



PERFORMANCE PARTS

Retail Price \$5.00

PP Number 23

P/N 88958754

Supersedes All Previous Catalogs

2011 CATALOG

700-HORSEPOWER CAMARO At Your Chevy Dealer Now!!!

E-ROD 5.3:
Affordable and
emissions friendly!

E-ROD LSA:
Supercharged
556-horse sicko!



LSX454R: The most powerful
crate engine we've ever built!

LS9 Blower takes your
Camaro past 650 horse!

SuperMatic™ Transmission and
Controller: Big-torque ready!

LSX454: 620-plus horsepower on
pump gas without a power adder.

LS9: ZR1 power in anything you want.
It's 638 horses of blown perfection!





Welcome to the 2011 GM Performance Parts Catalog

Chevrolet has a long history of high performance cars and excellence in all forms of motorsports. Decades of performance-oriented production cars, tuned to a razor's edge through racing and competition, have resulted in a truly amazing lineup of vehicles at your local Chevrolet dealership. Camaro SS, Corvette (Grand Sport, ZO6, or ZR1), Silverado Z71, and the turbo-charged Cruze LTZ offer up segment-winner performance at the crack of the throttle.

This lineup of brand new Chevrolet performance cars harkens back to the dawn of the Small-Block Chevy in the '50s, the great GM muscle cars of the '60s, and the modern muscle of the '80s and '90s. Through it all, we have defined automotive performance for the last 100 years. Today, we have an executive staff that is well versed in this history, and they are committed to keeping the high-performance GM customer well stocked with speed parts that will help you win whatever race you enter.

Under the direction of Tom Stephens (Vice Chairman), Mark Reuss (President), and Jim Campbell (VP of Performance and Motorsports), GM Performance Parts is changing. With the help of these executives, we are transitioning this part of GM to focus on high performance parts for new vehicles. Our line of industry-leading crate engines and engine components will still be an integral part of our business, but in the coming months you'll see even more high-performance parts for your new Camaro, Corvette, Silverado, Cruz, CTS-V, and more.

Our cover cars are a great example of what the future has in store for our customers. Two great Chevrolet dealerships (DeNooyer and NeSmith) have taken a great car, the Chevrolet Camaro SS, and they've made it better. Dropping in a crate engine from GMPP, tuning the suspension, adding a performance exhaust, and making them available to you; history sure does seem to be repeating itself. For full details on these two amazing cars, turn to page 3.

Inside this year's catalog, you'll find the parts that you need to keep your own project car ahead of the competition – whether that's at the drag strip, circle track race, or your local car show. Here's a look at what's hot for 2011:

New Product for 2011:

• **Vehicle-Specific Performance Parts and Accessories:**

Starting on page 9, you'll find a collection of add-on performance parts and accessories specially designed for your new GM vehicle.

• **E-ROD:** The E-ROD line of crate engines allows you to have big-time power while still considering your impact on the environment. We've added the very affordable 5.3, a 427-cubic-inch LS7, and the monstrous 556 horsepower LSA to the E-ROD portfolio. Find out more on page 62.

• **LSX454R:** It's the most powerful engine we've ever screwed together. It's a solid-roller, race-fuel, torque monster that spans over 750+ horsepower. Get all the details on page 88.

• **LSX DR Heads and Intake:** Leave the kiddy stuff at home, and let's go racing with genuine GM Performance Parts LSX DR heads and intake – the same horsepower makers that come as standard equipment on our LSX454R. Get more info on page 203.

• **LSX Components:** You wanted hot LSX parts that would take our production LS engines to the next level. You got 'em! Starting on page 196, there are new heads, intakes, camshafts, and more – all designed to help you make the power you need to win the race.

• **LS9 Supercharger:** The ZR1 Corvette is the greatest American supercar ever built. Its LS9 engine cranks out 638 hp thanks to a roots-style blower. Now, you can buy that same supercharger ready to bolt on to your LS3/LS9-port heads. See it on page 220, order it from your local GMPP dealer.

• **SuperMatic™:** GMPP has continued to expand our line of heavy-duty automatic transmissions that are ideal to put behind one of our crate engines. The 4L85-E has been joined by a SuperMatic version of the 4L70-E and the exciting new SuperMatic Transmission Controller. Find out more on page 124.

Thanks to a great leadership team, there are a lot of great plans for GMPP in 2011, as well as the future. For your daily fix of GMPP, join the conversation on FaceBook at www.facebook.com/GMPerformanceParts. We are constantly adding parts, sharing speed secrets, and answering your tough tech questions there.

To purchase any GM Performance Parts crate engine or high-performance component, visit www.GMPerformanceParts.com. There, you can find our dealers' pricing, purchase parts, and arrange for immediate delivery – even to the racetrack!

Thank you for considering genuine GM Performance Parts for your project car, race car, show car, new Camaro, work truck, or daily driver!

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WHAT'S NEW FOR 2011!



CHECK OUT THE LATEST ADDITIONS TO OUR FAMILY

PAGE 62

E-ROD Packages

2011 will see three new additions to the environmentally conscious E-ROD lineup. We've added the affordable 5.3L, the 427-cubic-inch LS7, and the monstrous 556-horsepower LSA to our portfolio.

E-ROD 5.3L
19258004

Automatic transmission

19258008
Manual transmission

E-ROD LS7
19257242

Automatic transmission

19257238
Manual transmission

E-ROD LSA
19257456

Automatic transmission

19257460
Manual transmission



PAGE 88

19257880

LSX454R Crate Engine

750+ horsepower makes this latest addition to our LSX line the most powerful crate engine we've ever offered! Designed specifically to meet the rigorous demands of the quarter mile, it's the ultimate in modern drag racing technology!



PAGE 127

92236241

TR 6060 Six Speed Manual Transmission

Rated to handle 420 lb.-ft. of torque, the TR 6060 Six Speed Manual Transmission is a direct replacement that works with any GMPP LS Series crate engine.



PAGE 125

19244043

SuperMatic™ 4L70-E Four-Speed Automatic Transmission

Based on the renowned Hydra-Matic 4L65 series of four-speed overdrive transmissions, the 4L70-E delivers greater torque carrying capacity and increased durability.



PAGE 220, 287

19244103

LS9 Supercharger Kit

Now, you can buy the same supercharger that comes standard on the legendary ZR-1 Corvette, ready to bolt on to your LS3/LS9-port heads.



PAGE 126

SuperMatic™ Transmission Control System

Revolutionary Connect and Cruise system makes installation a snap!

19257634

1996-2008 4L60-E family transmissions

19257661

1993-Up 4L80-E family transmissions



PAGE 223

LSX-DR Intake Manifolds

Single plane intake manifold designed specifically for the LSX-DR High output cylinder head.

19257851

LSX Single-Plane, Standard-Deck Manifold

19257852

LSX Single-Plane, Tall-Deck Manifold



MORE NEW PRODUCTS FOR 2011

19256513	LC9 5.3L Crate Engine (for automatic transmission)	Page 64
19256519	LC9 5.3L Crate Engine (for manual transmission)	Page 64
17804017	SuperMatic™ 4L70-E Torque Converter	Page 125
24217235	SuperMatic™ 4L85-E Torque Converter	Page 125
12021399	Crankshaft Spacer Kit	Page 126
24255748	LSX/LS7 Clutch Kit	Page 127
19201807	LSX Small Bore Cylinder Head	Page 200

19257879	LSX-LS7 Bare Cylinder Head	Page 200
19257881	LSX-LS7 Cylinder Head Assembly	Page 201
19166979	LSX-DR Cylinder Head	Page 202
19201808	LSX454 Rocker Arm Kit	Page 205
	LC9 5.3L Accessory Drive System	Page 217
19257453	LSX Header Flange Kit	Page 223

GM Performance Parts Cover Stars



Dealership-created performance packages were an important part of Chevrolet's muscle car heritage. Names like Yenko, Nickey, Berger and others helped drive high-performance options, while enhancing the mystique of one-off collectables decades later. In fact, it was creative ordering on the part of dealers that created the infamous COPO Camaros of the late 1960s – cars available from those enterprising dealers, but not offered in any regular catalog or order guide.

More than 40 years later, a couple of dealers – DeNooyer Chevrolet in New York and Georgia's NeSmith Chevrolet – have rekindled the concept of using Chevrolet's own parts to create specialty Camaros that simply aren't offered in regular production. DeNooyer used GM Performance Parts' LSX cylinder block and other GMPP engine components to build a modern 454 engine for the Camaro SS, while NeSmith transplanted the supercharged LS9 engine from the Corvette ZR1 into their Camaro.

"These great Camaros exemplify the spirit of dealer-built super cars that grew out of the muscle car era," says Dr. Jamie Meyer, product integration manager for GM Performance Parts. "They are the COPO Camaros of the 21st century."

Both cars are featured on the cover the 2011 GM Performance Parts catalog.

The DeNooyer 454 Camaro, dubbed the HTR-SS454, takes the GMPP LSX454 crate engine (P/N 19244611) and adds a port fuel injection system to its LS7-style LSX six-bolt cylinder heads. The engine has an all-forged rotating assembly and an 11.0:1 compression ratio. A front end accessory drive system was added, too, along with a custom flywheel and ZR1 clutch matched to the six-speed manual transmission.

With the custom engine installed in the Camaro and properly tuned, chassis-dyno tested delivered a strong 515 horsepower and 513 lb.-ft. of torque at the rear wheels – or right about the

620-hp/590-lb.-ft. estimates from GMPP for the basic crate engine. The car's driveline was beefed up to handle the 200-hp increase over stock, too, with stronger axles and stiffer bushings throughout.

Using the engineering and building experience of Redline Motorsports, DeNooyer is offering the HTR-SS454 through its Albany, New York store. More information is available from Dan Carlton: 518-526-0412 or toggun1ice@aol.com

While the DeNooyer 454-powered Camaro evokes memories of yesteryear, NeSmith's LS9-powered "Storm" Camaro is pure modern performance, with the world-beating power of the Corvette ZR1 under the hood. It was created within the dealership's in-house customization facility, NeSmith Customs, with assistance from nearby Jim Jac's Restorations. NeSmith also happens to be one of the largest GMPP dealers in the country.

The LS9 is offered as a crate engine from GM Performance Parts (P/N 19201990) and, because of its similar LS-family architecture to the Camaro's original LS3 engine, easily slipped into the engine compartment – although some fabrication was necessary to accommodate the unique placement of some accessories, as well as the LS9's dry sump-style oiling system. But when the installation was completed, the engine looked factory-installed. And with a few minor upgrades, the engine is producing about 700 horsepower.

Like the DeNooyer HTR-SS454, the NeSmith Storm Camaro matches its greater performance capability with complementing drivetrain parts, including stronger axles and a Brembo brake system featuring six-piston calipers, front and rear.

NeSmith is offering the LS9-powered Storm Camaro as a special model through its dealership. More information is available from Steve Gordon: 912-739-5305 or sgordon@nesmithnow.com.



E-ROD Lineup Expands with New Engine Systems

GM Performance Parts (GMPP) launched the revolutionary E-ROD crate engine system at the SEMA Show a year ago. Based on the 430-horsepower LS3 engine, it introduced a groundbreaking system of emissions parts to support the crate engine, enabling enthusiasts to build classic cars with lower emissions.

The E-ROD LS3 now meets CARB aftermarket requirements and carries E.O. number D-126-30. It is emissions-compliant for OBD-II (1995) and earlier model vehicles. No other OEM or aftermarket manufacturer offers a comparable system.



E-ROD 5.3L

E-ROD LSA



"E-ROD is the future of hot rodding, delivering greater efficiency and lower emissions without sacrificing performance," said Dr. Jamie Meyer, Product Integration Manager for GM Performance Parts. "GM Performance Parts is committed to enthusiasts' passions for performance, but we're doing it in a more responsible way."

For 2011, GMPP is introducing three new E-ROD packages: E-ROD 5.3L, E-ROD LS7 and E-ROD LSA. The 5.3L and LSA are available now, with the LS7 package coming after the first quarter of 2011. Like the original E-ROD LS3, all are offered for manual transmission or automatic transmission applications. CARB aftermarket EOs will be forthcoming on the new engine systems in early 2011 for use in pre-1996 vehicles.

Details of the new E-ROD crate engines include:

- **E-ROD 5.3L** – rated at 315 horsepower and based on the proven and durable Chevy Silverado engine
- **E-ROD LS7** – the Corvette Z06's 505-horsepower, 7.0L engine, with racing-derived cylinder heads and valvetrain (Available after first quarter of 2011)
- **E-ROD LSA** – the 556-horsepower supercharged 6.2L V-8 from the world-beating Cadillac CTS-V

Additionally, GMPP engineers and the GM certification group are working with CARB to develop a process to have E-ROD packages approved for specially constructed vehicles in California. Those vehicles include street rods, kit cars and some vehicles with reproduction bodies, which require a new vehicle identification



E-ROD LS7

number and, consequently, emissions certification, to qualify for California registration. Importantly, that certification is different from the EO number that makes the E-ROD LS3 approved for use in pre-OBD-II vehicles. The E-ROD LS3 is not yet certified for specially constructed vehicles.

The engine packages are available through authorized GM Performance Parts retailers, GM dealership parts departments and via GMPP's Web site: gmperformanceparts.com.

See page 62 for more information.



GMPP Showcases the Flexibility of E-ROD Systems



A classic Corvette Grand Sport replica from Superformance and a custom 1955 Chevy pickup built by Lingenfelter Performance Engineering demonstrate the possibilities of GM Performance Parts' emissions-efficient E-ROD crate engine packages.

Built for nothing more than pure speed, the 1963 Corvette Grand Sport announced to the world that Chevrolet was ready to take on all comers.

Under the direction of Zora Arkus-Duntov, Chevrolet engineers built a lightweight racecar, served up 500+ horsepower Small-Blocks, and sent the competition back to the drawing board. Unfortunately, only five of them were ever built.

The Superformance Grand Sport replica wraps the style and elemental driving experience of the original Corvette Grand Sport racing cars around the E-ROD LSA 6.2L supercharged engine. It delivers 556 horsepower, giving the lightweight car a stunning power-to-weight ratio.

In Lingenfelter's '55 Chevy truck, GMPP's new E-ROD 5.3L crate engine is rated at a stout 315 horsepower and serves as the heart of a driving experience designed to match high-performance with high-comfort and efficiency.

The E-ROD crate engine packages in both vehicles incorporate emissions equipment including catalytic converters, evaporative emissions canisters and more. GM Performance Parts will display the vehicles at events throughout 2011, so be sure to check them out and see how E-ROD is redefining hot rodding.



The E-ROD Corvette Grand Sport

Inspiration: LSA E-ROD engine, GM Performance Parts

Design: Dave Ross, GM Design

Project Build Manager: Mike Copeland, GM Performance Parts

Vehicle:

- 1963 Corvette Grand Sport Re-creation by Superformance LLC

Powertrain:

- GM Performance Parts LSA E-ROD crate engine (556 hp and 551 lb.-ft.)
- Tremec 6-speed Manual Transmission
- Centerforce DYAD DS Twin Disc Clutch
- Rear end - Factory casted custom housing with Dana gears
- Gearing - 3.36:1

Supporting Systems:

- Exhaust - Ceramic-coated custom headers and side pipes
- Fuel System - Aeromotive

Chassis:

- Weight - approximately 2,500 lbs. (depending on engine and options)
- Superformance - Period-correct tubular frame with mono-leaf rear spring and front coil springs
- Four-piston Wilwood brakes on all 4 corners

Exterior Features:

- Original '63 Corvette Grand Sport styling
- Paint by Glasurit - Corvette Grand Sport Admiral Blue with Bright White Stripes

Interior Features:

- Period correct with custom air conditioning
- Factory Instrument cluster with 200-mph speedometer
- Leather seating surfaces

Wheels and Tires:

- Period-correct 15" Corvette Grand Sport Wheels

The '55 E-ROD Pickup

Inspiration: 5.3-liter E-ROD engine, GM Performance Parts

Design: Dave Ross, GM Design

Project Build Manager: Lingenfelter Performance

Vehicle:

- 1955 Chevy 3100 Series Pickup
- Dynacorn Reproduction Body

Powertrain:

- GM Performance Parts 5.3L E-Rod Engine (315 hp and 335 lb.-ft.)
- GM Performance Parts 4L65-E Automatic Transmission
- GM Performance Parts SuperMatic Transmission Controller System
- GM 9.5" Rear Axle, with 4.10:1 Ratio and Eaton limited slip differential

Supporting Systems:

- BeCool Custom Radiator
- Painless wiring

Chassis:

- Trailblazer SS Chassis and Suspension
- Eibach Lowering Springs
- 4-Wheel Disc Brakes
- Power Rack-and-Pinion Steering

Exterior Features:

- Restoration Parts from Classic Industries
- Custom mixed paint by Wanda Paint
- Custom grille
- Hidden fuel fill
- Wood bed floor

Interior Features:

- IDIDIT Steering Column
- Custom Interior by C.A.R.S., Inc.
- Vintage Air A/C and Heat

Wheels and Tires:

- 17" Chevy Silverado Wheels

UNLEASHED! New LSX454R is the Most Powerful Crate Engine Ever from GMPP

Every year, the bar is raised when it comes to the performance that is achieved with GM's high-performance LS engine family.

GM Performance Parts has established a new benchmark for 2011, with the introduction of the LSX454R crate engine. It is simply the most powerful crate engine ever offered by GMPP and the most powerful automotive engine ever built by General Motors.

The new LSX454R represents the next-generation of large-displacement racing engines. It delivers a stunning 750+ naturally aspirated horsepower that will help just about any drag racer collect easy 9-second time slips. That's big-block performance and big-block power within small-block dimensions and lower mass – and we don't have to explain the advantages of that when it comes to minimizing the weight of your race car, especially over the front wheels.

The LSX454R was developed in the tradition of our powerful and durable big-block racing engines, like the ZZ572/720R, which are engineered for the unique high-rpm demands of competition. That means high-flow heads complemented with super-strong valvetrain components and a bullet-proof bottom end.



We achieve the 454-cubic-inch displacement with our super-strong LSX cylinder block, which allows for a longer stroke and, in turn, optimal camshaft specifications. Naturally, there's an all-forged rotating assembly in the block. The LSX454R is also capable of supporting nitrous and other power adders for even greater power.

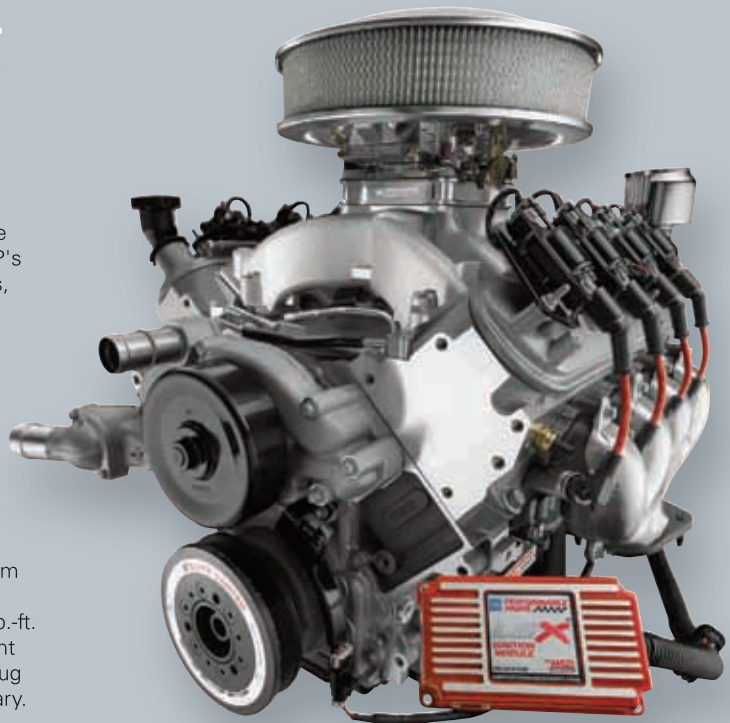
See page 88 for more details. Go online to order the LSX454R at gmperformanceparts.com.

CT525 Drives 'LS' Power in Circle Track Racing

LS-powered race cars are becoming less of a novelty in circle track racing, spurred on by the growing acceptance of GMPP's CT525 crate engine. From street stocks to super late models, more racers are finding the economical power and durability of the LS engine to their liking.

2010 has found the CT525 gaining acceptance on both dirt and asphalt circuits. The lightweight LS3 that is the foundation of the CT525 is a driver's favorite, making plenty of power, and keeping weight off the nose of the car. A better handling car is a faster car!

The CT525 6.2L crate engine is based on the LS3 V-8 that is standard in the Chevrolet Corvette, but adapted to circle track racing. The engine is lightweight and strong, using an aluminum block with cross-bolted 6-bolt main caps and high-flow LS3 rectangular-port cylinder heads. It is rated at 525 hp and 471 lb.-ft. of torque. The aluminum block and heads offers greater weight balance versus iron-block/head engines, while the coil-near-plug ignition system makes routine timing adjustments unnecessary.



Do You Know Where Your Rebuilt Engine Has Been?

It always sounds like a good deal: An inexpensive core engine that's rebuilt to a lofty horsepower claim. But do you know the history of that core engine before you invest the money to have it rebuilt or the time to install it in your project vehicle?

GM Small-Block and Big-Block engines have proven extremely durable over the decades, but that doesn't ensure used cores don't have issues. And what about the parts used to rebuild it? Are they brand-new rotating parts or reconditioned parts? You should insist on the best for your investment.

There are no nagging questions when you choose a GM Performance Parts crate engine. Each is built with brand-new parts, not reconditioned cores or "seasoned" used parts. So, before you open your wallet for your next engine project, consider this:

GMPP crate engines use brand-new cylinder blocks – not reconditioned/machined used cores

GMPP crate engines feature a strong, four-bolt-main architecture – almost all used and core production engines since the early 1970s used two-bolt main bearings. Four-bolt mains deliver greater strength for the bottom end of the engine

GMPP crate engines use all-new rotating parts and cylinder heads. Just like the block, each engine is built with brand-new parts rather than used or reconditioned components. That means a new crankshaft, not a "10/10" machined crank; and brand-new heads rather than "decked" used heads.

GMPP crate engines are powerful. The entry-level 350-290 HP engine (P/N 12499529) offers 290 horsepower and 332 lb.-ft. of torque. That's more than just about every production Small-Block of the past 40 years – and the ratings for our other engines only go up from there!

Even if you're looking to simply re-power your high-mileage work truck, GMPP crate engines make a cost-effective choice. You simply swap over the induction and accessory items from the



original engine and install the crate engine. You'll save the time it takes for you or a shop to disassemble, clean, machine and rebuild the original. That means your truck will be off the road for less time.

And with GM Performance Parts crate engines, there's no guessing or second thoughts about the history of your engine. It's new – all-new!

Find Your Best Prices Online!

GMPerformanceParts.com is more than an online resource for parts and accessories information, it's your source for the best prices for everything from chrome air cleaners to crate engines!

At gmperformanceparts.com we've listed hundreds of engines and parts and you can price them from our network of dealers and retailers. Simply find the part you want and compare the prices. You can refine the search by your local area and preferred dealer.



GMPerformanceParts.com

Chevrolet Performance



Corvette



Camaro



Silverado



Cruze



All the performance you want... and more

Since General Motors has been making cars and trucks, owners have been customizing them to meet their personal needs. Over the years, we have listened to our customers and designed and developed appearance, convenience and power-enhancing performance upgrades that make their vehicles their own.

Chevrolet and GM Performance Parts are your best resource for GM crate engines, engine parts and your connection to accessories.

Whether you are installing a new GM Performance Part LSX454 Crate engine in your '68 Chevy Chevelle or ground effects kit on your 2011 Camaro you can be assured GM Performance Parts are tested and validated to meet GMPP engineering standards.

Go to Chevrolet.com and gmperformanceparts.com for the latest lineup of performance parts and accessories – and don't forget to sign up for our *Fuel* electronic newsletter, so you'll always know when new parts are introduced!

CAMARO PERFORMANCE UPGRADES

We know you want greater performance from your Camaro. That's why GM designers and engineers have developed bolt-on components that accentuate and enhance the factory-delivered horsepower. Check out the parts below and build your Camaro to pull away from the crowd!



LS & LSX Engines*

GM's LS engine family has revolutionized the performance world, taking it to unprecedented levels of power, durability and efficiency. It is fast becoming the engine of choice of enthusiasts from all walks of life – from street rods and muscle cars to drag strips, road courses and off-roading.

For more information on these and other engines, go to www.gmperformanceparts.com.

- 19244549** LS376/480 Engine (for more details see page 72)

- 19211710** LS7 7.0L Engine (for more information see page 80) (not shown)

- 19211708** LSA 6.2L/SC (for more information see page 76) (not shown)

- 19201990** LS9 6.2L/SC (for more information see page 78) (not shown)

- 19244611** LSX454 (for more information see page 96) (not shown)



LS376/480

LS & LSX Components*

For the high-performance enthusiast, the LS Series represents the best of all worlds. Along with great durability, the platform offers unrivaled parts interchangeability, with literally dozens of possible combinations enabled by a proliferation of regular-production and special high-performance cylinder blocks, cylinder heads, induction systems and all the related components.

For more information on these and other components, see page 206.

LS & LSX VALVE COVERS

Brighten up that engine bay with these classic-style cast aluminum valve covers.

- 19156430** Valve Cover Kit – Camaro, Natural (for more information see page 206)



Camaro Valve Cover

LS9 SUPERCHARGER

Boost it! LS9 supercharger for rectangular-port-style heads.

- 19244103** LS9 supercharger (for more information see page 220)



LS9 Supercharger

LS CAMSHAFTS

LS Camshafts make power the old-fashioned way.

- 88958733** LS Hot Cam (for more information see page 209) (not shown)

**The use of this engine or component in a new Chevrolet vehicle voids the vehicle powertrain warranty and may result in adversely affecting vehicle performance. In some cases, use of certain Performance components may result in the failure of other components or systems, thus voiding the warranty of the failed component or system. GMPP components installed in new vehicles do retain their regular warranty coverage unless otherwise noted.*

These engines and components have not been tested or validated by GM Engineering for use in these vehicles. Installation of components or engines in non-original applications may require fabrication or modifications that affect other vehicle systems. Certain engines may require modifications to the vehicle for fit and operation.

The installation and operation of these components or replacement engines in new vehicles is intended for off-road operation only.

CAMARO PERFORMANCE UPGRADES CONTINUED

Wheels & Tires

We don't have to tell you how a great set of wheels transforms the look and feel of your car. The 2011 Camaro comes with a family of attractive, 18-, 19-, and 20-inch wheels. Take it a step further with great-looking, racing-inspired 21-inch wheels and complementing performance tires. The wheel design features a contemporary, split, five-spoke center available in two finishes. The first finish is a black painted finish and the other is machined aluminum with black accent paint. They are offered in 8.5-inch width across all V-6 models or 8.5-inch fronts and 9.5-inch rears for the SS models. Use only GM-approved wheel and tire combinations. see www.gmaccessorieszone.com for important tire and wheel information.

For more information on these and other sets, go to www.chevrolet.com.

92229351 21-Inch x 8.5-Inch Wheel - Machined Aluminum Spokes, Black Rim Flange (set of 4)

92229353 21-Inch x 9.5-Inch Wheel - Black Painted/Polished Rim Flange (set of 2)



21-inch Machined Aluminum with Black Accent

21-inch Black Painted with Polished Rim Flange

Contoured Quarter Flares

Not your typical splash guards (Quarter Flares). Designed specifically for your Camaro to give it exterior "flare" while helping to protect it from tire splashes. Available in seven body-matching paint colors - Victory Red, Orange, Yellow, Red Jewel, Black, Gray and Silver. These splash guards do not work with the ground effects package.

For more information on these and other accessories, go to www.chevrolet.com.

92214929 Contoured Quarter Flares, Scorch Yellow



Contoured Quarter Flares, Scorch Yellow

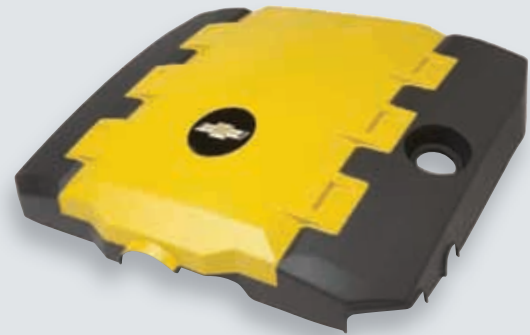
Engine Cover Kits

High performance and high style have always mixed with Camaro enthusiasts. You can give your Camaro's V-6 or V-8 engine a stylish, show-quality upgrade with our gorgeous engine cover kits. They're available to match most exterior colors, allowing you to complement or contrast the color choices to suit your style. Match the engine cover with one of the color-coordinated interior trim kits, too, for a completely integrated look.

The engine cover kits are easy to install and are easily removed when service is required. They don't interfere with oil fill or other common maintenance access points.

For more information on these and other kits, go to www.chevrolet.com.

92219188 V-6 Engine Cover, Scorch Yellow

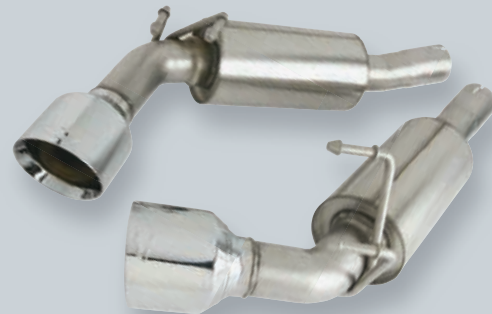


Exhaust

Upgrade the look and sound of your Camaro's exhaust system with one of our tuned, emissions-legal, bolt-on exhaust kits. They deliver a great performance sound and reduced restriction, which promotes increased power - especially when combined with other performance parts. Whether you're looking for a street-legal sound or a completely off-roading system, GM Performance Parts has got you covered. The exhausts are available with or without ground effects. When ordering the ground effects package, there is no need to include an exhaust tip. Our exhaust kits are designed for simple remove-and-replace installation, for a quick and hassle-free changeover. NOTE: When selecting a kit for SS models, check for specific LS3 (manual transmission) or L99 (automatic transmission) part numbers.

For more information on these and other systems, go to www.chevrolet.com.

92206992 LS3 & L99 V-8 Exhaust Upgrade Kit, Round Tip



LS3 & L99 V-8 Exhaust Upgrade Kit, Round Tip

Exterior Accessories

Create your own look for your Camaro with our diverse lineup of exterior accessories, from a satin nickel fuel door or a grille insert to color-matched splash guards and a complete ground effects kit.

The ground effects package creates a dramatic, ground-hugging look for your Camaro – one that is suitable whether you are out for a Saturday night cruise, or engaging in off-road competition. It comes delivered in a great Metallic Gray color that accents your car's original color.

Camaro exterior accessories are designed and manufactured to the same quality and durability standards as all regular-production components. That means you're assured of perfect-fitting, long-lasting accessories that will stand up to years of use.

For more information on these and other accessories, go to www.chevrolet.com.

92248500 Ground Effects Kit, Base Model

92248560 Ground Effects Kit, SS Models

92212671 Satin Nickel Fuel Filler Door



Satin Nickel Fuel Filler Door



Ground Effects Kit, Metallic Gray

Stripe Kits

The heritage-inspired 2010 Camaro is accented perfectly with our stripe kits. They give your Camaro a classic look and contemporary style. Our stripe kits are inexpensive and easy to install; or, have your dealer install them for a hassle-free upgrade that will make your new ride the envy of the neighborhood! Choose from multiple colored hockey stick-style, hood and hockey stick-style and rally-style stripes.

For more information on these and other kits, go to www.chevrolet.com.

92215975 Hood and Hockey Stick Stripe Kit, Black

92225513 Rally Stripe Kit, Black



Hood and Hockey Stick Stripe Kit, Black



Rally Stripe Kit, Black

Car Covers

Protect your pride and joy from the elements and UV rays with a fitted, outdoor-rated car cover. Our covers are custom-contoured to fit your Camaro's curves like a glove. They're available in two colors, each with stylish, heritage-inspired black stripes.

For more information on these and other accessories, go to www.chevrolet.com.

92215993 Outdoor Car Cover, Red with Black Stripes (not shown)

92215994 Outdoor Car Cover, Gray with Black Stripes



Interior Trim Kits

When ordering the factory illumination package you can personalize the interior lighting color with parts, color-matched to the Camaro's exterior colors. Use them to complement or contrast your Camaro's exterior color for a completely custom appearance.

For more information on these and other kits, go to www.chevrolet.com.

92221433 Interior Trim Kit, Scorch Yellow



Interior Trim Kit

CORVETTE PERFORMANCE UPGRADES

Even without a top, it's over the top. Total exhilaration, with or without a roof. The Corvette offers one powerful legacy in three models – coupe, convertible and Z06. But whichever one you choose, the look and functionality of your Corvette can be pushed even further. Genuine Corvette Parts and Accessories are designed for performance and durability to advance the sports car driving experience.



LS & LSX Engines*

GM's LS engine family has revolutionized the performance world, taking it to unprecedented levels of power, durability and efficiency. It is fast becoming the engine of choice of enthusiasts from all walks of life – from street rods and muscle cars to drag strips, road courses and off-roading.

For more information on these and other engines, go to www.gmperformanceparts.com.

- 19244549** LS376/480 Engine (for more details see page 72) (not shown)

- 19211710** LS7 7.0L Engine (for more information see page 80) (not shown)

- 19211708** LSA 6.2L/SC (for more information see page 76) (not shown)

- 19201990** LS9 6.2L/SC (for more information see page 78) (not shown)

- 19244611** LSX454 (for more information see page 96)



LSX 454

LS & LSX Components*

For the high-performance enthusiast, the LS Series represents the best of all worlds. Along with great durability, the platform offers unrivaled parts interchangeability, with literally dozens of possible combinations enabled by a proliferation of regular-production and special high-performance cylinder blocks, cylinder heads, induction systems and all the related components.

For more information on these and other components, go to www.gmperformanceparts.com.

LS & LSX VALVE COVERS

Brighten up that engine bay with these classic-style cast aluminum valve covers.

- 19156429** Valve Cover Kit – Corvette, Polished, Red Lettering (for more information see page 207)



Corvette Valve Cover

LS9 SUPERCHARGER

Boost it! LS9 supercharger for rectangular port-style heads.

- 19244103** LS9 supercharger (for more information see page 220)

LS CAMSHAFTS

LS Camshafts make power the old-fashioned way - upgrade that camshaft!

- 88958733** LS Hot Cam (for more information see page 209) (not shown)



LS9 Supercharger

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The installation and operation of these components or replacement engines in new vehicles is intended for off-road operation only.

Wheels & Tires

Make a dramatic modification to the appearance of your Corvette with these 7-spoke forged chrome wheels. Features the crossed-flags logo on the center cap. Not for use on Z06 or Grand Sport Models. Use only GM-approved wheel and tire combinations. See www.gmaccessorieszone.com for important tire and wheel information. For more information on these and other sets, go to www.chevrolet.com.

88967777 18-inch Wheel - C6898F Front - 7 Spoke Chrome (set of 2)

17800902 19-inch Wheel - C6898R Rear - 7 Spoke Chrome (set of 2)

17800906 18-inch Wheel - C6900F Front - 15 Spoke Polished (set of 2)

17800908 19-inch Wheel - C6900R Rear - 15 Spoke Polished (set of 2)



18/19-inch 7-Spoke Forged Chrome



18/19-inch Forged Polished Aluminum

Decal And/Or Stripe Packages

Add visual punch to your Corvette with race-inspired decals. Choose from Body Stripes, GT1 Stripes (both in 3 color combinations), Fender Hash Marks (in 4 colors), Racing Numbers (digits 0-9) and/or an Oval Racing Decal to give your 'Vette a custom look.

For more information on these and other packages, go to www.chevrolet.com.

17802434 Racing Stripes - For Use on Coupe Models, Silver with Red Accent

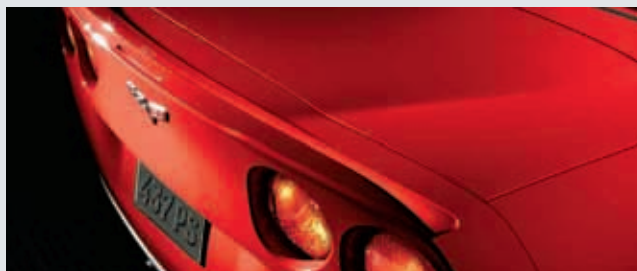


Spoiler Kits

Add style to your Corvette with a body-color Rear Spoiler that replaces the standard black spoiler. Or change the rear profile completely with the full-width or Z06 design spoiler.

For more information on these and other kits, go to www.chevrolet.com.

19166223 C6 Design, Crystal Red (89U)



Exterior Accessories

ENGINE COVER

Carry your sense for detail right under the hood with this alternate finish Engine Cover. Available in various finishes. Not for use on Corvette Z06.

For more information on these and other accessories, go to www.chevrolet.com.

19159031 For LS3 Engine, Matte Silver with Red Letters

ENGINE PERFORMANCE DATA PLATE

Showcase your engine performance with this Performance Data Plate. It includes displacement, horsepower, torque and compression ratio. Easily attaches to the radiator support underneath the hood.

For more information on these and other accessories, go to www.chevrolet.com.

19154740 LS7



LS7 Data Plate



Matte Silver with Red Letters

SILVERADO PERFORMANCE UPGRADES

You take a lot a pride in owning a Silverado. It's the personal touches you add that make it your signature ride. Chevrolet and GM Performance Parts have the parts and accessories that will help you add an exclamation point to your pride and joy.



LS & LSX Engines*

GM's LS engine family has revolutionized the performance world, taking it to unprecedented levels of power, durability and efficiency. It is fast becoming the engine of choice of enthusiasts from all walks of life – from street rods and muscle cars to drag strips, road courses and off-roading.

For more information on these and other engines, go to www.gmperformanceparts.com.

19244549 LS376/480 Engine (for more details see page 72) (not shown)

19211710 LS7 7.0L Engine (for more information see page 80) (not shown)

19211708 LSA 6.2L/SC (for more information see page 76) (not shown)

19201990 LS9 6.2L/SC (for more information see page 78)

19244611 LSX454 (for more information see page 96) (not shown)



LS9 6.2L/SC

LS & LSX Components*

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For more information on these and other components, go to www.gmperformanceparts.com.

LS & LSX VALVE COVERS

Brighten up that engine bay with these classic-style cast aluminum valve covers.

19156433 Valve Cover Kit – Chevrolet, Polished (for more information see page 206)



Chevrolet Valve Cover

LS9 SUPERCHARGER

Boost it! LS9 supercharger for rectangular port-style heads.

19244103 LS9 supercharger (for more information see page 220)



LS9 Supercharger

LS CAMSHAFTS

LS Camshafts make power the old-fashioned way - upgrade that camshaft!

88958733 LS Hot Cam (for more information see page 209) (not shown)

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The installation and operation of these components or replacement engines in new vehicles is intended for off-road operation only.

Wheels

Customize your Silverado with these Chrome Wheels. Available with center caps that feature the Chevy Bowtie logo. Finish the custom look with available lug nuts and wheel locks. Use only GM-approved wheel and tire combinations. See www.gmaccessorieszone.com for important tire and wheel information. For more information on these and other sets, go to www.chevrolet.com.

- 17800926 20-inch Wheel - 5-Spoke CK925 Chrome (set of 4)
- 17800929 20-inch Wheel - 8-Spoke CK928 Chrome (set of 4)
- 17800946 20-inch Wheel - 6-Spoke-Split V CK945 Chrome (set of 4)
- 17800949 20-inch Wheel - 6-Spoke CK948 Chrome (set of 4)
- 17800952 20-inch Wheel - 5-Spoke CK951 Chrome (set of 4)
- 20917095 20-inch Wheel - 7-Spoke CK988 Chrome (set of 4)
- 17800992 20-inch Wheel - 5-Spoke Flared CK991 Chrome (set of 4)
- 17800995 20-inch Wheel - 6-Spoke Double Split CK994 Chrome (set of 4)
- 17800998 20-inch Wheel - 6-Spoke 20-inch Flared CK997 Chrome (set of 4)
- 19170371 20-inch Wheel - 6-Spoke Flared CK370 Chrome (set of 4)
- 17800917 22-inch Wheel - 8-Spoke CK916 Chrome (set of 4)
- 17800923 22-inch Wheel - 6-Spoke flared CK922 Chrome (set of 4)
- 17800367 22-inch Wheel - 6-Spoke-Split CK366 Chrome (set of 4)
- 20917092 22-inch Wheel - 9-Spoke aluminum alloy CK369 Chrome (set of 4)
- 17800376 22-inch Wheel - 8-Spoke aluminum alloy CK375 Chrome (set of 4)
- 19170799 22-inch Wheel - 12-Spoke-Split aluminum alloy CK798 Black Painted Center/Bright Rim Flange (set of 4)
- 17800911 22-inch Wheel - 12-Spoke Flared aluminum alloy CK910 Chrome (set of 4)



20-inch 7-Spoke



22-inch 6-Spoke-Split



20-inch 8-Spoke



20-inch 6-Spoke Flared



20-inch 6-Spoke



20-inch 5-Spoke



20-inch 6-Spoke Flared



20-inch 5-Spoke

SILVERADO PERFORMANCE UPGRADES CONTINUED

Grille

Go for the ultimate in personalization with a sporty Grille. The light duty chrome model features a chrome mesh center with your choice of a body-color or chrome surround. The heavy-duty model is available with chrome surround only.

For more information on these and other accessories, go to www.chevrolet.com.

19154892 For Use on Heavy-Duty Models, Chrome Surround with Chrome Mesh

19158486 For Use on Light-Duty Models, Black (41U) Surround with Chrome Mesh

19211825 For Use on Light-Duty Models, Blue (37U) Surround with Chrome Mesh

20955212 For Use on Light-Duty Models, Carbon (58U) Surround with Chrome Mesh

19166685 For Use on Light-Duty Models, Chrome Surround with Chrome Mesh

19211826 For Use on Light-Duty Models, Labyrinth (GGW) Surround with Chrome Mesh

19154231 For Use on Light-Duty Models, Red (74U) Surround with Chrome Mesh



19211828 For Use on Light-Duty Models, Silver (GGZ) Surround with Chrome Mesh

19158485 Use on Light-Duty Models, Stealth Gray (46U) Surround with Chrome Mesh

19154228 For Use on Light-Duty Models, White (50U) Surround with Chrome Mesh

Tonneau Covers

Secure your cargo under this lockable, lightweight, molded-composite Hard Tonneau Cover. Designed to complement Silverado styling, the cover features struts for easy opening and closing, and a quick-release mechanism for easy removal. Available in select body colors. Light-duty models will require the heavy-duty tailgate protector.

Shield the cargo in your Silverado and help protect the bed itself from harsh weather with this Soft Roll-Up Tonneau Cover. Constructed with integrated crossbows, it easily rolls up to allow full access to the bed and features an embossed Chevy Bowtie logo.

For more information on these and other accessories, go to www.chevrolet.com.

20972502 6'6" Standard Box, Hard Cover Red (74U)

SOFT COVERS

19243602 Soft Tonneau Cover - 8' Long Box



Standard Box
Tonneau Hard Cover



Long Box
Tonneau Soft Cover

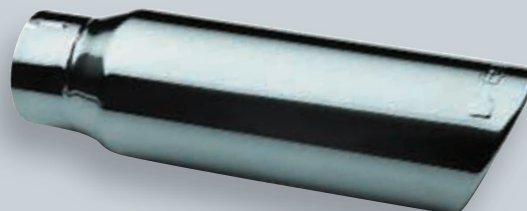
Accessories

EXHAUST TIP – OE OR CAT-BACK

These stainless steel exhaust tips add a sporty appearance to the exterior of your Silverado.

For more information on these and other accessories, go to www.chevrolet.com.

19156360 Cat-Back Exhaust Tip - No Logo, Single Exhaust, Dual-Wall, Angle-Cut, Highly Polished, For Use on 6.2L (L92) Engine



CRUZE PERFORMANCE UPGRADES

Cruze challenges conventional compact wisdom with one simple word: more. Its cavernous, quiet interior and beautifully sculpted exterior feel like luxury. Cruze is filled with performance, safety and technology features that you won't believe come in a compact.

Add your own upgrades to meet your needs. Watch for more performance upgrade parts and accessories to be introduced later this year.



Door Sill Plates or Door Step Shields

Add a stylish accent to the entry area of your Cruze while also helping to protect against scratches and scrapes with front and rear Door Sill Plates. Two styles available; both feature the Chevrolet logo on the front plates. Choose the brushed satin finish with black logo or upgrade to a more distinctive look with eye-catching blue illumination.

19202364 Door Sill Plates - Front and Rear Sets, Chevrolet Logo, Black and Brushed Satin

96888840 Illuminated Door Sill Plates - Front and Rear Sets, With Illuminated Blue Chevrolet Logo



Interior Trim Kit

This 2-piece Interior Trim Kit features a Shift Lever Trim Plate and I/P Trim Plate that accents the center of your Cruze's interior with a splash of flash.

95989724 Optic Check pattern, for use on vehicles with automatic transmission (MH8 or MH9)

96996409 Optic Check pattern, for use on vehicles with electronic ride & handling (FX3) and manual transmission (MZ0 or MZ4)



Molded Splash Guard

Designed to accent the exterior of your Cruze, these Molded Splash Guards fit directly behind the wheels and help protect against tire splashes and mud.

96888785 Front and Rear Sets, not for use on models equipped with RS package (PDZ), Black



Crate Engines

Factory-Engineered for Worry-Free High-Performance

How to power your project vehicle is one of the most important decisions you'll make. It's an investment in more ways than one, because long after you've paid for an engine it will determine the performance of your car or truck, and affect its longevity.

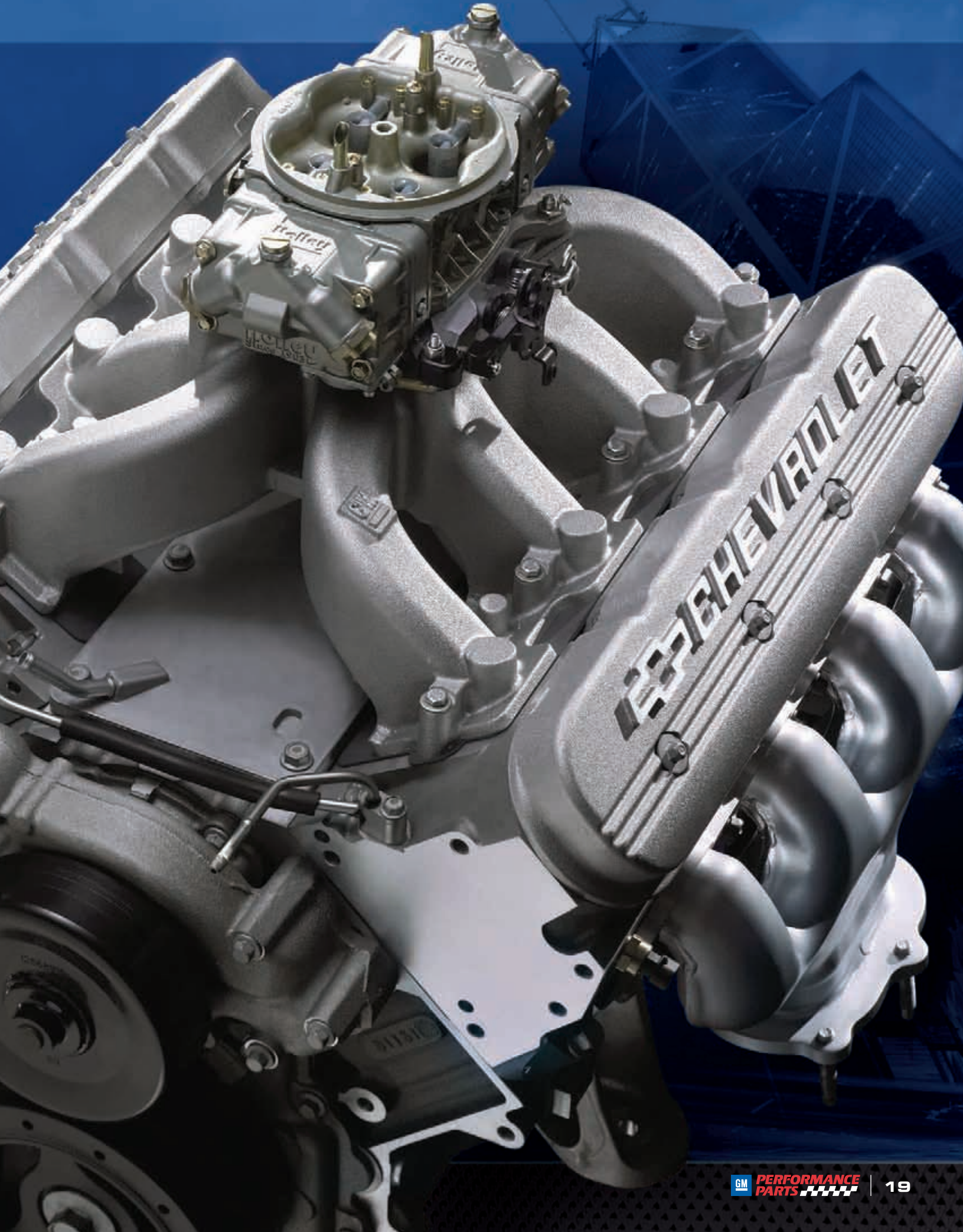
Selecting a GM Performance Parts crate engine is the smart decision. You'll save time and eliminate those nagging doubts about a costly rebuild or reconditioned used engine. When you order a GMPP crate engine, it will be delivered sooner than you can disassemble your old engine and take the parts to the machine shop. Better still, our crate engines deliver greater power than most stock-type rebuilds and we offer high-performance combinations – including 383 Small-Blocks, 502 Big-Blocks and blower-ready LS engines – that require more costly investment during a rebuild.

Importantly, GMPP crate engines are built with brand-new parts, from the block and rotating assembly to the cylinder heads and all of the accessory items included with each engine package. We don't use "seasoned" blocks or reconditioned components. When you pay for a new engine, you get new parts. Better still, the engine blocks for our Small-Block and Big-Block engines are stronger than the core blocks you'll find at a swap meet or salvage yard.

There's another reason to select a GMPP crate engine: Each is designed, validated and built with the same quality and performance standards that go into GM production engines. That's important, because the GMPP engine you buy today will start, idle and run with the smoothness and dependability of a production engine. In other words, we didn't sacrifice drivability for a couple additional horsepower. It's a philosophy you'll appreciate whether you're in for a quick spin down to the local cruise night or doing the long haul on the Hot Rod Power Tour.

Don't spend your time chasing parts and guessing at high-performance parts combinations. Use a GMPP crate engine to get your project on the road sooner!

Featured here is the LS7 7.0L P/N 19211710. For more information, see page 80.



Crate Engine Quick Reference Chart

CHEVY SMALL-BLOCK V-8

Part Number	Description	Engine Size	Weight	hp	Torque	Page	Warranty
19244450	350/290 HP Deluxe Kit	350 cu in	—	290	326	44	
12499529	350/290 HP—Economy Performance Engine	350 cu in	352	290	332	44	
19210009	350 HO Turn-Key—with Iron Vortec Heads	350 cu in	575	330	380	46	
19210008	350 HO Deluxe—with Iron Vortec Heads	350 cu in	481	330	380	47	
19210007	350 HO Base—with Iron Vortec Heads	350 cu in	298	330	380	47	
19201330	ZZ4 350 Turn-Key—with Aluminum Heads	350 cu in	511	355	405	48	
24502609	ZZ4 350 Base—with Aluminum Heads	350 cu in	379	355	405	49	
12561723	ZZ4 350 Partial Engine	350 cu in	223	N/A	N/A	49,53	
12499120	Ram Jet 350—PFI with Iron Vortec Heads	350 cu in	517	350	400	50	
19201331	Fast Burn 385 Turn-Key—with Aluminum Vortec Heads	350 cu in	511	385	385	52	
12496769	Fast Burn 385 Base—with Aluminum Vortec Heads	350 cu in	466	385	385	53	
12499101	HT383 Base—Performance Engine	383 cu in	405	340	435	54	
12499106	383 Partial Engine	383 cu in	335	N/A	N/A	55,59	
17800393	HT383E	383 cu in	450	340	435	56	
12498772	ZZ383 with Aluminum Vortec Heads	383 cu in	397	425	449	58	

LS FAMILY SMALL-BLOCK V-8

Part Number	Description	Engine Size	Weight	hp	Torque	Page	Warranty
19256513	LC9 5.3L—With ECU for Automatic Transmission	5.3L	—	315	335	64	
19256517	LC9 5.3L—With ECU for Manual Transmission	5.3L	—	315	335	64	
19165628	LS327/327—Base Assembly	5.3L	433	332	352	66	
19244096	LS327/327 Deluxe Kit	5.3L	—	332	352	67	
17801267	LS1 5.7L—Without ECU and Wire Harness	5.7L	409	350	365	68	
19244097	LS3 6.2L—Corvette Gen IV V-8	6.2L	415	429	424	70	
19244549	LS376/480—EFI LS3 Gen IV V-8	6.2L	415	480	475	72	
19171225	LS376/515—Carbureted LS3 Gen IV V-8	6.2L	415	515	469	74	
19211708	LSA 6.2L SC	6.2L	—	556	551	76	
19201990	LS9 6.2L SC	6.2L	—	638	604	78	
19211710	LS7 7.0L—Corvette Z06	7.0L	440	505	470	80	

LSX FAMILY SMALL-BLOCK V-8

Part Number	Description	Engine Size	Weight	hp	Torque	Page	Warranty
19171049	LSX376—Base Assembly	6.2L	—	450	444	84	
19244611	LSX454—Base Assembly	7.4L	—	620	600	86	
19257880	LSX454R	7.4L	—	750+	700	88	

CHEVY BIG-BLOCK V-8

Part Number	Description	Engine Size	Weight	hp	Torque	Page	Warranty
19166392	Anniversary Edition 427	427 cu in	460	430	444	92	
19166393	ZZ427/480	427 cu in	520	480	490	94	
12568774	454 HO—with Iron Heads and Roller Cam	454 cu in	590	425	500	96	
12498778	454 Partial Engine	454 cu in	361	N/A	N/A	97,99	
12498777	ZZ454/440—440 Horsepower with Aluminum Heads	454 cu in	522	440	500	98	
88890534	HT502—Truck Replacement Engine	502 cu in	557	338	512	100	
12568782	ZZ502/502 Partial Engine	502 cu in	402	N/A	N/A	101,103,105,107	
12568778	502 HO—with Iron Heads and Roller Cam	502 cu in	602	450	550	102	
19201332	ZZ502 Deluxe—Assembled Kit, with Aluminum Heads	502 cu in	611	502	567	104	
12371171	ZZ502 Deluxe—Unassembled Kit, with Aluminum Heads	502 cu in	602	502	567	105	
12496963	ZZ502 Base Engine, with Aluminum Heads	502 cu in	504	502	567	106	
12371204	ZZ502 Base —Unassembled Kit, with Aluminum Heads	502 cu in	532	502	567	107	
12499121	Ram Jet 502—PFI with Aluminum Heads	502 cu in	608	502	565	108	
19201333	ZZ572/620 Deluxe	572 cu in	580	620	650	110	
12498792	ZZ572/620 Base	572 cu in	514	620	650	111	
19201334	ZZ572/720R Deluxe	572 cu in	—	720	685	112	
12498826	ZZ572/720R Base	572 cu in	—	720	685	113	

WARRANTY INFORMATION



GM Performance Parts Crate Engines include a 24-month or 50,000-mile limited warranty.



GM Components include a 12-month or 12,000-mile limited warranty.



GM Performance Parts Racing Crate Engines are excluded from limited warranty.



GM Parts Engines offer a 36-month or 100,000-mile limited warranty when the engine is installed in a recommended application.

CIRCLE TRACK RACING ENGINES

Part Number	Description	Engine Size	Weight	hp	Torque	Page	Warranty
19258602	CT350	350 cu in	451	350	390	116	
88958603	CT355	350 cu in	402	355	405	118	
88958604	CT400	350 cu in	466	400	400	120	
19271821	CT525	376 cu in	415	525	471	122	

GM PARTS ENGINES

Part Number	Description	Engine Size	hp	Torque	Page	Warranty
12607031	2.2L L61	134 cu in	135-143	142	128	
19178808	2.8L I-4	2.8L	175	185	129	
89060432	3.5L LX9	3.5L	200	220	129	
19168948	3.8L V-6	3.8L	200	230	129	
12575091	4.2L LL8	256 cu in	275	275	129	
12491869	4.3L LU3	262 cu in	180-200	245-260	130	
12491851	4.8L LR4	292 cu in	275	285-290	130	
12491854	5.3L LM7/L59	325 cu in	285	325-330	130	
10067353	5.7L Gen 0	350 cu in	195	N/A	130	
12568758	5.7L Gen I	350 cu in	N/A	N/A	131	
12491857	6.0L LQ4/LQ9	364 cu in	300-325	360-370	131	
12491355	7.4L L19/L29	454 cu in	230-270	N/A	131	
89017618	8.1L L18	496 cu in	225-340	350-455	131	

NOTE: Weights include crates and all packaging material. Approximate crate weight is 30 lbs.

Different Levels of Engine Assemblies

Recognizing that each customer has unique needs, GM Performance Parts offers four distinct levels of Crate Engines, covering the gamut from starter Partial engines to complete Turn-Key engines that are ready to be dropped into your favorite vehicle. This variety gives builders the opportunity to customize an engine as much or as little as they need to, to meet their expectations.

Partial Engine

This is for the builder who wants to start essentially from the block up. These engines typically include the block and reciprocating assembly. It allows the builder to choose the heads, cam and intake combination he/she wants.



Base

The Base engine assembly typically includes, block, crank, pistons, cam, heads and valve covers, but allows the builder to pick the carburetor/injection system and intake manifold they desire.



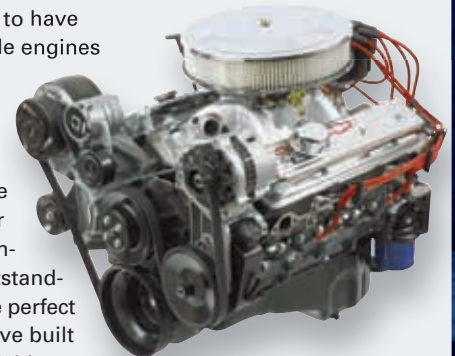
Deluxe

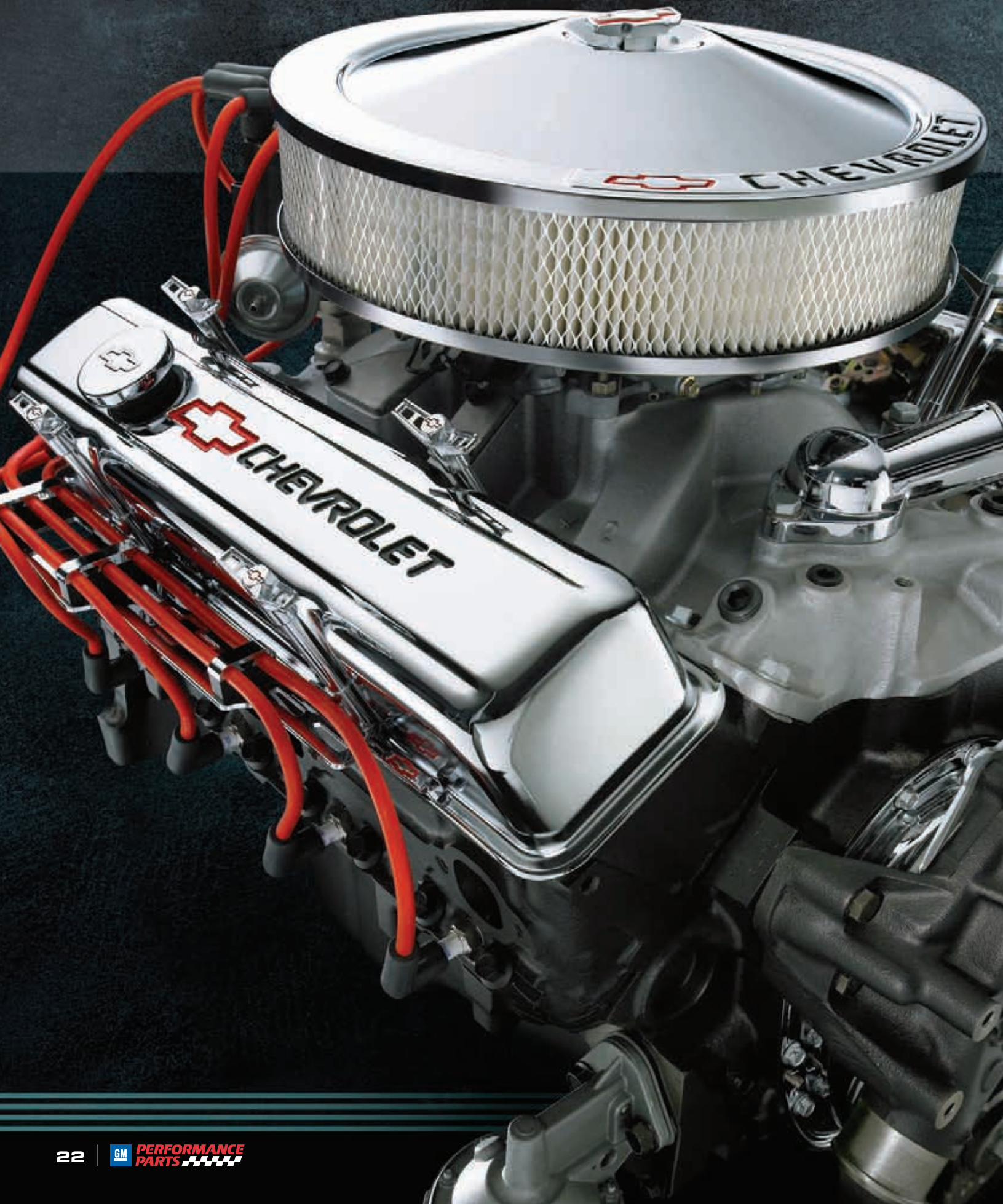
The Deluxe crate engines are essentially ready to fire up, as they ship with the distributor installed, harmonic balancer bolted on and the carburetor in the crate. All you need to do is put the parts together and go!



Turn-Key

We told our engineers to have some fun and assemble engines the way they think it should be done ... we then took their combinations, built them up and put them in a crate that ships right to your dealer. The Turn-Key engines represent an outstanding value, and they are perfect for enthusiasts who have built a chassis and need reliable power to get it down the road.





350/290 HP Deluxe

An Affordable Alternative to Rebuilding!

Forget rebuilds and used engines! The affordable 350/290 HP Deluxe features all-new parts – including the engine block – and comes dressed to impress!

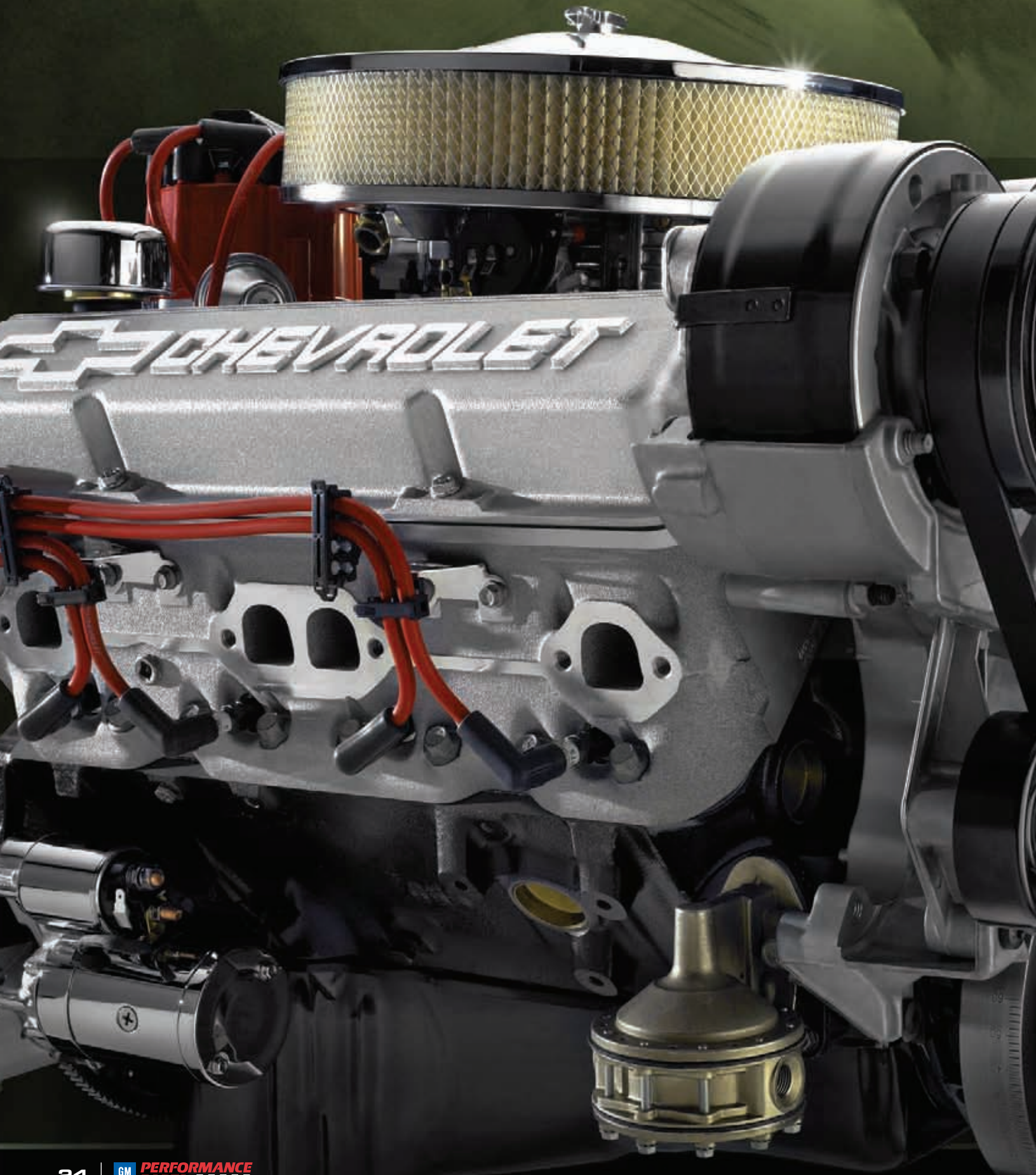
Image shown includes the 350/290 HP Deluxe Engine P/N 19244450 along with the following additional GM Performance Parts:

670-cfm Holley Carburetor	19170092
HEI Distributor	93440806
Push-In Oil Filler Cap	12341993
Chrome Water Neck	12342024
Spark Plug Wires	12361057
Long-Style Water Pump	88894341
Balancer	12551537
High Capacity Fuel Pump	6415325
Chrome, Black/Red Logo Air Cleaner	141-906*
Spark Plug Wire Loom Kit	141-638*

To learn more about this engine, please turn to page 44.

** For more information on these and other Licensed Parts, turn to page 290.*





ZZ4 350

A Crate Engine Classic that's Ready to Run!

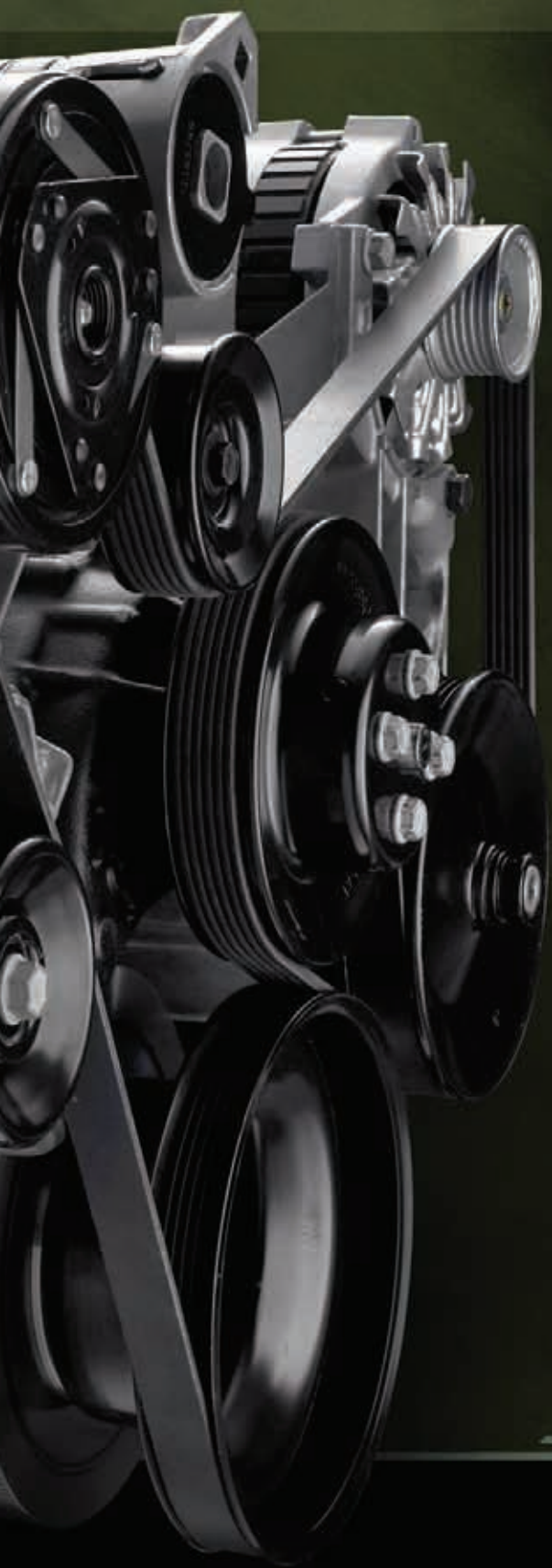
Rated at 355 hp/405 lb.-ft. and including everything needed to get it running – from the carburetor and starter to popular accessories – it's the classic 350 crate engine!

Image shown includes the ZZ4 350 Turn-Key Engine P/N 19201330 along with the following additional GM Performance Parts:

Chrome Air Cleaner and Bowtie Nut	12342071
Billet HEI Distributor	88961867
Aluminum Valve Covers	12480127
Street Performance Fuel Pump	12355612
Chrome High-Torque Mini Starter	12363128
Push-In Oil Filler Cap	12341993
Chrome Water Neck	12342024
Chrome Breather Cap	141-616*

To learn more about this engine, please turn to page 48.

** For more information on these and other Licensed Parts, turn to page 290.*



Ram Jet 350

Vintage Style and Modern Performance!

The performance of electronic fuel injection built into the classic style of vintage mechanical injection. The Ram Jet 350 is tailor-made for resto-mod projects!

Image shown includes the Ram Jet 350 Engine P/N 12499120 along with the following additional GM Performance Parts:

Deluxe Accessory Drive Kit	12497698
Valve Cover Adapters	24502540
Chrome Short Valve Covers	12341670
Push-In Oil Filler Cap	12341993
Chrome Water Neck	12342024
Spark Plug Wire Loom Kit	141-638*
Chrome Breather Cap	141-616*

To learn more about this engine, please turn to page 50.

** For more information on these and other Licensed Parts, turn to page 290.*





ZZ383

The Stroker Small-Block that Performs like a Big-Block!

Its unique long-stroke combination and Fast Burn heads deliver 425 hp and 449 axle-twisting lb.-ft. of torque. That's Big-Block grunt in a Small-Block package. That's the ZZ383!

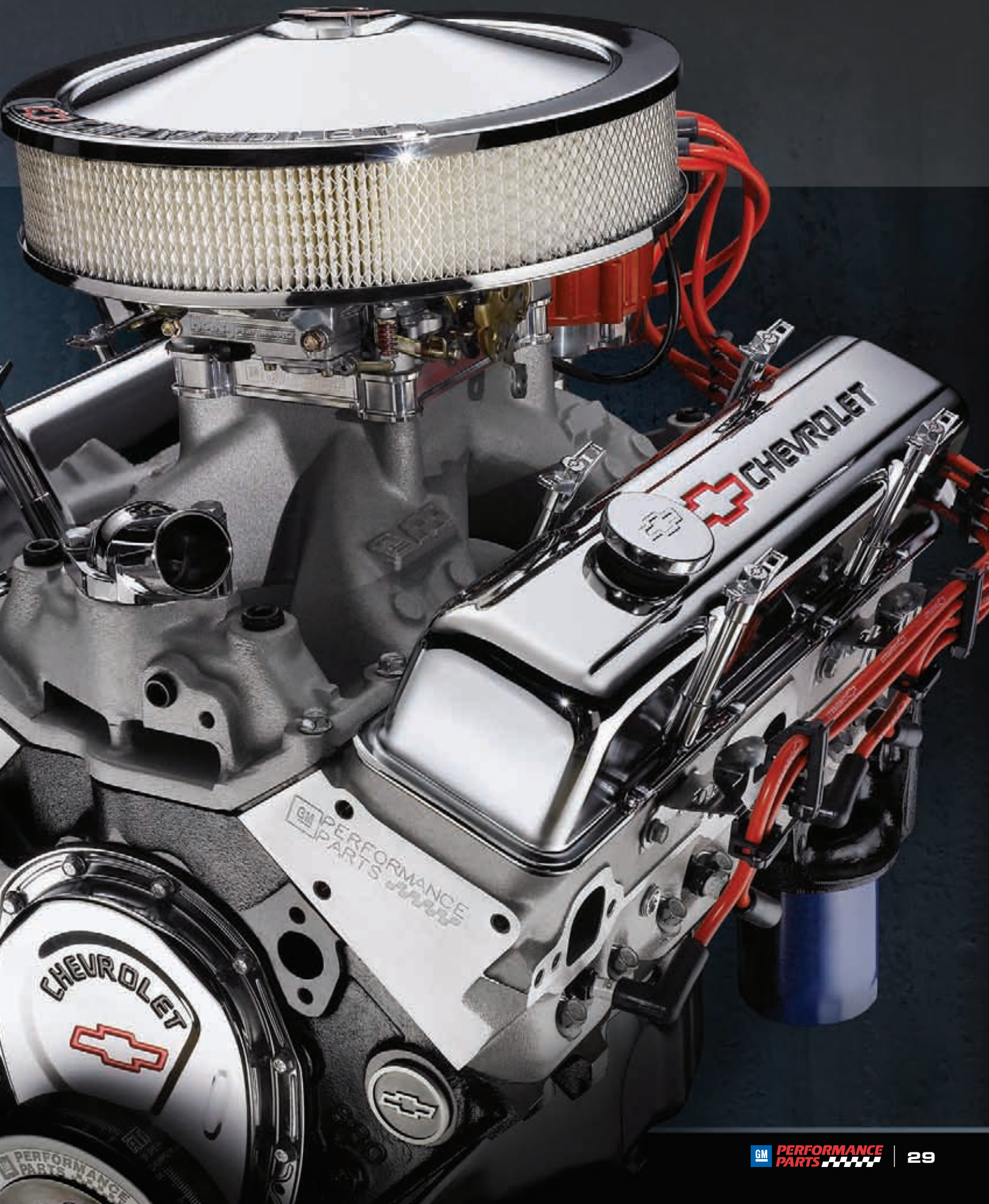
Image shown includes the ZZ383 Engine P/N 12498772 along with the following additional GM Performance Parts:

Distributor	93440806
Holley 670-cfm Carburetor	19170092
Billet HEI Distributor	88961867
Chrome Breather Cap	12341989
Push-In Oil Filler Cap	12341993
Chrome Water Neck	12342024
Spark Plug Wire Set	12361051
Wire Loom Kit	12495502
High Capacity Fuel Pump	6415325
Chrome, Black/Red Logo Air Cleaner	141-906*
Bowtie Air Cleaner Nut	141-322*
Chrome Tall Valve Covers	141-905*
Chrome, Red Logo Valve Cover Hold Down Clamps	141-902*
Chrome, Black/Red Logo Timing Chain Cover	141-904*
Bowtie Logo Freeze Plug Inserts	141-232*

To learn more about this engine, please turn to page 58.

** For more information on these and other Licensed Parts, turn to page 290.*





LS9 6.2L SC

Supercharged Supremacy from the Corvette ZR1!

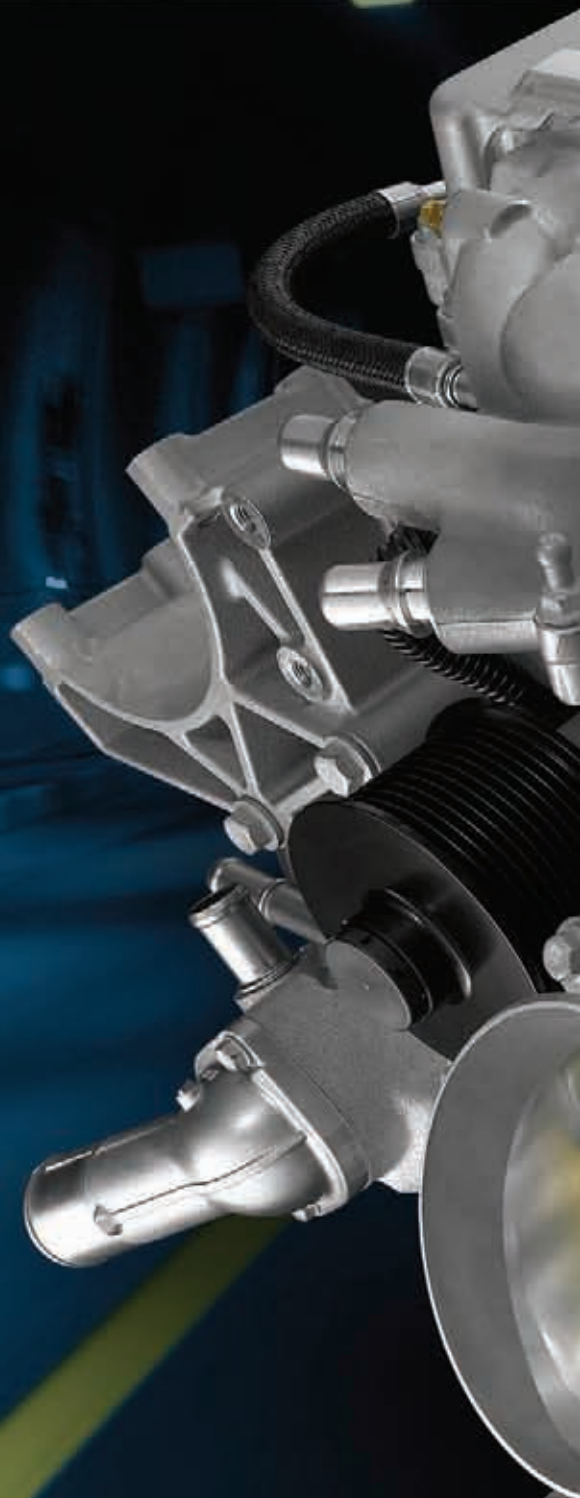
With its supercharger spinning at up to 15,000 rpm and generating more than 10 pounds of boost, the LS9 produces a stunning 638 horsepower! It's the ultimate high-tech crate engine for any project.

Image shown includes the following GM Performance Parts:

LS9 6.2L Crate Engine	19201990
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For complete Front End Accessory Drive, order P/N 19243524 (not shown). See page 216 for details.

To learn more about this engine, please turn to page 78.







LSX376

A Factory-Built Foundation for Forced Induction!

Crank up the boost with the LSX376! Its unique combination includes forged-aluminum pistons designed for supercharging and turbo systems. It's great with nitrous, too!

Image shown includes the LSX376 Engine P/N 19171049 along with the following additional GM Performance Parts:

EFI Intake Manifold Assembly	12610434
Accessory Drive Kit	19155067

To learn more about this engine, please turn to page 84.

LSX454R

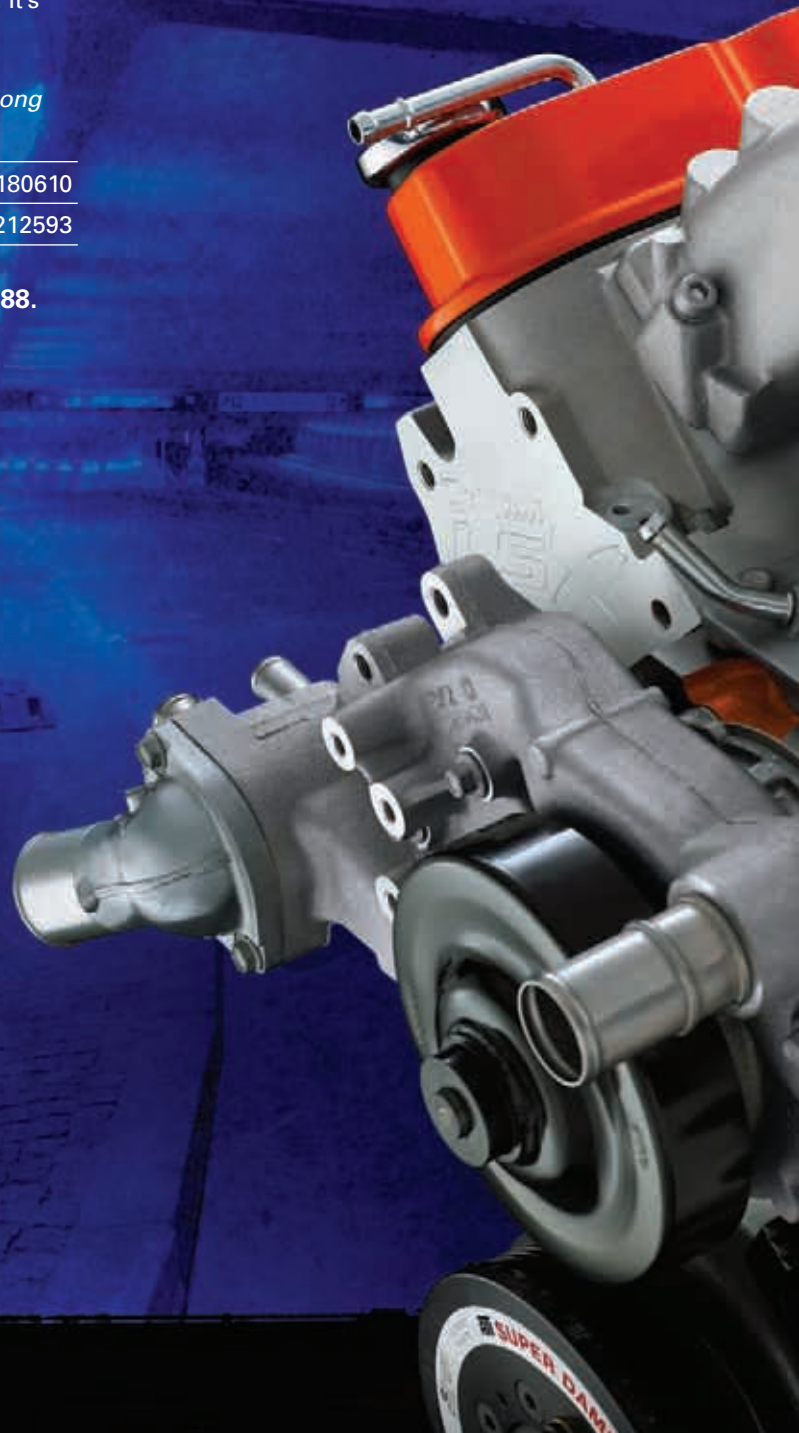
The Most Powerful Crate Engine Ever from GMPP!

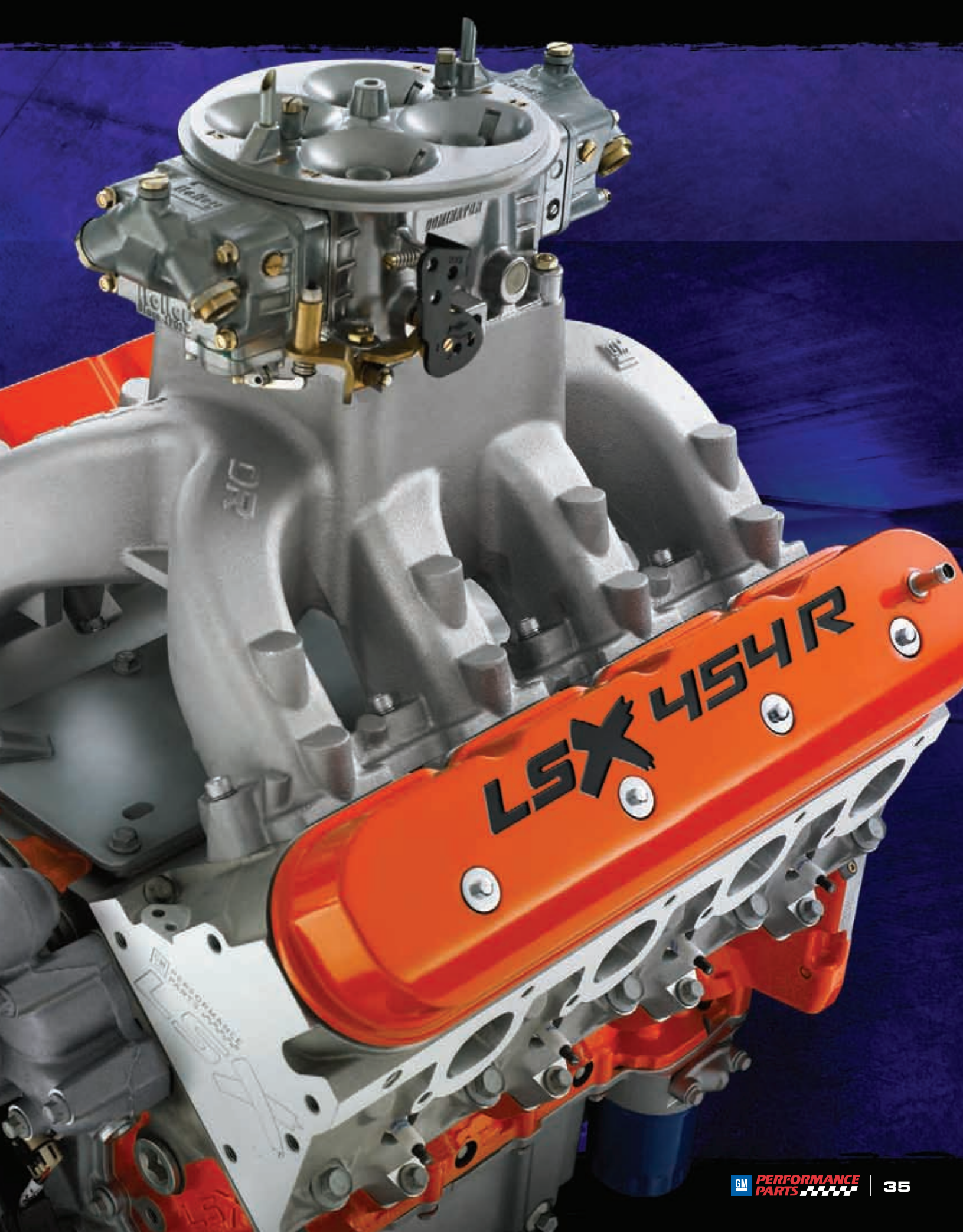
Attention drag racers! The LSX454R cranks out an unprecedented 750+ horsepower in a ready-to-rock racing engine package. It's your ticket to 9-second ETs – and a season of "win" lights!

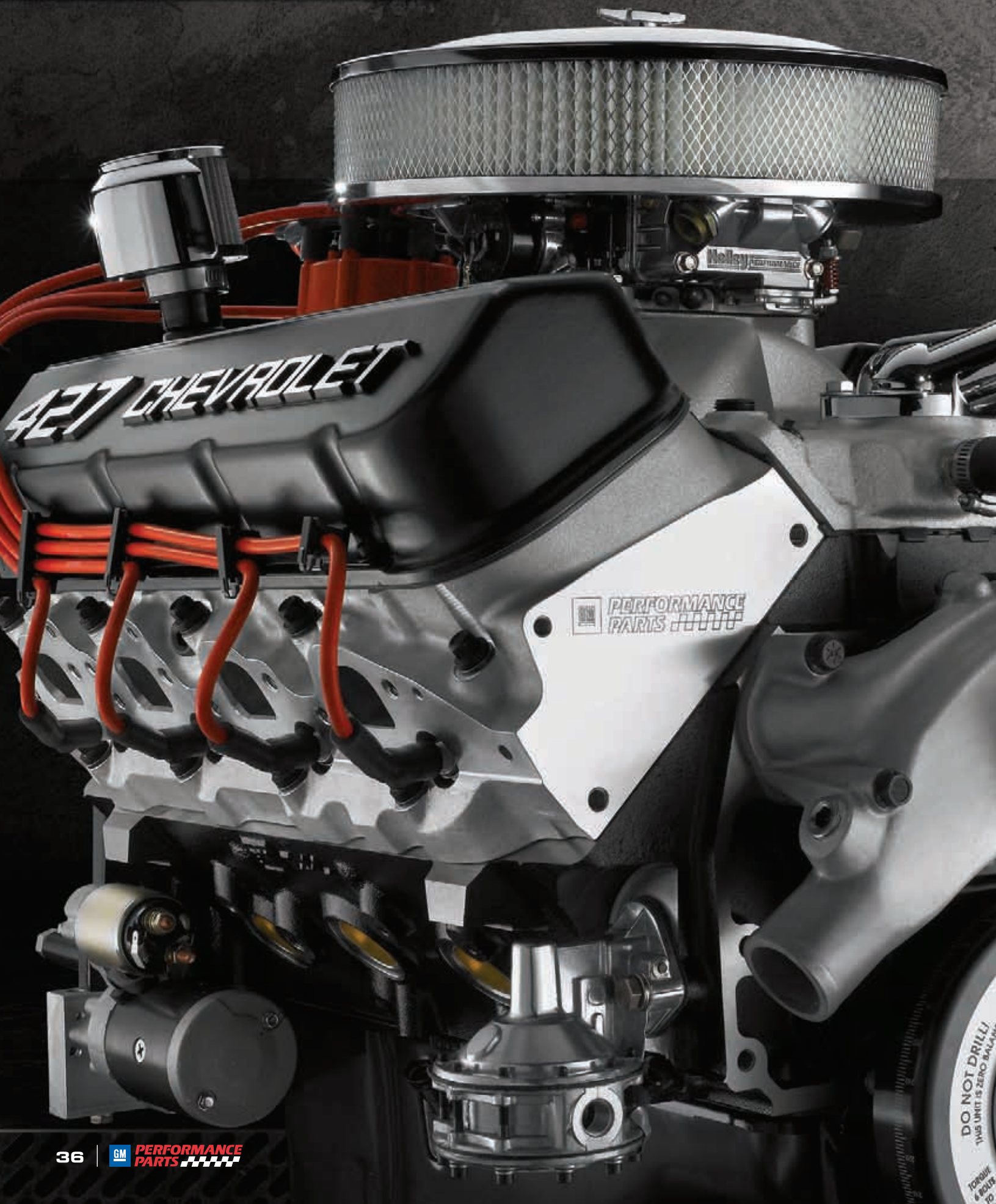
Image shown includes the LSX454R Engine P/N 19257880 along with the following additional GM Performance Parts:

Water Pump	19180610
Muscle Car Oil Pan Kit	19212593

To learn more about this engine, please turn to page 88.







DO NOT DRILL!
THIS UNIT IS ZERO BALANCE
FOR USE
& BOLT

ZZ427/480

The Spirit of the Legendary L88 Lives On!

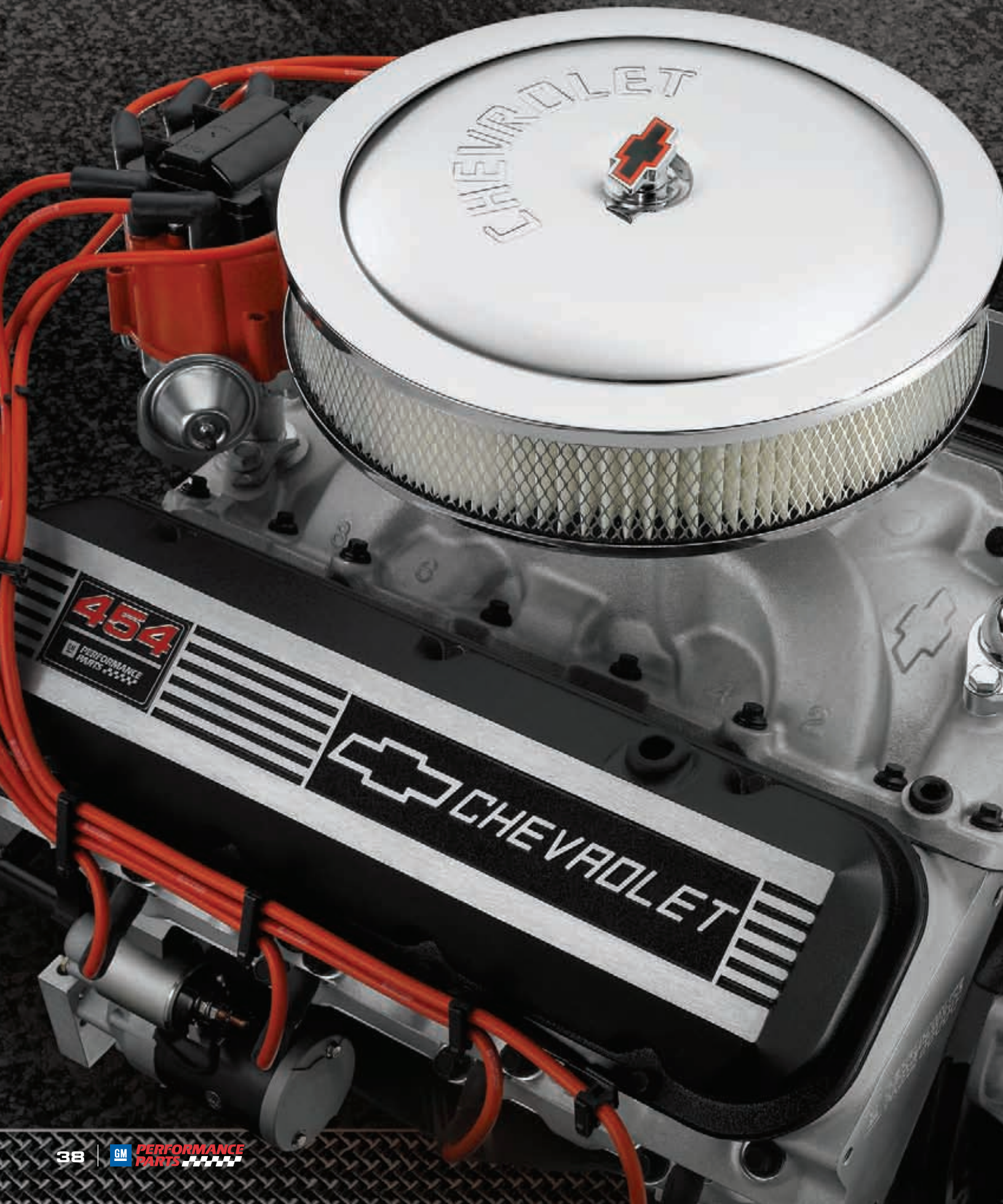
A heritage-inspired interpretation of the legendary L88 427 engine that delivers greater drivability with the same great tire-shredding torque as the original!

Image shown includes the ZZ427/480 Engine P/N 19166393 along with the following additional GM Performance Parts:

Chrome Air Cleaner and Bowtie Nut	12342080
Chrome Water Neck	12342024
High-Torque Mini Starter	12361146
Street Performance Fuel Pump	12355614

To learn more about this engine, please turn to page 94.





ZZ454/440

Big Torque as Only the Big-Block can Deliver!

There's nothing like the feel of 500 lb.-ft. generated by a Big-Block and the ZZ454 delivers it with uncompromising durability and drivability. Experience it yourself!

Image shown includes the ZZ454/440 Engine P/N 12498777 along with the following additional GM Performance Parts:

Chrome Air Cleaner and Bowtie Nut	12342080
Holley 770-cfm Carburetor	19170093
Custom Aluminum Valve Covers	12495488
Valve Cover Badge, 454 GM Performance Parts	12366995
Chrome Water Neck	12342024
Billet HEI Distributor	88961867
Spark Plug Wire Set	12361058
Wire Loom Kit	12495502
Fuel Pump Block-Off Plate	12341999
Aluminum Water Pump	19168602
High-Torque Mini Starter	12361146
Big Block Racing Balancer	88962814

To learn more about this engine, please turn to page 98.



ZZ572/720R

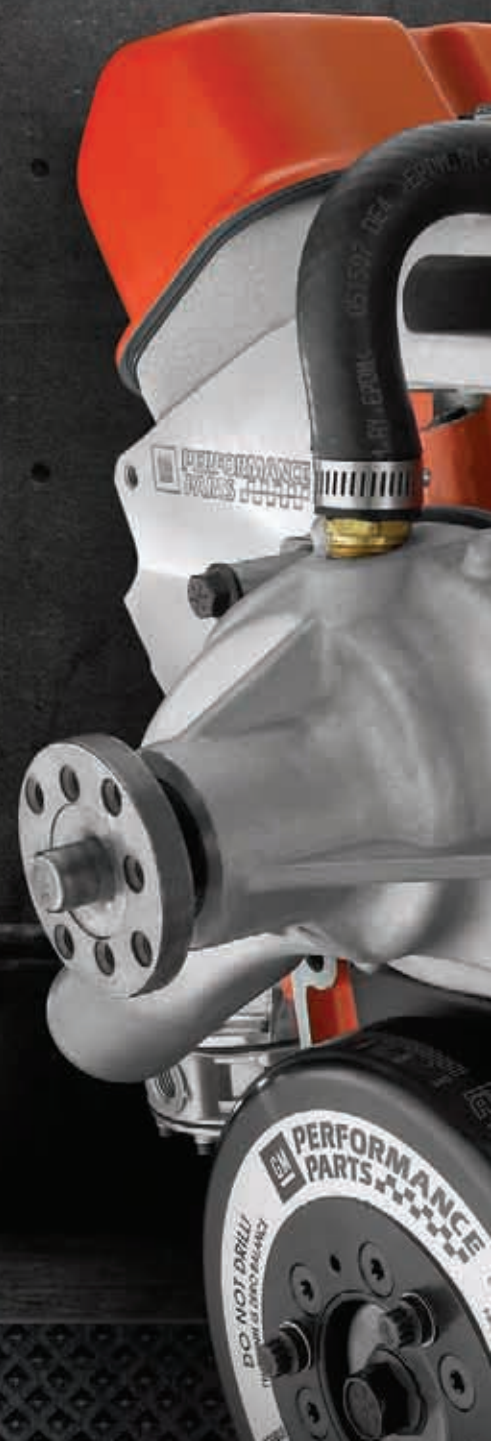
The Ultimate Big-Block Street/Strip Crate Engine!

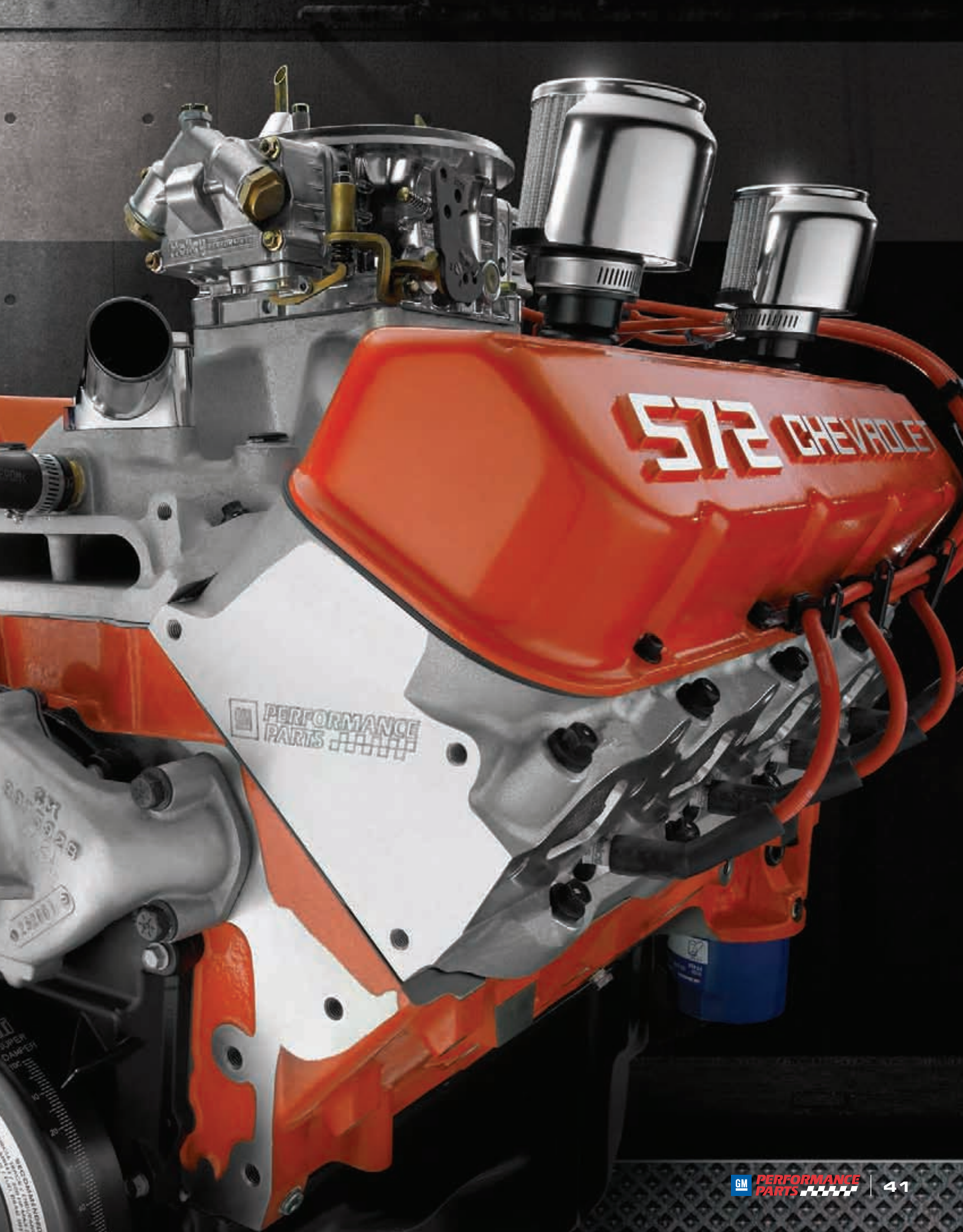
Get your chassis in order! The ZZ572/720R cranks out an amazing 720 hp and 685 lb.-ft. It's all the power you need on the track or the street – as long as your car can handle it!

Image shown includes the ZZ572/720R Deluxe Engine P/N 19201334 along with the following additional GM Performance Parts:

Chrome Water Neck	12342024
Street Performance Fuel Pump	12355614

To learn more about this engine, please turn to page 112.





PERFORMANCE PARTS

5.3 CHEVROLET

Small-Block



An Old Flame That's Never Looked Better

You always remember your first love – and for many of us, it was a car with a classic Chevy Small-Block engine. Maybe it was in show-worthy Malibu or a rusty-but-trusty work truck, but that Small-Block never let you down.

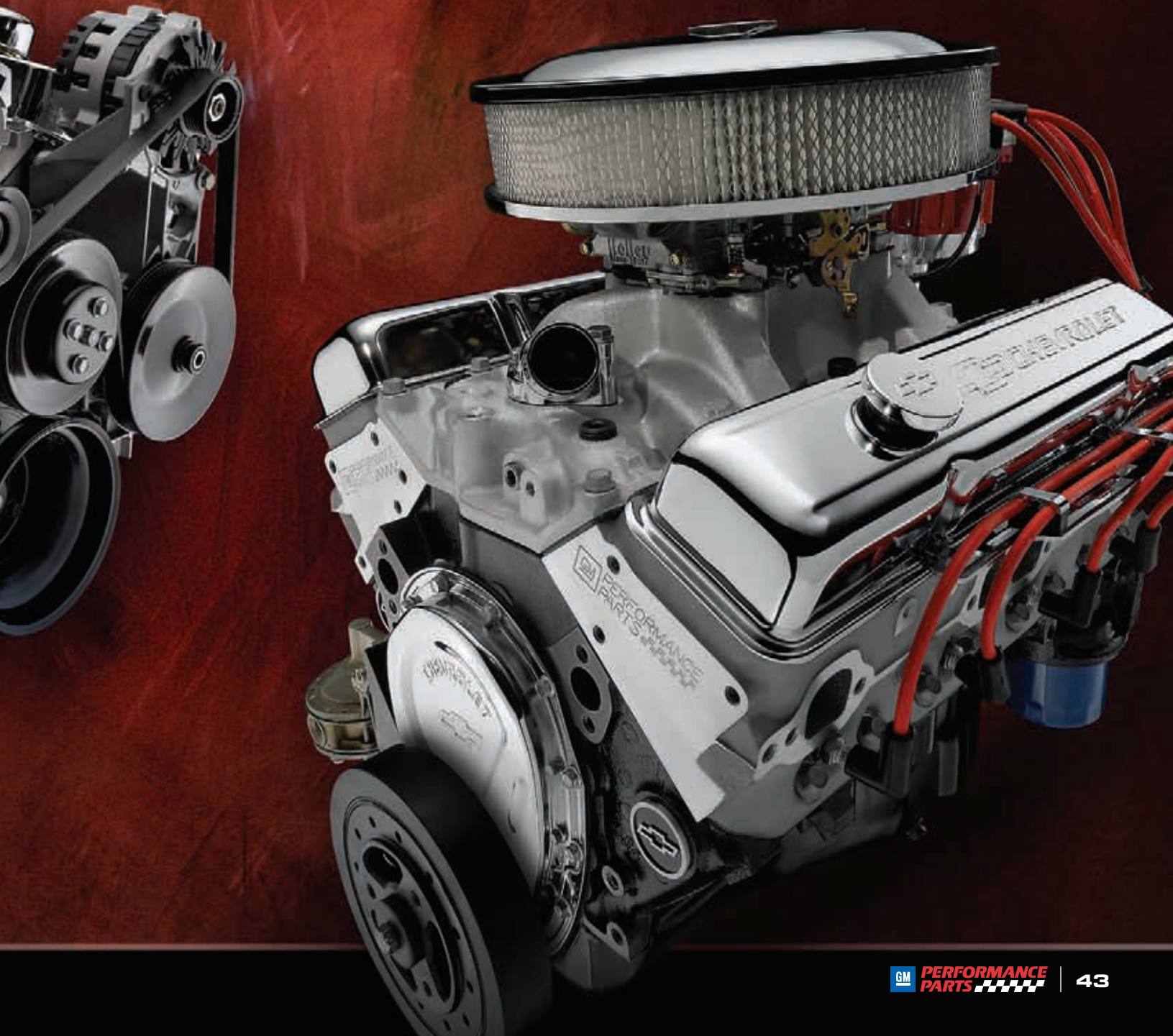
Those formative introductions to Small-Block performance have kept it the engine of choice for enthusiasts of all ages and walks of life – and it's been like that for more than half a century. GM Performance Parts' range of Small-Block crate engines has something for everyone and every budget, from our 350/290 Deluxe budget performer to the high-performance ZZ383 and engines to repower your truck.

All of our crate engines are built with *brand-new* parts, from the cylinder block and rotating assembly to the heads and all

the supporting accessories. Save yourself the time of a rebuild and the uncertainty of a reconditioned used engine. GMPP crate engines are built stronger and most carry a 24-month/50,000-mile (80,000 km) warranty for worry-free performance.

Better still, GMPP has a huge portfolio of parts that will help you build more performance into your new Small-Block, including factory-engineered cylinder heads and camshafts that deliver horsepower without sacrificing drivability. You can top it all off by personalizing your engine from our huge selection of accessories and chrome dress-up parts.

There's no better way to rekindle that old love affair!





350/290 HP Deluxe

19244450   

■ 290 hp @ 5,250 rpm

■ 326 lb.-ft. @ 3,750 rpm

Forget the rebuild – GMPP’s best crate engine value comes with classic chrome style!

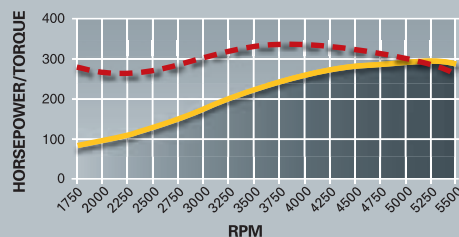
The 350/290 HP Deluxe combines GMPP’s most popular crate engine with an aluminum intake manifold* and chrome dress-up kit to create one of the most stylish and value-driven engines on the market. The chrome dress-up parts include the valve covers (with push-in breathers and “T-bar”-style hold-downs), timing cover and air cleaner.

Like all of GMPP’s crate engines, the 350/290 HP Deluxe starts with a brand-new block. And it’s a strong one, with four-bolt mains. It also includes a smooth hydraulic camshaft and durable aluminum pistons that deliver an 8.5:1 compression ratio. It’s a powerful, durable engine that makes a great alternative to rebuilding with your old two-bolt block.

GMPP has all the parts you need to get your 350/290 HP engine running, too, from the starter and distributor to the plug wires and more. If you want even more power, our high-performance cylinder heads will take this stout Small-Block to the next level.

*GMPP recommends Holley 670-cfm carburetor P/N 19170092 for use with the 350/290 HP Deluxe.

350/290 HP DYNO CHART



Horsepower: 290 @ 5250 rpm Torque (lb-ft): 326 @ 3750 rpm

INSTALLATION NOTES

- Use neutral balance harmonic damper P/N 12551537
- Use internally balanced flexplate P/N 471529 for automatic transmission or flywheel P/N 14085720 for manual transmission (not included)
- Power ratings based on tests with Holley 670-cfm carburetor P/N 19170092 (not included)
- Does not accept GM Performance Parts roller lifter assemblies
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- See the Valve Covers section on page 156 for selection of chrome, polished and aluminum valve covers
- Pre-1986-style 2-pc rear main seal block
- Recommended use in vehicles with 6,000 GVW or less

350/290 HP TECH SPECS

Part Number:	19244450	Camshaft Duration (@.050 in):	222° intake / 222° exhaust
Engine Type:	Chevy Small-Block V-8	Cylinder Heads (P/N 93438648):	Iron; 76cc chambers
Displacement (cu in):	350	Valve Size (in):	1.94 intake / 1.50 exhaust
Bore x Stroke (in):	4.000 x 3.480	Compression Ratio:	8.5:1
Block (P/N 10066034):	Cast-iron with 4-bolt main caps	Rocker Arms (P/N 10089648):	Stamped steel
Crankshaft (P/N 93426651):	Nodular iron	Rocker Arm Ratio:	1.5:1
Connecting Rods (P/N 10108688):	Powdered metal steel	Recommended Fuel:	87 octane
Pistons (P/N 93422884):	Cast-aluminum	Ignition Timing:	Base 10° BTDC, 32° Total
Camshaft Type (P/N 3896962):	Hydraulic flat tappet	Maximum Recommended rpm:	5,300
Camshaft Lift (in):	.450 intake / .4600 exhaust	Balanced:	Internal

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



*Includes chrome air cleaner (not shown)

12499529



350/290 HP

The 350/290 crate engine is also available without the manifold and chrome dress-up kit. Use this even more economical version to build the final combination to your specifications.

24216083

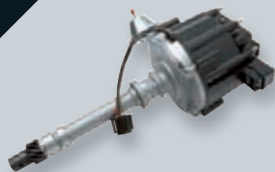


Hydra-Matic 4L60-E Four-Speed Automatic Transmission

Electronically controlled four-speed overdrive transmission. Suitable for engines producing up to 370 lb.-ft. of torque.

See page 125 for details

SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



93440806 HEI Distributor

See page 170 for details



12361146 High-Torque Mini-Starter

See page 276 for details



19212657 Transmission Controller

See page 280 for details



12497698 Serpentine Accessory Drive System

See page 168 for details



12361056 Spark Plug Wires, GM Performance 135° Boot

See page 277 for details



12355612 Fuel Pump, Street Performance

See page 284 for details

SEE PAGE 132 FOR OUR COMPLETE LINE OF SMALL-BLOCK ENGINE COMPONENTS

350 HO Turn-Key



19210009   

■ 330 hp @ 5,000 rpm

■ 380 lb.-ft. @ 3,800 rpm

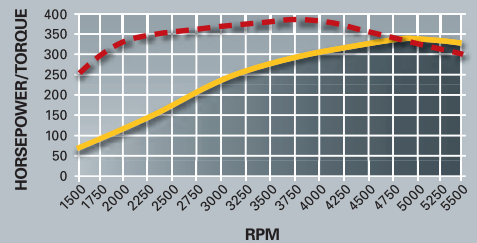
From air cleaner to oil pan, this affordable and powerful 350 comes with it all

The classic 350 Small-Block engine has powered countless project cars since its introduction in the Camaro in 1967 – and it is easy to understand why: it makes great power and torque in a compact, affordable package. That’s exactly what you get in our 350 HO Turn-Key crate engine.

Construction begins with a brand-new engine block with four-bolt mains, which delivers greater strength than that old two-bolt block you were thinking of rebuilding. We also add a set of brand-new Vortec iron heads and a hydraulic flat-tappet camshaft with 0.435/0.460-inch lift specs. It gives the engine the idle quality of a true muscle car without the need for periodic lash adjustments.

As one of GMPP’s Turn-Key engines, the 350 HO Turn-Key comes with the intake manifold and distributor installed. It also includes the carburetor, front-accessory kit, starter, fuel pump and spark plug wires. It’s just about everything you need to get this classic 350 up and running in your project vehicle.

350 HO DYNO CHART



Horsepower: 330 @ 5000 rpm

Torque (lb-ft): 380 @ 3800 rpm

INSTALLATION NOTES

- Comes with externally balanced flexplate for automatic transmission; requires externally balanced flywheel for manual transmission. See chart on page 165
- Has right-side oil dipstick
- Requires fuel line from fuel pump to carburetor
- Fuel pump pressure is pre-set; fuel pressure regulator not required
- Some assembly and minor engine tuning required
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

350 HO TECH SPECS

Part Number:	19210009	Cylinder Heads (P/N 12558060):	Vortec iron; 64cc chambers
Engine Type:	Chevy Small-Block V-8	Valve Size (in):	1.940 intake / 1.500 exhaust
Displacement (cu in):	350	Compression Ratio:	9.1:1
Bore x Stroke (in):	4.000 x 3.480	Rocker Arms (P/N 10089648):	Stamped steel
Block (P/N 10105123):	Cast-iron with 4-bolt main caps	Rocker Arm Ratio:	1.5:1
Crankshaft (P/N 14088526):	Nodular iron	Water Pump (P/N 88894341):	Cast iron, long-style
Connecting Rods (P/N 10108688):	Powdered metal steel	Flexplate (P/N 14088765):	12.750"
Pistons (P/N 12514101):	Cast-aluminum	Recommended Fuel:	92 octane
Camshaft Type (P/N 24502476):	Hydraulic flat tappet	Ignition Timing:	Base 10° BTDC, 32° Total
Camshaft Lift (in):	.435 intake / .460 exhaust	Maximum Recommended rpm:	5,500
Camshaft Duration (@.050 in):	212° intake / 222° exhaust	Balanced:	External

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



19210008   

350 HO Deluxe

Like the 350 HO Turn-Key crate engine, the 350 HO Deluxe is rated at 330 horsepower and 380 lb.-ft. of torque. The intake manifold, carburetor and distributor are included, but not installed.



19210007   

350 HO Base

All the same, important, power-building elements as the Turn-Key and Deluxe versions, but it comes without an intake manifold, carburetor or distributor.

SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



24216083
Hydra-Matic 4L60-E
Four-Speed Automatic
Transmission

See page 125
for details



19212657
Transmission
Controller

See page 280
for details



12361146
High-Torque
Mini-Starter

See page 276
for details



12497985
Chrome-Finish
Aluminum Valve Covers,
Center Bolt Design

See page 157
for details



12497979
Aluminum Black
Crinkle Valve Covers,
Center Bolt Design

See page 157
for details



12342024
Chrome Water
Neck

See page 176
for details

ZZ4 350 Turn-Key



19201330

■ 355 hp @ 5,400 rpm

■ 405 lb.-ft. @ 3,600 rpm

Affordable high-performance with everything you need to get running!

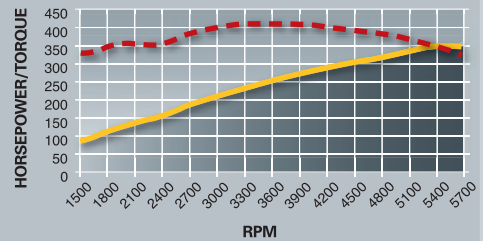
The ZZ4 350 crate engine is GMPP's original affordable crate engine. In Turn-Key form, it comes with everything you need to get it running in your project vehicle.

High-flow aluminum heads are the keys to the ZZ4's robust 355 hp and 405 lb.-ft. of torque. They boast 163cc intake runners, raised exhaust ports and tight, 58cc combustion chambers that enhance compression and power. The heads feature 1.94/1.50-inch valves for efficient performance.

The rest of the ZZ4 350 is comprised of premium materials, including a brand-new, four-bolt block, forged steel crankshaft, high-silicon pistons and a hydraulic roller camshaft. It also includes an aluminum intake, Holley four-barrel carburetor and HEI distributor, as well as a starter, water pump, fuel pump and front-end accessory drive kit – including an air conditioning compressor, alternator and more!

If you want to finish off the engine yourself, try the ZZ4 350 Base engine (P/N 24502609) at a lower price. It includes only the intake manifold, distributor, water pump, damper and flexplate.

ZZ4 350 DYNO CHART



Horsepower: 355 @ 5400 rpm Torque (lb-ft): 405 @ 3600 rpm

INSTALLATION NOTES

- Comes with 12.75-inch externally balanced 153-tooth automatic transmission flexplate. Change to externally balanced flywheel for manual transmission applications. See chart on page 165
- Requires fuel line from fuel pump to carburetor
- Fuel pump pressure is pre-set; fuel pressure regulator not required
- Some assembly and minor engine tuning required
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

ZZ4 350 TECH SPECS

Part Number:	19201330	Camshaft Duration (@.050 in):	208° intake / 221° exhaust
Engine Type:	Chevy Small-Block V-8	Cylinder Heads (P/N 12556463):	Aluminum; 58cc chambers
Displacement (cu in):	350	Valve Size (in):	1.940 intake / 1.500 exhaust
Bore x Stroke (in):	4.000 x 3.480	Compression Ratio:	10:1
Block (P/N 10105123):	Cast-iron with 4-bolt main caps	Rocker Arms (P/N 10089648):	Stamped steel
Crankshaft (P/N 12556307):	Forged steel	Rocker Arm Ratio:	1.5:1
Connecting Rods (P/N 10108688):	Powdered metal steel	Recommended Fuel:	92 octane
Pistons (P/N 10159436):	High-silicon aluminum with offset pins	Ignition Timing:	Base 10° BTDC, 32° Total
Camshaft Type (P/N 10185071):	Steel hydraulic roller	Maximum Recommended rpm:	5,800
Camshaft Lift (in):	.474 intake / .510 exhaust	Balanced:	External

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



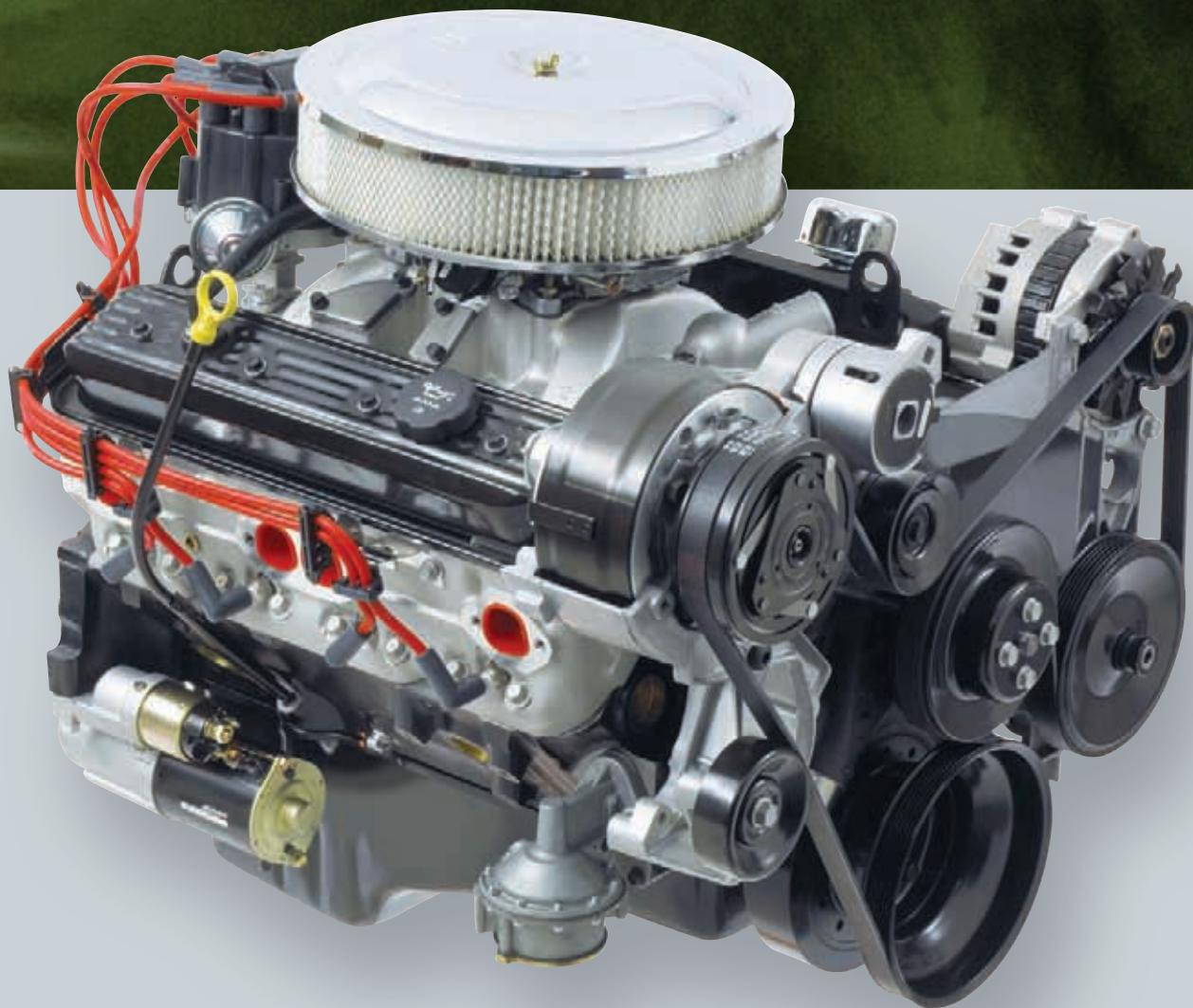
Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



24502609

ZZ4 350 Base

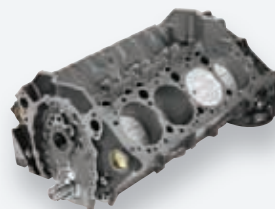
GM Performance Parts offers the ZZ4 350 Base crate engine for customers who want to finish it off with their own accessories. It includes the intake manifold, HEI distributor, cast-iron water pump, damper and flexplate.



12561723

ZZ4 Partial Engine

For customers in search of a replacement Partial Engine for their ZZ-series engine, this is it! It includes the ZZ4 350's bottom end, with forged steel crankshaft, LT1-style high-silicon aluminum pistons and connecting rods.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



24216083
Hydra-Matic 4L60-E
Four-Speed Automatic
Transmission (Gen 0/1)
*See page 125
for details*



19212657
Transmission
Controller
*See page 280
for details*



19210728
Roller Rocker Arm
Set, 1.5:1 Ratio
*See page 155
for details*



12342024
Chrome Water
Neck
*See page 176
for details*



12497979
Aluminum Black
Crinkle Valve Covers,
Center Bolt Design
*See page 157
for details*



12497985
Chrome-Finish
Aluminum Valve Covers,
Center Bolt Design
*See page 157
for details*

SEE PAGE 132 FOR OUR COMPLETE LINE OF SMALL-BLOCK ENGINE COMPONENTS



Ram Jet 350

12499120

■ 350 hp @ 5,200 rpm

■ 400 lb.-ft. @ 3,500 rpm

Modern performance with vintage style!

GM Performance Parts' unique Ram Jet 350 combines the classic look of the original Rochester mechanical injection system with the dependability and optimized performance of contemporary electronic port fuel injection.

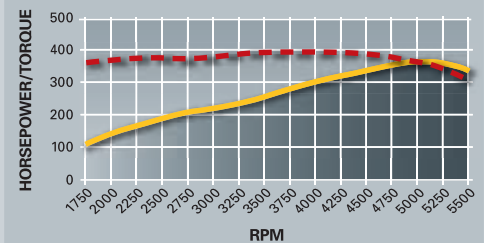
We've taken our proven 350 Small-Block and topped it with an exclusive port fuel injection system that emulates the look of Chevy's factory fuel injection systems from the 1950s and '60s. It's the perfect choice for a resto-mod hot rod from the original Rochester era.

We deliver the Ram Jet 350 with the following components to make it easier to install and start:

- Unique intake manifold and plenum that is 9.75 inches tall – plenty of clearance to fit under the hood of most vehicles without modifications
- MEFI 4 engine controller
- Wiring harness
- Detailed instructions

The bottom end of the engine is our stout 350 with a brand-new block, a hydraulic roller cam, Vortec iron heads and a pump-gas-friendly 9.4:1 compression ratio.

RAM JET 350 DYNO CHART



Horsepower: 350 @ 5200 rpm

Torque (lb-ft): 400 @ 3500 rpm

INSTALLATION NOTES

- Comes with externally balanced, manual transmission flywheel; change to externally balanced flexplate for automatic transmission applications. See chart on page 165
- Installer to supply 12-volt power source and fuel
- See instructions for fuel pump recommendation
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- IMPORTANT! For a safe, proper and trouble-free engine break-in, the MEFI 4 computer has a "green" mode that controls rpm during the break-in period. During this period, engine speed is limited to 4,000 rpm in the first hour, 4,500 rpm in the second hour and 5,500 rpm in the third hour

RAM JET 350TECH SPECS

Part Number:	12499120	Camshaft Duration (@.050 in):	196° intake / 206° exhaust
Engine Type:	Chevy Small-Block V-8	Cylinder Heads (P/N 12558060):	Vortec iron; 64cc chambers
Displacement (cu in):	350	Valve Size (in):	1.940 intake / 1.500 exhaust
Bore x Stroke (in) :	4.000 x 3.480	Compression Ratio:	9.4:1
Block:	Cast iron with 2-bolt main caps	Rocker Arms (P/N 12367346):	Aluminum roller style
Crankshaft (P/N 10243068):	Cast-iron	Rocker Arm Ratio:	1.6
Connecting Rods (P/N 10108688):	Powdered metal steel	Recommended Fuel:	92 octane
Pistons (P/N 88894280):	Hypereutectic aluminum	Ignition Timing:	Base 10° BTDC, 32° Total
Camshaft Type (P/N 14097395):	Hydraulic roller	Maximum Recommended rpm:	5,500
Camshaft Lift (in):	.460 intake / .481 exhaust	Balanced:	External

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



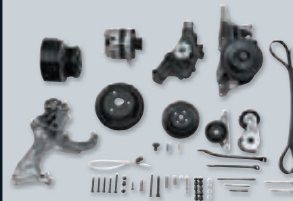
GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH YOUR RAM JET 350 CRATE ENGINE AND GET IT RUNNING IN LESS TIME!



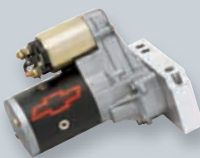
24216083
Hydra-Matic 4L60-E Four-Speed Automatic Transmission
 Electronically controlled four-speed over-drive transmission. Suitable for engines producing up to 370 lb.-ft. of torque.
See page 125 for details



12497698
Serpentine Accessory Drive System
 The complete kit you need to finish off the crate engine in your vehicle.
See page 168 for details



19212657
Transmission Controller
See page 280 for details



12361146
High-Torque Mini-Starter
See page 276 for details



12341670
Chrome Short Valve Covers
See page 156 for details



12497985
Chrome-Finish Aluminum Valve Covers, Center Bolt Design
See page 157 for details



12342024
Chrome Water Neck
See page 176 for details



10465143
Lightweight Starter (remanufactured)
See page 276 for details

SEE PAGE 132 FOR A COMPLETE LIST OF COMPONENTS AND ACCESSORIES.



Fast Burn 385 Turn-Key

19201331

■ 385 hp @ 5,600 rpm

■ 385 lb.-ft. @ 4,000 rpm

Power-building 'Fast Burn' heads matched with the ZZ4 short-block delivers stunning Small-Block performance!

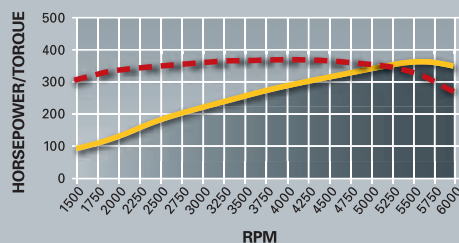
Our engineers grafted the bottom end of the legendary ZZ4 with the horsepower-building Fast Burn cylinder heads to create the Fast Burn 385. The result is 385 horsepower and a satisfying 385 lb.-ft. of torque – with no less than 300 lb.-ft. from 1,500 rpm to 5,700 rpm.

The foundation is a sturdy iron block with four-bolt mains, a forged steel crankshaft, an aggressive hydraulic roller camshaft and durable high-silicon pistons. As a Turn-Key crate engine, it comes with the distributor, carburetor and balancer installed – along with a starter, fuel pump, air conditioning pump, alternator, front-end accessory drive kit and more – all in one convenient, all-inclusive package!

The lightweight, Vortec-style Fast Burn aluminum heads have large, 210cc intake runners and 2.00/1.55-inch valves. Their 62cc combustion chambers are uniquely shaped to promote quicker, more complete combustion.

If you want to finish off the engine yourself, try the Fast Burn 385 Base engine (P/N 12496769) at a lower price. It includes only the intake manifold, distributor, water pump, damper and flexplate.

FAST BURN 385 DYNO CHART



Horsepower: 385 @ 5600 rpm Torque (lb-ft): 385 @ 4000 rpm

INSTALLATION NOTES

- Comes with 12.750-inch externally balanced 153-tooth automatic transmission flexplate. Change to externally balanced flywheel for manual transmission applications. See chart on page 165
- Requires fuel line from fuel pump to carburetor
- Fuel pump pressure is pre-set; fuel pressure regulator not required
- Some assembly and minor engine tuning required
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

FAST BURN 385 TECH SPECS

Part Number:	19201331	Cylinder Heads (P/N 12464298):	Fast Burn aluminum;
Engine Type:	Chevy Small-Block V-8		62cc chambers
Displacement (cu in):	350	Valve Size (in):	2.000 intake / 1.550 exhaust
Bore x Stroke (in):	4.000 x 3.480	Compression Ratio:	9.6:1
Block (P/N 10105123):	Cast-iron with 4-bolt main caps	Rocker Arms (P/N 10089648):	Stamped steel
Crankshaft (P/N 12556307):	Forged steel	Rocker Arm Ratio:	1.5:1
Connecting Rods (P/N 10108688):	Powdered metal steel	Recommended Fuel:	92 octane
Pistons (P/N 10159436):	Hypereutectic aluminum	Ignition Timing:	Base 10° BTDC, 32° Total
Camshaft Type (P/N 10185071):	Hydraulic roller	Maximum Recommended rpm:	5,800
Camshaft Lift (in):	.474 intake / .510 exhaust	Balanced:	External
Camshaft Duration (@.050 in):	208° intake / 221° exhaust		

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpformanceparts.com




GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



12496769   

Fast Burn 385 Base

It has the same forged crankshaft, hydraulic roller cam and high-flow Fast Burn heads as the Turn-Key crate engine—but delivered without the carburetor, fuel pump, starter and other accessories.



12561723   

ZZ4 Partial Engine

The Fast Burn 385 is based on the popular ZZ4 engine and this partial engine assembly includes the forged steel crankshaft, LT1-style high-silicon pistons and connecting rods.

SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



24216083
Hydra-Matic 4L60-E
Four-Speed Auto-
matic Transmission

See page 125
for details



19212657
Transmission
Controller

See page 280
for details



12497985
Chrome-Finish
Aluminum Valve Covers,
Center Bolt Design

See page 157
for details



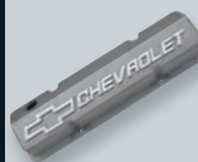
19210728
Roller Rocker Arm
Set, 1.5:1 Ratio

See page 155
for details



12342024
Chrome Water
Neck

See page 176
for details



12480127
Short Aluminum
Valve Covers

See page 156
for details

SEE PAGE 132 FOR OUR COMPLETE LINE OF SMALL-BLOCK ENGINE COMPONENTS

HT383



12499101   

■ 340 hp @ 4,500 rpm

■ 435 lb.-ft. @ 4,000 rpm

Extra cubic inches deliver greater torque for your truck!

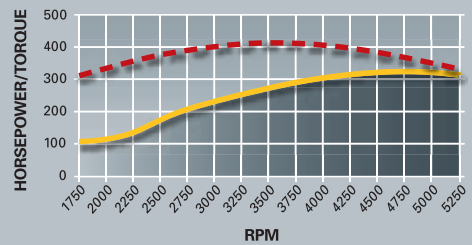
Got a pre-1980 GM truck with a tired Small-Block? Forget the rebuild or reconditioned used engine and take your trusty truck's capability to the next level with our big-torque HT383 stroker crate engine.

Its extra displacement and unique parts are designed to build a wide, flat torque curve that hits the 400 lb.-ft. mark by 2,500 rpm and doesn't dip below it through the 4,000 rpm peak (435 lb.-ft.). It also makes 340 horsepower. That's power and torque you simply won't get with a stock-type rebuild.

The HT383 features a brand-new engine block with four-bolt mains – an upgrade for most production engines that came with two-bolt mains – along with a forged steel crankshaft and a smooth hydraulic roller camshaft. Its 9.1:1 compression ratio allows it to run on regular unleaded gasoline, too.

We deliver the HT383 with an aluminum intake manifold, ready for you to swap over the accessories from your tired engine. It's also backed by a 24-month/50,000-mile (80,000 km) limited warranty.

HT383 DYNO CHART



Horsepower: 340 @ 4500 rpm

Torque (lb.-ft.): 435 @ 4000 rpm

INSTALLATION NOTES

- Requires addition of carburetor, ignition and starter (not included)
- Rochester Quadrajet or Holley 770-cfm carburetor recommended
- Comes with 12.75-inch externally balanced 153-tooth automatic transmission flexplate. Requires externally balanced flywheel for manual transmission. See chart on page 165
- Has right-side oil dipstick
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

HT383 TECH SPECS

Part Number:	12499101	Cylinder Heads (P/N 12558060):	Vortec iron; 64cc chambers
Engine Type:	Chevy Small-Block V-8	Valve Size (in):	1.940 intake / 1.500 exhaust
Displacement (cu in):	383	Compression Ratio:	9.1:1
Bore x Stroke (in):	4.000 x 3.800	Rocker Arms (P/N 10089648):	Stamped steel
Block (P/N 88962516):	Cast-iron with 4-bolt main caps	Rocker Arm Ratio:	1.5:1
Crankshaft (P/N 12489436):	4340 forged steel	Water Pump (P/N 88894341):	Cast iron
Connecting Rods (P/N 12497624):	Heavy-duty PM steel	Recommended Fuel:	87 octane
Pistons (P/N 12499103):	Hypereutectic aluminum	Ignition Timing:	Base 10° BTDC, 32° Total
Camshaft Type (P/N 14097395):	Hydraulic roller	Maximum Recommended rpm:	5,000
Camshaft Lift (in):	.4310 intake / .4510 exhaust	Balanced:	External
Camshaft Duration (@.050 in):	196° intake / 206° exhaust		

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpartsparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



12499106   

383 Partial Engine

It comes with 4.000-inch-bore/3.800-inch-stroke reciprocating assembly already installed, including a forged steel crankshaft, heavy-duty connecting rods and durable aluminum-alloy pistons.



24216083

Hydra-Matic 4L60-E Four-Speed Automatic Transmission

Electronically controlled four-speed overdrive transmission. Suitable for engines producing up to 370 lb.-ft. of torque.



See page 125 for details

SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19212657
Transmission Controller

See page 280 for details



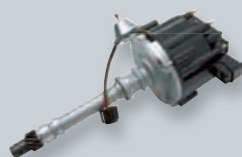
19170092
Carburetor, Holley 670-cfm

See page 282 for details



12497979
Aluminum Black Crinkle Valve Covers, Center Bolt Design

See page 157 for details



93440806
HEI Distributor

See page 170 for details



10465143
Lightweight Starter (remanufactured)

See page 280 for details



12497985
Chrome-Finish Aluminum Valve Covers, Center Bolt Design

See page 157 for details

SEE PAGE 132 FOR OUR COMPLETE LINE OF SMALL-BLOCK ENGINE COMPONENTS

HT383E



17800393   

■ 340 hp @ 4,500 rpm

■ 435 lb.-ft. @ 4,000 rpm

10% Greater hp than stock! A high-torque direct replacement for 1996-99 GM full-size trucks and SUVs

GM Performance Parts' HT383E crate engine is an affordable and more powerful emissions-legal direct replacement for the tired 350 engine in your 1996-99 full-size GM truck or SUV. The larger displacement delivers up to 10 percent more horsepower and more usable torque for effortless towing. It is extra power you won't get with a stock-type rebuild or reconditioned used engine.

The HT383E is designed to replace the L31 5.7-liter engine in half-ton models of the Silverado, Suburban, Tahoe, Sierra and Yukon. You simply swap the intake manifold, throttle body, exhaust manifolds and other accessories from your old 350 onto the HT383E and install it in your truck with no further modifications.

The engine uses a brand-new four-bolt-main block, a forged steel crankshaft, a smooth roller camshaft and durable iron Vortec heads, helping it deliver the dependable power you expect from the venerable small-block V-8. It even comes with a new distributor, water pump and other components that would be replaced during a rebuild.

GREATER TORQUE – ENHANCED TOWING

BETTER ALTERNATIVE TO A REBUILD

INCLUDES ALL NEW PARTS

INSTALLATION NOTES

- Requires the reuse of the stock intake manifold, wiring harness, and fuel injection system
- Due to calibration variances between half-, three-quarter- and one-ton vehicles, this engine is designed for half-ton trucks and SUVs only
- This engine is not emissions-legal in CA, CT, ME, MA, NJ, NY, RI or VT
- Comes with 12.75-inch externally balanced 153-tooth automatic transmission flexplate. Requires externally balanced flywheel for manual transmission. See chart on page 165
- Has right-side dipstick
- Not available as a Partial
- Performance recalibration of ECU will significantly increase torque and horsepower

HT383E TECH SPECS

Part Number:	17800393	Camshaft Duration (@.050 in):	196° intake / 206° exhaust
Engine Type:	Chevy Small-Block V-8	Cylinder Heads (P/N 12558060):	Vortec iron; 64cc chambers
Displacement (cu in):	383	Valve Size (in):	1.940 intake / 1.500 exhaust
Bore x Stroke (in):	4.000 x 3.800	Compression Ratio:	9.1:1
Block (P/N 88962516):	Cast-iron with 4-bolt main caps	Rocker Arms (P/N 10089648):	Stamped steel
Crankshaft (P/N 12489436):	4340 forged steel	Rocker Arm Ratio:	1.5:1
Connecting Rods (P/N 12497624):	Heavy-duty PM steel	Water Pump (P/N 88894341):	Cast-iron
Pistons (P/N 12499103):	Hypereutectic aluminum	Recommended Fuel:	87 octane
Camshaft Type (P/N 14097395):	Hydraulic roller	Maximum Recommended rpm:	5,000
Camshaft Lift (in):	.431 intake / .451 exhaust	Balanced:	External

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



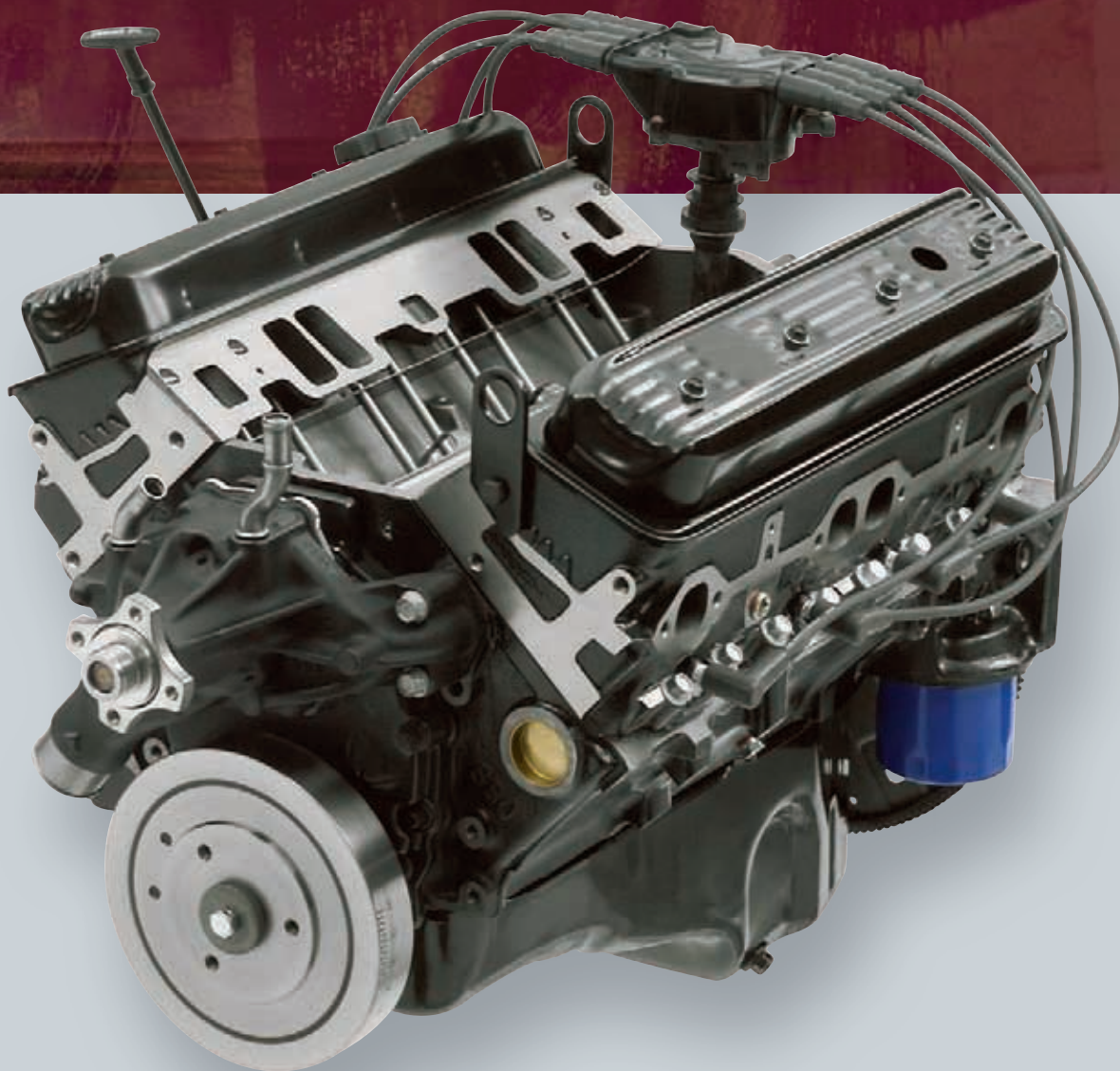
Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



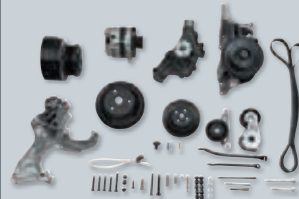
GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



24216083
Hydra-Matic 4L60-E Four-Speed Automatic Transmission
 Electronically controlled four-speed over-drive transmission. Suitable for engines producing up to 370 lb.-ft. of torque.
See page 125 for details



12497698
Serpentine Accessory Drive System
 The complete kit you need to finish off the crate engine in your vehicle.
See page 168 for details



19212657
Transmission Controller
See page 280 for details



12361056
Spark Plug Wires, GM Performance 135° Boot
See page 277 for details



12497979
Aluminum Black Crinkle Valve Covers, Center Bolt Design
See page 157 for details



10465143
Lightweight Starter (remanufactured)
See page 280 for details



19210728
Roller Rocker Arm Set, 1.5:1 Ratio
See page 155 for details



12497985
Chrome-Finish Aluminum Valve Covers, Center Bolt Design
See page 157 for details

SEE PAGE 132 FOR OUR COMPLETE LINE OF SMALL BLOCK ENGINE COMPONENTS

ZZ383



12498772   

■ 425 hp @ 5,400 rpm

■ 449 lb.-ft. @ 4,500 rpm

The classic Small-Block stroker as only GMPP can do it!

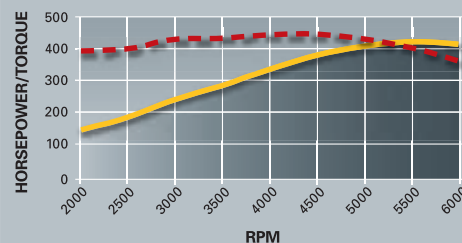
The ZZ383 delivers Big-Block power with Small-Block efficiency. We use the sturdy 383 bottom end, including a brand-new block with four-bolt mains; a forged crankshaft and heavy-duty rods, and finish it off with Fast Burn cylinder heads to enable 425 horsepower and 449 lb.-ft. of torque.

The Fast Burn heads use high-flow intake runners, 2.00/1.55-inch valves and a unique combustion chamber design to process air quickly and efficiently. A roller camshaft with more than 0.500-inch lift on both the intake and exhaust sides helps this potent engine maximize airflow. It is complemented by friction-reducing aluminum roller-tip rocker arms.

The ZZ383 comes in Base crate engine form, with a cast iron water pump and balancer. The induction system, ignition system and other accessories must be purchased separately. Use high-rise intake P/N 12496822 and Holley 770-cfm four-barrel carburetor P/N 19170093 to achieve the listed horsepower and torque ratings.

Your GM Performance Parts dealer has everything you need to finish off the engine – including chrome dress-up parts!

ZZ383 DYNO CHART



Horsepower: 425 @ 5400 rpm Torque (lb.-ft.): 449 @ 4500 rpm

INSTALLATION NOTES

- Requires addition of carburetor, ignition, intake manifold, fuel pump, and starter (not included)
- 425-horsepower rating achieved during GM testing with high-rise single-plane intake manifold (P/N 12496822) and a 770-cfm carburetor with vacuum secondaries
- GMPP dual-plane intake manifold (P/N 12366573) may be used to avoid hood clearance problems, but peak power may decrease by approximately 15-20 horsepower
- Comes with 12.750-inch automatic transmission flexplate. Requires 1986-1999 350-style externally balanced flywheel for manual transmission. See chart on page 165
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

TECH SPECS

Part Number:	12498772	Cylinder Heads (P/N 12464298):	Fast Burn aluminum; 62cc chambers
Engine Type:	Chevy Small-Block V-8	Valve Size (in):	2.000 intake / 1.550 exhaust
Displacement (cu in):	383	Compression Ratio:	9.6:1
Bore x Stroke (in):	4.000 x 3.800	Rocker Arms (P/N 12367345):	Aluminum roller style
Block (P/N 88962516):	Cast-iron with 4-bolt main caps	Rocker Arm Ratio:	1.5:1
Crankshaft (P/N 12489436):	4340 forged steel	Recommended Fuel:	92 octane
Connecting Rods (P/N 12497624):	Heavy-duty PM steel	Ignition Timing:	Base 10° BTDC, 32° Total
Pistons (P/N 12499103):	Hypereutectic aluminum	Maximum Recommended rpm:	6,000
Camshaft Type (P/N 12370846):	Hydraulic roller	Balanced:	External
Camshaft Lift (in):	.509 intake / .528 exhaust		
Camshaft Duration (@.050 in):	222° intake / 230° exhaust		

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



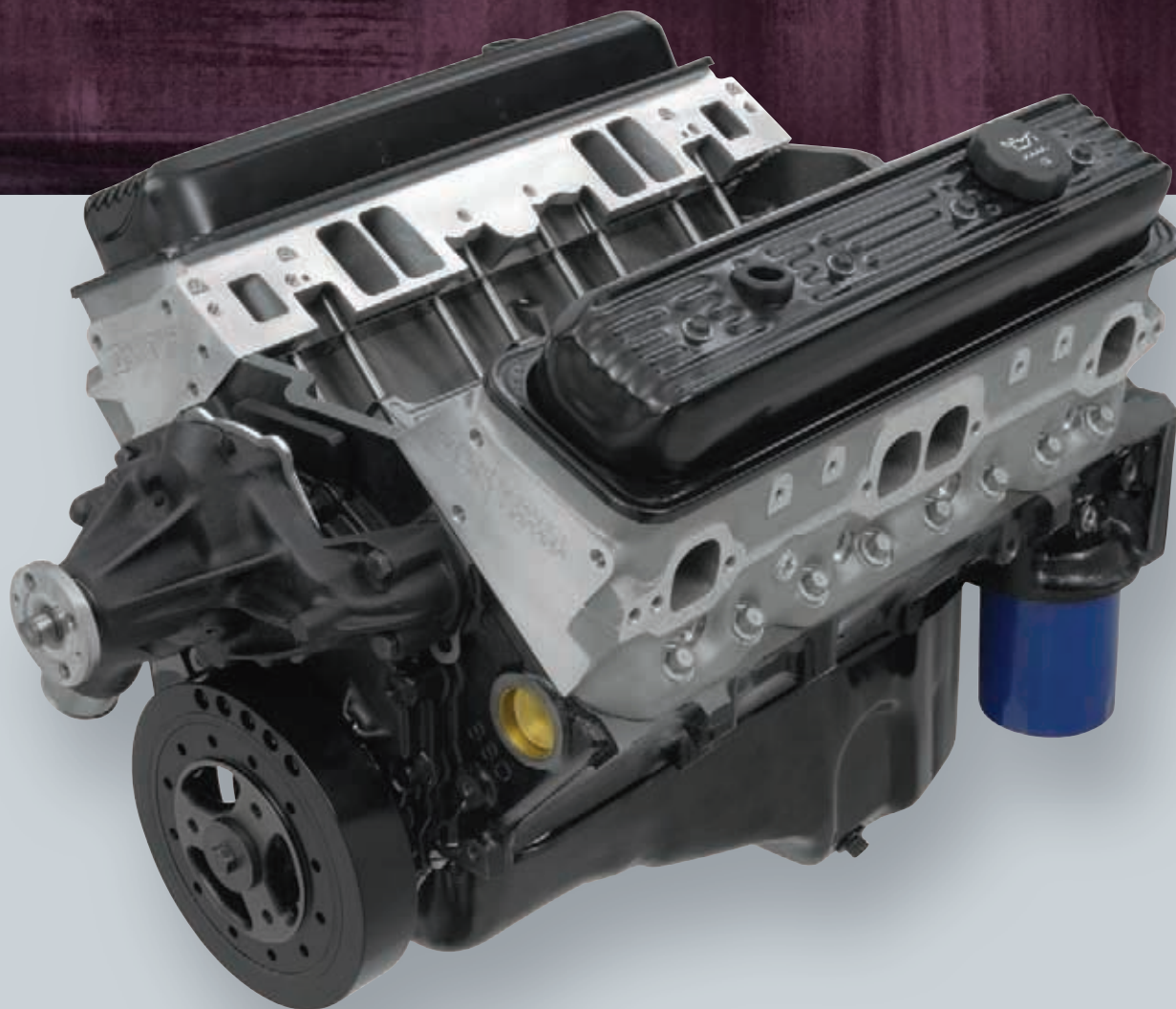
Available for purchase online at gmpformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



12499106   

383 Partial Engine

It comes with 4.000-inch bore/3.800-inch stroke reciprocating assembly already installed, including a forged steel crankshaft, heavy-duty connecting rods and durable aluminum-alloy pistons.



24216083

Hydra-Matic 4L60-E Four-Speed Automatic Transmission

Electronically controlled four-speed overdrive transmission. Suitable for engines producing up to 370 lb.-ft. of torque.



See page 125 for details

SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



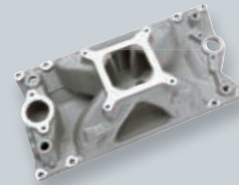
19212657 Transmission Controller

See page 280 for details



12480127 Short Aluminum Valve Covers

See page 156 for details



12496822 Intake Manifold, Vortec Design

See page 172 for details



12497698 Serpentine Accessory Drive System

See page 168 for details



93440806 HEI Distributor

See page 170 for details



12361146 High-Torque Mini-Starter

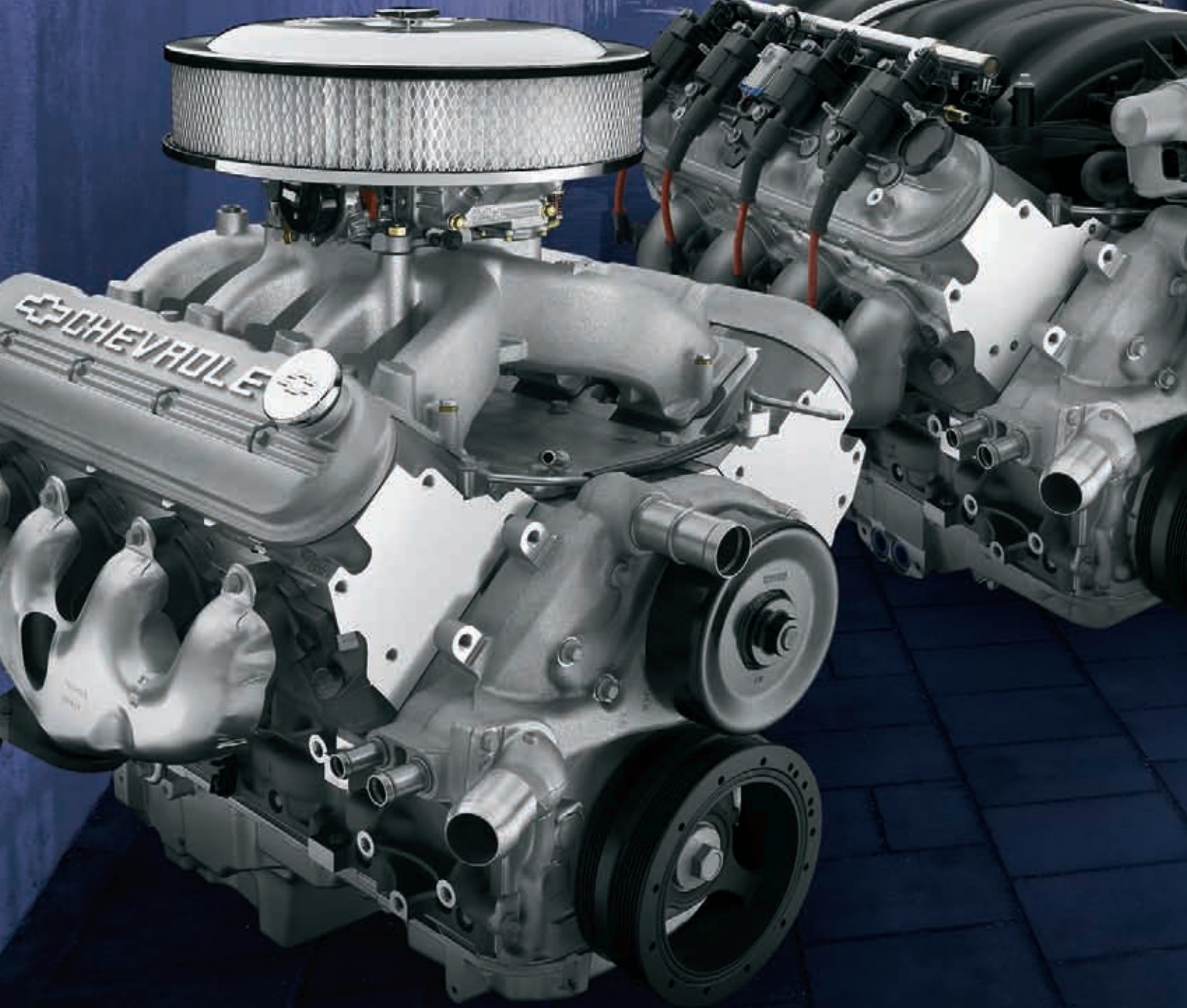
See page 276 for details

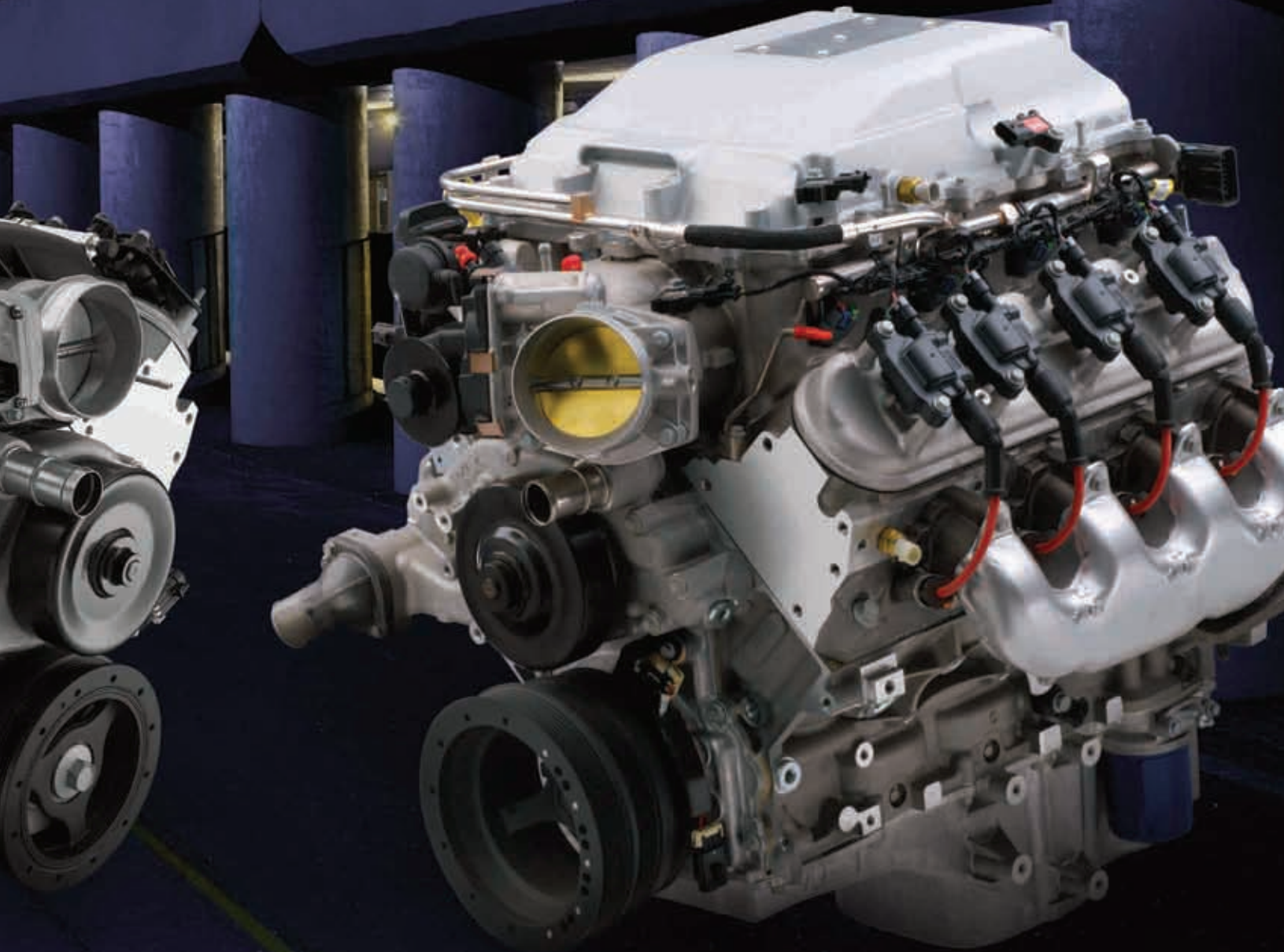
SEE PAGE 132 FOR OUR COMPLETE LINE OF SMALL-BLOCK ENGINE COMPONENTS

CRATE ENGINES

Small-Block

LS-Series





Unlimited Performance Potential for the Next Generation

GM's LS engine family has revolutionized the performance world, taking it to unprecedented levels of power, durability and efficiency. It is fast becoming the engine of choice of enthusiasts from all walks of life – from street rods and muscle cars to drag strips, road courses and off-roading.

GMPP offers a broad range of production-based and specialty LS crate engine packages, from the LS1 engine that launched the revolution and the 638-hp supercharged LS9 from the Corvette ZR1, to hot LS376 engines tailored for carbureted applications in classic and race vehicles. We've also got

almost everything you need to install a modern LS engine in vintage sheet metal.

Our E-ROD lineup of LS crate engines is designed to enable classic cars and special-construction vehicles to pass California's stringent emissions tests. They include emissions equipment and supporting components, including catalytic converters, an "evap" canister and more.

The good-old days were never as good as the LS generation. Be part of the revolution.

E-ROD SYSTEMS



Big power and emissions efficiency available only from GMPP!

GMPP's LS-based E-ROD engine system portfolio continues to grow – delivering high-performance with low emissions. No other manufacturer offers a comparable system.

There are four great E-ROD engines for 2011:

E-ROD 5.3L – rated at 335 lb.-ft., the E-ROD 5.3L is a great choice when torque and dependability is the priority over maximum horsepower

E-ROD LS3 – the original E-ROD, based on the Corvette's 430-horsepower 6.2L all-aluminum engine, meets CARB requirements and carries EO number D-126-30

E-ROD LS7* – the Corvette Z06's 505 horsepower, 7.0L engine, with racing-derived cylinder heads and valvetrain

E-ROD LSA – the 556 horsepower supercharged 6.2L V-8 from the world-beating Cadillac CTS-V

All of the engines include the necessary engine controller, with specific calibrations for automatic or manual transmissions. Additional components include:

- Engine wiring harness
- Exhaust manifolds
- Catalytic converters
- Oxygen sensors and sensor bosses
- Fuel tank evaporative emissions canister
- Mass airflow sensor and sensor boss
- Accelerator pedal (for use with the GMPP electronic throttle body)
- Air filter
- Instruction manual

*The LS7 E-ROD system is anticipated to be available after the first quarter of 2011. Please check with your GMPP Authorized Center or at gmperformanceparts.com for current availability.

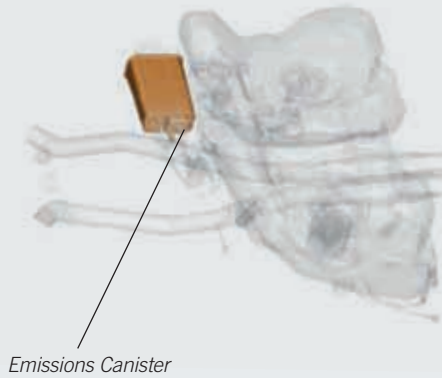


In addition to the E-ROD system, the builder will need to source additional components to complete the assembly and get the vehicle running. They include:

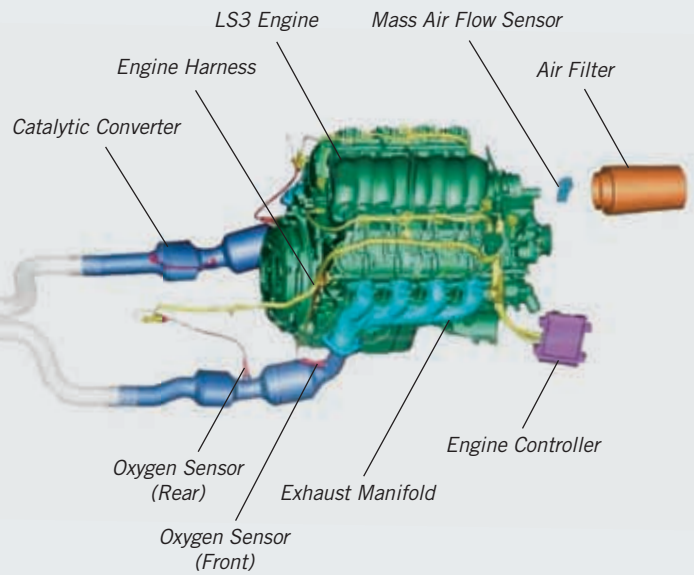
- Fuel tank
- Fuel lines (re-circulating or returnless)
- Fuel pump
- Fuel tank vent line from the tank to the evaporative emissions canister
- Purge line from the canister to the engine purge solenoid
- Air induction system that incorporates the mass airflow sensor
- Exhaust system behind the catalytic converters
- A "check engine" light (wiring and circuitry included in kit)

Each engine requires a front-end accessory drive system suitable to the vehicle. The instruction manual includes recommendations for the accessory drive kit, as well as the transmission, gear ratios and more. GMPP offers two configurations of the accessory drive systems to suit different applications; each allows the installer to easily delete air conditioning. They include P/N 19155066 and P/N 19155067.

E-ROD systems do not come with a transmission. GMPP recommends the new GM SuperMatic 4L70-E P/N19244043 and the new SuperMatic transmission controller P/N 19257634.



Emissions Canister



E-ROD 5.3L ENGINE

315 hp / 335 lb.-ft.

19258004 **NEW**
Automatic transmission

19258008 **NEW**
Manual transmission



E-ROD LS3 ENGINE

430 hp / 424 lb.-ft.

19257230
Automatic transmission

19257234
Manual transmission

Carries EO Number
D-126-30

E-ROD LS7 ENGINE

505 hp / 470 lb.-ft.

19257242* **NEW**
Automatic transmission

19257238* **NEW**
Manual transmission



E-ROD LSA ENGINE

556 hp / 551 lb.-ft.

19257456 **NEW**
Automatic transmission

19257460 **NEW**
Manual transmission



*Available after the first
quarter of 2011



LC9 5.3L

19256513 **NEW**

with ECU calibrated for automatic transmissions

19256517 **NEW**

with ECU calibrated for manual transmissions

■ 315 hp @ 5,400 rpm

■ 335 lb.-ft. @ 4,000 rpm

An affordable LS crate engine with power and durability!

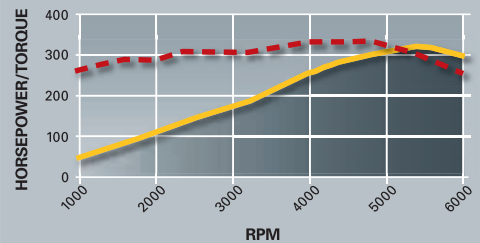
If you're looking for an affordable alternative to a used LS engine for your swap project, check out GM Performance Parts' new LC9 5.3L engine. It is based on the workhorse power plant used in hundreds of thousands of GM trucks, including the Chevrolet Silverado and Suburban. It's rated at 315 horsepower and tuned to deliver exceptional torque at low rpm.

Available in two configurations: a conventional 5.3L assembly (non-camshaft phased design), or the E-ROD version that also includes performance-enhancing camshaft phasing.

The LC9 5.3L system features a complete GMPP controller system, iron engine block, intake manifold, throttle body, and fuel rail. It's a great choice for hot rod cruisers and off-roader projects, where torque and dependability is the priority over maximum horsepower.

Check out our LS1 Engine Kit Installation Guide P/N 88959384 for details on installing an LS engine in a vintage vehicle.

LC9 5.3L DYNO CHART



Horsepower: 315 @ 5400 rpm

Torque:(lb0ft) 335 @ 4000 rpm

INSTALLATION NOTES

- 14-inch automatic transmission flexplate included
- Kit includes complete new engine and GMPP controller system
- Components to complete FEAD are listed on page 216
- Check hood clearance for interference
- Use of GMPP muscle car oil pan kit P/N 19212593 may be required for installation on older vehicles
- Intended for pre-1976 street vehicles or off-road vehicles
- Not intended for marine applications

LC9 5.3L TECH SPECS

Engine Type:	LS-Series Gen IV Small-Block V-8	Camshaft Duration (@.050 in):	196° intake / 201° exhaust
Displacement (cu in):	327 (5.3L)	Cylinder Heads (P/N 12598594):	Aluminum; cathedral port
Bore x Stroke (in):	3.620 (96 x 92 mm)	Valve Size (in):	1.890 intake / 1.550 exhaust
Block (P/N 12551360):	Cast-iron with 6-bolt, cross-bolted main caps	Compression Ratio:	9.5:1
Crankshaft (P/N 12553480):	Nodular iron	Rocker Arms (P/N 10214664):	Investment cast, roller trunnion
Connecting Rods (P/N 12568734):	Powdered metal steel	Rocker Arm Ratio:	1.7:1
Pistons (P/N 12571545):	Hypereutectic aluminum	Recommended Fuel:	87 octane
Camshaft Type (P/N 12561721):	Hydraulic roller	Maximum Recommended rpm:	6,000
Camshaft Lift (in):	.467 intake / .479 exhaust	Reluctor Wheel:	58X
		Balanced:	Internal



Available for purchase online at gmpartsparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



19258004 Automatic Transmission

19258008 Manual Transmission



E-ROD System – LC9 5.3L

We've expanded the emissions-efficient E-ROD lineup for 2011 with the new LC9 5.3L V-8 with cam phasing technology. Cam phasing alters camshaft timing to optimize performance and efficiency. The 5.3L E-ROD is GMPPs' most affordable system. CARB E.O. is pending.

Each engine requires a front-end accessory drive system suitable to the vehicle. The instruction manual includes recommendations for the accessory drive kit, as well as the transmission, gear ratios and more.

See page 62 for more system information or visit your GMPP Authorized Center.

SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19156260
Hydra-Matic 4L65-E
Four-Speed Automatic
Transmission

See page 125 for details



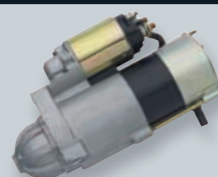
19212657
Transmission Controller

See page 126 for details



LC9 5.3L Accessory Drive System

See page 217 for details



10465385
LS-Series Starter

See page 224 for details

SEE PAGE 178 FOR OUR COMPLETE LINE OF LS-SERIES ENGINE COMPONENTS



19165628   

■ 327 hp @ 5,500 rpm

■ 347 lb.-ft. @ 4,600 rpm

Vintage displacement and modern technology combine for great performance ... at a great value!

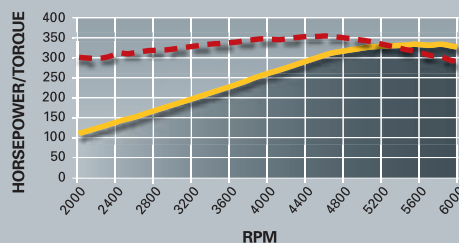
The LS327/327 crate engine is based on production 5.3L engines found in GM trucks and SUVs, but that translates to the same 327-cubic-inch displacement of the high-revving Small-Blocks from the 1960s. It's an affordable and powerful option for enthusiasts on a budget seeking to modernize their vintage project vehicle with an LS engine.

And while the LS327/327 is based on a production engine, GM Performance Parts engineers gave it a hotter cam, Grafel-coated high-silicon pistons and more. An iron engine block reinforces the engine's strength and keeps down the cost.

If you plan to equip your LS327/327 with a carburetor, the LS327 Deluxe crate engine P/N 19244096 comes with almost everything you need, including an intake manifold, ignition coils, coil brackets and more. Add our LSX ignition controller P/N 19171130 and Holley carburetor P/N 19170093 to finish it off!

Check out our LS1 Engine Kit Installation Guide P/N 88959384 for details on installing an LS engine in a vintage vehicle.

LS327/327 DYNO CHART



Horsepower: 327 @ 5500 rpm

Torque (lb-ft): 347 @ 4600 rpm

INSTALLATION NOTES

- Not for Active Fuel Management applications
- Assembly does not include any electronics or intake manifold
- Includes oil pan
- Includes water pump (not shown)
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- For carbureted applications, use intake manifold P/N 88958675, and MSD Ignition Module P/N 6010

LS327/327 TECH SPECS

Part Number:	19165628	Camshaft Duration (@.050 in):	196° intake / 201° exhaust
Engine Type:	LS-Series Small-Block V-8	Cylinder Heads (P/N 12559865):	Aluminum; cathedral port
Displacement (cu in):	327 (5.3L)	Valve Size (in):	1.890 intake / 1.550 exhaust
Bore x Stroke (in):	3.780 x 3.620 (96 x 92mm)	Compression Ratio:	9.5:1
Block (P/N 12551360):	Cast-iron with 6-bolt, cross-bolted iron main caps	Rocker Arms (P/N 10214664):	Investment cast, roller trunnion
Crankshaft (P/N 12553480):	Nodular iron	Rocker Arm Ratio:	1.7:1
Connecting Rods (P/N 12568734):	Powdered metal steel	Recommended Fuel:	87 octane
Pistons (P/N 12571545):	Hypereutectic aluminum	Maximum Recommended rpm:	6,000
Camshaft Type (P/N 12561721):	Hydraulic roller	Reluctor Wheel:	24X
Camshaft Lift (in):	.467 intake / .479 exhaust	Balanced:	Internal



Available for purchase online at gmpartsparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



19244096   

LS327 Deluxe

The LS327 is offered in Deluxe form that includes everything from a carbureted intake to the ignition coils, coil brackets, shields, plug wires, gaskets and installation hardware*. The manifold is GMPP's aluminum, spider-type intake (P/N 88958675) that's optimized for the LS327's cathedral-port heads.

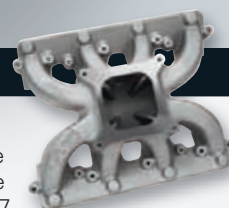
**Ignition controller not included. Use MSD controller P/N 6010.*

19244041

LS Finishing Kit

For builders who already have an LS engine with cathedral-port heads, GMPP offers the same finishing kit that completes the LS327 Deluxe crate engine. It includes the intake, ignition coils, coil brackets, shields, plug wires, gaskets and installation hardware.

See page 298 for information on our reference guide P/N 88959384 for installing an LS engine in an older car.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19156260
Hydra-Matic 4L65-E
Four-Speed Automatic
Transmission

*See page 125
for details*



19212657
Transmission
Controller

*See page 126
for details*



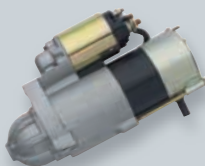
19155067
Corvette Accessory
Drive Kit

*See page 214
for details*



19212593
Muscle Car Oil
Pan Kit

*See page 219
for details*



10465385
LS-Series Starter

*See page 224
for details*



19170093
Carburetor, Holley
770-cfm

*See page 282
for details*

SEE PAGE 178 FOR OUR COMPLETE LINE OF LS-SERIES ENGINE COMPONENTS

LS1 5.7L



17801267   

■ 350 hp @ 5,800 rpm

■ 365 lb.-ft. @ 4,000 rpm

The original LS engine that started a high-performance revolution!

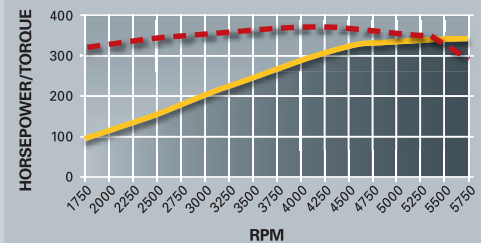
A high-revving, all-aluminum power house that delivers more than 300 lb.-ft. of torque between 1,500 rpm and 5,700 rpm, the LS1 shifted the balance of power at the strip and on the street. It's the engine that started the LS revolution: the LS1 5.7L.

GM Performance Parts offers the LS1 crate engine in fully dressed, regular-production form, including cathedral-port heads. That includes a manifold assembly with the fuel injectors, fuel rails and an electronically controlled throttle body already installed; a Holden oil pan (for more universal installation options); complete ignition system; 24X reluctor wheel, exhaust manifolds; balancer; water pump; and a 14-inch automatic-transmission flexplate.

We've got a limited supply of LS1 crate engines and when they're gone, they're gone for good. Get yours today!

Check out our *LS1 Engine Kit Installation Guide P/N 88959384* for details on installing an LS engine in a vintage vehicle.

LS1 5.7L DYNO CHART



Horsepower: 350 @ 5800 rpm

Torque (lb-ft): 365 @ 4000 rpm

INSTALLATION NOTES

- 14-inch automatic transmission flexplate included
- Assembly does not include any electronics
- Includes Holden oil pan
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Non-Corvette applications require flexplate P/N 12602448

LS1 5.7L TECH SPECS

Part Number:	17801267	Camshaft Duration (@.050 in):	198° intake / 209° exhaust
Engine Type:	LS-Series Small-Block V-8	Cylinder Heads (P/N 12559855):	Aluminum; cathedral port
Displacement (cu in):	346 (5.7L)	Valve Size (in):	2.000 intake / 1.550 exhaust
Bore x Stroke (in):	3.900 x 3.620 (99 x 92mm)	Compression Ratio:	10.25:1
Block (P/N 12561166):	Cast-aluminum with 6-bolt, cross-bolted iron main caps	Rocker Arms (P/N 10214664):	Investment-cast, roller trunnion
Crankshaft (P/N 89017522):	Nodular iron	Rocker Arm Ratio:	1.7:1
Connecting Rods (P/N 12568734):	Powdered metal steel	Recommended Fuel:	92 octane
Pistons (P/N 88984245):	Hypereutectic aluminum	Maximum Recommended rpm:	6000
Camshaft Type (P/N 12560965):	Hydraulic roller	Reluctor Wheel:	24X
Camshaft Lift (in):	.500 intake / .500 exhaust	Balanced:	Internal



Available for purchase online at gmpformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH YOUR LS1 5.7L CRATE ENGINE AND GET IT RUNNING IN LESS TIME!



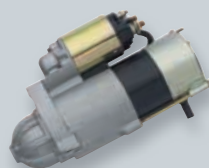
19156260
Hydra-Matic 4L65-E Four-Speed Automatic Transmission
 A durable, easy-cruising four-speed overdrive automatic transmission that is electronically controlled for more precise, fuel-saving performance.
See page 125 for details



19212657
Transmission Controller
 Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.
See page 126 for details



19155067
Corvette Accessory Drive Kit
See page 214 for details



10465385
LS-Series Starter
See page 224 for details



88958765
LS2 CNC Ported Cylinder Head
See page 196 for details



12628771
F-Car Oil Pan
See page 219 for details



25534399
LS Valve Cover without Breather Hole
See page 208 for details



19156433
Valve Cover Kit—CHEVROLET, Chrome
See page 206 for details

SEE PAGE 178 FOR A COMPLETE LIST OF COMPONENTS AND ACCESSORIES.



LS3 6.2L

19244097   

■ 430 hp @ 5,900 rpm

■ 424 lb.-ft. @ 4,600 rpm

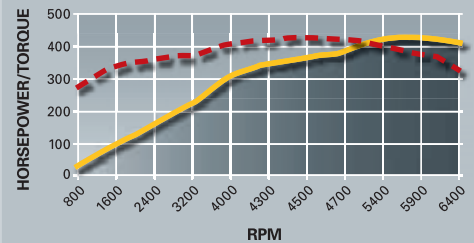
Direct from the Corvette to your project vehicle!

The LS3 6.2L is the 430-hp standard engine in the Chevrolet Corvette and is a fantastic combination of high-technology and uncompromising performance. Our LS3 crate engine comes complete, from the Corvette-specific oil pan to the ignition system. It also includes the EFI intake manifold assembly with injectors and throttle body, exhaust manifolds, water pump, balancer, 58X reluctor wheel and 14-inch automatic-transmission flexplate.

Inside, the LS3 is filled with components designed for high performance and longevity. The aluminum block is filled with a sturdy reciprocating assembly that combines with L92-type rectangular-port heads to deliver a 10.7:1 compression ratio. A high-lift, hydraulic roller camshaft delivers a whopping 0.551-inch of lift on the 2.16-inch intake valves and 0.522-inch lift on the 1.59-inch exhaust valves, enhancing the LS3's tremendous airflow and broad torque curve.

The Corvette oil pan doesn't suit all installation applications. Use a vehicle-specific oil pan for original LS-powered vehicle or GMPP's Muscle Car Oil Pan Kit P/N 19212593 for older vehicles.

LS3 6.2L DYNO CHART



Horsepower: 430 @ 5900 rpm Torque (lb-ft): 424 @ 4600 rpm

INSTALLATION NOTES

- 14-inch automatic transmission flexplate included
- Assembly does not include any electronics
- LS3 Controller Kit, P/N 19201861, available for non-Corvette applications. Kit includes electronic throttle pedal, which is required for throttle input to the ECU (see page 279)
- 2009 throttle body is installed on engine. To use LS3 Controller Kit, P/N 19201861, 2008 throttle body (supplied) must be installed
- Includes Corvette wet sump oil pan
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Non-Corvette applications require flexplate P/N 12602448

LS3 6.2L TECH SPECS

Part Number:	19244097	Cylinder Heads (P/N 12615879):	Aluminum L92-style port; as cast with 68cc chambers
Engine Type:	LS-Series Gen IV Small-Block V-8	Valve Size (in):	2.165 intake / 1.590 exhaust
Displacement (cu in):	376 cu in (6.2L)	Compression Ratio:	10.7:1
Bore x Stroke (in):	4.060 x 3.620 (103.25 x 92mm)	Rocker Arms (P/N 12569167 int):	Investment-cast, roller trunnion
Block (P/N 12584727):	Cast-aluminum with 6-bolt, cross-bolted main caps	Rocker Arms (P/N 10214664 exh):	Investment-cast, roller trunnion
Crankshaft (P/N 12597569):	Nodular iron	Rocker Arm Ratio:	1.7:1
Connecting Rods (P/N 12617570):	Powdered metal	Recommended Fuel:	92 octane
Pistons (P/N 19168089):	Hypereutectic aluminum	Maximum Recommended rpm:	6,600
Camshaft Type (P/N 12603844):	Hydraulic roller	Reluctor Wheel:	58X
Valve Lift (in):	.551" intake / .522" exhaust	Balanced:	Internal
Camshaft Duration (@.050 in):	204° intake / 211° exhaust		



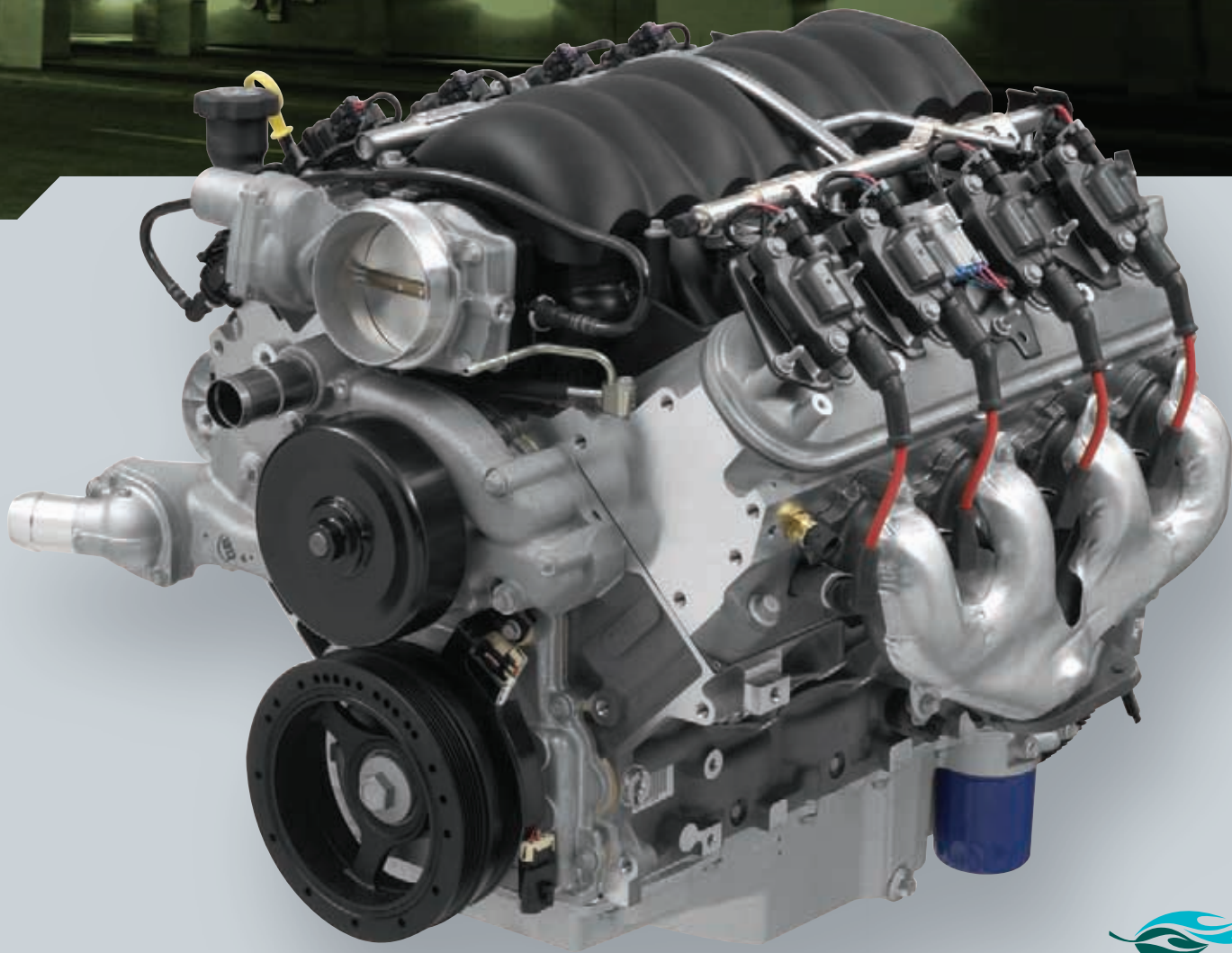
Available for purchase online at gmpformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



19257230 Automatic Transmission

19257234 Manual Transmission



E-ROD System — LS3 6.2L CARB approved - E.O. number D-126-30

This system meets California's aftermarket requirements for pre-OBD-II vehicles and delivers high-performance with low emissions. The LS3 engine is built with components designed for high-performance and longevity. It's the perfect complement for a street rod or special-construction sports car.

Each engine requires a front-end accessory drive system suitable to the vehicle. The instruction manual includes recommendations for the accessory drive kit, as well as the transmission, gear ratios and more.

See page 62 for more system information or visit your GMPP Authorized Center.

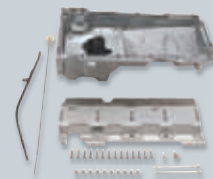
SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19156260
Hydra-Matic 4L65-E
Four-Speed Automatic
Transmission
See page 125
for details



19212657
Transmission
Controller
See page 126
for details



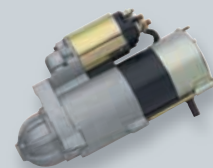
19212593
Muscle Car
Oil Pan Kit
See page 219
for details



19155067
Corvette Accessory
Drive Kit
See page 214
for details



19201861
LS3 Controller Kit
See page 279
for details



10465385
LS-Series Starter
See page 224
for details

SEE PAGE 178 FOR OUR COMPLETE LINE OF LS-SERIES ENGINE COMPONENTS



19244549   

■ 480 hp @ 5,750 rpm

■ 475 lb.-ft. @ 4,500 rpm

Our 'Hot Cam' adds 50 hp to the already-potent LS3!

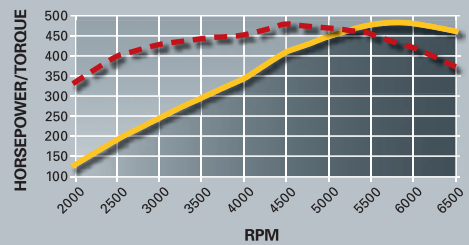
Our engineers never stop tinkering. When they took a production LS3 6.2L (376 cubic inches) engine and swapped the stock camshaft for the racing-inspired LS Hot Cam (P/N 88958733), they result was a stunning 480 horsepower and 475 lb.-ft. of torque. That's nearly 12 percent more power and torque from a simple camshaft change!

We wasted no time in adding that terrific combination – dubbed LS376/480 – to our crate engine portfolio. The key to the power boost is the Hot Cam's 0.525-inch lift on both the intake and exhaust sides, along with 219-degree/228-degree duration specs. That's less lift on the intake side than the stock LS3 cam, but considerably more duration, allowing the valves to stay open a little longer to draw in more air from the rectangular-port L92-style heads.

Use the LS376/480 with controller kit P/N 19201327, which includes a special pedal for use with the engine's electronically controlled throttle.

Check out our *LS1 Engine Kit Installation Guide P/N 88959384* for details on installing an LS engine in a vintage vehicle.

LS376/480 DYNO CHART



Horsepower: 480 @ 5750 rpm

Torque (lb-ft): 475 @ 4500 rpm

INSTALLATION NOTES

- 14-inch automatic transmission flexplate included
- Assembly does not include any electronics
- LS376/480 Controller Kit, P/N 19201327, available for non-Corvette applications. Kit includes electronic throttle pedal, which is required for throttle input to the ECU (see page 279)
- Includes Corvette wet sump oil pan
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Non-Corvette applications require flexplate P/N 12602448

LS376/480 TECH SPECS

Part Number:	19244549	Cylinder Heads (P/N 12615879):	Aluminum L92 style port;
Engine Type:	LS-Series Gen IV Small-Block V-8		as cast with 68cc chambers
Displacement (cu in):	376 cu in (6.2L)	Valve Size (in):	2.165 int / 1.590 exhaust
Bore x Stroke (in):	4.060 x 3.620 (103.25 x 92mm)	Compression Ratio:	10.7:1
Block (P/N 12584727):	Cast-aluminum with 6-bolt, cross-bolted main caps	Rocker Arms (P/N 12569167 int):	Investment-cast, roller trunnion
Crankshaft (P/N 12597569):	Nodular iron	Rocker Arms (P/N 10214664 exh):	Investment-cast, roller trunnion
Connecting Rods (P/N 12617570):	Powdered metal	Rocker Arm Ratio:	1.7:1
Pistons (P/N 19168089):	Hypereutectic aluminum	Recommended Fuel:	92 octane
Camshaft Type (P/N 88958733):	Hydraulic roller	Maximum Recommended rpm:	6,600
Valve Lift (in):	.525" intake / .525" exhaust	Reluctor Wheel:	58X
Camshaft Duration (@.050 in):	219° intake / 228° exhaust	Balanced:	Internal



Available for purchase online at gmpartsparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19156260
Hydra-Matic 4L65-E Four-Speed Automatic Transmission
 A durable, easy-cruising four-speed overdrive automatic transmission that is electronically controlled for more precise, fuel-saving performance.
 See page 125 for details



19212657
Transmission Controller
 Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.
 See page 126 for details



19155067
Corvette Accessory Drive Kit
 See page 214 for details



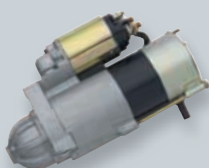
92236241
Camaro 6 Speed Transmission
 See page 127 for details



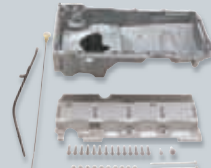
19201327
LS376/480 Controller Kit
 See page 279 for details



19156433
Valve Cover Kit—CHEVROLET, Chrome
 See page 206 for details



10465385
LS-Series Starter
 See page 224 for details



19212593
Muscle Car Oil Pan Kit
 See page 219 for details

SEE PAGE 178 FOR OUR COMPLETE LINE OF LS-SERIES ENGINE COMPONENTS



LS376/515

19171225   

■ 515 hp @ 6,500 rpm

■ 469 lb.-ft. @ 5,000 rpm

Affordable LS3-based high-performance for the street or track!

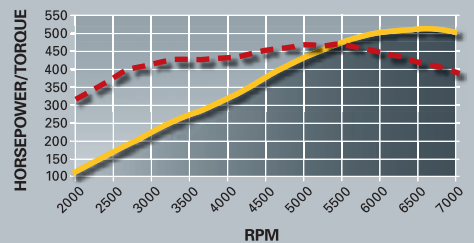
Using the LS3 engine as its foundation, the LS376/515 crate engine adds GMPP's racing-derived ASA Hot Cam and a carbureted intake system to produce 515 horsepower at a stellar 6,500 rpm and 469 lb.-ft. of torque at 5,000 rpm. It's the perfect high-performance option for a classic project car or race car.

The assembly includes a Corvette oil pan and LS3 cylinder heads, with high-flow, rectangular-port intake passages, as well as our unique, spider-type carburetor intake manifold. At the heart of the engine is the ASA Hot cam, which extends the performance range of the LS3 with more duration. That means it holds the valves open longer, enabling greater airflow at higher rpm. Wind it out yourself and you'll see what we mean!

You'll need our LSX controller P/N 19171130 and Holley 770-cfm carburetor P/N 19170093 to finish off and fire up this bad boy!

Check out our LS1 Engine Kit Installation Guide P/N 88959384 for details on installing an LS engine in a vintage vehicle.

LS376/515 DYNO CHART



Horsepower: 515 @ 6500 rpm

Torque (lb-ft): 469 @ 5000 rpm

INSTALLATION NOTES

- 14-inch automatic transmission flexplate included
- Assembly does not include any electronics
- Use LSX ignition controller P/N 19171130 (includes harness) (page 279)
- Includes Corvette wet sump oil pan
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- 770-cfm carb P/N 19170093 recommended for daily street use
- Non-Corvette applications require flexplate P/N 12602448

LS376/515 TECH SPECS

Part Number:	19171225	Cylinder Heads (P/N 12615879):	Aluminum L92-style port, as cast with 68cc chambers
Engine Type:	LS-Series Gen IV Small-Block V-8	Valve Size (in):	2.165 int / 1.590 exhaust
Displacement (cu in):	376 cu in (6.2L)	Compression Ratio:	10.7:1
Bore x Stroke (in):	4.060 x 3.620 (103.25 x 92mm)	Rocker Arms (P/N 12569167 int):	Investment-cast, roller trunnion
Block (P/N 12584727):	Cast-aluminum with 6-bolt, cross-bolted main caps	Rocker Arms (P/N 10214664 exh):	Investment-cast, roller trunnion
Crankshaft (P/N 12597569):	Nodular iron	Rocker Arm Ratio:	1.7:1
Connecting Rods (P/N 12617570):	Powdered metal	Recommended Fuel:	92 octane
Pistons (P/N 19168089):	Hypereutectic aluminum	Maximum Recommended rpm:	6,600
Camshaft Type (P/N 12480110):	Hydraulic roller	Reluctor Wheel:	58X
Valve Lift (in):	.525" intake / .525" exhaust	Balanced:	Internal
Camshaft Duration (@.050 in):	226° intake / 236° exhaust		



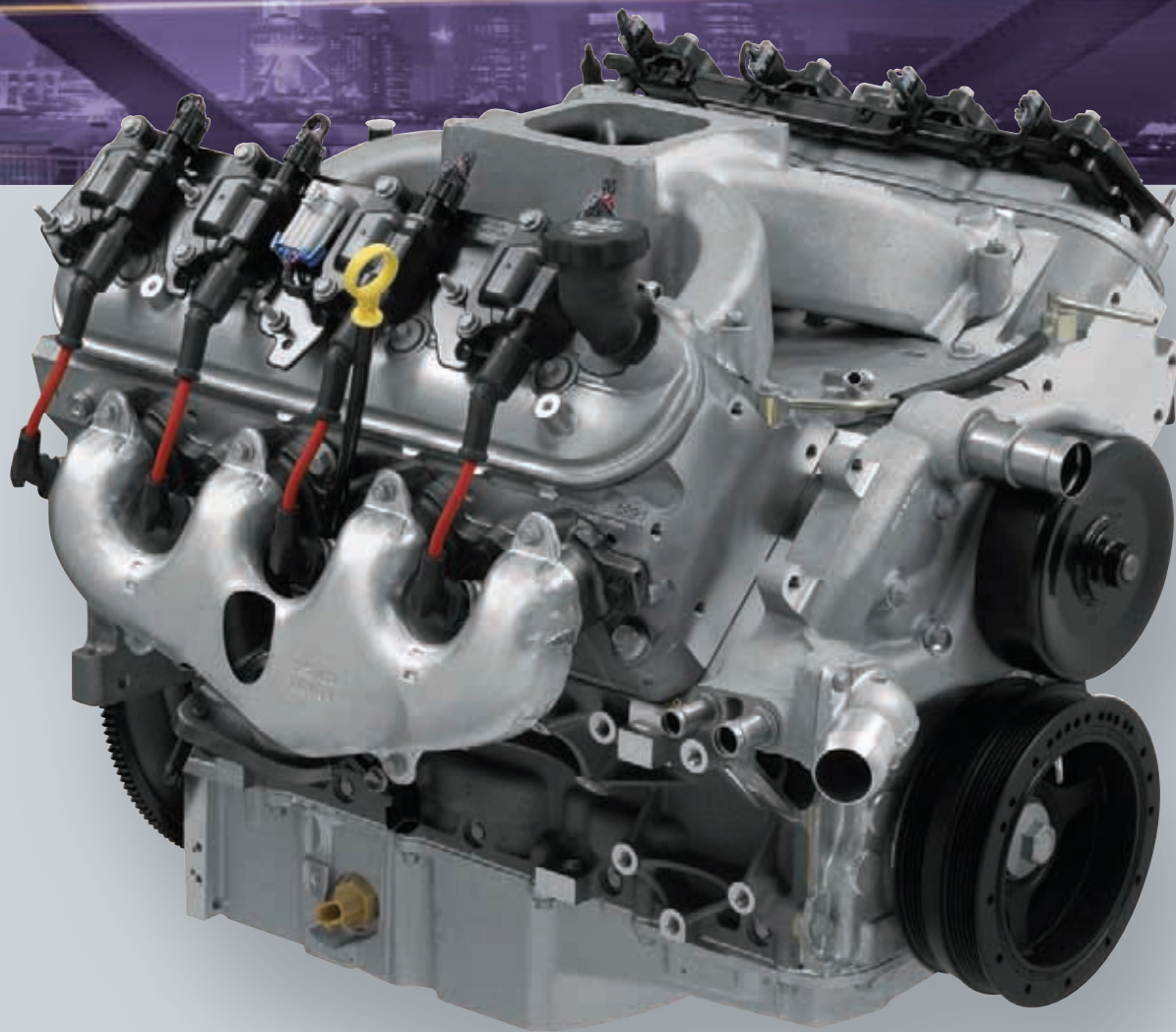
Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



**19156260
Hydra-Matic 4L65-E Four-Speed
Automatic Transmission**

A durable, easy-cruising four-speed overdrive automatic transmission that is electronically controlled for more precise, fuel-saving performance.

See page 125 for details



**19212657
Transmission Controller**

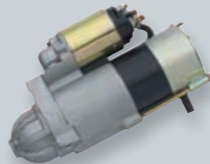
Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 126 for details



**19155067
Corvette Accessory
Drive Kit**

*See page 214
for details*



**10465385
LS-Series Starter**

*See page 224
for details*



**12342080
Air Cleaner, Chevrolet
Logo, High-Performance
Design**

*See page 225
for details*



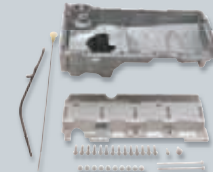
**19170093
Carburetor, Holley
770-cfm**

*See page 282
for details*



**19171130
LSX Controller**

*See page 224
for details*



**19212593
Muscle Car
Oil Pan Kit**

*See page 219
for details*

SEE PAGE 178 FOR OUR COMPLETE LINE OF LS-SERIES ENGINE COMPONENTS

LSA 6.2L SC



19211708   

■ 556 hp @ 6,100 rpm

■ 551 lb.-ft. @ 3,800 rpm

More than 550 supercharged horsepower with exceptional refinement!

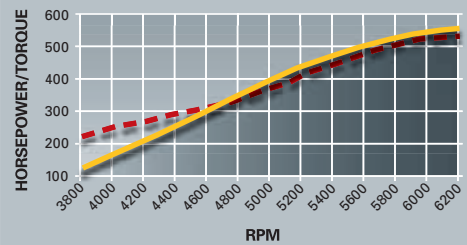
The Cadillac CTS-V's 6.2L supercharged LSA engine delivers 556 horsepower with refinement that is rare in the world of high performance. It is smooth, quiet and well-balanced – all while delivering breathtaking power.

A unique aluminum cylinder block casting houses a forged steel crankshaft and super-tough reciprocating parts, integrated piston-cooling oil jets and high-flow cylinder heads that support the airflow enabled by a 1.9L, sixth-generation supercharger with four-lobe, high-twist rotors. The advanced rotor design broadens the supercharger's effective range, enhancing low-rpm torque and high-rpm horsepower.

GMPP's LSA 6.2L supercharged crate engine package comes fully dressed, from the top of the charge-cooled supercharger assembly to the ignition system, water pump, balancer and more. It is a less-costly alternative to the LS9 engine and makes a great transplant for any off-road LS-powered vehicle or pre-1979 car or truck. It also comes with conventional wet-sump lubrication system.

Note: This engine includes an 8-bolt crankshaft flange that may require an adapter for use with some transmissions.

LSA DYNO CHART



Horsepower: 556 @ 6100 rpm

Torque (lb-ft): 551 @ 3800 rpm

INSTALLATION NOTES

- 14-inch automatic transmission flexplate included
- Assembly does not include any electronics or accessory drive components
- Intended for pre-1976 street vehicles or any off-road vehicle
- 8-bolt crank flange
- Not intended for marine applications

LSA 6.2L TECH SPECS

Part Number:	19211708	Cylinder Heads (P/N 12604860):	Aluminum L92 style port; as cast with 68cc chambers
Engine Type:	LS-Series Gen IV Small-Block V-8	Valve Size (in):	2.160 intake / 1.590 exhaust
Displacement (cu in):	376 cu in (6.2L)	Compression Ratio:	9.1:1
Bore x Stroke (in):	4.060 x 3.620 (103.25 x 92mm)	Rocker Arms (P/N 12569167 int):	Investment-cast, roller trunnion
Block (P/N 12627939):	Cast-aluminum with 6-bolt, cross-bolted main caps	Rocker Arms (P/N 10214664 exh):	Investment-cast, roller trunnion
Crankshaft (P/N 12603616):	Forged Steel with 8-bolt flange	Rocker Arm Ratio:	1.7:1
Connecting Rods (P/N 12604857):	Powdered metal	Recommended Fuel:	92 octane
Pistons (P/N 12625119):	Hypereutectic aluminum	Maximum Recommended rpm:	6,600
Camshaft Type (P/N 12605220):	Hydraulic roller	Reluctor Wheel:	58X
Valve Lift (in):	.492" intake / .480" exhaust	Balanced:	Internal
Camshaft Duration (@.050 in):	198° intake / 216° exhaust		



Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



19257456 Automatic Transmission

19257460 Manual Transmission

E-ROD System LSA 6.2L

GMPP has taken the E-ROD concept to a higher plateau, with the E-ROD LSA package. It is centered on the same 6.2L supercharged engine found in the Cadillac CTS-V series, rated at 556 hp and 551 lb.-ft. of torque. This exclusive E-ROD system is designed to be emissions-efficient even with top horsepower ratings. CARB E.O. is pending.

Each engine requires a front-end accessory drive system suitable to the vehicle. The instruction manual includes recommendations for the accessory drive kit, as well as the transmission, gear ratios and more.

See page 62 for more system information or visit your GMPP Authorized Center.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19156260
Hydra-Matic 4L65-E
Four-Speed Automatic
Transmission

See page 125
for details



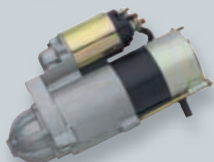
19212657
Transmission
Controller

See page 126
for details



19243525
LSA Accessory
Drive System
w/o AC

See page 215
for details



10465385
LS-Series Starter

See page 224
for details



19156433
Valve Cover Kit –
CHEVROLET, Chrome

See page 206
for details



19244106
LSA Accessory
Drive System AC
add-on kit

See page 215
for details

SEE PAGE 178 FOR OUR COMPLETE LINE OF LS-SERIES ENGINE COMPONENTS



LS9 6.2L SC

19201990   

■ 638 hp @ 6,500 rpm

■ 604 lb.ft. @ 3,800 rpm

World-conquering supercharged performance from the Corvette ZR1!

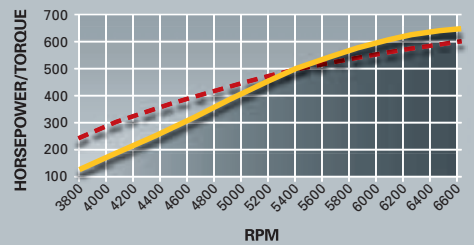
GM Performance Parts is thrilled to offer the LS9 6.2L supercharged in a fully dressed crate engine package that includes every one of the Corvette ZR1's 638 horsepower!

The LS9 is a technological marvel. High-rpm-validated lightweight reciprocating parts, including titanium intake valves, are used, along with high-flow cylinder heads that draw the charge forced on them by a sixth-generation supercharger. It has a high-helix (twist) design that helps the "blower" deliver greater power at the low-end and sustains it longer through the rpm band for broad, on-demand power, whether off-idle or at speed.

GM Performance Parts' LS9 crate engine assembly includes the dry sump oil pan and provisions for the charge cooler's liquid cooling system. You'll need an external oil tank,* external coolant tank* (for the charge cooler) and ECU/wire harness* to get the baddest production LS engine of them all up and running in your project vehicle. It also includes a 9-bolt crankshaft flange that may require an adapter for use with some transmissions.

*Not available from GMPP.

LS9 DYNO CHART



Horsepower: 638 @ 6500 rpm Torque (lb-ft): 604 @ 3800 rpm

INSTALLATION NOTES

- 14" manual transmission flywheel included
- Assembly does not include any electronics
- Forged pistons with oil-spray cooling
- Includes Corvette dry sump oil pan - requires production or aftermarket oil lines and oil tank (not included)
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Crankshaft has unique 9-bolt flywheel mounting pattern

LS9 TECH SPECS

Part Number:	19201990	Cylinder Heads (P/N 12621774):	Aluminum L92 style ports; as cast with 68cc chambers
Engine Type:	LS-Series Gen IV Small-Block V-8	Valve Size (in):	2.160 titanium intake / 1.590 hollow, sodium-filled exhaust
Displacement (cu in):	376 cu in (6.2L)	Compression Ratio:	9.1:1
Bore x Stroke (in):	4.060 x 3.620 (103.25 x 92mm)	Rocker Arms (P/N 12569167 int):	Investment-cast, roller trunnion
Block:	Cast-aluminum with 6-bolt, cross-bolted main caps	Rocker Arms (P/N 10214664 exh):	Investment-cast, roller trunnion
Crankshaft (P/N 12598610):	Forged Steel with 9-bolt flange	Rocker Arm Ratio:	1.7:1
Connecting Rods (P/N 12624231):	Forged titanium	Recommended Fuel:	92 octane
Pistons (P/N 19180414):	Forged aluminum	Maximum Recommended rpm:	6,600
Camshaft Type (P/N 12605527):	Hydraulic roller	Reluctor Wheel:	58X
Valve Lift (in):	.562" intake / .558" exhaust	Balanced:	Internal
Camshaft Duration (@.050 in):	211° intake / 230° exhaust		



Available for purchase online at gmperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



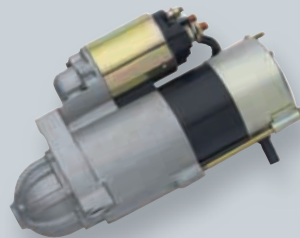
GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19154550
SuperMatic™ 4L85-E
Four-Speed Transmission
 See page 125 for details



10465385
LS-Series Starter
 See page 224 for details



19243524
LS9 Accessory Drive
System w/AC
 See page 216 for details



19212657
Transmission Controller
 See page 126 for details

SEE PAGE 178 FOR OUR COMPLETE LINE OF LS-SERIES ENGINE COMPONENTS



LS7 7.0L

19211710   

■ 505 hp @ 6,300 rpm

■ 470 lb.-ft. @ 4,800 rpm

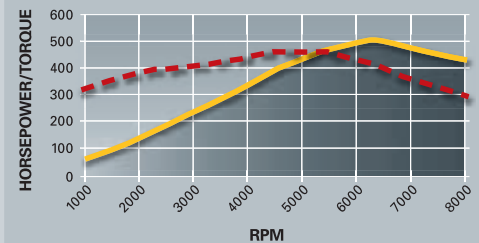
A living legend with 427 classic cubic inches!

In annals of high-performance engines, the Corvette Z06's LS7 will be remembered as a benchmark in naturally aspirated power. It will also go down as one of the most popular LS crate engines ever offered, with 505 horsepower and 470 lb.-ft. of torque.

Within its classic 427-cu-in displacement, engineers extracted Big-Block grunt from its high-revving small-block package. It features a unique, big-bore cylinder block that is anchored with a forged crankshaft, featherweight titanium connecting rods and friction-coated pistons. But it's the airflow capability of the cavernous, CNC-ported heads that enables its tremendous power. Large-volume, straight-passage intake runners channel air directly through 2.20-inch titanium intake valves.

GM Performance Parts' LS7 7.0L crate engine package includes a production-style engine with the dry sump oil pan. You'll need to supply the external oil supply and oil lines to the engine, but the rest of the assembly is fully dressed, including the manifold assembly with injectors and electronically controlled throttle body, and log-style exhaust manifolds. Use our LS7 controller kit P/N 19243066 to get it running in your project vehicle.

LS7 7.0L DYNO CHART



Horsepower: 505 @ 6300 rpm

Torque (lb-ft): 470 @ 4800 rpm

INSTALLATION NOTES

- Assembly does not include any electronics
- Comes assembled with 14-inch Corvette Z06 168-tooth flywheel
- LS7 is the same size and mounts the same as previous LS-Series engines
- LS7 Controller Kit P/N 19243066 available for non-Corvette applications. Kit includes electronic throttle pedal, which is required for throttle input to the ECU (see page 279)
- Use oil hose adapters P/N 25534412 to adapt to AN -12 fittings
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Engine is NOT compatible with LS7 Controller Kit P/N 19166567 due to MAP sensor and throttle body changes

LS7 7.0L TECH SPECS

Part Number:	19211710	Cylinder Heads (P/N 12578450):	CNC ported LS7 style ports
Engine Type:	LS-Series Small-Block V-8		70cc CNC combustion chambers
Displacement (cu in):	427 (7.0L)	Valve size (in):	2.200" titanium intake, 1.610" sodium-filled exhaust
Bore x Stroke (in):	4.125 x 4.000 (104.8 x 101.6mm)	Compression Ratio:	11.0:1
Block (P/N 19213580):	Cast-aluminum with 6-bolt steel main bearing caps	Rocker Arms:	Investment-cast, roller trunnion
Crankshaft (P/N 12568820):	Forged steel	Rocker Arm Ratio:	1.8:1 (offset, intake only)
Connecting Rods (P/N 12586258):	Forged titanium	Recommended Fuel:	91 octane
Pistons:	Hypereutectic aluminum	Maximum rpm:	7,000
Camshaft Type (P/N 12571251):	Hydraulic roller	Reluctor Wheel:	58X
Camshaft Lift (in):	.591 intake / .591 exhaust	Balanced:	Internal
Camshaft Duration (@.050 in):	211° intake / 230° exhaust		



Available for purchase online at gmpformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



19257242 Automatic Transmission

19257238 Manual Transmission

E-ROD System LS7 7.0L

At 7.0L (427 cubic inches), the LS7 is the largest-displacement LS production engine and is used in the Corvette Z06. Its racing-derived cylinder heads and valvetrain, including lightweight titanium connecting rods and other components, helps the engine rev quickly to produce 505 horsepower. It would make a great engine for a classic Corvette, where the legendary "427" hood numbers would be wholly appropriate – not to mention a Cobra-style kit car. CARB E.O. is pending.

Each engine requires a front-end accessory drive system suitable to the vehicle. The instruction manual includes recommendations for the accessory drive kit, as well as the transmission, gear ratios and more.

See page 62 for more system information or visit your GMPP Authorized Center.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



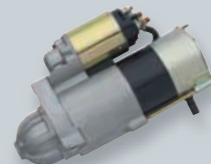
19244043
Supermatic™ 4L70-E
Four-Speed Automatic
Transmission

See page 125
for details



19212657
Transmission
Controller

See page 126
for details



10465385
LS-Series Starter

See page 224
for details



19155067
Corvette Accessory
Drive Kit

See page 214
for details



25534412
Oil Hose Adapters

See page 194
for details



19243066
LS7 Controller
Kit, 2009

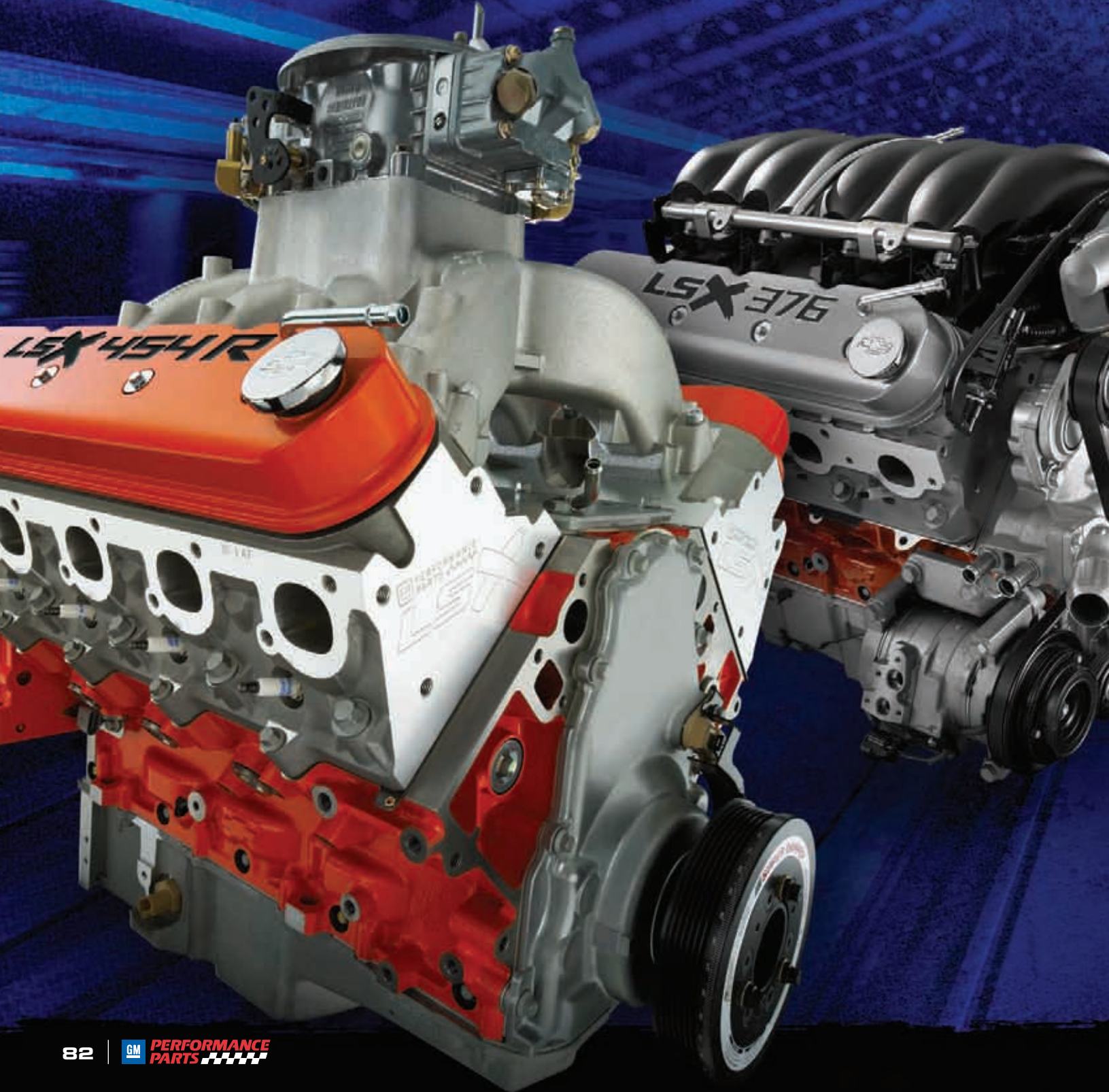
See page 279
for details

SEE PAGE 178 FOR OUR COMPLETE LINE OF LS-SERIES ENGINE COMPONENTS



Small-Block

LSX-Series



Ultimate-Performance LS Engines that are Built to Handle Big Power

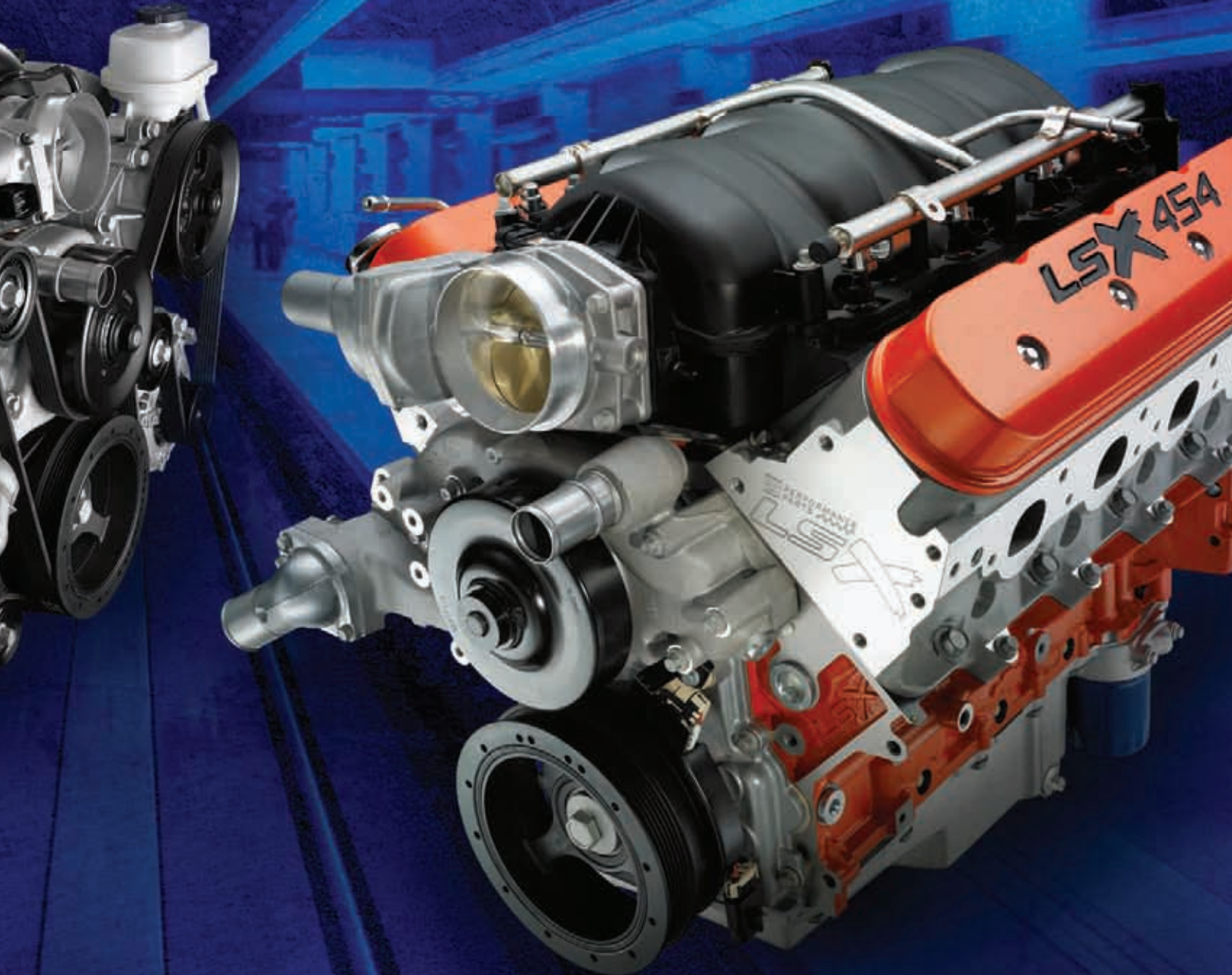
GM Performance Parts designed the LSX lineup of crate engines for one reason: Maximum performance with maximum durability. When it comes to dual-purpose, street/strip performance, there's nothing stronger.

LSX crate engines are based on the high-performance LSX Bowtie block, which is designed to support extreme performance combinations, including supercharging, turbocharging and nitrous. Our LSX cylinder heads complement that tough block with tremendous airflow

and six-bolts-per-cylinder clamping strength that supports those power adders.

Our latest addition to the lineup is the LSX 454R. It's an 750+ horsepower monster that will help racers trip the quarter-mile timers in 9 seconds or quicker. It's the most powerful crate engine ever from GMPP.

When you need the most power with the greatest strength, go with LSX!



LSX376



19171049   

■ 450 hp @ 5,900 rpm

■ 444 lb.-ft. @ 4,600 rpm

A factory-built foundation for forced induction!

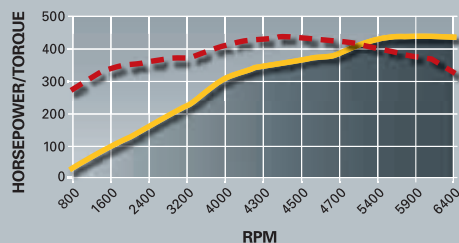
Boost on a budget! That's what you get with the LSX376. GM Performance Parts takes the economical LSX Bowtie standard-deck block, adds blower-friendly 9.0:1 forged pistons and combines them with the LS3's high-flow, rectangular-port heads to create an affordable foundation for supercharged and turbocharged combinations.

We deliver the LSX376 without an intake manifold and other accessories to keep the price lower and enable the installer to tailor the induction system to suit the blower or turbo system. Swap in the LSX376 in a vehicle originally equipped with an LS engine to give it a stronger bottom end for forced induction, or swap it into a street rod or classic muscle car body for a modern update.

Our horsepower and torque ratings are based on testing with the production-style, normally aspirated fuel injection system. More power is attainable with a carbureted induction system, but there's no telling how much power you can realize with a carefully tuned turbo or supercharger system!

Check out our *LS1 Engine Kit Installation Guide P/N 88959384* for details on installing an LS engine in a vintage vehicle.

LSX376 DYNO CHART



Horsepower: 450 @ 5900 rpm Torque (lb-ft): 444 @ 4600 rpm

INSTALLATION NOTES

- Assembly does not include any electronics
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Non-Corvette applications require flexplate, P/N 12602448
- Requires LSX Ignition Controller P/N 19171130 for carbureted applications
- Standard LS 6-bolt crank flange

LSX376 TECH SPECS

Part Number:	19171049	Cylinder Heads (P/N 12615869):	LS3 rectangular port; with "as cast" 68cc chambers
Engine Type:	LSX-Series Gen IV Small-Block V-8	Valve Size (in):	2.160 intake / 1.590 exhaust
Displacement (cu in):	376 cu in (6.2L)	Compression ratio:	9:1
Bore x Stroke (in):	4.060 x 3.620 (103.25 x 92 mm)	Rocker Arms (P/N 12569167 int):	Investment-cast, roll trunnion
Block (P/N 19244055):	LSX cast-iron with 6-bolt, cross-bolted main caps	Rocker Arms (P/N 10214664 exh):	Investment-cast, roll trunnion
Crankshaft (P/N 12597569):	Nodular iron	Rocker Arm Ratio:	1.7:1
Connecting Rods (P/N 12607475):	Powdered metal	Recommended Fuel:	92 octane
Pistons (P/N 19244016):	Forged aluminum	Maximum Recommended RPM:	6,600
Camshaft Type (P/N 12603844):	Hydraulic roller	Reluctor Wheel:	58X
Valve Lift (in):	0.551" intake / 0.522" exhaust	Balanced:	Internal
Camshaft Duration (@0.050 in):	204° intake / 211° exhaust		



Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19244043
SuperMatic™ 4L70-E Four-Speed Automatic Transmission
 Features five-pinion gearsets, heat-treated state shaft splines, induction-hardened turbine shaft, seven-plate clutch and specific valve-body calibration.
See page 125 for details



19212657
Transmission Controller
 Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.
See page 126 for details



19244035
LSX-LS3 Single-Plane Standard Deck 4-bbl Intake Manifold
See page 222 for details

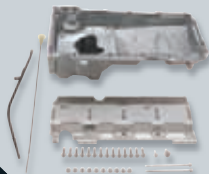


19244037
LSX-LS3 Dual-Plane Standard Deck 4-bbl Intake Manifold
See page 222 for details

LSX376 COMPLETION KITS

Electronic Fuel Injection
 LS3 intake manifold **12610434**
 Ignition coil kit **19257878**
 Engine controller kit **19201861**
 High flow / 60PSI (400kPa) fuel pump (not available from GMPP)

Carburetor Fuel System
 Intake manifold (single plane) **19244035**
 Intake manifold (Dual plane) **19244037**
 Carburetor **19170095**
 Air cleaner **12342071**
 Ignition controller **19171130**
 Ignition coil kit **19257878**
 Fuel pump **6472657**



19212593
Muscle Car Oil Pan Kit
See page 219 for details



12610434
LS3 Intake Manifold Assembly
See page 220 for details



LSX454

19244611

■ 620 hp @ 6,200 rpm

■ 590 lb.-ft. @ 4,800 rpm

Big-Block performance built from our tall-deck LSX block!

One of the most legendary engines in muscle car history was the Chevy 454 Big-Block. With the tall-deck LSX Bowtie block, GM Performance Parts engineers were able to build a 21st-century 454 with the latest technology – and it requires no more space under the hood than a production LS engine.

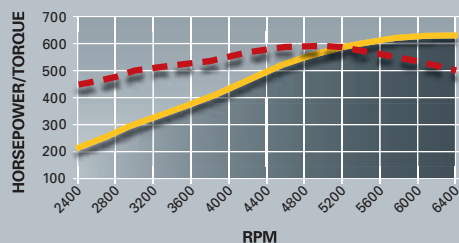
The LSX454 is filled with an all-forged, super-tough rotating assembly and features a pair of our new, deep-breathing LSX six-bolt cylinder heads. It also comes dressed with great-looking, orange powder-coated valve covers with engraved “LSX454” logos.

GMPP delivers the LSX454 without an intake manifold and other accessories. With a carburetor and high-flow GM Performance Parts intake manifold, the LSX454 is good for about 620 horsepower and 600 lb.-ft. of torque or about 580 hp and 600 lb.-ft. with fuel injection.

Use LSX-LS7 single-plane carbureted intake manifold P/N 19244033. The LSX454 valve covers do not include provisions for mounting ignition coil brackets. Aftermarket or custom relocation brackets must be obtained. It also includes an 8-bolt crankshaft flange that may require an adapter for use with some transmissions.

Check out our *LS1 Engine Kit Installation Guide P/N 88959384* for details on installing an LS engine in a vintage vehicle.

LSX454 DYNO CHART



Horsepower: 620 @ 6200 rpm Torque (lb-ft): 590 @ 4800 rpm

INSTALLATION NOTES

- Assembly does not include any electronics
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Requires LSX Ignition Controller P/N 19171130
- Requires the purchase and installation of an oil pan (see page 219)
- LSX 8-bolt crank flange
- Requires premium fuel

LSX454 TECH SPECS

Part Number:	19244611	Cylinder Heads (P/N 19201806):	Aluminum LSX-LS7 port; with "as cast" 70cc chambers
Engine Type:	LSX-Series Gen IV Small-Block V-8	Valve Size (in):	2.200 titanium intake/1.610 hollow, sodium-filled exhaust
Displacement (cu in):	454 cu in (7.4L)	Compression ratio:	11.0:1
Bore x Stroke (in):	4.185 x 4.125 (106.3 x 104.8 mm)	Rocker Arms (P/N 12579615 int):	Investment-cast, roll trunnion
Block (P/N 19244057):	LSX cast-iron with 6-bolt, cross-bolted main caps	Rocker Arms (P/N 12579617 exh):	Investment-cast, roll trunnion
Crankshaft (P/N 19170391):	4340 forged steel with 8-bolt flange	Rocker Arm Ratio:	1.8:1
Connecting Rods (P/N 19166964):	4340 forged steel	Recommended Fuel:	92 octane
Pistons (P/N 19166958):	Forged aluminum	Maximum Recommended RPM:	6,500
Camshaft Type (P/N 19166972):	Hydraulic roller	Reluctor Wheel:	58X
Valve Lift (in):	0.635" intake / 0.635" exhaust	Balanced:	Internal
Camshaft Duration (@0.050 in):	236° intake / 246° exhaust		



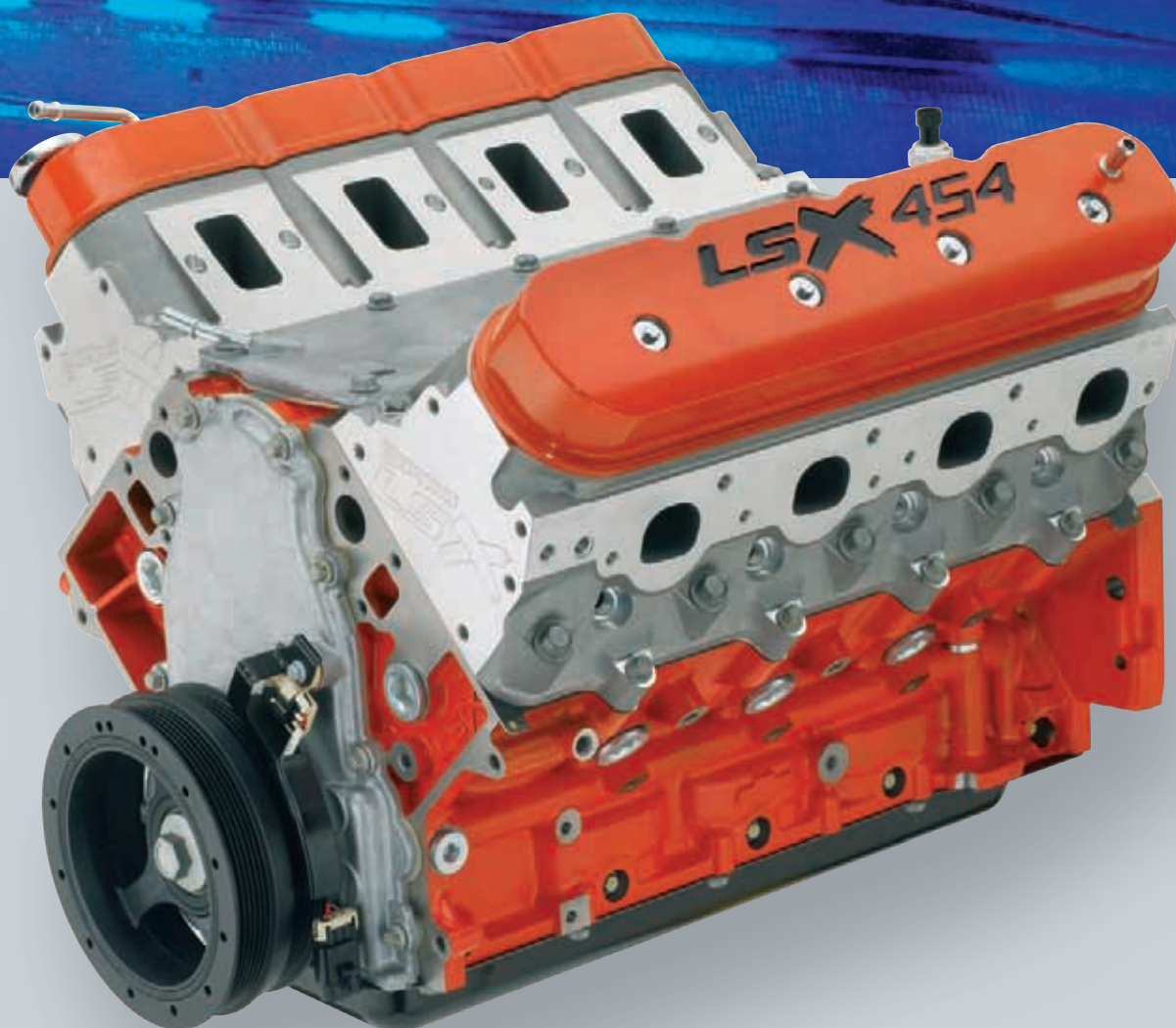
Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19244043
SuperMatic™ 4L70-E Four-Speed Automatic Transmission
 Features five-pinion gearsets, heat-treated state shaft splines, induction-hardened turbine shaft, seven-plate clutch and specific valve-body calibration.
See page 125 for details



19212657
Transmission Controller
 Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.
See page 126 for details



19244033
LSX-LS7 Standard Deck 4-bbl Manifold
See page 222 for details

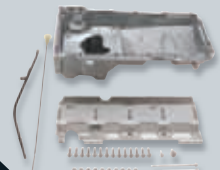


12610435
LS7 Production Intake Manifold Assembly
See page 220 for details

LSX454 COMPLETION KITS

Electronic Fuel Injection
 LS7 intake manifold: **12610435**
 Ignition coil kit: **19257878**
 Engine controller kit: **19244481**
 High flow / 60PSI (400kPa) fuel pump (not available from GMPP)

Carburetor Fuel System
 Intake manifold: **19244033**
 Carburetor: **19170095**
 Air cleaner: **12342071**
 Ignition controller: **19171130**
 Ignition coil kit: **19257878**
 Fuel pump: **6472657**



19212593
Muscle Car Oil Pan Kit
See page 219 for details



19171130
LSX Ignition Controller
See page 224 for details

LSX454R



19257880



NEW

■ 750+ hp @ peak rpm

■ 680+ lb.-ft. @ peak rpm

Quite simply the most powerful crate engine ever from GMPP!

Drag racers take note! GM Performance Parts' new LSX454R crate engine delivers 750+ horsepower that will help you stay in front of the competition. More than the most powerful LS engine in our portfolio, it is the most powerful crate engine we've ever offered!

Our engineers designed LSX454R for the unique, high-rpm demands of drag racing. It is a high-compression, solid-roller combination that uses our new LSX DR cylinder heads. These 11-degree, six-bolt aluminum heads feature raised ports that provide tremendous airflow. We complement them with an exclusive, high-rise open-plenum intake manifold and a Dominator-type carburetor to complete the assembly.

The LSX454R's bottom end includes our LSX Bowtie cylinder block and an all-forged rotating assembly. And while we rate the engine at 750+ horsepower in its naturally aspirated form, it is capable of supporting nitrous and other power adders for even greater power.

Use the LSX454R as the centerpiece of a new race car built with our 2011 Camaro body-in-white for the ultimate modern drag strip star. With 750+ horses under the hood, it will perform as good as it looks!

Check out our *LS1 Engine Kit Installation Guide P/N 88959384* for details on installing an LS engine in a vintage vehicle.

RAISED PORT LSX-DR HEADS

ALL-FORGED ROTATING ASSEMBLY

750+ HORSEPOWER OUT OF THE CRATE

INSTALLATION NOTES

- Intended for off-road use only!
- Requires Race Fuel (110 Octane Minimum)
- Not intended for Marine Use
- Requires LSX Ignition Controller P/N 19171130
- Oil pan not included (see page 219)
- LSX 8-bolt crank flange
- Uses 4500-series carburetor
- Requires header flange P/N 19257453 for exhaust fabrication (see page 223)

LSX454R TECH SPECS

Part Number:	19257880	Cylinder Heads (P/N 19166979):	Drag race cylinder heads
Engine Type:	LS-Series Small-Block V-8		6-bolt LSX aluminum
Displacement (cu in):	454 cu in (7.4L)	Valve size (in):	2.25" x 6.350" intake
Bore x Stroke (in):	4.185 x 4.125 (106.3 x 104.8 mm)		1.625" x 6.350" exhaust
Block (P/N 19244057):	LSX cast iron with 6-bolt cylinder head attachment	Compression Ratio:	13.1:1
Crankshaft (P/N 19244018):	4340 forged steel	Rocker Arms (P/N 19201808):	Shaft mounted with needle bearing fulcrum and tip
Connecting Rods (P/N 19166964):	4340 forged steel	Rocker Arm Ratio:	1.9:1
Pistons: (P/N 19166958):	4032 forged aluminum	Recommended Fuel:	Race fuel (110 octane minimum)
Camshaft Type (P/N 12571251):	Mechanical roller	Maximum rpm:	7,100
Camshaft Lift (in):	.738 intake / .738 exhaust	Reluctor Wheel:	58X
Camshaft Duration (@.050 in):	250° intake / 270° exhaust	Balanced:	Internal



Available for purchase online at gmperformanceparts.com



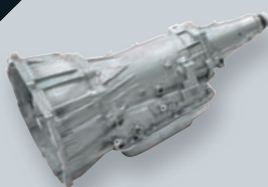
GM Performance Parts Racing Crate Engines are excluded from limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



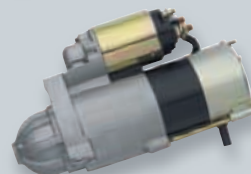
19244043
SuperMatic™ 4L70-E Four-Speed Automatic Transmission
 Features five-pinion gearsets, heat-treated state shaft splines, induction-hardened turbine shaft, seven-plate clutch and specific valve-body calibration.
See page 125 for details



19212657
Transmission Controller
 Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.
See page 126 for details



19212593
Muscle Car Oil Pan Kit
See page 219 for details



10465385
LS-Series Starter
See page 224 for details

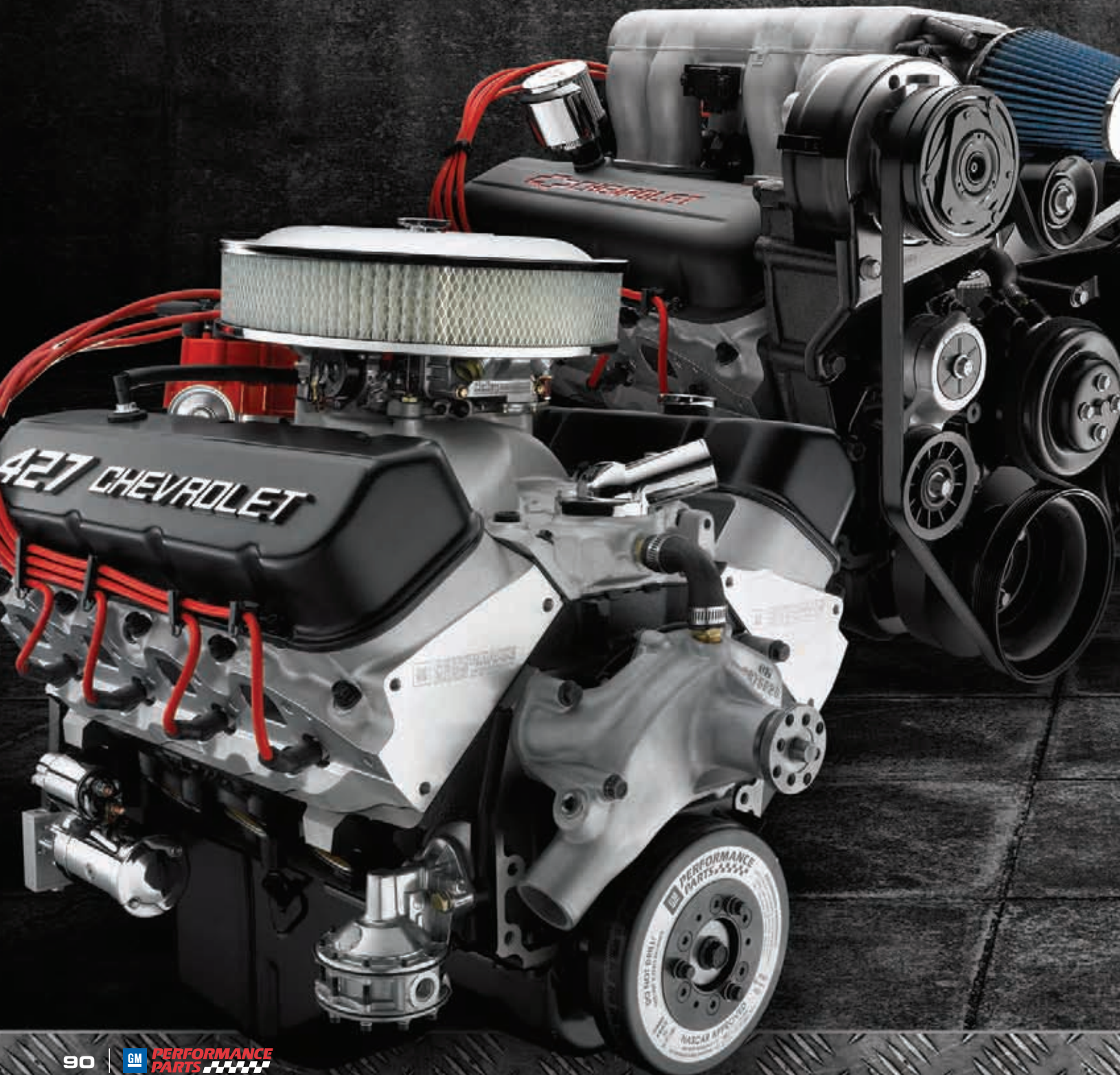


19171130
LSX Ignition Controller
See page 224 for details



19180610
Water Pump
See page 218 for details

Big-Block



The Ultimate Weapon for the Street and Strip – or Towing

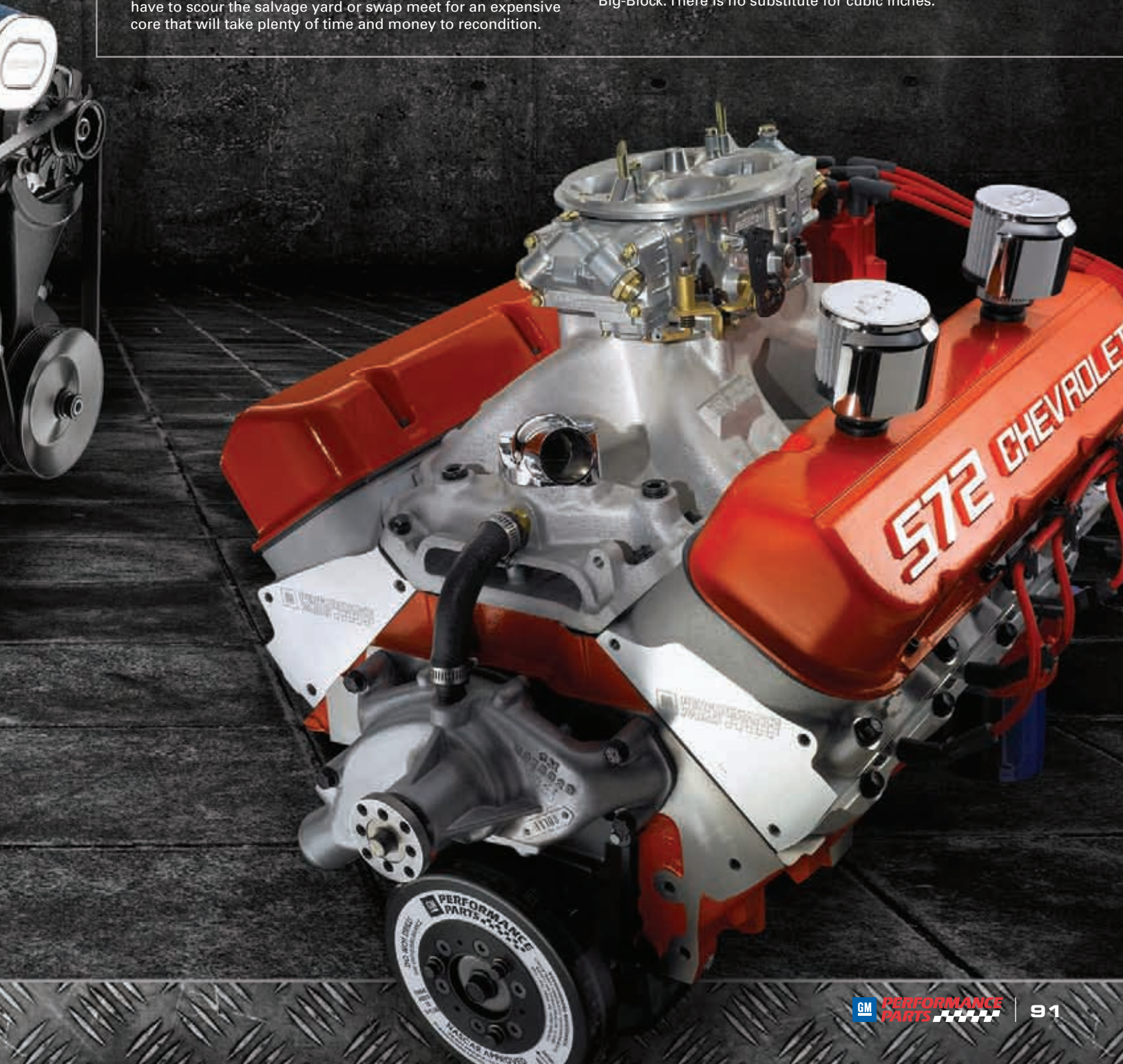
Two words are all it takes to silence the competition: Big-Block. Its massive dimensions and reputation for frame-twisting torque make it the ultimate weapon for those seeking supremacy in a street/strip performer. And when it comes to hauling a Big-Block-powered car to the track, there's no better choice than a GMPP 454 or 502 engine under the hood of your tow rig.

We don't have to tell you Big-Block cores are getting harder to find and that's why GMPP crate engines are the perfect solution to your Big-Block dilemma. Each is built with the latest version of the Bowtie big block design, which is stronger in many key ways to previous production engines. Besides that, you don't have to scour the salvage yard or swap meet for an expensive core that will take plenty of time and money to recondition.

All of our Big-Block crate engines are built with brand-new parts, from the cylinder block and rotating assembly to the heads and all the supporting accessories. Save yourself the trouble of rebuilding. Our lineup of assembled, ready-to-install engines offers something for every budget and project – and you'll be on the road quicker, with little or no time required for fine-tuning.

GMPP crate engines are built stronger and most carry a 24-month/50,000-mile (80,000 km) warranty for worry-free performance. That goes for the engine you install in your Chevelle, Corvette or Suburban.

Big-Block. There is no substitute for cubic inches.



Anniversary Edition 427



19166392

■ 430 hp @ 5,800 rpm

■ 444 lb.-ft. @ 3,800 rpm

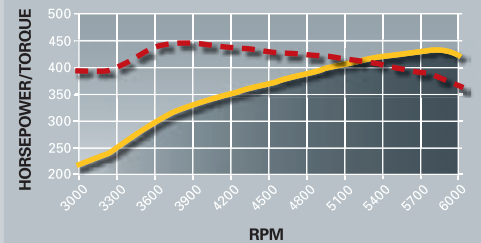
A limited-edition crate engine that honors the legendary ZL1!

At the height of the muscle car wars, a few enterprising, dealer-backed racers worked the loopholes of Chevrolet's COPO ordering system to create a handful of factory-built, supercars that weren't found in any brochure or order guide. They were equipped with an all-aluminum 427 engine dubbed the ZL1. It was similar in specification to the legendary L88 427, but with an aluminum block that saved about 100 pounds.

GM Performance Parts commemorates the ZL1 with the Anniversary Edition 427 – an aluminum-block crate engine that mimics the original in spirit, but with design upgrades that make it a street-friendly option for resto-mod and tribute projects. Our modern aluminum cylinder block features strength-enhancing design tweaks, screw-in galley plugs and more. We also use a hydraulic roller camshaft in place of the ZL1's original-type flat-tappet cam, making for smoother street operation and greatly reduced maintenance.

Only 427 examples of this unique engine will be built, with each numbered crate engine including a special owner's kit with an authenticity certificate, special 427 emblems and more.

ANNIVERSARY 427 DYNO CHART



Horsepower: 430 @ 5800 rpm Torque (lb-ft): 444 @ 3800 rpm

INSTALLATION NOTES

- Due to crate fitment, the carburetor is shipped in a separate box and needs to be installed by an engine installer
- Requires addition of starter and fuel pump (not included)
- Clutch linkage bosses are drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- Comes with an internally balanced 14" automatic transmission flexplate; use flywheel P/N 12582964 and 11.500" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

ANNIVERSARY EDITION 427 TECH SPECS

Part Number:	19166392	Compression Ratio:	10.1:1
Engine Type:	Aluminum Chevy Big-Block V-8	Rocker Arms (P/N 12361323):	Aluminum roller style
Displacement (cu in):	427	Rocker Arm Ratio:	1.7:1
Bore x Stroke (in):	4.250 x 3.750	Distributor (P/N 19212081):	HEI type
Block (P/N 88958696):	Cast-aluminum with 4-bolt main caps	Carburetor (P/N 19170093):	770-cfm
Crankshaft (P/N 19171620):	Forged steel	Water Pump (P/N 19168602):	Aluminum short-style
Connecting Rods: (P/N 19211226):	Forged steel	Spark Plugs and Wires:	Included
Pistons (P/N 19171618):	Forged aluminum	Flexplate (P/N 12561217):	14"
Camshaft Type (P/N 12366543):	Hydraulic roller	Recommended Fuel:	92 octane
Valve Lift (in):	.527" intake / .544" exhaust	Ignition Timing:	Base 10° BTDC, 36° Total
Camshaft Duration (@.050 in):	224° intake / 234° exhaust	Maximum Recommended rpm:	6,400
Cylinder Heads: (P/N 19211799):	Aluminum oval port, 110cc chambers	Balanced:	Internal
Valve Size (in):	2.190 intake / 1.880 exhaust		

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



Limited Edition

Individually Serial Numbered!

SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19154550 SuperMatic™ 4L85-E Four-Speed Transmission
 Direct bolt-on for Gen I Small-Block and all Big-Blocks. Includes torque converter for Big-Block applications (approx. 2,200 rpm stall).
 See page 125 for details



19212657 Transmission Controller
 Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.
 See page 126 for details



19172805 Serpentine Accessory Drive Belt System With Air Conditioning
 See page 256 for details



12355614 Fuel Pump, Street Performance (Chevy Big-Block)
 See page 284 for details



12342071 Air Cleaner
 See page 263 for details



12342024 Chrome Water Neck
 See page 263 for details



12363128 Chrome High Torque Mini Starter
 See page 276 for details

ZZ427/480



19166393   

■ 480 hp @ 5,800 rpm

■ 490 lb.-ft. @ 3,800 rpm

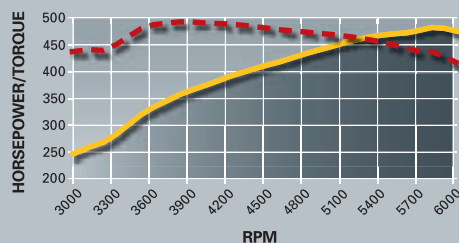
The Classic L88 427 updated for the 21st century!

Between 1967 and 1969, the legendary L88 was the ultimate expression of Chevy's Big-Block power, combining a rigid iron cylinder block with lightweight aluminum cylinder heads and a single four-barrel carburetor. That raspy rat engine was rated at 480 horsepower, although the figure was generally thought to be on the conservative side.

GM Performance Parts has recreated that classic Big-Block combination in the ZZ427/480 – including the 480 horsepower rating (and it just might be a little on the conservative side, too). Like the original, it features a forged steel crankshaft and high-flow, oval-port aluminum cylinder heads. We've upgraded the camshaft from the original's mechanical flat-tappet design to a smoother hydraulic roller, which delivers great drivability characteristics and a broader rev range. A 10.1:1 compression ratio means it will perform great on pump gas, too.

Whether you're building a '69 COPO Camaro resto-mod tribute, a modified mid-year Corvette or a street-tire class winner, the ZZ427/480 is the heritage-inspired crate engine that delivers the performance that built the Big-Block's legendary reputation.

ZZ427/480 DYNO CHART



Horsepower: 480 @ 5800 rpm Torque (lb-ft): 490 @ 3800 rpm

INSTALLATION NOTES

- Due to crate fitment, the carburetor is shipped in a separate box and needs to be installed by an engine installer
- Requires addition of starter and fuel pump (not included)
- Clutch linkage bosses are drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- Comes with an internally balanced 14" automatic transmission flexplate; use flywheel P/N 12582964 and 11.5" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

ZZ427/480 TECH SPECS

Part Number:	19166393	Compression Ratio:	10.1:1
Engine Type:	Chevy Big-Block V-8	Rocker Arms (P/N 12361323):	Aluminum roller style
Displacement (cu in):	427	Rocker Arm Ratio:	1.7:1
Bore x Stroke (in):	4.250 x 3.750	Distributor (P/N 19212081):	HEI type
Block (P/N 19170538):	Cast-iron with 4-bolt main caps	Carburetor (P/N 19170093):	770-cfm
Crankshaft (P/N 19171620):	Forged steel	Water Pump (P/N 19168602):	Aluminum short-style
Connecting Rods (P/N 19211226):	Forged steel	Spark Plugs and Wires:	Included
Pistons (P/N 19171618):	Forged aluminum	Flexplate (P/N 12561217):	14"
Camshaft Type (P/N 12366543):	Hydraulic roller	Recommended Fuel:	92 octane
Valve Lift (in):	.527 intake / .544 exhaust	Ignition Timing:	Base 10° BTDC, 36° Total
Camshaft Duration (@.050 in):	224° intake / 234° exhaust	Maximum Recommended rpm:	6,400
Cylinder Heads (P/N 19211799):	Aluminum oval port, 110cc chambers	Balanced:	Internal
Valve Size (in):	2.190 intake / 1.880 exhaust		

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



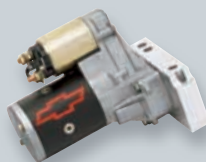
19154550
SuperMatic™ 4L85-E Four-Speed Transmission
 Direct bolt-on for Gen I Small-Block and all Big-Blocks. Includes torque converter for Big-Block applications (approx. 2,200 rpm stall).
See page 125 for details



19212657
Transmission Controller
 Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.
See page 126 for details



19172805
Serpentine Accessory Drive Belt System With Air Conditioning
See page 256 for details



12361146
High Torque Mini Starter
See page 276 for details



12341999
Fuel Pump Block-Off Plate
See page 237 for details



12342024
Chrome Water Neck
See page 263 for details



12355614
Fuel Pump, Street Performance (Chevy Big-Block)
See page 284 for details



12342071
Air Cleaner
See page 263 for details

454 HO



12568774   

■ 425 hp @ 5,250 rpm

■ 500 lb.-ft. @ 3,250 rpm

GMPP's most economical Big-Block crate engine delivers 500 lb.-ft.!

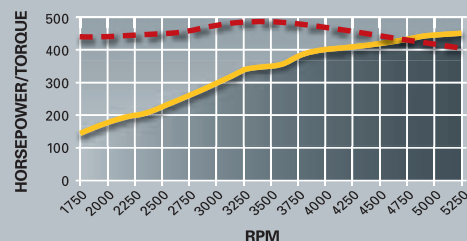
GM Performance Parts' 454 HO crate engine is classic in its own time, offering enthusiasts an affordable Big-Block combination with performance specs that will make you think it's 1970 all over again – with 425 horsepower and 500 asphalt-wrinkling lb.-ft. of torque.

The foundation of the 454 HO is a brand-new, updated cylinder block, which incorporates many strength and performance design enhancements – making it a smart and economical alternative to rebuilding. We also add an all-forged reciprocating assembly for maximum durability, a roller camshaft and a set of rectangular-port iron cylinder heads.

We deliver the 454 HO with a water pump, balancer, 14-inch flexplate and aluminum intake manifold. Add a carburetor, ignition system and starter and your budget Big-Block will be ready to roar. All of the necessary parts are available from GMPP.

If you want the strength and convenience of the 454 HO bottom end, but want to add your own heads and induction system, use our 454 Partial engine P/N 12498778.

454 HO DYNO CHART



Horsepower: 425 @ 5250 rpm Torque (lb.-ft.): 500 @ 3250 rpm

INSTALLATION NOTES

- Requires addition of carburetor, starter, fuel pump, distributor and ignition system (not included)
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- Comes with an externally balanced 14" automatic transmission flexplate; use flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

454 HO TECH SPECS

Part Number:	12568774	Cylinder Heads (P/N 12562920):	Iron rectangular port; 118cc chambers
Engine Type:	Chevy Big-Block V-8	Valve Size (in):	2.190 intake / 1.880 exhaust
Displacement (cu in):	454	Compression Ratio:	8.75:1
Bore x Stroke (in):	4.250 x 4.000	Rocker Arms (P/N 12523976):	Stamped steel
Block (P/N 19170538):	Cast-iron with 4-bolt main caps	Rocker Arm Ratio:	1.7:1
Crankshaft (P/N 14096983):	Forged steel	Water Pump (P/N 19168606):	Cast-iron, long-style
Connecting Rods (P/N 19170198):	Forged steel	Flexplate (P/N 10185034):	14"
Pistons (P/N 10215228):	Forged aluminum	Recommended Fuel:	92 octane
Camshaft Type (P/N 24502611):	Hydraulic roller	Ignition Timing:	Base 4° BTDC, 26° Total
Camshaft Lift (in):	.510 intake / .540 exhaust	Maximum Recommended rpm:	5,500
Camshaft Duration (@.050 in):	211° intake / 230° exhaust	Balanced:	External

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



12498778

454 Partial Engine

The sturdy foundation of the 454 HO is the starting point of a custom engine build. Use externally balanced flywheel for manual transmission applications.



19154550

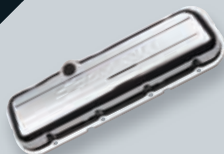
SuperMatic™ 4L85-E Four-Speed Transmission

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Includes torque converter for Big-Block applications (approx. 2,200 rpm stall).

See page 125 for details



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



12342093 Short Chrome Bowtie Valve Cover

See page 248 for details



12606096 Lightweight Starter

See page 276 for details



19212657 Transmission Controller

See page 126 for details



93440806 HEI Distributor

See page 259 for details



12355614 Fuel Pump, Street Performance (Chevy Big-Block)

See page 284 for details



19170093 Carburetor, Holley 770-cfm

See page 282 for details

SEE PAGE 227 FOR OUR COMPLETE LINE OF BIG-BLOCK ENGINE COMPONENTS



ZZ454/440

12498777   

■ 440 hp @ 5,250 rpm

■ 500 lb.-ft. @ 3,250 rpm

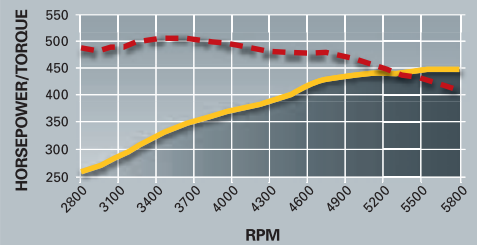
Oval-port aluminum heads deliver big power in an affordable package!

Our engineers took the 454 HO – with its super-tough, all-forged reciprocating assembly – and matched it with a set of higher-flow, oval-port aluminum cylinder heads to pick up an additional 15 horses, while still offering 500 lb.-ft. of torque. We dubbed it the ZZ454/440 and it's an affordable high-performance Big-Block for any chassis you can stuff it in.

The ZZ454/440 uses our new cylinder block casting for greater strength and performance, while the aluminum heads use smaller, 110cc combustion chambers to boost compression to 9.6:1 (up from 8.5:1 on the 454 HO). We then match the airflow capability with a high-lift, hydraulic roller camshaft that delivers great idle quality and requires no periodic lash adjustments.

Our crate engine package includes the ZZ454/440 assembled with a water pump, balancer, aluminum intake manifold and a 14-inch flexplate. Your GM Performance Parts dealer can hook you up with the carburetor, starter, ignition system and other accessories required to get this big-power Big-Block started.

ZZ454/440 DYNO CHART



Horsepower: 440 @ 5250 rpm

Torque (lb-ft): 500 @ 3250 rpm

INSTALLATION NOTES

- Requires addition of carburetor, starter, distributor and ignition system (not included)
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads, for clearance
- Comes with an externally balanced 14" automatic transmission flexplate; use flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

ZZ454 TECH SPECS

Part Number:	12498777	Cylinder Heads (P/N 12363392):	Aluminum oval port; 110cc chambers
Engine Type:	Chevy Big-Block V-8	Valve Size (in):	2.190 intake / 1.880 exhaust
Displacement (cu in):	454	Compression Ratio:	9.6:1
Bore x Stroke (in):	4.250 x 4.000	Rocker Arms (P/N 12368082):	Stamped steel
Block (P/N 19170538):	Cast-iron with 4-bolt main caps	Rocker Arm Ratio:	1.7:1
Crankshaft (P/N 14096983):	Forged steel	Water Pump (P/N 19168606):	Cast-iron, long-style
Connecting Rods (P/N 19170198):	Forged steel	Flexplate (P/N 10185034):	14"
Pistons (P/N 10215228):	Forged aluminum	Recommended Fuel:	92 octane
Camshaft Type (P/N 24502611):	Hydraulic roller	Ignition Timing:	Base 4° BTDC, 26° Total
Camshaft Lift (in):	.510 intake / .540 exhaust	Maximum Recommended rpm:	5,500
Camshaft Duration (@.050 in):	211° intake / 230° exhaust	Balanced:	External

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



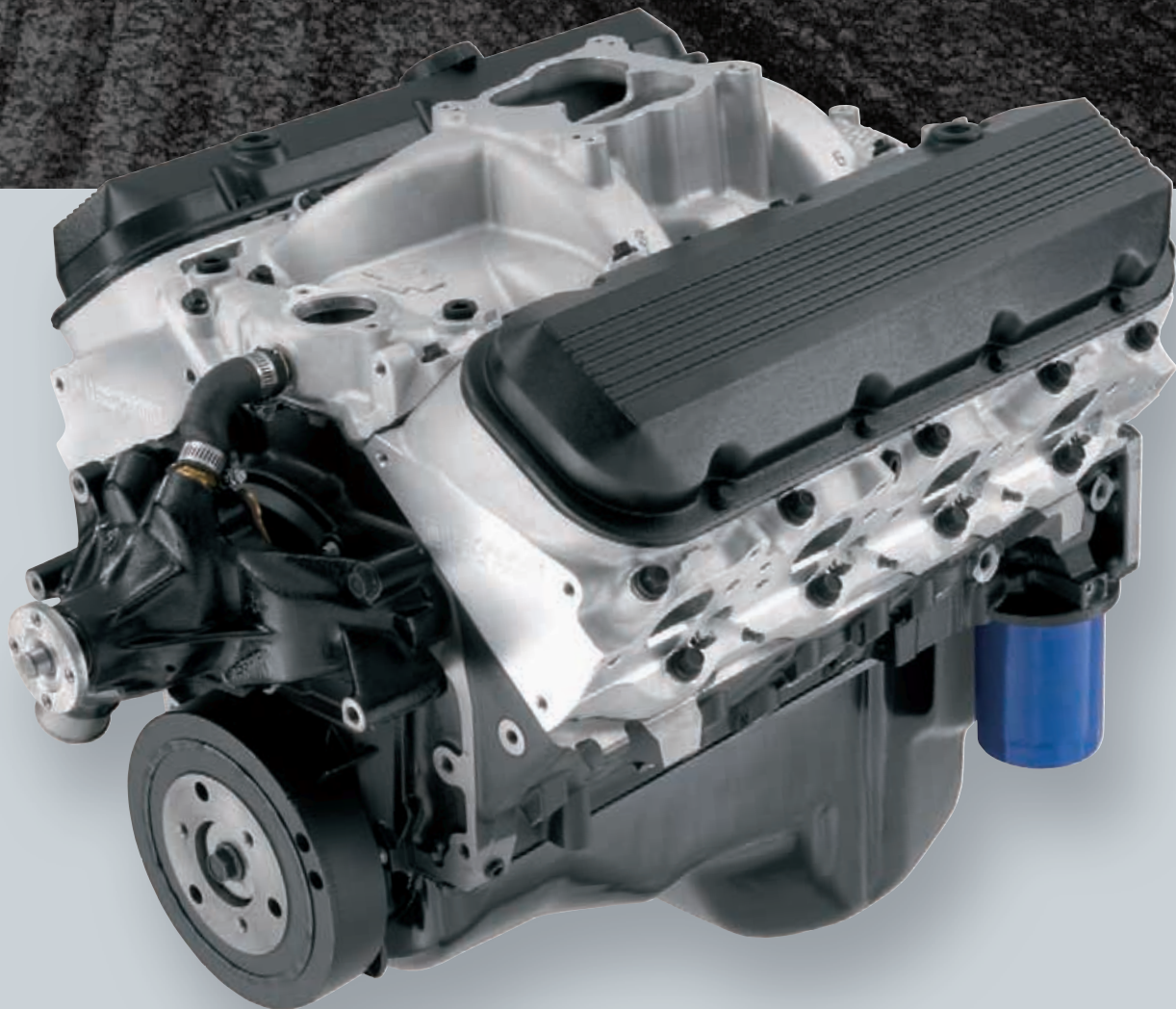
Available for purchase online at gmpformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



12498778   

454 Partial Engine

The sturdy foundation of the 454 HO is the starting point of a custom engine build. Use externally balanced flywheel for manual transmission applications.



19154550

SuperMatic™ 4L85-E Four-Speed Transmission

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Includes torque converter for Big-Block applications (approx. 2,200 rpm stall).

See page 125 for details



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!

19170093
Carburetor, Holley
770-cfm

See page 282
for details



12606096
Lightweight Starter

See page 276
for details



19212657
Transmission
Controller

See page 126
for details



12342071
Air Cleaner

See page 263
for details



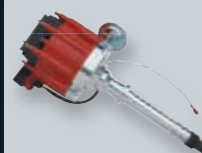
12368383
Spark Plug Wire Set

See page 277
for details



88961867
Distributor, Aluminum
Billet HEI

See page 259
for details



HT502

88890534   

■ 377 hp @ 4,500 rpm

■ 512 lb.-ft. @ 3,300 rpm

An affordable, high-performance alternative to rebuilding!

If you're thinking about repowering your trusty Big-Block-powered truck, don't bother with a rebuild or reconditioned used engine. GMPP's HT502 crate engine is an affordable alternative with more power and greater durability.

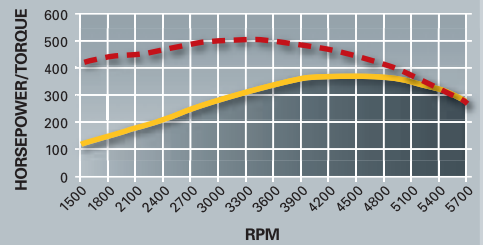
The HT502 is rated at 377 horsepower and a whopping 512 lb.-ft. of trailer-tugging torque. That's more than the factory ever offered and more than you'll get with a stock-type rebuild. It is uniquely suited to pre-1978 trucks, but is adaptable to a variety of applications.

We build the HT502 with a forged crankshaft, rods and pistons for maximum strength; and they're installed in a new version of the Big-Block cylinder block. It is updated for greater strength and performance capability. A conservative 8.75:1 compression ratio ensures pump-gas performance at all altitudes and engine loads.

Our assembly comes with heads and a balancer installed. An induction system, ignition, starter, water pump and other accessories are required to finish the engine. All necessary components are available from GM Performance Parts.



HT502 DYNO CHART



Horsepower: 377 @ 4500 rpm

Torque (lb.-ft.): 512 @ 3300 rpm

INSTALLATION NOTES

- Requires the addition of carburetor, intake manifold, water pump, starter, distributor and ignition system
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- 502 engines now have a mechanical fuel pump boss!
- Comes with an externally balanced 14" automatic transmission flexplate. Use externally balanced flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

HT502 TECH SPECS

Part Number:	88890534	Cylinder Heads (P/N 12562917):	Iron oval port; 118cc chambers
Engine Type	Chevy Big-Block V-8	Valve Size (in):	2.07 intake / 1.73 exhaust
Displacement (cu in):	502	Compression Ratio:	8.75:1
Bore x Stroke (in):	4.47 x 4.00	Rocker Arms (P/N 12523976):	Stamped steel
Block (P/N 19170540):	Cast-iron with 4-bolt main caps	Rocker Arm Ratio:	1.7:1
Crankshaft (P/N 10183723):	Forged steel	Flexplate (P/N 10185034):	14"
Connecting Rods (P/N 19170198):	Forged steel, shot peened	Recommended Fuel:	92 octane
Pistons (P/N 12533507):	Forged aluminum	Ignition Timing:	Base 4° BTDC, 26° Total
Camshaft Type (P/N 12552296):	Hydraulic roller	Maximum Recommended rpm:	5,500
Camshaft Lift (in):	.480 intake / .483 exhaust	Balanced:	External
Camshaft Duration (@.050 in):	204° intake / 209° exhaust		

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



12568782 



502 Partial Engine

This brand-new Partial engine includes forged reciprocating components, as well as the balancer, oil pan and timing chain set.

19154550



SuperMatic™ 4L85-E Four-Speed Transmission

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Includes torque converter for Big-Block applications (approx. 2,200 rpm stall).

See page 125 for details

SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19170093 Carburetor, Holley 770-cfm

See page 282 for details



12606096 Lightweight Starter

See page 276 for details



19212657 Transmission Controller

See page 126 for details



19168602 Aluminum Water Pump, Short-Style

See page 256 for details



93440806 HEI Distributor

See page 259 for details



14097092 Intake Manifold, Oval Port (iron)

See page 260 for details

SEE PAGE 227 FOR OUR COMPLETE LINE OF BIG-BLOCK ENGINE COMPONENTS



502 HO

12568778   

■ 450 hp @ 5,250 rpm

■ 550 lb.-ft. @ 3,500 rpm

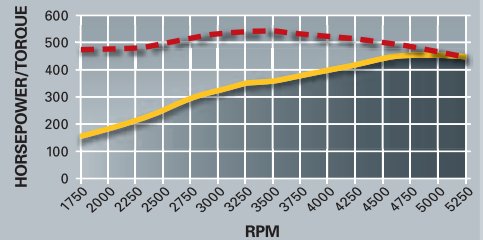
Affordable Big-Block performance with huge torque and 450 hp!

With 450 horsepower and 550 lb.-ft. of torque, our 502 HO crate engine has power on tap for every need – whether it’s a ‘69 Chevelle at the drag strip or the Suburban that towed it there!

The 502 HO is all about torque. It hovers just below the 500 lb.-ft. mark at only 1,500 rpm and arcs gently above the 500 lb.-ft. level by 2,800 rpm, remaining there through 4,200 rpm. All those axle-twisting lb.-ft. are rooted in a stronger, updated four-bolt cylinder block that houses a forged steel crankshaft, forged and shot-peened rods and forged aluminum pistons. In other words, it’s a super-stout assembly that is as durable as it is powerful.

Iron, rectangular-port cylinder heads keep the 502 HO affordable and our crate engine assembly includes an aluminum, dual-plane intake manifold, a water pump, 14-inch flexplate, balancer and more. You add the carburetor, starter and ignition system – all available at gmpformanceparts.com.

502 HO DYNO CHART



Horsepower: 450 @ 5250 rpm

Torque (lb.-ft): 550 @ 3500 rpm

INSTALLATION NOTES

- Requires addition of carburetor, fuel pump, starter, distributor and ignition system
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads, for clearance
- 502 engines now have a mechanical fuel pump boss!
- Comes with an externally balanced 14" automatic transmission flexplate. Use flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

502 HOTECH SPECS

Part Number:	12568778	Cylinder Heads (P/N 12562920):	Iron rectangular port; 118cc chambers
Engine Type:	Chevy Big-Block V-8	Valve Size (in):	2.190 intake / 1.880 exhaust
Displacement (cu in):	502	Compression Ratio:	8.75:1
Bore x Stroke (in):	4.470 x 4.000	Rocker Arms (P/N 12523976):	Stamped steel
Block (P/N 19170540):	Cast-iron with 4-bolt main caps	Rocker Arm Ratio:	1.7:1
Crankshaft (P/N 10183723):	Forged steel	Water Pump (P/N 19168606):	Cast-iron, long-style
Connecting Rods (P/N 19170198):	Forged steel, shot peened	Flexplate (P/N 10185034):	14"
Pistons (P/N 12533507):	Forged aluminum	Recommended Fuel:	92 octane
Camshaft Type (P/N 24502611):	Hydraulic roller	Ignition Timing:	Base 8° BTDC, 30° Total
Camshaft Lift (in):	.510 intake / .540 exhaust	Maximum Recommended rpm:	5,500
Camshaft Duration (@.050 in):	211° intake / 230° exhaust	Balanced:	External

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



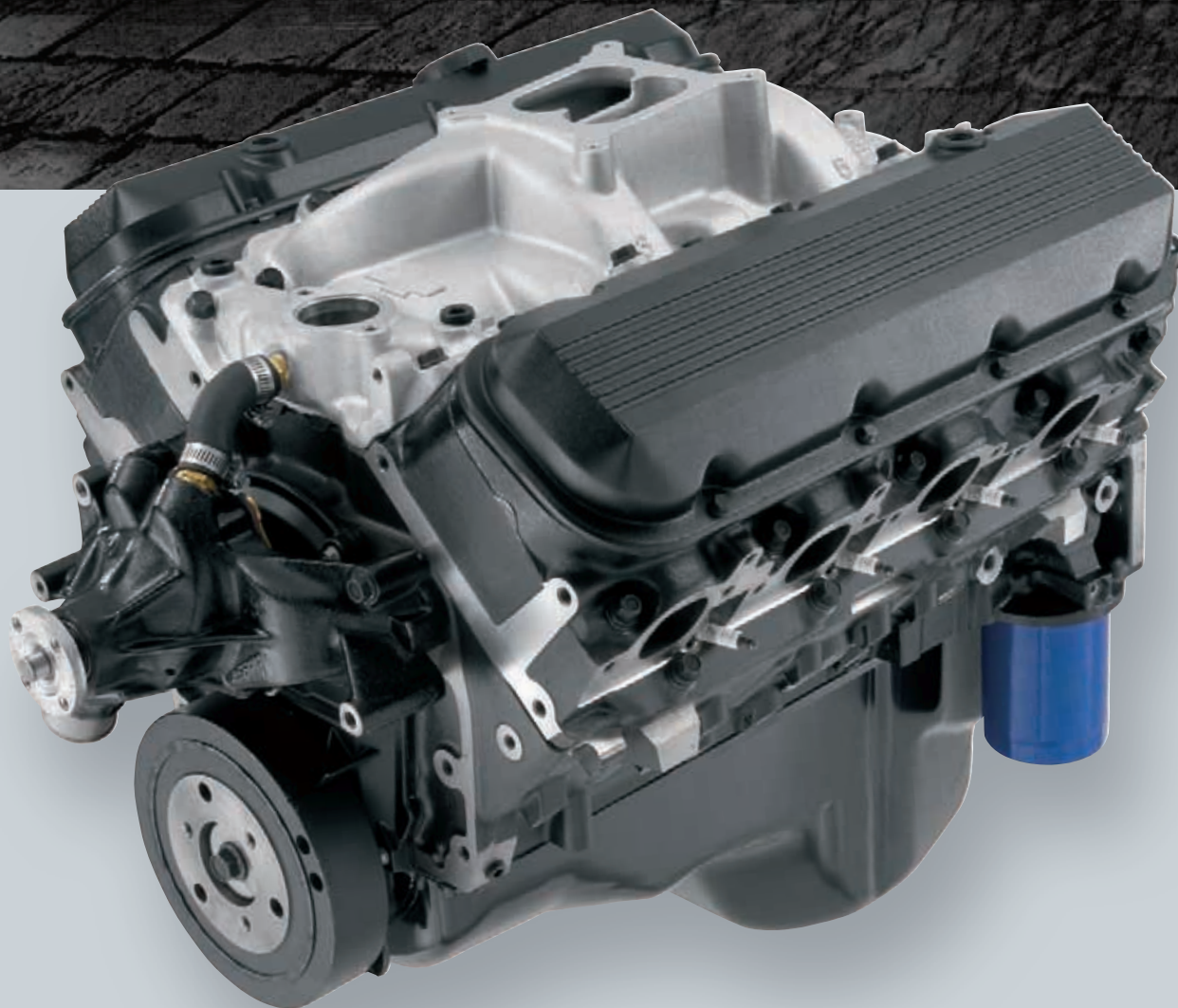
Available for purchase online at gmpformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



12568782

502 Partial Engine

This brand-new Partial engine includes forged reciprocating components, as well as the balancer, oil pan and timing chain set.



19154550

SuperMatic™ 4L85-E Four-Speed Transmission

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Includes torque converter for Big-Block applications (approx. 2,200 rpm stall).

See page 125 for details



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!

19170093
Carburetor, Holley
770-cfm

See page 282
for details



12355614
Fuel Pump, Street
Performance (Chevy
Big-Block)

See page 284
for details



19212657
Transmission
Controller

See page 126
for details



19172805
Serpentine Accessory
Drive Belt System
With Air Conditioning

See page 256
for details



93440806
HEI Distributor

See page 259
for details



12368383
Spark Plug Wire Set

See page 277
for details



SEE PAGE 227 FOR OUR COMPLETE LINE OF BIG-BLOCK ENGINE COMPONENTS

ZZ502/502 Deluxe



19201332   

■ 502 hp @ 5,200 rpm

■ 567 lb.-ft. @ 4,200 rpm

Our most popular Big-Block crate engine for the street and strip!

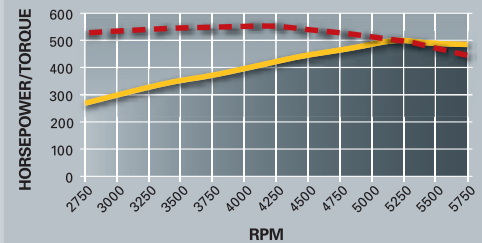
GM Performance Parts' ZZ502/502 is one of the industry's benchmark crate engines, offering excellent value with a proven combination of performance that is suitable for the street or strip. With more than 500 horsepower and 567 lb.-ft. of torque, it demands your full attention and a chassis that is strong enough to harness its frame-straining twisting power.

All ZZ502 crate engines are manufactured with GM's updated cylinder block casting that is stronger and better supports high-performance applications. A forged crankshaft, along with forged rods and pistons, anchors the bottom end, while our popular oval-port aluminum heads offer excellent airflow characteristics. Torque tops the 500 lb.-ft. mark by approximately 2,500 rpm and doesn't dip below it until about 5,000 rpm.

Our ZZ505/502 Deluxe package comes complete from the oil pan to the carburetor, including an HEI distributor, plug wires, starter, water pump, balancer and an aluminum intake topped with a Holley 870-cfm four barrel.

We've taken care of the engine's details. You need to make sure your car can handle the ZZ502/502!

ZZ502/502 DYNO CHART



Horsepower: 502 @ 5200 rpm Torque (lb-ft): 567 @ 4200 rpm

INSTALLATION NOTES

- Due to crate fitment, the carburetor is shipped in a separate box and needs to be installed by an engine installer
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- 502 engines now have a mechanical fuel pump boss!
- Comes with an externally balanced 14" automatic transmission flexplate. Use flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

ZZ502/502 DELUXETECH SPECS

Part Number:	19201332	Compression Ratio:	9.6:1
Displacement (cu in):	502	Rocker Arms (P/N 12368082):	Stamped steel
Bore x Stroke (in):	4.470 x 4.000	Rocker Arm Ratio:	1.7:1
Block (P/N 19170540):	Cast-iron with 4-bolt main caps	Distributor (P/N 93440806):	HEI type
Crankshaft (P/N 10183723):	Forged steel	Carburetor (P/N 19170094):	870-cfm
Connecting Rods (P/N 19170198):	Forged steel, shot peened	Water Pump (P/N 19168602):	Aluminum, short-style
Pistons (P/N 12533507):	Forged aluminum	Spark Plugs and Wires:	Included
Camshaft Type (P/N 12366543):	Hydraulic roller	Starter (P/N 12606096):	Included
Camshaft Lift (in):	.527 intake / .544 exhaust	Flexplate (P/N 10185034):	14"
Camshaft Duration (@.050 in):	224° intake / 234° exhaust	Recommended Fuel:	92 octane
Cylinder Heads (P/N 12363390):	Aluminum oval port, 110cc chambers	Ignition Timing:	Base 8° BTDC, 30° Total
Valve Size (in):	2.250 intake / 1.880 exhaust;	Maximum Recommended rpm:	5,800
	stainless steel	Balanced:	External

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts does not utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



12371171   

ZZ502 Deluxe Kit

GM Performance Parts offers the ZZ502 Deluxe kit for those who want to build their own deluxe engine.



12568782   

502 Partial Engine

This brand-new Partial engine includes forged reciprocating components, as well as the balancer, oil pan and timing chain set.

SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19154550
SuperMatic™
4L85-E Four-Speed
Transmission

See page 125
for details



19212657
Transmission
Controller

See page 126
for details



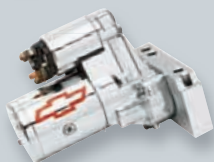
12342024
Chrome Water Neck

See page 263
for details



19172805
Serpentine Accessory
Drive Belt System
With Air Conditioning

See page 256
for details



12363128
Chrome High Torque
Mini Starter

See page 276
for details



12341999
Fuel Pump Block-
Off Plate

See page 237
for details

SEE PAGE 227 FOR OUR COMPLETE LINE OF BIG-BLOCK ENGINE COMPONENTS



ZZ502/502 Base

12496963   

■ 502 hp @ 5,200 rpm

■ 567 lb.-ft. @ 4,200 rpm

The DIY foundation for big torque!

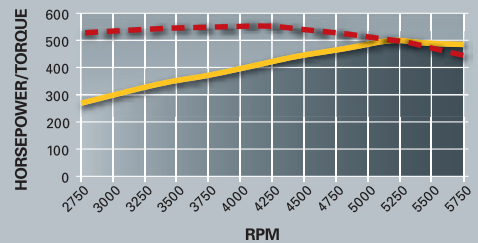
It's simple: We offer the ZZ502/502 Base crate engine for the builder who wants the super-strong bottom end and high-flow aluminum oval-port cylinder heads, but also wants to finish the engine their way.

The ZZ502/502 Base Engine uses our new cylinder block casting that is stronger and better suited to high-performance combinations. A forged steel crankshaft, forged rods and forged pistons form the reciprocating assembly, with a smooth-operating hydraulic roller camshaft delivering big 0.527/0.544-inch lift. The lightweight aluminum heads boast 110cc combustion chambers and big, 2.25-inch intake and 1.88-inch exhaust valves.

We rate the ZZ502/502 Base engine at 502 horsepower and 567 lb.-ft. of torque when it is finished with GMPP aluminum intake manifold P/N 12363406 and Holley 870-cfm carburetor P/N 19170094. The other parts you need to complete the engine – including chrome dress-up parts – are available from your GMPP dealer and gmperformanceparts.com.

The ZZ502/502 Base is a great foundation. It's up to you to make the most of it.

ZZ502/502 DYNO CHART



Horsepower: 502 @ 5200 rpm

Torque (lb.-ft.): 567 @ 4200 rpm

INSTALLATION NOTES

- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- 502 engines now have a mechanical fuel pump boss!
- Comes with an externally balanced 14" automatic transmission flexplate. Use flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

ZZ502/502 BASE TECH SPECS

Part Number:	12496963	Cylinder Heads (P/N 12363390):	Aluminum oval port; 110cc chambers
Engine Type:	Chevy Big-Block V-8	Valve Size (in):	2.250 intake / 1.880 exhaust; stainless steel
Displacement (cu in):	502	Compression Ratio:	9.6:1
Bore x Stroke (in):	4.470 x 4.000	Rocker Arms (P/N 12368082):	Stamped steel
Block (P/N 19170540):	Cast-iron with 4-bolt main caps	Rocker Arm Ratio:	1.7:1
Crankshaft (P/N 10183723):	Forged steel	Recommended Fuel:	92 octane
Connecting Rods (P/N 19170198):	Forged steel, shot peened	Ignition Timing:	Base 8° BTDC, 30° total
Pistons (P/N 12533507):	Forged aluminum	Maximum Recommended rpm:	5,800
Camshaft Type (P/N 12366543):	Hydraulic roller	Balanced:	External
Camshaft Lift (in):	.527 intake / .544 exhaust		
Camshaft Duration (@.050 in):	224° intake / 234° exhaust		

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



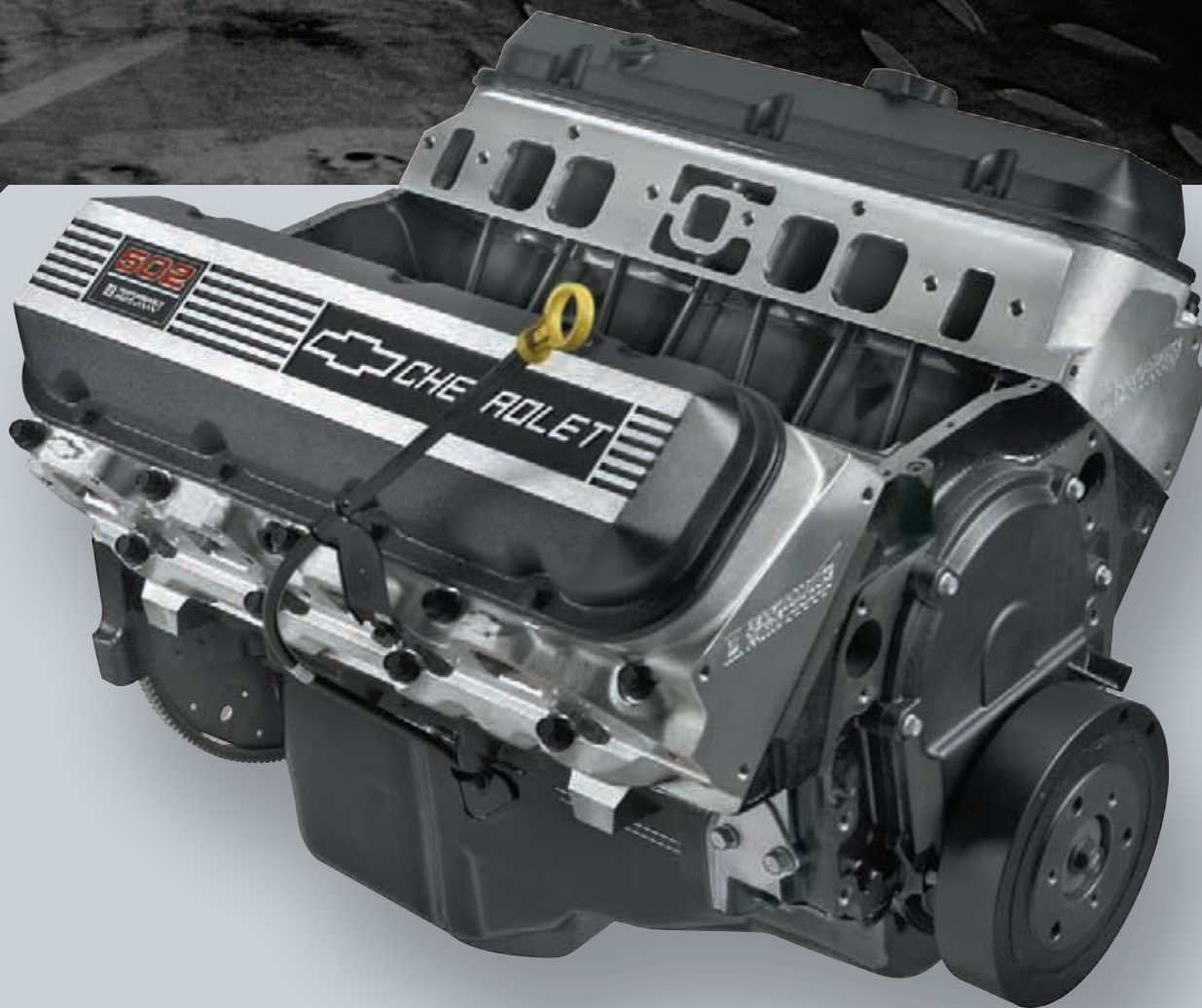
Available for purchase online at gmperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



12371204

ZZ502 Base Kit

Nothing is quite as satisfying as building your own high-performance Big-Block. With the ZZ502 Base Kit, every part is engineered to work together to deliver 502 horses!



12568782

502 Partial Engine

This brand new Partial engine includes forged reciprocating components, as well as the balancer, oil pan and timing chain set.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19154550 SuperMatic™ 4L85-E Four-Speed Transmission

See page 125 for details



19212657 Transmission Controller

See page 126 for details



19131359 High-Rise Intake Manifold, Rectangular Port

See page 260 for details



19172805 Serpentine Accessory Drive Belt System With Air Conditioning

See page 256 for details



19168602 Aluminum Water Pump, Short-Style

See page 266 for details



19170095 Carburetor, Holley 850-cfm

See page 282 for details

SEE PAGE 227 FOR OUR COMPLETE LINE OF BIG-BLOCK ENGINE COMPONENTS

Ram Jet 502 with calibrated controller and wiring harness



12499121

■ 502 hp @ 5,100 rpm

■ 565 lb.-ft. @ 3,200 rpm

Outrageous style and fuel-injected drivability – all with Big-Block power!

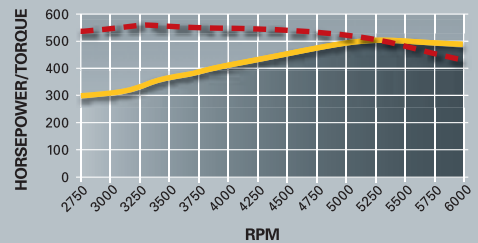
The Ram Jet 502 blends the legendary torque and performance of the Big-Block with a modern port fuel injection system and tunnel ram-style high-rise intake manifold. It's a combination that offers uncompromising performance in a visually stunning presentation.

The unique Ram Jet fuel injection system stands 11 inches tall at its highest point and consists of a two-piece manifold/plenum assembly, eight injectors, a throttle body, and an updated MEFI 4 controller. Setup instructions are included, making it a simple, "plug-and-play" installation.

Supporting the unique induction system is a robust bottom end with an all-forged rotating assembly and a smooth hydraulic roller camshaft. The heads are GMPP's high-flow aluminum oval-port parts.

You'll need to check your ride for clearance before closing the hood over the Ram Jet 502. Then again, it looks so impressive, you may just want to cruise around with the hood off!

RAM JET 502 DYNO CHART



Horsepower: 502 @ 5100 rpm Torque (lb.-ft): 565 @ 3200 rpm

INSTALLATION NOTES

- The Ram Jet 502 requires a 12-volt power source (and ground), coolant, exhaust system, fuel feed and fuel return line (to the fuel tank). An in-tank fuel pump is recommended
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads, for clearance
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- IMPORTANT! For a safe, proper and trouble-free engine break-in, the MEFI 4 computer has a "green" mode that controls rpm during the break-in period. During this period, engine speed is limited to 4,000 rpm in the first hour, 4,500 rpm in the second hour and 5,500 rpm in the third hour

RAMJET 502 TECH SPECS

Part Number:	12499121	Valve Size (in):	2.250 intake / 1.880 exhaust;
Engine Type:	Chevy Big-Block V-8		stainless steel
Displacement (cu in):	502	Compression Ratio:	9.6:1
Bore x Stroke (in):	4.470 x 4.000	Rocker Arms (P/N 12368082):	Stamped steel
Block (P/N 19170540):	Cast-iron with 4-bolt main caps	Rocker Arm Ratio:	1.7:1
Crankshaft (P/N 10183723):	Forged steel	Distributor (P/N 1104060):	HEI type
Connecting Rods (P/N 19170198):	Forged steel, shot peened	Throttle Body (P/N 17113524):	Included
Pistons (P/N 12533507):	Forged aluminum	Water Pump (P/N 19168602):	Aluminum, short-style
Camshaft Type (P/N 12366543):	Hydraulic roller	Flexplate (P/N 10185034):	14"
Camshaft Lift (in):	.527 intake / .544 exhaust	Recommended Fuel:	92 octane
Camshaft Duration (@.050 in):	224° intake / 234° exhaust	Ignition Timing:	Base 8° BTDC, 30° Total
Cylinder Heads (P/N 12363390):	Aluminum oval port;	Maximum Recommended rpm:	5,800
	110cc chambers	Balanced:	External

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19154550
SuperMatic™ 4L85-E Four-Speed Transmission
 Direct bolt-on for Gen I Small-Block and all Big-Blocks. Includes torque converter for Big-Block applications (approx. 2,200 rpm stall).
 See page 125 for details



19212657
Transmission Controller
 Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.
 See page 126 for details



12342024
Chrome Water Neck
 See page 263 for details



12606096
Lightweight Starter
 See page 276 for details



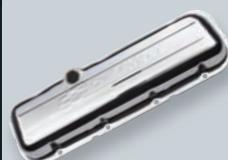
25534374
Orange Powder-Coated Valve Covers
 See page 248 for details



19172805
Serpentine Accessory Drive Belt System With Air Conditioning
 See page 256 for details



25534323
Black Powder-Coated Valve Covers
 See page 248 for details



12342093
Short Chrome Bowtie Valve Cover
 See page 248 for details

SEE PAGE 227 FOR OUR COMPLETE LINE OF BIG-BLOCK ENGINE COMPONENTS

ZZ572/620 Deluxe



19201333   

■ 620 hp @ 5,500 rpm

■ 650 lb.-ft. @ 4,500 rpm

The most powerful Big-Block street engine from GMPP!

The ZZ572/620 is the ultimate expression of GM Performance Parts' engineering capability.

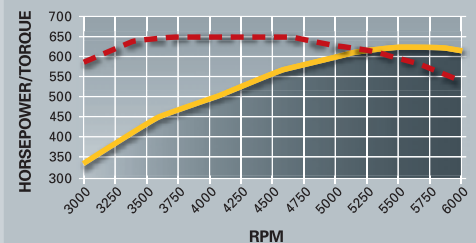
We build the ZZ572 with huge 4.560-inch bores and add a forged 4.375-inch-stroke crankshaft. To make sure those cylinders are packed with every cubic centimeter's worth of atmosphere, we use a camshaft with incredible 0.632/0.632-inch lift and 254°/264° duration specifications.

Aluminum rectangular-port heads with 310cc intake passages complement the airflow capability offered by the big-bore bottom end. They also feature 118cc raised exhaust ports and 118cc combustion chambers. The valves are big, too – measuring 2.250 inches on the intake side and 1.880 inches on the exhausts.

GM Performance Parts delivers the ZZ572/620 Deluxe with an 850-cfm carburetor, HEI distributor, aluminum water pump and distinctive orange powder-coated valve covers that proudly proclaim the 572 legend.

For the builder who wants the foundation of this Big-Block powerhouse, but wants to finish it with the induction system of his choice, we offer the ZZ572/620 Base engine P/N12498792. It comes with the bottom end fully assembled – including the forged crankshaft, rods and pistons – along with the unique 0.632-inch-lift roller camshaft.

ZZ572/620 DYNO CHART



Horsepower: 620 @ 5500 rpm

Torque (lb-ft): 650 @ 4500 rpm

INSTALLATION NOTES

- Due to crate fitment, the carburetor is shipped in a separate box and needs to be installed by an engine installer
- Clutch linkage boss is now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- Requires addition of starter and fuel pump (not included)
- Gen VI tall-deck block has machined mechanical fuel pump boss
- Comes with a 14" automatic transmission flexplate. Requires internally balanced flywheel for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- You do have a strong transmission and rear axle, don't you?

ZZ572/620 DELUXETECH SPECS

Part Number:	19201333	Valve Size (in):	2.250 intake / 1.88 exhaust, stainless steel
Engine Type:	Chevy Tall Deck Big-Block V-8	Compression Ratio:	9.6:1
Displacement (cu in):	572	Rocker Arms (P/N 12361323):	Aluminum roller style
Bore x Stroke (in):	4.560 x 4.375	Rocker Arm Ratio:	1.7:1
Block (P/N 19212195):	Cast-iron with 4-bolt main caps	Distributor (P/N 88961867):	HEI
Crankshaft (P/N 88961554):	Forged steel	Carburetor (P/N 19170095):	850-cfm
Connecting Rods (P/N 88962926):	Forged steel, shot peened	Water Pump (P/N 19168602):	Aluminum, short-style
Pistons (P/N 88962925):	Forged aluminum	Spark Plugs and Wires:	Included
Camshaft Type (P/N 88961557):	Hydraulic roller	Flexplate (P/N 12561217):	14"
Camshaft Lift (in):	.632 intake / .632 exhaust	Recommended Fuel:	92 octane
Camshaft Duration (@.050 in):	254° intake / 264° exhaust	Ignition Timing:	Base 8° BTDC, 36° Total
Cylinder Heads (P/N 12499255):	Aluminum rectangular port, 118cc chambers	Maximum Recommended rpm:	6,000
		Balanced:	Internal

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpperformanceparts.com



GM Performance Parts Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



12498792   

ZZ572/620 Base Engine

The 620 features rectangular-port aluminum cylinder heads that deliver 9.6:1 compression ratio in a pump-gas-friendly package.

19154550

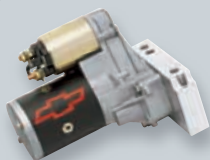
SuperMatic™ 4L85-E Four-Speed Transmission

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Includes torque converter for Big-Block applications (approx. 2,200 rpm stall).

See page 125 for details



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



12361146 High Torque Mini Starter

See page 276 for details



12355614 Fuel Pump, Street Performance (Chevy Big-Block)

See page 284 for details



19212657 Transmission Controller

See page 126 for details



19172805 Serpentine Accessory Drive Belt System With Air Conditioning

See page 256 for details



12342024 Chrome Water Neck

See page 263 for details



12341999 Fuel Pump Block-Off Plate

See page 237 for details

SEE PAGE 227 FOR OUR COMPLETE LINE OF BIG-BLOCK ENGINE COMPONENTS

ZZ572/720R Deluxe



19201334   

■ 720 hp @ 6,250 rpm

■ 685 lb.-ft. @ 4,500 rpm

Our baddest, most powerful Big-Block engine is ready for the strip!

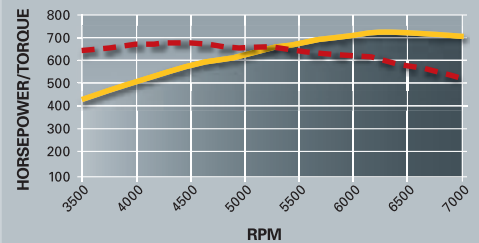
A 10-second car is quick, but the ZZ572/720R could achieve that with a couple of its spark plugs left in the pits. It is the king of all Rat engines and is capable of pulling your bracket racer or heads-up challenger down the 1320 in the 9-second range.

The ZZ572/720R's true value lies in its ready-to-run status when delivered. Rather than waiting weeks for a racing engine shop to build a custom combination, we deliver the ZZ572/720R fully assembled; just bolt on the included Dominator-style 1150-cfm carburetor, along with a starter and fuel pump (not included) and you're ready to go.

The ZZ572/720R is built with the best stuff we can find, including an all-forged rotating assembly, rectangular-port aluminum cylinder heads with 113cc intake ports and 2.25/1.88-inch valves. There's also a solid roller camshaft with 0.714/0.714-inch lift.

If you're building the ultimate dual-purpose car, the ZZ572/720R is suitable for limited forays on the street. It has a 12.0:1 compression ratio, so make sure you've got access to 110-octane gasoline before hitting the local cruise night!

ZZ572/720R DYNO CHART



Horsepower: 720 @ 6250 rpm Torque (lb-ft): 685 @ 4500 rpm

INSTALLATION NOTES

- Due to crate fitment, the carburetor is shipped in a separate box and needs to be installed by an engine installer
- Clutch linkage boss is now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- Requires addition of starter, ignition coil, and fuel pump (not included)
- Gen VI tall-deck block has machined mechanical fuel pump boss
- Comes with a 14" automatic transmission flexplate. Requires internally balanced flywheel for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Big sticky slicks will help hook up this monster!

ZZ572/720 TECH SPECS

Part Number:	19201334	Valve Size (in):	2.250 intake / 1.880 exhaust stainless steel
Engine Type:	Chevy Tall Deck Big-Block V-8	Compression Ratio:	12:1
Displacement (cu in):	572	Rocker Arms (P/N 12361323):	Aluminum roller style
Bore x Stroke (in):	4.560 x 4.375	Rocker Arm Ratio:	1.7:1
Block (P/N 19212195):	Cast-iron with 4-bolt main caps	Distributor (P/N 10093387):	Electronic ignition
Crankshaft (P/N 88961554):	Forged steel	Carburetor (P/N 19170096):	1150-cfm Dominator
Connecting Rods (P/N 88963226):	Forged steel, shot peened	Water Pump (P/N 19168602):	Aluminum, short-style
Pistons (P/N 88963227):	Forged aluminum	Spark Plugs and Wires:	Included
Camshaft Type (P/N 88962216):	Mechanical roller	Recommended Fuel:	110 octane race gas
Camshaft Lift (in):	.714 intake / .714 exhaust	Ignition Timing:	Base 8° BTDC, 36° Total
Camshaft Duration (@.050 in):	278° intake / 282° exhaust	Maximum Recommended rpm:	6,750
Cylinder Heads (P/N 88961160):	Aluminum rectangular port, 118cc chambers	Balanced:	Internal

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmpperformanceparts.com



GM Performance Parts Racing Crate Engines are excluded from limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



12498826 

ZZ572/720R Base Engine

GM Performance Parts offers the racing-oriented ZZ572/720R in Base Engine form, allowing the builder to order the long-block assembly and add the induction system, ignition system and other accessories separately.



19154550

SuperMatic™ 4L85-E Four-Speed Transmission

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Includes torque converter for Big-Block applications (approx. 2,200 rpm stall).

See page 125 for details

SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



12606096 Lightweight Starter

See page 276
for details



12355614 Fuel Pump, Street Performance (Chevy Big-Block)

See page 284
for details



19212657 Transmission Controller

See page 126
for details



19172805 Serpentine Accessory Drive Belt System With Air Conditioning

See page 256
for details



12342024 Chrome Water Neck

See page 263
for details



12341999 Fuel Pump Block- Off Plate

See page 237
for details

SEE PAGE 227 FOR OUR COMPLETE LINE OF BIG-BLOCK ENGINE COMPONENTS

Circle Track





The Power to Win – and the Durability to Keep Winning!

Winning is the goal. It's why you race. But when you spend more time working on your engine, winning isn't as important as surviving the season. GM Performance Parts CircleTrack crate engines are engineered to perform – and perform reliably. That means less time under the hood and more time at the front of the pack.

Importantly, GMPP CircleTrack crate engines are built with brand-new parts, from the cylinder block and rotating assembly to the heads and all the supporting accessories.

In fact, our 350 Small-Block engines feature blocks with four-bolt mains – a strength-enhancing design most used blocks simply won't offer.

Nothing beats the thrill of taking the checkered flag. With GM Performance Parts CircleTrack crate engines on your side, you'll experience that thrill again and again!

CT350



19258602   

■ 350 hp @ 5,000 rpm

■ 390 lb.-ft. @ 3,800 rpm

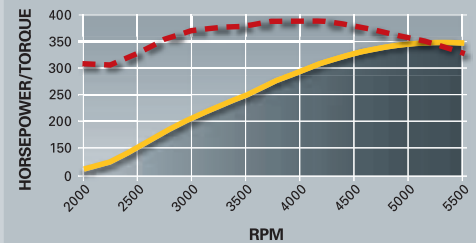
GMPP's most economical Circle Track crate engine!

GM Performance Parts' CT350 delivers 350 horsepower from a classic 350 cubic-inch combination. It's just the thing budget-conscious racers can depend on for competitive performance and low-maintenance durability.

The CT350 is based on the popular 350 HO high-performance street crate engine, including a stout four-bolt-main block and Vortec-style iron cylinder heads. The Vortec heads and unique dual-pattern camshaft help deliver more than 300 lb.-ft. of torque at 2,000 rpm and hold it above that mark through 5,500 rpm – it peaks at 390 lb.-ft. at 3,800 rpm. With that much pulling power, you can hold a gear longer, keeping the engine in its sweet spot for quicker laps.

We complete the CT350 with an 8-quart circle track racing oil pan, balancer, HEI distributor and an aluminum high-rise, dual-plane intake manifold. Add your carburetor, starter, spark plugs, wires and water pump – all available at gmperformanceparts.com – and you'll be ready to roll into the winner's circle!

CT350 DYNO CHART



Horsepower: 350 @ 5000 rpm

Torque (lb.-ft.): 390 @ 3800 rpm

INSTALLATION NOTES

- Requires addition of carburetor, starter, water pump, plug wires and exhaust system (not included)
- Requires an externally balanced flywheel (not included). See page 165 for flywheel selection
- The 8-quart Circle Track oil pan is 8 inches deep at the sump. It will clear most GM rear-steer chassis with stock engine location

CT350 TECH SPECS

Part Number:	19258602	Camshaft Duration (@.050 in):	212° intake / 222° exhaust
Engine Type:	Chevy Small-Block V-8	Cylinder Heads (P/N 12558060):	Vortec iron; 64cc chambers
Displacement (cu in):	350	Valve Size (in):	1.940 intake / 1.500 exhaust
Bore x Stroke (in):	4.000 x 3.480	Compression Ratio:	9.1:1
Block (P/N 10105123):	Cast-iron with 4-bolt main caps	Rocker Arms (P/N 10089648):	Stamped steel
Crankshaft (P/N 14088526):	Nodular iron	Rocker Arm Ratio:	1.5:1
Connecting Rods (P/N 10108688):	Powdered metal steel	Recommended Fuel:	92 octane
Pistons (P/N 12514101):	Hypereutectic aluminum	Ignition Timing:	Base 10° BTDC, 32° Total
Camshaft Type (P/N 24502476):	Hydraulic flat tappet	Maximum Recommended rpm:	5,500
Camshaft Lift (in):	.435 intake / .460 exhaust		

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmperformanceparts.com



GM Performance Parts Racing Crate Engines are excluded from limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

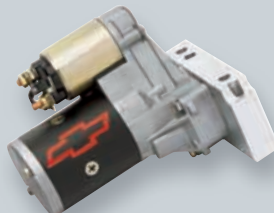


SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



88894341
Water Pump,
Long-Style

*See page 167
for details*



12361146
High-Torque
Mini-Starter

*See page 276
for details*



12342071
Air Cleaner,
Classic Design

*See page 283
for details*



12355612
Fuel Pump, Street
Performance

*See page 284
for details*



19170092
Carburetor,
Holley 670-cfm

*See page 282
for details*



24502521
Spark Plug
Wire Set

*See page 277
for details*

CT355



88958603   

■ 355 hp @ 5,250 rpm

■ 405 lb.-ft. @ 3,500 rpm

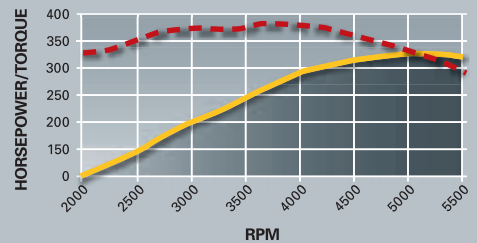
The versatile ZZ4 350 adapted for Circle Track competition!

Renowned for its deep reserve of torque, responsive power and great dependability, the ZZ4 350 crate-engine is one of GM Performance Parts' most popular crate engines – and our engineers have adapted that combination as a winning, affordable racing engine in the CT355!

The CT355's strength lies in its ZZ4 bottom end, which includes a block with four-bolt mains, a forged-steel crankshaft and high-silicon pistons. A steel hydraulic roller camshaft actuates valves in the high-flow aluminum ZZ4 heads, which boast 163cc intake ports and 1.94/1.50-inch valves. This combination makes good power and great torque: 355 hp and 405 lb.-ft.

Like our other Circle Track crate engines, the CT355 includes a racing oil pan with a dual kick-out design. It also includes a valve cover breather kit, a special "kool nut" rocker arm nut design, a dual-plane aluminum high-rise intake manifold, cast iron water pump, HEI distributor and balancer. You add the carburetor, starter, spark plugs and wires – all available from gmperformanceparts.com.

CT355 DYNO CHART



Horsepower: 355 @ 5250 rpm

Torque (lb.-ft.): 405 @ 3500 rpm

INSTALLATION NOTES

- Requires addition of carburetor, starter, plug wires and exhaust system (not included)
- Requires an externally balanced flywheel (not included). See page 165 for flywheel selection.
- The 8-quart Circle Track oil pan is 7 inches deep at the sump. It will clear most GM rear-steer chassis with stock engine location.

CT355 TECH SPECS

Part Number:	88958603	Camshaft Duration (@.050 in):	208° intake / 221° exhaust
Engine Type:	Chevy Small-Block V-8	Cylinder Heads (P/N 12556463):	Aluminum; 58cc chambers
Displacement (cu in):	350	Valve Size (in):	1.940 intake / 1.500 exhaust
Bore x Stroke (in):	4.000 x 3.480	Compression Ratio:	10:1
Block (P/N 10105123):	Cast-iron with 4-bolt main caps	Rocker Arms (P/N 10089648):	Stamped steel
Crankshaft (P/N 12556307):	Forged steel	Rocker Arm Ratio:	1.5:1
Connecting Rods (P/N 10108688):	Powdered metal steel	Recommended Fuel:	92 octane
Pistons (P/N 10159436):	Hypereutectic aluminum	Ignition Timing:	Base 10° BTDC, 32° Total
Camshaft Type (P/N 10185071):	Steel hydraulic roller	Maximum Recommended rpm:	5,800
Camshaft Lift (in):	.474 intake / .510 exhaust		

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmperformanceparts.com



GM Performance Parts Racing Crate Engines are excluded from limited warranty.



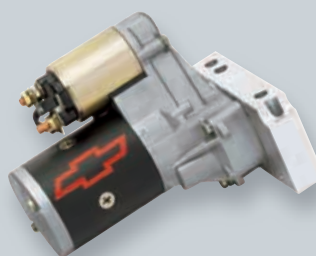
GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19170092
Carburetor, Holley 670-cfm
 See page 282 for details



12361146
High-Torque Mini-Starter
 See page 276 for details



12355612
Fuel Pump, Street Performance
 See page 284 for details



24502521
Spark Plug Wire Set
 See page 277 for details



12342080
Air Cleaner, High Performance Design
 See page 283 for details

CT400



88958604   

■ 400 hp @ 5,500 rpm

■ 400 lb.-ft. @ 4,500 rpm

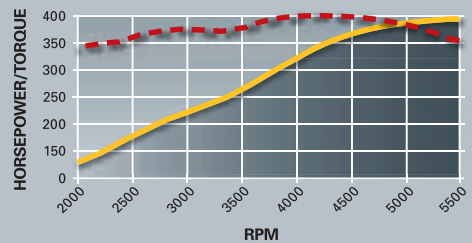
Fast burn heads deliver race-winning power!

GM Performance Parts' 23-degree Fast Burn heads have large, 210cc intake runners and 2.00/1.55-inch valves, along with specially shaped combustion chambers that make quick, efficient work of the air/fuel charge. When partnered with an aggressive, high-lift camshaft, you've got a great balance of horsepower and torque – and that's exactly what you get with the CT400 racing engine.

The foundation for the CT400 is our Fast Burn 385 crate engine, including a sturdy iron block with four-bolt mains, a forged crankshaft and high-strength pistons. We've tuned the CT400 for more power, and it's rated at an even 400 horses and 400 lb.-ft. of torque.

Rounding out the package is a racing oil pan with a dual kick-out design, as well as a valve cover breather kit, special aluminum roller rocker arms, a single-plane aluminum high-rise intake manifold and balancer. You add the water pump, carburetor, starter, distributor, spark plugs and wires. They're all available from gmperformanceparts.com.

CT400 DYNO CHART



Horsepower: 400 @ 5500 rpm

Torque (lb-ft): 400 @ 4500 rpm

INSTALLATION NOTES

- Requires addition of carburetor, starter, ignition, plug wires, water pump and exhaust system (not included)
- Requires an externally balanced flywheel (not included). See page 165 for flywheel selection
- The 8-quart Circle Track oil pan is 7 inches deep at the sump. It will clear most GM rear-steer chassis with stock engine location

CT400 TECH SPECS

Part Number:	88958604	Camshaft Duration (@.050 in):	208° intake / 221° exhaust
Engine Type:	Chevy Small-Block V-8	Cylinder Heads (P/N 12464298):	Fast Burn aluminum; 62cc chambers
Displacement (cu in):	350	Valve Size (in):	2.000 intake / 1.550 exhaust
Bore x Stroke (in):	4.000 x 3.480	Compression Ratio:	9.6:1
Block (P/N 10105123):	Cast-iron with 4-bolt main caps	Rocker Arms (P/N 12367345):	Aluminum; roller style
Crankshaft (P/N 12556307):	Forged steel	Rocker Arm Ratio:	1.5:1
Connecting Rods (P/N 10108688):	Powdered metal steel	Recommended Fuel:	92 octane
Pistons (P/N 10159436):	Hypereutectic aluminum	Ignition Timing:	Base 10° BTDC, 32° Total
Camshaft Type (P/N 10185071):	Steel hydraulic roller	Maximum Recommended rpm:	5,800
Camshaft Lift (in):	.474 intake / .510 exhaust		

NOTE: Distributor with melonized steel gear **MUST** be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Available for purchase online at gmperformanceparts.com



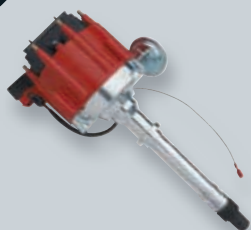
GM Performance Parts Racing Crate Engines are excluded from limited warranty.



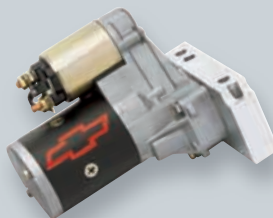
GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



88961867
Distributor, Aluminum Billet HEI
 See page 291 for details



12361146
High-Torque Mini-Starter
 See page 276 for details



12342071
Air Cleaner, Classic Design
 See page 283 for details



12355612
Fuel Pump, Street Performance
 See page 284 for details



19170092
Carburetor, Holley 670-cfm
 See page 282 for details



24502521
Spark Plug Wire Set
 See page 277 for details



CT525

19271821   

■ 525 hp @ 6,700 rpm

■ 471 lb.-ft. @ 5,000 rpm

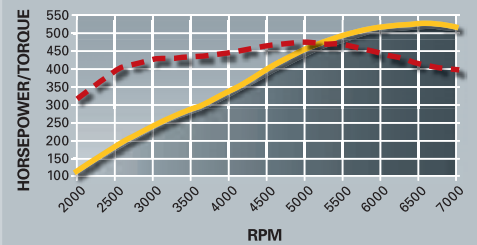
GMPP's exclusive LS3-based racing engine is a lightweight powerhouse!

GM Performance Parts' CT525 6.2L crate engine is based on the latest-generation "LS" engine family and delivers serious power for serious racing series, including Super Late Model and similar. It is rated at 525 hp and 471 lb.-ft. of torque!

This 6.2L engine is similar to the LS3 V-8 that is standard in the Chevrolet Corvette, but we've adapted it to Circle Track racing with a carburetor intake manifold, 8-quart racing oil pan and more. The engine is lightweight and strong, using an aluminum block with cross-bolted 6-bolt main caps and high-flow LS3 rectangular-port cylinder heads.

The CT525 6.2L comes with coil-on-plug ignition, a water pump, exhaust manifolds and an SFI-certified balancer. It also comes with a 14-inch/168-tooth automatic transmission flexplate. All that's needed to complete the assembly is a carburetor, starter and our LSX ignition controller P/N 19171130. All the necessary parts are available online at gmperformanceparts.com.

CT525 6.2L DYNO CHART



Horsepower: 525 @ 6700 rpm

Torque (lb-ft): 471 @ 5000 rpm

INSTALLATION NOTES

- Use LSX ignition controller P/N 19171130 (page 224, not included, shown below)
- Requires addition of carburetor, starter, exhaust system, and front accessory drive system
- Includes 14-inch 168-tooth automatic transmission flexplate
- The 6 quart Circle Track oil pan is designed to clear most GM rear-steer chassis with stock engine location. Requires external oil filter and cooler (will increase capacity to approximately 8 quarts)

CT525 TECH SPECS

Part Number:	19271821	Cylinder Heads (P/N 12615879):	LS3 rectangle port; aluminum
Engine Type:	LS-Series Gen IV Small-Block V-8	Valve Size (in):	as-cast with 68cc chambers
Displacement (cu in):	376 cu in (6.2L)	Compression Ratio:	2.165 intake / 1.590 exhaust
Bore x Stroke (in):	4.065 x 3.62 (103.25 x 92mm)	Rocker Arms (P/N 12569167 int):	10.7:1
Block (P/N 12584727):	Cast-aluminum with 6-bolt, cross-bolted main caps	Rocker Arms (P/N 10214664 exh):	Investment-cast, roller trunnion
Crankshaft (P/N 12597569):	Nodular iron	Rocker Arm Ratio:	Investment-cast, roller trunnion
Connecting Rods (P/N 12617570):	Powdered metal	Recommended Fuel:	1.7:1
Pistons (P/N 19168089):	Hypereutectic aluminum	Maximum Recommended rpm:	92 octane
Camshaft Type (P/N 12480110):	Hydraulic roller	Reluctor Wheel:	6,700
Valve Lift (in):	.525" intake / .525" exhaust	Balanced:	58X
Camshaft Duration (@.050 in):	226° intake / 236° exhaust		Internal



Available for purchase online at gmperformanceparts.com



GM Performance Parts Racing Crate Engines are excluded from limited warranty.



GM Performance Parts *does not* utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

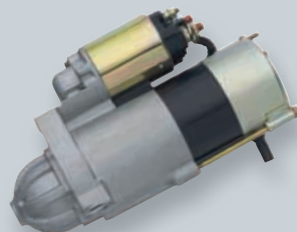


NOTE: Final production version may differ slightly in content from photo shown.

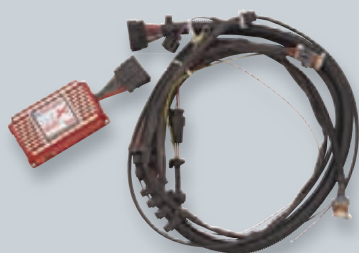
SELECT THE PARTS BELOW TO FINISH OFF YOUR CRATE ENGINE AND GET RUNNING IN LESS TIME!



19170094
Carburetor, Holley 870-cfm
See page 282 for details



10465385
LS-Series Starter
See page 224 for details



19171130
LSX Ignition Controller
See page 224 for details



12342071
Air Cleaner, Classic Design
See page 283 for details

Transmissions & Components

New, High-Strength SuperMatic 4L70-E Transmission

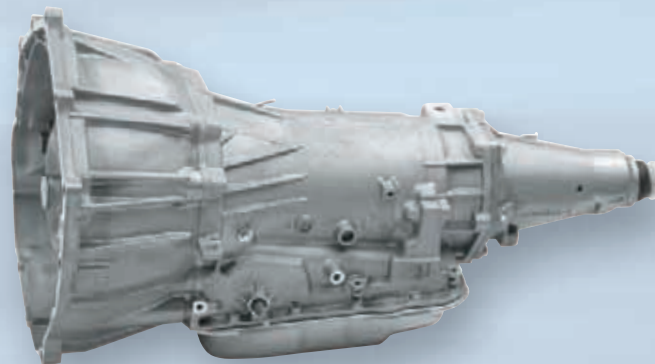
Greater performance with enhanced efficiency is the cornerstone of a growing movement in environmentally conscious hot-rodding. One of the best ways to improve drivability and drastically improve the efficiency of your street rod, resto-mod muscle car or classic truck is installing a modern, electronically controlled automatic overdrive transmission.

The new GM Performance Parts SuperMatic 4L70-E transmission – **P/N 19244043** – is designed to complement high-performance engines with exceptional efficiency, strength and the shift characteristics enthusiasts demand.

Based on the renowned Hydra-Matic 4L60 series of four-speed overdrive transmissions, the 4L70-E delivers greater torque carrying capacity and increased durability – and it's built with the highest quality OEM parts. It is designed for engines making up to 480 horsepower.

Construction and feature highlights include:

- **A 13-vane pump with a heat-treated stator support**
- **Five-pinion input and reaction carriers**
- **High-performance 2/4 servo**
- **Heat-treated sun shell**
- **Heavy-duty low roller clutch assembly**



To further increase the performance and long term durability, GMPP upgraded the 3-4 clutch pack and installed a high-energy 2-4 band. Power loss is diminished with the use of needle bearing assemblies and associated components, which replace conventional thrust washers.

The new SuperMatic 4L70-E is the perfect complement to a GMPP crate engine, forming a bulletproof powertrain for any four-wheeled project you can dream up.

New SuperMatic Transmission Controller makes Installation a Snap!

GM Performance Parts' all-new SuperMatic Transmission Controller system is the most fully integrated and user-friendly transmission control package in the aftermarket. It is designed for hot rods and other vehicles equipped with LS engines and GM Hydra-Matic 4L60- or 4L80-series electronically controlled transmissions – including GMPP's high-performance SuperMatic transmissions.

The revolutionary system makes installation a simple matter of completing a few fully terminated connections that link the transmission controller to the engine controller. It comes pre-programmed and is ready to drive, once all the connections are made. No additional set-up programming is required. That enables the installer to get the vehicle running quicker.

Two versions of the SuperMatic Transmission Controller system are offered:

- **P/N 19257634** works with 4L60-E, 4L65-E and GMPP's new SuperMatic 4L70-E
- **P/N 19257661** works with 4L80-E, 4L85-E and GMPP's SuperMatic 4L85-E transmissions

The controller system is designed to operate with GM Performance Parts' E67-based engine controller, which operates all of GMPP's LS-based crate engines with electronic fuel injection. And while the



system is designed for "tuning-free" operation right out of the box, it also includes optional connections that allow adjusting a number of calibration settings, including shift timing and shift firmness. Also, the system can be configured to operate the transmission in a manual mode, to enhance the performance driving experience; and it supports most types of tap shifters or wheel-mounted paddle-shift systems. Comprehensive adjustment instructions are included with the kit.

If all those features weren't enough, the system also includes on-board data logging capability, which allows the operator to capture a data trace, which helps maximize performance.

TRANSMISSIONS AND COMPONENTS

Automatic Transmissions

24216083

Hydra-Matic 4L60-E Four-Speed Automatic Transmission (Gen 0/1) (not shown)

- Electronically controlled four-speed overdrive transmission
- Has a two-piece case bellhousing bolt pattern to fit 1955-96 Small-Block engines
- Includes 2,300 rpm (approx.) torque converter
- Gear ratios: 1st: 3.06, 2nd: 1.75, 3rd: 1.00, 4th: 0.70

NOTE: Use with electronic controller P/N 9212657.

A. 19156260

Hydra-Matic 4L65-E Four-Speed Automatic Transmission (LS-Series V-8)

- Similar in design to the 4L60-E
- Electronically controlled four-speed overdrive transmission
- Features five-pinion gearsets, heat-treated stator shaft splines, induction-hardened turbine shaft, seven-plate clutch and revised valve-body calibration
- Includes torque converter
- Gear ratios: 1st: 3.06, 2nd: 1.62, 3rd: 1.00, 4th: 0.70
- Use adapter kit P/N 19154766 on Gen I and II engines

NOTE: Use with electronic controller P/N 9212657.

B. 19244043 **NEW**

SuperMatic™ 4L70-E Four-Speed Automatic Transmission

- Based on the 4L60-E/4L65-E
- Increased horsepower and torque capacity
- Features five-pinion gearsets, heat-treated stator shaft splines, induction-hardened turbine shaft, seven-plate clutch and specific valve-body calibration
- Gear ratios: 1st: 3.06, 2nd: 1.62, 3rd: 1.00, 4th: 0.70
- Torque converter not included

NOTE: Use with electronic controller P/N 19212657.

C. 19154550

SuperMatic™ 4L85-E Four-Speed Transmission

- Newly designed for use on our ZZ572/720 crate engine
- All new parts, including additional clutch plates
- Improved valve body for firmer shifts
- Direct bolt-on for Gen I Small-Block and all Big-Blocks
- Includes torque converter for Big-Block applications (approx. 2,200 rpm stall)
- For Small-Block applications, an aftermarket converter is strongly recommended
- Gear ratios: 1st: 2.48, 2nd: 1.48, 3rd: 1.00, 4th: 0.75

NOTE: Use with electronic controller P/N 19212657.

Torque Converters

Performance-matched torque converters from GM Performance Parts.

D. 17804017 **NEW**

SuperMatic™ 4L70-E Torque Converter

- Designed for P/N 19244043 SuperMatic Transmission

24217235 **NEW**

SuperMatic™ 4L85-E Torque Converter

- Designed for P/N 19154550 SuperMatic Transmission



Hydra-Matic 4L65-E Four-Speed Automatic Transmission (LS-Series V-8) **A**



SuperMatic™ 4L70-E Four-Speed Automatic Transmission **B**



SuperMatic™ 4L85-E Four-Speed Transmission **C**



SuperMatic™ Torque Converter **D**



Transmission Control Systems

A. SuperMatic™ Transmission Control System **NEW**

- Pre-programmed – provides full function transmission operation after completing connections
- No laptop programming required
- Only compatible with E-67 based GMPP electronic LS engine control systems
- Optional features for personal preferences
 - Gearshift timing
 - Multiple shift patterns
 - Manual shift mode
 - Supports most “Tap Shifters” or wheel-mounted paddles
 - On-Board data logging
- Connect and cruise – Simple connections with no additional wiring required. Connect the clearly marked leads to the engine control harness, and you're ready to cruise!

19257634 **NEW**

- 1996-2008 4L60-E family transmissions
- Fits P/N19244043 GMPP SuperMatic™

19257661 **NEW**

- 1993-Up 4L80-E family transmissions
- Fits P/N19154550 GMPP SuperMatic™

B. 19212657 Transmission Controller, 4L60-E, 4L65-E, 4L70-E, 4L80-E and 4L85-E Automatic

- Required when using a GM electronically controlled automatic transmission (see page 125)
- Includes wiring harness, software and connector for laptop computer
- Controller allows full programming of shifting, as well as part-throttle, wide-open throttle and shift firmness control
- Recommended for carburetor or Ram Jet applications

C. 19154766 Transmission Adapter Kit

- Allows installation of Gen III/IV style 4L60-E/4L65-E transmission onto Gen I and II engine
- Includes spacer ring, shims, dowels, bolts and flexplate
- Works on one-piece rear main seal engines only

D. 12563532 Crankshaft Spacer

- For use with Gen I style (Turbo 350/400, 700R4, 4L60, 4L60-E and 4L85-E) transmission on Gen III- and Gen IV-engines
- Needs regular flat flexplate P/N 12621399 and six torque converter bolts P/N 11589040 or starter will not reach
- Also requires longer bolts P/N 12563533

12021399 **NEW** Crankshaft Spacer Kit (not shown)

- 6-bolt crankshaft spacer kit includes spacer, flexplate, mounting bolts

Note: Eight-bolt crankshaft spacer and flexplate kit will be available spring 2011. Check gmpformanceparts.com for details.

NEW



A SuperMatic™ Transmission Control System



B Transmission Controller, 4L60-E, 4L65-E, 4L70-E, 4L80-E and 4L85-E Automatic



C Transmission Adapter Kit



D 6-Bolt Crankshaft Spacer



LSX454/LSA 8-Bolt Adapter



NEW

TR 6060 Six-Speed Manual Transmission **E**



NEW

LSX/LS7 Clutch Kit **F**



4L60/700R4 Transmission Swap Kit **G**



Torsen Differential **H**

Manual Transmissions

E. 92236241 NEW

TR 6060 Six-Speed Manual Transmission

- A direct replacement trans for your Camaro SS
- Rated to handle 420 lb.-ft. of torque
- Works with any GMPP LS crate engine
- Equipped with 26 spline input shaft and a fixed-yoke production style output shaft
- Release Bearing (Actuator) #19210297 is included

12581400

F23 Manual Transmission '05-'07 Cobalt/G5 (not shown)

- Non-supercharged applications
- 3.84 ratio

12558016

T-56 Transmission Kit (not shown)

- For Big-Block and Gen I and II Small-Blocks
- Gear ratios: 1st: 2.66, 2nd: 1.78, 3rd: 1.30, 4th: 1.00, 5th: 0.74, 6th: 0.50
- Includes shifter, no handle

12552099

T-56 Transmission Kit (not shown)

- For Gen III and IV Small-Blocks (LS-Series)
- Gear ratios: 1st: 2.66, 2nd: 1.78, 3rd: 1.30, 4th: 1.00, 5th: 0.74, 6th: 0.50
- Includes shifter, no handle

F. 24255748 NEW

LSX/LS7 Clutch Kit

- Pressure plate and clutch disc

12571611

Flywheel, 6-Bolt (not shown)

12561465

Pressure Plate Bolts (not shown)

- 6 pieces

11569956

Flywheel Bolts (not shown)

- 6 required

19210297*

Release Bearing (actuator) (not shown)

** Included with Trans Kit P/N 92236241*

G. 24502513

4L60/700R4 Transmission Swap Kit

- Adapts the 4L60 or 700R4 automatic transmission (non-electronic version) for use in early-model vehicles, with or without an engine management computer
- Includes instruction sheet, throttle valve spring for carbureted engines, a normally-closed fourth-gear clutch switch and wiring connector for the torque converter

H. 88958682

Torsen Differential

- Used in GM 4T65-E Racing's FWD drag racing programs
- Tested to 900-plus horsepower
- In drag-race style, straight-line acceleration runs, this results in a close to ideal 50/50 power split to both drive wheels
- In cornering, while accelerating out of a turn, the Torsen biases power to the outside wheel, reducing inside-wheel spin
- Provides constant and infinitely variable drive
- Power is transferred automatically without the use of normal friction
- Extremely strong and durable, because it is gear operated
- No plates or clutches that can wear out
- Comes with new pinion gears already loaded





Engines

As part of General Motors, GM Performance Parts is able to offer a wide and diverse range of crate engines and partial engines beyond our high-performance Small-Block, Big-Block and LS engines. They are based on regular-production engines and make great swap choices for replacing a tired engine, while also enabling creative engine builders to start with an economical production engine and add their power-building accessories.

The engines are generally delivered fully assembled (minus the induction, ignition and starting systems) and each is backed by a strong warranty. (Coverage depends on the engine and application.)

See your GM Performance Parts dealer for more details and ordering information.

NOTE: Engines depicted in photographs are representative of several part numbers and may not show all items included.



GM Parts Crate Engines include a 36-month or 100,000-mile/160,000-kilometer limited warranty when installed in a recommended application.

2.2L L61

The 2.2L L61 engine is the same production engine used in thousands of GM small cars, such as the Cavalier, Cobalt, HHR, Sunfire, G5 and more. It comes fully assembled and ready to install – or build it up to higher performance standards and turn your compact commuter car into a compact performer!



2.8L I-4

Striking a balance between four-cylinder economy and V-6 power, the Vortec 2800 four-cylinder (I-4) and Vortec 3500 five-cylinder (I-5) engines benefit from the broad, inherent torque and balance of an inline engine design. The I-4 is standard in the Chevrolet Colorado and GMC Canyon midsize pickups; the I-5 is available in both vehicles, as well as the H3 Hummer.



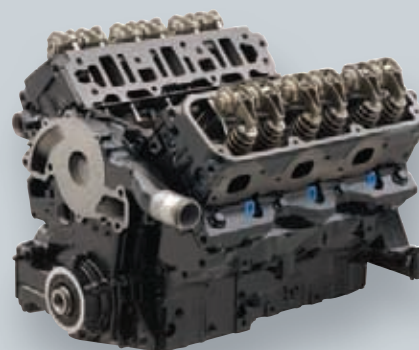
3.5L LX9

Introduced in 2004 on the new Chevy Malibu, the 3500 3.5L V-6 is the standard engine in the Pontiac G6 V-6 and GT models, as well as GM's crossover sport vans: Chevrolet Uplander, Pontiac Montana SV6, Buick Terraza, and Saturn Relay. Rated at 200 hp (149 kw) and 220 lb.-ft. of torque (278 Nm), the engine has broad power bands that produce stirring performance for low-rpm acceleration and high-rpm responsiveness.



3.8L V-6

With its reputation for power and reliability, the 3800 Series III V-6 and 3800 Series III V-6 Supercharged are the "Small-Block Chevy" engines of the V-6 world. The 3800 engine is available new or remanufactured.



4.2L I-6 LL8

Introduced in GM's midsize SUVs, including the Chevy TrailBlazer and GMC Envoy, the unique 4.2L inline-six engine delivers exceptional torque (276 lb.-ft.) and responsive horsepower (285). The engine assembly requires induction, ignition and starting systems, along with other accessories and production-style controller when not used as a direct replacement to re-power a vehicle.



4.3L LU3

Based on the architecture of the original Small-Block V-8, but minus two cylinders, the 4.3L V-6 – also known as the Vortec 4300 – is a popular and powerful motivator in thousands of GM trucks. Engine assemblies are available in new or economical remanufactured options (reman engines exclude oil pan and valve covers), but all are built to the exacting standards of regular-production engines.



4.8L LR4

This economical 4.8L LS-series engine serves as the entry-level V-8 in many GM full-size trucks, where it also known as the Vortec 4800. It delivers all of the strength, durability and performance attributes of its larger-displacement cousins. It uses the same iron cylinder block as the 5.3L LS, but has a smaller stroke. It is rated at 275 horsepower. Available in new and remanufactured options for 2001-2009 applications.



5.3L LM7/L59

Used on thousands of GM trucks, SUVs and vans since 1999, the 5.3L V-8 that's also known as the Vortec 5300, is respected for its great performance and efficiency. Horsepower is rated at 285, with torque at approximately 330 lb.-ft. GM Performance Parts offers the 5.3L in new and economical remanufactured packages for 2001-2007 applications



5.7L Gen O

10067353 *All new – not remanufactured!*

The classic 350 is offered here in our most economical Small-Block engine assembly. Designed to replace production engines used from 1972-1985, it features a durable, yet value-driven, short-block assembly and iron cylinder heads with early-style perimeter hold-downs. Better still, it includes a stronger four-bolt main block and smooth flat tappet hydraulic camshaft.



5.7L Gen 1

12568758 *All new – not remanufactured!*

This basic 5.7L/350-cubic-inch is designed for 1987-1995 truck applications, as it uses the later-style one-piece rear main seal and cylinder heads with center-style valve cover hold-downs. But it is adaptable to almost unlimited Small-Block applications. The bottom end is durable, with four-bolt mains. Additional details include a gear-driven oil pump assembly and a machined fuel pump pad, but no hole for the fuel pump pushrod. (210HP@4000 and 300 lb.-ft.@2800.)



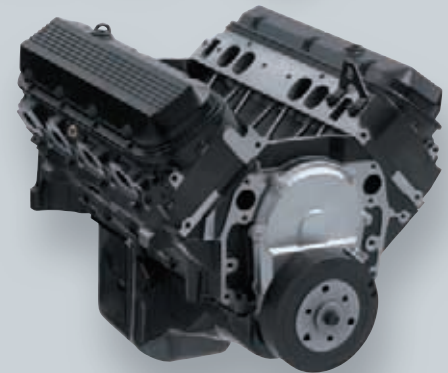
6.0L LQ4

Used in a variety of 2001-07 GM trucks and SUVs, our iron-block 6.0L LS-series engine offers big power and exceptional torque (up to 325 horsepower and 370 lb.-ft. of torque, depending on the application). Our affordable 6.0L engine assembly is delivered without induction or ignition systems, and is offered in brand-new or remanufactured packages.



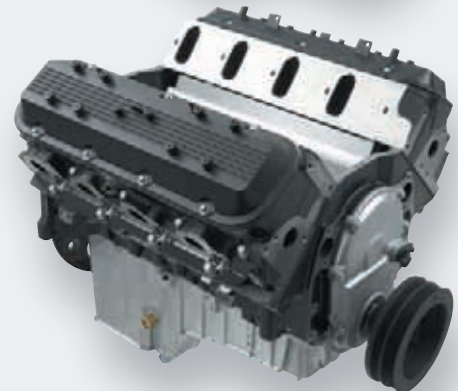
7.4L L19/L29

Our 7.4L engine assembly delivers the big torque you need for pulling a trailer and other heavy loads. A four-bolt main block enhances strength, and a later-style one-piece rear main seal reduces the chance for an oil leak. Designed for trucks, SUVs and vans built from 1980-2000; offered in new and remanufactured packages.



8.1L L18

The largest regular-production Big-Block engine is the 8.1L L18 engine used in a variety of heavy-duty GM trucks. This workhorse uses durable cast-iron cylinder block and cylinder heads castings and features later-style front camshaft sensing. Depending on the application, the L18 engine produces 225-340 horsepower and up to 455 lb.-ft. of tow-anything torque. Our 8.1L engine assemblies are available new or remanufactured and many are certified for CNG and LPG use.



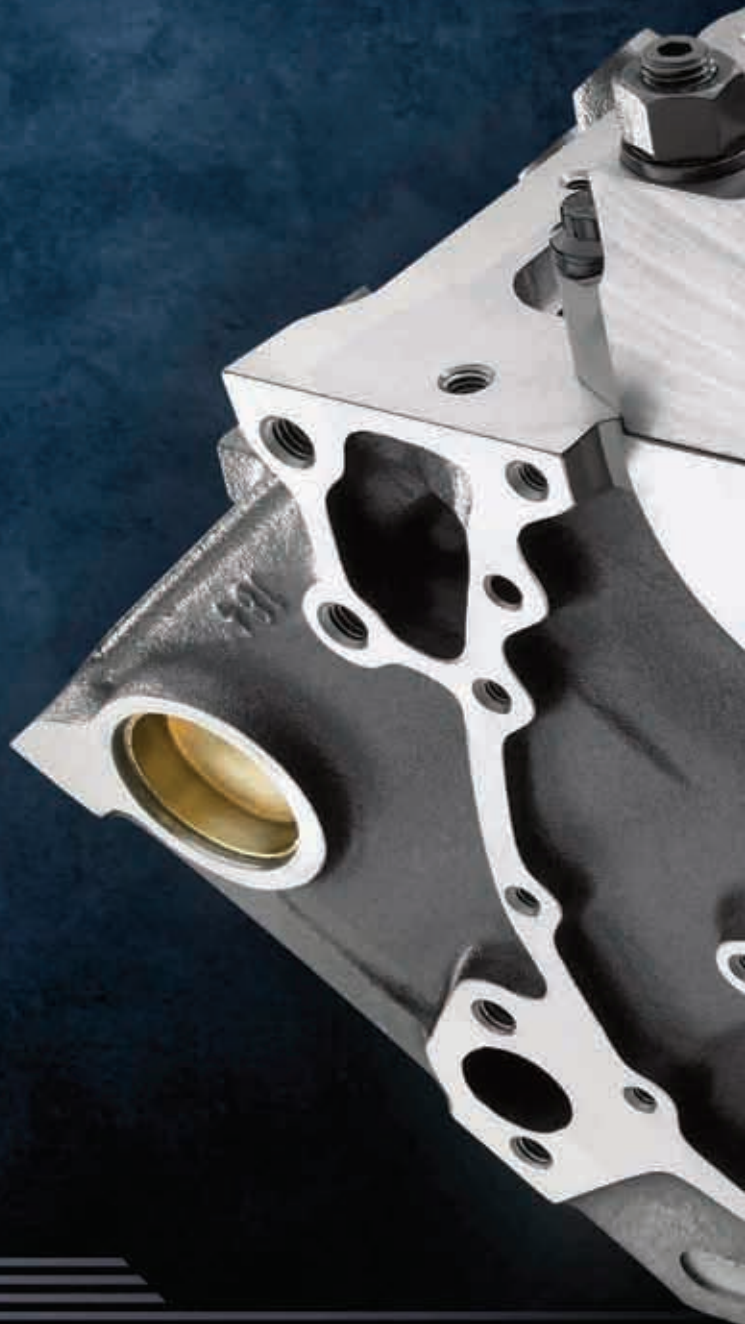
Small-Block Components

Whether your project is a '55 Chevy, '69 Chevelle or '91 Camaro Z28, it's a good bet you're building a Small-Block for it. It's been America's favorite V-8 for more than half a century.

GM Performance Parts brings that half-century of engineering experience to the table with its range of Small-Block components. Our General Motors engineers know the best methods for building dependable horsepower, whether you're using it for the street, strip, circle track or off-road trails. They've designed, dyno-tested and validated our Small-Block parts to the same precise standards as production engines, so you're assured the parts you'll find on the next few pages will perform as promised and fit without compromises.

Our Small-Block parts range starts with brand-new GM cylinder blocks, rotating parts and cylinder heads. There's no reason to settle for used, reconditioned or "seasoned" parts, because GMPP parts are competitively priced and often deliver greater strength and performance than used production components. GMPP's Small-Block performance parts – including cylinder heads, rotating parts, camshafts, intake manifolds and more – deliver big horsepower, too.

It doesn't matter if you're building a budget engine for a street cruiser, a killer racing engine for the drag strip or a chrome showpiece for a trophy winning street rod, we've got the Small-Block parts you need, with the assurance you're getting the best of factory-engineered performance.





Chevy Small-Block Quick Reference Chart

CAST-IRON SMALL-BLOCKS

Part Number	Cast Number	Deck Height	Lifter Pattern	Cyl Wall	Bore Range	Main Bolt	Main Bolt Degree	Cap Material	Crank Jnl Size	Oiling	Seal Type	Max Stroke	Weight (lbs)	Max HP	Usage	Page Number
10105123	14093638	9.025"	Std	Open	4.000"–4.030"	4	Straight	Grey iron	350	Wet	1 pc	3.750"	181	350	Street	135
19171109	—	9.025"	Std	Open	4.005"–4.030"	4	Straight	Grey iron	350	Wet	1 pc	3.800"	181	450	Street	135
10066034	—	9.025"	Std	Open	4.000"–4.030"	4	Straight	Grey iron	350	Wet	2 pc	3.750"	181	350	Street	135
12480174	10051184	9.025"	Std	Siamese	3.980"–4.155"	4	20°	Nodular	350	Wet	1 pc	3.750"	196	500	Amateur	136
12480047	10051184	9.025"	Std	Siamese	3.980"–4.155"	4	20°	Nodular	350	Wet	2 pc	3.750"	208	500	Amateur	137
12480175	10051184	9.025"	Std	Siamese	4.117"–4.155"	4	20°	Nodular	350	Wet	1 pc	3.750"	196	500	Amateur	137
12480157	10051184	9.025"	Std	Siamese	4.117"–4.155"	4	20°	Nodular	350	Wet	2 pc	3.750"	196	500	Amateur	137
12480049	10051184	9.025"	Std	Siamese	3.980"–4.155"	4	20°	Nodular	400	Wet	2 pc	3.750"	208	500	Amateur	137
12480159	10051184	9.025"	Std	Siamese	4.117"–4.155"	4	20°	Nodular	400	Wet	2 pc	3.750"	196	500	Amateur	137
24502503	10051184	9.025"	Std	Siamese	3.980"–4.155"	4	20°	8620 steel	350	Wet	2 pc	3.750"	208	700	Pro	138

SHORT DECK CAST-IRON BLOCK

Part Number	Cast Number	Deck Height	Lifter Pattern	Cyl Wall	Bore Range	Main Bolt	Main Bolt Degree	Cap Material	Crank Jnl Size	Oiling	Seal Type	Max Stroke	Weight (lbs)	Max HP	Usage	Page Number
24502650	24502650C	8.325"	Std	Siamese	3.980"–4.185"	4	20°	8620 steel	283	Dry	2 pc	3.250"	167	800	Pro	138
12480050	12480050	8.700"	Std	Siamese	3.980"–4.190"	4	20°	8620 steel	283	Dry	2 pc	3.480"	216	800	Pro	139

SB2.2 BLOCKS

Part Number	Cast Number	Deck Height	Lifter Pattern	Cyl Wall	Bore Range	Main Bolt	Main Bolt Degree	Cap Material	Crank Jnl Size	Oiling	Seal Type	Max Stroke	Weight (lbs)	Max HP	Usage	Page Number
12480097	10051184A	9.025"	SB2.2	Siamese	4.116"–4.185"	4	17°	4140 steel	283	Dry	2 pc	3.750"	192	800	Pro	139

ALUMINUM SMALL-BLOCKS

Part Number	Cast Number	Deck Height	Lifter Pattern	Cyl Wall	Bore Range	Main Bolt	Main Bolt Degree	Cap Material	Crank Jnl Size	Oiling	Seal Type	Max Stroke	Weight (lbs)	Max HP	Usage	Page Number
10185075	10134398	9.025"	Std	Siamese	3.986"–4.135"	4	20°	8620 steel	350	Wet	2 pc	3.750"	90	800	Pro	140
10134400	10134398	9.025"	Std	Siamese	4.117"–4.135"	4	20°	8620 steel	400	Dry	2 pc	3.750"	89	800	Pro	140
24502495	24502495	9.525"	Std	Siamese	4.117"–4.135"	4	20°	8620 steel	400	Dry	2 pc	4.125"	101	850	Pro	140



BUILDER'S TIP

383 Small-Block Basics

If you're building your own 383-cid Small-Block, you probably know you need the 3.750-inch crankshaft from a 400 engine to use in a 350 cylinder block. But it doesn't simply drop in without modifications. The 2.650-inch main journals must be machined down to match the 350 block's 2.450-inch journals; and depending on the rods used, the cylinder block may require machining to prevent interference at the oil pan rail area and bottom of the bores. Fortunately, the 400 crank's 2.100-inch rod journals match the 350's, but the 400 crank is externally balanced. A counterweighted torsional damper and properly balanced flywheel must be used with it.





Production-Based Block (front) **A**



Production-Based Block (rear) **A**

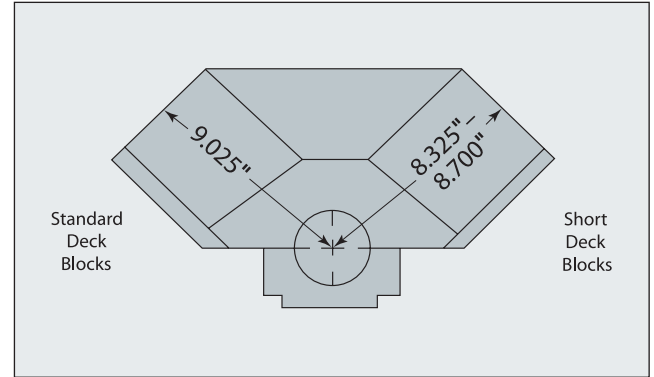


Straight 4-Bolt Mains **A**



Production-Based Block (front, top) **A**

DECK HEIGHT DIAGRAM



PRODUCTION-BASED BLOCKS

When building a mild Small-Block performance engine or a replacement for a stock engine, GM Performance Parts' brand-new, production-based blocks give you strength, accuracy and peace of mind that can't be assured in a rebuilt core. And unlike so many of the used cores, ours all feature four-bolt main caps for extra strength – there's no reason to settle for a two-bolt block. Each new cylinder block is machined to production-spec tolerances and is manufactured to the exact specifications of pre-1986 or 1986-later engines.

Production-Based Block Technical Notes:

- Standard 350 main journal sizes
- Non-siamese bores
- Production-spec cylinder wall thickness
- Lifter valleys machined for hydraulic-roller and flat-tappet valvetrains

See the chart on page 134 for complete specifications

A. 10105123

350 Bare Block (1986–Later Style), 1-Piece Rear Main Seal

- Cast-iron 4-bolt block
- 4.000" bore
- Machined for hydraulic roller or flat tappets

19171109

383 Bare Block (1986–Later Style), 1-Piece Rear Main Seal

- Cast-iron 4-bolt block
- 4.005" bore
- Torque plate honed
- Clearanced for 3.800" stroker crankshaft
- Machined for hydraulic roller or flat tappets

10066034

350 Bare Block (Pre-1986 Style), 2-Piece Rear Main Seal

- Cast-iron 4-bolt block
- 4.000" bore
- Can be used for 302, 327, or 350 engines
- Machined for flat tappets only
- Used in 1973-1985 GM Goodwrench 350 engines



GM PERFORMANCE PARTS BOWTIE SPORTSMAN BLOCK

Step up to serious street/strip performance when you choose a GM Performance Parts Sportsman Block. These iron blocks provide a rock-solid foundation for any application in the 350–500-horsepower range, be it drag strip, circle track or high-performance street machine. These highly versatile blocks are available in a variety of finish options that enable maximum flexibility for building a wide range of engine combos. Most of the blocks have siamesed cylinder walls¹ and 4-bolt main caps² that are secured with Grade-8 bolts. GM Performance Parts Bowtie Sportsman Blocks have 9.025-inch deck heights.

NOTE: Bowtie blocks are called out by main journal sizes (i.e., 283, 350 or 400) and then by bore size (i.e., 283, 305, 350 or 400) if the bore is not standard to the main size. Example: P/N 24502650 – “283 Main-350 Bore size” – has standard 283 main journal sizes; however the bore is standard 350 size.

Bowtie Sportsman Block Technical Notes:

- Standard 9.025-inch deck height
- Nominal cylinder wall thickness is 0.340-inch
- Minimum cylinder wall bore thickness on 4.155-inch bore is 0.225-inches (excluding P/N 10051181, 10051183, and 10185047)
- Extra-thick deck surfaces have blind-tapped bolt holes for improved head gasket sealing
- Priority main oiling system
- Main bearing bulkheads are 0.900-inch thick and use Grade-8 bolts
- All five cam bearing locations require 2.000-inch O.D. (1.867-inch I.D.) bearings P/N 12370843 (except block P/N 10051183)
- Tall lifter bore blocks may require clearancing the top of the lifter bores for some roller lifters
- Lifter valley oil scavenging boss below bell housing flange is present, but not drilled and tapped
- Oil dipstick holes are not drilled
- Timing system clearance must be checked
- Seal adapter P/N 10051118 required to use 2-piece rear main crankshafts in 1-piece rear main blocks

See the chart on page 134 for complete specifications.

4-Bolt 350 Main Blocks

A. 12480174

350 Bowtie Sportsman Block, 1-Piece Rear Main Seal

- CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- 4-bolt nodular mains, splayed caps on center 3 mains
- 3.980" finished bore
- 4.155" max bore (siamese cylinder bores)
- Extra smooth gasket surfaces for better seal
- Tall lifter bores
- Comes with rear seal adapter

¹Siamesed cylinder walls have thicker cylinder wall material with no water between the bores. This allows for a bigger bore; a bigger bore allows for more cubic inches and more power!

²4-bolt mains have more material and more fasteners holding the crank in the block (4-bolts per main instead of just 2). 4-bolt mains help maintain the integrity of the block when you drop the hammer!



A Sportsman Block (front)



A Sportsman Block (rear, for use with 1-piece seal adapter)



2-Piece Rear Main Seal



4-Bolt Splayed Main Caps



350 Bowtie Sportsman Block, 2-Piece Rear Main Seal **B**



350 Bowtie Sportsman Block, 2-Piece Rear Main Seal **B**

B. 12480047

350 Bowtie Sportsman Block, 2-Piece Rear Main Seal

- CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- 4-bolt nodular mains, splayed caps on center three mains
- 3.980" finished bore
- 4.155" max bore (siamese cylinder bores)
- Extra smooth gasket surfaces for better seal
- Tall lifter bores

12480175

350 Main, 400 Bore Size Bowtie Sportsman Block, 1-Piece Rear Main Seal

- CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- 4-bolt nodular mains, splayed caps on center three mains
- 4.117" finished bore
- 4.155" max bore (siamese cylinder bores)
- Extra smooth gasket surfaces for better seal
- Tall lifter bores
- Comes with rear seal adapter

12480157

350 Main, 400 Bore Size Bowtie Sportsman Block, 2-Piece Rear Main Seal

- CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- 4-bolt nodular mains, splayed caps on center three mains
- 4.117" finished bore
- 4.155" max bore (siamese cylinder bores)
- Extra smooth gasket surfaces for better seal
- Tall lifter bores

4-Bolt 400 Main Blocks

12480049

400 Main, 350 Bore Size Bowtie Sportsman Block, 2-Piece Rear Main Seal

- CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- 4-bolt nodular mains, splayed caps on center three mains
- 3.980" finished bore
- 4.155" max bore (siamese cylinder bores)
- Extra smooth gasket surfaces for better seal
- Tall lifter bores

12480159

400 Bowtie Sportsman Block, 2-Piece Rear Main Seal

- CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- 4-bolt nodular mains, splayed caps on center three mains
- 4.117" finished bore
- 4.155" max bore (siamese cylinder bores)
- Extra smooth gasket surfaces for better seal
- Tall lifter bores



BUILDER'S TIP

Add 50 HP to Your ZZ4 350

With its efficient ZZ4 aluminum cylinder heads and forged-steel crank at the bottom end, the ZZ4 350 is a durable, reliable crate engine – but that doesn't mean there isn't room for more power! We've raided the GM Performance Parts shelves to test a variety of performance-enhancing packages, resulting in a bolt-on combo that makes about 405 horsepower and 393 lb.-ft. of torque.

Here's the recipe:

- **12499712** ZZ4 350 crate engine
- **25534421** Cylinder head (2)
- **12496822** Vortec Eliminator single-plain intake manifold
- **24502586** LT4 "Hot" camshaft
- **19170093** Holley 770-cfm carburetor
- **12370839** 1.6-Ratio rocker arms



GM PERFORMANCE PARTS RACE BLOCKS

GM Performance Parts Race Blocks are all about serious horsepower. Precision is the operative word for them, from start to finish, so you can depend on them to get you to the finish line first. GM Performance Parts Race Blocks use only the highest-grade materials and machining techniques. The blocks are CNC-machined¹ with closer tolerances than Bowtie blocks. Race blocks feature full race-prep machining and 4-bolt splayed² main caps. GM Performance Parts Race Blocks have proven themselves repeatedly in NASCAR and NHRA-sanctioned races. GM Performance Parts race blocks have the power and reliability to put your car in the winner's circle.

See the chart on page 134 for complete specifications.

GM Performance Parts Race Block Technical Notes:

- Precision CNC-machining means +/- 0.001-inch tolerances.
- Cylinder bore wall thickness is 0.225" minimum at 4.155" bore. A sonic bore check data sheet is provided with block
- Nominal wall thickness of cylinder bores is 0.340"
- Cylinder decks, front and rear of case, oil pan rail surfaces and head dowel pins are blueprinted
- Extra thick deck surfaces have blind-tapped head bolt holes for superior head gasket sealing
- Enlarged cam bosses allow custom machining for larger bearings
- Non-standard cam bearings are required (see each block for details)
- Extra-thick main bearing bulkhead is machined at 5°
- Bearing cap inner bolts are spread 0.210" to allow machining for 400 journal crankshafts
- Premium quality main studs and SAE 8620 steel main bearing caps
- Priority main oiling system
- Billet wet sump rear main cap can be adapted to dry sump with plugs
- 2-piece rear main crankshafts and pre-1986 oil pans are required
- Use of some aftermarket mechanical roller lifters may require clearancing top of lifter bores
- Timing system clearance should be checked before engine assembly
- Lifter valley oil scavenging boss below bell housing flange is not drilled or tapped
- Oil dipstick holes are not drilled

24502503

350 Cast-Iron Bowtie Race Block (not shown)

- Cast-iron competition block right out of the box
- 4-bolt SAE 8620 steel mains, 20° splayed caps on center three mains
- 2.000" O.D. cam bearings (1.867" I.D.) required at all five locations
- 3.980" finished bore
- 4.155" max bore (siamese cylinder bores)
- 9.025" deck height
- Oil galleries for dry sump system are oversized and tapped for pipe plugs
- Supplied with sonic data sheet
- Tested to over 700 horsepower!

A. 24502650

283 Main, 350 Bore Size Short-Deck Bowtie Race Block

- CNC cast-iron competition block designed for drag racing, road racing or restricted oval track racing!
- 4-bolt SAE 8620 steel mains, 20° splayed caps on center three mains
- 8.325" deck (Standard deck blocks are 9.025 inches), can be machined to 8.200" deck height
- Camshaft is raised 0.433" to 4.955"
- Cam bearing bores machined for 2.250" O.D. x 1.875 roller bearings
- 3.980" rough bore
- 4.185" max bore (minimum of .250" cylinder bore wall thickness)
- Integral oil restrictors
- Must use Big-Block water pump, must raise water pump with adapters for balancers larger than 6"
- Olds Aurora V-8 bell housing bolt pattern (12.25" max flywheel diameter)
- Lifter holes and cylinder head bolt holes are not drilled
- Will accept standard, SB2.2 and splayed valve lifter patterns
- Can be machined to accept any Small-Block Chevy cylinder head
- Machined as 4.400" bore and main centers, can be machined to 4.500" bore centers
- Shorter than production pushrods required
- Tested to over 800 horsepower!
- Water jacket core plugs are 1.5" press-in
- Oil galley plugs are AN O-ring style

¹CNC (computer numerical controlled) machining guarantees exact tolerances. GM Performance Parts offers more CNC-machined blocks than anyone.

²Splayed main caps have additional material for added strength in securing the crankshaft. This reduces the chance of "throwing" a crankshaft.



A Short Deck Race Block (front)



A Short Deck Race Block (rear)



A 2-Piece Rear Main Seal



A 4-Bolt Main Caps



NASCAR Series Block (front) **B**



NASCAR Series Block (rear) **B**



NASCAR Specific Main Caps **B**



2-Piece Rear Main Seal **B**

12480050

283 Main, 350 Bore Size Medium-Deck Bowtie Race Block (not shown)

- CNC cast-iron competition block designed for drag racing, road racing or restricted oval track racing!
- 4-bolt SAE 8620 steel mains, 20° splayed caps on center three mains
- 8.700" deck (standard deck blocks are 9.025"), can be machined to 8.500" deck height
- Camshaft is raised 0.433" to 4.955"
- Cam bearing bores machined for 2.250" O.D. x 1.875" roller bearings
- 3.980" rough bore
- 4.190" max bore (minimum of .225" cylinder bore wall thickness)
- Integral oil restrictors
- Must use Big-Block water pump, must raise water pump with adapters for balancers larger than 6"
- Standard Chevy V-8 bellhousing bolt pattern
- Lifter holes and cylinder head bolt holes are not drilled
- Will accept standard, SB2.2 and splayed valve lifter patterns
- Can be machined to accept any Small-Block Chevy cylinder head
- Machined as 4.400" bore and main centers, can be machined to 4.500" bore centers
- Shorter than production pushrods required
- Tested to over 800 horsepower!

B. 12480097

283 Main Size NASCAR SB2.2 Series Block

- CNC-machined, cast-iron NASCAR competition block
- 9.025" deck height
- 4-bolt NASCAR-block-specific steel mains, 17° splayed caps on center three mains
- 4.116" rough bore
- 4.185" max bore (siamese bores)
- Machined for 58mm roller cam bearings
- .875" lifter bores
- -06 AN water drains
- 45° -10 AN front oil feed and valley scavenge
- AN O-ring pipe plugs
- (4) Center lifter valley drains (drilled and tapped)
- Steam holes drilled between cylinders .750" below deck surface
- 1/2" NPT water hole on each side of block
- Dry sump only (no oil filter boss)
- SB2.2 Lifter pattern and lobe sprayers
- Tested to over 800 horsepower!



ALUMINUM RACE BLOCKS

Less weight and the same great horsepower are the benefits of a GM Performance Parts Aluminum Race Block. GM Performance Parts Aluminum Race Blocks provide the same competition-level strength and reliability of our cast-iron Race Blocks, but their lighter weight improves chassis dynamics. The super-tough A-356 aluminum competition blocks are CNC-machined to +/- 0.001-inch tolerances. GM Performance Parts Aluminum Race Blocks are ideal for road racing applications or high horsepower turbocharged engines.*

See chart on page 134 for complete specifications.

GM Performance Parts Aluminum Race Block Technical Notes:

- Extra-thick deck surfaces with blind-tapped head bolt holes for improved head gasket sealing
- Centrifugally spun cast-iron cylinder sleeves
- Blueprinted cylinder decks, front and rear of case, oil pan rail surfaces and head dowel pins
- 2-piece rear-main crankshafts and pre-1986 oil pans required
- Enlarged cam bosses allow machining for larger cam bearings
- 2.000" O.D. (1.867" I.D.) cam bearings P/N 12370843 required
- Blocks may require clearancing at top of lifter bores (0.842") for some roller lifters
- Timing system clearance should be checked before engine assembly
- Extra thick main bearing bulkhead machined at 5°
- Premium main studs and SAE 8620 steel main bearing caps
- Priority main oiling system
- Billet wet sump rear main cap can be converted to dry sump with plugs
- Oil dipstick holes not drilled
- Comes with dowel pins

10185075

350 Aluminum Bare Block

- A-356 aluminum competition block
- CNC-machined
- Siamesed bores with increased wall thickness
- 3.986" rough finished bore
- 4.135" maximum bore
- 350 main size
- Tested to more than 800 horsepower!

10134400

400 Aluminum Bare Block

- A-356 aluminum competition block
- CNC-machined
- Siamesed bores with increased wall thickness
- 4.117" rough-finished bore
- 4.135" maximum bore
- 3.750" maximum stroke
- Splayed 4-bolt steel mains
- 400 main size
- Dry sump use only
- Tested to more than 800 horsepower!

24502495

400 Aluminum Tall Deck Bare Block (not shown)

- A-356 aluminum competition block
- CNC-machined
- Siamesed bores with increased wall thickness
- 4.117" rough-finished bore
- 4.135" maximum bore
- 4.125" maximum stroke
- Splayed 4-bolt steel mains
- 400 main size
- Dry sump use only
- Tested to more than 800 horsepower!

*Proposed applications have not been specifically tested or validated by GM Performance Parts.



Aluminum Race Block (front)



Aluminum Race Block (rear)



Aluminum Race Block (bottom)



Universal Engine Lift Brackets **A**



Freeze Plug, 1-5/8" brass **B**



Cylinder Sleeve (standard) **C**



Main Bearing Kit 383 Engine (standard) **D**



Main Bearing Bolt Kit, Sportsman Blocks **E**

CYLINDER BLOCK COMPONENTS

A. 12363238

Universal Engine Lift Brackets

- Designed to bolt to the end of cylinder heads for removal and installation of the engine
- Made from 0.200" steel and have .880" x 1.000" hook slots
- Use with 3/8" or 7/16" bolts
- Includes two brackets and two 7/16" bolts

B. 88891749

Freeze Plug, 1-5/8" Brass

- Corrosion-resistant brass freeze plug is recommended for marine applications

10121044

Rear Oil Seal, 2-Piece Design (not shown)

- Rear oil seal for V-8 and V-6 engines with pre-1985 style 2-piece oil seal design
- Used by many NASCAR teams for superior leak protection

C. 12480004

Cylinder Sleeve (standard)

- Standard-bore steel cylinder sleeve for new-design aluminum Small-Block V-8 and 90° V-6 aluminum blocks, including P/N 10134400, P/N 10134351, P/N 10185075, and P/N 10134371

NOTE: Sleeve has 3.980" bore; can be overbored to 4.135".

12480018

Oil Galley Plugs, Aluminum Blocks (not shown)

- Replacement oil galley plugs for all GM aluminum engine blocks, size AN -06

D. 12499102

Main Bearing Kit, 383 Engine (standard)

- Complete main bearing kit for 383-cubic-inch Small-Block V-8 with standard-size mains

12499138

Main Bearing Kit, 383 Engine, +0.010 (not shown)

- Complete main bearing kit for 383-cubic-inch Small-Block V-8 with +0.010-undersize mains

E. 12480108

Main Bearing Bolt Kit, Sportsman Blocks

- Sturdy main bearing cap bolts designed specifically for the following GMPP Sportsman Racing Blocks: P/N 12480047, P/N 12480049, P/N 12480157, P/N 12480159, P/N 12480174 and P/N 12480175
- Bolts are Grade-8 with 12-point heads and black oxide-coated



FRONT COVER, TIMING POINTERS, FUEL PUMP BLOCK-OFF PLATE

3991435

Timing Pointer, 6.750" and 7" Balancer

- Steel timing pointer bolts onto engines with 6.750" or 7" balancers
- Pointer is not chromed

3991436

Timing Pointer, 8" Balancer (not shown)

- Steel timing pointer bolts onto Small-Block with an 8" balancer
- Pointer is not chromed

12342089

Small-Block Chrome Timing Cover

- Attractive chrome cover for 1969–1991 Small-Block V-8 and all 90° V-6 engines
- Direct replacement for covers that use bolt-on timing pointer
- Supplied with GM oil seal (replacement oil seal P/N 10111769)

12562818

Front Cover

- With crank trigger plug
- Includes bolts, seal and gasket

12341998

Small-Block Fuel Pump Block-Off Plate

- Plate has stamped Bowtie logo
- Special non-asbestos gasket included



Timing Pointer, 6.75" and 7" Balancer



Small-Block Chrome Timing Cover



Front Cover With Bolts, Seal and Gasket



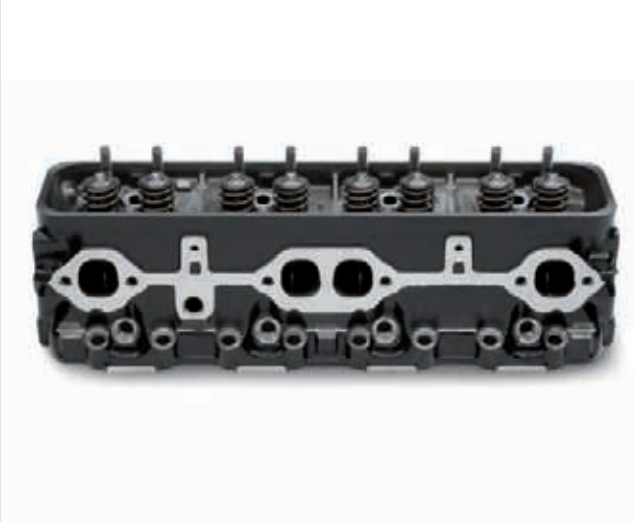
Small-Block Fuel Pump Block-Off Plate

TIMING COVERS: ADDITIONAL REQUIRED COMPONENTS

Part Number	Bolts (Quantity)	Seals (Quantity)	Gasket (Quantity)	Bolt Grommets (Quantity)	Engine Application
12342089	11561767 (10)	12577710 (1)	10108435 (1)	N/A	19258602, 12499711, 19210007, 12496968, 19210007
12562818	10213293 (6) 12551135 (2)	10228655 (1)	N/A	10213294 (8)	12499101, 12499106, 12497317, 88958604, 12499710, 12498772 12496769, 24502609, 88958603, 12499712, 19201330

SMALL-BLOCK CYLINDER HEADS

Part Number	Description	Casting Number	Material	Port Size	Port Type	Valve Angle	Chbr CC's	Int Vlv	Exh Vlv	Exh Port	Plug Type	Heat Riser	Rocker Stud	Notes	Page Number
12363287	LT4	12555690	Alum	195	—	23	54.4	2.000	1.550	LT4	Angled	No	Screw-in	For LT1 or LT4	146
12480034	Bowtie Phase III	12480034	Iron	184	—	23	64	2.020	1.600	—	Angled	No	Screw-in	Phase 3 Bowtie	144
12497186	Fast Burn	12367712	Alum	210	Vortec	23	62	2.000	1.550	LT4	Angled	No	Screw-in	Bare 12464298	147
12464298	Fast Burn	12367712	Alum	210	Vortec	23	62	2.000	1.550	LT4	Angled	No	Screw-in	Assembly	147
12556463	ZZ4	10088113	Alum	163	—	23	58	1.940	1.500	LT4	Angled	No	Screw-in	ZZ4 Assembly	146
12529093	Vortec	10239906 or 12558062	Iron	170	Vortec	23	64	1.940	1.500	LT4	Straight	No	Press	Bare 12558060	143
12558060	Vortec	10239906 or 12558062	Iron	170	Vortec	23	64	1.940	1.500	LT4	Straight	No	Press	Assembly	143
25534351	Small-Port Vortec Bowtie	25534351c	Iron	185	Vortec	23	66	2.000	1.550	LT4	Straight	No	Screw-in	Bare 25534421	145
25534445	Large-Port Vortec Bowtie	25534371c	Iron	225	Vortec	23	66	2.000	1.550	LT4	Straight	No	Screw-in	Bare 25534446	145
25534421	Small-Port Vortec Bowtie	25534351c	Iron	185	Vortec	23	66	2.000	1.550	LT4	Straight	No	Screw-in	Assembly	145
25534446	Large-Port Vortec Bowtie	25534371c	Iron	225	Vortec	23	66	2.000	1.550	LT4	Straight	No	Screw-in	Assembly	145
24502580	18° Semi	10134363	Alum	215	18°	18	60	—	—	18°	Angled	No	Shaft	No seats/guides	148
24502615	15°	10134363	Alum	210	18°	15	35-37	—	—	18°	Angled	No	Shaft	No seats/guides	148
12480129	SB2.2	12480011	Alum	—	SB2.2	SB2.2	48	2.150	1.625	SB2.2	Angled	No	Shaft	No seats/guides	151
12480011	SB2.2 Bare	12480011	Alum	—	SB2.2	SB2.2	48	2.150	1.625	SB2.2	Angled	No	Shaft	No seats/guides	150
88958667	ROX SB2.2	88958667	Alum	—	SB2.2	SB2.2	28	2.150	1.625	SB2.2	—	—	Shaft	No seats/guides	151
12480146	Rough Bare Splay	10185040	Alum	—	Splayed	Splay	45	2.200	1.650	Splayed	Angled	No	Shaft	Rough mach 24502517	149
12480147	Semi-Machined Splay	10185040	Alum	—	Splayed	Splay	45	2.200	1.650	Splayed	Angled	No	Shaft	Semi-mach 12480146	149
24502517	Splayed valve	10185040	Alum	—	Splayed	Splay	45	2.200	1.650	Splayed	Angled	No	Shaft	No seats/guides	149
12480153	ROX splayed	12480153	Alum	—	Splayed	Splay	—	—	—	Splayed	—	—	Shaft	No seats/guides	150



Cast-iron Vortec Cylinder Head (exhaust) **A**



Cast-iron Vortec Cylinder Head (intake) **A**



Cast-iron Vortec Cylinder Head (combustion chamber) **A**

SERVICE REPLACEMENT HEADS

These cylinder heads are direct replacements for OEM heads on 1987-and-newer GM Small-Block V-8 engines. Save time and worry by replacing tired or damaged cylinder heads with new ones from GM Performance Parts.

Service Replacement Head Technical Notes:

- Cast-iron
- Use 1.940"/1.500" valves
- Straight spark plug design
- No heat risers provided

93438649

Cylinder Head Assembly With Valves For 290 HP (not shown)

This cast-iron cylinder head is for use on 350/290 hp crate engines and Goodwrench base 350 V-8 (P/N 10067353).

- Bare head P/N 93438648
- Standard 6-bolt intake manifold pattern
- 76cc combustion chamber

This head is assembled with the following components:

12550909	Exhaust Valves	10241744	Intake Spring Retainer
10241743	Intake Valves	14042575	Exhaust Spring Retainer
94666580	Valve Springs	10212810	Intake Seals
24503856	Valve Locks	12564852	Exhaust Seals

VORTEC CYLINDER HEADS

An easy way to gain 20-40 horsepower on any 1955-and-newer Small-Block Chevrolet V-8 (except later-style LT1/LT4 engines with reverse-flow cooling) is by installing a set of Vortec cylinder heads. These value-priced cast-iron cylinder heads use modified combustion chambers and high velocity port technology to provide improved performance. Vortec cylinder heads significantly outflow non-Vortec service replacement cylinder heads and earlier OEM cast-iron heads. These cylinder heads are ideal for applications up to 350 horsepower, but they require Vortec-specific intake manifolds.

A. 12558060

Cast-iron Vortec Cylinder Head Assembly

- Completely assembled with 1.940"/1.500" valves
- Uses bare head 12529093
- 64cc combustion chamber
- Straight spark plugs
- No heat risers
- Requires Vortec-specific intake manifold
- Camshafts with more than 0.475" lift require machining valve guide bosses and checking valve seal to valve spring retainer clearance
- Can be machined for 2.020"/1.600" valves
- Rocker arm studs can be pinned or drilled and tapped to 3/8"
- Valve spring seat diameter is 1.280"
- Casting number 10239906 or 12558062

This head is assembled with the following components:

10241743	Intake Valves	10241744	Valve Spring Retainer
12550909	Exhaust Valves	10212810	Intake Seals
10212811	Valve Springs	12564852	Exhaust Seals
24503856	Valve Locks		

THE PHASE 3 CAST-IRON BOWTIE HEAD

The Phase 3 Bowtie cylinder head is a true cast-iron performance head that's designed for off-highway, competition use only. Racers who are required to run a production-style cast-iron cylinder head can obtain optimum performance with this head because it outflows all production cast-iron heads. The Phase 3 casting is extra thick, which allows ample room for port modifications.

A. 12480034

Phase 3 Cast-iron Bowtie Head

- Extra-thick walls for porting
- Machined for 2.020"/1.600" valves
- Exhaust seats are induction hardened
- Valve spring seat is machined for 1.500" competition springs
- 184cc intake runner
- 64cc combustion chamber
- No heat riser
- Angled spark plugs (5/8" hex, 3/8" reach, tapered plugs)
- Requires early model intake manifolds
- Valve spring seat is machined for 1.500" competition springs
- Use P/N 12495497 screw-in studs for 3/8" rocker arms
- Use P/N 3921912 screw-in studs for 7/16" rocker arms
- Use P/N 3973418 guideplates for hardened pushrods



A Phase 3 Cast-iron Bowtie Head (exhaust)



A Phase 3 Cast-iron Bowtie Head (intake)



A Phase 3 Cast-iron Bowtie Head (combustion chamber)



BUILDER'S TIP

Machining the Vortec Head for Greater Valve Lift

The Small-Block Vortec cylinder head delivers great airflow, but is limited to valve lift of about 0.450-inch in stock form – otherwise the valve stem seals will be crushed. The valve guide bosses can be easily machined down to provide greater stem seal clearance. You'll want about 0.050-inch stem-to-retainer clearance at maximum valve lift. Also, the spring seats are easily machined to accept larger-diameter valve springs that are necessary to complement a higher-lift camshaft.



Small- and Large-Port Vortec Bowtie Heads (intake). Bare head shown. **B**



Small-Port Vortec Bowtie Head (exhaust). Bare head shown. **B**



Small-Port Vortec Bowtie Head (chamber). **B**

VORTEC BOWTIE CYLINDER HEADS

Vortec Bowtie cylinder heads are the most powerful cast-iron heads offered by GM Performance Parts. These upgraded production cylinder heads are ideal for 400-450 horsepower street and racing (great for circle track applications) engines. Vortec Bowtie cylinder heads come with bigger valves, a thicker deck surface and 66cc combustion chambers. The heads provide outstanding low-lift flow numbers (the more air you flow, the more potential power) and Fast Burn performance all in an affordable, cast-iron head.

Vortec Bowtie Cylinder Head Technical Notes:

- Cast-iron small runner or large runner cylinder heads¹
- 66cc combustion chambers
- 0.450" deck thickness
- Hardened exhaust valve seats
- Machined for 2.000"/1.550" valves
- Maximum 0.530" valve lift (without modifications)
- Straight spark plug design
- No heat risers
- Drilled and tapped for 7/16"-14 screw-in studs
- Dual bolt patterns for Vortec and early style intake manifolds (early model P/N 10051103; Vortec intakes P/N 12366573, 12496820, 12496821, 12496822 or 12489371)
- Use intake gasket P/N 12529094 for Vortec intakes or dual pattern intake gasket P/N 12497760 for early model intakes or Vortec design intake manifolds
- Dual bolt patterns for perimeter-style and center-bolt valve covers
- Vortec intake manifold three-step torque specs: 2 lb.-ft.; 9 lb.-ft.; 11 lb.-ft.

B. 25534421

Small Port Vortec Bowtie Cylinder Head Assembly

- Completely assembled, ready to bolt on
- 185cc intake ports
- 65cc exhaust ports
- Use Fel-Pro® P/N 1470 exhaust gasket
- **Bare head P/N 25534351, available separately**

25534446

Large Port Vortec Bowtie Head Assembly (not shown)

- Completely assembled, ready to bolt-on
- Improved air flow (281 cfm @ 0.600")
- 225cc intake ports
- 77cc exhaust ports
- 65cc combustion chambers
- Use Fel-Pro® P/N 1470 exhaust gasket (minor trimming may be necessary)
- **Bare head P/N 25534445, available separately**

These heads are assembled with the following components:

12363757	Intake Valves	10212808	Valve Spring Retainers
12363758	Exhaust Valves	10212810	Valve Stem Seals
12551483	Valve Springs	24503856	Valve Locks
12552126	3/8" Rocker Studs		

¹Larger intake and exhaust ports allow for more volume of air to pass through the engine. The more air you flow, the more power you can make.



THE ZZ4 ALUMINUM HEAD

The revolutionary lightweight ZZ4 aluminum cylinder head was a key component of the highly successful Corvette L98 Small-Block V-8 engine (1985-1990). GM Performance Parts offers that same cylinder head as a complete assembly, with D-shaped exhaust ports¹ (they increase post-combustion scavenging for increased power), high-velocity exhaust runners and centrally located spark plugs² that improve air/fuel mixture burn efficiency for increased power potential. The ZZ4 aluminum cylinder head is ideal for a great variety of engine applications.

A. 12556463

ZZ4 Aluminum Cylinder Head Assembly

- Aluminum performance head – used on ZZ4 engines
- Completely assembled with 1.940"/1.500" valves
- 163cc intake port
- 58cc combustion chamber
- No heat riser
- Angled spark plugs (5/8" hex, 3/4" reach, tapered plugs)
- 1.48" Valve spring seat diameter
- Screw-in studs (3/8" top, 7/16" bottom)
- Use head gaskets with stainless steel fire rings
- Raised, machined rocker rails
- Raised exhaust ports .100", requires Fel-Pro® gasket P/N 1470
- Use rail type rockers P/N 10089648, or kit P/N 12370838 (roller rockers!)
- Casting P/N 10088113

This head is assembled with the following components:

12550909	Exhaust Valves	10212808	Valve Spring Retainers
10241743	Intake Valves	10212810	Intake Valve Stem Seals
12551483	Valve Springs	10212870	Exhaust Valve Stem Seals
10212809	Valve Spring Shims	24503856	Valve Locks
12552126	3/8" Rocker Studs		

THE LT4 ALUMINUM HEAD

The LT4 aluminum cylinder head represents another benchmark in Chevrolet high performance engine technology. This premium-quality aluminum cylinder head is designed for use on 1992-and-newer LT1 and LT4 Small-Block engines with reverse-flow cooling systems. LT4 aluminum cylinder heads are key components of any contemporary high horsepower GM Small-Block engine buildup.

B. 12363287

LT4 Aluminum Cylinder Head Assembly

- Aluminum performance head
- Can only be used on 1992 – newer LT1 and LT4 engines
- Completely assembled with 2.000"/1.550" valves
- 195cc intake port
- 54.4cc combustion chamber
- No heat riser
- Angled spark plugs (5/8" hex, 3/8" reach, tapered plugs)
- 1.480" Valve spring seat diameter
- Screw-in studs (3/8" top, 7/16" bottom)
- Use head gaskets with stainless steel fire rings
- Raised, machined rocker rails
- Raised exhaust ports .100", requires Fel-Pro® gasket P/N 1470
- Use rail type rockers P/N 10089648, or kit P/N 12370838 (roller rockers!)

This head is assembled with the following components:

12555331	Intake Valves	10212808	Valve Spring Retainers
12551313	Exhaust Valves	10212810	Valve Stem Seals
12551483	Valve Springs	10212809	Valve Spring Shims
12552126	3/8" Rocker Studs	24503856	Valve Locks

¹D-shaped exhaust ports increase the scavenging of the exhaust after combustion. The quicker you can get the exhaust out, the quicker you can get the air/fuel mixture into the combustion chamber. And, that equals big power!

²Centrally-located spark plugs allow for a more efficient flame front and air/fuel mixture burn during combustion, greatly increasing the power potential of the cylinder head.



A ZZ4 Aluminum Cylinder Head Assembly (intake)



A ZZ4 Aluminum Cylinder Head Assembly (exhaust)



A ZZ4 Aluminum Cylinder Head Assembly (combustion chamber)



B LT4 Aluminum Cylinder Head Assembly (intake)



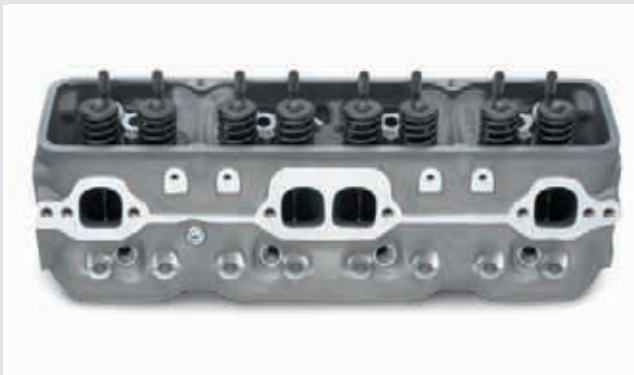
B LT4 Aluminum Cylinder Head Assembly (exhaust)



LT4 Aluminum Cylinder Head Assembly (combustion chamber) **B**



Fast Burn Cylinder Head (intake) **C**



Fast Burn Cylinder Head (exhaust) **C**



Fast Burn Cylinder Head (combustion chamber) **C**

ALUMINUM FAST BURN HEADS

Maximum bolt-on performance for serious street engines is as close as your local GM Performance Parts dealer when you order a set of Aluminum Fast Burn Cylinder Heads. Fast Burn technology delivers more horsepower by increasing cylinder pressures, which maximizes air/fuel mixture combustion. The 62cc combustion chamber is designed for use with flat-top pistons. The Fast Burn heads require no additional porting for optimum performance, so all you need to do is bolt them on and go. These ultimate 23-degree Small-Block cylinder heads are the same ones used on GM Performance Parts 425-horsepower ZZ383 crate engines. The heads can be used on any 4.00-inch bore Small-Block with the standard-flow coolant system.

C. 12464298

Aluminum Fast Burn Cylinder Head Assembly

- CNC-machined aluminum performance head
- Completely assembled with 2.000"/1.550" valves
- 210cc intake port, roof raised .240"
- 78cc D-shaped exhaust ports, raised .200", requires Fel-Pro® gasket P/N 1470 (may require minor trimming)
- 62cc combustion chamber, .400" thick deck (can be milled safely to .060")
- No heat riser
- Angled spark plugs (5/8" hex, 3/4" reach, tapered plugs)
- 1.48" Valve spring seat diameter
- Use head gaskets with stainless steel fire rings
- Raised, machined rocker rails
- 0.530" max valve lift (without modifications)
- Screw-in studs, (3/8" top, 7/16" bottom)
- Dual bolt patterns for perimeter-bolt and center-bolt valve covers
- Dual bolt patterns for both Vortec and early model intake manifolds
- Uses bare head P/N 12497186
- Use production intake gasket P/N 12529094 for Vortec intakes, dual bolt pattern intake gasket P/N 12497760 for early model or Vortec design manifolds (Fel-Pro® P/N 1289 and P/N 1207 may be used)

This head is assembled with the following components:

12555331	Intake Valves	10212808	Valve Spring Retainers
12551313	Exhaust Valves	10212810	Valve Stem Seals
12551483	Valve Springs	10212809	Valve Spring Shims
12552126	3/8" Rocker Studs	24503856	Valve Locks

ALUMINUM RACING CYLINDER HEADS

The same superior GM Performance Parts technology that professional NASCAR and NHRA racers have used to win races for decades is available for you to use in your racecar. The GM Performance Parts Aluminum Racing Cylinder Heads are part of an extensive family of high-performance inline-valve heads, designed specifically for race-winning engines.

GM Performance Parts Aluminum Racing Cylinder Heads start with castings designed with thicker decks and manifold flange areas. The combustion chambers are designed for competition and air passages are maximized for high-velocity airflow. These cylinder heads thrive on high compression and high rpm. Used in conjunction with optimized short-block, intake and valve-train combos, these heads are part of an "instant-on" power plant – the kind of engine that will put you in the winner's circle.

GM Performance Parts engineers dramatically altered the valve architecture to improve airflow and maximize efficiency. These aluminum racing cylinder heads are only available unported, so you must have them custom-ported to your specific requirements.

Aluminum Racing Head Technical Notes:

- Made of 355-T7 aluminum
- Extra-thick decks for angle milling or heavy flat milling
- Extra port material for professional porting
- Recommended for use with 4.000" to 4.155" cylinder bores
- Revised location angled spark plugs (14mm, 5/8" hex, 3/4" reach, gasketed plugs)
- Raised and revised location intake and exhaust ports for superior airflow above 0.600" valve lift
- Modified valve angles (not production 23°)
- Longer-than-stock valves required
- Designed for aftermarket shaft-mount rocker systems
- Perimeter-bolt-pattern-type valve covers required
- Specific 18°/15° intake manifold bolt patterns
- Recommended intake manifolds: P/N 24502481, 24502579 or 24502653 (with valley plate P/N 24502654)
- Intake manifold gasket P/N 10185007

24502580

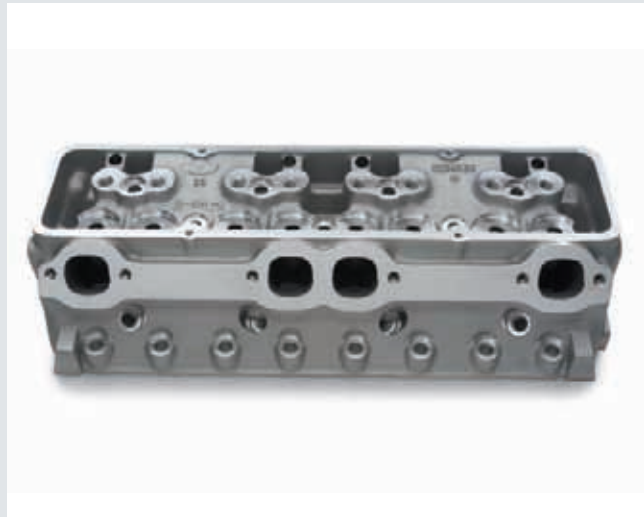
Semi-Finished 18° Cylinder Head

- Fully machined, semi-finished, no seats or guides
- Non-CNC ports and combustion chamber are "as-cast"
- 60cc "as-cast" combustion chambers
- Designed for up to 2.200"/1.625" valves
- 215cc "as-cast" intake ports
- .0800" extra material on deck face, and .055" on intake face

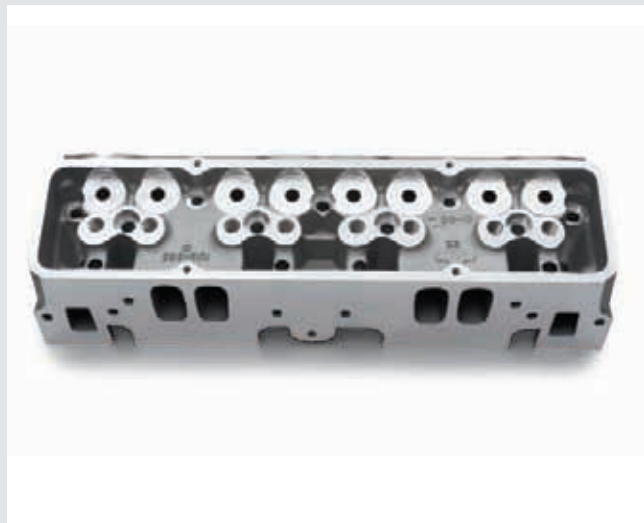
24502615

Semi-Finished 15° Cylinder Head

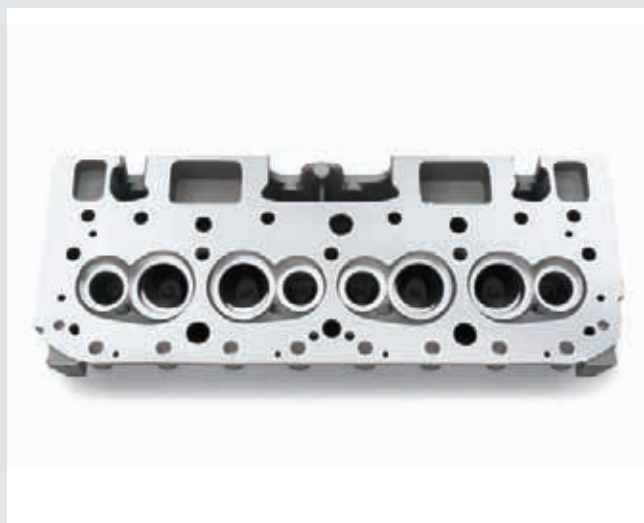
- Fully machined, semi-finished, no seats or guides
- Non-CNC ported, ports and combustion chamber are "as-cast"
- Great head for NHRA Comp-Eliminator, both V-8 and 4-cylinder applications!
- Casting has been "rolled" 2°. Valve-guides are also tipped 1°
- 210cc "as-cast" intake ports
- 35-37cc "as-cast" combustion chamber
- Capable of over 900 horsepower
- Multi-NHRA world records



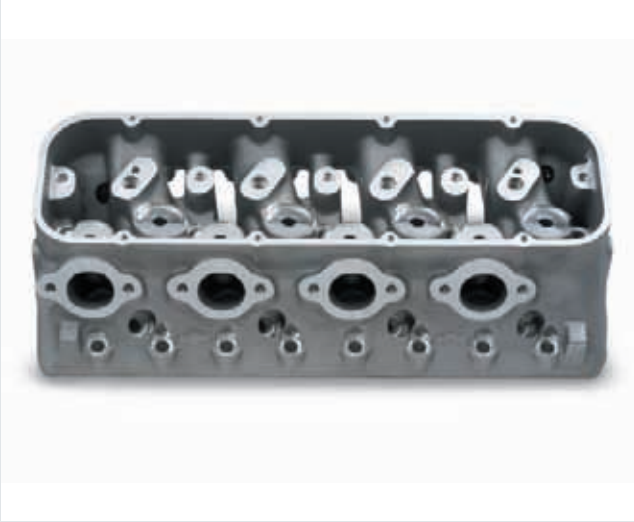
15°/18° Cylinder Head (exhaust)



15°/18° Cylinder Head (intake)



15°/18° Cylinder Head (combustion chamber)



Splayed-Valve Head (exhaust) **A**



Splayed-Valve Head (intake) **A**



Splayed-Valve Head (combustion chamber) **A**

SPLAYED-VALVE ALUMINUM RACE CYLINDER HEADS

GM Performance Parts Splayed-Valve Aluminum Race Cylinder Heads are extremely aggressive, all-out competition heads and not intended for street use. Splayed valves point both intake and exhaust valves at the center of the cylinder bore. As the valves open, they move away from the edges of the bore. That allows maximum-size valves to be installed without increasing bore size. The result is dramatically increased airflow, compared to inline-valve-design cylinder heads.

The castings have a 0.240-inch minimum port wall thickness, which leaves ample room for extensive custom porting. Intake valves are angled 16-degrees to the deck surface and splayed 4-degrees. Exhaust valve angles are 11-degrees with a 4-degree splay. Making more than 1000 naturally aspirated horsepower with these cylinder heads is easily achievable.

Aluminum Splayed Valve Race Head Technical Notes:

- Made of 355-T7 aluminum
- No valve seats or guides provided
- Extra-thick decks for angle milling or heavy flat milling
- Extra port material (0.240") for professional porting
- Completely revised intake and exhaust ports provide ultimate airflow potential
- 45cc "as cast" combustion chambers
- Modified valve angles (16° x 4° intake, and 11° by 4° exhaust)
- Designed for longer-than-stock 2.200" and 1.650" valves
- Valve spring pads accommodate 1.625" diameter springs
- Revised location angled spark plugs (14mm, 5/8" hex, 3/4" reach, gasketed plugs)
- All pistons have the same orientation
- Designed for aftermarket shaft-mount rocker systems
- Custom-fabricated intake manifold required
- P/N 10185042 intake manifold gasket required
- Valve cover P/N 10185045 and valve cover gaskets P/N 10185043 required

12480146

Rough-Machined Splayed-Valve Aluminum Cylinder Head (not shown)

- Main surfaces are machined, exhaust bolt pattern is machined
- Head bolt and dowel holes, intake bolt holes, spark plug holes and pushrod holes are not machined
- Valve guides, valve seats, valve spring seats and rocker stands are not machined
- Valve locations and angles may be relocated
- 240cc "as-cast" intake ports
- 78cc "as-cast" exhaust ports
- 45cc "as-cast" combustion chambers

12480147

Semi-Machined Splayed-Valve Aluminum Cylinder Head (not shown)

- Main surfaces are machined; exhaust bolt pattern, valve guides and spark plug holes are machined
- Head bolt holes, dowel holes, intake bolt holes, pushrod holes are not machined
- Valve seats, spring seats and rocker stands are not machined
- 240cc "as-cast" intake ports
- 78cc "as-cast" exhaust ports
- 45cc "as-cast" combustion chambers
- Same casting as P/N 12480146

A. 24502517

Splayed-Valve Aluminum Cylinder Head

- Semi-machined aluminum race head
- 240cc "as-cast" intake ports
- 78cc "as-cast" exhaust ports
- 45cc "as-cast" combustion chambers
- Same casting as P/N 12480146



Splayed-Valve Aluminum Race Cylinder Heads Continued

A. 12480153

Splayed-Valve 4.500 Bore Center Aluminum Cylinder Head

- Semi-machined aluminum race head
- Great for NHRA competition with dual carburetors
- As-cast ports and combustion chambers for professional finishing
- Use mid-deck block P/N 25534429 with 4.500" main bore machining
- Special larger head-bolt pattern, 3/8" fasteners, 19 holes
- 240cc "as-cast peanut" intake ports
- 78cc "as-cast peanut" exhaust ports
- 40cc "as-cast" combustion chambers

88958684

Splayed-Valve 4.500 Bore Center Aluminum Cylinder Head Cubed (not shown)

- Great for NHRA competition with dual carburetors
- 240cc "as-cast peanut" intake ports
- 78cc "as-cast peanut" exhaust ports
- "Cubed" aluminum race head
- Bare head, no seats or guides

SB2.2 NASCAR RACE CYLINDER HEADS

The GM Performance Parts SB2 NASCAR racing head was designed to improve durability, simplify preparation procedures, and reduce the overall cost of building and maintaining a Small-Block Chevrolet racing engine. It is ideal for single-four-barrel carburetor applications due to having "mirror" design intake ports and all eight ports being angled toward the center of the engine. Spark plug holes were moved toward the bore center for improved combustion efficiency. 48cc combustion chambers permit 12.1:1-compression-ratio flat-top pistons.

Aluminum SB2.2 NASCAR Race Head Technical Notes:

- 355-T7 X-rayed and "hipped" aluminum competition cylinder heads
- Extra-thick decks for heavy flat milling
- Extra material around ports for professional porting
- Combustion chambers are very small, shallow and wedge shaped
- Precision T-washers installed in all four center head bolt bosses
- Designed for longer-than-stock 2.150" and 1.625" valves
- Valve spring pads accommodate 1.625" diameter springs
- Modified valve angles, 11° x 4° intake and 8° x 0° exhaust
- Designed for aftermarket shaft-mount rocker systems
- Revised location angled spark plugs (14mm, 5/8" hex, 3/4" reach, gasketed plugs)
- Requires specific left- and right-hand pistons
- Valve cover P/N 12480006 or P/N 12480012 required
- Replacement AN -08 intake port plugs available as P/N 12480171

B. 12480011

Semi-Finished SB2.2 Aluminum Cylinder Head

- Aluminum NASCAR-accepted head
- Bare head, no seats or guides installed
- Standard .500" guide holes
- As cast "peanut" ports
- 48cc "as-cast" combustion chamber

**HIP is the acronym for Hot Isostatic Pressure. This process puts the heads in a sealed vessel where a vacuum is first used to remove room air and any possible contaminants. The vessel is filled with high pressure nitrogen (up to 30,000-psi) and then heated to the required temperature and sustained for a determined amount of time. The cooling process is also a controlled procedure to insure maximum strength and proper heat treat. This extreme high pressure and heat removes almost 100% of the internal porosities that are generated during the casting process. The material integrity, strength and fatigue life increases significantly*



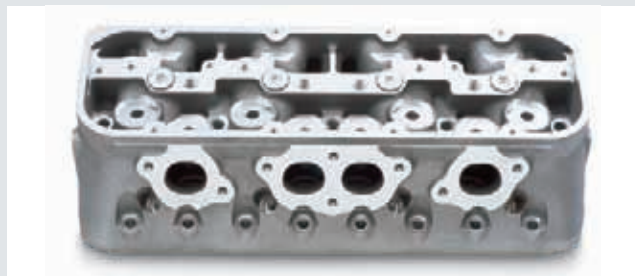
A Splayed-Valve R0X Cylinder Head (exhaust)



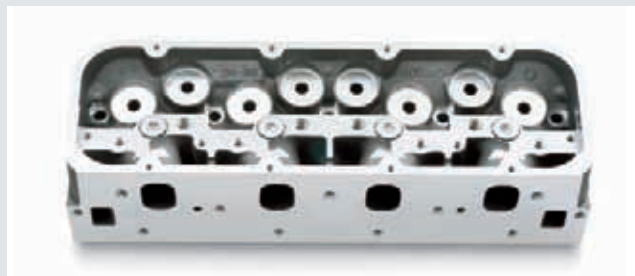
A Splayed-Valve 4.500 Bore Center Cylinder Head (intake)



A Splayed-Valve 4.500 Bore Center Cylinder Head (combustion chamber)



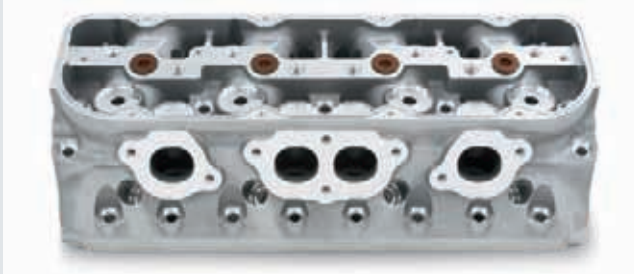
B SB2.2 Cylinder Head (exhaust)



B SB2.2 Cylinder Head (intake)



SB2.2 Cylinder Head (combustion chamber) **B**



Semi-Finished SB2.2 Design R0X Cylinder Head (exhaust) **C**



Semi-Finished SB2.2 Design R0X Cylinder Head (intake) **C**



Semi-Finished SB2.2 Design R0X Cylinder Head (combustion chamber) **C**

12480129

Semi-Finished SB2.2 Aluminum Cylinder Head (not shown)

- Aluminum NASCAR-accepted head
- Bare head, no seats or guides
- Reduced size .375" diameter guide holes
- "As-cast peanut" ports
- 48cc "as-cast" combustion chamber

C. 88958667

Semi-Finished SB2.2 Design R0X Aluminum Cylinder Head

- Fully CNC-machined aluminum race head
- Has cast ports and combustion chambers for professional finishing
- Machined for 4.500" bore center R0X cylinder block P/N 25534453
- Special spread head-bolt pattern, 3/8" fasteners, 19 holes
- Machined with additional .070" material on deck face
- Valve centerlines moved apart .100" for additional valve clearance and larger valves
- Valve angles are 11° x 4° intake, and 7° x 2° exhaust
- Exhaust port positions are slightly reoriented, but same bolt pattern as standard SB2.2
- "As-cast peanut" intake ports
- "As-cast peanut" exhaust ports
- 28cc "as-cast" combustion chambers

! CYLINDER HEADS: ADDITIONAL REQUIRED COMPONENTS

Part Number	Head Gaskets (Quantity)	Bolts (Quantity)	Spark Plug	Engine Application
93438649	10105117 (2)	10168525 (14), 10168526 (4), 10168527 (16)	N/A	12587265, 12499529, 19157995
93438648	10105117 (2)	10168525 (14), 10168526 (4), 10168527 (16)	N/A	12587265, 12499529
12558060	10105117 (2) OR 12557236 (2)	10168525 (14), 10168526 (4), 10168527 (16)	19157986	19258602, 19210009, 12499101, 12497317, 19210007, 19210008
12529093	10105117 (2) OR 12557236 (2)	10168525 (14), 10168526 (4), 10168527 (16)	19157986	19258602, 19210009, 12499101, 12497317, 19210007, 19210008
12464298	10105117 (2) OR 12557236 (2)	10168525 (14), 10168526 (4), 10168527 (16)	5614210	88958604, 1249772, 12496769
12556463	12557236 (2)	10168525 (14), 10168526 (4), 10168527 (16)	5614210	24502609, 88958603, 19201331, 19201330
25534446	10105117 (2), 10185054 (2) OR 12363763 (2)	10168525 (14), 10168526 (4), 10168527 (16)	N/A	12366573, 12496820, 12496822, 12496820



OVERHAUL GASKET KITS

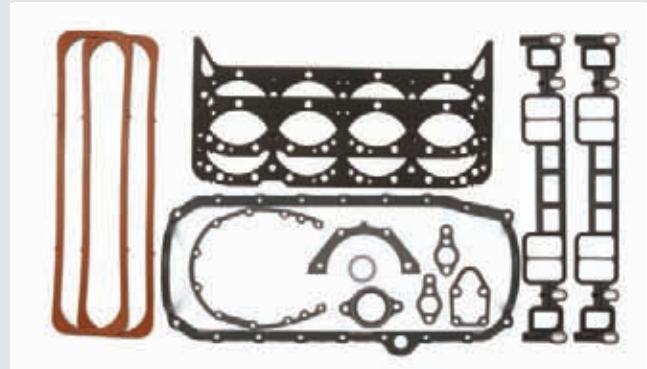
A. 19201171

Rebuild Gasket Kit

- Fits 350 HO and Circle Track engine P/N 88958602 and P/N 19258602

This kit includes the following items:

10105117	2	Head Gaskets
10108676	1	Oil Pan Gasket Set
12555771	1	Rear Main Seal Housing Gasket
89017465	1	Intake Manifold Gasket Set
10105135	1	Water Outlet Gasket
10108435	1	Front Cover Gasket
12560223	1	Fuel Pump Adapter Gasket
3754587	2	Water Pump Gaskets
10108445	1	Distributor Gasket
10046089	2	Valve Cover Gaskets
12554314	1	Crankshaft Rear Main Seal



A Rebuild Gasket Kit

B. 19201172

Rebuild Gasket Kit

- Fits Fast Burn 385, HT383 and Circle Track engine P/N 88958604

This kit includes the following items:

12557236	2	Head Gaskets
10108676	1	Oil Pan Gasket Set
12555714	1	Rear Main Seal Housing Gasket
89017465	1	Intake Manifold Gasket Set
10105135	1	Water Outlet Gasket
12560223	1	Fuel Pump Adapter Gasket
3754587	2	Water Pump Gaskets
10108445	1	Distributor Gasket
10046089	2	Valve Cover Gaskets
12554314	1	Crankshaft Rear Main Seal



B Rebuild Gasket Kit

CYLINDER HEAD GASKETS AND HEAD BOLTS

GM Performance Parts cylinder head gaskets, cylinder head bolts and cylinder head studs are the finest-quality parts available. Their superior construction ensures optimum sealing between cylinder heads and the engine block.

Gasket packages contain one gasket unless otherwise specified. Head gaskets are available in a variety of materials and thicknesses. Use the proper gasket to maintain compression ratios and minimum piston-to-cylinder-head clearances.

C. 10105117

Composition Head Gasket

- Composition head gasket with stainless steel fire ring
- For stock or mildly modified engines with **4.000"** cylinder bores
- Fits cast-iron or aluminum heads
- Used on Ram Jet 350
- 0.028"** compressed thickness

3830711

Steel Shim Head Gasket (not shown)

- For stock and mildly modified engines with **4.000"** cylinder bores
- 0.026"** compressed thickness

12557236

Composition Head Gasket (not shown)

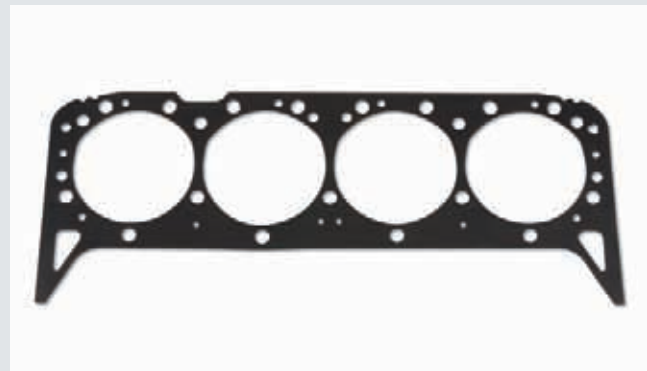
- Stainless steel fire rings
- Fits aluminum or cast-iron heads
- Used on ZZ4 and 350 HO engines
- 0.051"** compressed thickness

D. 10185054

Heavy-Duty Composition Head Gasket

- Teflon-coated
- Pre-flattened wire O-rings around each cylinder
- For competition engines with cylinder bores of **4.000" to 4.125"**
- 0.041"** compressed thickness

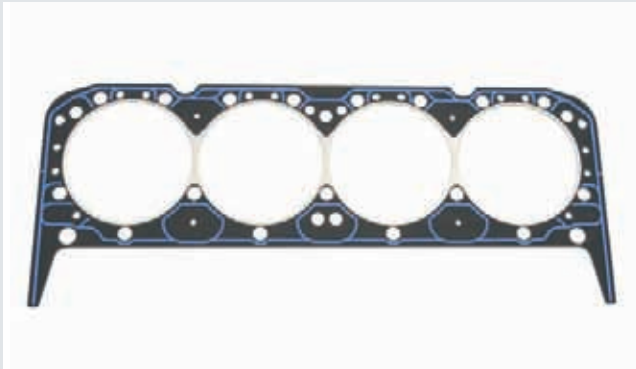
NOTE: Drill steam holes when used on 400-ci Small-Blocks. Gasket does not require re-torquing.



C Composition Head Gasket



D Heavy-Duty Composition Head Gasket



Special Competition Head Gasket **E**

E. 12363763

Special Competition Head Gasket

- Teflon-coated, heavy-duty composition gasket
- Pre-flattened steel fire rings and **4.200"** bore
- For Bowtie, 400 Small-Blocks, and aluminum blocks with cast-iron or aluminum heads
- Revised coolant hole pattern
- No steam holes for production 400 engines
- **0.038"** compressed thickness

NOTE: Gasket does not require re-torquing.

12553160

LT1 Head Gasket (not shown)

- Composition gasket for 1994-2001 iron head LT1 engines
- **0.028"** compressed thickness

10168457

LT1 Head Gasket (Aluminum Head, not shown)

- Composition gasket for 1992-2001 aluminum head LT1 engines
- **0.050"** compressed thickness

12551488

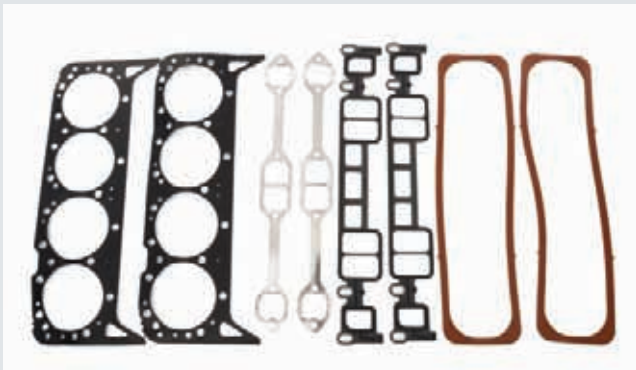
LT4 Head Gasket (not shown)

- Composition gasket for 1996 aluminum head LT4 engines
- **0.043"** compressed thickness

F. 12499223

Cylinder Head Installation Kit (5.7L L31 Engine)

- Comprehensive kit
- Includes 2 cylinder head gaskets, 2 valve cover gaskets, 2 intake manifold gasket sets and 2 exhaust manifold gaskets
- **.0280"** compressed thickness



Cylinder Head Installation Kit **F**

PART	DESCRIPTION	QTY
10105117	Cylinder Head Gaskets	2
10046089	Valve Cover Gaskets	2
12529094	Intake Manifold Gaskets	2
12550033	Exhaust Manifold Gaskets	2

HEAD BOLTS AND STUDS



Hardened Washer

14011040

Hardened Washer

- 0.450" I.D. x 0.778" O.D.
- Sold individually

10051155

Hardened Washer

- 0.450" I.D. x 0.750" O.D.
- Sold individually
- For Phase 6 and raised runner aluminum heads

14044866

Cylinder Head Stud Nut

- Magnafluxed 12-point 4037 steel 7/16"-20 nut
- Sold individually



Hardened Washer



Cylinder Head Stud Nut, 12 Point

12366569

Cylinder Head Nut Kit (not shown)

- Set of 16 magnafluxed 4037 steel 7/16"-20 12-point P/N 14044866 nuts for aftermarket head studs
- Complete for 1 cylinder head; order 2 per engine

585927

Cylinder Head Dowel Pin

- Dowel pin 5/16" diameter by 9/16" long
- For all Small-Block V-8 and 90° V-6 engines

12495499

Cylinder Head Bolt Kit

- For iron or aluminum heads
- Includes 14 of P/N, 10168525, 4 of P/N, 10168526, 16 of P/N 10168527, and thread sealant



Cylinder Head Dowel Pin



Cylinder Head Bolt Kit





SMALL-BLOCK VALVES

Part Number	Valve Size	Stem Size	Description
Intake Valves			
10241743	1.940"	11/32"	Stock replacement valve used in all of our crate engines except CT350/400, Fast Burn 385 and ZZ383/425
12555331	2.000"	11/32"	Stock replacement valve used in the 1996 LT4 engine, and in our CT350/400, Fast Burn 385 and ZZ383/425 also in LT4 and Fast Burn heads
12363757	2.000"	11/32"	Stainless-steel valve with undercut stems to improve air flow, single groove design, chrome plated stems to reduce wear, hardened tips to withstand high loads
Exhaust Valves			
12550909	1.500"	11/32"	Stock replacement valve used in all of our crate engines except CT350/400, Fast Burn 385 and ZZ383/425
12551313	1.550"	11/32"	Stock replacement valve used in the 1996 LT4 engine, and in our CT350/400, Fast Burn 385 and ZZ383/425; also in LT4 and Fast Burn heads
12363758	1.550"	11/32"	Stainless-steel valve with undercut stems to improve air flow, single groove design, chrome plated stems to reduce wear, hardened tips to withstand high loads

SMALL-BLOCK VALVE SPRINGS AND SPRING KITS

Part Number	Spring Type	Outside Diameter	Pressure at Installed Height	Solid Height	Average Rate (lbs @ in)	Retainer Part Number	Valve Seal Kit	Technical Notes
94666580	Single w/dampener	1.241"	80# @ 1.700"	1.150"	267	14003715	10132715	Production spring for 350/290 HP engines
10134358	Single w/dampener	1.273"	110# @ 1.700"	1.160"	356	14003974	10132715	Chrome silicone steel; use with aluminum heads P/N 12556463; orange color code
330585	Dual	1.379"	140# @ 1.750"	1.150"	325	330586	10132715	Use with cam P/N 3927140, and all moderate lift racing cams
10206040	Single spring	1.300"	85# @ 1.780"	1.260"	373	10168424	N/A	1992-1993 LT1 production Corvette engine
12551483	Single spring	1.320"	101# @ 1.780"	1.220"	332	10212808	N/A	1996 LT4 Corvette, ZZ4, CT350/400 and ZZ383 engines
12495494	Spring kit	1.320"	101# @ 1.780"	1.220"	332	10212808	N/A	Kit of 16 springs P/N 12551483 (see above)
10212811	Single spring	1.250"	80# @ 1.700"	1.200"	256	10241744	N/A	CT350/350, 350HO engines
19154761	Spring kit	1.250"	80# @ 1.700"	1.200"	256	10241744	N/A	Kit of 16 Springs P/N 10212811 (see above)



VALVE SPRINGS AND SHIMS

10212809

LT4 Valve Spring Shim (not shown)

- Lightweight shims as used on 1996 LT4 Corvette special LT service heads P/N 12363287, and Fast Burn heads
- Use with spring P/N 12551483

10185066

Spring Shim (not shown)

- Used on ZZ3 series 350 HO engines
- Spacer is 1.350" O.D. x 0.561" I.D. x .050" thick

3875916

Spring Shim (not shown)

- 55/64" I.D. x 1-31/64" O.D. x 0.015" thick

460483

Valve Stem Seal (not shown)

- Used on all ZZ series 350 HO engines
- Sold individually; 16 required per engine

10212810

LT4 Valve Stem Seal (not shown)

- Used on LT4 heads and GM Performance Parts head assemblies P/N 25534421, 25534431, 12363287 and 12464298.

12511890

Valve Stem Seal Kit (not shown)

- Late-model V-8 seal kit for 11/32" diameter valve stems
- Includes eight intake seals, eight exhaust seals and 16 oil stem seals

NOTE: Check for seal-to-guide interference with high-lift cams.

10241744

Valve Spring Retainer (not shown)

- Used on 350 HO, 350 Ram Jet and HT383

10045007

Valve Spring Retainer (not shown)

- For all ZZ3 series engines

NOTE: When converting ZZ3, ZZ1 or ZZ2 engines to ZZ3 series cap, valve spring shield must be removed and add cap P/N 10045007, seal P/N 460483, and spacer P/N 10185066.

19171528

LT4 Valve Spring Cap Kit (not shown)

- Kit for 5.7L LT4 engines
- Includes 16 P/N 10212808 lightweight retainers
- Use with spring kit P/N 12495494 and key kit P/N 12495503
- Used on ZZ4, Fast Burn, LT4 and iron Vortec Bowtie heads

19169661

Heavy Duty Vortec Valve Spring Retainer (not shown)

- Fits Fast Burn and Vortec Bowtie cylinder heads
- Designed for circle track racing

12495503

Valve Spring Key Kit (not shown)

- Kit includes 32 keys of P/N 24503856 for 11/32" valve stems
- Use on all Small-Block V-8 engines



Rocker Arm Kit, steel, 1.5 Ratio **A**



Roller Rocker Arm Set **B**



Roller Rocker Arm (top) with adjuster nut **B**



Rocker Arm (bottom) **B**



Adjuster Nut for Rocker Arm **C**



ARP "Kool Nut" Rocker Arm Kit **D**

ROCKER ARMS

A. 12495490

Rocker Arm Kit, Steel, 1.5 Ratio (set of 16)

- Self-aligning, high-quality rockers have a nominal 1.5:1 ratio
- Includes 16 stamped steel rockers with pivot balls and nuts
- Use P/N 10089648 for single service part; for 3/8" studs

NOTE: Not recommended for mechanical lifter camshafts.

Aluminum Roller Rocker Arm 3/8" Studs

These GM Performance Parts aluminum roller rocker arms resemble the ones used in the 1996 Corvette LT4 engine, except the trunnions have been machined to fit early-model 3/8-inch rocker studs. The arms are self-aligning with improved stiffness. They will accommodate up to 0.575" valve lift. They are available in 1.5:1 and 1.6:1 ratios.

B. 19210728

Roller Rocker Arm Set, 1.5:1 Ratio

- Set of 16, 3/8" stud 1.5:1 ratio roller rockers
- Use P/N 19210724 for single service part

19210729

Roller Rocker Arm Set, 1.6:1 Ratio (not shown)

- Set of 16, 3/8" stud 1.6:1 ratio roller rockers
- Use P/N 12367346 for single service part

NOTE: When using a high-lift camshaft, check valve spring coil bind, retainer-to-seal clearance and piston-to-valve clearance. Check for adequate pushrod clearance when using on cast-iron heads. It may be necessary to remove valve cover drippers for proper rocker arm clearance.

NOTE: P/N 19210729 cannot be used on ZZ3 engines with orange valve springs.

C. 19210730

Adjuster Nut for Roller Rocker Arm

- 3/8" adjustment nut
- Used on both aluminum rocker arm kits P/N 19210728 and P/N 19210729

D. 88961233

ARP "Kool Nut" Rocker Arm Kit

- Special rocker arm nuts are used on GM Circle Track engine P/N 19258602
- Contains 16 pieces
- Can be used with any stamped steel rocker arm



VALVE COVERS

People can't see the beautiful porting artistry inside your GM Performance Parts aluminum cylinder heads, but they can, and do, see the valve covers. To make sure your GM engine looks as great as it runs, GM Performance Parts offers a wide selection of precision-engineered, branded valve covers. The valve covers are either aluminum or stamped steel. They're designed to seal tightly and minimize the chance of oil leakage. Taller competition valve covers are made to easily clear high performance valvetrain components.

NOTE: Valve covers are sold in pairs unless otherwise specified. Valve covers cannot be used with 15° or 18° heads unless otherwise stated.

A. 10185064

Tall Aluminum Valve Covers

- Competition racing valve cover displays the Chevrolet name and Bowtie logo
- Natural cast finish
- No holes for PCV or oil fill, but has bosses for drilling them
- Designed for pre-1986 engines with perimeter hold downs
- Can be used with 15° and 18° heads
- Use P/N 10185052 for single service part

B. 12480127

Short Aluminum Valve Covers

- Cast-aluminum Chevy Bowtie-design valve cover is similar to P/N 10185064 except it is a short style with a PVC hole in both covers (grommets included)
- Natural cast finish
- Designed for pre-1986 engines with perimeter hold downs
- Covers have oil baffle
- Not to be used with the 350/290 crate engine

NOTE: For use with 1.5 ratio stamped rocker arms only.

C. 24502466

Tall Valve Covers, No Logo

- Create your own custom valve covers!
- Cast-aluminum valve cover is similar to P/N 10185064, but has no logo
- Cast with extra material to permit milling a custom logo

NOTE: Sold as single piece. Order 2 per engine.

D. 12341670

Chrome Short Valve Covers

- Short chrome valve covers, with baffle
- For use on pre-1986 engines with perimeter hold downs
- Chevrolet and the Bowtie logo are embossed on top

NOTE: For use with 1.5 ratio stamped rocker arms only.

E. 12497978

Polished Aluminum Valve Covers, Center Bolt Design

- Die-cast aluminum valve covers
- Polished to a bright shine
- Approximately 1/4" taller than production covers
- For use on 1986-and-newer engines with center hold-downs
- Kit includes bolts, washers and seals

NOTE: Use valve cover gasket P/N 10046089 and replacement bolt and seal kit P/N 12497980.



A Tall Aluminum Valve Covers



B Short Aluminum Valve Covers



C Tall Valve Covers, No Logo



D Chrome Short Valve Covers



E Polished Aluminum Valve Covers, Center Bolt Design



Aluminum Black Crinkle Valve Covers, Center Bolt Design **F**



Chrome-Finish Aluminum Valve Covers, Center Bolt Design **G**



CircleTrack Valve Covers, Center Bolt Design **H**



Original Corvette V-8 Valve Covers **I**



Mid-Year Corvette Valve Covers **J**

F. 12497979 ⓘ Ⓢ

Aluminum Black Crinkle Valve Covers, Center Bolt Design

- Die-cast with black crinkle finish
- Approximately 1/4" taller than production covers
- For use on 1986-and-newer engines with center hold-downs
- Kit includes bolts, washers and seals

NOTE: Use valve cover gasket P/N 10046089 and replacement bolt and seal kit P/N 12497980.

G. 12497985 Ⓢ

Chrome-Finish Aluminum Valve Covers, Center Bolt Design

- Die-cast with chrome finish
- Approximately 1/4" taller than production covers
- For use on 1986-and-newer engines with center hold-downs
- Kit includes bolts, washers and seals

NOTE: Use valve cover gasket P/N 10046089 and replacement bolt and seal kit P/N 12497980.

H. 25534359 Ⓢ

CircleTrack Valve Covers, Center Bolt Design

- Sheet metal valve cover kit designed for Gen I design circle track engines equipped with center hold-down cylinder heads
- Covers equipped with 2 breather pipes on 1 cover and no pipes on the other

NOTE: Use breather kit P/N 25534355 (2 come in kit).

I. 3726086

Original Corvette V-8 Valve Covers

- 1956-1959 V-8
- Off-set bolt holes will not fit newer V-8 heads

NOTE: Sold as single piece. Order 2 per engine.

J. Mid-Year Corvette Valve Covers

- These mid-year, finned Corvette valve covers are polished to a high luster

474207

- 1970-1977
- Has breather hole with Corvette "crossed flag" emblem

474208

- 1970-1977
- Has breather hole and an oil-filler cap provision
- Cap not included

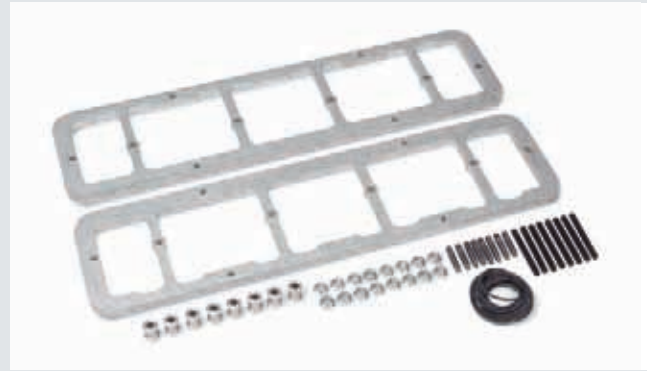
ADAPTERS, HARDWARE AND BREATHERS

A. 24502540

Adapter Kit, Center Bolt Design to Flange Mount

- Allows use of old-style flange mount (perimeter hold-down) valve covers on 1986-and-newer center hold down-style heads
- CNC-machined from billet aluminum stock
- Kit includes two 3/8" thick adapters, O-rings and fasteners

NOTE: Use replacement O-ring gasket P/N 12480023.



A Adapter Kit, Center Bolt Design to Flange Mount

B. 12497980

Chrome Bolt Kit, Center Bolt Design

- Service replacement parts for 1986-and-newer center hold-down design, die-cast aluminum valve covers in chrome, crinkle, and polished finishes
- Will not fit production valve covers

12356818

Chrome Hold-Down Bolt (not shown)

- Chrome valve cover hold-down bolt
- Used on all 1986-and-newer engines with center hold-down design stamped valve covers

NOTE: Package contains 1 bolt. Order 4 per valve cover.



B Chrome Bolt Kit, Center Bolt Design

12338092

Black Hold-Down Bolt (not shown)

- Black valve cover hold-down bolt
- Used on all 1986-and-newer engines with center hold-down design stamped valve covers

NOTE: Package contains 1 bolt. Order 4 per valve cover.

C. 88962074

Oil Baffle Tube

- Pushes easily into most valve covers that have an oil baffle
- Requires breather P/N 25534355; used on ZZ572 engines



C Oil Baffle Tube

VALVE COVERS: ADDITIONAL REQUIRED COMPONENTS

Part Number	Gaskets (Qty)	Bolts (Qty)	Grommets (Qty)	Oil Fillers (Qty)	Engine Application
25534359	10046089 (2)	N/A	3989350 (1)	93439687 (1)	19258602, 88958603, 88958604
12497979	10046089 (2)	12497980 (8)	12341988 (8)	N/A	Small-Block
12497985	10046089 (2)	12497980 (8)	12341988 (8)	N/A	Small-Block
12497978	10046089 (2)	12497980 (8)	12341988 (8)	N/A	Small-Block



CircleTrack Breather **D**

D. 25534355

Circle Track Breather

- Special breathers are for circle track valve covers used on circle track and ZZ572 engines
- Chrome breathers are 1-3/8", hose-clamp-style with the Bowtie logo on top
- Installs on the left-side of each valve cover
- Kit includes two breathers

E. 12341993

Push-In Oil Filler Cap

- For valve covers with 1.22" hole



Push-In Oil Filler Cap **E**



Hold-Down Clamps **F**

F. 12341986

Hold-Down Clamps

- Clamps to minimize distortion of valve cover flanges on 1955-1986 Chevrolet Small-Block V-8 and 90° V-6 engines
- 4 clamps per package; order 2 per engine

G. 14082321

Spring Bar Retainer

- Special steel retainers prevent oil leaks
- Use under the valve cover bolts
- Distribute clamping force over a large area and prevent deformation of the flanges
- Narrow retainers are engineered to fit pre-1986 engines with perimeter-style hold downs

NOTE: Package contains 1 retainer. Order 4 per valve cover.



Spring Bar Retainer **G**

H. 14044820

Spring Bar Retainer, Chrome-Plated

- Similar to retainer P/N 14082321 described above
- Chrome-plated to match chrome valve covers

NOTE: Package contains 1 retainer. Order 4 per valve cover.



Spring Bar Retainer, Chrome-Plated **H**

3933964

Valve Cover Gasket (not shown)

- Cork-type gasket
- Fits all valve covers with perimeter hold-down bolts
- 1 gasket per package

10046089

Valve Cover Gasket (not shown)

- For '86 and newer center hold down design valve covers

10185043

Valve Cover Gasket, Splayed Valve Head (not shown)

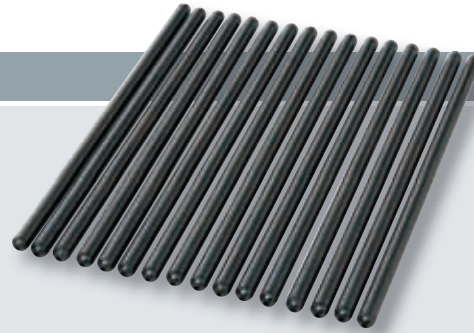
- Used with on splayed-valve V-8 cylinder head P/N 24502517
- Kit includes 2 gaskets



SMALL-BLOCK PUSHRODS

Pushrods are that critical connection between the camshaft and the rocker arms. These seemingly innocuous parts play a very important role in the combustion process. That's why GM Performance Parts pushrods are designed for heavy-duty street and competition applications. GM Performance Parts pushrods are case-hardened for use with pushrod guideplates.

Pushrods are available in standard and 0.100-inch extended lengths. The longer pushrods can be used to restore correct valvetrain geometry when using a high-lift camshaft with a small base circle. They are also recommended when longer-than-stock valves are installed.



Heavy-Duty Pushrod Kit (0.100" longer than stock)

Part Number	Material	Diameter	Length	Usage	Description
12495491	1010 steel	5/16"	7.724"	Flat tappet	(16) Heavy-duty heat-treated .075" wall, hardened tip inserts; standard length. Use 14044874 for single piece
14044874	1010 steel	5/16"	7.724"	Flat tappet	(1) Heavy-duty heat-treated .075" wall, hardened tip inserts; standard length.
12371057	1010 steel	5/16"	7.824"	Flat tappet	(16) Heavy-duty heat-treated .075" wall, hardened tip inserts. +.100 long; use 366277 for single piece
366277	1010 steel	5/16"	7.824"	Flat tappet	(1) Heavy-duty heat-treated .075" wall, hardened tip inserts. +.100 long
10046173	1010 steel	5/16"	7.122"	Hyd. roller	(1) Heavy-duty heat-treated .060" wall, standard length; for use in early ZZ-series engines with guideplates
12371041	1010 steel	5/16"	7.122"	Hyd. roller	(16) Heavy-duty .060" wall, standard length; for use in 2nd design ZZ-series engines without guideplates Use P/N 10241740 for single piece
10241740	1010 steel	5/16"	7.122"	Hyd. roller	(1) Heavy-duty .060" wall, standard length; for use in 2nd design ZZ-series engines without guideplates

SMALL-BLOCK GUIDEPLATES

Part Number	Description	Technical Notes
3973418	Pushrod guideplate (cast-iron head)	For use with production and Bowtie cast-iron cylinder heads with screw-in studs. Can also be used with aluminum Bowtie V-6 head. Should not be used with self-aligning rockers. Pushrod slots are 0.325". For 90° V-6, use on cylinders 1, 2, 5 and 6; guideplate must be ground to clear valve cover hold-down bolts. Four required per head.
14011051	Pushrod guideplate (aluminum Bowtie head)	Hardened steel guideplate has the correct pushrod spacing for aluminum Bowtie heads. Should not be used with self-aligning rockers. Pushrod slots are 0.365". Four required per head.

ROCKER ARM STUDS

3921912

Screw-In Rocker Stud (7/16"; Big-Block style) (not shown)

- Beefy 7/16" Big-Block V-8 rocker studs
- Improve valvetrain stability of any Small-Block V-8 or 90° V-6 racing engine by minimizing rocker stud flex
- Fits any Small-Block V-8 or 90° V-6 cylinder head machined for screw-in studs
- Requires rocker arm for 7/16" stud



12371058

Screw-In Rocker Stud Kit (LT1, LT4 style)

- 3/8" studs are used on all late-model LT1, LT4
- Kit includes 16 pieces; for single stud usage, use P/N 12552126
- Lower thread section is 7/16-14

VALVE LIFTERS



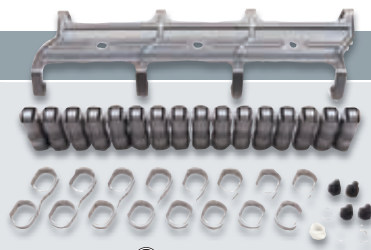
Valve Lifter Guide, "Quick Cam"

88958652

Valve Lifter Guide, "Quick Cam"

- For use on Gen I GM Small-Blocks (block must be drilled and tapped)
- For use with hydraulic roller lifters only
- Makes it possible to remove the camshaft without removing the intake and lifters
- Enough friction in the guide to hold the lifters in place if the rocker arms are backed off and the camshaft is rotated two full revolutions to push up the lifters

NOTE: Package services one lifter bank.



12371042

Hydraulic Roller Lifter Kit

- Designed for 1986-and-later engines
- Second-design lifters are used in late-model 350 HO engines and use a higher checkball spring preload
- Includes 16 lifters of P/N 17120735, 8 valve lifter guides, 1 valve lifter guide retainer, 4 retainer bolts, and 4 retainer washers
- This lifter kit plus pushrod kit P/N 12371041 and a roller-tappet design camshaft converts your engine to a roller-lifter engine
- For single lifter usage, use P/N 17120735



Hydraulic Roller Lifter



Flat Tappet Lifter

12371044

Hydraulic Lifter Kit (set of 16)

- Used on 1986-and-older Gen I- and Gen II-style engines
- Kit includes 16 hydraulic flat tappet lifters of P/N 5232720, and is designed for use with standard-length pushrod kit P/N 12495491 or 0.100" longer kit P/N 12371057
- Use P/N 5232720 for single lifter pieces



SMALL-BLOCK CAMSHAFTS AND COMPONENTS

A great deal of exacting engineering, extensive development/testing, and precision manufacturing practices go into every GM Performance Parts camshaft. In many ways, the camshaft can be considered the heart of a high-performance engine. This vital function is why GM Performance Parts puts so much effort into making sure its camshafts deliver maximum power and drivability.

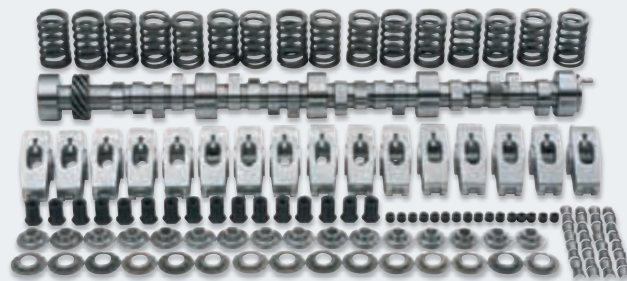


NOTE: IMPORTANT! Distributor with melonized steel gear **MUST** be used with steel camshafts or engine damage will occur.

Part Number	Description	Duration @ .050" Lift (deg)	Maximum Lift (in) w/1.5 rocker	Lobe Centerline (deg)	Technical Notes
3896962	Hydraulic flat tappet	I: 222 E: 222	I: .450 E: .460	114	Used in 350/290 HP crate engine
24502476	Hydraulic flat tappet	I: 212 E: 222	I: .435 E: .460	112.5	Used in 350 HO and CT602 engines
14097395	Hydraulic roller design	I: 196 E: 206	I: .431 E: .451	109	For the HT383 truck engine with 1.5 rockers
10185071	Hydraulic roller tappet	I: 208 E: 221	I: .474 E: .510	112	For ZZ3, 350 HO, ZZ4, Fast Burn 385 engines; use with spring P/N 10134358 or 12551483
24502586 (1.5 rocker)	Hydraulic roller (LT4 hot cam)	I: 218 E: 228	1.5 rocker I: .492 E: .492	112	Service only; for all V-8 engines with roller cams. (See note below chart)
24502586 (1.6 rocker)	Hydraulic roller (LT4 hot cam)	I: 218 E: 228	1.6 rocker I: .525 E: .525	112	Service only; for all V-8 engines with roller cams. (See note below chart)
12480002 (1.6 rocker)	Hydraulic roller (LT4 hot cam kit)	I: 218 E: 228	1.6 rocker I: .525 E: .525	112	Same as P/N 24502586 except this is a kit that includes aluminum rockers, valve springs, and retainers
12370846	Hydraulic roller design	I: 222 E: 230	I: .509 E: .528	112	Off-highway use only; contains eccentric for mechanical fuel pump
12370847	Hydraulic roller design	I: 234 E: 242	I: .539 E: .558	112	Off-highway use only; contains eccentric for mechanical fuel pump

The LT4 camshaft P/N 24502586 was designed to be used in many different engines. The following change may be necessary for correct engine assembly: For LT1 and L98 engines (pre-1996) the dowel pin in the end of the camshaft must be pushed in so extension from end of cam is .30+/- .01". For 1996 LT1 and LT4 engines, the dowel pin is in the correct position extending .620" from the end of the camshaft. This cam has a fuel pump lobe.

Camshaft Kits, Retainers and Rear Cover Kits



350 Hot Cam Kit

12480002

350 Hot Cam Kit

- Off-highway kit converts production LT1 engine for showroom stock racing
- Improves Small-Block originally equipped with roller tappet camshaft
- Significant horsepower gains
- For roller blocks only
- Includes: 1 P/N 24502586 Camshaft, 16 P/N 19210729 Roller Rocker Arms Kit, 16 P/N 12551483 Valve Springs, P/N 19169661 16 Valve Caps, 16 P/N 10212808, 16 P/N 19210729 Valve Keys, 16 P/N 10212809 Valve Spring Shims, lifters are not included.



Camshaft Retainer



Camshaft Rear Cover Kit

12499229

5.7L Vortec Camshaft Install Kit (not shown)

- Convenient, inclusive kit
- Includes 2 water pump gaskets, intake manifold gasket set, 2 valve cover gaskets, a distributor gasket and a front crankshaft seal assembly

10088128

Camshaft Retainer

- First design with 3.620" bolt center as used on ZZZ, ZZ1 and ZZ2 engines

10168501

Camshaft Retainer (not shown)

- Second design with 3.294" bolt center as used on ZZ3 and ZZ4 engines

24502459

Camshaft Rear Cover Kit

- Cover and O-ring gasket for sealing rear camshaft hole on all "CNC" aluminum and iron blocks
- Includes bolts



CONNECTING RODS AND COMPONENTS

A. 12495071

Connecting Rod Kit

- High-quality, 5.700" powdered metal (PM) connecting rods
- For competition or street applications below 500 horsepower
- Replaces the old "pink rods" and are the same rods used in LT1 and LT4 Corvette engines
- Includes 8 P/N 10108688 rods, available individually

19169670

383 Connecting Rod Kit, 1st Design (not shown)

- Set of 8 steel 5.700" PM connecting rods used in 383-cubic inch engines
- Notched to clear camshaft in most stroked Small-Block applications
- **First design, without chamfer**
- Standard .927" pin and 2.100" rod journal
- Cap held on by stud and nut, not standard-type bolt
- Good to 550 horsepower
- Use P/N 12497624 for single-service part

19169670

383 Connecting Rod Kit, 2nd Design (not shown)

- Set of 8 steel 5.700" PM connecting rods used in 383-cubic-inch engines
- Notched to clear camshaft in most stroked Small-Block applications
- **Second design, with chamfer**
- Standard .927" pin and 2.100" rod journal
- Cap held on by stud and nut, not standard type bolt
- Good to 550 horsepower
- Use P/N 17803091 for single service part

B. 12499108

Connecting Rod Bearing Kit, 383 Engine (standard)

- 8 heavy-duty bearings
- First design, with chamfer
- For all 383-cubic-inch engines

17800761

Connecting Rod Bearing Kit, 383 Engine (standard, not shown)

- 8 heavy-duty bearings
- Second design, without chamfer
- For all 383-cubic-inch engines

12499137

Connecting Rod Bearing Kit, 383 Engine (+0.010) (not shown)

- 8 bearings
- For +0.010-undersize 383-cubic-inch engines

C. 12491166

Connecting Rod Stud and Nut Kit, 383 Engine

- Studs and 12-point nuts (16 each) for all 383-cubic-inch engines
- Use with connecting rod P/N 12497624



A Connecting Rod Kit



B Connecting Rod Bearing Kit, 383 Engine



C Connecting Rod Stud and Nut Kit, 383 Engine



PISTONS AND PISTON RINGS

Compressing the air/fuel mixture and dealing with the explosive forces inside an engine's cylinders isn't a job for weak parts. That's why GM Performance Parts pistons are premium quality and factory-tested to withstand the rigors of high-performance street and competition engines. GM Performance Parts pistons are available in a variety of compression ratios and bore sizes. They're sold individually, unless otherwise specified, and wrist pins are included.



Pistons

Part Number	Engine Size	Compression Ratio	Head Chamber Volume	Size	Pin Type	Technical Notes
93422884	350	8.5:1	76cc	Standard	Pressed	350/290 HP
10159436	350	10:1	58cc	Standard	Pressed	5.7L HO, ZZ4 and LT1; high silicon aluminum
12514101	350	9.1:1	64cc	Standard	Pressed	350-cid 300 hp and 330 hp service engine with "SP" ID
88962542	383	9.1:1 9.7:1	64cc* 62cc*	Standard	Pressed	383 engine, first or second design
88962748	383	9.1:1 9.7:1	64cc* 62cc*	+0.005	Pressed	383 engine, second design
88962749	383	9.1:1 9.7:1	64cc* 62cc*	+0.030	Pressed	383 engine, first or second design
12499103	383	9.1:1 9.7:1	64cc* 62cc*	+0.005	Pressed	Kit containing 8 of P/N 88962748 (383 engine, second design)
12499104	383	9.1:1 9.7:1	64cc* 62cc*	+0.030	Pressed	Kit containing 8 of P/N 88962749 (383 engine, second design)

*Compression ratio based on .028" thick head gasket.

Piston Rings

Part Number	Bore Size	Oversize	Ring Thicknesses	Description
12528817	4.000"	Standard	—	Low tension rings for ZZ4, LT1, and LT4 engines
12528818	4.000"	+ .005"	—	Low tension rings for ZZ4, LT1, and LT4 engines
12499135	4.000"	Standard	—	Premium quality standard-size rings for 1st design 383 engines
12499136	4.000"	+ .030"	—	Premium quality rings for 383 engines
12499107	4.000"	+ .005"	—	Set of 8 ring packs of P/N 12499135
12499231	4.000"	Standard	—	Set of 8 ring packs of P/N 12528817



BUILDER'S TIP

Cast vs. Forged – Picking the Right Pistons

It's the classic engine builder's dilemma: cast or forged pistons? Conventional wisdom holds that forged aluminum pistons are hands-down the stronger option. And while it's true they are generally stronger than hypereutectic cast aluminum pistons, it's not to say cast pistons are weak. In fact, modern hypereutectic pistons are made with higher silicon content and offer

exceptional strength, as well as thermal properties that generally make them quieter. When determining which piston material to use on your project, a good rule of thumb is this: go forged if the engine is targeted at more than 500 horsepower and/or uses a power-adder, such as a supercharger, turbo or nitrous. Otherwise, save a little money and use the sturdy, modern hypereutectic pistons.



CRANKSHAFTS

A crankshaft is that massive piece of convoluted steel that holds the whole engine together. An engine is essentially a pump, and without a strong crankshaft, the pump won't work. GM Performance Parts puts the same top-quality engineering and manufacturing processes into its crankshafts as it does with all its parts. These crankshafts are the same ones used in GM Performance Parts crate engines. The crankshafts are available in cast-iron and forged steel. Forged crankshafts should be used for higher-horsepower applications.

14088526

Crankshaft, Cast-iron (not shown)

- Nodular cast-iron with 3.480" stroke and 2.100" diameter rod journals
- 1-piece rear main seal crankshaft for 300- and 330-horsepower engines

NOTE: This crank does not have a pilot bearing.

12556307

Crankshaft, Forged Steel (used in late-style ZZ4 engine; not shown)

- Forged 1053 steel crankshaft used in post-November 1998 ZZ4 engines
- Replaces all cast or steel ZZ4 crankshafts

NOTE: Must be used with connecting rod P/N 10108688 and piston P/N 10159436.

A. 12489436

Crankshaft, 383-Cubic-Inch Forged Steel

- Forged 4340 steel crankshaft used to create 383-cubic-inch engines with 3.800" stroke
- Rod journals are 2.100"
- Mains are standard 350 size

NOTE: Should be used with connecting rods P/N 19169670, bearing kit P/N 17800761, standard pistons P/N 88962748 or 0.030" oversize pistons P/N 88962749, balancer P/N 12498008, and 1986-and-later one-piece crank seal design flywheel or flexplate.

B. 10185100

Crankshaft Raw Forging, 350-Cubic-Inch Style

- Raw forging from S38 micro alloy steel
- Can be machined for a 3.460" to 3.500" stroke
- 2-piece rear seal design

14061685

Roller Pilot Bearing (not shown)

- Used in high-performance manual transmission applications



A Crankshaft, 383-cubic-inch Forged Steel



B Crankshaft Raw Forging, 350-cubic-inch Style



BUILDER'S TIP

Small-Block Oil Pump Overkill

Over the years, many engine builders have employed Big-Block oil pumps on high-performance Small-Blocks. Unless you're building a dedicated racing engine, that's not necessarily a great idea. There are advantages to the Big-Block pump, but with its 3/4-inch pickup tube, it's very easy to suck all the oil out of a standard-

capacity Small-Block oil pan, starving the engine at higher rpm. For most street/strip combinations, a Small-Block pump with the standard 5/8-inch pickup tube is adequate. If you're going to try the Big-Block pump, make sure to use a large-capacity pan and don't let the oil level get low!



BALANCERS AND PULLEYS

Balancers are relatively small parts that play a big role in how smooth an engine runs. Balancers are also known as torsional dampeners or harmonic balancers, which is indicative of how they help control unwanted crankshaft vibrations. By controlling vibrations, GM Performance Parts balancers help engines run smoothly, which also extends engine life.



383 Crate Engine Balancer with 1-Piece Crank Seal (P/N 12498008)



Racing Balancer (P/N 24502534 and 24502535)

Small-Block Balancers

Part Number	Engine Application	Outside Diameter	Technical Notes
12551537	1969-up 305 and 350; 90° V-6 competition	6.750"	Smaller size for limited clearance. Timing mark is 10 degrees before keyway centerline. Use with timing pointer P/N 3991435
88960604	1970-74 350; Z24 crate engine	8"	Cast-iron. Inertia ring is 1-11/16" wide. Use with timing pointer P/N 3991436. For externally balanced engines.
12498008	383 crate engine with 1-piece crank seal	8"	Use with 383 engine components and crankshaft P/N 12489436. For externally balanced engines. Counter weight can be removed for neutral balance
24502534	All racing Accepts standard pulleys	7.074"	NASCAR-approved and specially tuned up to 9000 rpm. Uses standard crank hub diameter
24502535	All racing	7.074"	NASCAR-approved and specially tuned. Use with large-diameter 1.598" crankshaft hub

Pulleys and Bolts

3858533

Crankshaft Pulley, 6-5/8" (not shown)

- Two-groove, high-rpm, 6-5/8" pulley
- For engines with short water pump

NOTE: Can be used with a water pump pulley and belt P/N 9433722 without an idler pulley or alternator.

3815933

Crankshaft Bolt (not shown)

- Positive retention 7/16"-20 x 2-1/4" bolt for engines with tapped crank snouts
- Use with washer P/N 14001829

FLYWHEELS AND FLEXPLATES

At the opposite end of the crankshaft from the balancer are flywheels and flexplates, which connect the engine to either manual (flywheels) or automatic (flexplates) transmissions. GM Performance Parts offers both internally and externally balanced flywheels and flexplates. It is critical you use the correct design for your engine application.

NOTE: IMPORTANT! All Chevy Small-Block and Big-Block engines with one-piece crankshaft seal require an externally balanced flywheel or flexplate.



Lightweight Flywheel, 1986-up



14" Flexplate



Standard-Weight Flywheel, 1986-up



12-3/4" Flexplate

Small-Block Flywheels

Part Number	Year of Engine	Outside Diameter	Crank Flange Bolt Pattern	Clutch Diameter	Starter Ring Gear Teeth	Technical Notes
14085720	1955-1985	12.750"	3.580"	10.400"	153	For 2-piece crank seal. Lightweight nodular iron; weighs approximately 15 pounds
3991469	1955-1985	14"	3.580"	10.400"; 11.000"	168	For 2-piece crank seal
14088646	1986-up	12.750"	3.000"	10.000"	153	For 1-piece crank seal. Lightweight nodular iron; weighs approximately 17 pounds
14088650	1986-up	12.750"	3.000"	10.400"	153	Standard-weight flywheel for 1-piece crank seal
14088648	1986-up	14"	3.000"	11.000"; 11.850"	168	For 1-piece crank seal

Small-Block Flexplates

471598	1970-1985	14"	3.580"	10.750"; 11.500"	168	For internally balanced engine with 2-piece crank seal
471529	1969-1985	12.750"	3.580"	9.750"; 10.750"	153	For internally balanced engine with 2-piece crank seal
14088765	1986-up	12.750"	3.000"	10.750"	153	For externally balanced 1-piece crank seal
12554824	1986-up	14"	3.000"	11.500"	168	Heavy-duty flexplate with increased thickness for 1-piece crank seal, externally balanced
14088761	1986-up	14"	3.000"	10.750"; 11.500"	168	For 1-piece crank seal, externally balanced

Bolts

12337973

Flywheel Bolt (not shown)

- Fits all Chevy Small-Block V-8, Big-Block V-8 and 90° V-6 engines
- Sold individually; 6 required per engine

3727207

Flexplate Bolt (not shown)

- Fits all Chevy Small-Block V-8, Big-Block V-8 and 90° V-6 engines
- Sold individually; 6 required per engine



TIMING CHAIN AND SPROCKETS

The timing chain connects the crankshaft to the camshaft and ensures those two key components work in a synchronized manner. GM Performance Parts' strong, accurate timing chains and sprockets provide top performance and dependable service.

A. 12371043

Single Roller Timing Chain Kit

- Performance kit for all 1987-and-newer engines with roller lifter camshaft, except LT1, LT4 and LS-Series
- Includes chain P/N 14088783, crank sprocket P/N 14088784, cam sprocket P/N 12552129, retainers and bolts

NOTE: Will not work with flat tappet camshafts or LT1 and LT4 engines.

B. 12370835

Extreme-Duty Timing Chain Kit, LT1 and LT4 Engines

- Performance upgrade, extreme-duty timing chain kit for 1995-and-newer LT1 and LT4 engines
- Includes roller timing chain P/N 14088783, crankshaft sprocket P/N 14088784, camshaft sprocket P/N 10214880 and water pump gear P/N 12551728
- Use with pin drive camshaft only

NOTE: To convert 1993 and 1994 engines, use camshaft P/N 12551705, distributor P/N 1104032, timing cover P/N 12552426, vacuum harness P/N 12555323, and vacuum fitting P/N 14082470.

14088783

Roller Timing Chain (not shown)

- Heavy-duty, single-roller chain for ZZ-design 350 HO engine
- Use with crank sprocket P/N 14088784 and cam sprocket P/N 12552129

14088784

Crankshaft Sprocket (not shown)

- Single-roller-type for ZZ-design 350 HO engine

12552129

Camshaft Sprocket (not shown)

- Single-roller-type for ZZ-design 350 HO engine

C. 9424877

Camshaft Bolt

- 5/16"-18 x 0.750" bolt

12554553

Camshaft Dowel Pin (not shown)

12555887

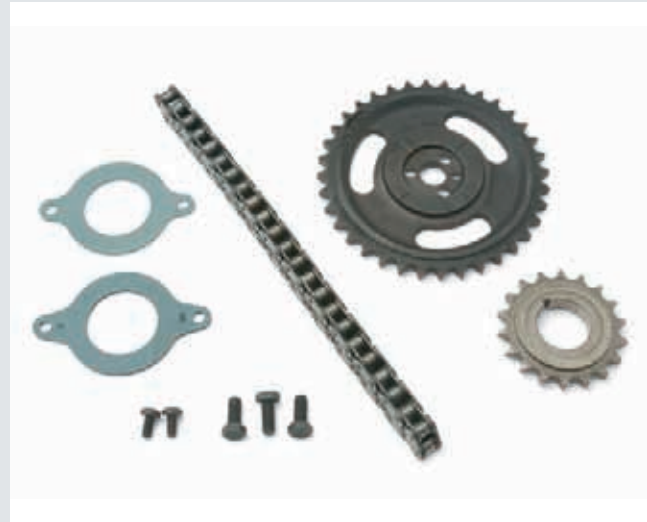
LT4 Timing Chain (not shown)

- Quiet roller design for all LT4 engines
- Use with crank sprocket P/N 12555886 and cam sprocket P/N 12555885

D. 12367600

LT1/LT4 Front Cover Plug

- Covers the hole on the front cover of a 1996 LT4 engine when original distributor is removed and replaced with rear-mounted distributor
- Must be used with 1995 to 1997 timing covers. Will not fit the earlier covers that had non-vented opti-spark units.



A Single Roller Timing Chain Kit



B Extreme Duty Timing Chain Kit, LT1 and LT4 Engines



C Camshaft Bolt



D LT4 Front Cover Plug

Water Pump, Long-Style **E**Aluminum Water Pump, Short-Style **F**Aluminum Water Pump, Long-Style Serpentine **G**Water Pump Pulley **H**Water Pump Pulley Reinforcement **I**

WATER PUMPS, PULLEYS AND COMPONENTS

Water Pumps and Components

E. 88894341

Water Pump, Long-Style

- Late-style cast-iron pump with long mounting legs, reinforced snout and 3/4" diameter shaft
- End of shaft is reduced to 5/8" diameter
- Use with 350 HO, 383 and ZZ4 engines

F. 19168604

Aluminum Water Pump, Short-Style

- Saves weight over comparable iron pump
- Casting has short-style mounting legs used on pre-1982 Corvettes
- Pump has reinforced 3/4" diameter snout and a large hub with dual bolt patterns

NOTE: Pump housing has a boss which can be drilled and tapped for a cam stop. Can be used with the ZZ4 engine with composite front timing cover by exchanging the bolts that hold the rear sheet metal plate to the pump with pan-head bolts P/N 14010976 or equivalent aftermarket bolts.

NOTE: Cam stop boss may interfere on engines with 8" dampener. Some clearancing may be required.

G. 12497986

Aluminum Water Pump, Long-Style Serpentine

- Reverse-rotation pump
- Use with late-style engines with a serpentine belt system, including 90° V-6

NOTE: Will not fit LT1 or LT4 engines.

25534390

R0X Water Pump Housing with Cassette (not shown)

- Housing bolts directly to the block
- Block openings are spread to 9.400"
- Standard front inlet and outlet openings
- Includes Water Pump Cassette P/N 25534391

25534391

R0X Water Pump Cassette (not shown)

- Designed for efficient operation
- Easy serviceability
- Refined impeller design and tolerances to improve flow

Water Pump Pulleys

H. 3942992

Water Pump Pulley

- Fits 1971-and-newer and short-leg water pumps with large hubs

NOTE: Must be modified to fit water pump with 3/4" shaft.

I. 3720616

Water Pump Pulley Reinforcement

- Increases stiffness of water pump pulley
- Use with pulley P/N 2942992



ACCESSORY DRIVE KITS

A. 12497698

Serpentine Accessory Drive System (with Air Conditioning)

- Fits Gen I-style engines
- Deluxe kit includes all the components and hardware necessary to install on an engine with air conditioning, including water pump, alternator, power steering pump and idler bracket; belt included

The system includes:

10055800	Secondary Air Injector Pump Bracket
1134344	Air Compressor Assembly (CR4)
10129569	Idler Belt Pulley Bracket
88894005	Water Pump Kit
10055880	Water Pump Pulley
10055879	Crankshaft Pulley
10463172	Alternator Assembly – 105 AMP (reman)
12117361	Alternator Connector (with lead)
10055798	Drive Belt Tensioner Assembly
10085752	Belt (fan, water pump, A/C, power steering pump, and alternator)
10105212	Alternator and Power Steering Bracket
88985115	Power Steering Pump (reman)
14102096	Power Steering Pulley

12497697

Serpentine Accessory Drive System (without Air Conditioning, not shown)

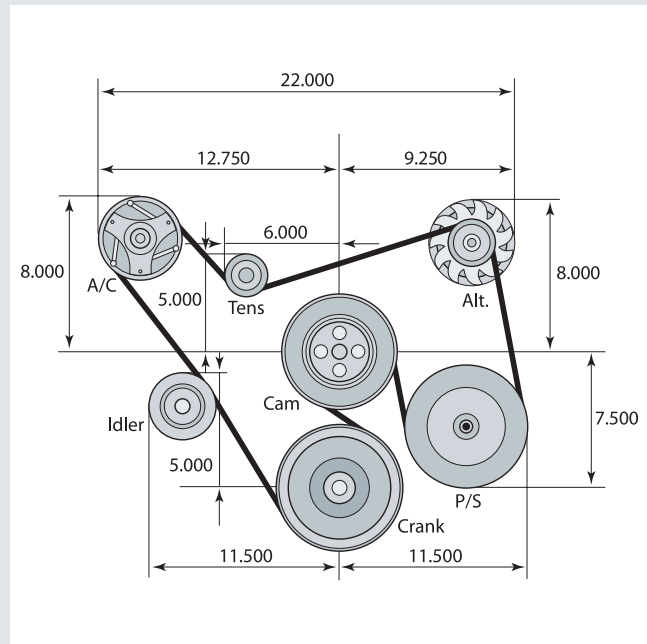
- Fits Gen I-style engines
- Deluxe kit includes all the components and hardware necessary to install on an engine without air conditioning, including water pump, alternator, power steering pump and idler bracket; belt included

The system includes:

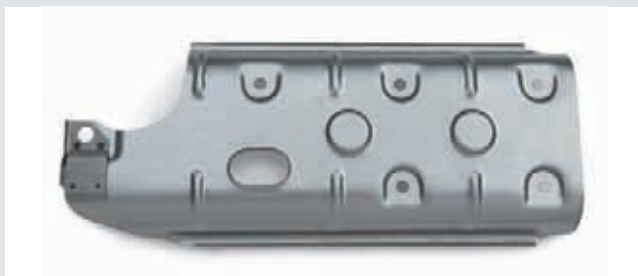
10055800	Secondary Air Injector Pump Bracket
10129569	Idler Belt Pulley Bracket
88894005	Water Pump Kit
10055880	Water Pump Pulley
10055879	Crankshaft Pulley
10463172	Alternator Assembly (reman)
12117361	Alternator Connector (with lead)
10055798	Drive Belt Tensioner Assembly
10085752	Belt (fan, water pump, A/C, power steering pump, and alternator)
10105212	Alternator and Power Steering Bracket
88985115	Power Steering Pump (reman)
14102096	Power Steering Pump Pulley



A Serpentine Accessory Drive System (with air conditioning)



A Serpentine Accessory Drive System (with air conditioning)

Oil Pan, 1986-1992 F-car and ZZ4 **B**Oil Pan, Z28-Style **C**CircleTrack "Late Model" Oil Pan **D**Windage Tray **E**Windage Tray **F**

OIL PANS, GASKETS AND ACCESSORIES

Oil is your engine's lifeblood and a high-quality GM Performance Parts oil pan keeps it where it belongs. Our properly designed and manufactured oil pans fit right and, along with matching gaskets, prevent leaks for years of trouble-free service. GM Performance Parts has oil pans for street and competition applications.

(Oil pans are sold without dipsticks or other hardware unless otherwise specified.)

It's important to note that Chevrolet V-8 and V-6 engines were redesigned in 1986 to include a one-piece rear main seal. That change required a correspondingly new oil pan design. For pre-1986 engines, there is a newer one-piece pan gasket available. Oil pans and gaskets are not interchangeable between early and late design engines. Blocks that have been machined for a one-piece rear main seal require seal adapter P/N 10051118 and must use the newer-style oil pan and gasket.

B. 12557558

Oil Pan, 1986-1992 F-Car and ZZ4

- Four-quart pan used on ZZ4 crate engines and 1986-92 Camaro and Firebird
- Internal baffling and right-hand dipstick
- Designed for 1-piece rear main and 1-piece oil pan gasket
- Fits with crankshaft seal adapter P/N 10051118

NOTE: Use with oil pan rail reinforcement P/N 12553058 (LH) and 12553059 (RH).

C. 360450

Oil Pan, Z28-Style (2-Piece Rear Main Seal)

- Four-quart oil pan fits 1970-79 Camaro and 1979 Corvette
- Internal baffling and a left-hand dipstick
- Use with 2-piece rear main seal on 1955-1979 blocks
- Requires gasket P/N 14079399

25534353

Circle Track "Factory Stock" Oil Pan (not shown)

- Special black-powder-coated 8-quart circle track pan is used in the Circle Track engine P/N 19258602
- 8" sump has a single 3.5" kickout on the right-hand side
- Includes a fully louvered windage tray, oil scraper, three trap doors, oil level plug, and 3/4" oil pick-up tube
- 8" deep

D. 25534354

Circle Track "Late-Model" Oil Pan

- Special black-powder-coated, 8-quart circle track pan is used in the factory stock engines P/N 88958603 and P/N 88958604
- 7" sump has a 3.500" kickout on both sides
- Includes a fully louvered windage tray, three crankshaft scrapers, six trap doors, two runners, an oil temperature fitting provision, oil level plug, and 5/8" oil pick-up tube
- 7" deep
- Oil pickup tube available separately P/N 19171997

10108676

Oil Pan Gasket, 1-Piece Rear Main Seal (not shown)

- Neoprene 1-piece gasket for 1986-and-newer engines

E. 3927136

Windage Tray

- Separates the oil in the pan sump from the rotating crank assembly to reduce aeration of the oil
- Aids in oil control and minimizes oil slosh under hard braking
- Use with oil pan P/N 360450

NOTE: Requires five mounting studs P/N 14087508 for 1968-and-later blocks. Use mounting studs P/N 3872718 with pre-1968 blocks. On 400-cubic-inch Small-Blocks the baffle requires modifying by elongating mounting holes. Check tray clearance with long-stroke crankshafts and/or non-stock connecting rods.

F. 12554816

Windage Tray

- Flat oil pan baffle used with 1986-1996 Corvette pan P/N 10055765
- For 1968-and-newer blocks, use five mounting studs P/N 14087508
- For pre-1968 blocks, use studs P/N 3872718



Oil Pans, Gaskets and Accessories Continued

12555884

Oil Pump, High-Pressure LT1/LT4-Style (not shown)

- Production-style high-pressure 1993-1997 LT1/LT4 oil pump with 1.200" gears
- Produces 60-70-psi oil pressure; screen not included

A. 14044872

Oil Pump, High Volume

- High-volume pump has 1.500" gears for increased volume
- Approximately 25 percent more capacity than a production pump at standard pressure; pick-up not included

Order These Parts To Complement Your New Oil Pump:

3892678

Oil Pump Bolt (not shown)

- Fits all models, 7/16"-14 x 2"

3998287

Oil Pump Shaft (not shown)

- Fits all 1959-and-newer engines

3764554

Oil Pump Shaft Retainer (not shown)

- Fits all 1959-and-newer engines
- Use with oil pump shaft P/N 3998287

3848911

Oil Pump Spring (not shown)

- Regulates oil pressure at approximately 70 psi
- Use with high-volume pump, P/N 12555884

NOTE: Minimum recommended oil pressure for off-highway use is 65 psi at engine operating speed.

B. 3952301

Oil Filter Adapter

- Mounts a spin-on cartridge for Gen I and II Small-Block V-8s
- Contains a filter bypass valve and requires two attaching bolts, P/N 3951644

24241872

Magnetic Drain Plug (not shown)

- Catches and holds small pieces of metal before they can cause engine damage

C. 12368084

Engine Oil Primer

- Use to lube engine bearings prior to starting a new or rebuilt engine
- Fits Small-Block and Big-Block

D. 93440806

HEI Distributor

- A must for steel roller cams
- Has ignition advance curve for high-performance applications
- Comes with melonized steel gear P/N 19052845

E. 88961867

Distributor, Billet HEI

- Most powerful and durable distributor for Small- or Big-Block Chevrolet engines
- Oversized shaft is guided by a sealed ball bearing and long sintered bushing
- Treated coating on the shaft provides low friction
- Advance assembly features chrome-moly weights that slide on nylon pads for smooth timing advancement through the entire rpm range
- Also included are vacuum advance canister and billet aluminum housing that is CNC-machined for greater accuracy
- High quality cap with brass terminals

19052845

Distributor Gear, Melonized Iron (not shown)

- Melonized iron gear is required for all crate engines and steel roller camshafts

NOTE: This gear is part of distributor assembly P/N 93440806.



A Oil Pump, High Volume



B Oil Filter Adapter



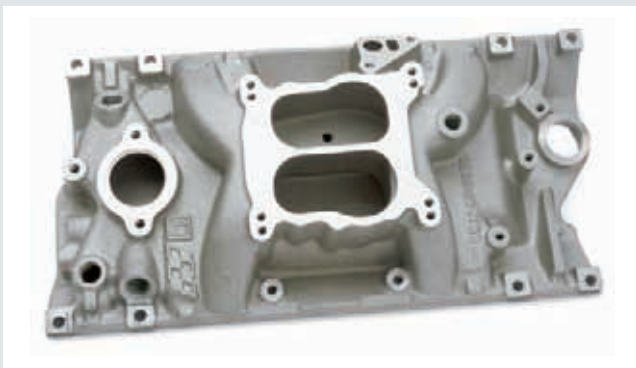
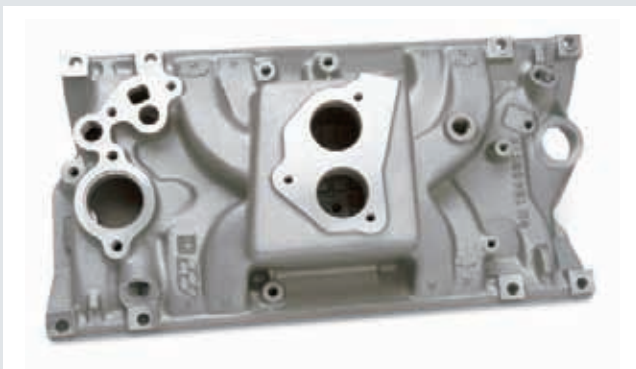
C Engine Oil Primer



D HEI Distributor



E Billet HEI Distributor

Intake Manifold, ZZ Series **F**Intake Manifold, Vortec Head Design **G**Intake Manifold, Vortec Head Design
(Dual Pattern Carb Mount) **H**Intake Manifold, Vortec Head Design for TBI **I**

INTAKE MANIFOLDS, GASKETS AND COMPONENTS

Intake manifolds distribute the air/fuel mixture to the appropriate cylinders. Intake manifold design is geared toward the end usage, whether that is a street performance engine or an all-out competition application. The wide range of GM Performance Parts intake manifolds means there is an ideal manifold for your every need. There are cast-iron and aluminum intake manifolds for carbureted and fuel injected applications. GM Performance Parts intake manifolds were designed specifically for GM engines, so you know they will deliver O.E. performance.

F. 10185063

Intake Manifold, ZZ Series

- Aluminum manifold used on all ZZ series 350 HO engines
- Can be used on all Small-Blocks through 1986
- Dual-pattern carburetor flange is approximately 1/2" lower than the 1970 LT1 intake, yet produces the same horsepower
- Provisions for all late-model accessory brackets, EGR, and an integral hot-air choke
- A heat shield can be mounted underneath for improved performance

G. 12366573

Intake Manifold, Vortec Head Design

- Designed for 283-400-cubic-inch engines using Vortec cylinder heads P/N 12529093, P/N 12558060, P/N 12497186, P/N 12464298, P/N 25534421, or P/N 25534446
- Has 4-bolts per side to attach it to these cylinder heads
- Aluminum high-rise design maximizes horsepower and delivers a broad torque curve
- Accepts a square-bore 4150-style carburetor and includes externally plumbed hot water crossover passage
- Use manifold gasket P/N 89017465 and eight attachment bolts, P/N 12550027

NOTE: Vortec heads were originally released on 1996-1999 truck engines. Check for hood clearance, especially with Corvette.

H. 12496820

Intake Manifold, Vortec Head Design (Dual Pattern Carb Mount)

- This dual-bolt-pattern aluminum manifold will work with all Vortec cylinder heads P/N 12529093, P/N 12558060, P/N 12497186, P/N 12464298, P/N 25534421, or P/N 25534446
- Will accept Holley or Quadrajets-style carburetors
- Will accept an EGR valve, P/N 17052693
- To block EGR port, use P/N 12556596
- Requires intake manifold gasket P/N 89017465 and 8 special manifold bolts, P/N 12550027

I. 12496821

Intake Manifold, Vortec Head Design for TBI

- Designed for throttle-body fuel injection
- Aluminum intake will work with all Vortec cylinder heads, including P/N 12529093, P/N 12558060, P/N 12497186, P/N 12464298, P/N 25534421, or P/N 25534446
- Also accepts EGR

NOTE: The exhaust manifold from 1996-and-newer pickup trucks with RPO L31 350 engine, P/N 12557828, is drilled and tapped to accept an EGR tube. EGR pipe P/N 10220275 can be used with EGR Valve P/N 17113457 and gasket P/N 12337972. This manifold is primarily intended for use with Vortec heads on pre-1996 engine blocks. Blocks manufactured in 1995 or earlier have thermostat bypass passage from the block directly to the water pump. If manifold is used on 1996 and later engines (which do not have the bypass in the block), you must run a coolant bypass line from the manifold to the 5/8" hose nipple on the water pump (passenger's side). Suggested routing is from the 3/8" NPSF boss on manifold to the water pump.

Intake Manifolds, Gaskets and Components Continued

A. 12496822  

Intake Manifold, Eliminator Vortec Head Design

- Designed to deliver the most power and torque with Vortec cylinder head P/N 12529093, P/N 12558060, P/N 12497186, P/N 12464298, P/N 25534421 or P/N 25534446
- Use intake manifold gasket P/N 89017465 and 8 special manifold bolts P/N 12550027

B. 24502592 

LT1 Intake Manifold

- Fits 1992-1996 Gen II LT1 engines and permits the use of a carburetor
- Long runners increase engine torque up to 30 lb.-ft. without sacrificing top-end horsepower
- There are no water coolant holes on this manifold

C. 14097494

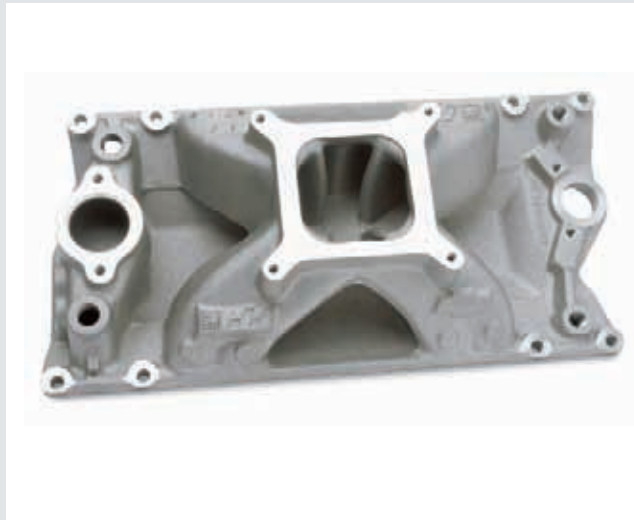
Cast-iron Intake Manifold (1987-newer)

- High-rise manifold fits all 1987-and-newer 305 and 350 engines with cast-iron Gen I-style cylinder heads
- Same height as the aluminum Z28 manifold P/N 14096011 and has no EGR provision
- The center two bolt holes are at 72° angles instead of the normal 90° angle

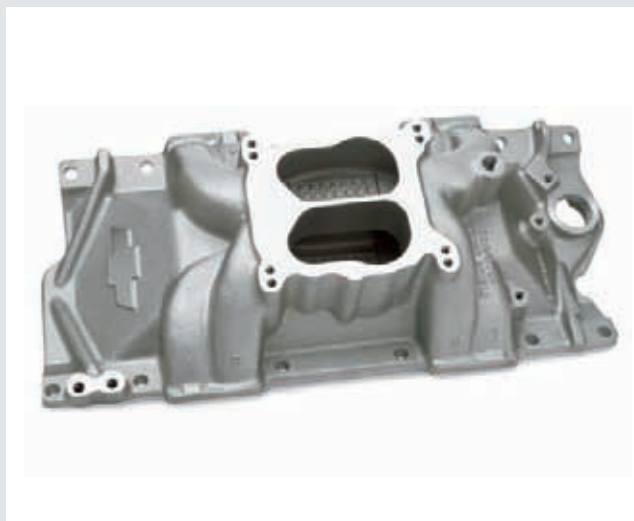
14096011 

Cast-iron, High-Rise Intake Manifold (not shown)

- Cast-iron version of the aluminum high rise Z28 intake manifold
- Designed for budget builds, racing classes that mandate a cast-iron intake and marine applications
- Accepts both standard and spread bore 4-bbl carburetors
- Manifold is identified by orange Bowtie logo



A Intake Manifold, Eliminator Vortec Head Design



B LT1 Intake Manifold



C Cast-iron Intake Manifold (1987-newer)



Bowtie Intake Manifold, Raised Runner **D**

D. 10051103

Bowtie Intake Manifold, Raised Runner

- Runners of this single-plane aluminum intake manifold are raised .200" to match the ports of Bowtie cylinder head P/N 10051101
- Air gap beneath the runners isolates the intake charge from hot engine oil
- A 2" carburetor spacer is recommended
- Accepts standard-flange 4-bbl carb
- For competition use only, as there are no heat riser passages

E. 10051102

Bowtie Intake Manifold, Standard Runner

- This standard-runner manifold is based on the raised-runner intake P/N 10051103 (see above)
- Designed for use on Small-Blocks using heavy-duty Bowtie cylinder heads P/N 10134392 and P/N 14011049



Bowtie Intake Manifold, Standard Runner **E**

F. 12498032

Ram Jet Fuel Injection Manifold Kit (less electronics)

- Retro-fit fuel injection kit will fit V-8 engines using Vortec cylinder heads P/N 12529093, P/N 12558060, P/N 12497186, P/N 12464298, P/N 25534421, or P/N 25534446
- Must be used with an aftermarket ECU and wiring harness with the proper calibration
- The same as used on Ram Jet 350 engine P/N 12499120. (MEFI with ECU and Wire Harness Kit P/N 12499116 is not calibrated for anything other than Ram Jet 350.)

Kit includes the following (as well as brackets, sensors, bolts, nuts, gaskets, and other small parts):

88959339	Instruction Manual	12489371	Intake Manifold
17096144	Throttle Body	1115498	Coil
12097982	Ignition Wire	1104060	Distributor
12498951	Air Cleaner	12553918	Injector Rail
17124248	8 Fuel Injectors	16249939	MAP Sensor
10456126	Knock Sensor	15326386	Engine Temp Sensor
17123897	Fuel Pressure Regulator		

NOTE: It does not include ECU or wiring harness, which must be sourced separately.

12489371

Ram Jet 350 Intake Manifold (not shown)

- Used on the Ram Jet 350 engine assembly P/N 12499120
- Bare manifold only – no throttle body, injector rails, injectors, bracket or other components
- See P/N 12498032 for complete manifold kit



Ram Jet Fuel Injection Manifold Kit (less electronics) **F**

Bowtie Competition Manifolds

A. 24502481

Intake Manifold, 18° Competition

- Developed for NASCAR's shorter tracks and works well on Trans-Am-series engines
- Features smaller runners and less plenum volume, which enhances mid-range torque
- Aluminum intake fits 18° heads casting P/N 10134363 and P/N 24502569
- Manifold is ideal for 310-cubic-inch road racing and 358-cubic-inch short track engines
- Manifold flanges are 0.590" thick to promote a good gasket seal
- An auxiliary water line boss at the rear of the casting improves water flow
- Weight 22.5 lbs
- Volume 2700cc

B. 24502653

Intake Manifold, Spider Design

- A 2-piece 'dry' aluminum manifold "spider" consisting of the runners and plenum only
- The runners, called the spider assembly by racers, along with valley plate assembly – the common term for the bottom section of the intake (see P/N 24502654 below) – are designed for use with the 18° cylinder heads with a date code of June 1996 or newer

C. 24502654

Valley Plate Assembly

- Universal aluminum valley plate is designed for use with 18° cylinder heads
- Can be used with dedicated 2-piece manifold spiders, existing 1-piece intake manifolds which have been properly machined for use as a dry manifold, or fabricated manifold designs
- Valley plate assembly consists of the valley plate P/N 24502652, the inspection cover P/N 24502651, O-ring material and eight retaining bolts
- Valley plate has cast-in integral passages to equalize coolant flow from the front and the rear of the cylinder heads
- Fits heads dated June 1996 and later

NOTE: Important information about gasket matching: Gasket flanges are machined to provide the proper port alignment with standard runner locations. Runners in heads and manifold must be matched by engine builder. Often, the gasket will line up with the top of the port so removal is required at the bottom of the port. Gaskets that can be used with this manifold are: Fel-Pro® P/N 1205 and P/N 1206, and Mr. Gasket® P/N 102. Always match the gasket to the cylinder head you plan to use to ensure a correct fit.



A Intake Manifold, 18° Competition



B Intake Manifold, Spider Design



C Valley Plate Assembly

Intake Manifold, Spider Restrictor Design – SB2.2 **D**Intake Manifold, Spider Design – SB2.2 **E**Valley Plate Assembly, SB2.2 **F****NASCAR Intake Manifolds****D. 12480096** **Intake Manifold, Spider Restrictor Design – SB2.2**

- Aluminum manifold has more material in the runners and plenum to accept more flexibility in porting
- Designed for NASCAR restrictor-plate racing and is used with valley plate assembly P/N 12370840 (see below)

E. 88958617 **Intake Manifold, Spider Design – SB2.2**

- Designed for NASCAR-style racing and high-rpm engines
- Additional aluminum in the runners and plenum allows more flexibility in porting
- Must be used with valley plate assembly P/N 12370840 or P/N 88958659

12370840**Valley Plate Assembly, SB2.2 (not shown)**

- Aluminum valley cover is used with manifold runners P/N 12480096 and P/N 88958617 on SB2.2 cylinder heads for NASCAR racing

F. 88958659**Valley Plate Assembly, SB2.2**

- Aluminum valley cover is used with manifold runners P/N 12480096, P/N 88958617 and P/N 88958691
- Does not incorporate an inspection cover, but has revised integral water passage for improved coolant flow from the front and rear of the cylinder heads
- Uses AN -24 fitting for water outlet; can use reducer for -20 fitting

88958670**Valley Plate Assembly, ROX (not shown)**

- Fits ROX manifold and ROX head P/N 88958667

INTAKE MANIFOLDS: ADDITIONAL REQUIRED COMPONENTS

Part Number	Gaskets (Quantity)	Bolts (Quantity)	Engine Application
12366573	89017465 (1)	12550027 (8)	19258602, 12499710, 12496769
12496820	89017465 (1)	12550027 (8)	12499711, 12499101, 12497317, 12496968
12496822	89017465 (1)	12550027 (8)	88958604, Vortec Heads
10185063	12525810 (1)	14091544 (8), 88891769 (2)	24502906, 88958603, 12499712, 19201330
12489371	89017465 (1)	12550027	12499120, 12495515
12496821	89017465 (1)	12550027 (8)	Vortec Head for TBI
24502481	10185007	N/A	18" high-port racing heads
24502653	10185007	N/A	18" high-port racing heads
24502654	10185007	N/A	18" high-port racing heads



Additional components required for installation. See page 175.



Available for purchase online at gmperformanceparts.com



Covers and Plugs

A. 14094792

Choke Hole Cover

- Covers the choke hole on the 350 HO manifold P/N 10185063
- Use gasket P/N 14096848 and screw P/N 9442184 with washer P/N 9439511

B. 6269414

Cover, EGR Valve

- Covers the EGR valve port on the 350 HO manifold P/N 10185063
- Use gasket P/N 12554530 and screw P/N 9442184 with washer P/N 9439511

C. 12556596

Plug, EGR Pipe Hole

- 7/8"-15 plug is used to seal off EGR pipe holes on intake manifold P/N 12496820 and P/N 12496821

Chrome Water Necks

D. 12342024

Water Neck

- Chrome water neck with neoprene O-ring and chrome bolts
- For 1966-1975 full-size Chevrolet, Camaro, and Chevelle V-8 engines

10108470

Aluminum Water Outlet (not shown)

Intake Manifold Gaskets

E. 10147994

Gasket Kit, 1971-1986 and ZZ350

- For 302-350 high-performance Small-Blocks built from 1971-1986, and all ZZ350 high-performance engines
- Gaskets fit standard intake port location
- Do not use with raised runner cylinder heads
- Includes 2 gaskets

F. 12497760

Gasket Kit, Vortec Design

- Designed for Vortec heads P/N 12529093, P/N 12558060, P/N 12464298 and P/N 12497186 only
- Gasket thickness is 0.120" (1/8"), post size is 1.080" x 2.160" with tapered wall
- Has both early style 6-bolt pattern and Vortec 4-bolt pattern
- Includes 2 gaskets



A Choke Hole Cover



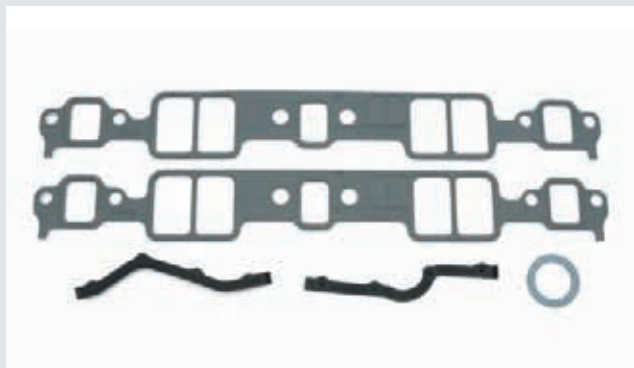
B Cover, EGR Valve



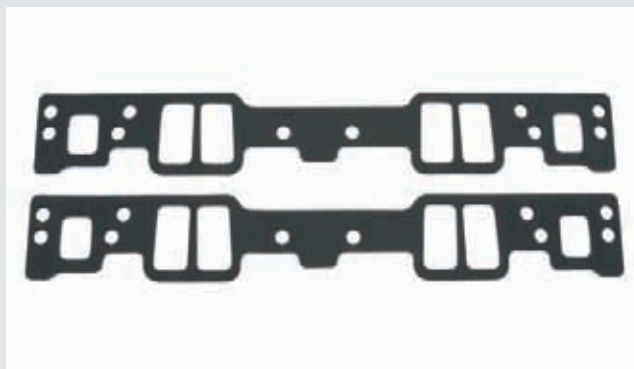
C Plug, EGR Pipe Hole



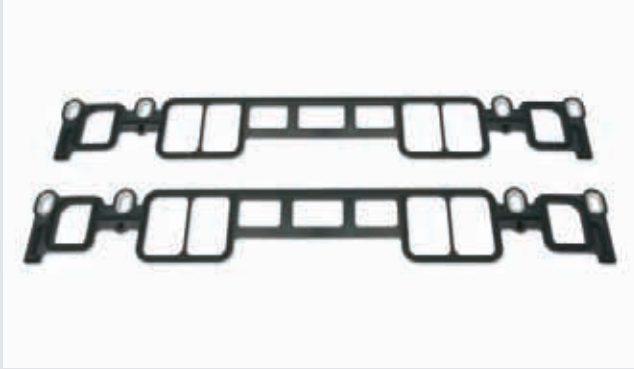
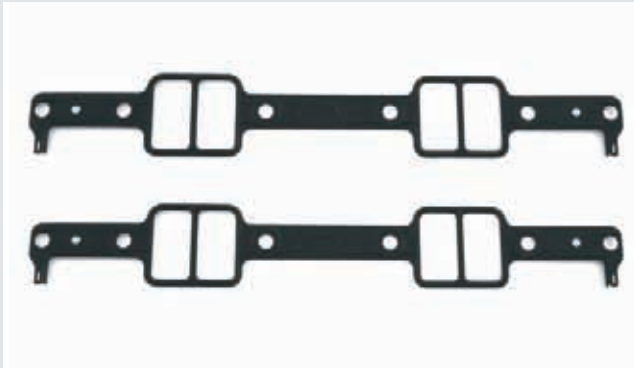
D Water Neck



E Gasket Kit, 1971-1986 and ZZ350



F Gasket Kit, Vortec Design

Gasket Kit, Production Vortec Design **G**Gasket Kit, LT4 **H**Air Cleaner, Chevrolet-Logo High-Performance Design **I**Air Cleaner, Chevrolet-Logo Classic Design **J**Air Cleaner, Ram Jet 350 **K****G. 89017465** **Gasket Kit, Production Vortec Design**

- Production gasket for all Vortec-design cylinder heads (4-bolt attachment to cylinder heads P/N 12529093 and P/N 12558060)
- Requires the use of GM attachment bolt P/N 12550027, because the bolt has a ball design on the end that seats in the head so it will not crush the intake manifold gasket
- Includes 2 gaskets

H. 12528884**Gasket Kit, LT4**

- Used on the LT4 engine P/N 12371172
- Can be used with all LT4 heads and is designed not to cover part of the cylinder head opening – as production gaskets do
- Includes 2 gaskets

10185042 **Gasket Kit, Splayed-Valve (not shown)**

- Used only on the splayed-valve V-8 cylinder heads P/N 24502517
- Includes 2 gaskets

10185007**Gasket Kit, 18-Degree High Port Heads (not shown)**

- Used only with V-8 18° high port cylinder heads P/N 10134363 and P/N 10134364
- Includes 2 gaskets

12524653 **Gasket Kit, LT1 4-bbl Conversion (not shown)**

- Required when installing a 4-bbl manifold on any LT1 engine
- Includes 2 gaskets

AIR CLEANERS**I. 12342080** **Air Cleaner, Chevrolet-Logo High-Performance Design**

- 14" round high-performance-style air cleaner
- Chrome lid with embossed Chevrolet name
- Fits most 4-bbl and 2-bbl carburetors
- Will not fit Dominator-style carburetors

NOTE: Check clearance between hood and top of air cleaner. Minimum clearance is 3.750" from top of carburetor gasket area to underside of hood.

J. 12342071 **Air Cleaner, Chevrolet-Logo Classic Design**

- 14" round classic-style air cleaner
- Chromed lid with embossed Chevrolet name and Bowtie attaching nut
- Fits most 4-bbl and 2-bbl carburetors
- Will not fit Dominator-style carburetors

K. 12498951 **Air Cleaner, Ram Jet 350**

- Designed for use with throttle body on Ram Jet 350 crate engine, but can be used on other applications



LS-Series Components

Every day, more and more enthusiasts are turning to the LS engine family for their street rod, resto-mod muscle car or late-model performer. It's the next generation of high performance, with almost unlimited performance potential.

The LS revolution started in 1997, with the introduction of the 5.7L LS1 in the Chevrolet Corvette. GM engineers matched the inherent advantages of a cam-in-block engine design – low-end torque, compact packaging and low complexity – with state-of-the-art design and manufacturing techniques, creating the optimal V-8 for the 21st century. LS engines are capable of exceptional performance per displacement and greater efficiency than previous GM V-8 engine designs.

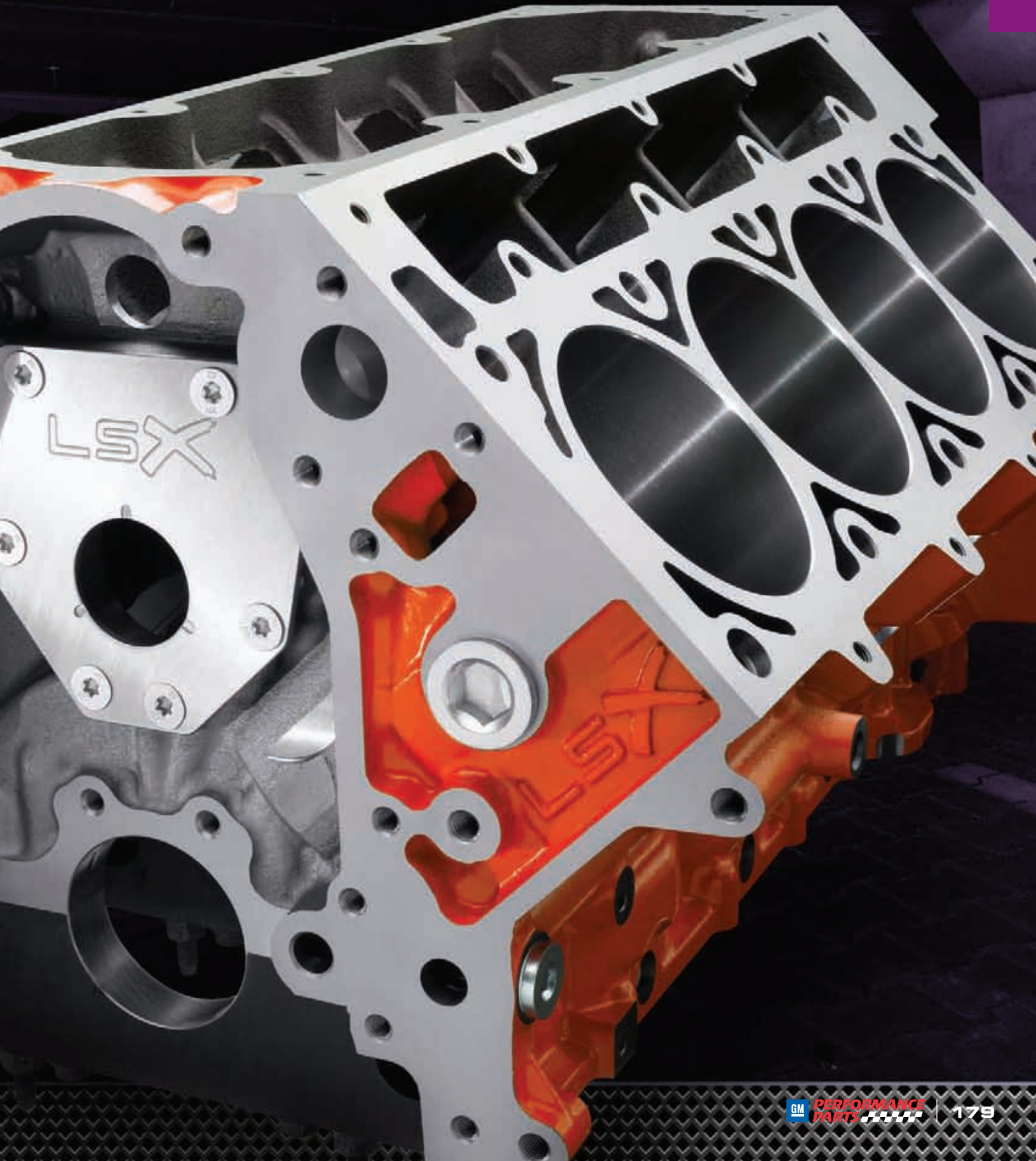
For the high-performance enthusiast, the LS Series represents the best of all worlds. Along with great durability, the platform offers unrivaled parts interchangeability, with literally dozens of possible combinations enabled by a proliferation of regular-production and special high-performance cylinder blocks, cylinder heads, induction systems and all the related components.

GM Performance Parts is at the forefront of LS engine-building, with a stunning array of factory-engineered parts. Our lineup includes production-based blocks, heads, cams and more, as well as the expanding portfolio of LSX maximum-performance blocks, forged rotating parts, intakes and more. No one knows more about LS performance than GM and no other aftermarket manufacturer comes close to matching the breadth or depth of LS parts available from GMPP.

We're not stopping with what you'll find in this catalog, either! GMPP is continually developing new parts, power packages and crate engines for the LS Series. Check in at gmperformanceparts.com for the latest updates.

The LS Series is the engine family of the future – and you can count on GMPP to be there with the latest parts to build maximum power!





The LS Engine Family Tree

Everything you wanted to know about GM's 21st-century Small-Block, but were afraid to ask!

LS HERITAGE

The engine family commonly called the LS-Series debuted in 1997. General Motors called it the Gen III Small-Block, with the iron-block versions in trucks and the all-aluminum LS1 version introduced in the then-new C5 Corvette. A year later, the LS1 replaced the LT1 Small-Block in Camaros and Firebirds. The LS1 displaced 5.7 liters, similar to the previous-generation Small-Block, but the cubic-inch measurement differed slightly: 346 for the LS1 versus the traditional 350 cubes.

In 1999, the Gen III platform spawned the higher-performance LS6 that was standard in the Corvette Z06. In 2005, the Gen IV branch of the LS family was born, differing from the Gen III with cast-in provisions for fuel-saving cylinder deactivation, larger displacements and revised camshaft sensing. The performance versions of the Gen IV include the LS2, LS3, LS7 and LS9 supercharged.

GM has continued to refer to its modern V-8 engine family as Gen III and Gen IV, but to the enthusiasts who quickly grasped the tremendous performance potential of the engines, every engine based on the platform is nicknamed "LS." The range of production engines from the LS platform is wide. On the truck side, iron-block engines have included 4.8L and 5.3L versions, as well as all-aluminum 6.0L and 6.2L premium engines. Car engines include 5.3L, 5.7L, 6.0L, 6.2L and 7.0L displacements – including some configured for front-wheel-drive.

GEN III VERSUS GEN IV

Despite some significant differences between Gen III and Gen IV cylinder blocks, all LS engines share common traits that include:

- 4.400" bore centers (like the original Small-Block)
- 6-bolt, cross-bolted main bearing caps
- Center main thrust bearing
- 9.240" deck height
- 4-bolt-per-cylinder head bolt pattern
- 0.842" lifter bores
- Distributorless, coil-near-plug ignition system

The most distinguishing differences between Gen III and Gen IV cylinder blocks are larger bores (on some engines), different camshaft position sensor locations – front timing cover area on Gen IV blocks and top-rear position on Gen III blocks – and, on most Gen IV blocks, cast-in provisions for GM's Active Fuel Management cylinder deactivation system. Another distinguishing trait is the use of 24X reluctor wheels on early engines, switching to 58X reluctors on Gen IV versions.

There is great interchangeability between all LS engines (including between Gen III and Gen IV versions). Cylinder heads, crankshafts, intake manifolds and more can be mixed and matched – but the devil is in the details. Not every head matches every intake manifold and not every crankshaft works with every engine combination. Will Handzel's "How to Build High-Performance Chevy LS1/LS6 V-8s" P/N 88958786 is a great reference source that outlines the more specific differences and interchangeability among Gen III-based engines.

LS4

Perhaps the most unique application of the LS engine in a car, the LS4 is a 5.3L version used in the front-wheel-drive Chevrolet Impala SS and Pontiac Grand Prix GXP. The LS4 has an aluminum block and unique low-profile front-end accessory system, including a "flattened" water pump to accommodate the transverse mounting position within the Impala and Grand Prix. It is rated at 303 horsepower and 323 lb.-ft. of torque.

LS1/LS6

LS1 5.7L (346-cu-in) engines were produced between the 1997 and 2004 model years in the United States (Corvette, Camaro, Firebird and GTO) and stretching into 2005 in other markets (primarily Australia). The LS6 was introduced in 2001 in the Corvette Z06 and was manufactured through 2005, when it also was found in the Cadillac CTS-V. The LS1 and LS6 share a 5.7L displacement, but the LS6 production engine uses a unique block casting with enhanced strength, greater bay-to-bay breathing capability and other minor differences. The heads, intake manifolds and camshaft also are unique LS6 parts.

LS2

In 2005, the LS2 6.0L (364 cubic inches) engine and the Gen IV design changes debuted. In GM performance vehicles, it was offered in the Corvette, GTO and even the heritage-styled SSR roadster. Its larger displacement brought greater power. The LS2 is one of the most adaptable engines, as LS1, LS6, LS3 and L92 cylinder heads work well on it. It is designed with a siamese bore.

LS3/L99

Introduced on the 2008 Corvette, the LS3 brought LS base performance to an unprecedented level: 430 horsepower from 6.2L (376 cubic-inches) – making it the most powerful base Corvette engine in history. The LS3 block not only has larger bores than the LS2, but a strengthened siamese bore casting to support more powerful 6.2L engines. The LS3 is offered in the Pontiac G8 GXP and is also the standard V-8 engine in the new, 2010 Camaro SS. The L99 version is equipped with GM's fuel-saving Active Fuel Management cylinder deactivation system and is standard on 2010 Camaro SS models equipped with an automatic transmission.

LSA

The baby brother to the LS9, this supercharged 6.2L engine is standard in the 2009 Cadillac CTS-V. It is built with several differences when compared to the LS9, including hypereutectic pistons versus the LS9's forged pistons and a smaller, 1.9L supercharger. The LSA also has a different charge-cooler design on top of the supercharger. Horsepower is rated at 556 in the super-quick Caddy.

LS9

The most powerful production engine ever from GM, the LS9 is the 6.2L supercharged and charge-cooled engine of the Corvette ZR1. It is rated at an astonishing 638 horsepower. The LS9 uses the strengthened 6.2L block with stronger, roto-cast cylinder heads and a sixth-generation 2.3L Roots-type supercharger. Like the LS7, it uses a dry-sump oiling system. It is the ultimate production LS engine. It is built by hand at the GM Performance Build Center in Wixom, Mich.

LS7

A legend in its own time. The LS7 is the standard engine in the Corvette Z06 and its 7.0L displacement (427 cubic inches) makes it the largest small block engine offered in a production car. Unlike LS1/LS6 engines, the LS7 uses a siamese-bore cylinder block design – required for its big, 4.125-inch bores. Competition-proven heads and lightweight components, such as titanium rods and intake valves, make the LS7 a street-tuned racing engine, with 505 horsepower. LS7 engines are built by hand at the GM Performance Build Center in Wixom, Mich.

GEN III AND GEN IV VORTEC TRUCK ENGINES

Although performance car engines have typically carried "LS" designations, truck engines built on this platform have been dubbed Vortec. They are generally distinguished by iron cylinder blocks and smaller displacements than car engines. Interestingly, a 5.7L Vortec "LS" engine has never been offered. Here's a quick rundown of the previous and current-production LS truck engines:

- 4.8L – The smallest-displacement LS engine (293 cubic-inches); it uses an iron block with 3.78-inch bores and aluminum heads.
- 5.3L – The most common LS truck engine, it uses the same iron block with 3.78-inch bores as the 4.8L, but with a larger, 3.620-inch stroke crankshaft (327 cubic inches). Later versions are equipped for Active Fuel Management. Manufactured with iron and aluminum cylinder blocks.
- 6.0L – Used primarily in ¾-ton and one-ton trucks, the 6.0L (364 cubic-inches) uses an iron block (LY6) or aluminum block (LY6) and aluminum heads, with provisions for Active Fuel Management; some equipped with variable valve timing.
- 6.2L – Commonly referred to by its L92 engine code, the 6.2L (376 cubic-inches) engine uses an aluminum block and heads, and incorporates advanced technology including variable valve timing. The L92 is used primarily as a high-performance engine for the Cadillac Escalade and GMC Yukon Denali.

GEN III, IV SMALL-BLOCK CRATE ENGINES

Part Number	Description	Liters	CID	Block Material	HP	Torque	Bore	Stroke
19165628	LS327/327	5.3	327	CI	327	347	3.780	3.622
17801267	LS1	5.7	346	AL	350	365	3.898	3.622
19165484 (discontinued)	LS2	6.0	364	AL	400	400	4.000	3.622
17802134 (discontinued)	LS364/440	6.0	364	AL	440	404	4.000	3.622
12611022	L99	6.2	376	AL	430	424	4.065	3.622
19244549	LS376/480	6.2	376	AL	485	475	4.065	3.622
19244552	LS376/515	6.2	376	AL	515	469	4.065	3.622
19244097	LS3	6.2	376	AL	430	424	4.065	3.622
19211708	LSA	6.2	376	AL	556	551	4.065	3.622
19201990	LS9	6.2	376	AL	638	604	4.065	3.622
19271821*	CT525	6.2	376	AL	525	471	4.065	3.622
19244098	LS7	7.0	427	AL	505	470	4.125	4.000
19171049	LSX376	6.2	376	CI	450	444	4.060	3.620
19244611	LSX454	7.4	454	CI	620	590	4.185	4.125
19257880	LSX454R	7.4	454	CI	750+	700+	4.185	4.125

*For circle-track racing only. Not for street use.

NON-PRODUCTION CYLINDER BLOCKS

C5R: Developed for the factory-backed Corvette racing program, the C5R cylinder block has been manufactured in comparatively small quantities since 2000. They are manufactured with a unique aluminum alloy for greater strength and undergo a variety of specialized machining and inspection processes, including “hipping” to increase strength and X-raying that ensures against unacceptable porosity. A siamese bore design with 4.117-inch finished bores enables 7.0L (427 cubic-inch) displacements. The C5R uses billet steel main caps with premium, 4340 fasteners. Racing-quality head studs are also included. All LS-Series heads will work with the C5R block, but maximum performance depends on maximum airflow.

LSX Bowtie Block (standard and tall-deck): Introduced in 2007, the LSX Bowtie Block is a durable and affordable cast-iron casting that was designed to support extreme high-performance combinations, including provisions for six-bolts-per-cylinder head fastening. It has a siamese bore design with 3.880” bores that must be finished to 3.890 inches or larger – with a 4.200-inch maximum bore. Maximum stroke can reach 4.250 inches, but rotating assembly interference on the cylinder must be taken into account for strokes greater than 4.125 inches; heavy metal is required for crankshaft balancing of larger-stroke combinations. Standard versions feature decks 0.020-inch taller than LS production blocks, with the tall-deck version manufactured with a 9.720-inch semi-finished deck height. The oiling system is a true priority-main system and all LS Small-Block heads work with the engine.

CONNECTING RODS

LS connecting rods are very similar and mostly interchangeable. Most are made of powdered metal, while the LS7 and LS9 rods are forged titanium. Rods lengths are similar, too, at 6.098-inch for 5.3L, 5.7L, 6.0L and 6.2L engines. The 4.8L engine uses 6.275-inch rods and the LS7 uses 6.067-inch rods. Since 2006, LS rods use bushed small ends. Also, LS6 rods bolts (P/N 11600158) offer a strength-enhancing upgrade to pre-2000 engines. Finally, the LS7 and LS9 rods have a slightly different size than other LS rods, requiring a unique bearing (P/N 89017811).

PISTONS

The LS9 is the only production LS engine with forged aluminum pistons; all the other engines use hypereutectic (cast) aluminum alloy pistons – varied mostly by diameter to accommodate various bore sizes. LS cast pistons shouldn't be used on applications greater than approximately 550 horsepower. The LS7 piston's inner bracing and larger pin diameter require the use of the matching LS7 connecting rod. The same is true for LS9 pistons; they require the use of LS9 connecting rods.

CRANKSHAFTS

Generally, LS crankshafts are similar in design, with identical 2.100-inch rod and 2.560-inch main journal sizes and a common rear main seal. All production LS engines use iron crankshafts except the LS7, LS9 and LSA; they use forged steel cranks (4.000-inch stroke on the LS7; 3.62-inch stroke on the LS9 and LSA).

The crankshaft sensing function of the distributorless ignition system depends on reading the toothed reluctor wheel on the crankshaft. Early LS engines mostly used 24-tooth wheels and upgraded a few years ago to 58-tooth (also known as 58X) wheels. When building an LS engine, it is imperative that the correct reluctor wheel is used with the compatible crankshaft position sensor and ignition controller.

The crankshafts are mostly interchangeable, but the snouts on LS7 and LS9 crankshafts are approximately one-inch longer to accommodate their two-stage oil pumps that work with the engines' dry-sump oiling systems. These forged crankshafts can be used on wet-sump engines by using a few specific components and/or modifications (see below).

SPECIAL NOTE ABOUT CRANKSHAFT BOLT PATTERNS

All Pre-2009 crankshafts utilize a 6-bolt flywheel/flexplate bolt pattern. Starting in 2009, the LSA utilizes an 8-bolt pattern, and the LS9 utilizes a unique 9-bolt pattern. All LSX454 high performance crankshafts utilize the 8-bolt pattern common to the LSA.



BUILDER'S TIP

Adapt the LS7 Forged Crankshaft to Your LS Engine

If you're building a 427-cubic-inch LSX engine – or any other LS engine with a 4.00” stroke – and want the strength afforded with a forged-steel crankshaft, GM Performance Parts has two choices: the new LSX 4.00”-stroke crankshaft, P/N 19170390, or the LS7 dry-sump crankshaft, P/N 12568820.

The LSX crankshaft is the easy way to go because the LS7 crankshaft has an approximately 1” longer snout that is designed to work with the production engine's larger, dry-sump oil pump. However, the LS7 crank can be adapted to conventional wet-sump oiling systems with the following components and modifications:

- Use the standard LS-engine crankshaft gear, P/N 12556582
- Use the standard LS-engine oil pump, P/N 17801830
- Use the standard LS2 timing cover, P/N 12600325

With those parts, a 1” spacer can be used in front of the LS7 balancer to make up the difference between the two crankshaft gears (using the LS7 balancer bolt), **OR** the crankshaft snout can be machined to reduce its length by approximately 1” (using the LS2-type balancer bolt).



CYLINDER HEADS – INTAKE PORT DESIGN

Cylinder head interchangeability enables great parts mixing to build custom LS engine combinations, but the heads must be matched with intake manifolds that have compatible intake port configurations. The port sizes and shapes include:

Cathedral-port

Introduced on the LS1 engine and used also on the LS6 and LS2, cathedral-port heads are named for the unique shape of the top of the intake port (**photo A**). Intake manifolds for LS1, LS2, LS6 and LS Vortec engines with cathedral-port heads are mostly interchangeable.

Rectangular port – L92 style

Similar to the LS7 design, but the ports are a little taller and a little narrower (**photo B**). They flow more than cathedral-port heads, but not as much as LS7 heads. In addition to the L92 6.2L engines, this port shape is also used on LS3 engines and some 6.0L truck engines, as well as the Corvette ZR1's LS9 and Cadillac CTS-V's LSA supercharged engines. Intake manifold bolt patterns are unique to this port design.

Rectangular port – LS7 style

The third LS intake runner design debuted on the Corvette Z06's LS7 engine (**photo C**). This rectangular design supports the straight-through airflow design of the heads. The LS7 head is the highest flowing production head GM has ever made, to date. They feature 270cc intake ports and the ports and combustion chambers are CNC-ported from the factory. Use only with LS7-style intake manifolds.

C5R heads

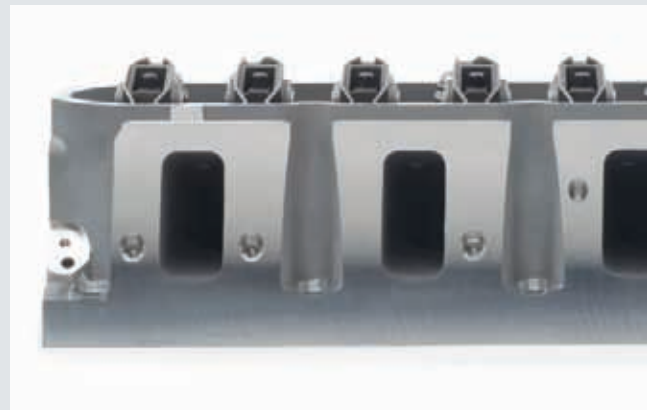
These heads pioneered the rectangular-port design, but because they are designed for professional finishing, their final shape and size depends on whoever is performing the porting. The port shape and bolt pattern are unique.

LSX-CT and LSX-DR ports

CT and DR ports are derived from the C5R rectangular shape, but raised 10mm over standard C5R design, and the bolt pattern is spread for more varied port configurations (**photo D**). The CT port is suitable for sprint car applications both with and without alcohol down nozzles, while the DR targets larger displacements and/or higher rpm in drag racing applications.



A Cathedral Intake Port and Bolt Pattern



B L92 Intake Port and Bolt Pattern

LS COMPATIBILITY—HEADS VS. INTAKES

INTAKES				HEADS								
Engine	P/N	Manifold Type	Port Type	12559855 Std LS1	12564824 Std LS6/LS2	12562319 Std LQ9	88958665 CNC LS6	88958622 CNC LS6	12562713 Std L76/L92	12615879 Std LS3	88958698 CNC L92	
LS1/LS6	88894339	EFI	Cathedral	Yes	Yes	Yes	Yes	Yes	No	No	No	
LS2/LQ4	88958675	4-bbl	Cathedral	Yes	Yes	Yes	Yes	Yes	No	No	No	
LS3	12610434	EFI	L92	No	No	No	No	No	Yes	Yes	Yes	
L92/LS3	25534416	4-bbl w/inj	L92	No	No	No	No	No	Yes	Yes	Yes	
L92/LS3	25534401	4-bbl	L92	No	No	No	No	No	Yes	Yes	Yes	
L92/LS3	19244037	LSX 4-bbl	L92	No	No	No	No	No	Yes	Yes	Yes	
L92/LS3	19244035	LSX 4-bbl	L92	No	No	No	No	No	Yes	Yes	Yes	
LS7 '09	12610435	EFI	LS7	No	No	No	No	No	No	No	No	
LS7	25534413	4-bbl w/inj	LS7	No	No	No	No	No	No	No	No	
LS7	25534394	4-bbl	LS7	No	No	No	No	No	No	No	No	
LSX454	19244033	LSX 4-bbl	LS7	No	No	No	No	No	No	No	No	
—	19257854	LSX 4-bbl	LSX-CT	No	No	No	No	No	No	No	No	
—	19257851	LSX 4-bbl	LSX-DR	No	No	No	No	No	No	No	No	

No = not compatible Yes = direct compatibility



LS7 Intake Port and Bolt Pattern **C**



LSX-CT and LSX-DR Ports **D**

CYLINDER HEADS – VALVES AND RECOMMENDED APPLICATIONS

Each LS cylinder head has specific valve sizes, locations and valve angles. Here's an overview of them:

Cathedral-port heads

Designed for smaller-displacement engines, these heads have the smallest valves; 2.000-inch intake and 1.500-inch exhaust, and they're held at a 15-degree angle. They also have the closest valve spacing, which limits the maximum valve size. LS6 valves include lightweight hollow-stem intake and sodium-filled exhaust parts; all others in this family feature solid-stem construction.

L92/LS3 heads

Similar in design to the LS7 head, the L92 heads don't flow quite as much and the valves are correspondingly smaller: 2.165-inch on the intake side and 1.590-inch on the exhaust side. They are held at a 15-degree angle and also require offset rocker arms. These heads/valves require at least a 4.00-inch bore, but work best on an engine with a 4.060-inch bore. Valve-to-piston clearance must be checked when using them on an engine originally equipped with cathedral-port heads.

LS7 heads

Using LS-Series' largest production valves – 2.200-inch on the intake side and 1.610-inch on the exhaust – the LS7 heads offer tremendous airflow, but they require an engine with no less than 4.100-inch bores. The intake valves are made of titanium and the exhaust valves are sodium-filled; they are held at a 12-degree angle. That and their large size require offset rocker arms on the intake side. Valve-to-piston clearance must be checked when using these heads with pistons not designed for the LS7 engine.

C5R

Designed for engines with at least 4.125-inch bores, these heads can accommodate 2.200-inch intake and 1.650-inch exhaust valves; they are held at an 11-degree angle and their spacing is unique. When using on an engine not originally designed for C5R pistons, valve-to-piston clearance must be checked.

LSX-CT and LSX-DR

CT and DR are in-line heads, with a valve angle of 11 degrees. The CT head was designed specifically for 410 CID sprint car applications, with 2.200-inch intake and 1.610-inch exhaust valve sizes, with valve placement modified and optimized for 4.125-inch bores. DR heads were designed for 410-plus CID, high rpm drag racing applications. Valve placement was spread from the CT to allow up to 2.280-inch and 1.620-inch valves. Larger valve sizes require a 4.165-inch minimum bore.

LS COMPATIBILITY—HEADS VS. INTAKES CONTINUED

INTAKES				HEADS							
Engine	P/N	Manifold Type	Port Type	19201807 LSX-L92 Small Bore	19201805 LSX-LS3	19213963 LSX-LS9	12578450 Std CNC LS7	19201806 LSX-LS7	19166981 LSX-CT	19166979 LSX-DR	12480090 C5R head
LS1/LS6	88894339	EFI	Cathedral	No	No	No	No	No	No	No	No
LS2/LQ4	88958675	4-bbl	Cathedral	No	No	No	No	No	No	No	No
LS3	12610434	EFI	L92	Yes	Yes	Yes	No	No	No	No	No
L92/LS3	25534416	4-bbl w/inj	L92	Yes	Yes	Yes	No	No	No	No	No
L92/LS3	25534401	4-bbl	L92	Yes	Yes	Yes	No	No	No	No	No
L92/LS3	19244037	LSX 4-bbl	L92	Yes	Yes	Yes	No	No	No	No	No
L92/LS3	19244035	LSX 4-bbl	L92	Yes	Yes	Yes	No	No	No	No	No
LS7 '09	12610435	EFI	LS7	No	No	No	Yes	Yes	No	No	No
LS7	25534413	4-bbl w/inj	LS7	No	No	No	Yes	Yes	No	No	No
LS7	25534394	4-bbl	LS7	No	No	No	Yes	Yes	No	No	No
LSX454	19244033	LSX 4-bbl	LS7	No	No	No	Yes	Yes	No	No	No
—	19257854	LSX 4-bbl	LSX-CT	No	No	No	No	No	Yes	Yes	No
—	19257851	LSX 4-bbl	LSX-DR	No	No	No	No	No	Yes	Yes	No

No = not compatible Yes = direct compatibility

VALVETRAIN

LS-Series valvetrain systems are very universal. All production engines use investment-cast rockers with roller trunnions. They attach to a bolt-down mounting bracket (except for LS7 and LSX applications that have machined pedestals) that makes installation fast and easy. All production engines feature 1.7-ratio rockers, except the LS7, which uses 1.8-ratio rockers. Rockers are specific to their cylinder head families. Here's a look at the various applications:

Cathedral-port heads

Use interchangeable rockers on the intake and exhaust sides P/N 10214664. **(Photo A)**

L92 heads

Use specific, offset intake rockers P/N 12569167 and non-offset exhaust rockers P/N 10214664. **(Photo B)**

LS7 heads

Use specific, offset intake rockers P/N 12579615 and non-offset exhaust rockers (P/N 12579617). **(Photo C)**

LSX-CT and LSX-DR heads

LSX-CT and LSX-DR heads require racing-style shaft mount rocker systems. GMPP offers a 1.85:1-ratio rocker arm kit (P/N 19201808). **(Photo D)**



A LS6 Rockers



B L92 Rockers

LS COMPATIBILITY — HEADS VS. BLOCKS

BLOCKS			HEADS							
Engine	P/N	Bore Size	12559855 Std LS1	12564824 Std LS6/LS2	12562319 Std LQ9	88958665 CNC LS6	88958622 CNC LS6	12562713 Std L76/L92	12598594 Std LS3	88958698 CNC L92
LS1/LS6	12561166	3.890"	Yes	Yes	Yes	Yes	Yes	No	No	No
LQ4/LQ9	12572808	4.000"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LS2/L76	12602691	4.000"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
L92/LS3	12623967	4.060"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LSA	12623968	4.060"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LS9	12621983	4.060"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LS7	19213580	4.125"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LS7*	25534427	4.125"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
C5R	12480030	4.120" - 4.160"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LSX Std. Deck ¹	19213964	3.890"	Yes	Yes	Yes	Yes	Yes	*	*	*
LSX Tall Deck ¹	19244059	3.890" - 4.200"	*	*	*	*	*	*	*	*
LSX376	19244055	4.085"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LSX454	19244057	4.185"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

No = not compatible Yes = direct compatibility * = 4.00" minimum bore ** = 4.125" minimum bore

¹ LSX Semi-Finished - needs finish bore/hone and deck height machined



BUILDER'S TIP

Ensuring Windage Tray Clearance on LS Engines

When building a custom LS engine combination, care must be taken to make sure the connecting rods don't interfere with the windage tray. To do that, set the windage tray over the installed rotating assembly carefully rotate

the crankshaft. If any of the connecting rods touch the tray, you'll have to use a specially designed windage tray for longer-stroke cranks. See page 211 for listings.



LS7 Rockers **C**



LSX-CT and LSX-DR Rocker Stand Pads **D**

HEAD-TO-BLOCK COMPATIBILITY

Because of their comparatively small bores – 3.89 inches – LS1 and LS6 engines can only use LS1, LS6 and LS2 heads. Using heads designed for larger engines will cause valve-to-block interference. The larger, 4.000-inch bore of the LS2 enables it to use LS1/LS6 heads, as well as L92-style heads (including LS3, LS9 and LSA). The 6.2L engines (LS3, L92, etc.) can use all production heads except for the LS7, while the 7.0L LS7 and C5R blocks can use any LS-Series head. LS7 blocks should be matched with heads designed for at least 4.100" bores; 4.125-inch bores are preferred.

Most LS production cylinder blocks share the same cylinder head bolt pattern and the same size head bolts – four 11mm bolts per cylinder (10 in total) and five upper, 8mm bolts. Early LS1 and LS6 engines used different-length 11mm bolts, but engines from 2004 and later use same-length bolts. LS9 engines use stronger, 12mm head bolts.

Non-production blocks, such as GM Performance Parts' LSX block and the C5R, offer the same head-bolt pattern as production blocks. All LS heads will bolt up to them, but care must be taken to select the most compatible heads based on the appropriate bore size. Because of their large bores, heads designed for at least 4.100-inch bores should be used and 4.125-inch bores are preferred, such as the L92/LS3 or LS7 heads otherwise, valve-to-block interference is an issue, as is sufficient cylinder sealing.

GM Performance Parts' new LSX cylinder heads use (10) 11mm and (13) 8mm head bolts, or eight more than a regular-production LS head. That's more than 50-percent more head bolts than production heads, offering a 21-percent increase in total clamping capability and 100-percent more clamping in the 12 o'clock and 6 o'clock positions, right where gaskets leak and blow out in power-adder applications.

LS COMPATIBILITY — HEADS VS. BLOCKS CONTINUED

BLOCKS			HEADS							
Engine	P/N	Bore Size	19201807 LSX-L92	19201805 LSX-LS3	19213963 LSX-LS9	12578450 Std CNC LS7	19201806 LSX-LS7	19166981 LSX-CT	19166979 LSX-DR	12480090 C5R head
LS1/LS6	12561166	3.890"	Yes	No	No	No	No	No	No	No
LQ4/LQ9	12572808	4.000"	Yes	Yes	Yes	No	No	No	No	No
LS2/L76	12602691	4.000"	Yes	Yes	Yes	No	No	No	No	No
L92/LS3	12623967	4.060"	Yes	Yes	Yes	No	No	No	No	No
LSA	12623968	4.060"	Yes	Yes	Yes	No	No	No	No	No
LS9	12621983	4.060"	Yes	Yes	Yes	No	No	No	No	No
LS7	19213580	4.125"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LS7*	25534427	4.125"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
C5R	12480030	4.120" – 4.160"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LSX Std. Deck	19213964	3.890"	**	**	**	**	**	**	**	**
LSX Tall Deck	19244059	3.890" - 4.200"	**	**	**	**	**	**	**	**
LSX376	19244055	4.085"	Yes	Yes	Yes	No	No	No	No	No
LSX454	19244057	4.185"	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

No = not compatible Yes = direct compatibility * = 4.000" minimum bore ** = 4.125" minimum bore



BUILDER'S TIP

Priming the LS Engine

If you're used to building classic Small-Block and Big-Block engines, you've probably used an electric drill or similar tool in the distributor hole to drive the oil pump and prime the engine prior to start-up. LS engines don't use distributors, so engine priming must be performed in other ways. First of all, fill the oil pump pickup with oil when assembling the engine. That will ensure a quantity

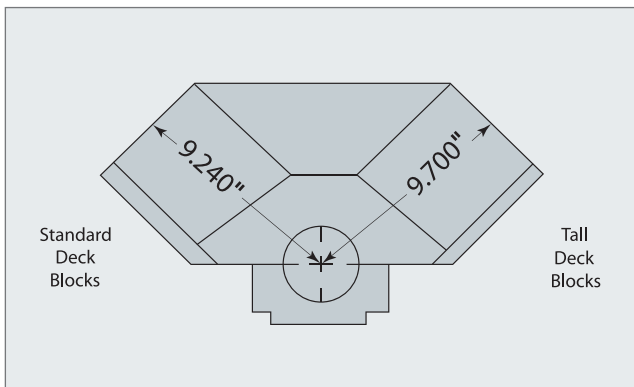
of oil is in the pump when the engine is started for the first time. Also, disconnect either the fuel supply or ignition system when it's time to start the engine and allow the engine to "roll over" for approximately 30 seconds. That allows oil to circulate through the engine without the engine running. Then, reconnect the fuel or ignition and fire up your LS engine!

Chevy LS-Series Blocks Quick Reference Chart

LS-SERIES BLOCKS

Origin	Part Number	Material	Deck Height	Bore	Main Bolt	Cap Material	Crankshaft Jnl Dia.	Oiling	Rear Main Seal	Max Stroke	Max Hp	Usage	Page Number
LS1/LS6	12561166	Alum	9.240	3.890"	6	Iron	Std. LS (2.56)	Wet/Dry	1 pc	4.00"	450	Street	186
LSA	12623968	Alum	9.240	4.065"	6	1045 Steel	Std. LS (2.56)	Wet/Dry	1 pc	4.50"	800	Street/Pro	187
LS9	12621983	Alum	9.240	4.065"	6	1045 Steel	Std. LS (2.56)	Wet/Dry	1 pc	4.50"	900	Street/Pro	187
LS2	12632691	Alum	9.240	4.000"	6	Iron	Std. LS (2.56)	Wet/Dry	1 pc	4.00"	450	Street	188
L92/LS3	12623967	Alum	9.240	4.065"	6	Iron	Std. LS (2.56)	Wet/Dry	1 pc	4.00"	525	Street	189
LS7	19213580	Alum	9.240	4.125"	6	PM	Std. LS (2.56)	Wet/Dry	1 pc	4.10"	550	Street	190
C5R	12480030	Alum	9.240	4.117-4.160"	6	8620 Steel	Std. LS (2.56)	Wet/Dry	1 pc	4.10"	900	Pro	191
LQ9	12572808	Iron	9.240	4.000"	6	Iron	Std. LS (2.56)	Wet/Dry	1 pc	4.00"	500	Street	188
LSX	19213964	Iron	9.260	3.880"	6	1045 Steel	Std. LS (2.56)	Wet/Dry	1 pc	4.25"	1500+	Street/Pro	193
LSX	19244059	Iron	9.720	3.880"	6	1045 Steel	Std. LS (2.56)	Wet/Dry	1 pc	4.50"	1500+	Street/Pro	193

DECK HEIGHT DIAGRAM



PRODUCTION CYLINDER BLOCKS

The LS-Series cylinder block is the foundation for the serious performance achievements that are driving a new generation of street and racing enthusiasts. Features include a deep-skirt casting (the block side extends below the crankshaft centerline); 6-bolt cross-bolted main caps, strong and lightweight aluminum alloy casting (most production blocks) and provisions for the latest in engine control management. The cam-in-block configuration brings inherent torque to every LS engine, with production-based blocks capable of supporting combinations of 500 horsepower or more. The Corvette ZR1's unique 6.2L block, for example, supports the engine's 638-horsepower rating. GM Performance Parts' high-performance iron LSX cylinder block supports more than 2000 forced-induction horses!

Whether you're building a mild street engine or an Outlaw racing engine, starting with a strong LS cylinder block brings the assurance that you'll make the power you need with a durable foundation.

A. 12561166

LS1/LS6 5.7L Bare Block

- Direct replacement for 2001-2004 LS1 and LS6 Corvette 5.7L
- Production 319-T5 aluminum block with iron sleeves
- Production oiling system
- 6-bolt iron main bearing caps
- 9.240" deck height
- Use LS1/LS6 cylinder heads only
- 3.890" finished bore (99.0mm)
- No provision for Active Fuel Management
- Tested to over 400 horsepower!



A LS1/LS6 5.7L Bare Block (rear)



A LS1/LS6 5.7L Bare Block (top)



A LS1/LS6 5.7L Bare Block (bottom)



LS9 6.2L Bare Block (rear) **B**



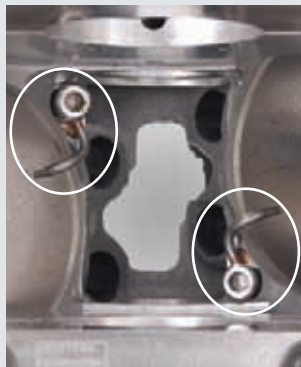
LS9 6.2L (bottom) **B**



LS9 6.2L (front) **B**



LS9 6.2L (rear, top) **B**



LSA 6.2L Piston Oilers (coolers) **B**

12623968

LSA 6.2L Bare Block (not shown)

- Direct replacement for 2009-2010 Cadillac CTS-V 6.2L supercharged engine
- Production cast-aluminum block with iron sleeves
- Production oiling system
- 6-bolt iron main bearing caps
- 9.240" deck height
- Not for use with LS7 or LSX-LS7 heads
- 4.065" finished bore (103.25mm)
- No provision for active fuel management
- Rated for more than 550 horsepower

B. 12621983

LS9 6.2L Bare Block

- Direct replacement for 2009-2010 Corvette ZR1 6.2L supercharged engine
- Production cast-aluminum block with iron sleeves
- Deck plate honed
- Production oiling system
- 6-bolt steel main bearing caps with dowel pins
- 9.240" deck height
- Not for use with LS7 or LSX-LS7 heads
- 4.065" finished bore (103.25mm)
- No provision for active fuel management
- Rated for more than 635 horsepower



LS Family Production Cylinder Blocks Continued

12572808

LQ9 Cast-Iron 6.0L Bare Block (not shown)

- Direct replacement for 1998-2004 LQ4 and LQ9 Truck and SUV 6.0L
- Production cast-iron block
- Production oiling system
- 6-bolt iron main bearing caps
- 9.240" deck height
- Use only LS1, LS6, LS2 or L92/LS3-style cylinder heads
- 4.000" finished bore (101.6mm)
- No provision for Active Fuel Management
- Great for stroker cranks for even more cubes
- Tested to over 500 horsepower!

12602691

LS2 Aluminum 6.0L Bare Block (not shown)

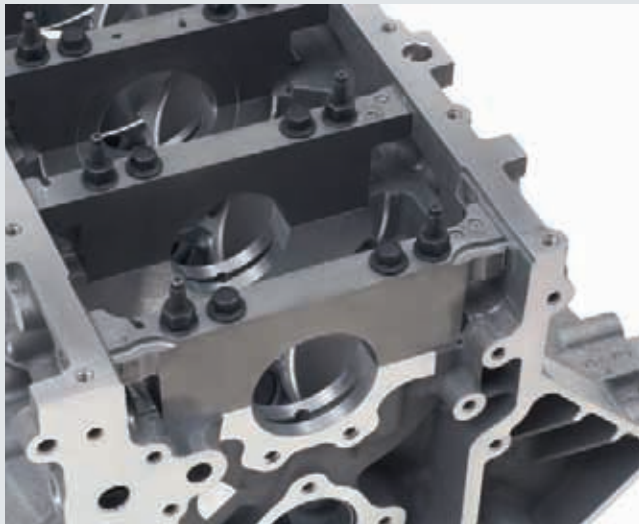
- Direct replacement for 2005-2008 LS2 Corvette, SSR, GTO 6.0L and TrailBlazer SS
- Production 319-T5 aluminum block with iron sleeves
- Production oiling system
- 6-bolt iron main bearing caps
- 9.240" deck height
- Use only LS1, LS6, LS2, L92/LS3-style cylinder heads
- 4.000" finished bore (101.6mm)
- Provisions for Active Fuel Management
- Great for stroker cranks for even more cubes
- Tested to over 450 horsepower!



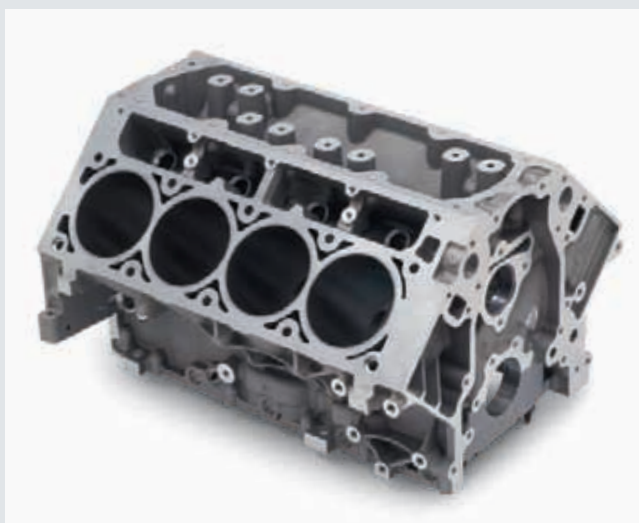
A LS3/L92 Aluminum 6.2L Bare Block (top)



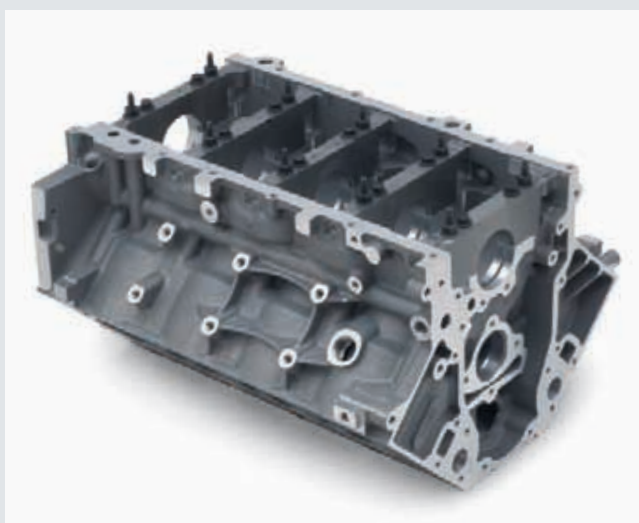
A LS3/L92 Aluminum 6.2L Bare Block (bottom)



LS3/L92 Aluminum 6.2L Bare Block (rear) **A**



LS3/L92 Aluminum 6.2L Bare Block (front) **A**



LS3/L92 Aluminum 6.2L Bare Block (bottom) **A**

A. 12584727

LS3/L92 Aluminum 6.2L Bare Block

- Direct replacement for '07-'09 L92, and '08-'09 LS3 6.2L
- Production aluminum block with iron sleeves
- Production oiling system
- 6-bolt iron main bearing caps
- 9.240" deck height
- Use only LS1, LS6, LS2, L92/LS3-style cylinder heads
- 4.065" finished bore (103.25mm)
- Provisions for Active Fuel Management
- Great for stroker cranks for even more cubes
- Tested to over 500 horsepower!



The LS-Series Blocks Continued

A. 19213580

LS7 7.0L Corvette Bare Block

- Direct replacement for 2006-2009 7.0L LS7 engine
- Production 319-T5 aluminum block with pressed-in iron sleeves
- Production oiling system
- 6-bolt dowel located steel main bearing caps
- 9.240" deck height
- For use with any LS or LSX series head
- 4.125" finished bore (104.78mm), deck plate honed
- Siamese cylinder bores for large bore size
- No provision for Active Fuel Management
- Based on C5R block development
- Tested to over 500 horsepower!

Parts required to complete your LS7 Block

PART NUMBER	QTY	DESCRIPTION
12570471	1	Valley Cover
12598292	1	Front Cover Assembly
21007339	4	Plug
12556437	1	Camshaft Retainer
11609289	1	Plug
11610259	1	Plug, Cylinder Head
11515756	5	M8 x 1.25 Flanged Hex Head Bolt
12570326	4	Dowel, Cylinder Head Locating
12572013	1	Rear Cover Assembly
12573460	1	Oil Plug
12596334	1	Windage Tray
11588426	2	Plug
09427693	4	Plug
01453658	2	Dowel, Bellhousing Locating
12561663	1	Plug
12573107	1	Oil Pressure Sensor
12585546	1	Crankshaft Position Sensor

25534412

Oil Hose Adapters (shown on page 194)

- Kit adapts the production LS7 Oil Pan to aftermarket AN style hoses for aftermarket dry sump oil tanks
- Bolts directly to LS7 Oil Pan, and has AN male outlet for AN -12 fittings
- Includes 1 adapter, 2 fittings, 2 bolts, and 2 sealing gaskets



A LS7 7.0L Corvette Bare Block (bottom, rear)



A LS7 7.0L Corvette Bare Block (bottom, front)



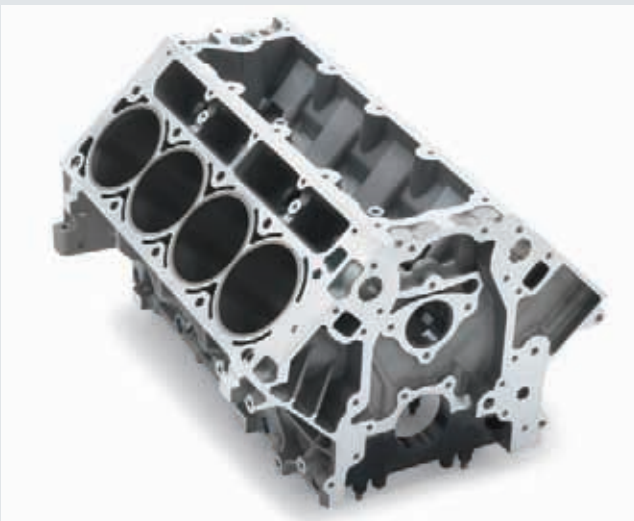
A LS7 7.0L Corvette Bare Block (rear)



Aluminum C5R Racing Block (bottom, rear) **B**



Aluminum C5R Racing Block (bottom, front) **B**



Aluminum C5R Racing Block (front) **B**

B. 12480030

Aluminum C5R Racing Block

The ultimate GM aluminum LS block, the C5R was originally designed for Chevrolet's factory-backed Corvette racing program. It was developed to support more than 440 cubic inches and up to 900 horsepower – and it proved itself by powering the Corvette team to wins at LeMans, Daytona and nearly every track they encountered. This is a non-production, purpose-built cylinder block manufactured with proprietary materials and machined to the highest tolerances – and using premium, racing-spec hardware. If you're looking for the ultimate aluminum cylinder block to support your horsepower desires, the race-proven C5R is it!

- Premium "hipped"* and X-rayed 356-T6M aluminum-alloy block casting
- 9.240" deck height
- Production-style oiling system
- 6-bolt SAE 8620 dowel-located steel main bearing caps
- 4340 premium map cap fasteners
- For use with any LS or LSX series head
- Unique cylinder liner material for maximum durability
- Siamesed cylinders to support larger bores
- 4.117" finished bore
- 4.160" maximum bore
- Fully blueprinted and squared
- Production camshaft location and cam bores
- Includes 4340 premium head studs
- Anodized aluminum O-ring core plugs
- No Active Fuel Management provisions
- Supports more than 900 horsepower

** HIP is the acronym for Hot Isostatic Pressure. This process puts the blocks in a sealed vessel where a vacuum is first used to remove room air and any possible contaminants. The vessel is filled with high pressure nitrogen (up to 30,000-psi) and then heated to the required temperature and sustained for a determined amount of time. The cooling process is also a controlled procedure to insure maximum strength and proper heat treat. This extreme high pressure and heat removes almost 100% of the internal porosities that are generated during the casting process. The material integrity, strength and fatigue life increases significantly.*





LSX BOWTIE BLOCK

Delivering the seemingly impossible combination of professional racing-level strength and entry-level affordability, the LSX Bowtie Block is the next revolution in high-performance engine-building. This durable iron-block casting is based primarily on GM's production LS7 block, but designed with more material in key areas – including a thicker deck and bores – to support displacements of 454 cubic inches or more, and unique six-bolts-per-cylinder head-clamping capability that enables forced-induction and nitrous combinations of greater than 2000 horsepower.

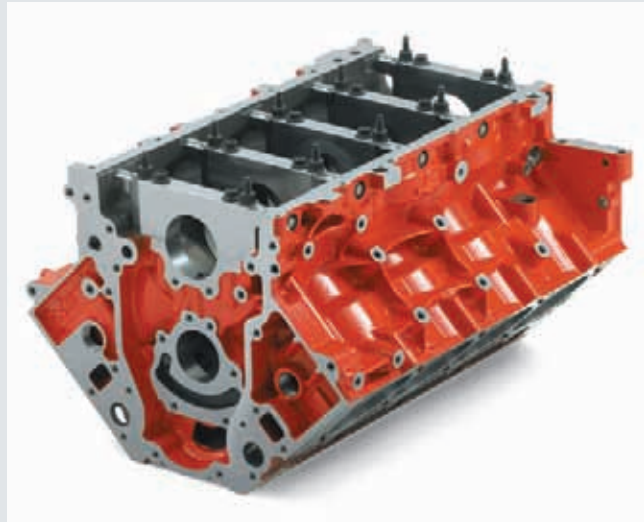
Because the LSX Bowtie block is based on production LS blocks, all of the LS-Series Gen IV cylinder heads, crankshafts, oil pans, camshafts, and accessories bolt right up to it. There is also a tall-deck version for building even larger engines. GM Performance Parts delivers the LSX Bowtie Block semi-finished, allowing you to finish it to your needs. Whether you're building a "tame" 500-horse street engine for your hot rod or a 1700 horsepower turbo engine for an Outlaw drag racer, the LSX Bowtie Block is the foundation for an unbeatable combination – at an unbeatable price!

LSX Bowtie Block specs and features include:

- CNC-machined cast iron block
- True priority main oiling
- 6-head bolts per cylinder
- Standard 4.400" bore spacing
- Extra-thick siamese cylinder bores, ready for final honing
- Semi-finished, machined thicker decks
- LS7-style, 6-bolt dowel-located billet main bearing caps
- Wet-sump and dry-sump oiling capability
- Production-style deep-skirt head bolt holes
- Production bolt hole and thread sizes
- Maintains production exterior accessory mounting provisions
- Front motor plate mounting holes added
- Additional material cast around cam bearings for greater strength
- 8mm exterior/interior fifth- and sixth-head bolt holes
- All five cam bores machined for bearing P/N 19167218 (supplied)
- Standard 0.842" lifter bores
- Accommodates all LS oil pumps and oil pans
- External oil pump feed (rear of block)
- Main web bay-to-bay breathing holes to support greater horsepower
- Includes unique cam retainer, rear cover, lifter retainers and production-style replacement cam bearings

For the advanced LSX competition engine builder, you will fully enjoy reading the following features of the new LSX Bowtie Block:

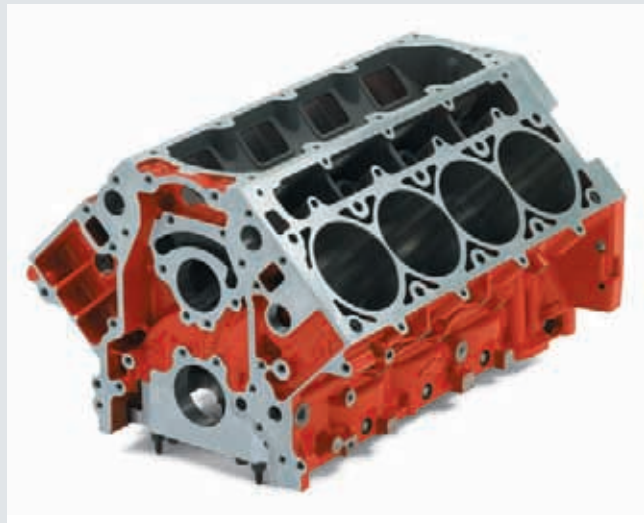
- Front oil feed holes can be plugged/restricted for mechanical flat tappet or mechanical roller lifter applications
- Can be machined safely to 9.200" deck height
- Maximum 4.200" bore at .200" minimum wall thickness (naturally aspirated applications)
- Head bolt holes can be machined for 1/2" studs
- Cam bores can be machined to accept 60mm roller bearings
- Can be machined for larger diameter lifters and/or 1.060" bronze bushings
- Front oil feed lines can be plugged and external oil pump and/or aftermarket dry sump systems can be used via oil pump feed at rear of block – may be required with certain large stroke/aluminum rod combinations
- Belt cam drive systems can be accommodated – some machining will be required
- Front motor plate can be used for racing chassis applications (sprint car, drag racing, truck pulling, etc.)
- Threaded water plugs can be used for external heaters or coolers
- Extra stock for main bearing align-honed



A LSX Bowtie Block (bottom, front)



A LSX Bowtie Block (bottom, rear)



A LSX Bowtie Block (front)



LSX Bowtie Block (bottom, front) **A**



Lifter Boss Detail **A**



Bay-to-Bay Breathing Pocket Detail **A**



LSX Tall Deck Block **B**

Semi-finished Blocks

A. 19213964

LSX Bowtie Block (Standard Deck)

- 3.880" finished siamese cylinder bores (ready to be finish-honed)
- 9.260" semi-finished standard deck height (ready to be decked)
- 4.250" maximum stroke (professional engine builders only!)
- Capable of 364- to 482-cubic-inch displacements
- Orange powder-coated finish
- Accepts all LS and LSX Series heads, cranks, cams, etc.
- Approximate finished weight is 225 pounds

B. 19244059

LSX Tall Deck Block

- 3.880" finished siamese cylinder bores (ready to be finish-honed)
- 9.720" semi-finished standard deck height (ready to be decked)
- 4.500" maximum stroke (small base circle camshafts required)
- Capable of 364- to 500-cubic-inch displacements or more!
- Orange powder-coated finish
- Accepts Gen IV LS and LSX Series heads, cranks, cams, etc.
- Approximate finished weight is 250 pounds

LSX Blocks include the following:

19244460	Cam Thrust Plate
19166179	Rear Cover
19166182	Tappet Guides

Other service parts for your LSX Block:

19166178	Cam Thrust Plate, O-Ring
19166180	Rear Cover, O-Ring
19166181	Rear Cover, O-Ring Seal
19167382	0.5mm Cam Oversize Bearing
19167383	1mm Oversize Cam Bearing
19211434	Main Cap Dowel (10-piece kit)
19166178	Cam Plate Gasket

Finished Blocks

19244055

LSX376 Production Block (not shown)

- 4.065" bore
- Fully CNC machined
- Deck plate honed
- Align-honed main bearings
- Deck height 9.240 (production)
- Billet-steel main caps
- Includes all hardware
- Used in LSX 376 crate engine

19244057

LSX454 Production Block (not shown)

- 4.185" bore
- Fully CNC machined
- Deck plate honed
- Align-honed main bearings
- Deck height 9.240 (production)
- Billet-steel main caps
- Includes all hardware
- Used in LSX454 crate engine



CYLINDER BLOCK COMPONENTS

A. 19153789

Bare Block Completion Kit, Gen III

- Includes all parts to complete a Gen III bare block

The kit includes:

PART NUMBER	QTY	DESCRIPTION
12577927	1	Valley Cover
12561211	1	Cam Sensor
12561243	1	Front Cover (with seal)
1453658	2	Transmission Alignment Dowel
12589016	1	Cam Retainer Plate
11561455	4	Cam Retainer Bolts
12588670	1	Timing Chain Damper
12560228	1	Crankshaft Sensor
12570326	4	Head Locating Dowels
12551162	4	Lifter Guide
12615666	1	Rear Cover (with seal)
varies	-	Required Water and Oil Plugs
varies	-	Required Mounting Bolts



A Bare Block Completion Kit, Gen III

B. 25534412

Oil Hose Adapters

- Kit adapts the production LS7 Oil Pan to aftermarket AN style hoses for aftermarket dry sump oil tanks
- Bolts directly to LS7 Oil Pan, and has AN male outlet for AN -12 fittings
- Includes 1 adapter, 2 fittings, 2 bolts, and 2 sealing gaskets

89017877

Main Bearing (not shown)

- Positions 1,2,4,5
- Requires 4 per engine
- For LS7 and LS9 engines



B Oil Hose Adapters

C. 89017808

Main Bearing

- Thrust bearing, position 3
- For LS7 and LS9 engines

88894271

Main Bearing (not shown)

- Positions 1,2,4,5
- Requires 4 per engine
- For non-LS7 engines

89017572

Main Bearing (not shown)

- Thrust bearing, position 3
- For non-LS7 engines



C Main Bearing



Front Timing Cover **D**



LS Front Distributor Drive Cover **E**



Rear Block Cover **F**

FRONT COVERS

12561243

LS1, LS6 Front Timing Cover (not shown)

- For LS1 and LS6 engines
- No cam sensor

D. 12600325

LS2, LS3 Front Timing Cover

- Includes seals and bolts
- For LS2 and LS3 engines
- Gen IV cam sensor included

12616491

L92 Front Timing Cover (not shown)

- Includes seals and bolts
- For engines with VVT such as L92
- Gen IV cam sensor included

12598292

LS7 Front Timing Cover (not shown)

- Includes seals and bolts
- Also fits LS9 engines
- Required for 2-stage oil pump clearance
- Gen IV cam sensor included

E. 88958679

LS Front Distributor Drive Cover

- Assembly is manufactured for applications where a 4-bbl carburetor and distributor are required
- For all LS-Series engines except LS7 and LS9

NOTE: Distributor and mechanical fuel pump not included. Uses Small-Block Ford-style distributor and mechanical fuel pump. Special water pump, accessory drive and damper required.

12574294

Front Cover Gasket (not shown)

- For all LS-Series engines

12585673

Front Crank Seal (not shown)

- For all LS-Series engines

11515758

Front Cover Bolt (not shown)

- Requires 8 per engine
- For all LS-Series engines

REAR COVERS

F. 12615666

Rear Block Cover

- Includes seals and bolts
- For all production LS engine blocks (will not work on LSX blocks)

19166179

LSX Rear Block Cover (not shown)

- Does not include bolts or seals
- For use on LSX blocks only

89060436

Rear Crank Seal (not shown)

- For all LS-Series engines



LS-SERIES CYLINDER HEADS

Part Number	Description	Material Size	Port Size	Valve Angle	Chamber Vlv	Int Vlv	Exh Type	Int Port Type	Ex Port Type	Rocker	Notes Number	Page
12629049	Bare LS2 & LS6	Aluminum	210	15 deg	64.5	2.000	1.550	Cathedral	Std LS	Bolt-down	Bare LS2/LS6	N/S
12576063	Stock LS2 Assembly	Aluminum	210	15 deg	64.5	2.000	1.550	Cathedral	Std LS	Bolt-down	Solid stem valves	197
88958622	CNC LS6	Aluminum	250	15 deg	61.9	2.000	1.550	Cathedral	Std LS	Bolt-down	11.2 compression	196
88958665	CNC LS6	Aluminum	250	15 deg	65	2.000	1.550	Cathedral	Std LS	Bolt-down	10.5 compression	196
88958765	CNC LS2	Aluminum	250	15 deg	64.5	2.000	1.550	Cathedral	Std LS	Bolt-down	Solid stem valves	197
12629054	Bare L92	Aluminum	260	15 deg	70	2.165	1.590	L92	Std LS	Bolt-down	Bare L92	N/S
12629064	Stock L92	Aluminum	260	15 deg	70	2.165	1.590	L92	Std LS	Bolt-down	Solid stem valves	197
12629063	Stock LS3	Aluminum	260	15 deg	68.4	2.165	1.590	L92	Std LS	Bolt-down	Hollow/solid	197
12629051	Bare LS3	Aluminum	260	15 deg	70	2.165	1.590	L92	Std LS	Bolt-down	Bare LS3	197
12578450	Bare LS7	Aluminum	270	12 deg	70	2.200	1.610	LS7	Std LS	Bolt-down	Bare LS7	198
12578449	Stock LS7	Aluminum	270	12 deg	70	2.200	1.610	LS7	Std LS	Bolt-down	Titanium/sodium-filled valves	198
25534393	C5R	Aluminum	210	11 deg	38	2.180	1.630	C5R	Std LS	Shaft	As-cast, no seats/guides	N/S
19201807	LSX-L92 Small Bore	Aluminum	260	15 deg	70	2.000	1.550	L92	Std LS	Bolt-down	Solid/solid valves	200
19201805	LSX-LS3	Aluminum	260	15 deg	70	2.160	1.590	L92	Std LS	Bolt-down	Hollow/solid valves	200
19201806	LSX-LS7	Aluminum	270	12 deg	70	2.200	1.610	LS7	Std LS	Bolt-down	Titanium/sodium-filled valves	201
19257879	Bare LSX-LS7	Aluminum	270	12 deg	70	2.200	1.610	LS7	Std LS	Bolt-down	Fully CNC-machined	200
19257881	LSX-LS7 Assembly	Aluminum	270	12 deg	70	2.200	1.610	LS7	Std LS	Bolt-down	Fully CNC-machined bare head	201
19166981	LSX-CT	Aluminum	302	11 deg	45	2.200	1.610	LSX-CT	LSX-CT/DR	Shaft	Fully CNC-machined bare head	201
19166979	LSX-DR	Aluminum	313	11 deg	50	2.250-2.280	1.600-1.650	LSX-DR	LSX-CT/DR	Shaft	Fully CNC-machined bare head	202

THE LS FAMILY PRODUCTION AND C5R ALUMINUM HEADS

Great cylinder-head airflow has been a key enabler of the LS-Series' exceptional performance. GM Performance Parts delivers those power-building attributes to you with a range of production-style aluminum heads – from the LS6 heads for smaller-displacement engines to LS7 style heads for 427-inch-and-larger combinations, our aluminum heads benefit from General Motors' extensive research and development program, ensuring maximum airflow without compromises. In fact, many professional builders use our heads as straight bolt-ons, with no further machining. Many of our assembled heads use premium machining and materials, including CNC finishing and porting, along with lightweight, hollow-stem valves, sodium-filled exhaust valves and – on some heads – lightweight titanium intake valves.

Aluminum LS Family Head Technical Notes:

- Manufactured from 319-T5 aluminum alloy
- High-efficiency combustion chambers
- Symmetrical intake and exhaust ports
- Angled spark plugs (14mm; 5/8" hex; 3/4" reach; taper-seat plugs)
- 15° valve angle (except C5R and LS7)
- Bolt-down-type rocker arms (except C5R)
- Center-bolt valve cover hold-downs
- Fits Gen III and Gen IV Small-Blocks only*

A. 88958665

CNC-Ported LS6 Cylinder Head Assembly

- CNC-ported aluminum performance head
- 2.000" hollow stem intake, and 1.550" sodium-filled exhaust valves
- .570" max valve lift
- 250cc CNC'd cathedral-port intake ports
- 85cc CNC'd D-shaped exhaust ports
- 65cc CNC'd combustion chambers

88958622

CNC-Ported LS6 Cylinder Head Assembly (not shown)

- CNC-ported aluminum performance head
- 2.000" hollow stem intake, and 1.550" sodium-filled exhaust valves
- .570" max valve lift
- 250cc CNC'd cathedral-port intake ports
- 85cc CNC'd D-shaped exhaust ports
- 61.9cc CNC'd combustion chambers

Heads P/N 88958665 and P/N 88958622 are assembled with the following components:

12565311	Intake Valves	10166344	Valve Spring Retainers
12565312	Exhaust Valves	12482063	Intake Valve Stem Seals
12586484	Valve Springs	12482062	Exhaust Valve Stem Seals
10166345	Valve Locks		

* GM Performance Parts heads will not fit 4.8L and 5.3L engines due to their smaller bore sizes.



A CNC-Ported LS6 Cylinder Head Assembly (exhaust)



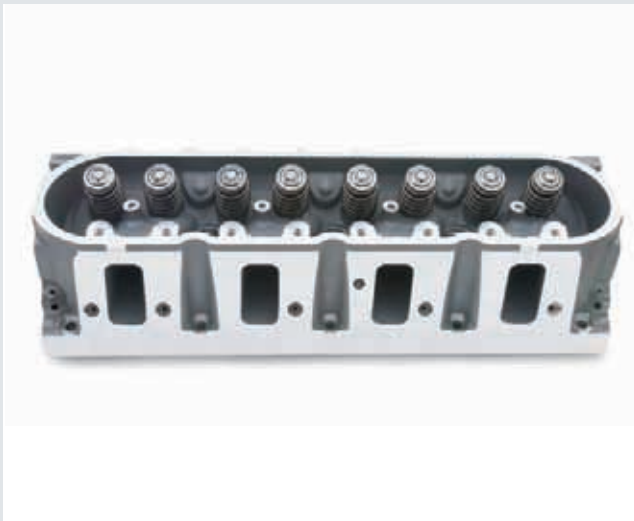
A CNC-Ported LS6 Cylinder Head Assembly (intake)



A CNC-Ported LS6 Cylinder Head Assembly (combustion chamber)



L92 Cylinder Head Assembly (exhaust) **B**



L92 Cylinder Head Assembly (intake) **B**



L92 Cylinder Head Assembly (combustion chamber) **B**

12576063  

LS2 Cylinder Head Assembly (not shown)

- Lower cost alternative to the LS6 head
- 2.000" solid stem intake, and 1.550" solid stem exhaust valves
- .570" max valve lift
- 210cc cathedral-port intake ports
- 70cc D-shaped exhaust ports
- 65cc combustion chambers
- Bare head P/N 12615363 available separately
- Upgrade the valves to LS6 hollow stem valves with P/N 17801930

Heads P/N 12576063 is assembled with the following components:

12563063	Intake Valves	10166344	Valve Spring Retainers
12563064	Exhaust Valves	12482063	Intake Valve Stem Seals
12586484	Valve Springs	12482062	Exhaust Valve Stem Seals
10166345	Valve Locks		

LS2 and LS6 Head Flow Data:

Lift	0.200"	0.300"	0.400"	0.500"	0.600"
Stock intake	136	195	237	260	260
Stock exhaust	104	135	157	169	180
CNC intake	147	215	262	290	307
CNC exhaust	111	155	198	210	218

B. 12615355  

L92 Cylinder Head Assembly

- Aluminum performance head
- Fits any LS family engine with 4.000" bore or larger
- 2.165" solid stem intake, and 1.590" solid stem exhaust valves
- .510" max valve lift
- As-cast L92 style intake ports
- D-shaped exhaust ports
- As-cast combustion chambers

Head P/N 12615355 is assembled with the following components:

12590771	Intake Valves	10166344	Valve Spring Retainers
12582719	Exhaust Valves	12482063	Intake Valve Stem Seals
12589774	Valve Springs	12482062	Exhaust Valve Stem Seals
10166345	Valve Locks		

L92 Head Flow Data (4.000" Bore):

Lift	0.200"	0.300"	0.400"	0.500"	0.600"
Intake	151	208	256	294	316
Exhaust	111	152	174	183	189

12629063 

LS3 Cylinder Head Assembly (not shown)

- Aluminum performance head
- Fits any LS family engine with 4.000" bore or larger
- 2.165" hollow stem intake, and 1.590" solid stem exhaust valves
- .570" max valve lift
- As-cast L92 style intake ports
- D-shaped exhaust ports
- As-cast combustion chambers
- Uses bare head P/N 12629051

Head P/N 12629063 is assembled with the following components:

12569427	Intake Valves	10166344	Valve Spring Retainers
12582719	Exhaust Valves	12482063	Intake Valve Stem Seals
12586484	Valve Springs	12482062	Exhaust Valve Stem Seals
10166345	Valve Locks		

*GM Performance Parts heads will not fit 4.8L and 5.3L engines due to their smaller bore sizes.

A. 12578449 ⓘ ⓘ

LS7 Cylinder Head Assembly

- 356-T6 aluminum head
- Fully CNC'd ports and chambers
- LS7 rectangle port design
- Assembled with 2.200" titanium intake and 1.610" sodium-filled exhaust valves
- 12° valve angle
- Minimum 4.100" bore
- 270cc CNC'd intake ports, 85cc CNC'd exhaust ports
- 70cc CNC'd combustion chambers
- Capable of over 600 horsepower
- Bare head P/N 12578450 available separately

Head P/N 12578449 is assembled with the following components:

12591644	Intake Valves	12596508	Valve Spring Retainers
12578455	Exhaust Valves	12482063	Intake Valve Stem Seals
12586484	Valve Springs	12482062	Exhaust Valve Stem Seals
10166345	Valve Locks	12596509	Intake Valve Lash Cap

LS7 Head Flow Data:

Lift	0.100"	0.200"	0.300"	0.400"	0.500"	0.550"	0.600"	0.700"
Intake	71	145	222	271	315	332	348	352
Exhaust	60	120	159	192	207	214	219	221

12626958 ⓘ

LSA Cylinder Head Assembly (not shown)

- CTS-V 6.2L production cylinder head assembly
- High-strength aluminum casting for supercharged application
- Premium steel intake and exhaust valves
- Completely Assembled

NOTE: Uses ten 8mm & twenty 11mm head bolts

B. 12621774 ⓘ

LS9 Cylinder Head Assembly

- ZR-1 Corvette production cylinder head assembly
- Extra-strength casting with re-enforced webbing for supercharged engines
- Thicker deck surface for minimal distortion
- Titanium intake and hollow sodium-filled exhaust valves

NOTE: Uses ten 8mm & twenty 12mm head bolts – for use on LS9 blocks only



A LS7 Cylinder Head Assembly (exhaust)



A LS7 Cylinder Head Assembly (intake)



A LS7 Cylinder Head Assembly (combustion chamber)



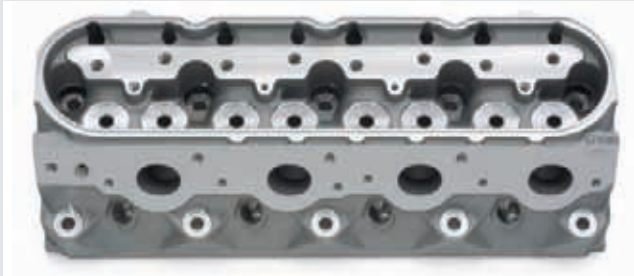
B LS9 Cylinder Head (exhaust)



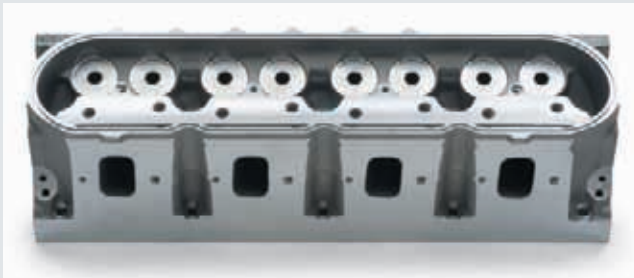
B LS9 Cylinder Head (intake)



LS9 Cylinder Head (combustion chamber) **B**



Bare C5R Racing Cylinder Head (exhaust) **C**



Bare C5R Racing Cylinder Head (intake) **C**



Bare C5R Racing Cylinder Head (combustion chamber) **C**

C. 25534593 ⓘ

Bare C5R Racing Cubed Cylinder Head

- The images (B) to the left represent a machined version of the P/N 25534593 cubed (unmachined) product. GMPP does not supply a fully machined version of the C5R head. Image is for reference only.
- 355-T7 "as-cast" Aluminum racing head
- Professional porting and machining of combustion chambers required
- No seats or guide machining
- C5R rectangle-port design – requires aftermarket rectangle-port intake manifolds
- Designed for big bore (4.100" min) LS7/C5R/LSX blocks
- 210cc "as-cast" intake ports
- 70cc "as-cast" exhaust ports, same as production LS6
- 30cc "as-cast" combustion chambers
- All fasteners are metric
- Capable of over 800 horsepower!
- Standard LS exhaust port design

ⓘ CYLINDER HEADS: ADDITIONAL REQUIRED COMPONENTS

Part Number	Gaskets (Quantity)	Bolts (Quantity)	Spark Plug	Engine Application
12576063	12589227 (2) OR 19170418	11562524 (20), 12558840 (10)	12571164	MY05/06/07 LS2 and Carb LS2
12615363	12589226 (2) OR 19170418	11562524 (20), 12558840 (10)	12571164	MY07 LS4
12615363	12589226 (2) OR 19170418	11588291 (16), 12560745 (4), 12558840 (10)	12571164	MY04/05 LS6
12578449	12582179 (2) OR 19170419	11562524 (20), 12558840 (10)	12571165	MY06/07 LS7
12582713	12610046 (2) OR 19170419	11562524 (20), 12558840 (10)	12571164	MY07 L92
12582714	12610046 (2) OR 19170419	11562524 (20), 12558840 (10)	12571164	MY07 L92
88958622	12589226 (2) OR 19170418	11562524 (20), 12558840 (10)	12571164	CNC LS6
88958665	12589226 (2) OR 19170418	11562524 (20), 12558840 (10)	12571164	CNC LS6
88958698	12610046 (2) OR 19170418	11562524 (20), 12558840 (10)	12571164	CNC L92
25534393	12582179 (2) OR 19170419	11562524 (20), 12558840 (10)	12571164	C5R

LSX CYLINDER HEADS

Extending the performance range of the LSX platform are GM Performance Parts' new, 6-bolt LSX cylinder heads. Many are capable of flowing more than 400 cfm and their 6-bolts-per-cylinder clamping design gives them bomb-proof strength. Your horsepower-building potential is nearly unlimited with LSX heads.

These aluminum masterpieces of performance feature port and chamber designs based on popular and performance-proven production-style heads, such as the LS3/L92 and LS7 heads. They are easily identified by the engraved LSX logo on the ends.

All LSX heads are made of 356-T6 aluminum and feature a 5/8" thick deck that allows plenty of room for builder-specified combinations. Additional features include:

- Uses 11mm (10) and 8mm (13) head bolts (not included, see drawing on page 203)
- Accommodates production valvetrain components (except for Drag Race and Circle Track heads)
- Includes premium beehive-type valve springs (except for Drag Race and Circle Track heads)
- Extra material cast in the port areas to accommodate professional porting
- Valve guides for 8mm valve stems

Racing-specific LSX-DR (Drag Racing) and LSX-CT (Circle Track) heads feature raised runner designs and other unique features designed to maximize performance at the track.

LSX Street Heads

Four LSX street head configurations are offered: The LSX-LS7 head, the LSX-LS3 head, the LSX-LS9 head and the LSX-L92 Small Bore head. The LSX-L92 head features smaller combustion chambers that are compatible with smaller-bore LS1 and LS6 engines. The street heads accommodate valve springs with up to 1.55" diameter bases, but can be machined for larger springs.

19201807 **NEW**

LSX-L92 Small Bore Cylinder Head (not shown)

- LS3/L92 Port Configuration
- "As cast" runners and combustion chamber
- 15 Degree valve angle
- Assembled with 2.000" intake and 1.555" exhaust valves
- 250cc intake port and 80cc exhaust port
- 70cc combustion chamber
- Intake flow – 280 cfm@ .600" lift / Exhaust flow – 180 cfm@ .700" lift
- Beehive valve springs
- Uses LS3/L92 style rocker arms (non-offset)
- 3.890" minimum bore size
- Uses LS3/L92 style intake manifold

19201805

LSX-LS3 Cylinder Head (not shown)

- L92 style rectangle port design
- Assembled with 2.165" hollow stem intake and 1.590" solid stem exhaust valves
- 15° valve angle
- Minimum 4.000" bore
- 260cc "as-cast" intake ports, 80cc "as-cast" exhaust ports
- 70cc "as-cast" combustion chambers
- Uses LS3 rocker arms/LS7 bolts

19257879 **NEW**

LSX-LS7 Bare Cylinder Head (not shown)

- Fully CNC Ported
- 6-bolt per cylinder bolt pattern
- LS7 style rectangle port design
- 12° valve angle
- Minimum 4.100" bore
- 270cc "as-cast" intake ports, 85cc "as-cast" exhaust ports
- 70cc "as-cast" combustion chambers
- Handles .650" lift with premium springs
- Uses LS7 rocker arms/LS7 bolts



A LSX-LS7 Cylinder Head (exhaust)



A LSX-LS7 Cylinder Head (intake)



A LSX-LS7 Cylinder Head (combustion chamber)

LSX-CT Cylinder Head (exhaust) **B**LSX-CT Cylinder Head (intake) **B**LSX-CT Cylinder Head (combustion chamber) **B****19257881 NEW** **LSX-LS7 Cylinder Head Assembly (not shown)**

- 6-bolt per cylinder bolt pattern
- LS7 style rectangle port design
- Assembled with 2.200" titanium intake and 1.610" sodium-filled exhaust valves
- 12° valve angle
- Minimum 4.100" bore
- 270cc "as-cast" intake ports, 85cc "as-cast" exhaust ports
- 70cc "as-cast" combustion chambers
- Handles .650" lift with premium springs
- Uses LS7 rocker arms/LS7 bolts
- Uses P/N 19166977 bare head (shown)

A. 19201806 **LSX-LS7 Non CNC Cylinder Head Assembly**

- Rough machined seats and guides
- Ready for custom porting

19166977**LSX-LS7 Non CNC Bare Cylinder Head (not shown)**

- Used in P/N 19201806

19213963**LSX-LS9 Cylinder Head (not shown)**

- L92 style rectangle port design
- Assembled with 2.165" titanium intake and 1.590" sodium-filled exhaust valves
- 15° valve angle
- Minimum 4.000" bore
- 260cc "as-cast" intake ports, 80cc "as-cast" exhaust ports
- 70cc "as-cast" combustion chambers
- Uses LS3 rocker arms/LS7 bolts

LSX-CT and LSX-DR Heads

The LSX-CT (Circle Track) and LSX-DR (Drag Racing) cylinder heads feature raised-runner designs for improved airflow that supports sustained high-rpm performance. Intake port configuration is similar to the competition-derived C5R head, but the ports are raised an amazing 10mm and the intake manifold bolt pattern is spread to accommodate additional port configurations. Additional features include:

- 11-degree valve angle (same as C5R head)
- Accommodates up to 1.660" diameter valve springs
- Raised rocker rails
- Requires shaft-mount rockers (see P/N 19201808)
- May require special valve covers to clear shaft-mount rockers
- Provisions for down-nozzle machining
- 9° intake manifold angle – requires new LSX DR or LSX CT intake manifolds
- Unique LSX-CT/DR exhaust bolt pattern – use header flange P/N 19257453

B. 19166981**LSX-CT Cylinder Head**

- Fully CNC-ported
- 356-T6 aluminum racing head
- 5/8" thick deck
- LSX-CT rectangle-intake port design – requires LSX-CT or LSX-DR intake manifold
- LSX-CT/DR spread-port exhaust port pattern
- Cast-in down-nozzle bosses (not machined)
- Designed for 2.200" intake and 1.610" exhaust valves
- Machined for 1.625" valve springs
- 11° valve angle
- Minimum 4.125" bore
- 302cc CNC'd intake ports
- 109cc CNC'd exhaust ports
- 45cc CNC'd combustion chambers
- Requires 19201808 shaft-mount Rocker Kit
- Capable of over 850 naturally aspirated horsepower!

19202985**CT Non-CNC Cylinder Head (not shown)**

- Rough machined seats and guides
- Ready for custom porting



LSX Cylinder Heads Continued

A. 19166979 NEW 

LSX-DR Cylinder Head

- Fully CNC ported
- 356-T6 aluminum racing head
- 5/8" thick deck
- LSX-DR rectangle intake port design – requires LSX-CT or LSX-DR intake manifold
- LSX-CT/DR spread port exhaust port pattern
- Cast-in down-nozzle bosses (not machined)
- Designed for up to 2.280" intake and 1.620" exhaust valves (4.165" minimum bore)
- Machined for 1.660" valve springs
- 11° valve angle
- Minimum 4.125" bore
- 313cc CNC'd intake ports
- 116cc CNC'd exhaust ports
- 50cc CNC'd combustion chambers
- Requires 19201808 shaft-mount Rocker Kit
- Capable of over 900 naturally aspirated horsepower!

NEW



A LSX-DR Cylinder Head (exhaust)

NEW

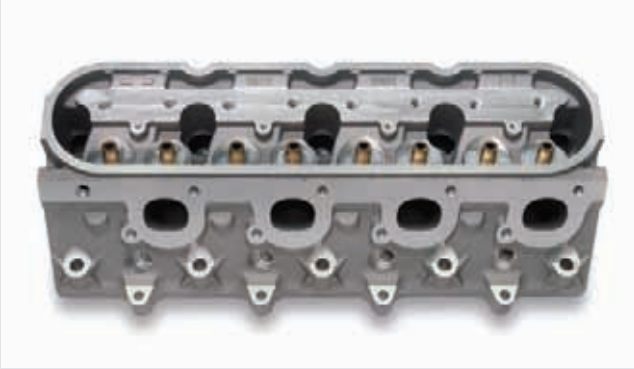


A LSX-DR Cylinder Head (intake)

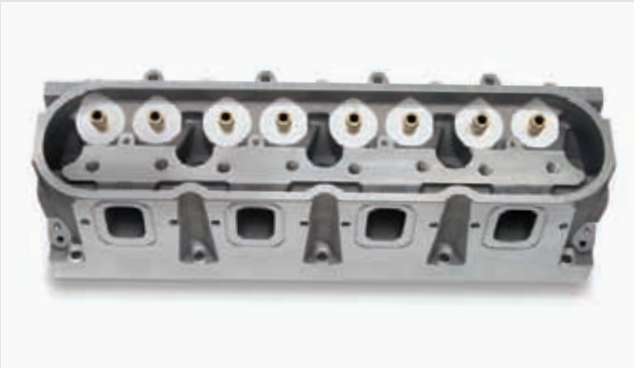
NEW



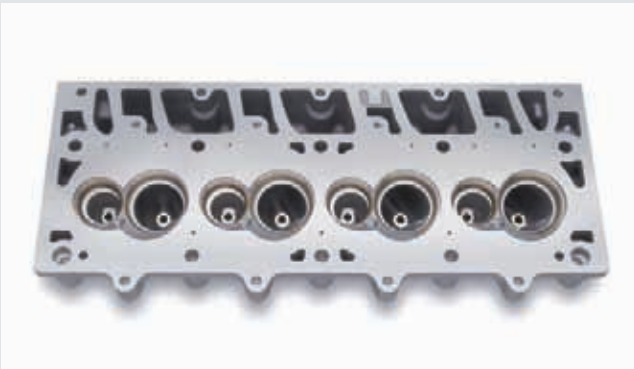
A LSX-DR Cylinder Head (combustion chamber)



LSX-DR Non-CNC Cylinder Head (exhaust) **B**



LSX-DR Non-CNC Cylinder Head (intake) **B**



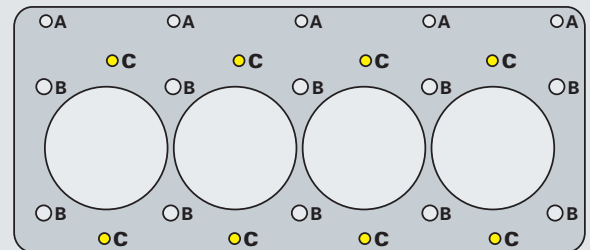
LSX-DR Non-CNC Cylinder Head (combustion chamber) **B**

B. 19202986

LSX-DR Non-CNC Cylinder Head

- Rough machined seats and guides
- For cylinder head porters to work their magic!

LS/LSX HEAD-BOLT PATTERNS



A	Standard LS	8mm	Bolt/Stud
B	Standard LS	11mm	Bolt/Stud
C	LSX	8mm	Bolt/Stud



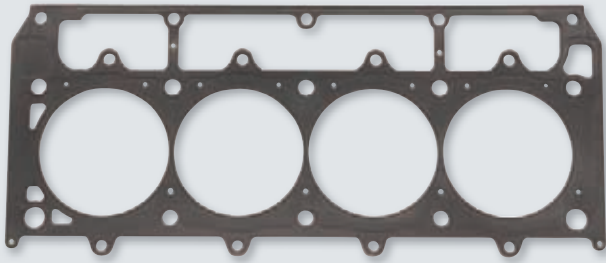
BUILDER'S TIP

Building a Carbureted LS Engine

For some vintage cars, a carbureted induction system is more aesthetically appropriate, while some racecars depend on a carburetor, based on class rules or other reasons. Building a carbureted LS engine is just as easy as assembling a production-style fuel injected version. You'll still need all the sensors of an injected engine, but you simply replace the injection manifold with one of GM Performance Parts' carbureted intakes –

they're available for LS1/LS2/LS6-style cathedral-port heads, L92/LS3-style heads and LS7 heads. Then, add your favorite four-barrel and plug it all into one of our pre-programmed controllers. Add a 12-volt power source and your carbureted LS engine will deliver a balanced combination of vintage looks and modern engine management dependability!

CYLINDER HEAD GASKETS AND BOLT KITS



LSX 4.100" Bore MLS Head Gasket Kit

12498543 ⓘ

Cylinder Head Gasket Kit (not shown)

- 2 head gaskets for 1997-2001 LS1 Camaro/Firebird and Corvette engines
- Also fits 2001 LS6 Corvette engine

12498544 ⓘ

Cylinder Head Gasket Kit (not shown)

- 2 head gaskets for 2002-2004 LS1 Camaro/Firebird and Corvette engines

19170418

LSX 4.100 Bore MLS Head Gasket Kit

- Multi-layer steel gaskets for naturally aspirated and forced induction applications
- .051" thick
- Includes 1 LH and 1 RH gasket
- For standard LS and LSX 6-bolt pattern blocks and heads
- For bores up to 4.100"

19170419

LSX 4.200 Bore MLS Head Gasket Kit (not shown)

- Multi-layer steel gaskets for naturally aspirated and forced induction applications
- .051" thick
- Includes 1 LH and 1 RH gasket
- For standard LS and LSX 6-bolt pattern blocks and heads
- For bores up to 4.200"

19170420

LSX 4.250 Bore MLS Head Gasket Kit (not shown)

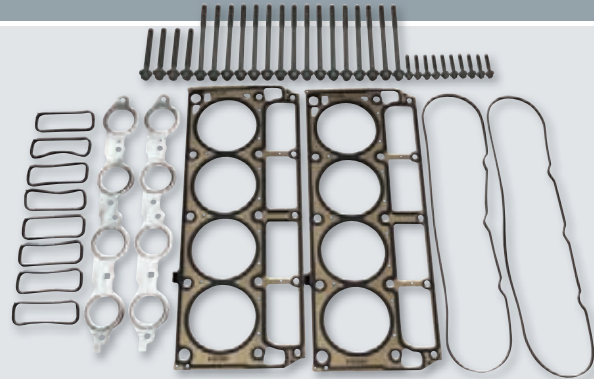
- Multi-layer steel gaskets for naturally aspirated applications
- .051" thick
- Includes 1 LH and 1 RH gasket
- For standard LS and LSX 6-bolt pattern blocks and heads
- For bores up to 4.250"

12498545 ⓘ

Cylinder Head Bolt Kit (1997-2003, not shown)

- Kit of 15 head bolts for 1998-2003 LS1 Camaro/Firebird and 1997-2003 Corvette; and 2001-2003 LS6 Corvette
- 1 kit per cylinder head; order 2 per engine
- Head bolts cannot be reused on these engines

NOTE: IMPORTANT!!! LS-Series engines produced from January 2004 forward have a new "short-style" head bolt design. Earlier head bolts will not fit. Order P/N 17800568 for engines produced from January 2004 and later.



LS1 Cylinder Head Installation Kit (F-Car)

17800568 ⓘ

Cylinder Head Bolt Kit, Gen III and Gen IV (not shown)

- Kit of 15 bolts for LS-Series engines produced from January 2004 and later
- Bolts are 5mm shorter than previous design
- Services single engine head only

12499217 ⓘ

LS1 Cylinder Head Installation Kit (F-Car)

- Comprehensive cylinder head installation kit for 2002 Camaro and Firebird models equipped with the LS1 engine
- Kit includes 2 head gaskets, 2 valve cover gaskets, 8 intake manifold gaskets, 2 exhaust manifold gaskets, 2 intake manifold-to-block seals, 20 long-head bolts and 10 short-head bolts

12589226 ⓘ

LS1/LS6 Head Gasket (not shown)

- Single gasket, 2 required
- For naturally aspirated LS1 and LS6 5.7L engines
- .051" thick
- 3.920" max bore
- Standard LS bolt pattern

12589227 ⓘ

LS2, L76 Head Gasket (not shown)

- Single gasket, 2 required
- For naturally aspirated LS2 and L76 6.0L engines
- .051" thick
- 4.020" max bore
- Standard LS bolt pattern

12610046 ⓘ

LS3, L92 Head Gasket (not shown)

- Single gasket, 2 required
- For naturally aspirated LS3/L92 6.2L engines
- .051" thick
- 4.080" max bore
- Standard LS bolt pattern

12582179 ⓘ

LS7 Head Gasket (not shown)

- Single gasket, 2 required
- For naturally aspirated LS7 7.0L engines
- .051" thick
- 4.140" max bore
- Standard LS bolt pattern

17800568 ⓘ

LSX 6-Bolt Head Stud Kit (not shown)

- Requires 2 kits per engine



LS-SERIES VALVES

Intake Valves

Part Number	Valve Size	Stem Size	Description
12590773	2.165"	8mm	Stock replacement valve used in L92 engines
12605223	2.165"	8mm	Stock replacement solid-stem valve used in LSA engines
12569427	2.165"	8mm	Stock replacement hollow-stem valve used in LS3 engines
12605524	2.165"	8mm	Stock replacement titanium valve used in LS9 engines
12591644	2.200"	8mm	Stock replacement titanium valve used in LS7 engines

Exhaust Valves

12565312	1.500"	8mm	Stock replacement sodium-filled stem valve used in LS6 engines
12563064	1.500"	8mm	Stock replacement solid-stem valve used in LS2 engines
12582719	1.590"	8mm	Stock replacement solid-stem valve used in L92 and LS3 engines
12605525	1.590"	8mm	Stock replacement sodium-filled stem valve used in LS9 engines
12578455	1.610"	8mm	Stock replacement sodium-filled stem valve used in LS7 engines

VALVE SPRING COMPONENTS

12499224

LS Valve Spring Kit (not shown)

- Beehive style springs
- Used on LS2/LS6 cylinder heads
- 1.800" installed height @ 90 lbs. pressure
- Max lift .570"
- 1.250" @ 295 lbs. pressure
- Includes 16 of P/N 12586484

12586484

Valve Springs (not shown)

- Beehive style springs
- Standard LS6/LS3 springs
- Use cap P/N 10166344
- 1.250" @ 295 lbs. pressure
- 1.800" installed height @ 90 lbs. pressure
- Max lift .570"

12589774

Valve Springs (not shown)

- Beehive style springs
- Standard L76/L92 springs
- 1.800" installed height @ 90 lbs. pressure
- Max lift .520"
- 1.300" @ 264 lbs. pressure

12578457

Valve Springs (not shown)

- Beehive style springs
- Used on LS7 cylinder heads
- 1.960" installed height @ 101 lbs. pressure
- 1.368" @ 310 lbs. pressure
- Max lift .600"

LS-SERIES PUSHRODS

Part Number	Material	Diameter	Length	Usage	Description
12593344	1010 steel	3/8"	7.750	LS7	Production pushrod, individually packed
10238852	1010 steel	5/16"	7.325	LS1, LS2, LS3, LS6, L92	Production pushrod, individually packed

ROCKER ARMS AND ROCKER ARM BOLTS

10214664

Rocker Arm (not shown)

- For LS1, LS2 and LS6 intake and exhaust valves
- For L92, LS9 and LS3 exhaust valves
- Straight design, no offset
- 1.7:1 ratio

12569167

Rocker Arm (not shown)

- Intake rockers for L92, LS9 and LS3 style heads only
- Offset design
- 1.7:1 ratio

12579615

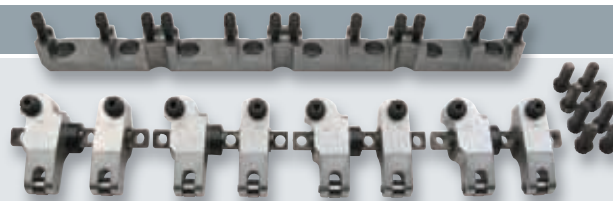
Rocker Arm (not shown)

- Intake rockers for LS7 style heads only
- Offset design
- 1.8:1 ratio

12579617

Rocker Arm (not shown)

- Exhaust rockers for LS7 style heads only
- Straight design, no offset
- 1.8:1 ratio



NEW LSX454 Rocker Arm Kit

12560961

Rocker Arm Bolts (not shown)

- For cathedral port and L92 style heads
- 16 required per engine

11588791

Rocker Arm Bolts (not shown)

- For LS7 style heads
- 16 required per engine

12552203

Rocker Arm Stand (not shown)

- For LS1, LS2 and LS6 style heads only
- Sold individually
- Requires 1 per cylinder head

12600936

Rocker Arm Stand (not shown)

- For L92, LS9 and LS3 style heads only
- Sold individually
- Requires 1 per cylinder head

19201808 **NEW**

LSX 454 Rocker Arm Kit

- 1.9:1 ratio
- Fits DR head only
- Full-roller bearing tips
- Full-roller bearing trunion
- Set is for two heads

LS VALVE COVERS

Nothing finishes off your engine like a great-looking set of valve covers straight from GM. Our new collection of LS valve covers allows you to personalize your LS-powered project with a custom look. Choose from 15 great styles, available in natural, powder-coated, polished and chrome finishes, with callouts for your favorite nameplate, vehicle and more. These valve covers are designed and built to production specs and include a production-type O-ring gasket for a leak-free fit. No matter if you're driving a new Corvette or a Pro-Touring-style, LS3-powered '61 Chevy, we've got the perfect set of valve covers for it.

NOTE: The valve covers feature the standard bolt pattern, but DO NOT have provisions for production-style coil mounts. Aftermarket or custom coil relocation brackets must be used. Additional features include:

- PVC system (except 25534398 and 25534399)
- Sold in pairs (except 25534398 and 25534399)
- Integrated oil fill
- Accommodates tall-style rockers
- Includes hardware and O-ring gasket

A. 19156433

Valve Cover Kit – CHEVROLET, Chrome

- Chrome finish with Black CHEVROLET lettering

B. 19156430

Valve Cover Kit – CAMARO, Natural

- Silver finish with Black CAMARO lettering

C. 19156428

Valve Cover Kit – CORVETTE, Polished

- Polished finish with Black CORVETTE lettering



A Valve Cover Kit – Chevrolet, Chrome



B Valve Cover Kit – Camaro, Natural



C Valve Cover Kit – Corvette, Polished



Valve Cover Kit – Corvette, Polished **D**



Valve Cover Kit – Pontiac, Natural **E**



Valve Cover Kit – GMPP/LSX, Polished **F**



Valve Cover Kit – Polished **G**

D. 19156429

Valve Cover Kit – CORVETTE, Polished

- Polished finish with Red CORVETTE lettering

E. 19171269

Valve Cover Kit – PONTIAC, Natural

- Silver finish with Black PONTIAC logo

F. 19171500

Valve Cover Kit – GM Performance Parts/LSX, Polished

- Polished finished with Black GM Performance Parts and LSX logos

G. 19171502

Valve Cover Kit – Polished

- Polished finish with no logos

LS Valve Covers Continued

A. 25534398 

LS Center-Bolt Competition Valve Cover (with breather hole)

- Lightweight aluminum valve cover designed for production center-bolt LS-Series cylinder heads
- Includes bolts and seal
- Sold individually
- Natural finish



A LS Center-Bolt Competition Valve Cover (with breather hole)

B. 25534399 

LS Center-Bolt Competition Valve Cover

- Lightweight aluminum valve cover designed for production center-bolt LS-Series cylinder heads
- Includes bolts and seal
- Sold individually
- Natural finish




B LS Center-Bolt Competition Valve Cover

HARDWARE AND BREATHERS

12341993 

Push-In Oil Filler Cap (not shown)

- Round oil filler cap with Bowtie logo for valve covers with 1.220" diameter hole

12573338 

Oil Fill Cap (not shown)

- Production • For LS1 engines

12573337 

Oil Fill Cap (not shown)

- Production • For L92 engines

12577268 

Oil Fill Cap

- Production • For LS2 and LS6 engines

12577215 


Valve Cover Bolt (not shown)

- Requires 4 per valve cover • For L92 engines

12560961 

Valve Cover Bolt (not shown)

- Requires 4 per valve cover • For LS1, LS2 and LS6 engines

11588791 

Valve Cover Bolt (not shown)

- Requires 4 per valve cover • For LS7 engines

12560696

Valve Cover Gasket (not shown)

- Requires 1 per valve cover • For LS1, LS2, LS6, LS7 and L92 engines



VALVE LIFTERS AND COMPONENTS

12499225 

LS-Series Camshaft Lifter Kit (not shown)

- Set of 16 lifters for LS-Series engines
- Same lifter used in LS2 and LS7 P/N 17122490 (single lifter)

12595365

Lifter Guide (not shown)

- Works in Gen III and IV applications (except with AFM)

17801930

LS6 Hollow Stem Valve Kit (not shown)

- Kit of 4 intake and 4 exhaust valves originally for LS6 engines
- One kit services 1 head to drop right into your LS2 head



88958689

Racing Hydraulic Roller Lifter Kit

- As developed by GM Racing and GM Powertrain
- For use in Gen III and Gen IV engines where sustained high rpms are typical
- Special reduced-mass internal components allow for higher limiting speeds with aggressive camshaft designs
- Improved valvetrain dynamics and stability will improve horsepower, and high rpms
- Tested to 8,000 rpm in GM Racing applications
- Set of 16



LSX CAMSHAFT

The range of high-performance camshafts for LS engines expands to include our new LSX454 cam. It was developed by GM Performance Parts' LSX performance engineers, who designed it to deliver great high-rpm performance with excellent street manners.

The LSX454 cam is a high-lift, hydraulic roller that was originally developed for our LSX454 crate engine. It maximizes the potential of big-displacement engines at high rpm. Maximum lift is 0.612/0.612" with 1.7-ratio rockers and 0.648/0.648" with 1.8-ratio rockers. Duration is 236 degrees on the intake side and 246 degrees on the exhaust side, with a 110-degree separation angle.

NOTE: Not compatible with production-style variable-valve timing configurations or production valve springs.

19166972

LSX454 Camshaft

- .635" lift intake/exhaust (1.8 rockers)
- 236° intake/246° exhaust
- Good mid-range and top-end
- 3-bolt design



LSX454 Camshaft

LS-SERIES CAMSHAFTS

Part Number	Description	Duration @ .050" Lift (deg)	Maximum Lift (in) (1.7 rocker)	Lobe Separation (deg)	Technical Notes
12565308	2002-2004 LS6 Cam	I: 204 E: 218	I: .550 E: .550	117.5	Cam requires valve spring P/N 12586484
12560950	2001 LS6 Cam	I: 207 E: 217	I: .525 E: .525	116	Cam requires valve spring P/N 12586484
12480110	ASA Cam	I: 226 E: 236	I: .525 E: .525	110	Cam requires valve spring P/N 12586484; "ASA" cam for off-highway use
12480033	Hot Cam Kit	I: 219 E: 228	I: .525 E: .525	112	Kit includes 16 LS6 valve springs P/N 12565117 and retainers
88958733	LS Hot Cam	I: 219 E: 228	I: .525 E: .525	112	Same cam as in kit P/N 12480033
19166972	LSX454 Cam	I: 236 E: 246	I: .612 E: .612	110	Max lift with 1.8 rockers .648/.648
88958606	Showroom Stock Cam	I: 239 E: 251	I: .570 E: .570	106.5	Showroom Stock racing design; requires hollow-stem intake valves P/N 12565311, hollow-stem exhaust valves P/N 12565312, valve springs P/N 12586484, and aftermarket notched pistons OR machine stock pistons
12571251	LS7	I: 211 E: 230	I: .558 E: .558	121	Stock LS7 camshaft, will not work on Gen III engines Max lift with 1.8 rockers .591/.591
12561721	LQ9: 2002-2006 LS1: 2001-2004	I: 196 E: 201	I: .467 E: .479	116	Stock cam for 2002-2006 LQ9 and 2001-2004 LS1 engines
88958722	LS Stage 2 Cam	I: 227 E: 239	I: .551 E: .551	108	Max lift with 1.8 rockers .583/.583
88958723	LS Stage 3 Cam	I: 233 E: 276	I: .595 E: .595	107	Max lift with 1.8 rockers .630/.630

CAMSHAFT COMPONENTS

All LS camshafts are compatible with production-style LSX and C5R blocks, as well as all of our cylinder heads – although piston-to-valve clearance must be checked on some applications. We offer a broad range of production and racing-style camshafts that are factory-engineered to deliver maximum performance when paired with our high-flow cylinder heads. Save yourself the time and expense of going to an aftermarket camshaft supplier and build your LS engine with a genuine GM cam. We've also got the valvetrain components you need to finish the engine, including lightweight components designed for high-rpm performance.

Check out the accompanying chart for all of the camshafts from GM Performance Parts, including part numbers, recommended applications, duration, lift and lobe separation specifications.

12499228

Cam Installation Kit, LS Engine (not shown)

- Complete gasket kit to make cam swaps easier
- Includes all necessary gaskets and balancer bolt
- For LS1, LS2 and LS6 engines
- Cam Installation Kit, LS Engine includes:

12574294	1	Gasket – Engine Front Cover
12588372	2	Gasket – Water Pump
89060413	1	Gasket Kit, Intake Manifold
12612045	2	Gasket – Valve Rocker Arm Cover
12557840	1	Bolt/Screw – CR/SHF Balance
12585673	1	Seal ASM – CR/SHF Front Oil



LSX CONNECTING RODS

Like our new crankshafts, GM Performance Parts' new LSX connecting rods are made of high-strength, 4340 forged steel to deliver worry-free performance for your high-horsepower, high-revving LS engine. Additional strength comes in the rod's I-beam design and its chamfered big end fits great with filleted cranks, like our LSX crankshafts. They're available in three lengths, ranging from 6.000" to 6.125". Other details include:

- 2.100" journals (big end)
- 0.866" bushed small ends
- MUST be used with LSX forged pistons – not compatible with production pistons
- Includes 7/16" 12-point, SAE 8740 rod bolts
- Caps are dowel located
- Weight-matched, sold in sets of 8

A. 19166964

LSX Connecting Rod Kit, 6.000"

19166965

LSX Connecting Rod Kit, 6.098"

19166966

LSX Connecting Rod Kit, 6.125"

CONNECTING RODS AND COMPONENTS

B. 12568734

1997-2004 Connecting Rod

- Connecting rod for use on all 1997-2004 production Corvettes and 1998-2002 Camaro/Firebird with LS1/LS6
- Press fit design
- 6.098" C-C length
- Sold individually

12617570

Connecting Rod (not shown)

- Connecting rod used in 2005-2007 LS2 and 2008-2009 LS3 engines has bronze bushing
- 6.098" C-C length
- Sold individually

11610158

LS6 Rod Bolts (not shown)

- Recommended for use in performance Gen III engines
- Bolts have greater strength than pre-2000 rod bolts
- 1 bolt per package; order 2 per connecting rod

C. 12586258

LS7 Connecting Rod

- Titanium connecting rod used in 2006-2009 LS7 crate engines
- 6.067" C-C length
- Sold individually

11609825

LS7 Connecting Rod Bolt Kit (not shown)

- Required for LS7 engine builds
- Sold individually

89017573

Rod Bearing (not shown)

- 1 required per connecting rod
- For all LS-Series engines, except LS7 and LS9

89017811

LS7 Rod Bearing (not shown)

- 1 required per connecting rod
- For LS7 and LS9 engines only



A LSX Connecting Rod Kit



B 1997-2004 Connecting Rod



C LS7 Connecting Rod



CRANKSHAFTS AND ACCESSORIES

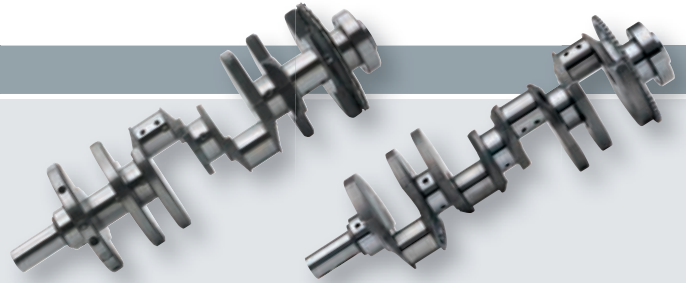
LS Crankshafts

Our LS crankshafts are strong, precision-machined components that will support your high-horsepower aspirations. Choose from our nodular cast cranks up to 3.622-inch-stroke and our premium, forged-steel 4.125-inch-stroke crankshafts for larger-displacement combinations – and don't forget the proper reluctor wheel!

LSX Crankshafts

Our new LSX crankshafts are all made from 4340 forged steel (most production LS cranks are cast) and have generous fillets. GM Performance Parts' new LSX forged crankshafts deliver exceptional strength and durability, whether you're building a formidable Fourth-Gen Camaro or late-model GTO for the street. Additional features include:

- 2.100" rod journals
- 8-bolt flexplate/flywheel pattern
- Comes with 58X reluctor wheel
- Reluctor wheel can be swapped for use with LS1/LS2/LS6 controller
- Designed for internal balancing (must be balanced prior to use in engine)
- Requires the use of chamfered rods (see our LSX connecting rod selection)

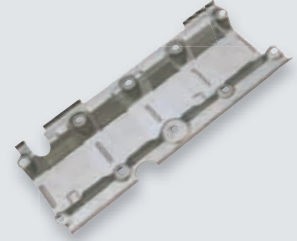


Crankshaft Assembly 1997 – 2004

LSX Crankshaft, 4.125" stroke



Reluctor Wheel, 24X



LSX Windage Tray Kit

LS Crankshafts and Accessories

89017522

Crankshaft Assembly 1997-2004 (not shown)

- Nodular cast 3.622" stroke crankshaft assembly has 24X reluctor wheel installed
- Used on 1998-2002 F-cars and 1997-2005 Corvettes
- Balanced for 3.898" bore engines

12588612

LS2 Crankshaft Assembly (not shown)

- Nodular cast 3.622" stroke crankshaft assembly has 58X reluctor wheel installed
- Used on 2006-2007 Corvettes
- Balanced for 4.000" bore engines

89060436

Rear Crank Seal (not shown)

- Requires 1 per engine
- For all LS-Series engines

12557583

Roller Pilot Bearing (not shown)

- Used in high-performance manual transmission applications
- Use when input shaft protrudes 3-6mm (.079-.112") beyond bellhousing

LSX Crankshafts and Accessories

19244018

LSX Crankshaft, 4.125" stroke (not shown)

- 4340 premium steel
- Requires balancing
- 8-bolt flexplate/flywheel required
- 4.125" stroke
- Includes 58X reluctor wheel

19244050

LSX Windage Tray Kit (not shown)

- For 3.750" strokes
- Includes all matching hardware
- Some notching may be required

19244049

LSX Windage Tray Kit (not shown)

- For 4.000" strokes
- Includes all matching hardware
- Some notching may be required

14061685

Roller Pilot Bearing (not shown)

- Used in high-performance manual transmission applications
- Use when input shaft protrudes 23-24mm (.906-.945") beyond bellhousing

12611649

LS7 Forged Steel Crankshaft (not shown)

- Forged 4" stroke crankshaft for LS7 engine
- Includes 58X reluctor wheel
- Rebalancing required if LS7 rods and pistons are not used
- Machine .886" from snout for use in wet-sump applications

12559353

Reluctor Wheel, 24X

- 24-tooth crankshaft position sensor timing wheel for 1997-2005 engines

12586768

Reluctor Wheel, 58X (not shown)

- 58-tooth crankshaft position sensor timing wheel for 2006 and newer engine

19202609

LSX Windage Tray Kit

- For 4.125" strokes
- Includes all matching hardware
- Some notching may be required depending on application

19244051

LSX Windage Tray Kit (not shown)

- For 4.200" strokes
- Includes all matching hardware
- Some notching may be required



LS-SERIES PISTONS AND RINGS

Premium-quality hypereutectic aluminum alloy pistons are used on most production LS engines (the LS9 supercharged uses forged aluminum). They are lightweight, durable and promote quieter operation. GM Performance

Parts offers production and oversized pistons for many applications. They're sold individually, unless otherwise specified. Check the accompanying chart for part numbers, specs, sizes and applications.

LS-Series Pistons

Part Number	Engine Size	Bore Size	Oversize	Rod Length	Pin Type	Comp Ratio	With Chamber	Description
88984245	5.7L	3.898"	—	Standard	Pressed	—	65	Hypereutectic LS1 and LS6 replacement
88984246	5.7L	3.898"	+0.010"	Standard	Pressed	—	65	Hypereutectic LS1 and LS6 replacement
89017478	6.0L	4.000"	—	Standard	Floated	10.9	65	Hypereutectic LS2 and LQ9 replacement
89017479	6.0L	4.000"	+0.020"	6.098"	Floated	10.9	65	Hypereutectic LS2 and LQ9 replacement
12602624	7.0L	4.125"	—	6.067"	Floated	11.0	70	Hypereutectic LS7 replacement, includes titanium rod
89018171	7.0L	4.125"	+0.020"	6.067"	Floated	11.0	70	Hypereutectic LS7 replacement

LS-Series Rings

Part Number	Bore Size	Oversize	Ring Thicknesses	Description
89017484	4.000"	—	1.2, 1.5, 2.5mm	Production ring pack for '05-'06 LS2, '06 L76
88894243	4.000"	—	1.5, 1.5, 3.0mm	Production ring pack for '05-'06 LQ9
89017776	4.125"	—	1.2, 1.2, 2.0mm	Production ring pack for '06 LS7
89017777	4.125"	+0.020"	1.2, 1.2, 2.0mm	Oversize LS7 ring pack

LSX PISTONS

Complete your all-LSX rotating assembly with GM Performance Parts' new LSX forged aluminum pistons. They're lightweight and tough, enabling higher revs and dependable performance, even with high-boost and nitrous-assisted applications. They're made of 4032 forged aluminum and available in 4.065" and 4.185" bores. Additional details include:

- Flat-top or dished designs with valve relief cut-outs
- High-tech skirt coating
- Forced pin oiling
- Pistons come with wrist pins and rings

19166957

LSX376 Piston, 4.065" bore

- Forged flat-top, no valve notches
- Works with stock connecting rods only
- Weight matched to stock LS3 piston weight

19244016

LSX376 Piston, 4.065" bore

- 14cc dish that lowers compression to approx. 9:1 (with most standard LS cylinder heads)
- Optimized for supercharged and turbocharged combinations
- Use with stock-type connecting rods only

19166958

LSX454 Piston, 4.185" bore

- Forged dished piston with valve reliefs
- Must be used with LSX rods
- Lightweight, includes rings and wrist pins
- 4.185" bore, .866" wrist pin size
- 1.2mm compression ring lands and a 2.0mm oil control ring land

NOTE: Not compatible with production-style LS connecting rods. Must be used only with new LSX connecting rods with 0.866" wrist pin bores.



LSX376 Piston, 4.065" bore



LSX376 Piston (dished), 4.065" bore



LSX454 Piston, 4.185" bore



TIMING CHAINS AND SPROCKETS

12588670

LS2 Timing Chain Dampener (not shown)

- Production LS2 dampener
- Will not fit LS1 and LS6 blocks fitted with P/N 88958607 (P/N 88958607 is no longer serviced)
- For use with standard oil pumps

12581276

Timing Chain Dampener (not shown)

- Production LS7 dampener
- 1.1mm thinner than P/N 12588670
- For use with LS7 2-stage oil pump

12576407

1X Camshaft Sprocket (not shown)

- Fits all LS cams with 3-bolt design
- 1X camshaft gear
- 3-bolt design; uses 3 bolts P/N 12556127

12586481

Camshaft Sprocket (not shown)

- Fits all LS cams with 3-bolt design
- 4X camshaft gear
- 3-bolt design; uses 3 bolts P/N 12556127

12585994

VVT Camshaft Sprocket (not shown)

- Combination camshaft sprocket and VVT activator
- Production on 2007-2008 Cadillac Escalade L92 engines
- Single-bolt design; use bolt P/N 12588151
- 4X camshaft gear

12556582

Crankshaft Sprocket (not shown)

- Fits non-LS7/LS9 applications
- For standard single-stage oil pumps
- Works with both cam sprockets P/N 12576407 and 12586481

12581278

Crankshaft Sprocket (not shown)

- For use with 2-stage LS7 or LS9 oil pump only
- Works with cam sprockets P/N 12576407 and P/N 12586481

12586482

Timing Chain (not shown)

- Fits 1997-2009 LS based engines

12585997

Timing Chain Tensioner (not shown)

- Requires 1 per engine
- Includes retainer and bolts
- For L92 and LS3 engines

12556127

Camshaft Sprocket Bolt (not shown)

- For use with 3-bolt (non VVT) cams
- For LS1, LS2, LS6, LS9 and early LS7 engines

12561283

Camshaft Sprocket Bolt (not shown)

- For use with single-bolt cams and non-VVT timing covers
- For 2008-2009 LS3 and LS7 engines

12588151

Camshaft Sprocket Bolt (not shown)

- Combination bolt and valve for Variable Valve Timing (VVT) engines
- For L92 engines
- Use with VVT camshaft sprocket P/N 12585994

FLYWHEELS AND FLEXPATES

Select flywheels for manual transmission vehicles and flexplates for automatic transmission vehicles.

Bolts and Dowels

11569956

Flywheel Bolt (not shown)

- Requires 6 per engine
- For LS1, LS2, LS3, LS6, LS7 and L92 engines
- For manual transmission flywheels only

24240678

Flywheel – Dual Mass Design

- For LSA engines – also fits LSX 8-bolt crank
- 8-bolt

12598613

Flywheel (not shown)

- For LS9 engines
- 9-bolt

11505820

Flywheel Dowel (not shown)

- For all LS-Series engines

11569956

Flexplate Bolt (not shown)

- Requires 6 per engine
- For LS1, LS2 and LS6 engines
- For automatic transmission flexplates only

12606620

Flexplate (not shown)

- For all LS-Series engines with 6 bolt crank



Part Number	Description	Part Number	Description
12571611	Flywheel for LS2, LS3 and LS7 Corvette engines	12570806	Flywheel, clutch and press-plate kit for LS2 GTO engines
24248985	Clutch disc and pressure plate for LS2, LS3 and LS7 Corvette engines	24237568	Dual-mass clutch and press plate for LS9 Corvette ZR1
12581650	Flywheel with pressure plate and disc for LS1 Camaro engines	12598613	Flywheel for Corvette ZR1
		12622564	8-bolt flexplate for LSA, LSX454 and LSX crankshafts



BUILDER'S TIP

Time for a New Flywheel?

If you're rebuilding or replacing the engine in your car or truck, you're probably also going to send out the flywheel for resurfacing, right? If the vehicle saw a lot of heavy-duty, high-load use or the clutch was severely worn when you removed it, a resurfaced flywheel may not do the trick. You may need a new one if the resurfaced part shows "hot spots." Hot spots or hard spots on

the flywheel commonly develop as the clutch nears the end of its service life, as more friction-generated heat is created when the clutch is engaged – resulting in annoying clutch chatter when the clutch's friction material encounters the flywheel's varied surface hardness rates. Severely hot-spotted flywheels cannot be machined to alleviate the condition; they must be replaced.



DRIVE SYSTEMS

The easiest and most convenient way to finish your LS engine and get it ready to run in your vehicle is with one of our serpentine accessory drive systems. They include the accessories, brackets, drive belts and hardware your engine needs, saving you the time of sourcing them individually. Our kits include an alternator, power steering pump, pulleys, idlers and even an air conditioning compressor. They're all-inclusive systems that bolt right on to the engine for a factory fit and appearance.

A. 19155066

CTS-V Accessory Drive System, with A/C

- Does not work on LS9 and LSA supercharged engines
- Most harmonic balancers do not line up correctly with the accessory drive system; damper P/N 12620556 is strongly recommended
- Air conditioning has separate belt; to delete air conditioning, do not install the belt, compressor or tensioner
- Fits all LS type engines, except for production iron block applications
- Direct bolt-on for LS3 and LS7 engines

NOTE: Will not work on LS327 with cast iron block

NOTE: Water pump P/N 89018052 NOT Included with kit

The system includes:

12578548	Bracket-Air Conditioning
89023451	Compressor-Air Conditioning
12595289	Tensioner-Air Conditioning Belt
12578549	Belt-Air Conditioning Compressor
12578551	Bracket-Power Steering Pump
21997867	Pump-Power Steering
12578552	Pulley-Power Steering Pump
21997866	Reservoir-Power Steering Fluid
21997868	Hose-Power Steering Fluid Reservoir With Clamps
12578550	Bracket-Generator
25766345	Generator
12568996	Pulley-Belt Idler
12569301	Tensioner-Drive Belt
12578553	Belt-Water Pump/Generator/ Power Steering



A CTS-V Accessory Drive System with AC

B. 19155067

Corvette Accessory Drive System, with A/C

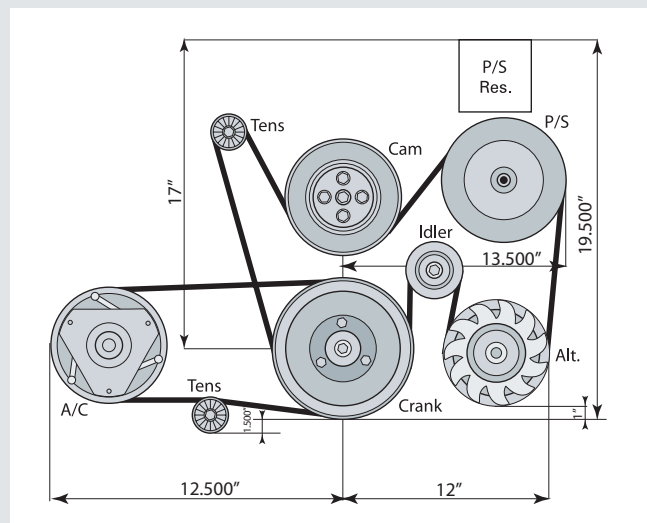
- Fits all Non-LSA and LS9 LS type engines
- Most harmonic balancers do not line up correctly with the accessory drive system; damper P/N 12620556 is strongly recommended
- Air conditioning has separate belt; to delete air conditioning, do not install the belt, compressor or tensioner
- Direct bolt-on for LS3 & LS7 engines

NOTE: Use on LS327 iron block engine requires harmonic balancer P/N 12601402

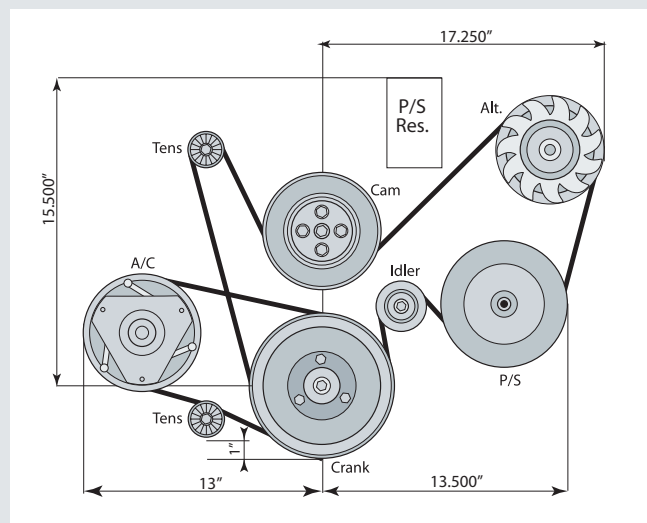
NOTE: Water pump P/N 89018052 NOT Included with kit

The system includes:

12569286	Bracket-Air Conditioning Compressor
88958093	Compressor-Air Conditioning
12595289	Tensioner-Air Conditioning Compressor Belt
12579228	Belt-Air Conditioning Compressor (1040mm-Long)
12555222	Bracket-Power Steering Fluid Reservoir
12578067	Bracket-Generator and Power Steering Pump
15841234	Generator
15261472	Pump-Power Steering
12568997	Pulley-Power Steering Pump
12555693	Brace-Power Steering Pump Front
15907878	Hose-Power Steering Fluid Reservoir With Clamps
26046502	Reservoir-Power Steering Fluid
12569301	Tensioner-Drive Belt
12568996	Pulley-Belt Idler
12579229	Belt-Water Pump/Generator/Power Steering Pump



A CTS-V Accessory Drive System with AC



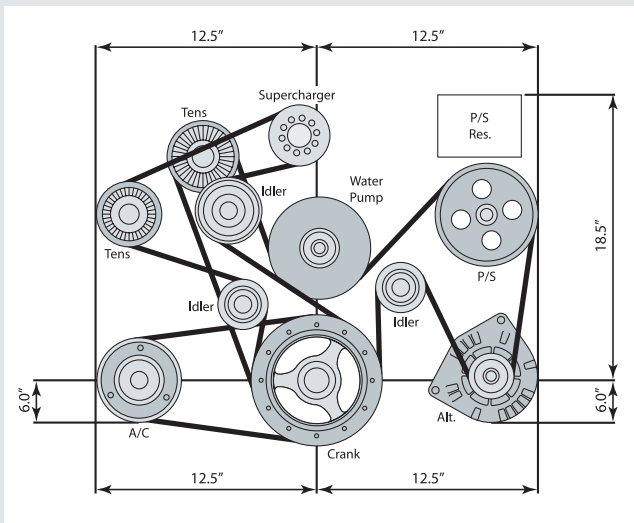
B Corvette Accessory Drive System with AC



LSA Accessory Drive System without AC **C**



LSA AC Add-On-Kit **D**



LSA Accessory Drive System with LSA AC Add-On-Kit **D**

C. 19243525

LSA Accessory Drive System w/o AC

The front engine assembly dress components used in the CTS-V, without AC for installations in other vehicles.

- Includes all brackets, bolts, tensioners, pulleys, belts, alternator, P/S pump and instruction sheet

The system includes:

Part #	Qty	Description
12578550	1	Bracket-Gen
25925447	1	Generator Asm
11518630	2	Bolt-Hvy Hx Acorn Flg Hd
11518637	3	Bolt-Hvy Hx Acorn Flg Hd
12611905	1	Bracket-P/S Pump
11516931	2	Bolt-Rad Up Mt
12611906	1	Pulley-P/S Pump
25936422	1	Pump Asm-P/S
25955223	1	Reservoir Asm-P/S Fluid
15224351	1	Hose Asm-P/S Fluid Rsvr Otlt
11518633	3	Bolt-Gen
11900254	3	Bolt-Hfh, M8x1.25x29, 19 Th
12606501	1	Bracket-Belt Idler Pul
11588727	3	Bolt-Hvy Hx Acorn Flg Hd
11900254	1	Bolt-Hfh, M8x1.25x29, 19 Th
12606500	1	Bracket-Drv Belt Tensr
11588749	1	Bolt-Hvy Hx Acorn Flg Hd
11588742	1	Bolt-Hvy Hx Acorn Flg Hd
12628025	1	Tensioner Asm-Drv Belt
11571051	1	Bolt-Hex Washer Hd
12606031	1	Pulley Asm-Spchg Belt Idler
12606032	1	Pulley Asm-Belt Idler
11518630	2	Bolt-Hvy Hx Acorn Flg Hd
12622452	1	Tensioner Asm-Spchg Belt
11588752	1	Bolt-Hvy Hx Acorn Flg Hd
12568996	1	Pulley Asm-Belt Idler
12628027	1	Belt-w/Pmp & Gen & P/S Pump
12636227	1	Belt-Spchg
19243527	1	Instruction-FEAD Kit

D. 19244106

LSA Accessory Drive System AC add-on kit

Components needed to add AC to your LSA-equipped vehicle.

- Kit includes mounting bracket, bolts, belt, AC compressor and instruction sheet
- Intended to be used in conjunction with P/N 19243525 GMPP kit for non-AC applications. Not verified to work with any non-GM FEAD kit

The system includes:

Part #	Qty	Description
11509202	4	Bolt-Hex Flg Hd
12612514	1	Bracket-AC Cmpr
11571051	4	Bolt-Hex Washer Hd
25821958	1	Compressor Asm-AC
12623615	1	Tool-AC Cmpr Belt
12612516	1	Belt-AC Cmpr
19243527	1	Instruction-FEAD Kit

Drive Systems Continued

A. 19243524

LS9 Accessory Drive System w/AC

The GMPP FEAD kit for the powerful LS9 is complete, as used in the ZR-1 Corvette.

- It consists of all brackets, bolts, tensioners, pulleys, belts, alternator, P/S pump, idlers, and AC brackets, compressor and instruction sheets.

The system includes:

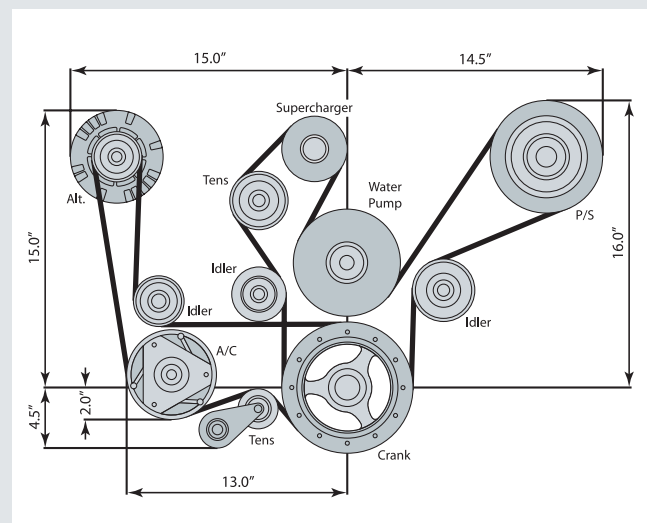
Part #	QTY	Description
15857665	1	Pump Asm-P/S
11588733	2	Bolt-Hvy Hx Acorn Flg Hd
12625875	1	Bracket Asm-P/S Pump
11518634	4	Bolt-Hvy Hx Acorn Flg Hd
15285644	1	Reservoir Asm-P/S Fluid
12598653	1	Pulley Asm-Belt Idler
11518631	1	Bolt-Drv Belt Tensr
12598654	1	Pulley Asm-Belt Idler
11588743	1	Bolt-Hvy Hx Acorn Flg Hd
12623061	1	Tensioner Asm-Drv Belt
11515767	3	Bolt-Trans Br Brkt
12602288	1	Bracket-AC Cmpr
12556447	1	Stud-Special M10 X 1.5 X 127
11571051	1	Bolt-Hex Washer Hd
12623062	1	Tensioner Asm-AC Cmpr Belt
12568996	1	Pulley Asm-Belt Idler
89019076	1	Compressor Asm-AC
11514597	1	Nut-Gen
12552922	1	Bolt/Screw-AC Cmpr
11518637	1	Bolt-Hvy Hx Acorn Flg Hd
11588754	1	Bolt-Hvy Hex Acorn Flg Hd
25888947	1	Generator Asm
11518630	2	Bolt-Hvy Hx Acorn Flg Hd
11571051	2	Bolt-Hex Washer Hd
12602289	1	Bracket-Gen & Drv Belt Tensr
11518634	1	Bolt-Hvy Hx Acorn Flg Hd
11515767	1	Bolt-Trans Br Brkt
12637321	1	Belt-Spchg & w/Pmp & P/S Pump
12627522	1	Belt-AC Cmpr
19243526	1	Instruction-FEAD Kit



A LS9 Accessory Drive System with AC



A LS9 Accessory Drive System with AC



A LS9 Accessory Drive System with AC



NEW

LC9 5.3L Accessory Drive System **B**

B. LC9 5.3L Accessory Drive System **NEW**

The workhorse 5.3L LC9 engine assembly comes with an alternator bracket attached. To complete the installation of your engine, the parts listed below will complete the factory-installed FEAD assembly.

These components are engineered for heavy-duty work-truck use, and will provide years of reliable service in your performance vehicle.

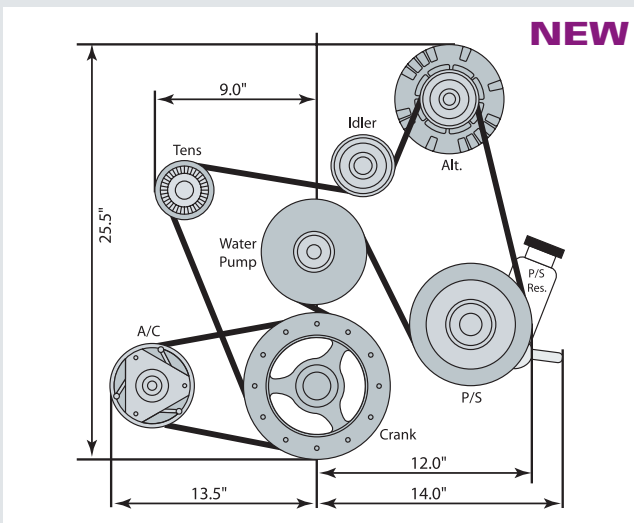
The system includes:

Part #	QTY	Description
12626222	1	Drive Belt
12580771	1	Idler Pulley w/Bolt
11518633	2	Tensioner Bolts
12609719	1	Tensioner
12554030	1	Bracket
11516744	4	Bracket Bolts
20989651	1	Alternator
11516360	2	Alternator Bolts
20756714	1	P/S Pump
12554032	1	P/S Brace
11514597	2	P/S Brace Nuts
11515764	1	P/S Brace Bolt
12604004	1	P/S Pump Pulley
11515767	3	Stg Pump Mtg Bolt
25891791	1	AC Compressor
12554026	1	Mtg Bracket
11515767	3	Bracket Bolts
11515109	3	Comp Bolts-Long
11516503	1	Comp Bolt-Short
19210691	1	Belt Kit (w/Tool) AC



NEW

LC9 5.3L Accessory Drive System **B**



NEW

LC9 5.3L Accessory Drive System **B**

BALANCERS

A smooth-running engine depends on an effective balancer or torsional damper. GM Performance Parts' dampers not only help LS engines run smoothly, they can extend engine life. Pick the right damper for your project from the list below.

12634105

Harmonic Balancer (not shown)

- Originally used on L92 engines
- For use in truck applications
- WILL NOT work with GMPP Serpentine Accessory Drive Systems

A. 12553118

Harmonic Balancer

- Originally used on LS1 and LS2 engines
- For use in F-Car and GTO applications

B. 12599862

Harmonic Balancer

- Originally used on LS7 engines
- For use in Corvette applications
- Works with GMPP Serpentine Accessory Drive System P/N 19155066 or P/N 19155067

12635649

Harmonic Balancer (not shown)

- For LS3 engines
- Works with GMPP Serpentine Accessory Drive System P/N 19155066 or P/N 19155067

Balancer Bolts and Washers

12557840

Balancer Bolt (not shown)

- For LS1, LS2, LS3, LS6 and L92 engines

11570163

Balancer Bolt (not shown)

- For LS7 engines

12600525

Balancer Washer (not shown)

- For LS2, LS3, L99, LS7 and L92 engines

WATER PUMPS AND ACCESSORIES

C. 19208815

Water Pump

- '07 - '10 LS2 Trucks, Vans and SUVs

D. 89018052

Water Pump

- '05 - '07 LS2
- '08 LS3
- '07 - '08 LS7

E. 19180610

Water Pump

- '09 - '10 LSA (CTS-V)
- '09 - '10 LS3 (Vette)
- '09 L76 SRX
- '09 - '10 LS7 Vette

89018053

Water Pump (not shown)

- '97 - '04 LS1 (Vette)
- '01 - '04 LS6 (Vette)
- '98 - '02 LS1 - F-car

12630223

Water Pump Gasket (not shown)

- Requires 2 per engine
- For LS1, LS2, LS3, LS6, LS7 and L92 engines

12551926

Water Pump Bolt (not shown)

- Requires quantity of 6
- For LS1, LS2, LS3, LS6, LS7 and L92



A Harmonic Balancer – LS1 and LS2



B Harmonic Balancer – LS7



C Water Pump – 2007-2010 LS2 Trucks, Vans and SUV's



D Water Pump – LS2, LS3 and LS7 Engines



E Water Pump – 2009 LSA, LS3/LS7, L76 SRX Engines

Corvette Oil Pan – 2002-2004 LS6 **E**F-Car Oil Pan **F**CircleTrack Oil Pan **G**Muscle Car Oil Pan Kit **H****OIL PANS AND ACCESSORIES****E. 12561828****Corvette Oil Pan (2002-2004 LS6)**

- Used on 2002-2004 Corvettes with LS6

F. 12628771**F-Car Oil Pan**

- Used on 1998-2002 Camaro and Firebird LS1
- Uses PF48 oil filter

G. 19243065**LS Circle Track Oil Pan**

- Used on CT525 P/N 19171821
- 6-quart capacity (8-quart with remote filter and adapter)
- Requires remote oil filter and adaptor
- Uses oil pan gasket P/N 12558760 (not included)

H. 19212593**Muscle Car Oil Pan Kit**

- Fits virtually all 1955-1995 GM front engine, RWD, V-8 cars
- 5-qt capacity
- Includes oil pan, dipstick and tube, gaskets, pickup tube, windage tray, and all mounting hardware
- Wet sump design

24241872**Magnetic Drain Plug (not shown)**

- Catches and holds small pieces of metal before they can cause damage

12612350**Oil Pan Gasket (not shown)**

- Requires 1 per engine
- Fits all LS-Series engines except LS7 and LS9

12612351**Oil Pan Gasket (not shown)**

- Requires 1 per engine
- For LS7 and LS9 engines

11515758**Oil Pan Bolt (not shown)**

- M8 x 30mm long
- Requires 12 per engine (use 13 with LS7 and LS9 engines)
- For LS1, LS2, LS6, LS7 and L92 engines

12554990**Oil Pan Bolt (not shown)**

- M6 x 136mm long
- Requires 2 per engine
- For all LS-Series engines

12612289**Oil Pump (not shown)**

- For L92 engines

17801830**High Volume LS Oil Pump Kit (not shown)**

- High volume pump assembly for LS-Series engines (except LS7 and LS9 applications)
- Pump pick-up seal included

12623097**Oil Pump (not shown)**

- 2-stage pump for LS7 engines
- Will not work on standard LS crankshafts
- Must use crank sprocket (P/N 12581278), timing dampener (P/N 12581276), LS7 pickup tube (P/N 12580855), LS7 oil pan (P/N 12596689), and LS7 timing cover (P/N 12598292)

11519133**Oil Pump Bolt (not shown)**

- Requires 4 per engine
- For all LS-Series engines



INTAKE MANIFOLDS

A. 12610435

LS7 Production Intake Manifold Assembly

- Gen IV fuel injection nylon manifold used on the 2009 Corvette Z06 LS7 engine
- Fully assembled with injectors, fuel rail, 90mm ETC throttle body and gaskets
- For use only with LS7 and LSX/LS7-style cylinder heads

NOTE: Must use Controller Kit P/N 19243066.



A LS7 Production Intake Manifold Assembly

B. 12610434

LS3 Intake Manifold Assembly

- Gen IV fuel-injection nylon manifold used on the 2009 Corvette LS3
- Fully assembled with injectors, fuel rail, 90mm ETC throttle body and gaskets
- For use with LS3/L92 style cylinder heads
- Compatible with GMPP controllers only if throttle body is replaced with P/N 12570790



B LS3 Intake Manifold Assembly

C. 88894339

LS6 Intake Manifold

- Gen III fuel-injected nylon manifold used on the 2001-2004 LS6 Corvette engine (cathedral port)
- Supplied with the intake manifold seal (P/N 12560251), gasket (P/N 12533587), throttle body seal (P/N 12552542), MAP sensor (P/N 16212460), and MAP sensor seal (P/N 16194007)



C LS6 Intake Manifold

D. 17801947 **NEW**

LS9 Supercharger

- Original Equipment on ZR-1 Corvette
- Eaton twin-rotor 2.3L displacement
- Integrated dual-brick air to liquid intercooler
- Highly efficient 4-lobe rotor design
- Generates maximum boost pressure of 10.5 PSI
- Assembly includes:
 - Supercharger intake system with injectors
 - Cast cover and intercooler
 - Front pulley
 - Throttle body
 - Gasket Set



NEW

D LS9 Supercharger



LS2 4-bbl Intake Manifold **E**

E. 88958675 

LS2 4-bbl Intake Manifold

- Allows you to install a 4-bbl carburetor on a LS-Series engine with cathedral ports (LS1, LS2, LS6)
- Cast aluminum open-plenum intake manifold accepts a 4150-style square-bore carburetor
- Bosses for EFI injectors for custom applications
- Bolts and instructions supplied

NOTE: LSX Ignition Controller P/N 19171130 is required for carbureted applications.

F. 25534394  

LS7 4-bbl Intake Manifold

- Lightweight GM Racing design for use on LS7-style heads
- Reduced mass design, porting not recommended
- Includes mounting bolts and instructions
- Uses LS7 carb intake gasket set P/N 19172113
- Machined for 4150-style carburetors and has 3/8" NPT vacuum boss
- Also available with injector bosses, P/N 25534413

NOTE: LSX Ignition Controller P/N 19171130 is required for carbureted applications.



LS7 4-bbl Intake Manifold **F**

G. 25534401  

LS3/L92 Style 4-bbl Intake Manifold

- Lightweight GM Racing design for use on LS3/L92-style cylinder heads
- Reduced mass design, porting not recommended
- Includes mounting bolts P/N 11609577 and instructions
- Uses L92 carb intake gasket set, P/N 19172114
- Machined for 4150-style carburetors and has 3/8" NPT vacuum boss
- Also available with injector bosses P/N 25534416

NOTE: LSX Ignition Controller P/N 19171130 is required for carbureted applications.



LS3/L92 Style 4-bbl Intake Manifold **G**



Additional components required for installation. See page 223.



Available for purchase online at gmperformanceparts.com



LSX INTAKE MANIFOLDS

The best way to feed an LSX engine is with air channeled through one of GM Performance Parts' new LSX intake manifolds. They're designed to match the performance capability of our LSX heads and big-displacement rotating assemblies. LSX intake manifolds have a high-flow, spider-type design and are made of lightweight aluminum. They're cast with plenty of material for builder-specified port work; and the flanges are a minimum of 0.5"-thick to accommodate machining. Additional features include:

- Standard-deck and tall-deck versions
- Natural finish with LSX and GM logos
- Injector/nitrous bosses cast in place
- Comes with installation hardware

A. 19244037

LSX-LS3 Dual-Plane Standard Deck 4-bbl Manifold

- Dual plane for low- and mid-range torque
- L92 style ports
- Injector/nitrous bosses cast-in
- Extra thick for professional porting
- 4150-style carb. mounting provision
- Uses OEM O-ring gaskets and bolts (included)
- **Tall-deck version available as P/N 19244036**

B. 19244035

LSX-LS3 Single-Plane Standard Deck 4-bbl Manifold

- Single-plane design for mid-range and top-end power
- L92 style ports
- Injector/nitrous bosses cast-in
- Extra thick for professional porting
- 4150-style carb. mounting provision
- Uses OEM O-ring gaskets and bolts (included)
- **Tall-deck version available as P/N 19244034**

C. 19244033

LSX-LS7 Single-Plane Standard Deck 4-bbl Manifold

- Single-plane design for mid-range and top-end power
- LS7 style port
- Injector/nitrous bosses cast-in
- Extra thick for professional porting
- 4150-style carb. mounting provision
- Uses OEM O-ring gaskets and bolts (included)
- **Tall deck version available as P/N 19244032**

D. 19257854

LSX-CT Single-Plane Standard Deck 4-bbl Manifold

- No-holds-barred single plane design for large displacement or high-rpm applications
- LSX-CT/DR-style port; minor port matching required for optimal port match
- Two-sets of injector/nitrous bosses are cast-in for extreme power capability
- Extra thick for professional porting and/or boosted applications
- 1/2" raised 4150-style carb. mounting pad
- **Tall deck version available as P/N 19257853**



A LSX-LS3 Dual-Plane Standard Deck Manifold



B LSX-LS3 Single-Plane Standard Deck 4-bbl Manifold



C LSX-LS7 Standard Deck 4-bbl Manifold



D LSX-CT Standard Deck 4-bbl Manifold



NEW

LSX-DR Standard Deck 4-bbl Manifold **E**

E. 19257851 NEW

LSX-DR Single-Plane Standard Deck 4-bbl Manifold

- The ultimate drag racing single plane for large displacement or high-rpm applications
- LSX-CT/DR style port; minor port matching required for optimal port match
- Two-sets of injector/nitrous bosses are cast-in for extreme power capability
- Extra thick for professional porting and/or boosted applications
- 1" raised 4500 style carb. mounting pad
- **Tall-deck version available as P/N 19257852**



LS Front Distributor Drive Cover **F**

F. 88958679

LS Front Distributor Drive Cover

- Assembly is manufactured for applications where a four-bbl carburetor and distributor are required
- Can be combined with GM's Bowtie valve covers, P/N 25534398 and P/N 25534399, for a complete traditional-looking engine package
- For all LS-Series engines except LS7 and LS9

NOTE: Distributor and mechanical fuel pump not included. Uses Small-Block Ford-style distributor and mechanical fuel pump. Special water pump, accessory drive and damper required.

G. 19172113

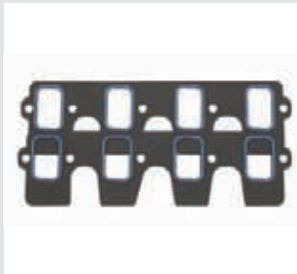
LS7 Carb Intake Gasket

- For use with intake manifold P/N 25534394 or P/N 25534413
- Includes 2 gaskets

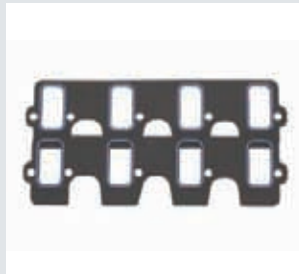
H. 19172114

L92/LS3 Carb Intake Gasket

- For use with intake manifold P/N25534401 or P/N 25534416
- Includes 2 gaskets



LS7 Carb Intake Gasket **G**



L92/LS3 Carb Intake Gasket **H**

19156564

LS2 Carb Intake Gasket (not shown)

- For use with intake manifold P/N 88958675
- Includes 2 gaskets

EXHAUST MANIFOLD/HEADER

I. 12480130

LS Header Flange

- These 3/8" thick steel header flanges are a great way to start a fabricated set of LS-Series headers for a racecar or street rod
- For stock LS1, LS2, LS3, LS6, LS7 and L92 (may require clearancing) exhaust ports
- Sold individually



LS Header Flange **I**



NEW

LSX Header Flange Kit **J**

J. 19257453 NEW

LSX Header Flange Kit

- Laser cut 3/8" thick 304 stainless steel
- Fits LSX-DR head P/N 19166979
- Fits LSX-CT head P/N 19166981

INTAKE MANIFOLDS: ADDITIONAL REQUIRED COMPONENTS

Part Number	Gaskets (Quantity)	Bolts (Quantity)	Engine Application
88894339	12533587 (2)	12552344 (10)	MY04/05 LS1 and LS6
25534394/25534413	19172113	Included with manifold	LS7 Carb Applications
25534401/25534416	19172114	Included with manifold	L76/L92 and LS3 Carb Applications
88958675	19156564	Included with manifold	LS2 Carb Applications

DRY SUMP COMPONENTS

A. 25534412

LS7 Oil Hose Adapters

- Kit adapts the production LS7 oil pan to aftermarket AN-style hoses for aftermarket dry sump oil tanks
- Bolts directly to LS7 oil pan, and has AN male outlet for AN -12 fittings
- Includes 1 adapter, 2 fittings, 2 bolts, and 2 sealing gaskets

12603281

Oil Tank (not shown)

- Fits Z06 Corvette

15210122

Oil Inlet Hose (not shown)

- Fits Z06 Corvette

15210117

Oil Outlet Hose (not shown)

- Fits Z06 Corvette



A LS7 Oil Hose Adapters

IGNITION SYSTEMS

B. 19171130

LSX Ignition Controller

- Distributorless plug-in ignition system for carbureted LS engines with 58X reluctor wheel
- Several pre-programmed timing curves provided
- Supplied software allows you to create custom vacuum advance curves, timing curves, program low- and high-rpm rev limiter and step retard
- Plugs into stock sensors (not provided)
- MAP sensor provided
- Compatible only with LS1/LS6 and LS2/LS7 ignition coils



B LSX Ignition Controller

STARTERS

C. 10465385

LS-Series Starter

- Works with all LS-Series and Gen IV V-8 engines, including the LS1, LS2, LS3, LS6, LQ9, LQ4 and LS7

89017844

Starter (reman, not shown)

- Requires 1 per engine
- For L92 engines

10465547

Starter (reman, not shown)

- Requires 1 per engine
- For F-car applications

89017664

Starter (reman, not shown)

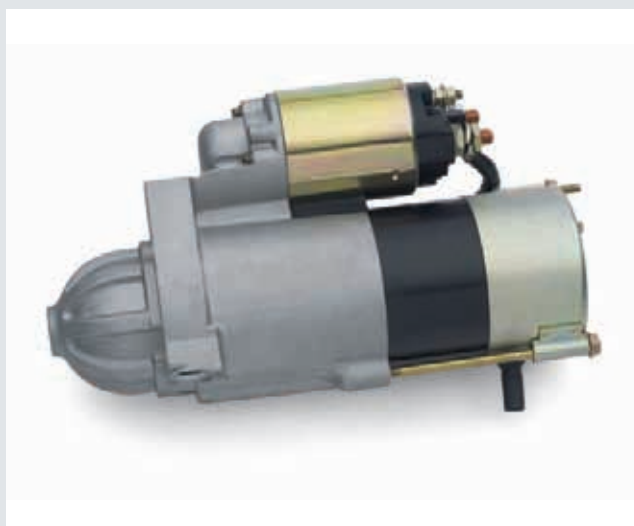
- Requires 1 per engine
- For 2005 Corvette applications
- For LS2 engines

89017847

Starter (reman, not shown)

- Requires 1 per engine
- For 2006-2007 Corvette applications
- For LS2, LS3 and LS7 engines

NOTE: All LS starters require one bolt P/N 11610787, and one bolt P/N 12561848.



C LS-Series Starter



Air Cleaner, Chevrolet-Logo High-Performance Design **D**

AIR CLEANERS

D 12342080

Air Cleaner, Chevrolet-Logo High-Performance Design

- 14" round high-performance-style air cleaner
- Chrome lid with embossed Chevrolet name
- Fits most 4-bbl and 2-bbl carburetors

NOTE: Check clearance between hood and top of air cleaner. Minimum clearance is 3.75" from top of carburetor gasket area to underside of hood.

E 12342071

Air Cleaner, Chevrolet-Logo Classic Design

- 14" round classic-style air cleaner
- Chrome lid with embossed Chevrolet name and Bowtie attaching nut
- Fits most 4-bbl and 2-bbl carburetors



Air Cleaner, Chevrolet-Logo Classic Design **E**

SPARK PLUGS

12571165

Spark Plug (not shown)

- Requires 8 per engine
- AC 41-101
- For LS7 engines

12621258

Spark Plug (not shown)

- Requires 8 per engine
- AC 41-985
- For LS1, LS2, LS6 and L92 engines

15336959

Spark Plug Wire Shield (not shown)

- Requires 8 per engine
- For all LS-Series engines

ENGINE MOUNTS - LS ENGINES

15254700

Engine Mount (not shown)

- Requires 2 per engine
- For 2005-2008 Corvette engines
- For LS2 and LS7 engines

10284134

Engine Mount (not shown)

- Requires 2 per engine
- For 1997-2004 Corvette engines
- For LS1, LS2 and LS6 engines

22179268

Engine Mount (not shown)

- Requires 2 per engine
- For 1998-2002 F-Car engines
- For LS1 engines

15854941

Engine Mount (not shown)

- Requires 2 per engine
- For L92 engines





Bowtie Sportsman Block

Big-Block Components

You don't know power until you tap into the torque reserve of a healthy Big-Block engine—be it a 454 in a classic Chevelle, a 502 in a dependable work truck or a 572 in a dedicated drag racer.

Building a Big-Block for maximum performance and durability is easier when you're using factory-engineered, matched components that have been tested on the dyno and on the drag strip. That's what you get from GM Performance Parts' comprehensive range of Big-Block parts. We've been designing, building and tuning Big-Blocks longer than anyone, so you can trust that our parts will deliver dependable, race-winning performance.

Our range of Big-Block parts starts with brand-new GM cylinder blocks that are stronger than previous production designs. The new blocks combine design elements of the Mark IV and Gen V designs, along with architecture improvements that give the block greater strength. That means it'll stand up better to the high horsepower and monster torque levels a Big-Block is capable of generating. We've even got an updated version of the legendary aluminum ZL-1 block casting for your COPO tribute project!

We've also got the best-performing rotating parts and cylinder heads, too – including rectangular-port and oval-port and lightweight aluminum versions of the heads. There's no reason to settle for used, reconditioned or "seasoned" parts, because GMPP parts are competitively priced and often deliver greater strength and performance than used production components.

There's nothing like the feel of Big-Block power – and nobody builds it like GM Performance Parts.

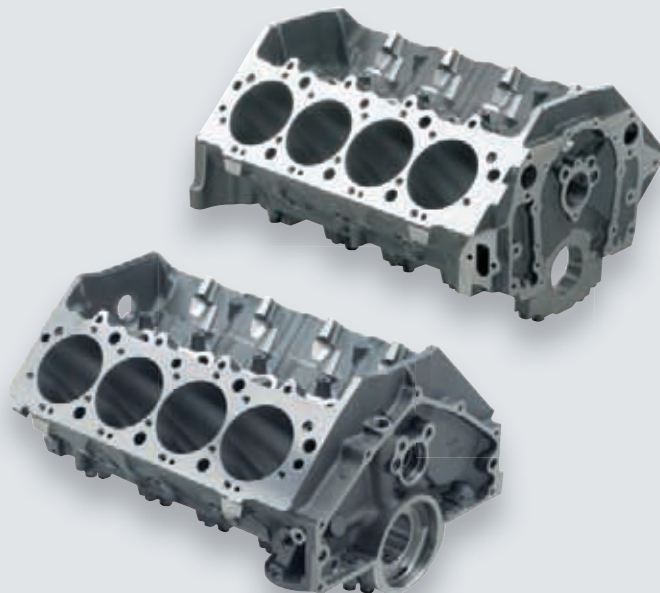


The New Big-Block

The classic Chevy Big-Block production engine was introduced in 1965. In the late 1980s, a new version arrived, designed for marine and fuel-injected applications. The early-style engines are known as Mark IV Big-Blocks, while the later style is referred to as the Gen V (and Gen VI) Big-Block. You can tell them at a glance by checking for a mechanical fuel pump mounting pad. If it has one, it's a Mark IV. If there's no fuel pump pad, it's a Gen V block.

Despite the fuel pump mounting pad difference in their castings, the cylinder blocks of the Mark IV and Gen V are based on the same design architecture. There are several other differences—particularly in the water jackets near the deck surfaces—that make some Mark IV and Gen V parts incompatible, including crucial components such as the cylinder head gaskets.

GM recently revised the basic Big-Block architecture to commonize the Mark IV and Gen V, creating an all-new cylinder block casting that combines the features of both generations. It also incorporates significant updates and strength-enhancing features that make the Big-Block a stronger engine foundation with provisions to support 21st-century performance.



Although the basic Big-Block architecture is revised, GM Performance Parts continues to offer two versions, each differentiated by performance and displacement capability. The Bowtie block continues to be the block of maximum performance. GM Performance Parts crate engines use the revised Big-Block design.

Here's how we updated the biggest and baddest performance engine platform of the past 46 years:

- Water jackets were revised near the deck surfaces so that Mark IV or Gen V head gaskets can be used interchangeably
- Oil pressure feed holes were added to the oil filter boss and front bulkhead to support oil feeds for superchargers, turbochargers, etc.
- The oil hole next to the camshaft bore at the front of the block was repositioned, enabling safe machining of the cam bore to accept a 50mm roller camshaft bearing
- A mechanical fuel pump mounting pad became standard, similar to the Mark IV
- A boss was added next to the distributor hole in the valley to support hardware for digital ignition equipment
- Revised front bulkhead was made thicker and stronger, with marked provisions for 10-bolt timing cover (non-Bowtie blocks are delivered with drilled and tapped holes for 6-bolt covers; remaining holes must be drilled and tapped at the prescribed positions)
- Non-Bowtie blocks were machined for 4-bolt parallel main caps; Bowtie blocks are machined for 4-bolt splayed caps
- Revised rear-of-block allowed for the machining of 1- or 2-piece main seals (similar to Gen V design)
- The front clutch boss was added for older muscle car applications
- 454 blocks created a slightly beefier main web than previous blocks
- All blocks were made with the standard production roller camshaft and lifter machining
- 502 and Bowtie blocks shared the same main web, which is strengthened considerably from the Mark IV and the first-generation Gen V Bowtie block
- Bowtie blocks were given a distinctive water jacket design to allow up to 4.600" bores. These blocks can be identified by a "B" suffix behind the casting number

Additionally, two new core plugs were added to the rear bulkhead. They enhance the manufacturing process at the foundry and help improve overall quality. Also, new "Bowtie" logo and other identifying marks are added to the Bowtie block, distinguishing it from previous generations.

Chevy Big-Block Quick Reference Chart

PRODUCTION-BASED CAST-IRON BLOCKS

Part Number	Casting Number	Deck Height	F Pump Boss	Cyl Wall	Bore Range	Main Bolt	Main Bolt Degree	Cap Material	Crank Jnl Dia.	Oiling	Seal Type	Max Stroke	Weight (lbs)	Max HP	Usage	Page Number
19170538	—	9.800"	Yes	Open	4.250"–4.310"	4	Straight	Cast-iron	2.750"	Wet	1 pc	4.250"	247	700	Street	230
19170540	—	9.800"	Yes	Siamese	4.470"–4.500"	4	Straight	Cast-iron	2.750"	Wet	1 pc	4.250"	269	700	Mod	230

BOWTIE CAST-IRON BIG-BLOCKS

Part Number	Cast Number	Deck Height	F Pump Boss	Cyl Wall	Bore Range	Main Bolt	Main Bolt Degree	Cap Material	Crank Jnl Size	Oiling	Seal Type	Max Stroke	Weight (lbs)	Max HP	Usage	Page Number
19212191	24502504B	9.800"	Yes	Siamese	4.494"–4.600"	4	16°	Nodular	2.750"	Wet	2 pc	4.500"	258	800	Sport	231
19212192	24502504B	9.800"	Yes	Siamese	4.494"–4.600"	4	16°	Nodular	2.750"	Wet	1 pc	4.500"	258	800	Sport	231
19212193	24502506B	10.200"	Yes	Siamese	4.494"–4.600"	4	16°	Nodular	2.750"	Wet	1 pc	4.500"	263	800	Sport	232
19212194	24502506B	10.200"	Yes	Siamese	4.494"–4.600"	4	16°	Nodular	2.750"	Wet	2 pc	4.500"	263	800	Sport	232
19212195	24502506B	10.200"	Yes	Siamese	4.560"–4.600"	4	16°	Nodular	2.750"	Wet	1 pc	4.500"	263	800	Sport	232
19212196	24502504B	9.800"	Yes	Siamese	4.240"–4.600"	4	16°	8620 steel	2.750"	Wet	2 pc	4.500"	281	1200	Pro	234
19212197	24502506B	10.200"	Yes	Siamese	4.240"–4.600"	4	16°	8620 steel	2.750"	Wet	2 pc	4.500"	296	1200	Pro	234

ALUMINUM ZL1 BLOCK

Part Number	Cast Number	Deck Height	F Pump Boss	Cyl Wall	Bore Range	Main Bolt	Main Bolt Degree	Cap Material	Crank Jnl Size	Oiling	Seal Type	Max Stroke	Weight (lbs)	Max HP	Usage	Page Number
12370850	3946053	9.800"	Yes	Siamese	4.240"–4.300"	4	16°	8620 steel	2.750"	Wet	2 pc	4.375"	110	650	Pro	233
88958696*	88958695	9.800"	Yes	Siamese	4.250"–4.300"	4	16°	8620 steel	2.750"	Wet	1 pc	4.375"	110	650	Pro	N/A

*Used in Anniversary 427 P/N 19166392. Not available for service.

DRCE BLOCKS

Part Number	Cast Number	Deck Height	F Pump Boss	Cyl Wall	Bore Range	Main Bolt	Main Bolt Degree	Cap Material	Crank Jnl Size	Oiling	Seal Type	Max Stroke	Weight (lbs)	Max HP	Usage	Page Number
24502572	1A626	9.525"–9.000"	No	Siamese	4.500"–4.700"	4	16°	8620 steel	2.750"	Dry	2 pc	4.600"	255	1400+	Pro	235
25534406	CG	9.250"–9.000"	No	Siamese	4.590"–4.700"	4	22°	4140 steel	2.500"	Dry	2 pc	4.600"	N/A	1400+	Pro	235



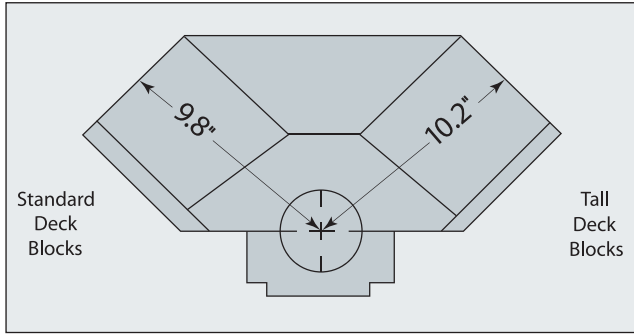
BUILDER'S TIP

Thrust Bearing Alignment

On Small-Block and Big-Block engines, the thrust bearing alignment on the important #5 bearing is performed by installing only the #5 main cap and tightening its fasteners. With cap in place, the crankshaft is tapped

forward or backward with a rubber mallet. When this is done, crankshaft endplay can be measured. For Small-Blocks, you're looking for between 0.005- and 0.007-inch; for Big-Blocks, the spec is 0.0065-0.0075-inch.

DECK HEIGHT DIAGRAM



ENGINE BLOCKS

19170538

427/454 Bare Block (not shown)

- New casting incorporating the best designs of Mark IV and Gen VI
- Production type cast-iron 4-bolt block
- **4.250"** finished bore
- **4.310"** max bore (non-siamese bore)
- Machined fuel pump pad
- New water jackets for use with Mark IV or Gen VI heads
- Revised oiling to allow for bigger cam bearings/cam lift
- Bolt boss (not machined) added near distributor hole like 8.1L
- Can be drilled for use with 10-bolt front timing cover
- Additional clearance added for roller timing chains
- Auxiliary oil pressure line added to front of block
- Racing style oil filter cast feature with added oil pressure port
- Additional boss for manual transmission clutch pivot (machined)
- Additional material added around lifter bosses

A. 19170540

502 Mark IV/Gen VI Bare Block

- New casting incorporating the best designs of Mark IV and Gen VI
- Production type cast-iron 4-bolt block
- Improved main bearing bulkheads—Bowtie block-style bulkhead
- Cleared for bigger strokes
- **4.470"** finished bore
- **4.500"** max bore (siamese)
- Fuel pump pad has been added/machined
- New water jackets for use with Mark IV or Gen VI heads
- Revised oiling to allow for bigger cam bearings/cam lift
- Bolt boss (machined) added near distributor hole like 8.1L
- Can be drilled for use with 10-bolt front timing cover
- Additional clearance added for roller timing chains
- Auxiliary oil pressure line added to front of block
- Racing-style oil filter cast feature with added oil pressure port
- Two bosses added for manual transmission clutch pivot (machined)
- Additional material added around lifter bosses



A 502 Mark IV/Gen VI Bare Block (front)



A 502 Mark IV/Gen VI Bare Block (bottom)



A 502 Mark IV/Gen VI Bare Block (rear)



Bowtie Sportsman Block (front) **B**



Bowtie Sportsman Block (rear) **B**



Top—Splayed Main Cap **C**
Bottom—Machined Bottom
(close-up)



2-Piece Rear Main **C**

BOWTIE SPORTSMAN BLOCKS

Big-Blocks with big power are what you get when you select a GM Performance Parts Bowtie Sportsman Block for your drag racing or extreme street-performance application. These blocks comprise a full line of high-quality, precision-machined components based on performance-proven GM designs. The extensive lineup of blocks makes choosing the perfect block easy – and our quality and precision machining is second to none.

The blocks are CNC-machined, an automated process that guarantees precise tolerances. There are no approximations on these blocks – they're exactly right, which is critical to obtaining maximum performance. GM Performance Parts offers more CNC-machined blocks than anyone.

The highest-quality materials are used to cast GM Performance Parts Sportsman Bowtie Blocks. They are also available as tall decks, allowing you to make more cubic inches with larger-stroke crankshafts. These blocks can easily be bored and stroked to 500-or-more cubic inches. They can be fitted with one-piece or two-piece crankshaft seals for a smaller chance of oil leaks (one-piece seals) or more aftermarket components attachments (two-piece seals).

The Bowtie Sportsman Blocks are available with splayed main caps, which have additional material holding the crankshaft in place. The caps are splayed at 16 degrees. GM Performance Parts uses splayed main caps throughout the entire line of performance-built Big-Blocks.

GM Performance Parts Bowtie Sportsman Blocks are ideal for drag racers or street machines where the goal is 800 horsepower and long-lasting reliability.

Bowtie Sportsman Block Technical Notes:

- Available in short deck (9.800") or tall deck (10.200") configurations
- Blocks have clearance for 4.500" stroke crankshafts
- CNC-machined to +/- .001" tolerance
- Siamese cylinder bores
- Bore finishes are ready to hone to size
- Machined for mechanical fuel pump
- Machined for hydraulic roller and flat tappets
- Nodular iron 4-bolt main caps splayed 16° on the three center mains
- Priority main oiling system
- Blocks with a 1-Piece Rear Main Seal use the 6-bolt, Gen VI-style front cover (P/N 10230954) and Gen VI-style oil pan
- Blocks with a 2-Piece Rear Main Seal use the 10-bolt, Mark IV-style front cover and Mark IV-style oil pan

See chart on page 229 for complete specifications.

Standard Deck Sportsman Blocks

B. 19212192

Standard Deck Bowtie Sportsman Block

- 1-piece rear main seal
- CNC-machined cast-iron 4-bolt block
- **4.494"** finished bore
- **4.600"** max bore
- Tested to 800 horsepower!

C. 19212191

Standard Deck Bowtie Sportsman Block

- 2-piece rear main seal
- CNC-machined cast-iron 4-bolt block
- **4.494"** finished bore
- **4.600"** max bore
- Tested to 800 horsepower!



TALL DECK SPORTSMAN BLOCKS

A. 19212193

Tall Deck Bowtie Sportsman Bare Block

- 1-piece rear main seal
- CNC-machined cast-iron 4-bolt block
- **4.494"** finished bore
- **4.600"** max bore
- Tested to 800 horsepower!

19212194

Tall Deck Bowtie Sportsman Bare Block (not shown)

- 2-piece rear main seal
- CNC-machined cast-iron 4-bolt block
- **4.494"** finished bore
- **4.600"** max bore
- Tested to 800 horsepower!

19212195

Tall Deck 572 Bowtie Sportsman Bare Block (not shown)

- 1-piece rear main seal
- Uses Mark V style front cover and oil pan mounting
- CNC-machined cast-iron 4-bolt block
- **4.560"** fully honed bore
- **4.600"** max bore
- Powdercoated Chevy orange
- 5 windage tray bolts installed
- Tested to 800 horsepower!
- This is the block used for our 572 engines



A Tall Deck Bowtie Sportsman Bare Block (front)



A Tall Deck Bowtie Sportsman Bare Block (rear)



A Machined Lifter Valley Detail



1-Piece Rear Main



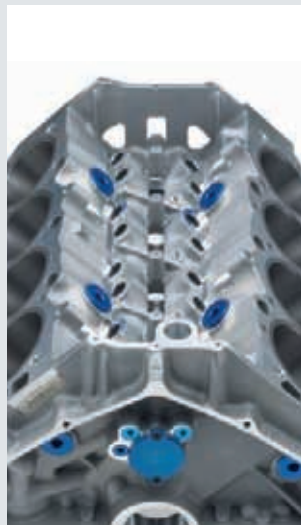
ZL1 Aluminum Big-Block (front) **B**



ZL1 Aluminum Big-Block (rear) **B**



ZL1 Aluminum Big-Block, 4-Bolt Mains **B**



ZL1 Aluminum Big-Block, Lifter Valley **B**

ZL1 ALUMINUM BIG-BLOCK

ZL1 was the legendary regular production option (RPO) code that struck fear into all competitors who came up against 1969 Camaros – and a couple of Corvettes – that were equipped with this fearsome 427-cubic-inch Big-Block from the factory. The price to own an original ZL1 has exceeded the value of many homes, but you can build your own ZL1-powered supercar thanks to GM Performance Parts. By reintroducing this fabled aluminum Big-Block GM Performance Parts has made it possible for mere mortals to experience the raw horsepower and tremendous torque of the ZL1. The GM Performance Parts ZL1 aluminum block is made from premium materials and is precision machined to blueprinted specifications.

See chart on page 229 for complete specifications.

ZL1 Aluminum Block Technical Notes:

- 356-T6M Aluminum block
- Standard deck height (9.800")
- 4.300" maximum bore
- 4.240" finished bore
- 4.375" maximum stroke
- Siamesed cylinder walls
- Centrifugally spun cast-iron cylinder sleeves
- Steel 4-bolt main caps splayed 16° on the three center mains (dowel located)
- Provision for hydraulic roller camshafts
- AN O-ring oil and water plugs
- Tested to 650 horsepower

B. 12370850

ZL1 Aluminum Big-Block

- 4.240" finished bore
- 4.300" max bore
- 4.375" max stroke
- Use sleeve P/N 12480035 (see page 236)
- 2-piece rear main seal
- Uses Mark IV front timing cover



CAST-IRON BOWTIE RACE BLOCKS

If you're looking to build a drag racing engine capable of producing 1200 horses or more, a GM Performance Parts' cast-iron Bowtie Race Block is your starting point. It is designed for engine builders who want to custom-machine their blocks for specific racing applications. Toward that end, these premium castings have thick deck surfaces, improved oiling, improved coolant flow and splayed 4-bolt steel bearing caps. Everything is secured with premium fasteners. The combination of a GM Performance Parts cast-iron Bowtie Race Block and your unique engine building skills will put you down the track ahead of the competition.

See chart on page 229 for complete specifications.

Cast-iron Bowtie Race Block Technical Notes:

- Precision CNC-machining means +/- 0.001" tolerances
- Blocks are available in short deck (9.800") or tall deck (10.200")
- A sonic bore check data sheet is provided with each block
- Siamese cylinder bores
- Improved cooling around number-1 cylinder
- Accepts Mark IV or Gen V, VI cylinder heads
- Use Gen V head gaskets with Mark IV and Gen V cylinder heads
- Use Gen VI head gaskets with Gen VI cylinder heads
- Requires Mark IV design 2-piece rear main seal oil pans
- Requires Mark IV design crankshafts
- Can use Mark IV and Gen V, VI camshafts, timing sets, lifters and timing cover (aftermarket belt drive timing covers may require clearancing)
- Blind-tapped head bolt holes; extra inner head bolt bosses provided
- 4-bolt SAE 8620 main caps splayed 16° on the three center mains
- Priority main oiling wet-sump system
- Provisions for dry-sump oil line provided
- Honed camshaft and crankshaft bores
- 0.842" lifter bores (maximum 1.06") may be relocated
- Distributor gear clearance at bottom of number-8 cylinder bore should be checked
- Machined mechanical fuel pump pad

19212196

Standard Deck Bowtie Race Block (not shown)

- CNC-machined cast-iron 4-bolt block
- **4.240"** finished bore
- **4.600"** max bore (.250" min wall thickness)
- Standard deck height (9.800")
- Lifter bosses are .300" taller than standard blocks
- Tested to 1,200 horsepower!

A. 19212197

Tall Deck Bowtie Race Block

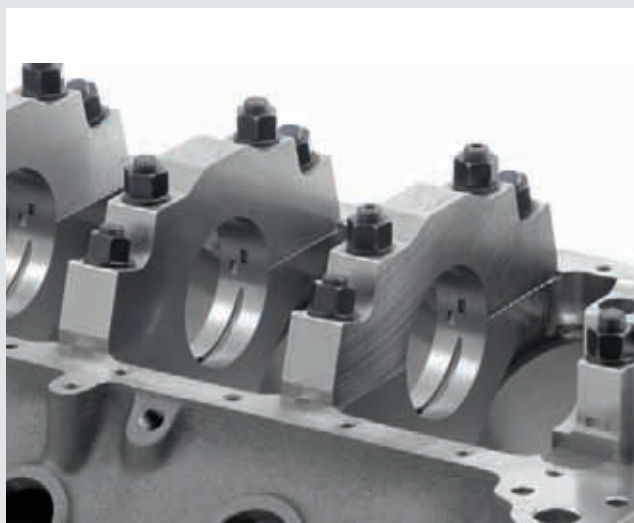
- CNC-machined cast-iron 4-bolt block
- **4.240"** finished bore
- **4.600"** max bore (.250 min wall thickness)
- Tall deck height (**10.200"**)
- Lifter bosses are .300" taller than standard blocks
- Tested to 1,200 horsepower!



A Tall Deck Bowtie Race Bare Block (front)



A Tall Deck Bowtie Race Bare Block (rear)



A Bowtie Sportsman Bare Block, Nodular 4-Bolt Splayed Caps

DRCE 2 Bare Block (front) **B**DRCE 2 Bare Block (rear) **B**DRCE 2 Lifter Valley **B**DRCE 2 Main Caps **B**

BIG-BLOCK DRCE BLOCKS

GM Performance Parts Big-Block DRCE (Drag Racing Competition Engine) blocks are the foundation of many of the most powerful Pro Stock drag racing engines. The DRCE family of engine blocks was specifically designed with 500-cubic-inch Pro Stock engines in mind. They are the latest evolution of Pro Stock engine design. In order to build optimum performance, the DRCE blocks have bore spacing that allows for the preferable big bore/short-stroke crankshaft combination. The camshaft has been raised and the distributor moved.

The big-bore design unshrouds the heads, which means bigger valves can be used. The result is maximized air/fuel mixtures. All DRCE blocks are sold solid, without lifter holes or head bolt holes, so any GM Big-Block cylinder heads may be used. The DRCE blocks are available in either gray iron or compacted graphite (an extremely high-strength material that helps the block combat bore distortion and crank deflection under stress).

See chart on page 229 for complete specifications.

DRCE Block Technical Notes:

- CNC-machined to +/- 0.001" tolerance
- Siamese cylinder bores with 4.900" spacing
- No lifter bosses, solid bar can be drilled as required
- No head bolt holes
- Numbers two and four main bearing bulkheads moved 0.060"
- Bellhousing bolt pattern accommodates Chevy and Pontiac/Olds transmissions
- Uses Big-Block Chevrolet crank, camshaft, balancer, flywheel and water pump
- Requires camshaft with distributor gear behind rear bearing
- Priority main oiling dry-sump system
- Dual starter mounting locations
- Front-engine mounts only
- Each block is supplied with sonic test data sheet

B. 24502572

DRCE 2 Bare Block, Gray Iron

- CNC-machined iron 4-bolt block
- 9.525" deck height, may be machined to 9.000"
- Camshaft raised to 5.750"
- Cam tunnel accommodates 55mm cam bearings
- **4.500"** semi-finished bore
- **4.700"** max bore
- 4-bolt SAE 8620 main caps, 16° splayed-on center three mains
- Oil pan rails spread .400" per side for additional stroke clearance
- Tested to 1,400-plus horsepower!

25534406

DRCE 3 Bare Block, Compacted Graphite¹ (not shown)

- CNC-machined compacted graphite material 4-bolt block
- 9.250" deck height, can be machined to 9.000"
- Camshaft raised to 7.067"
- Cam tunnel accommodates (9) 60mm cam bearings
- Cam tunnel is closed (no oil drain to rotating assembly)
- **4.590"** semi-finished bore
- **4.700"** max bore
- 2.500" crankshaft main journal
- 4-bolt SAE 4140 'dovetailed after assembly' main caps, 22° splayed-on center three mains
- Highest-available quality main studs
- Oil pan rails spread to 12"
- Oil and water plugs are AN O-ring-style
- Tested to 1,400-plus horsepower!

25534400

DRCE 3 Bare Block, Compacted Graphite¹ (not shown)

- Same as P/N 25534406
- Cam tunnel accommodates (9) 70mm cam bearings

¹Compacted graphite is an extremely high strength material that helps the block combat bore distortion and crank deflection under heavy loads – like making 1,400-plus horsepower at 10,000 rpm!



CYLINDER BLOCK COMPONENTS

A. 6264902

O-Ring Seal (sold individually)

- Use under the rear main bearing cap on all 1991-and-newer Gen V and Gen VI 454 and 502 engines

3859927

Outer Main Cap Bolt, Mark IV (not shown)

- Used with Mark IV (1965-1990) cast-iron Big-Blocks with 4-bolt mains
- Sold individually; order 10 per engine

B. 10106461

Inner Main Cap Bolt, Gen V and Gen VI

- Used with Gen V and Gen VI (1991-and-newer) Big-Blocks with 4-bolt mains
- Sold individually; order 10 per engine

3909834

Inner Main Cap Bolt, Mark IV (not shown)

- Used with Mark IV (1965-1990) cast-iron Big-Blocks with 4-bolt mains
- Sold individually; order 10 per engine

C. 88962212

Main Bearings, 572 Engine

- Complete main bearing kit for 572 block with standard-size mains

Freeze Plugs and Oil Plugs

Part Number	Description	Quantity
03826963	Plug, Expansion	8
03999200	Plug, Camshaft Bearing Hole	1
00444777	Plug	8
14090911	Plug, Water Outlet	1
00444613	Plug, Automotive Hex Head Pipe	1
12558081	Pin, Cylinder Head Locationing	4
1453658	Pin, Transmission	2
14090911	Plug, Water Outlet	1

3743389

Freeze Plug, Steel (Mark IV, not shown)

- Steel freeze plug for Mark IV (1965-1990) engines

3826963

Freeze Plug, Brass (Mark IV, not shown)

- Brass freeze plug for Mark IV (1965-1990) engines
- Suitable for marine applications

D. 88891749

Freeze Plug, Brass (Gen V and Gen VI)

- Brass freeze plug for Gen V and Gen VI (1991-and-newer) engines
- Suitable for marine applications

12480035

Cylinder Sleeve (standard, not shown)

- Steel cylinder sleeve for aluminum block P/N 12370850 and P/N 88958696
- Sleeve has 4.240" bore and finish-bores to 4.250"

3902885

Windage Tray Stud (not shown)

- Used for mounting splash shield P/N 3967854

10224104

Windage Tray Stud, Gen V 454 and 502 (not shown)

- Used with Gen V 454 and 502 engines

E. 88958656

Windage Tray Bolt, 572

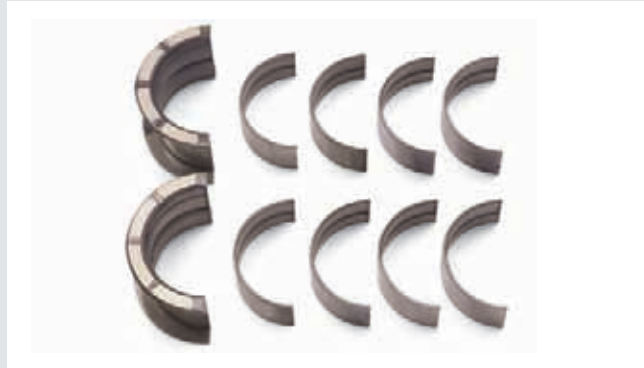
- Used with 572 engines



A O-Ring Seal



B Inner Main Cap Bolt (Gen V and Gen VI)



C Main Bearings, 572 Engine



D Freeze Plug, Brass (Gen V and Gen VI)



E Windage Tray Bolt, 572



Timing Chain Cover **F**
Gen V and Gen VI



Big-Block Fuel Pump **G**
Block-Off Plate

FRONT COVERS AND TIMING POINTERS

F. 10230954

Timing Chain Cover, Gen V and VI

- Aluminum cover with timing indicator fits all 1996-and-newer Gen V and Gen VI engines
- Used on all GMPP Big-Block crate engines

11609914

Front Oil Galley Plug (not shown)

- Fits front oil galley (cam tunnel) holes
- .0300" oil squirter hole for cooling and lubricating the timing chain

G. 12341999

Big-Block Fuel Pump Block-Off Plate

- Plate has stamped Bowtie logo
- Special non-asbestos gasket included



TIMING COVERS: ADDITIONAL REQUIRED COMPONENTS

Part Number	Bolts (Quantity)	Seals (Quantity)	Gasket (Quantity)	Engine Application
10230954	10243771 (6)	10191640 (1)	10198910 (1)	12498793, 12498777, 12498778, 12371054, 12498827, 12498792, 12498826, 24502620, 12568779, 12568778, 12499121, 19201332, 12371054, 88890534, 24502618, 12568774, 12371204, 12568782, 12497323, 12496963, 12371171, 19166392, 19166393



BUILDER'S TIP

Valve-to-Piston Clearance Considerations

A custom engine combination should always raise the concern of valve-to-piston clearance. And while camshaft lift is commonly thought of as the primary culprit of valve/piston interference, the overlap period – when the piston nears top-dead center and the intake valve is starting to open and the exhaust valve is closing – brings the valves and piston closest together. So, don't assume the gross lift specs are all you have to worry about; duration and lobe separation are equally important, making a careful clearance inspection all the more important.



Additional components required for installation. See page 237.



Available for purchase online at gmperformanceparts.com



BIG-BLOCK CYLINDER HEADS

Part Number	Description	Casting Number	Material	Port Size	Port Type	Valve Angle	Chbr CC's	Int Vlv	Exh Vlv	Exh Port	Plug Type	Heat Riser	Rocker Stud	Notes	Page Number
12562920	Gen V, VI BBC	12562934	Iron	325	Rect	BBC	118	2.180	1.880	Square	Std	yes	Screw-in	Ass'd 2925's	238
12562925	Gen V, VI BBC	12562934	Iron	325	Rect	BBC	118	2.180	1.880	Square	Std	yes	Screw-in	7/16 accy holes	238
12562926	Gen V, VI BBC	12562934	Iron	325	Rect	BBC	118	2.180	1.880	Square	Std	yes	Screw-in	3/8 accy holes	238
12562917	Gen V, VI BBC	10114156	Iron	—	Round	BBC	118	2.070	1.720	Square	Std	yes	Screw-in	HT 502 head	N/S
12363390	Oval alum	12363391	Alum	290	Oval	BBC	110	2.250	1.880	Square	Std	no	Screw-in	Semi-open, oval port	239
12363392	Oval alum	12363391	Alum	290	Oval	BBC	110	2.190	1.880	Square	Std	no	Screw-in	Semi-open, oval port	239
12363399	Oval alum	12363391	Alum	290	Oval	BBC	110	2.190	1.880	Square	Std	no	Screw-in	Bare 3392	239
12363408	NHRA L88	12363401	Alum	315	Rect	BBC	118	2.190	1.880	Square	Std	no	Screw-in	Bare, NHRA legal	240
12363400	Rect alum	12363401	Alum	300	Rect	BBC	118	2.250	1.880	Square	Std	no	Screw-in	Assembled	240
12363410	Rect alum	12363401	Alum	300	Rect	BBC	118	2.250	1.880	Square	Std	no	Screw-in	Bare 3400	240
12363425	BBC Bowtie	14044861	Alum	380	Rect	BBC	115	2.190	1.880	Square	Std	no	Screw-in	Bare, raised int/exh	241
12499255	572/620	—	Alum	310	Rect	BBC	118	2.250	1.880	Square	Std	no	Screw-in	ZZ572/620	241
88961160	572/720	—	Alum	310	Rect	BBC	118	2.250	1.880	Square	Std	no	Screw-in	ZZ572/720R	241
10051129	Pro Stock BBC	—	Alum	400	—	Special	72	—	—	Square	—	no	Shaft	Unmachined 10051128	N/S
24502585	DRCE 2	—	Alum	—	Peanut	DRCE 2	—	—	—	DRCE	—	no	Shaft	Pro Stock—raw	242
25534404	DRCE 3	—	Alum	—	Peanut	DRCE 3	—	—	—	DRCE	—	no	Shaft	Pro Stock—raw	243

SERVICE REPLACEMENT HEADS

GM Performance Parts service replacement cylinder heads are direct replacements on most 1990-and-later GM Big-Block 454-cubic-inch and 502-cubic-inch engines. These brand-new cylinder heads meet GM's stringent quality standards and provide excellent service and durability not found in used cylinder heads. The cylinder heads have rectangular intake ports¹.

Service Replacement Head Technical Notes:

- Cast-iron
- Rectangular intake ports
- Machined for 2.180"/1.880" (3/8" stems) valves
- Non-adjustable rocker arm design
- Heads have heat risers
- Will not work on production Mark IV cylinder blocks

A. 12562925

Bare Cast-iron Gen V and Gen VI Cylinder Head

- Bare cast-iron head
- 118cc combustion chambers
- 7/16" accessory bolt holes

12562926

Bare Cast-iron Gen V and Gen VI Cylinder Head (not shown)

- Bare cast-iron head
- Machined for 2.180"/1.880" 3/8" stem valves
- 118cc combustion chambers
- 3/8" accessory bolt holes (otherwise identical to P/N 12562920)

12562920

Cast-iron Gen V and Gen VI Cylinder Head Assembly (not shown)

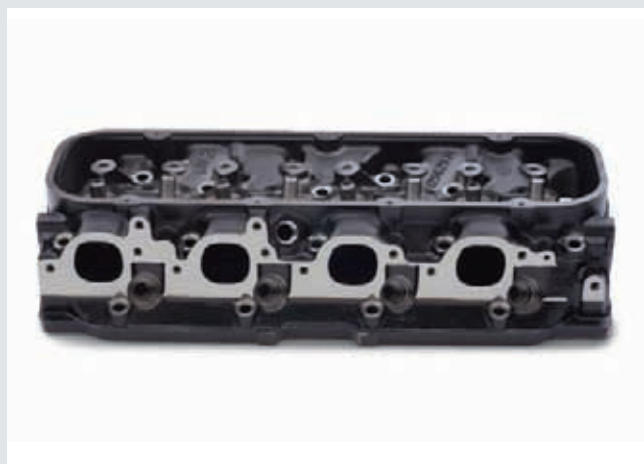
- Cast-iron head
- Completely assembled with 2.180"/1.880" valves
- 118cc combustion chambers
- Uses P/N 12562925 bare casting

This head is assembled with the following components:

14097045 Intake Valves	12360874 Valve Spring Retainer & Seal Kit
14097049 Exhaust Valves	3947880 Valve Locks
14097002 Valve Springs	3875916 Valve Spring Shims

NOTE: Will not work on L29 engines.

¹Rectangular intake ports are larger in volume and designed to enhance high rpm horsepower. They are an ideal street head for those Big-Block enthusiasts who want more power from a street car that sees a lot of drag-strip action.



A Bare Cast-iron Gen V and Gen VI Cylinder Head (exhaust)



A Bare Cast-iron Gen V and Gen VI Cylinder Head (intake)



Bare Cast-iron Gen V and Gen VI Cylinder Head **A**
(combustion chamber)



Bowtie Oval Port Aluminum Cylinder Head (intake) **B**



Bowtie Oval Port Aluminum Cylinder Head (exhaust) **B**



Bowtie Oval Port Aluminum Cylinder Head **B**
(combustion chamber)

ALUMINUM BOWTIE STREET CYLINDER HEADS

GM Performance Parts Bowtie high-performance street cylinder heads are an ideal combination of street drivability and drag-strip performance. They provide a broad power range with ample low-end torque, excellent throttle response, good mid-range torque and enough top-end power to beat your competitors to the finish line. GM Performance Parts Bowtie street cylinder heads are designed for high-performance applications, with thick deck surfaces and high-velocity airflow passages. The heads are manufactured to precise machining tolerances.

GM Performance Parts Bowtie street cylinder heads are available in either rectangular or oval intake port configurations. Rectangular intake ports are larger in volume and are designed to enhance high-rpm horsepower. These heads are best for vehicles that see frequent drag-strip action. Cylinder heads with oval intake ports are smaller in volume and are designed for greater low-rpm torque. Oval port heads are best for street applications where lots of bottom end, off-the-line power is desired.

Bowtie Street Cylinder Head Technical Notes:

- Made from 356-T6 aluminum
- Available in rectangular- or oval-port designs
- Will work on Mark IV and Gen V,VI blocks
- 9/16"-thick decks
- As-cast intake and exhaust ports
- No heat risers
- 1.55" valve spring seat diameter
- Heli-coiled 7/16" screw-in rocker stud holes
- Designed for use with 3/8" pushrods
- Use intake gasket P/N 12366985 and bolt kit P/N 12367959
- Use head gasket P/N 12363414 for bores to 4.370" and P/N 12363413 for bores 4.470" to 4.540" (Mark IV)
- Use head gasket P/N 12363412 for bores to 4.370" and P/N 12363411 for bores 4.470" to 4.540" (Gen V, VI)
- Use head bolt kit P/N 12367779

Oval Port Heads

12363399

Bowtie Oval Port Aluminum Cylinder Head, Bare (not shown)

- Fully machined
- Semi-finished for 2.190"/1.880" valves
- Bronze guides can be finished to 11/32" or 3/8"
- 290cc high-velocity oval intake ports
- 110cc exhaust ports
- 110cc semi-open combustion chambers

B. 12363392

Bowtie Oval Port Aluminum Cylinder Head Assembly

- Completely assembled with 2.190"/1.880" 11/32" stem valves
- 290cc oval intake ports
- 110cc exhaust ports
- 110cc combustion chambers

This head is assembled with the following components:

12366986	2.190" Intake Valves	12366990	Valve Spring Retainers
12366988	Exhaust Valves	12366992	Valve Locks
12462970	Valve Springs	12495690	Valve Seals
3875916	Valve Spring Shims	3921912	Rocker Arm Studs
3860038	Pushrod Guideplates		

12363390

Bowtie Oval Port Aluminum Cylinder Head Assembly (not shown)

- Completely assembled with 2.250"/1.880" 11/32" stem valves
- 290cc oval intake ports
- 110cc exhaust ports
- 110cc combustion chambers

This head is assembled with the following components:

12366987	2.250" Intake Valves	12366990	Valve Spring Retainers
12366988	Exhaust Valves	12366992	Valve Locks
12462970	Valve Springs	12495690	Valve Seals
3875916	Valve Spring Shims	3921912	Rocker Arm Studs
3860038	Pushrod Guideplates		



Additional components required for installation. See page 243.



Available for purchase online at gmperformanceparts.com



Bowtie Street Heads Continued

12363408

Bowtie Rectangular Port Aluminum Bare Cylinder Head (not shown)

This NHRA-legal aluminum cylinder head is a replacement for the L88 Big-Block cylinder heads used on 1968-1971 Corvettes and 1969 Camaros.

- Aluminum performance cylinder head
- 315cc rectangular intake ports
- Replacement head for P/N 14011076
- Machined for 2.250"/1.880" 11/32" valve stems
- 110cc exhaust ports
- 118cc combustion chambers

12363410

Bowtie Rectangular Port Aluminum Bare Cylinder Head (not shown)

- Bare aluminum performance head
- Machined for 2.250"/1.880" valves
- 300cc rectangular intake port
- 110cc exhaust port
- 118cc combustion chamber

A. 12363400

Bowtie Rectangular Port Aluminum Cylinder Head Assembly

- Aluminum performance head
- Completely assembled with 2.250"/1.880" 11/32" stem valves
- 300cc rectangular intake port
- 110cc exhaust port
- 118cc combustion chamber
- Uses bare head P/N 12363410

This head is assembled with the following components:

12366987	2.250" Intake Valves	12366990	Valve Spring Retainer Lock
12366988	Exhaust Valves	12366992	Valve Spring Retainer
12462970	Valve Springs	12495690	Valve Seals
3875916	Valve Spring Shims	3921912	Rocker Arm Studs
3860038	Pushrod Guideplates		



A Bowtie Rectangular Port Aluminum Cylinder Head Assembly (intake)



A Bowtie Rectangular Port Aluminum Cylinder Head Assembly (exhaust)



A Bowtie Rectangular Port Aluminum Cylinder Head Assembly (combustion chamber)



Bowtie 572/620 Cylinder Head Assembly (intake) **B**



Bowtie 572/620 Cylinder Head Assembly (exhaust) **B**



Bowtie 572/620 Cylinder Head Assembly (combustion chamber) **B**

B. 12499255  

Bowtie 572/620 Cylinder Head Assembly

- Aluminum head assembly
- Used in the 572/620 GMPP crate engine
- Completely assembled with 2.250"/1.880" 11/32" stem valves
- Valve springs for hydraulic roller cams for up to .632" lift
- 310cc rectangular intake port
- 118cc exhaust port – raised 5/8"
- 118cc combustion chamber
- Not recommended for engines smaller than 572 cid

This head is assembled with the following components:

12366987	2.250" Intake Valves	12366990	Valve Spring Retainer Lock
88963128	Exhaust Valves	12366992	Valve Spring Retainer
88963934	Valve Springs	88963936	Valve Seals
88963937	Valve Spring Shims	3921912	Rocker Arm Studs
88963935	Valve Spring Locators	3860038	Pushrod Guideplates

88961160  

Bowtie 572/720R Cylinder Head Assembly (not shown)

- Aluminum racing head assembly
- Used in the 572/720R GM Performance Parts
- Completely assembled with 2.250"/1.880" 11/32" stem valves
- Mechanical roller valve springs – not for use with hydraulic roller cams
- Good to .720" valve lift
- 310cc rectangular intake port
- 118cc exhaust port – raised 5/8"
- 118cc combustion chamber
- Not recommended for engines smaller than 572 cid

This head is assembled with the following components:

12366987	2.250" Intake Valves	12366990	Valve Spring Retainer Lock
88963128	Exhaust Valves	12366992	Valve Spring Retainer
88963933	Valve Springs	88963936	Valve Seals
88963937	Valve Spring Shims	3921912	Rocker Arm Studs
88963935	Valve Spring Locators	3860038	Pushrod Guideplates

BOWTIE RACE CYLINDER HEADS

Monster-cubic-inch stroker Big-Blocks need lots of air to maximize their performance potential and GM Performance Parts Bowtie race cylinder heads are designed for that task. They are made of 356-T6 aluminum with huge, raised intake ports, larger valves, smaller combustion chambers and two additional head bolts for increased clamping force. The runners are purposely left smaller, so there is ample room for custom porting by the engine builder.

Bowtie Race Head Technical Notes:

- 356-T6 Aluminum
- 9/16" thick decks
- No heat risers
- Will work on Mark IV cylinder block
- Heli-coiled 7/16" screw-in rocker stud holes
- As-cast intake and exhaust ports

12363425 

Bowtie Racing Cylinder Head (not shown)

- Aluminum racing head
- Machined for 2.190"/1.880" valves (+.400" long required)
- 380cc rectangular intake ports – raised .100"
- 110cc exhaust port – raised .750", vanes in port floor ("W" port)
- 115cc "open chamber" combustion chamber
- Rocker cover rails raised .250"
- Two additional head bolt holes in valley
- Pushrod guide plates P/N 3860038 must be ground for clearance



Additional components required for installation. See page 243.



Available for purchase online at gmperformanceparts.com



DRCE PRO STOCK CYLINDER HEADS

GM Performance Parts DRCE (Drag Racing Competition Engine) Pro Stock cylinder heads are the choice of NHRA Pro Stock champions, so you know these are the best heads available. When races are won by thousandths of a second there's no room for second-best parts. The GM Performance Parts DRCE aluminum cylinder heads were specifically designed for the DRCE 2 engine block P/N 24502572 and intended for NHRA Drag Racing Pro Stock competition applications.

Special features of these heads include high-capacity water jackets, symmetrical-port layout, ample wall material for custom porting, thick deck surfaces (7/8") to facilitate angle milling and reduced weight casting to minimize CNC-machining time. A typical CNC-prepped cylinder head without valves or valve train weighs approximately 40 pounds.

DRCE Pro Stock Race Cylinder Head Technical Notes:

- T355-T7M aluminum construction
- Complies with NHRA Pro Stock 500-cid, 4.900" bore spacing rules
- Symmetrical intake port layout
- Intake and exhaust ports are extremely small "peanut ports"
- 7/8" thick decks allow for angle milling or heavy flat milling
- Requires professional porting and machining
- High-capacity self-purging water jackets
- Custom aftermarket rocker arm assemblies required

A. 24502585

DRCE 2 Raw Aluminum Cylinder Head

- Raw aluminum casting, not machined
- Accommodates 10°–14° x 5° intake and 5°–9° x 2.5° exhaust valve angles
- Designed to work on DRCE 2 block P/N 24502572



A DRCE 2 Raw Aluminum Cylinder Head (exhaust)



A DRCE 2 Raw Aluminum Cylinder Head (intake)



A DRCE 2 Raw Aluminum Cylinder Head (combustion chamber)



DRCE 3 Aluminum Cylinder Head Casting (exhaust) **B**



DRCE 3 Aluminum Cylinder Head Casting (intake) **B**



DRCE 3 Aluminum Cylinder Head Casting (combustion chamber) **B**

B. 25534404

DRCE 3 Aluminum Cylinder Head Casting

- Raw aluminum casting, not machined
- Newest design DRCE – rocker arm mounting pads and valve spring seat pads allow greater flexibility with valve angles and locations than DRCE 2
- Designed to work on DRCE 3 block and DRCE 2 P/N 24502572

25534387

DRCE 3 Water Jacket Plug (not shown)

- For ends of DRCE 3 cylinder head casting P/N 25534404
- Aluminum AN -16 with internal hex for Allen wrench
- Includes O-ring
- Sold individually; use 2 per head

25534388

DRCE 3 Water Jacket Plug (not shown)

- For water jacket access holes of DRCE 3 cylinder head casting P/N 25534404
- Aluminum AN -08 with internal hex for Allen wrench
- Includes O-ring
- Sold individually; use 8 per head

! CYLINDER HEADS: ADDITIONAL REQUIRED COMPONENTS

Part Number	Gaskets (Quantity)	Bolts (Quantity)	Spark Plug	Engine Application
12562920	14097001 (2) OR 12555728 (2)	10141204 (24), 10141205 (8)	19157985	24502620, 12568778, 24502618, 12568774
12562926	14097001 (2) OR 12555728 (2)	10141204 (24), 10141205 (8)	19157985	24502620, 12568778, 24502618, 12568774
12562925	14097001 (2) OR 12555728 (2)	10141204 (24), 10141205 (8)	19157985	24502620, 12568778, 24502618, 12568774
12363390	12363411 (2)	12367779 (1 Kit)	19145286	12499121, 19201332, 12371204, 12497323, 12496963, 12371171
12363392	12555728 (2)	88960333 (16), 88960334 (8)	19145286	12498777
12363399	12555728 (2)	88960333 (16), 88960334 (8)	19145286	12498777
88961160	88961561 (2)	88960333 (16), 88960334 (8)	5613100	12498827, 12498826
12499255	88961561 (2)	88960333 (16), 88960334 (8)	5613878	12498792



CYLINDER HEAD GASKETS AND HEAD BOLTS

Secure sealing between the cylinder heads and the block is a critical component of making reliable horsepower, so GM Performance Parts puts the same engineering excellence and manufacturing precision into their gaskets, head bolts, and cylinder head studs as the blocks and heads they secure. Big-Block cylinder head gaskets are available in a variety of materials and thicknesses. Piston-to-head clearances should be considered when selecting gaskets. Use Gen V for 1991-1992 applications. Gasket packages contain one gasket unless otherwise specified.

A. 12363414

Composition Head Gasket (1965-1990)

- With pre-flattened copper wire ring and permatorque/blue stripe coating for engines with aluminum heads
- Bore sizes between **4.250" and 4.370"**
- Use with **Mark IV** (1965-1990) engines only
- Compressed thickness is **0.039"**

12363413

Composition Head Gasket (1965-1990)(not shown)

- With pre-flattened copper wire ring and permatorque/ blue stripe coating for engines with aluminum heads and bore sizes **4.375" to 4.540"**
- Use with **Mark IV** (1965-1990) engines only
- Compressed thickness is **0.041"**

12363412

Composition Head Gasket (1991-newer)(not shown)

- For 1991-and-newer **Gen V and Gen VI** Big-Blocks with aluminum heads and **4.250" to 4.370"** bore size
- Has pre-flattened wire ring and stainless core which makes it ideal for saltwater marine use
- Compressed thickness is **0.039"**

12555728

Head Gasket, 454 Engine (not shown)

- Head gasket for 1991-2000 **Gen V** 454 Big-Blocks

B. 12366984

Head Gasket Kit, 502 Engine

- For all **Gen V and Gen VI** 502 Big-Blocks with cast-iron heads
- Has additional water hole for improved cooling of siamesed cylinder walls
- Includes 2 gaskets (right and left) per package
- Compressed thickness is **0.041"**

12363411

Composition Head Gasket (1991-newer)(not shown)

- For **Gen V and Gen VI** Big-Blocks with aluminum heads and **4.375" to 4.540"** bore size
- Has pre-flattened wire ring and stainless core which makes it ideal for saltwater marine use
- Compressed thickness is **0.039"**

C. 88961561

Head Gasket, 572 Engine

- With pre-flattened wire ring for all **572** Big-Blocks with either cast-iron or aluminum heads
- Compressed thickness is **0.030"**



A Composition Head Gasket (1965-1990)



B Head Gasket Kit, 502 Engine



C Head Gasket, 572 Engine



VALVES AND VALVE SPRINGS



Cylinder Head Stud Nut, Hex Head



Cylinder Head Stud Nut, 12-Point



Valve Spring Retainer



Valve Spring Key

12367779

Cylinder Head Bolt Kit (not shown)

- Universal kit for cast-iron and aluminum Big-Block heads
- Includes (8) 7/16-14 x 2.08" bolts P/N 88960334, (24) 7/16-14 x 4.060" bolts P/N 88960333, (8) 7/16-14 x 5.06" bolts P/N 12367329, and (40) hardened washers P/N 14011040
- Use part numbers above for replacement parts
- Use thread sealant on all Big-Blocks except 502, due to blind bolt holes

3899696

Hardened Washer (not shown)

- 0.450" I.D. x 0.860" O.D.; sold individually

3942410



Cylinder Head Stud Nut

- Magnafluxed 1038 steel 7/16"-20 hex head nut; sold individually

14044866



Cylinder Head Stud Nut

- Magnafluxed 4037 steel 7/16"-20 12-point nut; sold individually

3989353

Valve Spring Retainer (not shown)

- Steel retainer for valve spring P/N 3989354

12550421

Valve Spring Retainer

- For 1991-and-newer Gen V and Gen VI engines

3947880

Valve Spring Key

- Hardened steel split locks for production and racing engines
- Color-coded purple
- Sold individually, order 32 per engine

12550422

Valve Stem Seal (not shown)

- Seal for 1991-and-newer Gen V and Gen VI engines
- Use with valve spring P/N 12550421
- The valve guide boss must be machined slightly for seal to retain clearance when using high-lift cams

12495690

Valve Spring Stem Seal Kit (not shown)

- Kit of 16 special high-performance seals for the 502 engine kit
- Use with spring kit P/N 12495691

88963936

Valve Spring Seal (not shown)

- Use with all 572 engines



BIG-BLOCK VALVES

Intake Valves

Part Number	Valve Size	Stem Size	Description
14097045	2.190"	3/8"	Stock replacement valve for Gen V and Gen VI 454 and 502 HO engines
12366986	2.190"	11/32"	Stainless-steel valve with undercut chrome-plated stems, single-groove design, hardened tips, used on ZZ454, ZZ427 and the Anniversary Edition 427 crate engines
12366987	2.250"	11/32"	Stainless-steel valve with undercut chrome-plated stems, single-groove design, hardened tips, used on ZZ502 and ZZ572

Exhaust Valves

14097049	1.880"	3/8"	Stock replacement valve for Gen V and Gen VI 454 and 502 HO engines
12366988	1.880"	11/32"	Stainless-steel valve with undercut chrome-plated stems, single-groove design, hardened tips, used on ZZ454, ZZ427 and the Anniversary Edition 427 crate engines
88963128	1.880"	11/32"	Stainless-steel valve with undercut chrome-plated stems, single-groove design, hardened tips, used on ZZ502 and ZZ572





BIG-BLOCK VALVE SPRINGS

Part Number	Description	Outside Diameter	Pressure at Installed Height	Solid Height	Average Rate (lbs per in)	Retainer Part Number	Valve Seal Kit	Technical Notes
3970627	Dual Spring	1.487"	105# @ 1.880"	1.280"	267	3964264	460527	For high-performance 396/427/454 LS6 engines
12371061	Dual Kit	1.487"	105# @ 1.880"	1.280"	267	3964264	460527	Kit of 16 P/N 3970627 springs
88963934	Dual Spring	1.540"	197# @ 1.800"	N/A	N/A	12366990	88963936	Use with 572/620 HP engines
19172596	Dual Spring	1.567"	230# @ 2.000"	N/A	N/A	12366990	88963936	Use with 572/720 HP engines

VALVE SPRING COMPONENTS

3875916

Spring Shim (not shown)

- 55/64" I.D. x 1 31/64" O.D. x 0.015" thick

88963937

Spring Shim (not shown)

- Shim for all 572 engines

88963935

Valve Spring Locator (not shown)

- Valve spring locator for setting the valve spring in the right location on all 572 engines

3964264

Valve Spring Retainer (not shown)

- Retainer and seal for valve spring P/N 3970627

3989353

Valve Spring Retainer (not shown)

- Steel retainer for valve spring P/N 3989354

12360874

Retainer/Seal Kit (not shown)

- Kit of 16 retainers P/N 12550421 and 16 seals P/N 12550422 for 1991-and-newer Gen V and Gen VI engines
- New design improves oil economy
- The valve guide bosses require minor machining with high-lift cams

ROCKER ARMS

Steel Rocker Arms

Steel rocker arms are designed for long-term durability. GM Performance Parts steel rocker arms are intended for 454- and 502-cubic-inch Big-Blocks. Rocker arm kits include one rocker arm and ball.

Aluminum Roller Big-Block Rocker Arm for 7/16" Studs

GM Performance Parts aluminum roller rocker arms have bearings and fulcrums with an extra-wide design for improved load distribution. The rockers are lubricated with pressurized oil. The rockers have a 1.7:1 ratio for 7/16" studs. The roller-tip axle is made from 4130 steel and the roller tip is machined and ground from 8620 steel.

NOTE: Not for use with production-height valve covers.

12523976

Steel Rocker Arm Assembly (not shown)

- Designed for use on Gen V and Gen VI design 454- and 502-cubic-inch HO engines. The rocker arms have long slots for high-lift camshafts.

NOTE: Kit includes rocker arm and ball. One rocker assembly per package; order 16 per engine.

12368082

Steel Long Slot Rocker Arm, 1.7:1 Ratio (not shown)

- These 1.7:1 ratio hardened steel rocker arms have elongated slots to provide extra clearance for high-lift (.600" and greater) camshafts
- Use with all 396-502 Big-Block heads with adjustable rockers
- Each assembly includes rocker arm P/N 3959182 as well as the ball P/N 12338047 and nut P/N 3896648

NOTE: Can be used on any Gen V or Gen VI by using rocker stud kit P/N 12495518.



Roller Rocker Arm Set, 1.7:1 Ratio

12368085

Steel Long Slot Rocker Arm Kit (not shown)

- Set of 16 rocker arms (P/N 12368082) with the balls and nuts

NOTE: These long slot rocker arms are stamped "H".

19210726

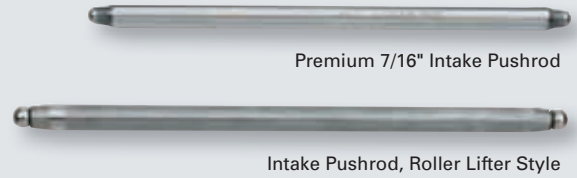
Aluminum Roller Rocker Arm Set, 1.7:1 Ratio

- Set includes 16 roller rocker arms and nuts for 7/16" studs
- Used on 572-cubic-inch Big-Block engines
- Use P/N 12361330 for single replacement part



PUSHRODS

GM Performance Parts offers a complete line of premium-quality, heavy-duty pushrods for most GM Big-Block engines. Pushrods are that critical link between the camshaft and the rocker arms. These seemingly innocuous parts play a very important role in the combustion process. Two materials are used: 1010 mild steel for high-performance street cars, power boats, and limited competition applications, and 4130 chrome-moly steel for maximum-performance racing engines. GM Performance Parts pushrods are case-hardened for use with pushrod guideplates. Pushrods are available in standard and extended lengths. Check the usage chart below to verify proper applications.



Part Number	Material	Diameter	Length	Usage	Port	Description
10134307	1010 steel	3/8"	8.285"	Flat tappet	Intake	1-piece design. Recommended for high-performance street engines. ¹
10134308	1010 steel	3/8"	9.256"	Flat tappet	Exhaust	1-piece design. Recommended for high-performance street engines. ¹
10134304	1010 steel	7/16"	8.285"	Flat tappet	Intake	1-piece design. Recommended for high-performance and limited competition engines. ²
10134303	1010 steel	7/16"	9.256"	Flat tappet	Exhaust	1-piece design. Recommended for high-performance and limited competition engines. ²
10134306	4130 steel	7/16"	8.285"	Flat tappet	Intake	Premium quality 1-piece design. Recommended for racing engines. ²
10134305	4130 steel	7/16"	9.256"	Flat tappet	Exhaust	Premium quality 1-piece design. Recommended for racing engines. ²
10227762	1010 steel	3/8"	7.592"	Hyd. roller	Intake	(1) heavy-duty heat-treated .060" for use in Gen VI 454 and 502 engines with hydraulic roller lifters
10227763	1010 steel	3/8"	8.569"	Hyd. roller	Exhaust	(1) heavy-duty heat-treated .060" for use in Gen VI 454 and 502 engines with hydraulic roller lifters
12368081	1010 steel	3/8"	7.592"-8.569"	Hyd. roller	—	Kit of (8) P/N 10227762 and (8) P/N 10227763
88961559	4130 steel	3/8"	7.900"	Hyd. roller	Intake	Chrome-moly 1-piece for 572/620 (Tall Deck Block)
88961558	4130 steel	3/8"	8.900"	Hyd. roller	Exhaust	Chrome-moly 1-piece for 572/620 (Tall Deck Block)
88962284	4130 steel	3/8"	8.550"	Mech. roller	Intake	Chrome-moly 1-piece for 572/720 (Tall Deck Block)
88962283	4130 steel	3/8"	9.525"	Mech. roller	Exhaust	Chrome-moly 1-piece for 572/720 (Tall Deck Block)

¹Use with pushrod guideplate P/N 3860038.

²Use with pushrod guideplate P/N 3879620.



BUILDER'S TIP

Shimming the way to Correct Valve Spring Height

The correct valve spring height is important to prevent coil bind and ensure uniform spring pressure among all the valves. Don't assume the installed height (with the valve closed) is correct out of the box. Each spring's height should be carefully measured and recorded. Shims – typically sold in 0.015-inch heights – can be used to

bring the springs to the manufacturer's specifications. The important thing about installing them is to be sure that they go beneath the spring seat. Don't simply slip them on over the top of the spring seat. With 16 valve springs to measure, it's a long, tedious process, but an important one for performance and engine longevity.



VALVE COVERS

Top off your high-performance Big-Block with a pair of handsome GM Performance Parts valve covers. These stylish, precision-fit valve covers come in a variety of finishes and colors. They're made out of die-cast aluminum or heavy-gauge stamped steel. Quality construction methods provide better sealing and less chance of leakage from deflection caused by over-tightened fasteners. Competition valve covers are designed to clear taller valvetrains.

NOTE: Valve covers are sold in pairs unless otherwise specified.

A. 12342093

Short Chrome Bowtie Valve Cover

- Show-quality covers embossed with the famous Bowtie logo and Chevrolet name
- Standard height, for use with 1965-1994 engines
- May not clear brake booster on some Corvette models

B. 12495488

Custom Aluminum Valve Covers

- Die-cast aluminum valve covers are black with a brushed aluminum finish on top revealing the Chevrolet name and Bowtie logo
- Can be finished with a custom engine designation badge (see page 250) not included
- For use on 1965-1994 engines
- Includes 2 covers, 1 grommet P/N 10198941, 1 grommet P/N 10198949, oil cap P/N 15681150 and 14 retaining bolts

C. 12371244

Aluminum Competition Design Valve Covers

- Display the Chevrolet name and Bowtie logo in natural aluminum finish, or paint to match engine or vehicle color
- No holes for PCV or oil fill, but bosses for drilling them
- Can be used on most Big-Block Chevrolet cylinder heads
- Use P/N 12370836 for single replacement part

NOTE: Use with valve cover gasket P/N 14085759.

D. 25534323

Aluminum Competition Design Valve Covers, Black Powder-Coat

- Display the Chevrolet name and Bowtie logo in black powder-coated covers
- No holes for PCV or oil fill, but bosses for drilling them
- Can be used on most Big-Block Chevrolet cylinder heads

NOTE: Use with valve cover gasket P/N 14085759.

E. 25534374

Aluminum Competition Design Valve Covers, Orange Powder-Coat

- Display the Chevrolet name and Bowtie logo in orange powder-coated covers
- One hole each cover for PCV or oil fill
- Can be used on most Big-Block Chevrolet cylinder heads

NOTE: Use with valve cover gasket P/N 14085759.



A Short Chrome Bowtie Valve Cover



B Custom Aluminum Valve Covers



C Aluminum Competition Design Valve Covers



D Aluminum Competition Design Valve Covers, Black Powder-Coat



E Aluminum Competition Design Valve Covers, Orange Powder-Coat



Valve Covers, "572 Chevrolet" **F**



Valve Covers, "427 Chevrolet", Natural Appearance **G**



Valve Covers, "427 Chevrolet", Black Powder-Coat **H**

F. 12499200
Valve Covers, "572 Chevrolet"

- Used on all 572-cubic-inch crate engines and can be used on most Big-Blocks
- Cast aluminum with "572 Chevrolet" as part of the casting
- One cover has oil fill and breather holes and the second cover has the breather hole only

NOTE: Requires push on oil cap P/N 12341993, breather P/N 25534355 and breather tube P/N 88962074 that incorporates a baffle in the tube.

G. 19202588
Valve Covers, "427 Chevrolet", Natural Appearance

- Natural finish
- Used on the Anniversary Edition 427 crate engine
- Can be used on any Big-Block engine

H. 19202589
Valve Covers, "427 Chevrolet", Black Powder-Coat

- Used on the ZZ427/480 crate engine
- Can be used on any Big-Block engine

VALVE COVERS: ADDITIONAL REQUIRED COMPONENTS

Part Number	Gaskets (Qty)	Bolts (Qty)	Grommets (Qty)	Oil Fillers (Qty)	Engine Application
12495488	14085759 (2) OR Mark IV, V, VI (2)	25520079	10198941 OR 3989350	15681150	12499121, 19201332, 12371204, 12497323, 12496963, 12371171, Mark IV, V, VI BB
12499200	14085759 (2)	88961871 (8)	12341988 (1)	12341993 (1)	12498793, 12498827, 12498792, 12498826
19202588	14085759 (2)	88961871 (8)	12341988 (1)	12341993 (1)	12498793, 12498827, 12498792, 12498826
19202589	14085759 (2)	88961871 (8)	12341988 (1)	12341993 (1)	12498793, 12498827, 12498792, 12498826
25534323	14085759 (2)	88961871 (8)	N/A	12341993 (1)	12498793, 12498827, 12498792, 12498826

BREATHERS AND HARDWARE

88962074

Oil Baffle Tube (not shown)

- Pushes easily into most valve covers that have an oil baffle
- Requires breather P/N 25534355, used on ZZ572 engines

A. 25534355

ZZ572 Breather

- Special breathers for the ZZ572 valve covers
- Chrome breathers are 1-3/8", hose-clamp-style with the Bowtie logo on top
- Use with oil baffle tube P/N 88962074
- Includes 2 breathers

B. 12341993

Push-In Oil Filler Cap

- For valve covers with 1.220" hole

19131218

Chrome Push-In Breather (not shown)

- 2-3/4" O.D. x 1-1/2" tall with 3/4" nipple
- Use with rubber grommet P/N 3894337

3894337

Rubber Grommet, Bowtie Valve Covers (not shown)

- Has 15/16" I.D. x 17/32" O.D.
- Can be used to plug the oil filler hole in Bowtie valve covers or to mount a push-in breather

14085759

Valve Cover Gasket (not shown)

- Steel-reinforced gasket fits all Big-Block Chevy valve covers
- Order 2 per engine

VALVE COVER BADGES

Designed to fit mounting area on valve covers P/N 12495488 (see page 248), these good-looking badges will fit some other Big-Block valve covers.

NOTE: 1 badge per package. Order 2 per engine.

C. 12363951

Valve Cover Badge, "427-Cubic Inches"

12366995

Valve Cover Badge, "454 GM Performance Parts"

12366994

Valve Cover Badge, "502 GM Performance Parts"

ROCKER ARM STUDS AND ACCESSORIES

D. 3896648

Rocker Adjusting Nut

- Positive locking 7/16"-20 nut for all Big-Block V-8s



A ZZ572 Breather



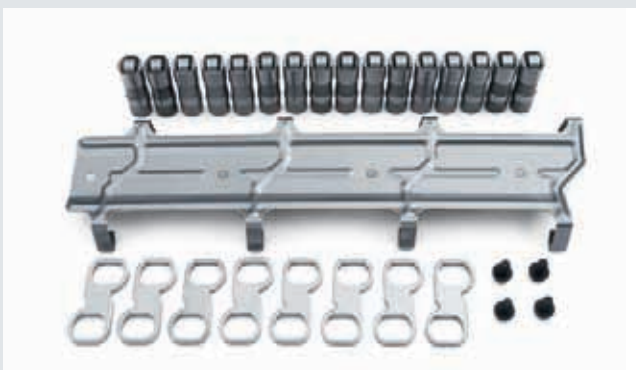
B Push-In Oil Filler Cap



C Valve Cover Badges



D Rocker Adjusting Nut

Pushrod Guide Plate (3/8") **E**Hydraulic Lifter Kit **F**Hydraulic Roller Lifter Kit **G**Mechanical Roller Lifter, ZZ572/720 **H**

GUIDE PLATES

E. 3860038

Pushrod Guide Plate (3/8")

- Designed for all 1965-1990 iron and aluminum cylinder heads with 3/8" diameter pushrods
- Slotted style with hardened steel construction, aligns rocker arms with valve stem tips on Big-Block's splayed-valve head
- 8 required for each engine

NOTE: Use with screw-in rocker stud P/N 3921912.

3879620

Pushrod Guide Plate (7/16")(not shown)

- Similar to guide plate described above, but for use with heavy-duty 7/16" diameter pushrods

12562369

Pushrod Guide Plate (Gen V 454/502 style)(not shown)

- Used on all Gen V 454 and 502 engines with 3/8" diameter pushrods

VALVE LIFTERS AND COMPONENTS

F. 12371044

Hydraulic Lifter Kit (set of 16)

- For use on all 396, 427, 454, and 502 engines that use hydraulic flat tappet lifters
- For single-service replacement use P/N 5232720

17120060

Hydraulic Roller Lifter, ZZ572/620 (not shown)

- Roller valve lifters used on the ZZ572/620 engines
- Use with camshaft P/N 88961557, intake pushrod P/N 88961559, exhaust pushrod P/N 88961558 and rocker arm P/N 12361323

G. 12371056

Hydraulic Roller Lifter Kit

- Hydraulic roller lifter retainer kit can be used on all Gen VI 454 and 502 engines that are machined for hydraulic roller lifters
- Includes 16 roller lifters P/N 17120061, 8 lifter guides, 1 lifter guide retainer and 4 retainer bolts
- For single service replacement lifter, use P/N 17120061

NOTE: These lifters allow more oil to the rocker arms than the late-model truck roller lifters.

H. 88962920

Mechanical Roller Lifter, ZZ572/720

- Mechanical roller valve lifters used on the ZZ572/720 horsepower engines
- Use with camshaft P/N 88962216, intake pushrod P/N 88962284, exhaust pushrod P/N 88962283 and rocker arm P/N 12361323
- Kit of 16 lifters

12551397

Roller Tappet Guides (not shown)

- Roller tappet guides used with all 502 engines and 454 HO engines
- Used with roller camshaft engines
- Sold individually; order 8 per engine

12551399

Roller Tappet Guide Retainer (not shown)

- Roller tappet guide retainer used with all 502 engines and 454 HO engines
- Used with roller camshaft engines
- Order only 1 per engine



BIG-BLOCK CAMSHAFTS AND COMPONENTS

The camshaft is one of the most important factors in determining an engine's overall performance profile and capability. GM Performance Parts' wide array of precision-engineered, extensively tested camshafts allows you to choose the best cam for your application. In order to avoid possible engine damage, a distributor with a melonized steel gear must be used with steel camshafts.



Big-Block Camshafts

Part Number	Description	Duration @ .050" Lift (deg)	Maximum Lift (in)	Lobe Centerline (deg)	Technical Notes
12366543	Steel hydraulic roller	I: 224 E: 234	I: .527 E: .544	110	For 502/502 special engine. Must use distributor gear P/N 10456413.
24502611	Steel hydraulic roller	I: 211 E: 230	I: .510 E: .540	112	For 454 and 502 HO engines. Must use distributor gear P/N 10456413.
88961557	Steel hydraulic roller	I: 254 E: 264	I: .632 E: .632	112	For ZZ572/620 engine
88962216	Steel mechanical roller	I: 278 E: 282	I: .714 E: .714	112	For ZZ572/720 engine

CAMSHAFT COMPONENTS

A. 12499434

Camshaft Bearings, 572 Engine

- Five standard-size premium camshaft bearings for the ZZ572 engine



A Camshaft Bearings, 572 Engine

CONNECTING RODS AND COMPONENTS

B. 19170198

Forged Steel Connecting Rod

- Magnafluxed 4340 steel with heavy-duty 7/16" bolts
- Machined for pressed piston pins and color-coded white
- Used in Gen V 454 and 502 engines
- 6.135" c-c length
- Use rod bearing P/N 12329715

19211226

427 Forged Connecting Rod (not shown)

- 4340 Steel with 7/16" heavy duty bolts
- Machined for pressed piston pins
- Used in 427 Anniversary and ZZ427 engines
- Big end chamfered for large crank pin radius
- 6.535" c-c length
- Use rod bearing P/N 88961556



B Forged Steel Connecting Rod

C. 88962926

572 Connecting Rod

- Forged 4340 steel H-beam for all 572 engines
- 6.535" c-c length
- Use rod bearing P/N 88961556



C 572 Connecting Rod



572 Connecting Rod Bearing Kit **D**



12-Point Connecting Rod Nut (set of 16) **E**

D. 88961556

572 Connecting Rod Bearing Kit

- Standard-size, premium connecting rod bearings
- Includes all 8 rod bearings

E. 12366569

Connecting Rod Nut Set

- Set of 16 aircraft-quality, 6304 steel 12-point 7/16"-20 nuts for all 396, 427, 454, and 502 engines
- For single service replacement use P/N 14044866

PISTONS AND RINGS

Pistons and rings operate in a very explosive environment, so they have to be extremely tough. GM Performance Parts are designed to withstand the rigors of high-performance engines. The pistons are factory-tested for quality assurance. GM Performance Parts pistons are sold in a variety of sizes and compression ratios. There are pistons for GM Big-Block engines ranging in displacement from 427 cubic inches to 572 cubic inches. Pistons are sold individually and are fitted with wrist pins.



NOTE: Part numbers are for one piston; order eight per engine.

Big-Block Pistons

Part Number	Engine Size	Bore Size	Oversize	Rod Length	Pin Type	Compression Ratio	Chamber Size	Ring Size	Description
19211865	427	4.250"	—	—	—	10.1:1	110cc	1/16", 1/16", 3/16"	Forged 427
12533507	502	4.470"	—	6.135"	Pressed	8.75:1	118cc	5/64", 1/16", 3/16"	Forged Gen V and Gen VI 502 replacement
88962925	572	4.560"	—	6.535"	Floating	9.6:1	118cc	1/16", 1/16", 3/16"	Forged 572/620
88963227	572	4.560"	—	6.535"	Floating	12.0:1	118cc	1/16", 1/16", 3/16"	Forged 572/720R

Big-Block Piston Rings

Part Number	Bore size	Oversize	Ring Thicknesses	Description
12523921	4.250"	Standard	5/64", 5/64", 3/16"	Standard-size ring pack for Gen V 454 HO
12523923	4.250"	+ .030"	5/64", 5/64", 3/16"	Oversize ring pack for Gen V 454 HO
12524293	4.470"	Standard	5/64", 1/16", 3/16"	Standard-size low-tension ring pack for all 502 engines
12524294	4.470"	+ .030"	5/64", 1/16", 3/16"	Oversize low-tension ring pack for all 502 engines
12499212	4.560"	Standard	1/16", 1/16", 3/16"	Standard-size ring pack for 572 engines

CRANKSHAFTS

Crankshafts are a critical, central component of any engine. Strength and durability are important traits of a great crankshaft. GM Performance Parts crankshafts are precision-engineered to be both strong and durable. GM Performance Parts understands how catastrophic crankshaft failure can be, so that's why its crankshafts are manufactured to such exacting specifications and tested to withstand the forces of high-performance engines. These crankshafts are the same tough parts used in GM Performance Parts crate engines.

3963524

Crankshaft, Forged Steel (454 and Mark IV 502-cubic-inches)(not shown)

- Premium quality
- Externally balanced
- Nitride-treated 5140 forged steel with 4.000" stroke, cross-drilled 2.750" diameter main journals, and 2.200" diameter rod bearing journals
- Used on 1965-1990 454 and 502 with 2-piece rear seal

NOTE: Must be used with counterweighted torsional dampener and flywheel or flexplate.

14096983

Crankshaft, Forged Steel (Gen V and Gen VI 454)(not shown)

- Externally balanced
- Forged 1053 steel crankshaft with 1-piece rear main seal

10183723

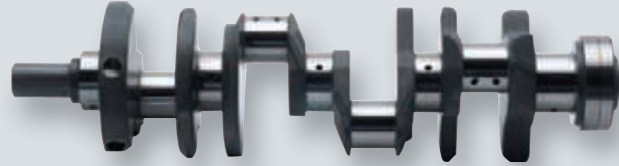
Crankshaft, Forged Steel (Gen V and Gen VI 502)

- Externally balanced
- Cross-drilled
- Nitride-treated forged 1053 steel crankshaft with 1-piece rear main seal
- Forging P/N 14097044

19171620

Crankshaft, Forged Steel (Gen V and Gen VI 427)(not shown)

- Steel crankshaft with 3.750" stroke for 1991-and-later 427-cubic-inch engines
- 1-piece rear main seal
- Requires chamfered connecting rods (P/N 19211226 or 88962926) and rod bearings P/N 88961556
- Used in ZZ427 and Anniversary Edition 427 engines
- Internally balanced



Crankshaft, Forged Steel (Gen V and Gen VI 502)



Crankshaft, Forged Steel 572

88961554

Crankshaft, Forged Steel (572-cubic-inches)

- Internally balanced
- Premium 4340 steel forging for 572-cubic-inch engines
- Use neutral balance dampener and flexplate or flywheel
- 1-piece rear seal

NOTE: Must use main bearing P/N 88962212 and rod bearing P/N 88961556.

14061685

Roller Pilot Bearing (not shown)

- Used in high-performance manual transmission applications

BALANCERS

Balancers are relatively small parts that play a big role in helping engines run smoothly. Balancers are also known as torsional dampeners or harmonic balancers, which is indicative of how they help control unwanted crankshaft vibrations. By controlling vibrations, GM Performance Parts balancers help engines run smoothly, which also extends engine life.



88962814
572 Balancer

Part Number	Engine Application	Outside Diameter	Technical Notes
3879623	Originally used on 1967-1969 427, ZZ427 and Anniversary Edition 427	8"	Can be used on all engines with internally balanced crank. Use with timing pointer P/N 3991436
10216339	454 and 502 with 4.000"-stroke crank 1970 to present	8"	Counterweighted for externally balanced engines. Use chrome timing pointer P/N 3991436
88962814	572	8"	This internal balance dampener is designed with inner and outer shells. It utilizes matched O-rings to control destructive crankshaft vibrations. Black zinc chromate finish. Laser engraved 360° timing marks



FLYWHEELS AND FLEXPLATES

GM Performance Parts offers both internally and externally balanced flywheels and flexplates. It is critical that you use the correct design for your specific engine application. Engines with one-piece crankshaft seals require externally balanced flywheels or flexplates (except for ZZ427, ZZ572/620, ZZ572/720R and the Anniversary Edition 427). Check the accompanying charts to find the correct parts for specific engine applications.



14096987 Flywheel (see chart below)



12561217 Flexplate (see chart below)

Big-Block Flywheels

Part Number	Year of Engine	Outside Diameter	Crank Flange Bolt Pattern	Clutch Diameter	Starter Ring Gear Teeth	Technical Notes
14085720	1965-present	12.750"	3.580"	10.4"	153	Lightweight nodular iron; weighs approximately 15 lbs; for internally balanced engines
3991469	1965-present	14"	3.580"	11"	168	Use with internally balanced engines and balancer P/N 3879623
3993827	1970-1990	14"	3.580"	11"	168	Counterweighted for externally balanced 454 Mark IV 2-piece rear seal engines; use with balancer P/N 10216339
14096987	1991-present	14"	3.580"	11"	168	Lightweight nodular iron. For external balanced engines
12582964	1965-present	14"	3.580"	11.500"	168	Used with 427 or 572 crate engine. Internally balanced.

Big-Block Flexplates

Part Number	Year of Engine	Outside Diameter	Crank Flange Bolt Pattern	Converter Bolt Pattern	Starter Ring Gear Teeth	Technical Notes
10185034	1991-up	14"	3.580"	10.750" and 11.500"	168	Use with forged steel crank. Has dual-converter bolt pattern. (502 & 454 1-piece rear main seal)
12561217	1991-up	14"	3.580"	11.500"	168	427 ci crate engine production internally balanced. .100" thick
471598	1965-present	14"	3.580"	10.750" and 11.500"	168	For internally balanced engines. Use with 572/620 crate engine. Has dual-converter pattern. .120" thick
14001992	1970-1990	14"	3.580"	11.500"	168	For externally balanced 454 Mark IV 2-piece rear main seal engines

Bolts and Dowels

12337973

Flywheel Bolt (not shown)

- Fits all Chevy Small-Block V-8, Big-Block V-8 and 90° V-6 engines
- Sold individually; 6 required per engine

10046031

Flywheel Dowel (Big-Block, not shown)

- Highly recommended for all high-performance and competition Big-Block engines

1453658

Bellhousing Dowel, Clutch Housing/Transmission Dowel (Big-Block)(not shown)

- Use with Big-Block engine
- Sold individually; 2 required per engine

3727207

Flexplate Bolt (not shown)

- Fits all Chevy Small-Block V-8, Big-Block V-8 and 90° V-6 engines
- Sold individually; 6 required per engine

TIMING CHAINS AND SPROCKETS

GM Performance Parts' strong, accurate timing chains and sprockets provide top performance and dependable service.

12371053

Timing Chain Kit, 502 (second design Gen VI)

- Heavy-duty timing chain kit for all second-design 502 Gen VI roller-lifter engines with aluminum front timing cover
- Kit includes chain P/N 10114177, crankshaft sprocket P/N 12550039, camshaft sprocket P/N 12551401, camshaft retainer and bolts
- Also used in 572

10114177

Timing Chain, 502 (second design Gen VI)

- Single-roller design for all second-design 502 Gen VI engines
- Use with crankshaft sprocket P/N 12550039 and camshaft sprocket P/N 12551401



Timing Chain Kit, 502 (second design Gen VI)



Timing Chain, 502 (second design Gen VI)



Camshaft Bolt

12554553

Camshaft Dowel Pin (not shown)

9424877

Camshaft Bolt

- 5/16"-18 x 0.75" bolt



WATER PUMPS, PULLEYS AND ACCESSORY DRIVE SYSTEMS

A. 19168602

Aluminum Water Pump, Short-Style

- Lightweight standard-rotation pump has reinforced snout and large-diameter hub with dual bolt patterns for early- and late-model pulleys
- Has short mounting legs
- Use with early-design V-belt drive rotation

B. 19168606

Cast-iron Water Pump, Long-Style

- Same standard-rotation pump used on all GMPP 454 and 502 crate engines
- Not for use with a serpentine belt system

C. 19172805

Serpentine Accessory Drive Belt System With Air Conditioning

- Deluxe kit includes all the components and hardware necessary to install on a 9.800" deck or 10.200" tall deck engine (including bolts, nuts and spacer)
- Belt included

The system includes:

10463415	Alternator Assembly (cs130, reman)
88985115	Power Steering Pump (reman)
12456326	Water Pump Kit
88964862	A/C Compressor, R134a
10187612	A/C Compressor Bracket
10187613	A/C Compressor Bracket
10108470	Water Outlet
10085753	Crankshaft Pulley
88986828	Belt (water pump, A/C, alternator)
88986813	Belt (fan, water pump, A/C)
12552359	Tensioner
12552361	Idler Pulley
10085760	Fan and Water Pump Pulley
6272959	Thermal Bypass Hose Connector
1470030	Clamp
1485552	Heater Hose
12604004	Power Steering Pump Pulley
88961892	Power Steering Bracket (tall deck)
10187611	Alternator Bracket
10187610	Alternator/Power Steering Bracket

19172806

Serpentine Accessory Drive Belt System Without Air Conditioning (not shown)

- Deluxe kit includes all the components and hardware necessary to install on a 9.800" deck or 10.200" tall deck engine
- Kit includes hardware and belt

The system includes:

10463415	Alternator Assembly (cs130, reman)
88985115	Power Steering Pump (reman)
12456326	Water Pump Kit
10108470	Water Outlet
10085753	Crankshaft Pulley
88986828	Belt (water pump, A/C, alternator)
88986813	Belt (fan, water pump, A/C)
12552359	Tensioner
12552361	Idler Pulley
10085760	Fan and Water Pump Pulley
6272959	Thermal Bypass Hose Connector
1470030	Clamp
1485552	Heater Hose
12604004	Power Steering Pump Pulley
88961892	Power Steering Bracket (tall deck)
10187611	Alternator Bracket
10187610	Alternator/Power Steering Bracket
10055890	Idler Pulley



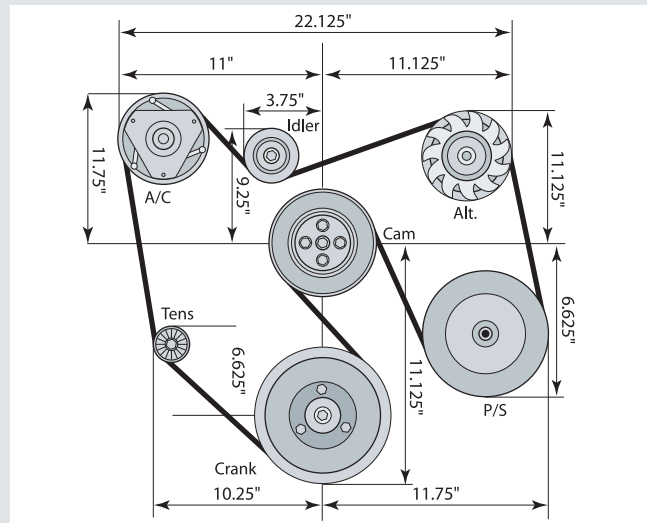
A Aluminum Water Pump, Short-Style



B Cast-iron Water Pump, Long-Style



C Serpentine Accessory Drive Belt System, with Air Conditioning



C Serpentine Accessory Drive Belt System (with Air Conditioning): Diagram

Corvette Oil Pan (1965-1974) **D**6-Quart Oil Pan **E**6-Quart Oil Pan, Gen V and Gen VI **F**4-Quart Oil Pan Kit, Gen V and Gen VI **G**

OIL PANS, OIL PUMPS, GASKETS AND ACCESSORIES

Oil is an engine's lifeblood and a high quality GM Performance Parts oil pan is what keeps it where it belongs. Properly designed and manufactured oil pans fit right, and when used with matching GM Performance Parts gaskets, prevent leaks. GM Performance Parts has oil pans for street and competition applications. Oil pans are sold without dipsticks or other hardware unless otherwise noted.

D. 14091356

Corvette Oil Pan (1965-1974)

- 5-quart pan has a trap door baffle that controls oil slosh during cornering and heavy braking
- Windage tray is included and requires four mounting studs, P/N 3902885
- Used on LS7 engine assembly P/N 3965774

NOTE: Use the following part numbers for the oil pan rails: P/N 3860048 (x2), 3860049 (x1), and 3860050 (x1). Parts are available through Vintage Parts.

E. 14103141

6-Quart Oil Pan

- 6-quart pan fits all 1965-1990 engines

F. 10240721

6-Quart Oil Pan, Gen V and Gen VI

- Six-quart pan fits all 1991-and-newer Gen V and Gen VI, 427, 454, 502 and 572 engines

G. 12495360

4-Quart Oil Pan Kit, Gen V and Gen VI

- Fits 1991-and-newer Gen V and Gen VI 427, 454 and 502 engines
- Fits many early-model Chevelles and Camaros
- Includes a 4-quart oil pan, 4 main cap-bolts, oil pump screen, oil level tube, oil level gauge, and oil pan gasket
- Pan is not available separately

12557083

Dipstick, 6-Quart (not shown)

- For use with production 6-quart oil pan P/N 10240721 or P/N 14103141
- Use oil dipstick tube P/N 12550533 and seal P/N 274244



Oil Pans, Oil Pumps, Gaskets and Accessories Continued

A. 12550533

Dipstick Tube, 6-Quart

- For use with production 6-quart oil pan P/N 10240721 or P/N 14103141
- Use oil dipstick P/N 12557083 and seal P/N 274244

274244

Oil Dipstick Tube Seal, 6-Quart (not shown)

- For use with the production 6-quart oil pan P/N 10240721 or P/N 14103141
- Use oil dipstick tube P/N 12550533 and dipstick P/N 12557083

3989391

Dipstick, 4-Quart (not shown)

- For use with 4-quart oil pan kit P/N 12495360 for all Gen V and Gen VI engines
- Use dipstick tube P/N 329231

B. 329231

Dipstick Tube, 4-Quart

- For use with 4-quart oil pan kit P/N 12495360
- Use oil dipstick P/N 3989391

C. 14097040

Windage Tray

- Use with the Gen V and Gen VI 454 and 502 engines

D. 3967854

Windage Tray

- Separates the oil from the spinning crank assembly to reduce aeration of the oil, aids in oil control and minimizes oil slosh under hard braking
- Use with oil pan P/N 14091356
- Requires four mounting studs P/N 3902885

E. 88962187

Windage Tray, 572 Engine

- Used on all 572-cubic-inch engines
- Use with oil pan P/N 14091356
- Requires four mounting studs P/N 88958656

3969870

Oil Pump and Pick-Up (not shown)

- Heavy-duty pump
- 1.300" wide gears for increased volume; suitable for all Mark IV engines
- Distance from the pump mounting surface to the bottom of the pick-up tube screen is 4.940"
- Pick-up tube is tack-welded to the pump body
- Use with Corvette-style oil pan P/N 14091356

10051105

High-Volume Oil Pump (not shown)

- Delivers 25 percent more capacity than a production pump at standard pressure
- Use with oil pan P/N 12495360 and pick-up P/N 3955281

F. 19131250

Oil Pump and Pick-Up, 572 Engine

- For use with all 572-cubic-inch engines
- Use with oil pan P/N 10240721, oil pan gasket P/N 10106407 and windage tray P/N 88962187

G. 3865886

Oil Pump Shaft

- Heavy-duty all-metal
- Intermediate shaft fits all Big-Block engines

12555167

Oil Pump and Pick-Up, Gen V and Gen VI (not shown)

- For use with the Gen V and Gen VI 454 and 502 engines with 1-piece rear main seal
- Pump has 1.300" gears and will fit Mark IV engines
- Distance from the mounting surface to the bottom of the screen is 5.870"

NOTE: Tack-welding pick-up tube to pump is recommended.



A Dipstick Tube, 6-Quart



B Dipstick Tube, 4-Quart



C Windage Tray



D Windage Tray



E Windage Tray, 572 Engine



F Oil Pump and Pick-Up, 572 Engine



G Oil Pump Shaft

Oil Filter Adapter **H**Oil Cooler Bypass Valve **I**Engine Oil Primer **J**Distributor **K**Distributor, Billet HEI **L**Distributor, Competition Adjustable Slip Collar **M****3955281****Oil Pump Pick-Up (not shown)**

- Distance from pump mounting surface to lowest point of screen is 4.880"

NOTE: Weld or braze the pick-up tube to the pump cover for off-highway applications.

H. 3952301**Oil Filter Adapter**

- Mounts a spin-on cartridge oil filter
- Contains a filter bypass valve used on all V-8 engines

I. 25013759**Oil Cooler Bypass Valve**

- For high-performance and Bowtie Big-Blocks with 4-bolt main bearing caps
- Must be installed in the rear hole behind the oil filter adapter bolt to route oil through the cooler

24241872**Magnetic Drain Plug (not shown)**

- Catches and holds small pieces of metal before they can cause engine damage

J. 12368084**Engine Oil Primer**

- Use to lube engine bearings prior to starting a new or rebuilt engine
- Fits both Big-Block and Small-Block engines

DISTRIBUTORS AND IGNITION SYSTEMS

GM Performance Parts distributors and ignition components are designed to provide the optimum spark at precisely the right time. The distributors in this group are interchangeable with Small-Block Chevrolet V-8 components. GM Performance Parts distributors cannot be used with Tall-Deck Bowtie blocks, except adjustable distributor P/N 10093387.

K. 93440806**Distributor**

- Has melonized cam drive gear P/N 19052845 for steel roller camshafts
- Required on all crate engines and steel roller camshafts
- If engines are assembled not using this gear, it may affect your engine warranty
- Use connector wire P/N 8917052 to ignition

L. 88961867**Distributor, Billet HEI**

- Most powerful and durable distributor for Small- or Big-Block Chevrolet engines that GM Performance Parts has serviced
- For strength and high rpm stability the oversized shaft is guided by a sealed ball bearing and long sintered bushing
- Treated coating on the shaft provides low friction
- Advance assembly features chrome-moly weights that slide on nylon pads for smooth timing advancement through the entire rpm range
- Vacuum advance canister and billet aluminum housing is CNC-machined for greater accuracy
- Has melonized cam drive gear P/N 10456413 for steel roller camshafts
- High-quality cap with brass terminals

19052845**Distributor Gear (not shown)**

- Melonized iron gear is required on all crate engines and steel roller camshafts
- If engines are assembled without using this gear, it may affect the warranty

NOTE: This gear is part of distributor assembly P/N 93440806.

M. 10093387**Distributor, Competition Adjustable Slip Collar**

- Designed primarily for competition use
- Billet-aluminum housing, ball-bearing guide and adjustable mechanical-advance assembly
- Magnetic pickup provides accurate trigger signals to GMPP Heavy Duty Ignition P/N 10037378 (not included)
- Uses a standard Chevrolet V-8 cap and rotor
- Will clear most induction systems
- Slip collar that can be adjusted to make up for block or head machining, or a tall-deck Bowtie block

INTAKE MANIFOLDS, GASKETS AND COMPONENTS

The wide range of GM Performance Parts intake manifolds are cast-iron and aluminum for carbureted and fuel injected applications. These intake manifolds were designed specifically for GM engines so you know they will deliver optimum performance. Due to the profile of some GM Performance Parts' high-rise intake manifolds, hood clearance should be carefully checked before ordering an intake manifold.

A. 14097092

Intake Manifold, Oval Port (iron) (spread bore)

- Economical iron 4-bbl intake manifold
- Fits all 396-502 engines with large oval port heads
- Use oil splash shield P/N 346243 (if required)

B. 19131359

High-Rise Intake Manifold, Rectangular Port (square bore)

- Aluminum, dual-plane manifold can be used with high-performance cast-iron or aluminum rectangular port heads
- Same as used on 454 HO and 502 HO engine assemblies

NOTE: Ports do not match Bowtie cylinder heads P/N 14044861 and P/N 14044862, or symmetrical port heads P/N 10051128 and P/N 10051129.

C. 12363420

High-Rise Intake Manifold, Oval Port

- Designed for all 396-502 engines with GM aluminum heads (1975 and earlier) and large oval port iron heads
- Has a dual-plane design with spread bore flange and a dual-bolt pattern
- Has no provisions for a hot-air choke, but will accept a divorced choke or electric choke
- Accepts air conditioning and alternator brackets
- Use intake manifold gasket P/N 12366985 and bolt kit P/N 12367959

NOTE: May not fit on many Corvette models. Manifold height is 6" at the rear and 4.5" in front. Check for hood clearance before ordering.

12363421

High-Rise CNC-Port-Matched Intake Manifold, Oval Port (spread bore) (not shown)

- Similar manifold design as P/N 12363420 (see above), but it is "CNC" port-matched to GM Performance Parts oval port aluminum cylinder heads

D. 12363406

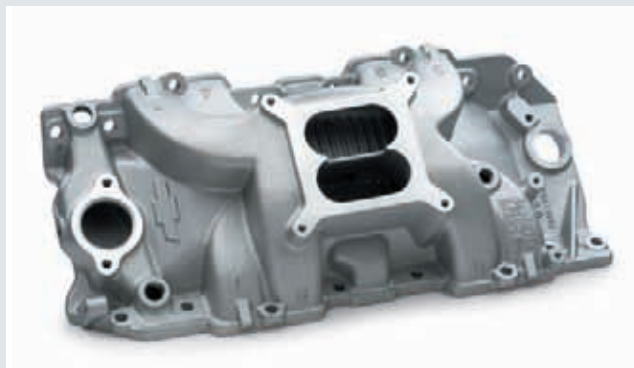
Intake Manifold, Oval Port (square bore) (Holley Carburetors)

- Same as manifold P/N 12363420 (see above), but designed for use with a Holley carburetor
- Dual-plane design requires bolt kit P/N 12367959, which includes 16 bolts (8740 chrome-moly 3/8-16 x 1.5" with 3/8" hex head and 16 5/8" O.D. washers), and manifold gasket kit P/N 12366985
- Accepts air conditioning and alternator brackets and a late-model water neck

NOTE: Will not fit production Corvettes, and may not fit Chevilles. Manifold carb flange height is 4.450".



A Intake Manifold, Oval Port (iron)



B High-Rise Intake Manifold, Rectangular Port



C High-Rise Intake Manifold, Oval Port



D Intake Manifold, Oval Port (Holley Carburetors)



CNC-Port-Matched Intake Manifold, Oval Port (Holley Carburetors) **E**

E. 12363407  
CNC-Port-Matched Intake Manifold, Oval Port (square bore) (Holley Carburetors)

- Same as P/N 12363406 (see previous page), except it has been CNC-port-matched for GM aluminum oval port heads with large oval port heads (1975-and-older), and all aluminum heads with oval ports

F. 88961161  
Intake Manifold, ZZ572/620 Engine (square bore)

- Aluminum single-plane intake manifold is used on the ZZ572/620 engine
- The carburetor flange is for a 4150-style carburetor
- Use intake gasket P/N 88962213
- For tall-deck blocks

G. 88962218  
Intake Manifold, ZZ572/720R Engine

- Aluminum single plane intake manifold is used on the ZZ572/720R engine
- The carburetor flange is for a 4500 Dominator-style carburetor
- Use intake gasket P/N 88962213
- For tall-deck blocks



Intake Manifold, ZZ572/620 Engine **F**



Intake Manifold, ZZ572/720R Engine **G**

Intake Manifolds, Gaskets and Components Continued

A. 12499249

Ram Jet Fuel Injection Kit, with MEFI-4 Electronics

- Retro-fit fuel injection kit is calibrated for a 502/502 GMPP engine and is the same as used on the Ram Jet 502 P/N 12499121
- May be used on other Big-Block applications by replacing the ECU unit with an aftermarket unit with the proper calibration
- Includes brackets, sensors, bolts, nuts, gaskets and other small parts, including:

PART	DESCRIPTION	QTY
88962744	Instruction Manual	1
12489400	Diagnostic Trouble Code Tool	1
12555320	Intake Manifold Oil Shield	1
12366985	Gasket Package	1
12367959	Bolt/Screw Package	1
12489372	Upper Intake Manifold Gasket	1
12487372	Fuel Feed Hose	1
10216948	Tube Assembly—Fuel Press Regulator	1
88961968	Engine Harness Assembly	1
10456208	Knock Sensor	1
12489595	Bracket Assembly, Transmission Cable	1
12489596	Bracket Assembly, Transmission And Throttle Cable	1
12489597	Rod, Throttle Control	1
1104060	Distributor	2
1115491	Ignition Coil	1
12464482	Lower Intake Manifold	1
12464484	Upper Intake Manifold	1
17113524	Body Assembly Throttle	1
12490257	Air Filter Kit	1
12569240	MAP Sensor	1
25036751	Intake Air Temperature Sensor	1
17090919	Injector Assembly	8
17113222	Fuel Injector Retainer Kit	1
17120039	Rail Assembly, Multi-Port Fuel Injection	1
89060414	Fuel Pressure Regulator Assembly	1
88962718	Module Assembly Engine Cont.	1
15326386	Coolant Temperature Sensor	1

B. 12464482

Lower Manifold, 502 Ram Jet

- Aluminum lower portion of the intake manifold is used on Ram Jet 502 crate engine P/N 12499121
- Use with upper manifold P/N 12464484 (see below), upper manifold gasket P/N 12489372 and 8 bolts P/N 12490255

C. 12464484

Upper Manifold, 502 Ram Jet

- Aluminum upper portion of the intake manifold is used on Ram Jet 502 crate engine P/N 12499121
- Use with lower manifold P/N 12464482 (see above), upper manifold gasket P/N 12489372 and 8 bolts P/N 12490255



A Ram Jet Fuel Injection Kit, with MEFI-4 Electronics



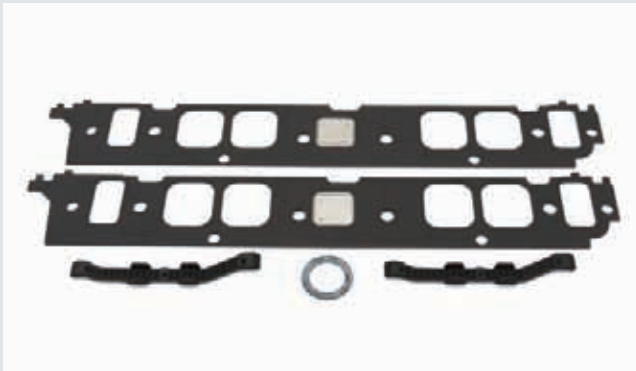
B Lower Manifold, 502 Ram Jet



C Upper Manifold, 502 Ram Jet

INTAKE MANIFOLDS: ADDITIONAL REQUIRED COMPONENTS

Part Number	Gaskets (Quantity)	Bolts (Quantity)	Engine Application
12464484	12366985 (1)	12497460 (1)	12499121, 12497323
12464482	12366985 (1)	12367959 (1)	12499121, 12497323
88961161	88962213 (1)	12367959 (1)	12498793
12363420	12366985 (1)	12367959 (1)	12498777, BB Oval Port High Rise
12363407	12366985 (1)	12367959 (1)	19201332, 12371171, CNC version of 12363406
19131359	12506106 (2)	10198997 (14), 9349918 (2)	12568774, BB Dual Plane
88962218	88962213 (1)	12367959 (1)	12498827

Oil Shield **D**Gasket, Aluminum Oval Port Heads **E**Bolt Kit, Intake Manifold **F**Water Neck **G**Air Cleaner, Chevrolet-Logo High-Performance Design **H**Air Cleaner, Chevrolet-Logo Classic Design **I****MANIFOLD ACCESSORIES AND GASKETS****D. 1255320****Oil Shield**

- Isolates hot engine oil from the air/fuel mixture

E. 12366985**Gasket, Aluminum Oval Port Heads**

- Designed for Big-Block aluminum heads P/N 12363390, P/N 12363392 and P/N 12363399
- Use with manifold P/N 12363406, P/N 12363407, P/N 12363420 or P/N 12363421

88962213**Intake Manifold Gasket (not shown)**

- Use on all Big-Block engines with rectangular intake port heads 396 through 572-cubic-inch
- Includes 2 gaskets

12506106**Gasket, 454 and 502 Engines (not shown)**

- Used on 454 and 502 engines; with restricted heat crossover passages
- 1 gasket per package; order 2 per engine.

F. 12367959**Bolt Kit, Intake Manifold**

- For any Big-Block Chevrolet engine
- Includes 16 bolts: 3/8"-16 x 1.5" with wide, underhead flange with a 7/16" hex head
- Rated at 170,000 psi and will give consistent torque load
- Includes 16 hardened flat washers

NOTE: Four of these washers are smaller in diameter for use around the front water passages.

CHROME WATER NECKS**G. 12342024****Water Neck**

- Chrome water neck with neoprene O-ring and chrome bolts
- For 1966-1975 full-size Chevrolet, Camaro, and Chevelle V-8 engines

10108470**Aluminum Water Outlet (not shown)****AIR CLEANERS****H. 12342080****Air Cleaner, Chevrolet-Logo High-Performance Design**

- 14" round high-performance style air cleaner has chrome lid with embossed Chevrolet name
- Fits most 4-bbl and 2-bbl carburetors
- Will not fit Dominator-style carburetors
- Bowtie nut not included

NOTE: Check clearance between hood and top of air cleaner. Minimum clearance is 3.750" from top of carburetor gasket area to underside of hood.

I. 12342071**Air Cleaner, Chevrolet-Logo Classic Design**

- 14" round classic-style air cleaner has chrome lid with embossed Chevrolet name and Bowtie attaching nut
- Fits most 4-bbl and 2-bbl carburetors
- Will not fit Dominator-style carburetors



Additional components required for installation. See page 262.



Available for purchase online at gmperformanceparts.com



A. 17802110

Cat-Back Exhaust Systems

Offered in two distinct sound options: The Performance System gives your Cobalt an "aggressive growl," while the Touring System provides a "throaty purr."

- T-304 stainless steel
- Mandrel-bent tubing
- Semi-polished muffler embossed with GM Performance Parts logo
- GM-validated
- Two sound levels
- Single-outlet, production location

Part Number	Model Year	Description
17802111	2005-08	Performance
17802110	2005-08	Touring

NOTE: Requires separate purchase of performance exhaust tip.

NOTE: Check local and state, or provincial and territorial noise ordinances to ensure compliance.



A Cobalt Cat-Back Exhaust System and Exhaust Tip

B. 17802112

Performance Exhaust Tips

Add high-performance appearance to the Cat-Back Exhaust System on your Cobalt with one of these highly polished exhaust tips.

- Unique design
- Rolled lip
- Polished T-304 stainless steel

Part Number	Model Year	Description
17802112	2005-08	Bowtie Logo, Angle Cut
17802113	2005-08	Bowtie Logo, Straight Cut

NOTE: Not for use on production exhaust systems.



B Performance Exhaust Tips



C Extrude Honed Exhaust Manifold

C. 19131972

Extrude Honed Exhaust Manifold

Provides improved flow over production exhaust manifold.

Part Number	Model Year	Description
19131972	2005-08	SS/Supercharged (exc CA emissions)

NOTE: Fits production or GM Performance Parts Exhaust Systems.

D. 17800578

16" Wheel

Personalize your Cobalt with attractive wheels.

- Chromed
- Available with matching center cap and lugnuts
- Validated to GM specifications



D 16" Wheel

E. 17800195

18" Wheel

Part Number	Model Year	Description
17800578	2005-08	AZ577, 16" Cast Chrome
17800195	2005-08	AP194, 18" Forged Polished

88958710

Heavy-Duty Front Steering Knuckle (not shown)

- Chevrolet Cobalt SS, Saturn ION Red Line
- Designed to provide enhanced load capacity for off-road use
- Designed to use the existing interfaces to the bearing, brake caliper, strut and control arm
- Installation requires caliper mounting bolts P/N 11588889, lower ball joint bolt P/N 11589341 and nut P/N 11511799 included with the kit
- Bearing spacer plate needs modification for installation
- Specific suspension point geometry – may induce increased tire wear during street duty
- LH P/N 88958710 and RH P/N 88958711



E 18" Wheel


 Cobalt Wheel-Hop Kit **F**

 Cobalt Clutch Upgrade Kit **G**
**F. 19211782
Cobalt Wheel-Hop Kit**

Under hard acceleration, wheel hop will slow you down and could lead to a broken or damaged transmission, axle, or other expensive parts. This kit is specially designed to eliminate wheel hop on your 2005-2007 Cobalt SS/SC or ION Redline so that you can get all of your power to the ground.

**G. 19212712
Cobalt Clutch Upgrade Kit**

This kit utilizes stronger components to create a package that will be less susceptible to clutch failure in your 2005-2007 Cobalt SS/SC and Ion Redline. This kit is capable of up to 300 horsepower and will give users better performance and more load capability because of increased surface area and extra clamping force.

SUPERCHARGER UPGRADE KITS
17801947
Stage 1 Performance Upgrade Kit: Cobalt SS/ION Red Line

Increase the performance of your 2005-2007 Chevrolet Cobalt SS or Saturn ION Red Line with our Stage 1 Performance Upgrade Kit. This kit includes a recalibrated computer and high-flow injectors to meet the demands of more rpm and higher horsepower. The Stage 1 Kit takes the factory-blown 2.0L Ecotec from 205 horsepower up to 230 horsepower. Keep the fun rolling with a performance upgrade kit for your daily driven supercar.

NOTE: Premium (93-octane) fuel is required for Stage 1.

Kit Includes:

- High-flow injectors
- PCM reprogramming

17803229
Stage 2 Performance Upgrade Kit

Make that Cobalt SS or Saturn ION Red Line sit up and beg with our Stage 2 Performance Kit. Building on the success of our Stage 1 Kit, our GM Performance Parts engineers wanted to push the overachieving four-banger just a little bit more. Stage 2 takes your Cobalt SS or ION Red Line from a stock rating of 205 horsepower all the way up to 245 horsepower.

The key to making that power is increasing the boost on the factory supercharger by swapping out the stock blower pulley. Increased boost means more air getting pumped into the high-revving Ecotec, and the increased airflow requires more fuel. That's why GM high-flow injectors are included in the kit. Together, this Performance Kit will keep your Cobalt/ION Red Line boosted ahead of the competition.

NOTE: Premium (93-octane) fuel is required for Stage 2.

Kit Includes:

- High-flow injectors
- Supercharger pulley
- Correct length supercharger belt (P/N 12597993)
- PCM reprogramming



Stage 1 Performance Upgrade Kit: Cobalt SS/ION Red Line



Stage 2 Performance Upgrade Kit

17803230
Stage 1 to Stage 2 Upgrade Kit (not shown)

If you've already got our Stage 1 Upgrade Kit, and you just have to have some more, this upgrade kit is what you are looking for. This takes the 230-horse-level supercharged 2.0L Ecotec to 245 horsepower.

Kit Includes:

- Supercharger pulley
- Correct length supercharger belt
- PCM Reprogramming

NOTE: Due to the display rate of the production tachometer in 1st and 2nd gears, the tachometer may not display 7,000 RPM at fuel cutoff.

SUPERCHARGER UPGRADE KITS CONTINUED

Stage 3 Kit for Cobalt SS/ION Red Line

Take your Cobalt SS or ION Red Line to the next level with our Stage 3 Off-Road Kit! The Stage 3 kit consists of the following:

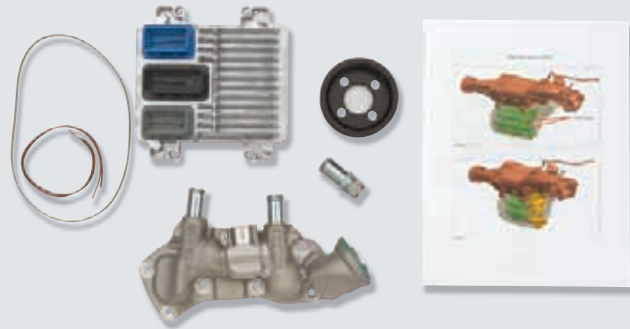
- Smaller, 76mm supercharger pulley
- 2-pass intercooler end plate
- Unique PCM, which includes a calibration for the smaller pulley, an adjustable rev limiter, a 100-octane mode, and a nitrous control algorithm

Our Stage 3 Kit will take your supercharged Ecotec 2.0L engine to a whole new level of performance. Stage 3 takes horsepower output to 248 horsepower on 93 octane fuel and to 260 horsepower on 100 octane fuel. In addition to the power increase, you'll also get an adjustable rev limiter and calibration for a 50-shot of nitrous (nitrous kit not included). For best power, we recommend also installing a high-flow exhaust.

This PCM is equipped with a user-adjustable rev limit from 6,750 to 8,000 rpm. The rev limit is adjusted by pressing on the throttle pedal with the ignition on and engine off. At about 50 percent throttle, the tachometer will show the current rev limit. Pressing the throttle further will adjust the rev limit in 250 rpm increments. This PCM is also equipped with a control scheme for the equivalent of a 50-horsepower shot of nitrous. The PCM will automatically provide the proper spark and fuel for nitrous up to 500 rpm below the current selected rev limit when the trigger is activated.

NOTE: The Stage 3 Kit is for off-road use only. The Stage 3 upgrades are meant for off-road use only and are not certified to be emissions-legal. The vehicle's air conditioning is disabled by the Stage 3 PCM.

NOTE: This kit is an upgrade to Stage 2. It requires the following parts from the Stage 2 Kit: high-flow fuel injectors, pulley adapter hub and serpentine belt.



Stage 3 Kit, 2006-2007 Cobalt SS Supercharged

Kits

88958718	Stage 3 Kit, 2005 Cobalt SS Supercharged
88958719	Stage 3 Kit, 2006-2007 Cobalt SS Supercharged
88958715	Stage 3 Kit, 2004 ION Red Line
88958716	Stage 3 Kit, 2005 ION Red Line
88958717	Stage 3 Kit, 2006-2007 ION Red Line

Parts List

88958721	Intercooler Endplate, 2 Pass Style
12610641	PCM, Stage 3, 2004 ION Red Line
12610642	PCM, Stage 3, 2005 ION Red Line
12610643	PCM, Stage 3, 2006-2007 ION Red Line
12610644	PCM, Stage 3, 2005 Cobalt SS Supercharged
12610645	PCM, Stage 3, 2006-2007 Cobalt SS Supercharged

19212670

Performance Turbocharger Upgrade Kit for Cobalt, Solstice, Sky and HHR

- For 2007-2009 Pontiac Solstice GXP, 2007-2009 Saturn Sky Redline, 2009-2010 HHR SS, 2008-2010 Cobalt SS
- Increases horsepower up to 290 @ 5,200 rpm and torque up to 340 lb.-ft.
- Includes new calibration (flashed by your local dealer) and two new MAP sensors
- Premium fuel required



V-6 90° ENGINE BLOCK QUICK REFERENCE CHART

Part Number	10205294	10134371	10134351
Block Material	Cast-iron	A356-T6 aluminum	A356-T6 aluminum
Cylinder Wall Type	Non-Siamesed	Siamesed	Siamesed
Cylinder Deck Height	9.025"	9.025"	9.025"
Cylinder Bore (Max)	4.000"	4.125"	4.125"
Number Bearing Cap Bolts	2	4	4
Cap Bolt Orientation	Straight	Splayed (20°)	Splayed (20°)
Bearing Cap Type	Cast-iron	8620 steel	8620 steel
Crankshaft Journal Dia.	350 size	350 size	400 size Oil Sump Type
Oil Sump	Wet	Wet	Dry
Oil Seal Type	2 pc	2 pc	2 pc
Design Max Stroke	3.750"	4.000"	4.000"
Weight (lbs; bare)	N/A	78	78
Intended Usage	Discontinued	Professional competition	Professional competition
Non-Standard Parts Required	Has fuel pump boss	No mechanical fuel pump boss	No mechanical fuel pump boss



Aluminum Racing Bare Block (front) **A**

V-6 90° ENGINE BLOCKS

10134371

Aluminum Racing Bare Block (350 ci main size)(not shown)

- Improved, new-design 90° V-6 A-356 aluminum racing block with 3.980" bores (maximum bore of 4.125")
- Will accommodate 4.000" stroke and can be built in displacements ranging from 3.0L to 5.2L
- Deck surface is 0.620" thick, with reinforced front and rear bulkheads
- Head bolt holes are blind-tapped to eliminate coolant leaks
- 4-bolt main caps are machined from 4340 chrome-moly steel
- Block has an upgraded V-8-style oiling system
- Uses a 2-piece rear main seal

A. 10134351

Aluminum Racing Bare Block (400 ci main size)

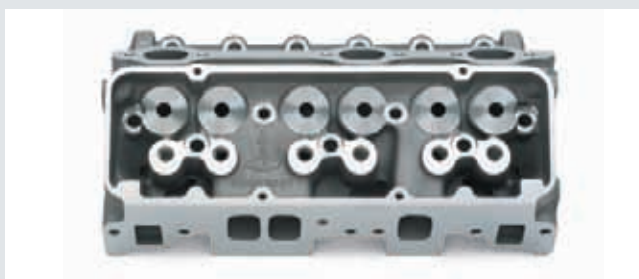
- Has the same features as block P/N 10134371 (see above), except it has 4.117" bores, a 2.65"-diameter main bearing bore and a provision for dry-sump oiling
- Maximum recommended bore is 4.125"

V-6 90° CYLINDER HEADS QUICK REFERENCE CHART

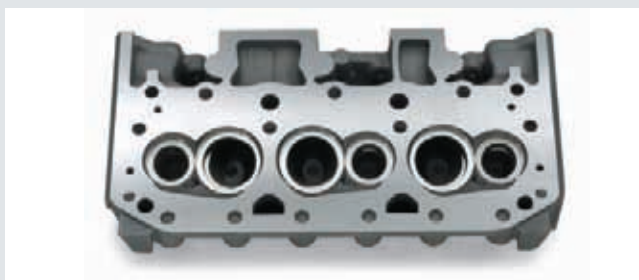
Part Number	Description	Casting Number	Material	Port Size	Port Type	Valve Angle	Chamber CC's	Int Vlv	Exh Vlv	Plug Type	Heat Riser	Rocker Stud	Notes
10134359	18° V-6	12480009	Aluminum	215	Raised	18°	43	2.150	1.620	Angled	No	Shaft	No seats/guides
12480009	18° V-6	12480009	Aluminum	215	Raised	18°	43	2.150	1.620	Angled	No	Shaft	As cast ports



18° Aluminum Cylinder Head (exhaust) **B**



18° Aluminum Cylinder Head (top/intake) **B**



18° Aluminum Cylinder Head (combustion chamber) **B**

V-6 90° CYLINDER HEADS

B. 10134359

18° Aluminum Cylinder Head

- Low-port 18° aluminum cylinder head for maximum-effort competition engines
- Offers significant improvements over conventional head designs with 18° valve angles (vs. older 23° angles) and 43cc combustion chambers
- Spark plug holes are centrally located and valve centerlines are relocated
- Exhaust ports are high-flow
- Head face has an extra 0.080" of material for 9.1:1 compression, and up to 2.200" intake valves can be used
- Shallow wedge-shaped combustion chambers allow builders to achieve high compression ratios with small piston domes
- Heads do not include valve seats or guides
- Aftermarket shaft-mounted rocker arm assemblies and pushrods are required
- Piston domes and valve pockets must be matched to the revised combustion chamber design

12480009

18° Aluminum Cylinder Head (not shown)

- Low-port 18° aluminum cylinder head for competition engines
- Identical to P/N 10134359 (see above), except that it has a new design intake port for the Daytona Dash Racing Series

V-6 90° PUSHROD GUIDEPLATES

14011051

Pushrod Guide Plate (aluminum Bowtie head)(not shown)

- Hardened steel guide plate has the correct pushrod spacing for aluminum Bowtie heads
- Should not be used with self-aligning rockers
- Pushrod slots are 0.365"

V-6 90° SPARK PLUG WIRES

A. 12361054

Spark Plug Wire Set, 90° V-6 (Chevy Bowtie logo)

- Designed for a 90° V-6, with 135° spark plug boots
- Route over the valve covers

12361060

Spark Plug Wire Set, 90° V-6 (GM Performance Parts logo)(not shown)

- Designed for a 90° V-6, with 135° spark plug boots
- Route over the valve covers



A Spark Plug Wire Set, 90° V-6

V-6 90° INTAKE MANIFOLDS, GASKETS AND COMPONENTS

B. 10134390

Aluminum Intake Manifold, 4-bbl

- High-performance aluminum manifold is used on all conventional-design 200/229/262 (3.8L and 4.3L) Chevrolet V-6 engines
- Designed for use with 390-cfm, 500-cfm or 600-cfm 4150-style carburetors
- There is no provision for EGR
- Check manifold and carburetor-to-hood clearance before installation

NOTE: This manifold will not fit 18° head or 3800 V-6.



B Aluminum Intake Manifold, 4-bbl

C. 10051125

Raised Runner Intake Manifold Base (aluminum)

- Cross-ram intake manifold is recommended for all maximum-performance competition engines
- Second-design box-style
- Designed for raised runner cylinder heads
- An air gap beneath the runners insulates the intake charge from engine heat

NOTE: An aluminum plate should be mounted between the runner entries for optimum performance; see the Chevy Power manual for information. This manifold will clear a large-diameter HEI distributor.



C Raised Runner Intake Manifold Base

10185004

Splayed Valve Gasket Kit (not shown)

- Used only with splayed-valve cylinder head P/N 10134394
- Includes two gaskets



OLDSMOBILE/PONTIAC



Olds V-8 Aluminum Valve Cover



Super-Duty Valve Cover



301-455 Valve Covers



Aluminum Valve Cover, SB2.2 "Pontiac Logo"



Pontiac 301-455 V-8 Valve Covers

OLDSMOBILE

Books and Manuals

12480027

Oldsmobile High-Performance Manual (not shown) (see page 289)

- Contains proven methods for building power in Oldsmobile V-8 engines
- Contains a detailed list of casting numbers for most Oldsmobile V-8 engines

Wheels and Accessories

12551491

Olds Rocketparts Wheel Studs (not shown)

- Long, 12mm studs have rounded ends to make tire changes quicker in the pits
- Fits all GM hubs designed for 12mm studs

NOTE: Do not use with closed-end wheel nuts; bottoming of the wheel nut on the stud can cause the wheel to separate from the vehicle.

Valve Covers

22525295

Olds V-8 Aluminum Valve Cover

- Cast-aluminum valve cover fits all production 307-455 Oldsmobile V-8 engines
- Can be used with five- and 10-bolt cylinder heads

NOTE: Sold as single piece. Order two per engine.

PONTIAC V-8 AND SUPER-DUTY FOUR CYLINDER

Valve Covers

25534420

301-455 Valve Covers

- Stylish covers fit 301-455 cubic-inch Pontiac engines manufactured from 1965-1979
- Designed for stock valvetrains and may not clear aftermarket rocker arms, springs or stud girdles
- Each cover has one 1.220" hole on left side for oil fill cap; or grommet for PCV or fresh air inlet
- Covers have a natural aluminum finish with machined Pontiac name and logo
- Includes 2 covers and grommet kit P/N 12341988

12341643

Pontiac Big-Block Aluminum Valve Covers

- Cast-aluminum competition valve covers
- Designed for the Pontiac racing cylinder head that bolts onto a Chevrolet Big-Block engine
- Designed to accept most roller rocker arms and support systems
- Pontiac name is on the top of the cover
- There are no holes for oil fill or PCV

10031327

Super-Duty Valve Cover

- Stout, brightly polished die-cast aluminum valve cover
- Functional and stylish addition to any Super-Duty four-cylinder engine
- Top half of the cover can be removed quickly for easy valve adjustments
- O-ring seal prevents oil leaks

12480012

Aluminum Valve Cover, SB2.2 "Pontiac Logo"

- Embossed with the Pontiac name Intake Manifolds, Gaskets and Components

Intake Manifolds, Gaskets and Components

12371032

Gasket (not shown)

- Designed for Super-Duty engines

NOTE: Does not fit high-port special head P/N 10049801.

PONTIAC V-8 CAMSHAFTS

Part Number	Description	Duration @ .050" Lift (deg)	Maximum Lift (in)	Lobe Centerline (deg)	Technical Notes
12364043	Hydraulic flat tappet	I: 215 E: 225	I: .408 E: .407	N/A	For all 1955-1981 Pontiac V-8 engines with 8.5-10.0 C.R. and 1800-4000 basic rpm range. Emissions-legal in 50 states.

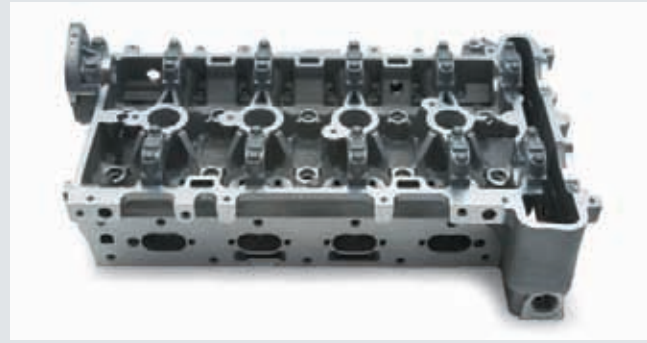


CYLINDER HEADS

A. 88958619

Ecotec "Street" CNC-Ported Cylinder Head

- Aluminum cylinder head is fully CNC-machined with high-performance-oriented ports and three-angle valve seats
- Accepts a complete stock valvetrain
- No cam sensor provision
- Flow sheet not included. See page 68 of "Ecotec 2.0L LSJ Power Book" (P/N 88958696)
- Uses stock head gasket
- Fits L61 2.2L only



A Ecotec CNC-Ported Cylinder Head, Top View and Exhaust Ports

B. 88958632

Exhaust Header Flange

- Use this .375"-thick steel flange as the starting point for your custom header system



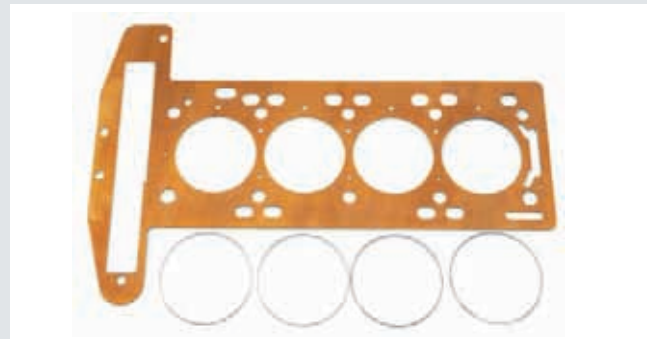
B Exhaust Header Flange

CYLINDER HEAD GASKETS AND HEAD BOLTS

C. 88958614

Ecotec Head Gasket and O-Ring Kit

- Reduces cylinder bore distortion and improves cylinder sealing at high horsepower/boost levels
- Requires special machining to head and blocks per included instructions
- Includes copper head gasket and four 1-piece stainless steel O-rings .043" thick
- For use on head P/N 88958640



C Ecotec Head Gasket and O-Ring Kit

12499222

2.2L Cylinder Head Installation Kit (not shown)

- Comprehensive kit includes the gaskets and hardware necessary to install the cylinder head on the 2.2L engine
- Includes a cylinder head gasket assembly, 4 intake manifold gaskets, an exhaust manifold gasket, and special cylinder head bolts/screws

CAMSHAFTS

88958648

Ecotec Performance Camshaft Set (not shown)

- For increased power in naturally aspirated and turbocharged engines
- Duration @ 0.050" lift is 247° on the intake and 249° on the exhaust
- Maximum lift is 0.499" for the intake and 0.499" on the exhaust
- Lobe centerline is 116°

D. 88958611

Ecotec Intake Camshaft Blank

- Heat-treated camshaft blank for grinding custom-profile intake cam



D Ecotec Intake Camshaft Blank

E. 88958612

Ecotec Exhaust Camshaft Blank

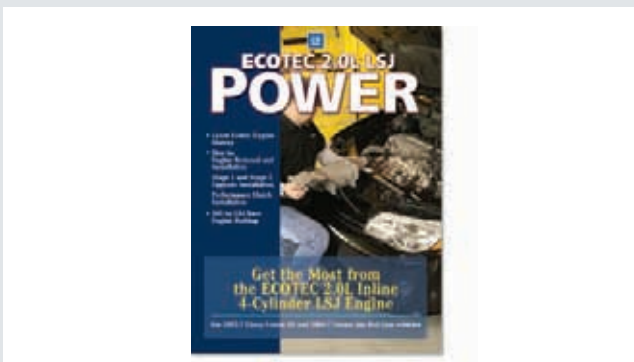
- Heat-treated camshaft blank for grinding custom-profile exhaust cam



E Ecotec Exhaust Camshaft Blank


 Ecotec Adjustable Cam Gear Set **F**

 Ecotec Neutral Balance Shaft Set **G**

 Sport Compact Build Book **H**

 Ecotec 2.0L LSJ Power Book **I**
F. 88958613
Ecotec Adjustable Cam Gear Set

- Includes intake and exhaust
- Allows valve timing to be advanced or retarded up to 16° of crankshaft rotation

G. 88958615
Ecotec Neutral Balance Shaft Set

- High-performance neutral balance shaft set (two shafts) used to replace stock balance shafts

CRANKSHAFTS
88958631
Ecotec Crankshaft Pulley (not shown)

- Billet pulley has a reduced diameter to minimize horsepower-robbing drag of the alternator and air conditioning compressor

INTAKE MANIFOLDS, GASKETS AND COMPONENTS
88958633
Ecotec Intake Manifold Flange Set (not shown)

- 0.555"-thick aluminum flanges can be used to fabricate your own custom intake manifold

H. 88958728
Sport Compact Build Book

- Describes all the parts and procedures needed to transform your stock Ecotec engine into a high-performance racing engine for drag racing or drifting competition
- Also includes race modifications for a 4T65-E automatic transmission

I. 88958686
Ecotec 2.0L LSJ Power Book

Step-by-step guide to boosting the horsepower and torque in this versatile four-cylinder powerplant.

- Detailed instructions on engine removal/reinstallation
- Special instructions on Installing Stage 1 and Stage 2 upgrade kits
- Build a 300-plus horsepower Ecotec!

WHEELS AND ACCESSORIES

Perhaps nothing gives your vehicle a more distinct look than its wheels. GM Performance Parts wheels are factory engineered and give your vehicle an integrated, production appearance. And best of all, they look great!

ZQ8 Wheels

A. 12498299

5-Spoke Wheel Kit, 16" ZQ8-Style

- Originally designed for S-trucks with the ZQ8 suspension
- 16" x 8" aluminum wheels have a -6.4mm rim offset and look great on 1987-and-older A-body and G-body cars; 1992-and-older F-body cars; and other vehicles that have the GM-style 5" x 4.750" five-lug bolt pattern
- Includes four wheels, Bowtie logo center caps, valve stems, wheel nuts and wheel nut caps

NOTE: If GMC logo center caps desired, order cap P/N 9593761 (sold individually; order four per vehicle).



A 5-Spoke Wheel Kit, 16 ZQ8-Style

WHEEL HARDWARE AND ACCESSORIES

12363989

Valve Stem Assembly, Rubber (not shown)

- Rubber valve stem has chrome metal sleeve and metal hex head
- 4 per part number

22551491

Olds Rocketparts Wheel Studs (not shown)

- Long, 12mm-studs have rounded ends to make tire changes quicker in the pits
- Fits all GM hubs designed for 12mm studs

NOTE: Do not use with closed-end wheel nuts; bottoming of the wheel nut on the stud can cause the wheel to separate from the vehicle.



B Shock Absorber Kit

Cadillac CTS-V

B. 12499241

Shock Absorber Kit

- Performance-oriented kit consisting of two 45mm monotube front shocks and two 32mm self-leveling Nivomat rear shock absorbers
- Developed at the famed Nürburgring racetrack in Germany to work with the stock 2004-07 CTS-V suspension, providing exceptional road handling
- Nivomat rear shocks have a self-compensating hydropneumatic spring that helps maintain ride control, but also maintains level vehicle height when carrying passengers or cargo

NOTE: Shock absorber kit improves handling, but may result in a harsher overall ride.



C Front Rotors

C. 88964607

Front Rotors

- Cross-drilled rotors for 2004-07 Cadillac CTS-V
- Sold as a pair

D. 88964608

Rear Rotors

- Cross-drilled rotors for 2004-07 Cadillac CTS-V
- Sold as a pair



D Rear Rotors



Cadillac CTS-V Differential Cooler Kit **E**



Heavy Duty Steering Knuckle, Left-Hand **F**



Heavy Duty Front Steering Knuckle, Right-Hand **G**



Strut Tower Braces **H**

25534462

CTS-V Transmission Cooler Kit (not shown)

- Developed for SCCAT2 racing series
- Improved cooling during sustained high-speed driving

Kit includes:

12480081	Pump	12480118	Clamp Pump Mount
12480087	Thermostat	25534489	Cooler
25534490	Bracket (Cooler Mount)	25534491	Fastener Kit
25534492	Plumbing Kit	25534493	Harness
25534482	Filter	25534494	Instruction Sheet

E. 25534463

Cadillac CTS-V Differential Cooler Kit

- Developed for SCCAT2 racing series
- Improved cooling during sustained high-speed driving

Kit includes:

12480081	Pump	12480118	Clamp Pump Mount
25534477	Cooler/Differential	12480087	Thermostat
25534478	Fastener Package	25534479	Mounting Bracket
25534480	Plumbing Kit	25534481	Wiring Harness
25534482	Filter	25534483	Assembly Instructions
25534499	Fitting Differential Outlet		

Cobalt SS, Saturn ION Red Line

F. 88958710

Heavy-Duty Front Steering Knuckle for Chevrolet Cobalt SS, Saturn ION Red Line, Left-hand

- Designed to provide enhanced load capacity for off-road use
- Designed to use the existing interfaces to the bearing, brake caliper, strut and control arm
- Installation requires caliper mounting bolts P/N 11588889, lower ball joint bolt P/N 11589341 and nut P/N 11511799 included with the kit
- Bearing spacer plate needs modification for installation
- Specific suspension point geometry – may induce increased tire wear during street duty

G. 88958711

Heavy-Duty Front Steering Knuckle for Chevrolet Cobalt SS, Saturn ION Red Line, Right-hand

- See P/N 88958710 for description

W-Body: 2000-2005 Monte Carlo and Impala; 1997-2003 Grand Prix

H. 12498648

Strut Tower Braces

- Install these easy bolt-on braces on your car to reduce body flex for firmer feel when cornering
- Includes hardware and installation instructions

A. 12498642

Heavy-Duty Rear Stabilizer Bar

- For reduced body roll, install this thick, 19mm rear bar
- Includes bushings

B. 12498643

Heavy-Duty Front Stabilizer Bar

- Get the look and feel of performance with this sturdy 34mm front bar
- Includes bushings and end links

C. 12498644

High-Performance Front Brake Upgrade Kit

- Attain increased braking performance with 12" vented disc rotors and high-performance brake pads
- Includes rotors, caliper mounting brackets, pads and bushings

NOTE: Monte Carlo and Impala models already have this system installed as standard production. Will not fit stock Grand Prix "crosslace" wheels and spare tire may not fit. Heat generated by performance brake pads can cause rotor warping if not allowed to cool sufficiently between severe uses.

D. 12498646

Heavy-Duty Front Brake Caliper Brackets

- Same brackets used in brake kit P/N 12498644 (see above)
- Includes brackets, bushings and pins
- Rotors equivalent to P/N 12498647 must be used



A Heavy-Duty Rear Stabilizer Bar



B Heavy-Duty Front Stabilizer Bar



C High-Performance Front Brake Upgrade Kit



D Heavy-Duty Front Brake Caliper Brackets



FACTORY ENGINEERED RACE PARTS F & Y CAR



T1 Suspension Package

Lightweight Racing Aluminum Driveshaft

Lose less power transferred from the transmission to the rear axle. These lightweight aluminum driveshafts are designed for F-cars equipped with the MM6 six-speed manual transmission:

12564004

Aluminum Driveshaft (not shown)

- 1998-1999 LS1 with MM6 transmission

Corvette

The Corvette engineering group and GM Racing collaborated to develop components that improve the durability and performance of production-based 1997-2004 Corvettes in professional Showroom Stock racing. GM Performance Parts offers these winning parts in convenient, comprehensive kits to make your Corvette's transformation from street car to racecar simple and straightforward.

NOTE: C5 racing parts are validated for off-road use only and are not intended for street car use. Modification with these parts will void the vehicle's warranty.

C5 Corvette

12480062

T1 Suspension Package

- Developed and approved for SCCA Touring 1 racing
- Comprehensive kit dramatically improves the handling of the Corvette
- Includes front and rear springs, front and rear stabilizer bars, stabilizer bar end links and isolators, upper and lower front A-arms
- Provides maximum performance when used with the SACHS shock absorbers (see below)

This kit includes the following items:

12480063	Spring-Front	12480064	Spring-Rear
12480065	Stabilizer Bar-Front	25534433	Stabilizer Bar-Rear
12480067	Stabilizer Link-Front and Rear (4 required)	12480068	Isolator-Front Stabilizer Bar (2 required)
12480069	Isolator-Rear Stabilizer Bar (2 required)	12480072	Upper Control Arm-Front LH
12480073	Upper Control Arm-Front RH	12480077	Lower Control Arm-Front LH
12480078	Lower Control Arm-Front RH		

12480094

SACHS Shock Absorber, Front (not shown)

- Tuned for use with the T1 suspension package (see above)
- Sold individually; order 2 per vehicle

12480095

SACHS Shock Absorber, Rear (not shown)

- Tuned for use with the T1 suspension package (see above)
- Sold individually; order 2 per vehicle

12480093

Camber Spacer Kit (not shown)

- 2 kits required per wheel

Kit includes one of each of the following:

12480071	Camber Plate, Large	12480076	Camber Plate, Small
15688265	Bolt, Lower Control Arm	11516382	Nut, Lower Control Arm

12480080

C5 Transmission Oil Cooler Kit (not shown)

- Intended for cars equipped with the six-speed manual transmission and has been updated for use on Z06 and export-model Corvettes
- Includes transmission pump, cooler assembly, wiring harness, plumbing kit, filter bracket, thermal switch, brackets and fasteners

C6 Corvette

25534430

T1 Suspension Kit for C6 Corvette (not shown)

- Approved by the SCCA for racing in the T1 class
- Similar to the championship winning C5 kit, but made to fit the C6

This kit includes the following items:

25534418	Spring-Front	25534419	Spring-Rear
12480065	Bar-Anti-Roll Front	25534433	Bar-Anti-Roll Rear (4 required)
12480067	Link-Anti-Roll Bar (4 required)	12480068	Isolator-Front Anti-Roll Bar (2 required)
12480069	Isolator-Rear Anti-Roll Bar (2 required)	25534436	Arm-Front Upper LH
25534437	Arm-Front Upper RH	25534438	Arm-Front Lower LH
25534439	Arm-Front Lower RH	25534442	Arm-Rear Lower LH
25534443	Arm-Rear Lower R		

STARTERS AND ALTERNATORS

Flywheels with two different diameters are used on Chevrolet Small-Block, Big-Block, and 90° V-6 engines. Large flywheels are 14" in diameter and have 168 teeth on the starter ring gear. Small-diameter flywheels are 12.750" in diameter, with 153 teeth on the ring gear.

This difference in flywheel diameters requires two distinct starter housings. Starter noses used with large-diameter flywheels have two offset bolt holes, while starters for small flywheels have two bolt holes that are parallel to the back of the block. Most Chevy blocks are drilled for both types of starters.

Starters

A. 12361146  

High-Torque Mini Starter

- Gear reduction starter is designed for 1958-1996 V-8 and all 90° V-6 engines
- Compact design provides increased clearance
- Weighs only 10.5 pounds and has a gear reduction of 3.75:1
- Equipped with a dual bolt pattern for 12.750" (153-tooth) and 14" (168-tooth) flywheels
- Housing can be rotated to clear exhaust systems
- Includes starter, mounting bolts, shims, gaskets and electrical connectors

NOTE: Not recommended for competition use.

B. 12363128  

High-Torque Mini Starter, Chrome

- Same as starter P/N 12361146 (see above), but with a chrome housing

C. 10465143  

Lightweight Starter (remanufactured)

- Lightweight high-performance starter was originally used on 1993-1997 Camaros and Firebirds with the LT1 engine
- Can be used on any Small-Block or Big-Block engine with a 12.750", 153-tooth flywheel

D. 12606096 

Lightweight Starter, Big-Block and Small-Block

- Gear reduction starter can be used on Big-Block and Small-Block engines with a 14", 168-tooth flywheel

E. 10465385 

LS-Series Starter

- Works with all LS-Series and Gen IV V-8 engines

Alternators

F. 1101641

Alternator, 74-Amp (Competition Use)

- Has an electronic regulator assuring safe and reliable operation with positive turn-on, integral load response control and over/under voltage monitoring
- The "P" and "F" terminals permit on-board computer interface and a new bridge has passivated chips with high reliability
- Integral capacitor eliminates wiring, suppresses radio interference and uses less space
- Dynamically balanced rotor assembly provides stable operation at speeds to 18,000 rpm

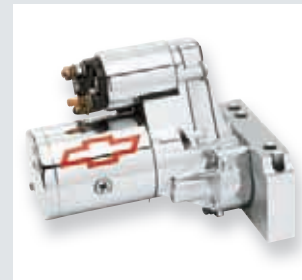
88958690

Alternator, 90-Amp (Competition Use, not shown)

- Proven in NASCAR use
- Similar to P/N 1001641
- CS121 design housing
- Serpentine belt pulley
- Hand-assembled and dyno-tested



A High-Torque Mini Starter



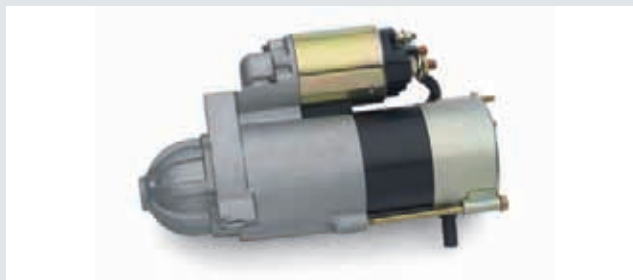
B High-Torque Mini Starter, Chrome



C Lightweight Starter 12.75" Flywheel (remanufactured)



D Lightweight Starter 14" Flywheel



E LS-Series Starter



F Alternator, 74 Amp (competition use)

**STARTERS: ADDITIONAL REQUIRED COMPONENTS**

Part Number	Bolts (Quantity)	Engine Application
12361146	14097279 (1), 14097278 (1)	Small-Block (except LT or LS Engines)
12361146	12338064 (2)	Big-Block
10465143	14097279 (1), 14097278 (1)	Small-Block (except LT or LS Engines) and 12499711, 12499710, 12499712, 19201330
10465143	12338064 (2)	Big-Block
12606096	12338064 (2)	Big-Block and 12499121, 12496962, 12497323, 12371171
12363128	14097278 (1)	Small-Block (except LT or LS Engines)
12363128	12338064 (2)	Big-Block
10465385	11588456 (1), 12561848 (1)	LS-Series

SPARK PLUG WIRES

GM Performance Parts spark plug wire kits are designed to fit your GM engine, eliminating the guesswork in selecting the correct length.



GM Performance Parts Spark Plug Wire Set (90° Boots Shown)



Spark Plug Wire Set (135° Boot Shown)



Chevrolet Bowtie Spark Plug Wire Set (90° Boots Shown)

GM Performance Parts Logo Wires

These performance 8mm spark plug wires exhibit only 600 ohms per foot of resistance, with high noise suppression capabilities. Features include red wires with white GM Performance Parts insignia and black boots. Manufactured with double-wall silicone construction. Kits include a 10° coil wire for engines, such as the Ram Jet 350 and ZZ572 engines that have remote-coil HEI, plus four wire separators and HEI terminals and boots for the distributor cap.

Part Number	Description	Notes
12361056	Spark Plug Wire Set, Small-Block	Designed for a Small-Block, with 135° spark plug boots. Route over the valve covers.
12361057	Spark Plug Wire Set, Small-Block (90° Boot)	Designed for a Small-Block, with 90° spark plug boots. Route below the valve covers. Recommend wire loom kit: P/N 12496806.
12368383	Spark Plug Wire Set for GMPP Loom Kit, Big-Block	Custom-fit set designed to be used with black wire loom P/N 12495502.
12495078	Spark Plug Wire Set and Loom Kit, Big-Block	Supplied with wire set P/N 12368383 and black loom kit P/N 12495502.
12495519	Spark Plug Wire Set, LS-Series V-8	Direct-fit wire set with factory-style boots and terminals.

Chevrolet Bowtie Logo Wires

These red wires share the same high quality features as the GM Performance Parts wires, but have the Chevrolet Bowtie logo in white.

Part Number	Description	Notes
12361051	Spark Plug Wire Set, Small-Block (90° Boot)	Designed for a Small-Block, with 90° spark plug boots. Route over the valve covers. Recommend wire loom kit: P/N 12496806.
12368384	Spark Plug Wire Kit for GMPP Loom Kit, Big-Block	Custom-fit set designed to be used with black wire loom P/N 12495502 or chrome wire loom P/N 12342049.

GM Racing Wires

Part Number	Description	Notes
24502521	Spark Plug Wire Set	Superior quality racing plug wires used by NASCAR teams. Designed to route over the valve cover, with 135° spark plug boots. 50 ohm/ft premium cable covered with 8mm of silicone and a black abrasive-resistant cover. Not for SB2 cylinder heads.

! SPARK PLUG WIRES: ADDITIONAL REQUIRED COMPONENTS

Part Number	Engine Type	Loom Number	Logo	Ends	Routing	Engine Application
12361056	Small-Block	12496806 OR 88891792	GMPP	135°	Over valve covers	Small-Block V-8
12361057	Small-Block	12496806 OR 88891792	GMPP	90°	Below valve covers	12499711: 350 HO Turn-Key, 12499710: FB 385 Turn-Key, 19201330: ZZ4 Turn-Key, 12499120: Ram Jet 350, 12496968: 350 HO Deluxe, 12495515: Ram Jet 350
12361058	Big-Block	N/A	GMPP	135°	Over valve covers	
12368383	Big-Block	12495502	GMPP	135°	Over valve covers	12499121: Ram Jet 502, 12497323: Ram Jet 502
12495078	Big-Block	Included in kit	GMPP	135°	Over valve covers	12496962: 502 Deluxe, 12371171: 502 Deluxe Kit
12361060	90° V-6	N/A	GMPP	135°	Over valve covers	
12495519	LS-Series	N/A	None		Over valve covers	
12361050	Small-Block	N/A	Bowtie	135°	Over valve covers	
12361051	Small-Block	12496806	Bowtie	90°	Below valve covers	Small-Block with 90° spark plug boots
12361052	Big-Block	N/A	Bowtie	135°	Over valve covers	
12368384	Big-Block	12495502 OR 12342049	Bowtie	135°	Below valve covers	
12495079	Big-Block	12495502	Bowtie	135°	Below valve covers	
12361054	90° V-6	N/A	Bowtie	135°	Over valve covers	
24502521	NASCAR	N/A	None	135°	Over valve covers	

LOOM KITS



Wire Loom Kit, Big Block



Wire Loom Kit, Small Block

Part Number	Description	Technical Notes
12496806	Wire Loom Kit, Small-Block	Stainless-steel supports with the Bowtie logo laser-cut in each of the six supports. Twelve retainers, bolts and washers are supplied to bolt to the side of the head. Use with spark plug wire set P/N 12361051 and P/N 12361057.
12495502	Wire Loom Kit, Big-Block	Used on late-model Big-Block trucks. Supplied with one left-hand support P/N 12553397, one right-hand support P/N 12553398, three four-wire retainers P/N 12132223, two three-wire retainers P/N 12047523, two two-wire retainers P/N 12132229, and two single-wire retainers P/N 12132228.



ELECTRONIC CONTROL UNITS AND COMPONENTS



Ignition Controller



Rev Limiter for CD Ignition Controller



LSX Ignition Controller



Ignition Wire Harness



Controller and Wiring Harness, LS7

IGNITION AND ELECTRONIC CONTROL UNIT SYSTEMS

Ignition Components

10037378

Ignition Controller

- CD ignition control for 4-, 6- or 8-cylinder racing engines
- Each spark is at full power from idle to racing rpm
- Supplied with shock-resistant mounts

NOTE: Use with GM heavy-duty electronic distributors P/N 10051133 and P/N 10051134. Do not use with production HEI system.

10039932

Ignition Wire Harness (engine compartment-mounted)

- Will connect all GMPP heavy-duty electronic distributors to ignition controller P/N 10037378 when the control box is mounted in the engine compartment

10037379

Rev Limiter for CD Ignition Controller

- Plugs directly into the GM High Performance CD Ignition Control P/N 10037378
- The rpm limit is set with plug-in rpm modules
- Kit is supplied with 6,000, 7,000, and 8,000 rpm modules

RPM Limit Module Kits

These kits are supplied with five rpm modules for the Rev Limiter P/N 10037379 (see above). Choose from the following:

10039933

5,000 rpm Module Kit (not shown)

- Includes 5,000, 5,200, 5,400, 5,600, and 5,800 rpm modules

10039934

6,000 rpm Module Kit (not shown)

- Includes 6,000, 6,200, 6,400, 6,600, and 6,800 rpm modules

10039935

7,000 rpm Module Kit (not shown)

- Includes 7,000, 7,200, 7,400, 7,600, and 7,800 rpm modules

10039936

8,000 rpm Module Kit (not shown)

- Includes 8,000, 8,200, 8,400, 8,600, and 8,800 rpm modules

19166567

LS7 Controller Kit, 2006-2008

- Includes all the components required to run your 2006-2008 LS7 crate engine
- For individual engine controller, use P/N 19166569 (included in kit)
- Max rpm 7,100
- Will not run 2009 LS7s

19243066

LS7 Controller Kit, 2009 (not shown)

- Includes all the components required to run your 2009 LS7 crate engine
- For individual engine controller, use P/N 19253067 (included in kit)
- Max rpm 6,500
- Will not run 2006-2008 LS7s

19166568

LS2 Controller Kit (not shown)

- Includes all the components required to run your LS2 crate engine
- Max rpm 6,500
- For individual engine controller, use P/N 19166570 (included in kit)
- Only works with 58X reluctor ring engines

19201327

LS376/480 Controller Kit (not shown)

- Includes all the components required to run your LS376/480 crate engine
- Max rpm 6,500
- For individual engine controller, use P/N 19201790 (included in kit)

19201861

LS3 Controller Kit (not shown)

- Includes all the components required to run the LS3 crate engine
- Max rpm 6,500
- For individual engine controller, use P/N 19201859 (included in kit)

The previous kits (P/N 19166567, 19166568, 19201327, 19201861, 19243066) include the following items:

19202595	LS2/LS7 Engine Harness -OR-
19202596	LS3/LS376 Engine Harness
12576410	Mass Air Flow Meter
19166574	Mass Air Flow Meter Mounting Boss
10367117	Accelerator Pedal Assembly
12581966	Oxygen Sensor (2 Per Kit)
15156588	Oxygen Sensor Mounting Boss (2 Per Kit)
19171935	Instruction Sheet
Varies	Engine Specific Controller

NOTE: The controller will not function in a production vehicle unless all kit components are used. These controllers will not operate any of the production gauges. Aftermarket gauges are required.

19171130

LSX Ignition Controller

- Distributorless plug-in ignition system for carbureted LS engines with 58X reluctor wheel
- Several pre-programmed timing curves provided
- Supplied software allows you to create custom vacuum advance curves, timing curves, program lo and hi rpm rev limiter and step retard
- Plugs into stock sensors (not provided)
- MAP sensor provided
- Compatible with all LS-Series ignition coils



ELECTRONIC CONTROL UNITS & COMPONENTS CONTINUED

Chevy Small-Block V-8 (LS Style)**12480112****ECU, LS1 V-8 (not shown)**

- Calibrated for the LS1 Camaro/Firebird engine and can be used in a street rod or other early-model vehicles

NOTE: Use with Camaro/Firebird LS1 engine and wire harness P/N 12480113.

12480054**ECU, LS1/ASA Racing (not shown)**

- LS1 ECU is similar to P/N 16238212, but is calibrated for ASA racing only
- Use with wire harness P/N 12480055

12480055**Wire Harness, LS1, ASA Racing (not shown)**

- Designed for ASA racing ECU P/N 12480054 only

19212657**Transmission Controller, 4L60-E, 4L65-E, 4L80-E and 4L85-E Automatic (not shown)**

- Required when using a GM electronically controlled automatic transmission (see page 125)
- Includes wiring harness, software and connector for laptop computer
- Controller allows full programming of shifting, as well as part-throttle, wide-open throttle and shift firmness control

Chevy Small-Block V-8 (Gen I)**88962717****MEFI 4 ECU, Ram Jet 350 (not shown)**

- Replacement ECU for all Ram Jet 350 crate engines, MEFI 3 P/N 12495515 or MEFI 4 P/N 12499120
- MEFI 4 Ram Jet engine is a closed-loop system that gives a much smoother idle and improved performance

NOTE: Replacing the ECU on MEFI 3 Ram Jet engine P/N 12495515 requires using new wire harness kit P/N 12499116, or use jumper wire P/N 88963118 to use MEFI 4 ECU as an open-loop system.

88961967**MEFI 4 ECU Wire Harness, Ram Jet 350 (not shown)**

- Designed to be used with the MEFI 4 Ram Jet 350 P/N 12499120 and MEFI 4 ECU P/N 88962717

12499116**MEFI 4 ECU and Wire Harness Kit, Ram Jet 350 (not shown)**

- Use to convert a Ram Jet 350 from MEFI 3 to the newer MEFI 4 design, which provides a better idle through closed-loop operation
- Includes ECU module P/N 88962717, wire harness P/N 88961967, oxygen sensor P/N 25312200, intake air temp sensor P/N 25036751, and oxygen sensor fitting P/N 15156588

NOTE: ECU is programmed with a "green mode" that controls the rpm for the break-in period. During this period, engine speed is limited to 4,000 rpm in the first hour, 4,500 rpm in the second hour and 5,500 rpm in the third hour.

15156588**Fitting, Oxygen Sensor (not shown)**

- Used on all MEFI 4 electronic controlled ignition systems
- Should be welded into the exhaust pipe so the oxygen sensor can be screwed into the exhaust system

19171873**MEFI 3 ECU Wire Harness, Ram Jet 350 (not shown)**

- Designed for use with the MEFI 3 350 Ram Jet engine P/N 12495515 using ECU P/N 12489488

Chevy Big-Block V-8**88962718****ECU, Ram Jet 502 (not shown)**

- Replacement ECU for all Ram Jet 502 engines (MEFI 3 P/N 12497323 or MEFI 4 P/N 12499121)
- MEFI 4 Ram Jet engine is a closed-loop system that gives a much smoother idle and improved performance

NOTE: Replacing the ECU on MEFI 3 Ram Jet engine P/N 12497323 requires using new wire harness kit P/N 12499117, or jumper wire P/N 88963118 to use MEFI 4 ECU as an open-loop system.

12499117**MEFI 4 ECU & Wire Harness Kit, Ram Jet 502 (not shown)**

- Module/harness kit is used to convert a Ram Jet 502 from MEFI 3 to the newer MEFI 4 design, which offers improved idle and performance through a closed-loop system
- Includes module P/N 88962718, wire harness P/N 88961968, oxygen sensor P/N 25312200, intake air temp sensor P/N 25036751 and oxygen sensor fitting P/N 15156588

NOTE: The ECU is programmed with a "green mode" that controls the rpm for the break-in period. During this period, engine speed is limited to 4,000 rpm in the first hour, 4,500 rpm in the second hour and 5,500 rpm in the third hour.

88963118**Jumper Harness, MEFI 3 to MEFI 4 (not shown)**

- Allows an MEFI 4 module to be used with an MEFI 3 wiring system (to stay as an open-loop system)
- Fits both Big-Block and Small-Block engines

88958621**PROM, 502 Truck Conversions (1991–1993)(not shown)**

- Used in the 502 emission-legal engine conversions for 1991–1993 trucks

12489494**MEFI 3 ECU Harness, 502 (not shown)**

- Designed for the MEFI 3 ECU P/N 12489493 on the MEFI 3 Ram Jet 502 engine P/N 12497323
- Part of engine kit P/N 12499121

88961968**MEFI 4 ECU Harness, Ram Jet 502 (not shown)**

- Used in the MEFI 4 Ram Jet 502 P/N 12499121 with the MEFI 4 closed-loop oxygen sensor-equipped system
- Use with MEFI 4 ECU P/N 88962718

CHASSIS WIRING HARNESS

If you're building a hot rod or restoring an old muscle car, GM Performance Parts inclusive wiring harness kits make a great replacement for old, worn or damaged wires. These universal wiring kits come with the wires pre-installed on the fuse block, so wiring the vehicle is simply a matter of mounting the fuse block and routing the wires. Each wire is preprinted with the necessary application and is GM-color-coded. The kits also come with all necessary fuses, flashers, horn relay, tach leads, wire ties and grommets. High-temperature, 275°F wire is used – one size larger than factory specs. In all, it's everything you need to electrify your vintage GM car or truck!

NOTE: Installation note: These universal systems will re-wire any car, truck or competition vehicle using a GM-keyed column. Kits come with extra-long wire to accommodate almost any vehicle.

12355691**12-Circuit Wiring Harness (not shown)**

- Basic system is wired for: heat/air conditioning, brake lights, coil, electric fan, emergency flashers, gauges/dash instruments, headlamps, horn, radio, turn signals, wipers, dome light and third brake light

12355693**18-Circuit Wiring Harness (not shown)**

- Includes wiring for all circuits in P/N 12355691
- Also includes: cigarette lighter, power windows, power door locks, electric fuel pump, back-up lights/cruise control and speakers

Distributor, HEI **A**Distributor, Billet HEI **B**Distributor, Ram Jet 350 & Ram Jet 502 **C**Distributor, Adjustable Slip Collar **D**

DISTRIBUTORS AND COMPONENTS

High-quality, durable and dependable GM Performance Parts distributors optimize the performance of your GM engine. These distributors are interchangeable among standard GM Small-Block and Big-Block V-8s. For tall-deck engines, use adjustable slip collar distributor P/N 10093387.

NOTE: Melonized distributor gear P/N 10456413 is required on all GM Performance Parts crate engines, or serious damage will occur.

A. 93440806

Distributor, HEI

- Cast aluminum distributor for all Small-Block and Big-Block V-8 engine assemblies
- High-performance mechanical advance curve
- Vacuum advance canister included
- Use connector P/N 12167658 to attach tachometer and 12-volt power supply wire to distributor
- Includes module P/N 10482820, cap P/N 19110931 and rotor P/N 19110934

B. 88961867

Distributor, Billet HEI

- CNC-machined billet aluminum housing provides great strength
- Ball bearing guide, oversized shaft and long sintered bushing for stability
- Offers mechanical advance and vacuum advance
- Includes brass terminal cap
- Use connector P/N 12167658 to attach tachometer and 12-volt power supply wire to distributor

C. 1104060

Distributor, Ram Jet 350 and Ram Jet 502

- Used on the fuel-injected Ram Jet 350 and Ram Jet 502
- Includes ignition module P/N 10482830, cap P/N 19166099 and rotor P/N 10477219

1103952

Distributor, Late-Model EFI (not shown)

- Used on late-model V-8 engines with fuel injection and computer controls
- Kit includes ignition module, cap and rotor

D. 10093387

Distributor, Adjustable Slip Collar

- Designed for competition use
- Billet aluminum housing
- Ball-bearing guide
- Adjustable mechanical advance
- Magnetic pickup
- Uses standard cap and rotor
- Adjustable slip collar for tall-deck blocks or to compensate for cylinder head or block machining

19052845

Distributor Gear (not shown)

- Melonized gear for distributor P/N 1103952

10456413

Distributor Gear (not shown)

- Melonized iron gear is required on all GMPP crate engines
- Failure to use this gear will affect the engine warranty

NOTE: Supplied on distributor P/N 93440806.

12167658

Connector, HEI Distributor Power and Tachometer (not shown)

- Used to attach the power and tachometer wires to the cap of the HEI distributor

12498335

Coil, HEI (not shown)

- Production HEI coil



CARBURETORS, THROTTLE BODIES AND AIR CLEANERS

GM Performance Parts has the right carburetor or throttle body to complete your new crate engine, or give life to your rebuilt engine. Then, top off your engine with one of our great-looking air cleaners.

Carburetors

19170097

Carburetor, Holley 650-cfm (not shown)

- Holley 4150-style 650-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Mechanical secondaries
- Manual choke
- Four-corner idle adjustment
- Power valve blowout protection
- Bolts and gaskets included
- Replaces Holley 4160 600-cfm carburetor P/N 12497147

A. 19170092

Carburetor, Holley 670-cfm

- Holley 4160-style 670-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Dual-feed center-hung fuel bowls
- Vacuum secondaries
- Electric choke
- Power valve blowout protection
- Quick-change adjustable vacuum secondary
- Bolts and gaskets included

19170093

Carburetor, Holley 770-cfm (not shown)

- Holley 4160-style 770-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Dual feed, center-hung float bowls
- Vacuum secondaries
- Automatic electric choke
- Quick-change adjustable vacuum secondary
- Recommended for Small-Block and Big-Block engines, including street, competition, towing and off-road vehicles
- Bolts and gaskets included
- Replaces Holley 4160 750-cfm carburetor P/N 12485506

B. 19170095

Carburetor, Holley 850-cfm

- Holley 4150-style 850-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Mechanical secondaries
- Electric choke
- Four-corner idle adjustment
- Power valve blowout protection
- Custom-calibrated for the ZZ572/620 crate engine
- Recommended for 502 crate engines and suitable for Big-Block engines, including street, competition, towing and off-road vehicles
- Bolts and gaskets included
- Replaces Holley 4160 850-cfm carburetor P/N 88961560

NOTE: Carburetor can only be recalibrated for use with other large-displacement engines.

C. 19170094

Carburetor, Holley 870-cfm

- Holley 4160-style 870-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Dual feed, center-hung float bowls
- Vacuum secondaries
- Automatic electric choke
- Quick-change adjustable vacuum secondary
- Recommended for 502 crate engines and suitable for Big-Block engines, including street, competition, towing and off-road vehicles
- Bolts and gaskets included
- Replaces 4150-style 850-cfm carburetor P/N 12366996



A Carburetor, Holley 670-cfm



B Carburetor, Holley 850-cfm



C Carburetor, Holley 870-cfm

Carburetor, Holley Dominator 1150-cfm **D**Air Cleaner, Chevrolet Logo
Classic Design **E**Air Cleaner, Chevrolet Logo
High-Performance Design **F****G** Air Cleaner, Ram Jet 350**D. 19170096** **Carburetor, Holley Dominator 1150-cfm**

- Dominator-style 1150-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Mechanical secondaries
- Four-corner idle adjustment
- Power valve blowout protection
- Custom-calibrated for the ZZ572/720R crate engine
- Bolts and gaskets included
- Replaces 4500-style 1090-cfm carburetor P/N 88962217

Throttle Bodies**17096144** **Throttle Body, Ram Jet 350 (not shown)**

- Used on the Ram Jet 350 crate engine
- Use throttle body gasket P/N 12551240 and bolt P/N 11516425 for installation
- Single 75mm blades
- Flows 440-cfm

17113524**Throttle Body, Ram Jet 502 (not shown)**

- Used on the Ram Jet 502 crate engine
- Use throttle body gasket P/N 10105379 and bolt P/N 11516344 for installation
- Dual 49.9mm blades
- Flows 440-cfm

NOTE: Also fits L98 TPI engines.**Hardware****Standard Length Stud:**

Part Number	Quantity	Description
10012990	4	Stud, 2" long 5/16 thd.
124920	4	Nut, hex
9439511	4	Washer

Air Cleaners**E. 12342071** **Air Cleaner, Chevrolet-Logo Classic Design**

- 14" round classic-style air cleaner
- Has chrome lid with embossed Chevrolet name and Bowtie attaching nut
- Fits most 4-bbl and 2-bbl carburetors
- Does not fit Dominator-style carburetors

F. 12342080 **Air Cleaner, Chevrolet-Logo High-Performance Design**

- 14" round high-performance-style air cleaner
- Has chrome lid with embossed Chevrolet name
- Fits most 4-bbl and 2-bbl carburetors
- Does not fit Dominator-style carburetors

G. 12498951 **Air Cleaner, Ram Jet 350**

- Designed for use with throttle body on Ram Jet 350 crate engine
- Can be used on other applications

19172061**Air Cleaner, Ram Jet 502 (not shown)**

- Designed for use with throttle body on Ram Jet 502 crate engine
- Can be used on other applications



FUEL PUMPS AND ACCESSORIES

A. 6415325

Fuel Pump, High Capacity, Small-Block

- For use on carbureted engines
- Pump has 7 psi shutoff pressure and free flowing rate of 30 gph
- Lower housing can be rotated to reposition inlet and outlet ports

B. 12355612

Fuel Pump, Street Performance, Small-Block

- For use on carbureted engines
- Pump has 7 psi shutoff pressure and a free-flow rating of 110 gph
- Lower housing can be rotated to reposition inlet and outlet ports
- 3/8" - 18 inlet

C. 12355613

Fuel Pump, Competition, Small-Block

- For use on carbureted racing engines
- Pump has 9 psi shutoff pressure and a free-flow rating of 115 gph
- Lower housing can be rotated to reposition inlet and outlet ports
- 1/2" - 14 inlet

D. 12355614

Fuel Pump, Street Performance, Big-Block

- For use on carbureted Big-Block engines built from 1965 through 1990
- Pump has 7 psi shutoff pressure and a free-flow rating of 100 gph
- Lower housing can be rotated to reposition inlet and outlet ports
- 3/8" - 18 inlet



A Fuel Pump, High Capacity, Small-Block



B Fuel Pump, Street Performance, Small-Block



C Fuel Pump, Competition, Small-Block



D Fuel Pump, Street Performance, Big-Block



Small-Block Fuel Pump Block-Off Plate **E**



Big-Block Fuel Pump Block-Off Plate **F**



Electric Fuel Pump **G**



Electric Fuel Pump, High Output **H**



Fuel Filter **I**

Chrome Fuel Pump Block-Off Plates

- E. 12341998**  **Small-Block Fuel Pump Block-Off Plate**
 - Plate has stamped Bowtie logo
 - Special non-asbestos gasket included

- F. 12341999**  **Big-Block Fuel Pump Block-Off Plate**
 - Plate has stamped Bowtie logo
 - Special non-asbestos gasket included

- G. 6472657** **Electric Fuel Pump**
 - For use on all carbureted engines
 - Flows 30-40 gph at 6-9 psi

- H. 25115899** **Electric Fuel Pump, High-Output**
 - Heavy-duty 12-volt electric rotary pump
 - Flows 72 gph at 6-8 psi

- 12574986** **Fuel Pressure Regulator Kit (not shown)**
 - Used on Ram Jet 502 crate engine
 - Fits other fuel-injected engines

- I. 854619** **Fuel Filter**
 - High-capacity inline filter
 - Suitable for all high-performance carbureted applications
 - 5/16" inlet and outlet

- 19170365** **Carb High Idle Solenoid (not shown)**
 - Used to increase idle speed on carbureted applications
 - Increases idle when air-conditioning compressor is engaged
 - Fits all Holley 670, 770, 870 carburetors

- 19289926** **LS Fuel Filter (not shown)**
 - 99-03 Corvette stock fuel filter
 - Built-in fuel pressure regulator
 - Mounts to frame
 - Supplies constant 55-61 PSI of fuel to engine and returns excess to fuel tank



ELECTRONIC CONTROL UNITS AND COMPONENTS

Turn your GM car into a true sport compact with the horsepower boost of a supercharger. By squeezing pressurized air into the engine, a supercharger dramatically increases the performance of your vehicle, while maintaining excellent drivability. GM Performance Parts Roots-type supercharger systems are factory engineered and extensively tested to meet the same rigorous standards as GM's production vehicles and components.

Superchargers

A. 12498660

2.4L Twin Cam Supercharger (Cavalier, Sunfire, Grand Am, Alero)

- Add up to 50 horsepower and 40 lb.-ft. of torque!
- Designed for 2000-2002 GM vehicles equipped with the 2.4L Twin Cam engine (engine code RPO LD9)
- Includes all mounting brackets, air ducts, adapters, Gen II MAP sensor and spark plugs
- Can be installed with normal hand tools
- Includes new serpentine drive belt

NOTE: Recalibration of Vehicle Control Module is included, but must be performed by an authorized GM dealership.



A 2.4L Twin Cam Supercharger

B. 12498927

Pontiac Vibe Supercharger (automatic transmission)

- Add up to 30 percent more power and 18 percent more torque to your 2003-2004 Pontiac Vibe, for new power outputs of 170 hp and 150 lb.-ft. compared to the stock 1.8L engine
- Supercharger produces up to 7.5 pounds of boost
- Includes mounting brackets, air ducts, serpentine drive belt, PCV hoses, new fuel injectors and add-on controller for calibration of the Vehicle Control Module



B Pontiac Vibe Supercharger

12499105

Pontiac Vibe Supercharger (manual transmission, not shown)

- Same as P/N 12498927
- Includes upgraded engine mounts

Supercharger Upgrades

C. 17801947

Stage 1 Performance Upgrade Kit, Cobalt SS/ION Red Line

- For 2005-2007 Saturn ION Red Line and Chevrolet Cobalt SS only
- Enhances engine performance to 230 hp (up from stock 205 hp)
- Includes high-flow injectors and specific performance engine calibration
- Premium fuel required



C Stage 1 Performance Upgrade Kit, Cobalt SS/ION Red Line

D. 17803229

Stage 2 Performance Upgrade Kit, Cobalt SS/ION Red Line

- For 2005-2007 Saturn ION Red Line and Chevrolet Cobalt SS only
- Enhances engine performance to 241 hp (up from stock 205 hp)
- Includes high-flow injectors, supercharger pulley, new special length supercharger belt and specific performance engine calibration
- Premium fuel required

17803230

Stage 1 to Stage 2 Upgrade Kit, Cobalt SS/ION Red Line (not shown)

- For 2005-2007 Saturn ION Red Line and Chevrolet Cobalt SS with Stage 1 Performance upgrade kit already installed only
- Converts your Stage 1 Kit to Stage 2, increasing performance from 236 hp to 241 hp
- Includes supercharger pulley, and new special-length supercharger belt
- Premium fuel required



D Stage 2 Performance Upgrade Kit, Cobalt SS/ION Red Line



Stage 3 Kit for Cobalt SS/ION Red Line **E**

E. 88958719

Stage 3 Kit for Cobalt SS/ION Red Line

Take your Cobalt SS or ION Red Line to the next level with our Stage 3 Off-Road Kit!

The Stage 3 Kit consists of the following:

- A smaller, 76mm supercharger pulley
- A 2-pass intercooler end plate
- A unique PCM, which includes a calibration for the smaller pulley, an adjustable rev limiter, a 100-octane mode, and a nitrous control algorithm
- See page 266 for more information

88958721

Two Pass Intercooler Endplate Kit (not shown)

- Upgrade from Stage 3
- Kit includes: seal P/N 12584355, seal P/N 12584333, nipple P/N 10235669 and instruction sheet
- Go to tunersource.gmblogs.com for more information



LS9 Supercharger **F**

F. 17801947 NEW

LS9 Supercharger

- Original Equipment on ZR-1 Corvette
- Eaton twin-rotor 2.3L displacement
- Integrated dual-brick air to liquid intercooler
- Highly efficient 4-lobe rotor design
- Generates maximum boost pressure of 10.5 PSI
- Assembly includes:
 - Supercharger intake system with injectors
 - Cast cover and intercooler
 - Front pulley
 - Throttle body
 - Gasket Set

NOTE: For Turbocharger upgrades, see page 266.

SERVICE MANUALS

G. 12486611

Service Manual, Ram Jet 350 (MEFI 3)

- Covers the installation and service of the MEFI 3 Ram Jet 350 P/N 12495515

88962723

Service Manual, Ram Jet 350 (MEFI 4, not shown)

- Covers the installation and service of the MEFI 4 Ram Jet 350 P/N 12499120

H. 12486610

Service Manual, Ram Jet 502 (MEFI 3)

- Covers the installation and service of the MEFI 3 Ram Jet 502 P/N 12497323

88962724

Service Manual, Ram Jet 502 (MEFI 4, not shown)

- Covers the installation and service of the MEFI 4 Ram Jet 502 P/N 12499121



Service Manual, Ram Jet 350 (MEFI 3) **G**



Service Manual, Ram Jet 502 (MEFI 3) **H**

BOOKS AND MANUALS

Get the most from your vehicle and its GM Performance Parts. These books and manuals provide insider information and technical tips from direct sources within General Motors. They are invaluable for building an engine for the street or race track.

A. 24502488

Chevrolet Power

- Seventh edition of the time-tested guide to building competition engines for oval track racing, drag racing, road racing and marine applications
- Includes information on Small-Block, Big-Block, 90° V-6 and 60° V-6
- Contains more than 600 photos, illustrations, blueprints and charts

12486611

Service Manual, Ram Jet 350 (MEFI 3)(not shown)

- Covers the installation and service of the MEFI 3 Ram Jet 350 P/N 12495515

B. 88962723

Service Manual, Ram Jet 350 (MEFI 4)

- Covers the installation and service of the MEFI 4 Ram Jet 350 P/N 12499120

C. 12486610

Service Manual, Ram Jet 502 (MEFI 3)

- Covers the installation and service of the MEFI 3 Ram Jet 502 P/N 12497323

88962724

Service Manual, Ram Jet 502 (MEFI 4, not shown)

- Covers the installation and service of the MEFI 4 Ram Jet 502 P/N 12499121

D. 88959384

LS1 Engine Kit Installation Guide

- Detailed instructions to help you install an LS1 engine in your older vehicle
- Includes notes and technical explanations for necessary parts, along with part numbers you can order from your GM dealer to get the job done easily

E. 88958786

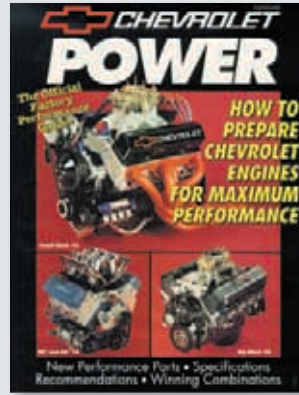
High-Performance Chevy LS1/LS6 V-8s

- 160 pages discuss the LS-Series engine architecture and design, parts interchangeability along with step-by-step engine removal sequences for many GM vehicles with LS-Series engines
- Shows how to build, modify and tune LS engines

F. 88958764

LS-Series "How to Rebuild" Book

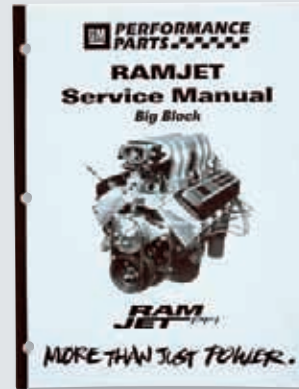
- A complete reference that shows how to rebuild an LS-Series engine
- Includes tips and modification procedures to improve power and economy
- More than 600 step-by-step color photos



A Chevrolet Power



B Service Manual, Ram Jet 350 (MEFI 4)



C Service Manual, Ram Jet 502 (MEFI 3)



D LS1 Engine Kit Installation Guide



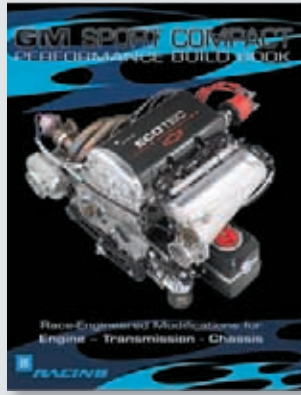
E High-Performance Chevy LS1/LS6 V-8's



F LS-Series - How to Rebuild Book



Oldsmobile High-Performance Manual **G**



Sport Compact Build Book **H**



Ecotec 2.0L LSJ Power Book **I**



Busch Grand National Engine Handbook **J**



SuperTruck Engine Handbook **K**



Solstice Performance **L**

G. 12480027

Oldsmobile High-Performance Manual

- Contains proven methods for building power in Olds V-8 engines
- Also contains a detailed list of casting numbers for most Oldsmobile V-8 engines

H. 88958728

Sport Compact Build Book

- Describes all the parts and procedures needed to transform your stock Ecotec engine into a high-performance racing engine for drag racing or drifting competition
- Also includes race modifications for a 4T65-E automatic transmission

I. 88958686

Ecotec 2.0L LSJ Power Book

Step-by-step guide to boosting the horsepower and torque in this versatile four-cylinder powerplant.

- Detailed instructions on engine removal/reinstallation
- Special instructions on Installing Stage 1 and Stage 2 upgrade kits
- Build a 300-plus horsepower Ecotec!

24502570

Motorsports Aurora V-8 Engine Handbook (not shown)

- Covers component selection and recommendations, as well as engine building procedures, for engines used in specific racing series

J. 12370848

Busch Grand National Engine Handbook

- Covers component selection and recommendations, as well as assembly procedures, for building a 358-cubic-inch engine for use in the NASCAR Busch Grand National series
- Includes specifications for bore clearances, bearing clearances, etc.

K. 12370844

SuperTruck Engine Handbook

- Covers component selection and recommendations, as well as assembly procedures, for building a 358-cubic-inch engine for use in the NASCAR Craftsman Truck series
- Includes specifications for bore clearances, bearing clearances, etc.

88958668

Circle Track Techbook (not shown)

- Technical manual for GM Circle Track crate engines P/N 19258602, P/N 88958603 and P/N 88958604
- Covers all details regarding rebuilding specifications, including parts lists
- 47 pages with photos and details on valve machining, valve springs, camshafts and other factory specifications

L. 88958697

Solstice Performance

- 132 pages show how to take advantage of the performance capabilities of the Pontiac Solstice
- Loaded with almost 900 images and detailed technical information to help everyone from the beginner to the expert
- Shows how a Sports Car Club of America (SCCA) road racing Solstice is created, along with the buildup of a 'drifting' Solstice and a brute-performance Solstice

GM Licensed Parts

NEW COMING SPRING 2011!

LS Slant-Edge Valve Covers

Still trying to find your LS engine amongst a congestion of wires, tubes, and ignition coils? Not Any More! Through innovative engineering, Specialty Auto Parts USA, Inc. has developed a valve cover that will take your stock LS engine, and give it a totally personalized look. These new valve covers are taller than stock valve covers, and can accommodate a wide variety of large valvetrain applications. Five choices, with raised or recessed Chevrolet and Bowtie emblems. Mounting studs, and oil-restricting baffles are included. Threaded mounting holes for the Integrated Ignition Coil Bracket included. Sold in Pairs. Patent Pending. Your style choices include:

Chevrolet and Bowtie Emblem.

Fits GM LS engines (see FactoryPerformanceParts.com for dimensional information).

- Chevy® Orange, raised emblem **141-261**
- Black Crinkle, raised emblem **141-262**
- Cast Gray, raised emblem **141-263**
- Polished, recessed red/black emblem **141-264**
- Chrome, recessed red/black emblem **141-265**

Integrated Ignition Coil Bracket

What to do with those pesky coils in such a confined space? In addition to new LS Slant-Edge valve covers, Specialty has designed an attractive way to lift your coils off your valve cover so you can see the Chevrolet emblem. A unique rail mounting system attaches to the threaded holes on the valve cover, and the individual coils attach to the rail so they can be mounted in multiple positions. All necessary hardware included. See www.FactoryPerformanceParts.com for detailed coil information.

- Coil bracket for LS 1 & 6 style coils **69520**
- Coil bracket for LS 3 & 7 style coils **69521**

Spark Plug Wires

If you decide to use Specialty's Integrated Ignition Coil Bracket to mount your coils, you will need slightly longer spark plug wires. See www.FactoryPerformanceParts.com for detailed spark plug wire information.

Remote Mount Ignition Coil Brackets

COMING SOON!



Production valve cover may vary in appearance.



Slant-Edge Die-Cast Valve Covers: 10 New Looks! (see page 292)



HEI Distributors: Factory-Proven Performance (see page 298)



100% New Chrome Alternators (see page 298)

GM LICENSED PARTS

Your engine is a source of pride. Show it off with accessories designed to complement its style and support its performance!

These parts are manufactured under license for General Motors and GM Performance Parts. They meet strict dimensional and quality standards, ensuring you the highest-quality, best-fitting, top-performing components.

Finish your project your way with dress-up accessories and other licensed components from GM Performance Parts.

Parts without images in this catalog may be viewed online.



Use coupon code **GMPP2011** at checkout for **15% Off** on your first **FactoryPerformanceParts.com** order. One use per customer.

\$10 CASH REBATE COUPON*

To receive your \$10 cash rebate, please send (1) your name and mailing address legibly written (and optional email address in case questions arise), (2) this coupon cut from your 2011 catalog, (3) proof-of-purchase: a copy of your online order for \$50 or more, excluding shipping, shipped to the same name and address as that to which the \$10 should be sent (ordered through the www.factoryperformanceparts.com website, which is also accessible through the www.gmperformanceparts.com website) to: 2011 GMPP Catalog Rebate, Factory Performance Parts, P.O. Box 306, Roseville, MI 48066. More information about this offer can be found under the "GMPP Catalog" tab on the FactoryPerformanceParts.com website.

***NOTE:** Only the parts displayed on pages (290-299) are eligible for the \$10 rebate from Factory Performance Parts.

Ordering Information

The licensed engine dress-up parts displayed on the following pages (290-299) may be purchased online through gmperformanceparts.com (or from factoryperformanceparts.com), as well as from GM Performance Parts Authorized Centers and participating GM dealers. To locate products, find additional product information, or receive technical support, please visit gmperformanceparts.com, click on "Featured Products" and then on "Licensed Products."

ATTENTION GM DEALERS: The following pages of General Motors licensed products (290-299) may be ordered online from the licensee by visiting www.FactoryPerformanceParts.com and clicking on the "Dealer Login" button. These procedures are also referenced in Dealer Bulletin ACC08-035. Crate Engine/Dress-Up Parts Cash Rebate information is described in Dealer Bulletin GMP09-200

SUPER-LIGHT, FABRICATED ALUMINUM VALVE COVERS

Precision-welded fabricated aluminum valve covers are available for street and racing applications (with and without, respectively, breather holes and baffles). The valve covers have recessed Chevrolet and Bowtie logos, billet mounting rails (for maximum leak resistance), and weigh approximately three pounds less than stamped steel die-cast valve covers. Sold in pairs.

A. Chevrolet Small-Block V-8, 1958-1986

- Clear anodized, tall, no baffle (shown, A) 141-800
- Clear anodized, tall, with baffle (not shown) 141-801
- Black anodized, tall, no baffle (not shown) 141-802
- Black anodized, tall, with baffle (not shown) 141-803

B. Chevrolet Big-Block, 1965-Later

- Clear anodized, tall, no baffle (not shown) 141-805
- Black anodized, tall, no baffle (not shown) 141-806
- Black anodized, tall, with baffle (shown, B) 141-807
- Clear anodized, tall, with baffle (not shown) 141-808

DIE-CAST VALVE COVERS

These premium die-cast aluminum valve covers are manufactured to GM specifications and are equipped with internal oil drippers (Small-Block only) and baffles. The valve covers are highlighted with recessed red Bowtie and Chevrolet logos. Sold in pairs.

C. Chevrolet Big-Block, 1965-Later

- Chrome, tall, with baffle (shown, C) 141-140
- Black crinkle, tall, with baffle (not shown) 141-141
- Polished, tall, with baffle (not shown) 141-142

D. Chevrolet Small-Block V-8, 1958-1986

- Polished, tall, with baffle (shown, D) 141-108
- Black crinkle, tall, with baffle (not shown) 141-116
- Chrome, tall, with baffle (not shown) 141-117

LATE-MODEL DIE-CAST VALVE COVERS

Late-model valve covers are the tall, center hold-down-style and come with mounting bolts and appropriate washers. All late-model valve covers come with baffles and grommets. Sold in pairs.

E. Chevrolet Small-Block V-8, 1987-Current

- Polished, with baffle (not shown) 141-130
- Black crinkle, with baffle (not shown) 141-131
- Chrome, with baffle (shown, E) 141-132
- Replacement bolt and washer kit (not shown) 141-133
- Polished, Circle Track, with vent tubes on one cover, no baffle, no Bowtie logo (not shown) 141-139

SLANT-EDGE DIE-CAST VALVE COVERS

These tall, slant-edge die-cast valve covers have a progressive design and a modern look. Offered with raised or recessed Chevrolet and Bowtie logos, plus plain. The valve covers are baffled and sold in pairs. U.S. Pat. D580,954.

F-J

Chevrolet Small-Block V-8, 1958-1986

- Polished, raised logo (not shown) 141-920
- Black crinkle, raised logo (shown, page 291) 141-921
- Chrome, raised logo (shown, F) 141-922
- Metallic gray, recessed logo (not shown) 141-923
- Chevy Orange, raised logo (shown, G and page 291) 141-924
- Cast gray crinkle, raised logo (shown, H) 141-925
- Polished, no logo (shown, I) 141-926
- Polished, recessed red/black logo (not shown) 141-927
- Black crinkle, recessed logo (not shown) 141-928
- Chrome, recessed red/black logo (shown, J) 141-930



A 141-800



B 141-807



C 141-140



D 141-108



E 141-132



F 141-922



G 141-924



H 141-925



I 141-926



J 141-930



141-905 **K**



141-813 **L**



141-103 **M**



141-115 **N**



141-751 **O**



141-361 **P**



141-811 **Q**



141-814 **R**

STAMPED VALVE COVERS

These heavy-gauge stamped steel valve covers are designed to prevent leakage. The high-quality chromed covers feature Chevrolet and Bowtie logos. They are available in both tall and short (production height) designs. Some valve covers have oil baffles for PCV hookups. The valve covers are sold in pairs with necessary grommets, unless otherwise specified.

NOTE: Production height Chevy Small-Block valve covers and valve covers with baffles will not clear most stud girdle applications.

K, M, O, P

Chevrolet Small-Block V-8, 1958–1986

- Chrome, tall, no baffle (not shown) 141-101
- Chrome, short, with baffle (not shown) 141-102
- Chrome, tall, with baffle (shown, M) 141-103
- Metallic gray, tall, with baffle (shown, P) 141-361
- Black crinkle, short, with baffle (not shown) 141-750
- Black crinkle, tall, with baffle (shown, O) 141-751
- Chrome, short, with baffle, black/red logo (not shown) 141-899
- Chrome, tall, with baffle, black/red (shown, K) 141-905

L, N, Q, R

Chevrolet Big-Block V-8, 1965–1996

- Chrome, short, with baffle (not shown) 141-114
- Chrome, tall, with baffle (shown, N) 141-115
- Black crinkle, short, with baffle (not shown) 141-810
- Black crinkle, tall, with baffle (shown, Q) 141-811
- Chrome, short, with baffle, black/red logo (not shown) 141-812
- Chrome, tall, with baffle, black/red (shown, L) 141-813
- Metallic gray, short, with baffle (shown, R) 141-814
- Metallic gray, tall, with baffle (not shown) 141-815

TRANSMISSION OIL PAN

This stock-depth transmission oil pan has a drain plug for easier maintenance. The finned design aids cooling. There is a large GM logo stamped on the pan.

Transmission Oil Pan (not shown)

- Turbo 350 141-250

Personalize your engine with a distinctive component combo in three easy steps:

(1) Select your preferred color theme, choosing from various offerings in classic chrome, chrome with recessed painted logos, black crinkle, high-tech metallic gray, polished, clear anodized; or select the Chevy orange valve covers.

(2) Select your basic materials, choosing from stamped steel, die-cast aluminum, stamped aluminum, fabricated aluminum, composite or graphite fiber.

(3) Consider the importance of functionality, internal and external clearance, weight, mechanical strength, and surface finish characteristics.

...the result will be an appearance that is uniquely yours.



Plating more than four times thicker than some aftermarket parts.

2-PIECE DIE-CAST ALUMINUM VALVE COVERS

Valvetrain maintenance is greatly simplified with 2-piece die-cast aluminum valve covers. The top section has a diagonal cut and a retained gasket for a tight, leak-free seal. The valve covers feature oversized bolts for fast removal. These tall valve covers will clear roller rockers and stud girdles. These valve covers are available in a variety of styles/finishes with and without Bowties and/or Chevrolet logos. Small-Block valve covers fit 1958-1986 engines, and Big-Block fit 1965-1996. The valve covers are sold in pairs and include an Allen wrench and required grommets. U.S. Pat. Nos. 7,343,890, D543,998S

A-B

Chevrolet Small-Block V-8, 1958-1986

- Polished, recessed logo (shown, A)..... 141-910
- Black crinkle, recessed logo (shown, B) 141-911
- Chrome, recessed logo (not shown) 141-912
- Polished, raised logo (not shown) 141-913
- Black crinkle, raised logo (not shown) 141-914
- Polished, no logo (not shown) 141-915
- Replacement gasket kit (2) (not shown) 141-916

NOTE: Will not fit cylinder head 12340034 or similar (with three rectangular raised internal sections near the valve cover mounting surface), unless such sections are milled off.

Chevrolet Big-Block V-8, 1965-1996 (Coming Summer 2011)

- Polished, recessed logo (not shown)..... 141-940
- Black crinkle, recessed logo (not shown) 141-941
- Chrome, recessed logo (not shown) 141-942
- Chevy® Orange, recessed logo (not shown)..... 141-943
- Replacement gasket kit (2) 141-946

LATE-MODEL STAMPED-STEEL VALVE COVERS

These short-style valve covers are the center hold-down design for later Small-Block engines. They have baffles and grommets, but are not supplied with mounting bolts. Sold in pairs.

C-D

Chevrolet Small-Block V-8, 1987-Current

- Chrome, short (shown, D) 141-107
- Black crinkle, short (shown, C) 141-907
- Metallic gray, short (not shown) 141-908

DRESS-UP KITS

These dress-up kits include one pair of tall valve covers, an air cleaner, timing chain cover, breather cap, 8 wing nuts and 8 hold-down clamps.

E-F

Deluxe Dress-Up Kits

- Metallic gray (not shown) 141-360
- Black crinkle (shown, E)..... 141-758
- Chrome, black/red logos (shown, F) 141-900

	141-360	141-758	141-900
Valve Covers	141-361	141-751	141-905
Air Cleaner	141-362	141-752	141-906
Timing Chain Cover	141-363	141-753	141-904
Air Breather Cap	141-365	141-754	141-616
8 Wing Nuts	141-364 x2	141-756 x2	141-902 x2
8 Hold-Down Clamps	141-366 x2	141-757 x2	141-903 x2

G-H

Chevrolet Small-Block V-8, 1958-1986

- Includes 2 short baffled Bowtie valve covers (141-102), plus Bowtie timing chain cover with GM production oil seal installed (141-215), 2 black/red Bowtie 4-wire looms (141-636), 1 Bowtie push-in air breather (141-616), oil dipstick (141-550), timing tab for 8" Balancer (141-202), and 2 grommets (air breather cap and PCV) (shown, G) 141-001
- Includes two short baffled Bowtie valve covers (141-102), plus 8 Bowtie valve cover wing nuts (141-600), 4 valve cover hold-down clamps (141-610), 2 black/red Bowtie 4-wire looms (141-636), 1 Bowtie push-in air breather cap (141-616), oil dipstick (141-550), and 2 grommets (air breather cap and PCV) (shown, H) 141-002



A 141-910



B 141-911



C 141-907



D 141-107



E 141-758



F 141-900



G 141-001



H 141-002



141-302 **I**



141-692 **J**



141-362 **K**



141-752 **L**



141-906 **M**



141-793 **N**



141-307 **O**



141-333 **P**



141-323 **Q**



141-327 **R**

AIR CLEANERS

These steel air cleaners are available in the classic GM style and the newer, high-performance look. They feature the Chevrolet logo and come with maximum flow ACDelco air filter elements* and mounting hardware. The classic air cleaners include die-cast Bowtie center nuts (except P/N 141-906). The air filter bases are recessed for a low profile and maximum hood clearance (a minimum of 3.750- inches from the top of carburetor gasket area to hood underside).

*14" x 3" Filter (A212CW), 10" x2-53/64" Filter (A773)

I, K, L, M, O

14" Steel Air Cleaners

- 14" Classic with Bowtie center nut (shown, I)..... 141-302
- 14" High-performance (shown, O)..... 141-307
- 14" Metallic gray (shown, K)..... 141-362
- 14" Black crinkle (shown, L)..... 141-752
- 14" Chrome, black/red logo (shown, M)..... 141-906

10" Steel Air Cleaners

- 10" Classic with Bowtie center nut (not shown)..... 141-309
- 10" High-performance (not shown)..... 141-315

SUPER-LIGHT 14" AIR CLEANERS

Weight savings can be had by using air cleaners made of aircraft aluminum, carbon or composite fiber. The aluminum air cleaners are available in clear anodized or black anodized finishes. These air cleaners come with a 3" tall ACDelco filter element, all necessary mounting hardware and standard wing nuts.

J, N

14" Super-Light Air Cleaners

- Black anodized aluminum, no logo (not shown)..... 141-690
- Clear anodized aluminum, no logo (not shown)..... 141-691
- Black anodized aluminum, Chevrolet Bowtie logo (shown, J) 141-692
- Clear anodized aluminum, Chevrolet Bowtie logo (not shown) 141-693
- Carbon fiber, silver Bowtie logo (not shown)..... 141-790
- Composite fiber, Bowtie logo (shown, N)..... 141-793

AIR CLEANER CENTER NUTS

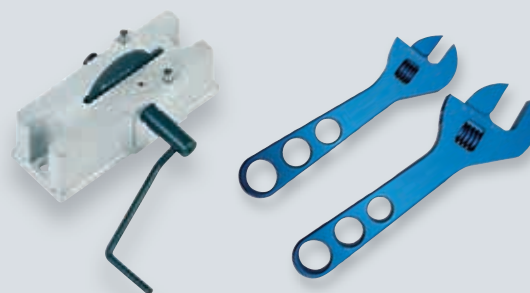
Add some extra flair to your custom air cleaner by topping it with a distinctive GM or Bowtie chrome plated zinc die-cast center nut. The center nuts are available in small and large sizes. They fit both 1/4"-20 and 5/16"-18 studs.

P-R

Large and Small Air Cleaner Center Nuts

- Bowtie, small (not shown)..... 141-322
- Bowtie, large (shown, P)..... 141-333
- Hi-tech Bowtie, small (not shown)..... 141-328
- Hi-tech Bowtie, large (shown, Q)..... 141-323
- Hi-tech GM, small (not shown)..... 141-332
- Hi-tech GM, large (shown, R)..... 141-327

GM Performance Parts Licensed Engine Builder Tools



Available only at FactoryPerformanceParts.com or GM Dealers

NEW VALVE COVER MINI NUTS & WING NUTS

These custom valve cover mini nuts and wing nuts feature a Bowtie logo on the top of each fastener. Separate studs are included for precise gasket positioning. The wing nuts fit Chevrolet Big-Block, Small-Block, and V-6 cylinder heads. Sold 4 per package.

A-E

Valve Cover Mini Nuts

- Chevy® orange (shown, A).....141-601
- Polished aluminum (shown, B).....141-917
- Black crinkle (shown, C).....141-759
- Metallic gray (shown, D).....141-367
- Chrome, with red Bowtie (shown, E).....141-909

F-I

Valve Cover Wing Nuts

- Chrome (shown, F).....141-600
- Metallic gray (shown, G).....141-364
- Black crinkle (shown, H).....141-756
- Chrome, with red Bowtie (shown, I).....141-902

AIR BREATHER CAPS

Air breather caps with raised Bowtie logos are available in a variety of finishes to complement die-cast or stamped valve covers. Use on valve covers with grommets fitting 1.220" holes unless otherwise specified. The breather caps are available in traditional domed-style and push-in, 3"-diameter air-filter-element style.

Push-In, Rectangular

- Chrome (not shown).....141-619

J-L

Push-In, 3" Diameter

- Metallic gray (shown, J).....141-365
- Chrome (shown, K).....141-616
- Black crinkle (shown, L).....141-754

Push-On, 3" Diameter, For Use with Oil Filler Tube, 1.820" Opening

- Chrome (not shown).....141-617

Twist-On, 3" Diameter

- Chrome (not shown).....141-618

These popular push-in filter air breathers, with the raised Bowtie logo stamped prominently in the top, are offered in two styles: with the heat-shield hood and without. 3" diameter. Fits valve covers with 1.220" holes.

M-N

Push-In Filter Air Breathers

- Chrome, with hood (shown, M).....141-621
- Chrome, without hood (shown, N).....141-622

Clamp-On Filter Air Breather, Fits 1-3/8th

- Chrome, with hood (not shown).....141-625

WATER NECKS

These Chevrolet water necks utilize neoprene O-ring gaskets instead of regular gaskets – eliminating leakage. Supplied with chrome bolts.

- V-8, 1955-1965, Chevy II V-8 1965, Corvette 1956-1963 (not shown).....141-500
- Chevrolet, Camaro, and Chevelle V-8s, 1966-1975 (not shown).....141-501

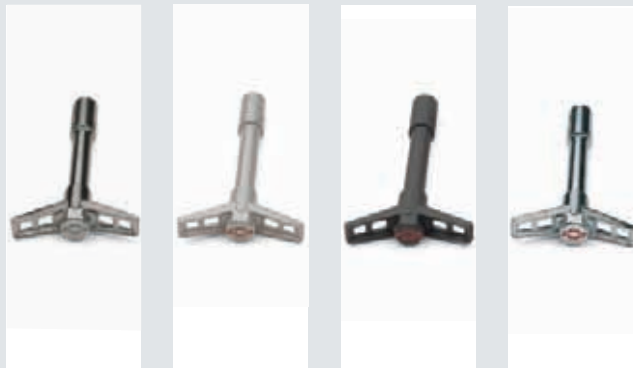
MASTER CYLINDER COVERS

These GM dual line master cylinder covers are offered for the most popular applications. Supplied with clips and a precisely positioned GM logo. PDB = Power Disk Brakes

- Single clip, 5"x 2-3/8", PDB (not shown).....141-225
- Double clip, 5-3/4"x 3", PDB (not shown).....141-226
- Single clip, 5-5/8"x 3", PDB or manual (not shown).....141-227



A 141-601 **B** 141-917 **C** 141-759 **D** 141-367 **E** 141-909



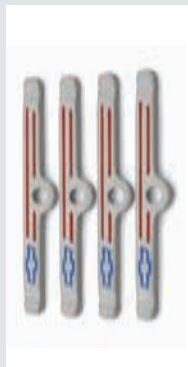
F 141-600 **G** 141-364 **H** 141-756 **I** 141-902



J 141-365 **K** 141-616 **L** 141-754



M 141-621 **N** 141-622



141-366 **O**



141-757 **P**



141-903 **Q**



141-363 **R**



141-753 **S**



141-904 **T**



141-215 **U**



141-216 **V**



141-217 **W**



141-730 **X**

VALVE COVER HOLD-DOWN CLAMPS

Valve cover hold-down clamps distribute the load over a wider area to minimize valve cover distortion and possible leakage. The clamps feature Bowtie logos and fit stamped valve covers for Chevrolet Small-Block V-8 and V-6/90-degree engines through 1986. (4 clamps per package.)

O-Q

Hold-Down Clamps

- Chrome, no logo (not shown) 141-610
- Metallic gray (shown, O) 141-366
- Black crinkle (shown, P) 141-757
- Chrome, red Bowtie (shown, Q) 141-903

TIMING CHAIN COVERS

Add a distinctive look to the front of any Chevrolet Small-Block or Big-Block engine with a custom timing cover that's accented with Chevrolet and Bowtie logos. These stamped-steel covers are engineered to GM specifications and come with a GM production oil seal pre-installed. The covers use bolt-on timing pointers.

NOTE: Replacement oil seals: S/B GM 10111769, B/B GM 3860095.

R-U

Chevrolet Small-Block V-8 1969-1991 and V-6/90°

- Chrome (shown, U) 141-215
- Metallic gray (shown, R) 141-363
- Black crinkle (shown, S) 141-753
- Chrome, black/red logo (shown, T) 141-904

V. Chevrolet Big-Block 1965-1990

- Chrome (shown, V) 141-216

Striking die-cast timing covers, supplied with separate GM production oil seal. Bowtie logo directly cast into the upper surface.

W. Die-Cast Aluminum, Chevrolet Small-Block V-8 1965-1990

- Polished (shown, W) 141-217
- Chrome (not shown) 141-218

HARMONIC BALANCER COVERS

Enhanced looks and engine timing accuracy are benefits of installing a custom aluminum harmonic balancer cover. More than just a dress-up item, the precision-degreed Small-Block and Big-Block covers are mounted directly through the center hub, which eliminates any timing inaccuracies caused by outer inertia ring slippage. The balancer covers are marked with a Bowtie logo, Top Dead Center and proper timing degrees. They are available in black and chrome finishes. U.S. Patent 5,675,078

Chevrolet Small-Block, 6-3/4"

- Black (not shown) 141-727
- Chrome (not shown) 141-728

Chevrolet Small-Block, 8"

- Black (not shown) 141-729
- Chrome (not shown) 141-730

X. Chevrolet Big-Block

- Black (shown, X) 141-730
- Chrome (not shown) 141-729

CHROME ALTERNATORS

These chrome (with red Bowtie logo) alternators are totally new with no rebuilt components, so they perform as well as they look. The quality is assured with generous over-spec amperage and an individual Quality Assurance graph that documents operating performance. The alternators come with a machined pulley.

A. 100% New Chrome Alternators

- 1973-1986 internal regulator (not shown)..... 141-656
- 100 amp, 1-wire (shown, A)..... 141-657
- 60 amp, 1-wire (not shown)..... 141-658
- 80 amp, 1-wire (not shown)..... 141-659
- 120 amp, 1-wire (not shown)..... 141-660

ALTERNATOR BRACKETS

Alternator Brackets

- Top bracket bolts to manifold (not shown) 141-402
- Top bracket bolts to neck (not Corvette) (not shown)..... 141-403

HEI DISTRIBUTORS

These high quality, 100% new, and dependable HEI distributors set the standard in ignition, loaded with premium components like the original GM-meltonized distributor gear and sintered steel weights to optimize GM engine performance. Includes an adjustable vacuum advance for fine-tuning the rate and amount of advance that will result in increased power and eliminate harmful detonation.

B. Chevrolet Small- and Big-Block, 1955-1982

- Yellow cap, with coil (shown, page 291)..... 141-681
- Black cap, with coil (shown, page 291) 141-682
- Red cap, with coil (shown, B)..... 141-683

BOWTIE HIGH PERFORMANCE ELECTRIC FANS

Auxiliary electric fans can improve engine performance and increase gas mileage, as well as prevent overheating in congested traffic. The fans are available in 10", 12", 14", heavy-duty 15" with thermostat, and 16" sizes to fit most popular cars and trucks. Their ultra-thin design is great for cramped locations. The 15" fan has an adjustable 180-240° F thermostat, and pulls 2,800 cfm, bolting to the radiator supports with supplied sturdy brackets. Installation is easy with basic hand tools. The fans feature a red Bowtie logo.

C-D

Bowtie High Performance Electric Fans

- 10" fan (not shown)..... 141-641
- 12" fan (not shown)..... 141-642
- 14" fan (shown, C) 141-644
- 15" fan with adjustable thermostat (shown, D) 141-647
- 16" fan (not shown)..... 141-646

ELECTRIC WATER PUMPS

Electric water pumps help race and high-performance street engines save weight and eliminate high-rpm impeller drag. The lightweight, but durable, die-cast aluminum pumps are epoxy-powder-coated in three colors (plus chrome and polished finishes) for corrosion resistance. The flow rate is more than 35 gallons per minute. The units are decorated with a red Bowtie logo. A stepped fitting (1" pipe to 1.750" hose) and weather-tight connector are included.

E-G

Electric Water Pumps

	Big-Block	Small-Block
Polished	141-670 (shown, E)	141-654
Chrome	141-671	141-650
Red	141-672	141-652
Blue	141-673 (shown, F)	141-653
Black	141-674	141-651 (shown, G)

HEAVY DUTY HIGH-TORQUE MINI STARTER

High-torque, gear-reduction design. 100% New, not rebuilt. Offset design results in more clearance between the oil pan and the starter, and can be rotated for additional chassis clearance. 15-to-1 compression for maximum cranking!

H. High-Torque Mini Starter

- Heavy-duty, 2.0 KW starter (shown, H)..... 141-684



A 141-657



B 141-683



C 141-644



D 141-647



E 141-670



F 141-673



G 141-651



H 141-684



141-232 **I**



141-233 **J**



141-630 **K**



141-210 **L**



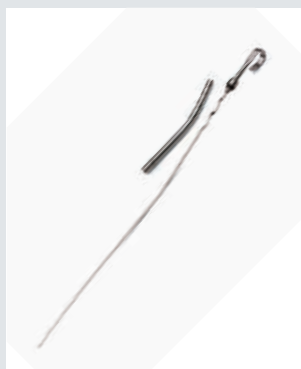
141-638 **M**



141-636 **N**



141-200 **O**



141-550 **P**

BOWTIE LOGO FREEZE PLUG INSERTS

Make your engine block Bowtie all the way with decorative machined billet aluminum Bowtie logo freeze plug inserts. These are NOT freeze plug replacements. They fit all Chevy Small-Block engines except the LS-Series. Two per package.

I-J

Freeze Plug Inserts

- Black, raised logo (shown, I)..... 141-232
- Red, recessed logo (shown, J)..... 141-233

PUSH-IN OIL FILLER CAP

A raised, embossed Bowtie logo adorns the top of this push-in filler cap that fits valve covers with 1.220" holes.

K. Oil Filler Cap

- Chrome (shown, K)..... 141-630

TWIST-ON OIL FILLER CAP

A large, white-on-blue epoxy-coated GM logo highlights this large, twist-on oil filler cap. It fits Chevrolet-style holes and includes a non-asbestos gasket.

Twist-On Oil Filler Cap

- Chrome with GM logo (not shown)..... 141-631

FUEL PUMP BLOCK-OFF PLATES

These Chevrolet V-8 fuel pump block-off plates feature a stamped Bowtie logo and come with a special non-asbestos gasket

L. Fuel Pump Block-Off Plates

- Small-Block, chrome (shown, L)..... 141-210
- Big-Block, chrome (not shown)..... 141-211

LINEAR WIRE LOOMS

Messy spark plug wires can detract from an otherwise sharp engine, but those unruly wires can easily be tamed with Bowtie logo linear wire looms. The looms attach to the valve cover bolts and hold the wires in a neat parallel arrangement. A patented nylon wedge allows the wire holders to be opened and closed individually. One pair per package.

M. Linear Wire Looms

- Small-Block V-8, 1959-1986 (shown, M)..... 141-638
- Big-Block V-8, 1965-1991 (not shown)..... 141-639

IGNITION WIRE LOOMS

These ignition wire looms feature black nylon separators with Bowtie and Chevrolet logos in red. They're mounted on chrome stems. They fit Small-Blocks from 1959-1986 and Big-Blocks from 1965-1991. Two per package.

N. Ignition Wire Looms

- Wire looms (shown, N)..... 141-636

TIMING CHAIN POINTERS

Chrome, bolt-on timing pointers are available for 6.750" or 7" balancers and 8" balancers on Small-Block Chevrolet engines from 1969-1990 and Big-Blocks from 1965-1991.

O. Chevrolet Small-Block V-8 or V-6/90°, 1969-1990

- 6-3/4" or 7" balancer (shown, O)..... 141-200
- 8" balancer (not shown)..... 141-202

Chevrolet Big-Block, 1965-1991

- 8" balancer (not shown)..... 141-201

OIL DIPSTICK KITS

Chrome dipstick kits are available for a large variety of Chevrolet Small-Block and Big-Block engines. The kits include the dipstick tube and a hooked handle dipstick that has the Bowtie logo stamped near the fill indicator mark.

P. Chevrolet Oil Dipstick Kits

- Small-Block V-8, through 1977 (shown, P)..... 141-550
- Small-Block V-8, 1978-1981 (not shown)..... 141-551
- Big-Block V-8, 1965-1991 (not shown)..... 141-553

BOWTIE LOGO GAUGES

Now that you've built your dream high-performance Chevrolet engine, let GM Performance Parts keep tabs on all vital functions with handsome Chevrolet logo gauges. A wide variety of gauges and styles are offered by Autometer products with Chevrolet, Bowtie, and GM Performance Parts logos. These gauges are designed to withstand the rigors of racing or high-performance street use. Mounting hardware is included unless otherwise specified.

NOTE: ATTENTION GM DEALERS: The following pages are General Motors' LICENSED PRODUCTS and must be ordered from the licensee. For detailed instructions, see Bulletin number ACC08-035 or visit the gmpartsparts.com website, click on "Dealer Info," and then click on "Dealer Sites."

BOWTIE LOGO GAUGES

3600-00406 Series

- Red Bowtie logo
- White LED Through-the-dial lighting
- Black dial, white numbers



Speedometer
3688-00406

Tachometer
3699-00406



Fuel Level
3613-00406

Voltmeter
3692-00406

Water Temperature
3655-00406

Oil Pressure
3653-00406

3613-00406
2-1/16" Fuel Level, 0-90 Ohms GM, Short Sweep Electrical

3627-00406
2-1/16" Oil Pressure, 0-100 PSI, Short Sweep Electrical

3637-00406
2-1/16" Water Temperature, 100-250° F, Short Sweep Electrical

3644-00406
2-1/16" Pyrometer Kit, 0-1,600° F, Full Sweep Electrical

3645-00406
2-1/16" Pyrometer Kit, 0-2,000° F, Full Sweep Electrical

3649-00406
2-1/16" Transmission Temperature, 100-250° F, Short Sweep Electrical

3653-00406
2-1/16" Oil Pressure, 0-100 PSI, Full Sweep Electrical

3655-00406
2-1/16" Water Temperature, 100-260° F, Full Sweep Electrical

3657-00406
2-1/16" Transmission Temperature, 100-260° F, Full Sweep Electrical

3659-00406
2-1/16" Boost, Vacuum 30 In Hg/30 psi, Full Sweep Electric

3674-00406
2-1/16" Nitrous, 0-1,600 psi, Full Sweep Electrical

3675-00406
2-1/16" Air/Fuel Ratio, Full Sweep Electrical

3688-00406
3-3/8" Electrical Speedometer, 160 mph Programmable

3690-00406
3-3/8" Tachometer, 10,000 rpm with Shift Light
• 4-, 6-, and 8-cylinder compatible

3692-00406
2-1/16" Voltmeter, 8-18 Volt, Short Sweep Electrical

3697-00406
3-3/8" Tachometer, 10,000 rpm
• 4-, 6-, and 8-cylinder compatible
• In-dash mount

3699-00406
5" Tachometer, 10,000 rpm with Shift Light
• 4-, 6-, and 8-cylinder compatible
• In-dash or pedestal mount

3603-00406
2-1/16" Boost, Vacuum 30 in Hg/30 psi, Mechanical

3604-00406
2-1/16" Boost, 0-35 psi, Mechanical

3605-00406
2-1/16" Boost, 0-60 psi, Mechanical

3607-00406
2-1/16" Boost, Vacuum 30 in Hg/20 psi, Mechanical

3621-00406
2-1/16" Oil Pressure, 0-100 psi, Mechanical

3632-00406
2-1/16" Water Temperature, 120-240° F, Mechanical

3663-00406
2-1/16" Fuel Pressure, 0-100 psi, Full Sweep Electrical



Speedometer - 5889-00406



Water Temperature - 5832-00406



Tachometer - 5780-00406



Fuel Level - 5814-00406



Water Temperature - 5837-00406



Oil Pressure - 5827-00406



Nitrous - 5828-00406

BOWTIE LOGO GAUGES

5700/5800-00406 Series

- Red Bowtie logo
- Perimeter lighting
- White dial, black numbers

5780-00406

3-3/4" Tachometer, 8,000 rpm

- 4-, 6-, and 8-cylinder compatible
- In-dash or pedestal mount

5795-00406

5" Tachometer, 10,000 rpm with Memory, Standard Ignition (not shown)

- 4-, 6-, and 8-cylinder compatible
- In-dash or pedestal mount

5814-00406

2-5/8" Fuel Level, Short Sweep Electrical

- 0 Ohms empty, 90 Ohms full

5827-00406

2-5/8" Oil Pressure, 0-100 psi, Short Sweep Electrical

5837-00406

2-5/8" Water Temperature, 100-250° F, Short Sweep Electrical

5889-00406

5" Electronic Programmable Speedometer, 160 mph

5812-00406

2-5/8" Fuel Pressure, 0-100 psi, Mechanical (not shown)

5813-00406

2-5/8" Fuel Pressure, 0-15 psi with Isolator, Mechanical (not shown)

5821-00406

2-5/8" Oil Pressure, 0-100 psi, Mechanical (not shown)

5828-00406

2-5/8" Nitrous, 0-2000 psi, Mechanical

5832-00406

2-5/8" Water Temperature, 120-240° F, Mechanical

VINTAGE BOWTIE LOGO GAUGES

A. 1300-00408

5-Piece Kit Box with Mechanical Speedometer

- Vintage logo
- White dial, black logo
- Perimeter lighting
- All 2" gauges feature chrome-embossed Bowtie bezel
- Orange pointer
- Includes speedometer, oil pressure, voltmeter, water temperature, fuel level gauges and all required sensors, sending units and mounting hardware

B. 1302-00408

5-Piece Kit Box with Electrical Speedometer

- Vintage logo
- White dial, black logo
- Perimeter lighting
- Orange pointer
- Includes speedometer, oil pressure, voltmeter, water temperature, fuel level gauges and all required sensors, sending units and mounting hardware

C. 1303-00408

5" Quad Gauge and Speedometer

- Vintage logo
- White dial, black logo
- Perimeter lighting
- Orange pointer
- Includes speedometer, oil pressure, voltmeter, water temperature, fuel level gauges and all required sensors and sending units

D. 1398-00408

3-1/8" Tachometer, 7,000 rpm

- Vintage logo
- White dial, black logo
- Perimeter lighting
- Orange pointer
- 4-, 6-, and 8-cylinder compatible



A 5-Piece Kit Box with Mechanical Speedometer



B 5-Piece Kit Box with Electrical Speedometer



C 5" Quad Gauge and Speedometer



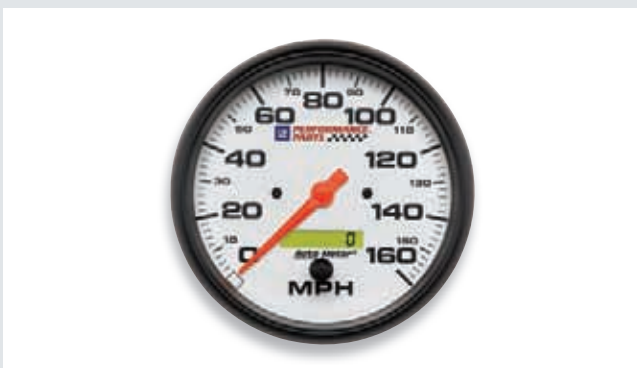
D 3-1/8" Tachometer, 7000 rpm



Example of 2-1/16" Chrome-Embossed Bowtie Bezel



Tachometer - 5899-00407



Speedometer - 5889-00407



Water Temperature - 5837-00407



Oil Pressure - 5827-00407



Volts - 5891-00407



Nitrous - 5828-00407

GM PERFORMANCE PARTS LOGO GAUGES

5700/5800-00407 Series

- GM Performance Parts logo
- Perimeter lighting
- White dial, black numbers

5780-00407

3-3/4" Tachometer, 8,000 rpm (not shown)

- 4-, 6-, and 8-cylinder compatible

5795-00407

5" Electrical Tachometer, 10,000 rpm with Memory, Standard Ignition (not shown)

- 4-, 6-, and 8-cylinder compatible
- In-dash or pedestal mount

5827-00407

2-5/8" Oil Pressure, 0-100 psi, Short Sweep Electrical

5837-00407

2-5/8" Water Temperature, 100-250° F, Short Sweep Electrical

5891-00407

2-5/8" Voltmeter, 8-18 Volts

5899-00407

5" Tachometer, 10,000 rpm with Shift Light

- 6- and 8-cylinder compatible
- In-dash or pedestal mount

5898-00407

5" Tachometer, 10,000 rpm In-Dash (not shown)

- 4-, 6-, and 8-cylinder compatible

5814-00407

2-5/8" Fuel Level (not shown)

- 0 Ohms empty, 90 Ohms full

5889-00407

5" Electrical, Programmable Speedometer, 160 mph

5812-00407

2-5/8" Fuel Pressure, 0-100 psi, Mechanical (not shown)

5813-00407

2-5/8" Fuel Pressure, 0-15 psi with Isolator, Mechanical (not shown)

5821-00407

2-5/8" Oil Pressure, 0-100 psi, Mechanical (not shown)

5828-00407

2-5/8" Nitrous, 0-2,000 psi, Mechanical

5832-00407

2-5/8" Water Temperature, 120-240° F, Mechanical (not shown)



PERFORMANCE PARTS

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Do you need merchandise for promotions and giveaways?



LSX Fender Cover & PPGM Fender Cover

Strong PVC product reinforced with nylon mesh. Impervious to motor oil, coolant, lacquer thinner, brake fluid, etc. Will not harm your paint. Non-slip material will not slide off slick surfaces. Soft and cushioned for protection. Tools will not slip off fender cover. Completely washable. 22" x 34" standard size. Performance Parts logo only.

PPGM2209 LSX, PPGM00701

\$27.00 Each

Performance Parts Logo T-Shirt

100% preshrunk cotton, double-needle stitching throughout, left chest imprint & full back imprint. Black only. Sizes XS-3XL.



PP-22410

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\$16.95 Each (2XL-3XL)

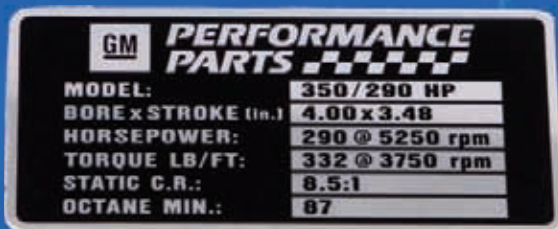


Project X T-Shirt

100% cotton. Project X Chevrolet, logo and engine full front. Black. S-XXL. Limited quantities available.

PP-22408

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Black and Silver aluminum - assorted models

- PPGM2216 - 350/290 HP, □ PPGM2218 - ZZ4, □ PPGM2219 - Ram Jet 350,
- PPGM2222 - ZZ383, □ PPGM2227 - LS364/440, □ PPGM2229 - LS7, □ PPGM2230 - 454 HO, □ PPGM2234 - Ram Jet 502,
- PPGM2235 - ZZ572/620, □ PPGM2236 - LS3, □ PPGM2237 - ZZ427, □ PPGM2238 - LS376/480, □ PPGM2239 - 350 HO,
- PPGM2240 - LS2, □ PPGM2241 - ZZ502, □ PPGM2242 - LS376/515, □ PPGM2243 - ZZ454

\$19.99 Each



Aluminum License Plate

GM Performance Parts aluminum license plate, 4-hole.

PPGM2211

\$6.00 Each

To order, please fax to: (888) 821-4362 Attention: GM Performance Parts ... or call (888) 821-4646

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Men's Extreme Sport

60% combed cotton/40% polyester pique, preshrunk. 2-button, jacquard collar with checker trim, raglan sleeve. Molten Red with Black and White piping. Performance Parts logo only. S-4X.

PP18500

\$20.18 Each

\$22.05 Each (2XL)

\$23.18 Each (3XL)

\$27.68 Each (4XL)



All Season Athletic Pull-Over

Vansport 100% polyester moisture management knit body, UV protection, stand-up collar with zip neck, tagless label, set-in sleeves, right-side zip pocket. Performance Parts logo only. S-3XL.

PP39900

\$38.90 Each

\$42.23 Each (2XL-3XL)



Checker Plate Cap

Structured 6-panel low profile. Pre-curved bill with checker plate. Fabric covered short touch strap. Black only. Performance Parts embroidered logo on front.

PP57A40

\$6.98 Each

Stainless Super Sip Bottle

21 oz. easy grip bottle with ergonomic design and a clear flip-top lid. Red with GM Performance Parts logo only.

PP92A25

\$9.32 Each



Cooler Bag

Recycled polypropylene, foam insulated with heat sealed water-resistant PEVA lining, main zippered compartment, front open pocket, carry handle. Blue. Performance Parts logo only. 7-5/8" w x 5-7/8" h x 6" d.

PP92A26

\$7.95 Each



Action Duffel Bag

Black with Gray accents. Zippered main compartment. Side zippered shoe compartment. Durable button feet. Side mesh pocket. Carry handle and adjustable shoulder strap. Performance Parts logo only. 10.5" h x 19" w with a 9.5" gusset.

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GM knows it's the little things that count with a restoration. With countless resources for restoration components, assurance that you're getting the most authentic and best-fitting parts comes when you buy officially licensed GM Restoration Parts. They're made by

manufacturers who build to GM's specifications and label them accordingly. Many even use original tooling for unparalleled accuracy in look, feel and performance.

You can find licensed GM Restoration Parts for everything from the grille badge for a 1969 Camaro to the body shell itself for that Camaro. That's right – an entire classic Camaro body!

Before purchasing any reproduction parts for your valuable project, make sure the manufacturer is licensed by GM Restoration Parts. And check out gmrestorationparts.com for a comprehensive list of parts you can purchase online.

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Axion Power Battery Mfg., Inc.	(724) 654-9300		Lone Star Caliper Company	903-873-8400	www.lonestarcaliper.com
BELTS AND HOSES			Long Island Corvette Supply, Inc.	631-225-5030	www.livorvette.com
Ground Up Restorations, Inc.	203-235-1200	www.ss396.com	Melrose T-Top International	815-758-2783	www.melrosetop.com
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BODY PARTS			Vette Masters inc.	757-575-8715	
* Dynacorn International, Inc.	805-486-2612	www.dynacorn.com	Auto Accessories of America	(717) 667-3004	
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Auto Metal Direct	866-591-8309		ECS Automotive Concepts, LLC	636-207-7767	www.ecsautomotive.com
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Autocraft Investments, Inc., dba (NPD)	352-378-2473	www.nationalparts.com	HARD / MECHANICAL PARTS		
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- 1967, 1968 and 1969 Firebird® Coupes
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- 1970 Chevelle® Coupes



Part# TR47PU



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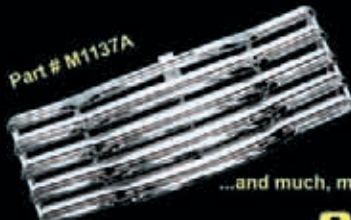
Canada
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1957.....FBH-1410

Chevelle

1964.....FBH-908
1965-1967.....FBH-1309
1968.....FBH-1510
1969 - 1972.....FBH-708

Nova

1963-1965.....FBH-908
1966-1967.....FBH-1309
1968-1979.....FBH-808

Camaro/Firebird

1967-1969.....FBH-1309
1970-1981.....FBH-407

GTO

1964-1967.....FBH-908

Impala

1963-1964.....FBH-908
1965-1967.....FBH-1309
1968.....FBH-808
1970.....FBH-708

Trunk Hinges

Bel Air/210/150

1955-1956 Post Models.....FBTHG-55POST
1957 No Post Models.....FBTHG-57NOPOST

Camaro/Firebird

1967-1969.....FBTHG-69CAM

Chevelle

1964-1965FBTHG-64CHVL
1966-1967FBTHG-66CHVL
1968-1972 Hard Top Models.....FBTHG-70CHVL
1968-1972 Convertible Models.....FBTHG-70CHVL-CV

Nova

1966-1967FBTHG-66NOVA
1968-1972FBTHG-68NOVA

Taillights

C10 Pickup

1967-1972.....FBTL-6772C10

Chevelle

1970.....FBTL-70CHVL

Firebird

1967-1968.....FTBL-67FIRE

Nova

1966-1967.....FTBL-66NOVA
1968-1972.....FTBL-70NOVA

Camaro

1967.....FBTL-67CAM
1968.....FBTL-68CAM
1969 SS Models
(3d version).....FBTL-69CAM-SS
1969 RS Models
(3d version).....FBTL-69CAM-RS
1969 SS Models
(flush version).....FBTLF-69CAM-SS
1969 RS Models
(3d version).....FBTLF-69CAM-RS
1969 Feather Design
(flush version).....FBTLF-69CAM-FS
1970-1973.....FBTL-70CAM



Reverse Lights



Door Jamb Vents



Marker Lights



Door Strikers



Hood Latch Assemblies

Camaro/Firebird

1967-1981 (assembly).....FBHLA-CAM68
 1967-1981 (pin, collar and spring only).....FBHPC-CAM

Chevelle

1966.....FBHLA-66CHVL
 1967.....FBHLA-67CHVL
 1968-1969.....FBHLA-CAM68
 1970-1972.....FBHLA-70CHVL

Impala

1968-1970 (pin only).....FBHP-CAM68
 1967-1970 (spring only).....FBHS



Fender Braces

Camaro/Firebird

1967-1969 (small block design).....FBB-69C-SB
 1967-1969 (big block design).....FBB-69C-BB
 1970-1981 (Camaro only).....FBB-70C



Driving Lights

Camaro

1969 (Halogen).....FBDL-69CAM
 1969 (L.E.D).....FBIL-69CAM



Shown with optional products and wrapped in leather

Door Panels

Camaro

1967-1969 (four piece).....FRDP-69CAM-KIT

Chevelle

1968-1972 (hard top).....FRDP-70CHVL-KIT



Door Handles (exterior)

Camaro/Firebird

1967-1969.....FBDH-COWEN3

Chevelle

1964-1967.....FBDH-COWEN3

Nova

1968-1976.....FBDH-COWEN3

All Fesler GM licensed products are:

- Made in the USA
- 6061 Aluminum
- Weatherproof bearings
- Available in natural, polished, brushed, grey anodized, black anodized, clear anodized and chrome
- Design and manufactured in house



Hood Adjusters



Door Jamb Vents



Engine Mounts



Body Mounts

AUTHORIZED CENTERS

Company Name	Contact Name	Address	City	ST	Zip	Phone	Fax	Internet Site	Email Address
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USA

Alabama

Capitol Chevrolet	Jody Elmore	711 Eastern Blvd	Montgomery	AL	36117	334.272.9595	334.270.9162	capitolchevrolet.com	jody.elmore@capitolchevrolet.com
Ivan Leonard Chevrolet, Inc.	John Moore	1620 Montgomery Hwy	Hoover	AL	35216	205.823.5428	205.979.3048	ivanleonardchevy.com	ilparts@yahoo.com
Landers McLarty Chevrolet	Jack Straley	4930 University Dr.	Huntsville	AL	35816	256-217-4387		landersmclartychevrolet.com	

Arkansas

Smith Chevrolet-Cadillac Co.	Brad Scoggins	1215 Hwy 71 S	Ft. Smith	AR	72901	479.646.1581	476.648.0439	smithchevyland.com	brad-jordan-123@hotmail.com
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Arizona

Chapman Chevrolet, L.L.C.	Chuck Owens	1717 E Baseline	Tempe	AZ	85283	480.752.1641	480.730.6745	chapmanchevy.com	chuckowen@chapmanchoice.com
Courtesy Chevrolet	Phil Graziano	1233 E Camelback Rd	Phoenix	AZ	85014	602.604.3003	602.604.3099	courtesychev.com	pgraziano@courtesychev.com
Midway Chevrolet Company	Rod Martin	2323 W Bell Rd	Phoenix	AZ	85023	602-760-3357	602.387.7526	parts4chevys.com	rmartin@vtaig.com
Van Chevrolet	Chuck Rudgiero	8585 E Frank Lloyd Wright Blvd	Scottsdale	AZ	85260	800.477.9233	480.905.1659	gmpartscenter.net	crudgiero@vtaig.com
Watson Chevrolet, Inc.	Bob Valencia	625 W Auto Mall Dr	Tuscon	AZ	85705	520.292.1500	520.292.3252	watsonchevrolet.com	bobv@watsonchevrolet.com
Brown & Brown Chevrolet, Inc.	David Priest	145 E Main St	Mesa	AZ	85201	480.827.3376	480.827.2171	shopchevy.com	priestd@autonation.com
Sands Motor Company	Robert Wellman	5418 NW Grand	Glendale	AZ	85301	623.931.9349	623.842.5205	sandschevrolet.com	parts@sandschevrolet.com

California

Bonander Pontiac-Buick-GMC	Pete McCarthy	231 S Center St	Turlock	CA	95380	209.632.8871	209.633.4749	bonanderauto.com	zz4pete@prodigy.net
City Chevrolet	Dan Perry	2111 Morena Blvd	San Diego	CA	92110	619.276.6900	619.276.2414	city-chevrolet.com	dperry@city-chevrolet.com
Connell Chevrolet	Dave Hardy	2828 Harbor Blvd	Costa Mesa	CA	92626	714.546.9400	714.979.3578	connellchevrolet.com	weargm@aol.com
Crest Chevrolet	Tom Hadaway	909 W 21st Street	San Bernardino	CA	92405	909.883.8833	909.882.4661	crestchevrolet.net	donyoung@crestfleet.com
Diamond Hills Auto Group, Inc.	Brian Yates	4545 W Ramsey	Banning	CA	92220	951.849.7861	951.849.0970	diamondhillsautogroup.com	byates@yahoo.com
Courtesy Chevrolet Center	Gerry LeFebvre	750 Camino Del Rio North	San Diego	CA	92108	619.297.3961	619.297.4023	courtesysandiego.com	courtesychevds@aol.com
Crown Chevrolet	Roy Wold	4200 John Monego Court	Dublin	CA	94568	925.828.6500	925.829.2941	dublinchevrolet.com	parts@crowndublin.com
F. H. Dailey Motor Co.	Peter Chin	800 Davis St	San Leandro	CA	94577	510.351.5800	510.614.9220	fddailey.com	fddailey2002@yahoo.com
Chevrolet Of Irvine	Bob Mortensen	21 Auto Center Drive	Irvine	CA	92618	949.457.2020	949.457.2022	foothillranchperformance.com	bob@frcchevy.com
Guaranty Chevrolet Motors, Inc	Carl Lutes	711 E 17th Street	Santa Ana	CA	92701	714.560.4277	714.543.3387	guarantyperformance.com	clutes@guarantychevrolet.com
Mark Christopher Auto Center	Doug Reeves	2131 Convention Center Way	Ontario	CA	91764	909.390.2900	909.390.4677	markchristopher.com	dreeves@markchristopher.com
Martin Cadillac-Pontiac	Gary Carter	12101 Olympic Blvd	Los Angeles	CA	90064	310.820.3611	310.207.8429	martincad.com	garyc@martincad.com
Motor City Buick Pontiac GMC	Ray Herman	3101 Pacheco Rd	Bakersfield	CA	93313	661.836.9999	661.836.2342	motorcitywest.com	rherman@motorcitywest.com
Paradise Chevrolet Cadillac	Ruben Aranda	27360 Ynez Road	Temecula	CA	92591	951.699.2699	951.676.4789	paradiseautos.com	partsdept@paradiseautos.com
Rally Auto Group	Brenden Herem	39012 Carriage Way	Palmdale	CA	93551	800.585.0551	661.266.1881	4rally.com	bherem@4rally.com
Rydell Automotive Group	Dan Colwell	18600 Devonshire	Northridge	CA	91324	818.832.1625	818.832.1635	rydells.com	dcolwell@rydells.com
Taylor Motors, Inc.	Cliff Mayne	2525 Churn Creek Road	Redding	CA	96002	530.222.1200	530.722.1089	taylormotorsredding.com	cliffmayne@sbcglobal.net
Victory Chevrolet Cadillac	Adrian Smith	1360 Auto Center Dr	Petaluma	CA	94952	707.765.3068	707.762.7606	petalumachevy.com	jethydro@comcast.net
Fremont Chevrolet	Ray Lloyd	5850 Cushing Pkwy.	Fremont	CA	94538	888-340-1421	510.445.8700	chevroletoffremont.com	rayl@cacargroup.com

Colorado

Burt Chevrolet, Inc.	Ken Casey Jr.	5200 S Broadway	Englewood	CO	80113	800.345.5744	313.789.6737	burt.com	kcasey@burt.com
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Delaware

Nucar Chevrolet	Bill Grasso	174 N Dupont Hwy	New Castle	DE	19720	302.322.6606	302.322.7135	nucar.com	bgrasso@nucar.com
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Florida

James-Rivard Pontiac-GMC, Inc.	Larry Folino	9740 Adamo Dr	Tampa	FL	33619	877.909.6565	813.620.6589	jrgmparts.com	parts@jrgmparts.com
Nimnicht Chevrolet Company	Dwight Bjork	1550 Cassat Ave	Jacksonville	FL	32210	904.388.0751	904.389.7779	nimnichtchevy.com	dbjork@nimnichtauto.com
Maroone Chevrolet-Miami	Jason Armas	4181 S.W. 8 Street	Miami	FL	33134	800-322-3389	305-448-2670	maroonechevroletofmiami.com	armasj@autonation.com
Victory Layne Chevrolet	Dave Hack	3980 Fowler	Fort Myers	FL	33901	800.226.7806	239.936.9218	victorylaynechevrolet.com	davehack@victorylaynechevrolet.com
Autoway Chevrolet	Jim Kubisiak	15005 US Hwy 19 North	Clearwater	FL	33764	800.888.2292	727.539.0756	autoway.com	kubisiakj@autonation.com
Stingray Chevrolet	Bill Annable	2002 N. Frontage Rd.	Plant City	FL	33563	813-359-5000		stingraychevrolet.com	
Jon Hall Chevrolet, Inc.	Scott Bowser	551 N Nova Road	Daytona Beach	FL	32114	386.236.4557	386.236.4754	jonhallchevrolet.com	parts@jonhall.com

Georgia

Day's Chevrolet, Inc.	Jeff Tate	3693 North Cobb Pkwy	Acworth	GA	30101	770.975.1802	770.974.2683	dayschevrolet.com	jtate@dayschevrolet.com
John Thornton Chevrolet	Gary Ellis	1971 Thornton Rd	Lithia Springs	GA	30122	770.941.8550	770.732.6433	johnthornton.com	gellis@johnthornton.com
Nash Chevrolet Company	George Pittman	630 Scenic Highway	Lawrenceville	GA	30045	770.963.9266	770.822.6671	nashchevy.com	gkpittman@yahoo.com
Nesmith Chev-Bu-Pon-GMC, Inc.	Tim Bland	7334 Hwy 280 West	Claxton	GA	30417	877.497.3624	912.739.7000	nesmithnow.com	tim@nesmithnow.com
Legacy Chevrolet, Cadillac, Saab	Johnny Williams	3615 N. Manchester Express Way	Columbus	GA	31909	706-405-4030		legacychevy.com	
Hardy Chevrolet, Inc.	Gary Connally	1249 Charles Hardy Pkwy	Dallas	GA	30157	770.445.9411	770.445.1143	hardychevy.com	gconnally@hardychevy.com
Maypole Chevrolet, Inc.	Dave Phillips	1223 S Big A Rd	Toccoa	GA	30577	706.886.7481		maypolechevrolet.com	jandrews@maypolechevrolet.com

Idaho

Edmark Chevrolet Cadillac	Mellisa Moreno	15700 Idaho Center Blvd	Nampa	ID	83687	208.466.6000	208.442.2713	edmarksuperstore.com	partsroom@edmarksuperstore.com
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Company Name	Contact Name	Address	City	ST	Zip	Phone	Fax	Internet Site	Email Address
Illinois									
Jim McComb Chevrolet, Inc.	Bill Brouch	3622 N University	Peoria	IL	61604	309.686.2500	309.686.0121	jimmccomb.com	billbrouch@jimmccomb.com
Rockenbach Chevrolet Sales Inc.	Tom Rominski	1000 E. Belvidere Rd	Grayslake	IL	60030	800.441.5150	847-223-7085	rockenbachchevy.com	tom@crateengine depot.com
Weir Chev-Buick-Pontiac-GMC	Brian Washausen	1107 S Main	Red Bud	IL	62278	618.282.3111	618.282.3993	weirparts.com	chris.lutman@weirparts.com
Shepard Chevrolet Inc	Russ Fowler	930 Carriage Ln	Lake Bluff	IL	60044	847.295.5310	847.234.9459	shepardchevrolet.com	shepardparts@yahoo.com
Indiana									
Schepel Buick-Pontiac-GMC, Inc	Ron Carlson	3209 West Lincoln Hwy	Merrillville	IN	46410	219.769.7757	219.755.0339	schepel.com	parts@schepel.com
Shepherd's Chev-Old-Pon-Bu-Cad	Dan Rapp	1520 East 9th Street	Rochester	IN	46975	574.224.7278	574.223.2718	sheperdsigm.net	bdelorenzo@sheperdsigm.com
Hubler Chevrolet, Inc.	Rick Bell	8220 S Us 31	Indianapolis	IN	46227	317.882.4018	317.882.4719	drivehubler.com	rbell@drivehubler.com
Iowa									
Bob Brown Chevrolet, Inc.	Ron Dorrian	4224 Merle Hay Road	Des Moines	IA	50310	515.278.7888	515.278.7895	bobbrownauto.com	ron.dorrian@bobbrownauto.com
Karl Chevrolet, Inc.	Jason Roach	1101 SE Oralabor Rd	Ankeny	IA	50021	515.299.4411	515.299.4380	karlchevrolet.com	jasonr@karlchevrolet.com
Rydell Chevrolet, Inc.	Brian Tenley	1325 E San Marnan Dr	Waterloo	IA	50702	319.234.4601	319.234.4815	rydellauto.com	brian@rydellauto.com
Knoepfler Chevrolet Co.	Bill Knoepfler	100 Jackson St	Sioux City	IA	51101	712.279.7153	712.279.0316	kchev.com	bknoepfler@kchev.com
Shottenkirk, Inc.	Brad Richardson	5031 Ave O P.O. Box 218	Ft. Madison	IA	52627	319-372-6880		shottenkirkchevy.net	
Kansas									
Superior Chevrolet	David Hosley	8300 Shawnee Mission Pkwy	Merriam	KS	66202	913.789.4308	913.789.1005	superchevyperformance.com	dhosley@hendauto.com
Kentucky									
Bob Hook Chevrolet, Inc.	Jack Tillman	4144 Bardstown Rd	Louisville	KY	40218	502.499.8060	502.499.0917	bobhookperformance.com	jtillman@bobhook.net
Campbell Chevrolet	Landon Raburn	2151 Scottsville Rd.	Bowling Green	KY	42104	270-781-7000		campbellchevrolet.com	
Bachman Auto Group, Inc.	Tom Finley	9650 Bluegrass Pkwy	Louisville	KY	40299	502.499.6161	502.719.3849	bachmanparts.com	tfinley@bachmanautogroup.com
Louisiana									
All Star Chevrolet, Inc.	Pat Jackson	11377 Airline Hwy	Baton Rouge	LA	70816	225.298.8080	225.298.8041	allstarautomotive.com	pjackson@allstarautomotive.com
Chevyland	Jeral Lawler	7500 Youree Dr	Shreveport	LA	71105	318.425.3471	318.222.4990	chevyland.com	jlawler@chevyland.com
Banner Chevrolet	Wily Teague	5950 Chef Menteur Hwy	New Orleans	LA	70126	501.242.4624	504.253.8596	bannerauto.com	costantini@bannerauto.com
Maine									
Quirk Chev-Cad-Olds of Bangor	Dave Provencher	293 Hogan Rd	Bangor	ME	4401	800.664.6008	207.945.0164	quirkautoparts.com	dprovencher@quirkauto.com
Maryland									
Jerry's Chevrolet, Inc.	Vince Poling	1940 E Joppa Rd	Baltimore	MD	21234	410.661.9100	410.513.0196	jerrysautogroup.com	vpoling@jerryschevrolet.com
Ourisman's Rockmont Chevrolet	Dave Katz	#20 Southlawn Court	Rockville	MD	20850	301.424.5900	301.424.0027	ourismanrockmont.com	dave.katz@ourismanautomotive.com
Criswell Chevrolet, Inc.	Alex Verna	503 Quince Orchard Rd	Gaithersburg	MD	20878	301.948.0880	301.921.9806	criswellauto.com	averna@criswellauto.com
Courtesy Chev-Olds-Cad	Bill Cropper	2531 N Salisbury Blvd	Salisbury	MD	21801	410.749.7100	410.749.4257	courtesychevroletcadillac.com	parts@courtesychevrolet.biz
Massachusetts									
Central Chevrolet Inc	Kenneth Day	675 Memorial Ave	W. Springfield	MA	1089	413.781.1410	413.732.5524	centralchevy.net	centralgmparts@yahoo.com
Clay Chevrolet-Hyundai	Brad Sassaman	391 Providence Hwy	Norwood	MA	2062	781.762.8300	781.255.8912	claychevrolet.com	bsassaman@claycars.com
Michigan									
Lafontaine Bu-Pont-GMC-Cadillac	John Hicks	4000 W. Highland Road	Highland	MI	48357	248-714-1120		thefamilydeal.com	
Ed Rinke Chevrolet Co.	Jim Hensley	26125 Van Dyke	Centerline	MI	48015	586.754.7000	586.754.5030	edrinke.com	jhensley@edrinke.com
Young Chevrolet, Cadillac, Inc	Mike Szura	1500 E Main Street	Owosso	MI	48867	989.725.2184	989.729.3016	youngautosales.com	mikeszura@youngautosales.com
Berger Chevrolet, Inc.	Gerry Rozeboom	2525 28th St Se	Grand Rapids	MI	49512	616.575.9473	616.949.2870	bergerchevy.com	parts@bergerchevy.com
Shaheen Chevrolet	Mike Lynch	3901 S Milk Blvd	Lansing	MI	48910	517.394.0330	517.394.6305	shaheenlansing.com	mlynch@shaheenchevrolet.com
Mississippi									
Turan-Foley Motors, Inc.	Joe May	11123 Hwy 49 N	Gulfport	MS	39503	228.539.7500	228.539.5689	turanfoley.com	joemay@turanfoley.com
Minnesota									
Suburban Chevrolet	Tom Kuether	12475 Plaza Drive	Eden Prairie	MN	55344	952.947.5432	952.947.5439	suburbanchev.com	dlatvis@suburbanchev.com
Missouri									
Lou Fusz Pont-Buick-GMC Truck	Sean Speer	10950 Page Avenue	St. Louis	MO	63132	800.325.1492	314.595.2790	pontiac.fusz.com	pontiacparts@fusz.com
Reliable Chevrolet, Inc.	Dean Jones	3655 S Campbell	Springfield	MO	65807	417.887.5800	417.887.4012	reliablechevy.com	djones@vtaig.com
Bob McCosh Chevrolet, Inc.	Rick Neuner	1 Business Loop 70	Columbia	MO	65203	573.442.6156	573.441.5632	perrychevrolet.com	rneuner@bmcmail.com
Weber Chevrolet Company	Jim Nixon	12015 Olive Blvd	Creve Coeur	MO	63141	314.567.3300		weberchev.com	

AUTHORIZED CENTERS

Company Name	Contact Name	Address	City	ST	Zip	Phone	Fax	Internet Site	Email Address
Nebraska									
Friesens Chevrolet, Inc.	Jon Pedersen	806 S Way	Sutton	NE	68979	402.773.5538	402.773.5639	friesenchevy.com	info@friesenchevy.com
H & H Chevrolet Company	Tim Hurlbutt	4645 South 84th St	Omaha	NE	68127	402.596.2710	402.596.2719	hhchevy.com	timhurlbutt@hhchevy.com
Nevada									
Champion Chevrolet Geo	Roger Marseillan	800 Kietzke Lane	Reno	NV	89502	775.786.3111	775.786.0458	championchev.com	roger@championchev.com
Henderson Chevrolet Co.	Pete Zachrison	240 N Gibson Rd	Henderson	NV	89015	702.558.2430	702.558.2444	hendersonchevy.com	petezachrison@hendersonchevy.com
Winkel Pontiac-GMC Truck	Jon Deambrosio	900 Kietzke Ln	Reno	NV	89502	775.690.6910	775.786.1513	winkelmotors.com	parts@winkelmotors.com
Fairway Chevrolet	Brad Oaks	3100 E Sahara Ave	Las Vegas	NV	89104	702.641.1446	702.641.5866	fairwaychevy.com	bradoaks@fairwaychevy.com
New Hampshire									
Banks Chevrolet-Cadillac, Inc.	Jack O'Neil	137 Manchester St	Concord	NH	03301	603.224.4055	603.225.6489	banksautos.com	joneil@banksauto.com
Miller Chevrolet-Cadillac	Kevin French	13 Labombard Rd.	Lebanon	NH	3766	877-777-0001		millerautogroup.com	
Quirk Chevrolet Buick Hummer	Gary Philbin	1250 S Willow St	Manchester	NH	03103	800.842.9600	800.641.5554	quirkchevynh.com	gphilbin@quirkcars.com
New Jersey									
Bob Maguire Chevrolet, Inc.	Bill Curren	840 Route 206	Bordentown	NJ	8505	609.298.3600	609.298.3033	bobmaguirechevrolet.com	bill.curren@maguireauto.com
New Mexico									
Watson Chev-Buick-Pont Div	Dan Wharff	1501 N Grimes	Hobbs	NM	88240	505.397.2411	505.397.0838	watsonauto.com	dwharff@watsontruck.com
New York									
Bresee Chevrolet Co. Inc.	Al Koster	604 Old Liverpool Rd	Liverpool	NY	13088	315.233.0333	315.233.0347	breseechevrolet.com	
De Nooyer Chevrolet	Harry Conerty	127 Wolf Road	Albany	NY	12205	866.362.0518		denooyerchevrolet.com	
Nesenger 112 Chevrolet	Thomas Doner	2096 Rte. 112 Medford Ave	Medford	NY	11763	877.453.7918		chevrolet112.com	
Ruge's GMC	Tom Althizer	7916 Old Route 22	Copake Falls	NY	12571	888.845.3379		rugescgmc.com	
Nye Pontiac-GMC	Jon Curro	1479 Genesee Street	Oneida	NY	13421	315.363.2388	315.363.2873	nyeaautogroup.com	joncurro@nyeaauto.com
North Carolina									
Burnsville Chev-Buick, Inc.	Andy Warren	627 W Main St	Burnsville	NC	28714	828.682.6141	828.678.3481	burnsvillechevy.com	mikec@burnsvillechevy.com
Everett Chevrolet, Inc.	Rich McKean	161 Hwy 70 SE	Hickory	NC	28602	828.327.9171	828.328.3282	everettchevy.com	tbrewer@everettchevy.com
Flow Gm Auto Center	Chris Porter	1400 S Stratford	Winston-Salem	NC	27103	336.760.7046	336.760.5126	gmpartsdirect.com	cporter@flowauto.com
McCaulley Chevrolet	Steve Lowder	2307 Hwy 52 N	Albemarle	NC	28002	704.982.2191	704.982.3134	modernautomotive.com	stevelowder@mccaulleychevy.com
Bobby Murray Chevrolet, Inc.	Terry Hinnant	1820 Capital Blvd	Raleigh	NC	27604	800.662.7502	919.832.1603	morethanjustpower.com	parts@bobbymurray.com
Modern Chevrolet Company	Ivil Porter	5415 Kelley-Moore Dr	Winston-Salem	NC	27105	800.334.0165	336.727.4809	modernchevy.com	chege@modernaautomotive.com
City Chevrolet	Chris Knight	5101 East Independence Blvd	Charlotte	NC	28212	800.763.2489	704.586.7422	citychevrolet.com	cknight@hendauto.com
North Dakota									
Rydell GM Center	Mike Huot	2700 S. Washington	Grand Forks	ND	58201	800.354.7278	701-772-3377	rydellchev.com	mhuot@rydellchev.com
Ohio									
Reichard Buick Pontiac GMC	Jeff Ringer	161 Salem Avenue	Dayton	OH	45406	937.224.8541		reichardbuick.com	
Pace Performance	Chuck Finch	430 Youngstown Rd	Niles	OH	44446	800.748.3791	330.652.7484	paceperformance.com	parts@paceperformance.com
McDaniel Chevrolet, Inc.	Rick Wallace	1065 Mt. Vernon Ave.	Marion	OH	43302	800-333-2415		mcDanielauto.com	
Coughlin Chevrolet Buick	Greg Jackson	15801 US Rte 36	Marysville	OH	43040	800-311-6348		coughlinmarysvillegm.com	
Sweeney Buick GMC	Matt Fullerton	7997 Market Street	Youngstown	OH	44512	800-519-0795		sweeneycars.com	
Oklahoma									
Danny Beck Chevrolet, Inc.	Andy Boyce	8300 New Sapulpa Rd	Tulsa	OK	74131	918.227.1070	918.227.7746	dannybeckchevy.com	andy.boyce@dannybeckchevy.com
Hudiburg Chevrolet Inc	Zach Heines	6000 Tinker Diagonal	Midwest City	OK	73110	405.737.6641	405.739.0636	hudiburg.com	zach@hudiburg.com
Smicklas Chevrolet	Larry Lowe	3501 N Santa Fe	Oklahoma City	OK	73118	405.525.4402	405.525.4484	smicklaschevrolet.com	rkimbrough@bobhowardauto.com
Oregon									
Airport Chevrolet	Larry Lavada	3001 Biddle Road	Medford	OR	97504	541.770.1300	541.772.8079	airportchevy.com	parts@airportchevy.com
Capitol Chevrolet Cadillac, Inc	Tom Dalton	2711 Misson St SE	Salem	OR	97309	503.585.4141	503.316.4223	capitol-chevy.com	tdalton@capitolauto.com
Gilbert Chevrolet	Mel Kooper	1003 S. Main	Milton Freewater	OR	97862	541-938-5561			
Kendall Chevrolet	Mike Romig	846 Goodpasture Island Rd	Eugene	OR	97401	541.342.1121	541.335.6895	kendallauto.com	mromig@kendallauto.com
Ron Tonkin Chevrolet Co.	Allen English	122 NE 122nd Ave	Portland	OR	97230	503.255.2355	503.257.2285	tonkin.com	gmparts@tonkin.com
Wentworth Chevrolet Co.	Darrin Rea	107 SE Grand Ave	Portland	OR	97214	503.232.2000	503.234.3374	wentworthchevrolet.com	darrinrea@wentworthchevrolet.com
Pennsylvania									
Sutliff Chevrolet Co	Joe Halula	1251 Paxton Street	Harrisburg	PA	17104	800.932.0284	717.234.8825	sutliffchevrolet.com	jhalula@sutliff.net
Apple Chevrolet Apple Cadillac	Jason Alwood	1200 Loucks Rd, Po Box 7767	York	PA	17404	717.848.1300	717.843.5730	applechevrolet.com	jalwood@appleauto1.com
Bowser Pontiac	Dave McManus	Rte 51 & Lewis Run Rd	Pittsburgh	PA	15236	412.469.2100	412.469.3596	powerofbowser.com	parts@powerofbowser.com
Fred Beans Cad-Buick-Pont-GMC	Dave Wittlinger	131 Doyle Street	Doylestown	PA	18901	877.385.5769	336.940.3768	877fullpower.com	wedopartsright@fredbeans.com
Jones Pontiac Buick GMC	John Shuman	1335 Manheim Pike	Lancaster	PA	17604	717.394.7087	717.394.1752	gojones.com	jshuman@gojones.com
Rohrich Cadillac, Inc.	Paul Lijja	1000 Saw Mill Run Blvd	Pittsburgh	PA	15220	412.390.2940	412.390.2950	rohrichcadillac.com	plijja@rohrich.com

Company Name	Contact Name	Address	City	ST	Zip	Phone	Fax	Internet Site	Email Address
South Carolina									
John Newsome, Inc.	Fred Bowker	1510 S 5th Street	Hartsville	SC	29550	843.339.2719	843.339.2716	johnnewsomesuperstore.com	fbowker@newsomeparts.com
Love Chevrolet Company	Andy Trantum	1255 Knox Abbott Drive	Cayce	SC	29033	803.794.9000	803.926.1658	chevy.loveauto.com	
Rick Hendrick Chevrolet	Jerry Roberson	1500 Savannah Hwy.	Charleston	SC	29407	888.563.6130		rickhendrickchevy.com	

South Dakota									
Billion Motors, Inc.	Dale Zimmer	600 West 41st St	Sioux Falls	SD	57105	605.333.3436	605.333.3459	zimmer@billionauto.com	zimmer@billionauto.com

Tennessee									
Chuck Hutton Chevrolet	Gene Langdon	2471 Mt. Moriah Rd.	Memphis	TN	38115	866.651.9699		chuckhuttonchevrolet.net	
Dobbs Pontiac-GMC	Jeff Sappington	2621 Mendenhall Rd S	Memphis	TN	38115	901.795.4500	901.367.3146	dobbspontiacgmc.com	sappingtonj@autonation.com
West Chevrolet, Inc.	John Parke	3450 Airport Hwy	Alcoa	TN	37701	865.970.9378	865.970.4559	westchevrolet.com	johnparker@westchevrolet.com

Texas									
Bruce Lowrie Chevrolet, Inc.	Kris King	711 SW Loop 820	Ft. Worth	TX	76134	817.568.4819	817.551.0570	brucelowriechevrolet.com	kingz28502@msn.com
Champion Chev Gulf Freeway	Wayne Knape	13800 Gulf Freeway	Houston	TX	77034	281.929.3220	281.929.3238	championdealer.com	knape@autonation.com
Classic Chevrolet, Ltd.	Tom Cross	1101 Hwy 114	Grapevine	TX	76051	817.410.6146	817.251.1633	classicchevytexas.com	tcross@classicchevytexas.com
Don Hewlett Chevrolet-Buick	Jeff Gilbert	7601 S. IH-35	Georgetown	TX	78626	512.681.3000	512.681.3113	donhewlett.com	jeffg@donhewlett.com
Friendly Chevrolet Co.	Robert Fayette	2754 N Stemmons Blvd	Dallas	TX	75207	214.920.4199	214.920.4138	friendlypartscenter.com	rfayette@friendlychevy.com
Henna Chevrolet, L.P.	Hal Matthews	8805 North IH-35	Austin	TX	78753	512.719.6273	512.832.2355	henna.com	halmat@henna.com
Scoggin-Dickey Chevrolet-Buick	Nicky Fowler	5901 Spur 327	Lubbock	TX	79424	800.456.0211	806.798.4086	sdparts.com	Jsmith@Sdparts.Com
Classic Chevrolet	Ken Williams	13115 Southwest Freeway	Sugar Land	TX	77478	866.375.2772		classicchevysugarland.com	

Utah									
Brent Brown Chevrolet	Tom Maxfield	2125 North University Pkwy	Provo	UT	84604	801.373.9500	801.375.0059	brentbrownauto.com	tom@brentbrownauto.com
Larry H. Miller Chevrolet	Grant Martin	5650 S State Street	Murray	UT	84107	801.264.3330	801.264.3336	lhmcchevy.com	gmartin@lhm.com

Virginia									
Heritage Chevrolet, Inc.	Andy Pratt	12420 Jefferson Davis Hwy	Chester	VA	23831	800.523.6137	804.748.9770	heritagechevrolet.com	wmlmoats@aol.com
Radley Chevrolet	Chris Rogers	3670 Jefferson Davis Hwy	Fredericksburg	VA	22408	540.898.4000	540.891.2074	radleyauto.com	chrisrogers@radleyautogroup.com
Berglund Chev Jeep Buick Pont	Jim Colvin	1824 Williamson Rd	Roanoke	VA	24012	540.344.1461	540.345.7431	berglundperformance.com	jcolvin@berglundcars.com
Colonial Chevrolet	Keith Frazier	6252 Virginia Beach Blvd	Norfolk	VA	23502	800.446.8148	757.455.4427	colonialchevrolet.net	keith.frazier@hendrickauto.com
Dominion Chev-Buick-Pont-GMC	John Faison	12050 West Broad Street	Richmond	VA	23233	804.364.4500	804.364.4598	dominionautogroup.com	jfaison@dominionautogroup.com
Strosnider Chevrolet, Inc.	Mark Hughes	5200 Oaklawn Blvd.	Hopewell	VA	23860	804.415.4485		strosniderchevrolet.com	

Vermont									
Springfield Buick Pontiac GMC	Linley Messer	Rte 106	N Springfield	VT	05150	802.886.2281	802.886.2213	springfieldautomart.com	parts@vermontel.net

Washington									
Camp Automotive, Inc.	Brian O'Shaughnessy	101 Montgomery	Spokane	WA	99207	509.456.7890	509.456.7895	campchevrolet.com	boshaughnessey@lithia.com
Hall Chevrolet-Buick	Lynn Channel	314 Sixth St	Prosser	WA	98350	800.676.4255	509.786.0239	hallchevbuick.com	parts@hallchevbuick.com
McCurley Chevrolet-Cadillac	Dean Goody	1325 Auto Plex Way	Pasco	WA	99301	509-547-5555		billmccurley.com	
Jet Chevrolet, Inc.	Steve Haase	35700 Enchanted Pkwy S	Federal Way	WA	98003	253.952.7417	253.952.7419	jetchevrolet.com	parts@jetchevrolet.com
Speedway Chevrolet, LLC	Greg White	16957 W Main St	Monroe	WA	98272	360.794.1155	360.863.9356	speedwaychevrolet.com	gwhite@speedwaychevrolet.com

Wisconsin									
Broadway Automotive, Inc.	Rick Larscheid	2700 S Ashland Ave	Green Bay	WI	54304	800.236.2819	920.498.6620	broadwayautomotive.com	larscheid@broadwayautomotive.com
Holz Motors, Inc.	Dale Keup	5961 S 108 Place	Hales Corners	WI	53130	800.236.2407	414.425.1402	holzmotors.com	dkeup@holzmotors.com
Ivan Gandrud Chevrolet, Inc.	Chris Slack	919 Auto Plaza Dr	Green Bay	WI	54302	920.468.6800	920.468.3673	gandrud.com	parts@gandrud.com
Bud Weiser Motors, Inc.	Brad Schrock	2676 Milwaukee Rd	Beloit	WI	53511	608.364.6340	608.364.6355	budweiserbeloit.com	parts@budweiserbeloit.com

Company Name	Address	City	State	PC	Phone	Fax
Australia						
Eagle Auto Parts	92 Gippsland Hwy.	Dandenong	Victoria	3175	03 87103000	03 97933082
Eagle Auto Parts	8 Marigold Place	Revesby	New South Wales	2212	02 97715566	02 97715599
Eagle Auto Parts	Unit 1, 100 Park Road	Slacks Creek	Queensland	4127	07 34428000	07 34428099

Canada
 GM Performance Parts are available at all participating Canadian GM dealers.

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GM SERVICE REPLACEMENT POWERTRAIN & GM PERFORMANCE PARTS LIMITED WARRANTY

Engines, Engine Components, Transmissions, Transmission Components & Transfer Cases

To retain the safety and dependability built into this product, it is essential that your product receives the scheduled maintenance at the recommended intervals contained in your vehicle Owner's Manual/Maintenance Schedule* or GM Performance Parts Engine Instruction Sheet. Since emissions-related components vary by model and engine application, you should follow the emissions maintenance recommendations also contained in your vehicle's manuals.

Maintenance services should be performed by an authorized GM dealer or other qualified independent service center.

General Motors Corporation warrants to the purchaser for the time and/or mileage indicated that it will repair or replace, at its option, using new or remanufactured parts, GM Parts Service Replacement Engine, Engine Component, Transmission/Transaxle, Transmission Component, Transfer Case or Short Block Assembly that fails due to a defect in material or workmanship.

*If owner's manual/maintenance schedule is lost, visit www.ownercenter@mygmllink.com

GM | Parts

Effective with purchases on or after 4/15/05	Passenger Car & Light-Duty Truck ³	Medium-Duty Truck, Class A Motor Home, Taxi & Police ⁴	Other ⁵
Engines & Automatic Transmissions ^{6,10}	36 months or 100,000 miles ^{1,2,7B}	18 months or 100,000 miles ^{1,2}	12 months or 12,000 miles ¹
Transfer Cases	36 months or 100,000 miles ^{1,2}	36 months or 100,000 miles ^{1,2}	36 months or 100,000 miles ¹
Short Block Assemblies ⁹	24 months or 24,000 miles ¹	12 months or 12,000 miles ¹	12 months or 12,000 miles ¹
Manual Transmissions	12 months or 12,000 miles ^{1,2}	12 months or 12,000 miles ^{1,2}	12 months or 12,000 miles ¹
Engine & Transmission Components ⁹	12 months or 12,000 miles ¹	12 months or 12,000 miles ¹	12 months or 12,000 miles ¹

GM | PERFORMANCE PARTS

Effective with purchases on or after 3/1/07	Passenger Car & Light-Duty Truck ^{9,12}
Performance Parts Transmissions, Components & Short Block Assemblies ⁹	12 months or 12,000 miles ^{1,2}
Performance Parts Engines	24 months or 50,000 miles ^{1,2,8,11,12}

¹Whichever occurs first, months or mileage; ²Parts and labor warranty; ³Light-Duty series 10-30; ⁴Medium-Duty series 40-80, unlimited miles; ⁵Parts only warranty for non-cataloged applications; ⁶Includes Allison assemblies sold through GM Dealers; ⁷3 year, 50,000 mile warranty applies to purchases prior to 4/15/05; ⁸Engine upgrades require appropriate associated parts to ensure proper engine and transmission cooling and torque capacity, fuel/air delivery and emission controls (upgrade example: 305 engine replaced with 350 engine); ⁹Parts only warranty when sold over the counter or to a qualified independent repair facility; ¹⁰Excludes ACDelco and Performance Parts; ¹¹12 month, 12,000 mile warranty applies to purchases prior to 3/1/07; ¹²Must be installed in a street legal automotive application.

Warranty begins on the date of installation by an authorized GM dealer or by a qualified independent service center. For over-the-counter sales, warranty begins on date of retail sale.

This Warranty Does Not Cover:

- Damage due to improper installation, negligence, alteration, accident, improper use, or any use related to racing, track or competition. Proper vehicle use is discussed in the vehicle Owner's Manual. In addition, coverage does not apply if the odometer has been disconnected or the mileage reading has been altered.
- Damage caused by lack of proper maintenance as described in the vehicle's original Maintenance Schedule/Owner's Manual, failure to follow Maintenance Schedule intervals, or failure to use or maintain proper type and levels of fluid, fuel, oil and lubricants recommended in the Maintenance Schedule/Owner's Manual. Proof of proper maintenance is the owner's responsibility. Keep all receipts and be prepared to make them available if questions arise about maintenance.
- Damage as a result of overheating, contamination or lack of lubrication.
- Damage caused by a turbocharger, supercharger, nitrous oxide, or similar product, which is not an approved GM Performance Part or Accessory.
- Racing engines and/or their components.

- Use of components in excess of maximum torque specification.
- Damage as a result of modification/replacement of torque converter that is part of transmission assembly.
- Loss of time, inconvenience, loss of use, or other economic loss.
- Vehicles registered and normally operated outside of the United States.
- This warranty does not apply to any unit installed under the General Motors New Vehicle Limited Warranty.

Documentation Requirements:

The GM dealer or independent service center must be furnished with the purchaser's original repair order or sales slip (or dealer's photo copy), and this warranty certificate properly completed. This warranty is transferable to subsequent owners by providing the above required documents to any purchaser of the vehicle in which the assembly/component was originally installed.

Obtaining Repairs:

GM Dealer Installation—The GM dealer who initially installed the assembly/component or any GM dealer may perform the repairs. You must allow a reasonable period of time for repairs following delivery of the vehicle to the GM dealer's place of business.

Independent Service Center Installation—The independent service center that installed the assembly/component or any GM dealer may perform repairs. Before any repairs can be performed under warranty by an independent repair center, the selling GM dealer (or any GM dealer) must first authorize needed repairs as a sublet service.

Emergency Repairs (GM Dealers Only)—Reimbursement to an owner for repairs performed by other than a GM dealer will be considered when GM dealer service was not available (e.g., weekends, evenings, etc.) or when repairs were made in a foreign country where warranty repairs by a GM dealer were difficult to obtain.

Other Terms:

GM sells other engines and transmissions in various states of completion. This warranty covers only those engines and transmissions that are marketed by GM as Goodwrench, GM Parts or GM Performance Parts.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

General Motors does not authorize any person to create for it any other obligations or liability in connection with these assemblies.

ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO ASSEMBLIES OR PARTS IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY. THE PERFORMANCE OF REPAIRS OR REPLACEMENT IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. GM SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.

Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, therefore, the above limitation or exclusions may not apply to you.

Service Checks:

Transmissions: It is important for you or a service technician to check the transmission/transaxle fluid level at regular intervals.

Engines: It is important for you or a service technician to perform these underhood checks at each fuel fill:

- Check engine oil level and add if necessary.
- Check engine coolant level in coolant reservoir and add if necessary.
- Check belts and hoses for visible wear and replace if necessary.

The parts listed in this catalog are intended primarily for use in race or "off-highway" vehicles only. Federal law restricts the removal, modification or knowingly making inoperative of any part or element of design installed in compliance with an applicable Federal Motor Vehicle Safety Standard or any part of federally required emission control systems on a motor vehicle used on public roads. Further, many states have enacted laws with various penalties for tampering with, or otherwise modifying any required emission or noise control system. Parts which have been granted an exemption by the California Air Resources Board (CARB) are noted as such.

Unless specifically noted to the contrary herein, vehicles equipped with GM Performance Parts may not meet Federal Motor Vehicle Safety Standards and emissions regulations and should not be operated on public roads. GMPP customers are responsible for ensuring their use of GM Performance Parts complies with applicable federal, state and local laws, regulations and ordinances.

Many parts intended for racing or other "off-highway" use are not designed or tested for crashworthiness or to meet the safety needs of the motoring public, and may adversely affect the original intended performance or handling characteristics of the vehicle. These parts are designed and intended to be used with experts supervising their installation and use, to help assure the proper and safe operation of the vehicle.

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Direct any inquiries to: General Motors LLC, Consumer Relations Dept., P.O. Box 33136, Detroit, MI 48232-5136

GM SERVICE REPLACEMENT POWERTRAIN & GM PERFORMANCE PARTS LIMITED WARRANTY

Engines, Engine Components, Transmissions, Transmission Components & Transfer Cases

To retain the safety and dependability built into this product, it is essential that your product receives the scheduled maintenance at the recommended intervals contained in your vehicle Owner's Manual/Maintenance Schedule. * Since emissions-related components vary by model and engine application, you should follow the emissions maintenance recommendations also contained in your vehicle's manuals.

Maintenance services should be performed by an authorized GM dealer or other qualified independent service centre.

General Motors of Canada Limited ("GM Canada") warrants to the purchaser for the time and/or mileage indicated that it will repair or replace, at its option, using new or remanufactured parts, GM Parts Service Replacement Engine, Engine Component, Transmission/Transaxle, Transmission Component, Transfer Case or Short Block Assembly that fails due to a defect in material or workmanship.



Effective with purchases on or after 4/15/05	Passenger Car & Light-Duty Truck ²	Medium-Duty Truck, Class A Motor Home, Taxi, Police* & Tow Truck ⁴	Other ⁵
Engines & Automatic Transmissions ^{6,10}	36 months or 160,000 kilometers ^{1,2,7,8}	18 months or 160,000 kilometers ^{1,2}	12 months or 20,000 kilometers ¹
Transfer Cases	36 months or 160,000 kilometers ^{1,2}	36 months or 160,000 kilometers ^{1,2}	36 months or 160,000 kilometers ¹
Short Block Assemblies ⁹	24 months or 40,000 kilometers ^{1,2}	12 months or 20,000 kilometers ¹	12 months or 20,000 kilometers ¹
Manual Transmissions	12 months or 20,000 kilometers ^{1,2}	12 months or 20,000 kilometers ^{1,2}	12 months or 20,000 kilometers ¹
Engine & Transmission Components ⁹	12 months or 20,000 kilometers ¹	12 months or 20,000 kilometers ¹	12 months or 20,000 kilometers ¹



Effective with purchases on or after 3/1/07	Passenger Car & Light-Duty Truck ^{2,13}
Performance Parts Transmissions, Components & Short Block Assemblies ⁹	12 months or 20,000 kilometers ^{1,11}
Performance Parts Engines	24 months or 80,000 kilometers ^{1,2,8,11,12}

¹ Whichever occurs first, months or mileage; ² Parts and labor warranty; ³ Light-Duty series 10-30; ⁴ Medium-Duty series 40-70; ⁵ Parts only warranty for non-cataloged applications; ⁶ Includes Allison assemblies sold through GM Dealers; ⁷ 3 year / 80,000 kilometer warranty applies to purchases prior to 4-15-05; ⁸ Engine upgrades require appropriate associated parts to ensure proper engine and transmission cooling and torque capacity, fuel/air delivery and emission controls (upgrade example: 305 engine replaced with 350 engine); ⁹ Parts only warranty when sold over the counter or to a qualified independent repair facility; ¹⁰ Excludes ACDelco and Performance Parts; ¹¹ 12 month / 20,000 kilometers warranty applies to purchases prior to 3-1-07; ¹² Must be installed in a street legal automotive application.

WARRANTY BEGINS ON THE DATE OF INSTALLATION BY AN AUTHORIZED GM DEALER OR BY A QUALIFIED INDEPENDENT SERVICE CENTER. PARTS ONLY WARRANTY (NO LABOUR) APPLIES FOR WARRANTY REPAIRS NOT PERFORMED BY AN AUTHORIZED GM DEALER OR QUALIFIED INDEPENDENT SERVICE CENTER.

GM sells other engines and transmissions in various states of completion. This warranty covers only those engines and transmissions that are marketed by GM as Goodwrench or GM Parts.

THIS WARRANTY DOES NOT COVER:

- Damage due to improper installation, negligence, alteration, accident, improper use, or any use related to racing or competition. Proper vehicle use is discussed in the vehicle Owner's Manual. In addition, coverage does not apply if the odometer has been disconnected or the mileage reading has been altered.
- Damage caused by lack of proper maintenance as described in the vehicle's original Maintenance Schedule/Owner's Manual, failure to follow Maintenance Schedule intervals, or failure to use or maintain

proper type and levels of fluid, fuel, oil and lubricants recommended in the Maintenance Schedule/Owner's Manual. Proof of proper maintenance is the owner's responsibility. Keep all receipts and be prepared to make them available if questions arise about maintenance.

- Damage as a result of overheating, contamination or lack of lubrication.
- Damage caused by a turbocharger, supercharger, nitrous oxide, or similar product, which is not an approved GM Performance Part or Accessory.
- Racing engines and/or their components.
- Use of components in excess of maximum torque specification.
- Damage as a result of modification/replacement of torque converter that is part of transmission assembly.
- Loss of time, inconvenience, loss of use, or other economic loss.
- Vehicles registered and normally operated outside of Canada.
- This warranty does not apply to any unit installed under the General Motors New Vehicle Warranty.

DOCUMENTATION REQUIREMENTS

The GM dealer or independent service center must be furnished with this warranty statement, purchase receipt, installation date invoice and proof of proper maintenance. This warranty is transferable to subsequent owners by providing the above required documents to any purchaser of the vehicle in which the assembly/component was originally installed.

OBTAINING REPAIRS

GM Dealer Installation—The GM dealer who initially installed the assembly/component or any GM dealer may perform the repairs. You must allow a reasonable period of time for repairs following delivery of the vehicle to the GM dealer's place of business.

Independent Service Center Installation—The independent service center that installed the assembly/component or any GM dealer may perform repairs. Before any repairs can be performed under warranty by an independent repair center, the selling GM dealer (or any GM dealer) must first authorize needed repairs as a sublet service.

OTHER TERMS

TO THE FULL EXTENT PERMITTED BY APPLICABLE CANADIAN LAW: The foregoing warranty is the only and the entire warranty provided by GM Canada and is in lieu of and excludes all other representations, warranties or conditions, express or implied (including any implied warranty of merchantability or fitness for a particular purpose).

The performance of repairs, the provision of replacement parts, or reimbursement thereof, as described above, is the exclusive remedy under this written warranty or under any otherwise applicable implied warranty or condition.

GM CANADA DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR IT ANY OTHER OBLIGATIONS or liability in connection with the products and no person is permitted to extend or enlarge this warranty on behalf of GM Canada by written, verbal or other representation and if made, such representation or warranty will not be enforceable against GM Canada.

DISCLAIMER OF LIABILITY: Except as provided in this limited warranty, GM Canada will not be liable in contract, tort or otherwise for any direct, indirect, economic, commercial, incidental, or consequential or special loss or damage or expense or claim howsoever caused, arising in connection with the sale, use, loss of use, performance or non-performance of the product.

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SERVICE CHECKS:

Transmissions: It is important for you or a service technician to check the transmission/transaxle fluid level at regular intervals.

Engines: It is important for you or a service technician to perform these underhood checks at each fuel fill:

- Check engine oil level and add if necessary.
- Check engine coolant level in coolant reservoir and add if necessary.
- Check belts and hoses for visible wear and replace if necessary.

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The GM Performance Parts 350/290 HP is all-new, all the way through.

It's built to the time-tested formula that defined small-block performance from the start. With our competitive pricing, it's an affordable alternative to the unknown.

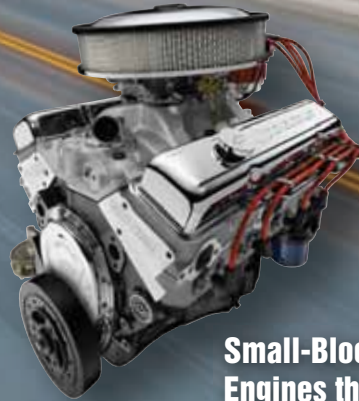
It's time to write your own chapter of the small-block legend. Get the facts, then find a dealer and compare prices at gmperformanceparts.com/350.

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Modern LS/LSX Crate Engines – Big-Block power in a Small-Block package
Starting on page 60



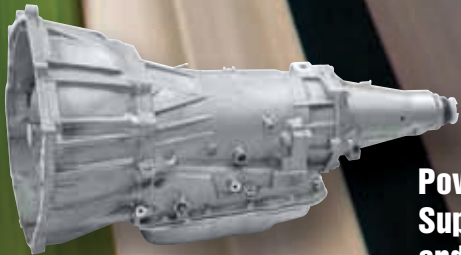
Small-Block Chevy Engines that make as much as 425 hp
Starting on page 42



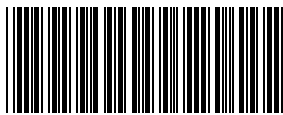
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