



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.

HEAD GASKET

Follow any directional markings shown on gasket(s). If no markings exist, install gasket(s). **Fiber Faced Gasket(s):** Install dry. **Metal Faced Gasket(s):** Requires a thin even coat of a general purpose gasket sealer applied to the metal side(s) of gasket.

VALVE STEM SEALS

POSITIVE GUIDE SEAL:

Use plastic installation sleeve(s), to prevent damage to lip of seal. Trim the plastic sleeve so it extends 1/16" below the keeper groove. Place the sleeve on the stem. Carefully start valve stem seal over sleeve. Remove plastic sleeve. **FOR RUBBER JACKET SEALS:** Push seal 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 over shoulder of seal down over the guide until it bottoms.

UMBRELLA TYPE SEAL:

Start valve stem seal over valve stem; push seal down on seal body until it touches top of valve stem guide. Seal will find its proper position on stem once engine starts.

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

WHERE DOWEL PINS EXIST position seals over dowel pins.

WHERE NO DOWEL PIN 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.

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

PRIOR TO INSTALLING INTAKE MANIFOLD apply a small dab of silicone sealer where all gaskets and seals meet.

Never apply RTV completely across gaskets or seals.

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 a general purpose gasket sealer to both sides of gasket(s).



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