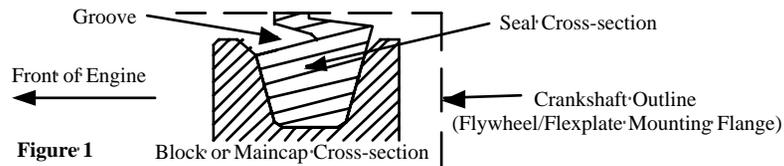


BOP Engineering Viton® Rear Main Crankshaft Seal Instructions for RMS01 (3"main) & RMS02 (3.25"main) with Crankshaft Removed

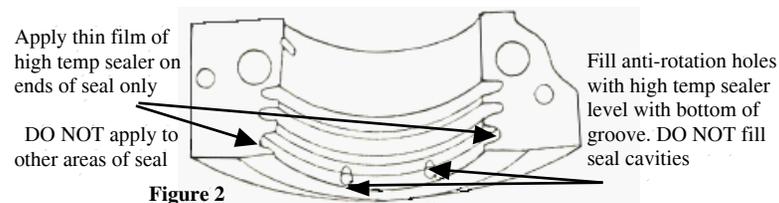
Thank you for choosing the BOP Engineering Viton® Rear Main Seal, which is a direct replacement for the stock rope seal. The seal may ride on the serrated area of the stock crankshaft. We have not found this to cause any problems. The serrations on some non-GM cranks may be more aggressive than the stock crank. If the seal rides on an area of aggressive serrations, we recommend polishing this area prior to installation. Remove no more than .003" during polishing. If you have questions during installation please call, or contact us through our website.

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 side. If it is more, remove material from the end of the seal with a file while keeping the ends square, until it measures the correct amount. Repeat for the main cap assembly.



3. Remove seal from block and main cap. Fill only the bottom of the four anti-rotation holes with a high temperature silicone sealer or equivalent (Figure 2). This will help prevent any unwanted movement of the seal during operation.
Do not coat the back of the seal, the groove area or the seal cavities!
This will cause excessive compression and wear on the lip, causing premature failure of the seal.



4. 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 red 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. Lightly coat the crankshaft mating surfaces of the seals with oil or equivalent. Install crankshaft and torque all main cap bolts to manufacturer specifications.
6. Allow assembly to sit overnight to permit undisturbed curing of sealer.

BOP Engineering Viton® Rear Main Crankshaft Seal Instructions for RMS01 (3"main) without Crankshaft Removed

Attention! DO NOT install RMS02 (3.25"main) using this Procedure. When using the RMS02, the crankshaft must be removed to fill the anti-rotation holes in **both** block and main cap with RTV to prevent oil seepage behind the seal at those locations. They do not need to be filled in the block when using the RMS01.

1. Remove oil pan, oil pump and windage tray per factory service manual.
2. Remove rear main cap. Loosen, but do not remove the other main caps. Pull the rear of the crankshaft slightly away from the block to remove pressure on the rope seal.
3. Remove the stock rope seal from the main cap. The block-mounted rope seal may be removed by grasping one end firmly with needle-nose pliers and pulling it out.
4. Make sure seal cavities are clean and free of obstructions. Place the BOP Engineering seal in the block noting correct orientation of seal (Figure 1).
5. 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 side. If it is more, remove material from the end of the seal with a file while keeping the ends square, until it measures the correct amount. Repeat for the main cap assembly.
6. Remove seal only from the main cap. **Fill only the bottom of the two anti-rotation holes in the cap** with a high temperature red silicone sealer (Figure 2). This will help prevent any unwanted movement of the seal during operation. It is not necessary to fill the two anti-rotation holes in the block.
Do not coat the back of the seal, the groove area, or the seal cavities!
This will cause excessive compression and wear on the lip, causing premature failure of the seal.
7. Reinstall the seal in the main cap, noting correct orientation of seal (Figure 1). Position with an equal amount of protrusion on each end. Place a thin film of high temperature red silicone sealer only on the ends of the seal halves (Figure 2).
8. Lightly coat the crankshaft mating surfaces of the seals with oil or lithium grease. Install crankshaft and rear main cap. Torque all main cap bolts to manufacturer specifications.
9. Allow assembly to sit overnight to permit undisturbed curing of sealer.
10. Install oil pump, windage tray, and oil pan.

Installation Notes:

These instructions are written for part numbers RMS01 & RMS02 for Pontiac. Part numbers RMS02 for Buick, RMS03, and RMS04 use as reference only.

Specifications:

RMS01 Sealing Diameter 3.188" +/- .003" Groove Diameter 3.812" +/- .005"

RMS02 Sealing Diameter 3.437" +/- .003" Groove Diameter 4.012" +/- .005"

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

