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Triple-Lok Introduction

Parker pioneered the flare fitting concept early in the 20th century. The design has since gained worldwide acceptance due to it's many inherent features and customer benefits. Today, the 37° flare fitting it is the most widely used fitting in the world. Its appeal is in its simplicity, compact design, ease of assembly, reliability (single seal), material availability, adaptability to inch or metric tube, worldwide availability and acceptance. Further helping its acceptance is its widespread use as a hose adapter. As a tube fitting, it is especially suited for thin and medium wall thickness tube. Even though 37° flare fittings are generally considered to be 3000 psi fittings, Triple-Lok's capabilities range from 9000 psi for 1/4" size to 2000 psi for 2" size. Currently, it is used in virtually every application that uses fluid power for motion control.

Parker's Triple-Lok fittings meet the strict requirements of SAE J514 and ISO 8434-2 industry standards. Additionally, they meet many customer and industry-recognized conformance standards and type approvals.

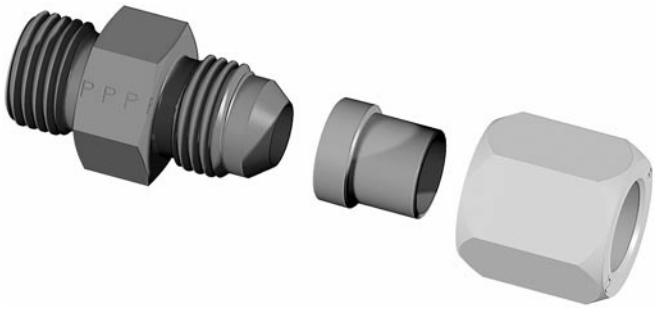

Fig. C1 – Triple-Lok Fitting Body, Sleeve and Nut

Design and Construction

The Triple-Lok (37° flare fitting) design is simple. It uses an easily produced flare at the tube end to seal and hold fluid under high pressure. The fitting consists of three pieces: the body, sleeve and nut. The tube end is flared at a 37° angle (74° included angle) and held between the fitting nose (seat) and the sleeve (support) with the nut as shown in Fig. C2, providing a very effective (single) seal between the fitting nose and the tube flare.

The design of Triple-Lok fittings is very efficient. The fitting incorporates the smallest seal area of all fitting types. This seal area, as seen in Fig. C2, is only slightly larger than the fluid flow area. The small seal area results in a compact design, low assembly torque, and a relatively high-pressure capability.

The primary difference between a two-piece flare fitting and the three-piece design is the flare support sleeve. The support sleeve provides several key functions:

1. It provides a clamping surface for the tube flare.
2. It provides a bearing surface for the tube nut. The sleeve isolates the tube from the nut, minimizing the tube twist during assembly, a common problem of 2-piece flare fitting designs.
3. It provides support to the tube flare. The tapered fitting nose tends to "wedge open" the tube flare during assembly. The sleeve helps to resist this expansion, thus eliminating the possibility of tube flare and sleeve jamming inside the nut. This eliminates any waste of applied torque and allows for easy disassembly.
4. It makes the fitting adaptable to metric tube merely by changing its inside diameter (see Table C2).

Due to the popularity and simplicity of the 37° flare fitting, many manufacturers offer the product. Even though most manufacturers conform to the same dimensional standards, there are significant performance advantages with Parker's Triple-Lok fittings due to Parker's optimized manufacturing methods and commitment to quality.

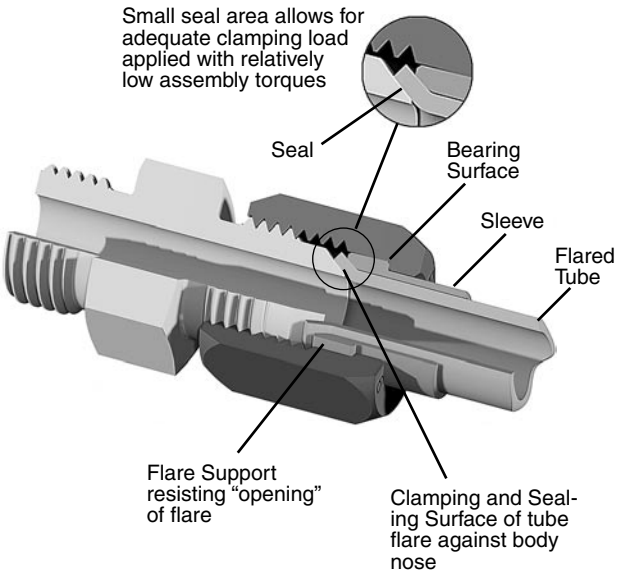

Fig. C2 – Triple-Lok Design and Features