



FEL-PRO INSTALLATION TIPS

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.

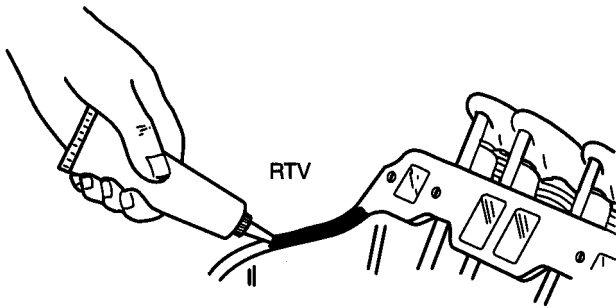
REINSTALL VALVE COVER TO ENGINE. Torque securely to OEM specifications. Over-torquing can distort cover and cause leakage.

INTAKE MANIFOLD GASKET

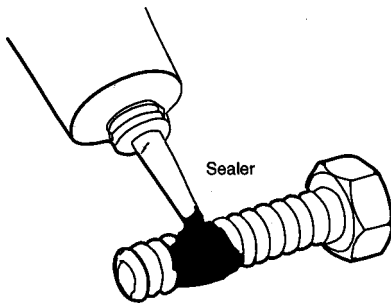
CLEAN MATING SURFACES of all material including old gaskets, RTV and oil. You may wish to use a degreaser.

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

ATTACH AND ALIGN GASKET(S) TO CYLINDER HEAD(S). Apply quick-drying adhesive sparingly in several places on the cylinder heads. Mount gasket(s) on cylinder head(s). **Allow time for adhesive to set.** Test for slippage with light pressure. If gasket moves, allow more time.



CREATE INTAKE MANIFOLD END SEALS by applying a continuous 3/16" bead of silicone sealer, such as RTV, across the front and rear ends of the cylinder block, from one cylinder head to the other. **IMMEDIATELY PROCEED** to the next step, as RTV normally sets up in 10-15 minutes.



REINSTALL INTAKE MANIFOLD TO ENGINE while RTV is still wet. **IMPORTANT:** The bolts attaching the manifold to the heads should be coated with a thread locking sealer. Torque securely to OEM specifications.

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

NOTE: RTV is included in this set.

HEAD GASKET

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.

ATTACH AND ALIGN GASKET(S) FOLLOWING ANY DIRECTIONAL MARKINGS SHOWN ON THE GASKET. If no markings exist, simply install the gasket by matching the gasket to engine deck surface.

FIBER FACED GASKET(S) are to be installed dry. **METAL FACED GASKET(S)** require a thin even coat of sealer to be applied to the metal side(s) of the gasket.

REINSTALL CYLINDER HEADS TO ENGINE. Torque securely to OEM specifications.

VALVE STEM SEALS

Use the valve stem seals included in this set for the applications indicated. Valve guide seal on intake, umbrella seal on exhaust, in addition to the "O" Ring seal on intake and exhaust.

REMOVE SPRING ASSEMBLIES, KEEPERS and the old valve stem seals.

REMOVE BURRS (IF ANY) FROM VALVE STEMS. Use a fine stone or crocus cloth. Clean stems thoroughly to remove all abrasives or dust particles. Lubricate lightly.

INSTALL NEW SEALS.

POSITIVE GUIDE SEAL: Use the plastic installation sleeve(s), included in this set, to prevent damage to the lip of the seal. Trim the plastic sleeve so it extends 1/16" below keeper groove. Place the sleeve on the stem.

Carefully start valve stem seal over sleeve.

Remove plastic installation sleeve and reuse for installing remaining seals.

FOR RUBBER JACKET SEALS: Push seal down over valve guide until it bottoms.

FOR SOLID OR METAL JACKET SEALS: The use of an OEM service tool is recommended. If tool is unavailable, use a deep socket or rigid tube of appropriate diameter. Center tool (or socket) over the shoulder of the seal and tap the seal down over the guide until it bottoms.

REPLACE VALVE SPRING ASSEMBLIES. Compress springs just enough to install keepers. **IMPORTANT:** Excessive compression can result in spring retainer damaging valve stem seal. Release spring carefully.

VALVE COVER GASKET

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.



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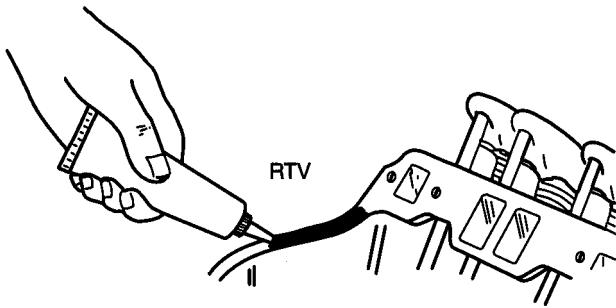
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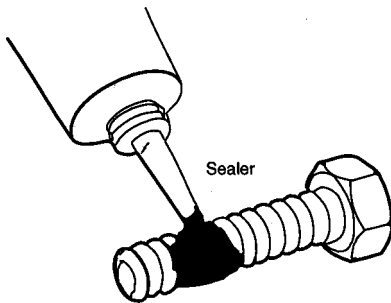
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