



FEL-PRO INSTALLATION TIPS

HEAD GASKET

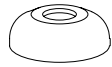
Follow any directional markings shown on gasket(s). If no markings exist, install gasket(s).

Fiber Faced Gasket(s): Install dry.

VALVE STEM SEALS



Umbrella Intake



Umbrella Exhaust

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

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 or "boss." The seal will find its proper position on the stem once the engine starts.

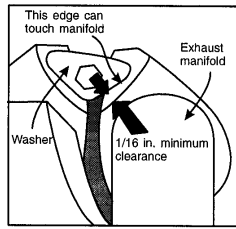
VALVE COVER/PUSH ROD COVER

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 AND EXHAUST MANIFOLD GASKETS

REMOVE MANIFOLDS from cylinder heads. **IMPORTANT:** You must disassemble the intake manifold from the exhaust manifold to allow for corrected realignment of the manifolds to the cylinder head during the reassembly.

REASSEMBLE MANIFOLDS. Install the intake-to-exhaust gasket between the intake and exhaust manifolds. Only finger tighten the manifolds together.



ATTACH AND ALIGN GASKET(S) TO CYLINDER HEAD(S). Hang gasket on locator studs.

IMPORTANT: Do not remove the locator studs or replace them with bolts.

REINSTALL INTAKE AND EXHAUST MANIFOLD ASSEMBLY to cylinder heads.

WASHER INSTALLATION FOR EXHAUST MANIFOLDS: for 170, 198 and 225 engine washers must be installed to permit expansion and contraction of the manifolds. The washers spanning the intake and exhaust flanges should apply more pressure to the intake manifold as opposed to the exhaust manifold. To accomplish this; the intake casting flanges are slightly thicker than the exhaust flanges, this difference should be maintained. **IMPORTANT:** Keep a minimum gap of 1/16" around all the bridging washers.

TORQUE INTAKE AND EXHAUST MANIFOLD ASSEMBLY as follows:

Slightly torque all manifold-to-cylinder head and intake-to-exhaust studs, bolts and or nuts to 10 in. lbs.

Torque all inboard intake to exhaust manifold studs, bolts and/or nuts to 30 ft. lbs.

Torque all outboard intake to exhaust manifold studs, bolts and/or nuts to 20 ft. lbs.

Repeat the inboard and outboard torquing to assure that full specified torque has been achieved.

Torque all intake and exhaust manifold to cylinder head stud nuts starting with the center moving out in both directions to 10 ft. lbs.

TORQUE INTAKE MANIFOLD EXHAUST CONNECTION to 20 ft. lbs. Over-torquing can fracture the manifold and/or cause the bolts and studs to break.



FEL-PRO INSTALLATION TIPS

HEAD GASKET

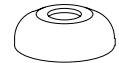
Follow any directional markings shown on gasket(s). If no markings exist, install gasket(s).

Fiber Faced Gasket(s): Install dry.

VALVE STEM SEALS



Umbrella Intake



Umbrella Exhaust

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

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 or "boss." The seal will find its proper position on the stem once the engine starts.

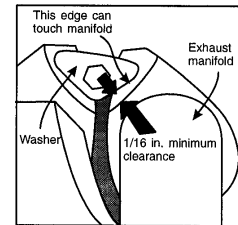
VALVE COVER/PUSH ROD COVER

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 AND EXHAUST MANIFOLD GASKETS

REMOVE MANIFOLDS from cylinder heads. **IMPORTANT:** You must disassemble the intake manifold from the exhaust manifold to allow for corrected realignment of the manifolds to the cylinder head during the reassembly.

REASSEMBLE MANIFOLDS. Install the intake-to-exhaust gasket between the intake and exhaust manifolds. Only finger tighten the manifolds together.



ATTACH AND ALIGN GASKET(S) TO CYLINDER HEAD(S). Hang gasket on locator studs.

IMPORTANT: Do not remove the locator studs or replace them with bolts.

REINSTALL INTAKE AND EXHAUST MANIFOLD ASSEMBLY to cylinder heads.

WASHER INSTALLATION FOR EXHAUST MANIFOLDS: for 170, 198 and 225 engine washers must be installed to permit expansion and contraction of the manifolds. The washers spanning the intake and exhaust flanges should apply more pressure to the intake manifold as opposed to the exhaust manifold. To accomplish this; the intake casting flanges are slightly thicker than the exhaust flanges, this difference should be maintained. **IMPORTANT:** Keep a minimum gap of 1/16" around all the bridging washers.

TORQUE INTAKE AND EXHAUST MANIFOLD ASSEMBLY as follows:

Slightly torque all manifold-to-cylinder head and intake-to-exhaust studs, bolts and or nuts to 10 in. lbs.

Torque all inboard intake to exhaust manifold studs, bolts and/or nuts to 30 ft. lbs.

Torque all outboard intake to exhaust manifold studs, bolts and/or nuts to 20 ft. lbs.

Repeat the inboard and outboard torquing to assure that full specified torque has been achieved.

Torque all intake and exhaust manifold to cylinder head stud nuts starting with the center moving out in both directions to 10 ft. lbs.

TORQUE INTAKE MANIFOLD EXHAUST CONNECTION to 20 ft. lbs. Over-torquing can fracture the manifold and/or cause the bolts and studs to break.