

Install Fuel Injection Pump

1. If engine was rotated after injection pump was removed, rotate flywheel until timing pin enters flywheel at No. 1 cylinder's "TDC" compression stroke.

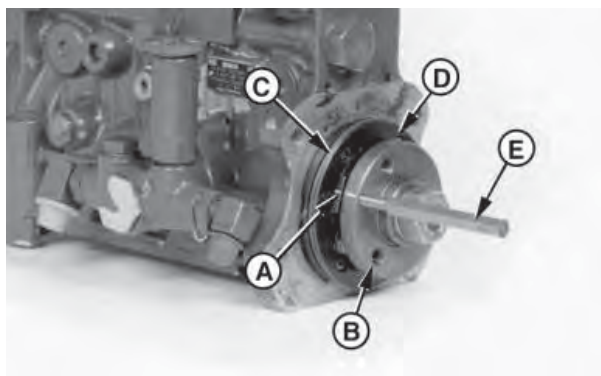
NOTE: When No.1 cylinder is at "TDC" compression stroke, intake and exhaust valves for No. 1 cylinder will be closed and both rocker arms will be loose.

2. Rotate injection pump drive hub until marks on drive hub (B) and pointer (A) are aligned.

NOTE: It may be necessary to rotate pump hub slightly to get timing pin (E) to enter bearing plate.

3. Thread JDG886 Timing Pin (E) into drive hub, as shown, and tighten until it bottoms against bearing plate (D).
4. Install a new O-ring (C) on pump mounting hub. Lightly lubricate O-ring with AR54749 Soap Lubricant to aid in pump installation and prevent O-ring damage.

NOTE: Place injection pump drive gear in timing gear housing (if previously removed) with chamfered side of gear toward injection pump. Chamfer is at outer edge of bore for easier installation of gear to pump drive hub.



Preparing Injection Pump for Installation

- A—Pointer
- B—Drive Hub
- C—O-Ring
- D—Bearing Plate
- E—JDG886 Timing Pin

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5. Install injection pump using moderate forward pressure and slight rocking motion to work O-ring into mounting bore.

Injection pump flange should seat solidly against cylinder block and injection pump drive hub nut should be positioned in I.D. of pump drive gear.

6. Install mounting stud nuts and tighten to specifications.

Specification

Injection Pump-to-Cylinder Block
Stud Nuts—Torque..... 47 N•m (35 lb-ft)

7. Carefully install drive gear on pump drive hub, position gear so mounting cap screws are approximately centered in mounting slots. This will allow for minor adjustment of pump timing, should the need arise.

8. Install four drive gear-to-pump hub cap screws and tighten to specifications using a T45 TORX® adapter (B).

Specification

Injection Pump Drive
Gear-to-Pump Hub Cap Screw—
Torque 61 N•m (45 lb-ft)

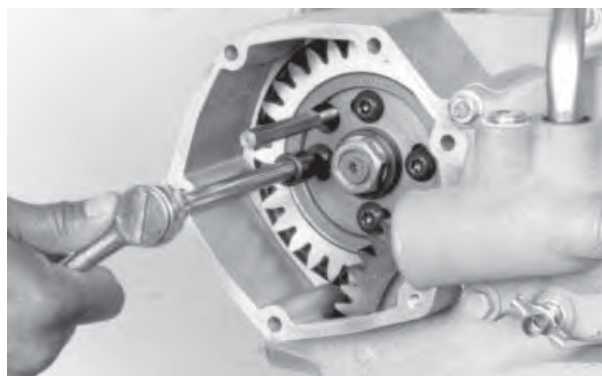
9. Remove JDG886 Timing Pin (A) from injection pump hub. Install timing hole plug using LOCTITE® 242 (TY9370) Thread Lock and Sealer, tighten plug securely.

NOTE: Also remove timing pin from engine flywheel (if installed).

10. Install injection pump drive gear cover using a new gasket or O-ring. Tighten cap screws to specifications.

Specification

Injection Pump Drive Gear Cover
Cap Screws—Torque 27 N•m (20 lb-ft)



Installing Pump Drive Gear

A—Timing Pin
B—Adapter

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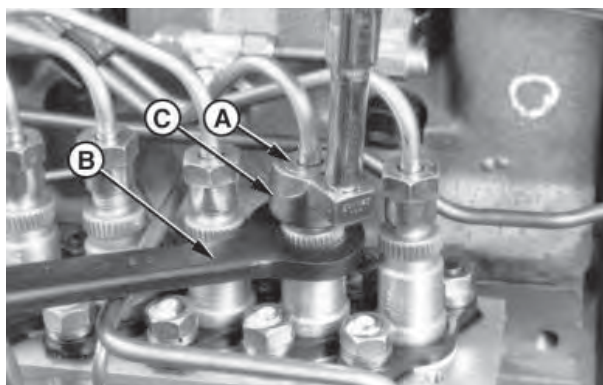
NOTE: Remove protective caps and plugs that were installed on fuel system components during injection pump removal.

11. Connect fuel delivery line nuts (A) to injection pump delivery valve fittings using two wrenches as shown. On Bosch "P" pumps, use JDE90 Serrated Wrench (B) and JDF22 Crowsfoot Wrench (C). Tighten line nuts to specifications.

Specification

Fuel Delivery Line Connectors @
Delivery Valves and Nozzles—
Torque 27 N•m (20 lb-ft)

IMPORTANT: DO NOT move delivery valve fittings while tightening line nuts. If delivery valve and barrel housing rotates while tightening a fuel line nut, injection pump fuel delivery will be altered. The injection pump will have to be recalibrated on a test stand by an authorized diesel repair station.



Installing Lines (Bosch "P" Pump Shown)

- A—Fuel Delivery Line Nuts
- B—Serrated Wrench
- C—Crowsfoot Wrench

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