

## OXWELD M-2 PORTABLE ACETYLENE/FUEL GAS CYLINDER MANIFOLD



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 & 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.

The OXWELD M-2 Manifold is intended only for outdoor service and is designed to supply acetylene (or other fuel gas with CGA-510 Regulator Connection) only to a single torch. The total acetylene capacity of the cylinders in use on the manifold should be at least seven times the maximum amount of acetylene the manifold will be required to supply per hour.

Never connect the M-2 Manifold to an acetylene piping system that serves multiple welding and cutting stations.

The manifold covered by these instructions are listed by Underwriter's Laboratories only when using parts manufactured by ESAB Welding & Cutting Products to the specifications on file with Underwriter's Laboratories, Inc., and when they are used in the gas service for which they are designed and listed. The use of other parts that cause damage or failure to the equipment will void the manufacturer's warranty.

### OPERATING INSTRUCTIONS

#### TO CONNECT

1. Crack the valves on the cylinders to be used. To do this, stand to one side, not over the cylinder outlet, and open the cylinder valve slightly for an instant. (This is termed "cracking the valve." This will blow out dust or dirt that may have collected in the cylinder valve outlets.
2. The pressure in each of the cylinders to be used should not vary more than 50 psi from the pressure in any other cylinder to be used. Check each cylinder with an acetylene regulator following instructions packed with the regulator.
3. Attach the center connection (coupler block) of the manifold to one of the cylinders, making sure that the cylinder is positioned so that the cylinder valve stem is easily accessible. Tighten the union nut which connects the manifold to the cylinder firmly with a wrench.
4. Attach a lead to each couple block outlet, but do not tighten. Connect a cylinder to each manifold lead, positioning all cylinders so that the cylinder valve stems will be easily accessible. Tighten the union nuts at the cylinders firmly with a wrench. Then tighten the leads at the couple block firmly with a wrench.

*NOTE: If fewer than four cylinders are to be used, blank off the unused manifold connections with the caps provided. Tighten the caps with a wrench.*

5. Crack each cylinder valve in turn as described in step 1 to blow out dust or dirt that may have collected in the manifold.
6. Connect a cylinder regulator with CGA-510 connection regulator to the top of manifold assembly on 5320A00 and tighten the connection nut firmly with a wrench.

#### TO OPERATE

1. Back off the regulator pressure-adjusting screw (counterclockwise) until it turns freely.
2. Stand to one side--not in front of the regulator gauge -- and open one of the cylinder valves **slowly** and only a fraction of a turn. After the cylinder-pressure gauge hand stops moving, open the cylinder valve 1-1/2 turns. Then slowly open each of the other cylinder valves 1-1/2 turns.

*NOTE: Each open cylinder should be equipped with a cylinder valve T-wrench (791F74). The wrench should remain on the valve until the valve is closed. Then the wrench should be removed.*

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

3. Test all connections for leakage with OXY-TEC leak test solution P/N 998771. Bubbling of solution indicates leakage. Do NOT operate until leakage is corrected.
4. The manifold is now ready to operate. For torch operations, refer to instruction booklet packed with the torch.

### TO SHUT OFF

1. Close each cylinder valve and remove the cylinder valve wrench from the valve.
2. Open the torch Fuel Gas valve.
3. Turn the regulator pressure-adjusting screw to the right (clockwise) until the cylinder-pressure gauge hand of the regulator drops to the pin. Then back off the regulator pressure-adjusting screw (counterclockwise) until it turns freely.
4. Close the torch fuel gas valve.

### MAINTENANCE INSTRUCTIONS

Do not operate the OXWELD M-2 Acetylene/Fuel Gas Manifold without flash arrestor in the cylinder leads. In case a cylinder lead becomes clogged, or is subjected to any damaging force, the flash arrestor or the entire lead should be replaced. A flash arrestor has a rated capacity

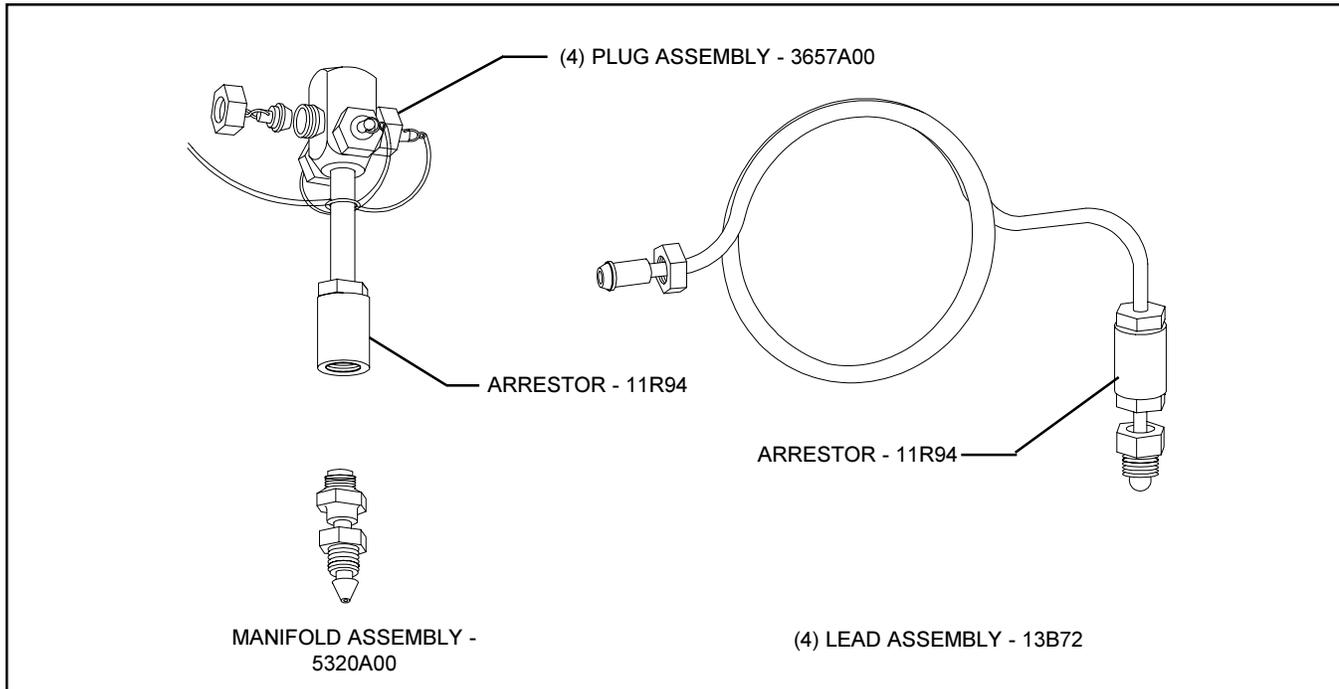
of 40 cfh with a 5 psi pressure drop. It is clogged when the pressure drop increases to 10 psi at the 40 cfh flow rating. Never attempt to make any other repairs to a cylinder lead or to the coupler block. Never attempt to repair a flash arrestor that has been clogged.

### FLASH ARRESTOR

1. Close all cylinder valves and relieve all pressure from the manifold and regulator.
2. Remove the cylinder lead to be repaired from its cylinder and the coupler block. If the coupler block is to be repaired, remove the regulator and all leads from the coupler block, and remove the coupler block from its cylinder.
3. Blow through the lead or coupler block with dry compressed air to purge it of Fuel Gas. Remove the flash arrestor body from the cylinder lead or coupler block by using two wrenches, one on each of the hex caps on either side of the cylindrical body. Replace with a new flash arrestor body.



**Never attempt to repair a clogged flash arrestor body.**



M-2 (with leads), P/N 3664A00 M-2 (less leads), P/N 5320A00