SERVICE MANUAL

T4.55 / T4.65 / T4.75

PowerStar - Tractor

PIN ZDAH00008 and above

Part number 47772169

English

September 2014

NEW HOLLAND AGRICULTURE

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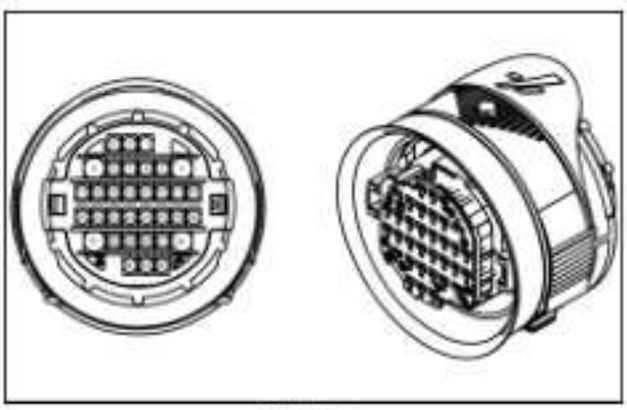
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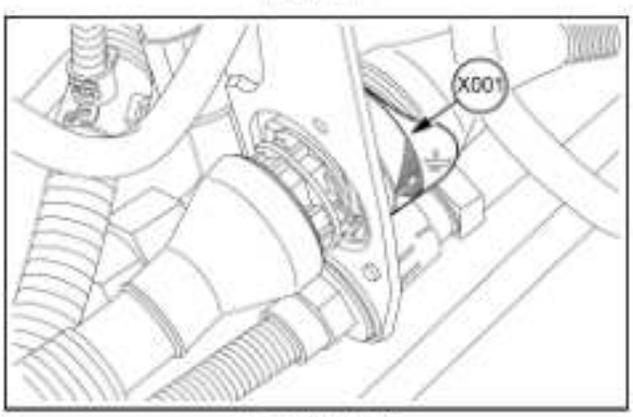
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CONNECTOR X-001 - Main Harness/ Engine Connection		
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**
20	1000 (BL/YE) 155 (BL/YE) 27 (BL/YE)	SP-008 X-001Main Harness/ Engine Connection X-130Modulo Fuses F1-F32 SP-070 X-450ADIC CN1 X-376Diagnostic Socket
21	-	-
22	-	-
23	-	-
24	-	-
25	1007 (OR) 336 (OR)	SP-031 X-001Frazionamento Motore - cabina X-130Modulo Fuses F1-F32 X-001Main Harness/ Engine Connection
26	1900 (BK)	X-410Steering Column Ground X-001Main Harness/ Engine Connection
27	105 (TQ/GN)	X-012Interconnect Transmission / Trailer Socket J-003Trailer Socket ISO
28	33 (BL) 689 (BL) 689 (RD)	X-001Frazionamento Motore - cabina X-002Frazionamento PDU X-130Modulo Fuses F1-F32 SP-061 X-130Modulo Fuses F1-F32 SP-061
29	-	-
30	-	-
31	1248 (BK/YE) 1249 (GN)	X-120Modulo Relays R9-R16 + Fuses F37-F40 X-001Main Harness/ Engine Connection X-001Frazionamento Motore - cabina X-937EDC17 CONNECTOR 2
32	-	-
33	1252 (RD/YE) 1255 (RD/YE)	SP-086 X-001Frazionamento Motore - cabina SP-087 X-001Main Harness/ Engine Connection
34	1253 (RD/YE) 1254 (RD/YE)	SP-086 X-001Frazionamento Motore - cabina SP-087 X-001Main Harness/ Engine Connection





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Temperature	Resistance Nominal Value	Average minimum/maximum limits
70 °C (158 °F)	446 ohms	431 - 462 ohms
75 °C (167 °F)	383 ohms	370 - 396 ohms
80 °C (176 °F)	329 ohms	319 - 340 ohms
85 °C (185 °F)	284 ohms	275 - 293 ohms
90 °C (194 °F)	246 ohms	238 - 254 ohms
95 °C (203 °F)	214 ohms	207 - 220 ohms
100 °C (212 °F)	186 ohms	180 - 192 ohms
105 °C (221 °F)	162 ohms	157 - 167 ohms
110 °C (230 °F)	142 ohms	138 - 147 ohms
115 °C (239 °F)	125 ohms	121 - 129 ohms
120 °C (248 °F)	110 ohms	106 - 113 ohms
125 °C (257 °F)	97 ohms	93 - 100 ohms
130 °C (266 °F)	85 ohms	83 - 88 ohms

A. If the resistance measurement does not approximately match the table, Implement does not work properly.

B. If the resistance measurement does approximately match the table, Continue to step **5**.

5. Check for ECU voltages and ground continuity.
Use product schematic. Leave the ignition key switch in the OFF position.
Remove connector **X-937** from the ECU.
Place the ignition key switch ON to check for voltage at the appropriate pins defined in the test table below. Place the ignition key switch OFF to check for continuity at the appropriate pins defined in the test table below.
Use the **0.4 mm** (**0.017 in**) diameter test probes from the Tier II (NEF) Diagnostic Repair Kit **380040185** when connecting the DMM to connector **X-939**.
Make sure the DMM's test lead resistance is taken into account when making any continuity measurements.

Important Note:
Check and verify that the Vehicle Status is correct for each operation. Potential ECU damage could result when removing and replacing main ECU connectors if this is not followed.

Type of test	From	To	Expected results
1. Voltage	**X-937**, pin 1 wire 31 (RD/BK), pin 3 wire 30 (RD/YE), pin 5 wire 29 (RD/YE), pin 29 wire 341 (OR)	Ground (engine block)	about **12 V**
2. Continuity.	**X-937**, pin 2 wire 311(BK), pin 4 wire 312 (BK), pin 6 wire 313 (BK)	Ground (engine block)	about **0 - 0.10 ohms**

A. If the voltages and ground paths are correct and the Boost Pressure sensor was not replaced on a prior diagnostic of this type, Implement does not work properly.

B. If the voltages and ground paths are correct and the Boost Pressure sensor was replaced on a prior diagnostic of this type,re-initialize the ECU as if it was blank (new) and load the appropriate data-set.

C. If the voltages and ground paths are correct and the ECU was re initialized on a prior diagnostic of this type, replace the ECU.

D. If the voltages and ground paths are not correct, refer to schematic and determine root cause of power or continuity problem(s).

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3802-Exhaust manifold pressure sensor - signal too low

Control Module : ECU

Context:
The engine control unit (ECU) has detected that the voltage read by the pressure sensor upstream from the turbine is greater than **4.74 V**.

Cause:
The turbine upstream pressure sensor signal is shorted to a high voltage source.

Possible failure modes:

1. Faulty connector
2. Faulty wiring.
3. Exhaust gas absolute pressure sensor on the manifold (B-021)

Solution:

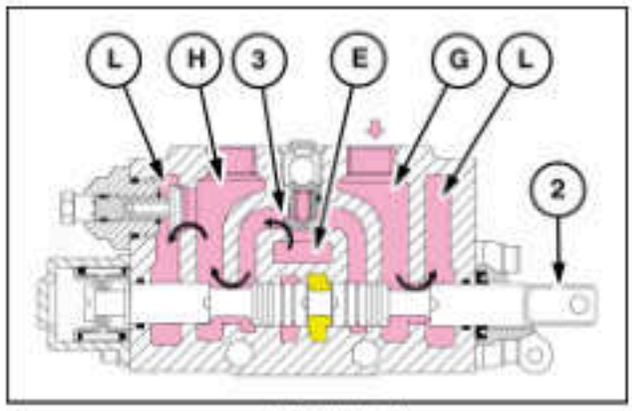
1. Before proceeding clear the error code with the approved diagnostic equipment. Run the tractor under normal conditions and retest.
   A. If the error code is not indicated, check that the system is operating correctly.
   B. If the error code is indicated, continue to step **2**
2. Check the connector **X-963** on the exhaust gas absolute pressure sensor on the manifold (upstream from the turbine) and the connector **X-939** of the engine control unit (ECU).
   A. Ensure the connectors were connected, not damaged, the pins are in the correct position and that the fit is tight.
   If an error occurs, Repair or replace as required.
   B. If the connectors are okay, continue to step **3**
3. Check for **5 V**.
   A. Disconnect connector **X-963** . Turn the ignition key switch ON. Measure voltage between connector **X-963** pin 1 and ground. If the voltage measured is not approximately **5 V**, Repair or replace wiring harness as needed.
   B. If approximately **5 V** is indicated, continue to step **4**
4. Check for an open ground circuit.
   A. Check between connector **X-963** pin 2 and ground. If an open circuit is indicated, Repair or replace wiring harness as needed.
   B. If an open circuit is not indicated, continue to step **5**
5. Check for a short circuit to a positive voltage.
   A. Disconnect connector **X-939** . Turn the ignition key switch ON. Measure the voltage between connector **X-963** pin 3 and ground. If a voltage is present, Repair or replace wiring harness as needed.
   B. If a voltage is not indicated, continue to step **6**
6. Check for a short circuit to ground.
   A. Turn the ignition key switch OFF. Check between connector **X-963** pin 3 and ground. If short to ground is indicated, Repair or replace wiring harness as needed.
   B. If a short to ground is indicated, continue to step **7**
7. Check for an open condition.

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Lower

To operate the lowering stage, you need to pull the control lever forward and trigger the following actions:

- The control cable moves and shifts the spool **(2)** of the control valve.
- The movement of the spool allows:
  - The oil in the cylinder to flow to the drain **(L)** through line **(G)**
  - The entire flow of oil from the pump to run to the drain **(L)** through check valve **(3)** and line **(H)**.



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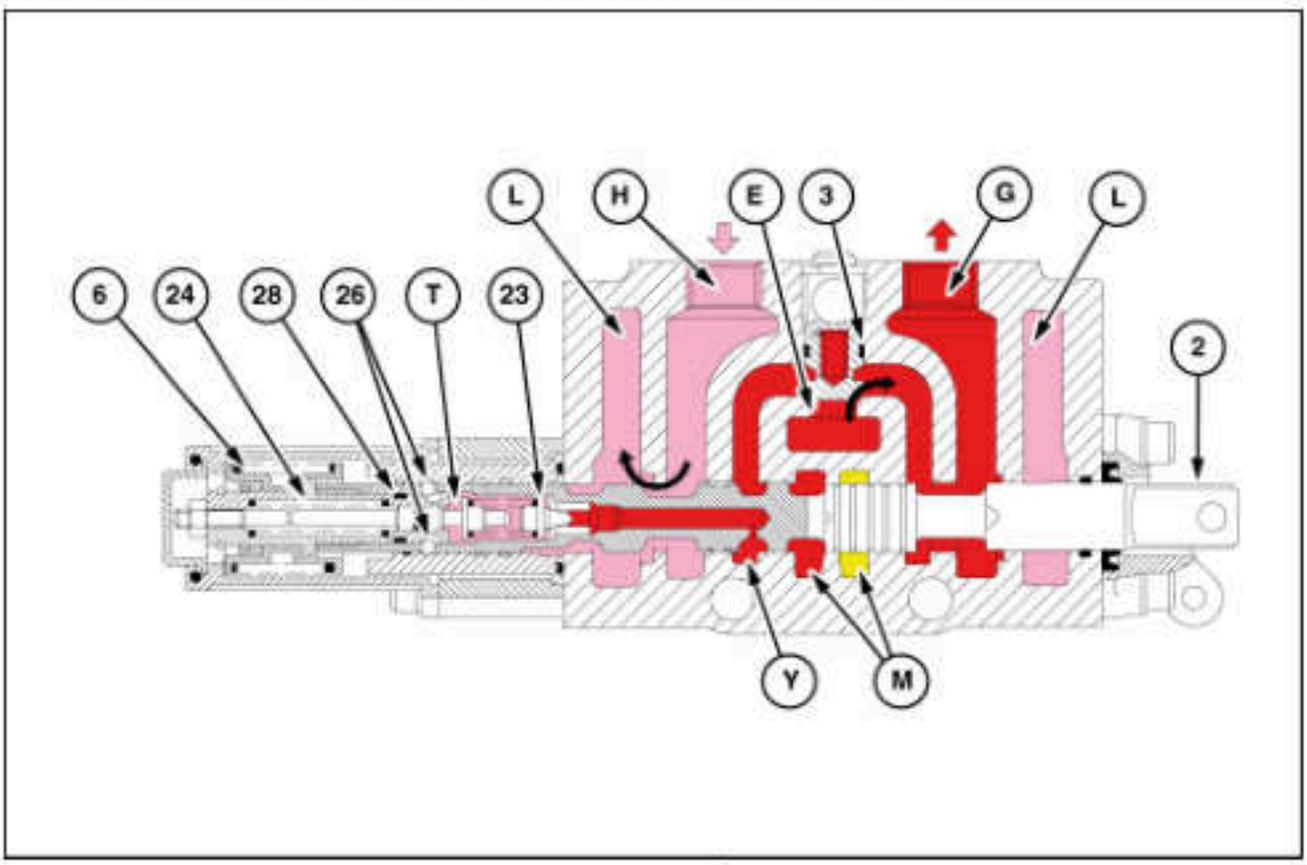
Pressure oil

Oil in suction, delivery or return

Trapped oil

NOTE: *To operate the single-acting cylinder, loosen the switching valve* ***(1)****; see Fig.* ***3****.*

Operating stages of an auxiliary control valve for operation of a single-acting cylinder/double-acting cylinder with automatic detent release and float position



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Pressure oil

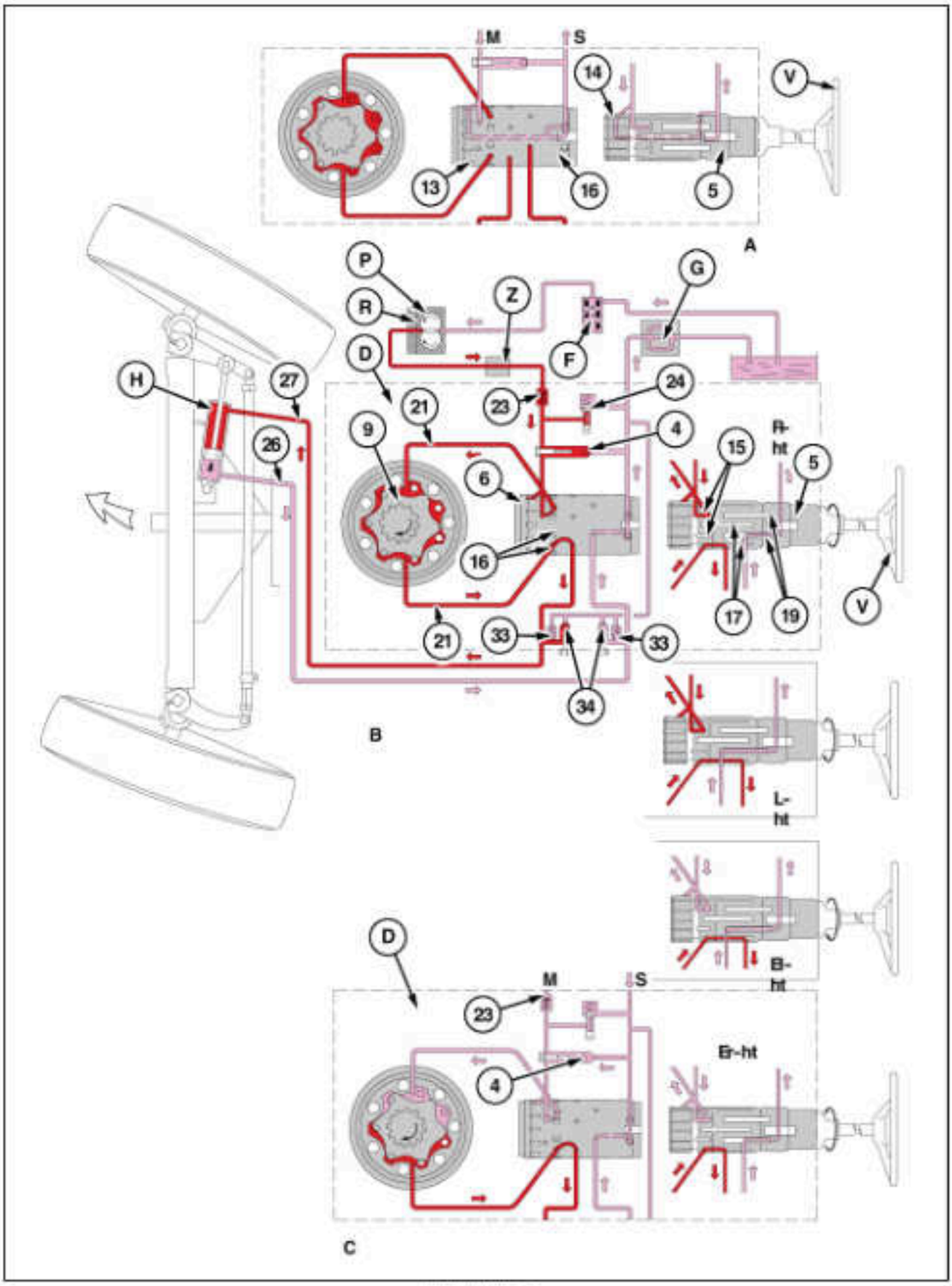
Oil in suction, delivery or return

Trapped oil

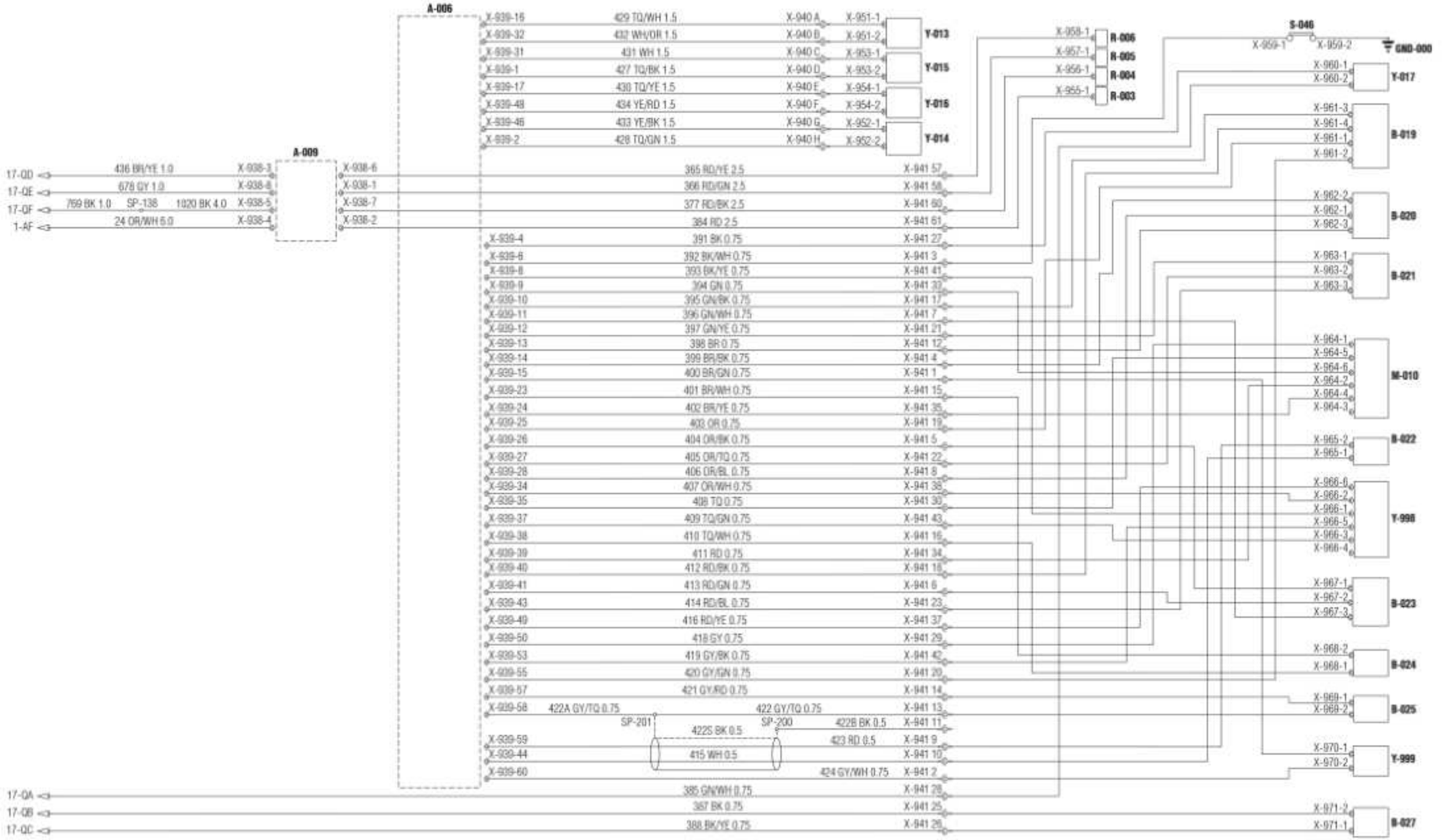
Raising

To operate the lifting stage, you need to pull the control lever back and trigger the following actions:

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