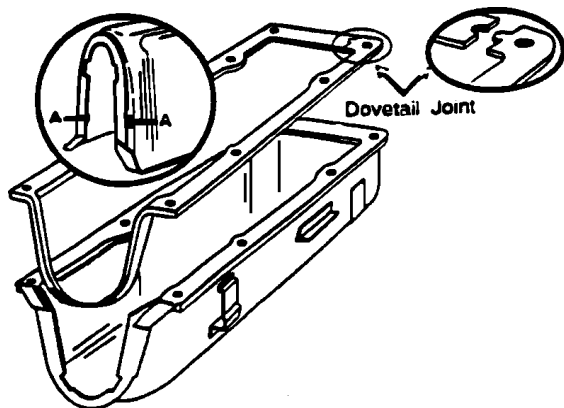




REINSTALL COVER TO ENGINE. Press down firmly.

INSTALL AND TIGHTEN ALL CAP SCREWS in side rails and rear ends. Securely tighten cap screws at "A" if present. **CAUTION:** Over-torquing can distort cover and cause leakage.

START CAP SCREWS. If 2 slotted holes are present (see "A" in drawing) do not tighten down.

INTAKE MANIFOLD GASKET

ATTACH AND ALIGN GASKET.

EXHAUST MANIFOLD GASKET

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

WATER OUTLET, WATER PUMP, FUEL PUMP AND TIMING COVER GASKETS

If a supplementary sealer is desired, apply a thin coat of gasket sealer to both sides of gasket(s).

ROTATING SHAFT SEALS

RUBBER SEAL(S): Install seal with its **largest raised sealing lip toward the engine**. Two-piece rubber seals may be installed using a "shoehorn" installation aid placed underneath seals to protect them from sharp edges.

ROPE SEALS: Install seals into grooves of cap and block by firmly pressing packing into grooves with a "packing tool." Ensure that ends of seals protrude above face of cap and block.

IMPORTANT: Final interference of rope packing seals against crankshaft is critical. To achieve proper interference, it is best to install packings using correct **Packing Tool** for your engine. With "packing tool" in position, cut protruded ends of seals flush with cap and block.

LUBRICATE SEALING LIPS AND CRANKSHAFT with motor oil or grease. If engine will not be started within several days grease is recommended.

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

REAR MAIN BEARING CAP: Prior to installation apply anaerobic sealant to mating surfaces of cap or block. **AVOID** sealant on ends of seals.

OIL PAN GASKET

ATTACH AND ALIGN GASKET(S). Apply 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.

FIT®

FEL-PRO INSTALLATION TIPS

GENERAL INSTRUCTIONS

CLEAN MATING SURFACES. Use a degreaser.

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

BOLT PREPARATION: Those **entering** coolant passages require 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 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

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.

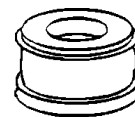
FIBER FACED GASKET(S) are to be installed dry. **METAL FACED GASKET(S)** require a thin even coat of sealer to be applied to the metal side(s) of the gasket.

TORQUE SPECIFICATIONS: The CORRECT cylinder head bolt torque for the engine is 80-90 ft. lbs. Disregard lower torque figures that appear in some service and technical manuals. Incorrect torque will result in early gasket failure.

VALVE STEM SEALS



Positive Intake



Positive Exhaust

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 valve stem seal over sleeve.

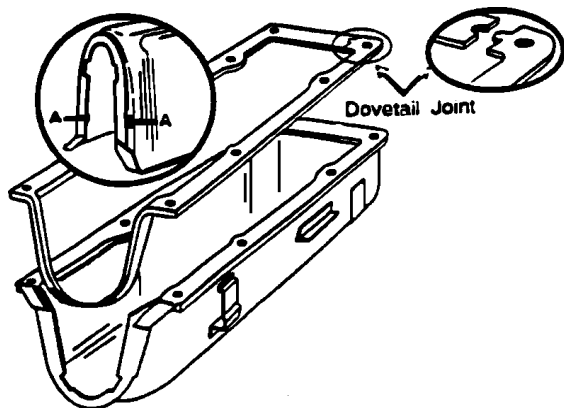
Remove plastic installation sleeve and reuse for installing remaining seals.

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 GASKET

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.



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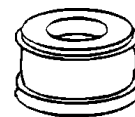
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