

TOOLBOX TALK: GAS CYLINDERS

Job or site _____

Date _____

Led by _____

Open with this

Look at the cylinders on this site. How many are standing up and chained? How many have caps on? Do not answer, just count, because that is the score.

The talk

Cylinders shall be secured in an upright position at all times, except if necessary for short periods while they are actually being hoisted or carried. At all times. That includes the one leaning against the wall of the container that somebody will stand up later.

The cap is not packaging. Valve protection caps shall be in place and secured, and regulators come off and caps go on before a cylinder is moved, unless it is firmly secured on a carrier made for the job. The cap exists because the valve is the weak point and the valve is what turns a cylinder into a missile.

And the cap is not a handle. Valve protection caps shall not be used for lifting cylinders from one vertical position to another. Nor are bars to be used under valves or caps to pry a frozen cylinder loose. Warm water, not boiling, is what the standard says to use.

Moving them: tilt and roll on the bottom edge. They shall not be intentionally dropped, struck or allowed to strike each other violently. If they are hoisted they go on a cradle, a slingboard or a pallet, never a magnet and never a choker sling. On a powered vehicle they are secured vertical.

Storage is the one that gets cited. Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible materials, especially oil or grease, by a minimum of 20 feet, or by a noncombustible barrier at least 5 feet high with a fire resistance rating of at least half an hour. Twenty feet or a real wall. Not the corner of the shed.

Inside a building they go in a well protected, well ventilated, dry place at least 20 feet from highly combustible material, away from elevators, stairs and gangways, where nothing can knock them over. And they shall not be kept in unventilated enclosures such as lockers and cupboards, which is exactly where a van box puts them.

In use: keep them far enough from the welding or cutting that sparks, hot slag or flame cannot reach them, or put a fire resistant shield up. Keep them out of any electrical circuit, and never strike an arc against a cylinder. Fuel gas cylinders stand valve end up. And no cylinder of oxygen, acetylene or any fuel gas goes into a confined space, ever.

Cracking a valve before fitting the regulator is a real procedure with a real position. Open it slightly and close it immediately, standing to one side of the outlet and not in front of it, and never where the gas could reach sparks or flame. Then open slowly, and on a fuel gas cylinder no more than one and a half turns so it can be shut fast.

When work is finished, when a cylinder is empty, or whenever a cylinder is moved, the valve is closed. Empty is not a state that makes a cylinder safe. It makes it lighter, which is worse.

Point at these before anybody starts

- Every cylinder on this site: upright, secured, cap on or regulator fitted.
- The distance between the oxygen and the fuel gas in storage. Pace it out.
- Any cylinder inside a van box, locker or cupboard with no ventilation.
- Any cylinder close enough to the cutting that slag could reach it.
- The wrench for the fuel gas valve, and whether it is on the stem where it belongs.
- Any cylinder being used as a roller, a prop or a support for something.

The rules that apply

- Compressed gas cylinders shall be secured in an upright position at all times except, if necessary, for short periods while actually being hoisted or carried.
- Valve protection caps shall be in place and secured, shall not be used for lifting, and regulators shall be removed with caps fitted before cylinders are moved unless firmly secured on a special carrier.
- Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible materials, especially oil or grease, by at least 20 feet or by a noncombustible barrier at least 5 feet high with a fire resistance rating of at least half an hour.
- Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards, and shall be stored at least 20 feet from highly combustible materials.
- Cylinders containing oxygen or acetylene or other fuel gas shall not be taken into confined spaces, and shall be placed where they cannot become part of an electrical circuit.
- When work is finished, when cylinders are empty, or when cylinders are moved at any time, the cylinder valve shall be closed. No damaged or defective cylinder shall be used.

Ask the crew

- How far apart do oxygen and fuel gas have to be in storage, and what else would do?
- What are the two things a valve cap must never be used for?
- Can a cylinder go into a confined space if the work is quick?

Close with this

Upright, capped, chained, twenty feet. Four things, and one of them is wrong on most sites right now.

Attendance

Everybody who was present signs, including subcontractors and anybody visiting the site.

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This talk is general safety information for a crew briefing, not legal advice and not a substitute for the training your employees are required to have. Standards are quoted for orientation only. Check the current text of the standard and your own state plan, which may be stricter than the federal rule.