



## Main Bearing Bolt Installation on 2005-2016 Nissan 4.0L VQ40DE Engines

The AERA Technical Committee offers the following information regarding the installation of main bearing bolts on 2005-2016 Nissan 4.0L VQ40DE engines. This installation procedure is suggested to assure a leak-free gasket seal between the upper and lower cylinder block.

This engine uses a two piece block assembly and it should be noted the lower block assembly is not replaceable as a single unit; the upper and lower components are a matched set. After previously verifying all main bearing oil clearances, follow the steps listed below for final installation of the lower unit to the upper block unit.

1. After assuring the upper and lower block mating surfaces are completely clean and dry apply a continuous bead of liquid (approved silicon sealant RTV) as shown in Figure 1. **Note:** The components must be installed within 5 minutes of the liquid gasket application. Then allow 30 minutes for the liquid gasket to set before operating the engine

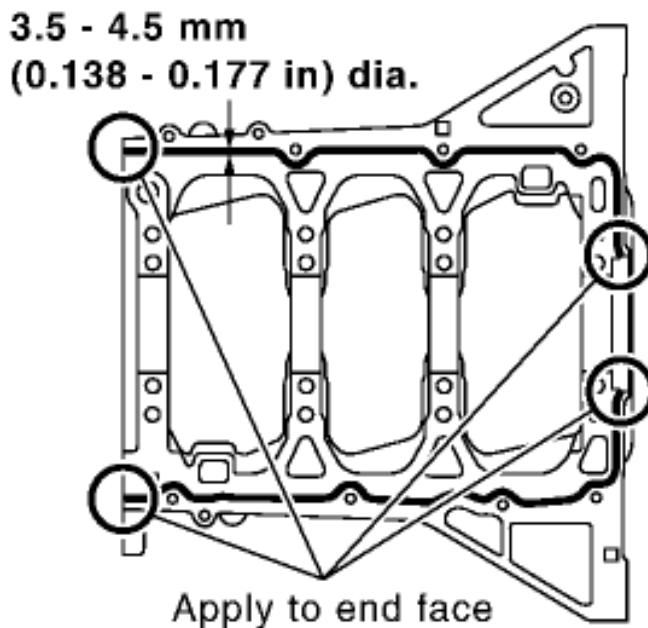
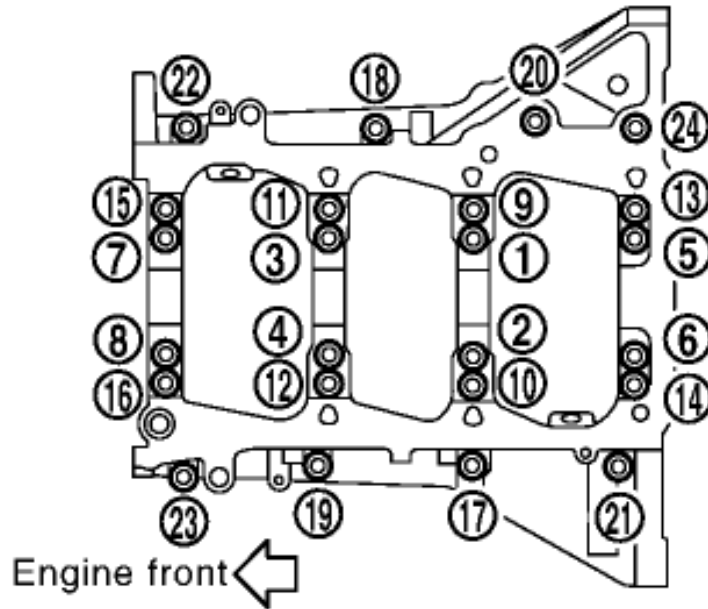


Figure 1. Apply RTV as Shown

2. Tighten lower cylinder block as follows: Apply new engine oil to threads and seat surfaces of the bolts. See Figure 2.



**Figure 2. Lower Block Main Bolt Torque Sequence**

3. Tighten M8 bolts in numerical order as shown from 17–24 to 16 FT/LBS (22.1 Nm) CAUTION: Wipe off completely any protruding liquid gasket on rear oil seal installation surface. NOTE: There are more processes to the complete tightening of main bolts.
4. It is recommended the installation of the rear crankshaft seal be done at this time and then restarting the main bearing bolt torque procedure.
5. Tighten the M10 bolts in the numerical sequence order 1-16 as shown in Figure 2 to 26 FT/LBS (34.3 Nm).
6. After doing so, turn the M10 bolts 1-16 an additional 90° turn clockwise in the numerical sequence shown in Figure 2.