KENR6226-01
April 2008

Perkins®

Disassembly and Assembly

402D-403D-404D Industrial Engine

GG (Engine)
GH (Engine)
GJ (Engine)
GK (Engine)
GL (Engine)
GM (Engine)
GN (Engine)
GP (Engine)
GQ (Engine)
GS (Engine)

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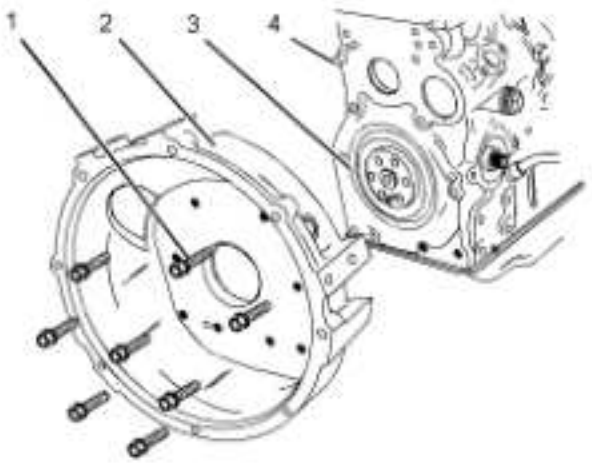


Illustration 76 g01326595
Typical example

1. Ensure that the mating surfaces of flywheel housing (2) are clean and free from damage. Inspect the crankshaft rear seal (3) for leaks. If necessary, replace the crankshaft rear seal. Refer to Disassembly and Assembly, "Crankshaft Rear Seal - Remove and Install" for the correct procedure. Inspect dowels (4) for damage. If the dowels are damaged, use new parts for replacement.

2. Use a suitable lifting device to align flywheel housing (2) to dowels (5) and install the flywheel housing. The weight of the flywheel housing is approximately 30 kg (66 lb).

3. Install bolts (1).

   For 402D-05 and 403D-07 engines, tighten the bolts to a torque of 15 N·m (11 lb ft).

   For 403D-11 and 404D-15 engines, tighten the bolts to a torque of 50 N·m (37 lb ft).

   For 403D-15, 403D-15T and 403D-17 engines, tighten the bolts to a torque of 25 N·m (19 lb ft).

4. Remove the lifting device from the flywheel housing.

End By:

a. Install the flywheel. Refer to Disassembly and Assembly, "Flywheel - Install".

i02845702

Flywheel Housing - Remove and Install (Engines with Flywheel Housing and Back Plate)

Removal Procedure

Start By:

a. Remove the flywheel. Refer to Disassembly and Assembly, "Flywheel - Remove".

NOTICE
Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

1. Support the engine.

2. Install a suitable lifting device to the flywheel housing. Support the weight of the housing. The weight of the flywheel housing is approximately 30 kg (66 lb).

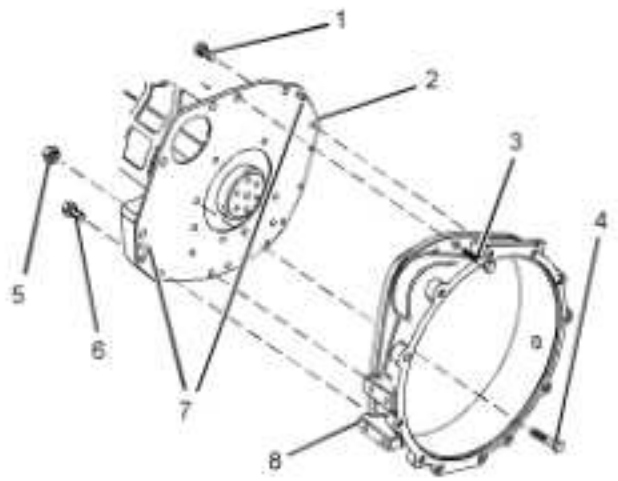


Illustration 77 g01326591

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Rocker Shaft and Pushrod - Remove

Removal Procedure

Start By:

a. Remove the engine oil line. Refer to Disassembly and Assembly, "Engine Oil Line - Remove and Install".

b. Remove the valve mechanism cover. Refer to Disassembly and Assembly, "Valve Mechanism Cover - Remove and Install".

NOTICE
Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

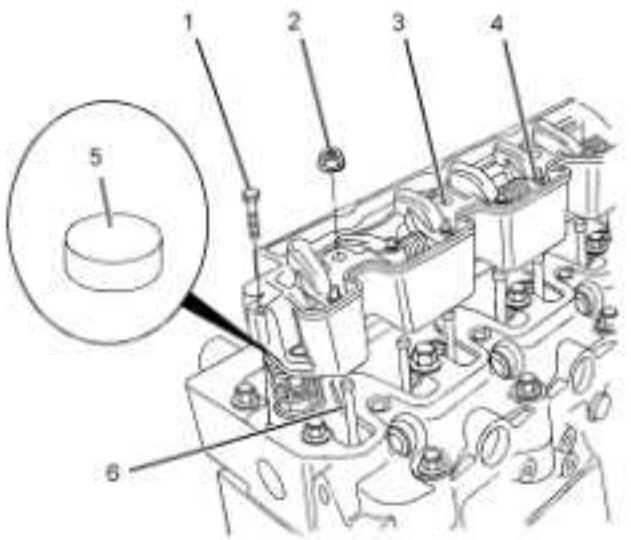


Illustration 113 g01316901
Typical example

1. Loosen the nuts and adjustment screws (4) on all rocker arms.

2. Remove bolts (1) and nuts (2) from rocker shaft assembly (3).

3. Remove rocker shaft assembly (3) from the cylinder head.

4. Place temporary identification marks on caps (5) and pushrods (6).

Note: Identification will ensure that the pushrods and the caps can be reinstalled in the original positions. Do not interchange the positions of used pushrods or caps.

5. Remove pushrods (6) from the cylinder head. Remove caps (5) from the valve stems.

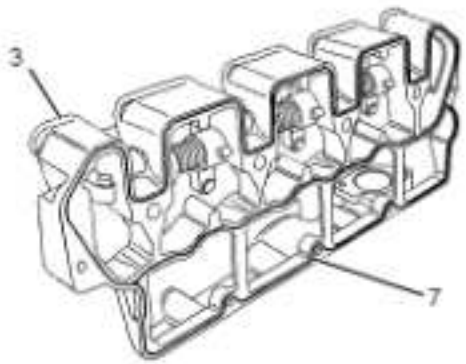


Illustration 114 g01317309
Typical example

6. Remove joint (7) from the base of rocker shaft assembly (3).

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Rocker Shaft - Disassemble (403D-15, 403D-15T, 403D-17, 404D-22, 404D-22T and 404D-22TA Engines)

Disassembly Procedure

Start By:

a. Remove the rocker shaft and the pushrods. Refer to Disassembly and Assembly, "Rocker Shaft and Pushrod - Remove".

NOTICE
Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

1. Make a temporary identification mark on each rocker arm assembly in order to show the location.

Note: Used components must be reinstalled in the original location. Do not interchange components.

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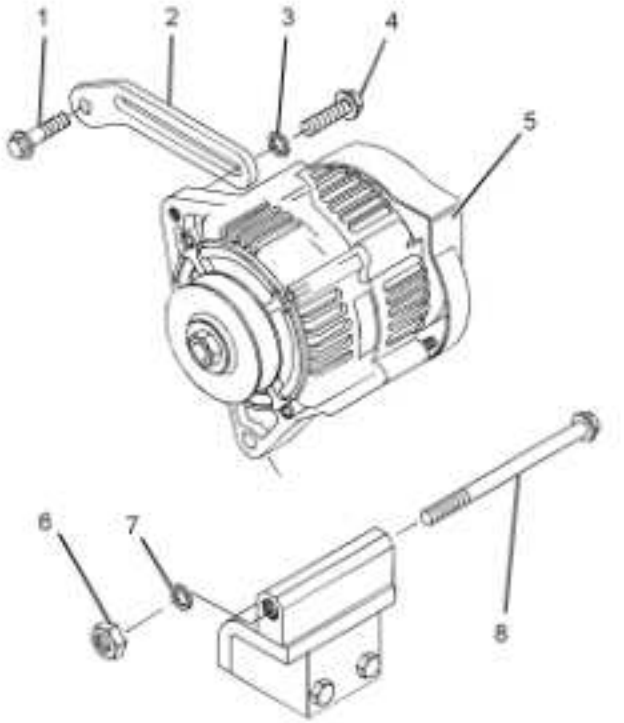


Illustration 184 g01308285
Typical example

3. Disconnect the harness assembly (not shown) from alternator (5).
4. Remove bolt (4) and washer (3) from alternator (5).
5. Remove washer (7) and nut (6). Remove bolt (8) and alternator (5) from the mounting bracket.
6. If necessary, remove bolt (1) and remove adjusting link (2).

Installation Procedure

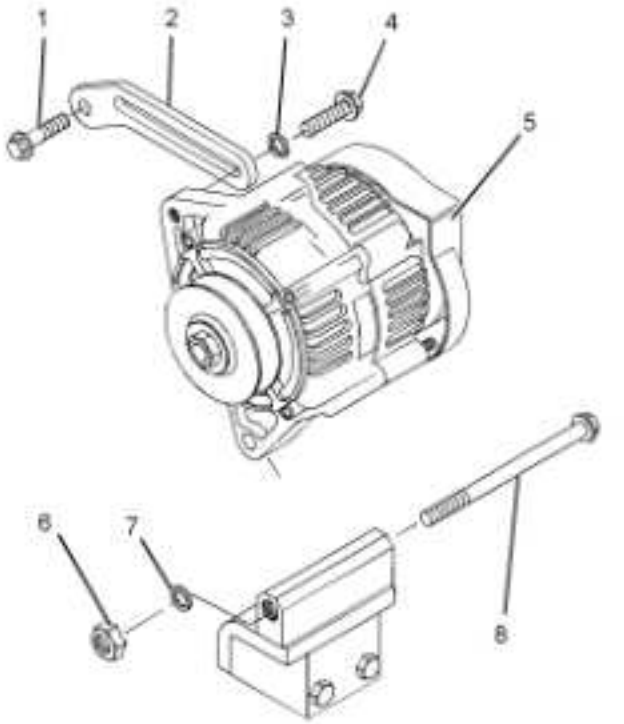


Illustration 185 g01308285
Typical example

1. If necessary, install adjusting link (2) and install bolt (1) finger tight.
2. Position alternator (5) on the mounting bracket.
3. Install bolt (8), washer (7) and nut (6) finger tight.
4. Install bolt (4) and washer (3) finger tight.
5. Install the V-Belt. Refer to Disassembly and Assembly, "V-Belts - Remove and Install".

Note: Ensure that the alternator pulley is in alignment with the crankshaft pulley. Ensure that all fasteners are tightened.

6. Connect the harness assembly (not shown) to the alternator.
7. Turn the battery disconnect switch to the ON position.

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