MOUNTING AND DEMOUNTING — INSTRUCTIONS

PASSENGER CAR- AND VAN TYRES

VREDESTEIN
TYRES

MOUNTING AND DEMOUNTING INSTRUCTIONS FOR PASSENGER CAR- AND VAN TYRES

With this document, Apollo Tyres aims to draw attention to the correct mounting and demounting of passenger car-and van tyres. This is in light of EU regulations that makes a tyre pressure monitoring system, also known as a Tyre Pressure Monitoring System (TPMS), mandatory from July 2024. This new TPMS regulation will apply to all new vehicles **(vehicle class M_1, M_2, M_3, N_1, N_2, N_3, O_3 and O_4)** placed on the EU market.

It still happens regularly that a TPMS sensor is damaged when demounting or mounting tyres.

TPMS REGULATION (EU 661/2009) FOR ALL NEW VEHICLES FROM JULY 2024

Since 2014, there has been a regulation in force in the EU that states that all new vehicles up to a maximum weight of 3500 kg must have a TPMS. This concerns vehicles for the transport of maximum 9 people including the driver (vehicle class M_1).

Two systems are allowed here:

1. **Indirect systems are using the ABS system**
2. **Direct TPMS is using tyre pressure sensors**

From July 2024 , the amended regulation (EU 2019/2144) will apply to all new vehicles. Vehicles for the transport of more than 9 people including the driver and vehicles for the transport of goods are therefore subject also to this obligation. This concerns busses (vehicle class M_2 and M_3), vans (vehicle class N_1, with a maximum weight of 3500 kg), and heavy trucks (vehicle class N_2 and N_3, with a maximum weight above 3500 kg), but also semi-trailers and trailers (vehicle class O_3 and O_4, with a maximum weight above 3500 kg).

ATTENTION POINTS FOR TYRES AND TPMS SENSORS

In recent years, many mechanics have gained experience in mounting and demounting tyres and TPMS sensors for passenger cars and light trucks. With heavier vans and trucks one can use this experience well, but there are a number of points of attention that must be taken into account.

For example, tyres for this class (C2 and C3) are heavier and stiffer, which can make mounting and demounting more difficult. A TPMS sensor (or tyre) can then be damaged more quickly.

There are also different types of sensors. Sensors on the valve, sensors mounted in the deep bed and sensors attached to / in the tyre. This is not always clear, which increases the risk of damage.

In addition to a wrong act that can damage a TPMS sensor, a TPMS sensor can also damage a tyre.

MOUNTING AND DEMOUNTING OF TPMS SENSORS

1 Always use the right tools.

2 Check for damage to sensor, wheel and tyre.

3 If a rubber Snap-In valve is mounted, always replace the old Snap-In valve for a new one when fitting a tyre. For metal valves, follow the maintenance guidelines of the car or valve manufacturer.

4 Use mounting paste when mounting a Snap-In valve.

5 Check before installation whether the sensor is still functioning. For example, check whether the sensor still has enough battery capacity.

6 When mounting metal valves, always use the correct tightening torque for securing, which is specified by the valve manufacturer. For deep bed sensors and sensors that are attached to/in a tyre, there are also special mounting guidelines.

7 Use the correct inner valve with corresponding tightening torque.

8 Follow the procedure carefully when demounting or mounting a tyre.

MAIN CONSIDERATIONS WHEN MOUNTING AND DEMOUNTING TYRES

MOUNTING OF TYRES

1 Always use the appropriate tools and the **corresponding safety instructions.**

2 Check for damage to sensor, wheel and tyre.

3 Use sufficient lubricant and appropriate mounting paste on both beads of the tyre. Do not forget about the backside of the beads.

4 Lubricate mounting paste on the rim. Also lubricate the deep bed.

5 Follow the correct procedure when mounting tyres.

6 Make sure that the beads seats to the rim below the mounting pressure of 3,3 Bar.

7 For correct seating of the beads, inflate to the bead seating pressure of 4,0 Bar for passenger car tyres and 4,5 bar for van tyres.

8 Do not forget to set the tyre to the correct tyre pressure specified by the car manufacturer.

MOUNTING OF TYRES

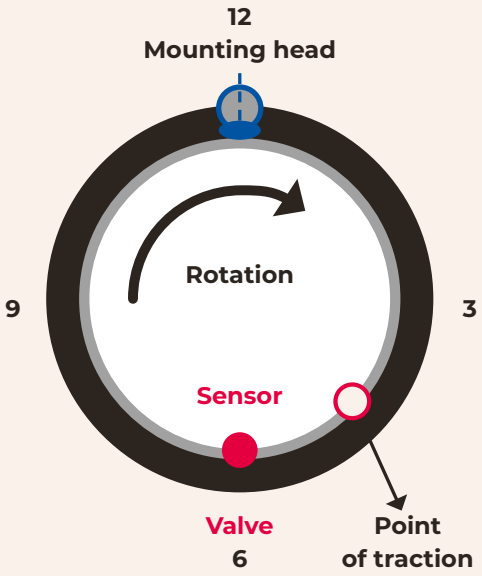
Lower or first bead:

1 Apply enough mounting paste to both beads.

2 Position the valve (with or without sensor) **180 degrees** to the mounting head, as shown in the picture beside.

3 Slowly rotate the wheelset clockwise.

4 Make sure that the distance between the traction point and the valve is not less than 15 cm.



Upper or second bead:

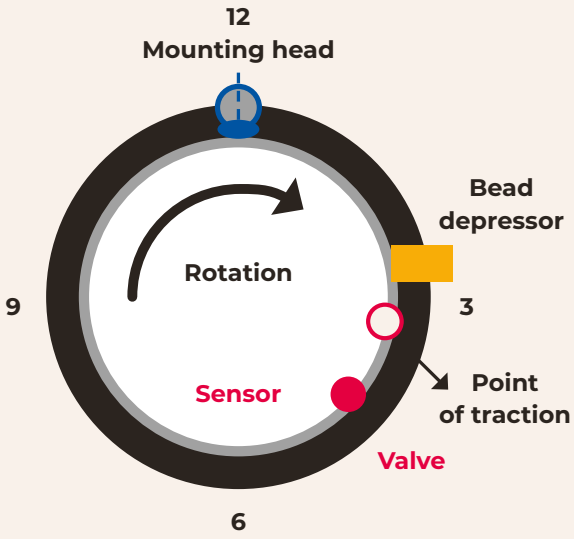
1 Position the valve (with or without sensor) relative to the mounting head, as shown beside.

2 Use (a) bead depressor(s) to press the bead under the rim flange.

3 Slowly rotate the wheelset in the direction indicated.

4 Use (a) bead depressor(s) to keep the bead in the deep bed.

5. The last part of the bead should slide over the rim flange near the valve.



DEMOUNTING OF TYRES

1 Always use the right tools.

2 Check for damage to sensor, wheel and tyre.

3 Remove the inner valve and allow the tyre pressure to drain completely.

4 In a machine with bead breaker plate, push the bead 1 cm from the rim flange at four different places of the tyre.

5 Place the bead breaker plate so that it cannot touch any TPMS sensor.

6 Use enough mounting paste between bead and rim before demounting the tyre.

7 Tighten the rim in the right way and with the right clamping tools.

8 Carefully follow the procedure when demounting tyres.

DEMOUNTING OF TYRES

Upper or first bead:

1 Remove the inner valve and allow the tyre pressure to deflate completely.

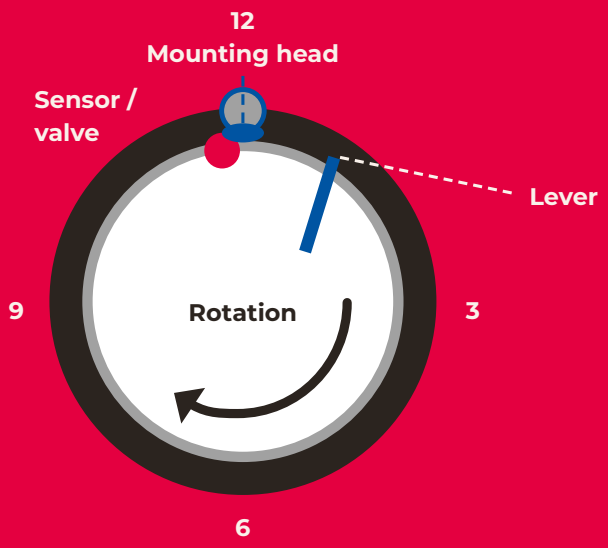
2 Preferably use an assembly machine with push rollers. If a machine with bead breaker plate is used, push the bead 1 cm from the rim flange in four places.
   1 At 90 degrees or at 270 degrees
   2 Never at 0 degrees or 180 degrees

3 Position the valve (with or without sensor) just slightly in front of the mounting head in relation to the direction of rotation.

4 Position the depressor(s) between 90 and 270 degrees to press the bead into the deep bed.

5 Lift the bead over the rim flange with a tyre lever. To do this, use a smooth tyre lever that has been specially produced for this purpose. This is to prevent damage to the bead.

6 Slowly rotate the wheelset clockwise.

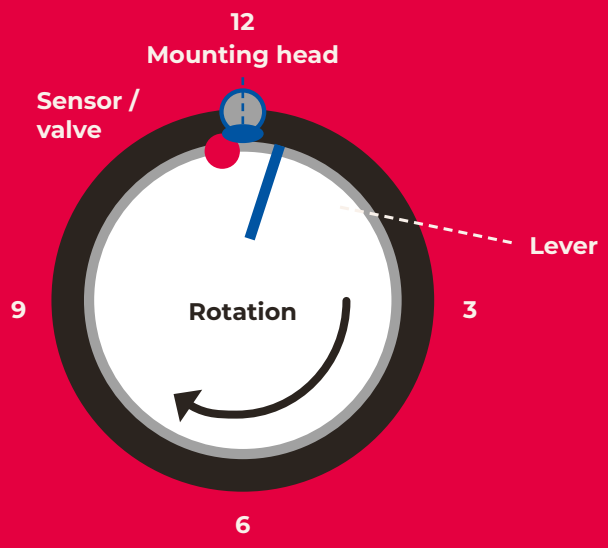


Lower or second heel:

1 Position the valve (with or without sensor) just slightly in front of the mounting head in relation to the direction of rotation.

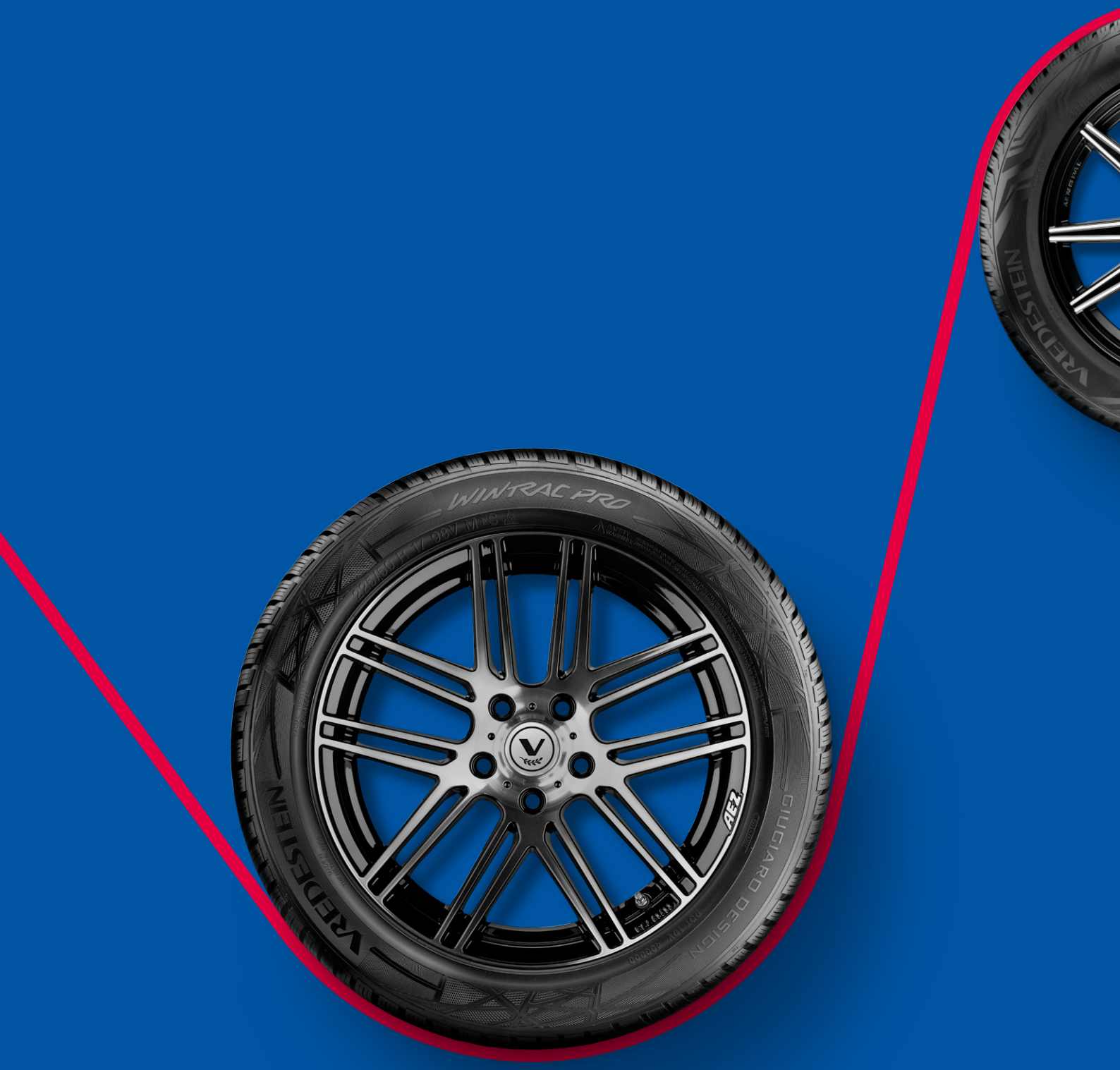
2 Lift the bead over the rim flange with a tyre lever.

3 Slowly rotate the wheelset clockwise.



Safety warning

The correct mounting and demounting of tyres is vital for a driver's safety. Only trained tyre specialists should mount or demount tyres and only the appropriate equipment should be used.



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