(7) Turbine housing

(8) Turbine wheel

(9) Exhaust outlet

(10) Oil outlet port

(11) Exhaust inlet

A turbocharger is installed between the exhaust and inlet manifolds. The turbocharger is driven by exhaust gases which flow through the exhaust inlet (11). The energy of the exhaust gas turns the turbine wheel (8). Then, the exhaust gas flows out of the turbine housing (7) through the exhaust outlet (9) .

Turbine wheel (8) and compressor wheel (3) are installed on the same shaft. Therefore, turbine wheel (8) and compressor wheel (3) rotate at the same rpm. The compressor wheel is enclosed by compressor housing (2). The compressor wheel compresses the air. The air flows into the engine cylinders through the inlet valves of the cylinders.

The oil from the main gallery of the cylinder block flows through the oil inlet port (5) in order to lubricate the turbocharger bearings (4) and (6). The pressurized oil passes through the bearing housing of the turbocharger. The oil is returned through the oil outlet port (10) to the oil pan.

The turbocharger has a wastegate. The wastegate is controlled by the boost pressure. This allows some of the exhaust gas to bypass the turbine at higher engine speeds. The wastegate is a type of flapper valve that automatically opens at a preset level of boost pressure in order to allow exhaust gas to flow around the turbine. The wastegate allows the design of the turbocharger to be more effective at lower engine speeds.

The wastegate is controlled by a diaphragm which is open to the atmosphere on one side and open to the manifold pressure on the other side.

An air/fuel ratio control is installed between the turbocharger and the fuel injection pump. The air/fuel ratio control performs the following functions:

- The fuel is limited on acceleration in order to prevent an overspeed condition.
- The generation of black smoke is reduced.
- The fuel efficiency is improved and emissions are reduced at low boost when the fuel rack is limited for low power output.

Cylinder Head And Valves

The valves and the valve mechanism control the flow of the air and the exhaust gases in the cylinder during engine operation. The cylinder head assembly has two valves for each cylinder. Each valve has one valve spring. The ports for the inlet and exhaust valves are on the right side of the cylinder. Steel valve seat inserts are installed in the cylinder head for both the inlet and the exhaust valves. The valve seat inserts can be replaced.

The valves move along steel guides. The guides are treated with phosphate in order to reduce friction and wear. The valve guides can be replaced. The exhaust valve guide has a counterbore in

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Product: SKID STEER LOADER
Model: 216 SKID STEER LOADER 4NZ
Configuration: 216 226 228 Skid Steer Loader 4NZ00001-03399 (MACHINE) POWERED BY 3034 Engine

Disassembly and Assembly
3024C Engine for Caterpillar Built Machines
Media Number -SENR5006-04 **Publication Date -01/01/2009** **Date Updated -16/01/2009**

i02005467

Camshaft - Install

SMCS - 1210-012

Installation Procedure

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

1. Ensure that the camshaft is clean. Lubricate the camshaft with clean engine oil.

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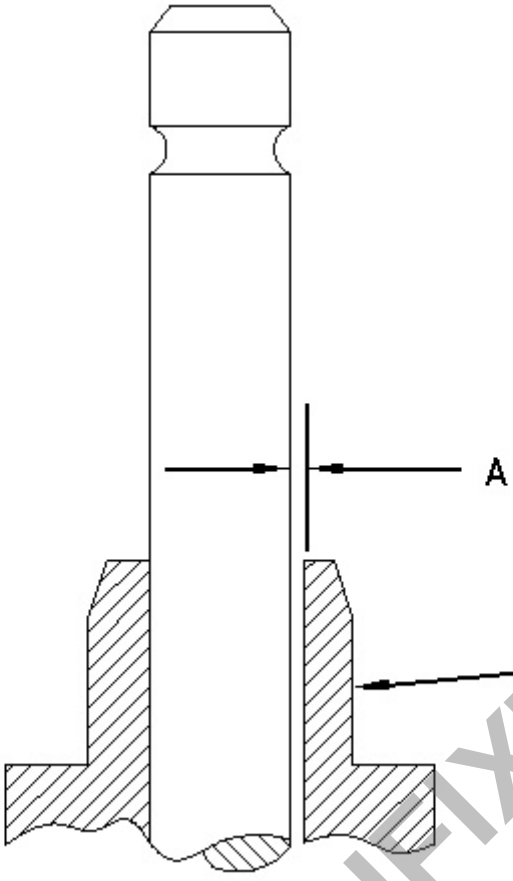


Illustration 3 g00845819

(6) Valve guide

(A) Clearance between the valve and valve guide ... 0.030 to 0.060 mm (0.0012 to 0.0024 inch)

Clearance between the valve and valve guide ... 0.20 mm (0.0079 inch)

(A) Standard clearance for the exhaust valve ... 0.050 to 0.075 mm (0.0020 to 0.0030 inch)

Service limit for the exhaust valve ... 0.25 mm (0.010 inch)

(7) Exhaust valve stem

Diameter of the exhaust valve stem ... 6.940 to 6.950 mm (0.2732 to 0.2736 inch)

Service limit ... 6.840 mm (0.2693 inch)

(8) Inlet valve stem

Diameter of the inlet valve stem ... 6.955 to 6.970 mm (0.2738 to 0.2744 inch)

Service limit ... 6.890 mm (0.2710 inch)

(9) Valve face angle

Valve face angle ... 45 degrees
Valve seat angle ... 45 degrees

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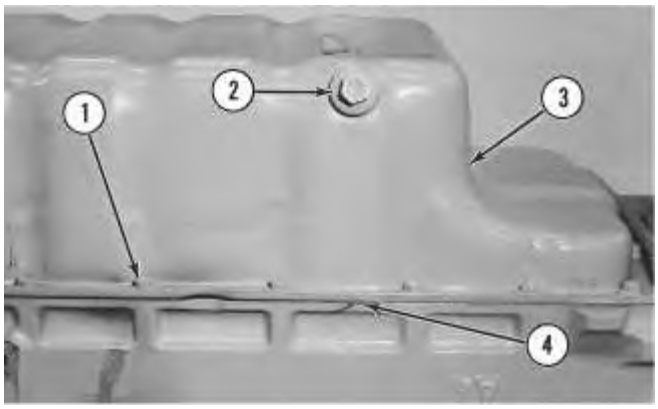


Illustration 2 g00547147

Typical example

2. Inspect the condition of gasket (4). If gasket (4) is worn or damaged, use a new gasket for replacement.
3. Install gasket (4) and engine oil pan (3) .
4. Install bolts (1) that fasten engine oil pan (3) to the cylinder block. Tighten bolts (1) to a torque of 28 N·m (21 lb ft).
5. Install the O-ring seal on oil pan drain plug (2) and install oil drain plug (2). Tighten the drain plug to a torque of 34 N·m (25 lb ft).
6. Fill the engine oil pan to the correct level that is indicated on the engine oil level gauge.

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WARNING

Personal injury can result from hot coolant, steam and alkali.

At operating temperature, engine coolant is hot and under pressure. The radiator and all lines to heaters or the engine contain hot coolant or steam. Any contact can cause severe burns.

Remove filler cap slowly to relieve pressure only when engine is stopped and radiator cap is cool enough to touch with your bare hand.

Cooling System Conditioner contains alkali. Avoid contact with skin and eyes.

To check for the amount of pressure that opens the filler cap, use the following procedure:

1. After the engine cools, carefully loosen the filler cap. Slowly release the pressure from the cooling system. Then, remove the filler cap.
2. Inspect the pressure cap carefully. Look for damage to the seal. Look for damage to the surface that seals. Remove any debris on the cap, the seal, or the sealing surface.

   Carefully inspect the filler cap. Look for any damage to the seals and to the sealing surface. Inspect the following components for any foreign substances:

   - Filler cap
   - Seal
   - Surface for seal

   Remove any deposits that are found on these items, and remove any material that is found on these items.
3. Install the pressure cap on the **9S-8140** Pressurizing Pump .
4. Observe the exact pressure that opens the filler cap.
5. Compare the pressure to the pressure rating that is found on the top of the filler cap.
6. If the filler cap is damaged, replace the filler cap.

Testing The Radiator And Cooling System For Leaks

Table 4

Required Tools		
Part Number	**Part Name**	**Qty**
9S-8140	Pressurizing Pump	1

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Product: SKID STEER LOADER
Model: 216 SKID STEER LOADER 4NZ
Configuration: 216 226 228 Skid Steer Loader 4NZ00001-03399 (MACHINE) POWERED BY 3034 Engine

Systems Operation
216, 226, 228, 232, 236, 242, 246, 248, 252 and 262 Skid Steer Loaders and 247, 257, 267, 277 and 287 Multi Terrain Loaders Interlock Electronic Control System

Media Number -RENR2864-05 **Publication Date -01/04/2003** **Date Updated -13/04/2003**

i01502893

Hydrostatic System Interlock and Parking Brake Interlock

SMCS - 7630

The interlock system for the hydrostatic system and the parking brake uses the following components:

- Switch (armrest)
- Switch (seat)
- Switch (parking brake)
- Solenoid valve (hydrostatic pilot)
- Solenoid valve (parking brake)
- Indicator (armrest)
- Indicator (parking brake)

When power is applied to the ECM, the outputs for the hydrostatic pilot solenoid and the parking brake solenoid will be off. The outputs will remain off until the ECM receives valid inputs from the armrest switch, the seat switch and the parking brake switch.

When the ECM receives signals that indicate that the seat is occupied and the armrest is lowered, the ECM will turn off the armrest indicator. When the ECM sees the parking brake switch close, the ECM will then turn on the outputs for the hydrostatic pilot solenoid and the parking brake solenoid. Energizing these solenoids allows the machine to move.

Pressing the parking brake switch again will turn off the hydrostatic pilot solenoid and the parking brake solenoid. When the parking brake solenoid is turned off, the parking brake will become engaged and the parking brake indicator will illuminate.

Note: A raised armrest or an unoccupied seat will also cause the ECM to turn off the hydrostatic pilot solenoid and the parking brake solenoid.

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Illustration 7 g01739417

"Add/Edit Reactions" screen

(5) "Reaction Types" drop-down menu

4. From the "Reaction Types" drop-down menu (5) , select a reaction type. The left of the "Description" list box is populated with the available reactions for the type that is selected.
5. Select the events that are to be tracked from the left "Description" list box.
6. Click the "Add" button. The event is moved from the left "Description" list box to the right box.
7. If there are events that are to be removed from the reaction, select the events in the right list box.
8. Click the "Remove" button. The event is moved from the right list box to the left list box.
9. From the "Addresses" list box, select the address you wish an email message to be sent to when the selected events occurs.
10. Click the "Add" button. The address is moved from the "Addresses" list box to the "Add New Addresses" list box.
11. If there are addresses that are to be removed from the reaction, select the addresses from the "Add New Addresses" list box.
12. Click the "Remove" button. The address is moved from the "Add New Addresses" list box to the "Addresses" list box.
13. Click the "Save Reactions" button. The reaction is saved.

Alarm Reaction Types

The Alarm "Reaction Types" menu is used for defining the parameters for Time and Geo Fence alarm notification.

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Product: SKID STEER LOADER
Model: 216 SKID STEER LOADER 4NZ
Configuration: 216 226 228 Skid Steer Loader 4NZ00001-03399 (MACHINE) POWERED BY 3034 Engine

Systems Operation
EquipmentManager User Guide
Media Number -KENR6303-08 **Publication Date -01/05/2010** **Date Updated -18/05/2010**

i03319640

Manage Users

SMCS - 7600; 7606

Set Up New Users

There are four different types of user roles that are available in EquipmentManager. The tables below list the four types of roles. Under each of the roles the permissions that are available for that role are listed.

Table 1

Customer User Permissions	
Features	Administration
Hours and Location	**Groups**
Map	Create Groups
Start/Stop Times	Modify Groups
View SMU history	Delete Groups
View Location History	Assign Groups (to user level)
View Status History	Assign Groups (to user level)
Time & Geo Fence	**Manage Hardware**
Update Status	View General Registry
Setup Fence	View Digital Registry
Enable/Disable	View Transmission Registry
View Alarm History	Product Link Module Search
View Status History	**Event Tracking**
Planned Maintenance	None
Request quote	**Upload Data**
View Planner	Repair History
Enter PM Notes	Refueling History
Mark PM Complete	**Manage Exiting User**

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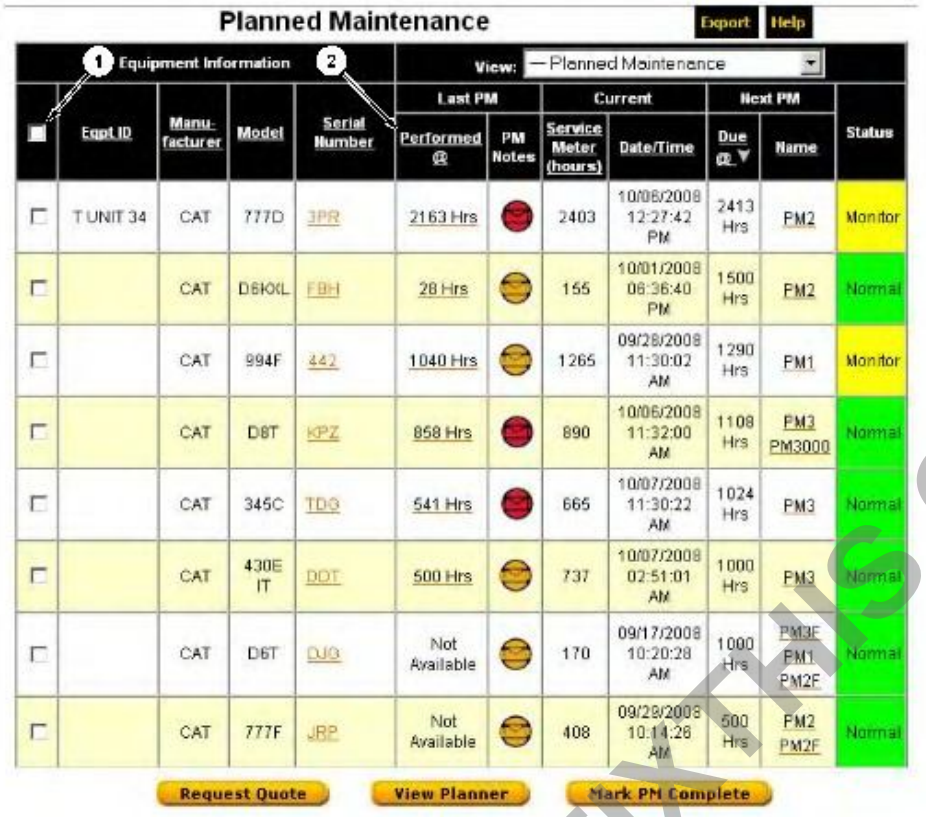


Illustration 1 g01711296

"Planned Maintenance" screen

(1) Check box

(2) "Performed @" column

1. From the "Planned Maintenance" screen, click the number in the "Performed @" column (2) under the "Last PM" column if the number is available.

   The "Planned Maintenance (PM) History" screen will be displayed.

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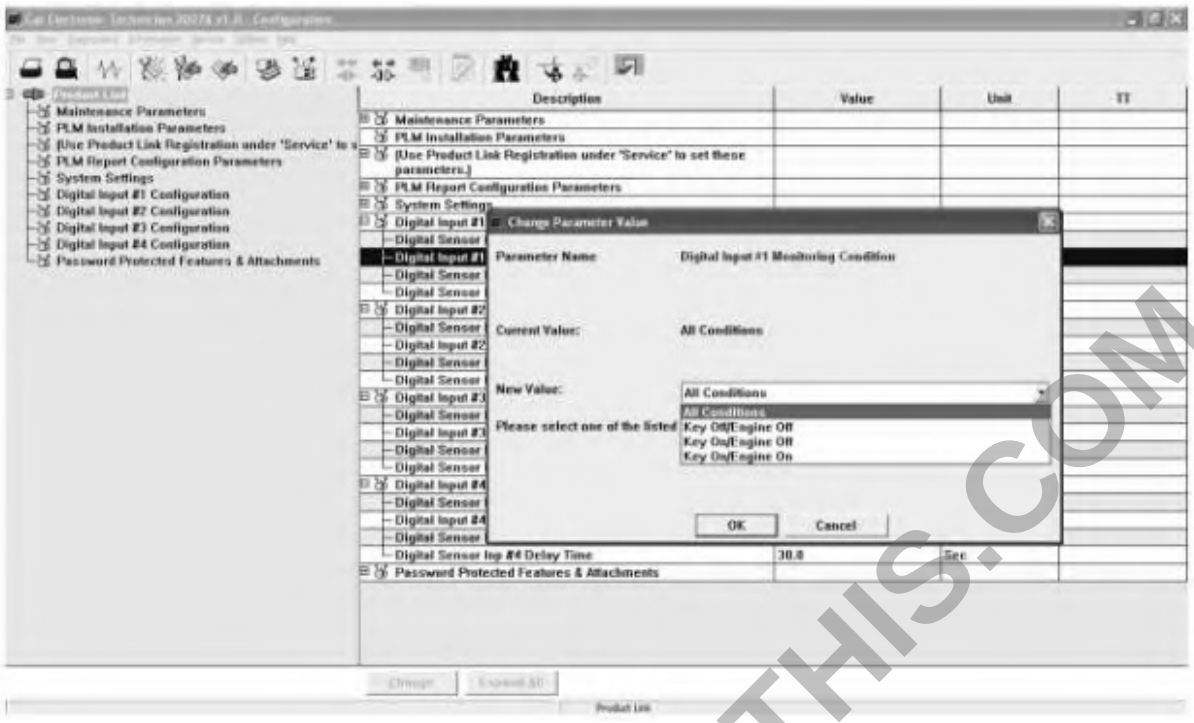
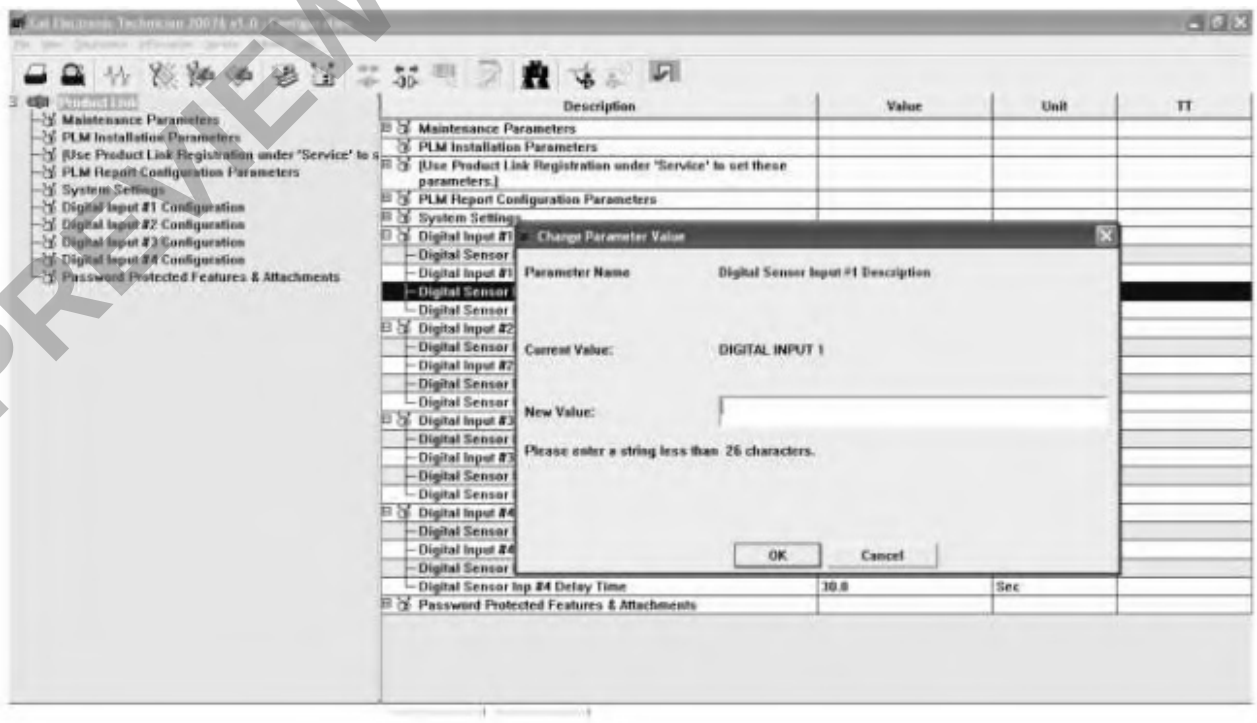


Illustration 3 g01361928

"Digital Input Monitoring Condition" Screen

Refer to Table 1 for further information about this parameter.

"Digital Sensor Input #x Description" Parameter



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Product: SKID STEER LOADER
Model: 216 SKID STEER LOADER 4NZ
Configuration: 216 226 228 Skid Steer Loader 4NZ00001-03399 (MACHINE) POWERED BY 3034 Engine

Testing and Adjusting
Product Link - PL522/523
Media Number -RENR8143-02 **Publication Date -01/07/2013** **Date Updated -23/07/2013**

i03995042

Electrical Connector - Inspect

SMCS - 7553-040-WW

ReferenceSpecial Instruction, SEHS9615, "Servicing DT Connectors".

ReferenceSpecial Instruction, REHS0148, "Listing Of Deutsch Connector Components"

ReferenceSpecial Instruction, SEHS9065, "Use Of CE Connector Tools".

ReferenceService Magazine, SEPD034227 January 97, "Field Repair Of Single Wire Breaks In Harnesses (Sealed Splice)".

ReferenceService Magazine, SEPD037128 July 97, "Protection Of Unsealed Electrical Terminations For Machines In Corrosive Applications".

ReferenceService Magazine, SEPD047324 May 99, "New DT Connector Plugs With Improved Seal Retention".

ReferenceService Magazine, SEPD054509 October 00, "Dielectric Grease Should Not Be Used In Electrical Connectors".

ReferencePocket Guide, SEBD0402, "Guidelines For Routing And Installing Wire Harness Assemblies".

Use this procedure under the following situation:

Use the following steps to help determine if the connector is the cause of the problem. If a problem is found in the electrical connector, repair the connector and verify that the problem has been corrected.

The following background information is related to this procedure:

Many of the operational procedures and the diagnostic code procedures in this troubleshooting guide will instruct you to check a specific electrical connector.

Intermittent electrical problems are often caused by poor connections. Always check for an active diagnostic code before breaking any connections. Also, always check for an active diagnostic code after the connector is reconnected in order to verify that the problem disappears.

Simply disconnecting the connectors and then reconnecting the connectors can temporarily solve a problem at times. If reconnecting the connectors solves the problem, likely causes are loose

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Product: SKID STEER LOADER
Model: 216 SKID STEER LOADER 4NZ
Configuration: 216 226 228 Skid Steer Loader 4NZ00001-03399 (MACHINE) POWERED BY 3034 Engine

Troubleshooting

247, 257, 267, 277 and 287 Multi Terrain Loaders and 216, 226, 228, 232, 236, 242, 246, 248, 252 and 262 Skid Steer Loaders Auxiliary Hydraulic Electronic Control System

Media Number -RENR2893-12 **Publication Date -01/12/2004** **Date Updated -14/12/2004**

i03884471

MID 106 - CID 1181 - FMI 03

SMCS - 3139-038-AX

Conditions Which Generate This Code:

This diagnostic code is associated with the modulating valve for the auxiliary hydraulics (A2). The FMI 03 means that the ECM determined that the voltage is above normal. A short to the + battery terminal will cause this code.

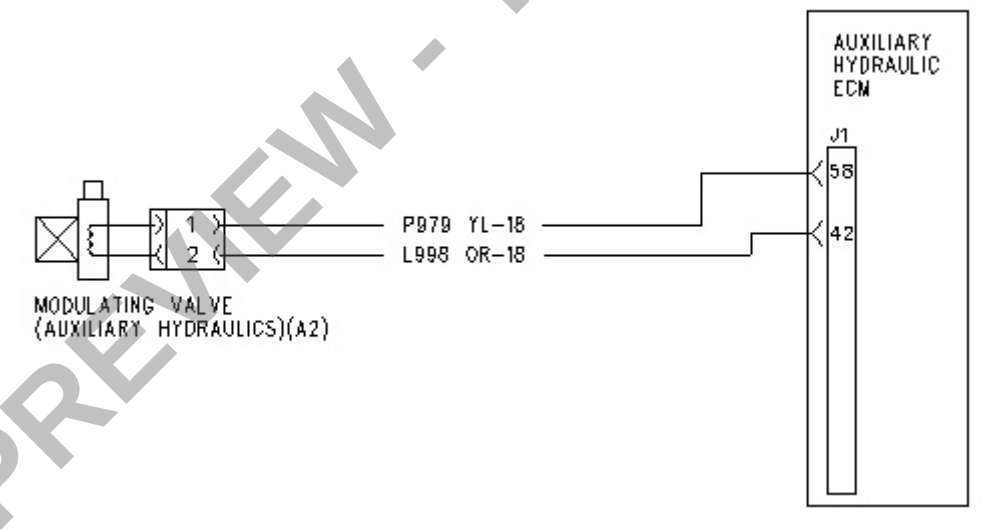


Illustration 1 g00739076

Schematic of the modulating valve for the auxiliary hydraulics (A2)

Test Step 1. CHECK FOR A SHORT TO + BATTERY IN THE WIRE HARNESS

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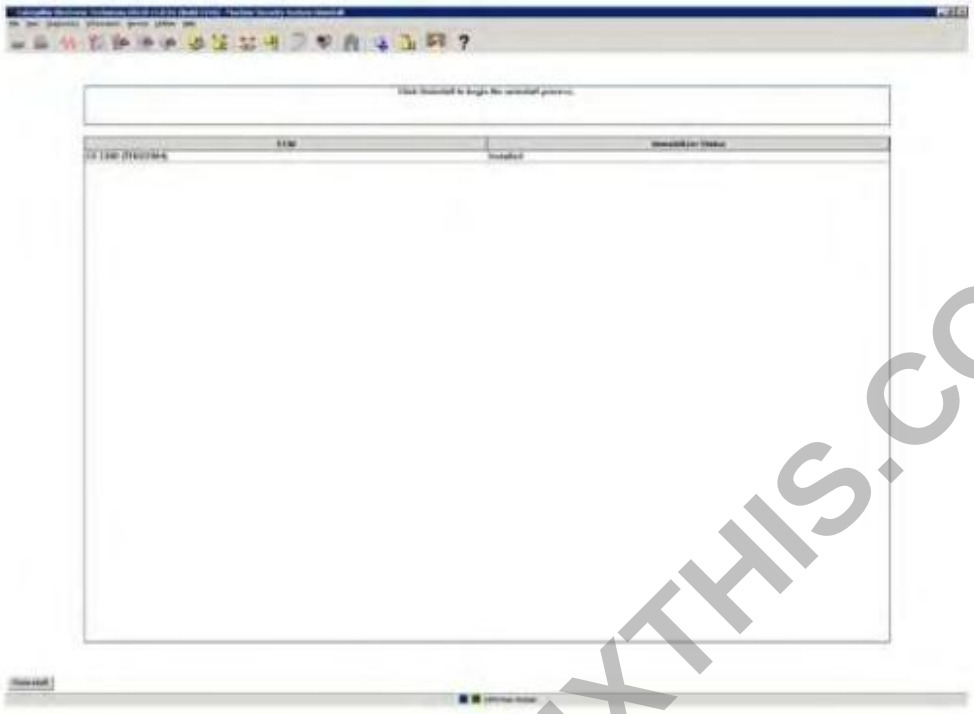


Illustration 23 g02646630



Illustration 24 g02646631

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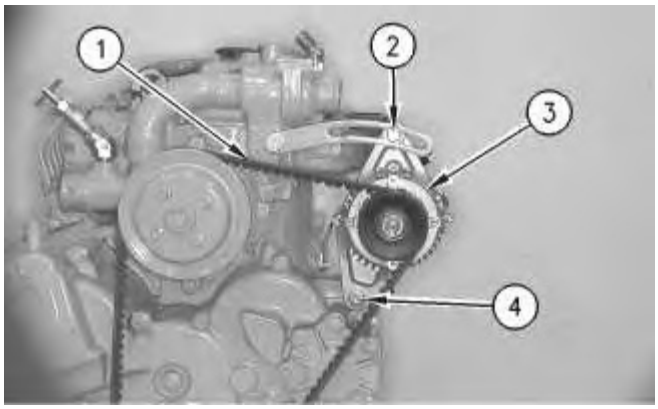


Illustration 1 g00577662

1. Loosen bolt (2) and bolt (4) .
2. Slide alternator (3) toward the engine.
3. Remove alternator V-belt (1) from the alternator pulley.
4. Remove bolts (2) and (4) .
5. Remove alternator (3) from the engine.

Installation Procedure

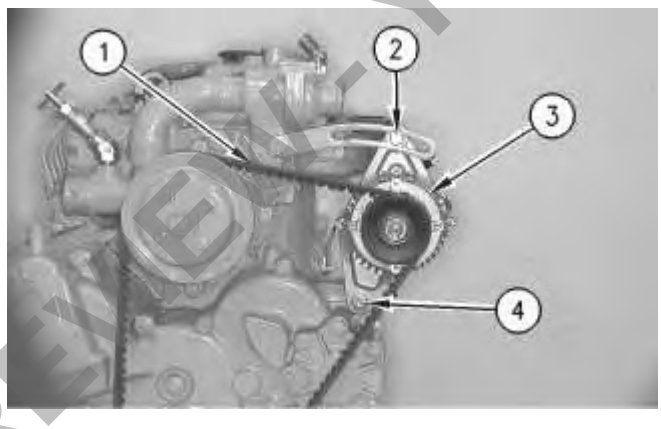


Illustration 2 g00577662

1. Put alternator (3) in position on the engine.
2. Install bolts (2) and (4). Tighten bolts (2) and (4) finger tight.

   Note: When you install the alternator, ensure that the alternator pulley is in alignment with the crankshaft pulley within 2.4 mm (0.09 inch).

3. Install alternator V-belt (1) .

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Do not use dirty test fluids when you test fuel injection nozzles. Also, do not test fuel injection nozzles unless you have the correct service tools.The use of dirty test fluids and the use of incorrect service tools will result in damage to fuel injection nozzles.

Note: This procedure is a test of the opening pressure of the fuel injection nozzle.

1. Connect fuel injection nozzle (2) to the tooling that is shown in Illustration 5.

   The spray from fuel injection nozzle (2) must be directed into **1U-8857** Extension (4) and **8S-2270** Fuel Collector (5) .

   Use clean **6V-6068** Calibration Fluid when the fuel injection nozzles are tested. The calibration fluid is similar to SAE J-967 (ISO 4113) oil.

2. Close the gauge protector valve. Close the shutoff valve. Open the pump isolator valve. Flush fuel injection nozzle (2) by operating the nozzle tester. Operate the nozzle tester for 10 to 15 strokes at a rate of approximately sixty strokes per minute.

3. Open the gauge protector valve. Slowly increase the pressure until the valve in fuel injection nozzle (2) opens. Note the highest pressure indication on the dial indicator before the pointer moves to 0 kPa (0 psi). This highest pressure indication is the opening pressure of fuel injection nozzle (2). The opening pressure occurs when the valve needle is lifted from the nozzle seat.

   Refer to the Specifications Module, "Fuel Injection Nozzles" topic for the correct pressure settings. If the opening pressure is not within the range of the setting which is given in the table, fuel injection nozzle (2) must be replaced or a new shim must be installed.

4. In order to adjust the pressure setting by the use of a new shim, disassemble the fuel injection nozzle. Refer to this Systems Operation, Testing and Adjusting Module, "Inspection and Cleaning of the Fuel Injection Nozzles" topic.

5. Install additional shims in order to increase the pressure setting. Remove shims or replace the shim with a thinner shim in order to decrease the pressure setting.

   The pressure setting will increase 980 kPa (142 psi) for an increase of 0.10 mm (0.004 inch) in the thickness of the shim. The pressure setting will decrease 980 kPa (142 psi) for a decrease of 0.10 mm (0.004 inch) in the thickness of the shim.

Injector Spray Pattern Test

WARNING

Ensure that you wear eye protection at all times during testing. When fuel injection nozzles are tested, test fluids travel through the orifices of the nozzle tip with high pressure. Under this amount of pressure, the test fluid can pierce the skin and cause serious injury to the operator.

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Product: SKID STEER LOADER
Model: 216 SKID STEER LOADER 4NZ
Configuration: 216 226 228 Skid Steer Loader 4NZ00001-03399 (MACHINE) POWERED BY 3034 Engine

Specifications

3024C Engine for Caterpillar Built Machines

Media Number -SENR5004-02 **Publication Date -01/05/2006** **Date Updated -23/05/2006**

i02220157

Fuel Transfer Pump

SMCS - 1256

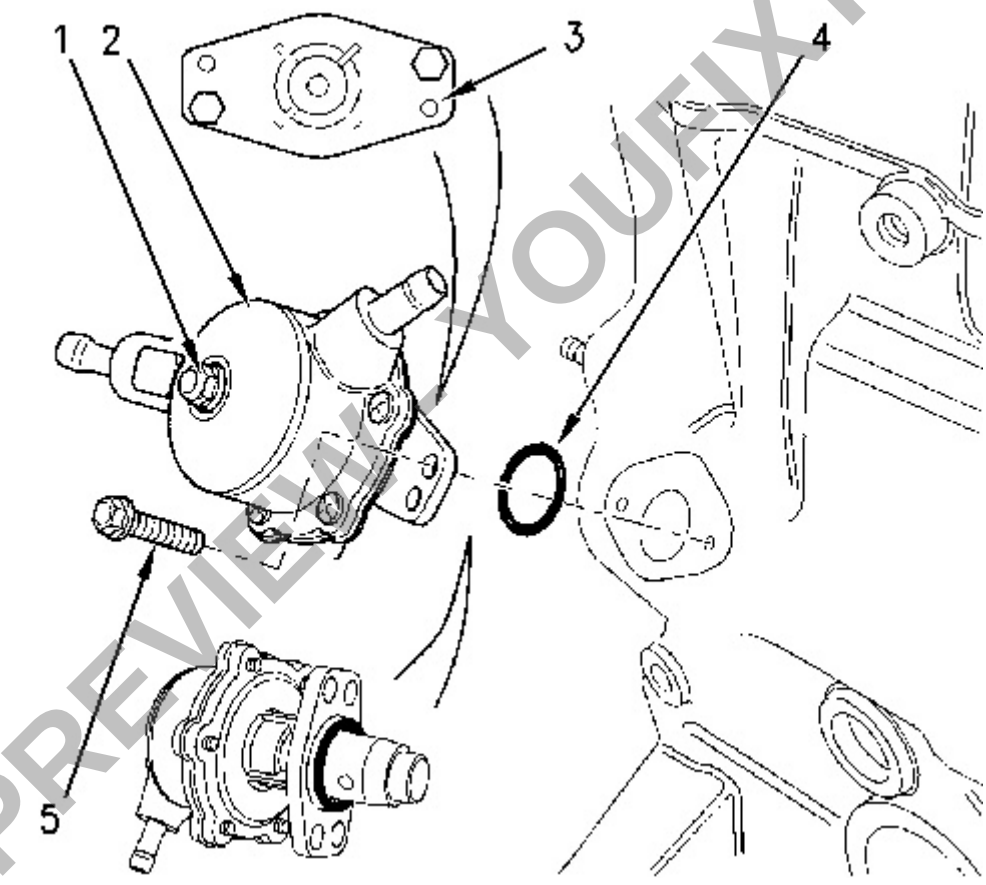


Illustration 1 g00819278

(1) Tighten the adjustment screw for the fuel transfer pump to the following torque. ... 2.5 N·m (1.8 lb ft)

(2) Fuel transfer pump

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Product: SKID STEER LOADER
Model: 216 SKID STEER LOADER 4NZ
Configuration: 216 226 228 Skid Steer Loader 4NZ00001-03399 (MACHINE) POWERED BY 3034 Engine

Testing and Adjusting
216 and 226 Skid Steer Loaders Machine Systems
Media Number -RENR2860-03 **Publication Date -01/09/2001** **Date Updated -16/11/2001**

i01587202

Operational Checks

SMCS - 4350-535; 5050-535

WARNING

Sudden movement of the machine or release of oil under pressure can cause injury to persons on or near the machine.

To prevent possible injury, perform the procedure that follows before testing and adjusting the power train.

Before you perform these procedures, refer to Testing and Adjusting, "Machine Preparation" for the correct procedure for machine preparation.

The following operational checks can be used for the following items:

- find leakage in the system.
- determine whether the pilot operated hydraulic controls are functioning correctly.
- determine whether the pumps or motors are functioning correctly.
- determine whether the whole work tool system is functioning correctly.

In order for the hydraulic system to function properly, each component in the system must be set to the correct specifications. Some components must be set prior to the testing of other components. A component that is not set properly will have an impact on other components in the system.

Note: The oil in the hydraulic system must be at an operating temperature range of 50° ± 10°C (122° ± 18°F). In order to increase the oil temperature, start the engine and operate all the cylinders for at least five cycles. Also, drive the machine forward and drive the machine rearward.

Lift Cylinder Speed Test

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6. Attach a suitable lifting device and Tooling (A) to the radiator assembly.



Illustration 6 g00911317

7. Support the radiator assembly. Remove clip (11). Remove strut (12) .

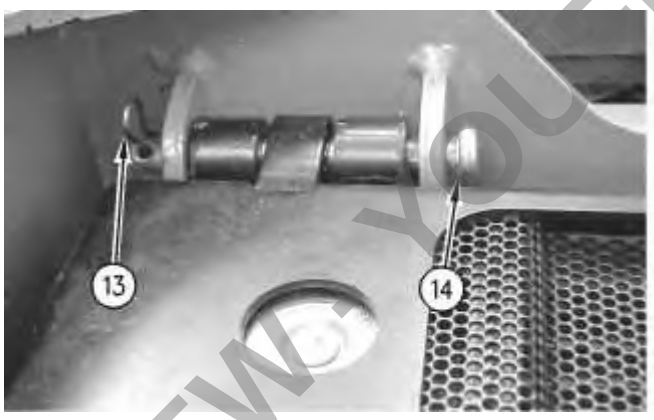


Illustration 7 g00911320

8. Remove cotter (13). Remove pin (14) .
9. Repeat Step 8 for the other side.

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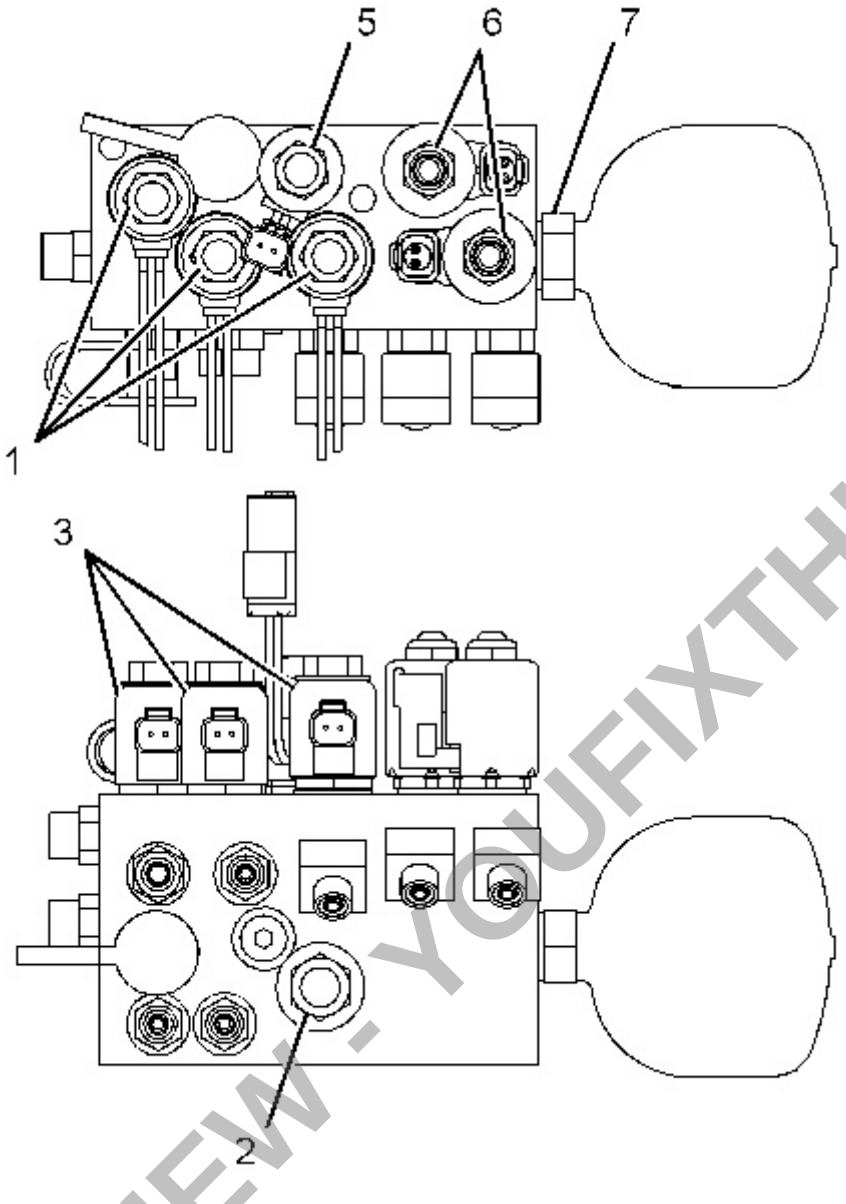


Illustration 2 g01750118

(5) **185-9409** Solenoid Valve Gp

Final installation torque for two solenoid valve groups ... 50 ± 5 N·m (37 ± 4 lb ft)
Final installation torque for two nuts ... 5.5 ± 1.5 N·m (50 ± 13 lb in)
Operating voltage ... 12 VDC
Coil resistance at 25 ± 5 °C (77 ± 9 °F) ... 10.5 ± 0.3 Ohms

(6) **173-7832** Solenoid Valve Gp

Torque for four solenoid valve groups ... 50 ± 5 N·m (37 ± 4 lb ft)
Final installation torque for four self-locking nuts ... 13.0 ± 1.5 N·m (115 ± 13 lb in)
Operating voltage ... 12 VDC
Coil resistance at 25 °C (77 °F) ... 2.2 ± 0.2 Ohms

(7) Torque for the hydraulic accumulator group ... 30.0 ± 3.5 N·m (22 ± 3 lb ft)

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Product: SKID STEER LOADER
Model: 216 SKID STEER LOADER 4NZ
Configuration: 216 226 228 Skid Steer Loader 4NZ00001-03399 (MACHINE) POWERED BY 3034 Engine

Disassembly and Assembly
3024C Engine for Caterpillar Built Machines
Media Number -SENR5006-04 **Publication Date -01/01/2009** **Date Updated -16/01/2009**

i01591441

Engine Oil Relief Valve - Remove and Install

SMCS - 1315-010

Removal 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.

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.

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10. Blow out the air conditioning system with clean dry shop air for 5 to 10 minutes. Follow the instructions that are provided with the flushing unit.

NOTICE

It is extremely important that all of the flushing solvent is purged from the Air Conditioning System. Failure to purge all of the solvent will result in premature compressor failure. Components should be positioned in order to ensure that no solvent is trapped in the system.

---

11. Install a new receiver-dryer or an in-line dryer. Refer to the Service Manual, SENR5664, "Receiver-Dryer - Remove and Install" section in Disassembly and Assembly. For in-line dryers, refer to the Service Manual, SENR5664, "In-Line Refrigerant Dryer - Remove and Install" section in Disassembly and Assembly.

12. Install a new accumulator, if necessary. Refer to the Service Manual, SENR5664, "Air Conditioner Accumulator - Remove and Install" section in Disassembly and Assembly.

13. Install a new expansion valve or an orifice tube. Clean the original quick couplers or replace the original quick couplers.

    Note: If the Air Conditioning System has an in-line dryer, then the new orifice tube is already contained inside the dryer.

14. Install new quick couplers to the dryer inlet and outlet lines, if necessary.

15. Install a new compressor.

16. Refer to the Service Manual, SENR5664, "Refrigerant System - Evacuate" section in Testing and Adjusting.

17. Add additional oil to the air conditioning system, if necessary. Refer to "Oil Charge After System Flush".

    Note: New compressors are shipped with oil in the compressors. In many instances, it is not necessary to add extra oil to the air conditioning system.

18. Refer to the Service Manual, SENR5664, "Refrigerant System - Charge" section in Testing and Adjusting.

    Note: Also, Refer to Specifications, SENR5664, "System Capacities for Refrigerant".

19. In order to ensure proper operation of the system, refer to the Service Manual, SENR5664, "Performance Test" section in Testing and Adjusting.

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Product: SKID STEER LOADER
Model: 216 SKID STEER LOADER 4NZ
Configuration: 216 226 228 Skid Steer Loader 4NZ00001-03399 (MACHINE) POWERED BY 3034 Engine

Troubleshooting

247, 257, 267, 277 and 287 Multi Terrain Loaders and 216, 226, 228, 232, 236, 242, 246, 248, 252 and 262 Skid Steer Loaders Auxiliary Hydraulic Electronic Control System

Media Number -RENR2893-12 **Publication Date -01/12/2004** **Date Updated -14/12/2004**

i02233245

MID 106 - CID 1190 - FMI 04

SMCS - 1435-038-AN

Conditions Which Generate This Code:

The diagnostic code is associated with the switches for the seat and the armrest. The FMI 04 means that the ECM determined that the voltage is below normal. Both circuits are possibly shorted to ground.

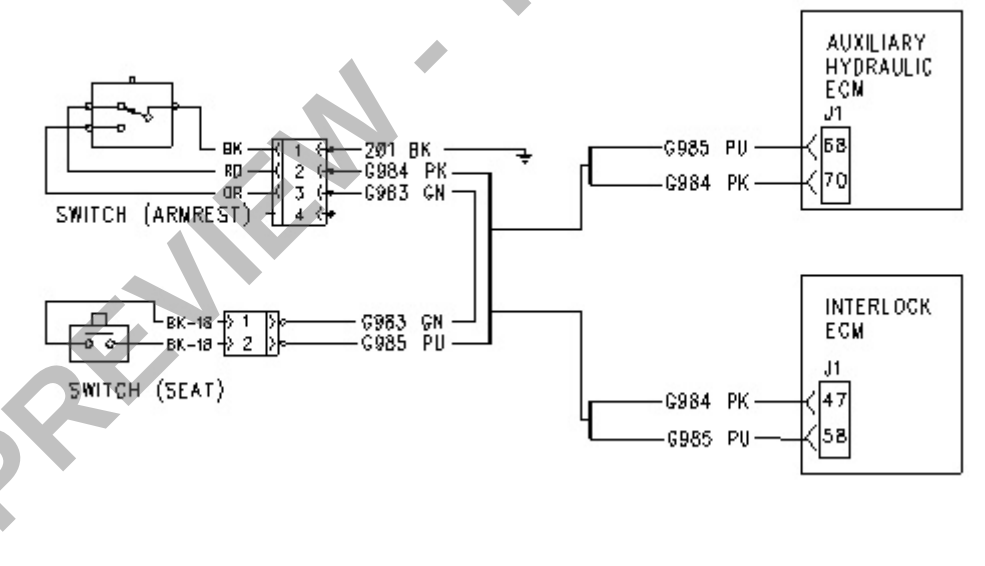


Illustration 1 g00778771

Schematic for the switch circuit (armrest and seat)

Test Step 1. CHECK FOR AN ACTIVE DIAGNOSTIC CODE WITH ARMREST IN THE UP POSITION

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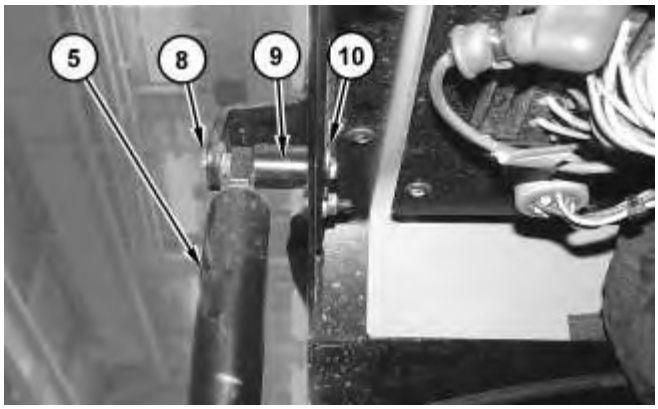


Illustration 5 g02020453

WARNING

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.

4. Use Tooling (B) in order to raise the cab enough to fully extend right gas spring (5) .

   Note: The gas spring on the right side of the machine will become fully extended before the left gas spring.

5. Remove clip (7) and clip (10). Remove pin (6). Remove pin (8) and spacer (9) in order to remove right gas spring (5) .

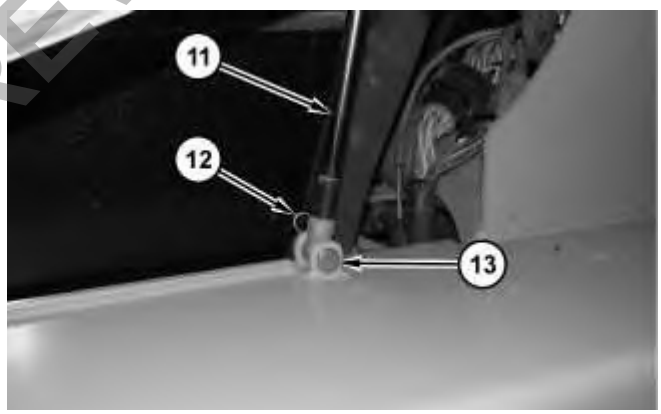


Illustration 6 g02020473

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Product: SKID STEER LOADER
Model: 216 SKID STEER LOADER 4NZ
Configuration: 216 226 228 Skid Steer Loader 4NZ00001-03399 (MACHINE) POWERED BY 3034 Engine

Systems Operation
216 and 226 Skid Steer Loaders Machine Systems
Media Number -RENR2859-02 **Publication Date -01/09/2001** **Date Updated -16/11/2001**

i01719719

Piston Motor (Hydrostatic)

SMCS - 5058

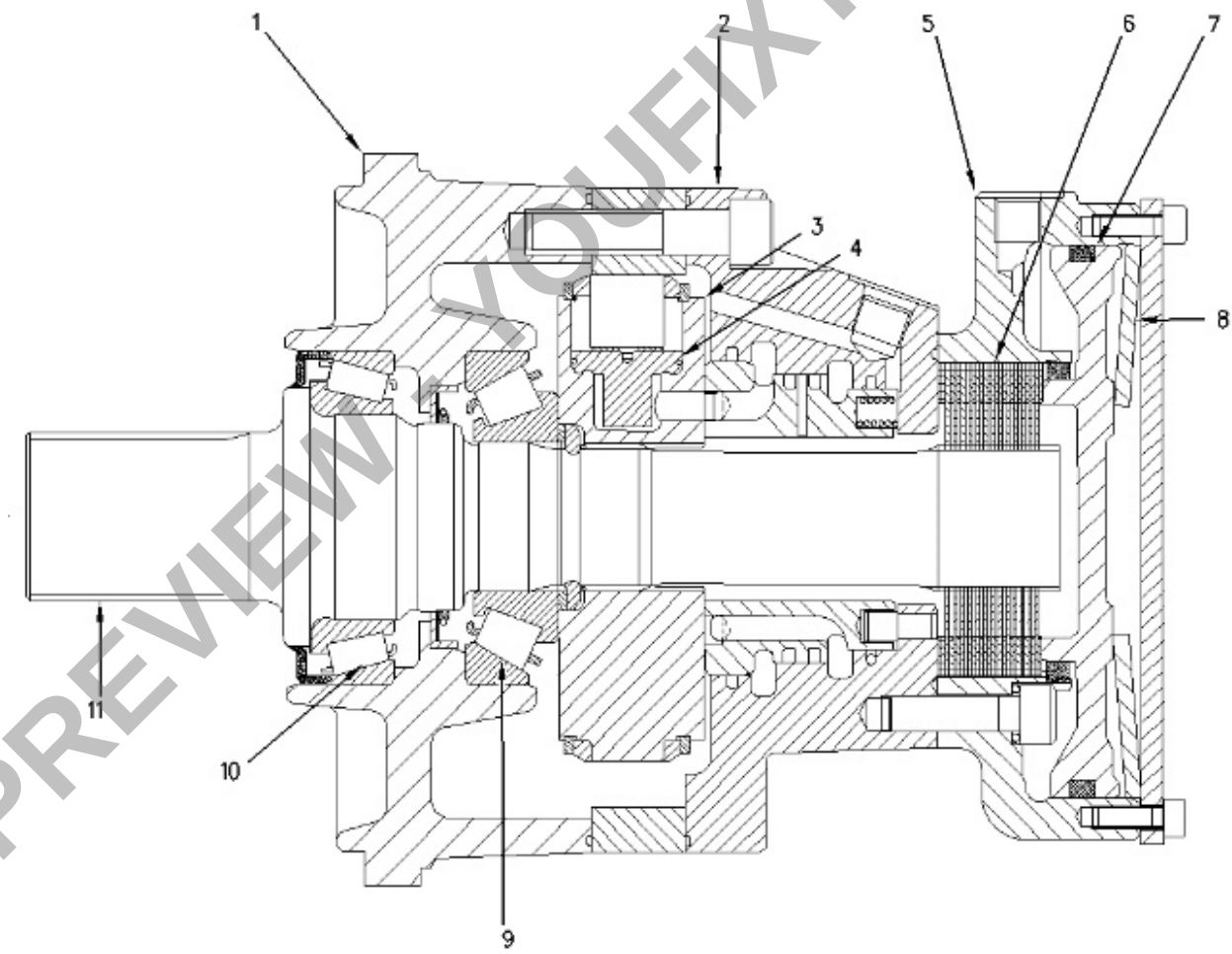


Illustration 1 g00759243

(1) Shaft housing

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Illustration 9 g00698667

13. Tighten eight nuts (8) to 50 ± 15 N·m (37 ± 11 lb ft) in the pattern that is shown in illustration 9.

14. Check the proper tension of the drive chains again.

15. Torque all nuts again to 50 ± 15 N·m (37 ± 11 lb ft) and turn an additional 90 ± 5° in the same order. Use the same tightening pattern.

16. Repeat Steps 10 through 15 in order to tighten the drive chain on the opposite axle assembly.

17. Remove Tooling (A) after the proper adjustment.

    Note: Clean the mating surfaces of the tandem drive and the cover.

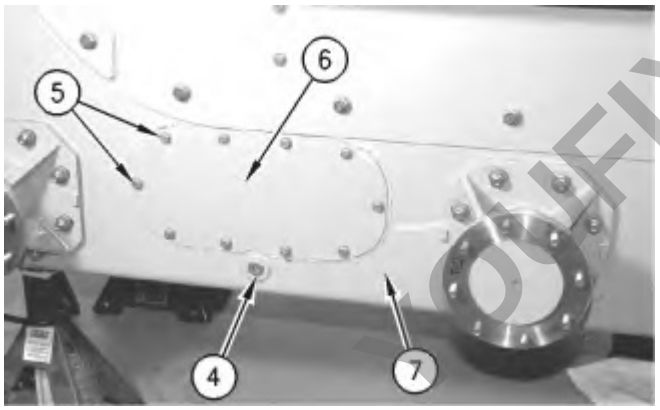
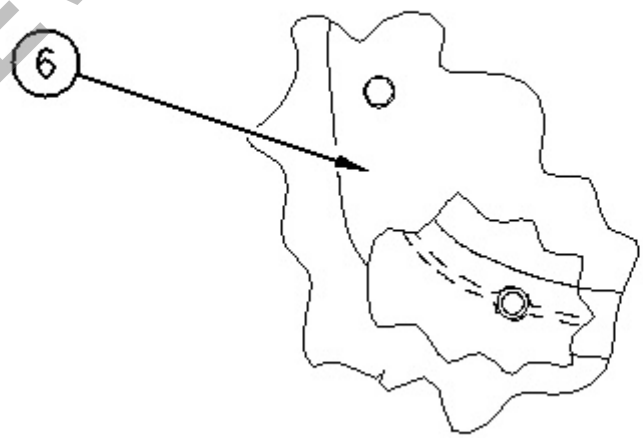


Illustration 10 g00682434



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