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OnRetul V321

OnRetul V321 OBD2 Scanner Diagnostic Tool User Manual

Model: V321 | Brand: OnRetul

1. INTRODUCTION

The OnRetul V321 OBD2 Scanner Diagnostic Tool is designed to provide comprehensive diagnostic capabilities for vehicles manufactured since 1996 that support OBD II protocols. This versatile device helps users quickly identify and resolve check engine light issues, offering features beyond basic code reading. It functions as a complete diagnostic tool with capabilities such as battery voltage testing, I/M readiness checks, and code clearing. The scanner empowers you to understand your vehicle's status, potentially saving time and money by identifying issues before they become major problems. This manual provides detailed instructions for setting up, operating, maintaining, and troubleshooting your V321 scanner.

2. PRODUCT OVERVIEW

The OnRetul V321 OBD2 Scanner is a compact, handheld device featuring a 2.8-inch high-definition color screen for clear display of diagnostic information. It is equipped with an integrated OBDII connector cable for direct connection to your vehicle's diagnostic port.



Figure 2.1: The OnRetul V321 OBD2 Scanner, showcasing its main unit, integrated cable, and the user interface with various diagnostic functions.

The device features intuitive navigation buttons including directional arrows, an 'OK' button for selection, and an 'ESC' button to go back. Dedicated 'DTC' and 'BAT' buttons provide quick access to Diagnostic Trouble Code lookup and Battery Test functions, respectively.

PROFESSIONAL OBDII SCANNER

Supports All OBDII Functions To Provide Accurate Diagnostic Data



Figure 2.2: The V321 scanner's interface highlighting its comprehensive OBDII functions for accurate diagnostic data, including O2 sensor tests, live data, DTC lookup, and I/M readiness.

3. SETUP

To begin using your OnRetul V321 OBD2 Scanner, follow these simple setup steps:

1. **Locate the OBD-II Port:** The OBD-II (On-Board Diagnostics II) port is typically located under the dashboard on the driver's side of the vehicle. Refer to your vehicle's owner's manual if you cannot find it.
2. **Connect the Scanner:** Plug the V321 scanner's integrated OBDII connector firmly into your vehicle's OBD-II port. Ensure a secure connection.
3. **Power On:** The scanner will usually power on automatically once connected to the vehicle's OBD-II port, drawing power directly from the vehicle's battery. If it does not power on, ensure the vehicle's ignition is in the 'ON' position (engine can be off).
4. **Language Selection:** Upon first use, or if prompted, select your preferred language from the available options (e.g., English, Spanish).

4. OPERATING INSTRUCTIONS

The OnRetul V321 scanner offers various functions to diagnose and monitor your vehicle's health. Navigate through the menus using the arrow buttons and confirm selections with the 'OK' button.

4.1. Reading and Erasing Diagnostic Trouble Codes (DTCs)

1. **Read Codes:** From the main menu, select 'OBD/EOBD' or 'Read Codes'. The scanner will communicate with the vehicle's ECU and display any stored DTCs. Each code will have a description to help identify the issue.
2. **Erase Codes (One-Click Reset):** After addressing the underlying issue that caused the DTC, you can clear the Check Engine Light. Select 'Erase Codes' or 'Reset' from the menu. Confirm the action when prompted. **Warning:** Do not erase codes before fixing the problem, as this will only turn off the light temporarily and the code will reappear.

4.2. Data Stream Monitoring

The Data Stream function allows you to view real-time operating parameters of your vehicle, which is crucial for diagnosing intermittent faults and understanding engine performance.

1. From the main menu, select 'Data Stream'.
2. The scanner will display various parameters such as fuel pressure, oxygen sensor readings, coolant temperature, engine RPM, vehicle speed, and more.
3. Monitor these values to identify any abnormal readings that might indicate a problem.

Data Stream

This system can retrieve comprehensive data from the vehicle's powertrain and utilize this information to accurately diagnose potential issues.



**Number of fault codes | Fault codes | Fuel system status | Engine Load |
Coolant temperature | Short term fuel correction | Oxygen sensor | OBD mode |
Fuel pressure | Intake manifold pressure | Engine speed | Vehicle Speed |
Cylinder ignition | advance angle | intake temperature |**

Figure 4.1: The V321 scanner showing live data stream, including fault codes, fuel system status, engine load, coolant temperature, oxygen sensor data, and more, providing comprehensive real-time vehicle information.

4.3. I/M Readiness Detection

I/M Readiness (Inspection/Maintenance Readiness) indicates whether the various emission-related systems on the vehicle are operating correctly and have completed their self-tests. This is essential for vehicle inspections.

1. Select 'I/M Readiness' from the main menu.
2. The scanner will display the status of various monitors (e.g., EVAP system, catalytic converter, O2 sensor). 'OK' or 'Complete' indicates the test has passed, while 'INC' or 'Incomplete' means the test has not yet run or failed.
3. This function helps ensure your vehicle passes annual emission inspections.

Multiple Aspect Inspection

I/M ready item detection, vehicle information detection, EVA detection, oxygen sensor detection, etc.

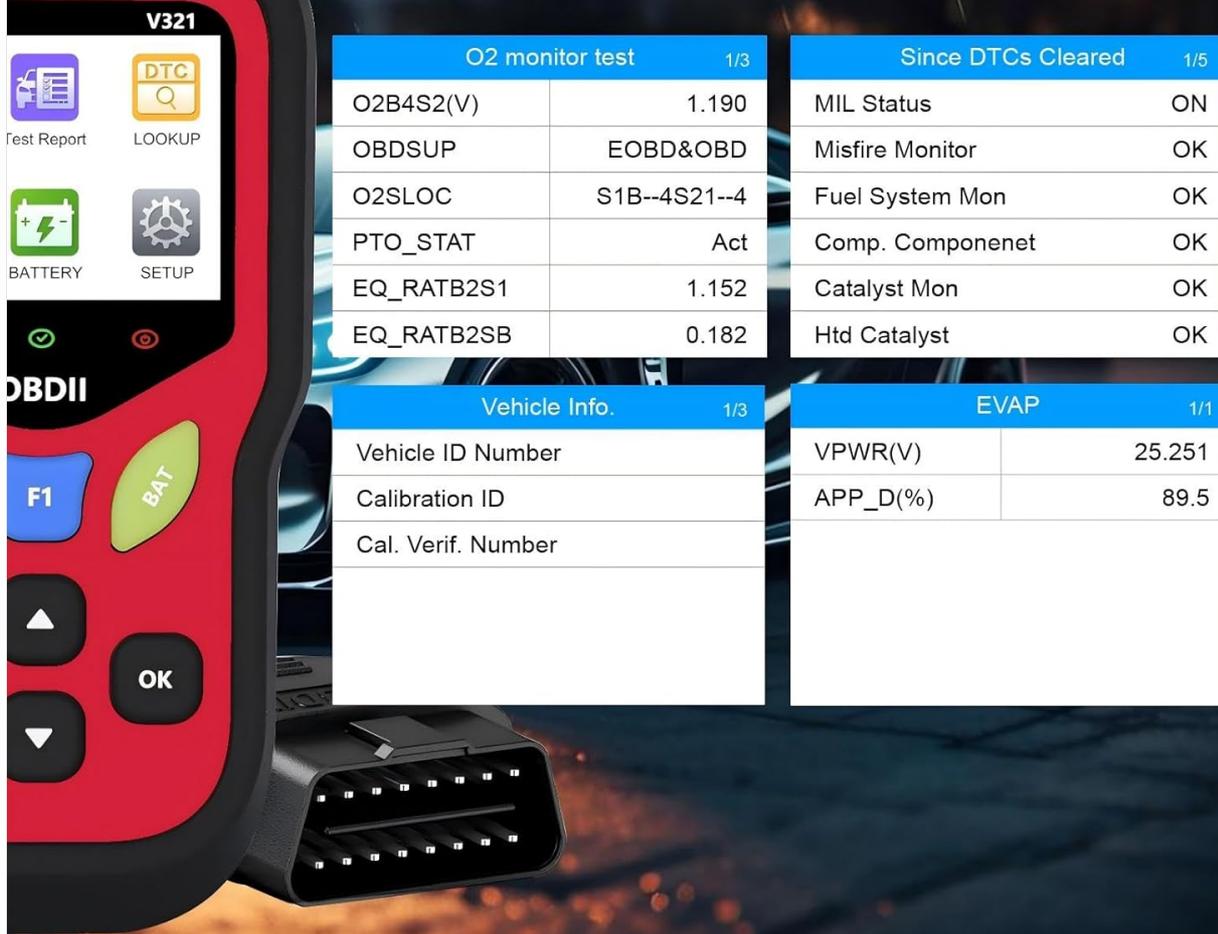


Figure 4.2: The V321 scanner's display showing results from a multiple aspect inspection, including O2 monitor tests and I/M readiness status for various vehicle systems.

4.4. Battery Test

The V321 scanner can perform diagnostic tests on automotive battery voltage and cranking voltage, displaying real-time voltage curves to assess battery health.

1. Press the 'BAT' button or select 'Battery Test' from the menu.
2. The scanner will display the current battery voltage and may show a voltage waveform.
3. Interpret the results to determine if the battery is in good condition, weak, or needs replacement.

Battery Test

This feature performs diagnostic tests on automotive battery voltage and cranking voltage. It displays real-time voltage curves to facilitate easy assessment of battery health.



Figure 4.3: The V321 scanner's battery test interface, illustrating real-time voltage readings, waveform analysis, and a visual indicator of battery health.

4.5. Test Report Generation

The scanner can encode retrieved vehicle information (VIN, DTC count, battery voltage, data stream, etc.) into a QR code, allowing users to scan, view, and share the data via mobile devices.

1. After performing diagnostics, navigate to the 'Test Report' option.
2. The scanner will generate a QR code on its screen.
3. Use your smartphone's camera or a QR code scanner app to scan the code.
4. The report will open on your mobile device, allowing for easy viewing and sharing of diagnostic data.

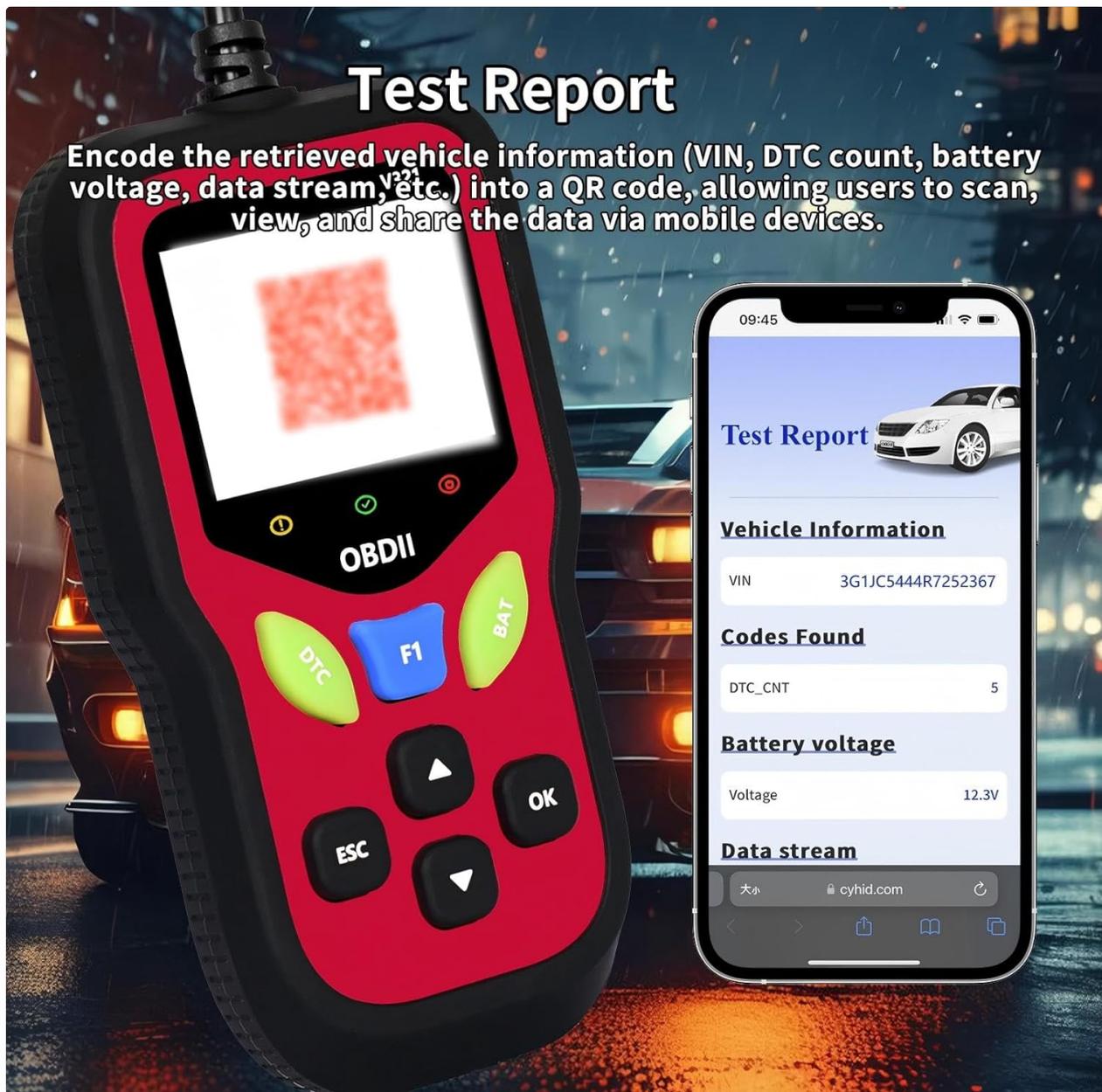


Figure 4.4: The V321 scanner's test report feature, demonstrating how diagnostic data can be encoded into a QR code for convenient viewing and sharing on a mobile device.

5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your OnRetul V321 OBD2 Scanner.

- **Cleaning:** Use a soft, dry cloth to clean the scanner's screen and body. Avoid using abrasive cleaners or solvents that could damage the plastic or screen.
- **Storage:** Store the scanner in a cool, dry place away from direct sunlight, extreme temperatures, and excessive moisture. Keep it in its original packaging or a protective case when not in use.
- **Cable Care:** Do not bend or crimp the OBDII cable excessively. Store it neatly coiled to prevent damage to the internal wires.
- **Software Updates:** While not explicitly detailed, many diagnostic tools benefit from periodic software updates to improve compatibility, add new features, or fix bugs. Check the manufacturer's official website for any available firmware updates for the V321 model.

6. TROUBLESHOOTING

If you encounter issues while using your OnRetul V321 OBD2 Scanner, refer to the following common problems and solutions:

- **Scanner Does Not Power On:**

- Ensure the OBDII connector is securely plugged into the vehicle's OBD-II port.
- Verify that the vehicle's ignition is in the 'ON' position (engine can be off).
- Check the vehicle's fuse for the OBD-II port (refer to your vehicle's manual).

- **Link Error / Communication Error:**

- Confirm the vehicle supports OBD-II protocols (most vehicles since 1996 in the US, 2002 in Japan, 2008 in Europe).
- Ensure the connection is firm and stable.
- Turn off the ignition, disconnect the scanner, wait 10 seconds, then reconnect and try again.
- Try the scanner on a different OBD-II compliant vehicle to rule out scanner malfunction.

- **No Codes Found, But Check Engine Light is On:**

- The light might be for a pending code that has not yet matured into a confirmed DTC.
- Some vehicle-specific codes may not be generic OBD-II codes. The V321 primarily reads generic and some manufacturer-specific codes.
- Ensure the vehicle's ignition is on and the engine is not running (KOEO - Key On, Engine Off) for reading codes.

- **Screen Freezes or Becomes Unresponsive:**

- Disconnect the scanner from the vehicle.
- Press and hold the 'ESC' button for a few seconds to attempt a reset.
- Reconnect the scanner. If the issue persists, contact customer support.

7. SPECIFICATIONS

Below are the technical specifications for the OnRetul V321 OBD2 Scanner Diagnostic Tool:

Feature	Specification
Brand	OnRetul
Model	V321 (also referred to as Car Scanner)
Product Dimensions	3"L x 1"W x 6"H (approx. 7.6cm L x 2.5cm W x 15.2cm H)

Feature	Specification
Display Resolution	LCD Display
Automotive Fit Type	Universal Fit (for OBD-II compliant vehicles)
Item Weight	11.3 ounces (approx. 320g)
Operating System (Internal)	Windows 10 (as per product specifications, likely refers to compatibility for data printing/software)
Manufacturer	Shenzhen jixinwei Electronic Commerce Co.,Ltd.
ASIN	B0FJFXNG89

Product Size

5.88inch/14.94cm



3.18inch/8.08cm

Figure 7.1: The physical dimensions of the OnRetul V321 OBD2 Scanner, indicating its compact and portable size.

8. WARRANTY AND SUPPORT

OnRetul is committed to providing excellent customer service. If you encounter any problems during the use of your V321 OBD2 Scanner, please do not hesitate to contact the manufacturer directly. They aim to respond to

inquiries within 24 hours.

For support, please refer to the contact information provided with your product packaging or visit the official OnRetul website.

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