SERVICE MANUAL

D150C
Tier 2
Crawler Dozer

PIN NDDC15000 and above; PIN NEDC15000 and above; PIN NFDC15000 and above

Part number 47907877
2nd edition English
October 2015
Replaces part number 47619947

NEW HOLLAND CONSTRUCTION

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Aftercooler - Remove

D150C	ANZ — APAC — LA — MEA

⚠ WARNING

Heavy objects!
Lift and handle all heavy components using lifting equipment with adequate capacity. Always support units or parts with suitable slings or hooks. Make sure the work area is clear of all bystanders.
Failure to comply could result in death or serious injury.

W0288A

⚠ WARNING

Burn hazard!
Hot coolant can spray and scald if you remove the radiator or deaeration tank cap while the system is hot. To remove the cap: allow the system to cool, turn the cap to the first notch, and wait for all pressure to release. Remove the cap only after all pressure has released.
Failure to comply could result in death or serious injury.

W0187A

⚠ CAUTION

Burn hazard!
Do not handle any service fluid (engine coolant, engine oil, hydraulic oil, etc.) at temperatures that exceed 49 °C (120 °F). Allow fluids to cool before proceeding.
Failure to comply could result in minor or moderate injury.

C0167B

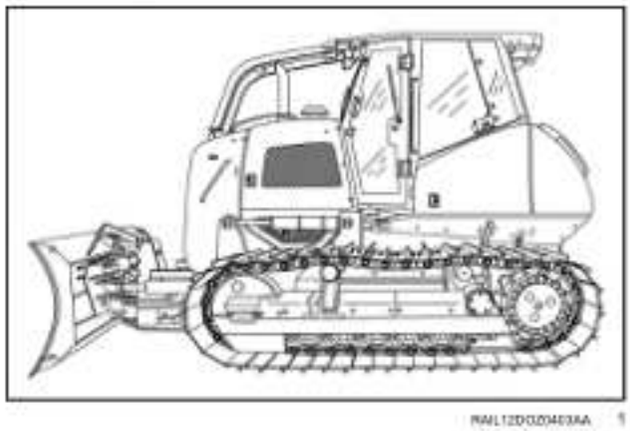
⚠ WARNING

Chemical hazard!
Coolant can be toxic. Keep away from children and pets. Avoid prolonged contact. If not reused, dispose of in accordance with local environmental regulations.
Failure to comply could result in death or serious injury.

W0285A

NOTE: *Retain all of the hardware throughout this instruction for reassembly.*

1. Park on level ground. Lower all attachments to the ground.



RAL12D0Z0403AA 1

2. Turn the engine OFF.

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Schematic legend			
(1)	UCM connector X-019 Pin 10, backup alarm signal	(3)	Backup alarm ground GND-Engine
(2)	Backup alarm, H-005 Connector X-155 and X-156		

A. The connectors are secure and the harness is free of damage. Go to step **3**.

B. The connectors or the harness has damage. Repair or replace the harness or connectors as required. Return to step **1** to confirm elimination of fault.

3. Measure the voltage on the signal wire.

Turn the ignition switch OFF.

Disconnect UCM connector X-019.

Disconnect the backup alarm.

Turn the ignition switch ON.

Measure the voltage between X-019 pin 10 and chassis ground. The chassis ground connection must be clean and free of paint, oil, and dirt. The voltage should be less than **0.5 V**. Wiggle the harness during measurement to reveal an intermittent condition.

A. The voltage is less than **0.5 V**. Go to step **4**.

B. The voltage is greater than **0.5 V**. There is a short circuit to another voltage source in the UCM wiring. Repair or replace the harness as required. Return to step **1** to confirm elimination of the fault.

4. Test the circuit.

Turn the ignition switch OFF.

Disconnect the backup alarm.

Turn the ignition switch ON.

Access the fault code screen on the EST.

Fault code 1203 should no longer be active. Fault code 1201 is now active.

A. Fault code 1203 is no longer active. Fault code 1201 is now active. Temporarily replace the backup alarm and retest. Return to step **1** to confirm elimination of the fault.

B. Fault code 1203 is still present and active. Fault code 1201 did not become active. Temporarily replace the UCM and retest. Return to step **1** to confirm elimination of the fault.

Harnesses and connectors - Electrical schematic sheet 08 UCM (55.100-C.20.E.08)
Harnesses and connectors - Electrical schematic sheet 29 Horn/ Backup Alarm (55.100-C.20.E.29)

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Schematic legend			
(1)	UCM connector X-016 Pin 5 L Pump FWD (Front A) Fault Codes 4111, 4112, 4113, 4114, and 4302	(6)	UCM connector X-016 Pin 22 REV Pump RTN (Both B) Fault Codes 4311, 4313 and 4312
(2)	UCM connector X-016 Pin 6 L Pump REV (Front B) Fault Codes 4131, 4132, 4133, 4134, and 4312	(7)	UCM connector X-016 Pin 19 R Pump FWD (Rear A) Fault Codes 4101, 4102, 4103, 4104, and 4302
(3)	UCM connector X-014 Pin 21 FWD Pump RTN (Both A) Fault Codes 4301, 4303, and 4302	(8)	UCM connector X-016 Pin 25 R Pump REV (Rear B) Fault Codes 4121, 4122, 4123, 4124, and 4312
(4)	Left Pump Connector X-115	(9)	Right Pump Connector X-114
(5)	Connector X-001/ X-090		

A. The connectors are secure and the harness is free of damage. Go to step **3**.

B. The connectors or the harness has damage. Repair or replace the harness or connectors as required. Return to step **1** to confirm elimination of fault.

3. Measure the voltage on the signal wire.

   Turn the ignition switch OFF.

   Disconnect UCM connector X-016.

   Disconnect the right reverse solenoid.

   Turn the ignition switch ON.

   Measure the voltage between X-016 pin 25 and chassis ground. The chassis ground connection must be clean and free of paint, oil, and dirt. The voltage should be less than **0.5 V**.

   A. The voltage is less than **0.5 V**. Go to step **4**.

   B. The voltage is greater than **0.5 V**. There is a short circuit to another voltage source. Repair or replace the harness as required. Return to step **1** to confirm elimination of fault.

4. Test the circuit.

   Turn the ignition switch OFF. Reconnect the UCM connector.

   Disconnect the right reverse solenoid.

   Fabricate a jumper wire that will connect between X-114 pin 2 and X-114 pin 1.

   Connect the jumper wire between X-114 pin 2 and X-114 pin 1.

   Turn the ignition switch ON.

   Access the fault code screen on the EST.

   Fault code 4123 should no longer be active. Fault code 4122 is now active. Fault code 4101 will also be active, ignore this fault code.

   A. Fault code 4123 is no longer active. Fault code 4122 is now active. Temporarily replace the solenoid and retest. Return to step **1** to confirm elimination of the fault.

   B. Fault code 4123 is still present and active. Fault code 4122 did not become active. Temporarily replace the UCM and retest. Return to step **1** to confirm elimination of the fault.

Harnesses and connectors - Electrical schematic sheet 23 Drive Train/ Pumps (55.100-C.20.E.23)

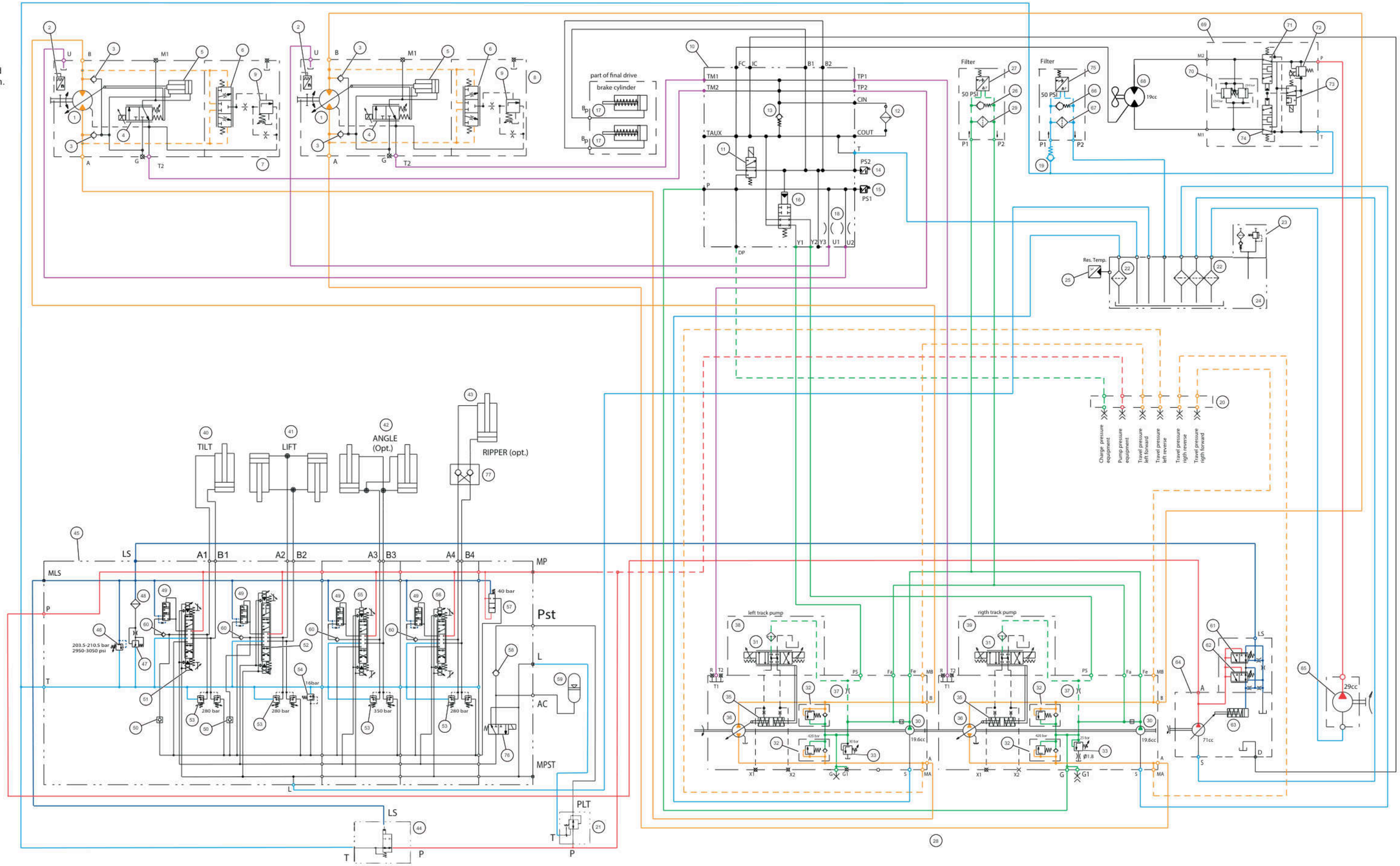
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HYDRAULIC SCHEMATIC
D150C DOZER
Stage IIIB\Tier 2 - ROW

Additional copies of this Schematic can be ordered through Technical Publications Distribution System. Part # RAC 47907886 (replaces RAC 47714315)

LEGEND

- HYDRAULIC PRESSURE
- CHARGE PUMP PRESSURE
- RETURN TO TANK/ PUMP INLET
- TRACK DRIVE
- TRACK DRIVE CASE DRAIN
- LOAD SENSE



1	Track Drive Motor	13	Oil Cooler Bypass	25	Reservoir Temperature Sensor	37	Pump Speed Control Orifice	49	Flow Compensator Spool	61	Flow Control Spool	73	Fan Reverse Solenoid
2	Track Drive Motor Speed Sensor	14	Brake Release Pressure Switch	26	Charge Filter Bypass Valve	38	Left Track Pump Assembly	50	Regeneration Check Valve	62	High Pressure Cut-Off Spool	74	Forward Pilot Control Valve
3	Motor Control Check Valve	15	Charge Pressure Switch	27	Charge Filter Pressure Switch	39	Right Track Pump Assembly	51	Tilt Spool	63	Destroke Pistons	75	Hydraulic Filter Pressure Switch
4	Motor Control Solenoid Valve	16	Neutral Override Valve	28	Tandem Pump Assembly	40	Tilt Cylinder	52	Lift Spool	64	Equipment Hydraulic Pump	76	Pilot On/Off Solenoid Valve
5	Motor Speed Control Piston	17	Park Brake Release Piston	29	Charge Filter	41	Lift Cylinders	53	Circuit Relief w/ Anticavitation	65	Fan Drive Pump	77	Ripper Lock Check Valve
6	Motor Flushing Valve	18	Motor Cooling Orifice	30	Charge Pump	42	Angle Cylinders	54	Regeneration Relief Valve	66	Filter Bypass Valve		
7	Left Track Drive Motor Assembly	19	Backpressure Check Valve	31	Pump Control Solenoid Valve	43	Ripper Cylinder	55	Angle Spool	67	Hydraulic Filter		
8	Right Track Drive Motor Assembly	20	Hydraulic Test Points	32	High Pressure Relief/Check Valve	44	Pump Flushing Valve	56	Ripper Spool	68	Fan Drive Motor		
9	Motor Flushing Valve Flow Control	21	Pilot Pressure Reducing Valve	33	Charge Pressure Relief	45	Equipment Valve	57	Pressure Spike Clipper	69	Fan Reverse Valve		
10	Brake Release (Multi-function) Valve	22	Reservoir Suction Screen	34		46	Load Sense Relief Valve	58	Pilot Pressure Check Valve	70	Fan Reversing Pressure Relief		
11	Park Brake Release Solenoid	23	Reservoir Pressure Cap	35	Pump Control Piston	47	Signal Bleed Down Orifice	59	Pilot Accumulator	71	Reverse Pilot Control Valve		
12	Oil Cooler	24	Hydraulic Reservoir	36	Track Drive Pumps	48	Screen	60	Load Check Valve	72	Fan Speed Control Solenoid		

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