I. Introduction

The OXWELD H-14 Back-Pressure Check Valve is for installation at a station on an acetylene piping system where oxy-acetylene equipment is used. The purpose of the H-14 is to prevent oxygen from being forced back into the acetylene supply line and to prevent flashbacks in the blowpipe and hose from travelling back into the supply line.

The H-14 is for use with acetylene only. It is not for use with mixtures of acetylene and other gases, or an air-acetylene mixture. (This does not apply to the small amount of air in the line during purging.)

The H-14 is for acetylene pressures up to 15 psi and flow rates up to 300 cfm. It is recommended that the hose not exceed 100 feet in length or 13/16 inch inside diameter.

II. Installation Instructions

IMPORTANT: If the station valve is to be replaced when an H-14 is to be installed on a supply line which has previously contained acetylene, that part of the supply line in which the H-14 is to be installed must be completely shut off from the rest of the system. This is done so that the line can be vented and then purged of acetylene. (Nitrogen or carbon dioxide should be used for purging.)

A. INSTALL

1. Install the H-14 with a moisture trap and vent piping as illustrated in Figure 1 on Page 2.

2. The vent piping must be galvanized and have galvanized fittings. It must be at least 3/4
III. Operating Instructions

To admit acetylene to the H-14, make sure the blowpipe valves are closed; then open the station shutoff valve.

To shut off the H-14, close the blowpipe valves and close the shutoff valve.

If a flashback occurs, close the blowpipe oxygen valve and then the blowpipe acetylene valve. Wait about one minute -- then resume operation.

IV. Periodic Inspection

The following inspection should be made regularly in order to obtain the best service from the H-14:

1. Regularly drain the moisture trap. Close the shutoff valve and lift the relief valve cap. Then remove the drain cap, and let the water run out. When all the water has drained out, replace the drain cap promptly using pipe compound on the male thread.

2. Every week operate the Relief Valve. Lift the valve cap for an instant to unseat the valve. This guards against sticking of the valve.

3. Every six months inspect the H-14 for leakage and condition of the neoprene sleeve as follows:

   (a) Preparation

      (i) Test for leaks to the atmosphere as instructed in II-B.
      (ii) Attach a pressure gauge (30 lb. acetylene pressure gauge) to the outlet connection. (See Fig. 2.)
      (iii) Crack the shutoff valve very slightly to allow the pressure to build up to 5 psi, and then close the valve tight.
      (iv) Watch the pressure gauge for several minutes. If the pressure falls inspect the relief valve as outlined in F-5990 "Instructions and Parts List for RV-22, 23, 24, and 25 Relief Valves" (packed with the H-14).

   (b) Testing

      (i) Loosen the pipe union on the relief valve vent piping one or two turns.
      (ii) Slowly loosen the pipe union between the shutoff valve and the H-14 to relieve the pressure from the inlet piping.
      (iii) Uncouple this pipe union and rotate the H-14 and its connected piping, in its supporting clamp, enough to move the union 1/8 turn forward.
      (iv) Watch the pressure gauge to make sure the 5 psi has been maintained.

(Continued on Page 4.)
Replacement Parts List

FOR
H-14 BACK-PRESSURE CHECK VALVE
(PART NO. 11P31)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>09R96</td>
<td>Relief Valve (RV-25)</td>
</tr>
<tr>
<td>23R29</td>
<td>Stem</td>
</tr>
<tr>
<td>23R30</td>
<td>Mandrel Assembly</td>
</tr>
<tr>
<td>52S76</td>
<td>Relief Valve Cap</td>
</tr>
<tr>
<td>64S07</td>
<td>Pin</td>
</tr>
<tr>
<td>64S08</td>
<td>Ball</td>
</tr>
<tr>
<td>64S12</td>
<td>Sleeve (Neoprene)</td>
</tr>
<tr>
<td>64S15</td>
<td>Pressure Ring</td>
</tr>
<tr>
<td>64S16</td>
<td>Retaining Cap</td>
</tr>
<tr>
<td>64S17</td>
<td>Seal Ring (Rubber)</td>
</tr>
<tr>
<td>64S20</td>
<td>Filter</td>
</tr>
</tbody>
</table>

PARTS SUPPLIED
8693     Adaptor
10Y01    Plug and Chain Assembly

HARDWARE
P-C-19  1/8-in. x 1-1/8-in. Long Steel Cotter Pin
M-N-P-C-5  3/4-in. Close Nipple
(Continued from Page 2.)

(v) Check the neoprene sleeve for back-flow leakage with a film of soapy water across the union face.

(vi) If no leakage is observed, reassemble the piping, operate the relief valve, and remove the pressure gauge. If there is leakage, the cause should be corrected as outlined in "Maintenance Instructions," below.

V. Maintenance Instructions

A. Before taking any action to repair, adjust, or disassemble the H-14, or its relief valve, be sure you have closed the shutoff valve in the line to the H-14, and relieved all pressure.

B. Make no repairs or replacements other than those described below. When installing new parts, use only standard OXWELD parts as listed on the preceding page.

![Diagram of test gauge hook-up]

**FIG. 2 - TEST GAUGE HOOK-UP**

C. To inspect and clean the neoprene sleeve, sealing ring, and the inlet filter proceed as follows:

1. Close the station shutoff valve, lift the relief valve cap to relieve the pressure, and disconnect the acetylene hose from the outlet.

2. Disconnect the pipe unions in the inlet and the vent piping.

3. Disconnect the pipe and the elbow at the check valve inlet.

4. Remove the filter and clean it thoroughly with a jet of clean compressed air or nitrogen. If clean compressed air is not available, wash the filter thoroughly in clear water. **WEAR GOGGLES. NEVER USE OXYGEN IN PLACE OF COMPRESSED AIR.**

5. Wipe out the filter retaining recess with a clean cloth.

6. Loosen the H-14 cap with a wrench. Slowly unscrew the cap and remove the pressure ring, seal ring, mandrel, and neoprene sleeve. Handle the mandrel with care. Place the mandrel on a clean cloth or in a spare neoprene sleeve to prevent the raised seating rings from being nicked or damaged.

7. Remove any grit or dirt from the neoprene sleeve, mandrel, and H-14 housing. If it is necessary to blow the dirt out, use clean compressed air or nitrogen.

8. Inspect and clean the relief valve. Follow the instructions in F-5990, "Instructions for RV-22, 23, 24, and 25 Relief Valves," packed with the H-14.

9. While the relief valve is disconnected, remove the H-14 outlet connection, pull out the ball-check retaining pin, and remove the ball check. Clean the ball check and the ball-check recess with a clean cloth.

10. Reassemble the H-14, replacing any worn parts with new parts.

11. Leak test the H-14 for backflow as outlined in "Periodic Inspection."

12. Test the entire station for leaks. See "INSTALLATION INSTRUCTIONS." Section II-B.

13. Set the relief valve for the correct operating pressure, as instructed for the RV-25 in F-5990. (See Paragraph 8 above.)

The H-14 Back-Pressure Check Valve is now ready for operation.

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