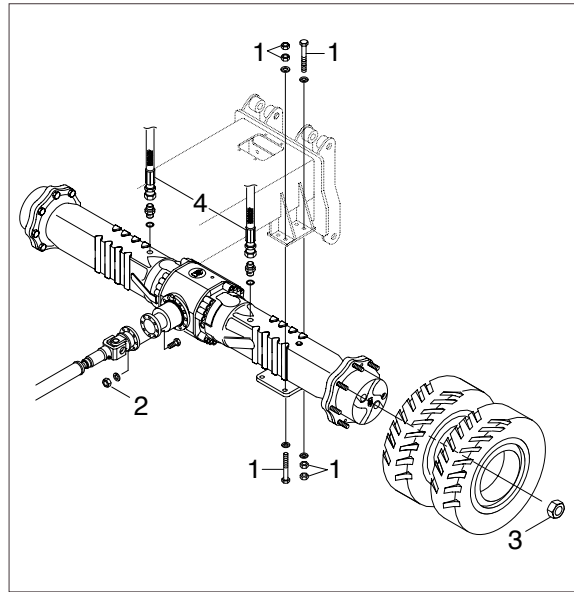


GROUP 12 REAR AXLE

1. REMOVAL REAR AXLE

- 1) Rear axle mounting bolt, nut(1, M24)
 - Tightening torque : $100 \pm 15(\text{kgf} \cdot \text{m})$
($723 \pm 108\text{lb} \cdot \text{ft}$)
- 2) Propeller shaft mounting nut(2, M10)
 - Tightening torque : $5.9 \pm 0.6\text{kgf} \cdot \text{m}$
($42.7 \pm 4.3\text{lb} \cdot \text{ft}$)
- 3) Wheel nut(3, M22)
 - Tightening torque : $52 \pm 0.5\text{kgf} \cdot \text{m}$
($378 \pm 3.6\text{lb} \cdot \text{ft}$)
- 4) Hose assy(4, PF 1/4)
 - Tightening torque : $4\text{kgf} \cdot \text{m}(28.9\text{lb} \cdot \text{ft})$
- 5) Axle weight : 285kg(628lb)



2. GENERAL INSTRUCTIONS

1) GENERAL WORKING INSTRUCTIONS

The efficiency and continued operation of mechanical units depend on constant, correct maintenance and also on efficient repair work, should there be a break-down or malfunction. The instructions contained in this manual have been based on a complete overhaul of the unit.

However, it is up to the mechanic to decide whether or not it is necessary to assemble only individual components, when partial repair work is needed. The manual provides a quick and sure guide which, with the use of photographs and diagrams illustrating the various phases of the operations, allows accurate work to be performed.

All the information needed for correct disassembly, checks and assembly of each individual component is set out below. In order to remove the differential unit from the machine, the manuals provided by the machine manufacturer should be consulted. In describing the following operations it is presumed that the unit has already been removed from the machine.

(1) Important

In order to facilitate work and protect both working surfaces and operators, it is advisable to use proper equipment such as: trestles or supporting benches, plastic or copper hammers, appropriate levers, pullers and specific spanners or wrenches.

Before going on to disassemble the parts and drain the oil, it is best to thoroughly clean the unit, removing any encrusted or accumulated grease.

(2) Introductory remarks

All the disassembled mechanical units should be thoroughly cleaned with appropriate products and restored or replaced if damage, wear, cracking or seizing have occurred.

In particular, thoroughly check the condition of all moving parts (Bearings, gears, crown wheel and pinion, shafts) and sealing parts (O-rings, oil shields) which are subject to major stress and wear. In any case, it is advisable to replace the seals every time a component is overhauled or repaired. During assembly, the sealing rings must be lubricated on the sealing edge. In the case of the crown wheel and pinion, replacement of one component requires the replacement of the other one. During assembly, the prescribed pre-loading, backlash and torque of parts must be maintained.

(3) Classification

This manual classifies units according to part numbers. For a correct interpretation, classification is indicated as follows:

▶▶ = Up to the part number

▶▶ = From the part number on

When no classification is given, disassembly and assembly operations are the same for all versions.

(4) Specific equipment

The drawings of all specific tools required for maintenance and repair work can be found at the end of this manual.

2) NOTES ON SAFETY PRECAUTIONS

- (1) During all operations described in this manual, the axle should be fastened onto a trestle, while the other parts mentioned should rest on supporting benches.
- (2) When removing one of the arms, an anti-tilting safety trestle should be placed under the other arm.
- (3) When working on an arm that is fitted on the machine, make sure that the supporting trestles are correctly positioned and that the machine is locked lengthways.
- (4) Do not admit any other person inside the work area; mark off the area, hang warning signs and remove the ignition key from the machine.
- (5) Use only clean, quality tools; discard all worn, damaged, low-quality or improvised wrenches and tools. Ensure that all dynamometric wrenches have been checked and calibrated.
- (6) Always wear gloves and non-slip rubber shoes when performing repair work.
- (7) Should you stain a surface with oil, remove marks straight away.
- (8) Dispose of all lubricants, seals, rags and solvents once work has been completed. Treat them as special waste and dispose of them according to the relative law provisions obtaining in the country where the axles are being overhauled.
- (9) Make sure that only weak solvents are used for cleaning purposes; Avoid using turpentine, dilutants and toluol-, xylol-based or similar solvents; Use light solvents such as Kerosene, mineral spirits or water-based, environment friendly solvents.
- (10) For the sake of clarity, the parts that do not normally need to be removed have not been reproduced in some of the diagrams.
- (11) The terms RIGHT and LEFT in this manual refer to the position of the operator facing the axle from the side opposite the drive.
- (12) After repair work has been completed, accurately touch up any coated part that may have been damaged.

3) LUBRICANT AND MAINTENANCE SPECIFICATIONS

(1) Lubricant

Gear oils with limited-slip additives.

API GL-5

MIL-L-2105D(SAE 85W-90, 85W-140 with LS-Additive)

(2) Maintenance

Oil change interval

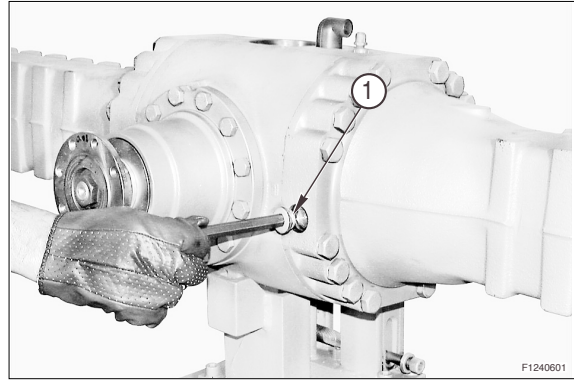
- 1st : 500hr

- Every 1000hr or at least once a year.

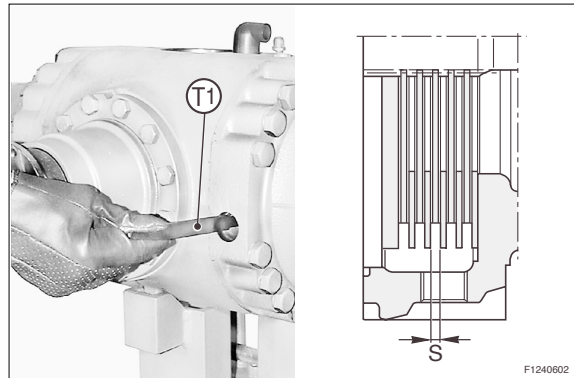
Grease

- Monthly

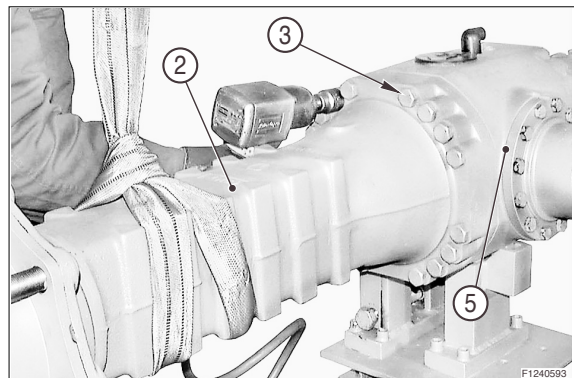
- (1) Remove the oil level plug(1).
Perform all operations on both arms.



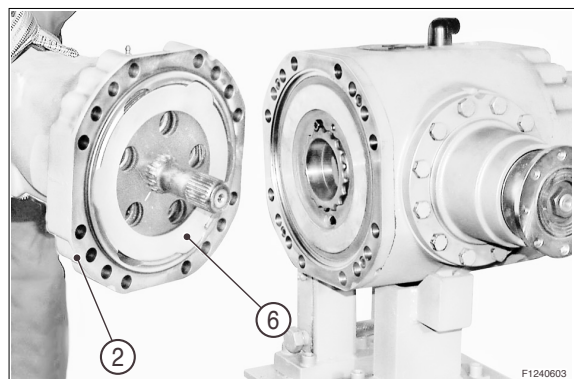
- (2) Apply the brakes and, keeping them under pressure, check the linings S between the disks using tool T1 .
· Minimum S : 4.5mm
Replace the braking disks and the intermediate disks on both sides if necessary.



- (3) Unloose and remove the screws(3) and the washers(4) that fix the arm(2) to the central body(5).



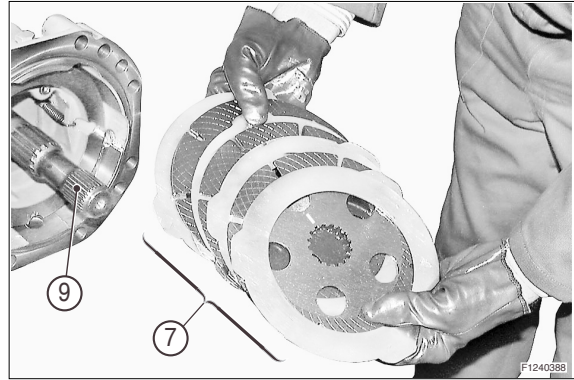
- (4) Remove the arm(2) together with the pack of the braking disks(6).
Place the arm on a bench.



(5) Remove the braking disks(6) and note down their order of assembly.

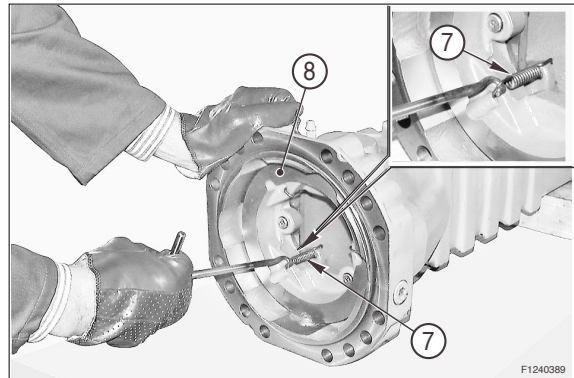
※ If the disks do not need replacing, avoid switching their position.

Extract the axle shaft(9).



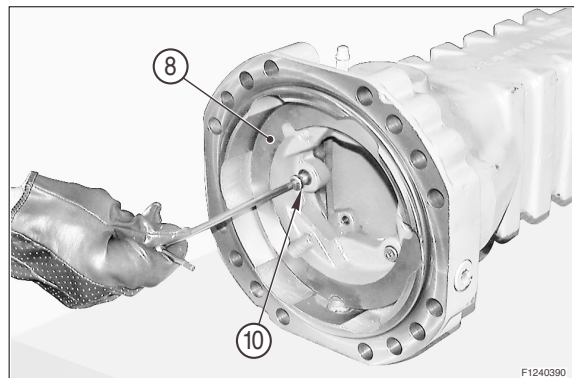
(6) Remove the reversal springs(7) from the piston(8).

If the springs(7) are weak or deformed they must be replaced.



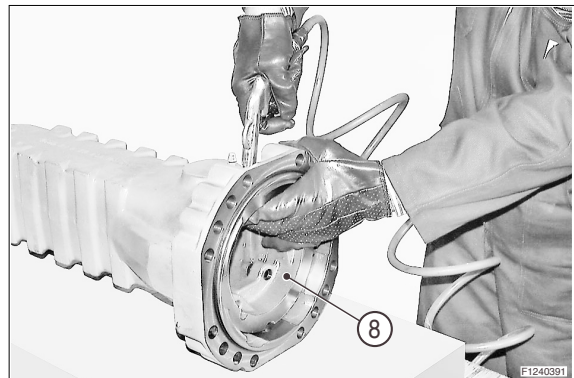
(7) Remove the pin screws(10) guiding the piston(8).

If the screws are to be replaced, note down the different colors for the different brake gaps.(See Assemble the braking units)

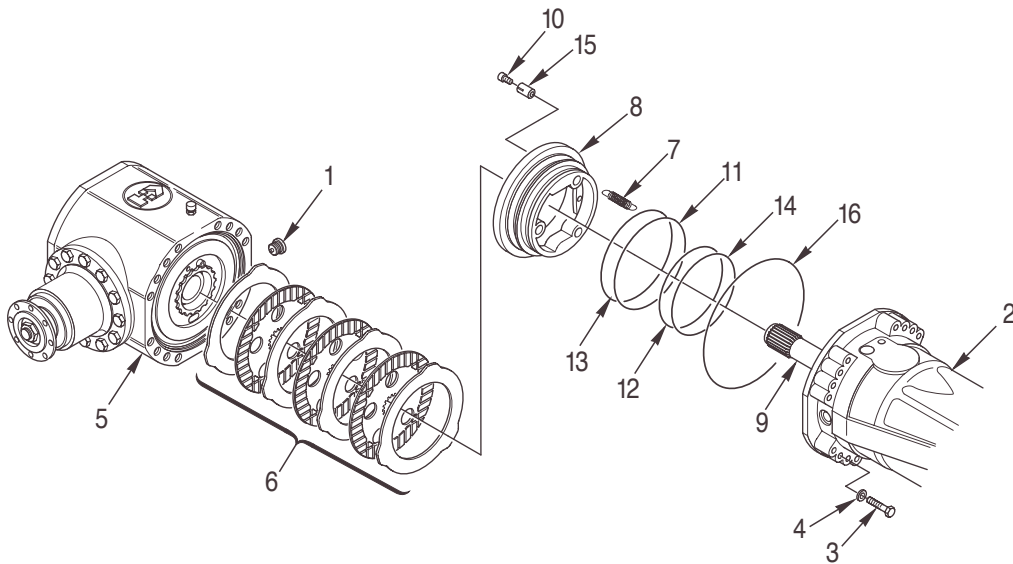


(8) Slowly introduce compressed air through the connection of the braking circuit in order to extract the entire piston.

Hold on to the piston as it may be suddenly ejected and damaged.



2) ASSEMBLE THE BRAKING UNITS

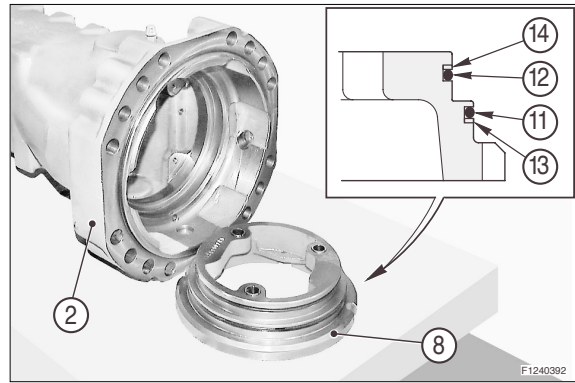


- 1 Oil level plug
- 2 Arm
- 3 Screw
- 4 Washer
- 5 Central body
- 6 Braking disk

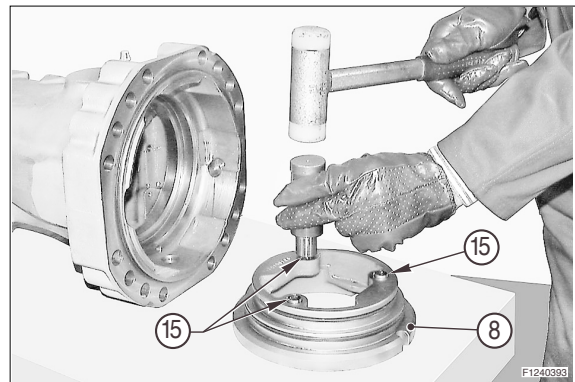
- 7 Spring
- 8 Piston
- 9 Shaft
- 10 Screw
- 11 O-ring

- 12 O-ring
- 13 Anti-extrusion ring
- 14 Anti-extrusion ring
- 15 Spring
- 16 Sealing ring

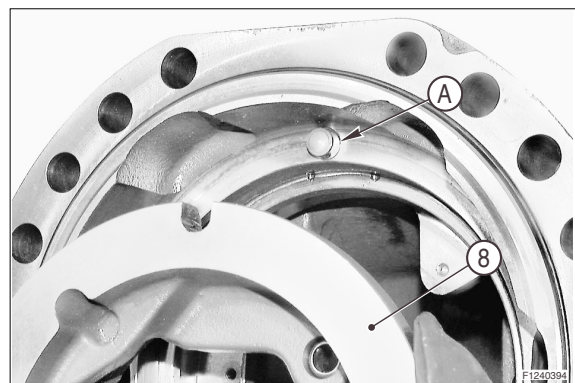
- (1) Accurately clean the piston(8) and the seats of slide and seal.
 Replace the O-rings(11) and (12) and the anti-extrusion rings(13) and (14); Make sure that the assembly side is correct.
 Accurately check the positioning of the anti-extrusion rings(13) and (14).



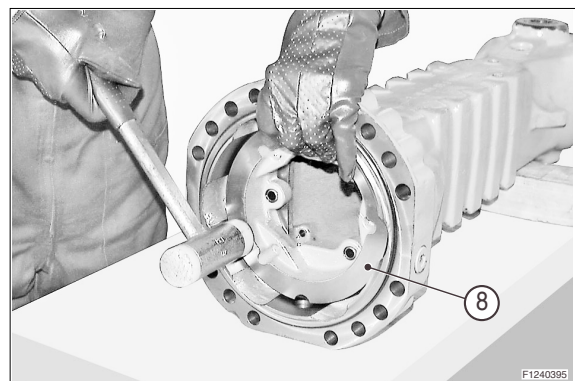
- (2) Insert the stroke automatic regulation springs(15); Place them in line with the piston(8).



- (3) Lubricate the seals(11) and (12) and fit the piston(8) into the arm(2).
 Make sure that the piston seat fits into the stop pin A inside the arm.



- (4) Assist the insertion on the piston(8) by lightly hammering around the edge with a plastic hammer.

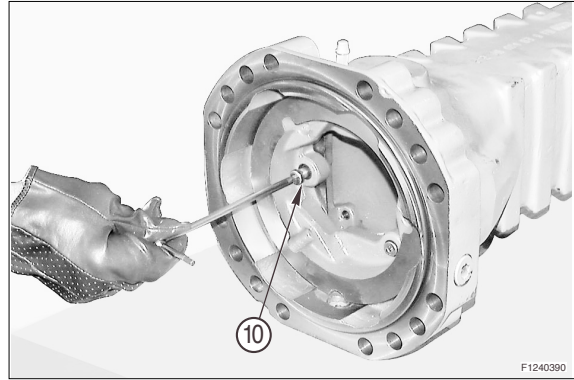


(5) Fit the pin screws(10) making sure that they are all of the same color.

- White : 1mm gap
- Yellow : 0.75mm gap
- Blue : 0.5mm gap

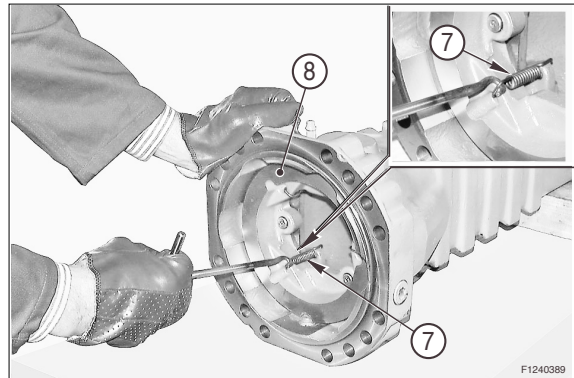
Apply Loctite 270 to the thread.

- Tightening torque : $0.6 \pm 0.1 \text{kgf} \cdot \text{m}$
($4.3 \pm 0.7 \text{lb} \cdot \text{ft}$)

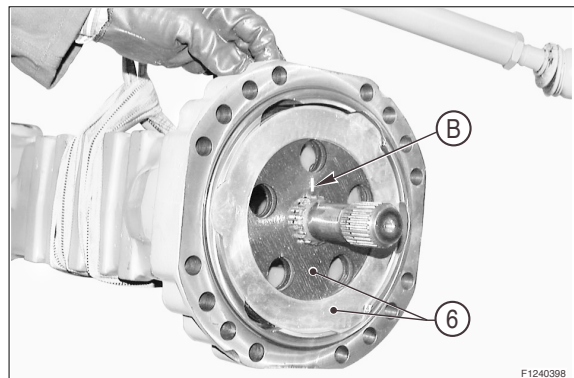


(6) Fit the reversal springs(7) on the piston (8).

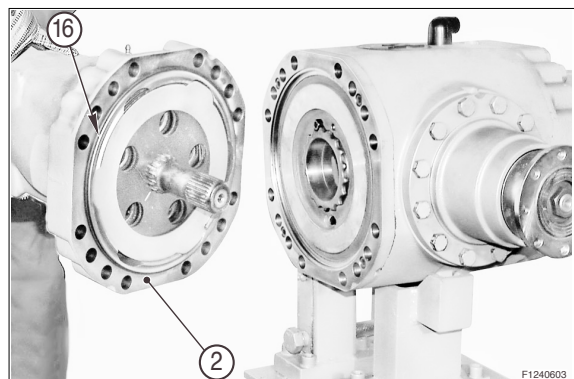
Pay due attention not to deform the connections of the springs.



(7) Slightly lubricate the braking disks(6) and fit them in the arm following the correct sequence; orient them so that the oil circulation holes and the marks B are perfectly lined up.

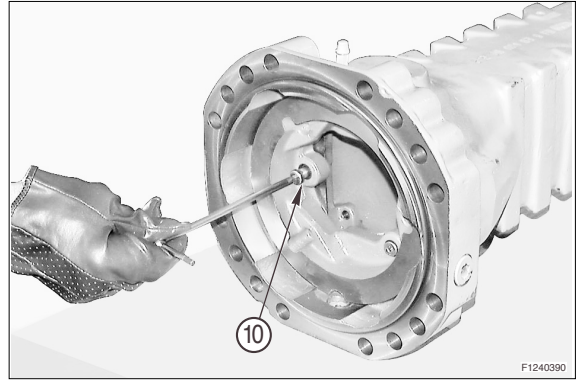


(8) Check that the positioning of the sealing ring(16) on the arm is intact; Install the complete arm(2). Lock it into position using two facing screws(3) and washers (4).

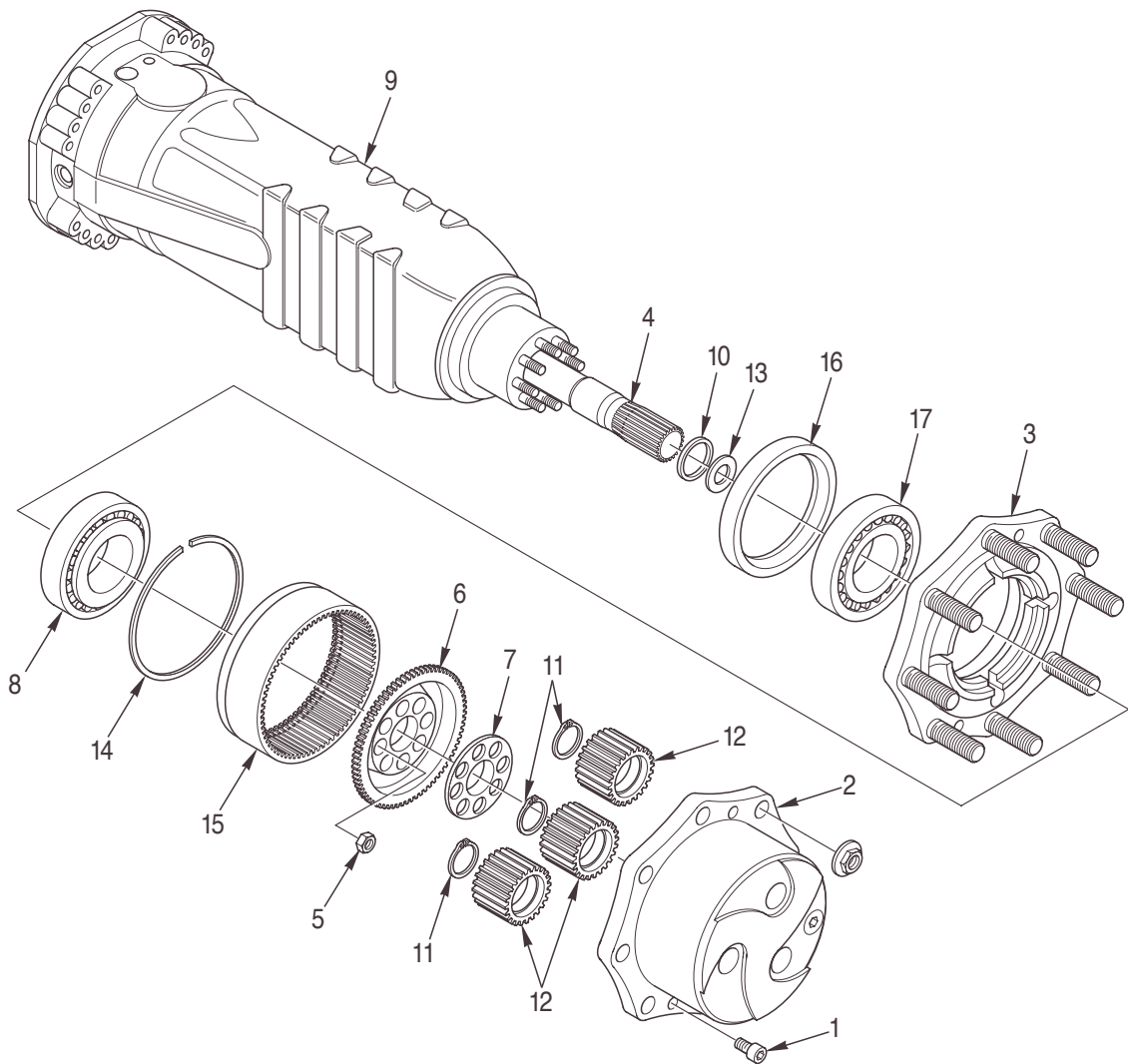


(9) Check the flatness of the arms using tool T2 and finally lock the arms with the screws(3) and the washer(4) using the cross-tightening method.

- Tightening torque : 30.4kgf · m(220lb · ft)



3) DISASSEMBLE THE PLANETARY REDUCTION AND AXLE SHAFT



- | | | | | | |
|---|--------------|----|----------------------|----|--------------|
| 1 | Screw | 7 | Flange | 13 | Shim washer |
| 2 | Spider cover | 8 | Bearing | 14 | Snap ring |
| 3 | Hub | 9 | Arm | 15 | Crown |
| 4 | Axle shaft | 10 | Snap ring | 16 | Sealing ring |
| 5 | Nut | 11 | Snap ring | 17 | Sealing ring |
| 6 | Flange | 12 | Planetary wheel gear | 18 | Bearing |

(1) Notes on safety precautions

The axle shafts can only be removed after extraction has been performed. Different procedures need to be followed depending on the kind of repair operation needed and the type of axle:

Axle without parking brakes: Compressed air(7bar approx.) should be introduced in the braking circuit in order to hold the braking disks in position.

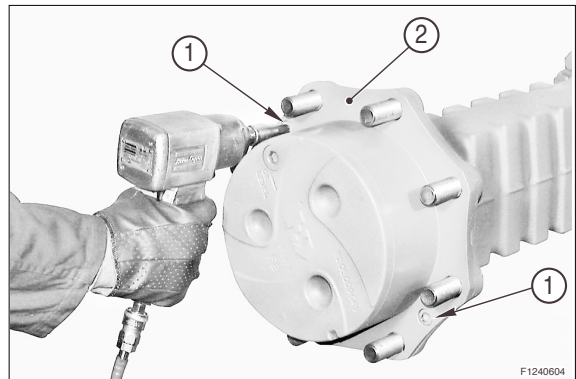
Axle with negative brake: Does not require any preparation as the disks are mechanically locked in position.

Axle with mechanical brake: requires that the external control levers are put under tension in relation to each other.

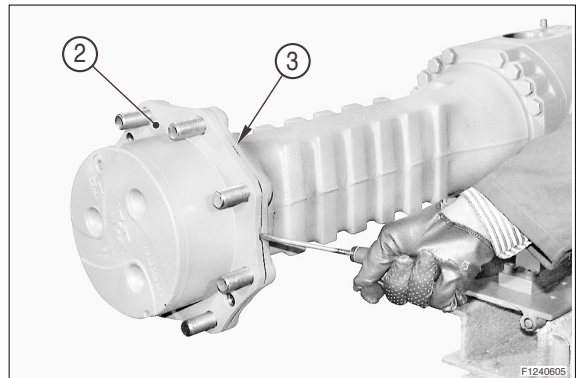
Disassembly to be carried out with the arm resting on the bench.

The explanations reported herewith refer to removal operations carried out on the bench; the different stages of axle shaft removal also apply to all other solutions or versions.

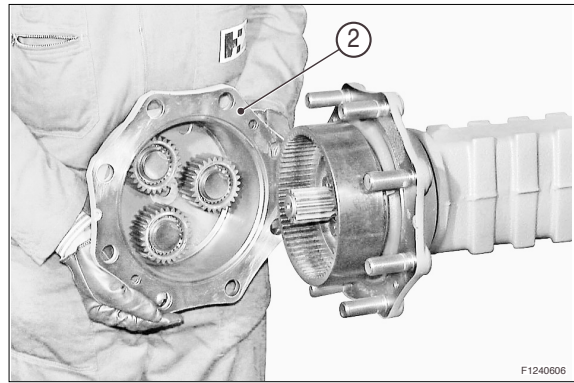
- (2) Remove the securing screws(1) from the spider cover(2).



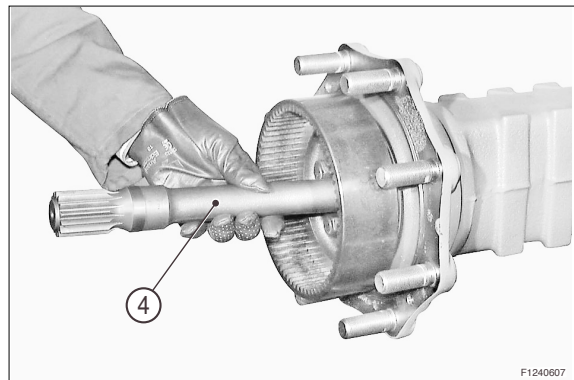
- (3) Disjoin the spider cover(2) from the hub(3) by alternatively forcing a screwdriver into the appropriate slots.



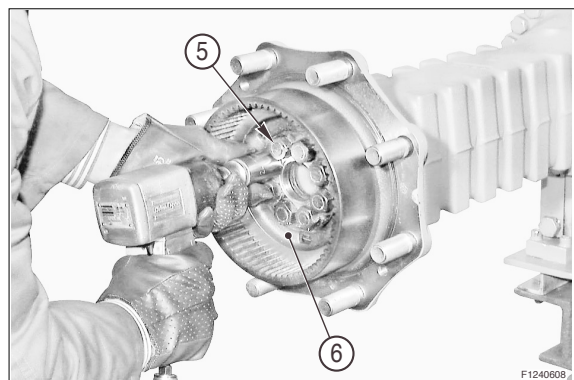
(4) Remove the complete planetary carrier cover(2).



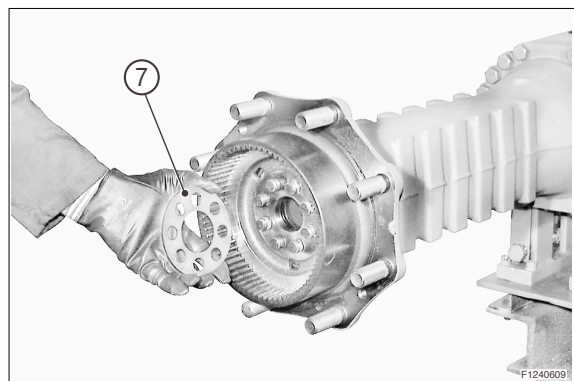
(5) Remove the complete axle shaft(4).



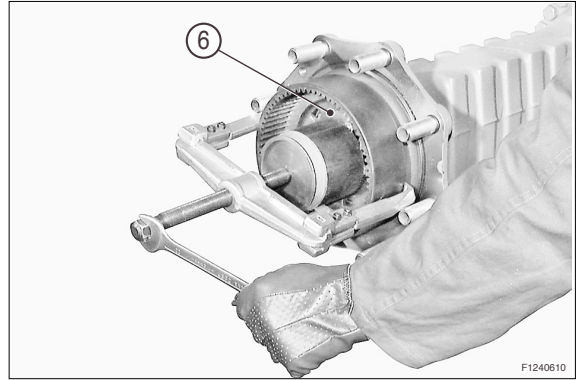
(6) Unloose and remove the tightening nuts(5) from the crown flange(6).



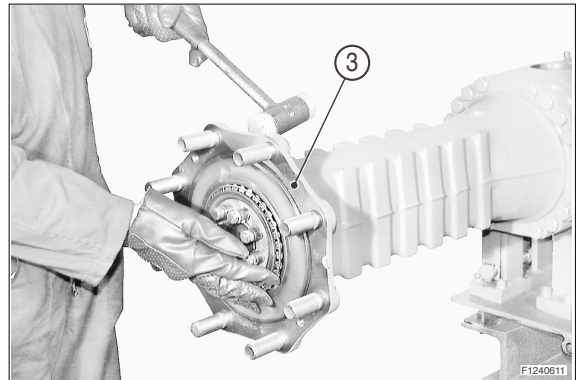
(7) Remove the safety flange(7).



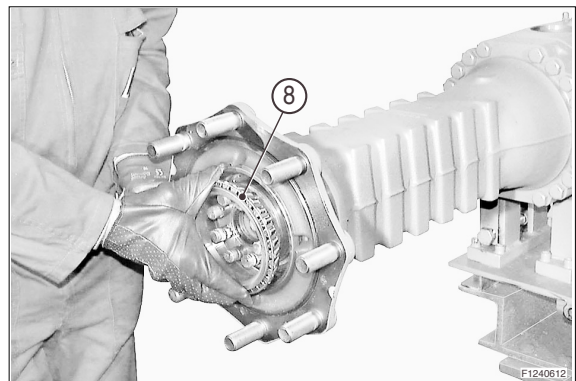
- (8) Using a puller, remove the complete crown flange(6) by acting on the stud bolts.



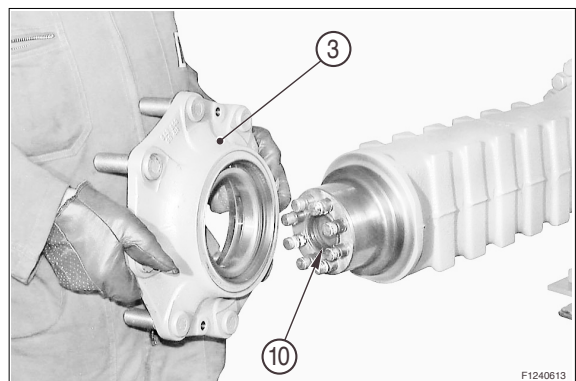
- (9) Partially extract the hub(3) using a plastic hammer.
Alternately hammer on several equidistant points.



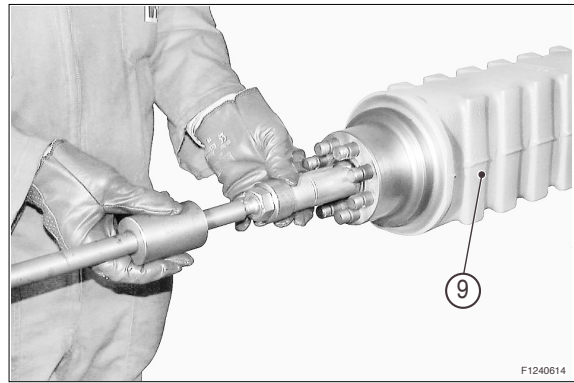
- (10) Remove the external bearing(8).



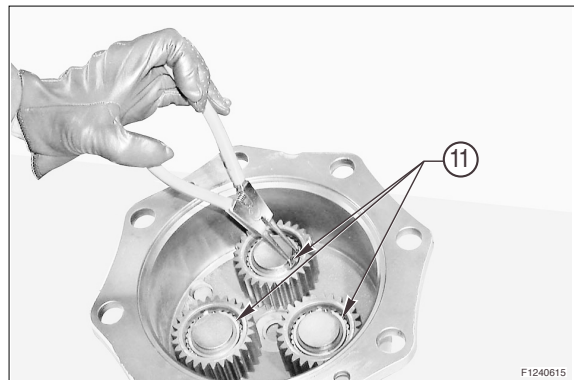
- (11) Extract the hub(3).



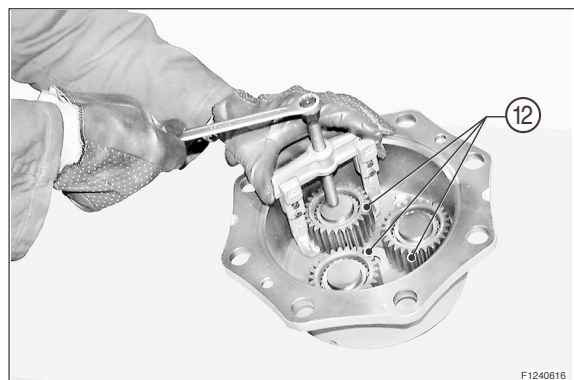
(12) Remove snap ring(10) from the arm(9).



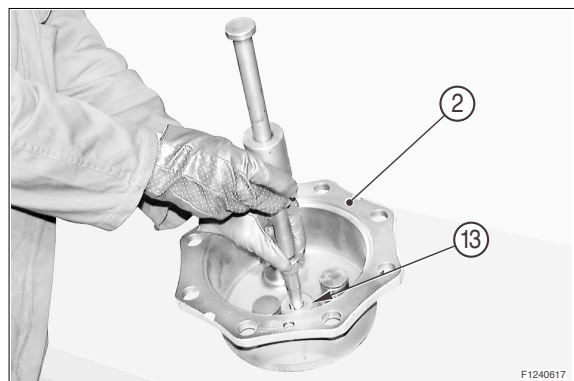
(13) Remove the snap rings(11).



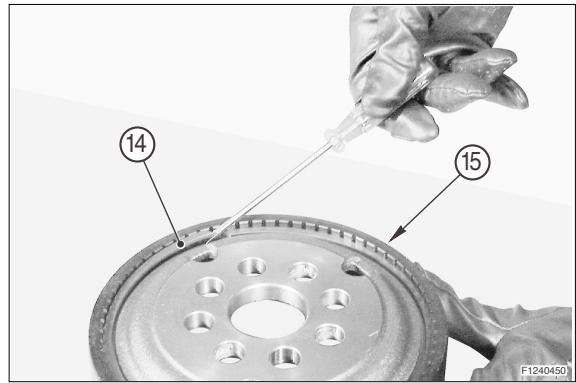
(14) With the help of a puller, remove the planet wheel gears(12).
Note down the assembly side of planet wheels.



(15) Using a puller for inner parts, remove shim washer(13) from planetary cover(2).



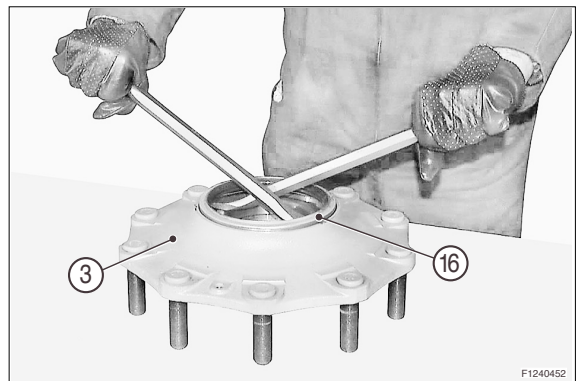
(16) Remove the snap ring(14) from the crown(15).



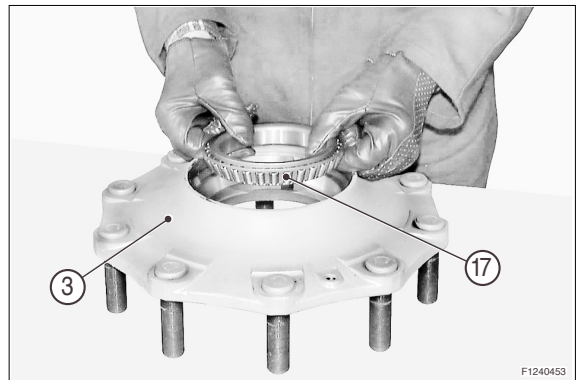
(17) Remove the crown flange(6).



(18) Remove the sealing ring(16) from the hub (3).



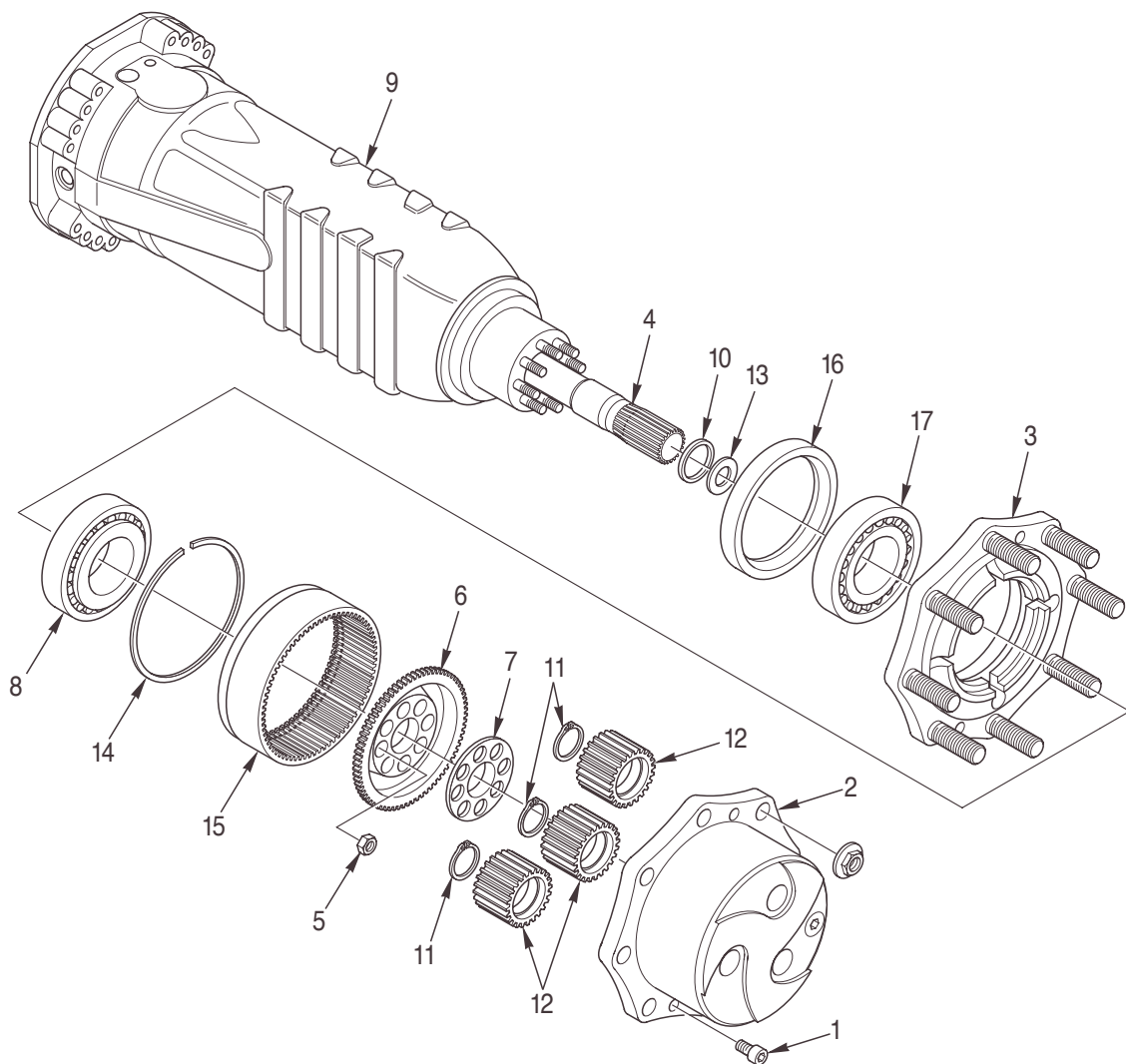
(19) Remove the internal bearing(17).



(20) Remove the external thrust blocks from the bearings(8) and (17) forcing a pin driver into the appropriate slots on the hub (3). Hammer in an alternate way so as to avoid crawling or deformation of the thrust blocks.



4) ASSEMBLING THE PLANETARY REDUCTION AND AXLE SHAFT

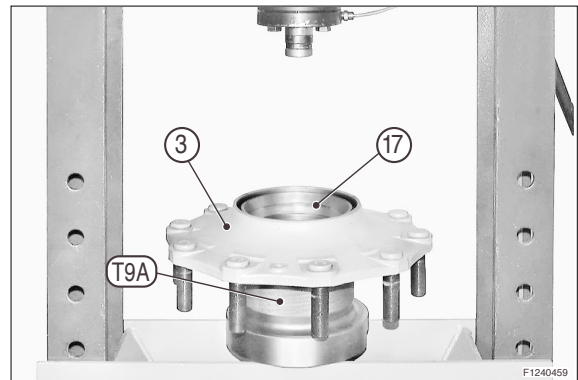


- | | | | | | |
|---|--------------|----|----------------------|----|--------------|
| 1 | Screw | 7 | Flange | 13 | Shim washer |
| 2 | Spider cover | 8 | Bearing | 14 | Snap ring |
| 3 | Hub | 9 | Arm | 15 | Crown |
| 4 | Axle shaft | 10 | Snap ring | 16 | Sealing ring |
| 5 | Nut | 11 | Snap ring | 17 | Sealing ring |
| 6 | Flange | 12 | Planetary wheel gear | 18 | Bearing |

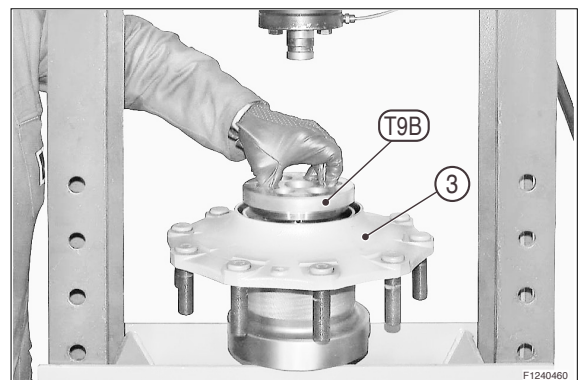
- (1) Position the lower part of tool T9A and the thrust block of the external bearing(8) under the press.



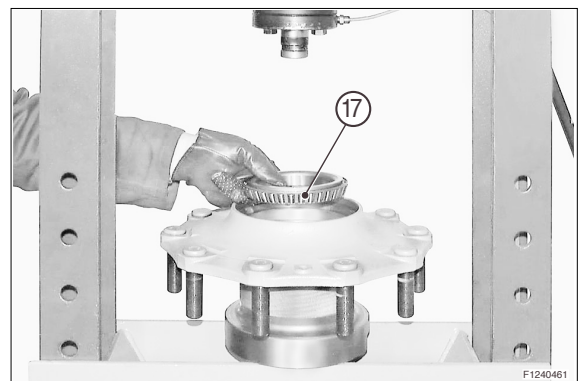
- (2) Lubricate the seats of the bearings and position the hub(3) on tool T9A; Position the thrust block of the internal bearing(17). Check that the thrust block is correctly oriented.



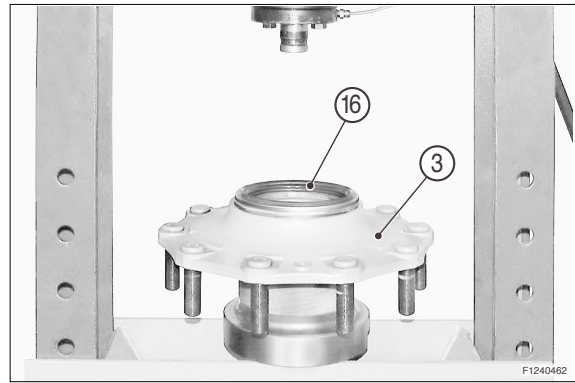
- (3) Position the upper part of tool T9B and press the thrust blocks into the hub(3) all the way down.



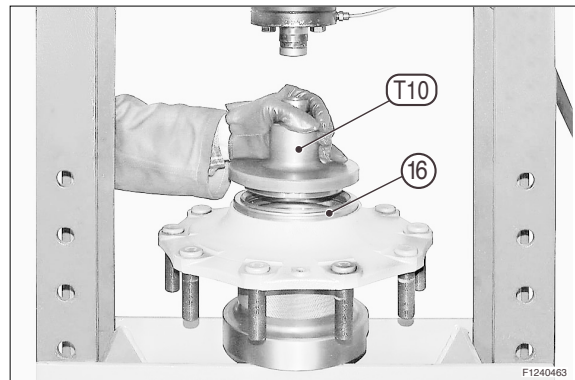
- (4) Fit the bearing(15) into the internal thrust block.



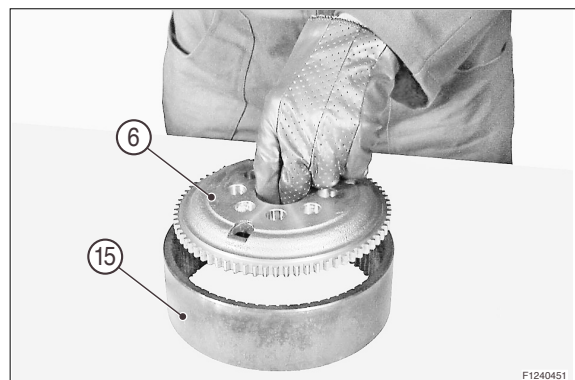
- (5) Apply a sealant for removable seals to the outer surface of the sealing ring(16). Position the sealing ring(16) in the hub(3). Check that the ring(16) is correctly oriented.



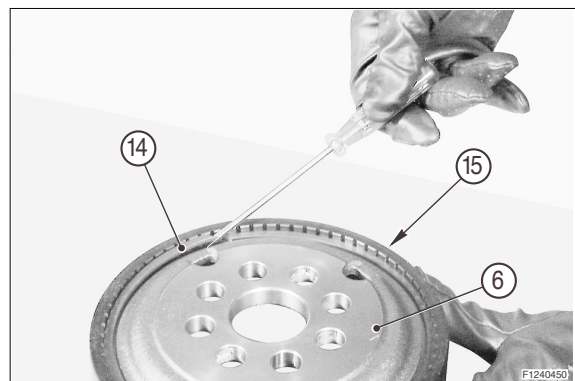
- (6) Position tool T10 and press the sealing ring(16) into its seat.



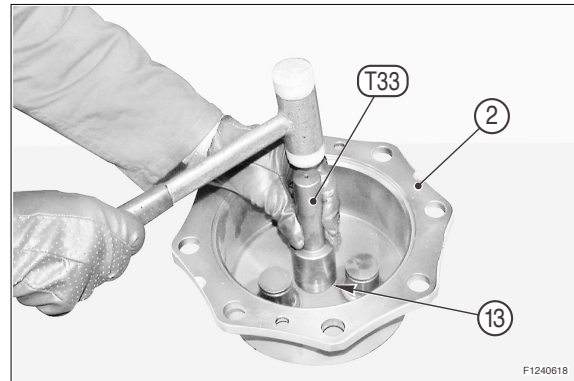
- (7) Insert the flange(6) in the crown(15).



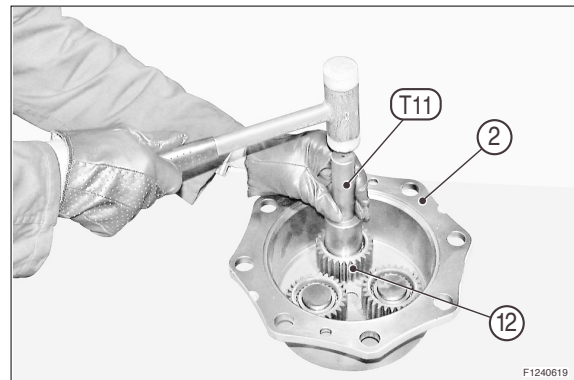
- (8) Insert the snap ring(14) in order to fix the flange(6) in the crown(15). Carefully check that ring(14) is properly inserted in the slot of the crown(15).



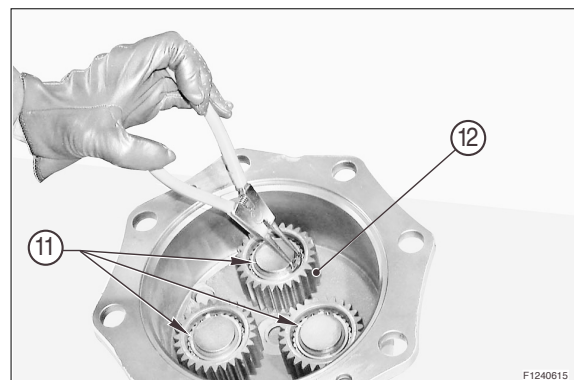
(9) Using tool T33, fit shim washer(13) into planetary cover(2).



(10) With the help of tool T11, insert the planet wheel gears(12) into the cover(2). Accurately check the orientation.

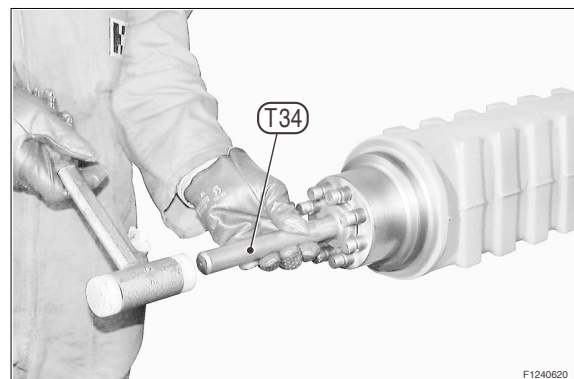


(11) Lock the gears(12) into position by fitting the sanp rings(11).

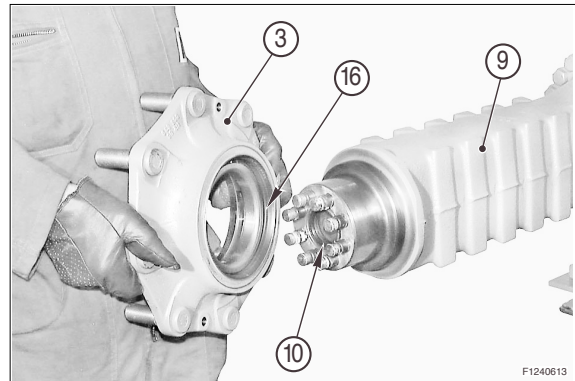


(12) Lubricate the outer face of the sealing ring (10) and, with the help of tool T34, fit it in the arm.

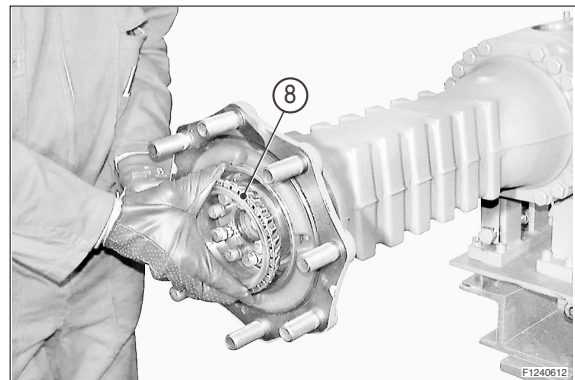
Accurately check direction of assembly.



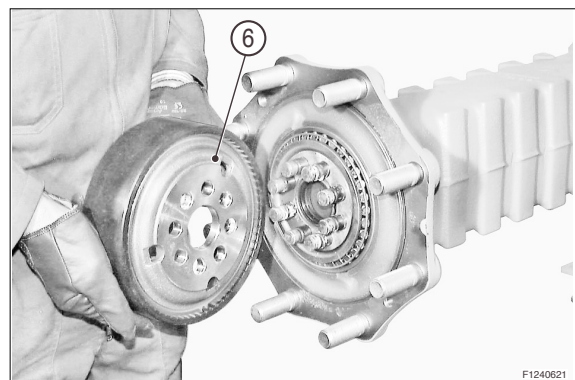
- (13) Lubricate with grease the sealing ring(16) and the hub of the arm(9).
Install the hub(3).



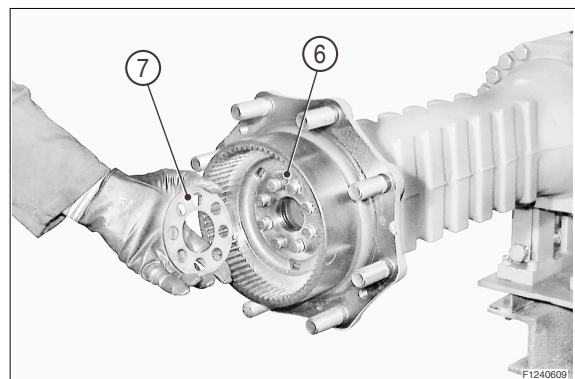
- (14) Install the external bearing(8).
Using a plastic hammer, drive the bearing to the limit stop by lightly hammering around the edge.



- (15) Fit the complete crown flange(6).
In order to fasten the flange(6), use a plastic hammer and alternately hammer on several equidistant points.



- (16) Apply TecnoLube Seal 101 grease to the surface of the safety flange(7) which touches the crown flange(6).
Fit the safety flange (7).

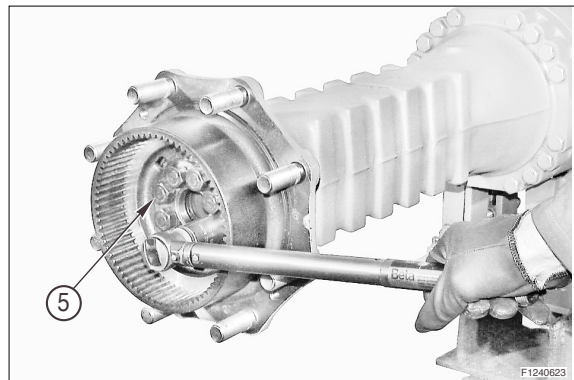


(17) Apply loctite 242 to the studs and fit in the nuts(5).



(18) Cross tighten the nuts(5) in two stages.

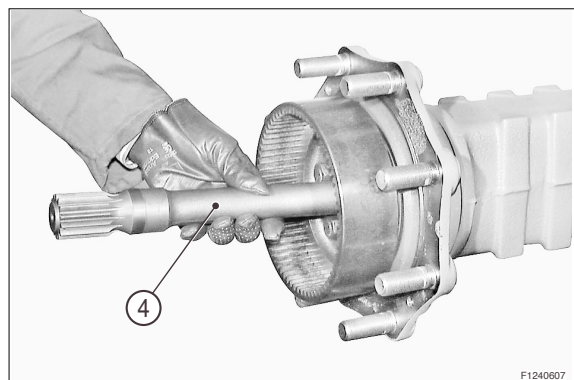
- Tightening torque
- Initial : $13.3\text{kgf} \cdot \text{m}$ ($96.2\text{lbf} \cdot \text{ft}$)
- Final : $27.5 \pm 1.5\text{kgf} \cdot \text{m}$ ($199 \pm 10.8\text{lbf} \cdot \text{ft}$)



(19) Grease snap ring(10) and sealing face of axle-shaft(4).

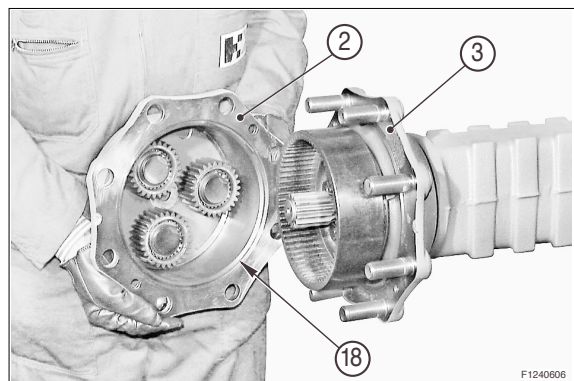
Install the axle shaft(4) making sure it is properly engaged in the braking disks and in the differential unit.

Be very careful not to damage the snap ring(10).

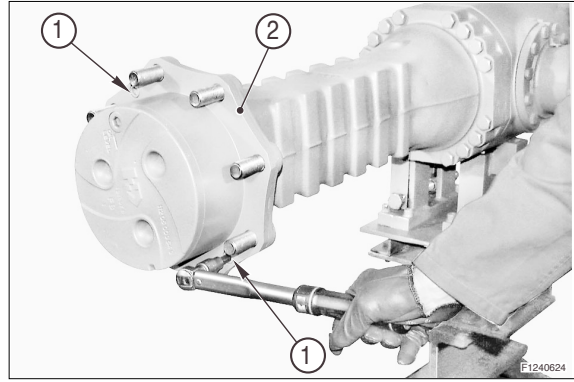


(20) Fit the planetary carrier cover(2) onto the hub(3).

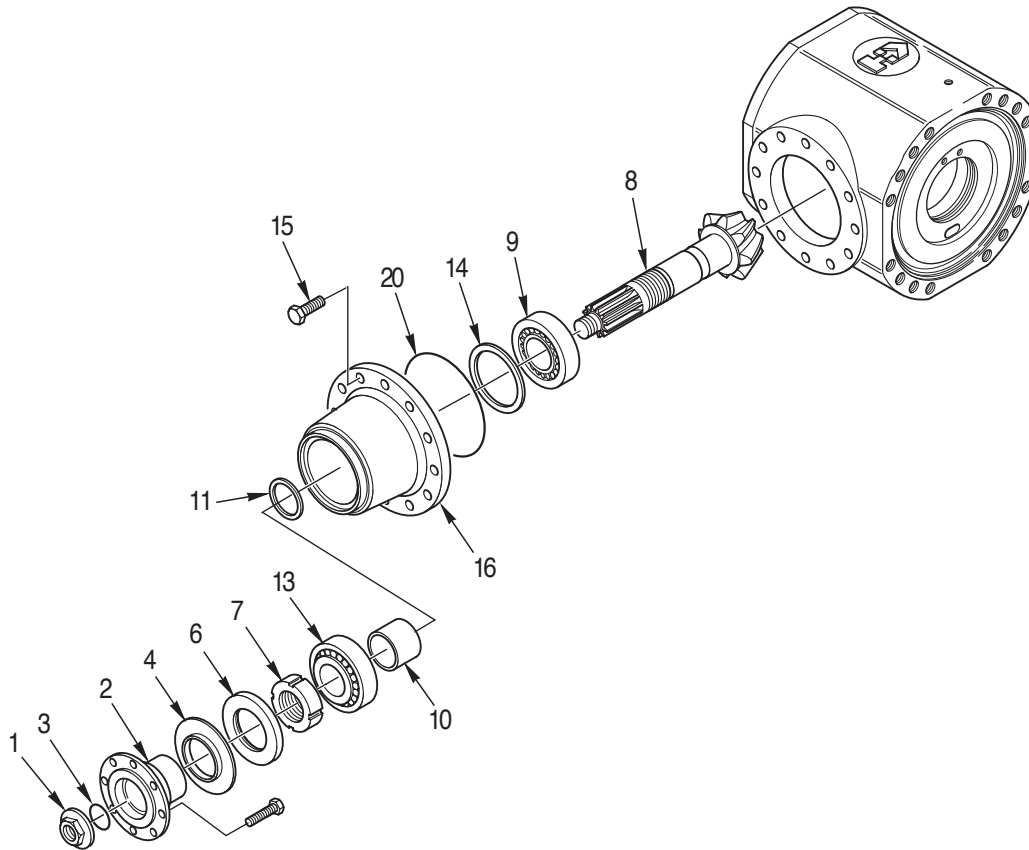
Check that the O-ring(18) is in good condition and in position.



- (21) Lock the planetary carrier cover(2) by tightening the screws(1).
- Tightening torque : $4.6 \pm 0.5 \text{kgf} \cdot \text{m}$
($33.3 \pm 3.6 \text{lb} \cdot \text{ft}$)

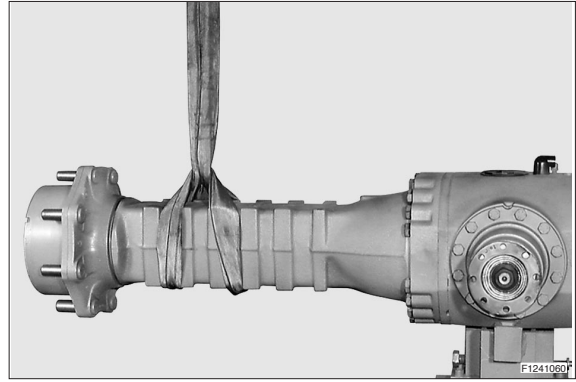


5) REMOVE THE BEVEL PINION

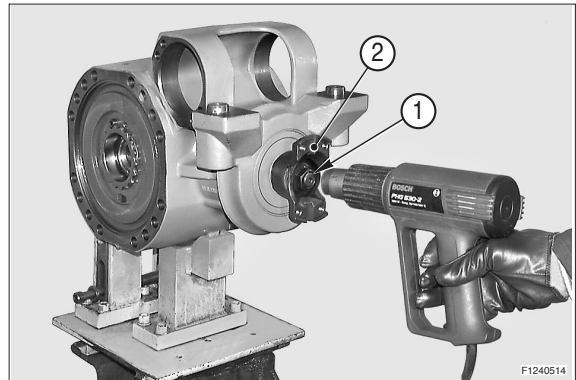


- | | | | | | |
|---|--------------|----|----------------|----|-------------|
| 1 | Nut | 7 | Ring nut | 13 | Bearing |
| 2 | Flange | 8 | Pinion | 14 | Shim washer |
| 3 | O-ring | 9 | Bearing | 15 | Screw |
| 4 | Guard | 10 | Distance piece | 16 | Support |
| 6 | Sealing ring | 11 | Shim | 20 | O-ring |

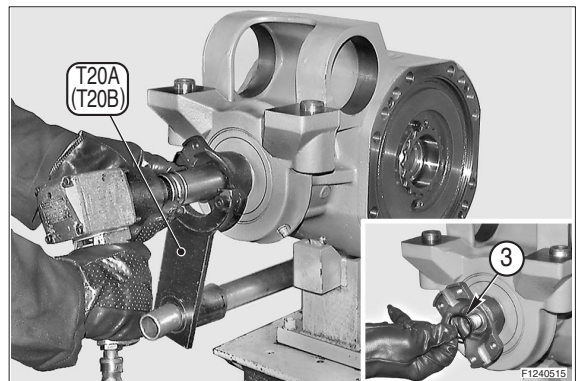
- (1) Remove the differential unit.
Though the photos in this manual refer to a steering and oscillating axle, the operations described apply anyway.



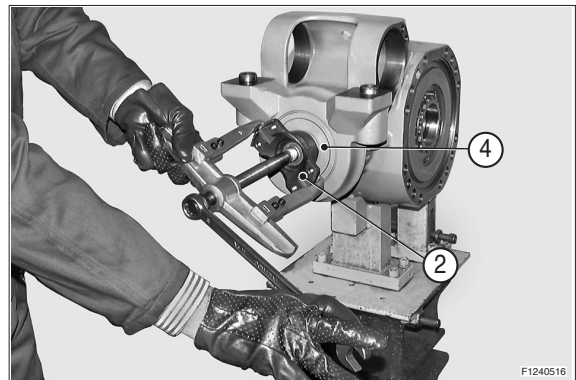
- (2) If disassembly is awkward, heat the check nut(1) of the flange(2) at 80°C.
Heating is meant to unloose the setting of loctite on the nut(1).



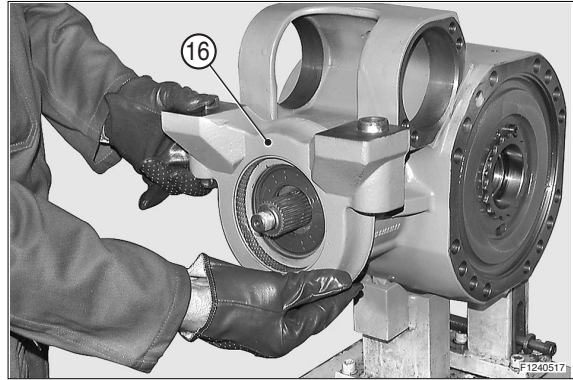
- (3) Position tool T20A(or T20B), so as to avoid pinion rotation.
Unloose and remove the nut(1); Also remove the O-ring(3).



- (4) Remove the flange(2) complete with guard(4) by means of a puller.



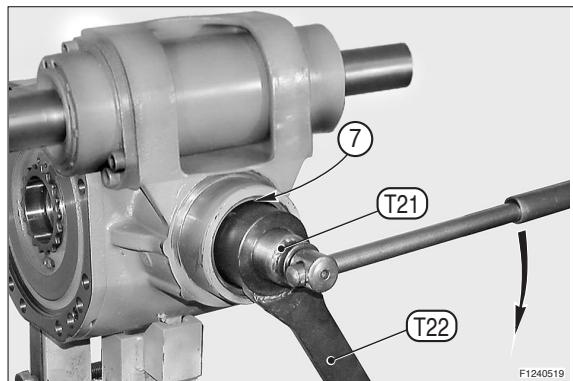
- (5) Remove the support(16).
This operation does not apply to the fixed axle.



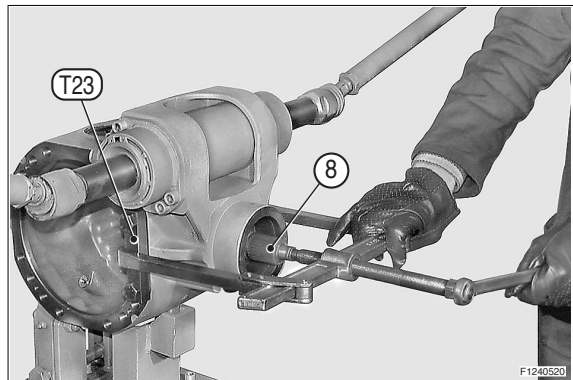
- (6) Remove the sealing ring(6).



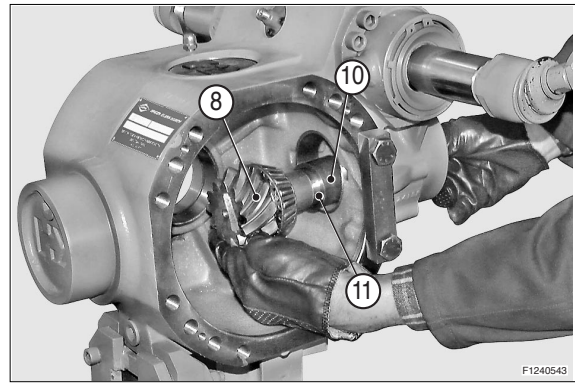
- (7) Position wrench T22 onto the ring nut(7) and apply bar hold T21 to the pinion(8).
Stop wrench T22 and rotate the pinion so as to release and remove the ring nut(7).
If disassembly proves awkward, weld the ring nut at approx. 80°C.



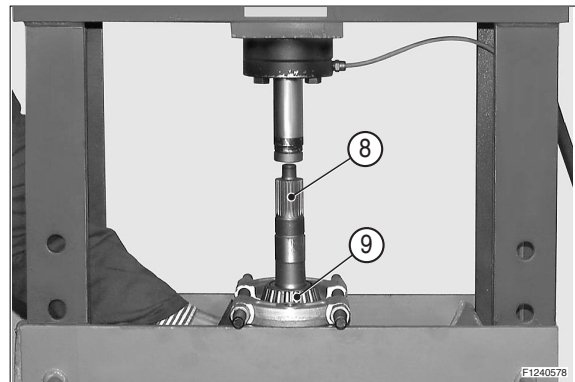
- (8) Apply block T23 and, with the help of a puller, extract the pinion(8) complete with the internal bearing(9), the distance piece (10).
The thrust blocks of the bearings remain in the central body.



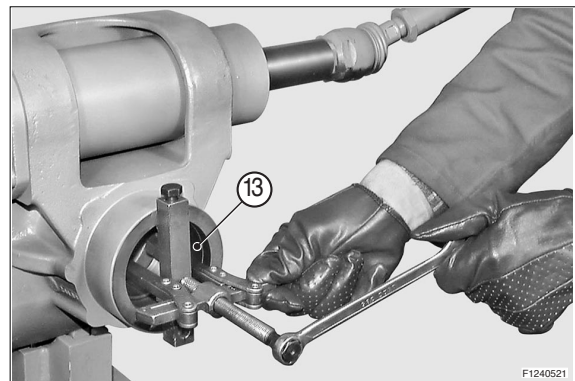
(9) Remove the pinion(8), shims(11) and distance piece(10).



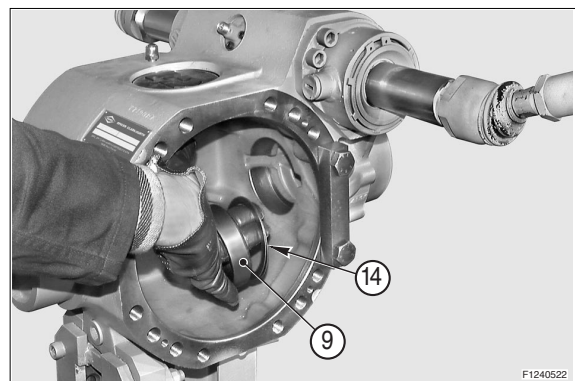
(10) Using a puller and a press, remove the inner bearing(9) from the pinion(8).



(11) Remove the thrust block of the external bearing(13).

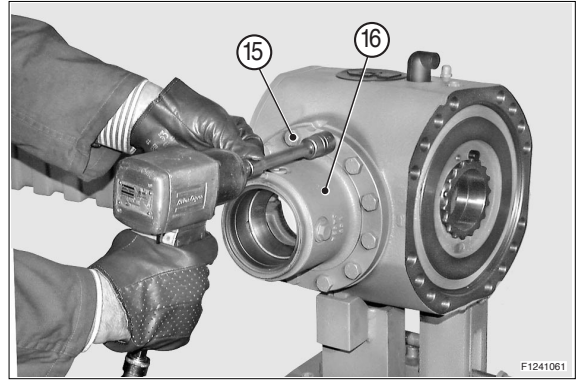


(12) Insert a drift in the appropriate holes and remove the thrust block of the internal bearing(9) as well as the shim washers (14).

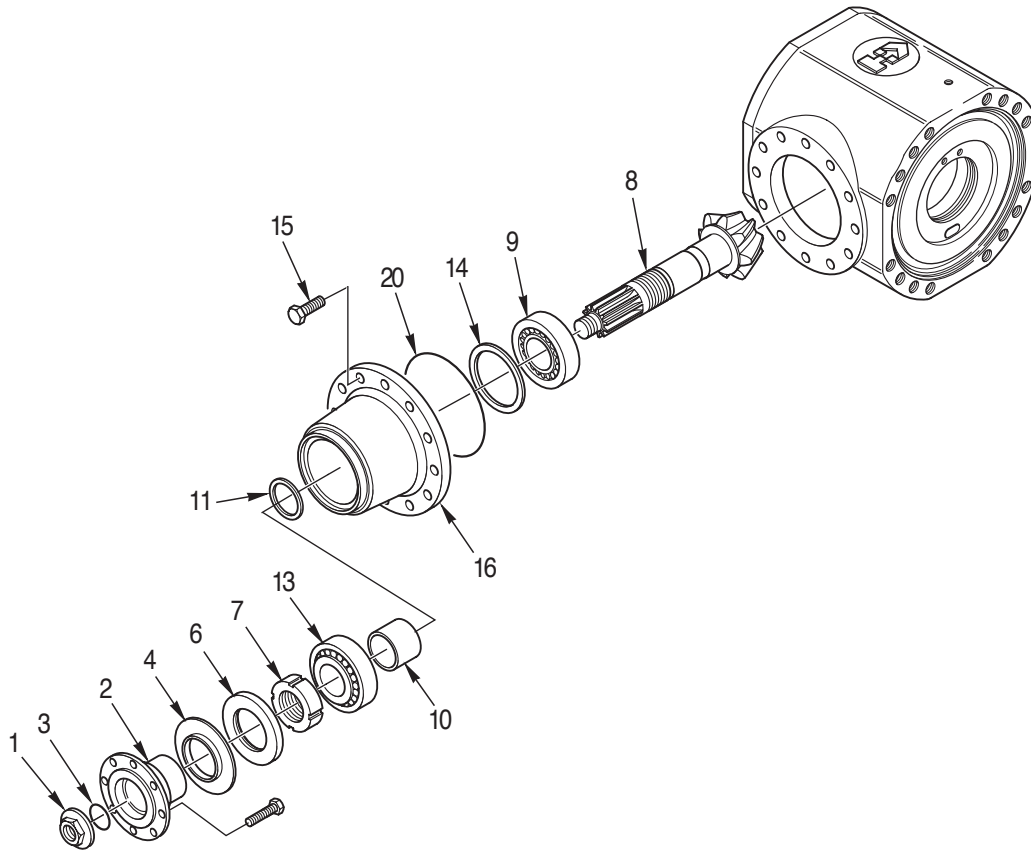


Only if necessary

(13) Unloose and remove the screws(15) locking the support(16); Remove the whole support.



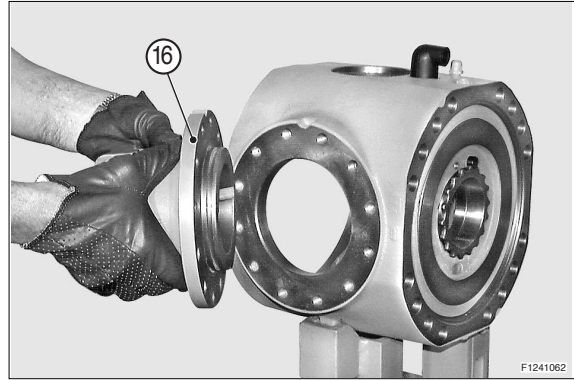
6) INSTALL AND ADJUST THE BEVEL PINION



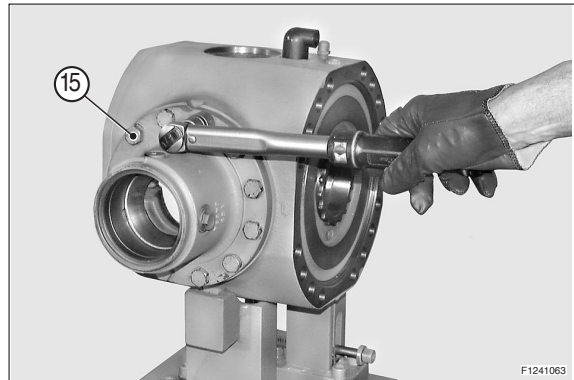
- | | | | | | |
|---|--------------|----|----------------|----|-------------|
| 1 | Nut | 7 | Ring nut | 13 | Bearing |
| 2 | Flange | 8 | Pinion | 14 | Shim washer |
| 3 | O-ring | 9 | Bearing | 15 | Screw |
| 4 | Guard | 10 | Distance piece | 16 | Support |
| 6 | Sealing ring | 11 | Shim | 20 | O-ring |

Only if has been removed

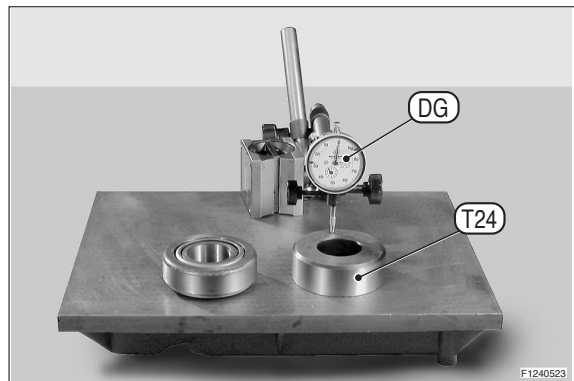
- (1) Fit support(16), including O-ring(20), onto the intermediate body.
The cavity located on the outer diameter must face upwards.
Check and lubricate the O-ring(20).



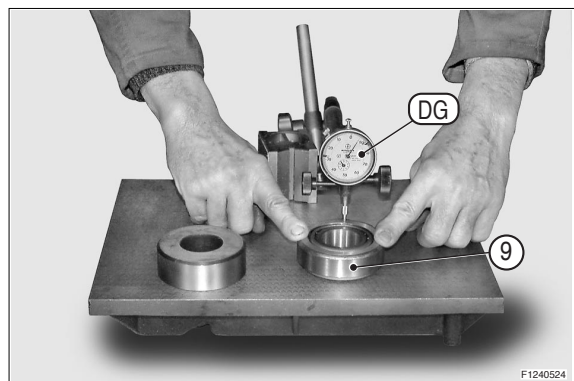
- (2) Fasten support with screws(15) previously coated with loctite 270.
Tighten using the criss-cross method to a tightening torque of $9.7 \pm 0.5 \text{kgf} \cdot \text{m}$ ($70.2 \pm 3.6 \text{lb} \cdot \text{ft}$)



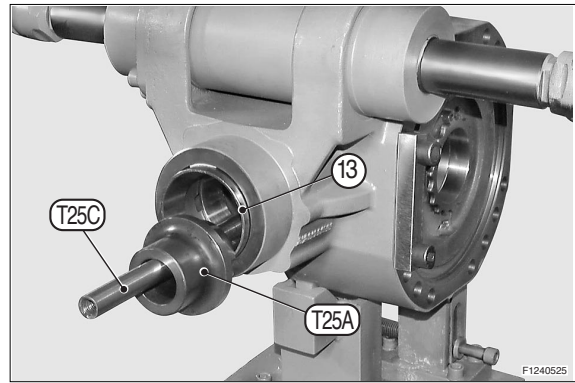
- (3) Using a surface plate, reset a centesimal comparator DG and place it on the measurement ring T24 (With a thickness of 30.2mm).
Preset the comparator to approx. 2mm.



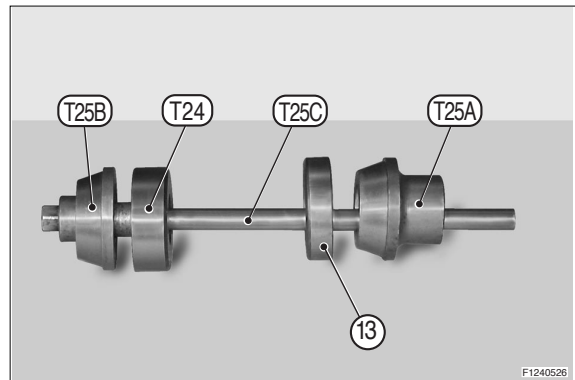
- (4) Bring the internal bearing(9), complete with its thrust block, under the comparator DG.
Determine overall thickness D of the bearing checking the discrepancy between this size and the size of the measurement ring.
Press the thrust block in the centre and take several measurements while rotating the thrust block.



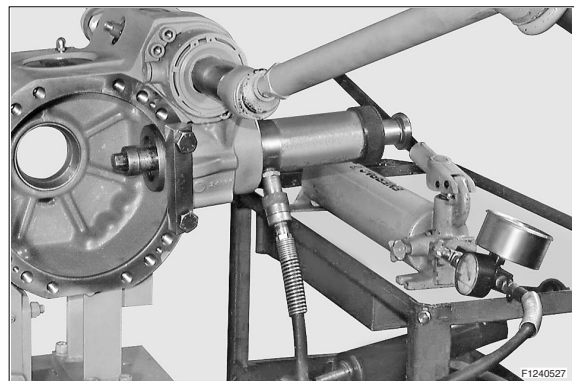
- (5) Partially insert the thrust block of the external bearing(13).



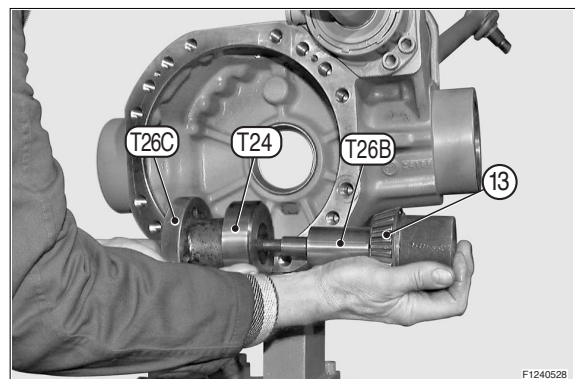
- (6) Install tension rod T25C, measurement ring T24 and front guide tool T25A on the thrust block of the external bearing(13).



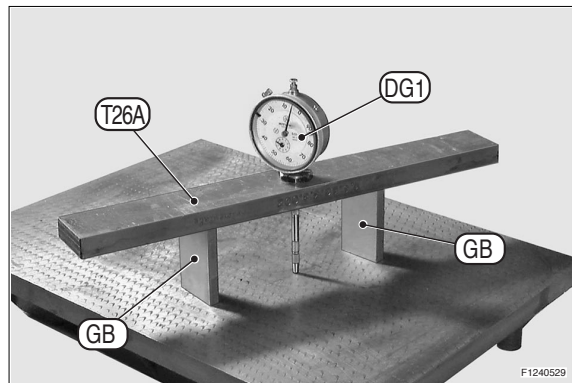
- (7) Connect the tension rod to the press and move the thrust block of the external bearing(13) into its seat.
Disconnect the press and remove the tension rod.
Before starting the next stage, make sure that the thrust block has been completely inserted into its seat.



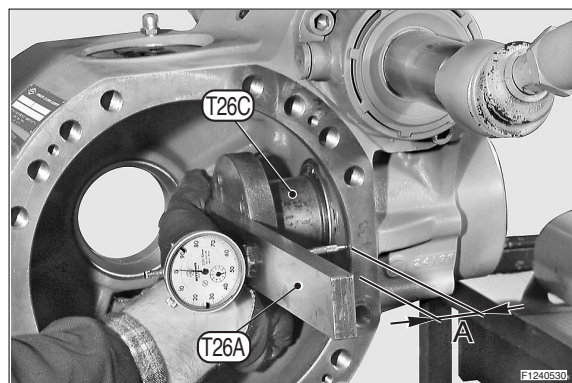
- (8) Insert tool T26B complete with external bearing (13), measurement ring T24 and gauged ring nut T26C.
Manually tighten.



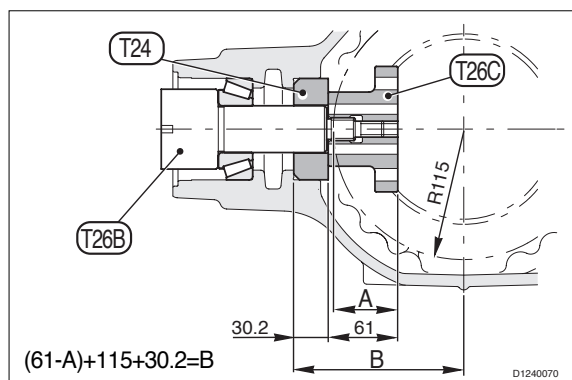
- (9) Fit a centesimal comparator DG1 with long stem into bar T26A; When the bar rests on two size- blocks GB of 57mm, reset the comparator.
Preset the comparator to approx. 2mm and reset.



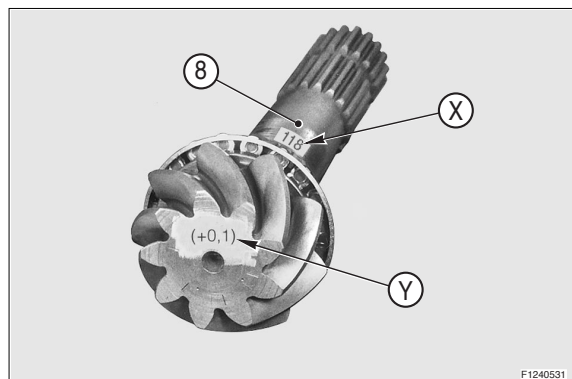
- (10) Lay bar T26A on gauged nut T26C and take the size A at about 57mm corresponding to the maximum diameter of arms centering.



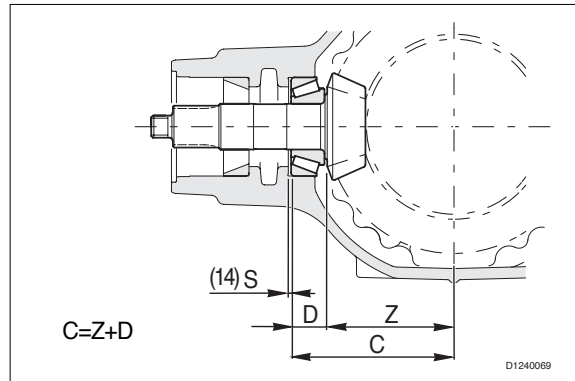
- (11) Calculate size B which will be the first useful value for calculating the size of the shims(14) that are to be inserted under the thrust block of the internal bearing(9).



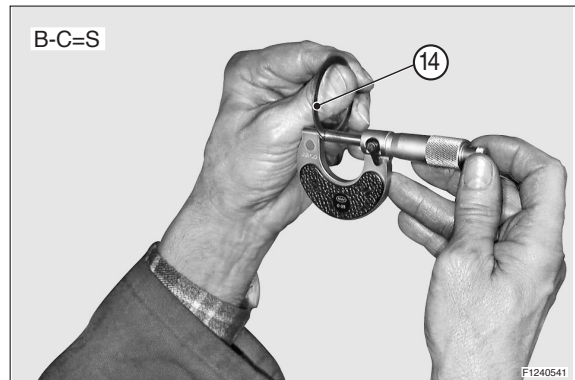
- (12) Check the nominal size(X) marked on the pinion and add or subtract the indicated variation(Y) so as to obtain size Z.
e.g. : $Z = 118 + 0.1 = 118.1$
 $Z = 118 - 0.2 = 117.8$



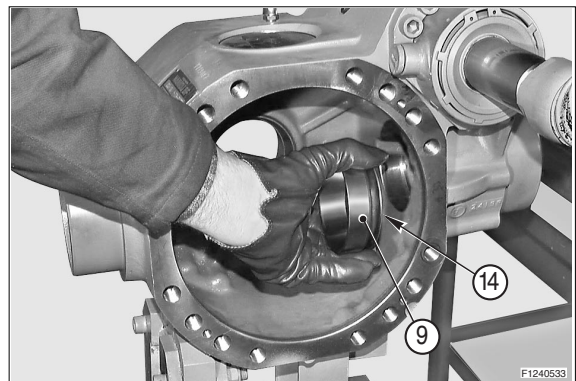
- (13) Calculate size C which represents the second value for calculating the size of the shims S that are to be placed under the thrust block of the internal bearing(9).



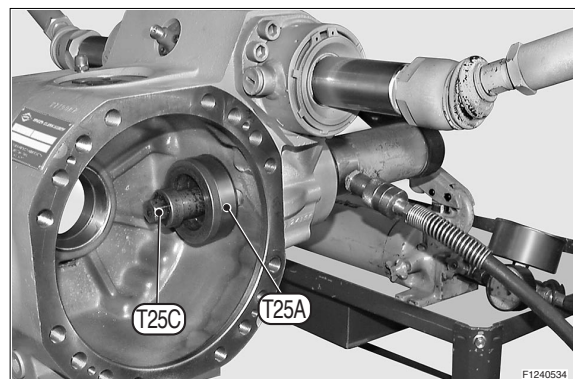
- (14) Calculate the difference between sizes B and C so as to obtain the size S of the shim(14) that will go under the thrust block of the internal bearing(9).



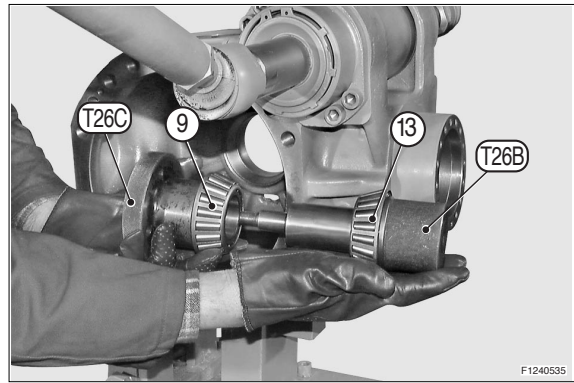
- (15) Insert shim S(14) and the thrust block of the internal bearing(9) in the central body. To hold shim S(14) in position, apply grease.



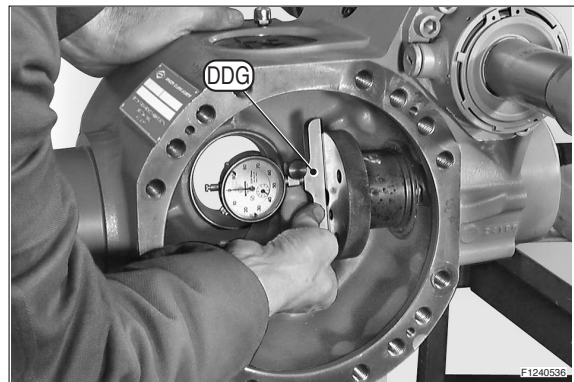
- (16) Position tool T25A and tension rod T25C. Connect the tension rod to the press, fasten the thrust block and then remove the tools. Before going on to the next stage, make sure that the thrust block has been completely inserted.



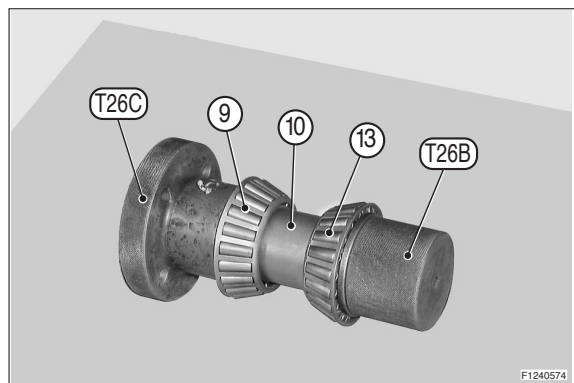
- (17) Position tools T26C and T26B complete with tapered bearings(9) and (13); Manually tighten until a rolling torque has been obtained.



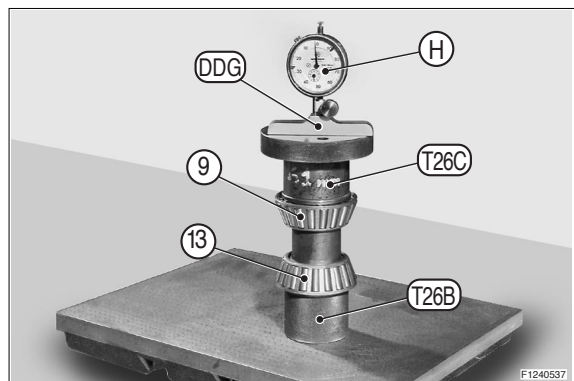
- (18) Insert the stem of a depth comparator DDG in either side hole of tool T26C; Reset the comparator with a presetting of approx. 3mm.



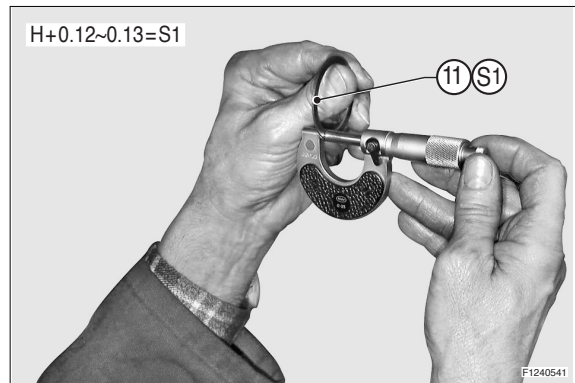
- (19) Remove the comparator and release tools and bearings from the central body. Re-install all and insert the distance piece (10) between bearings(9) and (13); Manually tighten the whole pack.



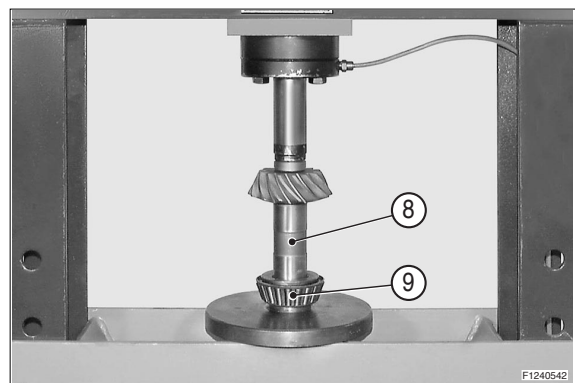
- (20) Insert depth comparator DDG into tool T26B-T26C and measure variation H in relation to the zero setting performed back at pointed.



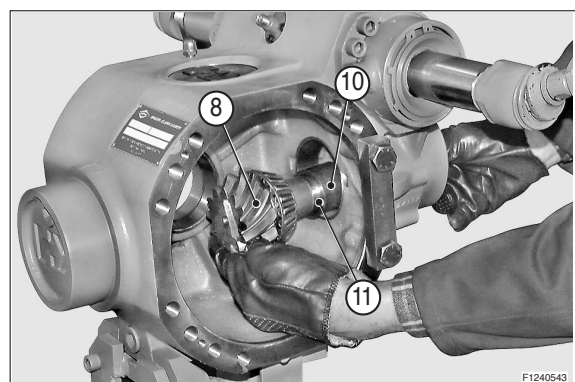
(21) The variation is to be added to a set value of 0.12~0.13mm, so as to obtain the size of shim S1(11) which will be inserted between the external bearing(13) and the distance piece(10) and subsequently, to determine the preload for the bearings.



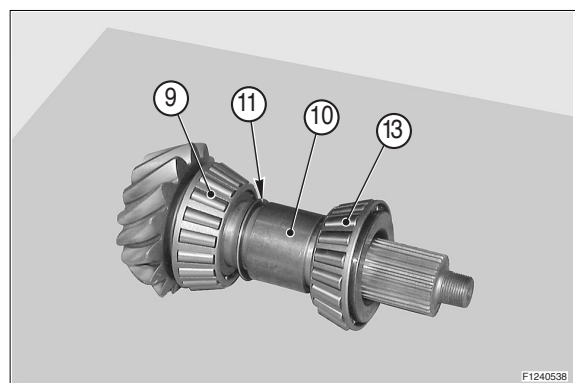
(22) Position the internal bearing(9) and the pinion(8) under a press; Force the bearing onto the pinion.



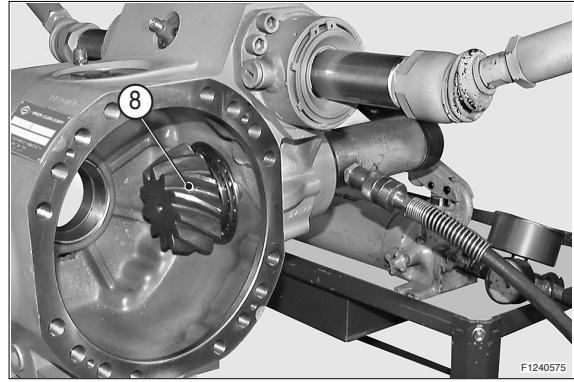
(23) Fit the pinion(8), shim S1(11) and distance piece(10) in the main body(12). The finer shims must be placed in-between the thicker ones



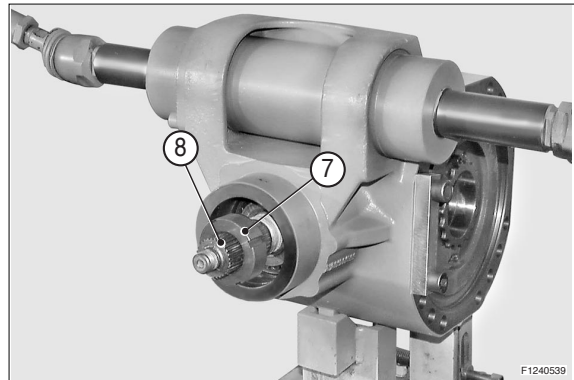
(24) Insert the external bearing(13) in the central body in order to complete the pack arranged as in the figure.



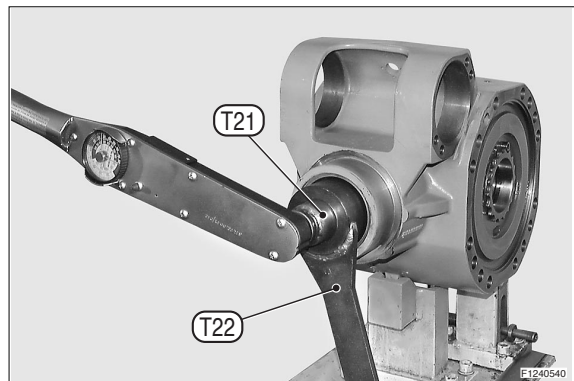
(25) Connect the pinion(8) to the tie rod T28A and T28B; Connect the tie rod T28C(See special tools) to the press and block.



(26) Apply loctite 242 to the thread of the ring nut(7) and screw the nut onto the pinion(8).



(27) Apply special wrench T22 to the ring nut (7) and bar-hold T21 to the pinion(8). Lock the wrench T22 and rotate the pinion using a dynamometric wrench, up to a minimum required tighten torque setting of 51kgf · m(369lbf · ft).



(28) Apply onto the pinion(8) the bar-hold and with the help of a torque meter, check the torque of the pinion(8).

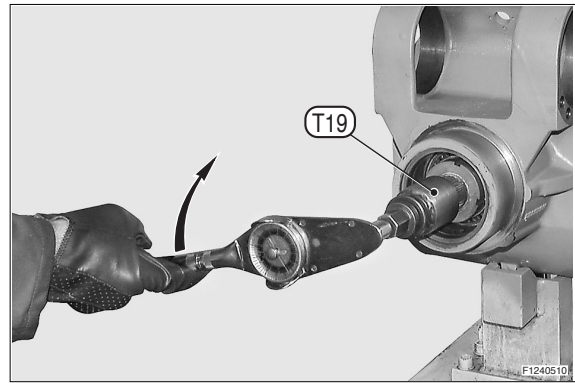
- Tightening torque : $0.15 \pm 0.03\text{kgf} \cdot \text{m}$
($1.1 \pm 0.2\text{lb} \cdot \text{ft}$)

If torque exceeds the maximum value, then the size of shim S1(11) between the bearing(13) and the distance piece(10) needs to be increased.

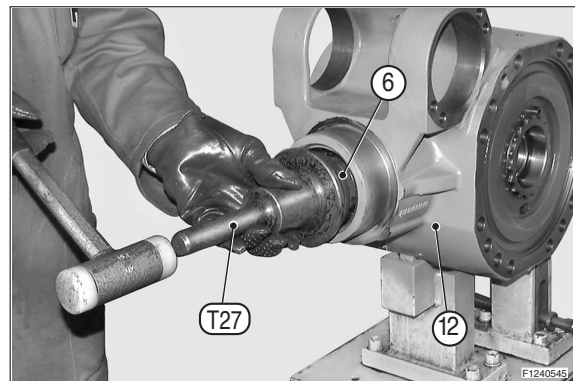
If torque does not reach the set value, increase the torque setting of the ring nut (7) in different stages to obtain a maximum value of $58.1\text{kgf} \cdot \text{m}$ ($420\text{lb} \cdot \text{ft}$).

If torque does not reach the minimum value, then the size of shim S1(11) needs to be reduced.

When calculating the increase or decrease in size of shim S1, bear in mind that a variation of shim(11) of 0.01mm corresponds to a variation of $0.06\text{kgf} \cdot \text{m}$ ($0.43\text{lb} \cdot \text{ft}$) in the torque of the pinion(8).

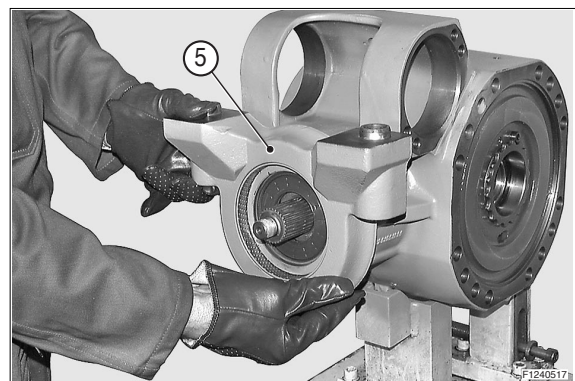


(29) Lubricate the outer surface of the new sealing ring(6) and fit it onto the central body(12) using tool T27.



This operation does not apply to the fixed axle.

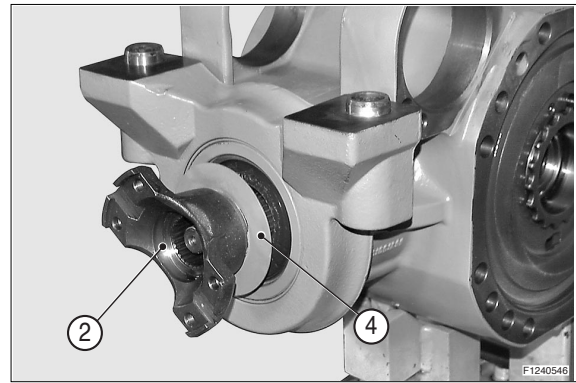
Check that it is properly oriented.



(30) Fit the flange(2) complete with the guard (4) and fasten it.

For keying the flange(2), use a plastic hammer if necessary.

Make sure that the guard(4) is securely fastened onto the flange and that it is not deformed.

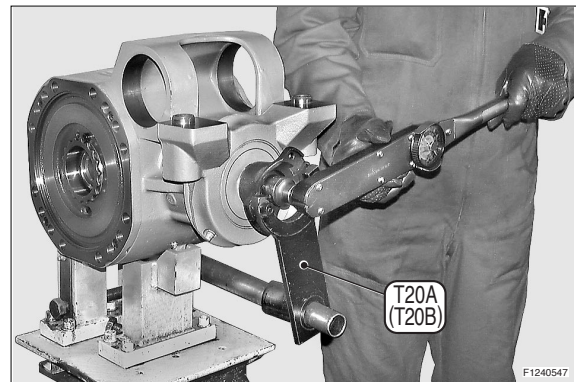


(31) Apply Loctite 242 to the threaded part of the pinion(8).

Position tool T20A(or T20B) and fasten it in order to avoid rotation.

Insert O-ring(3) the nut(1) and tighten it using a dynamometric wrench.

- Tightening torque : $30.1 \pm 1.5 \text{kgf} \cdot \text{m}$
($218 \pm 10.8 \text{lb} \cdot \text{ft}$)



(32) Remove blocks T23(Used for extracting the pinion) and re-install the arms.

For details, see Checking wear and replacing the braking disks.

