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1. Safety Precautions and Warnings

To prevent personal injury or damage to vehicles and/or the scan tool, read this instruction manual first and observe the following safety precautions at a minimum whenever working on a vehicle:

- Always perform diagnosis or service in a safe environment.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- Operate the vehicle in a well ventilated work area: Exhaust gases are poisonous.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.
- Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Keep a fire extinguisher suitable for gasoline/chemical/electrical fires nearby.
- Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Always turn the ignition off before connecting/disconnecting the OBDII Cable to/from the TPMS tool; otherwise it may cause the Malfunction Indicator Light (MIL) to turn on.
- Refer to the user's manual for the vehicle being serviced and adhere to all diagnostic procedures and precautions. Otherwise personal injury or unneeded repairs may result.
- Keep the TPMS tool dry, clean, free from oil, water and grease. Use a mild detergent on a clean cloth to clean the outside of the TPMS tool when necessary.

2. General Information

2.1 TPMS system review

A tire pressure monitoring system (TPMS) is an electronic system designed to monitor the air pressure inside the pneumatic tires on various types of vehicles. TPMS report real-time tire-pressure information to the driver of the vehicle, either via a gauge, a pictogram display, or a simple low-pressure warning light. TPMS can be divided into two different types — direct (dTPMS) and indirect (iTPMS). TPMS are provided both at an OEM (factory) level as well as an aftermarket solution.

2.2 TPMS Legislation

In the United States, the United States Department of Transportation (NHTSA) released the FMVSS No. 138, which requires an installation of a Tire Pressure Monitoring System to all new passenger cars, multipurpose passenger vehicles, trucks, and buses that have a gross vehicle weight rating (GVWR) of 4,536 kg (10,000 lbs.) or less, except those vehicles with dual wheels on an axle, as of 2007. In the European Union, starting November 1, 2012, all new models of passenger cars must be equipped with a TPMS, with even tighter specifications that will be defined by the UNECE Vehicle Regulations (Regulation No. 64). From November 1, 2014, all new passenger cars sold in the European Union must be equipped with TPMS. On July 13, 2010, the South Korean Ministry of Land, Transport and Maritime Affairs announced a pending partial-revision to the Korea Motor Vehicle Safety Standards (KMVSS), specifying that "TPMS shall be installed to passenger vehicles and vehicles of GVW 3.5 tons or less, ... [effective] on January 1, 2013 for new models and on June 30, 2014 for existing models". Japan is expected to adopt European Union legislation approximately one year after European Union implementation. Further countries to make TPMS mandatory include Russia, Indonesia, the Philippines, Israel, Malaysia and Turkey.

2.3 TPMS Tell-tale Light

When diagnosing TPMS systems, you should understand what the TPMS tell-tale light means.

When turning the ignition OFF to ON, the TPMS tell-tale should come on, and then go off, which indicates the system is working fine. If the light stays on, there would be a pressure problem. If the light flashes, there would be a system problem, which can range from faulty sensors to sensors on the vehicle that haven't been learned to that vehicle.

2.4 Benefits of TPMS

The significant advantages of TPMS are summarized as follows:

- Fuel saving.
- Extended tire life.
- Decreased downtime and maintenance.
- Improved safety.
- Environmental efficiency.

3. Tool Information

3.1 Tool Description

1) **SENSOR SLOT** – Holds the MX-Sensor needs to be programmed.

2) **LCD DISPLAY** – Displays the menus and test screens.

3) **FUNCTION BUTTONS** – Corresponds with "buttons" on screen for executing commands.

4) **UP SCROLL BUTTON** – Moves up through menu and submenu items in menu mode. When more than one set of data are retrieved, use this button to move up to previous screens for

additional data. It is also used to view previous trouble code when viewing DTCs.

5) **N** **N BUTTON** – Cancels a selection (or action) from a menu or return to previous menu.

6) **LEFT SCROLL BUTTON** –When scrolling through a screen of data or text, moves to previous character and views additional information on previous screens if recorded data content covers more than one screen.

7) **HELP BUTTON** – Provides help information.

8) **POWER BUTTON** – Long press this button to turn on/off the tool; or, short press the button to return to Home screen.

9) **DOWN SCROLL BUTTON** – Moves down through menu and submenu items in menu mode. When more than one set of data are retrieved, use this button to move down to next screens for additional data. It is also used to view next trouble code when viewing DTCs.

10) **RIGHT SCROLL BUTTON** – When scrolling through a screen of data or text, moves to next character and view additional information on next screens if recorded data content covers more than one screen.

11) **Y** **Y BUTTON** – Confirms a selection (or action) from a menu.

12) **FUNCTION BUTTON/TEST BUTTON** – Corresponds with "buttons" onscreen for executing commands, or commences a TPMS Test in sensor activation mode.

13) **USB PORT** – Connects the TPMS tool to PC for software update, data printing or battery charging.

14) **POWER PORT** – Connects the TPMS tool to the mains with the charger supplied for battery charging.

15) **SD CARD SLOT** – Holds SD card.

16) **OBD II CONNECTOR** – Connects the TPMS tool to the vehicle's Data Link Connector (DLC).

3.2 Specifications

1) Display: TFT color display (320 x 240 dpi)

2) Power: 3.7V Li-polymer battery

3) Operating Temperature: 0°C to 50°C (32°F to 122°F)

4) Storage Temperature: -20°C to 70°C (-4°F to 158°F)

5) Dimensions:

Length	Width	Height
202.2 mm (7.96")	106.7mm (4.20")	37.7 mm (1.48")

6) Weight: 0.4kg (0.88lb)

3.3 Accessories Included

1) **User's Manual** -- Instructions on tool operations.

2) **OBDII Cable** -- Provides power to tool and communicates between tool and vehicle.

3) **USB Cable** -- Allows easy online update, data printing, and power charging via PC connection.

4) **Carry Case** -- A case to store the tool when not in use.

5) **Magnet** -- Used to trigger magnetically activated sensors (early model TPMS sensors).

6) **Power Adapter** -- Charges the built-in battery.

7) **CD** -- Includes user's manual, PC Suit, etc.

8) **SD Card** -- Used to store data.

3.4 Icons

1) "⊞" – Indicates battery charging.

2) "☒" -- Indicates there is data stored in the tool.

3) "▬" -- Indicates battery volume.

4) "⟵⟶" -- Indicates USB communication with the computer is established.

5) "▱" -- Indicates magnet is required to activate TPMS sensor.

6) "P↓" -- Indicates deflation is required to activate TPMS sensor.

7) "⊛" -- Indicates test mode **One Wheel** is selected.

8) "▭" -- Indicates test mode **ALL Wheels** is selected.

9) "⟨⟨⟨" -- Indicates the TPMS tool is sending signals to the tire sensor for activation and test.

10) "OBD" -- Indicates tool communication with the vehicle's OBDII DLC is established.

3.5 Keyboard

No solvents such as alcohol are allowed to clean the keypad or display. Use a mild nonabrasive detergent and a soft cotton cloth. Do not soak the keypad as the keypad is not waterproof.

3.6 Battery Charging

The TPMS tool has a 3.7V built-in lithium-ion polymer rechargeable battery. There are two means of battery charging:

✓ To charge battery by power adapter.

    1) Locate the power port of the device.
    2) Connect the device and the power source with the adapter.

✓ To charge battery by USB cable

    1) Locate the USB port of the device.
    2) Connect the device and the computer with the USB cable.

For optimum performance, always keep your tool sufficiently charged. It is recommended that you charge the tool for over 2 hours before the first use.

🖉 *NOTE: Only use the power adaptor or USB cable that is included in our pack to charge this tool. The use of un-approved power supplies may damage your tool and void the tool warranty.*

3.7 Power Up by DLC

The tool can also be powered via the vehicle Data Link Connector (DLC). Just follow the steps below to turn on the TPMS tool:

    1) Connect the OBDII Cable to the TPMS tool.

    2) Find DLC on vehicle.

● *A plastic DLC cover may be found for some vehicles and you need to remove it before plugging the OBDII cable.*

    3) Plug OBDII cable to the vehicle's DLC.

    4) Power up the TPMS tool by pressing the **Power** button, and wait for the Main Menu to appear. (Figure 3.1)
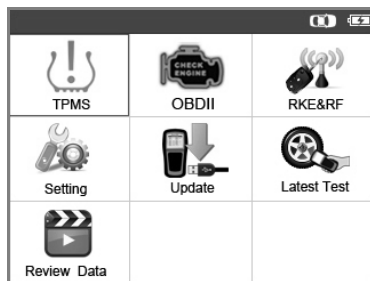
Figure 3.1

3.8 System Setting

The tool allows you to make the following adjustments and settings.

1) **Language:** Selects the desired language.

2) **Beep Set:** Turns on/off key-press beep.

3) **ID Format:** Sets the ID displaying in Hexadecimal or Decimal.

4) **Pressure Unit:** Sets the pressure unit in kPa, Psi or Bar.

5) **Temperature Unit:** Sets the temperature unit in degree Celsius or Fahrenheit.

6) **Wheels to Test:** Sets test modes in One Wheel or All Wheels.

7) **Distance Unit:** Sets the distance unit in Km or mile.

8) **Auto Power-off:** Sets the time to power off automatically.

9) **About:** Allows viewing important information of the tool.

● *Settings will remain until change to the existing settings is made.*

To enter the Setting menu

From the **Main Menu**: Use the **UP/DOWN** and **LEFT/RIGHT** scroll button to select **Setting**, and press the **Y** button. The Setting menu displays as below. (Figure 3.2)
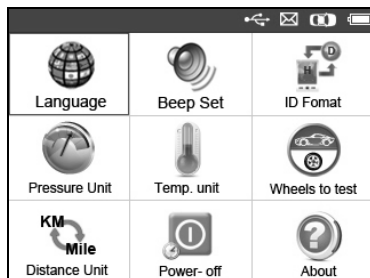
Figure 3.2

Language

- *English is the default language.*

1) From System **Setting** screen, use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **Language**, and press the **Y** button.

2) Use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select the desired language and press the **Y** button to save your selection and return to previous menu. (Figure 3.3)

Figure 3.3

Beep Set

This function allows you to turn on/off the built-in speaker for key pressing.

1) From System **Setting** screen, use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **Beep Set**, and press the **Y** button.

2) From **Beep Set** menu, use the **LEFT/RIGHT** scroll button to select **ON** or **OFF** to turn on/off the beep.(Figure 3.4)
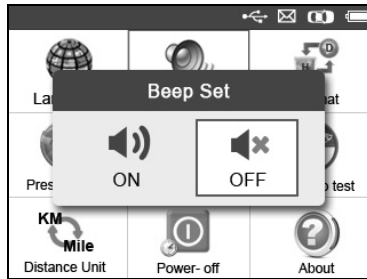
Figure 3.4

3) Press the **Y** button to save your selection or the **N** button to exit without change.

ID Format

1) From System **Setting** screen, use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **ID Format**, and press the **Y** button.

2) From **ID Format** screen, use the **LEFT/RIGHT** scroll button to select the desired ID format. (Figure 3.5)

Figure 3.5

3) Press the **Y** button to save your settings and return to previous menu, or press the **N** button to exit without change.

Pressure Unit

1) From System **Setting** screen, use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **Pressure Unit**, and press the **Y** button.

2) From **Pressure Unit** screen, use the **LEFT/RIGHT** scroll button to select the desired unit: **kPa**, **Psi** or **Bar**. (Figure 3.6)

Figure 3.6

3) Press the **Y** button to save your settings and return to previous menu, or press the **N** button to exit without change.

Temperature Unit

1) From System **Setting** screen, use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **Temperature Unit**, and press the **Y** button.

2) From **Temperature Unit** screen, use the **LEFT/RIGHT** scroll button to select the desired unit of temperature.(Figure 3.7)
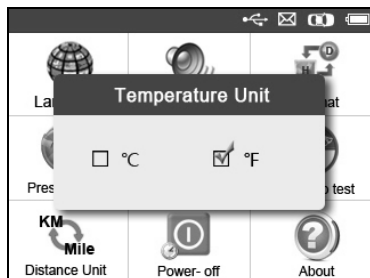
Figure 3.7

3) Press the **Y** button to save your settings and return to previous menu, or press the **N** button to exit without change.

Wheels to Test

This function allows you to set sensor testing mode in **All Wheels** or **One Wheel**.

1) From System **Setting** screen, use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **Wheels to Test**, and press the **Y** button.

2) From **Wheels to test** screen, use the **LEFT/RIGHT** scroll button to select **All Wheels** or **One Wheel** mode for TPMS sensor testing. (Figure 3.8)
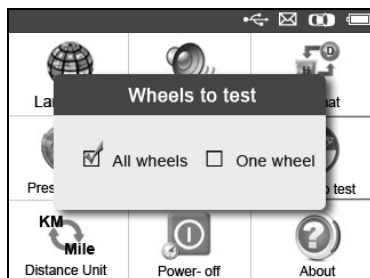
Figure 3.8

3) Press the **Y** button to save your selection or the **N** button to exit without change.

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NOTE: In All Wheels mode, the tool will determine if a duplicate sensor ID has been read. In this case, the tool will display a message "Sensor ID Duplicated.". In One Wheel mode, the tool will not check the duplication of sensor ID.

Distance Unit

1) From System **Setting** screen, use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **Distance Unit**, and press the **Y** button.

2) From **Distance Unit** screen, use the **LEFT/RIGHT** scroll button to select the desired unit of distance: **Km** or **mile**. (Figure 3.9)

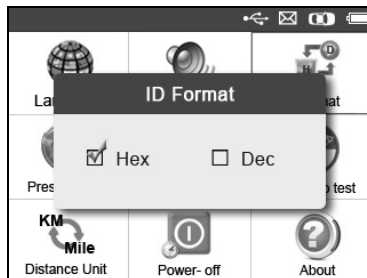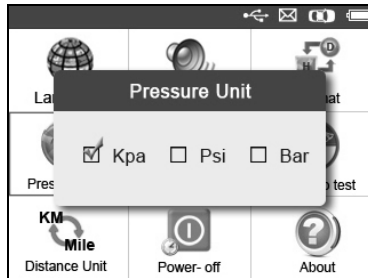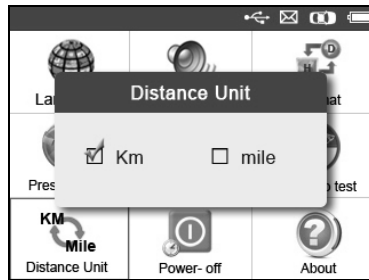
Figure 3.9

3) Press the **Y** button to save your settings and return to previous menu, or press the **N** button to exit without change.

Power-off

1) From System **Setting** screen, use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **Power-off**, and press the **Y** button.

2) Press the **UP/DOWN** scroll button to increase or decrease the interval time for auto power-off, and then press the **Y** button to confirm your change or the **N** button to exit without change. (Figure 3.10)
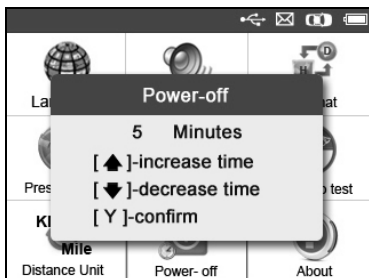
Figure 3.10

🖉 *NOTE: Before the tool powers off automatically, it will save all the TPMS test data. Next time when the tool is powered on, you may retrieve the recorded data or return to the last operation.*

🖉 *NOTE: When using external power, the scan tool stays on until you turn it off. When using internal battery power, the scan tool turns off automatically after a set time of inactivity.*

About

This function allows viewing of some important information such as serial number and software version number of the tool.

1) From System **Setting** screen, use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **About**, and press the **Y** button; wait for the **About** screen to appear.

2) View tool information on screen. (Figure 3.11) Press the **N** button to exit.

AUTEL

TS601

Product Serial Number: MT6000000009
Register Password: 962413
Sys. Software Version: V1.00
Hardware Version: V1.00
Manufacture Date: 11/29/2012
Copyright(C)2012 Autel Co.,Ltd
All rights reserved

Figure 3.11

3.9 Product Troubleshooting

This part describes problems that you may encounter while using the TPMS tool.

Vehicle Linking Error

A communication error occurs if the TPMS tool fails to communicate with the vehicle's ECU (Electronic Control Unit) when running the diagnostic function. You need to do the following to check up:

✓ Verify that the ignition is ON.

✓ Check if the TPMS tool's OBD II connector is securely connected to the vehicle's DLC.

✓ Verify that the vehicle is OBD II compliant.

✓ Verify that the vehicle is equipped with TPMS.

✓ Verify that the tool battery is sufficiently charged.

✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and continue the testing.

✓ Verify that the control module is not defective.

Operating Error

If the scan tool freezes, then an exception occurs or the vehicle's ECU (Engine Control Unit) is too slow to respond to requests, do the following to reset the tool:

✓ Reset the scan tool.

✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and continue the testing.

4. TPMS Check & Diagnostics

The MaxiTPMS® TS601 is a new generation TPMS diagnostic & service tool specially designed to activate all known OEM/Universal TPMS sensors, and provide users with direct access to the vehicle's ECU through OBDII connection, thus allowing users to reprogram sensor IDs, retrieve/clear TPMS DTCs, read live data and perform special functions, helping technicians to quickly find out faulty TPMS and turn off MILs.

● *NOTE: All software screens shown in this manual are examples, actual test screens may vary for each vehicle being tested. Observe the menu titles and onscreen instructions to make correct option selections.*

4.1 TPMS Sensor Check

The sensor check function allows user to activate TPMS sensor to view sensor data such as sensor ID, tire pressure, tire temperature, battery condition, sensor position and OE part number.

There are two means to check a TPMS sensor:

A. Select by Vehicle

Users can start activating sensors directly by selecting the specific vehicle make, model and year. The graphed vehicle with 4 or 5 wheels makes the sensor activation process more simple and convenient.

1) Use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **TPMS** from **Main Menu** (Figure 3.1), and press the **Y** button to confirm.

2) Select a specific vehicle manufacture region. (Taking **Nissan** as an example.)
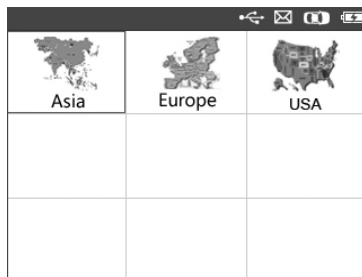
Figure 4.1

3) From the vehicle make screen, select a specific vehicle brand and press the **Y** button. (Figure 4.2)

Figure 4.2

4) Observe the menu title and use the **UP/DOWN** scroll button to select by model and year to identify the vehicle being tested.

● *The selected vehicle is remembered by the tool when a test is commenced.*
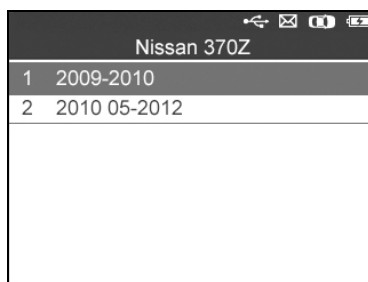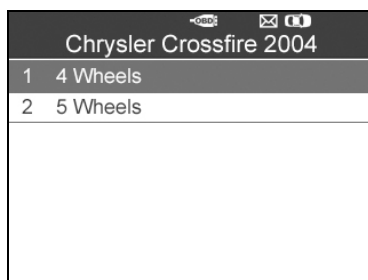
Select by Model:

Figure 4.3

Select by Year:

Figure 4.4

5) For some vehicles an option screen will show up to let users choose between **4 Wheels** and **5 Wheels** test mode.

Figure 4.5

● *Depending on the test mode (**All Wheels** or **One Wheel**), results are displayed in different manners.*

All Wheels Mode

In this mode, the screen will display as below (Figure 4.6). Use the **UP/DOWN** and **LEFT/RIGHT** scroll button to select a desired wheel and press the **TEST** button to activate sensor. (Figure 4.7)
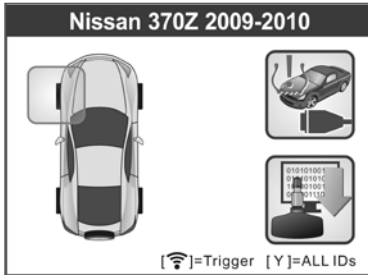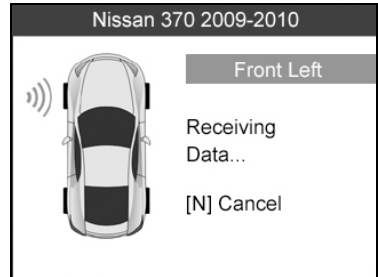
Figure 4.6   Figure 4.7

● *The **TPMS Relearn** function icon on the upper right corner of screen is not supported by all vehicles, but the sensor activating process remains the same. For those vehicles not supporting Relearn function, the activation screen displays as Figure 4.8. Detailed information about TPMS Relearn, please refer to **4.2 TPMS Relearn***.
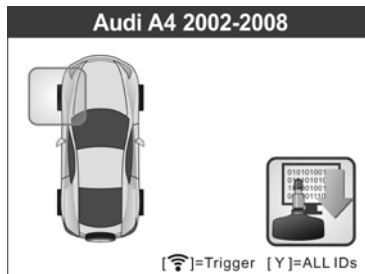
Figure 4.8

The tool will do TPMS test in a sequence of FL (Front Left), FR (Front Right), RR (Rear Right), LR (Rear Left) and SPARE, if the vehicle has the option for the spare. Or, you can use the **UP/DOWN** or **LEFT/RIGHT** scroll button to move to the desired wheel for testing.

Place the tool alongside the valve stem, point toward the sensor location, and press the **TEST** button.

The tool will send LF signal to trigger the sensor. Once the sensor is successfully activated and decoded, the tool will display as below with a beep. (Figure 4.9)
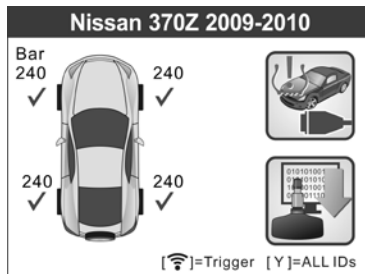
Figure 4.9

✓ Wheel with a feedback icon, "√"**,** "**x**"**,** "**D**", indicates wheel test has been finished. Refer to Table 1 for detailed description to learn what testing result each icon stands for.

✓ Press the **Y** button to read all sensor data, including sensor ID, tire pressure, temperature, battery condition and modulation.

One Wheel Mode

In this mode the screen will show as below (Figure 4.10). The tool will check TPMS sensor on the single wheel. Place the tool alongside the valve stem, point toward the sensor location, and press the **TEST** button. Wait for test result before moving the tool.

The tool will send LF signal to trigger the sensor. Depending on the sensor type, the tool will activate the sensor on the first or last step.

Once the sensor is successfully activated and decoded, the tool will display as below with a beep. (Figure 4.11)

Figure 4.10

Figure 4.11

Once the first sensor test is completed, the screen will remain for 3 seconds for data viewing and then automatically switch to next sensor test. Follow the same procedure for the other sensor tests.

The tool can save up to 5 TPMS sensor data records at each time. Press the **UP/DOWN** or **LEFT/RIGHT** scroll button to turn over data screens while viewing. If more than five records are stored, the latest record will overwrite the oldest record.

TABLE 1 POSSIBLE RESULTS FOR TESTING

Icon	Test Results	Description
√	Successful Sensor Read	TPMS sensor is successfully activated and decoded. The tool displays the sensor information.
X	Failed Sensor Read	If the search period expires and no sensor is activated or decoded, it may be caused by wrong sensor fitting or non-functioning sensor. The tool then displays a message "No sensor detected.". In this case, repeat testing to confirm the TPMS failure.
X	Wrong Sensor Type	A TPMS sensor is activated and decoded, but does not match the protocol for the Make, Model or Year that the tool was set-up for. The tool displays a message "Sensor triggered but cannot be known.". In this case, verify the Make, Model or Year or other features you have selected as well as the sensor part number that was fitted.
D	Duplicate ID (only checked in **All Wheels** mode)	A sensor with a duplicate ID has been read. The tool displays a message "Sensor ID Duplicated.". In this case, clear data and re-read again.

✍ *NOTE: With Ford sensors, the tool should be held 180 degree away from the stem. Please refer to vehicle user's manual.*

● If the TPMS sensor requires a magnet, place the magnet over the stem and then place the tool alongside the stem, and press the **TEST** button.
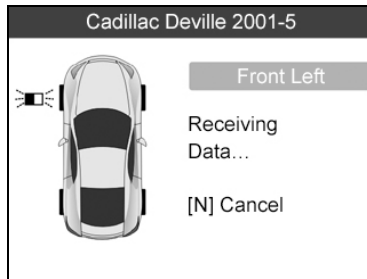
Figure 4.12

● If the TPMS sensor requires tire deflation (of the order of 10PSI), then deflate the tire and place the tool alongside the stem while pressing the **TEST** button.
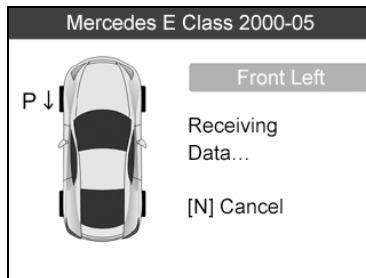
Figure 4.13

● Anytime while doing the TPMS test, pressing ⑦ button allows reading the sensor make, OEM part no., and relearn information for the vehicle being tested for reference. Use the **UP/DOWN** scroll button to view all details if the data information covers more than one page.

Nissan 370Z 2009-2010

Sensor:Schrader 433
OEM part #
52088990AD
Relearn:
Relearn can be completed using a properly
formatted scan tool and relearn magnet.
*Relearn magnet not required for Prowler.

Back
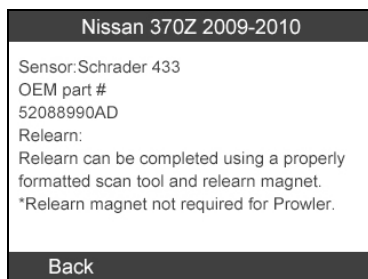
Figure 4.14

- Sensor activation can be aborted at any time by pressing the **N** button. When the activation is aborted, the screen will return to the previous menu.
- By pressing the **Y** button, you may review information of all sensors tested. Press the **LEFT/RIGHT** scroll button to turn over data screens while viewing.

Pos	ID-H	Kpa	℃
FL	8000E0	240	38
FR	002020	240	38
RR	00E000	240	38
RL	1E00E0	240	38

[◀▶]=Change Page   [N]=Exit   1/2

Figure 4.15

Pos	BAT	Mode	Modulation
FL	OK	TEST	433AM
FR	OK	TEST	433AM
RR	OK	TEST	433AM
RL	OK	TEST	433AM

[◀▶]=Change Page   [N]=Exit   2/2

Figure 4.16

[Pos] – Indicates the wheel sensor position.

[ID-H/D] – Shows sensor ID data.

[KPa/Psi/Bar] – Indicates tire pressure.

[°C/°F] – Indicates tire temperature.

[BAT] – Indicates battery condition.

[Mode] – Defines tire sensor working mode or status.

[Modulation] – Indicates sensor signal amplitude.

B. Select by Latest Test

This function allows you to review the last tested sensor data and activate the sensor by using the wave signal of the latest trigger event, which is very convenient and useful for technicians to wake up sensors of the same vehicle.

1) Use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **Latest Test** from **Main Menu** (Figure 3.1).

2) An activation screen with the previously activated sensor information will show up (Figure 4.17). Use the **UP/DOWN** or **LEFT/RIGHT** scroll button to select the desired wheel, and press the **TEST** button to reactivate the sensor, or press the **Y** button to view all detailed sensor data (Figure 4.18).
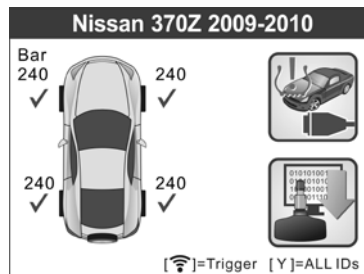
Figure 4.17

Pos	ID-H	Kpa	℃
FL	8000E0	240	38
FR	002020	240	38
RR	00E000	240	38
RL	1E00E0	240	38

[◄►]=Change Page   [N]=Exit   1/2

Figure 4.18

3) If user is going to retest the sensor, a prompt will come up asking for your confirmation.

Nissan 370Z 2009-2010

Are you sure to delete the TPMS data?

No   Yes
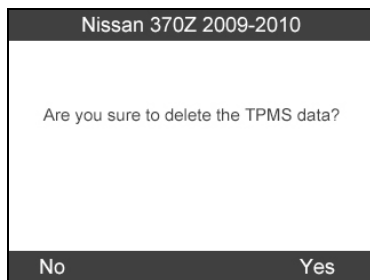
Figure 4.19

4) Select "**Yes**" to delete all test records and enter test mode. Or select "**No**" to reserve the previous data and check the remaining untested sensors.

4.2 TPMS Relearn

This function, which provides users with quick access to the vehicle's ECU, enables users to do TPMS diagnostics, such as reading/writing sensor IDs on vehicle ECU, reading/ clearing codes of TPMS system, reading TPMS live data, retrieving TPMS ECU information, and performing actuation tests and special functions, and to save data for later reviews and printing.

1) Connect the TPMS tool to the vehicle's DLC with the OBD II cable. Press the **POWER** button to turn on the tool.

2) Turn the ignition on but do not start the engine.

3) Make sure the testing mode is set to **All Wheels** mode in System Setting.

4) Follow the same process in **4.1 TPMS Sensor Check** to enter the activation screen. Use the **UP**/**DOWN** scroll button or **LEFT**/**RIGHT** scroll button to select the **TPMS Relearn** function on the upper right corner of the screen. (Figure 4.20)

Figure 4.20

5) The tool will display a function screen as below. Use the **UP/DOWN** scroll button to select **TPMS Diagnosis** or **TPMS Sensor Information**, and press the **Y** button to continue. (Figure 4.21)
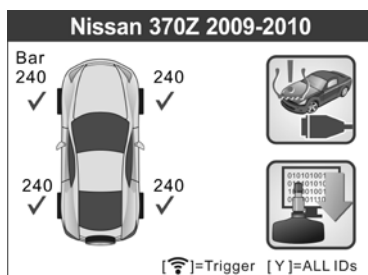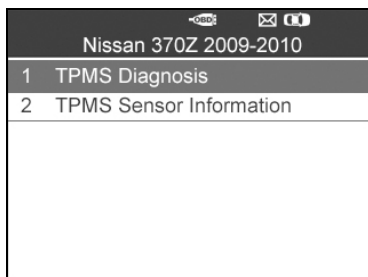

Figure 4.21

6) The **TPMS Diagnosis** function allows user to write IDs to vehicle, read IDs from vehicle, read/clear TPMS codes, read TPMS live data, perform active test and special functions.

7) The **TPMS Sensor Information** enables retrieval of the sensor make, OEM part no., and relearn information.

● *The **TPMS Diagnosis** function varies by vehicle being tested.*

🖉 *NOTE: In this manner, the scan tool will communicate with the vehicle being tested. If there is a linking error, a notice screen will show up. Please refer to 3.9 Product Troubleshooting for more details.*

A. Write IDs to Vehicle

1) From the TPMS Diagnosis Menu, use the **UP/DOWN** scroll button to select the **Write IDs to Vehicle**, and press the **Y** button. (Figure 4.22)

	Diag. Menu
1	Write IDs to Vehicle
2	Read IDs from Vehicle
3	Read Codes
4	Erase Codes
5	Live Data
6	Active Test
7	Special Function

Figure 4.22

2) The tool will display the sensor IDs and positions for confirmation. Select "**Yes**" to register ID in vehicle ECU, or "**No**" to exit.
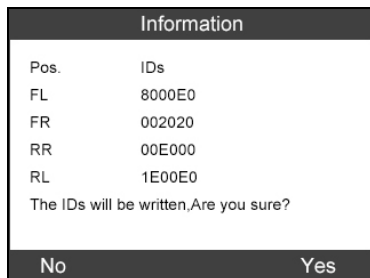
Figure 4.23

3) Once the sensor IDs are successfully written, a confirm screen will show up. Press any key to continue the TPMS diagnostic procedure. (Figure 4.24)

Figure 4.24

✍ *NOTE: The sensor writing procedure may vary for different vehicles being serviced. Please follow the onscreen instruction and take appropriate measures and selections to complete the process.*

✍ *NOTE: If there are untested sensors in the vehicle, the writing ID process cannot proceed. The tool will display a warning message as below. (Figure 4.25) In this case, follow the sensor check procedure to activate all sensors in vehicle and register sensor IDs again.*

Pos.	IDs
FL	Untested
FR	Untested
RR	Untested
RL	Untested
Get the 'Untested' Sensor's ID,Otherwise	
Can't write the IDs.	
Cancel	OK

Information
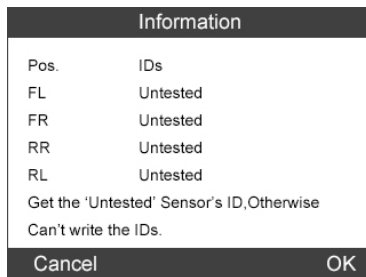
Figure 4.25

IMPORTANT: Make sure to turn the ignition off before connecting /disconnecting the OBDII Cable to/from the TPMS tool; otherwise it may cause the Malfunction Indicator Light (MIL) to turn on.

B. Read IDs from Vehicle

1) From the TPMS Diagnosis Menu, use the **UP/DOWN** scroll button to select the **Read IDs from Vehicle**, and press the **Y** button. (Figure 4.22)
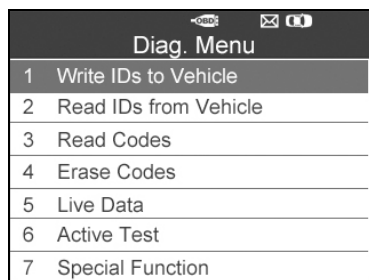
2) The tool will display the sensor IDs and positions for viewing. Select "**Save**" to store data for future review, or "**Esc**" to exit without saving. (Figure 4.26).

Read IDs from Vehicle	
ID TYPE1 FL	8000E0
ID TYPE1 FR	002020
ID TYPE1 RR	00E000
ID TYPE1 RL	1E00E0
Esc	Save

Figure 4.26

C. Read Codes

1) From the TPMS Diagnosis Menu, use the **UP/DOWN** scroll button to select the **Read Codes**, and press the **Y** button. (Figure 4.22)

2) The tool will display TPMS DTCs retrieved from the vehicle's ECU for your viewing. Select "**Save**" to store data for future review, or press "**N**" button to exit without saving. (Figure 4.27).

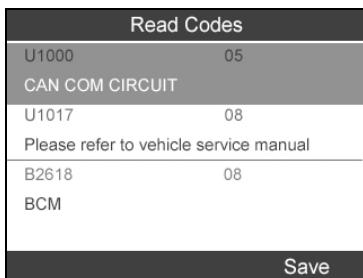| Read Codes	
U1000	05
CAN COM CIRCUIT	
U1017	08
Please refer to vehicle service manual	
B2618	08
BCM	
	Save

Figure 4.27

D. Erase Codes

1) From the TPMS Diagnosis Menu, use the **UP/DOWN** scroll button to select the **Erase Codes**, and press the **Y** button. (Figure 4.22)

2) The tool will display a warning message for your confirmation. Select "**Yes**" to continue, "**No**" to exit. (Figure 4.28)

Erase Codes	
DTCs and Freeze Data will be lost Do you wish to continue?	
No	Yes
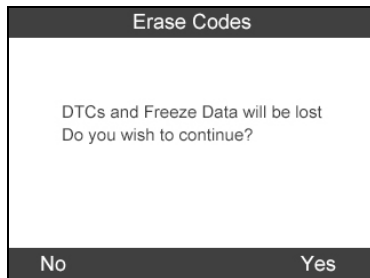
Figure 4.28

3) If the erase command is sent successfully, the screen will show as below (Figure 4.29). Press any button to continue. To make sure codes are erased clearly, run **Read Codes** again.

Figure 4.29

E. Live Data

This function not only allows you to read the live data but also lets you record live data for later review.

1) From the TPMS Diagnosis Menu, use the **UP/DOWN** scroll button to select **Live Data**, and press the **Y** button. (Figure 4.22)

All Data

1) From the Live Data menu, use the **UP/DOWN** scroll button to select **All Data** and press the **Y** button. (Figure 4.30)

Figure 4.30

2) The tool will display a list of all live sensor data. (Figure 4.31)

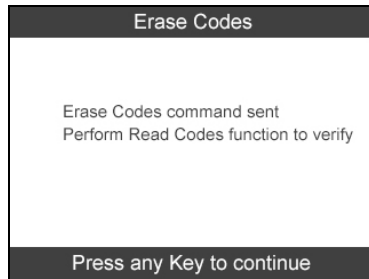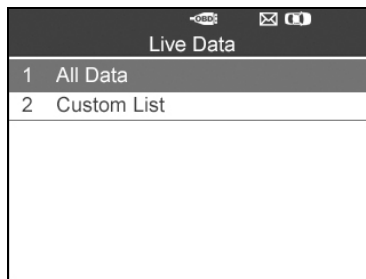| Live Data		
AIR PRESS FL	8.60	Kpa
AIR PRESS FR	10.32	Kpa
AIR PRESS RR	12.04	Kpa
AIR PRESS RL	13.76	Kpa
ID REGST FL1	Yet	
Save	One Graphic	Pause		

Figure 4.31

● Press the corresponding **FUNCTION** button "**Save**" to store the retrieved live data for later playback or printing. (Figure 4.31)

● Press the corresponding **FUNCTION** button "**Stop Save**" to stop saving data and resume live sensor data retrieving. (Figure 4.32)

● Press the corresponding **FUNCTION** button "**Pause**" to temporarily stop live sensor data retrieving.(Figure 4.31)

● Press the corresponding **FUNCTION** button "**Continue**" to resume live sensor data retrieving. (Figure 4.35)

Save 24 Items		
AIR PRESS FL	8.60	Kpa
AIR PRESS FR	10.32	Kpa
AIR PRESS RR	12.04	Kpa
AIR PRESS RL	13.76	Kpa
ID REGST FL1	Yet	
Stop Save	One Graphic	Pause		

Figure 4.32

- If the "**One Graphic**" option is highlighted when a specific item is selected, the graphic information is available. (Figure 4.32)

- When the sensor data is shown in graph, the tool offers two more options: **Two Graphics** and **Merge Graphic**. The first option can display two graphs on the same screen (Figure 4.33), and the last option can merge the two graphs into one. (Figure 4.34).
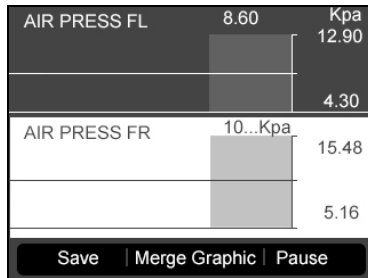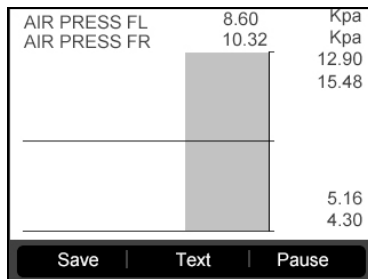

Figure 4.33

Figure 4.34

- Press the corresponding **FUNCTION** button "**Text**" or the **N** button to return to previous screen. (Figure 4.35)

Figure 4.35

Custom List

1) To retrieve customized live sensor data, use the **UP/DOWN** scroll button to select **Custom List** from **Live Data** and press the **Y** button. (Figure 4.30)

2) Use the **UP/DOWN** scroll button to move to the desired item and press the corresponding **FUNCTION** button "**Select**". (Figure 4.36)

Figure 4.36

- The Selected items are marked with ticks on the left.
- The number on the right indicates sequence of the selected item.
- Press the corresponding **FUNCTION** button "**Clear**" to unselect the items, or press the corresponding **FUNCTION** button "**Select All**"/"**Clear All**" to select or unselect all items. (Figure 4.36)

3) Press the **Y** button to confirm your selection and retrieve the selected live sensor data.

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4)   Press the **N** button to return to the previous menu.

F.   Active Test

1)   From the TPMS Diagnosis Menu, use the **UP/DOWN** scroll button to select **Active Test**, and press the **Y** button. (Figure 4.22)

2)   The tool will display a list of available active tests for the vehicle being tested. (Figure 4.37).

Active Test	
1	FLAT TIRE WARNING
2	ID REGIST WARNING
3	WARNING LAMP
4	RUN FLAT/T WARN BUZZER
5	FLASHER
6	HORN

Figure 4.37

Taking **Flat Tire Warning** for example:

3)   From **Active Test** Menu, use the **UP/DOWN** scroll button to select **Flat Tire Warning** function. (Figure 4.37)

4)   Press the corresponding **FUNCTION** button "**ON**" or "**OFF**" to check whether the TPMS warning lamp on the vehicle is turning on or off. (Figure 4.38)

Active Test		
FLAT TIRE WARNING	OFF	

ON	OFF	
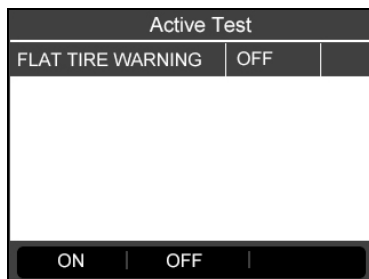
Figure 4.38

5)   Press the **N** button to return to the previous menu.

G. Special Function

1) From the TPMS Diagnosis Menu, use the **UP/DOWN** scroll button to select **Special Function**, and press the **Y** button. (Figure 4.22)

2) The tool will display a list of available special functions for the vehicle being tested. (Figure 4.39).
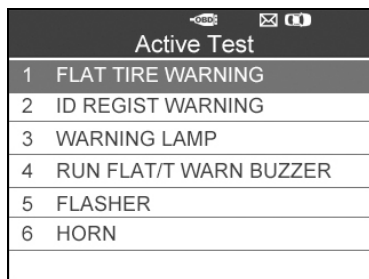
📖 *NOTE: The Special Function menu may vary for different vehicles being serviced. Please follow the onscreen instruction and take appropriate measures and selections to complete the process.*

Taking **Switch TPMS between ON/OFF** for example:

3) To manually switch on/off TPM system, use the **UP/DOWN** scroll button to select **Switch TPMS between On/Off** and press the **Y** button. (Figure 4.39)
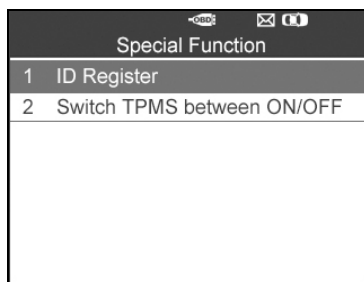
Figure 4.39

4) The tool displays a message for your confirmation. Select "**OK**" to continue and "**Cancel**" to exit.
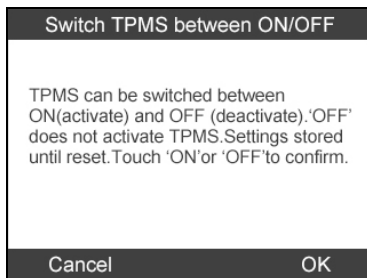
Figure 4.40

5) Press the corresponding **FUNCTION** button "**ON**" or "**OFF**" to turn ON/OFF the TPMS on the vehicle. (Figure 4.41)
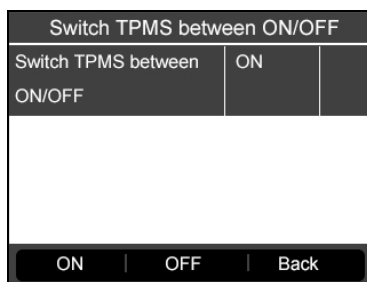
Figure 4.41

6) Press the corresponding **FUNCTION** button "**Back**" to return to the previous screen.

H. ECU Part Number

1) To retrieve ECU part number, use the **UP/DOWN** scroll button to select **ECU Part Number** function item from the TPMS Diagnosis Menu. (Figure 4.22)

2) The ECU part number will be displayed once it's successfully retrieved. Press the corresponding **FUNCTION** button "**Save**" to store for later playback and printing. (Figure 4.42)

Ecu Information	
ECU Part number	284B2-EH10Q
Esc	Save

Figure 4.42

3) Press the corresponding **FUNCTION** button "**Esc**" to return to previous menu.

4.3 Audit Report

After the user finished the TPMS test, the tool is capable of presenting all of its stored TPMS data in a HTML file when connected to a PC via an USB cable.

The tool will automatically pop up an explorer window in PC screen when connected to an active USB port on the PC. Make sure the tool is powered on. Otherwise, there will be no communication between the tool and computer.

Once the explorer window is open, you may view a file by double-clicking on the file. If this explorer window does not automatically pop up, the user may browse for the newly connected device manually.

The data presented is in a HTML form format that displays not only information regarding the TPMS, but also automatically updates with the date. It also provides data entry areas for other tester and vehicle data.

MaxiTPMS TS601

Vehicle Make Tested: Honda Odyssey Touring 2005-2007

Test Performed by:

Owners Name:

License Plate No:

Model and Year:

Comments:

Wheel	BCM ID Hex	BCM ID Dec	ID Hex	ID Dec	Pressure	Temperature	Battery State	Modulation	OEM Part #:
FL	8D867ACF	2374335183	B8220784	30892378800	240Kpa	25	OK	315AM	06421-83V-A04
FR	Untested	Untested	Untested	Untested	Untested	Untested	Untested	Untested	Untested
RR	Untested	Untested	Untested	Untested	Untested	Untested	Untested	Untested	Untested
RL	Untested	Untested	Untested	Untested	Untested	Untested	Untested	Untested	Untested
SP	Untested	Untested	Untested	Untested	Untested	Untested	Untested	Untested	Untested

Figure 4.43

5. TPMS Sensor Programming

The Programming function allows users to program the sensor data to the MX-Sensor and replace faulty sensor with low battery life or one that is not functioning. The scan tool is easy-to-use with a proven efficiency and guaranteed accurate results.

📖 *NOTE: Programming function will only work with Autel's MX-Sensor. There are two types of MX-Sensor, one in orange color with 433MHz frequency, one in dark gray color with 315MHz frequency. Please choose the right MX-Sensor when programming.*

There are four options available when programming MX-Sensor using this scan tool: **Auto Create**, **Manual Create**, **Copy by OBD**, and **Copy by Activation**.

5.1 Auto Create

This function is designed to program the MX-Sensor by applying random IDs created according to the test vehicle when it is unable to obtain the original sensor ID.

1) Use the **UP/DOWN** scroll button and the **LEFT/RIGHT** scroll button to select **TPMS** from **Main Menu** (Figure 3.1), and press the **Y** button to confirm.

2) Select a specific vehicle manufacture region. (Taking Chrysler as an example.) From the vehicle region screen, select **USA** and press the **Y** button.
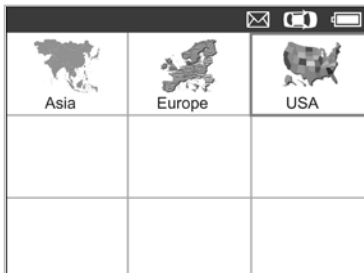

Figure 5.1

3) From the vehicle make screen, select a specific vehicle brand and press the **Y** button.

Figure 5.2

4) Observe the menu option and use the **UP/DOWN** scroll button to select by model and year to identify the vehicle being tested.

NOTE: Please pay attention to the frequency used in the vehicle. Refer to the original sensor information for the exact frequency.

• The selected vehicle is remembered by the tool when a test is commenced.
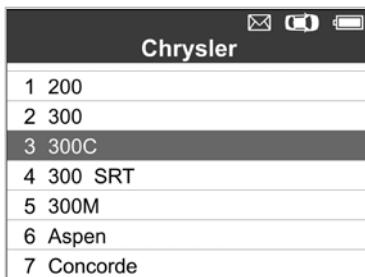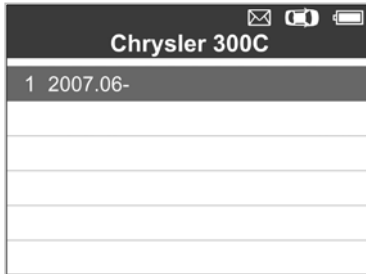
Select by Model:

Figure 5.3

Select by Year:

Figure 5.4

5) For some vehicles (like Chrysler), an option screen will show up allowing users to choose between **4 Wheels** and **5 Wheels** test mode before accessing the activation screen.

Figure 5.5

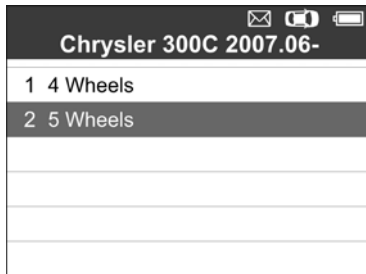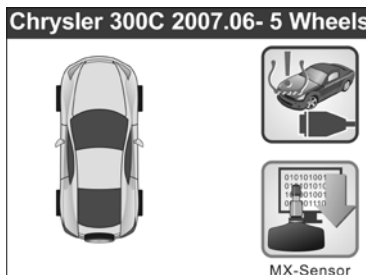6) Use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **MX-Sensor**.

Figure 5.6

7) Use the **UP/DOWN** scroll button to select the wheel which needs to be programmed.
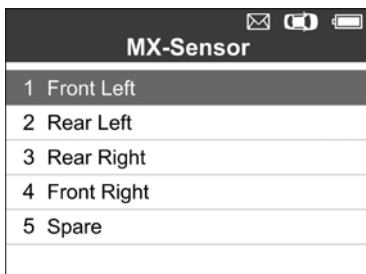

Figure 5.7

8) Use the **UP/DOWN** scroll button to select **Auto Create** to create a new random sensor ID.
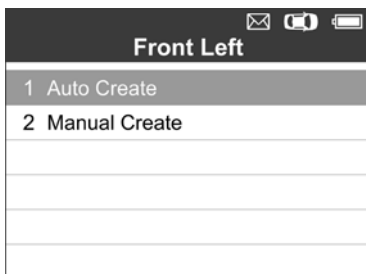
Figure 5.8

9) Insert the correct MX-Sensor into the sensor slot as displayed below:
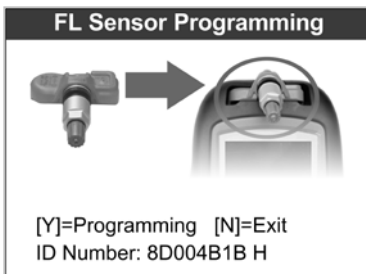
Figure 5.9

📝 *NOTE: Please pay attention to the MX-Sensor type displayed in the screen and insert the correct MX-Sensor. Inserting incorrect MX-Sensor will cause programming failure.*

10) Press the **Y** button to write in the new created sensor ID to the MX-Sensor, and the screen will show as below (Figure 5.10), or the **N** button to exit without change. If an error prompt displays as below (Figure 5.11), please try another type of MX-Sensor, for the type of the inserted MX-sensor may be incorrect.
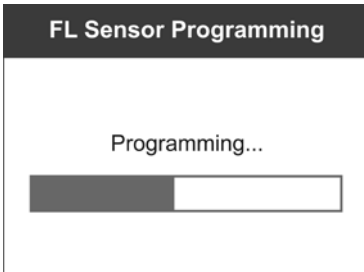
Figure 5.10
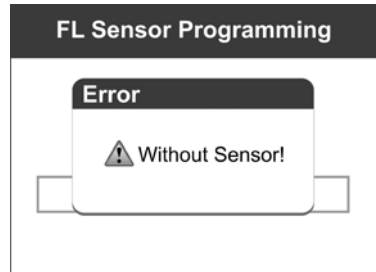
Figure 5.11

After programming is finished, a series of beep sound will be heard and the tool will display the data details such as the sensor ID, the temperature and the battery voltage after testing the new programmed MX-Sensor.
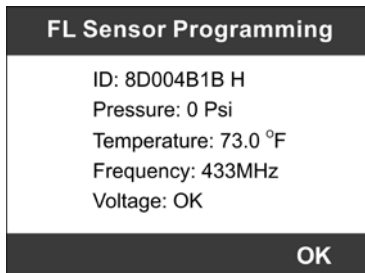
Figure 5.12

If programming failed, the screen will show as below (Figure 5.13), in this case, please perform programming function again.

Figure 5.13

Press "**OK**" to return to the previous screen, and a sensor mark will appear on the right side of the screen, indicating the wheel sensor has been programmed.
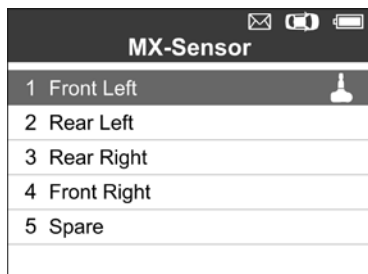
Figure 5.14

The "Programmed" option is available when selecting the programmed wheel sensor. Select "**Programmed**" to reprogram the wheel sensor with the same ID if necessary.

Figure 5.15

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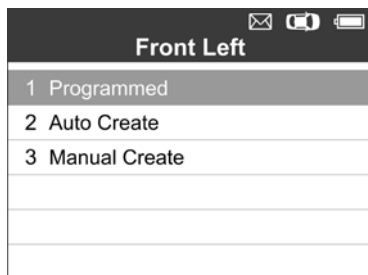
After all required MX-Sensor is programmed, please select **Write IDs to Vehicle** in **Relearn** function, refer to **4.2 TPMS Relearn** for details.

5.2 Manual Create

This function allows user to manually enter sensor IDs. Users can enter the random ID or the original sensor ID, if it's available.

✍ *NOTE: Do not enter the same ID for each sensor.*

1) Follow the steps 1 to 7 in **5.1 Auto Create** to select **MX-Sensor** and then select the required wheel position and press the **Y** button.

2) Use the **UP/DOWN** scroll button to select **Manual Create** and press the **Y** button.
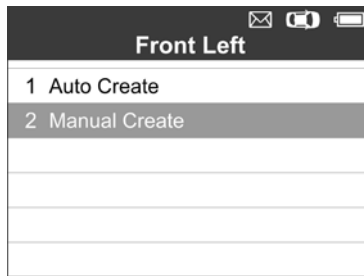
Figure 5.16

3) Use the **UP/DOWN** scroll button and the **LEFT/RIGHT** scroll button to select the character and press the **Y** button to confirm.
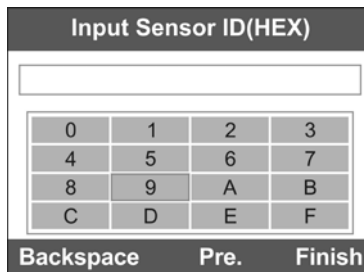
Figure 5.17

4) Use the left **FUNCTION** button to select "**Backspace**" to remove the entered character. Use the middle **FUNCTION** button to select "**Pre.**" to move the cursor to the previous character. Use the right **FUNCTION** button to finish the input and the screen will display a message requiring the user for confirmation. Select "**Yes**" to save the sensor ID and continue programming or "**No**" to return to the previous screen.

Input Diaglog Box

91736260
Do you want to save and continue?

No   Yes
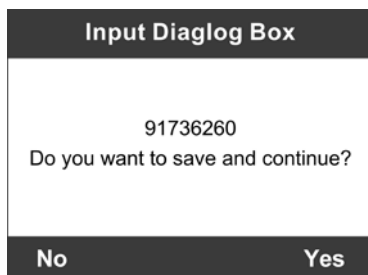
Figure 5.18

📕 *NOTE: Different sensor from manufacturer may have different ID character length limit. The scan tool will automatically recognize the OEM sensor ID character length, and prompt a message when entered character length is out of limitation.*

Input Sensor ID(HEX)

Warning

⚠ Input Overflow!

Backspace   Pre.   Finish
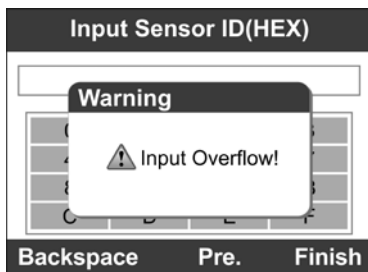
Figure 5.19

5) Insert the correct MX-Sensor and press the **Y** button to start programming or the **N** button to exit.

📕 *NOTE: If a random ID is entered, please perform the Relearn function after programming is finished. If the original ID is entered, then there is no need to perform Relearn function.*

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5.3 Copy by OBD

This function allows user to write in the saved sensor information to MX-Sensor after performing **Read IDs from Vehicle** in **Relearn** function.

1) Follow the steps 1 to 7 in **5.1 Auto Create** to select **MX-Sensor** to enter the Programming function. The OBD mark will appear on the right side of the screen. (Figure 5.20) After selecting the specific wheel and pressing the **Y** button, the "Copy by OBD" option is available on the function menu. (Figure 5.21)

⊠ ▭▭ ▭
MX-Sensor
1 Front Left
2 Rear Left
3 Rear Right
4 Front Right
5 Spare

◄OBD▮ ▭▭
Front Left
1 Copy by OBD
2 Auto Create
3 Manual Create
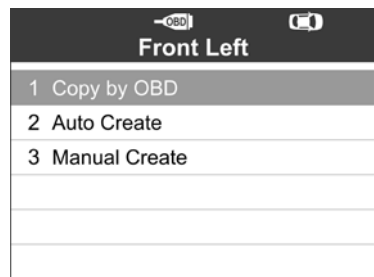
Figure 5.20   Figure 5.21

2) Select **Copy by OBD,** insert the correct MX-Sensor into the sensor slot, and then press the **Y** button to start programming the saved sensor information to the MX-Sensor.

5.4 Copy by Activation

This function allows user to bypass OBD II and automatically write in the retrieved original sensor data to the MX-Sensor. It is used after the original sensor is triggered.

1) From the activation screen, select the specific wheel position and press the **TEST** button to trigger the original sensor. When the information is retrieved, a series of beep sound will be heard.
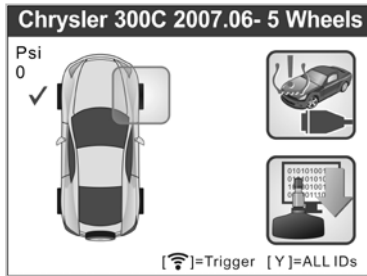
Figure 5.22

2) Select **MX-Sensor** and a trigger mark 𝄞)) will appear on the right side of the screen.
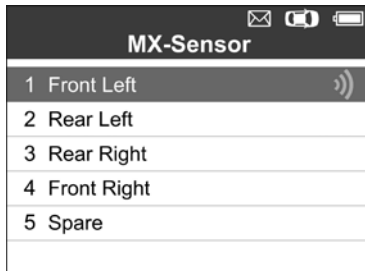
Figure 5.23

3) Use the **UP/DOWN** scroll button to select the corresponding wheel, press the **Y** button and then the "Copy by Activation" option will appear on the screen.
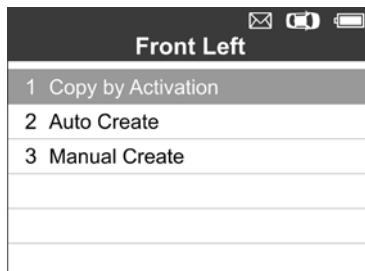
Figure 5.24

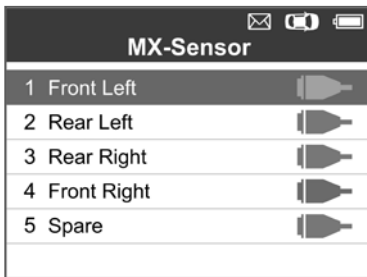4) Select **Copy by Activation**, insert the correct MX-Sensor into the sensor slot, and then press the **Y** button to start programming the retrieved sensor information to the MX-Sensor.

If the user had performed both the **Read IDs from Vehicle** function and the trigger function, the scan tool will use the sensor information retrieved by the trigger function to program the MX-Sensor as default priority.

Once programmed with **Copy by Activation** and **Copy by OBD**, the MX-Sensor can be installed in the wheel directly to be mounted on the car and the TPMS warning light will turn off without needing to write IDs to the vehicle.

📝 *NOTE: For the vehicles not supported by Relearn function, please select the "Manual Create" option to enter the original sensor ID manually, or trigger the original sensor at the activation screen to get the sensor information, before programming the MX-Sensor.*

6. OBDII Diagnostics

The OBD II Diagnostics function is a fast-access option that allows you to carry out a quick test on the engine system of OBD II-compliant vehicles.

When more than one vehicle control module is detected by the scan tool, you will be prompted to select the module where the data may be retrieved. The most often to be selected are the Power-train Control Module [PCM] and Transmission Control Module [TCM].

CAUTION: Don't connect or disconnect any test equipment with ignition on or engine running.

1） Turn the ignition off.
2） Locate the vehicle's 16-pin Data Link Connector (DLC).
3） Plug the scan tool cable connector into the vehicle's DLC.
4） Turn the ignition on. Engine can be off or running.
5） Turn on the scan tool. Select **OBD II** from the **Main Screen**. (Figure 3.1)
6） Press the **Y** button to wait for the Menu to appear. A sequence of messages displaying the OBD II protocols will be observed on the display until the vehicle protocol is detected.

◢ *If the scan tool fails to communicate with the vehicle's ECU (Engine Control Unit) more than three times, a "LINKING ERROR!" message shows up on the display.*

✓ Verify that the ignition is ON.
✓ Check if the scan tool's OBD II connector is securely connected to the vehicle's DLC.
✓ Verify that the vehicle is OBD II compliant.
✓ Turn the ignition off and wait for about 10 seconds. Turn the ignition back to on and repeat the procedure from step 5.

● *If the "LINKING ERROR" message does not go away, then there might be problems for the scan tool to communicate with*

the vehicle. Contact your local distributor or our technical supports.

7) View a summary of system status (MIL status, DTC counts, Monitor status) on screen. (Figure 6.1)

System Status	
MIL Status	ON
Codes Found	127
Monitors N/A	0
Monitors OK	0
Monitors INC	10
OK	Save

Figure 6.1

- If more than one module is detected, you will be prompted to select a module before testing. (Figure 6.2)

Control Module
1 Module $10
2 Module $18
3 Module $28
4 Module $98

Figure 6.2

- Use the **UP/DOWN** scroll button to select a module and press the **Y** button.

6.1 Read Codes

1) From **Diagnostic Menu**, use the **UP/DOWN** scroll button to select **Read Codes** and press the **Y** button. (Figure 6.3)

Figure 6.3

2) Use the **UP/DOWN** scroll button to select **Stored Codes**, **Pending Codes** or **Permanent Codes** from the **Read Codes** menu and press the **Y** button. (Figure 6.4)

Figure 6.4

3) A screen of trouble codes will appear. If more than one DTC is found, use the **UP/DOWN** scroll button to check all the codes. (Figure 6.5)

Figure 6.5

6.2 Erase Codes

● *This function is performed with key on engine off (KOEO). Do not start the engine.*

1) Use the **UP/DOWN** scroll buttons to select **Erase Codes** from **Diagnostics Menu** and press the **Y** button. (Figure 6.3)

2) A confirm screen will show up. Press the corresponding **FUNCTION** button "**Yes**" to continue; otherwise press the corresponding **FUNCTION** button "**NO**" to exit. (Figure 6.6)

```
          Erase Codes


        Erase trouble codes!
          Are you sure?



  No                      Yes
```
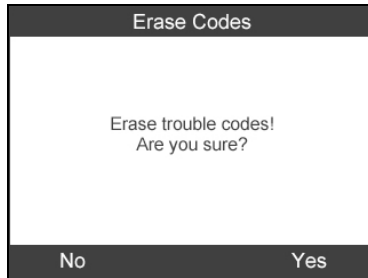
Figure 6.6

3) If the codes are cleared successfully, an "**Erase Done!**" message shows on the screen. Press any key to continue. (Figure 6.7)

```
          Erase Codes



          Erase Done!



    Press any key to continue
```
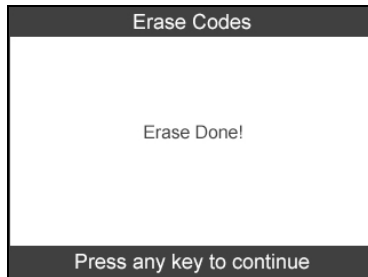
Figure 6.7

6.3 Live Data

In this function, you can not only read the live data but also retrieve data for later review.

1) To view live data, use the **UP/DOWN** scroll button to select **Live Data** from **Diagnostic Menu** and press the **Y** button. (Figure 6.3)

2) Wait a few seconds while the scan tool validates the PID MAP. (Figure 6.8)

Figure 6.8

Complete List

1) To view complete set of data, use the **UP/DOWN** scroll button to select **Complete List** from **Live Data** menu and press the **Y** button. (Figure 6.9)

Figure 6.9

2) Use the **UP/DOWN** scroll button to select a specific item or use the **LEFT/RIGHT** scroll button to turn to next page. (Figure 6.10)

Complete List		
Calculated Load Value	100.0	%
Absolute Throttle Position	100.0	%
Commanded Secondary Air Status	UPS	
Save	One Graphic	Pause

Figure 6.10

Custom List

1) To view customized PID data, use the **UP/DOWN** scroll button to select **Custom List** from **Live Data** menu and press the **Y** button. (Figure 6.9)

2) Use the **UP/DOWN** scroll button to move to the desired item and press the corresponding **FUNCTION** button "**Select**" to choose. (Figure 6.11)
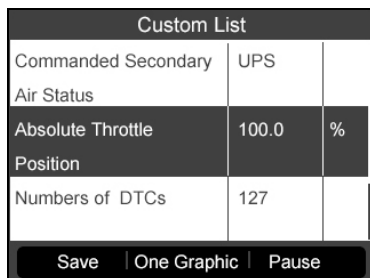
Custom List	
☐ Numbers of DTCs	
☐ DTC that caused required freeze frame data storage	
☐ Fuel system 1 status	
☐ Fuel system 2 status	
☐ Calculated Load Value	
☐ Absolute Throttle Position	
Clear All	Select	Select All

Figure 6.11

3) Press the corresponding **FUNCTION** button "**Clear**" to unselect items, or press the corresponding **FUNCTION** button "**Select All**"/"**Clear All**" to select or unselect all items.

4) Press the **Y** button to view selected PIDs on screen. (Figure 6.12)
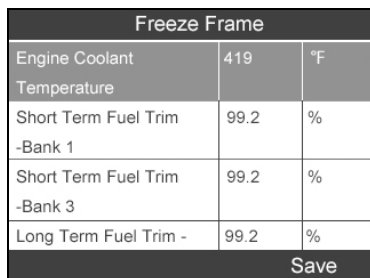
Custom List		
Commanded Secondary Air Status	UPS	
Absolute Throttle Position	100.0	%
Numbers of DTCs	127	
Save One Graphic Pause		

Figure 6.12

5) Press the **N** button to return to previous menu.

6.4 Freeze Frame

1) To view freeze frame data, use the **UP/DOWN** scroll button to select **Freeze Frame** from **Diagnostic Menu** and press the **Y** button. (Figure 6.3)

2) Wait a few seconds while the scan tool validates the PID MAP.

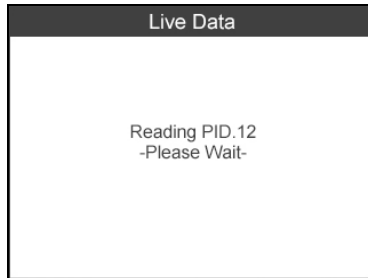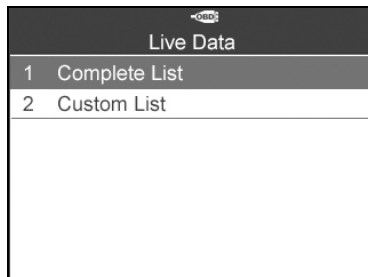3) Use the **UP/DOWN** scroll button to select a specific item or use the **LEFT/RIGHT** scroll button to turn to next page. (Figure 6.13)

Freeze Frame		
Engine Coolant Temperature	419	°F
Short Term Fuel Trim -Bank 1	99.2	%
Short Term Fuel Trim -Bank 3	99.2	%
Long Term Fuel Trim -	99.2	%
		Save

Figure 6.13

4) If there is no available freeze frame data, an advisory message "**No freeze frame data stored!**" shows on the display.

5) Press the corresponding **FUNCTION** button "**Save**" to record freeze frame to **Review Data** for later playback or printing. A confirming message "**Save success!**" shows on the screen and press any key to continue.

6.5 Retrieving I/M Readiness Status

Some latest vehicle models may support two types of **I/M Readiness** tests:

A. *Since DTCs Cleared* - indicates status of the monitors since the DTCs are erased.

B. *This Drive Cycle* - indicates status of monitors since the beginning of the current drive cycle.

An I/M Readiness Status result of "NO" does not necessarily indicate that the vehicle being tested will fail the state I/M inspection. For some states, one or more such monitors may be allowed to be "Not Ready" to pass the emissions inspection.

- **"OK"** -- Indicates that a particular monitor being checked has completed its diagnostic testing.
- **"INC"** -- Indicates that a particular monitor being checked has not completed its diagnostic testing.
- **"N/A"** -- The monitor is not supported on that vehicle.

1) Use the **UP/DOWN** scroll button to select **I/M Readiness** from **Diagnostic Menu** and press the **Y** button. (Figure 6.3)

2) Wait a few seconds while the scan tool validates the PID MAP.

3) If the vehicle supports both types of tests, then both types will be shown on the screen for selection. (Figure 6.14)

Figure 6.14

4) Use the **UP/DOWN** scroll button, as necessary, to view the status of the MIL light ("**ON**" or "**OFF**") and the monitors.

Since DTCs cleared		
Malfunction Indicator Lamp(ML) Status	ON	
Misfire Monitoring	INC	
Fuel system Monitoring	INC	
Comprehensive component	INC	

Figure 6.15

5) If the vehicle supports readiness test of "**This Drive Cycle**", a screen of the following displays: (Figure 6.16)

This driving cycle		
Misfire Monitoring	INC	
Fuel system Monitoring	INC	
Comprehensive component Monitoring	INC	
Catalyst Monitoring	INC	

Figure 6.16

6) Use the **UP/DOWN** scroll button for more PIDs if additional information is available for more than one page. Or use the **LEFT/RIGHT** scroll button to view PIDs in the previous/next page.

7) Press the **N** button to return to previous menu**.**

6.6 O2 Monitor Test

1) Use the **UP/DOWN** scroll button to select **O2 Monitor Test** from **Diagnostic Menu** and press the **Y** button. (Figure 6.3)

2) Wait a few seconds while the scan tool validates the PID MAP.

3) Use the **UP/DOWN** scroll button to select O2 sensor from **O2 Monitor Test** menu and press the **Y** button. (Figure 6.17)
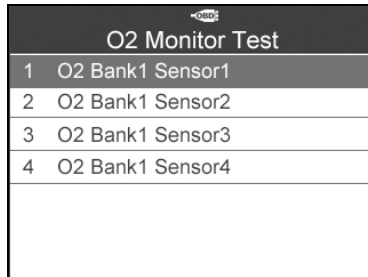
Figure 6.17

● If the vehicle does not support the mode, an advisory message will be displayed on the screen. (Figure 6.18)
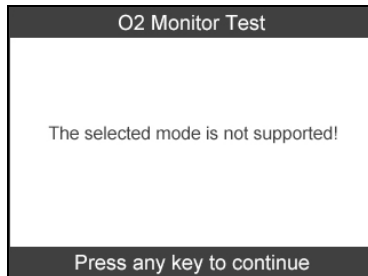
Figure 6.18

4) Select a specific item and press the **Y** button to view test value, maximum value, minimum value, and determine if it is OK. (Figure 6.19)

O2 Bank1 Sensor1	
1	Rich-Lean Threshd(V)
2	Lean-Rich Threshd(V)
3	Low for Switch(V)
4	High for Switch(V)
5	Rich-Lean Threshd(s)
6	Lean-Rich Threshd(s)
7	Min for test Cys(V)

Figure 6.19

5) Press the corresponding **FUNCTION** button "**Save**" to store to Review Data for later playback and print or press the **N** button to return to previous menu. (Figure 6.20)

Rich-Lean Threshd(V)		
Module	$10	
Test Value	0.005	
Min Limit	0.435	
Max Limit	0.010	
		Save

Figure 6.20

6.7 On-Board Monitor Test

1) Use the **UP/DOWN** scroll button to select **On-Board Monitor Test** from **Diagnostic Menu** and press the **Y** button. (Figure 6.3)

2) Wait a few seconds while the scan tool validates the PID MAP.

3) Select the vehicle make and press the **Y** button. (If you have selected the vehicle before, the **Vehicle Manufacturer** screen would not appear again)

Figure 6.21

4) A list of specific monitoring systems appears. Select one of the items and press the **Y** button. (Figure 6.22)

Figure 6.22

5) A screen of test results shows up. (Figure 6.23)

Figure 6.23

6) Press the **N** button to return to previous menu.

6.8 Component Test

1) Use the **UP/DOWN** scroll button to select **Component Test** from **Diagnostic Menu** and press the **Y** button. (Figure 6.3)

2) Wait for the scan tool to display the **Component Test** menu. (Figure 6.24)
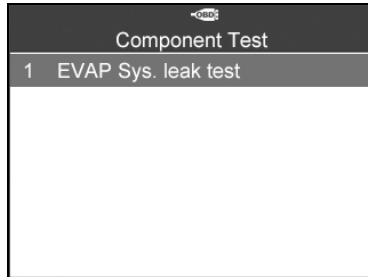
Figure 6.24

3) If the test has been initiated by the vehicle, a confirmation message will be displayed on the screen. (Figure 6.25)
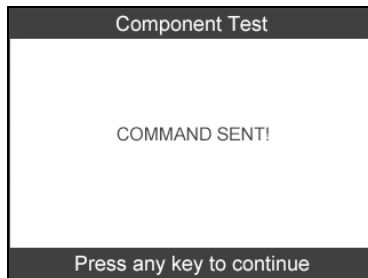
Figure 6.25

- If the test has not been successfully initiated by the vehicle, a message "**LINKING ERROR**" shows up. Make sure the tool and DLC are connected securely.

- Some vehicles do not allow scan tools to control vehicle systems or components. If the vehicle under test does not support the EVAP Leak Test, an advisory message is displayed on the screen. (Figure 6.26)

Component Test

The selected mode is not supported!

Press any key to continue
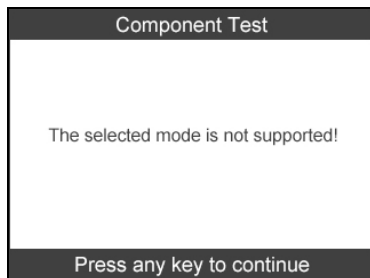
Figure 6.26

4) Wait a few seconds or press any key to return to previous screen.

6.9 Viewing Vehicle Information

This function enables retrieval of Vehicle ID No. (VIN), Calibration ID Nos. (CINs), Calibration Verification Nos. (CVNs), In-use Performance Tracking, and ECU Name.

1) From the **Diagnostic Menu**, use the **UP/DOWN** scroll button to select **Vehicle Info.** and press the **Y** button. (Figure 6.3)

2) Wait for the scan tool to display the **Vehicle Info.** menu. (Figure 6.27)

Vehicle Info.

1 Vehicle ID Number
2 Calibration ID
3 Cal.Verf.Number
4 In-use Perform Track
5 ECU Name
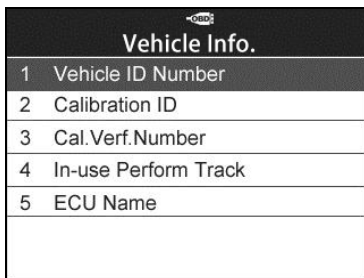
Figure 6.27

● If the vehicle does not support this mode, a message shows on the display warning that the mode is not supported.

3) From **Vehicle Info.** menu, use the **UP/DOWN** scroll button to select **Vehicle ID Number** and press the **Y** button.

Figure 6.28

4) Follow the same procedures to retrieve **Calibration ID**, **Calibration Verification No.**, **In-use Performance Tracking** and **ECU Name**.

6.10 Modules Present

1) Use the **UP/DOWN** scroll button to select **Modules Present** from **Diagnostic Menu** and press the **Y** button. (Figure 6.3)

2) View modules present with their IDs and communication protocols. (Figure 6.29)

Figure 6.29

3) Press the corresponding **FUNCTION** button "**Save**" to store the modules data to **Review Data**, or press the **N** button to exit.

7. RKE & RF Monitor

Today's keyless remotes -- also known as key fobs -- make life easier. But when your key fob stops working or starts to perform sporadically, it will be particularly frustrating. Check your key fob to make sure it is in top condition so it will work when you really need it.

Since a key fob is attuned to a special frequency that is only detected by the car for which it was issued, you will need to use your vehicle to test the fob. Otherwise you will have to take it to a dealership or an automotive locksmith to have it tested for the right frequency. But with our TPMS tool, the key fob testing becomes easy and convenient.

1) Use the **UP/DOWN** scroll button and **LEFT/RIGHT** scroll button to select **RKE & RF** from **Main Menu** (Figure 3.1), and press the **Y** button to confirm.

2) Hold the key fob very close to the tool and press the function buttons on key fob to test. If the button works and the key fob is sending a signal, the tool will beep and the screen shows as below. If the button does not work, the tool will do nothing. To make sure each button is working properly, please test each button in turn.

RKE & RF Monitor

100%
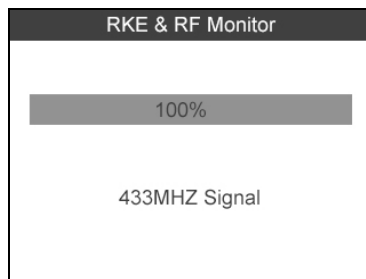
433MHZ Signal

Figure 7.1

● The progress bar indicates the approximate power level of the key fob.

- The stronger the signal, the higher the beep tone.

- The tool only tests 315MHz and 433MHz key fobs.

3) Press the **N** button to return to previous menu.

8. Review Data

The Review Data function allows user to view and print out saved data of the latest TPMS diagnostic recordings and all diagnostic data retrieved from the ECUs of the OBD II-compliant vehicles by the service tool.

Use the **UP/DOWN** and **LEFT/RIGHT** scroll button to select **Review Data** from Main Screen (Figure 3.1), and wait for the review data menu to appear.(Figure 8.1)

1) Use the **UP/DOWN** scroll button to select **TPMS** or **OBDII** from **Review Data** and press the **Y** button. (Figure 8.1)
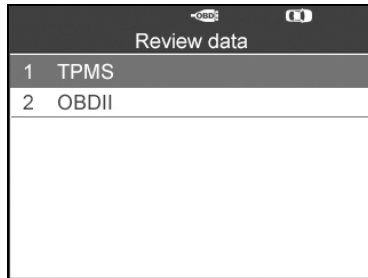
Figure 8.1

2) Use the **UP/DOWN** scroll button to select the desired stored data (taking **Read IDs from Vehicle** as an example) from **TPMS** menu and press the **Y** button.
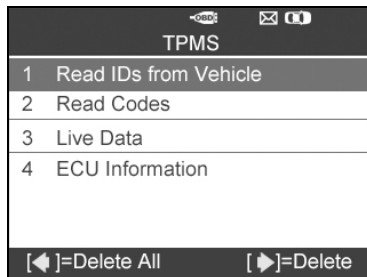
Figure 8.2

3) A list of retrieved sensor IDs will show on the screen.

Read IDs from Vehicle	
ID TYPE1 FL	8000E0
ID TYPE1 FR	002020
ID TYPE1 RR	00E000
ID TYPE1 RL	1E00E0
	Print

Figure 8.3

- Print --- Select this function to print out the data on screen. For detailed instructions, refer to *9.1 Print Data*.

- Delete --- Use the **RIGHT** scroll button to delete the selected data.

- Delete All --- Use the **LEFT** scroll button to delete all data on the screen.

📝 *NOTE: Don't use Delete All unless you are definitely sure what you are going to proceed.*

9. Print and Update

To print out retrieved data or update software, you will need the followings:

- ✓ TS601 tool with SD card inserted
- ✓ PC or laptop with USB ports
- ✓ USB cable

9.1 Print Data

The Print Data function allows printing out data retrieved by the service tool by connecting the scan tool to a PC or laptop with the USB cable supplied.

1) Install the **PC Suit** program to the PC from the supplied CD.

2) Connect the scanner to computer with the USB cable supplied.

3) Run **Printer** software on computer.

4) Select **Review Data** function in **Main Screen** of the TPMS tool. In data menu screen, use the **UP**/**DOWN** scroll button to select the data you want to print. Wait for the reviewing window to display (Figure 8.3), and then press the corresponding **FUNCTION** button "**Print**" and the selected file will be uploaded to your computer.

5) The **Printer** will show as below.

Figure 9.1

6) The selected data will display on the textbox of **Printer**. By selecting the function keys on the right, you could execute the following operations:

Print – Print all data in the textbox to a printer connected to your computer.

Edit – Once clicked, the software will automatically open a NOTEPAD window with all recorded data showing on.

Copy – Copy all data in the textbox to the clipboard.

Clear – Delete all data in the textbox.

Exit – Quit the operation.

7) You are also allowed to edit, copy, and delete the data in the **Printer** window.

9.2 Software Update

This function allows you to update the scan tool software through a computer.

◆ Register the Tool

User could update the scan tool **ONLY** after you had registered the tool on our website: www.autel.com Then you could download software, update online, retrieve information and get warranty service.

📖 *NOTE: Prior to registration, please confirm your network is working properly.*

1. Visit our website http://pro.autel.com.

2. On the Sign In page, input your account ID and other information to log in, if you already have an account.

3. If you are a new member to Autel and do not have an account yet, click the **Create Autel ID** button on the left side.

4. Enter the required information in the input fields, read through Autel's Terms and Conditions and tick on **Agree**, and then click **Create Autel ID** at the bottom to continue.

5. The online system will automatically send a confirmation email to the registered email address. Validate your account by clicking the link provided through the mail. A product registration screen opens.

6. Select the product model of your tool, enter the product serial number and password on the Product Registration screen, and click **Submit** to complete the registration procedure.

NOTE: Please use the About function to find out the Product Serial No. and Register Password. For details, please refer to the Section 3.8 System Setting.

◆ Update Procedure

Autel frequently releases software updates that you can download. The Update feature makes it very easy to determine and get exactly what you need.

Users could either choose to update the TPMS tool via USB connection or SD card.

✓ Update via USB

Connect the tool with computer with USB cable. Then switch on the tool.

✓ Update via SD card

Remove the SD card from the tool and connect it with computer.

Follow the update procedure to finish updating.

1) Run **Autel Update** in the **PC Suit** program. Wait for the Log In window to pop up. (Figure 9.2)
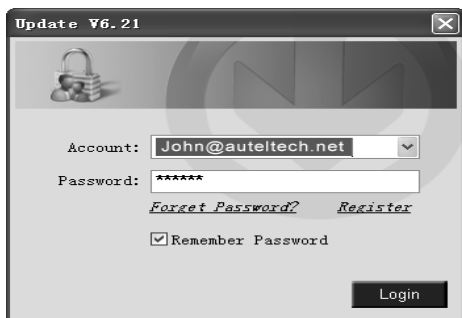
Figure 9.2

2) Enter your Autel ID and password and wait for the Update window to display. If you forget your password unintentionally, you may always click the [**Forget Password?**] to link to our website and get your password back.

3) In the **Update** window, select the items you want to install. Usually, you should install all available updates.
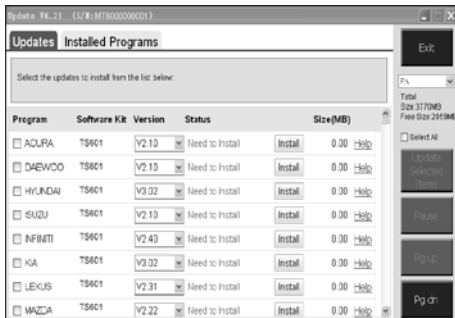
Figure 9.3

Generally there are two ways to update programs:

Batch Updating

1) Select the programs that you would update by clicking on the check boxes next to those items. Then click the **Update Selected Items** button on the right side of screen. Or

2) Click on the **Select All** checkbox on the right side of screen and all updatable items will be selected automatically. Then click the **Update Selected Items** button on the right side of screen.

3) Check the updating process by observing the upper left progress bar [Downloads] and upper right progress bar [Installs]. You may also find progress information in the Status column of updated items.

4) When the downloading is completed, the downloaded programs will be installed automatically. The new version will replace the old version.

5) Anytime you could click the **Pause** button on the right side of screen to suspend all progresses.

6) To resume updating process, you may need to select those suspended items again, and then click the **Update Selected Items** button. The progress will resume from the break point.

Single Updating

1) Find out the desired updating item and click the **Install** button in the same line, and the **Install** button changes to **Pause** at the same time.

2) Check the updating process by observing the upper left progress bar [Downloads] and upper right progress bar [Installs]. You may also find progress information in the Status column of updated items.

3) Anytime you could click the **Pause** button in the line to suspend this progress.

4) To resume updating process, click the **Install** button in the line again. The progress will resume from the break point.

5) When the downloading is completed, the downloaded program will be installed automatically. The new version will replace the old one.

6) Once the update is complete, disconnect the tool from the

computer. It is now updated and ready to go.

7) For users who choose to update by SD card, please insert the SD card into the scan tool, and switch on the TPMS tool. It's now updated and ready to go.

◆ View or Delete Programs

To view the list of installed programs or to delete an installed program, please follow these steps:

1) Click on the **Installed Programs** tag entry and the page will show the list of programs installed.

2) Select the program(s) that you would delete.

  ✧ **Batch delete**: Select the programs that you would delete by clicking on the check boxes to the left of those items. Then click the **Delete** button on the right side of screen.

  ✧ **Single delete**: Click the **Uninstall** button in the line of your would-be-deleted program.

3) A window asking "**Are you sure to delete the software?**" will pop up for your confirmation.
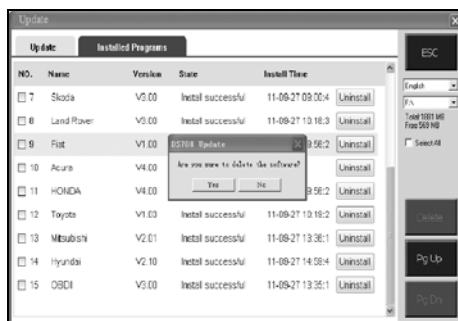
Figure 9.4

- Click on **Yes** to delete the program(s) selected, or on **No** to cancel the action.

- The deleted program will automatically add to the end of program list in the UPDATE page in case you would like to

install again.

Theoretically, all programs of the latest versions will be automatically compatible with the older versions, but if your TPMS tool does have a compatibility problem and need to retrieve the older version for some programs, please delete the new versions first then install the older version again. Choose the older version from the pull-down menu of program version.

Figure 9.5

10. Compliance Information

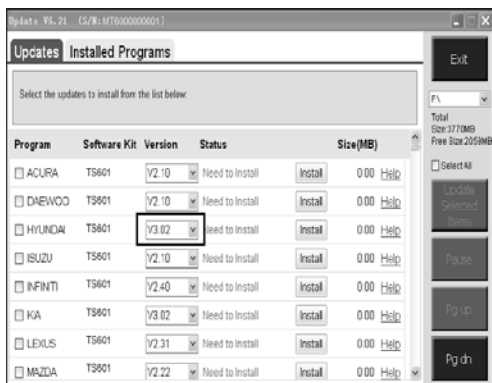## FCC COMPLIANCE   FCC ID:WQ83017501601

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation.

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

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the 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 and, if not installed and used in accordance with the instructions, 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 turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: ⅰ. Reorient or relocate the receiving antenna. ⅱ. Increase the separation between the equipment and receiver. ⅲ. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. ⅳ. Consult the dealer or an experienced radio/TV technician for help.

RF warning statement:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

The term "IC" before the radio certification number only signifies that IC technical specifications were met.

RoHS COMPLIANCE

This device is declared to be in compliance with the European RoHS Directive 2011/65/EU.

CE COMPLIANCE

This product is declared to conform to the essential requirements of the following Directives and carries the CE mark accordingly: EMC Directive 2004/108/EC R&TTE Directive 1999/5/EC   Low Voltage Directive 2006/95/EC

11. Warranty and Service

11.1 Limited One Year Warranty

Autel warrants to its customers that this product will be free from all defects in materials and workmanship for a period of one (1) year from the date of the original purchase, subject to the following terms and conditions:

1) The sole responsibility of Autel under the Warranty is limited to either the repair or, at the option of Autel, replacement of the TPMS tool at no charge with Proof of Purchase. The sales receipt may be used for this purpose.

2) This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our Service Center or facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance.

3) Autel shall not be liable for any incidental or consequential damages arising from the use, misuse, or mounting of the TPMS tool. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

4) All information in this manual is based on the latest information available at the time of publication and no warranty can be made for its accuracy or completeness. Autel reserves the right to make changes at any time without notice.

11.2 Service Procedures

If you have any questions, please contact your local store, distributor or visit our website at www.autel.com.

If it becomes necessary to return the tool for repair, contact your local distributor for more information.