

TUCANO 580-320

Repair manual

Validity of manual

This manual applies to the following machine / front attachment:

Machine	Type	Vehicle identification number	
		From	To
TUCANO 580	L07	L0700011	–
TUCANO 580	L17	L1700011	–
TUCANO 570	L07	L0700011	–
TUCANO 570	L17	L1700011	–
TUCANO 560	L06	L0600011	–
TUCANO 560	L16	L1600011	–
TUCANO 450	L05	L0500011	–
TUCANO 450	L15	L1500011	–
TUCANO 440	L05	L0500011	–
TUCANO 440	L15	L1500011	–
TUCANO 430	L04	L0400011	–
TUCANO 430	L14	L1400011	–
TUCANO 430	L04	L0100011	–
TUCANO 420	L04	L0400011	–
TUCANO 340	L03	L0300011	–
TUCANO 340	L13	L1300011	–
TUCANO 320	L02	L0200011	–
TUCANO 320	L12	L1200011	–

NOTICE!

Lubricants and fuels end up in the environment.

Environmental pollution

- ▶ Collect and store lubricants and fuels in suitable containers and dispose of them properly.

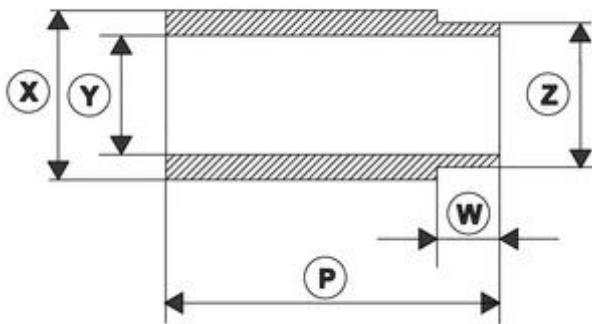
Work preparation

Utilities:

- ▶ Lubricants:
Use grease as specified in the Operator's Manual ("Lubricants" chapter).
Use multi-purpose transmission oil as specified in the Operator's Manual ("Lubricants" chapter).
- ▶ Sealing agents and glue:
DELO-ML-5349 - 00 0178 109 X
Omnifit FD 10 - 00 0219 027 X
Teflon tape - 00 0136 540 X

Tool:

- ▶ Suitable lifting device
Load-bearing capacity 200 kg min. (final drive)
- ▶ Suitable lifting gears (ropes and shackles) with appropriate load-bearing capacity.
- ▶ Suitable safety stand
Load-bearing capacity 10 t min.
- ▶ Tube (I) for pressing the taper roller bearing inner race on the wheel shaft
See figure
- ▶ Adapter (II) for determining the breakaway torque
See figure
- ▶ Oil collecting tank



Ⓟ

Auxiliary tool (I)

Tube

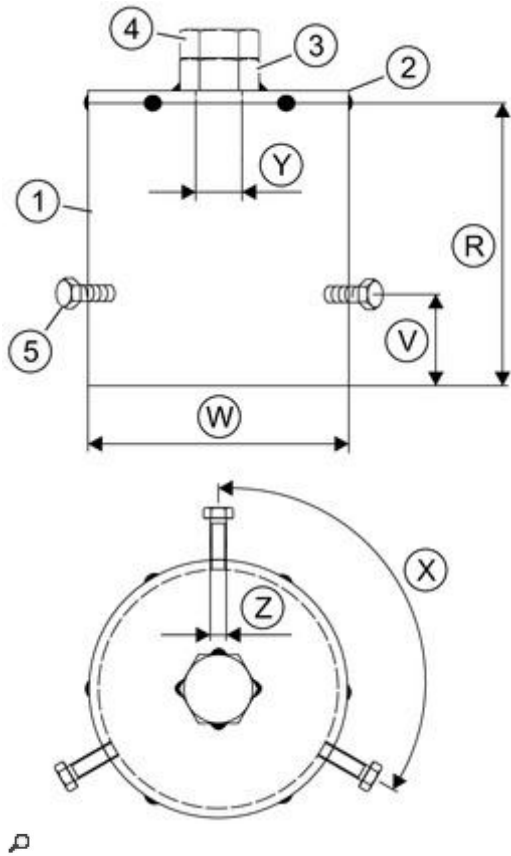
X = Ø 120 mm

Y = Ø 102 mm

Z = Ø 110 mm

W = 15 mm

P = 260 mm



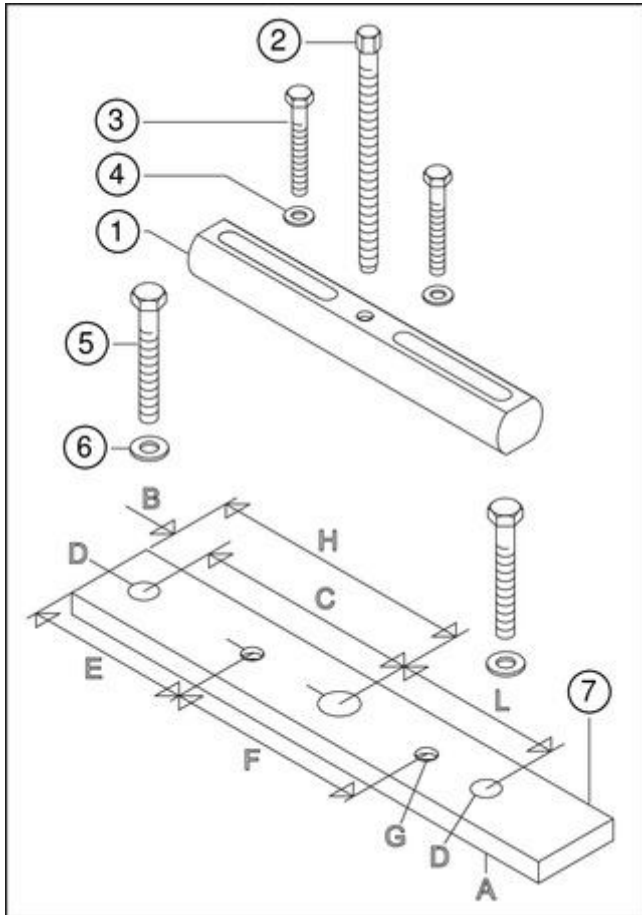
D

Dimensions of auxiliary tool (II)	
R	90 mm
V	32 mm
W	Ø 76.3 mm
X	3 x 120°
Y	Ø 17 mm
Z	3 x M8 thread

	Designation	Pcs.
1	Tube Inside Ø 66 mm Outside Ø 76.3 mm Length 90 mm	1
2	Washer (welded to tube (1)) Thickness 3 mm Outside Ø 76.3 mm	1
3	Hex. nut (welded to washer (2)) ISO 4032-8 M16 00 0213 954 X	1
4	Hex. bolt ISO 4017 M1X6x50-8.8 00 0235 586 X	1

	Designation	Pcs.
5	Hex. bolt ISO 4017 M8x35-8.8 00 0237 572 X	3

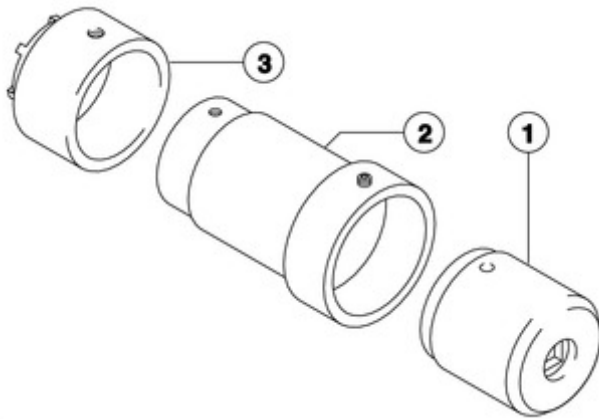
Special tool



p

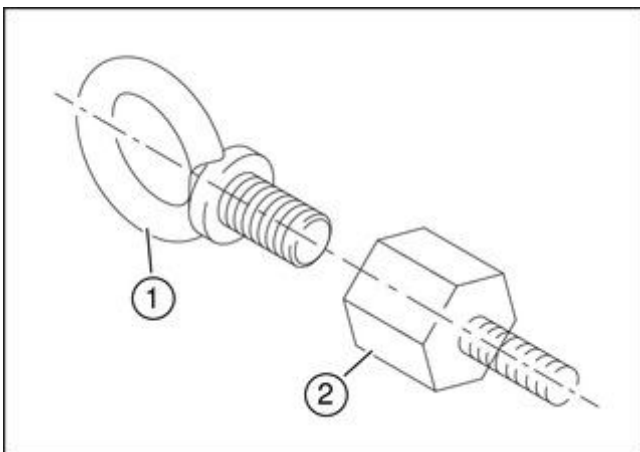
	Special tool (I)	Pcs.
1, 2	Extractor bridge 00 0181 621 X	1
3	Hex. bolt ISO 4017 M16 x 80-8.8 00 0242 468 X	2
4	Washer 00 0617 305 X	2
5	Hex. bolt ISO 4017 M20 x 50-8.8 00 0242 478 X	2
6	Washer 00 0238 060 X	2
	Auxiliary tool	Pcs.

	Auxiliary tool	Pcs.
7	Flat bar (self-manufactured)	1
A	= Flat bar 60 mm x 15 mm, 370 mm long	
B	= 28 mm	
C	= 275 mm	
D	= Ø 22 mm	
E	= 115 mm	
F	= 140 mm	
G	= M16 (internal thread)	
H	= 185 mm	
K	= Ø 30 mm	
L	= 146 mm	



p

	Special tool (II)	Pcs.
1	Adapter 00 0181 641 X	1
2	Basic tube 00 0181 639 X	1
3	Front groove spanner 00 0181 614 X	1



p

	Special tool (III)	Pcs.
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	Special tool (III)	Pcs.
1	Eye bolt M16 DIN 580 00 0242 963 X	2
2	Adapter 00 0181 610 X	2



p

	Special tool (IV)	Pcs.
	Lifting strap 00 0180 170 X	1

Removal

WARNING!

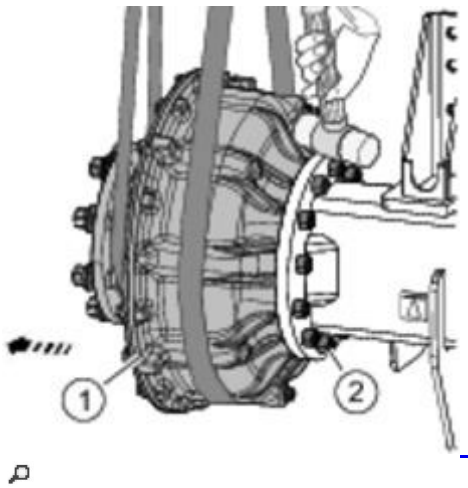
Suspended loads may fall.

Death or serious injuries!

- ▶ Use suitable lifting equipment.
- ▶ Observe the lifting capacity.
- ▶ Never stand underneath a suspended load.

- | | |
|--------------------------|-------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | - Secure the machine against rolling away at the rear axle.
Do not apply the parking brake. |
| <input type="checkbox"/> | - Jack up the machine.
Safely support the machine at the specified jacking point beneath the drive axle. |
| <input type="checkbox"/> | - Remove the drive wheel. |
| <input type="checkbox"/> | - Drain the final drive gearbox oil. |

Operator's Manual



⚠ WARNING!

Lifting heavy components.

Risk of death or serious injury.

- ▶ Use a lifting tool with a sufficient bearing load.
- ▶ Use a lifting tool that operates reliably.
- ▶ Use the lifting tool on solid and even ground.
- ▶ Attach the lifting tool to the component at the intended or a suitable position.
- ▶ Only use faultless and sufficiently dimensioned lifting accessories.
- ▶ Protect lifting accessories against sharp corners and edges, for example using protectors.

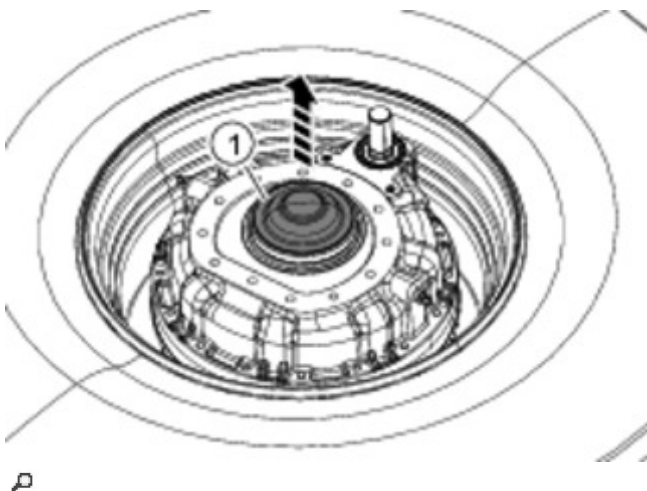
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- ▶ Suspend the final drive (1) in a suitable lifting device.

Weight of final drive:

Final drive

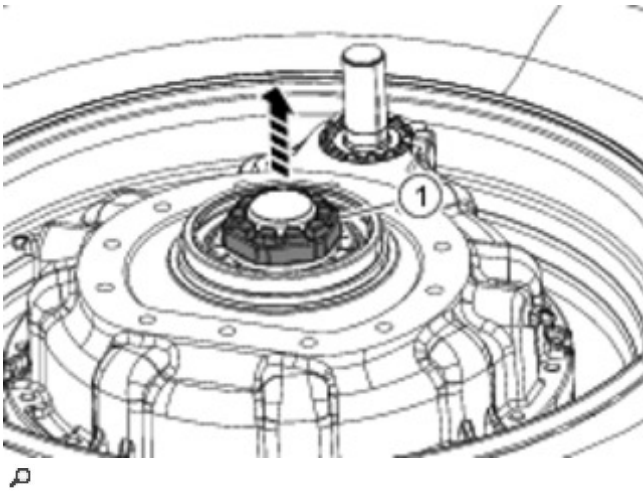
- ▶ Unscrew bolts (2) from the axle flange.
- ▶ Separate the final drive (1) from the axle flange with a plastic-tip hammer.

Disassembly

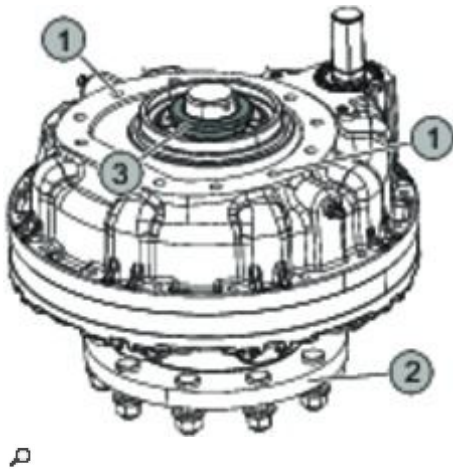


Making installation easier:

- ▶ Insert the final drive with the wheel bolts into the wheel.
- ▶ Drive cap (1) out of the seat.



- ▶ Unlock nut (1).
- ▶ Unscrew nut (1).



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Use special tools (III).

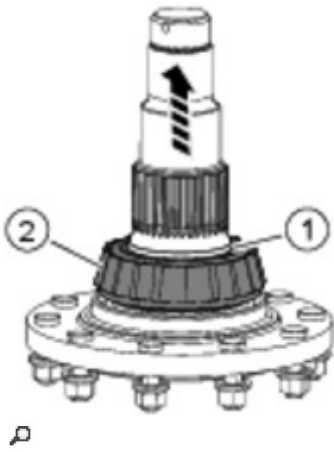
Final drive

- ▶ Screw in special tools (III) at (1).
- ▶ Using a suitable lifting device, lift the final drive until the wheel shaft (2) has no more contact.

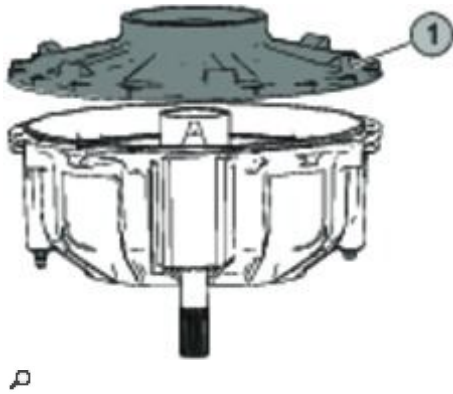
Weight of final drive:

Final drive

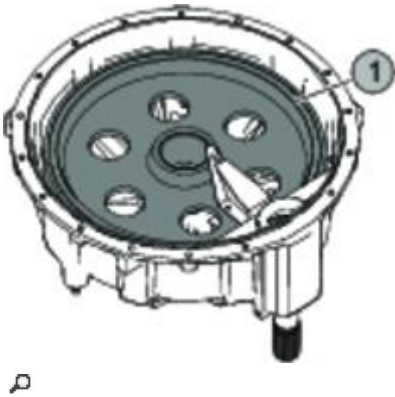
- ▶ Push wheel shaft (2) out of the gearbox housing, using special tool (I).
- ▶ Remove tapered roller bearing inner race (3) and the existing shims.



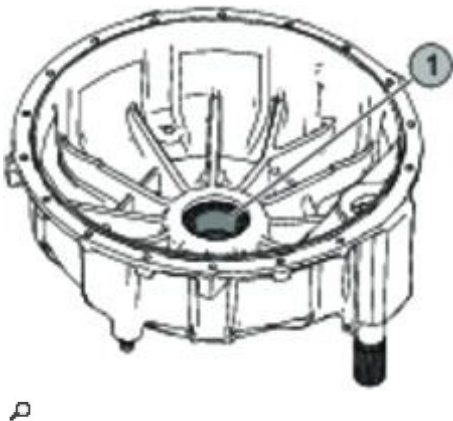
- ▶ Destroy bearing cage (2) of taper roller bearing inner race (1).
- ▶ Pull off the taper roller bearing inner race (1) with a suitable puller.
Please note: If necessary, heat up the taper roller bearing inner race (1) when dismantling.



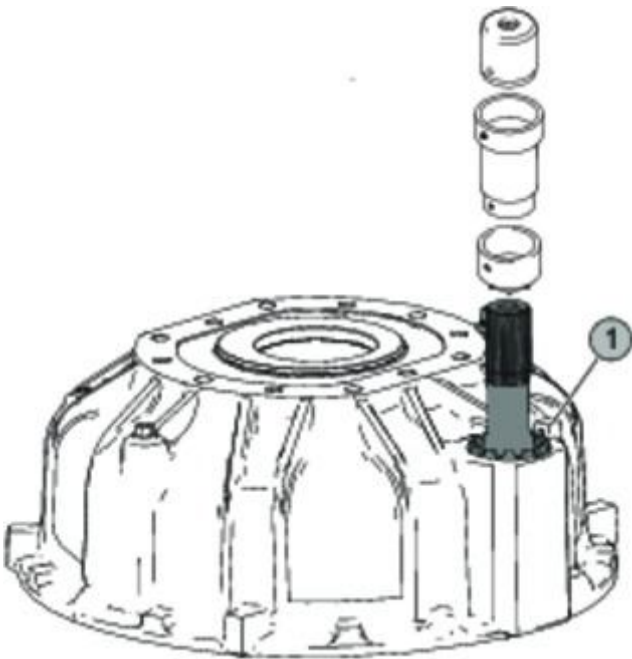
- ▶ Remove cover plate (1).



- ▶ Remove spur gear (1) and the spacer sleeve located behind it.



- ▶ Drive out tapered roller bearing outer race (1).



▫

Use special tool (II).

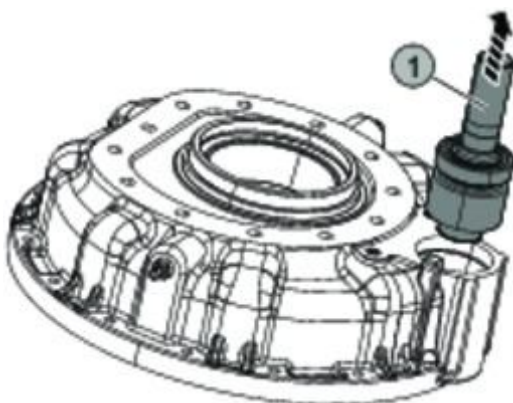
Final drive

- ▶ Drive out the expansion pin.
- ▶ Unscrew bearing cap (1) with special tool (II).



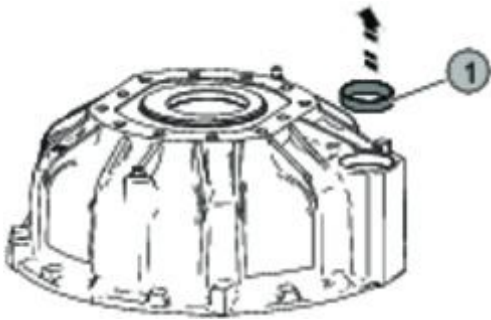
▫

- ▶ Remove radial shaft seal (1) and O-ring (2) from bearing cap (3).



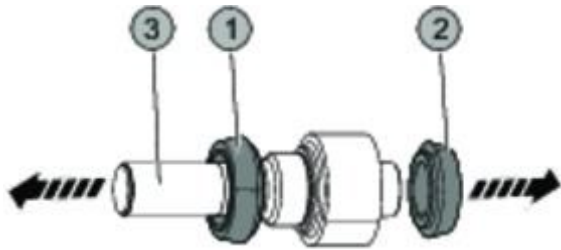
▫

- ▶ Remove drive shaft (1) completely.



▢

▶ Remove taper roller bearing outer race (1).



▢

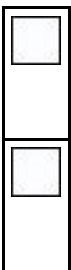
▶ Pull tapered roller bearing inner races (1) and (2) from the drive shaft (3).



▢

▶ Drive out radial shaft seal (1) and tapered roller bearing outer race (2).

Assembly

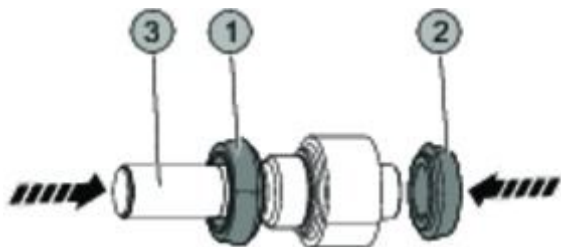


- Apply oil as specified in the Operator's Manual ("Lubricants" chapter) to all moving parts.

Operator's Manual

- Apply a little grease to the taper roller bearings and the radial shaft seals as specified in the Operator's Manual.

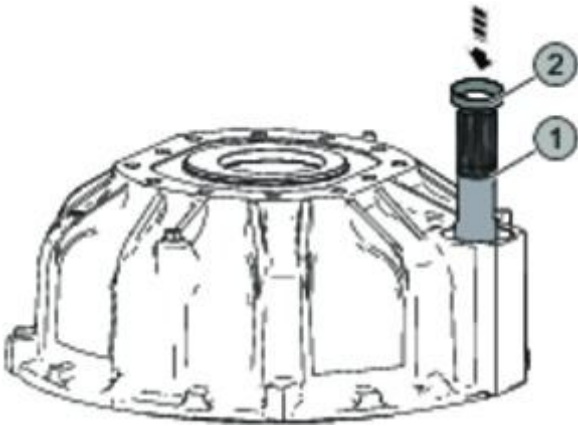
Operator's Manual



▢

▶ Heat up taper roller bearing inner races (1) and (2) to around 100 °C.

- ▶ Install taper roller bearing inner races (1) and (2) on drive shaft (3).
- ▶ Check the correct bearing seat with a blow.



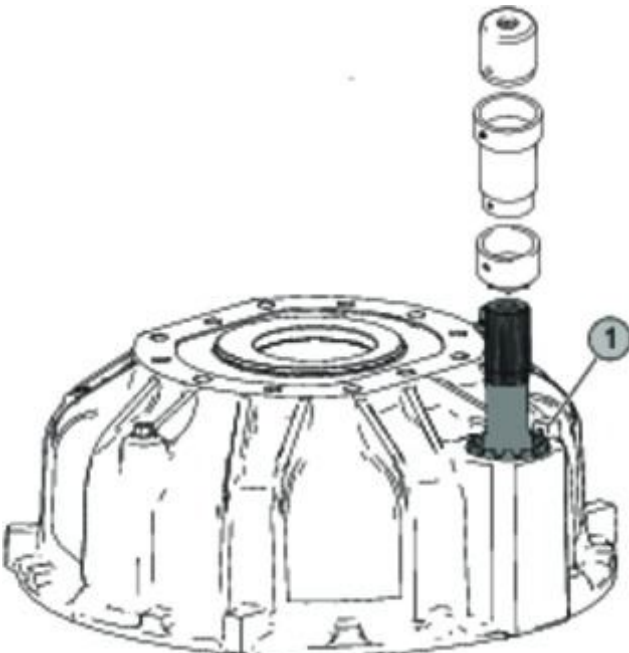
D

- ▶ Insert the tapered roller bearing outer race into the axle housing.
- ▶ Insert the pre-assembled drive shaft (1) and the taper roller bearing outer race (2).



D

- ▶ Insert radial shaft seal (1) and O-ring (2) into bearing cap (3).
- ▶ Apply a little oil to radial shaft seal (1).

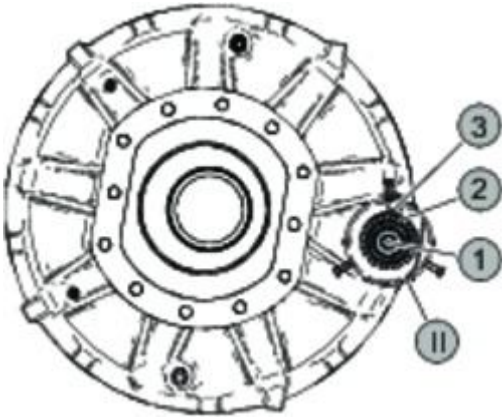


D

Use special tool (II).

Final drive

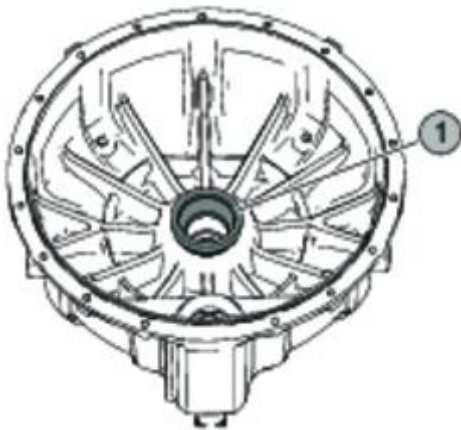
- ▶ Screw in the pre-assembled bearing cover (1) hand-tight.
- ▶ Adjust the bearings using special tool (II) so that no play can be measured while constantly turning the drive shaft.



Use auxiliary tool (II).

Final drive

- ▶ Install auxiliary tool (II) on the drive shaft (1).
- ▶ Check the breakaway torque of drive shaft (1).
- ▶ If required, slacken off the bearing cap (2) or turn it until the next slot is reached.
- ▶ Remove the settling effect with a plastic-tip hammer.
- ▶ Arrest the bearing cap (2) with an expansion pin (3).



- ▶ Insert spacer sleeve (1) into the axle housing.



Suggest:

If the above button click is invalid.

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