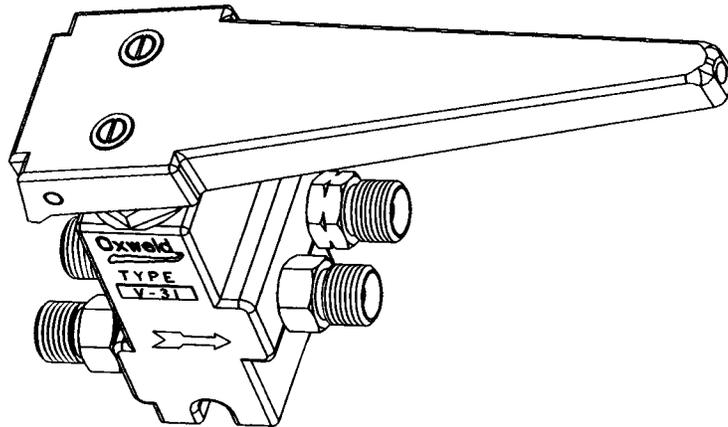


# OXWELD®

## V-31 DUAL SHUT-OFF VALVE

### for OXYGEN and ACETYLENE (or Other Fuel Gas)



### ! CAUTION

These INSTRUCTIONS are for experienced operators. If you are not fully familiar with the principles of operation and safe practices for oxy-fuel gas equipment, we urge you to read our booklet, "Precautions and Safe Practices for Gas Welding, Cutting and Heating" Form 2035. Do NOT permit untrained persons to install, operate or maintain this equipment. Do NOT attempt to install or operate this equipment until you have read and fully understand these instructions. If you do not fully understand these instructions, contact your supplier for further information.

#### I. INSTALLATION

**Oxygen pressure in this valve should never exceed 100 psi, fuel gas pressure should never exceed 35 psi, and acetylene pressure should never exceed 15 psi.**

1. Apply a single turn of 3/16-in. teflon tape to the threads of the pilot light assembly. Screw the assembly into the valve body by hand until tight. Use a wrench to take up the remaining threads (1-1/2 to 2-turns) until the assembly is in its upright position.
2. Apply a single turn of either 3/16-in. or 1/4-in. Teflon tape to the pipe threads on all hose connections. Screw one 58K12 connection (L.H. fitting w/annular vee groove) into valve opening marked "Fuel Gas", and screw the other 58K12 into the opening directly opposite. Screw one 58K11 connection (R.H. fitting w/o groove) in valve opening marked "Oxygen", and screw the other 58K11 into the opening directly opposite. Tighten all connections with a wrench.
3. Assemble the base (77Z26) to the valve using the four machine screws and lockwashers supplied.
4. Fasten the valve securely to the bench with two 1/4-in. bolts or lag screws.
5. Insert the lever extension in the valve lever and fasten with the setscrew.
6. Connect the oxygen supply and torch hoses to the inlet and outlet connections marked "Oxygen".
7. Similarly connect the fuel gas hoses to the connections marked "Fuel Gas".
8. Pilot light volume is adjusted by rotating the pilot mixer manually— clockwise to reduce volume; counterclockwise to increase volume. If pilot light is not desired, clockwise rotation to a definite stop shuts off pilot light gas supply.

**Be sure this information reaches the operator.  
You can get extra copies through your supplier.**

## II. MAINTENANCE INSTRUCTIONS

### A. OXYGEN AND FUEL GAS VALVES

If leakage occurs through either valve, readjust the valve setting. To do this: Hold the lever in the full-down position and back-off the adjusting screws in the lever until both valves just leak (equally). Then alternately turn the screws down (clockwise) a fraction of a turn at a time until both valves just seal off. At this point give each screw an additional 1/8 turn. If the leak is still present the leaking valve seat must be cleaned or replaced.

If leakage occurs around the valve stem at the top of the valve, the valve o-rings need replacement.

To correct either condition proceed as follows:

1. Close the oxygen supply valve and the fuel gas supply valve or close cylinder valves if cylinders are being used. Momentarily raise the valve lever to release any pressure from the hose line. If cylinders are being used, release the pressure-adjusting screws of the regulators.
2. Loosen the setscrew at the hinge end of the lever and remove the hinge pin and lever.
3. Unscrew retaining nut, containing valve stem o-rings and bronze washers, and remove from unit.
4. Remove the valve packing spring. Remove valve stem extension, guide bushing, valve stem body, and valve seat. Remove valve opening spring. Wipe seating surface in valve body with clean cloth and examine the seat to see whether it is nicked or marred. If it is badly marred, the valve might leak when reassembled. In case it does leak, the valve should be

- returned to the factory for reseating.
5. Replace the valve opening spring.
6. Examine the rubber seat and if it is damaged, the valve seat should be replaced.
7. Examine the upper end of the valve stem extension where it passes through the o-rings.
8. Replace the valve seat and place the valve stem body into the valve seat.
9. Slide the guide bushing onto the valve stem body, and place the valve stem extension into the valve stem body. To prevent binding, apply a little silicone grease, P/N 17672 (1oz tube) to the extension.
10. Replace the valve stem packing spring.
11. Replace and tighten the retaining nut and washer assembly in the valve.
12. If leakage occurs past the valve stem extension and o-rings, unscrew retaining nut and replace the valve o-rings.
13. Adjust valve setting as described under "A".
14. Test for leakage.

### B. MAINTENANCE OF PILOT LIGHT

If the flow of gas through the pilot light appears to be restricted, replace the orifice disc and filter assembly as follows:

1. Unscrew the pilot light stem from the body.
2. Remove the filter assembly from the lower end of the stem with a 1/8-in. socket key. The orifice disc will then drop out.
3. Insert the new orifice disc in the stem and screw in the new filter assembly.
4. Screw the pilot light stem back into the body.

## REPLACEMENT PARTS

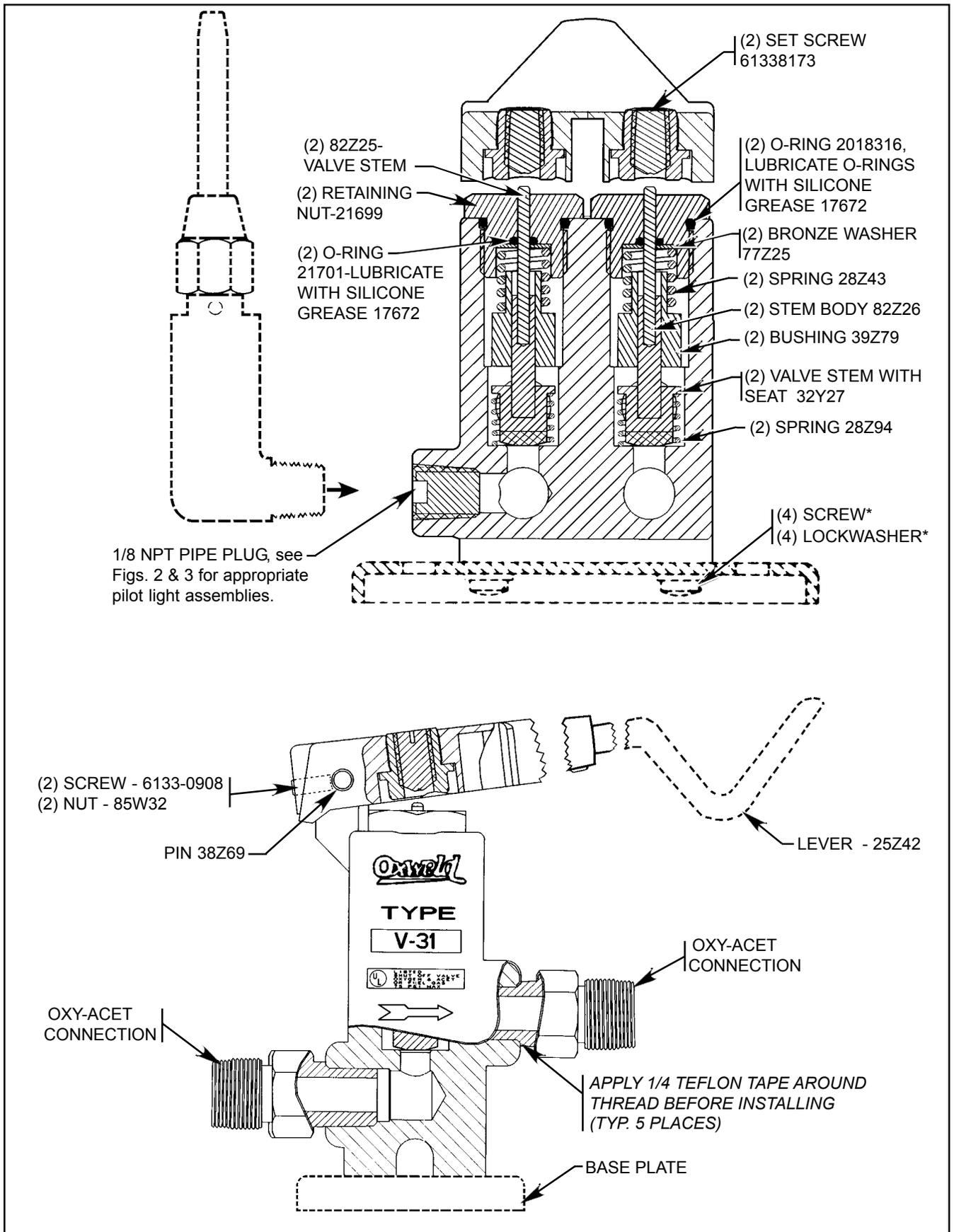
The following drawings (pages 3 & 4) show all replacement parts available for the V-31 valves. To order, identify the required parts from the drawings and specify by part number and name.

### Parts Supplied Unassembled (See Figure 1 On Facing Page)

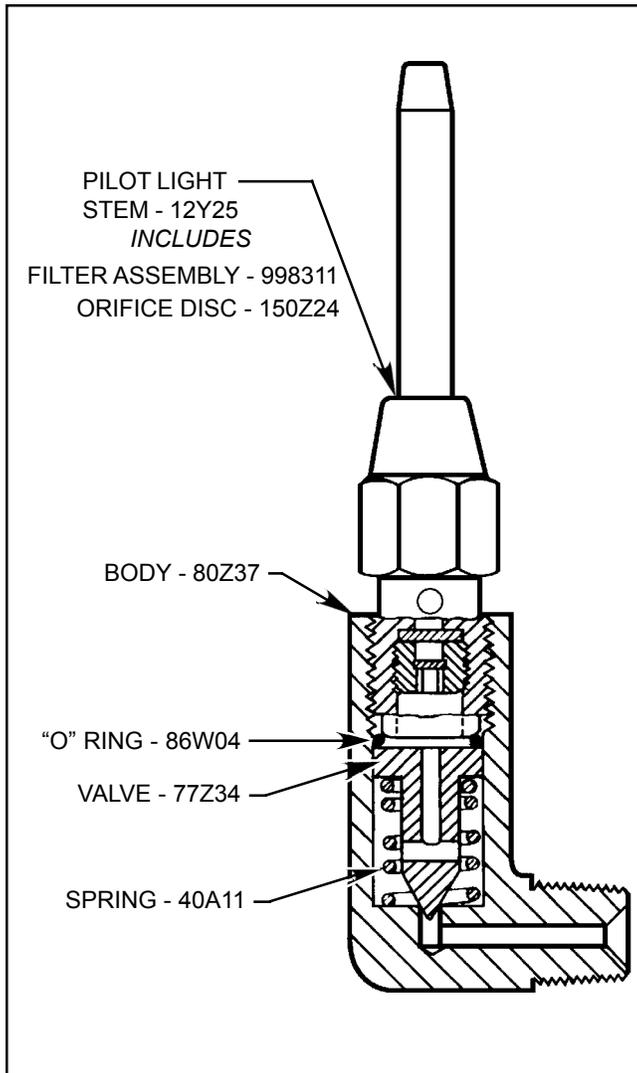
Amt.	Part No.	Description	Amt.	Part No.	Description
2	58K11	Oxygen Connection	1	6123-9907	Set Screw
2	58K12	Acety. Connection	4	6130-0902	Mach. Screw
1	77Z26	Base Plate	4	6430-2920	Lock washer
1	77Z31	Lever Extension			

### Hardware (See Figure 1 On Facing Page)

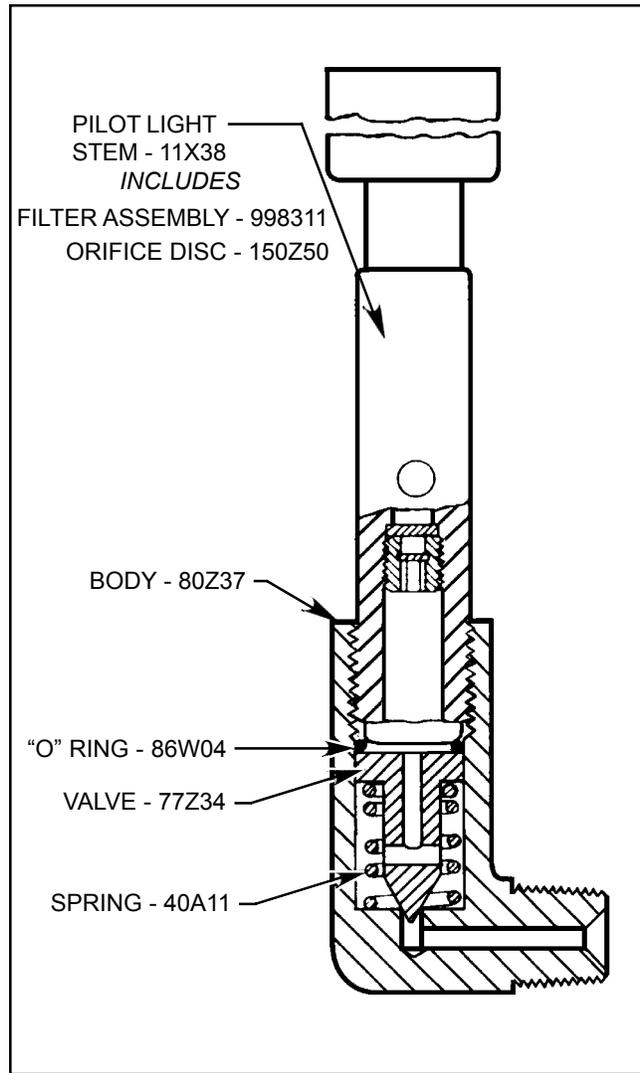
Amt.	Part No.	Description
2	6133-8173	5/16-in.-24 x 1/2-in. Lg. Headless, Setscrew
1	6123-9907	No. 10-32 x 3/16-in. Lg. Headless, Setscrew
1	6133-0908	No. 10-32 x 1/4-in. Lg. Headless, Setscrew
4	6130-0902	No. 10-24 x 1/2-in. Machine Screw
4	6430-2920	No. 10x1/16-in. x 3/64-in. S.A.E. Lockwasher



**Fig. 1 - V-31 for use with Acetylene (includes Pilot Light Assembly 61Y96 - (See Fig. 2) - 16X22  
V-31 for use with Fuel Gas except Acetylene (includes Pilot Light Assembly 61Y95 - (See  
Fig. 3) - 22X18**



**Fig. 2 - Pilot Light Assembly (Acetylene) - 61Y96**  
(Supplied with 16X22)



**Fig. 3 - Pilot Light Assembly (Fuel Gas) - 61Y95**  
(Supplied with 22X18)