



# INSTRUCTIONS

J02359

2008-10-08



## SCREAMIN' EAGLE TWIN CAM (HTCC HEADS) STROKER FORGED PISTON KIT

### GENERAL

#### Kit Number

22444-02, 22445-02, 22446-02

#### Models

These High Compression forged stroker piston kits are designed for installation on Harley-Davidson Twin Cam motorcycles with stroker flywheels, HTCC heads and 1550 big bore cylinders installed.

#### NOTE

All dimensions listed on these instructions are in inches.

Table 1. Models

Kit	Application
22444-02	Standard (front & rear)
22445-02	+0.005 (front & rear)
22446-02	+0.010 (front & rear)

#### NOTE

Harley-Davidson motorcycles equipped with some Screamin' Eagle high-performance engine parts may not be used on public roads, and in some cases must be restricted to closed course competition. This engine related performance part is intended for racing applications, and is not legal for sale or use on pollution-controlled motor vehicles.

### Additional Parts Required

1550 Kits require separate purchase of two head gaskets (P/N 16787-99). These are available from your Harley Davidson Dealer.

#### NOTE

Re-jetting or re-timing of the engine may be required to realize the full potential of this performance product.

For optimal performance, exhaust seals should be replaced with Screamin' Eagle exhaust seals P/N 17048-98.

#### ⚠ WARNING

Rider and passenger safety depend upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333b)

#### NOTE

This instruction sheet references service manual information. A service manual for your model motorcycle is required for this installation and is available from a Harley-Davidson Dealer.

### Kit Contents

See Table 4, and Figure 3.

### INSTALLATION

#### ⚠ WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect battery cables (negative (-) cable first) before proceeding. (00307a)

#### ⚠ WARNING

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

1. Refer to the service manual and follow the instructions given to remove the seat and disconnect the battery cables, **negative cable first**.

#### ⚠ WARNING

When servicing the fuel system, do not smoke or allow open flame or sparks in the vicinity. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00330a)

2. Refer to the ENGINE: STRIPPING MOTORCYCLE FOR ENGINE REPAIR, CYLINDER HEAD REMOVAL sections of the service manual.
3. Follow the procedures in the ENGINE: CYLINDER AND PISTON, REPAIR, BORING AND HONING CYLINDER.
4. See the ENGINE: CYLINDER AND PISTON INSTALLATION AND ASSEMBLY.

#### NOTE

Install piston rings having dots or bevels with the dots or bevels facing **UP**. Rings with no markings can be installed either side up.

1550 cylinders do not use O-rings on the top cylinder dowels. Do not install them when using torque plates or at final assembly of engine.



**Table 2. Piston Manufacturing Tolerances**

Piston:	Tolerance (in.)
Fit in cylinder	0.0025-0.0035
Compression ring gap	
Top	0.009-0.015
Second	0.019-0.029
Oil control rail gap	0.010-0.030

**Table 3. Piston Service Wear Limits**

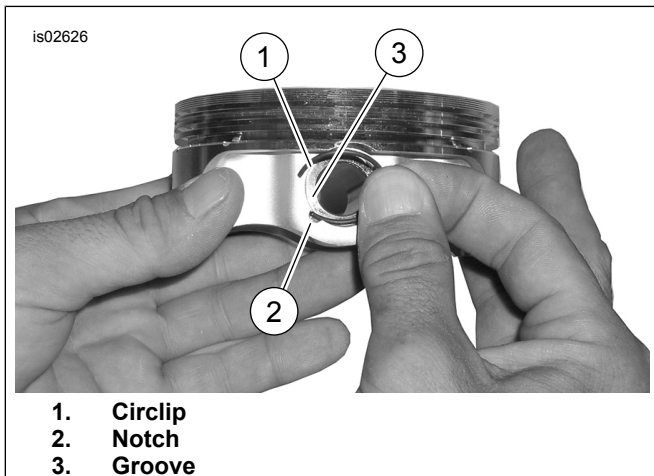
Piston:	Wear Limit (in.)
Fit in cylinder	0.005
Compression ring gap	
Top	0.025
Second	0.039
Oil control rail gap	0.030

## Piston Pin Retaining Ring (Circlip) Installation

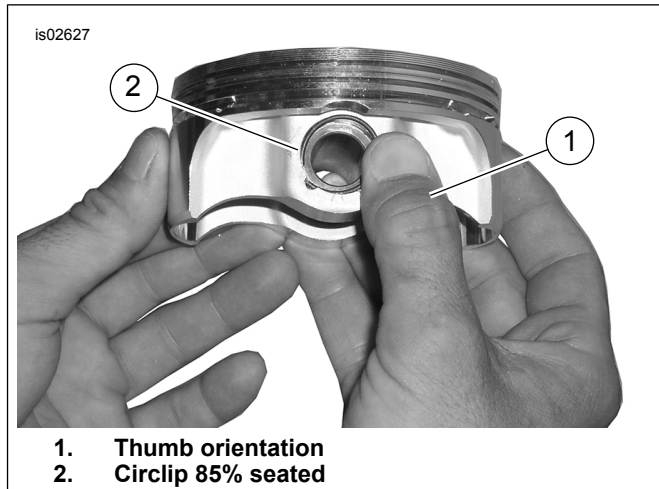
**NOTE**

*Circlip gap must be at 12:00 or 6:00 position when installed.*

1. See Figure 1. Insert the open end of the circlip (1) into the notch (3) on the groove (2) around the piston pin boss so that the gap is at the 12:00 or 6:00 position when installed.



**Figure 1. Circlip and Piston (generic piston shown)**



**Figure 2. Install Circlip (generic piston shown)**

2. See Figure 2. Position your thumb (1) as shown, and press firmly until approximately 85% of the circlip (2) is seated in the groove.
3. Being careful not to scratch or mar the piston, use a small-bladed screwdriver to wedge the circlip into the remainder of the groove. Repeat for the remaining circlips.

**NOTE**

*Make sure the piston circlip is fully seated, or ENGINE DAMAGE WILL OCCUR.*

4. Refer to the ENGINE: ASSEMBLING MOTORCYCLE AFTER STRIPPING section of the service manual for final re-assembly procedures.

**NOTE**

*Always follow the break-in procedure outlined in the appropriate Owner's Manual after rebuilding an engine.*

SERVICE PARTS

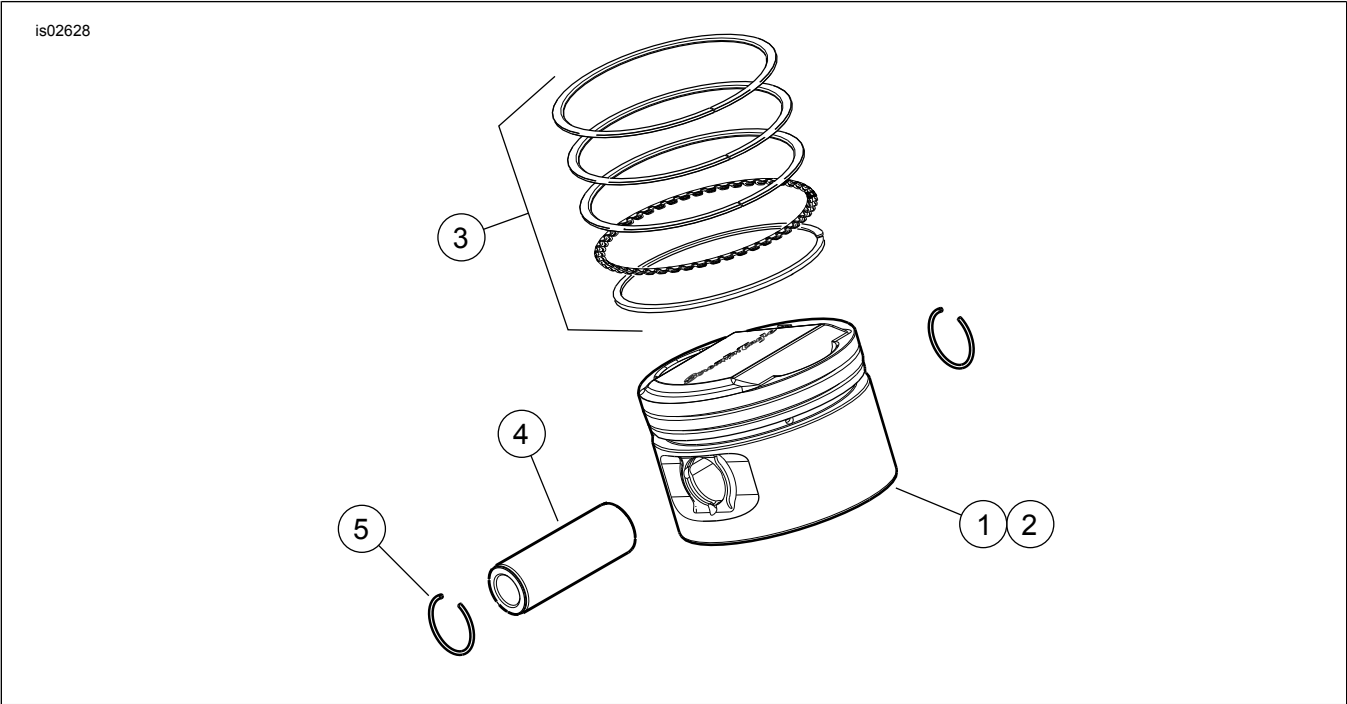


Figure 3. Service Parts: Screamin' Eagle Twin Cam (103 cu. in. Heads) Stroker Forged Piston Kits

Table 4. Service Parts Table, Front and Rear Piston Kits

Kit	Item	Description (Quantity)	Part Number
Kit 22444-02 Piston Kit Standard	1	Piston (front, standard)	Not sold separately
	2	Piston (rear, standard)	Not sold separately
	3	Ring set (standard) (2)	22457-03
Kit 22445-02 Piston Kit (+0.005)	1	Piston (front, +0.005)	Not sold separately
	2	Piston (rear, +0.005)	Not sold separately
	3	Ring set (+0.005) (2)	22458-03
Kit 22446-02 Piston Kit (+0.010)	1	Piston (front, +0.010)	Not sold separately
	2	Piston (rear, +0.010)	Not sold separately
	3	Ring set (+0.010) (2)	22459-03
Items common to all Piston Kits:			
	4	Piston pin (2)	22455-03
	5	Retaining ring (Circlip) (4)	22456-03