

DISASSEMBLY AND ASSEMBLY (Continued)

Assembly

NOTE: During the engine assembly, a Gasket Maker E2AZ-19562-B (WSK-M2G348-A5) or equivalent sealer will be applied to many areas before installation. When the sealant is applied, the component should be installed within 15 minutes. After this time the sealant begins to set-up and its sealing effectiveness can be reduced.

Lightly oil all retaining bolt and stud bolt threads before installation except those specifying special sealant.

1. If removed, install oil gallery and cooling jacket plugs. Tighten plugs to 20 N·m (15 lb-ft). Before installation, coat plug threads with Pipe Sealant with Teflon® D8AZ-19554-A (ESG-M4G194-A and ESR-M18P7-A) or equivalent.
2. Install crankshaft as follows:
 - a. Install main bearing inserts in the appropriate cylinder block saddle. Note that third bearing from front is the thrust bearing.

CAUTION: Use care to prevent damage to bearing surfaces.
 - b. Lubricate bearing inserts with Engine Assembly Lubricant D9AZ-19579-D (ESR-M99C80-A) or equivalent heavy engine oil. Carefully lower the crankshaft into place.
 - c. Apply a 6mm (1/4 inch) dot of Anaerobic Sealer E1FZ-19562-A or equivalent, between rear cap and cylinder block as shown.

- d. Install lower bearing inserts in the main caps. Note that caps are numbered with arrow heads. No. 1 is located at front of engine with arrow head facing front of engine. No. 2 is main cap and has two arrow heads pointing to front of engine and so on.

NOTE: Caps are precision fit to surrounding metal parts. A slight tap with a plastic mallet will help to locate cap. Use care to prevent damage.

- e. Apply oil to bearing caps. Install bolts finger-tight.
- f. Before tightening bearing cap retaining bolts/studs, wedge a large screwdriver between cylinder block web and crankshaft cheek located in front of the No. 3 main bearing. Do not jam the screwdriver into place. Apply sufficient force only to push crankshaft forward while the cap bolts are tightened.
- g. Tighten bearing cap retaining bolts/studs to 80 N·m (60 lb-ft) and remove screwdriver.
- h. Check crankshaft end play. Refer to Section 03-00.