

PARTS & SERVICE NEWS

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SUBJECT: REPAIR PROCEDURE OF TORQUE CONVERTER LOWER BEARING OF WA600-1 AND WA600-3

PURPOSE: To introduce modification procedure to replace the lower bearing of the torque converter pump on WA600-1 and WA600-3 wheel loaders with the improved one with increased reliability

APPLICATION: WA600-1 Wheel Loaders, Serial Nos. 10001 thru 11598
WA600-3 Wheel Loaders, Serial Nos. 50001 thru 50421

FAILURE CODE: 132MFF

DESCRIPTION:

1. Introduction

With the torque converter on the WA600-1 and WA600-3 wheel loaders (excluding the Cummins engine spec. machines), there is a possibility of occurrence of breakage failure of the lower bearing of the pump because of excessive thrust force occurring inside the torque converter.

When the above breakage failure of the lower bearing of the pump has occurred, make the modification being introduced in this Service News to repair the breakage failure.

The new bearing has been strengthened by three times as much as the current bearing in a thrust load resistance.

2. List of parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
711-59-31002 (711-59-31001)	Converter (Converter)	} Replacement	1 (1)	WA600-3
711-59-00013 (711-59-00011)	Converter (Converter)		1 (1)	WA600-1
711-59-31031 (711-59-31030)	Converter (Converter)		1 (1)	WA600-3 Extreme cold spec.
711-59-00072 (711-59-00071)	Converter (Converter)		1 (1)	WA600-1 Extreme cold spec.

Part No.	Part Name	Purpose of part	Q'ty	Remarks
The component parts of the torque converter ass'y to be changed: Common for the WA600-3, WA600-1, WA600-3 extreme cold weather spec. machines and WA600-1 extreme cold weather spec. machines				
711-59-13360 (711-59-13351)	Bearing (Bearing)	} Replacement	1 (1)	
711-59-11180 (711-54-11180)	Spacer (Spacer)		1 (1)	
23W-13-12680	Nut		1	
711-59-00022 (711-59-00021)	Shaft sub (Shaft A.)	} Replacement	1 (1)	
711-59-11191 (711-59-11190)	Guide (Guide)		1 (1)	
711-59-11141 (711-59-11140)	Retainer (Retainer)		1 (1)	
711-59-11121 (711-59-11120)	Pump (Pump)		1 (1)	
711-59-12111 (711-59-12110)	Stator (Stator)		1 (1)	

Consumable parts which need to be replaced when carrying out this modification: Common for the WA600-3 and WA600-1

711-59-05011	Service kit	1	
07018-20653	Seal ring	1	
711-59-12530	Sleeve	1	
07018-31355	Seal ring	1	
426-13-19110	O-ring	1	

Consumable parts which need to be replaced when carrying out this modification: Common for the WA600-3 extreme cold weather spec. machines and WA600-1 extreme cold weather spec. machines

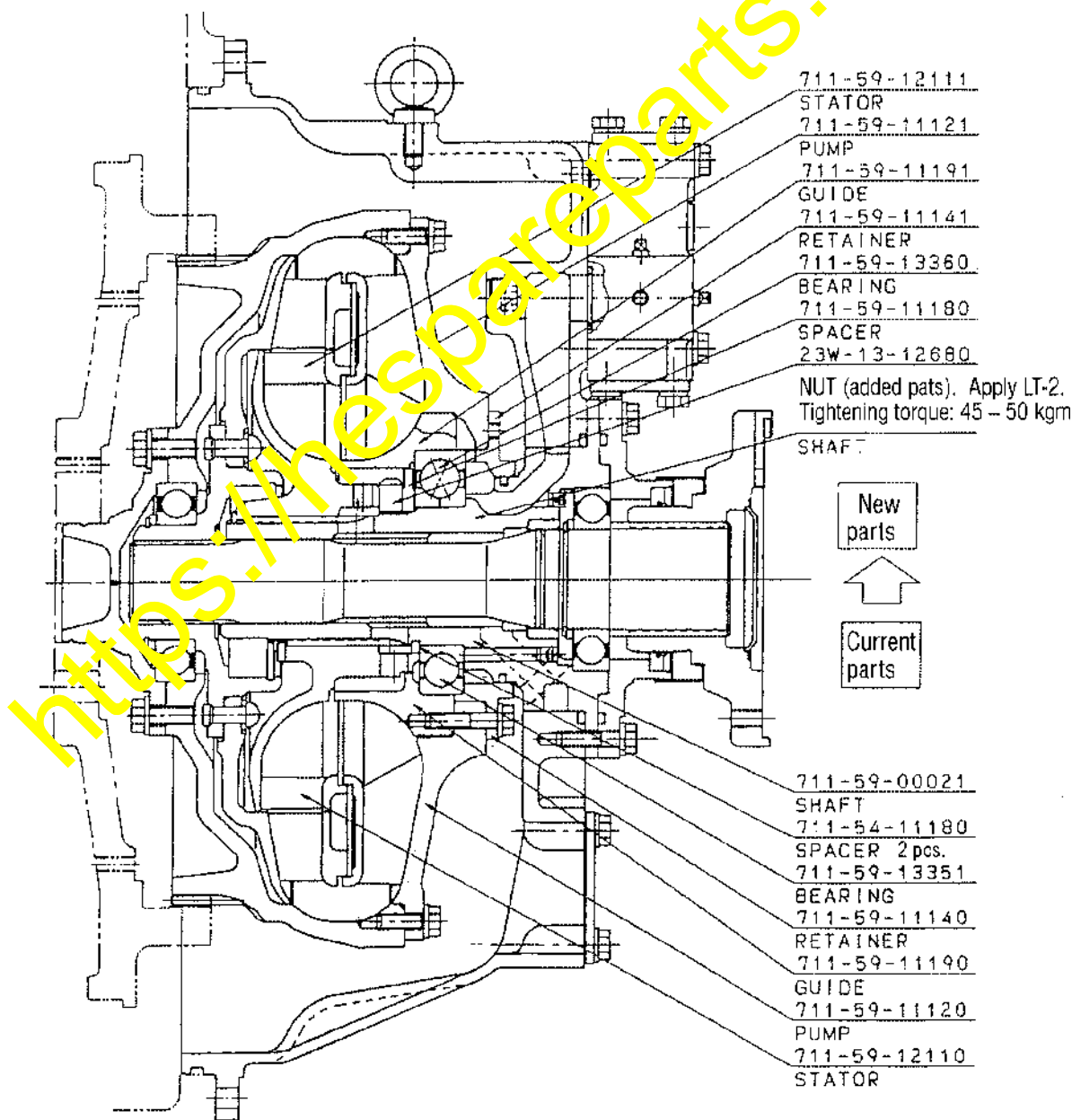
711-73-05020	Service kit	1	
07018-20653	Seal ring	1	
711-59-12530	Sleeve	1	
07018-31355	Seal ring	1	
41E-14-11110	O-ring	1	

3. Details of the modification

- (1) The thrust load resistance of the lower bearing of the pump has been strengthened by three times as much as the current bearing in thrust load resistance.

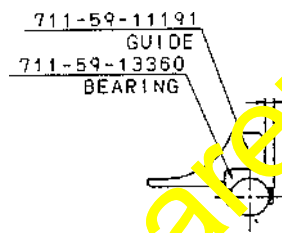
	Current bearing	→	New bearing
Part No.	722-59-13351	→	711-59-13360
Type No.	6E-SF1732C4	→	TM-QJ219BCS236
Inner dia.	φ 85	→	φ 95
Outer dia.	φ 150	→	φ 170
Width	28	→	32

- The new lower bearing of the pump and the current lower bearing of the pump can be identified by the type number stamped on the side surface of the bearing.
(Current bearing: SF1732 New bearing: QJ219)
Also, the current bearing has the integrated inner and outer ring, and the new bearing has the separated inner ring.
- (2) Along with the strengthening of the lower bearing of the pump, surrounding parts are changed.

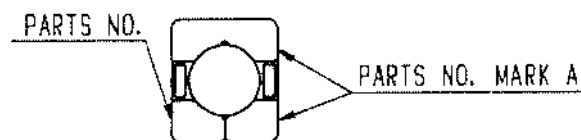


4. Modification procedure

- (1) Referring to the Shop Manual, disassemble the torque converter ass'y.
 - (2) Referring to the parts list indicated on page 1, replace the internal parts of the torque converter ass'y with the improved parts.
 - (3) Precautions when carrying out this modifications
 - (3-1) Be sure to replace the "consumable parts which need to be changed when carrying out this modification" described on the parts list indicated on page 2 with the new parts.
 - (3-2) When installing the outer race of the lower bearing of the pump (711-59-13360) into the guide (711-59-11191), press-fit it securely after cooling until the end face of the outer race comes in contact with the surface of the deep end of the guide hole.
- ※ To make sure that the outer race of the bearing has been press-fit securely, measure the dimension "A" indicated in the drawing below at 4 places on the circumference (at the interval of 90 degrees) to confirm that the deviations of the dimension "A" is within 0.05 mm.




- ★ If the bearing is installed in an inclined state, the strength against the thrust load will be lowered.
- (3-3) When making parts control of the bearing, keep the inner and outer races together as a parts set and do not change the combination.
Also, when installing the outer race and the inner race, arrange the surface of the outer race where the mark "A" is being indicated and the surface of the inner race where the mark "A" is being indicated on the same side.

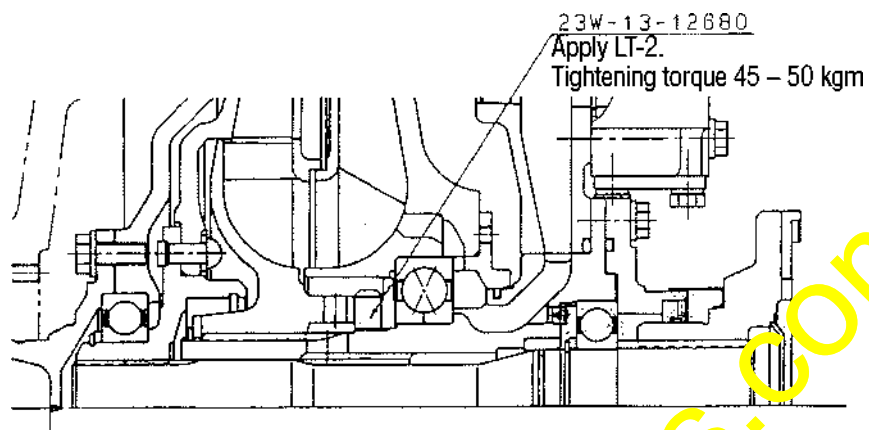


- (3-4) When installing the inner race of the lower bearing of the pump (711-59-13360) to the stator shaft (711-59-00022), press-fit the inner race of the bearing securely after warming until the end face of the inner race comes in contact with the shoulder surface of the stator shaft.
- ★ When warming the inner race of the bearing, never heat it to a temperature over 120°C.
If the inner race of the bearing is heated to a temperature over 120°C, the strength of the bearing itself will be lowered.

(3-5) Tightening procedure for the bearing fastening nut (23W-13-12680)

: Apply LT-2.

: Tightening torque 45 – 50 kgm



- ★ When applying LT-2, use the minimum quantity. If swelled out LT-2 adheres to the bearing, there will be a possibility of occurrence of breakage of the bearing.

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