SERVICE MANUAL

T8.275 / T8.300 / T8.330 / T8.360 / T8.390 / T8.420 Continuously Variable Transmission (CVT)

Tractor

PIN ZCRC02586 and above

Part number 47533593
2nd edition English
October 2013

NEW HOLLAND AGRICULTURE

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Connector **X-2381**	To front hitch harness
Connector **X-2382**	Front auxiliary power harness
Connector **X-2383**	To front trailer connector
Connector **X-2385**	To front power outlet
1.	To front hitch harness
2.	To front trailer connector
3.	To front power outlet

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111-Cab temperature sensor open or shorted to power

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Cause:
The ATC controller detects an open circuit or short to power at the cab temperature sensor.

Possible failure modes:

1. Cab temperature sensor failed.
2. Harness damage.
3. ATC controller failure

Solution:

1. Access the cab temperature sensor below the operator's seat.

   Disconnect connector **ATC_J7** from the sensor. Measure resistance between pins A and B on the sensor. The expected reading varies with the ambient cab temperature. Allow the sensor temperature to stabilize, and then use the table below to determine whether the sensor is functioning normally.

°C	°F	Ohm
-10 °C	14 °F	16.12k Ω
-5 °C	23 °F	12.3k Ω
0 °C	32 °F	9.4k Ω
5 °C	41 °F	7.2k Ω
10 °C	50 °F	5.6k Ω
15 °C	59 °F	4.4k Ω
20 °C	68 °F	3.5k Ω
25 °C	77 °F	2.8k Ω
30 °C	86 °F	2.2k Ω
35 °C	95 °F	1.8k Ω

   A. Reading out of range. Replace the cab temperature sensor. Clear all fault codes, and return unit to field operation.

   B. Reading within range. Reconnect connector **ATC_J7** to the sensor. Go to Step **2**.

2. Disconnect the connector at the automatic temperature control (ATC) control module. Measure resistance between pin 18 of control module connector **ATC_CM** and chassis ground. Expected reading is less than **1.0 Ω**.

   A. Expected reading not found. Locate and repair the open circuit in sensor ground wire 309. Clear all fault codes, and return unit to field operation.

   B. Expected reading found. Go to Step **3**.

3. Measure resistance between pin 21 of control module connector **ATC_CM** and every other pin on the control module connector. Expected reading is no continuity (infinite resistance or overload).

   A. Continuity found. Locate and repair the short circuit. Clear all fault codes, and return unit to field operation.

   B. Continuity not found. Go to Step **4**.

4. Disconnect connector **ATC_J7** at the sensor. Measure resistance between pin 21 of control module connector **ATC_CM** and pin A of harness connector **ATC_J7**. Expected reading is less than **1.0 Ω**.

   A. Expected reading not found. Locate and repair the open circuit in sensor wire SEN orange. Clear all fault codes, and return unit to field operation.

   B. Expected reading found. Clear all fault codes, and return unit to field operation and monitor for recurring fault. If the fault code re-displays, go to Step **5**.

5. Replace the ATC control module. Test operation of the HVAC system.

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2365-C2 clutch is not calibrated

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Context:
Poor clutch performance from an uncalibrated clutch.

Cause:
The flag in NVM that indicates the C2 clutch has been calibrated is not set.

Possible failure modes:

1. Faulty solenoid
2. Faulty hydraulic circuit
3. Mechanical fault

Solution:

1. Perform the transmission calibration procedure. Refer to controller calibration section in this manual.

   Test operation of the clutch when complete.

   A. Error code redisplays. Continue to step **2**

   B. Error code does not redisplay. Return unit to field operation.
2. Check if other transmission error codes are active.

   A. Other error codes are active. Resolve those error codes first.

   B. No other error codes are active. Continue to step **3**.
3. Check the C2 clutch solenoid.

   Turn the keyswitch off.

   Disconnect the C2 clutch solenoid connector **X-037**.

   Measure resistance between terminal 1 and 2 through the solenoid.

   Expected reading is **9 - 11 Ohms**.

   A. Resistance not within range. Replace the C2 clutch solenoid, and return unit to field operation.

   B. Resistance within range. Continue to step **4**.
4. Check the C2 clutch pack pressure. Refer to transmission clutch pressure testing.

   A. Clutch pressure is good. Submit a concern to ASIST.

   B. Clutch pressure is low. Continue to step **5**.
5. Thoroughly clean the area surrounding C2 clutch solenoid. See valve disassembly in this service manual.

   Remove the solenoid valve assembly.

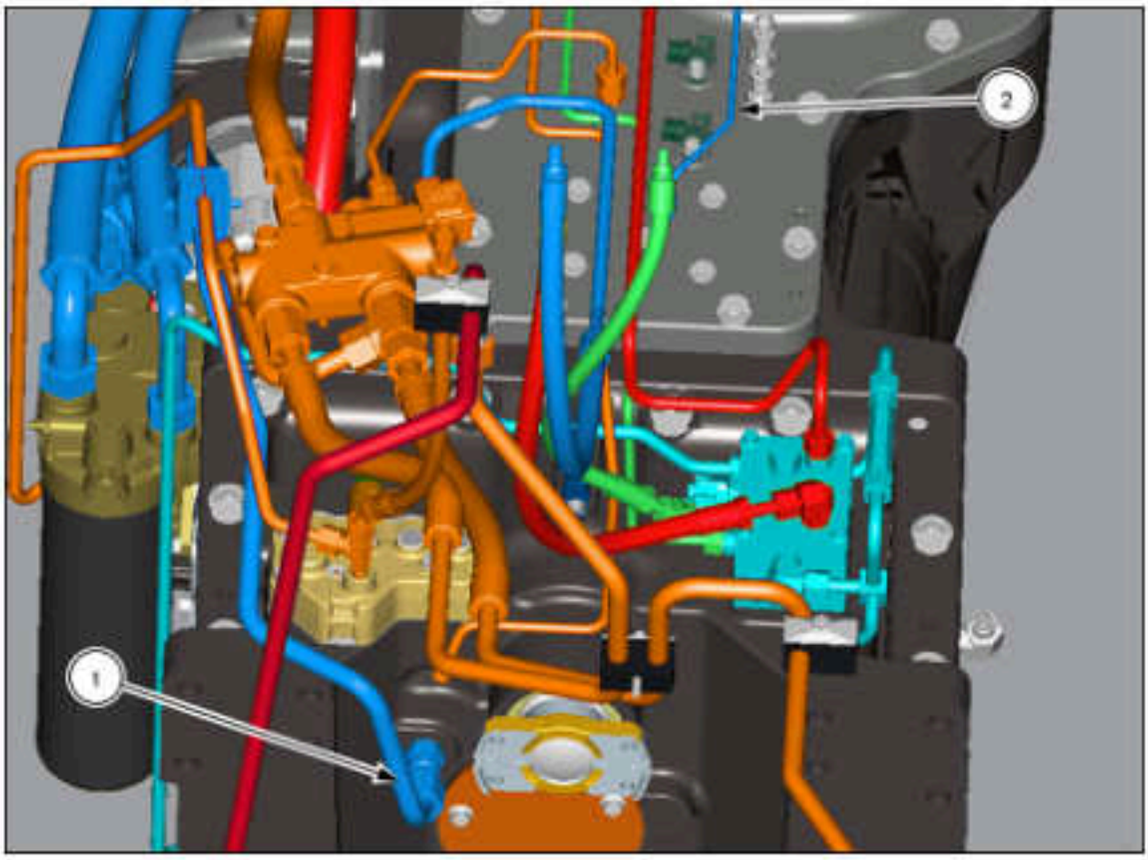
   Check the seals and test the solenoid valve operation on the bench top.

   A. Seals or valve are worn or damaged. Repair or replace the valve as required, and return unit to field operation.

   B. Reinstall the valve with new O-ring seals, and test valve operation. If the error code redisplays, submit a concern to ASIST.

Wire harnesses - Electrical schematic frame 13 (55.100.DP-C.20.E.13)

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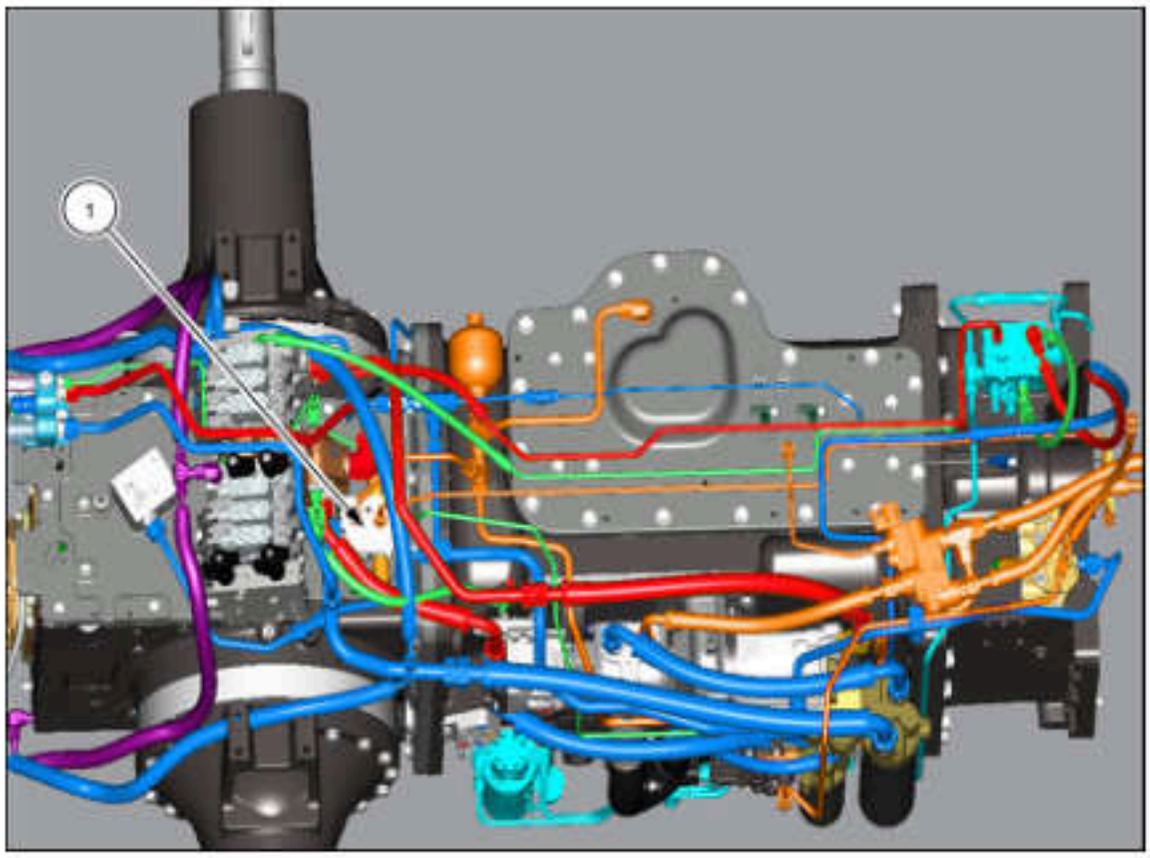
RAIL13TR30668FA 2

1. Front cover lube line	2. Front CVT hydro bearing lube

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Power Take-Off (PTO) control valve - Dynamic description

The PTO/diff lock valve is located on top of the rear frame housing. The PTO/diff lock valve controls the PTO and diff lock operation. The PTO/diff lock valve also controls and distributes lube flow.



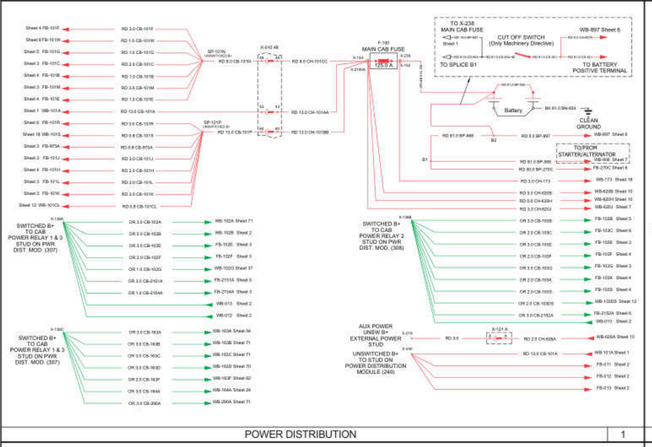
RAIL1STR30652PA 1

1. PTO/diff lock valve	

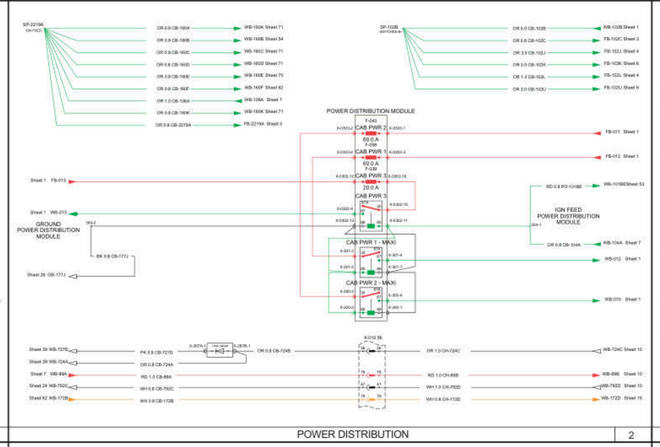
The regulated pressure circuit supplies the PTO and diff lock functions. The regulated supply to both the PTO and diff lock is limited to **22.4 - 24.5 bar** (**325 - 355 psi**). The supply to the PTO clutch and diff lock are internally ported through the rear frame assembly.

The charge/lube circuit supplies the lube portion of the valve. The lube points include the diff lock, pinion, front and rear hydro bearings and service brakes. The amount of lube to the left and right brakes is controlled through the lube solenoid valve. The lube solenoid minimizes lube to brakes, when the brakes are not applied. Once the brakes are applied a signal from brake pedal switch, energizes the lube solenoid. The lube pressure is directed to the base of the lube spool. As pressure builds the spool shifts up increasing the lube flow to the brakes.

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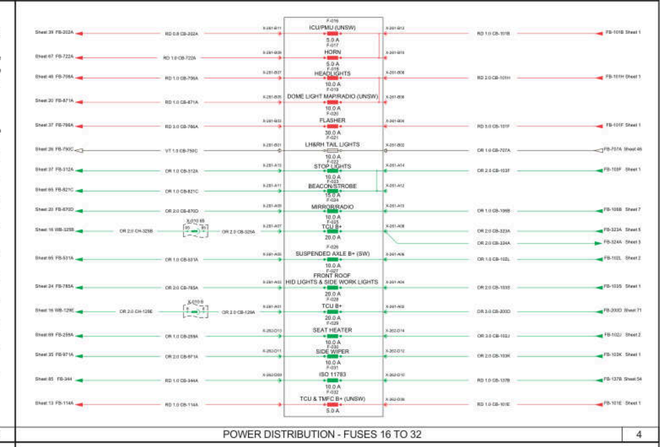
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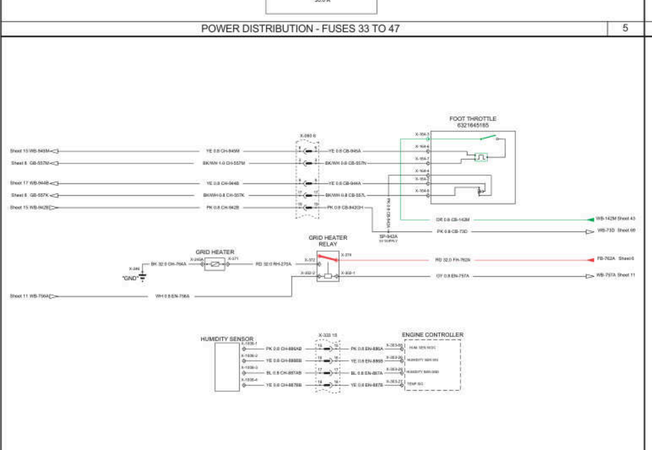
POWER DISTRIBUTION | 2



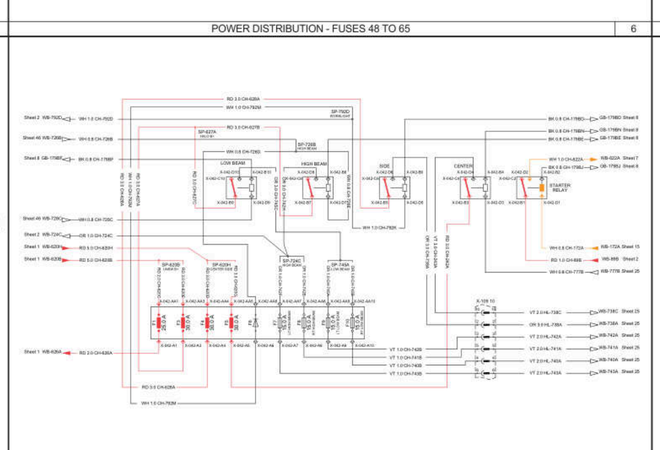
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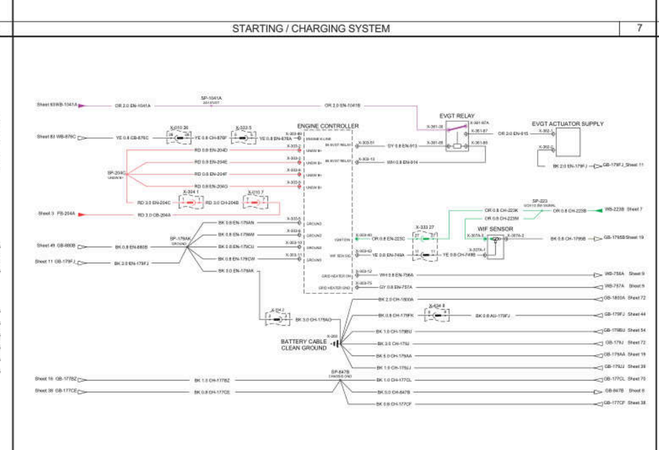
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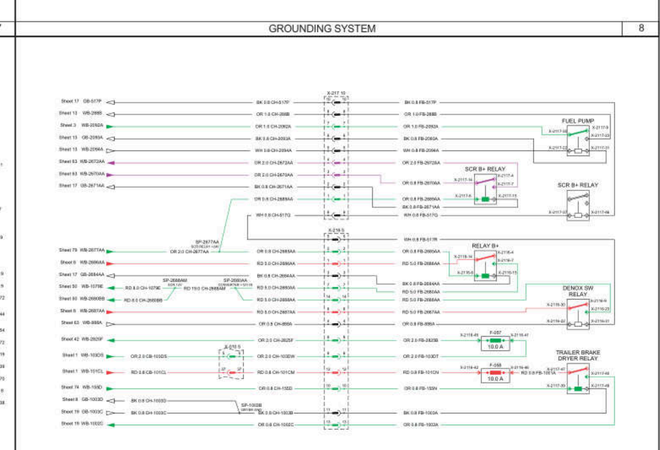
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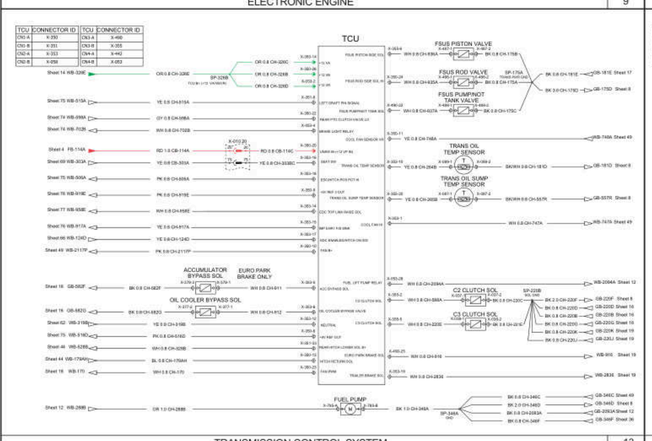
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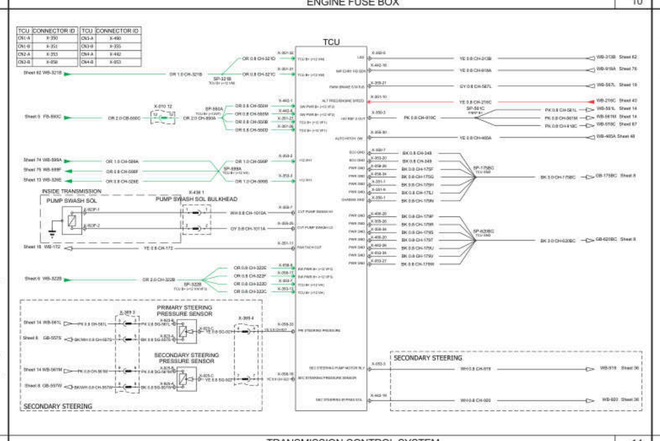
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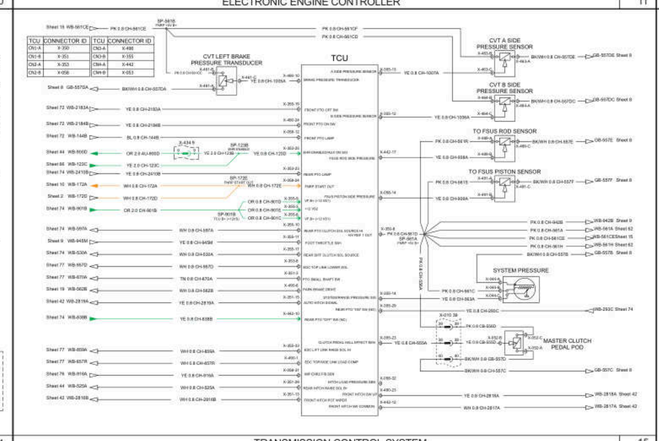
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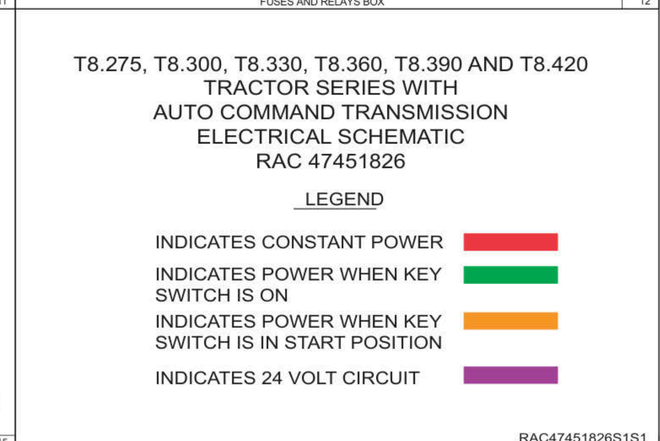
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T8.275, T8.300, T8.330, T8.360, T8.390 AND T8.420 TRACTOR SERIES WITH AUTO COMMAND TRANSMISSION ELECTRICAL SCHEMATIC RAC 47451826

LEGEND

INDICATES CONSTANT POWER

INDICATES POWER WHEN KEY SWITCH IS ON

INDICATES POWER WHEN KEY SWITCH IS IN START POSITION

INDICATES 24 VOLT CIRCUIT

RAC47451826S1S1

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