

PARTS & SERVICE NEWS

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DATE	Sep. 11, 2003
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This PARTS & SERVICE NEWS supersedes the previous issue No. AT02089 dated Aug. 8, 2002 which should be discarded.

SUBJECT: REPAIR PROCEDURE OF A/C COMPRESSOR ADJUSTMENT ROD & PULLEY COVER ON HD325, 405-6

PURPOSE: \triangle To introduce modification procedure to repair breakage of the drive belt adjusting rod and cracks in the air compressor pulley cover and in the bracket mounting bolts on HD325-6 and HD405-6 dump trucks

APPLICATION: HD325-6 Dump Trucks, Serial Nos. 6001 thru ~~6102~~ 6187
 HD405-6 Dump Trucks, Serial Nos. 2001 thru ~~2052~~ 2086

FAILURE CODE: 874AFF

DESCRIPTION:

1-1. Introduction

\triangle There is a possibility of occurrence of cracks in the compressor drive belt adjusting rod of the air conditioner, in the pulley cover and in the bracket mounting bolts on the HD325-6 and HD405-6 dump trucks by the influence of the engine vibrations and of the operating conditions of these vehicles. Implement the modification following the procedures being described in this Service News when the above failures occur or to prevent occurrence of the above failures.

1-2. Revised places:

20 places \triangle	Sep. 11, 2003	<ul style="list-style-type: none"> • Took necessary measures to prevent breakage of the hinge bolt. • Added new and current parts information.
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2. List of parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
566-07-6A944 (566-07-6A942)	Bracket (Bracket)	} Replacement	1 (1)	HD325-6: #6001 – #6040 HD405-6: #2001 – #2022
566-07-6A944 (566-07-6A943)	Bracket (Bracket)		1 (1)	HD325-6: #6041 – #6102 HD405-6: #2023 – #2052
566-07-6A124 (566-07-6A123)	Bracket (Bracket)		1 (1)	
566-07-6A570 (6222-83-6740)	Rod (Rod)		1 (1)	
6240-81-8670 (6150-82-8690)	Plate (Plate)		1 (1)	
01580-11613 (01580-11411)	Nut (Nut)		2 (2)	
01010-81275 (01010-81270)	Bolt (Bolt)		1 (1)	
566-07-6A532 (566-07-6A531)	Cover (Cover)		1 (1)	
01010-81020	Bolt		1	
01643-31032	Washer		1	
566-07-6A550	Bracket	} Addition	1	
01010-80890	Bolt		1	

Part No.	Part Name	Purpose of part	Q'ty	Remarks
566-07-6A945 (566-07-6A942)	Bracket (Bracket)	} Replacement	1 (1)	HD325-6: #6001 – #6040 HD405-6: #2001 – #2022
566-07-6A945 (566-07-6A943)	Bracket (Bracket)		1 (1)	HD325-6: #6041 – #6102 HD405-6: #2023 – #2052
566-07-6A945 (566-07-6A944)	Bracket (Bracket)		1 (1)	HD325-6: #6103 – #6187 HD405-6: #2053 – #2086
566-07-6A125 (566-07-6A123)	Bracket (Bracket)		1 (1)	HD325-6: #6001 – #6102 HD405-6: #2001 – #2052
566-07-6A125 (566-07-6A124)	Bracket (Bracket)		1 (1)	HD325-6: #6103 – #6187 HD405-6: #2053 – #2086
566-07-6A570 (6222-83-6740)	Rod (Rod)		1 (1)	
6240-81-8670 (6150-82-8690)	Plate (Plate)		1 (1)	
01580-11613 (01580-11411)	Nut (Nut)		2 (2)	

Part No.	Part Name	Purpose of part	Q'ty	Remarks
01010-81275 (01010-81270)	Bolt (Bolt)	} Replacement	1 (1)	
566-07-6A532 (566-07-6A531)	Cover (Cover)		1 (1)	
01010-81020	Bolt	} Addition	1	
01643-31032	Washer		1	
566-07-6A550	Bracket		1	
01010-80890	Bolt		2	
566-07-6A580	Collar		1	
01580-11210	Nut		1	
01643-31232	Washer		1	
125-70-21210	Bolt	1	Replace to new parts.	

3. Contents of the modification

\triangle The following improvements are being made to increase the durability of the adjusting rod, pulley cover and mounting bolt..

A. Contents of the modification of the adjusting rod

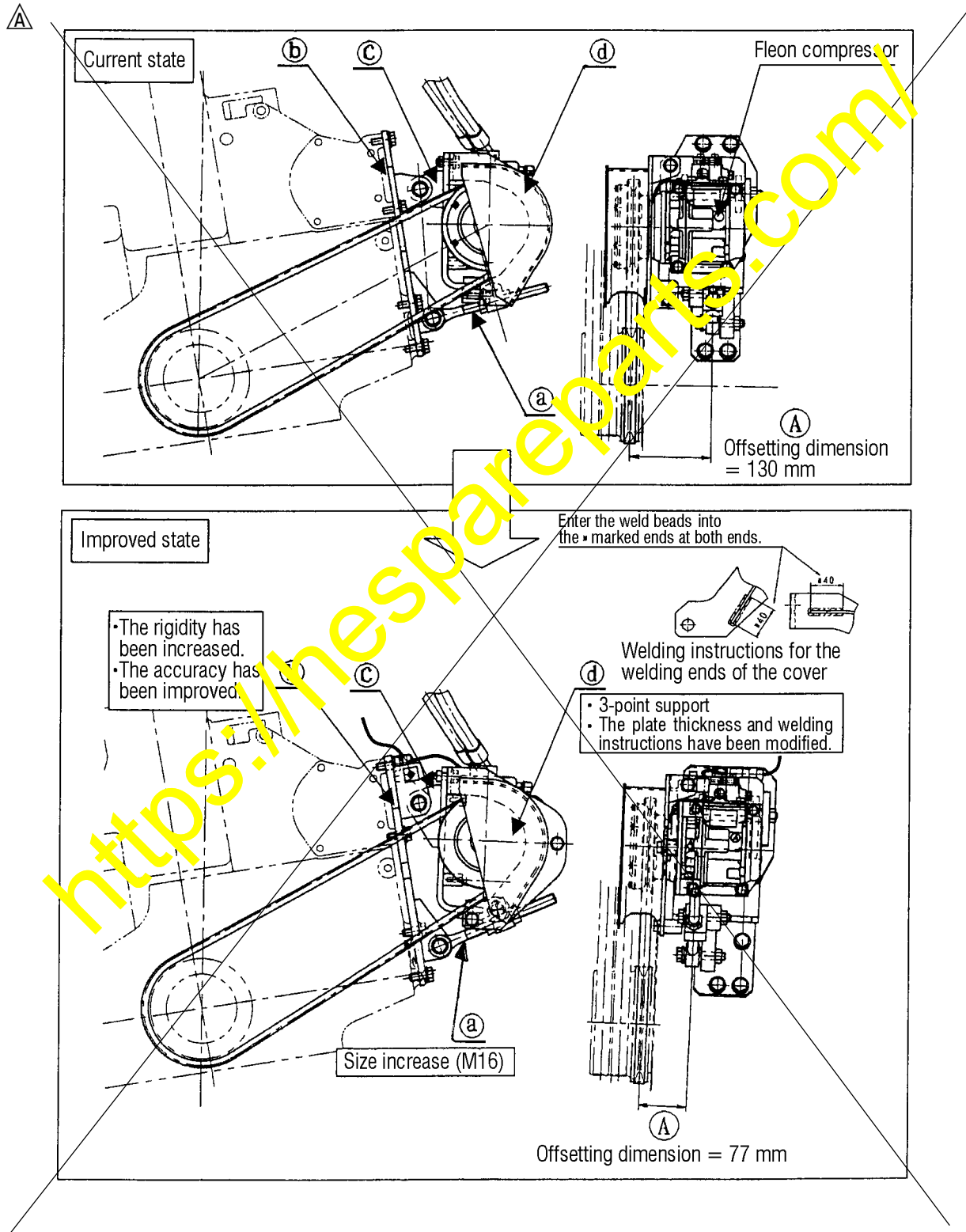
The bending stress being applied to the adjusting rod is to be reduced to increase the durability of the adjusting rod.


- 1) The offsetting dimension between the adjusting rod and the drive belt is to be reduced. (Dimension \textcircled{A} 43 mm \rightarrow 77 mm)
- 2) The adjusting rod \textcircled{a} is to be reinforced. (Size increase: M14 \rightarrow M16)
- 3) The rigidity of the brackets \textcircled{b} and \textcircled{c} is to be increased. (The cross-sectional shape is to be changed and the sheet thickness is to be increased t 9 \rightarrow t 12)
- 4) The accuracy of the brackets \textcircled{b} and \textcircled{c} is to be improved. (Tolerance for the shape is to be additionally instructed.)

B. Contents of the modification of the adjusting rod


The influence of the vibrations of the engine is to be reduced to increase the durability of the pulley cover.

- 1) The supporting method for the pulley cover $\text{\textcircled{a}}$ is to be changed from the current 2-point support method to a 3-point support method.
- 2) The strength of the pulley cover is to be increased.
 - Sheet thickness increase: $t\ 2.3 \rightarrow t\ 3.2$

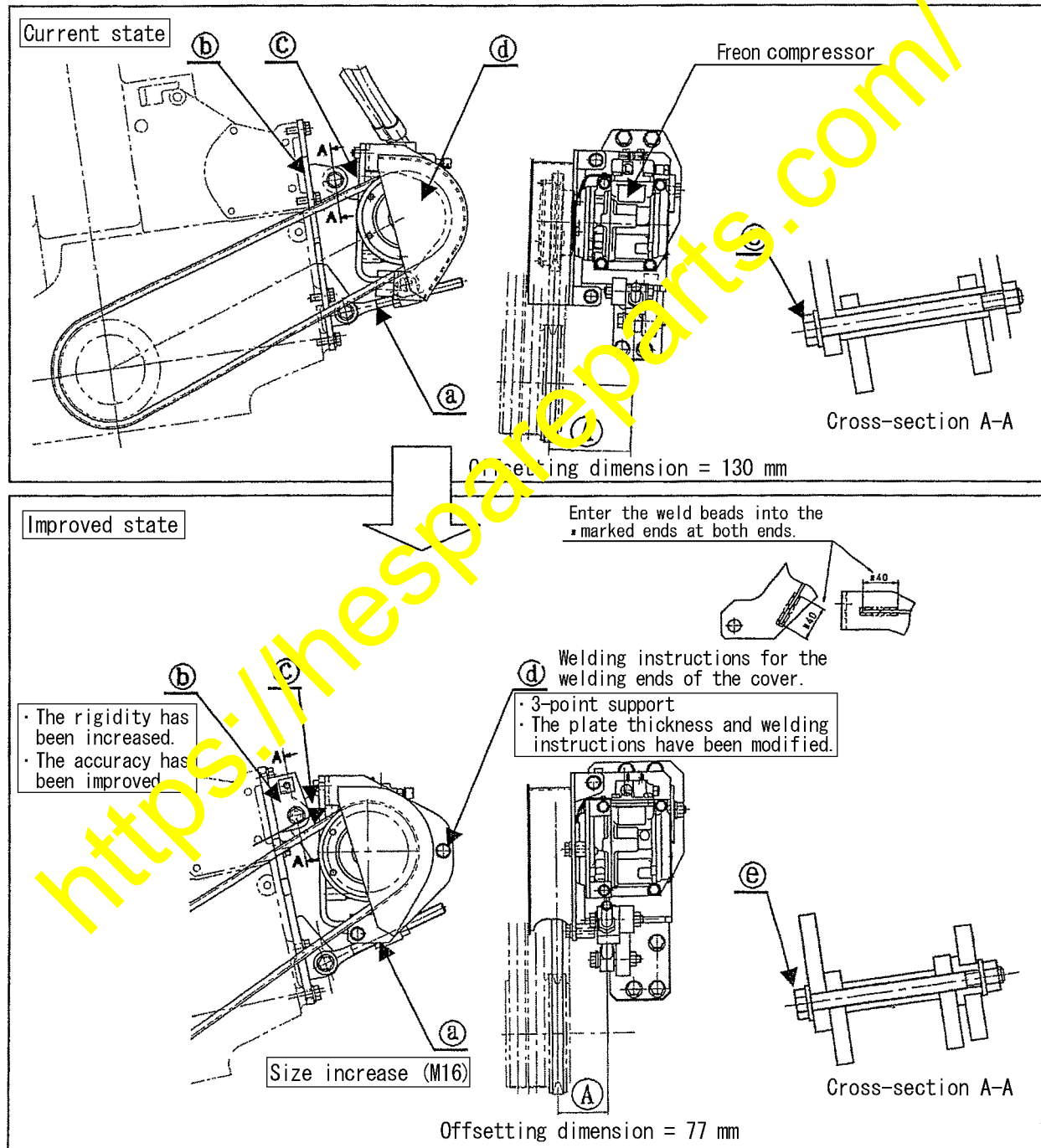


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C. Details of modification of the mounting bolts

The bending moment occurring in the bolt  connecting the engine side bracket and the compressor side bracket is to be reduced to prevent occurrence of the bolt breakage.

- 1) The mounting method for the engine side bracket is to be changed from the current bracket tightening up method to the collar tightening up method.






4. Modification procedure


4-1. Preparations before starting the modification work

- 1) Park the vehicle on a flat place and apply the parking brake.
- 2) Stop the engine.
- 3) Insert chocks underneath each tire.
- 4) Read the Operation and Maintenance Manual carefully before starting the modification work.

4-2. Removing the parts

Remove the parts marked  and  in the drawing below. (Refer to Fig. 1.)

Since the parts marked  are being reused when installing the improved parts, store them carefully.

Parts marked  are to be replaced with the newly prepared parts.

(Numbers in () after the part numbers indicate the using quantity.)

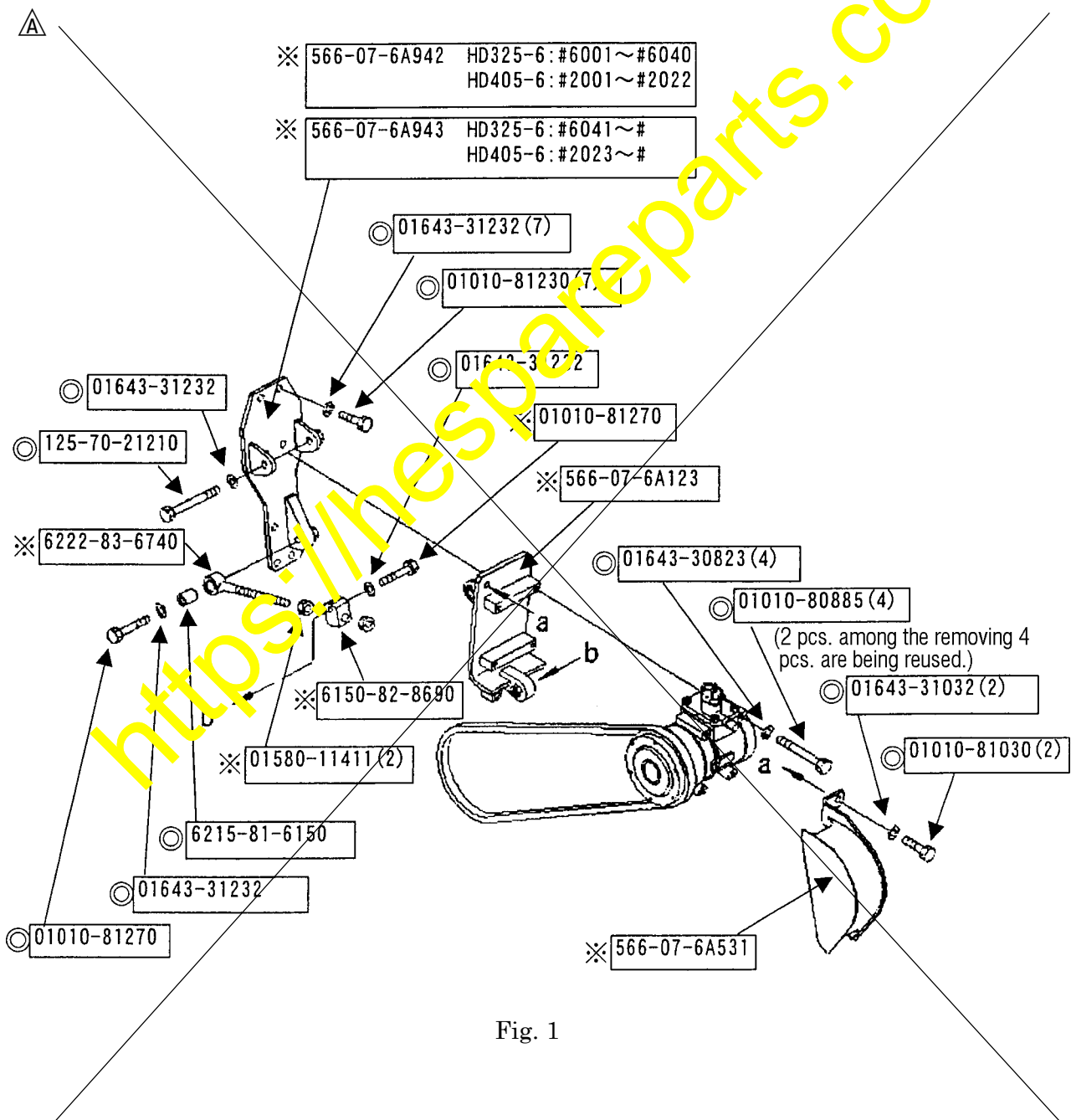



Fig. 1

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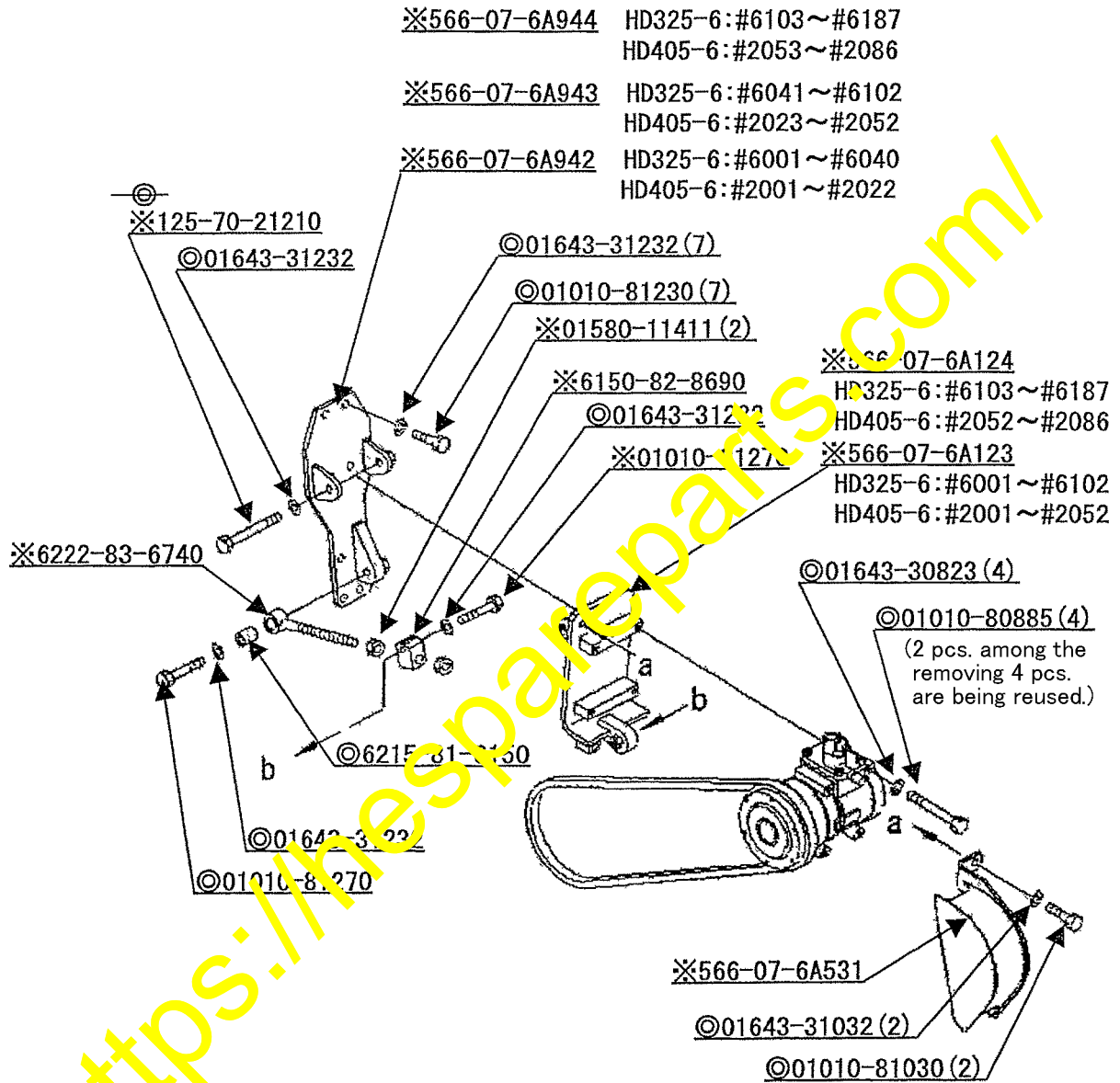






Fig. 1

4-3. Installation procedure for the improved parts

Install the parts following the procedure being described below. (Refer to Fig. 2.)

 Parts marked  are reusing parts. Parts marked  are improved parts, additional parts or replacing parts.

(The numbers in the parentheses after the part numbers are indicating the quantities.)

-  1) Install the bracket (566-07-6A944) to the engine.
 2) Install the bracket (566-07-6A124). Lightly screw-in the bolt 1 and leave it in loosened state.
 3) Install the air compressor to the bracket (566-07-6A124). At this time, install the bracket (566-07-6A550) using the mounting bolts commonly.
 4) Install the rod (566-07-6A570) and plate (6240-81-8670). At this time, lightly screw-in the bolts 2 and 3 leave them in loosened state.

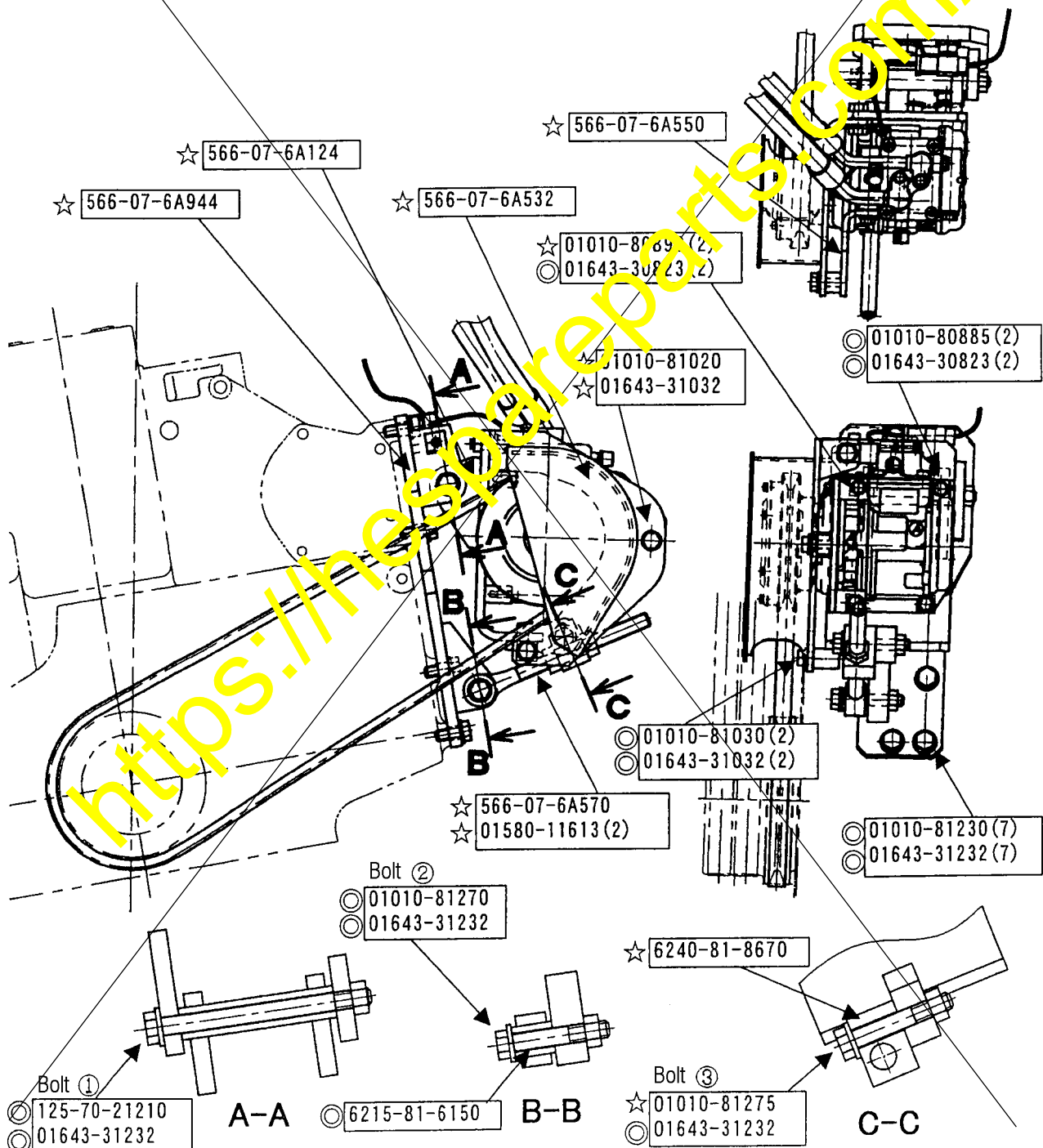


Fig. 2

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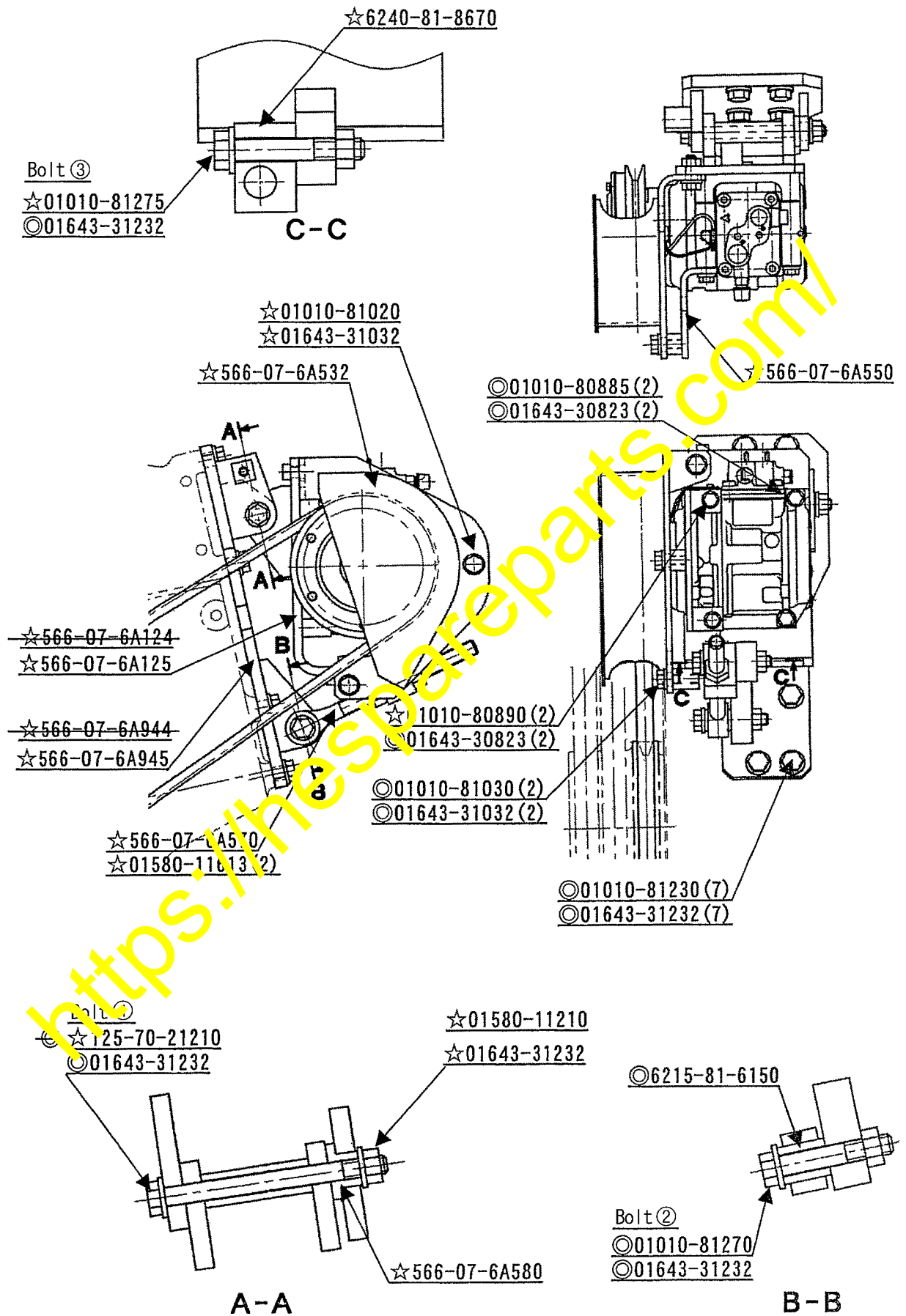
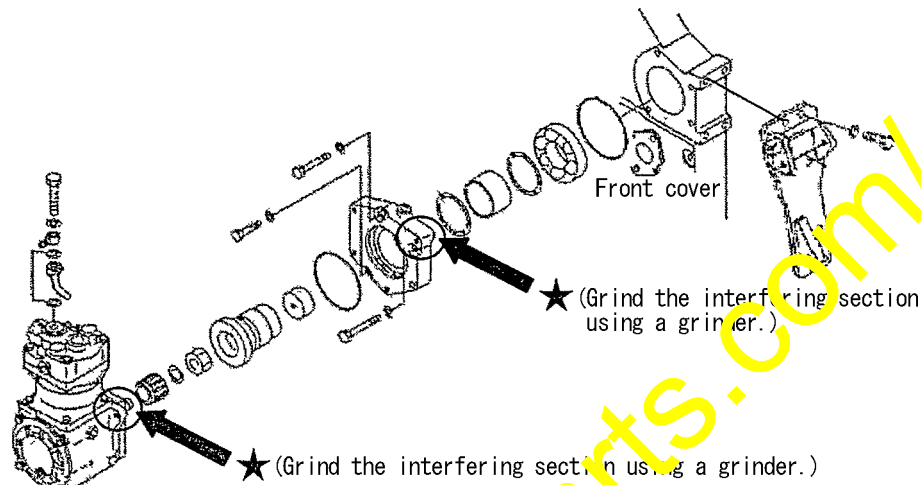


Fig. 2


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- 1) Install the improved engine side bracket (566-07-6A945) to the engine using the bolt (01010-81230) and washer (01643-31232).

At this time, if the sections marked ★ shown in the figure below interfere with the rear surface of the bracket, grind the housing of the compressor using a grinder, etc. to prevent occurrence of the above interference.



- 2) Install the improved compressor side bracket (566-07-6A125) to the engine side bracket using the bolt ① (125-70-21210), washer (01643-31232) and collar (566-07-6A580). Keep the bolt ① loosened.
- 3) Install the compressor to the bracket (566-07-6A125) using the bolts (01010-80890 and 01010-80885) and washers (01643-31232). At this time, install the bracket (566-07-6A550) together by use of the same mounting bolts.
- 4) Install the tension rod (566-07-6A570) to the engine side bracket using the bolt ② (01010-81270), washer (01643-31232) and pin (6215-81-6150). Keep the bolt ② loosened.
Connect the tension rod and the compressor side bracket using the plate (6240-81-8670), bolt ③ (01010-81275) and washer (01643-31232).
Keep the bolt ③ loosened.

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- 5) Setting the drive belt on the air compressor pulley, adjust the nut (01580-01613) to tighten the belt tension. (Refer to Fig. 3)
(Tighten the belt tension so that the belt will be deflected by about 10 mm when the center point of the belt is depressed by the thumb (at 58.8 N {6 kgf}.)
-  Install the nut (01580-11613) securely to the both sides of the plate (6240-81-8670).

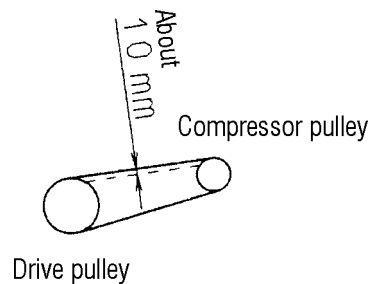




Fig. 3

- 6) After finishing the belt tension adjustment work, tighten the bolts ①, ② and ③.
Tightening torque: 98 – 123 N·m {10.0 – 12.5 kgf·m}
- ~~7) Install the pulley cover (566-07-6A532).~~
-  7) Install the pulley cover (566-07-6A532) using the bolts (01010-81030 and 01010-81020) and washers (01643-31032).
-  8) Start operation of the vehicle and after one day has passed, re-tight the bolts ①, ② and ③.