



# Service Repair Manual

## **Model**

426C BACKHOE LOADER

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Product: BACKHOE LOADER

Model: 426C BACKHOE LOADER 7WN

Configuration: 426C Backhoe Loader Center Pivot, Single Tilt 7WN01100-01110 (MACHINE) POWERED BY 3054 Engine

## Disassembly and Assembly

### 416C, 426C, 428C, 436C AND 438C BACKHOE LOADERS MACHINE SYST

Media Number -SEN1209-02

Publication Date -01/10/2004

Date Updated -05/06/2012

SEN12090032

## Steering Cylinder

SMCS - 4303-010

### Remove & Install Steering Cylinder

Start By:

- a. remove tie rods

#### Fluid Spillage Containment

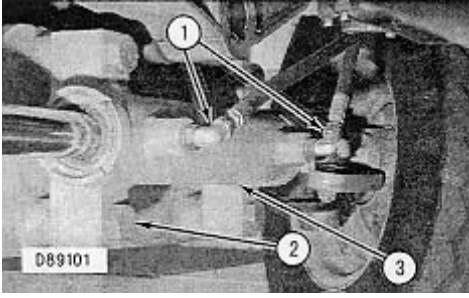
Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the machine. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids. Refer to "Tools And Shop Products Guide", NENG2500 for tools and supplies suitable to collect and contain fluids in Caterpillar machines. Dispose fluids according to local regulations and mandates.



**At operating temperature, the hydraulic oil tank is hot and under pressure. Hot oil can cause burns. Remove the breather filter cap only when the engine is stopped and the breather filter cap is cool enough to touch. Slowly loosen the breather filter cap to release any pressure in the hydraulic tank. Be cautious of hot hydraulic oil when any lines are disconnected in the hydraulic system.**

**NOTE:** Put identification on all lines, hoses, wires and tubes for installation purposes. Cap and plug all lines, hoses and tubes to prevent foreign material from entering the system.

**NOTE:** Drain all fluids in a suitable container for storage or disposal.



1. Disconnect two hose assemblies (1). Cap or plug immediately.
2. Remove four bolts (2).
3. Remove steering cylinder (3).

**NOTE:** For installation of the steering cylinder, reverse the removal steps.

End By:

- a. install tie rods

**NOTE:** Refer to the Operation & Maintenance Manual for all fluid capacities and the proper filling procedures.

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Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

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[Previous Screen](#)

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## Disassembly and Assembly

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Media Number -SEN1209-02

Publication Date -01/10/2004

Date Updated -05/06/2012

SEN12090033

## Air Conditioner Compressor Group

SMCS - 1802-010; 1802-015; 1802-016

## Remove & Install Air Conditioner Compressor Group



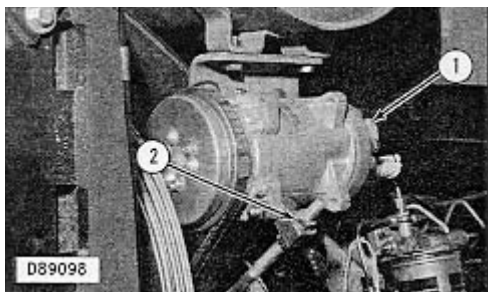
Effective July 1, 1992 regulations prohibit the venting of any refrigerant into the atmosphere. Refer to Caterpillar publication SENR5664 and NEDG5065 for the proper procedure, equipment and tools to reclaim refrigerant from any Caterpillar machine.



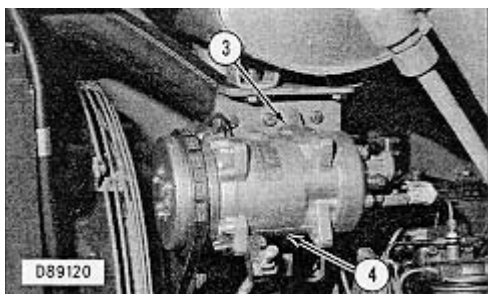
Always wear goggles when working on air conditioning systems. The system is under pressure at all times, engine running or not. Escaping refrigerant R-134A can cause freezing of human flesh.

Do Not smoke while working on air conditioning systems. **INHALING REFRIGERANT R-134A THROUGH ANY SMOKING MATERIAL, ALTHOUGH NOT TOXIC OR FLAMMABLE, CAN GENERATE LETHAL PHOSGENE GAS AND CAUSE VIOLENT ILLNESS OR DEATH. ALSO HEAT MUST NEVER BE APPLIED TO A CHARGED SYSTEM.** See Air Conditioning And Heating Service Manual, Form No. SENR5664, for more information on removal and installation of lines and refrigerant from the system.

**NOTE:** For purging and charging the air conditioning system, refer to the Air Conditioning And Heating Service Manual SENR5664.



1. Disconnect wiring harness (1).
2. Loosen nuts (2).
3. Position fan belt for compressor removal.
4. Disconnect the refrigerant lines.



5. Remove two bolts (3).
6. Remove compressor (4).

**NOTE:** For installation of the air conditioner compressor group, reverse the removal steps.

**NOTE:** For purging and charging the air conditioning system, refer to the Air Conditioning And Heating Service Manual SENR5664.

## **Remove & Install Air Conditioner Compressor Group (416C)**



**Effective July 1, 1992 regulations prohibit the venting of any refrigerant into the atmosphere. Refer to Caterpillar publication SENR5664 and NEDG5065 for the proper procedure, equipment and tools to reclaim refrigerant from any Caterpillar machine.**

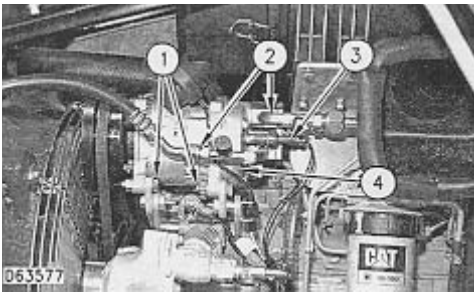
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## **WARNING**

Always wear goggles when working on air conditioning systems. The system is under pressure at all times, engine running or not. Escaping refrigerant R-134A can cause freezing of human flesh.

**Do Not smoke while working on air conditioning systems. INHALING REFRIGERANT R-134A THROUGH ANY SMOKING MATERIAL, ALTHOUGH NOT TOXIC OR FLAMMABLE, CAN GENERATE LETHAL PHOSGENE GAS AND CAUSE VIOLENT ILLNESS OR DEATH. ALSO HEAT MUST NEVER BE APPLIED TO A CHARGED SYSTEM. See Air Conditioning And Heating Service Manual, Form No. SENR5664, for more information on removal and installation of lines and refrigerant from the system.**

**NOTE:** For purging and charging the air conditioning system, refer to the Air Conditioning And Heating Service Manual SENR5664.



1. Disconnect wiring harness (3).
2. Loosen nuts (1).
3. Position fan belt for compressor removal.
4. Disconnect refrigerant lines (2).
5. Remove two bolts (1).
6. Remove compressor (4).
7. Install air conditioner compressor group in the reverse order of removal.

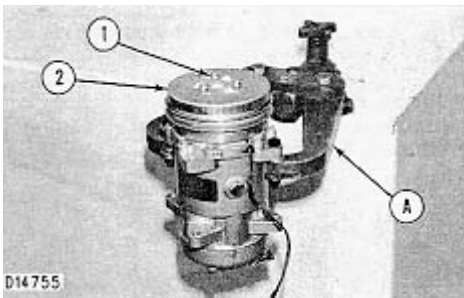
**NOTE:** For purging and charging the air conditioning system, refer to the Air Conditioning And Heating Service Manual SENR5664.

## **Disassemble Air Conditioner Compressor**

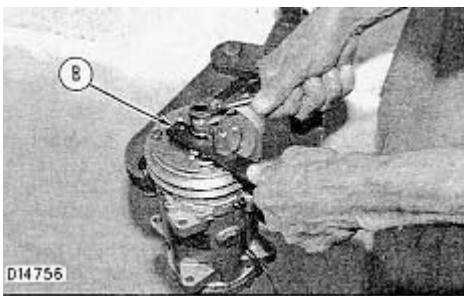
Tools Needed		A	B	C	D	E	F
2P8338	Fixture	1					
8T7710	Clutch Holder		1				
8T7704	Puller Plate			1			
8T7703	Puller Screw			1			
4L7124	Bolt			3			
8T7713	Driver				1		
8T7705	Driver					1	
8T7704	Puller Plate						1
8T7703	Puller Screw						1
8T7709	Puller Pilot						1
2J5245	Bolt						2
8T7702	Puller						2

Start By:

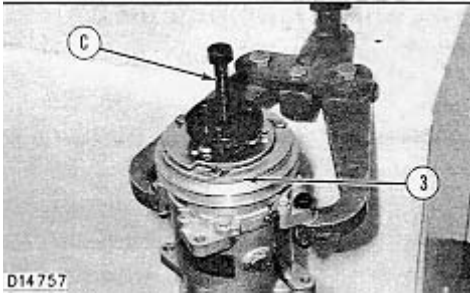
- a. remove air conditioner compressor



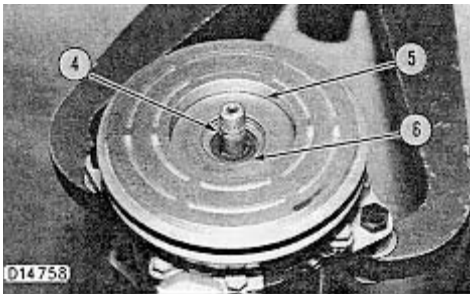
1. Put the compressor assembly in position on Tool (A). Remove screws (1) to remove cover (2).



2. Use Tool (B), and remove nut and washer.



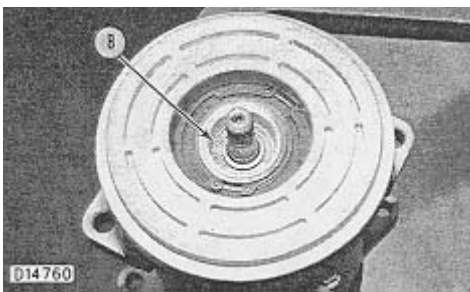
3. Use Tool (C) and remove clutch front plate (3).



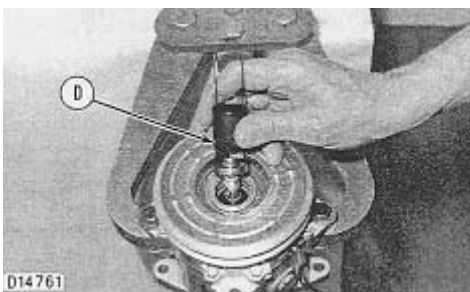
4. Remove key (4), shims (6) and cover (5).



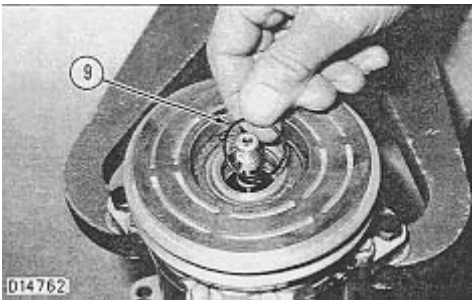
5. Use a pair of retaining pliers, and remove felt ring and retainer assembly (7).



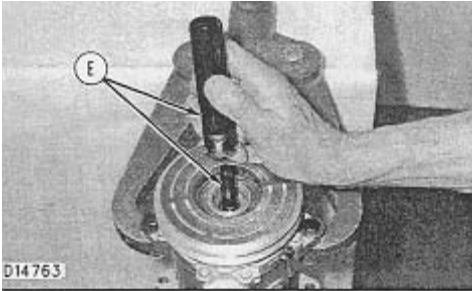
6. Remove retainer ring (8).



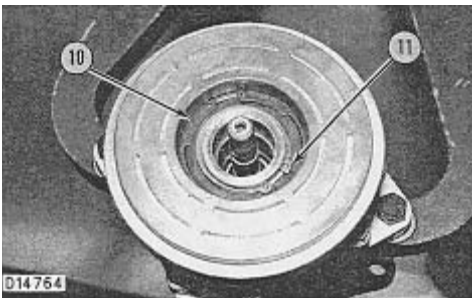
7. Use Tool (D) and remove the shaft seal seat.



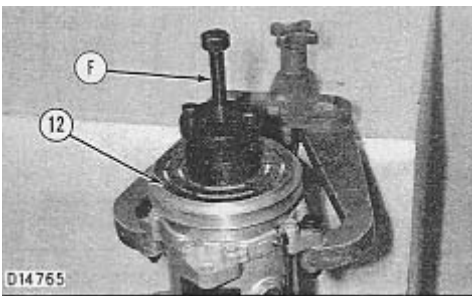
8. Remove O-ring seal (9).



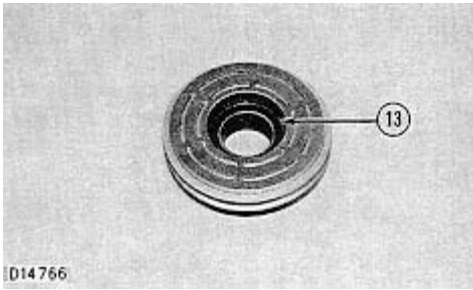
9. Use Tool (E) and remove seal assembly from the shaft.



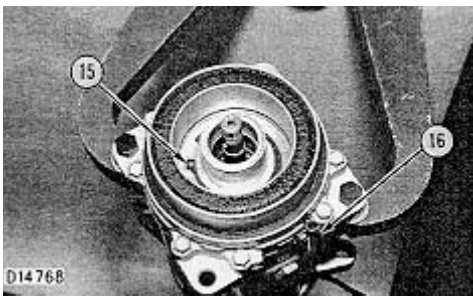
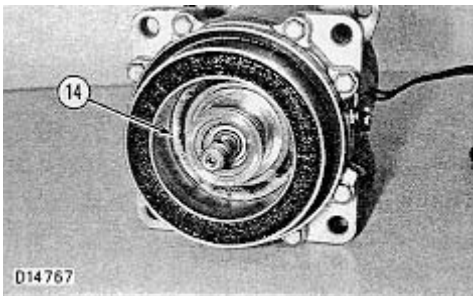
10. Remove retainer rings (10) and (11).



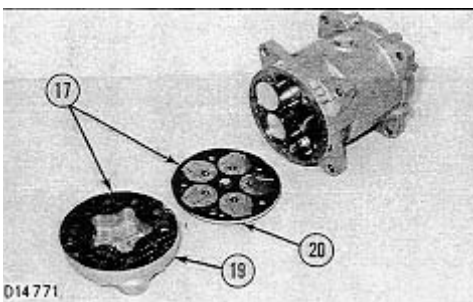
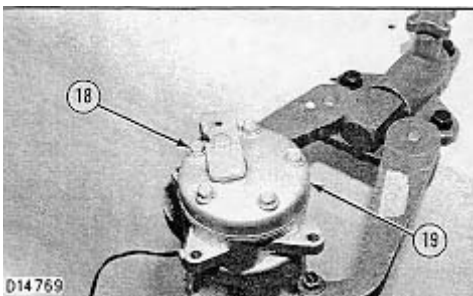
11. Use Tool (F) to remove pulley (12).



12. Use a press, and remove bearing (13) from the pulley.



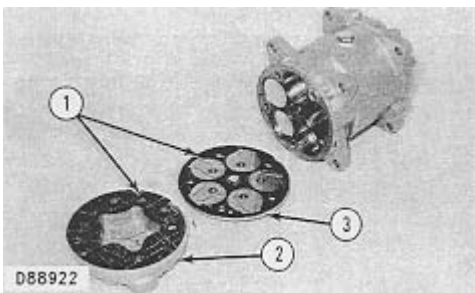
13. Remove felt ring (14). Remove retainer ring (15). Remove wire clip (16) and the field coil.



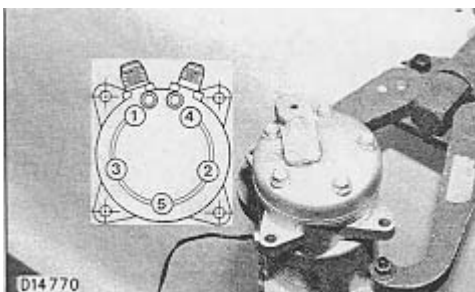
14. Remove bolts (18). Remove head (19) and valve plate (20). Remove and inspect gaskets (17).

# Assemble Air Conditioner Compressor

Tools Needed		A	B	C	D	E	F
8T7712	Driver	1					
8T7706	Handle	1				1	
8T7715	Guide		1				
8T7705	Driver			1			
8T7713	Driver				1		
8T7714	Installer						1
8T7710	Clutch Holder					1	

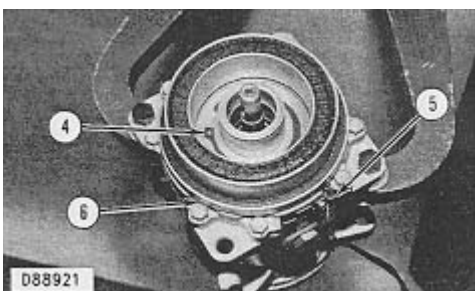


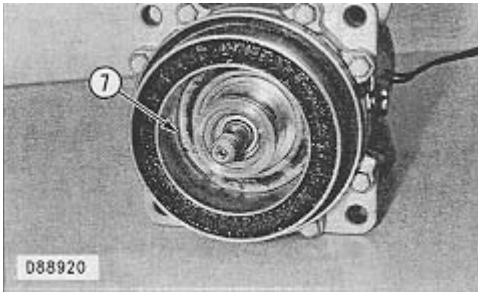
1. Put clean refrigerant oil on gaskets (1). Install a new gasket on head (2) and valve plate (3).



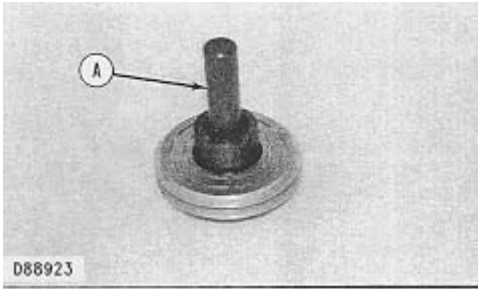
2. Install valve plate and head on the compressor body with the bolts that hold it.

3. Tighten the bolts to a torque of 30 to 34 N·m (22 to 25 lb) in the number sequence shown.

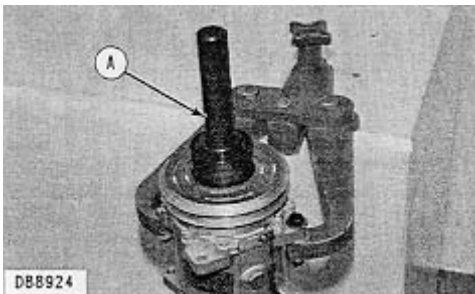




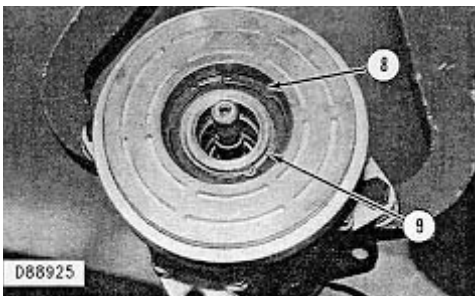
4. Put field coil (6) in position on compressor body. Install clip (5) that holds wiring.
5. Install retainer ring (4). Install felt ring (7).



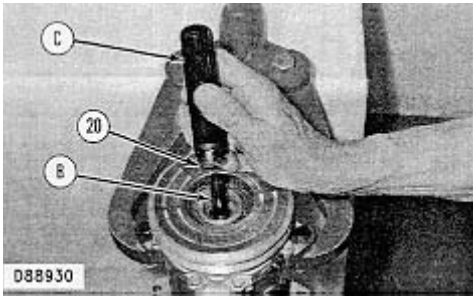
6. Install bearing in the pulley with Tool (A).



7. Use Tool (A) and drive the pulley and bearing assembly on the compressor body.

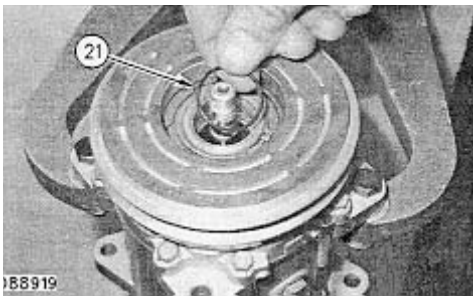


8. Install retainer rings (8) and (9).

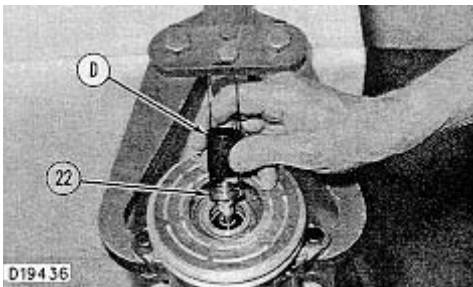


9. Put Tool (B) in position on the shaft. Put clean refrigerant oil on seal assembly (20). Use Tool (C), and install seal assembly.

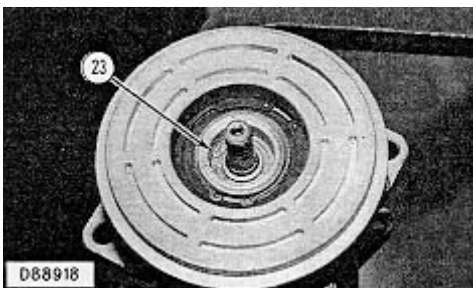
10. Release the seal assembly from Tool (C) by pushing downward and rotating Tool (C) counterclockwise.



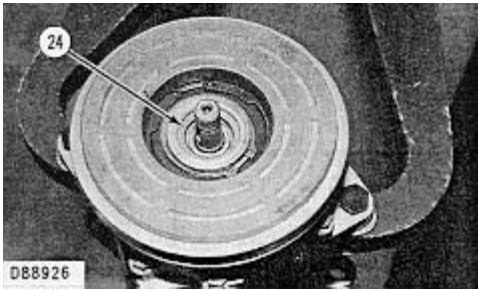
11. Install O-ring seal (21).



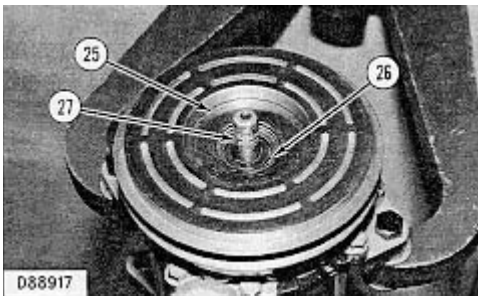
12. Put clean refrigerant oil on shaft seal seat (22). Install shaft seal seat (22) with Tool (D).



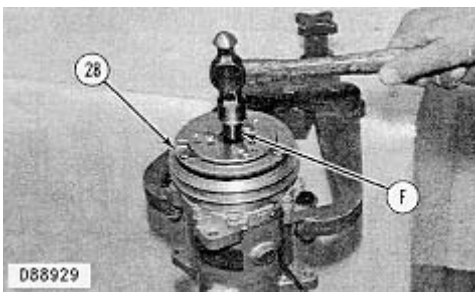
13. Install retainer ring (23).



14. Install felt ring and retainer assembly (24).

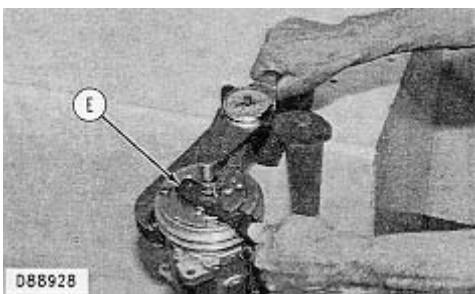


15. Install the original shims (26). Install cover (25) and key (27).



16. Install clutch front plate (28). Install Tool (F).

17. Carefully tap the clutch plate until it bottoms out against the shims.

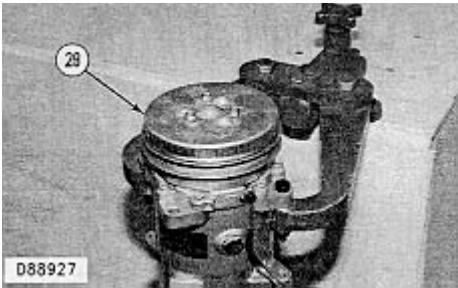


18. Use Tool (E) to hold clutch front plate. Install a washer and nut. Tighten the nut to a torque of 34 to 40 N·m (25 to 30 lb ft).



**19.** Check the gap between the clutch front plate. The gap should be 0.41 to 0.79 mm (.016 to .031 in). If the gap is not consistent around the circumference, lightly pry up at the minimum variations. Lightly tap down at points of maximum variations.

**20.** If the gap is not correct again, add or subtract shims; then repeat Steps 16 through 19.



**21.** Install cover (29) with the screws that hold it.

End By:

**a.** install air conditioner compressor

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Media Number -SEN1209-02

Publication Date -01/10/2004

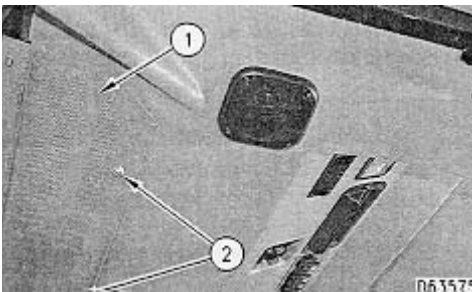
Date Updated -05/06/2012

SEN12090034

## Air Conditioner Filter

SMCS - 7342-010

### Remove & Install Air Conditioner Filter (416C)



1. Loosen screws (2) and let cover (1) swing down.



2. Remove air conditioner filter (3) and replace.

3. Install in the reverse order of removal.

[Previous Screen](#)

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## Disassembly and Assembly

### 416C, 426C, 428C, 436C AND 438C BACKHOE LOADERS MACHINE SYST

Media Number -SEN1209-02

Publication Date -01/10/2004

Date Updated -05/06/2012

SEN12090035

## Air Conditioner

SMCS - 1802-010

### Remove & Install Air Conditioner (416C)

#### **WARNING**

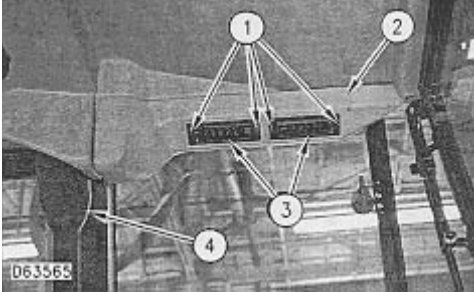
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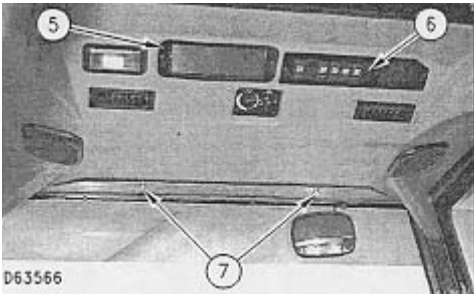
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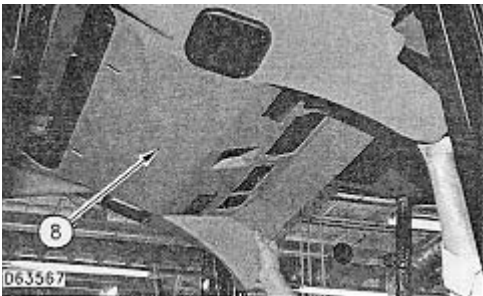
**NOTE:** For purging and charging the air conditioning system, refer to the Air Conditioning And Heating Service Manual SENR5664.



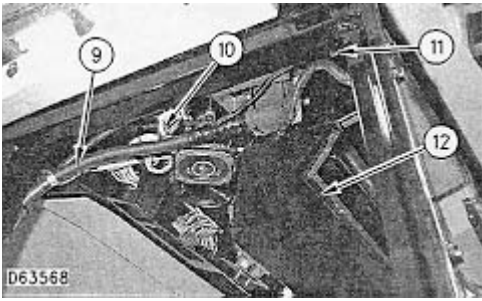
1. Remove screws (1) and remove air vents (3).
2. Loosen three screws behind vents (hidden) and remove retaining plate (hidden) and rear duct (2).
3. Repeat Steps 1 and 2 for left side of cab.
4. Remove side trim held by Velcro fasteners (4) (one side only).



5. Remove two screws and radio mount (5).
6. Remove two screws and disconnect wiring harnesses from control panel (6).
7. Loosen two screws (7) and remove air conditioning filter (hidden).



8. Remove headliner (8).



9. Disconnect refrigerant lines (9).
10. Disconnect wiring harness (10).
11. Remove bolts (11) and remove air conditioner (12).
12. Install in the reverse order of removal.

**NOTE:** For purging and charging the air conditioning system, refer to the Air Conditioning And Heating Service Manual SENR5664.

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### 416C, 426C, 428C, 436C AND 438C BACKHOE LOADERS MACHINE SYST

Media Number -SEN1209-02

Publication Date -01/10/2004

Date Updated -05/06/2012

SEN12090036

## Cab

SMCS - 7301-010

### Remove & Install Cab

Tools Needed		A	B	C
362-0960	Spreader Bar	2		
133-9873	Lifting Brackets	2		
6V-2156	Link Brackets		2	
6V-3145	Load Leveler			1

Start By:

- a. remove rear wheels

#### Fluid Spillage Containment

Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the machine. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids. Refer to "Tools And Shop Products Guide", NENG2500 for tools and supplies suitable to collect and contain fluids in Caterpillar machines. Dispose fluids according to local regulations and mandates.



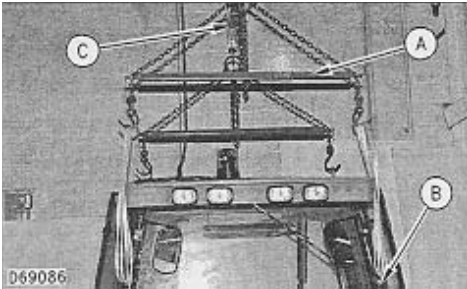
**At operating temperature, the hydraulic oil tank is hot and under pressure. Hot oil can cause burns. Remove the breather filter cap only when the engine is stopped and the breather filter cap is cool enough to touch. Slowly loosen the breather filter cap to release any pressure in**

**the hydraulic tank. Be cautious of hot hydraulic oil when any lines are disconnected in the hydraulic system.**

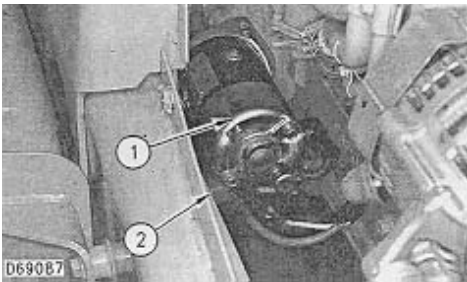
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**NOTE:** Put identification on all lines, hoses, wires and tubes for installation purposes. Cap and plug all lines, hoses and tubes to prevent foreign material from entering the system.

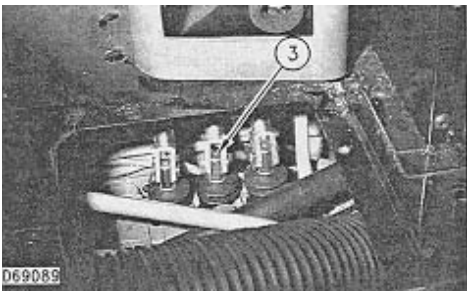
**NOTE:** Drain all fluids in a suitable container for storage or disposal.



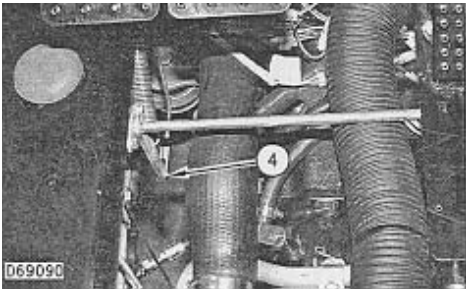
1. Attach Tool (A) to each end of Tool (C). Attach straps to Tool (B).
2. Adjust Tool (C) so the cab can be picked up level.



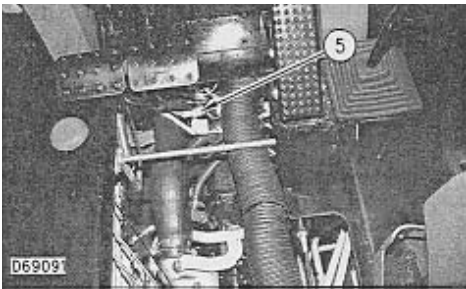
3. Remove three wires (2) from starter (1).
4. Remove the seat, and all floor plates.



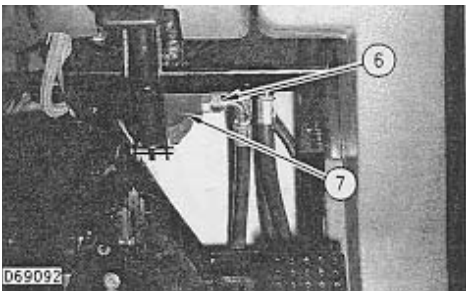
5. Disconnect linkage (3).



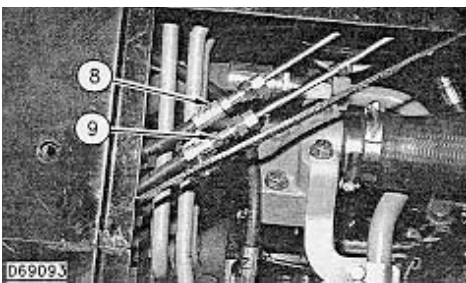
6. Disconnect throttle linkage (4).



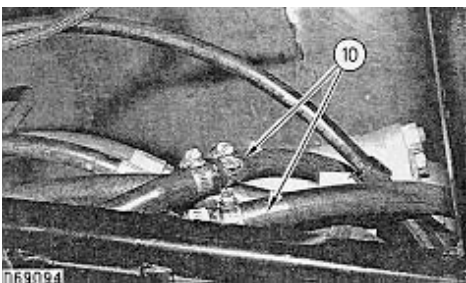
7. Disconnect all wiring connections (5).



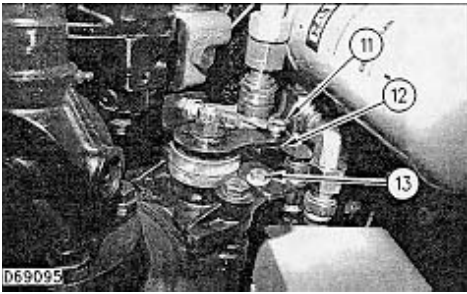
8. Disconnect five hoses (6) from steering valve (7).



9. Disconnect hoses (8) and (9).

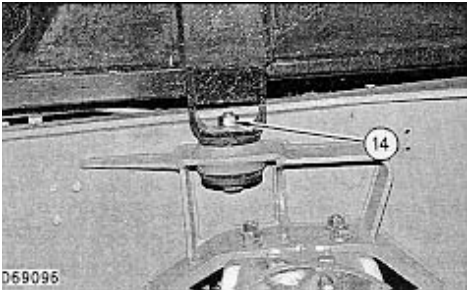


10. Disconnect two heater hoses (10).

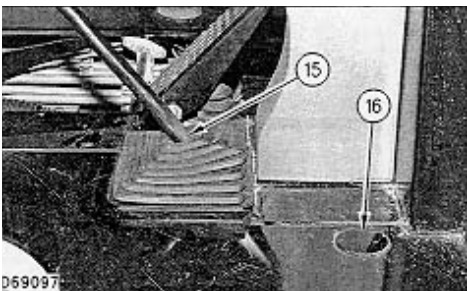


11. Remove retaining clip (11).

12. Remove pin (12) and two bolts (13) and remove brake assembly.

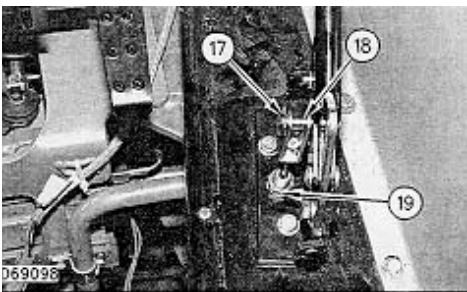


13. Remove mounting nut (14) on each side of the cab.



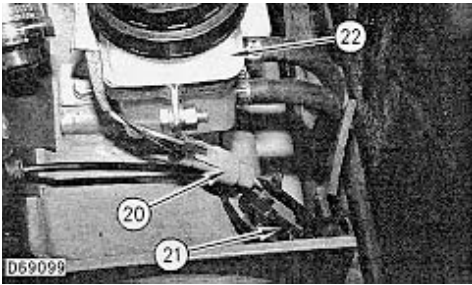
14. Remove nuts and bolts from under two floor plugs (16) on each side of the cab.

15. Remove bolt under the floor plate, and disconnect shift linkage (15).



16. Remove retaining clip (17), and remove pin (18).

17. Remove nut (19) and remove boom lock assembly.



**17.** Disconnect two windshield washer hoses and two electrical connections (20) and (21), near brake fluid reservoir (22).

**18.** Adjust all lifting Tooling and raise slowly making sure all wiring connections have been disconnected and remove cab.

**NOTE:** Install in reverse order of removal.

End By:

**a.** install rear wheels

**NOTE:** Refer to the Operation & Maintenance Manual for all fluid capacities and the proper filling procedures.

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Product: BACKHOE LOADER

Model: 426C BACKHOE LOADER 7WN

Configuration: 426C Backhoe Loader Center Pivot, Single Tilt 7WN01100-01110 (MACHINE) POWERED BY 3054 Engine

## Disassembly and Assembly

### 416C, 426C, 428C, 436C AND 438C BACKHOE LOADERS MACHINE SYST

Media Number -SEN1209-02

Publication Date -01/10/2004

Date Updated -05/06/2012

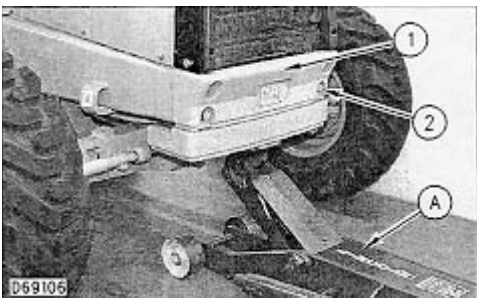
SEN12090037

## Counterweight

SMCS - 7056-010

### Remove & Install Counterweight

Tools Needed	A
1U-9745 Hydraulic Jack	1



1. Position Tool (A) under counterweight (1).
2. Remove four bolts (2) that hold the counterweight to the frame.
3. Remove counterweight (1). The weight of the counterweight is 268 kg (590 lb).

**NOTE:** Install in the reverse order.

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Product: BACKHOE LOADER

Model: 426C BACKHOE LOADER 7WN

Configuration: 426C Backhoe Loader Center Pivot, Single Tilt 7WN01100-01110 (MACHINE) POWERED BY 3054 Engine

## Disassembly and Assembly

### 416C, 426C, 428C, 436C, & 438C BACKHOE LOADERS POWER TRAIN

Media Number -SEN1206-02

Publication Date -01/11/2003

Date Updated -26/02/2018

SEN12060001

## Introduction

SMCS - 7056-010

## Fluid Spillage Containment

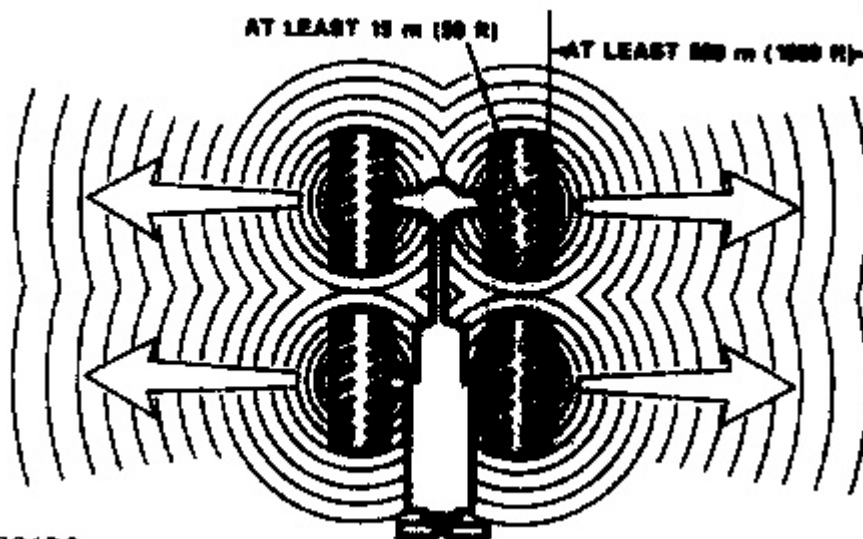
Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the machine. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids. Refer to "Tools And Shop Products Guide", NENG2500 for tools and supplies suitable to collect and contain fluids in Caterpillar machines. Dispose fluids according to local regulations and mandates.

**NOTE:** Special care and cleanliness are essential for correct disassembly and assembly of the transmission, differential and other gear components. Failure to follow these procedures may result in early hour wear and failure. Thoroughly clean the exterior of the transmission and differential prior to any disassembly. Any exterior dirt which would enter the transmission or differential could cause damage and failure of the unit. Disassemble and assemble the unit in as clean an area as possible. It is essential to replace all parts which have become defective along with all O-rings and seals. All machined parts showing signs of scratches or other wear must be replaced. The cavities of the housing, especially the corners, must be carefully cleaned and rinsed. If the disassembly and assembly is a result of a serious breakdown, it is essential that all portions of the unit be cleaned and flushed to eliminate any broken parts or metal particles. Carefully lubricate all parts during reassembly. Cover all faces of housings and covers, which must be oil-tight towards the outside, with the proper sealing compound, gasket or O-ring. Prior to operation, insure that the unit has been filled with the proper lubricant. Consult the Operation And Maintenance Manual for the proper levels.

## Tire Explosion Prevention

Explosions of air inflated tires have resulted from heat-induced gas combustion inside the tires. Explosions can be caused by heat that is generated by welding, by heating rim components, by external fire or by excessive use of brakes.

A tire explosion is much more violent than a blowout. The explosion can propel the tire, the rim components, and the axle components as far as 500 m (1500 ft) or more from the machine. Both the force of the explosion and the flying debris can cause property damage, personal injury, or death.



D70180

Do not approach a warm tire. Maintain a minimum distance, as shown. Stay outside the shaded area in illustration 1.

Dry nitrogen gas is recommended for inflation of tires. If the tires were originally inflated with air, nitrogen is still preferred for adjusting the pressure. Nitrogen mixes properly with air.

Nitrogen inflated tires reduce the potential of a tire explosion because nitrogen does not aid combustion. Nitrogen helps to prevent oxidation of the rubber, deterioration of rubber, and corrosion of rim components.

To avoid over inflation, proper nitrogen inflation equipment and training in the usage of the equipment are necessary. A tire blowout or a rim failure can result from improper equipment or from misused equipment.

When you inflate a tire, stand behind the tread and use a self-attaching chuck.



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**to download the complete manual.**

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Product: BACKHOE LOADER

Model: 426C BACKHOE LOADER 7WN

Configuration: 426C Backhoe Loader Center Pivot, Single Tilt 7WN01100-01110 (MACHINE) POWERED BY 3054 Engine

## Disassembly and Assembly

### 416C, 426C, 428C, 436C, & 438C BACKHOE LOADERS POWER TRAIN

Media Number -SEN1206-02

Publication Date -01/11/2003

Date Updated -26/02/2018

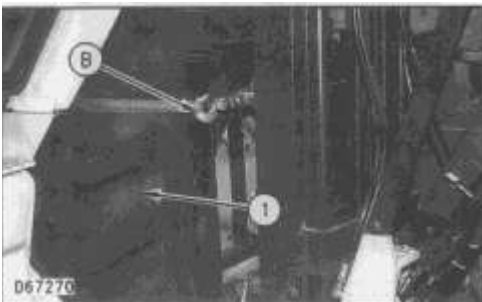
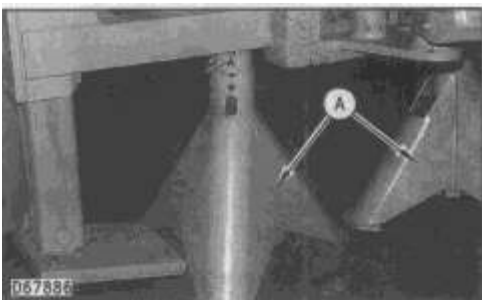
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## Tires & Wheels (Rear)

SMCS - 4200-010

### Remove & Install Tires & Wheels (Rear)

Tools Needed		A	B
8S7640	Stand	2	
8S7611	Tube	2	
8S7615	Pin	2	
8S9906	Ratchet Puller		1



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