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Written By Engineers For Engineers

10 things not to do when your hydraulic fitting leaks

Myth and misapplication are abundant when it comes to hydraulic tube fitting leaks. From small operations to global corporations, we've seen and heard it all. Let's clear up some misconceptions. Here's what not to do when you find a hydraulic fitting leak.

1. **Don't use your hand to check for leaks** – Hydraulic fluid reaches temperatures of 300°F or higher, which can quickly result in a serious burn. In addition, taking a pinhole leak of high velocity fluid to your hand can have devastating outcomes. These leaks can be in excess of 600 feet per second velocity and have been known to inject fluid through the skin, including that which is covered with thick leather gloves. Penetration of the skin has been recorded with distances of up to four inches between the fluid source and the skin, and occur with pressures as low as 100 psi. Injuries such as these result in the need for immediate medical attention, possible amputation, and industry safety violations.
2. **Don't just torque (tighten)** – Fluid leaks are occasionally the result of a loose nut. This problem can be easily corrected by tightening the nut. However, we often see people over-tightening. This ruins fitting integrity and is one of the most common causes of tube fitting leaks. Be sure to assess the fitting connection before instinctively tightening.
3. **Don't leave the system pressurized** – Always depressurize a hydraulic system before inspection. This applies even if you only see a slow fluid drip on the ground. Depressurization minimizes the chances of hydraulic fluid erupting from a machine component during inspection. *Note: be aware that trapped fluid and back pressure can still be present after the system is turned off.*
4. **Don't replace with a different fitting type to save time/money** – Make sure you replace a fitting with the exact same fitting type even if it takes longer to acquire. Grabbing a similar fitting and trying to make it work simply because it's available is a recipe for failure. The downtime you experience while waiting for the correct part is well worth the time and money you save long term. If you are unsure how to identify the fitting needing replaced, see [Four Easy Steps to Identify Hydraulic Threads](#).

5. **Don't always blame the fitting** – The drip point may not be the leak point. Drips happen at the lowest point of gravity. While fluid may be dripping off a fitting, the actual leak point could be elsewhere in the system.
6. **Don't reuse an O-ring** – O-rings should always be changed even if you are reassembling a reusable fitting. O-rings are susceptible to cracks that can ruin seal integrity upon reassembly.
7. **Don't forget to protect an open system while fixing a leak** – We see it all the time. People disassemble a fitting to correct a leak, only to drop the fitting on the ground before reassembly. This can introduce contamination into the hydraulic system while fixing a leak. It's a bad practice that can reduce the life of your equipment.
8. **Don't forget to clean the connecting ends before replacing or reassembling a fitting** – This helps prevent dirt and metal flakes from entering the hydraulic system. These particles have been known to completely ruin expensive hydraulic machinery. See [What You Need to Know about Testing Your Hydraulic System for Particle Contamination](#) for more information. Also helpful: [How Many Times Can I Reassemble a Hydraulic Fitting?](#)
9. **No open flames** – Keep all open flames away from leak points. People often forget that pinhole leaks can create mist-like “clouds” of flammable vapor. Common hazards include lit cigarettes, the use of lighters for illumination and welding or cutting torches being used close by.
10. **Don't ignore it** – Even a minor leak could be a sign of a more serious problem in your hydraulic system, and can cause performance issues and inefficiencies. Resolve the issue as soon as possible. See [A Dollars and Sense Approach to Preventing Hydraulic Oil Leaks](#).

Do you have any additional tips or stories from the field about hydraulic fitting leaks? If so, please comment below – we've love see them. If you have any questions or comments, please post them and we will respond if warranted. To talk to our techConnect engineer team directly, they can be reached at [Parker Tube Fittings Division, 614.279.7070](#).

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