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VXSCAN V3

VXSCAN V3 Automotive Smoke Machine Leak Detector User Manual

Model: V3 | Brand: VXSCAN

1. INTRODUCTION

The VXSCAN V3 Automotive Smoke Machine Leak Detector is a professional diagnostic tool designed to quickly and accurately locate leaks in various vehicle pipe systems. Equipped with a built-in air pump, pressure gauge, and adjustable flow meter, it offers both air and smoke modes to efficiently identify and pinpoint leaks in systems such as EVAP, intake, exhaust, fuel tank, crankcase, and cooling systems. This manual provides detailed instructions for the safe and effective use of your V3 smoke machine.



Figure 1.1: VXSCAN V3 Smoke Machine Leak Detector and included accessories.

2. SAFETY INFORMATION

Please read and understand all safety warnings and instructions before operating the device. Failure to do so may result in injury or damage to the equipment or vehicle.

- **Power Supply:** The device must only be powered by a DC12V car battery with a current range of 8A-10A. Do not connect to other power sources or reverse the positive and negative terminals.
- **Oil Type:** Use only Johnson & Johnson baby oil (pink label) or USP Mineral Oil for smoke generation. Do not exceed the recommended oil refill amount (10ml-20ml).
- **Engine Off:** Ensure the vehicle's ignition is turned off and the engine is not running during testing.
- **Sensitive Parts:** Do not test smoke-sensitive parts directly.
- **Pressure Control:** Monitor the pressure gauge. Excessive pressure can damage vehicle pipes. Adjust the flow meter as needed.
- **Ventilation:** Operate in a well-ventilated area. Smoke can be irritating.
- **Overheat Protection:** The device has overheat protection (up to 120°C) and anti-frost protection (down to -20°C). However, avoid extreme temperatures.
- **Process Duration:** The smoke generation process typically takes about 5 minutes.



WARM TIPS



1. Do not test the smoke sensitive parts for leak detection



2. Only be powered by 12V car battery, Do not reverse the positive and negative



3. Clean the inner side of the air intake hose before placing the universal air inlet bag into the



4. It means oil insufficiency, please fill in oil in time.



5. The process is about 5 minutes, so you don't have to worry about it.



6. When the product is working, please do not turn on the engine.



Figure 2.1: Important safety and operational tips for the VXSCAN V3.

3. PRODUCT OVERVIEW AND COMPONENTS

The VXSCAN V3 is a compact and robust smoke leak detector. Familiarize yourself with its main components and what's included in the package.



Figure 3.1: Main components and dimensions of the VXSCAN V3.

Main Unit Features:

- **Pressure Gauge:** Displays the system pressure, indicating leak presence and size.
- **Adjustable Flow Meter:** Allows control over smoke output and pressure.
- **Dual Mode Buttons:** Select between Air Mode (for quick leak detection) and Smoke Mode (for precise leak location).
- **Built-in Air Pump:** Eliminates the need for an external air compressor.
- **Oil Refill Port:** For adding test oil.
- **Smoke Outlet:** Where smoke exits to the test hose.
- **Power Socket:** For connecting to the vehicle's 12V battery.

Package Contents:



Figure 3.2: What's included in the VXSCAN V3 package.

- VXSCAN V3 Main Unit
- Standard Cone Adapter (30-85mm)
- Funnel
- Replacement Rubber
- Intake Bladder
- Smoke Hose
- Power Cord Clamp
- Test Oil Refill Bottle (oil not included)

4. SPECIFICATIONS

Feature	Specification
Input Voltage	DC 12V, < 8 Amp
Output Pressure	< 1.2 Bar
Smoke Output	< 7 L/Min
Power Cord Length	2.5 Meters
Smoke Hose Length	2.5 Meters
Working Cycle	5 Min auto-stop
Fast Smoke Out	10 Seconds
Main Unit Dimensions	7.28" x 5.11" x 3.34"
Package Weight	2.29 Kg / 5 Lb



Figure 4.1: VXSCAN V3 Technical Specifications.

5. SETUP GUIDE

Follow these steps to set up your VXSCAN V3 smoke machine for operation.

- 1. Fill Test Oil:** Open the oil refill port on the top of the device. Using the provided funnel and oil refill bottle, fill 10ml-20ml of Johnson & Johnson baby oil (pink label) or USP Mineral Oil into the detector. Do not overfill.
- 2. Prepare Vehicle:** Disconnect the intake pipe of the car or the specific pipe system you intend to test. Ensure the engine is off.
- 3. Connect Smoke Hose:** Connect the smoke hose from the detector to the vehicle's pipe system using the appropriate adapter (e.g., standard cone adapter or intake bladder).
- 4. Connect Power:** Connect the power cord clamps to the vehicle's DC12V battery. Ensure correct polarity (red to positive, black to negative). The device will power on.

Figure 5.1: Easy-to-use setup steps for the automotive smoke machine.

6. OPERATING INSTRUCTIONS

The VXSCAN V3 offers two operating modes for comprehensive leak detection.

6.1. Air Mode

Air Mode helps you quickly determine if a leak exists in the system by pressurizing it with air. This mode is useful for initial diagnosis.

- After connecting the device and powering it on, the power indicator light will be red, indicating normal power supply.
- Press the 'Air Mode' button (usually indicated by an air icon). The device will begin to inject air into the pipe.
- Observe the pressure gauge. If the pressure drops or does not build up, it indicates a leak. You may also hear a hissing sound if the leak is significant.



Figure 6.1: Using Air Mode for quick leak diagnosis.

6.2. Smoke Mode

Smoke Mode allows you to visually locate the exact point of a leak by filling the system with visible smoke.

- After confirming a leak in Air Mode, switch to 'Smoke Mode' by pressing the corresponding button (usually indicated by a smoke icon).
- The device will start generating smoke within 10 seconds. The pipe system will be filled with smoke.
- Visually inspect the entire system for smoke escaping, which indicates the leak point. Use a flashlight if necessary.
- You can adjust the smoke output using the flow meter knob to better control the smoke effect for precise location.



Figure 6.2: Using Smoke Mode to pinpoint leak locations.

ADJUSTABLE SMOKE OUTPUT FOR QUICK LEAK LOCATION

Embedded with an airflow regulator to better control the smoke effect



Figure 6.3: Adjustable smoke output for precise leak location.

6.3. Interpreting Pressure Gauge Readings

The pressure gauge is crucial for determining the presence and size of a leak.

- **No Leak:** If the pressure gauge index keeps increasing and remains stable, there is no leakage in the system.
- **Small Leak:** If the pressure gauge value drops slowly, it indicates a small leak in the system.
- **Massive Leak:** If the pressure gauge value quickly reaches zero, it indicates a large leak in the system.

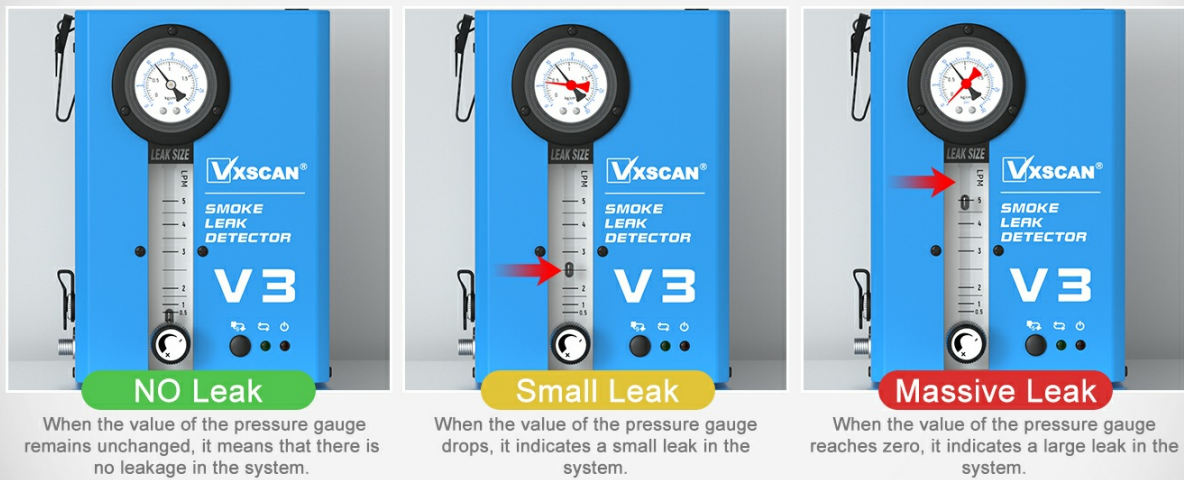


Figure 6.4: Interpreting leak size from the pressure gauge.

6.4. Applicable Systems and Vehicles

The VXSCAN V3 is designed to test a wide range of vehicle systems and types.

- **Systems:** EVAP system, Intake system, Exhaust system, Fuel tank system, Crankcase system, Cooling system, various pipe fittings, Car sealing, Turbo test system, Engine block.
- **Vehicles:** Automobiles, motorcycles, snowmobiles, ATVs, light trucks, and speedboats. Suitable for all makes and models of cars.

Figure 6.5: Systems testable with the VXSCAN V3.



Figure 6.6: Wide range of applications for the VXSCAN V3.

7. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your VXSCAN V3 smoke machine.

- **Oil Refill:** If the smoke output becomes weak or stops, it indicates insufficient oil. Refill 10ml-20ml of

recommended test oil promptly.

- **Cleaning:** After use, clean the inner side of the air intake hose before placing the universal air inlet bag into the system. Wipe down the exterior of the device with a clean, dry cloth.
- **Storage:** Store the device in a cool, dry place away from direct sunlight and extreme temperatures.
- **Check Gauge Beads:** Before each use, ensure the gauge beads can slide freely.

8. TROUBLESHOOTING

If you encounter issues with your VXSCAN V3, refer to the following common problems and solutions.

- **Problem: Device does not produce smoke.**

Solution:

1. Ensure the vehicle's ignition is turned off. The device cannot output smoke if connected to a 12V power supply in an office setting; it requires a 12V car battery with an 8A-10A current range.
2. Check if there is enough test oil in the detector. Refill if necessary.

- **Problem: Weak smoke output.**

Solution:

1. Ensure you are using the correct type of oil (Johnson & Johnson baby oil pink label or USP Mineral Oil).
2. Do not exceed the recommended oil refill amount (10ml-20ml). Overfilling can affect smoke production.
3. Check for blockages in the smoke hose or nozzle.

- **Problem: Pressure gauge does not move or shows no pressure.**

Solution:

1. Before use, check if the gauge beads can slide freely. If stuck, gently tap the gauge.
2. Ensure the pressure regulating valve is correctly adjusted.
3. Verify that all connections to the vehicle's system are secure and airtight. A large leak will prevent pressure buildup.

- **Problem: Device stops working after a short period.**

Solution:

The device has a 5-minute auto-stop working cycle for safety. This is normal operation. If it stops prematurely, check for overheating (device has overheat protection) or power supply issues.

If the problem persists after attempting these solutions, please contact VXSCAN customer support for further assistance.

9. WARRANTY AND SUPPORT

VXSCAN is committed to providing high-quality automotive maintenance products and excellent customer service. While specific warranty details are not provided in this manual, VXSCAN aims to ensure every user is satisfied with their product.

For any questions, technical support, or service inquiries, please contact VXSCAN customer support through the retailer where you purchased the product or visit the official VXSCAN website for contact information.

Your feedback is valuable to us as we continuously strive to improve our products and services.

