



Oxygen Cleaning Mobile Trailer

“First in Quality”



Mec-Tric Control Company provides mobile valve repair and testing. We also have a mobile trailer for **Oxygen Cleaning** relief valves, regulators, control valves alongside other specialty valves. Please inquire on how we can offer solutions to your valve repair needs. Our mobile repair trailers are located in Charlotte, NC and Raleigh, NC.

Oxygen (O2) cleaning is a precision decontamination process for valves and fittings used in oxygen-enriched environments. Its primary purpose is to remove all traces of hydrocarbons (oils, greases), particulates, and organic matter that could act as fuel. In a high-pressure oxygen system, even microscopic residues can spontaneously ignite or cause explosions.

Mec-Tric Controls is privileged to have a National Board (NB) accredited Valve Repair and Valve Assembler Shop. This accreditation involves consistent calibration of our testing devices (Air, Steam, Liquid) as well as QC procedures relating to the verification of safety relief valve set pressure, blow down (pressure at where valve reseats/closes relative to set pressure) and valve integrity. As a National Board certified valve repair shop, Mec-Tric Controls adheres to all regulations and procedures instituted by ASME Section I and Section XIII, in addition to National Board Inspection Code (NBIC) guidelines relating to valve repair, Mec-Tric also provides on site tank vent inspections and repair and steam trap testing. Other repairs at our Charlotte and Raleigh locations include, Control Valves, Pinch Valves, Stop/Ceek Valves, Pressure Regulator valves, Gate Valves, Ball Valves as well as many other valve types.

Mec-Tric Control maintains two ASME Certificates of Authorization for the use of Code symbol stamps for new valve assemblies.

These authorizations are as an assembler of safety and safety-relief valves for:

- Code Section I, “V” Stamped Power Boiler Safety Valves (Assembled and Tested at our Charlotte, NC facility).
- Code Section XIII, “UV” Stamped Pressure Vessel Relief Valves

The National Board Certificate of Authorization for use of the VR repair symbol stamp is also maintained. The scope of this authorization includes:

- ASME Code Sections – I (tested and repaired at our Charlotte, NC facility with our steam boiler) and XIII valves.
- Shop and Field Repairs are also conducted on Section XIII “UV” valves (formerly section VIII valves).

Common Contaminants Removed in O2 Cleaning:

The process meticulously targets three main types of substances:

Organics & Hydrocarbons: Machine oils, greases, skin oils, and solvents. **Particulates:** Metal shavings, weld slag, dust, and lint. **Inorganic Residues:** Nitrates, phosphates, and water-based detergents.

Industry Standards

ASTM G93: Standard Practice for Cleaning Methods and Cleanliness Levels from ASTM International.



Mobile Trailer inside view



J-Tube valve testing device



Oxygen Cleaning Mobile Trailer

Equipment Included In Oxygen Cleaning Mobile Trailer:

- 316 SS J-Tube for Testing Air, Vapor, Liquid valves to pressures of 500 PSIG.
- Stainless Steel work benches and vise’s.
- Nitrogen Tanks for valve Pressure Testing.
- Valve Tagging Equipment.
- Electrical for the trailer can be operated with land power supplied by the customer (preferable) or a generator provided by Mec-Tric.
- Stainless Steel rinse sink (water supplied by customer via standard 3/4” hose spigot).
- We utilize a dark room area in the front of the trailer to inspect valves under UV (ultraviolet) black lights and bright white lights for O2 Cleaning. The UV light helps identify areas of the valve requiring further cleaning.
- Oxygen cleaning chemicals, sanitary gloves and sanitary wipes are also stocked on the trailer.



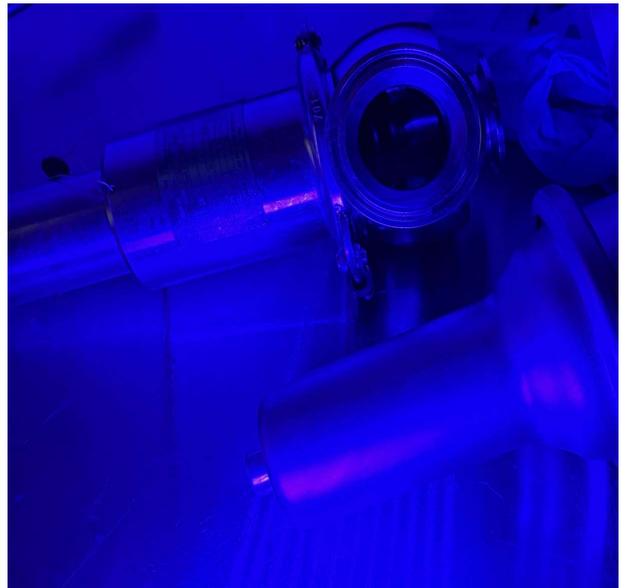
Inspection bench with UV black light and bright white light



Valve repair workbench



UV light inspection illustrating grease smear on sanitary safety valve



UV light re-inspection after sanitary safety valve cleaned