

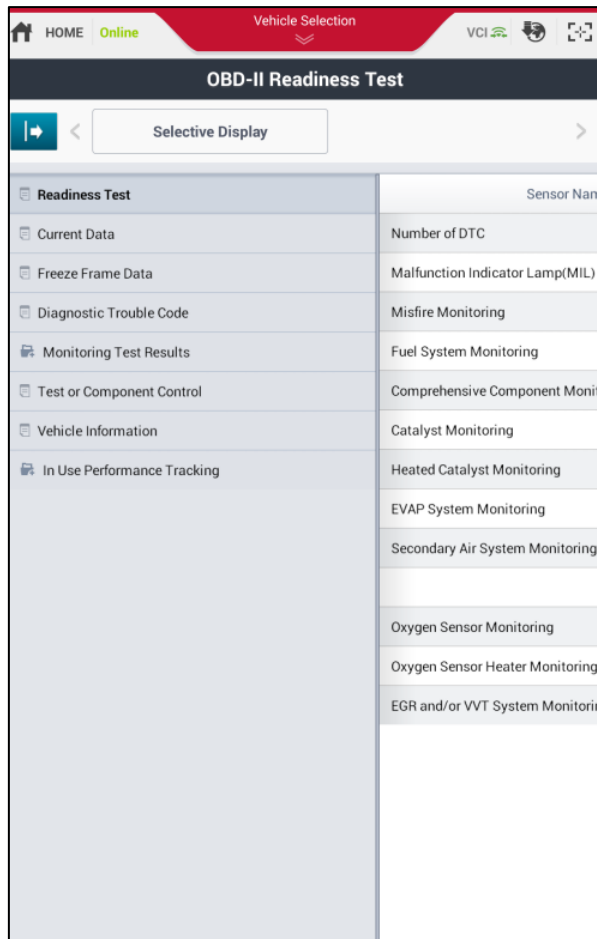
# OBD-II



OBD II mode is used to display generic vehicle powertrain diagnostic data. The vehicle communication protocol is automatically determined when OBD II mode is selected.

## Readiness Test

The System and status of the READINESS TESTS supported for each MODULE within the vehicle will be displayed. The number of DTCs present and the MIL status will also be displayed.



## Current Data

The CURRENT DATA MODE allows for sensor values and status to be displayed, based upon the standard that one component may be supported by several systems. Supporting module information is displayed in this mode.



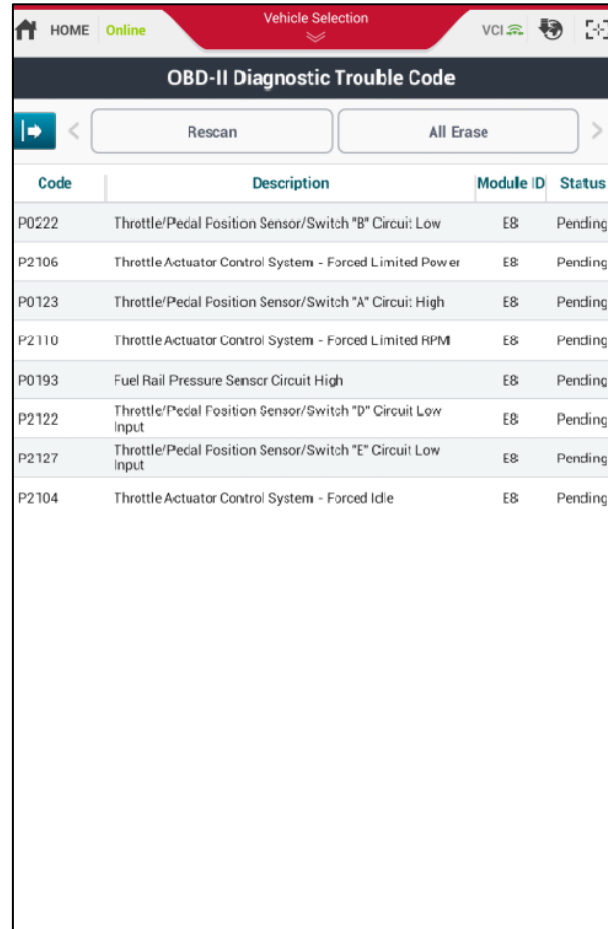
Sensor Name	Module ID	Value	Unit
Fuel System Status-Bank1	E8	OPEN LOOP	-
Fuel System Status-Bank2	E8	-	-
Calculated Load Value	E8	0.0	%
Engine Coolant Temperature Sensor	E8	-40	°C
Short Term Fuel Trim-Bank1	E8	0.0	%
Long Term Fuel Trim-Bank1	E8	0.0	%
Manifold Absolute Pressure Sensor	E8	9	kPa
Engine Speed	E8	0	RPM
Vehicle Speed	E8	0	km/h
Ignition Timing Advance for 1 Cylinder	E8	6	°
Intake Air Temperature Sensor	E8	-40	°C
Absolute Throttle Position Sensor	E8	100.0	%
Oxygen Sensor Location	E8	B1S1	-
Oxygen Sensor-Bank1/Sensor2	E8	420	mV
Short Term Fuel Trim-Bank1/Sensor2	E8	99.2	%
OBD Requirement	E8	OBD II	-
Time Since Engine Start	E8	0	Sec
Distance After MIL On	E8	0	km
Command Evaporative Purge	E8	2.7	%

## Freeze Frame Data

The FREEZE FRAME DATA displays the sensor data stored in the Engine Control Module at the point when the first conformed DTC is detected.

## Diagnostic Trouble Code

This is to read and display the saved DTC(Diagnostic Trouble Code) on the ECU.



Code	Description	Module ID	Status
P0222	Throttle/Pedal Position Sensor/Switch "B" Circuit: Low	E8	Pending
P2106	Throttle Actuator Control System - Forced Limited Power	E8	Pending
P0123	Throttle/Pedal Position Sensor/Switch "A" Circuit: High	E8	Pending
P2110	Throttle Actuator Control System - Forced Limited RPM	E8	Pending
P0193	Fuel Rail Pressure Sensor Circuit High	E8	Pending
P2122	Throttle/Pedal Position Sensor/Switch "D" Circuit Low Input	E8	Pending
P2127	Throttle/Pedal Position Sensor/Switch "E" Circuit Low Input	E8	Pending
P2104	Throttle Actuator Control System - Forced Idle	E8	Pending

## Monitoring Test Result

The results of on board Readiness monitoring tests conducted during normal driving are displayed this mode.

OBD-II Monitoring Test Results		
<input type="button" value="Selective Display"/> <input type="button" value="Graph"/>		
	Sensor Name	Module ID
Current Data	Test ID \$B4	E8
Freeze Frame Data		
Diagnostic Trouble Code		
<b>Monitoring Test Results</b>		
Oxygen Sensor Monitor Bank1 - Sensor1		
Oxygen Sensor Monitor Bank1 - Sensor2		
<b>Catalyst Monitor-Bank1</b>		
VVT Monitor Bank1		
EVAP Monitor (Cap Off)		
EVAP Monitor (0.093)		
EVAP Monitor (0.043)		
EVAP Monitor (0.023)		
Purge Flow Monitor		
Oxygen Sensor Heater Monitor Bank1 - Sensor1		
Oxygen Sensor Heater Monitor Bank1 - Sensor2		
Misfire Monitor General Data		
Misfire Cylinder1 Data		
Misfire Cylinder2 Data		
Misfire Cylinder3 Data		
Misfire Cylinder4 Data		

## Vehicle Information

Vehicle Information
VIN
Calibration ID
ECU :
TCU :
Verification Number
ECU :
TCU :
<input type="button" value="OK"/>

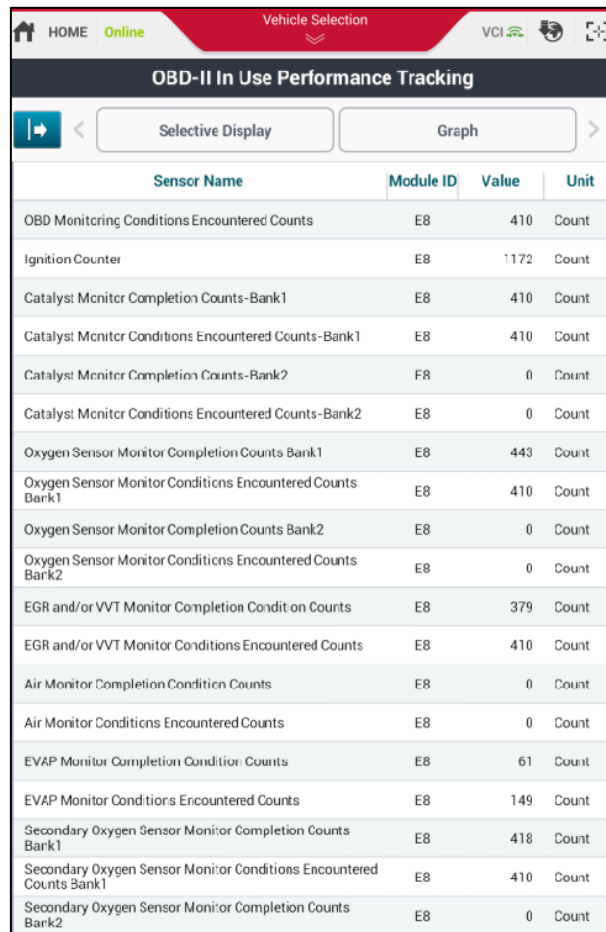
## In-USE Performance Tracking

This data is used to support possible regulatory requirements for In-use Performance Tracking. Manufacturers are required to implement software algorithms that track in-use performance for each of the following component:

- Catalyst bank 1
- Catalyst bank 2
- Primary oxygen sensor bank 1
- Primary oxygen sensor bank 2
- Evaporative 0.020" leak detecting system
- EGR system
- Secondary air system

The parameters for each component or system shall record the number of times that all conditions necessary for a specific monitor to detect a malfunction have been met the values for each component or system shall track the number of times that the vehicle has been operated in the specified conditions. These conditions are specified for each monitored component or system.

The ignition counter shall track the number of times that the engine has been started. All data items of the In-use Performance Tracking record have to be reported in the order as shown.



Sensor Name	Module ID	Value	Unit
OBD Monitoring Conditions Encountered Counts	E8	410	Count
Ignition Counter	E8	1172	Count
Catalyst Monitor Completion Counts-Bank1	E8	410	Count
Catalyst Monitor Conditions Encountered Counts-Bank1	E8	410	Count
Catalyst Monitor Completion Counts-Bank2	E8	0	Count
Catalyst Monitor Conditions Encountered Counts-Bank2	E8	0	Count
Oxygen Sensor Monitor Completion Counts Bank1	E8	443	Count
Oxygen Sensor Monitor Conditions Encountered Counts Bank1	E8	410	Count
Oxygen Sensor Monitor Completion Counts Bank2	E8	0	Count
Oxygen Sensor Monitor Conditions Encountered Counts Bank2	E8	0	Count
EGR and/or VVT Monitor Completion Condition Counts	E8	379	Count
EGR and/or VVT Monitor Conditions Encountered Counts	E8	410	Count
Air Monitor Completion Condition Counts	E8	0	Count
Air Monitor Conditions Encountered Counts	E8	0	Count
EVAP Monitor Completion Condition Counts	E8	61	Count
EVAP Monitor Conditions Encountered Counts	E8	149	Count
Secondary Oxygen Sensor Monitor Completion Counts Bank1	E8	418	Count
Secondary Oxygen Sensor Monitor Conditions Encountered Counts Bank1	E8	410	Count
Secondary Oxygen Sensor Monitor Completion Counts Bank2	E8	0	Count