

# DTC Analysis



Fault Code Searching  
DTC Analysis



Fault Code Searching is to read all DTC from the selected systems and display it on the screen.

HOME Online
OPTIMA(TF)/2011/G 2.4 DOH.. VCI

**Fault Code Searching**

Rescan
Erase All DTC
Go to DTC

A / T

ENGINE

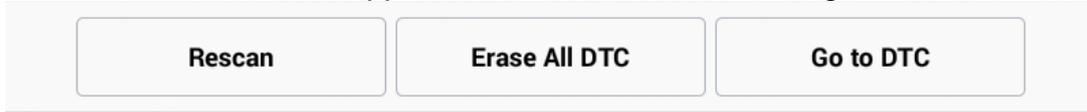
System	Status	Result
✓ ENGINE	DTC is existed.	Fault(09)
✓ AT	DTC is existed.	Fault(01)

System	DTC	Description	Status
ENGINE	P2122	Accelerator Position Sensor 1 Signal Circuit Low Input	Active
ENGINE	P2127	Accelerator Position Sensor 2 Signal Circuit Low Input	Active
ENGINE	P2104	Limp Home Mode - Forced Idle	Active
ENGINE	P2101	Throttle Actuator Control Motor Circuit Range/Performance	Active
ENGINE	U1111	Lin Message Timeout with EBS	Active
AT	P0880	TCM Power Input Signal	Active

## Fault Code Searching Screen

### ◆ Function Button

Three function buttons are supported on Fault Code Searching as below.



Rescans DTC from FCS.(All the selected systems)



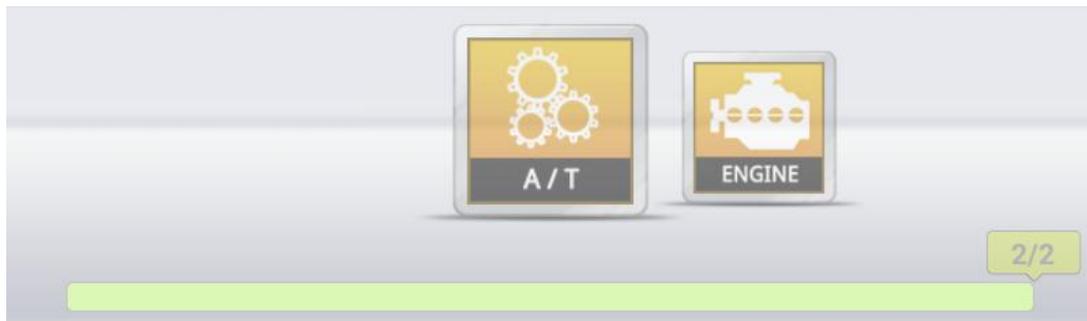
Erases all DTC saved on ECU.(The selected systems on FCS)



Moves DTC Analysis directly.(The selected systems by the user)

### ◆ Current DTC searching system

It displays the current state of the DTC searching.



### ◆ DTC Result by each System

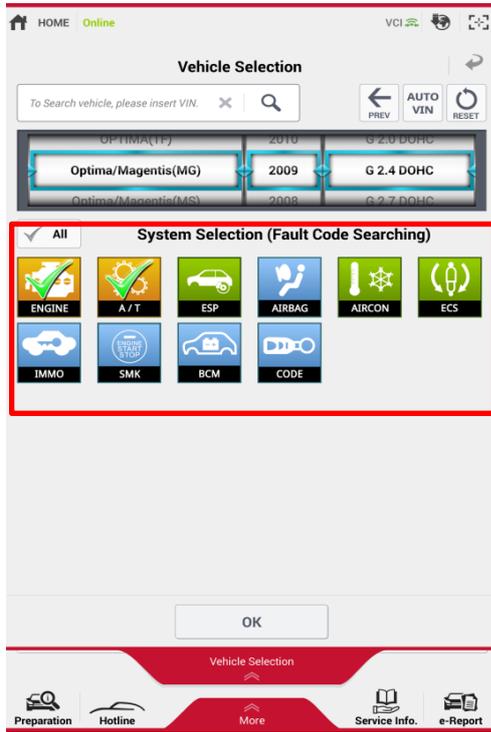
It displays DTC result by each system. When selecting the specific system, the user can check the DTC in detail by detailed result display.

System	Status	Result
✓ ENGINE	DTC is existed.	Fault(10)
✓ AT	Communication Fail / Check whether system is installed or not. Check the IG key and DLC.	Failed

### ◆ DTC Detailed Result Display

System	DTC	Description	State
ENGINE	P0123	Throttle Position Sensor 1 Signal Circuit High Input	
ENGINE	P2106	Throttle Actuator Control System - Forced Limited Power	
ENGINE	P0222	Throttle Position Sensor 2 Signal Circuit Low Input	
ENGINE	P2110	Throttle Actuator Control System - Forced Limited RPM	
ENGINE	P0638	Throttle Actuator Control Range / Performance	
ENGINE	P0650	Malfunction Indicator Lamp (MIL) Control Circuit	

# Fault Code Searching



## Step 1

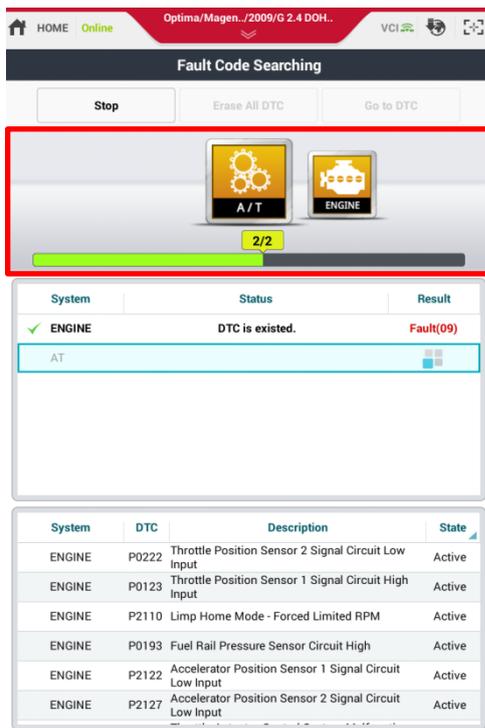
- 1 Select all systems of the vehicle desired to search DTC.
- 2 Tap [OK] button below.



## Notice

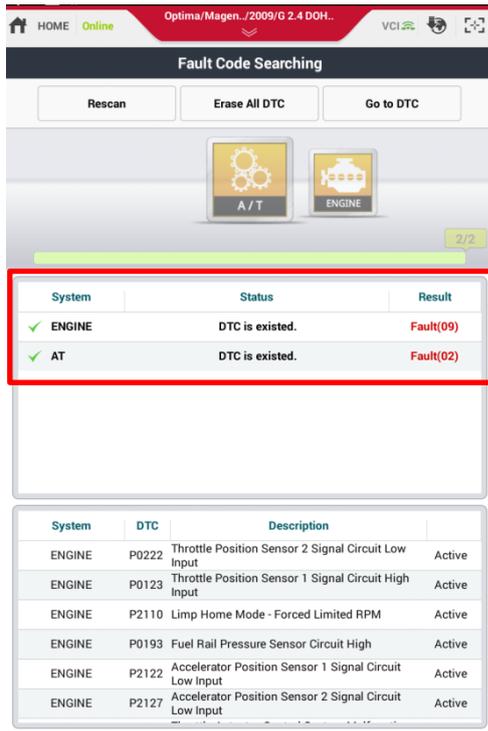


Mark indicates the selected system



## Step 2

It reads DTC information from ECU sequentially.

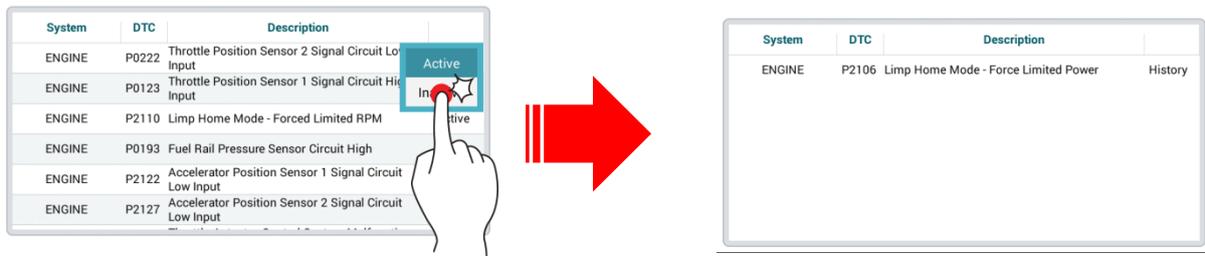


### Step3

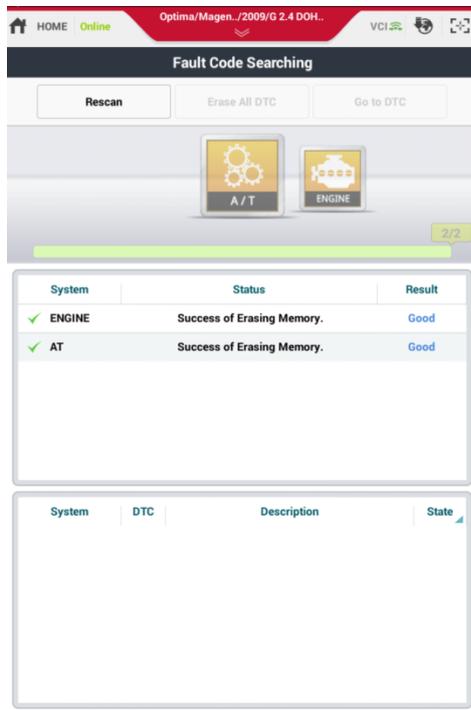
It displays all DTC information on the screen after inspection.

#### ◆ Inactive DTC display

When clicking the inactive button, users can check History DTC stored in the system.



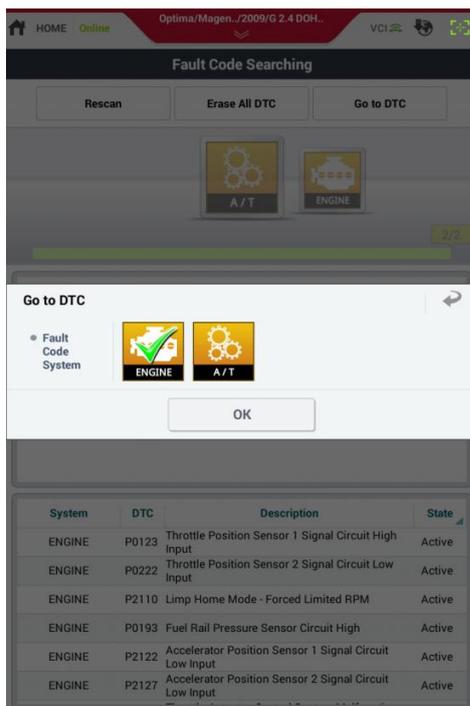
## Rescan



Rescan is to rescan DTC information from ECU. After repairing vehicle, the user can check if DTC is still present.

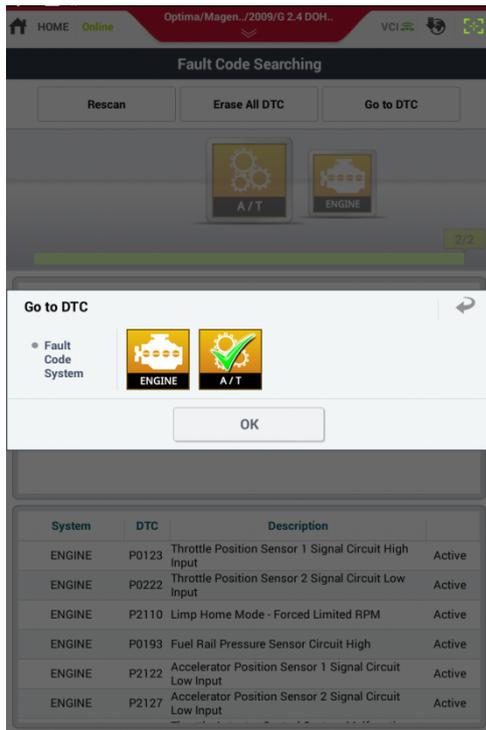
## Go to DTC

The page can be moved on to DTC Analysis directly without going through the initial page.



### Step 1

Tap [Go To DTC] button and the pop-up window will appear for selected systems as shown on the left.



## Step2

Select a system on the system list and tap [OK] button to move on to DTC Analysis.



### Notice

☞ To use “Go to DTC” function, Fault Code Searching must be performed in advance.



DTC Analysis is to retrieve DTC data from a specific ECU and retrieve diagnostic procedures for any DTCs found.

## DTC Analysis Screen

Code	Description	State	Link Up
P0222	Throttle Position Sensor 2 Signal Circuit Low Input	Active	
P0123	Throttle Position Sensor 1 Signal Circuit High Input	Active	
P2110	Limp Home Mode - Forced Limited RPM	Active	
P0193	Fuel Rail Pressure Sensor Circuit High Input	Active	
P2122	Accelerator Position Sensor 1 Signal Circuit Low Input	Active	
P2127	Accelerator Position Sensor 2 Signal Circuit Low Input	Active	
P2104	Limp Home Mode - Forced Idle	Active	
P2101	Throttle Actuator Control Motor Circuit Range/Performance	Active	
P0118	Engine Coolant Temperature Circuit High Input	Active	

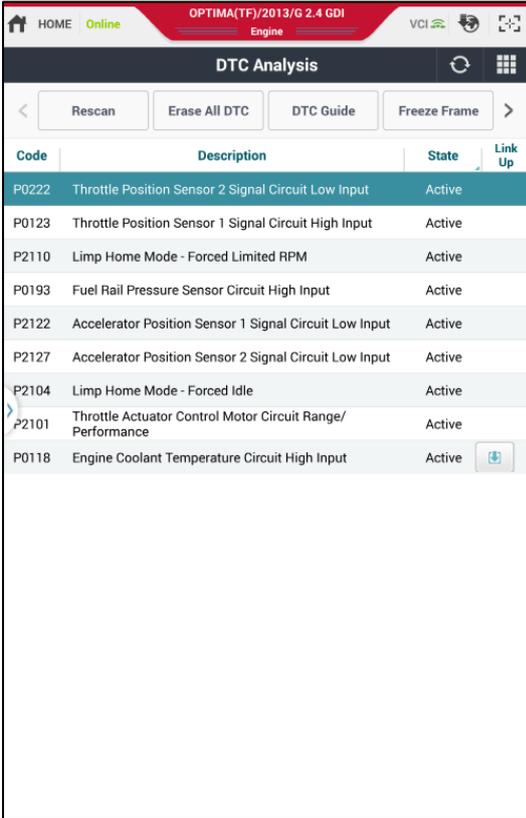
Safety Icon	Description
	Rescans DTC of ECU.
	Erases all DTCs saved on ECU.
	Shows DTC guide related to the DTC
	Shows Freeze Frame at the moment when the DTC occurs
	Shows the current status of the DTC.
	Active : Active DTC Inactive : Inactive DTC (Pending/History)
	Links to S/W management function related to the DTC

## DTC Status Display

There are two types of DTC detected from ECU: Active and Inactive

### ◆ Active DTC

The DTC is active on ECU and it needs to be repaired.

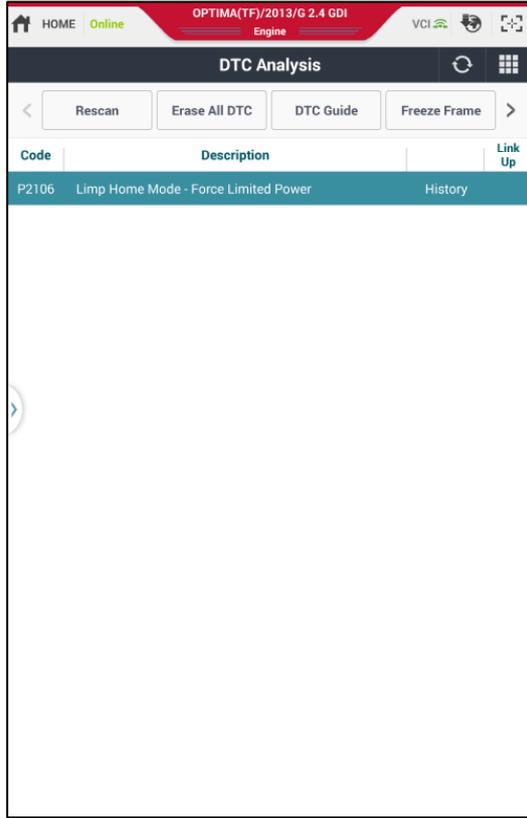


The screenshot shows the 'DTC Analysis' screen for an OPTIMA(TF)/2013/G 2.4 GDI engine. The interface includes a top navigation bar with 'HOME Online' and 'VCI' status. Below the title bar are buttons for 'Rescan', 'Erase All DTC', 'DTC Guide', and 'Freeze Frame'. The main content is a table with columns for 'Code', 'Description', 'State', and 'Link Up'. The table lists several active DTCs.

Code	Description	State	Link Up
P0222	Throttle Position Sensor 2 Signal Circuit Low Input	Active	
P0123	Throttle Position Sensor 1 Signal Circuit High Input	Active	
P2110	Limp Home Mode - Forced Limited RPM	Active	
P0193	Fuel Rail Pressure Sensor Circuit High Input	Active	
P2122	Accelerator Position Sensor 1 Signal Circuit Low Input	Active	
P2127	Accelerator Position Sensor 2 Signal Circuit Low Input	Active	
P2104	Limp Home Mode - Forced Idle	Active	
P2101	Throttle Actuator Control Motor Circuit Range/Performance	Active	
P0118	Engine Coolant Temperature Circuit High Input	Active	

### ◆ Inactive DTC

The DTC is not active, currently, but it was detected on ECU previously. (Pending/History)

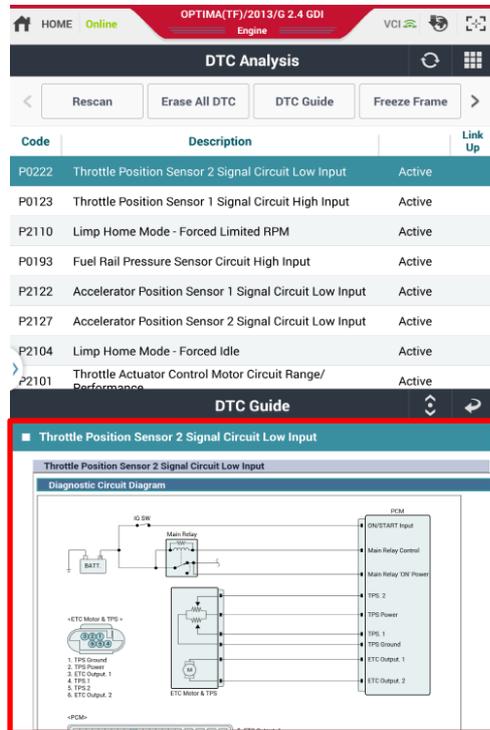


The screenshot shows the 'DTC Analysis' screen for the same vehicle. The interface is identical to the previous screenshot. The table below shows a single inactive DTC listed as 'History'.

Code	Description	State	Link Up
P2106	Limp Home Mode - Force Limited Power	History	

# DTC Guide

The user can check DTC guide about the detected DTC at the bottom of the screen. To use DTC guide function properly, Internet should be connected and Micro card, Service Information installed, should be inserted to Tablet.



1 Select DTC item that you want to check DTC guide.

2 Tap  button and you can check Service Information for the DTC by DTC Guide.



## Notice

☞ There are two options to search Service Information on KDS.

- 1<sup>ST</sup> Internet, 2<sup>nd</sup> SD Card
- “SD Card only”

HOME Online OPTIMA(TF)/2011/G 2.4 DOH.. VCI Engine

Service Information

Service Information

Configuration Information in SD card

• Search Location

1st Internet, 2nd SD Card  SD Card only

Language

English	Français	Deutsch
español	Italiano	Ελληνικά
Čeština	русский язык	Türkçe
Polski	Português	Български
Magyar	Română	

If the information cannot be displayed in the selected language, it will be displayed in English.

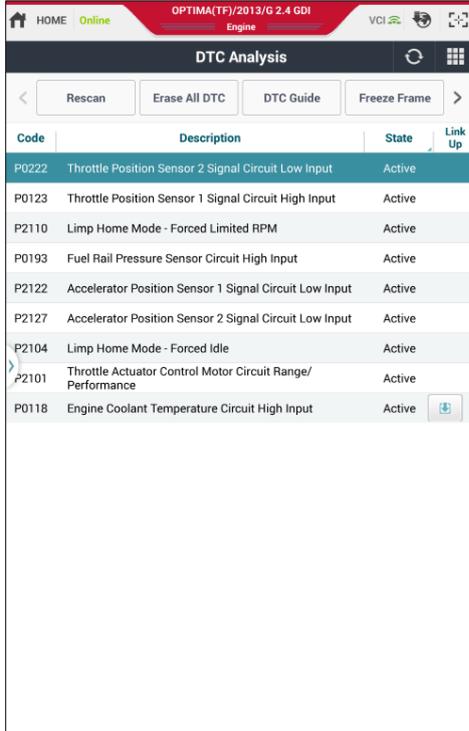
OK

\* Refer to setting Service Information

☞ To check the latest information, set [1<sup>st</sup> Internet, 2<sup>nd</sup> SD Card].

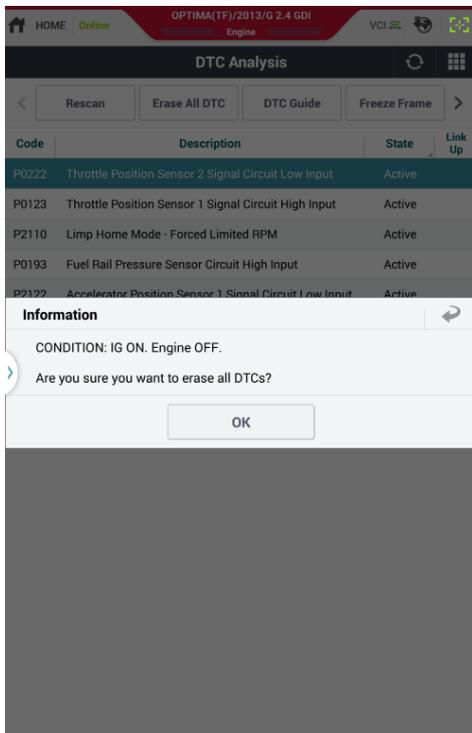
## Erase All DTC

Erase All DTC is to erase the detected DTC on ECU. If the cause of the DTC is not determined, the recorded DTC can be detected again.



### Step 1

Tap  button.



### Step 2

- 1 Check the conditions on the pop-up message.
- 2 Tap [OK] button to remove all of the DTC information saved on ECU.

## Freeze Frame

The FREEZE FRAME DATA displays the data values stored in the Engine Control Module at the point when the first confirmed DTC (Engine ECU Only) is detected.

The screenshot shows a mobile application interface for DTC Analysis. The top status bar displays 'HOME Online' and 'OPTIMA(TF)/2013/G 2.4 GDI Engine'. Below the status bar, the 'DTC Analysis' section includes buttons for 'Rescan', 'Erase All DTC', 'DTC Guide', and 'Freeze Frame'. A table lists several DTCs with their codes, descriptions, and states. The 'Freeze Frame' section below shows a message: 'No freeze frame data present at this time.' and a table with columns for 'Sensor Name', 'Value', and 'Unit'.

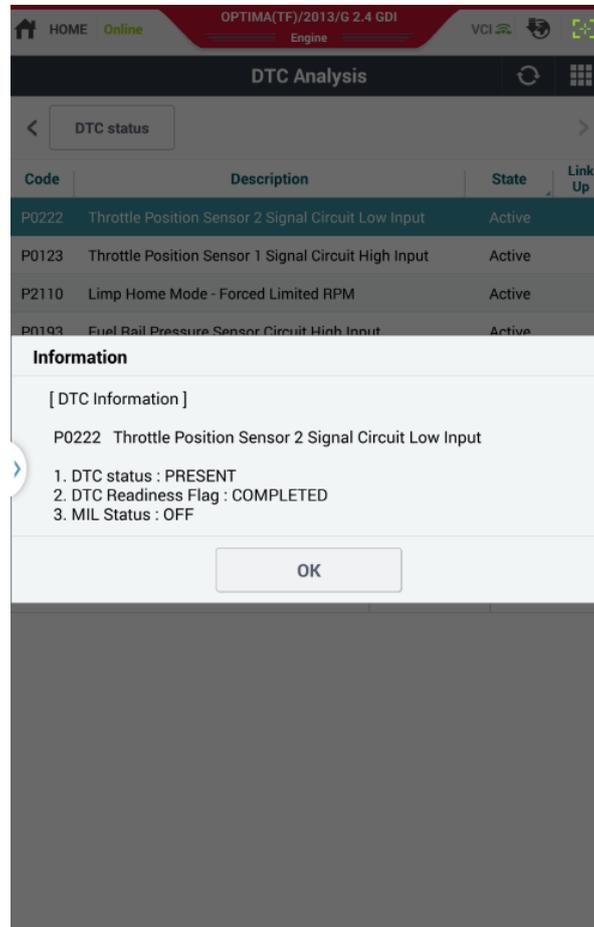
Code	Description	State	Link Up
P0222	Throttle Position Sensor 2 Signal Circuit Low Input	Active	
P0123	Throttle Position Sensor 1 Signal Circuit High Input	Active	
P2110	Limp Home Mode - Forced Limited RPM	Active	
P0193	Fuel Rail Pressure Sensor Circuit High Input	Active	
P2122	Accelerator Position Sensor 1 Signal Circuit Low Input	Active	
P2127	Accelerator Position Sensor 2 Signal Circuit Low Input	Active	
P2104	Limp Home Mode - Forced Idle	Active	
P2101	Throttle Actuator Control Motor Circuit Range/Performance	Active	

Freeze Frame		
■ No freeze frame data present at this time.		
Sensor Name	Value	Unit

## DTC Status

DTC status button is to notice the status of the specific DTC. It checks the status of Warning light, the time of occurrence, the status and diagnosis completion of DTC. (DTC Status function may not be supported depending on the type of ECU module)



## Rescan

This function is to rescan the DTC from ECU Control Module.