

Pump / Engine Timing Kit

P/N 40572

IMPORTANT: Complete installation instructions including requirements for safety, cleanliness and environmental awareness are contained in the John Deere Technical Manual for 4.5L & 6.5L PowerTech® Engines with DE Electronic Fuel Injection (John Deere P/N CTM331).

Timing Kit Contents:

- 40610 DE Pump Timing Pin
- 40571 Engine Timing Pin
- 13324 1/4" Hex Key Wrench

Torque Values:

- Injection Pump Mounting Stud Nut 19 lb-ft (25 N•m)
- Injection Pump Drive Gear Nut 145 lb-ft (195 N•m)
- Injection Pump Timing Pin Plug 7.5 lb-ft (9.5 N•m)

Pump Installation:

1. Position the engine crankshaft so number one cylinder is at TDC on the compression stroke. Insert the Engine Timing Pin (P/N 40571) thru the hole in the flywheel housing and engage the pin in the flywheel (Figure 1).
2. Using the included 1/4" Hex Key Wrench (P/N 13324), remove the timing hole plug on the top of the fuel injection pump (Figure 2).
3. Insert the Pump Timing Pin (P/N 40610) into the hole (Figure 3a) and rotate the pump's drive shaft until the pin indexes in the internal drive shaft slot. Leave the pump timing pin in the pump until installation is complete. *NOTE: A small punch may be temporarily inserted into the small hole in the drive shaft taper to facilitate shaft rotation (Figure 3b).*
3. Ensure the pump's flange seal is in place and that the drive shaft and mating surfaces are clean and dry. Carefully insert the injection pump drive shaft into the drive gear and guide the housing flange onto the three mounting studs. Install washers and nuts then tighten the nuts evenly to 19 lbf-ft. (25 N•m).
4. Install the drive gear retaining nut and washer (Figure 4). Do not tighten the nut at this time.
5. Rotate the crankshaft counterclockwise (as viewed from the front of the engine) to remove gear backlash*. Tighten the gear retaining nut to 145 lbf-ft (195 N•m).

***IMPORTANT: Gear backlash can cause the injection timing to be off by as much as several degrees resulting in poor engine performance.**

6. Install the injection pump drive gear access cover. Remove the engine timing pin (P/N 40571) from the flywheel and remove the pump timing pin (P/N 40610) from the pump. Install the timing hole plug (Figure 2) and tighten to 75-100 lbf.-in. (8-11 N•m).

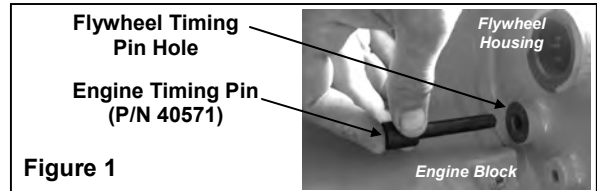


Figure 1

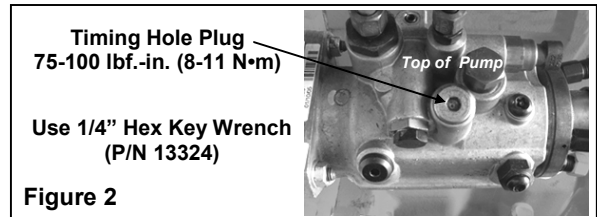


Figure 2

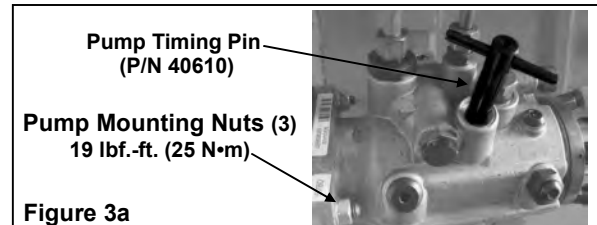


Figure 3a

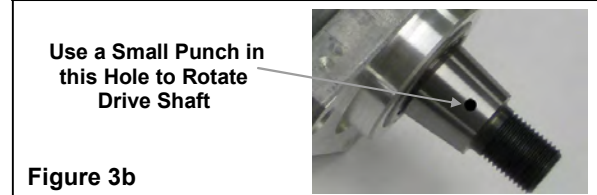


Figure 3b

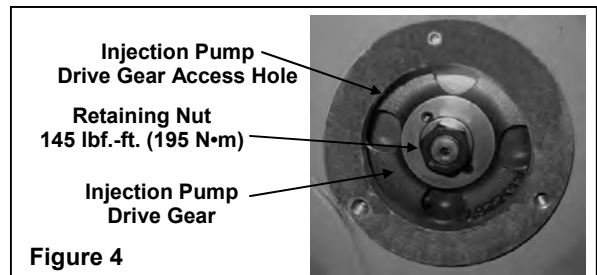


Figure 4