

Standard Operating Guidelines

SENSIT GAS METER

Guideline # 220.10

Date: 01/04 R

PURPOSE

- A. To familiarize all District personnel with the Sensit Gas meter to be used in the District.
- B. To provide information to all personnel as to the proper application and use of tools.
- C. To provide all personnel with training so that all personnel will be able to operate tools with regard to personal safety at all times.

POLICY

- A. It shall be the policy of Jackson Fire District 3 to provide training to personnel in the proper use of the Sensit Gas meter and to have safety as a priority.
- B. It shall be mandatory for all personnel to receive Sensit Gas meter training.
- C. No personnel shall operate the Sensit Gas meter without the necessary training in proper operation and safety.
- D. The Sensit Gas meter of the District shall be carried on an engine.
- E. The Sensit Gas meter shall not be removed from the above stated apparatus, with the exception of preventive maintenance or equipment failure, and will be serviced only by authorized personnel.
- F. The Sensit Gas meter shall be checked weekly during routine equipment checks.

RESPONSIBILITY

- A. The career staff shall have overall responsibility for the maintenance and serviceability of Fire District equipment.
- B. Company Officers are responsible for supervising the maintenance and inspection of Fire District equipment.
- C. Fire Apparatus Operators are responsible for the proper cleaning, inspection and maintenance of the equipment after use.
- D. All members are responsible for reporting damaged or defective equipment to their direct supervisor and completing the proper forms.

GENERAL DESCRIPTION

The Sensit HXG-2 instrument is an advanced state of the art leak detector capable of detecting many combustible, noncombustible and toxic gases.

The Sensit meter solid-state sensor is sensitive to most combustible and/or toxic gases. A partial list of these gases is: Acetane, Alcohol, Ammonia, Steam, Carbon Monoxide*, Butane, Gasoline, Jet Fuel, Hydrogen Sulfide, Smoke, Industrial Solvents, Methane, Lacquer Thinners, Naphtha, Propane, Natural Gas.

* Not to be used to quantify the amount of CO present, not to be used for finding low level carbon monoxide leaks in furnaces or in the home.

CAUTION: The Sensit instrument is factory calibrated for methane in air. The alarm will indicate when the gas concentration at the sensor approaches the Alarm Set Point. The alarm set point is adjustable by the user for any gas concentration within the range of 0% to 40% of the lower explosive limit. The alarm response in the presence of any other gas will be different.

OPERATION

1. Turn the instrument on in a non-contaminated atmosphere. The instrument will go through a warm-up process.

2. During warm-up it is normal but not required that the ticking sound increases and the alarm indicates for a short time. While the instrument is warming up the tick rate will slowly decrease until it becomes steady. The alarm will also stop indicating as the instrument completes warm-up. The time required for this will vary depending on the duration of time since the instrument was last used.

NOTE: If the instrument is in an area where detectable gases are present, the alarm may not stop.

3. Once warm-up is complete adjust the "Tick Adjust" control to establish a slow uniform tick rate. Only after the tick rate remains steady is the unit ready for calibrated use. To identify the presence of gas vapors or leaks listen for any change in tick rate. If the tick rate increases, the instrument has detected the presence or location of a leak. As the level of gas increases, the tick rate will increase accordingly. If the alarm is indicating, the level of gas is near or above 0.5% gas or approximately at a minimum of 10% of LEL. This indicates a potentially hazardous atmosphere. When the instrument alarms a flashing red light will appear and an audible warbling tone will sound.

4. To pinpoint a leak source it may be necessary to readjust the tick rate. The "Nullable Tick Rate" feature of the HX-2 allows the rate to be slowed and reestablished even in high gas concentrations. By turning the tick adjust counterclockwise and reestablishing a slow tick rate, as

needed the HXG-2 will continually identify higher levels of gas thereby locating the leak source. Remember an increase in the tick rate means you are getting closer while a decrease means you are moving further away from the leak source.

5.To continue searching for a leak while the alarm is sounding, you may choose to depress the "Quiet Alarm" button on the back of the instrument. This will silence the audible portion of the alarm and allow the user to listen to the tick rate pattern. The visual red flashing light will still be seen when the instrument is alarming even if the "Quiet Alarm" button is used. You will note that the tick rate is independent of the alarm which is calibrated to the appropriate gas concentration

6.If the green light flashes or does not illuminate this is an indication that the batteries need replacement.

7.The unit will respond to leaking finding solutions (soap). Use the Sensit instrument first.

8.If the sensor is overexposed to some gases, the unit may take an extended period of time to return to calibrated ready condition.

9.To increase battery life turn the unit to "OFF" when not in use.

CALIBRATION

1.WARM-UP: Turn on the unit for 10 minutes to warm-up.

2.ALARM ADJUSTMENT: Insert the sensor into a clean, closed container filled with 0.5% methane/air mixture or gas to be monitored.

3.Rotate the "Alarm Set" adjustment until the "Alarm" light just comes on.

4.Remove the sensor from the gas for 1 minute then reinsert to verify the adjustment.

5.If the unit can't be calibrated using this procedure, it should be returned to the factory for repair.

Approved:

Date:
District Chief:

Date:
Company Chief