



18SP611* – N3 Injector Washer and O-ring Seal Kit for Series 60® EGR DDEC® V Engines

*Revision3 – 5/13/09

KIT DESCRIPTION

New service kit (P/N: 23537111) supersedes former service kit (P/N: 23535700) and is now available for replacement of the N3 injector washer, O-rings, and injector hold-down clamp washer and bolt on Series 60 EGR DDEC V engines.

KIT CONTENTS

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

Part Number	Quantity	Description
F00HN34702	1	Injector O-ring (Orange)
F00HN37331	1	Injector O-ring (Blue)
F00HN37860	1	Injector O-ring (Purple)
F00H410609	1	Injector Washer
8929393	1	Injector Hold-Down Clamp Bolt M10 1.5 x 70
23535699	1	Injector Hold-Down Clamp Washer
18SP611Rev.	1	Instruction Sheet

Table 1 Contents for Service Kit (P/N: 23537111)

INSTALLATION PROCEDURE

Install the washers and O-rings as follows (see Figures 2 and 3):

1. Disconnect battery power before servicing the N3 injector to prevent failure of the DDEC V ECU.
2. Remove the N3 injector and identify injector cylinder positions. Refer to the *Series 60 Service Manual* (6SE483) for full procedures on the proper removal and installation of the N3 injector. Use Kent-Moore tool J-47372 if the injector cannot be removed by hand.
3. Carefully clean (remove carbon, soot, etc.) the injector body and the injector sleeve in the cylinder head.

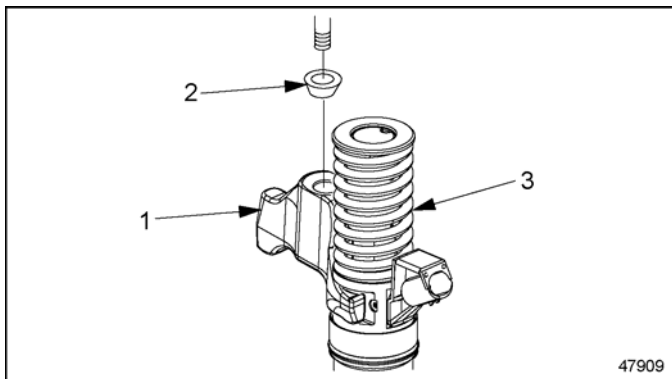
NOTICE:

Avoid cleaning (wire brushing, etc.) the injector tip spray holes to prevent damage and plugging.

NOTICE:

Take extra precautions when cleaning the injector sleeves in the cylinder head to ensure that debris does not enter into the fuel supply or return galleries. Do NOT use powered tools to clean the injector sleeves – use a hand brush such as Kent-Moore J-47374 and a rag. Do NOT use compressed air to blow out debris in the sleeves.

4. Replace the three O-rings on the injector by applying a thin coat of clean fuel to the injector O-rings and installing them in the injector nut ring grooves. Make sure the O-rings are properly seated. See Figure 2.
5. Replace the washer on the bottom of the injector with the new washer in the kit. The flat side of the washer must face down into the cylinder head. The stepped side of the washer must face up to the injector. See Figure 2.
6. Install the injector and hold-down clamp as an assembly into its original cylinder position, taking care not to damage the O-rings. See Figure 3.
7. Replace the injector hold-down clamp washer with the new washer in the kit. The curved side of the washer fits into a corresponding curved cup in the injector hold-down clamp. See Figure 1.



1. Injector Hold-Down Clamp (Re-use From engine)
2. Injector Hold-Down Clamp Washer
3. N3 Injector (Re-Use From Engine)

Figure 1 Injector Hold-Down Clamp Washer Installation

8. Replace the injector hold-down clamp bolt with the new bolt in the kit. Align the hold-down clamp over the retaining stud and install the new bolt into the injector clamp and torque using the procedure below. No additional torque of the bolt is necessary. See Figure 3.
 - a. Torque the bolt to 50 N·m (37 lb-ft).
 - b. Loosen the bolt 60 degrees (1/6 of a turn, or one bolt flat). Do not fully loosen the bolt.
 - c. Torque the bolt to 35 N·m (26 lb-ft).
 - d. Tighten the bolt 90 degrees (1/4 of a turn).

NOTICE:

Injector O-ring seals, injector washers, and the injector hold-down crab bolt are considered one-use items and cannot be reused. Any time an injector is removed, all three injector O-ring seals, injector washers, and the injector hold-down crab bolt must be replaced with new parts. Failure to replace O-ring seals, injector washers, and the injector hold-down crab bolt can result in leakage.

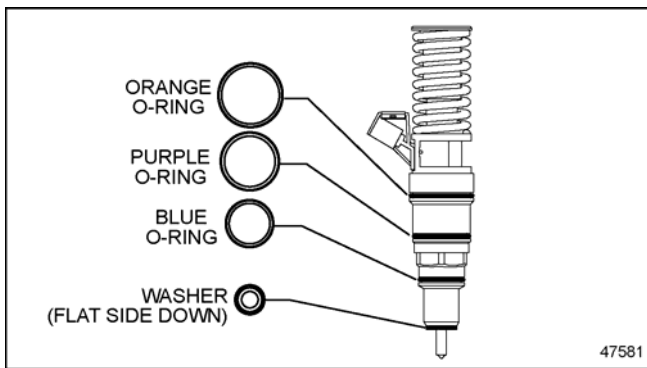
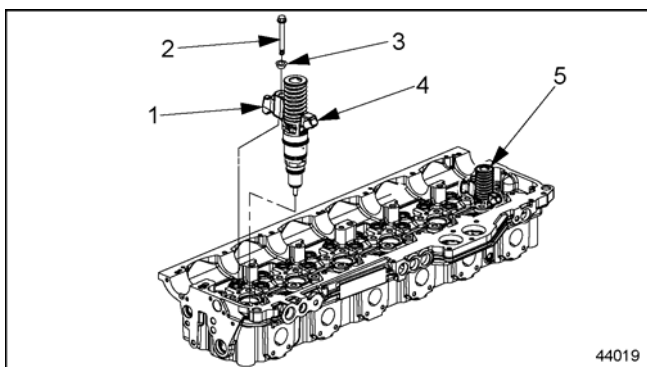


Figure 2 Injector Washer and O-ring Installation



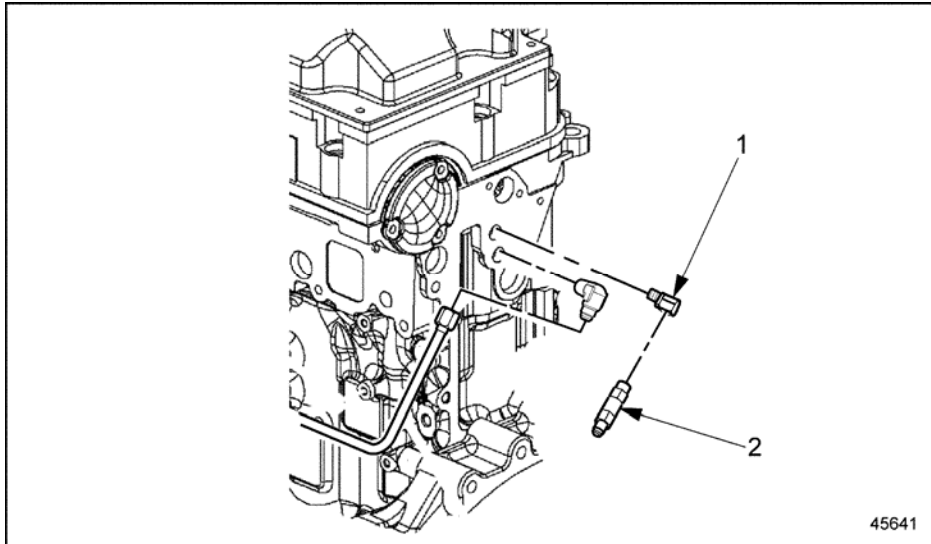
- 4. Injector Hold-Down Clamp (Re-use From engine)
- 5. Bolt
- 6. Injector Hold-Down Clamp Washer

- 4. N3 Injector (Re-Use From Engine)
- 5. N3 Injector Installed

Figure 3 Injector Hold-Down Clamp and Washer Installation

9. Prime the fuel system.
10. Refer to the "General Information" section in the *Series 60 Service Manual* (6SE483) for the necessary caution warnings before proceeding.
11. Flush the injectors and cylinder head fuel passages by removing the pressure regulator/check valve from the 90 degree elbow in the cylinder head fuel return port. See Figure 4.
12. Connect a fuel line to the 90 degree elbow and route it to a separate container.
13. Disconnect the Engine Harness 68-pin connector from the ECU or remove the fuse/breaker in the vehicle that powers the ECU.
14. Reconnect battery power to allow use of the starter.
15. Using the starter, crank the engine three times for 15 seconds each time. Allow sufficient time between cranking periods to allow the starter to cool. Note that fuel should be flowing out of the return line into the container.
16. Remove the fuel line from the 90 degree elbow in the cylinder head fuel return port.
17. Install the pressure regulator/check valve and torque to 23 N·m (17 lb-ft). See Figure 4.

18. Connect the Engine Harness to the ECU or install the fuse/breaker in the vehicle that powers the ECU.
19. Complete any other required installation of components (I.E: valve cover, etc.).
20. Start the engine and verify the repairs.



1. 90° Elbow
2. Pressure Regulator/ Check Valve

Figure 4 **Pressure Regulator/Check Valve**



13400 Outer Drive, West, Detroit, Michigan 48239-4001
Telephone: 313-592-5000
www.detroitdiesel.com

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