

# PARTS & SERVICE NEWS

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(C)

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**SUBJECT:** INTRODUCTION OF IMPROVED SUSPENSION PACKING ON HD325-5

**PURPOSE:** To introduce improved suspension packing for use on different dump truck models (and scraped out leakage evaluation criteria.)

**APPLICATION:** HD325-5 Dump Trucks, Serial Nos. 4275 thru 4293 (Front, Rear)  
 HD325-6 Dump Trucks, Serial Nos. 5084 thru 5835 (Front, Rear)  
 HD405-6 Dump Trucks, Serial Nos. 1001 thru 1122 (Front, Rear)  
 HD465-5 Dump Trucks, Serial Nos. 4140 thru 4734 (Front)  
 HD605-5 Dump Trucks, Serial Nos. 1001 thru 1057 (Front)

**FAILURE CODE:** 5A0099

**DESCRIPTION:**

1. Introduction

Oil film exists between the sliding surfaces of the packing and piston rod of a suspension cylinder for lubrication purposes. Such oil film may be scraped out through the dust seal while the suspension cylinder is making repetitive sliding movements.

This Service News will introduce criteria to determine whether such scraping out of oil is to be repaired or not and the improved packing necessary for repair of scraped out leakage, as well as the actual modification procedures.

Meanwhile, when making this modification on vehicles carrying the serial numbers prior to the applicable numbers listed above, supplement the spacer (566-50-42160) simultaneously. Regarding the supplementation procedure for the spacer, refer to the previous issue of Service News No. A020174.

## 2. List of parts

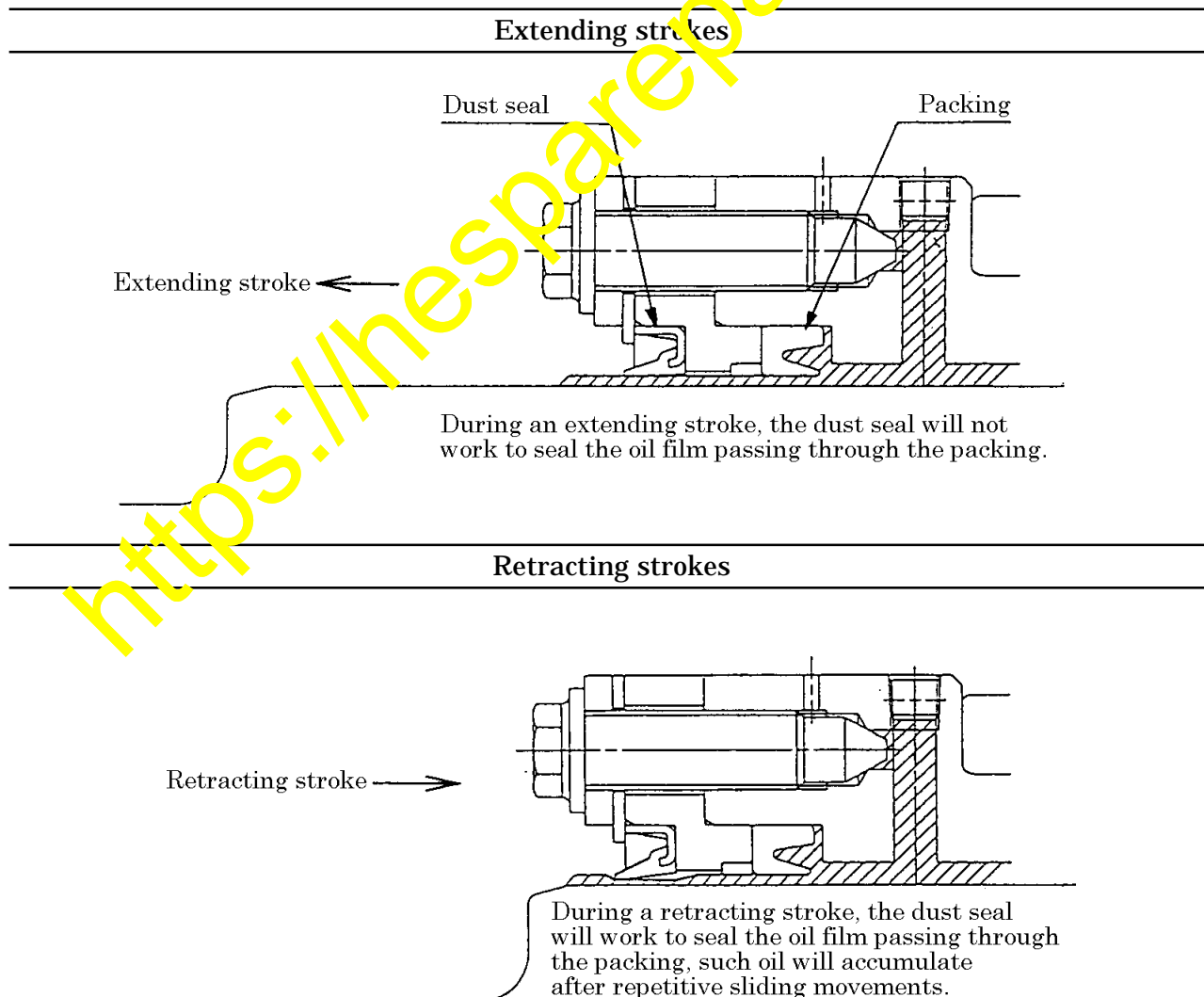
Part No.	Part Name	Q'ty	Remarks
566-50-71003 (566-50-71002)	Suspension A. (Suspension A.)	2 (2)	Front standard suspension for the HD325-6 and HD405-6
566-50-73003 (566-50-73002)	Suspension A. (Suspension A.)	2 (2)	Front Auto suspension for the HD325-6 and HD405-6
566-50-75001 (566-50-75000)	Suspension A. (Suspension A.)	2 (2)	Front Auto suspension for the 4WD HD325-6
566-50-77001 (566-50-77000)	Suspension A. (Suspension A.)	2 (2)	Front Standard suspension for the 4WD HD325-6
566-50-72004 (566-50-72003)	Suspension A. (Suspension A.)	2 (2)	Rear Standard suspension for the HD325-6 and HD405-6
566-50-74005 (566-50-74004)	Suspension A. (Suspension A.)	2 (2)	Rear Auto suspension for the HD325-6 and HD405-6
569-50-61005 (569-50-61004)	Suspension A. (Suspension A.)	2 (2)	Front standard suspension for the HD465-5 and HD605-5
569-50-63006 (569-50-63005)	Suspension A. (Suspension A.)	2 (2)	Front Auto suspension for the HD465-5 and HD605-5
569-88-62001 (569-88-62000)	Suspension A. (Suspension A.)	2 (2)	Front standard ABS for the HD465-5 and HD605-5
569-88-63002 (569-88-63001)	Suspension A. (Suspension A.)	2 (2)	Front Auto ABS for the HD465-5 and HD605-5
566-50-42152 (566-50-42151)	Packing (Packing)	4 (4)	HD325-5, HD325-6, HD405-6
566-50-42152 (566-50-42151)	Packing (Packing)	2 (2)	HD465-5, HD605-5

### 3. What is scraped out leakage?

Oil film exists between the sliding surfaces of the packing and piston rod of a suspension cylinder for lubrication purposes. During retraction processes of the suspension cylinder, since the dust seal still continues to seal the oil film that has passed through the sliding surface of the packing, oil accumulates in the sliding section of the rod by repetition of extending and retracting movements of the rod and this phenomenon is called “scraped out leakage”.

Different from oil leakage occurring from other causes such as by catching foreign substances, rusting of the rod or imperfect sealing of the packing due to deterioration of the packing material, the scraped out leakage will not affect the function of the suspension cylinder.

Although the current packing is not at all defective in its sealing performance as the sealing means for the suspension cylinder, since the scraped out leakage may give unpleasant impressions to the customer when dust and mud adheres on the scraped out leakage oil, we are introducing an improved packing that works to suppress the scraped out leakage. (Nonetheless, this does not mean that the scraped out leakage can be eliminated by this improved packing but that the new packing works to suppress the scraped out leakage.)

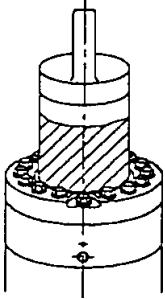
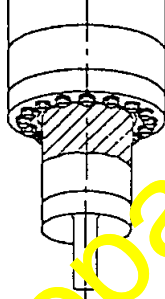
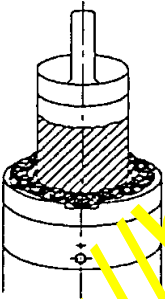
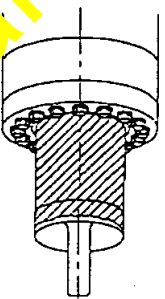
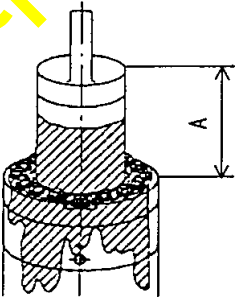
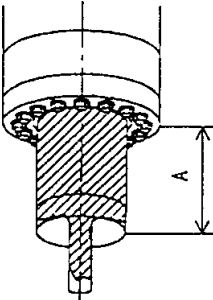


4. Determination criteria for evaluating scraped out leakage

Types of oil leakage through the sliding section of the piston rod of the suspension cylinder on dump trucks can be categorized to one occurring from scraped out leakage and one occurring from catching of foreign substances.

This Service News will outline the determination criteria for the degrees of the scraped out leakage and the remedy methods for respective degrees of the scraped out leakage. Make full use of these criteria when determining the degrees of the scraped out leakage from the suspension cylinder and when servicing the vehicles.

(The ranks "B" through "D" represent typical circumstances of scraped out leakage. In cases of the rank "B" and rank "C", meanwhile, clean adhered oil and mud and observe the progress for the time being.)

Ranks	Rod-up suspension cylinders	Rod-down suspension cylinders	Remedies
A	No leakage is occurring	No leakage is occurring	<p>Scraped out leakage to these degrees will not affect the function of the suspension cylinder. Clean adhered oil and mud and observe the progress for the time being.</p> <p>When the oil quantity remaining inside the cylinder is found to have decreased (when the dimension "A" namely, the distance between the shoulder of the rod head and the upper surface of the flange, has decreased to a level less than the specified value) by progress of scraped out leakage of oil or by some other causes, replace the packing and seal with new counter parts.                      ※ As for the specified value of the dimension "A", refer to the Shop Manual of respective vehicle models.</p>
B	 The sliding surface of the rod is wet by oil.	 The sliding surface of the rod is wet by oil.	
C	 Although the upper surface of the flange is wet by oil and though dust and mud are adhering to the oil, continuous leakage of oil is not occurring.	 Although the plated surface of the rod is wet by oil and though dust and mud are adhering to the oil, continuous leakage of oil is not occurring.	
D	 ※ Measure the dimension "A" after releasing the nitrogen gas. The surfaces of the cylinder are wet by oil and dust and mud are adhering there. Also, leakage of oil is occurring continuously.	 ※ Measure the dimension "A" after releasing the nitrogen gas. The surfaces of the rod pin joint are wet by oil and dust and mud are adhering there. Also, leakage of oil is occurring continuously.	
E	Oil drops to the ground from the surface of the cylinder.	Oil drops to the ground from the surfaces of the rod pin joint.	

## 5. Contents of the modification

The cross-sectional shape of the packing has been modified and the molding method for the packing has been changed to improve its durability.

### 5-1. Identification methods for the improved packing and the current packing

The improved packing and the current packing are interchangeable for installation. Identify the improved packing and the current part according to the designations given in Table 1 below.

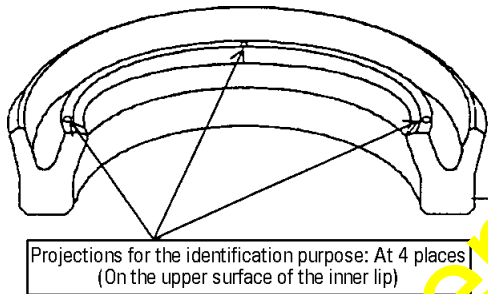

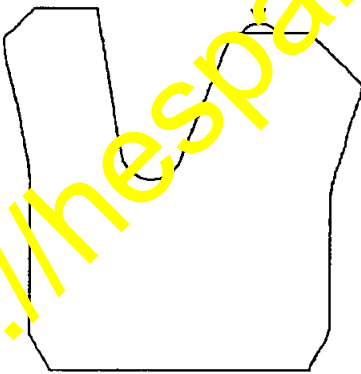
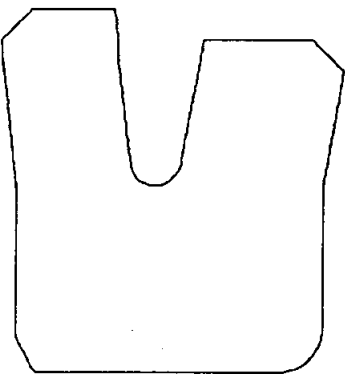
	New: Improved packing	Current: Current packing
Part numbers	566-50-42152	566-50-42151
External shapes		
Cross-sectional shapes		

Table 1

### 5-2. Replacement procedures for the packing

- (1) Replace the packing referring to the Section "Disassembly and assembly of suspension cylinder" in the Shop Manual.
- (2) As for the factory estimation of the standard man hour necessary for this modification work, water proofing of the cylinder, flange mounting bolt tightening torque ranges, etc., refer to the Service News "AT96241A" (Repair of oil leakage from suspension cylinder on dump trucks).