CATERPILLAR

Service Manual

226 SKID STEER LOADER

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Product: SKID STEER LOADER
Model: 226 SKID STEER LOADER 5FZ
Configuration: 216 226 232 242 Skid Steer Loader 5FZ06700-UP (MACHINE) POWERED BY 3024C, 3034 Engine

Disassembly and Assembly
216, 226 and 228 Skid Steer Loaders Engine Supplement
Media Number -RENR2853-02 **Publication Date -01/08/2001** **Date Updated -16/11/2001**

i01296335

Engine - Install

SMCS - 1000-012

Installation Procedure

Table 1

Required Tools			
Tool	**Part Number**	**Part Description**	**Qty**
A	1U-9758	Jack Stand	2
B	6U-3145	Load Leveler	1
C	138-7575	Link Bracket	2
D	1U-9759	Jack Stand	1
E	1U-9760	Jack Stand	2

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.

Refer to Special Publication, NENG2500, "Caterpillar Tools and Shop Products Guide" for tools and supplies suitable to collect and contain fluids on Caterpillar products.

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.

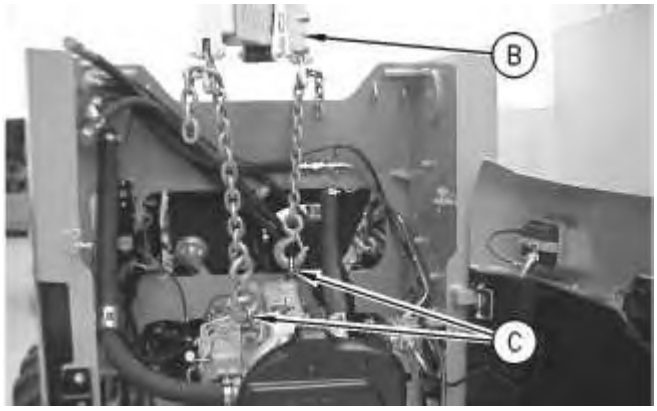


Illustration 1 g00593895

1. Attach Tooling (B) and Tooling (C) to the engine.

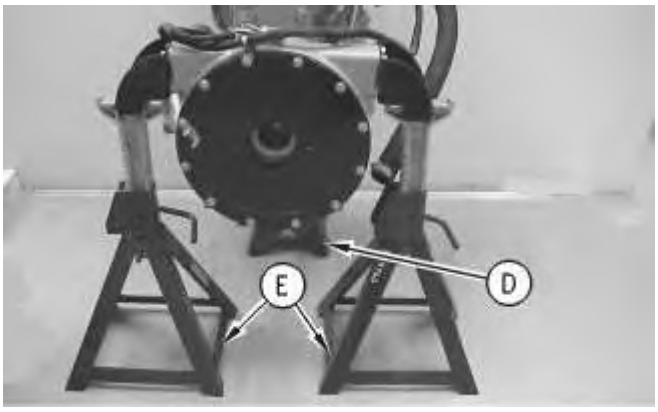


Illustration 2 g00593912

2. Raise the engine from Tooling (E) and Tooling (D). The weight of the engine and pump mount is 293 kg (645 lb).

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Illustration 3 g00686909

3. Install the engine into the engine compartment slowly. Do not snag the wires during installation of the engine. Do not crush the hoses during installation of the engine. Align the coupling hub of the piston pumps (30). Engage the coupling hub of the piston pumps into the pump mounting.



Illustration 4 g00686734

4. Install two bolts (27) that secure the piston pumps (30) to the pump mounting.

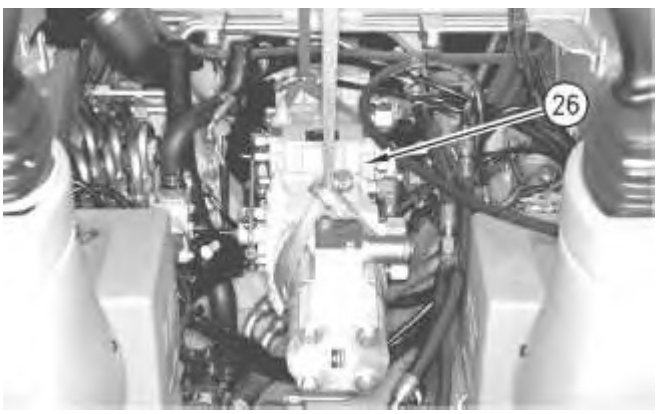


Illustration 5 g00686732

5. Remove the lifting device that was used to support piston pumps (26) .



Illustration 6 g00686741

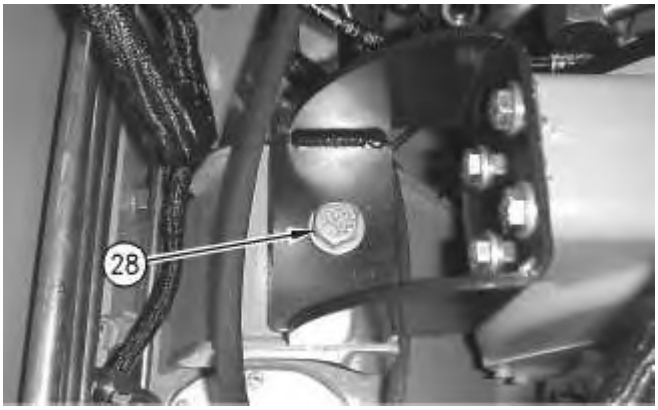


Illustration 7 g00686738

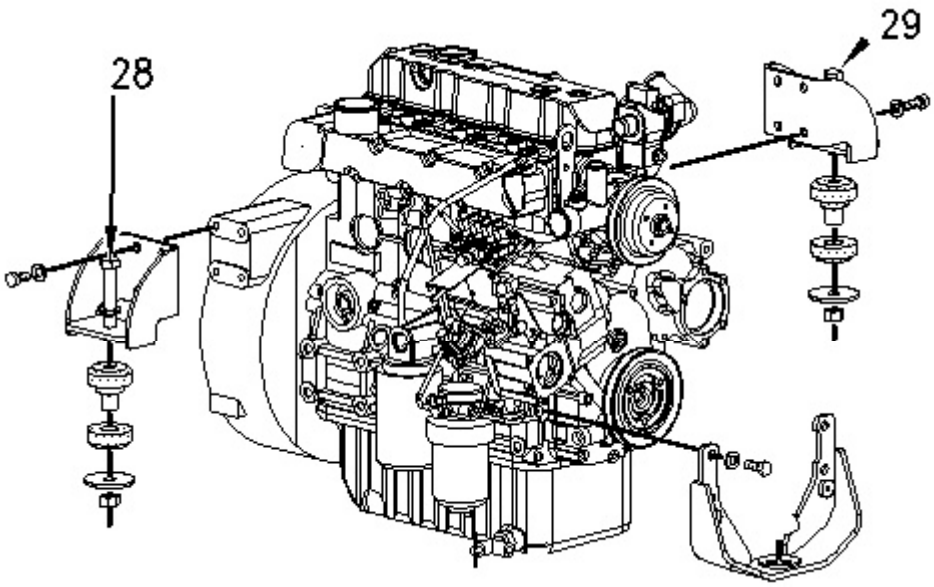


Illustration 8 g00686735

6. Align the rear of the engine with rubber mounts. Install bolts (28) and (29) into the motor mounts that secure the engine to the frame. Torque bolts (28) and (29) to 240 ± 40 N·m (177 ± 30 lb ft).
7. Install hoses, tubes and wires that were removed from the engine compartment prior to the installation of the engine.

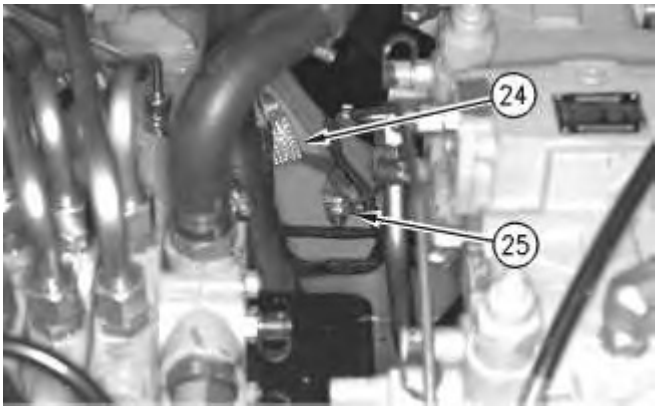


Illustration 9 g00686640

8. Install ground strap (24). Secure ground strap (24) with bolt (25) .

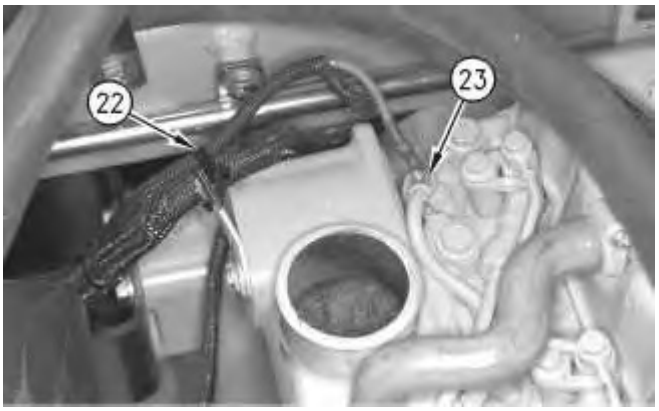


Illustration 10 g00686633

9. Install electrical glow plug wire (23). Secure wire (23) with wire tie-wrap (22) .

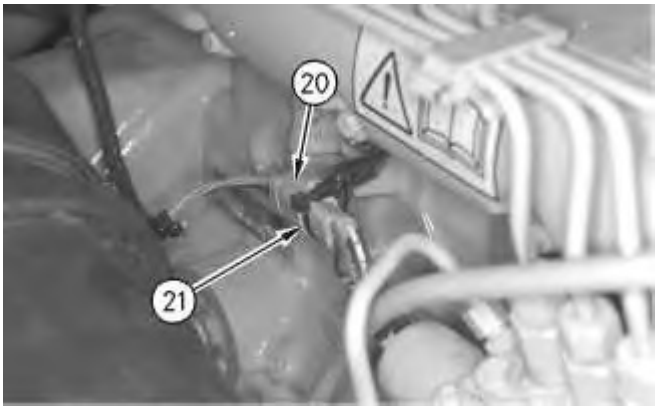


Illustration 11 g00686630

10. Connect electrical connector (20). Secure electrical connector (20) with tie-wrap (21) .



Illustration 12 g00686627

11. Connect fuel line (18) and fuel line (19) .

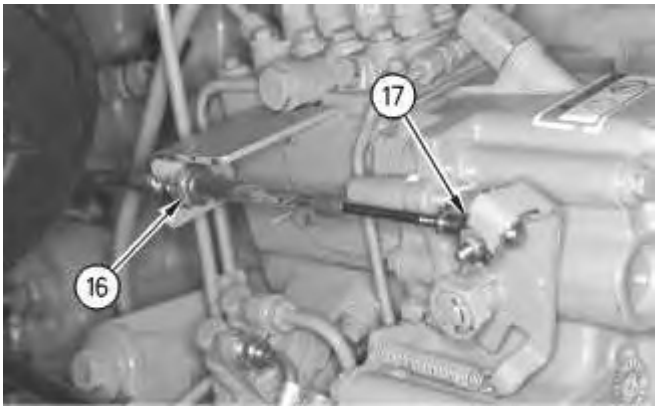


Illustration 13 g00686622

12. Connect throttle linkage (17). Connect throttle cable (16) .

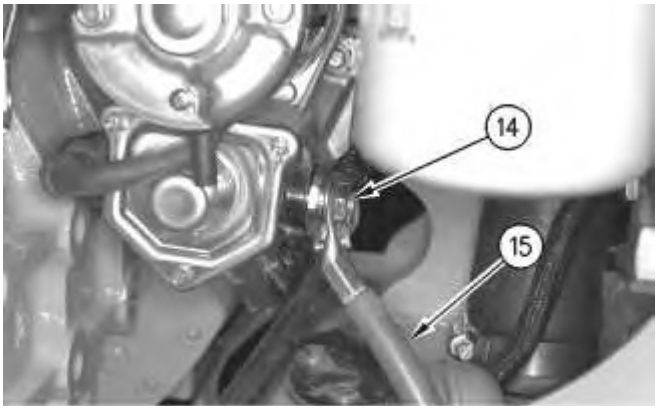


Illustration 14 g00686619

13. Install battery cable (15) on the starter. Secure cable (15) with washer and bolt (14) .

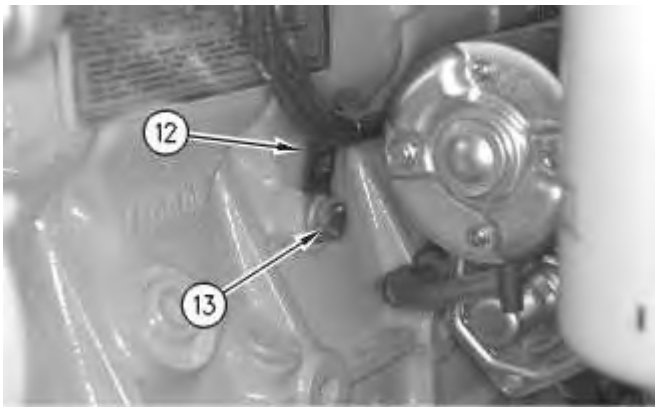


Illustration 15 g00686599

14. Place wire clip (12) in position. Secure clip (12) with washer and bolt (13) .

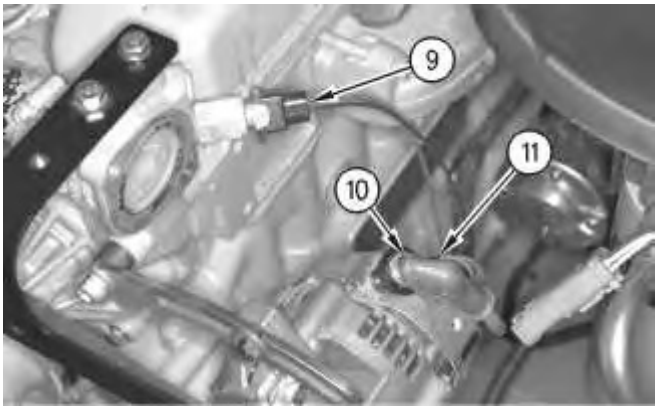


Illustration 16 g00686591

15. Install three electrical connections (9), (10) and (11) .

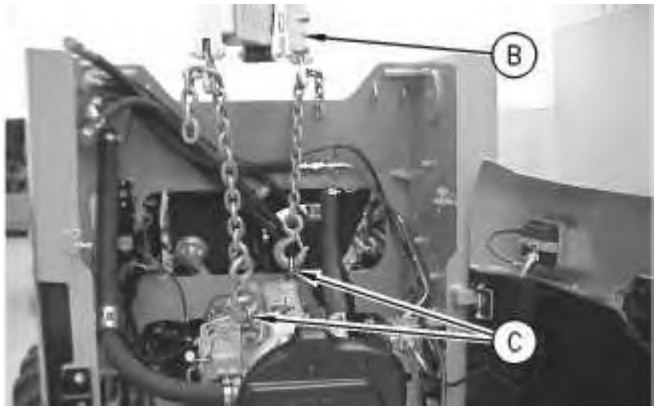


Illustration 17 g00593895

16. Use Tooling (B) and Tooling (C) to raise the engine slightly.

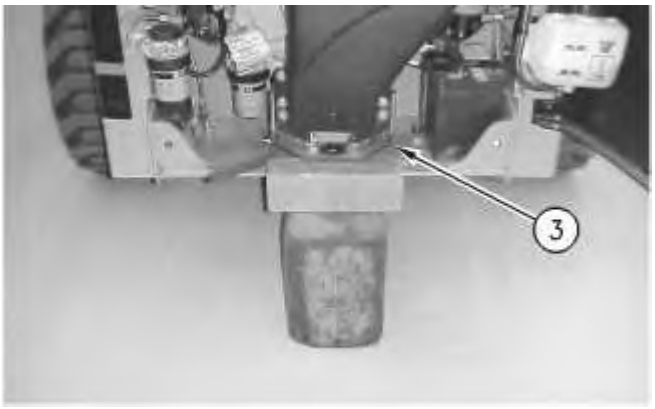


Illustration 18 g00686585

17. Remove the wood block under front engine bracket (3) .

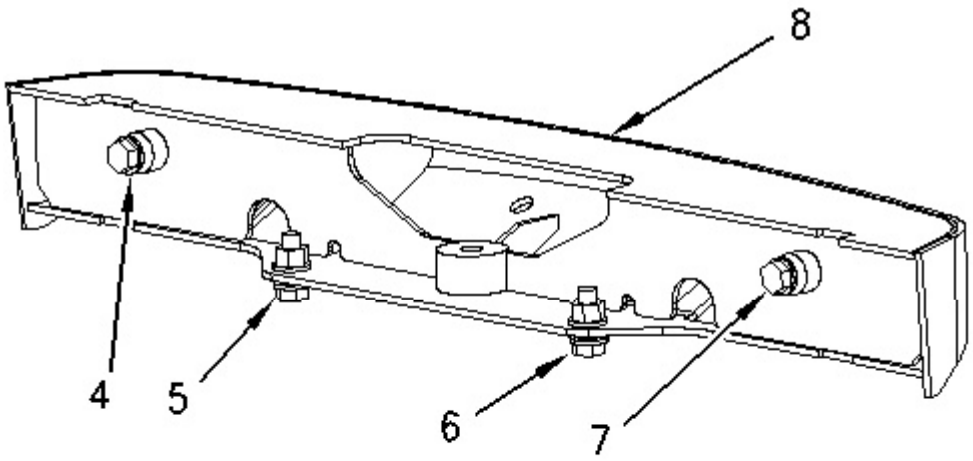


Illustration 19 g00686564

18. Attach two suitable nylon straps to bumper (8) .
19. Move bumper (8) into position on the machine. The weight of bumper (8) is 23 kg (51 lb).

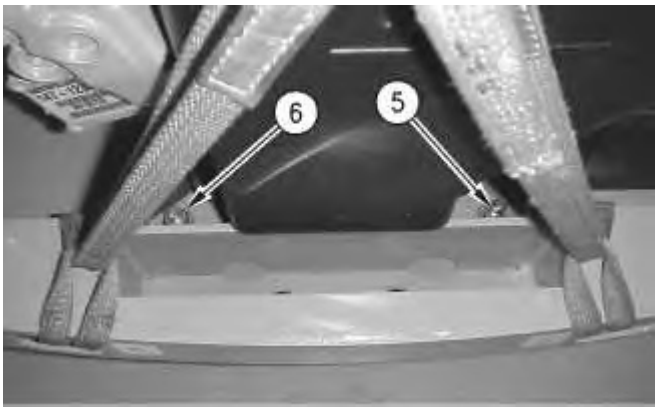


Illustration 20 g00686582



Illustration 21 g00686578

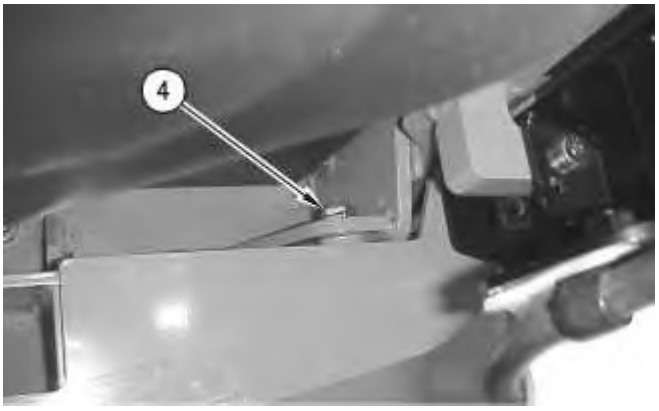


Illustration 22 g00686572

20. Secure bumper (8) to the frame. Install four bolts (7), (6), (5) and (4). Install the washers and the nuts.

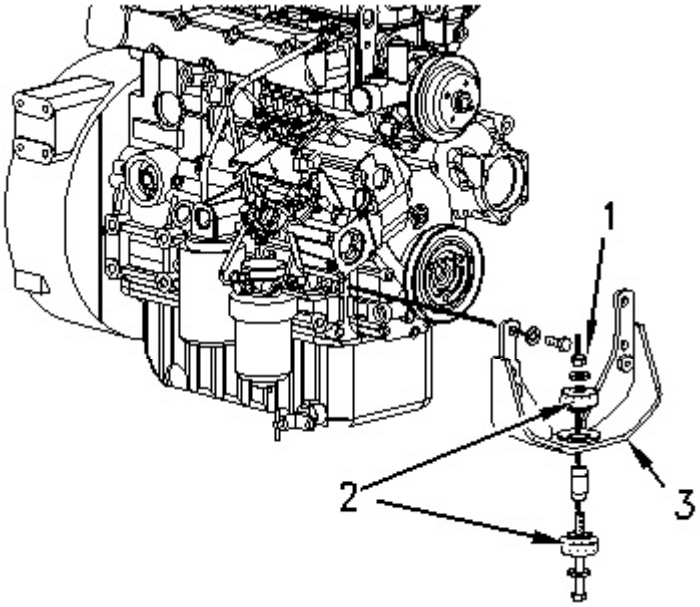


Illustration 23 g00686552

21. Install rubber engine mount (2) on the front of engine mount (3) .

    Note: Inspect rubber engine mount (2) prior to installation. Replace rubber engine mount (2) with new Caterpillar part if wear is noted.

22. Lower the engine into position on rubber engine mount (2) .

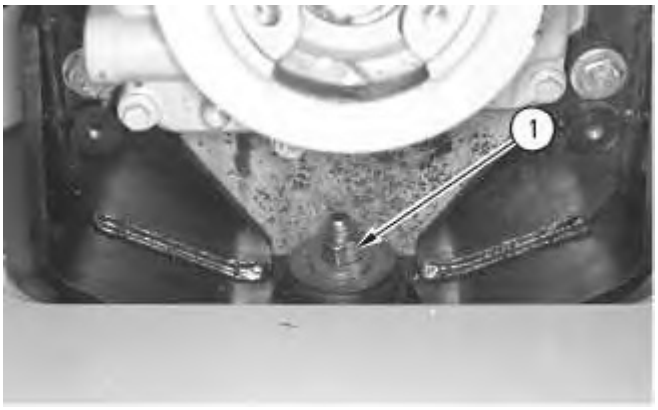


Illustration 24 g00686545

23. Secure front engine bracket (3) and rubber engine mount (2) to the frame. Install the bolt, the washer and the nut (1). Torque nut (1) to 240 ± 40 N·m (177 ± 30 lb ft).



Illustration 25 g00578440

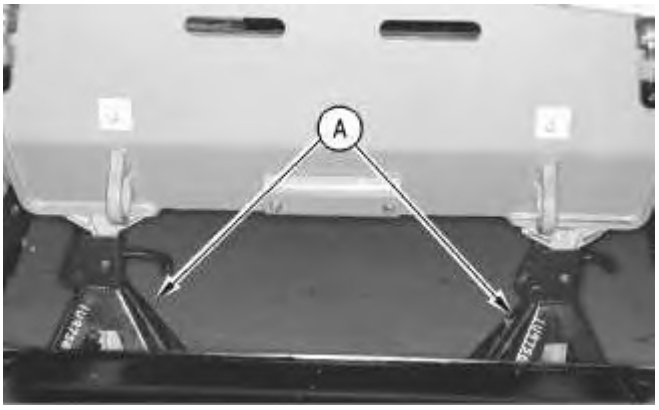


Illustration 26 g00578435

24. Remove Tooling (A) from the front of the machine. Remove two wood blocks from the rear frame.
25. After all portions of the engine are in place and secure, start the engine.
26. Check the engine for proper operation. Shut the engine OFF. Check bolts and nuts for proper torque.
27. Check the engine for any leaks.
28. Move any hoses or wires away from hot surfaces.

End By:

a. Install the muffler. Refer to Disassembly and Assembly, "Muffler - Remove and Install". The information can be found in this manual.
b. Install the air cleaner. Refer to Disassembly and Assembly, "Air Cleaner - Remove and Install". The information can be found in this manual.
c. Install the radiator and hydraulic oil cooler. Refer to Disassembly and Assembly, "Radiator and Hydraulic Oil Cooler - Remove and Install". The information can be found in this manual.
d. Install the battery and the battery cables. Refer to Disassembly and Assembly, "Battery and Battery Cable - Seperate and Connect".

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Tue Nov 8 23:27:24 UTC+0530 2022

Product: SKID STEER LOADER
Model: 226 SKID STEER LOADER 5FZ
Configuration: 216 226 232 242 Skid Steer Loader 5FZ06700-UP (MACHINE) POWERED BY 3024C, 3034 Engine

Disassembly and Assembly
216, 226 and 228 Skid Steer Loaders Engine Supplement
Media Number -RENR2853-02 **Publication Date -01/08/2001** **Date Updated -16/11/2001**

i02169184

Pump Mounting - Remove and Install

SMCS - 3203-010

Removal Procedure

Table 1

Required Tools			
Tool	**Part Number**	**Part Description**	**Qty**
A	180-3033	Repair Stand Set	1
B	180-3034	Repair Stand Set	2
C	4C-4030	Thread Lock Compound	1
D	9S-3263	Thread Lock Compound	1

Start By:

A. Remove the engine. Refer to Disassembly and Assembly, "Engine - Remove".

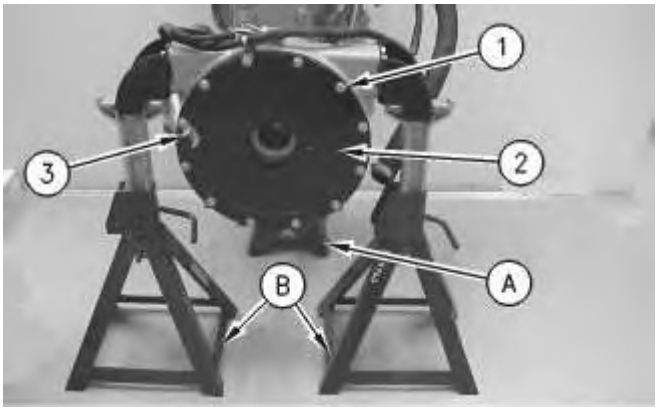


Illustration 1 g00593558

1. Place the engine on Tooling (A) and (B). Remove bolts (1), clip (3), and adapter plate (2) .

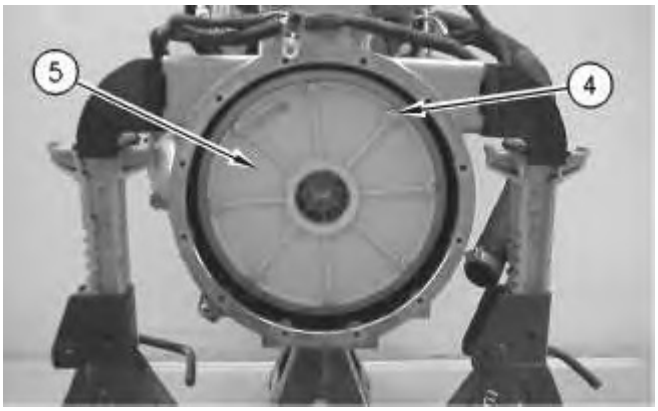


Illustration 2 g00593563

2. Remove bolts (4) and flange (5) .

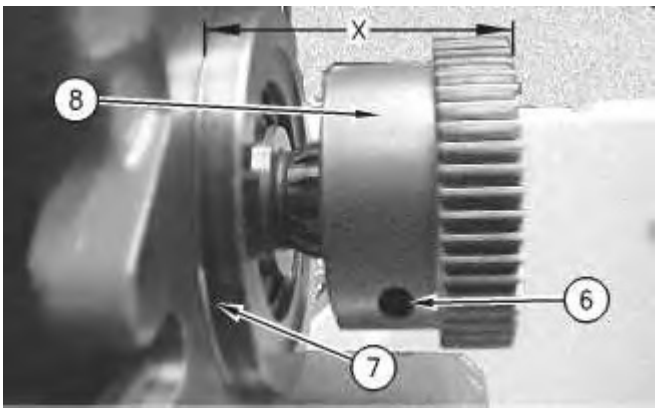


Illustration 3 g00593565

3. Loosen set screw (6). Remove hub (8) from hydrostatic piston pump (7) .

Installation Procedure

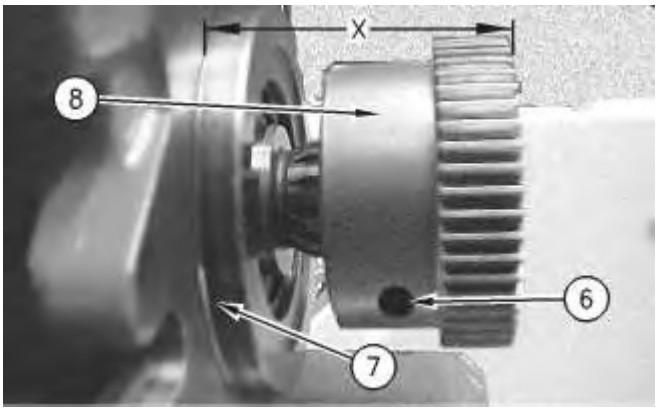


Illustration 4 g00593565

1. Install hub (8) to the spline of hydrostatic piston pumps (7). The face of hub (8) must be installed to a dimension of 65.3 ± 2.0 mm (2.6 ± 0.08 inch) from the face of pump (7). This dimension is shown in the graphic above as dimension (X). Apply Tooling (C) or Tooling (D) to the threads of set screw (6). Tighten set screw (6) to a torque of 55 ± 5 N·m (41 ± 4 lb ft).

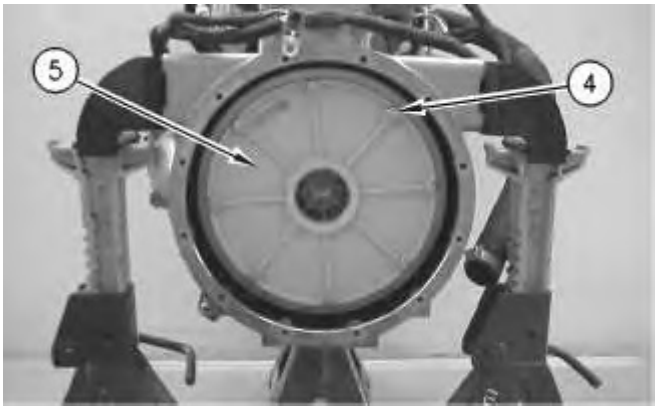


Illustration 5 g00593563

2. Install flange (5) so that the center protruding section of flange (5) is positioned away from the flywheel. Install bolts (4) .

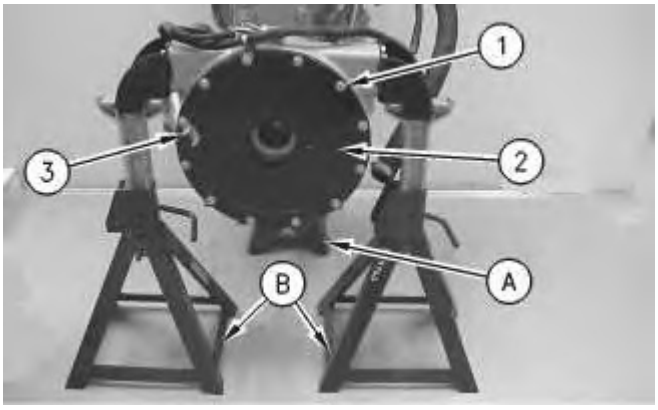


Illustration 6 g00593558

3. Position adapter plate (2) to the engine. Position clip (3) to the top of adapter plate (2). Install bolts (1) and clip (3) .

End By: Install the engine. Refer to Disassembly and Assembly, "Engine - Install".

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Product: SKID STEER LOADER
Model: 226 SKID STEER LOADER 5FZ
Configuration: 216 226 232 242 Skid Steer Loader 5FZ06700-UP (MACHINE) POWERED BY 3024C, 3034 Engine

Disassembly and Assembly
216, 226 and 228 Skid Steer Loaders Engine Supplement

Media Number -RENR2853-02 **Publication Date -01/08/2001** **Date Updated -16/11/2001**

i01295716

Engine - Remove

SMCS - 1000-011

Removal Procedure

Table 1

Required Tools			
Tool	**Part Number**	**Part Description**	**Qty**
A	1U-9758	Jack Stand	2
B	6U-3145	Load Leveler	1
C	138-7575	Link Bracket	2
D	1U-9759	Jack Stand	1
E	1U-9760	Jack Stand	2

Start By:

A. Release the pressure in the hydraulic system. Refer to Disassembly and Assembly, "Hydraulic System Pressure - Release".
B. Remove the radiator and hydraulic oil cooler. Refer to Disassembly and Assembly, RENR2853, "Radiator and Hydraulic Oil Cooler - Remove and Install".
C. Remove the air cleaner. Refer to Disassembly and Assembly, RENR2853, "Air Cleaner - Remove and Install".
D. Remove the muffler. Refer to Disassembly and Assembly, RENR2853, "Muffler - Remove and Install".
E. Remove battery cables from the battery. Remove the battery. Refer to Disassembly and Assembly, "Battery and Battery Cable - Seperate and Connect".

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.

Refer to Special Publication, NENG2500, "Caterpillar Tools and Shop Products Guide" for tools and supplies suitable to collect and contain fluids on Caterpillar products.

Dispose of all fluids according to local regulations and mandates.



Personal injury can result from hydraulic oil pressure and hot oil.

Hydraulic oil pressure can remain in the hydraulic system after the engine has been stopped. Serious injury can be caused if this pressure is not released before any service is done on the hydraulic system.

Make sure all of the attachments have been lowered, oil is cool before removing any components or lines. Remove the oil filler cap only when the engine is stopped, and the filler cap is cool enough to touch with your bare hand.



Personal injury or death can result without releasing all of the hydraulic pressure.

Release all the pressure from the hydraulic system before any lines are disconnected.



Fuel leaked or spilled onto hot surfaces or electrical components can cause a fire. To help prevent possible injury,

turn the start switch off when changing fuel filters or water separator elements. Clean up fuel spills immediately.

Note: Put identification marks on all lines, hoses, wires, and tubes for installation purposes. Plug all lines, hoses and tubes. This helps prevent fluid loss and contamination of the oil system.

1. Park the machine on level ground.
2. Lower the loader arms fully.

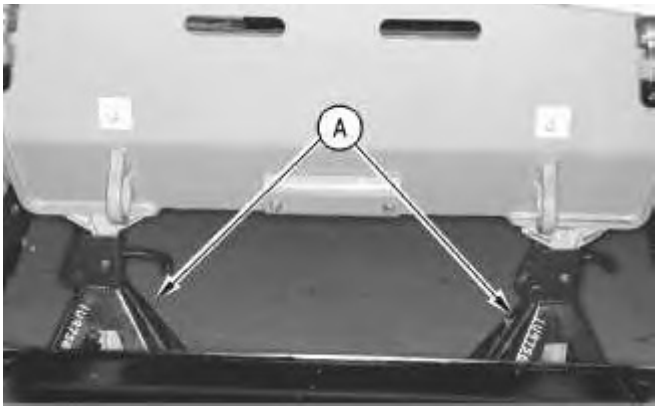


Illustration 1 g00578435



Illustration 2 g00578440

3. Install Tooling (A) under the front frame of the machine. Install two wood blocks under the rear frame of the machine. Tooling (A) and the wood blocks will stabilize the machine.



Illustration 3 g00686545

4. Remove nut (1). Remove the bolt and the washers.

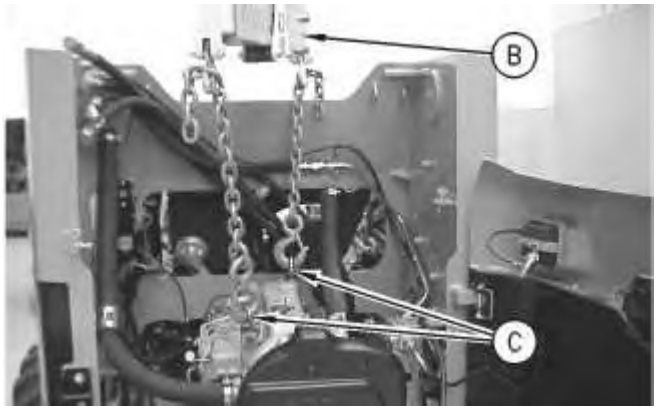


Illustration 4 g00593895

5. Attach Tooling (B) and Tooling (C) to the engine. Raise the engine slightly.

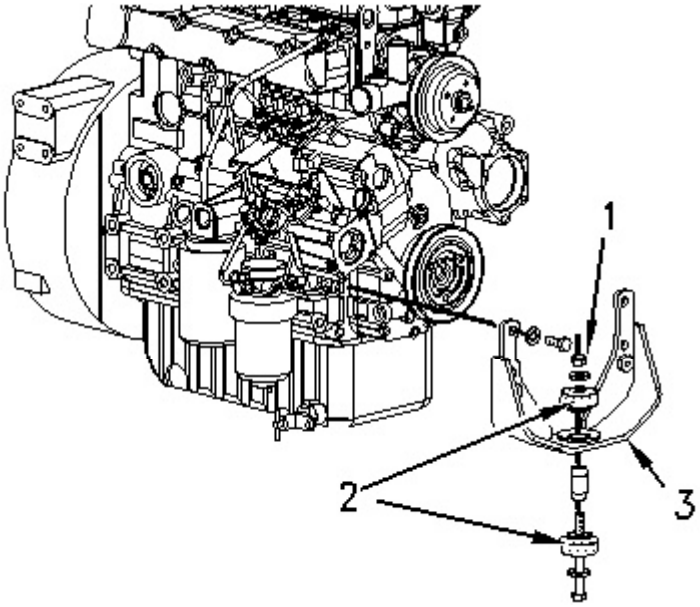


Illustration 5 g00686552

6. Remove the rubber mount assembly (2) from the front of engine mount (3) .

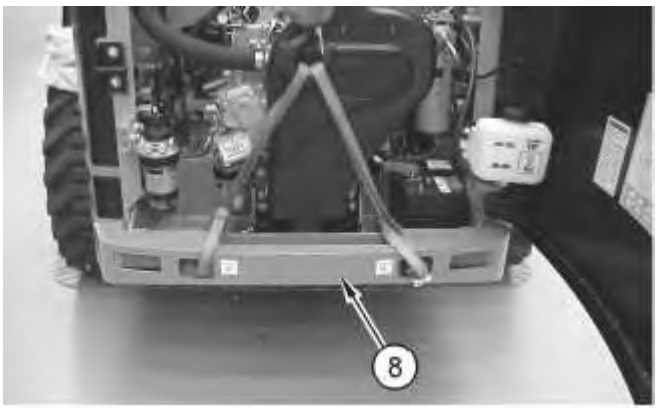


Illustration 6 g00686559

7. Attach two nylon straps and a suitable lifting device to bumper (8) .

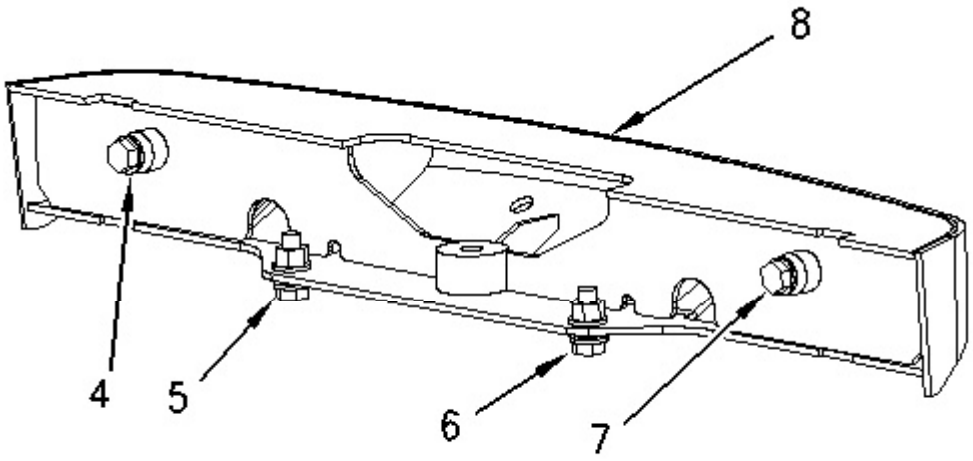


Illustration 7 g00686564

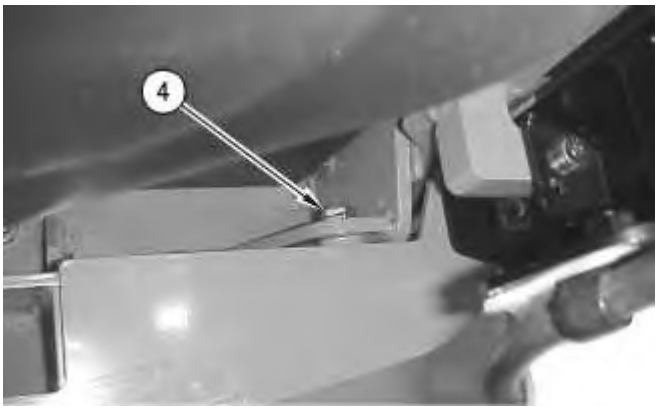


Illustration 8 g00686572

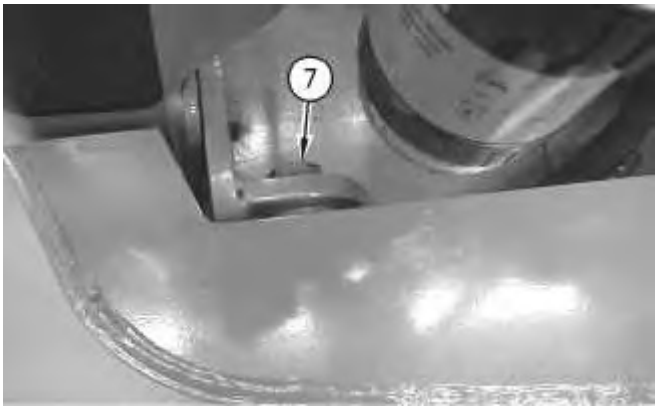


Illustration 9 g00686578

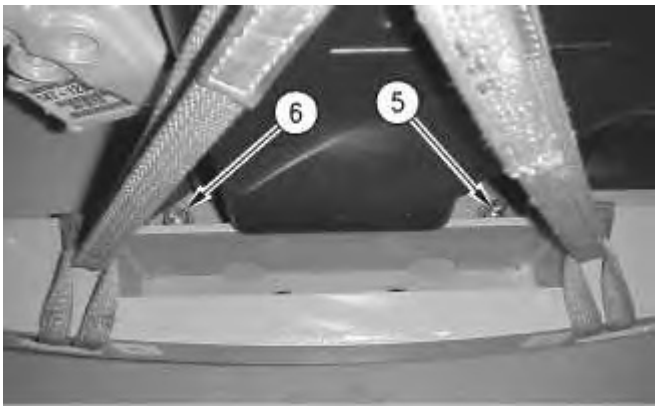


Illustration 10 g00686582

8. Remove four bolts (4), (5), (6), and (7). Remove the washers and the nuts. Remove bumper (8). The weight of the bumper is 23 kg (51 lb).

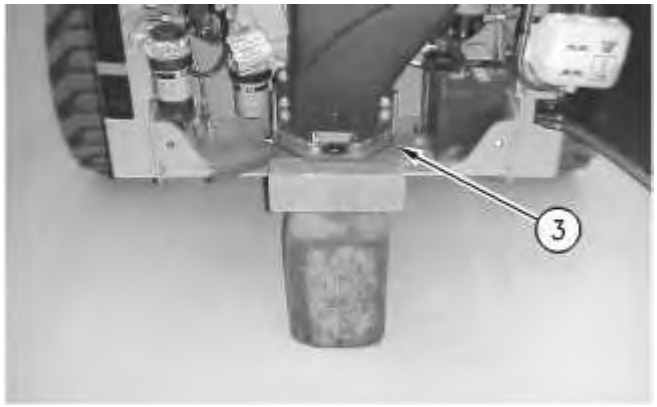


Illustration 11 g00686585

9. Install a small block of wood under the front engine bracket (3) .
10. Lower the lifting device. Allow the weight of the engine to rest on wood block.

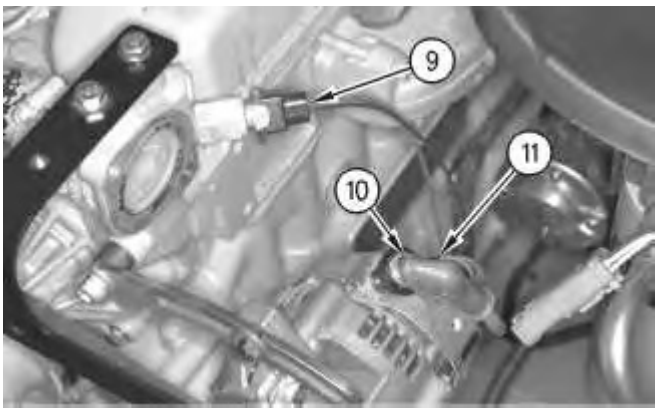


Illustration 12 g00686591

11. Remove three electrical connections (9), (10) and (11) .

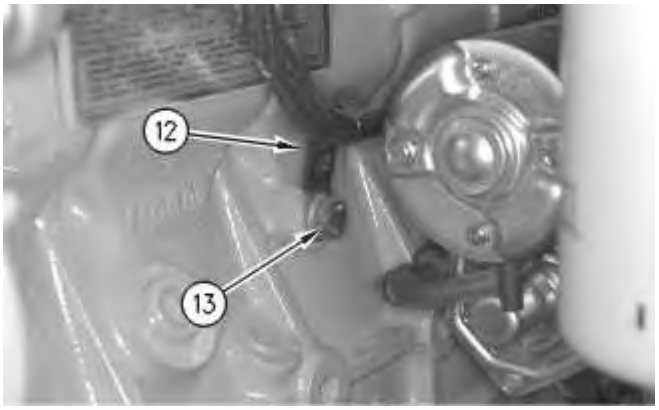


Illustration 13 g00686599

12. Remove bolt (13) and remove clip (12) .

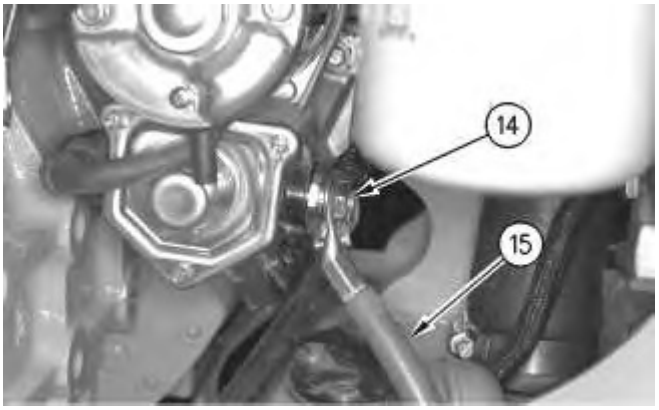


Illustration 14 g00686619

13. Remove nut (14) and the washer. Remove battery cable (15) .

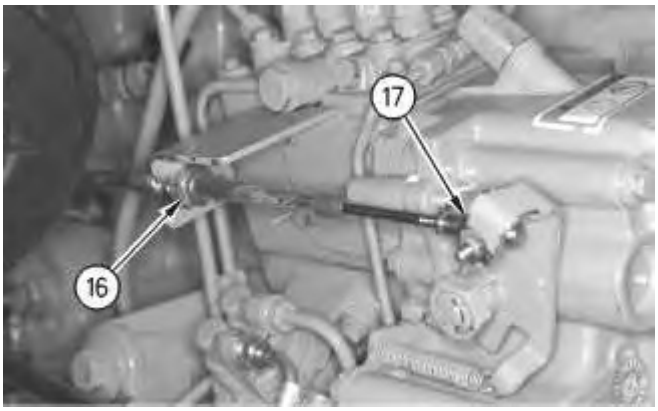


Illustration 15 g00686622

14. Disconnect throttle cable (16). Disconnect throttle linkage (17) .



Illustration 16 g00686627

15. Disconnect fuel line (18) and fuel line (19) .

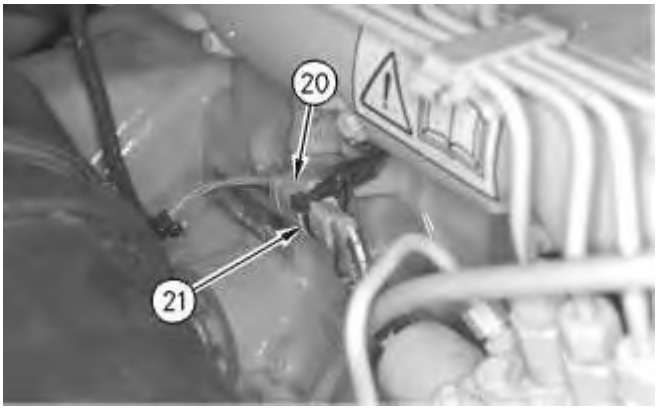


Illustration 17 g00686630

16. Remove tie-wrap (21). Disconnect electrical connector (20) .

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