Commercially available tools		
Valve tool "Quick"	e.g.	Stahlgruber D-8000 München 80 Order no. 562 82 50
Tire mounting equipment	e.g.	Steinbock, D-8052 Moosburg Duquesne M 320
Compressed-air tire loosening device with shock absorber	e.g.	Steinbock, D-8052 Moosburg AR 120 DB und SDP 3-9"
Mounting ring	e.g.	Stahlgruber, D-8000 München 80 14" Pump Ring 701 372

Note

Use only tubes with rubber valve, no tubes with metal valve for tube-type tires. For replacement purposes, mount only prescribed tubes of the same make.

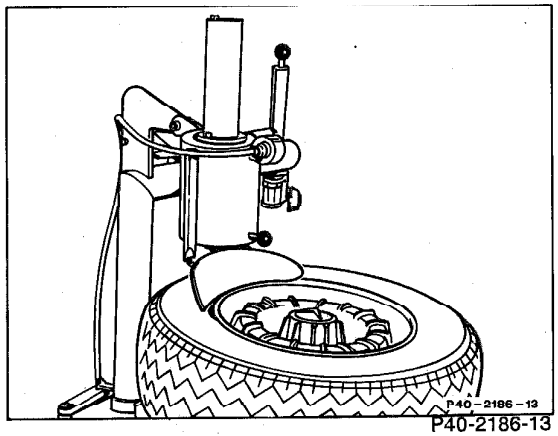
Recommended tire makes can be taken from the valid Group 40 Service Information bulletins.

Observe tire instructions (40–104).

Use tire mounting equipment with incorporated compressed-air pressing-off device. For removing and mounting tires, use soapy water or recommended lubricant paste. A mixing ratio of 1:10 is recommended to make up the soapy water (1 kg of soft soap on 10 liters of water).

Removing

1 When pressing the tire off the rim ensure that the pressing-off blade is positioned on the tire bead as far inside as possible.

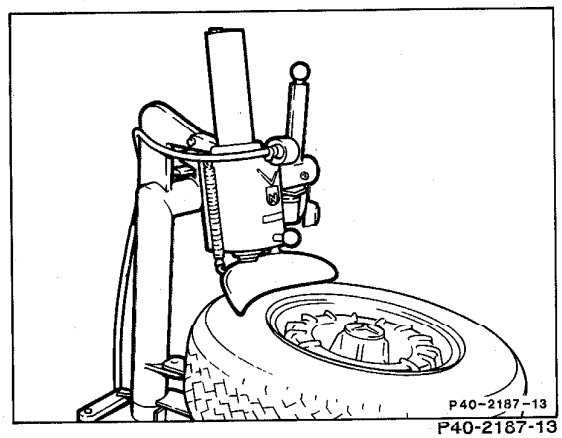


Correct

P40-2186-13

Note

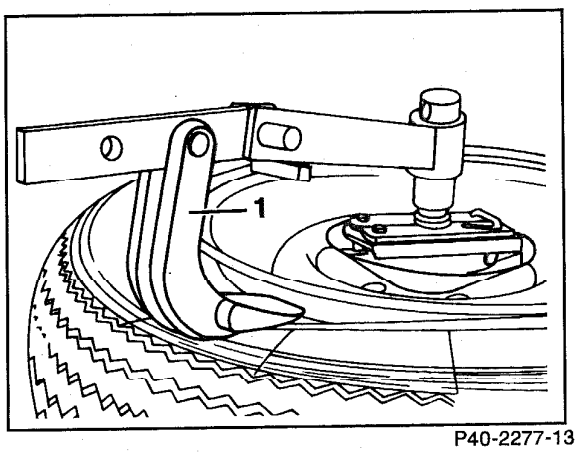
If required, reposition and push in blade. It must not be forced against the tire side wall but only the bead flank. Improperly pressed-off tires will invariably result in damage to the carcass. Radial-ply tires are particularly at risk as these have considerably softer side walls than cross-ply tires. With light-alloy rims ensure that the rim bed is not damaged.



Incorrect

P40-2187-13

The pressing-off devices with narrow blade used in the past must no longer be used as this could result in a damage or permanent deformation of the tire bead as well as damage of the rim bed.

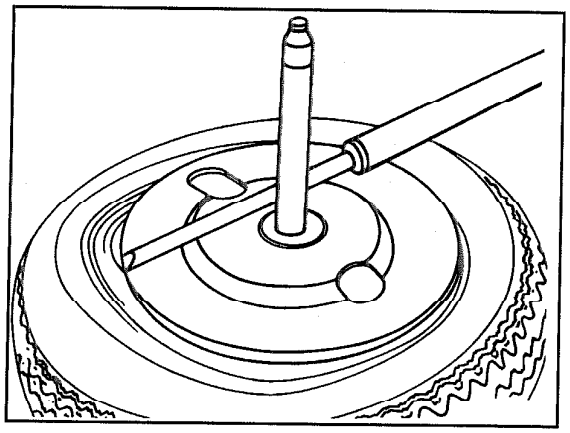


1 Pressing-off blade

P40-2277-13

2 Before pressing the tire off the rim, remove balancing weights in order to avoid damage to both the rim and the tire bead.

3 When pulling the tire off the rim flange ensure that the bead area (rubber and wire core) are not subjected to excessive load. It is practical to rub the rim flange with a sponge dipped in soapy water. The pulling-off lever of the mounting device must not have any sharp edges or other damage as this would damage the bead rubber.

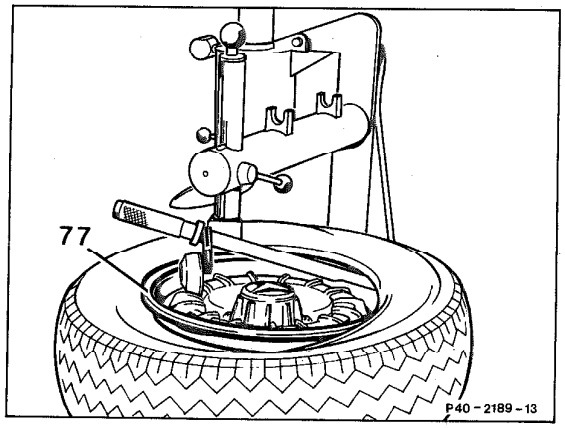


P40-2276-13

4 Use a mounting plate or a protective ring (77) to pull tires off light-alloy rims. This prevents direct contact of the pulling-off lever with the rim flange.

Note

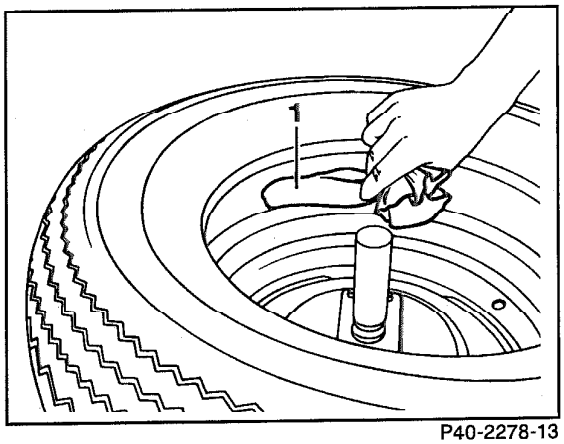
Sliding of the tire bead with as little friction as possible is particularly important on radial-ply tires with very stiff understructure (e.g. 205/70 VR 14). For this reason it is necessary to thoroughly wet the beads with soapy water.



P40-2189-13

Mounting

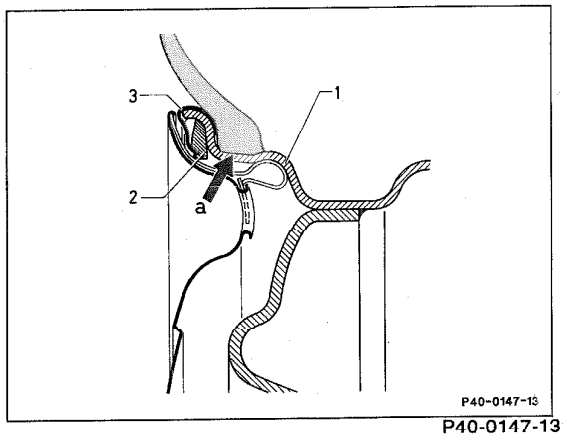
5 °Before mounting tube-type tires, thoroughly apply talc powder to the tire inside. Talc should not be poured into the tire, but a small cotton bag (1) filled with talc powder should be used.



P40-2278-13

6 To mount tube-type tires, first place the tube in the tire and fit a valve extension. Then slightly inflate the tube.

7 When mounting tubeless tires, check the sealing surfaces of the tire and the rim for absolute cleanliness and possible damage. Please note that a tubeless tire always has to seal at the base of the tire bead (see arrow).



P40-0147-13

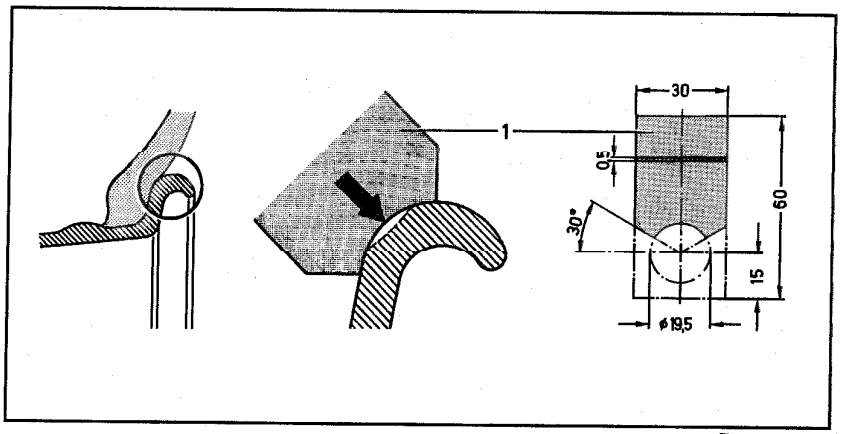
1 Rim
2 Balancing weight
3 Retaining clip
a Sealing surface of bead base

Note

If a leaking bead base requires the bead flank to be utilized for sealing, there is a risk of air escaping on the side wall particularly with brisk driving. This air usually escapes at the retaining clip of the balancing weight which is frequently leading to the opinion that the retaining spring itself is the cause of the leak. A tubeless tire leaking at the bead base can as an exception be mounted with a tube. However, dusting the tire inside with talc powder must be carried out very thoroughly.

A tubeless tire leaking at the running surface due to damage must not be used again when mounting a tube. Damaged tubeless steel-belted tires must, if repairable, be reconditioned by means of vulcanization. A requirement for the tire repair is that flat rolling of the tires due to the damage can be excluded.

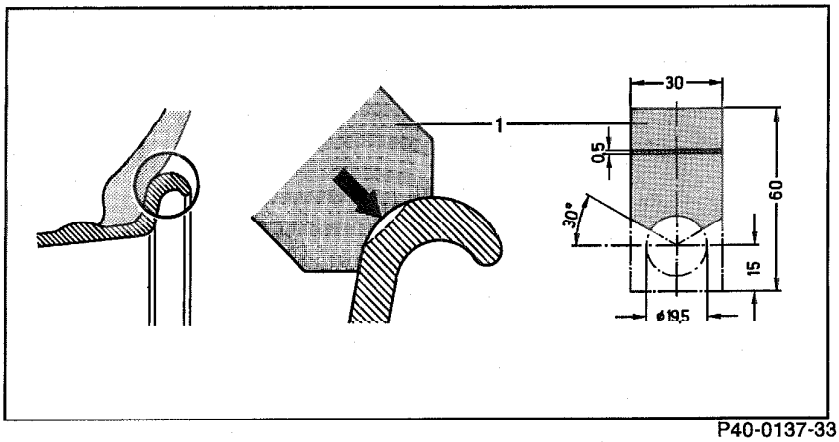
8 Check rims at the rim flanges for damage.



P40-0137-33

a) Steel rims must not show any rust marks at the seat of the tire bead on the radius to the rim flange and on the rim flange itself as well as on the outer surfaces, especially at the wheel inside and the contact surfaces of the valve seat. If required, remove rust from surfaces and repaint.

b) Always check light-alloy rims for wear.
The flank of the inner rim flange is the area on the light-alloy rim most prone to wear.
The wear must not exceed 1 mm; if it is greater, the wheel must no longer be used.
Carry out test with a self-made template.
Remove burrs and sharp edges.



Checking the rim flange
—— New condition
- - - - Wear
1 Template (self-made)

It is important before any tire installation, to completely remove burrs on the flange area caused by wear or damage.

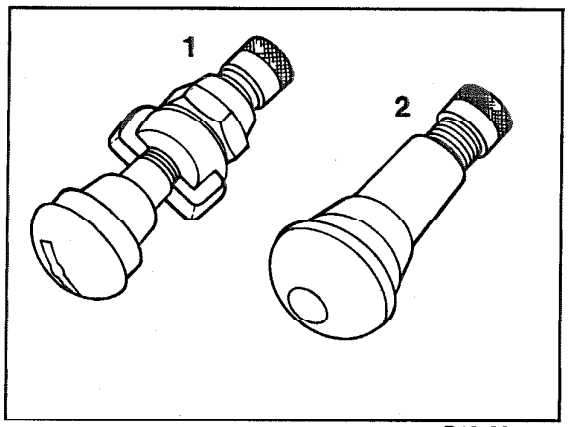
For reworking the flange insides it is practical to mount the wheel on a balancing machine.
The flange contour should be worked with a flat scraper and subsequently with fine emery cloth.

9 When replacing a tubeless tire, replace rubber valve for safety reasons.

⚠ **CAUTION!**
Use only prescribed valves (see table).

Fit only metal or hard-plastic valve caps with rubber sealing rings, part no. 007 757 00 86 00 to the valves.

On light-alloy rims with protruding hub and 14" and 15" without trough-type depression on the valve seat (version up to 09/81) fit only special metal valves (1), part no. 107 400 00 13. Tighten valve nut with a tightening torque of 6 Nm and check for tight seat.



P40-2241-13

Use valve tool (e.g. valve tool "Quick" made by Stahlgruber) to insert the rubber valve in the rim. On light-alloy rims the use of the valve tool is of particular importance in order to avoid damage to the light-alloy rim.

Valves for tubeless tires

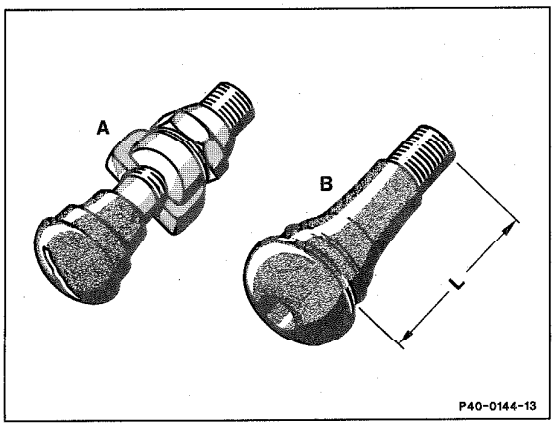
Model	Length "L" mm (Dimension from seat up to end of thread)	Part no. or designation	Application

Special metal valve

126	40	107 400 00 13	For 14" light-alloy rims with protruding hub and without trough-type depression on valve seat (version up to 09/81)

Valves for tubeless tires

Model	Length "L" mm (Dimension from seat up to end of thread)	Part no. or designation	Application
Rubber valves			
126 (up to 08/85)	34.5	000 400 02 13 43 GS 11.5 DIN 7780	For 14" and 15" light-alloy rims with protruding hub and with trough-type depression on valve seat (version as of 10/81)
126 (as of 09/85)	41	000 400 03 13 49 GS 11.5 DIN 7780	For 15" light-alloy rims with flush wheel disk
126	53.5	000 400 04 13 61.5 GS 11.5	For 14" and 15" steel rims in conjunction with plastic wheel trim cover

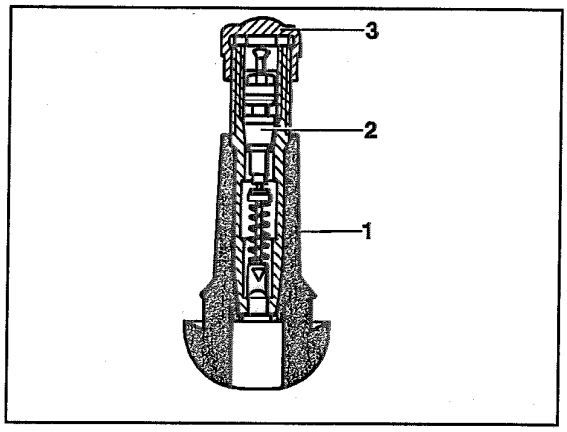


A Special metal valve
B Rubber valve

P40-0144-13

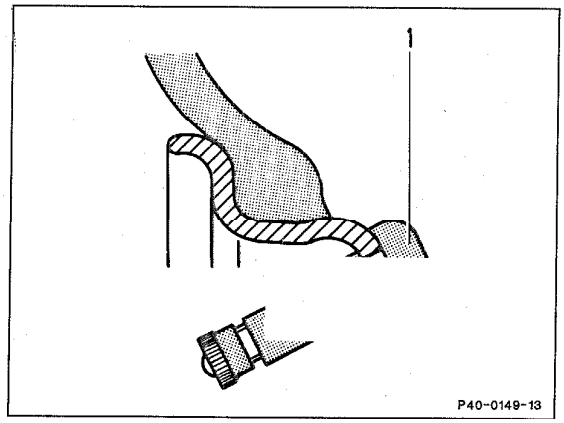
Rubber valve consists of:

1 Valve body
2 Valve insert
3 Valve cap



P40-0151-13

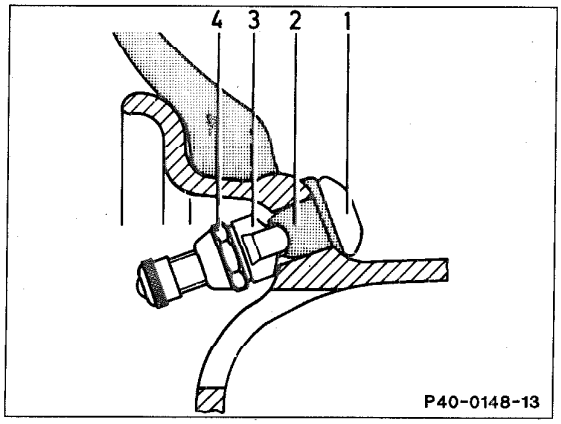
Rubber valve (1) in steel rim



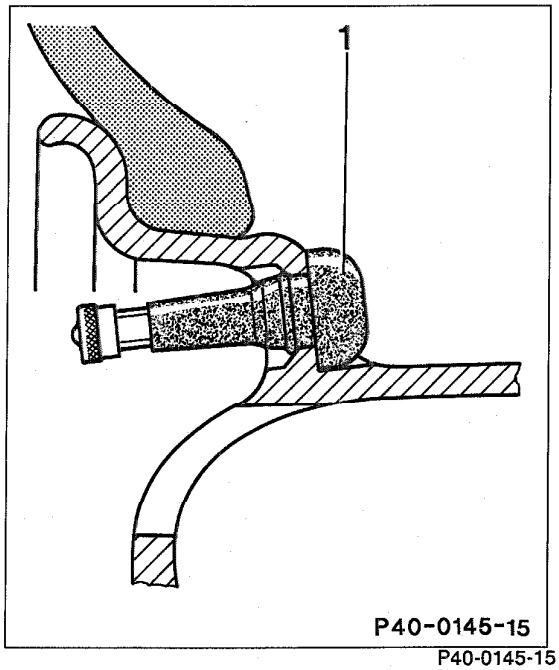
P40-0149-13

Special metal valve (1) in light-alloy rim
(version up to 09/81)

1 Valve body
2 Rubber ring
3 Washer
4 Hex. nut



P40-0148-13



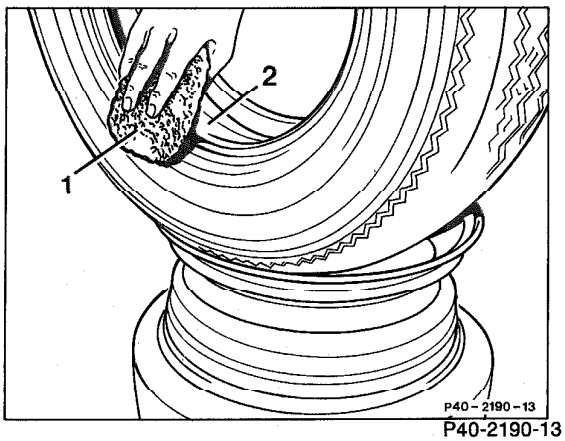
P40-0145-15

Rubber valve (1) in light-alloy rim (version as of 10/81)

10 Before mounting the tire, wet both beads with soapy water or brush with lubricant.

Note

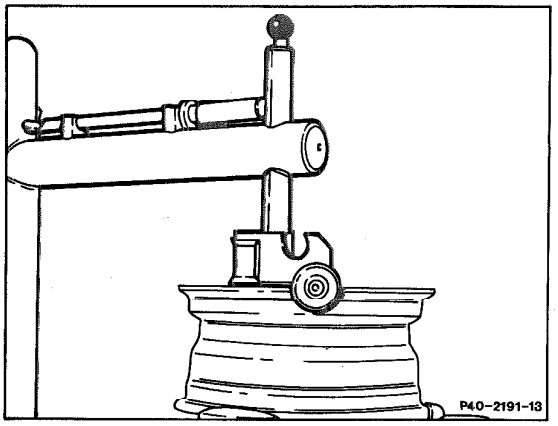
Sliding of the tire bead with the least possible friction is particularly important on radial-ply tires with very stiff understructure (e.g. 205/70 VR 14).



P40-2190-13

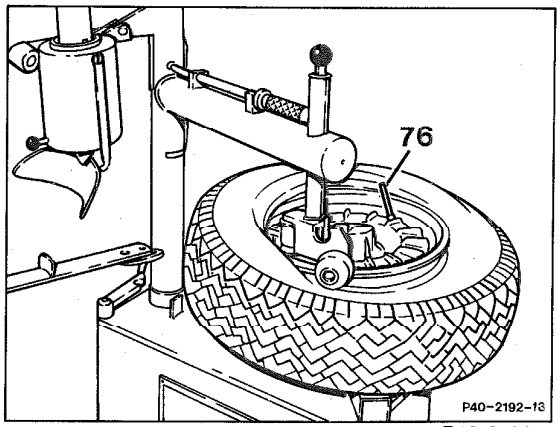
1 Sponge
2 Tire bead

11 Adjust roller device of tire mounting equipment to proper height with rim mounted. The roller must not sit on the rim flange.



P40-2191-13

12 Force the tire if possible only by rolling over the rim flange while ensuring that the bead area is loaded as little as possible.

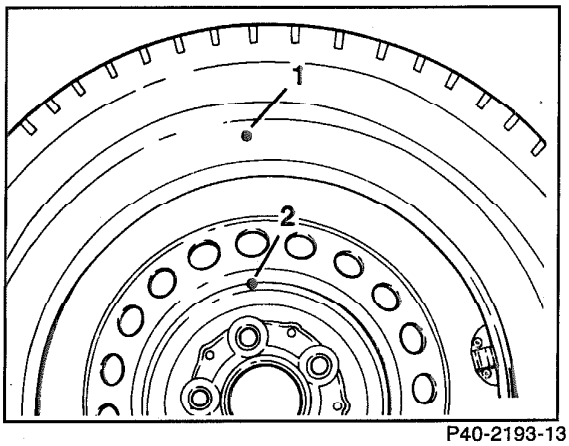


P40-2192-13

76 Valve extension

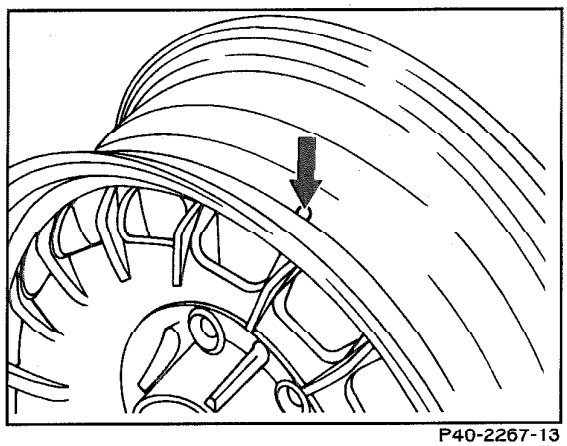
13 Matching the wheels.
Matching means allocating the low point of the tire to the high point of the rim. This serves to establish the most favorable position of the tire relative to the rim during mounting, ensuring proper concentric operation of the wheel.
If no matchpoints are provided, the tire must be turned into the most favorable position on the rim.

a) 14" wheels.
Tires as of 205/70 R 14 93 H are tested by the manufacturer for radial force fluctuation. During this test the tire is measured on an O-wheel (without vertical runout) and the matchpoint marked by a green dot of paint (1).
Matchpoint on steel rims as of designation 6 1/2 J x 14 H2 ET 30, green dot of paint (2) on the wheel disk.

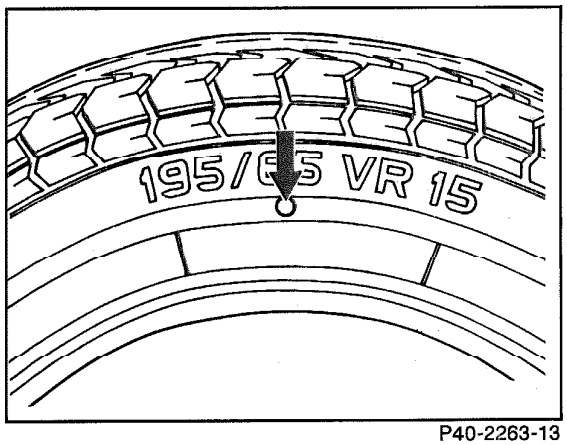


P40-2193-13

Matchpoint on light-alloy rims with protruding hub as of designation 6 1/2 J x 14 H2 ET 30, green dot of paint on the wheel disk and spot-face in rim bed (arrow).

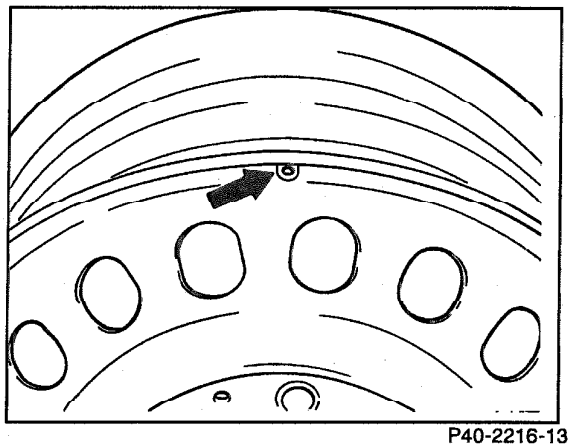

P40-2267-13

b) 15" wheels.
Matchpoint on tire, white dot of paint (arrow).
Shown on 195/65 VR 15 tire.



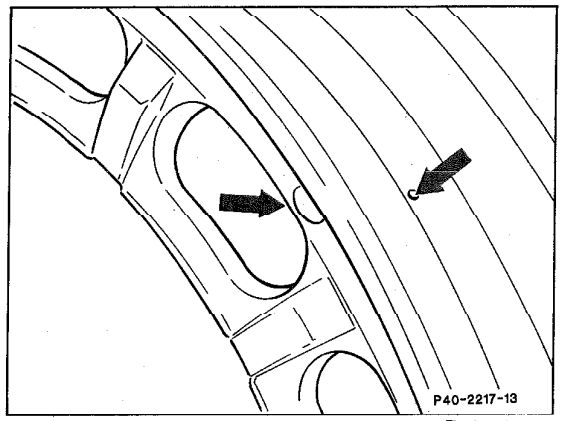
P40-2263-13

Matchpoint on steel rim - white dot of paint and center punch mark on wheel outside (arrow).



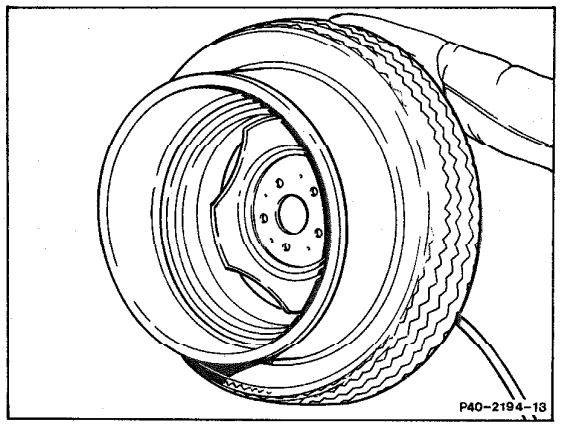
P40-2216-13

Matchpoint on light-alloy rim with flush wheel disk, sticker on wheel outside and spot-face in rim bed (arrows).



P40-2217-13

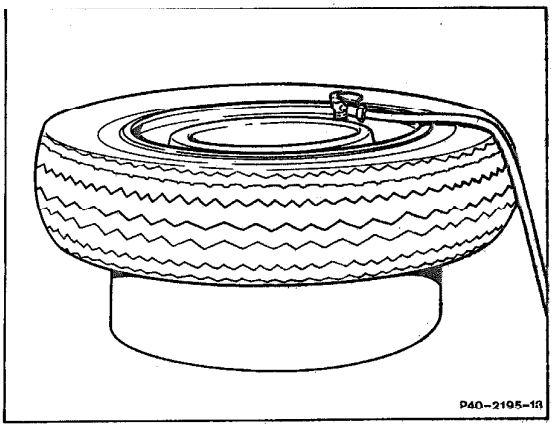
14 After mounting the tire, pump up to approx. 3 to 4 bar without valve insert to ensure proper seating on the rim. Then screw in valve insert and adjust specified inflating pressure. Filling the tire without valve insert ensures rapid inflating pressure build-up and consequently good centering on the rim. During initial pumping up of a tire, the wheel must be mounted on the mounting fixture.



P40-2194-13

⚠ **WARNING!**
For safety reasons, the inflating pressure when mounting must only amount up to 150 % of the inflating pressure applicable for the operation of the tire concerned. The tire beads must not be in contact with the rim bed at an angle while pumping up in order to avoid excessive tensile loads on the bead cable.

Clamping the wheel during initial pumping up is required for safety reasons in order to avoid that the wheel jumps off during a possible bead cable breakage.

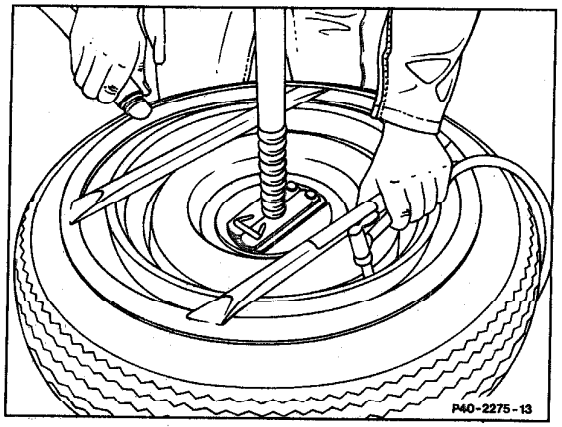


P40-2195-13

If the tire does not slide evenly over the low bed during pumping up, the inflating pressure must be released and, after replaced treatment of the tire beads with soapy water, the pumping-up process repeated.

⚠ CAUTION!
An additional check of the tire inflating pressure is advisable after mounting tube-type tires, and, in particular, tubeless tires additionally fitted with a tube due to leaking beads. The reason for this is a very slow escape of the air trapped between tube and tire via the gaps at the base of the rubber valve.

15 Use a suitable mounting ring or other commercially available devices to pump up tubeless tires.



P40-2275-13