"PREST-O-LITE" 411 ACETYLENE REGULATOR

The PREST-O-LITE 411 Regulator is a sturdy piece of equipment especially designed for use with PREST-O-LITE small-tank appliances. The regulator eliminates the need for continual readjustment of the tank valve as pressure in the tank drops. When it has been set to the desired working pressure, it will maintain that pressure without any further attention. In shifting the regulator from one tank to another you don’t have to change the pressure setting. The regulator is easily installed and is simple to operate.

1. Operating Instructions

If you do not understand the general principles of operation and safe practice to be followed while operating air-acetylene equipment, you should read also the booklet entitled PREST-O-LITE Air Appliances - How and Where to Use Them (F-9061). This booklet may be obtained free of charge from any LINDE office, or from your PREST-O-LITE appliance dealer.

A. Making the Connection

1. Before attaching the regulator, use a PREST-O-LITE tank key (NEVER pliers) to open the tank valve slightly for an instant, then close it again. This blows out any dust or dirt which may be in the valve outlet. NEVER OPEN AN ACETYLENE VALVE NEAR HOT WORK, SPARKS, OR ANY OTHER POSSIBLE SOURCE OF IGNITION.

2. Attach the regulator to the tank valve. (The regulator inlet nut has a right-hand thread.) Tighten the nut with a wrench.

3. Attach the hose to the regulator outlet and to the torch or other appliance. (The connections have left-hand threads.) Tighten the connections with a wrench.

4. SLOWLY, open the tank valve about 1/4 turn.

5. Do not begin operations until you have checked all connections for leaks. Set the regulator for a working pressure of 10 lbs. per sq. in. (See section B), and use a soapy water solution to test connections.

B. Adjusting Working Pressure

1. Working pressure is adjusted by use of the red plastic pressure-adjusting screw. To increase pressure, turn the pressure-adjusting screw to the right--clockwise. To decrease pressure, turn the screw to the left--counter-clockwise.

2. If your regulator is equipped with a working pressure gauge, skip steps 3 and 4. To ad-
just the working pressure, turn in the pressure-adjusting screw until the desired pressure registers on the gauge. The first time you light the torch it may be necessary to adjust the pressure slightly.

3. The pressure-adjusting screw has two flat-bottom grooves on which the lettered settings "A," "B," and "C" are marked at intervals of two turns. These settings serve the same purpose as a working pressure gauge. Letter "A" represents the point at which pressure begins to flow. Letters "B" and "C" represent approximate settings of 5 and 10 lb. per sq. in.

4. Since the distance from one lettered setting to the next is two full turns (approximately 5 lbs.), pressure settings between the letters are easy to determine. A full turn past "B" would give a setting of approximately 7-1/2 lb. per sq. in. A half turn past "C" would give a setting of approximately 11-1/4 lbs., etc.

5. When the desired working pressure is obtained for a particular operation, you may leave the pressure-adjusting screw at that setting as long as you are using the same appliance. If an adjustment becomes necessary because of small changes in operating conditions (such as changing of tips), it may be made by a slight turn of the pressure-adjusting screw. If desired, a working pressure gauge (Part No. 27Y15) may be installed in one-gauge regulators, in place of the 1/8-in. pipe plug.

NOTE: If the regulator is to be out of use for a few days or more, leave the pressure-adjusting screw turned in enough to move the valve seat off the seating surface of the body. A quarter turn beyond the "A" setting is generally sufficient.

II. Maintenance Instructions

Improperly repaired apparatus may be hazardous. For all replacements or repairs other than those described below, the regulator should be sent to the nearest Linde Air Products Company apparatus repair station. (Your Prest-O-Lite dealer will be glad to forward the regulator for you.)

A. Replacing the Valve Seat
1. Using a 1/8-in. socket key, remove the socket-type screw from the inlet nipple. Be careful not to lose the valve closing spring; it will pop out when the screw is removed. The valve seat will fall out in your hand when the regulator is inverted.

2. When reassembling, hold the regulator at an angle so that the valve seat will slide into place. Replace the spring and screw in the nipple. Care should be used in starting the screw into the nipple so as not to cross the threads.

3. Attach the regulator to the tank, and screw the pressure-adjusting screw out as far as it will go. With pressure in the regulator, test for valve leakage by placing a film of soapy water over the regulator outlet.

B. Replacing the Diaphragm
1. Insert two pieces of 1/4-in. drill rod in the vent holes of the regulator cap, and use them as handles for unscrewing the cap. Remove the spring washer, spring, diaphragm ring, and diaphragm.

2. To reassemble, first detach the regulator body from the tank valve. Holding the body with the gauge face upward, replace the diaphragm, diaphragm ring, spring, and spring washer. Screw on the regulator cap, and tighten it with your hand.

3. Attach the regulator to the tank, making sure that the nut is tight. Insert drill rod in the vent holes of the regulator cap as before, and further tighten cap.

4. Block off the regulator outlet with your thumb and adjust the pressure-adjusting screw to "C" position. Using soapy water, test for leakage between the regulator cap and regulator body. Test the diaphragm for leakage by placing a film of soapy water over the two vent holes in the regulator cap.

NOTE: In the original factory assembly, the pressure adjusting spring was cemented to the diaphragm plate, and the spring washer was cemented to the spring. It is not necessary to re-cement these parts, although it may be done if convenient.

C. Replacing the Filter
1. The filter is located within the socket-type screw in the regulator inlet nipple. To replace it you must replace the screw (see section A-1). Clogging of the filter is indicated by a no-reading or a very sluggish climb on the gauge.

D. Replacing the Pressure-Adjusting Screw
1. Insert two pieces of 1/4-in. drill rod in the vent holes of the regulator cap, and use them as handles for unscrewing the cap.

2. Screw the pressure-adjusting screw into the regulator cap as far as it will go.

3. Using the tip of a screwdriver, remove the lock ring on the inner end of the pressure-adjusting screw.

4. Remove the pressure-adjusting screw by screwing it all the way out of the regulator cap.

5. To reassemble, screw the pressure-adjusting screw into the regulator cap as far as it will go. Press the lock ring into place on the inner end of the pressure-adjusting screw.

The term "Prest-O-Lite" is a registered trade-mark of Union Carbide and Carbon Corporation.
Replacement Parts List

FOR
"PREST-O-LITE" REGULATORS

TYPE 411-B (PART NO. 04X36)
TYPE 411-BD (PART NO. 05X01)
TYPE 411-MC (PART NO. 04X37)
TYPE 411-MCD (PART NO. 05X02)

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>06Y10</td>
<td>Body and Inlet Connection Assembly (B)</td>
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<tr>
<td>06Y11</td>
<td>Body and Inlet Connection Assembly (MC)</td>
</tr>
<tr>
<td>27Y19</td>
<td>400-lb. Acetylene Gauge (includes 05Z93)</td>
</tr>
<tr>
<td>30Y07</td>
<td>Diaphragm</td>
</tr>
<tr>
<td>32Y32</td>
<td>Valve Seat and Stem</td>
</tr>
<tr>
<td>34Y02</td>
<td>Filter and Screw</td>
</tr>
<tr>
<td>05Z93</td>
<td>Gauge Crystal (included in 27Y19)</td>
</tr>
<tr>
<td>29Z42</td>
<td>Valve Closing Spring</td>
</tr>
<tr>
<td>29Z43</td>
<td>Pressure-Adjusting Spring</td>
</tr>
<tr>
<td>31Z77</td>
<td>Cap</td>
</tr>
<tr>
<td>35Z82</td>
<td>Pressure-Adjusting Screw</td>
</tr>
<tr>
<td>68Z80</td>
<td>Inlet Nut Spacer (B)</td>
</tr>
<tr>
<td>68Z81</td>
<td>Inlet Nut Spacer (MC)</td>
</tr>
<tr>
<td>82Z39</td>
<td>Pressure-Adjusting Screw Retaining Ring</td>
</tr>
<tr>
<td>82Z40</td>
<td>Diaphragm Slip Ring</td>
</tr>
<tr>
<td>82Z41</td>
<td>Pressure-Adjusting Spring Washer</td>
</tr>
<tr>
<td>82Z52</td>
<td>Filter Screen</td>
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HARDWARE

6010-1025 1/8-in. Socket-Head Brass Pipe Plug

ACCESSORY

27Y15 30-lb. Acetylene Gauge (Supplied with 411-BD and 411-MCD)
HOSE ASSEMBLIES
Hose assemblies fitted with 3/16-in. connections are available in several standard lengths from your PREST-O-LITE dealer. To make up a hose assembly in an odd length, use 3/16-in. 1-braid acetylene hose and two each of the following parts:

<table>
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<th>PART NO.</th>
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<tbody>
<tr>
<td>3383</td>
<td>&quot;A&quot; Size Acetylene Hose Connection Nut</td>
</tr>
<tr>
<td>03Z83</td>
<td>&quot;A&quot; Size 3/16-in. Hose Nipple</td>
</tr>
<tr>
<td>92Z25</td>
<td>3/16-in. Circle Hose Clamp</td>
</tr>
</tbody>
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HOSE ADAPTORS
PREST-O-LITE R-41: Regulators have standard "A" size outlet connections, designed for use with 3/16-in. hose fittings. To connect 1/4-in. hose (used with earlier models of PREST-O-LITE appliances) to an R-411 regulator, use:

19X23 "A" Size to 1/4-in. (P-O-L) Hose Adaptor
963-A 1/4-in. Hose Clamp

The superseded PREST-O-LITE No. 1 Handles were designed for use with 1/4-in. hose. To adapt the No. 1 Handle for use with 3/16-in. fitted hose assemblies, use:

S1508 P-O-L to 3/16-in. "A" Size Acetylene Hose Connection Adaptor

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