

In-Line Leak Testing Procedure for Checking Skotch Trifecta Gas Safety Shut-off Valve Systems

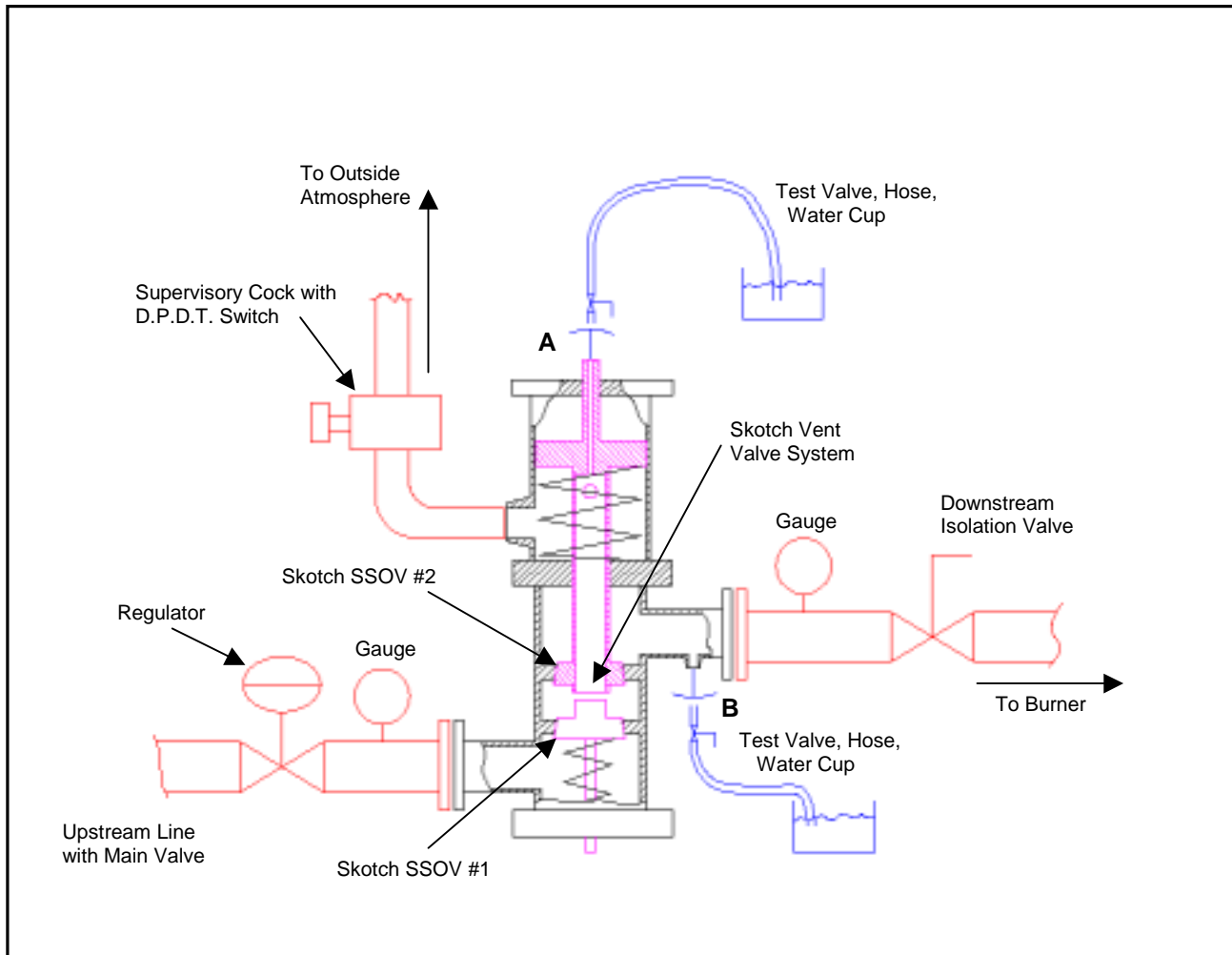


Figure 1: Testing Schematic of Skotch Valve System with pipe system as required to test the Double Block Valves. A supervisory cock in the vent line, and a down stream isolation valve are required in addition to the Skotch Valve System with the optional "Outlet Test Port" configuration.

Figure 1 Color Legend:

- Black** – Skotch Base Valve System
- Red** – Customer Piping (portions may be supplied on request from ITT)
- Blue** – Required Leak Test Equipment

ITT Industries
Engineered Valves Group
33 Centerville Road
Lancaster, PA 17603
Phone: (800) 366-1111
(717) 509-2200

www.engvalves.com



Description of Terms:

Skotch Gas Valve System – Double “plug” block valve, with automatic vent valve incorporated into a singular housing/actuation package.

Port A - Skotch test port on actuation end of the valve system – used to test for SSOV #1 leakage, and to pressurize the SSOV #2 for leakage testing. This port is plugged during normal valve operation.

Port B - Skotch “Outlet Test Port”, incorporated into Skotch housing, downstream of the SSOV #2; used to detect in-line leakage of SSOV #2.

Downstream Isolation Valve – Manual valve downstream of the Skotch System; used to isolate the downstream piping during SSOV #2 leakage testing.

Supervisory Cock – Normally open cock, used in the closed position for in-line leak testing only.

Test Valve – manual valve used to control test port gas flow into the water cup.

Water Cup – leakage rate bubble capturing device. Should include a 100cc graduated cylinder for accurate measurements.

TEST PROCEDURE (see Figure 1):

1. Close supervisory cock on the vent line.
2. Verify that the Skotch Valve System is in the closed position.
3. SSOV #1 Leak testing:
 - a. Open Test Port **A**, and connect up testing apparatus: manual valve (closed), hose, and bubble capture equipment.
 - b. Verify that the upstream pressure gage is reading 50psig maximum.
 - c. Open the manual test valve on Port **A**, evacuate any trapped pressure, and begin testing for 2 minutes. Record results based on a 2 minute test.
4. SSOV #2 Leak Testing.
 - a. Remove the testing apparatus from Test Port **A**, and attach a regulated pressure line of Nitrogen gas supply to Test Port **A**.
 - b. Verify that the Nitrogen gas supply pressure reading is 50psi maximum.
 - c. Open Test Port **B**, and connect up testing apparatus: manual valve (closed), hose, and bubble capture equipment.
 - d. Close the downstream isolation valve.
 - e. Open the manual test valve on Port **B**, evacuate any trapped pressure, and begin testing for 2 minutes. Record results based on a 2 minute test.
5. Remove Nitrogen supply from Test Port **A**, and replace plug.
6. Open supervisory cock on vent line.
7. Open downstream isolation valve.
8. Remove testing apparatus from Test Port **B**, and replace plug.