

PARTS & SERVICE NEWS

REF NO.	AT03011
DATE	Feb. 13, 2003
(C)	Page 1 of 8

SUBJECT: REPAIR PROCEDURE OF PARKING BRAKE ON HD465-7/HD605-7

PURPOSE: To introduce modification procedure to repair parking brake failure on HD465-7 and HD605-7 dump trucks

APPLICATION: HD465-7 Dump Trucks, Serial Nos. 7001 thru 7059
HD605-7 Dump Trucks, Serial Nos. 7001 thru 7028

FAILURE CODE: 2F00ME

DESCRIPTION:

1. Introduction

On the HD465-7 and HD605-7 dump trucks, owing to possible use of insufficiently chamfered brake cylinder, a gap may occur on the contact surface where O-ring is being used and the O-ring may be damaged to cause oil leakage thus making it unfeasible to feed the necessary hydraulic pressure to release the parking brake, resulting in a failure that the parking brake cannot be released after application.

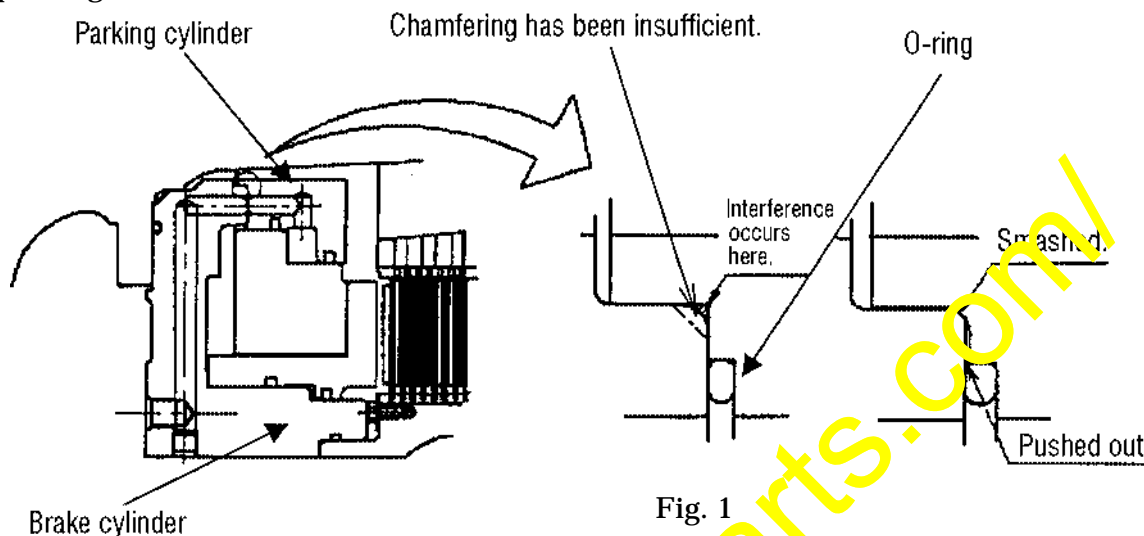
When the aforementioned failure occurs with any of these vehicles, make the modification being introduced in this Service News to repair the failure.

2. List of parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
569-22-70001 (569-22-70000)	Axle Ass'y (Axle Ass'y)	Rework or Replacement	1 (1)	R.H.
569-22-70201 (569-22-70200)	Final & Brake Ass'y (Final & Brake Ass'y)		1 (1)	
569-22-70301 (569-22-70300)	Final & Brake Ass'y (Final & Brake Ass'y)		1 (1)	L.H.
569-33-71112 (569-33-71111)	Cylinder (Cylinder)		2 (2)	Replacing parts ① are to be used or the current parts are to be additionally worked.
569-34-71111 (569-34-71110)	Cylinder (Cylinder)		2 (2)	Replacing parts ② are to be used or the current parts are to be additionally worked.
56A-46-13480 (56A-46-13480)	O-ring (O-ring)	Replacement	2 (2)	Consumable parts ③ to be replaced when making this modification. Refer to pages 7 and 8.
07000-15415 (07000-15415)	O-ring (O-ring)		2 (2)	Consumable parts ④ to be replaced when making this modification. Refer to pages 7 and 8.
07000-15320 (07000-15320)	O-ring (O-ring)		2 (2)	Consumable parts ⑤ to be replaced when making this modification. Refer to pages 7 and 8.
07000-15280 (07000-15280)	O-ring (O-ring)		2 (2)	Consumable parts ⑥ to be replaced when making this modification. Refer to pages 7 and 8.
07000-15430 (07000-15430)	O-ring (O-ring)		2 (2)	Consumable parts ⑦ to be replaced when making this modification. Refer to pages 7 and 8.
569-34-71440 (569-34-71440)	D-ring (D-ring)		2 (2)	Consumable parts ⑧ to be replaced when making this modification. Refer to pages 7 and 8.
569-34-71410 (569-34-71410)	D-ring (D-ring)		2 (2)	Consumable parts ⑨ to be replaced when making this modification. Refer to pages 7 and 8.
569-33-71400 (569-33-71400)	D-ring (D-ring)		4 (4)	Consumable parts ⑩ to be replaced when making this modification. Refer to pages 7 and 8.
07000-A2016 (07000-A2016)	O-ring (O-ring)		6 (6)	Consumable parts ⑪ to be replaced when making this modification. Refer to pages 7 and 8.
287-33-11160 (287-33-11160)	O-ring (O-ring)		2 (2)	Consumable parts ⑫ to be replaced when making this modification. Refer to pages 7 and 8.

3. Non-conformity phenomenon to which this modification is to be applied

This modification should be applied when the brake cylinder is insufficiently chamfered to cause interference with the parking cylinder, thus causing a gap between the contact surfaces of the brake cylinder and the parking cylinder to push out the O-ring through the gap to damage the O-ring resulting in hydraulic pressure drop to release the applied parking brake.



4. Measurement of the hydraulic pressure

To confirm that the malfunction of the parking brake in releasing is occurring from the internal cause of the parking brake, measure the hydraulic pressure.

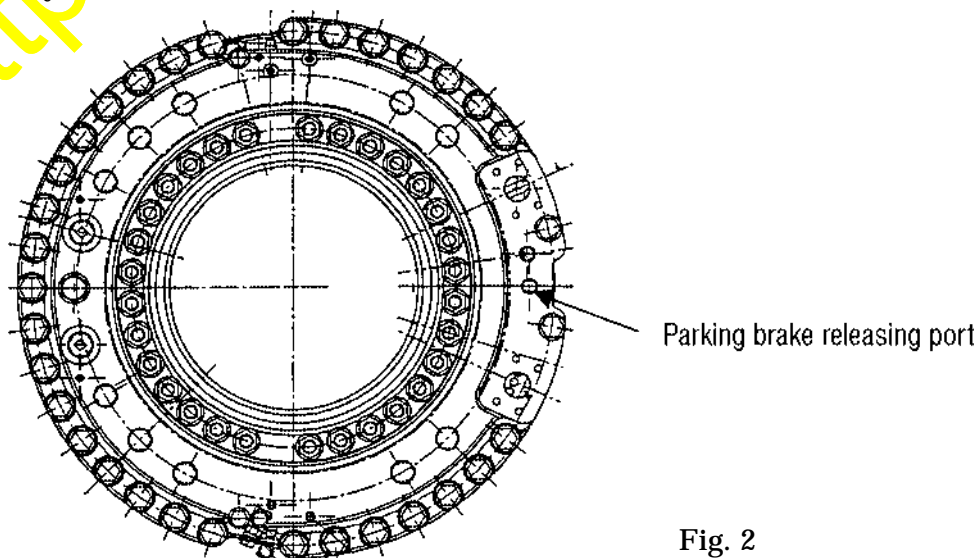
⚠ When measuring the hydraulic pressure, park the vehicle on a flat place and apply chocks underneath the tires in advance, since the parking brake may be released and the vehicle may start moving.

Measurement procedure

1. Apply a blind plug just before the parking brake releasing port to measure the hydraulic pressure.

Judgment standard: 7.27 MPa (73.8 kg/cm²) or more

In case the above hydraulic pressure is below the judgment standard, the failure cause is not the leakage inside the parking brake and perform trouble shooting for the hydraulic circuits.



5. Details of the modification

Replace the cylinders with the improved cylinders or make the additional working to the current cylinders.

(1) When replacing the cylinders with the improved cylinders

Replace the parking cylinder and the brake cylinder to the improved cylinders with which chamfering has been made sufficiently.

	Part No. of the current parts	Part No. of the improved parts
Parking cylinder	569-34-71110	569-34-71111
Brake cylinder	569-33-71111	569-33-71112

<Identification of the improved parts>

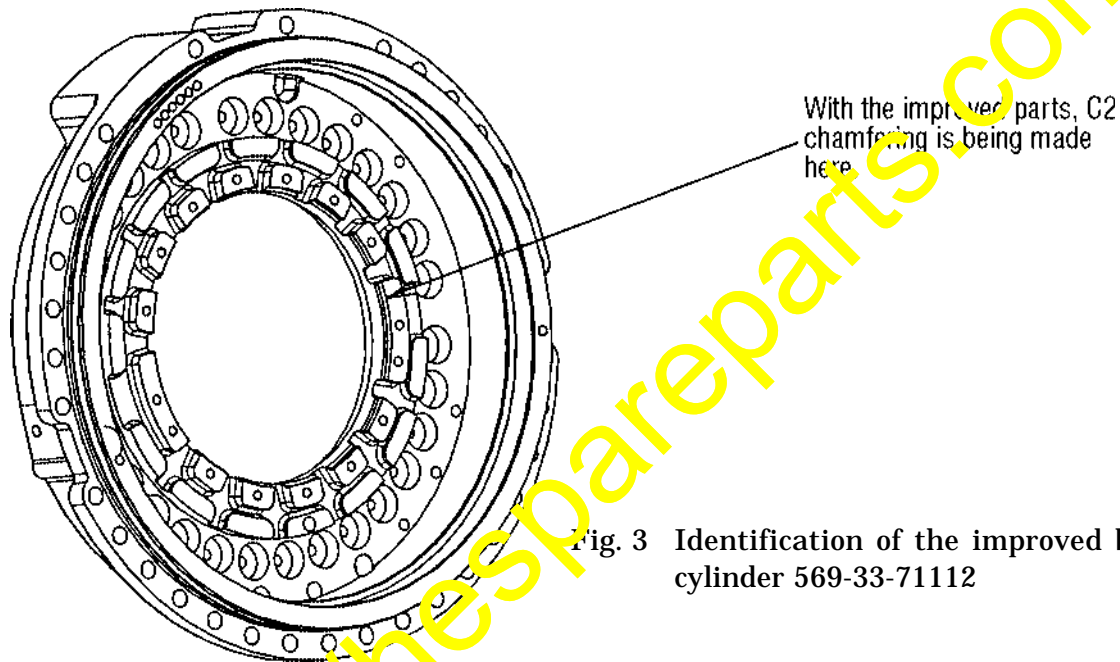


Fig. 3 Identification of the improved brake cylinder 569-33-71112

With the improved parts, C1.5 chamfering is being made here.

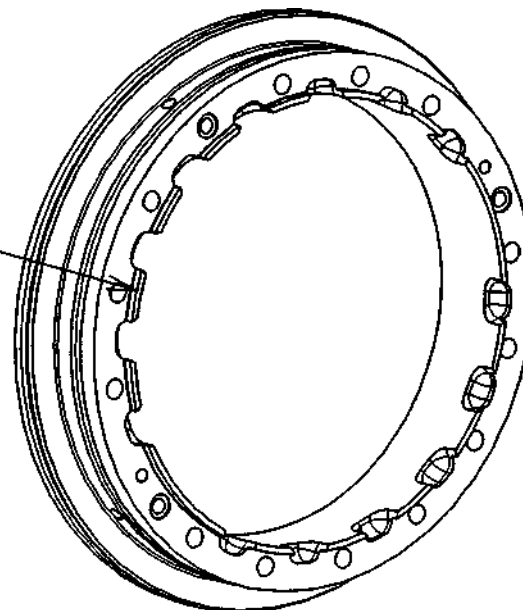
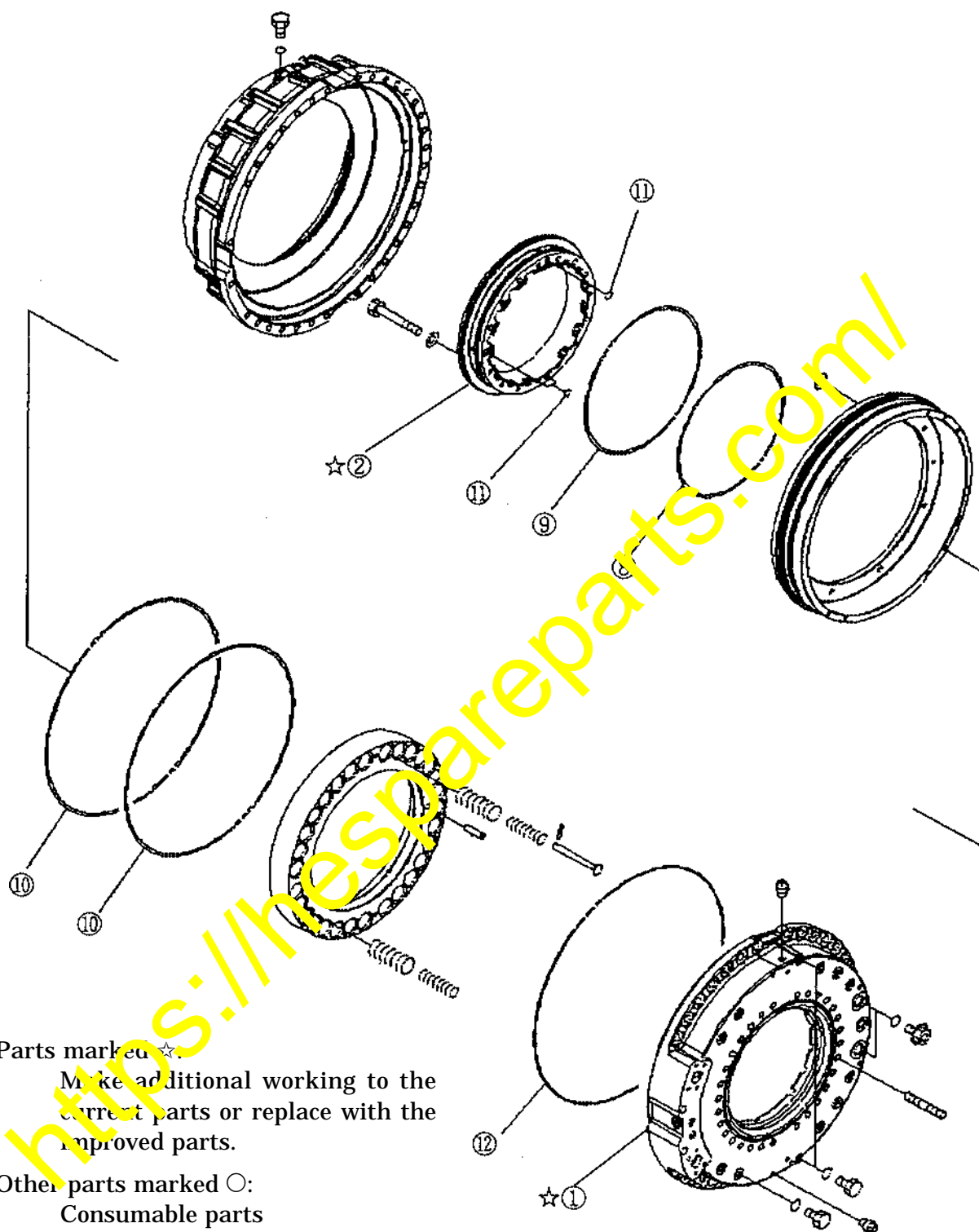


Fig. 4 Identification of the improved parking cylinder 569-34-71111

(2) When making additional working to the current cylinders

Make the additional working to the current cylinders as per the additional working procedure indicated on page 7.



Parts marked ☆:

Make additional working to the current parts or replace with the improved parts.

Other parts marked ○:

Consumable parts

Fig. 5

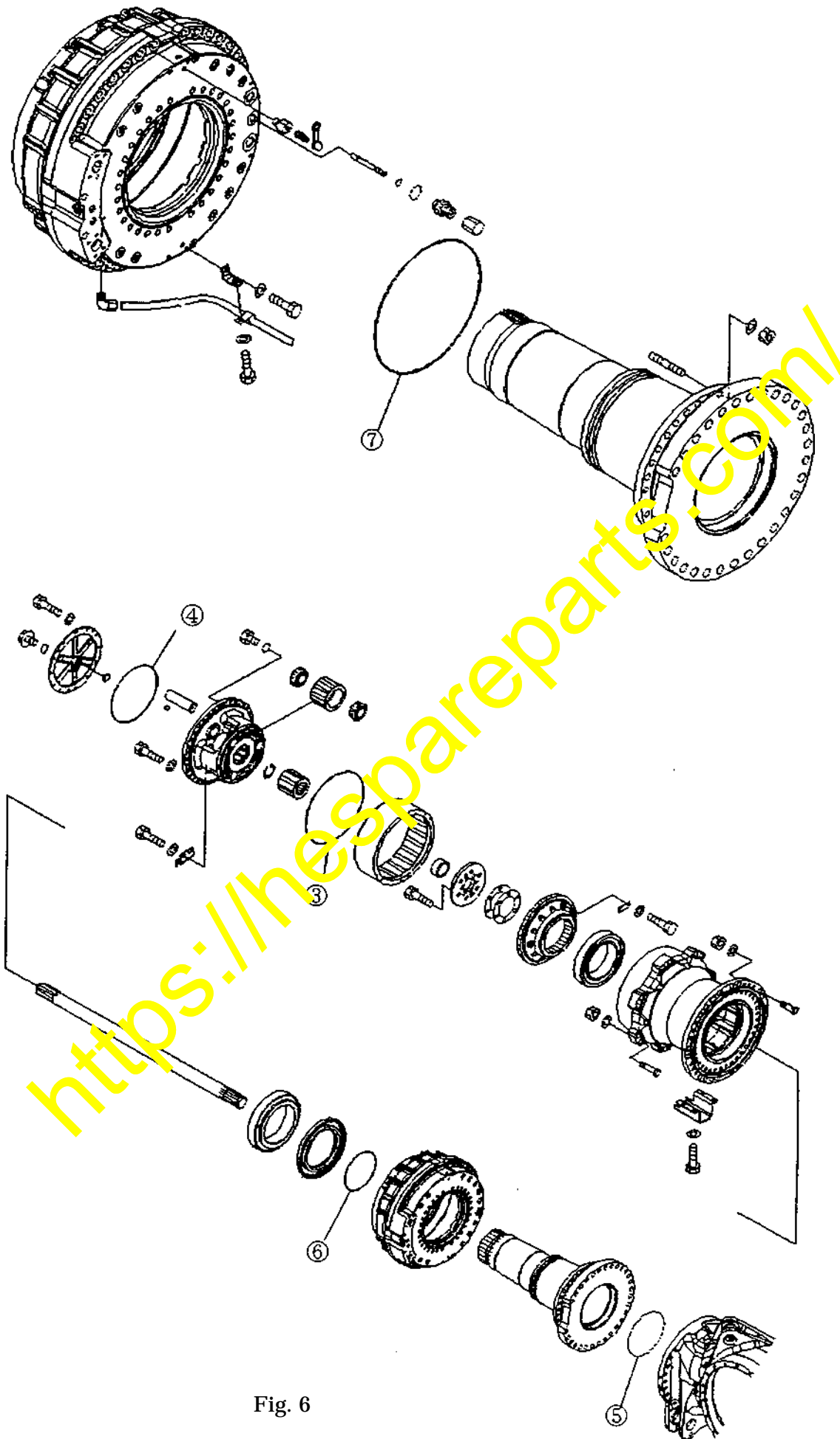


Fig. 6

6. Modification procedure

6.1 Disassembly

- (1) Referring to the Section "Installation and Removal of Final Drive Ass'y • Rear Brake Ass'y • Parking Brake Ass'y" in the Shop Manual, remove the final drive ass'y, rear brake ass'y and parking brake ass'y.
- (2) Referring to the Section "Disassembly and Assembly of Final Drive Ass'y • Rear Brake Ass'y • Parking Brake Ass'y" in the Shop Manual, disassemble the parking brake ass'y.

⚠ It is not necessary to remove the Tool "J1" fastening the outer gear and the wheel hub.

⚠ It is not necessary to disassemble the damper, disc, plate, spacer, outer gear and inner gear.

6.2 Replacing the cylinders or making additional working to the cylinders

Replace the cylinders to 569-33-71112 and 569-34-71111.

When making additional working to the cylinders, add chamfering to the cylinders as per the instructions given in Fig. 7 and Fig. 8. After finishing the additional working, wash the parts sufficiently so that no chips may remain on the surface.

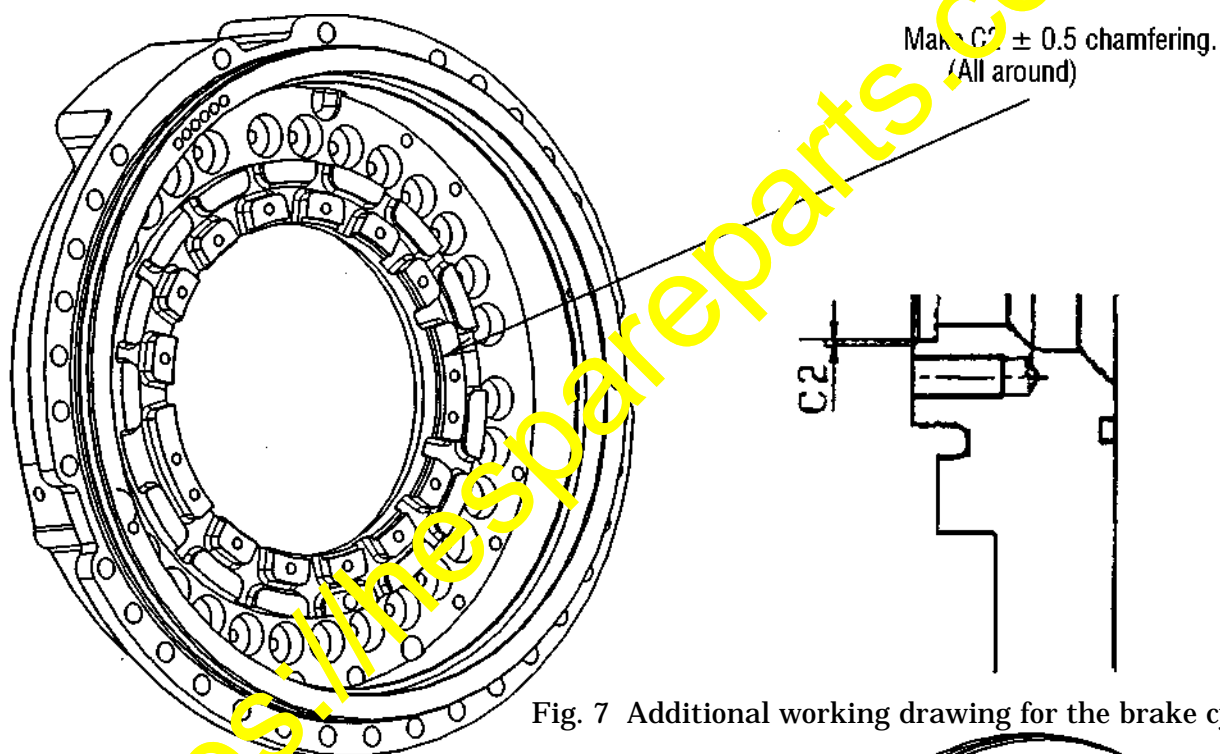


Fig. 7 Additional working drawing for the brake cylinder

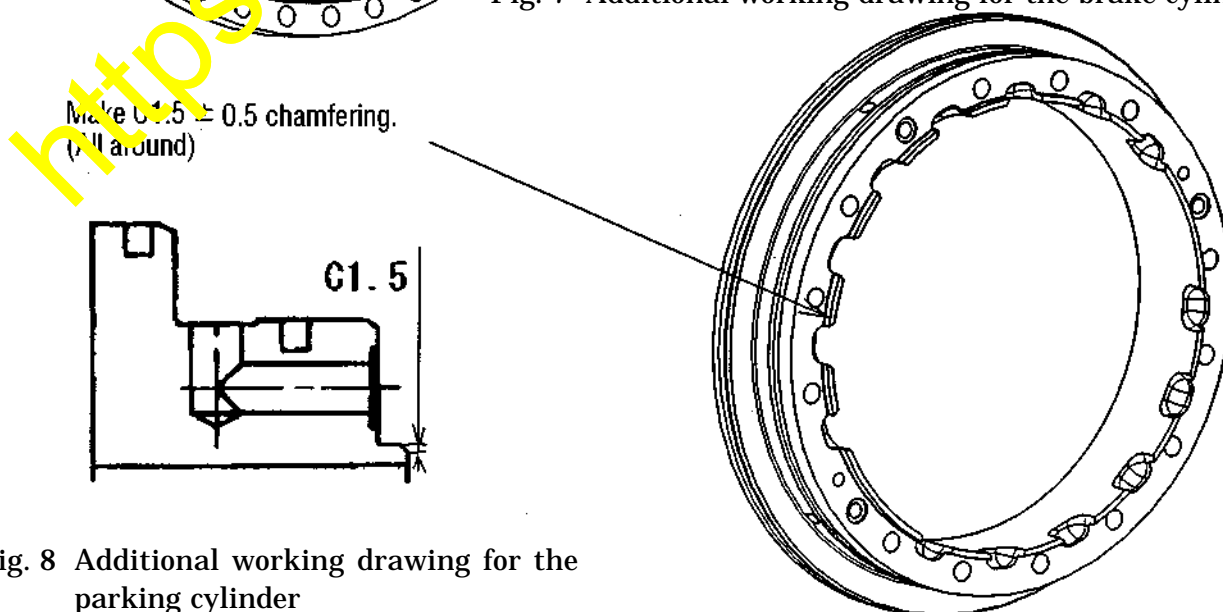


Fig. 8 Additional working drawing for the parking cylinder

6.3 Assembly

- (1) Referring to the Section "Disassembly and Assembly of Final Drive Ass'y • Rear Brake Ass'y • Parking Brake Ass'y" in the Shop Manual, assemble the parking brake ass'y.

MOST IMPORTANT

▲ Since the parking cylinder mounting bolt is receiving reaction force of the spring, tightening torque will not be stabilized at the specified level and repeat tightening the parking cylinder mounting bolt as many times as necessary until the tightening torque becomes sufficient.

- (2) Referring to the Section "Installation and Removal of Final Drive Ass'y • Rear Brake Ass'y • Parking Brake Ass'y" in the Shop Manual, install the final drive ass'y, rear brake ass'y and parking brake ass'y.
- (3) Bleed air from the parking brake and the service brake.

6.4 Inspections

Measure the hydraulic pressure at the parking brake releasing port to make sure the pressure is 7.27 MPa (73.8 kg/cm²) or more.

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