

# TECBLOG **CLEAN AND DRY**

**IT'S NO SECRET THAT FEL-PRO® GASKETS OFFER THE MOST RELIABLE SEAL FOR ANY REPAIR JOB. PROPER INSTALLATION IS THE KEY TO LONG SERVICE LIFE AND INSTALLATION PRACTICES ARE CHANGING RAPIDLY AS GASKET DESIGNS ADVANCE.**

In the past, it was not uncommon to coat a gasket with sealers, adhesives or RTV before installing it. Today, Fel-Pro offers many gasket designs with advanced leak-sealing technologies built into the gasket. With these modern gaskets, RTV or other sealers can actually decrease the gasket's ability to form a reliable seal, causing leaks. Fel-Pro PermaDryPlus® gaskets offer the latest in sealing technology. All PermaDryPlus gaskets feature proprietary in-house molded silicone rubber sealing beads bonded to rigid carrier construction. This provides a perfect fit – with no adhesives – saving installation time.



## INTAKE MANIFOLD GASKETS

Intake manifold gaskets have become problematic leak areas over the last several years. PermaDryPlus intake manifold gaskets are designed to provide a permanent seal. They have an aluminized steel carrier that resists corrosion and is not susceptible to degradation from exposure to fuels, oils and coolants. In-house developed FKM fluoroelastomer resists all fluids and is used to create edge-molded seals, as well as primary and secondary sealing beads that provide additional sealing and compensate for corrosion-roughened surfaces. To ensure all of these technologies work the way they were designed to, these intake manifold gaskets must be installed on a clean, dry surface with no additional sealants used.



## WHAT IF SEALANT IS NEEDED?

In cases where a sealant is needed for installation of a Fel-Pro gasket, a FIT® Form will be included, along with the proper sealant. Only apply the sealant in the manner and locations directed. Intake manifold gasket sets may contain a small tube of RTV. This RTV is not to be used on the gasket face, but rather to fill the gap where the bottom corners of the gasket meet the end seals.

**FIT®**

**FEL-PRO INSTALLATION TIPS**

**OIL PAN GASKET**

**Perma-Dry®**

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 PAN 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 TO PAN.**

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

**REINSTALL OIL PAN TO ENGINE.** Install cap screws, finger tight. Torque cap screws to OEM specifications. Over-torquing can distort pan and cause leakage.

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

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PermaDryPlus® intake gaskets installed dry:  
RTV used for end seals.

## USING RTV ON GASKETS WITH FKM OR SILICONE SEALING BEADS CAUSES MULTIPLE ISSUES:

The sealer can chemically attack the rubber sealing beads and degrade them. RTV can act as a lubricant and cause the rubber gasket to slip out of place and split, creating an opportunity for leaks. Sealants can add thickness, which creates uneven clamping force as the gasket will not be able to seat properly. Also, RTV can extrude out when the gasket is compressed, and it could end up in an oil or coolant passage and restrict or block flow.

**CONTINUED...**

## **MOLDED RUBBER GASKETS**

PermaDry® gaskets are intended for vehicles that used a molded rubber gasket as original equipment. These gaskets are made using Fel-Pro's proprietary molded rubber formulations and are precision engineered for each application. To guarantee a leak-free repair, PermaDry gaskets must also be installed without the use of additional sealants.



PermaDry® gasket installed dry

## **HEAD GASKETS**

Fel-Pro head gaskets are also designed so that no additional sealers are needed. Modern facing materials and their pre-applied coatings, along with the proprietary coatings found on PermaTorque® MLS head gaskets, will compensate for minor surface imperfections, resist scrubbing, and provide the proper amount of torque retention to create a true no-retorque head gasket. Do not use sealers, adhesives or other additives with these gaskets.

