GENERAL MONITORS

Model IR5000
Gas Check Cell
For Methane and Propane

Instruction Manual **06/00**

Part No. MANIR5000 Gas Check Cell
Revision A/06-00

CAUTION: The use of this gas cell requires application of high concentrations of flammable gas. When high concentrations of gas are diluted in air, a flammable gas air mixture can be reached.

1.0 Purpose

The IR5000 Gas Check Cell is used to ensure that the IR5000 is responding in the Parts per Million (ppm) and Lower Explosive Limit (LEL) levels. The cell can be used for both the methane and propane units.

1.1 Theory of Operation

By flowing a known concentration of gas through the length of the cell, the unit will respond within a known value range. Values may vary with temperature. The IR5000 Gas Cell is designed to be used with methane and propane.

2.0 Set-Up and Operation

1. The IR5000 must be properly mounted and aligned; see IR5000 Installation Manual. With the IR5000 operating,
2. Install the gas cell into the shroud in front of the receiver unit with the hose fitting pointing down and close to the unit as shown on outline and mounting drawing 31088 (Figure 1).
3. Install hose over fitting and begin flowing gas. Flow gas (minimum 2 minutes at 1 liter per minute (l/m)) until reading stabilizes at levels indicated below.
4. All values given are taken at 20 to 25°C without Hydrocarbon (HC) background in the path. At different temperatures the values will vary.

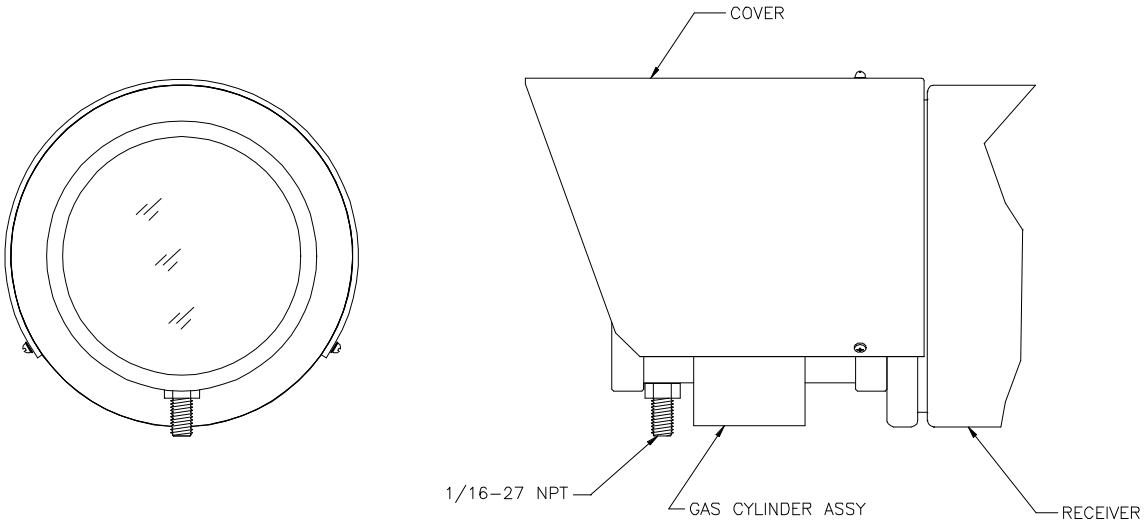

Figure 1

2.1 Methane Testing

PPM Test
Flow gas 2.5% by volume, at 1 l/m for a minimum of 2 minutes, or until display stabilizes at up to 25 (2500) ppm.meter.

LEL Test
Flow Gas 100% by volume, at 1 l/m for a minimum of 2 minutes, or until display stabilizes at up to 2.0 LEL.meter.

2.2 Propane Testing

PPM Test
Flow gas 1.05% by volume, at 1 l/m for a minimum of 2 minutes, or until display stabilizes at up to 10 (1000) ppm.meter.

LEL Test
Flow gas 21% by volume, at 1 l/m for a minimum of 2 minutes, or until display stabilizes at up to 1.0 LEL.meter.

2.3 Areas of Caution at Installation and Operation

1. Do not allow cell to become pressurized. Keep vent clear.
2. Make sure gas inlet is closest to the unit and pointed down.
3. Use proper tubing and do not allow tubing to kink.
4. Provide adequate ventilation around the front of the cell.
5. The windows are fragile and must be protected when the unit is not in use. Store unit in shipping container.
6. Prevent dirt and foreign matter from entering the cell.
7. If windows become dirty, clean only with GMI window cleaner or Windex with Ammonia D.
8. During setup, Hydrocarbon Gases at several ppm in the background can cause error in the readings in the range of 20 to 30%, depending upon the distance between the receiver and the source.

2.4 Equipment

31090-1 Gas Check Kit for Methane ppm/meter
31090-1 Gas Check Kit for Propane ppm/meter
31090-1 Gas check kit for Propane LEL/meter

2.5 Replacement Gas Cylinders

1400155-M	Methane 2.5%/Vol
1400155-PR	Propane 1.05%/Vol
1400155-PR21	Propane 21%/Vol