



Installation Instructions

18SP559* – Install Gear Case Housing Kit (P/N: 23531253) on EGR-Equipped Series 60® Engine

*Revision – 3/16/06

KIT DESCRIPTION

This kit includes the parts needed to replace a damaged gear case housing on 2002 and later-built, EGR-equipped Series 60 engines.

KIT CONTENTS

The new replacement kit contains the following parts listed in Table 1.

Part Number	Quantity	Description
23529363	1	Housing, Gear Case
8929333	1	Bolt, M12 x 1.75 x 65 L. (10.9, coated)
8929015	1	Pin, Dowel, 16.0 (round)
8929022	1	Pin, Dowel, 16.0 (diamond)
8924380	2	Plug, Pipe, 1/8 NPTF Sq. Skt. Hd. (coated)
18SP559	1	Instruction Sheet

Table 1 Content for Service Kit (P/N: 23531253)

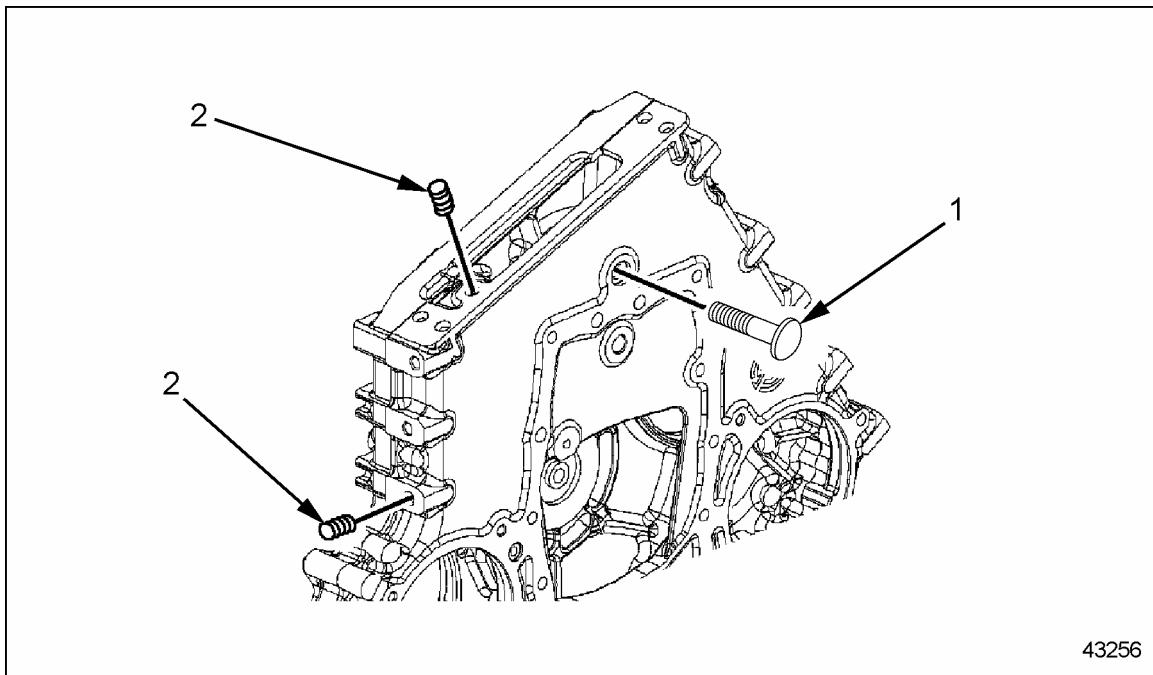
INSTALLATION PROCEDURE

The bolt, dowel pins, and plugs must be installed in the new gear case housing before it can be used. Install these parts as follows:

NOTICE:

Do not use a hammer to install the idler gear hub-mounting bolt into the gear case housing, since this may result in bolt and/or gear case damage.

1. Position the gear case housing on the bed of an arbor press with the back (block side) facing up. Insert the idler gear hub mounting bolt (P/N: 8929333) into the topmost opening and press bolt in until fully seated. If an arbor press is not available, use a washer and nut with a deep-socket wrench to draw the bolt into the housing until fully seated. See Figure 1.



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1. Hub Mounting Bolt

2. Pipe Plug

Figure 1 Location of Idler Gear Hub Mounting Bolt and Pipe Plugs

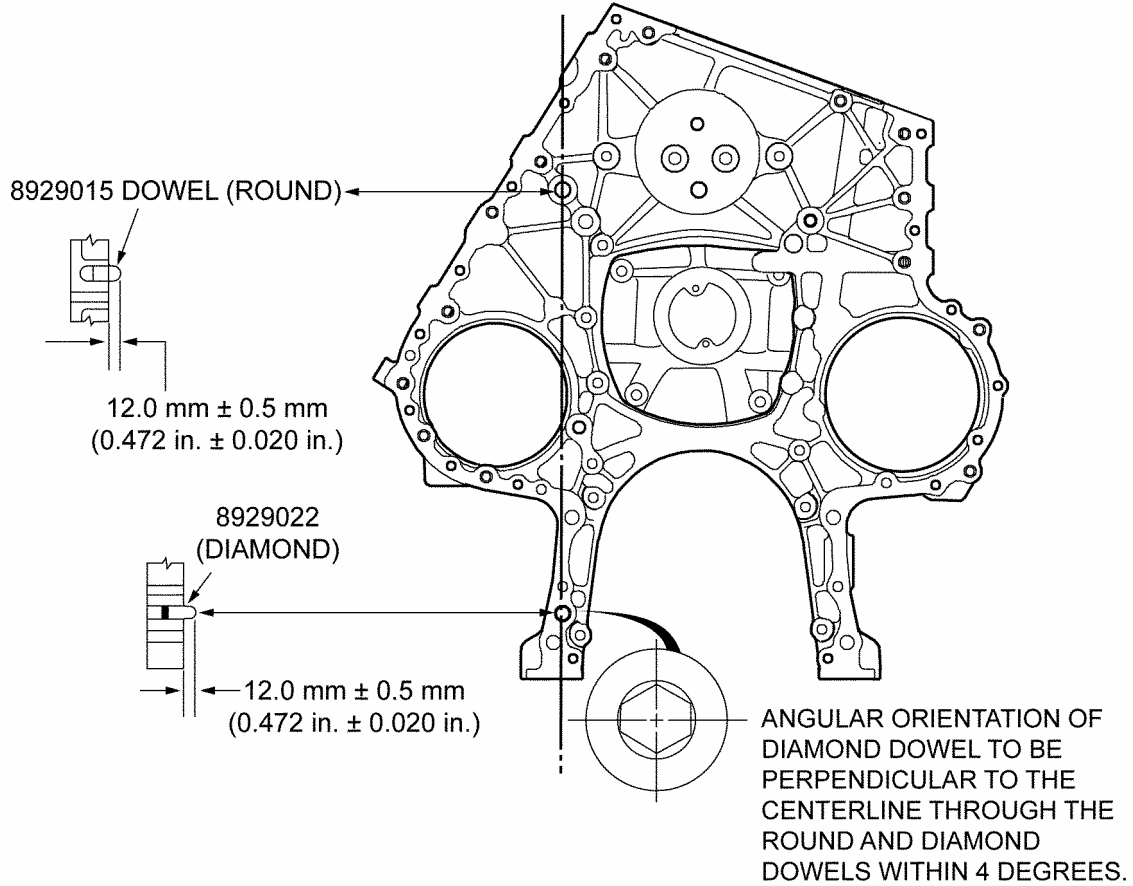
2. Install the two (2) pipe plugs (P/N: 8924380) in the lubrication orifices located in the left and top-left sides of the gear case housing until slightly below flush. See Figure 1.
3. Position the gear case on the bed of an arbor press with the back (block side) facing down. Using tool J-36224-2, install the round dowel (P/N: 8929015) in the location show until it protrudes 12.0 mm +/- 0.5 mm (0.472 in. +/- 0.020 in.) from the hole. See Figure 2.

NOTICE:

Proper orientation of the diamond dowel during installation is critical to correct gear case installation. Improper gear case-to-block sealing may lead to loss of lubricant and engine damage.

4. Position the diamond dowel (P/N: 8929022) in the location shown and orient it so that it is perpendicular to the centerline drawn through the round and diamond dowel holes to within four degrees. Using tool J-36224-2, press the dowel in until it protrudes 12.0 mm +/- 0.5 mm (0.472 +/- 0.020 in.) from the hole. See Figure 2.

DOWELS 8929015 AND 8929022 ARE INSTALLED
 TO A HEIGHT OF 12 mm ± 0.5 mm (0.472 in. ± 0.020 in.)
 USE TOOL J 36224-2 TO INSTALL BOTH DOWELS.



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Figure 2 Gear Case Dowel Locations and Installation Requirements

⚠ WARNING:

PERSONAL INJURY

To avoid injury from hot surfaces, wear protective gloves, or allow engine to cool before removing any component.

⚠ WARNING:

PERSONAL INJURY

To avoid injury from accidental engine startup while servicing the engine, disconnect/disable the starting system.

5. With the Series 60 engine shut down and at ambient temperature (cool to the touch), refer to the *Series 60 Service Manual* (6SE483) and *Series 60 Service Information Bulletins* 8-60-02 and 13-60-02, all available on the Internet.* Follow instructions to remove the damaged gear case housing and install the replacement housing.

* Go to www.detroitdiesel.com → Support → On Highway → Service Information → Service Information Bulletins → Series 60 Service Bulletins.

DETROIT DIESEL



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