



## Engineering Notes: Using O-ring Face Seal Fittings with D03 Manifolds

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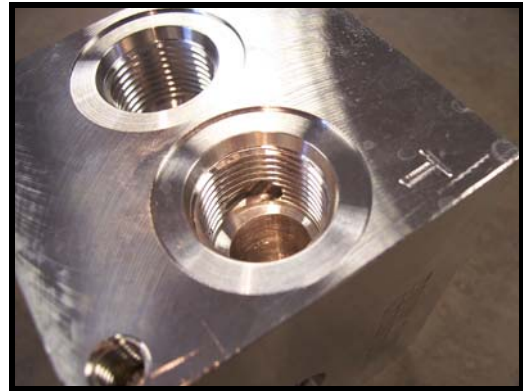
### O-ring face seal fittings length compared to standard fitting and plug length

Daman Products SAE O-ring boss ports on all of our products have female thread depths that conform to ISO 11926-1. ISO 11926-1 specifies minimum female thread depths deep enough to allow for the installation of fittings that are manufactured with male thread lengths conforming to both ISO 11926-3, and ISO 11926-2 (heavy duty). As seen in the picture below, the O-ring face seal style fitting (center) has more male thread on the port end (bottom of the fitting) because it is built to conform to ISO 11926-2 (heavy duty). The 37 degree flare fitting (left) and the plug (right), are built to the more common ISO 11926-3 lengths, which results in less threads.



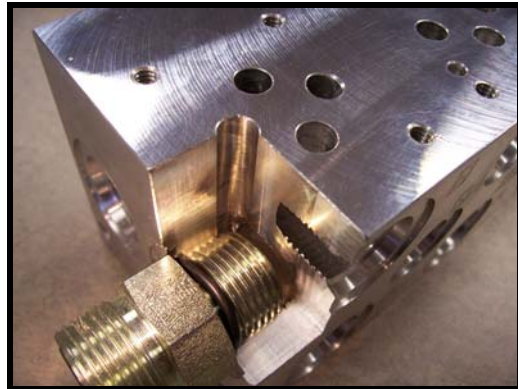
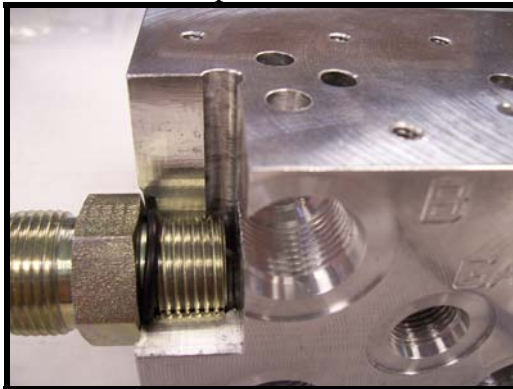
## Interference problem

When the longer O-ring face seal style fitting is installed in the “P” port on the left end or the “T” port on the right end of a Daman standard D03 manifold, this longer fitting partially overlaps the oil passage from the P of the first D03 valve pattern and the T of the last D03 valve pattern. The two pictures below show how these oil passages from the valve patterns intersect the ports near the bottom of the threads.



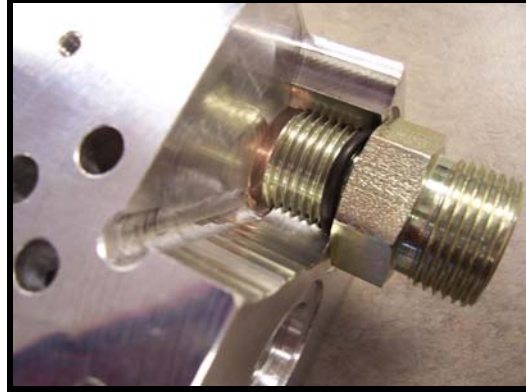
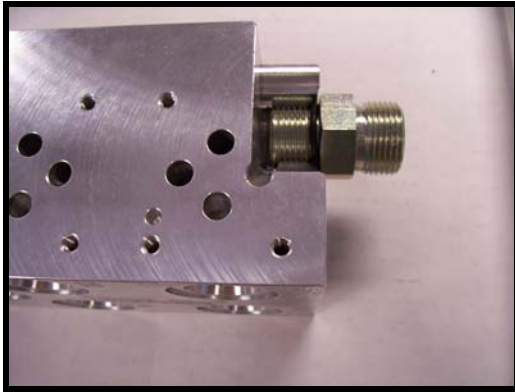
## Interference problem: left end P port

In the two pictures below, cutaway section views of the left end of a sample AD03P032S show how the longer O-ring face seal style fitting partially overlaps the P oil passage of the first D03 valve pattern on the manifold.



## **Interference problem: right end T port**

In the two pictures below, cutaway section views of the right end of a sample AD03P032S show how the longer O-ring face seal style fitting partially overlaps the T oil passage of the last D03 valve pattern on the manifold.



### **Solutions for existing applications switching to O-ring face seal style fittings**

Since the Daman standard D03 manifold product line has both P and T inlet ports on both ends, using the RIGHT end P port and the LEFT end T port solves this interference problem.

### **Solutions for new applications using O-ring face seal style fittings**

Since the Daman standard D03 product line has both P and T inlet ports on both ends, using the RIGHT end P port and the LEFT end T port solves this interference problem.

The Daman High flow (D03H) and the Low Cost (L\*D03) manifold lines do not have these interference issues and can be used with O-ring face seal style fittings.

We encourage you to discuss, comment, and offer feedback about this issue by contacting Matt Giloth ([mattg@daman.com](mailto:mattg@daman.com)) or Tom Weinkauff ([tomw@daman.com](mailto:tomw@daman.com)) by email or phone (800 959 7841)