Setup and Shutdown Procedure for Oxy-fuel Cutting Torch

A handout containing the highlights of the video titled *Setup and Shutdown Procedure for Oxy-fuel Welding.*

Setting up the Oxy-fuel cutting torch

1. Make sure torch valves are closed.

CAPTION 1. THE INSTRUCTOR TURNS THE VALVES ON CUTTING TORCH OFF.

2. Turn the adjusting screws on each tank out.

CAPTION 2. THE INSTRUCTOR TURNS THE ADJUSTING SCREW FOR THE OXYGEN TANK OUT. DO THE SAME FOR THE ACETYLENE TANK.

3. Gently turn the valve for the oxygen tank. Once there is pressure in the regulator, you can open it the whole way. Turn the adjusting screw in until the pressure line falls on or close to the pressure you need to use for the torch you are using. The particular torch used in the video runs at 40 psi on the oxygen side. If you are not sure, check the documentation of the equipment you are using.

CAPTION 3. THE INSTRUCTOR SLOWLY TURNS THE OXYGEN VALVE.

4. Check to make sure oxygen is supplied to the cutting attachment and to make sure the oxygen is still at the acceptable level. After checking, close the cutting attachment again.

CAPTION 4. THE INSTRUCTOR CHECKS IF OXYGEN IS BEING SUPPLIED TO THE TORCH. NOTICE THAT THE PRESSURE GAUGE NEEDLE HAS MOVED.

5. On the acetylene tank, slowly open the valve. Once there is pressure, do a 1 ½ turn on the valve.

CAPTION 5. THE INSTRUCTOR TURNS THE VALVE FOR THE ACETYLENE TANK.

6. Adjust the pressure valve to needed pressure. In the video, 5 psi is needed for the torch. If you are not sure, check the documentation of the equipment you are using.

CAPTION 6. THE ADJUSTMENT SCREW ON THE ACETYLENE VALVE IS BEING SET TO 5 PSI.

7. Check to make sure acetylene is supplied to the cutting attachment, and to make sure the acetylene is still at the acetylene level. When checking the acetylene, it is best to do it quick so that you are not letting the extra gas out and causing a fire explosion hazard. After checking, close the cutting attachment again.

CAPTION 7. THE INSTRUCTOR CHECKS IF ACETYLENE IS BEING SUPPLIED TO THE TORCH.

Lighting the Oxy-fuel torch

1. Turn the acetylene knob on the cutting torch about a quarter of a turn and light the acetylene. Make sure that the flame is up against the tip. If you light up the tip and the flame is away from the tip, decrease the acetylene pressure and let the flame come back against the tip. (Use your safety equipment.)

CAPTION 8. THE TORCH IS TURNED ON, AND THE ACETYLENE IS LIT UP.

2. Add in the oxygen and adjust it. When you're adjusting it, you're bringing the acetylene feather in the middle comes right up to the inner cone. Hold down the oxygen, and readjust for neutral. You are now ready to cut.

CAPTION 9. OXYGEN IS ADDED TO THE TORCH.

Turning off the Oxy-fuel torch

1. Turn off the valve on the cutting torch for the oxygen first, then the acetylene.

CAPTION 10. THE VALVES ON THE TORCH ARE TURNED OFF.

2. Turn the valves on the tanks to close them.

CAPTION 11. THE INSTRUCTOR TURNS THE OXYGEN VALVE OFF.

3. Bleed all the pressure, one tank at a time. Watch as the needles on the gauges drop to zero. In the video, the instructor starts with the acetylene tank. Close the torch and turn your adjusting screw out.

CAPTION 12. THE INSTRUCTOR BLEEDS THE ACETYLENE PRESSURE FIRST. NOTICE THAT THE NEEDLE ON THE PRESSURE GAUGE HAS DROPPED.

4. Bleed the remaining oxygen pressure. Watch as the needles on the gauges of the oxygen tank drop to zero. Turn your adjusting screw out, and turn off the torch.

CAPTION 13. THE INSTRUCTOR TURNS THE OXYGEN PRESSURE DOWN WITH THE ADJUSTMENT SCREW.

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The Oxy-fuel Welding iTunes U course has videos and other learning materials for you to view. You can download iTunes for free to view the course and course materials. Closed-captioned videos are available at T4E's YouTube page.

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