

INNOVA®

SDS43

SDS-Inspector

OE-Level Diagnostic Tablet



POWERED BY

REPAIR SOLUTIONS PRO

HELLO...

On behalf of everyone at INNOVA, we want to welcome you and thank you for purchasing the **INNOVA® SDS Inspector!** 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 Light Diagnostics*
- ✓ *OEM Network Scans*
- ✓ *Smog / Emissions Readiness*
- ✓ *Bi-Directional / Active Test*
- ✓ *Enhanced Data Stream for ECM (PCM), TCM, ABS, SRS systems*
- ✓ *Code Severity Level Identifier*
- ✓ *Battery / Charging System Test*
- ✓ *TPMS / Tire Pressure Readings*
- ✓ *Read Oil Life, Oil Level, Brake Pad Life, Transmission Temperature*
- ✓ *Hybrid Battery Cell Voltage Readings*
- ✓ *Workshop Tools (12 service resets including Oil Maintenance Reset, Electronic Parking Brake Reset, ABS Bleeding, DPF Reset, etc.)*
- ✓ *OEM ECU Information*
- ✓ *And Much More...*

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

POWERED BY



RepairSolutionsPRO™ increases the power of your INNOVA OBD2 diagnostic tablet by delivering the most complete automotive repair database with verified fixes from ASE Certified Master Technicians. Get the right fix and the right parts instantly right on your SDS Tablet or mobile device.

Enjoy using your INNOVA SDS Tablet!

Yours sincerely,

The Innova Technical Team

P.S.: Connect with us to see what we're up to...





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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 ID: 2AC7Z-ESPWR00M32D

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 65](#)]

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

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

1. **4.3-inch LCD Screen** - Color LCD display shows menus and sub-menus, test results, tablet functions and vehicle status information.
2. **Diagnostic Port** - Connects the Tablet 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 screens in Active Test and services reset function).
8. **OK Button** - Confirms the selected option or value.
9. **Left / Right Button** - Moves selection cursor left or right, or helps scroll through pages when more than one page is displayed.
10. **Up / Down Button** - When in MENU mode, scrolls Up/Down through the menu options. When LINKED to a vehicle, scrolls Up/Down through the current display screen to display additional data.
11. **Back Button** - Exits the current function or returns to the previous screen.



Figure 1. Controls and Indicators

TABLET DISPLAY FUNCTIONS

See Figure 2 for the locations of items 1 through 19 below.

1. **I/M MONITOR STATUS: SINCE DTCs CLEARED** field - Identifies the I/M Monitor status area.

2. **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.

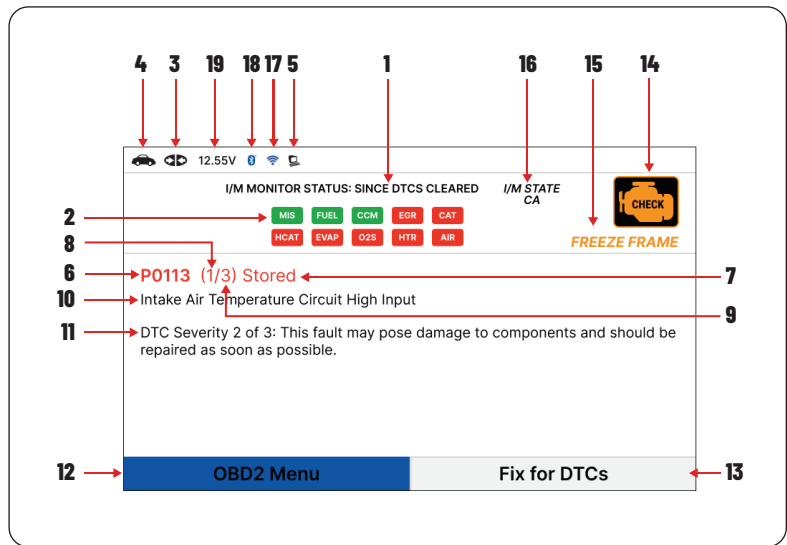


Figure 2. Tablet Display Functions






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 is linked to a vehicle, only the icons for Monitors that are supported by the vehicle under test are visible on the display.

3. **Link Icon** - Indicates whether or not the Tablet is communicating (linked) with the vehicle's on-board computers. When visible, the Tablet is communicating with the computers. If the Link icon is not visible, the Tablet is not communicating with the vehicle's computers.
4. **Vehicle Icon** - Indicates whether or not the Tablet is being properly powered through the vehicle's Data Link Connector (DLC). A visible icon indicates that the Tablet is being powered through the vehicle's DLC connector.
5. **Computer Icon** - When visible, indicates the Tablet is linked to a personal computer.
6. **DTC Display Area** - Displays the Diagnostic Trouble Code (DTC) number. Each fault is assigned a code number that is specific to that fault.
7. **Code Type** - Indicates the type of code being displayed: Stored, Pending, Permanent.
8. **Code Number Sequence** - The Tablet 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. **OBD2 Menu** - Displays menu to perform the 10 modes of OBD2 functions.
13. **Fix for DTCs** - Displays the verified fix for retrieved DTCs.
14.  **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.
15. **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).
16. **I/M STATE** - Displays acronym of I/M program location.
17.  **Wi-Fi Icon** - When OFF, indicates there is no Wi-Fi connection.
18.  **Bluetooth Icon** - Indicates communication status with a compatible INNOVA® mobile application. A solid blue icon indicates an active Bluetooth connection has been established.
19. **12.55V** - Displays the vehicle's current battery voltage.

TECHNICAL SPECIFICATIONS

The following table provides the tablet's current technical specifications:*

Display Type	4.3 Inch Panel
J1962 DLC Cable	6-foot Detachable 16-pin OBDII Compliant Connector
Wi-Fi	802.11b/g/n
Operating Temperature	23°F to 113°F (-5°C to 45°C)
Memory	4GB Memory

Tablet Case	Rugged ABS Shock & Drop Resistant
Included Accessories	Molded Storage Case, Quick Start Guide, USB Cable

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

THE RepairSolutionsPRO™ APP

Innova's **RepairSolutionsPRO (RSPRO)** app is a web-based service created to assist Professional technicians simplify and augment their vehicle diagnostic process.

In essence, it helps you decode the diagnostic data collected by your INNOVA® OBD2 Tablet to arrive at a most likely fix. At its core, the app 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 a second opinion from your most trusted peers to help you diagnose and repair more vehicles.

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THE RSPRO 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 the vehicle 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 the vehicle's manufacturer.
- **Upcoming Maintenance** – View the vehicle manufacturer's recommended maintenance intervals. Plus, conveniently order the correct maintenance parts right from the app.
- And much more...

HARDWARE REQUIREMENTS

- Innova OBD2 Tablet with Bluetooth/Wi-Fi connectivity.
- Android or iOS Mobile Device.

DOWNLOAD THE RSPRO APP

- Available for Apple iOS & Android Devices (Scan QR Code)



USING THE RepairSolutionsPRO APP

1. Retrieve your vehicle's diagnostic data. [[See page 12](#)]
2. Download and install the **RSPRO** app (see above).
3. Launch the app and log in to your account.
 - If you have not yet established an account, you must register for a FREE account before proceeding.
4. Follow the screen prompts to pair your INNOVA Tablet. Be sure your mobile device is connected to an available Wi-Fi network.
 - Begin the pairing process by selecting your handheld tablet from the list.



NOTE: The RSPRO app can only store up to two Wi-Fi configurations.


5. Once paired, the data from your tablet is automatically transferred to the app to create a report.



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

USING THE TABLET

HOME SCREEN

The  **Home** Screen provides access to all the tablet'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 ABS, Airbag, Transmission, Tire Pressure, Battery, and all modules to view and erase their DTCs. Perform bi-directional tests on fuel pump, injectors, ignition coils, and much more. Plus, get access to hundreds of additional parameters that you can view in real-time. Also provide the Vehicle Inspection that show Diagnostic Report, Customer Report and Collision Industry Report. [\[See page 33\]](#)

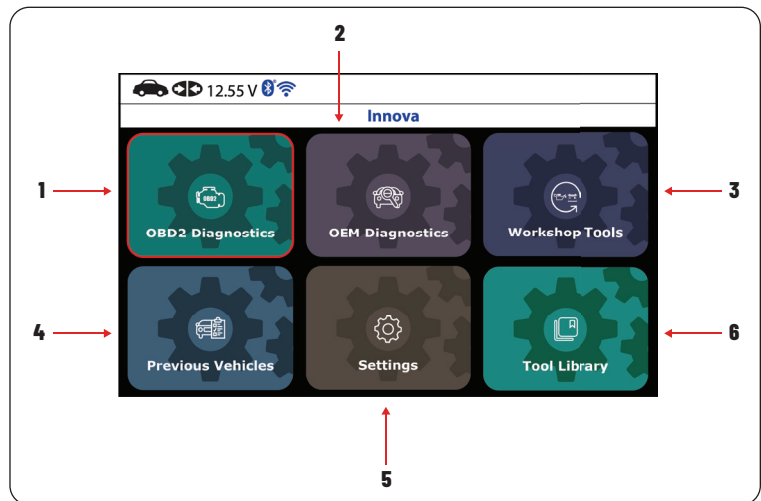


Figure 3. Home Screen

3. **Workshop Tools Tab** – Perform several OEM services, including Vehicle Inspection, Oil Maintenance Reset, Battery Reset, Battery Initialization, EV/HEV/PHEV Battery Health, Battery/Alternator Test, Electronic Parking Brake Reset, etc. Access dealership level relearn procedures to complete repairs or maintenance and much more. [\[See page 51\]](#)
4. **Previous Vehicles Tab** – Access and view reports for the 30 previous tested vehicles, including pre-recorded Live Data streams. [\[See page 61\]](#)
5. **Settings Tab** – Setup your tablet's settings, including Wi-Fi, update software, and other personal settings. [\[See page 62\]](#)
6. **Tool Library Tab** – Access the tablet's tool library for DTC and tool icon definitions, Smog Check or I/M Program LED Definition, DLC Locator, Monitor Icon Status. [\[See page 67\]](#)

INITIAL TABLET 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** (Standard or Metric) and press **OK**.
3. Select the preferred **Smog Check or I/M Program Location** and press **OK**.
4. The next screen displays the **Smog Check or I/M Program LED Definition**. Press **OK** to continue.
5. In this next screen, a QR code to **RepairSolutionsPRO (RSPRO)** is provided. Using any mobile device, scan the code to download and install the free RSPRO app. The app offers additional information including Most Likely Component/System Cause for DTC, Repair Tip, and much more. [[See page 8](#)]



6. Enjoy your INNOVA Smart Diagnostic System!

OBD2 DIAGNOSTICS

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

- ☐ **I/M Readiness Status – \$01, \$41** [[See page 12](#)]
- ☐ **Read DTCs - \$03, \$07, \$0A** [[See page 12](#)]
- ☐ **Erase DTCs - \$04** [[See page 19](#)]
- ☐ **Freeze Frame - \$02** [[See page 20](#)]
- ☐ **Live Data - \$01** [[See page 20](#)]
- ☐ **O2 Sensor Monitor - \$05** [[See page 28](#)]
- ☐ **OBD Monitor Test - \$06** [[See page 28](#)]
- ☐ **Request Control On-Board System - \$08** [[See page 30](#)]
- ☐ **Drive Cycle Procedures** [[See page 30](#)]
- ☐ **Vehicle Information - \$09** [[See page 31](#)]

There are two main ways to access OBD2 Diagnostic functions:

1. From the **Home** Screen, select **OBD2 Diagnostics** and press the **OK** button.
2. From the OBD2 Control Display screen, select **OBD2 Menu** and press the **OK** button.

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 to view the Drive Cycle Procedures for a selected Monitor. You can also view a description of a selected Monitor.

- From the OBD2 Menu, select **I/M Readiness Status - \$01, \$41**, then press **OK** button.
- 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.
- The Select Monitor screen displays listing all Monitors supported by the vehicle.
- To view a Monitor description, select the desired **Monitor**, then choose **Description**.
 - A description for the selected Monitor displays.
- To view Drive Cycle Procedures for a Monitor, select the desired **Monitor**, then choose **Drive Cycle**.

12.55V


This Drive Cycle - \$41

1/8

Misfire Monitor	Incomplete
Fuel System Monitor	Disabled
Oxygen Sensor Monitor	Incomplete
Comprehensive Component Monitor (CCM)	Complete
Oxygen Sensor Heater Monitor	Incomplete
Catalyst Monitor	Incomplete
EGR System Monitor	Incomplete
EVAP System Monitor	Incomplete

Description


Drive Cycle

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

- The Drive Cycle Procedures screen for the Monitor display.
- 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.
 - When you are finished viewing the Drive Cycle Procedures, choose **Other Monitors** to view other monitors or press the **Home** button to return to the Home Screen.


RETRIEVING OBD2 DIAGNOSTIC TROUBLE CODES (DTCs)

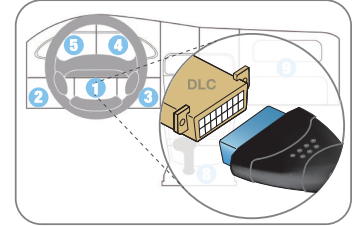
Never replace a part based only on the DTC definition. Each DTC has a set of testing procedures, instructions and flow charts that must be followed to confirm the location of the problem. This information is found in the vehicle’s service manual. Always refer to the vehicle’s service manual for detailed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

 **NOTE:** Check your vehicle thoroughly before performing any test.

 **WARNING: ALWAYS** observe safety precautions whenever working on a vehicle. See **SAFETY FIRST!** for more information. [[See page 3](#)]

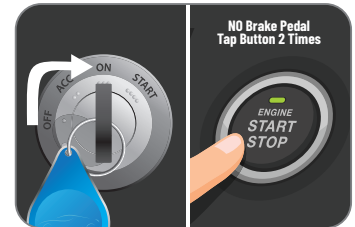
1. Turn the ignition **OFF**.
2. Locate the vehicle's 16-pin Data Link Connector (DLC).
3. Connect the Tablet's cable connector to the vehicle's DLC. The cable connector is keyed and will only fit one way.

- 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. Refer to your vehicle's service manual to check the vehicle's DLC properly.
- After the Tablet'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.

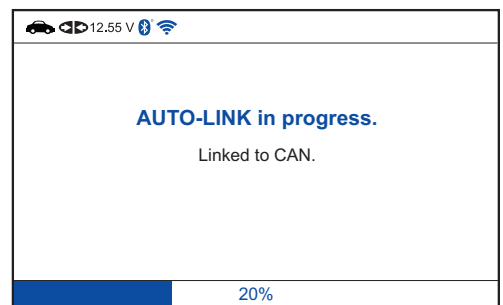


6. The Tablet automatically checks the vehicle's computer to determine which communication protocol it is using.
- Tablet begins to "AUTO-LINK" to identify computer's communication protocol. A progress bar is displayed while a communication link is established.

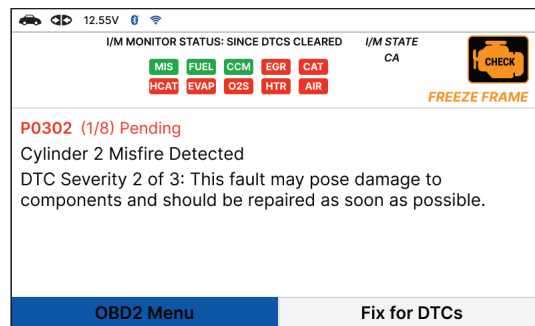


NOTE: A *PROTOCOL* is a set of rules and procedures for regulating data transmission between computers, and between testing equipment and computers. As of this writing, five different types of protocols (ISO 9141, Keyword 2000, J1850 PWM, J1850 VPW and CAN) are in use by vehicle manufacturers.

- If the Tablet 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.
 - Choose **Relink** to try again or select OBD2 Menu button to return to the OBD2 Menu.
- If the Tablet 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.
 - Contact Technical Support for assistance.
7. If the Tablet 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 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 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 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 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.



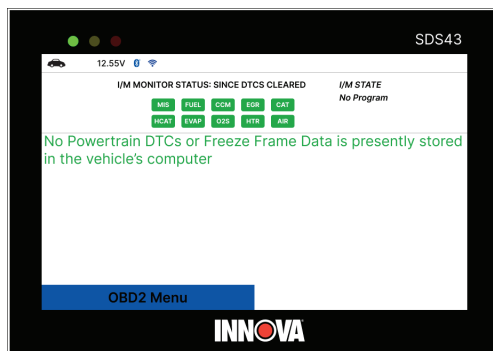
NOTE: If a definition for the currently displayed code is not available, an advisory message shows "The definition for this trouble code is not available. Please connect your tablet to the update software quarterly to see if a new update is available."

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



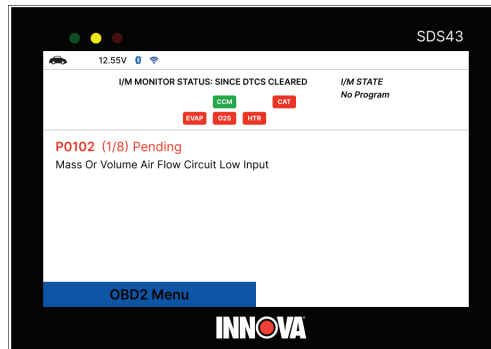
NOTE: The green, yellow, and red LEDs are used (with the display) as visual aids to make it easier to determine engine system conditions.

- **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.

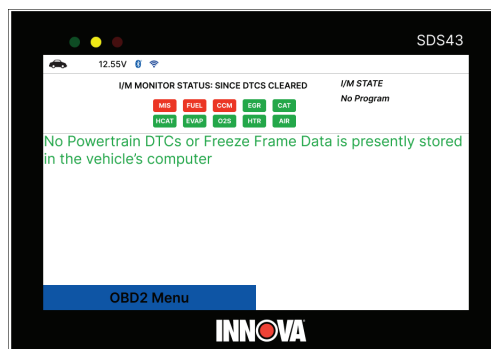


- **Yellow LED** – Indicates one of the following conditions:

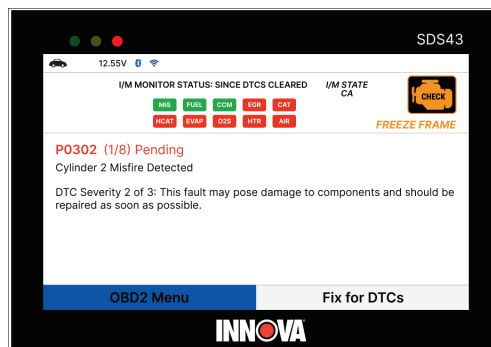
[A] A PENDING CODE IS PRESENT – If the yellow LED is illuminated, it may indicate a Pending code is present. Check the display for confirmation. A Pending code is confirmed by the presence of a numeric code and the word **Pending**.



[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 automatically displays the code definitions (if available) for Generic DTC's.

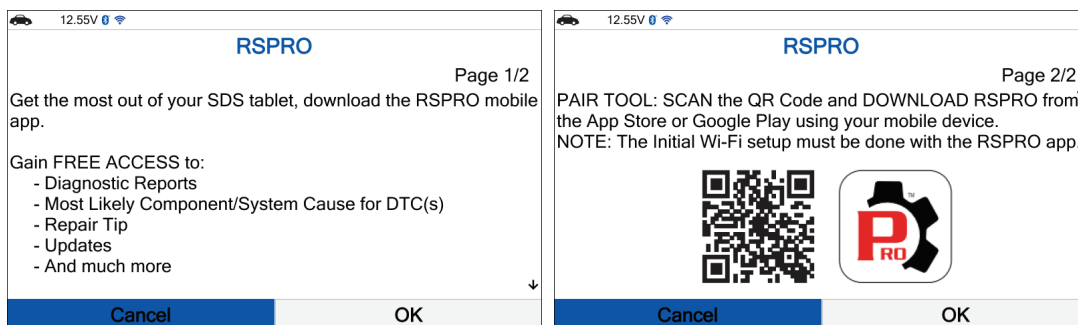


NOTE: DTC's that start with "P1" and some "P3" are Manufacturer specific codes – their code definitions will vary with each vehicle manufacturer.

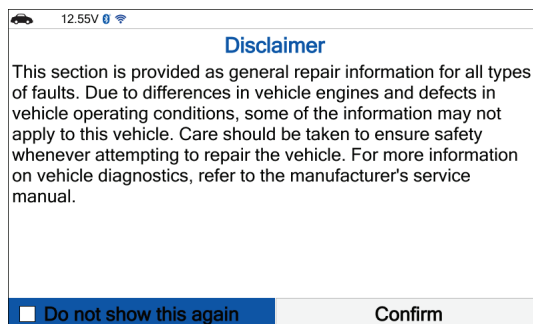
FIX FOR DTCs

Innova's **RepairSolutionsPRO** reports offer a fix, which is cross referenced for accuracy against a database of millions of verified fixes. It is real-world data that has been collected for over 25 years by Innova's network of ASE Master Technicians across the U.S. (For the **RSPRO** App, [\[See page 8\]](#))

- From OBD2 Diagnostic screen, select **Fix for DTCs**, then press **OK**.
 - The tablet verifies that it has a registered RSPRO account. If not, the screen displays a screen requesting that the tablet be registered with an RSPRO account. Follow the steps to create your account.






- The tablet also verifies if its connected to a Wi-Fi Network. [\[See page 63\]](#)
 - If the Tablet fails to establish communication, the screen shows a notification. Select **Cancel**, then press **OK** to return to the OBD2 Diagnostic screen or select **Try Again**, then press **OK** to try again.
- A "One moment please..." message displays while the results are gathered.
 - A **Disclaimer** is provided every time a fix is requested.



- To stop showing this screen, press the **OK** button to check the “Do not show this again” check-box, select **Confirm** and press **OK** to confirm your selection. Alternatively, select **Confirm** without the check mark, and press **OK** to not make any changes.


- The results screen displays the recommended Fix for DTCs, and provides the Most Likely Component/System Cause for the DTC, and any additional most likely fix recommendations.



<div>  12.55V  </div> <h3>Fix for DTCs: P0302</h3>	
Most Likely Component/System Cause for DTC	Distributor Cap and Roto
Second Most Likely Component/System Cause for DTC	Fuel Injector(s)
Third Most Likely Component/System Cause for DTC	Spark Plug Wire(s)
Other Likely Component/System Cause for DTC	Fuel Pressure Regulator
<div>Repair Tip</div>	

- If a Fix is not available for the retrieved DTC, an advisory message displays. Press the  **Back** button to return to the OBD2 Diagnostic screen.



NOTE: A Repair Tip offers additional insight and helpful tips to solve the issue.

- Select **Repair Tip** and press **OK**.
 - A Repair Tip menu for the retrieved DTC is provided.
 - If a DTC Repair Tip is not available, an advisory message displays. Press the  **Back** button to return to the Fix for DTCs screen.
- Each Repair Tip for DTC includes: **Initial Inspection**, **Possible Cause**, **Diagnostic Procedure** and **Repair Validation**.

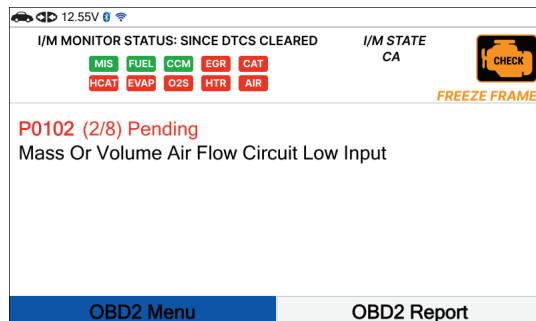
<div>  12.55V  </div> <h3>Repair Tip For DTC P0302</h3> <div>1/4</div>
Initial Inspection
Possible Cause
Diagnostic Procedure
Repair Validation

- Select the information you wish to view, then press **OK**.
- When finished viewing, press the  **Back** button to return to the Repair Tip menu.

OBD2 REPORT

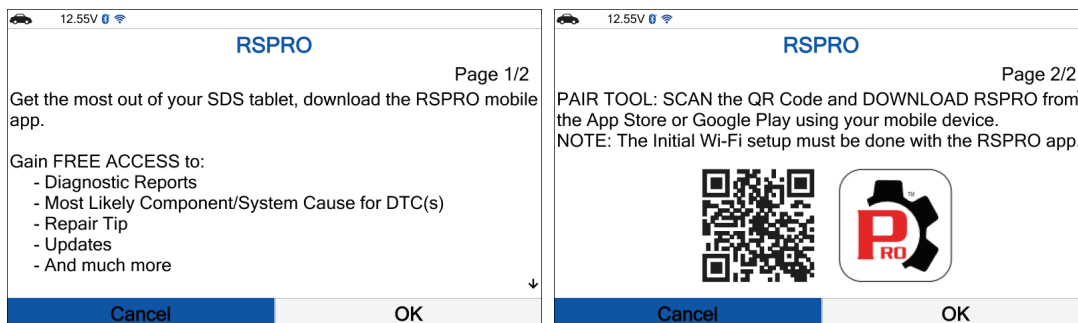
The OBD2 Report function allows you create an OBD2 Diagnostics Report and upload it to your account, which you

can view at a later time on your registered RSPRO app. The OBD2 Report function is available from the second DTC or from the first DTC that does not offer a Fix for DTC. This option is removed once a report has been successfully completed and will reappear after each vehicle relink.

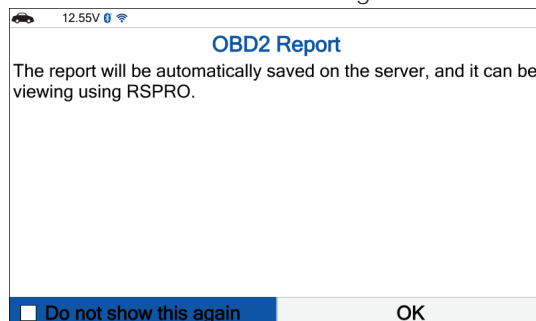


- From OBD2 Diagnostics screen, select the **OBD2 Report** button then press **OK**.

- The tablet verifies that it has a registered RSPRO account. If not, the screen displays a screen requesting that the tablet be registered with an RSPRO account. Follow the steps to create your account.



- The tablet also verifies if its connected to a Wi-Fi Network. [\[See page 63\]](#)
 - If the Tablet fails to establish communication, a notification is displayed. Select **Cancel**, then press **OK** to return to the OBD2 Diagnostic screen or select **Try Again**, then press **OK** to try again.
- A "Submitting data..." message displays.
 - If the report creation fails, the screen displays a notification and returns to the OBD2 Diagnostics screen after 3 seconds.
 - If the report was successfully created, a confirmation screen displays.
 - To bypass all these steps, press the **OK** button to check the "Do not show this again" check-box, then select and press OK to confirm your selection. The tool will bypass this screen the next time it is used, and after each successful data submission, the screen will return to the OBD2 Diagnostics screen. Alternatively, select **OK** without the check mark and press **OK** to not make any changes.



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.

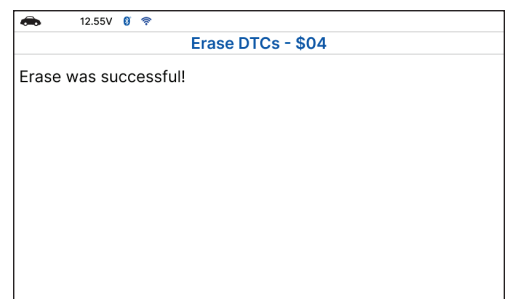
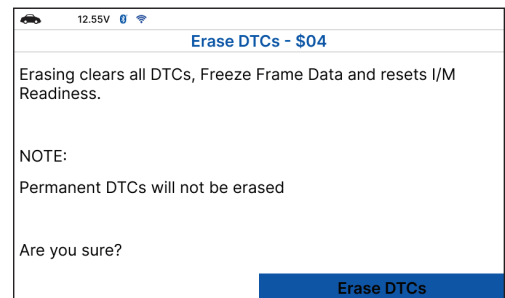
If you plan to take the vehicle to a Service Center for repair, DO NOT erase the codes from the vehicle's computer. If the codes are erased, valuable information that might help the technician troubleshoot the problem will also be erased.

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.

1. Perform the **Code Retrieval procedure** [\[See page 12\]](#)
 - Wait until the codes are displayed.
 - Press the **OK** button to access to OBD2 Menu.
2. From OBD2 Menu, select **Erase DTCs - \$04**, then press **OK** button. A confirmation message shows.
 - If you are sure you want to proceed, choose **Erase DTCs** to continue.
 - If you do not want to proceed, press **Back** button to back to OBD2 Menu.
3. Select **Erase DTCs** then press **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 "Erase DTCs" to continue.
 - A "One moment please..." message displays while the erase function is in progress.
4. 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. Choose **Erase DTCs** 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:

1. 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 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.

12.55V	
P0113 Audi Stored	
1/15	
Fuel Sys 1	OL Fault B2
Fuel Sys 2	CL
Calc Load	0.0(%)
ECT	-38(°F)
STFT B1	-99.2(%)
LTFT B1	-99.2(%)
STFT B2	-99.2(%)
LTFT B2	-100.0(%)
Fuel Pres	0(psi)
PID Desc	



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 **PID Desc**.

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

- From OBD2 Menu, select **Live Data - \$01**, then press **OK** button.
- 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 **Relink** to continue.

- Real-time Live Data (PID) information supported by the vehicle under test displays.



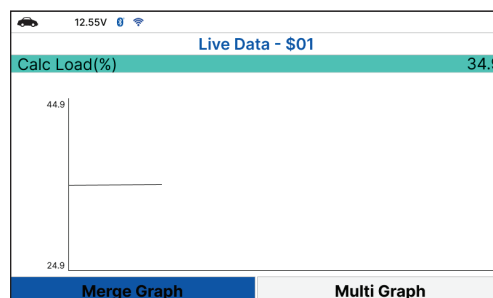
NOTE: The values for the various PIDs displayed may change as the vehicle's operating conditions change.



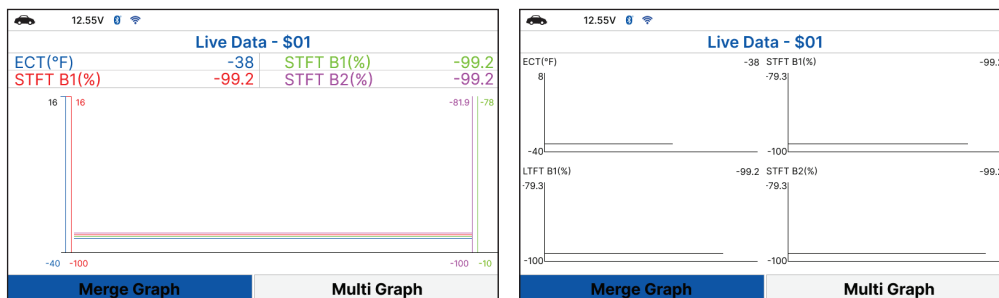
NOTE: The Graph function button will stay inactive if the selected PID does not report a numerical value. An example is the Fuel System Status PID, which reports either Open Loop (OL) or Close Loop (CL).

Live Data - \$01		3/15
Fuel System 1 Status	OL Fault B2	
Fuel System 2 Status	CL	
Calculated Load Value	0.0(%)	
Engine Coolant Temp	-38(°F)	
Short Term Fuel Trim - Bank 1	-99.2(%)	
Long Term Fuel Trim - Bank 1	-99.2(%)	
Long Term Fuel Trim - Bank 1	-99.2(%)	
Short Term Fuel Trim - Bank 2	-99.2(%)	
Fuel Rail Pressure	0 (psi)	
Live Data Menu		Graph

- 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.
- Select **Graph** and press **OK** to view the currently selected PID in “graph” mode.



- Choose **Merge Graph** to view more PID results on one graph.
- Choose **Multi Graph** to view more Graphs in one screen.



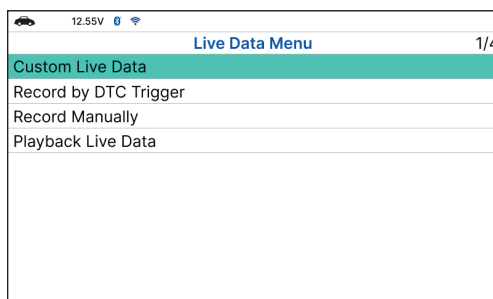
NOTE: The “expanded” definition functionality is available only when enabled through Settings. [\[See page 62\]](#)

6. 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 that you wish to display.

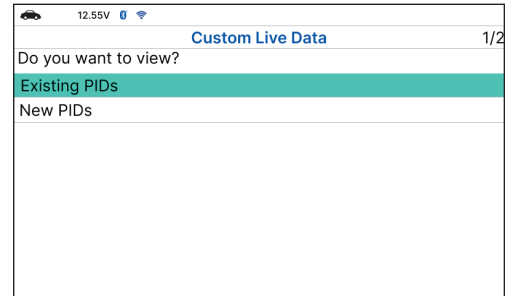
1. With the Tablet in Live Data mode, select **Live Data Menu** to access the Live Data menu, then select **Custom Live Data** and press the **OK** button.



- 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 **Relink** to continue.
- If Live Data is not supported by the vehicle under test, an advisory message displays. Press

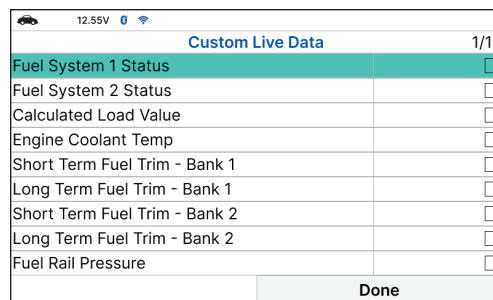
Back to return to the OBD2 Menu.

- 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 **OK**. Proceed to **step 5**.
 - To configure new custom Live Data, select **New PIDs**, then press **OK**. The Custom Live Data menu displays. Proceed to **step 2**.

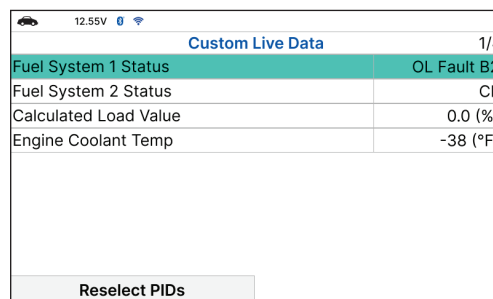


- If custom Live Data was not previously selected, the Custom Live Data menu displays. Proceed to **step 2**.

2. Press **▲ UP** and **▼ DOWN** to scroll through the available PIDs. When a PID you wish to display is highlighted, press **OK** (a “check-mark” 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 **OK**. The check-mark is removed.



3. When you are finished making your selection(s), choose **Done** to continue.
 - If no PIDs have been selected, an advisory message display. Press **OK** to return to the Custom Live Data menu.
4. The Tablet is now in “Custom Live Data” mode. Only the PIDs you selected are shown.



- To change the current custom Live Data selections, select **Reselect PIDs**, then press **OK** to return to the Custom Live Data menu. **Repeat step 2**.
5. To exit the “Custom Live Data” mode, press **↩ Back** to return to the Live Data Menu.

RECORD LIVE DATA

You can record and save several frames of Live Data information for each PID supported by the vehicle in the Tablet's memory. Once recorded, each session can be played back for further analysis.

There are two ways that the Tablet can record Live Data:

- ☐ **Record by DTC Trigger**
- ☐ **Record Manually**

Record by DTC Trigger

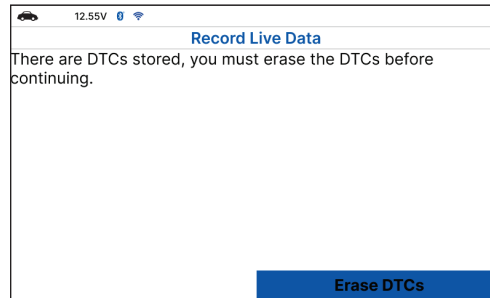
This function automatically records Live Data information when a DTC sets and saves it in the Tablet's memory. The recorded data can be a valuable troubleshooting aid, particularly if you are experiencing a fault that is causing a DTC to set. The Tablet can record approximately 100 frames of Live Data.

1. With the Tablet in Live Data mode [[See page 20](#)] select **Live Data Menu** and press **OK** to display the Live Data Menu.
2. Select **Record by DTC Trigger**, then press **OK**.
 - The Select PIDs to Record screen displays.

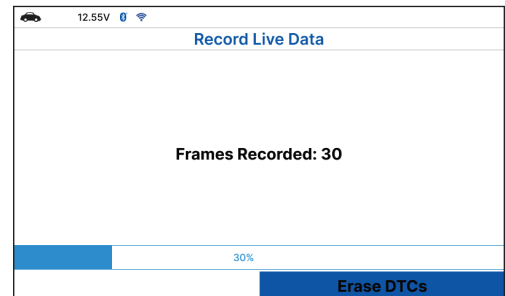
Record Live Data	
Record All PIDs	<input checked="" type="checkbox"/>
Fuel Sys 1	<input type="checkbox"/>
Fuel Sys 2	<input type="checkbox"/>
Calc Load	<input type="checkbox"/>
ECT	<input type="checkbox"/>
STFT - B1	<input type="checkbox"/>
LTFT - B1	<input type="checkbox"/>
STFT - B2	<input type="checkbox"/>
LTFT - B2	<input type="checkbox"/>
Done	

- 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 **Relink** to continue.
3. Press **▲ UP** and **▼ DOWN** to scroll through the available PIDs. When a PID you wish to display is highlighted, press **OK** (a "check-mark" shows to confirm your selection). Repeat until only the PIDs you want to record are selected.
 - To select all PIDs, choose **Record All PIDs**.
 - To deselect a PID, highlight the PID, then press **OK**. The check-mark is removed.
 4. When you are finished making your selections, choose **Done** to continue.

- If DTCs are presently stored in the vehicle's computer, an advisory message displays.



- Choose **Erase DTCs**. A “One moment please...” message displays while DTCs are erased from the vehicle's computer.
 - If the erase is not successful, an advisory message displays.
 - To retry the erase process, verify that the Tablet is properly connected to the vehicle's DLC and that the ignition is on. Choose **Erase DTCs**.
 - To exit the record function, press **Back** to return to the Record Live Data menu.
 - When the Erase process is complete, the Record Live Data screen displays the message “Ready to record. Waiting for DTCs.”
5. Put the engine in the operating condition that causes the DTC to set.
- If necessary, drive the vehicle until you reach the vehicle speed at which the problem occurs.
6. When the Tablet detects a fault that causes a DTC to set, it automatically records and saves approximately 100 frames of Live Data information in its memory for each PID selected.
- A progress message shows on the display.
 - You can stop and save recorded Live Data at any time by choosing **Stop/Save**.
 - When the recording is complete, a confirmation screen displays. Choose **Yes** to Playback Live Data [See page 26] or **No** to return to the Live Data menu, as desired.
 - If recording **was not successful**, an advisory message displays. Choose **Continue** to return to the Live Data menu.



Record Manually

This option lets you select the precise time at which the Live Data recording will occur. Record by Manually can be a very valuable tool when troubleshooting intermittent problems that do not meet the requirements for a DTC to set. The Tablet is capable of recording approximately 100 frames of Live Data.

1. With the Tablet in Live Data mode [See page 20] select **Live Data Menu** and press **OK** to display the Live Data Menu.

2. Select **Record Manually**, then press **OK**.

- The Select PIDs to Record screen displays.
- If the Tablet fails to establish communication with the vehicle, a “Communication Error” message displays.
 - 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.
 - The Tablet should power up once the ignition is in the ON position.

3. Press **▲ UP** and **▼ DOWN** to scroll through the available PIDs. When a PID you wish to record is highlighted, press **OK** (a “check-mark” shows to confirm your selection). Repeat until only the PIDs you want to record are selected.

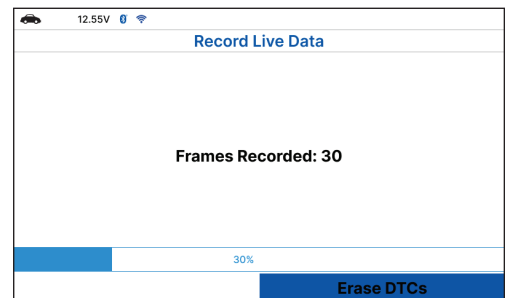
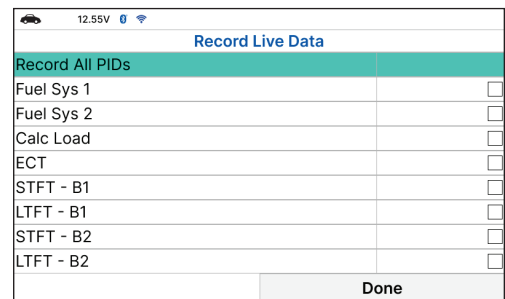
- To select all PIDs, choose **Record All PIDs**.
- To deselect a PID, highlight the PID, then press **OK**. The check-mark is removed.

4. When you are finished making your selections, choose **Done** to continue.

- The Record Live Data screen displays.
- Put the engine in the operating condition where the problem manifests itself.
 - If necessary, drive the vehicle until you reach the vehicle speed at which the problem occurs.

5. When the problem occurs, choose **Record**.

- A progress message shows on the display.
- When recording is complete, a confirmation screen displays. Choose **Yes** to Playback Live Data [See [page 26](#)] or **No** to return to the Live Data menu, as desired.
- If recording was not successful, an advisory message display. Choose **Continue** to return to the Live Data menu.





NOTE: If desired, you can transfer the recorded Live Data information to a personal computer with the use of optional software (see instructions included with the software for more information).

PLAYBACK LIVE DATA

Once Live Data has been recorded, it is saved in the Tablet's memory. You can view recorded Live Data immediately after recording by selecting **Yes** from the Record Live Data confirmation screen, or you can view it later using the “Playback” function.

1. From Live Data Mode, select **Live Data Menu** and press **OK**.
2. Select **Playback Live Data**, then press **OK**.
 - The Playback Live Data menu displays.

 **NOTE:** If there is no Live Data currently stored in the Tablet's memory, an advisory message shows on the display. Press **View LD** to return to Live Data mode.

 **NOTE:** When you select **Yes** from the Record Live Data confirmation screen, the Tablet enters the "Live Data Playback" mode, and the Playback Live Data menu displays.

3. Select **Continuous Playback** or **Frame by Frame**, as desired, then press **OK**.
 - The display shows the recorded Live Data, beginning with the "trigger" frame.
 - 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 all available PID data.
 - When viewing recorded Live Data, look for any irregularities in any of the PID values/signal information (LTFT %, RPM, MAP, TEMP, etc.). If any PIDs are not within specification, or irregularities are detected, follow the procedures in the vehicle's service repair manual to perform additional troubleshooting and repair.
4. When you select **Continuous Playback**, the Tablet plays recorded data at a rate of one frame per 2 seconds.
 - Press **OK** on any selected PID to open a graph view for that PID.
 - Select **Pause**, to "pause" the Live Data playback. Select **Play** to resume the playback mode.
 - Select **Exit Playback** to exit the Live Data Playback mode and return to the Playback Live Data menu.
 - Once playback finishes, the tablet automatically returns to the Playback Live Data menu.
 - To replay the data again, select **Continuous Playback** or **Frame by Frame**, as desired, then press **OK**.
5. When Frame by Frame is selected, you must scroll the individual frames manually.
 - When you have viewed all PID information for the current frame of Live Data, choose **Next Frame** or **Previous Frame**, as desired.

12.55V	
Playback Live Data	
2016 Audi L4, 2.0L; Turbo	
1/2	
Continuous Playback	
Frame by Frame	

12.55V	
Playback Live Data	
Select and Press <OK> to Graph	
Frame 5/100 PID 3/7	
Fuel Sys 1	OL Fault B2
Fuel Sys 2	CL
Calc Load	0.0 (%)
ECT	-38 (°F)
STFT B1	-99.2 (%)
LTFT B1	-99.2 (%)
STFT B2	-99.2 (%)
Pause	Exit Playback

12.55V	
Playback Live Data	
Select and Press <OK> to Graph	
Frame 3/100 PID 3/7	
Fuel Sys 1	OL Fault B2
Fuel Sys 2	CL
Calc Load	0.0 (%)
ECT	-38 (°F)
STFT B1	-99.2 (%)
LTFT B1	-99.2 (%)
STFT B2	-99.2 (%)
Previous Frame	Next Frame

- Press **OK** on any PID to open a graph view for that PID.
- To exit Live Data Playback mode, select **Exit Playback** selection at the bottom of the list, then press **OK**.

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 **OK**.

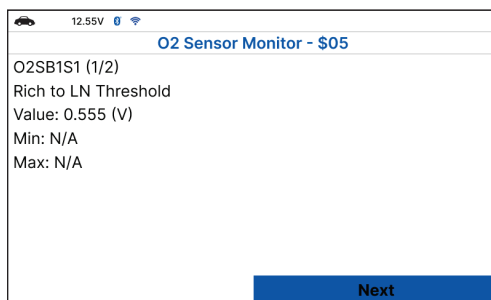
- The O2 Sensor Monitor - \$05 screen displays.




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 will show test result.



3. When you have finished viewing the retrieved test data, press **Next** to view results for the next test, or press  **Back** to return to Select Test menu.

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 **OK**.
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.)

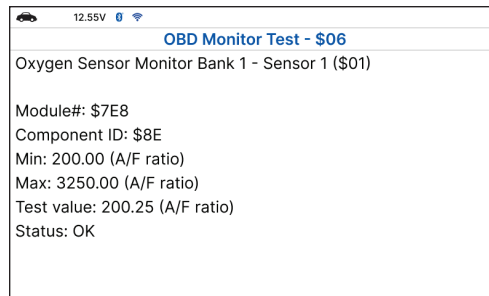


NOTE: If OBD Monitor Test data is not presently stored in the vehicle's computer, an advisory message display. Press the **Back** button to return to the OBD2 Menu.



NOTE: If the OBD Monitor Test is not supported by the vehicle under test, an advisory message displays. 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 **Next** 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 **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.

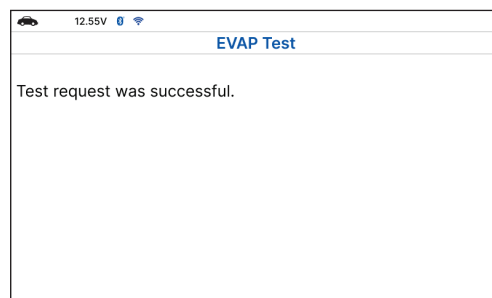
1. From the OBD2 Menu, select **Request Control On-Board System - \$08**.

- A Request Control On-Board System - \$08 screen displays.



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

2. Select the test displays on screen, then press **OK**.
 - A “One moment please...” message displays while the tablet performs the test.
3. 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 **OK**.
 - 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 **Disabled Monitors**.



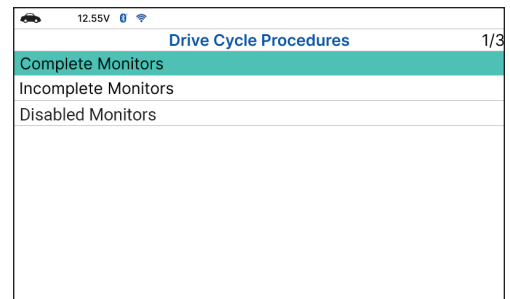
NOTE: If Drive Cycle Procedures are not available for the vehicle, an advisory message displays. Press **Back** to return to the OBD2 Menu.

- Select **Complete Monitors**, **Incomplete Monitors** or **Disabled Monitors**, as desired, then press **OK**.

- 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**.

- 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 shows. 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

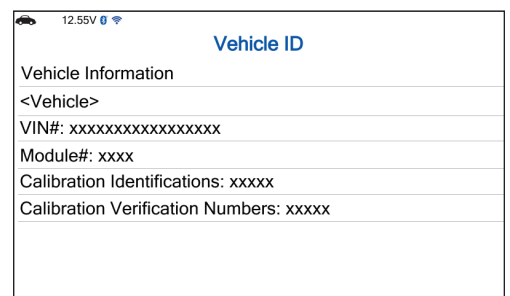
The Tablet offers three options for retrieving reference information for the vehicle under test: **Vehicle ID**, **Available Modules** and **In-use Performance Tracking**.



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**, 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**, 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.

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).

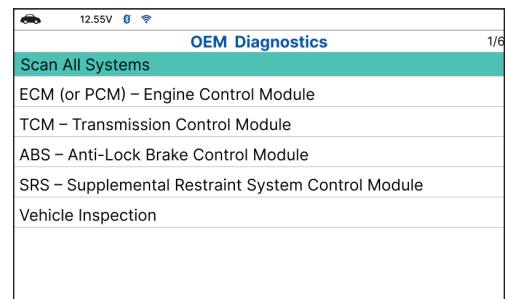
1. From OBD2 Menu, select **Vehicle Information**, then press **OK**.
 - The Vehicle Information menu displays.

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 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.

OEM DIAGNOSTICS

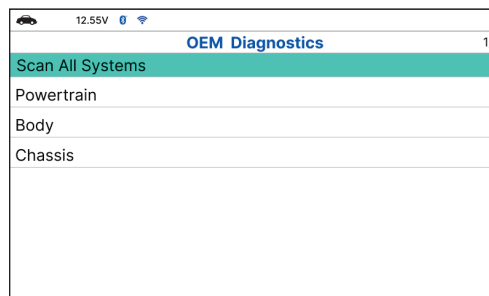
The OEM Diagnostics function allows you to perform enhanced, OEM level diagnostics not available over generic OBD2. A network scan allows you to scan all or just one vehicle module to retrieve DTCs associated with the module(s). Get access to hundreds of additional parameters that you can view in real-time for **ABS**, **Airbag (SRS)**, **Transmission**, and **Engine Control Module**. Plus, perform bidirectional tests on fuel pump, injectors, ignition coils, and much more. 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 **Home** Screen, select **OEM Diagnostics** and press **OK**.
2. A selection dialog is provided.
3. Select the type of test you wish to perform.
 - Select **Scan All Systems** to perform a comprehensive vehicle scan of all available network modules.
 - Select **Vehicle Inspection** to perform a complete vehicle health status report, including: OBD2 check, all Network system scan, service checks, warning lights, tire pressures, and more.
 - Select the "individual" listed **control module name** to perform a diagnostic check on that single module.



PERFORM A SCAN - SCAN ALL SYSTEMS


1. Select **Scan All Systems** from the OEM Diagnostics screen, then press **OK**.





- The Module Selection displays.

2. Choose **Scan All Systems**, then press **OK**.

- A “Linking...” message displays while the Tablet scans all available modules.
- When the scan is complete, the All Modules Scan screen displays. The screen shows the number of DTCs recorded for each available module.
- The results window lists all tested Control Modules with its corresponding result:
 - **Fault** – Indicates the number of reported DTCs.
 - **No Fault** – Indicates that no DTCs were found.
 - **Available** – Indicates that the module is part of the system but does not report DTCs.
- The results screen also allows too either:
 - **Erase All DTCs** - Erases all the vehicle's retrieved Diagnostic Trouble Codes (DTC).
 - **Rescan** - Performs to scan all systems again.
- Select the desired system, then press **OK**.



12.55V

Scan All Systems

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ABS/VSC/TRAC	2 Fault
Air Conditioner	2 Fault
Blind Spot Monitor Slave	1 Fault
D-Door Motor	1 Fault
Engine and ECT	4 Fault
HL AutoLeveling	1 Fault
Sliding Roof	1 Fault
SRS Airbag	No Fault
Tire Pressure Monitor	Available

Rescan

Erase All DTCs

3. Depending on the module selected, you can Read DTCs, Erase DTCs, view Live Data, perform Active Test or read ECU Information.

4. Choose the function you would like to run. Or press **Back** to return to the selected module screen.

- **Read DTCs**
- **Erase DTCs**
- **Live Data**
- **Active Test**
- **ECU Information**

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.

3. Select **Erase DTCs** to erase **ALL** retrieved Diagnostic Trouble Codes (DTCs).

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 shows.
 - Ensure that the ignition in the Key ON, Engine OFF position.
 - If you are sure you want to proceed, choose **Erase DTCs** for a second time.
 - If you do not want to proceed, press  **Back** 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.

Viewing Live Data for a Selected Module

Follow these steps to view Live Data for the currently selected module.

1. Select the **module** for which you wish to view its Live Data, then press **OK**.
 - The individual module menu screen displays.
2. Select **Live data**, then press **OK**.
 - The results screen displays all the vehicle’s available PIDs with reported values.
 - Refer to OBD2 Live Data [\[See page 20\]](#) on how to use Live Data mode.

PERFORM ACTIVE TEST FOR A SELECTED MODULE

Active Test lets you perform active tests for various vehicle actuators and systems. It offers the most popular function tests available for 7 vehicle brands – Chrysler, GM, Ford, Hyundai, Nissan, Toyota, and Honda.

1. Select the module you wish to perform the Active Test on, then press the **OK** button.
 - The individual module menu screen displays.
2. Select **Active Test**, then press the **OK** button.
 - The tablet retrieves and displays a menu of Active Tests available for the vehicle under test.



NOTE: If Active Test are not supported for this vehicle under test, the message “Active Test is not supported” displays. Select **Exit** to return to the previous page.

Chrysler Active Tests

Depending on the vehicle under test, the Active Test menu provides access to one or more of the following tests on Chrysler vehicles:

- NVLD Evaporative Vent Valve Solenoid Control State

- Intake Manifold Tuning Valve (MTV) Solenoid Control State
- Intake Manifold Short Runner Valve (SRV) Solenoid Control State
- Radiator Cooling Fan Relay #2 Control State
- Radiator Cooling Fan Relay PWM Control State
- Oxygen Sensor 1/1 Heater Control State Oxygen Sensor 2/1 Heater Control State
- Oxygen Sensor 1/2 Heater Control State
- Oxygen Sensor 2/2 Heater Control State

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Active Test	
NVLD Evaporative Vent Valve Solenoid Control State	
Intake Manifold Tuning Valve (MTV) Solenoid Control State	
Intake Manifold Short Runner Valve (SRV) Solenoid Control State	
Radiator Cooling Fan Relay #2 Control State	
Radiator Cooling Fan Relay PWM Control State	
Oxygen Sensor 1/1 Heater Control State	
Oxygen Sensor 2/1 Heater Control State	
Oxygen Sensor 1/2 Heater Control State	
Oxygen Sensor 2/2 Heater Control State	

NOTE: If an error occurs while performing any function, an “advisory” message displays. Press **Back** to return to the Active Test menu.

NVLD Evaporative Vent Valve Solenoid Control State

1. Select **NVLD Evaporative Vent Valve Solenoid Control State** in the PCM Active Test menu, then press **OK**.
 - The screen shows Live data.
2. Select On, Off, or Toggle as desired, then press **OK**.
 - The screen refreshes to show the Result.
3. Press **Back** to return to the PCM Active Test menu.

GM Active Tests

Depending on the vehicle under test, the Active Test menu provides access to one or more of the following tests on GM vehicles:

- ☐ Air Pump Relay
- ☐ Cooling Fan
- ☐ EVAP Purge Solenoid
- ☐ EVAP Vent Solenoid
- ☐ Fuel Pump Relay


12.55V	1/5
Active Test	
Air Pump Relay	
Cooling Fan	
EVAP Purge Solenoid	
EVAP Vent Solenoid	
Fuel Pump Relay	



NOTE: If an error occurs while performing any function. Press **Back** to return to the Active Test menu.


Air Pump Relay Test

The Air Pump Relay function lets you turn the Air Pump Relay ON or OFF.

1. Select **Air Pump Relay** in the ECM Active Test menu, then press **OK**.
 - An “instructional” screen displays. Follow the instructions to prepare the vehicle for the test procedure.
2. Press **On** or **Off** as desired.
 - The screen refreshes to show the Result.
3. Press  **Back** to return to the Active Test menu.


Cooling Fan Test

The Cooling Fan function lets you control the fan speed.

1. Select **Cooling Fan** in the ECM Active Test menu, then press **OK**.
 - Wait for a few seconds to link the Control Unit.
 - The Cooling Fan screen displays.
 - The screen shows the “Commanded State”, “Fan Relay 1”, “Fan Relays 2 and 3”, “Fan Relays 1, 2 and 3” and Off.
2. Select the **fan speed** you wish.
 - The Commanded State shows the result.
3. Press  **Back** to return to the ECM Active Test menu.

EVAP Purge Solenoid Test


The EVAP Purge Solenoid function lets you Increase or Decrease EVAP purge solenoid.

1. Select **EVAP Purge Solenoid** in the ECM Active Test menu, then press **OK**.
 - Wait for a few seconds to link the Control Unit.
 - The EVAP Purge Solenoid screen displays.
2. Select **Increase** or **Decrease** as desired, then press **OK**.
 - The screen refreshes to show the test result.
3. Press  **Back** to return to the ECM Active Test menu.

EVAP Vent Solenoid Test


The EVAP Vent Solenoid function lets you turn EVAP vent solenoid ON or OFF.

1. Select **EVAP Vent Solenoid** in the ECM Active Test menu, then press **OK**.
 - The EVAP Vent Solenoid screen displays.
2. Select **On** or **Off** as desired, then press **OK**.
 - The screen refreshes to show the test result.

3. Repeat **step 2** as desired.
4. Press  **Back** to return to the ECM Active Test menu.

Fuel Pump Relay Test

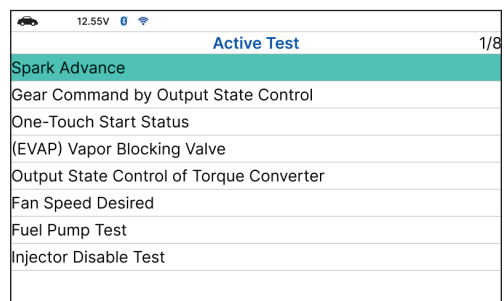
The Fuel Pump Relay function lets you turn the fuel pump relay ON or OFF.

1. Select **Fuel Pump Relay** in the Active Test menu, then press **OK**.
 - An “informational” screen displays.
2. Choose **Next** to continue.
 - The Fuel Pump Relay screen displays.
3. Select **On** or **Off**, as desired, then press **OK**.
 - The screen refreshes to show the test result.
4. Repeat **step 3** as desired.
5. Press  **Back** to return to the Active Test menu.

Ford Active Tests

Depending on the vehicle under test, the Active Test menu provides access to one or more of the following tests on Ford vehicles:

- ☐ Spark Advance
- ☐ Gear Command by Output State Control
- ☐ One-Touch Start Status
- ☐ (EVAP) Vapor Blocking Valve
- ☐ Output State Control of Torque Converter
- ☐ Fan Speed Desired
- ☐ Fuel Pump Test
- ☐ Injector Disable Test



NOTE: If an error occurs while performing any function, an “advisory” message displays. Press  **Back** to return to the Active Test menu.

Spark Advance Test

The Spark Advance function lets you increase or decrease spark advance.

1. Select **Spark Advance** in the Active Test menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:

- Place the transmission in **PARK**.
- Start and idle the engine.
- 2. Press **OK** to continue.
 - The Spark Advance screen displays.
- 3. Select **Increase** or **Decrease**, as desired, then press **OK**.
 - The screen refreshes to show the test result.
- 4. Repeat **step 3** as desired.
- 5. Press **↩ Back** to return to the Active Test menu.

Gear Commanded by Output State Control Test

The Gear Commanded by Output State Control function lets you select the transmission gear command.

1. Select **Gear Commanded by Output State Control** in the Active Test menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Turn the ignition on. **DO NOT** start the engine.
2. Press **OK** to continue.
 - The Gear Commanded by Output State Control screen displays.
3. Select the **gear to be commanded**, as desired, then press **OK**.
 - The screen refreshes to show the test result.
4. Repeat **step 3** as desired.
5. Press **↩ Back** to return to the Active Test menu.

One-Touch Start Status Test

The One-Touch Start Status function lets you enable or disable one touch start functionality.

1. Select **One-Touch Start Status** in the Active Test menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Turn the ignition on. **DO NOT** start the engine.
2. Press **OK** to continue.
 - The One-Touch Start Status screen displays.
3. Select **Disabled** or **Enabled**, as desired, then press **OK**.
 - The screen refreshes to show the test result.
4. Repeat **step 3** as desired.
5. Press **↩ Back** to return to the Active Test menu.

(EVAP) Vapor Blocking Valve Test

The (EVAP) Vapor Blocking Valve function lets you turn the vapor blocking valve ON or OFF.

1. Select **(EVAP) Vapor Blocking Valve** in the Active Test menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Turn the ignition on. **DO NOT** start the engine.
2. Press **OK** to continue.
 - The (EVAP) Vapor Blocking Valve screen displays.
3. Select **On** or **Off**, as desired, then press **OK**.
 - The screen refreshes to show the test result.
4. Repeat **step 3** as desired.
5. Press **↩ Back** to return to the Active Test menu.

Output State Control of Torque Converter Test

The Output State Control of Torque Converter function lets you select the operating mode of the torque converter.

1. Select **Output State Control of Torque Converter** in the Active Test menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Turn the ignition on. **DO NOT** start the engine.
2. Press **OK** to continue.
 - The Output State Control of Torque Converter screen displays.
3. Select **Trans Control**, **Unlock** or **Lock**, as desired, then press **OK**.
 - The screen refreshes to show the test result.
4. Repeat **step 3** as desired.
5. Press **↩ Back** to return to the Active Test menu.

Fan Speed Desired Test

The Fan Speed Desired function lets you increase or decrease cooling fan speed.

1. Select **Fan Speed Desired** in the Active Test menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Turn the ignition on. **DO NOT** start the engine.
2. Press **OK** to continue.
 - The Fan Speed Desired screen displays.
3. Select **Increase** or **Decrease**, as desired, then press **OK**.

- The screen refreshes to show the test result.
- 4. Repeat **step 3** as desired.
- 5. Press **Back** to return to the Active Test menu.

Fuel Pump Test

The Fuel Pump function lets you turn the fuel pump ON or OFF.

1. Select **Fuel Pump** in the Active Test menu, then press **OK**.
 - An "informational" screen displays.
2. Press **OK** to continue.
 - The Fuel Pump screen displays.
3. Select **On** or **Off**, as desired, then press **OK**.
 - The screen refreshes to show the test result.
4. Repeat **step 3** as desired.
5. Press **Back** to return to the Active Test menu.

Injector Disable Test

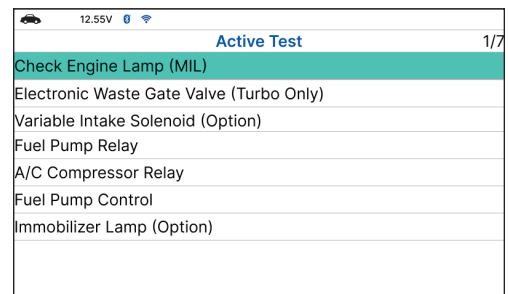
The Injector Disable functions let you disable a selected fuel injector.

1. Select **Injector 1 Disable**, **Injector 2 Disable**, **Injector 3 Disable** or **Injector 1 Disable** in the Active Test menu, as desired, then press **OK**.
 - An "informational" screen displays.
2. Press **OK** to continue.
 - The Injector Disable screen displays.
3. Select **Disabled**, then press **OK**.
 - The screen refreshes to show the test result.
4. Press **Back** to return to the Active Test menu.

Hyundai Active Tests

Depending on the vehicle under test, the Active Test menu provides access to one or more of the following tests on Hyundai Vehicles:

- ☐ Check Engine Lamp (MIL)
- ☐ Electronic Waste Gate Valve (Turbo Only)
- ☐ Variable Intake Solenoid (Option)



- ☐ Fuel Pump Relay
- ☐ A/C Compressor Relay
- ☐ Fuel Pump Control
- ☐ Immobilizer Lamp (Option)

Check Engine Lamp (MIL) Test

The Check Engine Lamp (MIL) function allows you to check the operation of the MIL warning lamp.

1. Select **Engine Check Lamp (MIL)** in the Active Test Menu, then press **OK**.
 - A “confirmation” screen displays.
2. Select **OK** to continue.
 - An “instructional” screen displays. Prepare the vehicle for the test as directed:
 - IG On
 - Engine Off
3. Select **Start** to begin the test.
 - A “status” screen displays while the vehicle is being tested.
4. Select **Stop** to finish the test.
 - A “results” screen displays.
5. Select **OK** to display the “confirmation” screen.
6. Select **Cancel** to return to the Active Test menu.

Electronic Waste Gate Valve (Turbo Only) Test

1. Select **Electronic Waste Gate Valve (Turbo Only)** in the Active Test Menu, then press **OK**.
 - A “confirmation” screen displays.
2. Select **OK** to continue.
 - An “instructional” screen displays. Prepare the vehicle for the test as directed:
 - IG On
 - Engine Off or IDLE
3. Select **Start** to begin the test.
 - A “status” screen displays while the vehicle is being tested.
4. Select **Stop** to finish the test.
 - A “results” screen displays.
5. Select **OK** to display the “confirmation” screen.
6. Select **Cancel** to return to the Active Test menu.

Variable Intake Solenoid (Option) Test

1. Select **Variable Intake Solenoid (Option)** in the Active Test Menu, then press **OK**.
 - A “confirmation” screen displays.
2. Select **OK** to continue.
 - An “instructional” screen displays. Prepare the vehicle for the test as directed:
 - Engine RUN.
3. Select **Start** to begin the test.
 - A “status” screen displays while the vehicle is being tested.
4. Select **Stop** to finish the test.
 - A “results” screen displays.
5. Select **OK** to display the “confirmation” screen.
6. Select **Cancel** to return to the Active Test menu.

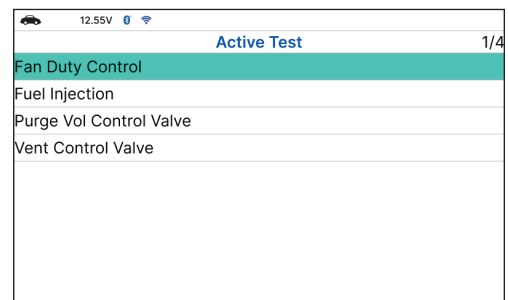
Nissan Active Tests

Depending on the vehicle under test, the Active Test menu provides access to one or more of the following tests on Nissan vehicles:

- ☐ Fan Duty Control
- ☐ Fuel Injection
- ☐ Purge Vol Control Valve
- ☐ Vent Control Valve



NOTE: If an error occurs while performing any function, an “advisory” message displays. Press **Back** to return to the Active Test menu.




Fan Duty Control Test


1. Select **Fan Duty Control** in the Active Test menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Ignition Switch On
2. Select **Next** to continue.
 - The Fan Duty Control screen displays.
3. Select **Increase** or **Decrease**, as desired, then press **OK**.
 - The screen refreshes to show the Result.
4. Repeat **step 3** as desired.

5. Select  **Back** to return to the Active Test menu.

Purge Vol Control Valve Test

1. Select **Purge Vol Control Valve** in the Active Test menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed.
 - Engine: After Warning Up Above 158°F (70°C), run Engine at 1500-2000rpm.
2. Select **Next** to continue.
 - An “Information” screen displays.
3. Select **Next** to continue.
 - “The Purge Vol Control Valve” screen displays.
4. Select **Down 10%** or **Up 10%**, as desired, then press **OK**.
 - The screen refreshes to show the test result.
5. Repeat **step 3** as desired.
6. Press  **Back** to return to the Active Test menu.

Vent Control Valve Test

1. Select **Vent Control Valve** in the Active Test menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Ignition Switch: ON (Engine Stopped)
2. Select **Next** to continue.
 - An “Information” screen displays.
3. Select **Next** to continue.
 - “The Purge Vol Control Valve” screen displays.
4. Select **On** or **Off**, as desired, then press **OK**.
 - The screen refreshes to show the test result.
5. Repeat **step 3** as desired.
6. Press  **Back** to return to the Active Test menu.

Toyota Active Tests

Depending on the vehicle under test, the Active Test Menu provides access to one or more of the following tests on Toyota vehicles:

- ☐ EGR Cut VSV
- ☐ EGR Step Position / System
- ☐ Inspection Mode

- ☐ Cranking Request
- ☐ PWM Output Test
- ☐ Cooling Fan Hi / Mid / Lo / Stop
- ☐ OFF Ave Cg Relay



NOTE: If an error occurs while performing any function, an “advisory” message displays. Press **Back** to return to the Active Test Menu.

12.55V	Active Test	1/7
EGR Cut VSV		
EGR Step Position / System		
Inspection Mode		
Cranking Request		
PWM Output Test		
Cooling Fan Hi / Mid / Lo / Stop		
OFF Ave Cg Relay		

EGR Cut VSV Test

The EGR Cut VSV function lets you activate and deactivate the Exhaust Gas Recirculation (EGR) Vacuum Switching Valve (VSV).

1. Select **EGR Cut VSV** in the Active Test Menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Turn the ignition on. **DO NOT** start the engine.
 - Place the transmission in **PARK**.
2. Select **Continue** to proceed.
 - The Control EGR Cut VSV screen displays.
3. Select **On** to activate the EGR Cut VSV. Select **Off** to deactivate the EGR Cut VSV.
 - The display refreshes to show the results. Repeat as desired.
4. Press **Back** to return to the Active Test Menu.

EGR Step Position / System Test


The EGR Step Position / System function lets you increase Exhaust Gas Recirculation (EGR) target position through its full range (1% - 100%).

1. Select **EGR Step Position / System** in the Active Test Menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Turn the ignition on. **DO NOT** start the engine.
 - Place the transmission in **PARK**.
2. Select **Continue** to proceed.
 - The Control EGR Step Position / System screen displays.
3. Select **Decrease** to decrease the EGR target position. Select **Increase** to increase the EGR target position.
 - The display refreshes to show the results. Repeat as desired.

4. Press  **Back** to return to the Active Test Menu.


Inspection Mode Test

The Inspection Mode function is used to check exhaust gases by engine intermittent prohibition or to allow use of a chassis dynamometer by cutting Traction Control (TRC).

1. Select **Inspection Mode** in the Active Test Menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Erase all DTCs from the vehicle’s computer.
 - Turn the ignition on. **DO NOT** start the engine.
 - Verify the Ready Light is **OFF**.
2. Select **Next** to continue.
 - The Select Inspection Mode screen displays.
3. Select the desired inspection mode; **2WD** for cutting TRC, **2WD** for measuring Exhaust Gas, **4WD** for cutting TRC or **4WD** for measuring Exhaust Gas.
 - A “confirmation” screen displays.
4. Press  **Back** to return to the Active Test Menu.
5. Turn the ignition **OFF** to exit the inspection mode.

Cranking Request Test

The Cranking Request function lets you toggle the ECU mode from “normal” to “compression test” mode for performing a compression test or other maintenance functions.

1. Select **Cranking Request** in the Active Test Menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Turn the ignition on. **DO NOT** start the engine.
 - Verify the Ready Light is **OFF**.
2. Select **Continue** to proceed.
 - The Set Mode screen displays.
3. Select **On** to place the ECU in “compression test” mod. Select **Off** to place the ECU in “normal” mode.
 - The display refreshes to show the test results. Repeat as desired.
4. Press  **Back** to return to the Active Test Menu.

PWM Output Test

The PWM Output Test function lets you turn off current within the inverter when performing inverter maintenance.

1. Select **PWM Output Test** in the Active Test Menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Turn the ignition on. **DO NOT** start the engine.
 - Place the transmission in **PARK**.
 - Verify the Ready Light is **OFF**.
2. Select **Continue** to proceed.
 - The Control PWM Output screen displays.
3. Select **On** to stop inverter current. Select **Off** to return to normal mode.
 - The display refreshes to show the test results. Repeat as desired.
4. Press **↩ Back** to return to the Active Test Menu.

Cooling Fan Test

The Cooling Fan functions let you control operation of the battery cooling fan motor.

1. Select **Cooling Fan Hi**, **Cooling Fan Mid**, **Cooling Fan Lo** or **Cooling Fan Stop** in the Active Test Menu, as desired, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Place the transmission in **NEUTRAL**.
 - Verify the Ready Light is **ON**.
2. Select **Continue** to proceed.
 - The Control Cooling Fan screen displays.
3. Select **On** to turn the cooling fan On. Select **Off** to turn the cooling fan off. It may take from 3 to 10 seconds for cooling fan speed to change.
 - The display refreshes to show the results. Repeat as desired.
4. Select **↩ Back** to return to the Active Test Menu.

OFF Ave Cg Relay Test

The OFF Ave Cg Relay function lets you activate and deactivate the THS charger adapter relay.

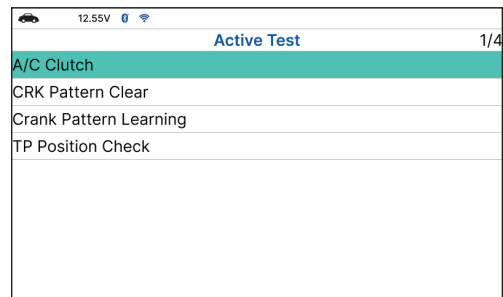
1. Select **OFF Ave Cg Relay** in the Active Test Menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Place the transmission in **NEUTRAL**.
 - Verify the Ready Light is **ON**.
2. Select **Continue** to proceed.
 - The Control Relay screen displays.

3. Select **On** to activate the relay. Select **Off** to deactivate the relay.
 - The display refreshes to show the test results. Repeat as desired.
4. Select **↩ Back** to return to the Active Test Menu.

Honda Active Tests

Depending on the vehicle under test, the Active Test menu provides access to one or more of the following tests on Honda vehicles:

- ☐ A/C Clutch
- ☐ CRK Pattern Clear
- ☐ Crank Pattern Learning
- ☐ TP Position Check A/C Clutch



A/C Clutch Manual Operation Test

1. Select **A/C Clutch** in the Active Test Menu, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed:
 - Place the transmission in **NEUTRAL** or **PARK**.
 - Turn the ignition on. **DO NOT** start the engine.
 - A/C Switch is **OFF**.
2. Select **Next** to proceed.
 - The A/C Clutch Test screen displays.
3. Select **On** to activate the A/C Clutch. Select **Off** to deactivate the A/C Clutch.
 - The display refreshes to show the test results. Repeat as desired.
4. Select **↩ Back** to return to the Active Test Menu.

CRK Pattern Clear

This clear command erases only CKP pattern data stored in the ECM/PCM. Use this clear command after repairing a misfire or replacing a CKP sensor. Afterward, do the ‘CKP pattern learn procedure’ to write the new CKP pattern into the ECM/PCM.

1. Select **Crank Pattern Clear** in the Active Test Menu, then press **OK**.
 - An “instructional” screen display. Prepare the vehicle for test as directed:
 - Place the transmission in **NEUTRAL** or **PARK**.
 - Turn the ignition on. **DO NOT** start the engine.

- Battery Voltage: **12V**.
- 2. Select **Next** to proceed.
 - A “Please waiting for clear....” message displays, followed by one or more “informational/instructional” screens.
- 3. Perform test procedures as directed.
 - When the process has completed, a confirmation message displays.

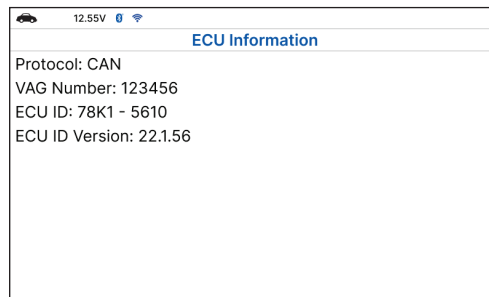


NOTE: If the process was not successful, an advisory message displays. Check again the vehicle's necessary conditions to re-perform this function. Select **Back** to return to the Active Test Menu.

- 4. Select **Back** to return to the Active Test Menu.

Reading ECU Information

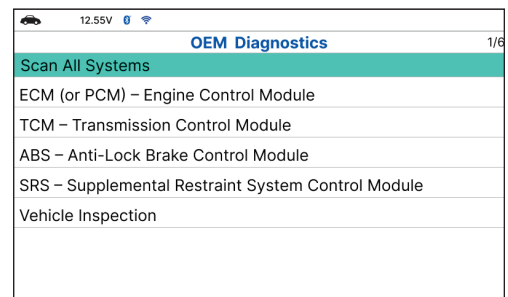
This function retrieves and displays the specific information for the tested control unit, including Protocol, ECU ID, version number and other specifications. The sample ECU Information screen displays as illustrated:



PERFORM A SCAN FOR INDIVIDUAL MODULES

From the *OEM Diagnostics* screen:

1. Select a **module** from the available list of modules, then press **OK**. Proceed to **step 4**.
2. Select **Scan All Systems**, then press **OK**.
 - The Module Selection displays.
3. Choose between **Powertrain**, **Body**, or **Chassis** modules you wish to scan, then press **OK**.
 - Screen shows list of available modules. Select the **system** you would like to run, then press **OK**.
4. Depending on the modules selected, you can **Read DTCs**, **Erase DTCs**, **view Live Data**, **perform Active Test** or **read ECU Information**.
 - Read DTCs – refer to [\[See page 34\]](#)



- ❑ Erase DTCs – refer to [\[See page 34\]](#)
- ❑ Live Data – refer to [\[See page 35\]](#)
- ❑ Active Test – refer to [\[See page 35\]](#)
- ❑ ECU Information – refer to [\[See page 49\]](#)

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 places 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".
- **Service Check** – provides values for Engine Oil Level, Oil Life Remaining, Brake Pad Life, Transmission Temperature.
- **TPMS** - shows the status of the vehicle's Tire Pressure Monitoring System (TPMS) and the individual tire pressures for all tires.
- **Warning Light** – confirms the ON or OFF status for the vehicle's ABS Dash Indicator and Airbag Dash Indicator.
- **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** – shows the systems that the vehicle does not support.

12.55V	
PreScan Report	
1/10	
Emission Inspection Status	Fail
Service Check >	
Transmission Fluid Temperature	176 (°F)
Oil Life Remaining	Poor oil quality
TPMS >	
Warning Light >	
System Fault >	
System No Fault/ Available >	
ReScan	

DTC Detail – to view Definitions and status DTCs of all systems.

1. Follow the Scan All Systems steps to connect with the vehicle. [\[See page 33\]](#)
2. From the OEM Diagnostics screen, select the **Vehicle Inspection** button.
 - The Select Business Report screen displays.
3. Choose the **Business Report** you wish to retrieve, then press **OK**.
 - **Diagnostic Report** – Provides a report for OBD2 Data, MIL DTC additional Information, Scan All Systems Data, and Vehicle Care.
 - **Customer Report** – Provides a report for OBD2 Data, Scan All Systems Data, Service Check,

Service Warning Lights, and Vehicle Care.

- **Collision Industry Report** – Provides a report for OBD2 Data, Scan All Systems Data, Service Warning Lights, and Service Check.
- 4. Choose the report type you wish to view, then press **OK**.
 - **The PreScan** – View the vehicle's diagnostic report before making any repairs.
 - **The PostScan** – View the vehicle's diagnostic report after completing the repairs.
- 5. A "One moment please..." message displays, while the tablet scans all of the vehicle's equipped modules.
 - The tablet verifies that it has a registered RSPRO account. If not, the screen displays a screen requesting that the tablet be registered with an RSPRO account. Follow the steps to create your account. To view the report result, press **Cancel**.
 - The tablet also verifies if its connected to a Wi-Fi Network or Bluetooth-connected to the RSPRO app.
 - It can take several minutes depending on the number of available systems available on the vehicle being tested.
- 6. A "Submitting data..." message displays while this function is in progress.
- 7. Select **Rescan**, to get the most current diagnostic status for vehicle under test – particularly as you continue to troubleshoot each individual control module.
 - An "instructional" dialog displays to confirm selection.
 - Select **Yes** to rescan the vehicle. Or, **No** to cancel.
- 8. When finished viewing all desired information, select **Back** to return to the OEM Diagnostics menu.

WORKSHOP TOOLS

The WORKSHOP TOOLS tab allows you to perform several OEM / dealership services, including **Vehicle Inspection, Oil Maintenance Reset, Battery Reset, Battery Initialization, EV/HEV/PHEV Battery Health, Battery/Alternator Test, Electronic Parking Brake Reset**, and others. Access dealership level relearn procedures to complete repairs or maintenance and much more.

OIL MAINTENANCE RESET

1. 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.
2. When the reset process has completed, a confirmation message displays. Select **Back** to return to the

12.55V	Workshop Tools	1/14
Vehicle Inspection		
Oil Maintenance Reset		
Battery Reset		
Battery Initialization		
Battery/Alternator Test		
Electronic Parking Brake Reset		
Steering Angle Sensor Calibration		
TPMS Relearn		
Throttle Body Relearn/TEC Learn		

Workshop Tools screen.

- If the Oil Maintenance Reset was not successful, an advisory message display.



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.

3. 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.
4. To perform the Oil Maintenance Reset by procedure, choose **View Procedure**.
 - 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.
5. To perform Oil Maintenance Reset by command, choose **Perform Command**.
 - A “status” message displays while the Oil Maintenance Reset is in progress.
6. When the reset process has completed, a confirmation message displays.
 - Choose **Back** or **Exit**, as appropriate, to return to the Workshop Tools screen.
 - If the Oil Maintenance Reset was not successful, an advisory message displays.
 - To perform the Oil Maintenance Reset by procedure, choose **View Procedure**.
 - An “instructional” message displays, showing the manual procedures for resetting the indicator light.
 - If you do not wish to perform the Oil Maintenance Reset by procedure, choose **Exit** to return to the Workshop Tools screen.

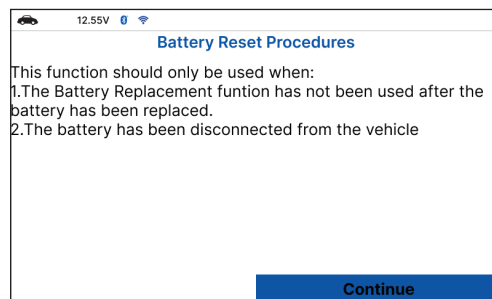
BATTERY RESET



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 **Continue**, then press **OK**.
 - 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 **OK**.
 - 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 (Audi, BMW, Ford, Volkswagen, Volvo)


Follow these steps to perform a battery OBD reset service for **Audi, BMW, Ford, Volkswagen, and Volvo models only**.

To perform battery reset OBD service (BMW / Ford / Volvo):

1. Select **Battery Initialization** on Workshop Tools screen.
 - The Battery Reset OBD Service displays.
2. Select **Next**, then press **OK**.
 - 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.

To perform battery reset OBD service (Audi / Volkswagen):

1. Tap **Battery Initialization** on Workshop Tools screen.
 - The Battery Reset OBD Service displays.
2. Select **Battery Reset OBD Service**, then press **OK**.
 - An “informational” screen display.
3. Choose **Next** to continue.
 - A series of “instructional” screens display, directing you to enter reference information for the battery (part number, manufacturer, serial number).
4. Choose **Next** as necessary to scroll the screen and enter the necessary information.
 - A “confirmation” screen displays.


- The screen shows the previously entered Battery part number, Battery manufacturer and Battery serial number.
5. Select the desired option:
 - To proceed with coding, select **Carry Out Coding** and press **OK**. Proceed to **step 6**.
 - To re-enter battery reference information, select **Repeat Input** and press **OK**. Repeat **steps 3 and 4**.
 - To cancel the battery reset process, select **Cancel** and press **OK**.
 6. If battery coding was successful, a “confirmation” screen displays. Choose  **Back** to return to the Workshop Tools screen.
 - If battery coding was not successful, an “advisory” screen display. Choose **Exit** to return to the Workshop Tools screen.



STEERING ANGLE SENSOR (SAS) CALIBRATION

The Steering Angle Sensor Calibration function is available for BMW, Chrysler, Ford, GM, Honda, Hyundai, Mitsubishi, Nissan, Subaru, Toyota, Volkswagen, and Volvo vehicles only. Calibration procedures vary between vehicle makes and models.



NOTE: If an error occurs while performing calibration procedures, an “advisory” message display. Choose **Exit** to return to the Workshop Tools screen.

1. Select **Steering Angle Sensor Calibration** in the Workshop Tools screen, then press **OK**.
 - For some vehicles, a sub-menu displays. Select the desired option, then press **OK**. Proceed to **step 2**.
- 

NOTE: If SAS calibration is not supported by the vehicle under test, an “advisory” message display. Choose  **Back** to return to the Workshop Tools screen.
2. A “One moment please...” message displays, followed by one or more “informational/ instructional” screens.
 - Perform test procedures as directed. Choose **Next**, as appropriate, to scroll to the next screen.
 3. For some vehicles, “status” screens display as each phase of the calibration procedure is successfully completed. Choose **Next**, as appropriate, to scroll to the next screen.
 - A “results” screen displays when the calibration procedure has completed.
 4. Choose  **Back** to return to the Workshop Tools screen.

ELECTRONIC PARKING BRAKE (EPB) RESET

EPB Reset procedures vary between vehicle makes and models.



NOTE: If an error occurs while performing calibration procedures, an “advisory” message display. Choose **Exit** to return to the Workshop Tools screen.

1. Select **EPB Reset** in the Workshop Tool screen, then press **OK**.
 - A “One moment please...” message displays.
 - For some vehicles, one or more sub-menus display. Select the desired module and/or option, as appropriate, then press **OK**. Proceed to **step 2**.



NOTE: If EPB reset is not supported by the vehicle under test, an “advisory” message displays. Choose **↩ Back** to return to the Workshop Tools screen.

2. One or more “informational/instructional” screens display.
 - Perform test procedures as directed. Choose **Next**, as appropriate, to scroll to the next screen.
3. For some vehicles, “status” screens display as each phase of the calibration procedure is successfully completed. Choose **Next**, as appropriate, to scroll to the next screen.
 - A “One moment please...” message displays while the procedure is in process.
 - A “results” screen displays when the calibration procedure has completed.



NOTE: If the procedure is stopped due to a communication error, an “advisory” message displays. Choose **↩ Back** to return to the Workshop Tools screen.

4. Choose **↩ Back** to return to the Workshop Tools screen.

DPF RESET (Except Chrysler, General Motors, Nissan, and Volkswagen)



NOTE: If the vehicle under test is not a diesel vehicle, an “advisory” message displays. Choose **↩ Back** to return to the Workshop Tools screen.

1. Select **Diesel Particulate Filter Reset** in the Workshop Tools screen, then press **OK**.
 - A “One moment please...” message displays, followed by the DPF Reset Menu.
2. Select **DPF Regeneration Procedure**, then press **OK**.
 - The DPF Regeneration Procedure screen displays.



NOTE: If the vehicle under test does not support DPF Regeneration Procedure, an “informational” screen displays the procedures for “passive” DPF regeneration. Choose **↩ Back** to return to the DPF Reset Menu.

3. Choose **Next** to continue.
 - An “informational” screen displays the procedures for “passive” or “active” DPF regeneration, as applicable. Choose **↩ Back** to return to the DPF Reset Menu.
4. To finish, choose **↩ Back** to return to the DPF Reset Menu, then choose **↩ Back** to return to the Workshop Tools screen.

DPF RESET (Chrysler)

1. Select **Diesel Particulate Filter Reset** in the Workshop Tools screen, then press **OK**.
 - A “One moment please...” message displays, followed by the Diesel Particulate Filter Reset menu.
2. Select the desired option, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed.
3. Choose **Yes** to continue.
 - A series of “status” screens display while the routine is in process.
 - A “confirmation” screen displays when the routine is completed.



NOTE: If the routine does not complete successfully, an “advisory” message display. Choose **Close** to return to the Diesel Particulate Filter Reset menu.

4. Choose **Finish** to return to the Diesel Particulate Filter Reset menu, then choose  **Back** to return to the Workshop Tools screen.

DPF RESET (General Motors)

1. Select **Diesel Particulate Filter Reset** in the Workshop Tools screen, then press **OK**.
 - A “One moment please...” message displays, followed by the Diesel Particulate Filter Reset menu.
2. Select the desired option, then press **OK**.
 - One or more “informational/instructional” screens displays.
3. Choose **Next**, as appropriate, to scroll to the next screen.
 - For some vehicles, a “confirmation” screen display.
4. Select **Reset**, as appropriate.
 - A “confirmation” or “results” screen displays when the routine is completed.



NOTE: If the routine does not complete successfully, an “advisory” message may display. Choose **End** to return to the Diesel Particulate Filter Reset menu.

5. Choose **Exit** to return to the Diesel Particulate Filter Reset menu, then choose  **Back** to return to the Workshop Tools.

DPF RESET (Nissan)

1. Select **Diesel Particulate Filter Reset** in the Workshop Tools screen, then press **OK**.
 - An “instructional” screen displays. Prepare the vehicle for test as directed.
2. Choose **Next** to continue.
 - A “status” screen displays while the routine is in process.

- A “confirmation” screen displays when the routine is completed.



NOTE: If the routine does not complete successfully, an “advisory” message display. Choose **Exit** to return to the Workshop Tools screen.

3. Choose **End** to return to the Workshop Tools screen.

DPF RESET (Volkswagen)

1. Select **Diesel Particulate Filter Reset** in the Workshop Tools screen, then press **OK**.
 - A “One moment please...” message displays, followed by the Diesel Particulate Filter Reset menu.
2. Select the desired option, then press **OK**.
 - A series of “informational/instructional” screens display. Prepare the vehicle for test as directed.



NOTE: If the selected function is not supported by the vehicle under test, an “advisory” message may display. Choose **End** to return to the Diesel Particulate Filter Reset menu.

3. Choose **Next**, **Continue**, or **Start**, as appropriate, to proceed.
 - One or more “status” screens may display while the routine is in process.
 - A “confirmation” or “results” screen displays when the routine is completed.




NOTE: If the routine does not complete successfully, an “advisory” message may display. Choose **End** to return to the Diesel Particulate Filter Reset menu.

4. Choose **End** to return to the Diesel Particulate Filter Reset menu, then choose  **Back** to return to the Workshop Tools.

ABS BLEEDING

The ABS Bleeding function is available for BMW, Chrysler, Ford, GM, Honda, Hyundai/KIA, Mazda, Jaguar/Landover, Mercedes, Mitsubishi, Nissan, Subaru, Toyota, Volkswagen and Volvo. Procedures vary between vehicle makes and models.



NOTE: If an error occurs while performing ABS bleeding procedures, an “advisory” message display. Choose **Exit** or  **Back**, as necessary, to return to the Workshop Tools screen.

1. Select **ABS Bleeding** in the Workshop Tools screen, then press **OK**.
 - A “One moment please...” message may displays.
 - Once complete a sub-menu displays. Select the desired option, then press **OK**. Proceed to **step 2**.
2. One or more “informational/ instructional” screens display.

- Perform test procedures as directed. Choose **Next** or **Continue**, as appropriate, to scroll to the next screen.
- 3. For some vehicles, “status” screens display as each phase of the calibration procedure is successfully completed. Choose **Next** or **Continue**, as appropriate, to scroll to the next screen.
 - A “results” screen displays when the procedure has completed.



NOTE: If the procedure is stopped due to a communication error, an “advisory” message display. Choose **Exit** or **Back**, as necessary, to return to the Workshop Tools screen.

- 4. Choose **Exit** or **Back**, as necessary, to return to the Workshop Tools screen.

EV/HEV/PHEV BATTERY HEALTH

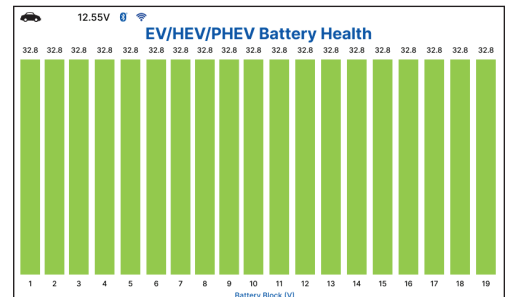
Follow these steps to check the vehicle’s battery and alternator system (or hybrid/EV battery system) to ensure the system is operating within acceptable limits.

- 1. Select **EV/HEV/PHEV Battery Health, Battery/Alternator Test** in the Workshop Tools screen.

- The EV/HEV/PHEV Battery Health, Battery/Alternator Test displays.
- If the vehicle is an electric or hybrid vehicle, the EV/HEV/PHEV Battery Health screen shows a graphic representation of the vehicle’s current state of charge for all battery pack cells.



NOTE: If the Hybrid/EV Battery Test is not supported by the vehicle under test, an “advisory” message displays. Choose **Back** to return to the Workshop Tools screen.



- If the vehicle is not an electric or hybrid vehicle, the Battery/Alternator Test menu displays.
- 2. When you have finished viewing the retrieved information, 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 Check Only

If the **EV/HEV/PHEV Battery Health, Battery/Alternator Test** is selected from the Workshop Tools screen and the vehicle is not an electric or hybrid vehicle, the Battery/Alternator Test menu displays. Proceed to **step 2**.


- 1. Select **Battery/Alternator Test**, then press **OK**.

- 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. Choose **Continue** 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 **OK** to continue.

- An “instructional” message displays.
- 5. Turn the vehicle’s headlights on, then choose **Continue** to proceed.
 - A “countdown” message shows while the battery check is in process.
- 6. Turn the vehicle’s headlights off, then choose **Continue** to proceed.
 - An “instructional” message is displayed.
 - If battery voltage is less than 12.1 volts, an advisory message shows. Choose  **Home** to return to the Home Screen. 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. Allow the engine to run for several seconds, then turn the engine off. Repeat for a total of **three** “start/stop” cycles.




NOTE: If the Tablet did not detect “cranking status” for the vehicle’s engine, an advisory message shows. 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.

View Battery Live Data


If the **EV/HEV/PHEV Battery Health, Battery/Alternator Test** is selected from the Workshop Tools screen and

the vehicle is not an electric or hybrid vehicle, the Battery/Alternator Monitor menu displays. Proceed to **step 2**.

1. Select **Battery/Alternator Test**, then press **OK**.
 - The Battery/Alternator Test menu displays.
2. Select **Battery Live Data (12 Volts)**, then press **OK**.
 - The Battery Live Data (12 Volts) screen displays.
3. When you are finished viewing the Battery Live Data (12 Volts), choose  **Back** to return to the Battery/Alternator Test menu.

Perform a Charging System Check


If the **EV/HEV/PHEV Battery Health, Battery/Alternator Test** is selected from the Workshop Tools screen and the vehicle is not an electric or hybrid vehicle, the Battery/Alternator Monitor menu displays. Proceed to **step 2**.

1. Select **Battery/Alternator Test**, then press **OK**.
 - 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 the headlights. Choose **Continue** to proceed.
 - An “instructional” message show.
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 shows.
 - 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.

View Alternator Live Data


If the **EV/HEV/PHEV Battery Health, Battery/Alternator Test** is selected from the Workshop Tools screen and the vehicle is not an electric or hybrid vehicle, the Battery/Alternator Monitor menu displays. Proceed to **step 2**.

1. Select **Battery/Alternator Test**, then press **OK**.
 - The Battery/Alternator Test menu displays.
2. Select **Alternator Live Data**, then press **OK**.
 - The Alternator Live Data, screen displays.

3. When you've concluded viewing the Alternator Live Data, 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 **OK**.
2. If more than one vehicle is stored in the Tablet's memory, the Vehicle Selection menu displays. Select the desired vehicle, then press **OK**.

- 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 displays. Press  **Home** to return to the Home Screen.

System Menu 1/4	
OBD2 Diagnostic	27 Fault
Scan All Systems	
Vehicle Inspection	
Workshop Tools	
Submit Data	

3. Select **OBD2 Diagnostics**, then press **OK**.
 - 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.
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**. 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 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.

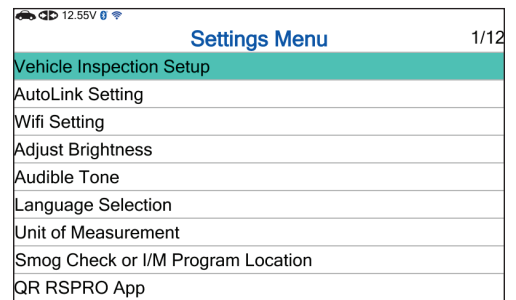
6. Or, select **Vehicle Inspection**, then press **OK**.
 - The Tablet displays the scan type report listing.

- 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 displays.
 - Select **Yes** to exit and return to the Home Screen. Or, select **No** to proceed.

SETTINGS

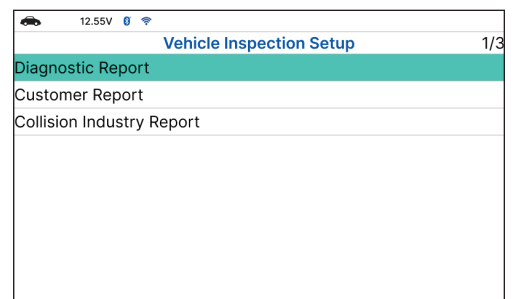
The Tablet lets you make several adjustments and settings to configure it to your particular needs. The following functions can be performed:

- ☐ Vehicle Inspection Setup
- ☐ AutoLink Setting
- ☐ Wifi Setting
- ☐ Adjust Brightness
- ☐ Audible Tone
- ☐ Language Selection
- ☐ Unit of Measurement
- ☐ Smog Check or I/M Program Location
- ☐ QR RSPRO App
- ☐ QR RSPRO App Setting
- ☐ Version Information
- ☐ Update



VEHICLE INSPECTION SETUP

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



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 and not proceed, select **Cancel** to return to the Report Selection screen.

AUTOLINK SETTING

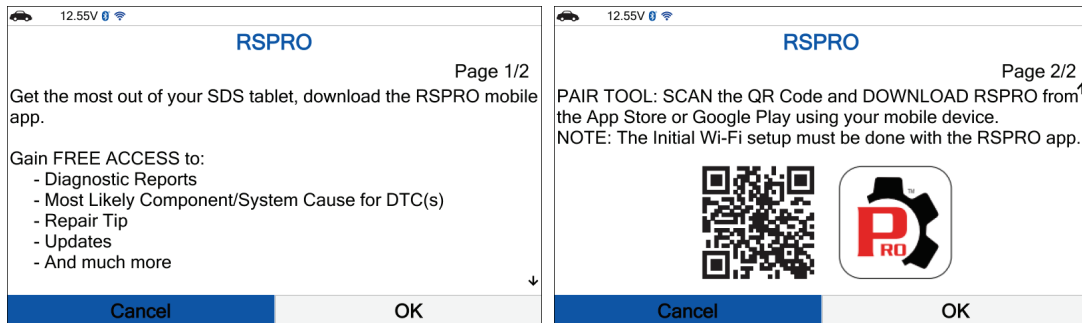
1. Select **AutoLink Setting** in the Settings menu, then press **OK**.
 - The AutoLink Setting screen displays.
2. Select **On** or **Off** as desired.



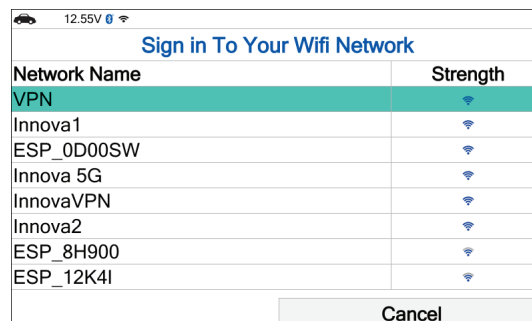
NOTE: To return to the Settings menu without making changes, press the **Back** button.

WI-FI SETTING

1. Select **Wi-Fi Setting** in the Settings menu, then press **OK**.
 - The tablet verifies if it is registered to the RSPRO app. If not, the screen displays the information requesting that the tablet registered to the RSPRO app.



- If the tablet registered with the RSPRO app, the Wi-Fi Setting screen displays.
 - If you are currently connected to a Wi-Fi network, the **Network Name** is shown "Connected" under the **Strength** column; if not, it shows the Wi-Fi icon.
2. To change or connect to a Network, choose the desired network name, then press **OK**.
 - The **Sign in To Your Wi-Fi Network** dialog displays.



3. Enter the Wi-Fi network password using the keyboard. Once the password has been entered, tap the ✓ button to save your changes and complete your connection.



- To select a different network, press **Back** to cancel your changes and return to the **Sign in To Your Wi-Fi Network** dialog screen.

ADJUSTING DISPLAY BRIGHTNESS

1. Select **Adjust Brightness** in the Settings menu, then press **OK**.
 - 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 **OK**.
 - 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 **OK**.
 - The Language Selection screen displays.
2. Select the desired display language (English, Spanish, French), the tablet will automatically save your changes.



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 **OK**.
 - The Unit of Measurement screen displays.
2. Select the desired unit of measurement (Standard or Metric), the tablet will automatically save your changes.



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

SMOG CHECK OR I/M PROGRAM LOCATION

1. Select **Smog Check or I/M Program Location** in the Settings menu, then press **OK**.
 - The Smog Check or I/M Program Location displays.
2. Select the desired U.S. state.

VIEWING THE APP QR CODE - RepairSolutionsPRO™

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

SETTING THE QR RepairSolutionsPRO APP MODE

1. Select **QR RSPRO App Setting** in the Settings menu, then press **OK**.
 - The QR RSPRO 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 **OK**.
 - The Version Information screen displays.
 - The screen shows the tablet's **Tool ID**, **GUID**, current **Firmware** version, **Bootloader** version and database version for the specific **Make**.
2. Press **Back** to return to the Settings menu.

Version Information		1/26
Tool ID	0x02D6	
GUID	00000-0000-000000-00000000	
Firmware	V22.xx.xx	
Bootloader	V01.xx.xx	
BMW/ Mini	V22.xx.xx/ V22.xx.xx	
Chrysler/ Dodge/ Jeep Ram/ FCA/...	V22.xx.xx/ V22.xx.xx/ V22.xx.xx/ ...	
Ford/ Lincoln/ Mercury	V22.xx.xx/ V22.xx.xx	

UPDATING THE TABLET

1. Select **Update** in the Settings menu, then press **OK**.
 - Verify that the tablet is connect to a Wi-Fi Network.
 - If the tablet is not connected to a Wi-Fi network, an alert message displays “Please connect to Wi-Fi to continue”. Select **Cancel**, then press **OK** to return to Settings menu or select **Connect Wi-Fi** to connect a Wi-Fi network [[See page 63](#)].
 - If the Tablet fails to establish communication, the screen displays a notice. Select **Cancel**, then press **OK** to return to Settings menu or select **Try Again**, then press **OK** to try to reconnect.
2. A “One moment please...” message displays while the update function is in progress.
 - If an Update is not available, an advisory message displays. Select **Close**, then press **OK** to return to the Settings menu.
3. The screen displays the current firmware version and the most recent database version for the specific make.
 - Select or unselect any available updates as desired.

Update 1/7		
Current Version	Update	
Select All		<input type="checkbox"/>
Firmware: V22.00.79	V22.00.80	<input type="checkbox"/>
BMW/ Mini : V22.00.01/ V22.00.01	V22.00.09	<input type="checkbox"/>
Chrysler/ Dodge/ Jeep Ram/ FCA/... : V22.00.01/ V22.00.01/	V22.02.07	<input type="checkbox"/>
Ford/ Lincoln/ Mercury: V22.00.01/ V22.00.01/ ...	V22.02.07	<input type="checkbox"/>
Buick/ Cadillac/ Chevrolet: V22.00.01/ V22.00.01/ ...	V22.02.07	<input type="checkbox"/>
Cancel		Done

- If you want to update all available versions, check the Select All box.




NOTE: The check-box is only available for database that has an update. If an update is not available, the check-box will be dim and unavailable to select.

4. Select **Done**, then press **OK** to perform the update. Select **Cancel** if you want to exit update.



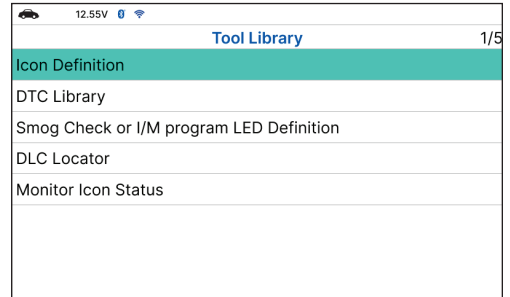
NOTE: Avoid any power or Wi-Fi interruptions during the update process. Make sure the tablet is plugged in with the provided power supply charger and the tablet has a good Wi-Fi connection.

5. Once the update process is completed, select **Close** to return to Settings menu, or press the  **Home** button to return to Home Screen.

TOOL LIBRARY

Tool Library contains valuable reference information for the 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.
- **DTC Library** – Provides access to libraries of OBD2 DTC definitions.
- **Smog Check or I/M Program LED Definition** - Provides descriptions of the meaning of the Tablet SYSTEM STATUS LEDs.
- **DLC Locator** - Use this search function to quickly find the location of the Data Link Connector (DLC) for a specified vehicle.
- **Monitor Icon Status** - Defines the icon monitor status' color coding and provides tips on how to proceed.



ICON DEFINITION

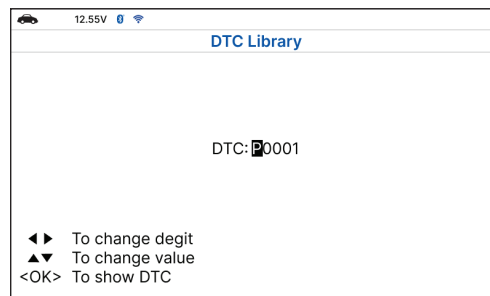
1. Select **Icon Definition** in the Tool Library menu, then press **OK**.
 - The Icon Definition displays.
2. Select the type of icons you wish to view – **Spark Ignition Monitors**, **Compression Ignition Monitors**, or **Tool Icons**, then press **OK**.
 - The screen shows a list of Monitor for the 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.

DTC LIBRARY

1. From the Tool Library menu, select **DTC Library**, then press **OK**.
 - The Select Library screen displays.
2. Select **OBD2 Library**, then press **OK**.
 - The Select Manufacturer screen displays.
3. Select the desired **vehicle manufacturer**, then press **OK**.
 - A confirmation message shows.
 - If the correct manufacturer is not shown, choose **No** to return to the list of vehicle manufacturers.
 - If the correct manufacturer is shown, choose **Yes**.

4. The Enter DTC screen displays.

- The screen shows the code “P0001,” with the “P” highlighted. Press **▲ Up / ▼ Down**, as necessary, to scroll to the desired DTC type (**P**=Powertrain, **U**=Network, **B**=Body, **C**=Chassis), then choose **Next Digit**.
- The selected character displays solid, and the next character is highlighted.

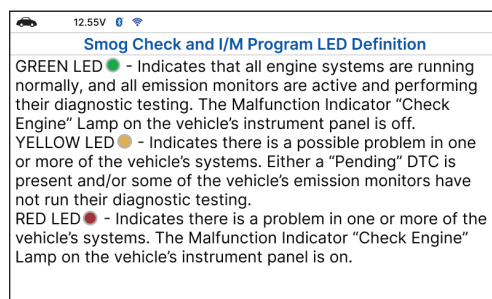
5. Select the remaining digits in the DTC in the same way. When you have selected all the DTC digits, press **OK** to view the DTC definition.6. When you have finished viewing the DTC definition, choose **↩ Back**, to return to the Enter DTC screen to search for additional DTCs.

NOTE: If a definition for the DTC you entered is not available, an advisory message show. Choose **↩ Back** to return to the Enter DTC screen and enter additional DTCs.

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 **OK**.

- 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.

USING THE DLC LOCATOR

1. Select **DLC Locator** in the Tool Library menu, then press **OK**.

- The Select Vehicle Model Year screen displays.

2. Select the desired **vehicle model year**, then press **OK**.

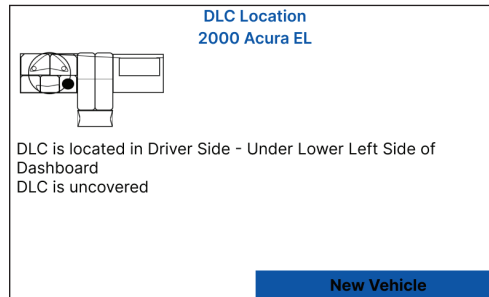
- The Select Vehicle Manufacturer screen displays.

3. Select the desired **vehicle manufacturer**, then press **OK**.

- The Select Vehicle Model screen displays.

4. Select the desired **model**, then press **OK**.

- The DLC Location screen for the selected vehicle displays.



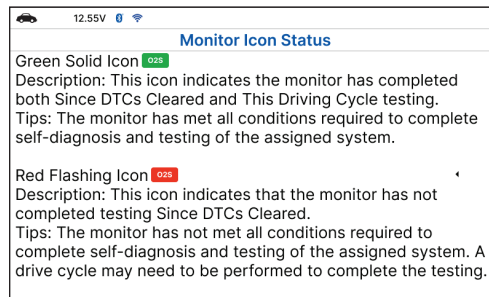
- The DLC Location screen shows the selected vehicle make and model, a description of the DLC location and whether the DLC is “covered” or “uncovered,” and includes a picture of the DLC location.
5. When you have finished viewing the DLC location, choose **New Vehicle** (to view the DLC location for another vehicle) or choose **Back** to return to the Tool Library menu.

ICON MONITOR 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 **OK**.

- 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
 - **SRS** = Safety Restraint System
 - **TPMS** = Tire Pressure Monitoring System
 - **TSBs** = Technical Service Bulletins
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