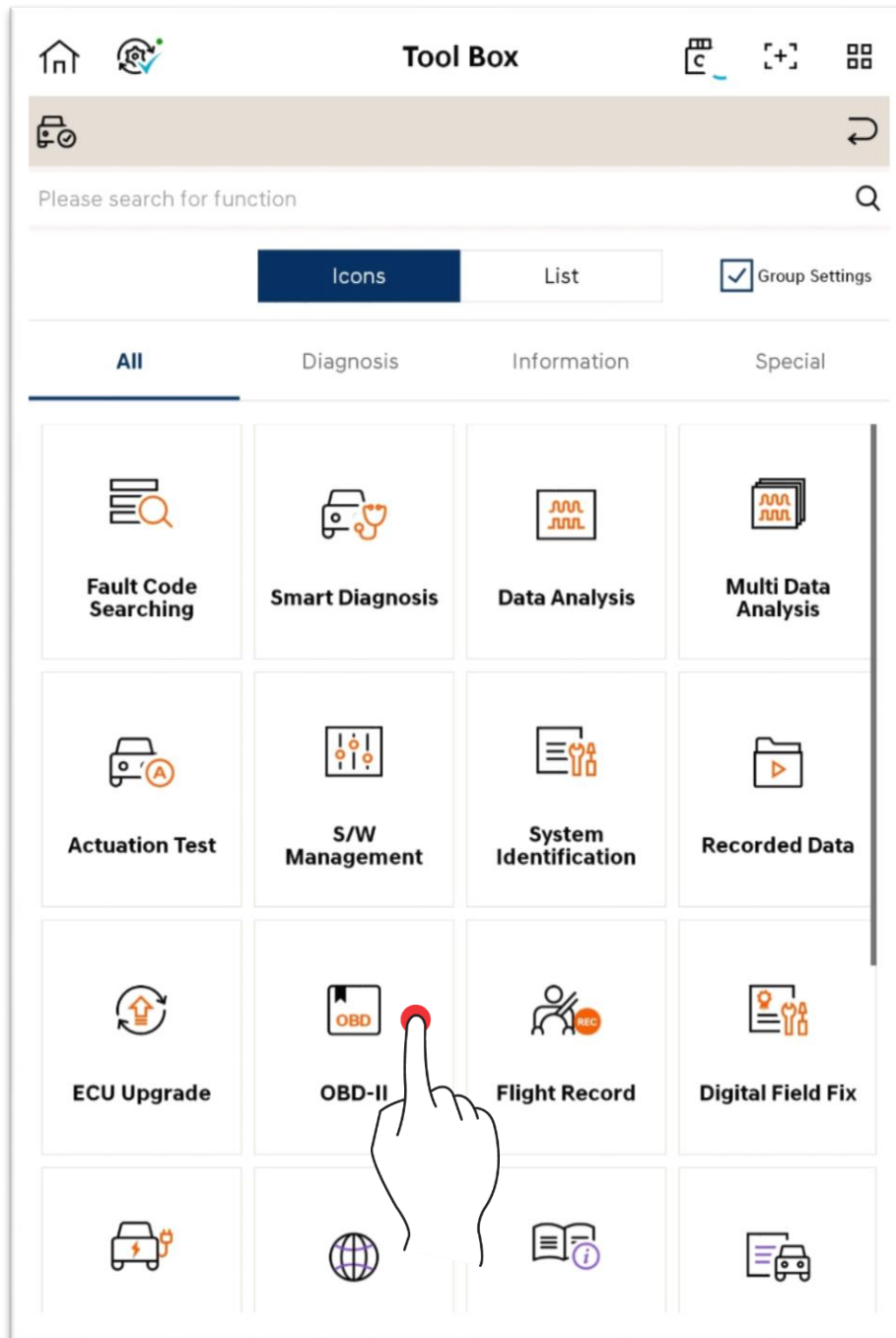


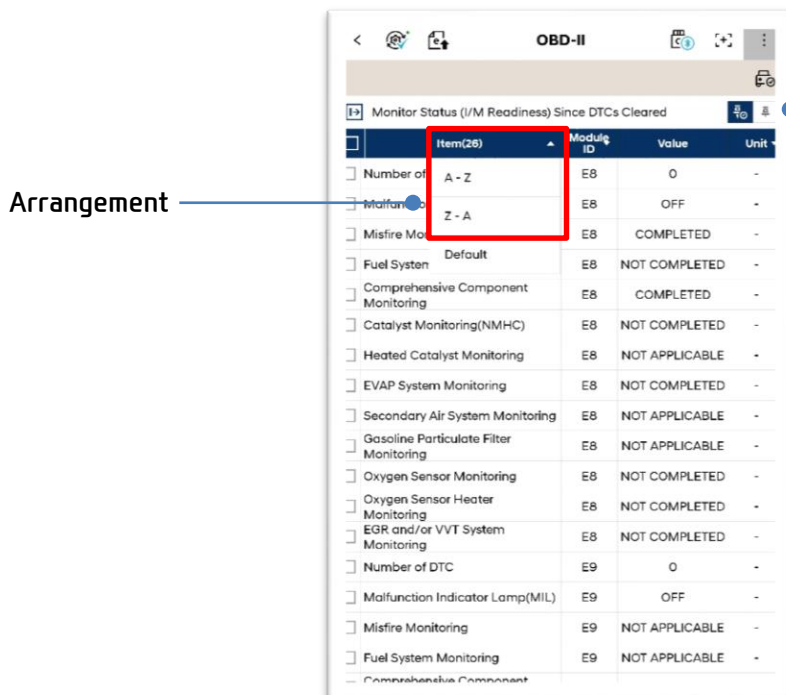
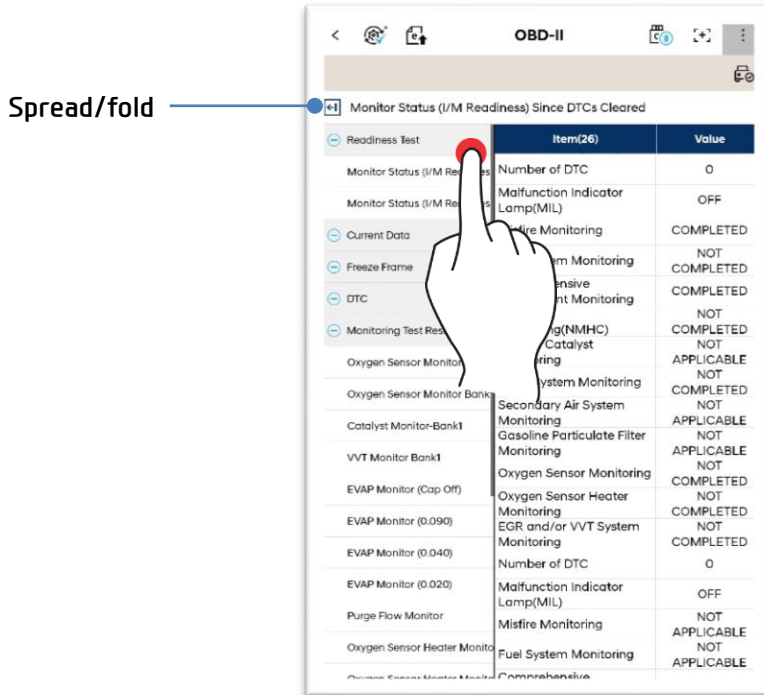
Tool Box - OBD-II

OBD-II mode is used to display generic vehicle powertrain diagnostic data.



Monitoring Status

It indicates overall monitoring status on each module of the vehicle depending on OBD-II method. It indicates the status based on each item such as number of fault codes and warning light status, etc.



Current Data

It indicates the current sensor data and actuator based on OBD-II method.

Spread/fold

	Item(48)	Value
Readiness Test		
Monitor Status (I/M Readiness)	Fuel system "A" status	OPEN LOOP
Monitor Status (I/M Readiness)	Fuel system "B" status	-
Current Data	Calculated Load Value	0.0
Freeze Frame	Engine Coolant Temperature	-40
DTC	Short Term Fuel Trim-Bank1	0.0
Monitoring	Short Term Fuel Trim - Bank 3	Not Supported.
Oxygen Sensor	Long Term Fuel Trim-Bank1	0.0
Oxygen Sensor	Long Term Fuel Trim - Bank 3	Not Supported.
Catalyst Monitor	Intake Manifold Absolute Pressure	0
VVT Monitor Bank	Engine RPM	0
EVAP Monitor (Cap Off)	Vehicle Speed Sensor	0
EVAP Monitor (0.090)	Ignition Timing Advance for 1 Cylinder	6
EVAP Monitor (0.040)	Intake Air Temperature	-40
EVAP Monitor (0.020)	Absolute Throttle Position Sensor	Not Used.
Purge Flow Monitor	Oxygen Sensor Location	B1S1
Oxygen Sensor Heater Monitor	Oxygen Sensor-Bank1/Sensor2	420
	Short Term Fuel Trim-Bank1/Sensor2	Not Used.

View type setting

Item(48)	Module ID	Value	Unit
<input type="checkbox"/> Fuel system "A" status	E8	OPEN LOOP	-
<input type="checkbox"/> Fuel system "B" status	E8	-	-
<input type="checkbox"/> Calculated Load Value	E8	0.0	%
<input type="checkbox"/> Engine Coolant Temperature	E8	-40	°C
<input type="checkbox"/> Short Term Fuel Trim-Bank1	E8	0.0	%
<input type="checkbox"/> Short Term Fuel Trim - Bank 3	E8	Not Supported.	%
<input type="checkbox"/> Long Term Fuel Trim-Bank1	E8	0.0	%
<input type="checkbox"/> Long Term Fuel Trim - Bank 3	E8	Not Supported.	%
<input type="checkbox"/> Intake Manifold Absolute Pressure	E8	0	kPa
<input type="checkbox"/> Engine RPM	E8	0	RPM
<input type="checkbox"/> Vehicle Speed Sensor	E8	0	km/h
<input type="checkbox"/> Ignition Timing Advance for 1 Cylinder	E8	6	°
<input type="checkbox"/> Intake Air Temperature	E8	-40	°C
<input type="checkbox"/> Absolute Throttle Position Sensor	E8	Not Used.	%
<input type="checkbox"/> Oxygen Sensor Location	E8	B1S1	-
<input type="checkbox"/> Oxygen Sensor-Bank1/Sensor2	E8	420	mV
<input type="checkbox"/> Short Term Fuel Trim-Bank1/Sensor2	E8	Not Used.	%

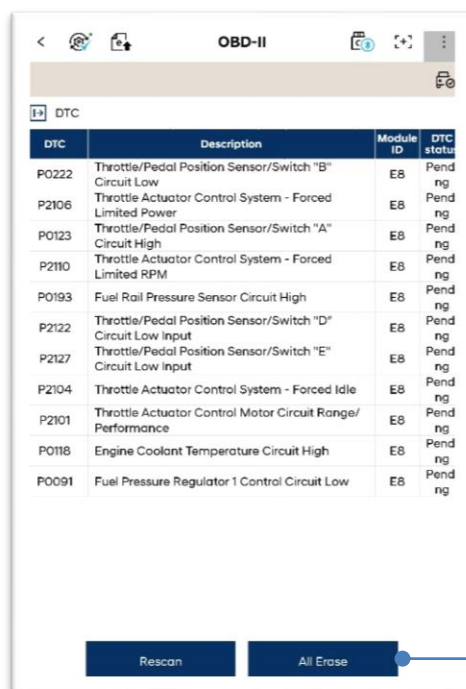
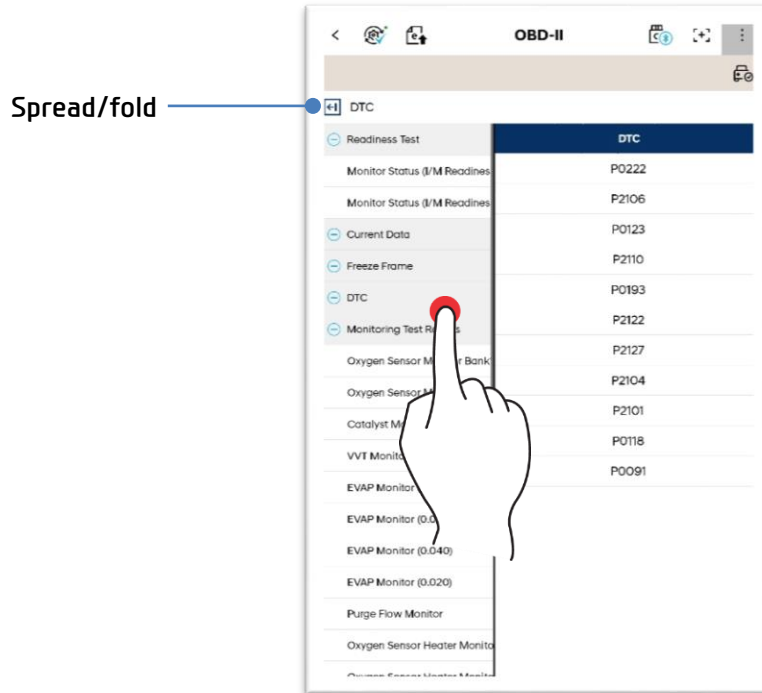
- List
- Graph
- View the entire items
- View only fixed items

Fault Situation Data

It indicates the sensor data value stored in ECU at the time when a fault code is generated.

DTC

It indicates the fault codes stored in ECU.

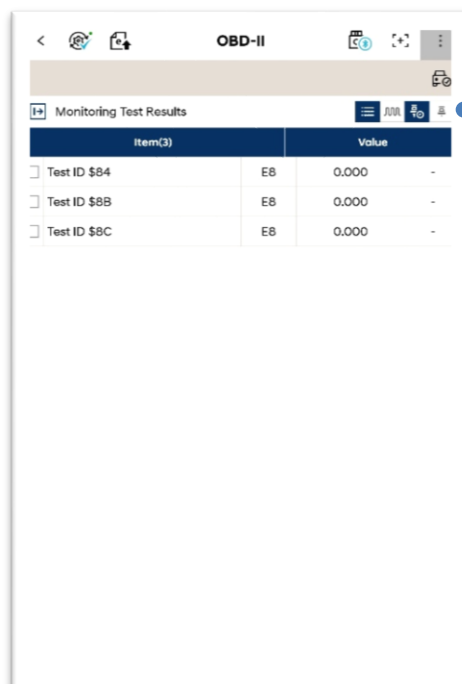
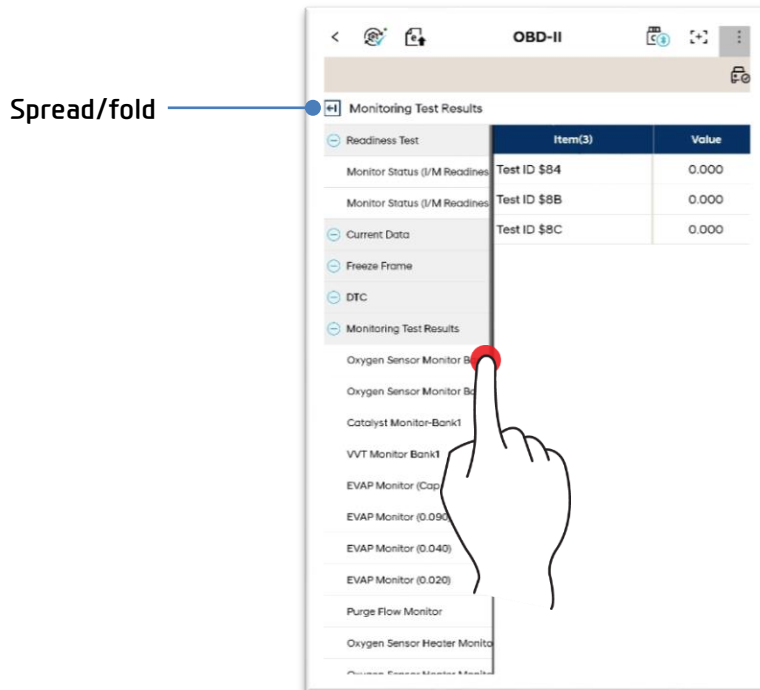


Remove all fault codes

Monitoring Test Results

Monitoring test performs monitoring of operating status of each sensor related to exhaust gases, and its results accordingly.

※ It may not be supported depending on the type of vehicle.



View type setting

- List
- Graph
- View the entire items
- View only fixed items

Vehicle Information

It indicates information on the vehicle.

Spread/fold

The screenshot shows the OBD-II interface with the 'Gasoline' menu expanded. A hand icon is overlaid on the 'Vehicle Information' item, with a red dot indicating the 'Spread/fold' action. The table below shows the data for the 'Gasoline' menu.

Item(28)	Value
OBDMonitoring Conditions	0
Ignition Counter	0
Catalyst Monitor Completion Counts-Bank1	0
Catalyst Monitor Conditions	0
Catalyst Monitor Completion	0
Catalyst Monitor Conditions	0
Oxygen Sensor Monitor Completion Counts Bank1	0
Oxygen Sensor Monitor Conditions	0
Oxygen Sensor Monitor Completion Counts Bank2	0
Oxygen Sensor Monitor Conditions	0
EGR and/or VVT Monitor Completion Condition Counts	0
EGR and/or VVT Monitor Conditions Encountered Counts	0
Air Monitor Completion Condition Counts	0
Air Monitor Conditions Encountered Counts	0
EVAP Monitor Completion Condition Counts	0
EVAP Monitor Conditions	0
Secondary Oxygen Sensor Monitor	0

The screenshot shows the OBD-II interface with the 'Gasoline' menu fully expanded into a table. The table has four columns: Item(28), Module ID, Value, and Unit. A 'Capture' button is visible at the bottom.

Item(28)	Module ID	Value	Unit
OBDMonitoring Conditions Encountered Counts	E8	0	Count
Ignition Counter	E8	0	Count
Catalyst Monitor Completion Counts-Bank1	E8	0	Count
Catalyst Monitor Conditions Encountered Counts-Bank1	E8	0	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	0	Count
Oxygen Sensor Monitor Conditions Encountered	---	0	Count
Oxygen Sensor Monitor Completion Counts Bank2	E8	0	Count
Oxygen Sensor Monitor Conditions Encountered	---	0	Count
EGR and/or VVT Monitor Completion Condition Counts	E8	0	Count
EGR and/or VVT Monitor Conditions Encountered Counts	E8	0	Count
Air Monitor Completion Condition Counts	E8	0	Count
Air Monitor Conditions Encountered Counts	E8	0	Count
EVAP Monitor Completion Condition Counts	E8	0	Count
EVAP Monitor Conditions	FR	0	Count

In Use Performance Ratio

It proceeds the test using all conditions necessary to detect parts of the vehicle or system fault status, etc. in accordance with OBD-II regulation.

In addition, the user can also check number of abnormal operations of the system under a designated condition.

Monitoring items specified in OBD-II

- ✓ Catalyst (Catalyst bank1, bank2)
- ✓ Oxygen sensor (Primary oxygen sensor bank1, bank2)
- ✓ Evaporative gas leak detecting system (Evaporative 0.020" leak detecting system)
- ✓ Exhaust gas recirculation system (EGR system)
- ✓ Secondary air supply system (Secondary air system)

The screenshot shows the 'In Use Performance Ratio' section of the OBD-II monitoring interface. The table lists various monitoring items with their corresponding Item IDs and values.

Item	Item ID	Value
Monitor Status (I/M Readiness) S	0BD Monitoring Conditions Encountered Counts	0
Monitor Status (I/M Readiness) T	Ignition Counter	0
Current Data	Catalyst Monitor Completion Counts-Bank1	0
Freeze Frame	Catalyst Monitor Conditions Encountered Counts-Bank1	0
DTC	Catalyst Monitor Completion Counts-Bank2	0
Monitoring Test Results	Catalyst Monitor Conditions Encountered Counts-Bank2	0
Test or Component Control	Oxygen Sensor Monitor Completion Counts Bank1	0
Vehicle Information	Oxygen Sensor Monitor Conditions	0
In Use Performance Ratio	Oxygen Sensor Monitor Completion Counts Bank2	0
	Oxygen Sensor Monitor Conditions	0
Gasoline	EGR and/or VVT Monitor Completion	0
	EGR and/or VVT Monitor Conditions	0
	Air Monitor Completion Condition Counts	0
	Air Monitor Conditions Encountered Counts	0
	EVAP Monitor Completion Condition Counts	0
	EVAP Monitor Conditions Encountered Counts	0
	Secondary Oxygen Sensor Monitor	0
	Secondary Oxygen Sensor Monitor	0
	Secondary Oxygen	0

The screenshot shows a detailed view of the OBD-II monitoring interface. The table lists various monitoring items with their corresponding Item IDs, Module IDs, Values, and Units.

Item	Item ID	Module ID	Value	Unit
OB	0BD Monitoring Conditions Encountered Counts	E8	0	Count
OB	Ignition Counter	E8	0	Count
OB	Catalyst Monitor Completion Counts-Bank1	E8	0	Count
OB	Catalyst Monitor Conditions Encountered Counts-Bank1	E8	0	Count
OB	Catalyst Monitor Completion Counts-Bank2	E8	0	Count
OB	Catalyst Monitor Conditions Encountered Counts-Bank2	E8	0	Count
OB	Oxygen Sensor Monitor Completion Counts Bank1	E8	0	Count
OB	Oxygen Sensor Monitor Conditions Encountered Counts Bank1	E8	0	Count
OB	Oxygen Sensor Monitor Completion Counts Bank2	E8	0	Count
OB	Oxygen Sensor Monitor Conditions Encountered Counts Bank2	E8	0	Count
OB	EGR and/or VVT Monitor Completion Condition Counts	E8	0	Count
OB	EGR and/or VVT Monitor Conditions Encountered Counts	E8	0	Count
OB	Air Monitor Completion Condition Counts	E8	0	Count
OB	Air Monitor Conditions Encountered Counts	E8	0	Count
OB	EVAP Monitor Completion Condition Counts	E8	0	Count
OB	EVAP Monitor Conditions Encountered Counts	E8	0	Count
OB	Secondary Oxygen Sensor Monitor Completion Counts Bank1	E8	0	Count
OB	Secondary Oxygen Sensor	-	-	-