

PARTS & SERVICE NEWS

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(C)

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SUBJECT: SHIM ADJUSTMENT TO FINAL DRIVE PLANETARY BEARING

PURPOSE: To introduce shim supplementation procedures to prolong the service life of the final drive planetary bearing

APPLICATION: HD785-3 Dump Trucks, S/N 2461 thru 4003 and 4005 thru 4011
 HD785-5 Dump Trucks, S/N A10228 and up
 HD985-3 Dump Trucks, S/N 1013 and up
 330M Dump Trucks S/N Cf24120 and up.

FAILURE CODE: 2B7599

DESCRIPTION:

In case the clearance between the final drive planetary bearing mounting holder and the shaft happens to be too large, the tightening force of the holder mounting bolts influences the bearing to cause deformation of the inner ring to deteriorate the service life of the bearing. To eliminate this problem, we worked out corrective measures to prolong the service life of the bearing by supplementation of shims into this clearance space to prevent deformation of the inner ring occurring from the tightening force of the holder mounting bolts.

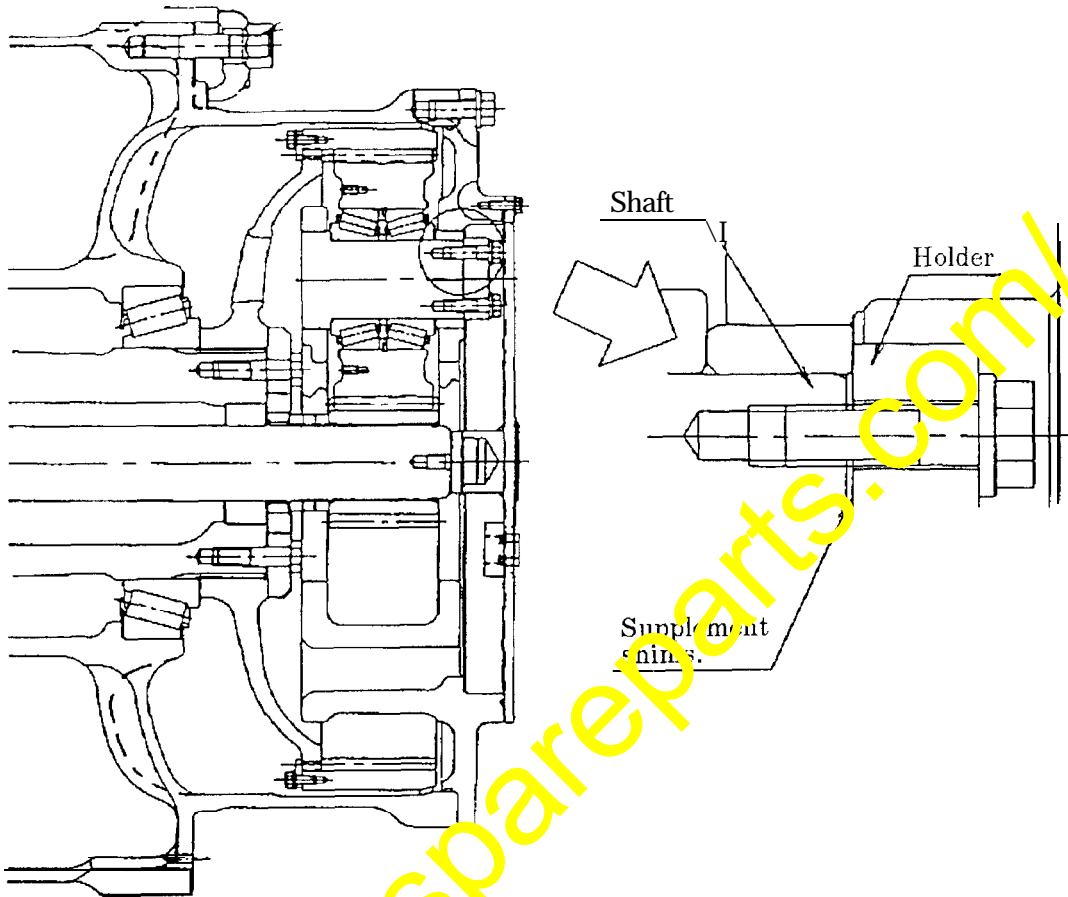
Since this corrective measure is applicable to already shipped vehicles also, supplement the shims when overhauling or replacing the bearing by following the procedures outlined in this **PARTS & SERVICE NEWS**.

LIST OF PARTS:

Part No.	Part Name	Q'ty	Remarks
561-22-62920	Shim	6	t = 0.05
561-22-62940	Shim	30	t = 0.10

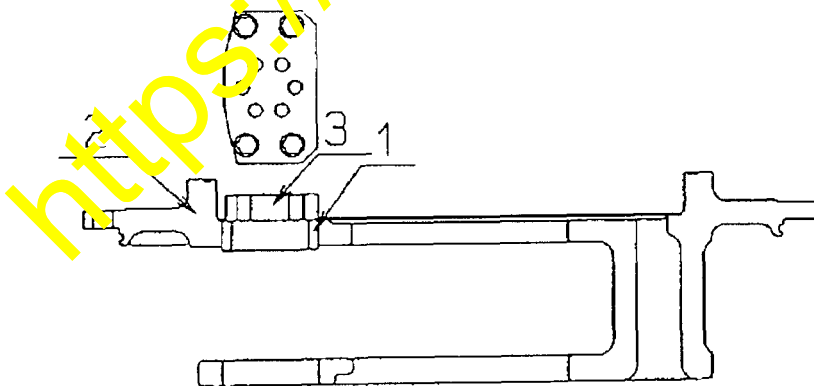
3. Contents of the improvement

By supplementing shims into the space between the shaft and the holder, deformation of the inner ring of the bearing by the excessive load occurring from the tightening force of the holder mounting bolts can be avoided.

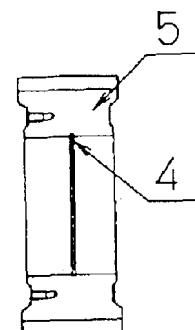


4. Shim adjustment method

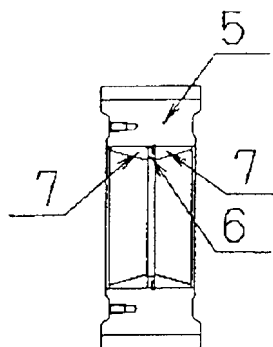
- ① Install the spacer (1) to the carrier (2).
Temporarily tighten the holder (3) to the carrier (2).



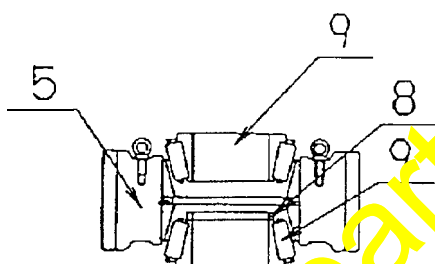
- ② Install the snap ring (4) to the planetary gear (5).



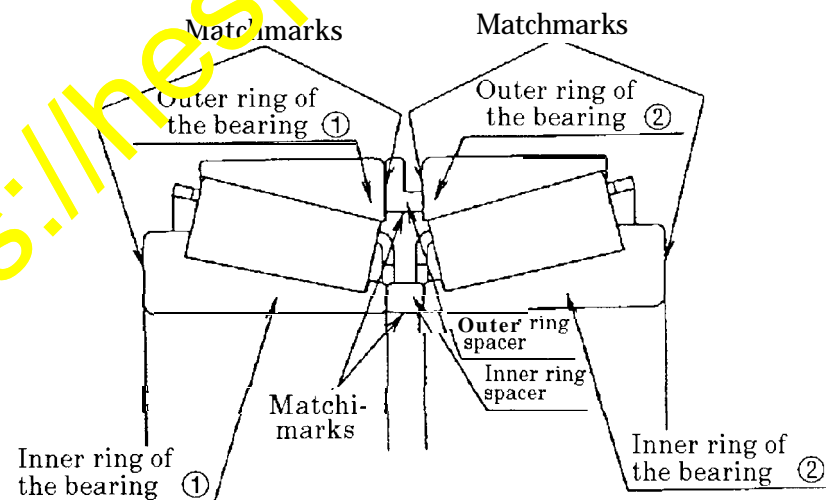
- ③ Setting the spacer (6) in position, press-fit the outer race (7) into the planetary gear (5).
(Do not cause any gap between the spacer and the outer race.)



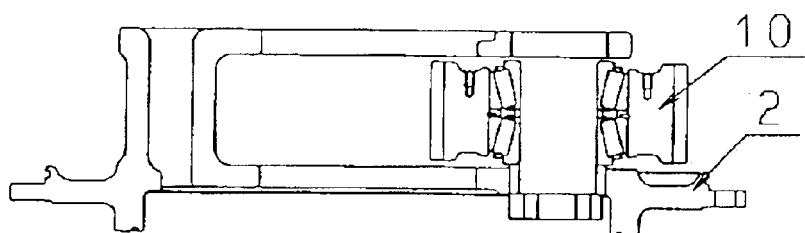
- ④ Placing the spacer (8) and the bearing inner race (9) in position, hoist the planetary gear (5) to assemble in position before installing the bearing inner race (9) from above.



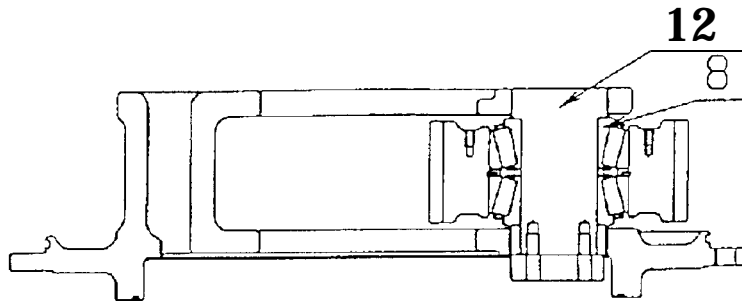
- ⚠ Matchmarks are being provided on the inner ring spacer, outer ring spacer inner ring of the bearing and the outer ring of the bearing to indicate matching sets.
Match the matchmarks when installing the inner ring and outer ring of the bearing also,
(Do not mix up the inner ring and the outer ring of the bearing ① and those of the bearing ②).



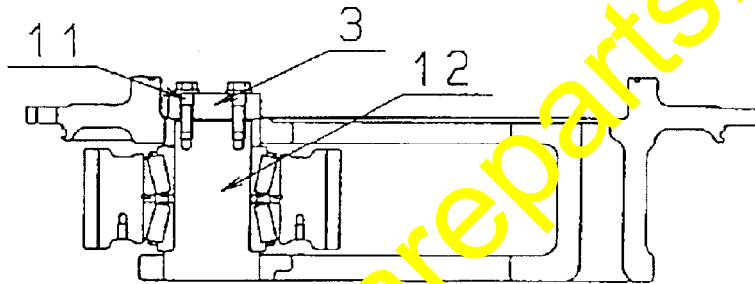
- ⑤ Push-in the planetary gear assembly (10) into the carrier (2).



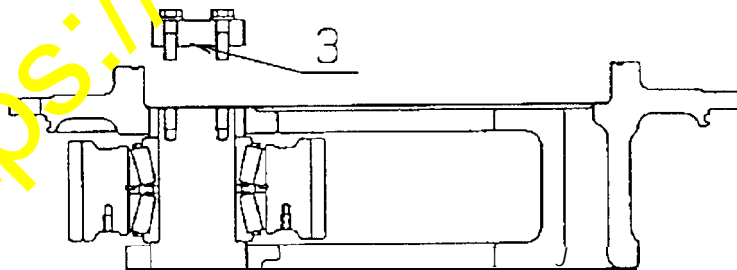
- ⑥ Press fit the shaft (12) into the bearing inner race (8).
★ When fitting the shaft, use the chilling fitting method or press fit it using a press.



- ⑦ Placing the sub-assembly upside down, temporarily tighten the shaft (12) and the holder (3) using 3 bolts (11) only at alternate places while turning the planetary bearing.
⚙️ $147 - 309\text{Nm}$ $\{15.0 - 31.5\text{kgm}\}$

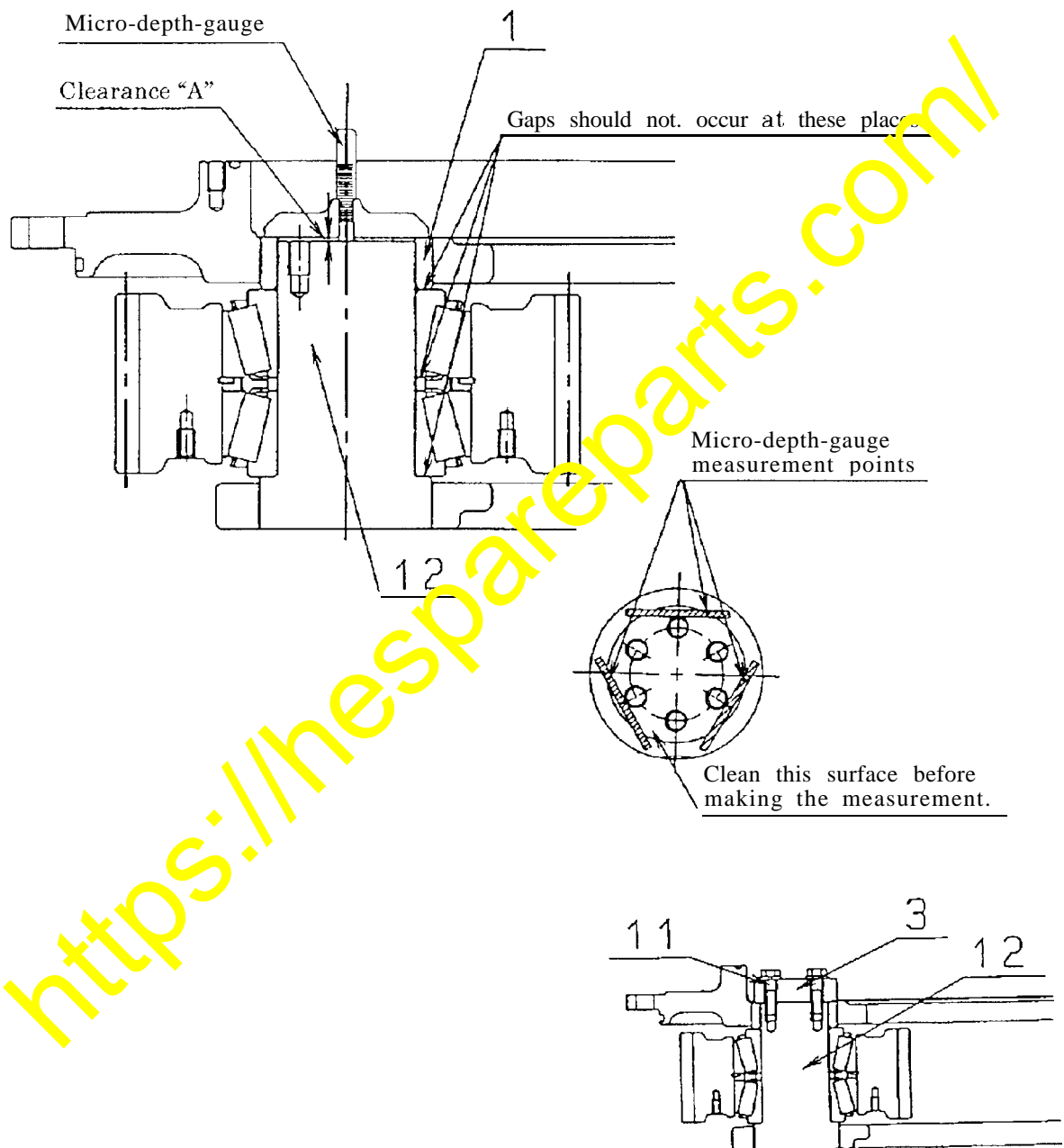


- ⑧ Remove the holder (3) once.
★ The next clearance measurement is to be made with the holder (without bolting) in removed state.




- ⑨ Measure the clearance "A" between the shaft (12) and the spacer (1) at 3 points around the periphery using a micro-depth gauge and calculate the mean value (which is to be called "A"m).
- ⑩ Adjust the shims 561-22-62920 (t=0.05) and the shims 561-22-62940 (t=0.1) so that the total shim thickness becomes as follows.

$$"A"m - 0.05 < \text{Total shim thickness} \leq "A"m$$



- ⑪ Fasten the shims and the holder (3) using the bolts (11). After turning the planetary gear by 5 to 6 turns, tighten the ten bolts (11) at the prescribed tightening torque.

 245.2 – 308.9Nm (20.5 – 31.5kgm)

 Apply lock-paint (LT-2).