

Notes

For tube-type tires use only tubes with rubber valve, never tubes with metal valve.

For tubeless tires use long rubber valves only (dimension from seat to end of threads 42 mm).

For approved tire makes refer to special tire table.

Use only tire changing equipment provided with a compressed air removing device.

Removal

When removing the tire from the rim make sure that the removing blade obtains a hold as far as possible inside the tire bead (Fig. 1 and 2).

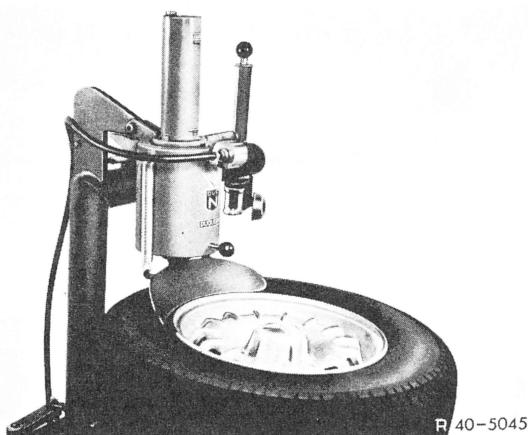


Fig. 1 Right



Fig. 2 Wrong

Note: If required, change grip and push blade completely in. Never apply force to side wall of tire, but against bead flange only. **Inexpert removal of a tire will result in carcass damage.** Belted tires are particularly subject to being damaged, since they have a considerably softer side wall than conventional tires (Fig. 2).

The formerly used **removing devices with narrow blade may no longer be used**, since the risk to damage or permanently distort the tire bead, as well as damaging the rim channel is high (Fig. 3).

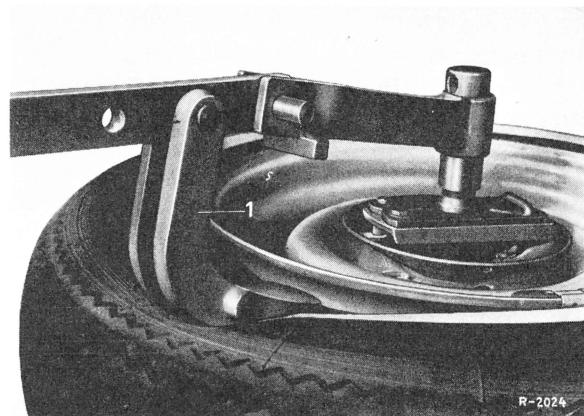


Fig. 3

2 Prior to pushing tire from rim, remove balancing weights to prevent damage both to rim and to rubber coating of tire bead.

3 When pulling the tire from the rim flange, make sure that the bead section (rubber coating and wire core) are not excessively stressed. Suitably rub rim flange with sponge soaked in a soap solution. **The pulling lever of the tire changing unit should have no sharp edges or other damage**, since this might damage the rubber coating of the bead (Fig. 4).

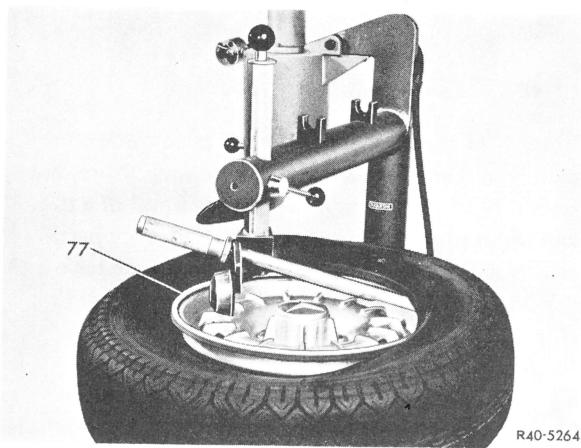


Fig. 4

77 Guard ring

Mounting

4 Prior to mounting tube-type tires, coat tire inside well with talcum. **But do not pour talcum into tire**, but use a small linnen bag filled with talcum (Fig. 5).



Fig. 5

1 Linnen bag with talcum

5 For mounting tube type tires, it will be best to insert the tube into the tire first, followed by screwing on a valve extension. Then fill tube slightly with air.

6 When mounting tubeless tires check sealing surfaces of tire as well as those of the disc wheel for absolute cleanliness as well as damage, if any. Note that a tubeless tire should always seal at the base of the tire bead (Fig. 6).

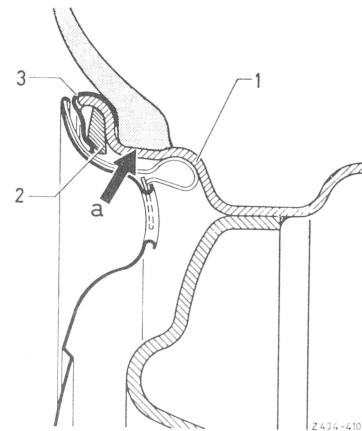


Fig. 6

a Sealing surface on bead base
1 Disc wheel
2 Balancing weight
3 Retaining spring

Note: If in the event of a leak at the bead base the bead flank is used for sealing, there is the risk that air will escape at the side wall, particularly when driving fast. Usually, this air will then escape at the retaining spring of the balancing plate, so that the erroneous opinion is often heard that the retaining spring itself is responsible for the leak. **A tubeless tire leaking at the bead base may be mounted with a tube, as an exception.** The dusting of the inside of the tire with talcum should then be made with extreme care.

7 Prior to mounting the tire, moisten both beads with soap solution (Fig. 7).

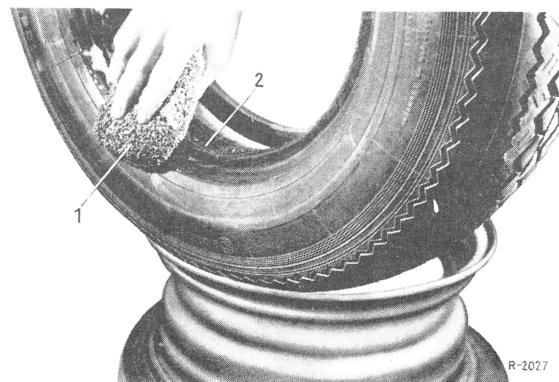


Fig. 7

1 Sponge
2 Tire bead

Caution! For mounting passenger car tires use soap solution only and never tire sliding paste.

8 Adjust roller attachment of tire mounting unit to correct height with disc wheel in place. The roller should not be in contact with the rim flange (Fig. 8).

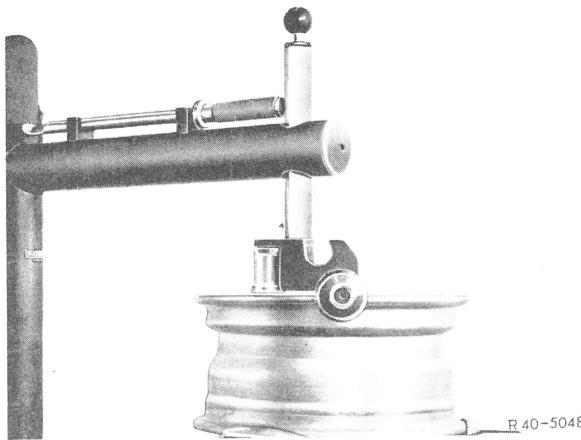


Fig. 8

9 Try and push tire over rim channel by rolling only and make sure that the bead section is strained as little as possible (Fig. 9).

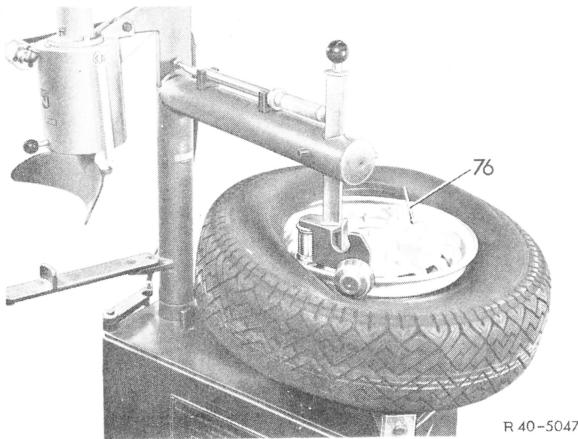


Fig. 9

76 Valve extension

10 To permit high driving speeds at low vibrations, high-speed tires are checked by tire manufacturers for radial fluctuations. The tire is first measured on an O-wheel (without vertical runout). The softest spot found during this test on the circumference of the tire is identified by a green dot. To obtain the lowest vibrations for the entire wheel on the vehicle, the disc wheel and the tire are assembled in such a manner that the spot with the highest vertical runout on the disc wheel is in alignment with the softest spot

on the tire. The highest spot on the circumference of the steel disc wheel is identified by a green dot on the outside of the wheel disc (Fig. 10). Light-alloy disc wheels are not identified, since by the machining of the tire supporting surfaces they are practically showing no vertical runout.

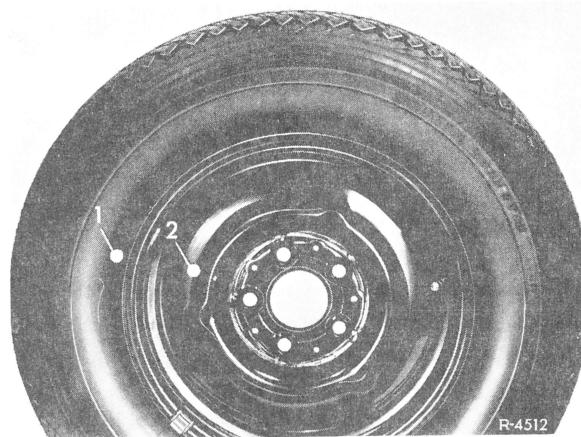


Fig. 10

1 Green dot on tire 2 Green dot on disc wheel

11 Upon mounting, fill tire without valve insert to approx. 4 atü to obtain correct seating on the rim. Only then screw in valve insert and set to specified tire pressure. Filling the tire without the valve insert guarantees a quick rise in pressure and thereby accurate centering in the rim.

Additional Notes for Mounting Tires on Light-Alloy Disc Wheel

- a)** Tire mounting equipment holding the wheel in the center bore is unsuitable since there is a danger of widening the bore.
- b)** While mounting the tire, metal rollers should not slide on rim flange; mounting levers may be used only when they are protected by a plastic coating.
- c)** The removing device should be provided with a damper or restricted stroke to prevent that the tire removing shoe hits and damages the rim bed when the tire is forced off the rim by the sudden yielding of the tire bead.

d) Prior to removing the tire, insert a suitable guard ring (77) to prevent that the pulling lever of the mounting unit makes direct contact with the rim flange) (Fig. 4 and 11).

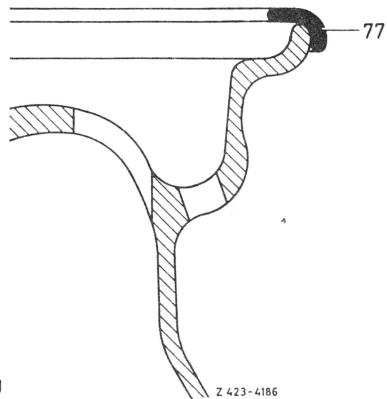


Fig. 11

77 Guard ring

Note: When no guard ring is available, a suitable piece of metal sheeting approx. 50 mm wide should at least be placed between the pulling lever and the rim flange when lifting the tire bead (Fig. 4).

e) Make the guard ring yourself by removing the rim flanges of a no longer used disc wheel 5 1/2 J x 14 H, Part No. 115 400 13 02 (Fig. 12).

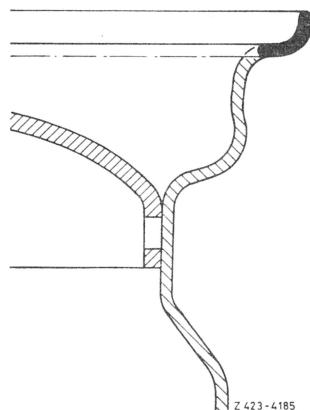


Fig. 12

f) For this purpose, cut machined ring open and place on light-alloy disc wheel. By welding a pertinent piece of the second removed rim flange enlarge ring in such a manner that in inserted condition a gap of approx. 1.5 mm will be available (Fig. 13). By pertinent bending of its contours match guard ring to rim flange in such a manner that it will abut under tension. Carefully round off edges of ring.

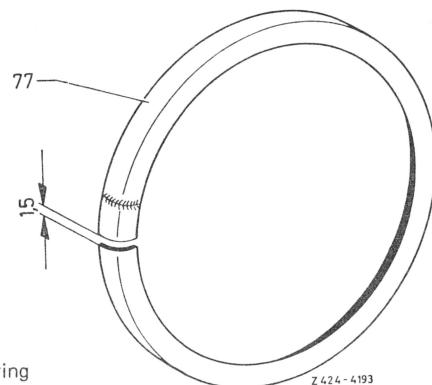


Fig. 13

77 Guard ring

g) Since light alloy disc wheels are subject to a certain wear on rim flanges in range of tire contact and are also sensitive against impacts, check used wheels prior to mounting the tires well and remove burr, if any.