



Anti-Seize Lubricant

CLEAN ALL THREADS by using a wire brush for bolts and studs, tap all bolt holes and stud nuts. Apply a high temperature anti-seize lubricant to the bolt and stud threads.

ATTACH AND ALIGN GASKET TO CYLINDER HEAD. If gasket is steel faced on one side and fiber on the other, install steel faced side toward the manifold.

REINSTALL MANIFOLD TO ENGINE. Torque securely to OEM specifications.

EXHAUST PIPE FLANGE AND E.G.R. VALVE BOLTS

CLEAN MATING SURFACES of all foreign material. You may use a degreaser.



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CLEAN ALL THREADS by using a wire brush for bolts and/or studs. Apply a high temperature anti-seize lubricant to the bolt and/or stud threads.

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REINSTALL EXHAUST PIPE FLANGE AND/OR E.G.R. VALVE GASKET(S) TO ENGINE. Torque securely to OEM specifications. Over-torquing can cause the bolts and studs to break.

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.

TEST RUN ENGINE. Check all mating areas thoroughly to determine that all seals hold during operation.



FEL-PRO INSTALLATION TIPS

VALVE STEM SEALS

REMOVE SPRING ASSEMBLIES, KEEPERS and the old valve stem seals.

REMOVE BURRS (IF ANY) FROM VALVE STEMS. Use a fine stone or crocus cloth. Clean stems thoroughly to remove all abrasives or dust particles. Lubricate lightly.

INSTALL NEW SEALS.

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.

REPLACE VALVE SPRING ASSEMBLIES. Compress springs just enough to install keepers. **IMPORTANT:** Excessive compression can result in spring retainer damaging valve stem seal. Release spring carefully.

VALVE COVER GASKET



To effectively seal this sophisticated engine application, FEL-PRO has included PERMA-DRY™ molded rubber gasket(s) in this set.

CLEAN MATING SURFACES of all foreign material including old gaskets, RTV and oil. You may wish to use a degreaser. Also, clean oil return holes.

CHECK COVER FLANGES for flatness. Straighten stamped metal covers. Replace if severely distorted. Distorted cast aluminum or plastic covers are difficult to straighten and should be replaced.

ATTACH AND ALIGN GASKET.

IMPORTANT: This molded rubber silicone gasket must be installed **DRY** without any chemical adhesive.

REINSTALL COVER TO ENGINE. Torque securely to OEM specifications. Over-torquing can distort cover and cause leakage.

EXHAUST MANIFOLD GASKET

CLEAN MATING SURFACES of all foreign material including old gaskets and oil. You may wish to use a degreaser.

CHECK EXHAUST MANIFOLD for flatness with a straight edge. Resurface or replace if severely corroded or distorted.



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