



FEL-PRO INSTALLATION TIPS

GENERAL INSTRUCTIONS

CLEAN MATING SURFACES. Use a degreaser.

CLEAN THREADS of bolts/studs; for nuts/threaded holes use a bottoming tap.

BOLT PREPARATION: Those **entering** coolant passages require a pliable non-hardening sealer on threads and underside of bolt heads. Those **not entering** coolant passages require oil on threads and underside of bolt heads. **Exhaust Assembly:** Apply a high temperature anti-seize lubricant to threadings.

CHECK CASTINGS for flatness. Straighten, resurface or replace if needed. **CYLINDER HEAD AND BLOCK:** Refer to OEM manual to determine flatness tolerances and resurfacing limitations.

FINAL ASSEMBLY: Torque all fasteners to OEM specifications unless noted. CYLINDER HEAD torquing is critical; we recommend that you confirm with OEM.

VALVE STEM SEALS

Use the valve stem seals included in this set for the applications indicated. "Intake" seals are black rubber; "Exhaust" seals are brown rubber.

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 the keeper groove. Place the sleeve on the stem. Carefully start the 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.

VALVE COVER/PUSH ROD COVER

ATTACH AND ALIGN GASKET(S): Use a quick drying adhesive, applied sparingly. If gasket has installation tabs, adhesive is not required. **IMPORTANT:** If gasket is rubber, install dry.

INTAKE MANIFOLD GASKET

STEEL SHIM GASKET: Apply a thin coat of sealer around the intake ports on the underside of the gasket to prevent vacuum loss.

Now apply a 1/8" continuous bead of silicone sealer around each water port on the cylinder heads.

Attach and align gasket(s) to engine. Position gasket(s) by means of stamped protrusions into corresponding bolt holes in the heads.

Apply a thin coat of sealer around the intake ports on the top side of the gasket.

Now apply a 1/8" continuous bead of silicone sealer around each water port on the gasket.

INSTALL END SEALS:

WHERE DOWEL PINS EXIST position seals over dowel pins.

WHERE NO DOWEL PINS EXIST position seals by applying quick-drying adhesive sparingly in several places on each end of the block. Mount end seals. **Allow time for adhesive to set.** Test for slippage with light pressure. If end seals move, allow more time.

Secure ends of seals by making certain that protruding tabs from head gasket fit through holes in end seals. Press down to lock securely in place.

PRIOR TO INSTALLING INTAKE MANIFOLD apply a small dab of silicone sealer where all gaskets and seal(s) meet.

EXHAUST MANIFOLD GASKET

ATTACH AND ALIGN GASKET(S). If gasket has only one steel faced side, install steel side towards manifold.

WATER OUTLET GASKET

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



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