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SERVICE MANUAL

216B3 Skid Steer Loader

CD300001-UP

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HEAVY-EQUIPMENTMANUAL

SMCS -1051

106038381

Removal Procedure

A WARNING

Hot engine components can cause injury from burns. Before performing maintenance on the engine, allow the engine and the components to cool.

1. Refer to Operation and Maintenance Manual, "Radiator Tilting'

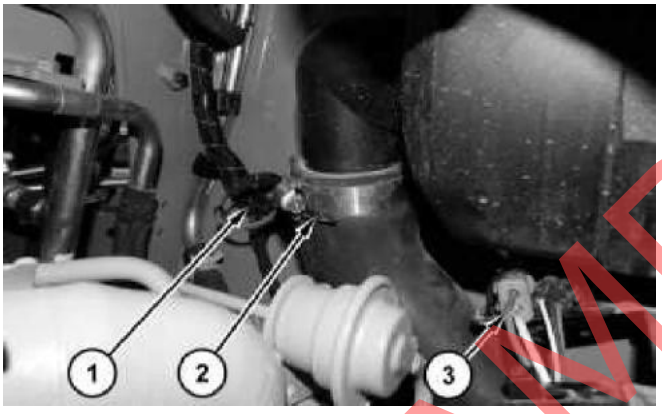


Illustration 1 g03784700

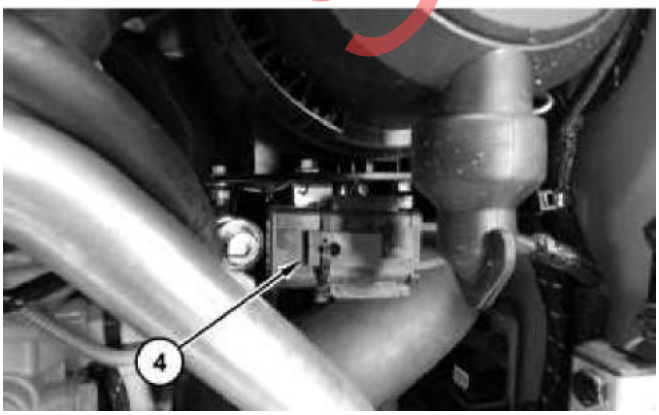


Illustration 2 g03784719

2. Disconnect harness assembly (1) and (3). Disconnect hose (2). Remove fuse assem and set aside

SAMPLE

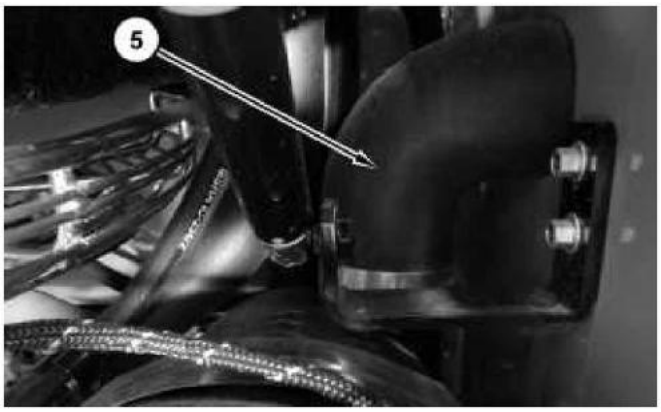


Illustration 3 g03784764



3. Disconnect hose (5).

4. Remove bolts (7). Remove air cleaner assembly (6).

Installation Procedure

1. Install air cleaner housing (6) in the reverse order of removal.

    a. Tighten bolts (7) to a torque of 25 ± 3 N m (221 ± 27 lb in).

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Illustration 4 g03784767

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SAMPLE

SMCS -1405

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Removal Procedure

1. If equipped, turn the battery disconnect switch to the OFF position. If not equipped with battery disconnect switch, refer to Operation and Maintenance Manual, "Battery or Battery Cable - Inspect/Replace".

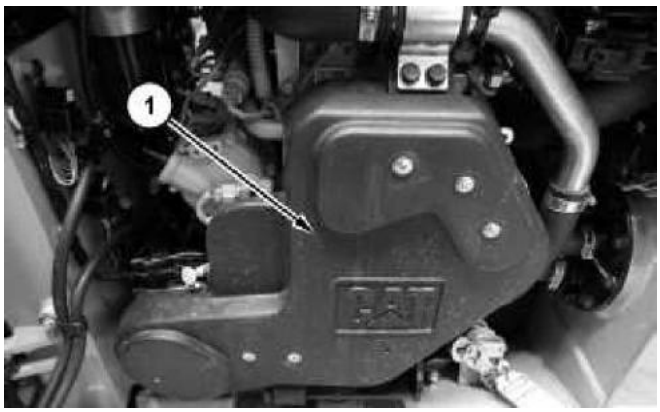


Illustration 1 g03789638

2. Remove cover (1).

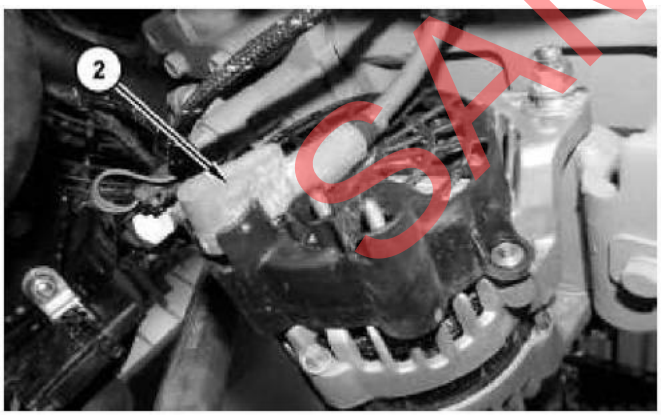


Illustration 2 g03783305

3. Disconnect harness assembly (2)

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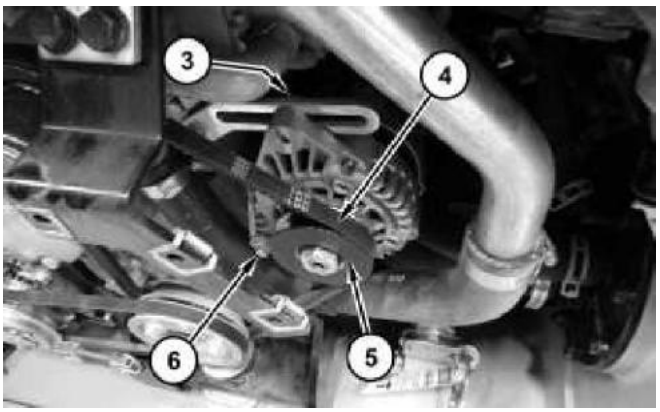


Illustration 3 g03783308

4. Remove belt (4). Refer to Operation and Maintenance Manual, "Belts - Inspect/Adjust/Replace" to remove and install belt.

5. Loosen bolt (3). Remove bolt (6) and alternator (5).

Installation Procedure

1. Install alternator (6) in the reverse order of removal.

    a. Tighten cable assembly (2) to a torque of 8 ± 2 N m (71 ± 18 lb in)

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SMCS -1401

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Removal Procedure

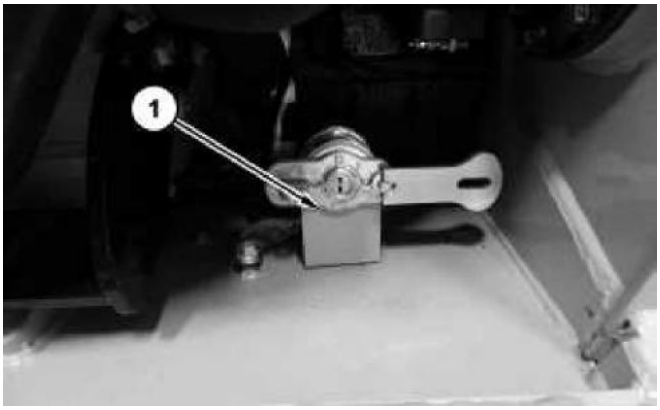


Illustration 1 g03783194

1. Remove battery disconnect switch (1) if equipped

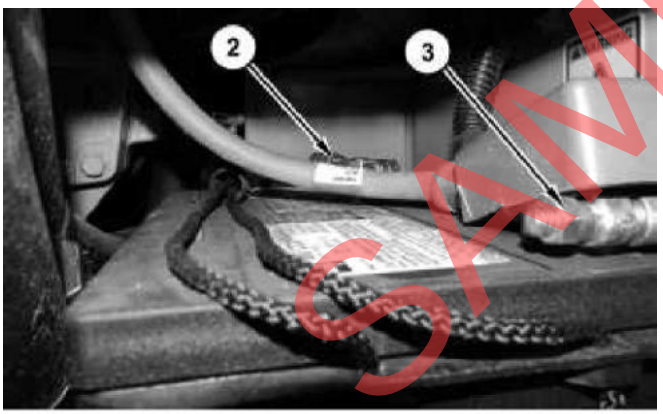
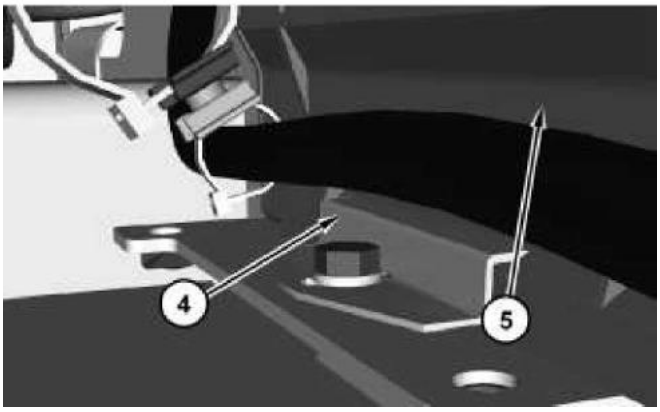


Illustration 2 g03783229



SAMPLE

Illustration 3 g03783235

2. Disconnect cable assemblies (2) and (3). Remove bracket (4). Remove battery (5). The weight of battery (5) is approximately 23 kg (50 lb).

Installation Procedure

1. Install battery (5) in the reverse order of removal.

    a. Tighten cable assemblies (2) and (3) to a torque of 7 ± 2 N m (64 ± 14 lb in).

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SMCS -7301

106040017

Raising the Cab

A WARNING

Do not go beneath cab unless cab is empty and support lever is engaged.

Failure to follow the instructions or heed the warnings could result in injury or death.

A WARNING

Do not tilt the cab using an open door. The door must be closed and latched when lifting the cab. The door may become dislodged from its hinges and may cause serious personal injury or death.

SAMPLE

1. Park the machine on level ground.
2. If you tilt the cab upward with the loader lift arms in the RAISED position, engage the brace for the loader lift arms. Refer to Operation and Maintenance Manual, "Loader Lift Arm Brace Operation" for the process for engaging the brace for the loader lift arms.
3. Close the cab door and ensure that the door is latched.

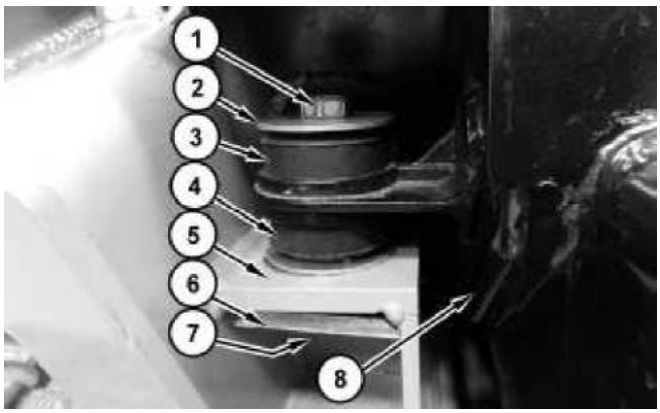


Illustration 1 g03785489

4. Remove bolt (1). Remove washer (2), rubber mount (3), rubber mount (4), washer (5), plate (6), and nut (7).

   Note: Note the location of the rubber mounts and the spacers for assembly purposes.

5. Raise cab (8).

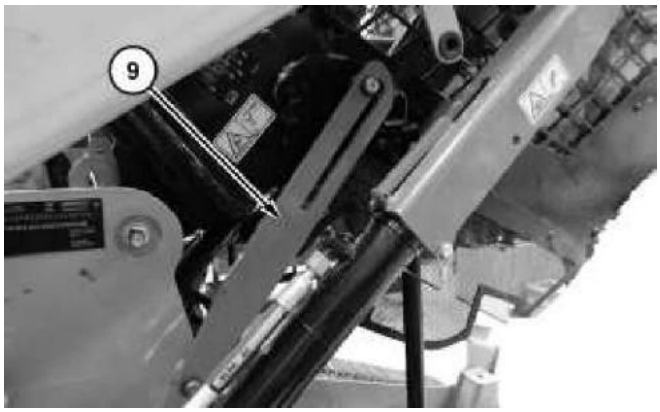


Illustration 2 g03785578

6. Raise the cab until the cab support lever (9) is in the ENGAGED position

Lowering the Cab

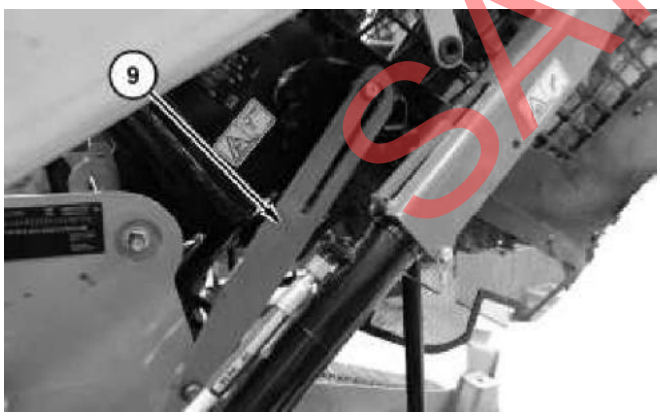


Illustration 3 g03785578

1. Raise the cab. With the help of another person, release the cab support lever (9)

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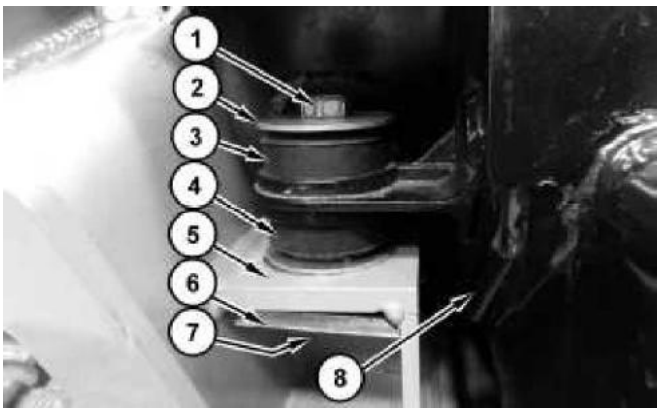


Illustration 4 g03785489

2. Lower cab (8).

3. Install nut (7), plate (6), washer (5), rubber mount (4), rubber mount (3), washer (2) and bolt (1). Tighten bolt (1) to a torque of 125 ± 10 N m (92 ± 7 lb ft).

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SMCS -1354, 1377

106049715

Removal Procedure

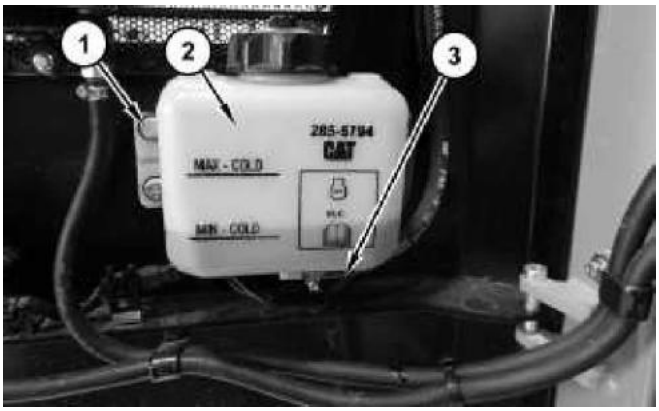


Illustration 1 g03790211

1. Disconnect hose assembly (3). Remove bolts (1) to remove coolant tank (2)

Installation Procedure

1. Install coolant tank (2) in the reverse order of removal.

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SAMPLE

SMCS -1317

106180651

Removal Procedure

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.



Illustration 1 g03839347

1. Remove hose (1).

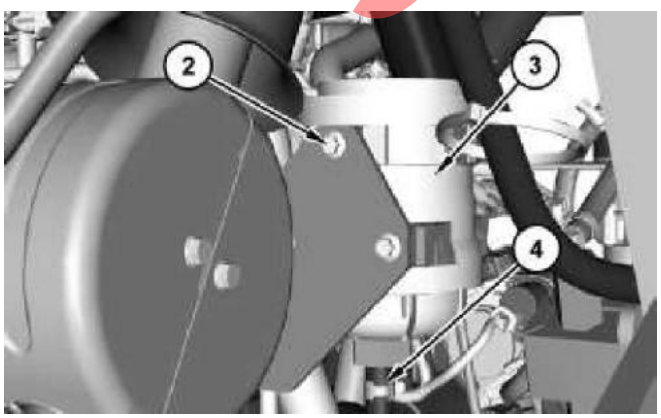


Illustration 2 g03839359

2. Remove hose (4). Remove bolts (2) and crankcase breather (3)

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Installation Procedure

1. Install crankcase breather (3) in the reverse order of removal

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SMCS -1205

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Removal Procedure

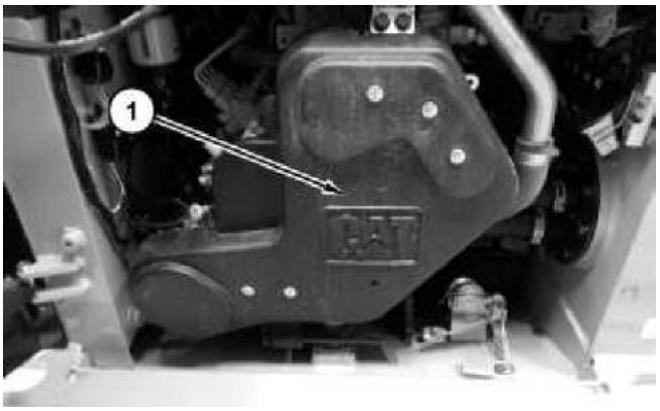


Illustration 1 g03783300

1. Remove cover (1).

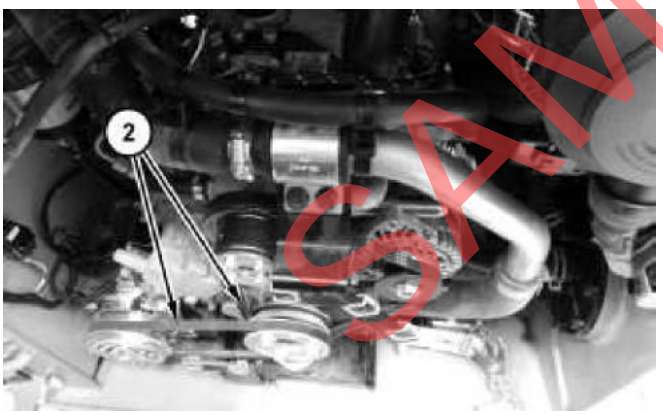


Illustration 2 g03786576

SAMPLE

Table 1

Required Tools			
Tool	**Part Number**	**Description**	**Qty**
A	8S-2264	Puller	1
	-	Bolt	3

SAMPLE

2. Remove the belts (2). Refer to Operation and Maintenance Manual, "Belts - Inspect/Adjust/Replace" to remove and install belt.

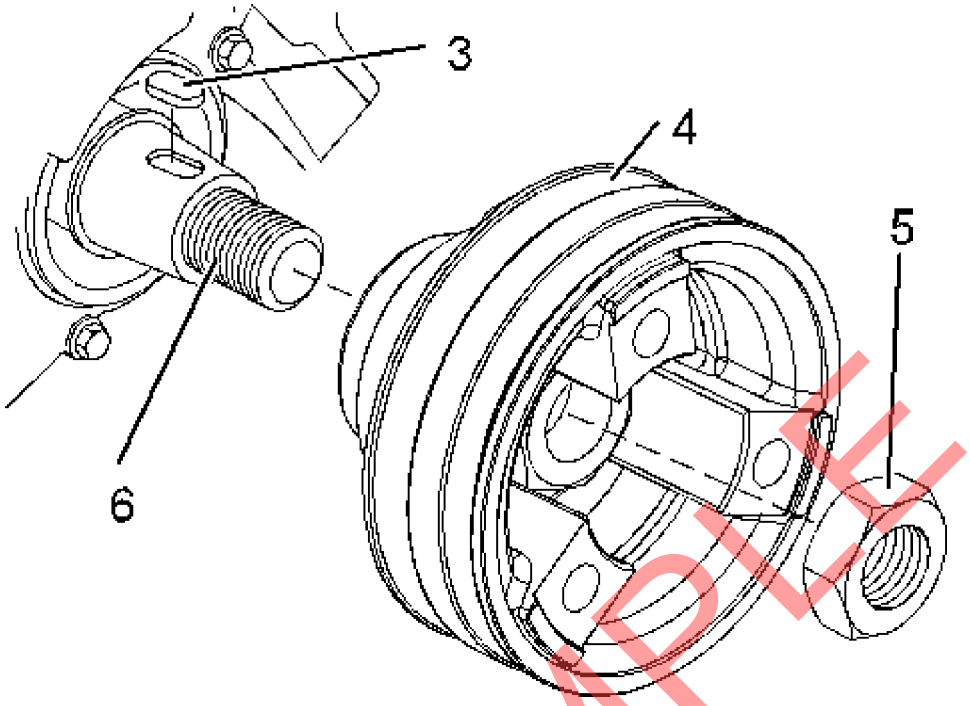


Illustration 3 g03786504

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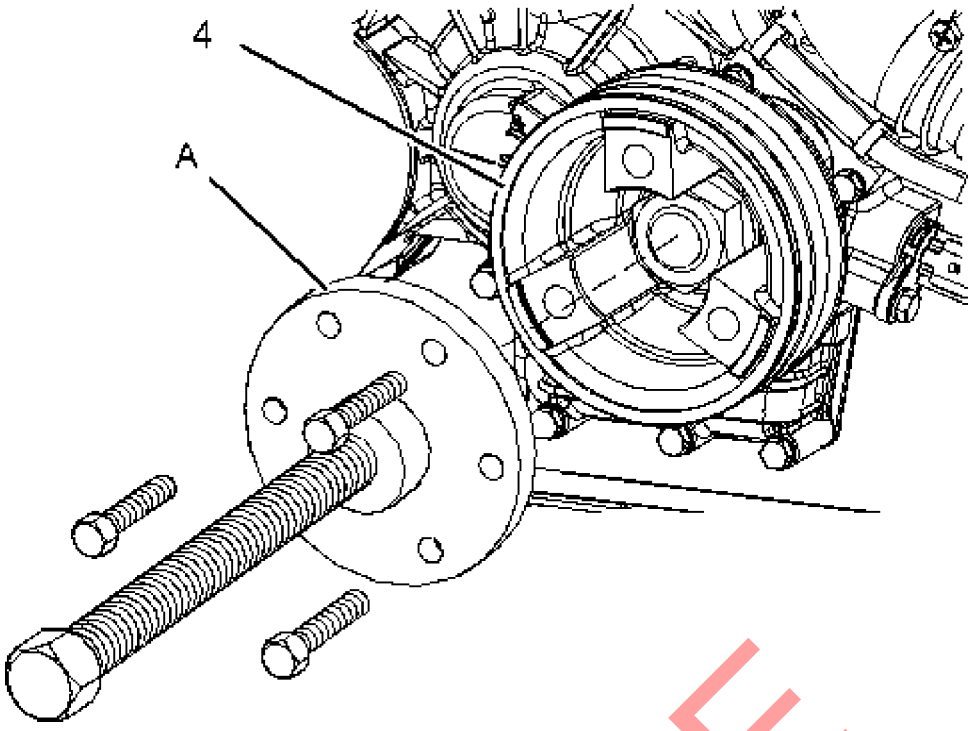


Illustration 4 g03786507

3. Loosen nut (5).
   Note: Do not remove the nut at this time.
4. Install Tooling (A) to crankshaft pulley (4). Use Tooling (A) in order to remove crankshaft pulley (4) from crankshaft (6).
5. Remove Tooling (A).
6. Remove nut (5).
7. Remove pulley (4) from crankshaft (6).
8. Remove woodruff key (3) from crankshaft (6).

Installation Procedure

1. Install crankshaft pulley (4) in the reverse order of removal.
   a. Lubricate nut (5) with clean engine oil and install the nut. Tighten nut (5) to a torque of 304 N m (224 lb ft).

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SMCS -1075, 1091

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Removal Procedure

Start By:

a. Tilt cab.

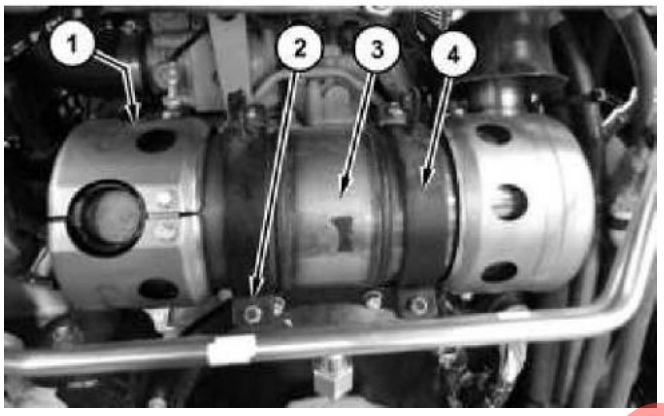


Illustration 1 g03791186

1. Remove bolts (1). Remove nuts (2). Remove brackets (4). Remove DOC canister (3)

Installation Procedure

1. Install DOC canister (3) in the reverse order of removal.

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SMCS -1453

106049099

Removal Procedure

A WARNING

Accidental engine starting can cause injury or death to personnel working on the equipment.

To avoid accidental engine starting, disconnect the battery cable from the negative (-) battery terminal. Completely tape all metal surfaces of the disconnected battery cable end in order to prevent contact with other metal surfaces which could activate the engine electrical system.

Place a Do Not Operate tag at the Start/Stop switch location to inform personnel that the equipment is being worked on.

SAMPLE

1. If equipped, turn the battery disconnect switch to the OFF position. If not equipped with battery disconnect switch, refer to Operation and Maintenance Manual, "Battery or Battery Cable - Inspect/Replace".

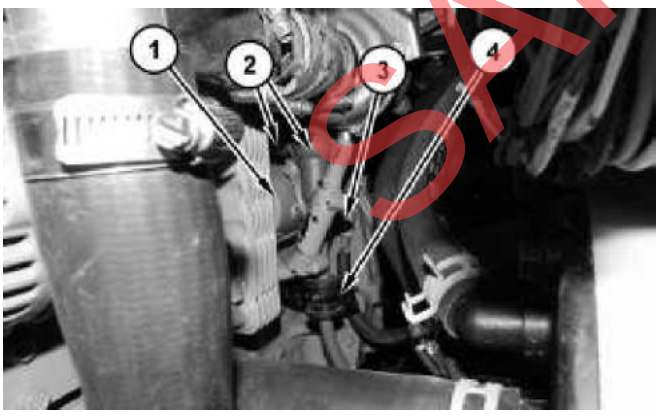


Illustration 1 g03789829

2. Remove cable strap (4).
3. Remove harness assemblies (2).
4. Remove bolts (3) and electric starting motor (1)

Installation Procedure

1. Install electric starting motor (1) in the reverse order of removal.

    a. Tighten the nut (Terminal B) for cable assembly (2) to a torque of 13 ± 2 N m (115 ±18 lb in).

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Removal Procedure

1. Refer to Operation and Maintenance Manual, "Battery or Battery Cable - Inspect/Replace"
2. Refer to Operation and Maintenance Manual, "Radiator Tilting".

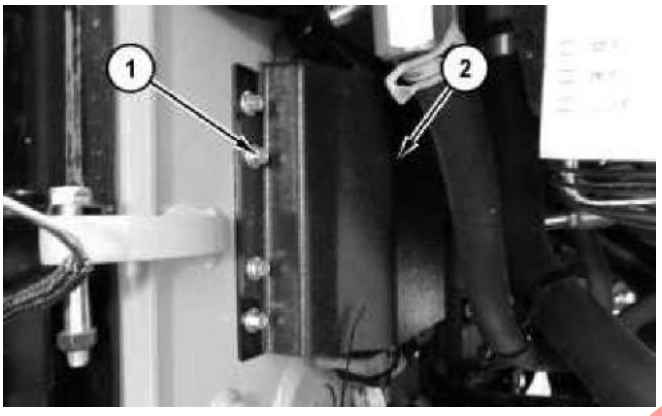


Illustration 1 g03791319

3. Remove bolts (1) and cover (2).

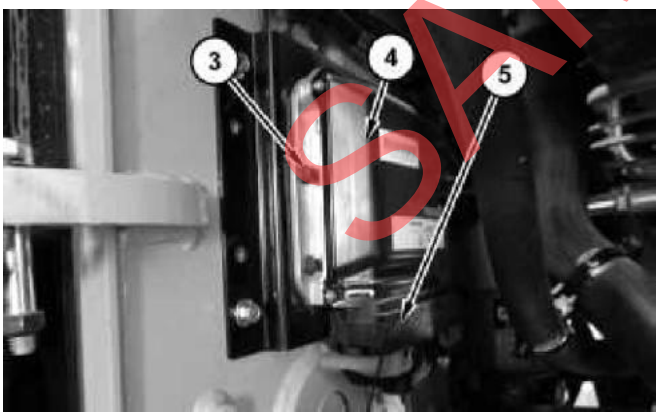


Illustration 2 g03791328

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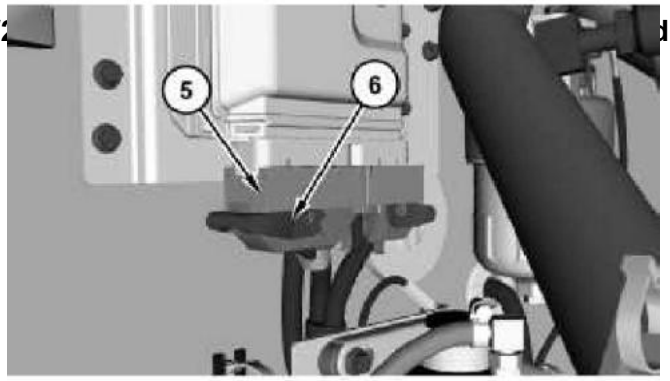


Illustration 3 g03828839

Note: Use locking tabs (6) to remove and install harness assemblies (5). Pull out locking tabs (6) to remove harness assemblies (5). Push in locking tabs (6) to install harness assemblies (5).

4. Disconnect harness assembly (5). Remove bolts (3) and electronic control module (4).

Installation Procedure

1. Install electronic control module (4) in the reverse order of removal.

   a. Tighten bolts (1) and (3) to a torque of 7.5 ±0.5 N m (66 ± 4 lb in).

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