

PARTS & SERVICE NEWS

REF NO.	AA03170
DATE	December 03, 2003

(C)

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SUBJECT: CREEPING OF TORQUE CONVERTER AND TRANSMISSION BEARINGS

PURPOSE: To introduce the modified parts needed to prevent creeping of the bearings of the torque converter and transmission assembly.

APPLICATION: Komatsu Mechanical Drive Dump Trucks:
530M: A30001 - A30038, 32628;
HD1500-5: A30039 & Up;
equipped with transmission serial numbers prior to 165112

FAILURE CODE: 1547CA

DESCRIPTION:

1. Introduction

When creeping of the bearings in the torque converter and transmission assembly occurs, their fitting surfaces may wear making it necessary to replace the contacting parts during overhaul. The parts needed to prevent creeping of the bearings, and the installation procedure for the parts, are outlined in this bulletin.

2. List of parts

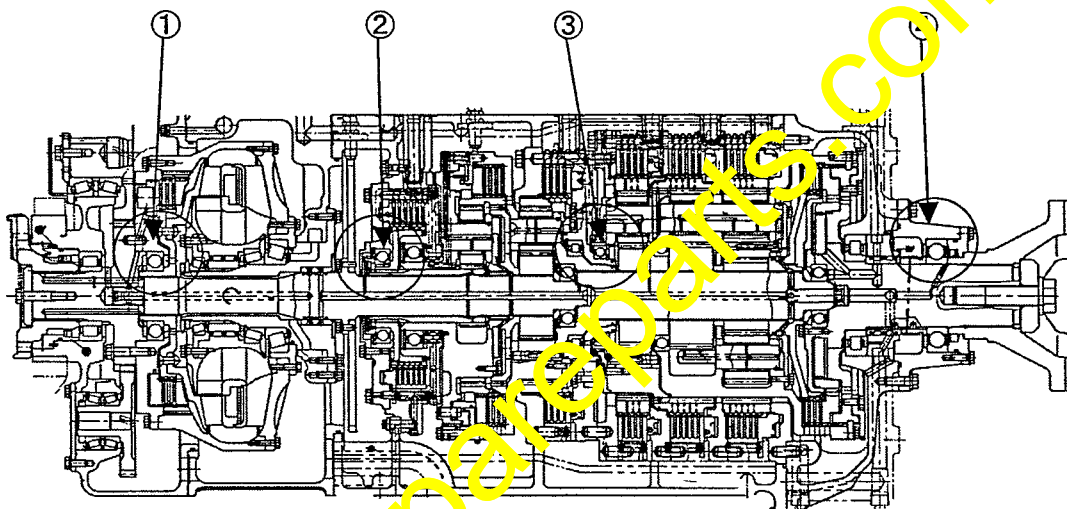
Part No.	Part Name	Q'ty	Remarks
< Turbine bearing section >			
562-13-41550 (06040-06219)	Bearing Bearing	1 (1)	
562-13-41511 (562-13-41510)	Turbine comp (Turbine comp)	1 (1)	
562-13-47112 (562-13-47111)	Housing comp (Housing comp)	1 (1)	
< M-clutch support bearing section >			
562-15-29380 (562-15-19380)	Bearing (Bearing)	1 (1)	
562-15-22272 (562-15-22271)	Hub (Hub)	1 (1)	
562-15-29520	Pin	1	
< 2nd carrier ball bearing section >			
562-15-21211 (562-15-21210)	Cage (Cage)	1 (1)	
562-15-22351 (562-15-22350)	Cover (Cover)	1 (1)	
562-15-29370 (562-15-19360)	Bearing (Bearing)	1 (1)	
< Transmission output cage section >			
562-15-23120 (562-15-13120)	Cage (Cage)	1 (1)	
06030-06224 (06000-06224)	Bearing (Bearing)	1 (1)	

3. Details of the modification and installation procedure

For the bearing sections at 4 places indicated in the drawing shown below, details of the modification to prevent occurrence of the creeping, and the precautions when overhauling the torque converter and transmission and when making this modification are being introduced on the next page and after.

Modifying sections

- ① Turbine bearing section Page 4
- ② M-clutch support bearing section Page 5
- ③ 2nd carrier ball bearing section Page 6
- ④ Transmission output cage bearing section Page 7



<Fig. 1> Cross-sectional view of the transmission ass'y on the HD1500-5

① Torque converter turbine bearing section

1) Details of the modification

By changing the dimensions of the fitting section to the bearing of the turbine comp. 562-13-41511 and of the housing comp. 562-13-47112, the fitting interference has been increased to prevent the creeping of the bearing.

Along with the above change, the bearing clearance has been changed.

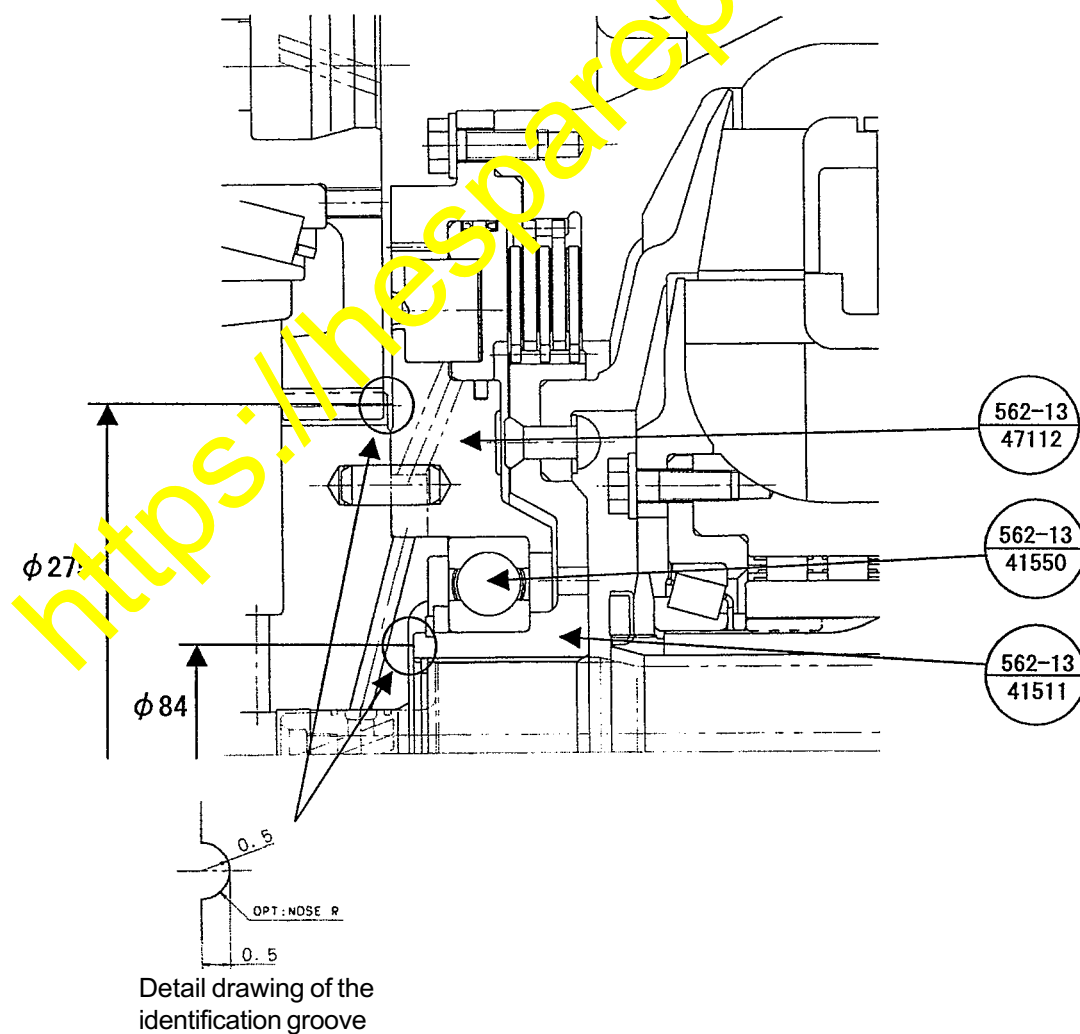
2) Precautions for the installation work

Regarding the three kinds of parts indicated in the table shown below, be sure to install all three parts in a set after checking the identification marks. If these parts are not installed in a set, inappropriate internal clearance of the bearing will occur to cause possible premature breakage of the bearing.

< Table 1 > Identification for the turbine bearing section

Part No.	Part name	Ident mark	
562-13-41511	Turbine comp	With an identification groove	
562-13-47112	Housing comp	With an identification groove	
562-13-41550	Bearing	With an etching or a stamping mark on the outer ring	
		Produced by NSK	6219C5
		Produced by NTN	6219C5 NTN JAPAN XX*

*... XX (on NTN made bearings) is year and month mark using two alphabetical characters.

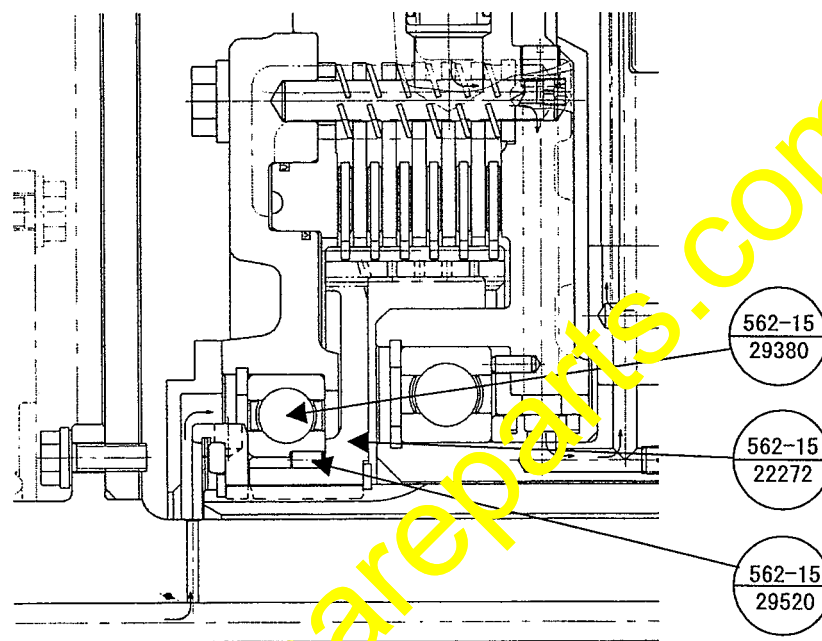


<Fig. 2> Cross-sectional view of the turbine bearing section

- ② Details of the modification of the M-clutch support bearing section of the transmission ass'y

A pin "562-15-29520" has been added to the fitting surface to the bearing "562-15-29380" of the hub "562-15-22272" to prevent the creeping of the bearing.

This improvement will function only when the above three parts are replaced at the same time. (Refer to the drawing shown below.)



<Fig. 3> Cross-sectional view of the M-clutch support bearing section

③ 2nd carrier ball bearing section of the transmission ass'y

1) Details of the modification

By changing the dimensions of the fitting section to the bearing of the cage "562-15-21211" and of the cover "562-15-22351", the fitting interference has been increased to prevent the creeping of the bearing.

Along with the above change, the bearing clearance has been changed.

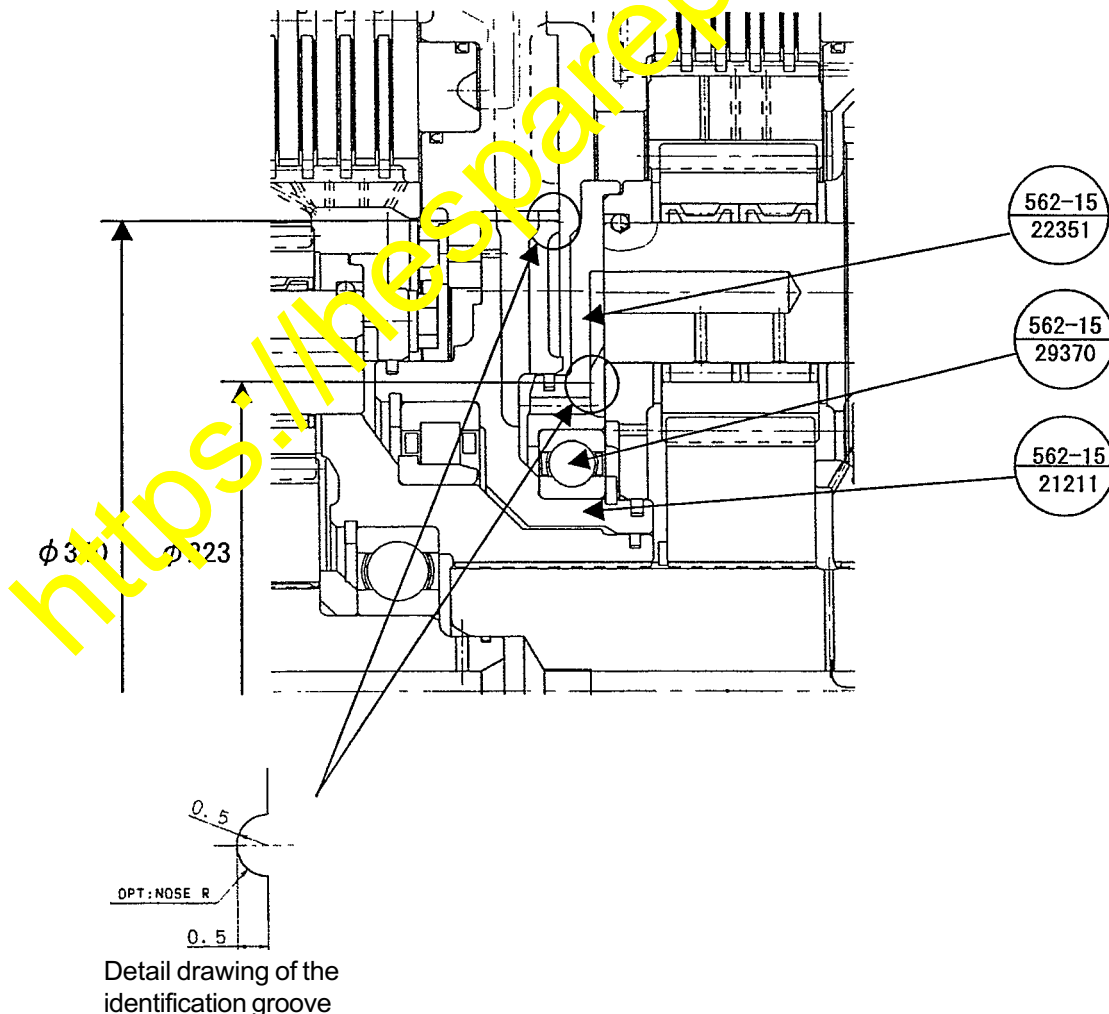
2) Precautions for the installation work

Regarding the three kinds of parts indicated in the table shown below, be sure to install all three parts in a set after checking the identification marks. If these parts are not installed in a set, inappropriate internal clearance of the bearing will occur to cause possible premature breakage of the bearing.

< Table 2 > Identification for the 2nd carrier ball bearing section

Part No.	Part name	Ident mark
562-15-21211	Cage	With an identification groove
562-15-22351	Cover	With an identification groove
562-15-29370	Bearing	With an etching or a stamping mark on the outer ring
		Produced by NSK 69804
		Produced by NTN 628L1C4 NTN JAPAN XX*

*... XX (on NTN made bearings) is year and month mark using two alphabetical characters.



<Fig. 4> Cross-sectional view of the 2nd carrier ball bearing section

④ Transmission output cage bearing section

1) Details of the modification

By changing the dimensions of the fitting section to the bearing of the cage "562-15-23120", the fitting interference has been increased to prevent the creeping of the bearing.

Along with the above change, the bearing clearance has been changed.

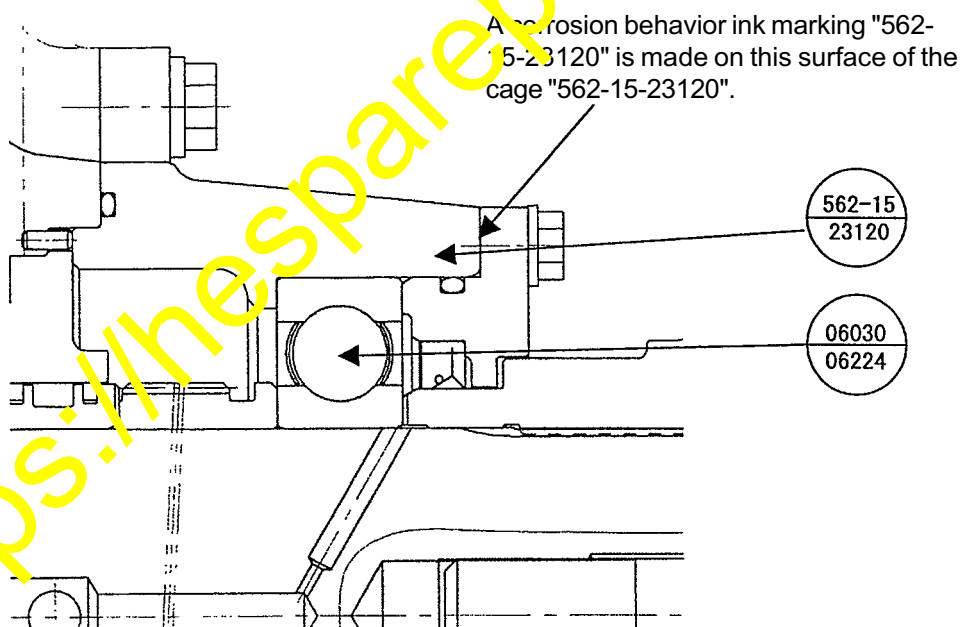
2) Precautions for the installation work

Regarding the two kinds of parts indicated in the table shown below, be sure to install all two parts in a set after checking the identification marks. If these parts are not installed in a set, inappropriate internal clearance of the bearing will occur to cause possible premature breakage of the bearing.

< Table 3 > Identification for the output cage bearing section

Part No.	Part name	Ident mark	
562-15-23120	Cage	With corrosion behavior ink marking "562-15-23120"	
06030-06224	Bearing	With an etching or a stamping mark on the outer ring	
		Produced by NSK	6224C3
		Produced by NTN	6224C3 NTN JAPAN XX*

*... XX (on NTN made bearings) is year and month mark using two alphabetical characters.



<Fig. 5> Identification for the output cage bearing section