Repairing Leaks - Depressurizing

Warning: Before fixing a leak at a connection, depressurize the high- and low-pressure fuel system completely

- Depressurizing the low- and high-pressure fuel system with a running engine
  - Close the valves on both cylinders
  - Run the engine at idle
  - The engine will die when the fuel pressure is depleted.
  - Verify that the pressure gauge in the fuel box reads 0 psi
- Depressurizing the low- and high-pressure fuel system with a non-running engine
  - Close the valves on both cylinders
  - Open the petcock at the bottom of the low-pressure fuel filter. About 150 psi of fuel will be removed.
  - Leave the petcock open
  - Turn the ignition key on. About 150 psi of fuel will be removed
  - Repeat the key on, key off process (leaving the key off for at least 5 sec) until no more gas is heard escaping from the low-pressure fuel filter and the pressure gauge in the fuel box reads 0 psi.
  - Tighten the petcock on the low-pressure filter

Repairing Leaks – Types of Fittings*

- O-Ring face seal and compression fittings are utilized
- Once the system has been depressurized, use the proper tools to address the leaking tube connection
  - Snugging a leaking tube fitting, assuming it was assembled properly, may stop a leak
  - If snugging the fitting does not fix the leak
    - Depressurize again
    - Disassemble, clean and reassemble
- If the leak is not fixed at this point, the component and or the tubing should be replaced

* Refer to Landi Technologies Workshop manual for proper methods

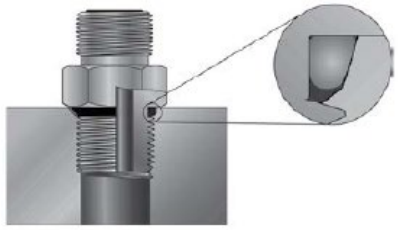


Fig. S7 — Non-Adjustable Port End Assembly

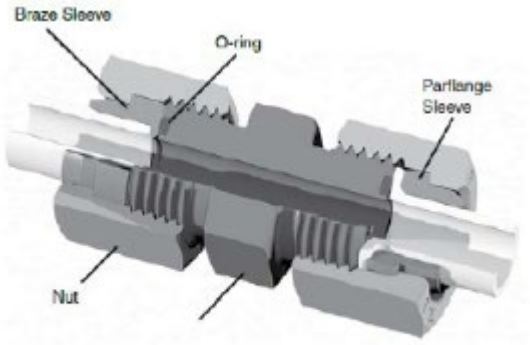


Fig. S15 – Seal-Lok Union cutaway with flanged and brazed assemblies

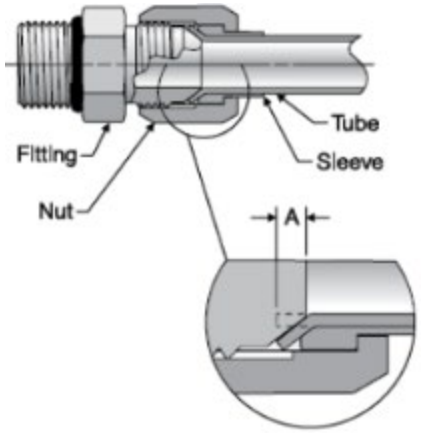
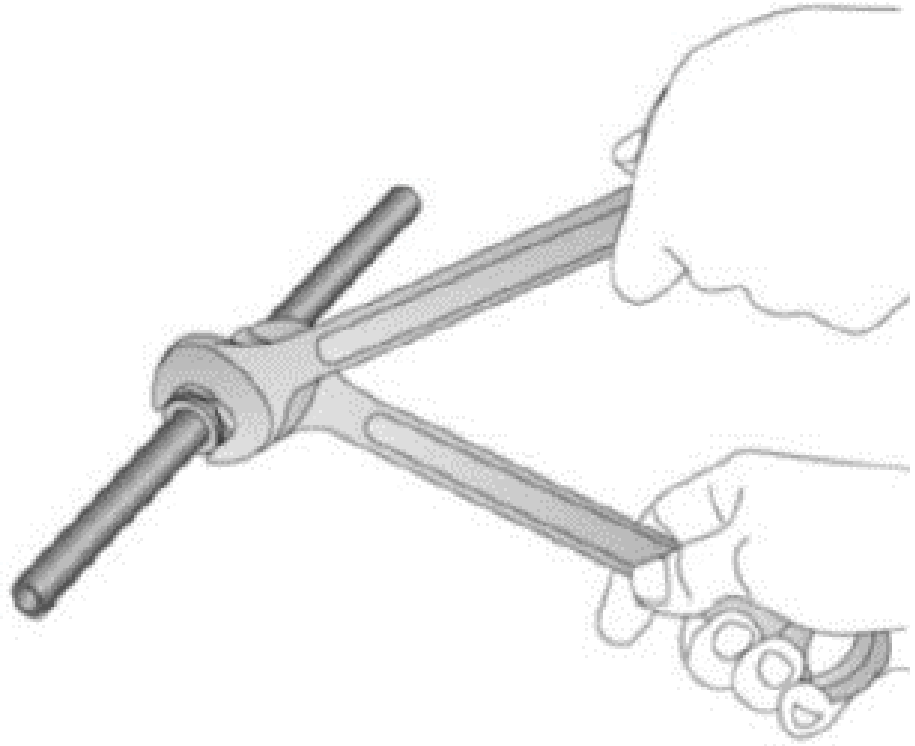


Fig. S26 — Tube length allowance

Repairing Leaks – Line Removal & Installation

- Use a touch of non-synthetic, non-detergent oil to lubricate the O-rings prior to installation
- **CAUTION: DO NOT USE silicone grease or any other type of lubricant**
- Install high pressure fittings, tubing and hoses finger tight to ensure proper fitment before fully tightening components. Be sure to use an opposing wrench to apply equal and opposite force. Refer to the following slide for torque values.
- Ensure O-rings are not damaged during the disassembly and reassembly process. All O-rings can be reused if no damage is visible and connection is leak-free



Repairing Leaks – Torque Values & O-Ring Part Numbers

- Torque Values

SAE J1926 O-Ring Boss (ORB) Fittings

Used On:
- LP Fuel Lines
- HP Fuel Lines
- PRD Vent Lines

Fig. S7 — Non-Adjustable Port End Assembly

SAE Straight Thread Port Assembly (SAE J1926)

SAE Dash Size	Thread Size UN/UNF	Assembly Torque (+10% -0) Non-Adjustables: Seal-Lok (Heavy Duty SAE J1926-2) ft.lbs. (in. lbs)	N-m	Non-Adjustables: Triple-Lok Ferulok Adapters (Light Duty SAE J1926-3) ft.lbs. (in. lbs)	N-m	Adjustables: Seal-Lok (Heavy Duty SAE J1926-2) ft.lbs. (in. lbs)	N-m	Adjustables: Triple-Lok Ferulok Adapters (Light Duty SAE J1926-3) ft.lbs. (in. lbs)	N-m	Plugs: Hollow Hex HP5ON-S (Light Duty SAE J1926-3) ft.lbs. (in. lbs)	N-m	Plugs: Hex Head P5ON-S (Light Duty SAE J1926-3) ft.lbs. (in. lbs)	N-m
6	9/16-18	(420)	47	(350)	40	(420)	47	(350)	40	(350)	40	(350)	40
8	3/4-16	(720)	81	(620)	70	(720)	81	(620)	70	(620)	70	(620)	70

Notes: Lubricate threads before assembly. Values in chart are for plated steel fittings in steel ports. For stainless steel fittings, use the upper limit of torque range. For brass and aluminum, decrease torque value by 35%.

Table S1 – SAE J1926 Straight Thread Port Assembly Torques

SAE J1453 O-Ring Face Seal Fittings (ORFS)

Used On:
- LP Fuel Lines
- HP Fuel Lines

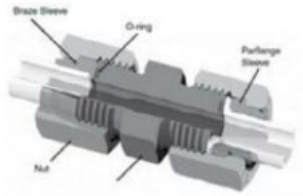


Fig. S15 – Seal-Lok Union cutaway with flanged and brazed assemblies

O.D. (in.)	O.D. (mm)	SAE Dash Size	Tube Side Thread Size (UN/UNF)	Tube Side Assembly Torque (+10% -0%) in.-lb.	ft.-lb.	N-m	Flats from Wrench Resistance (F.F.W.R.) Tube Nuts	Swivel & Hose Ends
3/8	8, 10	-6	11/16-16	360	30	40	1/4 to 1/2	1/2 to 3/4

Table S14 – Seal-Lok and UPTC assembly torque and F.F.W.R. For brass, aluminum (and other soft metals) decrease torque value by 35%, however F.F.W.R. is the same.

- O-Ring Part Numbers

Landi Technologies Replacement O-Ring Part Numbers			
Connection Type	**Dash Size**	**Landi P/N**	**Landi Description**
SAE J1926 O-Ring Boss (ORB)	-6	1002345	O-Ring, CNG, #6 MORFS, 2-012
	-8	1002346	O-Ring, CNG, #8 MORFS, 2-014
SAE J1453 O-Ring Face Seal (ORFS)	-6	1002347	O-Ring, CNG, #6 MORB, 3-906
	-8	1002348	O-Ring, CNG, #8 MORB, 3-908