

# MAFES Dawg Tracks



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Safety Tips: Gas Welding Safety



All of our farms have welding and cutting equipment. For the benefit of new employees and refreshers for old employees, welding safety is a subject that needs to be discussed.

It is, like other facts of the agriculture industry, dangerous. Acetylene is the most commonly used fuel gas. It is very flammable and hazardous and can ignite at a wide range of concentrations. Oxygen won't burn or explode, but it helps other materials to burn faster. Gases are stored in compressed cylinders. A cylinder containing compressed gas can shoot through the air like a rocket if its valve is damaged or broken. Following are some safety tips that can help you when using welders and cutting torches:

## STORAGE & HANDLING:

- Keep cylinders in locations where they aren't exposed to the possibility of physical damage, heat, or tampering.
- Cylinders, full and empty, should be securely chained to prevent falling.
- Store away from flammable and combustible materials.
- Keep the extra gas and oxygen cylinders stored separately.
- Store all cylinders in the upright position and close valves before moving.
- Keep the protective caps and regulators in place.
- Roll cylinders by the bottom edge and don't drag them.
- Try to allow a minimum of movement when transporting.

## GENERAL GAS WELDING SAFETY TIPS:

- Inspect equipment for leaks at all connections. Use an approved leak-test solution.
- Inspect hoses for leaks and worn places. Replace bad hoses.
- Protect the hoses and cylinders from sparks, flames, and hot metal.
- Use a flint lighter to ignite the flame.
- Stand to the side (away from the regulators) when opening the cylinder valves.
- Open cylinder valves very slowly to keep sudden high pressures from exploding the regulators.
- Only open the acetylene cylinder valve  $\frac{1}{4}$  -  $\frac{3}{4}$  turn; leave the wrench in place so that the cylinder can be quickly closed in an emergency.

- Open and light acetylene, then open and adjust oxygen to a neutral flame.
- When you finish a job, close the acetylene torch valve first. A "pop" might occur as the oxygen "blows out" the flame, but this eliminates the possibility of the flame burning up the acetylene line.
- Also, after the job is finished, close cylinder valves, bleed the lines to take pressure off the regulators, coil up the hoses neatly, and replace the equipment to its location.
- Keep a fire extinguisher easily accessible close to the welding site.

## PERSONAL PROTECTIVE EQUIPMENT:

- Infrared radiation will cause retinal burning and cataracts, so protect your eyes with safety glasses.
- Protect your body from welding spatter and arc flash with protective clothing such as:

Woolen clothing  
Gloves

Flameproof apron  
Proper fitting clothing with no frays or tears.

Long-sleeve shirt

Straight legged pants that cover the shoe tops

For overhead work, you need a shoulder covering like a cape or shoulder covers.

Check your protective clothing before each job to be sure that they are in good condition.

Keep clothes free of grease and oil.

## PROPER VENTILATION:

Always be sure that you are working in a good ventilated area. Avoid confine areas or areas where there are barriers that restrict air movement. Natural drafts, fans, and positioning your head can help keep the fumes away from your face.

### **Ventilation is sufficient if:**

- The welding area contains at least 10,000 cubic feet for each welder.
- The ceiling height is no less than 16 feet.
- Cross ventilation isn't blocked by barriers, equipment, or partitions.
- Welding is not done in a confined space.

**K.I.S.S.  
Keep it Safe and  
Sound !**