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1. Safety Precautions and Warnings

To prevent personal injury or damage to vehicles and/or the scan tool, read this instruction manual first and observe the following safety precautions at a minimum whenever working on a vehicle:

- Always perform automotive testing in a safe environment.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc, away from all moving or hot engine parts.
- Operate the vehicle in a well-ventilated work area; Exhaust gases are poisonous.
- Put blocks on drive wheels and never leave vehicle unattended while running tests.
- Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Put transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Keep a fire extinguisher suitable for gasoline/chemical/ electrical fires nearby.
- Don't connect or disconnect any test equipment with ignition on or engine running.
- Keep the scan tool dry, clean and free from oil, water and grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool, when necessary.

2. General Information

2.1 On-Board Diagnostics (OBD) II

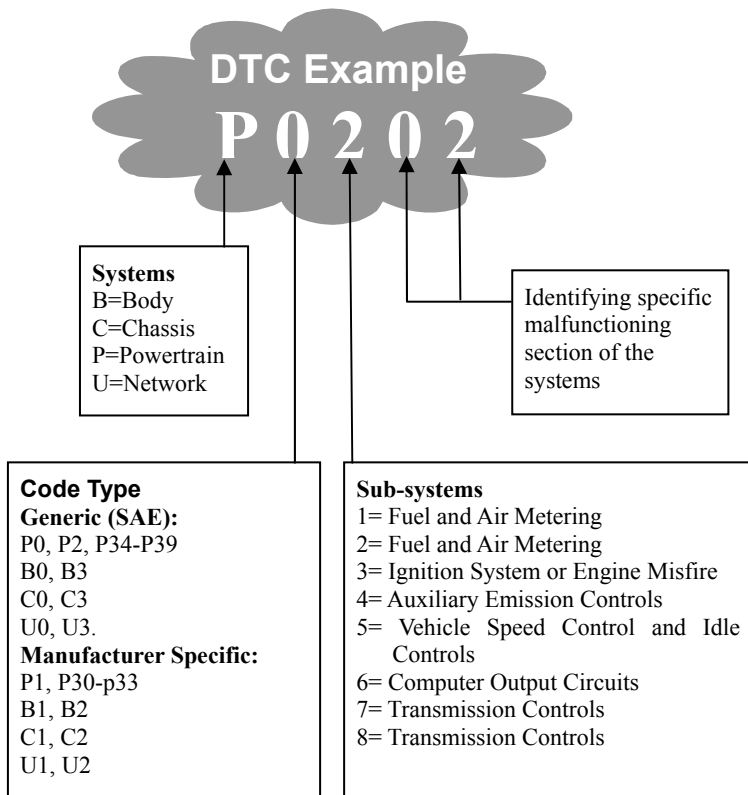
The first generation of On-Board Diagnostics (called OBD I) was developed by the California Air Resources Board (ARB) and implemented in 1988 to monitor some of the emission control components on vehicles. As technology evolved and the desire to improve the On-Board Diagnostic system increased, a new generation of On-Board Diagnostic system was developed. This second generation of On-Board Diagnostic regulations is called "OBD II".

The OBD II system is designed to monitor emission control systems and key engine components by performing either continuous or periodic tests of specific components and vehicle conditions. When a problem is detected, the OBD II system turns on a warning lamp (MIL) on the vehicle instrument panel to alert the driver typically by the phrase of "Check Engine" or "Service Engine Soon". The system will also store important information about the detected malfunction so that a technician can accurately find and fix the problem. Here below follow three pieces of such valuable information:

- 1) Whether the Malfunction Indicator Light (MIL) is commanded 'on' or 'off';**
- 2) Which, if any, Diagnostic Trouble Codes (DTCs) are stored;**
- 3) Readiness Monitor status.**

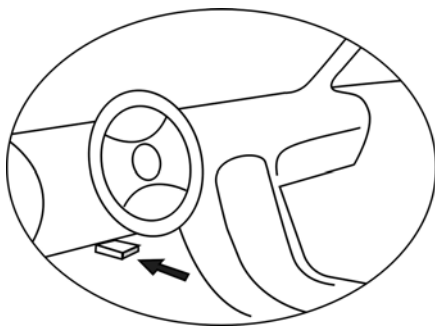
2.2 Diagnostic Trouble Codes (DTCs)

OBD II Diagnostic Trouble Codes are codes that are stored by the on-board computer diagnostic system in response to a problem found in the vehicle. These codes identify a particular problem area and are intended to provide you with a guide as to where a fault might be occurring within a vehicle. OBD II Diagnostic Trouble Codes consist of a five-digit alphanumeric code. The first character, a letter, identifies which control system sets the code. The other four characters, all numbers, provide additional information on where the DTC originated and the operating conditions that caused it to set. Here below is an example to illustrate the structure of the digits:



2.3 Location of the Data Link Connector (DLC)

The DLC (Data Link Connector or Diagnostic Link Connector) is the standardized 16-cavity connector where diagnostic scan tools interface with the vehicle's on-board computer. The DLC is usually located 12 inches from the center of the instrument panel (dash), under or around the driver's side for most vehicles. If Data Link Connector is not located under dashboard, a label should be there telling location. For some Asian and European vehicles, the DLC is located behind the ashtray and the ashtray must be removed to access the connector. If the DLC cannot be found, refer to the vehicle's service manual for the location.



2.4 OBD II Readiness Monitors

An important part of a vehicle's OBD II system is the Readiness Monitors, which are indicators used to find out if all of the emissions components have been evaluated by the OBD II system. They are running periodic tests on specific systems and components to ensure that they are performing within allowable limits.

Currently, there are eleven OBD II Readiness Monitors (or I/M Monitors) defined by the U.S. Environmental Protection Agency (EPA). Not all monitors are supported by all vehicles and the exact number of monitors in any vehicle depends on the motor vehicle manufacturer's emissions control strategy.

Continuous Monitors -- Some of the vehicle components or systems are continuously tested by the vehicle's OBD II system, while others are tested only under specific vehicle operating conditions. The continuously monitored components listed below are always ready:

- 1) **Misfire**
- 2) **Fuel System**
- 3) **Comprehensive Components (CCM)**

Once the vehicle is running, the OBD II system is continuously checking the above components, monitoring key engine sensors, watching for engine misfire, and monitoring fuel demands.

Non-Continuous Monitors -- Unlike the continuous monitors, many emissions and engine system components require the vehicle to be

operated under specific conditions before the monitor is ready. These monitors are termed non-continuous monitors and are listed below:

- 1) EGR System**
- 2) O2 Sensors**
- 3) Catalyst**
- 4) Evaporative System**
- 5) O2 Sensor Heater**
- 6) Secondary air**
- 7) Heated Catalyst**
- 8) A/C system**

2.5 OBD II Monitor Readiness Status

OBD II systems must indicate whether or not the vehicle's PCM's monitor system has completed testing on each component. Components that have been tested will be reported as "Ready", or "Complete", meaning they have been tested by the OBD II system. The purpose of recording readiness status is to allow inspectors to determine if the vehicle's OBD II system has tested all the components and/or systems.

The powertrain control module (PCM) sets a monitor to "Ready" or "Complete" after an appropriate drive cycle has been performed. The drive cycle that enables a monitor and sets readiness codes to "Ready" varies for each individual monitor. Once a monitor is set as "Ready" or "Complete", it will remain in this state. A number of factors, including erasing of diagnostic trouble codes (DTCs) with a scan tool or a disconnected battery, can result in Readiness Monitors being set to "Not Ready". Since the three continuous monitors are constantly evaluating, they will be reported as "Ready" all of the time. If testing of a particular supported non-continuous monitor has not been completed, the monitor status will be reported as "Not Complete" or "Not Ready."

In order for the OBD monitor system to become ready, the vehicle should be driven under a variety of normal operating conditions. These

operating conditions may include a mix of highway driving and stop and go, city type driving, and at least one overnight-off period. For specific information on getting your vehicle's OBD monitor system ready, please consult your vehicle owner's manual.

2.6 OBD II Definitions

Powertrain Control Module (PCM) -- OBD II terminology for the on-board computer that controls engine and drive train.

Malfunction Indicator Light (MIL) -- Malfunction Indicator Light (Service Engine Soon, Check Engine) is a term used for the light on the instrument panel. It is to alert the driver and/or the repair technician that there is a problem with one or more of vehicle's systems and may cause emissions to exceed federal standards. If the MIL illuminates with a steady light, it indicates that a problem has been detected and the vehicle should be serviced as soon as possible. Under certain conditions, the dashboard light will blink or flash. This indicates a severe problem and flashing is intended to discourage vehicle operation. The vehicle onboard diagnostic system can not turn the MIL off until the necessary repairs are completed or the condition no longer exists.

DTC -- Diagnostic Trouble Codes (DTC) that identify which section of the emission control system has malfunctioned.

Enabling Criteria -- Also termed Enabling Conditions. They are the vehicle-specific events or conditions that must occur within the engine before the various monitors will set, or run. Some monitors require the vehicle to follow a prescribed "drive cycle" routine as part of the enabling criteria. Drive cycles vary among vehicles and for each monitor in any particular vehicle.

OBD II Drive Cycle -- A specific mode of vehicle operation that provides conditions required to set all the readiness monitors applicable to the vehicle to the "ready" condition. The purpose of completing an OBD II drive cycle is to force the vehicle to run its onboard diagnostics. Some form of a drive cycle needs to be performed after DTCs have been erased from the PCM's memory or after the battery has been disconnected. Running through a vehicle's complete

drive cycle will “set” the readiness monitors so that future faults can be detected. Drive cycles vary depending on the vehicle and the monitor that needs to be reset. For vehicle specific drive cycle, consult the vehicle’s Owner’s Manual.

Freeze Frame Data -- When an emissions related fault occurs, the OBD II system not only sets a code but also records a snapshot of the vehicle operating parameters to help in identifying the problem. This set of values is referred to as Freeze Frame Data and may include important engine parameters such as engine RPM, vehicle speed, air flow, engine load, fuel pressure, fuel trim value, engine coolant temperature, ignition timing advance, or closed loop status.

3. Product Information

3.1 Tool Description



1. **LCD DISPLAY** -- Indicates test results. Backlit, 128 x 64 pixel display with contrast adjustment.
2. **Y BUTTON** -- Confirms a selection (or action) from a menu. When a DTC's definition covers more than one screen, it is used to move down to the next screen for additional data.

3. **N BUTTON** -- Cancels a selection (or action) from a menu or returns to the menu. It is also used to set up the unit when being pressed and held for at least 3 seconds.
4. **⤴ UP SCROLL BUTTON** -- Moves up through menu and submenu items in menu mode. When more than one DTC is retrieved, moves up through the current screen to the previous screens for additional DTCs and definitions.
5. **⤵ DOWN SCROLL BUTTON** -- Moves down through menu and submenu items in menu mode. When more than one DTC is retrieved, moves down through the current screen to the next screens for additional DTCs and definitions.
6. **READ BUTTON** -- HOT key to retrieve DTCs without going through the menu mode.
7. **ERASE BUTTON** -- HOT key to erase DTCs when being pressed and held for at least 3 seconds without going through the menu mode.
8. **OBD II CONNECTOR** -- Connects the scan tool to the vehicle's Data Link Connector (DLC).
9. **POWER BUTTON** -- Turns power ON or OFF.
10. **SERIAL NUMBER PLATE** -- Provides serial number of the scan tool.
11. **BATTERY COMPARTMENT** -- Provides power to scan tool for off-vehicle reviewing or when upgrading from a PC.

3.2 Specifications

- 1) Display: Backlit, 128 x 64 pixel display with contrast adjustment
- 2) Operating Temperature: 0 to 50°C (32 to 122 F°)
- 3) Storage Temperature: -20 to 70°C (-4 to 158 F°)
- 4) External Power: 8.0 to 15.0 Volts provided via vehicle battery
- 5) Internal Power: 9V Cell battery
- 6) Dimensions:

Length	Width	Height
196 mm (7.80")	90 mm (3.51")	34 mm (1.35")

7) NW: 0.70kg (1.54lb), GW: 1.0kg(2.20lb)

3.3 Accessories Included

- 1) **User's Manual** -- Instructions on tool operations
- 2) **CD** -- Includes user's manual and DTC definitions library
- 3) **OBD2 cable** -- Provides power to tool and communicates between tool and vehicle
- 4) **Serial Cable** -- Used to upgrade the scan tool
- 5) **Carry Case** -- A nylon case to store the scan tool when not in use
- 6) **Cell Battery** -- Supplies power to the scan tool when disconnected from vehicle DLC

3.4 Navigation Characters

Characters used to help navigate the scan tool are:

- 1) “►” -- Indicates current selection.
- 2) “↓” -- A flashing Down Arrow indicates additional information is available on the next screen.
- 3) “↑” -- A flashing UP Arrow indicates additional information is available on the previous screen.
- 4) “Pd” -- Identifying a Pending DTC when viewing DTCs.

3.5 Keyboard

No solvents such as alcohol are allowed to clean the keypad or display. Use a mild nonabrasive detergent and a soft cotton cloth. Do not soak the keypad as the keypad is not waterproof.

3.6 Power

A. Internal Battery Power

The scan tool has a 9V cell battery that provides power for tool upgrading and off-car reviewing and analysis. Press the power key to turn on the scan tool. And the voltage of the batteries is checked each time the scan tool is powered up. If the voltage is low, a message

“Battery is low!” shows on the screen. Replace the battery as per instructions in “Battery Replacement” on paragraph 3.8.

- *If the scan tool is stored for a long period of time, remove batteries to prevent battery leakage from damaging battery compartment.*

B. Vehicle Power

The external power of the scan tool is provided via the vehicle Data Link Connector (DLC). Just follow the steps below to turn on the scan tool:

- 1) Connect the OBD II Cable to 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.

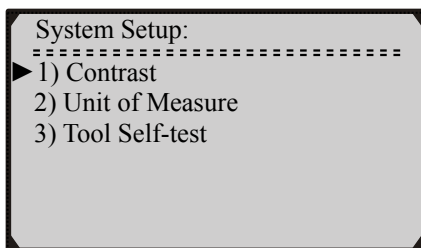
3.7 Product Setup

The scan tool allows you to make the following adjustments and settings:

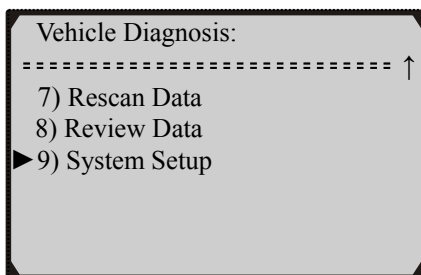
- 1) **Contrast adjustment:** Adjusts the contrast of the LCD display.
- 2) **Unit of measure:** Sets the Unit of Measure to English or Metric.
- 3) **Tool self-test:** Tests the LCD display and the keyboard.
- *The settings of the unit will remain until change to the existing settings is made.*

To enter the setup menu mode

- 1) **From the keyboard:** Press and hold the N button for at least 3 seconds until **System Setup** menu shows up. Follow the instructions to make adjustments and settings as described in the following setup options.

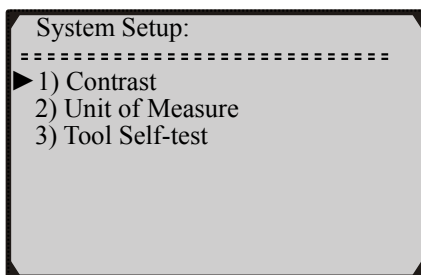


- 2) **From the Vehicle Diagnosis menu:** Use the **UP/DOWN** Scroll Buttons to select **System Setup** and then press the **Y** button. Follow the instructions to make adjustments and settings as described in the following setup options.

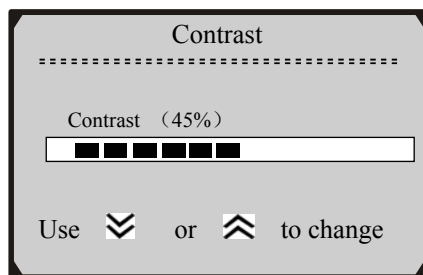


Contrast Adjustment

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



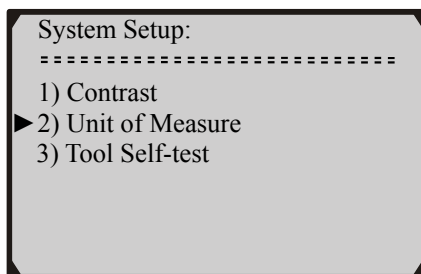
- 2) From the **Contrast** menu, use the **UP/DOWN** scroll buttons to decrease or increase the contrast.



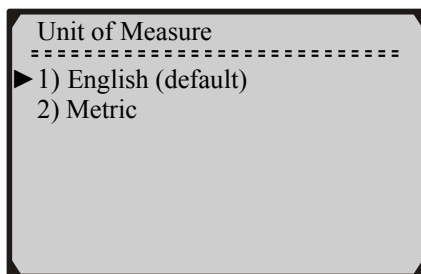
- 3) Press the **Y** button to save your selection and return to previous menu.
- 4) Press the **N** button to return to **Vehicle Diagnosis** menu.

Unit of Measurement

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



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



- 3) Press the **Y** button to save your selection and return to previous menu.
- 4) Press the **N** button to return to **Vehicle Diagnosis** menu.

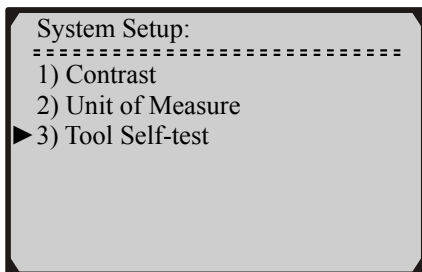
Tool Self-test

Tool Self-Test checks the display and keyboard.

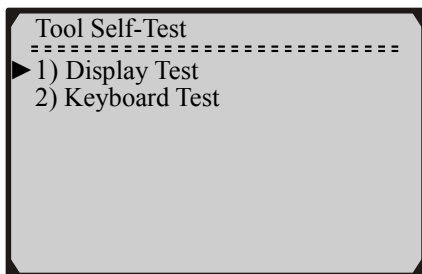
A. Display test

The Display Test is used to check the LCD display.

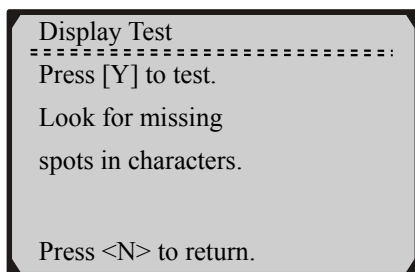
- 1) From the **System Setup** menu, use the **UP/DOWN** scroll buttons to select **Tool Self-Test**, and press the **Y** button.



- 2) Select **Display Test** from the **Tool Self-Test** menu and press the **Y** button.



- 3) Press the **Y** button again to start test. Look for missing spots in the solid black characters.

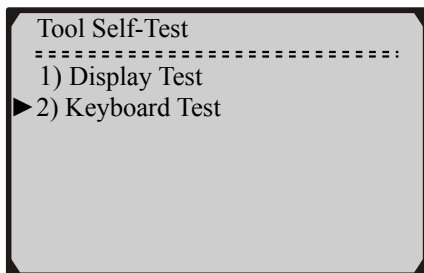


- 4) When completed, press the N button to return.

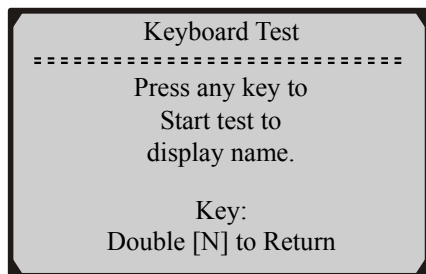
B. Keyboard Test

The Keyboard Test is used to verify that the keys are functioning properly.

- 1) Use the **UP/DOWN** scroll buttons to select **Keyboard Test** from the **Tool Self-Test** menu, and then press the **Y** button.



- 2) Press any key to start test. When you press a key, the key name should be observed on the display. If the name does not show up, then the key is not functioning properly.



- 3) Double press [N] to return to the menu.

3.8 Battery Replacement

The scan tool requires a 9V cell battery to operate without vehicle power. When the batteries need to be replaced, a low-battery warning message appears.

- 1) Locate the battery cover on the back of the scan tool.
- 2) Remove the battery cover screw and slide the battery cover off.
- 3) Remove discharged batteries and install a new 9V cell battery.
- 4) Reinstall battery cover by sliding battery cover on and installing screw.

3.9 Vehicle Coverage

The OBD II 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.

4. Operating Instructions

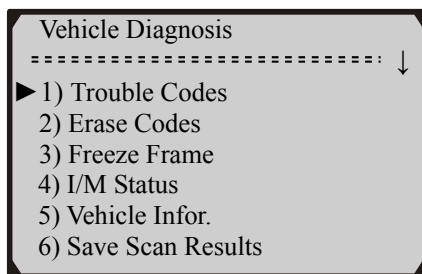
4.1 Reading Codes

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

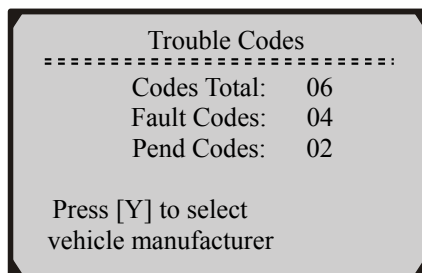
- ◆ **HOT KEY:** Pressing the **READ** button will allow you to quickly retrieve and read the DTCs without going through the menu mode.
- 1) Turn the ignition off.
 - 2) Locate the vehicle's 16-pin Data Link Connector (DLC).
 - 3) Plug into the scan tool cable connector to the vehicle's DLC.
 - 4) Turn the ignition on. But do not start the engine.
 - 5) Turn the scan tool's power on.
 - 6) Press the **Y** button. A sequence of messages showing the OBD2 protocols will be observed on the display until the vehicle protocol is detected.
 - *If the 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 scan tool's 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 6.
 - *If the "LINKING ERROR" message does not go away, then there might be problems for the scan tool to communicate with the vehicle. Contact your local distributor or the manufacturer's customer service department for assistance.*
 - 7) After a test result summary is displayed (MIL status, DTC counts, I/M Status and Freeze Frame Data), press any key for the **Vehicle**

Diagnosis menu to come up.

- 8) Use the **UP/DOWN** scroll buttons to select **Trouble Codes** from the menu and press the **Y** button.



- If there are no Diagnostic Trouble Codes present, the display will indicate **"NO CODES ARE FOUND!"**
- If there are any Diagnostic Trouble Codes present, a brief overview with the total count of the Trouble Codes, followed by that of the Fault Codes and Pending Codes will be reported on the display.



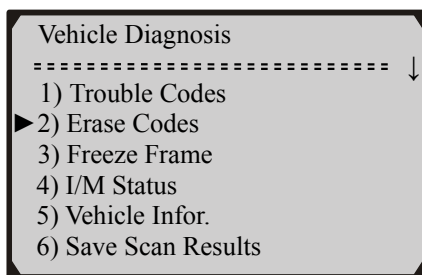
- 9) If the retrieved DTCs do not contain any manufacturer specific codes (all generic), view the DTCs by pressing the **Y** button.
- The DTC number and its definition will show on the LCD display.
 - The sequence of the DTC currently being observed, the total number of codes detected and type of code (Generic or Manufacturer specific) will be observed on the upper right hand corner of the display.

- If the code being displayed is a pending code, the **Pd** icon will be observed on the upper right hand corner of the display too.
 - When a DTC's definition covers more than one display screen, use the **Y** button, as necessary, to view any additional information.
- 10) If the retrieved DTCs contain any manufacturer specific or enhanced codes, you will be prompted to select the vehicle manufacturer to view the DTC definitions. Use the **UP/DOWN** scroll buttons to select the right manufacturer and then press the **Y** Button to view the DTC definitions.
 - If the manufacturer for your vehicle is not listed, use the **UP/DOWN** scroll buttons to select **Other** and press the **Y** button.
 - If the DTC definition is not available (mostly for manufacturer specific codes), a message will be observed on the display.
 - 11) If more than one DTC is found, use the **UP/DOWN** scroll buttons, as necessary, until all the codes have been shown up.

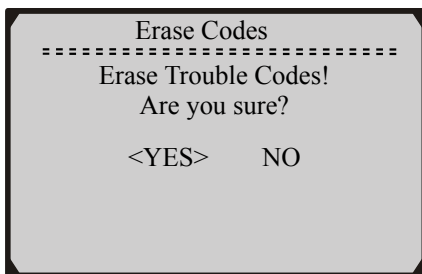
4.2 Erasing Codes

CAUTION: Erasing the Diagnostic Trouble Codes may allow the scan tool to delete not only the codes from the vehicle's on-board computer, but also "Freeze Frame" data and manufacturer specific 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.

- ◆ **HOT KEY:** Pressing and holding the **ERASE** button for at least 3 seconds will allow you to quickly erase the DTCs without going through the menu mode.
- 1) If you decide to erase the DTCs, use the **UP/DOWN** scroll buttons to select **Erase Codes** from the **Vehicle Diagnosis** menu and press the **Y** button.



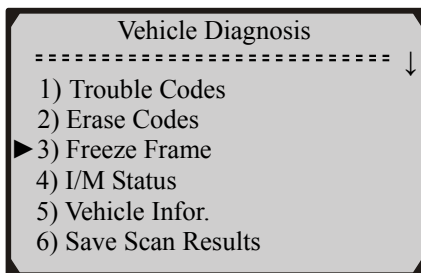
- If the scan tool is not connected or no communication is established with the vehicle yet, then refer to Reading Codes from 1 to 6 at Paragraph 4.1.
- 2) A warning message comes up asking for your confirmation.



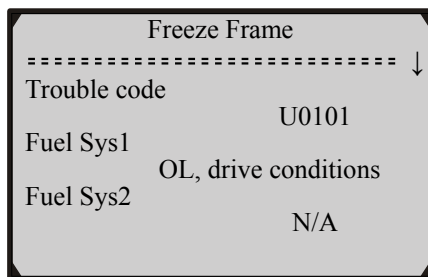
- 3) If you do not want to proceed with erasing the codes, press the **N** button to exit. A message of "**command cancelled**" will show up.
- 4) If you do wish to proceed to erase the codes, then press the **Y** button.
- 5) If the codes are cleared successfully, an "**ERASE DONE!**" confirmation followed by one advisory message prompting for rescanning will show on the display. Press any button to return to the **Vehicle Diagnosis** Menu.
- 6) If the codes are not cleared, then an "**ERASE FAILURE!**" message will appear. Press the **N** button to return to the **Vehicle Diagnosis** menu.

4.3 Reading Freeze Frame Data

- 1) To view Freeze Frame Data, use the **UP/DOWN** scroll buttons to select **Freeze Frame** from the **Vehicle Diagnosis** menu and press the **Y** button.



- If the scan tool is not connected or no communication is established with the vehicle yet, then refer to **Reading Codes** from 1 to 6 at Paragraph 4.1.
- 2) If the retrieved information covers more than one screen, then a flashing down arrow will appear. Use the **DOWN** scroll button, as necessary, until all the data have been shown up.



- If there is no freeze frame data available, an advisory message shows on the display.
- 3) Press the **N** button to return to the **Vehicle Diagnosis** menu.

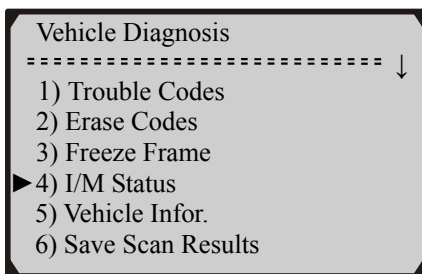
4.4 Retrieving I/M Readiness Status

Important: *I/M Readiness function is used to check the operations of the Emission System on OBD2 compliant vehicles. It is an*

excellent function to use prior to having a vehicle inspected for compliance to a state emissions program.

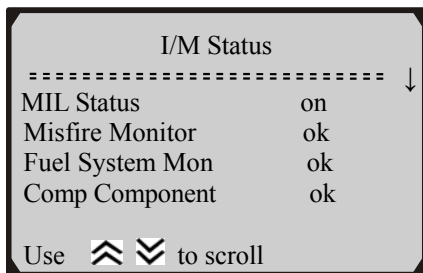
An I/M Readiness Status result of “NO” does not necessarily indicate that the vehicle being tested will fail the state I/M inspection. For some states, one or more such monitors may be allowed to be “Not Ready” to pass the emissions inspection.

- “**Y**” -- All monitors supported on the vehicle have completed their diagnostic testing and the MIL light is not on.
 - “**N**” -- At least one monitor supported on the vehicle has not completed its diagnostic testing, and (or) the “Check Engine” (MIL) light is on.
 - “**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 the **UP/DOWN** scroll buttons to select **I/M Status** from the **Vehicle diagnosis** menu and press the **Y** button.



- If the scan tool is not connected yet, then refer to **Reading Codes** from 1 to 6 at Paragraph 4.1.
- 2) Use the **UP/DOWN** scroll buttons, as necessary, 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

- **EGR -- EGR System Monitor**
- **Oxygen Sens Mon -- O2 Sensors Monitor**
- **Catalyst Mon -- Catalyst Monitor**
- **EVAP System Mon -- Evaporative System Monitor**
- **Oxygen Sens htr --O2 Sensor Heater Monitor**
- **Sec Air System -- Secondary Air Monitor**
- **Htd Catalyst -- Heated Catalyst Monitor**
- **A/C Refrig Mon -- A/C system Monitor**

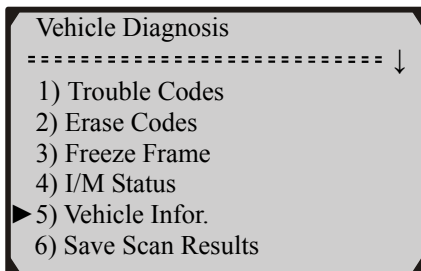


- 3) Press the **N** button to return to the **Vehicle Diagnosis** Menu.

4.5 Viewing Vehicle Information

The View Vehicle Information function allows you to retrieve the Vehicle Identification No, CALID and CVN on 2002 and newer vehicles that support Mode 9.

- 1) Use the **UP/DOWN** scroll buttons to select **Vehicle Infor.** from the **Vehicle Diagnosis** menu and press the **Y** button.

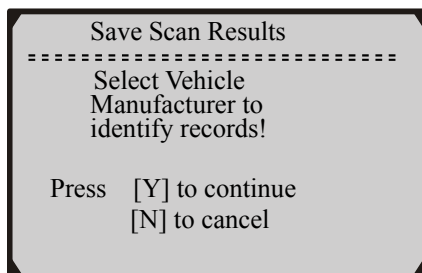
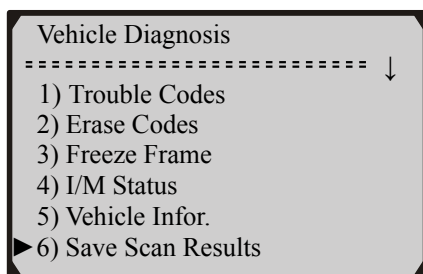


- If the scan tool is not connected yet, then refer to **Reading Codes** from 1 to 6 at Paragraph 4.1.
 - *If the vehicle does not support this mode, a message will show on the display confirming that the mode is not supported.*
- 2) Use the **UP/DOWN** scroll buttons, as necessary, to view any additional information.
 - 3) Press the **N** button to return to the **Vehicle Diagnosis** menu.

4.6 Saving Scan Result

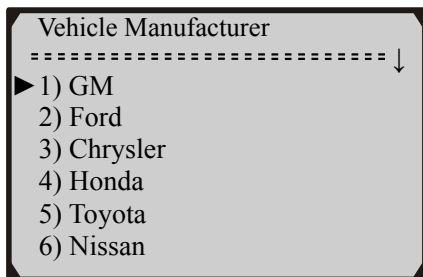
This function allows you to store scanning results for off-car review and analysis. You can store up to 15 scanning events.

- 1) Use the **UP/DOWN** scroll buttons to select **Save Scan Result** from the **Vehicle Diagnosis** menu and press the **Y** button.

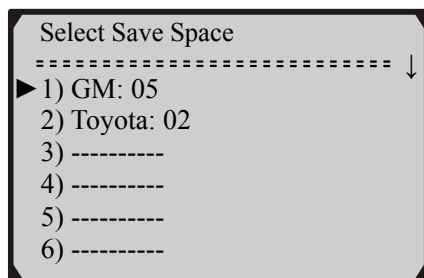


- If you do not want to save, simply press the **N** button to cancel. A confirmation message of the demand will be observed: **"Save Cancelled!"**

- 2) Press the **Y** button to proceed to the next step and use the **UP/DOWN** scroll buttons, as necessary, to select the appropriate vehicle manufacturer.



- *A scanning record will be identified by the selected vehicle manufacturer and the number of DTCs retrieved. For example: Ford:01 means that the vehicle scanned is a Ford with one DTC detected. If the retrieved DTCs contain any manufacturer specific codes and so a vehicle manufacturer has to be selected when viewing DTC definitions, then you won't be prompted to select a vehicle manufacturer since the record will be identified by the same manufacturer you selected.*
- 3) After a message confirming the selected vehicle manufacturer, you will be prompted to select the save space. Use the **UP/DOWN** scroll buttons, as necessary, to select the desired space.

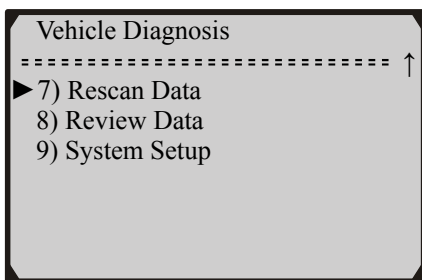


- If you want to overwrite a scanning record, a message will ask for your confirmation. If you want to continue with overwriting, then select **[YES]** by pressing the **Y** button to continue; If not, select **[NO]** by pressing the **N** button.

4.7 Rescanning Data

*The **RESCAN** function allows you to retrieve the most current data stored in the ECU or to re-link to the vehicle if communication is disconnected.*

- 1) Use the **UP/DOWN** scroll buttons to select **Rescan Data** from the **Vehicle Diagnosis** menu and press the **Y** button.

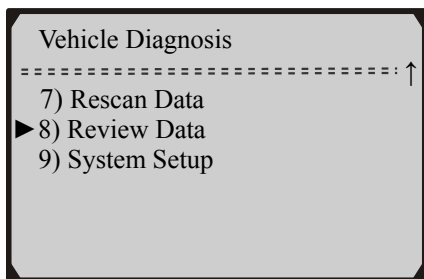


- If the scan tool is not connected yet, then refer to **Reading Codes** from 1 to 6 at Paragraph 4.1.
- 2) After a quick test summary of the rescanning results is shown on the display, press any key to return to the **Vehicle Diagnosis** menu and select the desired function.

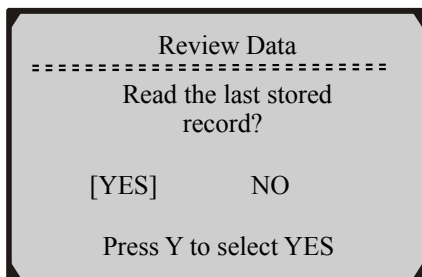
4.8 Reviewing Data

This function allows the user to view the stored test results for off-car analysis.

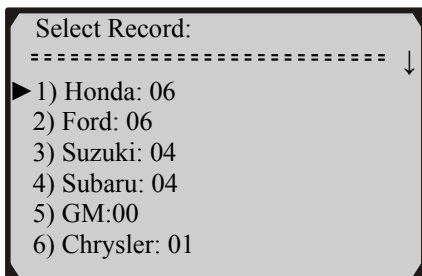
- 1) Use the **UP/DOWN** scroll buttons to select **Review Data** from the **Vehicle Diagnosis** menu and press the **Y** button.



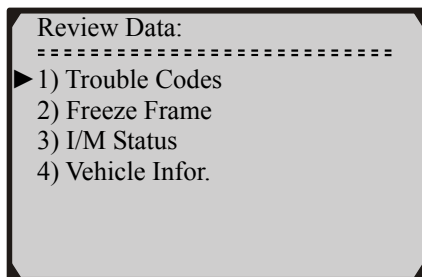
- 2) If you want to read the last stored record (if there is any), select **[YES]** by pressing the **Y** button. Use the **UP/DOWN** scroll button to select **[NO]** and press the **Y** button to choose other stored records.



- 3) Use the **UP/DOWN** scroll buttons to select the record you want to view.



- 4) Select the Data item you want to review from the **Review Data** menu.



CEN-TECH **LIMITED 90 DAY** **WARRANTY**

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of ninety days from the date of purchase. This warranty does not apply to damage due directly or indirectly to misuse, abuse, negligence or accidents; repairs or alterations outside our facilities; or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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