

INNOVA®

SD29

SD-Reader

Diagnostic Tablet



POWERED BY



HELLO...

On behalf of everyone at INNOVA, we want to welcome you and thank you for purchasing the **INNOVA® SD-Reader!** Every automotive diagnostic scan tool we make includes tons of pro-level features designed to help maximize, and simplify, your OBD2 diagnostic routine. In this manual, we will guide you on how to access your tablet's intuitive functions including:

- ✓ *Check Engine: Read & Clear Trouble Codes*
- ✓ *Read & Clear OEM Engine and Transmission Codes*
- ✓ *Smog / Emissions Readiness*
- ✓ *Code Severity Level Identifier*
- ✓ *Battery / Charging System Test*
- ✓ *View & Graph Live Data Stream*
- ✓ *Supports All 10 OBD2 Modes*
- ✓ *Oil Maintenance Reset*
- ✓ *ABS/Brake Codes: Read and Clear*
- ✓ *BMS/Battery Reset & Initialization*
- ✓ *Read TPMS/Tire Pressure*
- ✓ *And Much More...*

Plus, gain the benefit of having unlimited access to real world solutions on your mobile device:



RepairSolutions2® seamlessly pairs with your INNOVA OBD2 diagnostic tool to deliver the most complete automotive repair database with verified fixes from ASE Certified Master Technicians. Find the right fix and the right parts instantly on your mobile device.

Enjoy using your INNOVA SD Tablet!

Yours sincerely,

The InnoVA Technical Team

P.S: See what's new, connect with us on social...





TABLE OF CONTENTS

LEGAL INFORMATION	1
SAFETY PRECAUTIONS	3
INTRODUCTION	5
Tablet Controls and Indicators	5
Tablet Display Functions	6
Technical Specifications	7
The RepairSolutions2® App	8
USING THE TABLET	10
Home Screen	10
Initial Setup (Personal Settings)	10
OBD2 Diagnostics	11
I/M Readiness Status - \$01, \$41	11
Retrieving OBD2 Diagnostic Trouble Codes (DTCs)	12
Erasing Diagnostic Trouble Codes (DTCs) - \$04	15
Freeze Frame - \$02	16
Live Data- \$01	17
O2 Sensor Monitor - \$05.	20
OBD Monitor Test - \$06	21
Request Control On-Board System - \$08.	21
Drive Cycle Procedures	22
Viewing Vehicle Information - \$09	23
OEM Diagnostics	25
Reading DTCs for a Selected Module	25
Erasing DTCs for a Selected Module	25
Vehicle Inspection	26
Workshop Tools	27
Vehicle Inspection	27
Oil Maintenance Reset.	27
Battery Reset	27
Battery Initialization.	28



Battery / Alternator Test 28

Previous Vehicles 30

Settings 31

 Vehicle Inspection Setup 32

 Adjusting Display Brightness 32

 Enabling / Disabling the Audible Tone 32

 Selecting the Display Language. 32

 Setting the Unit of Measurement 33

 Viewing the App QR Code – RepairSolutions2® 33

 Setting the QR RepairSolutions2 App Mode. 33

 Viewing the Version Information 33

Tool Library 34

 Icon Definition 34

 Smog Check or I/M Program LED Definitions 34

 Monitor Icon Status 34

WARRANTY+ CUSTOMER SERVICE 35

GLOSSARY 36

OBD2 Terminology. 36

OBD2 Monitors. 37

 Continuous Monitors. 37

 Non-Continuous Monitors. 38

Additional Terminology + Acronyms 38

LEGAL INFORMATION

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

- The transmitters within this device must not be co-located or operating in conjunction with any other antenna or transmitter.
- This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain with IC RF exposure compliance requirements please follow operation instruction as documented in this manual.

Trademarks

Title, ownership rights, and intellectual property rights in the Products and Services shall remain in Innova and/or its licensors and other suppliers. Licensee and End Users acknowledge such ownership, confidential information, and intellectual property rights and will not take any action to jeopardize, limit or interfere in any manner with Innova's or its licensors' or other suppliers' ownership of or rights with respect to the Products and Services. The Products and Services may be protected by Patent, Trademark, Copyright and/or other intellectual property laws and by international treaties. All trademarks used in connection with the Products and Services are owned by Innova, its affiliates or its licensors and other suppliers, and no license to use any such trademarks is provided hereunder. Licensee and End Users agree that Innova may use in any manner and without limitation all comments, suggestions, complaints and other feedback Licensee and End Users provide relating to the Products and Services. For more information and current listing of trademarks, please visit <https://www.innova.com/pages/trademarks>.

Patents

Innova Electronics Corp. protects its intellectual property with numerous U.S. patents, which were used to research, design and manufacture this product. Please visit <https://www.innova.com/pages/patents> for additional information.

Software Version

Please note that the images and functions on this manual may differ based on the current **Firmware Version (FW)** and **Software Version** you have. To check your tablet's current version and to check for updates, please see the **SETTINGS** tab under the **Version Information** section. [[See page 33](#)]

California Product Warnings

WARNING

This product can expose you to chemicals including DiNP, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SAFETY PRECAUTIONS

Safety First!

It is important that every user utilizing this product read all instructions and warnings included within this manual to ensure your safety, the safety of others, and to prevent damage to this product & vehicles being diagnosed and repaired. This manual describes common test procedures used by experienced service technicians. It is inferred that the user has a good understanding of vehicle systems before using this product.

Many test procedures require precautions to avoid accidents that can result in personal injury, and/or damage to your vehicle or test equipment. At a minimum, the following safety standards should be followed whenever using this product, or whenever working on a vehicle.

- ❑ When an engine is running, it produces carbon monoxide, a toxic and poisonous gas. To prevent serious injury or death from carbon monoxide poisoning, **operate the vehicle ONLY in a well-ventilated area.**
- ❑ To protect your eyes from propelled objects as well as hot or caustic liquids, **always wear approved safety eye protection.**
- ❑ When an engine is running, many parts (such as the coolant fan, pulleys, fan belt etc.) turn at high speed. To avoid serious injury, **always be aware of moving parts.** Keep a safe distance from these parts as well as other potentially moving objects.
- ❑ Engine parts become very hot when the engine is running. To prevent severe burns, **avoid contact with hot engine parts.**
- ❑ Before starting an engine for testing or troubleshooting, make sure the parking brake is engaged. **Put the transmission in park** (for automatic transmission) **or neutral** (for manual transmission). **Block the drive wheels** with suitable tire blocks.
- ❑ Connecting or disconnecting test equipment when the ignition is ON can damage test equipment and the vehicle's electronic components. **Turn the ignition OFF before connecting the tablet to or disconnecting the tablet from the vehicle's Data Link Connector (DLC).**
- ❑ To **prevent damage to the on-board computer** when taking vehicle electrical measurements, always use a digital multimeter with at least 10 Megohms of impedance.
- ❑ Fuel and battery vapors are highly flammable. To prevent an explosion, keep all sparks, heated items, and open flames away from the battery and fuel vapors. **DO NOT SMOKE NEAR THE VEHICLE DURING TESTING.**
- ❑ **Don't wear loose clothing or jewelry when working on an engine.** Loose clothing can become caught in the fan, pulleys, belts, etc. Jewelry is highly conductive and can cause a severe burn if it makes contact between a power source and ground.

Safety Alert Icons

As you read this manual, color-coded icons are used throughout to identify safety alerts and warnings. These are provided to help prevent serious injury to you, injury to bystanders, and damage to property or equipment. They are characterized as follows:



Yellow Icon – Provides a **"NOTE:"** statement to offer special information or tip on what is being instructed.



Orange Icon – Potential hazardous situation. Provides a **"WARNING:"** statement on how to proceed to avoid serious injury to the user, bystanders, and/or equipment.



Red Icon – Imminent hazardous situation. Provides an immediate **"DANGER:"** alert on what must be done to prevent serious injury or death to the user or bystanders.

INTRODUCTION

Tablet Controls and Indicators



Figure 1. Controls and Indicators

See Figure 1 for the locations of items 1 through 11, below.

1. **2.8-inch LCD Screen** - Color LCD display shows menus and sub-menus, test results, Tablet Scan Tool functions and vehicle status information.
2. **Diagnostic Port** - Connects the Tablet Scan Tool to the vehicle's Data Link Connector (DLC).
3. **USB Port** - Allows connection to a PC using a standard USB cable.
4. **GREEN LED** - Indicates that all engine systems are running normally, and all emission monitors are active and performing their diagnostic testing. The Malfunction Indicator "Check Engine" Lamp on the vehicle's instrument panel is off.
5. **YELLOW LED** - Indicates there is a possible problem in one or more of the vehicle's systems. Either a "Pending" DTC is present and/or some of the vehicle's emission monitors have not run their diagnostic testing.
6. **RED LED** - Indicates there is a problem in one or more of the vehicle's systems. The Malfunction Indicator "Check Engine" Lamp on the vehicle's instrument panel is on.
7. **Home Button** - Press from any screen to return back to the Home screen (except the screen in services reset function).
8. **Up Button** - When in MENU mode, scrolls Up through the menu options. When LINKED to a vehicle, scrolls Up through the current display screen to display additional data.
9. **OK Button** - Confirms the selected option or value.
10. **Down Button** - When in MENU mode, scrolls Down through the menu options. When LINKED to a vehicle, scrolls Down through the current display screen to display additional data.
11. **Back Button** - Exits the current function or returns to the previous screen.

Tablet Display Functions

See Figure 2 for the locations of items 1 through 15 below.

- I/M MONITOR STATUS: SINCE DTCs CLEARED (SDC) or THIS DRIVE CYCLE (TDC) field** - Identifies the I/M Monitor status area.
- Monitor icons** - Indicate which Monitors are supported by the vehicle under test, and whether or not the associated Monitor has completed its diagnostic testing (Monitor status). When a Monitor icon is solid green, it indicates that the Monitor has completed both Since DTCs Cleared and This Drive Cycle. When a Monitor icon is flashing red, it indicates that the Monitor has not completed testing Since DTCs Cleared. When a Monitor is Green-Gray, it indicates that the monitor has not completed testing This Drive Cycle. When a Monitor is Red-Gray, it indicates that the monitor has been disabled This Drive Cycle.

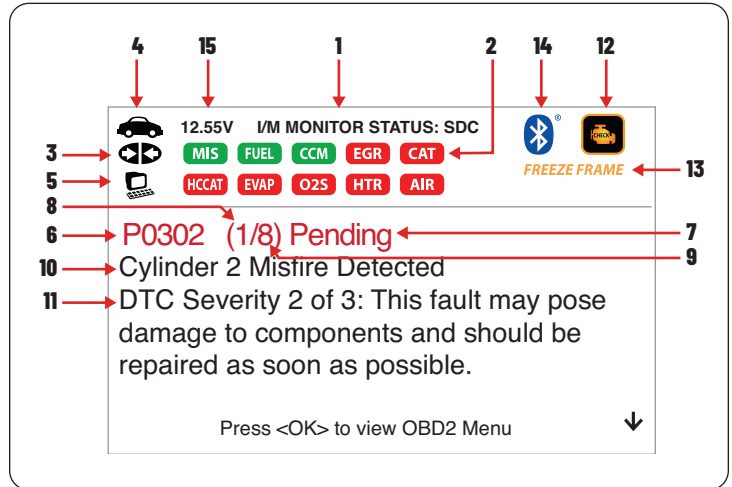


Figure 2. Tablet Display Functions





NOTE: The I/M Monitor Status icons are associated with INSPECTION and MAINTENANCE (I/M) READINESS STATUS. Some states require that all vehicle Monitors have run and completed their diagnostic testing before a vehicle can be tested for Emissions (Smog Check). A maximum of fifteen Monitors are used on OBD2 systems. Not all vehicles support all fifteen Monitors. When the Tablet Scan Tool is linked to a vehicle, only the icons for Monitors that are supported by the vehicle under test are visible on the display.

- Link Icon** - Indicates whether or not the Tablet Scan Tool is communicating (linked) with the vehicle's on-board computers. When visible, the Tablet Scan Tool *is communicating* with the computers. If the Link icon is not visible, the Tablet Scan Tool *is not communicating* with the vehicle's computers.
- Vehicle Icon** - Indicates whether or not the Tablet Scan Tool is being properly powered through the vehicle's Data Link Connector (DLC). A visible icon indicates that the Tablet Scan Tool is being powered through the vehicle's DLC connector.
- Computer Icon** - When visible, indicates the Tablet Scan Tool is linked to a personal computer.
- DTC Display Area** - Displays the Diagnostic Trouble Code (DTC) number. Each fault is assigned a code number that is specific to that fault.
- Code Type** - Indicates the type of code being displayed: Stored, Pending, Permanent.
- Code Number Sequence** - The Tablet Scan Tool assigns a sequence number to each DTC that is present in the computer's memory, starting with "1". This helps keep track of the number of DTCs present in the computer's memory. Code number "1" is always the highest priority code and the one for which "Freeze Frame" data has been stored.



NOTE: If “1” is a “Pending” code, there may or may not be “Freeze Frame” data stored in memory.

9. **Code Enumerator** - Indicates the total number of codes retrieved from the vehicle’s computer.
10. **Test Data Display Area** – Displays DTC definitions, Freeze Frame data and other pertinent test information messages.
11. **Severity** – Indicates the level of severity for the priority code (code number “1”), as follows:
 - [1] This fault typically does not cause damage to components and should be serviced when convenient.
 - [2] This fault may pose damage to components and should be repaired as soon as possible.
 - [3] This fault will cause damage to components and should be repaired immediately.
12.  **MIL Icon** - Indicates the status of the Malfunction Indicator Lamp (MIL). The MIL icon is visible only when a DTC has commanded the MIL on the vehicle’s dashboard to light.
13. **FREEZE FRAME Icon** - Indicates that there is Freeze Frame data stored in the vehicle’s computer memory (Captured when Priority Code was set / Code #1).
14.  **Bluetooth Icon** – Indicates communication status with a compatible mobile application. A solid blue icon indicates an active Bluetooth connection has been established.
15. **12.55V** – Displays the vehicle’s current battery voltage.

Technical Specifications

The following table provides the Tablet Scan Tool Scan Tool’s current technical specifications:*

Display Type	2.8 Inch Panel
J1962 DLC Cable	Attached 16-pin OBDII Compliant Connector
Operating Temperature	23°F to 113°F (-5°C to 45°C)
Memory	4GB Memory
Tablet Scan Tool Scan Tool Case	Rugged ABS Shock & Drop Resistant
Included Accessories	Quick Start Guide, USB Cable

*Manufacturer reserves the right to change technical specifications at any time.

The RepairSolutions2® App



The **RepairSolutions2® (RS2 App)** is a web-based service created to assist Do-it-Yourselfers and Professional technicians simplify their vehicle diagnostic process.

In essence, RS2 helps you decode the diagnostic data collected by your OBD2 Tablet to arrive at a most likely fix. At its core, RS2 uses a database of millions of real-world verified fixes—collected over the last 25 years by ASE Master Technicians across the U.S.—that is cross-referenced to your specific vehicle’s problem to instantly arrive at a verified fix. Think of it as your personalized technician to help diagnose, repair, and maintain your vehicle(s).

The RS2 APP Offers...

- **Verified Fixes** – Find the most likely fixes reported and verified by ASE Technicians for the retrieved DTCs. Plus, quickly purchase the exact parts you need right from the app.
- **Predicted Repairs** – With millions of verified repair solutions, get a statistical probability of what repairs you may need within the next 12 months.
- **TSBs & Recalls** – Learn if there are any special NHTSA safety recalls or Technical Service Bulletins (TSBs) issued by your vehicle’s manufacturer.
- **Vehicle Health Reports** - Get a quick insight on how your vehicle’s vitals are currently performing (tire pressure, battery status, etc.) and get alerts to potential problems.
- **Upcoming Maintenance** – View your vehicle manufacturer’s recommended maintenance intervals. Plus, conveniently purchase the correct maintenance parts right from the app.
- **And much more...**

Hardware Requirements

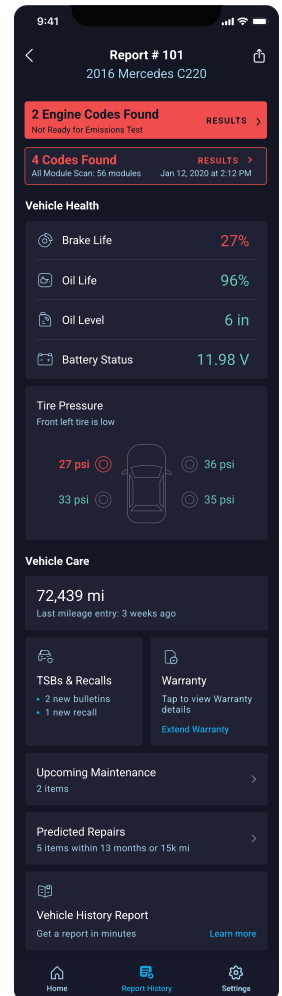
- Certified RS2 Tablet with Bluetooth® connectivity
- Android or iOS Mobile Device

Download the RS2 App

- **Apple iOS Devices** (click on the link)



- **Android Devices** (click on the link)



- **From a Tablet Scan Tool**

- Scan the **QR Code** displayed on the tablet's screen when pairing app with the tablet.

Using RepairSolutions2®


1. Retrieve your vehicle's diagnostic data [[See page 12](#)]
2. Download and install the RepairSolutions2® app (see above)
3. Launch the **RS2 app** and log in to your account.
 - If you have not yet established an account, you must register for a FREE RS2 account before proceeding.
4. Follow the screen prompts to pair your Tablet Scan Tool.
 - Begin the pairing process by selecting your handheld tool from the list.
5. Once paired, the data from your tool is automatically transferred to the RS2 app to create a report.



NOTE: *If the data does not automatically transfer, simply keep the app and tool paired and scan your vehicle again.*

USING THE TABLET

Home Screen

The  **Home** Screen provides access to all the Tablet Scan Tool's primary functions.

See **Figure 3** for the explanation of items 1 through 6, below:

1. **OBD2 Diagnostics Tab** – Use to perform OBD2 menu, display 10 modes of OBD2. [[See page 11](#)]
2. **OEM Diagnostics Tab** – Provides enhanced OEM level diagnostics that are not available over generic OBD2. Access ECM (PCM), TCM, ABS systems to view and erase their DTCs. Also provide the Vehicle Inspection that show Diagnostic Report, Customer Report and Collision Industry Report. [[See page 25](#)]
3. **Workshop Tools Tab** – Perform several OEM services, including Vehicle Inspection, Oil Maintenance Reset, Battery Reset, Battery Initialization, Battery/Alternator Test. Access dealership level relearn procedures to complete repairs or maintenance and much more. [[See page 27](#)]
4. **Previous Vehicles Tab** – Access and view reports for the 30 previously tested vehicles. [[See page 30](#)]
5. **Settings Tab** – Displays the Tool Settings menu, which lets you configure the Tablet to your particular needs. [[See page 31](#)]
6. **Tool Library Tab** – Access the tablet's tool library for DTC and tool icon definitions, Smog Check or I/M Program LED Definition, Monitor Icon Status. [[See page 34](#)]

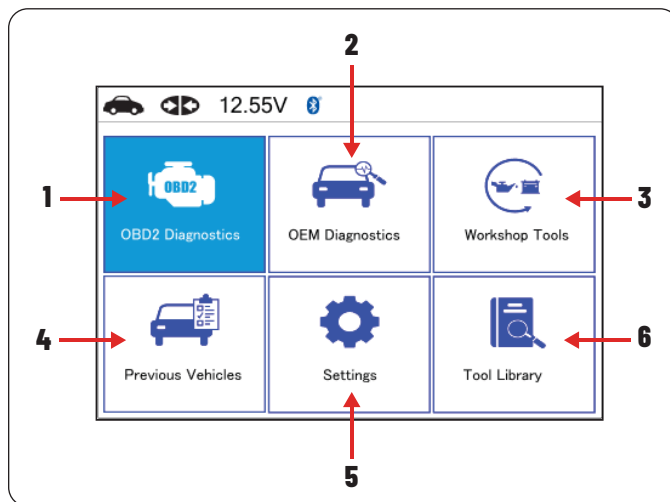


Figure 3. Home Screen

Initial Setup (Personal Settings)

The first time the Scan Tool is connected to a vehicle, it is necessary to complete your setup by performing the following steps:

1. Select the desired display **language** (English, Spanish, French) and press **OK**.
2. Select the desired **unit of measurement** (U.S. Standard or Metric) and press **OK**.
3. The screen displays the **Smog Check** or **I/M Program LED Definition**. Press **OK** to continue.
4. On the next screen, a QR code to **RepairSolutions2 (RS2)** is provided. Using any mobile device, scan the code to

download and install the free RS2 app. The app offers additional information including Most Likely Component/System Cause for DTC, Repair Tip, and much more. [[See page 8](#)].



OBD2 Diagnostics

OBD2 Diagnostics provides access to all **10 modes of OBD2**. The following functions are available:

- ❑ **I/M Readiness Status – \$01, \$41** [[See page 11](#)]
- ❑ **Read DTCs - \$03, \$07, \$0A** [[See page 12](#)]
- ❑ **Erase DTCs - \$04** [[See page 15](#)]
- ❑ **Freeze Frame - \$02** [[See page 16](#)]
- ❑ **Live Data - \$01** [[See page 17](#)]
- ❑ **O2 Sensor Monitor - \$05** [[See page 20](#)]
- ❑ **OBD Monitor Test - \$06** [[See page 21](#)]
- ❑ **Request Control On-Board System - \$08** [[See page 21](#)]
- ❑ **Drive Cycle Procedures** [[See page 22](#)]
- ❑ **Vehicle Information - \$09** [[See page 23](#)]

I/M Readiness Status - \$01, \$41

A Drive Cycle for a Monitor requires that the vehicle is driven in such a way that all the required “Enabling Criteria” for the Monitor to run and complete its diagnostic testing are met. You can use the Tablet Scan Tool to view the Drive Cycle Procedures for a selected Monitor. You can also view a description of a selected Monitor.

1. From the OBD2 Menu, select **I/M Readiness Status - \$01, \$41**, then press **OK** button.
2. A “One moment please. . .” message displays, followed by a selection dialog. Select **Since DTCs Cleared - \$01** or **This Drive Cycle - \$41** as appropriate. Press **OK** to continue.
 - If the vehicle under test does not support Since DTCs Cleared - \$01 or This Drive Cycle - \$41, a warning message displays “*This vehicle does not support this monitor type.*” Press the **Back** button to return to the previous dialog.

This Drive Cycle - \$41		1/8
Select and press <OK>		
Misfire Monitor		Complete
Secondary Air System Monitor		Disable
Fuel System Monitor		Incomplete
Catalyst Monitor		Incomplete
EGR System Monitor		Incomplete

3. The Select Monitor screen displays listing all Monitors supported by the vehicle.
4. To view the description or the drive cycle procedures for a monitor, select the desired monitor, then press **OK** button to view. The **I/M Readiness Status - \$01, \$41** menu displays.



NOTE: With the complete monitors, only allows view descriptions for monitors.

- To view a Monitor description, select **Description**.
 - A description for the selected Monitor displays.
- To view Drive Cycle Procedures for a Monitor, select **Drive Cycle**.
 - The Monitor's Drive Cycle Procedures screen displays.



NOTE: If Drive Cycle Procedures are not available for the vehicle, an advisory message displays. Press **Back** to return to the OBD2 Menu.

5. The Drive Cycle Procedure screen shows the specific set of operating procedures that ensure the vehicle is driven in such a way that all the required "Enabling Criteria" for the Monitor to run and complete its diagnostic testing are met.
6. When you are finished viewing the Drive Cycle Procedures, press the **OK** button to view additional monitors or press the **Home** button to return to the Home Screen.

Retrieving OBD2 Diagnostic Trouble Codes (DTCs)


Never replace a part based only on the DTC definition. Each DTC has a set of testing procedures, instructions and flow charts that must be followed to confirm the location of the problem. This information is found in the vehicle's service manual. Always refer to the vehicle's service manual for detailed testing instructions.

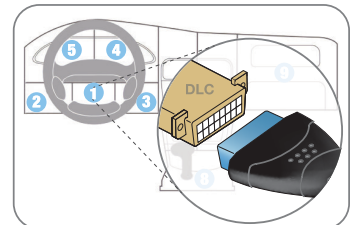


NOTE: Check your vehicle thoroughly before performing any test.



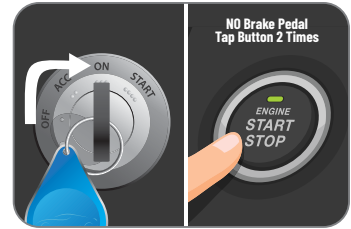
WARNING: ALWAYS observe safety precautions whenever working on a vehicle. See **IMPORTANT SAFETY INFORMATION**. [[See page 3](#)]

1. Turn the ignition **OFF**.
2. Locate the vehicle's 16-pin Data Link Connector (DLC).
3. Connect the Tablet Scan Tool's cable connector to the vehicle's DLC. The cable connector is keyed and will only fit one way.
 - If you have problems connecting the cable connector to the DLC, rotate the connector 180° and try again. If you still have problems, check the DLC on the vehicle and on the Tablet Scan Tool. Refer to your vehicle's service manual to check the vehicle's DLC properly.
 - After the Tablet Scan Tool's test connector is properly connected to the vehicle's DLC, the Vehicle icon  should display to confirm a good power connection.



4. Turn the ignition on. **DO NOT** start the engine.
5. When the Tablet is properly connected to the vehicle's DLC, the unit automatically turns ON.

- If the unit does not power on automatically, it may indicate there is no power present at the vehicle's DLC connector. Check the fuse panel and replace any burned-out fuses.
- If replacing the fuse(s) does not correct the problem, consult the vehicle's repair manual to identify the proper computer (PCM) fuse/ circuit, and perform any necessary repairs before proceeding.

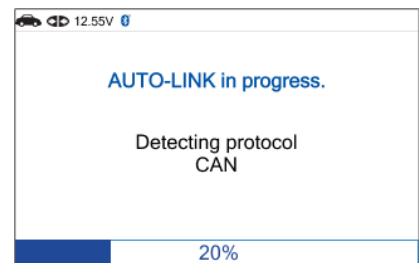


6. The Tablet Scan Tool automatically checks the vehicle's computer to determine which communication protocol it is using.

- Tablet Scan Tool begins to "AUTO-LINK" to identify computer's communication protocol. A progress bar is displayed while a communication link is established.



NOTE: A *PROTOCOL* is a set of rules and procedures for regulating data transmission between computers, and between testing equipment and computers. As of this writing, five different types of protocols (ISO 9141, Keyword 2000, J1850 PWM, J1850 VPW and CAN) are in use by vehicle manufacturers.



- If the Tablet Scan Tool fails to link to the vehicle's computer, a "Communication Error" message shows.
 - Ensure your vehicle is OBD2 compliant.
 - Verify the connection at the DLC, and verify the ignition is ON.
 - Turn the ignition OFF, wait 5 seconds, then back ON to reset the computer.
 - Press the **OK** button to try again.
 - If the Tablet Scan Tool cannot link to the vehicle's computer after three attempts, the message "Contact Technical Support" displays.
 - Choose the **Home** button to return to the Home Screen.
 - Turn the ignition **OFF** and disconnect the Tablet Scan Tool.
 - Contact Technical Support for assistance.
7. If the Tablet Scan Tool **can decode** the Vehicle Identification Number (VIN) for the vehicle under test, the OBD2 results screen displays. Proceed to **Step 9**.
 8. If the Tablet Scan Tool **cannot decode** the Vehicle Identification Number (VIN) for the vehicle under test, the Vehicle Selection screen displays.
 9. After approximately 2~3 seconds, the Tablet Scan Tool will retrieve and display any Diagnostic Trouble Codes (DTCs), I/M Monitor Status and Freeze Frame Data retrieved from the vehicle's computer memory.
 - The Tablet Scan Tool will display a code only if codes are present. If no codes are present, the message "No Powertrain DTCs or Freeze Frame Data presently stored in the vehicle's computer" displays.

10. Refer to the TABLET DISPLAY FUNCTIONS for a description of display elements. [See page 6]



NOTE: In the case of long code definitions, a small arrow is shown in the upper/ lower right-hand corner of the display area to indicate the presence of additional information. Use arrow keys as necessary to scroll through the definition.



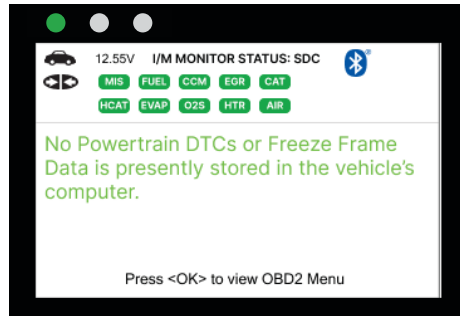
NOTE: If a definition for the currently displayed code is not available, an advisory message shows "The definition for this trouble code is not available. Please connect your Tablet Scan Tool to the update software quarterly to see if a new update is available."

11. Read and interpret Diagnostic Trouble Codes/system condition using the display and the green, yellow, and red LEDs.



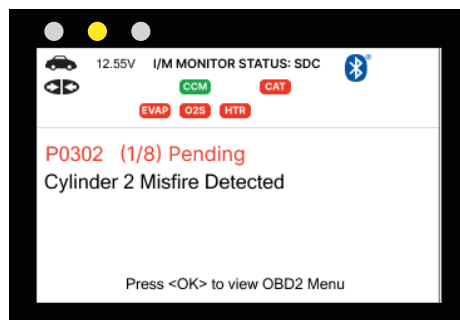
NOTE: The green, yellow, and red LEDs are used (with the display) as visual aids to make it easier to determine engine system conditions.

- **Green LED** – Indicates that all engine systems are running normally, and all emission monitors are active and performing their diagnostic testing. The Malfunction Indicator "Check Engine" Lamp on the vehicle's instrument panel is off.

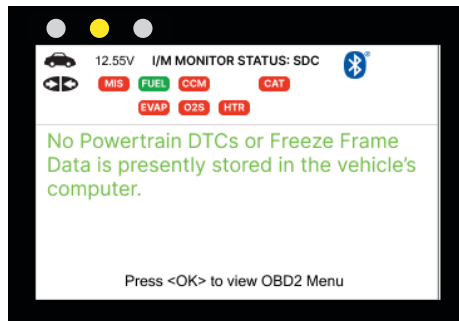


- **Yellow LED** – Indicates one of the following conditions:

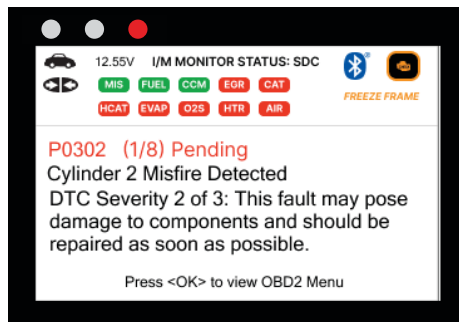
[A] A PENDING CODE IS PRESENT – If the yellow LED is illuminated, it may indicate a Pending code is present. Check the display for confirmation. A Pending code is confirmed by the presence of a numeric code and the word **Pending**.



[B] MONITOR NOT RUN STATUS – If the display shows a zero (indicating there are no DTCs present in the vehicle’s computer memory), but the yellow LED is that some of the Monitors supported by the vehicle have not yet run and completed their diagnostic testing. Check the display for confirmation. All Monitor icons that are blinking have not yet run and completed their diagnostic testing; all Monitor icons that are solid have run and completed their diagnostic testing.



- **Red LED** – Indicates there is a problem in one or more of the vehicle’s systems. The Malfunction Indicator “Check Engine” Lamp on the vehicle’s instrument panel is on.



NOTE: DTC’s that start with “P0”, “P2” and some “P3” are considered Generic (Universal). All Generic DTC definitions are the same on all OBD2 equipped vehicles. The Tablet Scan Tool automatically displays the code definitions (if available) for Generic DTC’s.

NOTE: DTC’s that start with “P1” and some “P3” are Manufacturer specific codes – their code definitions will vary with each vehicle manufacturer.

Erasing Diagnostic Trouble Codes (DTCs) - \$04

NOTE: When the Tablet’s ERASE function is used to erase the DTCs from the vehicle’s on-board computer, “Freeze Frame” data and manufacturer-specific enhanced data are also erased.

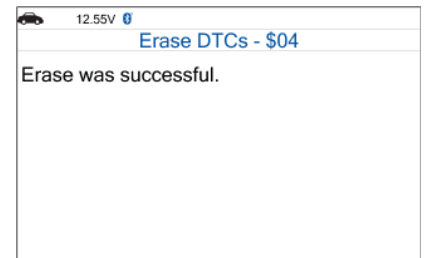
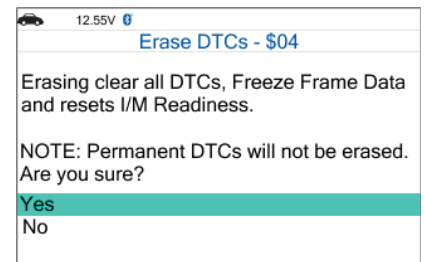
If you plan to take the vehicle to a Service Center for repair, **DO NOT** erase the codes from the vehicle's computer. If the codes are erased, valuable information that might help the technician troubleshoot the problem will also be erased.

Erase DTCs from the computer's memory as follows:



NOTE: When DTCs are erased from the vehicle's computer memory, the I/M Readiness Monitor Status program resets status of all the Monitors to a not run "flashing" condition. To set all the Monitors to a **DONE** status, an OBD2 Drive Cycle must be performed. Refer to your vehicle's service manual for information on how to perform an OBD2 Drive Cycle for the vehicle under test.

- Perform the Code Retrieval procedure [[See page 12](#)].
 - Wait until the codes are displayed.
 - Press the **OK** button to access to OBD2 Menu.
- From OBD2 Menu, select **Erase DTCs - \$04**, then press the **OK** button. A confirmation message displays.
 - If you are sure you want to proceed, choose **Yes** to continue.
 - If you do not want to proceed, choose **No** to back to OBD2 Menu.
- Choose **Yes** then press the **OK** button.
 - If the vehicle's engine is running, an advisory message shows: "Please stop the vehicle and place transmission in Park or Neutral then press "**OK**" to continue.
 - A "One moment please..." message displays while the erase function is in progress.
- If the erase was successful, a confirmation message displays. After 3 seconds, the tablet automatically re-links to the vehicle's computer.
 - If the erase was not successful, an advisory message shows indicating the erase request was sent to the vehicle's computer. After 3 seconds, the tablet automatically re-links to the vehicle's computer.



NOTE: If the erase was not successful and ECU error code \$22 is present, an advisory message display. Start the engine and maintain vehicle speed at 0. Press the **OK** button to try again.

Freeze Frame - \$02

If more than one Diagnostic Trouble Code (DTC) was retrieved and to view Freeze Frame Data, following procedures below:

- From OBD2 Menu, select **Freeze Frame - \$02** and press the **OK** button.
 - The Freeze Frame data displays.
 - In OBD2 systems, when an emissions-related engine malfunction

FREEZE FRAME	
P0113 Audi Stored	1/15
Fuel Sys 1	OL fault B2
Fuel Sys 2	CL
Calc Load	0.0 (%)
ECT	176 (°F)
STFT B1	0.0 (%)
LTFT B1	-1.5 (%)
STFT B2	1.2 (%)

Press <OK> to view PID Desc

occurs that causes a DTC to set, a record or snapshot of engine conditions at the time that the malfunction occurred is also saved in the vehicle's computer memory. The record saved is called Freeze Frame data. Saved engine conditions include, but are not limited to: engine speed, open or closed loop operation, fuel system commands, coolant temperature, calculated load value, fuel pressure, vehicle speed, air flow rate, and intake manifold pressure.



NOTE: *If more than one malfunction is present that causes more than one DTC to be set, only the code with the highest priority will contain Freeze Frame data. The code designated "01" on the Tablet display is referred to as the PRIORITY code and Freeze Frame data always refers to this code. The priority code is also the one that has commanded the MIL (Check Engine) lamp on.*



NOTE: *Retrieved information can be uploaded to a Personal Computer (PC) with the use of optional software (see instructions included with the software for more information).*

- To view a description of the displayed PID, press the **OK** button.

Live Data- \$01

The Tablet lets you view "real-time" Live Data. This information includes values (volts, rpm, temperature, speed etc.) and system status information (open loop, closed loop, fuel system status, etc.) generated by the various vehicle sensors, switches, and actuators. These are the same signal values generated by the sensors, actuators, switches and/or vehicle system status information used by the vehicle's computer when calculating and conducting system adjustments and corrections.

The real time (Live Data) vehicle operating information (values/status) that the computer supplies to the Tablet for each sensor, actuator, switch, etc. is called Parameter Identification Data (PID).

Each PID (sensor, actuator switch, status, etc.) has a set of operating characteristics and features (parameters) that serve to identify it. The Tablet displays this information for each sensor, actuator, switch, or status that is supported by the vehicle under test.




DANGER: *If the vehicle must be driven in order to perform a troubleshooting procedure, ALWAYS have a second person help you. One person should drive the vehicle while the other person observes the Tablet data. Trying to drive and operate the Tablet at the same time is dangerous and could cause a serious traffic accident.*


Viewing Live Data

1. From OBD2 Menu, select **Live Data - \$01**, then press **OK** button.
2. A "One moment please . . ." message displays while the Tablet establishes communication with the vehicle.
 - If the Tablet fails to establish communication with the vehicle, a "Communication Error" message displays.
 - Ensure the vehicle is OBD2 compliant.

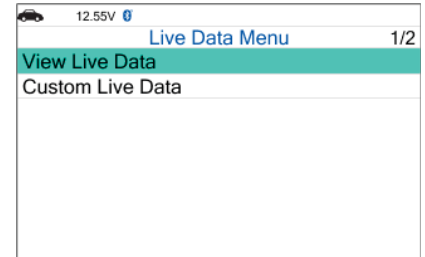
- Verify the connection at the DLC, and verify the ignition is ON.
- Turn the ignition OFF, wait 5 seconds, then back ON to reset the computer.
- Press the **OK** button to relink.

3. The Live Data Menu displays.
4. Then select **View Live Data** and press **OK** button.
5. Real-time Live Data (PID) information supported by the vehicle under test displays.

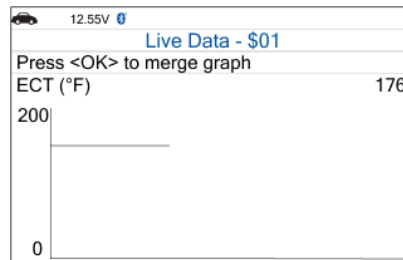
 **NOTE:** The values for the various PIDs displayed may change as the vehicle's operating conditions change.

 **NOTE:** The Graph function will stay inactive if the selected PID does not report a numerical value. An example is the Fuel System Status PID, which reports either Open Loop (OL) or Close Loop (CL).

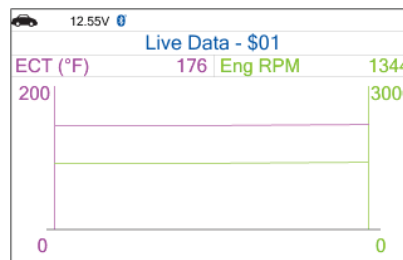
6. Only a limited amount of PID data can be displayed on the screen at one time. If additional PID data is available, a small arrow is shown on the display. Press **▲ UP** and **▼ DOWN**, as necessary, to view available PID data.
 - If communication with the vehicle is lost while viewing Live Data, an advisory message is displayed.
7. Press **OK** to view the currently selected PID in "graph" mode.



Live Data - \$01	
Select and press <OK> to graph	4/15
Fuel System 1 Status	OL-Drive
Fuel System 2 Status	N/A
Calculated Load Value	0.0 (%)
Engine Coolant Temp	176 (°F)
Engine RPM	1344
Vehicle Speed Sensor	0 (mph)
Intake Air Temperature	96.8 (°F)



- Press **OK** once more to select two PIDs results and view them on a single graph. To merge a graph, choose the desired PID and press and hold the **OK** button. The merge graph screen displays.

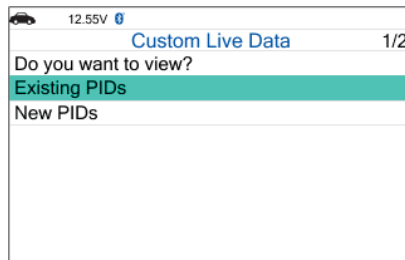


8. Troubleshoot any diagnostic issues by referencing your vehicle's repair manual to view and/or compare Live Data (PID) information displayed on the Tablet against recommended vehicle specifications.

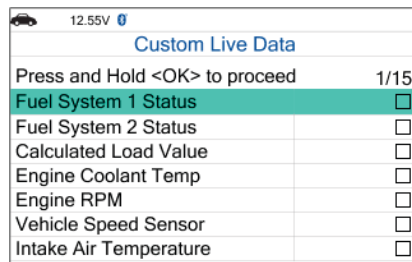
Customizing Live Data (PIDs)

You can customize the Live Data display by placing the Tablet in “Custom Live Data” mode and selecting only the PIDs you wish to display.

1. From the Live Data Menu, then select **Custom Live Data** and press the **OK** button.
 - If the Tablet fails to establish communication with the vehicle, a “Communication Error” message displays.
 - Ensure the vehicle is OBD2 compliant.
 - Verify the connection at the DLC, and verify the ignition is ON.
 - Turn the ignition OFF, wait 5 seconds, then back ON to reset the computer.
 - Press the **OK** button to relink.
 - If Live Data is not supported by the vehicle under test, an advisory message displays. Press the **Back** button to return to the OBD2 Menu.
 - If custom Live Data was previously configured, the Select PIDs to Use screen displays.
 - To use the existing custom Live Data selections, select **Existing PIDs**, then press the **OK** button. Proceed to **step 5**.



- To configure new custom Live Data, select **New PIDs**, then press the **OK** button. The Custom Live Data menu displays. Proceed to **step 2**.
 - If Custom Live Data was not previously selected, the Custom Live Data menu displays. Proceed to **step 2**.
2. Press **▲ UP** and **▼ DOWN** to scroll through the available PIDs. When a PID you wish to display is highlighted, press **OK** (a “checkmark” shows to confirm your selection). Repeat until only the PIDs you want to display are selected.
 - To deselect a PID, highlight the PID, then press the **OK** button. The checkmark is removed.



3. When you are finished making your selection(s), hold the **OK** button to continue.
 - If no PIDs have been selected, an advisory message display. Press **OK** button to return to the Custom Live Data menu.
4. The Tablet is now in “Custom Live Data” mode. Only your selected PIDs are shown.
 - To change the current custom Live Data selections, press the **↩ Back** button to return to the Custom Live Data menu. **Repeat step 2.**

Custom Live Data		4/5
Select and press <OK> to graph		
Fuel System 1 Status		OL-Drive
Fuel System 2 Status		N/A
Calculated Load Value		0.0 (%)
Engine Coolant Temp		176 (°F)
Engine RPM		1344

5. Press **OK** button to perform the graph function.
6. To exit the “Custom Live Data” mode, press the **↩ Back** button to return to the Live Data Menu.

O2 Sensor Monitor - \$05

The O2 Sensor Monitor lets you view the test results of the vehicle's two or more O2 sensors. These sensors are designed to help identify problems that can reduce fuel efficiency or increase emissions. Each O2 sensor has a unique name that identifies its location in the exhaust system – cylinder bank location (bank 1 or bank 2) and its location in relation to the catalytic converter (upstream or downstream). Please reference the vehicle's service manual for further information.



NOTE: Service Mode \$05 is not supported in ISO 15765-4 (CAN) applications – it includes the majority of 2008 and older vehicles. For CAN applications, the functionality of Service Mode \$05 was revised and implemented in Service Mode \$06.

1. From OBD2 Menu, select **O2 Sensor Monitor - \$05**, then press the **OK** button.

- The O2 Sensor Monitor - \$05 screen displays.



NOTE: If the O2 Sensor Monitor is not supported by the vehicle under test, a notification is displayed. Press the **↩ Back** button to return to the OBD2 menu.

2. Choose the item you wish to view, then press **OK**.

- The screen displays test result.

O2 Sensor Monitor - \$05		1/2
O2SB1S1		
Rich to LN Threshold		
Value: 0.555 (V)		
Min: N/A		
Max: N/A		
Press <OK> to next page		

3. When you have finished viewing the retrieved test data, press **OK** to view results for the next test, or press **↩ Back** to return to Select Test menu.
4. When you have finished viewing test data for all desired tests, press **↩ Back** from Select Test menu to return to OBD2 Menu, or press the **🏠 Home** button to return to Home screen.

OBD Monitor Test - \$06

The OBD Monitor Test function retrieves and displays test results for emission-related powertrain components and systems that are not continuously monitored. The tests available are determined by the vehicle's manufacturer.



NOTE: The diagnostic tablet does not perform the OBD monitor test but retrieves results from the most recently performed tests from the on-board computer's memory. You may retrieve OBD monitor test results for only one test at any given time.

1. From the OBD2 Menu, select **OBD Monitor Test - \$06**, then press the **OK** button.
2. A "One moment please..." message displays, followed by the Select Test menu screen. (Refer to the vehicle's service repair manual for information related to non-continuous tests.)



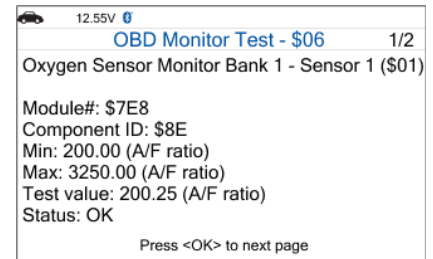
NOTE: If OBD Monitor Test data is not presently stored in the vehicle's computer, an advisory message display. Press the **Back** button to return to the OBD2 Menu.



NOTE: If the OBD Monitor Test is not supported by the vehicle under test, an advisory message display. Press the **Back** button to return to the OBD2 Menu.

3. Select the desired test, then press **OK** to display the test results. The display shows the following information:

- Test ID number
- Module ID number
- Component ID number
- Min or Max test limit (Only one test limit, either Min or Max, is shown for any given test.)
- Test Value and status.



NOTE: Status is calculated by the diagnostic tablet by comparing the Test Value against the displayed test limit (either Min or Max). Status is shown as either Low, High, or OK.

4. When you have finished viewing the retrieved test data, press **OK** to view results for the next test, or press **Back** to return to Select Test menu.
5. When you have finished viewing test data for all desired tests, press **Back** from Select Test menu to return to OBD2 Menu, or press the **Home** button to return to Home screen.

Request Control On-Board System - \$08

The Request Control On-Board System - \$08 allows you perform an EVAP Test or Particulate Filter Regeneration and Inducement System Reinitialization.

- **EVAP Test** - lets you initiate a leak test for the vehicle's EVAP system.
- **Particulate Filter Regeneration** – this service requests the vehicle to initiate a PF regeneration. The


vehicle manufacturer is responsible to determine the criteria to enable, start and stop the test, such as engine running, vehicle speed, or engine rpm.

- **Inducement System Reinitialization** - This service requests the vehicle to initiate a reinitialize the inducement system. The vehicle manufacturer is responsible to determine the criteria to enable, start and stop the test, such as engine running, vehicle speed, or engine rpm.



NOTE: The tablet does not perform the leak test, but signals to vehicle's on-board computer to initiate the test. The vehicle manufacturer determines the criteria and method for stopping the test once it has been started. **BEFORE** using the Request Control On-Board System function, refer to the vehicle's service manual to determine the procedures necessary to stop the test.



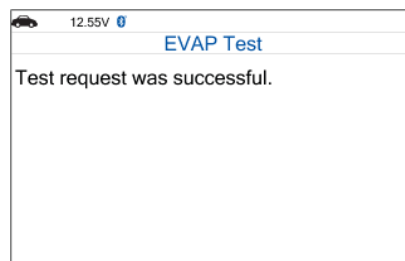
NOTE: Some vehicle manufacturers do not allow Tablets or other external devices to control vehicle systems. If the Request Control On-Board System is not supported by the vehicle under test, an advisory message displays. Press  **Back** to return to the OBD2 Menu.

1. From the OBD2 Menu, select **Request Control On-Board System - \$08**, then press the **OK** button.
 - A Request Control On-Board System - \$08 screen displays.



NOTE: The EVAP Test is used for Spark Ignition, and the Particulate Filter Regeneration and Inducement System Reinitialization is used for Compression Ignition.

2. Select the test displays on screen, then press **OK**.
3. A "One moment please..." message displays while the tablet performs the test.
4. When the test has been initiated by the vehicle's on-board computer, a confirmation message displays.



Drive Cycle Procedures



A Drive Cycle for a Monitor requires that the vehicle is driven in such a way that all the required "Enabling Criteria" for the Monitor to run and complete its diagnostic testing are met. You can use the Tablet to view the Drive Cycle Procedures for a selected Monitor.

1. From OBD2 Menu, select **Drive Cycle Procedures**, then press the **OK** button. A "One moment please..." message displays while the Tablet retrieves Monitor status.





NOTE: If the Tablet retrieves Permanent DTCs only, MIL Off and California state is selected, Drive Cycle Procedures can be viewed from the OBD2 Diagnostic screen.

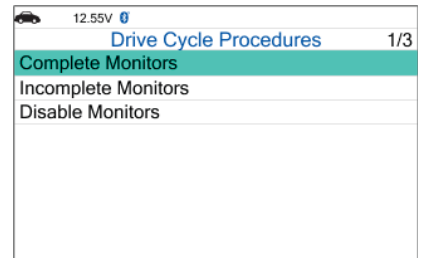
- When Monitor status has been retrieved, the Drive Cycle Procedures menu displays. Depending on the Monitor status, you can view Drive Cycle Procedures for **Complete Monitors**, **Incomplete Monitors** or **Disable Monitors**.

 **NOTE:** If Drive Cycle Procedures are not available for the vehicle, an advisory message displays. Press  **Back** to return to the OBD2 Menu.



- Select **Complete Monitors**, **Incomplete Monitors** or **Disable Monitors**, as desired, then press the **OK** button.


- A list of the available Monitors for the selected status displays.

 **NOTE:** If no Monitors for the selected status are detected, an advisory message displays. Press  **Back** to return to the OBD2 Menu.



- Select the **Monitor** for which you wish to view Drive Cycle Procedures, then press **OK** button.
 - A “One moment please...” message displays while the Tablet retrieves the requested Drive Cycle Procedure. Once retrieved, the Drive Cycle Procedures screen displays.

 **NOTE:** If a Drive Cycle Procedure for the selected Monitor is not available, an advisory message show. Press  **Back** to return to the OBD2 Menu.

- The Drive Cycle Procedure screen shows the specific set of operating procedures that ensure the vehicle is driven in such a way that all the required “Enabling Criteria” for the Monitor to properly run and complete its diagnostic testing.
- When finished viewing the Drive Cycle Procedures, press  **Back** to return to the Drive Cycle Procedures menu.

Viewing Vehicle Information - \$09

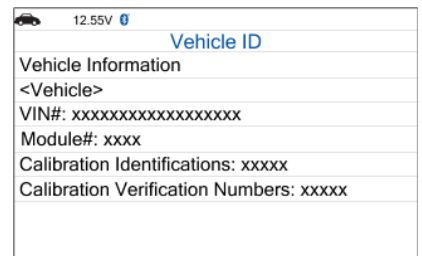
The Tablet offers three options for retrieving reference information for the vehicle under test: Vehicle ID, Available Modules and In-use Performance Tracking.

Viewing Vehicle ID

 **NOTE:** The Vehicle ID function is applicable to model year 2000 and newer OBD2-compliant vehicles.

The Tablet can retrieve a list of information (provided by the vehicle’s manufacturer), unique to the vehicle under test, from its on-board computer. This information may include:

- The vehicle’s VIN number.
- The control module identification number.
- The vehicle’s calibration ID(s). These IDs uniquely identify the software version(s) for the vehicle’s control module(s).
- The Vehicle’s Calibration Verification Number(s) (CVNs) required



by OBD2 regulations. CVNs are used to determine if emission-related calibrations for the vehicle under test have been changed. One or more CVNs may be provided by the vehicle's computer.

1. From OBD2 Menu, select **Vehicle Information - \$09**, then press **OK**.
 - The Vehicle Information menu displays.
2. Select **Vehicle ID**, then press **OK**.



NOTE: The first time the Vehicle ID function is used, it may take several minutes to retrieve the information from the vehicle's computer.

3. When the retrieval process is completed, the vehicle ID information displays.
4. When finished viewing the retrieved vehicle ID information, press **↩ Back** to Vehicle Information menu.

Viewing Available Modules

The Tablet can retrieve a list of modules supported by the vehicle under test.

1. From OBD2 Menu, select **Vehicle Information - \$09**, then press **OK**.
 - The Vehicle Information menu displays.
2. Select **Available Modules**, then press **OK**.
3. When the retrieval process is completed, a complete list of modules supported by the vehicle under test displays.
4. When you have finished viewing the list of available modules, press **↩ Back** to return to the Vehicle Information menu.

12.55V	
Available Modules	
OBD2	
Protocol: CAN	
Module#: \$7E8	

Viewing In-Use Performance Tracking


The Tablet can retrieve In-use Performance Tracking (IPT) statistics for monitors supported by the vehicle under test. Two values are returned for each monitor; the number of times that all conditions necessary for a specific monitor to detect a malfunction have been encountered (XXXCOND), and the number of times that the vehicle has been operated under the specific conditions for the monitor (XXXCOMP). Statistics are also provided for the number of times the vehicle has been operated in OBD monitoring conditions (OBDCOND), and the number of times the vehicle's engine has been started (IGNCNTR).

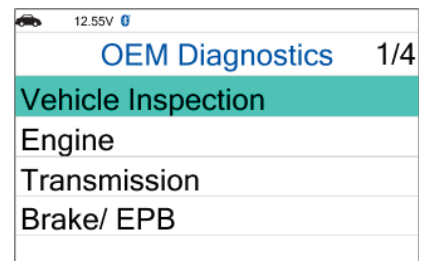
1. From OBD2 Menu, select **Vehicle Information - \$09**, then press **OK**.
 - The Vehicle Information menu displays.
2. Select **In-Use Performance Tracking** then press **OK**.
3. When the retrieval process is completed, the In-use Performance Tracking statistics for the vehicle are under test display.
 - If In-use Performance Tracking is not available for your vehicle, an advisory message shows on the diagnostic tablet's display. Press **↩ Back** to return to the Vehicle Information Menu.
4. When you have finished viewing the list of available modules, press **↩ Back** to return to the Vehicle Information menu.

12.55V	
In-Use Performance Tracking 1/15	
OBDCOND	516
IGNCNTR	1717
CATCOMP1	572
CATCOND1	516
CATCOMP2	0
CATCOND2	0
O2SCOMP1	680
O2SCOND1	516

OEM Diagnostics

The **OEM DIAGNOSTICS** function allows you to perform enhanced, OEM level diagnostics not available over generic OBD2. It provides the ability to retrieve “enhanced” DTCs for ABS, Transmission, and Engine Control Module. You can even provide a comprehensive Vehicle Inspection report that shows the complete Diagnostic Report, Customer Report, and the Collision Industry Report – offering a complete overview of the vehicle’s current health status.

1. From the  **Home** Screen, select **OEM Diagnostics** and press the **OK** button.
2. A selection dialog is provided.
3. Select the type of test you wish to perform.
 - Select the “**individual**” listed control module name to perform a diagnostic check on that single module.
 - Select **Vehicle Inspection** to perform a complete vehicle health status report, including: OBD2 check, enhanced DTCs, tire pressures, and more.



Reading DTCs for a Selected Module

1. Select the module for which you wish to read DTCs.
 - Select Read DTCs in the selected module screen.
2. The tablet retrieves and displays DTCs stored in the vehicle’s computer for the currently selected module.



NOTE: If no DTCs for the selected module are currently stored in the vehicle’s computer, the message “No ‘modules’ DTCs are presently stored in the vehicle’s computer” displays.

Erasing DTCs for a Selected Module

1. Select the **module** for which you wish to erase its DTCs.
2. Choose **Erase DTCs**. A confirmation message displays.
 - Ensure that the ignition in the Key ON, Engine OFF position.
 - If you are sure you want to proceed, choose **Yes** to perform the erase procedure.
 - If you do not want to proceed, press **No** to cancel the erase procedure.
3. If you selected to erase its DTCs, a “One moment please...” message displays while the erase function is in progress.
 - If the erase was successful, a confirmation message displays. After 3 seconds, the Tablet will automatically re-scan the currently selected module.
 - If the erase was not successful, an advisory message displays indicating the erase request was sent to the vehicle’s computer. After 3 seconds, the Tablet will automatically re-scan the currently selected module.

Vehicle Inspection

Performing a full vehicle scan ensures peace of mind for you and your customers. Many systems do not turn on a light or place a message on the vehicle's Diagnostic Information Center, so following this process can help uncover hidden issues.

A good practice is to perform a pre-scan before any work is done to uncover all issues, then a post-scan once repairs are complete to confirm the repairs were completed properly. Furthermore, several manufacturers mandate a pre- and post-scan for all warranty work and insurance carriers require it for pre- and post-collision work.

- ❑ **Emission Inspection Status** - Indicates whether the vehicle is ready for an Emissions Test (Smog Check) based on DTCs present, Freeze Frame data, Monitor Status, MIL (Check Engine Light) status, State/Region, and Engine Type. Results are shown as "Pass", "Fail" or "Warning".
- ❑ **TPMS** - shows the status of the vehicle's Tire Pressure Monitoring System (TPMS) and the individual tire pressures for all tires.
- ❑ **System Fault** – shows number of DTCs retrieved for all of the vehicle's systems.
- ❑ **System No Fault/Available** – provides information on which vehicle systems are not reporting any DTCs and/or it does not support reading DTCs.
- ❑ **System No Response/Not Equipped** – shows the systems that the vehicle does not support.
- ❑ **DTC Detail** – to view Definitions and status DTCs of systems.

PreScan Report		1/7
Emission Inspection Status		Fail
TPMS >		
System Fault >		
System No Fault/Available >		
System No Respond/Not Equipped >		
DTC Detail >		
Rescan		

1. From the OEM Diagnostics screen, select the **Vehicle Inspection** button.
 - The Select Business Report screen displays.
2. Choose the **Business Report** you wish to retrieve, then press **OK** button.
 - **Diagnostic Report** – Provides a report for OBD2 Data and Enhanced DTCs.
 - **Customer/Collision Industry Report** – Provides a report for OBD2 Data, Enhanced DTCs, and TPMS.
3. Choose the report type you wish to view, then press the **OK** button.
 - **The PreScan** – View the vehicle's diagnostic report before making any repairs.
 - **The PostScan** - View the vehicle's diagnostic report after completing the repairs.
4. A "One moment please..." message displays, while the tablet scans ECM (PCM), TCM, ABS modules.
 - It can take several minutes depending on the number of available systems available on the vehicle being tested.
5. Choose **Rescan** to retrieve the vehicle's latest diagnostic status. This ensures you have the most up-to-date information available.
6. When finished viewing all desired information, select **Back** to return to the OEM Diagnostics menu.

Workshop Tools

The **WORKSHOP TOOLS** function allows you to perform several OEM / dealership services, including **Vehicle Inspection, Oil Maintenance Reset, Battery Reset, Battery Initialization, Battery/Alternator Test**. Access dealership level relearn procedures to complete repairs or maintenance and much more.

Vehicle Inspection

Refer to the Vehicle Inspection section under OEM Diagnostics to learn more. [\[See page 26\]](#)

12.55V 0	
Workshop Tool	
Vehicle Inspection	1/5
Oil Maintenance Reset	
Battery Reset	
Battery Initialization	
Battery/ Alternator Test	

Oil Maintenance Reset

- Select **Oil Maintenance Reset** on the Workshop Tools screen.
 - The Oil Maintenance Reset screen displays.
 - An “instructional” dialog displays to confirm selection.
 - Select **Yes** to continue. Or, **No** to cancel.
- When the reset process has completed, a confirmation message displays. Select **Back** to return to the Workshop Tools screen.
 - If the Oil Maintenance Reset was not successful, an advisory message displays.



NOTE: If the Tablet cannot reset the Oil Maintenance Light, an “instructional” dialog displays, showing the manual procedures for resetting the indicator light. When finished viewing the instructions, press **Back** to return to the Workshop Tools screen.


- The Select Reset Method screen displays.
 - If the vehicle under test does not have an Oil Maintenance Reset command function, the service procedures will immediately display.
- When the reset process has completed, a confirmation message displays.
 - If the Oil Maintenance Reset was not successful, an advisory message displays.
 - To perform the oil reset by procedure, select **Yes**, then press the **OK** button. An “instructional” message displays, showing the manual procedures for resetting the indicator light.
 - If you do not wish to perform the oil reset by procedure, select **No**, then press the **OK** button to return to the Workshop Tools screen.
- Choose **Back**, as appropriate, to return to the Workshop Tools screen.



Battery Reset

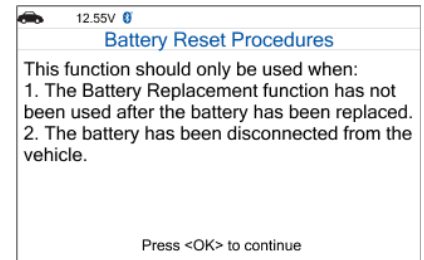
You can use the Tablet to view the procedures for resetting the battery monitor system following a battery replacement.

1. Select **Battery Reset** on the Workshop Tools screen.
 - The Battery Reset Procedures screen displays.
2. Select **OK** to continue.
 - The Battery Reset Procedures menu displays. The menu provides access to General Information, and procedures to be followed: **Battery Disconnection Precautions**, **Battery Connection Precautions**, and **Battery Connection Procedures**.




NOTE: If battery reset procedures are not available, an advisory message show. Choose  **Back** to return to the Workshop Tools screen.

3. Choose the procedure you wish to view, then press the **OK** button.
 - The selected procedure displays.
4. When you have finished viewing the retrieved information, choose  **Back** to return to the Battery Reset Procedures menu. Repeat **step 3** to view additional procedures.
 - When you have finished viewing all desired procedures, choose  **Back** to return to the Workshop Tools.



Battery Initialization

To perform a battery reset OBD service:

1. Select **Battery Initialization** on Workshop Tools screen.
 - The Battery Reset OBD Service displays.
2. Select **Next**, then press the **OK** button.
 - An “instructional” message display.
3. Follow the instructions provided to prepare the vehicle for battery reset OBD service. When all necessary procedures have been performed, choose **Next** to continue.
 - A “Live Data” screen displays, if applicable.
4. Choose **Next** to continue.
 - A “One moment please...” message displays while battery reset is in process.
5. If the battery reset process is successful, a “Reset Complete” message displays.
 - Choose **Exit** to return to the Workshop Tools screen.
 - If the battery reset process is not successful, a “Reset Fail” message displays. Choose  **Back** to return to the Workshop Tools screen.

Battery / Alternator Test

The Tablet can perform a check of the vehicle’s battery and alternator system to ensure the system is operating within acceptable limits. Follow these steps to perform a battery check only, or an alternator system (battery and alternator) check.

Perform a Battery Test

1. Select **Battery/Alternator Test**, then press the **OK** button.
 - The Battery/Alternator Test menu displays.
2. Select **Battery Test**, then press **OK**.
 - An “instructional” message displays, showing the procedures to prepare the vehicle for the battery check.
3. Prepare the vehicle for the battery check:
 - Turn the engine off.
 - Place the transmission in PARK or NEUTRAL and set the parking brake.
 - Make a visual check of the battery’s condition. If the battery terminals are corroded or other damage is present, clean or replace the battery as appropriate.
 - For “unsealed” batteries, make sure the water level in each cell is above the battery plates.
 - Turn the ignition on. **DO NOT** start the engine.
4. Press the **OK** button to proceed.



NOTE: If the engine is running, an advisory message will show. Turn the engine off, then turn the ignition on. **DO NOT** start the engine. Press the **OK** button to continue.

- An “instructional” message displays.
5. Turn the vehicle’s **headlights on**, then press the **OK** button to proceed.
 - A “countdown” message shows while the battery check is in process.
 6. Turn the vehicle’s **headlights off**, then press the **OK** button to proceed.
 - An “instructional” message displays.
 - If battery voltage is **less than 11.8 volts**, an advisory message shows. Turn the ignition off and disconnect the Tablet from the vehicle. Fully charge the battery, then repeat the battery check.
 - If the battery voltage is **between 11.8 and 12.1 volts**, a “Battery voltage is low, this may affect the accuracy of the test results.” message displays.
 - If battery voltage is **greater than 12.1 volts**, an “instructional” message displays.
 7. Start the vehicle’s engine.



NOTE: If the Tablet did not detect signal start of vehicle’s engine, an advisory message show. Choose **Retest** to repeat the battery check or choose **Back** to return to the Battery/Alternator Test menu.

8. When the battery check is complete, a results screen displays with the battery’s status.
9. Choose **Back** to return to the Battery/Alternator Test menu.

Perform an Alternator Test

1. Select **Battery/Alternator Test**, then press the **OK** button.
 - The Battery/Alternator Test menu displays.
2. Select **Alternator Test**, then press **OK**.
 - An “instructional” message show.
3. Start and **warm the engine** to normal operating temperature. **Turn on headlights**. Choose **OK** to proceed.
 - An “instructional” message shows.
4. Press the accelerator pedal to **raise engine speed to 2000 RPM** and maintain the engine speed.
 - When engine speed is within the required range, the alternator test begins. A progress screen displays.
 - When the “countdown” timer expires, an “instructional” message displays.
5. Turn the vehicle’s **headlights off** and return the engine to idle speed.
 - A “One moment please...” message displays while the test results are retrieved.
6. When the alternator check is complete, a results screen shows charging system voltage and indicates whether the charging system is within acceptable limits.
7. Choose **Back** to return to the Battery/Alternator Test menu.

Previous Vehicles

The Tablet stores the results of the most recent vehicle scans you have performed. The Previous Vehicles function allows you to retrieve these historical scan records and view them as needed.

1. From the **Home** screen, select the **Previous Vehicle** tab and press the **OK** button.
2. If more than one vehicle is stored in the Tablet’s memory, the Vehicle Selection menu displays. Select the **desired vehicle**, then press the **OK** button.
 - The Memory System Menu displays and includes: **OBD2 Diagnostics**, **Scan All Systems**, **Vehicle Inspection**, and **Workshop Tools**.




NOTE: If there are no vehicles currently stored, an advisory message is displayed. Press **Home** to return to the Home Screen.

3. Select **OBD2 Diagnostics**, then press the **OK** button.
 - The Tablet displays the Memory OBD2 Diagnostics screen.
 - The Memory OBD2 Diagnostics function allows you to review the available 10 modes of OBD2.
 - Select the function you wish to view, then press **OK**. Choose **Back** to return to the Memory OBD2 Menu.

System Menu		1/4
OBD2 Diagnostics		5 Fault
Scan All Systems		
Vehicle Inspection		
Workshop Tools		


4. Or, select **Workshop Tools**, then press **OK**.

- The Tablet displays the Memory Workshop Tools listing.
- Select the **procedure** you wish to view, then press **OK** button. Choose  **Back** to return to the Memory System Menu.



NOTE: The Memory Workshop Tools function allows you to review only Oil Maintenance Reset Procedures and Battery Reset Procedures.


5. Or, select **Scan All Systems**, then press **OK**.



- The Tablet displays the Memory Scan All Systems (including ECM/PCM, ABS and TCM) listing.
- Select the **system** you wish to view its DTCs, then press **OK**. Choose  **Back** to return to the Memory System Menu.



NOTE: The Tablet only shows systems saved in memory mode.

6. Or, select **Vehicle Inspection**, then press **OK**.

- The Tablet displays the scan type report listing.
- Select the **scan type** report you wish to view, then press **OK**. Choose  **Back** to return to the Memory System Menu.

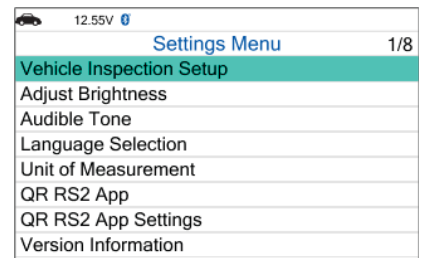
7. When you have finished viewing the information, choose  **Back** to return to the Previous Vehicles screen or press  **Home** to exit to the Home Screen.

- An “advisory” confirmation message display.
- Select **Yes** to exit and return to the Home Screen. Or, select **No** to proceed.

Settings

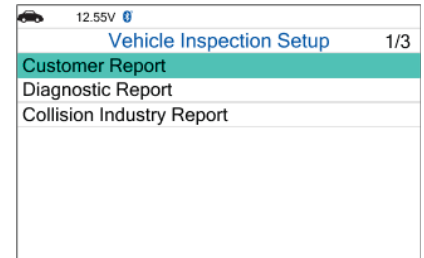
The Tablet lets you make several adjustments and settings to configure it to your particular needs. The following functions can be performed:

- Vehicle Inspection Setup**
- Adjust Brightness**
- Audible Tone**
- Language Selection**
- Unit of Measurement**
- QR RS2 App**
- QR RS2 App Setting**
- Version Information**



Vehicle Inspection Setup

1. Select **Vehicle Inspection Setup** in the Settings menu, then press the **OK** button.
 - The Vehicle Inspection Setup screen displays.
2. Select the **type** of report you wish to set up, then press the **OK** button.
 - The Report Selection screen displays.
 - **Select** or **unselect** functions as desired, then press the **OK** button.



NOTE: The OBD2 Diagnostics (DTCs, Monitor, Freeze Frame Data) status is always ON; this function cannot be turned OFF.

3. Select **Save** to save your changes and auto-return to the Report Selection screen.
 - To exit without proceeding, select **Cancel** to return to the Report Selection screen.

Adjusting Display Brightness

1. Select **Adjust Brightness** in the Settings menu, then press the **OK** button.
 - The Adjust Brightness screen displays.
2. Press **▲ UP** and **▼ DOWN** to make the display lighter or darker.



NOTE: To return to the Settings menu without making changes, press the **↩ Back** button.

Enabling / Disabling the Audible Tone

1. Select **Audible Tone** in the Settings menu, then press the **OK** button.
 - The Audible Tone screen displays.
2. Select **On** or **Off** as desired.



NOTE: To return to the Settings menu without making changes, press the **↩ Back** button.

Selecting the Display Language

1. Select **Language Selection** in the Settings menu, then press the **OK** button.
 - The Language Selection screen displays.
2. Select the desired display language (English, Spanish, French).
 - The tablet automatically saves the change.



NOTE: To return to the Settings menu without making changes, press the **↩ Back** button.

Setting the Unit of Measurement

1. Select **Unit of Measurement** in the Settings menu, then press the **OK** button.
 - The Unit of Measurement screen displays.
2. Select the desired unit of measurement (**U.S. Standard** or **Metric**).
 - The tablet automatically saves the change.



NOTE: To return to the Settings menu without making changes, press the **Back** button.

Viewing the App QR Code - RepairSolutions2®

1. Select **QR RS2 App** in the Settings menu, then press the **OK** button.
 - The QR RS2 App screen displays.
2. Press **▲ UP** and **▼ DOWN** to navigate through the options.
 - Using a mobile device, scan the QR Code to download the RepairSolutions2 App.
 - To exit, choose **Back** to return to the Settings menu.

Setting the QR RepairSolutions2 App Mode

1. Select **QR RS2 App Setting** in the Settings menu, then press the **OK** button.
 - The QR RS2 App Setting screen displays.
2. Select **Enable** or **Disable** as desired.



NOTE: To return to the Settings menu without making changes, press the **Back** button.

Viewing the Version Information

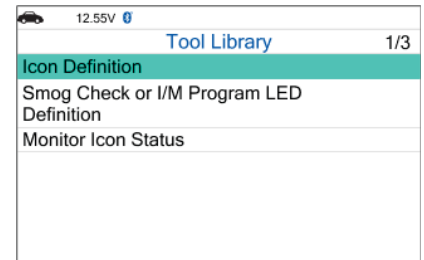
1. Select **Version Information** in the Settings menu, then press the **OK** button.
 - The Version Information screen displays.
 - The screen shows the tablet's **Tool ID**, **GUID**, current **Firmware** version, **Bootloader** version and database (**DB**) version for the specific make.
2. Press **Back** to return to the Settings menu.

Version Information		1/25
Tool ID	0x0671	
Guid	ecdb8c3e-7-b14-4632-becefbdb2d6-8869	
Firmware	V22.01.12	
Bootloader	V01.00.07	
Image	V22.00.16/ V22.00.06	

Tool Library

The **Tool Library** includes valuable reference information for the your tablet. The following functions are available:

- ❑ **Icon Definition** – Shows the full names for the I/M MONITOR STATUS icons shown and descriptions of informational icons on the Tablet's display.
- ❑ **Smog Check or I/M Program LED Definition** - Provides descriptions of the meaning of the Tablet SYSTEM STATUS LEDs.
- ❑ **Monitor Icon Status** - Defines the icon monitor status' color coding and provides tips on how to proceed.

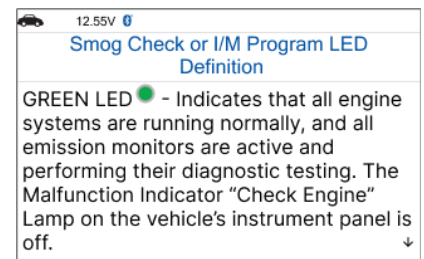


Icon Definition

1. Select **Icon Definition** in the Tool Library menu, then press the **OK** button.
 - The Icon Definition displays.
2. Select the type of icons you wish to view – **Spark Ignition Monitors**, **Compression Ignition Monitors**, or **Tool Icons**, then press the **OK** button.
 - The screen shows a list of Monitor for the selected category.
 - Choose **↶ Back** to return to the Icon Definition menu. If desired, repeat **step 2** to view additional icon definitions.
3. When you have finished viewing the descriptions, choose **↶ Back** to return to the Icon Definition menu.

Smog Check or I/M Program LED Definitions

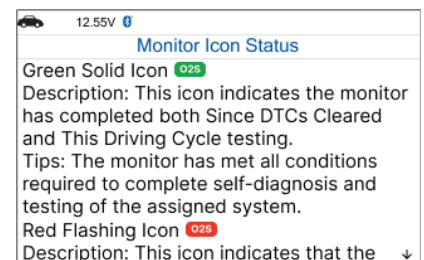
1. From the Tool Library menu, select **Smog Check or I/M Program LED Definition**, then press the **OK** button.
 - The Smog Check or I/M Program LED Definition screen displays.
2. When you have finished viewing the Smog Check or I/M Program LED Definition, choose **↶ Back** to return to Tool Library menu.



Monitor Icon Status

Defines the icon monitor status color coding and provides tips on how to proceed.

1. Select **Monitor Icon Status** in the Library menu, then press the **OK** button.
 - The Monitor Icon Status dialog displays.
2. When you have finished viewing the Monitor Icon Status, press **↶ Back** to return to Tool Library menu.



WARRANTY+ CUSTOMER SERVICE

Limited Warranty

The Manufacturer warrants to the original purchaser that this unit is free of defects in materials and workmanship under normal use and maintenance for a period of one (1) year from the date of original purchase.

If the unit fails within the one (1) year period, it will be repaired or replaced, at the Manufacturer's option, at no charge, when returned prepaid to the Service Center with Proof of Purchase. The sales receipt may be used for this purpose. Installation labor is not covered under this warranty. All replacement parts, whether new or remanufactured, assume as their warranty period only the remaining time of this warranty.

This warranty does not apply to damage caused by improper use, accident, abuse, improper voltage, service, fire, flood, lightning, or other acts of God, or if the product was altered or repaired by anyone other than the Manufacturer's Service Center.

The Manufacturer, under no circumstances shall be liable for any consequential damages for breach of any written warranty of this unit. This warranty gives you specific legal rights, and you may also have rights, which vary from state to state. This manual is copyrighted with all rights reserved. No portion of this document may be copied or reproduced by any means without the express written permission of the Manufacturer. **THIS WARRANTY IS NOT TRANSFERABLE.** For service, send via U.P.S. (if possible) prepaid to Manufacturer. Allow 3-4 weeks for service/repair.

Customer Service

Our ASE Certified technical staff is here to help if you have any questions or require service. For information on UPDATES and OPTIONAL ACCESSORIES, please contact your local store, distributor or Innova's Service Center.

USA & Canada: (800) 544-4124
Monday through Friday: 6:00 AM to 6:00 PM PST

All others: (714) 241-6802
Monday through Friday: 6:00 AM to 6:00 PM PST

FAX: (714) 241-3979 (24 Hr.)

Web: www.innova.com

GLOSSARY

OBD2 Terminology

The following terms and their definitions are related to OBD2 systems.

- **Powertrain Control Module (PCM)** - The PCM is the OBD2 accepted term for the vehicle's "on-board computer." In addition to controlling the engine management and emissions systems, the PCM also participates in controlling the powertrain (transmission) operation. Most PCMs also have the ability to communicate with other computers on the vehicle (ABS, ride control, body, etc.).
- **Monitor** - Monitors are "diagnostic routines" programmed into the PCM. The PCM utilizes these programs to run diagnostic tests, and to monitor operation of the vehicle's emissions-related components or systems to ensure they are operating correctly and within the vehicle's manufacturer specifications. Currently, up to fifteen Monitors are used in OBD2 systems. Additional Monitors will be added as the OBD2 system is further developed.



NOTE: *Not all vehicles support all fifteen Monitors*

- **Enabling Criteria** - Each Monitor is designed to test and monitor the operation of a specific part of the vehicle's emissions system (EGR system, oxygen sensor, catalytic converter, etc.). A specific set of "conditions" or "driving procedures" must be met before the computer can command a Monitor to run tests on its related system. These "conditions" are known as "**Enabling Criteria**." The requirements and procedures vary for each Monitor. Some Monitors only require the ignition key to be turned "**On**" for them to run and complete their diagnostic testing. Others may require a set of complex procedures, such as, starting the vehicle when cold, bringing it to operating temperature, and driving the vehicle under specific conditions before the Monitor can run and complete its diagnostic testing.
- **Complete / Incomplete** - The terms "**Complete**" or "**Incomplete**" are used throughout this manual. "**Complete**," means the PCM **has** commanded a particular Monitor to perform the required diagnostic testing on a system to ensure the system is operating correctly (within factory specifications). The term "**Incomplete**" means the PCM **has not** yet commanded a particular Monitor to perform diagnostic testing on its associated part of the emissions system.
- **Trip** - A Trip for a particular Monitor requires that the vehicle is being driven in such a way that all the required "Enabling Criteria" for the Monitor to run and complete its diagnostic testing are met. The "Trip Drive Cycle" for a particular Monitor begins when the ignition key is turned "**On**." It is successfully completed when all the "Enabling Criteria" for the Monitor to run and complete its diagnostic testing are met by the time the ignition key is turned "**Off**." Since each of the fifteen monitors is designed to run diagnostics and testing on a different part of the engine or emissions system, the "Trip Drive Cycle" needed for each individual Monitor to run and complete varies.
- **OBD2 Drive Cycle** - An OBD2 Drive Cycle is an extended set of driving procedures that takes into consideration the various types of driving conditions encountered in real life. These conditions may include starting the vehicle when it is cold, driving the vehicle at a steady speed (cruising), accelerating, etc. An OBD2 Drive Cycle begins when the ignition key is turned "On" (when cold) and ends when the vehicle has been driven in such a way as to have all the "Enabling Criteria" met for all its applicable Monitors. Only those trips that provide the Enabling Criteria for all Monitors applicable to the vehicle to run and complete their individual diagnostic tests qualify as an OBD2 Drive Cycle. OBD2 Drive Cycle requirements vary from one

model of vehicle to another. Vehicle manufacturers set these procedures. Consult your vehicle's service manual for OBD2 Drive Cycle procedures.



NOTE: Do not confuse a "Trip" Drive Cycle with an OBD2 Drive Cycle. A "Trip" Drive Cycle provides the "Enabling Criteria" for one specific Monitor to run and complete its diagnostic testing. An OBD2 Drive Cycle must meet the "Enabling Criteria" for all Monitors on a particular vehicle to run and complete their diagnostic testing.

- **Warm-up Cycle** - Vehicle operation after an engine off period where engine temperature rises at least 40°F (22°C) from its temperature before starting, and reaches at least 160°F (70°C). The PCM uses warm-up cycles as a counter to automatically erase a specific code and related data from its memory. When no faults related to the original problem are detected within a specified number of warm-up cycles, the code is erased automatically.

OBD2 Monitors

To ensure the correct operation of the various emissions-related components and systems, a diagnostic program was developed and installed in the vehicle's on-board computer. The program has several procedures and diagnostic strategies. Each procedure or diagnostic strategy is made to monitor the operation of, and run diagnostic tests on, a specific emissions-related component or system. These tests ensure the system is running correctly and is within the manufacturer's specifications. On OBD2 systems, these procedures and diagnostic strategies are called "Monitors."

Currently, fifteen Monitors are supported by OBD2 systems. Additional monitors may be added because of Government regulations as the OBD2 system grows and matures. Not all vehicles support all fifteen Monitors. Additionally, some Monitors are supported by "spark ignition" vehicles only, while others are supported by "compression ignition" vehicles only.

Monitor operation is either "**Continuous**" or "**Non-Continuous**," depending on the specific monitor.

Continuous Monitors

Three of these Monitors are designed to constantly monitor their associated components and/or systems for proper operation. Continuous Monitors run constantly when the engine is running.

CCM = Comprehensive Component Monitor

MIS = Misfire Monitor

FUEL = Fuel System Monitor

Non-Continuous Monitors

The other twelve Monitors are “non-continuous” Monitors. “Non-continuous” Monitors perform and complete their testing once per trip.

O2S = Oxygen Sensor Monitor

HTR = Oxygen Sensor Heater Monitor

CAT = Catalyst Monitor

HCAT = Heated Catalyst Monitor

EGR = EGR (Exhaust Gas Recirculation) System Monitor

EVAP = EVAP System Monitor

AIR = Secondary Air System Monitor



NOTE: The following Monitors became standard beginning in 2010. The majority of vehicles produced before this time will not support these Monitors.

HCCAT = NMHC (Non-Methane Hydrocarbon Converting) Catalyst Monitor

NCAT = NOx/SCR Aftertreatment Monitor

BP = Boost Pressure System Monitor

EGS = Exhaust Gas Sensor Monitor

PM = PM (Particulate Matter) Filter Monitor

Additional Terminology + Acronyms

- **ABS** = Anti-Lock Brakes
- **DLC** = Data Link Connector (vehicle's data port)
- **DTC** = Diagnostic Trouble Codes
- **KOEO** = Key On, Engine Off
- **KOER** = Key On, Engine Running
- **MIL** = Malfunction Indicator Lamp (Check Engine Light)

- **OBD** = On Board Diagnostics
 - **OBD2 / OBD II** = On Board Diagnostics, Second Generation
 - **OEM** = Original Equipment Manufacturer
 - **PID** = Parameter Identification Data
 - **TPMS** = Tire Pressure Monitoring System
 - **TSBs** = Technical Service Bulletins
-



INNOVA[®]
Innova Electronics Corp.
17352 Von Karman Ave.
Irvine, CA 92614

