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ANCEL HD431

ANCEL HD431 Heavy Duty Truck Scanner User Manual

Model: HD431

1. INTRODUCTION

The ANCEL HD431 is a versatile 2-in-1 diagnostic scan tool designed for both heavy-duty diesel trucks and standard OBD2 compliant vehicles. It offers comprehensive system diagnostics, including specialized DPF (Diesel Particulate Filter) functions for Detroit and Paccar engines. Equipped with a 4.3-inch HD screen and Wi-Fi connectivity for lifetime free updates, the HD431 provides an efficient solution for vehicle maintenance and troubleshooting.

Key capabilities include reading and clearing trouble codes, viewing live data streams, performing DPF regeneration, and accessing vehicle information. Its wide compatibility with various truck connectors makes it a valuable tool for truck owners and mechanics.

2. WHAT'S IN THE Box

Upon unboxing your ANCEL HD431, please verify that all components listed below are present and in good condition:

- 1 x ANCEL HD431 Diagnostic Device
- 1 x 1.5M OBD-II Diagnostic Cable
- 1 x Diesel 6 & 9 Pin Connector
- 1 x Instruction Manual
- 1 x Packaging Box



Image: ANCEL HD431 Kit Packing List. This image displays the main diagnostic device, the OBD-II diagnostic cable, the diesel 6 & 9 pin connector, the instruction manual, and the product packaging box.

3. PRODUCT FEATURES

The ANCEL HD431 offers a robust set of features designed for comprehensive vehicle diagnostics:

3.1 DPF Regeneration for Detroit & Paccar

The HD431 supports forced regeneration, replacement, and reset functions specifically for Detroit and Paccar truck engines. Regular DPF regeneration is crucial for extending engine service life and reducing maintenance costs, preventing costly emergency shutdowns.

Advanced DPF Regeneration Truck Scanner

ANCEL®



Dust and particles continue to damage your truck



Advanced DPF function solve sort of issues



Image: Advanced DPF Regeneration Truck Scanner. This visual highlights the contrast between a truck with accumulated dust and particles in its exhaust system (left) and a clean truck after DPF regeneration using the HD431 (right), emphasizing the benefits for Paccar and Detroit engines.

3.2 Lifetime Free Updates

Benefit from lifelong free software and version updates, ensuring your device remains current with the latest vehicle diagnostic capabilities and new functions without incurring additional subscription fees.

3.3 All HDOBD/OBD2 Diagnosis

This device supports all 12V and 24V trucks equipped with Cummins, Caterpillar, Paccar, and Detroit engines, as well as standard OBD2 vehicles. It can read and erase trouble codes, determine MIL (Malfunction Indicator Lamp) status, I/M Readiness, Live Data, Oxygen Sensor Test, and On-Board Monitor data. A built-in DTC lookup library assists in understanding relevant codes.

OE-LEVEL ALL System Diagnostic

ANCEL®



Image: Professional HDOBD OBDII Functions. This graphic details the comprehensive diagnostic capabilities of the HD431, including standard OBDII functions like reading and erasing codes, live data stream, freeze frame, I/M readiness, on-board monitoring test, O2 monitor test, and HDOBD functions such as reading and erasing codes and live data stream.

3.4 Wide Compatibility

Equipped with 6 & 9 pin truck connectors and 16 pin OBD standard connectors, the HD431 is compatible with a wide range of U.S. trucks and vehicles. It supports protocols including SAE J1939, SAE J1708, SAE J1850 PWM, SAE J1850 VPW, ISO 14230-4, ISO 9141-2, ISO 15765-4, and ISO 27145-4.

2024 Wide Trucks Compatibility

ANCEL®



Image: 2024 Wide Trucks Compatibility. This image illustrates the broad range of vehicles compatible with the HD431, including heavy-duty trucks, medium-duty trucks, garbage trucks, tow trucks, dump trucks, and vans, highlighting its versatility.

3.5 OE-Level All System Diagnostic

The HD431 provides OE-level diagnostics for all major systems in heavy-duty trucks, including Engine, Transmission, ABS, TPMS, Brake, BMS, Exhaust, Fuel, SAS, and Controller systems.

PLUG AND PLAY

3 Step To Connect And Diagnose

ANCEL®



Image: OE-LEVEL All System Diagnostic. This visual demonstrates the comprehensive system diagnostic capabilities of the HD431, pointing out various components like exhaust, transmission, controller, engine, BMS, TPMS, and brake systems on a truck chassis.

3.6 Product Overview Video

For a quick overview of the ANCEL HD431's features and benefits, please watch the official product video below:

Video: Why choose HD431? This short video provides a concise summary of the key advantages and features of the ANCEL HD431 diagnostic scanner.

4. SETUP

Setting up your ANCEL HD431 is a straightforward three-step process:

- 1. Plug into the Truck/OBDII Port:** Locate the diagnostic port in your vehicle (typically under the dashboard on the driver's side). Connect the appropriate diagnostic cable (either the 16-pin OBDII connector for cars or the 6 & 9 pin diesel connector for trucks) to the HD431 device and then to your vehicle's diagnostic port.

2. **Turn On the Vehicle:** Turn the vehicle's ignition to the 'ON' position (engine off) or start the engine, depending on the diagnostic procedure required. The HD431 device will power on automatically once connected and the vehicle is powered.
3. **Select the Menu and Start Diagnosis:** Once the device powers on and initializes, navigate the menu using the directional buttons. Select the appropriate diagnostic mode (e.g., HD OBD for heavy-duty, OBD/EOBD for standard vehicles) and proceed with your desired diagnostic function.



Image: Plug and Play. This visual guide demonstrates the simple three-step process for connecting and initiating diagnosis with the ANCEL HD431 scanner.

5. OPERATING INSTRUCTIONS

The ANCEL HD431 provides intuitive navigation for various diagnostic operations:

5.1 Menu Navigation

Use the directional buttons (up, down, left, right) to navigate through the menu options on the 4.3-inch HD screen.

The 'OK' button confirms selections, and the 'Return' button goes back to the previous screen.

5.2 Reading and Clearing Trouble Codes

From the main menu, select either 'HD OBD' or 'OBD/EOBD' based on your vehicle type. Choose 'Read Codes' to display current, pending, and history Diagnostic Trouble Codes (DTCs). To clear codes, select 'Erase Codes' and follow the on-screen prompts. Ensure the ignition is on and the engine is off when clearing codes.

5.3 Live Data Stream

Access real-time sensor data by selecting 'Live Data Stream' from the diagnostic menu. This function allows you to monitor various parameters such as engine RPM, coolant temperature, oxygen sensor readings, and fuel system status, which is vital for pinpointing intermittent issues.

5.4 DPF Regeneration

For Detroit and Paccar engines, select 'HD DPF' from the main menu. Follow the specific instructions for forced regeneration, replacement, or reset. Ensure the engine meets the necessary conditions (e.g., correct temperature) before attempting DPF functions.

6. MAINTENANCE

To ensure optimal performance and access to the latest vehicle data, regular maintenance of your ANCEL HD431 is recommended:

6.1 Software Updates

The device supports lifetime free updates via Wi-Fi. Connect the device to a stable Wi-Fi network and navigate to the 'Update' section in the main menu. Follow the on-screen instructions to download and install the latest software versions. This ensures compatibility with new vehicle models and improved diagnostic capabilities.

6.2 Physical Care

Keep the device clean and free from dust and debris. Store it in a dry, cool place away from direct sunlight and extreme temperatures. Avoid dropping the device or exposing it to excessive moisture.

7. TROUBLESHOOTING

If you encounter issues while using your ANCEL HD431, consider the following common troubleshooting steps:

7.1 Device Not Powering On

Ensure the diagnostic cable is securely connected to both the HD431 and the vehicle's diagnostic port. Verify that the vehicle's ignition is in the 'ON' position or the engine is running. Check the vehicle's battery voltage; insufficient power can prevent the device from turning on.

7.2 Communication Error

If the device fails to communicate with the vehicle, ensure the correct connector (OBDII, 6-pin, or 9-pin) is being used for your specific vehicle. Verify that the vehicle's ignition is on. Try connecting to a different vehicle to rule out a

device issue. Consult your vehicle's manual for the exact location and type of diagnostic port.

7.3 DPF Regeneration Failure

DPF regeneration may fail due to various factors, including existing engine trouble codes, incorrect engine temperature, or specific vehicle conditions not being met. Ensure all prerequisites outlined in the DPF function menu are satisfied before attempting regeneration. Address any active engine trouble codes first.

7.4 Software Update Issues

If updates fail, ensure a stable Wi-Fi connection. Restart the device and attempt the update again. If the issue persists, contact ANCEL technical support for assistance.

8. SPECIFICATIONS

Attribute	Value
Brand	ANCEL
Model	HD431
Item Weight	2.55 pounds
Package Dimensions	9.61 x 5.35 x 5.04 inches
Country of Origin	China
Operating System	Android 5.0
Display Resolution	480x272
Connectivity	Wi-Fi, OBD-II, 6-pin, 9-pin

9. WARRANTY & SUPPORT

ANCEL is committed to providing excellent customer service and support for the HD431 diagnostic scan tool:

9.1 Technical Support

Experience unparalleled assistance from ANCEL's expert team. The 'Feedback' function on the device streamlines the process of sending diagnostic reports or encountered issues for professional consultation. ANCEL offers round-the-clock services 24/7/365.

9.2 Warranty Information

The ANCEL HD431 comes with a 1-year brand warranty, ensuring peace of mind regarding product quality and performance. For detailed warranty terms and conditions, please refer to the official ANCEL website or contact customer service.

