






# Huf “IntelliSens” Universal Sensor

## Tips and Techniques for the Installation of Huf Tire Pressure Sensors

Module I:  
TPMS Diagnostics

1. Check whether the vehicle is equipped with a direct measurement TPMS



1. Check sensor

2. Select manufacturer



3. Select model

4. Select year of manufacture

5. Specify tire position

6. Push "Test" button

2. Check the status of the TPMS light and the tire pressure



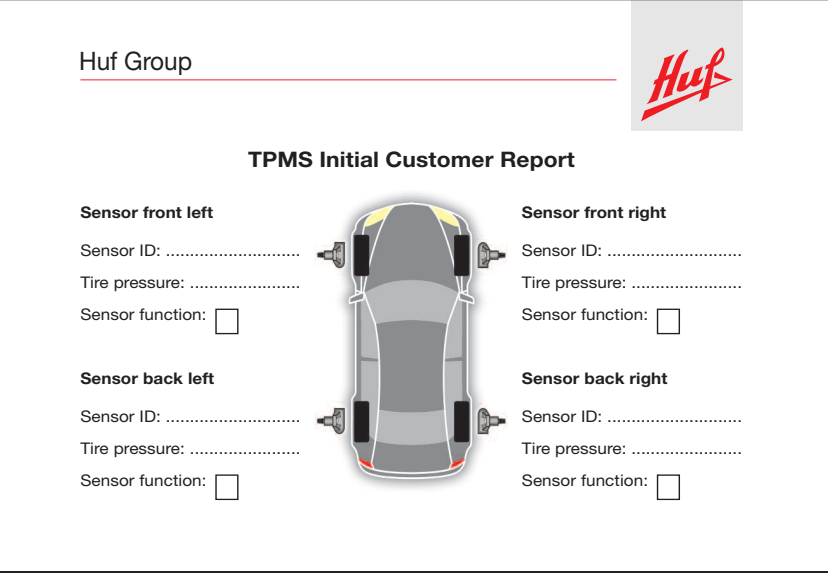
• TPMS light

A steady light indicates low tire pressure.  
A blinking light indicates a defective system component.

• Check the tire pressure

In case of pressure loss, visually check tires for external damages and carry out respective repairs.  
If the tire pressure is too low, inflate the tire.

3. Create a TPMS Initial Customer Report



Create a TPMS Initial Customer Report using the TPMS diagnostic tool (depending on the respective tool) that includes the following data:

– Sensor ID

– Tire pressure

– Sensor function

Huf “IntelliSens” universal sensors contain:

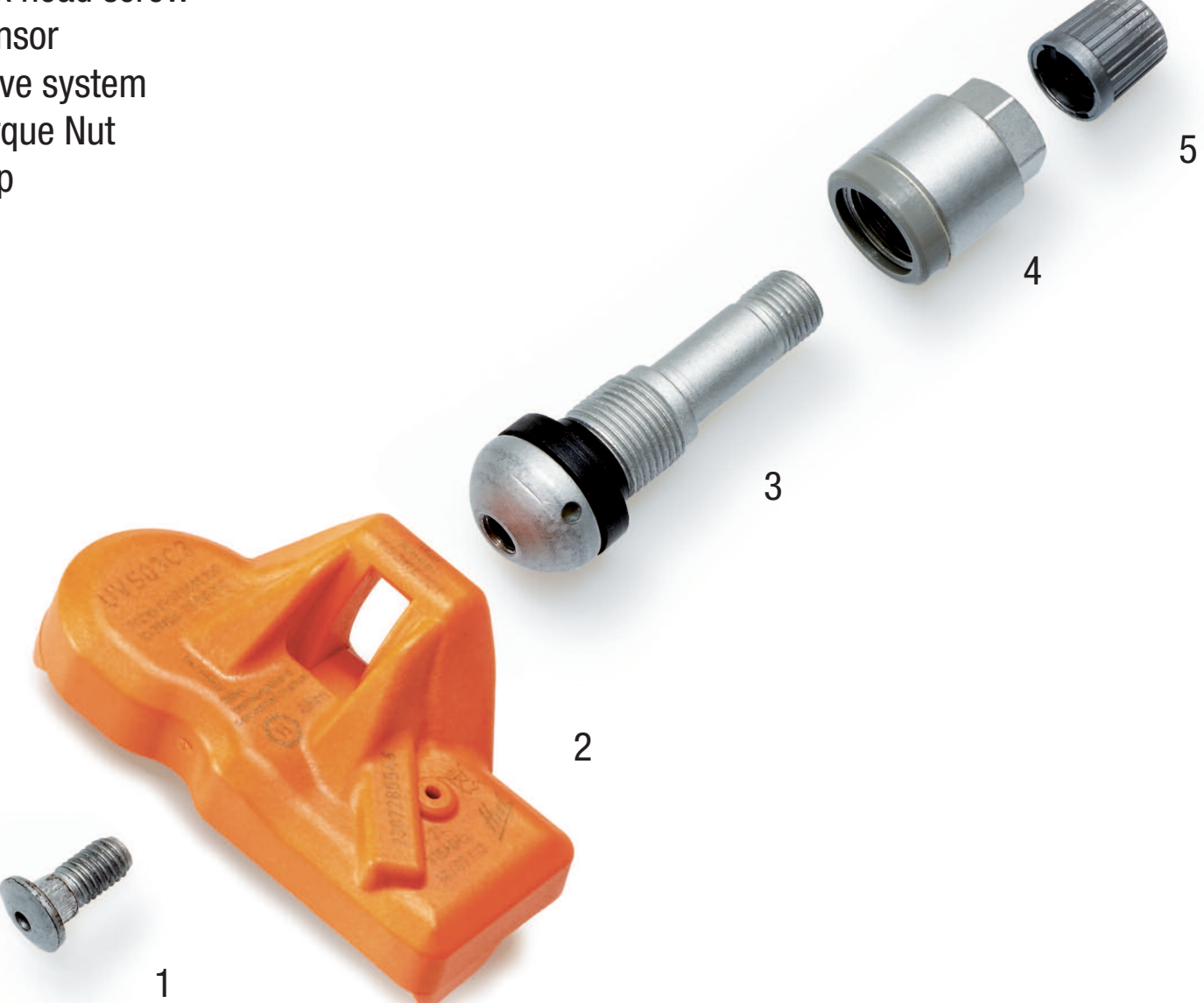
(1) Box head screw

(2) Sensor

(3) Valve system


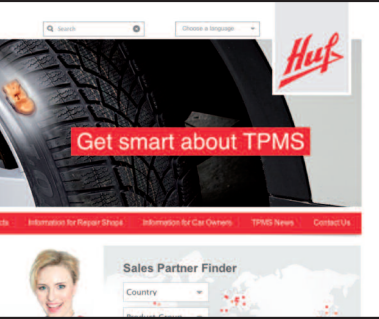
(4) Torque Nut

(5) Cap



Module II:  
Configuration of the Huf “IntelliSens” universal sensor

4. Selection of a correct Huf “IntelliSens” universal sensor



The correct Huf “IntelliSens” universal sensor can be selected with the help of:

– TPMS diagnostic tool (displays the matching Huf “IntelliSens” universal sensor)

– Product finder on the Huf website [www.intellisens.com](http://www.intellisens.com)


To select, the following vehicle data is required:

– manufacturer

– model

– year of manufacture

5. Configuration of the Huf “IntelliSens” universal sensor



Copy sensor

1. Select vehicle

2. Select model

3. Select year of manufacture

4. Copy sensor

– Read in the old sensor

– Configure the new sensor

5. Activate the new sensor

! The easiest way: Copy the sensor (no learning procedure necessary)

Create the new sensor

1. Select vehicle

2. Select model

3. Select year of manufacture

4. Create the new sensor

5. Activate the new sensor

In order to ensure that unauthorized persons are unable to change the configuration of the Huf “IntelliSens” universal sensor, a protection function was implemented into the sensor (lock function). After configuring the sensor to the respective vehicle model by means of the TPMS diagnostic tool, the lock function is executed via an additional command. The configuration is subsequently concluded. In order to provide optimal protection from misuse, the lock function is implemented in a way that eliminates the possibility of reconfiguring the universal sensor afterwards.

In case it is forgotten to execute the lock function after configuring the sensor, the Huf “IntelliSens” universal sensor automatically carries out the lock function after pressurization of the tires (autolock function).

! Note: Carry out the configuration of the Huf “IntelliSens” universal sensor with appropriate diligence and check the data before executing the lock function.

Important notes: The work steps described below may not be suitable for Runflat tires, UHP tires, and Michelin Pax®-tires. Carefully read the installation instructions and safety notes before installing the sensor. Reproduction mistakes, errors, and changes reserved. Illustrations may differ from the products. For safety reasons and to ensure optimal functionality, Huf recommends to have all maintenance and repair work carried out exclusively by trained specialists and according to the guidelines of the respective vehicle manufacturer. Tire valves are safety-relevant parts and must only be installed by trained specialists. Huf does not assume any liability in case of faulty or improper installation of the product. In case of failure to comply with the safety and installation indications and improper installation, the sensor may not be functional or limited in its function, which can lead to accidents resulting in bodily injury and/or death. The sensor must only be installed with the matching valves and appropriate accessories and installation tools in order to ensure optimal functionality. Do not use the sensor if it is damaged and/or other visible defects are present. In this case, use a new sensor and contact your supplier's customer service.

The following items are required for the configuration of the Huf “IntelliSens” universal sensor:

1. Tire changer machine


2. Tire fitting accessories

3. Matching valve

4. TPMS diagnostic tool


5. Torque wrench

– Torque of 35 in-lbs (4 Nm) with 11 mm socket



Module III:  
Installation of the Huf “IntelliSens” universal sensor


6. Selecting the matching valve



The applied rim requires the selection of a standard-compliant (DIN, ETRTO and TRA) valve length. Observe the rim manufacturer's information.

! The valve must be replaced during every sensor change!

7. Breaking the tire's bead



• First place the wheel into the bead breaker blade of the installation machine.


• The valve must be positioned at a distance of between 90 and 270 degrees relative to the bead breaker blade and the bead breaking must start there.

• Break the tire's bead several times on the outside.

• In the process, the bead must not touch the well of the rim in the proximity of the sensor.

• Finally, break the tire's bead delete also several times on the inside and adhere to the same instructions that apply to breaking the bead on the outside.

8. Exposing the sensor by pulling off the tire




• Please imagine the position of the mount head to be on the 12-o'clock position.

• Position the tire so that the valve is at an 11-o'clock position.

• Start by separating the upper bead from the rim.

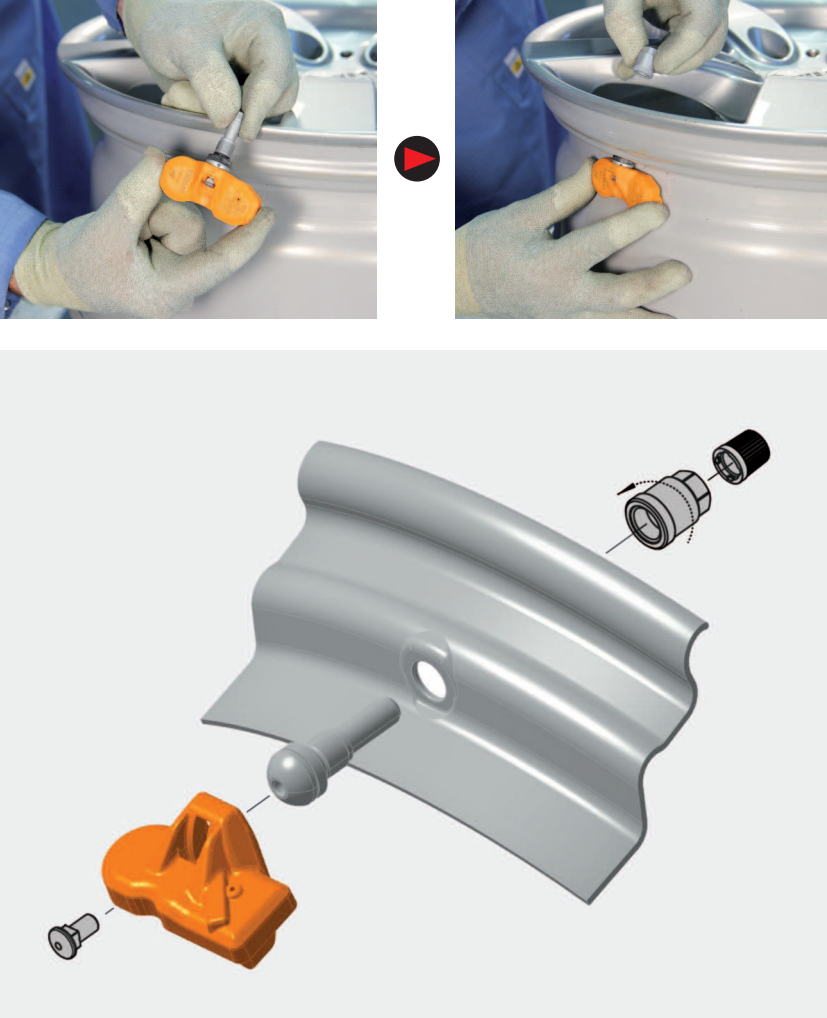
• Separate the lower bead from the rim while the position of the valve is the same as the upper bead procedure.

9. Removing the defective sensor



• Loosen valve stem from the inside of the valve hole and make sure that the grommet is removed.

10. Screwing the Huf “IntelliSens” universal sensor back into place



• Using the box head screw, mount the valve and sensor loosely together.

• Thread the valve through the hole from the inside of the rim and attach the valve nut from the outside.

• Secure the valve with torque nut.


• Turn clockwise using an 11 mm torque wrench. The valve will turn during this step and tighten the box head screw to the sensor housing.

• Continuing to turn with torque of 35 inch-pounds or 4 Nm will tighten the valve tightly to the rim.

• Be sure to keep the sensor directly against the rim during the installation process.

• Never reuse a torque nut!

11. Fitting the tire to the rim

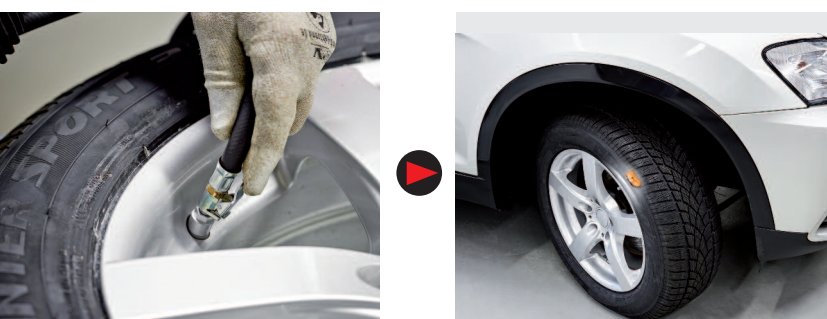


• Make sure that the bead lube does not cover the sensor's pressure port (ill. on left).

• Ensure that the bead engages with the well of the rim at an angle of 180 degrees relative to the sensor (ill. bottom left). Begin the mounting process of the lower bead with usage of the rotary disk clockwise.

• Start mounting the upper bead by turning the rotary disk clockwise. Make sure that the sensor is not pinched between the bead and the rim.

12. Installing the wheel to the vehicle and conducting the re-learn process



After the sensor is successfully replaced, continue the usual process of installing the wheel on the vehicle:

• Inflate tires with the specified tire pressure and screw on the valve cap

• Balance the tires

• Clean the contact surfaces between the rim and the wheel bearing

• Mount the wheel to the vehicle

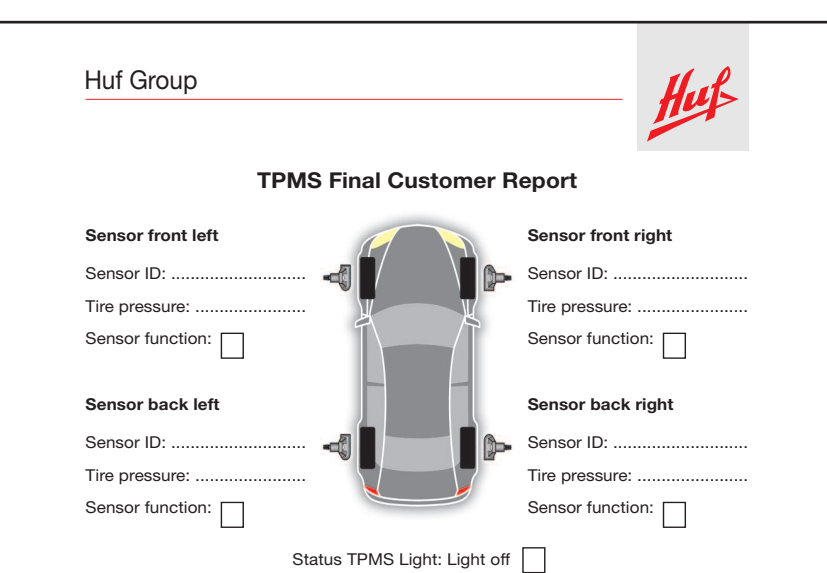
Conduct the specified re-learn process according to the instructions of the vehicle manual or the TPMS diagnostic tool. Possible re-learn processes:

– Automatic re-learn

– Manual re-learn

– Re-learn via OBD II interface

13. Create a TPMS Final Customer Report



• As a last point, check the following for each tire:

– Sensor function and tire pressure

• With the help of the TPMS warning light in the dashboard, check whether the TPMS system works correctly

• Finally document the data from every sensor on the TPMS Final Customer Report

• Deliver the vehicle to the customer

www.intellisens.com

IntelliSens  
The smarter sensor

10:00:00 00 12 34 192/08/2013