

User Manual



Ver. 141101A

CARMAN INTERNATIONAL CO., LTD.



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Precautions For Use

Safety Regulations

Precautions for use

The AUTO-i 300 described in this guide was manufactured for those who have the basic knowledge required for its use.

Users should follow the safety instructions described in this manual for safe and efficient use of the product.

Safety precaution symbols



Failure to adhere to the instructions of this symbol may result in serious property damage or bodily injuries.



Failure to adhere to the instructions of this symbol may result in slight property damage or bodily injuries.



This symbol appears when references or information are provided for user's convenience.

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Precautions For Use

Safety regulations for overall use are as follows.

Power source



Do not touch power cords with wet hands. It may result in an electric shock.



Always use AC/DC POWER adaptor provided with this product. Otherwise, it may result in an explosion or a fire.



Do not use the product under electrically unstable conditions. It may result in damage to a power supply unit.



Push down the plug until it clips securely into place. Otherwise, it may result in a fire.

Wireless Communication



Avoid high tension currents or electronic jamming. It could be affected by external environment.



There is one set of Bluetooth Dongle for AUTO-i 300 mainbody, and PC connection. Green-color LED displays the connection status of Bluetooth Dongle connection to AUTO-i 300 mainbody. If Bluetooth dongle of mainbody is

connected to PC side or vice versa, it will damage each Bluetooth dongle.



Be cautious of wet-damage or loss of Bluetooth dongle.



Precautions For Use

Usage



Do not drop the product. It may cause damage to the product.



Do not put the product on a distributor. Although manufactured to prevent interference of internal electromagnetic wave, any strong interference beyond the setlimit mayresult in damage to the product.



Do not attempt to repair, disassemble, or alter the product yourself. It may cause damage to the product.



Avoid air-vent plugged by foreign substances. This may cause fire or damage of product.

Upgrade



Never attempt to disassemble the power supply unit or adaptor. It may cause damage to the product.

Storage and carriage



Avoid storage in a humid place. It may cause damage to the product.



Use the carrier bag provided with this product when carrying. It will protect the product from external impacts.



Long hour battery charging may cause shorten battery life or damage it. Avoid battery charging over two (2) days.



1. Product Feature

AUTO-i 300 can detect malfunction in vehicle's engine, automatic transmission, ABS, air bag, immobilizer and other devices, confirm current data, and operate the actuator through OBD-I, OBD-II, and MOBD communication.

Functions supported in AUTO-i 300

- ▶ Diagnoses Korean, Japanese and European vehicles.
- Support OBD-II/EOBD, MOBD
- Support CAN, SAE-J1850, ISO9141-2/KWP2000, J1587

Supports vehicle troubleshooting and current data search.
You can diagnose vehicles with their sensors and switches, and save and reload the current data.

▶ Supports automatic actuator inspection.

- This function runs/stops the actuator and switches forcibly in order to check if the corresponding active device is normal.

► Maintenance is possible during operation since maintenance information is provided.

► As a PC-based device with an unlimited data storage space, it can easily update the diagnostic program through internet.

▶ You can change the sound effects and display unit of the AUTO-i 300.

▶ Wireless communication provides more convenient vehicle diagnosis.



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Chapter 1: General

2. Product Specification

| Item | Specifications | | |
|---|---|----------------------------|--|
| OS And Recommended PC specification | Windows XP, Windows VISTA, Windows7 (32bit),Window8 (32bit)Over 1GHz processor, 1GB RAM, Hard Disc. Space16GB, DirectX 9 Graphic (WDDM 1.0 Driver) | | |
| Connecting Method | Bluetooth USB | 2.0 USB 2.0 (Compliant) | |
| Protocol | Protocols: - Dual CAN(2.0A,2.0B), Singlewire CAN - ISO914-2, KWP2000, J1850P, J1587 - K/L-line High Speed Serial, Flashing Code - Ethernet Support | | |
| J2534 | | | |
| OperatingTemperature0~45°C(32~113°F)Operating Voltage-20~70°C(-4~158°F) | | 13°F) | |
| | | ~158°F) | |



-

Please keep operating temperature to avoid shortening battery life or abnormal voltage usage.



3. Component List

♦ Basic kit

| NO | Part No. | Description |
|----|--------------|--------------------------------|
| 1 | AY-ELPT-A300 | AUTO-i 300 Main Body |
| 2 | CB-AYTP-0001 | Power adapter (3.5A) |
| 3 | CB-CNHC-0004 | Battery Extension Cable |
| 4 | CB-CYAT-0001 | DLC Main Cable (16P 2M) |
| 5 | CB-CYAU-001A | USB Cable(B Type) |
| 6 | CB-CYTP-0004 | AC/DC Power Cord |
| 7 | CB-CYVG-0006 | Cigarette Lighter Power Cable |
| 8 | FE-MUDE-0047 | AUTO-i 300 BluetoothDongle Set |
| 9 | LA-DQAU-A001 | Installation DVD |
| 10 | LA-MCAU-E002 | User Manual |
| 11 | PK-BGTT-0005 | AUTO-i 300 Carrier Bag |

🔶 Asian kit

| NO | Part No. | Description |
|----|---|--------------------------------|
| 1 | CB-AYHC-0018 | KIA ADAPTOR 20P (BLUE) |
| 2 | CB-AYVG-0001 | TOYOTA, LEXUS ADAPTOR (17P"R") |
| 3 | CB-AYVG-0002 TOYOTA, LEXUS ADAPTOR (17P"C") | |
| 4 | CB-AYVG-0003 | MAZDA ADAPTOR (6P + 1P) |
| 5 | CB-AYVG-0005 | DAEWOO,GM ADAPTOR (12P) |
| 6 | CB-AYVG-0006 | SSANGYONG ADAPTOR (14P) |
| 7 | CB-AYVG-0007 | SSANGYONG ADAPTOR (20P) |
| 8 | CB-AYVG-0008 SAMSUNG / NISSAN ADAPTOR (14P) | |
| 9 | CB-AYVG-0009 | HONDA ADAPTOR (3P) |
| 10 | CB-AYVG-0010 | MAZDA "C" ADAPTOR (17P) |
| 11 | CB-AYVG-0011 | SUBARU ADAPTOR (16P-9P) |
| 12 | CB-AYVG-0012 | HONDA ADAPTOR (5P) |
| 13 | CB-CYHC-0018 | MITSUBISHI ADAPTOR (12P) |
| 14 | CB-CYVG-0007 | MITSUBISHI CABLE (12P+16P) |



♦ European kit

| NO | Part No. | Description |
|----|--------------|--------------------------------|
| 1 | CA-PSA1-0002 | PSA Cable (2P) |
| 2 | CB-AYHC-0016 | Mercedes Benz Board (38P) |
| 3 | CB-AYVG-0013 | BMW Adapter (20P) |
| 4 | CB-AYVG-0014 | Opel Adapter (10P) |
| 5 | CB-CYHC-0022 | Audi / VW Cable (2+2P) |
| 6 | CB-CYHC-0023 | Mercedes Benz Cable (3 liners) |
| 7 | CN-T005-AM06 | Fiat Cable (3P) |

♦ USA/Australian kit

| ſ | NO | Part No. | Description |
|---|----|--------------|-------------------|
| | 1 | CB-CYHC-0031 | Ford Cable (20P) |
| | 2 | CB-CYVG-0009 | Holden Cable (6P) |



4. Name and function of each part

Front View of Main Body



- 1) PWR LED: External power supply. (12V DC, DLC power supply)
- 2) BAT LED:Battery status. (Color-Status) (Green-In Use, Orange-Charging, Red-Shortage, Red Blinking-Warning battery dead)
- 3)DLC LED: Communication with a vehicle
- 4) USB LED : Communication with a USB port
- 5)Bluetooth LED : Bluetooth communication

6)Power Button : Used to turn the power of the main body on and off

* If you press power button excessively strong, it may cause power button inside.



Upper part of Main Body



1.DLC connector: It is for DLC communication cable to diagnose vehicles.

2.RS232: It connects to TPMS module for read sensor data and coding. (New TPMS will be introduced in 2015)

Side of Mainbody



1.USB mini B: USB port for support J2534 communication (Later, it will be supported on our website.)

2.J2534 power port: power port for J2534

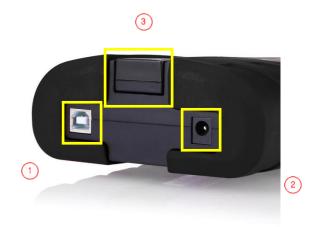


Back of Main Body



1.Serial No. label

Bottom of Main Body



1.USB B TPYE: Connecting to PC for update..

2.Power connector: It is for a AC/DC power adaptor and a cigar jack..

- 3. Bluetooth dongle (Mainbody): If it is connected with its mainbody, Green-color LED is on.
 - Do not connect this to PC side.
 - Do not remove this from its mainbody. If Bluetooth communication does not work, please push up Bluetooth dongle for connecting tightly.



5. Power Supply

Power can be supplied through the following 4 ways.

 Cigarette Lighter Power Cable
 Power is fed through the cigarette lighter power cable.
 However, when the vehicle ignition switch is in the "OFF" position or upon starting a vehicle, power is not supplied to the cigarette lighter socket.

2. Vehicle Battery

Power can be supplied through the cigar lighter cable after the red alligator clip of battery extension cable is attached to the positive battery terminal (+), and the black alligator clip to the negative battery terminal (-). In this case, power can be supplied continuously regardless of the position of the ignition switch or a startup situation of the vehicle. (Be careful no to discharge the battery.)



Caution! Improper connection of (+) and (-) may cause damage to the product.

3. DLC Communication Cable

Vehicles satisfying OBD-II communication protocol and 20PIN diagnostic connector can directly receive a power supply through DLC communication cable without a separate power supply unit.

4. AC/DC POWER Adapter

If AC/DC adapter is used as a power supply, the battery may be charged automatically, and it may be also used as the power supply of the mainframe.



1. Component pictures and description

1-1. Installation DVD



1-2. AUTO-i 300 Main Body andBluetooth





1-3. AUTO-i 300 Carrier Bag



Adapters and cables for vehicle diagnosis are included in AUTO-i 300. Store product in carrier bag if not in use in order to prevent loss and protect against impact.

1-4. USB Cable



The USB cable connects the USB port of AUTO-i 300 and that of your PC and is used when you want to download the diagnosis software or save captured files to your PC.



Be sure to use a dedicated USB cable only.

A dedicated USB cable of AUTO-i 300 is not allowed to use for other purpose.



1-5. Cigar Light Power Cable



- Cigar Light Power Cable-

The Cigar Light Cable connects the AUTO-i 300 to the cigar jack for power supply.

1-6. Battery Extension Cable



- Battery Extension Cable-

This battery extension cable make AUTO-i 300 to get power from battery of a vehicle directly by connecting to a cigarette cable.



1-7. DLC Cable



DLC Cable

The DLC cable is also called the OBD-II cable. All vehicles released recently have built-in OBD-II connectors compatible to the OBD-II specification.

It is possible to diagnose new model vehicles by directly connecting the DLC cable. It is not necessary to connect any additional power source as power is feed through the diagnostic connector.



Separate adapter is needed to diagnose old vehicles.

1-8. AC electrical power cord / adapter



AC electrical power cord / adapter

When you want to download the diagnosis program or search flight record, you can use this AC/DC electrical power adapter to feed power.

Also, can charge the battery built in the product.



1-9.DLC ADAPTER

The DLC Adapter is used to diagnose vehicles by connecting to the main connector. Do check name of brand written on adapter before use since shape of DLC Adapters are similar.

Some products of the same brand include more than one adapter. Therefore do check form and number of pin of the diagnostic connector which is attached to the vehicle.



Some vehicles do not supply power through the diagnostic connector. Do not connect any power supply if power can be supplied through the diagnostic connector.

1) Asian kit





SAMSUNG / NISSAN ADAPTOR (14P)KIA ADAPTOR 20P (BLUE)





DAEWOO,GM ADAPTOR (12P) SSANGYONG ADAPTOR (14P)



SSANGYONG ADAPTOR (20P)







TOYOTA, LEXUS ADAPTOR (17P"R")TOYOTA, LEXUS ADAPTOR (17P"C")





HONDA ADAPTOR (3P)HONDA ADAPTOR (5P)





SUBARU ADAPTOR (16P-9P)MAZDA "C" ADAPTOR (17P)





MAZDA ADAPTOR (6P + 1P)NISSAN ADAPTOR (14P)







MITSUBISHI ADAPTOR (12P) MITSUBISHI CABLE (12P+16P)



2) European kit





Mercedes Benz Board (38P) Mercedes Benz Cable (3 liners)





PSA Cable (2P) Audi / VW Cable (2+2P)





Fiat Cable (3P) Opel Adapter (10P)



BMW Adapter (20P)



3) Usa/ Australian kit





Ford Cable (20P) Holden Cable (6P)



Chapter 3: Menu Cofiguration

1. Before using the product

1-1.Confirm the power supply before using the product. Note that power can be supplied through the vehicle's diagnostic connector if it is connected to the vehicle.



When power is not supplied through the vehicle diagnostic connector, Connect cigar cable for power supply before communicating with the vehicle. If voltage levels are not matched between ECU and AUTO-i 300, it may disable communication

1-2.Before using the product, make sure to download the latest diagnostic program. Before using the product, confirm whether the diagnostic program is compatible with the option purchased.

Latest diagnostic data can be updated through our homepage(www.carmanit.com) or confirmed through regional retailers.

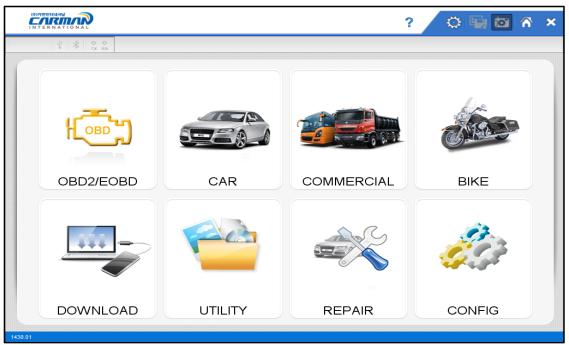


Chapter 3: Menu Cofiguration

2. Menu Description

This is the description for each menu displayed on the initial screen when AUTO-i 300is

program on.



01. OBD2/EOBD

- This menu is to diagnose and test some parts that are related with exhaust gas only if user`s vehicle has OBD 2/EOBD

02. CAR, COMMERCIAL, BIKE

- This menu provides scanner's own functionality such as vehicle diagnosis, service data search, actuator activation, etc.
- Depending on your option, you can perform diagnosis on Korean, Japanese, European, Australian and USA vehicles.

03. DOWNLOAD

- In this menu, AUTO-i300 can connect to PC so that it can upgrade software and download saved files etc. in AUTO-i 300 to PC.

04. UTILITY

- In this menu, you can check the system display unit, favorite maker setting, screen setting, time setting and system information
- 05. REPAIR

- To use Repair Information, you should install "Repair Information" in the installation DVD.

- This function provides repair service information and wiring diagrams.

06. CONFIG

- This menu provides setting function of System Display Unit, Maker, Display, Time, and System and User information.



Chapter 3: MenuCofiguration

3. Icons on Main Screen

This is description of each menu displayed on the initial screen when AUTO-i 300 is program on.



- 1. Help: Provides User Manual.
- 2. Setting: Selects "Autoselect Car Menu", "Show DLC Message Box" function.
- If each function is selected, it becomes colorized.
- * "Show DLC Message Box" will be available soon.
- 3. Text Shot: Saves the sensor data at specific time point.
- 4. Screen capture: Saves the image on the screen as image file (.bmp).
- 5. Home: Goes to main menu.
- 6. Exit: Exits this program.



1. How To Connect Diagnostic Connector and Select Diagnosis Program

- 1. Locate the diagnostic connector in the vehicle.
 - Most vehicles released after year 2002 conform to the OBD-II Protocol and have OBD-II diagnostic connectors.
 - Most OBD-II vehicles have their diagnostic connectors on the section over the brake pedal under the steering wheel.
 - If an additional adaptor is required, the scanner display shows the type of the necessary adaptor and the location of the diagnostic connector.



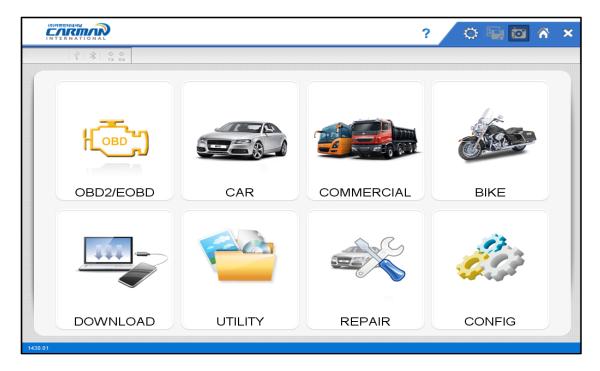
2. Use the DLC main cable to connect the vehicle's diagnostic connector and AUTO-i 300.

3. Turn on AUTO-i 300

- If power is not feed through the diagnostic connector and the AUTO-i 300 battery is not fully charged, you need to connect an additional power supply (vehicle battery or cigarette lighter power cable, etc).



4.Select "CAR" menu.



5. Select vehicle maker to be diagnosed in diagnostic menu.

| | | | ? | o 🖬 🖸 🔥 | Ĵ |
|-----------------|--------------------------|------------------|----------------|-----------------|---|
| V × OO TX RX | | | | | |
| RECENT LIST | | B | B | B | * |
| ALL | GM DAEWOO / CHEVROLET | HYUNDAI DOMESTIC | HYUNDAI EXPORT | HYUNDAI USA | |
| KOREA | | | | | |
| ASIAN | KIA | KIA | KIA | \bigcirc | |
| EUROPEAN | KIA DOMESTIC | KIA EXPORT | KIA USA | RENAULT SAMSUNG | |
| USA | | | | | |
| AUSTRALIA | | | | | |
| | | | | | |
| | SSANGYONG | | | | |
| | | | | | |
| | | | | | |
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| | | | | | ₹ |

-Selection of vehicle maker-



6. Select vehicle in diagnostic menu.

| | | ? 🔷 🖬 🖬 🏠 😁 | , |
|---------------------------|------------------------|-------------------|----------|
| \$ 8 0 0 TX RX | HYUNDAI KOREA DOMESTIC | | |
| HYUNDAI KOREA DOMESTIC | Trajet XG | Santa Fe(SM) | * |
| | Santa Fe(CM) | Santa Fe((CM F/L) | |
| | Santa Fe(DM) | MAXCRUZ(NC) | |
| | Tucson | Tucson IX(LM) | |
| | Veracruz | i40(VF) | |
| | i30(FD) | i30(GD) | |
| | Genesis | Genesis Coupe | |
| | | | |
| | | | ▼ ₹ |

7. Select the system to be diagnosed.

| | | ? 🖸 🖬 🔯 😚 | ţ | | | | |
|---------------------------|-----------------------------------|----------------------------|----------|--|--|--|--|
| ↓ × 0 0 tx rx | HYUNDAI KOREA DOMESTIC / Veracruz | | | | | | |
| HYUNDAI KOREA DOMESTIC | QUICK SEARCHING MODE | Engine Gasoline | ± | | | | |
| Veracruz | Engine Diesel | Automatic Transaxle | | | | | |
| | Airbag | Brake System(ABS/VDC) | | | | | |
| | Auto Aircon | 4WD | | | | | |
| | Electric Power Steering | Auto Head Leveling System | | | | | |
| | Power Tailgate | Body Control Module(BCM) | | | | | |
| | Smart Key System(IGN Nobe) | Smart Key System(Button) | | | | | |
| | Immobilizer | Transmiter Saving-PIC None | | | | | |
| | TPMS | | ▼ ₹ | | | | |



8. Select connector to be diagnosed in diagnostic menu.

| | ? | o 🖳 🔯 🏠 🖘 |
|---------------------------|--|-----------|
| v x rx | HYUNDAI KOREA DOMESTIC / Veracruz / QUICK SEARCHING MODE | |
| HYUNDAI KOREA DOMESTIC | OBD-II 16PIN CONNECTOR | * |
| Veracruz | | |
| QUICK SEARCHING MODE | | |
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1. Diagnostic Trouble Codes

 In this menu, it is possible to check for any malfunction of the selected vehicle system through the communication with the ECU in the vehicle. As AUTO-i 300 displays
 DTCs (Diagnostic Trouble Codes), you can easily check where malfunction occurs.
 Also, the description for DTCs is displayed as well to help you service your vehicle.



In order to diagnose DTC correctly, please check the connection between connector and AUTO-i 300. Please refer to Chapter4: Diagnosis menu and check details such as Vehicle maker, model and displacement etc.

| | ? 🔅 🖳 🔯 🏠 | ~ |
|--------------------|--|----------|
| ↓ * ° ° Tx RX | HYUNDAI KOREA DOMESTIC / Veracruz / Engine Gasoline / OBD-II 16PIN CONNECTOR | |
| DIAG MENU (F1) | 1. DIAGNOSTIC TROUBLE CODES | * |
| DTC (F2) | 2. ERASE/RESET DTC | |
| LIVE DATA (F3) | 3. PARAMETER DATA | |
| ACTUATOR (F4) | 4. ACTUATOR TEST | |
| SYS.INFO(F5) | 5. RESETTING ADAPTIVE VALUES | |
| Select System (F6) | 6. EVAP. LEAKAGE TEST | |
| | 7. PCM LOCK(MEC) SETTING | |
| | 8. MISFIRE DELAY RESON. | |
| | 9. SYSTEM INFORMATION | |
| | | |
| | | |
| | | ¥ |

The help function may differ between vehicle makers.

- Diagnostic Trouble Codes-

Note - Items of Diagnostic Trouble Codes may differ from depending on makers and models.

1.If a car and a system are selected correctly in the Vehicle Diagnosis menu and communication with vehicle is stable, the above picture will be shown.





If it does not show a menu like page 31 and shows "Communication Error" or does not communicate stably, please check first status of the target car or connection of cables.

| | | | | ? | o 🖬 | i î 🐔 🕤 | |
|--------------------|--|---|--|---|-----|---------|--|
| DLC ° ° TX RX | GM DAEWOO/CHE | GM DAEWOO/CHEVROLET / MATIZ/SPARK / ENGINE CONTROL / 0.8L / GM DAEWOO 12 or 18PIN CONNECTOR | | | | | |
| DIAG MENU(&F1) | DTC History DTC Clear DTC Freeze Frame Detail DTC List | | | | | | |
| DTC(&F2) | | | | | | | |
| CURRENT(&F3) | | | | | | | |
| ACTUATION(&F4) | | | | | | | |
| SYS.INFO(F5) | No Trouble Code | | | | | | |
| Select System(&F6) | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| DTC 0 / 0 | | | | | | | |
| | | | | | | | |

2. The DTC search screen appears. Now, you can check current and old DTCs and erase them.



Old DTCs are not activated unless there is no corresponding fault history.Only detected DTC can be saved.



3. Click current DTC icon to confirm its content.

| | | | | ? | 0 6 | i î 🐔 🖘 | | |
|--------------------|--|--------------------------|---------------------------|-------------------|------|-------------|--|--|
| V N O | HYUNDAI KOREA D | OMESTIC / Veracruz / Eng | jine Gasoline / OBD-II 16 | PIN CONNECTOR | | | | |
| DIAG MENU (F1) | DTC History DTC ERASE DTC Freeze Frame Detail DTC List | | | | | | | |
| DTC (F2) | P2122 TPS/ | APS1 - Signal | Low | | | ^ | | |
| LIVE DATA (F3) | P2127 Acce | lerator Positior | n Sensor 2 Sig | nal Circuit Low I | nput | | | |
| ACTUATOR (F4) | P2104 Limp | Home Mode - | Forced Idle | | | | | |
| | P1295 Limp | Home Mode - | Power Manage | ement | | | | |
| SYS.INFO(F5) | P0222 Throttle position (TP) sensor B/accelerator pedal position (APP) sensor B - lo | | | | | | | |
| Select System (F6) | P0123 Throttle position (TP) sensor A/accelerator pedal position (APP) sensor A - hi | | | | | | | |
| | P0107 Manifold abosolute pressure (MAP) sensor/barometric pressure (BARO) sens P1107 Manifold Absolute Pressure Sensor Circuit Intermittent Iow | | | | | (BARO) sens | | |
| | | | | | | | | |
| | P0452 Evaporative emission (EVAP) pressure sensor - low input | | | | | | | |
| | P0685 ECM power relay control - circuit open | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| DTC | | | | | | | | |
| 1 / 10 | | | | | | ~ | | |

- 3-1. DTC Press this button to check current DTCs.
 - In the case of MIL type vehicle, you can check codes through the DTC list.
- 3-2. History DTC Press this button to check old DTCs.
- 3-3. Erase DTC Press this button to clear DTCs.
- 3-4. Freeze Frame Press this button to check data at that moment of malfunction.
- 3-5. Detail Press this button to display detailed information for DTCs.



2. Erase/Reset DTC

1. If you select a car and a system correctly on the menu and if communication with a car works successfully, it shows the DIAG MENU like a picture below.

Press the ERASE/RESET DTC button.

| | ? 🔅 🖬 🔯 😚 | Ĵ |
|---|--|----|
| ↓ × o o tx rx | HYUNDAI KOREA DOMESTIC / Veracruz / Engine Gasoline / OBD-II 16PIN CONNECTOR | |
| DIAG MENU (F1) | 1. DIAGNOSTIC TROUBLE CODES | \$ |
| DTC (F2) | 2. ERASE/RESET DTC | |
| LIVE DATA (F3) | 3. PARAMETER DATA | |
| ACTUATOR (F4) SYS.INFO(F5) Select System (F6) | DO YOU WANT TO ERASE ? [Y/N] (CONDITION : KEY ON,ENGINE OFF) | |
| | 8. MISFIRE DELAY RESON. 9. SYSTEM INFORMATION | |
| | | |
| | | |
| | | ₹ |

- Erase/Reset DTC-
- 2. You can see "Yes" & "No" buttons. If you choose the YES button, the DTC is deleted. If you choose the No button, it returns to previous step.

ATIP

There are current and old DTCs. When trying to clear old DTCs, they are cleared immediately and they are not set again. However, when trying to clear current DTCs, they are cleared for a short period of time but they are activated

again. In this case, clear DTCs again after checking and repairing

malfunction parts for the corresponding DTCs.



3. Parameter Data

- In the PARAMETER DATA menu, the module can communicate with the vehicle ECU to check data and control values of each sensor of the selected system and to check conditions of various switches and actuators.



It is important to select the vehicle specifications correctly for accurate sensor data measurement.

Make sure to set the vehicle displacement, manufacturedyear, fuel, etc. correctly. The live data list can differ even with the same vehicle models.

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|--------------------|------------------------------|-------------|
| V × OO TX RX | | |
| DIAG MENU(&F1) | 1. DIAGNOSTIC TROUBLE CODES | * |
| DTC(&F2) | 2. ERASE/RESET DTC | • |
| LIVE DATA(&F3) | 3. PARAMETER DATA | |
| ACTUATOR(&F4) | 4. ACTUATOR TEST | |
| SYS.INFO(F5) | 5. RESETTING ADAPTIVE VALUES | |
| Select System(&F6) | 6. EVAP. LEAKAGE TEST | |
| | 7. PCM LOCK(MEC) SETTING | |
| | 8. MISFIRE DELAY RESON. | |
| | 9. SYSTEM INFORMATION | |
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-Parameter Data -

NOTE) The menu for Parameter data selection, shown in the above picture, can differ by vehicle makers and models.

1.When selecting the correct vehicle model and system from the menu and communication with the vehicle is properly established, the menu appears as the picture above. Select Parameter DATA and press the ENTER key



If the message indicating a communication error is displayed instead of the menu like the figure above or communication cannot be established, check the vehicle condition and the connection status of the diagnostic connector again..

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|--------------------|-----------------|--------------------------|---------------------------|---------------|------|-----------|-------|---|
| 1 🖞 🔧 📍 | HYUNDAI KOREA D | OMESTIC / Veracruz / Eng | gine Gasoline / OBD-II 16 | PIN CONNECTOR | | | | |
| DIAG MENU (F1) | Graph Mode | Flight Record Start | Dual DTC | Guide Info | Cha | ange Unit | | |
| DTC (F2) | SENSOR | | | VALUE | UNIT | MIN | MAX | |
| LIVE DATA (F3) | Warning La | amp State | | | | | | - |
| | Battery Vol | tage | | | | | | |
| ACTUATOR (F4) | Main Relay | , | | | | | | |
| SYS.INFO(F5) | Cooling Ter | mperature Senso | r | | | | | |
| Select System (F6) | Oil Temper | ature | | | | | | |
| | Air Flow Se | ensor | | | | | | |
| | Intake Tem | perature Sensor | | | | | | |
| | Manifold Al | bsolute Pressure | (MAP) Sensor | | | | | |
| | Barometric | Pressure Senso | г | | | | | |
| | Engine Spe | ed | | | | | | |
| | Target Idle | Speed | | | | | | |
| | Idle State | | | | | | | |
| Count | Vehicle Sp | eed Sensor | | | | | | |
| | Throttle Po | sition Sensor 1 | | | | | | , |

Graph Mode: Converts sensor data to graph for analyzing data stream.

- Maximum 32 item-selection available.
- Maximum eight (8) graphs on screen.
- To convert each sensor data to graph, you should select each item.

Flight Record Start: Saves sensor data.

Dual DTC: Displays selected DTC and its sensor data together.

Guide Info: For the system "Help" function supportive, you can see its helping information. (Available year 2015)

Change Unit: Changes measure of sensor data.

| Count | |
|-------------|--|
| 0 / 10 / 77 | |
| 123 | |

- 1. Count: Number of selected sensor data item.
- 2. Position: Position of selected sensor data item. (1 from top)
- 3. Number of total item: Number of total items of sensor data.



- Graph Mode: This function is to check live data in graph forms for tendencyanalysis.

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| v × ° • tx rx | HYUNDAI KOREA D | OMESTIC / Veracruz / Engi | ne Gasoline / OBD-II 16 | PIN CONNECTOR | | |
| DIAG MENU (F1) | Graph Mode | Flight Record Start | Dual DTC | Guide Info | Change Unit | |
| DTC (F2) | 1. Warning Lamp \$ | State (-) | | ON | <u>, </u> | |
| LIVE DATA (F3) ACTUATOR (F4) | 2. Battery Voltage | (V) | | 11.9 | | |
| SYS.INFO(F5) | | | | | | |
| Select System (F6) | 4. Cooling Temper | ature Sensor (°C) | | -16.5 | | |
| | 5. Oil Temperature (°C) | | | -16.5 | | |
| | 6. Air Flow Sensor (Kg/h) | | | 0.0 | | |
| | 7. Intake Temperature Sensor (°C) | | | -48.0 | | |
| | 8. Manifold Absolu | ite Pressure (MAP) S | ensor (hPa) | 999.8 | 3 | |
| | | | | | | |

- Flight Record Start: Saves data of selected sensor data.

Maximum data saving time is one hour and it might be different up to the number of selected data. (One hour after Flight Record Start, it stops automatically.)

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| ↓ × ° • tx rx | HYUNDAI KOREA D | OMESTIC / Veracruz / Engi | ne Gasoline / OBD-II 16 | PIN CONNECTOR | | | |
| DIAG MENU (F1) | Graph Mode | Flight Record Stop | Dual DTC | Guide Info | Change Unit | | |
| DTC (F2) | 1. Warning Lamp S | State (-) | | ON | | | |
| LIVE DATA (F3) | 2. Battery Voltage | (V) | | 11.9 | | | |
| ACTUATOR (F4) | | | | | | | |
| SYS.INFO(F5) | Flight Record Start : Temp.tmp | | | | | | |
| Select System (F6) | | ∕ou can save th | e record up to | o 1 hour. | | | |
| | | | ок | | | | |
| | | | | | | | |
| | 6. Air Flow Sensor (Kg/h) | | | | | | |
| | 7. Intake Tempera | ture Sensor (°C) | | -48.0 | | | |
| Count 0 /10 / 77 | -8. Manifold Absolu | ute Pressure (MAP) S | ensor (hPa) | 999.8 | 3 | | |

- Dual DTC: Displays DTC and its sensor data.

Top half screen displays sensor data and bottom half screen displays its DTC.

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| ∛ ≯ ° • tx rx | HYUNDAI KOREA D | HYUNDAI KOREA DOMESTIC / Veracruz / Engine Gasoline / OBD-II 16PIN CONNECTOR | | | | | | | |
| DIAG MENU (F1) | Graph Mode | Flight Record Start | Hide DTC | Guide Info | Change Unit | | | | |
| DTC (F2) | 1. Warning Lamp S | State (-) | | ON | | | | | |
| LIVE DATA (F3) | | | | | | | | | |
| ACTUATOR (F4) | 2. Battery Voltage | (^) | | 11.9 | | | | | |
| SYS.INFO(F5) | | | | | | | | | |
| Select System (F6) | | | | | | | | | |
| | | | | | | | | | |
| | 4. Cooling Tempera | ature Sensor (°C) | | -16.5 | i | | | | |
| | | | | | | | | | |
| | P2127 Acce | lerator Positior | n Sensor 2 Sigi | nal Circuit Low | Input | | | | |
| | P2104 Limp | Home Mode - | Forced Idle | | | | | | |
| | P1295 Limp | Home Mode - | Power Manage | ement | | | | | |
| | P0222 Throt | tle position (TF |) sensor B/aco | celerator pedal | position (APP) |) sensor B - Io | | | |
| | P0123 Throt | tle position (TF |) sensor A/aco | elerator pedal | position (APP) |) sensor A - hi | | | |
| | | | | | | ~ | | | |



4. Actuator Test

Actuator test is a function to diagnose abnormalities in the applicable product by forcefully operating or stopping actuator and switches.

The support of Actuator test function depends on vehicle maker and vehicle type.

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|--------------------|------------------------------|-------------|
| V X O O | | |
| DIAG MENU(&F1) | 1. DIAGNOSTIC TROUBLE CODES | * |
| DTC(&F2) | 2. ERASE/RESET DTC | A |
| LIVE DATA(&F3) | 3. PARAMETER DATA | |
| ACTUATOR(&F4) | 4. ACTUATOR TEST | |
| SYS.INFO(F5) | 5. RESETTING ADAPTIVE VALUES | |
| Select System(&F6) | 6. EVAP. LEAKAGE TEST | |
| | 7. PCM LOCK(MEC) SETTING | |
| | 8. MISFIRE DELAY RESON. | |
| | 9. SYSTEM INFORMATION | |
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-Actuator Test-

1. If a car and a system are selected correctly in the Vehicle Diagnosis menu and communication with vehicle is stable, the above picture will be shown Select a Actuator Test.



2.The screen as below appears.

| | ? 🔅 🖬 | |
|--------------------|-------------------------------------|----------|
| v x rx | | |
| DIAG MENU (F1) | 01. Injector 1 | <u>^</u> |
| DTC (F2) | 02. Injector 2 | |
| LIVE DATA (F3) | 03. Injector 3 | |
| | 04. Injector 4 | |
| ACTUATOR (F4) | 05. Injector 5 | |
| SYS.INFO(F5) | 06. Injector 6 | = |
| Select System (F6) | 07. Immobilizer Warning Lamp | |
| | 08. Fuel Pump Relay | |
| | 09. Fuel Pump Control | |
| | 10. Fan - High Speed | |
| | 11. Fan - Low Speed | |
| | 12. A/C Compressor Relay | |
| | 13. ETS Motor | |
| | 14. Throttle Minimum Value Initial. | |
| | 15. Variable Intake Manifold # 1 | |
| | 16. Ignition Coil - Cylinder 1 | |

3.When pressing start key icon, Actuator test starts.

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Before starting inspection, confirm operation conditions and inspect accordingly. Actuator test time varies according to items.

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|--------------------|-------|-----------|----------------|------------------|-------------------|---|---------|--------------|
| v ∦ ∦ ° • | | | | | | | | |
| DIAG MENU (F1) | Show | v Sensor | | | | | | |
| DTC (F2) | 01. I | njector 1 | | | | | | ^ |
| LIVE DATA (F3) | 02. I | njector 2 | | | | | | Ξ |
| ACTUATOR (F4) | 03. I | njector 3 | | | | | | |
| | 04.1 | njector 4 | | | | | | |
| SYS.INFO(F5) | 05. I | njector 5 | | | | | | |
| Select System (F6) | 06. 1 | njector 6 | | | | | | |
| | 07. I | mmobilize | er Warning Lam | | | | | ~ |
| | | | | 03. Injecto | or 3 | | | |
| | | Time | UNTIL STO | P KEY PRESS | | | Start | |
| | | Method | DEACTIVAT | TION | | | Stop | |
| | 0 | Conditio | n IG. KEY ON, | ENGINE RUNNING | i | | | 0 |
| | | | | PRESS [STRT], IF | F YOU ARE READY ! | | | |



4.When pressing stop key icon, Actuator test stops.Use this key to stop the inspection. Inspection stops when pressing ESC key or arrow on the upper right of the screen.



Evaluation on Actuator test results is determined by operating sounds of actuator and switches, and vehicle's RPM change. Therefore, Actuator test should be conducted in a quiet place where surrounding noises are limited. See current data values.



If the applicable system does not support sensor, actuator, and dual display, it supports only actuator operation items, not sensor items.



5. Resetting Adaptive Values

- The resetting adaptive values initiates ECU by clearing values of sets in ECU.
 - The clearing learning values may be different depend on car makers and models.

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| | | |
| DIAG MENU(&F1) | 1. DIAGNOSTIC TROUBLE CODES | * |
| DTC(&F2) | 2. ERASE/RESET DTC | |
| LIVE DATA(&F3) | 3. PARAMETER DATA | |
| ACTUATOR(&F4) | 4. ACTUATOR TEST | |
| SYS.INFO(&F5) | 5. RESETTING ADAPTIVE VALUES | |
| Select System(&F6) | 6. EVAP. LEAKAGE TEST | |
| | 7. PCM LOCK(MEC) SETTING | |
| | 8. MISFIRE DELAY RESON. | |
| | 9. SYSTEM INFORMATION | |
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| ↓ × 0 0 tx rx | | | | | | | |
| DIAG MENU | | | | | | 1 | 2 |
| DTC | RESE | | | 6 | | 3 | 4 |
| LIVE DATA | | | | | | 5 | 6 |
| ACTUATOR | PCM AUTO DE | TECTION RE | SET | | | 3 | 0 |
| SYS.INFO | | | | | | 7 | 8 |
| | CONDITION | IGN KEY | ON | | | 9 | 0 |
| ADAPTATION | CONDITION | ENGINE | STOP | | | | |
| | | LINGINE | STOP | | | | |
| | | 1 | | | | SHIFT | |
| | PRESS [| REST] IF YOU | J ARE READ | Y | | YES | NO |
| | | | | | | | |
| | REST | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | F1 F2 | F3 | F4 | F5 | F6 | | Esc |



6. Evap. Leakage Test

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- Press this button to check if there is leakage from a oil tank.

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|--------------------|------------------------------|-----------|----|
| \$ \$ 0 0 TX RX | | | |
| DIAG MENU(&F1) | 1. DIAGNOSTIC TROUBLE CODES | | \$ |
| DTC(&F2) | 2. ERASE/RESET DTC | | |
| LIVE DATA(&F3) | 3. PARAMETER DATA | | |
| ACTUATOR(&F4) | 4. ACTUATOR TEST | | |
| SYS.INFO(&F5) | 5. RESETTING ADAPTIVE VALUES | | |
| Select System(&F6) | 6. EVAP. LEAKAGE TEST | | |
| | 7. PCM LOCK(MEC) SETTING | | |
| | 8. MISFIRE DELAY RESON. | | |
| | 9. SYSTEM INFORMATION | | |
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| \$ № № № | | | |
| DIAG MENU | | | 1 2 |
| DTC | | | 3 4 |
| LIVE DATA | | | 5 6 |
| ACTUATOR | ***** | | 7 8 |
| SYS.INFO | ***** ENGINE START ****** | | |
| ADAPTATION | ***** | | 9 0 |
| | IF YOU READY, PRESS [ENTER] KEY | F6 | SHIFT YES NO |
| | F1 F2 F3 F4 F5 | F6 | Esc |



7. PCM Lock(MEC) Setting

- This function is to prevent data or programs from adjustment.
- System information differs from depend on car makers and models.

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|--------------------|------------------------------|-------------|
| v x nx | | |
| DIAG MENU(&F1) | 1. DIAGNOSTIC TROUBLE CODES | * |
| DTC(&F2) | 2. ERASE/RESET DTC | A |
| LIVE DATA(&F3) | 3. PARAMETER DATA | |
| ACTUATOR(&F4) | 4. ACTUATOR TEST | |
| SYS.INFO(&F5) | 5. RESETTING ADAPTIVE VALUES | |
| Select System(&F6) | 6. EVAP. LEAKAGE TEST | |
| | 7. PCM LOCK(MEC) SETTING | |
| | 8. MISFIRE DELAY RESON. | |
| | 9. SYSTEM INFORMATION | |
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| V X O O TX RX | | | | | | |
| DIAG MENU | | | | | 1 | 2 |
| DTC | PC | M LOCK(MEC) SETTING | |] | 3 | 4 |
| LIVE DATA | | | | , | 5 | 6 |
| ACTUATOR | PCM LC | DCK(MEC) SETTING | | | | 0 |
| SYS.INFO | | IGN KEY ON | | | 7 | 8 |
| ADAPTATION | CONDITION | ENGINE STOP | | | 9 | 0 |
| | | | | | SHIFT | |
| | IF Y | OU READY PRESS[SET] | | | YES | NO |
| | SET | | | - | | |
| | F1 F2 | F3 F4 | F5 | F6 | | Esc |



8. Misfire Delay Reason

- This function is to check the number of misfire in each cylinders.
- System information differs from depend on car makers and models.

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|--------------------|------------------------------|-------------|---|
| \$ \$ 0 0 TX RX | | | |
| DIAG MENU(&F1) | 1. DIAGNOSTIC TROUBLE CODES | | * |
| DTC(&F2) | 2. ERASE/RESET DTC | | |
| LIVE DATA(&F3) | 3. PARAMETER DATA | | |
| ACTUATOR(&F4) | 4. ACTUATOR TEST | | |
| SYS.INFO(&F5) | 5. RESETTING ADAPTIVE VALUES | | |
| Select System(&F6) | 6. EVAP. LEAKAGE TEST | | |
| | 7. PCM LOCK(MEC) SETTING | | |
| | 8. MISFIRE DELAY RESON. | | |
| | 9. SYSTEM INFORMATION | | |
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| v ≯ o ● tx rx | | | | | | | | |
| DIAG MENU | | | | | | | 1 | 2 |
| DTC | | MISE | FIRE DELAY | RESON. | | | 3 | 4 |
| LIVE DATA | | | | | | | | |
| ACTUATOR | 01.CYL | #1 MISFIR | E CURRENT | | 0 | | 5 | 6 |
| | | | E CURRENT | | 0 | | 7 | 8 |
| SYS.INFO | 03.CYL | #3 MISFIR | E CURRENT | • | 0 | | | |
| ADAPTATION | 04.CYL | #4 MISFIR | E CURRENT | • | 0 | | 9 | 0 |
| | 05.CYL | #5 MISFIR | E CURRENT | • | 0 | | | |
| | 06.CYL | #6 MISFIR | E CURRENT | | 0 | | SHIFT | |
| | 07.TOT | AL MISFIR | E CURRENT | - | 0 | | Shiri I | |
| | 08.MIS | FIRE DELA | Y REASON | | | | YES | NO |
| | N | O DELAY | | | | | | |
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| | | | | | | | | |
| | | | | | | | IN IEF | |
| | F1 | F2 | F3 | F4 | F5 | F6 | 4 | Esc |



9. System Information

-System Information shows information related with system such as system model and software version etc.

- System information differs from depend on car makers and models.

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|--------------------|------------------------------|-------------|
| v x rx | | |
| DIAG MENU(&F1) | 1. DIAGNOSTIC TROUBLE CODES | \$ |
| DTC(&F2) | 2. ERASE/RESET DTC | |
| LIVE DATA(&F3) | 3. PARAMETER DATA | |
| ACTUATOR(&F4) | 4. ACTUATOR TEST | |
| SYS.INFO(F5) | 5. RESETTING ADAPTIVE VALUES | |
| Select System(&F6) | 6. EVAP. LEAKAGE TEST | |
| | 7. PCM LOCK(MEC) SETTING | |
| | 8. MISFIRE DELAY RESON. | |
| | 9. SYSTEM INFORMATION | |
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|--------------------|--------------------------|
| V X OO | |
| DIAG MENU(&F1) | |
| DTC(&F2) | SYSTEM INFORMATION |
| LIVE DATA(&F3) | SYSTEM : Engine Gasoline |
| ACTUATOR(&F4) | |
| SYS.INFO(&F5) | |
| Select System(&F6) | CAL NO : 88888888 |
| | HW NUM : C05CFFFF |
| | CAL.ID : |
| | CVN : 01 F6 1B A6 |
| | |
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1. OBD-II/EOBD Overview

■ Purpose of OBD-II

- To diagnose causes of increased exhaust gas from the vehicle and the applicable component and then illuminate a malfunction indicator light(MIL) to notify the need of immediate and accurate repair.

■ OBD-II regulations

- If vehicle's exhaust gas increases due to malfunction of any component, diagnose the applicable component and causes and turn on MIL.

- Standard diagnostic device(GST) should be able to read malfunction description.

■ OBD-II regulations 《major diagnostic items》

The warning light shall be on before the emission reaches 1.5 times of the permissible limit due to any of the following troubles or performance degradation.

- Catalyst purification rate (this diagnosis is for HC emission only. This is being phased in for 1.75 times of HC limit from TLEV), misfire, EGR System, O2 sensor and fuel system secondary air system

- Diagnose all sensors and actuators used for controlling the engine to see if they function properly as well as wirings for an open/short circuit.

- Diagnose the entire evaporation system to see if it leaks.

- Perform diagnosis when the PCV valve and the crankcase or the PCV valve and the intake manifold are disconnected.

- Diagnose the thermostat when the coolant temperature fails to reach the specified temperature where the diagnosis can be made to other items in a given time after starting the engine.



2. How To Connect Diagnostic Connector and Select Diagnosis Program

(It is common to Korean, Japanese, European and USA vehicles)

1. Confirm the location of vehicle's diagnostic connector.

 Locate the diagnostic connector in the vehicle.
 Most OBD-II vehicles have their diagnostic connectors on the section over the brake pedal under the steering wheel. (OBD-II Diagnostic connector location)

 Since vehicles without the OBD-II diagnostic connector do not conform to the OBD-II/EOBD communication protocol, you can not use the OBD-II/EOBD vehicle diagnosis function to them.



OBD-II Diagnostic connector location

2. Use the diagnosis cable to connect the vehicle's diagnostic connector and AUTO-i 300

3. Turn on AUTO-i 300.

- As OBD-II vehicles feed power through the diagnostic connector to the module, they do not need any additional power supply.

4. Click "OBD-II 16PIN CONNECTOR" button on the menu for diagnosis.



For vehicle diagnosis, always position the key to "Ignition ON". Power is not supplied to ECU at the "OFF" position, failing communication with AUTO-i 300.

3. Readiness Test

The readiness test tries making communication with your vehicle to review general items of ECU modules that response.

1. Once it communicates successfully with vehicle, the following menu is displayed. Please click READINESS TEST function.

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|--------------------|--|-----------|---|
| v x rx | OBD2/EOBD / CAN / OBD-II 16PIN CONNECTOR | | |
| DIAG MENU (F1) | 1. [M01] READINESS TEST | | * |
| DTC (F2) | 2. [M01] PARAMETER DATA | | |
| LIVE DATA (F3) | 3. [M03] DIAGNOSTIC TROUBLE CODES | | |
| ACTUATOR (F4) | 4. [M04] ERASE/RESET DTC | | |
| SYS.INFO(F5) | 5. [M06] MONITORING TEST RESULTS | | |
| Select System (F6) | 6. [M08] BI-DIRECTIONAL CONTROL | | |
| | 7. [M09] VEHICLE INFORMATION | | |
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- Readiness Test -



If no menu like above is displayed or communication cannot be established, check the vehicle condition and the connections status of the diagnostic connector again. In addition, check if your vehicle supports OBD-II communication.

*Result

1. NOT CMPLTD: The test has not been completed.

- This appears when the test was not completed owing to the abnormal

ECU or sensor required to display the test result..

2. COMPLETED: The test has been completed.

3. NON APPLIC: The item is not applied to the tested vehicle.



4. Parameter Data

Current data item values specified in OBD-II regulations can be confirmed.

1. Once it communicates successfully with vehicle, click sensor data item as below.

| | | ? | 0 | |
|--------------------|--|---|---|---|
| \$ \$ 0 0 TX RX | OBD2/EOBD / CAN / OBD-II 16PIN CONNECTOR | | | |
| DIAG MENU(&F1) | 1. [M01] READINESS TEST | | | * |
| DTC(&F2) | 2. [M01] PARAMETER DATA | | | |
| LIVE DATA(&F3) | 3. [M03] DIAGNOSTIC TROUBLE CODES | | | |
| ACTUATOR(&F4) | 4. [M04] ERASE/RESET DTC | | | |
| SYS.INFO(F5) | 5. [M06] MONITORING TEST RESULTS | | | |
| Select System(&F6) | 6. [M08] BI-DIRECTIONAL CONTROL | | | |
| | 7. [M09] VEHICLE INFORMATION | | | |
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- Parameter Data-

2. It displays selected sensor data as below, and you can check each data value

| | | | | | ? | ¢ 4 | ; 🖸 🏠 | |
|--------------------|---|------------------------|-------------|------------|------|-----------|-------|---|
| ↓ × • • • | OBD2/EOBD / CAN / | OBD-II 16PIN CONNECT | OR | | | | | |
| DIAG MENU(&F1) | Graph Mode | Flight Record Start | Dual DTC | Guide Info | Cha | ange Unit | | |
| DTC(&F2) | SENSOR | | | VALUE | UNIT | MIN | MAX | |
| LIVE DATA(&F3) | Fuel Syster | m 1 Status | | | | | | - |
| ACTUATOR(&F4) | Fuel Syster | m 2 Status | | | | | | |
| · · | Calculated | LOAD Value | | | | | | |
| SYS.INFO(F5) | Engine Coo | plant Temperature | • | | | | | |
| Select System(&F6) | Short Term | Fuel Trim - Bank | c1 | | | | | |
| | Long Term | Fuel Trim - Bank | 1 | | | | | |
| | | Fuel Trim - Bank | | | | | | |
| | | Fuel Trim - Bank | | | | | | |
| | | ifold Absolute Pre | essure | | | | | |
| | Engine RPI | | | | | | | |
| | | eed Sensor | | | | | | |
| Count | Ignition Timing Advance for #1 Cylinder | | | | | | | |
| 0 / 10 / 43 | | Femperature | | | | | | |
| | Air Flow Ra | ate from Mass Air | Flow Sensor | | | | | - |

- OBD-II/EOBD Sensor Data -



5. Diagnostic Trouble codes

Press this button to check trouble code of current vehicle.

1. Once it communicates successfully with vehicle, click DTC item as below.

| | | ? | Ø I | ה ו |
|--------------------|--|---|-----|------------|
| ↓ > 0 0 TX RX | OBD2/EOBD / CAN / OBD-II 16PIN CONNECTOR | | | |
| DIAG MENU(&F1) | 1. [M01] READINESS TEST | | | \$ |
| DTC(&F2) | 2. [M01] PARAMETER DATA | | | • |
| LIVE DATA(&F3) | 3. [M03] DIAGNOSTIC TROUBLE CODES | | | |
| ACTUATOR(&F4) | 4. [M04] ERASE/RESET DTC | | | |
| SYS.INFO(F5) | 5. [M06] MONITORING TEST RESULTS | | | |
| Select System(&F6) | 6. [M08] BI-DIRECTIONAL CONTROL | | | |
| | 7. [M09] VEHICLE INFORMATION | | | |
| | | | | |
| | | | | |
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-Diagnostic Trouble codes-

2. It displays DTC as below, and it support DTC erase.

| | | | | ? | Ø 🖬 | i î 🔨 |
|--------------------|-------------------|----------------------|-----------------|------------------|--------|----------|
| V × • • | OBD2/EOBD / CAN / | OBD-II 16PIN CONNECT | TOR | | | |
| DIAG MENU(&F1) | DTC | History DTC | ERASE DTC | Freeze Frame | Detail | DTC List |
| DTC(&F2) | P2122 Throt | tle/Pedal Posit | ion Sensor/Sw | itch "D" Circuit | Low | <u>~</u> |
| LIVE DATA(&F3) | P2127 Throt | tle/Pedal Posit | ion Sensor/Sw | itch "E" Circuit | Low | |
| ACTUATOR(&F4) | P2104 Throt | tle Actuator Co | ontrol System - | Forced Idle | | |
| | | | | | | |
| SYS.INFO(F5) | | | | | | |
| Select System(&F6) | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| DTC | | | | | | |
| 1/4 | | | | | | ~ |

- DTC -



6.Erase/Reset DTC

1. Select a car model and system in the diagnosis menu. Then, if communication with the vehicle is established successfully, the menu shown in Figure of Page49 appears. Select the ERASE/RESET DTC button.

| | | ? 🔷 🖬 🔯 | |
|---|---|---------|--------|
| ↓ * 0 0 TX RX | OBD2/EOBD / CAN / OBD-II 16PIN CONNECTOR | | |
| DIAG MENU(&F1) | 1. [M01] READINESS TEST | | * |
| DTC(&F2) | 2. [M01] PARAMETER DATA | | |
| LIVE DATA(&F3) | 3. [M03] DIAGNOSTIC TROUBLE CODES | | |
| ACTUATOR(&F4) SYS.INFO(F5) Select System(&F6) | DO YOU WANT TO ERASE ? [Y/N] (CONDITION : KEY ON,ENGINE OFF) YES NO | | |
| | | | ▼ ▼ |

2. If the "YES" button&"NO"button window are shown, Select the YES button to clear DTC or select the NO button to return back to previous step.

⁻Erase/Reset DTC-



7. Monitoring test results

This menu displays the monitoring test results while the vehicle is being normally operated.

- To test systems and units of different manufacturers, it is required to specify test

IDs and component IDs.

If there is no test item supported by the vehicle manufacturer, an error message will be displayed.

1.Once it communicates successfully with vehicle, click the item of Monitoring Test Result as below

| INTERNATIONAL | ? 🔅 🖬 | i î 🐔 🗢 |
|--------------------|--|---------|
| | OBD2/EOBD / CAN / OBD-II 16PIN CONNECTOR | |
| DIAG MENU(&F1) | 1. [M01] READINESS TEST | * |
| DTC(&F2) | 2. [M01] PARAMETER DATA | |
| LIVE DATA(&F3) | 3. [M03] DIAGNOSTIC TROUBLE CODES | |
| ACTUATOR(&F4) | 4. [M04] ERASE/RESET DTC | |
| SYS.INFO(&F5) | 5. [M06] MONITORING TEST RESULTS | |
| Select System(&F6) | 6. [M08] BI-DIRECTIONAL CONTROL | |
| | 7. [M09] VEHICLE INFORMATION | |
| | | |
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- Monitoring Test Results -



2. It displays test result of each Monitoring Test item.

| | ? 🔅 | 🔁 🔯 🏠 🗢 |
|-----------------------------------|--|---------|
| \\$\\ \ \\$\\ 0 0 TX RX | OBD2/EOBD / CAN / OBD-II 16PIN CONNECTOR | |
| DIAG MENU | | 1 2 |
| DTC | MONITORING TEST RESULTS | 3 4 |
| LIVE DATA | | 5 6 |
| ACTUATOR | * SELECT A ITEM | |
| SYS.INFO | 01. Exhaust Gas Sensor Monitor - Bank1 Sensor1 | 7 8 |
| Select System | 02. Exhaust Gas Sensor Monitor - Bank2 Sensor1 | 9 0 |
| | 03. Catalyst Monitor Bank1 04. Catalyst Monitor Bank2 | |
| | 04. Catalyst Monitor Bank2 05. EVAP Monitor (Cap Off/0.150) | SHIFT |
| | 06. EVAP Monitor (0.040) | YES NO |
| | 07. EVAP Monitor (0.020) | |
| | 08. Purge Flow Monitor | |
| | | |
| | F1 F2 F3 F4 F5 F6 | Esc |



8.BI-Directional Control

- You can control and test functions related with OBD-II system.

| | ? 🔷 🖳 🔯 🐔 | |
|--------------------|--|---|
| V X O O TX RX | OBD2/EOBD / CAN / OBD-II 16PIN CONNECTOR | |
| DIAG MENU(&F1) | 1. [M01] READINESS TEST | * |
| DTC(&F2) | 2. [M01] PARAMETER DATA | |
| LIVE DATA(&F3) | 3. [M03] DIAGNOSTIC TROUBLE CODES | |
| ACTUATOR(&F4) | 4. [M04] ERASE/RESET DTC | |
| SYS.INFO(&F5) | 5. [M06] MONITORING TEST RESULTS | |
| Select System(&F6) | 6. [M08] BI-DIRECTIONAL CONTROL | |
| | 7. [M09] VEHICLE INFORMATION | |
| | | |
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-BI-Directional Control-

6-1. If communication wih the vehicle is established successfully, the menu above appears. Select BI-DIRECTIONAL CONTROL.



If no menu like picture above is displayed or communication cannot be established, check the vehicle condition and the connection status of the diagnostic connector again.

In addition, check if your vehicle supports OBD-II communication..



9. Vehicle Information

A function to confirm information on the installed ECU in the vehicle, which is executable only in ECU provided with module information.

1. Once it communicates successfully with vehicle, click vehicle information item as below.

| | | ? 🔅 🖳 🔯 🐔 🗄 | Ĵ |
|---|--|-------------|---|
| ∛ 🛞 ° ° tx rx | OBD2/EOBD / CAN / OBD-II 16PIN CONNECTOR | | |
| DIAG MENU(&F1) | 1. [M01] READINESS TEST | | * |
| DTC(&F2) | 2. [M01] PARAMETER DATA | | |
| LIVE DATA(&F3) | 3. [M03] DIAGNOSTIC TROUBLE CODES | | |
| ACTUATOR(&F4) | 4. [M04] ERASE/RESET DTC | | |
| Image: Reserve and Rese | | | |
| Select System(&F6) | 6. [M08] BI-DIRECTIONAL CONTROL | | |
| | 7. [M09] VEHICLE INFORMATION | | |
| | | | |
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- Vehicle Information -

2. It displays its ECU information as below.

| | | | | | | ? 🔘 | | 중 ∽ |
|-------------------|----------------|----------------------|----------------------|---------|-----|-----|-------|-----|
| \$ 8 0 0 tx rx | OBD2/EOBD / C | AN / OBD-II 16PIN | CONNECTOR | | | | | |
| DIAG MENU | | | | | | | 1 | 2 |
| DTC | | SYS | | RMATION | | | 3 | 4 |
| LIVE DATA | OBD Monitori | ng Conditions Encou | intered Counts | | | | 5 | 6 |
| ACTUATOR | Ignition Cycle | Counter | | | - 0 | | 7 | 8 |
| SYS.INFO | Catalyst Moni | tor Completion Court | ts Bank 1 | | - 0 | | 9 | 0 |
| Select System | Catalyst Moni | tor Conditions Encou | untered Counts Bank1 | | - 0 | | | |
| | Catalyst Moni | tor Completion Coun | ts Bank 2 | | - 0 | | SHIFT | |
| | | | | | - 0 | | YES | NO |
| | ARE YOU | CONTINUE? [ENTE | RÆSC] | | | | | |
| | F1 | F2 | F3 | F4 | F5 | F6 | | Esc |

1. Parameter Record

Afunction to view the saved vehicle's service data for analyzing.

| | | | | | ? | 1 | × |
|-------------------|-----------------------|---------------|-----------|---------------|-----------------|----------|---|
| 🖞 Disconnected | Stored Data > Paramet | er Record | | | | | |
| Customer Database | Rename | Delete | Data View | Convert Excel | Attach | | |
| Stored Data | | PC List [0] | | | Device List [0 |] | |
| Parameter Record | | | | | | | |
| TE Text Shot | | | | | | | |
| Image Shot | | | | | | | |
| Print | | | | | | | |
| Repair Guide | | | | | | | |
| Complaint Report | | | | | | | |
| Configuration | | | | | | | |
| Program Download | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Rename: Changes file name on the list.

Delete: Deletes file on the list.

Data View: Views detail information of the selected file on the list.

Convert Excel: Converts to type of Excel file.

Attach: Attached the selected file to email to the Technical Support Team of Carman International Co. Ltd.



2. Text Shot

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- A function to view and compare the saved DTC and sensor data at specific time point for analyzing

| | | | | | ? | <u>io</u> 4 > | * |
|-------------------|-------------------------|-------------|---------|-------|-------------------|---------------|----------|
| √ Disconnected | Stored Data > Text Shot | - | | | | | |
| Customer Database | Rename | Delete | Compare | Print | Attach | | |
| Stored Data | | PC List [0] | | | Device List [0] | | |
| Parameter Record | | | | | | | _ |
| 1 Text Shot | | | | | | | |
| Image Shot | | | | | | | |
| Print | | | | | | | |
| Repair Guide | | | | | | | _ |
| Complaint Report | | | | | | | _ |
| Configuration | | | | | | | |
| Program Download | | | | | | | _ |
| | | | | | | | _ |
| | | | | | | | _ |
| | < | | | | | | > |

Compare: Compares selected two lists.

Print: Prints selected file.

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3. Image Shot

- Displays saved image file.

| INTERNATIONAL | | | | | ? | ⊠ ∧ × |
|-------------------|---|-------------------|------------|-----------------|-------------------|------------------|
| ⊈ Disconnected | Stored Data > Image Shot | | | | | |
| Customer Database | Rename Delete | | Image View | Print | Attach | |
| Stored Data | PC List [22 | 2 M | | | Device List [0] | |
| Parameter Record | 20141111 161616 20141111 161634 | 2 M 2 M | | | | |
| T Text Shot | 20141111 161637 20141111 161657 | 2 M 2 M | | 3 | | |
| Image Shot | 20141111 161701 20141111 161716 20141111 161727 | 2 M 2 M 2 M | | | | |
| Print | 20141111 161732 | 2 M | ~ | | | |
| Repair Guide | (Biscon ecter | d Stored Date - | | Compace A first | ? 🖾 😚 🛛 🗙 | |
| Complaint Report | Stored Dat | | PCLat_0] | <u> </u> | Device List [0] | |
| Configuration | in tertse Simple | | | 0 | | |
| Program Download | Hant Henpatr Ger | lda | | | | |
| | 👘 Campbint | | | | | |
| | Program D | Dawnlozd | | | | |
| | | ¢ | | - | | |

Image View- Displays full screen.

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4. Print

4

- It prints the Check List or selected file from the saved list through the connected printer.

| Disconnected | Stored Data > Print | | | | | |
|-------------------|----------------------|-------|----------------|------------|--------------|------------|
| Customer Database | Delete | Print | Preview | Check List | | |
| Stored Data | | | ATTA | CHLIST | | |
| Parameter Record | | | | | | |
| Text Shot | | | | | | |
| Image Shot | | | Work P | articulars | | |
| E Print | Brand | | Model | | VIN | |
| | Plate Number | | Total Distance | | Others | |
| Repair Guide | Owner | | Mobile | | Arrival Date | 2014/11/11 |
| Complaint Report | Customer requests | | | | | |
| Configuration | Work Particulars | | | | | |
| Program Download | Work Particulars | | | | | |
| | | | | | | |
| | | | | | | |

Preview- Previews the prints.

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Check List- Views and prints Check List.

1. Repair Information Menu

| | | ? 💿 🕥 🗙 |
|-------------------|----------------------------|---------|
| √ Disconnected | Repair Guide > Repair Info | |
| Customer Database | Repair Information | |
| Stored Data | Sorted By Parts | |
| Repair Guide | Sorted By Trouble | |
| Repair Info | Circuit Diagram | |
| Complaint Report | Part Description | |
| | Part Location | |
| Program Download | Repair Data | |
| | | |
| | | |
| | | |
| | | |
| | | |

1.Sorted By Parts

Tips are provided for the desired component by 4 systems; engine / engine(LPG) / ABS / suspension system.

2. Sorted By Troubles

Tips are provided for desired malfunction type by 4 systems; engine / engine(LPG) / automatic transmission/ suspension system.

3. Circuit Diagram

You can search wiring diagram of the desired vehicle by maker.

4. Parts Description

You can search description of components of the desired vehicle by maker.

5. Parts LocationYou can search location of components of the desired vehicle by maker.

6. Repair Data

You can search maintenance data of the desired vehicle by maker.

2.Sorted By Parts

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| INTERNATIONAL | | |
|--|--|--|
| Tech Info. > Sorted By Parts | | |
| Crank Angle Senser Camshaft Angle Sensor Throttle Position Sensor Mass Air Flow Sensor O2 Sensor Injector Ignition ISC Valve Intake Air Temperature Sensor Coolant Temperature Sensor Sensor Ground Battery Knock Sensor Vehicle Speed Sensor Scalve Position Sensor EGR Valve Position Sensor Canister Solenoid Valve EGR Solenoid Valve O2 Sensor Heater | Maintenance assistance Please select the help menu type at the top left of the screen and click on the help menu you want to browse. | |
| K Z Crank Angle Senser | | |

- Menu by Component Type-

Click [Troubles] in menu window on the left.

Tips for malfunction description of selected sensor and repair method.

| Tech Info. > Sorted By Parts | | |
|---|---|---|
| Crank Angle Senser Camshaft Angle Sensor Camshaft Angle Sensor Camshaft Angle Sensor Camshaft Angle Sensor Cambra | 1. O2 sensor faulty Cause of Problem Repair Procedure | 1.1 General fault related to the 02 sensor 1.1 Check the cause of the problem and repair appropriately a, replace 02 sensor b, repair the wiring |
| Part Explanation Part Characteristics EMS Understanding ■ Titanium without heater ■ Zircon with heater | Cause of Problem Repair Procedure | 2.1 Faulty O2 sensor or intermittent wires (Signal, ground wire) 2.1 Check the cause of the problem and repair appropriately a, replace O2 sensor b, repair the wiring |
| Zircon without heater | | oltage is always low (less than 0.5V) |
| | Cause of Problem Repair Procedure | 3,1 O2 sensor signal line is shorted to ground 3,1 Repair the short in the wiring |
| Ignition ISC Valve Intake Air Temperature Ser Coolant Temperature Sens Sensor Ground Battery Knock Sensor Vehicle Speed Sensor O2 Sensor > Titanium with heater > Trou | bles | |

- Troubles -



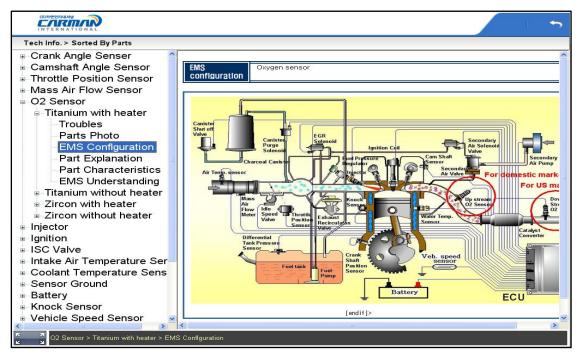
Click [Pictures of parts] in menu window on the left.

Tips for picture of selected sensor



Click [Location of Parts] in menu window on the left.

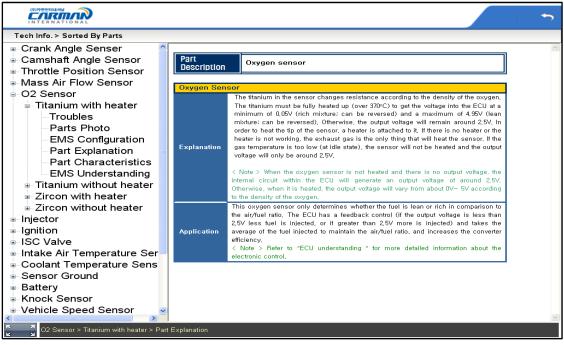
Tips for location of part of selected sensor





Click [Part Description] in menu window on the left.

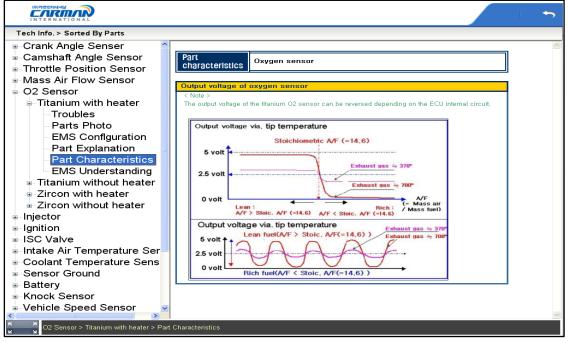
Tips for detailed principles and function of parts

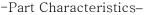


-Part Description-

Click [Part Characteristics] in menu window on the left.

Tips for characteristics of selected sensor.







Click [Principles Understanding] in menu window on the left.

Tips for principles of parts.

| Tech Info. > Sorted By Parts | |
|---|---|
| 🖩 Crank Angle Senser 🧁 | |
| - Camshaft Angle Sensor | EMS understanding Oxygen sensor(1/2) |
| Throttle Position Sensor | |
| Mass Air Flow Sensor | EMS application of Oxygen sensor Oxygen sensor is positioned in the exhaust pipe and it generates a voltage of 0-5V as the resistance changes |
| ■ O2 Sensor | depending on oxygen density. With this information, the ECU controls the fuel to the engine to have a stoichiomet |
| Titanium with heater | air fuel ratio (feedback control). |
| Troubles | When the density of the oxygen is high (lean fuel) the output voltage from the sensor is less than 2.5V and as a result, more fuel is needed per cycle. However, when more fuel is added, the density of the oxygen decreases (rich |
| Parts Photo | fuel) and the output voltage from the sensor becomes greater than 2.5V. The ECU then reduces the amount of fuel to |
| EMS Configuration | the engine and the density of the oxygen increases again and the process repeats. The amount of fuel to the engin changes from high to low but their average will meet the required stoichiometric air fuel ratio. This process is |
| Part Explanation | changes from fight to fow but their average with meet the required storch ometric air fuel ratio. This process is t we call feedback. |
| Part Characteristics | |
| EMS Understanding | Injection feedback by Titania O2(TiO2) sensor |
| Titanium without heater | O2 sensor output voltage , Start feedback |
| Zircon with heater Zircon without heater | Allax: S.OV |
| ■ ∠ircon without heater ■ Injector | Injection time Min: 0.0V |
| u= Injector ■ Ignition | correction by Max: 50% |
| ⊪ ISC Valve | 02 sensor Max 50% |
| Intake Air Temperature Ser | Lean (A/F > Stoic. A/F) |
| -Coolant Temperature Sens | A/F 14.6 |
| B-Sensor Ground | Rich (A/F < Stoic, A/F) |
| Battery | |
| Knock Sensor | |
| 🖩 Vehicle Speed Sensor 🛛 🚽 | |
| | |
| C2 Sensor > Titanium with heater > EMS | 3 Understanding |

-Principles Understanding -



: icon to move to next screen.



: icon to move to previous screen.



: icon to change the menu window on the left to full screen or basic screen.



3.Sorted By Troubles

| INTERNATIONAL | 1.00 | |
|--|------|--|
| Tech Info. > Sorted By Troubles Starting trouble 20 OI Starter works while S Cause of trouble Related part Analysis method 02 Engine shut off right : 03 Start failure: Irregular 04 Engine shut off after 05 Stabilized after irregu 06 Stabilized after irregu 06 Stabilized after ingin 07 Rich fuel injection wit 08 Engine retches and r 09 Engine stabilized after 10 Stabilized after engin 11 Engine start like start 12 Engine revs up high : 13 Engine doesn't start v 14 Engine doesn't start v 15 Engine shut off while 17 Engine shut off after 18 Engine doesn't starts 19 Backfire occurs while 20 Engine vibrates with v | | |

-Menu by Type of Malfunction-

Click [Cause of Problem] in menu window on the left.

Tips for cause of malfunction

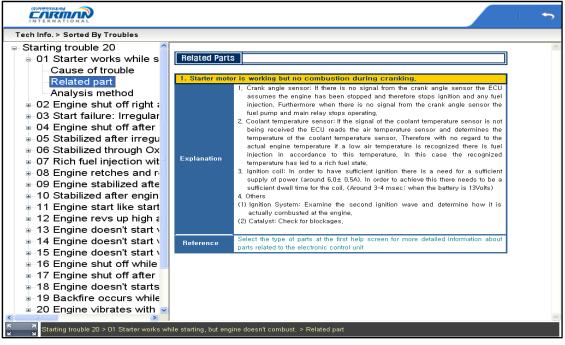
| INTERNATIONAL | | | ◆ |
|--|--|--|----------|
| Tech Info. > Sorted By Troubles | | | |
| Starting trouble 20 01 Starter works while s Cause of trouble Related part Analysis method 02 Engine shut off right a 03 Start failure: Irregular 04 Engine shut off after 05 Stabilized after irregu 06 Stabilized through Ox 07 Rich fuel injection wit 08 Engine retches and r 09 Engine stabilized after 10 Stabilized after engin 11 Engine revs up high a 13 Engine doesn't start | Cause of Problem 1. Starter mot Explanation | tor is working but no combustion during cranking. In the case that there is no smell of fuel from the exhaust pipe or no spark from the spark plug this is a problem that has occurred because the ECU had not been able to sense the running of the engine. Solution: The signal sent by the crank angle sensor is not being received by the ECU. Take note if the crank angle sensor is an optical type, which is built into the distributor this is a frequent problem, which occurs from overheating. In this case, it is impossible to repair and therefore must be replaced. There will be a difference in frequency depending on the maker of the part. In the case that there is a smell of fuel from the exhaust pipe but no spark there is a problem with the ignition system. Solution: Check the ignition system (ignition coil, power distributor etc) for any existing problems. In the case that the engine will not start even if fuel is injected and there is a spark there is a problem with the fuel's density. Solution: As the coolant temperature sensors signal is not being received the safe | |
| 14 Engine doesn't start v 15 Engine doesn't start v 16 Engine shut off while 17 Engine shut off after 18 Engine doesn't starts | | mode assumes the temperature (under normal conditions the temperature is 20 degrees Celsius or air temperature). However in this case the assumed temperature is lower then the actual temperature of the engine there is a rich supply of fuel. In this case there may be slight combustion. In order to find out the exact cause of this problem or view a detailed analysis please refer to "trouble with starting 2". | |
| | | Check the catalyst installed on the exhaust pipe for a blockage, Solution: Replace the catalyst | |
| ■ 19 Backfire occurs while ■ 20 Engine vibrates with ▼ | Reference | Surdiant: neprace vite catalyst Select the type of parts at the first help screen for more detailed information about parts related to the electronic control unit | ~ |
| Starting trouble 20 > 01 Starter works whi | le starting, but en | gine doesn't combust. > Cause of trouble | |

-Cause of Problem -



Click [Related Parts] in menu window on the left.

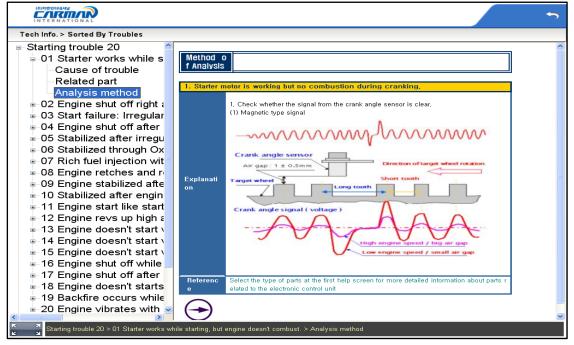
☞ Description of component related to malfunction.



-Related Parts-

Click [Analysis Method] in menu window on the left.

Tips for analysis method for malfunction symptoms.



-Analysis Method-

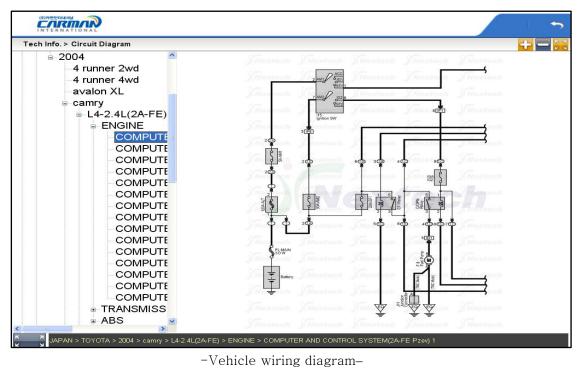


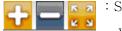
4. Circuit Diagram



-Vehicle wiring diagrams menu -

If you "drag" the screen, the wiring diagram location changes.





: Screen can be adjusted to condensed / extended / full screen with icons on the top of the screen.



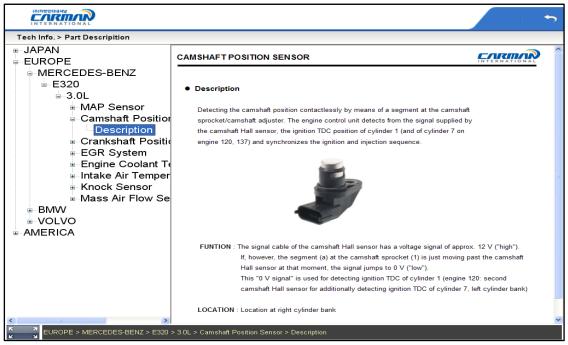
5. Parts Description

| INTERNATIONAL | | Ĵ |
|---|--|---|
| Tech Info. > Part Descripition | | |
| JAPAN EUROPE MERCEDES-BENZ BA20 BA20 | Maintenance assistance Please select the help menu type at the top left of the screen and click on the help menu you want to browse. | |
| | | |

- Part Description Menu-

Click the desired part in menu window on the left.

Tips for parts description



- Part Description-



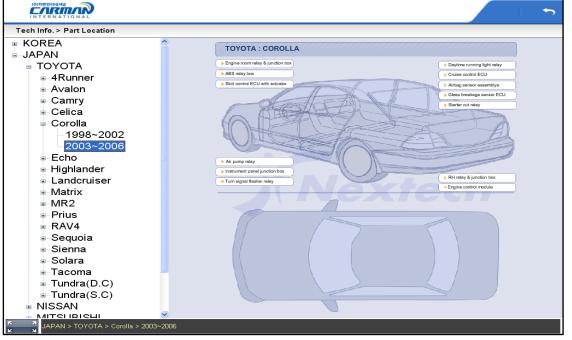
6. Parts Location



- Parts Location Menu -

Click the vehicle and model year to be confirmed in menu window on the left.

☞ Location will be confirmed by clicking the name of part in activated window on the right.



- Part Description -



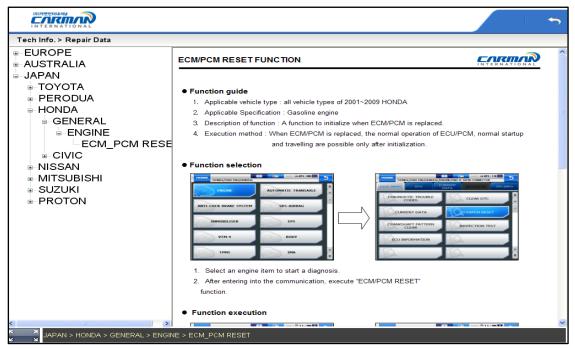
7. Repair Data



- Maintenance Data Menu -

Click the vehicle and system to be confirmed in menu window on the left.

Applied vehicle type, applied specification, function description, execution method, and order of execution will appear in the window on the right.



- Part Description -



8. Web Manual

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-Provides link to each maker's service information site.

| | | ? 🔯 🖄 🗙 |
|-------------------|---------------------------|---------|
| ਪ੍ਰੈ Disconnected | Repair Guide > Web Manual | |
| Customer Database | Web Manual | |
| Stored Data | Motordata | |
| Repair Guide | ALLDATA | |
| Repair Info | Mitchell | |
| Web Manual | Bentley | |
| Complaint Report | Hyundai / Kia | |
| Configuration | Ssangyong | |
| Program Download | 1/4 | |
| | | |
| | | |
| | | |
| | | |

Motordata: Please refer to "MOTORDATA INSTALLATION MANUAL" file in your DVD.



1. System Configuration

In this menu, you can change the display unit of data which are sent from a vehicle.

- The units of various information, such as speed, temperature, pressure, angle, air flow can be checked and modified.

| | | | | | | 🖸 🗥 🕤 |
|-------------------|---------------------|---|------------------|-----------------|-------------------|------------------|
| | Configuration > Sys | tern Config | | | | |
| Customer Database | III METER | Mile/YARD | Save | S Cancel | | |
| Stored Data | | Speed | | System Language | | Diag. Language |
| Repair Guide | | m.p.h 🗪 | | - | 🝷 anguage, plo | OS LANGUAGE ONL |
| Complaint Report | | Temperature | | Screen Size | | Background Color |
| Configuration | | Pressure | | 1024 * 768 | • | BLVE |
| System Config | | 🗂 mBar/hPa 📑 | | | | |
| Graph Config | | Angle | 2 | Select Device | _ | IP Address |
| System Info | | < % < | | AUTO-I 300 | - | 192.168.3.18 |
| User Info | 98≋ | Air Flow | | | - | Connect |
| Program Download | | | | | ; | |
| | 2.For correc | nay set by "Meter" or "M t device connection, ple full screen, please click | ease check "Conn | | | ce" correctly. |

1)It is possible to change the display units all at once according to the region that uses "Metric" or "Yard-Pound" system.

2) After changing the display unit, click the Save button to save your modification.

- SPEED : You can change between Km/h and MPH.
- TEMPERATURE : You can change between $\,^\circ\!\mathrm{C}\,$ and $\,^\circ\!\mathrm{F}.$
- PRESSURE : You can change among mbar, kPa, inHg and psi.
- ANGLE : You can change between $^\circ$ and %.
- AIR FLOW : You can change between gm/s and lb/m.



3) After setup of Language or Screen Size, please click to Save button.

-System Language: sets operating system language of PC program. 21 languages are available. -Diag. Language: sets diagnostic language.

Diagnostic languages can be selected up to the installed diagnostic languages in internal memory.

-Screen Size: sets screen size of program.

-Background Color: changes the background color.

-Select Device: selects diagnostic device.

-Communication Method: selects communication method of diagnostic module.

It selects Bluetooth or USB communication. It does not support simultaneous use of Bluetooth and USB communication.



2. Graph Configuration

You can set the display environment when confirming current data values with graph.

- Graph line, color or thickness of background screen



CH1~8: Channel can be changed to change graph color by channel for

total 8 channels that can be displayed on the screen.

Default 1: Standard default setup.

Default 2: Background color in Default 1 is white.

Save: After changing settings, save with [save] icon on the bottom of the screen so that changed setting values can be displayed.

Cancel: Cancel setup.

Background: Background color can be changed to desired color.

Grid X: The color of the vertical axis of checkerboard pattern on the screen can be changed.

Grid Y: The color of the horizontal axis of checkerboard pattern on the screen can be changed.

Cursor: The color of the cursor appearing when the screen is touched can be changed to confirm values at the specific point.

Line Width: Thickness of graph line can be adjusted.



3. System Info.

-

Displays System Information and Program Information.

Before your upgrade, be sure to check your current application/diagnostic program information.

| | Configuration > System Info | | | | |
|-------------------|---|------------------------------------|--|--|--|
| Customer Database | All rights reserved. This computer program is protected by Korean and International copyright laws. | | | | |
| Stored Data | System Infoma | tion | Program Infomation | | |
| Repair Guide | Model Name | AUTO-i 300 | Name : PCManager Version : 14.10.20.01 | | |
| Complaint Report | os | Windows XP (32 Bit) | Name : PCManager_Res Version : 1, 0, 0, 0 | | |
| Configuration | Serial Number | | | | |
| System Config | F/W Version | | | | |
| Graph Config | LOT Number | | | | |
| System Info | Diagnosis Version | 141020 | | | |
| Program Download | Application Version | | | | |
| | lf you do not upda 2."Program informa | tion" means version information of | t may cause communication problem. | | |

4. User Info.

You can input your information or check system information.

| | 🔁 🖓 😭 |
|-------------------|--|
| | Configuration > User Info |
| Customer Database | Save So Cancel |
| Stored Data | |
| Repair Guide | Family name |
| Complaint Report | , Personal name , |
| Configuration | Telephone Mobile |
| System Config | I E Fax |
| Graph Config | E-Mail B Company |
| System Info | ☐ Adress |
| User Info | |
| Program Download | "User information" will be displayed when prints out. 2.To put user information in local language into your device, please record user information in your local language and press "Upload" button. Then, your recorded user information written in local laugage will be uploaded into your device automatically. 3.To insert user picture or user company logo, please click picture image. |

4-1. User information is shown and you can edit and save information.

4-2. In order to change the information, please select a item to edit, click the edit button on below bar and input information.



Installation of Bluetooth Driver

* You are able to install all program of AUTO-i 300 in regular sequence with running the provided DVD.

If you want to install only Bluetooth driver only, please follow installation procedure below.

1. Double click "AUTOi300Bt.exe" file.



2. If the Bluetooth dongle is connected to the computer, then remove it and click "Next" button.



3.Turn on AUTO-i 300 and connect Bluetooth dongle to the computer. Then, follow the installation procedure as below.





Installation of Bluetooth Driver

4. Installation is completed as below, please click "OK" button.

| UTO-i300 Bluetooth driver i | nstallation | | |
|----------------------------------|-------------|----|--|
| Driver installation is complete. | | | |
| Please select [OK], | | | |
| | | | |
| | | ОК | |





Manufacturer: Carman International Co., Ltd. Model: AUTO-i 300

USA-Federal Communications Commission (FCC)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Model: CMIT-BT200

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna

- Increase the distance between the equipment and the receiver.

- Connect the equipment to outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Caution: Exposure to Radio Frequency Radiation.

To comply with FCC RF exposure compliance requirements, for mobile configurations, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Made in Korea



CE RULE

€€2280 ①

RF Exposure Warning : During operation, the user may keep a minimum seperation distance of 20 cm with the RF devices.

| IN TERNATIONAL | Declaration of Conformity |
|---|---|
| Type of equipment: | Bluetooth USB Dongle |
| Brand Name /Trade Mark: | CARMAN |
| Type designation /model: | CMIT-BT200 |
| Manufacturer: | Carman International Co., Ltd. |
| In accordance with the follo | |
| Directive 1999/5/EC | Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity |
| The following harmonized E | propean standards and technical specifications have been applied: |
| Art.3.1.a) | EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013 |
| | EN 62311: 2008 |
| | |
| Art.3.1.b) | ETSI EN 301 489-1 V1.9.2 (2011-09) ETSI EN 301 489-17 V2.2.1 (2012-09) |
| Art.3.2) | ETSI EN 300 328 V1.8.1 (2012-06) |
| | |
| Test report issued by: | |
| RF: CTK Co., Lt LVD: CTK Co., Lt EMC: CTK Co., Lt | d. |
| | ucts and/or their packaging signifies Carman International Co., Ltd. I file available to the European Union authorities. |
| Place of issue: | #1212, 12th Floor, Hoseo Univ. Venture Tower, 70, Gasan digital 1-ro, Geumcheon-gu, Seoul, Korea |
| Authorized Signatory: | Name: Ahn Tae Min |
| | Title: Associate Research Engineer |
| | |
| | Signature: |
| | |
| | |