

Product: INDUSTRIAL ENGINE
Model: C3.4B INDUSTRIAL ENGINE CJ7
Configuration: C3.4B IOPU Industrial Engine CJ700001-UP

Disassembly and Assembly C3.4B Industrial Engine

Media Number -UENR4498-02

Publication Date -01/06/2015

Date Updated -30/01/2018

i05825417

Crankcase Breather - Install

SMCS - 1317-012

Installation Procedure

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	-	1/2 Inch Drive x 19 mm Hex	1

1. Ensure that all components of the crankcase breather are clean and free from wear and damage. Replace any components that are worn or damaged.
-

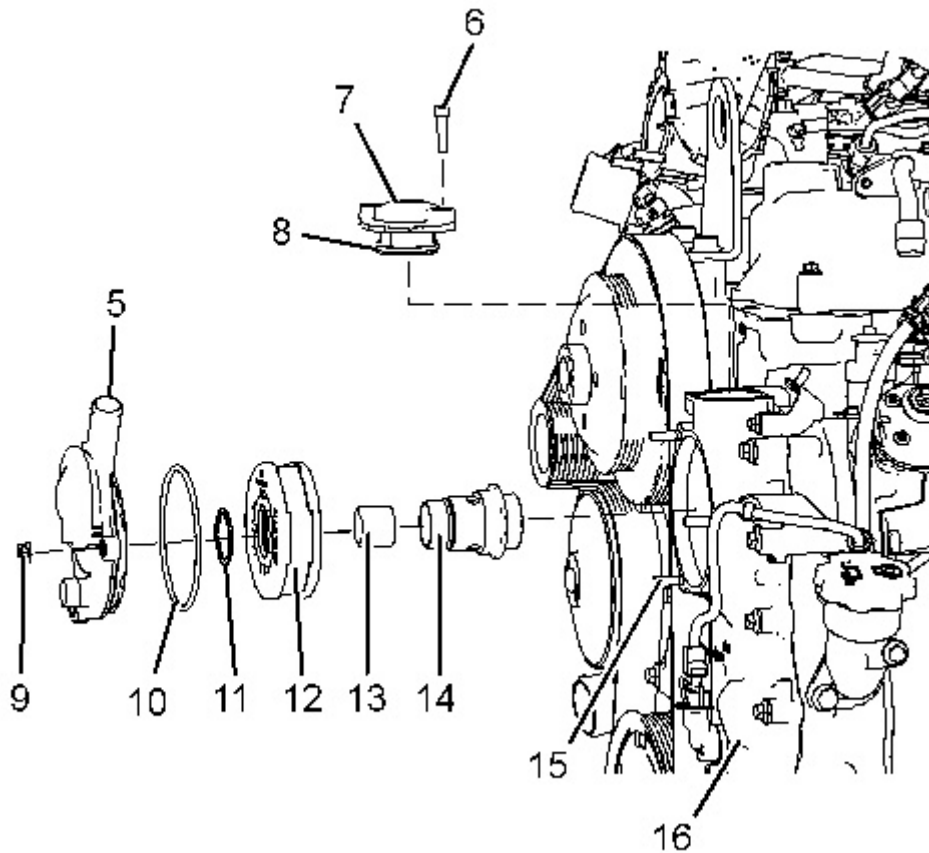


Illustration 1

g03787922

2. If necessary, install studs (15) to front cover (16). Tighten the studs to a torque of 9 N·m (80 lb in).
3. If necessary, install spigot (14) and threaded insert (13). Press the spigot onto the fuel injection pump shaft. Ensure that the spigot is correctly positioned onto the fuel injection pump shaft. Tighten the threaded insert hand tight.
4. Use a suitable tool in order to prevent the crankshaft from rotating. Use Tooling (A) in order to tighten threaded insert (13) to a torque of 85 N·m (63 lb ft).
5. Install new breather element (12) to spigot (14). Install circlip (11) to the spigot.
Note: Ensure that the circlip is correctly seated into the retaining groove in the spigot.
6. Install new O-ring (10) to crankcase breather cover (5).
7. Position crankcase breather cover (5) onto front cover (16).
8. Install nuts (9). Tighten the nuts to a torque of 10 N·m (89 lb in).
9. If necessary, install a new O-ring seal (8) to breather assembly (7). install the breather assembly to front cover (16). Install Allen head bolts (6) to the breather assembly. Tighten the Allen head bolts to a torque of 10 N·m (89 lb in).

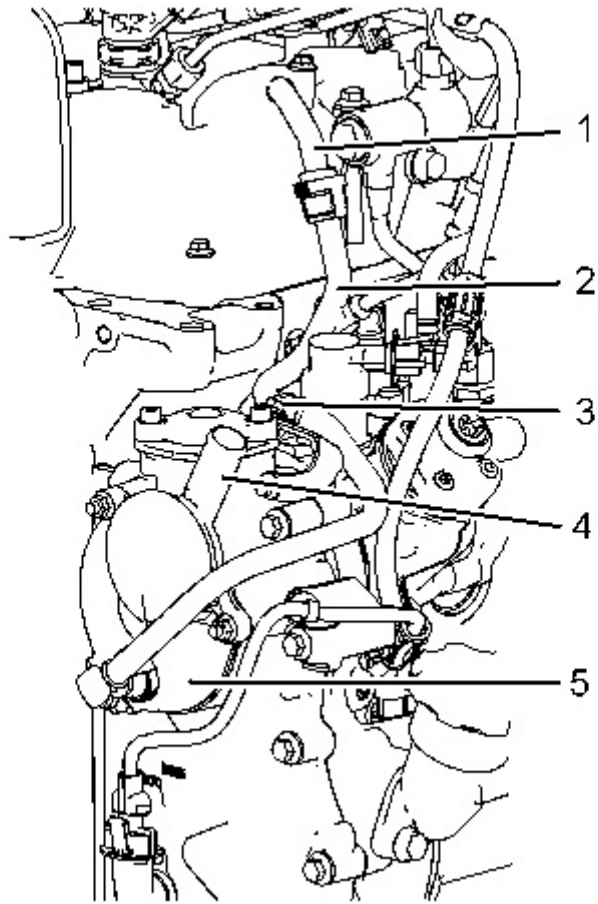


Illustration 2

g03787921

10. Connect plastic tube assembly (2) to connection (1) and crankcase breather cover (5).
 11. Install nut (3) to the clip. Tighten the nut to a torque of 10 N·m (89 lb in).
 12. Connect the OEM hose assembly to connection (4) on crankcase breather cover (5). Refer to the OEM for the correct procedure.
-

Product: INDUSTRIAL ENGINE
Model: C3.4B INDUSTRIAL ENGINE CJ7
Configuration: C3.4B IOPU Industrial Engine CJ700001-UP

Disassembly and Assembly

C3.4B Industrial Engine

Media Number -UENR4498-02

Publication Date -01/06/2015

Date Updated -30/01/2018

i05825418

Valve Mechanism Cover - Remove and Install

SMCS - 1107-010

Removal Procedure

Start By:

- a. If the Diesel Oxidation Catalyst (DOC) assembly is mounted above the valve mechanism cover, removal of the DOC assembly and the mounting bracket will be necessary. Refer to Disassembly and Assembly, "Clean Emissions Module - Remove and Install" and Disassembly and Assembly, "Support and Mounting (CEM) - Remove and Install" for the correct procedures.
- b. Remove the fuel manifold. Refer to Disassembly and Assembly, "Fuel Manifold (Rail) - Remove and Install" for the correct procedure.
- c. Remove the electronic unit injectors. Refer to Disassembly and Assembly, "Electronic Unit Injector - Remove" for the correct procedure.
- d. Remove the secondary fuel filter base. Refer to Disassembly and Assembly, "Fuel filter Base - Remove and Install (Secondary Fuel Filter)" for the correct procedure.

NOTICE

Ensure that all adjustments and repairs that are carried out to the fuel system are performed by authorised personnel that have the correct training.

Before beginning ANY work on the fuel system, refer to Operation and Maintenance Manual, "General Hazard Information and High Pressure Fuel Lines" for safety information.

Refer to Systems Operation, Testing and Adjusting Manual, "Cleanliness of Fuel System Components" for detailed information on

the standards of cleanliness that must be observed during ALL work on the fuel system.

NOTICE

Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.

Dispose of all fluids according to local regulations and mandates.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

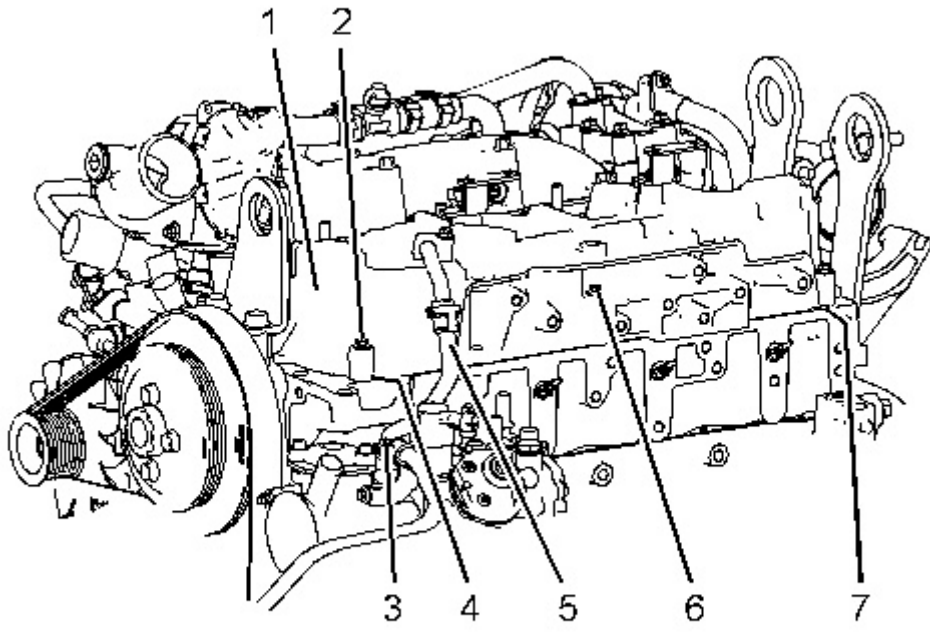


Illustration 1

g03792522

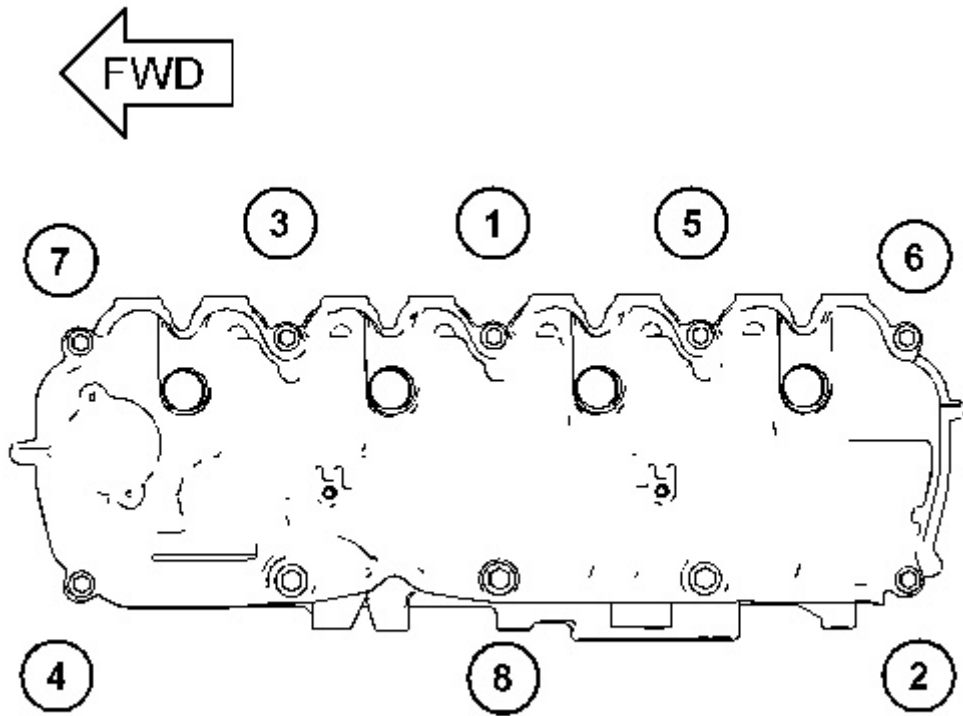


Illustration 2

g03793298

Sequence for tightening the bolts for the valve mechanism cover

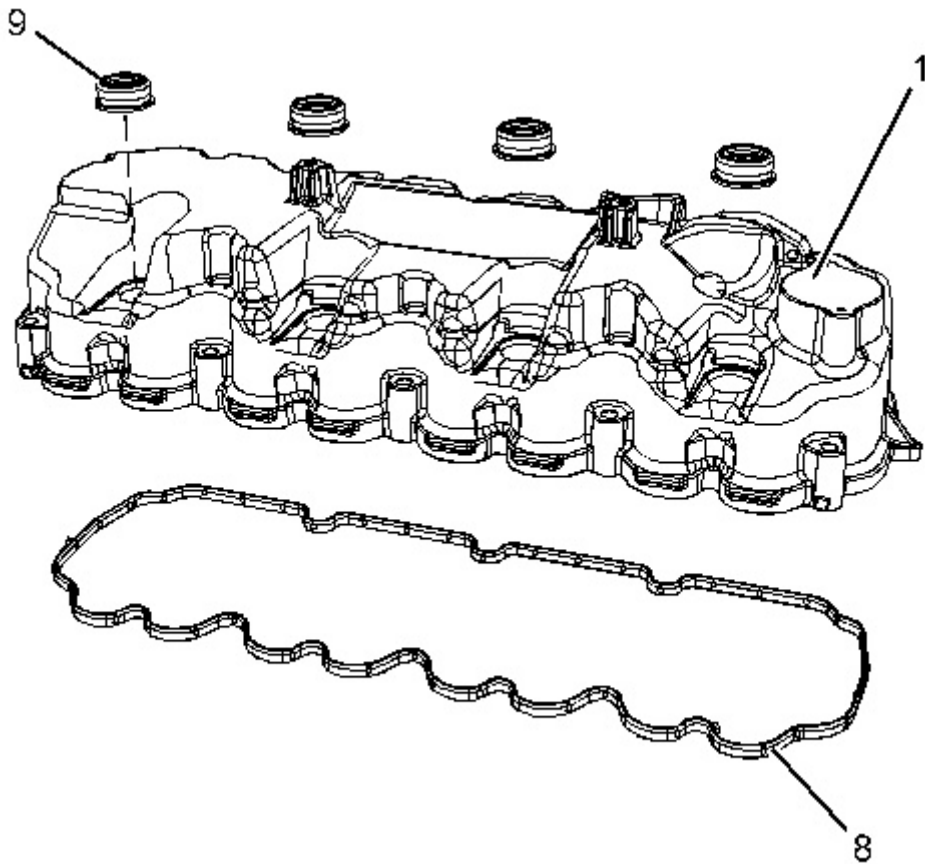


Illustration 3

g03835308

1. If necessary, remove the exhaust gas recirculation valve (EGR Valve). Refer to Disassembly and Assembly, "Exhaust Gas Recirculation Valve - Remove and Install" for the correct procedure.
 2. Remove nut (3) for the clip.
 3. Disconnect plastic tube assembly (5) from valve mechanism cover (1).
 4. Loosen bolts (2) and bolt (6) in the reverse numerical order to the tightening sequence. Refer to the Illustration 2.
- Note:** Follow the correct sequence in order to help prevent distortion of the valve mechanism cover.
5. Remove bolts (2) and bolt (6) from valve mechanism cover (1).
 6. Remove valve mechanism cover (1) from the cylinder head.
 7. Remove seal (8) from the valve mechanism cover.
 8. Remove electronic unit injector sleeve seals (9) from the valve mechanism cover.
 9. If necessary, remove dowel (4) (not shown) and dowel (7) (not shown) from the cylinder head. Do not remove dowels unless the dowels are damaged.

Installation Procedure

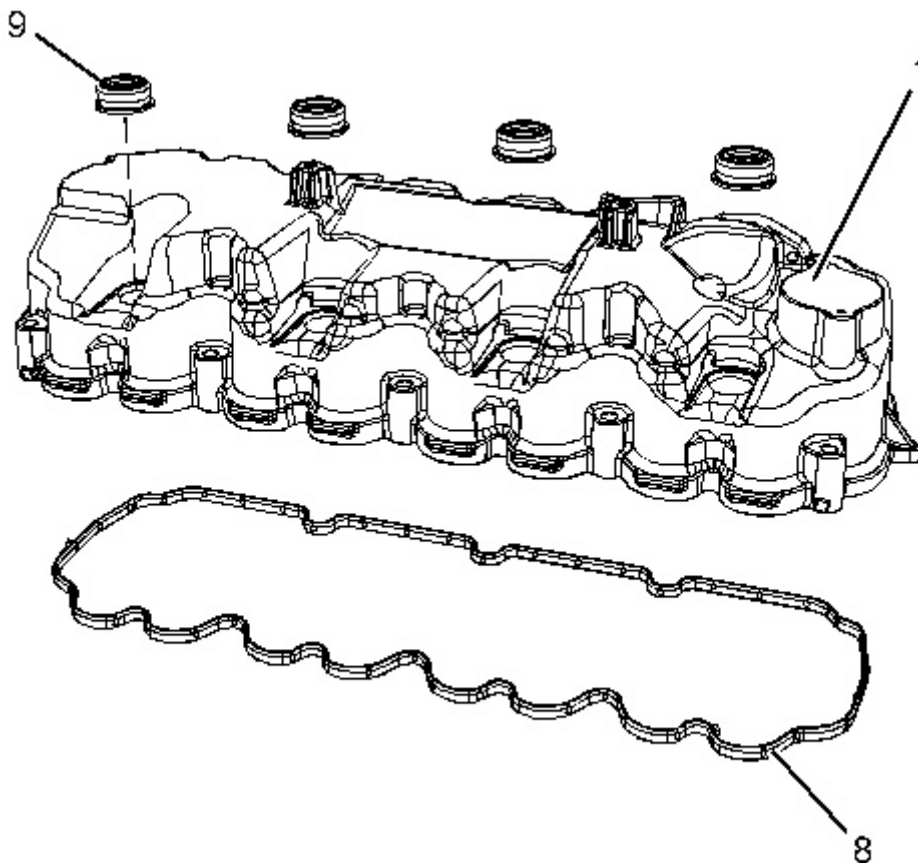
Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	-	Guide Stud 120mm x M6	4

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.



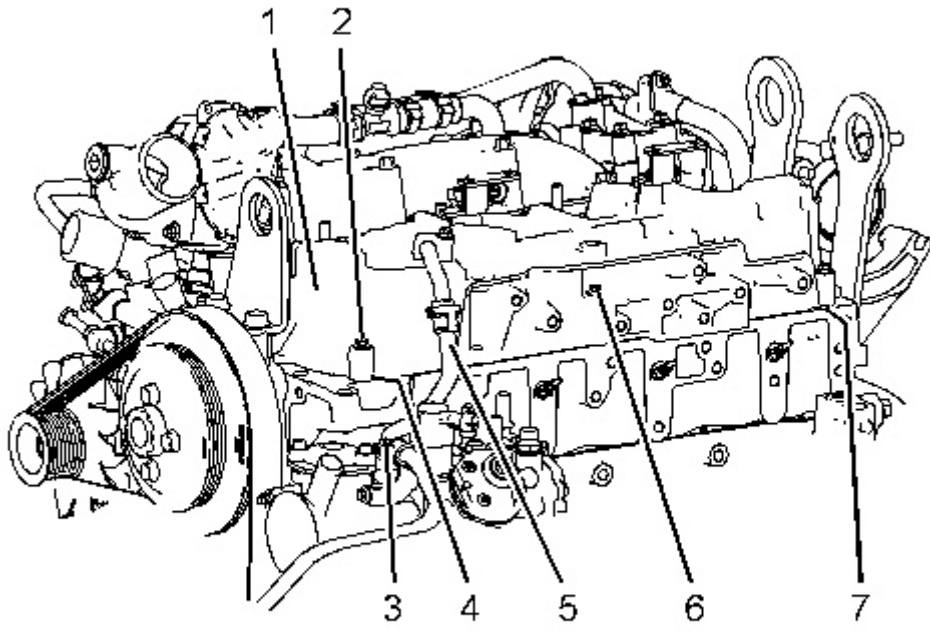


Illustration 5

g03792522

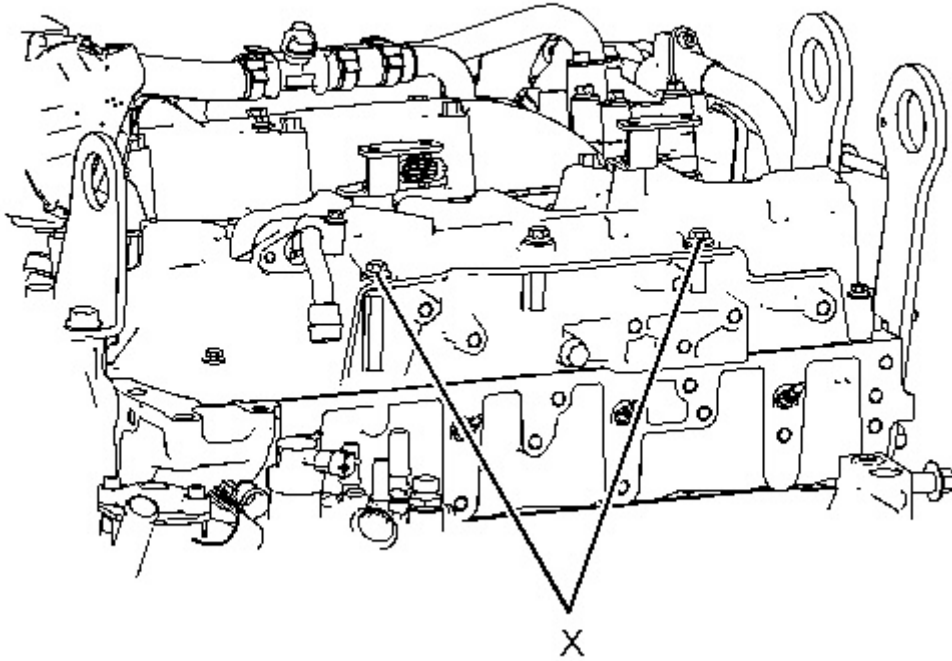


Illustration 6

g03792587

1. Thoroughly clean the gasket surface of valve mechanism cover (1) and the cylinder head.
 2. If necessary, install dowel (4) (not shown) and dowel (7) (not shown) to the cylinder head.
 3. Install new electronic unit injector sleeve seals (9) to the valve mechanism cover.
 4. Ensure that the recess for seal (8) in valve mechanism cover (1) is free from oil.
 5. Install a new seal (8) to valve mechanism cover (1). Ensure that the seal is fully seated into the recess of the valve mechanism cover.
-

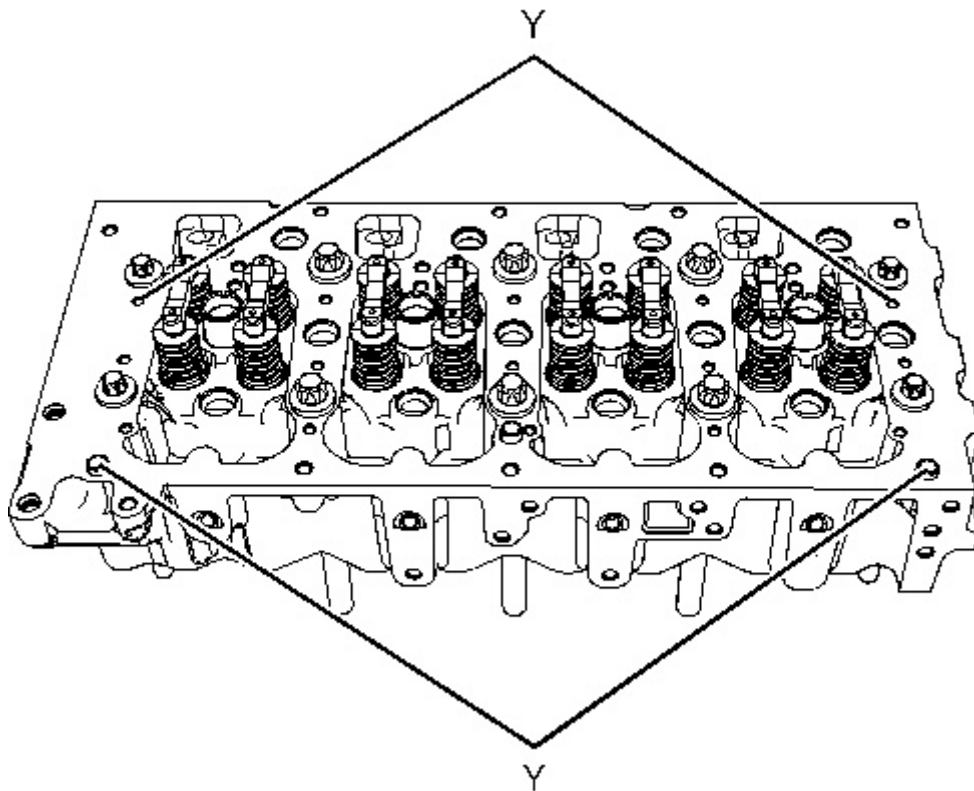


Illustration 7

g03843805

6. Install Tooling (A) in Positions (Y) as shown in Illustration 7.
 7. Position valve mechanism cover (1) onto the cylinder head. Ensure that the valve mechanism cover is correctly located onto dowel (4) (not shown) and dowel (7) (not shown).
 8. Remove Tooling (A).
 9. Install bolts (2) and bolt (6) to the valve mechanism cover.
 10. Temporarily install the bolts used to secure the fuel manifold in Positions (X) finger tight.
-

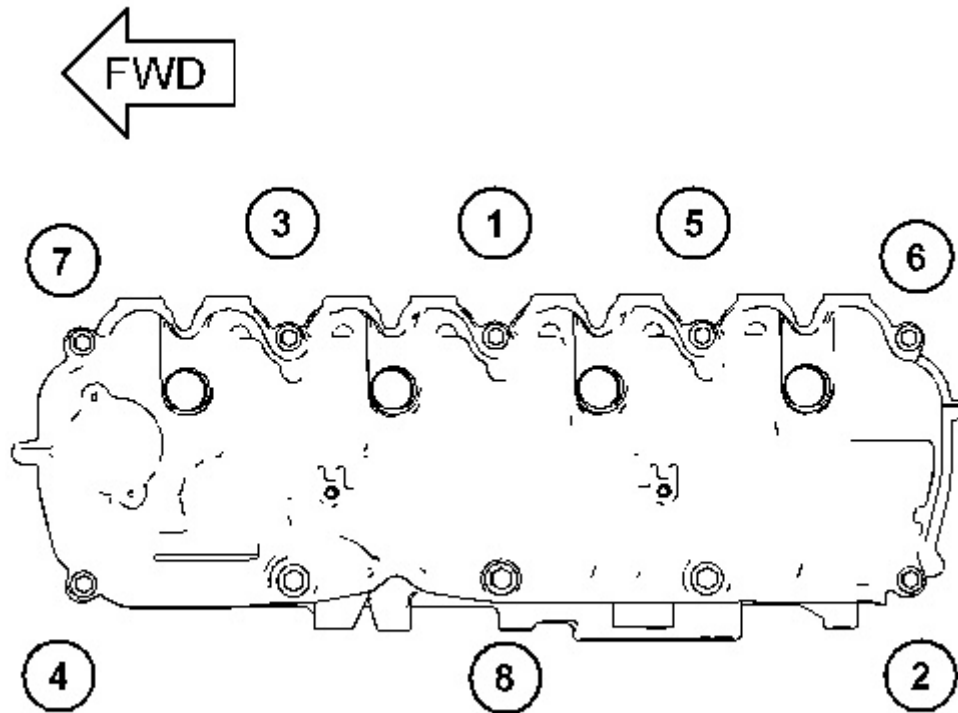


Illustration 8

g03793298

Sequence for tightening the bolts for the valve mechanism cover

11. Tighten the bolts in the numerical sequence that is shown in Illustration 8.

Tighten the bolts 1 through 7 to a torque of 10 N·m (89 lb in)

Tighten the bolt 8 to a torque of 27 N·m (239 lb in)

Repeat Step 11 in order to ensure the correct torque.

12. Remove the bolts used to secure the fuel manifold in Positions (X). Refer to Illustration 6.
13. If necessary, install the exhaust gas recirculation valve (EGR Valve). Refer to Disassembly and Assembly, "Exhaust Gas Recirculation Valve - Remove and Install" for the correct procedure.

End By:

- a. Install the electronic unit injectors. Refer to Disassembly and Assembly, "Electronic Unit Injector - Remove" for the correct procedure.
- b. Install the fuel manifold. Refer to Disassembly and Assembly, "Fuel Manifold (Rail) - Remove and Install" for the correct procedure.
- c. If the Diesel Oxidation Catalyst (DOC) assembly is mounted above the valve mechanism cover, install the DOC assembly and mounting bracket. Refer to Disassembly and

Assembly, "Clean Emissions Module - Remove and Install" and Disassembly and Assembly, "Support and Mounting (CEM) - Remove and Install" for the correct procedures.

- d. Install the secondary fuel filter base. Refer to Disassembly and Assembly, "Fuel filter Base - Remove and Install (Secondary Fuel Filter)" for the correct procedure.
-

Product: INDUSTRIAL ENGINE
Model: C3.4B INDUSTRIAL ENGINE CJ7
Configuration: C3.4B IOPU Industrial Engine CJ700001-UP

Disassembly and Assembly C3.4B Industrial Engine

Media Number -UENR4498-02

Publication Date -01/06/2015

Date Updated -30/01/2018

i05825419

Rocker Shaft and Pushrod - Remove

SMCS - 1102-011; 1208-011

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	390-1131	Timing Pin (Crankshaft)	1
B	435-3146	Timing Pin (Camshaft)	1

Start By:

- a. Remove the valve mechanism cover. Refer to Disassembly and Assembly, "Valve Mechanism Cover - Remove and Install" for the correct procedure.
-

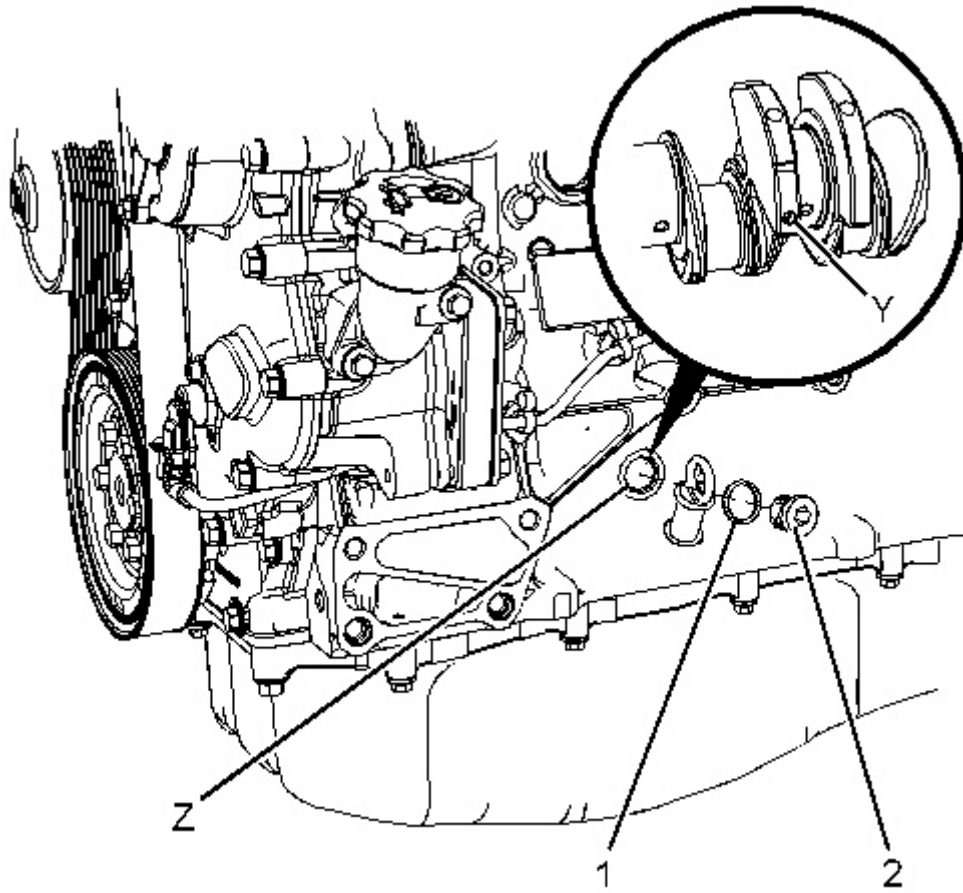


Illustration 1

g02942738

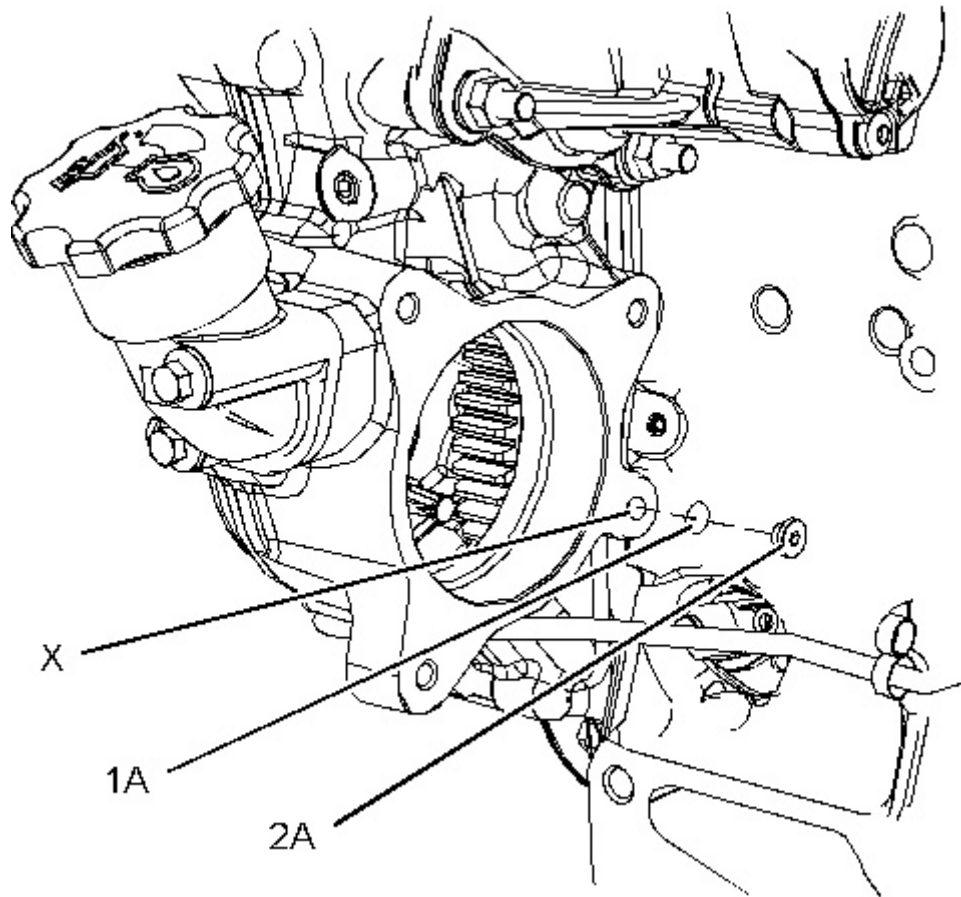


Illustration 2

g03835315

1. Follow Step 1.a through Step 1.c in order to install the crankshaft positioning tool.
 - a. Remove plug (2) from Position (Z) in the cylinder block.
 - b. Remove O-ring seal (1) from plug (2).
 - c. Install Tooling (A) into the cylinder block in Position (Z).

Note: Tooling (A) must be located in Hole (Y) in the crankshaft.

Note: Ensure that Tooling (A) is located in the correct drilling in the crankshaft as shown in Illustration 1.
 2. Follow Step 2.a through Step 2.c in order to install the camshaft positioning tool.
 - a. Remove plug (2A) from Position (X) in the front housing.
 - b. Remove O-ring seal (1A) from plug (2A).
 - c. Install Tooling (B) into the front housing in Position (X).
-

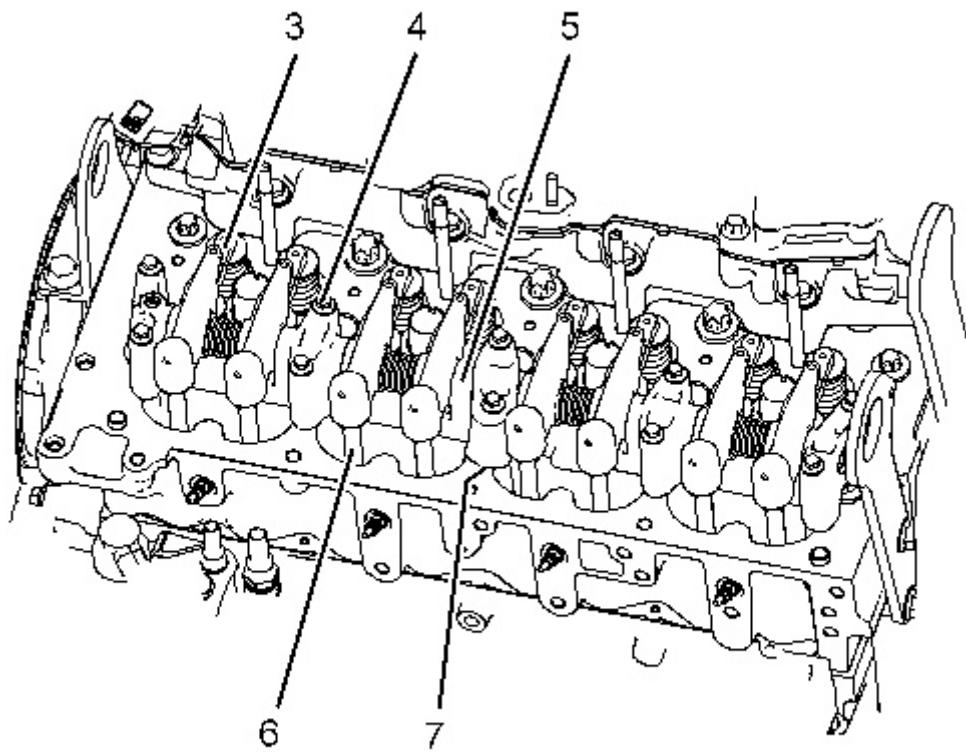


Illustration 3

g03793318

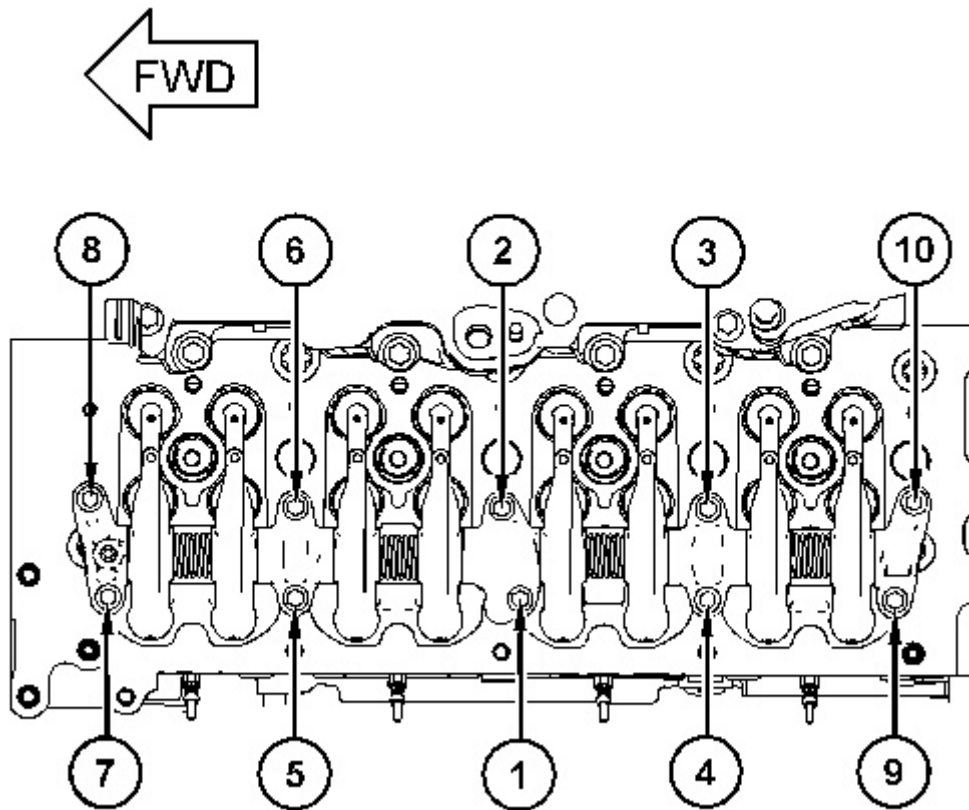


Illustration 4

g03793321

Sequence for tightening the bolts for the rocker shaft assembly

3. Remove bolts (4) from rocker shaft (5) in the reverse numerical sequence shown in Illustration 4.
4. Remove the assembly of rocker shaft (5) from the cylinder head.
5. Make temporary identification marks on push rods (6). Remove the push rods from the cylinder head.
6. Make temporary identification marks on valve bridges (3). Remove the valve bridges from the valve stems.

Note: Make a note of the orientation of the valve bridges.

7. If necessary, remove dowel (7) (not shown). Do not remove dowel unless the dowel are damaged.

Product: INDUSTRIAL ENGINE
Model: C3.4B INDUSTRIAL ENGINE CJ7
Configuration: C3.4B IOPU Industrial Engine CJ700001-UP

Disassembly and Assembly C3.4B Industrial Engine

Media Number -UENR4498-02

Publication Date -01/06/2015

Date Updated -30/01/2018

i05825421

Rocker Shaft - Disassemble

SMCS - 1102-015

Disassembly Procedure

Start By:

- a. Remove the rocker shaft assembly. Refer to Disassembly and Assembly, "Rocker Shaft and Pushrod - Remove" for the correct procedure.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.



Personal injury can result from being struck by parts propelled by a released spring force.

Make sure to wear all necessary protective equipment.

Follow the recommended procedure and use all recommended tooling to release the spring force.

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

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

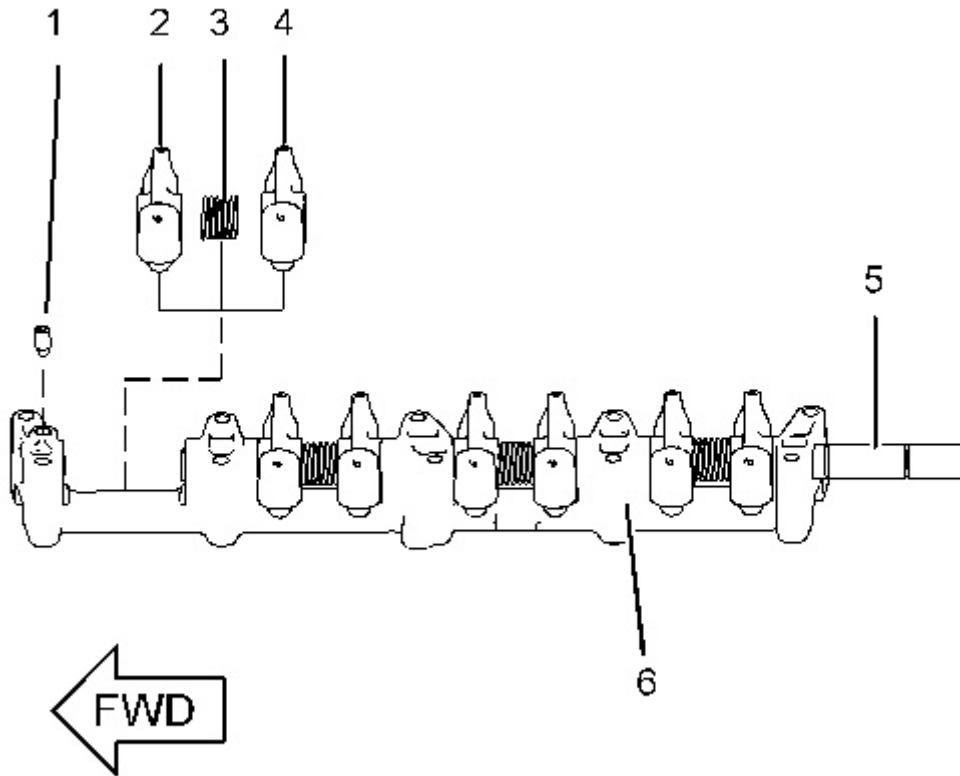


Illustration 1

g03793545

2. Remove grub screw (1) from the assembly of rocker shaft bracket (6).
 3. Remove rocker shaft (5) from rocker shaft bracket (6). Remove the rocker shaft in order to allow each cylinder inlet valve rocker arm assembly (2), spring (3), and exhaust rocker arm assembly (4) separately.
 4. Remove the inlet valve rocker arm assembly (2) from rocker shaft bracket (6).
 5. Remove spring (3) from rocker shaft bracket (6).
 6. Remove the exhaust rocker arm assembly (4) from rocker shaft bracket (6).
 7. Repeat Step 3 through Step 6 to remove remaining inlet valve rocker arm assembly (2), spring (3), and exhaust rocker arm assembly (2) from rocker shaft bracket (6).
-

Thank you so much for reading.
Please click the “Buy Now!”
button below to download the
complete manual.



After you pay.

You can download the most
perfect and complete manual in
the world immediately.

Our support email:

ebooklibonline@outlook.com