

430/440 SKID STEER AND 440CT COMPACT TRACK LOADER

Repair Manual Mechanical and Pilot Control Machines (Tier 3 and Cab Up-Grade Machines)

Bur 87634767

Table of Contents

Description	Section Number	Publication Form Number
General	Tab 1	
Section Index - General		6-79151
Fluids and Lubricants	1001	6-79031
Fluids and Lubricants Tier 3 Engines	1001	5-9520
Standard Torque Specifications	1002	7-52931
Metric Conversion Chart	1003	7-52950
Engines	Tab 2	
Section Index - Engines		6-79161
Engine and Radiator Removal and Installation	2000	6-79290
Engine and Radiator Removal and Installation (430 Tier 3 Engine)	2000	5-9540
Engine and Radiator Removal and Installation (440/440CT Tier 3 Engine)	2000	5-9550
For Engine Repair - See Engine Service Manual		6-74500
For 430 Tier 3 Engine Repair - See Tier 3 Engine Repair Manual		87693888
For 440/440CT Tier 3 Engine Repair - See Tier 3 Engine Repair Manual		87630273
Fuel Systems	Tab 3	
Section Index - Fuel Systems		6-79171
For Fuel System Repair - See the Engine Service Manual		6-74500
For 430 Tier 3 Fuel System Repair - See Tier 3 Engine Repair Manual		87693888
For 440/440CT Tier 3 Fuel System Repair - See Tier 3 Engine Repair Manual		87630273
Electrical	Tab 4	
Section Index - Electrical		6-79182
Electrical System Specifications, Troubleshooting, and Schematics (Mechanical and Pilot Control Machines)	4001	6-79371
Electrical System Specifications, Troubleshooting, and Schematics (Tier 3 and Cab Up-Grade Machines)	4001	5-9600
Battery	4005	7-51310
Starter and Starter Solenoid	4006	7-53091

430/440 SKID STEER AND 440CT COMPACT TRACK LOADER

Repair Manual Mechanical and Pilot Control Machines (Tier 3 and Cab Up-Grade Machines)

Bur 87634767

Table of Contents (Continued)

Description	Section Number	Publication Form Number
Tracks	Tab 5	
Section Index - Tracks		5-2630
Tracks	5001	5-2610
Drive Sprocket, Idler Wheels, and Rollers	5002	5-2620
Power Train	Tab 6	
Section Index - Power Train		6-79192
Hydrostatic System "How it Works" (ISO- Pattern and H-Pattern Pilot Control Machines)	6000	5-4930
Hydrostatic System Troubleshooting	6001	6-79331
Hydrostatic System Troubleshooting (Machines Equipped with Pilot Controls)	6001	5-4910
Removal and Installation of Hydrostatic Components (Mechanical and Pilot Control Machines)	6002	6-79322
Drive Coupling	6003	6-79230
Drive Coupling Tier 3 Engines	6003	5-9530
Piston Pump	6004	6-49580
Piston Pump (Machines Equipped with Pilot Controls)	6004	5-4921
Drive Motors Single Speed	6005	6-79000
Drive Motors Two Speed	6005	6-79010
Sprocket, Chains, and Axle Assemblies	6007	6-79300
Wheels and Tires	6011	6-79310
Brakes	Tab 7	
Section Index - Brakes		6-79200
Removal and Installation of Park Brake Components	7002	6-79441
Hydraulics	Tab 8	
Section Index - Hydraulics		6-79212
Hydraulic System Troubleshooting and Schematics (Mechanical and Pilot Control Machines)	8001	6-79342
Cleaning the Hydraulic System and Hydrostatic System	8002	6-45290
Removal and Installation of Hydraulic Components	8003	6-79431
Gear Pump (Equipment and High Flow)	8004	6-79350
Loader Control Valve	8005	5-2640
Cylinders	8006	6-79360
Flat Faced Couplers	8007	7-54740
Accumulator for Ride Control	8013	6-45550

430/440 SKID STEER AND 440CT COMPACT TRACK LOADER

Repair Manual Mechanical and Pilot Control Machines (Tier 3 and Cab Up-Grade Machines)

Bur 87634767

Table of Contents (Continued)

Description	Section Number	Publication Form Number
Mounted Equipment		
Tab 9		
Section Index - Mounted Equipment		6-79221
Pedals and Levers	9001	6-79421
Pedals and Levers (Cab Up-Grade Machines)	9001	5-9560
Loader	9002	6-79390
Attachment Coupler	9003	6-79400
ROPS Canopy, Seat, Seat Belts, and Operators Compartment	9004	6-79410
ROPS Canopy, Seat, Seat Belts, and Operators Compartment (Cab Up-Grade Machines)	9004	5-9460
Heater	9006	6-79450
Air Conditioning Troubleshooting for Systems with R-134A Refrigerant	9011	6-79460
Air Conditioning Troubleshooting for Systems with R-134A Refrigerant (Cab Up-Grade Machines)	9011	5-9480
Air Conditioner System Gauges and Testing for Systems with R-134A Refrigerant	9012	6-79470
Air Conditioner System Gauges and Testing for Systems with R-134A Refrigerant (Cab Up-Grade Machines)	9012	5-9490
Air Conditioner System Service for Systems with R-134A Refrigerant Refrigerant Recovery, Compressor Removal and System Evacuation and Recharging	9013	6-79480
Air Conditioner System Service for Systems with R-134A Refrigerant Refrigerant Recovery, Compressor Removal and System Evacuation and Recharging (Cab Up-Grade Machines)	9013	5-9500
Air Conditioner Component Service for Systems with R-134A Refrigerant	9014	6-79490
Air Conditioner Component Service for Systems with R-134A Refrigerant (Cab Up-Grade Machines)	9014	5-9510
Schematic Set		
Hydraulic and Electrical Schematic Foldout	In Rear Pocket	5-5351
Hydraulic and Electrical Schematic Foldout (Tier 3 Cab Up-Grade and Pilot Control Machines)	In Rear Pocket	5-9620

RADIATOR

Removal

NOTE: Photos may be slightly different from the machine you are repairing. The procedure is the same.

NOTE: Put caps on all fittings and plugs in all disconnected hoses.

STEP 1

Park the machine on a level surface.

STEP 2

Lift the hood and open the rear access door on the machine.

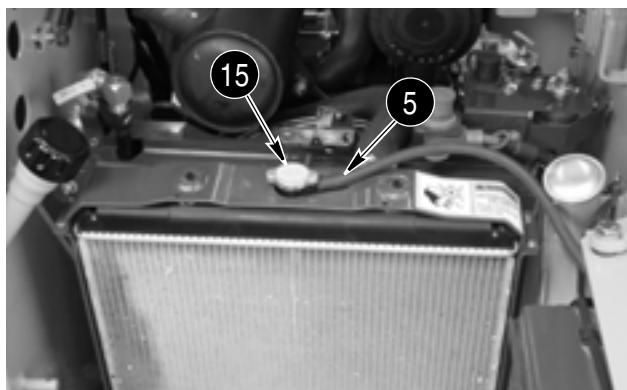
STEP 3

Turn the ignition switch and the master disconnect switch (if equipped) to the OFF position.

STEP 4

Disconnect the negative battery cable from the battery.

STEP 5

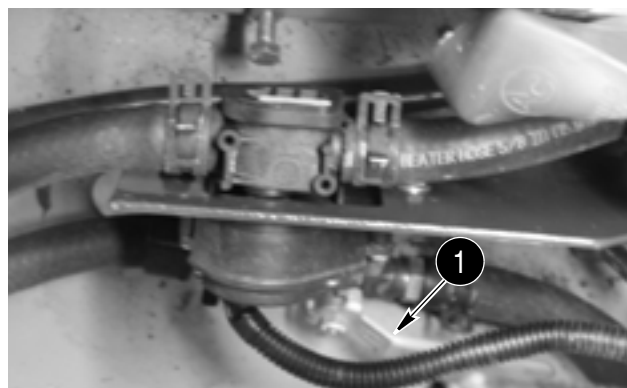


BD04C007

Slowly loosen the radiator cap (15). Disconnect the overflow hose (5) from the radiator neck.

NOTE: Refer to illustration on page 5.

STEP 6



BD05A024

If equipped with a heater, open the heater coolant valve (1).

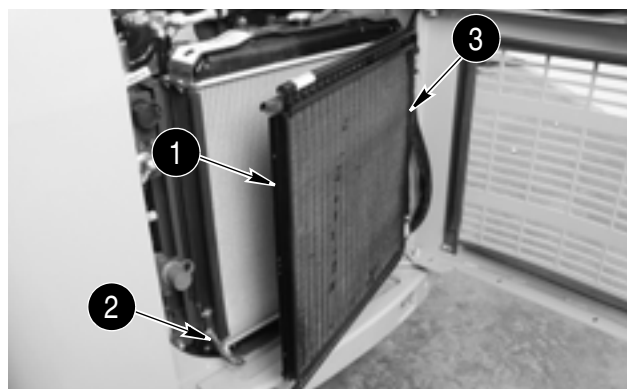
STEP 7

Install a hose on the drain valve (16) and drain the radiator (1) into a clean container that holds approximately 17 litres (4.5 gallons).

STEP 8

If equipped with a heater, close the heater coolant valve.

STEP 9



BD05A026

If the machine is equipped with a High Flow Oil Cooler (1), release the latch (2) on the lower left side of the oil cooler and swing the oil cooler away from the radiator. Remove mounting bolts (3) from the hinge and remove the oil cooler (1) from the radiator mounting location. Secure the oil cooler away from the radiator.

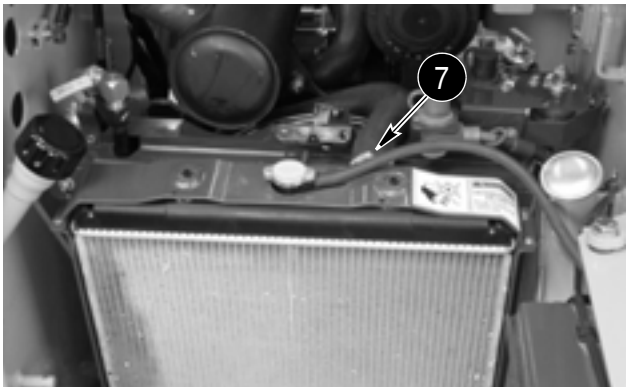
STEP 10



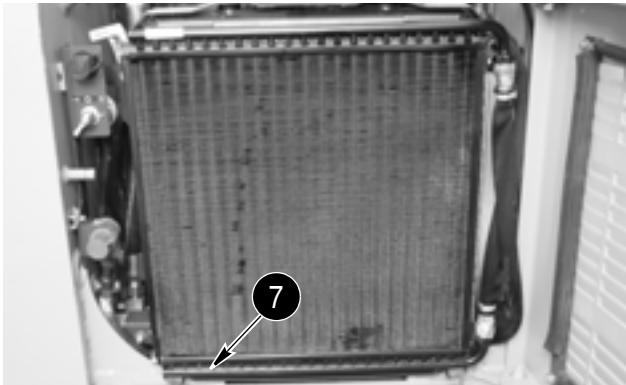
BD04C026

Release the latch on the top of the radiator and tip the radiator out from the mounting location.

STEP 11



BD04C007

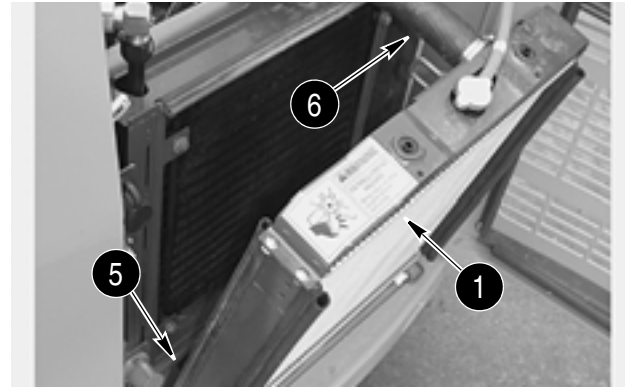


BD05A025

Loosen the clamps (7) on the lower radiator hose (10) and clamps (7) on the upper radiator hose (8). Remove the upper radiator hose (8) and the lower radiator hose (10) from the radiator (1).

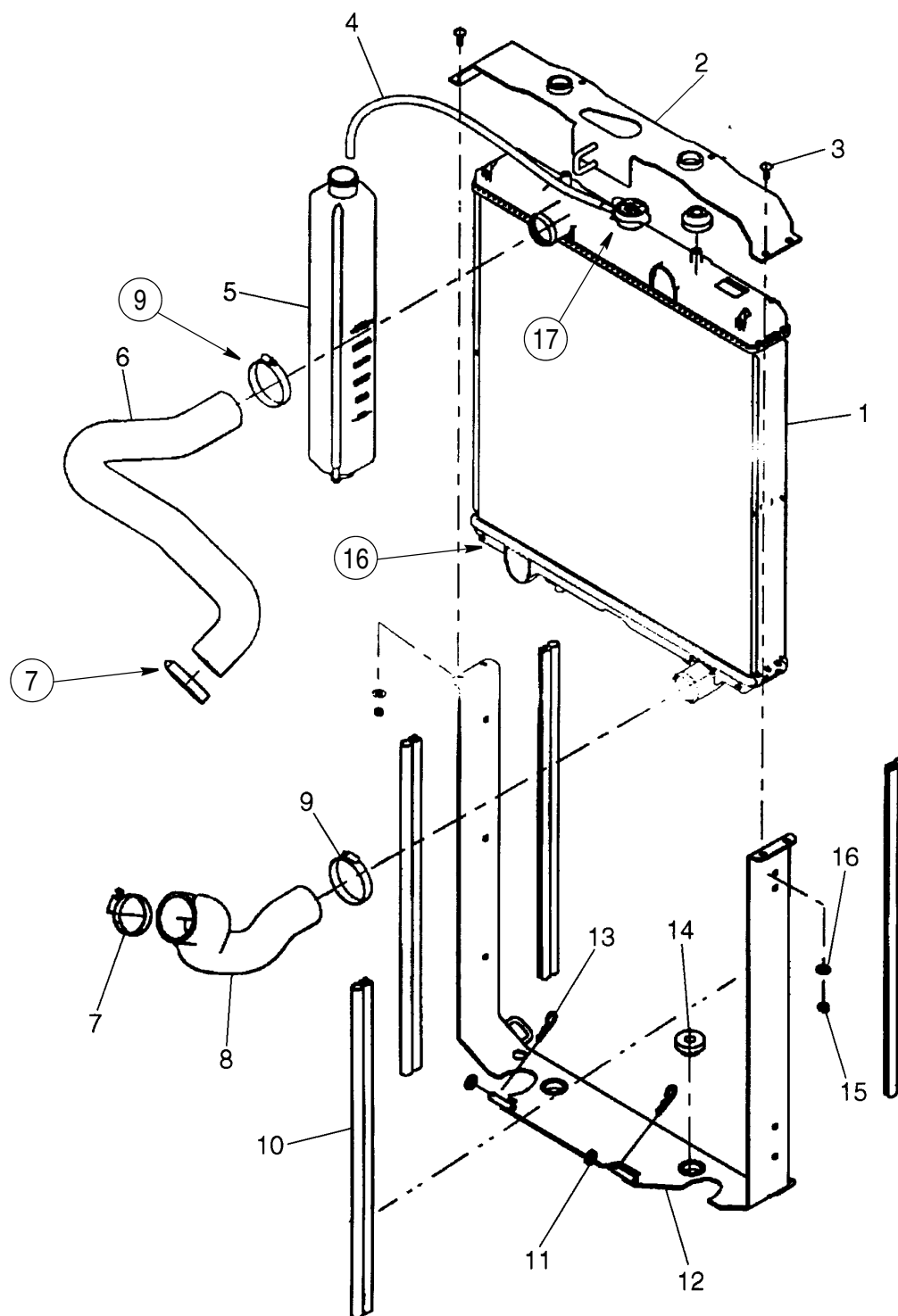
NOTE: Refer to illustration on page 5.

STEP 12



BD04K036

Move the radiator (1) away from the upper radiator hose (6) and lower radiator hose (5). Remove the radiator (1) from the machine.



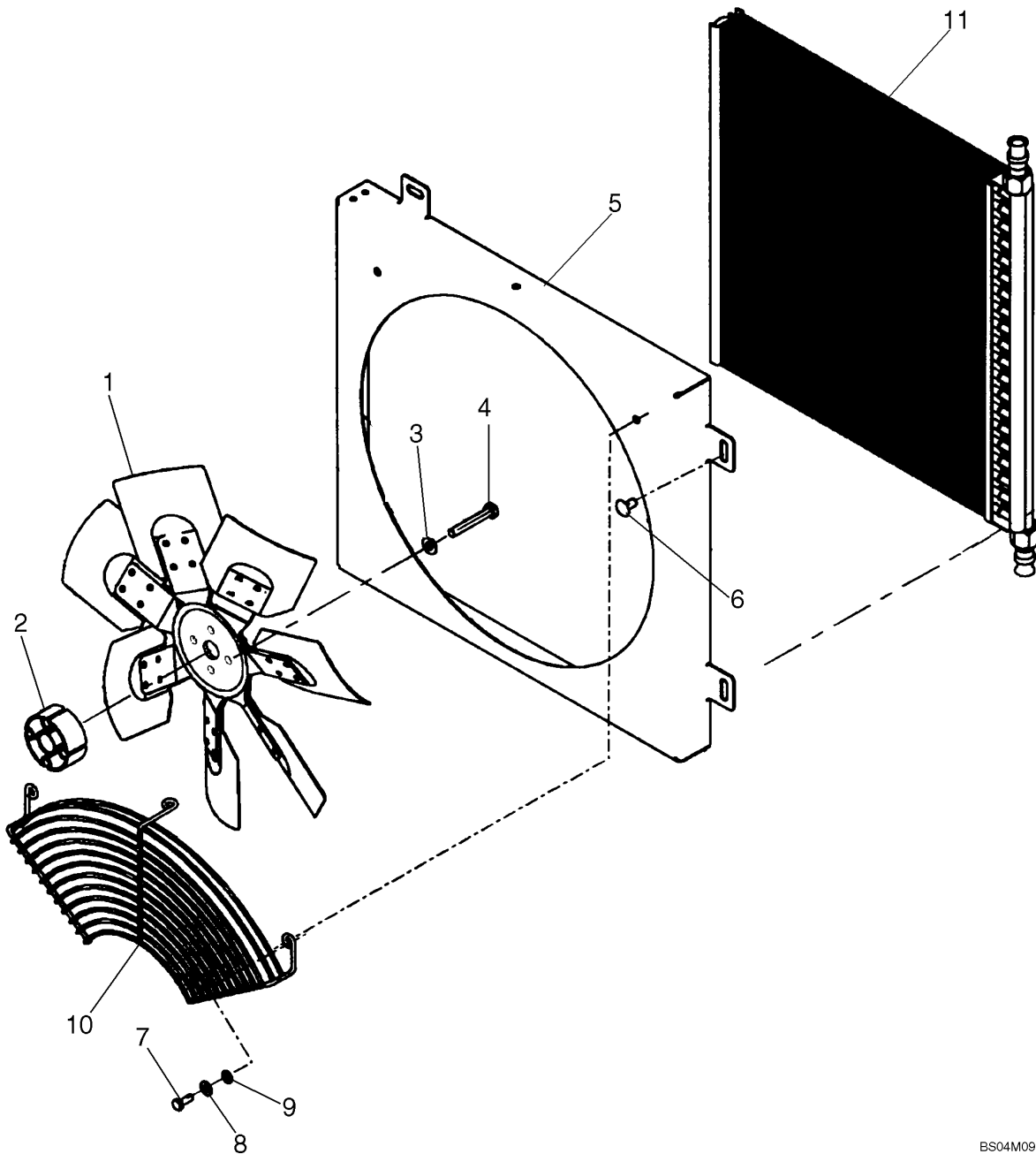
BS04M093

BS04M093

1. RADIATOR
2. UPPER FRAME ASSEMBLY
3. BOLT
4. COOLANT RECOVERY HOSE
5. COOLANT EXPANSION RESERVOIR
6. UPPER RADIATOR HOSE
7. CLAMP
8. LOWER RADIATOR HOSE
9. CLAMP

10. SEAL
11. WASHER
12. LOWER FRAME ASSEMBLY
13. SPLIT PIN
14. CUSHION
15. NUT
16. DRAIN VALVE
17. RADIATOR CAP

430 AND 440 RADIATOR MOUNTING



BS04M096

BS04M096

- 1. FAN BLADE
- 2. SPACER
- 3. LOCK WASHER
- 4. CAP SCREW
- 5. SHROUD
- 6. BOLT

- 7. CAP SCREW
- 8. LOCK WASHER
- 9. WASHER
- 10. FAN GUARD
- 11. OIL COOLER

430 AND 440 FAN MOUNTING

Installation

STEP 13

Installation of the radiator is the reverse procedure of removal.

STEP 14

After the radiator has been installed, fill the cooling system. See Section 1001 for the correct coolant mixture and quantity.

STEP 15

Start and run the engine until it reaches operating temperature and check for any leaks. Stop the engine. After the engine has cooled, check the level of the cooling system and add coolant as required.

ENGINE

Removal

STEP 1

Remove the radiator and hydraulic oil cooler from the machine.

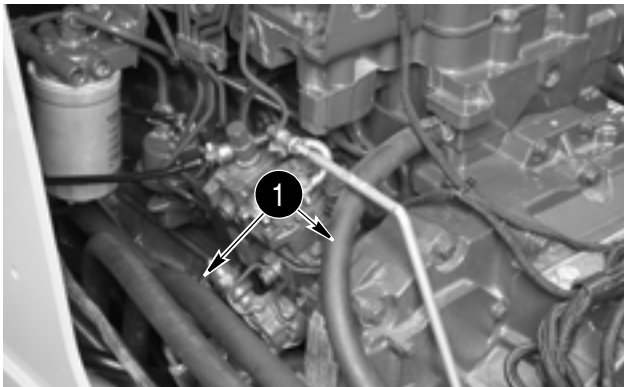
STEP 2

Install plugs and caps on all disconnected hoses and fittings.

STEP 3

Tag all electrical connection for identification during assembly.

STEP 4



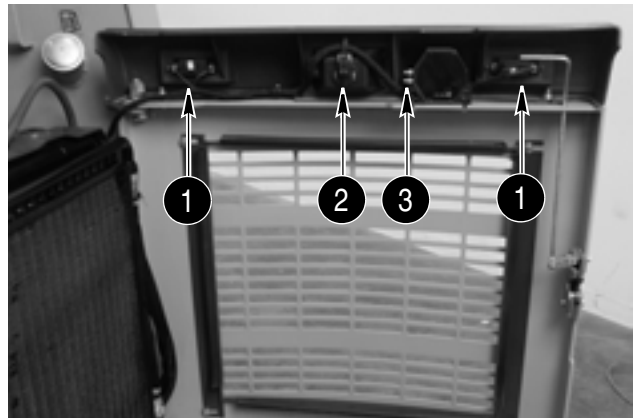
BD05A027

If equipped with a heater, disconnect the heater hoses (1) from the engine.

STEP 5

Lift the rear hood and open the rear access door.

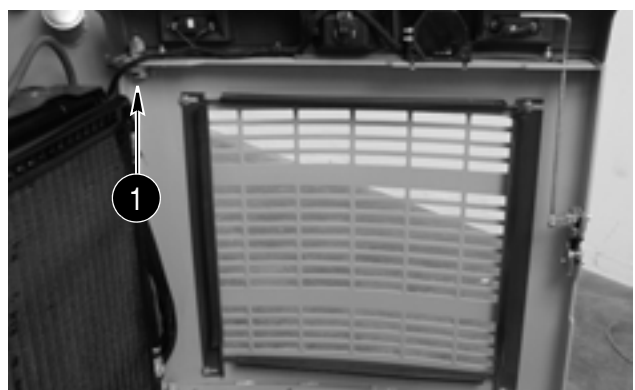
STEP 6



BD05A028

Disconnect the electrical connectors from the rear tail lamps (1) on both sides of the rear access door. Disconnect the electrical connectors from the rear worklight (2). Disconnect the electrical connectors from the backup alarm (3). Remove mounting hardware from the wiring harness (4) and remove the harness (4) from the rear access door.

STEP 7



BD05A028

Connect acceptable lifting equipment to the rear access door. Remove the pivot bolt (1) and lift the rear access door and remove from the machine.

STEP 8

1. CYLINDER PIVOT BOLT

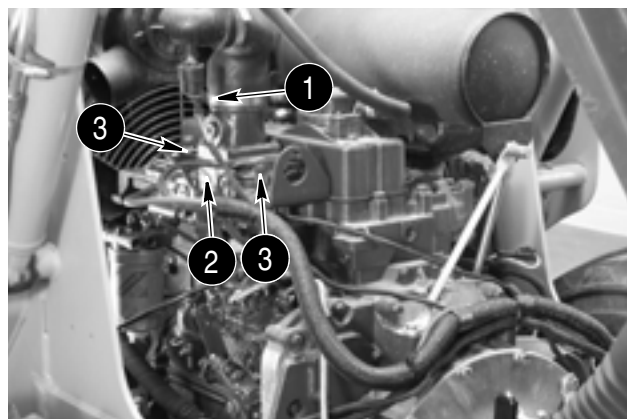
BD01K023

Remove the nut from cylinder pivot bolt (1) on the hood end of the cylinder.

STEP 9

BD05A0

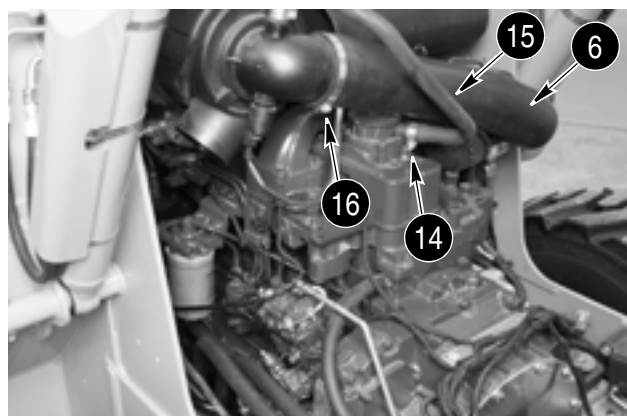
Remove the plastic clip (2) from the hood pivot shaft. Slide the hood to the left and remove the hood from the hood pivot shaft on both sides of the machine. Remove the hood from the machine.

STEP 10

BD05A051

1. AIR RESTRICTION INDICATOR SWITCH
2. GRID HEATER (IF EQUIPPED)

Disconnect the electrical connector for the air restriction indicator switch (1). Disconnect the wires (3) for the grid heater (2) (if equipped).

STEP 11

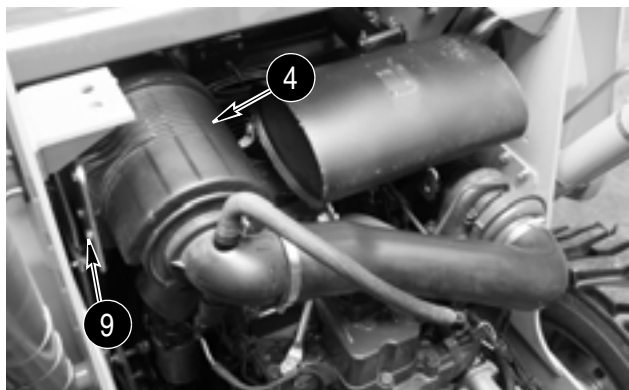
BD05A040

Loosen the clamps (16) on the intake manifold hose (6). Remove the hose from the intake and air filter assembly. Loosen the clamps (14) on the hose (15). Remove the hose from the engine.

NOTE: Torque clamps (49) 3 to 4 Nm (25 to 35 pound-inches) during assembly.

NOTE: Refer to illustration on page 16 and 17.

STEP 12



Loosen and remove the bolts (9) and washers (10) from the air filter housing clamp (4).

STEP 13

Remove the air cleaner (4) from the machine.

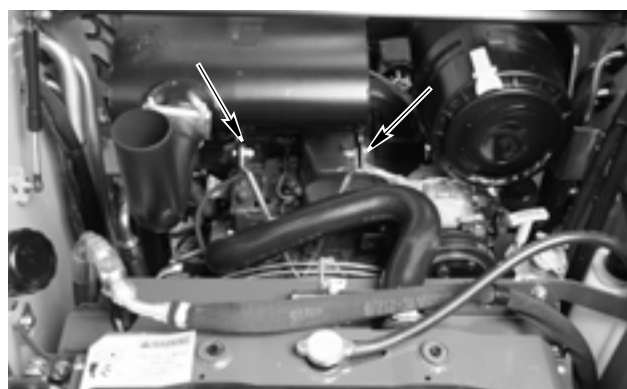
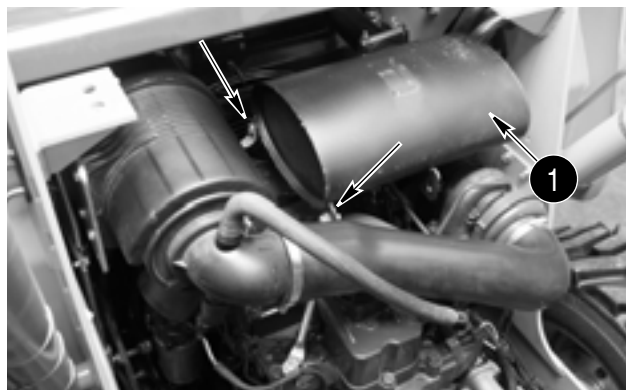
STEP 14

Loosen and remove the bolts (12 and 17) and lock washers (13) and spacers (14 and 15) that fasten the muffler (1) to the exhaust manifold.

NOTE: Torque the bolts (70) 51 to 61 Nm (38 to 45 pound-feet) during assembly.

NOTE: Refer to illustration on page 18 and 19.

STEP 15



Remove the bolts and washers that fasten the muffler to the support rods. Remove the muffler from the machine (1).

NOTE: Torque bolts (62) 23 to 26 Nm (204 to 228 pound-inches) during assembly.

STEP 16

Loosen and remove the cap screws (7) and washer and lock washers (8 and 9) from the fan guard (10). Remove the fan guard (10).

STEP 17

Remove the bolts (4), washers (3), fan blade (1), and spacer (2) from the engine.

STEP 18

Loosen and remove the bolts (6) from the shroud (5). Remove the shroud (5).

STEP 19

Connect a vacuum pump top the hydraulic reservoir. Start the vacuum pump. Loosen and remove the hose connections from the hydraulic oil cooler (11). Remove the oil cooler (11). Place caps on the fittings and plugs in the hoses. Stop the vacuum pump.

NOTE: Refer to illustration on page 6.

STEP 20

1. STARTER WIRES

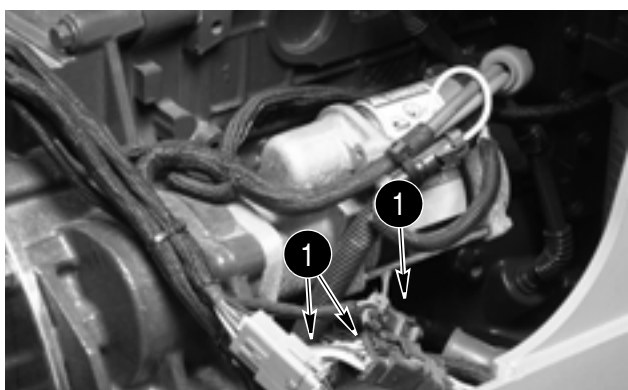
BD05A044

Disconnect the wires (1) from the starter solenoid.

STEP 21

BD05A068

Loosen and remove the bolt that fastens the ground cable to the engine. Remove the ground cable from the engine.

STEP 22

BD05A044

Unplug the electrical connectors (1) on the engine wiring harness.

STEP 23

BD01K021

Disconnect the wires from the alternator.

STEP 24

Loosen and remove the nut (32) and washer (33) that fastens the throttle linkage (31) to the fuel injection pump.

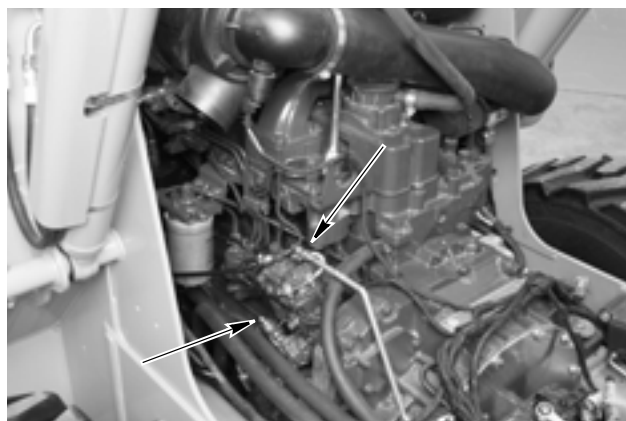
NOTE: Refer to illustration on page 14 and 15.

STEP 25

Loosen and remove the nut (32) and washer (33) that fastens the throttle linkage (31) to the throttle handle (34).

STEP 26

Disconnect the wire for the engine temperature switch. Cut the tie strap holding it to the engine and move out of the way.

STEP 27

BD05A040

Disconnect the wire connector for the fuel injection pump solenoid. Loosen and remove the nut and washer that fastens the throttle linkage to the injector pump. Remove the throttle linkage.

Click on the image link below for the full version of the service manual

