

Template: adapt to your own procedure and risk assessment

Oxy-fuel cutting set-up and shutdown

When: before cutting with portable oxy-acetylene or oxy-propane equipment. Builds on the five-step oxy cutter check that was the first Subtilitas guide.

BEFORE YOU START

A hot work permit if your site requires one. Flame-resistant clothing with long sleeves, gauntlets, safety boots, and goggles or a visor with the filter shade your risk assessment specifies. A fire extinguisher at hand and a fire watcher if the permit requires one.

STEPS

- 1 ☐ **Check the work area.** Remove or cover combustible material, check what is on the other side of walls, decks and bulkheads, and screen the area to protect others.
- 2 ☐ **Check the cylinders.** Upright, secured against falling, away from heat, with valves and threads free of oil and grease.
- 3 ☐ **Check the regulators.** The right regulator for each gas, undamaged, gauges readable and within the replacement date for your equipment.
- 4 ☐ **Check the safety devices.** Flashback arrestors fitted at the regulator outlets and non-return valves at the torch.
- 5 ☐ **Check the hoses.** The right colour for each gas (blue for oxygen, red for acetylene, orange for propane), no cracks, cuts, burns or tape repairs, and crimped fittings.
- 6 ☐ **Open the cylinder valves slowly.** If the acetylene cylinder uses a key, leave it on the valve so the cylinder can be closed quickly in an emergency.
- 7 ☐ **Set the working pressures** for the nozzle size, using the manufacturer's chart.
- 8 ☐ **Purge each hose separately** in a well-ventilated place away from any flame: oxygen first, then fuel gas.
- 9 ☐ **Leak test** every connection with an approved leak detection solution. Never use a flame.
- 10 ☐ **Light the torch** with a spark lighter, following the manufacturer's lighting sequence, and adjust to the flame you need.
- 11 ☐ **Cut.** Keep hoses away from the cut, sparks and slag, and out of walkways.
- 12 ☐ **Shut down** in the order the manufacturer specifies, close both cylinder valves, vent the hoses and release the regulator adjusting screws.

13



Fire watch. Check the area, including the far side of the work, for smouldering material, and keep watching for the time set in your permit.

Stop and report if you smell gas, a hose or fitting is damaged, a flashback arrestor has operated, or the flame snaps back or goes out.

TOOLBOX TALK

- What would you do if a hose or cylinder valve caught fire?
- Why must oxygen never be used to blow dust off clothing or to freshen the air?
- How long is the fire watch on this job, and who is doing it?

Further reading: BCGA Code of Practice CP7, The safe use of oxy-fuel gas equipment.

ADAPTED AND APPROVED FOR THIS SITE	
Site and equipment	Procedure or RAMS reference
Approved by (competent person)	Date and review date