



FEL-PRO INSTALLATION TIPS

GENERAL INSTRUCTIONS

CLEAN MATING SURFACE Use a degreaser.

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

BOLTS 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 lubricant such as anti-seize lubricant to threading.

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



No holes in cylinder block or with 1 end hole, use 8180 PT-2



Holes in cylinder block, use 8523 PT.

IMPORTANT: There are 2 series of coolant configurations for the 427 and 454 C.I.D. engines. Only use head gasket 8523 PT on the engine blocks **having** the 3 additional coolant holes. Engine blocks not having the extra coolant holes can only use head gasket 8180 PT-2.

ATTACH AND ALIGN GASKET(S) FOLLOWING ANY DIRECTIONAL MARKINGS SHOWN ON THE GASKET. If not 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 a general purpose gasket sealer to be applied to the metal side(s) of the gasket.

VALVE STEM SEALS

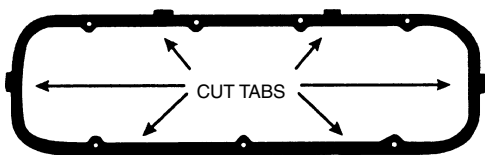
POSITIVE GUIDE SEALS:

Use plastic installation sleeve(s), to prevent damage to lip of seal. Trim plastic sleeve so it extends 1/16" below keeper groove. Place sleeve on stem. Carefully start valve stem seal over sleeve. Remove and re-use plastic sleeve. **FOR RUBBER JACKET SEALS:** Push seal over valve guide until it bottoms. **FOR SOLID/METAL JACKET SEALS:** Use of OEM service tool is recommended. If tool is unavailable, use socket or rigid tube of appropriate diameter. Center tool over shoulder of seal and tap seal down over guide until it bottoms.

UMBRELLA TYPE SEAL:

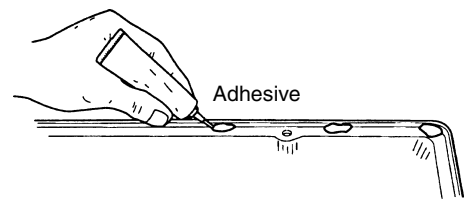
Start valve stem seal over valve stem and push seal down on seal body until it touches top of valve stem guide. Seal will find its proper position on the stem once the engine starts.

VALVE COVER GASKET



TYPICAL ILLUSTRATION

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



ATTACH AND ALIGN GASKET. Apply 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.

INTAKE MANIFOLD GASKET

V-TYPE ENGINES - FIBER SIDE GASKET(S) ALONG WITH FRONT AND REAR END SEAL(S): Attach and align gasket(s) and end seal(s) using a quick drying adhesive sparingly. **PRIOR TO INSTALLING INTAKE MANIFOLD** apply a dab of silicone sealer where all gaskets and seal meet.

IN-LINE ENGINES: Attach and align gaskets to cylinder heads.

EXHAUST MANIFOLD GASKET

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

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.

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

REAR MAIN BEARING SEAL

To properly install the rear main bearing seals it is necessary to install both seal halves as a pair.

MOLDED RUBBER SEALS: Install the seals into the grooves of the cap and block by firmly pressing the seals into the grooves.

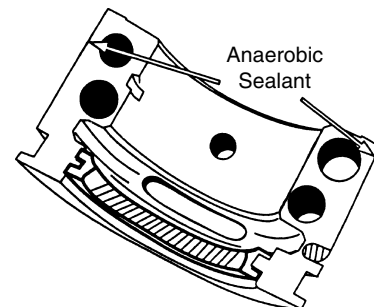
Make certain that the ends of the seals are flush with the face of the cap and block.

IMPORTANT: Install seals using the "shoehorn" installation aid, included in this set. Place shoehorn underneath the seals to protect them from the sharp casting edges.

To seal is properly installed when its largest raised sealing lip is toward the front of the engine.

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 recommended.

IMPORTANT: Never install any seal without break-in lubricant protection.



PRIOR TO INSTALLING THE REAR MAIN BEARING CAP apply an anaerobic sealant to either the rear main bearing cap or cylinder block mating surfaces. Never apply sealant on the ends of the seals.

OIL PAN GASKET

ATTACH AND ALIGN GASKET(S). Apply a quick-drying adhesive sparingly. Mount gasket and/or seals. **PRIOR TO INSTALLING OIL PAN** apply a dab of silicone sealer where all gaskets and seals meet.



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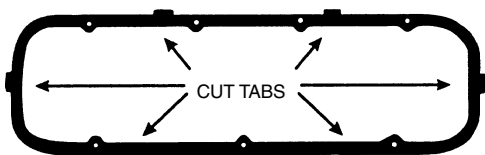
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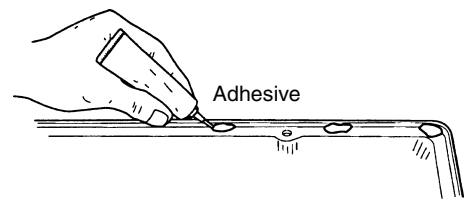
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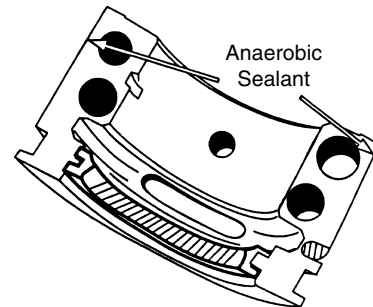
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