

HARLEY-DAVIDSON®

2010 SCREAMIN' EAGLE® PRO RACING PARTS



COMPETITION AND PERFORMANCE PARTS FOR THE EXPERIENCED RIDER



FAST IS NEVER FAST ENOUGH FOR THIS CROWD

Racing has been the backbone of Harley-Davidson for over 105 years—bringing hard-core enthusiasts together on the track, in the pits and in the stands. Screamin’ Eagle® Pro Racing parts are designed to race and engineered to win—fueling adrenaline, igniting crowds and delivering high-performance results *to those who demand it.*

Harley-Davidson supports competition on both the professional and amateur levels. Whether fielding championship NHRA® Pro Stock Motorcycle drag racing and AMA flat track teams or pushing AHDR®

speed fiends to hit the strip, Harley-Davidson believes in the spirit of two-wheeled competition. Visit www.harley-davidson.com/racing for schedules and updates on Harley-Davidson® racing.

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For the latest information on Screamin’ Eagle® Pro Racing Parts, see your Harley-Davidson® dealer, or visit harley-davidson.com/racecatalog.



HARLEY-DAVIDSON® RACING

NHRA® FULL THROTTLE® PRO STOCK MOTORCYCLE RACING



Experience the ultimate in side-by-side two-wheeled competition. This elite class of professional racing delivers a high octane, high adrenaline rush like no other. With blazing speeds up to 200 mph, NHRA Pro Stock Motorcycle drag racing is the culmination of perfect timing, raw horsepower and flawless precision. *To follow the Screamin' Eagle®/Vance & Hines factory team, visit www.harley-davidson.com/racing.*

AMA PRO FLAT TRACK RACING



Some battles are best fought on the dirt. AMA Pro Flat Track Racing blends tradition with sights, sounds and action to produce the best in wheel-to-wheel competition. Racing at speeds up to 140 mph, purpose-built Harley-Davidson® XR-750-powered motorcycles battle the competition in one of the most exciting sports on two wheels. *To follow the Harley-Davidson® factory team, visit www.amaproracing.com.*

AHDRA® SCREAMIN' EAGLE® CLASS RACING



Ever wondered what it would feel like to tear down the track? It's time to make that dream a reality. AHDRA competition provides all enthusiasts the opportunity to experience the high-octane adrenaline of drag racing on their own street bike or race-prepped machine. Harley-Davidson is the Series Sponsor—the largest sponsor of all five Screamin' Eagle classes—including the VRXSE Destroyer® class. *For full details, visit www.ahdra.com.*



ANATOMY OF A PERFORMANCE ENGINE

Power Plant. Milwaukee Muscle. Big Twin. Mill. Whatever you call it, your engine is the single most important factor in improving your bike’s performance. Decide whether you want a street-legal stage kit for more passing power, or a big-bore monster motor that’ll melt the asphalt right off the track. Check out the basics outlined below and let your dealer know how you plan to embarrass your competition...again.

MOVE MORE AIR & FUEL

Moving more air and fuel through the engine is the easiest (and most cost effective) way to make more horsepower and torque. A free-flowing air cleaner and matching tuned exhaust will add performance you can feel. To optimize engine performance (and to minimize the risk of engine damage), any changes to the intake and exhaust system must be accompanied by an increase in fuel flow. Re-jetting the carburetor or recalibrating the fuel-injection Electronic Control Module (ECM) will alter the amount of fuel and determine the precise moment at which fuel is released into the combustion chamber. Whenever you’re planning on making performance upgrades, make sure to consult your Harley-Davidson® dealer about the results you want to achieve.



CAMSHAFTS

Camshafts are a fundamental ingredient in the performance recipe, because they control the timing and duration of all major engine events. They are the primary means by which you can tune your engine’s horsepower and torque output. Every cam has unique lift and overlap performance characteristics, which means you need to select cams based on exactly the kind of power you’re looking for. If you need increased torque to launch a heavy bike off the line, or high horsepower to improve trap speed with a lightweight bike, Screamin' Eagle® cams are available in a wide variety of configurations engineered to help you achieve the results you crave.

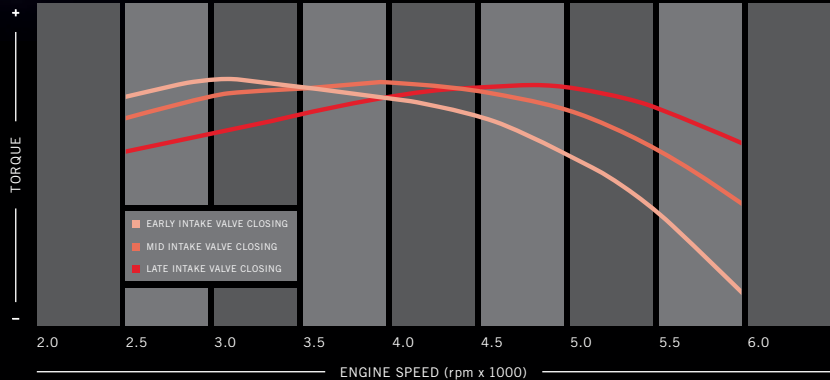


NEW EFI CAMS

Available for '06-later EFI Twin Cam models, “E” cams feature a unique lobe design that controls the valves for a higher lift with a shorter duration. This allows us to remove overlap, and take advantage of the EFI system to improve performance without impacting part throttle drivability.

THE GENERAL EFFECTS OF CAM TIMING ON ENGINE PERFORMANCE

The intake closing point relative to bottom center listed in the table on page 43 can be used as a “general” indicator for the shape of the torque curve. As illustrated in this graph, earlier intake closing values will result in higher torque at low engine speeds (along with lower torque at high engine speeds). Later intake closing values will result in higher torque at high engine speeds (along with lower torque at low engine speeds).



DISPLACEMENT

When it comes to increasing engine power, there’s no substitute for cubic inches. Assuming efficient volumetric filling and proper air/fuel mixture, the bigger the displacement, the more power your engine can produce. Essentially, there are three ways to increase your racing engine’s displacement: by increasing cylinder bore, by increasing piston stroke, or by increasing both the cylinder bore and piston stroke. Remember, stroke refers to the vertical distance a piston travels inside a cylinder, and bore refers to the diameter of the cylinder chamber in which the piston travels. What all this means is that you can enlarge your racing engine’s displacement by installing cylinders with a bigger bore and/or by adding a “stroker” flywheel and crankshaft combination to increase piston stroke.

DISPLACEMENT CALCULATION

$$1.57 \times \text{Bore} \times \text{Bore} \times \text{Stroke}^*$$

EXAMPLE

$$110 \text{ cubic inch} = 4 \text{ in. Bore}, 4.375 \text{ in. Stroke}$$
$$1.57 \times 4 \times 4 \times 4.375 = 109.9$$

*valid for 2-cylinder engine

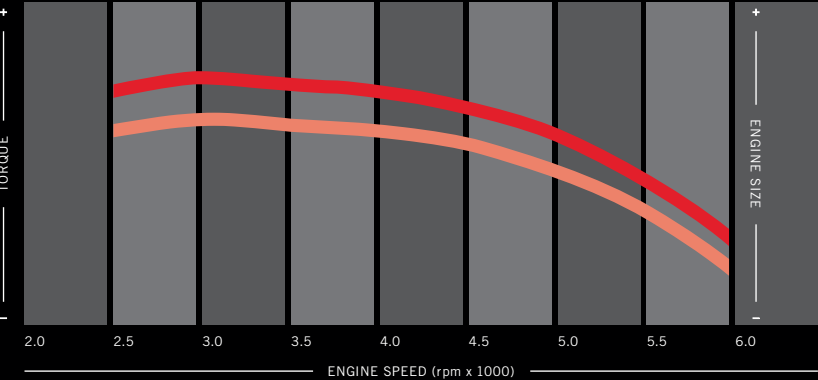
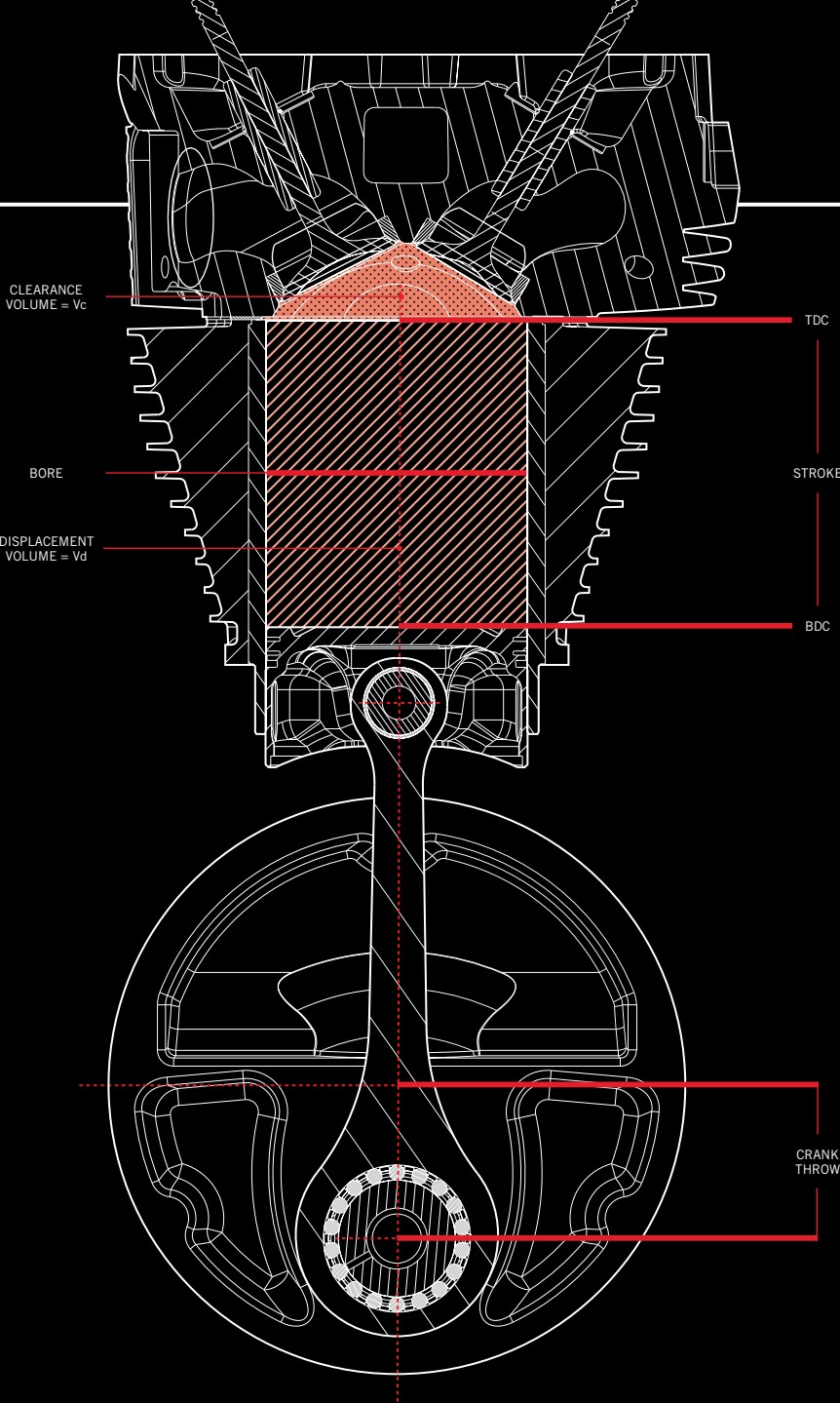
COMPRESSION RATIO CALCULATION

$$(Vd + Vc) / Vc$$

Vd = volume displaced by 1 cylinder
Vc = volume above the piston

EXAMPLE

$$(1 \text{ cylinder of a } 110 \text{ cubic inch engine})$$
$$Vd = 54.95 \text{ cu. in.}$$
$$Vc = 5.78 \text{ cu. in.}$$
$$(54.95 + 5.78) / 5.78 = 10.5:1$$

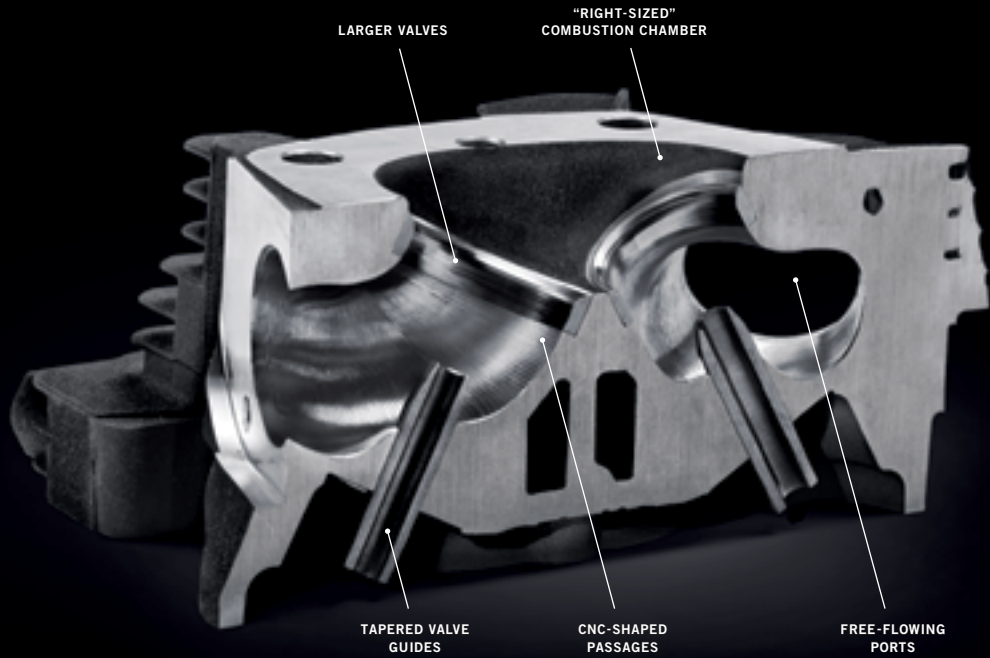


THE GENERAL EFFECTS OF INCREASING DISPLACEMENT ON ENGINE PERFORMANCE

Increasing engine displacement is an easy way to increase the output of an engine. Displacement increases tend to increase the output of the engine across the entire engine speed range. Big-bore pistons and cylinder and/or stroker kits are available to increase engine displacement.

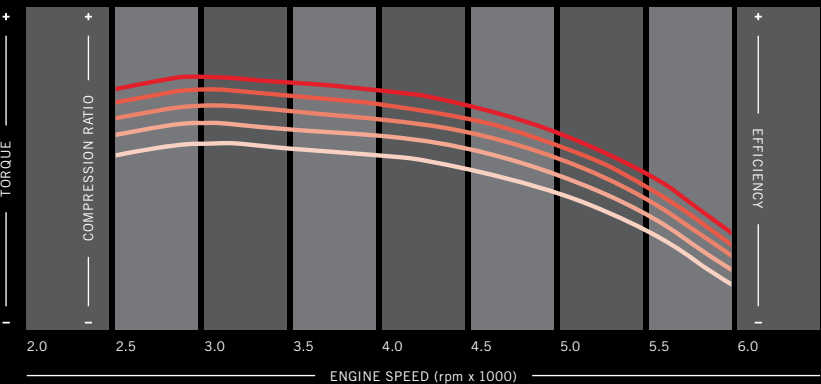
PISTONS & HEADS

Once you've increased your engine's displacement, you need to select complementary components that provide an ideal compression ratio for your specific situation. You can actually increase race engine power solely by boosting the compression ratio—the amount of pressure resulting from “squeezing” the air/fuel mixture—inside the cylinder's combustion chamber. The shape of the combustion chamber, which is dictated by the design of the cylinder heads and pistons, also has an effect on how efficiently the fuel/air mixture is drawn into the cylinder, burned and then expelled. Screamin' Eagle® Cylinder Heads offer a fusion of innovative port shapes and proven valve train components that produce race-winning power. And when matched with Screamin' Eagle® Pistons, which feature a range of designs for faster burn patterns and specific performance results, they can help put the competition at your back.



PERFORMANCE TUNING

Modifying an EFI-equipped motorcycle for racing is similar to modifying a carbureted model, in that freer-flowing intake and exhaust systems will require more fuel, and increased displacement and compression will require more fuel as well as spark timing changes. The Screamin' Eagle® Pro Super Tuner provides the computer-based tools you need to record and edit the ECM tuning tables for fuel delivery and spark timing. The Tuning Mode allows you to alter specific variables in your EFI system, and the Data Mode enables you to record and display real-time vehicle data, and graph the results on screen. The Super Tuner software also includes a variety of pre-tuned race-application calibrations that can be saved and loaded into your ECM.



THE GENERAL EFFECTS OF COMPRESSION RATIO ON ENGINE PERFORMANCE

Increasing the compression ratio is a common method for increasing an engine's performance. Increasing the compression ratio increases the thermal efficiency of the engine, resulting in an increase in engine performance across the entire engine speed range.

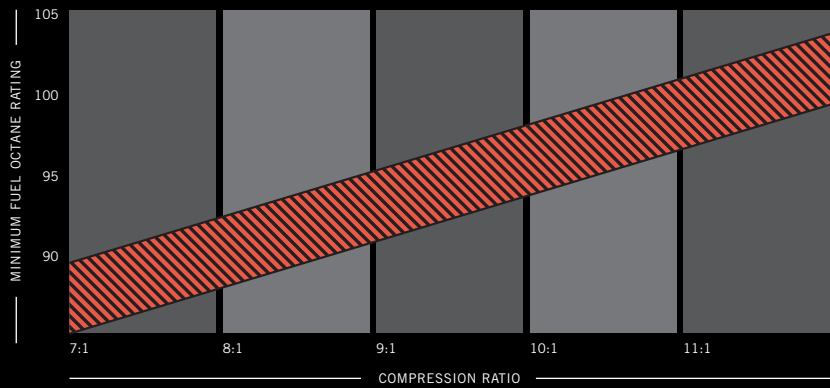
High-compression pistons are an easy way to increase compression ratio. See page 36 for recommended head and piston combinations.

Caution, increasing the compression ratio will likely result in a need to run higher octane fuels and less spark advance to avoid harmful spark knock.

THE GENERAL EFFECTS OF COMPRESSION RATIO ON FUEL QUALITY REQUIREMENTS

Increasing the compression ratio of an engine will likely result in a need to run higher octane fuel in the motorcycle. This graph shows the general trend for minimum required fuel octane rating for various compression ratios.

Cam selection also plays an important role in fuel quality requirements. For a given compression ratio, cams with an early intake valve closing value will likely require higher octane fuel than cams with a later intake valve closing value.



OTHER CONSIDERATIONS

Increased engine power and higher rev limits increase the stresses placed on other components. To maximize your engine's potential and help ensure its long-term health, remember to add high-performance rocker arms, gaskets, valve springs, cylinder studs and clutch springs into the mix.

STAGE KITS

Developed specifically for fuel-injected Harley-Davidson® motorcycles, Screamin' Eagle® EFI Stage Kits offer complete street-legal and racing performance configurations engineered to help you generate specific torque and horsepower gains at a given engine calibration. Eliminating all the guesswork and trial-and-error testing normally associated with engine modifications, Stage Kits include everything you need to enhance your bike's performance, including big-bore cylinders, high-compression pistons, performance cams and high-flow air cleaners. Always consult with your dealer about any Stage Kit-related modifications.



PUT IT TO THE TEST

Even with access to high-speed computers, theoretical modeling software, and hundreds of years of combined engineering expertise, we still need to put our theories to the test. We make hundreds of runs on the engine dyno to find the right mix of performance parts, and then subject bikes to hours on the chassis dyno to dial in perfect calibrations for street and track use. But sometimes, you just need to put rubber to the track.

For a complete recap of this performance machine’s specifications, visit www.harley-davidson.com/racecatalog.

FROM A MILD CUSTOM DYNA® STREET BOB®..

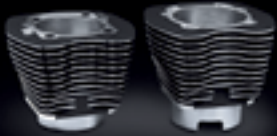
...TO A FULL-OUT DRAGSTER.

PICK A CLASS

Built with an eye toward AHRA’s ET or SEP racing class rules, our engineers went to work changing a simple street-custom Dyna® Street Bob® into a serious weekend racer. Trimmed of lighting, mirrors and other nonessential parts, this track-only ride would be an easy garage project (with the right tools and mechanical know-how). We started with 113ci Bigger Bore Cylinders, MVA Cylinder Heads, and 11.1:1 high-compression pistons, and finished with SE-266E cams, a 58mm throttle body and a free-flowing tuned exhaust. The results? 132 horsepower and 123.5 ft/lb of torque from 113 cubic inches.

RELIABILITY—RUN AFTER RUN

To spend more time on the track, and less time spinning wrenches, we also added everything you need to make this motor “bulletproof.” High lift rocker arms live in forged rocker supports, and are motivated by perfect-fit pushrods and roller tappets. The cams are held in place by a billet cam support plate, and the crank rides in a premium Lefty roller bearing. The top and bottom end are tied together with high tensile cylinder studs, and the power is put to the ground through a billet clutch hub and race disc package.



BIGGER-BORE CYLINDER KIT – P32



MVA CYLINDER HEADS – P34



RACE CLUTCH KIT – P51



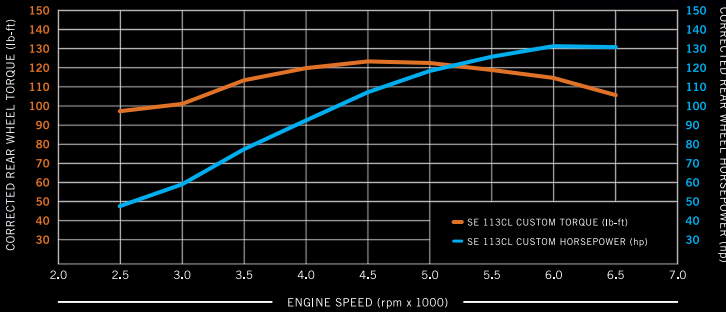
PISTONS – P37



THROTTLE BODY – P22



PERFORMANCE CAMS – P42



RACING INFORMATION GUIDE

WARRANTY & CAUTION


OVERVIEW Harley-Davidson has the engineering expertise, a sophisticated dyno lab and complete testing facilities to provide enthusiasts with a line of performance products designed to produce good, solid, reliable horsepower and torque. Engine-related performance parts are intended for the experienced rider only.


WARRANTY Installation of Screamin' Eagle® products, and similar off-road or competition products from other manufacturers, except some street-legal offerings installed by authorized Harley® dealers, may void your H-D® limited vehicle warranty. See your dealer for more information.


Installation of a California performance product onto a 49-state motorcycle or a 49-state performance product onto a California model motorcycle will void Manufacturers warranty, as it will not result in a street-legal configuration.


CAUTION Harley-Davidson® motorcycles modified with some Screamin' Eagle® high-performance engine parts must not be used on public roads and, in some cases, may be restricted to closed-course competition.

CAUTION ICONS

 **GO LIGHT** These Screamin' Eagle® products are 50-state street legal for sale and use on all vehicles, including those that are pollution controlled.

 **STOPHAND** Harley-Davidson® motorcycles modified with some performance engine parts must not be used on public roads and, in some cases, may be restricted to closed-course competition. Those performance parts identified with a stophand symbol are U.S. EPA legal, but are NOT legal for sale or use in California on pollution-controlled motor vehicles. California guidelines on tampering can also lead to substantial fines and penalties.

 **CROSSED FLAGS** Harley-Davidson® motorcycles modified with some (Screamin' Eagle®) performance engine parts must not be used on public roads and, in some cases, may be restricted to closed-course competition. In this Screamin' Eagle® section, all engine-related performance parts identified with the crossed flags symbol are intended for racing applications only and are not legal for sale or use in California on pollution-controlled vehicles. Alterations of emission related components constitutes tampering under the U.S. EPA guidelines and can lead to substantial fines and penalties.

 **CALIFORNIA** These Screamin' Eagle products are street legal for sale and use on pollution-controlled vehicles in the state of California.

PERFORMANCE VS. NOISE

Contrary to popular opinion, just because a bike is loud doesn't necessarily mean it performs better. In most cases, a certain amount of backpressure, which is generated primarily by the baffles in a muffler, is needed to effectively scavenge burnt fuel and air from the engine's cylinders and increase performance. Straight pipes that contain no baffles are only advantageous in very specific racing applications, namely for running lightweight bikes that have been tuned for high-horsepower, high-RPM operation on the drag strip. Most bikes running in ET-classes that require a fast starting-line launch need an exhaust system designed to add additional torque throughout the RPM range.

TUNING

Remember, your engine is a complex system of interrelated components that rely on each other to function properly. When you change your exhaust, you will most likely have to tune other parts of the system—like your air and fuel flow—to create the optimum synergy between components and maximize their on-track performance potential in the RPM range in which you'll be running.

LEGAL EFI PERFORMANCE

LIFE STAGES

Developed specifically for fuel-injected Harley-Davidson® motorcycles, Screamin' Eagle® Street Legal Kits eliminate the guesswork and the need for trial-and-error testing normally associated with engine modifications. Just define your performance goals, and pick the Stage Kit that gets you there.



A. SCREAMIN' EAGLE® STREET LEGAL 110 CUBIC INCH STAGE I KIT FOR EFI MODELS*

Bring your Twin Cam motorcycle up to the same displacement and power output as the CVO™ Screamin' Eagle® models – a gigantic 1800cc's. This street legal kit combines all the proven components of the CVO Screamin' Eagle models – the 4" big-bore forged pistons and cylinders, SE-255 camshafts, and cylinder heads with automatic compression release. The Screamin' Eagle cylinder heads and forged piston combination offers a 9.3:1 compression ratio for easy starting. The cylinder heads also prominently feature the "Screamin' Eagle 110" script. Kit includes all required gaskets (except primary cover and transmission interface gasket) and hardware to complete the installation. Installation requires case boring. Professional installation recommended. Separate purchase of cam spacers is required. See service manual for proper procedure and cam spacer part numbers. Requires separate purchase of appropriate Automatic Compression Release Wiring Harness. All EFI-equipped models require ECM calibration* (priced separately).

Fits 50-state '10 Touring models (except FLHX and FLTRX). Kit includes CVO Air Cleaner Back Plate.

27501-10	Black.	\$1,449.95
27504-10	Silver.	\$1,449.95

Fits 50-state '10 FXDF and FXDWG models. Kit includes Heavy Breather Air Cleaner.

27505-10	Black.	\$1,675.95
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Fits 49-state '09 Touring models.* Kit includes CVO Air Cleaner Back Plate and Catalytic Header Pipe.

27501-09	Black.	\$1,675.95
27504-09	Silver.	\$1,675.95

Fits 49-state '09 FXDF models.* Kit includes Heavy Breather Air Cleaner and Catalytic Header Pipe.

27505-09	Black.	\$1,979.95
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Fits 49-state '09 Softail® models with Staggered Dual Mufflers.* Does not fit FLSTF and FLSTN models. Kit includes Heavy Breather Air Cleaner and CVO Mufflers.

27508-09	Black.	\$1,979.95
27506-09	Silver.	\$1,979.95

Fits 49-state '08 Touring models.* Kit includes CVO Air Cleaner Back Plate and CVO mufflers.

27800-08A	Black.	\$2,459.95
27801-08A	Silver.	\$2,459.95

Fits '07-later HDI Touring models, '07-later HDI Dyna® models, and '07-'09 HDI FLSTF and '07 FXSTD Softail models. Street legal on HDI-configured models when installed with Original Equipment air cleaner and exhaust.

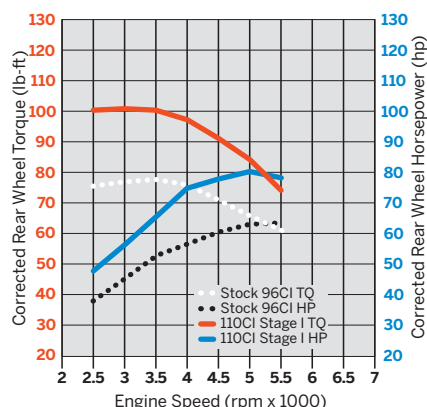
29866-07A	Black.	\$2,295.95
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Fits 49-state '08 FLSTF models.* Kit includes Heavy Breather Air Cleaner and CVO mufflers.

27804-08	Black.	\$2,459.95
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NOTICE: Installation of automatic or manual compression releases on large displacement engines is highly recommended.

TWIN CAM 96 STOCK VS. 110CI STAGE I KIT



Stage I
Air Cleaner

Heavy Breather
Air Cleaner



Touring
(^{'07-'08} only)



Dyna
(^{'07-'08} only)



Softail
(^{'07-'09} only)

*Recalibration is required for proper installation, and will allow engine to rev to 5500 RPM. See dealer for details. Labor cost not included.

When installed by an authorized Harley-Davidson Dealer at the time of vehicle delivery, these kits do not impact the vehicle's limited warranty.

NOTE: Installation of a California performance kit onto a 49-state model motorcycle, or a 49-state performance kit onto a California model motorcycle will void manufacturers warranty, as it will not result in a street legal configuration.



Touring

Softail

*Recalibration is required for proper installation, and will allow engine to rev to 6200 RPM. See dealer for details. Labor cost not included.

When installed by an authorized Harley-Davidson Dealer at the time of vehicle delivery, these kits do not impact the vehicle's limited warranty.

NOTE: Installation of a California performance kit onto a 49-state model motorcycle, or a 49-state performance kit onto a California model motorcycle will void manufacturers warranty, as it will not result in a street legal configuration.

B. SCREAMIN' EAGLE® STREET LEGAL BIG BORE STAGE II KIT FOR EFI MODELS – 103 CUBIC INCHES*

The Stage II Big Bore Kit provides the parts you need to increase the horsepower of your EFI-equipped model. The kit increases the displacement of your Twin Cam-equipped model from 96 cubic inches (1584cc) to 103 cubic inches (1690cc). Includes Stage II (SE-255) cams, Big Bore cylinders, Big Bore flat top pistons, clips, and a Stage I Air Cleaner Kit with one-piece back plate, integral breathers, all mounting hardware, and gaskets. Also includes a high performance clutch spring. Separate purchase of cam spacers is required. See manual for proper procedure and cam spacer part numbers. Requires separate purchase of primary cover gasket. Not all components shown. 49-state kits include catalyst mufflers or headers, and California kits are street legal on California pollution controlled vehicles when used with Original Equipment mufflers. All EFI-equipped models require ECM calibration* (priced separately).

Fits 50-state '10 Softail® models.
Also fits '08-later California Softail models.*

27543-08 Black. **\$899.95**

Fits 50-state '10 Touring models (except FLHTK, FLHX, FLTRX and Trike). Also fits '08-later California Touring models (except Trike, FLHTK, FLHX and FLTRX).*

27557-08 Black. **\$899.95**

27558-08 Silver. **\$899.95**

Fits 50-state '10 Dyna® models. Also fits '08-later California Dyna models (except FXDF and FXDWG)*

27545-08 Black. **\$899.95**

Fits 49-state '09 Touring models (except Trike).
Not street legal in California.*

27564-09 Black. **\$899.95**

27565-09 Silver. **\$899.95**

Fits 49-state '08 Touring models.
Not street legal in California.*

27532-08 Black. **\$1,199.95**

27533-08 Silver. **\$1,199.95**

Fits 49-state '08-'09 Dyna models (except FXDF).
Not street legal in California.*

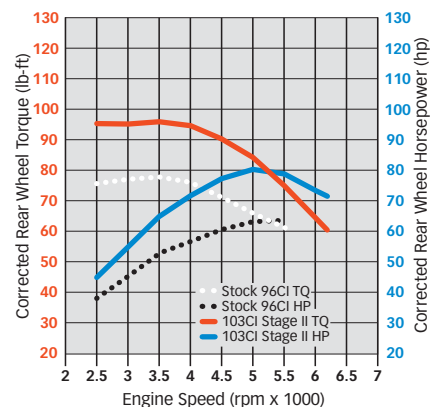
27541-08 Black. **\$1,199.95**

Fits '09 Dyna FXDF models.
50-state street legal.*

27566-09 Black. **\$899.95**

NOTICE: Installation of automatic or manual compression releases on large displacement engines is highly recommended.

TWIN CAM 96 STOCK VS. 103CI STAGE II KIT



A. SCREAMIN' EAGLE® BIG BORE STAGE I KIT FOR EFI MODELS – 103 CUBIC INCHES*

This Big Bore Kit lets you increase the displacement of your Twin Cam 96 engine-equipped model from 96 cubic inches (1584cc) to 103 cubic inches (1690cc). Includes Big Bore cylinders, Big Bore flat top piston assemblies and a Stage I Air Cleaner Kit with one-piece back plate, integral breathers, all mounting hardware, and gaskets. A high performance clutch spring is included to provide the additional clutch capacity required by the extra torque. Requires separate purchase of primary cover gasket. This kit is street legal when used with stock mufflers. (Not all components shown.) All EFI-equipped models require ECM calibration* (priced separately).

*Recalibration is required for proper installation, and will allow engine to rev to 6200 RPM. See dealer for details. Labor cost not included.

Fits all '07 Twin Cam and '08-later Softail® models.*

29903-07A Black. **\$639.95**

29904-07A Silver. **\$639.95**

Fits '08-later Dyna® models.*

27535-08 Black. **\$639.95**

27536-08 Silver. **\$639.95**

Fits '08-later Touring models (except FLHTK and Trike).*

27539-08 Black. **\$639.95**

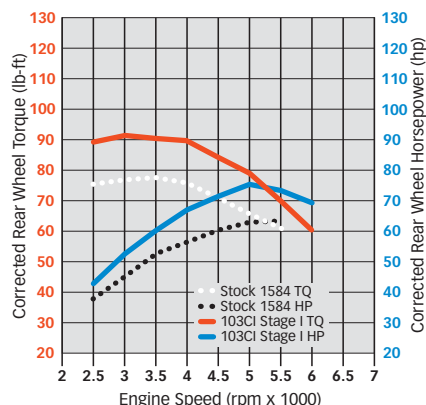
27540-08 Silver. **\$639.95**

Fits European '10 Touring models. Legal on HDI configured models when used with stock exhaust and air cleaner.

27534-10 Black. **\$639.95**

NOTICE: Installation of automatic or manual compression releases on large displacement engines is highly recommended.

TWIN CAM 96 STOCK VS. 103CI STAGE I KIT



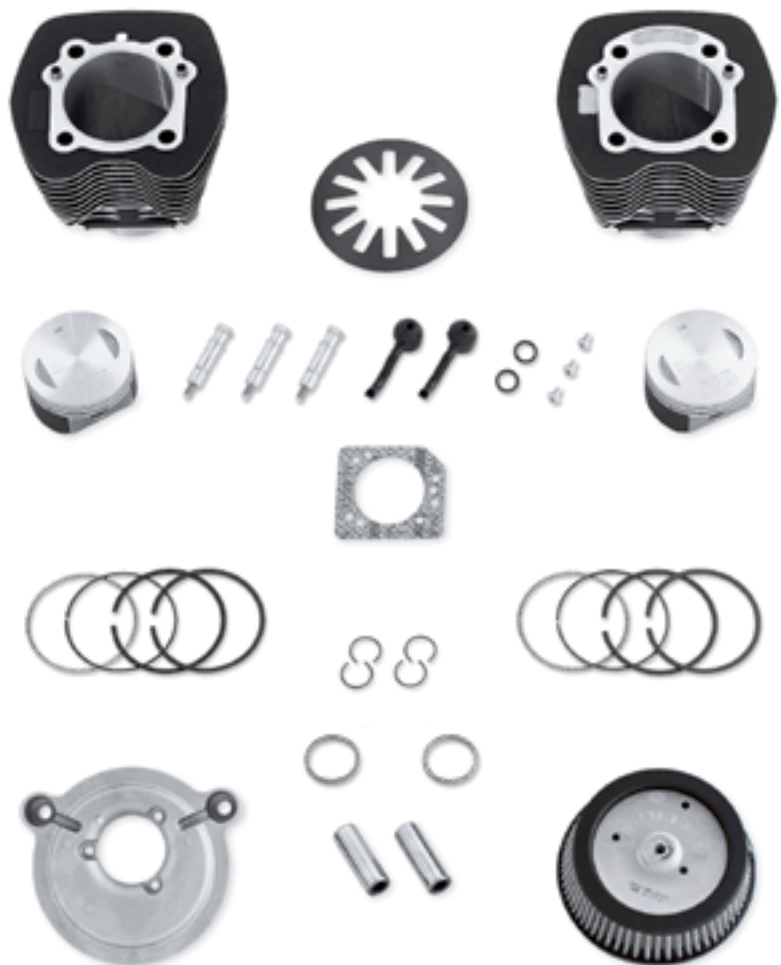
B. SCREAMIN' EAGLE "HEAVY BREATHER" AND STREET PERFORMANCE EXHAUST KIT

This street legal combination pairs two great accessories in one convenient package, the Screamin' Eagle Heavy Breather air intake system and the Screamin' Eagle Blunt Revolver Street Performance mufflers. Kit provides high style, improved sound quality, and great performance. All EFI-equipped models require ECM calibration* (priced separately). Mufflers are 50-state street legal on stock displacement '08-later FXDF and '10 FXDWG models.

29408-08 **\$619.95**

Fits '08-later FXDF and '10 FXDWG models.

*Recalibration is required for proper installation. See Dealer for details. Labor cost not included.



A. SCREAMIN' EAGLE BIG BORE STAGE I KIT FOR EFI MODELS – 103 CUBIC INCHES



B. SCREAMIN' EAGLE "HEAVY BREATHER" AND STREET PERFORMANCE EXHAUST KIT



C. SCREAMIN' EAGLE SPORTSTER 883CC TO 1200CC STAGE I CONVERSION KIT



D. SCREAMIN' EAGLE SPORTSTER STAGE I AIR CLEANER KIT



E. SCREAMIN' EAGLE EVOLUTION 1340 EFI STAGE I PERFORMANCE KIT

C. SCREAMIN' EAGLE® SPORTSTER® 883CC TO 1200CC STAGE I CONVERSION KIT*



Make your Iron 883 roar. This complete conversion kit will alter the personality of your 883-equipped Sportster model. Designed to bring your XL883 model up to XL1200 specifications, this kit includes Sportster Stage I Air Cleaner Kit, XL1200 Cylinder Heads, and XL1200 Cylinders and Pistons. Kit includes black highlighted cylinders and cylinder heads. No case machining is required for installation. Street legal when used with stock mufflers. All models require ECM calibration* (priced separately).

29784-07A Black.

\$1,199.95

Fits '07-later XL883 models.

*Recalibration is required for proper installation, and will allow engine to rev to 7000 RPM. See dealer for details.

D. SCREAMIN' EAGLE SPORTSTER STAGE I AIR CLEANER KIT*



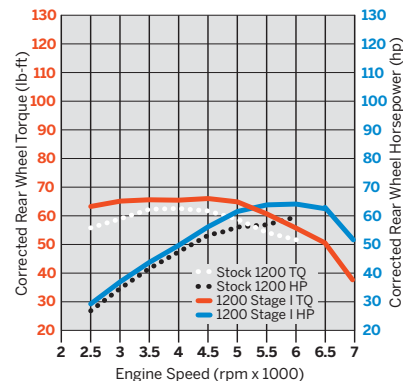
The XL Stage I Air Cleaner Kit provides increased airflow to boost the power of your fuel injected Sportster model. The complete kit features a composite air cleaner back plate, air cleaner cover adapter, a high-flow washable synthetic media filter element that does not require oiling, and a breather system that routes gasses and excess oil directly into the intake. Kit also includes cover trim, and all mounting hardware. Street legal when used with stock mufflers. All models require ECM calibration* (priced separately).

29782-07 Fits '07-later XL models.

\$139.95

*Recalibration is required for proper installation, and will allow engine to rev to 7000 RPM. See dealer for details.

SPORTSTER 1200 STOCK VS. 1200 STAGE I KIT



E. SCREAMIN' EAGLE EVOLUTION® 1340 EFI STAGE I PERFORMANCE KIT**



This 50-state street legal kit increases torque throughout the RPM range, with a 15% increase at the peak. Stage I Kit includes air cleaner and breather kit, and all required hardware. All models require ECM calibration** (priced separately). These kits are designed to work with stock mufflers.

29387-97B

\$119.95

Fits '97-'98 Evolution® 1340-equipped EFI models only. Also fits '95-'96 Evolution 1340-equipped EFI models when used with ECM P/N 32423-97B. (Does not fit Twin Cam-equipped models.)

**Recalibration is required for proper installation, and will allow engine to rev to 6000 RPM. See dealer for details. Labor cost not included.

CAUTION: Harley-Davidson EFI systems will not compensate for any component changes. Do not mill heads or increase compression in any way. Do not use cams other than those supplied in the kit. Do not change kit components. Failure to comply may result in engine damage.

RACE USE EFI PERFORMANCE

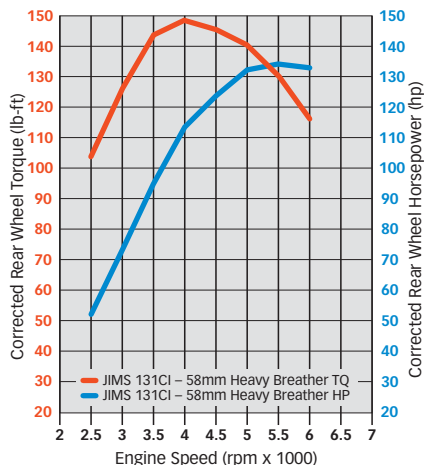


INJECT SOME MUSCLE

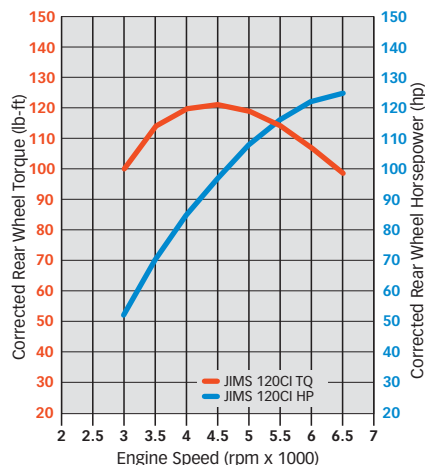
Despite what you may be thinking, Electronic Fuel Injection (EFI) isn't as complicated as it sounds. On the race track, you need to move more air and more fuel through the engine. And with Screamin' Eagle® Pro racing parts, you have a wide range of options that allow you to produce the specific kind of track performance you're looking for.



JIMS 131CI TWIN CAM
RACE ENGINE WITH SE HEAVY BREATHER



JIMS 120CI TWIN CAM
RACE ENGINE WITH SE AIR CLEANER



Corrected torque and horsepower measured at the rear wheel on a chassis dynamometer. Your results may vary.

A. JIMS® TWIN CAM RACE ENGINES

The new JIMS Twin Cam Race Engines, available exclusively through Harley-Davidson® dealers, are a complete component package designed to serve as a solid foundation for racers seeking big horsepower and displacement. Developed by JIMS of Camarillo, CA, these race engines are designed to fit Harley-Davidson® models originally powered by Evolution® 1340 or Twin Cam 88 engines. JIMS Twin Cam Race Engines are NOT street-legal. This engine kit was developed as a result of a license Harley-Davidson granted to JIMS for use of some Harley-Davidson Twin Cam intellectual property. The JIMS Twin Cam Race engines are based on a 356-T6 aluminum crankcase with enough case material to support a bore size up to 4.800 inches. This is not a bored stock case, but a brand new JIMS crankcase with increased wall thickness for larger bore potential. As a new crankcase, the kit ships with a JIMS serial number and a MSO.

JIMS Race Engines are available fully assembled, or in kit form with the lower end pre-assembled and all other component parts included. Engines are available with or without a Screamin' Eagle® 58mm EFI Throttle Body or Super Bore 51mm Carburetor and matching intake manifold. The engine is offered in black or silver powder coat, color-matched to Original Equipment Harley-Davidson transmissions. **For race application only.**

JIMS 120 and 131ci Twin Cam engines are available to fit '91-later Dyna® Softail® and Touring chassis, including models originally equipped with Evolution engines.

120CI TWIN CAM ALPHA AND BETA ENGINES

The 120-cid package pumps out 121 rear-wheel horsepower at 6200 RPM, and 125 ft. lbs. of torque at 3750 RPM on 91 octane pump gasoline. The engine features JIMS cylinder heads with matching stud spacing, pressed flywheels, forged 4340 steel connecting rods, JIMS 4.125-inch bore cylinders and matching forged pistons, Screamin' Eagle valve springs, and JIMS Powerglide™ II high performance tappets. The rocker covers are CNC relieved to clear the race valve springs.

JIMS 120 Twin Cam Race Engine Specifications: (with SE Stage I A/C)

Peak Horsepower	121 @ 6200 RPM
Peak Torque	125 @ 3750 RPM
Displacement	120 C.I.
Bore x Stroke	4.125" x 4.500"
Compression Ratio	10:1
Intake Valve Diameter	2.080"
Exhaust Valve Diameter	1.625"
Cam Lift	.635"

131CI TWIN CAM ALPHA AND BETA ENGINES

The 131-cid package pumps out 131 rear-wheel horsepower at 6200 RPM and 135 ft. lbs. of torque at 3750 RPM on 91 octane pump gasoline. The engine features high-flow CNC-ported heads, pressed flywheels, forged 4340 steel connecting rods, JIMS 4.312-inch bore cylinders and matching forged pistons, Screamin' Eagle valve springs, and JIMS Powerglide™ II high performance tappets. The engine also features an upgraded high-flow oil pump and a JIMS billet cam support plate with hydraulic cam chain tensioners. The rocker covers are CNC relieved to clear the race valve springs.

JIMS 131 Twin Cam Race Engine Specifications: (with SE Stage I A/C)

Peak Horsepower	130 @ 6200 RPM
Peak Torque	135 @ 3750 RPM
Displacement	131 C.I.
Bore x Stroke	4.312" x 4.500"
Compression Ratio	10:1
Intake Valve Diameter	2.120"
Exhaust Valve Diameter	1.625"
Cam Lift	.635"

For more details, ordering information, and pricing, see your Dealer, or visit: www.jimsusa.com

A. SCREAMIN' EAGLE® PRO RACE KIT – 113 CUBIC INCHES



A complete kit for the racing performance enthusiast. This kit has it all to get your motor to perform competitively at the track. This kit includes our precision honed big bore 4.060 diameter cylinders with high compression 10.5:1 forged aluminum pistons, a set of high lift SE266E cams, our CNC Ported Maximum Velocity Area (MVA's) Heads with 2.120" diameter intake valves, perfect fit pushrods and gaskets. Heads are machined to accept automatic compression releases (*sold separately*). To get the air to the heads you need a big bore throttle body. This kit includes our 58mm throttle body along with large fuel injectors. To top off the kit we've also included our very popular EFI Super Tuner. **For race application only.**

Fits '07-later Dyna®, '07-later Softail®, and '07 Touring models. Also fits '06 Dyna models when upgraded to 4-3/8" Stroker Flywheel P/N 23729-07. Cannot be installed on 110ci CVO™ models, or any Twin Cam models previously upgraded to a 110ci motor. Requires separate purchase of model-specific Automatic Compression Release Wiring Harness Kit. Not compatible with cruise control.

27559-08B	Black.	\$3,099.95
27561-08B	Silver.	\$3,099.95

Fits '08-later Touring models. Also fits Trike models. Cannot be installed on 110ci CVO models, or any Twin Cam models previously upgraded to a 110ci motor. Requires separate purchase of model-specific Automatic Compression Release Wiring Harness Kit.

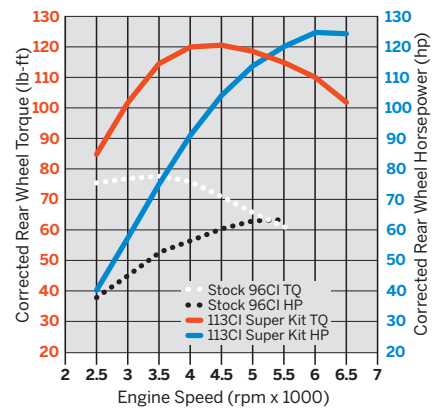
27525-08B	Black.	\$3,099.95
27526-08B	Silver.	\$3,099.95

NOTICE: Installation of automatic or manual compression releases on large displacement engines is highly recommended.

*Recalibration is required for proper installation, and will allow engine to rev to 6200 RPM. See dealer for details. Labor cost not included.



TWIN CAM 96 STOCK VS. 113CI SUPER KIT





A. SCREAMIN' EAGLE® PRO

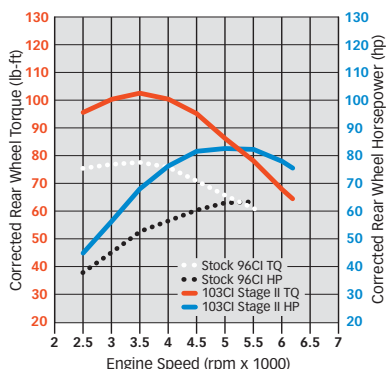
STAGE II KIT – 103 CUBIC INCHES*

The Stage II Big Bore Kit provides the parts you need to improve the track performance and horsepower of your EFI-equipped model. The kit increases the displacement of your Twin Cam-equipped model from 96 cubic inches (1584cc) to 103 cubic inches (1690cc). Kit includes Stage II (SE-255) cams, 3-7/8" Big Bore cylinders, 3-7/8" Big Bore flat top pistons a high performance clutch spring, and all mounting hardware and gaskets. Just add your choice of a Screamin' Eagle High Flow or Heavy Breather Air Cleaner (*sold separately*) for maximum track performance. Requires separate purchase of primary cover gasket. Not all components shown. All EFI-equipped models require ECM calibration* (*priced separately*). Separate purchase of cam spacers is required. See service manual for proper procedure and cam spacer part numbers. **For race application only.**

Fits '07-later Twin Cam models (except Trike and FLHTK).

29893-07A	Black.	\$759.95
29894-07A	Silver.	\$759.95

TWIN CAM 96 STOCK VS. 103CI STAGE II KIT



B. SCREAMIN' EAGLE PRO

STAGE II KIT – 95 CUBIC INCHES*

When stock cams just won't do. This Big Bore Kit provides the parts you need to increase the horsepower of your EFI-equipped model. The kit increases the displacement of your '99-'06 Twin Cam 88® from 88 cubic inches (1450cc) to 95 cubic inches (1550cc). Includes Stage II (SE203) cams, 3-7/8" cylinders, 3-7/8" pistons, clips, air cleaner and breather, high performance clutch spring, hardware and gaskets. Requires separate purchase of primary cover gasket and Air Cleaner Trim Ring. (Not all components shown.) All EFI-equipped models require ECM calibration* (*priced separately*). **For race application only.**

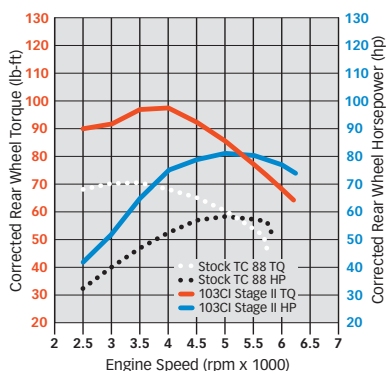
Fits '01-'06 EFI Softail® models, '02-'06 EFI Touring models and '04-'05 EFI Dyna® models.

29859-04A	Silver.	\$809.95
29775-02B	Black.	\$809.95

Fits '99-'01 fuel-injected Touring models. '99 models require Splayed Cam Sprocket P/N 25716-99.

29492-99C	Black.	\$809.95
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TWIN CAM 88 STOCK VS. 95CI STAGE II KIT



A. SCREAMIN' EAGLE PRO STAGE II KIT – 103 CUBIC INCHES



NOTE: Separate purchase of Cam Spacer Kit P/N 25938-00 is recommended for '99-'06 Touring, '01-'06 Softail and '04-'05 Dyna models. This kit contains five different spacers to achieve proper sprocket alignment. Individual spacers can be purchased separately. For '06 Dyna models, see service manual for proper procedure and Cam Spacer part numbers.



B. SCREAMIN' EAGLE PRO STAGE II KIT – 95 CUBIC INCHES

C. SCREAMIN' EAGLE® PRO SUPER TUNER



Get the biggest advantage at the race track with the Screamin' Eagle® Pro EFI Super Tuner. The hardware and software in the Super Tuner makes EFI tuning easier with dozens of innovative tuning enhancements. Super Tuner is available in 7 languages (English, Spanish, German, French, Japanese, Italian, Portuguese, and Dutch), and is compatible with Windows XP and Vista.

The Super Tuner includes an ergonomically improved Vehicle Communication Interface (VCI) box. The new VCI allows USB connectivity to your PC and contains on board memory for a full 15 minutes of data recording, tracking up to 26 data variables. Data recording is conveniently activated with a push of a button, allowing the VCI to be taken to the track to gather data during true race conditions. Cable Kit (P/N 32184-08) is sold separately and provides all necessary connections between Motorcycle, VCI, and PC / Laptop.

The Super Tuner Software is easy to use with a large icon layout, compatible with touch screen laptops, the ability to work in 4 windows (tables) at one time, and enhanced help tools to keep you on track. Data and Tuning functions are combined into a single application, insuring you are only 2 clicks away from any major tuning function. With a click of a button, the software automatically connects to the internet and updates to the most current version as well as retrieves the newest calibrations developed by professional Screamin' Eagle calibrators. Software contains built-in model recognition that filters calibrations, listing those that are applicable to your model. State of the art graphing capabilities illustrate tables clearly, highlighting areas for improvement, and are fully scalable and customizable. Additional features include editable calibration text, custom note fields, drag and drop, cut and paste, and printing capability.

To get you on the track quickly, Screamin' Eagle offers a comprehensive computer based training DVD, (P/N 32101-08). **For race application only.**

32109-08A **\$459.95**
Fits '01-later EFI VRSC™, XL, XR, Dyna®, Softail® and '02-later EFI Touring and Trike models. Also fits VRXSE Destroyer® race bikes.

Shown with:

SCREAMIN' EAGLE PRO SUPER TUNER SOFTWARE WITH "SMART-TUNE"



This updated software is required for all new 2010 model year updates for the Super Tuner EFI tuning capabilities. Software includes new 2010 race use only calibrations along with all previous race use calibration software from '02-'09. The new software also includes a new time-saving self-tuning feature called "Smart-Tune". Now, you can choose a base calibration, run the bike and record the data to the VCI box, download the data, and the software will automatically make recommendations and adjust the settings for optimum performance. Smart Tune works on models with factory-installed O2 sensors only. **For race application only.**

32111-10 **\$29.95**
Software CD.
Fits '01-later EFI VRSC™, XL, XR, Dyna®, Softail® and '02-later EFI Touring and Trike models. Also fits VRXSE Destroyer® race bikes.

SCREAMIN' EAGLE PRO SUPER TUNER CABLE KIT
32184-08 **\$39.95**

SCREAMIN' EAGLE PRO SUPER TUNER TRAINING DVD
32101-10 **\$29.95**



A. SCREAMIN' EAGLE® PRO HIGH FLOW 58MM EFI THROTTLE BODY – ELECTRONIC THROTTLE

The biggest engines deserve the most fuel. This huge 58mm Throttle Body (8mm or 16% larger than stock) won't leave your engine starving for more air. The one-piece throttle body features Electronic Throttle Control technology, new for '08 and '09 Touring models. Just add your stock injectors or the Screamin' Eagle Pro High Flow Injector Kit P/N 27796-08 (*sold separately*). Stock injectors are recommended for engines making up to 100 rear wheel horsepower, Screamin' Eagle High Flow injectors are recommended for engines creating greater than 100 rear wheel horsepower. All EFI-equipped models require ECM calibration (*sold separately*). **For race application only.**

27713-08 \$399.95
Fits '08-later Touring models.

B. SCREAMIN' EAGLE PRO HIGH FLOW 58MM EFI THROTTLE BODY – CABLE OPERATED THROTTLE

This massive 58mm bore Throttle Body is extruded, precision machined, and polished to provide all the air you'll need to dominate at the track. Designed for use with Screamin' Eagle Pro cylinder heads, installation requires separate purchase of Screamin' Eagle Pro High-Flow Intake Manifold P/N 29667-07, and either the Screamin' Eagle Pro High Flow Air Cleaner Kit P/N 29515-08 or the Heavy Breather Air Intake System 29253-08A, 29006-09A or 28716-10. Injectors mount to the Screamin' Eagle Manifold, stock injectors can be re-used for engines making up to 100 rear wheel horsepower, Screamin' Eagle Pro High Flow Injectors P/N 27797-07 are recommended for engines producing greater than 100 Rear Wheel Horsepower. All EFI-equipped models require ECM calibration (*sold separately*). **For race application only.**

27639-07A \$449.95
Fits '06-later Dyna and Softail EFI models, and '06-'07 Touring EFI models. Not compatible with cruise control.

C. SCREAMIN' EAGLE PRO HI-FLOW INTAKE MANIFOLD – 58MM THROTTLE BODY

This manifold is cast and precision machined to provide an exact fit with Screamin' Eagle Pro Accessory cylinder heads and the Screamin' Eagle Pro 58mm EFI Throttle Body P/N 27639-07. This manifold has intake runners which are .100" larger in diameter than all stock Twin Cam heads and early Screamin' Eagle performance cylinder heads. The intake port diameter in the cylinder heads should be 1.750", if not; an experienced engine builder can open the cylinder head ports to this diameter to ensure a smooth transition and air-flow. Stock injectors can be re-used for applications making up to 100 rear wheel horsepower, Screamin' Eagle Pro High Flow Injectors P/N 27797-07 are recommended for engines producing greater than 100 rear wheel horsepower. All EFI-equipped models require ECM calibration (*sold separately*). **For race application only.**

29667-07 \$89.95
Fits '06-later Dyna and Softail EFI models, and '06-'07 Touring EFI models equipped with Screamin' Eagle Pro 58mm EFI Throttle Body P/N 27639-07. The intake flanges supplied in this kit will only fit cylinder heads machined for use with the stock symmetrical intake flanges (OE since MY06). All Screamin' Eagle performance cylinder heads (except Kompressor) with kit P/N extension of -06 or later have a intake port diameter of 1.750" and are machined for use with symmetrical intake flanges.

D. SCREAMIN' EAGLE PRO HIGH FLOW INJECTOR KIT – 58MM THROTTLE BODY

Injectors provide fuel delivery at the rate of 4.9 grams/second, 25% more than Original Equipment injectors. Recommended for use with engine configurations making more than 100 rear wheel horsepower. All EFI-equipped models require ECM calibration (*sold separately*). **For race application only.**

27797-07 \$139.95
Fits Twin Cam models equipped with Screamin' Eagle 58mm EFI Throttle Body P/N 27639-07 and Intake Manifold P/N 29667-07.

Also available:

SCREAMIN' EAGLE PRO HIGH FLOW INJECTOR KIT – 58MM THROTTLE BODY

Injectors provide fuel delivery at the rate of 5.3 grams/second, 23% more than Original Equipment injectors. Recommended for use with engine configurations making more than 100 rear wheel horsepower. All EFI-equipped models require ECM calibration (*sold separately*). **For race application only.**

27796-08 \$139.95
Fits '08-later Touring models equipped with Screamin' Eagle 58mm Throttle Body P/N 27713-08.

22 EFI INTAKE PERFORMANCE PARTS TWIN CAM EFI MODELS



A. SCREAMIN' EAGLE PRO HIGH FLOW 58MM EFI THROTTLE BODY – ELECTRONIC THROTTLE



B. SCREAMIN' EAGLE PRO HIGH FLOW 58MM EFI THROTTLE BODY – CABLE OPERATED THROTTLE (SHOWN WITH MAP SENSOR-NOT INCLUDED)



C. SCREAMIN' EAGLE PRO HI-FLOW INTAKE MANIFOLD – 58MM THROTTLE BODY



D. SCREAMIN' EAGLE PRO HIGH FLOW INJECTOR KIT – 58MM THROTTLE BODY (27797-07 SHOWN)



E. SCREAMIN' EAGLE PRO 50MM EFI THROTTLE BODY – SHOWN WITH MAP SENSOR (NOT INCLUDED)



F. SCREAMIN' EAGLE PRO STAGE II KIT FOR VRSC MODELS



G. SCREAMIN' EAGLE PRO VRXSE DESTROYER BIG BORE THROTTLE BODY KIT



H. SCREAMIN' EAGLE PRO VRXSE DESTROYER PERFORMANCE INJECTOR KIT

E. SCREAMIN' EAGLE® PRO 50MM EFI THROTTLE BODY

Higher flowing for larger displacement race engine applications. Includes throttle body and unique intake flanges and seals. This big bore throttle body features a 50mm throttle plate (a 4mm increase over the '06 Original Equipment throttle body) to provide increased airflow, and more power. Higher flow rate injectors provide 25% more fuel to complement the increased airflow. Sensors, injectors (with a flow rate of 4.9 grams/second), and the IAC stepper motor are fully assembled on this bolt-on unit. All EFI-equipped models require ECM calibration (*priced separately*). **For race application only.**

27623-05A \$399.95

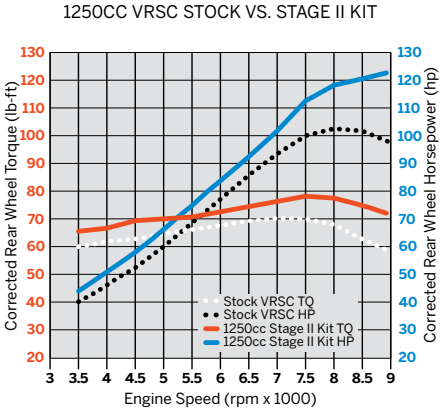
Fits '06-later Twin Cam EFI models (except '08-later Touring) equipped with accessory performance cylinder heads.

F. SCREAMIN' EAGLE PRO STAGE II KIT – VRSC™ MODELS

Increase your VRSC model's top-end horsepower and race track performance. When paired with your choice of race-use exhaust system, the Screamin' Eagle Pro intake and exhaust cams, tuned-length short velocity stacks and a high-flow air cleaner combine to produce a solid 20-horsepower boost at the rear wheel. Kit includes cam gaskets that permit this Stage Kit to be installed without removing the engine from the frame. The lower air cleaner box can be modified to improve the air flow (template included). All models require ECM calibration (*priced separately*) with available Super Tuner configuration. **For race application only.**

30076-09 \$499.95

Fits '07 VRSCX and '08-later VRSC models. Installation requires modification of the lower air cleaner box for relocation of the temperature sensor. Installation requires separate purchase of Valve Shims.



G. SCREAMIN' EAGLE PRO VRXSE DESTROYER® BIG BORE THROTTLE BODY KIT

This bolt-on kit boasts a 58mm throttle body, compared to 53mm stock throttle body. Can be used with stock injectors or with VRXSE Performance Injector Kit P/N 27791-05. Recalibration required through EFI Race Tuner only. **For race application only.**

27670-05 Fits '02-later VRSC models. \$499.95

H. SCREAMIN' EAGLE PRO VRXSE DESTROYER PERFORMANCE INJECTOR KIT

This performance injector kit features 6-hole, twin jet injectors that flow 30% more fuel, compared to stock injectors. Recalibration required through EFI Race Tuner only. **For race application only.**

27791-05 \$299.95

Fits '02-later VRSC™ models equipped with P/N 27670-05 Destroyer Big Bore Throttle Body Kit.