

621C/721C Loaders Service Manual

Table of Contents

Description	Section No.	Form No.
General	Tab 1	
Section Index - General		7-12120
Standard Torque Specifications	1001	8-71601
Fluids and Lubricants	1002	7-12131
Loctite Product Chart		8-98902
Engines	Tab 2	
Section Index - Engines		7-12140
Engine and Radiator Removal and Installation - 621C	2000	7-12150
Engine and Radiator Removal and Installation - 721C	2000	7-12160
Stall Tests	2002	7-12171
For Engine Repair, See the Engine Service Manual		
Fuel System	Tab 3	
Section Index - Fuel System		7-12180
For Fuel System Repair, See the Engine Service Manual		
Electrical	Tab 4	
Section Index - Electrical		7-12190
Removal and Installation of Starter and Alternator - 621C	4001	7-12210
Removal and Installation of Starter and Alternator - 721C	4001	7-15380
Electrical Specifications and Troubleshooting	4002	7-12221
Batteries	4003	7-49440
Starter and Starter Solenoid - 621C	4004	7-12230
Starter and Starter Solenoid - 721C	4004	7-12240
Information and Diagnostic Center	4005	7-12251
Alternator	4007	7-12260
Steering	Tab 5	
Section Index - Steering		7-12270
Removal and Installation of Steering Components	5001	7-12290
Steering Specifications, Pressure Checks, and Troubleshooting	5002	7-12300
Steering Control Valve	5003	7-12310
Steering Priority Valve	5004	7-12320
Steering Cylinders	5005	7-12330
Center Pivot	5006	7-12340

TABLE OF CONTENTS

TORQUE SPECIFICATIONS - DECIMAL HARDWARE	2
TORQUE SPECIFICATIONS - METRIC HARDWARE	3
TORQUE SPECIFICATIONS - STEEL HYDRAULIC FITTINGS	4
TORQUE SPECIFICATIONS - STEEL HYDRAULIC FITTINGS	5

TORQUE SPECIFICATIONS - DECIMAL HARDWARE

Use the torques in this chart when special torques are not given. These torques apply to fasteners with both UNC and UNF threads as received from suppliers dry, or when lubricated with engine oil. Not applicable if special graphities, Molydisulfide greases, or other extreme pressure lubricants are used.

Grade 5 Bolts, Nuts, and Studs		
  		
Size	Pound-Inches	Newton metres
1/4 inch	108 to 132	12 to 15
5/16 inch	204 to 252	23 to 28
3/8 inch	420 to 504	48 to 57
Size	Pound-Feet	Newton metres
7/16 inch	54 to 64	73 to 87
1/2 inch	80 to 96	109 to 130
9/16 inch	110 to 132	149 to 179
5/8 inch	150 to 180	203 to 244
3/4 inch	270 to 324	366 to 439
7/8 inch	400 to 480	542 to 651
1.0 inch	580 to 696	787 to 944
1-1/8 inch	800 to 880	1085 to 1193
1-1/4 inch	1120 to 1240	1519 to 1681
1-3/8 inch	1460 to 1680	1980 to 2278
1-1/2 inch	1940 to 2200	2631 to 2983

Grade 8 Bolts, Nuts, and Studs		
  		
Size	Pound-Inches	Newton metres
1/4 inch	144 to 180	16 to 20
5/16 inch	288 to 348	33 to 39
3/8 inch	540 to 648	61 to 73
Size	Pound-Feet	Newton metres
7/16 inch	70 to 84	95 to 114
1/2 inch	110 to 132	149 to 179
9/16 inch	160 to 192	217 to 260
5/8 inch	220 to 264	298 to 358
3/4 inch	380 to 456	515 to 618
7/8 inch	600 to 720	814 to 976
1.0 inch	900 to 1080	1220 to 1465
1-1/8 inch	1280 to 1440	1736 to 1953
1-1/4 inch	1820 to 2000	2468 to 2712
1-3/8 inch	2380 to 2720	3227 to 3688
1-1/2 inch	3160 to 3560	4285 to 4827
NOTE: Use thick nuts with Grade 8 bolts.		

CAPACITIES AND LUBRICANTS	2
ENGINE OIL RECOMMENDATIONS	3
DIESEL FUEL	4
MAINTENANCE SCHEDULE - 621C/721C	5

CAPACITIES AND LUBRICANTS

Engine oil

Capacity with filter change - 621C	15.1 litres (16 U.S. quarts)
721C	20.8 litres (22 U.S. quarts)

Type of oil..... Case No. 1 engine oil - see engine oil recommendations on page 3

Engine cooling system

Capacity - 621C	26.5 litres (28 U.S. quarts)
721C	32.1 litres (34 U.S. quarts)

Type of coolant..... Ethylene glycol and water mixed for lowest ambient temperature (at least 50/50 mix)

Fuel tank

Capacity - 621C	193 litres (51 U.S. gallons)
721C	204 litres (53.9 U.S. gallons)

Type of fuel See Diesel fuel specifications on page 4

Hydraulic system

Hydraulic reservoir refill capacity - 621C and 721C	90.1 litres (95.2 U.S. quarts)
Total system capacity - 621C and 721C	153.1 litres (40.5 gallons)

Type of oil..... MS-1209 Hy-Tran Ultra®

Transmission

Refill capacity with filter change - 621C	7.4 litres (8 U.S. quarts)
721C	12.3 litres (3.25 U.S. gallons)

Total system capacity - 621C	18.9 litres (20.0 U.S. quarts)
721C	22.7 litres (24.0 U.S. quarts)

Type of oil Case No. 1 Engine Oil (15W-40)

Axles

Capacity of center bowl

621C Front and rear (each) 8.5 litres (9 quarts) 135H EP Plus 0.9 litres (2 pints) B91246

721C Front 13.7 litres (14.5 quarts) 135H EP Plus 1.4 litres (3 pints) B91246

721C Rear 8.5 litres (9 quarts) 135H EP Plus 0.9 litres (2 pints) B91246

Capacity of planetary (each) - 621C and 721C 5.5 litres (6 quarts) 135H EP

Type of lubricant..... Case (MS1316) 135H EP (SAE 85W-140)

Limited slip additive..... Case B91246

Brake system

Type of fluid (same as hydraulic system) MS-1209 Hy-Tran Ultra®

NOTE: DO NOT use an alternate oil in the axles. The brake components in the axles could be damaged as a result of using an alternate oil.

Conversion Formulas

Imperial quart = litres x 0.879877

Imperial gallons = litres x 0.219969

MAINTENANCE SCHEDULE

Model 621C / 721C

Instructions

AS REQUIRED

22 SERVICE THE AIR CLEANER IF THE AIR CLEANER WARNING LAMP ILLUMINATES	SEE OPERATORS MANUAL
37 SERVICE AIR CLEANER PRECLEANER	SEE OPERATORS MANUAL
30 REPLACE THE TRANSMISSION FILTER	
IF THE TRANSMISSION FILTER RESTRICTION WARNING LAMP ILLUMINATES	USE CASE FILTER
19 CHECK THE RADIATOR COOLANT LEVEL IF THE WARNING LAMP ILLUMINATES	SEE OPERATORS MANUAL
6 REPLACE THE HYDRAULIC FILTERS IF THE HYDRAULIC FILTER WARNING LAMP ILLUMINATES	USE CASE FILTERS
20 CHECK THE FAN BELT CONDITION	REPLACE AS REQUIRED
CHECK THE AIR CONDITIONING DRIVE TENSION (IF EQUIPPED) NOT SHOWN	ADJUST AS REQUIRED

EVERY 10 HOURS OF OPERATION OR EACH DAY- WHICHEVER OCCURS FIRST

16 CHECK THE ENGINE OIL LEVEL	SEE OPERATORS MANUAL
-------------------------------------	----------------------

EVERY 50 HOURS OF OPERATION

1 CHECK THE COOLANT RESERVOIR FLUID LEVEL	ETHYLENE GLYCOL AND WATER
29 CHECK THE TRANSMISSION OIL LEVEL (ENGINE RUNNING AND OIL WARM)	SEE OPERATORS MANUAL
5 CHECK THE HYDRAULIC RESERVOIR FLUID LEVEL	SEE OPERATORS MANUAL
15 LUBRICATE THE REAR AXLE TRUNNION PIVOTS (2 FITTINGS)	CASE MOLYDISULFIDE GREASE
38 LUBRICATE THE BUCKET AND BELLCRANK PIVOT POINTS (10 FITTINGS) 621C/721C/ XT	CASE MOLYDISULFIDE GREASE
27 LUBRICATE THE CENTER DRIVE SHAFT SLIP JOINT (1 FITTING)	CASE MOLYDISULFIDE GREASE
39 LUBRICATE THE BELLCRANK AND BUCKET PIVOTS (6 FITTINGS) 621C/721C Z-BAR	CASE MOLYDISULFIDE GREASE

EVERY 100 HOURS OF OPERATION

7 LUBRICATE THE STEERING CYLINDER PIVOTS - ROD AND CLOSED END (4 FITTINGS)	CASE MOLYDISULFIDE GREASE
40 LUBRICATE THE LOADER LIFT ARM AND CYL. PIVOTS (7 FITTINGS) 621C/721C Z-BAR	CASE MOLYDISULFIDE GREASE
26 LUBRICATE THE FRONT DRIVE SHAFT SUPPORT BEARING (1 FITTING)	CASE MOLYDISULFIDE GREASE
32 LUBRICATE THE REAR DRIVE SHAFT SLIP JOINT (1 FITTING)	CASE MOLYDISULFIDE GREASE
8 LUBRICATE THE LOADER LIFT ARM AND CYLINDER PIVOTS (14 FITTINGS) 621C/721C/ XT	CASE MOLYDISULFIDE GREASE

EVERY 250 HOURS OF OPERATION

19 CHECK THE RADIATOR COOLANT LEVEL	ETHYLENE GLYCOL AND WATER
2 CHANGE THE ENGINE OIL AND REPLACE THE ENGINE OIL FILTER	SEE OPERATORS MANUAL
34 CHECK THE BATTERY FLUID LEVEL	SEE OPERATORS MANUAL
36 CHECK THE TIRE CONDITION AND AIR PRESSURE	SEE OPERATORS MANUAL
12 CLEAN THE CAB AIR FILTERS (IF EQUIPPED)	SEE OPERATORS MANUAL
25 REPLACE ENGINE COOLING SYSTEM FILTER 721C.	USE CASE FILTER

EVERY 500 HOURS OF OPERATION

3 REPLACE THE FUEL FILTERS	USE CASE FILTERS
33 DRAIN WATER AND SEDIMENT FROM THE FUEL TANK	SEE OPERATORS MANUAL
14 REPLACE THE IN-LINE FUEL FILTER	USE CASE FILTERS

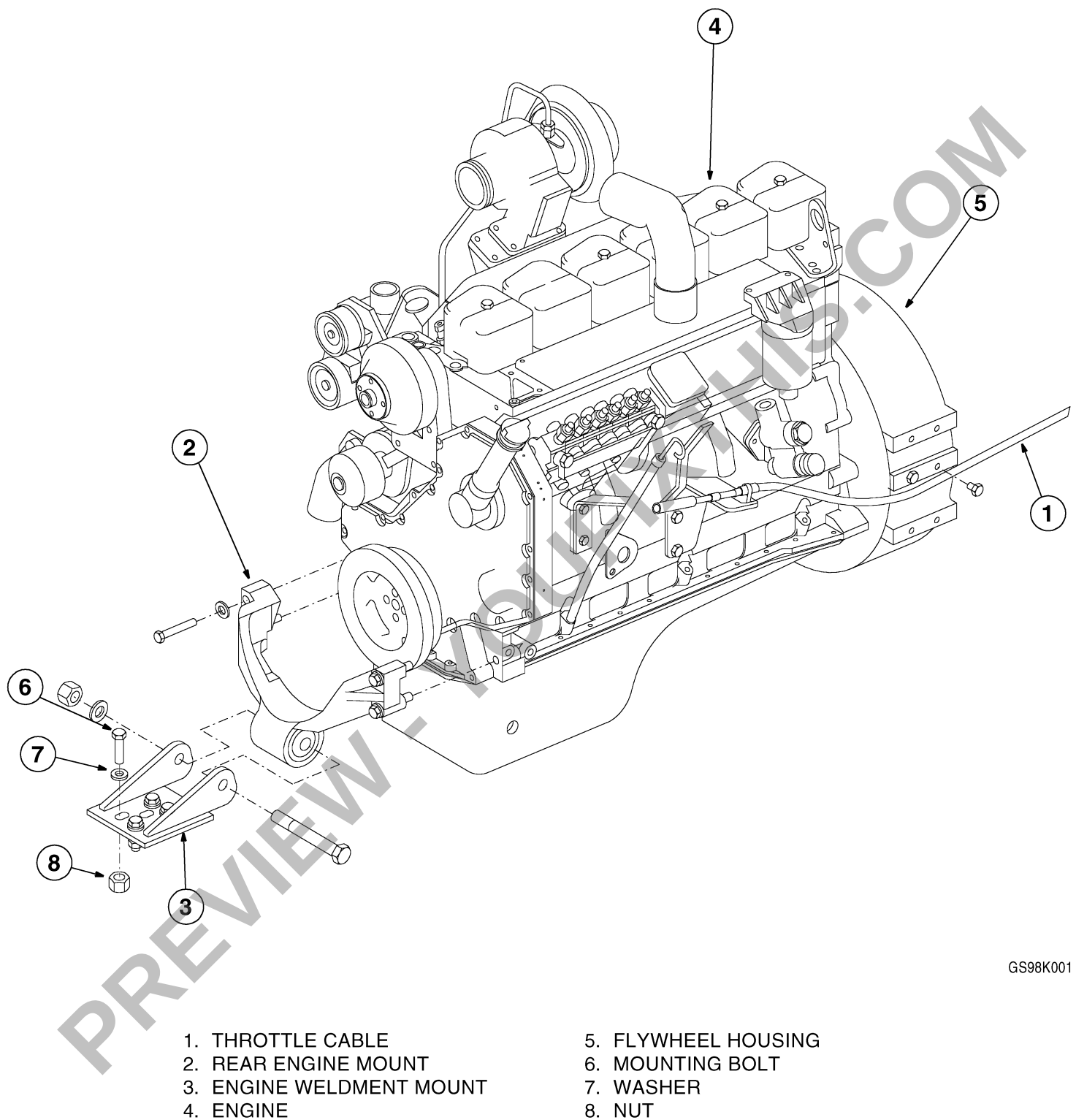
EVERY 1000 HOURS OF OPERATION

21 CHECK THE ENGINE VALVE CLEARANCES	SEE SERVICE MANUAL
6 REPLACE THE HYDRAULIC FILTERS	USE CASE FILTERS
30 REPLACE THE TRANSMISSION OIL FILTER	USE CASE FILTERS
28 CHANGE THE TRANSMISSION OIL	SEE OPERATORS MANUAL
23 CLEAN THE TRANSMISSION BREATHER	CLEAN WITH SOLVENT
24 LUBRICATE THE UPPER AND LOWER CHASSIS PIVOTS (2 FITTINGS)	CASE MOLYDISULFIDE GREASE
31 CHANGE THE FRONT/REAR AXLE DIFFERENTIAL AND PLANETARY OIL	SEE OPERATORS MANUAL

EVERY 2000 HOURS OF OPERATION OR EACH YEAR - WHICHEVER OCCURS FIRST

4 CHANGE THE HYDRAULIC OIL AND CLEAN THE SCREEN	SEE OPERATORS MANUAL
18 DRAIN, FLUSH AND REFILL THE ENGINE COOLING SYSTEM	ETHYLENE GLYCOL AND WATER
22 REPLACE THE AIR CLEANER ELEMENTS	USE CASE FILTERS

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 on 721C.



GS98K001

- | | |
|--------------------------|---------------------|
| 1. THROTTLE CABLE | 5. FLYWHEEL HOUSING |
| 2. REAR ENGINE MOUNT | 6. MOUNTING BOLT |
| 3. ENGINE WELDMENT MOUNT | 7. WASHER |
| 4. ENGINE | 8. NUT |

Figure 1. ENGINE

SPECIFICATIONS

Electrical System Two 12 volt batteries connected in series, negative ground
 System Voltage.....Approximately 24 volts

Batteries

The specifications are the same for the production battery and the replacement battery.

Production Battery case P/N L51769 or BCM4DAW

Replacement Battery Case P/N L13308 or BMC4DA

Group Size 4D

Reserve Capacity 310 minutes

Cold Cranking Capacity:

At -17°C (0°F) 800 amperes

At -29°C (-20°F) 650 amperes

Load of Capacity (Load) Test 400 amperes

Plates per Cell 23

Approximate weight with electrolyte 49.8 kg (110 pounds)

Nonspill caps Standard

Alternator 24 volt, 65 amperes

Voltage Regulator Solid State, Not Adjustable

Starter 24 volt, Solenoid Actuated

Bucket Control Valves Detent Electromagnets 84 ohms

Fuel Level Sender (E-F) 240-33 ohms

Coolant and Hydraulic Temperature Sender 20°C (68°F) 3521ohms

Coolant and Hydraulic Temperature Sender (Yellow Line) 105°C (221°F) 154 ohms

Coolant and Hydraulic Temperature Sender (Red Line) 110°C (230°F) 133.9 ohms

Hydraulic Filter Restriction Switch closing setpoint 310 kPa (45 psi)

Air Filter Restriction Switch closing setpoint 6.4 kPa (0.928 psi)

Low Brake Pressure Warning Switch opening setpoint 11 724 kPa (1700 psi)

A/C High Pressure Switch closing setpoint 28 Bar (400 psi) (increasing pressure)

A/C Low Pressure Switch closing setpoint 0.3 Bar (4 psi) (decreasing pressure)

Contacts 2 to 3 of thermostat switch close at initial turn of the rotary switch. Contacts 1 to 2 close with thermal setting.

Engine Oil Pressure Sender. Reference Resistance vs. Pressure

1 Bar 178 ohms

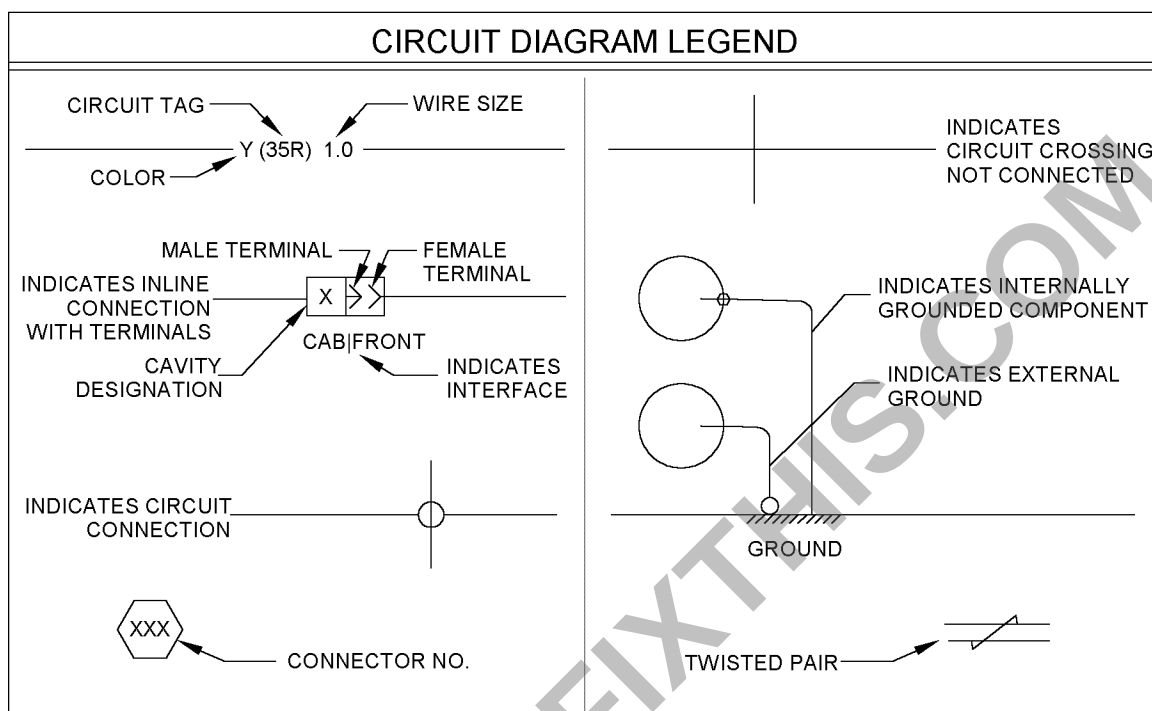
3 Bar 90 ohms

5.2 Bar 38 ohms

Fuel Solenoid Resistance (pull in) 0.82 ohms

Fuel Solenoid Resistance (hold in) 11.3 ohms

CIRCUIT DIAGRAM LEGEND, COLOR ABBREVIATIONS, AND NOTES



GM98M001

COLOR ABBREVIATIONS					
ABBREV.	COLOR	ABBREV.	COLOR	ABBREV.	COLOR
B	BLACK	DG	DARK GREEN	O/R	ORANGE/RED
BR	BROWN	Gy	GRAY	O/W	ORANGE/WHITE
BR/W	BROWN/WHITE	LBe	LIGHT BLUE	P	PINK
BR/Y	BROWN/YELLOW	LGe	LIGHT GREEN	R	RED
DBe	DARK BLUE	O	ORANGE	T	TAN
DBr	DARK BROWN	O/Be	ORANGE/BLUE	V	VIOLET (PURPLE)
DBr/LG	DARK BROWN/LT GREEN	O/G	ORANGE/GREEN	W	WHITE
DBr/Y	DARK BROWN/YELLOW	O/LB	ORANGE/LT BLUE	Y	YELLOW

GM98M002

NOTES:

NOTE: Diagram shown with vehicle parked, power off, and controls in off or neutral position.

NOTE: Sheet numbers refer to the number at the bottom center of each individual dashed block.

NOTE: Machine components that are being troubleshot are represented by this (17) symbol.

NOTE: Wires that continue, uninterrupted, to the next sheet are represented by this 3 symbol.

NOTE: Wires that continue, but are interrupted by several sheets, are located by specific text references as follows: To instrument cluster cavity 2 on sheet 11

HOW TO USE THIS SECTION

IMPORTANT: The troubleshooting procedures can be used with the Electrical and Hydraulic Schematic poster (rear pocket, 7-12720, 7-12730 and 7-13450) for the 621/721/821 C-series wheel loader.

17 All bold item numbers, **17**, as well as numbers in parenthesis, (17), found in the troubleshooting procedures, correspond to the circled numbers found on the Electrical and Hydraulic Schematic poster (rear pocket).

Items (90, Cigar Lighter) through (118, Cab Dome Light), Sheets 1 through 5 and 29 through 32, only appear on the foldout schematics in this section (see pages 67 through 97) and are not shown on the Electrical and Hydraulic Schematic poster (rear pocket).

The schematic poster is color coded to assist in troubleshooting electrical circuits. Red denotes circuits that have constant power. Green denotes circuits that have power when the ignition switch is turned ON.

Components can be located on the Electrical and Hydraulic Schematic poster (rear pocket) by item number using the key at the bottom right of the rear pocket. Use the following index to find the sheet (dashed block) a component is located on.

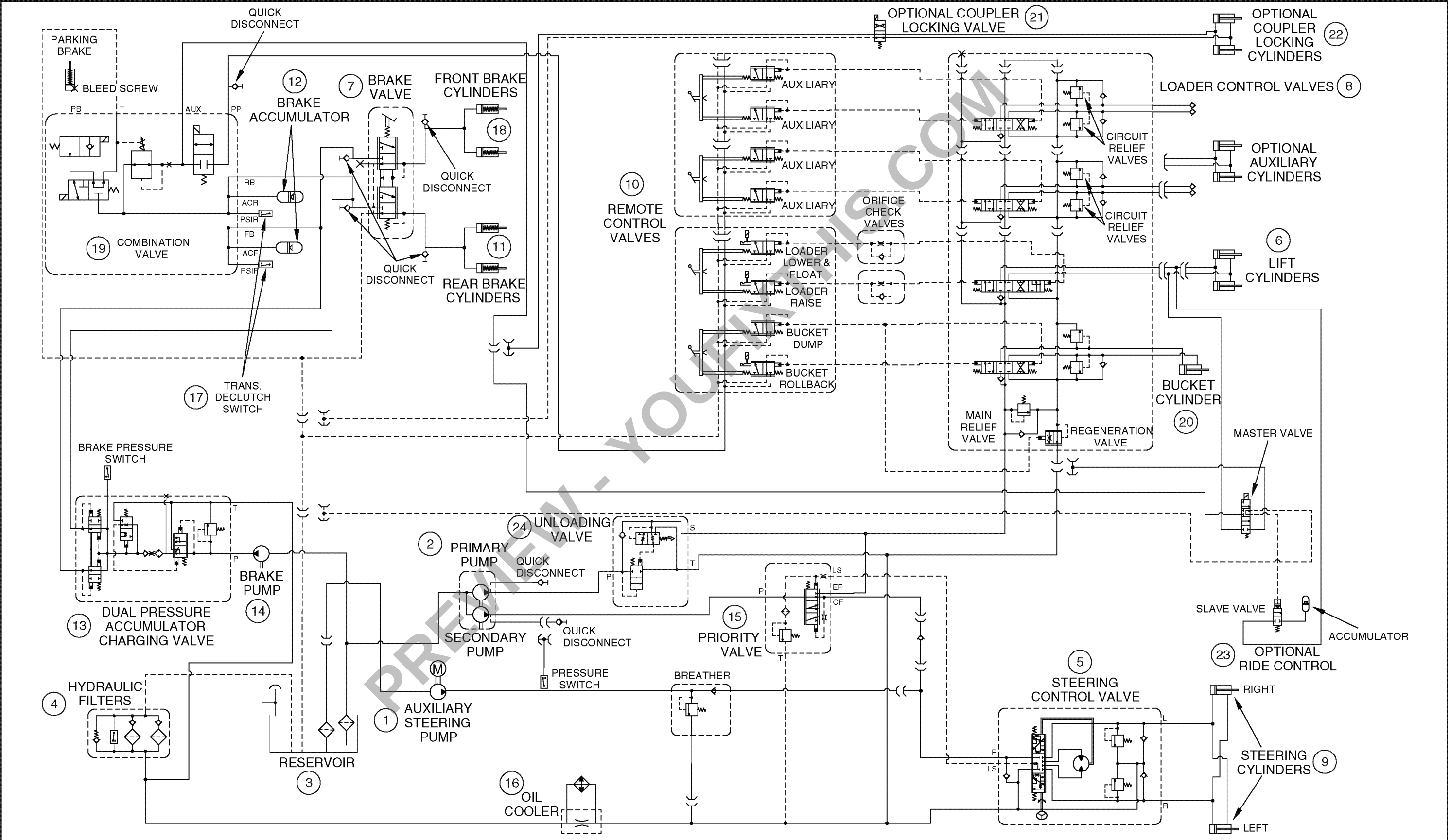
INDEX	SHEET
AIR CONDITIONING SYSTEM (RELAY, SWITCH, CLUTCH, MOTOR)	27-28
ALTERNATOR	6
BACK-UP ALARM	12
BATTERIES	6
BEACON & SWITCH	1
BLOWER HVAC (SWITCH, MOTOR, RESISTORS)	26-27
BUCKET CONTROLS (SOLENOIDS, SWITCHES)	19-20
CAB POWER RELAY	8-9
COLD START SYSTEM (INJECTOR, SWITCH, RELAY)	7
CRANKING MOTOR	6
FUEL SHUTOFF VALVE	6
HAZARD SWITCH	1
HORN, SWITCH & RELAY	1 & 26
IGNITION SWITCH	8
INSTRUMENT CLUSTER AND SYSTEM MONITORING (SENDER & SWITCH)	14-16
LIGHT - DOME	5
LIGHT - LH MARKER, COMBINATION	3
LIGHT - RH MARKER, COMBINATION	3
LIGHT - HEAD, ROOF	5
LIGHT SWITCH - 5 POSITION	4
MASTER DISCONNECT SWITCH	6
NEUTRAL START RELAY	7
PARKING BRAKE SYSTEM	15-17
RADIO, ANTENNA & SPEAKERS	29-32
SCHEMATIC COLOR ABBREVIATIONS	2A
SCHEMATIC SYMBOL DEFINITIONS	4A
SECONDARY STEERING (PUMP, MOTOR, RELAYS, SWITCHES)	21
SECONDARY STEERING W/LOCKOUT (PUMP, MOTOR, RELAYS, SW.)	21
SPARE CIRCUITS (CIGARETTE LIGHTER, RADIO)	10
PROGRAM RESET SWITCH	15
SEAT COMP. MOTOR AND SEAT SWITCH	16
TIME DELAY MODULE	10
ENGINE SHUTDOWN RELAY	18
SPEED SENSOR	11
STARTING RELAY	6
STOP LAMP SWITCH	1
TRANSMISSION CONTROLS (SOLENOIDS, SENSOR, MODULE, SHIFTER)	11-12
TURN SIGNAL INDICATOR & SWITCH	1-2
WIPER/ WASHER - FRONT (PUMP, MOTOR, SWITCH)	24
WIPER - REAR (MOTOR, SWITCH)	25

GM98M004

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).	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 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)	<ol style="list-style-type: none"> 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).	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Check the cables from TCU to shift lever. 2. Check signal combinations of shift lever positions F-N-R.

621C Z-BAR HYDRAULIC SCHEMATIC



621C Z-BAR HYDRAULIC SCHEMATIC

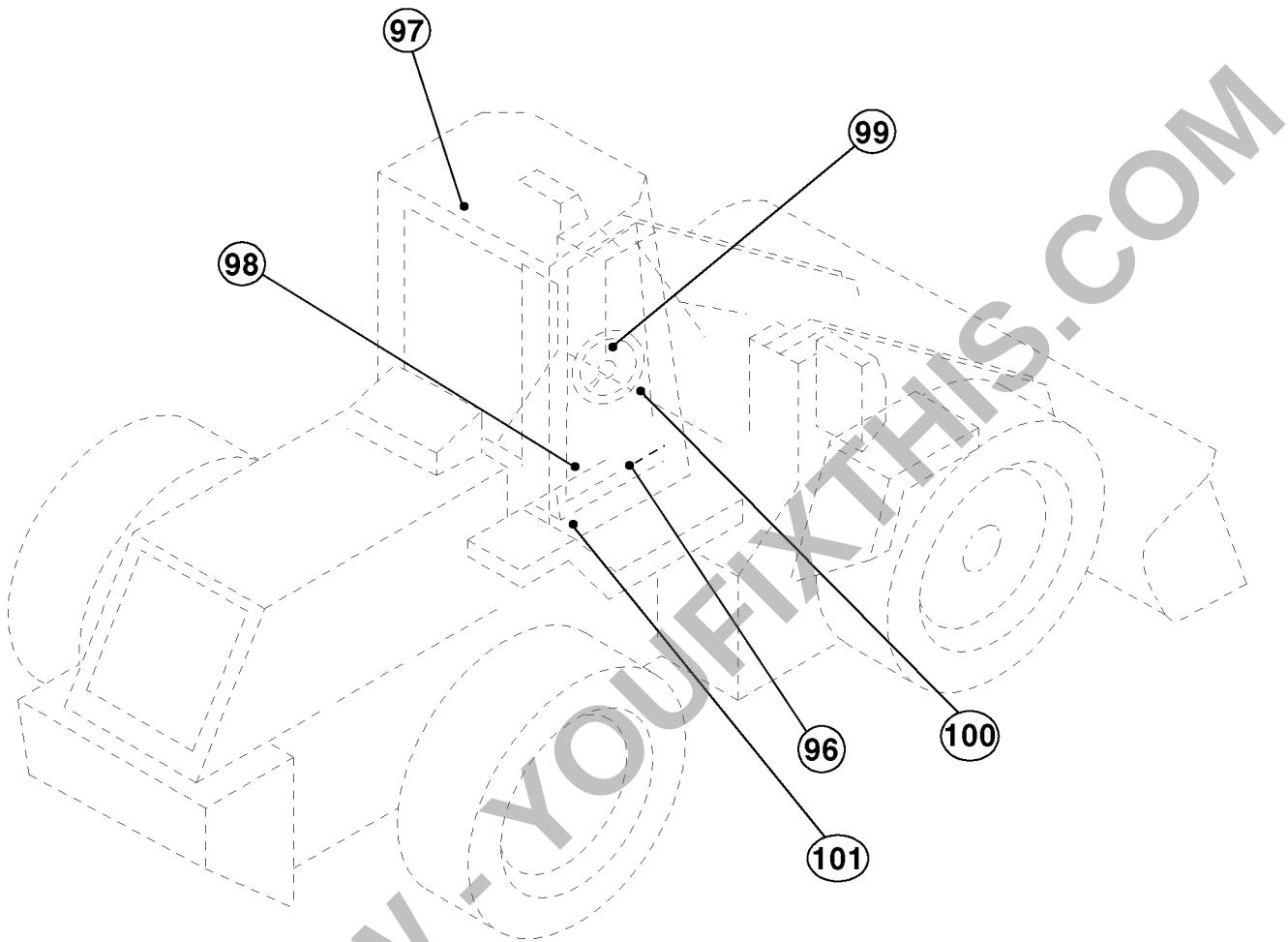
CLEANING THE HYDRAULIC SYSTEM

1. Prepare the portable filter on page 3 by doing the following steps:
 - a. Remove all the hydraulic oil from the inlet and outlet hoses for the portable filter.
 - b. Remove the filter element from the portable filter.
 - c. Remove all hydraulic oil from the portable filter.
 - d. Clean the inside of the housing for the filter element.
2. You must know whether the contamination is microscopic or visible. See Types of Contamination on page 4.
3. If the contamination is microscopic:
 - a. Check the maintenance schedule for the machine to learn if the hydraulic oil must be changed. If needed, change the hydraulic oil. See Section 1002 for specifications. Change the hydraulic filter.
 - b. Do steps 6 through 38.
4. If the contamination is visible:
 - a. Change the hydraulic oil and hydraulic filter. See Section 1002 for oil specifications.
 - b. Do steps 5 through 38.
5. Check the amount of contamination in the hydraulic system by doing the following steps:
 - a. Disassemble one cylinder in two different circuits. Check for damage to seals, scoring of the cylinder wall, etc. Repair the cylinders as necessary.
 - b. If, in your judgment, the damage to the cylinders was caused by severe contamination and is not the result of normal wear, it is necessary to remove, clean and repair valves, pump, lines, cylinders, hydraulic reservoir, etc. in the hydraulic system.
6. Connect a vacuum pump to the hydraulic reservoir air breather hose. Start the vacuum pump.
7. Loosen and remove the drain plug from the reservoir.
8. See the fitting kit shown on page 3. Install the valve in the hole for the drain plug. Make sure that the valve is closed.
9. Stop the vacuum pump.
10. Connect the inlet hose for the portable filter to the valve that is installed in the hole for the drain plug.
11. Disconnect the vacuum pump from the filler cap opening on the hydraulic reservoir.
12. Install the outlet hose for the portable filter in the hydraulic reservoir.
13. Open the valve that is installed in the hole for the drain plug.
14. Move the switch for the portable filter to the ON position. Start and run the engine at 1500 rpm (r/min).
15. Run the portable filter for 10 minutes.
16. Continue to run the portable filter. Increase the engine speed to full throttle. Heat the oil to operating temperature by doing the following steps:
 - a. Hold the bucket control lever in the ROLLBACK position for 15 seconds.
 - b. Return the bucket control lever to NEUTRAL for 30 seconds.
 - c. Repeat steps 17a through 18b until the oil in the hydraulic system is at operating temperature.
17. Continue to run the engine at full throttle. Continue to run the portable filter.
18. Operate each hydraulic circuit to completely extend and retract the cylinders. Continue to operate each hydraulic circuit two times, one after the other, for 45 minutes.
19. Decrease the engine speed to low idle.
20. Continue to run the portable filter for 10 minutes.
21. Stop the portable filter.
22. Stop the engine.
23. Remove the hose from the hydraulic reservoir.

PREVIEW - YOUFIXTHIS.COM

PREVIEW - YOUFIXTHIS.COM

TROUBLESHOOTING ROTATING BEACON, STOP SWITCH, HAZARD SWITCH, TURN SIGNAL/HI/LOW BEAM/HORN SWITCH, AND FLASHER MODULE



96. BEACON SWITCH
97. ROTATING BEACON

98. STOP LAMP SWITCH
99. HAZARD SWITCH

100. TURN SIGNAL, HI/LOW BEAM, AND HORN SWITCH
101. FLASHER MODULE

GM98M015

96 – Beacon Switch

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 and the 5 position rotary lamp switch (112) in position 3 or higher.		
Terminal for wire 49 to ground	24 volts	Check the 5 position rotary lamp switch (112), also check circuit 49.
Terminal for wire 19X to ground	24 volts	Check fuse X, also check circuit 19X.
NOTE: Put the beacon switch (96) in the ON position.		
Terminal for wire 46 to ground	24 volts	Bad beacon switch (96).

Section

4004

STARTER AND STARTER SOLENOID - 721C

4004

CASE CORPORATION
700 State Street
Racine, WI 53404 U.S.A.

CASE CANADA CORPORATION
3350 SOUTH SERVICE ROAD
BURLINGTON, ON L7N 3M6 CANADA

Bur 7-12240

© 1999 Case Corporation
Printed in U.S.A.
January, 1999

Download full manual at youfixthis.com

16. The ammeter indication in step 13 must not be less than 65 amperes and the voltmeter indication must be 25 to 29 volts.

A. If the ammeter and voltmeter indications were correct, the alternator and voltage regulator are good.

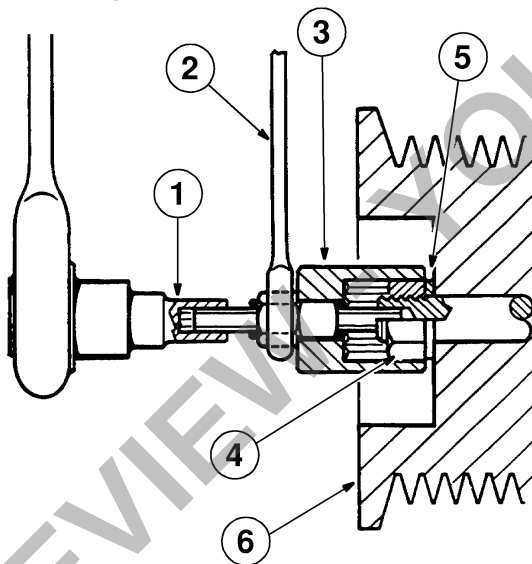
B. If the ammeter and voltmeter indications were not correct, the problem is in the alternator or voltage regulator. If a new voltage regulator and brush assembly are available, replace the voltage regulator and brush assembly and repeat the test.

C. If the alternator still does not operate correctly, disassemble the alternator and repair as necessary.

ALTERNATOR DISASSEMBLY, TESTING, AND ASSEMBLY

Disassembly and Testing

1. Place the alternator on a clean bench.
2. Use the pulley nut tool (1), wrench (2), and socket (3), and remove the retaining nut (4) and washer (5) from the alternator drive pulley (6), refer to Figure 2.



44L7

1. PULLEY NUT TOOL
2. WRENCH
3. SOCKET
4. RETAINING NUT
5. WASHER
6. ALTERNATOR PULLEY

Figure 2. RETAINING NUT REMOVAL

3. Remove the pulley (3), refer to Figure 3.
4. Remove the fan (4).
5. Remove the nuts (5), washers (6), nuts (7), washers (8), and plastic washers (9) that hold the housings together.
6. Remove the two screws (10) and washers (11) that hold the brush holder and voltage regulator (12) to the alternator. Remove the brush holder and voltage regulator (12).
7. Disconnect the capacitor (18) from the alternator.
8. Remove the screw (16) and washer (17) that hold the capacitor (18) to the rear housing (21). Remove the capacitor (18).
9. Put marks on the front housing (20) and rear housing (21) so they can be correctly assembled.
10. Remove the four housing screws (19) that hold the front and rear housings (20 and 21) together.
11. Separate the front housing (20) from the rear housing (21). Put a mark on the stator coil (44) so it can be correctly assembled.
12. Remove the four screws (22) that hold the rotor (24) in the front housing (20).
13. Remove the rotor (24) from the front housing (20).

Section 6002

6002

TRANSMISSION SPECIFICATIONS, PRESSURE CHECK, AND TROUBLESHOOTING

CASE CORPORATION
700 State Street
Racine, WI 53404 U.S.A.

CASE CANADA CORPORATION
3350 South Service Road
Hamilton, ON L7N 3M6 CANADA

Bur 7-12391

Copyright © 2000 Case Corporation
Printed in U.S.A.
April, 2000

Download full manual at youfixthis.com

SPECIFICATIONS

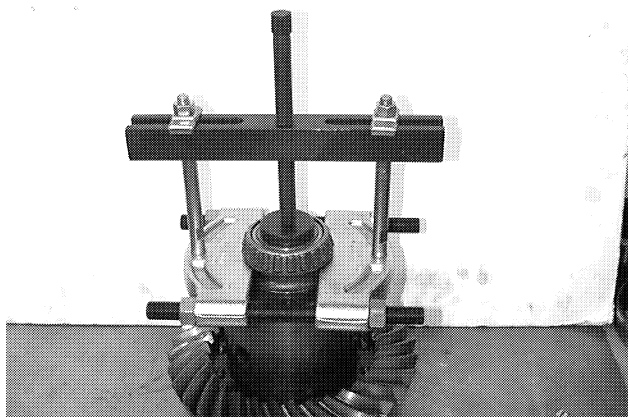
Clutch KV and KR plate clearance	2.7 mm (0.106 inches)
Clutch K1 plate clearance.....	2.4 mm (0.094 inches)
Clutch K2, K3 plate clearance	1.8 mm (0.071 inches)
Clutch K4 Plate Clearance	1.2 mm (0.047 inches)

NOTE: *The J I Case Company reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.*

PREVIEW - YOUFIXTHIS.COM

DISASSEMBLY OF LIMITED SLIP DIFFERENTIAL

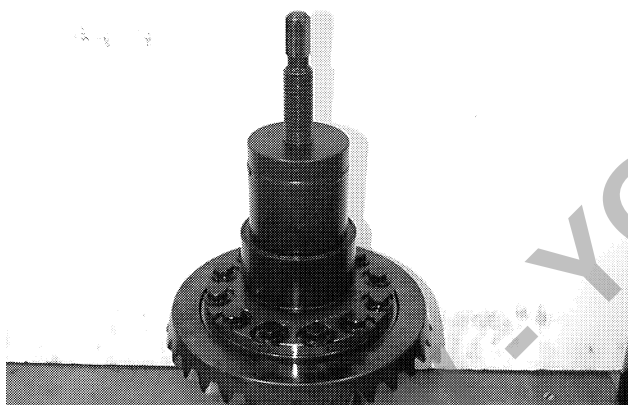
STEP 108



BD01F059

Remove the bearing inner ring from the differential housing using CAS2848 puller, OEM4175 pulling attachment, 1103 puller legs, and 8065 step plate.

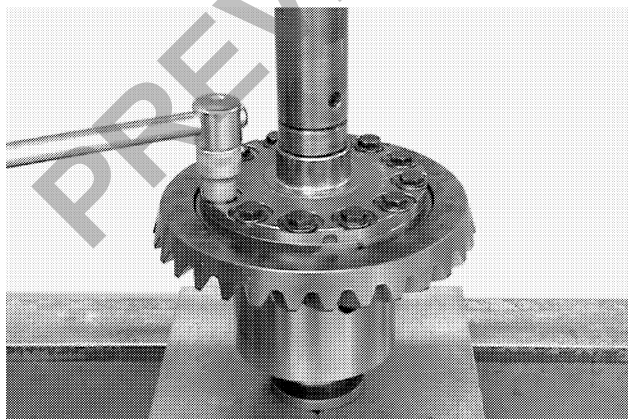
STEP 109



BD01F075

Remove the bearing inner ring using CAS2871 collet set, CAS2882 puller body, and 8067 step plate.

STEP 110



BD00M323

Place the differential in a press to prevent it from turning. Loosen and remove the bolts.

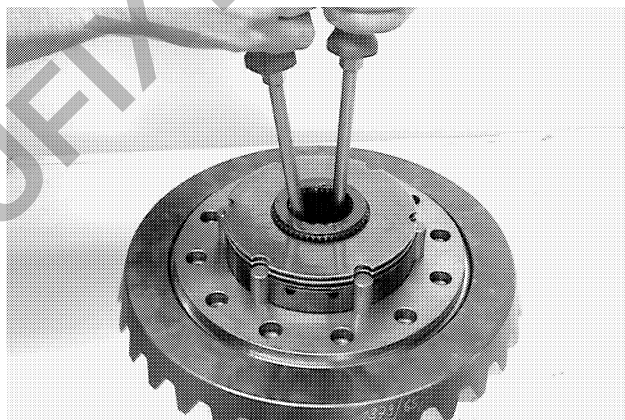
STEP 111



BD00M324

Remove the housing cover from the differential housing.

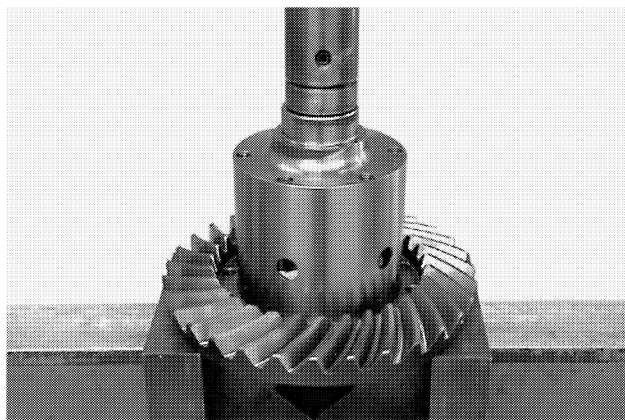
STEP 112



BD00M325

Remove all single parts from the differential housing.

STEP 113



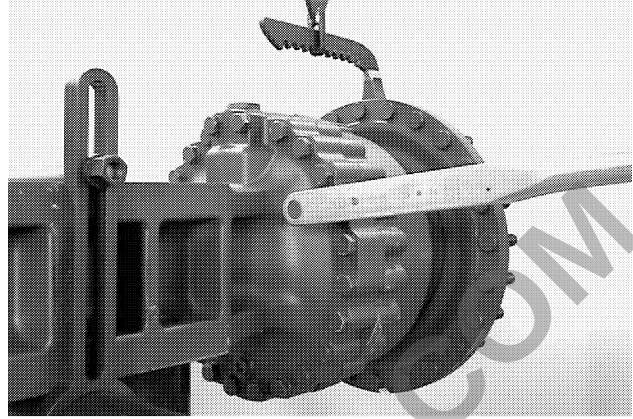
BD00M326

Press off the ring gear from the differential housing.

STEP 186

BD01F086

Use acceptable lifting equipment and place the wheel end on the axle housing. Use pipe clamps to compress the wheel end and axle housing together.

STEP 187

BD00M456

Install the bolts and washers on the wheel end.
Tightening torque 390 Nm (288 pound-feet)

NOTE: Repeat steps 184 to 187 for the other wheel end.

NOTE: Prior to putting into operation of the axle, fill with oil. See section 1002.

Section 7008

PARKING BRAKE

7008

CASE CORPORATION
700 State Street
Racine, WI 53404 U.S.A.

CASE CANADA CORPORATION
3350 SOUTH SERVICE ROAD
BURLINGTON, ON L7N 3M6 CANADA

Bur 7-12540

© 1999 Case Corporation
Printed in U.S.A.
January, 1999

Download full manual at youfixthis.com

BUCKET CYLINDER FOR 621C AND 721C XT MODELS

Disassembly

1. Clean the outside of the cylinder. If the hoses were removed with the cylinder, remove the hoses from the cylinder.
2. Fasten the cylinder in a vise or other holding equipment. Be careful to prevent damage to the tube (1), refer to Figure 6.
3. Loosen and remove the lock screw (2) from the gland (3) and tube (1).
4. Use a spanner wrench to loosen and remove the gland (3) from the tube (1).
5. Pull the piston rod (4) straight out of the tube (1) to prevent damage to the tube (1).
6. Fasten the rod yoke in a vise and put a support below the piston rod (4) near the piston (5). Use a shop cloth between the support and the piston rod (4) to prevent damage to the piston rod (4).
7. Use a torque multiplier, CAS-1039, to loosen and remove the piston bolt (6) and hardened washer (7) that secure the piston.
8. Remove the piston (5) from the piston rod (4).
9. Remove the gland (3) from the piston rod (4).
10. Remove the backup ring (8), piston seal (9) and wear ring (10) from the piston (5).
11. Remove the wiper (11), rod seal (12), buffer seal (13) and the bushing (14) from the gland (3).

NOTE: Use care not to scratch the ID of gland when removing seals.

12. Remove the O-ring (15) and backup ring (16) from the OD of gland (3).

Inspection

1. Discard the parts that were removed from the piston and the gland.
2. Clean all parts in cleaning solvent. Use only lint free cloths for cleaning and drying.
3. Check to be sure that the piston rod is straight. If the piston rod is not straight, replace it with a new piston rod.
4. Illuminate the inside of the tube for deep grooves and other damage. If there is any damage to the tube, replace it with a new tube.
5. Remove any small scratches on the piston rod or inside the tube with emery cloth of medium grit. Use the emery cloth with a rotary motion.
6. Inspect the bushings in the piston rod eye or yoke and the tube. Replace as required.
7. Inspect the gland for rust and clean and remove rust as necessary.
8. Inspect the gland end of the tube for sharp edges that will cut the gland O-ring and remove as necessary.
9. Inspect the piston for damage and wear. If the piston is damaged or worn, replace it with a new piston.

NOTES

PREVIEW - YOUFIXTHIS.COM

CONTROL VALVE

Removal

1. Park the machine on a level surface and lower the bucket to the floor.
2. Turn the master disconnect switch to OFF.
3. Remove the heater cable from the heater cable clip (1), refer to Figure 4.
4. Remove the clamp (2) from the front of the control valve (4) and the clamp (3) from the rear of the control valve.
5. Remove the return hose (5) from the front of the control valve (4).
6. Remove the return hose (6) from the rear of the control valve (4).
7. Remove and discard the control valve from the heating and air conditioning core (7).

Installation

1. The control knob should be in the OFF position.
2. Install a clamp (3) onto the rear return hose (6).
3. Install a new control valve (4) onto the rear return hose (6).
4. Install a clamp (2) onto the front return hose (5).
5. Install the front return hose (5) onto the front of the control valve (4).
6. Install the clamps (2 and 3) onto the control valve (4).
7. Install the heater cable onto the heater cable clip (1).
8. Rotate the control valve (4) to 20 degrees off center, so valve arm will clear the cab filler door.
9. Turn the master disconnect switch to ON.

PREVIEW ONLY

You're viewing 24 of 824 pages

The full manual includes:

- All 824 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Case 621C, 721C, 621C/721C Loaders Service Manual



Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual