

OWNER'S MANUAL FOR GAS APPARATUS

PLEASE READ ENTIRE MANUAL
FOR YOUR SAFETY AS WELL AS
THE SAFETY OF OTHERS

There are many hazards to be considered when using oxy-fuel welding, cutting and heating equipment. Proper safety precautions must be taken when using such equipment.

This handbook is offered as a practical guide to the safe operation of this equipment.

We suggest anyone using such equipment thoroughly read and familiarize themselves with this handbook.

- > WARNINGS(SEE PAGE 1)
- > SETTING UP YOU NEW TORCH KIT
- > DETAILED SAFE OPERATING INSTRUCTIONS AND GUIDE
- > WELDING AND CUTTING CHARTS AND GUIDES

DISTRIBUTED BY:

SAFETY FIRST

*This equipment is UL approved. All components are tested according to current Underwriters Laboratories specifications for safety. Please read, and understand all instructions before proceeding with using our equipment.
Compressed gases are dangerous observe your gas suppliers safety precautions when handling cylinders.
If you aren't sure, ask questions*

IMPORTANT SAFETY PRECAUTIONS TO REMEMBER

- * Always have a fire extinguisher handy.
- * Secure cylinders to cart, wall or post to prevent them from falling.
- * All cylinders should be used and stored in an upright position.
- * Never drop or strike a cylinder or use a damaged cylinder.
- * Never use oil or grease on any inlet or outlet connections or cylinder valves.
- * Examine hoses for cuts, burns or worn areas before each use. Also inspect fittings and replace any found damaged.
- * Do not repair hose with friction tape.
- * Always wear gloves made of leather or suitable substitute.
- * Always wear welding goggles with proper filter lens.
- * Do not wear torn or ragged clothes. Sparks can ignite ragged ends.
- * Never use oxygen or fuel gas to blow soot or dirt off clothes.
- * Never test for gas leaks with a flame. Use approved leak-detector product.
- * Upon completion of work, inspect area for any possible fire or smoldering material.
- * Working pressure on acetylene regulator should never be set above 15 PSIG.

Tip Selection & Recommended Working Pressure of Regulator

WELDING NOZZLE CHART

Metal Thickness	Tip Size	Oxygen Pressure P.S.I.G.		Acetylene Pressure P.S.I.G.	
		Min.	Max.	Min.	Max.
1/64"-3/64"	00	3	5	3	5
1/32"-5/64"	0	3	5	3	5
3/64"-3/32"	1	3	5	3	5
1/16"-1/8"	2	3	5	3	5
1/8"-3/16"	3	4	7	3	6
3/16"-1/4"	4	5	10	4	7
1/4"-1/2"	5	6	12	5	8

OXY-ACETYLENE MULTI-FLAME HEATING NOZZLE(S)

Tip Size	Acetylene Pressure Range P.S.I.G.	Oxygen Pressure Range P.S.I.G.	Acetylen Cubic Feet Per Hour		Oxygen Cubic Feet Per Hour	
			Min.	Max.	Min.	Max.
6	8 -11	10 -14	14	40	15	44
8	10 -14	18 -28	30	80	33	88

OXY-ACETYLENE CUTTING TIP CHART

Metal Thickness	Nozzle Size	Oxygen Pressure (P.S.I.G.)		Acetylene Pressure (P.S.I.G.)	
		Min.	Max.	Min.	Max.
1/2"	0	30	35	3	5
3/4"	1	30	35	3	5

SHUTTING DOWN EQUIPMENT

1. Turn off oxygen valve on torch, then turn off acetylene valve on torch.

Note: Reversal of this procedure can cause damage to the torch.

2. Close both cylinder valves.

3. Drain gas from oxygen regulator by opening the oxygen valve on the torch handle. Repeat this step on acetylene side.

4. Release adjusting screws on regulators. This is done by turning them counter-clockwise.

5. ALWAYS use two* wrenches to screw the hose connectors off from regulator connection:
one wrench of 11/16 in. (17.5mm) is for hose connectors; the other wrench of 5/8 in. (16mm) is for outlet connection of regulators.

* If only one wrench is used to unscrew the hose connectors, the regulator outlet connection may come loose from the regulator body.

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This handbook is offered as a guideline. Accidents can be prevented with the use of common sense. Please remember the safety precautions at the beginning of this handbook. Safety should always be considered before any cutting or welding operation.

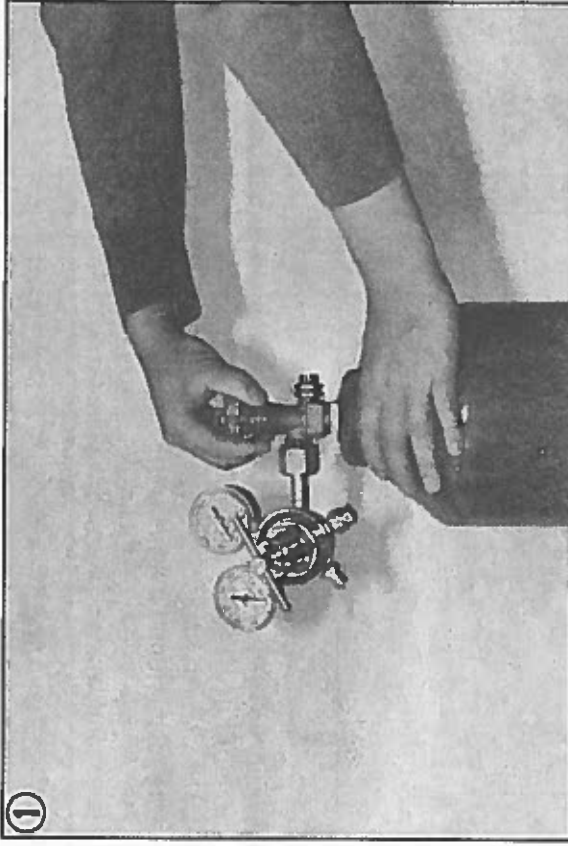
SET UP AND OPERATION GUIDE

1. Secure cylinder. (As noted in safety precautions.)

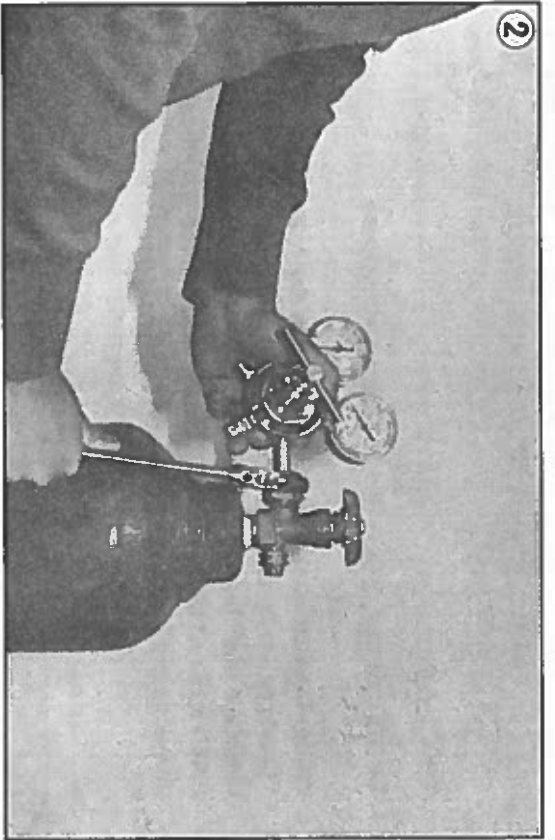
2. While standing to one side, "crack" each cylinder valve. (Fig. 1) "Cracking" is to quickly open and close the valve, allowing gas to escape and clearing the valve of any foreign material.

CAUTION: If oil or grease is found, discontinue use of cylinder immediately and contact your supplier.

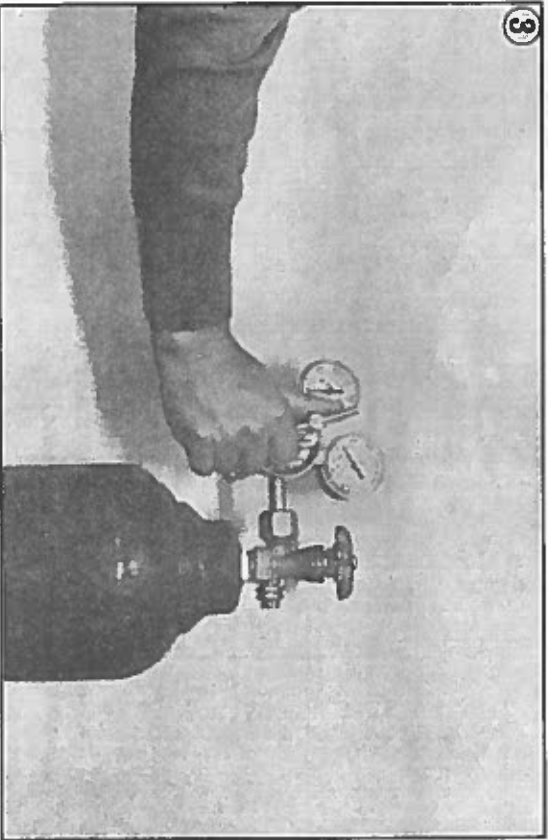
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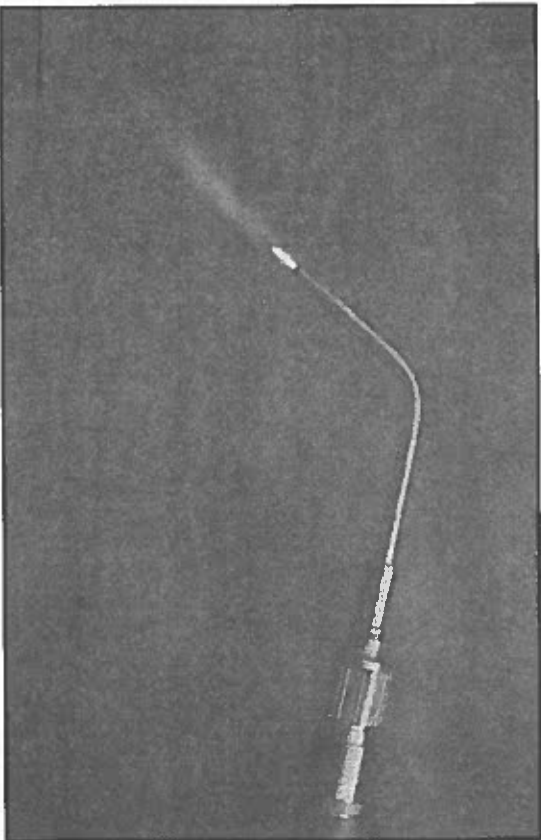
3. Attach regulators to proper cylinders. A wrench should be used to insure tight connections. (Fig. 2) make sure they are tightened in correct directions. (Normally clockwise for oxygen and counter-clockwise for Acetylene).



2. Regulator adjusting screws should be turned counterclockwise to relieve pressure on diaphragm before opening cylinder valves. (Fig. 3) If this is not done, pressure from cylinder can damage diaphragm and render regulator inoperable.

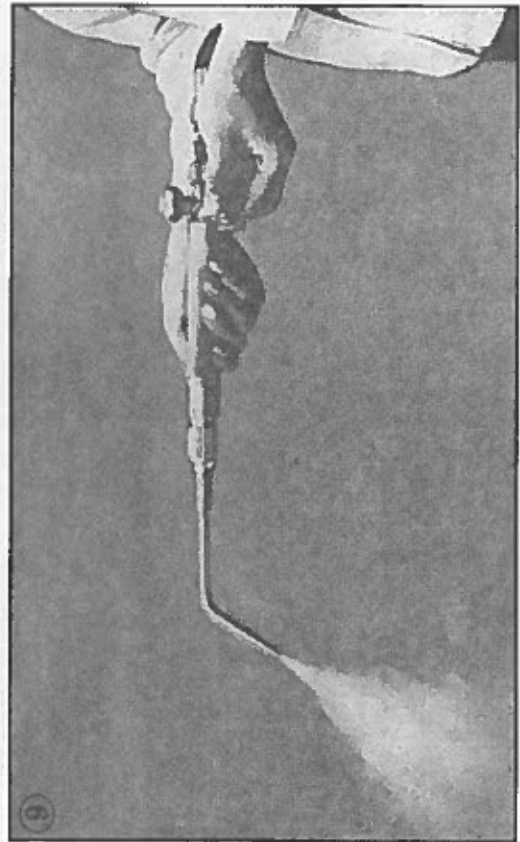


(g) Slowly open the oxygen valve until a brilliant neutral flame is reached. (Fig. 10) (If the flame has a smooth inner cone, the flame is called Neutral)
CAUTION: Always use goggles or suitable eye protection when welding, cutting or heating.



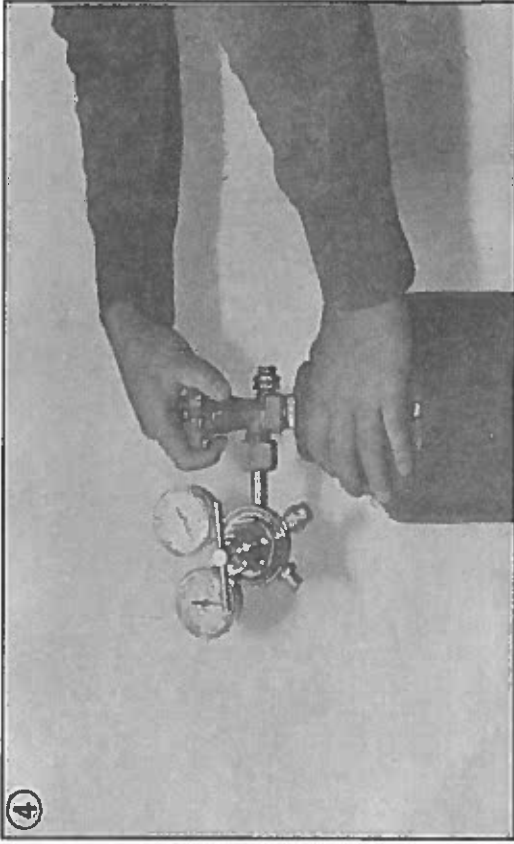


- (e) Open acetylene torch valve about 1/4 turn and ignite the acetylene gas coming out of the tip.
CAUTION: Always point torch away from any person when lighting.
- (f) Turn on the acetylene torch valve slowly until smoke subsides and the flame jumps away from the end of the tip slightly. (Fig.9)



5. Both cylinder and valve regulator connections should be checked for leaks. Stand so the cylinder valve is between you and the regulator. Slowly open cylinder valve. (Fig.4) An approved leak detector should be used.

CAUTION: Acetylene cylinder valve should be opened a maximum of one turn.



6. Connect proper hose to regulator. (Green to oxygen and red to acetylene) Tighten nuts securely with wrench. (Fig.5) If any sign of oil or grease is found, discontinue use immediately.

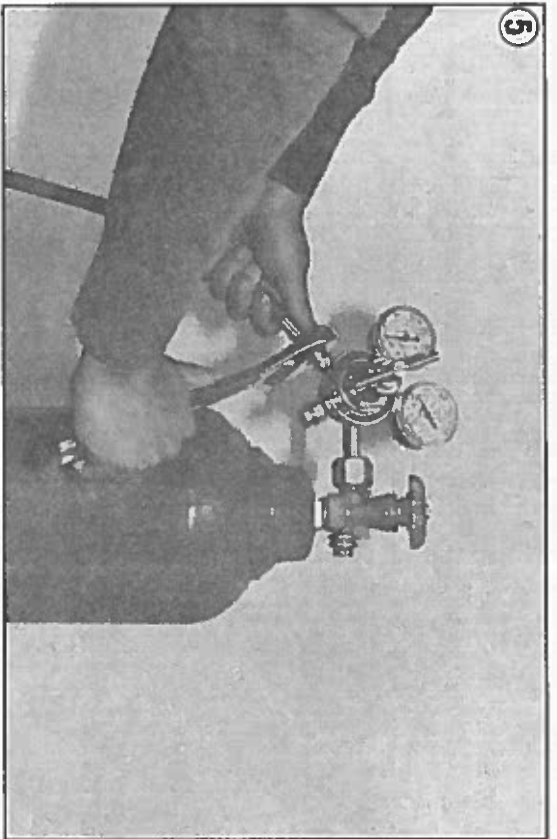
7. Blowing out hoses: Do this to one regulator at a time and in a well ventilated area to avoid creating conditions for fires or explosions.

- a. Turn oxygen regulator adjusting screw to allow 5 PSIG to pass through hose.
- b. Allow oxygen to flow approximately 10 seconds to purge the hose.
- c. Repeat these steps for acetylene regulator.

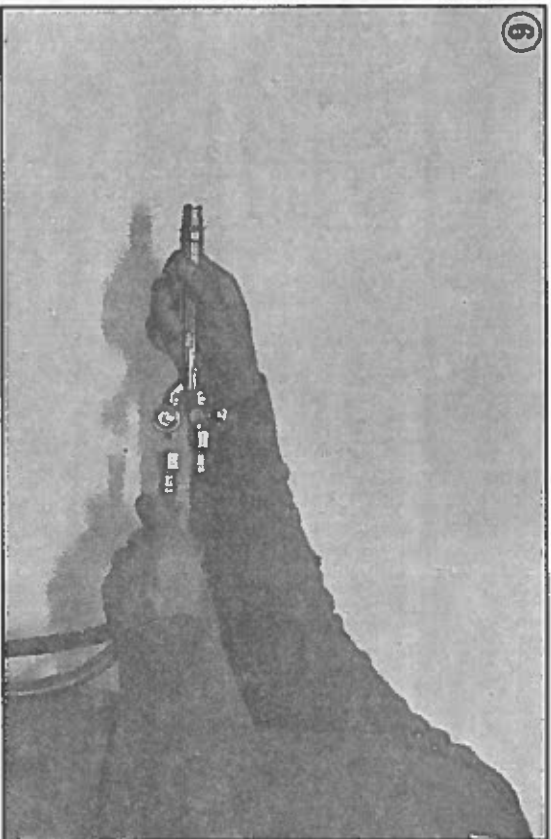
Note: New hose contains a preservative talc which must be blown out before using.

8. Connect hoses to proper connection on torch handle. (Oxygen is right-handed and fuel gas is left-handed.) (Fig.6)

CAUTION: If any traces of oil or grease are found, do not use. Contact your supplier immediately.



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9. Connect welding, heating nozzle or cutting attachment to the torch handle. Always check cone end coupling nut and torch head for damage or oil presence. If either are found, discontinue use and contact your supplier.

CAUTION: The two "o" rings on the cone end must be present and in undamaged condition, otherwise gases will mix in the wrong place resulting in flashback or backfire. (Fig. 7)



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10. Check all connections for leaks. Adjust regulators to normal operating pressure and, using an approved leak detection solution, check for leaks at all connections. If leaks are found, tighten nuts more securely. If leaks still persist, discontinue use and call your supplier.

CAUTION: Never set acetylene regulator above 15 PSIG working pressure.

11. Neutral Flame Adjusting

- (a) Refer to welding tip or cutting nozzle chart to determine the proper regulator pressures.
- (b) Open oxygen valve on the torch handle (and the preheat oxygen valve on cutting attachment), adjust the oxygen regulator to the desired working pressure. Then close the oxygen valve.
- (c) Open acetylene valve on the torch handle, adjust the acetylene regulator to the desired working pressure. Then close the acetylene valve.
- (d) Hold torch in one hand and spark lighter in other. (Fig. 8)