

Please read and save these instructions. Read through this owner's manual carefully before using product. Protect yourself and others by observing all safety information, warnings, and cautions. Failure to comply with instructions could result in personal injury and/or damage to product or property. Please retain instructions for future reference.



## A/C REFRIGERANT LEAK DETECTOR

### FOR CUSTOMER SERVICE

Technical Question?

**CALL 1-866-458-2472**

**customerservice@oem-tools.com**

### UNPACKING

After unpacking unit, inspect carefully for any damage that may have occurred during transit. Check for loose, missing, or damaged parts. If any damage is observed, a shipping damage claim must be filed with carrier. Do not use the A/C Refrigerant Leak Detector if broken, bent, cracked or damaged parts (including labels) are noted. Any A/C Refrigerant Leak Detector that appears damaged in any way, operates abnormally or is missing parts should be removed from service immediately. If you suspect that the A/C Refrigerant Leak Detector was subjected to a shock load (a load that was dropped suddenly, unexpectedly, etc.) immediately discontinue use until it has been checked by a factory authorized service center.



### **WARNING**

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

The following safety information is provided as guidelines to help you operate your A/C Refrigerant Leak Detector under the safest possible conditions. Any tool or piece of equipment can be potentially dangerous to use when safety or safe handling instructions are not known or not followed. The following safety instructions are to provide the user with the information necessary for safe use and operation. Please read and retain these instructions for the continued safe use of your service system. Failure to follow instructions listed below may result in serious injury. In addition, make certain that anyone that uses the equipment understands and follows these safety instructions as well.



## A/C REFRIGERANT LEAK DETECTOR

Thank you very much for choosing an OEMTOOLS Product!

For future reference, please complete the owner's record below:

**Model:** \_\_\_\_\_ **Purchase Date:** \_\_\_\_\_

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it. This machine is designed for certain applications only. OEMTOOLS cannot be responsible for issues arising from modification. We strongly recommend this machine is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted OEMTOOLS to determine if it can or should be performed on the product.

**For technical questions please call 1-866-458-2472.**



### IMPORTANT INSTRUCTIONS AND SAFETY RULES

- Keep bystanders, children, and visitors away while operating the A/C Refrigerant Leak Detector. Distractions can cause you to lose control. Protect others in the work area from injury.
- Stay alert. Watch what you are doing, and use common sense when operating the A/C Refrigerant Leak Detector. Do not use the tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the power tool in unexpected situations.
- Use safety equipment.
- Wear ANSI-approved safety glasses underneath a full face safety shield. Nonskid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.
- Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.
- Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
- Maintain tools with care.
- Keep tools dry and clean.
- Properly maintained tools are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools "Do not use" until repaired.
- Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation.
- If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool may become hazardous when used on another tool.
- Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
- When servicing a tool, use only identical replacement parts. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of injury.
- Maintain a safe working environment. Keep the work area well lit. Make sure there is adequate surrounding workspace. Keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use this product in a damp or wet location.
- Maintain labels and nameplates on this product. These carry important information. If unreadable or missing, contact OEM for a replacement.
- Keep the handle dry, clean, and free from brake fluid, oil, and grease.
- Before use, read and understand all warnings, safety precautions, and instructions as outlined in the vehicle manufacturer's service manual. It is beyond the scope of this manual to properly describe the correct procedure and test data for each vehicle.
- To reduce the risk of discomfort, illness, or death, read, understand, and follow the following safety instructions. Avoid breathing A/C refrigerant and lubricant vapor mist. Exposure may irritate eyes, nose, and throat. To remove R134a from the A/C system, use service equipment certified to meet the requirements of SAE J2788--R134a recycling equipment. Additional health and safety information may be obtained from refrigerant and lubricant manufacturers.



# A/C REFRIGERANT LEAK DETECTOR

- Always perform vehicle service in a properly ventilated area. Never run an engine without proper ventilation for its exhaust. Stop work and take necessary steps to improve ventilation in the work area if you develop momentary eye, nose, or throat irritation as this indicates inadequate ventilation.
- Engine parts that are in motion and unexpected movement of a vehicle can injure or kill. When working near moving engine parts, wear snug fit clothing and keep hands and fingers away from moving parts. Keep hoses and tools clear of moving parts. Always stay clear of moving engine parts. Hoses and tools can be thrown through the air if not kept clear of moving engine parts. The unexpected movement of a vehicle can injure or kill. When working on vehicles always set the parking brake or block the wheels.
- Be alert for hot engine parts to avoid accidental burns.
- When under pressure, refrigerants become liquid. When accidentally released from the liquid state they evaporate and become gaseous. As they evaporate, they can freeze tissue very rapidly. When these gases are breathed in, the lungs can be seriously damaged. If sufficient quantities are taken into the lungs, death can result. If you believe you have exposed your lungs to released refrigerant, seek immediate medical assistance. Refrigerants can cause frostbite and severe burns to exposed skin. Refrigerants are under pressure and can be forcibly sprayed in all directions if carelessly handled. Avoid contact with refrigerants and always wear protective gloves and make certain other exposed skin is properly covered. Refrigerants can also severely injure or cause permanent blindness to unprotected eyes. Avoid contact with refrigerants and always wear safety goggles.
- Avoid accidental fire and/or explosion. Do not smoke near engine fuel and battery components.
- The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.
- The manufacturer declines any and all responsibility for damage to vehicles or components if said damage is the result of unskillful handling by the operator or of failure to observe the basic safety rules set forth in the instruction manual.

## DISPOSAL

- At the end of the useful life of the A/C Refrigerant Leak Detector, dispose of the components according to all state, federal, and local regulations.
- All technicians opening the refrigeration circuit in automotive air conditioning systems must now be certified in refrigerant recovery and recycling procedures to be in compliance with Section 609 of the Clean Air Act Amendments of 1990. For information on certification call MACS Worldwide at (215) 631-7020.
- The 1990 amendments to the United States Clean Air Act mandate that all personnel who service refrigerant systems must be trained and certified. Fines are in place for violations and compliance is now being monitored by the U.S. EPA.
- Do Not Vent Refrigerant to the Atmosphere. Use Appropriate Recovery Equipment.

## FEATURES

- Advanced Microprocessor Controller
- Dual color LED indicator light with progressive real time display
- Sensitivity Adjustable, seven level alarming indicated by LED display
- Modular, replaceable Sensor Tip
- Seven level audible and visual alarm
- Auto reset when unit is turned on
- Battery Level Indicator

## PRODUCT SPECIFICATIONS

|                            |                                     |
|----------------------------|-------------------------------------|
| <b>Max Sensitivity</b>     | To halogenated refrigerants, 3gr/yr |
| <b>Battery Life</b>        | 30 hours under normal condition     |
| <b>Working Temperature</b> | 0°C -52°C – 32°F – 125°F            |
| <b>Working Mode</b>        | Continuous and no limit             |
| <b>Reaction Time</b>       | Instant                             |
| <b>Resetting Time</b>      | 2 Seconds                           |
| <b>Warm-Up Time</b>        | About 6 Seconds                     |
| <b>Size</b>                | 22.9cm X 6.5cm X 6.5cm              |
| <b>Weight</b>              | 560 grams                           |
| <b>Power Supply</b>        | 3V (2 Alkaline C Batteries)         |
| <b>Probe Length</b>        | 35.5cm – 14”                        |
| <b>Gross Weight</b>        | 720G - 1.5lbs                       |





## A/C REFRIGERANT LEAK DETECTOR

### PURPOSE

The purpose of this tool is to allow the user to perform electronic leak detection of refrigerant gas from A/C Systems.

### APPLICATIONS

The 24510 Leak Detector can also be used in:

- Other systems and storage/recovery containers
- The unit responds to all halogenated (with Chlorine and Fluorine included) refrigerants. This includes, but is not limited to: CFCs R12, R11, R500, R503, HCFCs R22, R123, R124, R502, HFCs R34a, R404a, R125.
- Detect Ethylene Oxide gas leaks in hospital sterilizing equipment (it will detect the halogenated carrier gas)
- Detect SF-6 in high voltage circuit breakers.
- Detect most gases that contain Chlorine, Fluorine, and Bromine (halogen gases)
- Detect cleaning agents used in dry cleaning applications such as perchloroethyl.
- Detects halogen gases in fire-extinguishing system.

### OPERATING INSTRUCTIONS



Always wear safety glasses and gloves!

Read the **ENTIRE IMPORTANT INSTRUCTIONS AND SAFETY RULES** section at the beginning of this document including all text under subheadings therein before set up or use of this product.

1. To turn the unit on, long press the Power Key, all LED's should come on for 3 seconds and the detector will automatically reset to ambient conditions. After the auto-reset, only the first LED will be left on. (Green, Batteries OK, Orange, Batteries weak and will need to be replaced soon, Red, Batteries need to be replaced before using)
2. The default sensitivity level is 4. You will hear a rapid, steady beep sound. The sensitivity can be adjusted by pressing Sensitivity  $\uparrow$  or Sensitivity  $\downarrow$ , according to your requirement.
3. Begin searching for leaks. When a leak is detected, the rate of the beep will increase noticeably and the Indicator Lights will progressively turn on.
4. Sensitivity can be adjusted at any time using the  $\uparrow$  or  $\downarrow$ .
5. If a leak is detected before reaching the leak source, press the Reset Key to reset the Leak Detector to the ambient conditions, and then try again.

6. Press the Mute key to stop the beeping sound and use the lights only for detecting, press it again to turn the sound on.

### DETECTION METHOD

1. Visually examine the refrigeration system. The oily and dirty spots, valves, coils, connections, fitting and lines are the area's most likely to leak.
2. Start leak detecting at a speed of 1cm/second and a distance of 1-3 cm from the suspected leak area.
3. When an alarm is triggered, it may indicate a leak is close by. Detect around that area again to see if the alarm is repeatable. If a leak is confirmed, pinpoint the leak source by moving slowly from the non-leaking area and back to the leaking area from different directions.
4. Additional work may be needed to eliminate possibility of false detection. Be aware that contaminants can cause false detection, it may be necessary to blow clean dry air into the leaking area and repeat step 3 above.
5. Evaporator Coil Leaks are more difficult to confirm that other areas because it is difficult to access the entire surface of the Coil. You can insert the probe into the vent, condensation drain (making sure not to let condensate touch the tip) or other access point to detect the air inside the Evaporator Case. Most refrigerants are lighter than air and are likely to accumulate at the highest spot.

### NOTES

1. In order to detect leaks, the system must have normal operating pressure.
2. Leaking areas are usually contaminated with dirt and oil, be sure to not let the tip come into contact with these contaminants.
3. In areas with a large leak, it may be necessary to press the Reset Key to reset the Leak Detector to the ambient conditions to prevent a continuous sounding of the alarm.
4. To prevent false alarms, be sure to prevent contact of the Sensor Tip with any moisture or solvents.

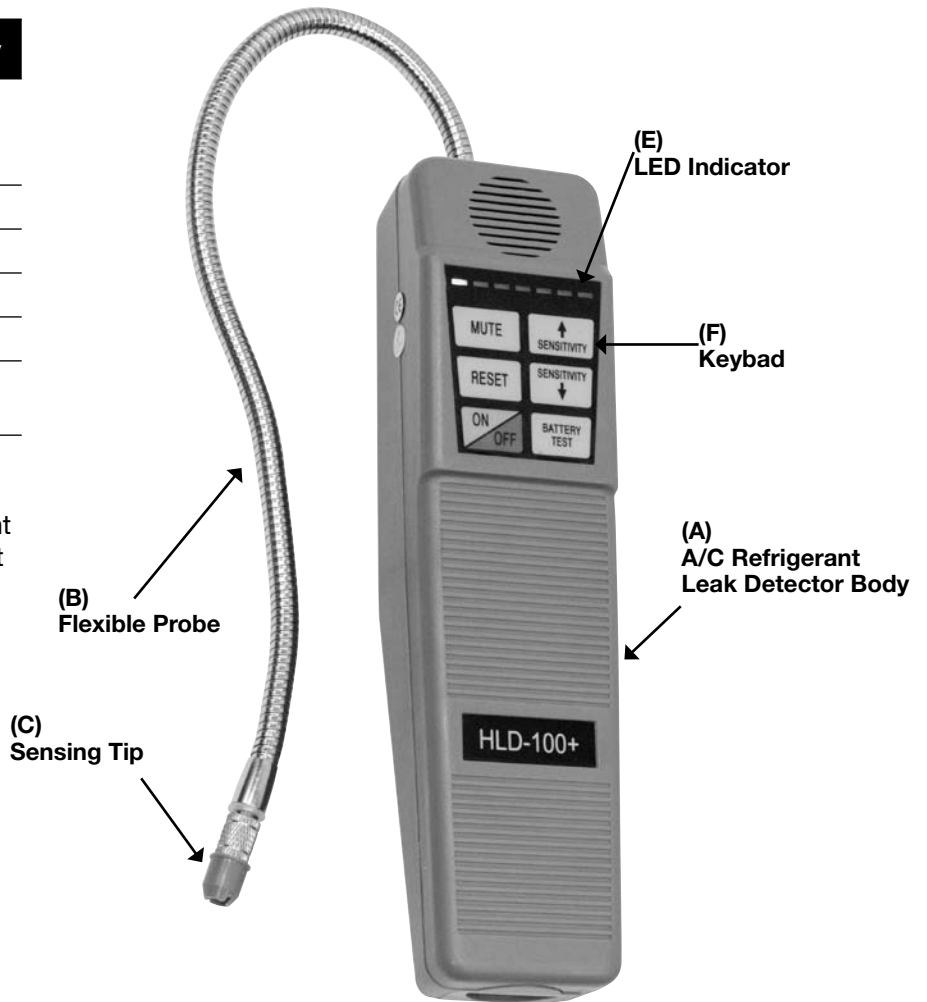


# A/C REFRIGERANT LEAK DETECTOR

| Figure | Description                        | Quantity |
|--------|------------------------------------|----------|
| A      | A/C Refrigerant Leak Detector Body | 1        |
| B      | Flexible Probe                     | 1        |
| C      | Sensing Tip                        | 1        |
| E      | LED Indicator                      | 1        |
| F      | Keypad                             | 1        |
|        | Battery Cover (not shown)          | 1        |

**NOTE**

Not all components of the A/C Refrigerant Leak Detector are replacement items, but are illustrated as a convenient reference for location and position in the assembly sequence.



Always turn the power off and remove the batteries before replacing the sensor tip. Voltage at the Sensor Tip may pose an electrical hazard.

**MAINTENANCE**

Proper maintenance is important and may extend the service life of your Leak Detector.

1. Always store the A/C Refrigerant Leak Detector in a well-protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements.
2. Keep the A/C Refrigerant Leak Detector clean for better and safer performance.
3. Keep the Sensor Tip Clean: Use a cotton cloth or dry air to clean the shield on the Sensor Tip if it gets contaminated. If the Sensor Tip itself is contaminated, soak in alcohol for a few minutes and then blow dry with compressed air.

**NOTE**

Never use petroleum based solvents to clean the Sensor Tip as they may leave a thin film which will reduce the sensitivity of the Leak Detector.

Remove the Batteries from the unit if the unit will not be used for a long time.





## A/C REFRIGERANT LEAK DETECTOR

### OEMTOOLS™ YEAR LIMITED WARRANTY

This warranty does not cover batteries, sensor tips or other materials that wear out during normal use. BEFORE RETURNING THE UNIT, PLEASE REPLACE OR CLEAN THE SENSOR TIP AND CHECK BATTERIES. A spare tip is included with your Leak Detector. Additional tips are available for sale at the point of purchase or from OEMTOOLS.

From one year from the original purchase date of this product, OEMTOOLS will warranty this product. If you find any defect in material or workmanship, through normal usage, return it to the place of purchase or to OEMTOOLS for repair or replacement at our discretion. In order to obtain this service send your tool and proof of purchase, transportation pre-paid, to OEMTOOLS Q.A. Dept., 3580 E. Raines Road #3, Memphis, TN 38118. We will not be responsible for lost or damaged goods during transportation, please insure your package. If our inspection verifies the defect, we will either repair or replace the product at our election, or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

OEMTOOLS does not provide warranty for products labeled other than OEM or OEMTOOLS. OEMTOOLS will not provide any warranty for products subjected to abnormal use. Abnormal use includes, but is not limited to, abuse, accident, alteration, neglect, and unauthorized or unreasonable use or repairs. This warranty does not cover bits, blades, files, batteries, or calibration. We recommend that you maintain your tools and sharpen or replace blades, bits, files, and batteries as necessary. OEMTOOLS reserves the right to make any changes in construction or design at any time without any obligation in incorporating such changes to tools or equipment previously sold.

OEMTOOLS makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of one year from the date of purchase. This warranty does not apply to damage due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear or to lack of maintenance.

We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

