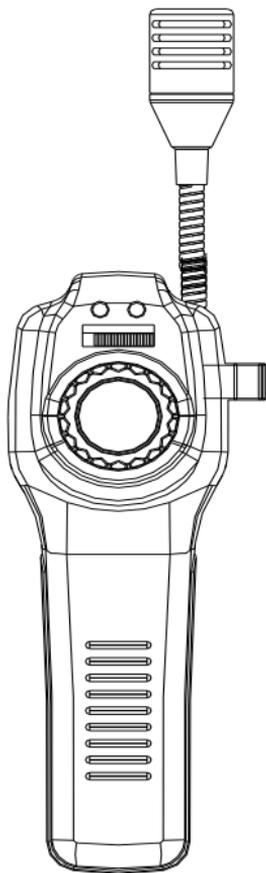


COMBUSTIBLE GAS LEAK DETECTOR OPERATIONS MANUAL LD-150



Introduction

The LD-150, Combustible Gas Leak Detector, has a long, slim gooseneck probe to find leaks in tight areas. Its adjustable alarm, easy one-hand operation and impact resistance storage case add up to value and convenience

Applications and Features

Easily operate the Combustible Gas Leak Detector, with one hand, to detect presence of combustible gases. Audible and visual indicators help pinpoint leak source. Adjustable sensitivity (alarm rate) helps eliminate background gas concentration in contaminated environments.

- Highly sensitive, can detect down to 50 ppm methane.
- Adjustable sensitivity (alarm rate) to locate leaks quickly and easily.
- Visual leak detection by LED indicator.
- Precision sensor detects even the smallest leaks.
- Fast response of less than two seconds to 40% LEL.
- Includes earphone jack.
- 16" flex-neck probe.

Safety Tips

Before using this Instrument, read all safety information carefully. In this manual the word "**WARNING**" is used to indicate conditions or actions that may pose physical hazards to the user. The word "**CAUTION**" is used to indicate conditions or actions that may damage this instrument.

If you are using your Combustible Gas Leak Detector as a result of a service call, chances are someone has either smelled a combustible gas leak or someone has reason to believe gas may be leaking. While your Combustible Gas Leak Detector is designed to function without producing sparks or otherwise igniting the gasses it detects, the environment you are responding to probably has no such safeguards. Most combustible gas leaks are noticed long before concentration levels build up to the point that explosion hazards exist. However, it is important to treat every situation with extreme caution and always follow all the proper safety practices and precautions. Failure to do so could result in damage to the unit, personal injury or death.



WARNING!

If you feel an explosion hazard exists:

- **Arrange for evacuation of people in the area**
- **Call proper authorities from a safe location**
- **Shut off gas source, if possible**
- **Ventilate enclosed areas, if possible to do so without risk of ignition**
- **DO NOT operate power switches or energize circuits in area of question**

As a matter of routine, ventilate the area in which you plan to work. Ventilation will help ensure the gas does not accumulate in large volume where it can attain its Lower Explosive Limit (LEL)*

**LEL: Lower Explosive Limit - The point at which a combustible gas, when mixed with air, has developed the minimum concentration to combust when exposed to a source of ignition. The LEL is usually stated as a percentage of gas in air, as a fuel-air-ratio, or as parts-per-million (PPM).*

International Symbols



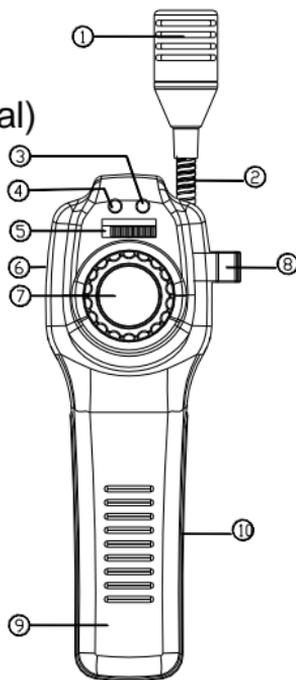
Important Information; see manual



Conforms to European Union directives

Controls and Indicators

1. Sensor Tip Guard & Sensor (internal)
2. Gooseneck Probe
3. Alarm Light
4. Ready Light (Power-On)
5. Power ON/OFF Slide Switch
6. Earphone Jack
7. Sensitivity Adjustment Wheel
8. Gooseneck Clip
9. Hand Handle
10. Battery Compartment & Cover



Instructions

Switch on the combustible gas leak detector by sliding the ON/OFF switch to the right. The READY light should glow green. The Combustible Gas Leak Detector runs through a one-minute warm-up and self-zeroing sequence when it is first turned on in

fresh air. The alarm of the instrument may initially sound without contact with any gas. This is caused by the high sensitivity preset of the Sensitivity Adjustment Wheel. Adjust sensitivity to lowest setting. If the alarm does not stop within 30 seconds, your unit may need service.

Sensitivity Adjustment

Each time the instrument is put into service, you should conduct a quick functional test. Adjust the sensitivity to non-alarm level. Then expose the sensor to a known combustible gas source, like a cigarette lighter, or pass the probe over a drop of combustible fluid. After the initial test and warm-up, the instrument can be used to detect combustible gas. When the sensor in the probe tip detects a combustible gas, the alarm rate will increase and the instrument sounds a warbling tone while the ALARM light glows. As the concentration of gas increases so does the alarm rate.

If the situation calls for quiet operation, or if background noise makes it difficult to hear the built-in speaker, you can use an earphone. The jack is on the side of the instrument. **Note: Listening to the alarm through earphones is very loud.**

If the **READY** light does not glow green, the batteries might be low. They should be replaced

immediately. Low batteries will adversely affect the instrument's reliability. For more information, see the Battery Replacement procedures.

Adjusting the Alarm Rate (Sensitivity)

The alarm rate tells you when the sensor (in the tip of the instrument) is getting close to a combustible gas. You can control the alarm rate using the sensitivity adjustment wheel in the center of the instrument.

- Turn the wheel clockwise to increase the frequency.
- Turn the wheel counter-clockwise to decrease the frequency.

An alarm rate of 4 to 8 tics per second, in fresh air, is typical. The rate of alarm increases as the sensor comes closer to a combustible gas source. In order to isolate the source of a leak, you may need to move the wheel counter clockwise, decreasing the sensitivity, as the sensor moves closer to the leak source.

Replacing the Batteries

Replace your 1.5 volt/size "C" alkaline batteries when:

- The green **READY** does not illuminate.
- No light or other activity occurs when powering on the instrument.

To replace the batteries:

1. Lay the instrument face-down on a flat surface.
2. Remove the battery cover. Gently press in on battery cover while sliding down.
3. Remove the batteries. Use a coin or screwdriver, if necessary, to pry them out.
4. Replace all three batteries with new batteries.
5. Replace battery cover and test unit.

Replacing the Sensor

Although the sensor is designed to offer many years of reliable service, it may become inoperable if it is submerged in liquid or otherwise physically damaged.

To replace the sensor:

1. Turn the instrument off
2. Remove the upper tip guard by pressing straight up from the alignment notch that separates the two halves of the tip guard.
3. This is a sturdy component, but use caution to not bend the sensor's leads.
4. Pull the sensor straight up from its tip housing.
5. Replace the sensor, pressing it straight in.
6. Reassemble in reverse order.

Specifications

| | |
|---------------|--|
| Sensitivity | 50 ppm methane |
| Sensor Type | Low power semiconductor |
| Warm Up Time | Less than 1 minute |
| Response Time | Less than 2 seconds |
| Duty Cycle | Continuous |
| Probe Length | 16" gooseneck |
| Power Supply | 3 x "C" Alkaline Batteries |
| Battery Life | 8 Hours, Continuous Use |
| Alarm | Visible & Audible at 10% LEL for Methane. Can be calibrated for other concentrations or gases. |
| Dimensions | 221mm x 72mm x 46mm |
| Weight | 498g |
| Warranty | 2 years |

Operating Conditions

To ensure accurate readings use it only when ambient air is within this range:

Temperature: 32 to 120°F

Humidity: 10 to 90% RH (non-condensing)

Gasses Detected

The LD-150 detects a wide variety of gasses, including some toxic gasses, and nuisance vapors. The following list represents only a portion of the more common gasses it will detect.

- Natural Gas
- Propane
- Butane
- Methane
- Acetone
- Alcohol
- Ammonia
- Steam
- Carbon Monoxide (not to quantify)
- Gasoline
- Jet Fuel
- Hydrogen Sulfide
- Smoke
- Industrial Solvents
- Lacquer Thinner
- Naphtha

Warranty

This PDI product is warranted to be free from

defects in materials and workmanship for a period of two (2) years from the verified date of purchase. During this warranty period, PDI will either repair or replace the defective unit, at PDI's discretion. A purchase receipt or other acceptable form of proof of original purchase date will be required before any warranty processes begin. PDI warrants all authorized repairs with a six (6) month limited warranty. View full warranty details and register your PDI product at www.PDIimeters.com.

NOTE: Online product registration is required for all warranty claims. All warranty claims must have a Return Goods Authorization assigned from PDI, in order to begin processing. Contact PDI for more details.





Precision Diagnostic Instruments

7581 W. 103rd Ave.

Westminster, CO 80021

Tel: 1-800-453-7892

Fax: 303-650-1238