

MS309 PRO

USER'S MANUAL



CAR PROFESSIONAL SCAN TOOL

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1. Precautions

To avoid personal injury or damage to the vehicles, read this instruction manual and observe the following safety precautions whenever working on a vehicle:

- Be sure to test your vehicle in a safe environment.
- Wear ANSI-compliant eye protection tools.
- Keep clothing, hair, hands, tools and test equipment away from all operating or hot engine parts.
- Operate the vehicle in a well-ventilated work area: Exhaust gases are poisonous.
- Place blocks in front of the drive wheels and never leave the vehicle unattended while running tests.
- Extreme caution must be exercised when working around ignition coils, distributor caps, ignition wires and spark plugs. These components generate dangerous voltages while the engine is running.
- Put the transmission into "PARK" (for automatic transmission) or "NEUTRAL" (for manual transmission) and make sure the parking brake is activated.
- Keep an applicable fire extinguisher near the hazard area
- Don't connect or disconnect any test equipment while the ignition is on or the engine is running.
- Keep test tools dry, clean and free of oil or grease. Use a mild detergent on a clean cloth to clean the outside of the Car Professional Scan Tool, when necessary.

2. Using the Car Professional Scan Tool

2.1 Tool Description



- ① **OBD II CONNECTOR** - Connects the Car Professional Scan Tool to the vehicle's Data Link Connector (DLC).
- ② **LCD DISPLAY** - Indicates test results.
- ③ **UP** button - Roll up the menu and submenu in menu screen.
- ④ **DOWN** button - Roll down the menu and submenu in menu screen.
- ⑤ **EXIT** button - Cancel the operation or exit.
- ⑥ **OK** button- Confirms a selection (or action) from a menu list.

2.2 Specifications

- 1) **Display:** 2.4-inch, 128 x 64 pixel
- 2) **Operating Temperature:** 0°C to 60°C (32°F to 140 °F)
- 3) **Storage Temperature:** -20°C to 70°C (-1°F to 158°F)
- 4) **Power:** 5.0V to 18.0V provided via vehicle battery
- 5) **Dimensions(LxWxH):**
133 mm (5.2")x 78 mm (3.1")x21 mm (0.82")
- 6) **Net Weight:** 138 g (0.3lb)

2.3 Accessories Included

- 1) **QR code** On the back of the product for **User's Manual** download - Instructions on tool operations
- 2) **OBD2 cable** -- Provides power to tool and communicates between tool and vehicle.

2.4 Navigation Characters

Characters used to help navigate the Car Professional Scan Tool are:

- 1) **"▶"** --indicates current selection.
- 2) **"Pd"** -- Identifies a pending DTC when viewing DTCs.
- 3) **"\$"** -- Identifies the control module number from which the data is retrieved.

2.5 Vehicle Power

The power of the Car Professional Scan Tool is provided via the vehicle Data Link Connector (DLC). Follow the steps below to turn on the Car Professional Scan Tool:

- 1) Connect the OBD II cable to the Car Professional Scan Tool.
 - 2) Find DLC on vehicle.
- *A plastic DLC cover may be found for some vehicles and you need to remove it before plugging the OBD2 cable.*

- 3) Plug OBD II cable to the vehicle's DLC.

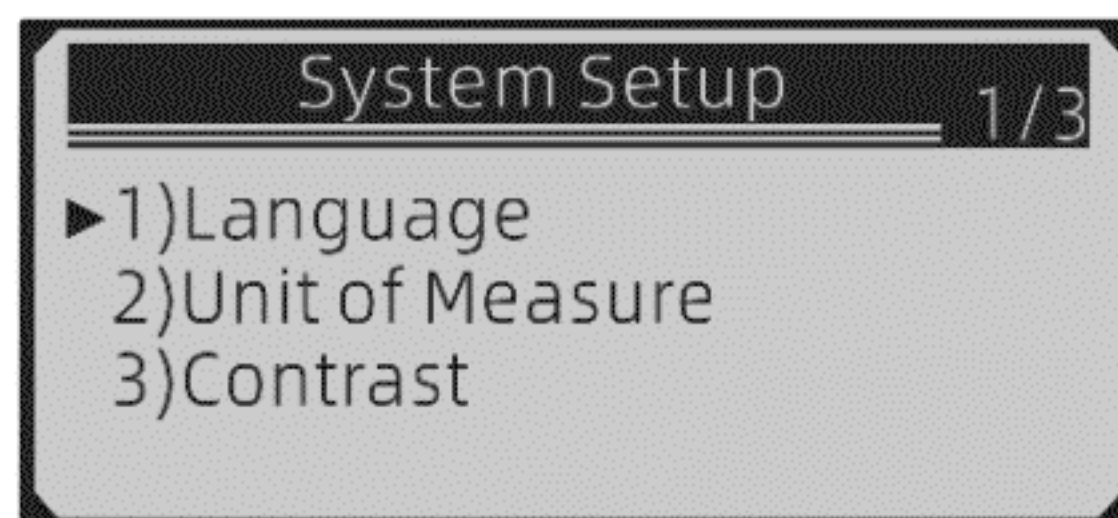
2.6 System Setup

The Car Professional Scan Tool allows you to make the following adjustments and settings:

- 1) **Language:** Selects desired language.
- 2) **Unit of measure:** Sets the unit of measure to English or Metric.
- 3) **Contrast:** Adjusts the contrast of the LCD display.
 - *The Settings of the unit will remain until change to the existing settings is made.*

To enter the **System Setup** menu

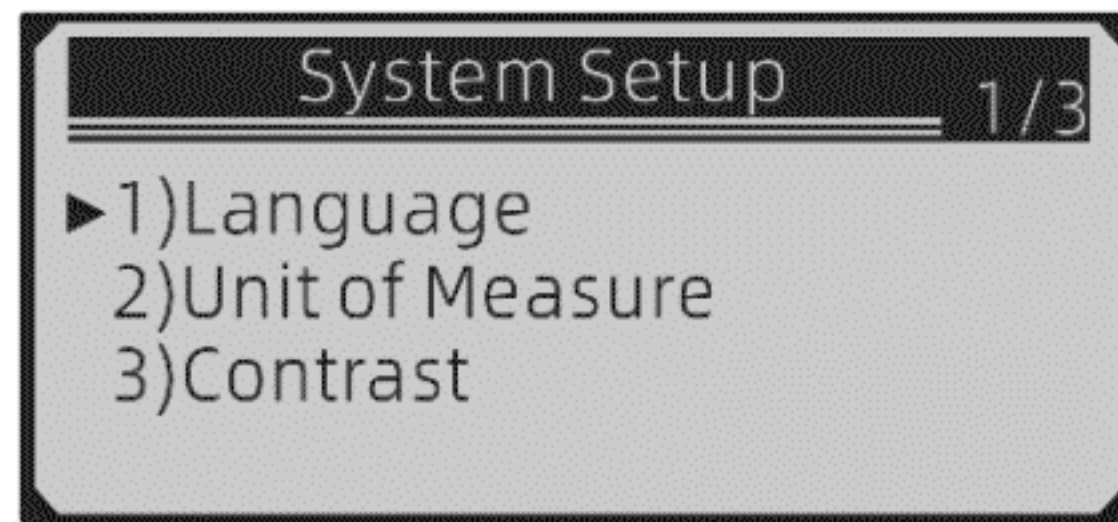
From the **Main Screen**, press **DOWN** button to enter **System Setup** menu. Follow the instructions to make adjustments and settings as described in the following setup options.



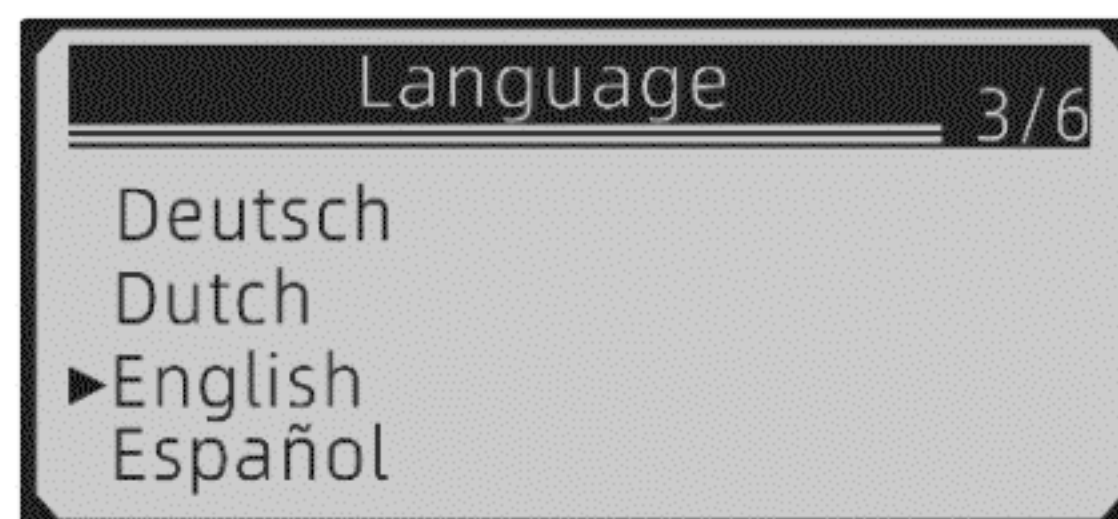
- *The number "x/x" to the upper right corner of the screen indicates total number of items under the menu and sequence of currently selected item.*

Language

- *English is the default language.*
- 1) From **System Setup** menu, use **UP/DOWN** button to select **Language**, and press **OK** button.



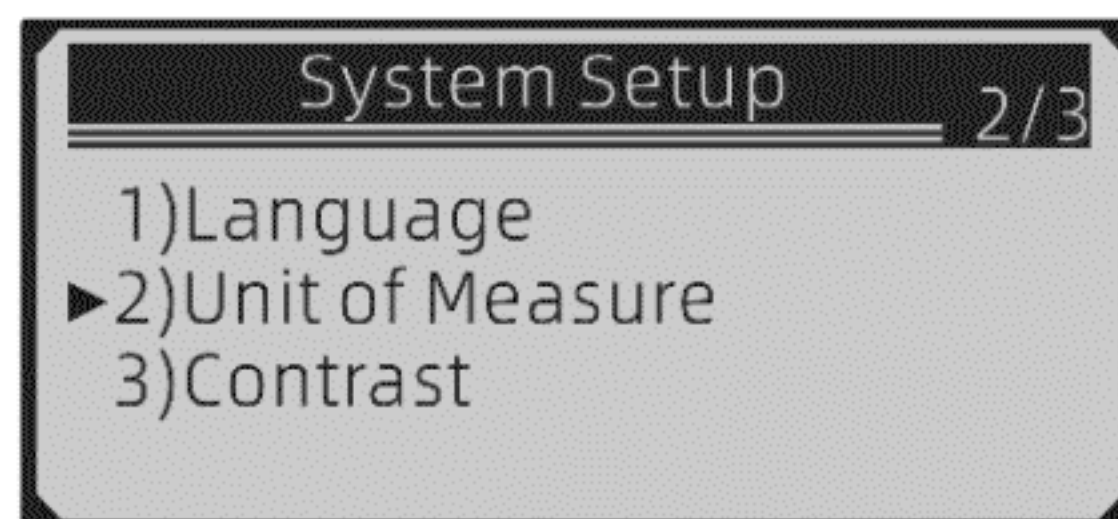
- 2) Use **UP/DOWN** button to select the desired language and press **OK** button to save your selection and return to previous menu.



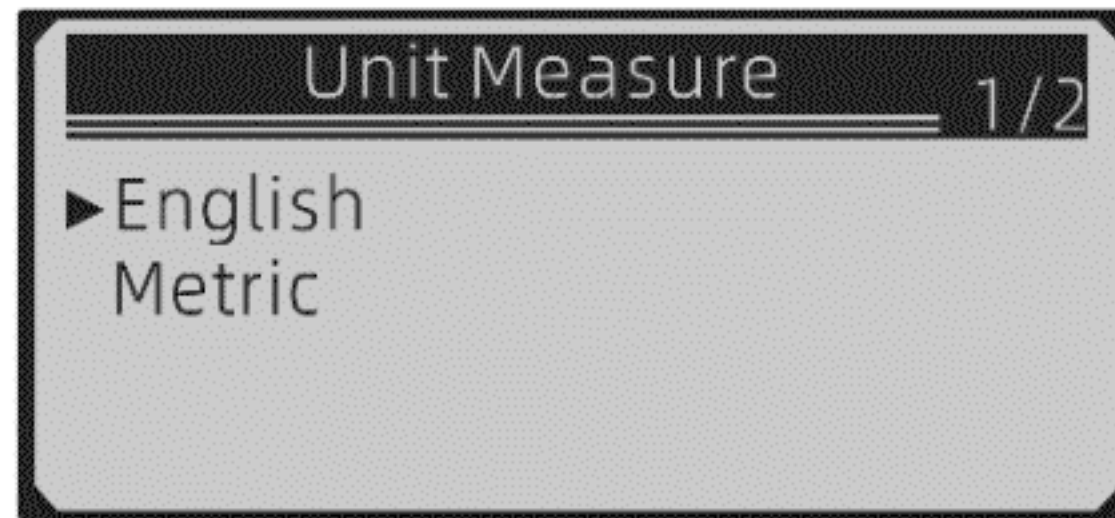
Unit of Measurement

- *Metric is the default measurement unit.*

- 1) From **System Setup** menu, use **UP/DOWN** button to select **Unit of Measure** and press **OK** button.



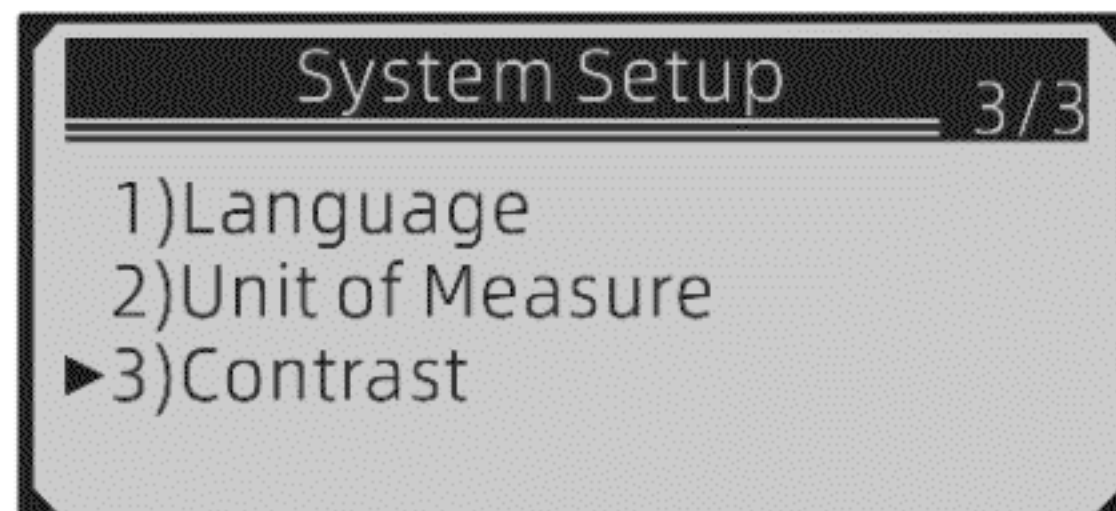
- 2) From **Unit of Measure** menu, use **UP/DOWN** button to select the desired unit of measurement.



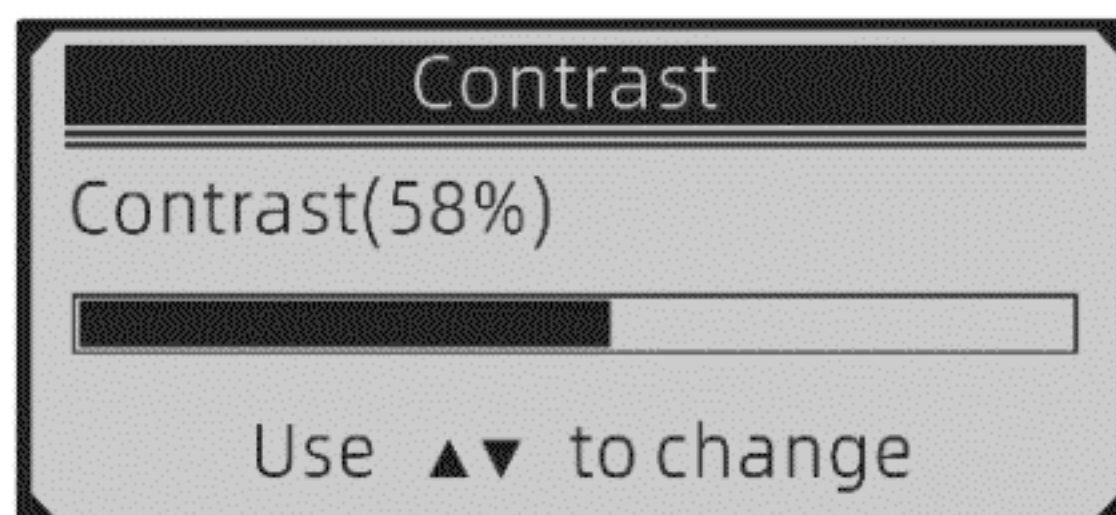
- 3) Press **OK** button to save your settings and return to previous menu.

Contrast

- 1) From **System Setup** menu, use **UP/DOWN** button to select **Contrast**, and press **OK** button.



- 2) From **Contrast** menu, use **UP/DOWN** button to adjust contrast.



- 3) Press **OK** button to save your settings and return to previous menu.

Exiting System Setup

- 1) Press **EXIT** button to return to **Main Screen**.

2.7 Vehicle Coverage

This OBDII / EOBD Car Professional Scan Tool is specially designed to work with all OBD II compliant vehicles, including those equipped with the next-generation protocol - Control Area Network (CAN). It is required by EPA that all 1996 and newer vehicles (cars and light trucks) sold in the United States must be OBD II compliant and this includes all Domestic, Asian and European vehicles.

A small number of 1994 and 1995 model year gasoline vehicles are OBD II compliant. To verify if a 1994 or 1995 vehicle is OBD II compliant, check the Vehicle Emissions Control Information (VECI) Label which is located under the hood or by the radiator of most vehicles. If the vehicle is OBD II compliant, the label will designate "OBD II Certified". Additionally, Government regulations mandate that all OBD II compliant vehicles must have a "common" sixteen-pin Data Link Connector (DLC).

For your vehicle to be OBD II compliant it must have a 16-pin DLC (Data Link Connector) under the dash and the Vehicle Emission Control Information Label must state that the vehicle is OBD II compliant.

3. OBD II Diagnostics

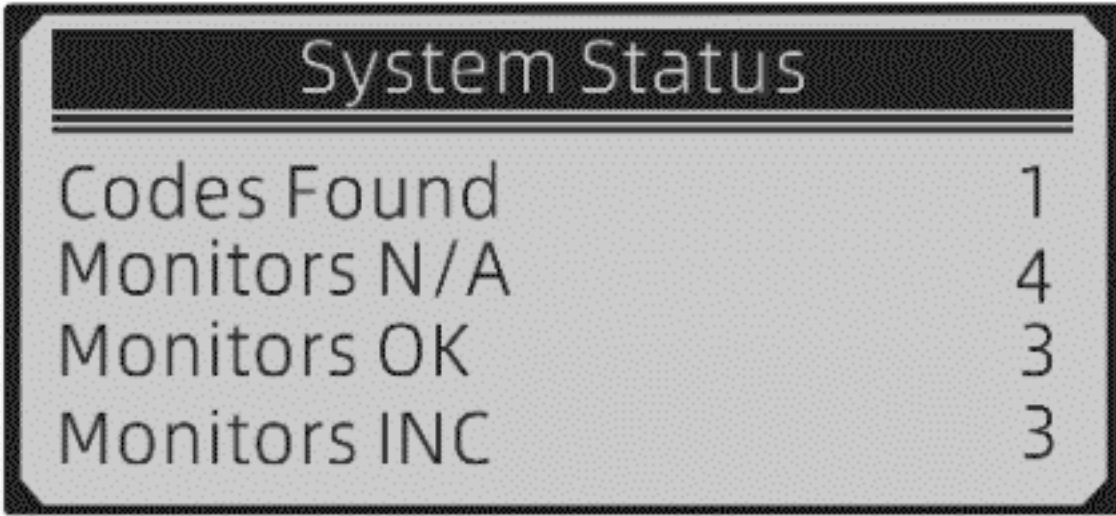
When more than one vehicle control module is detected by the Diagnostic tool, you will be prompted to select the module where the data may be retrieved. The most often to be selected are the Powertrain Control Module [PCM] and Transmission Control Module [TCM].

CAUTION: Don't connect or disconnect any test equipment with ignition on or engine running.

- 1) Turn the ignition off.
 - 2) Locate the vehicle's 16-pin Data Link Connector (DLC).
 - 3) Plug into the OBDII cable to the vehicle's DLC.
 - 4) Turn the ignition on. Engine can be off or running.
 - 5) Press **OK** button to enter **Diagnostic Menu** from the **Main Screen**. The tool will display OBD II protocols and the vehicle information until it has detected the vehicle's communication protocol.
- If the Car Professional Scan Tool fails to communicate with the vehicle's ECU (Engine Control Unit), a **"LINKING ERROR!"** message shows up on the display.
 - ✓ Verify that the ignition is **ON**;
 - ✓ Check if the Car Professional Scan Tool OBD II connector is securely connected to the vehicle's DLC;
 - ✓ Verify that the vehicle is OBD2 compliant;
 - ✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and repeat the procedure from step 5.
 - If the **"LINKING ERROR"** message continues to display, then there might be problems for the Car Professional Scan Tool to

communicate with the vehicle. Contact your local distributor or the manufacturer's customer service department for assistance.

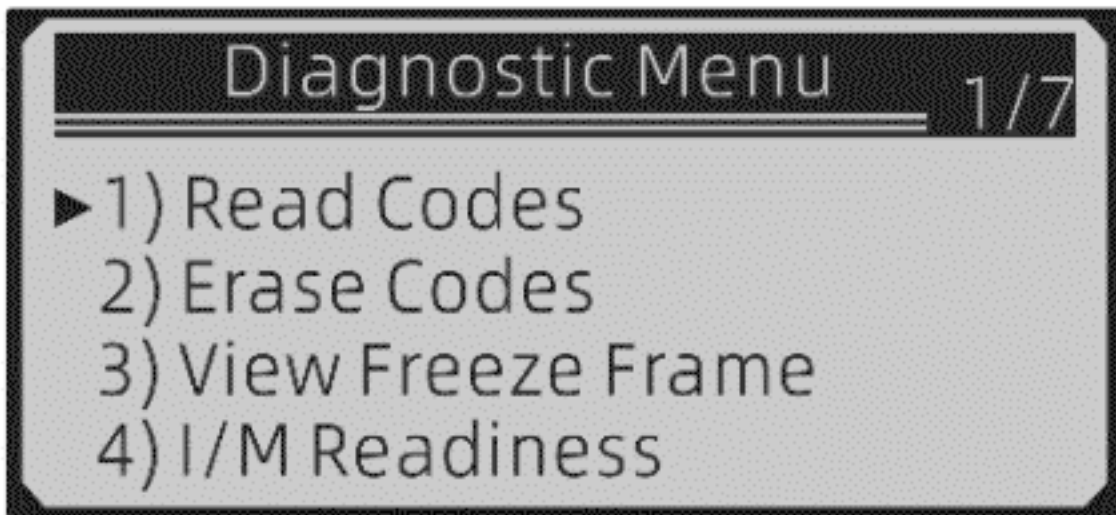
- 6) After the system status is displayed (MIL status, DTC counts, Monitor status), wait a few seconds or press any key for **Diagnostic Menu** to come up.

A screenshot of a vehicle's diagnostic display showing 'System Status'. The title 'System Status' is at the top. Below it, there are four rows of data: 'Codes Found' with a value of 1, 'Monitors N/A' with a value of 4, 'Monitors OK' with a value of 3, and 'Monitors INC' with a value of 3.

System Status	
Codes Found	1
Monitors N/A	4
Monitors OK	3
Monitors INC	3

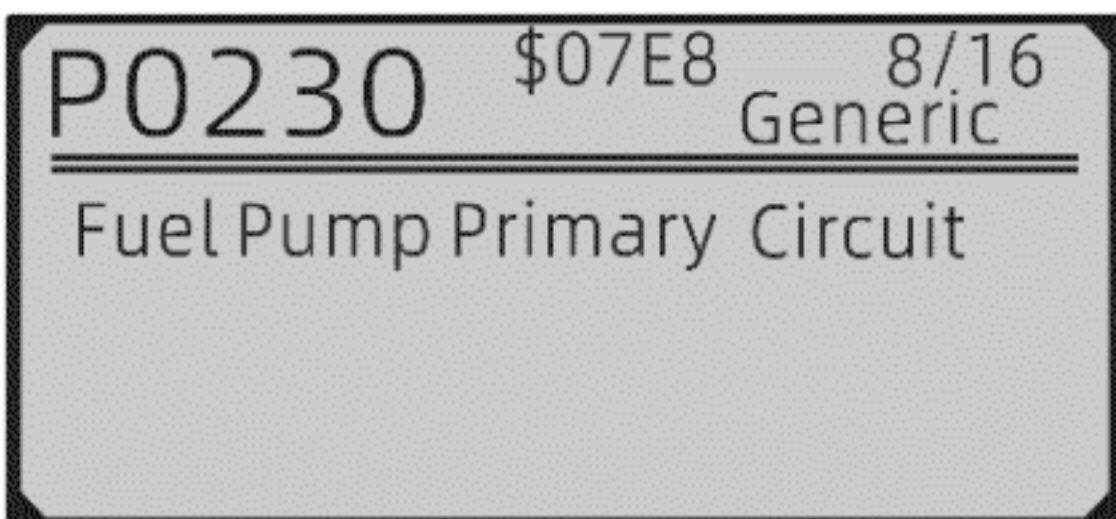
3.1 Reading Codes

- 1) Use **UP/DOWN** button to select Read Codes from **Diagnostic Menu** and press **OK** button

A screenshot of a vehicle's diagnostic display showing the 'Diagnostic Menu'. The title 'Diagnostic Menu' is at the top with a page indicator '1/7' on the right. Below the title, there is a list of four options: '1) Read Codes', '2) Erase Codes', '3) View Freeze Frame', and '4) I/M Readiness'. The first option is highlighted with a right-pointing arrow.

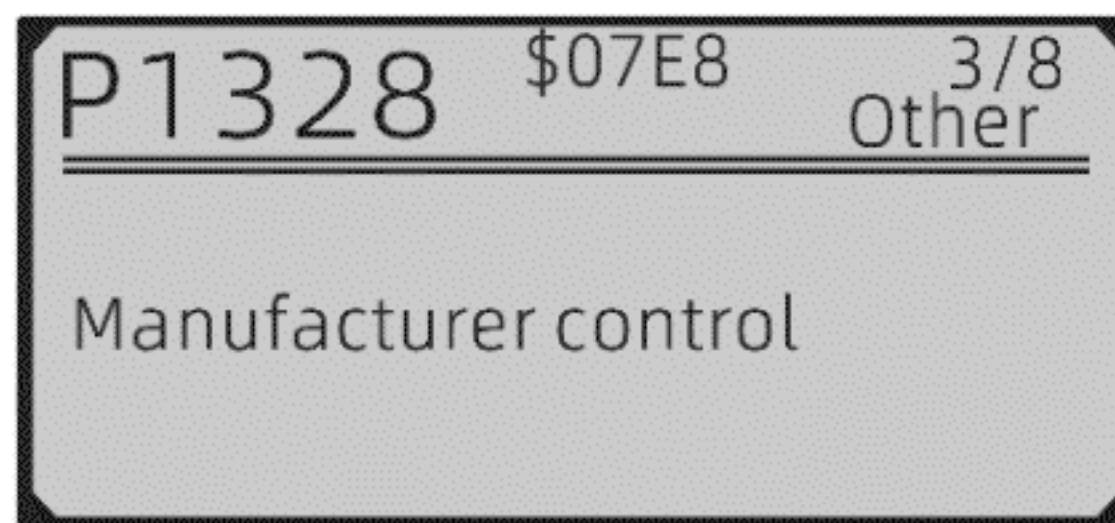
Diagnostic Menu 1/7	
► 1) Read Codes	
2) Erase Codes	
3) View Freeze Frame	
4) I/M Readiness	

- 2) View **DTCs** and their definitions on screen.

A screenshot of a vehicle's diagnostic display showing a specific Diagnostic Trouble Code (DTC). The code 'P0230' is large and bold. To its right is '\$07E8' and further right is '8/16'. Below 'P0230' is the text 'Generic'. At the bottom of the screen is the description 'Fuel Pump Primary Circuit'.

P0230	\$07E8	8/16
	Generic	
Fuel Pump Primary Circuit		

- *The control module number, sequence of the DTCs, total number of codes detected and type of codes (Generic or Manufacturer specific, Stored or Pending codes) will be observed on the upper right hand corner of the display.*
- 3) If more than one DTC is found, use **UP/DOWN** button, as necessary, until all the codes have been shown up.
- If no codes are detected, a “**No codes are stored in the module!**” message displays on the screen.
 - If retrieved DTCs contain any manufacturer specific or enhanced codes, the display indicates “**Manufacturer control**” .



- 4) Press **EXIT** button to return to previous menu.

3.2 Erasing Codes

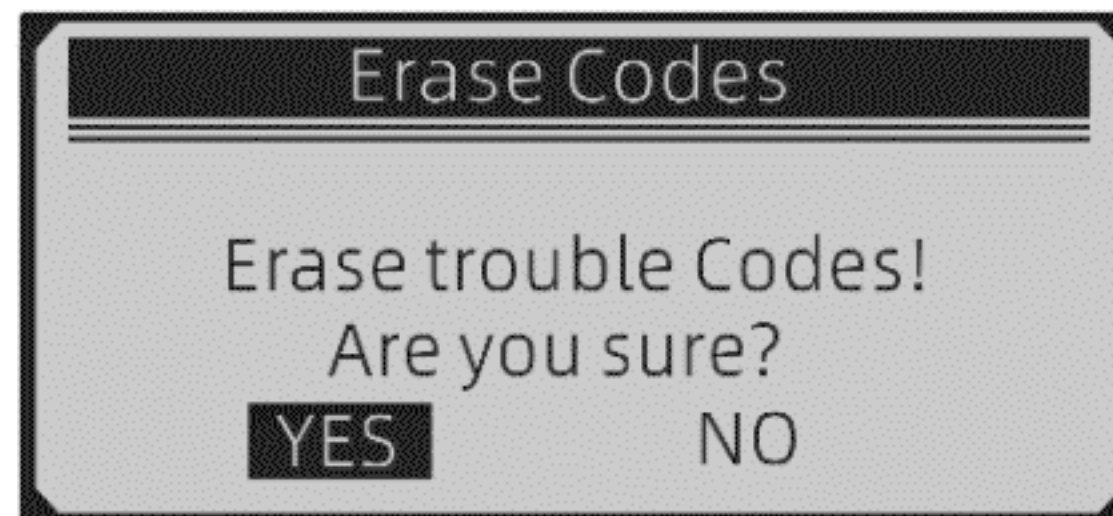
CAUTION: Erasing the Diagnostic Trouble Codes may allow the Car Professional Scan Tool to delete not only the codes from the vehicle's on-board computer, but also "Freeze Frame" data and manufacturer enhanced data. Further, the I/M Readiness Monitor Status for all vehicle monitors is reset to Not Ready or Not Complete status. Do not erase the codes before the system has been checked completely by a technician.

- *This function is performed with key on engine off (KOEO). Do not start the engine.*

- 1) If you decide to erase the DTCs, use **UP/DOWN** button to select **Erase Codes** from **Diagnostics Menu** and press **OK** button.



- 2) A warning message comes up asking for your confirmation.



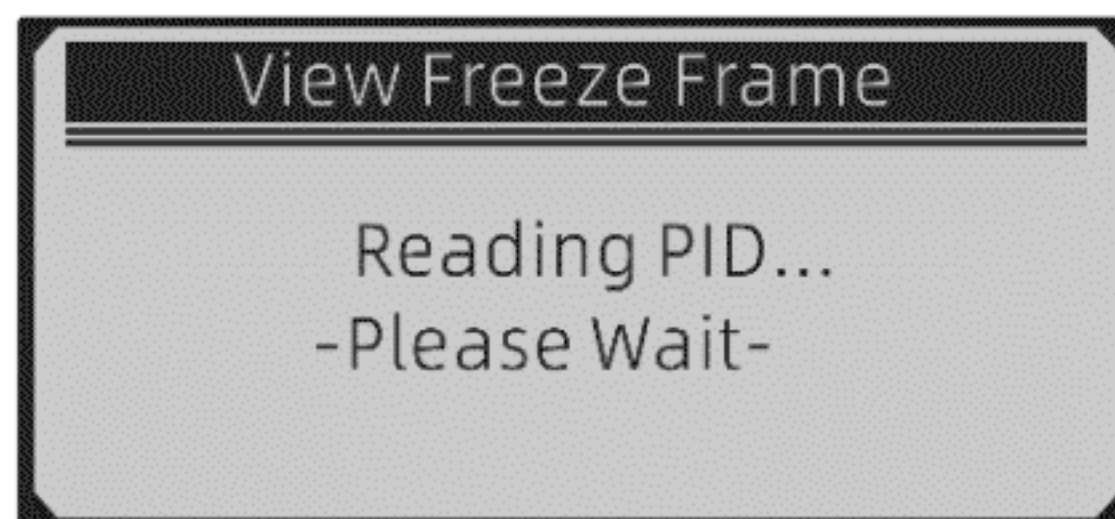
- 3) If you want to proceed with erasing the codes, press **OK** button to erase.
 - If the codes are cleared successfully, an **"Erase Done!"** message shows up.
 - If the codes are not cleared, then an **"Erase Failure. Turn Key on with Engine off!"** message displays.
- 4) Wait a few seconds or press any key to return to **Diagnostic Menu**.
 - If you don't want to erase the codes, then press **UP/DOWN** button to select **NO** and press **OK** button. A **"Command Canceled"** message shows up. Press any key or wait a few seconds to return to **Diagnostic Menu**.

3.3 Viewing Freeze Frame Data

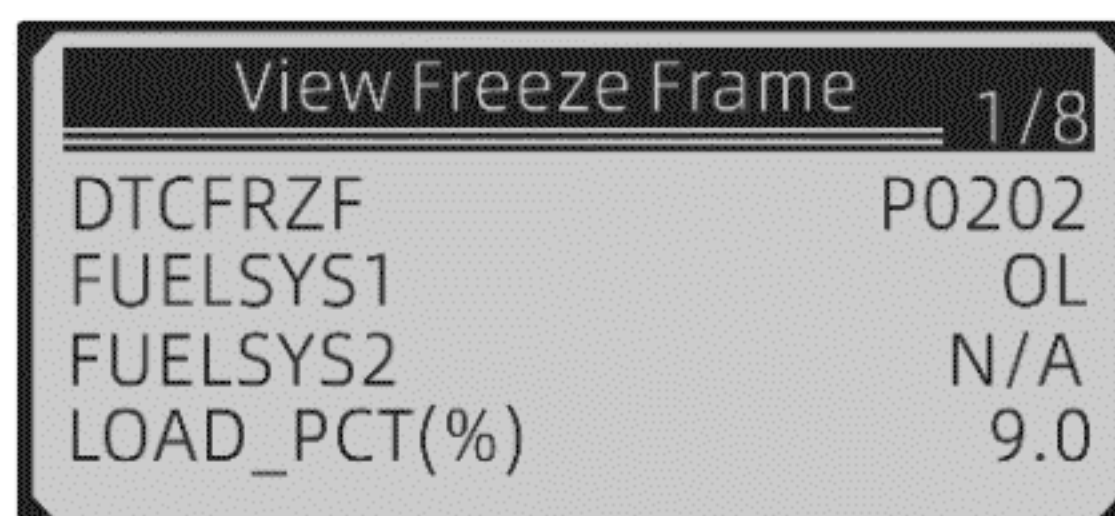
- 1) To view freeze frame, use **UP/DOWN** button to select **View Freeze Frame** from **Diagnostic Menu** and press **OK** button.



- 2) Wait a few seconds while the Car Professional Scan Tool validates the **PID MAP**.



- 3) If the retrieved information covers more than one screen, use **UP/DOWN** button, as necessary, until all data have been shown up.



- *The number "x/x" to the upper right corner of the screen indicates total number of screens the retrieved freeze frame*

covers and sequence of currently displayed data.

- *If there is no freeze frame data available, an advisory message “**No Freeze Frame Data Stored!**” shows on the display.*

4) Press **EXIT** button to return to **Diagnostic Menu**.

3.4 Retrieving I/M Readiness Status

I/M Readiness function is used to check the operations of the Emission System on OBD II compliant vehicles. It is an excellent function to use prior to having a vehicle inspected for compliance to a state emissions program.

Some latest vehicle models may support two types of **I/M Readiness** tests:

- A. **Since DTCs Cleared** -indicates status of the monitors since the DTCs are erased.
- B. **This Drive Cycle**- indicates status of monitors since the beginning of the current drive cycle.

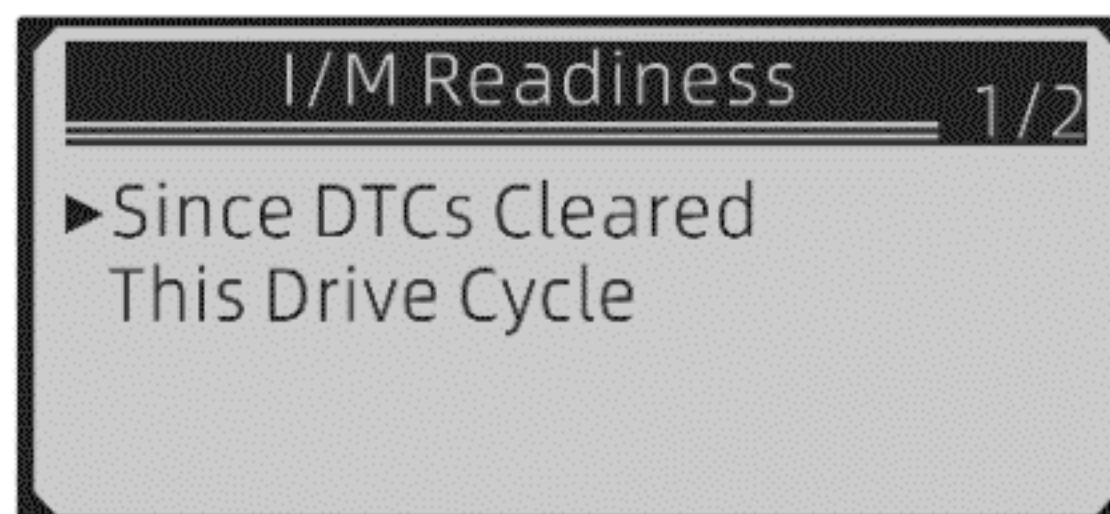
An I/M Readiness Status result of “**NO**” does not necessarily indicate that the vehicle being tested will fail the state I/M inspection. For some states, one or more such monitors may be allowed to be “Not Ready” to pass the emissions inspection.

- ✓ “OK” – Indicates that a particular monitor being checked has completed its diagnostic testing.
- ✓ “INC” – Indicates that a particular monitor being checked has not completed its diagnostic testing.
- ✓ “N/A” – The monitor is not supported on that vehicle.

1) Use **UP/DOWN** button to select **I/M Readiness** from **Diagnostic Menu** and press **OK** button.



- 2) If the vehicle supports both types of tests, then both types shows on the screen for selection.



- 3) Use **UP/DOWN** button to view the status of the MIL light ("**ON**" or "**OFF**") and the following monitors:
- **Misfire monitor**-- Misfire monitor
 - **Fuel System Mon.**-- Fuel System Monitor
 - **Comp. Component**-- Comprehensive Components Monitor
 - **Catalyst Mon.**-- Catalyst Monitor
 - **HTD Catalyst**-- Heated Catalyst Monitor
 - **EVAP System Mon.**-- Evaporative System Monitor
 - **Sec. Air System** -- Secondary Air Monitor
 - **A/C Refrig Mon.**-- A/C system Monitor
 - **Oxygen Sens Mon.**--O2 Sensors Monitor
 - **Oxygen Sens Htr**-- O2 Sensor Heater Monitor
 - **EGR**-- EGR System Monitor

•

Since DTCs Cleared		1/3
MIL Status		ON
Mis fire Monitor		OK
Fuel System Mon.		OK
Comp. Component		OK

- 4) If the vehicle supports readiness test of “**This Drive Cycle**” , a screen of the following will be displayed:

This Drive Cycle		1/3
MIL Status		OFF
Mis fire Monitor		OK
Fuel System Mon.		OK
Comp. Component		OK

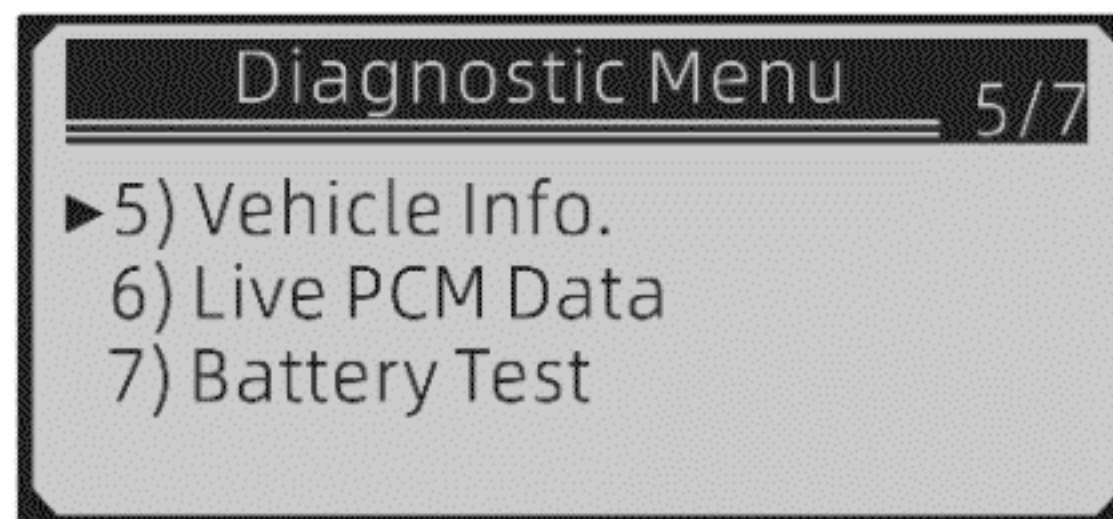
The number “x/x” to the upper right corner of the screen indicates total number of screens the retrieved data cover and sequence of currently displayed data.

- 5) Press **EXIT** button to return to previous menu.

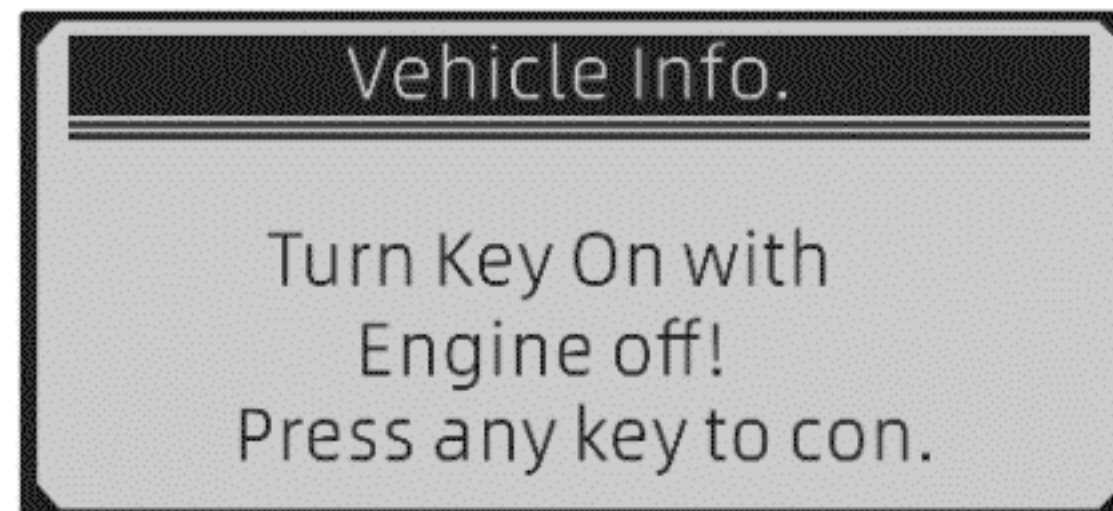
3.5 Viewing Vehicle Information

The Vehicle Info. function enables retrieval of the Vehicle Identification No. (VIN), Calibration ID(s), Calibration Verification Nos. (CVNs) and In-use Performance Tracking on 2000 and newer vehicles that support Mode 9.

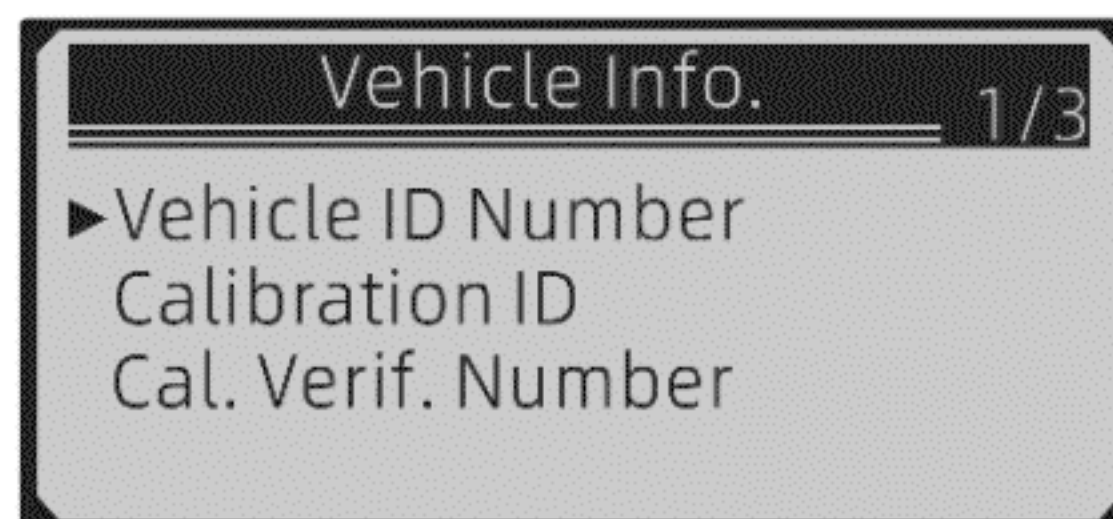
- 1) Use **UP/DOWN** button to select **Vehicle Info**, from **Diagnostic Menu** and press **OK** button.



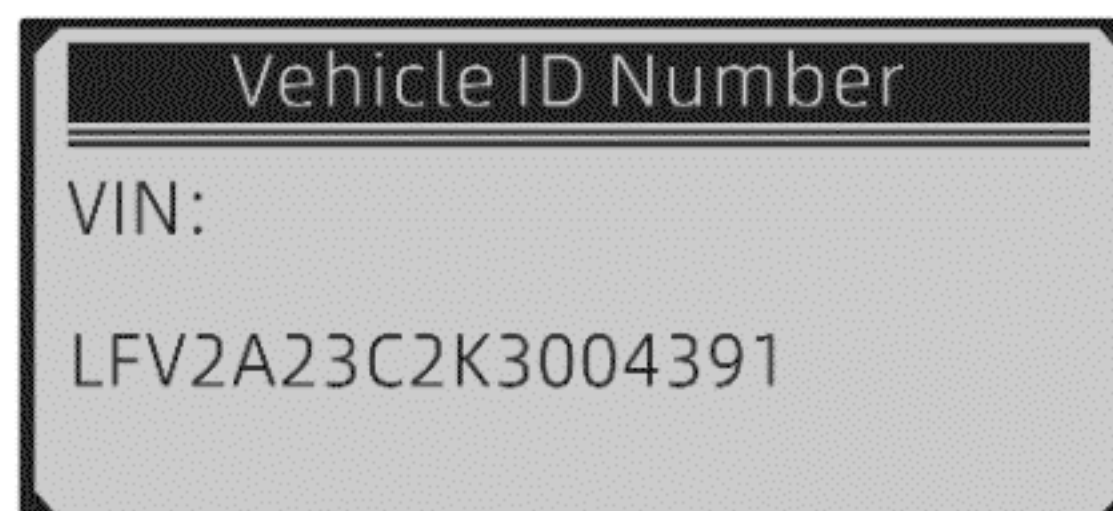
- 2) Wait a few seconds or press **OK** button to continue.



- If the vehicle does not support this mode, a "**The selected mode is not supported!**" message shows on the display.
- 3) From **Vehicle Info.** menu, use **UP/DOWN** button to select an available item to view and press **OK** button.



- 4) View retrieved vehicle information on the screen.

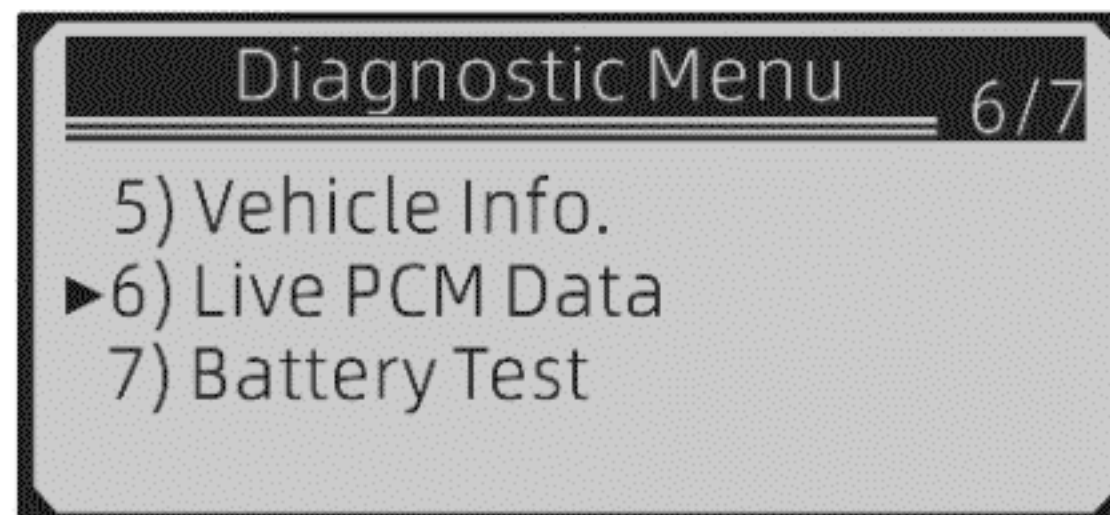


- 5) Press **EXIT** button to return to previous menu.

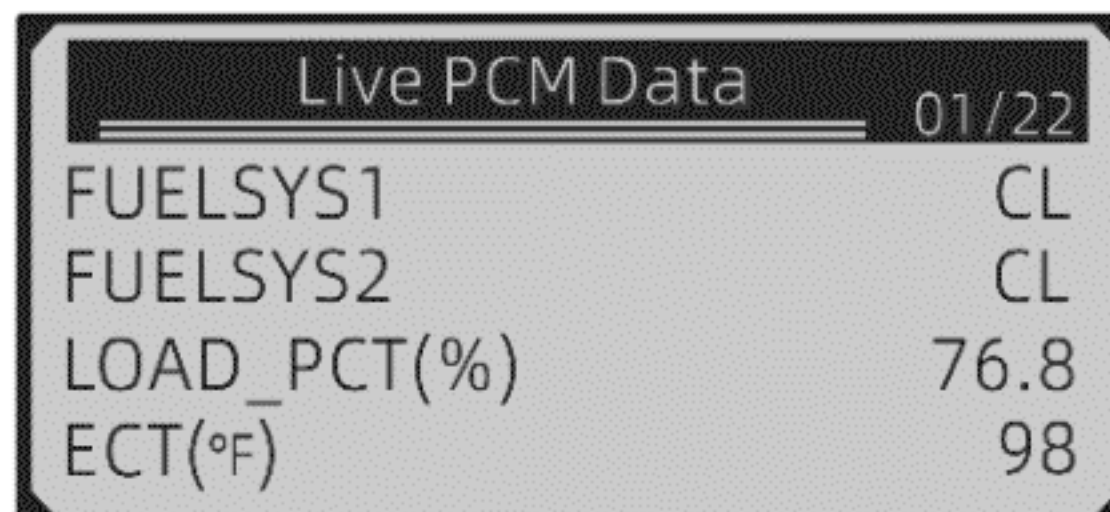
3.6 Live PCM Data

The **Live PCM Data** function can retrieve vehicle real time data of Mode 1.

- 1) Use **UP/DOWN** button to select **Live PCM Data** from **Diagnostic Menu** and press **OK** button



- 2) Use **UP/DOWN** button to change page in **Live PCM Data** interface.



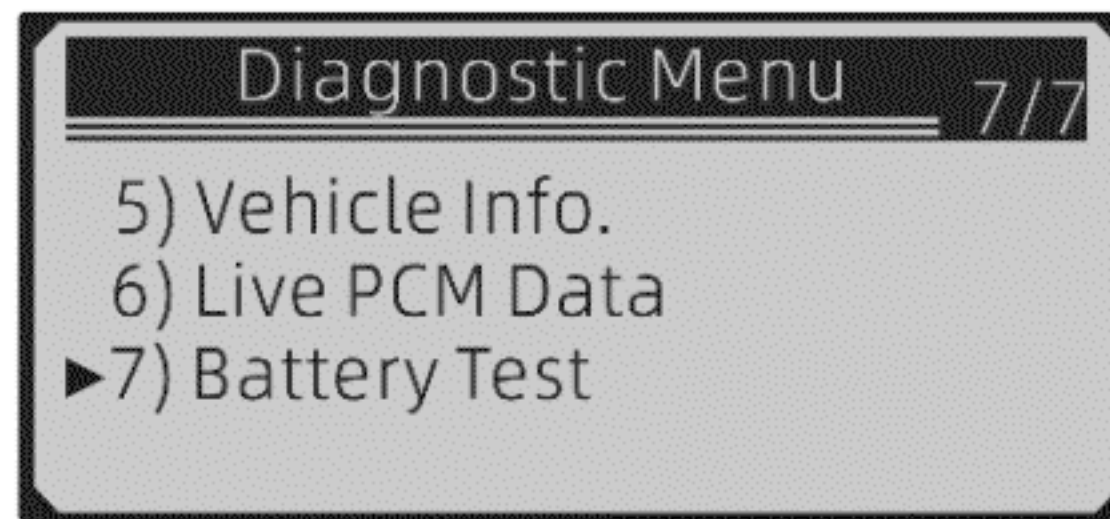
- 3) Press **EXIT** button to return to the previous menu.

3.7 Battery Test

The **Battery Test** function can measure the battery voltage, view the battery voltage curve and test the battery life.

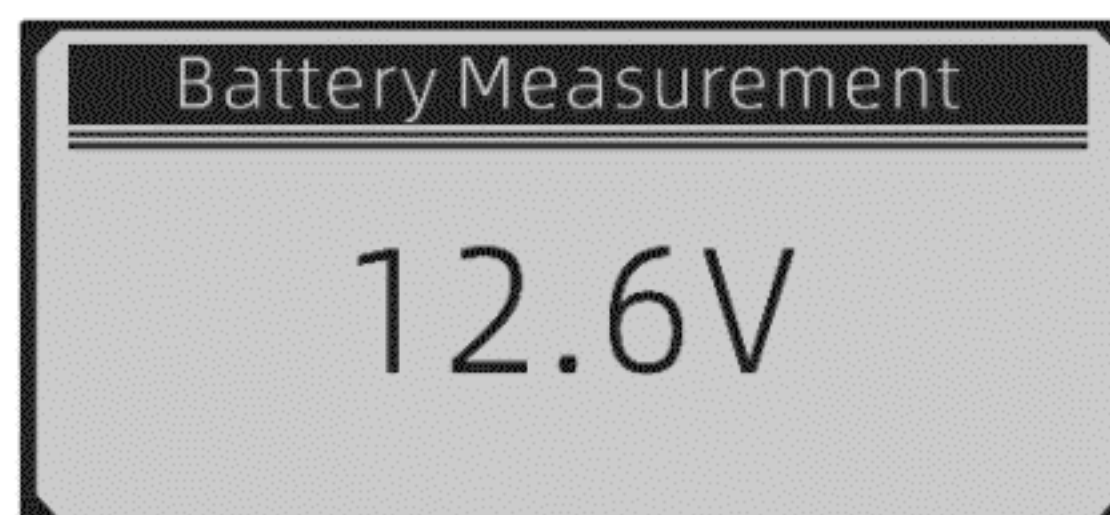
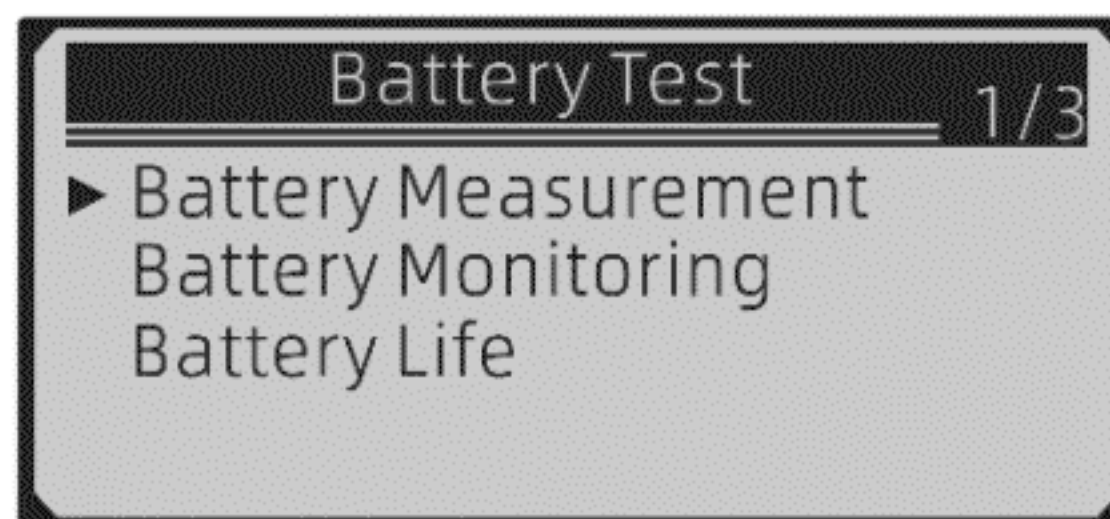
To enter the Battery Test menu

Use **UP/DOWN** button to select **Battery Test** from **Diagnostic Menu** and press **OK** button.



Battery measurement

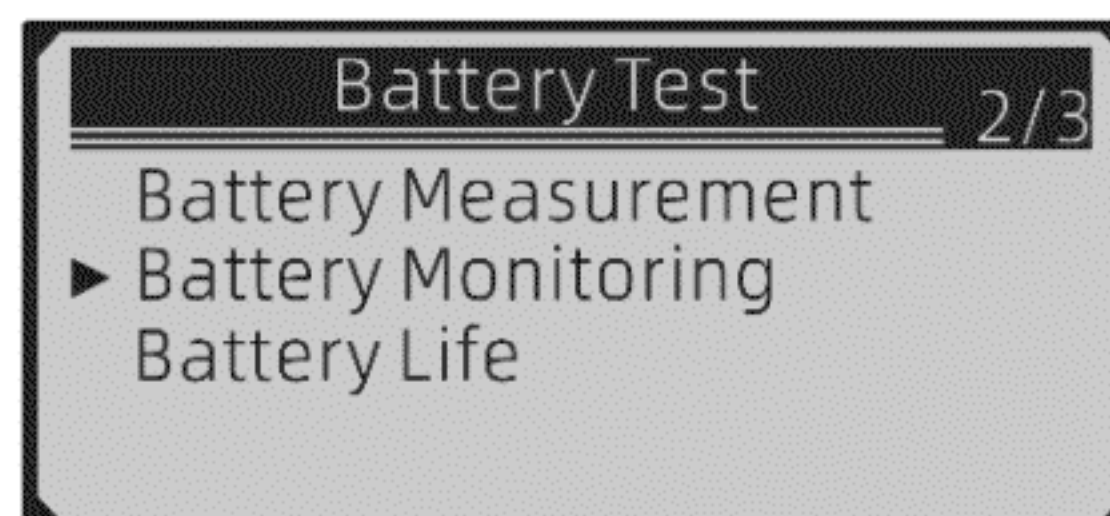
- 1) From **Battery Test** menu, use **UP/DOWN** button to select **Battery measurement**, and press **OK** button.

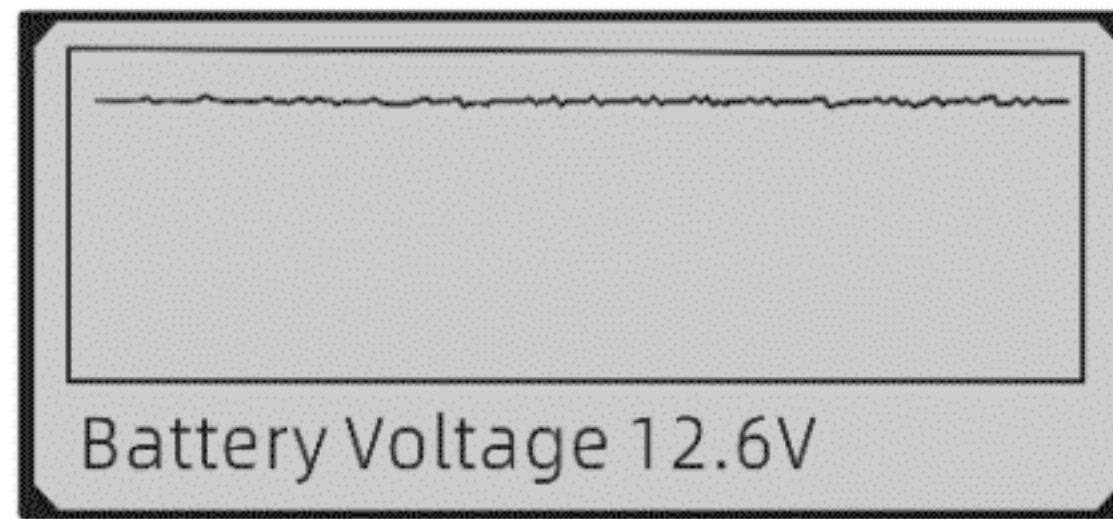


- 2) Press **EXIT** button to return to the previous menu

Battery monitoring

- 1) From **Battery Test** menu, use **UP/DOWN** button to select **Battery monitoring**, and press **OK** button.

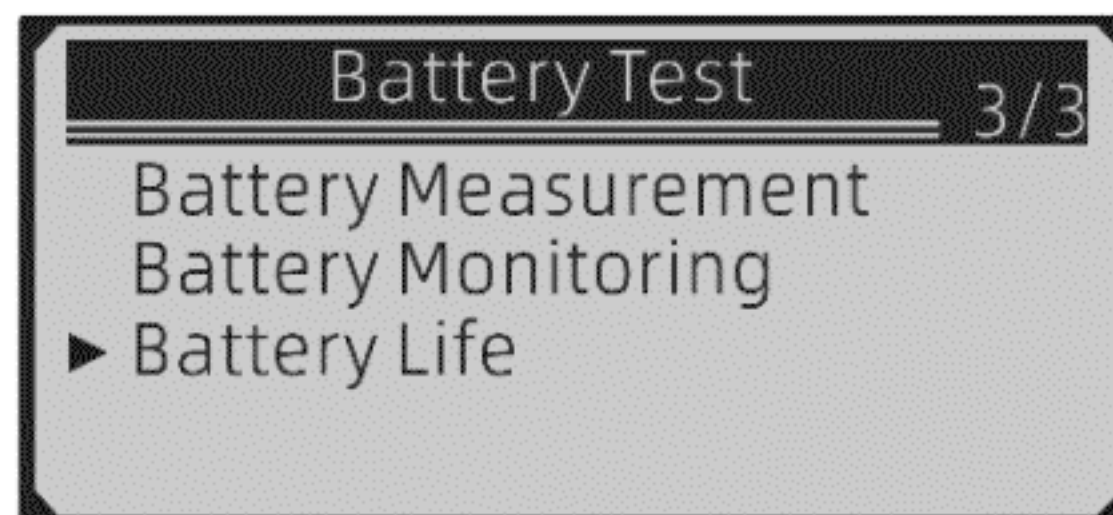




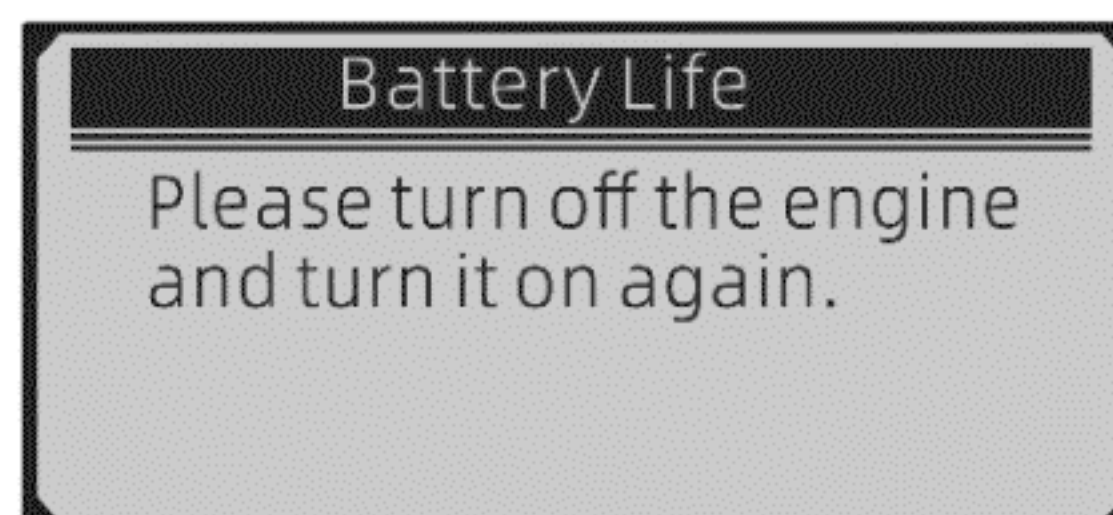
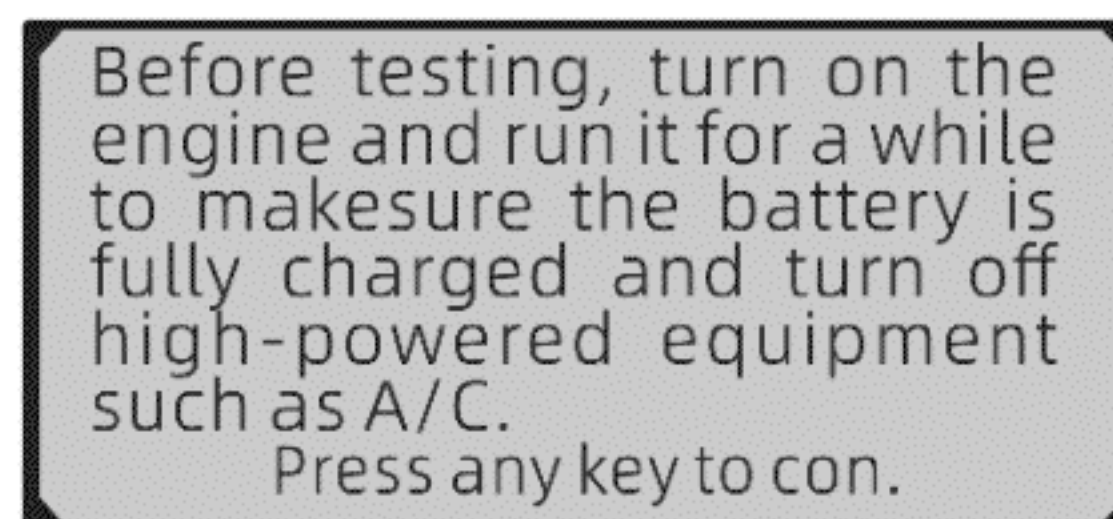
- 2) Press **EXIT** button to return to the previous menu.

Battery life

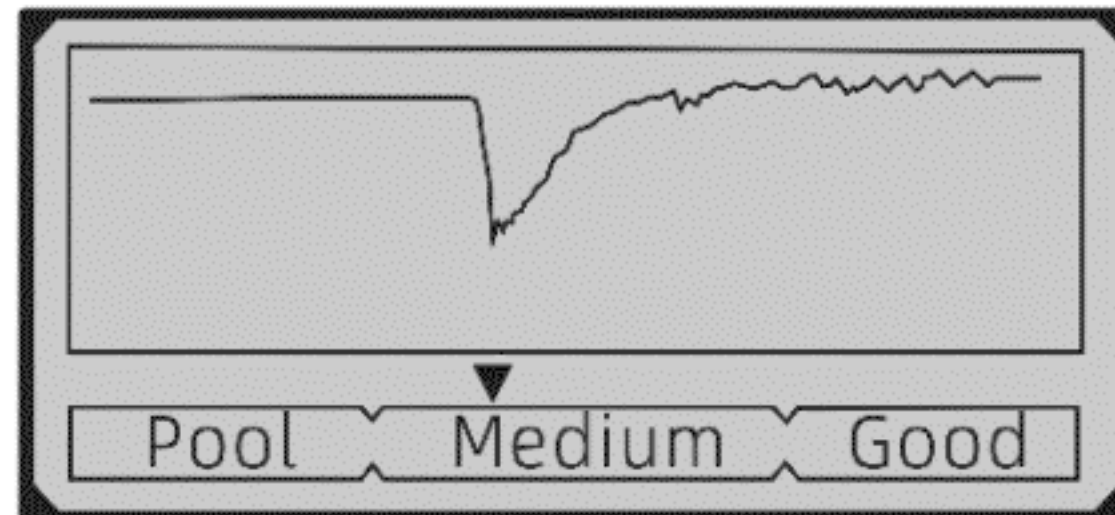
- 1) From **Battery Test** menu, use **UP/DOWN** button to select **Battery Life**, and press **OK** button.



- 2) There will be some prompts for the steps on the screen, in order to get accurate test results, please be sure to follow the prompts.



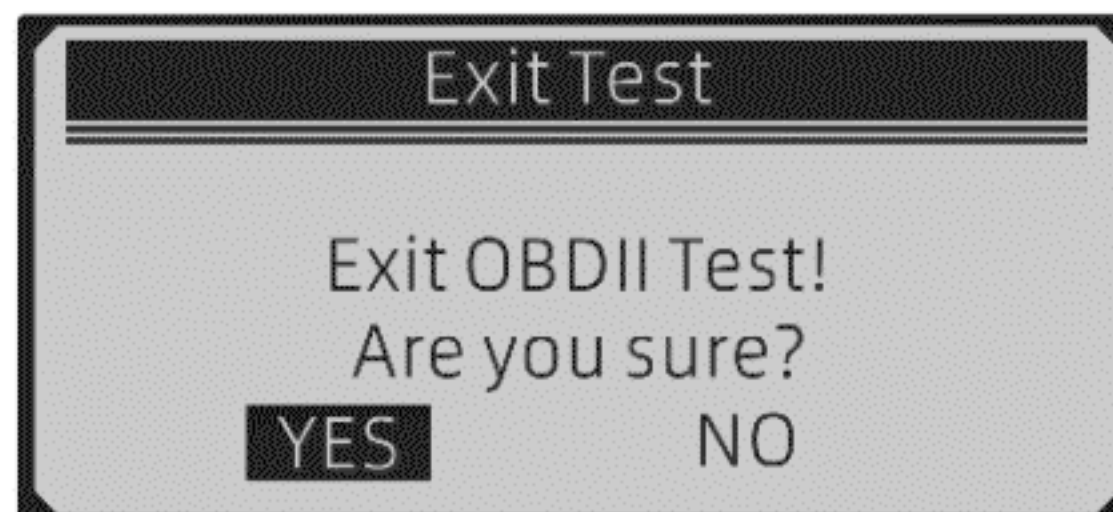
- 3) Follow the tips above, Turn off the engine, wait a moment and turn it on again.



- 4) Press **EXIT** button to return to the previous menu

3.8 Exiting OBDII Test

- 1) To exit OBDII test, press **EXIT** button in **Diagnostic Menu**.
- 2) A warning message comes up asking your confirmation.



- 3) If you do want to exit OBDII test, press **OK** button.
- If you do not want to exit, use **UP/DOWN** button to select **NO** and press **OK** button to return.

4. Warranty and Service

4.1 Limited One Year Warranty

This product will be free from all defects in materials and workmanship for a period of one (1) year from the date of the original purchase, subject to the following terms and conditions:

- 1) The sole responsibility of us under the Warranty is limited to either the repair or, at the option of us, replacement of the Car Professional Scan Tool at no charge with Proof of Purchase. The sales receipt may be used for this purpose.
- 2) This warranty does not apply to damages caused by improper use, accident, flood, lightning, or if the product was altered or repaired by anyone other than the Manufacturer's Service Center.
- 3) We shall not be liable for any incidental or consequential damages arising from the use, misuse, or mounting of the Car Professional Scan Tool. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.
- 4) All information in this manual is based on the latest information available at the time of publication and no warranty can be made for its accuracy or completeness. We reserves the right to make changes at any time without notice.

4.2 Service Procedures

If you have any questions, please contact your local store, distributor. If it becomes necessary to return the Car Professional Scan Tool for repair, contact your local distributor for more information.