Magnum 235
Magnum 260
Magnum 290
Magnum 315
Magnum 340

Tractor

PIN ZBRD07000 and after

SERVICE MANUAL

Part number 47386174

English

October 2012

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CASE IH AGRICULTURE

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Wire harnesses - Electrical schematic frame 66 - Hydraulic control lock switch

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Connector **X-010**	To main chassis harness
Connector **X-013**	Cab roof harness
Connector **X-245**	Hydraulic lock control switch

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18065-MFH (multi-function handle) basic assurance test error

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NOTE: *When the cause of the error code has been rectified, clear the error code and test the system for normal operation.*

Cause:
Multi function handle failed its self-test.

Possible failure modes:

1. Faulty multi function handle
2. Incorrect armrest configuration
3. Faulty connector
4. Swapped connectors
5. Faulty armrest controller

Solution:

1. Check if the fault code is still active. Clear all fault codes. Operate the tractor under normal conditions.
   A. Fault code does not redisplay. Return unit to field operation and monitor for continuing problems.
   B. Fault code redisplays. Continue to step **2**.
2. Use the monitor screen function on the electronic service tool (EST) to check operation of the multi function handle. Check operation of all controls in the multi functional handle. Refer to the EST user guide.
   A. Multi function handle not operating correctly. Continue with step **3**.
   B. Multi function handle operating correctly. Return unit to field operation and monitor for continuing problem.
3. Check the armrest controller connectors.

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3015-Fuel Temperature Sensor - Signal Above Maximum

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Context:
The Engine Control Unit (ECU) has detected a fault associated with fuel temperature sensor. This error typically results from a signal that is out of range.

Cause:
The fuel temperature sensor signal to the ECU is out of the range of the upper threshold limit.

Possible failure modes:

1. Faulty fuel temperature sensor.
2. Faulty electrical wiring or short to high source or open circuit condition.
3. Faulty ECU, supply voltages or grounds.

Solution:

1. Verify this error code is still active.

   A. If the error is still active, continue with step **2**.

   B. If the error is no longer active, continue with step **6**.
2. Check the sensor.

   Remove the harness connector from the **KTF** fuel temperature sensor.

   Measure resistance through the sensor, and compare the reading with the table below.

Fuel Temperature	Resistance Value
-20 °C (-4 °F)	10.5 kOhm
0 °C (32 °F)	7500 ohms
20 °C (68 °F)	4200 ohms
40 °C (104 °F)	980 ohms
60 °C (140 °F)	780 ohms
80 °C (176 °F)	500 ohms
100 °C (212 °F)	280 ohms
120 °C (248 °F)	97 ohms

   A. If sensor resistance is correct, continue with step **3**.

   B. If the sensor is incorrect, replace the sensor. Return unit to field operation.
3. Verify proper supply voltage to the fuel temperature sensor **KTF** from the ECU.

   Measure voltage between pin 2 on the harness connector on the sensor and ground.

   Expected reading is about **5 V**.

   A. If there is **5 V**, continue with step **5**.

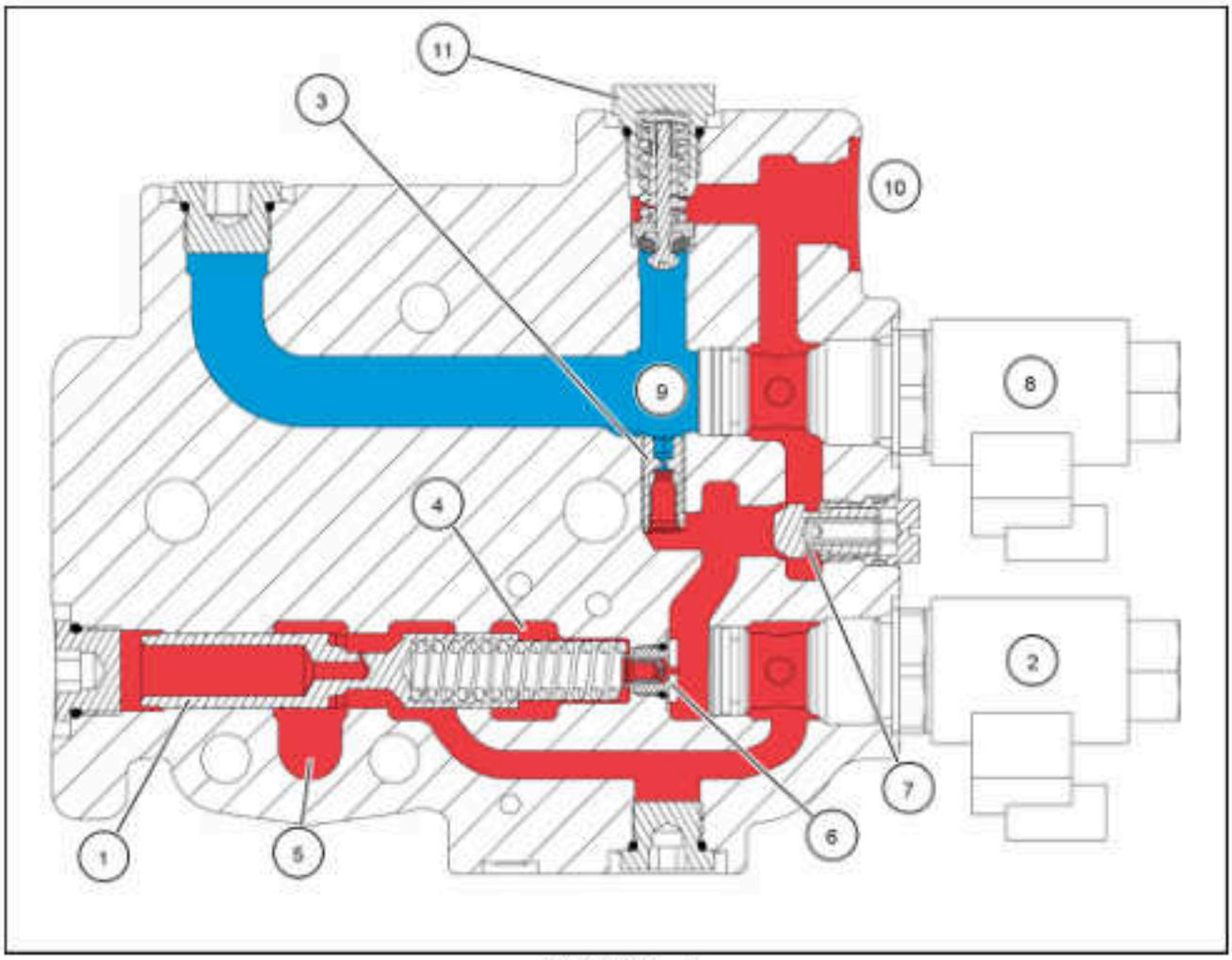
   B. If there is greater than **5 V**, continue with step **4**.
4. Verify voltage output from ECU.

   Disconnect ECU engine connector **2**.

   Measure voltage between pin 24 on the ECU and ground.

   Measure voltage between the engine connector **2**, pin 35 and ground.

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Raise position

PFC pump pressure	Return to tank pressure
Trapped oil	
1. Flow control spool	7. Load check
2. Raise solenoid	8. Lower solenoid
3. Screened orifice plug	9. Return to tank
4. Pilot signal to compensator	10. Hitch cylinders
5. PFC pump supply	11. Relief valve
6. Check/orifice plug	

Lowering function

To lower the hitch, the lower proportional solenoid valve must be energized by the tractor control unit (TCU). The amount of spool movement depends on the amount of current supplied by the controller to the proportional solenoid. Once the lower solenoid is energized, the solenoid valve shifts, opening a flow path directly back to tank.

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Hydraulic systems - Hydraulic schematic frame 01

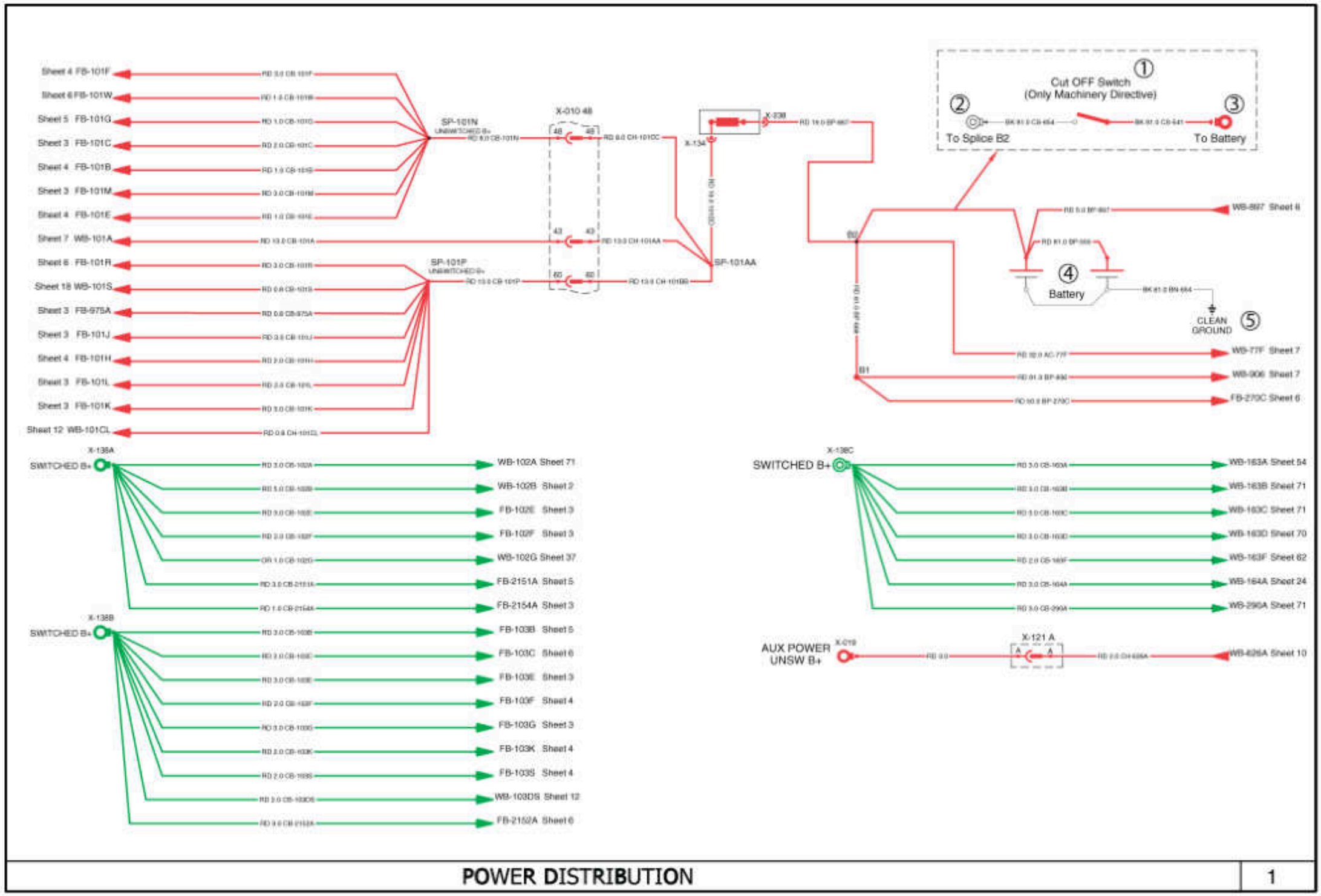
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Hydraulic schematic 84414788

	PFC PISTON PUMP
	CHARGE LUBE/LUBE PUMP FLOW
	REGULATED CIRCUIT PRESSURE
	RETURN TO TANK/SUMP
	OIL COOLER/FILTRATION, AUX CHARGE PUMP FLOW

1. Remote section	31. Transmission control valves
2. Load sense diagnostic	32. Park clutch
3. Pilot/hitch drain	33. Inlet regulator
4. Pilot supply	34. Priority regulator valve
5. Return	35. Thermal bypass valve
6. Supply	36. Oil cooler
7. Hitch valve	37. Lube regulator
8. Category 4 hitch	38. Piston pump
9. Hitch cylinders	39. Filter
10. Return	40. PTO lube
11. Supply	41. Odd/even lube
12. Signal	42. Drop box lube
13. Case drain	43. Creep drive lube
14. Power beyond	44. Master clutch lube
15. PTO/differential lock valve	45. Right brake/differential lube
16. PTO clutch/brake	46. MFD/range lube
17. Differential lock clutch	47. Left brake/differential lube
18. Bevel pinion lube	48. To park brake valve
19. Lube supply	49. Service brake
20. MFD clutch	50. Master clutch
21. Low clutch	51. Inlet
22. Medium clutch	52. Master clutch inching valve
23. Hitch clutch	53. Park/emergency brake
24. Reverse clutch	54. Brake release pump
25. Fifth clutch	55. Steering hand pump
26. Third clutch	56. Steering cylinders
27. First clutch	57. Bypass valve
28. Even clutch	58. Brake valve
29. Odd clutch	59. NOTE: Switch is opened when pedal reaches full stroke when hydraulic power is lost.
30. Creeper clutch	

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