SERVICE MANUAL

W130D / W170D
Stage IV
Wheel Loader

Part number 48083730
English
February 2017

NEW HOLLAND CONSTRUCTION

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Hydraulic systems - Hydraulic schematic frame 01

W130 D WHEEL LOADER XR, NEW CAB TIER4B	WE
W130 D WHEEL LOADER ZBAR NEW CAB TIER4B	WE

Z-bar/XR model

Callout	Description	Callout	Description
(1)	Hydraulic gear pump, **25 cm³**	(2)	Service brake accumulator, **3.5 L** (**0.92 US gal**), **70 bar** (**1015 psi**) precharge
(3)	Parking brake accumulator, **0.16 L** (**0.04 US gal**), **96 bar** (**1392 psi**) precharge	(4)	Brake dumping accumulator, **0.16 L** (**0.04 US gal**), **7 bar** (**102 psi**) precharge
(5)	Brake valve, **76 bar** (**1102 psi**)	(6)	Orbitrol valve, **983 cm³/rev**
(7)	Steering cylinder	(8)	Implement pump, **90 cm³**
(9)	Hydraulic oil filter	(10)	Auxiliary steering pump, **11 cm³**
(11)	Auxiliary steering control valve (optional)	(12)	Steering back-pressure relief valve, **8 – 10 bar** (**116 – 145 psi**)
(13)	Hydraulic tank filter (100 mesh filter strainer)	(14)	Steering valve, **100 L/min** (**26.4 US gpm**)
(15)	Hydraulic shuttle tee valve	(16)	Cut-off valve
(17)	Control valve	(18)	Hydraulic tank check valve, **0.25 bar** (**3.62 psi**)
(19)	2-function control valve	(20)	3-function control valve
(21)	4-function control valve	(22)	2-spool main control valve
(23)	3-spool main control valve	(24)	4-spool main control valve
(28)	Lift cylinder	(29)	Tilt cylinder (Z-bar)
(31)	Tilt cylinder (XR)	(32)	Thermal bypass valve
(33)	Fan relief valve	(34)	Fan speed and reverse control valve
(35)	Hydraulic cooler	(36)	Hydraulic cooler
(37)	Hydraulic tank filter (100 mesh filter strainer)	(38)	Fan drive hydraulic motor, **23 cm³**
(39)	Hydraulic tank neck assembly	(40)	100 mesh filter strainer
(41)	Accumulator, **3.78 L** (**1.00 US gal**), **14.5 bar** (**210.2 psi**) precharge	(42)	Ride control valve
(43)	Quick coupler locking solenoid valve	(44)	Quick coupler system
(45)	Quick coupler cylinder	(48)	Front axle (limited slip)
(49)	Rear axle (limited slip)	(50)	Front axle (front differential lock)
(51)	Rear axle (open differential)	(52)	Pilot supply accumulator, **0.32 L** (**0.08 US gal**), **13.8 bar** (**200.1 psi**) precharge

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60717 - (DTC ED2D)-CAN communication failure - External torque/speed checksum and counter

Context:
The Engine Control Unit (ECU) is capable of connecting to and communicating on three separate Controller Area Networks (CAN). Proper configuration and monitoring of the three twisted pair configured networks is also a function of the ECU. CAN Node A Bus is the main vehicle interface bus. The ECU provides a CAN termination resistor for the CAN Node A Bus, internal to the ECU. The ECU provides checksum and counter functionality to assure torque/speed message integrity and completeness. If the ECU senses an error in the rolling counter and checksum of the torque/speed message, this fault will occur.

Cause:
ECU has sensed an error in the rolling counter and checksum of the torque/speed message.

Possible failure modes:

1. Faulty vehicle system, related CAN fault.
2. Faulty supply voltage or ground, missing.
3. Faulty CAN circuit wiring, open circuit, short to ground, or short circuit.
4. Faulty ECU, termination resistor or software.

Solution:

1. Verify that fault is present and in active state.

   Use the Electronic Service Tool (EST) to check the status of this fault.

   A. If the fault is present and active, continue with Step**2**.

   B. If the fault is no longer present or is in an inactive state, the fault may be intermittent and not currently active. Continue with Step **6**.

2. Check for related vehicle CAN faults.

   Use the EST to determine if related vehicle CAN faults exist.

   A. If related vehicle CAN faults do exist, resolve the vehicle CAN faults, then check to see that this fault code is also resolved.

   B. If related vehicle CAN faults do not exist, continue with Step **3**.

3. Check the ECU supply voltage.

   Disconnect the vehicle (VE) harness from the ECU at the connector **X-ECU**.

   With the key switch in the "ON" position, use a multimeter to check for voltage on the vehicle (VE) harness side:

From	To	Value
Connector **X-ECU** pin 1	chassis ground	There should be **12.0 V**
Connector **X-ECU** pin 25	chassis ground	There should be **12.0 V**
Connector **X-ECU** pin 26	chassis ground	There should be **12.0 V**
Connector **X-ECU** pin 49	chassis ground	There should be **12.0 V**
Connector **X-ECU** pin 73	chassis ground	There should be **12.0 V**

   A. If the voltage is present on all of the checks, leave the connector **X-ECU** disconnected and continue with Step **4**.

   B. If the voltage is not present for one or more of the checks, refer to the appropriate vehicle service manual and electrical schematics to locate and restore supply power to the ECU.

4. Check the ECU grounding.

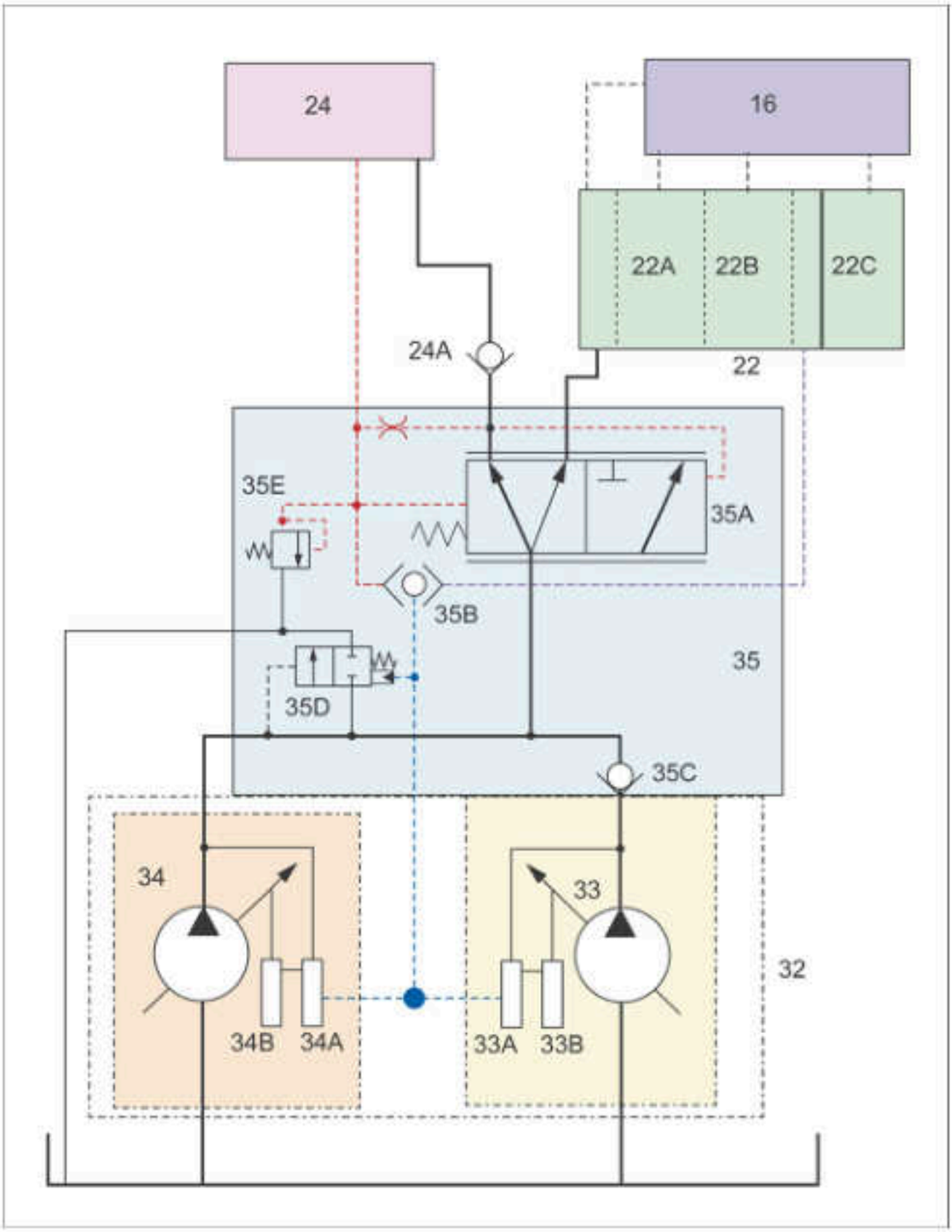
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A. If the functionality is restored, the procedure ends.

B. If the functionality is not restored, replace the **A-UCM**.

Wiring harnesses - Electrical schematic sheet 22 (55.100)

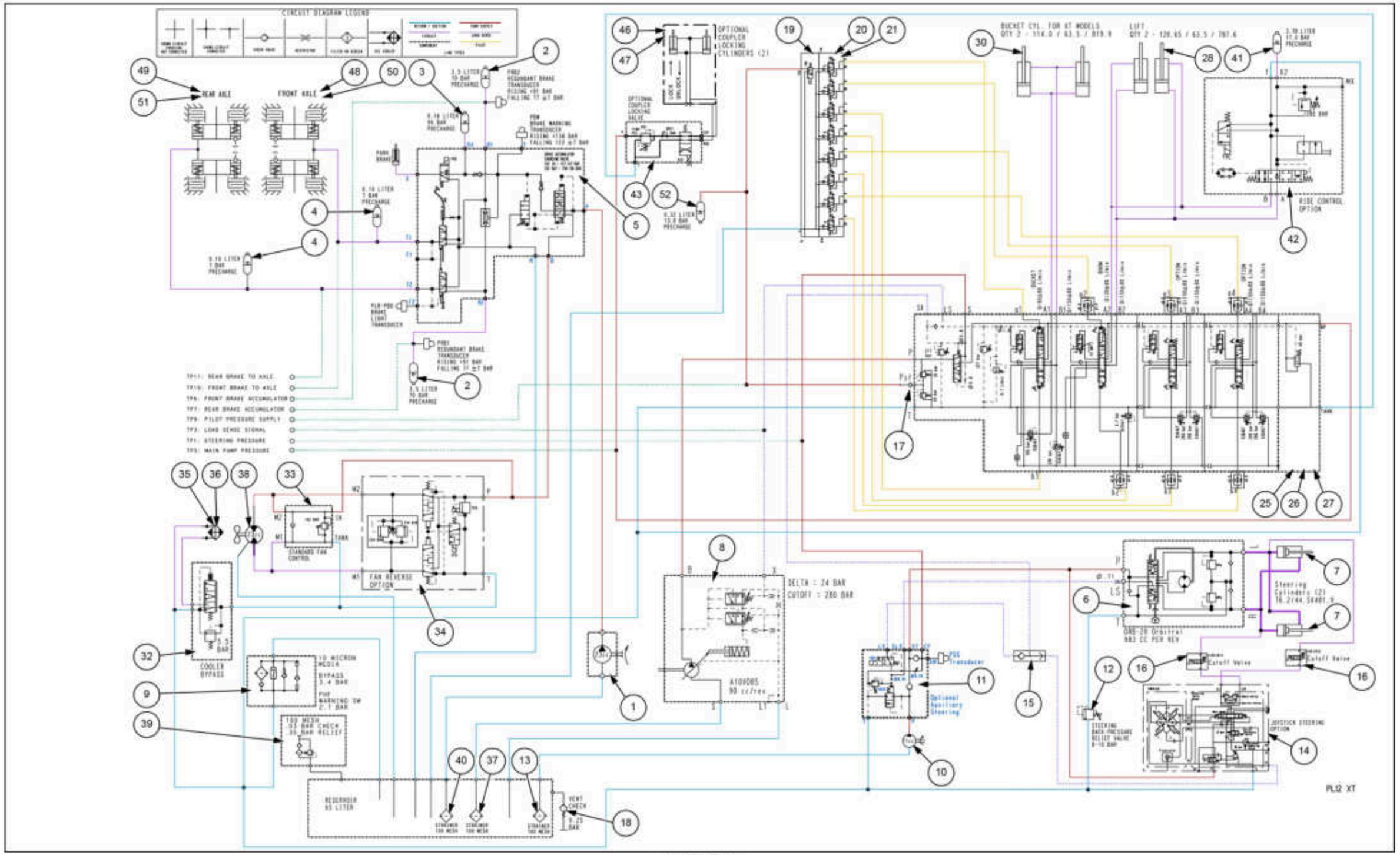
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RDPNYWHL03GHAN 1

Component Flow Chart

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