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Service Information Bulletin

SUBJECT	DATE
Main Shaft Speed Sensor	March 2018

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0140	DT12	Installation of the Main Shaft Speed Sensor	Updated text and a torque value change.

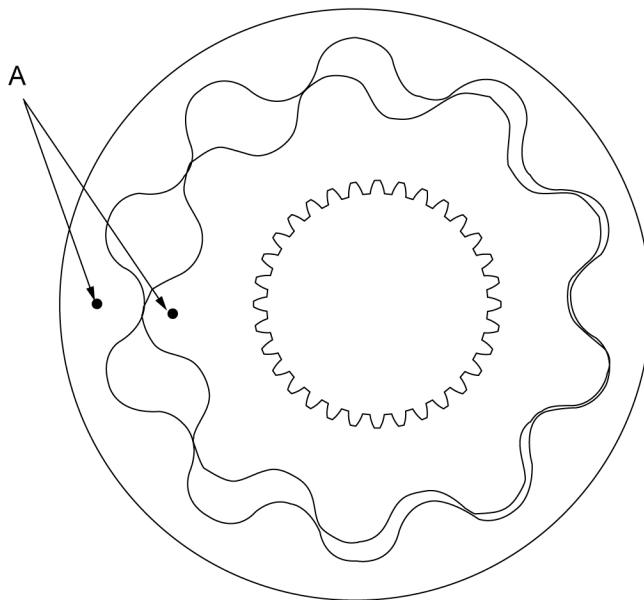


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2 Installation of the Main Shaft Speed Sensor

Install as follows:

1. Put a small amount of grease on the pass-through O-ring, then feed the sensor through the housing into position.
2. Install the sensor. Tighten the screw to 10 N·m (90 lb·in.).
3. Install the pass-through. Tighten the screws to 10 N·m (90 lb·in.).
4. Connect the sensor wiring to the transmission wiring harness.
5. Clean the housing flanges and threaded holes, then apply sealant to one of the flanges.
6. Align the range housing on the guide bolts and slide the range housing into position while engaging the flange of the planetary carrier on the guide pins. Use the flange bolts to evenly pull the range box onto the dowel pins.
7. Torque the range housing flange bolts to 80 N·m (59 lb·ft).
8. Install the shift fork detent spring, apply medium strength thread locker to secure and seal the cap, and tighten to 60 N·m (74 lb·ft).
9. Install the harness raceway, and tighten to 10 N·m (90 lb·in.).
10. Install the range shift air lines.
11. Install the wire harness connections for the road speed sensor, and range position sensor.
12. Clean the mating surfaces and the fastener threads of the oil pump cover.
13. Install the oil pump drive shaft. Make sure the rotors have the sides with the dot (A) facing the oil pump cover, as shown in the figure below.

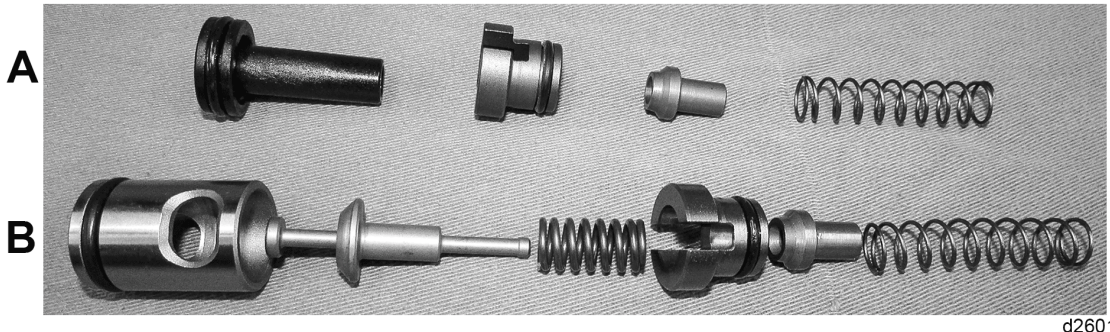


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Figure 1. Oil Pump Rotor and Hub Marking

14. Apply Loctite 518 sealant to the oil pump cover mating surface, and medium strength Loctite to the bolts.

Table 1.

Oil Pump Relief Valve	
NOTE: On oil-cooler-equipped transmissions, align the pressure relief valve locating dowel, with the hole on the cover.	
NOTICE: Be aware of the oil cooler control valve while installing the PTO. The assembly is spring loaded, and may dislodge unexpectedly, before the PTO is installed. If the spring pressure pushes it out of the housing without being retained, the internal parts of the valve will fly apart and may be lost or damaged. In the event the valve does become dislodged, refer to the figure below to see the details required to assemble the valve.	
	
Figure 2. Oil Pump Relief Valve	
A	Transmission Without an Oil Cooler
B	Transmission With an Oil Cooler

15. Clean the oil pump relief valve port to help the O-rings resist the spring pressure, and install the valve assembly with the locating dowel in the 9 o'clock position.
16. Install the oil pump cover, and tighten the bolts evenly to 50 N·m (37 lb·ft).
17. Install the transmission. For instructions, Refer to section "Installation of the Transmission".
18. Fill with transmission oil. Refer to the appropriate Freightliner or Western Star maintenance manual for specification.