

# PARTS & SERVICE NEWS

REF NO.	AT03167
DATE	Sep. 16, 2003
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**SUBJECT:** MODIFICATION PROCEDURE OF HITCH BEARING GREASING SYSTEM

**PURPOSE:** To introduce modification procedure to change the greasing method for the hitch bearing (output side) on HM300-1 articulated dump trucks to the external greasing structure

**APPLICATION:** HM300-1 Articulated Dump Trucks, Serial Nos. 1002 thru 1030

**FAILURE CODE:** 2013FF

**DESCRIPTION:**

1. Introduction

On the HM300-1 articulated dump trucks, there is a possibility of occurrence of breakage failure of the hitch bearing (output side) owing to flowing out of the grease causing insufficient lubrication. Therefore, make the modification to change the greasing method to the external greasing structure following the modification procedure being outlined in this Service News.

For the details of the modification and the modification procedure, refer to the following pages.

- #1002 thru #1015 (Pages 4 thru 9)
- #1016 thru #1030 (Pages 10 thru 12)

Serial numbers of the applicable vehicles (Table of vehicles applicable to this modification)

Serial numbers of the applicable vehicles among HM300-1 and their destinations  
(23 vehicles in total)

No.	Country	Model	Serial No.
1	U.S.A. (19 vehicles)	HM300-1	1002
2		HM300-1	1003
3		HM300-1	1005
4		HM300-1	1007
5		HM300-1	1008
6		HM300-1	1010
7		HM300-1	1011
8		HM300-1	1012
9		HM300-1	1013
10		HM300-1	1014
11		HM300-1	1015
12		HM300-1	1016
13		HM300-1	1017
14		HM300-1	1018
15		HM300-1	1019
16		HM300-1	1022
17		HM300-1	1026
18		HM300-1	1027
19		HM300-1	1028
20	Belgium (4 vehicles)	HM300-1	1020
21		HM300-1	1021
22		HM300-1	1025
23		HM300-1	1030

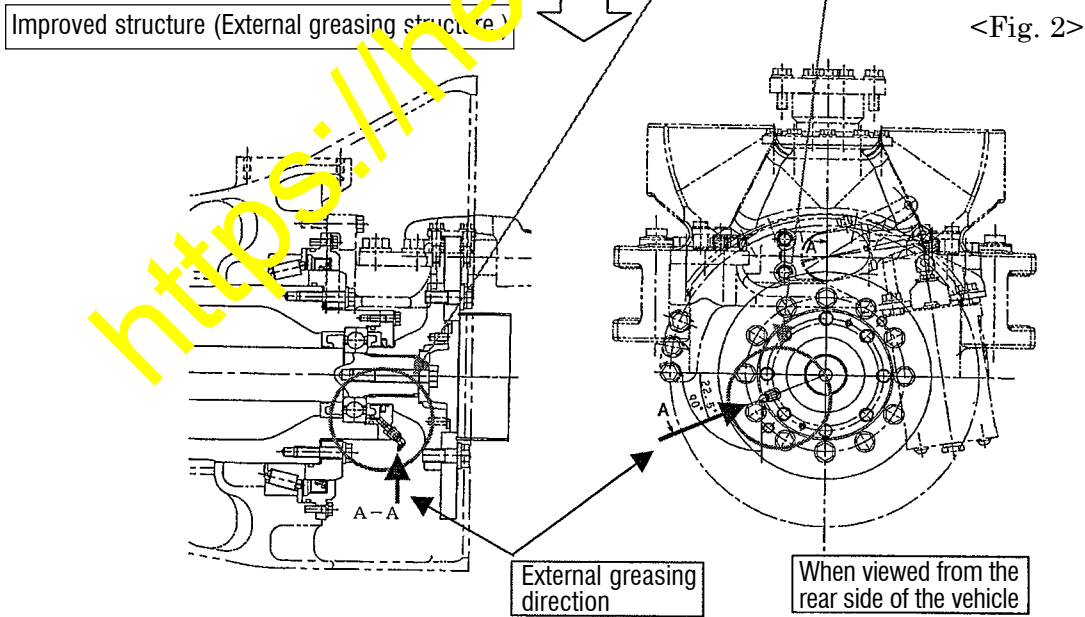
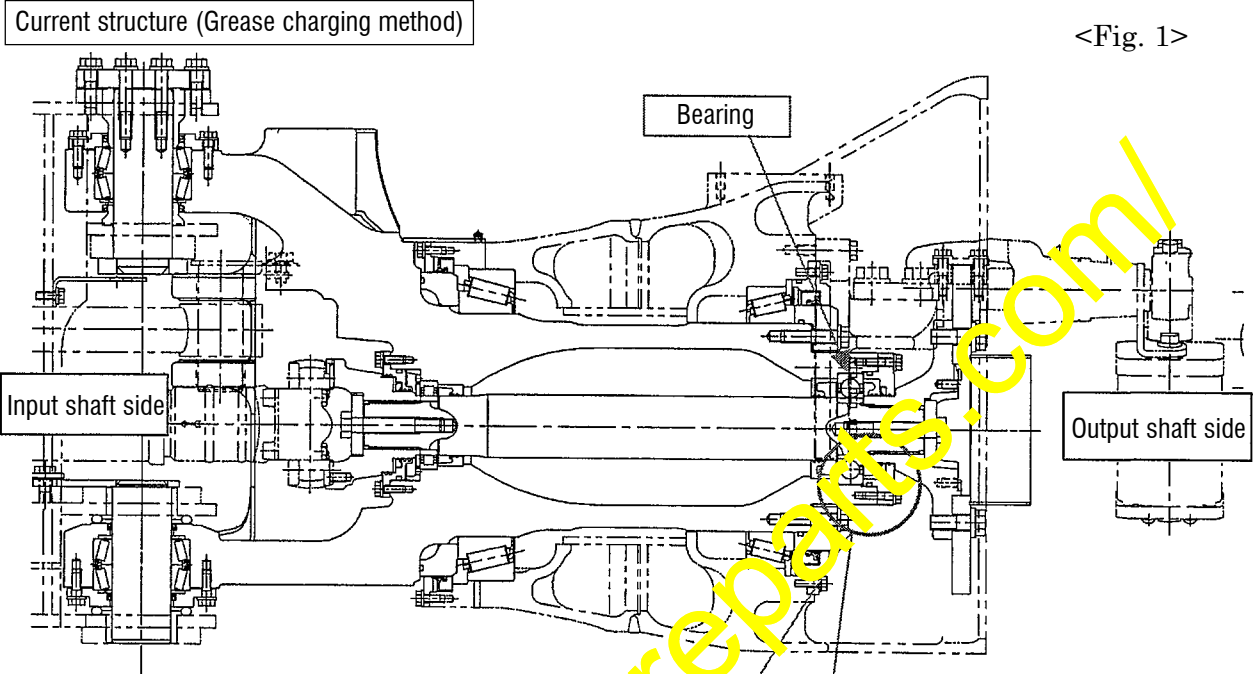
<https://linespareparts.com/>

## 2. List of parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
HM300-1: #1002 thru #1015				
56D-46-13841 (56D-46-13840)	Ring (Ring)	} Replacement	1 (1)	
56D-46-13561 (56E-46-13560)	Retainer (Retainer)		1 (1)	
07000-15145 (07000-15145)	O-ring (O-ring)		1 (1)	
56E-46-13810 (56E-46-13810)	Seal (Seal)		1 (1)	
566-52-12210	Nipple	} Addition	1	
07020-00675	Fitting		1	
HM300-1: #1016 and up				
566-52-12210	Nipple	} Addition	1	
07020-00675 (07042-30108)	Fitting (Plug)		1 (1)	
56D-93-12111 (56D-93-12110)	Oil chart (Oil chart)	} Replacement	1 (1)	English
56D-93-14111 (56D-93-14110)	Oil chart (Oil chart)		1 (1)	German
56D-93-15111 (56D-93-15110)	Oil chart (Oil chart)		1 (1)	French
56D-93-19111 (56D-93-19110)	Oil chart (Oil chart)		1 (1)	Spanish
56B-93-12280	Plate	} Addition	DM2	English
56B-93-19280	Plate		DM2	German
56B-93-15280	Plate		DM2	French
56B-93-19280	Plate		DM2	Spanish

3A. Details of the modification (#1002 thru #1015)

In order to keep the grease charged into the hitch output side bearing initially at the factory from flowing out while the vehicle is in operation that leads to breakage of the bearing at an early stage owing to insufficient lubrication, the greasing method for the hitch output side bearing has been changed to the external greasing structure which allows periodical greasing from the outside. (Refer to Fig. 1 and 2.)

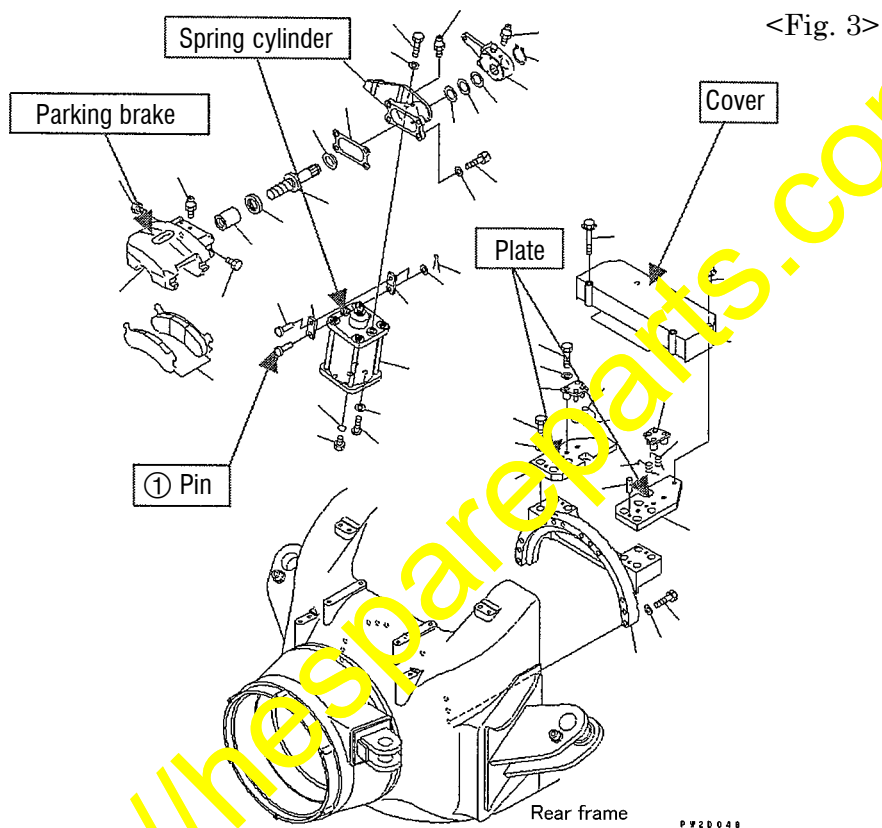


4A. Greasing interval and grease quantity (#1002 thru #1015)

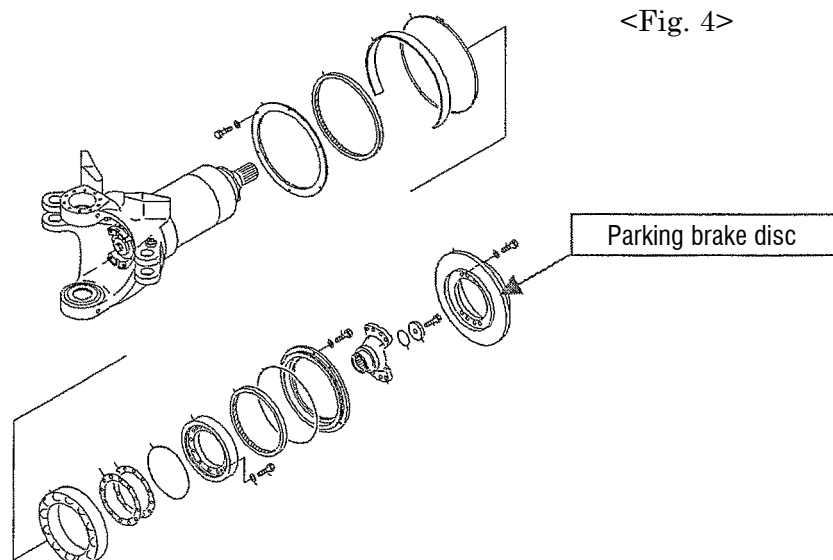
Greasing interval	Every 250 hours
Grease q'ty (approx.)	200 cc
Grease type	G2-LI

## 5A. Disassembly procedure (#1002 thru #1015)

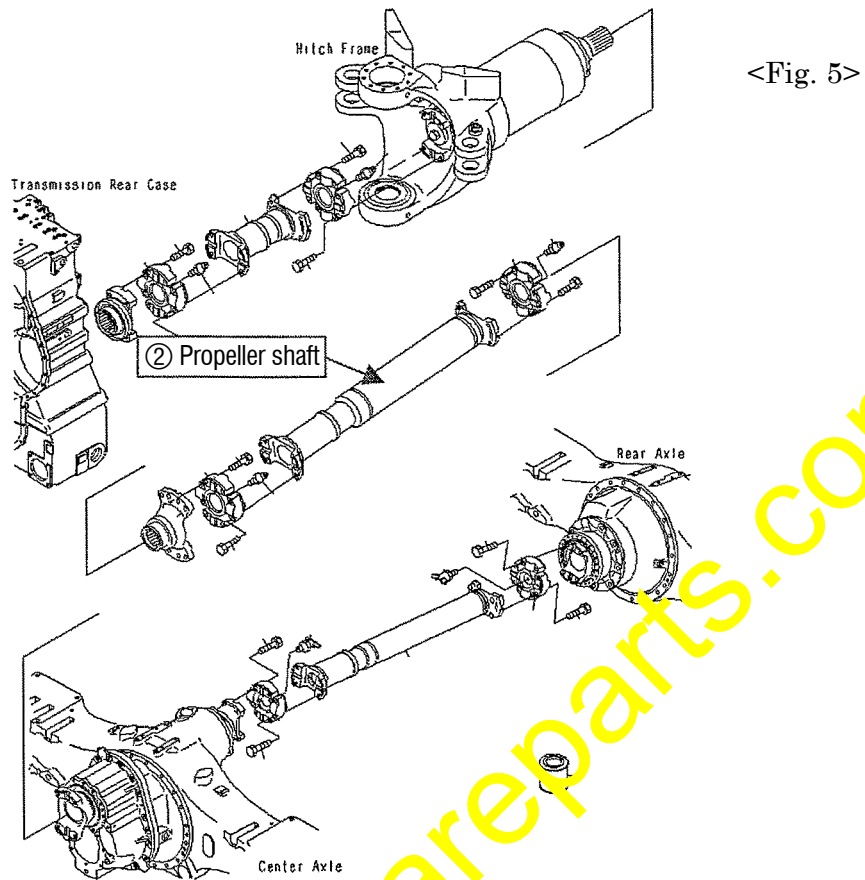
- 5A-1. Park the vehicle on a flat place and apply chocks to the tires.
- 5A-2. Raise the body, and for safety, insert the body stopper pins (both on the LH and RH sides).
- 5A-3. Wash the hitch, parking brake and propeller shaft areas.
- 5A-4. Start the engine and release the parking brake.
- 5A-5. Pull out the spring cylinder mounting pin ① shown in Fig. 3 to separate the link.
- 5A-6. Turn ON the parking switch and stop the engine.
- 5A-7. Remove the cover, plate and parking brake. (Refer to Fig. 3.)



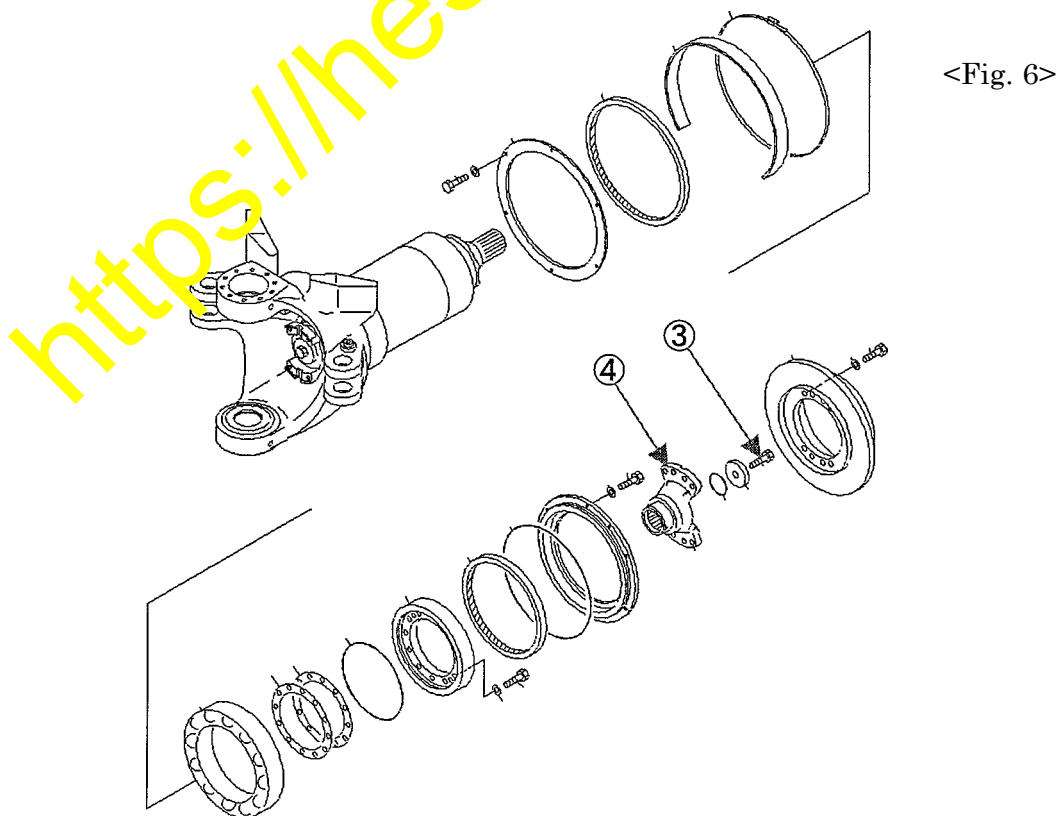
- 5A-8. Remove the parking brake disc. (Refer to Fig. 4.)  
(Keep it hanged on the propeller shaft.)



5A-9. Remove the propeller shaft ② connecting the hitch and the center axle.  
(Refer to Fig. 5.)

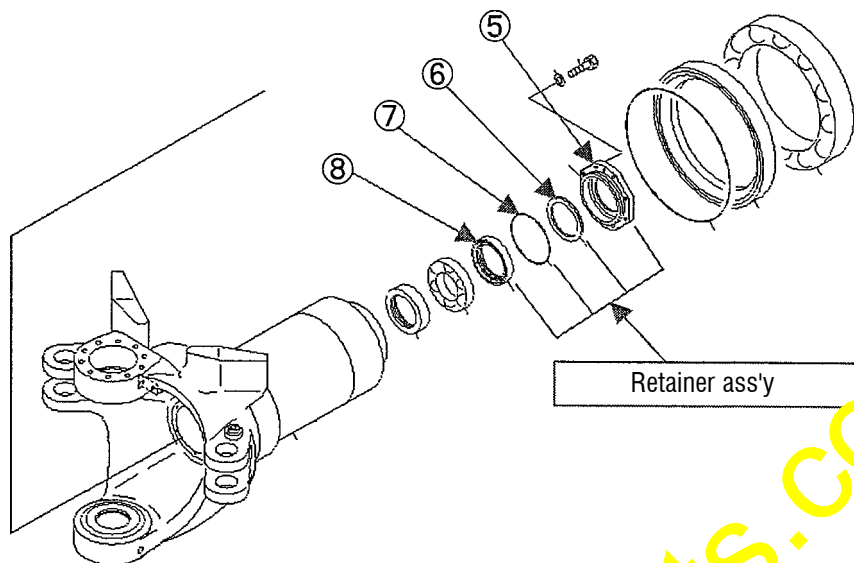


5A-10. Remove the center axle side end bolt (③) of the coupling mounting shaft of the hitch frame, then, remove the coupling (④). (Refer to Fig. 6.)



5A-11. Remove the retainer ass'y (⑤: retainer, ⑥: seal, ⑦: O-ring and ⑧: ring) on the output shaft side. (Refer to Fig. 7.)

<Fig. 7>

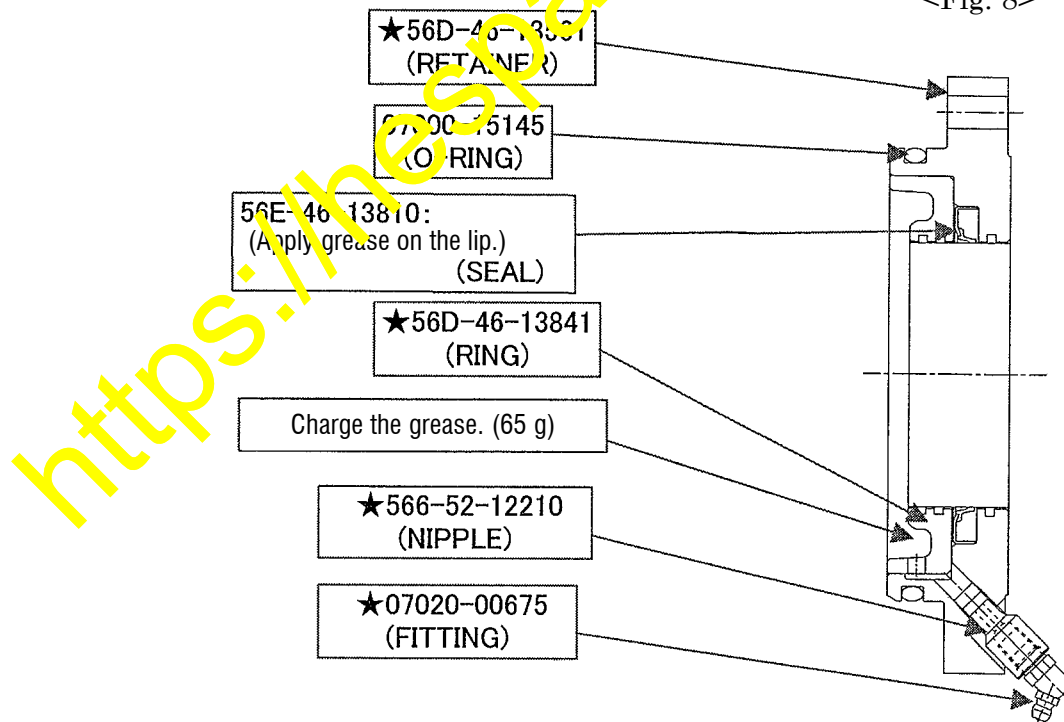


6A. Assembly procedure (#1002 thru #1015)

6A-1. Sub assemble the output shaft side retainer. (Refer to Fig. 8.)

Parts marked ★ are improved parts

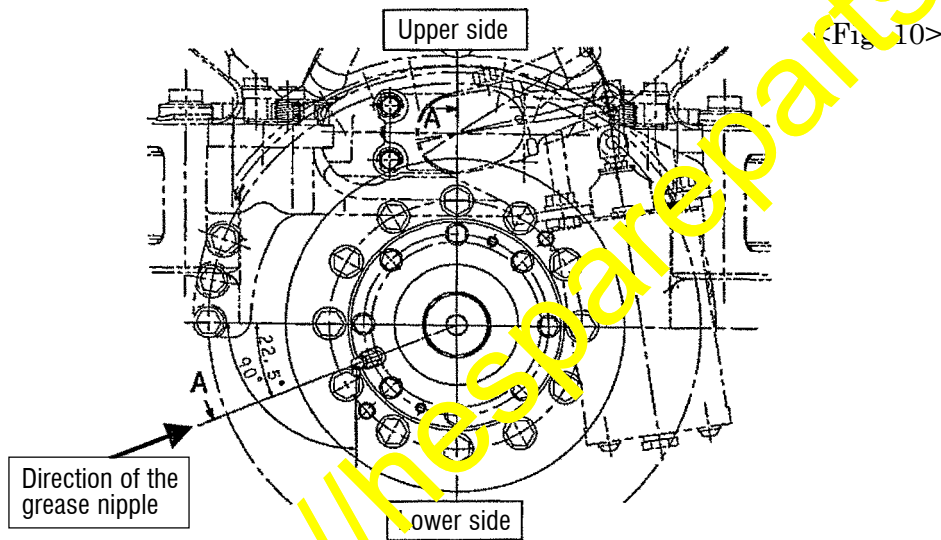
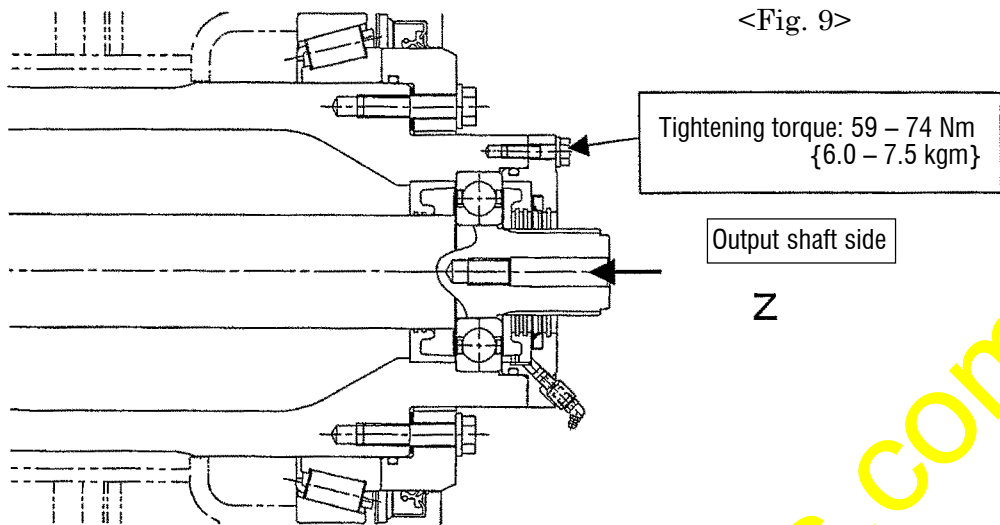
<Fig. 8>



Note: The type of the grease to be used should be G2-LI.

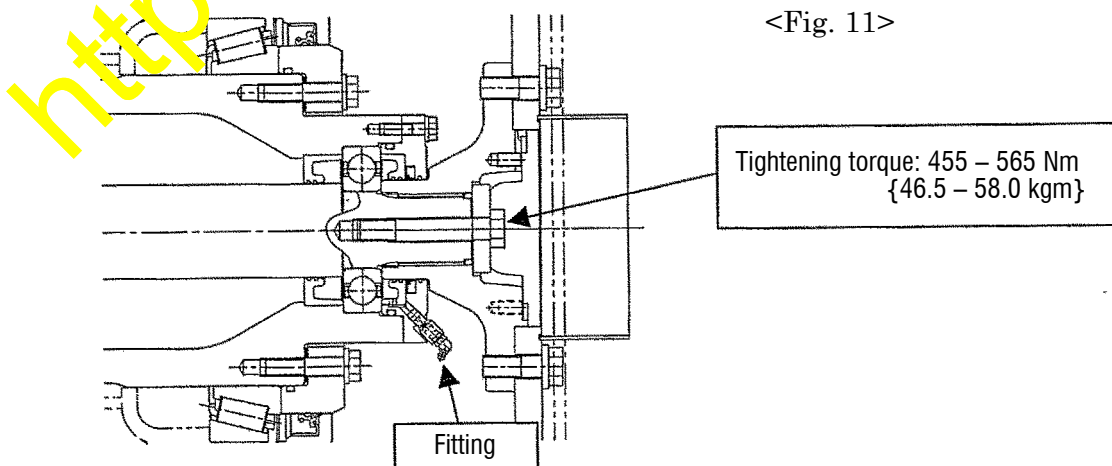
6A-2. Install the retainer ass'y. (Refer to Fig. 9.)

When installing the retainer, pay attention to its direction so that the grease fitting may be directed as shown in Fig. 10.



When viewed from the "Z" side

6A-3. Install the coupling. (Refer to Fig. 11.)



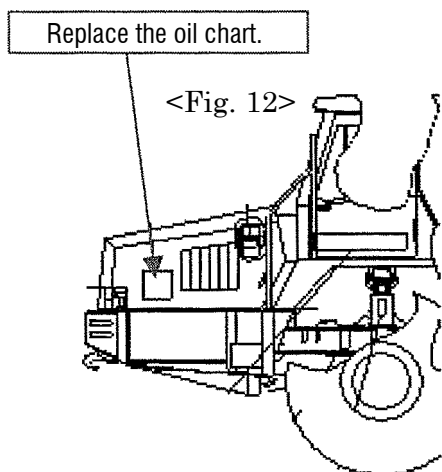
6A-4. Feed grease through the fitting which has been installed as per Section 6A-1.

Grease type : G2-LI

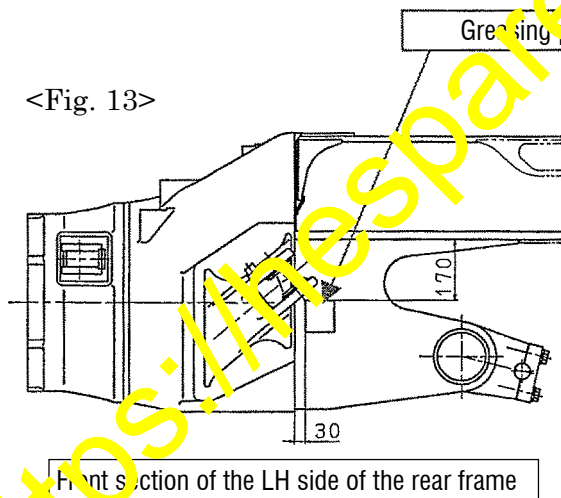
Grease quantity : About 200 cc



- 6A-5. Install the parking rake which has been removed as per Section 5A-7.  
Refer to the Shop Manual regarding the installation procedure.
- 6A-6. Install the propeller shaft connecting the hitch and the center axle.  
Refer to the Shop Manual regarding the installation procedure.
- 6A-7. Start the engine, remove the body stopper pins and lower the body. After that, stop the engine.
- 6A-8. Stick the oil chart and the hitch greasing point plate. (Refer to Fig. 12 and 13.)



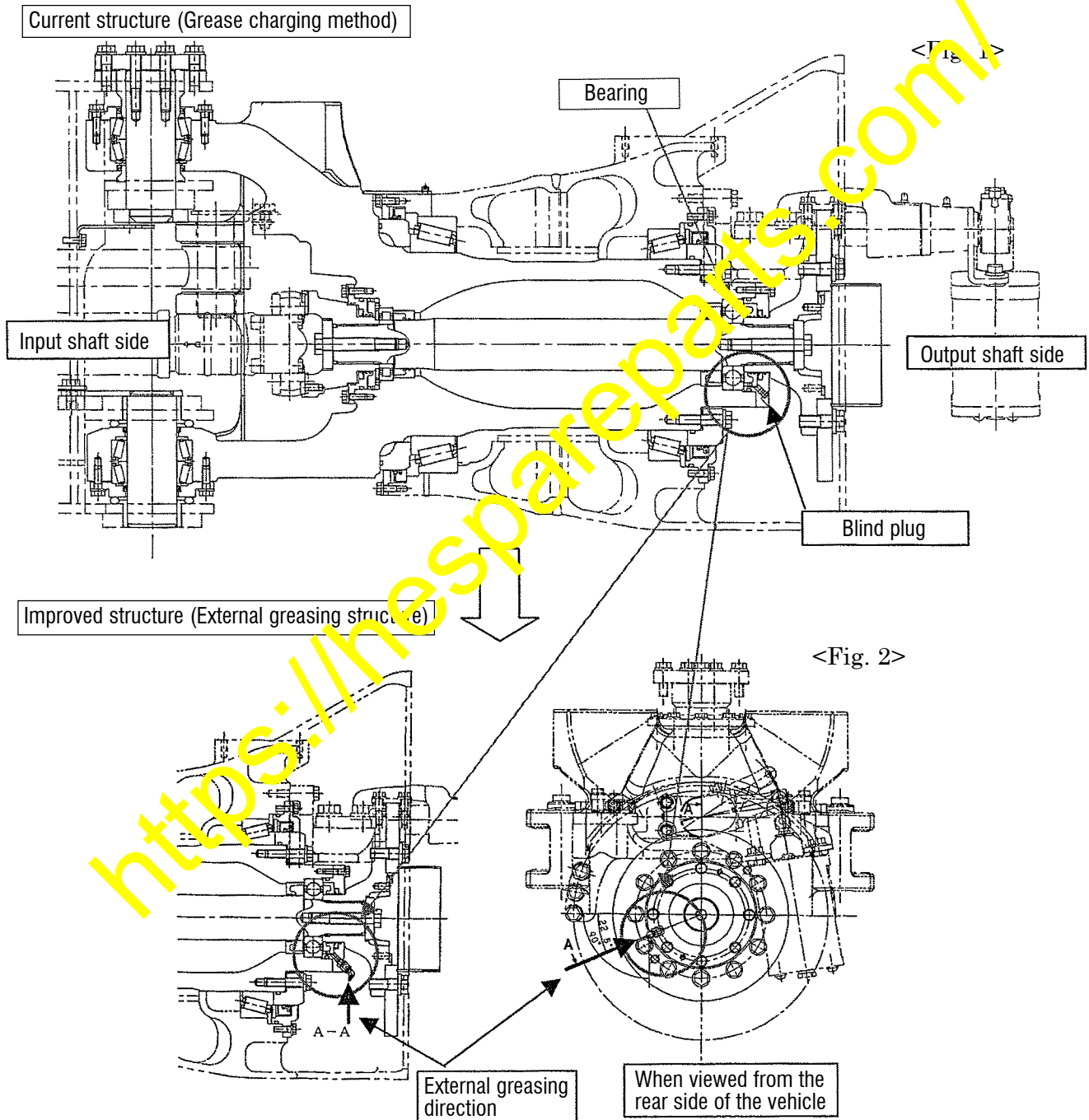
	Part No. of the current oil chart	Part No. of the new oil chart
English	56D-93-12110	56D-93-12111
German	56D-93-14110	56D-93-14111
French	56D-93-15110	56D-93-15111
Spanish	56D-93-19110	56D-93-19111



	Part No.
English	56B-93-12280
German	56B-93-14280
French	56B-93-15280
Spanish	56B-93-19280

3B. Details of the modification (#1016 thru #1030)

- (1) In order to keep the grease charged into the hitch output side bearing initially at the factory from flowing out while the vehicle is in operation that leads to breakage of the bearing at an early stage owing to insufficient lubrication, the greasing method for the hitch output side bearing has been changed to the external greasing structure which allows periodical greasing from the outside. (Refer to Fig. 1 and 2.)
- (2) With the current structure, the greasing hole is equipped with the blind plug. Therefore, it is possible to change the greasing structure to the external greasing structure by replacing the blind plug which is attached to the greasing hole with the nipple and the fitting. However, the direction of the hole is not being fixed properly, and direct it to the direction as per Fig. 2.

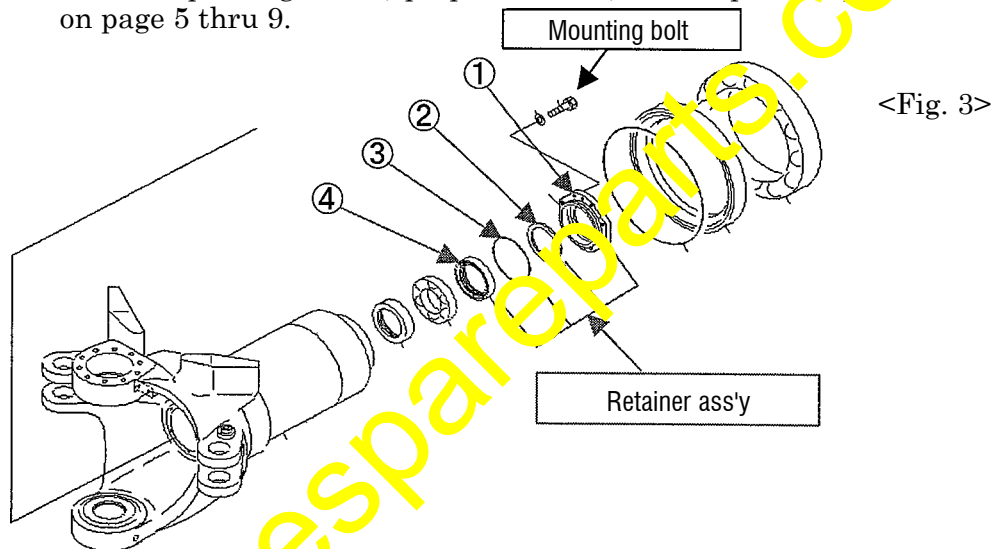


4B. Greasing interval and grease quantity (#1016 and after)

Greasing interval	Every 250 hours
Grease q'ty (approx.)	200 cc
Grease type	G2-LI

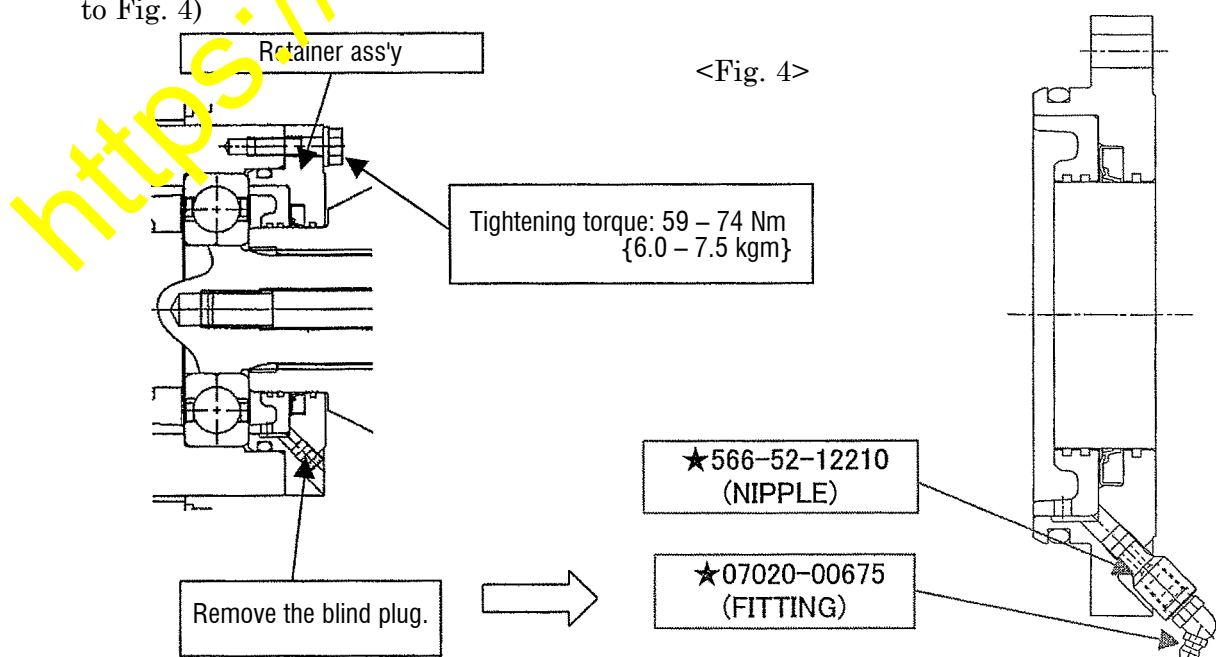
## 5B. Work procedure (#1016 and after)

- 5B-1. Park the vehicle on a flat place and apply chocks to the tires.
- 5B-2. Raise the body, and for safety, insert the body stopper pins (both on the LH and RH sides).
- 5B-3. Wash the hitch, parking brake and propeller shaft areas.
- 5B-4. (1) In case the direction of the blind plug on Fig. 1 coincides to the direction of that on Fig. 2, the procedure per Section 5B-5 below is not necessary and install the nipple and the fitting, and adjust the direction as per the instructions given in Fig. 4 and 6.
- (2) In case the direction of the blind plug on Fig. 1 does not coincides to the direction of that on Fig. 2, follow the procedure described below.
- 5B-5. Remove the mounting bolt for the retainer ass'y (①: retainer, ②: seal, ③: O-ring and ④: ring) on the output shaft side. (Refer to Fig. 3.)  
Then, turn the retainer ass'y without removing it to match the position of the blind plug to the direction per Fig. 6, and after that, fix the position by tightening the mounting bolt. (Refer to Fig. 5.)
- (Note) If the mounting bolt shown in Fig. 3 is difficult to remove, remove and reinstall the parking brake, propeller shaft, etc. as per the procedure described on page 5 thru 9.



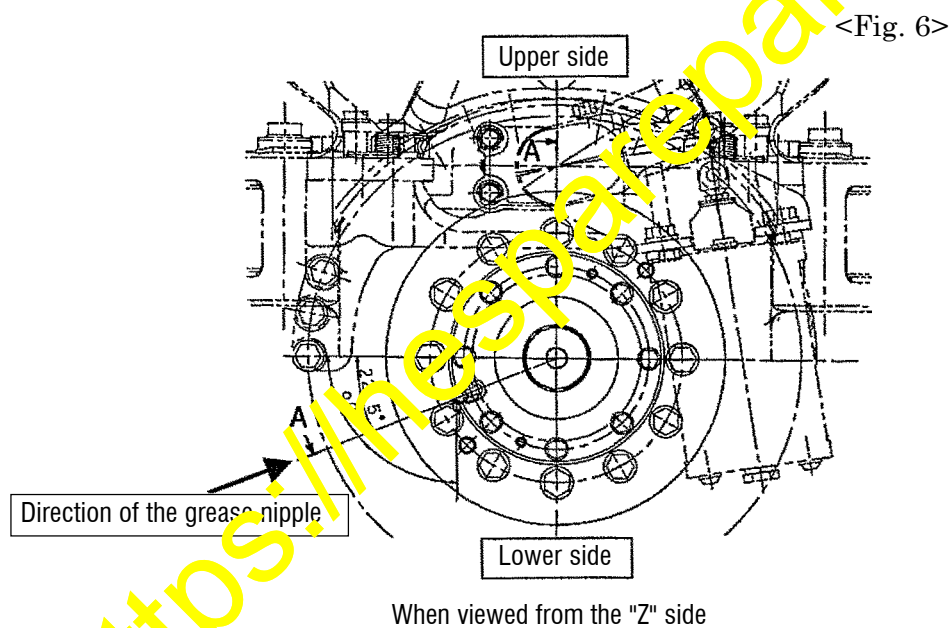
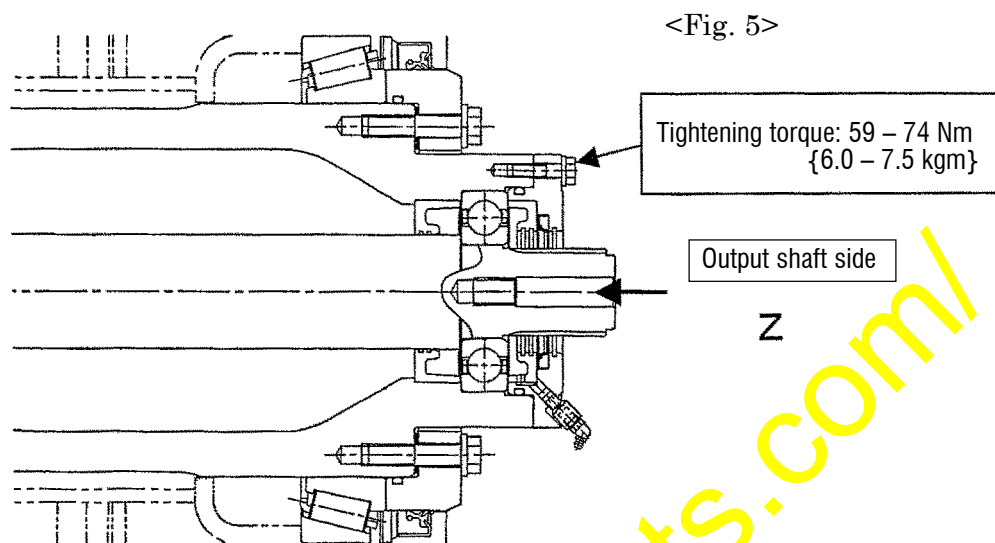
## 6B. Assembly procedure (#1016 and after)

- 6B-1. Remove the plug 07042-30108, then, install the ★ marked nipple and fitting. (Refer to Fig. 4)



Note: The type of the grease to be used should be G2-LI.

- 6B-2. Install the retainer ass'y using the mounting bolt. (Refer to Fig. 5.)  
 (When installing the retainer, pay attention to its direction so that the grease fitting may be directed as shown in Fig. 6.)



- 6B-3. Feed grease through the fitting which has been installed as per Section 6B-1.  
 Grease type : G2-LI  
 Grease quantity : About 200 cc
- 6B-4. Start the engine, remove the body stopper pins and lower the body. After that, stop the engine.