

Date Created: November 8, 2016	Created By: Rina Giancola	Approved by: Management	Document #: 10986	Revision #: 03	Training #: 5516	Last Reviewed/ Revised Date: December 12/16	Revised By: R. Giancola	Page Number: 1 of 6
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## Operating the Acetylene and Oxygen Torch

<b>Potential Injuries and Hazards</b> <small>(Check the box to those that apply)</small>	
<input type="checkbox"/>	Pinch Points
<input type="checkbox"/>	Cuts/Lacerations
<input type="checkbox"/>	Sharp points
<input checked="" type="checkbox"/>	Burns
<input type="checkbox"/>	Eye Injury
<input type="checkbox"/>	Crush Hazards
<input type="checkbox"/>	Amputation
<input checked="" type="checkbox"/>	Slip, Trip or Falls
<input type="checkbox"/>	Head Injury/Concussion
<input checked="" type="checkbox"/>	Fire or Explosion
<input type="checkbox"/>	Sharp Edges
<input checked="" type="checkbox"/>	Fatality
<input type="checkbox"/>	Other:
<input type="checkbox"/>	MSI*

\*MSI (Musculoskeletal Injuries) This task may expose workers to musculoskeletal injury risks. Signs and symptoms include pain, burning, numbness, tingling, swelling, loss of movement or strength in a body part. Report these symptoms to your supervisor immediately.



Personal Protective Equipment (PPE) required <small>(Check the box for required PPE)</small>										
Safety Glasses	CSA & Omega Safety Boots	Hearing Protection	Face Shield	Disposable Dust Mask	Cut Resistant Gloves	Disposable Nitrile Gloves	Welding Gloves	Electrical Gloves	Hard Hat	Fall Protection
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Inspect your PPE before use. Report any damage to your supervisor immediately. Take care of your PPE clean, maintain and store it properly.

Additional Training/Reference Material:
<p><b>CONVIRON Policies:</b></p> <ul style="list-style-type: none"> <li>Safe Work Practice and Procedure Policy #10588</li> <li>Personal Protective Equipment Policy #10542</li> <li>General Work Place Policy #10195</li> <li>Safety Policy #10107</li> <li>Hot Work Control Policy #10201</li> </ul>

# Daily Inspection

**1. Examine the hoses**– Hoses are a key delivery component as they connect the regulator to the torch. Hoses are generally color coded (acetylene is red and oxygen is green). Examine the hoses for holes or cracks. Ensure that hoses are not twisted too tight while being stored to avoid the development of cracks. Ensure there is no oil or grease on any part of the hose or valve connectors. If there is, clean it with a soap and water solution.

Hoses should be securely fastened to the torch head using brass sockets. Poorly maintained hoses are the most common source of gas leak and pose a great risk to the welding operation.



On the Torch it is labeled "O" for Oxygen

2. Ensure the hoses are connected right.



Green Hose is the Oxygen to the Torch

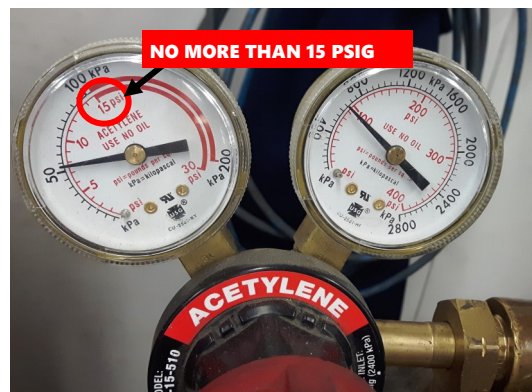
Red Hose is Fuel Gas (Acetylene) to the Torch

On the Torch it is labeled "F" for Fuel

**3. Inspect the Torch tip and other attachments** – Oxygen & acetylene are mixed in mixing chamber of torches & are ignited at the tip to generate the high temperatures required for cutting or welding. Torches and cutting tips need to be free from dirt and debris to ensure clean & optimal burning of the fuel (acetylene). You can use a fine, round metal file to clean the tips and torch head.



**4. Check the regulators** – Regulators have measurement gauges to measure the pressure of the underlying gases. Ensure that the gauges are marked clearly and are easy to read. Always remember to use acetylene **under 15 psig of pressure**.





# Cylinders

Ensure the Cylinders are chained down to the dolly.

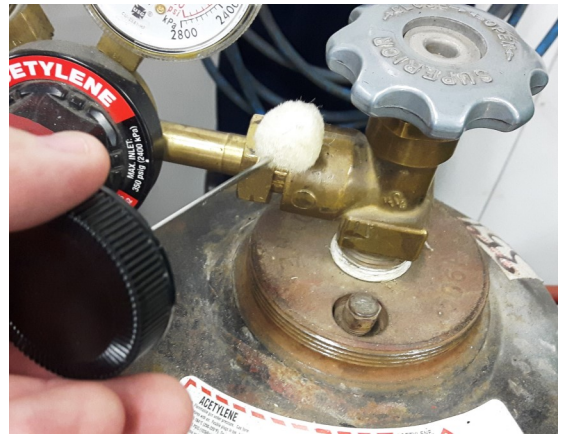
Ensure there is no damage, corrosion, leaks or cracks to the Cylinders. Alert your supervisor immediately.

Ensure they are not in the way of forklift travel paths.



## If you suspect a Leak

- Swab all connections.



Open the tank valve (to the left) If your torch is leaking you will know right away because even if you can't hear anything, you will see bubbles develop. If you detect a leak, bring damaged equipment immediately to your supervisor.



**Bubbles  
indicate  
gas is  
leaking  
out!**







First - before you attempt to light the torch follow these checks:

- Make sure regulator pressure adjustment screws are backed out!
- Make sure torch valves are closed!

## Prepare the Oxygen Valve and Pressure

1. Turn the Cylinder Valve to the left to release the oxygen. .



2. Adjust the working pressure no more than to 20psi.



## Prepare the Acetylene and Pressure

1. Turn the Acetylene Valve to the left. The Valve should never be more than 1 1/2 turns; 3/4 of a turn is preferable.



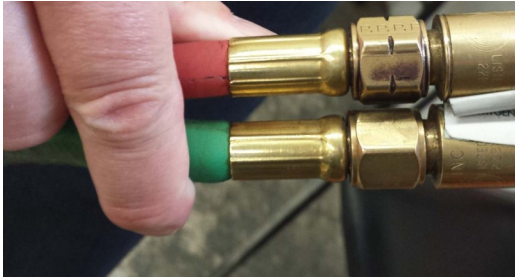
2. Adjust the Acetylene Regulator. Ensure the pressure is no more than 15psi.



## Igniting the Torch

1. Ensure the hoses are connected right.

- **Red** Hose to the **Acetylene**
- **Green** Hose to the **Oxygen**



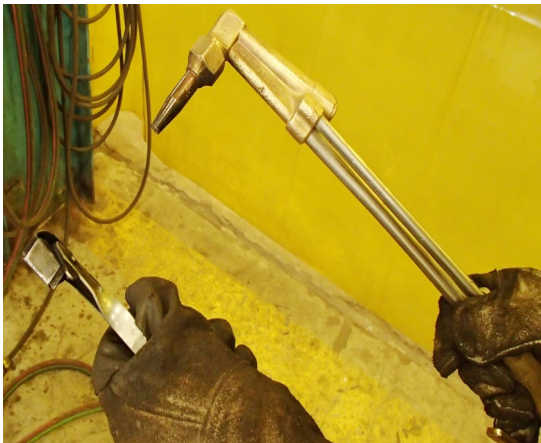
2. Open the Acetylene first by cranking the valve slightly.



### **CAUTION!! Sever Burns to your hands!**

- Ensure there is no oil, grease on your clothes or gloves.
- Ensure there are no matches or lighters in your pockets
- Ensure the striker has no oil or grease in it.

3. Hold the Striker in front of the torch approximately 10 inches away from the Torch Tip. Then squeeze the handle on the Striker. The sparks then will ignite the fuel.



4. Adjust the Oxygen valve to the desired flame



Main cylinder valve should be closed as soon as it is no longer necessary that it be open, it should never be left open when the equipment is unattended or not operating.