Main Bearing Installation on 2011-2016 Ford 6.7L Diesel Engines

The AERA Technical Committee offers the following information on main bearing installation for 2011-2016 Ford 6.7L diesel engines. This information should be followed anytime main bearings are being replaced and all related components are thoroughly cleaned and dry.

It should be noted that commonly found bearing tangs or locators are not used all main bearings for this engine. Only the number five location for the thrust bearing uses a tang or locator. Follow the steps listed below to correctly install main bearings for this engine after verifying all bearing sizes and housing bore are within their limits.

1. Apply clean engine oil or assembly lube to the upper crankshaft main bearing thrust washer and to the rear face of number 5 crankshaft main bearing cap. Align the tab (tang) on the thrust washer with the slot in the number 5 main bearing block location. **Note:** The front 4 main bearings are tangless and must be positioned in the center of the bearing cap or engine damage may occur.
2. Carefully position (lay) the cleaned crankshaft on the lubricated main bearings
3. Apply clean engine oil or assembly lube to the lower crankshaft main bearing thrust washer and to the rear face of number 5 crankshaft main bearing cap. Align the tab (tang) on the thrust washer with the slot in the number 5 main bearing cap.
4. Apply clean engine oil or assembly lube to the remaining four lower crankshaft main bearings after centering them in their respective caps.
5. Use a soft faced mallet to seat the main bearing caps into their registers. **Note:** Do not use the bolts to seat the crankshaft main bearing caps.
6. Loosely install the 20 crankshaft main bearing cap bolts and 10 crankshaft main bearing cap side bolts. Tighten the crankshaft main bearing cap bolts in 3 steps, in the sequence shown below in Figure 1.

• Stage 1: **NOTE:** Lightly lubricate the main bearing cap bolt threads and flanges with clean engine oil and snug up all the bolts.
• Stage 2: Tighten bolts 1 through 20 in sequence to 177 IN/LBS (20 Nm).
• Stage 3: Tighten bolts 1 through 10 in sequence to 59 FT/LBS (80 Nm).
• Stage 4: Tighten bolts 11 through 20 in sequence to 118 FT/LBS (160 Nm).
• Stage 5: Tighten bolts 1 through 20 in sequence an additional 90° turn.
• Stage 6: Tighten side bolts in sequence 21 through 30 to 30 FT/LBS (40 Nm).
• Stage 7: Tighten side bolts in sequence 21 through 30 an additional 90° turn.
Figure 1. Main Bearing Bolt Torque Sequence