PARTS & SERVICE NEWS

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(C)

SUBJECT: IMPROVEMENT ALTERNATOR DRIVESHAFT OIL SEAL ON S(A)(A)6D170 ENG,

PURPOSE: To introduce modification procedures to remedy oil leakage occurring through the oil seal for the alternator drive shaft of the S(A)(A)6D170 engines.

APPLICATION: Refer to page 7

FAILURE CODE: A26210

DESCRIPTION:

1. Introduction
   The oil seal for the alternator drive shaft of the S(A)(A)6D170 engines may be damaged in its oil sealing lip section by dust penetration during operation of the machine or vehicle carrying the engine, resulting to occurrence of an oil leakage.
   When such an oil leakage is found to be occurring, implement the modification intrduced in this Service News to remedy the failure.

2. List of parts

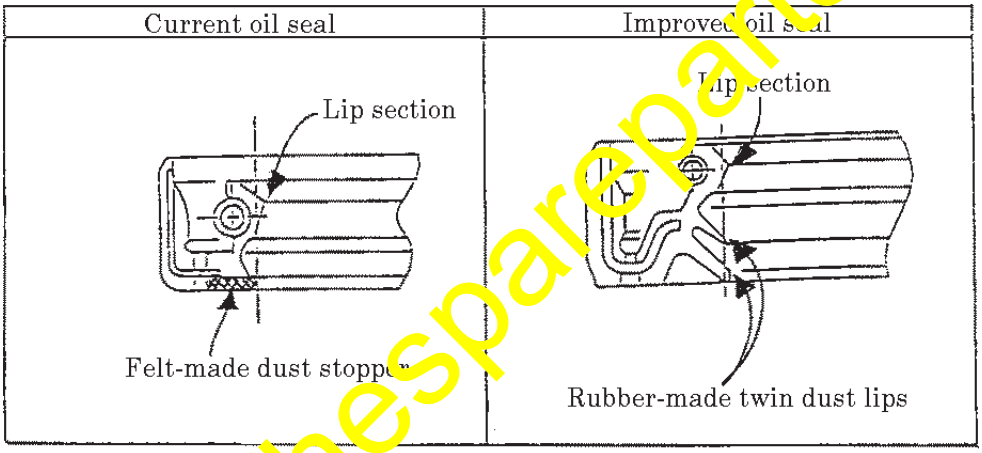
Part No.	Part Name	Purpose of part	Q'ty	Remarks
6162-63-1702 (6162-63-1701)	Case ass'y (Case ass'y)	Replacement		Replace the case assembly only when deemed necessary.
07000-62095	O-ring		1	Consumable part
07000-01009	O-ring		1	Consumable part
6162-63-1682 (6162-63-1681)	Seal (Seal)	Replacement	1 (1)	This replacement part is not necessary when replacing the case assembly.

3. Contents of the modification

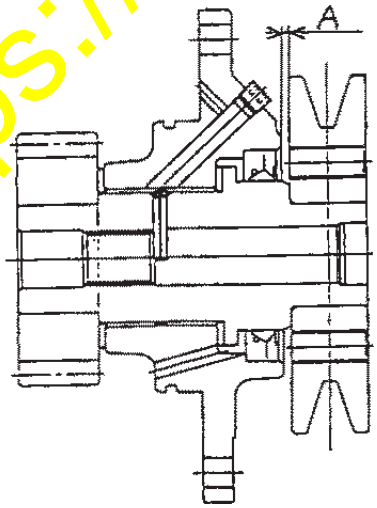
1) Oil seal
Although the current oil seal is being equipped with a felt-made dust stopper to prevent entry of external dust into the lip section of the oil seal, when muddy water penetrates into the felt dust stopper, the felt sets to deteriorate its dust stopping function.
With the improved oil seal, rubber-made twin dust lips are being employed to prevent entry of dust, thus improving the capacity to check entry of dust.

2) Alternator drive housing
When using the improved oil seal, the current housing might let the dust lips to run out of the oil sealing face of the shaft, depending on the dimensional deviations of the relevant parts and it is necessary to review the dimensions of the housing.
If the dimension "A" being designated in the schematic diagram given below is 3mm or more, the current housing can be used as is. However, when the dimension "A" has been found less than 3mm, it is necessary to replace the alternator drive assembly in whole.

1) Replacing the oil seal



2) Checking the alternator drive housing



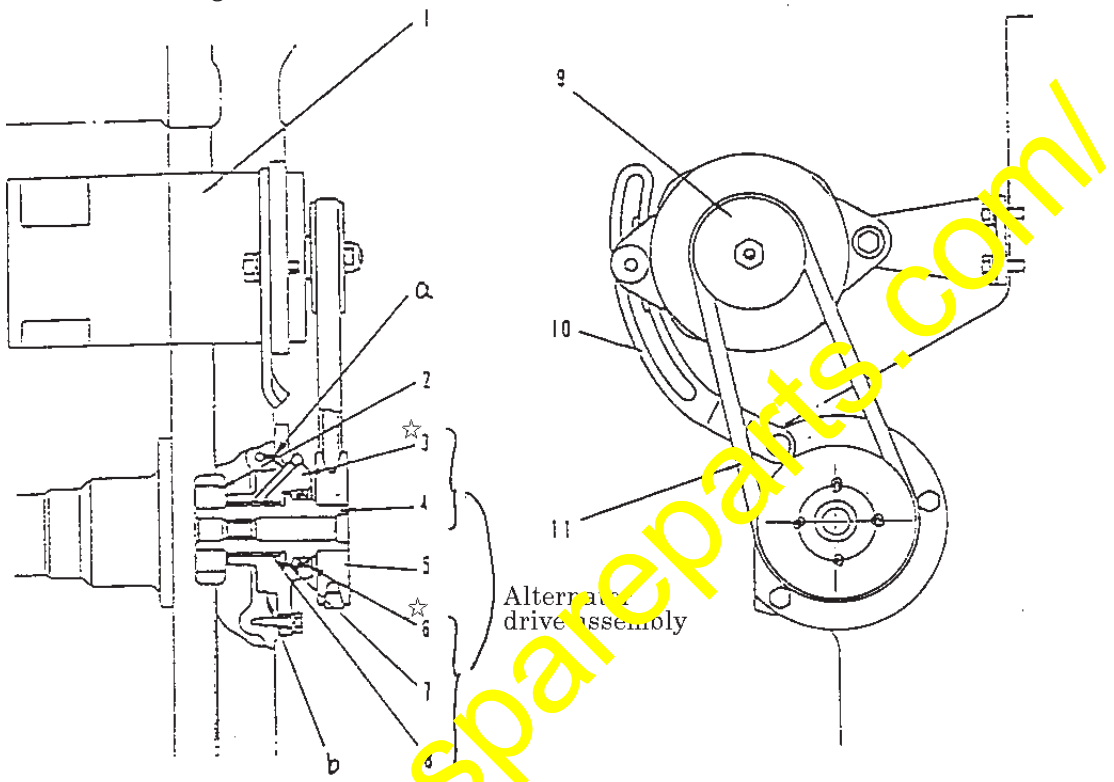
When the dimension "A" is less than 3mm:
→ Replace the alternator drive assembly in whole.

When the dimension "A" is 3mm or more:
→ Replace the oil seal only.

4. Modified sections

Those parts indicated in the schematic diagrams given below which are being marked ☆ have been modified.

Alternator mounting



Alternator drive assembly
1. Alternator
2. Drive gear (Number of teeth: 20)
3. ☆Housing
4. Drive shaft
5. Drive pulley (Outer diameter of the pulley: 132)
6. ☆Oil seal
7. Thrust plate
8. Bushing

9. Alternator pulley
10. Adjust plate
11. V-belt

a. O-ring (consumable part)
b. O-ring (consumable part)

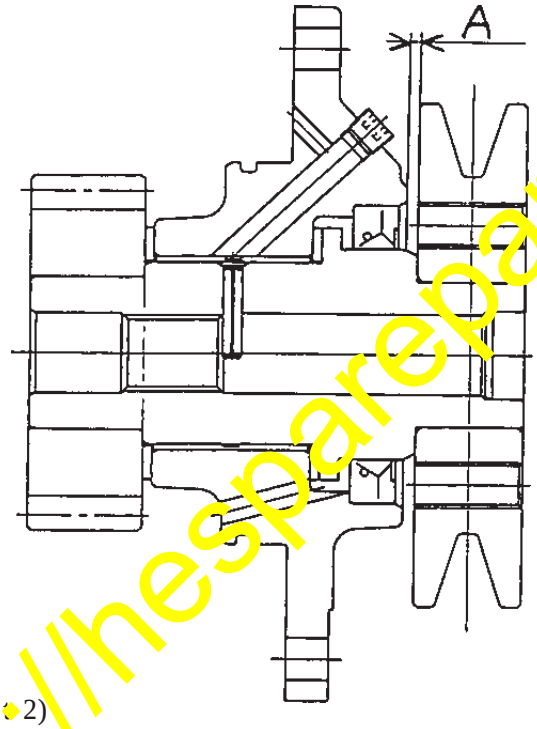
5. Modification procedures

1) Disassembly (Part 1)

① Disengage to remove the alternator driving V-belt.
② Remove the alternator drive assembly from the engine body.
(By unscrewing its three mounting bolts.)

2) Measuring the dimension

① Measure the dimension "A" being designated in the schematic diagram given below of the alternator drive assembly:
When the dimension "A" is 3mm or more, replace the oil seal only.
When the dimension "A" is less than 3mm, replace the alternator drive assembly in whole.

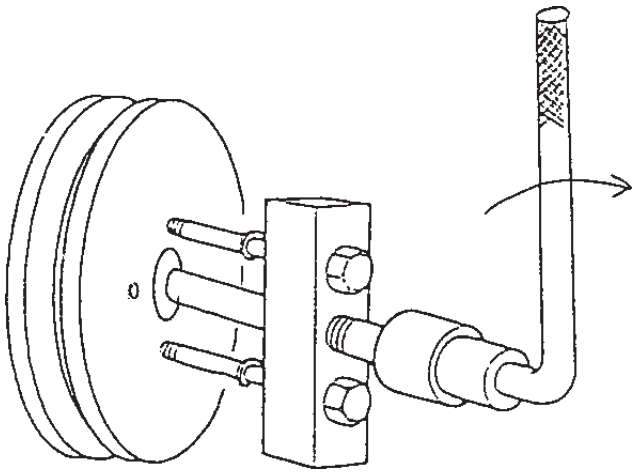


When the dimension "A" is less than 3mm:
→ Replace the alternator drive assembly in whole.

When the dimension "A" is 3mm or more:
→ Replace the oil seal only.

3) Disassembly (Part 2)

① Pull out to remove the alternator drive pulley.
When removing the alternator drive pulley, use a tool like the one illustrated below to remove the pulley making use of the tapped hole (M12) provided in the front surface of the pulley.



② Remove the oil seal.
(This process is not necessary when replacing the alternator drive assembly in whole.)
Pull out to remove the oil seal paying attention not to harm the drive shaft and the housing.

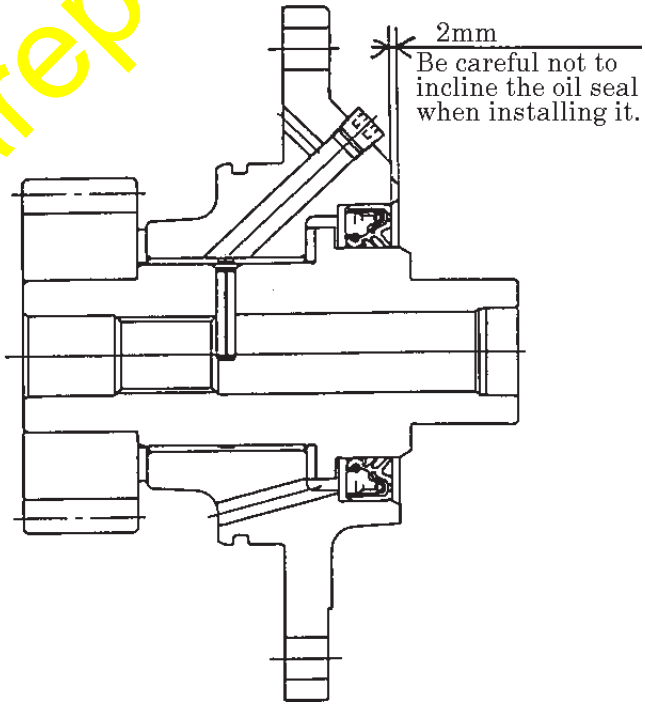
4) Reassembly

① Installing the new oil seal
(This process is not necessary when replacing the alternator drive assembly in whole.)

Wash the alternator drive housing and alternator drive shaft before installing the oil seal paying attention not to damage the oil seal. When doing this, make sure dust or any other foreign substances are not adhering to the shaft before inserting it to its position.
Meanwhile, be careful not to incline the oil seal when installing it.
Also, fill grease (G2-L1 for an equivalent) into the space between the lips before installation. (See the schematic diagram given below.)
Regarding the location of the oil seal, refer to the schematic diagram given below.

The space to fill grease

Location of the oil seal

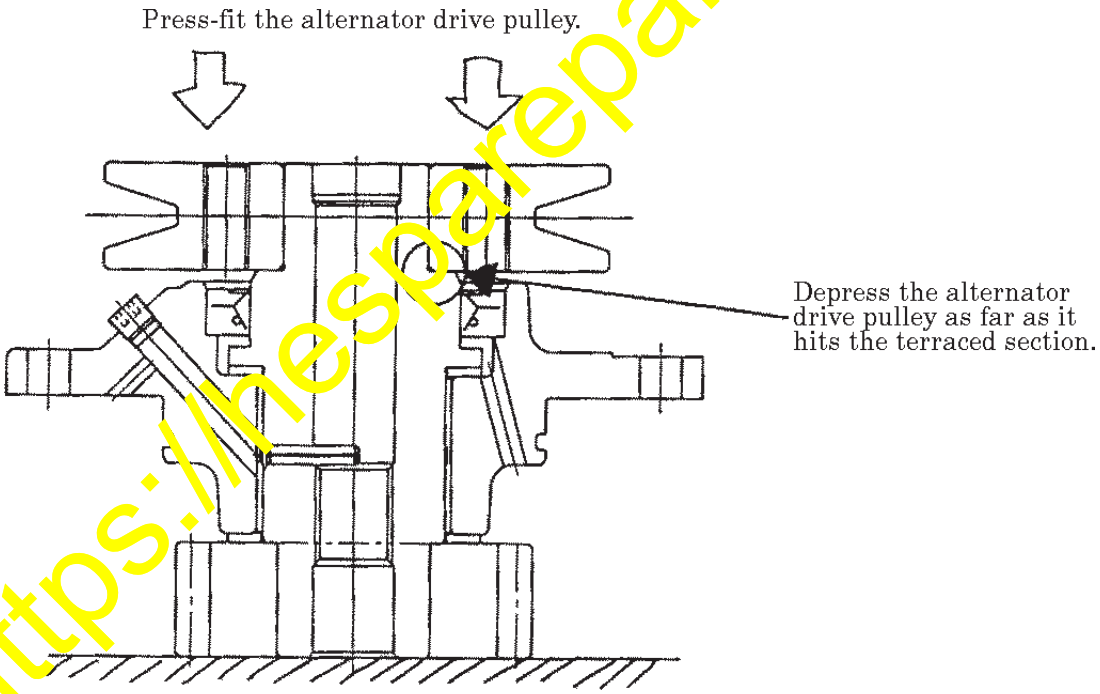


② Installing the alternator drive pulley
Press fit the alternator drive pulley into the alternator drive assembly. When doing this, depress the alternator drive pulley as far as it hits the terraced section of the drive shaft. (See the schematic diagram given below.)

③ Installing the alternator drive assembly
Replacing the O-rings (2 units) with new parts, install the alternator drive assembly to its position.

Bolt tightening torque: 59 – 74Nm (6 – 7.5kgm)

④ Installing the alternator driving V-belt
Install the alternator driving V-belt and adjust the belt tension accordingly.
Adjust the tension so that a flexure by 10 – 15mm may occur when the center point between the drive pulley and the alternator pulley of the V-belt is depressed by a force of about 58.8Nm (about 6kgm).



List of model names and serial numbers of applicable machines, vehicles and engines

No.	Model names of applicable machines, vehicles and engines	Serial numbers of applicable machines, vehicles and engines			
		Already shipped machines, vehicles and engines (Yet to be modified)		Machines, vehicles and engines being shipped newly from the factory (Already modified)	
		Engine numbers	Chassis numbers	Engine numbers	Chassis numbers
1	HD465-3	– #15256	—	#15257 –	From the next production and after
2	HD605-5	– #19208	– 1023	#19209 –	1024 –
3	HD465-5	– #19210	– 4675	#19211 –	4676 –
4	HD465-3C	– #15256	—	#15257 –	From the next production and after
5	PC1000-1	– #18935	—	#18936 –	From the next production and after
6	PC1100-6	– #19145	– 10058	#19218 –	10059 –
7	WA600-3	– #19223	– 50070	#19224 –	50071 –
8	WA700-1	– #18779	– 10100	#18780 –	10100 –
9	WA700-3	– #19131	– 5004	#19244 –	From the next production and after
10	WA700-AP-1	– #19128	– 5002	#19129 –	From the next production and after
11	BR1600JG-1	– #18953	– 10001	#18954 –	10002 –
12	D375A-1	– #17480	—	#17481 –	From the next production and after
13	PC1100-HA-6	– #19019	– 10039	#19020 –	10040 –
14	D275A-2	– #19124	– 10296	#19203 –	10297 –
15	D375A-2	– #18858	– 16532	#18859 –	16533 –
16	D375A-3	– #19118	– 17507	#19119 –	17508 –
17	A6D170E-WJK-2	– #18606	—	#18607 –	—
18	A6D170E-W2-2	– #18602	—	#18603 –	—
19	SA6D170-C2-1	– #17636	—	#17637 –	—
20	SA6D170-W1-1	– #17638	—	#17639 –	—
21	SA6D170B-C2-1	– #17635	—	#17636 –	—