

Product: VIBRATORY COMPACTOR

Model: CS74B VIBRATORY COMPACTOR B7M

Configuration: CS74B, CP74B Vibratory Soil Compactor B7M00001-UP (MACHINE) POWERED BY C7.1 Engine

## Disassembly and Assembly

### C7.1 Engines

Media Number -UENR0633-19

Publication Date -01/07/2015

Date Updated -29/10/2018

i05292335

## Idler Gear - Install

SMCS - 1206-012

## Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	230-6284	Timing Pin (Camshaft)	1
B	136-4632	Timing Pin (Crankshaft)	1
	268-1966	Adapter	1
C	298-5564	T40 Torx Socket	1
D	235-0032	Valve Lash Gauge Gp	1
E	8T-5096	Dial Indicator Gp	1
	-	Magnetic Base and Stand	1

---

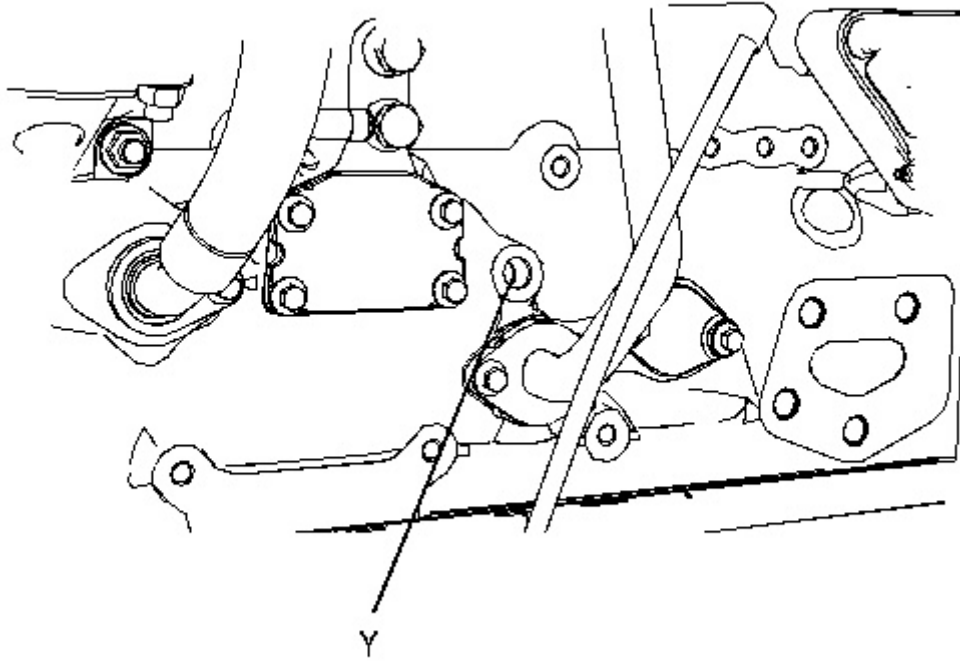
### NOTICE

**Keep all parts clean from contaminants.**

**Contaminants may cause rapid wear and shortened component life.**

---

---

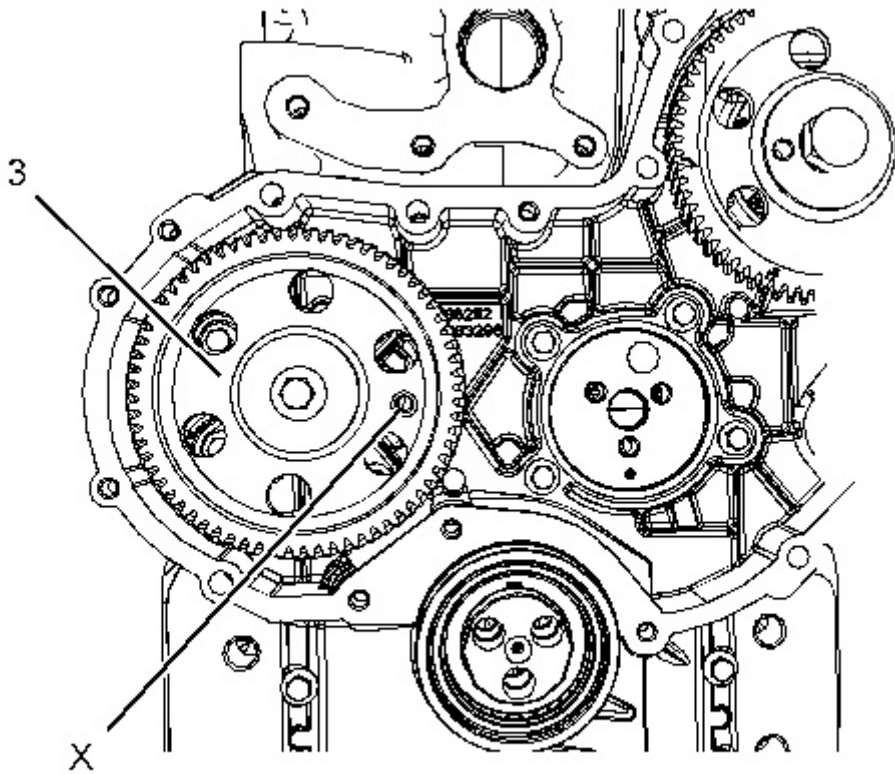


---

Illustration 1

g03414056

---

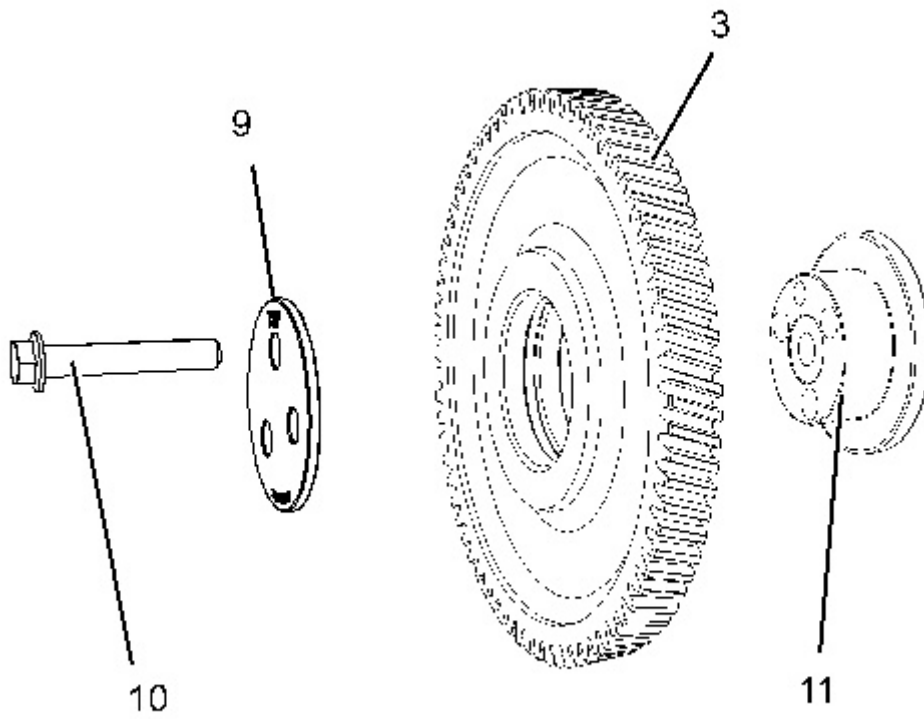


---

Illustration 2

g03414057

1. Ensure that Tooling (B) is installed in Hole (Y) in the cylinder block. Use Tooling (B) in order to lock the crankshaft in the correct Position. Refer to System Operation, Testing and Adjusting, "Finding Top Center Position for No.1 Piston" for the correct procedure.
  2. Ensure that Tooling (A) is installed into Hole (X) in camshaft gear (3).
-

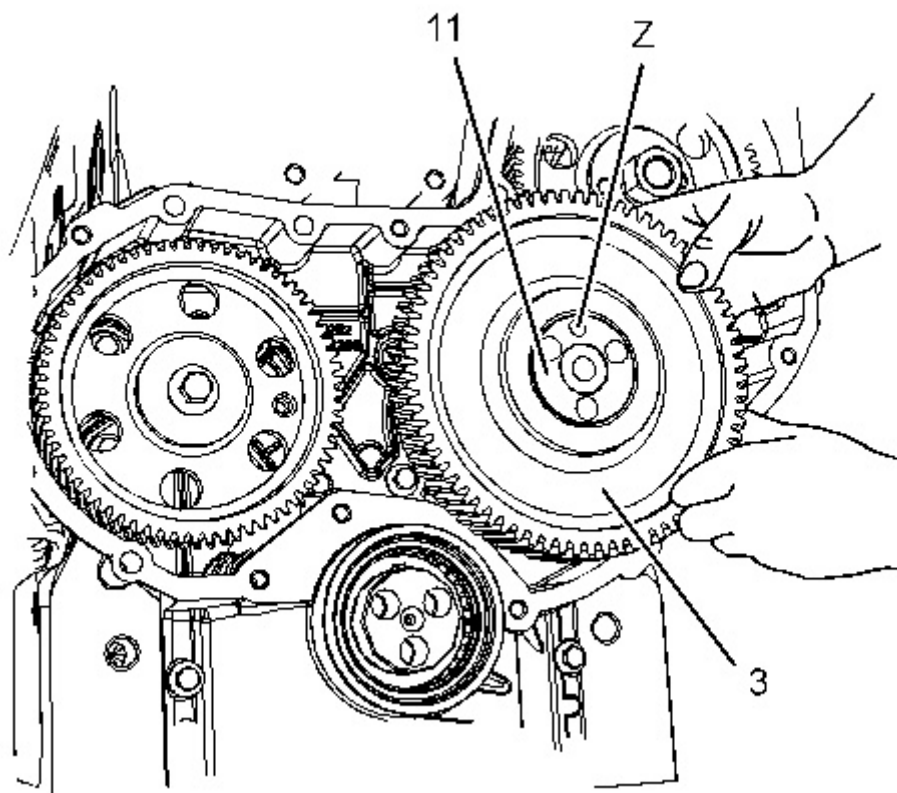


---

Illustration 3

g03414059

---



---

Illustration 4

g03414060

---

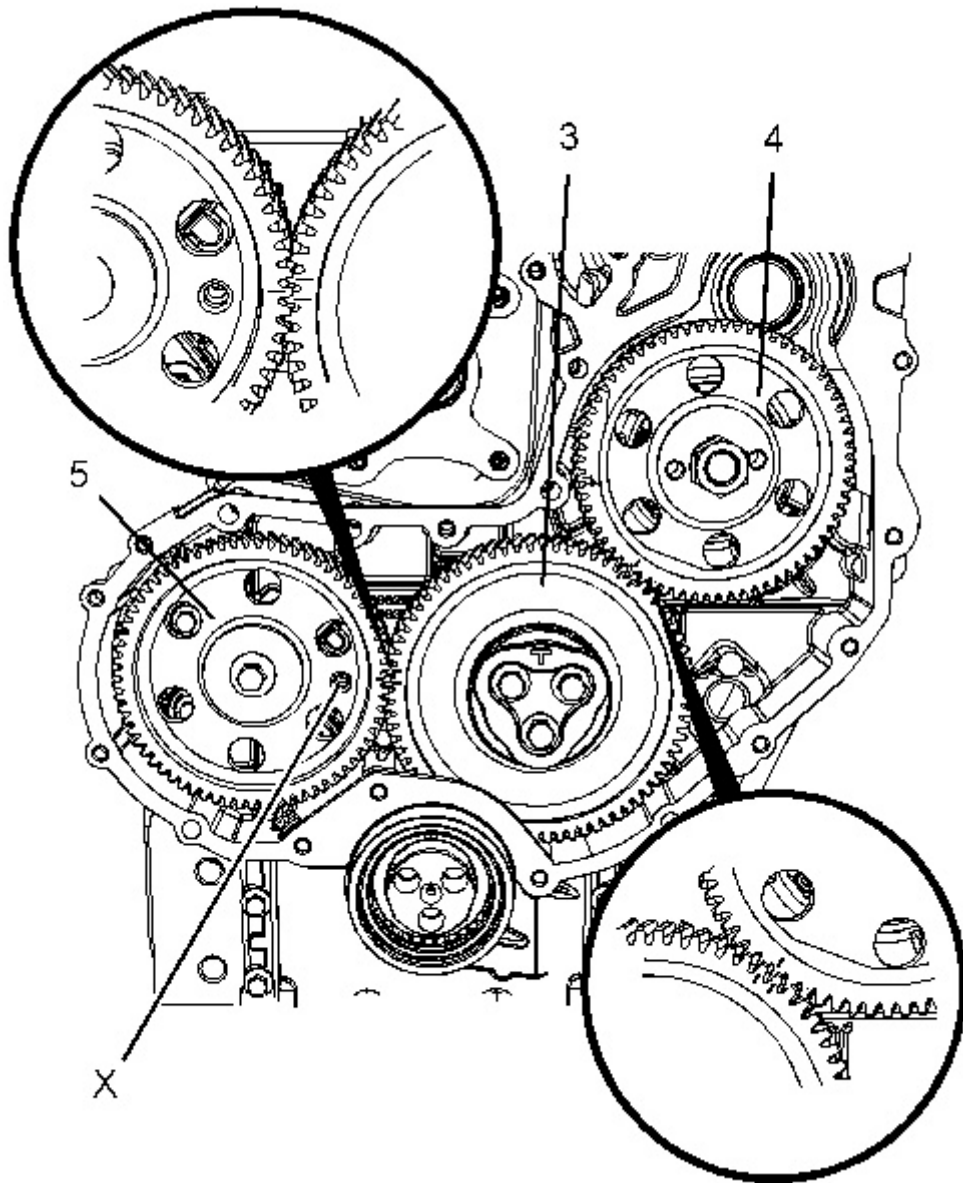


Illustration 5

g03414061

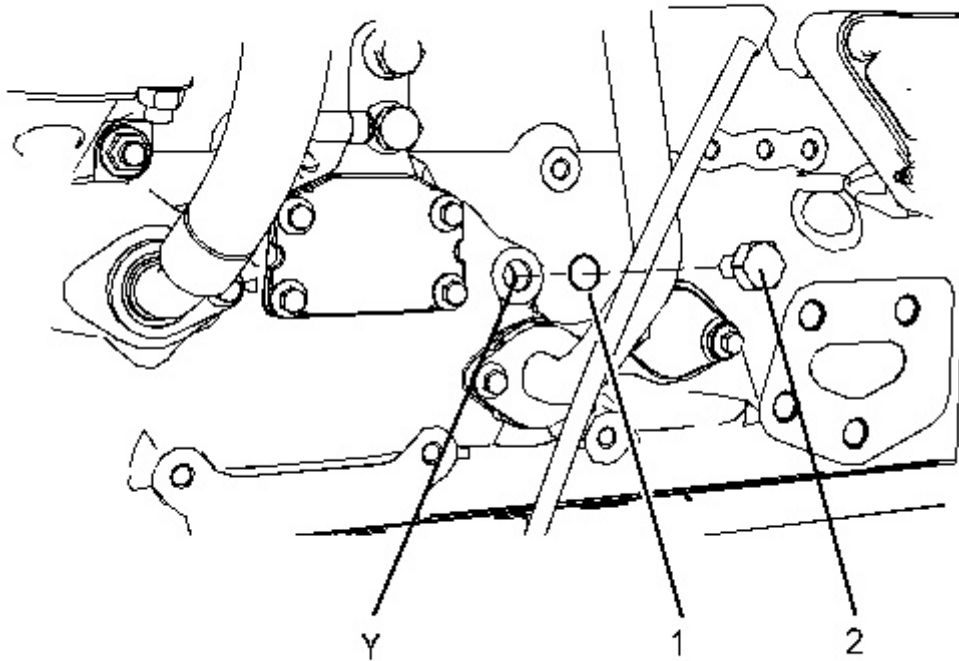
3. Clean idler gear (3) and inspect the idler gear for wear and damage. Refer to Specifications, "Gear Group (Front)" for more information. If necessary, replace the idler gear.
4. Clean hub (11) and inspect the hub for wear and damage. Refer to Specifications, "Gear Group (Front)" for more information. If necessary, replace the hub.
5. Lubricate hub (11) with clean engine oil. Install hub (10) into idler gear (3). Ensure that oil Hole (Z) is position as shown in the Illustration 4. Ensure that the timing marks are toward the front of the idler gear.
6. Align the timing marks on idler gear (3), camshaft gear (5), fuel injection pump gear (4). Refer to the Illustration 5. Install the assembly of idler gear (3) and hub (11).
7. Clean plate (9) and inspect the plate for wear and damage. If necessary, replace the plate.
8. Lubricate plate (9) with clean engine oil. Align the holes in plate (9) with the holes in hub (11). Install the plate in the original orientation.

**Note:** Ensure that the identification mark TOP is upward.

9. Install bolts (10) hand tight
10. Remove Tooling (A) and Tooling (B).

**Note:** Ensure that timing marks are aligned, before removing the Tooling (A) and Tooling (B).

11. Tighten bolts (10) to a torque of 44 N·m (32 lb ft).
- 



---

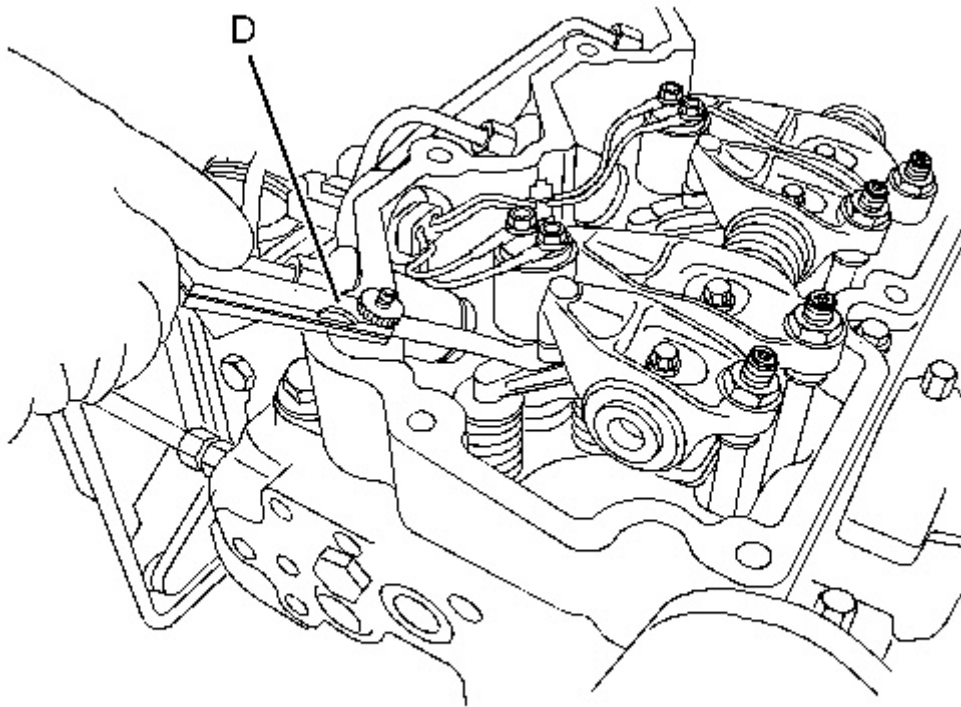
Illustration 6

g01996554

12. Position a new O-ring seal (1) onto plug (2). Install the plug to the cylinder block and tighten the plug to a torque of 21 N·m (186 lb in).
13. Use Tooling (E) in order to check the end play for the idler gear. Refer to Specifications, "Gear Group (Front)" for more information.
14. Use Tooling (E) in order to check the backlash between the idler gear and the camshaft gear. Refer to Specifications, "Gear Group (Front)" for more information.
15. Use Tooling (E) in order to check the backlash between the idler gear and the crankshaft gear. Refer to Specifications, "Gear Group (Front)" for more information.
16. Use Tooling (E) in order to check the backlash between the idler gear and the fuel injection pump gear. Refer to Specifications, "Gear Group (Front)" for more information.

17. Lightly lubricate all of the gears with clean engine oil.

---



---

Illustration 7

g03378711

18. Use Tooling (D) in order to check the valve lash. Refer to System Operation, Testing and Adjusting, "Engine Valve Lash - Inspect/Adjust" for more information.
19. If necessary, use Tooling (D) and Tooling (C) in order to adjust the valve lash. Refer to System Operation, Testing and Adjusting, "Engine Valve Lash - Inspect/Adjust" for the correct procedure.

**End By:**

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



Product: VIBRATORY COMPACTOR

Model: CS74B VIBRATORY COMPACTOR B7M

Configuration: CS74B, CP74B Vibratory Soil Compactor B7M00001-UP (MACHINE) POWERED BY C7.1 Engine

## Disassembly and Assembly

### C7.1 Engines

Media Number -UENR0633-19

Publication Date -01/07/2015

Date Updated -29/10/2018

i05292330

## Housing (Front) - Remove - Heavy Duty Housing (Front)

SMCS - 1151-011

### Removal Procedure

#### Start By:

- a. Remove the fan. Refer to Disassembly and Assembly, "Fan - Remove and Install" for the correct procedure.
- b. Remove the crankshaft pulley. Refer to Disassembly and Assembly, "Vibration Damper and Pulley - Remove" for the correct procedure.
- c. Remove the engine oil pan plate. Refer to Disassembly and Assembly, "Engine Oil Pan Plate - Remove" for the correct procedure.
- d. If the engine has an accessory drive, remove the accessory drive. Refer to Disassembly and Assembly, "Accessory Drive - Remove and Install" for the correct procedure.
- e. Remove the water pump. Refer to Disassembly and Assembly, "Water Pump - Remove" for the correct procedure.
- f. Remove the timing gears. Refer to Disassembly and Assembly, "Gear Group (Front) - Remove and Install" for the correct procedure.
- g. Remove the fuel injection pump. Refer to Disassembly and Assembly, "Fuel Injection Pump - Remove" for the correct procedure.

---

### NOTICE

**Keep all parts clean from contaminants.**

**Contaminants may cause rapid wear and shortened component life.**

---

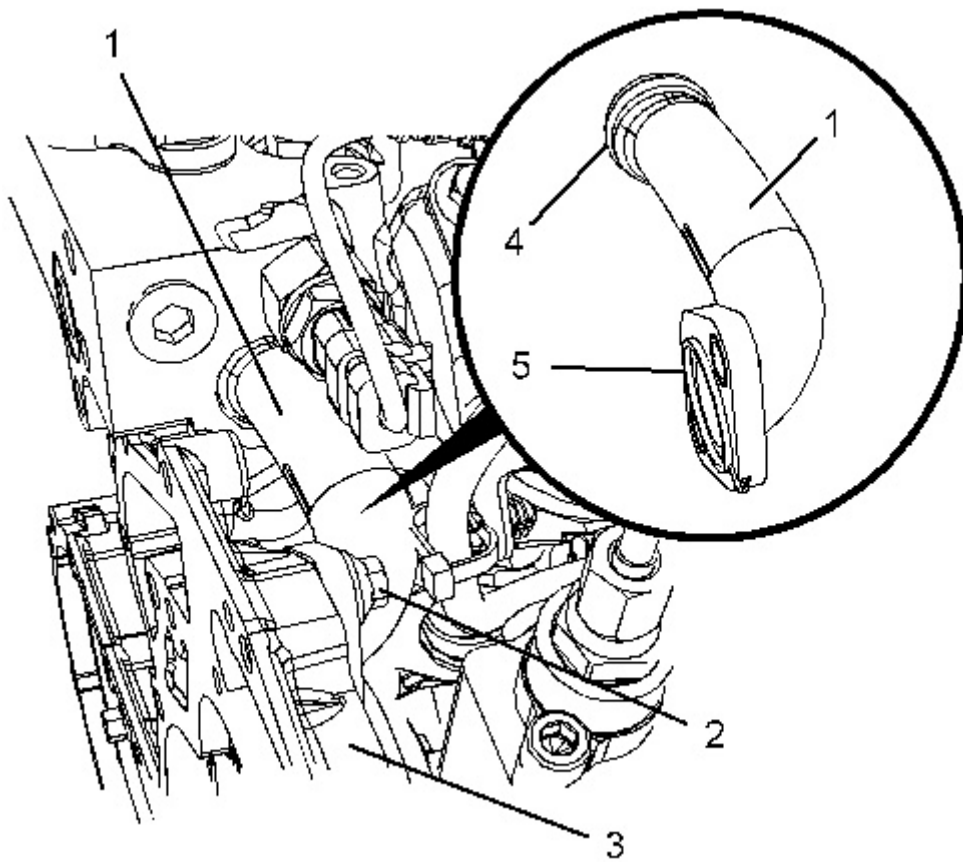
---

## 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.

---

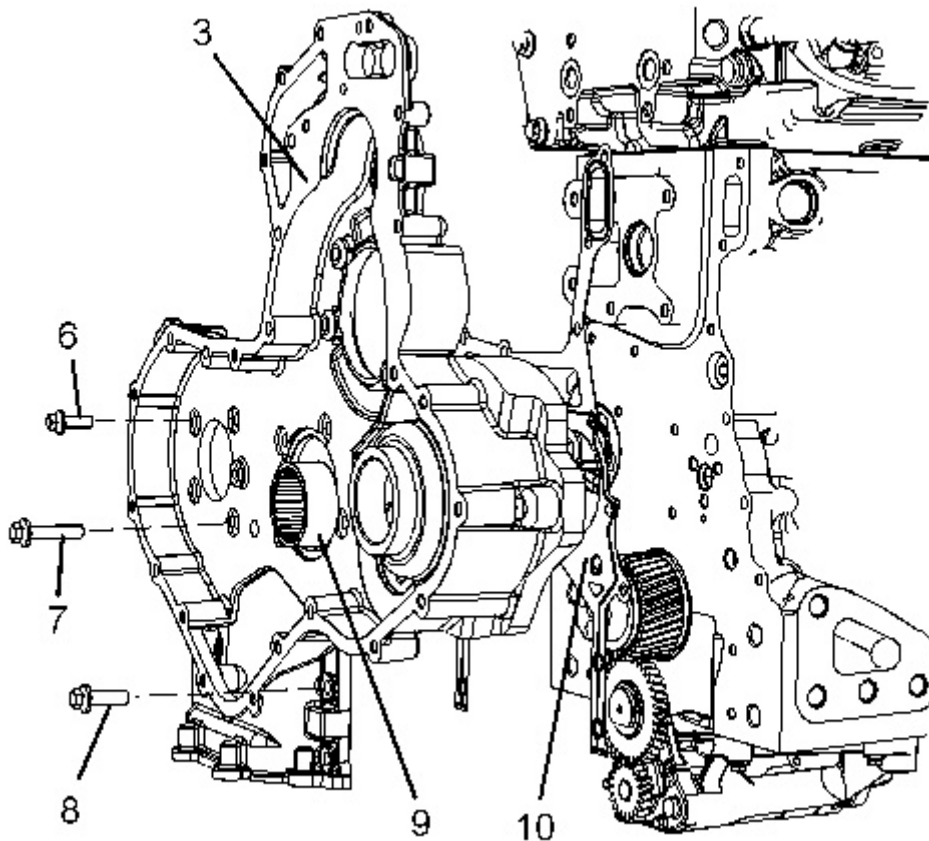


---

Illustration 1

g03430098

1. Remove bolts (2) that secure bypass tube (1) to front housing (3).
  2. Remove bypass tube (1) from the cylinder head. Remove O-ring (4) and O-ring (5) from bypass tube (1).
-



---

Illustration 2

g03378762

3. Remove bolts (6), bolts (7), and bolts (8) from front housing (3).

**Note:** The bolts are different lengths. Note the positions of the different length bolts.

4. Remove front housing (3) from the cylinder block.

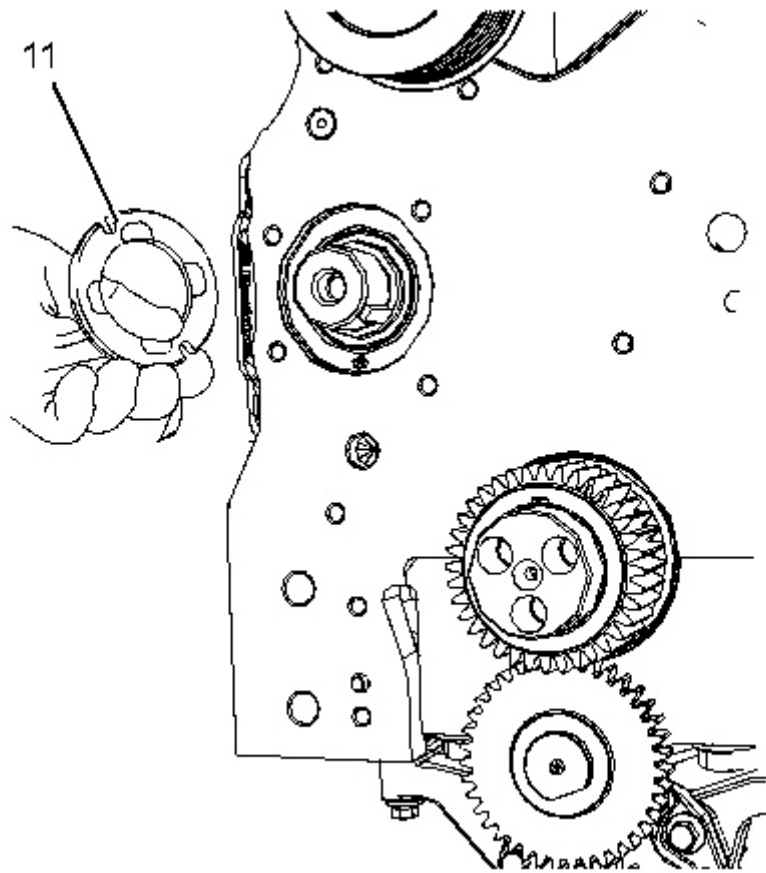
5. Remove gasket (10).

6. If necessary, follow Step 6.a through Step 6.b in order to remove bearing (9) from housing (3).

a. Place housing (3) onto a suitable support.

b. Use a suitable tool in order to press bearing (9) out of housing (3).

---



---

Illustration 3

g03378764

7. Remove thrust washer (11) from the cylinder block.
-

Product: VIBRATORY COMPACTOR

Model: CS74B VIBRATORY COMPACTOR B7M

Configuration: CS74B, CP74B Vibratory Soil Compactor B7M00001-UP (MACHINE) POWERED BY C7.1 Engine

## Disassembly and Assembly

### C7.1 Engines

Media Number -UENR0633-19

Publication Date -01/07/2015

Date Updated -29/10/2018

i05292333

## Housing (Front) - Remove

SMCS - 1151-011

### Removal Procedure

#### Start By:

- a. Remove the fan. Refer to Disassembly and Assembly, "Fan - Remove and Install" for the correct procedure.
- b. Remove the crankshaft pulley. Refer to Disassembly and Assembly, "Vibration Damper and Pulley - Remove" for the correct procedure.
- c. Remove the engine oil pan plate. Refer to Disassembly and Assembly, "Engine Oil Pan Plate - Remove" for the correct procedure.
- d. If the engine has an accessory drive, remove the accessory drive. Refer to Disassembly and Assembly, "Accessory Drive - Remove and Install" for the correct procedure.
- e. Remove the water pump. Refer to Disassembly and Assembly, "Water Pump - Remove" for the correct procedure.
- f. Remove the timing gears. Refer to Disassembly and Assembly, "Gear Group (Front) - Remove and Install" for the correct procedure.
- g. Remove the fuel injection pump. Refer to Disassembly and Assembly, "Fuel Injection Pump - Remove" for the correct procedure.

---

#### NOTICE

**Keep all parts clean from contaminants.**

**Contaminants may cause rapid wear and shortened component life.**

---

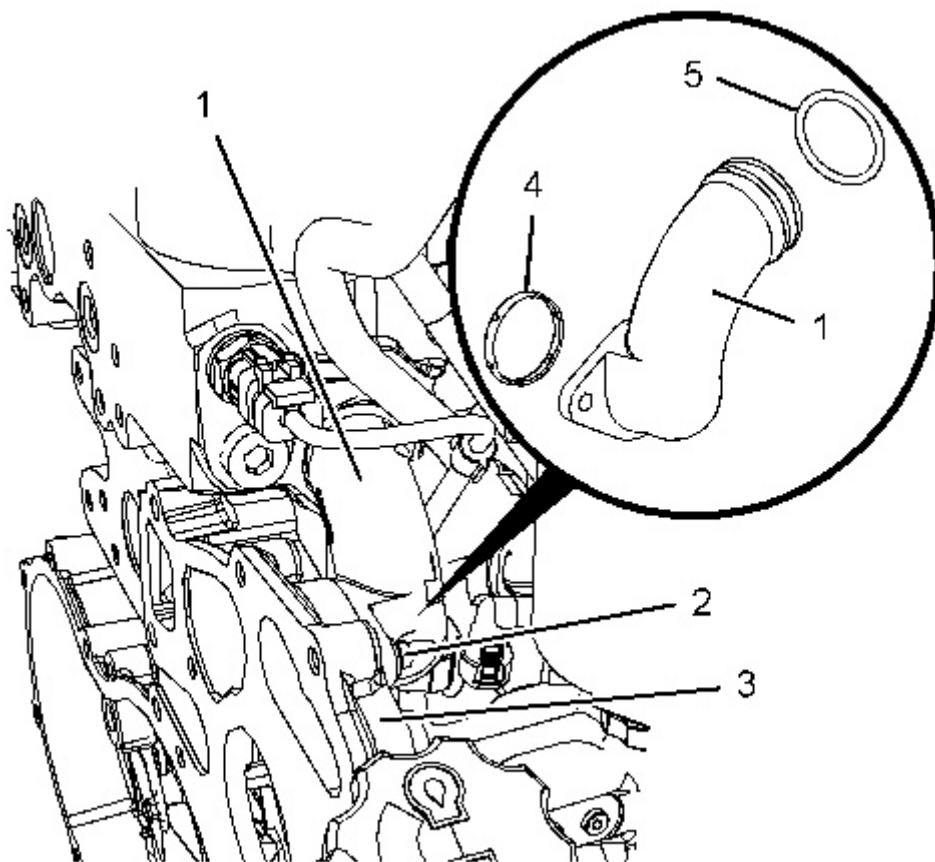
---

## 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.

---

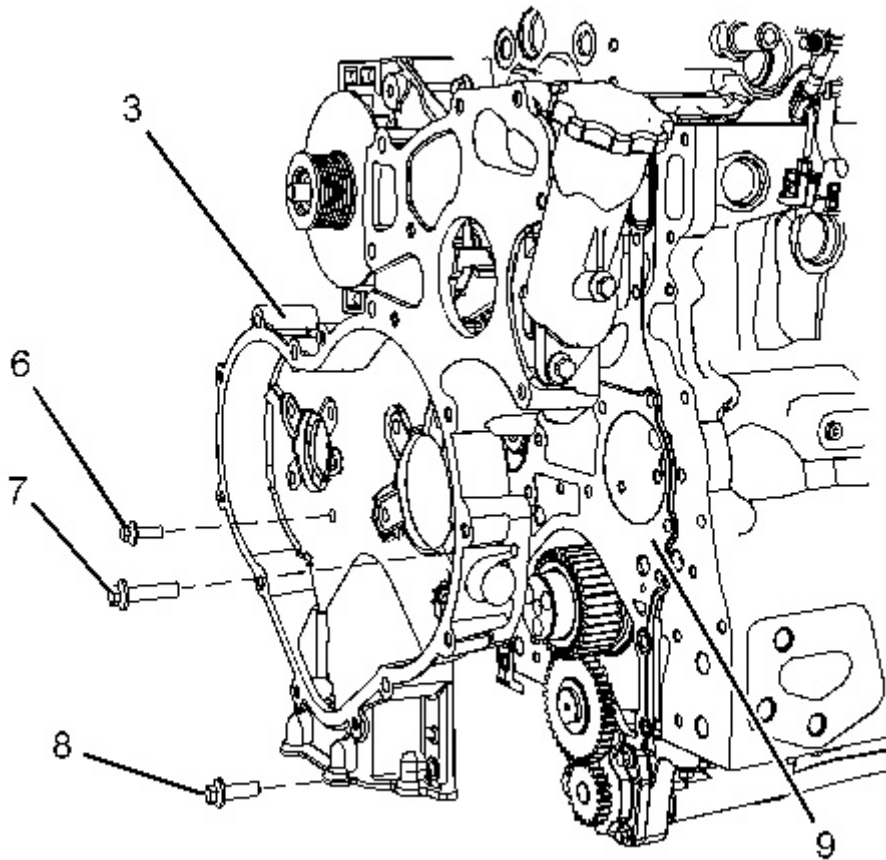


---

Illustration 1

g03378716

1. Remove bolts (2) that secure bypass tube (1) to front housing (4).
  2. Remove bypass tube (1) from the cylinder head. Remove O-ring (4) and O-ring (5) from bypass tube (1).
-



---

Illustration 2

g03378717

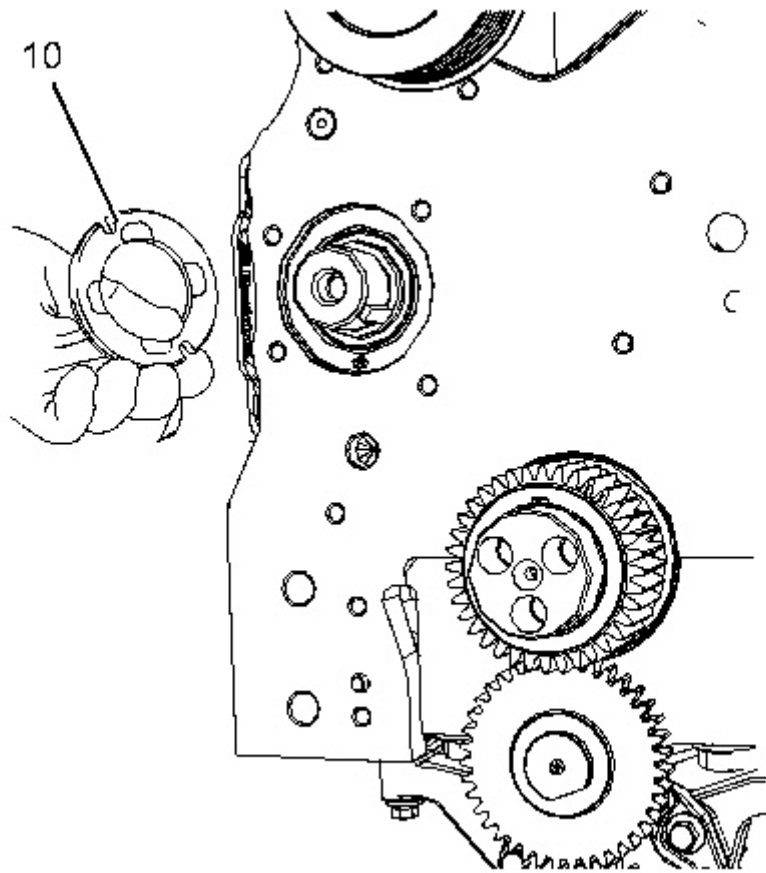
3. Remove bolts (6), bolts (7), and bolts (8) from front housing (3).

**Note:** The bolts are three different lengths. Note the positions of the different length bolts.

4. Remove front housing (3) from the cylinder block.

5. Remove gasket (9).

---



---

Illustration 3

g03378718

6. Remove thrust washer (10) from the cylinder block.
-



Product: VIBRATORY COMPACTOR

Model: CS74B VIBRATORY COMPACTOR B7M

Configuration: CS74B, CP74B Vibratory Soil Compactor B7M00001-UP (MACHINE) POWERED BY C7.1 Engine

## Disassembly and Assembly

### C7.1 Engines

Media Number -UENR0633-19

Publication Date -01/07/2015

Date Updated -29/10/2018

i05292326

## Housing (Front) - Install - Heavy Duty Housing (Front)

SMCS - 1151-012

### Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	6V-6640	Sealant	1
B	-	Guide Studs M8 by 40 mm	2
C	231-8847	Alignment Tool	1
	-	Bolts M10 by 50 mm	3
D	1U-6396	O-Ring Assembly Compound	1
E	7M-7456	Bearing Mount Compound	1

---

#### NOTICE

**Keep all parts clean from contaminants.**

**Contaminants may cause rapid wear and shortened component life.**

---

---

#### NOTICE

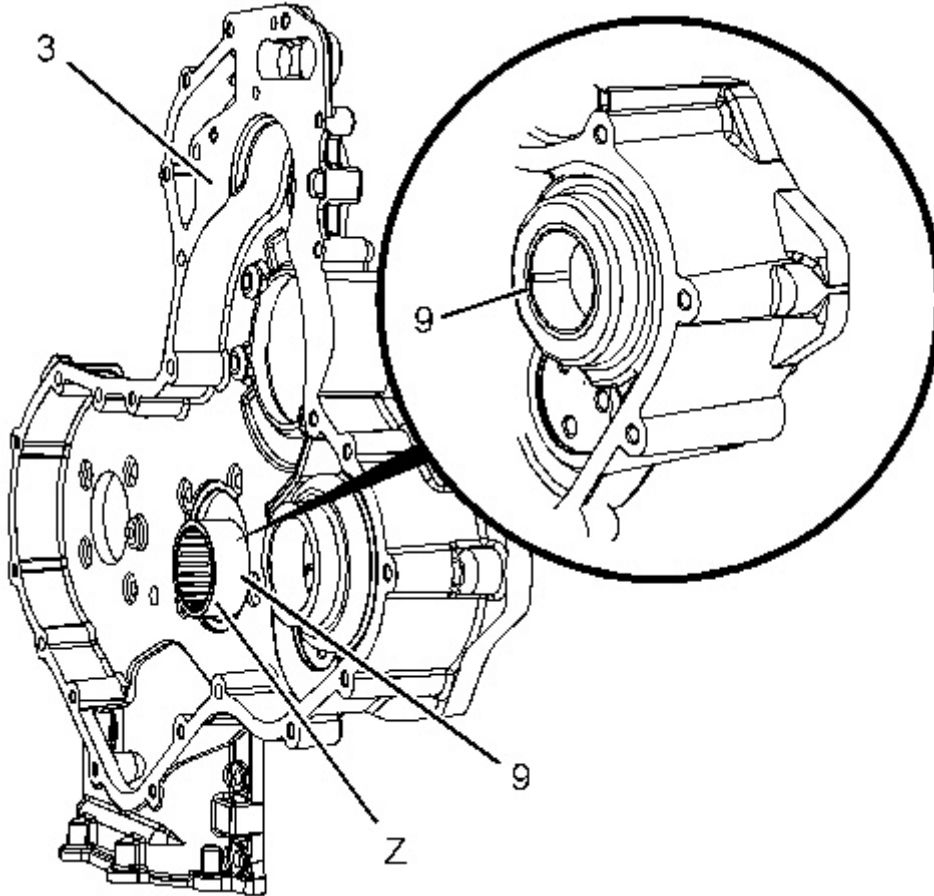
**Ensure that wiring harness are correctly routed and the cable straps are not over tightened. Over tightening of the cable straps will damage the wiring harness convoluting.**

---

1. Ensure that the front housing is clean and free from damage. If necessary, replace the front housing.

If necessary, install blanking plugs to a new front housing. Use Tooling (A) in order to seal all D-plugs.

2. Clean all the gasket surfaces of the cylinder block.
- 

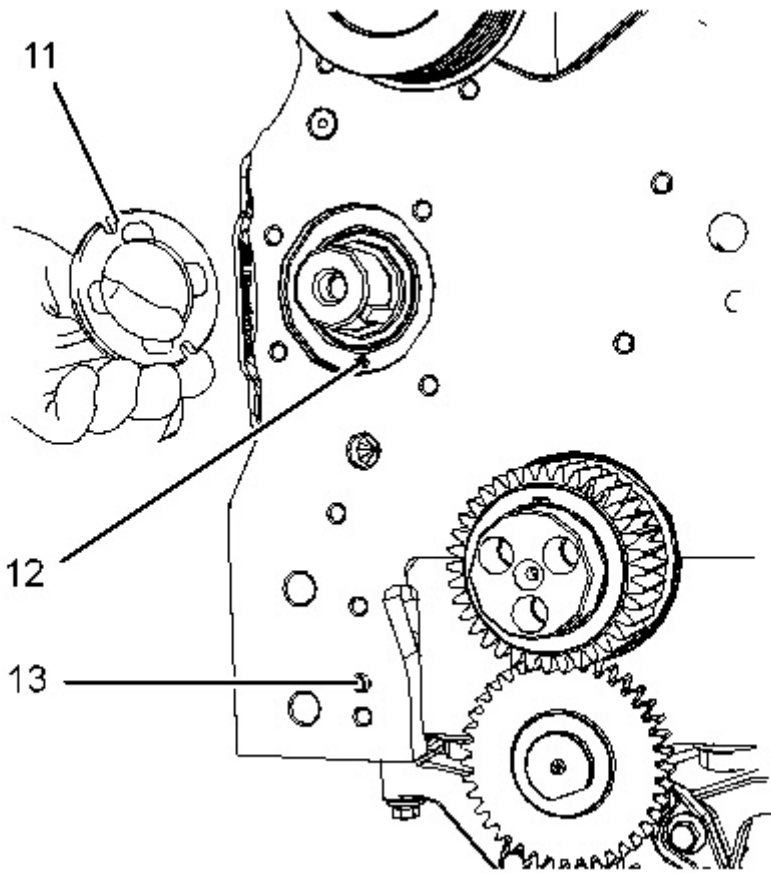


---

Illustration 1

g03389857

3. If necessary, follow Step 3.a through Step 3.c in order to install bearing (9) to housing (3).
    - a. Apply a small continuous bead of Tooling (E) to outer Surface (Z) of bearing (9).
    - b. Place housing (3) onto a suitable support.
    - c. Use a suitable tool in order to press bearing (9) into housing (3) until the bearing is in the correct position within the housing. Remove any excess Tooling (E).
-

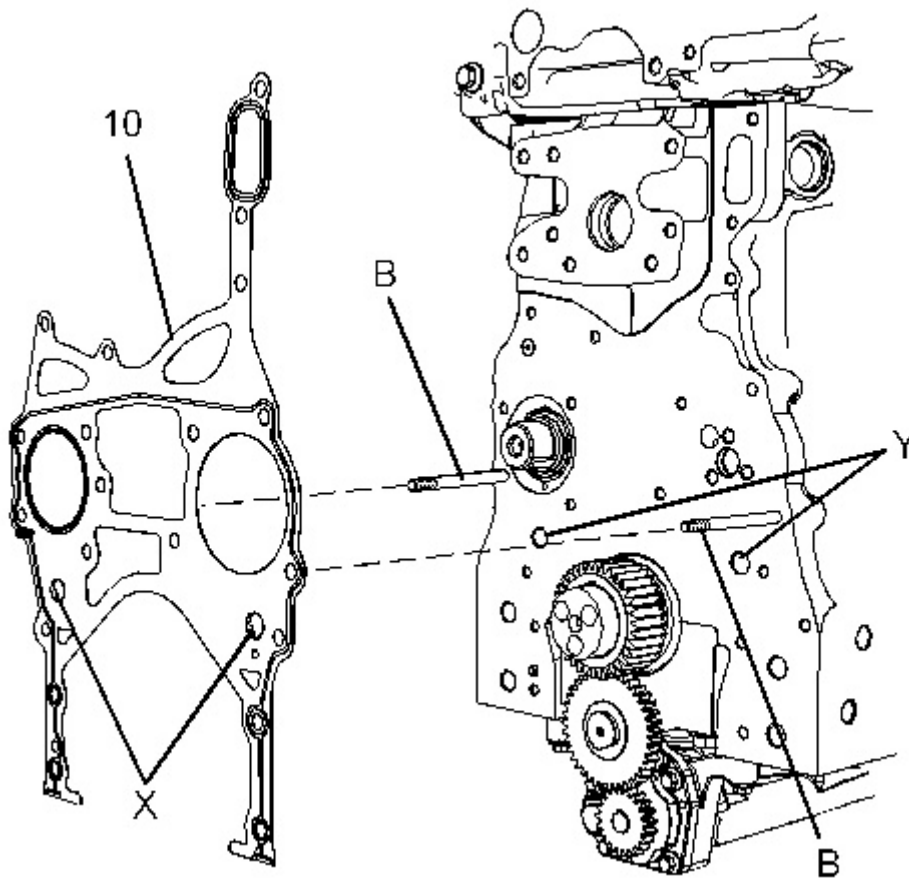


---

Illustration 2

g03378772

---



---

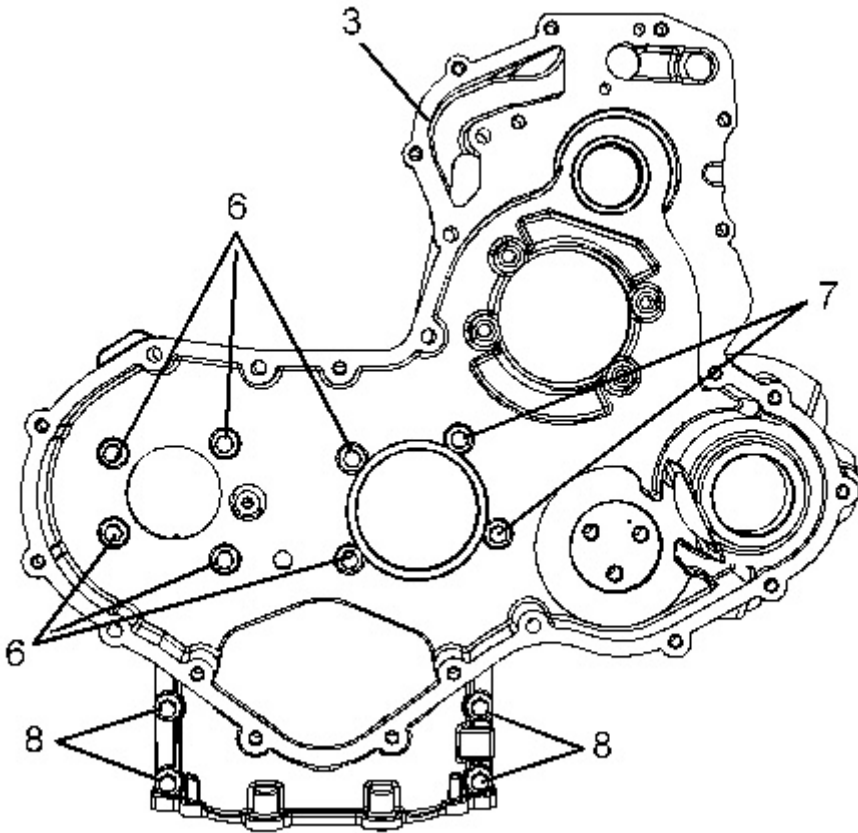
Illustration 3

g03378773

4. Inspect dowel (12) and dowel (13) for damage. If necessary, replace the dowels in the cylinder block.
5. Install thrust washer (11) into the recess in the cylinder block. Refer to Disassembly and Assembly, "Camshaft - Install" for more information.
6. Install Tooling (B) to the cylinder block. Refer to Illustration 3.
7. Align a new gasket (10) with Tooling (B). Install the gasket to the cylinder block.

**Note:** Ensure that two circular Tabs (X) on the gasket are engaged in two Holes (Y) in the cylinder block. Ensure that dowel (13) in the cylinder block is engaged on the gasket.

8. Install Tooling (C) to the cylinder block.
  9. Install front housing (3) over Tooling (B) and Tooling (C) onto the cylinder block.
-



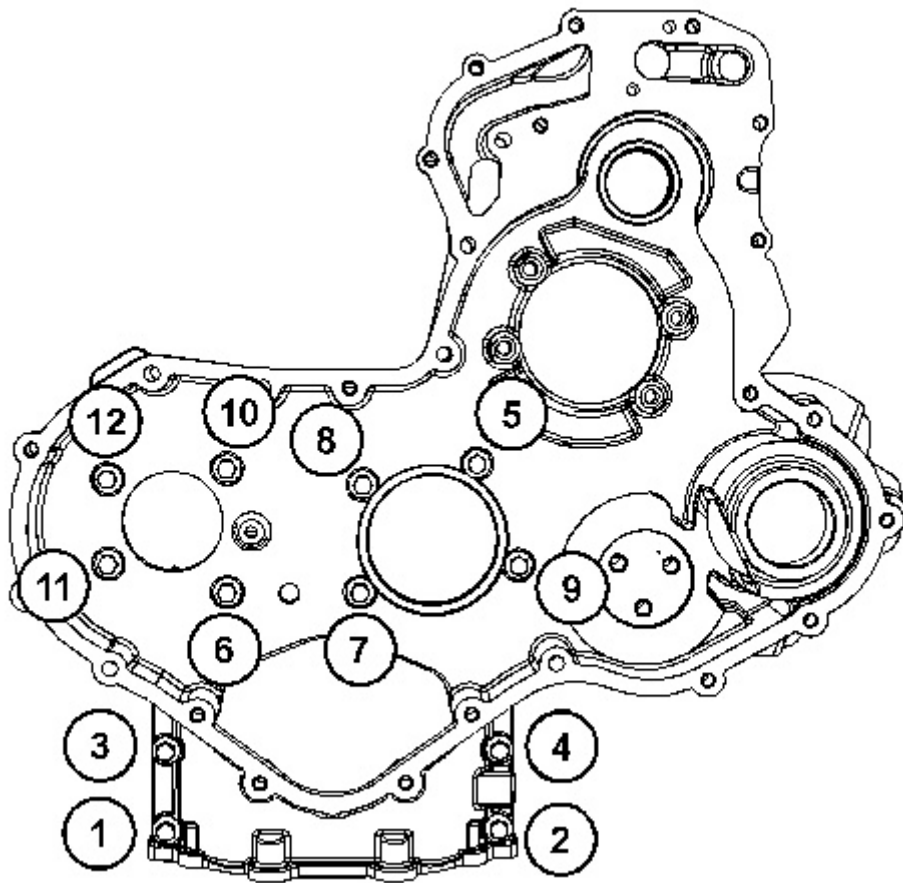
---

Illustration 4

g03378775

- (6) M8 by 20 mm
- (7) M8 by 35 mm
- (8) M8 by 25 mm

10. Install new bolts (8) to front housing (3) hand tight.
  11. Remove Tooling (B).
  12. Loosely install bolts (6) and bolts (7) finger tight. Refer to Illustration 4 for the correct position of the bolts.
-



---

Illustration 5

g03378776

13. Tighten bolts (6), bolts (7), and bolts (8) in the sequence that is shown in Illustration 5 to a torque of 28 N·m (248 lb in).
  14. Remove Tooling (C) from the cylinder block.
-

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](mailto:ebooklibonline@outlook.com)