QUEST LD-3000

ELECTROCHEMICAL REFRIGERANT LEAK DETECTOR

A2L COMPATIBLE

Detects all HFO, HFC, HCFC, CFC, HC and PFC Refrigerants Including Blends

Certifications:

CE, ASHRAE 173-2012, EN 14624:2012, SAE J2791 and SAE J2913

CE

MADE IN USA
WITH GLOBALLY SOURCED PARTS

JUST BETTER

OPERATING MANUAL

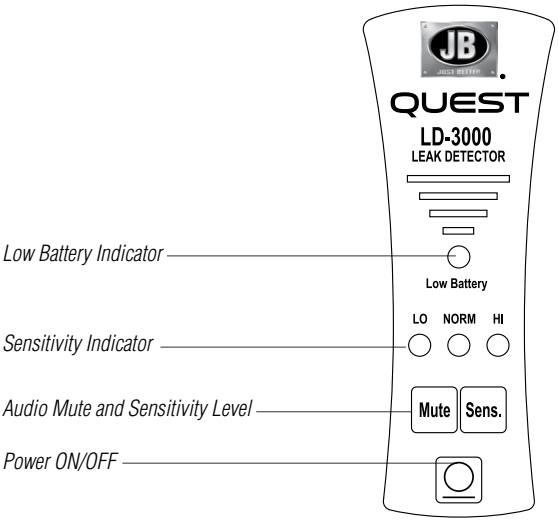
JBIND.COM

INTRODUCTION

The LD-3000 features a long life solid electrolyte sensor technology that is designed to detect difficult HFC refrigerants such as R134a, R410A, R404A, R407A, and R507, in addition to the new HFO R1234yf and all HCFC (R22) and CFC (R12) refrigerants including SNAP approved hydrocarbon blends. The LD-3000 does not require rechargeable batteries.

Features

- Long life, electrochemical sensor
- Designed to detect all CFC, HFC, HFO and HCFC refrigerants, and hydrocarbon blends
- Automatic calibration and reset to ambient levels
- Three adjustable sensitivity levels
- Low battery indicator
- Mutable alarm function
- Comfortable rubber handle
- Rugged carrying case
- Operates with four AA batteries (included)
- 2 year warranty



SPECIFICATIONS

Product Specifications

Description	Leak detector, refrigerant gas
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" (43cm)
Weight	1.5 lbs
Warranty	2 year warranty (includes sensor)

Test Specifications (EN14624)

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 (1gm/yr):	Approx 1 second
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

OPERATING INSTRUCTIONS

Install Batteries

Remove battery cover with a Phillips head screwdriver. Insert four AA batteries.

Power Settings

1. **TURN ON/OFF:** Press the ON/OFF button once to turn on and again to turn off.

   NOTE: Hold button down for approximately one second to turn unit off.

2. **WARM UP CYCLE:** The detector automatically starts heating the sensor. During the heating cycle, the detector will sound a slow "beep". Warm up time is usually less than 20 seconds.

3. **READY MODE:** The detector is ready to begin searching for leaks when the green sensitivity LED turns on. The audible "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 .37 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 pinpointed.

   NOTE: The LD-3000 only responds to changes in leak concentration. The alarm will reset 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 warm up and adjust to ready mode.
   - Allow the leak detector to operate with the sensitivity level in the HI position for several minutes before testing with the Leak Test Vial. This guarantees that sensor is fully conditioned for maximum response to refrigerant gas.

Low Battery Indicator

Replace the four AA alkaline batteries when the red LED on the control panel is lit. Follow battery installation instructions in **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 are required to restore sound if the MUTE button is pressed in rapid succession.

Adjusting Sensitivity Levels

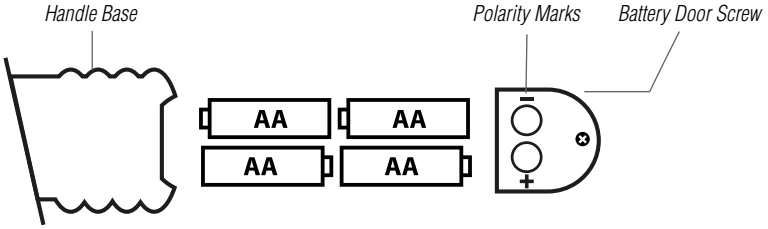
Leak detector will default to the NORM sensitivity level automatically once the unit comes out of the warm up cycle and the green LED will turn on.

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

MAINTENANCE

Batteries

Install Batteries: Remove screw located at base end of unit and pull down hinged battery door. Insert four AA batteries into the battery compartment as shown, noting Polarity Marks for battery orientation.

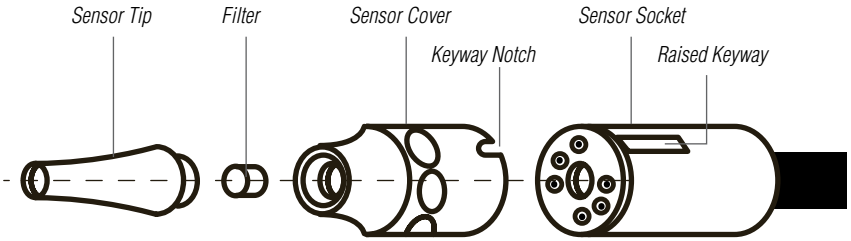


Sensor

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 Cover by pulling out of Socket. Install the new sensor by aligning the Keyway Notch in Sensor Cover with the Raised Keyway on Sensor Socket.

NOTE: Do not force Sensor Cover into Socket—misalignment will damage sensor pins.



To install sensor cover: align notch with raised keyway and insert straight on (do not twist)
To remove sensor cover: pull straight out (do not twist)

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 warm up cycle 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.

Sensitivity

SENSITIVITY	
R1234yf	.0125 oz/yr
R22	.025 oz/yr
R32	.05 oz/yr
R134a	.05 oz/yr
R404A	.05 oz/yr
R407A	.05 oz/yr
R410A	.05 oz/yr
R427A	.05 oz/yr
R454B	.05 oz/yr

Cross Sensitivity

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

CHEMICAL NAME
Rain-X® windshield wash fluid
Ford® spot remover (wet)
Ford® rust inhibitor
Ford® gasket adhesive (wet)
Loctite® natural blue degreaser (diluted)
Ford® brake parts cleaner
Ford® silicone rubber (uncured)
Motorcraft® antifreeze heated to 160° F
Gunk® liquid wrench
Ford® silicone lubricant
Ford® pumice lotion (with solvent)
Ford Motorcraft® brake fluid
Ford® carburetor cleaner
Dexron® transmission fluid heated to 160° F
Quaker State® motor oil heated to 160° F

Rain-X is a registered trademark of ITW Global Brands. Ford and Motorcraft are registered trademarks of Ford Motor Company. Quaker State is a registered trademark of Quaker State. Loctite is a registered trademark of Henkel Corp. Dexron is a registered trademark of General Motors. Gunk is a registered trademark of Gunk.

PARTS LIST

PART NO.	DESCRIPTION
LD-3000	QUEST leak detector in case
LD-S101	Replacement sensor (6 prong)
LD-RF5	Replacement filters (5 pack)
LD-TV	Replacement leak test vial
LD-PK	Parts kit (includes 6 prong sensor, filter kit and test vial)
LD-CS	Protective carrying case
LD-ST	Replacement sensor tip

RETURN FOR REPAIR

Every effort has been made to provide reliable, superior quality products. However, in the event your instrument requires repair, please contact the location of purchase. Wholesalers please contact JB Customer Service Department to obtain a Return Goods Authorization (RGA) number. Ensure that all returned products are packed to avoid any damage in shipment. Paperwork should be placed in a separate plastic bag and should include JB's assigned RGA number, a description of the problem and any customer assigned repair or purchase order number, if applicable.

Contact Customer Service for RGA number:

800.323.0811 Toll
800.552.5593 Toll Fax

Products should be shipped with freight prepaid to:

JB Industries
RGA#_____
601 N. Farnsworth Ave.
Aurora, IL 60505
630.851.9444 Tel
630.851.9448 Fax

WARRANTY

The QUEST LD-3000 is warrantied against defects in materials and workmanship for 1 year from date of purchase. JB products are guaranteed when used in accordance with our guidelines and recommendations. Warranty is limited to the repair, replacement, or credit at invoice price, (our option) of products which in our opinion are defective due to workmanship and/or materials. In no case will we allow charges for labor, expense or consequential damage. Repairs performed on items out of warranty will be invoiced on a nominal basis; contact wholesaler for details. Additional product information available online at www.jbind.com.

WARNING: This product can expose you to chemicals including lead which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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