

# PARTS & SERVICE NEWS

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**SUBJECT:** INTRODUCTION OF REINFORCED FLYWHEEL HOUSING ON WA600-3

**PURPOSE:** To introduce the reinforced flywheel housing on WA600-3

**APPLICATION:** WA600-3 (Tier 2 Engine installed)  
WA600-3, Serial Nos. Upto #54002  
(Engine Serial Nos. Upto #310690)  
WA600-3A, Serial Nos. Upto #52072  
(Engine Serial Nos. Upto #310931)  
WA600-3D, Serial Nos. Upto #53026  
(Engine Serial Nos. Upto #310830)

**FAILURE CODE:** A270HA

## DESCRIPTION:

### 1. Introduction

As for SAA6D170E-3 Engine (Tier 2 Engine) on WA600-3, when a crack occurs on the flywheel housing, repair according to this service news.

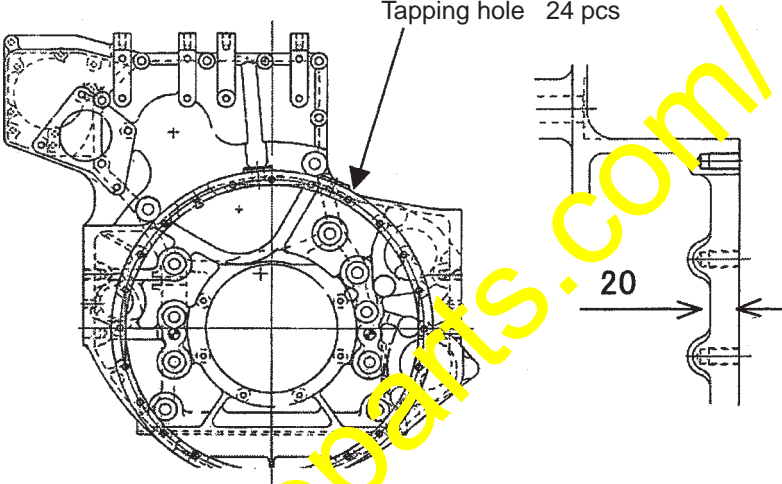
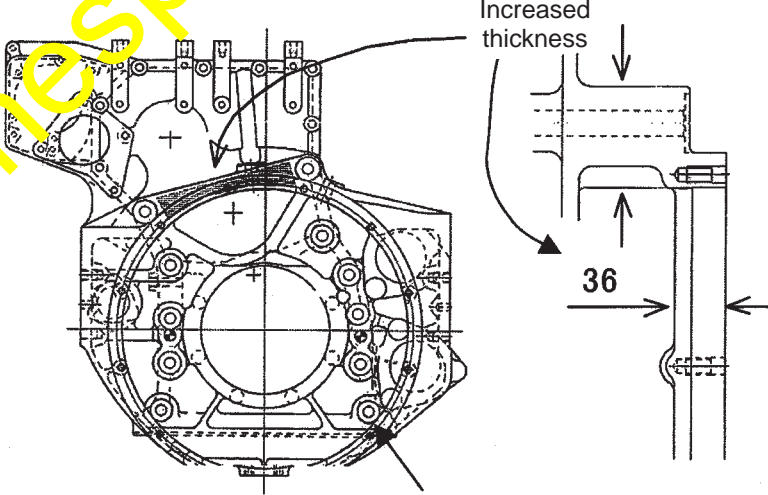
## 2. List of parts

Part No.	Part Name	Purpose of part	Q'ty	Remarks
6240-21-4131 (6240-21-4130)	Housing (Housing)	Replacement	1 (1)	For MAF125, the old part can be used.
07046-21410	Plug	Replacement	1	Replacement Flywheel housing portion
04020-01434	Pin	Replacement	4	Replacement Rear mount bracket
208-27-52341 (01011-81285)	Bolt (Bolt)	Replacement	2 (2)	Flywheel housing installation
6240-21-4250	Seal	Replacement	1	Consumable part Rear seal (Double lip)
6162-23-4941	Gasket	Replacement	1	Consumable part Bearing cap
6221-81-6810	Gasket	Replacement	2	Consumable part Starter
426-14-11150	O-ring	Replacement	1	Consumable part Tor-con housing
01010-61255 (01010-81240)	Bolt (Bolt)	Replacement	2 (2)	Tor-con housing installation
01010-61245 (01010-81240)	Bolt (Bolt)	Replacement	10 (10)	Tor-con housing installation
07000-12060	O-ring	Replacement	2	Consumable part Oil pump piping
07000-12075	O-ring	Replacement	4	Consumable part Oil pump piping
07000-12130	O-ring	Replacement	3	Consumable part Oil pump piping
07000-13030	O-ring	Replacement	1	Consumable part Oil pump piping
07000-13032	O-ring	Replacement	1	Consumable part Oil pump piping
07000-13035	O-ring	Replacement	1	Consumable part Oil pump piping
07000-13038	O-ring	Replacement	4	Consumable part Oil pump piping
07000-13048	O-ring	Replacement	4	Consumable part Oil pump piping
07000-A3038	O-ring	Replacement	1	Consumable part Oil pump piping

### 3. Repair contents

The rigidity of the flywheel housing is increased. Therefore, the margin against a crack is improved. When a crack occurs on the flywheel housing, replace according to this service news.

Repair contents and the identification method of the improved part

Current part	<p>Part No.: 6240-21-4130</p>  <p>Tapping hole 24 pcs</p> <p>20</p>
Improved part	<p>Part No.: 6240-21-4131</p>  <p>Increased thickness</p> <p>36</p> <p>Tapping hole 12 pcs</p>

Before assembling the improved part, check the housing by the above table, and ensure that the housing is the improved part.

#### 4. Repair method

When repairing, refer to Shop Manual for WA600-3 (Serial No.: #52001 and up), and Shop Manual for 6D170E-3 Engine.

During the work, observe "Precautions on Work" in "Disassembling and Assembling" on Shop Manual.

##### 1) Removing

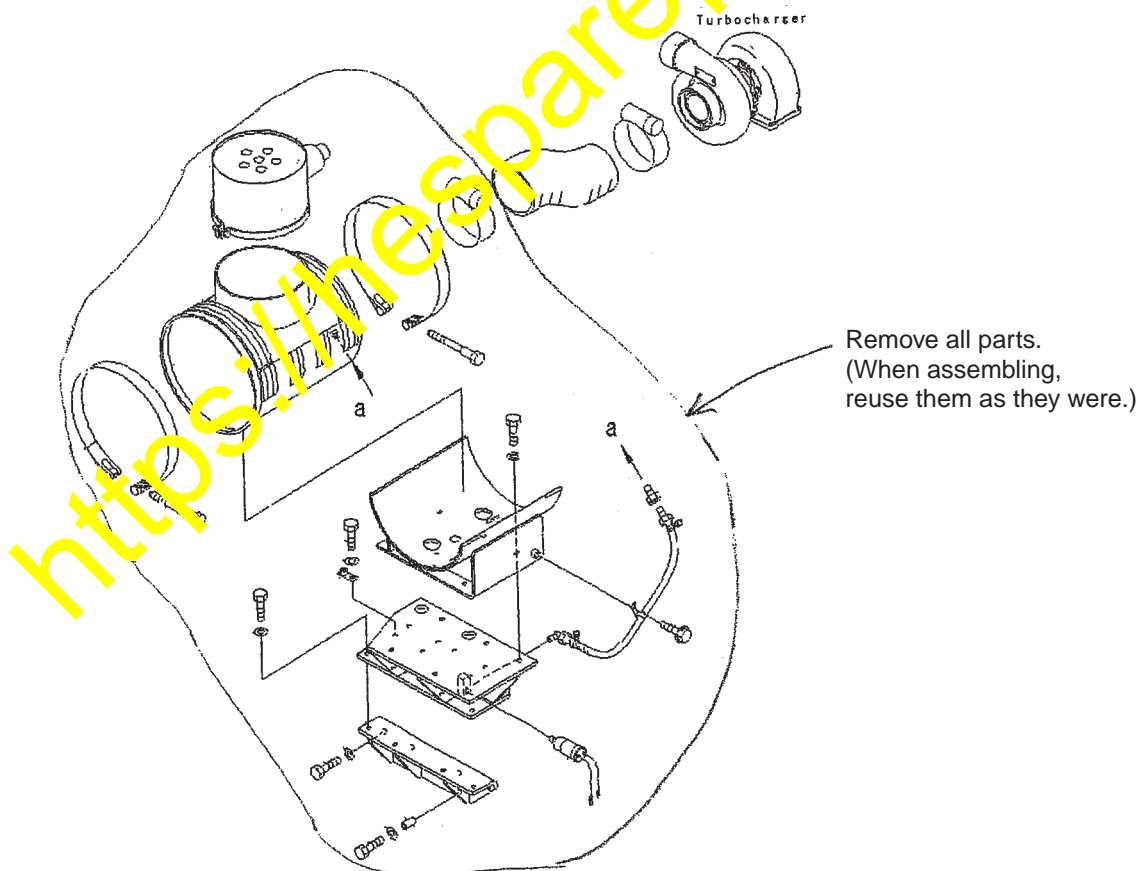
1)-1 Parts for the vehicle: Except the consumable parts, store the parts for reusing.

\* Before this work, drain the oil for the work equipment. (Drained volume: 326 ltr.)

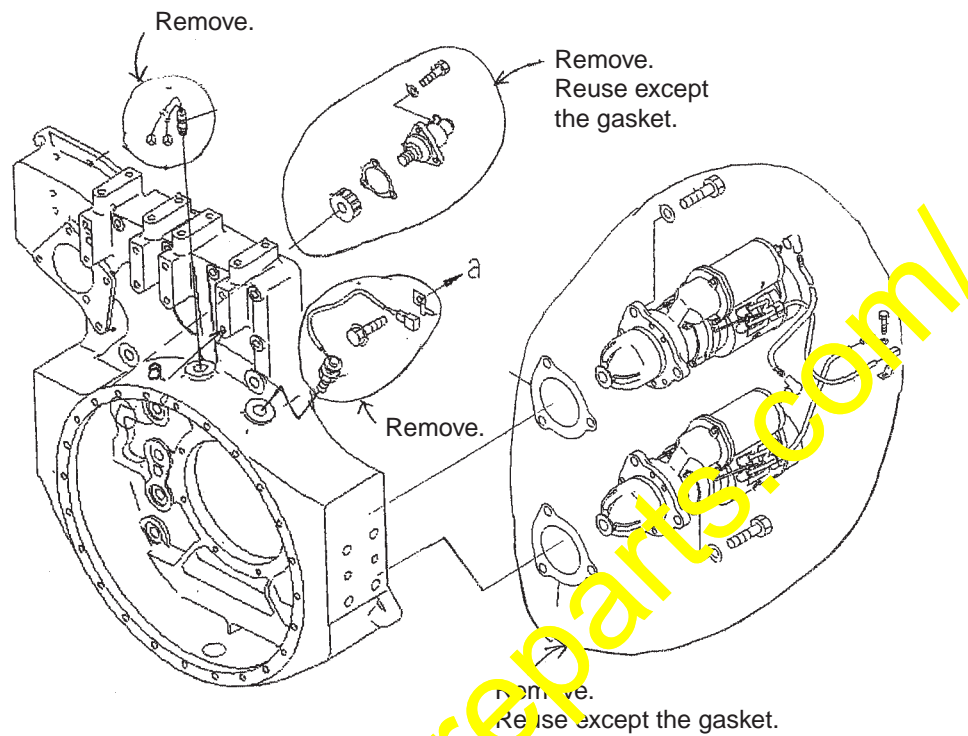
- ① Refer to "Removing Bulk Head Ass'y" in "Disassembling and Assembling" on Shop Manual, and remove the bulk head ass'y, the inspection cover, etc.
- ② Refer to "Removing Torque Converter Ass'y" in "Disassembling and Assembling" on Shop Manual, and remove the torque converter.

1)-2 Parts for the engine

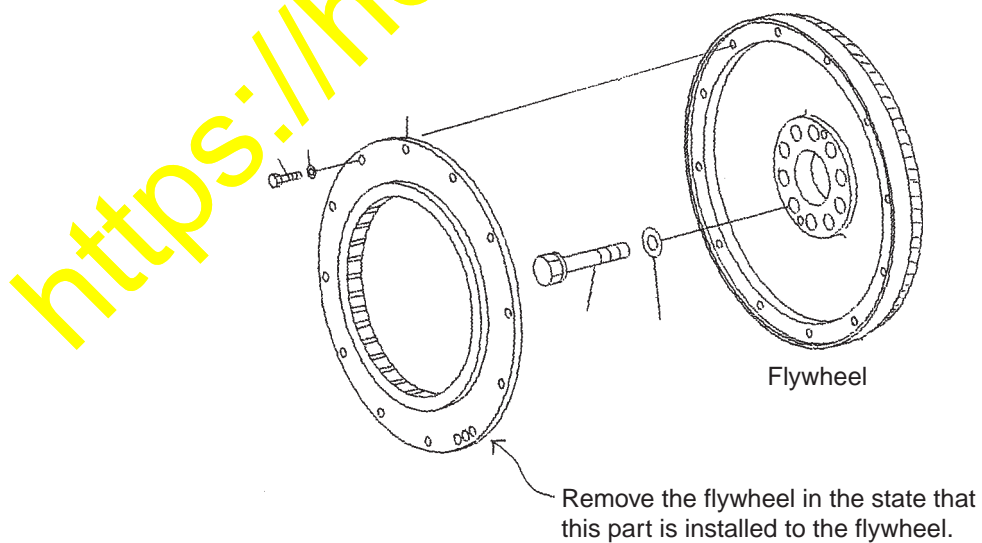
- ① Remove the air cleaner and the air cleaner bracket. Store them for reusing. In addition, remove the harnesses, the hoses, etc in the periphery.



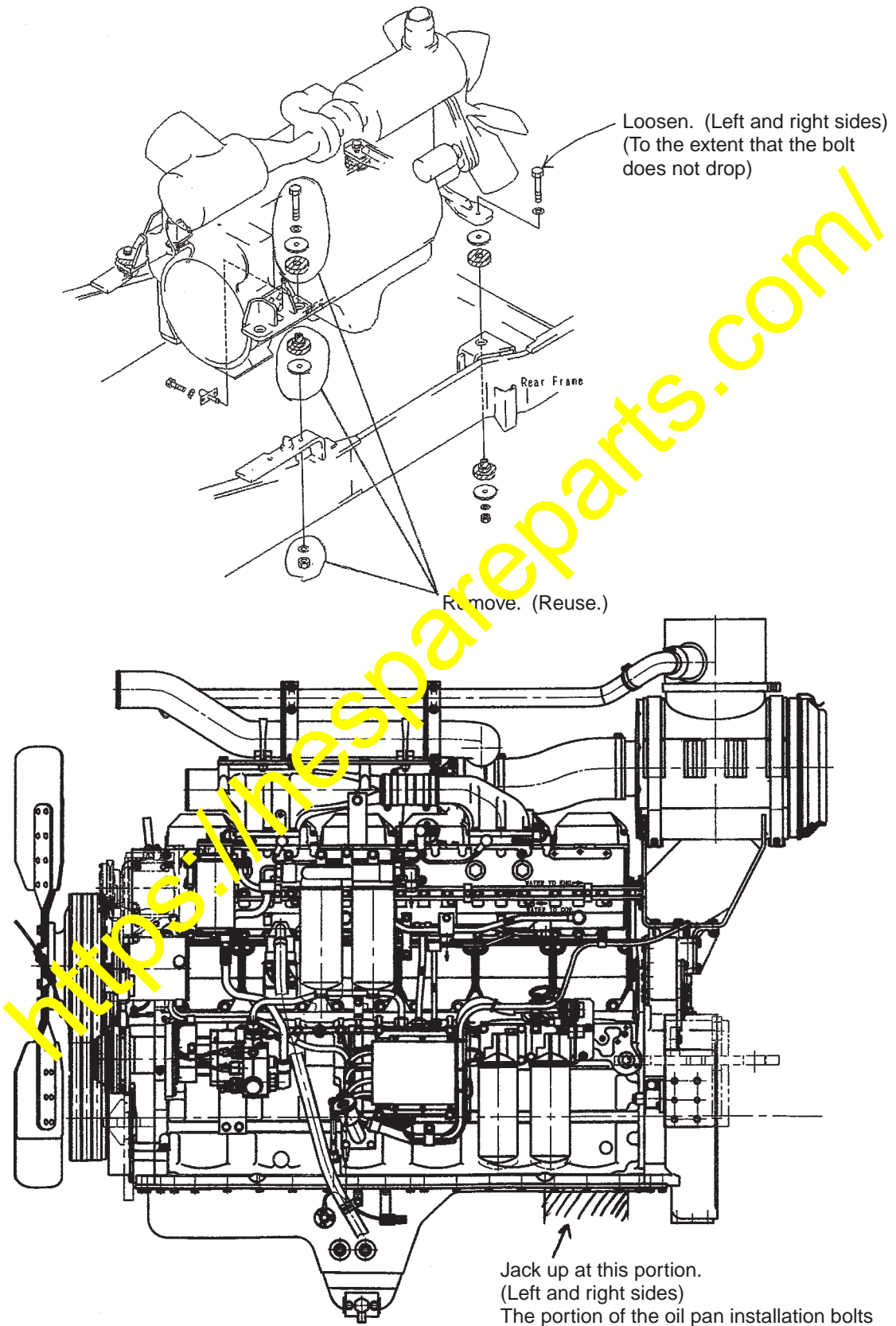
- ② Remove the revolving sensors (2 pcs), the starters (2 pcs) and the barring tool. Store them for reusing.



- ③ Remove the flywheel. (As for the drive ring for connecting the tor-con, it is not necessary to remove from the flywheel.)

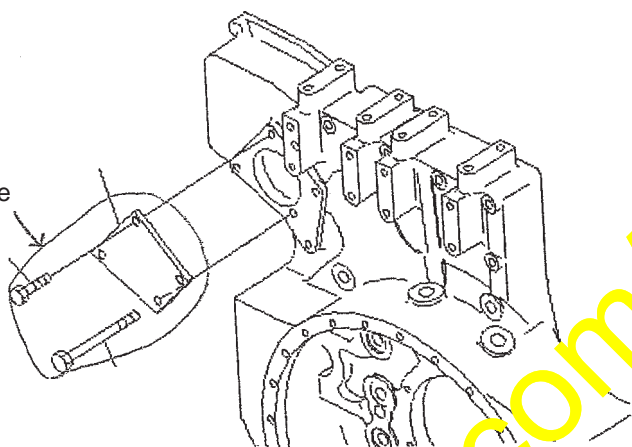


- ④ Loosen the front engine mount bolts and the rear engine mount bolts, and jack up the engine. After that, remove the cushions.

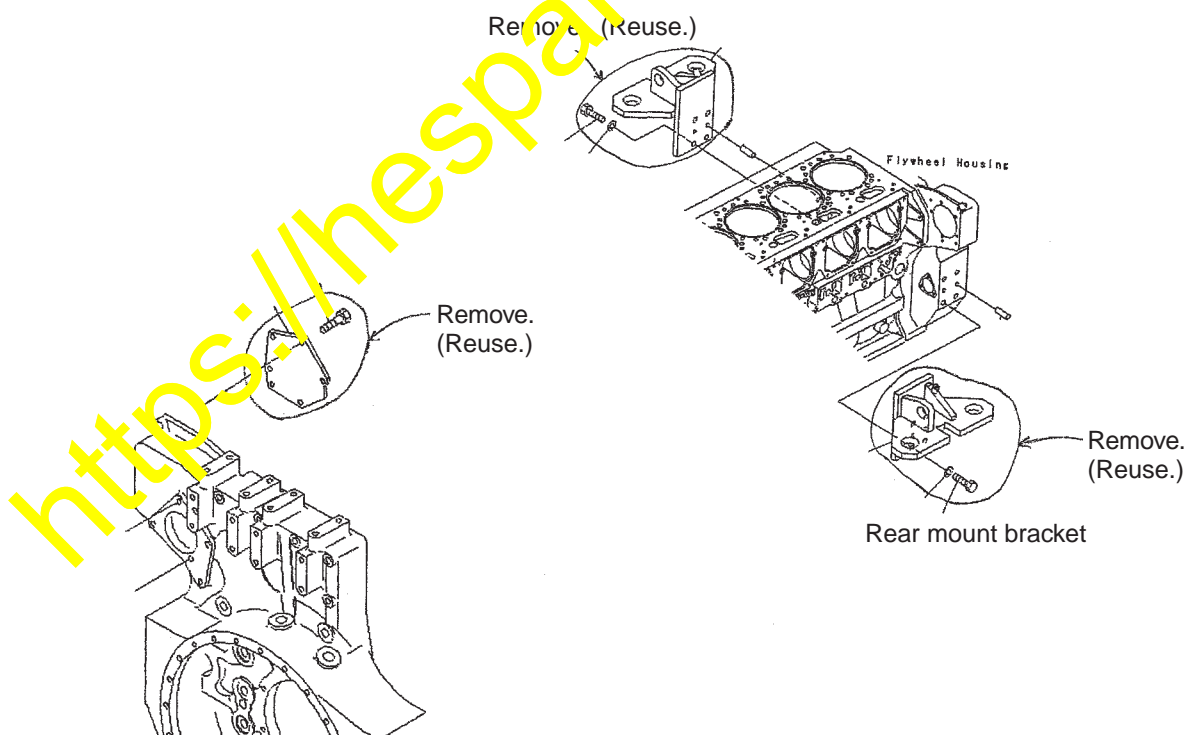


- ⑤ Remove the flywheel housing. Store the installation bolts for reusing.

Remove this part beforehand, and remove the flywheel housing. There are the bolts for installing the flywheel housing under this part. Store this part also for reusing.



- ⑥ Remove clearly the liquid gaskets, which are adhered to the cylinder block and the oil pan. At this time, take care sufficiently for that the removed matters do not enter the oil line.
- ⑦ Remove the parts shown in the below figure from the flywheel housing. (Store them for reusing.) Remove clearly the liquid gaskets.

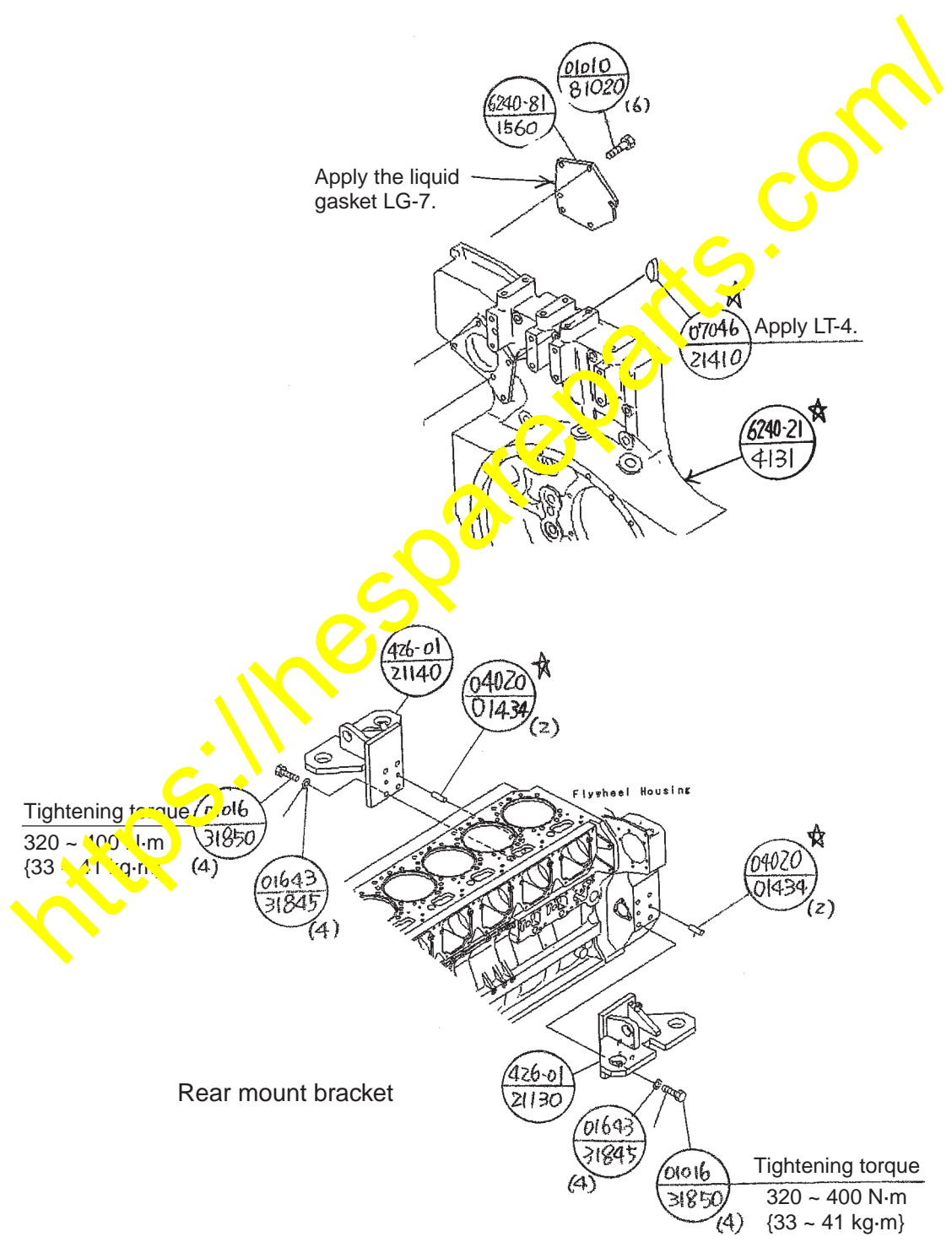


## 2) Assembling

As for the items (the tightening torque for the bolt and the nut, etc), which are not described in this service news, refer to “How to Read Manual” in “Disassembling and Assembling” on Shop Manual.

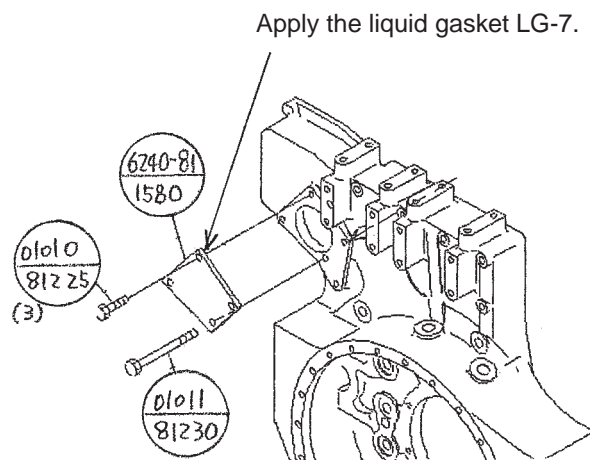
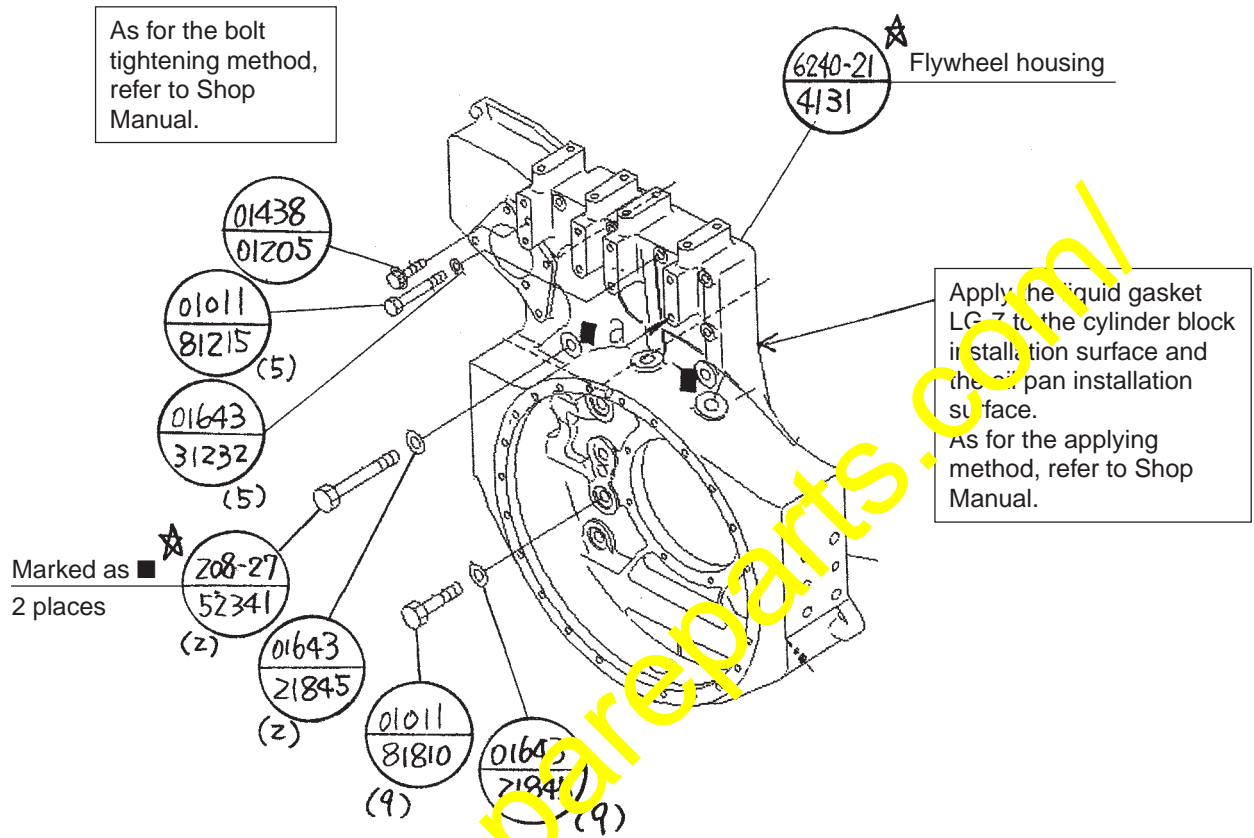
The parts marked as ☆ are the replaced parts. Except them, reuse the removed ones.

- ① Install the parts, which are shown in the below figure, to the replaced flywheel housing.

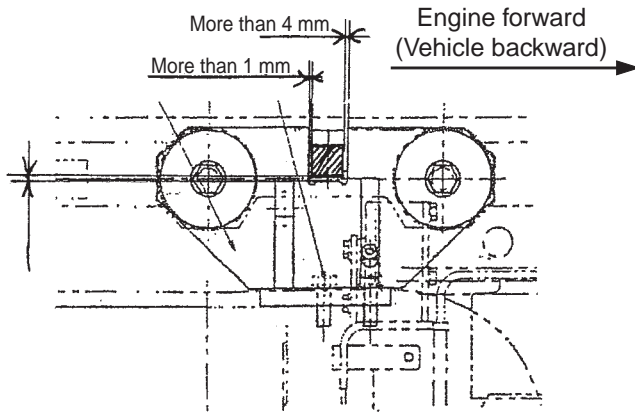




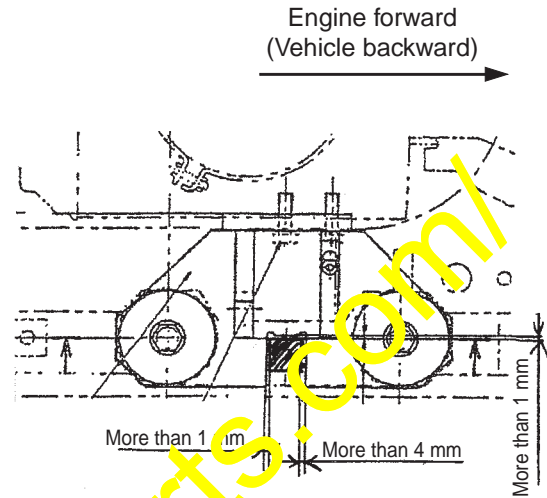
- ② Install the flywheel housing. As for the installation method, refer to Shop Manual for 6D170E-3.



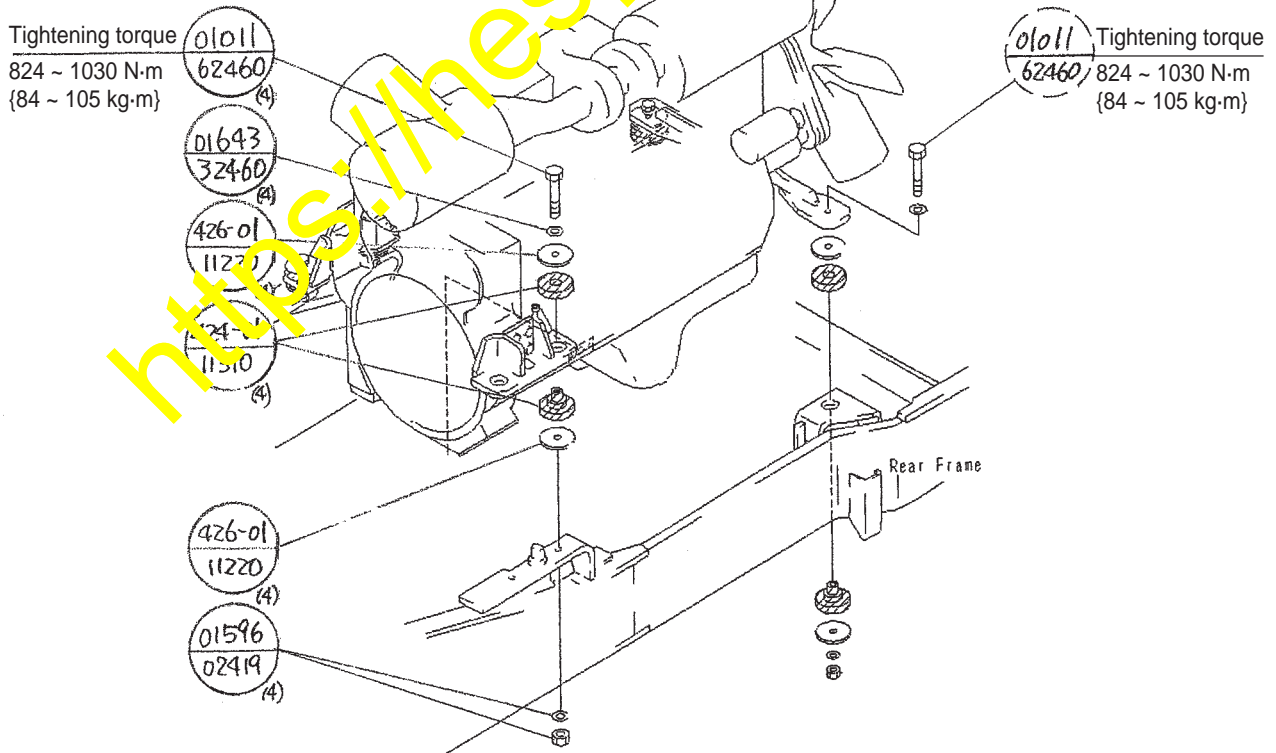
- ③ Jack down the engine, and adjust the clearance between the rear mount bracket and the stopper so that it becomes the value shown in the below figures. After that, tighten the engine mount.



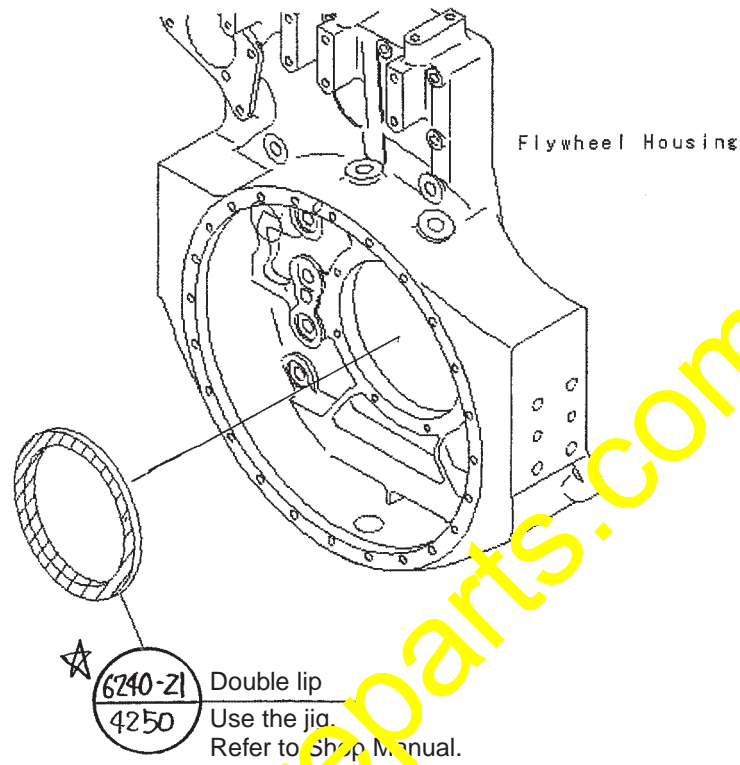
Viewed from the top. Engine left side  
(Vehicle right side)



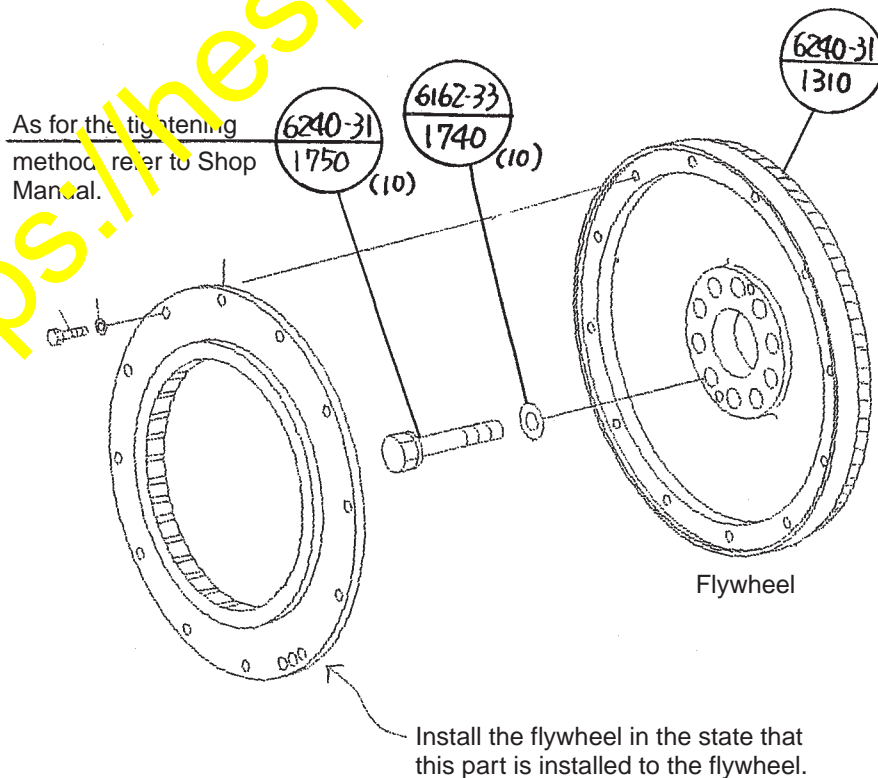
Viewed from the top. Engine right side  
(Vehicle left side)



- ④ Install the rear seal. As for the installation method, refer to Shop Manual.

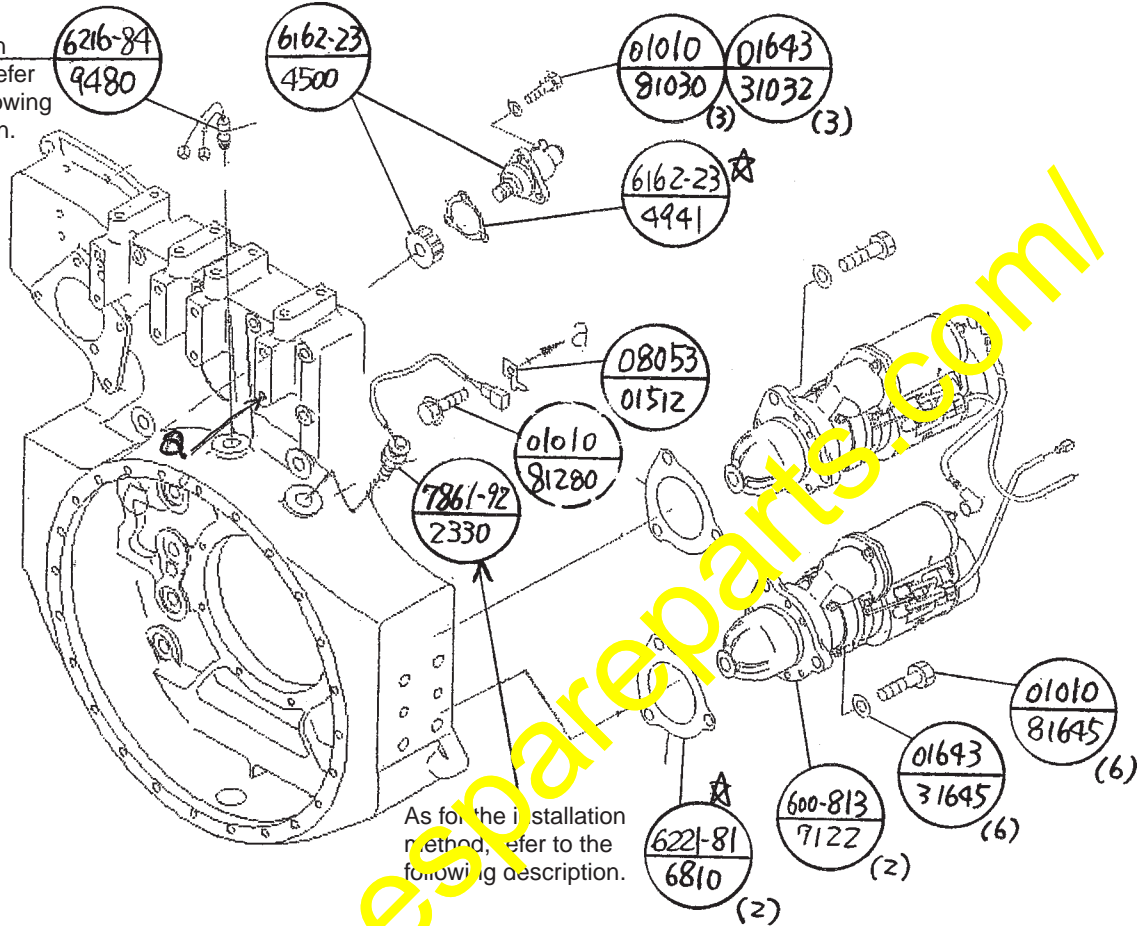


- ⑤ Install the flywheel and the drive plate for connecting the tor-con. As for the installation method, refer to Shop Manual for 6D170E-3.



- ⑥ Install the revolving sensors (2 pcs), the starters (2 pcs) and the barring tool.

As for the installation method, refer to the following description.



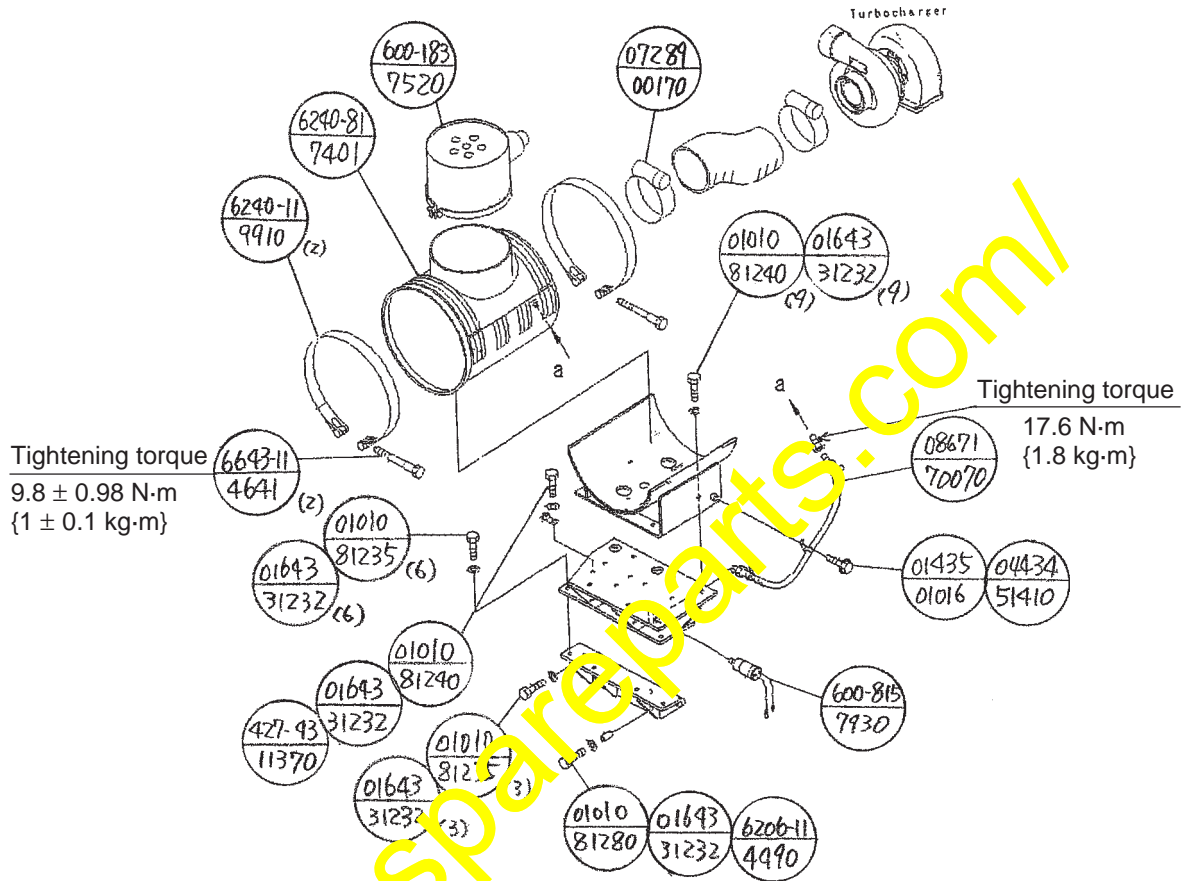
As for the installation method, refer to the following description.

The adjusting method for the revolving sensor

- (1) Apply the hydraulic sealant (P/N 21028: For sealing the metal pipes), which is made by Loctite Company, to the sensor thread portion.
- (2) Tighten the sensor until the tip of the revolving sensor contact with the ring gear.
- (3) Return 1/2 to 3/4 turns from the contacting state.
- (4) In the state that the sensor is held, tighten the lock nut.

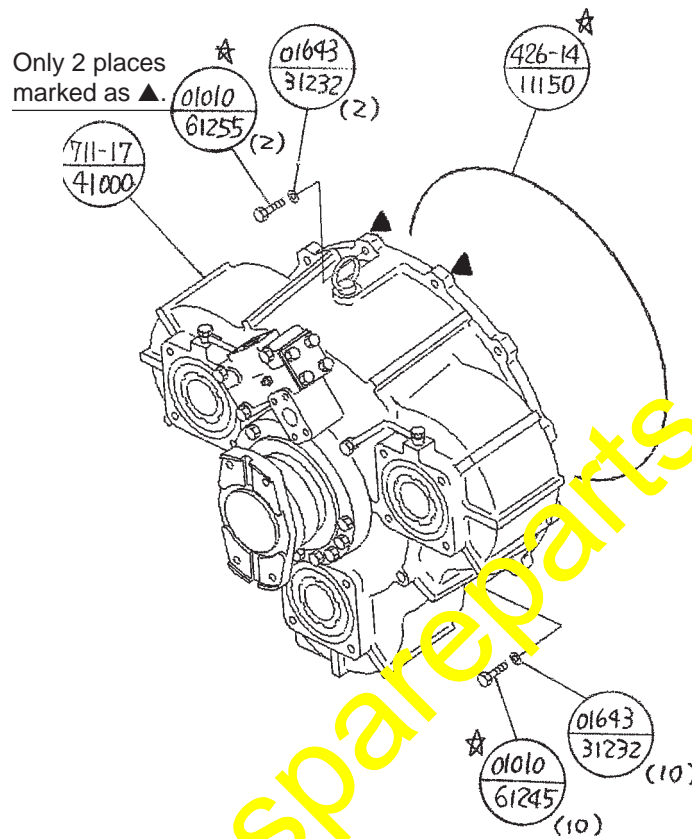
Lock nut tightening torque: 33.9 ~ 47.5 N·m (3.5 ~ 4.8 kg·m)

- ⑦ Install the air cleaner and the air cleaner bracket. In addition, install the harness and the hoses in the periphery.



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- ⑧ Refer to “Installing Torque Converter Ass’y” on Shop Manual for WA600-3, and install the torque converter ass’y. The length of the installation bolt is changed. Therefore, ensure the length before replacing the bolts. In addition, install the hydraulic pump, the pipes, etc.



- ⑨ Refill the work equipment oil and the T/C oil to the specified volume. As for the kind of oil, refer to “List for Volume of Oil and Coolant” in “General” on Shop Manual for WA600-3.

Supplying volume

Hydraulic oil: 326 ltr.  
Transmission case: Approx. 40 ltr.

- ⑩ After supplying the oil, due to the procedure of the air bleeding work within “Precautions during Installation Work” of “Precautions during Operations” in “Disassembling and Assembling” on Shop Manual for WA600-3, bleed the air from the hydraulic circuit.
- ⑪ After bleeding the air, ensure that the oil leakage from each portion and the abnormal sound do not exist, and refill the oil to the specified volume.
- ⑫ Due to “Installing Bulk Head Ass’y” in “Disassembling and Assembling” on Shop Manual for WA600-3, install the bulk head ass’y, the inspection cover, etc.