



Comet 200 and 300 ***Operating Instructions***





Safety Precautions

1. Use the regulator only for the purpose and with the gas for which it was supplied.
2. Check O-rings regularly and replace if worn or damaged (see O-ring kits under Servicing Section page 7).
3. Do not allow oil or grease to contact the regulator or other associated equipment - Oxygen can react explosively with oil or grease.
4. Release the regulator adjusting knob before opening the cylinder valve.
5. Open the cylinder valve slowly. Close after use.
6. Close the cylinder valve and release the gas pressure before

- removing the regulator from the cylinder.
7. Do not use regulator as a control valve when not in use for any extended period of time (overnight).
 8. Never use Acetylene at pressure in excess of 100 kPa.
 9. Ensure all connections are leak-free. Never test for leaks with a flame.
 10. Ensure the cylinder and delivery pressure gauges are in correct working order.
 11. If delivery pressure "creeps" in excess of 35 kPa when the gas flow ceases, have the regulator repaired.

12. Keep the regulator clean and in good operational order.
 13. Never modify the regulator without the consent of the manufacturer or authorised CIG representative.
 14. After making any repairs or service requirements to the equipment **always** test to ensure correct operation. (Refer Repair Data page 7).
- For more detailed information relating to Equipment Safety and Operation, refer to CIG publications such as:
"Don't Gamble with your Safety".
"Hints on Gas Welding and Cutting".
"The Safe Handling of Gases".

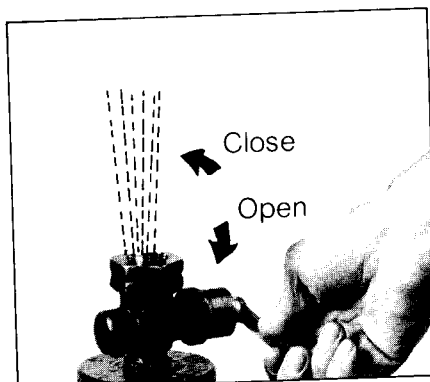
Assembly

1. Cylinders

Place cylinders in intended position in readiness for use. Secure firmly in that position.

2. "Cracking" the Cylinder (oxygen).

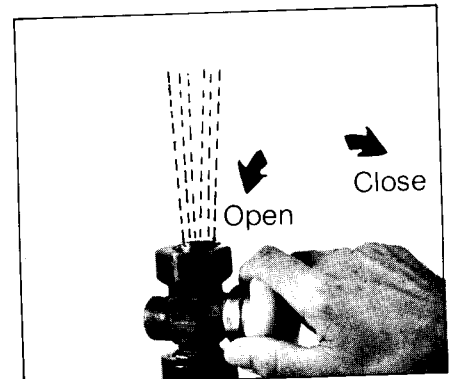
Remove dust seals first. Momentarily open and then close (called "cracking") the cylinder valve before attaching the regulator - to blow out foreign matter. (Fig. 1).



(Fig. 1)

3. "Cracking" the Cylinder (Acetylene).

Remove dust seals first. Momentarily open and then close (called "cracking") the cylinder valve before attaching the regulator - to blow out foreign matter. (Fig. 2).



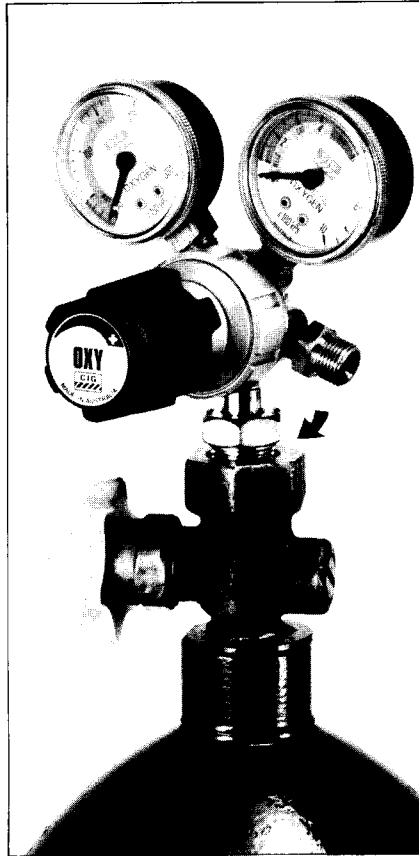
(Fig. 2)

N.B. Never "crack" a fuel gas cylinder valve near other welding works, sparks or open flame. Ensure surrounding area is well ventilated.

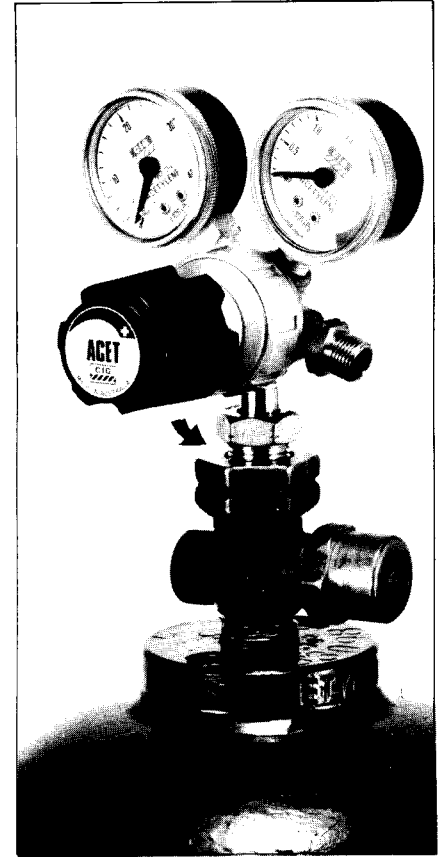
4. Regulators - fitting to cylinders.

Screw the regulator into the appropriate cylinder. The OXYGEN regulator (colour-coded black) to the black cylinder. The ACETYLENE regulator (colour-coded maroon) to the maroon cylinder. All acetylene fittings have left hand (LH) threads and can be recognised by grooves in the connections fittings. The nuts on the oxygen regulator are right hand (RH) threaded and need to be turned in a clockwise direction in order to tighten (Fig. 3). The nuts on the acetylene regulator are left hand (LH) threaded and need to be turned in an anti-clockwise direction in order to tighten (Fig. 4).

N.B. Tighten both regulators' inlet spigot nuts with a spanner, ensuring the pressure adjusting knob is facing the front.



(Fig. 3)

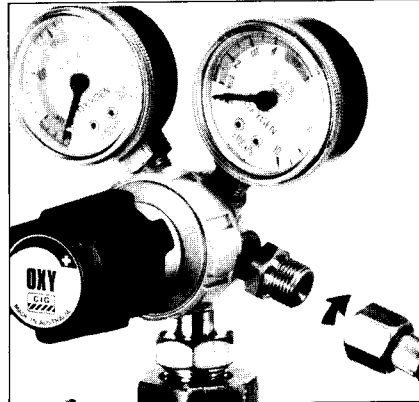


(Fig. 4)

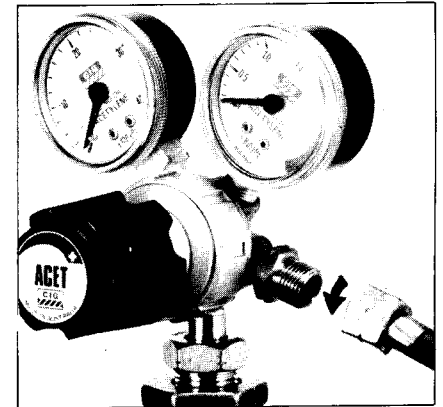
5. Hose

N.B Blow out new hose before connecting to the welding and cutting equipment - to remove dust, talc, etc.

Connect hose assembly to regulators. Black hose to oxygen (Fig. 5). Red hose to acetylene (Fig. 6) Tighten with a spanner.



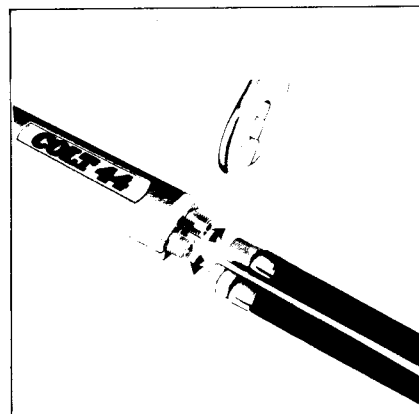
(Fig. 5)



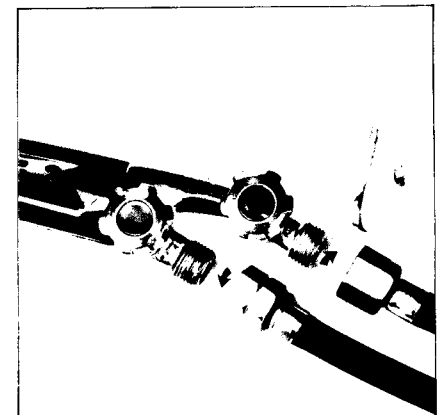
(Fig. 6)

6. Blowpipe

Connect blowpipe to hose assembly. Black hose to right hand (RH) blowpipe inlet connector. Red hose to left hand (LH) blowpipe inlet connector. Tighten with a spanner. (Fig. 7) (Fig. 8).



(Fig. 7)

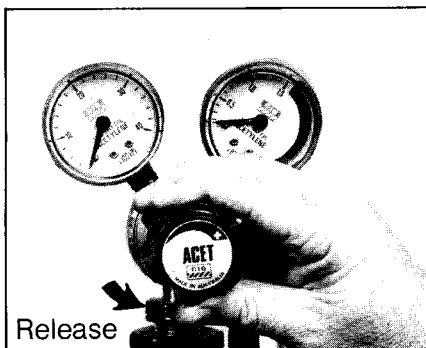


(Fig. 8)

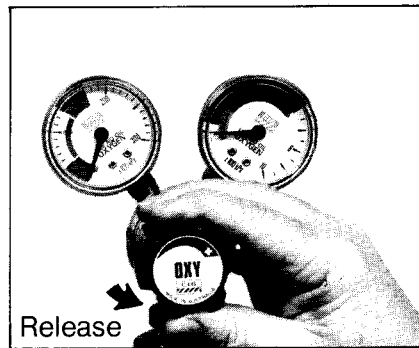


Regulator Operating Procedure

1. Release the regulator adjusting knob (Fig. 9) acetylene, (Fig. 10) oxygen, before opening the cylinder valves.

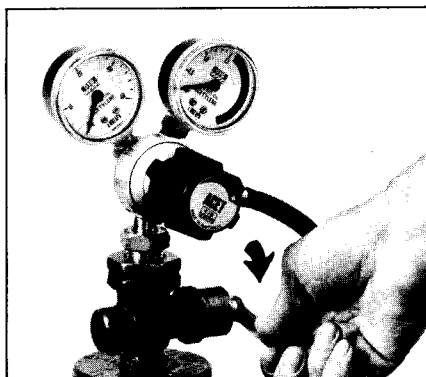


(Fig. 9)

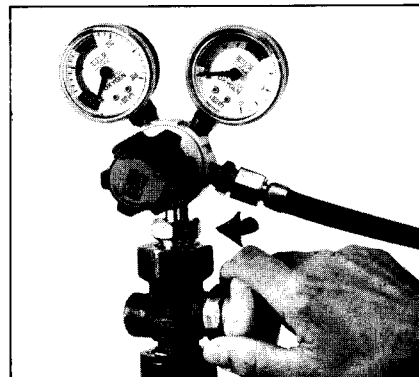


(Fig. 10)

2. Open both cylinder valves slowly with the cylinder key, acetylene (Fig. 11) and hand wheel, oxygen (Fig. 12). If this is done suddenly, it is possible to damage regulator.



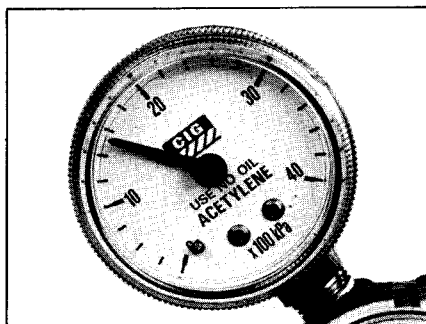
(Fig. 11)



(Fig. 12)

Cylinder Content Gauge (Acetylene)

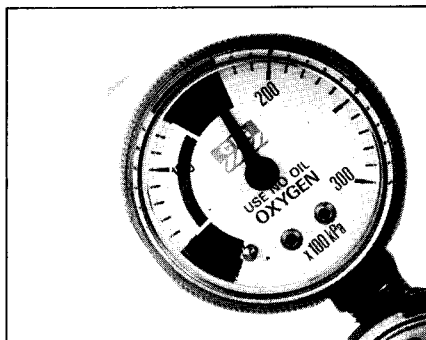
The position of the needle will vary with contents of cylinder (Fig. 13). If usage rate is high, needle will drop to lower end of calibration scale, repositioning after settling period to indicate correct contents.



(Fig. 13)

4. Cylinder Content Gauge (Oxygen)

The position of the pointer will vary with contents of cylinder. Full Green Zone indicates full cylinder - pointer position in this zone will vary with ambient temperature, in cold climates to left, hot climates to right. Red Zone - pointer position in this zone, cylinder is approaching empty.



(Fig. 14)



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Release

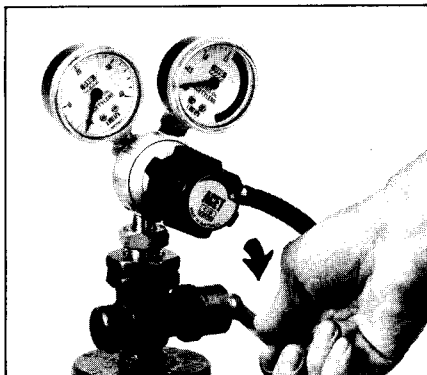
(Fig. 9)



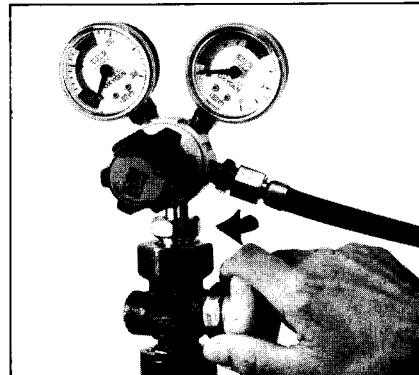
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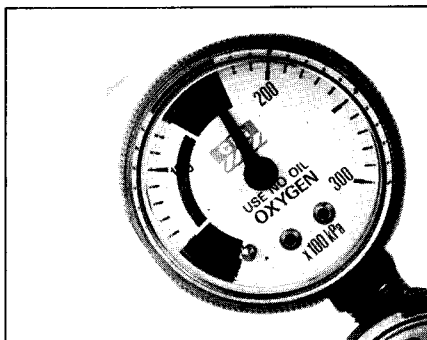
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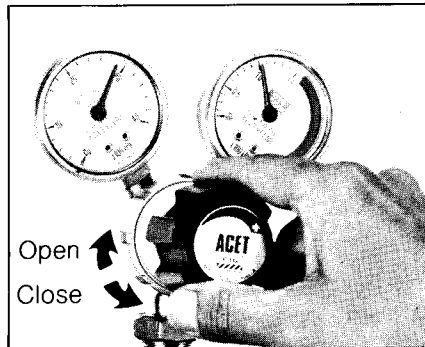


(Fig. 14)

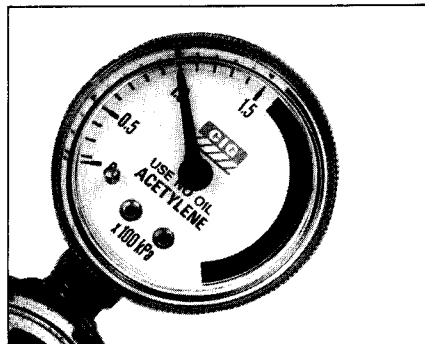
5. Adjusting Regulator (Acetylene).

Adjust control knob of regulator (Fig. 15) to the required welding, heating or cutting pressure indicated on gauge dial (Fig. 16). (Refer data charts).

A slight re-adjustment to the setting may be required when equipment is in operation.



(Fig. 15)



(Fig. 16)

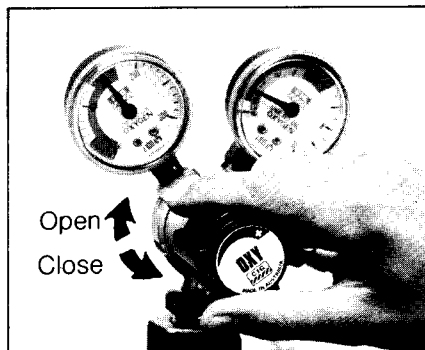
6. Adjusting Regulator (Oxygen)

Adjust control knob of regulator (Fig. 17) indicated on gauge dial (Fig. 18) to the required pressure. **Welding, Yellow Zone.** With the pointer positioned midway, welding, brazing and light heating can be performed.

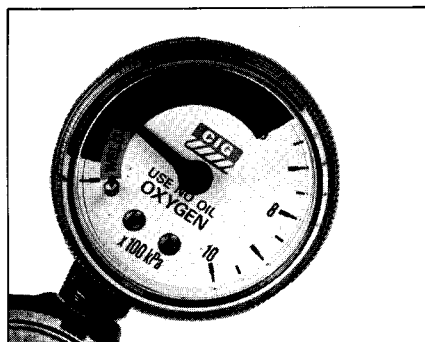
Cutting, Orange Zone. Position the pointer at lower end of zone for thinner steel, to high end of zone for thicker steel.

Heating, Red Zone. When using large heating tips, position the pointer in the upper wide red zone.

Slight adjustments to settings may be required when equipment is in operation.



(Fig. 17)



(Fig. 18)



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Oxy Cutting

Safe Operating Procedure:

- flash Back Arresters are to be in place on all gas cylinders
- gas cylinders, when in use, are to be placed in a suitable trolley for safety, security and ease of transport
- acetylene and butane is only to be used in an up right position
- all equipment is to be regularly checked for defects or damage
- gas cylinders are to be kept in a secure, cool location and away from sources of heat and the direct rays of the sun
- eye protection must be worn to prevent injuries from radiation and burns when oxy-acetylene cutting
- fire resistant gauntlet gloves, leather aprons and fire resistant leggings and spats
- appropriate fire extinguishers or hose reels is to be available within 6 metres of the hotworks
- to prevent fire hazards, the area around the oxy cutting is to be free of readily combustible material