Installing the Pressure Switch

1. Attach the outlet of the torch cooling water system to the Pressure Switch.

2. Lead the Pressure Switch drain hose to a suitable water disposal drain. (This drain should be on the same level with the switch or the switch will not operate correctly.)

3. Connect the electric wiring of the Pressure Switch into the electrical control circuit which operates the main contactor, in AC welding, or the generator field relay, in DC welding. This connection should be made so that when the Pressure Switch opens, the control circuit shuts off welding current to the torch.

Adjusting the Pressure Switch

1. The Pressure Switch is set at the factory.

The Pressure Switch has been set at the factory for operation with HELIARC torches having a 12-1/2 ft. power cable and which have a maximum current capacity of 500 amperes.

2. If your torch operates at more than 500 amperes, or has a water-cooled power cable more than 12-1/2 ft. long.

   If the Pressure Switch is to be used with a torch other than those for which it is adjusted or if the water-cooled power cable is lengthened, or if additional hoses or fittings are attached to the Pressure Switch, or if the drain is not on the same level with the switch, the Pressure Switch will not operate correctly and you must adjust it to give your torch adequate protection.

3. Amount of cooling water required for proper cooling.

   The Instruction Booklet which tells you about your torch gives the amount of cooling water which should flow through the cooling system to provide proper cooling. NOTE - The cooling water inlet temperature should not be warmer than 60 deg. F. The amount of water your torch needs is expressed in "gallons per hour" (to help you estimate your water consumption) and in "seconds per quart" (to make it easier to find out how much flows through your cooling water system).
4. To see if your torch is properly cooled.

   Let the drain hose of the Pressure Switch empty into a quart bottle. If it takes longer to fill the bottle than the Instruction Booklet says it should, you aren't getting enough cooling. If it takes less time, you are getting more than enough cooling and can cut down the amount of cooling water flowing to the torch.

5. Setting the Pressure Switch for correct operation.

   a. Turn on the cooling water and make sure the correct quantity is flowing.

   b. Remove the cover plate.

   c. Screw in the adjusting nut two turns. (Rotate the nut clockwise.) This should open the electric circuit through the pressure switch.

   d. Unscrew the adjusting nut (rotate counter-clockwise) until a click indicates that the electric circuit has closed. This is the correct setting. If the amount of cooling water falls below what is needed the pressure switch will act to shut off the welding current until the correct amount is flowing.

### Replacement Parts

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>32A12</td>
<td>1</td>
<td>3/16-in. &quot;B&quot; size Hose Connection Nipple</td>
</tr>
<tr>
<td>39282</td>
<td>1</td>
<td>3/16-in. &quot;B&quot; size Hose Ferrule</td>
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<tr>
<td>84W89</td>
<td>1</td>
<td>Pressure Switch Includes:</td>
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<tr>
<td>85W27</td>
<td></td>
<td>Switch Element (Micro Switch Corporation's &quot;'Kalper Switch,&quot; Style G-R-441)</td>
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<tr>
<td>10230</td>
<td>2</td>
<td>Adaptor (1/4-in.-18 NPT to Air-Water Hose Connection)</td>
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<tr>
<td>36240</td>
<td>1</td>
<td>Water Connection Nut</td>
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<td></td>
<td>1</td>
<td>5-ft. length 3/16-in. 1-Br. Hose</td>
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<tr>
<td></td>
<td>1</td>
<td>1/4-in. Close Brass Nipple</td>
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<tr>
<td></td>
<td>1</td>
<td>1/4-in. Brass Tee</td>
</tr>
</tbody>
</table>

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