Instructions for the Use of AIR-ACETYLENE AND LP-GAS APPLIANCES

with

402

and

403

HANDLES

Instructions for LP-Gas Appliances are the same as are described below for Air-Acetylene Appliances.

TO CONNECT

A. If your handle has a needle valve, you must use a regulator. The 402 can be converted to a 403 Handle by soft soldering the needle valve (19X39) to the end of the handle tube. Therefore, regardless of the stamping on the handle, if it is equipped with a needle valve you must use a regulator to avoid the danger of subjecting the hose to full tank pressure. At the left, below, is the setup you must use if you are using a handle equipped with a needle valve. Either a "B" or "MC" tank can be used in this setup. With the "B" tank, a 411-B regulator is used. With the "MC" tank, a 411-MC regulator is used. With an "MC" tank, an R-416 regulator is used.

If your handle does not have a needle valve, one of a regulator is optional. Use of a regulator will provide more accurate flame control and eliminates adjustment of the tank valve as pressure in the tank decreases. The setup left below is the setup to follow when using a regulator. Follow the setup at the right when not using a regulator. In this setup either a "B" or "MC" tank can be used. A "B" union is used with a "B" tank. With an "MC" tank, an "MC" union is used.

1. Open the tank valve slightly for an instant only, to blow out dust and dirt from the valve outlet. Use a PREST-O-LITE tank key to open the valve. NEVER use pliers.

2. Connect the regulator (shown at the left) or the tank union (shown at the right) to the tank valve. Tighten the nut securely with a wrench.

3. Connect a 3/16-in. hose assembly to an R-411 Regulator or to the tank union, and to the handle. Tighten the connection nuts with a wrench. (If you are using the old-style non-adjustable PREST-O-LITE regulator, see the special note at top of page 2.)

4. Insert the correct size torch stem (see page 4) into the handle locking nut of the handle. Hold the stem in position as you tighten the nut hand tight to lock the stem in place.
TO OPERATE

A. To Light (Except Nos. 9 and 3 MF Stems)

1. IF YOUR TORCH HAS A NEEDLE VALVE, be sure the needle valve is closed.
   (a) Open the tank valve one turn, using a PREST-O-LITE tank key. NEVER USE PLIERS.
   (b) Adjust the regulator pressure-adjusting screw. Follow the directions in the booklet packed with the regulator. (If using the old-style PREST-O-LITE regulator, open the regulator needle valve one complete turn.)
   (c) Open the torch handle needle valve and light the gas at the tip with a friction lighter. Adjust the needle valve to obtain the correct flame size.

2. IF YOUR TORCH DOES NOT HAVE A NEEDLE VALVE and you are using a regulator,
   (a) Open the tank valve one turn, using a PREST-O-LITE tank key. NEVER USE PLIERS.
   (b) Turn in the regulator pressure-adjusting screw until the gas flowing from the tip can be lit. Light the gas with a friction lighter.
   (c) Adjust the regulator to obtain the desired flame length.

3. IF YOUR TORCH DOES NOT HAVE A NEEDLE VALVE and you are not using a regulator,
   (a) Open the tank valve slightly (never more than 1/4 turn) until the gas flowing from the tip is just enough to be lit. Light the gas with a friction lighter.
   (b) Adjust the tank valve to obtain the correct flame size.

B. To Light (Nos. 9 and 3 MF Stems)

NOTE: The recommended operating pressure for the paint burner stem and the No. 3 MF (Multiflame) stem is from 5 to 10 lb. per sq. inch. DO NOT use an operating pressure below 3 lb. per sq. inch. Below this pressure the flames will become so short that burning within the stem may occur.

1. If you are using a regulator
   Adjust the pressure to from 5 to 10 lb. per sq. in. by means of the pressure-adjusting screw, following the instructions in the booklet packed with the regulator. If your handle has a needle valve, the valve should be closed during the pressure adjustment.

   IMPORTANT: Open the torch valve and wait at least 15 seconds, until a full flow of acetylene is obtained at the stem, indicating that all the air has been cleared from the hose, handle and stem.

2. If you are not using a regulator
   Open the tank valve 1/4 turn and wait until there is a good flow of gas at the tip. DO NOT barely crack the tank valve just enough to get a slight flow.

3. Light the torch at the tip. The flame should burn with the usual well defined light blue inner cone characteristics of all PREST-O-LITE torch stems. If the inner cone is long and stringy, not well defined, and burns with a roar, burning within the stem is taking place. To prevent damage to the stem, shut off the torch immediately. Wait a few minutes before relighting.

C. To Shut Off

1. IF YOUR TORCH HAS A NEEDLE VALVE you can use it to shut off the torch for short intervals. For longer intervals, close the tank valve.

2. IF YOUR TORCH DOES NOT HAVE A NEEDLE VALVE, shut off the torch by closing the tank valve.

3. When using a regulator, the regulator may be left as originally set so that work may be resumed by opening the tank valve and lighting the torch.

D. Operating Precautions

1. PREST-O-LITE gas is acetylene. Don't let acetylene escape near any possible source of ignition. Accumulations of acetylene in certain proportions may explode if ignited.

2. Keep tanks away from fire and heat. Each PREST-O-LITE tank is equipped with one or more fusible inserts - devices designed to relieve excessive tank pressure caused by fire or heat.

3. Don't use hose that is worn, or any equipment that is in need of repair.

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A. To Replace Handle Casing

1. Remove the valve stem assembly (09M21) from the needle valve.
2. Heat the front part of the needle valve body (keep the flame off the plastic casing) sufficiently to melt the soft solder joint, then unscrew the valve body from the handle tube.
3. Remove the jam nut (37Z67) and pull the casing back off the handle.
4. Align the new casing so that the pin projecting from the torch body fits into the recess in the casing. If necessary, hold a block of wood against the casing and tap it "home" with a hammer.
5. Replace the jam nut.
6. Screw the needle valve onto the handle tube and soft solder it in place using care to keep the flame from the plastic handle.
7. Replace the valve stem in the needle valve. Tighten the packing nut securely.

B. To Replace "O" Sealing Ring (85W64) in Head

1. Using a scriber or wire with a hook on the end of it, hook into the 'O' ring and pull it out through the nut which locks the stem in place.
2. Squeeze the new ring down into the head and using scriber or wire, push it back evenly into recess under the nut.

C. Valve Leakage

If the valve turns too easily or leaks around the valve stem, tighten the packing nut. If this does not help, remove the valve stem assembly and replace the sealing washer.

In the original factory assembly, the sealing washer is a solid ring. The replacement sealing washer is split so that it can be placed around the valve stem. Before inserting the valve stem assembly into the valve body, be sure the sealing washer is snug about the valve stem so that the washer will start properly into the packing recess.

To seal properly, the packing material should be molded in place. To do this: tightly screw down the packing nut. At this point it will be difficult, or impossible, to turn the valve. If possible, set the handle aside for 3 or 4 hours (preferably overnight). Next, back off the packing nut slightly until the proper friction is obtained for satisfactory valve adjustment. Test valve for leakage around the nut and stem.

If a valve does not shut off completely:
1. Remove the valve stem assembly.
2. Wipe the seating portion of the valve stem and body with a clean cloth.
3. If the valve stem is marred or bent, or if its seating surfaces are nicked, it should be replaced with a new valve stem assembly.
4. If the valve still leaks, replace the complete valve with a new one.

D. Maintenance of Torch Stems

If the flow of acetylene (or LP gas) through the torch stem appears to be restricted, replace the mixer disc and filter (located in the torch end of the stem) as follows:

1. Remove the socket type filter screw with a 1/8-in. socket key. The mixer disc will then fall out.
2. Insert new mixer disc and screw in the new filter screw (see page 4 for part numbers).

Stem Nos. 6 and 11MF have filter screens instead of a mixer disc and mixer screw. To replace the filter screens, pick out the old screens, clean the mixer orifice with any needle pointed object, and insert new screens.

E. Operating Precautions

1. PREST-O-LITE gas is acetylene. Don't let acetylene or other fuel gases escape near any possible source of ignition. Accumulations of fuel gas in certain proportions may explode if ignited.
2. Keep tanks away from fire and heat. Each PREST-O-LITE tank is equipped with one or more fusible inserts--devices designed to relieve excessive tank pressure caused by fire or heat.
3. Don't use hose that is worn, or any equipment that is in need of repair.

A 402 handle can be converted to a 403 by soft soldering needle valve 19X39 to the end of the 402 handle tube (following instructions in paragraphs A-1, A-6 and A-7, above). You must use a regulator with a handle that has a needle valve.
What’s Your Problem?

The PREST-O-LITE stems listed below provide the answers to hundreds of problems in the shop and in the home. These stems and your PREST-O-LITE handle can be used to perform a wide variety of jobs—from delicate soldering operations to heavy heating jobs.

STEMS

The Stems illustrated are for acetylene. The LP-Gas Stems are much the same except that they include a stainless steel flame cup at the tip.

<table>
<thead>
<tr>
<th>Acetylene Stem</th>
<th>LP-Gas Stem</th>
<th>Part No.</th>
<th>Part No.</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>10X26</td>
<td>11X19</td>
<td>No. 6</td>
<td></td>
<td>Extra Heavy Work — Solder-type joints in 3-in. or larger copper pipe.</td>
</tr>
<tr>
<td>10X25</td>
<td>11X14</td>
<td>No. 5</td>
<td></td>
<td>Heavy Work — Thawing frozen water pipes, loosening studs.</td>
</tr>
<tr>
<td>10X24</td>
<td>11X13</td>
<td>No. 4</td>
<td></td>
<td>Medium Work — Body and fender, solder-type joints in 3/4 to 1-1/2-in. copper pipe.</td>
</tr>
<tr>
<td>10X23</td>
<td>11X12</td>
<td>No. 3</td>
<td></td>
<td>Light Work — Soldering light sheet metal, joints in 3/8 to 1/2-in. copper pipe.</td>
</tr>
<tr>
<td>10X22</td>
<td>11X11</td>
<td>No. 2</td>
<td></td>
<td>Fine Work — Automobile radiator fins, toy manufacture.</td>
</tr>
<tr>
<td>10X21</td>
<td>11X10</td>
<td>No. 1</td>
<td></td>
<td>Very Fine Work — Switchboards, jewelry, radios.</td>
</tr>
<tr>
<td>10X27</td>
<td></td>
<td>No. 7</td>
<td></td>
<td>Same as No. 2 except it has a straight tip.</td>
</tr>
<tr>
<td>11X18</td>
<td>21X76</td>
<td>No. 8</td>
<td></td>
<td>Small size soldering iron with pointed copper.</td>
</tr>
<tr>
<td>11X17</td>
<td></td>
<td>No. 8-C</td>
<td></td>
<td>Same as No. 8 with chisel copper.</td>
</tr>
<tr>
<td>10X29</td>
<td></td>
<td>No. 9</td>
<td></td>
<td>Point Burner — produces brush-type-flame.</td>
</tr>
</tbody>
</table>

REPLACEMENT PARTS

20Y78 Flame Spreader for No. 9 Stem
60Y55 Shield for Acetylene Soldering Irons

23520 Chisel Soldering Head
23532 Pointed Soldering Head

For Stems Having Filter Screens: 62Z32 Filter Screen
For Stems Having Filter Screw and Replaceable Mixer Disc

34Y02 Filter and Locking Screw (All Stems)
150220 Mixer Disc for Acetylene Stems — Nos. 1, 8 & E-C
150224 Mixer Disc for Acetylene Stems — Nos. 2 & 7 and LP-Gas Stem No. 8 (Soldering Iron)
150224 Mixer Disc for Acetylene Stems — Nos. 3, 3MF & 10MF
150245 Mixer Disc for Acetylene Stems — Nos. 4 & 9
150246 Mixer Disc for Acetylene Stem No. 5

NOTE: See special operating instructions for Nos. 9 and 3MF Stems on Page 2.

10X35             No. 3MF      Multiflame Heating Stem — For bending, straightening, forming and other operations requiring a “soaking” heat over a broad surface.

10X36             No. 10MF     Multiflame Heating Stem — For heating and soldering tubing or cylindrical parts from 1/2 to 1 1/2 inches in diameter.

11X15             No. 11MF     Multiflame Heating Stem — For heating and soldering tubing or cylindrical parts from 2 to 4 inches in diameter.

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