

# **ALT-400**

## **Automotive Leak Tester**

### **(Turbo/EVAP)**

### **User Manual**

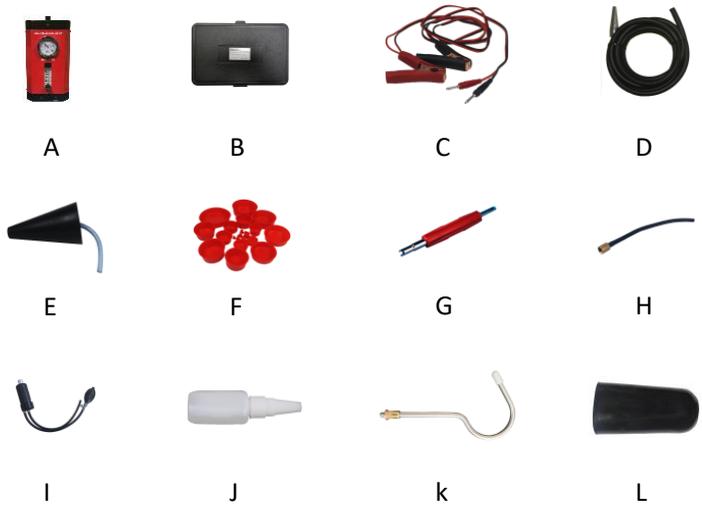


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**Inside the Package You Could Find**

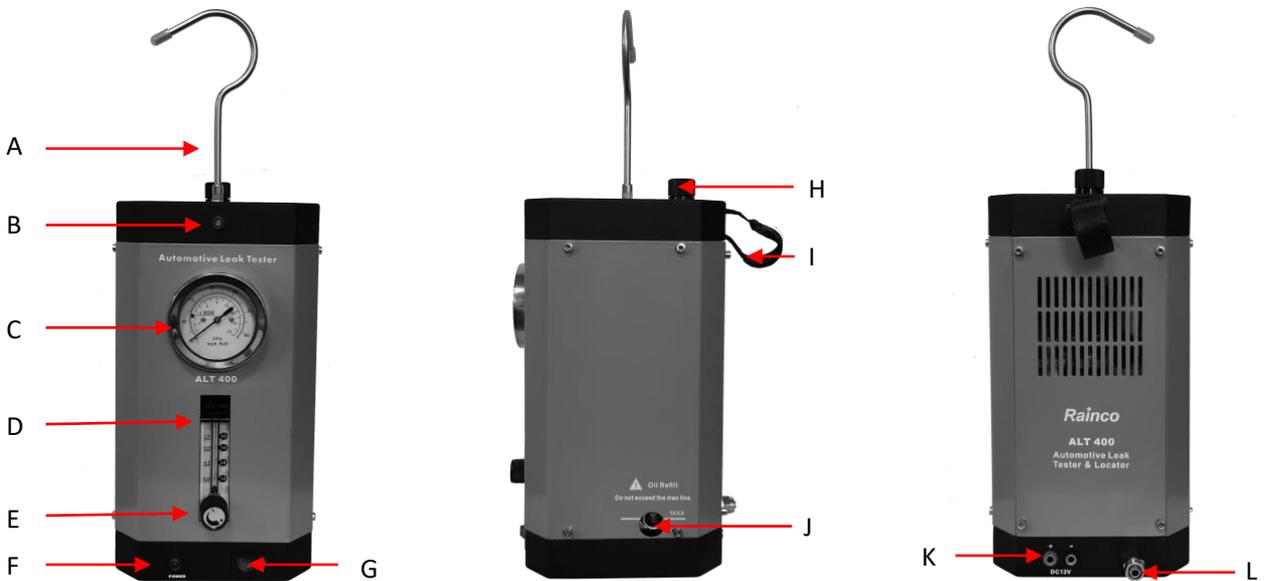
- A. Main Unit
- B. Plastic Casing
- C. Power Cords
- D. Smoke Tube
- E. Intake Adaptor Cone
- F. Cap Stopper (set)
- G. Schrader Valve Tool (only EVAP)
- H. EVAP Service Port Adaptor(only EVAP)
- I. Universal Intake Adaptor
- J. Oil Bottle
- K. Hook
- L. Drum rubber



This is consumables and need order.

- M. User Manual

**Overview**



A. Hook	B. Indicator for Power On/Off.
C. Pressure gauge	D. Flowmeter
E. Adjusting knob of flowmeter	F. Indicator for Smok mode
G. Switch of smoke mode	H. Port of filling oil
I. Receiving rope	J. Oil level
K. Power inlets: RED to +, BLACK to -	L. Smoke outlet

This Automotive Diagnostic Leak Detector is designed for test leaks in vehicle pipe systems. It could be used on all cars, motorcycles, snowmobiles, ATV, light trucks, boats, etc.

## Prepare the Unit

1. Mount the Power Cords to the Power Inlets.

**Note: Red plug to red socket and black plug to black socket.**

2. Mount the Smoke Tube to the Smoke Outlet, and lock it with the quick clamp.

**Note: Use the Velcro Strap to collect the Power Cords and the Smoke Tube before storage.**

3. Open the Oil Filler Port, fill smoke oil into the reservoir, note the Oil Level Indication Window, make sure the oil level do NOT exceed the Max line. If the smoke oil is overfilled, turn the unit upside down to drain some oil out.

4. Now the unit is ready to use.

**Note: Pay attention to the Oil Level Indication Window before use. If the oil level is close to the bottom, the unit will need a refill.**

## Test Run

1. Connect 12V vehicle battery with the clamps on the Power Cords. The Power Indicator will be ON and the unit will start generating air pressure.

**Note: red clamp to positive (+), and black clamp to negative (-).**

2. Turn the Flow Dial to max, the Flow Gauge will indicate the flow rate.
3. Block off the smoke nozzle on the Smoke Tube with fingertip, the Pressure Gauge will indicate the real time output pressure.
4. Switch on the smoke mode switch, the smoke mode indicator will be ON. The unit will start producing smoke.

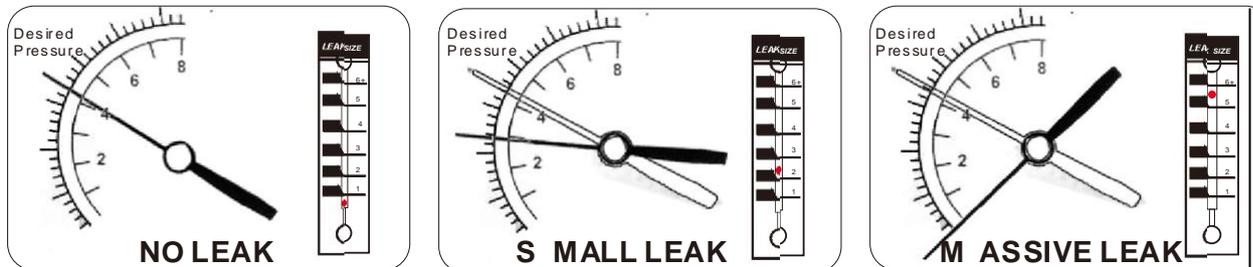
## Generic Operation

1. Turn OFF the ignition of the vehicle. LEAK TEST OF VEHICLE SYSTEMS REQUIRE THE ENGINE TO BE OFF.
2. Unmount the Air Filter, and the Throttle connections.
3. Clean the opening and avoid sharp objects before put the adaptor in.
4. Put the Intake Adaptor Cone (or the Universal Intake Adaptor) into the opening. As bellows:



5. Connect Power Cords to 12V vehicle battery. For best performance, the vehicle battery shall be fully charged. Do NOT use a DC12V switch power supply.

6. Now the unit shall generate pressurized air flow.
7. Turn the Flow Dial to max, then introduce the smoke nozzle into the system via the Intake Adaptor Cone (or the Universal Intake Adaptor).
8. Wait for about 2 minutes for the system to be pressurized.
9. Observe the Flow Meter and the Pressure Gauge for leak status. As follows:



10. Judging the size of leakage according to the Flow Meter and the Pressure Gauge.
11. If there's a leak in the system, switch on the smoke mode, the unit will start generating smoke.
12. Pull off the smoke nozzle, and plug it back again when there's obvious smoke coming out of the smoke nozzle.
13. The system will be ready for leak check in 2 minutes. Use a bright light torch or working lamp to assist.
14. After leak test, collect the Power Cords and Smoke Tube with the Velcro Strap, clean the Intake Adaptor Cone (or the Universal Intake Adaptor) before storage.

**Note:**

1. Cap Stoppers could be used to block off various openings, if a test on a partial of the whole system is required.
2. Cap Stoppers also could be used to block off the intake, and the smoke nozzle connects to the system via other openings available.
3. The smoke method can NOT be used on testing leaks of oil-sensitive parts, e.g. lamp housing.
4. ONLY 12V vehicle batteries are allowed to be used as power supply for the machine.

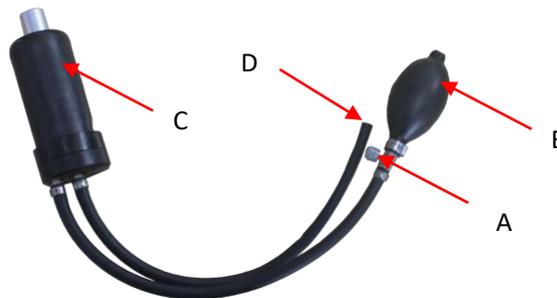
### EVAP Leak Test (EVAP Models ONLY)

**Generic OBD EVAP related codes: P0443~0457/P0465~0469.**

1. Locate EVAP Access Port (Green cap in engine compartment).
2. Remove the Schrader Valve, by using the Schrader Valve Tool.  
**Note: The valve is left-hand thread.**
3. Mount the EVAP Service Port Adaptor.
4. Connect the smoke nozzle to the EVAP Service Port Adaptor, introduce pressurized air into the system, and turn the Flow Dial to max, check the status of Pressure Gauge and Flow Meter to confirm if there is a leak.
5. If there's a leak in the system, press the Start/Stop Button, the unit will start generating smoke for an auto-stop 5 minutes working cycle.

6. Pull off the smoke nozzle, and plug it back again when there's obvious smoke coming out of the smoke nozzle.
7. In 2 minutes, the system will be ready for leak check. Use a bright light torch or working lamp to assist.
8. After leak test, collect the Power Cords and Smoke Tube with the Velcro Strap, clean the Intake Adaptor Cone (or the Universal Intake Adaptor) before storage.

### Instruction on Universal Intake Adaptor



1. Clean the inner wall of the intake opening while the Air Filter, and the Throttle connections are removed, so as not to scratch the adapter.
2. Close the Pressure Relief Valve (A) next to the Hand Pump (B).
3. Put the Rubber Component(C) into the intake opening.
4. Inflate the Rubber Component(C) by pressing the Hand Pump (B) till the intake opening is tightly sealed.
5. Now the system is ready to test, introduce air/smoke into the system by plug the smoke nozzle into the Tube Opening (D).
6. After test, pull off the smoke nozzle, release the inflated air by open the Pressure Relief Valve (A) next to the Hand Pump(B).
7. Clean the adapter for storage, avoid contact with corrosive liquids.

### Chemical

ADVISE use the special smoke oil.

Also this unit can use Baby Oil as smoke oil, available in supermarket or pharmacy.

Overfill: Turn the unit upside down to drain some oil out.

### Product Information

Power Supply: 12V Vehicle Battery

Flow Rate: about 16L/Min

Test pressure: Turbo: about 1bar / EVAP: about 10kPa

Flow Control: 360 Degree Flow Dial

Pressure Control: NO

High temperature protection: YES

Pressure gauge: Turbo: 2bar / EVAP: 10kPa

**Warranty**

1. The main unit entitled free warranty since the date of purchasing up to 12 months.
2. For warranty issue concerning the accessories, please make inquiry to the distributor.
3. Any damage to the machine caused by misuse, or improper operation, is not covered by warranty.

<b>Service Records</b>			
Date	Problem Description	Solution	Signature

The Manufacturer reserves the right of improving the structure and design of the product without prior notice.