L175, C175 REPAIR MANUAL COMPLETE CONTENTS

SECTION 00 - GENERAL INFORMATION 3

SECTION 10 - ENGINE 4

SECTION 27 - TRACKS AND MOTORS 6

SECTION 29 - HYDROSTATIC TRANSMISSION 7

SECTION 33 - BRAKES AND CONTROLS 9

SECTION 35 - HYDRAULIC SYSTEM 10

SECTION 37 - TOWING HOOKS AND BALLASTING 12

SECTION 39 - FRAMES 12

SECTION 44 - AXLES AND WHEELS 13

SECTION 50 - CAB CLIMATE CONTROL 14

SECTION 55 - ELECTRICAL SYSTEM 15

SECTION 82 - FRONT LOADER (BOOM AND MOUNTING PLATE) 17

SECTION 88 - ACCESSORIES 18

SECTION 90 - PLATFORMS, CAB, BODYWORK, AND DECALS 19

The following pages are the collation of the contents pages from each section and chapter of the L175/C175 Repair Manual. Complete Repair Manual part # 87630289.

The sections used through out all New Holland product Repair Manuals may not be used for each product. Each Repair Manual will be made up of one or several books.

Each book will be labeled as to which sections are in the overall Repair Manual and the sections that each book contains.

The sections listed above are the sections utilized for the L175 Skid Steer and C175 Track Loader.

© CNH AMERICA LLC

245 E NORTH AVENUE
CAROL STREAM, IL 60188 U.S.A.

MidWestTech | New Holland L175, C175 Skid Steer Compact Track Loader Service Manual... Order the manual at mid-west-tech.com >

SECTION 00 – GENERAL INFORMATION

BOOK 1 - 87634727

CONTENTS

Section	Description	Page
	Introduction	00-2
	About Improvements	00-2
	Company Policy	00-3
	Parts and Accessories	00-3
	Model Codes	00-3
	Precautionary Statements	00-4
	Safety Precaution Information	00-5
	General Safety Information	00-7
	Machine Model and Serial Number Location	00-9
	Engine Model and Serial Number Location	00-9
	Hardware Torque Specifications	00-10
	Installation of Adjustable Fittings in Straight Thread O Ring Bosses	00-12
	Standard Torque Data for Hydraulic Tubes and Fittings	00-12
	Pipe Thread Fitting Torque	00-13
	Lubricants and Coolants	00-13
	Sealants	00-13
	Properly Support a Raised Machine	00-14
	Properly Support Boom on Boom Lock Pins	00-14
	Raising Boom Without Hydraulic Oil Flow	00-14
	Raising Boom Without Battery Voltage (12V)	00-16
	Reattaching Cylinders After Repair with Boom Resting on Boom Lock Pins	00-17
	Major Unit Overhaul	00-18
	Cab and Boom Tilt Procedure	00-19
	Craning the Skid Steer	00-25
	Special Tools	00-28
	Specifications	00-29
	Dimensions	00-35
	Cab and Boom Tilt Procedure (Cab Upgrade Machines Only)	00-37

MidWestTech | New Holland L175, C175 Skid Steer Compact Track Loader Service Manual... Order the manual at mid-west-tech.com >

SECTION 10 – ENGINE
Book 1 - 87634727
Chapter 1 – L175 - N844LT, C175 - N844LT

CONTENTS

Section	Description	Page
10 000	General Engine Information	10-3
	General Description	10-3
	Engine Component Descriptions	10-3
	Engine Model and Serial Number Location	10-5
	Turbocharger Lubrication	10-5
	Safety Precautions	10-6
	General Engine Specifications	10-7
	Troubleshooting	10-11
	L175 - Excessive Oil Consumption	10-15
	Specifications - Service Standards	10-17
	Torque Specifications	10-21
	Engine Components Electrical Diagram	10-22
10 001 10	Engine Removal	10-23
10 001 53	Engine Disassembly Sequence	10-28
	Engine Component Maintenance	10-36
10 101 55	Valve Seat	10-39
10 101 56	Cylinder Block	10-41
10 105 22	Piston and Piston Rings	10-42
	Connecting Rod	10-45
10 103 10	Bearing Holder	10-47
	Front Crankshaft Bearing (Bushing)	10-48
10 103 30	Crankshaft	10-50
10 103 76	Flywheel and Ring Gear	10-52
10 106 40	Camshaft Assembly	10-52
10 106 66	Camshaft Gear and Bearing Assembly	10-53
	Timing Gear	10-54
10 304 41	Oil Pump	10-54
10 304 10	Oil Filter	10-55
10 402 28	Water Pump Assembly and Thermostat Housing	10-55
10 402 30	Thermostat	10-55
10 230 24	Governor	10-57
	Governor Operation	10-59

MidWestTech | New Holland L175, C175 Skid Steer Compact Track Loader Service Manual... Order the manual at mid-west-tech.com >

SECTION 27 - TRACKS

CHAPTER 1 - TRACKS, MOTORS

Book 2 - 87634730

CONTENTS

Section	Description	Page
27 000	Specifications	27-3
	Special Torques	27-3
	Wheel Hub Housing - Remove	27-4
	Wheel Hub Housing - Install	27-5
	Drive Sprocket - Remove	27-6
	Drive Sprocket - Install	27-8
	Rubber Track - Remove	27-10
	Rubber Track - Install	27-13
	Rubber Track - Tension Adjust	27-14
	Track Tension Mechanism - Remove	27-16
	Track Tension Mechanism - Install	27-17
	Track Rdler - Remove	27-18
	Track Roller - Install	27-19
	Idler Wheel - Remove	27-20
	Idler Wheel - Install	27-22
	Track Drive Motor - Remove	27-23
	Track Drive Motor - Install	27-24
	Track Drive Motor - Disassembly	27-26
	Track Drive Motor - Assembly	27-44

MidWestTech | New Holland L175, C175 Skid Steer Compact Track Loader Service Manual... Order the manual at mid-west-tech.com >

SPECIFICATIONS

SERVICE STANDARDS

Inspection Item	Standard Dimension	Standard Value	To Be Repaired	Allowable Limit	Remarks
CYLINDER HEAD					
Compression pressure of cylinder		More than 426.6 PSI (30 kg/cm^2)	Less than 355.5 PSI (25 kg/cm^2)		
Tigtening torque of cylinder head		72.3 - 75.9 ft. lbs. (98 - 103 N·m)			
Distortion of face of cylinder head		0.002" max. (0.05 mm)	0.0047" (0.12 mm)		
Valve seat depth (Both intake and exhaust) Width Recess Valve Seat		0.026" - 0.037" (0.65 - 0.95 mm)	0.063" (1.6 mm)		Valve seat angle 45°
Valve seat width (intake)		0.06"-0.08" (1.5 - 2.0 mm)	0.1" (2.5 mm)		
Valve seat width (exhaust)		0.076"-0.085" (1.94 - 2.16 mm)	0.1" (2.5 mm)		
CYLINDER BLOCK					
Type		Dry type (Unit type)			
Bore	3.307" (84 mm)	3.307" - 3.308" (84 - 84.019 mm)	3.315" (84.2 mm)	3.354" (85.2 mm)	Oversize 0.02/.04" (0.5, 1.0 mm)
Cylinder block type surface warpage		0.002" max. (0.05 mm)	0.0047" (0.12 mm)		
PISTON					
Skirt long-diameter size	3.307" (84 mm)	3.3050" - 3.3056" (83.948 - 83.963)		3.295" (83.7 mm)	Oversize 0.02/.04" (0.5, 1.0 mm)
Clearance with cylinder		0.0015" - 0.0028" (0.038 - 0.072 mm)		0.01" (0.25 mm)	68° F (20° C)
Piston pin hole inside diameter	1.1024" (28 mm)	1.1023" - 1.1025" (27.999 - 28.003)			
Piston pin hole to pin clearance		-0.00004" ± .00028" (0.001 ± 0.007 mm)		0.0008" (0.02 mm)	

MidWestTech | New Holland L175, C175 Skid Steer Compact Track Loader Service Manual... Order the manual at mid-west-tech.com >

TURBOCHARGER - L175 N844LT ENGINE

The L175 skid steer is equipped with the N844LT turbocharged engine.

Specifications

ITEM	DESCRIPTION	SPECIFICATIONS
Turbocharger	Lubrication	Pressure-fed from external source
Turbine	Axial-flow turbine max. continuous permissible speed (RPM)	180000
Blower	Centrifugal blower dry weight lbs. (kg)	7.0 lbs. (3.2 kg)

TROUBLESHOOTING

TURBOCHARGER IS SLUGGISH IN PICKING UP SPEED

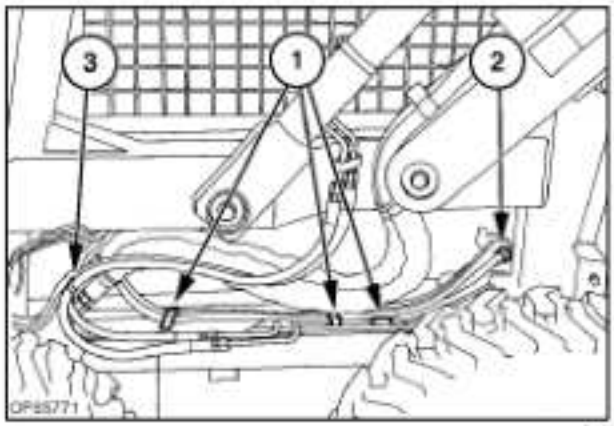
POSSIBLE CAUSE	CORRECTION
The sealed part of turbine wheel is heavily carboned, causing the rotor to offer much resistance to turning.	Change oil (engine oil) Disassemble and clean
Incomplete fuel combustion in the engine, due to a faulty condition in the fuel injection system.	Disassemble and clean Check the injection system for cause, and repair
Lack of lubrication during cold weather startup	Warm up below 1500 RPM for three minutes on startup and allow to run at low idle for one minute before shutdown

EXCESSIVE OR ABNORMAL VIBRATION

POSSIBLE CAUSE	CORRECTION
A loose pipe connection at the turbine or blower side or at the bearing	Tighten and repair
Bearing failure causing the rotor to run rough	Disassemble and repair
Turbine wheel or blower wheel has broken vanes caused by entry of metal or solid objects	Disassemble and repair damaged parts
Loss of dynamic balance in the rotor	Disassemble and repair damaged parts

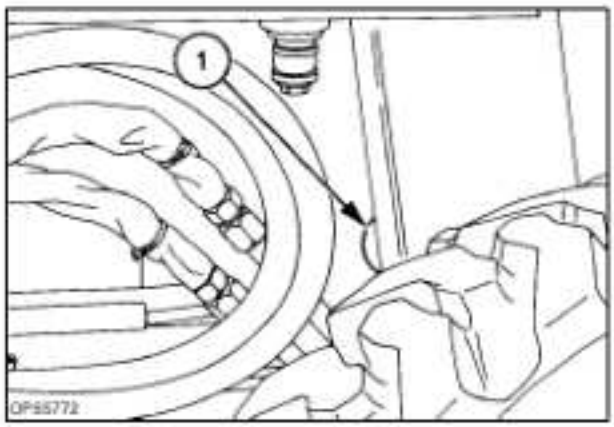
MidWestTech | New Holland L175, C175 Skid Steer Compact Track Loader Service Manual... Order the manual at mid-west-tech.com >

15. Remove the wire harness clamps and plastic ties along the left side of the lower frame at 1, 2, and 3.



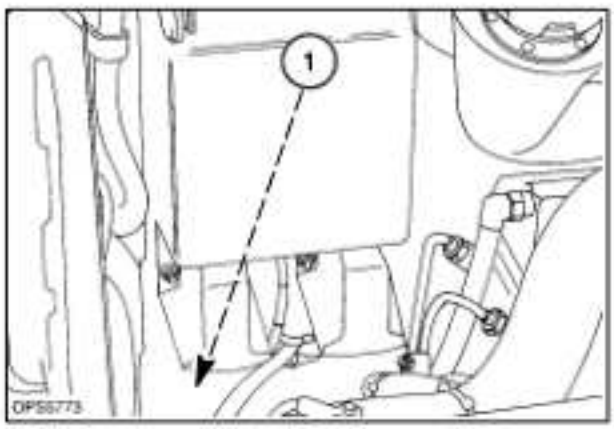
10

16. Remove the ground strap, 1, from the cab inner shell and lower main frame.



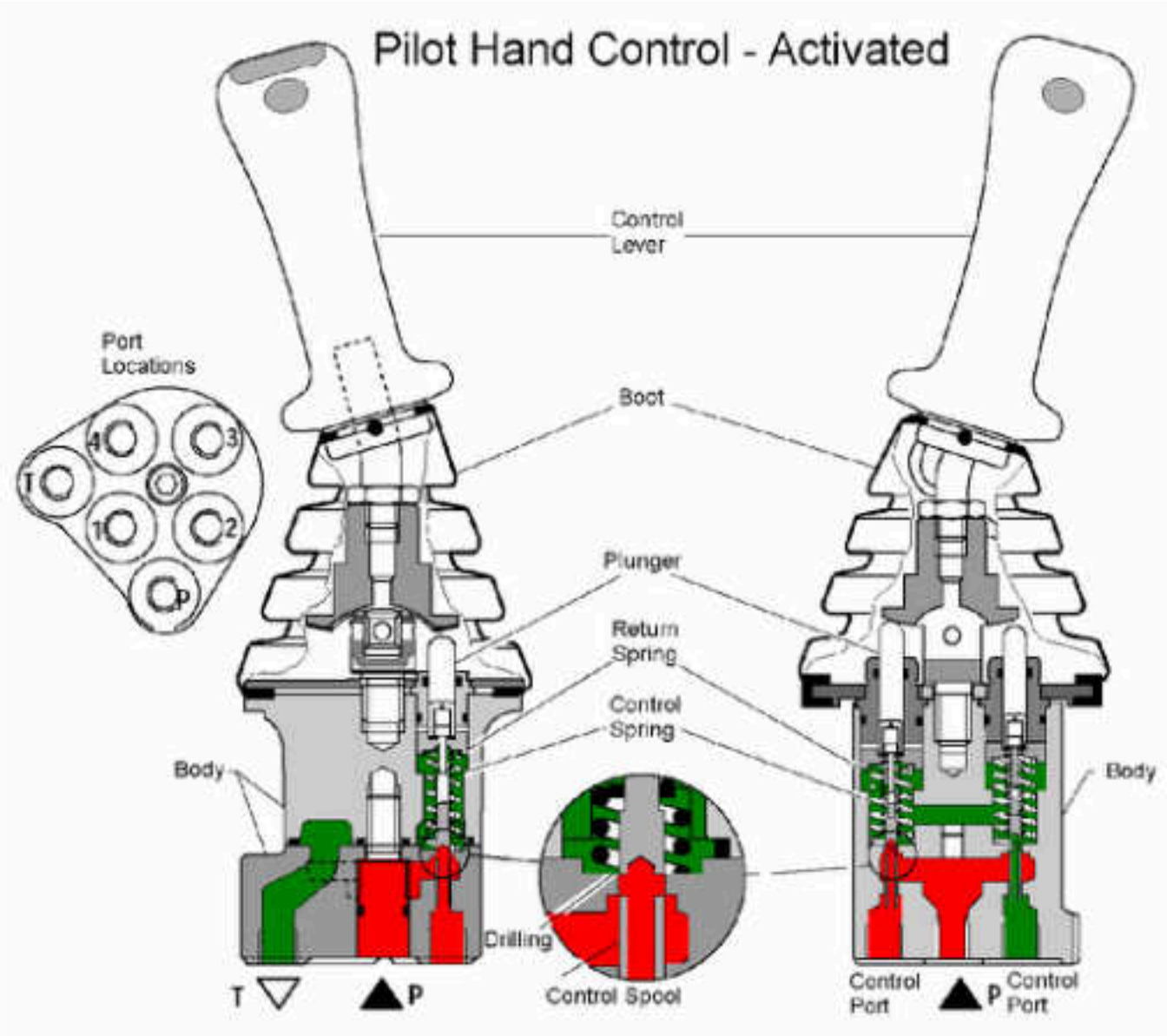
11

17. Remove the engine fuse/relay panel support hardware, 1, and raise and tie the panel assembly to the back of the cab assembly.

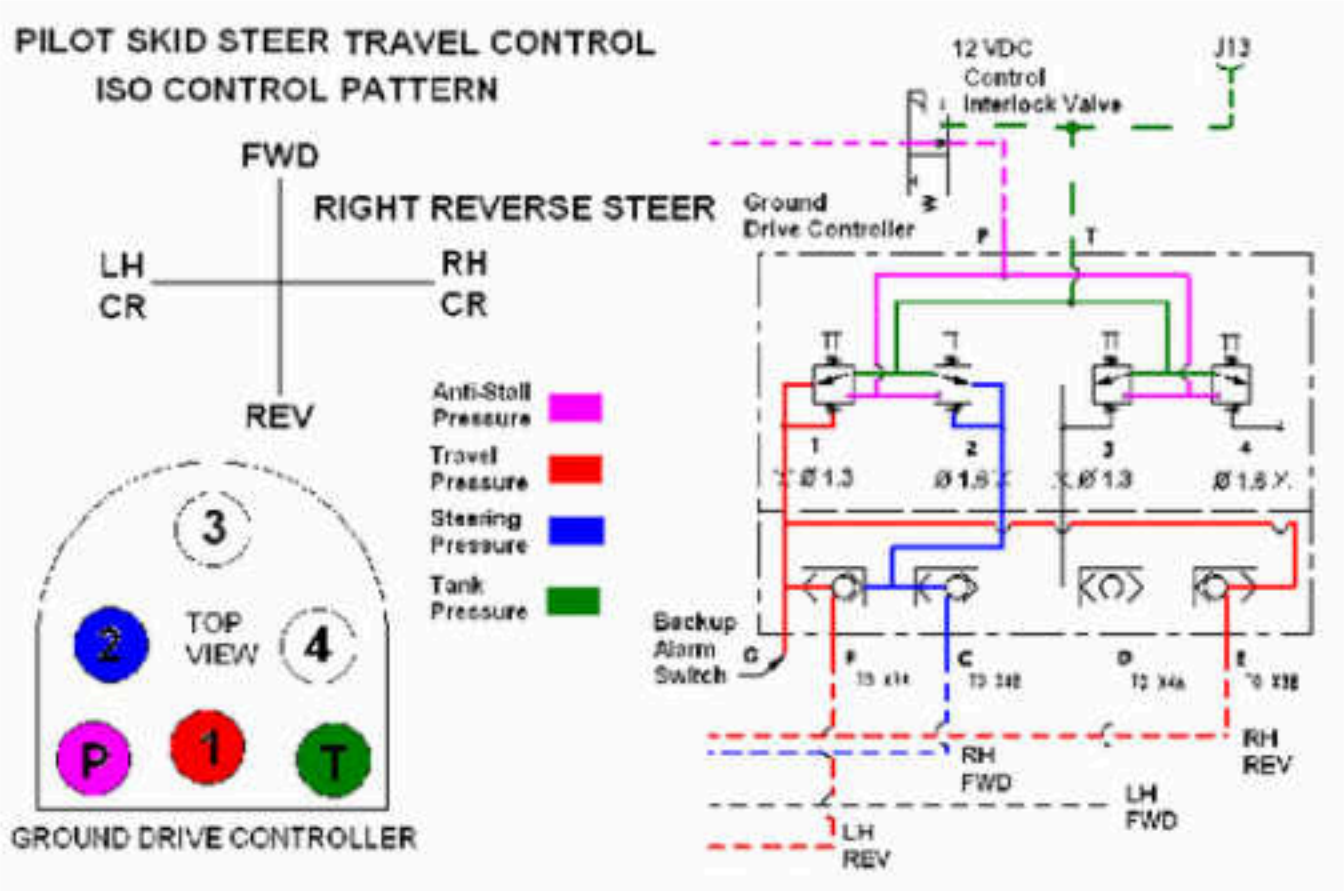


12

MidWestTech | New Holland L175, C175 Skid Steer Compact Track Loader Service Manual... Order the manual at mid-west-tech.com >

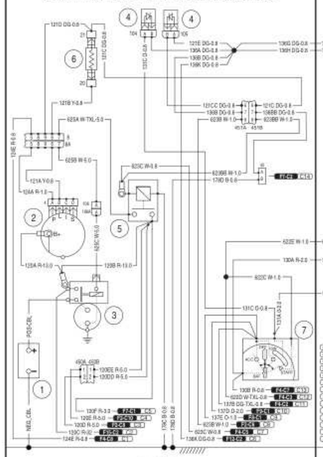


MidWestTech | New Holland L175, C175 Skid Steer Compact Track Loader Service Manual... Order the manual at mid-west-tech.com >



MidWestTech | New Holland L175, C175 Skid Steer Compact Track Loader Service Manual... Order the manual at mid-west-tech.com >

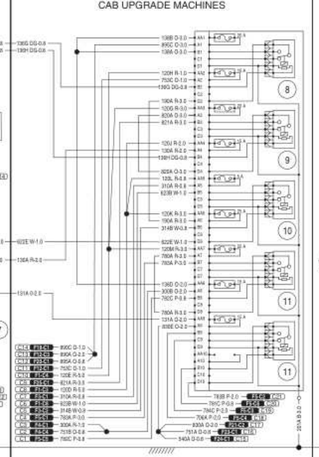
STARTING SYSTEM - CAB UPGRADE MACHINES



FRAME 1

BC07E491-01A

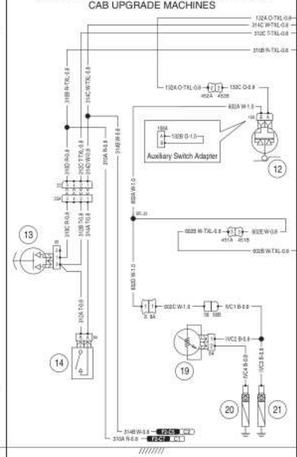
POWER DISTRIBUTION
CAB UPGRADE MACHINES



FRAME 2

BC07E491-02A

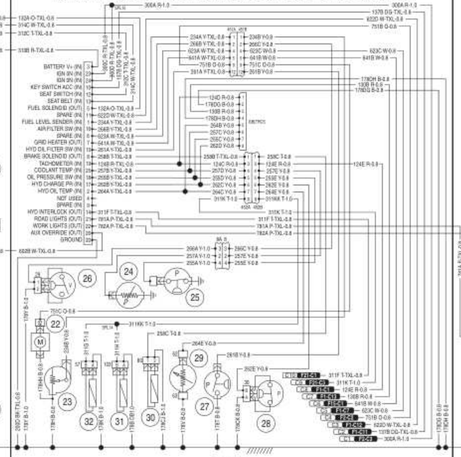
SAFETY INTERLOCK AND FUEL SUPPLY SYSTEM
CAB UPGRADE MACHINES



FRAME 3

BC07E491-03A

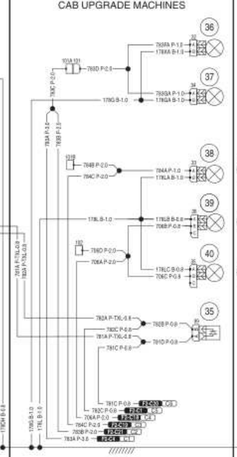
INSTRUMENT CLUSTER MONITORING SYSTEM - CAB UPGRADE MACHINES



FRAME 4

BC07E491-04A

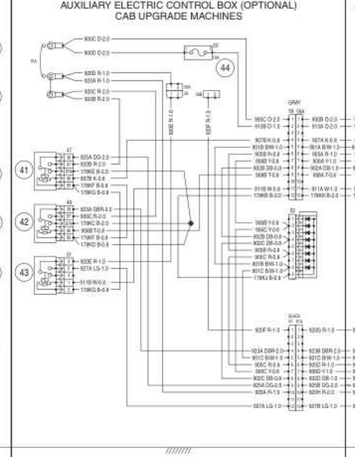
STANDARD LAMPS
CAB UPGRADE MACHINES



FRAME 5

BC07E491-05A

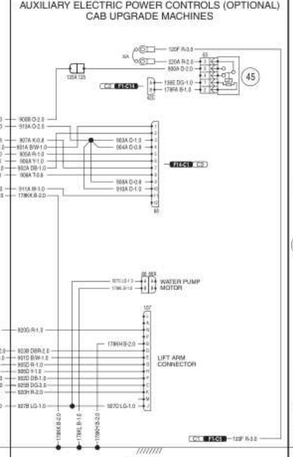
LOADER ARM
AUXILIARY ELECTRIC CONTROL BOX (OPTIONAL)
CAB UPGRADE MACHINES



FRAME 6

BC07E491-05A

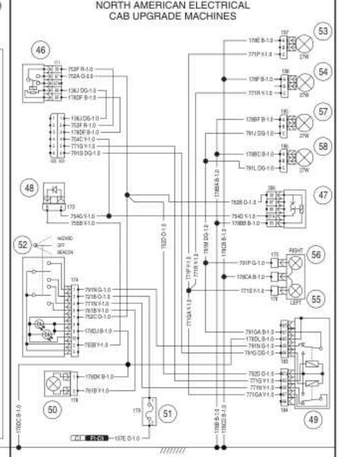
LOADER ARM
AUXILIARY ELECTRIC POWER CONTROLS (OPTIONAL)
CAB UPGRADE MACHINES



FRAME 7

BC07E491-07A

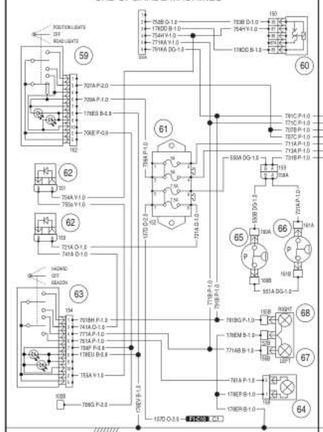
FLASHER AND TURN SIGNALS
NORTH AMERICAN ELECTRICAL
CAB UPGRADE MACHINES



FRAME 8

BC07E491-08A

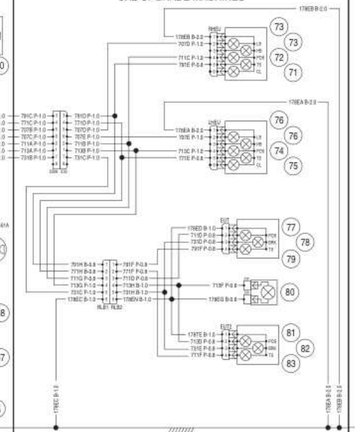
MAIN ELECTRICAL
EUROPEAN ON-ROAD REGULATIONS
CAB UPGRADE MACHINES



FRAME 9

BC07E491-09A

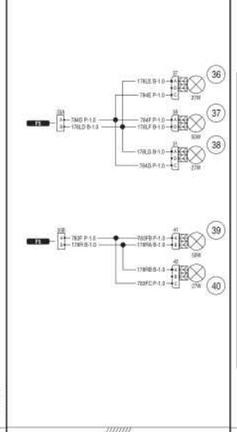
BOOM/REAR ELECTRICAL
EUROPEAN ON-ROAD REGULATIONS
CAB UPGRADE MACHINES



FRAME 10

BC07E491-10A

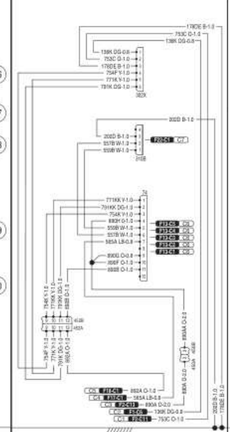
WORK LAMPS
CAB UPGRADE MACHINES



FRAME 11

BC07E491-11A

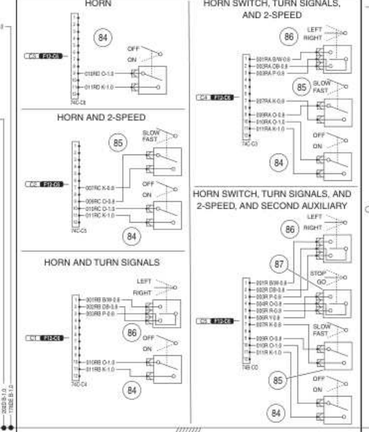
CONTROL LEVER INTERFACE
CAB UPGRADE MACHINES



FRAME 12

BC07E491-12A

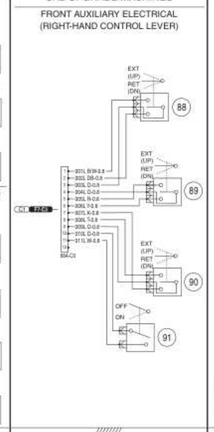
LEFT-HAND CONTROL LEVER (OPTIONS)
CAB UPGRADE MACHINES



FRAME 13

BC07E491-13A

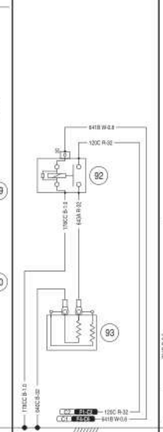
RIGHT-HAND CONTROL LEVER
(OPTIONAL)
CAB UPGRADE MACHINES



FRAME 14

BC07E491-14A

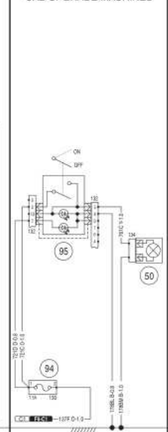
GRID HEATER SYSTEM
CAB UPGRADE MACHINES



FRAME 15

BC07E491-15A

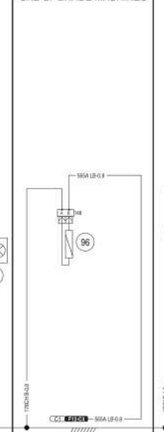
ROTATING BEACON
(OPTIONAL)
CAB UPGRADE MACHINES



FRAME 16

BC07E491-16A

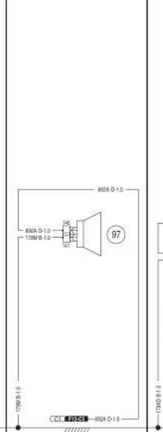
2 SPEED
(OPTIONAL)
CAB UPGRADE MACHINES



FRAME 17

BC07E491-17A

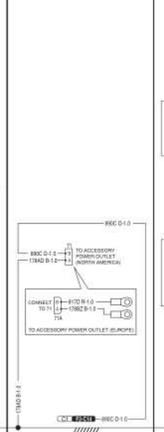
HORN
CAB UPGRADE MACHINES



FRAME 18

BC07E491-18A

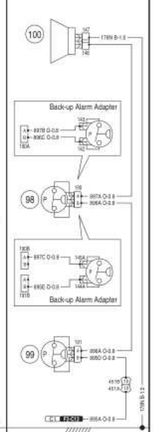
ACCESSORY OUTLET
CAB UPGRADE MACHINES



FRAME 19

BC07E491-19A

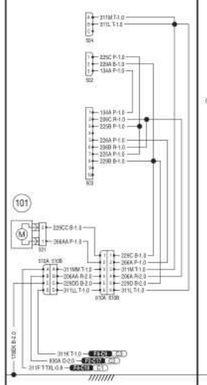
BACK-UP ALARM
CAB UPGRADE MACHINES



FRAME 20

BC07E491-20A

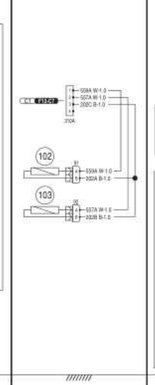
WIPER/WASHER
AND DOOR SWITCH
(OPTIONAL)
CAB UPGRADE MACHINES



FRAME 21

BC07E491-21A

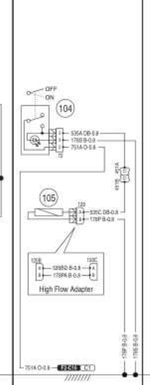
AUXILIARY HYDRAULICS
(OPTIONAL)
CAB UPGRADE MACHINES



FRAME 22

BC07E491-22A

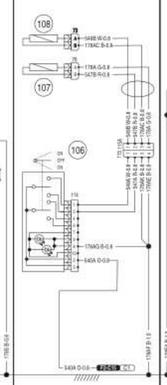
HIGH FLOW
(OPTIONAL)
CAB UPGRADE MACHINES



FRAME 23

BC07E491-23A

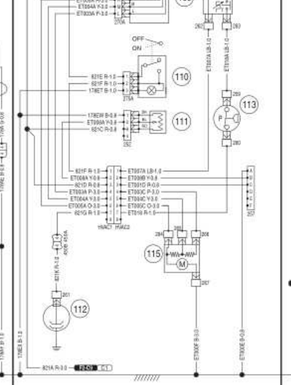
HYDRAULIC
MOUNT PLATE
(OPTIONAL)
CAB UPGRADE MACHINES



FRAME 24

BC07E491-24A

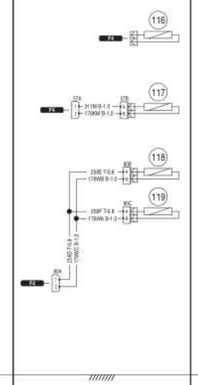
HEATING AND AIR CONDITIONING
(OPTIONAL)
CAB UPGRADE MACHINES



FRAME 25

BC07E491-25A

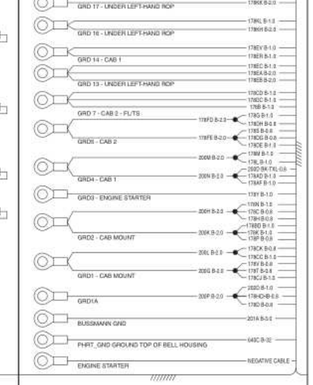
PILOT HYDRAULIC CONTROLS
(OPTIONAL)
CAB UPGRADE MACHINES



FRAME 26

BC07E491-26A

GROUND CONNECTIONS - CAB UPGRADE MACHINES



FRAME 27

BC07E491-27A

COMPONENTS - MECHANICAL AND PILOT CONTROL MACHINES

FRAME - COMPONENT NUMBERS	FRAME - COMPONENT NUMBERS	FRAME - COMPONENT NUMBERS	FRAME - COMPONENT NUMBERS	FRAME - COMPONENT NUMBERS
FRAME 1 COMPONENTS 1 - 1. Battery 1 - 2. Alternator 1 - 3. Starter and Solenoid 1 - 4. Reverse Polarity Diode 1 - 5. Starter Relay 1 - 6. Resistor 1 - 7. Ignition Switch FRAME 2 COMPONENTS 2 - 8. Electrical Accessory (Run) Relay 2 - 9. HVAC Relay 2 - 10. Starter Relay 2 - 11. Lamp Relay #1 2 - 11. Lamp Relay #2 FRAME 3 COMPONENTS 3 - 12. Auxiliary Override Switch 3 - 13. Seat Switch 3 - 14. Seat Belt Switch 3 - 15. Not Used 3 - 16. Not Used 3 - 17. Not Used 3 - 18. Not Used 3 - 19. Cold Start Advance Temperature Sender 3 - 20. Cold Start Advance Solenoid 3 - 21. Fuel Hold-In Solenoid FRAME 4 COMPONENTS 4 - 22. Fuel Pump (ISM Engine Only) 4 - 23. Fuel Sender 4 - 24. Engine Coolant Temperature Sender 4 - 25. Engine Oil Pressure Switch 4 - 26. Air Filter Restriction Switch 4 - 27. Hydraulic Filter Pressure Switch 4 - 28. Charge Pressure Switch 4 - 29. Hydraulic Oil Temperature Sender 4 - 30. Brake Release / Tandem Pump Neutral Override Switch 4 - 31. Loader Valve Solenoid 4 - 32. Loader Valve Solenoid	FRAME 5 COMPONENTS 5 - 33. Not Used 5 - 34. Not Used 5 - 35. Diode 5 - 36. Left Front Work Lamp 5 - 37. Right Front Work Lamp 5 - 38. Rear Work Lamp 5 - 39. Left Rear Indicator Lamp 5 - 40. Right Rear Indicator Lamp FRAME 6 COMPONENTS 6 - 41. Motor Control Left Relay 6 - 42. Motor Control Right Relay 6 - 43. Wiper Motor Relay 6 - 44. Fuse (10 amp) FRAME 7 COMPONENTS 7 - 45. Attachment Relay FRAME 8 COMPONENTS 8 - 46. Hazard / Turn Relay 8 - 47. Flasher Module 8 - 48. Diode (6 amp) 8 - 49. Turn Signal Converter Module 8 - 50. Beacon 8 - 51. Fuse 8 - 52. Hazard/Beacon Switch 8 - 53. Left Front Flashing Lamp 8 - 54. Left Rear Flashing Lamp 8 - 55. Turn Indicator Lamp (Left) 8 - 56. Turn Indicator Lamp (Right) 8 - 57. Right Front Flashing Lamp 8 - 58. Right Rear Flashing Lamp FRAME 9 COMPONENTS 9 - 59. Road Lamp Switch (Europe) 9 - 60. Flasher Module (Europe) 9 - 61. Cab Fuse Block (Europe) 9 - 62. Diode (6 amp) 9 - 63. Hazard/Beacon Switch (Europe) 9 - 64. Beacon (Europe) 9 - 65. Left Brake Lamp Switch (Europe) 9 - 66. Right Brake Lamp Switch (Europe) 9 - 67. Turn Indicator Lamp (Left) (Europe) 9 - 68. Turn Indicator Lamp (Right) (Europe 9 - 69. Not Used 9 - 70. Not Used	FRAME 10 COMPONENTS 10 - 71. Right Front Turn Lamp (Europe) 10 - 72. Right Front Position Lamp (Europe) 10 - 73. Right Front Road Lamp (Europe 10 - 74. Left Front Position Lamp (Europe) 10 - 75. Left Front Turn Lamp (Europe) 10 - 76. Left Front Road Lamp (Europe) 10 - 77. Right Rear Position Lamp (Europe) 10 - 78. Right Rear Brake Lamp (Europe) 10 - 79. Right Rear Turn Lamp (Europe) 10 - 80. License Plate Lamp 10 - 81. Left Rear Position Lamp (Europe) 10 - 82. Left Rear Brake Lamp (Europe) 10 - 83. Left Rear Turn Lamp (Europe) FRAME 11 COMPONENTS 11 - 36. Optional Right Rear Work Lamp 11 - 37. Standard Rear Work Lamp 11 - 38. Optional Left Rear Work Lamp 11 - 39. Standard Front Work Lamp 11 - 40. Optional Front Work Lamp FRAME 12 COMPONENTS No Components FRAME 13 COMPONENTS 13 - 84. Horn Switch 13 - 85. 2-Speed Switch 13 - 86. Turn Signal Switch 13 - 87. Auxiliary Hydraulic Switch FRAME 14 COMPONENTS 14 - 88. Front Electric Control Switch #1 14 - 89. Front Electric Control Switch #2 14 - 90. Front Electric Control Switch #3 14 - 91. Front Electric Control Switch #4 FRAME 15 COMPONENTS 15 - 92. Grid Heater Relay 15 - 93. Grid Heater FRAME 16 COMPONENTS 16 - 50. Beacon 16 - 94. Fuse (7.5 amp) 16 - 95. Beacon Switch	FRAME 17 COMPONENTS 17 - 96. 2 Speed Solenoid FRAME 18 Components 18 - 97. Horn (Optional) FRAME 19 COMPONENTS No Components FRAME 20 COMPONENTS 20 - 100. Back-Up Alarm 20 - 98. Back-Up Alarm Switch 20 - 99. Back-Up Alarm Switch FRAME 21 COMPONENTS 21 - 101. Washer Pump FRAME 22 COMPONENTS 22 - 102. Second Auxiliary Hydraulics - Solenoid #1 22 - 103. Second Auxiliary Hydraulics - Solenoid #2 FRAME 23 COMPONENTS 23 - 104. High Flow Switch (Optional) 23 - 105. High Flow Solenoid (Optional) FRAME 24 COMPONENTS 24 - 106. Hydraulic Coupler Switch (Optional) 24 - 107. Hydraulic Coupler Release Solenoid (Optional) 24 - 108. Hydraulic Coupler Engage Solenoid (Optional)	FRAME 25 COMPONENTS 25 - 109. Blower Switch (Optional) 25 - 110. Air Conditioner Switch (Optional) 25 - 111. Heater Control Switch (Optional) 25 - 112. Compressor Clutch 25 - 113. Pressure Switch 25 - 114. Thermostat 25 - 115. Blower Motor FRAME 26 COMPONENTS 26 - 116. Loader Control Pressure Solenoid 26 - 117. Magnetic Detent Solenoid 26 - 118. Ground Drive Control Pressure Solenoid 26 - 119. Brake Valve Solenoid

ACTUATORS: LEVER, HAND, FOOT, COIL, TEMP, DIODE, PRESSURE, FLOAT LIQUID LEVEL

HOUSINGS: VACUUM SWITCH, PRESSURE SWITCH, LAMP, MOTOR, TEMPERATURE SWITCH

CONTACT CONFIGURATIONS: S.P.S.T., S.P.D.T., D.P.S.T., D.P.D.T.

MISCELLANEOUS SYMBOLS: MOMENTARY / MAINTAINED CONTACTS, VARIABLE RESISTOR, RESISTOR, FUSE, CIRCUIT BREAKER, MALE TERMINAL, FEMALE TERMINAL, 54 COMPONENT NUMBER

SHOWS CIRCUIT SPLICE CONNECTION (SPL-99) — SHOWS CIRCUIT CROSSING NOT CONNECTED

INDICATES EXTERNAL GROUND — INDICATES INTERNALLY GROUNDED COMPONENT

FEMALE CONNECTOR, MALE CONNECTOR, CONNECTOR NUMBER, CONNECTOR IDENTIFICATION, INDICATES PARTIAL CONNECTOR, NOT ALL CONNECTIONS ARE SHOWN

CIRCUIT CONTINUATION: Frame Number and Circuit Number where Circuit continues. FRAME - CIRCUIT. Circuit Number assigned to Circuit in Frame. CIRCUIT TAGS

WIRE IDENTIFICATION

B . . . BLACK	O. . . ORANGE
DB. . DARK BLUE	P. . . PURPLE
G. . . GREEN	R. . . RED
K. . . PINK	T. . . TAN
LG. . LIGHT GREEN	W. . . WHITE
LB. . LIGHT BLUE	Y. . . YELLOW
DG . DARK GREEN	

702A G-1.0 — WIRE NUMBER, WIRE COLOR, WIRE SIZE

BC07E519-06A

NOTES

ELECTRICAL SCHEMATIC FOR CAB UPGRADE MACHINES
(MECHANICAL and PILOT CONTROL MACHINES)
L175 SKID STEER and C175 TRACK LOADER

Additional copies of this Hydraulic and Electrical Schematic can be ordered through Technical Publications Distribution System.
The part number is 5-7040

Copyright © 2007 - CNH America, LLC. All Rights Reserved.

BC07E491-00A

MidWestTech | New Holland L175, C175 Skid Steer Compact Track Loader Service Manual | Publication 87630289NA

Order the manual at mid-west-tech.com >