

Did YOU KNOW

#2019-009

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Question: What general maintenance should be performed on a regulator and how often?

Answer:

A REGULATOR (OR CHANGEOVER MANIFOLD) CAN LAST SEVERAL YEARS IF PROPERLY MAINTAINED. REGULATOR MAINTENANCE IS AN IMPORTANT PART OF MAXIMIZING YOUR SYSTEM PERFORMANCE AND EXTENDING THE SERVICE LIFE OF YOUR SYSTEM COMPONENTS. A maintenance schedule is the frequency by which recommended maintenance operations should be performed. Adherence to this maintenance schedule will result in minimizing downtime due to regulator failure, as well as enhancing safety of one's work area. Regulator service defines the gas service in which the regulator is installed in terms of its corrosive nature. The three primary categories are noncorrosive, mildly corrosive, and corrosive.

RECOMMENDED SCHEDULE FOR REGULATORS AND CHANGEOVERS

NONCORROSIVE EQUIPMENT

Perform leak test and functional test at start-up and once per month for the first 1-2 years. Increase frequency of tests to 2x per month for equipment 2-5 years old. After 5 years, consider equipment refurbishment or replacement depending of conditions and frequency of use (per CGA E-15).

MILDLY CORROSIVE EQUIPMENT

Perform leak test and functional test at start-up and 2x per month for the first 12 months. Perform source gas or inert gas purge at every shutdown for the life of the equipment. This prevents moisture from forming corrosive compounds inside wetted areas.

CORROSIVE/REACTIVE EQUIPMENT

Perform inert gas purge at every start-up AND shutdown. This prevents moisture from forming corrosive compounds inside wetted areas and increases the life of the equipment. Perform leak and *functional tests at every startup to ensure excess pressures do not create a hazardous environment.

*Many corrosive/reactive regulators and changeovers will need to be housed in a properly designed gas cabinet. Contact Harris Technical Service if you have questions regarding these applications.

RECOMMENDED SCHEDULE FOR REGULATORS AND CHANGEOVERS

SERVICE	FUNCTION TEST	INERT PURGE	LEAK CHECK	OVERHAUL	REPLACEMENT
Noncorrosive	Prior to use	N/A	monthly	5 years	10 years
Mildly Corrosive	Prior to use	shutdown	1-2x/month	2 years	6-7 years
Corrosive	Prior to use	shutdown	2x/month	1-2 years	3-4 years

MAINTENANCE CHECKS

FUNCTION TEST

Check the regulator's function. Do this by confirming delivery pressure increases* when the adjusting knob is turned clockwise and decreases** when turned counter-clockwise.

*Increase test is best done under static conditions - gas not flowing - for best results.

**Decrease test must be used with the gas flowing. This test cannot be done under static conditions.

INERT PURGE

To increase regulator life perform an inert purge on regulators that are used with corrosive or reactive gases after each use.

LEAK TEST

Here we want to check for an internal (seat) leak in the regulator.

SUGGESTED METHOD:

Close regulator by adjusting counter-clockwise until stop is reached, or the adjusting knob/key is loose with no tension. Ensure there is a downstream valve which is closed so that no gas goes downstream of the regulator. Apply pressure to the inlet. Adjust regulator pressure to the rated delivery pressure. Let stand for 2-5 minutes, observing any increase in the delivery pressure. If delivery pressure is steady with no increase, the regulator valve is working properly. Harris Products Group manufactures our regulators in the USA and some have up to 7-year warranties. Keep your regulators regularly maintained.

Turn to the
 Pros

FOR MORE INFO ABOUT REGULATOR MAINTENANCE

Email our Customer Service group at
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or call - 1.800.733.4043.