

PARTS & SERVICE NEWS

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(C)

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SUBJECT: ADDITION OF SHIM TO EXTEND LIFT FOR FINAL DRIVE PLANETARY BEARING ON HD465-5

PURPOSE: To introduce modification procedures to supplement shims to prolong the service life of the planetary bearing of the final drive assembly on HD465-5 dump trucks

APPLICATION: HD465-5 Dump Trucks, Serial Nos. 4001 thru 4406

FAILURE CODE: 2B7530

DESCRIPTION:

1. Introduction

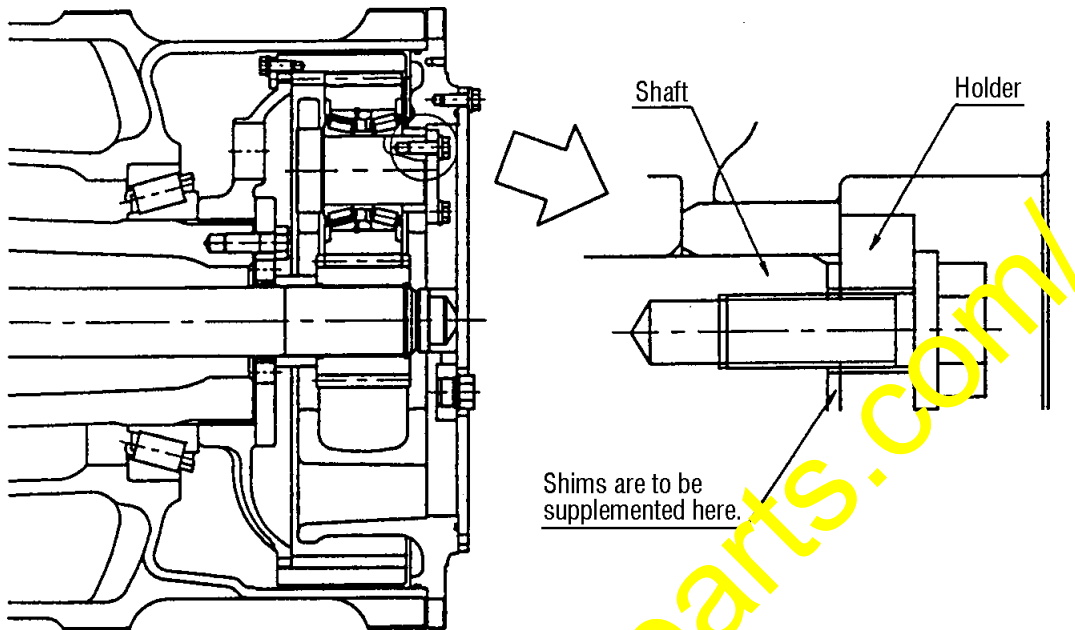
With the final drive assembly of the HD465-5 dump trucks, the shaft for the planetary bearing is being fastened by the holder and a bolt. Since the bearing life can be prolonged by means of inserting shim in the space between the holder and the shaft and thereby preventing the bearing being deformed due to tightening of the bolt, we suggest you to implement this modification to supplement the shims at an opportunity of making overhauling or of changing the bearing.

2. List of parts

Part No.	Part Name	Q'ty	Remarks
569-22-62920	Shim (t0.05)	2	
569-22-62930	Shim (t0.15)	8	
569-22-62940	Shim (t0.10)	2	

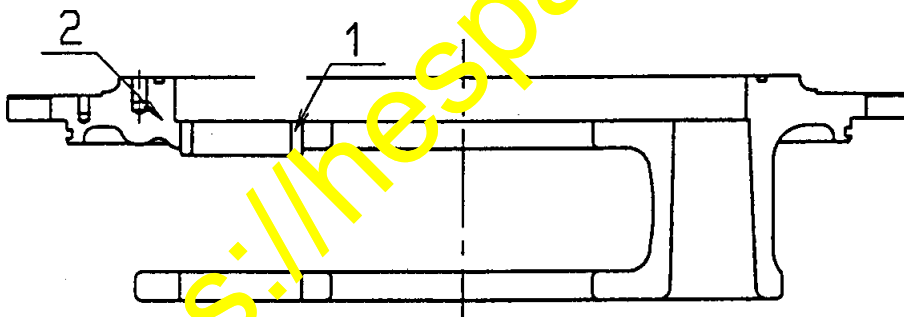
3. Introduction of the improvement

Shims have been added to the space between the shaft and the holder to prevent excessive load being applied to thereby to deform the inner ring of the bearing when the bolt is tightened.

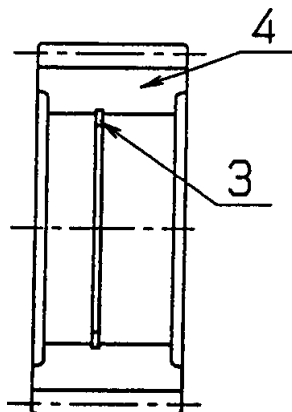


4. Shim adjustment method

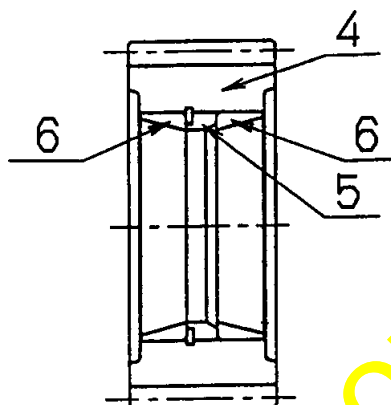
- ① Install the spacer (1) to the carrier (2).



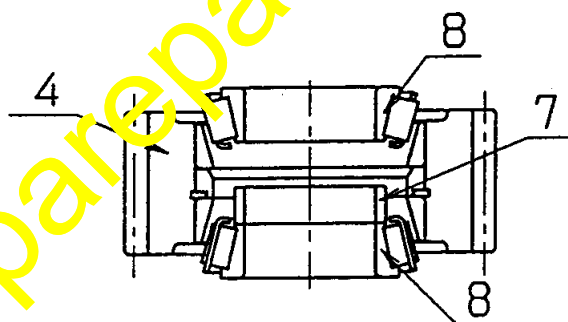
- ② Install the snap ring (3) to the planetary gear (4).



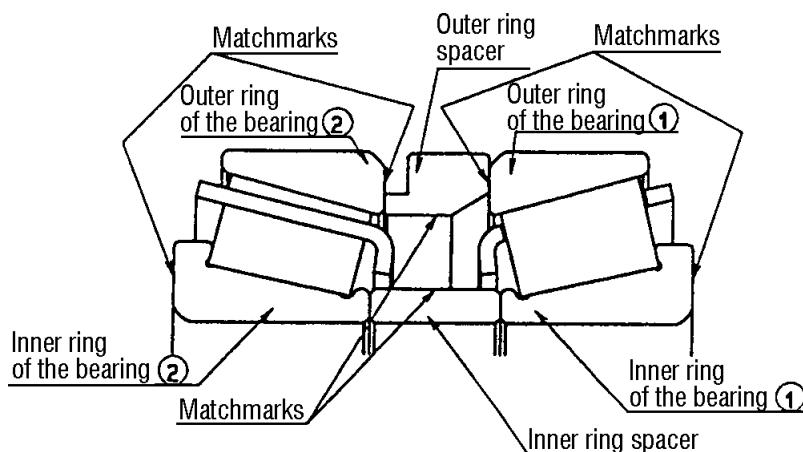
- ③ Installing the outer ring spacer (5), press-fit the outer ring (6) of the bearing to the planetary gear (4). (When doing this, gaps should not occur between the outer ring spacer and the outer ring of the bearing.)



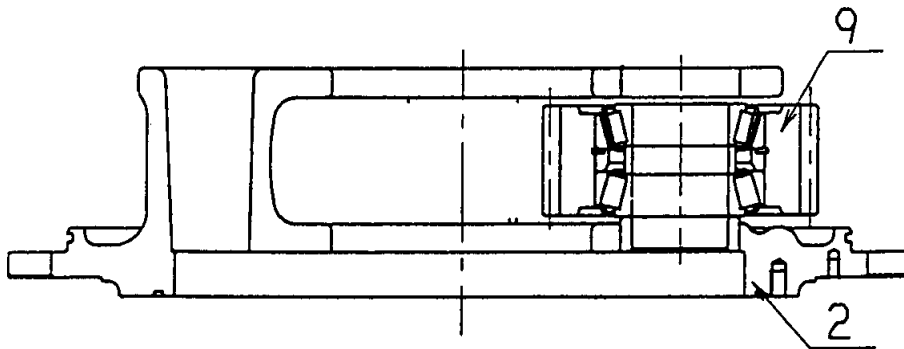
- ④ Placing the inner ring spacer (7) and the inner ring (8) of the bearing, install the planetary gear (4) before installing the inner ring of the bearing (8) from above.



- ⚠ For the inner ring and outer ring spacers and for the inner ring and the outer ring of the bearing, match marks are provided to indicate a fitting set. Always install fitting inner ring and outer ring of the bearing matching the matchmarks. (Do not mix the inner ring and outer ring of the bearing ① and of the bearing ②.)

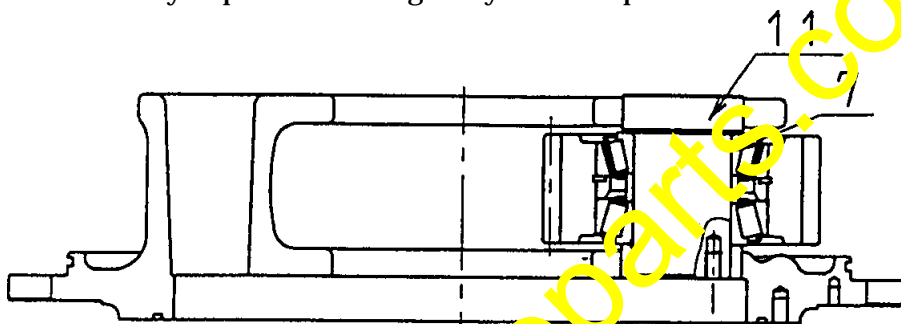


- ⑤ Insert the planetary gear ass'y (9) into the carrier (2).



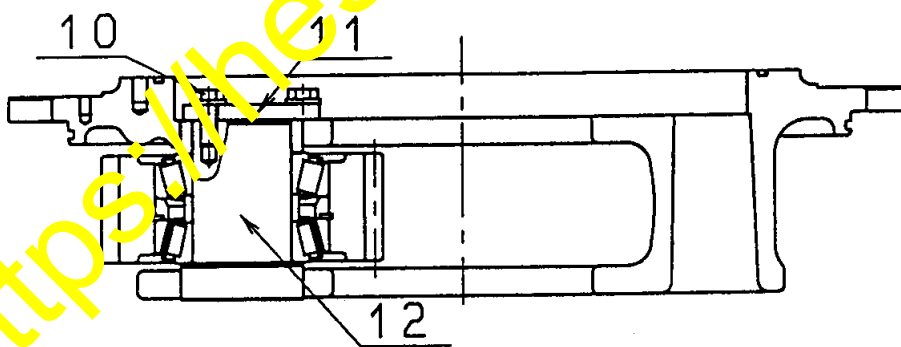
- ⑥ Press-fit the shaft (11) to the inner ring (7) of the bearing.

⚠ Press-fit the shaft by expansion fitting or by use of a press machine.

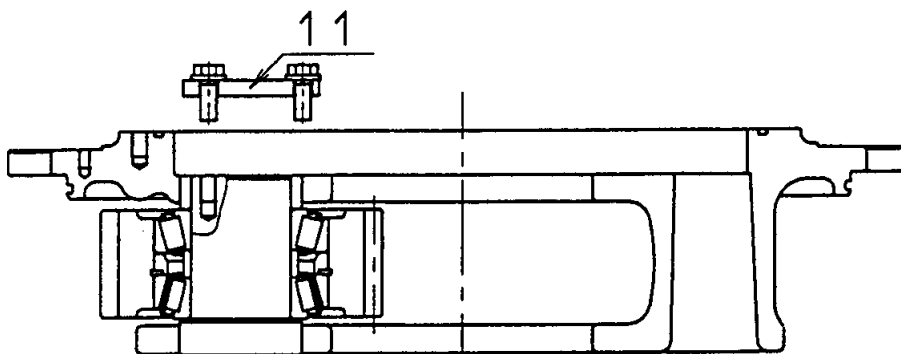


- ⑦ Inverting the sub-assembly, install the shaft (12) and the holder (11) and temporarily tighten them using five bolts (10), but without use of shims, while turning the planetary gear.

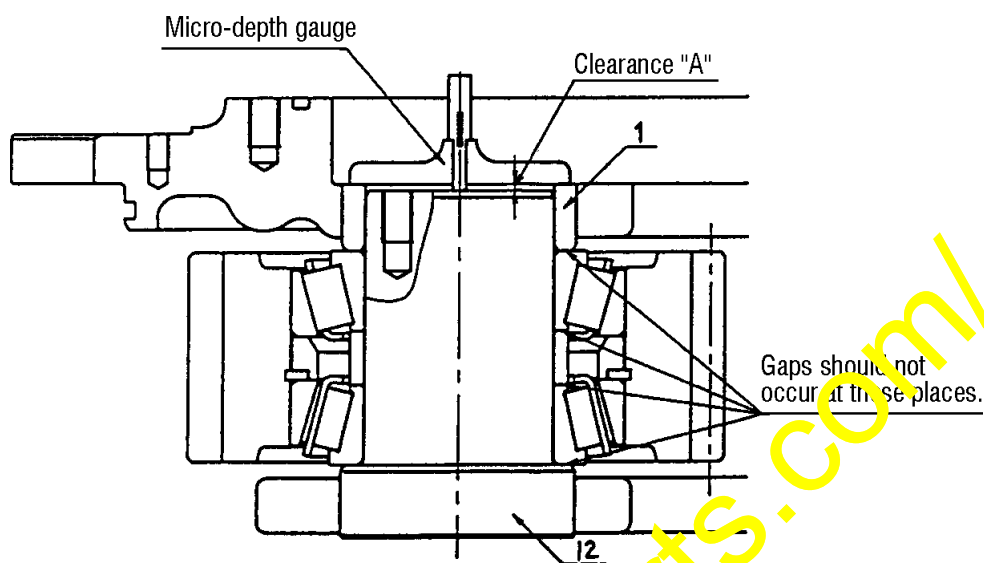
 84 – 196 Nm (8.5 – 20 kgf·m)



- ⑧ Remove the holder (11) once.



- ⑨ Measure the clearance "A" occurring between the shaft (12) and the spacer (1) at 3 places to calculate the mean value. (Assuming the mean value of the clearance as "Am")



- ⑩ Adjust the shims 569-22-62920 ($t = 0.05$), 569-22-62930 ($t = 0.15$) and 569-22-62940 ($t = 0.10$) so that the overall shim thickness may become as follows:

$$"Am" - 0.05 < \text{Overall shim thickness} \leq "Am"$$

- ⑪ Fasten the shims and the holder (11) by tightening the bolts (10). At this time, tighten the bolts (10) to the specified tightening torque while turning the planetary gear.

 157 - 196 Nm (16 - 20 kgm)

 Apply LT-2.

