



## 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.

### HEAD GASKET

**IMPORTANT:** The head gasket contained in this set should **ONLY BE INSTALLED** on engines where the intake manifold and cylinder heads are separate units. **DO NOT INSTALL** the head gasket contained in this set on engines where the cylinder head and manifold castings are integral (consult catalog for gasket application).

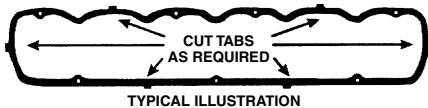
**CLEAN MATING SURFACES** of all foreign materials. You may wish to use a degreaser.

**CHECK HEAD AND BLOCK** for flatness. Refer to OEM manual to determine flatness tolerances and resurfacing limitations.

**CLEAR ALL THREADED HOLES** in the block by using a bottoming tap. Tap below the maximum bolt penetration to prevent bottoming.

**CLEAN ALL BOLT THREADS** by using a wire brush. Lubricate the underside of **every** bolt head with oil. Determine which bolts extend into the coolant passages. Those **entering** the coolant passages require a pliable non-hardening sealer on the threads. Those bolts **not entering** the coolant passages require oil on the threads.

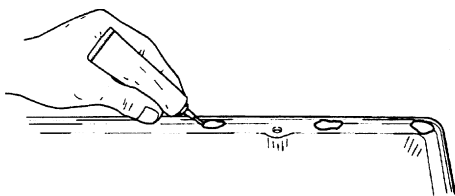
### VALVE COVER AND PUSH ROD COVER GASKETS



**PRIOR TO INSTALLATION** of covers check fit of gasket. If necessary, remove gasket tabs. Cut tabs using a sharp blade.

**CLEAN MATING SURFACES** of all foreign material including old gaskets, RTV and oil. You may wish to use a degreaser. Also clean oil return holes.

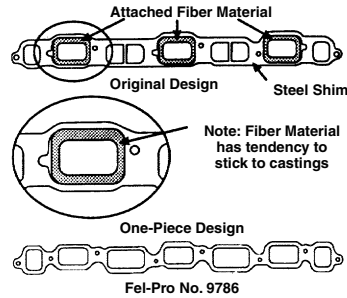
**CHECK COVER FLANGES** for flatness. Straighten stamped metal covers. Replace if severely distorted. Distorted cast aluminum or plastic covers are difficult to straighten and should be replaced.



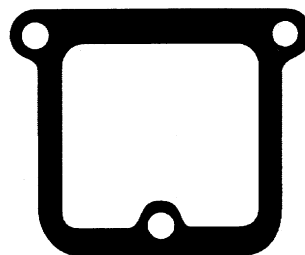
**ATTACH AND ALIGN GASKET TO COVER.** Apply a quick-drying adhesive sparingly in several places on the mating surface of cover. If gasket has installation tabs, adhesive is **not** required. Mount gasket on cover. **Allow time for adhesive to set.** Test for slippage with light pressure. If gasket moves, allow more time

**REINSTALL VALVE COVER TO ENGINE.** Torque securely to OEM specifications. Over-torquing can distort cover and cause leakage.

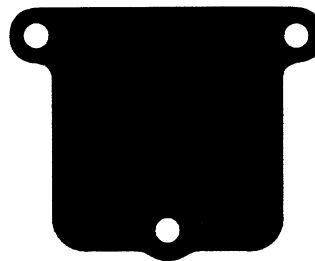
## INTAKE AND EXHAUST MANIFOLD GASKETS



The **Intake/Exhaust manifold gasket** included in this set is a one-piece design which may appear different from the original gasket being removed. The new one-piece gasket has steel faces on both sides with fiber in the center, as well as non-split exhaust port for multi-year coverage.



GASOLINE



LPG

This set contains 2 intake-to-exhaust gaskets. The **Opened Port** gasket is for gasoline engines; the **Closed Port** gasket is for LPG engines.

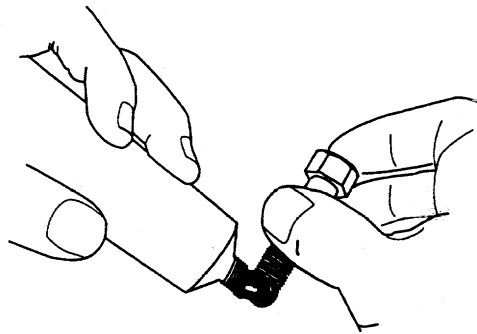
**REMOVED MANIFOLDS** from cylinder heads. **IMPORTANT:** You must disassemble the intake manifold from the exhaust manifold to allow for corrected realignment of the manifolds to the cylinder head during the reassembly.

**CLEAN MATING SURFACES** of all foreign material including old gaskets, RTV and oil. You may wish to use a degreaser.

**CHECK MANIFOLD CASTINGS** for flatness of gasket surface. Resurface or replace if severely distorted.

CUT TO 6.25"

CUT TO 6.25"



**CLEAN ALL THREADS** by using a wire brush for bolts and studs, tap all bolt holes and stud nuts. Apply a high temperature anti-seize lubricant to the bolt and stud threads.

**REASSEMBLE MANIFOLDS.** Install the intake-to-exhaust gasket between the intake and exhaust manifolds. If gasket is steel faced on one side and fiber on the other, install steel faced side toward the exhaust manifold. Only finger tighten the manifolds together.

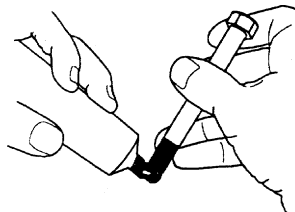
**ATTACH AND ALIGN GASKET(S) TO CYLINDER HEAD(S).** The gasket can only be installed one way.

**REINSTALL INTAKE AND EXHAUST MANIFOLD ASSEMBLY** to cylinder heads. Torque securely to OEM specifications.

Now torque the intake manifold exhaust connection to OEM specifications. Over-torquing can fracture the manifold or cause the bolts and studs to break.

## **EXHAUST PIPE FLANGE AND E.G.R. VALVE BOLTS**

**CLEAN MATING SURFACES** of all foreign material. You may use a degreaser.



**CLEAN ALL THREADS** by using a wire brush for bolts and/or studs. Apply a high temperature anti-seize lubricant to the bolt and/or stud threads.

**ATTACH AND ALIGN GASKET.**

**REINSTALL EXHAUST PIPE FLANGE AND/OR E.G.R. VALVE GASKET(S) TO ENGINE.** Torque securely to OEM specifications. Over-torquing can cause the bolts and studs to break.

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

## **WATER OUTLET GASKET**

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