

Models 15L, 15H, 15K Assembly Instruction

ACCEPTANCE TEST PROCEDURE

Scope

This procedure covers acceptance tests performed at the factory on the 15L line of small volume high pressure reducing and relief regulators (Hand Loaders), including gear operated styles. The following basic models are covered:

- 15L 15LG 15K
- 15LX 15LXG 15KX
- 15LH 15LHG
- 15LHX 15LHXG

Test Set-Up

Schematic diagram of bench test set-up is shown in Figure 1, and test pressures are given in Table I, below:

Figure 1 - Acceptance Test Set-Up

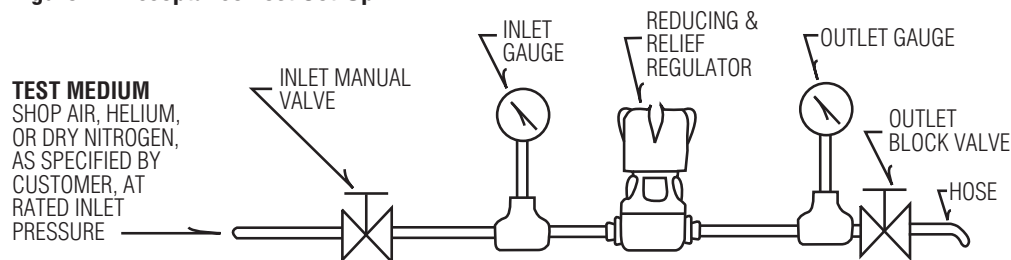


Table 1 - Test Pressures

* Basic Model	Rated Inlet Pressure	*Rated Outlet Pressure
15L, 15LG	3000/6000 psi	Take from nameplate
15LX, 15 LKG	6000 psi	Take from nameplate
15LH, 15LHG	6000 psi	Take from nameplate
15LHX, 15LHXG	6000 psi	Take from nameplate
15KX	6000 psi and 10,000 psi	Take from nameplate

Test Procedure

A. HYDROSTATIC PROOF TEST

(Optional at customer's request on sales contract only)

1. Perform the following on regulator body and port fittings only.
2. Install test fitting T 700 B and T 700 C.
3. Fill valve cavity with treated water through the inlet port and bleed all trapped air from the outlet port.
4. Apply 1-1/2 times the rated inlet pressure and hold for 5 minutes making sure that the pressure remains constant.
5. Release hydrostatic pressure. Remove test fittings and dry parts with compressed air.
6. Assemble Regulator per RedQ Instructions.

B. SET-UP AND ADJUSTMENT

1. Turn Regulator handwheel counterclockwise to its limit.
2. Mount in test set-up as shown in Figure I.
3. Admit rated inlet pressure to inlet port of regulator.
4. Set relief adjusting screw as follows:
 - a. Turn regulator handwheel clockwise to get about 10% of rated outlet pressure on outlet gage.
 - b. Turn relief adjusting screw clockwise until venting occurs. Back off until venting just stops, plus $\frac{1}{2}$ turn to get stable setting.

C. FUNCTIONAL AND LEAK TEST

1. Check Regulating action:
 - a. With rated inlet pressure applied to inlet port, turn regulator handwheel slowly clockwise to get maximum rated outlet pressure on the outlet gage.
 - b. Outlet shall follow smoothly without excessive lags or jumps.
 - c. Leave outlet at maximum rated pressure for one or two minutes, watching outlet gage.
 - d. Outlet locked-up pressure shall not creep up.
 - e. Break outlet block valve briefly and re-close smoothly.

- f. Outlet pressure shall return promptly to pre-set level within 2-4%, and shall not creep up.
2. Check for external leaks:
 - a. With maximum rated inlet and outlet pressures applied to regulator, apply bubble fluid around port fittings and spring barrel seal.
 - b. There shall be no bubbles.
3. Check relief valve performance:
 - a. With outlet at maximum rated pressure, re-set relief screw as in A. -4.-b.
 - b. Watching outlet gage, turn handwheel slowly counterclockwise to reduce outlet from maximum to zero.
 - c. Relief system shall bleed outlet line through spring barrel slot as handwheel setting is reduced, then shut off tight.
4. Check internal valve leak:
 - a. With inlet at maximum and outlet at zero, open outlet block valve and immerse end of hose in water.
 - b. There shall be no bubbles.
5. Check diaphragm leak:
 - a. With maximum inlet and outlet pressures applied to regulator, close inlet manual valve and outlet block valve.
 - b. Record inlet gage reading, and ambient temperature.
 - c. Hold pressure locked-up for at least two (2) minutes, temperature constant.
 - d. There shall be no drop in inlet gage reading.

Note: If ambient temperature changes during holding period, locked-up pressure will change. Repeat test with temperature constant, or call Engineering to make temperature correction.

This completes Acceptance Test Procedure for the 15L line of reducing and relief regulators, including gear operated styles.

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