**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.

#### Intake Manifold Gasket



**IMPORTANT:** 1986 and later Ford 5.0L applications, require the replacement of the crankcase breather filter, located under the PCV Valve. If the filter is not replaced the filter can get clogged with carbon and sludge resulting in increased crankcase pressure, intake manifold end seal leakage, timing cover or rear main seal leakage.

#### 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.

#### ATTACH AND ALIGN END SEALS:

Molded rubber silicone end seals: Must be installed DRY without any chemical adhesive.

Cork rubber end seals: Appply quick-drying adhesive sparingly to cylinder block. Mount end seals. **Allow time for adhesive to set.** Test for slippage with light pressure. If seals move, allow more time.

**PRIOR TO REINSTALLING INTAKE MANIFOLD** apply a small dab of silicone sealer to the 4 corner intersections between the end seals and gaskets.

## **EXHAUST MANIFOLD GASKET**

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

## MISCELLANEOUS FLUID SEALING GASKET(S) SEAL(S)

**ATTACH AND ALIGN GASKET(S) SEAL(S):** If supplementary sealer is desired apply a thin coat of gasket sealer to both sides of gasket(s). However, molded rubber gasket(s) or those with colored sealing beads, install **DRY**.



## **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 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



**Intake Manifold:** Using a torque wrench, torque all bolts to 23-25 ft. lbs. **DO NOT EXCEED** torque specifications.

**IMPORTANT:** For 351W engines, these torque procedures **DO NOT** apply. Torque securely following OEM specifications.

**TO INSURE PROPER COOLANT CIRCULATION**, the word **FRONT** is stamped on both sides of the head gasket and must always be installed towards the front of the engine. After engine assembly, the head gaskets are properly installed when corner "A" of each head gasket protrudes from under the **FRONT** of each cylinder head (see shaded area of illustration).

# ATTACH AND ALIGN GASKET(S). VALVE STEM SEALS





#### **Positive Exhaust**

Use the valve stem seals included in this set for the applications indicated.

**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 the sleeve.

Remove plastic installation sleeve and reuse for installing remaining seals.

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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.

#### Intake Manifold Gasket



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