

# ENGINE REMANUFACTURING

When the miles start to add up, the Harley-Davidson® Engine Remanufacturing Program can put the rumble back into your powerplant simply, quickly and affordably. The program is available for the Evolution® 1340, Twin Cam 88®, Twin Cam 88B™ and Twin Cam 95™ engines. Contact your Harley-Davidson® dealer for more information.



**Getting Started** *Your engine's journey begins at your Harley-Davidson dealership. The engine is removed from your bike and shipped via Con-way® in a specially-designed container to our state-of-the-art Powertrain Operation, Capitol Drive facility in Wauwatosa, WI.*



**1. Disassembly** *Upon its arrival, your engine is completely taken apart and inspected by the remanufacturing team. Engine components that can be cleaned and remanufactured to original specifications are saved, while those not worth saving are discarded.*



**2. Cleaning and Powder Coating** *All reusable parts are cleaned, and paint is thermally removed from the cylinders and heads. Small components are cleaned through a baking soda blasting process. After inspection, parts are powdercoated in our state-of-the-art production paint facility.*

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The engine—it's the heart and soul of your Harley-Davidson® motorcycle. To preserve it, we can remanufacture your high-mileage or aging motor to original specifications, with your choice of state-of-the-art chrome, polished and powder coated factory finishes. You have the option to select Stage I Big Bore upgrades, and when originally removed and installed by an authorized Harley-Davidson dealer, your remanufactured engine carries a 12-Month Unlimited Mileage Limited Warranty. *For details, visit: [Harley-Davidson.com/wcm/Content/Pages/Engines/engine\\_reman.jsp](http://Harley-Davidson.com/wcm/Content/Pages/Engines/engine_reman.jsp).*



**3. Machining** Once powder coated, these parts are machined, bored and honed to exact tolerances. Then, they proceed through rigid specification checks. Only the components that meet our strict standards ever make it past this point.



**4. Reassembly** During reassembly, crankcases are set, bearings are pressed and components are meticulously reassembled. All chromed and polished components are replaced with new parts, and your engine is upgraded to meet the latest specifications, while retaining its stock configuration.\*



**5. Testing and Finishing** After reassembly, your engine is run through a battery of tests to ensure it performs to Harley-Davidson standards. Upon passing these tests, your engine is awarded a one-year, unlimited mileage factory warranty. After cleaning and polishing, your engine is ready to come home.



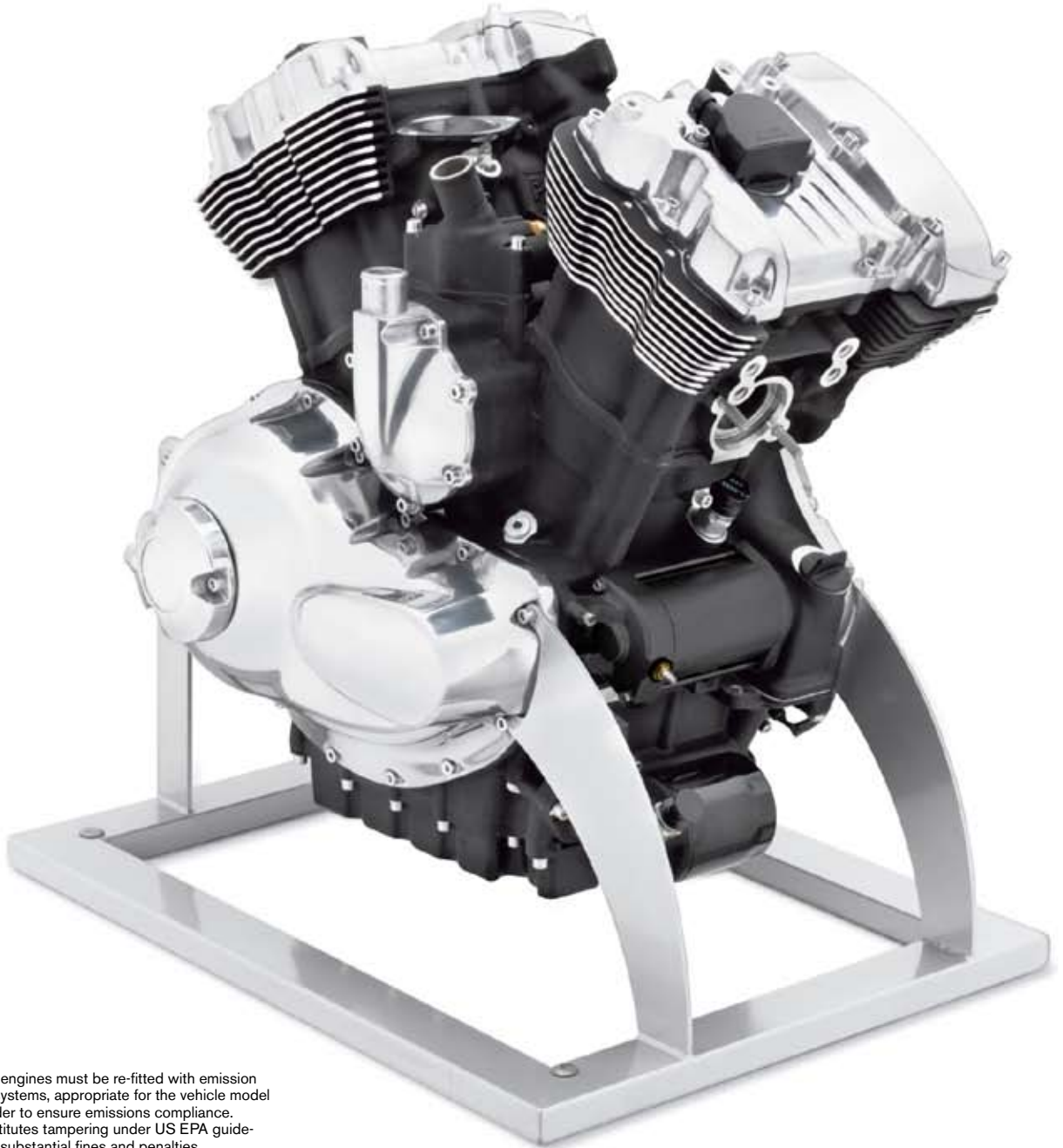
**Back in the Saddle** Approximately two weeks after its journey began, your V-Twin® is returned to your dealer for installation with a new lease on life and its original Vehicle Identification Number (VIN).

\*For legal and warranty purposes, all engines will receive stock camshafts. If you have installed high-performance cams, they will not be reinstalled or returned.

**A. New Era Revolution® Engine Program – VRSC™**

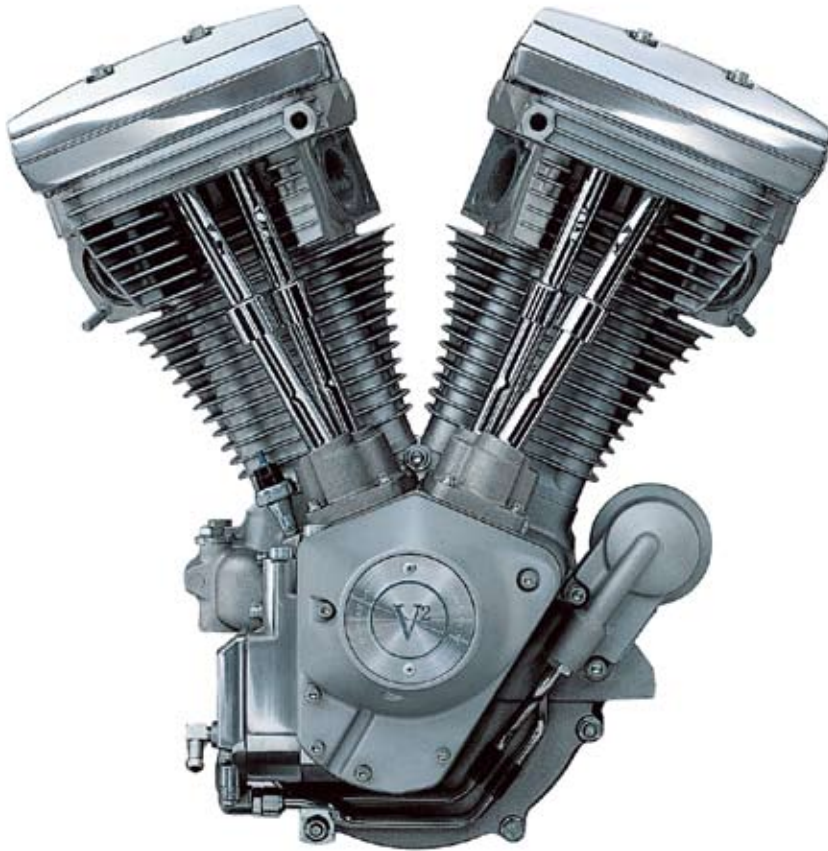
With the launch of the V-Rod® motorcycle in 2002, the world was introduced to a revolutionary new powertrain, and now, the Revolution engine is available from your Harley-Davidson® Dealer. Available in black and polished 1250cc configuration as featured as Original Equipment in the 2008 VRSC models.

**19558-08K** Black and Polished 1250cc.  
Fits '08 VRSC models.  
Does not include intake system  
or mini wire harness.



NOTE: Replacement engines must be re-fitted with emission control devices and systems, appropriate for the vehicle model and model year in order to ensure emissions compliance. Failure to do so constitutes tampering under US EPA guidelines and can lead to substantial fines and penalties.

Legal for use on public roads only when installed in the specified models. Not legal for use on public roads when installed in models other than the ones specified and not eligible for the P&A 24 month warranty when installed in models other than the ones specified. Please see the Parts and Accessories warranty statement and your dealer for more information.



## B. Smart Start Engine Program

Since the first single cylinder built in 1903, engines have been the heart and soul of Harley-Davidson history. Each motor has made its unique contribution, and the V2 Evolution® engine is no exception. With the Smart Start Engine Program, buying a new Evolution engine has never been easier. When replacing your Evolution motor, Smart Start offers brand new, factory-tested engines at an unbeatable price. Choose the standard Silver and Polished Evolution, the classic Black and Chrome or the new Silver and Chrome. Either way, you won't just be making a new start, you'll be making a smart start. Carburetor, manifold, and timer cover not included.

### Silver and Polished 1340cc Evolution Engine

**16161-99** Fits all '99 Softail® models.

### Black and Chrome 1340cc Evolution® Engine

**16160-99** Fits all '99 Softail models.

### Silver and Chrome 1340cc Evolution Engine

**16177-99** Fits all '99 Softail models (*not shown*).

## C. Smart Start Softail® Transmission

A natural extension of the Smart Start Evolution Engine Program.

### Black and Chrome

**33006-99** Fits all '99 Softail models (except FLSTS).

### Silver Painted Softail Transmission

**33005-99** Fits all '99 Softail models (except FLSTS).

B. Silver and Polished 1340cc Evolution Engine



B. Black and Chrome 1340cc Evolution Engine



C. Softail Transmissions

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**A. The New Era Twin Cam Engine Program – Softail®**

First introduced on the '07 Screamin' Eagle® Springer® Softail model, this 110 cubic inch big bore stroker motor is the largest complete engine available from the Motor Company. The 4" big bore cylinders and pistons, SE-255 camshafts, and Screamin' Eagle cylinder heads with automatic compression release combine with the factory stroker flywheel to deliver solid torque and horsepower where you need it. And the internal balance shaft system keeps vibration under control. Matching Cruise Drive™ Six Speed Transmission is available for Softail applications.

**Black and Chrome 1800cc Twin Cam110B Softail Engine**

**19293-08** Fits '08 FXSTSSE<sup>2</sup> models. Does not include intake system, stator rotor, or compensating sprocket assembly.

**Six Speed Cruise Drive Transmission – Softail**  
Complements the New Era Twin Cam Engine Program.

**33139-08** Black and Chrome.  
Fits '08 FXSTSSE<sup>2</sup> models.

**B. The New Era Twin Cam Engine Program – Softail®**

The balanced Twin Cam has brought a whole new ride to the Softail® family – and now that ride is available to you. With the New Era Program, you get the most technologically advanced, air-cooled, V-Twin engine for Softail® motorcycles on the planet. When the Screamin' Eagle® Fat Boy® model was introduced, it established a new benchmark for the term Softail "Factory Custom". The 103 cubic inch "Stroker" Twin Cam "B" engine is available in Silver and Chrome finish to match the Screamin' Eagle Fat Boy model or in Black and Chrome to match your custom direction. The 88B is available in Black and Chrome or Silver and Polished, as are the matching transmissions. With the Twin Cam 88B and 103B engines, the Softail model really lives up to its reputation. See your local Harley-Davidson® Dealer for details.

**Black and Chrome 1690cc Twin Cam 103B Softail Engine**

**19293-06B** Fits '06 FLSTFSE<sup>2</sup> models. Does not include intake system, stator, rotor or compensating sprocket assembly.

**Silver and Chrome 1690cc Twin Cam 103B Softail® Engine**

**19296-06B** Fits '06 FLSTFSE<sup>2</sup> models. Does not include intake system, stator, rotor or compensating sprocket assembly.

**Black and Chrome 1450cc Twin Cam 88B Softail Engine**

**19259-06B** Fits '06 Softail models (except '06 FLSTFSE<sup>2</sup>). Does not include intake system, stator, rotor or compensating sprocket assembly.

**Silver and Polished 1450cc Twin Cam 88B Softail Engine**

**19258-06B** Fits '06 Softail models (except '06 FLSTFSE<sup>2</sup>). Does not include intake system, stator, rotor or compensating sprocket assembly.

**Black and Chrome Softail Transmission**

**33006-06** Fits '06 Softail models (except '06 FLSTFSE<sup>2</sup>).

**Silver Painted Softail Transmission**

**33005-06** Fits '06 Softail models (except '06 FLSTFSE<sup>2</sup>).

NOTE: Replacement engines must be re-fitted with emission control devices and systems, appropriate for the vehicle model and model year in order to ensure emissions compliance.

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**A. The New Era Twin Cam Engine Program – Softail Twin Cam 110B****B. Black and Chrome 1450cc Twin Cam 88B Softail Engine****B. Black and Chrome Softail Transmission**



C. The New Era Twin Cam Engine Program - Touring Twin Cam 110



C. Black and Chrome Six Speed Cruise Drive Transmission - Touring



D. Black and Chrome 1450cc Twin Cam 88 Engine

### C. The New Era Twin Cam Engine Program - Touring

First introduced on the '07 Screamin' Eagle® Road King® and Electra Glide® Ultra models, this 110 cubic inch big bore stroker motor is the largest complete engine available from the Motor Company. The 4" big bore cylinders and pistons, SE-255 camshafts, and Screamin' Eagle cylinder heads with automatic compression release combine with the factory stroker flywheel to deliver solid torque and horsepower where you need it. Matching Cruise Drive™ Six Speed Transmission is available for Touring applications.

#### Black and Chrome 1800cc Twin Cam 110 Touring Engine

**19176-08** Fits '08 FLHRSE<sup>4</sup> and FLHTCUSE<sup>3</sup> models. Requires installation of Oil Cooler P/N 63068-07 and Cover Kit P/N 63071-07. Does not include intake system, stator, rotor, or compensating sprocket assembly.

#### Black and Chrome Six Speed Cruise Drive Transmission - Touring

Complements the New Era Twin Cam Engine Program.

**33118-08** Fits '08 FLHRSE<sup>4</sup> and FLHTCUSE<sup>3</sup> models.

#### Also Available:

#### The New Era Twin Cam® Engine Program - Touring

When the Screamin' Eagle® Electra Glide® model was introduced, it established a new benchmark for the term "Factory Custom". Now, the 103 cubic inch "Stroker" Twin Cam engine is available in Silver and Chrome finish to match the Screamin' Eagle Electra Glide Ultra Classic model or in Black and Chrome to match your custom direction.

#### Black and Chrome 1690cc Twin Cam 103™ Engine

**19176-06B** Fits '06 FLHTCUSE models. Requires installation of Oil Cooler P/N 62994-04 and Cover Kit P/N 62995-04. Does not include intake system, stator, rotor or compensating sprocket assembly.

#### Silver and Chrome 1690cc Twin Cam 103 Engine

**19264-06B** Fits '06 FLHTCUSE models. Requires installation of Oil Cooler P/N 62994-04 and Cover Kit P/N 62995-04. Does not include intake system, stator, rotor or compensating sprocket assembly.

### D. The New Era Twin Cam 88® Engine Program - Dyna®

When the Twin Cam 88 Engine was introduced for the 1999 model year, it took the motorcycling world by storm and turned the page on a new chapter in Motor Company history. With the New Era Twin Cam 88 Engine Program, you can get your own piece of Harley history by owning the most technologically advanced air-cooled V-Twin engine on the market. The New Era Twin Cam 88 is available in the Dyna configuration in Black and Chrome or Silver and Polished. Carburetor and manifold not included. See your local Harley-Davidson Dealer for details.

#### Black and Chrome 1450cc Twin Cam 88 Engine

**19255-05B** Fits '05 Dyna models. (Does not include intake system, stator, rotor or compensating sprocket assembly.)

#### Silver and Polished 1450cc Twin Cam 88 Engine

**19256-05B** Fits '05 Dyna models. (Does not include intake system, stator, rotor or compensating sprocket assembly.)

NOTE: Replacement engines must be re-fitted with emission control devices and systems, appropriate for the vehicle model and model year in order to ensure emissions compliance.

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