



LD900

Refrigerant Gas Leak Detector

Detects all HFO, HFC, HCFC, and CFC Refrigerants including blends

User Manual



Design certified by ASCI and Intertek to meet SAE J2791 & ASCI J2913, EN14624-2012 & ASHRAE 173-2012



Made in U.S.A.





INTRODUCTION

The LD900 features a long life solid electrolyte sensor technology that is designed to detect more current and difficult HFC refrigerants such as R-134a, R-410A, R-404A, R-407A, and R-507 in addition to the new HFO-1234yf and all HCFC (R-22) and CFC (R-12) refrigerants including SNAP approved hydrocarbon blends.

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.

The LD900 does not require rechargeable batteries.

FEATURES

- Unique numeric leak size indicator
- Long life, stable sensor
- R-134a sensitivity .05 oz/yr
- R-1234yf sensitivity .015 oz/yr
- R-22 sensitivity .025 oz/yr
- Design certified to meet SAE J2791, SAE J2913, European EN14624
- 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





LD900 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 LD900 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 refrigerant 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 HFC and HCFC refrigerants regardless of the sensitivity setting.

The number will continue to increase or decrease depending on the amount of refrigerant 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 comes with 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).

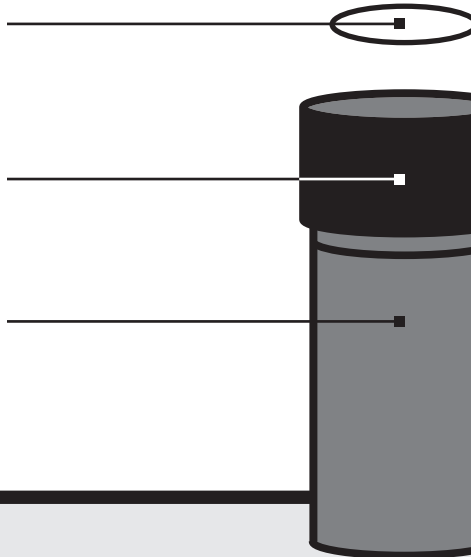
2. Turn on the leak detector and allow the instrument to complete the warm up cycle.

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



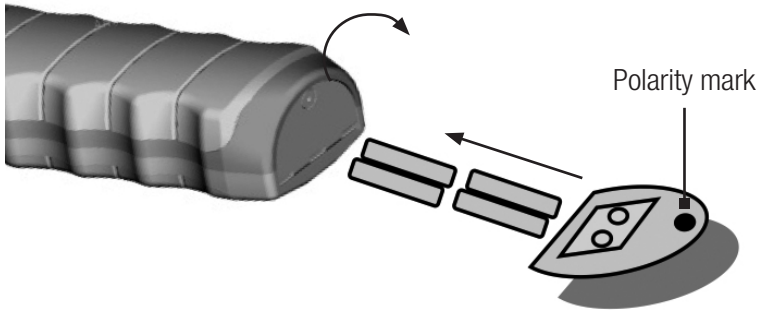
NOTE: Replace the Test Vial back in the nylon bag when not in use to extend the shelf life. Replace Test Vial when the green color is less than $\frac{1}{4}$ full or at the time of the expiration date.





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.

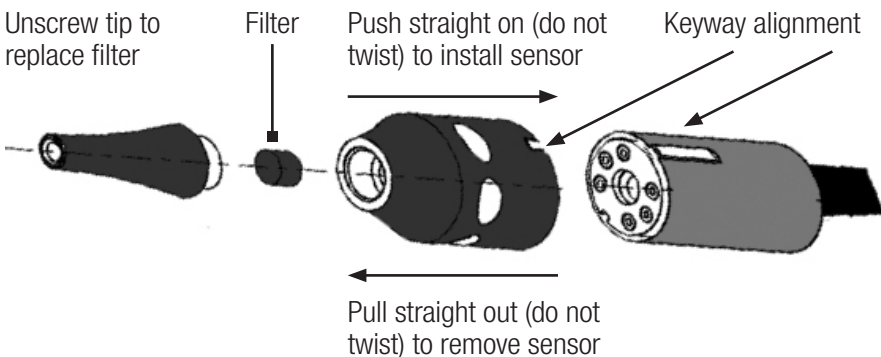


SENSOR MAINTENANCE

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 #	LD900
Name	Leak Detector, Refrigerant Gas
Sensitivity	.05 oz/yr R134a, .015 oz/yr R1234yf, .025 oz/yr R22
Sensor Life	> 10 years
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)

EN14624-2012 TEST SPECIFICATIONS

Minimum/Maximum Sensitivity Threshold (fixed)	1 gm/yr minimum, >50 gm/yr maximum
Minimum/Maximum Sensitivity Threshold (moving)	3 gm/yr minimum, > 50 gm/yr maximum
Minimum Detection Time (1 gm/yr)	Approx. 1 sec
Clearing Time	Approx. 9 seconds after exposure to >50 gm/yr
Minimum Threshold after Maximum Exposure	1 gm/yr
Sensitivity Threshold in Polluted Atmosphere	1 gm/yr
Calibration Frequency	1/yr check with calibrated leak Standard

CROSS SENSITIVITY TO AUTOMOTIVE CHEMICALS

Some automotive solvents and chemicals have similar hydrocarbon properties as R134a and may elicit a positive response. Before leak checking, clean up any chemicals in the list below that elicit a positive response

Chemical Name/Brand	Response
Rain-X Windshield Wash Fluid	Y
Ford Spot Remover (Wet)	Y
Ford Rust Inhibitor	Y
Ford Gasket Adhesive (Wet)	Y
Loctite Natural Blue degreaser (diluted)	Y
Ford Brake Parts Cleaner	Y
Ford Silicone Rubber (uncured)	Y
Motorcraft Antifreeze heated to 160° F	Y (partial)
Gunk liquid wrench	Y
Ford silicone lubricant	N
Ford Pumice lotion (with solvent)	Y
Ford Motorcraft brake fluid	Y
Ford Carburetor Cleaner	Y
Dextron Transmission fluid heated to 160° F	N
Quaker State Motor Oil heated to 160° F	N





REPLACEMENT PARTS

Item	Part Number
Sensor with Sensor Tip & Filter	S77694
Sensor Filters (5 pack)	S77695
Leak Test Vial	S77696
Sensor Tip with Filter	S77698
Parts Kit (includes sensor, test vial, & filter kit)	S77697
Carrying Case	S77699

WARRANTY

The LD900 Refrigerant 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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