



Product Specifications

Model #	D400
Name	Leak Detector, Refrigerant Gas
Sensitivity	.05 oz/yr R134a, .025 oz/yr R22
Sensor Life	> 300 hours
Response Time	Instantaneous
Power Supply	4 AA Alkaline batteries
Battery Life	6 hours continuous
Warm up time	< 20 seconds
Probe length	17 inches
Weight, lbs	1.5 lbs
Warranty	2 years (2 yrs for sensor)

RETURN FOR REPAIR POLICY

Every effort has been made to provide reliable, superior quality products. However, in the event your instrument requires repair, forward unit to Service Center freight prepaid to the address below with return address, phone number and/or email address.

TECHNO TOOLS CORPORATION
SERVICE CENTER
2651 W 81st Street
Hialeah, FL 33016

WARRANTY POLICY

The D400 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 including an industry first two year warranty on the sensor. This warranty applies to all repairable instruments that have not been tampered with or damaged through improper use including unauthorized opening of the unit. Please ship warranty units that require repair freight prepaid to Service Center along with proof of purchase, return address, phone number and/or email address.



Model D400 Refrigerant Gas Leak Detector

Detects all CFC, HFC, HCFC
Refrigerants including blends

User Manual



Design Certified to meet
SAE J2791 and EN14624
for R-134a



INTRODUCTION

The D400 features a long life heated sensor technology that is designed to detect the more current and difficult HFC refrigerants such as R-134a in addition to all HCFC (R22) and CFC (R12) refrigerants including SNAP approved hydrocarbon blends. The D400 does not require rechargeable batteries.

FEATURES

- Heated sensor technology
- Long life, stable sensor
- R134a sensitivity .05 oz/yr
- R22 sensitivity .025 oz/yr
- Designed certified SAE J2791 standard and EN14624
- Automatic calibration and reset to ambient
- Low battery indicator
- 3 adjustable sensitivity levels
- 2- year warranty including 2 years for the sensor
- True mechanical pump
- Uses 4 AA alkaline batteries
- CE Certified
- Made in USA

Replacement Parts

Item	Part Number
Sensor with Filter	AC-SEN0009A
Filter Kit	AC-FIL0001A
Test Vial	AC-LSA0001A

EN14624/2005 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 (1gm/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 (<30 seconds) from the D400. Before leak checking, clean up any chemicals in the list below that elicit a positive response.

Brand/Chemical Name	Response	Clears <30 seconds
Dextron Transmission fluid heated to 160 °F	N	N/A
Quaker State Motor Oil heated to 160 °F	N	N/A
Rain-X Windshield Wash Fluid	Y	Yes
Ford silicone lubricant	Y	Yes
Ford Rust Inhibitor (when wet)	Y	Yes
Ford Gasket Adhesive (when wet)	Y	Yes
Loctite Natural Blue degreaser (undiluted)	Y	Yes
Ford Brake Parts Cleaner (when wet)	Y	Yes
Ford Silicone Rubber (when uncured)	Y	Yes
Motorcraft Antifreeze heated to 160 °F	Y	Yes
Gunk liquid wrench (when wet)	Y	Yes
Ford Spot Remover (when wet)	Y	Yes
Ford Pumice lotion (with mineral solvent)	Y	Yes
Ford Motorcraft brake fluid	Y	Yes
Ford Carburetor Cleaner (when wet)	Y	Yes

Maintenance

Batteries:

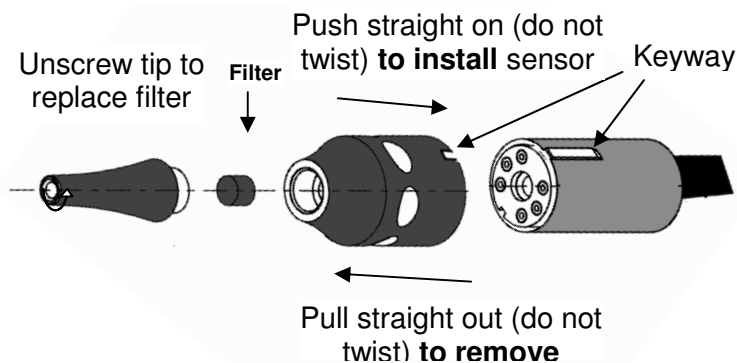
Install Batteries: Remove screw located at rear end of unit and pull down hinged battery door to open as shown. Always insert all 4 batteries into the compartment in the same direction. Note the polarity mark on the inside of the battery door for proper battery installation.

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 by pulling out of socket. Install the new sensor by aligning the 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: Make sure sensor is fully inserted for proper operation. The detector will stay in warm-up mode and the on/off switch will become inoperative if the sensor becomes loose or is not fully inserted.

D400 Control Panel



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 detector will sound a slow "beep". Warm up is usually less than 20 seconds.
3. **READY:** The detector is ready to begin searching for leaks when the green sensitivity LED turns on. The audio "beep" increases in frequency.

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.

Adjusting Sensitivity Levels

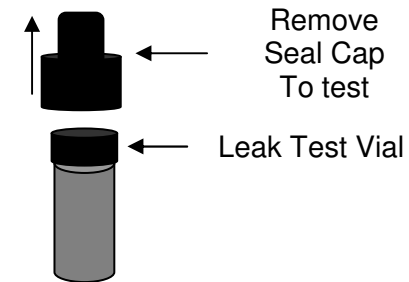
The Leak Detector will default to the NORM sensitivity level automatically once the unit comes out of the warm up cycle and the green LED will turn on.

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 plastic seal cap on top of the Leak Test Vial by pulling it off (see fig. below).
2. Turn on the detector and allow the unit 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 to full alarm indicating that the sensor and electronics are working properly.



NOTE: Always remember to replace plastic seal cap after leak test is completed. Replace Test Vial when the green color is no longer visible.