

Autel TPMS FAQs

Autel TPMS Department reserves the right for final explanation

I. TPMS FAQs:

Notes: if you read our TPMS FAQs for the first time, please read from beginning to end for your better understanding.

1. What is TPMS?

TPMS (Tire Pressure Monitoring System) is an electronic system designed to monitor the pressure, temperature and battery status of tire sensors with different IDs in real time and generate alerts to drivers in case of an exception so as to improve driving safety.

2. What do I benefit from direct TPMS?

- 1) Compared to indirect TPMS, direct TPMS provides more accurate pressure, temperature and battery status in a fast and live way.
- 2) It can maximize your driving safety by detecting slow air leak in a minute and transmitting a warning once an exceptional situation arises, like a flat tire.
- 3) It can also economize your fuel by informing you of real time tire pressure, and under or over pressure warnings.

3. What types of vehicles can Autel sensors function with?

Autel sensors are designed to only function with :

- 1) Passenger cars,
- 2) Pickups ,
- 3) Light commercial vehicles (LCVs),
- 4) But not with heavy-duty trucks right now.

4. What types of TPMS sensors can be replaced by Autel sensors?

- 1). Autel sensors can replace all direct TPMS sensors fitted on wheels, including OE and programmable universal sensors,
- 2). But not aftermarket sensors in an extra complete set of TPMS system.

5. What frequencies are Autel sensors compatible with?

- 1) 315MHz;
- 2) 433MHz;
- 3) 434MHz;

Notes: please select the 433MHz menu when the sensor is labelled with 434MHz.

6. How to make sure the vehicle has direct TPMS sensors?

Direct TPMS sensors are DEFINITELY fitted in your vehicle when you

- 1) Receive sensor information after activation via an Autel tool; or
- 2) Find out tire pressure values on your onboard menu.

Direct TPMS sensors are PROBABLY fitted in your vehicle when you find out the factory tires equipped with either metal valve stems or rubber valve stems with rubber rings.

Or you can just disassemble your tires and have a visual check.

7. How to distinguish indirect TPMS from direct TPMS?

Direct TPMS employs direct tire pressure sensors on each wheel while indirect TPMS does not. ABS is a very common indirect TPMS.

8. What is activation? How to activate a TPMS sensor?

To activate a sensor is to make it transmitting data, so that the TPMS tool or the vehicle can get its information, such as tire pressure, temperature and/or battery status.

OEM sensors are usually activated by

- 1) An Autel TPMS tool at low frequency; or
- 2) Rapid air inflation/ deflation such as 5 psi or 20 kPa/10 seconds; or
- 3) Placing a magnet over the stem, especially those in 2003 and older vehicle models.

Notes: Autel sensors are activated at low frequency for the sake of convenience.

9. Does the selected menu function after activation?

Even though you can successfully activate sensors, it doesn't mean your selected menu will function properly.

Different types of sensors from the same manufacturer can be activated but may not be used until they share an identical protocol. So you must make sure that the selected menu is based on the actual OEM part NO. .

10. How many types of TPMS relearns are there? And what are they?

There are three basic relearn methods for TPMS sensors.

Auto Relearn

Driving the vehicle is required to relearn new sensor IDs, but some simple TPMS resets should be done beforehand. Auto relearn procedure is more frequently used on Chrysler, Fiat, VW, Porsche, Bentley, Benz, BMW, Audi, Land Rover and Jaguar models.

OBD Relearn

An OBD relearn requires the use of a TPMS tool to write sensor IDs directly into the vehicle's ECU. This procedure is frequently used on most Japanese- and Korean-made vehicles, and Chrysler, Fiat, Land Rover and Jaguar vehicles.

Stationary Relearn

New sensor IDs are relearned to the vehicle with the need of neither driving the vehicle nor writing IDs. This relearn procedure should be done in the vehicle's parking mode. This procedure is more frequently used on GM, Ford, some Chinese- and Japanese-made vehicles like Nissan.

To access the stationary relearn mode, you need to:

- 1) Use the Autel TPMS tool's OBD function to enable the Training or Relearn mode; and/or
- 2) Operate necessary onboard keys based on the relearn procedure described in your Autel tool.

After that, you need to activate all tire pressure sensors to complete the

stationary relearn. Generally, the activation sequence is clockwise, starting from front left wheel and ending with rear left wheel.

11. How to relearn TPMS sensors?

There are some cases for you to relearn TPMS sensors:

- 1) If it's an OEM sensor, please see Relearn Procedure in Autel tools.
- 2) If it's an Autel sensor, please program it first, then follow the instructions in Relearn Procedure.
- 3) If you don't want to perform the relearn procedure by yourself, you can simply select either "Copy by Activation" or "Copy by OBD" to complete it.
 - Copy by Activation: you need to activate all tire pressure sensors first, select "Copy by Activation", and then select the desired wheel to program the sensor. In this way, the sensor ID read by activation is successfully written into an Autel sensor.
 - Copy by OBD: you need to read sensor IDs through OBD port first, select "Copy by OBD", and then select the desired wheel to program the sensor. In this way, the sensor ID read through OBD port is successfully written into an Autel sensor.

12. What're high- and low-line TPMS?

- 1) High Line: vehicles with high line systems can inform drivers of the location of the underinflated wheel tire, and usually show tire pressure readings.
- 2) Low Line: vehicles with low line systems will not indicate the location of the underinflated wheel tire, and usually have only tire pressure lights but no readings.

13. How to locate and solve TPMS troubles?

To locate and solve TPMS troubles, you need to complete the steps below:

- 1) Use an Autel tool to scan trouble codes, activate sensors and read sensor information;
- 2) Check your TPMS devices according to the detected trouble codes, and then repair/replace the damaged parts, like ECU, receiver, actuator, tire pressure sensor and circuit;

- 3) Clear trouble codes;
- 4) Relearn sensors after code clearance;
- 5) Switch the ignition off and on again, start the engine, use the tool to scan the TPMS system again to make sure the codes are cleared and the TPMS light goes out;
- 6) Drive your vehicle for 15 minutes to make sure everything goes fine.

14. Why do I get “NA” parameters after I successfully activate sensors?

Sometimes you may get “NA” parameters after all sensors are successfully activated by your Autel tool, for example:

- Temp (Temperature) shows “NA”, and/or
- BAT (Battery) shows “NA”, and/or
- Mode shows “NA”.

It’s a normal situation because the unavailable item is not supported on your selected menu. Just ignore and move on to your next step.

15. What if I get different modes for different sensors after successful activation?

Here are some different cases.

- 1) If it’s an Autel sensor, it can work after successful activation no matter what mode it shows. Please just follow the how-to instructions for installation and relearn; or
- 2) If it’s a Siemens OE sensor and your Autel tool reads a “Ship” mode, please contact Autel Technical Support and we may provide you a trial version/solution; or
- 3) If it’s an OE sensor and your Autel tool reads a “Test”, “Park” or “Drive” mode, it’s a normal situation. It can work.

16. What if I get an “error: multi sensors” message when programming a sensor?

If the “error: multi sensors” message shows when you are programming a

sensor, it means there are some other sensors quite close to the one that you are programming. Please take your sensor to an open air for the programming in order to avoid interference.

If you intend to program several sensors at the same time. Please remember to select "Setting -> Wheels -> One wheel" first, then go back to the programming interface to program all sensor IDs at one time. If you want to relearn sensors, please switch to All Wheels mode by selecting "Setting -> Wheels -> All wheels" at first, then relearn them one by one.

II. Solutions to Common TPMS Problems

1. Software version

Problem description:

Vehicles included in the latest function list released on Autel website are not supported on my Autel tool.

Solution:

Update your Autel tool as soon as you get it. Please refer to the update part in your device's User Manual.

2. Indirect TPMS

Problem description 1:

I cannot read tire pressure information from my vehicle via my Autel tool.

Solution:

Dismount your tire, then squeeze or separate its outer tube to verify a direct TPMS sensor is fitted. If no direct TPMS sensors are fitted, your vehicle has an indirect TPMS, so of course, you cannot read.

Problem description 2:

I cannot establish communication between my TS601 tool and vehicle via OBD port.

Solution:

If possible, you can use an Autel diagnostic device such as MS906 or 906TS to make auto scan of your vehicle's ECUs. If common direct TPMS modules like Tire Pressure Module (TPM) and Body Control Module (BCM) are detected, your vehicle is equipped with direct TPMS. Check for other reasons. If only ABS is detected, probably your vehicle has an indirect TPMS, so your TS601 tool cannot communicate with your vehicle via OBD port.

3. Model year

Problem description 1:

When I select a model year similar to my vehicle to activate and/or program sensors in wheels, my good sensors don't work properly.

Solution:

Please select the right model year according to the information on your vehicle's label (usually on driver's door jamb).

If your vehicle model is not supported on your Autel tool, please contact us with your label and sensor photos and the information that how you operated. We will provide you a substitutable model year that fits to your OEM part number and guide you to activate, program and relearn your sensors, but in this way, you need to find out the relearn procedure by yourself when you cannot get it from the owner's manual. Your specific model year will be updated to our next software release.

Problem description 2:

I cannot activate TPMS sensors.

Solution:

If you are sure that you have selected the right model year, please

- 1) Check your vehicle for direct TPMS sensors; or
- 2) Try the same model year with other optional frequencies; or
- 3) Check that your sensor is damaged due to car crash; or
- 4) Check that your sensor battery is dead because your vehicle's model year is older, if it is, replace your sensor; or
- 5) Contact Autel Technical Support and provide your vehicle's label and sensor photos;

Otherwise, it's because you have accidentally selected a wrong model year.

- 1) If your vehicle is renovated, double check its model year. For example, a Chrysler 300 vehicle may have a mistaken label saying Chrysler 300C. Or
- 2) If your vehicle's month is on the boundary between two model year segments defined in your Autel tool, please try both segments to activate sensors. One or the other will work. Or
- 3) If there is a little overlap between two model year segments which have different manufacturers and protocols in your Autel tool, for example, BMW 2 Series (VDO) 2014/03-2016/12 433MHz and BMW 2 Series (HUF) 2014/01-2014/12 433MHz, please try both. One or the other will work.

Problem description 3:

I can activate sensors but cannot relearn.

Solution:

If your vehicle is a Hyundai or Kia model, please check for high line and low line options. Select the proper one according to your actual situation. Otherwise you need to contact Autel Technical Support.

4. OBD issue**Problem description:**

When I access to some function that is included in the released function list, I get "not supported" or "fail to establish communication" warning messages.

Solution:

Please contact Autel Technical Support and describe what have you done, what warning messages did you get and then what happened. We will solve your problems and release an update soon.

5. Sensor frequency

Problem description:

When I select the model year in my Autel tool to activate sensors, I find both 315MHz and 433MHz options are available for my specific vehicle's model year. What do I do?

Solution:

Both 315MHz and 433/434MHz sensors may function across vehicles in the same model year. Take the 2005-2007 Audi A6 models for instance, some of them use 315MHz while others 433/434MHz. When you have no idea which frequency works for your specific vehicle, please try both. One or the other will make your sensors successfully activated.

6. Sensor ID

Problem description 1:

When I read sensor IDs by activation or OBD function, my tool shows a warning message of "duplicated sensor ID". I cannot complete the relearn procedure and the TPMS light always stays on.

Solution:

Please be aware that tire pressure sensors in different wheels cannot share the same ID. Please use an Autel TPMS tool to activate all sensors, read sensor information and make sure sensor IDs are unique.

Problem description 2:

I programmed sensor IDs into my vehicle through OBD relearn procedure, but after a driving for some time, my TPMS light comes on.

Solution:

We suggest you read sensors IDs again and their corresponding locations after your writing to make sure they are correct.

Problem description 3:

I programmed sensor IDs by manual input, but after a driving for some time, my TPMS light comes on.

Solution:

We suggest you compare your manual input IDs with the original and make sure they are consistent. If not, please contact Autel Technical Support.

Problem description 4:

I had a tire rotation service, and My TPMS light comes on after a driving for some time. For example, it tells the front left tire has a low pressure condition, but it turns out to be the front right tire.

Solution:

It's because ID locations logged into your vehicle's ECU are inconsistent with the actual fact. Please use the Autel tool's OBD function to write sensor IDs again.

Notes: if you have any other problems that are not mentioned here, please contact Autel Technical Support.

7. Sensor mounting

Problem description 1:

Sensors are properly mounted and successfully relearned into the vehicle. Everything goes fine until a few days later when the TPMS light comes on and indicates "low pressure". I check sensors to read their information and do find out a low pressure condition.

Solution:

Please double check the valve stems of all sensors after installation and make sure there is no air leak.

Problem description 2:

Clamp-in sensors are properly mounted, but I find difficulties when I try to dismount them.

Solution:

Make sure the washer is well mounted against the outer rim, otherwise it will have air leak. And tighten the screw-nut with 4.0 Nm with the help of the positioning pin. If too tight, it will be broken and you can hardly dismount.

8. Tire pressure

Problem description:

My TPMS light comes on and my vehicle tells "please check tire pressure" and "a low pressure condition".

Solution:

Please always keep the correct air pressure in your specific tires. Look for the recommended pressure in your vehicle owner's manual or the tire placard attached to the door edge. And double check that tires are worn out when the TPMS light shows a low pressure condition.

When you are ready to inflate your tires, first make sure they are cold. Then

inflate to a pressure that is 10-15 kPa above the value recommended on the tire placard. Wait for about 15 minutes and deflate the tire to the recommended pressure. For example, it was a case about a Land Rover car. Its TPMS light showed a low pressure tire and didn't turn off until the under-inflated tire was inflated to a pressure above the nominal value.

It must be noted that

- 1) The nominal tire pressure should never exceed the full load pressure, especially vehicles with modified tires; and
- 2) All tires should never be 30% over-inflated anytime.

9. Relearn procedure

Problem description 1:

I cannot access and complete the sensor relearn.

Solution:

Please strictly follow the step-by-step instructions in Relearn Procedure in your Autel tool. Any operations inconsistent with the instruction will lead to the failure. For example, TS601 requires Autel sensors are programmed into the 2015 Renault Megan 3 model in an OBD relearn process. In that case, if you try an auto relearn, you may get failed.

Problem description 2:

I are performing an auto relearn as required, but still get failed.

Solution:

We suggest that your driving speed is controlled between 25 km/h and 100 km/h throughout the relearn. Too fast or too slow speed may cause a relearn failure.

Please wait for at least 15 minutes before you start a second relearn, otherwise it may cause a failure. Sensors or your vehicle need a certain while to get back to their parking status before a second relearn.

10.TPMS parts

Problem description 1:

A 2005 or older vehicle model has an illuminated TPMS light.

Solution:

Probably it's the tire pressure control modules that are worn out due to a too long service. Please use an Autel tool to detect TPMS trouble codes and confirm failure causes. Repair or replace worn-out parts, for example a transmitter, receiver or sensor.

Problem description 2:

My vehicle had a collision. Now my TPMS light stays on. What do I do?

Solution:

A collided vehicle may have either broken tire pressure control modules or broken sensors or even both. Please use an Autel tool to check both sensor information and control modules.

If any unusual value, replace the damaged sensors with Autel sensors. Then relearn new sensors into your vehicle by strictly following our advised relearn procedures.

If TPMS troubles codes are found, or if you cannot complete the relearn after installing Autel sensors even you stick to the step-by-step relearn procedures, repair or replace the damaged parts based on the failure causes you find.