

WTIA Guidance Note 8: Recommended Oxy-Fuel Gas Daily Inspection and Pre-Start Check List

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ITEM	DESCRIPTION OF INSPECTIONS TO BE CARRIED OUT	STANDARD
Gas Cylinders	Check cylinders are secured against falling over and in an upright position before making any connections. Check cylinder labeling. Check there is no mechanical damage. Check condition of the seat and ensure it is clean and dry. USE NO OIL!	AS 2030
Cylinder Valve	Inspect the valve for damage. If the valve appears to be damaged DO NOT OPEN . You may not be able to close it again. Do not crack cylinder valve – uncontrolled discharge of gas can be hazardous. Remove dust protection cap manually. Clean seat with a clean dry cloth prior to fitting gauges.	AS 2473
Regulators	Check type, rating and condition. When fitting regulators to cylinders ensure they are not contaminated with oil or grease. Face the front of the gauges and ensure the rears of the gauges are directed away from others when opening the cylinder valve.	AS 4267
Flash Back Arrestors	FBA's should be fitted at both the regulator and blowpipe ends of hoses and be suitable for the gas flow requirements. Check current inspection tag or sticker.	AS 4603
Hoses	Check correct type hoses are fitted. Oxygen – BLUE . Acetylene – RED . LPG – ORANGE . Check hoses for damage particularly at junctions to fittings where mechanical fatigue damage occurs. Maximum length of standard hoses is 15 metres. Use larger diameter hoses for increased length or high draw rate attachments e.g. heating torches. Refer to and follow recommendations of equipment manufacturers.	AS1335 AS/NZS 1869 AS 4839
Blowpipe	Ensure the blowpipe is in good condition, the body is true, valves open and close fully, threads and seats are in good condition.	AS 4839
Tip	Check the tip condition, seats are in good condition, face is flat and clean, holes are open and free of contamination, tip is the right size and type for the job in hand. Set regulator pressures to suit tip and plate thickness. Ensure the required flow rate of acetylene tips is within the safe draw rate of the acetylene cylinder/s (1/7 th /hr)	AS 4839
Purging and Pressurising	<ul style="list-style-type: none"> • Ensure blowpipe valves are closed and regulator pressure adjusting knobs are wound all the way out (anti-clockwise). • Slowly open cylinder valves (one full turn only on fuel gas). • Wind regulator adjusting knobs in until required line pressure is indicated. • Individually open the blowpipe valves and allow gas to run through the line, readjust pressure to achieve correct pressure when gas is flowing, and then close the blowpipe valve before opening the other one. 	AS 4839
Pressure Test	<ul style="list-style-type: none"> • With the system purged and pressurised and blowpipe valves closed, close the cylinder valves. • Observe the regulator valves for one minute. Note any anti-clockwise movement of the cylinder pressure or regulated pressure gauges. • Open the cylinder valves. Note any clockwise movement of the cylinder pressure or regulated pressure gauges. • A change in the cylinder pressure gauge or regulated pressure gauge indicates a leak. • Find and eliminate all leaks. Use appropriate leak detection fluid. 	AS 4839
Lighting up	<ul style="list-style-type: none"> • Use approved lighting flint (not matches or cigarette lighter) • Light fuel gas with medium flow. If the flame is burning off the tip, reduce the fuel gas flow until the flame is coming off the tip. • Open oxy feed blowpipe valve to achieve the required flame 	AS 4839
Shutting down	<ul style="list-style-type: none"> • Shut down fuel feed blowpipe valve. • Shut down oxy feed blowpipe valve. • Close cylinder valves and depressurise the hoses and blowpipe. • Wind regulator adjusting knobs all the way out (anti-clockwise) 	AS 4839
Storage	<ul style="list-style-type: none"> • Store in approved storage areas only. • Keep different gas types separated and empty and full cylinders segregated. • Be aware of mandatory requirements for storing gas cylinders. 	AS 4289 AS 4332 AS 4839
Transport	<ul style="list-style-type: none"> • Transport in secure upright position. • Be aware of mandatory requirements for transporting gas cylinders. 	AS 4332 AS 4839
Inspection Tag	Check that a current inspection tag, traceable to your equipment maintenance register, is attached to the equipment.	

Notes

- If on completion of this pre-start checklist you are unsure of the safety of any part of this equipment - DO NOT USE. Isolate the equipment and notify your supervisor immediately, in order that remedial action can be taken.
- Fumes are generated by hot work. Take adequate precautions to limit exposure to fumes from welding consumables or surface coatings and contaminants.
- Oils, greases and other organic compounds may become highly flammable or explosive in the presence of pressurised oxygen. Ensure all fittings are clean and dry before assembly. Ensure there is no opportunity for contamination of parts.
- Ensure that you have all necessary Personal Protective Equipment in place, in good order and dry, before turning on the oxy-fuel gas equipment.



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