



No.	Areas of Operation	Recommended Actions
1	Customer interface	Establish a policy that customer cylinders must be checked prior to being filled, for condition and inspection status (including visual and hydrostatic inspections for valve and cylinder condition).
		Establish a policy regarding partially filled cylinders that may contain any gas mixture.
		Establish a policy regarding acceptance for filling or handling of cylinders containing oxygen or oxygen-enriched gas.
		Inspections prior to filling should include: <ul style="list-style-type: none"> <li>• Checking the date of the last hydrotest;</li> <li>• Checking the date of the last visual inspection;</li> <li>• Inspecting for any visible damage;</li> <li>• Hammer-testing steel cylinders (they should have a bell-like tone);</li> <li>• Verifying the cylinder code of construction, ensuring it is legal to fill it;</li> <li>• Verifying the rated fill pressure; and</li> <li>• Checking that the cylinder contains positive pressure prior to filling it.</li> </ul>
		Perform a gas-content analysis for any mixed gases.
		Maintain a log of customer complaints (e.g., reports of odors, taste, over-filling, and any other concerns).
		2
Retain the testing certificates.		
Display the current air/gas-quality testing certificate.		
Retain the gas-analysis certificates for vendor-supplied cylinders (e.g., oxygen, helium, nitrogen).		
Establish a policy for replacing filters and lubricants (including whether generic consumables and parts may be used instead of original equipment manufacturer [OEM] products).		
Establish a policy to change filters per manufacturers' specifications; a color-change indicator; a filter pressure-drop indicator; or air-quality testing.		
3	Cylinder handling	Establish instructions for cylinder handling, filling, and safe storage.
		Secure cylinders upright, in vertical cylinder banks.
		Log all cylinder fills, including the customer name, date, gas-content testing, etc., as applicable.
4	Compressor, booster, and filling areas	Establish daily start-up and shut-down checklists, including daily visual inspection of filling connections; whips; compressing equipment; and fuel, lubricant, and coolant levels.
		Schedule regular inspections that include checking performance, leak-checking piping, and function-testing control and safety components.
		Perform regular maintenance and servicing according to manufacturers' recommendations, based on running hours or time periods.
		Schedule visual and hydrostatic inspection of all storage cylinders.
		Establish a policy for service by a manufacturer-approved or other external service center and/or by in-house personnel.
		Log all service and repairs performed on compressors, boosters, and pressurized gas equipment.
		Retain all maintenance, service, and repair records.
		Clean external surfaces on compressors, boosters, and motors.
		Maintain oxygen cleanliness for oxygen or oxygen-enriched air compressors, booster pumps, piping, and all controls.
		Maintain oxygen cleaning records.

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	Compressor, booster, and filling areas (cont.)	<p>Ensure that compressor belt guards remain in place.</p> <p>Regularly assess the compressor intake location for contaminant risks (e.g., CO, CO<sub>2</sub>, odors, fumes, chemical vapors, smoke, car exhaust, cooking extraction exhaust, etc.).</p> <p>Regularly check that the gas-management area is well ventilated to prevent a buildup of heat.</p> <p>Regularly check that the gas-management area is clean and uncluttered (especially that there are no restrictions on ingress and egress).</p> <p>Regularly assess the compressing and filling areas for other risks (e.g., noise, unauthorized access, space, lighting, fire, etc.).</p> <p>Regularly inspect and test fire detectors, fire alarms, and fire extinguishing equipment and ensure that appropriate signs are in place.</p> <p>Ensure that signs about hazardous equipment, the operation of dangerous equipment, and restrictions on access are posted and easily visible.</p> <p>Establish a policy regarding appropriate, environmentally responsible disposal of compressor, gas-engine, and filter-system waste.</p>
5.	Personnel safety	<p>Establish a policy regarding unattended filling stations (e.g., require operators to remain at filling stations throughout the filling process).</p> <p>Establish clear training and competency requirements for all compressor and filling operations. Keep all training certificates on file.</p> <p>Comply with OSHA (or comparable) requirements for pressurized equipment.</p> <p>Ensure that compressor and filling station operators are covered by workers compensation.</p> <p>Screen operators' hearing status upon hiring and at periodic intervals, to detect any subsequent hearing loss.</p> <p>Check/screen operators for fitness to work (including daily checks if there is any evidence of substance abuse, etc.).</p> <p>Provide operators with PPE (ear-protectors, safety glasses, and hard-toed shoes), together with training in its use.</p> <p>Post appropriate signage regarding the use of PPE.</p> <p>Monitor operators' compliance with PPE requirements.</p>