

Document Title: Track unit, replacing	Function Group:	Information Type: Service Information	Date: 2014/4/5 0
Profile: CEX, EC55C [GB]			

Track unit, replacing

Op nbr 431-127

1. Park the machine in the service position F, see [091 Service positions](#).
2. • When the engine is running, the hydraulic lines are under high pressure. Stop the engine, and before disconnecting the hoses remove all residual pressure inside the hydraulic line by operating the control lever smoothly for 3 ~ 4 times with ignition switch at "ON" position.

NOTE!

After disconnecting the hoses, install a plugs and caps to prevent oil leakage and contamination.

3. Remove the track shoes over the master pin and remove the pin to split the track chain. Insert a bar into the track link to guide the track assembly. Rotate the track backward to remove the track chain from the drive sprocket. See [7753 Track chain assembly, removing](#) to remove the master pin and the track chain.
4. Using boom down operation raise the track frame, lift sprocket (4) and insert block (3) between track frame (1) and link (2).

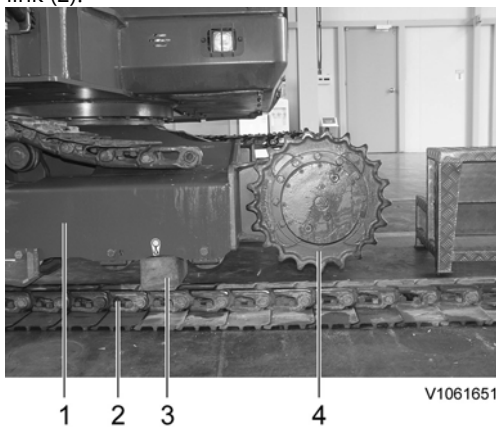


Figure 1
Removal, sprocket

1. Track frame
 2. Track link
 3. Wood block
 4. Sprocket
5. Remove screws (2) and sprocket (1) carefully.

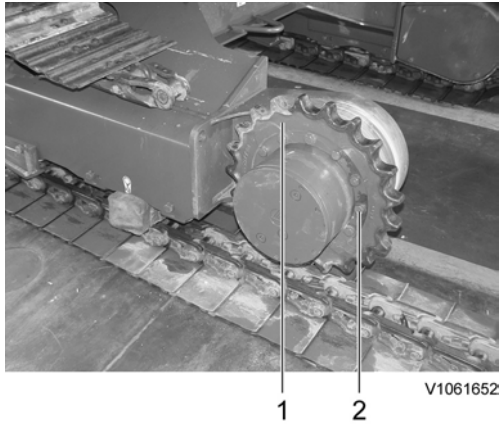


Figure 2
Removal, sprocket

1. Sprocket
2. Screws

6. Remove screws (1) and motor cover (2).

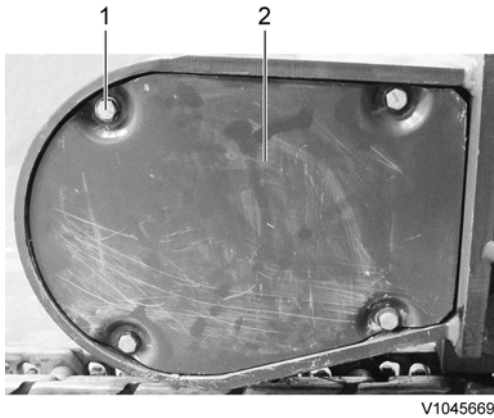


Figure 3
Removal, motor cover

1. Screws
2. Motor cover

7. Hold the track unit with hoist (1).

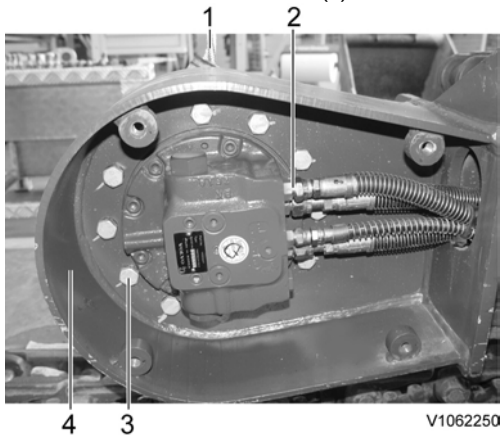
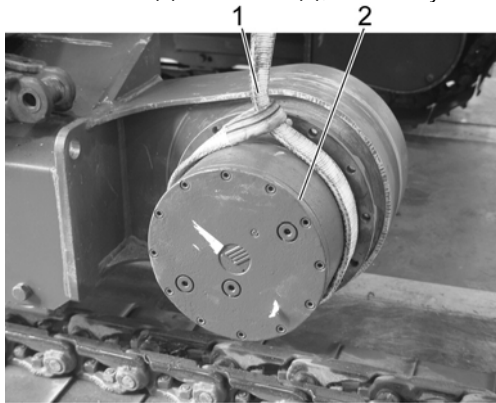


Figure 4
Removal, track unit

1. Hoist

2. Hoses and fittings
 3. Screws
 4. Track frame
8. Remove all hoses and fittings (2), and then install caps and plugs.
 9. Remove mounting screws (3) of the track unit from track frame (4).
 10. Lift track unit (2) with hoist (1), and safely move it to a workbench.



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Figure 5
Removal, track unit

1. Hoist
 2. Track unit
11. Install a new track unit in reverse order of the removal procedure.
NOTE!
Assembling the track unit and sprocket, apply loctite #277 onto the screw threads.
 12. Lift the track chain onto the drive sprocket, insert the bar into the track link to guide the track assembly. Rotate the track forward until the master pin link is at the idler. Install the master pin and the track shoes.
See [7753 Track chain assembly, installing](#) to install the master pin and the track chain.

Document Title: Track gearbox, replacing cover	Function Group:	Information Type: Service Information	Date: 2014/4/5 0
Profile: CEX, EC55C [GB]			

Track gearbox, replacing cover

Op nbr 431-117

1. Park the machine in the service position F, see [091 Service position 1](#).
Rotate the gearbox until the drain port and fill plug are on the vertical axis.
2. Remove the 2 plugs (oil filling port and oil drain port) on the cover and drain the oil into a suitable container.

NOTE!

Oil capacity: See [4311 Track gearbox specifications](#).

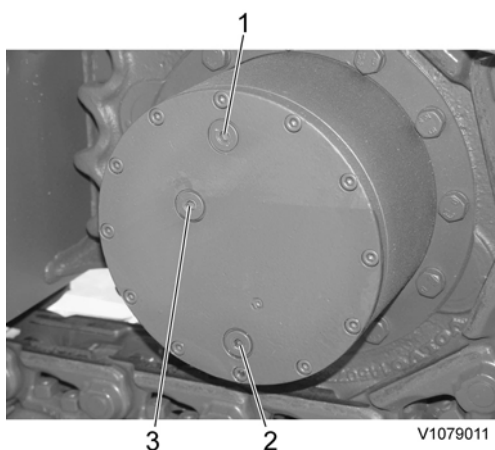


Figure 1
Removal, plugs

1. Oil filling port
 2. Oil drain port
 3. Oil level check port
3. Remove the screws and cover.

NOTE!

Be careful falling cover.

Thoroughly clean the mounting surface.



The parts are heavy. Take appropriate safety precautions.

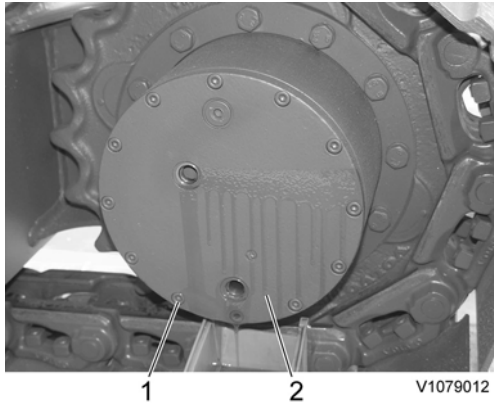


Figure 2
Removal, screws

1. Screw
2. Cover

4. Install the new gearbox cover to the track gearbox.

NOTE!

Do not reuse removed seals. When reassembling, replace the with a new one.

Coat loctite (#277 or 609) on screws.

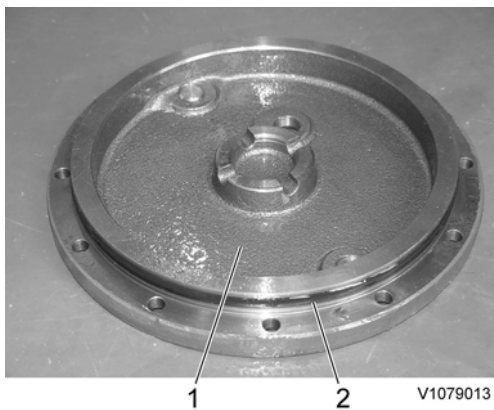


Figure 3
Installation, new cover

1. Track gearbox cover
2. Seal

5. Install the drain plug.

Fill the oil (See [4311 Track gearbox. specifications](#)) through the filling port.

NOTE!

If the oil is about to overflow from the hole, the level is correct.

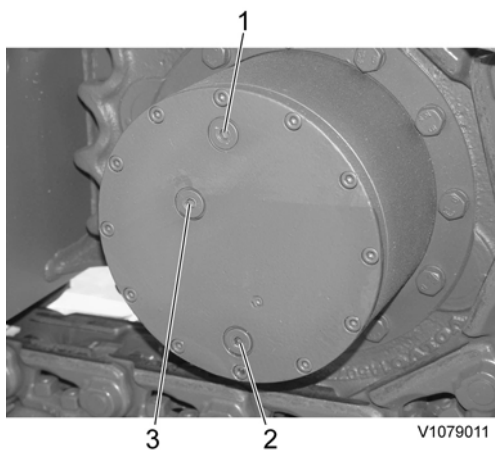


Figure 4
Filling, oil

1. Oil filling port
2. Oil drain plug
3. Oil level check port

6. Install the filling plug and tighten. See [4311 Track gearbox, specifications](#).

Document Title: Track gearbox, disassembly	Function Group:	Information Type: Service Information	Date: 2014/4/5 0
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Track gearbox, disassembly

General tools

General tools

No.	Description	Size	Quantity
1	Socket wrench	M10 (8 mm)	1
2	Hexagon L wrench	PT 3/8 (8 mm)	1
3	Torque wrench	400 ~ 1800 kgf·cm	1
4	Snap ring pliers	φ 32	1
5	Eye bolt	PT 1/2 M10 M12	1
6	Press	1 ton	1
7	Plastic hammer	Approximately L = 300 ~ 500 mm	1
8	Flat screwdriver	Approximately L = 200 mm	1
9	Depth gauge (Vernier caliper)	Range approximately 300 mm	1

Special tools

Special tools

No.	Description	Part number	Quantity
1	Bearing shim adjust fixture	See the diagram below	1
2	Track M. Reduction Ring_Nut Jig	8933-00900	1

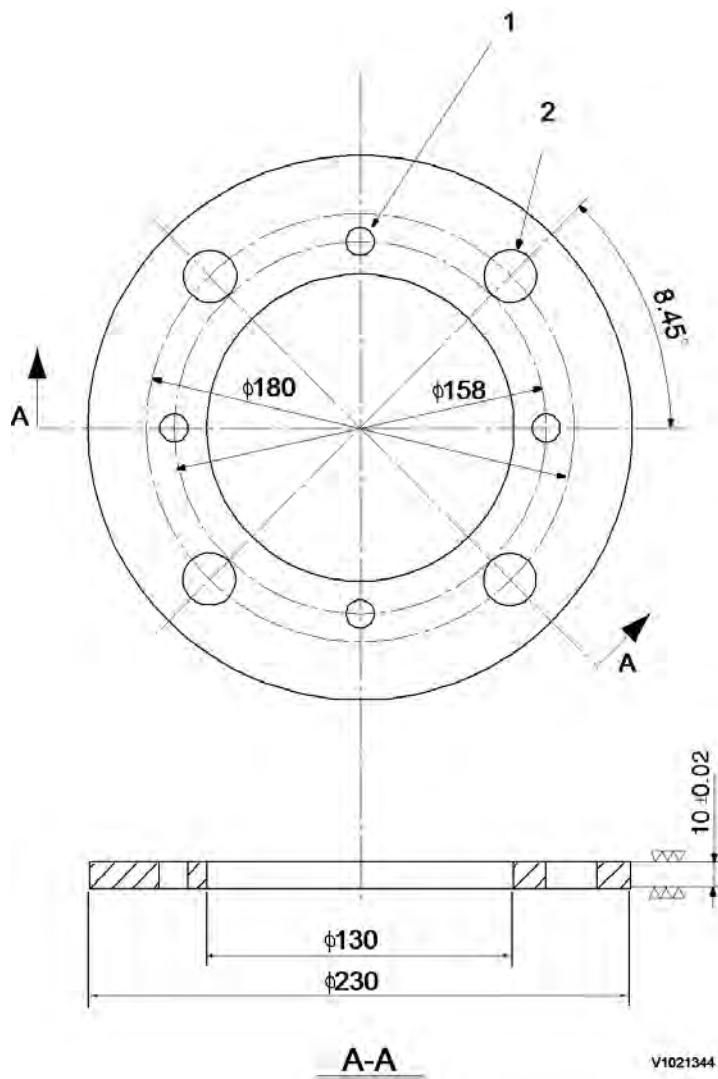


Figure 1
Shim thickness measuring tool

1. 4 – $\phi 10$ Holes
2. 4 – $\phi 22$ Holes; Shim thickness measuring position

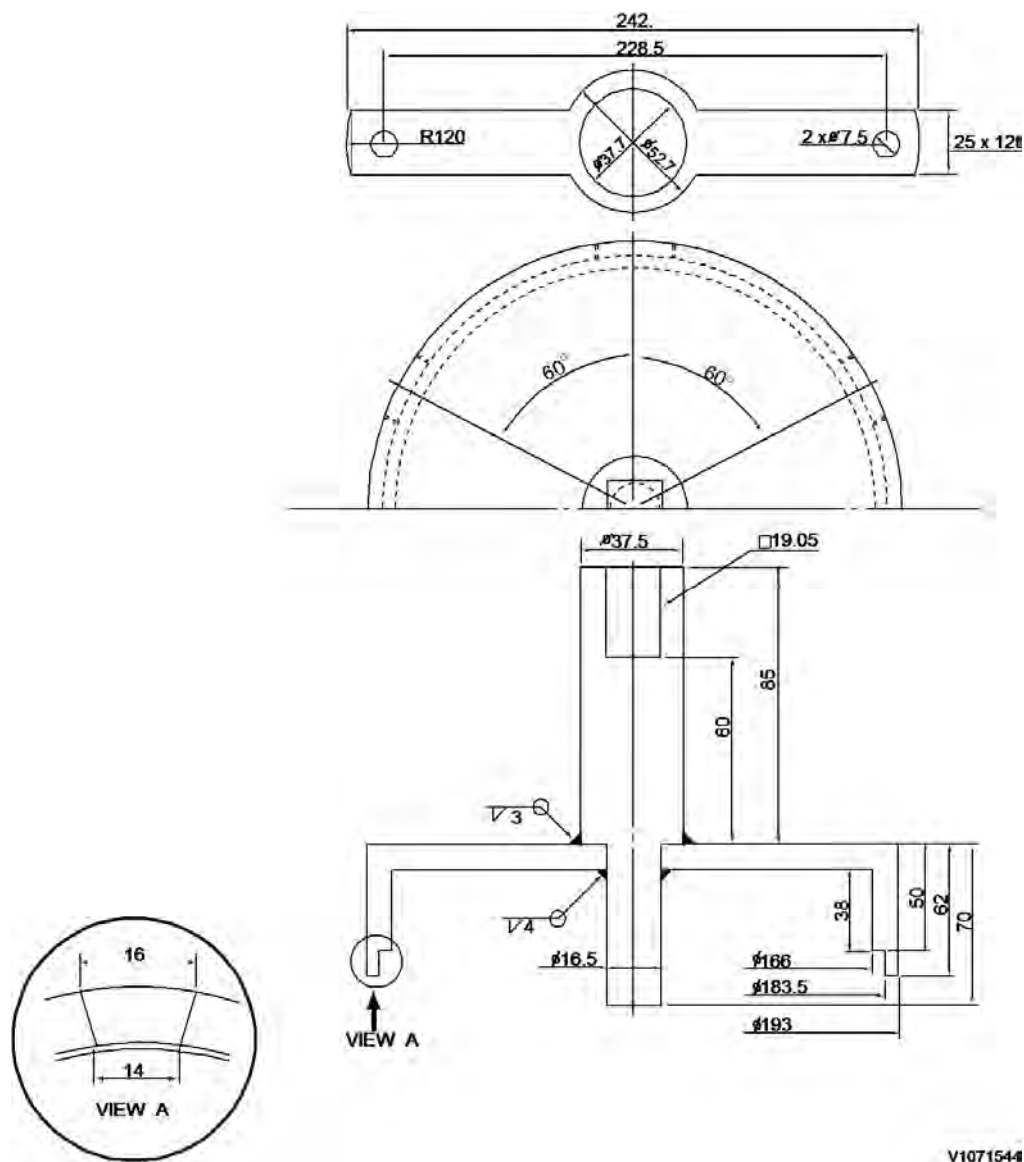


Figure 2
Track M. Reduction Ring_Nut Jig

Tightening torque, unit: kgf-m (lbf-ft)

Part No.	Description	Nominal	Hexagon flat width (mm)	Tighten torque
103	Nut ring	M165 × P2	–	18 (130)
104	Plug	PT 3/8	8	3.5 (43)
110	Screw	M 6	5	0.8 (6)
124	Screw	M 6	5	3 (22)

Precautions

- Thoroughly clean the gearbox assembly prior to disassembly.
- Select a clean work area.
- Match mark attached components to indicate proper positioning during reassembling.
- Take care not to mix parts of sub assemblies i.e. planetary bearings, gears and thrust washers.
- Thoroughly clean all parts and the inside of the casings.
- Inspect and analyze all failures.
 - Determine the root cause!

Disassembly procedure

1. Place the oil fill port and the oil drain port on the vertical axis.
Remove plug (104) and drain the gear oil.
Loosen screw (124) and remove cover (123).

NOTE!

Screw eye bolt into the hole for plug (104) and remove cover (123) with hook. Otherwise remove by using steel rod.

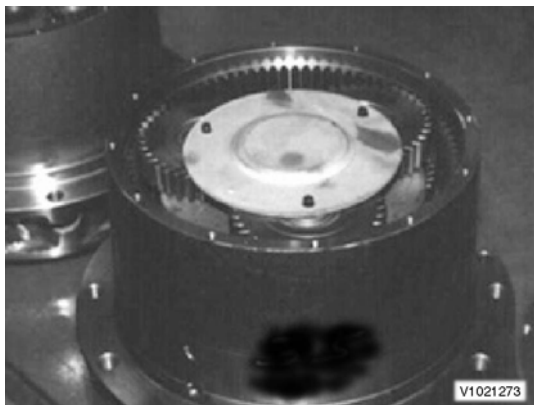


Figure 3
Drain the oil

2. Remove thrust plate (R) (122), driver gear (121).



Figure 4
Gear, removal

3. Remove planetary gear (R) (117), needle bearing (118), inner race (119) and holder (116).



Figure 5
Bearing, removal

4. Remove sun gear (114), screw (110), thrust plate (F) (113) and needle bearing (111).

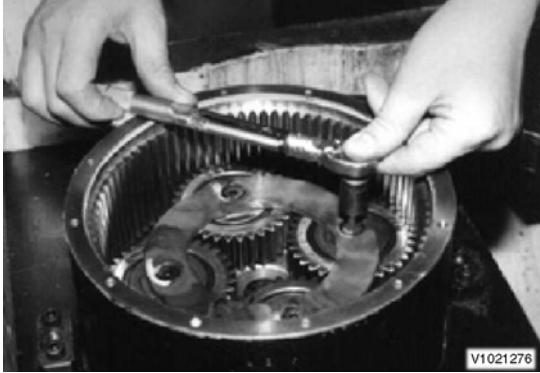


Figure 6
Bearing, removal

5. Remove collar (112), thrust washer (109).



Figure 7
Collar, removal

6. Remove plug (104).

NOTE!

Insert metal plate or jig between holder flange (101) and housing (105) and assemble 3 capscrews (M14 × 2.0) into housing direction equally.

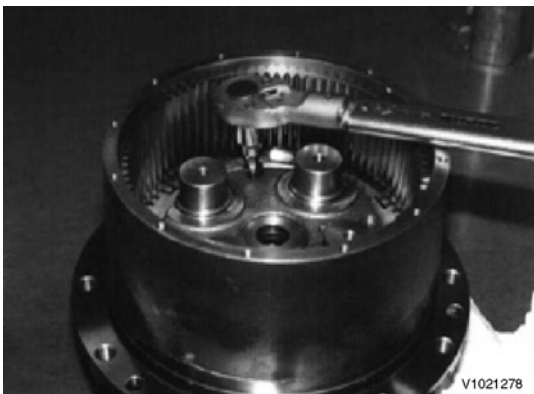


Figure 8
Plug, removal

7. Remove nut ring (103).



Figure 9
Ring, removal

8. Remove holder flange (101) from housing (105).



Figure 10
Flange, removal

9. Remove plug (104), 104 steel balls (106) nut ring (103).

NOTE!

Remove only if necessary.

Remove steel 104 balls (106) with tapping lightly a hammer on housing (105).

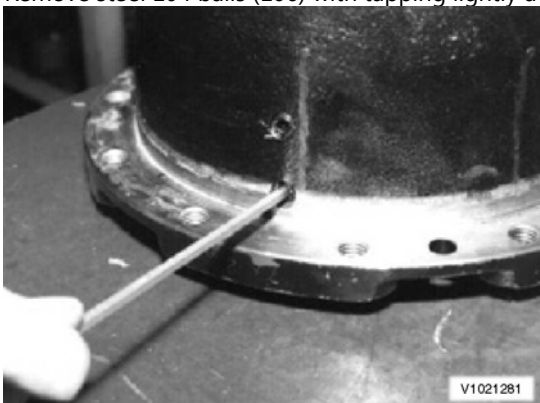


Figure 11
Plug, removal

10. Remove seal (102) and angular bearing (125).

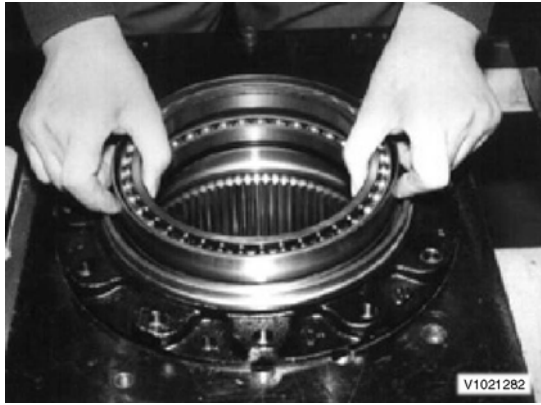


Figure 12
Seal, removal

11. Remove seal (102) by using two screw drivers.

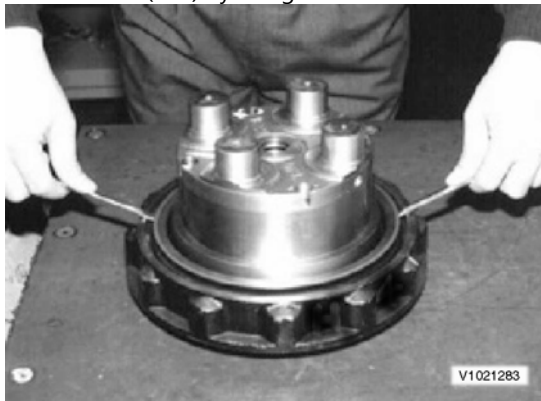


Figure 13
Seal, removal

12. Remove shaft (2).
Remove snap ring (76).
Remove seal (32).

NOTE!

When removing shaft (2), put a rod to the hole of holder flange and tap lightly with a plastic hammer.

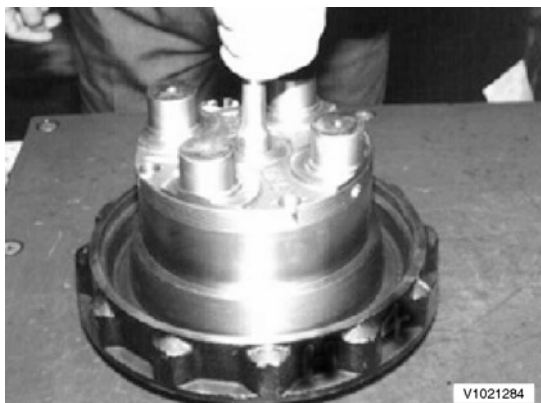


Figure 14
Shaft, removal

13. Remove roller bearing (49) from shaft (2).

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Track gearbox, assembly

Preparation

- Clean all parts with cleaning solvent and dry with compressed air.
- Rework damaged parts and before assembling, prepare all replacement parts.
- Coat the sliding parts, bearings and gears with clean gear oil.
- Coat the motor assembly sliding parts and bearings with clean hydraulic oil.
- Replace the O-rings, seal and seals.
- Use a torque wrench to tighten the screws and plugs to the specified torque.

Assembly procedure

Op nbr 00000

1. Press-fit seal into holder flange (101).

NOTE!

Apply a thin coat of grease ((NLG1#2) to the seal.



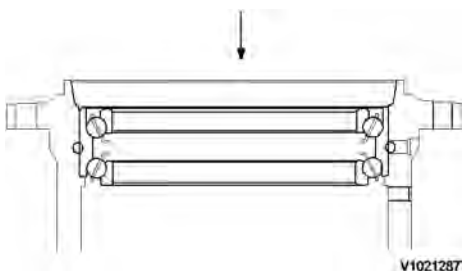
Figure 1

Flange, press fit

2. Press-fit angular bearing (125) into housing (105).

NOTE!

Notice the inserting direction.



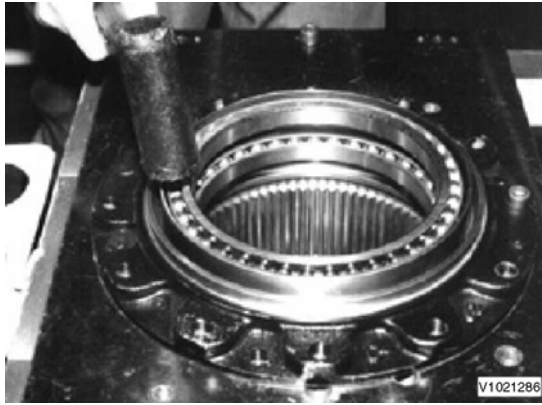


Figure 2
Angular bearing, assembly

3. Insert steel balls (106).



Figure 3
Steel ball, assembly

4. Wind seal tape on plug (104).

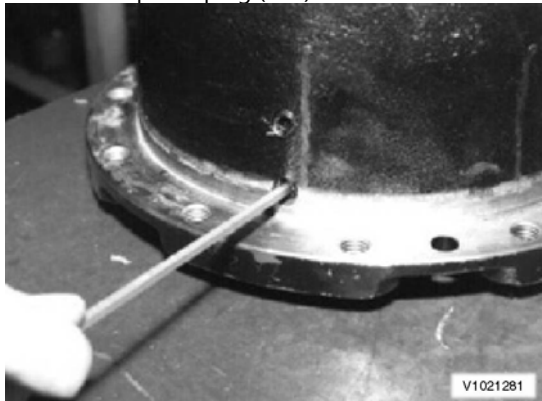


Figure 4
Sealing

5. Assemble seal (102) into housing (105).

NOTE!

Apply a thin coat of grease (NLG1#2) to the seal.

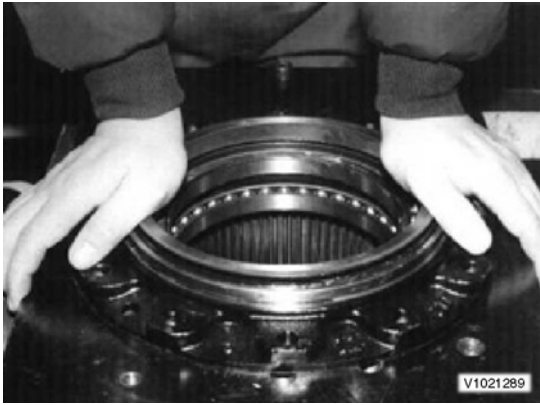


Figure 5
Seal, assembly

6. Assemble holder flange (101) into housing (105).



Figure 6
Flange, assembly

7. Assemble nut ring (103), plug (104).

NOTE!

Do not wind seal tape on plug (104).

NOTE!

Do punching work on 2 position to prevent plug (104) from loosening.

NOTE!

Tightening torque: 350 kgf·cm (303 lbf·in)



Figure 7
Nut ring, assembly

8. Assemble thrust washer (109), collar (112).

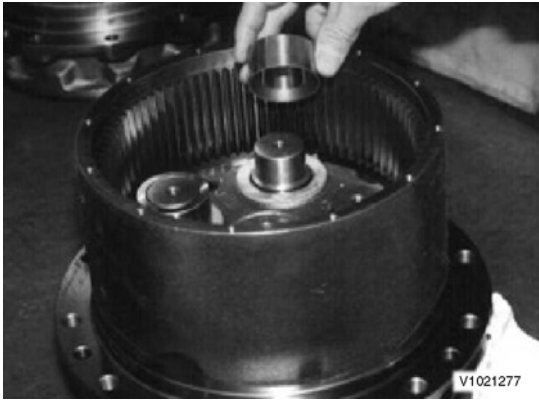


Figure 8
Washer, assembly

9. Assemble needle bearing (111), thrust plate (F) (113) and screw (110).

NOTE!

Screw tightening torque: 83 kgf·cm (72 lbf·in).

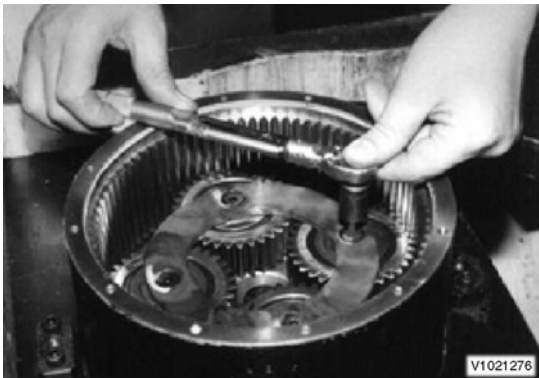


Figure 9
Bearing, assembly

10. After assembling sun gear (114), holder assembly, Assemble needle bearing (118), planetary gear (R) (117).

NOTE!

Holder assembly: assemble spring pin (120) and inner race (119) into holder (116).



Figure 10
Gear, assembly

11. Assemble driver gear (121) and thrust plate (R) (122).

NOTE!

Thickness between thrust plate (R) (122) and cover: 0.3 ± 0.1 mm.

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