A. BEFORE CONNECTING:
Select the regulator for proper gas service and pressures.

CYLINDERS:
Cylinders must be secured UPRIGHT. They must have ADEQUATE GAS SUPPLY TO AVOID DANGEROUS EMPTINESS CYLINDER CONDITIONS WHICH CAN RESULT IN REVERSE GAS FLOW. Always provide SAFE STORAGE - the valves must be closed when not in use or empty cylinders need to be stored in an upright position if immediate use will be required. Otherwise, 24 hours in an upright (valve up) position is recommended before use. NOTE: Most cylinders should be used in the upright position. If there are any questions, see the cylinder manufacturer’s or equipment manufacturer’s recommendations. Cylinder outlet valves shall be inspected for cleanliness and damage before connecting to the regulator inlet. IF DAMAGED OR DIRTY, DO NOT USE; contact your gas supplier for instructions.

OSHA 29 CFR 1910.252: Sec. 11 - Regulator: “Before connecting a regulator to a cylinder valve, the valve shall be opened slightly and closed immediately. The valve shall be opened while standing to one side of the outlet; never in front of it. Never crack the fuel-gas cylinder valve near other welding work or near sparks, flame, or other possible sources of ignition.”

WARNING: Keep cylinders clear of flames, electric arcs and other dangerous situations.

DANGER: DO NOT store cylinders and equipment in unventilated confined spaces, closed vehicles or trucks, rooms used for habitation or near any source of heat or ignition. Gas leaks can cause a fire or explosion when ignited.

B. TO CONNECT:

REGULATORS:
Regulators must be CLEAN and OIL FREE. The regulator inlet connections must be WRENCH-TIGHT and have NO LEAKS. The regulator must be turned OFF before opening the cylinder valve and CLOSED after the work is completed to avoid any leaks from the cylinder. Always OPEN the cylinder valve SLOWLY. (Read separate regulator instructions before use.) All connections to the regulator must be leak tested and free from leaks before use.

WARNING: Never stand in FRONT of or in BACK of the regulator when opening or closing the cylinder valve. Always stand to the side with the cylinder valve between you and the regulator. The oxygen cylinder valve should be OPENED VERY SLOWLY until the cylinder contents gauge stops moving and then opened sufficiently to provide adequate flow. The fuel gas/acylene cylinder valve should be opened a maximum of 3/4 of a turn. Where a special wrench is required, it should be left in the position if the work while the valve is in use so that the fuel gas/acylene flow can be quickly turned off in case of an emergency.

ADJUST TO THE REGULATOR, turn the PRESSURE ADJUSTING SCREW COUNTERCLOCKWISE (to the left) to INCREASE the pressure and COUNTERCLOCKWISE (to the left) to DECREASE the pressure and turn OFF the regulator.

1. Attach the inlet connection nut to the cylinder valve - make sure the threads engage properly - to prevent leaks, tighten securely with a wrench, but do not use excessive force - it can damage the nut and the valve threads. NOTE: (UNIWELD CO2 inlet connections use an O-Ring washer).

2. Turn the pressure adjusting screw counterclockwise (to the left) until tension is fully released to shut off the regulator. NOTE: The regulator should always be shut off when not in use - this helps avoid gas loss if the cylinder or equipment valves leak or are not shut off properly.

WARNING: DO NOT try to exceed the maximum pressure psi rating of the regulator or the gauges. The gauge may shatter and cause injury over 15 psi. Turn the regulator adjusting screw clockwise (to the right) for proper delivery pressure. 

EXAMPLE: 125 psi rated delivery pressure regulator uses a 200 psi gauge and a 4000 psi gauge for 3000 maximum inlet rating at 125 °F. This provides a safety factor for the pressure gauge.

HOSES:
Before use, examine the hose for damage such as cuts, nicks, abrasions, pinholes, etc. Always connect the hose WRENCH-TIGHT to the regulator outlet (if regulator check valves/flashback arresters are used, connect the hose WRENCH-TIGHT to the regulator outlet checking the valves). Make sure that the OXYGEN Hoses are not a HAND threaded fittings) is always connected to the OXYGEN REGULATOR. The FUEL GAS/ACYYLENE REGULATED should have a RED HOSE and the outlet fittings must be matched with the LEAD hose connections. Trench check hoses/flashback arresters, if used, are installed WRENCH-TIGHT between the welding torch and hose. Check used hoses for damage or cracks, especially shedding areas near hose connections and leak test before using. Repair or replace any doubtful hose.

NOTE: Blow out new or used hose with 5 psi from regulators BEFORE connecting to the downstream service (vent gases safely). Check connections for leaks using an proper leak testing solution.

WARNING: AT NO TIME during use should the operating pressure exceed the manufacturer’s recommended PRESSURE settings or the working pressure of the hose.

PRESSURE RELIEF DEVICE:

WARNINGs: The regulator pressure relief device is designed to protect the regulator outlet pressure gauge - NOT DOWNSTREAM SYSTEMS. All systems must have a proper capacity pressure relief device or other suitable means of excess pressure protection. This regulation is for the regulator when pressurizing a welding or cutting container or any system which requires excess pressure protection to avoid personal injury and equipment damage.

REGULATOR PLASTIC OR RUBBER PARTS:

DANGER: Regulator plastic parts such as gauge lenses, flowmeter tubes or rubber parts like diaphragms, O-rings, and high pressure seats should avoid contact with solvents. Solvents can damage these parts.

CAUTION: FLOWGAUGE: Flowgage regulators must have the same outlet orifice size as printed on the gauge dial.

C. TO CHECK FOR LEAKS:

WARNING: DO NOT USE THE EQUIPMENT UNTIL ALL CONNECTIONS AND EQUIPMENT ARE LEAK FREE, ESPECIALLY IF SOMEONE ELSE HAS USED THE EQUIPMENT. Properly pressurize the system. To check for leaks, close the cylinder valve and turn the pressure adjusting screw turn counterclockwise (to the left). If the high pressure gauge reading drops, there can be a leak in the cylinder valve or the regulator. If the low pressure gauge drops, check to see if there is a leak in the equipment. If no leak is found with the high pressure gauges, inspect the system for leaks using a soap solution. If the low pressure gauge rises, there is a leak in the regulator (see Figure 1 below).

CAUTION: Flowmeter: Uniweld flowmeter regulators must be preset to 50 psi to operate properly. All flowmeters must have a properly set pressure reducing regulator between the cylinder and flowmeter.

NOTE: Per OSHA standards (29 CFR 1910.252), only properly instructed skilled personnel shall perform repairs on regulators.

D. TO TURN ON:

Turn on the cylinder valve properly. Adjust the regulator to meet the specifications of the downstream equipment used. Turn pressure adjusting screw clockwise to increase pressure and turn pressure adjusting screw counterclockwise to reduce pressure and shut off. Do not exceed manufacturer’s recommended pressure settings. The user is responsible for results or damages incurred from the use of such information in whole or in part.

WARNING: To avoid and prevent injuries, death, property damage and destruction, the user must always be fully alert and alert to hazardous conditions that causer eatures. Medications that cause drowsiness should not be used when using this equipment.

WARNING: The user must at all times practice reasonable and common sense operating procedures and precautions when using gas torch equipment.

NOTE: Per OSHA standards (29 CFR 1910.252), only properly instructed skilled personnel shall perform repairs on regulators.

D. TO TURN OFF:

After work is completed, the downstream equipment should be turned off, the cylinder valve(s) should be closed; the downstream equipment should be safely vented. Then the regulator and pressure adjusting screw should be turned counterclockwise (to the left) until all spring pressure is relieved. Close all downstream valves and secure the equipment. Now shutdown is complete.

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IF YOU HAVE QUESTIONS REGARDING THE SAFE AND PROPER OPERATION OF THIS EQUIPMENT, PLEASE CONTACT OUR TECHNICAL SERVICE CENTER 1.800.323.2111

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