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ANCEL BT310, TD700

ANCEL BT310 12V 24V Car Battery Tester and ANCEL TD700 Diagnostic Tool User Manual

Model: BT310, TD700

1. INTRODUCTION

This manual provides detailed instructions for the ANCEL BT310 12V 24V Car Battery Tester and the ANCEL TD700 Diagnostic Tool. This bundle offers comprehensive solutions for vehicle battery health assessment and advanced automotive diagnostics. The BT310 is designed to accurately test 12V and 24V vehicle batteries, including cranking and charging system analysis. The TD700 is a specialized diagnostic scanner for Toyota vehicles, offering multi-system diagnosis and special functions, alongside standard OBD2 capabilities for all vehicle brands.

2. ANCEL BT310 BATTERY TESTER OVERVIEW

The ANCEL BT310 is a professional tool for evaluating the health of 12V and 24V automotive batteries. It performs battery tests, cranking tests, and charging system tests to provide a complete picture of your vehicle's electrical system. It supports a wide range of battery types and CCA values.

2.1 Key Features of BT310

- Supports 12V and 24V batteries.
- Tests batteries with Cold Cranking Amps (CCA) ratings from 100 to 2000.
- Performs Battery Test, Cranking Test, and Charging Test.
- Compatible with various battery types: Flooded, EFB, GEL, AGM Spiral, AGM Flat Plate, and Lithium-Ion.
- Provides detailed results including Voltage, Measured CCA, State of Charge, State of Health, and Internal Resistance.



Figure 2.1: ANCEL BT310 Battery Tester connected to a vehicle battery, illustrating its primary function.



Figure 2.2: BT310 compatibility with different battery technologies (Flooded, EFB, GEL, AGM, Lithium-Ion) and vehicle types (ATV, Boat, Car, SUV, Pickup, Motorcycle).

3. ANCEL TD700 DIAGNOSTIC TOOL OVERVIEW

The ANCEL TD700 is a professional-level diagnostic scanner specifically designed for Toyota vehicles, offering in-depth system diagnostics and special service functions. It also provides full OBD2 functionality for all OBD2-compliant vehicles, making it a versatile tool for automotive enthusiasts and professionals.

3.1 Key Features of TD700

- **Toyota Multi-System Diagnosis:** Accesses Engine, Transmission, Airbag, TPMS, ABS, SAS, BMS, EPB, GPS, ESP, A/C, and more.
- **Professional-Level Toyota Functions:** Includes Oil Reset, EPB Reset, ETC Reset, TPMS Reset, BMS Reset, ABS Bleeding, SAS Calibration, DPF Regeneration, Throttle Learning, Battery Registration, Injector Coding. *Note: Specific functions may vary by vehicle model and year.*
- **Full OBD2 Functions:** Read Codes, Erase Codes, Live Data Stream, I/M Readiness, Evap System Test, Vehicle

Information, DTC Lookup, Turn off Malfunction Indicator Lamp (MIL).

- **Additional Features:** Battery Voltage Check, One-click Smog Check, Auto VIN detection.

MANUFACTURER-LEVEL DIAGNOSIS

FOR ALL SYSTEM OF TOYOTA VEHICLES

Only some models support this feature, so please tell us the model via QA or Amazon message.



Note:TD700 supports fault-code read & clear for all systems. Confirm compatibility with us before accessing data streams of non-engine systems.

Figure 3.1: ANCEL TD700 displaying its multi-system diagnostic menu for Toyota vehicles.

PROFESSIONAL-LEVEL DIAGNOSTICS

FOR TOYOTA VEHICLES

Only some models support this feature, so please tell us the model via QA or Amazon message.



Oil Reset



EPB Reset



ETC Reset



TPMS Reset



BMS Reset



ABS Bleeding



SAS Calibration



DPF Regeneration



Throttle Learning



Battery Registration



Injector Coding



More ++



Note: Special functions vary by vehicle; not all are supported. Check compatibility with us before buying.

Figure 3.2: ANCEL TD700 showing its professional-level special functions menu for Toyota vehicles.

MULTIPLE OBD LEVEL DIAGNOSTICS

FOR ENGINE SYSTEMS OF ALL VEHICLE BRANDS



Figure 3.3: ANCEL TD700 displaying its OBD2 diagnostic menu, applicable to all vehicle brands.

4. SETUP AND CONNECTION

4.1 ANCEL BT310 Battery Tester Setup

1. **Prepare the Battery:** Ensure the vehicle's ignition is off and all accessories are turned off. The battery terminals should be clean and free of corrosion.
2. **Connect Clamps:** Connect the red positive (+) clamp of the BT310 to the positive (+) terminal of the battery. Connect the black negative (-) clamp to the negative (-) terminal of the battery.
3. **Power On:** The BT310 will power on automatically once correctly connected to the battery.
4. **Initial Settings:** Follow the on-screen prompts to select language and other initial settings if required.

DRIVE WITHOUT BATTERY WORRIES

Know Your Battery's Health Before It Fails

No More Road Trip Surprises

Vehicle Maintenance Made Easy

12V

24V

100-2000 CCA

Figure 4.1: Proper connection of the BT310 clamps to a vehicle battery.

4.2 ANCEL TD700 Diagnostic Tool Setup

1. **Locate OBD2 Port:** The OBD2 diagnostic port is typically located under the dashboard on the driver's side. Refer to your vehicle's manual if you cannot find it.
2. **Connect TD700:** Plug the TD700's OBD2 connector firmly into the vehicle's OBD2 port.
3. **Power On:** The TD700 will power on automatically once connected to the vehicle's OBD2 port.
4. **Vehicle Ignition:** Turn the vehicle's ignition to the 'ON' position (engine off) for most diagnostic functions. For some tests, the engine may need to be running.

5. OPERATING THE ANCEL BT310 BATTERY TESTER

After connecting the BT310, use the navigation buttons (ENTER, EXIT, Up/Down arrows) to select desired tests from the main menu.

5.1 Battery Test

1. From the main menu, select "Battery Test" and press ENTER.
2. Select the battery type (e.g., Flooded, AGM, GEL, Lithium-Ion) and press ENTER.
3. Enter the battery's Cold Cranking Amps (CCA) rating as specified on the battery label and press ENTER.
4. The tester will perform the analysis and display the results.
5. **Interpreting Results:**
 - **Good Battery:** Battery is in good condition.
 - **Good-Recharge:** Battery is good but needs recharging.
 - **Charge & Retest:** Battery needs charging, then retest to confirm health.
 - **Replace Battery:** Battery is failing and should be replaced.
 - **Bad Cell-Replace:** One or more cells are faulty; replace the battery.



Figure 5.1: BT310 displaying comprehensive battery health results.

5.2 Cranking Test

1. From the main menu, select "Cranking Test" and press ENTER.

2. Follow the on-screen instructions to start the vehicle's engine.
3. The tester will analyze the cranking voltage and time, then display the results.
4. **Interpreting Results:** The display will show cranking time and voltage. A 'CRANKING NORMAL' message indicates a healthy starter system. Low voltage or extended cranking time may indicate issues with the battery or starter.

5.3 Charging Test

1. From the main menu, select "Charging Test" and press ENTER.
2. Follow the on-screen instructions to start the vehicle's engine and perform any requested actions (e.g., revving the engine).
3. The tester will measure the alternator's output under various conditions (unloaded, loaded) and check for excessive ripple voltage.
4. **Interpreting Results:** The display will show unloaded voltage, loaded voltage, and ripple voltage. A 'VOLTAGE NORMAL' message indicates a healthy charging system. Readings outside the normal range may indicate issues with the alternator or voltage regulator.



Figure 5.2: BT310 displaying Cranking Test and Charging Test results.

5.4 Review Data

Select "Review Data" from the main menu to view previously saved test results. This allows for comparison and tracking of battery health over time.

6. OPERATING THE ANCEL TD700 DIAGNOSTIC TOOL

After connecting the TD700 to the vehicle's OBD2 port and turning the ignition on, the device will boot up. Use the navigation buttons (OK, ESC, Up/Down/Left/Right arrows) to navigate the menus.

6.1 Toyota Multi-System Diagnosis

1. From the main menu, select the Toyota diagnostic option.
2. The tool will automatically identify the vehicle or prompt you to enter vehicle information.
3. Select the desired system for diagnosis (e.g., Engine, Transmission, ABS, Airbag).
4. Choose to Read Codes, Erase Codes, or view Live Data Stream for the selected system.
5. **Note:** Some advanced features and system access may only be supported on specific Toyota models. If a feature is not available, please confirm compatibility with your vehicle.

6.2 Toyota Professional-Level Functions

1. From the Toyota diagnostic menu, navigate to "Special Functions" or a similar option.
2. Select the desired function (e.g., Oil Reset, EPB Reset, BMS Reset).
3. Follow the on-screen instructions carefully to perform the service function. Ensure all prerequisites (e.g., engine off, ignition on) are met.
4. **Caution:** Special functions can alter vehicle settings. Ensure you understand the procedure before proceeding. Compatibility varies by vehicle.

6.3 OBD2 Functions (All Vehicle Brands)

1. From the main menu, select "OBDII/EOBD" or a similar option.
2. Choose from the available functions:
 - **Read Codes:** Retrieves Diagnostic Trouble Codes (DTCs) from the Powertrain Control Module (PCM).
 - **Erase Codes:** Clears DTCs and turns off the Malfunction Indicator Lamp (MIL).
 - **Live Data Stream:** Displays real-time sensor data from the vehicle.
 - **I/M Readiness:** Checks the status of emission-related monitors.
 - **Evap System Test:** Initiates a test of the Evaporative Emission Control System.
 - **Vehicle Information:** Retrieves vehicle identification number (VIN), calibration ID, etc.
 - **DTC Lookup:** Provides definitions for generic DTCs.

6.4 Additional Features of TD700

- **Battery Voltage Check:** Quickly checks the current voltage of the vehicle's battery.
- **One-click Smog Check:** Provides a quick status check for emissions readiness.
- **Auto VIN:** Automatically retrieves the vehicle's VIN for quick identification.



Figure 6.1: TD700 displaying additional features such as Battery Voltage Check and Auto VIN.

7. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the device casings. Avoid using abrasive cleaners or solvents.
- **Storage:** Store the devices in a dry, cool environment, away from direct sunlight and extreme temperatures. Keep them in their original packaging or a protective case when not in use.
- **Cable Care:** Inspect cables regularly for damage. Do not bend or crimp cables excessively.
- **Software Updates:** Periodically check the ANCEL official website for available software updates for both the BT310 and TD700 to ensure optimal performance and compatibility with newer vehicles.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Device does not power on.	Incorrect connection; vehicle battery too low (BT310); OBD2 port issue (TD700).	Ensure clamps are correctly connected (BT310). Verify OBD2 connection (TD700). Check vehicle battery voltage.
"Connection Error" message.	Loose connection; faulty cable; vehicle communication issue.	Reconnect the device. Inspect the cable for damage. Ensure vehicle ignition is ON. Try on another vehicle if possible.
Inaccurate BT310 test results.	Incorrect CCA input; dirty battery terminals; battery not fully charged.	Verify the CCA value entered matches the battery. Clean battery terminals. Fully charge the battery before retesting.
TD700 cannot access certain Toyota systems or functions.	Vehicle model/year not supported for that specific function; outdated software.	Confirm compatibility with your specific Toyota model. Update the TD700 software to the latest version.

9. SPECIFICATIONS

9.1 ANCEL BT310 Battery Tester

- **Voltage Range:** 9V - 30V DC
- **Test Range:** 100 - 2000 CCA
- **Supported Battery Types:** Flooded, EFB, GEL, AGM Spiral, AGM Flat Plate, Lithium-Ion
- **Operating Temperature:** 0°C to 50°C (32°F to 122°F)
- **Storage Temperature:** -20°C to 70°C (-4°F to 158°F)

9.2 ANCEL TD700 Diagnostic Tool

- **Display:** Color LCD
- **Connectivity:** Standard 16-pin OBD2 connector
- **Supported Protocols:** OBDII/EOBD compliant protocols
- **Vehicle Coverage:** Toyota (multi-system & special functions), All OBD2 compliant vehicles (engine diagnostics)
- **Operating Temperature:** 0°C to 50°C (32°F to 122°F)
- **Storage Temperature:** -20°C to 70°C (-4°F to 158°F)

10. WARRANTY AND SUPPORT

ANCEL products typically come with a standard manufacturer's warranty. For specific warranty details, please refer to the warranty card included with your product or visit the official ANCEL website. If you encounter any issues or have questions regarding the ANCEL BT310 or TD700, please contact ANCEL customer support through the following channels:

- Visit the official ANCEL website for support resources and contact information.
- Contact the seller directly via the Amazon messaging system for assistance.

