NEW HOLLAND

LS160
LS170

Workshop Manual

LS160 - Valid from Serial No. LMU029683 and up
LS170 - Valid from Serial No. LMU028259 and up

NEW HOLLAND

PROVEN PERFORMANCE

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BOOK 1 - 87364075

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BOOK 1 - 87364075

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TROUBLESHOOTING

ADVANCED INSTRUMENT CLUSTER (AIC)

PROBLEM	POSSIBLE CAUSE	CORRECTION
AIC board will not light up when operator sits in the seat.	Faulty seat switch.	Replace switch
	No battery voltage to seat switch.	Open in power wire from 5 amp fuse from supply, check and/or replace battery No battery voltage to 5 amp fuse from supply, check and/or replace battery
	Blown 5 amp fuse (electronic battery) in engine panel.	Replace fuse.
	No battery voltage from seat switch to AIC board.	Open in power wire from seat switch to AIC board, repair open wire. Poor or no connection at AIC board, repair connection
	Battery voltage from seat switch to AIC board	If battery voltage from seat to board is OK, replace the AIC.
AIC backlighting is dim.	Brightness variations due to production differences between models and/or AIC board changes.	None -- overlay decal material variations cause differences in brightness.
	Backlights dim when the loader worklights are activated.	None -- AIC board circuitry automatically dims the backlighting when then worklights are on, to reduce the glare at night.
AIC board seat belt light will not go off with the seat belt fastened.	Seat belt not fastened.	Fasten the seat belt.
	Faulty seat belt buckle switch.	Replace seat belt assembly
	No battery voltage from seat switch to seat belt switch.	Open in wire from seat switch to seat belt switch, repair open.
	No battery voltage from seat belt switch to AIC board.	Open in wire from seat belt switch to AIC board, repair open. Poor or no connection at AIC board, repair connection.
	Battery voltage from seat belt switch to AIC board.	If voltage is OK, replace the AIC.

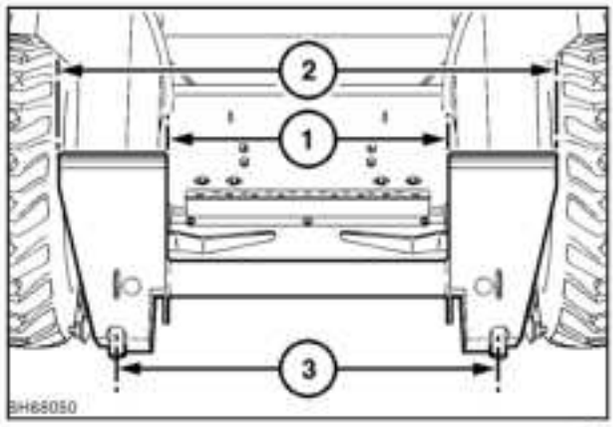
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3. Check the center dimension between the faceplate pods and the overall outside dimension.

   Inside Dimension 1: 647.7 mm (25-1/2")

   Outside Dimension 2: 1122.4 mm (44-3/16")

   Latch Pin Dimension 3: 850.1 mm ± 0.8 mm (33-15/32" ± 1/32") center



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⚠ CAUTION ⚠

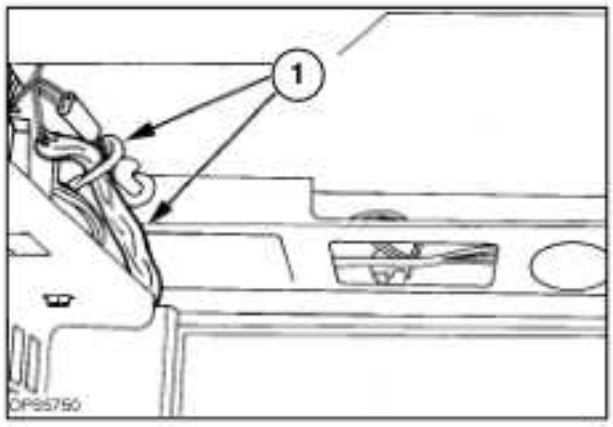
Do not cut or grind the loader faceplate to adapt any buckets or other attachments.

Do not cut or grind the loader faceplate latch pins.

When **attaching unapproved attachments**, the latch points on the attachment must meet the correct dimensions and be strong enough to maintain the correct dimensions during operation.

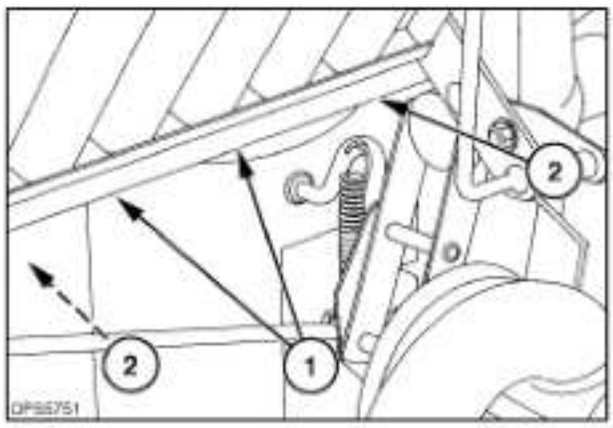
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11. Reinstall all wire harness retaining clamps and plastic ties to secure the harness, 1, in the upper right rear corner of the operator's cab.



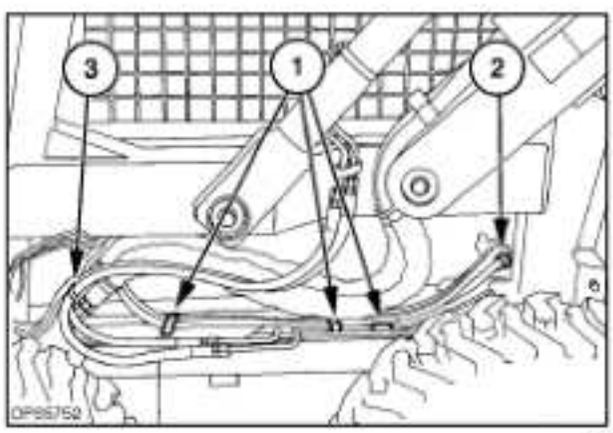
46

12. Reinstall the wire harness clamps and ties along the rear of the operator's seat. Make sure the harness is positioned to the inside of the boom lock linkage at 2 to prevent interference.



47

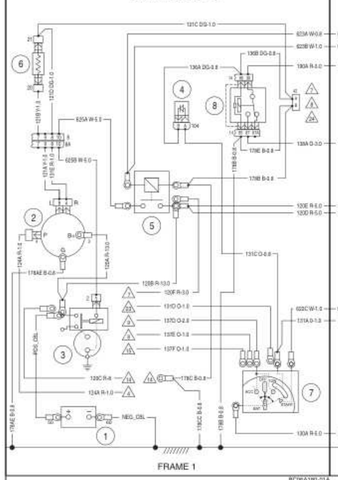
13. Reinstall the wire harness clamps and ties along the left side of the operator's cab at 1.
14. Position the rear of the harness and engine relay/fuse panel and install harness clamps and ties at 2.
15. With the harness positioned pull a loop (excess) of harness through the support at 3, to retain the excess wire harness.



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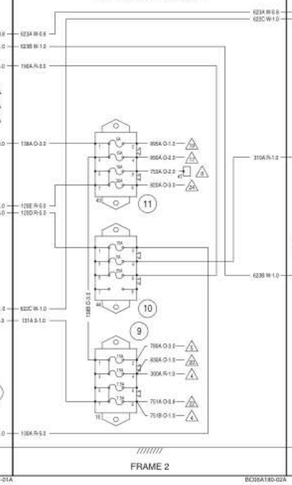
STARTING SYSTEM



FRAME 1

BC06A180-01A

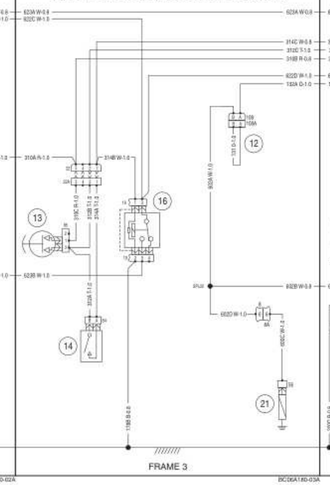
POWER DISTRIBUTION



FRAME 2

BC06A180-02A

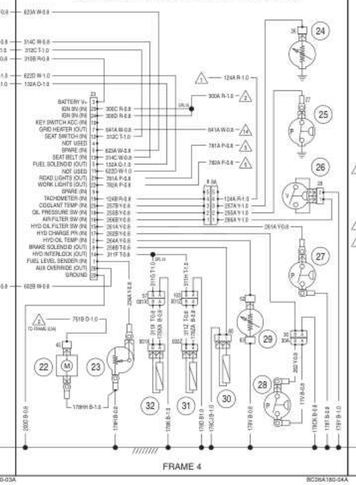
SAFETY INTERLOCK AND FUSE SUPPLY SYSTEM



FRAME 3

BC06A180-03A

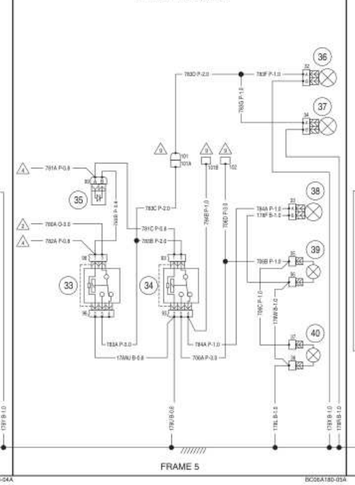
INSTRUMENT CLUSTER MONITORING SYSTEM



FRAME 4

BC06A180-04A

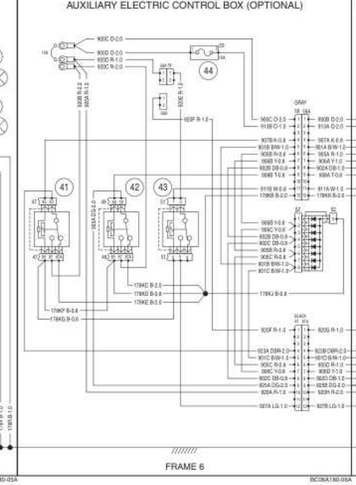
STANDARD LAMPS



FRAME 5

BC06A180-05A

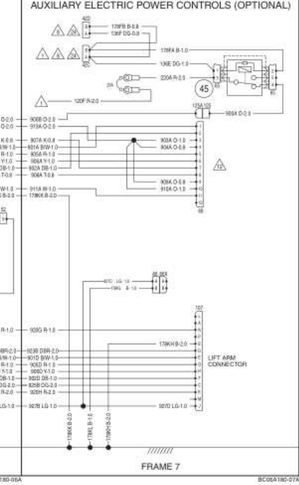
LOADER ARM
AUXILIARY ELECTRIC CONTROL BOX (OPTIONAL)



FRAME 6

BC06A180-06A

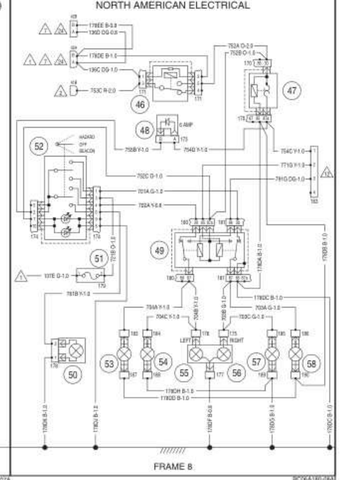
LOADER ARM
AUXILIARY ELECTRIC POWER CONTROLS (OPTIONAL)



FRAME 7

BC06A180-07A

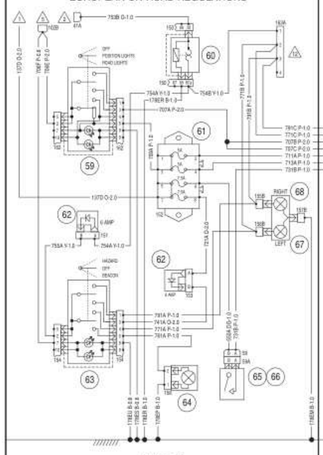
FLASHER AND TURN SIGNALS
NORTH AMERICAN ELECTRICAL



FRAME 8

BC06A180-08A

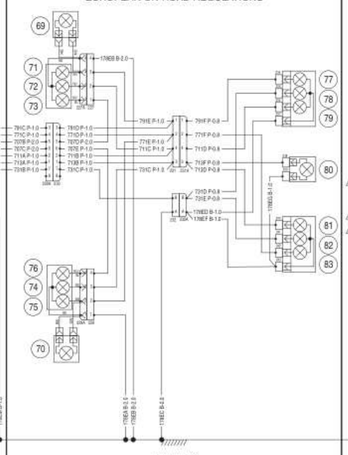
MAIN ELECTRICAL
EUROPEAN ON-ROAD REGULATIONS



FRAME 9

BC06A180-09A

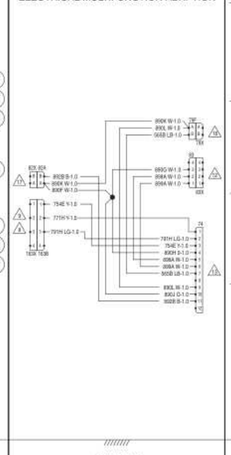
BOOM/REAR ELECTRICAL
EUROPEAN ON-ROAD REGULATIONS



FRAME 10

BC06A180-10A

RIGHT-HAND HANDLE (OPTION)
ELECTRICAL MULTIFUNCTION ADAPTION

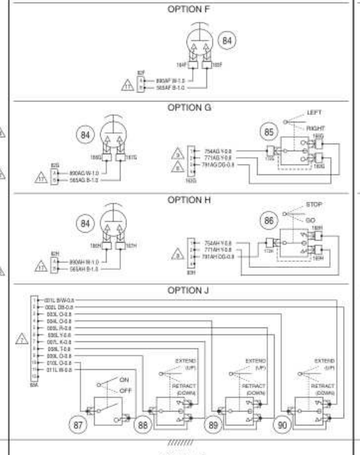


FRAME 11

BC06A180-11A

LEFT-HAND HANDLE (OPTIONS)

OPTION F



OPTION G

OPTION H

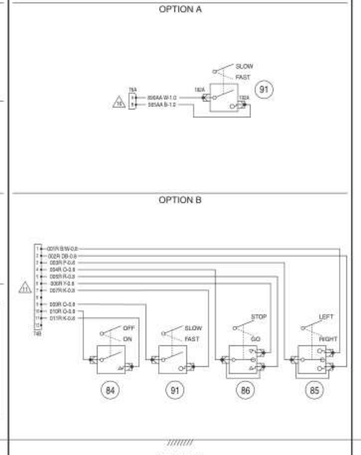
OPTION J

FRAME 12

BC06A180-12A

RIGHT-HAND HANDLE (OPTIONS)

OPTION A

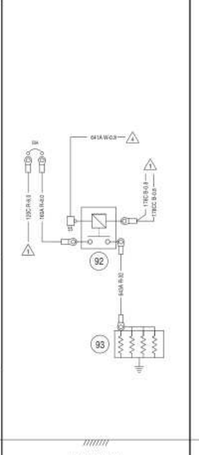


OPTION B

FRAME 13

BC06A180-13A

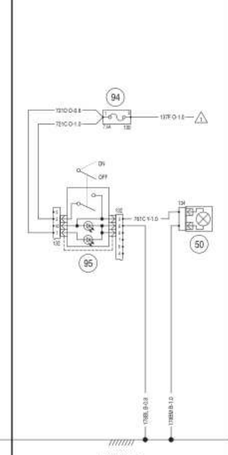
GLOW PLUGS



FRAME 14

BC06A180-14A

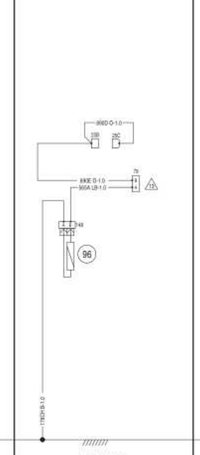
ROTATING BEACON (OPTIONAL)



FRAME 15

BC06A180-15A

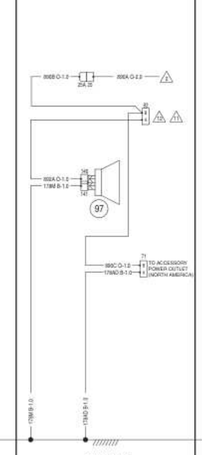
2 SPEED (OPTIONAL)



FRAME 16

BC06A180-16A

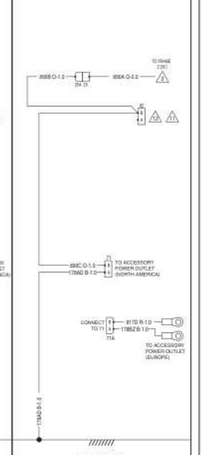
HORN (OPTIONAL)



FRAME 17

BC06A180-17A

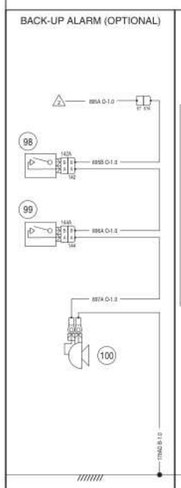
ACCESSORY OUTLET (OPTIONAL)



FRAME 18

BC06A180-18A

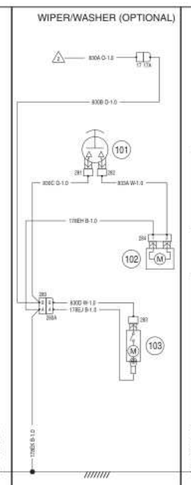
BACK-UP ALARM (OPTIONAL)



FRAME 19

BC06A180-19A

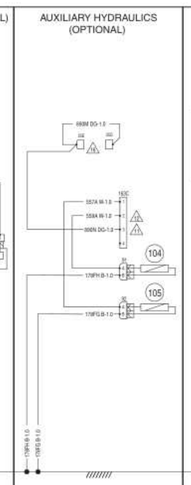
WIPER/WASHER (OPTIONAL)



FRAME 20

BC06A180-20A

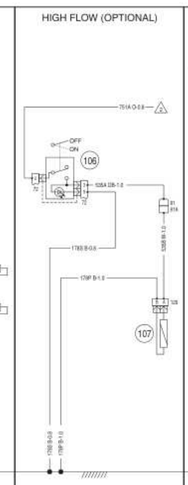
AUXILIARY HYDRAULICS (OPTIONAL)



FRAME 21

BC06A180-21A

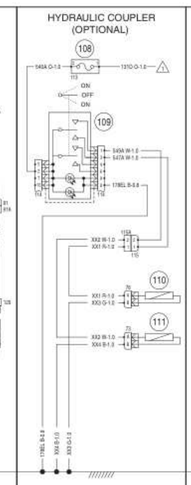
HIGH FLOW (OPTIONAL)



FRAME 22

BC06A180-22A

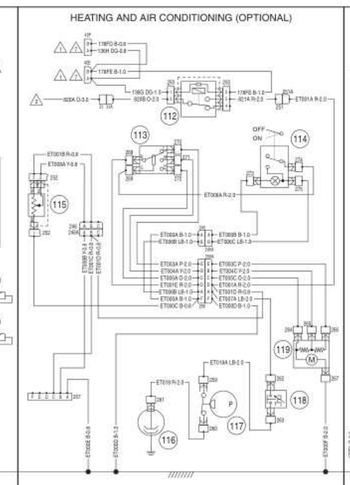
HYDRAULIC COUPLER (OPTIONAL)



FRAME 23

BC06A180-23A

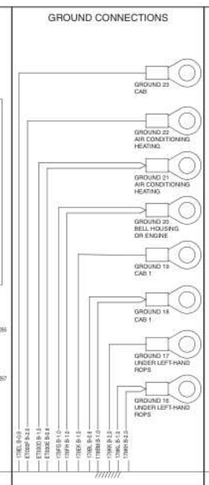
HEATING AND AIR CONDITIONING (OPTIONAL)



FRAME 24

BC06A180-24A

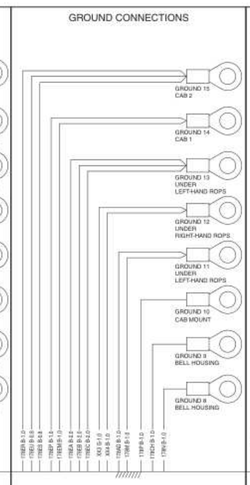
GROUND CONNECTIONS



FRAME 25

BC06A180-25A

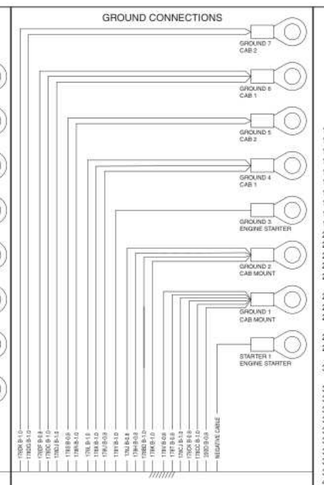
GROUND CONNECTIONS



FRAME 26

BC06A180-26A

GROUND CONNECTIONS



FRAME 27

BC06A180-27A

COMPONENT IDENTIFICATION

1. BATTERY
2. ALTERNATOR
3. STARTER AND SOLENOID
4. REVERSE POLARITY DIODE
5. STARTER RELAY
6. RESISTOR
7. IGNITION SWITCH
8. RUN RELAY
9. CAB FUSE BLOCK
10. REAR FUSE BLOCK #1
11. REAR FUSE BLOCK #2
12. JUMPER WIRE
13. SEAT SWITCH
14. SEAT BELT SWITCH
15. NOT USED
16. INTERLOCK START RELAY
17. NOT USED
18. NOT USED
19. NOT USED
20. NOT USED
21. FUEL HOLD-IN SOLENOID
22. FUEL PUMP (ISM ENGINE ONLY)
23. FUEL SENDER
24. ENGINE COOLANT TEMPERATURE SENDER
25. ENGINE OIL PRESSURE SWITCH
26. AIR FILER RESTRICTION SWITCH
27. HYDRAULIC FILTER PRESSURE SWITCH
28. CHARGE PRESSURE SWITCH
29. HYDRAULIC OIL TEMPERATURE SENDER
30. BRAKE RELEASE/TANDEM PUMP NEUTRAL OVERRIDE SWITCH
31. LOADER VALVE SOLENOID
32. LOADER VALVE SOLENOID
33. LIGHT RELAY #1
34. LIGHT RELAY #2
35. DIODE
36. LEFT FRONT WORK LAMP
37. RIGHT FRONT WORKLIGHT
38. REAR WORK LAMP
39. LEFT REAR INDICATOR LIGHT
40. RIGHT REAR INDICATOR LIGHT
41. MOTOR CONTROL LEFT RELAY
42. MOTOR CONTROL RIGHT RELAY
43. WIPER MOTOR RELAY
44. FUSE (10 AMP)
45. ATTACHMENT RELAY
46. HAZARD/TURN RELAY
47. FLASHER MODULE
48. DIODE (6 AMP)
49. TURN SIGNAL CONVERTER MODULE
50. BEACON
51. FUSE
52. HAZARD/BEACON SWITCH
53. LEFT FRONT FLASHING LAMP
54. LEFT REAR FLASHING LAMP
55. TURN INDICATOR LAMP (LEFT)
56. TURN INDICATOR LAMP (RIGHT)
57. RIGHT FRONT FLASHING LAMP
58. RIGHT REAR FLASHING LAMP
59. ROAD LIGHT SWITCH (EURO)
60. FLASHER MODULE (EURO)
61. CAB FUSE BLOCK (EURO)
62. DIODE (6 AMP)
63. HAZARD/BEACON SWITCH (EURO)
64. BEACON (EURO)
65. BRAKE LAMP SWITCH (EURO)
66. BRAKE LAMP SWITCH (EURO)
67. TURN INDICATOR LAMP (LEFT) (EURO)
68. TURN INDICATOR LAMP (RIGHT) (EURO)
69. OPTIONAL RIGHT TURN LAMP (EURO)
70. OPTIONAL LEFT TURN LAMP (EURO)
71. RIGHT FRONT TURN LAMP (EURO)
72. RIGHT FRONT POSITION LAMP (EURO)
73. RIGHT FRONT ROAD LAMP (EURO)
74. LEFT FRONT POSITION LAMP (EURO)
75. LEFT FRONT TURN LAMP (EURO)
76. LEFT FRONT ROAD LAMP (EURO)
77. RIGHT REAR BRAKE LAMP (EURO)
78. RIGHT REAR POSITION LAMP (EURO)
79. LEFT REAR POSITION LAMP (EURO)
80. LICENSE PLATE LIGHT
81. LEFT REAR POSITION LAMP (EURO)
82. LEFT REAR BRAKE LAMP (EURO)
83. LEFT REAR TURN LAMP (EURO)
84. HORN SWITCH
85. TURN SIGNAL SWITCH
86. AUXILIARY HYDRAULIC SWITCH
87. FRONT ELECTRIC CONTROL SWITCH #1
88. FRONT ELECTRIC CONTROL SWITCH #2
89. FRONT ELECTRIC CONTROL SWITCH #3
90. FRONT ELECTRIC CONTROL SWITCH #4
91. 2 SPEED SWITCH
92. PRE-HEATER RELAY
93. GLOW PLUGS (3 CYLINDER ENGINE = 3, 4 CYLINDER ENGINE = 4
94. FUSE (7.5 AMP)
95. BEACON SWITCH
96. 2 SPEED SOLENOID
97. HORN (OPTIONAL)
98. BACK-UP ALARM SWITCH (LEFT) (OPTIONAL)
99. BACK-UP ALARM SWITCH (RIGHT) (OPTIONAL)
100. BACK-UP ALARM (OPTIONAL)
101. WIPER/WASHER SWITCH (OPTIONAL)
102. WASHER PUMP
103. WIPER MOTOR
104. SECOND AUXILIARY HYDRAULICS SOLENOID #1
105. SECOND AUXILIARY HYDRAULICS SOLENOID #2
106. HIGH FLOW SWITCH (OPTIONAL)
107. HIGH FLOW SOLENOID (OPTIONAL)
108. FUSE
109. HYDRAULIC COUPLER SWITCH (OPTIONAL)
110. HYDRAULIC COUPLER RELEASE SOLENOID (OPTIONAL)
111. HYDRAULIC COUPLER ENGAGE SOLENOID (OPTIONAL)
112. HEATER/AIR CONDITIONER RELAY (OPTIONAL)
113. BLOWER SWITCH (OPTIONAL)
114. AIR CONDITIONER SWITCH (OPTIONAL)
115. HEATER CONTROL SWITCH (OPTIONAL)
116. COMPRESSOR CLUTCH
117. PRESSURE SWITCH
118. THERMOSTAT
119. BLOWER MOTOR

CIRCUIT DIAGRAM LEGEND

SHOWS CIRCUIT CROSSING NOT CONNECTED

SHOWS CIRCUIT CONNECTED

54 COMPONENT NUMBER

30 WIRE TAG NUMBER

8 CONNECTOR NUMBER

NUMBERS REFER TO THE FRAME NUMBER AT THE BOTTOM CENTER OF EACH FRAME.

MALE TERMINAL / FEMALE TERMINAL

INDICATES EXTERNAL GROUND — GROUND

INDICATES INTERNALLY GROUNDED COMPONENT

WIRE IDENTIFICATION

702A P-1.0
WIRE NUMBER — WIRE COLOR — WIRE SIZE

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

NOTES

PRODUCT IDENTIFICATION NUMBERS (PIN)

IMPORTANT: This Schematic is for the following European Machines

LS140 SKID STEER - Machines with PIN LMU004344 and After
LS150 SKID STEER - Machines with PIN LMU002648 and After
LS160 SKID STEER - Machines with PIN LMU029683 and After
LS170 SKID STEER - Machines with PIN LMU028259 and After

ELECTRICAL SCHEMATIC - EUROPEAN MACHINES
LS140 / LS150 / LS160 / LS170 SKID STEER

Additional copies of this Hydraulic and Electrical Schematic can be ordered through Technical Publications Distribution System. The part number is 5-2590

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