SERVICE MANUAL

1150L
Crawler Dozer

Part number 47998874
English
March 2016

NEW HOLLAND CONSTRUCTION

© 2016 CNH Industrial Latin America LTDA. All Rights Reserved.

MidWestTech | New Holland 1150L Crawler Dozer Service Manual | Publication 47998874 Order the manual at mid-west-tech.com >

Contents

INTRODUCTION

Engine 10

[10.001] Engine and crankcase 10.1

[10.400] Engine cooling system 10.2

[10.310] Aftercooler 10.3

[10.304] Engine lubrication system 10.4

Rear axle system 27

[27.120] Planetary and final drives 27.1

[27.126] Spur gear and final drives 27.2

Hydrostatic drive 29

[29.100] Transmission and steering hydrostatic control 29.1

[29.202] Hydrostatic transmission 29.2

Brakes and controls 33

[33.202] Hydraulic service brakes 33.1

Hydraulic systems 35

[35.000] Hydraulic systems 35.1

[35.104] Fixed displacement pump 35.2

[35.310] Distributor and lines 35.3

[35.350] Safety and main relief valves 35.4

[35.741] Dozer blade cylinders 35.5

[35.742] Ripper hydraulic system 35.6

Tracks and track suspension 48

[48.130] Track frame and driving wheels 48.1

[48.110] Front suspension 48.2

[48.100] Tracks 48.3

[48.134] Track tension units 48.4

MidWestTech | New Holland 1150L Crawler Dozer Service Manual | Publication 47998... Order the manual at mid-west-tech.com >

[48.138] Track rollers 48.5

Cab climate control 50

[50.100] Heating 50.1

[50.200] Air conditioning 50.2

Electrical systems 55

[55.013] Engine oil system 55.1

[55.000] Electrical system 55.2

[55.100] Harnesses and connectors 55.3

[55.525] Cab engine controls 55.4

[55.015] Engine control system 55.5

[55.201] Engine starting system 55.6

[55.301] Alternator 55.7

[55.302] Battery 55.8

[55.202] Cold start aid 55.9

[55.010] Fuel injection system 55.10

[55.012] Engine cooling system 55.11

[55.019] Hydrostatic drive control system 55.12

[55.050] Heating, Ventilation, and Air-Conditioning (HVAC) control system 55.13

[55.408] Warning indicators, alarms, and instruments 55.14

[55.101] Chassis harness 55.15

[55.014] Engine intake and exhaust system 55.16

[55.DTC] FAULT CODES 55.17

Dozer blade and arm 86

[86.110] Dozer blade 86.1

Tools 89

[89.128] Ripper assembly 89.1

Platform, cab, bodywork, and decals 90

[90.150] Cab 90.1

MidWestTech | New Holland 1150L Crawler Dozer Service Manual | Publication 47998... Order the manual at mid-west-tech.com >

Table 2 – No cooling or insufficient cooling

Expansion valve malfunctioning (Indications):

A. Discharge the hot air from the heater/evaporator

B. Too much condensation in the suction hose on the compressor

C. Too much condensation in the evaporator outlet

1. Check the expansion valve. Disconnect the low pressure switch.
2. Test the expansion valve:

A. Remove the insulation material from the top of the valve. With the engine running and the air conditioner on maximum cooling, cool the top of the expansion valve with ice. Check if there is a decrease on the low pressure gauge.

B. Allow the top of the expansion valve to warm. The valve should open and the pressure should increase on the low pressure gauge.

C. Repeat the procedure **(A)**. If there is little or no decrease on the low pressure gauge, go to the following procedure **(3)**.

3. If the expansion valve did not operate correctly, recover the refrigerant from the system, according to page **Air conditioning - Charging (50.200)**. Remove the expansion valve, according to page **Expansion valve - Remove (50.200)**
4. Install the new expansion valve, according to page **Expansion valve - Remove (50.200)**. Remove the air and moisture. Charge the system with refrigerant, according to page **Air conditioning - Charging (50.200)**
5. Connect the low pressure switch.
6. Continue the performance test to detect other possible issues.

Contamination of refrigerant (Indications):
See the table to the side. Check the stable saturation pressures at a certain temperature to determine if there is contamination

A. Measure the pressure obtained on the pressure gauge on the recovery unit

B. Measure the temperature of the refrigerant in the recovery tank. If the refrigerant was in the recovery unit for some time, use ambient temperature. The numbers in the table represent the boiling point of **HFC R134A**

C. Pressure readings below the range given in the table indicate contaminated refrigerant

NOTICE: *Do not use contaminated refrigerant or mix contaminated refrigerant with non-contaminated refrigerant. Dispose of in accordance with all applicable local laws and procedures.*

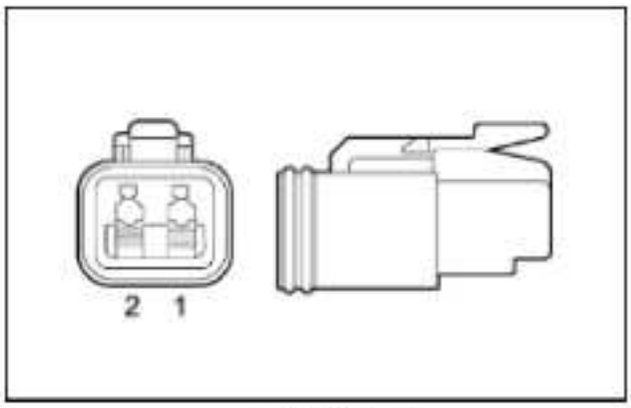
Stable saturation temperature/Pressure (**HFC R134A**)

Temperature	Pressure
10 °C (50 °F)	**3.1 bar (45 psi)**
13 °C (55 °F)	**3.5 bar (51 psi)**
16 °C (60 °F)	**3.9 bar (57 psi)**
18 °C (65 °F)	**4.4 bar (64 psi)**
21 °C (70 °F)	**4.9 bar (71 psi)**
24 °C (75 °F)	**5.4 bar (78 psi)**
27 °C (80 °F)	**6.1 bar (88 psi)**
29 °C (85 °F)	**6.6 bar (95 psi)**
32 °C (90 °F)	**7.2 bar (104 psi)**
35 °C (95 °F)	**7.9 bar (114 psi)**
38 °C (100 °F)	**8.6 bar (124 psi)**
39 °C (102 °F)	**8.9 bar (129 psi)**
40 °C (104 °F)	**9.2 bar (133 psi)**
41 °C (106 °F)	**9.5 bar (138 psi)**
42 °C (108 °F)	**9.8 bar (142 psi)**
43 °C (110 °F)	**10.1 bar (147 psi)**
44 °C (112 °F)	**10.5 bar (152 psi)**
46 °C (114 °F)	**10.8 bar (157 psi)**
47 °C (116 °F)	**11.2 bar (162 psi)**
48 °C (118 °F)	**11.5 bar (167 psi)**
49 °C (120 °F)	**11.9 bar (172 psi)**

MidWestTech | New Holland 1150L Crawler Dozer Service Manual | Publication 47998... Order the manual at mid-west-tech.com >

Connector V15 – Blade lowering

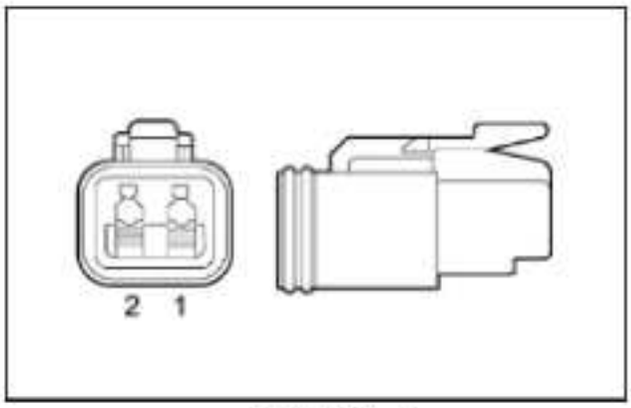
Cav	Circuit
1	422
2	423



LAIL11CD1962A0A 85

Connector V16 – Blade lifting

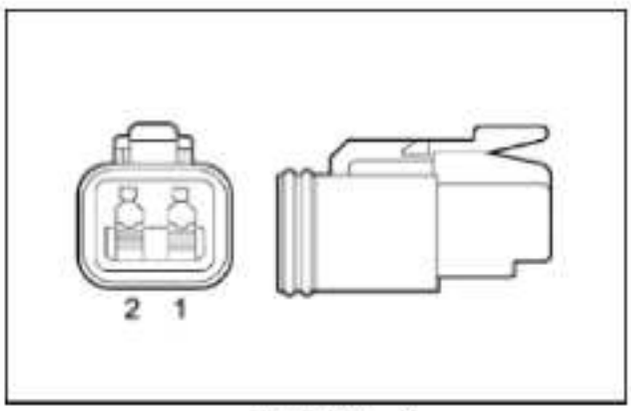
Cav	Circuit
1	421
2	423



LAIL11CD1962A0A 86

Connector V17 – Blade angle right

Cav	Circuit
1	427
2	429



LAIL11CD1962A0A 87

MidWestTech | New Holland 1150L Crawler Dozer Service Manual | Publication 47998... Order the manual at mid-west-tech.com >

4312-Right speed sensor out of range

Control Module : DTC

NOTICE: *Go to the electrical schematic for a full view of the controller circuit.*

Cause:
The track speed input is at zero when movement is commanded and the engine rotation is greater than zero for a long period.

Possible failure modes:

1. The connectors are not fully compatible, the pins are not pushed fully inside the connector, bent pin or broken wire at the back of the connector.
2. Water in the connector.
3. Faulty fuse in the fuse block of the drive train controller.
4. Wiring circuits or sensor circuits open.
5. Wiring circuits or sensor circuits shorted.
6. Failure in the Drive Train Control Module.

Solution:

1. Check if the fault code is still active.
   Before clearing fault codes, write down all the codes, number of occurrences and engine hours at last occurrence.

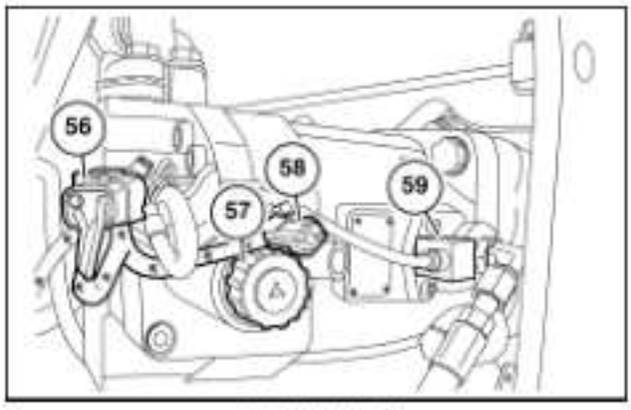
   1. Turn the ignition key to the RUN position to power the drive train controller.

   2. Clear all fault codes from the controller.

   3. To check the fault code, drive the machine at a speed greater than 50% of the speed of the transmission.

   A. NOT OK – Fault code 4312 is recorded again. Go to Step **2**.

   B. OK – Fault is not recorded again. OK to return to service.
2. Inspect the right-hand speed sensor connection.



LAUL11CD10BBADA 1

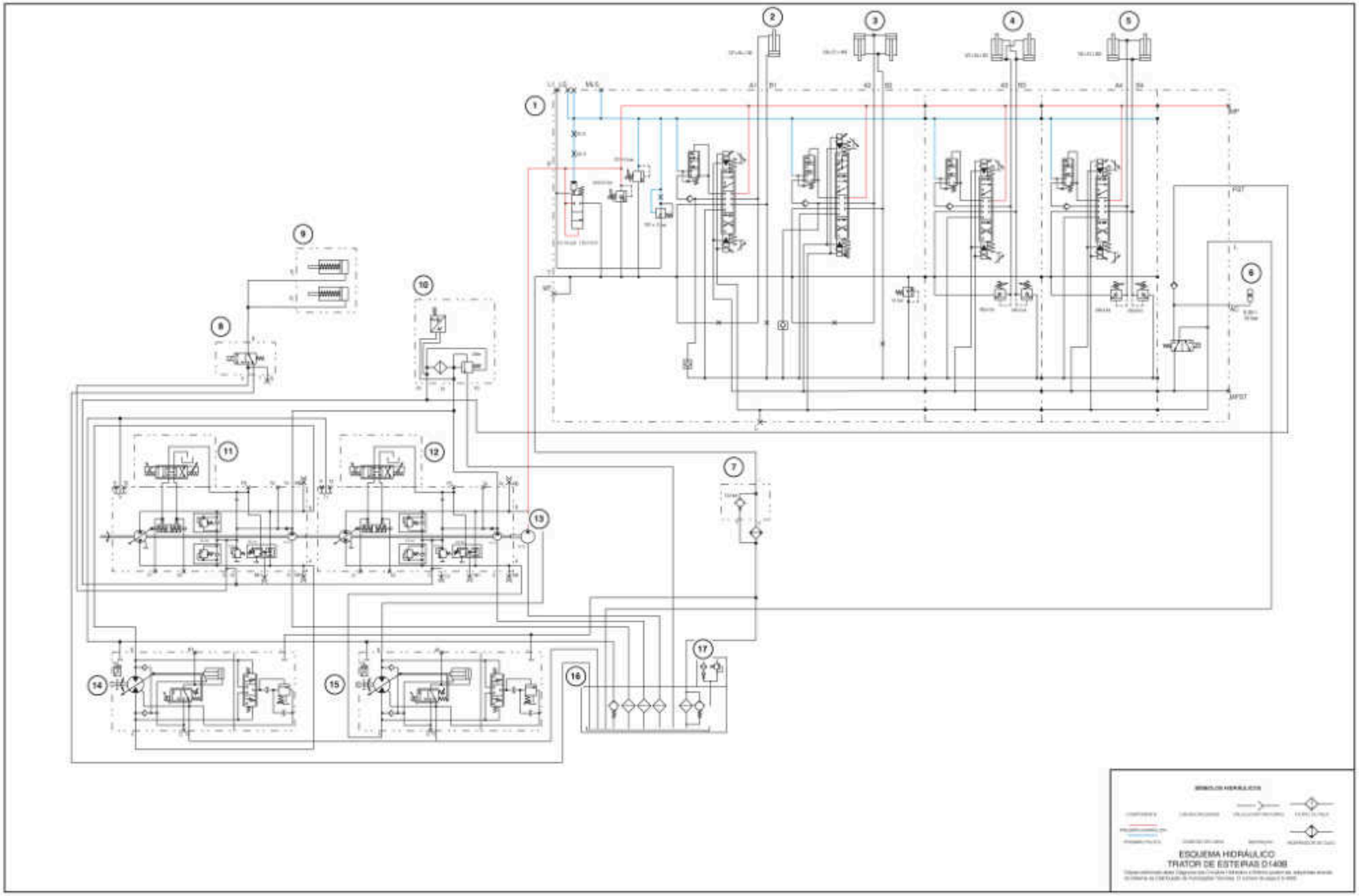
56.	Connector P6 of the right-hand motor speed sensor	58.	Connector P8 of the right-hand motor solenoid
57.	Right-hand motor solenoid	59.	Right-hand motor speed sensor

1. Turn off the ignition key. Turn off the master key.

2. Remove the rear cover to access the hydro motors.

3. Disconnect the right-hand speed sensor, connector P6.

MidWestTech | New Holland 1150L Crawler Dozer Service Manual | Publication 47998... Order the manual at mid-west-tech.com >



LAGL11CD1027J0A 1

MidWestTech | New Holland 1150L Crawler Dozer Service Manual | Publication 47998874
Order the manual at mid-west-tech.com >