Service Information Bulletin

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Additions, Revisions, or Updates

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2 Installation of the Oil Pan

Install as follows:

1. If the oil pump was removed, Refer to section "Installation of the Oil Pump, Oil Suction Manifold, and Oil Lines".
2. When a plastic oil pan is used, insert the raised lip portion of the seal into the groove in the oil pan. Press down on the isolator seal and insert it completely around the oil pan. Be careful not to stretch or bunch the seal. For best results, install the seal at each corner, then at points half way between the corners. Continue in this manner, halving the distance and seating the seal.
3. For the aluminum oil pan, place the gasket on the top of the pan.
4. Apply a 5mm (0.2 in.) diameter bead of Loctite® 5970 or equivalent to the four corners circled below on the gasket.
5. Install the eighteen oil pan bolts and sleeve assemblies through the pan rail into the holes in the gasket.
6. Ensure the joint surfaces of the gear case, the cylinder block, and front cover are cleaned and there is no damage that could prevent sealing.

NOTE: Oil pan (1) is Duraplastic. Oil pan (2) is Thermoplastic.

7. Install the oil pan assembly in position on the cylinder block.
NOTICE: Before torquing, bolt grade must be determined by a marking on the bolt head. Grade 8.8 oil pan bolts cannot be torqued above 25 N·m (18 lb·ft) or damage to the bolt will occur.

NOTE: The corner bolts on the oil pan will be torqued twice, as each is marked with two numbers in graphic below.

8. Ensure that the seal has not been disturbed. Torque the eighteen oil pan bolt assemblies using the proper sequence shown below.

a. For a Duraplastic oil pan, torque bolts to 20 to 25 N·m (15 to 18 lb·ft).

b. For the aluminum and thermoplastic oil pans, torque bolts to 30 to 35 N·m (22 to 26 lb·ft).

9. Install the oil pan drain plug with a new O-ring and torque the plug.
a. On a plastic oil pan, torque plug to 45 N·m +/- 7 N·m (33 lb·ft +/- 5 lb·ft).
b. On an aluminum oil pan torque plug to 60 N·m +/- 9 N·m (44 lb·ft +/- 6 lb·ft).

10. Install bolt at harness P-clip on the front center of the oil pan.
11. Install the dipstick.
12. Install the oil filter and cap. Torque to 55 N·m (40 lb·ft).
13. If oil pump was removed, Refer to section "Installation of the Oil Pump, Oil Suction Manifold, and Oil Lines".
14. Prime the lubrication system. Refer to section "Priming the Engine Lubrication System".
15. Refill the oil pan with lubricating oil. Refer to section "Engine Oil Capacities".

**WARNING: PERSONAL INJURY**

To avoid injury before starting and running the engine, ensure the vehicle is parked on a level surface, parking brake is set, and the wheels are blocked.

**WARNING: ENGINE EXHAUST**

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

16. Start the engine and inspect for leaks.