



INSTRUCTIONS FOR:

EOBD CODE READER

MODEL No: VS8812





INSTRUCTIONS FOR

EOBD CODE READER - LIVE DATAMODEL NO: **VS8812**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to
instructions

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2. SAFETY

- ❑ **WARNING!** To prevent personal injury or damage to vehicles and/or the scan tool, read this instruction manual first and observe the following safety precautions.
- ✓ Always perform automotive testing in a safe environment.
- ✓ Wear safety eye protection.
- ✓ 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 in front of the drive wheels and never leave the 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 the 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 petrol/chemical/electrical fires nearby.
- ✗ **DO NOT** connect or disconnect any test equipment while the ignition is on or the engine is running.
- ✓ Keep the scan tool dry, clean, free from oil/water or grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool, when necessary.

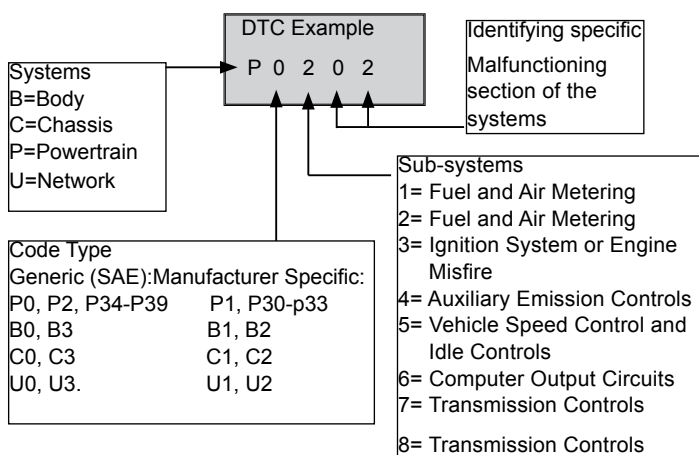
3. GENERAL INFORMATION

3.1. On-Board Diagnostics EOBD

The EOBD 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 EOBD system turns on a warning lamp on the vehicle instrument panel to alert the driver typically by the phrase of "Check Engine". The system will also store important information about the detected malfunction so that a technician can accurately find and fix the problem.

3.2. Diagnostic Trouble Codes

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. EOBD 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 digits:



3.3. 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 30cm 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 the 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.

3.4. EOBD Readiness Monitors

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

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 EOBD 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 EOBD 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

3.5. EOBD Monitor Readiness Status

EOBD 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 EOBD system. The purpose of recording readiness status is to allow inspectors to determine if the vehicle's EOBD system has tested all the components and/or systems.

The power train 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 EOBD monitor system to become ready, the vehicle should be driven under 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 EOBD monitor system ready, please consult your vehicle owner's manual.

3.6. EOBD Definitions

Powertrain Control Module (PCM) - EOBD terminology for the on-board computer that controls engine and drive train. Malfunction Indicator Light (MIL) - Malfunction Indicator Light (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 standards. If the MIL illuminates with a steady light, it indicates that a problem has been detected and the vehicle should be repaired 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 on board diagnostic system can not turn the MIL off until 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.

EOBD 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 EOBD 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 EOBD 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.

3.7. EOBD Modes of Operation

Introduction to the EOBD communication protocol.

Mode \$01 - Identifies the Powertrain information and shows current data available to the scan tool. This data includes: DTCs set, status of on-board tests and vehicle data such as engine RPM, temperatures, ignition advance, speed, air flow rates, and closed loop status for Fuel system.

Mode \$02 - Displays Freeze Frame data. Same data as in mode 1, but it was captured and stored when a malfunction occurred and a DTC was set. Some of the PIDs for mode one are not implemented in this mode.

Mode \$03 - Displays the type of powertrain or emission related DTCs stored by a 5 digit code identifying the faults. There may be more than one response message if there are more trouble codes than will fit in the data bytes of the response message, or if there are more than one PCM computer responding.

Mode \$04 - Used to clear DTCs and Freeze Frame data. This clears all diagnostic trouble codes that may be set including freeze frame data and readiness monitors.

Mode \$05 - Oxygen Sensor Test Results. This mode displays the oxygen sensor monitor screen and the test results gathered about the oxygen sensor.

There are ten numbers available for diagnostics:

1. \$01 Rich-to-Lean O2 sensor threshold voltage
2. \$02 Lean-to-Rich O2 sensor threshold voltage
3. \$03 Low sensor voltage threshold for switch time measurement
4. \$04 High sensor voltage threshold for switch time measurement
5. \$05 Rich-to-Lean switch time in ms
6. \$06 Lean-to-Rich switch time in ms
7. \$07 Minimum voltage for test
8. \$08 Maximum voltage for test
9. \$09 Time between voltage transitions in ms

Mode \$06 - Non-Continuously Monitored Systems test results. There are typically a minimum value, a maximum value, and a current value for each non-continuous monitor. This data is optional, and it is defined by a given vehicle make if it's used.

Mode \$07 - Request for DTCs (pending) from Continuously Monitored Systems after a single driving cycle has been performed to

determine if repair has fixed a problem. This is used by service technicians to verify repair was performed properly and after clearing diagnostic trouble codes.

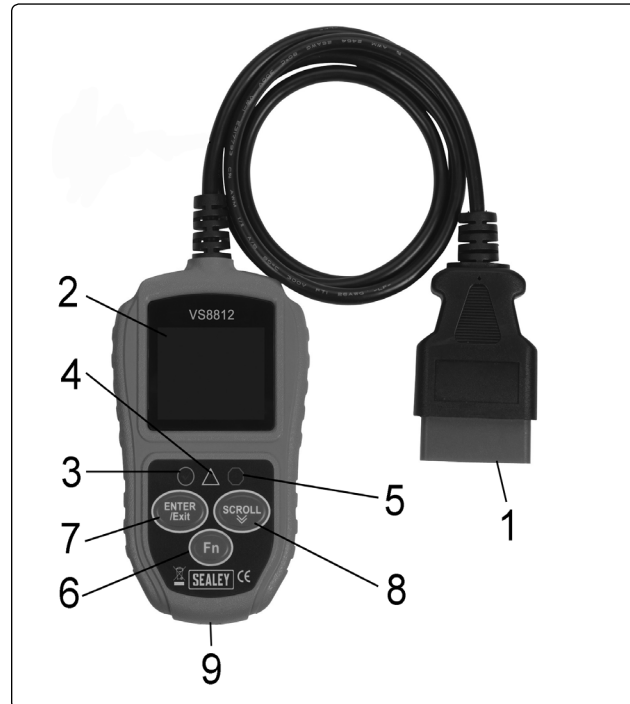
Mode \$08 - This Special Control Mode requests control of the on-board system, test, or component bi-directionally (where applicable). This mode is manufacturer specific.

Mode \$09 - Reports vehicle information. This information includes vehicle VIN number and calibration information stored in the vehicle PCMs.

Mode \$10 - Request Emission-Related Diagnostic Trouble Codes with Permanent Status. This mode is required for all emissions-related DTCs. The presence of permanent DTCs at an inspection without the MIL illuminated is an indication that a proper repair was not verified by the on-board monitoring system.

4. USING THE SCAN TOOL

4.1. Tool Description



1. EOBD CONNECTOR - Connects the scan tool to the vehicle's Data Link Connector (DLC).
2. LCD DISPLAY - Indicates test results.
3. GREEN LED - Indicates that engine systems are running normally (The number of monitors on the vehicle which are active and performing their diagnostic testing is in the allowed limit, and no DTCs are present).
4. YELLOW LED - Indicates there is a possible problem. A "Pending" DTC is present and/or some of the vehicle's emission monitors have not run their diagnostic testing.
5. RED LED - Indicates there is a problem in one or more of the vehicle's systems. The red LED is also used to show that DTCs are present. DTCs are shown on the Scan Tool's display. In this case, the MIL lamp on the vehicle's instrument panel will light steady on.
6. One-Click Function Key - Shortcut for 4 quick function including I/M readiness status, read code, usual datastream and all datastream.
7. ENTER/Exit BUTTON - Confirms a selection (or action) from a menu. Or returns to previous menu.
8. SCROLL BUTTON - Scrolls through menu items.
9. USB CONNECTOR - Connects the scan tool to the PC for upgrading.

4.2. Specifications

Screen: 2.0" TFT color display (220 x 176 dpi)
 External Power: 8.0 to 18.0 V power provided via vehicle battery.
 Operating temperature: 0 to 60°C (32 to 140 F°)
 Storage temperature: -20 to 70°C (-4 to 158 F°)
 Dimensions:

Length	Width	Height
124 mm (4.64")	72 mm (2.83")	18 mm (0.71")

NW: 0.18kg (0.39lb), GW: 0.21 kg(0.46lb)

4.3. Navigation Characters

Characters used to help navigate the scan tool are:

- 1) "#" - Identifies the control module number from which data is retrieved.
- 2) "Pd" - Identifies a pending DTC when viewing DTCs.

4.4. Keyboard

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

4.5. Power supply

The power supply is provided via the vehicle Data Link Connector (DLC). Follow the steps below to power it up.

A. Find DLC on vehicle. A plastic DLC cover may be found for some vehicles and you need to remove it before plugging the EOBD cable.

B. Plug the connector at the end of EOBD cable to the vehicle.

4.6. Tool Setup

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

1) Language: Selects the desired language.

2) Unit of measure: Sets the unit of measure to English or Metric.

3) Key Beep Set: Turns on/off key-press beep.

4) Status Beep Set: Turns on/off the I/M Readiness Status beep.

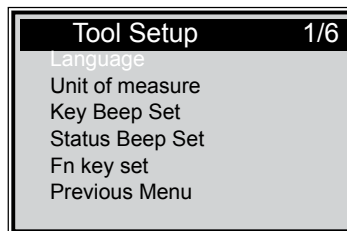
5) Fn key set: Set the One-Click-Quick Function Key including I/M readiness status, trouble code, default live data and all data stream.

Settings of the unit will remain until change to the existing settings is made.

When the scan tool is powered on, it displays a Main Screen.



From the Main Screen: Use the SCROLL button to select Setup, and press the ENTER button. Follow the instructions to make adjustments and settings as described in the below setup options.



Note: There is navigation bar in red to show the position for select item.

Also shows X/X at the top right corner to remind the user.

1). Language: Selects desired language.

English is the default language.

1) From System Setup screen, use the SCROLL button to select Language and press the ENTER button.

2) From Language screen, use the SCROLL button to select the desired language.

3) Press the ENTER button to save your selection and return to previous menu.



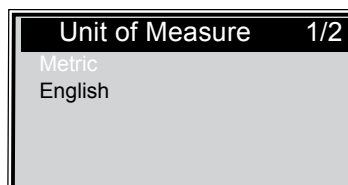
4.6.2. Unit of measure.

Metric is the default measurement unit.

1) From System Setup screen, use the SCROLL button to select Unit of Measure and press the ENTER button.

2) From Unit of Measure screen, use the SCROLL button to select the desired unit of measurement.

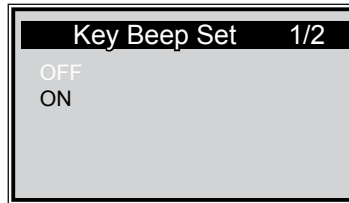
3) Press the ENTER button to save your selection and return to previous menu.



4.6.3. Key Beep Set

The default setting is Beep On.

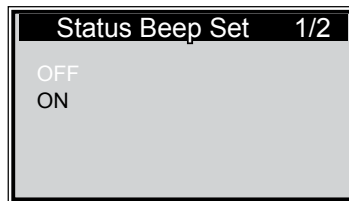
- 1) From System Setup screen, use the SCROLL button to select Key Beep Set and press the ENTER button.
- 2) From Key Beep Set menu, use the SCROLL button to select Beep ON or Beep OFF to turn on/off the beep.
- 3) Press the ENTER button to save your selection and return to previous menu.



4.6.4. Status Beep Set

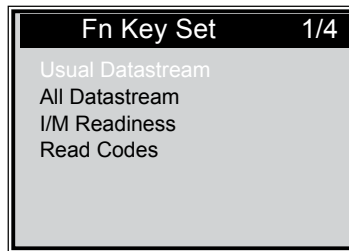
Different audio tone corresponds to different LED lamp. This function is invaluable when working in bright areas where LED illumination alone is not sufficient.

- 1) From System Setup screen, use the SCROLL button to select Status Beep Set and press the ENTER button.
- 2) From Status Beep Set menu, use the SCROLL button to select Beep ON or Beep OFF to turn on/off the beep.
- 3) Press the ENTER button to save your selection and return to previous menu.



4.6.5. Fn Key Set

From System Setup screen, use the SCROLL button to select FN Key Set, and press the ENTER button.



In this menu, you could configure the Fn setting for one-click function.

During the operation in any menu or interface of the tool, Once press the FN key, it will come up the setting menu. One-Click function.

Use the SCROLL button to select Usual Datastream Mode, All Datastream Mode, I/M Readiness Mode, Read Codes Mode. Then press the ENTER button to save your selection and return to previous screen.

1) Usual Datastream Mode

In this Mode, the tool has recommend some datastream as important datastream for the user reference, during the vehicle's monitors have run and completed their diagnosis and testing.

2) All Datastream Mode

In this mode, after the vehicle's monitors have run and completed their diagnosis and testing, the scan tool will return to check all datastream. So it is mostly used to check the monitors' status.

3) I/M Readiness Mode

I/M Readiness Mode is the default work mode. In this mode, after the vehicle's monitors have run and completed their diagnosis and testing, the scan tool will turn to EOBD diagnostic procedures.

4) Read Codes Mode

Read Codes Mode is the basic work mode. In this mode, after the vehicle's monitors have run and completed their diagnosis and testing, the scan tool will read the trouble codes.

To exit the Setup menu

Use the SCROLL button to select Previous Menu from the System Setup screen, and press the ENTER button to return to Main Screen.

4.7. About

The About function allows viewing of some important information such as serial number and software version number of the tool.
1) From Main Screen, use the SCROLL button to select About and press the ENTER button; wait for the About screen to appear.



2) View tool information on screen.



3) Press any button to return Main Menu.

4.8. Vehicle Coverage

Petrol 2001 onwards and diesel 2004 onwards

4.9. Product Troubleshooting

Vehicle Linking Error

A communication error occurs if the scan tool fails to communicate with the vehicle's PCM (Power Control Unit). You need to do the following checks:

Verify that the ignition is ON.

Check if the scan tool's EOBD connector is securely connected to the vehicle's DLC.

Verify that the vehicle is EOBD compliant.

Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and continue the testing.

Verify the control module is not defective.

Operating Error

If the scan tool freezes, then an exception occurs or the vehicle's PCM (Power Control Unit) is too slow to respond to requests. You need to do the following to reset the tool.

Reset the scan tool.

Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and continue the test.

Scan tool doesn't power up.

If the scan tool won't power up or operates incorrectly in any other way, you need to do the following to check:

Check if the scan tool's EOBD connector is securely connected to the vehicle's DLC.

Check if the DLC pins are bent or broken. Clean the DLC pins if necessary.

Check vehicle battery to make sure it is still good with at least 8.0 volts.

Verify the control module is not defective.

LED lamps not working.

If you turn on the scan tool and perform the I/M Readiness test but the LED lamps are not working, there may be several possible causes, including bad connection and ignition off. In this case, follow these steps to check the scan tool.

Make sure the EOBD II cable is connected to the DLC securely.

Verify the ignition key is in the KOEO position. (Key On Engine Off)

Run the LED Test in the System Setup menu. If the scan tool did not pass this test, there is a problem with the LED lamp. Please contact Sealey Tech Support or your local distributor.

Can't use the diagnostics function.

When you select the Diagnostics function in the main screen, it only shows the I/M Readiness status, the scan tool may be in Ready Test Mode. All you have to do is to select Scan Tool Mode in the System Setup menu.

5. EOBD DIAGNOSTICS

When more than one vehicle control module is detected by the scan tool, you will be prompted to select the module where the data may be retrieved. The most often to be selected is the Power Control Module (PCM) and Transmission Control Module (TCM).

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

Connection

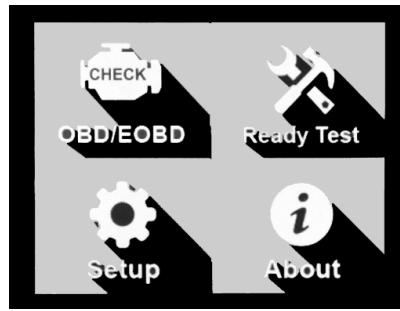
1) Turn the ignition off.

2) Locate the vehicle EOBD Connector.

3) Plug the EOBD cable into the vehicle.

4) Turn the ignition on. Engine can be off or running.

5) Use the SCROLL button to select Diagnostics from the Main Screen.



6). Press the ENTER button to wait for the Menu to appear. A sequence of messages displaying the EOBD protocols will be observed on the display until the vehicle protocol is detected.

If the scan tool fails to communicate with the vehicle's PCM (Power Control Module) more than three times, a "LINKING ERROR!" message shows up on the display.

Verify that the ignition is ON.

Check if the scan tool's EOBD connector is securely connected to the vehicle's DLC.

Verify that the vehicle is EOBD 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" is displayed, then there might be problems for the scan tool to communicate with the vehicle.

Contact Sealey Technical Support or local distributor.

7). View a summary of system status (MIL status, DTC counts, Monitor status) on screen. Wait a few seconds or press any key for Diagnostic Menu to come up.

Monitor Status	
MIL status	OFF
Codes Found	6
Monitors N/A	3
Monitors OK	3
Monitors INC	5

If more than one module is detected, you will be prompted to select a module before testing.

Control Module	1/2
Engine Module \$A4	

Use the SCROLL button to select a module and press the ENTER button to confirm.

5.1. **Read Codes**

Reading Codes can be done with the key on engine off or with the key on engine running.

Stored Codes are also known as "permanent codes". These codes cause the control module to illuminate the malfunction indicator light (MIL) when emission-related fault occurs.

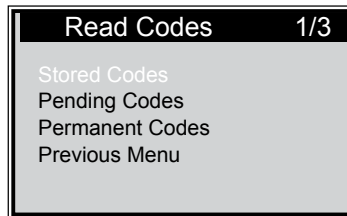
Pending Codes are also referred to as "continuous monitor codes". They indicate problems that the control module has detected during the current or last driving cycle but are not considered serious yet. Pending Codes will not turn on the malfunction indicator lamp (MIL). If the fault does not occur within a certain number of warm-up cycles, the code clears from memory.

1). Select (Read Codes) and press (ENTER) in Diagnostic Menu. If there are some codes, the screen will display the codes as shown below:

Diagnostic Menu	1/7
Read Codes	
Erase Codes	
View Freeze Frame	
I/M Readiness	
Vehicle Information	

Note: There is a navigation bar in red to show the position for chosen item, also shows X/X at the top right corner to remind the user.

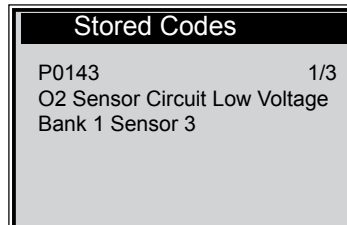
2) Use the SCROLL button to select Stored Codes or Pending Codes from the Read Codes menu and press the ENTER button.



If there is not any Diagnostic Trouble Code, the display indicates "No (pending) codes are stored in the module!" Wait a few seconds or press any key to return to previous screen.

NOTE: Permanent Codes function is only available for vehicles supporting the CAN protocols.

3) View DTCs and their definitions on screen. Press ENTER button to return to previous screen.



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.

4) If more than one DTC is found, use the SCROLL button to check all the codes.

5) Select Previous Menu from the Read Codes screen, and press ENTER button to return to previous menu.

5.2. Erase Codes

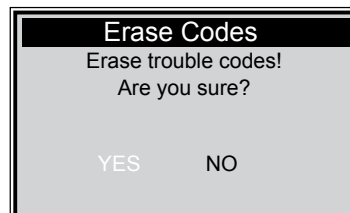
CAUTION: Erasing the Diagnostic Trouble Codes may allow the scan tool to delete not only the codes from the vehicle's on-board computer, but also "Freeze Frame" data and manufacturer specific enhanced data. Further, the I/M Readiness Monitor Status for all vehicle monitors is reset to Not Ready or Not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

NOTE: Erasing codes does not mean that trouble codes in PCM have been eliminated completely. As long as there is fault with the vehicle, the trouble codes keeps on presenting.

This function is performed with key on engine off. **Do not** start the engine.

1) Use the SCROLL button to select Erase Codes from Diagnostics Menu and press the ENTER button.

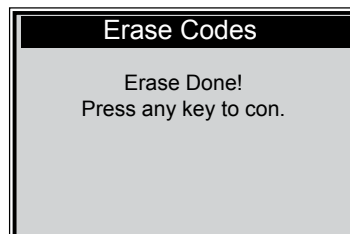
2) A warning message comes up asking for your confirmation.



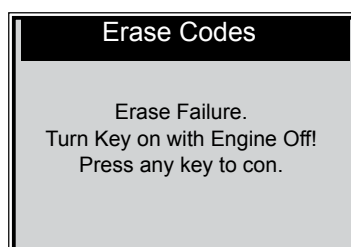
If you do not want to proceed with erasing codes, use SCROLL button to select NO to exit. A message of "Command Cancelled!" is displayed. Wait a few seconds or press any key to return to Diagnostic Menu.

3) Press the ENTER button to confirm.

If the codes are cleared successfully, an "Erase Done!" confirmation message displays as below.



If the codes are not cleared, then an "Erase Failure. Turn Key on with Engine off!" message appears.



5.3. Data Stream

The View Data function allows viewing of live or real time PID data of vehicle's computer module(s).

1) Use the SCROLL button to select Data Stream from Diagnostics Menu and press the ENTER button. If there is no freeze frame data available, an advisory message "No Data Stream!" shows on the display.

All Datastream 1/17	
Fuelsys1	CL
Fuelsys2	----
Load_PCT	45.5%
ECT	98
Shrtfi1	-64.8%

The number "x" to the right of the screen indicates sequence of display. Wait a few seconds while the scan tool validates the PID MAP.

- 3) If retrieved information covers more than one screen, use the SCROLL button, as necessary.
- 4) Press ENTER button to return to previous screen.

5.4. View Freeze Frame Data

Freeze Frame Data allows the technician to view the vehicle's operating parameters at the moment a DTC (Diagnostic Trouble Code) is detected. For example, the parameters may include engine speed (RPM), engine coolant temperature (ECT), or vehicle speed sensor (VSS) etc. This information will aid the technician by allowing the parameters to be checked for diagnostic and repair purposes.

- 1) To view freeze frame data, use the SCROLL button to select View Freeze Frame from Diagnostic Menu and press the ENTER button.
- 2) Wait a few seconds while the scan tool validates the PID MAP.
- 3) If retrieved information covers more than one screen, use the SCROLL button, as necessary.

Freeze Frame 1/5	
DTCFRZF	P1633
FUELSYS2	--
LOAD_PCT (%)	0.0
ECT(C)	-40
SHRTFT1 (%)	99.2

If there is no freeze frame data available, an advisory message "No freeze frame data stored!" shows on the display.

The number "x" to the right of the screen indicates sequence of display.

The red navigation bar to the right of the screen indicates sequence of highlighted item.

- 4) Press ENTER button to return to previous screen.

5.5. I/M Readiness

I/M Readiness function is used to check the operation of the Emission System on EOBD compliant vehicles. It is an excellent function to use prior to having a vehicle inspected.

CAUTION - By clearing trouble codes you also clear the readiness status for the individual emission system readiness tests. In order to reset these monitors, the vehicle must be driven through a complete drive cycle with no trouble codes in the memory. Times for reset vary depending on vehicle.

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 I/M inspection.

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 the SCROLL button to select I/M Readiness from Diagnostic Menu and press ENTER button.

2) Wait a few seconds while the scan tool validates the PID MAP.

3) If the vehicle supports both types of tests, then both types will be shown on the screen for selection.

I/M Readiness 1/2	
Since DTCs Were Cleared This Drive Cycle	

The number "x" to the right of the screen indicates sequence of display.

The red navigation bar to the right of the screen indicates sequence of highlighted item.

4) Use the SCROLL button, 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

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 System Mon - EGR System Monitor

Since DTCs Cleared 1/6	
Misfire Monitor	OK
Fuel System Mon	OK
Comp. Component	OK
Catalyst Mon	INC
Htd Catalyst	N/A

5) If the vehicle supports readiness test of "This Drive Cycle", a screen of the following displays:

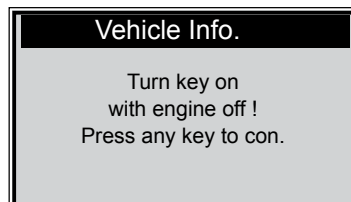
This Drive Cycle 1/6	
Misfire Monitor	OK
Fuel System Mon	OK
Comp. Component	OK
Catalyst Mon	INC
Htd Catalyst	N/A

5.6. Vehicle Info

The Vehicle Info. function enables retrieval of Vehicle Identification No. (VIN), Calibration ID Nos. (CINs), Calibration Verification Nos. (CVNs) and In-use Performance Tracking on 2001 and newer vehicles that support Mode 9.

1) Use SCROLL button to select Vehicle Info. from the Diagnostic Menu and press ENTER button.

2) An advisory message comes up to remind you. Wait a few seconds or press any key to continue.



3) If the vehicle does not support this mode, a message shows on the display warning that the mode is not supported.

4) From Vehicle Info. Menu, use the SCROLL button to select an available item to view and press the ENTER button.

Vehicle Info. 3/4	
Vehicle ID Number	
Calibration ID	
Previous Menu	

5) View retrieved vehicle information on screen.

5.7. Exiting the EOBD Test

1) To exit EOBD test, use SCROLL button to select Previous Menu from Diagnostic Menu and press ENTER/EXIT button.

2) A warning message comes up asking your confirmation. Press ENTER button to exit.

6. I/M READINESS

There are two modes to show I/M readiness monitor status. You can configure work modes in the Setup menu.

1). Scan Tool Mode

Scan Tool Mode is the default work mode. In this mode, after the vehicle's monitors have run and completed their diagnosis and testing, the scan tool will turn to EOBD diagnostic procedures.

NOTE: Only in this mode can you perform the EOBD diagnostics.

2). Ready Test Mode

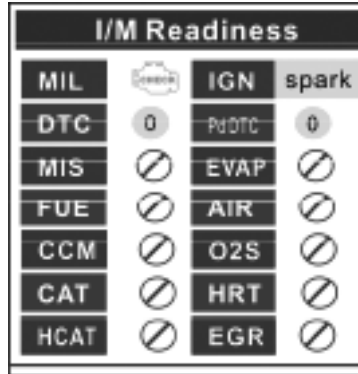
In this mode, after the vehicle's monitors have run and completed their diagnosis and testing, the scan tool will return to the previous screen. So it is ONLY used to check the emission-related monitors' status.

NOTE: This function reads off the real time data of emission-related monitoring systems readiness status every two minutes. Once

the scan tool has finished other operations, for example, clearing trouble codes, and the I/M Readiness Status indication will change accordingly. In order to reset these monitors, the vehicle must be driven through a complete drive cycle. Times for reset vary depending on vehicle.

6.1. **Ready Test Mode**

Repairs to the emissions-control systems of a 2001 or newer vehicle cause the vehicle's computer (PCM) memory to be cleared. The vehicle must go through a drive cycle to allow the PCM to perform a series of tests to ensure that the repair was successful, and before a emissions test can be conducted. Modern vehicles lack equipment to indicate whether the tests have been completed. With the auto code reader, you don't have to bring the vehicle back to the workshop for retest if all required tests by the PCM are completed. In the Ready Test Mode, you can easily check the I/M Readiness status to determine whether an EOBD vehicle is ready for an emission test. To enter this mode, simply press the One-Click Key at anytime. If the one-click function key is set at I/M readiness. Or while the scan tool in Ready Test Mode, select Diagnostics in the Main Screen. If the scan tool is idle, it will show the result immediately. If it is busy, it will wait till the current procedure has finished. After viewing the status, press I/M Readiness One-Click Key or ENTER button to exit, which takes a few seconds. You will get the information screen as below.



- “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 the vehicle.
- The LED and audio tone indications are as interpreted below:

LED Interpretation

The green and red LEDs provide an easy way to check if emission-related monitoring systems complete their self-diagnostic testing. 1) GREEN LED – Indicates that engine systems are “OK” and operating normally (the number of Monitors supported by the vehicle which have run and performed their self-diagnostic testing is in the allowed limit). 2) RED LED – Indicates that the number of Monitors supported by the vehicle which have run and performed their self-diagnostic testing is out of the allowed limit.

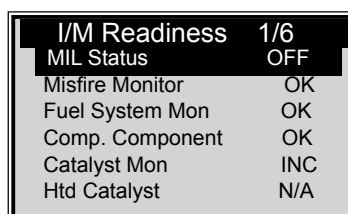
Audio Tone Interpretation

The audio tone could be configured according to the I/M Readiness Status. This function is invaluable when working in bright areas where LED illumination alone is not sufficient.

LED Light	Audio Tone	Beep Interval
Green LED	Bleep OFF	
Yellow LED	Two short Beeps	0.5 Second
Red LED	Two short Beeps	0.5 Second

6.2. **Scan Tool Mode**

NOTE: Only in this mode can you perform EOBD diagnostics. To enter this mode, please follow the steps in section Retrieving I/M Readiness Status. The green, yellow and red LEDs provide a quick way to help you determine if a vehicle is ready for an Emission Test. The LED and audio tone indications are as interpreted below: LED Interpretation 1) GREEN LED – Indicates that engine systems are “OK” and operating normally (the number of Monitors supported by the vehicle which have run and performed their self-diagnostic testing is in the allowed limit MIL is off). There are no stored and pending DTCs. The vehicle is ready for an Emissions Test. 2) YELLOW LED – With MIL off, there may be three possible conditions to cause the yellow LED to light. If a “Stored” Diagnostic Trouble Code is causing the Yellow LED to light, it is still possible that the vehicle can be tested for emissions. If a “Pending” Diagnostic Trouble Code is causing the Yellow LED to light, it is still possible that the vehicle will be allowed to be tested for emissions.



3) RED LED – Indicates there is a problem with one or more of the vehicle's system. A vehicle displaying a red LED is definitely not ready for an Emissions Test. The red LED is also an indication that there are DTCs present. The MIL lamp on the vehicle's instrument panel will be lit. The problem that is causing the red LED to light must be repaired before an Emissions Test can be performed.

Audio Tone Interpretation

The audio tone could be configured according to the I/M Readiness Status. This function is invaluable when working in bright areas where LED illumination alone is not sufficient. It is recommended to set the audio tone to Beep ON. For detailed setup information, please refer to Status Beep Set System Setup.

NOTE: The following audio tone description only works in Scan Tool mode.

Different audio tone with different LED lights will indicate different I/M Readiness Status.

LED Light	Audio Tone	Beep Interval
Green LED	Bleep OFF	
Yellow LED	Two short Beeps	0.5 Second
Red LED	Two short Beeps	0.5 Second



Environmental Protection

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment.

When the product becomes completely unserviceable and requires disposal, drain off any fluids (if applicable) into approved containers and dispose of the product and the fluids according to local regulations.



WEEE Regulations

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

IMPORTANT: No liability is accepted for incorrect use of this product.

WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.



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