



TWIN CAM 120, 131, & 135 OWNERS MANUAL

Performance Parts For Harley-Davidson Motorcycles

Service Miles	Date	Actual Miles	Name of Person Performing Service	Oil & Filter Installed
50				
250				
500				
1000				
1500				
3000				
4500				
6000				
7500				
9000				
10500				
12000				
And Each 1500 Miles There After				

JIMS
555 Dawson Drive
Camarillo CA, 93012
805-482-6913 • www.jimsusa.com

JIMS ENGINE INFO SHEET

SECTION 1 CONTACT INFORMATION

Customer # _____ Business Name _____

First Name _____

Last Name _____

Phone # _____ Ext _____

Address _____

City _____ State _____ Zip _____

Warranty Card _____

SECTION 2 MOTORCYCLE INFORMATION

Motorcycle Model / Year _____

Engine Serial Number _____

Clutch _____ Tire Size _____

Actual Mileage _____ Mileage on Engine _____

Exhaust System _____ Air Cleaner _____

Ignition Setting _____

Rev Limiter set @ _____

Electronic Fuel Injection _____

Throttle Body _____

Modifications (if any): Different Cams _____

4. Cylinder Head replace if more than:
 - Valve guide, press fit in head .002
 - Valve seat, press fit in head .002
 - Head warpage .006
5. Cylinder, replace if more than:
 - Taper .002
 - Out of round .002
 - Warpage at gasket surfaces .006
6. Piston replace if more than:
 - Fit in cylinder .006
 - Piston pin fit (wrist pin) .0012
 - Compression rings .030
 - Oil control rings .070
 - Ring side clearance compression rings .004
 - Ring side clearance oil control rings .008
7. Connecting rod, replace if more than:
 - Piston pin fit (wrist pin) .0012
 - Side play between flywheels (female rod end play) .024
 - Fit on crank pin (up and down play) .002
8. Flywheel runout not to exceed:
 - .005 in truing stand
 - End play (F/W in left bearing).006
 - Inspect shaft bearing journals for scoring, galling or wear, not to exceed
 - .0005 runout in a truing stand.
9. Oil Pressure at 2000 rpm with an oil temperature of 230° F. Should be 25 to 35 PSI, using the correct oil viscosity for the ambient temperature engine will be operating in.
10. Counter balance components: replace if more than:
 - Balance chain guides (front & rear) .060 to .070
 - Balance chain guides (lower) .060 to .070
 - Inspect other balancer components using H-D service manual



gine.

Break-In Procedure:

Note: Follow the engine break-in procedures outlined in the Harley-Davidson owner's manual per your application.

1. Allow the engine to warm-up before riding.
2. Do not use full throttle.
3. Do not idle the engine for more than two minutes. Note: Even less if the air temperature is above 80-degrees Fahrenheit.
4. Do not load the engine at low rpm.

Note: All engine loads must be moderate.

5. Vary the rpm frequently.

Note: Do not hold a steady speed.

6. First 50 miles:
 - Do not let the engine rpm exceed 2500.
 - Do not exceed 50mph.
7. Next 500 miles:
 - Do not let the engine rpm exceed 3000.
 - Do not exceed 55 mph.

Oil Change Intervals:

Break-in: • At 50 miles • 500 miles • 1000 miles

Normal Oil change intervals:

- 1500 to 2000 miles, depending upon usage.
- Change the oil filter every oil change.

Torque Checks:

- Re-check the torque of all accessible engine and chassis fasteners at all oil changes. (Do not re-torque the head bolts)

Inspection and Service Wear information for Valve Train Components Used in Performance Twin Cam Engines:

Valve Train Components should be inspected every 5000 miles of service more often if an engine is used under severe riding conditions, i.e. full throttle race operation, in city, dusty, low octane usage, trailering and two up. As with all high performance engines, components are under or subject to more stress in one-way or another, many times more than a stock engine. The following engine components will need to be inspected and or replaced every 5000 miles or more often as needed.

1. Rocker Arm / Rocker Arm Shaft replace if more than:
 - Shaft fit in bushing .0035
 - End play, side clearance .025
 - Shaft fit in support plate .003
2. Cam Support Plate, replace parts if more than:
 - Cam chain tensioned shoe wear .090 or 1/2 thickness of shoe
 - Crankcase bushing press fit in cam support plate .0008
 - Crankshaft bushing maximum I.D. .8545
3. Hydraulic Lifter Replace if more than:
 - Fit in crankcase .003
 - Roller end clearance .015
 - Roller fit on axle .0015 or any rough area or tight spot



Spark Plugs _____ Gaps _____

Ignition System _____ Oil Pumps _____

Heads _____

Modified Heads _____

SECTION 3 ENGINE AND TESTING INFORMATION

Date of Installation _____ (With Cover? • Yes • No)

Motorcycle Serial Number _____

Transmission Ratio (Pulleys) _____

Gear Ratio _____

Carb Jetting: Main _____ Slow _____ Needle _____

Bleed down Test Results Front: _____ Rear: _____

Systems: _____

Compression Test Results Front: _____ Rear: _____

Dyno Test Results HP _____ Torque _____

Dyno Charts _____

MOTOR WARRANTY / RETURNS

JIMS shall not be liable for any consequential or incidental damages resulting from a failure of any JIMS motor, the breach of any warranties, the failure to deliver, delay in delivery, delivery in non-conforming condition, or any other breach of contract between JIMS and a customer. Each part returned will be inspected for damage due to improper packaging/ shipping or damage that occurred prior to JIMS receiving the part. After inspection of the motor is completed and there is any incidental damage the customer will be notified immediately.

MOTOR WARRANTY PROCEDURE

See terms and conditions in the JIMS catalog for authorization to return parts. The following requirements must be met before JIMS will authorize the warranty return of a motor/ transmission/ flywheel assembly:

1. Must provide proof of the date of sale from the dealer (copy of invoice, invoice # or Warranty card).
2. Must provide detailed description of problem with motor.



3. Must provide the motor serial number (see Section 3).
 4. Must call and get a Returned Goods Authorization number from JIMS.
- All motor returns carry a **\$500.00 Inspection Fee**. If the Engine is determined defective due to a defect in manufacturing, material, or workmanship, the fee will be waived. If the returned part is found not to be defective, the fee is imposed as well as the cost of parts and additional labor for repairing the engine assembly.

I agree with the above warranty procedures and authorize JIMS to charge a \$500.00 Inspection Fee on engine, as well as charge for additional parts and labor if the engine is not found to be defective.

Signature _____

Date ____/____/____

(Authorized signature required to process return.)

SYMPTOMS:

In addition to the above information, we require the following parts and documents. (Please copy pages 1,2, and 3 then return these completed forms before returning any parts):

_____ Original Invoice of Purchase

Office Use Only

Hold Product:

Yes

Date

No

Date

Owners Manual For All JIMS® Engines 120, 131, & 135

Thank you for purchasing one of JIMS engines, which has been designed and manufactured to give years of safe Racing fun.

This owners manual gives you an in-depth look at the **maintenance** required to keep your JIMS engine running strong. Any and all **repair** information that is needed can be found in a service manual for the year and model of JIMS engine you have installed in your motorcycle.

The use of an H-D parts book will be helpful for viewing the parts and part numbers required for any repair. Please note that **all** JIMS engines use a Timken bearing for the retention of the flywheel assembly in the left case. With that being said, you will also need a service/parts book and manual for model year 2002.

JIMS will be making periodic improvements to these engines. With these im-

would not fill and pits would be empty. There would be no friendly arguments about 'which cam' or 'what exhaust' works best. Drag racing is one of the most popular motor sports in America. The fans are often racers themselves, have been racers, want to be racers or know a lot about the nuts and bolts of drag racing. We at JIMS have spent years developing the JIMS 120, 131, & 135 Race engine for drag racers and those who want to become drag racers. The 120, 131, & 135 engine is a strong, ground pounding and reliable base for your exploration into the complex and fascinating sport of drag racing. We hope you enjoy your new 120, 131, & 135 as much as we are pleased to bring it to you.

Pre Start procedures:

Do not connect the oil return line from the engine to the oil tank. Fit a hose from the engine's oil return fitting and run the hose into a large catch-pan.

Note: Remove the spark plugs from the engine. Attach the plug wires to the spark plugs and lay them on the cylinder heads to prevent damage to the coils.

Be sure the oil tank is properly filled with the correct oil. Use the electric starter to turn the engine until the oil pressure light goes out or until the pressure gauge reads 10 -15 psi. Re-install the spark plugs, torque to 12 to 18 ft lbs., attach plug wires. Depress both compression release plungers. You can hold the rear compression release plunger as the engine is trying to start. After engine has started, release compression release plunger. Allow the return oil to run into the catch pan. Run engine between 900 and 1500 rpm until the tops of the cylinders have reached 200 degrees Fahrenheit (too hot to touch). This normally takes between one and two minutes. **Note:** Do not allow the oil level in the tank to get too low while the engine is running. Stop the engine and let it cool to room temperature. Inspect the installation for any oil or gasoline leaks. Top – off the oil tank. Repeat the warm-up and cool-down procedure three additional times. Note: Watch and maintain the oil level in the tank. You may reconnect the oil return line to the oil tank after at least two quarts of oil have been pumped into the catch pan. Discard the oil in the pan.

EVO-TWIN CAM: Checking and Adding Oil

Caution: If JIMS EVO Twin Cam engine will be installed in a Softail or any model motorcycle that will have its oil tank higher than the engine, you will need to follow the instructions listed below. Install the recommended amount of oil and type per your owners manual in oil tank.

Ride the motorcycle until the engine is up to operating temperature. Idle motorcycle on kickstand for 2 minutes. Turn the motorcycle off and with the bike still on kickstand, remove and check oil level on the dipstick. Add oil if necessary until oil registers on the upper groove of dipstick (Full, Hot Line.)

Performance Twin Cam Engines:

Valve Train Components should be inspected every 5000 miles of service. More often if an engine is used under severe racing conditions, i.e. full throttle race operation. As with all high performance engines, components are under or subject to more stress in one-way or another, many times more than a stock en-

Combustion Chamber Pressure:

Power output and combustion chamber pressure are directly related. The higher the pressure, the more efficient and more powerful the engine becomes, within limits. That is, until the onset of detonation. A racing engine, one that is carefully and constantly looked after by an expert, can run with very high compression pressures. In the case of the Twin Cam chamber design, these pressures can exceed 210 psi. An engine that operates under a variety of conditions must have its compression pressure compromised so that it is not damaged under the worst of those conditions. For this reason, your JIMS 120, 131, & 135 Race engine does not develop the very highest possible compression pressure. Compression pressure is found by performing a common compression test as outlined in Harley's shop manuals. In this test, the mechanic removes both spark plugs and fits a compression tester to one of the plug holes. He then opens the throttle fully, lifts the CV slide, and turns the engine through five to seven compression cycles or until the pressure reading on the tester stops rising. The measured pressure is the compression pressure for that cylinder. The common method used to raise compression pressure is to remove material from the heads on a milling machine. This decreases combustion chamber volume, raises the compression ratio and, in turn, raises the cranking pressure.

Detonation:

Detonation must be avoided. A detonation event is literally an explosion. Most of the time these explosions are so small that they do not immediately damage the engine. However, if they are energetic or frequent enough, things break. A piston can be destroyed in a few engine revolutions from the effects of severe detonation. Detonation can be brought on by a variety of conditions including, incorrect ignition timing, poor quality gasoline, overly lean air/fuel mixtures, and too much cranking pressure for the particular combustion chamber or engine overheating. If you choose to alter the cranking pressure, ignition timing or carburetor settings of your JIMS 120, 131, & 135 Race Kit engine, please be aware that any of these alterations, improperly done, can result in engine damage. You should only consider such modifications if competition pressure demands them. And, make them only if you have the experience or expert assistance to deal with the possibility of detonation. Performance Tuning: As you can see, performance tuning is complex. One change often creates the need for other compensating or complimentary alterations. If raising the compression pressure makes the chamber more turbulent, a likely thing, it may be necessary to back-off ignition timing to compensate for the increased flame-front speed across the chamber. If moist air rolls across the track late in the afternoon, a leaner main jet may be needed to compensate for the reduced oxygen in the more moist air. If that air is also cooler and more dense, no change may be needed at all. The possibilities are almost endless. However, exploring those possibilities can be great fun. If drag racing and performance tuning in general were "Cut-and-Dried", they would be boring. The stands

improvements, it's difficult to list all replacements. So, if you're unable to receive the service or parts you need to maintain your JIMS race engine, please call JIMS Parts department at 805-482-6913 or E-mail at www.jimsusa.com If you do find it necessary to contact JIMS, please have the following information written down and handy; failure to do so will delay service.

Before starting or riding your new JIMS engine, please read through your H-D owner's manual as it is your (the riders) responsibility to know how the engine and motorcycle function correctly. These engines are first and foremost a Twin-Cam, designed & manufactured with its size and power in mind. If for any reason this engine starts to make LOUD internal noises, safely stop the engine and fill out the information sheet and submit to JIMS.

Caution:

These engines make almost double the HP & Torque as your old stock engine.

120" Engine both Alpha & Beta

Cylinder.....2
Type of engine.....4-cycle, 45 Degree V-twin, Oil & Air Cooled
Standard Compression Ratio10:00 to 1
Bore4.125"
Stroke4.500"
Displacement120"
Recommended Gas91 Octane

131" Engine both Alpha & Beta

Cylinder2
Type of engine.....4-cycle, 45 Degree V-twin, Oil & Air Cooled
Standard Compression Ratio10:50 to 1
Bore.....4.313"
Stroke.....4.500"
Displacement131"
Recommended Gas91 Octane

135" Engine Alpha

Cylinder2
Type of engine.....4-cycle, 45 Degree V-twin, Oil & Air Cooled
Standard Compression Ratio10:67 to 1
Bore.....4.313"
Stroke.....4.625"
Displacement135"
Recommended Gas91 Octane

Camshaft Specifications

Lift: .658"/.658"

Duration: 262*/266*

Intake: 24* BTDC / 58* ABDC

Exhaust: 69* BBDC / 17* ATDC

TDC Lift: .208"/.178"



Before Installing Engine In Chassis preparation

If a shop has performed the install and start up of your new engine then you will not need to perform the following steps. But you will need to know if they have indeed done the following steps. If you will be doing the installation of JIMS engine, then you will need to do the steps listed below.

Sprocket Shaft Spacer Information

If your motor assembly came with a sprocket spacer installed already you should be ready to install engine in chassis from the info you gave the Sales Dept. If you have an extra spacer shipped with the engine then check application list below for correct usage per year/model.

Sprocket Shaft Spacer

- Inspect the engine sprocket shaft, seal and bearing cavities for any packaging debris before continuing.
- Locate spacer specific to your application:
- For 1999 to 2005 Dyna "A" use H-D 24038-99A, JIMS No. **1286-1319**, spacer, .888" long.
- For 2006 to present Dyna "A" use H-D 24008-99A, JIMS No. **1286-1320**, spacer, 1.0950" long.
- For 1999 to present FL "A" use H-D 24008-99A, JIMS No. **1286-1320**, spacer, 1.0950" long.
- For 2000 only Softail "B" use H-D 24038-99A, JIMS No. **1286-1319**, spacer, .888" long.
- For 2001 to - 2006 Softail "B" use H-D 24039-01A, JIMS No. **1486-1834**, spacer, .988" long.
- For 2007 to - present Softail "B" use H-D 24008-99A, JIMS No. **1286-1320**, spacer, 1.0950" long.
- Inspect spacer for nicks and dents.
- Lightly coat outside diameter of sprocket shaft spacer and the inside of the sprocket shaft seal with clean 20w-50 H-D® motor oil.
- Slide sprocket shaft spacer onto sprocket shaft, until it is seated on the sprocket shaft bearing.

Recommended Oil Cooler:

These engines need to be fitted with an effective oil cooler. JIMS recommends you use the current H-D Accessories Book Oil Coolers. Order your cooler kit for the correct year and model of the motorcycle. Besides the 1st priority of an oil cooler you can also add a JIMS "Forceflow Cylinder Head Cooler" P/N. 5400 for added cooling. See JIMS catalog or website.

Battery :

It is very important to always use a well maintained battery with performance engines. Always keep a full charge on the battery or you will cause damage to the starter drive system. JIMS recommends usage of the H-D OEM maintenance

dramatic. As a rule-of-thumb, you can expect a pressure loss of 3% for each 1,000 feet of altitude gain, meaning that at 10,000 feet elevation an engine will lose almost 30% of its power. This loss in power will be slightly greater due to the air/fuel mixture becoming richer.

Carburetor settings can become too rich for smooth operation and/or maximum power production. If you are going to operate your JIMS engine above 3,000 foot elevation, you may find it necessary to alter the jetting. Denver for example is one mile above sea level; so you may need to install the next leaner needle, slow jet, and possibly a couple sizes leaner on the main jet. (A highly experienced engine tuner should make such changes.) Atmospheric conditions are much more important when racing, because small differences can determine whether you go on to the next round or go onto the trailer. Races are often won or lost on a tuner's ability to dial in the jetting as the atmospheric conditions change during the day. If you do not understand jetting, do not hesitate to ask questions. The majority of race tuners are more than willing to share much of what they know, but do not expect to get all the details - it is racing after all! Drag Racers are a congenial group and they want you to be there, racing with them, and enjoying it, but it is in your best interest to gather multiple tuners' suggestions to help ensure the jetting set up you choose is fitting for the conditions.

More Power- Air Flow Volume:

Ultimately, the amounts of power your JIMS 120, 131, & 135 Race engine can produce is determined by two factors. How much air it can process in a given time and how efficiently it uses that air to supply useful power to its crankshaft. The JIMS 120 Race engine delivers about 121 horsepower while the 131 puts out about 130 horsepower. The 135 delivers about 136 horsepower. It is very possible to increase that output by 20% or more, and it's also possible to reduce output by a similar percentage. Each and every part of this engine is perfectly balanced, designed and developed or selected to work together for maximum airflow and power output. Keep in mind it is easier to lose power than to gain power. For instance, if you upgrade to a larger air cleaner or carburetor to flow more air, the result may not meet your expectations. That's because a larger carburetor does little to improve power if the total airflow is limited in some other part of the engine.

Substantial power gains require substantial modifications. Increased airflow through the cylinder heads of your JIMS 120, 131, & 135 Race engine requires the manifold and both intake and exhaust ports be carefully and skillfully modified. Cylinder head porting continues to be an art form and should only be performed by a practiced porting expert. While the Screamin' Eagle air cleaner element is one of the highest flowing units available, the stock airflow is substantially increased with larger filters that allow more air volume than the supplied filter. However, they may interfere with riding comfort depending on make, model and personal preferences.

Application Information for EFI engines or carbureted models.

Use JIMS Air Cleaner Billet Backing Plate Kits with built in breather system. It is compatible with stock H-D outer air cover. The other option is to see your local H-D dealer for a selection of Screamin' Eagle air cleaner kits. If you are using one of these kits be sure to follow the instructions provided by the manufacturer.

Recommended Carburetor and Settings:

JIMS recommends using the Screamin' Eagle Super Bore 51mm CV carburetor kit No. 27928-07A. It requires ordering separately the Screamin' Eagle manifold kit No. 29414-07. If carburetor tuning is required order Screamin' Eagle 51mm tuner kit No. 27432-02. Order all all separately from a H-D dealer.

Note: For carburetor settings refer to manufactures instructions. Additional related instructions will come from the ignition programing system you choose.

The following info relates to usage of the Screamin' Eagle Super Bore 51mm CV carburetor kit No. 27928-07A using Screamin Eagle Ignition No. 32124-04.

1. The standard (furnished) settings are normally correct when used with 2-into-1 exhaust systems.

Note: Alternate exhaust systems may require different settings.

2. The standard (furnished) settings are normally correct for a "standard day" such as is common near sea level in the summer.
70 degrees Fahrenheit.
29.9 Hg pressure
50% humidity
3. The Screamin' Eagle 51mm carburetor's standard settings are:
Main Jet: 230
Slow Jet: 48
Jet Needle: NDKS (JET settings may need to be changed for peak H.P.)

Recommended Exhaust Systems:

JIMS has tested exhaust systems on the Dyno for the best horse power numbers. As a result of all these tests, we have found the Thunderheader Exhaust System and the Supertrapp 2 into 1 exhaust system (using 17 discs) gave us the best HP numbers.

Recommended Oil, Filters and Spark Plugs:

For pre-start oil, you can use any good quality oil that has been designed for air cooled roller bearing engines. After heat sinking engine, use an oil that is mineral-based, like H-D 360. If your riding ambient temperature is above 40 degrees F, you can use SAE 20-50 oil for the first 2000 miles. Use 32329-97 Spark Plug, 6R12PP Double Platinum, and 12mm gap at .038 to .043.

Tuning Factors- The Air: Changes in air pressure, temperature and humidity all have effects on the air/fuel mixtures, power output, and engine temperature. At a constant altitude, such changes are small and generally not as important in day-to-day operation. Changes in altitude cause the effect to become more



free battery for the correct model application.

Battery Cables:

JIMS recommends Super Flex performance battery cables because of the material quality of the cable and eyelets and flexibility. See JIMS catalog for a full model selection.

Starters and Ring and Pinion gear sets:

If your starter can't handle that big inch engine or is just plain worn out see JIMS New 2013 catalog for our selection of Performance High Torque starters. We also offer High Torque Starter Ring and Pinion Gear Sets to help take the stress of your starter.

Washing out complete oiling system:

Before you install your new JIMS Race engine in its chassis, thoroughly remove and wash out the complete oiling system. This includes removing all parts that oil has passed through; oil tank, oil cooler and oil lines. Make sure the entire oiling system is clean. If you are fitting your new JIMS Race engine into a chassis that has been used, be sure to completely clean the oil tank together with all lines and fittings leading to and away from the engine. If the old engine has more than 20,000 miles of use, or, if it has suffered any unusual wear, dismantle the oil pan and hoses and thoroughly clean them.

Be very careful you do not tear small slivers of rubber off the edges of the oil lines as you fit them to the engine's oil fittings.

Some Pre Start Information:

Do not connect the oil return line from the engine to the oil tank. Fit a hose from the engine's oil return fitting and run the hose into a large catch-pan.

TWIN CAM EVO Mounted Engine Installation:

Remove any paint from the motor mount pads on frame. If installing in an FXST (Softail), bolt down the rear engine mounts first. The rear engine case mounting holes have been optimized so the installation of the rear bolts can be performed with assembled engine. Install top motor mount per Harley-Davidson's service manual for the year and model you have. After Torquing the rear engine bolts, check the clearance (gap) between the front engine mount and the frame. Shim front engine mount to within .010 of an inch with shim stock.

TWIN CAM EVO Mounted:

Recommended Rear Engine Mounting Hardware:

H-D Part No. 3528 rear motor mount bolt 3/8"-16 x 3-1/4" used on 1991-98 FL, FXR, FXD, and 99 FXR.

H-D Part No. 3512 rear motor mount bolt 3/8"-24 x 3-1/4" used on 1991-99 FXST.

H-D Part No. 6019 washer 3/8" x 29/32" x 1/16" 1991-96 FXST and 1991-98 FL, FXR, FXD, & 99 FXR. For 2006 to present Dyna's or 2007 to present FL's, **remove the three red shipping plugs before attaching the transmission.** If you neglect to remove these, you will not have oil pressure and will damage



the engine when you start up.

Front cylinder head mount 2008 to present Touring models

JIMS engines come with the mounting hole provisions for the front head mount to be installed without any modifications. You can use your original mount and hardware or chrome, polished or black anodized JIMS Billet front head mount and chrome Heim joint link. This is a stronger and better looking mount system. Order separately. See JIMS No.1437 and 1444 in catalog or on the website. Follow either H-D service manual or JIMS instruction sheet for installing the front head mount and torque specifications.

All Models Installing Primaries and Clutch:

Follow installation instructions for inner and outer primary, clutch assembly, sprockets, primary chain, adjustment and alignment, per H-D service manual for the year and model you will be working with.

Engine Compensator recommendation:

We recommend a H-D No.40274-08A or equivalent. This kit comes with heavier springs and increased travel to meet the demands of race engines. This kit will support up to 7 times the energy absorption capacity of the original equipment compensator. In return, this will help protect the engine and driveline components during extreme drag race launches. The 2012 & 2013 models come stock with this.

Clutch Recommendation:

The high torque output of the JIMS Race engines do require a clutch with increased torque capacity. The Screamin' Eagle® No. 37976-08A clutch or JIMS High Performance Billet Clutch No. 8382 are two examples you can use.

Battery :

It is very important to always use a well maintained battery with performance engines. Always keep a full charge on the battery or you will cause damage to the starter drive system. JIMS recommends usage of the H-D OEM maintenance free battery for the correct model application.

Battery Cables:

JIMS recommends Super Flex performance battery cables because of the material quality of the cable and eyelets and flexibility. See JIMS catalog for a full model selection.

Starters and Ring and Pinion gear sets:

If your starter can't handle that big inch engine or is just plain worn out see JIMS New 2013 catalog for our selection of Performance High Torque starters. We also offer High Torque Starter Ring and Pinion Gear Sets to help take the stress of your starter.

Ignition for Carbureted:

Follow the ignition manufacturers instructions when installing per application. JIMS recommends for carbureted models the JIMS Race Ignition that can be ordered separately from JIMS' Sales Department.

Use JIMS No. 2344 JIMS Race Ignition on 1999 - 2003 Alpha carbureted mod-



els.

Use on 2000 - 2003 Beta carbureted models.

Use H-D 32124-04 ignition race turner or equivalent on 2004 - 2006 Alpha or Beta carbureted models.

Tuning for EFI:

Application information for fuel injected engines

JIMS recommended ignition for fuel injection engines is the Screamin' Eagle Pro Super Tuner and the Screamin' Eagle Pro Tuner Software with "Smart Tune". You may also need a Pro Tuner cable kit and a Pro Tuner training DVD. These are for race application only.

Use H-D 32109-08C Screamin' Eagle Pro Super Tuner for 02 and later EFI Dyna, Softail, and 02 - later EFI Touring, and Trikes.

Use H-D 32111-13 Screamin' Eagle Pro Tuner software with "Smart Tune" for 02 and later EFI Dyna, Softail, and 02 - later EFI Touring, and Trikes.

Use H-D 32184-08A Screamin' Eagle Pro Tuner cable kit. Use 41000018 for 2011 to present softails and 2012 to present Dynas.

Use H-D 32101-10 Screamin' Eagle Pro Tuner training DVD.

Intake Manifold Installation:

Center the intake manifold evenly between the two intake flange mounts per your service manual for the year and model.

Throttle Bodies and Manifolds:

JIMS recommended throttle bodies and manifolds for the fuel injected engines are as follows: JIMS throttle bodies are for all 2006 to present throttle cable style motorcycles. JIMS throttle bodies cannot be used on electronic throttle by wire models used on some 2008 to present motorcycles. Follow the throttle body manufacturers instruction when installing per application.

Use No. 5221 JIMS 62mm Elliptical throttle body with electronic components

Use No. 5215 JIMS 58mm Elliptical throttle body with electronic components

Use No. 5222 JIMS 62mm Elliptical throttle body without electronic components

Use No. 5216 JIMS 58mm Elliptical throttle body without electronic components

Use No. 705 JIMS Manifold with electronic components

Use No. 704 JIMS Manifold without electronic components

Use No. 27713-08 Screamin' Eagle Pro High Flow 58mm EFI throttle body/manifold for throttle by wire models only. Use on 2008 to present Touring Models.

Use No. 27639-07A Screamin' Eagle Pro High Flow 58mm EFI throttle body for cable operated throttle. Use on 2006 to present Dyna or Softail EFI models and 2006 - 2007 Touring EFI models. Not for use on cruise control models.

Use No. 29667-07 Screamin' Eagle Pro Hi-Flow intake Manifold for No.27639-07A 58mm throttle body. Note: See H-D dealer for details on mounting information.

Use No. 27623-05A Screamin' Eagle Pro 50mm throttle body/manifold for cable operated throttle.

Use No. 27623-05A Screamin' Eagle Pro 50mm throttle body/manifold for cable operated throttle.

Performance Air Cleaner Kits:

These are designed for Race applications only

