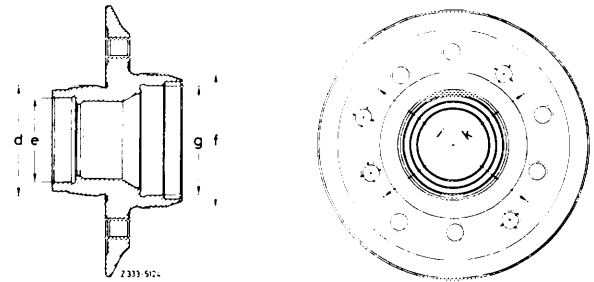


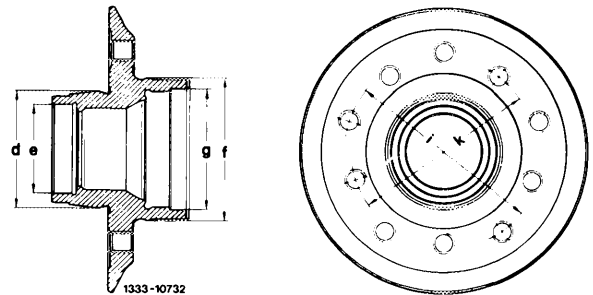
33–320 Disassembly, inspection, repair and assembly of front wheel hub

Data Front Wheel Hub

Bolt hole circle dia. "k" for attaching brake disc		104
Bolt hole circle dia. "l" for attaching rim		112
Fitted dia. "f" for brake disc		79.97 80.00
Perm. lateral runout on flange		0.03
Perm. vertical runout on edge centering "d"		0.05
Fitted dia. "h" for radial sealing ring	without ABS	70
	with ABS	67.5

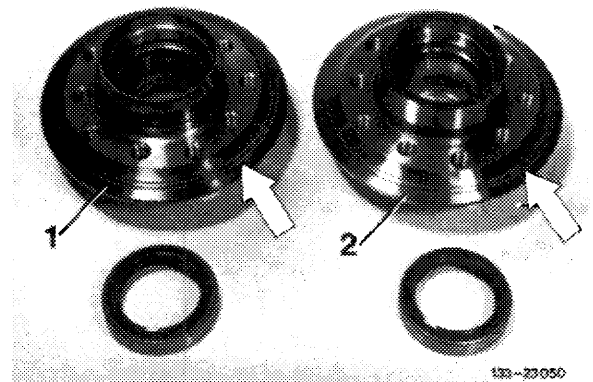


Front wheel hub without ABS



Front wheel hub with ABS

Note: Front wheel hubs of higher strength are installed on model 115.036. These wheel hubs are identified by two grooves on inside of flange (arrow).



- 1 Front wheel hub without ABS
- 2 Front wheel hub with ABS

Designation	Identification	Part No.	Remarks
Tapered roller bearings¹⁾			
Inner tapered roller bearing "g"	LM 48 548 C/10 ²⁾	001 980 29 02	
Outer tapered roller bearing "e"	M 126 49/10	000 981 63 05	
Radial sealing ring			
For front wheel hub	without ABS	50 x 70 x 13.5/6.5	011 997 60 46
	with ABS	50 x 67.5 x 13.5/8	005 997 44 47
Radial sealing ring with sealing lip and additional dust lip. During assembly, fill space between sealing lip and dust lip with specified grease.			

¹⁾ The bearing inner races are mounted on wheel spindle at a sliding fit or a light force fit. In the event of repairs, a radial play of 0.03 mm on inner bearing and of 0.025 on outer bearing between bearing inner race and wheel spindle is still permitted. If the play is larger, there is a possibility to eliminate this play during assembly by applying "Omnifit Type 80 red M or H" with activator (combination pack part no. 002 989 69 71) or Loctite 640 (part no. 002 997 20 71). For details, refer to respective instructions.

²⁾ Special version of tapered roller bearings. In the event of repairs, pay attention to part no.

Lubricant

Quantity	Total capacity	approx. 60 g	Suitably, weigh full capacity prior to starting assembly of front wheel hub.
	In hub with bearing	approx. 45 g	Fill roller cages or tapered roller bearings well with grease. Also provide grease for roller faces.
	In wheel cap	approx. 15 g	Fill approx. up to edge of bead.
Type	Series fillup: Anti-friction bearing grease (refer to Specifications for service products page 265) Repair fillup: High-temperature anti-friction bearing grease (refer to Specifications for service products page 265.1) ¹⁾		

¹⁾ Available in 150 gr. screw cans, part no. 000 989 49 51.

Tightening torque

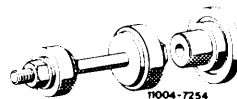
Nm

Hex. socket screws for attaching brake disc

115

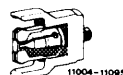
Special tools

Device for pressing-in outer bearing races and radial sealing ring



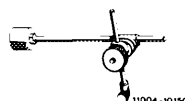
116 589 11 43 00

Puller for outer bearing race of inner tapered roller bearing



126 589 05 33 00

Holder for dial gauge for adjusting wheel bearing end play



363 589 02 21 00

Conventional tools

Dial gauge A 1 DIN 878

e.g. made by Mahr, D-7300 Esslingen
Order No. 810

Note

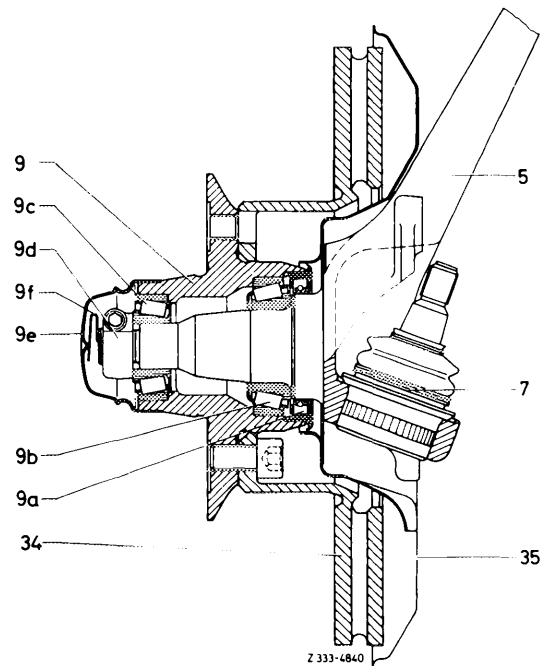
In the event of repairs, from now on use exclusively high-temperature anti-friction bearing grease for front wheel hubs. Generally renew complete grease charge of front wheel hub, since a mixture of anti-friction bearing grease or multi-grade grease must be absolutely prevented. If, in exceptional cases, high-temperature anti-friction bearing grease is not available, multi-grade grease (refer to Operating instructions page 267) may be used.

Disassembly

- 1 Separate front wheel hub from brake disc (42–220).
- 2 Remove inner race with roller cage of outer tapered roller bearing (9c) from hub.
- 3 Force-off radial sealing ring and remove tapered roller bearing inner race with roller cage from front wheel hub.

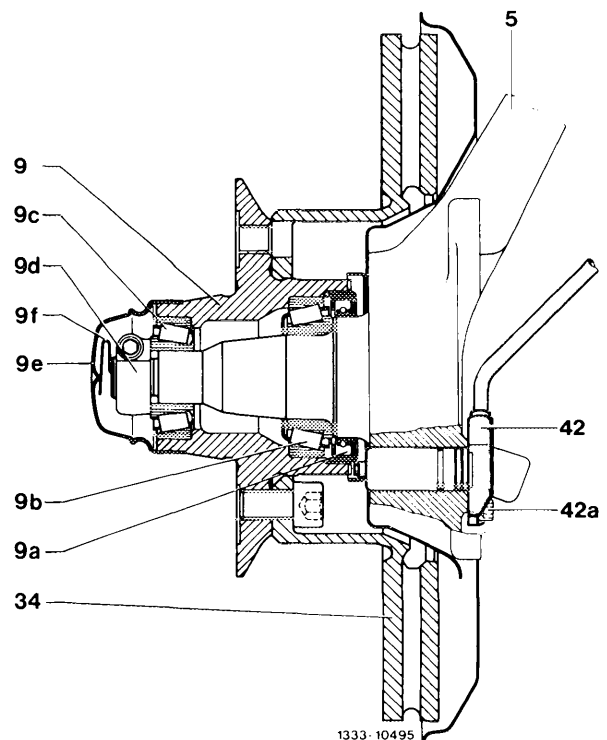
Front wheel hub without ABS

- 5 Steering knuckle
- 7 Supporting joint
- 9 Front wheel hub
- 9a Radial sealing ring
- 9b Tapered roller bearing, inside
- 9c Tapered roller bearing, outside
- 9d Clamping nut
- 9e Wheel cap
- 9f Contact spring
- 34 Brake disc
- 35 Cover plate



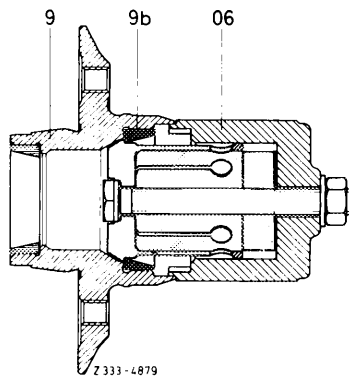
Front wheel hub with ABS

- 5 Steering knuckle
- 9 Front wheel hub
- 9a Radial sealing ring
- 9b Tapered roller bearing, inside
- 9c Tapered roller bearing, outside
- 9d Clamping nut
- 9e Wheel cap
- 9f Contact spring
- 34 Brake disc
- 42 Rpm sensor
- 42a Hex. socket screw

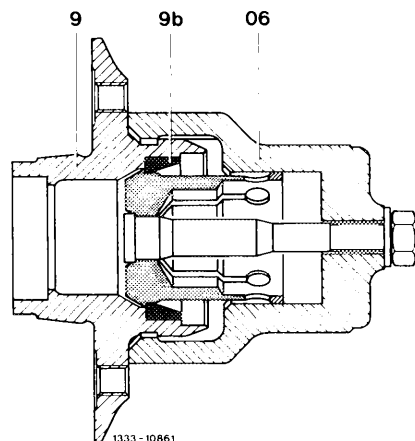


4 Pull-out outer race (9b) of inner tapered roller bearing with puller (06).

On front wheel hubs without ABS the former puller, part no. 116 589 14 33 00, can still be used.



Front wheel hub without ABS
former version
of special tool



Front wheel hub with ABS,
new version
of special tool

5 Carefully knock out outer race of outer tapered roller bearing by means of a suitable brass or aluminum mandrel.

Inspection and Repair

6 Check flange of front wheel hub for runout.

7 Check tapped holes of wheel and brake disc attachment.

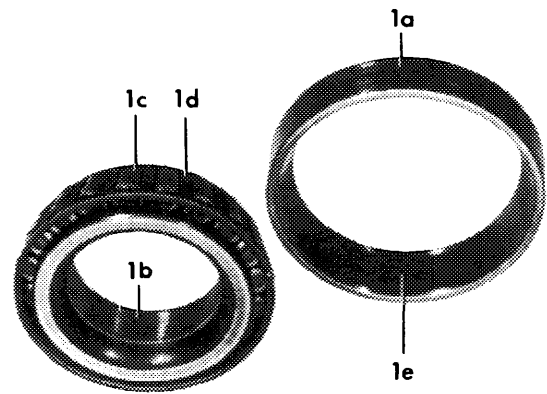
8 Check condition of running surface for radial sealing ring on wheel spindle.

9 Thoroughly wash tapered roller bearing and hub inside. Use only clean detergent.

10 Check tapered roller bearing and bearing seat in hub.

For evaluating tapered roller bearings, the condition of the running surface of bearing inner and bearing outer race, as well as of tapered roller faces is decisive.

- 1a Outer race
- 1b Inner race
- 1c Tapered rollers
- 1d Roller cage
- 1e Running surface of race



133-10612

Tapered roller bearings can still be used, if:

the outer race shows a smooth, gray track of tapered rollers.

Tapered roller bearings can **no** longer be used, if:

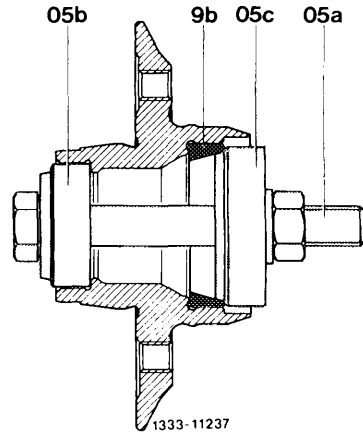
1. The track of the tapered rollers in bearing outer race shows dents (caused by peelings on bearing inner race).
2. If rust has settled on tapered roller bearings (shows up, if water enters front wheel bearing through defective radial sealing ring).
3. If bearing outer race has taken on a light brown to blue color owing to excessive overheating.

Note: If a tapered roller bearing is defective, also renew other bearing of respective hub on principle.

Mount wheel bearings of the same make. If used bearings are used again, do not mix up mating bearing inner races with roller cage and outer races.

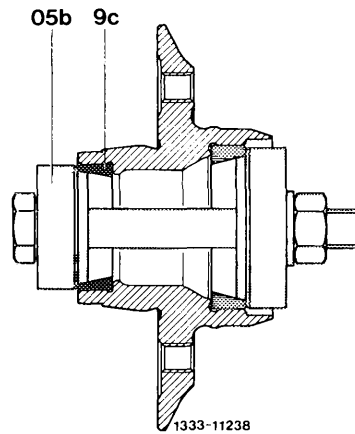
Assembly

10 Press outer races of tapered roller bearings individually into front wheel hub by means of pertinent device while watching thrust plate (05b) for correct seat.



Pressing-in outer race of inner tapered roller bearing

- 9b Outer race for inner tapered roller bearing
- 05a Screw with hex. nut and washer
- 05b Thrust plate for outer race of outer tapered roller bearing
- 05c Thrust plate for outer race of inner tapered roller bearing



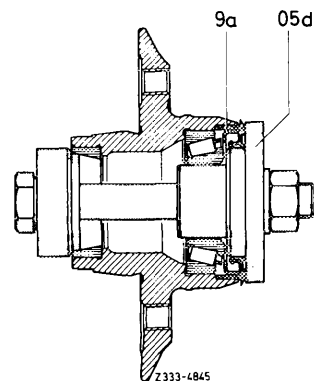
Pressing-in outer race of outer tapered roller bearing

- 9c Outer race for outer tapered roller bearing
- 05b Thrust plate for outer race of outer tapered roller bearing

12 Weigh specified quantity of grease for hub together with bearing.

13 Fill roller cage of inner tapered roller bearing well with anti-friction bearing grease, then insert inner race and roller cage into hub and coat faces of rollers with grease.

14 Fill radial sealing ring between sealing lip and dust lip with specified grease and press-in with device.



- 9a Radial sealing ring
- 05d Thrust washer for radial sealing ring

15 Fill front wheel hub with remaining grease.

Note: When using too much grease, the resulting contractions will result in excessive heating of the grease and a loss of its lubricity. However, the quantity of grease should not be too low either, since this would no longer guarantee perfect lubrication of the tapered roller bearings.

16 Mount brake disc (42–220).