



Main Bearing Bolt Installation on 2008-2010 Ford/Navistar 6.4L Diesel Engines

The AERA Technical Committee offers the following information on main bearing bolt installation for 2008-2010 Ford/Navistar 6.4L diesel engines. This information should be followed anytime main bearings are being replaced. As a note, beginning in 2010 the cylinder block material was also changed to CGI (Compressed Graphite Iron) and its appearance may differ from previous blocks.

NOTICE: New 14MM main bearing bolts are required for a successful repair on these engines. To prevent engine damage, make sure that the longer main cap bolts (M14 x 2 x 127 MM) are installed inboard and the shorter bolts (M14 x 2 x 114 MM) are installed outboard.

After the groove and sealing surfaces of the upper and lower crankcase have been cleaned with metal brake parts cleaner or equivalent the gasket maker may be applied. Make sure the gasket maker is used sparingly and spread to form a thin film on the surfaces.

Apply a thin film of gasket maker to the bottom of the groove and the sealing surfaces of the lower crankcase. Install the new lower crankcase seals on the film of gasket maker in the grooves of the lower crankcase. Apply a thin film of gasket maker on the upper crankcase sealing surfaces. RTV is not an acceptable alternative for gasket maker, as it can increase oil clearance.

Lightly lubricate the new crankcase main bearing mounting bolt threads and flanges with clean engine oil. Position the lower crankcase bedplate and install all 20 lower crankcase main bearing mounting bolts. Tighten the mounting bolts in 3 stages in the sequence shown below.

- Stage 1: Tighten all bolts in sequence to 110 FT/LBS (149 Nm).
- Stage 2: Tighten all bolts in sequence to 130 FT/LBS (176 Nm)
- Stage 3: Tighten all bolts in sequence to 170 FT/LBS (231 Nm)

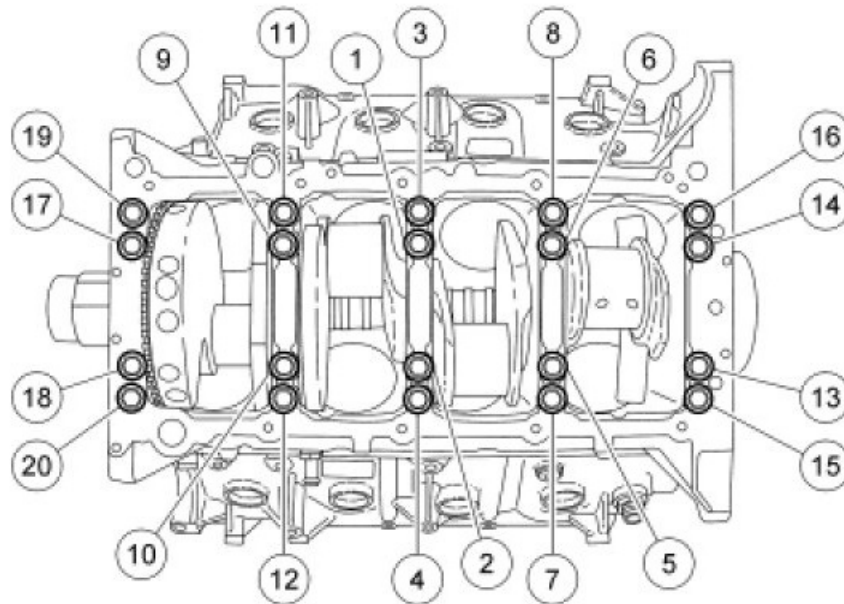


Figure 1. Main Bearing Bolt Torque Sequence