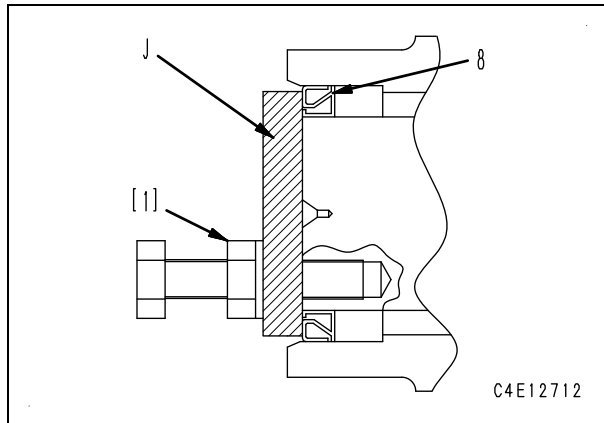
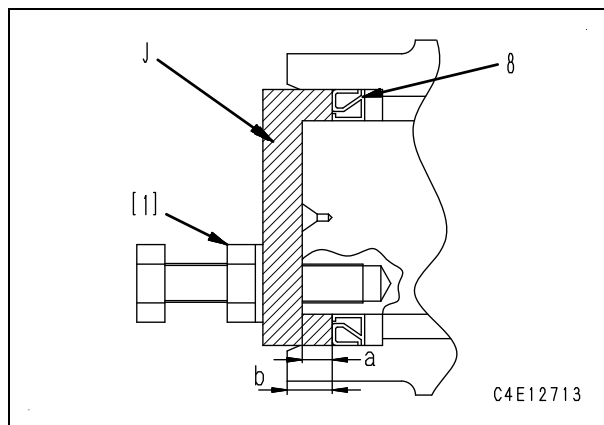


- 2) Tighten nuts [1] using the tool **J (plate)**, and press oil seal (8) to the crank shaft end surface.



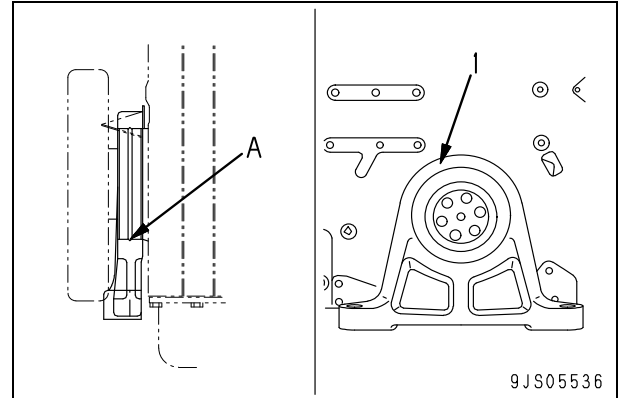
- 3) Tighten nuts [1] using the tool **J (push tool)**, press oil seal (8) in the front case until it becomes the dimension (a) as shown in the figure.
- ★ Oil seal press fit dimensions
    - (a): 17 mm (from crank shaft end surface)
    - (b): 25.1 mm (from front cover end surface)



**18. Front support**

Install front support (1).

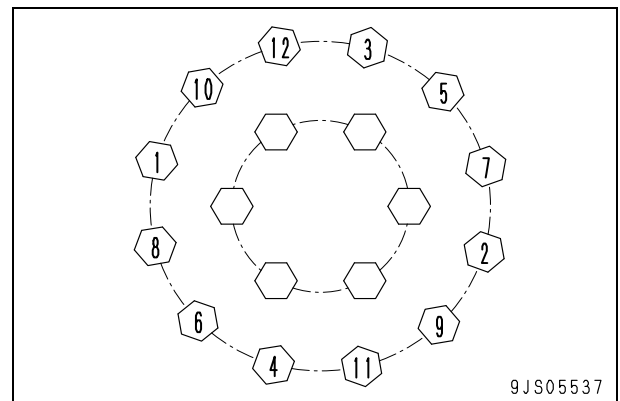
- ★ Prior to the installation, fill the oil hole with grease.
- ★ Volume of grease filled: 20 cc
- 🔧 Front support: **Grease (G2-LI)**



**19. Damper and crank pulley assembly**


- 1) When the damper and crank pulley are separated, assemble them again by tightening the mounting bolts in the order indicated in the figure.

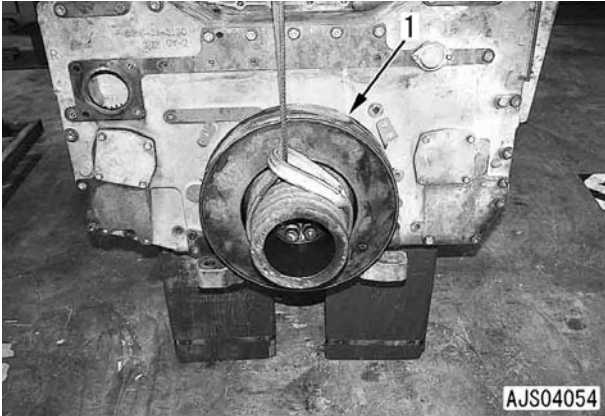
- 🔧 Damper mounting bolt and washer: **Engine oil (EO30)**
- 🔧 Damper mounting bolt: **98 – 122 Nm {10 – 12.5 kgm}**




2) Lift and install damper and crank pulley assembly (1).


★ Install the assembly aligning it to the dowel pin of the crankshaft.

 Damper and crank pulley assembly: **75 kg**

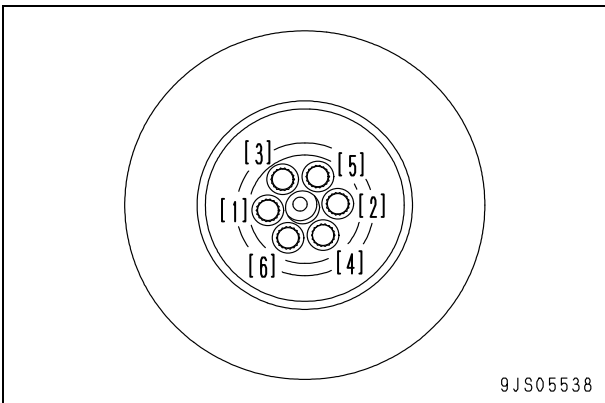


★ Tighten the mounting bolts in 3 steps according to the order indicated in the figure.

 Damper and crank pulley pump assembly mounting bolt and washer: **Engine oil (EO30)**


 Damper and crank pulley assembly mounting bolt

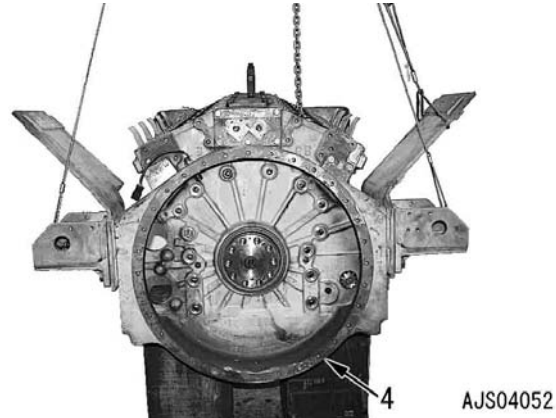
- 1st time:  
**73.5 ± 19.6 Nm {7.5 ± 2 kgm}**
- 2nd time:  
**245 ± 19.6 Nm {25 ± 2 kgm}**
- 3rd time:  
**744.8 ± 19.6 Nm {76 ± 2 kgm}**




**20. Flywheel housing**


1) Lift and install flywheel housing (4).

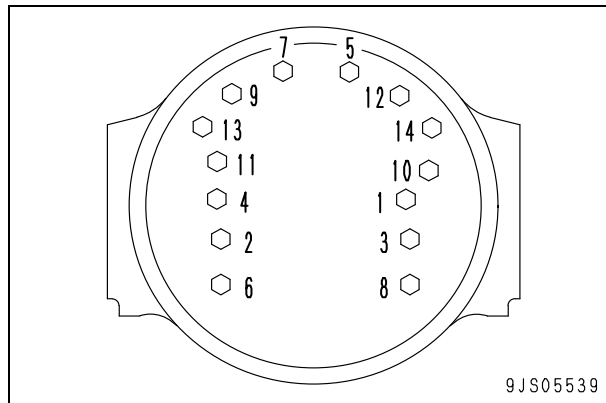
 Flywheel housing: **230 kg**



★ Tighten the mounting bolts in 3 steps according to the order indicated in the figure.

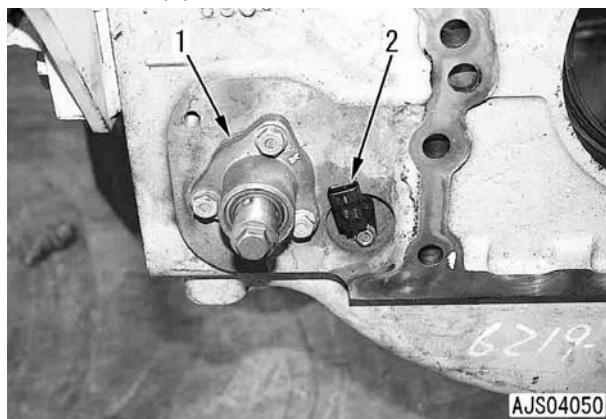
 Flywheel housing mounting bolt: **Engine oil (EO30)**

-  Flywheel housing mounting bolt:
- 1st time:  
**343 ± 49 Nm {35 ± 5 kgm}**
- 2nd time: **Loosen it fully**
- 3rd time:  
**411.6 ± 19.6 Nm {42 ± 2 kgm}**



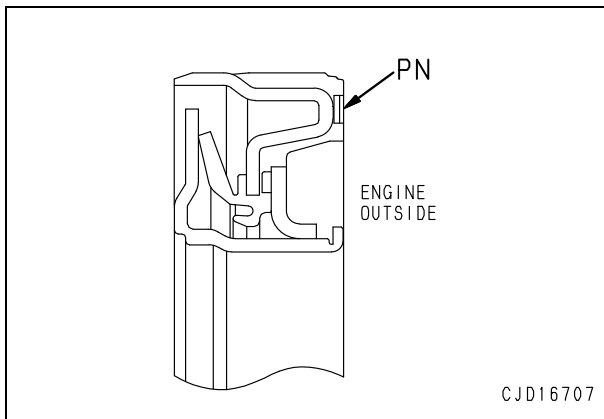
2) After the installation, cut off the gasket projecting from the oil pan mounting surface to make height of the gasket and mounting surface even.

3) Install burring tool (1) and Ne speed sensor (2).



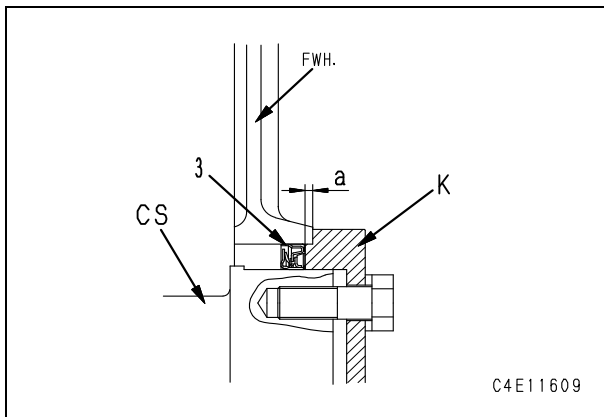
**21. Rear oil seal**

- 1) Clean, degrease and then dry the contact surface between the flywheel housing and rear seal.
- 2) Using a clean cloth, remove foreign matter deposited on the crankshaft flange.
  - ★ Clean foreign matter deposited on the seal lip surface (surface around the crankshaft) and then degrease and dry the surface.
  - ★ Check the crankshaft end face corner and lip siding surface for scratches due to the housing, burrs or rusts.
- 3) When installing rear oil seal (3), do not apply oil or grease to the shaft and seal lip. Wipe off the oil from the shaft.
  - 1] The surface having the parts number (PN) marking must face to the outside of engine.



CJD16707

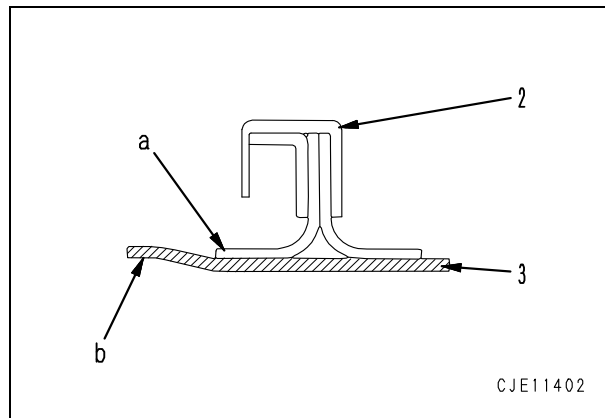
- 2] Using the **K (push tool)**, press oil seal (3) in the flywheel housing until it becomes the dimension (a) or (B) as shown in the figure.
  - ★ **Oil seal press fit dimensions**  
**(a): 5 mm (from flywheel housing end surface)**



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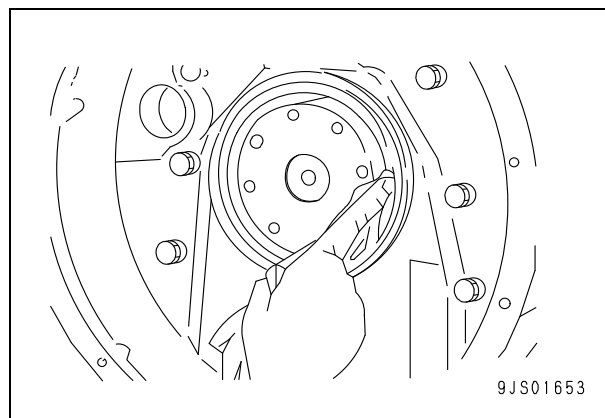
4) PC2000-8

- ★ Check the Teflon seal (Laydown lip seal) by checking the wear of the shaft and replace it with the "Standard seal".



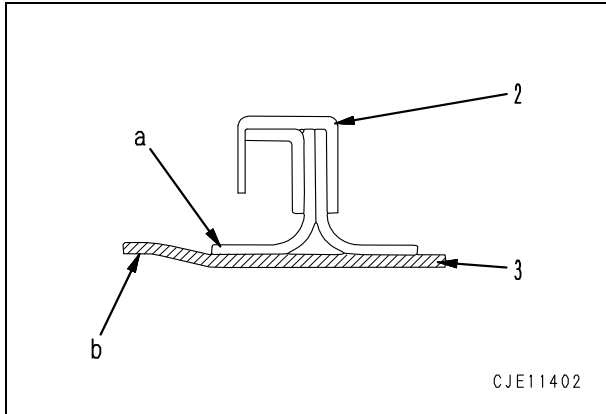
CJE11402

- ★ Clean, degrease and then dry the contact surface between the flywheel housing and rear seal.
- ★ Clean foreign matter deposited on the seal lip surface (surface around the crankshaft) and then degrease and dry the surface.
- ★ Check the crankshaft end face corner and lip siding surface for scratches due to the housing, burrs or rusts.

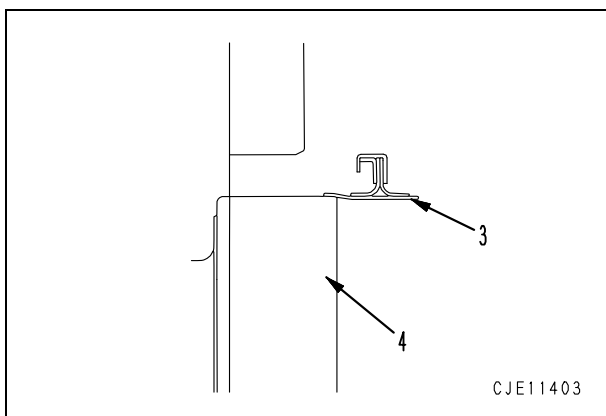


9JS01653

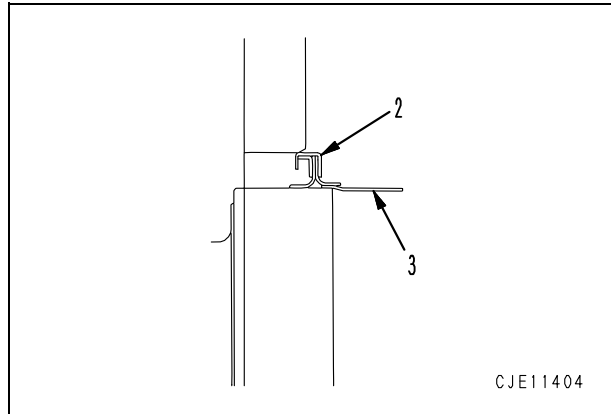
- 5) Installation procedure of standard seal
- ★ Do not apply any grease, oil and others to the seal lip surface (a).
  - ★ Never remove inside plastic cylinder (3) of the standard spare seal before installing the seal.



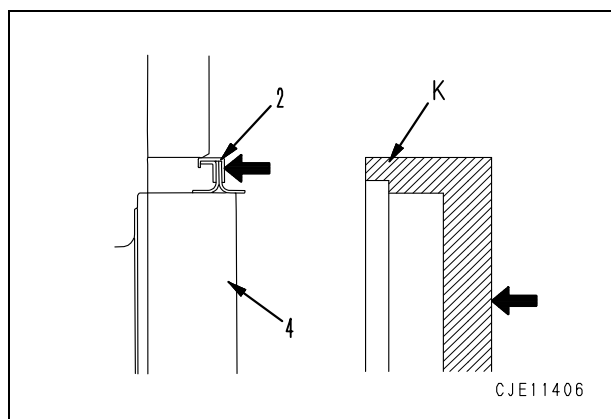
- 1] Set the large inside diameter side (b) of plastic inside cylinder (3) to the end of crankshaft (4).
- ★ Extremely take care not to mistake the direction of the plastic inside cylinder.



- 2] Hold the metal ring of rear oil seal (1) with both hands and push it in firmly.
- 3] After pushing in the rear oil seal, remove plastic inside cylinder (3).
- ★ When removing the inside cylinder, take care not to damage the seal lip.



- 4] Apply rear seal (2) on the end of crankshaft (4).
- ★ Install the rear seal in the correct direction.
- 5] Manually push the metal ring of rear seal (2) evenly, and insert in its position.
- 6] Using the tool K, further press and insert rear seal (2) evenly.



- 7] Using the tool K, press rear seal (2) by tightening bolts equally.
- ★ Press rear seal (2) until tool K reaches crankshaft (4).
    - Press fit method of oil seal (from flywheel housing end surface) (a): 13.5 mm
    - Press fit method of oil seal (from crankshaft end surface) (b): 25.7 mm
  - ★ After having pressed the rear seal, remove the red sealant form outer edge.