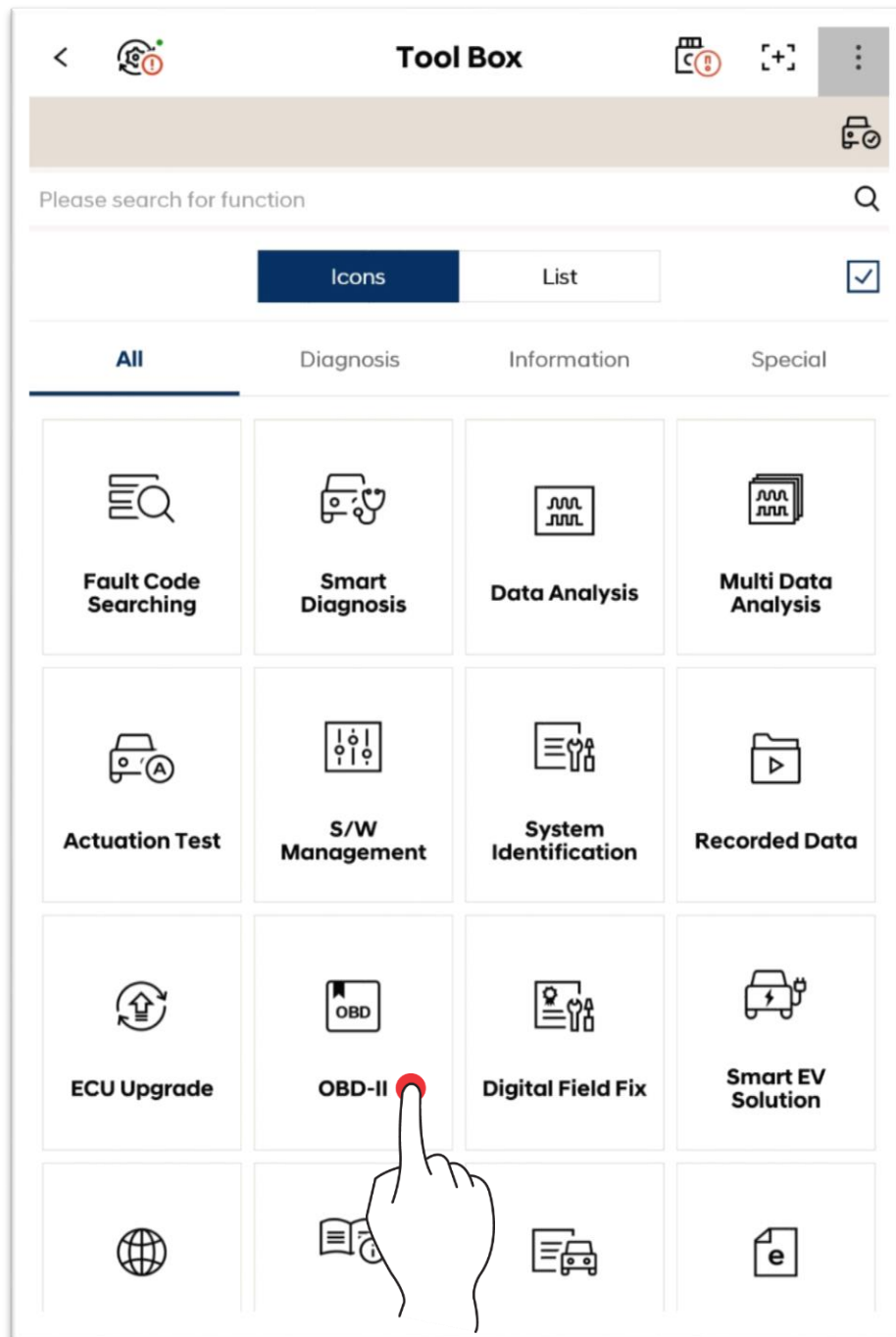


## Tool Box - OBD-II

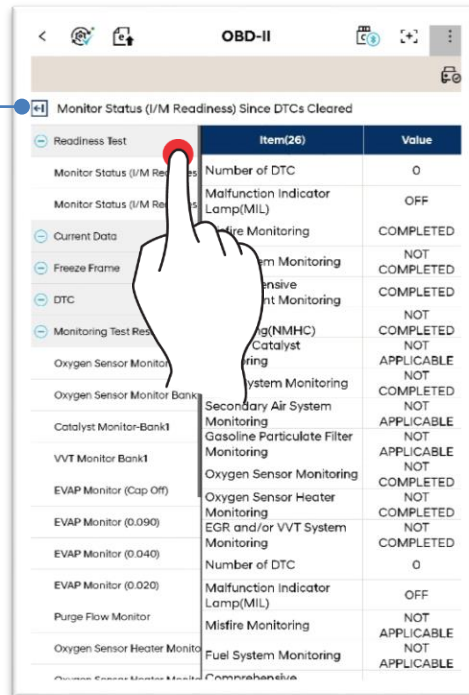
OBD-II mode is used to display generic vehicle powertrain diagnostic data.



## 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.

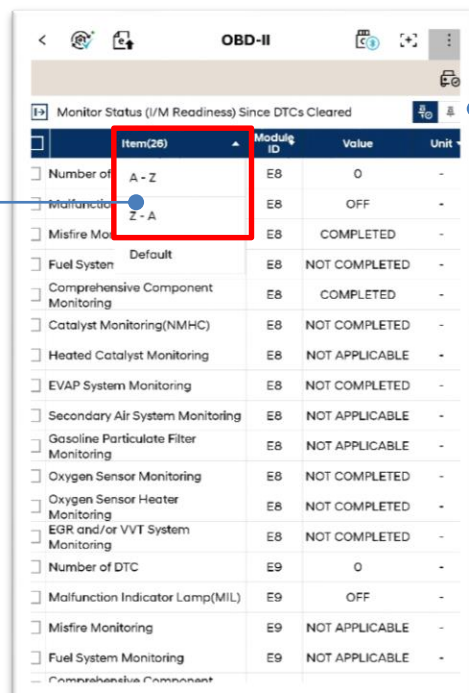
Spread/fold



Monitor Status (I/M Readiness) Since DTCs Cleared

Item(26)	Value
Number of DTC	0
Malfunction Indicator Lamp(MIL)	OFF
Misfire Monitoring	COMPLETED
Fuel System Monitoring	NOT COMPLETED
Comprehensive Component Monitoring	COMPLETED
Catalyst Monitoring(NMHC)	NOT COMPLETED
Heated Catalyst Monitoring	NOT APPLICABLE
Oxygen Sensor Monitoring	NOT COMPLETED
Oxygen Sensor Heater Monitoring	NOT COMPLETED
EGR and/or VVT System Monitoring	NOT COMPLETED
Number of DTC	0
Malfunction Indicator Lamp(MIL)	OFF
Misfire Monitoring	NOT APPLICABLE
Fuel System Monitoring	NOT APPLICABLE

Arrangement



Monitor Status (I/M Readiness) Since DTCs Cleared

Item(26)	Module ID	Value	Unit
Number of DTC	E8	0	-
Malfunction Indicator Lamp(MIL)	E8	OFF	-
Misfire Monitoring	E8	COMPLETED	-
Fuel System Monitoring	E8	NOT COMPLETED	-
Comprehensive Component Monitoring	E8	COMPLETED	-
Catalyst Monitoring(NMHC)	E8	NOT COMPLETED	-
Heated Catalyst Monitoring	E8	NOT APPLICABLE	-
EVAP System Monitoring	E8	NOT COMPLETED	-
Secondary Air System Monitoring	E8	NOT APPLICABLE	-
Gasoline Particulate Filter Monitoring	E8	NOT APPLICABLE	-
Oxygen Sensor Monitoring	E8	NOT COMPLETED	-
Oxygen Sensor Heater Monitoring	E8	NOT COMPLETED	-
EGR and/or VVT System Monitoring	E8	NOT COMPLETED	-
Number of DTC	E9	0	-
Malfunction Indicator Lamp(MIL)	E9	OFF	-
Misfire Monitoring	E9	NOT APPLICABLE	-
Fuel System Monitoring	E9	NOT APPLICABLE	-

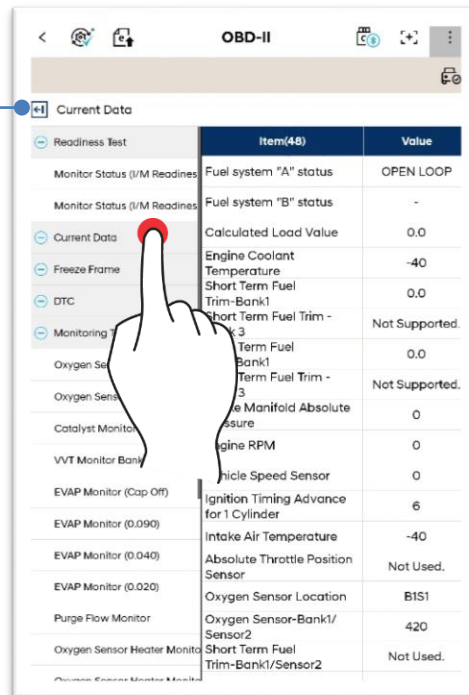
View type setting

- View the entire items
- View only fixed items

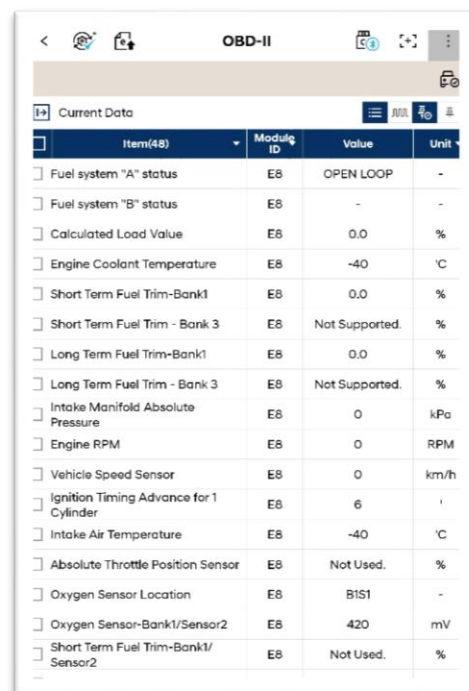
## Current Data

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
OTC	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.



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.	%

View type setting

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

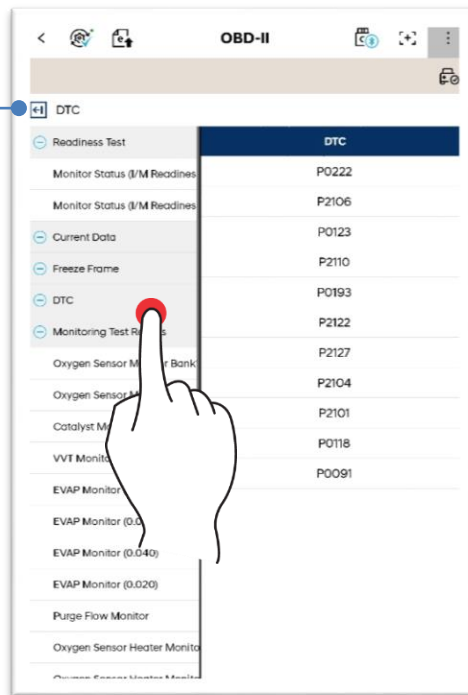
## Fault Situation Data

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.

Spread/fold



The screenshot shows the OBD-II menu with the DTC list expanded. The list contains 12 entries, each with a DTC code, a description, a module ID, and a status. At the bottom, there are two buttons: 'Rescan' and 'All Erase'. A blue line points from the 'Remove all fault codes' text to the 'All Erase' button.

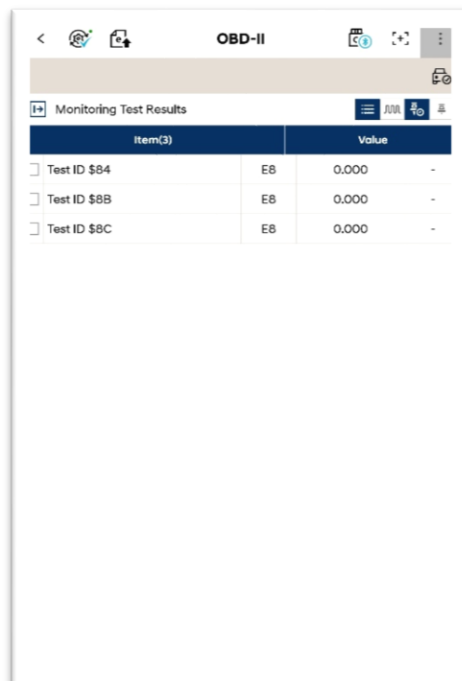
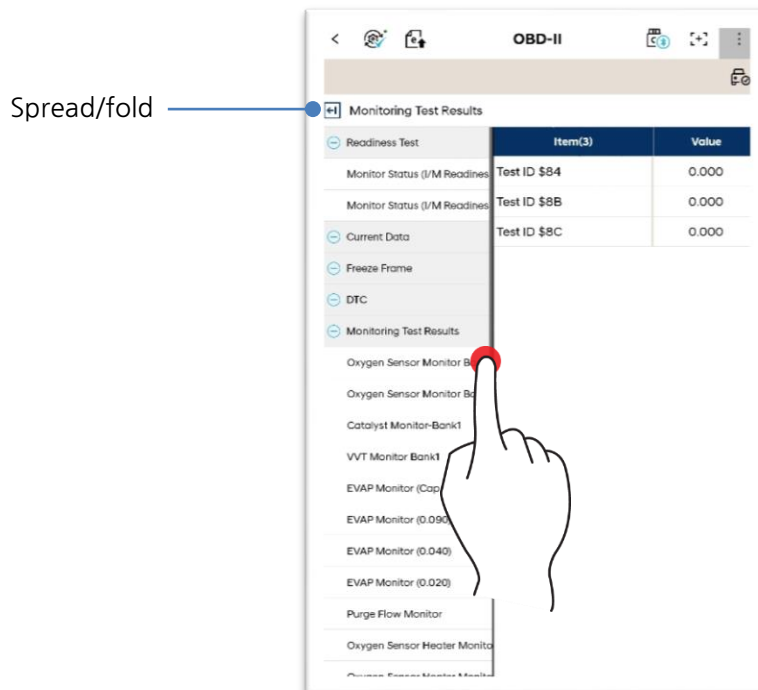
DTC	Description	Module ID	DTC status
P0222	Throttle/Pedal Position Sensor/Switch "B" Circuit Low	E8	Pending
P2106	Throttle Actuator Control System - Forced Limited Power	E8	Pending
P0123	Throttle/Pedal Position Sensor/Switch "A" Circuit High	E8	Pending
P2110	Throttle Actuator Control System - Forced 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
P2101	Throttle Actuator Control Motor Circuit Range/Performance	E8	Pending
P0118	Engine Coolant Temperature Circuit High	E8	Pending
P0091	Fuel Pressure Regulator 1 Control Circuit Low	E8	Pending

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.



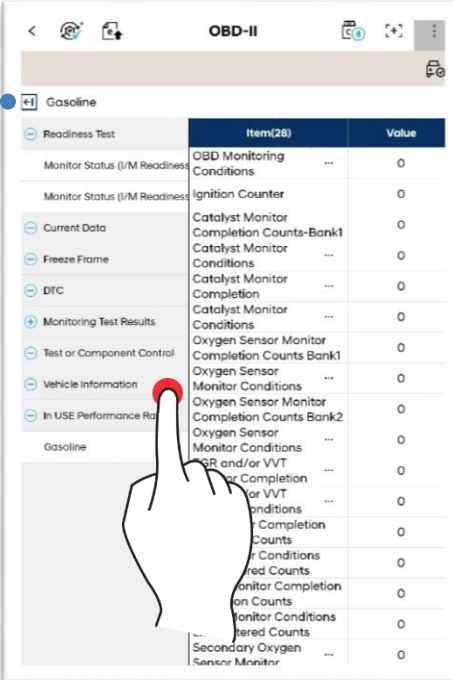
View type setting

- 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 'Vehicle Information' section expanded. A hand icon is pointing to the 'Vehicle Information' item in the left sidebar, indicating it is being spread/folded.

Item(28)	Value
OBD Monitoring 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



The screenshot shows the OBD-II interface with the 'Vehicle Information' section expanded. A detailed table of monitoring conditions is displayed.

Item(28)	Module ID	Value	Unit
OBD Monitoring 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	E8	0	Count
Oxygen Sensor Monitor Completion Counts Bank2	E8	0	Count
Oxygen Sensor Monitor Conditions Encountered	E8	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	E8	0	Count

Capture

## 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)

OBD-II				
Current Data				
Readiness Test	Item(48)	Value		
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 Test Results	Short Term Fuel Trim - Bank 3	Not Supported.		
Oxygen Sensor Monitor Bank1	Long Term Fuel Trim-Bank1	0.0		
Oxygen Sensor Monitor Bank1	Long Term Fuel Trim - Bank 3	Not Supported.		
Catalyst Monitor-Bank1	Intake Manifold Absolute Pressure	0		
VVT Monitor Bank1	Engine RPM	0		
EVAP Monitor (Cap Off)	Vehicle Speed Sensor	0		
EVAP Monitor (0.090)	Ignition Timing Advance for 1 CVlinder	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		
Oxygen Sensor Heater Monitor	Short Term Fuel Trim-Bank1/Sensor2	Not Used.		
Misfire Monitor General Data	OBD Requirement	OBD II		
	Time Since Engine Start	0		

OBD-II				
Gasoline				
	Item(28)	Module ID	Value	Unit
	OBD Monitoring 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	E8	0	Count

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