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MAINTENANCE SCHEDULE
Model 821C
Instructions

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NOTE: *When you drain, flush and refill the engine cooling system, add one container (0.5L) of Case cooling system treatment, and replace the cooling filter.*

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ENGINE

Removal

1. Park the machine on a level surface and lower the loader bucket to the floor. Stop the engine and apply the parking brake.

2. Let the engine cool. Loosen the cap screw that fastens the cover for the radiator cap and move the cover. Remove the radiator cap. Drain the cooling system. The drain valve is located at the right front side of the radiator. The cooling system holds 32.2 litres (34 U.S. quarts) of coolant.

3. Loosen the filler cap in the reservoir to release any air in the reservoir.

4. Open the access door on each side of the engine compartment.

5. Turn the master disconnect switch to the OFF position.

6. Open the grille.

7. Remove the precleaner. If the air cleaner is equipped with a cap, loosen the clamp and remove the cap.

8. Disconnect the hoses from the tubes for the oil cooler. Install a cap on each hose and plug in each tube fitting.

9. Remove the plugs and loosen and remove the cap screws, lock washers, and flat washers that fasten the hood.

10. Connect suitable lifting equipment to the hood and remove the hood.

11. Disconnect the ground cables and the positive cables from the batteries.

12. Loosen the self-locking nuts on the bolts for the battery hold down brackets. Remove the battery hold down brackets.

13. Have another person help you with this step. Remove both batteries.

14. If your machine is equipped with additional counterweights, connect suitable lifting equipment to one of the additional counterweights. The weight of an additional counterweight is 227 kg (500 pounds) or 453 kg (1000 pounds).

15. Loosen and remove the outside nuts and hardened washers from the studs that fasten the additional counterweight.

16. Remove the additional counterweight.

17. Connect suitable lifting equipment to the large counterweight. The weight of the large counterweight is 545 kg (1200 pounds).

18. Loosen and remove the inside nuts and hardened washers from the studs for the large counterweight.

NOTE: *If your machine is equipped with large counterweights only, loosen and remove the nuts and hardened washers from the bolts that fasten the large counterweights to the machine.*

19. Remove the large counterweight from the machine.

20. Repeat steps 14 through 19 for the other counterweight(s).

21. If the machine is equipped with ether injection, disconnect the tube from the valve.

22. If the machine is equipped with ether injection, disconnect the wire harness from the connector.

23. If the machine is equipped with ether injection, cut the tie strap that fastens the wire harness to the bracket.

24. If the machine is equipped with a backup alarm, disconnect the wires from the backup alarm and pull the wires through the grommet.

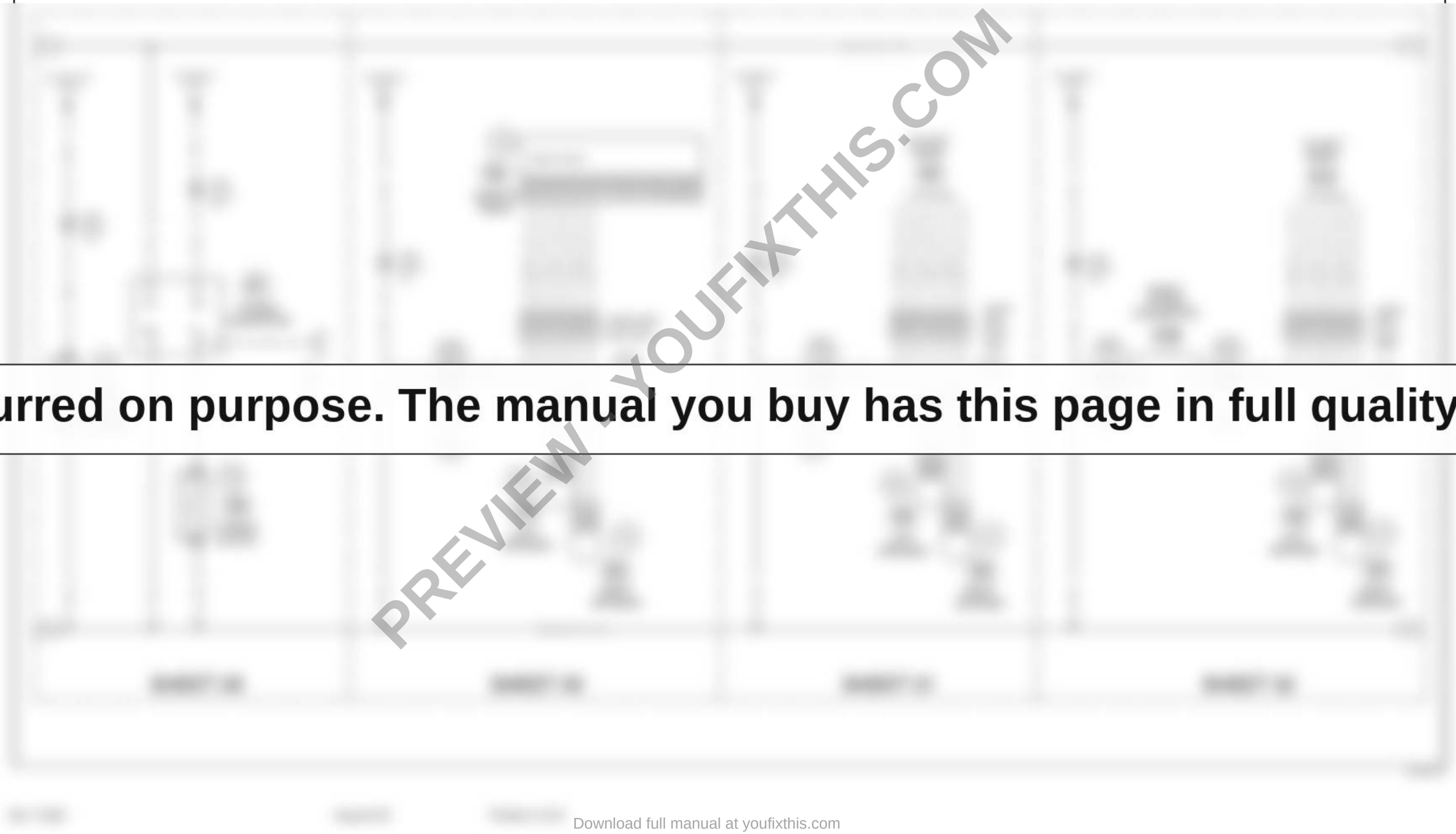
25. Cut the tie strap that fastens the connectors to the wire harness for the lamps at the right side of the radiator shroud. Disconnect both connectors.

26. Loosen and remove the nut, lock washer, and bolt that fasten the clamp for the wire harness to the right side of the top of the radiator shroud.

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ELECTRICAL SCHEMATIC - SHEETS 29, 30, 31, AND 32

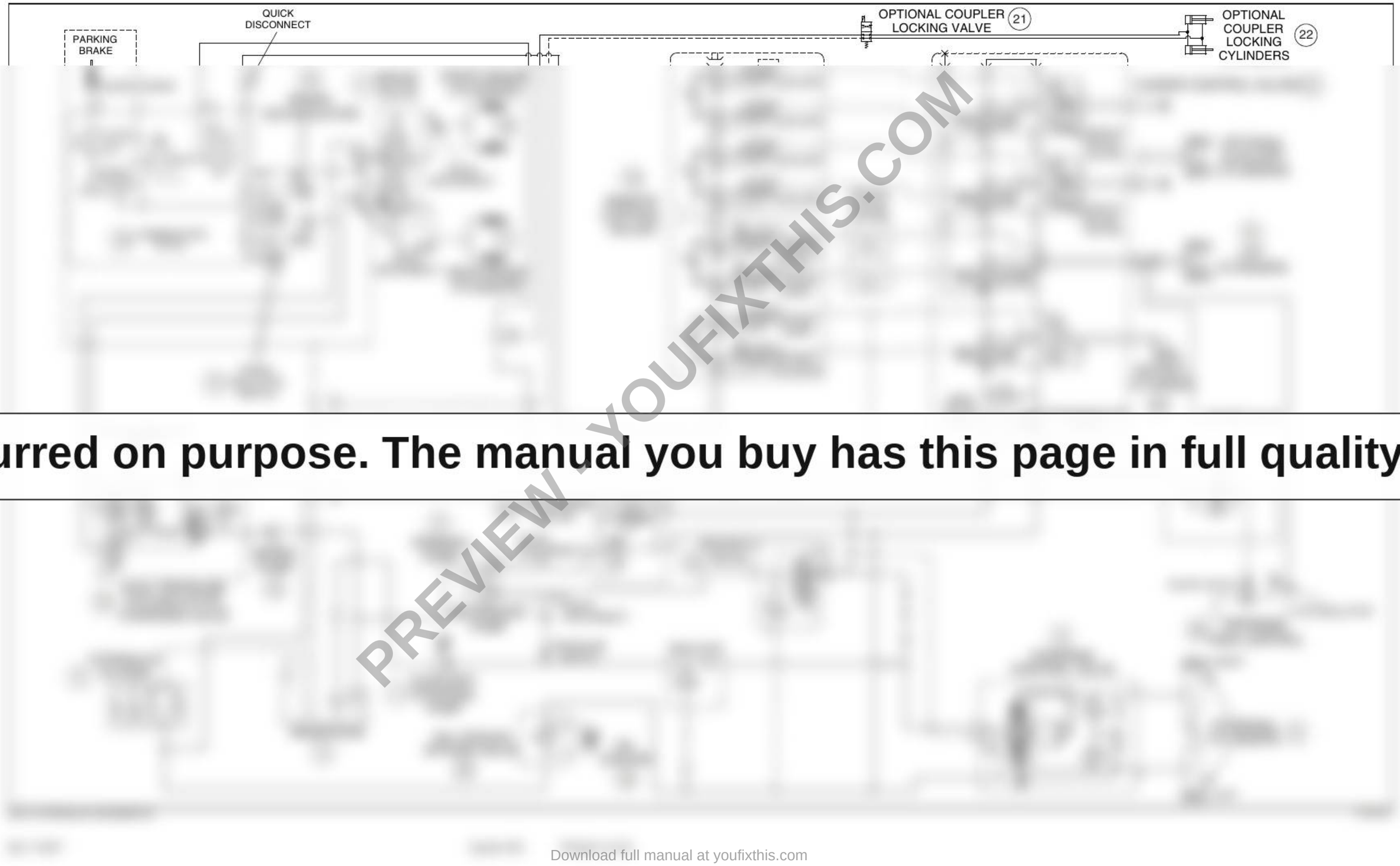


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821C HYDRAULIC SCHEMATIC



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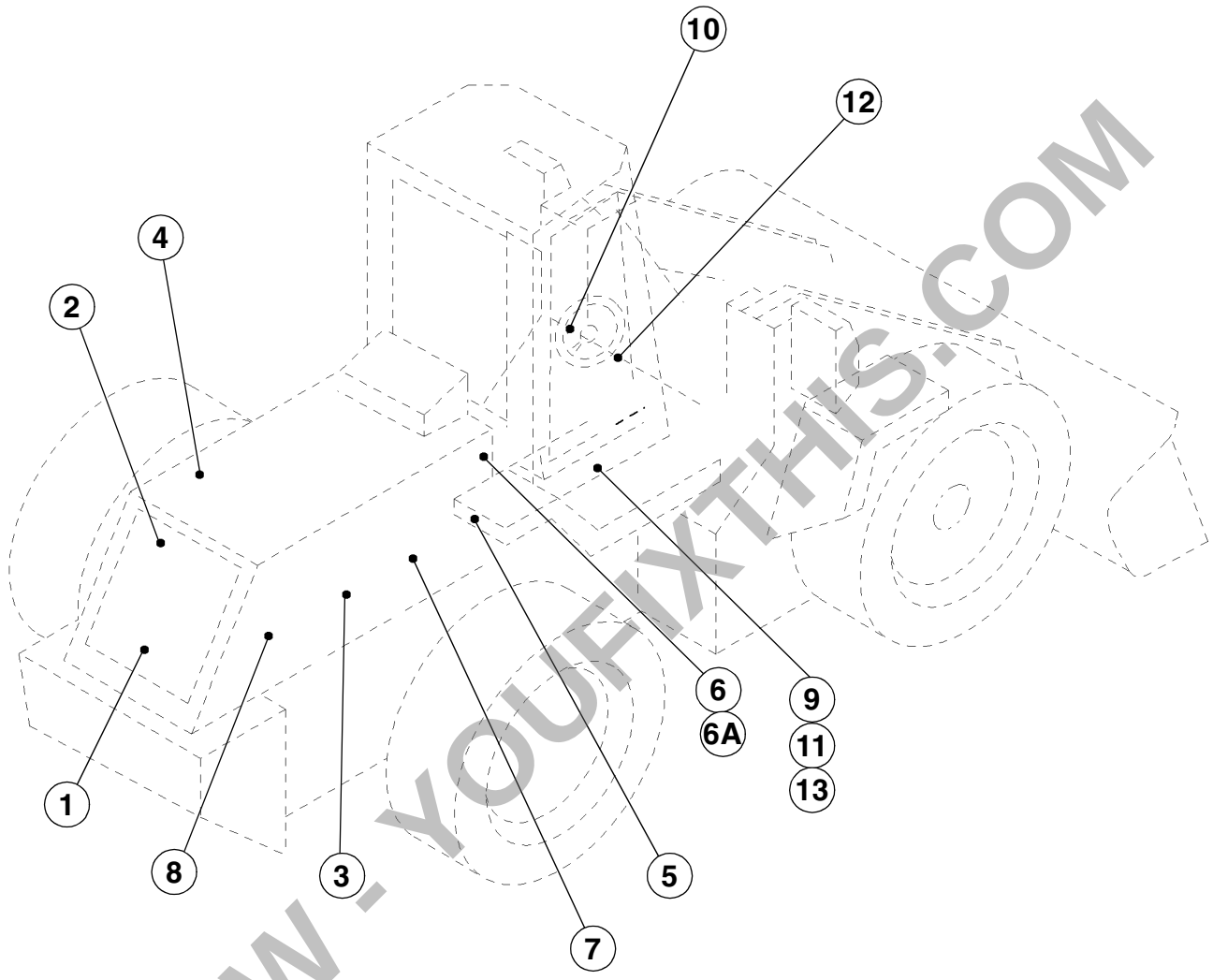
FAULT CODES

CODE	DEFINITION	POSSIBLE STEPS FOR REPAIR
12900	Engine coolant short circuit measuring less than 50 ohms to the engine coolant temperature sensor.	Troubleshoot electrical circuits.
12901	Engine coolant open circuit measuring greater than 10,000 ohms to the engine coolant temperature sensor with hydraulic oil temperature at 40° C (104° F) or more.	
13000	Low engine coolant level - This code will not be generated if the engine coolant temperature is below 20° C (68° F).	1. A critical stop function warning has occurred. 2. Red stop indicator comes on and continuous buzzer sounds. 3. Stop machine and perform required service on the critical area.
21100	Engine oil pressure is measured below 100 kPa (14.5 PSI)	
21110	Engine coolant temperature is 110° C (230° F) or greater.	
21900	Engine oil pressure short circuit measuring less than 16 ohms to the engine oil pressure sensor.	Troubleshoot electrical circuits. **NOTE:** *Fault code 21900 is possible during cold engine start-up. After machine warm up, verify proper operation.*
21901	Engine oil pressure open circuit measuring more than 270 ohms to the engine oil pressure sensor.	
33900	Fuel level short circuit measuring less than 16 ohms to the fuel level sender.	Troubleshoot electrical circuits.
33901	Fuel level open circuit measuring more than 270 ohms to the fuel level sender.	
34000	Fuel solenoid output short circuit.	
35000	High air filter restriction.	1. A caution level warning has occurred. 2. Yellow caution indicator comes on and buzzer sounds for 3 seconds. 3. Perform required service on the cautioned area.
42125	Transmission temperature measured above 125° C (257° F)	1. A critical stop function warning has occurred. 2. Red stop indicator comes on and continuous buzzer sounds. 3. Stop machine and perform required service on the critical area.
45000	High transmission filter restriction when the transmission oil is above 20° C (68° F).	1. A caution level warning has occurred. 2. Yellow caution indicator comes on and buzzer sounds for 3 seconds. 3. Perform required service on the cautioned area.
46017	Gear range fault error	1. Check the cables from TCU to shift lever. 2. Check signal combinations of shift lever positions for gear range.
46018	Logical error at direction select signal	1. Check the cables from TCU to shift lever. 2. Check signal combinations of shift lever positions F-N-R.

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TROUBLESHOOTING BATTERIES, FUEL SHUTOFF, CHARGING, STARTING, ALTERNATOR, COLD START, IGNITION SWITCH AND RELAYS



GM98M005

1. BATTERIES
2. MASTER DISCONNECT SWITCH
3. FUEL SHUTOFF SOLENOID
4. ALTERNATOR
5. STARTER MOTOR
6. START RELAY
6A. FUEL RELAY
7. COLD START TEMPERATURE SWITCH
8. ETHER SOLENOID
9. ETHER START RELAY #6
10. ETHER START SWITCH
11. NEUTRAL START RELAY #8
12. IGNITION SWITCH
13. IGNITION RELAY #1

1 – Batteries

NOTE: *The battery must be at full charge and all connections clean and tight before doing any testing of the electrical system. Use a Multimeter for the following tests.*

NOTE: *See Section 4003 and check the batteries.*

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D. Press the up/down count switch to up count once, so the display reads 01.

E. Shift the transmission selector into 3rd forward and slowly increase the engine rpm.

F. The park brake should hold the machine at full throttle.

G. To exit the test mode, press the program/reset switch to reset.

Transmission Clutch Calibration

Clutch Calibration ensures the most optimum shifting of the transmission. Before doing the following transmission clutch calibration procedures make sure of the following:

1. The machine is running and the transmission oil is warm.
2. Engine low idle speed is correct.
3. The transmission is in neutral.
4. The park brake is applied.
5. If steps 1 through 4 have been accomplished, calibrate the transmission clutches as follows:

   A. Put the transmission in the manual shift mode and the gear selector in 3rd gear neutral.

   B. Press the program/reset switch to program.

   C. Press the up/down count switch to up count until the display reads 011.

   D. Put the program/reset switch in the OFF (center) position.

   E. Press the up/down count switch to up count twice, so the display reads 02.

   F. 2 00 00 will begin to flash in the display center.

   G. After one second, the Clutch Calibration Main Code status will be displayed in the 3rd and 4th spaces (2 XX 00, the XX represents the 3rd and 4th spaces).

   H. The Modulation Cycle Number will be displayed in the 1st and 2nd spaces (2 00 XX, the XX represents the 1st and 2nd spaces).

   I. During Clutch Calibration, the Clutch Calibration Main Code will change from 01 to 07 as the process is completed. Code 07 indicates that the calibration process is complete and the information center will return to normal working status.

   J. If any of the Clutch Calibration parameters are incorrect, the display center will stop flashing and display a code in the 1st, 2nd, 3rd, and 4th spaces.

   If this occurs, the code in the 3rd and 4th spaces will be a Clutch Calibration Main Code 09 through 14 and indicate what process the calibration was in when it was aborted

   The 1st and 2nd spaces will produce the Clutch Calibration Sub Code, which is the code that informs the operator of the reason the process was aborted.

   K. After completing the Clutch Calibration procedure, turn the machine OFF for 15 seconds. This sets the calibration in the controller.

CLUTCH CALIBRATION MAIN CODES	
Main Code	Meaning
00	Clutch Calibration Mode was not initiated because one of the requirements was not met.
01	Adjusting 1st gear.
02	Adjusting 2nd gear.
03	Adjusting 3rd gear.
04	Adjusting 4th gear.
05	Adjusting Forward gear.
06	Adjusting Reverse gear.
07	Clutch Calibration Completed.
08	Operator aborted calibration procedure.
09	Aborted while adjusting 1st gear.
10	Aborted while adjusting 2nd gear.
11	Aborted while adjusting 3rd gear.
12	Aborted while adjusting 4th gear.
13	Aborted while adjusting Forward gear.
14	Aborted while adjusting Reverse gear.

CLUTCH CALIBRATION SUB CODES	
Sub Code	Meaning
00	Calibration in process.
01	Fault present.
02	Shift lever not in neutral.

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BATTERY TEST

NOTE: *To correctly test a battery, do each part of the battery test until you know the condition of the battery.*

Visual Checks

1. Make sure the cable connections are clean and tight. Clean foreign material from the top of the battery.

2. Inspect the battery case, battery posts, and cables for damage.

3. Check the electrolyte level. See page 4003-4.

4. If you added water to the battery, the battery must be charged for 15 minutes at 15 to 25 amperes to mix the water with the electrolyte.

Specific Gravity Check

A hydrometer is used to check the specific gravity (weight) of the electrolyte. The specific gravity is an indication of the level of charge for each cell.

Hydrometers are made to show the correct specific gravity when the temperature of the electrolyte is 80°F (26.7°C).

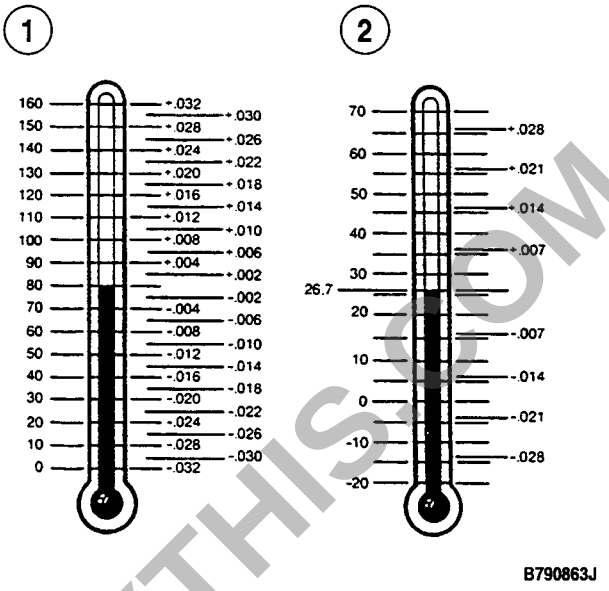
When you check the specific gravity, you must know the temperature of the electrolyte. If your hydrometer does not have a thermometer, get a thermometer to check the temperature of the electrolyte. The thermometer must indicate a high temperature of at least 120°F (52°C).

1. Remove enough electrolyte from a cell so that the float is free in the tube.

NOTE: *If the specific gravity cannot be checked without first adding water to the cell, the battery must be charged for 15 minutes at 15 to 25 amperes to mix the water with the electrolyte. Then check the specific gravity.*

2. Read the float.

3. Read the thermometer. If the reading is above 80°F (26.7°C) add specific gravity points to the reading for specific gravity. If the reading is below 80°F (26.5°C) subtract specific gravity points from the reading for specific gravity. See the following illustration and add or subtract specific gravity points as needed.



1. *Temperature in °F* 2. *Temperature in °C*
Specific Gravity Chart

4. Make a record of the corrected specific gravity reading for each cell.

5. If the difference between the high reading and the low reading is 0.050 or more, charge the battery and check the specific gravity again. If after charging, the difference is still 0.050 or more, install a new battery.

6. The corrected specific gravity reading shows the level of charge for the cell. The level of charge must be at least 75% in each of the cells. In maintenance free batteries the level of charge is at least 75% if the corrected specific gravity reading is 1.240 or higher. In all other batteries the level of charge is at least 75% if the corrected specific gravity reading is 1.230 or higher.

7. If the difference between the high reading and the low reading is less than 0.050, and the level of charge is at least 75% in all of the cells, do the Capacity (Load) Test.

8. If the difference between the high reading and the low reading is less than 0.050, but the level of charge is less than 75% in any of the cells, charge the battery and check the specific gravity again. If after charging:

   A. The level of charge is less than 75% in any of the cells, discard the battery.

   B. The level of charge is at least 75% in all of the cells, do the Capacity (Load) Test.

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Brake Disc Clearance Procedure

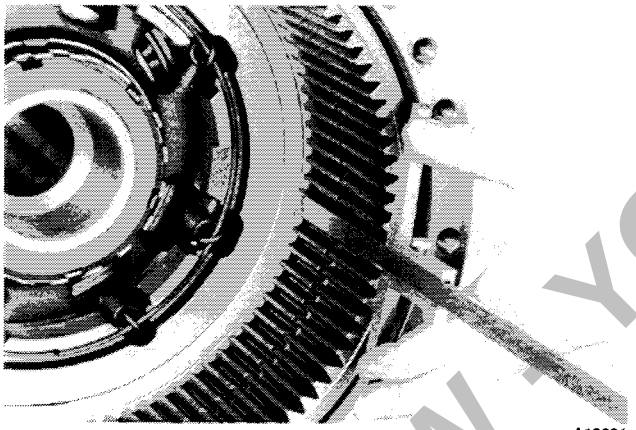
STEP 44



A18704

Measure the thickness of the backing plate and all brake discs. Example: Total of 43.5 mm.

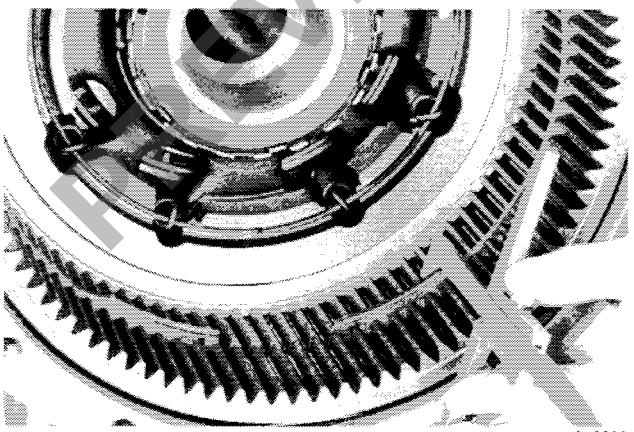
STEP 45



A18691

Measure from the hub end to the face of the brake piston. Example: 121.5 mm.

STEP 46



A18692

Install the brake disc snap ring and measure from the hub end to the inside edge of the snap ring. Example: 75.2 mm.

STEP 47

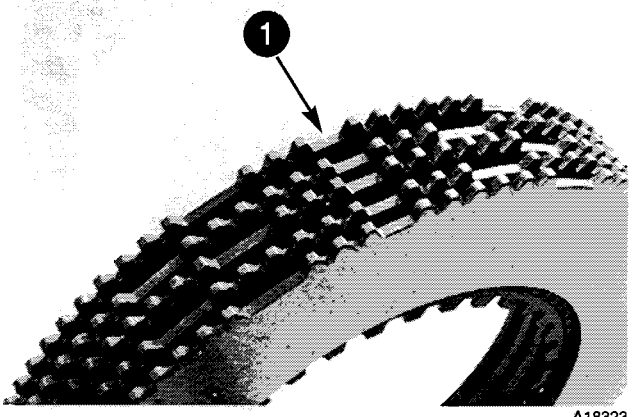
Axle	Number of Friction Discs	Disc Clearance
407	3	2.4 to 2.8 mm
409	3 4	2.4 to 2.8 mm 3.2 to 3.6 mm
411	4	3.2 to 3.6 mm

Add together all backing plate, brake disc, and hub end to snap ring dimensions.
Example: 43.5 mm---Plate and discs
75.2 mm---Hub end to snap ring
118.7 mm

Subtract this dimension from the hub end to piston dimension.
121.5 mm
118.7 mm
2.8 mm---This is the disc clearance (piston stroke)

Adjust disc clearance with steel discs. Discs are available in 4.0 and 4.5 mm sizes. See chart for clearance. Add first adjusting disc next to backing plate. Add next adjusting disc next to piston.

STEP 48



A18323

1. SMALL SPACE

Align the steel discs as shown. Align the smaller open space on all discs. Alternate next open space as shown on either side of small space. Install the discs as shown here, alternating steel discs and friction discs until all are installed.

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SAFETY RULES

Never try to charge the battery if the electrolyte in the battery is frozen.
47-83A

Never cause sparks to occur or smoke near batteries that are charging or have been recently charged.
13-8A

Disconnect the ground cable first when the battery cables are disconnected from the battery.

Connect the ground cable last when the battery cables are connected to the battery.
47-55A

Some batteries have a ventilation tube. If there is battery acid in the ventilation tube, this battery acid can be released when the battery is turned upside down. If you turn the battery upside down, make sure that the end of the ventilation tube is away from you and away from any other people in the area. Battery acid can cause severe burns.
48-57B

If the battery(s) in this machine must have nonspill caps, do not operate the machine if the nonspill caps do not work correctly, or if the nonspill caps are not in place.
48-99A

Battery acid causes severe burns. Batteries contain sulfuric acid. Avoid contact with skin, eyes, or clothing. Antidote: EXTERNAL-Flush with water. INTERNAL-Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call physician immediately. Eyes: Flush with water for 15 minutes and get prompt medical attention.

Batteries produce explosive gases. Keep sparks, flame, and cigarettes away. Ventilate when charging or using in enclosed area. Always shield eyes when working near batteries.

Keep out of reach of children.
D-47-53A

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SPECIAL TOOLS



The CAS-10147 tester is used to do the Capacity (Load) Test. This tool is first used on page 4003-7.

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2 – Master Disconnect Switch		
Check Points	**Reading**	**Possible Cause of Bad Reading**
NOTE: *Disconnect the cables from both terminals of the master disconnect switch (main contact). Put the master disconnect switch in the ON position.*		
Between the terminals of the master disconnect switch	Continuity	If there is no continuity, the master disconnect switch (2) is bad.
NOTE: *Put the master disconnect switch in the OFF position.*		
Between the terminals of the master disconnect switch	No continuity	If there is continuity, the master disconnect switch is bad.
NOTE: *Use the same method to check the master disconnect switch (auxiliary contact).*		

3 – Fuel Shutoff Solenoid		
Check Points	**Reading**	**Possible Cause of Bad Reading**
Terminal for wire 0 to ground	Continuity	Bad ground circuit.
NOTE: *Put the master disconnect switch in the ON position.*		
Terminal for wire 13M to ground	24 volts	Check circuit 13M, also check circuit to batteries. Bad master disconnect switch (2).
NOTE: *Have another person hold the ignition switch in the START position.*		
Terminal for wire 23F to ground	24 volts	Check circuit 23F. Bad fuel relay (6A).
NOTE: *If the readings are good, replace the fuel shutoff valve (3).*		

4 – Alternator		
Check Points	**Reading**	**Possible Cause of Bad Reading**
Between housing of alternator and ground	Continuity	Bad ground connection.
NOTE: *Put the master disconnect switch in the ON position.*		
Between the negative terminal of alternator and ground	24 volts	Check circuit to positive post of batteries.
NOTE: *Put the ignition switch in the ON position.*		
Between the positive terminal of alternator and ground	24 volts	Check circuit to positive post of batteries.
Terminal for wire 14 to ground	20 volts	Check circuit to ignition relay #1 (13) and ignition relay #2 (14), also check 75 ohm resistor.
NOTE: *If the readings are good, see Section 4007 to repair the alternator (4).*		

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19 AMP # 962175
COVER # 964731-1
CLAMP # 964732-1

20

LBe (25Y)

21 DEUTSCH
HDP 24-24-31PT

CAV.	WIRE COLOR	CAV.	WIRE COLOR
1	W (28P)	17	O/R (61M)

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2. Press the up/down count switch to up count until the display reads 023. The secondary work lights indicator light will flash intermittently.
3. Place the program/reset switch in the OFF (center) position.
4. The Information Center will display 00 when the work lights are OFF and 01 when the work lights are ON. The work lights indicator light will continue to flash intermittently and the numbers on the display will change in accordance with the status of the work lights.

Fog Lights Check

Do the following procedures to check the fog lights indicator light and the fog light electrical signal coming into the Information Center.

1. Press the program/reset switch to program.
2. Press the up/down count switch to up count until the display reads 024. The fog lights indicator light will flash intermittently.
3. Place the program/reset switch in the OFF (center) position.
4. The Information Center will display 00 when the fog lights are OFF and 01 when the fog lights are ON. The fog lights indicator light will continue to flash intermittently and the numbers on the display will change in accordance with the status of the fog lights.

Air Conditioning Switch Check

Do the following procedures to check the air conditioning indicator light and the air conditioning high/low pressure switch.

1. Press the program/reset switch to program.
2. Press the up/down count switch to up count until the display reads 025. The air conditioning indicator light will flash intermittently.
3. Place the program/reset switch in the OFF (center) position.
4. The Information Center will display 00, when the machine is being checked, if the air conditioning high/low pressure switch is not activated. If the air conditioning high/low pressure switch is activated, the Information Center will display 01 while the air conditioning high/low pressure switch is being checked. The air conditioning indicator light will flash intermittently on the Information Center.

Transmission Filter Restriction Switch Check

Do the following procedures to check the transmission filter restriction indicator light and the transmission filter restriction switch.

1. Press the program/reset switch to program.
2. Press the up/down count switch to up count until the display reads 026. The transmission filter restriction indicator light will flash intermittently.
3. Place the program/reset switch in the OFF (center) position.
4. The Information Center will display 00, when the machine is being checked, if the transmission filter restriction switch is not activated. If the transmission filter restriction switch is activated, the Information Center will display 01 while the transmission filter restriction switch is being checked. The transmission filter restriction indicator light will flash intermittently on the Information Center.

Requested Gear Check

Do the following procedures to check that the gear being requested by the shifter is the same gear that the Information Center is reading.

1. Press the program/reset switch to program.
2. Press the up/down count switch to up count until the display reads 028. The “F, N or R” indicator in the transmission display will flash intermittently.
3. Place the program/reset switch in the OFF (center) position.
4. Place the gear shifter in all positions and verify that the code in each position corresponds to the codes in the table below

Forward 1-Code 101	Neutral 1-Code 201	Reverse 1-Code 301
Forward 2-Code 102	Neutral 2-Code 202	Reverse 2-Code 302
Forward 3-Code 103	Neutral 3-Code 203	Reverse 3-Code 303
Forward 4-Code 104	Neutral 4-Code 204	

Operational Indicator Status

Do the following procedures to check the status of the operational indicator.

1. Press the program/reset switch to program.

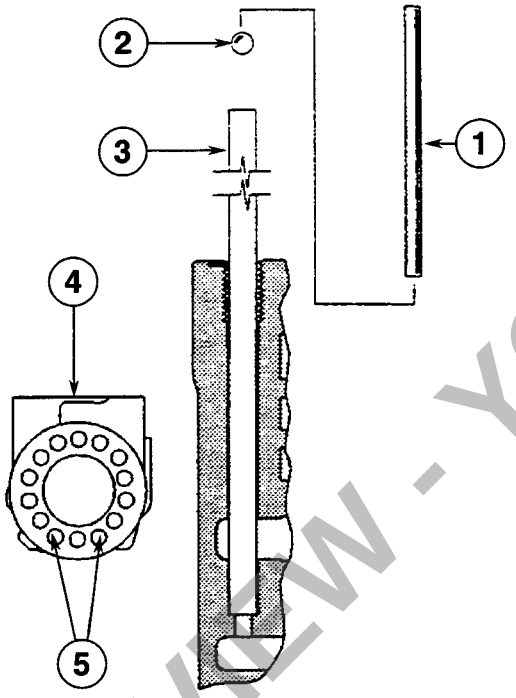
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Assembly

NOTE: *Use new seals (3), (16), and (19) when reassembling the steering control valve.*

IMPORTANT: *Lubricate the new seals with a petroleum jelly. Lubricate machined surfaces with clean hydraulic fluid.*

1. Use a soda straw (3) as a guide tool, refer to Figure 4. Drop the straw (3) into the anti-cavitation valve (5) to the bottom of the bore. Drop the ball check (2) through the straw (3). Pull the straw (3) out and use the same procedure in the second ball seat.



GS98K504

1. ROLL PIN
2. BALL CHECK
3. SODA STRAW
4. PORT FACE
5. ANTI-CAVITATION VALVES

Figure 4. OPTIONAL ANTI-CAVITATION VALVES - ASSEMBLY

2. Use a small light and check each bore to make sure each ball check (2) is in the correct place. Add the roll pin (1) in each.
3. Lubricate the spool (3) with clean hydraulic fluid and slide it into the sleeve (2), along with the ball check (5), refer to Figure 5.
4. Install the drive shaft (1) and pin (4).
5. Install the centering spring (6). Position one end of the centering spring (6) in slotted end of spool (3) and sleeve (2). Compress the centering spring (6) by turning it counter-clockwise to engage the free end of the spring.
6. Install the bearing race (8) and retaining ring (7), onto the spool (3), using retaining ring pliers.
7. Lubricate, using petroleum jelly, the ID of the dust seal (19) that is mounted in the steering control valve housing (7), refer to Figure 2.
8. Lubricate, using petroleum jelly, the needle thrust bearing (13), second bearing race (14), backup washer (15), seal ring (16) and O-ring (17). Position each part onto the spool (9). The needle thrust bearing (13) goes between the two bearing races (14), and must be centered around the retaining ring (18).
9. Lubricate, using clean hydraulic fluid, the spool (9) and sleeve (8) assembly and slide it into the steering control valve housing (7), as follows:

IMPORTANT: *Do not damage the dust or shaft seals.*

A. Protecting the gerotor star and hand with shop towels, hold the gerotor star and splined end of drive shaft (6) to keep it from turning.

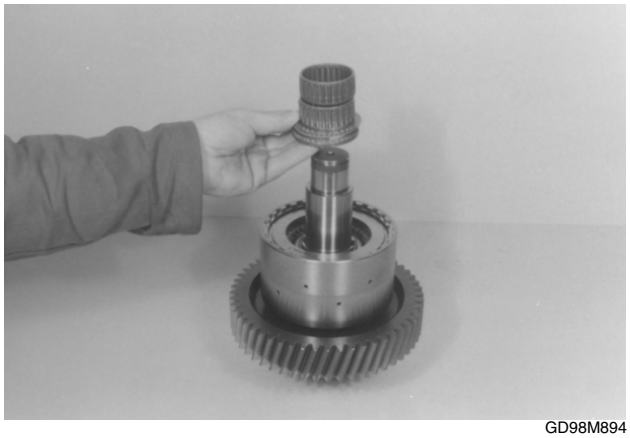
B. Insert the splined shaft end No. 8063 (see Special Tools this section), into the steering control valve housing (7), and start it onto the splined end of the spool (9). Turn the tool clockwise or counter-clockwise to compress the centering spring (12).

NOTE: *If the unit is positioned horizontally, keep the pin horizontal. If the tension on the pin is released before the assembly is fully engaged, the pin can drop and lockup can occur if the pin is not horizontal.*

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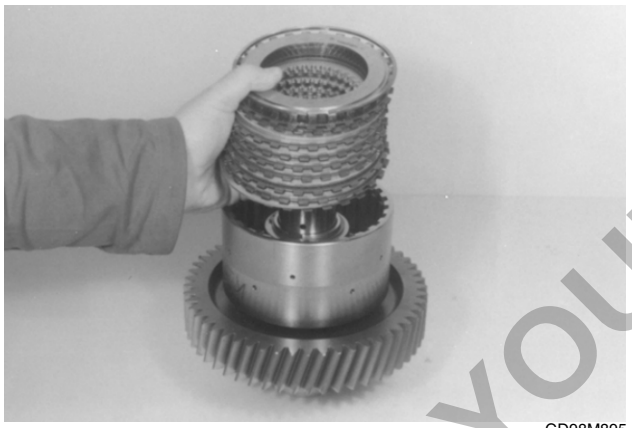
STEP 39



GD98M894

Remove the needle bearings and axial bearing.

STEP 40



GD98M895

Squeeze the snap ring out and remove the clutch disc pack.

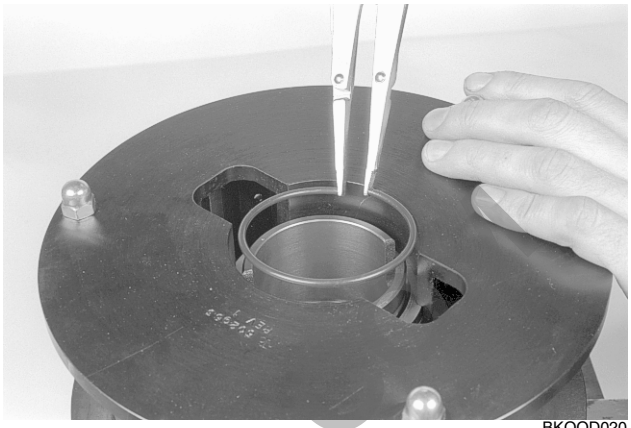
STEP 41



BK00D018

Preload compression spring using tool. (Tool in place.)

STEP 42



BKOOD020

Remove the snap ring.

STEP 43



BK00D019

Remove the compression spring.

STEP 44



BS00G001

Squeeze the sealing ring out. Remove bearing using bearing puller. Tap assembly until piston drops out of the plate carrier.

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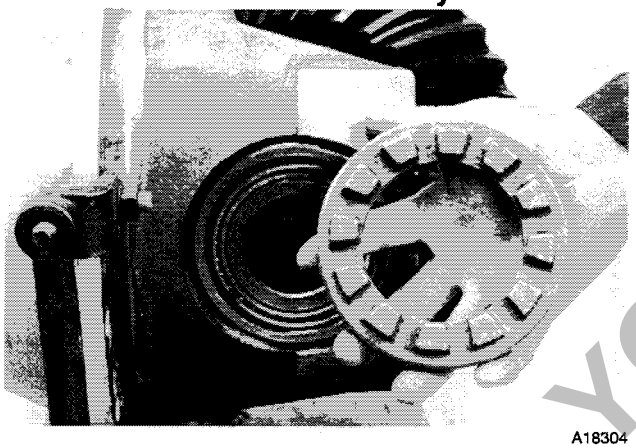
STEP 145---409 and 411 Only



A18305

Install the bearing cups on the bearings.

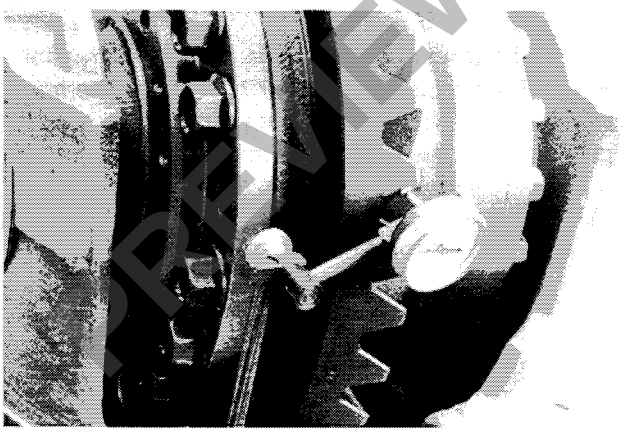
STEP 146---409 and 411 Only



A18304

Install the adjusting nuts. Tighten the adjusting nut on the ring gear side of the differential only.

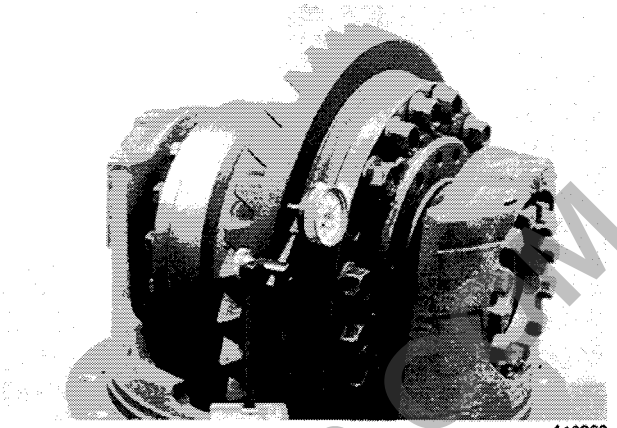
STEP 147



A18365

Install a dial indicator on the carrier and index to a tooth on the ring gear. Tighten the adjusting nut at the ring gear side until the backlash is 0.3 to 0.4 mm. Tighten the adjusting nut opposite the ring gear until the bearing is free of play. Tighten the nut two more notches for bearing preload. Check the backlash and correct if necessary.

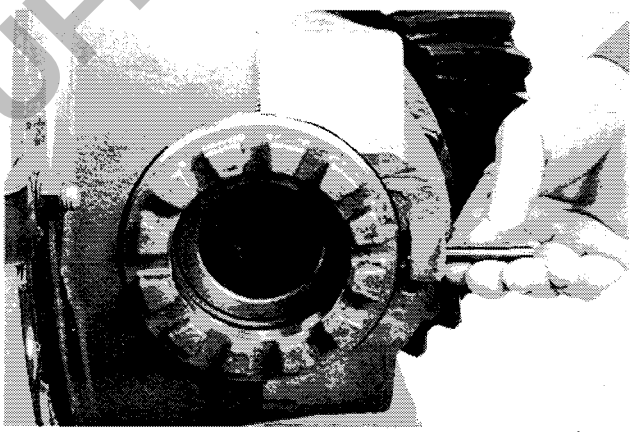
STEP 148



A18366

Install the dial indicator on the carrier and index to the back side of the ring gear. Turn the ring gear and check the run out. The maximum run out allowed is 0.08 mm. If run out is larger, repair or replace as necessary. Check tooth contact pattern between ring gear and pinion shaft. See Ring Gear Tooth Pattern Procedure.

STEP 149



A18303

When tooth pattern is correct, install the adjusting nut lock pins.

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SPECIFICATIONS

Manufacturer .... Mico

Brake Pressure Settings:

Model 621C
Upper Port ....51.02 to 57.8 bar (750 to 850 psi)
Lower Port ....46.2 to 53 bar (680 to 780 psi)

Model 721C and 821C
Upper Port ....57.8 to 64.6 bar (850 to 950 psi)
Lower Port ....53 to 59.8 bar (780 to 880 psi)

SPECIAL TORQUES

Socket Head Cap Screw ....358 to 407 Nm (263 to 299 lb ft)
Plug ....569 to 651 Nm (418 to 479 lb ft)

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Testing and Adjusting the Main Relief Valve

Pressure Check

STEP 1

Engage the transport/service link.

STEP 2

Lower the bucket to the floor. Stop the engine.

STEP 3

Connect a 20 685 kPa, 207 bar (3000 psi) pressure gauge to the quick disconnect fitting at Test Port 1. This Test Port 1 is located on the opposite side of the primary pressure port on the primary pump toward the engine.

STEP 4

Run the engine at full throttle. Heat the hydraulic oil to operating temperature.

STEP 5

Hold the bucket control lever in the ROLLBACK position.

STEP 6

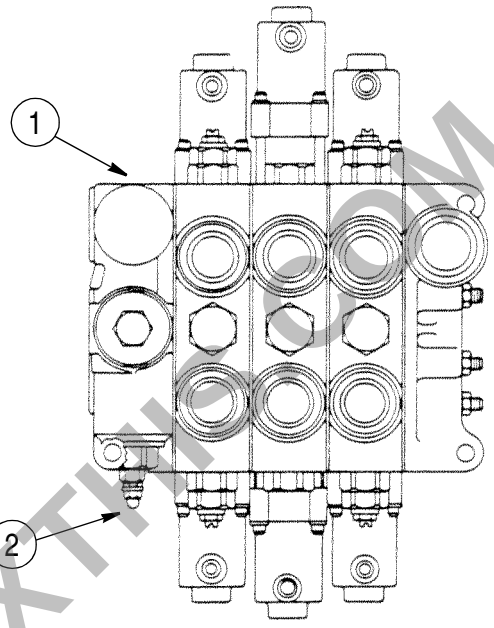
Read the pressure gauge. Compare the reading to the specifications on Page 3.

STEP 7

If the pressure is not correct, adjust the main relief valve.

Adjustment

STEP 1



GS98M896

1. LOADER CONTROL VALVE
2. MAIN RELIEF VALVE

Remove the cover at the front of the machine.

STEP 2

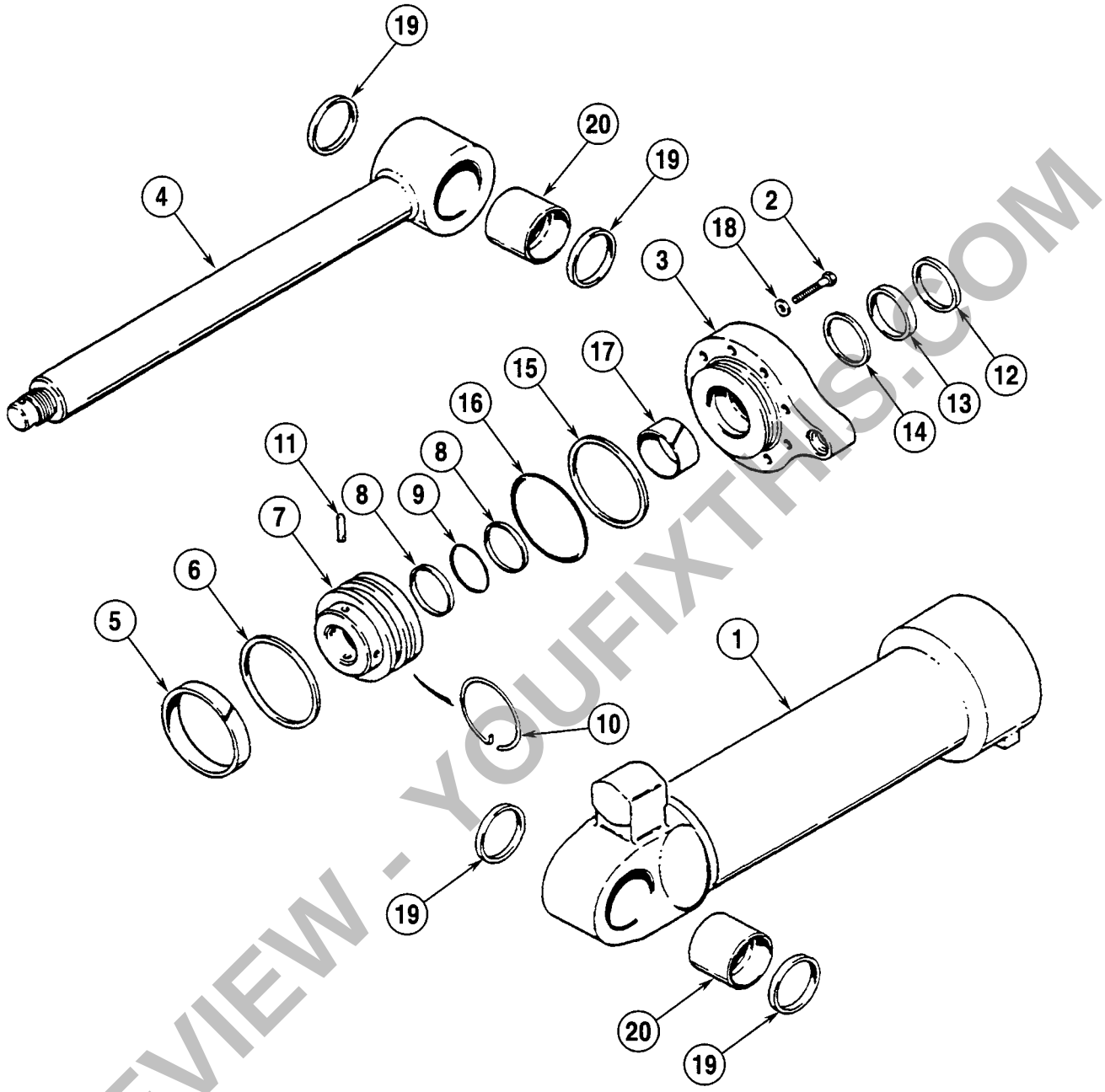
Loosen the lock nut. Turn the adjustment screw clockwise to increase the pressure or counterclockwise to decrease the pressure.

STEP 3

Check the pressure again. Repeat the adjustment as necessary.

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GS98J809

1. TUBE
2. CAP SCREW
3. GLAND
4. PISTON ROD
5. WEAR RING
6. SEAL
7. PISTON
8. BACKUP RING
9. O-RING
10. RETAINING RING
11. PIN
12. WIPER
13. WIDE SEAL
14. NARROW SEAL
15. BACKUP RING
16. O-RING
17. BUSHING
18. HARDENED WASHER
19. SEAL
20. BUSHING

Figure 4. BUCKET CYLINDER

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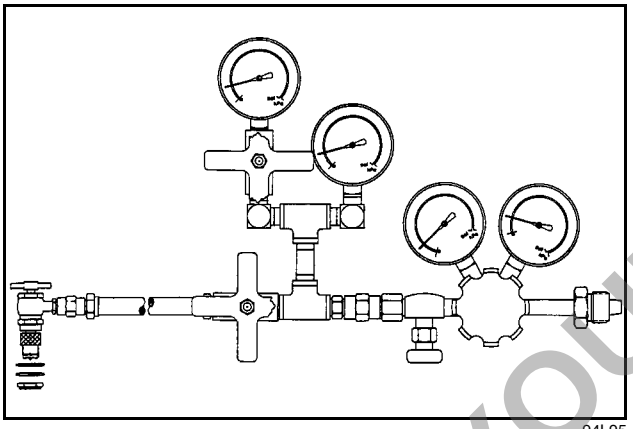
SPECIFICATIONS

Accumulator dry nitrogen pressure..... 31 ±1.7 bar (450 ±25 psi) at 21° C (70° F)
Accumulator fluid capacity..... 3785 ml (231 cu. inch)
Accumulator maximum operating pressure .....207 bar (3000 psi)

SPECIAL TORQUES

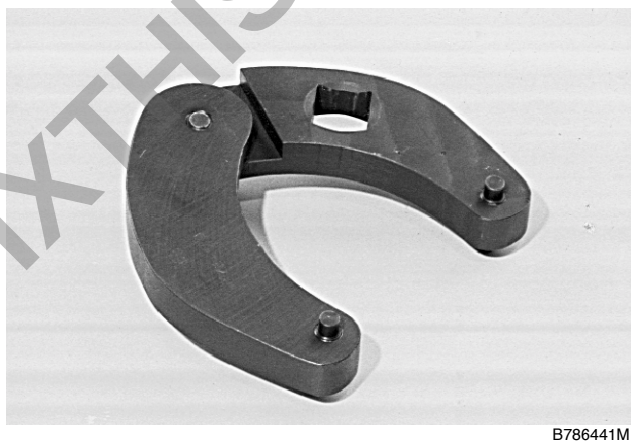
Accumulator gas charging valve cap .....13.6 Nm (10 pound-feet)
Gas charging valve .....88 to 102 Nm (65 to 75 pound-feet)
Cap screws for the protection bracket ..... 54 to 61 Nm (480 to 540 pound-inches)
Gland .....163 to 176 Nm (120 to 130 pound -feet)

SPECIAL TOOLS



94L95

CAS-10899 NITROGEN ACCUMULATOR CHARGING KIT



B786441M

CAS-1456 GLAND WRENCH

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EVAPORATOR / HEATER CORE 14
- Removal 14
- Installation 16

CONDENSER 17
- Removal 17
- Installation 17

SPECIFICATIONS

Compressor belt tension
- New belt ..... 422 to 516 N (95 to 115 lbs)
- Used belt ..... 400 to 489 N (90 to 110 lbs)

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