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## ANCEL X7 HD

# ANCEL X7-HD Heavy Duty Diesel Truck OBD2 Scanner Diagnostic Tool User Manual

Model: X7 HD

## INTRODUCTION

The ANCEL X7-HD is a comprehensive heavy-duty diesel truck OBD2 scanner and diagnostic tool designed for professional use. It offers full system diagnosis, DPF regeneration, ECU coding, bidirectional control, and various reset functions for a wide range of heavy-duty vehicles, including Cummins, Detroit, Caterpillar, and Paccar engines.

## PACKAGE CONTENTS

Upon opening the package, verify that all components are present and in good condition. The standard package for the ANCEL X7-HD includes:

- 10-inch IPS Tablet (Main Unit)
- BT VCI (Bluetooth Vehicle Communication Interface)
- USB Cable
- US Power Plug
- User Manual
- OBD Extension Cable
- Cigarette Lighter Cable
- Printer Lead USB A-USB B
- Battery Tester Clamps
- Various ECU OBD Jumper Cables (ISUZU-3, VOLVO-8, DENSO-12, ISUZU-20, MAN-37, DIESEL-9, CAT-9, BENZ-14, OBD-R16, CUMMINS-6)
- ECU Jumper Leads

# ANCEL X7-HD KIT PACKING LIST



Image: The ANCEL X7-HD kit, showing the main tablet, VCI module, and various cables and accessories included in the packing list.

## SETUP AND INITIAL USE

### 1. Charging and Powering On

Before first use, ensure the ANCEL X7-HD tablet is fully charged using the provided power adapter. Press and hold the power button to turn on the device.

### 2. Connecting the VCI Module

The Vehicle Communication Interface (VCI) module connects the diagnostic tool to the vehicle's OBD port. Connect the appropriate diagnostic cable to the VCI module, ensuring a secure fit. The VCI module communicates wirelessly with the main tablet via Bluetooth.



**2023**  
**NEW VERSION**



**ANCEL X7 HD**



Image: The ANCEL X7-HD main tablet and the separate VCI module, which connects to the vehicle.

For a visual guide on connecting the VCI module and establishing a Bluetooth connection, please refer to the video below:

Your browser does not support the video tag.

Video: Demonstrates the process of connecting the VCI module to the ANCEL X7-HD tablet via Bluetooth for wireless operation.

### 3. Initial Software Setup

Upon first boot, you may be prompted to configure basic settings such as Wi-Fi connection and language. Ensure a stable Wi-Fi connection for software updates.

- Language Setting:** The device supports 14 languages. Navigate to 'Settings' > 'Languages' to select your preferred language.
- Software Update:** Regularly check for software updates to ensure optimal performance and access to the latest vehicle coverage and functions. Go to 'Settings' > 'Version Update' and select 'Check Update'.

# ADVANCED HARDWARE & SOFTWARE CONFIGURATION



HD Camera



Rubber Protective Sleeve



USB Port



6000 mAh



10.1 inch  
Tablet



2G RAM



32G ROM



2 Year  
Free Update



Data Record  
& Replay & Print



Remote Operation



14 Languages



Android



Bluetooth 5.0  
& WiFi

Image: Overview of the ANCEL X7-HD's hardware features, including the 10.1-inch tablet, 6000 mAh battery, 2G RAM, 32G ROM, and software capabilities like data record/replay/print, remote operation, 14 languages, Android OS, and Bluetooth 5.0 & Wi-Fi connectivity.

## OPERATING INSTRUCTIONS

### 1. Main Menu Navigation

The main interface provides access to various diagnostic and service functions. Key options include Diagnose, Special Function, Update, Data Manager, Quick Support, Feedback, Data Playback, and User Manual.

### 2. OBDII Service

The OBDII Service function allows for standard OBD2 diagnostics, including reading and clearing fault codes, viewing live data streams, I/M readiness status, and vehicle information. This is essential for basic engine and emission-related diagnostics.

# PERFORM UNIVERSAL FULL OBD2 FUNCTION



Image: Illustrates the universal full OBD2 functions available on the ANCEL X7-HD, such as Read ECU Info, Read Codes, Erase Codes, Data Stream, I/M Readiness, Vehicle Information, Freeze Frame, EVAP System Test, Actuations, and DTC Lookup.

### 3. All Systems Diagnostic Scan

Perform a comprehensive scan of all available electronic control units (ECUs) within the vehicle. This includes systems such as Engine, Brake, Retarder, TECU Transmission, Tachograph, ABS, SRS, TPMS, EPB, SAS, ESP, and more. This function provides a holistic view of the vehicle's health.

# ALL SYSTEMS DIAGNOSTIC SCAN

The diagram illustrates the 'All Systems Diagnostic Scan' capability of the ANCEL X7-HD. It features a 3D wireframe model of a truck with various diagnostic system icons labeled around it. A hand is holding a tablet displaying a menu of truck makes and models, including Heavy Truck, Light Truck, China Truck, Construction, Agriculture, Engine, ABS, TPMS, and more. Below the main image are eight smaller images representing different truck components and systems: ABS, Suspension, Brake, Instrumentation, Engine system, TPMS, Safety, and More.

System	Icon	Description
Auxiliary	Icon of a wrench and screwdriver	Diagnose auxiliary systems
CAB Climate	Icon of a fan and temperature control	Diagnose cabin climate control systems
ACM	Icon of a gear and wrench	Diagnose Air Conditioning and Climate Control Module
Security	Icon of a person with a shield	Diagnose security systems
Retarder	Icon of a red retarder unit	Diagnose retarder systems
VMCN VMCU	Icon of a red VMCN VMCU unit	Diagnose VMCN VMCU systems
Chassis(CCIO, RCIOM)	Icon of a truck chassis	Diagnose chassis systems including CCIO and RCIOM
ECU Transmission	Icon of a microchip	Diagnose ECU and transmission systems

\* Menu & Compatibility vary by Truck / Machinery Make,Model & Made Year

Image: Depicts the extensive "All Systems Diagnostic Scan" capability of the ANCEL X7-HD, covering systems like Auxiliary, CAB Climate, Chassis, ECU Transmission, Security, Retarder, VMCN VMCU, ABS, Suspension, Brake, Instrumentation, Engine system, TPMS, and Safety.

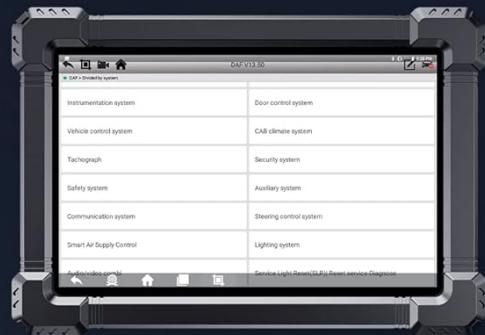
## 4. Special Functions and Resets

The ANCEL X7-HD offers over 15 special reset functions for common maintenance tasks and system adaptations. These include:

- ABS Bleeding
- DPF Regeneration & Reset
- Oil Reset
- PRV Valve Test
- ECU Reset
- Injector Coding
- Broken Cylinder Test
- Cylinder Shut off Test
- Cylinder Balancing Test

- EGR Solenoid Test
- EGR Pulse Ratio Test
- ECU Programming
- Basic Reset
- Clear Spec DTC
- Bi-Directional Active Test

# Frequently Used Reset 15+ SERVICE FUNCTIONS



■ ABS Bleeding	■ Broken Cylinder Test	■ ECU Programming
■ DPF Regeneration	■ Cylinder Shut off Test	■ Basic Reset
■ Oil Reset	■ Cylinder Balancing Test	■ Clear Spec DTC
■ PRV Valve Test	■ EGR Solenoid Test	■ Bi-Directional Active Test
■ ECU Reset	■ EGR Pulse Ratio Test	■ More



 ABS Bleeding



 Oil Reset



 PRV Valve Test



 DPF Regeneration



 Broken Cylinder Test



 Clear Spec DTC



 ECU Reset



 ECU Programming

Image: Highlights the "Frequently Used Reset 15+ SERVICE FUNCTIONS" of the ANCEL X7-HD, showing icons and descriptions for ABS Bleeding, DPF Regeneration, Oil Reset, PRV Valve Test, ECU Reset, Broken Cylinder Test, Cylinder Shut off Test, Cylinder Balancing Test, EGR Solenoid Test, EGR Pulse Ratio Test, ECU Programming, Basic Reset, Clear Spec DTC, and Bi-Directional Active Test.

## 5. Bi-directional Control / Active Test

This advanced function allows the diagnostic tool to send commands to vehicle systems and components to perform specific tests, such as activating pumps, fans, or solenoids. This helps in pinpointing faulty components and verifying repairs.

# ACTIVE TEST BI-DIRECTIONAL CONTROL



More Comprehensive and In-Depth Diagnoses

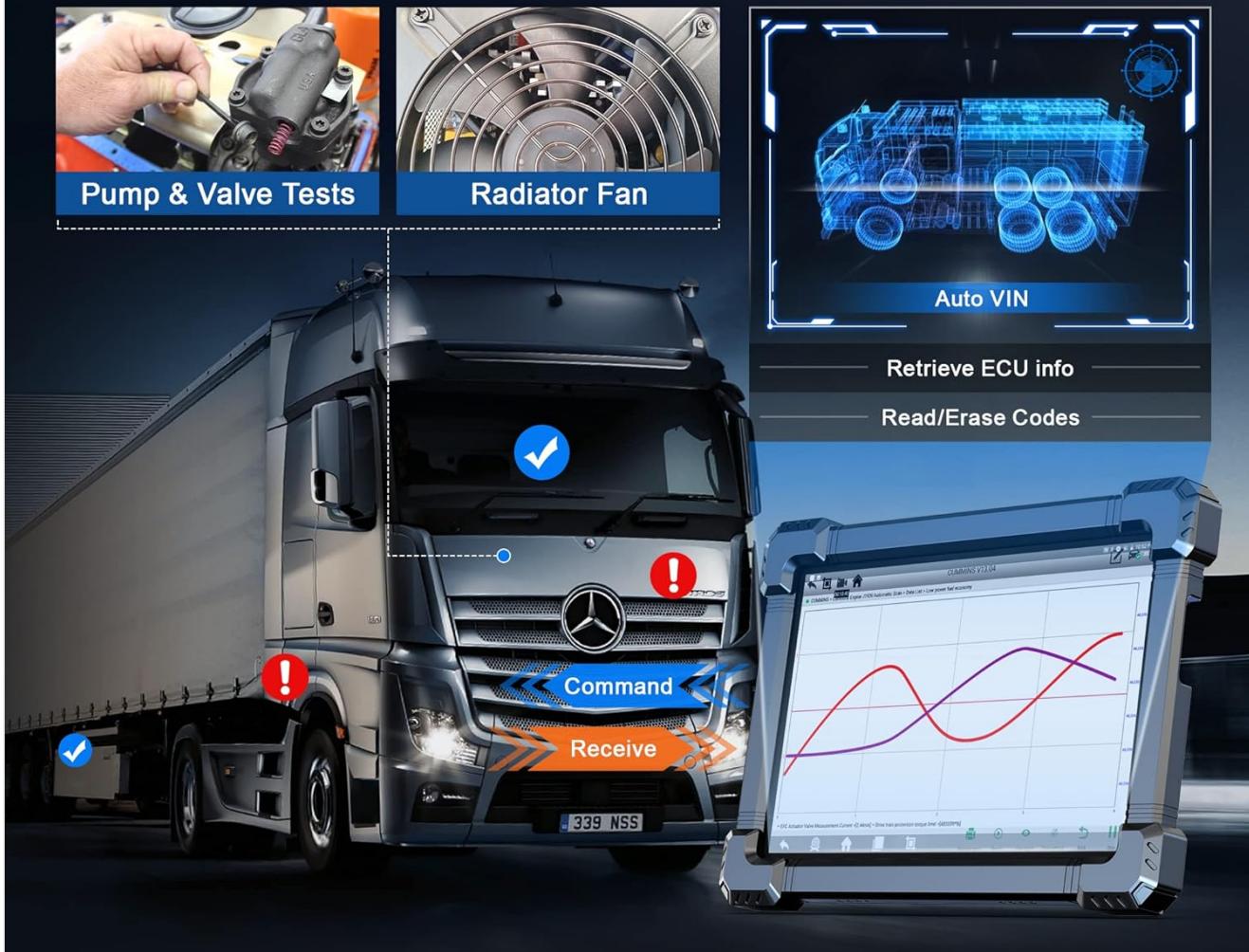


Image: Demonstrates the "Active Test Bi-directional Control" feature, showing examples like Pump & Valve Tests and Radiator Fan activation, along with the ability to retrieve ECU info and read/erase codes.

## 6. DPF Regeneration and ABS Bleeding

The tool supports DPF regeneration, DPF reset, and related information resets, crucial for maintaining diesel particulate filters and ensuring emission compliance. It also facilitates ABS bleeding by activating the motor to exhaust air from the ABS system automatically.

# ABS BLEEDING & DPF REGENERATION



Professional ABS Diagnosis & DPF Reset

## ABS Bleeding

ANCEL X7-HD activate motor to do exhaust air in ABS Automatically, save your energy and time, make your drive more safe, worth thousands of pounds.



## DPF Regeneration

DPF Reset and Do DPF Regeneration Automatically, make sure your truck meet emission requirement.

Image: Illustrates the "ABS Bleeding & DPF Regeneration" functions, detailing how the ANCEL X7-HD activates the ABS motor for air exhaust and performs DPF reset and forced regeneration to meet emission requirements.

## 7. ECU Coding & Programming

The ANCEL X7-HD is equipped with advanced ECU coding capabilities, allowing for level calibration, idle speed learning and adjustment, camshaft timing control learning, control unit adaptations, injector codes, and reading/writing VINs. This function enables customization and adaptation of vehicle modules.

## VEHICLE COVERAGE

The ANCEL X7-HD provides wide diagnostic coverage for various heavy-duty vehicles and machinery. Compatibility may vary by specific model and year.

# WIDE COVERAGE DIAGNOSTIC

## 24V Heavy Duty Truck / Lorry / Bus

For BENZ Truck / For DAF / For MAN / For ERF / For SCANIA / For IVECO / For Volvo / For Ashok Leyland / For ISUZU / For FUSO / For HINO / For UD / For MITSUBISHI / For RENAULT / For MACK / For KIA Heavy Truck / For HYUNDAI Heavy Truck / For DETROT / For FREIGHTLINER / For PACCAR / For KENWORTH / For NAVISTAR / For INTERNATIONAL/ For MaxxForce / For ASTRA / For BREMACH / For TATA.

## Light Duty Truck & Van

For Ford / For GM/For TOYOTA / For Great Wall

## Construction & Mining Machine & Off Road Equipment

For ATLAS / For BOBCAT / For CASE / For CATERPILLAR / For DOOSAN / For HITACHI / For IHI (HISCE) / For KATO / For KOMATSU / For LIEBHERR / For LISHIDE / For SUMITOMO / For TAKEUCHI / For TEREX / For YANMAR / For HYUNDAI.  
\*For SANY / For ZOOLION / For SHANTUI / For CHENGDU KOBELCO  
\*For BLACK CAT / For DASIN / For FOTON LOVOL / For FUWA / For FUZHOU SANYUAN / For HENGTE / For JON YANG / For LIUGONG / For LONKING / For SHANGHAI PENGPU / For SHUNTONG / For SUNWARD / For XCMG / For XGMA / For YELLOW RIVER / For YITUO / For YU CHAI / For YU TONG / For ZHEN YU/ For ZHONG LIAN / For ZHONG YOU

## Agriculture & Forestry Machinery

For JOHN DEERE / For Bell / For Euclid / For Frontier / For Green System / For Hitachi / For Timber Jack / For Waratah / For XCG.

## Engine Brands

For CUMMINS Engine / For BOSCH Engine / For CATERPILLAR Engine / For PERKINS Engine / For DOOSAN Engine.

## ABS Brands

For BOSCH / For ALLISON / For BENDIX / For WABCO / For DELPHI / For DENSO / For VOITH.

## China Truck

For FAW / For DONG FENG / For SINO TRUCK / For SHACMAN / For FOTON / For JAC / For XCMG / For HONGYAN TRUCK/ For C & C Truck / For JMC.

Image: Details the wide diagnostic coverage of the ANCEL X7-HD, including 24V Heavy Duty Truck/Lorry/Bus brands (e.g., Benz, DAF, MAN, Volvo, Freightliner), Light Duty Truck & Van (e.g., Ford, GM), Construction & Mining Machine & Off Road Equipment (e.g., Caterpillar, Hitachi, Komatsu), Agriculture & Forestry Machinery (e.g., John Deere), Engine Brands (e.g., Cummins, Caterpillar), ABS Brands (e.g., Bosch, Bendix), and China Truck brands.

## MAINTENANCE

- Cleaning:** Use a soft, dry cloth to clean the tablet and VCI module. Avoid abrasive cleaners or solvents.
- Software Updates:** Regularly update the software to ensure compatibility with new vehicle models and to receive performance enhancements. Connect to Wi-Fi and navigate to the 'Update' section on the main menu.
- Storage:** Store the device and its accessories in the provided protective case in a cool, dry place when not in use.

## TROUBLESHOOTING

If you encounter issues with your ANCEL X7-HD, consider the following common troubleshooting steps:

- Device Not Powering On:** Ensure the battery is charged. Connect the power adapter and try again.

- **VCI Not Connecting:** Verify Bluetooth is enabled on the tablet. Ensure the VCI module is properly connected to the vehicle's OBD port and receiving power. Restart both the tablet and the VCI.
- **Communication Errors:** Check all cable connections. Ensure the vehicle's ignition is on. Verify that the vehicle model and year are correctly selected in the software.
- **Software Freezing/Crashing:** Restart the application or the tablet. Ensure the software is up to date.

For persistent issues, refer to the 'Quick Support' or 'Feedback' sections within the device's main menu, or contact ANCEL customer support.

## SPECIFICATIONS

Feature	Detail
Brand	ANCEL
Model	X7 HD
Operating System	Android 8.1
RAM	2G
ROM	32G
Screen Size	10.1 inch
Battery	6000 mAh Lithium Polymer
Connectivity	Bluetooth 5.0, Wi-Fi, USB
Item Weight	9.44 pounds
Package Dimensions	16.06 x 13.7 x 5.08 inches
Manufacturer Part Number	AL-X7-HD

## WARRANTY AND SUPPORT

The ANCEL X7-HD typically comes with a manufacturer's warranty. Please refer to the warranty card included in your package or visit the official ANCEL website for detailed warranty terms and conditions.

For technical support, product inquiries, or service requests, please contact ANCEL customer support through their official channels. You can often find contact information on the manufacturer's website or within the 'Quick Support' section of the device's software.

The product includes 2 years of free software updates, ensuring your tool remains current with the latest vehicle data and diagnostic capabilities.