

# SWOBD6 **OBDII Premium Reader**

# **User Manual**



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## **1.** Safety Precautions and Warnings

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

Always perform automotive testing in a safe environment.

Do not attempt to operate or observe the tool while driving a vehicle. Operating or observing the tool will cause driver distraction and could cause a fatal accident.

Wear safety eye protection.

Keep clothing,hair,hands,tools,test equipment,etc. Away from all moving or hot engine parts.

Operate the vehicle in a well-ventilated work area: Exhaust gases are poisonous. Put blocks in front of the drive wheels and never leave the vehicle Unattended while running tests.

Use extreme caution when working around 1iie ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.

Put the transmission in P(for A/T)or N(for M/T) and make sure the parking brake is engaged.

Keep a fire extinguisher suitable for gasoline/ chemical/electrical fires nearby. Don't connect or disconnect any test equipment while the ignition is on or the engine is running.

Keep the scan tool dry,clean,free from oil/ water or grease. Use a mild detergent on a clean cloth to clean the outside of the scan tool when necessary.

## **2.** General Information

#### 2.1 On-Board Diagnostics (OBD) II

The OBD II system is designed to monitor emission control systems and Key engine components by performing either continuous or periodic Tests of specific components and vehicle conditions. When a problem is detected, the OBD II system turns on a warning lamp(MIL)on the Vehicle instrument panel to alert the driver typically by the phrase Of "Check Engine" or "Service Engine Soon". The system will also Store important information about the detected malfunction so follow Three pieces of such valuable information.

 Whether the Malfunction Indicator Light (MIL) is commanded "on" Or "off"
 Which, if any, Diagnostic Trouble Codes (DTCs) are stored;
 Readiness Monitor Status.

#### 2.2 Diagnostic Trouble Codes (DTCs)

OBD n Diagnostic Trouble Codes are codes that are stored by the On-Board computer diagnostic system in response to a problem found In the vehicle. These codes identify a particular problem area and Are intended to provide you with a guide as to where a fault might Be occurring within a vehicle.OBD n Diagnostic Trouble Codes Consists of a fivedigit alphanumeric code. The first character, a Letter, identifies which control system sets the code. The other Four characters, all numbers, provide additional information on Where the DTC originated and the operating conditions that caused It to set. Here below is an example to illustrate the structure of the digits.



#### 2.3 Location of the Data Link Connector (DLC)

The DLC(Data Link Connector or Diagnostic Link Connector) is the Standardized 16-cavity connector where diagnostic scan tools interface With the vehicle's side for most vehicles. If Data Link Connector is not Located under dashboard, a label should be there telling location. For Some Asian and European vehicles, the DLC is located behind the ashtray And the ashtray must be removed to access the connector. If the DLC cannot Be found, refer to the vehicle service manual for the location.



#### 2.4 OBDII Readiness Monitors

An important part of a vehicle's OBDII system is the Readiness Monitors, which are indicators used to find out if all of the emissions components have been evaluated by the OBD II system They are running periodic tests on specific systems and components to ensure that they are performing within allowable limits. Currently, there are eleven OBD II Readiness Monitors (or I/M Monitors). Not all monitors in any vehicle depends on the motor vehicle manufacturer emissions control strategy.

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

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

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

**Non-Continuous Monitors** —Unlike the continuous monitors, many emissions and engine system components require the vehicle to be operated under specific conditions before the monitor is read.

These monitors are termed non-continuous monitors. For different ignition type engines the available monitors are different too. Once the vehicle is running the OBD II system is continuously checking the above components, monitoring key engine sensors, watching for engine misfire, and monitoring fuel demands.

Non-Continuous Monitors —Unlike the continuous monitors, many emissions and engine system components require the vehicle to be operated under specific conditions before the monitor is read. These monitors are termed non-continuous monitors. For different ignition type engines the available monitors are different too.

The following monitors are to be used for spark ignition (Petrol) engines only:
1) EGR System
2) 02 Sensors
3) Catalyst
4) Evaporative System
5) 02 Sensor Heater Q Secondary air
7) Heated Catalyst

The following monitors are to be used for compression ignition (Diesel) engines only:
1) EGR System
2) NMHC Catalyst
3) NOX after treatment
4) Boost pressure system
5) Exhaust gas sensor
6) PM filter

## 2.5 OBDII Monitor Readiness Status

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

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

In order for the OBD monitor system to become ready, the vehicle should be driven under variety of normal operating conditions . These operating conditions may include a mix of highway driving and stop and go, city type driving and at least one overnight-off period. For specific information on getting your vehicle's OBD monitor system ready, please consult your vehicle owner's manual.

#### 2.6 OBD II Definitions

Power-train Control Module (PCM) - OBD n terminology for the on-board Computer that controls engine and drive train.

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

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

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

OBD Drive Cycle — A specific mode of vehicle operation that provides conditions required set all the readiness monitors completing and OBD II drive cycle is to force the vehicle to run its onboard diagnostics. Some from the PCM's memory or after the battery has been disconnected Running through a vehicle's complete drive cycle will "set" the readiness monitors so that future faults can be detected Drive cycles vary depending on the vehicle and the monitor that needs to be reset For vehicle specific drive cycle, consult the vehicle's Owner's Manual.

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

#### 2.7 OBD II Modes of Operation

Here is a basic introduction to the OBD n communication protocols Mode byte : The first byte in the stream is the mode number. There are 10 modes for diagnostic requests . The first byte in the response data bytes is this same number plus 64. For example, a mode 1 request would have the first data byte =1, and the response would have the first data byte=65.

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

Mode \$02 - Displays Freeze Frame data. Same data as in mode 1, but it was captured 4. \$04 High sensor voltage threshold for and stored when a malfunction occurred and a DTC was set. Some of the PIDs for mode one are not implemented in this mode.

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

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

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

There are ten numbers available for diagnostics:

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

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

Mode \$07 - Request for DTCs (pending) from Continuously Monitored Systems after a single driving cycle has been performed to determine if repair has fixed a problem. This is used by service technicians to verify repair was performed properly and after clearing diagnostic trouble codes.

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

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

**Mode \$0A -** Request Emission-Related Diagnostic Trouble Code with Permanent Status. This presence of permanent DTCs at an inspection without the MIL illuminated is an indication that a proper repair was not verified by the on-board monitoring system.

## **3. Using The Scan Tool**



1. OBD II Connector

2. LCD Display

- 3. Green LED
- 4. Yellow LED
- 5. Red LED
- 6. One Click 1/M Readiness
- 7. ESC Button
- 8. Enter Button
- 9. Up Scroll Button
- **10. Down Scroll Button**
- 11. USB Connector

#### **1. OBD II Connector**

Connects the scan tool to the vehicle's data link connector (DLC).

2. LCD Display Displays menus and test results.

## 3. Green LED

Indicates that engine systems are running normally (The number of monitors on the vehicle which are active and performing their diagnostic testing is in the allowed limit and no DTCs are present).

## 4. Yellow LED

Indicates there is a possible problem. A "pending" DTC is present and/or some of (he vehicle's emission monitors have not run their diagnostic testing.

#### 5. Red LED

Indicates there is a problem in one or more of the vehicle's systems. The red LED is also used to show that DTCs are present., DTCs arc shown on the Scan Tool's emission monitors have not run their diagnostic testing.

- 6. One Click 1/M Readiness Button Checks State emissions readiness and drive cycle verification.
- **7. ESC Button** Returns to previous menu.
- 8. Enter Button

Confirms a selection (or action) from a menu list.

# 9. Up Scroll Button

Move cursor up for selection.

10. Down Scroll Button

Move cursor down for selection.

## **11. USB Connector**

Connects the scan tool to the PC for printing and upgrading.

## **3.2 Specifications**

- 1) Display: TFT color display (320 x 240 dpi)
- 2) Operating Temperature: 0 to 60°C (32 to  $140 \text{ F}^{\circ}$ )
- 3) Storage Temperature: -20 to 70°C (-4 to 158  $F^\circ$  )
- 4) External Power : 8.0 to 18.0V power provided via vehicle battery
- 5) Dimensions: Length: 124mm(4. 88 ^ ), Width: 70mm (2. 76" ) Height: 20nun(0. 79")
- 6) NW : 0. 21kg(0.46 lb)GW:0.29kg(0.64 lb)

## **3.3 Accessories Included**

- 1) User' s Manual Instructions on tool operations.
- 2) **OBDII cable** Provides power to tool and communicates between tool and vehicle.
- **3) USB cable -** Used to upgrade the scan tool, and to print retrieved data.
- 4) Protective Nylon case A nylon case to store the tool when not in use.

## **3.4 Navigation Characters**

Characters used navigate the scan tool are: Identifies the control module number from which data is retrieved Indicates the Test ID in On-Board Mon.Test.

## 3.5 Keyboard

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

## 3.6 Power

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

1) Connect the OBDII Cable to scan tool.

- 2) Find DLC on vehicle. A plastic DLC cover may be found for some vehicles and you need to remove it before plugging the OBDII cable.
- **3**) plug OBD II cable to the vehicle's DLC.

## 3.7 Tool Setup

Use the UP/DOWN scroll button to Select [Tool Setup] in the Main Menu and press OK, The screen will display the interface as shown below:

Tool Setup
Language
Unit of Measure
Веер
Device Self-Test

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

1) Select language: Selects desired language press UP/DOWN key to Choose [Language] and press OK button, the screen will display the interface as shown on the next page.

	Tool Setup
Español	
Deutsch	
English	
Français	
РусскЙЙ	
taliano	
Dutch	
Português	

You can press UP/DOWN key to select any language and press OK button to confirm. The system will convert to the chosen language interface at once.

2) Unit of Measure: Measurement unit setting. Press UP/DOWN key to Choose [Unit

of Measure] and press OK button, the screen will display the interface as shown.

Flow	g/s
Speed	km/h
Distance	km
Pressure 1	kPa
Pressure 2	kPa
Pressure 3	kPa
Pressure 4	Pa
Temperature	D°

You can press UP/DOWN key to select any option and press OK button to convert, Press ESC key to return.

**3) Beep:** ON/OFF the Beeper. Press UP/ DOWN key to Choose [Beep] and press OK button, the screen will display the interface as shown below:

## ON

You can press OK button to cover ON or OFF , Press ESC key to return.

**4) Device Self-Test:** LED Keyboard, LCD display detection. Press UP/DOWN key to Choose [Device Self-Test] and press OK button, the screen will display the interface as shown below:

## Device Self-Test

Screen Test Key test LED test

## A. Screen Test

The Screen Test function checks if the LCD display is working normally.

- 1) From Tool Setup screen, use the UP/ DOWN scroll button to select Tool Self-Test, and press the OK button.
- 2) Select Screen Test from Tool Self-Test menu and press the OK button to start test. Press ESC key to return.
- 3) Look for missing spots in the colour bar, white , black LCD display.
- 4) When completed, press the ESC button to exit.

## B. Key Test

The Key Test function verifies if the keys are functioning properly.

- 1) Use the UP/DOWN scroll button to select Key Test from the Tool Self-Test menu, and then press the OK button.
- 2) Press any key to start test When you press a key, the key name should be observed on the display. If the key name does not show up, then the key is not functioning properly.

	Test Key	/
Exit	Up	Enter
Down	I/M	

## C. LED Test

The LED Test Function verifies if the 1/M Readiness LED indicator lamps are functioning properly.

- 1) When completed. Press any key to exit the menu.
- 2) Double press ESC to return to previous menu.

## 3.8 Vehicle Coverage

The scan tool is specially designed to work with all OBD compliant vehicles, including control area network (CAN), it is required by EPA that all 1996 and newer vehicles (Cars and light trucks) sold in the united states must be OBD n compliant and this includes all american, asian and European vehicles.

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

For the vehicle to be OBD compliant it must have a 16-pin DLC (Data Link Connector) under the dash and the vehicle emission control information label must state that the vehicle is OBD II compliant.

## 4. Operation

- 1) Turn the ignition off.
- 2) Locate the vehicle's 16-pin Data Link Connector (DLC).
- 3) Plug the OBD II cable into the vehicle's DLC.
- 4) Turn on the ignition and engine fully.
- 5) After finishing, press ESC button enter Main Menu as following.

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



#### 4.1 Diagnostic

Use UP/DOWN button to select [Diagnostic] in Main Menu and press OK button the screen will display Monitor Status interface as following:

Monitor Status	
L Status	OFF
DTCs in this ECU	0
Datastream Supported	114
Ignition	Spark

Press ESC button to back to the Main Menu of Diagnostic, the screen will display as following:

Diagnostic Menu
Read Codes
Erase Codes
I/M Readiness
Data Stream
Freeze Frame
o2 Sensor Test
On-Board Monitoring
Evap System(mode \$ 8)

## 4.1.1 Read Codes

Select [Read Codes] and press OK button in Diagnostic Menu If there are some codes, the screen will display the codes as shown below:

Read Codes Current DTCs ( \$ 03) Pending DTCs ( \$ 07) Permanent DTCs ( \$ 0A) Record DTC

According to the above Figure to select different item by pressing UP or DOWN and press OK to confirm. Then You can user DOWN key to view the next code. After viewing all the codes, you can press ESC to return to the Diagnostic Menu.

Current DTC		
P0010	1/11	
A Camshaft Position Bank 1	on Actuator Circuit / Open	

# Current DTCs: Pending DTCs:

Pending DTCs are also referred to as "maturing codes" or "continuous monitor codes". They indicate problems that the control module has detected during the current or last driving cycle but are not considered serious yet.

Pending codes will not turn on the malfunction indicator light (MIL). If the fault does not occur within a certain number of warm-up cycles, the code clear from memory.

**3) Permanent DTCs:** Permanent DTCs are codes that are "confirmed" and are retained in the non-volatile memory of the computer until the appropriate monitor for each codes has determined that the malfunction is no longer present and is not commanding the MIL on. Permanent codes shall be stored in non-volatile memory and may not be erased by any diagnostic services or by disconnecting power to ECU.

4) **Record DTC:** Record DTC are also known as "hard codes ", which are fault codes , or trouble codes that have been stored in the vehicle computer memory because the faults have reoccurred of more than a specified amount of key-cycles. These codes will cause the control module to illuminate the malfunction indicator light (MIL) when emission-related fault occurs.

## 4.1.2 Erase Codes

Select [Erase Codes], the screen will display the interface as shown above.

## Erase DTC

Clear/Reset Emission-Related Diagnostic Information, Are You sure?

Press OK to erase DTC'S, and the screen will display the interface as shown below:

## Erase DTC

Please Turn Ignition ON With Engine Off,Press enter key to continue

According to the above figure to press OK button and the screen will display the interface as shown.

## Erase DTC

Emission-Related Diagnostic Information has been Cleared!

#### Notes:

• Before performing this function make sure to retrieve and record the trouble codes.

• After clearing, you should retrieve trouble codes once more or turn ignition on and retrieve codes again. If there are still some trouble codes in the system, please troubleshoot the code using a factory diagnosis guide, then clear the code and recheck.

## 4.1.3 I/M Readiness

I/M refers to Inspection and Maintenance that is legislated by the Government to meet federal clean air standards I/M Readiness indicates whether or not the various emissions-related systems on the vehicle are operating properly and are ready for inspection and Maintenance testing.

The purpose of the I/M Readiness Monitor Status is to indicate which of the vehicle's monitors have run and completed their diagnosis and testing (as described in chapter 2.5), and which ones have not yet run and completed testing and diagnosis of their designated sections of the vehicle's emissions system. The I/M Readiness Monitor Status function also can be used (after repair of a fault has been performed) to confirm that the repair has been performed correctly, and/or to check for Monitor Run Status.

Select [I/M Readiness] and press OK button ^ the screen will display the interface as shown below:

## I/M Readiness Since DTCs Were Cleared This Drive Cycle

You can use UP/DOWN button to select and press OK button, the screen will display the interface as shown below:

I/M Readinese				
MIL	-	IGM	Spark	
DTC	0	Pd DTC	15	
MIS	<b>~</b>	EVAP	*	
FUE	~	AIR	×	
ССМ	✓	O2S	×	
CAT	×	HRT	×	
HCAT	$\oslash$	EGR	*	

Press ESC to return to Diagnostic Menu. N/A means not available on this vehicle, INC means incomplete or not ready, OK means Completed or Monitor OK.

## 4.1.4 Data Stream

Press UP or DOWN button to select Data Stream in Main Menu interface and then press OK button to confirm, the screen will display the interface as shown below:

## Data stream View All Items Select Items View Graphic Items Record All Record Select

Select [View All Items] and press OK button, the screen will display the interface as shown below:

Datastream	1/41
Fuel system 1 status	
	CL
Fuel system 2 status	
	CL

You can use UP/DOWN button to view other data streams. Press ESC to return to Diagnostic Menu.

Select [Select Items] in Data stream menu and press OK ,the screen will display the interface as shown on the next page.



1/41

Datastream

Fuel system 1 status

Select [View Graphic Items] in Data stream menu and press ESC, the screen will display the interface as shown.

Datast	1/37	
	Calculated LOAD Value	
[]		
[]	Engine Coolant Temperature	

You can use UP/DOWN button to select single data stream items to view of live data with a graph, and press ESC button, the screen will display the interface as shown.

Data Stream	
max 0.0	
min 0.0	
LOAD-PCT=0.0%	

Press ESC to return to Diagnostic Menu. You can view all data stream items or select a certain item of live data with a graph.

## 4.1.5 Freeze Frame

When and emission-related fault occurs, certain vehicle conditions are recorded by the on-board computer. This information is referred to as freeze frame data. Freeze Data is a snapshot of the operating conditions at time of an emission-related fault. Note: if DTCs were erased, Freeze Data may not be stored in vehicle memory depending on vehicle.

Select [Freeze Frame] in main menu interface, the screen will display the interface as shown.

Freeze	1/4
DTC that caused required freeze frame data storage	
	P0082
Calculated LOAD Value	
	50.6%

You can use UP/DOWN button to view the data. Press ESC to return to Diagnostic Menu.

## 4.1.6 O2 Sensor Test

The results of O2 sensor test are not live values but instead the results of the ECU 's last O2 sensor test. For live O2 sensor readings, refer to any of the live sensor screens such as Graph Screen. Not all test values are applicable to all vehicles. Therefore, the list generated will vary depending on vehicle. In addition, not all vehicles support the Oxygen Sensors screen. For results of latest mandated on-board oxygen sensor monitoring test.



Select [O2 Sensor Test] in Diagnostic Menu and press OK and the screen will display.

Select O2 S	Sensor
Bank1-Sensor1	
Bank1-Sensor2	

Press OK button, the screen will display as shown below.

Bank1- Sensor1			
Rich to lean sensor(V)			
Low sensor voitage			
Rich to lean sensor time			

You can use UP/DOWN button to select an item and press OK , the screen will display as shown below.

# Rich to lean sensor (V) Test ID \$01 Test Value 3.9987V

Press ESC to return to Diagnostic Menu.

## 4.1.7 On-board monitoring

This function can be utilized to read the results of on-board diagnostic monitoring tests for specific components/systems.

Select [On-board Monitoring] in main menu and press OK and the screen will display as shown.

## On-Board Monitoring

Catalyst Monitor B1 sensor Heater B1-S1 sensor Heater B1-S2 Heater Catalyst B1

You can use UP/DOWN button to select an item and press OK , the screen will display as shown on the next page:

# Catalyst Monitor B1 Component ID \$ 01 Limit Type Min&Max

Press ESC to return to Diagnostic Menu.

## 4.1.8 Evap System

The EVAP test function lets you initiate a leak test for the vehicle ^ EVAP system. The scan tool does not perform the leak test, but signals to vehicle's on-board computer to initiate the test Before using the system test function, refer to the vehicle's service repair manual to determine the procedures necessary to stop the test.

Select [Evap System ] and press OK,the screen will display there native information about EVAP system. Some vehicle manufacturers do not allow external devices to vehicle system. If the car supports this function, it will display as shown.

## Evap System(mode \$ 8)

Evaporative system leak test passed

## 4.1.9 Vehicle Information

Select [Vehicle Information] and press OK, the screen will display the information, such as VIN (Vehicle identification Number), CID (Calibration ID) and CVN (Calibration verification number), as shown on the next page.

## Vehicle Information

Vehicle Identification 1G1JC5444R7252367

Calibration Identifications CID1: JMB\*36761500 CID2: JMB\*4787261111

Calibration Verification CVN1: 1791BC82 CVN2: 16E062BE

Press ESC to return to Diagnostic Menu.

## 4.2 Code Look up

Select [Code Look up] in the Main Menu and press OK and the screen will display the interface as shown.

## DTC Lookup

Please input DTC:



Press[▲] to change input, Press[▼] to select position, then press[₊i] to confirm. You can use DOWN key to change the first letter. It can be switched among "P", "B", "C" and "U'. Press OK moves the cursor to next And then press UP key to input number. After you input the code number, press OK to view the definition of the code.

#### 4.3 Review

This function is used to review the recorded Data Streams, DTC, and Freeze. Select [Review] in the Main Menu and press OK and the screen will display the interface.

## Review

Review DTC Review Datas tream Review Freeze Frame Delete DTC Data Delete Datastream Delete Freeze Frame

#### 1) Review DTC

Select [Review DTC] in the Review and press OK and screen will display the interface as shown below:

Tool Setup		
Time And Date	DTC num.	DTC type
DTC RECORD 0		
NOT SUPPORT VIN		
DTC RECORD 1	1	Pending
NOT SUPPORT VIN		

The recorded DTC will be displayed as shown in the above table.

You can use UP/DOWN and press OK button to view detailed information.

#### 2) Review Data stream

The operation is similar to the "Review DTC" function.

#### 3) Review Freeze Frame

The operation is similar to the ''Review DTC" function.

#### 4) Delete DTC

Select [Delete DTC] in the Review and press OK and the screen will display the interface as shown below:

## Delete DTC Data

Are you sure to delete the recorded data?

Press OK to confirm, and press ESC to return to Main Menu.

#### 5) Delete Data stream

The operation is similar to the "Delete DTC" function.

#### 6) Delete Freeze Frame

The operation is similar to the "Delete DTC" function.

#### 4.4 Help

This function is used to view tool information, About OBD, and About Data stream.

## Help

Tool Information About OBD About Datastream

Tool Information includes: software version, hardware version, serial number, supported, time and date.

About OBD: Relevant introductions information about OBD.

About Data stream: Relevant introductions information about Data stream.

#### 4.5 BAT Check



## **4.6 LED Interpretation**

1) GREEN LED — Indicates that engine systems are "OK" and operating normally (the number of Monitors supported by the vehicle which have run and performed their self-diagnostic testing is in the allowed limit, MIL is off). There are no stored and pending DTCs. The vehicle is ready for an Emissions Test, and there is a good possibility that it can be certified.

2) YELLOW LED  $\sim$  With MIL off, there may be three possible conditions to cause the yellow LED to light.

**A.** If a ^ Stored55 Diagnostic Trouble Code is causing the Yellow LED to light, it is still possible that the vehicle will be allowed to be tested for emissions and certified.

**B.** If a "Pending" Diagnostic Trouble Code is causing the Yellow LED to light, it is still possible that the vehicle will be allowed to be tested for emissions and certified.

**C.** If the illumination of the Yellow LED is being caused by monitors that have not completed their diagnostic testing, then the issue of the vehicle being ready for an Emissions Test depends on the emissions regulations and laws of your local area.

NOTE: From the code retrieval procedure, determine the status of each Monitor, take this information to an emissions professional to determine (based on your test results) if your vehicle is ready for an Emissions Test.

**3) RED LED** — Indicates there is a problem with one or more of the vehicle's system. A vehicle displaying a red LED is definitely not ready for an Emissions Test. The red LED is also vehicle's instrument panel will light steady. The problem that is causing the red LED to light must be repaired before an Emissions Test can be performed. It is also

## **5. Print Data**

suggested that the vehicle be inspected/ repaired before driving the vehicle further.

**A.** Repair the vehicle yourself. If you are going to perform the repairs yourself, proceed by reading the vehicle service manual and following all its procedures and recommendations.

**B.** Take the vehicle to a professional to have it serviced. The problem(s) causing the red LED to light must be repaired before the vehicle is ready for is ready for an Emissions Test.

#### 4.7 Audio Tone Interpretation

The audio tone is configured according to the I/M readiness Status. This function is invaluable when performing diagnostics and driving at the same time, or working in bright areas where USD illumination alone is not sufficient.

Different audio tone with different LED light indicates different I/M Readiness Status.

LED Light	Audio Tone	Beep Interval
Green LED	Two long beeps	5 seconds
Yellow LED	Short,long,short beep	5 seconds
Red LED	Four short beeps	5 seconds

After you have read the information, press ESC to exit. The other buttons are disabled to prevent misoperation. The Print Data function allows printing out diagnostic data recorded by the scan tool or customized test reports.

- To print out retrieved data, you need the following tools:
- 1. Scan tool
- 2. A PC or laptop with USB ports
- 3. A USB cable

**1**) downloading the applications from www. itoscanner.com.

**2)** Connect the scanner to computer with the USB cable supplied.

**3)** Run uplink.exe in your computer.



**4)** Use the DP/DOWN scroll button to select Print Data from Main Menu in the scan tool, and press the OK button.

## Print Data

Print All Print Data Stream Print Freeze Data Print DTC

5) Use the UP/DOWN scroll button to select the desired item to print from Print Data menu.

• To print all retrieved data, use the UP/ DOWN scroll button to select Print All Data from Print Data menu.

**6)** Press the OK button to upload data to the computer.

7) In the uplink.exe Tool Kit, you could edit .delete, copy and print the data in the text box by selecting the by selecting the icons on the upper right of window.

NOTE: Data stored in a language different from current system settings of the scan tool will not be printable, please adjust language settings before printing. A reminder would pop up under such circumstances.

## 6. Update Mode

This function allows you to update the scan tool software and DTC library through a computer.

To update your scan tool, you need the following items. 1. Scan tool

- 2. A PC or laptop with USB ports
- 3. USB cable

- 1) downloading the applications from www.itoscanner.com.
- 2) Run uplink.exe in your computer (Mac OS does not compatible)
- **3)** Press and hold any button until the USB cable is connected with computer and Release it after the scan tool displays a message "Update Mode".
- Open the uplink software, click\*'Check update" button, will download the upgrade file from internet then update to scan tool.
- 5) Wait for few minutes until update succeed.
- 6) During the update procedure.
- 7) Restart the scan tool to finish the whole update.



NOTE: When you made a wrong choice and the scan tool is unable to work property, you may need to update 1he programs. To hold LEFT scroll button and power on the scan tool, you will enter the update mode forcedly. Then follow the procedure to refresh the program.

# 7. Disclaimer

This OBDI reader only checks faults in relation to the engine light. It does not check faults with airbags or braking system.

# 8. Manufacturer Warranty

This product comes with a 12 month manufacturer warranty which starts on the date of purchase. The warranty covers technical faults during the 12 month period. Any issues caused by accidental damage or wear and tear is not covered by this 12 month manufacturer warranty.

For any warranty queries, please contact the retailer where you purchased the product.



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