

# **AUTOOL SDT208**

Smoke Leak Detector

User Manual





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企业标准 / Corporate standard: Q/OR 006-2023



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## CAUTIONS

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### Warning



Before using the instrument, please read this manual carefully for proper operation.

- ▶ If you are not a technician, please do not change, disassemble or repair the product; otherwise all the losses shall be borne by the user.
- ▶ This product is powered by electricity and should not be used as a toy for children.
- ▶ To avoid a short circuit, do not put the product in water or other liquid.
- ▶ Please use the power source and power cord supplied by the manufacturer according to the standards.
- ▶ Please do not expose the product to intense light or high temperature when it's not used.
- ▶ When doing leak detection test, keep away from the smoke sensitive parts like the headlight.
- ▶ Replace the oil in the detector regularly. Before adding the new oil, please drain out the remaining used oil in the detector.
- ▶ Selection of the detector oil: liquid paraffin and baby oil are both usable.
- ▶ Please make sure there is no water in it, and please do not use any sticky liquid.

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## PRODUCT INTRODUCTION

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### Overview

The AUTOOL SDT208 is a professional automotive pipeline leak detection tool that complies with the technical specifications for EVAP testing in professional auto service. It assists technicians in quickly and accurately locating leaks in the vehicle's pipeline system, including EVAP system testing, intake system testing, exhaust system testing, cooling system testing, turbo system testing, crankcase system testing, vehicle sealing testing, and various component testing. The SDT208 significantly enhances work efficiency for automotive technicians.

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### Working theory

#### Low oxygen combustion

- The AUTOOL smoke leak detector employs a forced combustion smoke generation method in a low oxygen environment. It is energized by a conductive column to the heating wire, which rapidly heats up to more than 300°C so that the mineral oil reaches the ignition point and enters the state of combustion. Due to the small intake of air flow, it is insufficient to provide sufficient oxygen to maintain full combustion, thus the combustion mainly occurs on the surface of the heating wire. Subject to high-temperature heating, the mineral oil retention object can continue to burn insufficiently around the heating wire, thus producing a large amount of smoke.
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### Features

Built-in Air Pump	<b>Yes</b>
Overheat Protection	<b>Yes</b>
Pressure Gauge	<b>Yes</b>
Protection Indicator	<b>Yes</b>
Flow Meter	<b>Yes</b>
Flow Adjustment Knob	<b>Yes</b>
Oil Drain Valve	<b>Yes</b>
Liquid Level Gauge	<b>Yes</b>

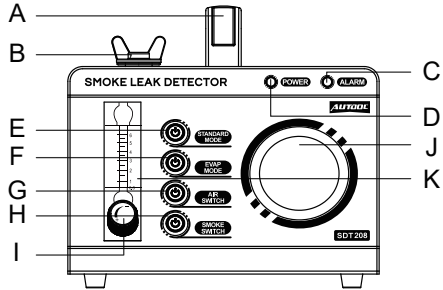
Air Control Switch	<b>Yes</b>
Smoke Control Switch	<b>Yes</b>
Adjustable Pressure	<b>Yes</b>
Intelligent Digital Display	<b>None</b>

**Technical  
parameter**

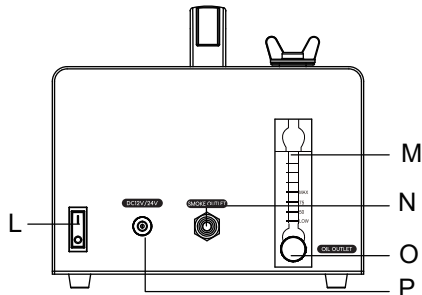
Power Supply	<b>DC 12V/24V</b>
Test Oil Filling Volume	<b>10-20ml</b>
Rated Output Pressure	<b>&lt;10/35psi</b>
Rated Output Flow	<b>&lt;15L/min</b>
Rated Power	<b>80W</b>
Product Size	<b>280*210*180mm</b>
Package Size	<b>350*250*300mm</b>
Product Weight	<b>4.2kg</b>
Gross Weight	<b>6.55kg</b>

# PRODUCT STRUCTURE

Structure diagram



<b>A</b>	Hook port	<b>B</b>	Oil filler port
<b>C</b>	Alarm indicator	<b>D</b>	Power indicator
<b>E</b>	Standard mode	<b>F</b>	EVAP mode
<b>G</b>	Air switch	<b>H</b>	Smoke switch
<b>I</b>	Flow control valve	<b>J</b>	Pressure gauge
<b>K</b>	Air flowmeter		



<b>L</b>	Power switch	<b>M</b>	Oil level gauge
<b>N</b>	Smoke outlet	<b>O</b>	Oil outlet
<b>P</b>	Power socket		



## OPERATIONS INSTRUCTION

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### Preparation before use

- Place the detector on the mobile cart or under the hood.
- Open the oil filler cap and fill 10ml test oil into the filling port (B). The amount of test oil can be observed through the liquid level gauge (M).

#### **NOTE**

- ▶ If the test oil is overfilled, please drain some oil out through the oil drain outlet (O).
- 
- After completing the first two steps, start using the SDT208.

### Detail operation during use

- Fit the smoke hose to the smoke outlet (N) and the power cord to the power socket (P).
- Connect the power clip to the DC 12V/24V battery, turn on the power switch (L) and the power indicator lights up (D).

#### **NOTE**

- ▶ The red clip is connected to the positive terminal (+) and the black clip is connected to the negative terminal (-). For optimum performance of the smoke leak detector, the car battery should be fully charged in advance.
- 
- Press the air mode switch (G) and the equipment begins to produce pressurized air.
  - Press the smoke mode switch (H) and the equipment begins to produce smoke.

#### **TIP**

- ▶ The smoke output can be observed and controlled through the smoke flow meter (K) and the smoke flow regulating valve (I).

#### **NOTE**

- ▶ When the internal temperature reaches 75°C, the product will start self-protection function and stop working automatically.
- 
- Press the smoke control switch (H) again to stop the smoke output.

- It is recommended to drain out the remaining test oil for next use in case the detector is not used for a long time.

**Operation guidelines for automobile pipeline inspection**

- Turn off the engine ignition switch.

**⚠ NOTE**

- ▶ All leak detection of automobile piping systems must be performed with the engine turned off.

- Remove the intake air filter, while some models need to remove the throttle valve.
- Clean the inner wall of the test pipe and install the conical adapter of the air inlet on the test pipe.
- The smoke leak detector is powered by DC 12V/24V car battery only.
- The cone on the smoke outlet pipe has air pressure output when press the air mode switch.
- Press the smoke control switch again, the indicator lights on, wait for about 10 seconds, insert the cone head on the smoke outlet pipe into the air inlet taper adapter when the smoke becomes thick.
- Wait for about 1 to 2 minutes, you can use a flashlight with strong light to help find the leaks in the pipeline and diagnose the leakage status.
- After the test is completed, turn off all switches, recycle and save the remaining test oil, put away all accessories, and confirm that there is no omission.

**⚠ NOTE**

- ▶ If only part of the system needs to be tested or if the system being tested has other openings that need to be sealed, a plug kit can be used, which can also be used to seal the intake manifold.

**⚠ WARNING**

- ▶ When the internal temperature reaches 75°C after a long time using, the protection indicator (C) will light up and the detector will stop working automatically.

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### Instruction of smoke leak detector pressure gauge

- The smoke leak detector pressure gauge has two main functions, one is for machine self-test, and the other is used for leak judgment, which can be used to initially determine the leakage of piping system through the change of pressure gauge pointer. If the pointer of the pressure gauge keeps still, which represents there is a relatively serious leak in the pipeline; the pressure gauge pointer will rise to a fixed pressure value only if the area of the piping system currently being tested is relatively small. And if there is a leak, the pressure gauge pointer will drop or become unstable. In this case, you can turn on the smoke switch to output smoke to locate the leak.

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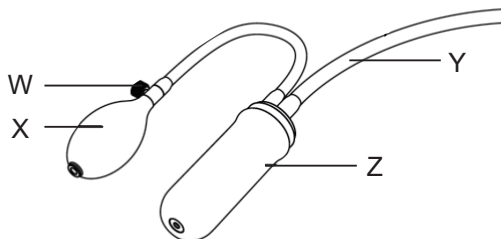
### Airbag adapter instructions

Airbag adapters are suitable for non-circular connections. While for round and oval ports, please use the inlet tapered adapter for normal cases.

- Before using the airbag adapter, be sure to clean the inner wall of the intake manifold (or other test interfaces) to prevent sharp protrusions from piercing the airbag adapter.
- Put the air bag (Z) into the test port.
- Press the hand pump (X) until the bladder (Z) inflates and fully seals the test port.
- Connect the cone head on the smoke outlet pipe with the smoke guide pipe (Y), introduce gases and smoke into the duct to be tested.
- After the test is completed, turn the pressure relief valve (W) counter clockwise, take out the car air inlet adapter from the test port, clean and save it.

 **NOTE**

- ▶ Airbag adapter can not contact with corrosive oil.
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











<b>W</b>	Pressure Relief Valve	<b>X</b>	Hand Pump
<b>Y</b>	Smoke Duct	<b>Z</b>	Airbag

**About  
smoke  
test oil**

- This product needs to use special test oil. It's recommend to purchase liquid paraffin or baby oil as test oil if you cannot find special test oil locally.
- It is recommended to use the filling bottle with the capacity mark in the accessories of the packing to fill in new oil.
- Too much test oil in the machine can affect smoke output, Please discharge part of the e-liquid through the oil discharge port.
- If the product is not used for a long time, it is recommended to drain out the remaining test oil for preservation.

## DESCRIPTION OF ACCESSORIES

Accessories	Name	Quantity	Remark
	Power cord	1 pc	Connected to car battery
	Smoke outlet hose	1 pc	Connecting adapter
	Cone adapter	1 pc	Installed on the detected pipeline
	Valve core wrench	1 pc	Removing the valve core
	EVAP connector	1 pc	For connecting EVAP service port
	Filling bottle	1 pc	There is a volume scale for checking filling amount
	Universal airbag adapter	1 pc	Used to seal the air inlet
	Universal hard rubber plug	1 set	Blocking the pipe
	Universal small adapter	1 pc	Suitable for detecting small pipes
	Universal red rubber plug	1 set	Used for sealing the hose
	BMW oil port adapter	1 pc	For connection to the oil filler of BMW
	User manual	1 pc	Product related operation instructions

## MAINTENANCE SERVICE

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Our products are made of long-lasting and durable materials, and we insist on perfect production process. Each product leaves the factory after 35 procedures and 12 times of testing and inspection work, which ensures that each product has excellent quality and performance.

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**Maintenance** To maintain the performance and appearance of the product, it is recommended that the following product care guidelines be read carefully:

- Be careful not to rub the product against rough surfaces or wear the product, especially the sheet metal housing.
- Please regularly check the product parts that need to be tightened and connected. If found loose, please tighten it in time to ensure the safe operation of the equipment. The external and internal parts of the equipment in contact with various chemical media should be frequently treated with anti-corrosion treatment such as rust removal and painting to improve the corrosion resistance of the equipment and extend its service life.
- Comply with the safe operating procedures and do not overload the equipment. The safety guards of the products are complete and reliable.
- Unsafe factors are to be eliminated in time. The circuit part should be checked thoroughly and the aging wires should be replaced in time.
- Regularly clean and replace consumable parts such as oil pump and oil filter; adjust the clearance of various parts and replace worn (broken) parts. Avoid contact with corrosive liquids.
- When not in use, please store the product in a dry place. Do not store the product in hot, humid, or non-ventilated places.

## WARRANTY

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From the date of receipt, we provide a three-year warranty for the main unit and all the accessories included are covered by a one-year warranty.

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### Warranty access

- The repair or replacement of products is determined by the actual breakdown situation of product.
- It is guaranteed that AUTOOL will use brand new component, accessory or device in terms of repair or replacement.
- If the product fails within 90 days after the customer receives it, the buyer should provide both video and picture, and we will bear the shipping cost and provide the accessories for the customer to replace it free of charge. While the product is received for more than 90 days, the customer will bear the appropriate cost and we will provide the parts to the customer for replacement free of charge.

### These conditions below shall not be in warranty range

- The product is not purchased through official or authorized channels.
- The product breakdown because the user does not follow product instructions to use or maintain the product.

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We AUTOOL pride ourselves on superb design and excellent service. It would be our pleasure to provide you with any further support or services.

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### Disclaimer

All information, illustrations, and specifications contained in this manual, AUTOOL resumes the right of modify this manual and the machine itself with no prior notice. The physical appearance and color may differ from what is shown in the manual, please refer to the actual product. Every effort has been made to make all descriptions in the book accurate, but inevitably there are still inaccuracies, if in doubt, please contact your dealer or AUTOOL after-service centre, we are not responsible for any consequences arising from misunderstandings.

## RETURN & EXCHANGE SERVICE

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### Return & Exchange

- If you are an AUTOOL user and are not satisfied with the AUTOOL products purchased from the online authorized shopping platform and offline authorized dealers, you can return the products within seven days from the date of receipt; or you may exchange it for another product of the same value within 30 days from the date of delivery.
- Returned and exchanged products must be in fully saleable condition with documentation of the relevant bill of sale, all relevant accessories and original packaging.
- AUTOOL will inspect the returned items to ensure that they are in good condition and eligible. Any item that does not pass inspection will be returned to you and you will not receive a refund for the item.
- You can exchange the product through the customer service center or AUTOOL authorized distributors; the policy of return and exchange is to return the product from where it was purchased. If there are difficulties or problems with your return or exchange, please contact AUTOOL Customer Service.

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