



## FEL-PRO INSTALLATION TIPS

Fel-Pro products are the result of exhaustive research and strict quality control. However, no sealing product is better than the quality of its installation.

### GENERAL INSTRUCTIONS

**CLEAN MATING SURFACES** of all foreign material. Use a degreaser.

**CLEAN THREADS** of bolts/studs using a wire brush; all nuts/threaded holes use a bottoming tap.

**Determine Which Bolts** extend into the coolant passages. Those **entering** the coolant passages require a pliable non-hardening sealer on the bolt threads and the underside of bolt head. Those **not entering** the coolant passages require oil on the bolt threads and underside of the bolt head.

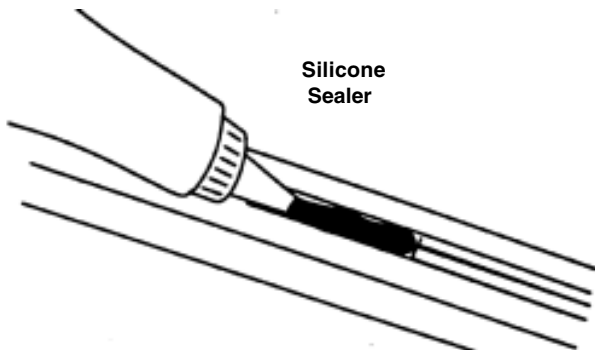
**Exhaust Assembly:** Apply a high temperature anti-seize lubricant to the threadings.

**CHECK ALL CASTINGS** for flatness; straighten, resurface or replace if out of flat conditions exists.

**FINAL ASSEMBLY** always requires torquing of fasteners according to OEM specifications. For certain assemblies we have provided specific torquing specifications.

**Some procedures may be repeated with additional specific information for your application.**

### TIMING COVER



**CREATE TIMING COVER GASKET** by applying a continuous 1/8" bead of silicone sealer to the mating surface of the timing cover. **IMMEDIATELY PROCEED** to the next step, as RTV normally sets up in 10-15 minutes.

**REINSTALL COVER TO ENGINE.** Torque securely to OEM specifications.

### WATER OUTLET AND WATER PUMP GASKETS

**TO ASSIST IN ALIGNMENT AND SEALING DURING ASSEMBLY,** apply a thin coat of gasket sealer to both sides of gasket(s).

### ROTATING SHAFT SEALS

**PRIOR TO INSTALLING THE ROTATING SHAFT AND/OR SEAL** apply a thin coat of lubricant, such as grease, on the sealing lip and shaft.

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**IMPORTANT:** Do not install any seal without break-in lubricant protection.

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### REAR MAIN BEARING SEAL

**CLEAN MATING SURFACES** (cap, block, and grooves of cap and block). You may wish to use a degreaser.

**REMOVE NICKS AND SCRATCHES (IF ANY) FROM THE CRANKSHAFT SEALING SURFACE** using a crocus cloth.

#### INSTALL NEW SEAL(S):

**INSTALL SEAL** into the recessed cavity of the seal retainer. The seal is properly installed when its largest raised sealing lip is toward the **front** of the engine. (Seals with a metal garter spring require the spring to face towards the **front** of the engine).

**ATTACH AND ALIGN SEAL RETAINER GASKET.** Apply a thin coat of gasket sealer to both sides of gaskets.

**LUBRICATE SURFACE** of seal lip and crankshaft by applying a thin coat of motor oil or grease. If engine will not be started within several days, grease is recommended.

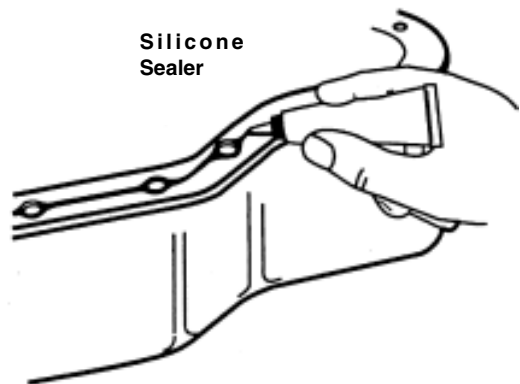
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**REINSTALL SEAL RETAINER TO CYLINDER BLOCK.** Torque to OEM specifications.

### CRANK CASE GASKET



**CREATE CRANK CASE GASKET** by applying a continuous 3/16" bead of silicone sealer down the center of the crank case flanges circling each hole. When crank case is positioned on the engine, avoid wiping off the RTV. **IMMEDIATELY PROCEED** to the next step, as RTV normally sets up in 10-15 minutes.

**REINSTALL CRANKCASE TO ENGINE.** Torque securely to OEM specifications.

**TEST RUN ENGINE.** Check all mating areas thoroughly to determine that all seals hold during operation.



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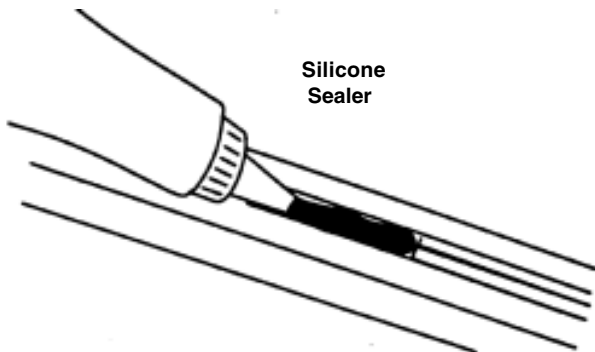
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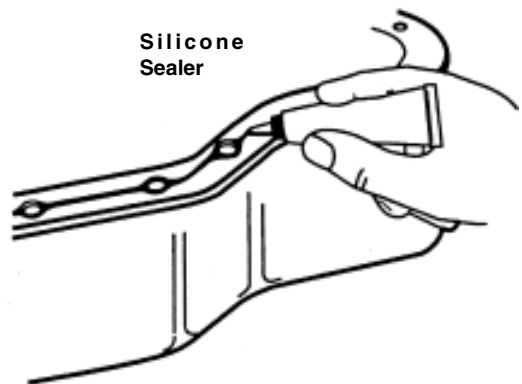
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