



INSTRUCTIONS

-J04825

REV. 2008-09-19

BIG TWIN COMPENSATOR KIT

GENERAL

Kit Number

40274-08

Models

This kit fits all 2007 and later Big Twin engines, except those on 2008 and later FXCW/C (Rocker®) or 2009 and later FXSTSSE3 (2009 Screamin' Eagle® Softail® Springer®) models.

Additional Parts Required

A new primary cover gasket is needed for the proper installation of this kit. Ask a Harley-Davidson dealer or see the parts catalog for your model motorcycle for the correct primary gasket part number.

Tools and Supplies Required

A PRIMARY DRIVE LOCKING TOOL (Part Number HD-47977) will be needed.

WARNING

The rider's safety depends 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. (00333a)

NOTE

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

Kit Contents

See Figure 2 and Table 1.

REMOVAL

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. Retain all seat mounting hardware.

2. Remove the drive components per the instructions in the service manual.

Remove the alternator rotor per service manual instructions.

INSTALLATION

NOTE

The primary chain, compensating sprocket and clutch assembly must be installed as an assembly.

1. See Figure 2. Install the **new** alternator rotor (12) to the engine compensating sprocket shaft per service manual instructions.

Install the shaft extension (2) to the alternator rotor with the bearing journal (A) facing away from the vehicle. Apply a thin layer of primary chaincase oil to the splines and bearing journal.

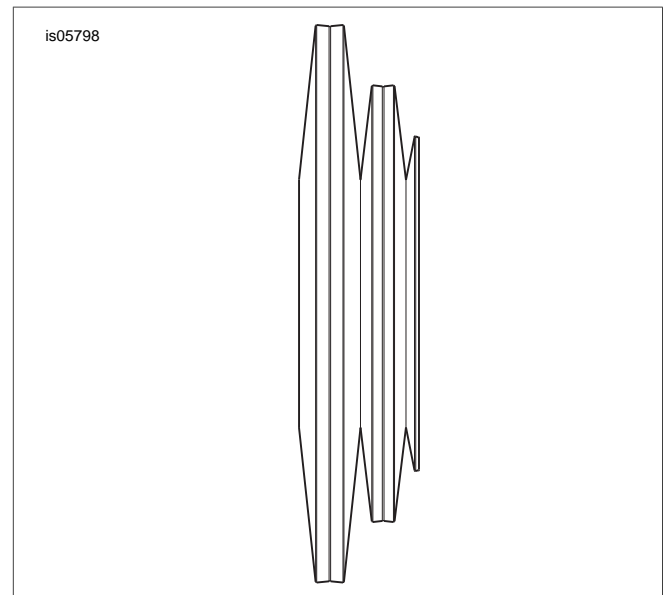


Figure 1. Spring Pack Sub-Assembly

2. Install the two large disc springs (6) with the outer diameters contacting each other, as shown in Figure 1. Install the two medium disc springs (7) with the outer diameters contacting each other. Install the small disc spring (8) with the outer diameter facing outward.
3. Install the sliding cam (3) with the flat face contacting the small disc spring. Lubricate the sliding cam ramps (B) with primary chaincase oil.

NOTE

The compensating sprocket (4) assembles to the motorcycle with the text "this side out" facing outward, away from the vehicle.

- Place the drive components (primary chain, compensating sprocket and clutch assembly) into position. The clutch hub and shaft extension are splined, so a slight rotation of the chain drive will aid installation.

NOTE

When installing the sprocket retainer (10), make sure that the thrust washer (9) does not fall off the retainer or that it does not get pinched between the retainer and shaft extension.

A small amount of white lithium grease will help hold the thrust washer to the sprocket retainer.

- Install the thrust washer (9) and sprocket retainer (10).

NOTES

When installing the screw (11), make sure the disc springs are properly aligned and that the spring nearest the rotor assembly has not slipped between the extension and rotor hub.

Make sure the thrust washer has not slipped between the sprocket and sprocket retainer.

- Install the new screw (11) by hand, and snug against the sprocket retainer. Using a 1-3/4 inch box-end wrench to hold the crankshaft, tighten the screw to 100 ft-lbs (135.7 Nm).
- Loosen the screw by one full turn (360 degrees), then tighten to 140 ft-lbs (190.0 Nm).
- Rotate the compensating sprocket (4) to make sure there is a light pressure on the sprocket from the springs. No clearance should be felt. A slight rotation should be possible by hand with the transmission in neutral.

- Perform the following per the instructions in the service manual.
 - Assemble the remaining drive components.
 - Adjust the clutch.
 - Install the primary chain tensioner.
 - Install the primary chaincase cover with a **new** gasket (sold separately) and fill the primary chaincase with lubricant.

RETURN TO SERVICE

- Verify that the ignition/key switch is turned to the OFF position.
- Apply a light coat of Harley-Davidson electrical contact lubricant (Part Number 99861-02), petroleum jelly or corrosion retardant material to the battery terminals. Refer to the service manual and follow the instructions given to attach the battery cables (positive cable first).

 **WARNING**

Connect positive (+) 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. (00068a)

- Refer to the service manual, and follow instructions to install the seat.

 **WARNING**

After installing seat, pull upward on seat to be sure it is locked in position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070b)

SERVICE PARTS

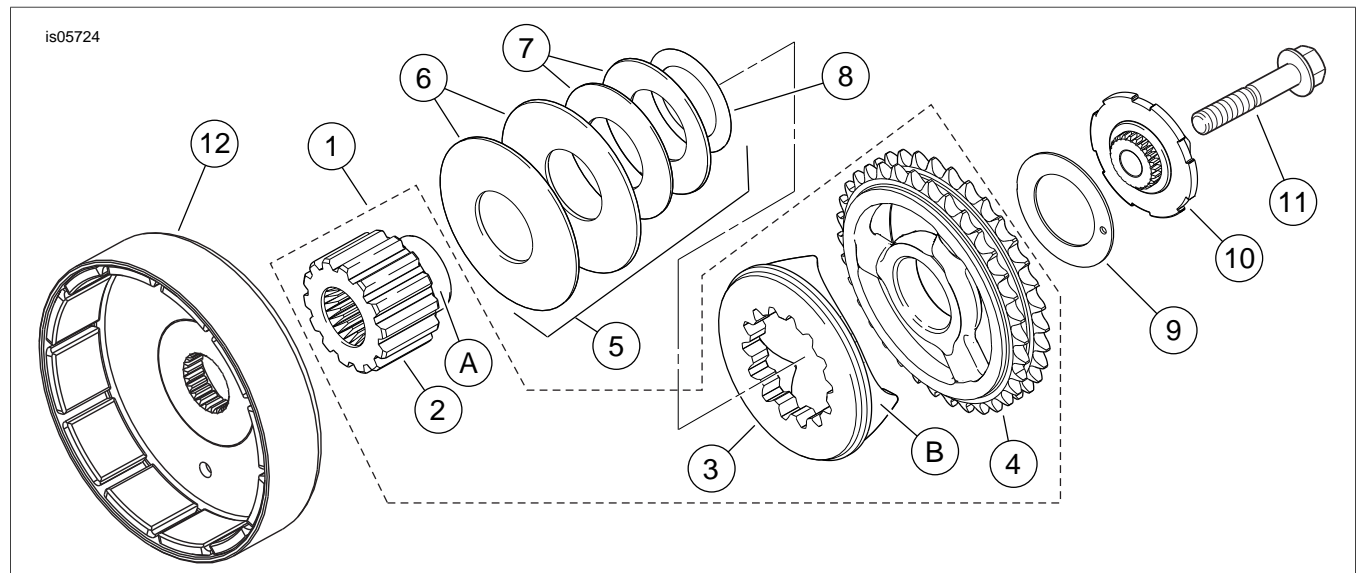


Figure 2. Service Parts, Big Twin Compensator Kit

Table 1. Service Parts

Item	Description (Quantity)	Part Number
1	Compensator assembly (includes items 2 through 4)	83935-09
2	• Shaft extension	Not sold separately
3	• Sliding cam	Not sold separately
4	• Compensating sprocket	Not sold separately
5	Spring pack (includes items 6 through 8)	83936-09
6	• Large disc spring (2)	Not sold separately
7	• Medium disc spring (2)	Not sold separately
8	• Small disc spring	Not sold separately
9	Thrust washer	6557
10	Sprocket retainer	37810-08A
11	Hex flange screw	4857
12	Alternator rotor assembly	30041-08
Items mentioned in text, but not included in kit:		
A	Bearing journal	
B	Sliding cam ramp (3)	