

# PARTS & SERVICE NEWS

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**SUBJECT:** IMPROVED DIFF. CARRIER FOR THE REAR AXLE

**PURPOSE:** To inform field personnel.

**APPLICATION:** WA1200-3: 50001-50030

**FAILURE CODE:** 2B21HA

**DESCRIPTION:**

**Introduction**

This Service News will introduce the improved rear axle diff. carrier with increased durability and the nuts on diff. side with wear resistance for use on WA1200-3.

**List of Parts**

Part No.	Part Name	Qty	Remarks
42C-23-10005 (42C-23-10003)	Axle Assy	1	
42C-23-11005 (42C-23-11003)	Diff(r) Assy	1	
42C-22-11104 (42C-22-11102)	Carrier & Cap Assy	1	
585-22-21140 (568-22-11611)	Nut	2	
561-22-61960 (568-22-11960)	Bearing	2	
561-22-61150 (427-22-11150)	Lock	2	
42C-23-13530 (42C-23-13510)	Spacer	7	
42C-23-13540 (42C-23-13520)	Tee	1	
01011-63010 (01010-63085)	Bolt	16	

1. Improvements

(1) Durability of the diff. carrier --- Has been improved by increase of the material thickness and by increase of the corner radius.

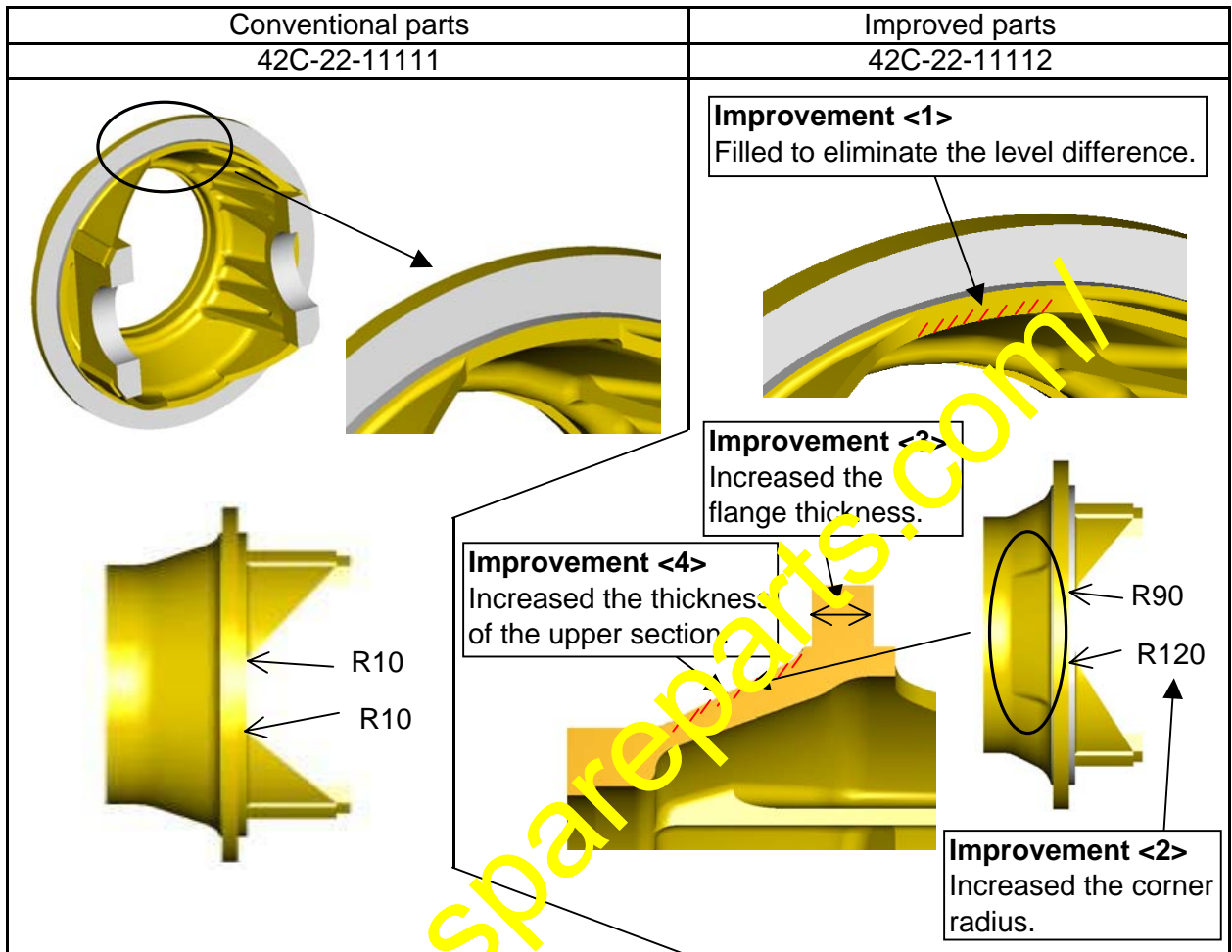


Fig. 1

(2) Wear resistant diff. side nut

- <1> Induction hardening process has been added to the contact surface to the bearing of the nut.
- <2> The fitness between the bearing and the carrier & cap ass'y bore has been increased.

Part name	Conventional part number	Improved part number	Details of the modification	Remarks
Carrier & cap ass'y	42C-22-11103	42C-22-11104	<ul style="list-style-type: none"> <li>· The bore diameter of the bearing has been changed.</li> <li>· The depth of the female thread of the nut has been changed.</li> </ul>	Identification mark "A"
Nut	568-22-11611	585-22-21140	<ul style="list-style-type: none"> <li>· Induction hardening process has been added to the contact surface of the bearing.</li> </ul>	Lock plate groove 16 to 24
Bearing	568-22-11960	561-22-61960	<ul style="list-style-type: none"> <li>· The outer diameter has been changed.</li> </ul>	
Lock plate	427-22-11150	561-22-61150	<ul style="list-style-type: none"> <li>· The shape has been changed by modification of the nut groove.</li> </ul>	

## 2. Modification procedure to accommodate the improvements

### (1) Removal of the rear axle

Carry out the removal work after releasing the brake oil pressure.

- <1> Park the vehicle on a horizontal place, set the safety bar to the frame and apply chocks to the tires.
- <2> Jack up the vehicle, set blocks under the rear frame and support the lower section of the counterweight with stands.
- <3> Temporarily hoist the LH and RH wheels, remove the hub nuts and hoist to remove the tires.  
Wheel: 9,150 kg  
Tightening torque: 1,470 - 1,810 Nm {150 -185 kgm}
- <4> Separate the rear drive shaft from the rear axle.  
Rear drive shaft: 215 kg
- <5> Remove the LH and RH final drives, remove the 3 pcs. of the drain plugs located underside the axle and drain the oil.  
Oil quantity: 670 L
- <6> Disconnect the hose connecting the brake pedal and the slack adjuster at the slack adjuster side.
- <7> Disconnect the brake cooling piping.
- <8> Disconnect the grease tube from the front side and rear side axle supports.
- <9> Fix the axle support and the rear axle using a chain, etc.
- <10> Remove the support mounting bolt.  
Tightening torque: 4,510 - 5,490 Nm {460 - 560 kgm}
- <11> Placing steel sheets on the ground, hoist the rear axle to bring it down,  
Rear axle: 16,300 kg
- <12> Pull out the rear axle sideways from the underside of the vehicle body.
- <13> Remove the front side support from the rear axle. (Be careful not to damage the packing.)  
Front support: 630 kg

### (2) Disassembly of the diff. carrier ass'y

- <1> Referring to the chapter "Disassembly and Assembly" in the Shop Manual, remove and disassemble the diff. carrier ass'y.  
However, it is not necessary to disassemble the diff. ass'y (28) and the cage ass'y (13).

### (3) Improvement work

- <1> Removing the inner races of the bearings (27) located on both sides of the diff. ass'y, install the inner races of the bearings (561-22-61960).
- <2> Install the diff. ass'y to the carrier & cap ass'y (42C-22-11104) using the outer race of the bearing (561-22-61960) and the nut (585-22-21140).

### (4) Installation of the diff. carrier ass'y

- <1> Referring to the chapter "Disassembly and Assembly" in the Shop Manual, install the diff. carrier ass'y.  
After checking the tooth contact of the bevel gear, install 2 pcs. of the lock plates (561-22-61150) using 4 bolts.  
Tightening torque: 245 - 309 Nm {25 - 31.5 kgm}
- <2> Install the diff. carrier ass'y to the rear axle.
- <3> Install the spacer (42C-23-13530) and the tee (42C-23-13540) using the bolt (01011-63085) and washer (01643-33080).
- <4> Use the bolt (01011-68010) and washer (01643-33080) at other locations than the ☆ marked places.
- <5> Connect 3 pipes to the tee (42C-23-13540).

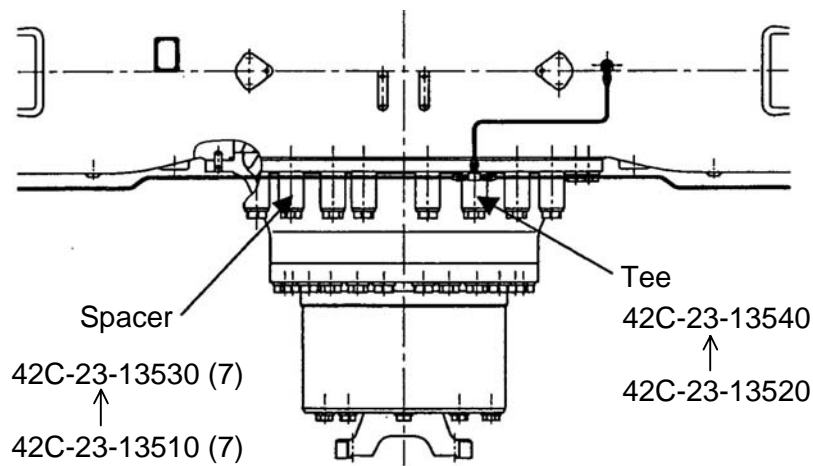


Fig. 2

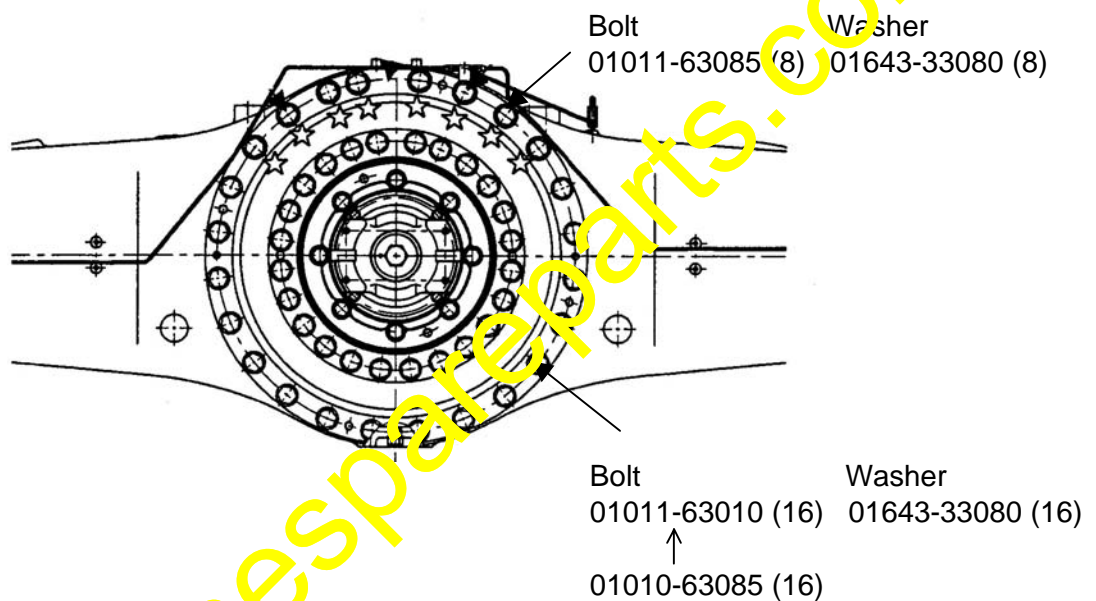


Fig. 3

## (5) Installation of the rear axle

<1> Install the rear axle to the vehicle body in the reversed procedure to the removal procedure.

<2> Install 3 pcs. of the drain plugs.

Tightening torque: 127 - 176 Nm {13 - 18 kgm}

<3> Supply oil and install 4 pcs. of the level plugs.

Oil quantity: 670 L (AXO80)

Tightening torque: 127 - 176 Nm {13 - 18 kgm}