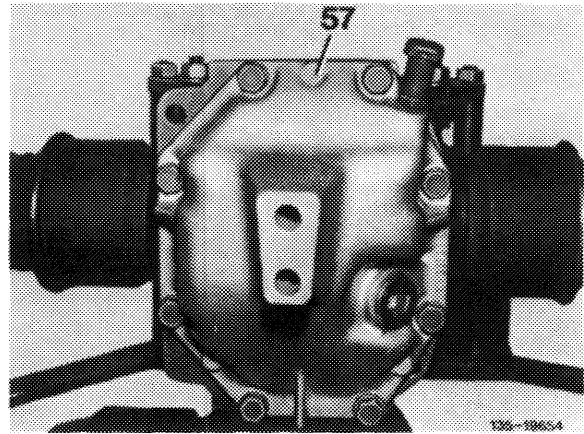
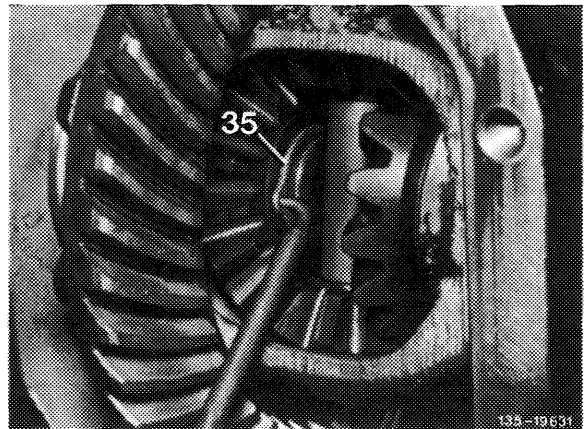


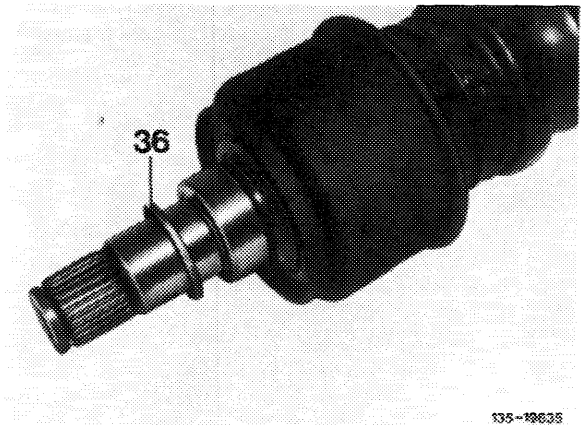
3 Unscrew end cover (57) from rear axle housing.



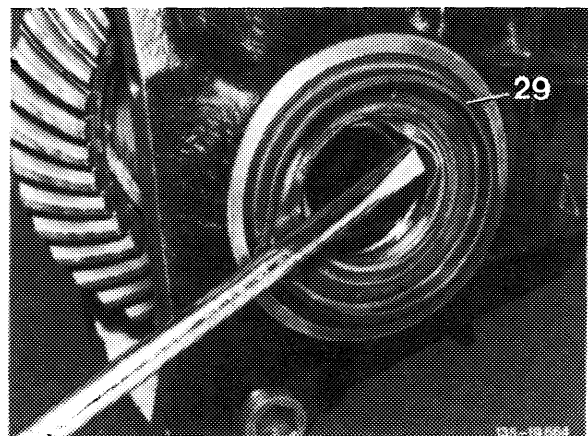
4 Pull off locking rings (35) between inner synchro-mesh joints and differential side gears with pliers or a hook and remove from housing.



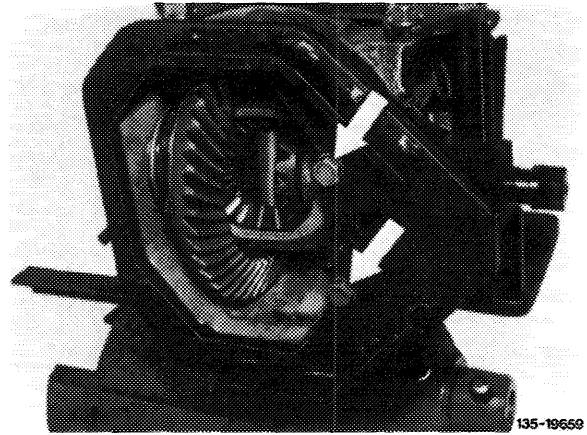
5 Pull rear axle shafts out of differential side gears and remove together with compensating washers (36).



6 Force both radial sealing rings (29) out of rear axle housing.



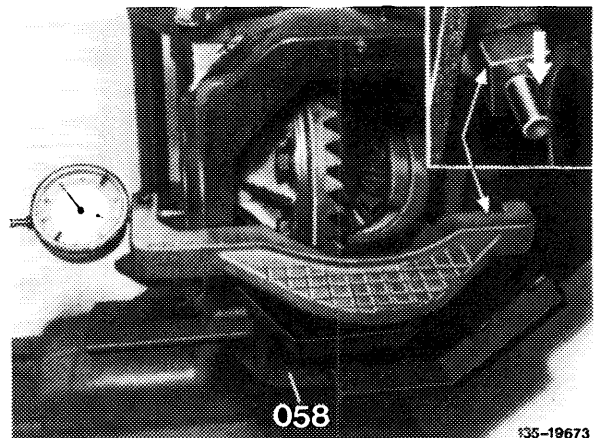
7 Attach spreading device to rear axle housing and tighten hex. screws to 40 Nm (arrows).



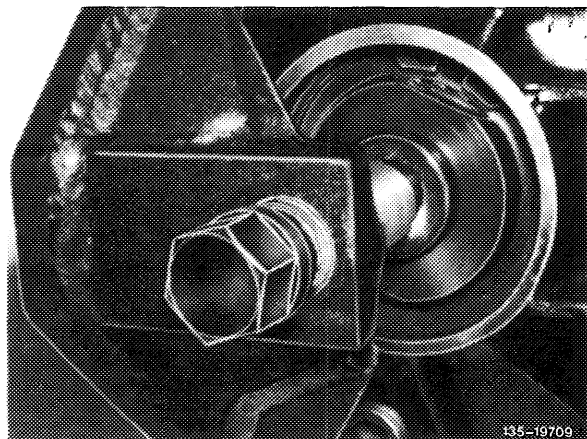
8 Place spread measuring instrument on spreading device (058) and adjust dial gauge to 0 at 3 mm preload.

Attention!

Make sure that stop pin of measuring instrument rests against contact surface on rear axle housing (refer to cutout, arrow).



9 Turn one face of thrust piece toward opening of locking ring and screw-in threaded spindle manually up to bearing outer race.

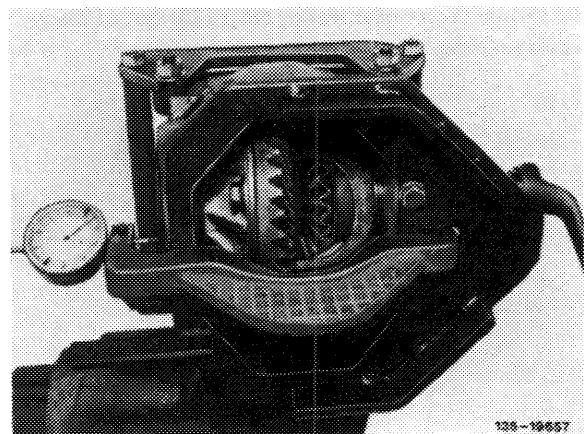


10 Preload (spread) rear axle housing to 0.20 mm by screwing-in threaded spindle of spreading device.

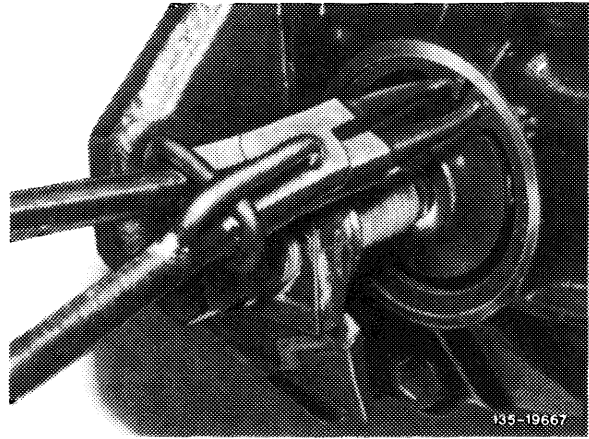
Attention!

When spreading, do not exceed value of 0.20 mm.

11 Remove spreading device.

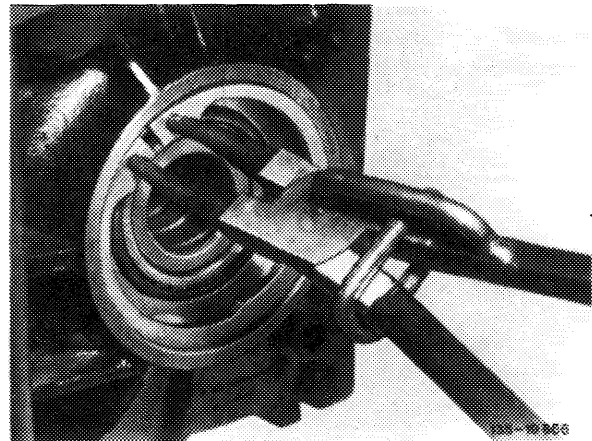


12 Remove righthand locking ring from rear axle housing by means of pliers and mark.

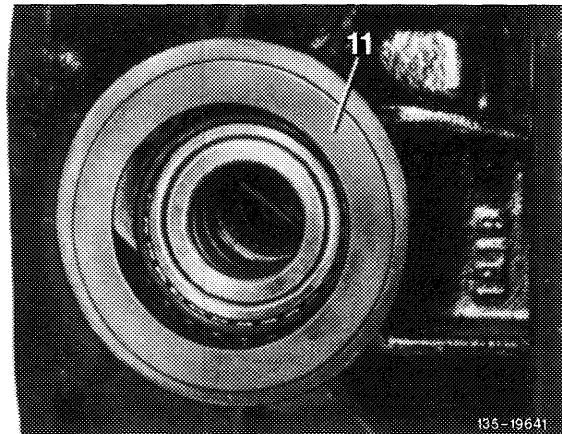


13 Relax rear axle housing and remove spreading device from housing.

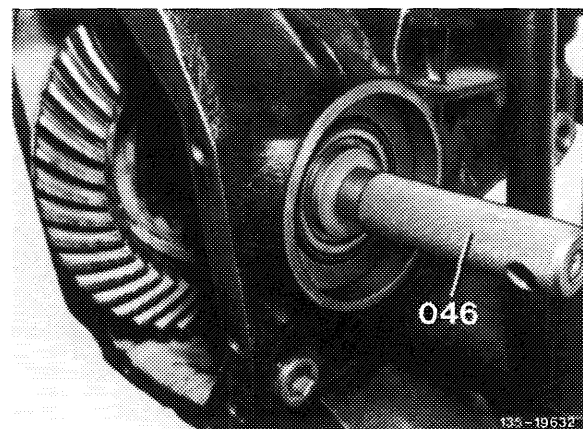
14 Remove lefthand locking ring from rear axle housing by means of pliers.



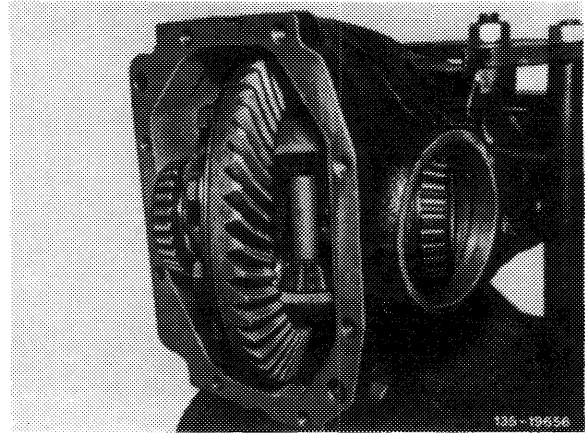
15 Take both bearing outer races of tapered roller bearings (11) from rear axle housing and mark to prevent mixups during reinstallation.



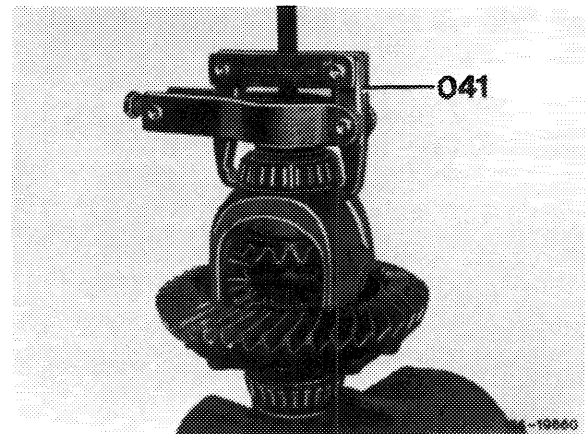
Note: For easier removal of bearing outer races, insert assembly mandrel for differential pinions (046) at the right and force complete differential toward the left until differential rests against rear axle housing. Remove lefthand and righthand bearing outer race.



16 Move differential into position shown and take out of rear axle housing.

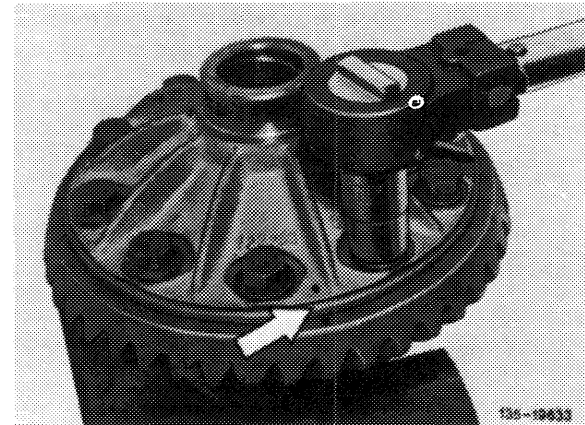


17 Pull both tapered roller bearings from differential housing by means of puller (041) and mark to prevent mixups during reinstallation.



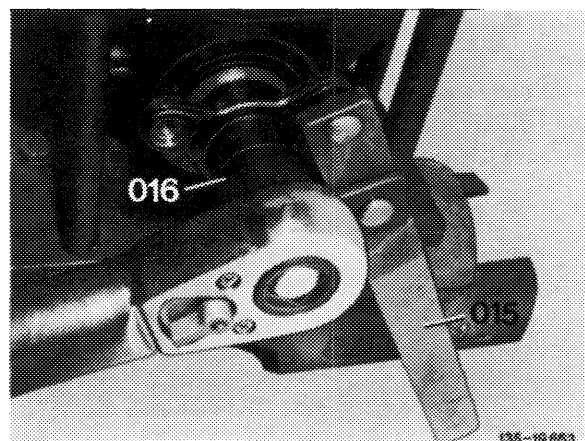
18 Unscrew ring gear from differential housing and carefully force off in relation to housing.

Note: If the gear assembly is used again, mark position of ring gear in relation to differential housing, so that ring gear is reinstalled in the same position (arrow).

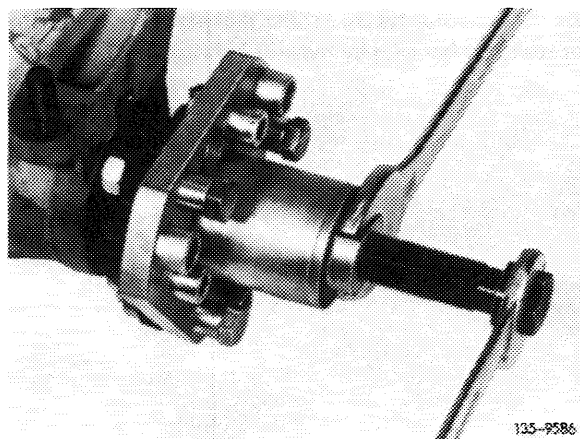


Removing and checking drive pinion

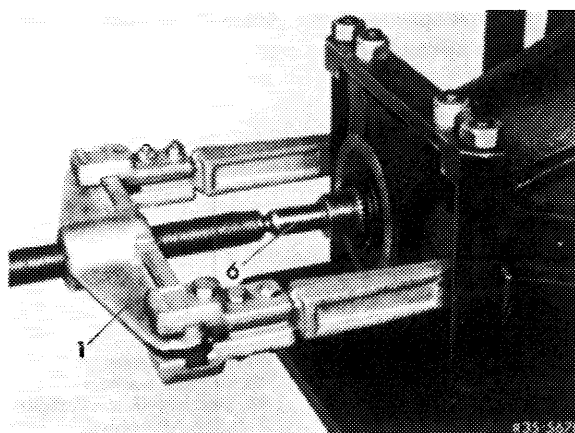
19 Pull holding wrench (015) on universal flange and loosen crush slot nut or double hex. collar nut with slot nut socket or double hex. socket (016).



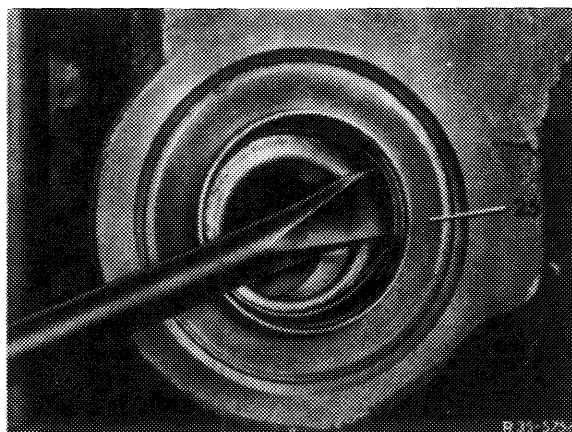
20 If required, pull universal flange from drive pinion by means of puller.



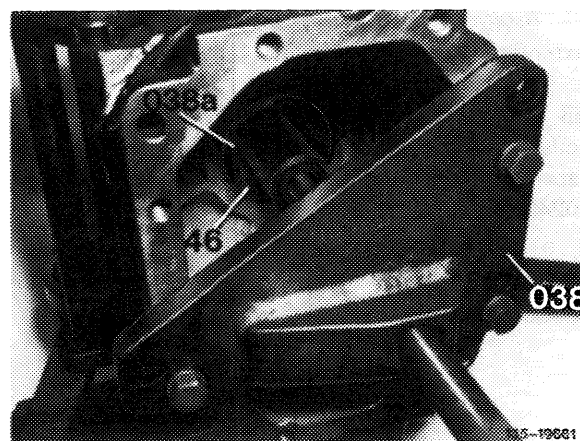
21 Force drive pinion out of rear axle housing by means of a conventional puller.



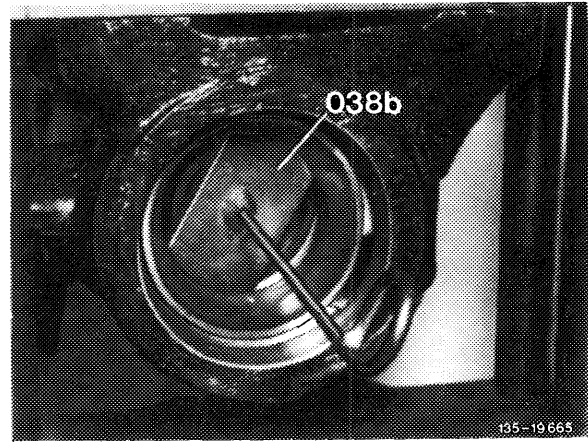
22 Force radial sealing ring (25) out of rear axle housing by means of a screwdriver and remove tapered roller bearing inner race.



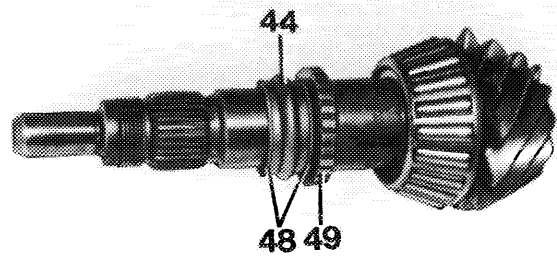
23 Screw installer and remover (038) to rear axle housing and pull inner tapered roller bearing outer race (46) out of housing by means of pulling member (038a).



24 Force outer tapered roller bearing outer race out of rear axle housing by means of thrust piece (038b).



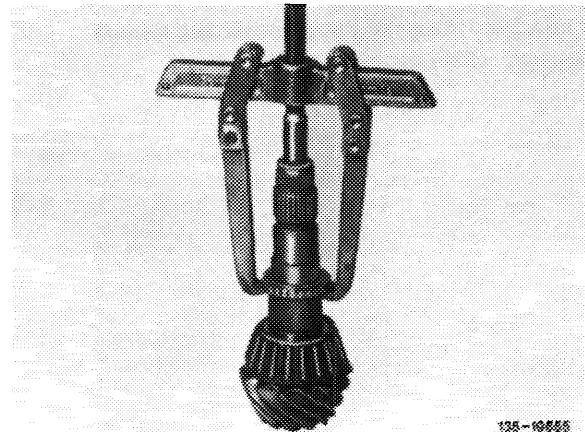
25 Remove spacing sleeve (44) with contact washers (48) from drive pinion.



- 44 Spacing sleeve
- 48 Contact washers
- 49 Gear wheel (on vehicles with ABS only)

135-19634

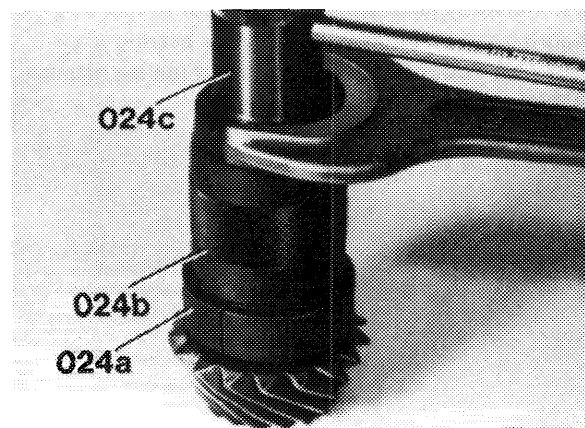
26 On vehicles with ABS, pull gear wheel (rotor) from drive pinion by means of puller.



135-19658

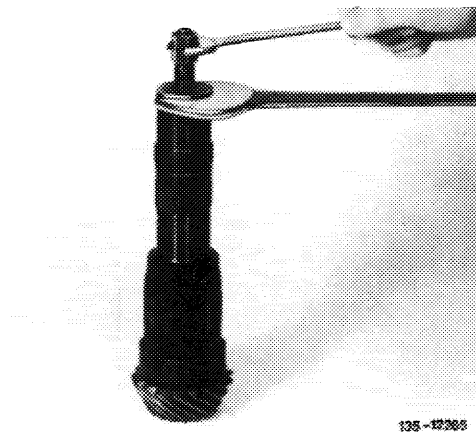
27 Assemble puller (basic unit 024) together with extension (024c) and collet (024a).

28 Slip puller with collet (024a) over tapered roller bearing and clamp collet behind rollers of tapered roller bearing by means of clamping sleeve (024b).



135-12284/1

29 Pull tapered roller bearing inner race from drive pinion by means of puller.



135-12302

Checkup

30 Check all parts for re-use. Check bearing seats on drive pinion for radial and axial runout.

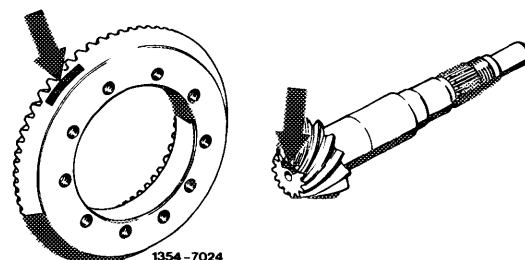
31 Check running surface for radial sealing ring on universal flange. If running surface is worn out, replace universal flange.

32 Plug universal flange on drive pinion and check radial runout of universal flange on running surface of radial sealing ring.

If, in spite of repeated changeover of universal flange on splining, the radial runout exceeds 0.6 mm, replace universal flange.

Note: Each drive pinion and ring gear of a gear assembly is identified by means of a serial number which is written on both parts. In addition, the distance of the gear wheels of a given gear set in relation to each other is indicated on drive pinion.

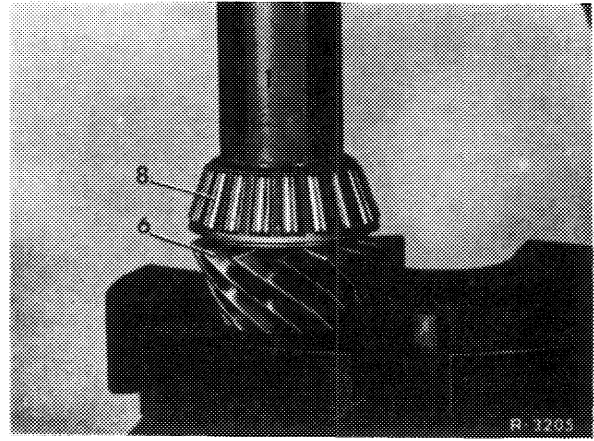
To calculate the thickness of the compensating washer required for adjusting drive pinion, always use a data sheet. A sample data sheet is shown at end of this job number. The measuring and calculating procedure of the example shown on sample sheet is described in detail further down.



1354-7024

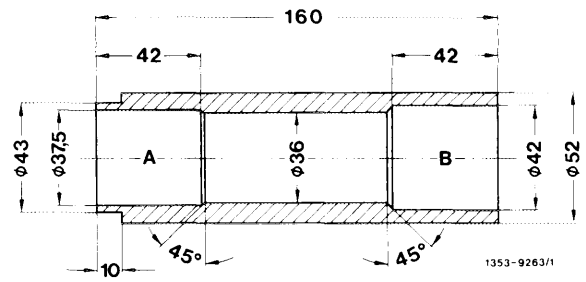
Assembly and adjustment of gear assembly

33 Press rear tapered roller bearing (8) on drive pinion (6) by means of self-made pressing-on sleeve (1). For this purpose, use side of sleeve identified with an "A".

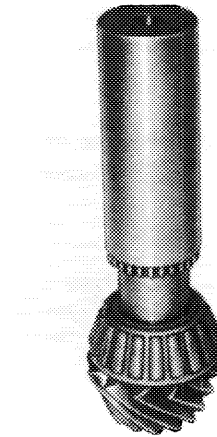


Press-on sleeve (self-made)

A = for vehicles with small center piece.
B = for vehicles with large center piece.

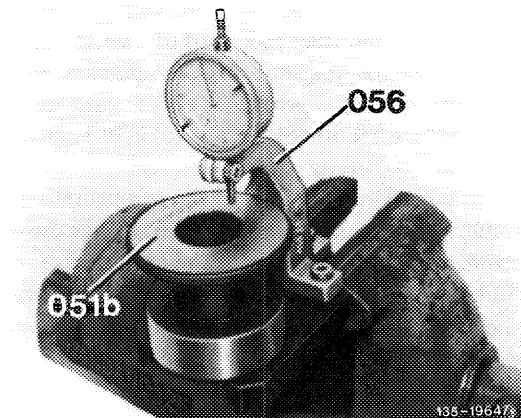


34 On vehicles with ABS, press-on gear wheel (rotor) with self-made pressing-on sleeve.

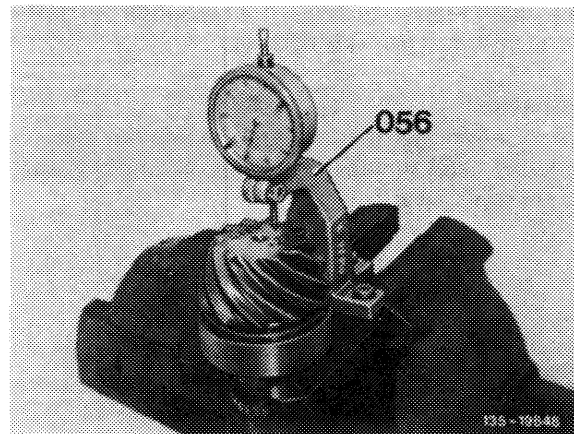


135-19640

35 Adjust dial gauge at approx. 3 mm preload first on measuring body (051b) to 0.

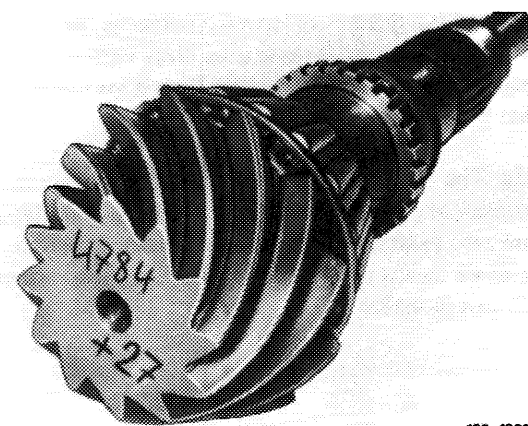


36 Slip outer bearing race on roller cage of drive pinion. Insert drive pinion into measuring device (056) and measure height of drive pinion including bearing. Enter dimension, which represents the difference between the height of measuring body "B1" and height of drive pinion "B", on data sheet item 1.



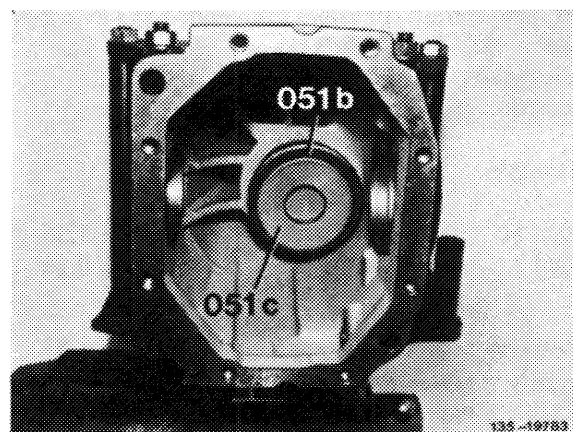
37 Enter basic deviation "a" of drive pinion (+ or -) under item 2 on data sheet.

38 Add (+) or subtract (-) values of 1 and 2 depending on prefix of value on drive pinion.

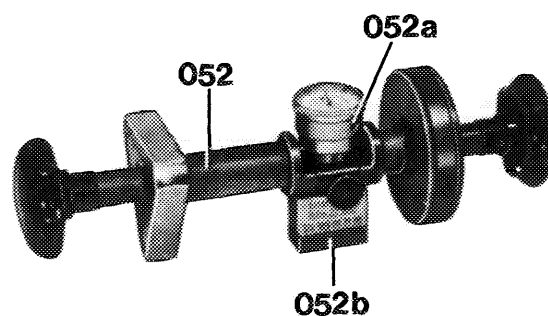


39 Insert measuring body of measuring device into rear axle housing and screw-on measuring body (051b).

40 Place magnetic measuring plate (052c) on face of measuring body (051b).



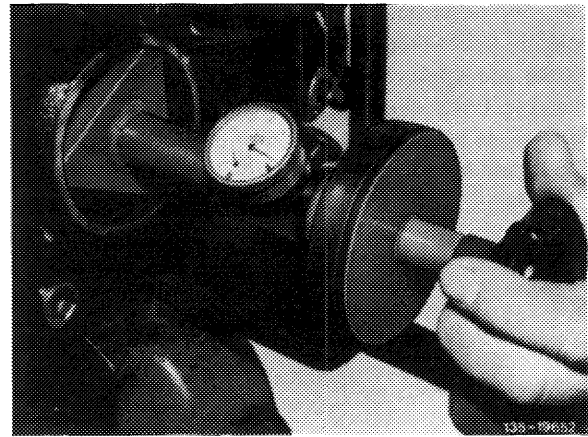
41 Insert dial gauge (052a) into measuring device (052). Push adjusting member (052b) against measuring device and set dial gauge to 0 at 2 mm preload. Tighten clamping screw, while checking 0-position of dial gauge and adjust, if required.



42 Insert measuring device from direction of right-hand bore into rear axle housing.

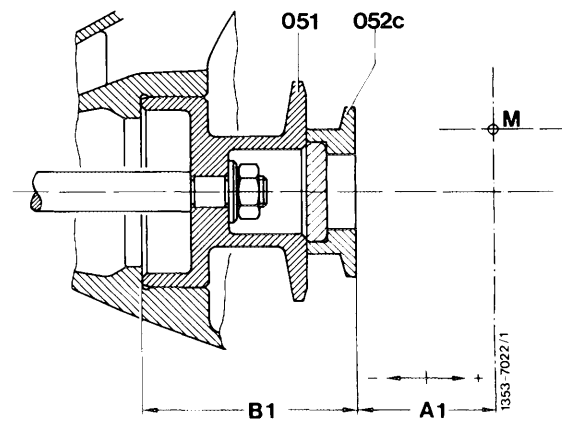
Attention!

When introducing measuring device into rear axle housing, make sure that measuring pin of dial gauge is not damaged at bore.



43 Read the difference between preset gauge dimension and face of measuring body with magnetic measuring plate and enter under item 3 into data sheet in plus or minus direction.

Note: The direction plus (+) or minus (-) refers to direction of rotation of dial gauge needle. A deviation from zero position opposite to clockwise direction therefore means minus direction, in clockwise direction plus direction.



44 Add subtotal of values from item 1 and item 2 as well as value from item 3 (+) or subtract (-). This calculated value indicates the thickness of the compensating washer.

Example:

Item 1	=	1.30
Item 2	=	+ 0.27
	=	—
Subtotal	=	1.57
Item 3	=	+ 0.15
Minus direction	=	—
Plus direction	=	—
Thickness of compensating washer "S"	=	1.72

45 Remove measuring devices (051, 052, 052c) from rear axle housing.

46 Place compensating washer with measured thickness "S" of washer into rear axle housing (refer to example).

Note: Use hardened compensating washers only; they are available at varying thickness. If required, grind down compensating washer as required.

