Thank you for choosing the BOP Engineering Viton® Rear Main Seal, which is a direct replacement for the stock rope seal. The seal may and can ride on the serrated area of the stock crankshaft with no issues. Some aftermarket crank serrations may be more aggressive than the factory crank and may require polishing prior to installation. In this case, do not remove more than .006 inches from the nominal diameter during polishing. (see specs under additional installation notes) We have not found it necessary to offset the seal ends from the parting line; however it can be done if desired. If you have any questions please feel free to contact us.

For longevity of the seal please follow these instructions carefully.

1. Prior to final installation of the crankshaft in the block, make sure the block and main cap seal cavities are clean and free of obstructions.
2. Place one half of the seal in the block seal cavity noting correct orientation of seal (Figure 1). With the seal fully seated in cavity, square up one end of the seal with the block/cap parting line and measure the amount of the seal that is protruding on the opposite end using a caliper or feeler gauge. The amount protruding should be 0.020 ± 0.005". This equates to 0.0075 to 0.0125" per end. If it is more, remove material from one end while keeping it square, until it measures the correct amount. (see install notes) Repeat for the main cap assy.
3. Preassemble seal in block and cap with no sealer and bolt together without crank. Look through bore and check to see that seal ends meet properly with no gaps or distortion. Refit where necessary until ends meet properly.
4. Remove seal from block and main cap. Fill the four anti-rotation holes with a high temperature silicone sealer only on the ends of the seal halves (Figure 2). We have not found it necessary to offset the parting line but it can be done if desired.
5. Reinstall the seal halves noting correct orientation of seal (Figure 1). Position with an equal amount of protrusion on each end. Place a thin film of high temperature silicone sealer only on the ends of the seal halves (Figure 2). We have not found it necessary to offset the parting line but it can be done if desired.
6. Lightly coat the crankshaft mating surfaces of the seals with oil or equivalent. Install crankshaft and torque all main cap bolts to manufacturer specifications.
7. Allow assembly to sit overnight to permit undisturbed curing of sealer.

**Note:** All four anti-rotation holes must be filled when using the RMS02!

1. Remove oil pan, oil pump and windage tray per factory service manual.
2. Follow the instructions on the back of this sheet with one exception. Fill only the two anti-rotation holes in the cap with high temp silicone. The seal half on the block-side is simply slid into the seal groove (and checked for length) after the rope seal is completely removed and groove is thoroughly cleaned.
3. Install oil pump, windage tray, and oil pan.

**RMS01 without crankshaft removed**

1. Remove oil pan, oil pump and windage tray per factory service manual.
2. Follow Steps 1-4 (Skip Step 3) on the back of this sheet, filling the block-side anti-rotation holes with steps 3 through 6 below

**RMS02 without crankshaft removed**

1. Remove oil pan, oil pump and windage tray per factory service manual.
2. Follow Steps 1-4 (Skip Step 3) on the back of this sheet, filling the block-side anti-rotation holes with steps 3 through 6 below

**Additional Installation Notes: For all BOP Seal Installations**

Theses instructions are written for part numbers RMS01 & RMS02 for Pontiac. If anti-rotation holes are not present skip steps that fill them with silicone.

RMS02 for Buick may require up to .125 inches to be removed for proper fit. For Part numbers RMS03 and RMS04 use as general reference only.

**Specifications:**

<table>
<thead>
<tr>
<th>RMS01 Sealing Diameter</th>
<th>3.188” +/- .003”</th>
<th>Groove Diameter</th>
<th>3.812” +/- .005”</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS02 Sealing Diameter</td>
<td>3.437” +/- .003”</td>
<td>Groove Diameter</td>
<td>4.012” +/- .005”</td>
</tr>
</tbody>
</table>

Call for further instruction if your groove of crankshaft does not meet specifications or if an excessive (> .050”) amount of seal trimming is required.

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