



LD920

H2/N2 Tracer Gas Leak Detector

Detects 5% H2 in 95% Nitrogen
Tracer Gas

User Manual



Made in U.S.A.





INTRODUCTION

The LD920 features a long life sensor technology that is designed to detect H₂/N₂ Tracer Gas mixture.

Our unique digital leak size indicator takes the guesswork out of whether to repair a small leak. The digital display is independent from the audio alarm and sensitivity level, allowing the precise pinpointing of the leak source.

When used with the H₂/N₂ Tracer Gas mixture, the LD920 will detect leak rates less than 5 ppm. The 5% H₂/ 95% N₂ Tracer Gas mixture is consistent with the teaching of EMC Directive 2014/30/EU for use with Low GWP Leak Detection System Tracer Gas. The LD920 does not require rechargeable batteries.

FEATURES

- Unique numeric leak size Indicator
- Long life, stable sensor
- H₂/N₂ sensitivity <5 ppm
- Automatic calibration and reset to ambient
- Visual LED leak alarm near sensor
- 3 adjustable sensitivity levels
- Low battery indicator
- True mechanical pump
- Audio mute function
- Uses 4 AA alkaline batteries
- CE Certified
- Comfortable Sanoprene grip
- 2-year warranty includes sensor
- Made in USA





LD920 CONTROL PANEL

- Digital Leak Size Indicator
- Low Battery Indicator
- Sensitivity Level Indicators
- Audio Mute & Sensitivity Level Selectors
- Power On/Off



OPERATING INSTRUCTIONS

1. TURN ON: Press the ON/OFF button once to turn on and again to turn off.
NOTE: Hold button down for approximately 1 second to turn unit off.

2. WARM UP: The detector automatically starts heating the sensor. During the heating cycle, the digital leak size indicator will flash 0 and the detector will sound a slow “beep”. Warm up time is usually less than 20 seconds.

3. READY: The detector is ready to begin searching for leaks when the flashing 0 stops and the green sensitivity LED turns on. The audio “beep” increases in frequency and the probe LED begins to blink steadily.

4. SEARCHING: When searching for leaks, move the sensor tip along A/C lines and fittings no further away than 0.4 in. (9.5 mm) and no faster than 3 in./sec. (75 mm/sec.) If the detector alarms, make smaller sweeps back and forth until the leak source can be pin pointed. NOTE: The LD920 only responds to changes in leak concentration. The alarm will re-set automatically if the sensor tip is held at the leak source. If the leak detector has been out of use for an extended period, weeks or months, the following action is recommended. Power on the instrument and allow it to come out of warm up. Then run it with the sensitivity level in the Hi (high) position for several minutes before testing it with the Leak Test Vial. This action will guarantee that the sensor is fully conditioned for maximum response to tracer gas.





LEAK SIZE INDICATOR

The digital leak size indicator remains off normally but once a leak is detected, a number from 1-9 will be displayed for all H₂/N₂ tracer gas regardless of the sensitivity setting.

The number will continue to increase or decrease depending on the amount of tracer gas sensed. The maximum value will be displayed once the leak source has been located. The table below can be used to approximate the size of leak:

Maximum # Displayed	Approx. Leak Size (oz/yr)	Approx. Leak Size (g/yr)
1 -3	< 0.1	<3
4-6	0.1 to 0.5	3 to 14
7-9	>0.5	>14

LOW BATTERY INDICATOR

Replace the 4 AA Alkaline batteries when the red LED on the control panel is lit. Follow battery installation instructions under **Maintenance** section.

AUDIO MUTE FUNCTION

To silence or mute the audio beep and alarm signal, press the MUTE button. To restore the audio sound, press the MUTE button again. (Note: a few seconds is required to restore sound if the mute button is pressed in rapid succession.)



ADJUSTING SENSITIVITY LEVELS

The leak detector will default to the NORM sensitivity level automatically once the unit comes out of the warm up cycle and the green LED will turn on.

To change sensitivity levels, press the SENS once for HI sensitivity (red LED will turn on) and again for LO sensitivity (yellow LED will turn on).

LEAK TEST VIAL

The leak detector includes a Leak Test Vial that allows the user to make sure the detector is performing properly. To test:

1. Remove the colored label dot in the center of the screw cap to expose the vent hole in the top of the screw cap. (see fig. below).

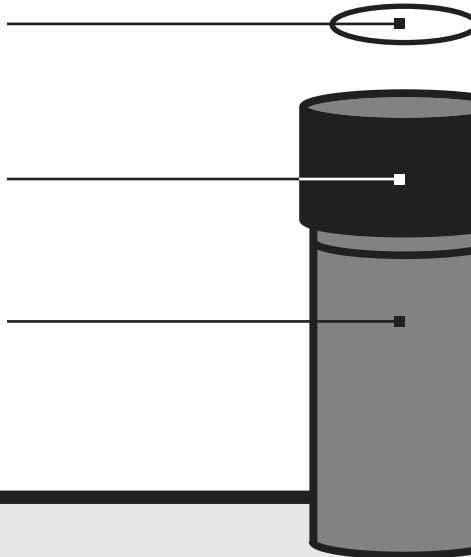
2. Turn on the leak detector and allow the instrument to complete the warm up cycle.

3. Place the sensor close to the small hole in the top of the Leak Test Vial. The beep rate should increase and the Digital Leak Size Indicator should display a number from 3-6 indicating that the sensor and the electronics are working properly.

Remove label dot over
vent hole before testing

Vial cap with vent hole

Expiration date on label



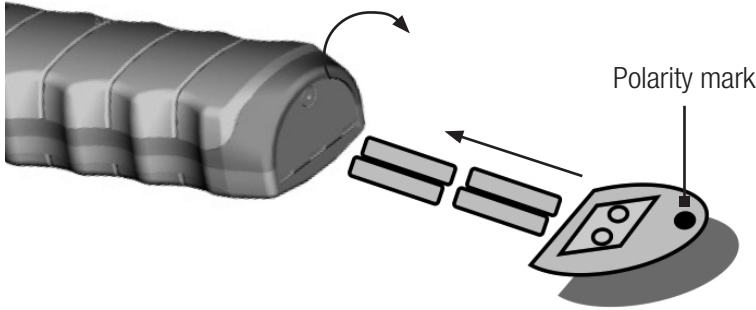
NOTE: Replace the Test Vial back in the nylon bag when not in use to extend the shelf life. Replace Test Vial when the green color is less than $\frac{1}{4}$ full or at the time of the expiration date.





BATTERY MAINTENANCE

Install Batteries: Remove screw located at rear end of unit and pull down hinged battery door to open as shown. Always insert all four batteries into the battery compartment in the same direction. Note: polarity mark on the inside of the battery door for proper battery orientation.

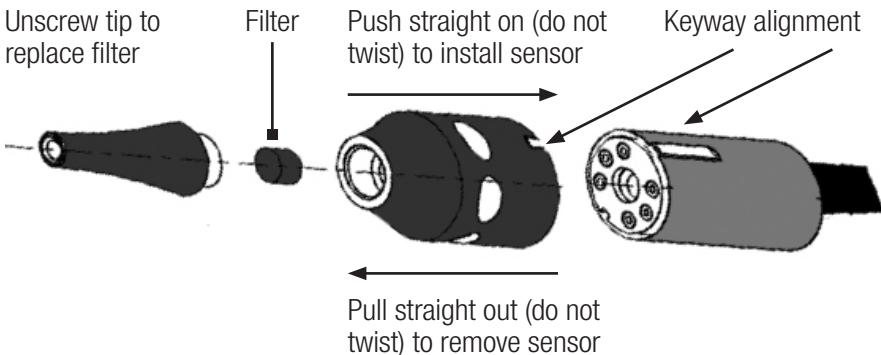


SENSOR MAINTENANCE

Replace Filter: Unscrew sensor tip as shown to replace filter. Replace filter whenever it becomes visibly dirty or every 2 to 3 months depending on use.

Replace Sensor: Remove sensor by pulling out of socket. Install the new sensor by aligning the Keyway notch in sensor cover with the raised keyway on sensor socket holder (see figure below).

Note: Do not force sensor into socket. Misalignment can damage the sensor pins.



IMPORTANT: The instrument's software is designed to alert the user if the sensor is dislodged or defective. If the sensor is not fully inserted into the six-pin socket, or if it is defective, the instrument will not come out of the "Warm Up" mode for proper operation when the power button is turned on. Additionally, if the instrument becomes unstable during its operation, it is an indication that the sensor may be defective or dislodged.





PRODUCT SPECIFICATIONS

Model #	LD920
Name	Leak Detector, H2/N2 Tracer Gas
Sensitivity	< 5 ppm or 2 g/yr R134a equivalent
Sensor Life	> 300 hours
Response Time	Instantaneous
Power Supply	4 AA Alkaline batteries
Battery Life	4-6 hours continuous
Warm up time	< 20 seconds
Probe length	17 inches (43.8cm)
Numerical Display	7 segment digital display (1 to 9)
Weight, lbs.	1.5 lbs. (0.68kg)
Warranty	2 years (includes sensor)

TRACER GAS DETECTION

Tracer Gas consists of a non-toxic, non-flammable, environmentally friendly (non-polluting) mixture of 5% Hydrogen and 95% Nitrogen. For this reason, the Tracer Gas can be released into the environment after the leak detection procedure is completed. The 5%H2/95%N2 Tracer Gas mixture is consistent with the teaching of EMC Directive 2014/30/EU for use with Low GWP Leak Detection System Tracer Gas.

The LD920 detects the Hydrogen component of the tracer and because Hydrogen molecules are so small, it is an ideal gas for leak detection.

The Tracer Gas is charged into an empty system at a pressure of approximately 75 psi (5bar). As Hydrogen is lighter than air, always probe slightly above the suspected leak area. Once the source of the leak is located and repaired, the Tracer Gas can be released and the system can be recharged again with refrigerant. A final check should be performed using a certified refrigerant gas leak detector such as the Imperial LD900.

NOTE: Run engine with air conditioner on briefly to properly distribute the H2/N2 Tracer Gas.





REPLACEMENT PARTS

Item	Part Number
H2/N2 Sensor with Sensor Tip and Filter	S77704
Sensor Filters (5 pack)	S77695
Leak Test Vial	S77705
Parts Kit (includes H2/N2 sensor with sensor tip, test vial, & filter kit)	S77706
Carrying Case	S77707
Sensor Tip with Filter	S77698

WARRANTY

The LD920 H2/N2 Tracer Gas Leak Detector is warranted to be free of defects in materials and workmanship for a period of two years from the date of purchase. This warranty applies to all repairable instruments that have not been tampered with or damaged through improper use including unauthorized opening of the unit. Tools should be returned to the buyer's place of purchase.

SERVICE/TECHNICAL QUESTIONS CALL TOLL FREE: 888.467.8665



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