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**HALOGUARD II CMOS REFRIGERANT MONITOR
AUTHORIZED FACTORY REPRESENTATIVE
START-UP/FINAL INSPECTION CHECKLIST**

PRIOR TO START-UP

INSTALLATION INSPECTION

1. Ensure that the monitor is securely mounted to the wall or support, approximately five feet off the floor using the four (4) mounting holes.

Findings and any Corrective action taken:

2. Ensure that the sensors are located near potential leaks in a quiet area or downstream from leak source in area with air movement and that there are no kinks in the sensor wiring. Ensure that sample pick-up tubes are located near potential leaks in a quiet area or downstream from leak source in area with air movement and that there are no kinks in the tubing.

Findings and any Corrective action taken:

3. Ensure that the sample tubes are located approximately 18" - 24" above the finished floor and that the area is not subject to flooding, potential impact or severe ambient temperature or humidity changes.

Findings and any Corrective action taken:

4. Ensure end-of-line filter assemblies are in place and that the white porous filter has not been painted over, damaged or clogged in any way.

Findings and any Corrective action taken:

CONNECTIONS INSPECTION

5. **Perform the following tests with power off.** Remove lower cover (2 screws). Visually inspect that the sensor cables have been wired correctly, Red to +V, White to SIG and Black to GND.

Findings and any Corrective action taken:

6. Inspect for loose wire strands that could cause the system to short. Gently blow out construction debris from instrument with compressed air if available. Check all screw terminals for tightness.

Findings and any Corrective action taken:

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CONNECTIONS INSPECTION (cont'd)

7. Verify that all external accessories (horns, strobes, etc.) have been connected to the unit properly.

Document devices and Alarm Relays connected to below.

Findings and any Corrective action taken:

8. Ensure that the sample-draw tubes are properly seated on their INLET barb fittings.

Findings and any Corrective action taken:

POWER UP THE UNIT. AFTER THE 20 MINUTE WARM-UP PERIOD;

PROGRAMMING TEST PROCEDURES

9. Verify that all channels with current PPM readings are displayed on the LCD screen. The displayed channel should change every few seconds. Press "Manual" button to manually scan through gas type and PPM reading. Compare to factory settings on last page of O&M manual.

Findings and any Corrective action taken:

10. Remove lower cover (2 screws). Visually inspect High Alarm and Low Alarm jumpers for each sensor. (Note: there are no Alarm jumpers for oxygen sensors.) Compare to factory settings on last page of O&M manual and confirm alarm settings with end-user.

Findings and any Corrective action taken:

Caution:
The following procedure will activate Alarm Relays. Take proper precautions to disconnect equipment or alert necessary personnel before proceeding.

11. Press and hold "Test" Pushbutton. The following should happen:

- The Low Alarm relay will energize for a second then de-energize. Then the High and Offscale Alarm relays will energize for a second then de-energize.

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PROGRAMMING TEST PROCEDURES (cont'd)

The procedure repeats as long as the TEST pushbutton is held. (Caution: there may be power on relays if connected to external devices). Use ohmmeter to confirm that unused relays are energized,

- The local strobe should engage for High and Offscale alarms
- The audible alarm will beep.
- The on board LEDs will flash the appropriate alarm.
- The on board Analog Output will output 5Vdc (10Vdc if so trimmed).

Findings and any Corrective action taken:

12. Move the jumper to JP1. Record the software version number or date code.

Version Number/ Date Code: _____

OPTIONS INSPECTION

Oxygen Sensor

13. Verify that all Oxygen sensors are mounted in a vertical down orientation.

Findings and any Corrective action taken:

14. Observe the Haloguard II LCD screen indicates the proper oxygen content for the sensor location - typically 21%.

Findings and any Corrective action taken:

15. If required, perform calibrated gas sensor test & demonstration using instructions provided with the test kit. Alternatively, refrigerant released into plastic (garbage) bag can be used for demo purposes.

Description of Gas Demonstration, Findings and any Corrective action taken:

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16. To be filled in by person performing final inspection

Inspection Performed By: _____

Signature: _____ **Date:** _____

Company Name: _____

Please distribute COMPLETED original & copies as follows:

Original to End-User

Copy to Authorized Service Representative

Copy to Thermal Gas Systems