

HALIDE LEAK DETECTORS

MODEL I (SUPER SENSITIVITY) PART NO. 10X32
MODEL II (STANDARD SENSITIVITY) PART NO. 11X16

CAUTION

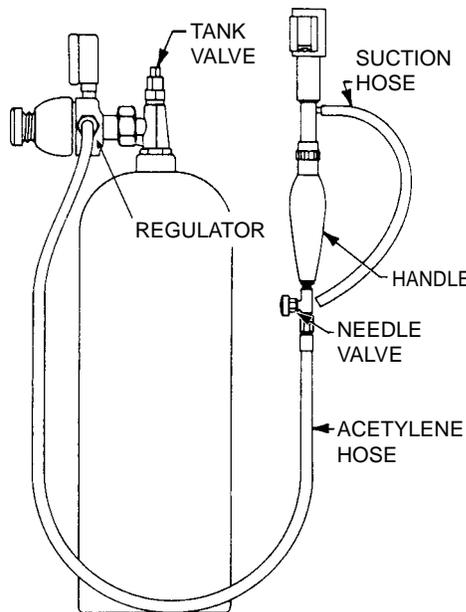
These INSTRUCTIONS are for experienced operators. If you are not fully familiar with the principles of operation and safe practices for oxy-fuel gas equipment, we urge you to read our booklet "Precautions and Safe Practices for Gas Welding, Cutting and Heating," Form 2035. Do NOT permit untrained persons 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.

PREST-0-LITE Halide Leak Detectors are designed for locating leaks of noncombustible halide reffigerant gases (sold under the brand names "Freon," "Ucon," etc.) used in refrigerating and air-conditioning systems.

The supersensitive Model Detector will detect the presence of as little as 20 parts per million of these reffigerant gases. The Model II Detector will detect 100 parts of halide gas per million parts of air. (The Model I and Model II detectors are generally similar in appearance. The Model 1, however, has wings alongside the opening in the flame shield; the Model 11 does not.)

Setting Up:

The leak detector is normally used with a standard PREST-0-LITE torch handle (either Type 401 or Type 403) equipped with shut-off valve. Acetylene can be supplied from a "B" tank (40 cu. ft.) or an MC tank (10 cu. ft.). In either case, the tank must be equipped with a pressure-reducing regulator, such as the PREST-0-LITE R-411, and the torch handle connected to the regulator by a suitable length of fitted acetylene hose. In making set-up, be sure all seating surfaces are clean before assembling, and tighten all connections securely, using a wrench to tighten hose and regulator connections. Be sure to



follow the instructions supplied with the torch handle and regulator.

Lighting:

1. Open the tank valve, using a P-O-L tank key (Part No. 505LOO), one quarter turn.
2. Be sure the shut-off valve on the torch handle is closed. Then adjust the regulator to deliver 10 psi by turning in the pressure-adjusting screw until the "C" marking on the flat surfaces of the screw is opposite the face of the front cap. Then test for leaks (see next section on "Leak-Testing the Set-Up").

3. Open the torch handle shut-off valve and light the gas, above the reaction plate, with a match or taper.

Leak-Testing the Set-Up:

Using a thick solution of soap and water, applied with a small brush, test for leaks at the (tank valve), at the (regulator-to-tank) connection, and at the (regulator-to-hose) and (hose-to-handle) connections. If you find a leak, correct it before you light up. (A leak around the valve stem of a small acetylene tank can often be corrected by tightening the packing nut with a wrench. If this will not stop the leak, remove the tank, tag it to indicate valve stem leakage, and place it outdoors in a safe spot until you can return it to your supplier.)

Adjusting the Flame:

1. With the inlet end of the suction hose placed so that it is unlikely to draw in air contaminated with refrigerant vapor, adjust the needle valve on the torch handle until the pale blue outer envelope of the flame extends about one inch above the reactor plate. The inner cone of the flame, which should also be visible above the reaction plate, should be clear and sharply defined.

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



**ESAB Welding &
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If the outer envelope of the flame, when of proper length, is yellow, not pale-blue, you're either picking up refrigerant vapors (see "Leak Detecting") or there is probably some obstruction in the flow of air to the flame. Make sure the suction tube isn't clogged or bent sharply. If the suction tube is clear, shut off the flame, close the tank valve, disconnect the leak detector from handle, and check for dirt in the filter screw or mixer disc. Use a 1/8-in. socket key (Allen wrench) to remove or replace the filter screw, which retains the mixer disc.

Detecting Leaks:

1. Explore for leaks by moving the end of the suction hose around all points where a leak might occur. Be careful not to kink the suction hose.

2. Watch for color changes in the flame as you move the end of the suction hose. These are the changes which you should look for:

With the Model I Detector (large opening in flame shield, with wings on each side): a small leak will change the color of the outer flame to a yellow or orange-yellow hue. As the concentration of halide gas increases, the yellow will disappear. The lower part of the flame will become a bright, light blue, and the top of the flame will become a vivid purplish blue.

With the Model H Detector (no wings alongside the flame shield opening): Small concentrations of halide gas will change the color of the outer flame to a bright blue-green. As the concentration of halide gas increases, the lower part of the flame will lose its greenish tint, and the upper portion will become a vivid purplish blue.

3. Watch for color intensity changes. The location of small leaks can be pinpointed readily, since the color in the flame will disappear almost instantly after the intake end of the suction hose has passed the point of leakage. With larger leaks, you'll have to judge the point of leakage in terms of the color change from yellow to purple-blue (Model 1) or blue-green to blue-purple (Model II).

IMPORTANT: In the course of time and intensive usage, an oxide scale may form on the surface of the reaction plate, thus reducing its sensitivity, remove the reaction plate and scrape its surface with a knife or screwdriver blade, or install a new plate.

REPLACEMENT PARTS

