SERVICE MANUAL

T4.75 PowerStar™
Tier 4B (final)
Tractor

PIN ZDAH00008 and above

Part number 47711469
1st edition English
May 2014

MidWestTech | New Holland T4.75 PowerStar Tier 4B Tractor Service Manual | Publication 47711469

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(*) See content for specific models

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COMPO-NENT NAME	CONNEC-TIONS	DESCRIPTION	WIRING DIAGRAM
GND-006	X-410	Steering column ground	**Wire harnesses - Electrical schematic sheet 01 (55.100)** **Wire harnesses - Electrical schematic sheet 05 (55.100)** **Wire harnesses - Electrical schematic sheet 07 (55.100)** **Wire harnesses - Electrical schematic sheet 08 (55.100)** **Wire harnesses - Electrical schematic sheet 15 (55.100)** **Wire harnesses - Electrical schematic sheet 16 (55.100)** **Wire harnesses - Electrical schematic sheet 19 (55.100)** **Wire harnesses - Electrical schematic sheet 21 (55.100)** **Wire harnesses - Electrical schematic sheet 22 (55.100)**
GND-007	X-420	Engine ground	**Wire harnesses - Electrical schematic sheet 01 (55.100)** **Wire harnesses - Electrical schematic sheet 07 (55.100)** **Wire harnesses - Electrical schematic sheet 16 (55.100)** **Wire harnesses - Electrical schematic sheet 17 (55.100)**
GND-008	X-601	Battery ground	**Wire harnesses - Electrical schematic sheet 01 (55.100)**
H-001	X-015 — X-016	Horn	**Wire harnesses - Electrical schematic sheet 07 (55.100)**
H-002	X-039	Radio	**Wire harnesses - Electrical schematic sheet 21 (55.100)**
H-003	X-082 — X-083	Rear radio speaker right hand	**Wire harnesses - Electrical schematic sheet 21 (55.100)**
H-004	X-084 — X-085	Rear radio speaker left hand	**Wire harnesses - Electrical schematic sheet 21 (55.100)**
H-005	X-555	Reverse gear buzzer	**Wire harnesses - Electrical schematic sheet 10 (55.100)**
J-003	X-026	**8 A** socket	**Wire harnesses - Electrical schematic sheet 09 (55.100)**
J-004	X-029	Electric seat connector	**Wire harnesses - Electrical schematic sheet 09 (55.100)**
J-005	X-027 — X-080	Cigar lighter connector	**Wire harnesses - Electrical schematic sheet 09 (55.100)**
J-007	X-078 — X-079	**40 A** socket	**Wire harnesses - Electrical schematic sheet 09 (55.100)**
J-009	X-376	Main diagnostic socket	**Wire harnesses - Electrical schematic sheet 11 (55.100)**
J-016	X-099	7-pins trailer socket	**Wire harnesses - Electrical schematic sheet 09 (55.100)**
J-018	J-001	**30 A** socket	**Wire harnesses - Electrical schematic sheet 09 (55.100)**
J-019	X-028 — X-081	Optional cigar lighter connector	**Wire harnesses - Electrical schematic sheet 09 (55.100)**
K-001	X-110	Switched service relay	**Wire harnesses - Electrical schematic sheet 19 (55.100)**

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3008-Coolant temperature signal - signal below range minimum

Control Module : ECU

Context:
The Engine Control Unit (**ECU**) generated an error from a fault associated with the coolant temperature sensor. This error could result from a signal out of range or a signal that is erratic or intermittent. When the **ECU** determines that the coolant temperature sensor temperature value is not valid, it will substitute another value to be used. In case of a defective coolant temperature sensor during engine warm-up, a default coolant temperature value is derived from the ramp of the currently logged sensor data. If an error would occur during normal engine operation, the oil temperature is used as the default value. If the oil temperature / pressure sensor is defective, **89.96 °C** (**193.9 °F**) is substituted as the default value.

Cause:
The coolant temperature sensor signal to the **ECU** is out of the range of the lower threshold limit.

Possible failure modes:

1. Faulty electrical wiring, short to low source condition.
2. Faulty coolant temperature sensor.
3. Faulty **ECU**.

Solution:

1. Verify the fault code is active and present.

   A. If fault code is present and active, Continue to step **3**.

   B. If the fault code is no longer present, Continue to step **6**.

2. Verify proper coolant temperature sensor operation.
   Disconnect the coolant temperature sensor connector **X-969** and test resistance of coolant temperature sensor using the table of resistance vs temperature below.

Coolant 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 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 **4**.

3. Check for supply voltage from the **ECU** in the coolant temperature sensor supply wiring.
   Disconnect the connector from coolant temperature sensor **X-969** and check for voltage between coolant temperature sensor connector **X-969**, pin 1 and ground.
   There should be **5 V**.

   A. If approximately **5 V** is present, continue with step **5**.

   B. If **5 V** is not present, Continue to step **2**

4. Check the **ECU** output to the coolant temperature sensor.
   With the ignition key switch in the OFF position, disconnect the coolant temperature sensor connector **X-969** and the **ECU** engine connector **X-969** on engine sensor harness.

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3285-Sensor supply voltage 3 - high

Control Module : ECU

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

NOTE: *Check alternator output voltage. Troubleshoot charging system before proceeding.*

Cause:
Besides the 3 independent **5 V** voltage supplies the **ECU** also provides a **12 V** supply for the sensors. This **12 V** supply is monitored to ensure it remains within a certain range. This is done by using an analog input of the **ECU** . The lower and upper thresholds depend on the battery voltage.

Possible failure modes:

1. Faulty wiring.
2. Faulty connectors.
3. Faulty **ECU**.

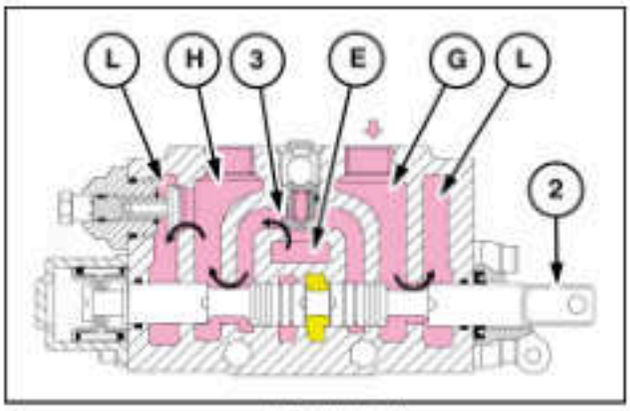
Solution:

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 fault is still present, continue to step **2**
2. Check for other engine sensor related error codes.
   A. If other engine sensor related error codes are displayed, continue to these tests.
   B. If no other engine sensor related error codes are displayed, continue to step **3**
3. Check for **12 V**
   A. Turn the ignition key switch ON. Measure voltage between connector:
   X-937, pin 1, wire 31 (RD/BK) and ground;
   X-937, pin 3, wire 30 (RD/YE) and ground;
   X-937, pin 5, wire 29 (RD/YE) and ground;
   X-937, pin 28, wire 28 (BK/WH) and ground.
   If the voltage indicated is not approximately **12 V**, repair or replace the harness as necessary.
   B. If the **ECU** supply voltage is okay, download the correct level of software.
   If the fault re-occurs, remove and replace the **ECU**.

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Lowering

On pushing back the control lever (located in the cab) the stem **(2)** will shift to the position indicated in Fig. **4**. The oil contained in the cylinder, pressurized by the weight of the lifted implement, will flow to the exhaust **(L)** by way of line **(G)**, while the entire flow from the pump is also conveyed to the exhaust **(L)** through the check valve **(3)** and line **(H)**.



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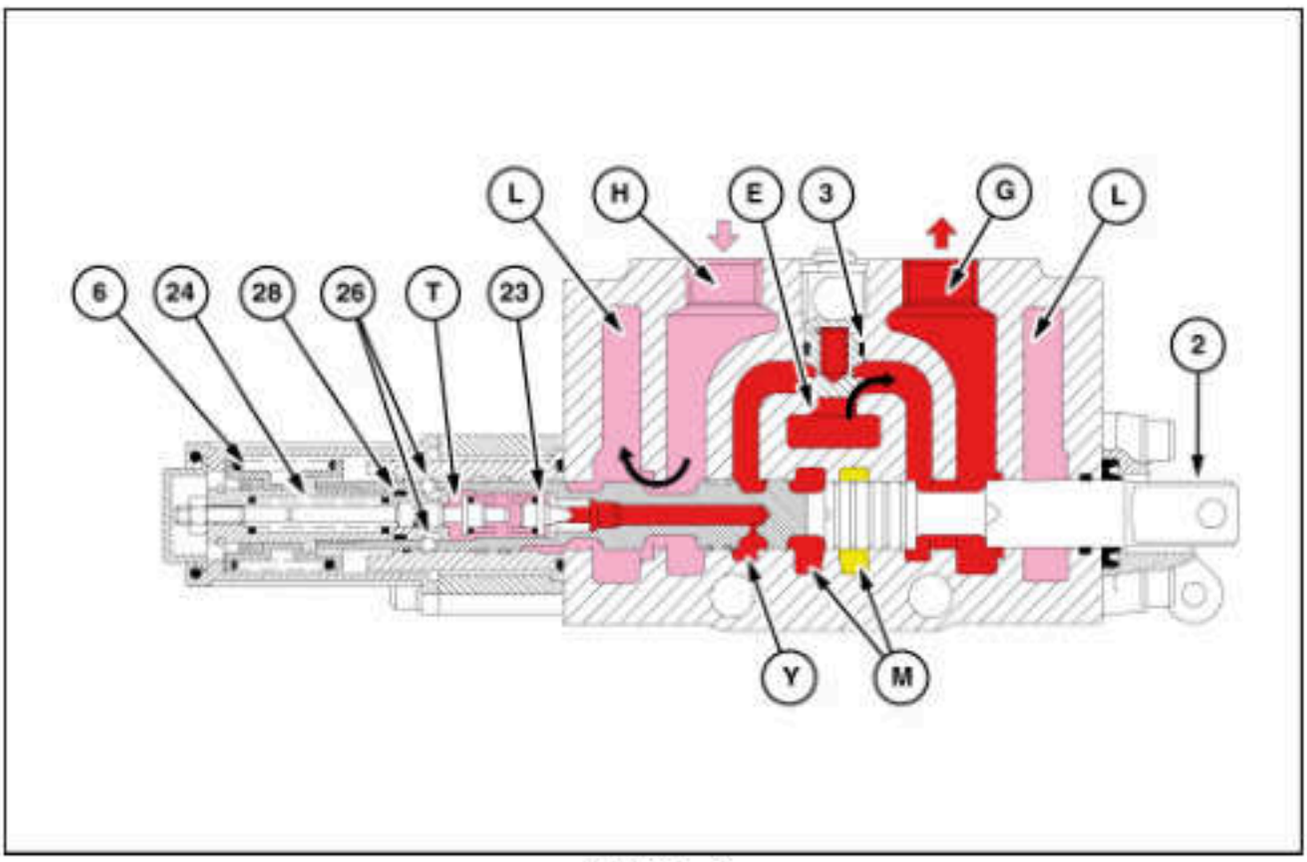
Pressurized oil

Oil in suction, delivery or return

Oil at static rest

NOTE: *For operation of a double-acting cylinder, tighten the screw* ***(1)****. For operation of a single-acting cylinder, loosen the screw.*

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



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Pressurized oil

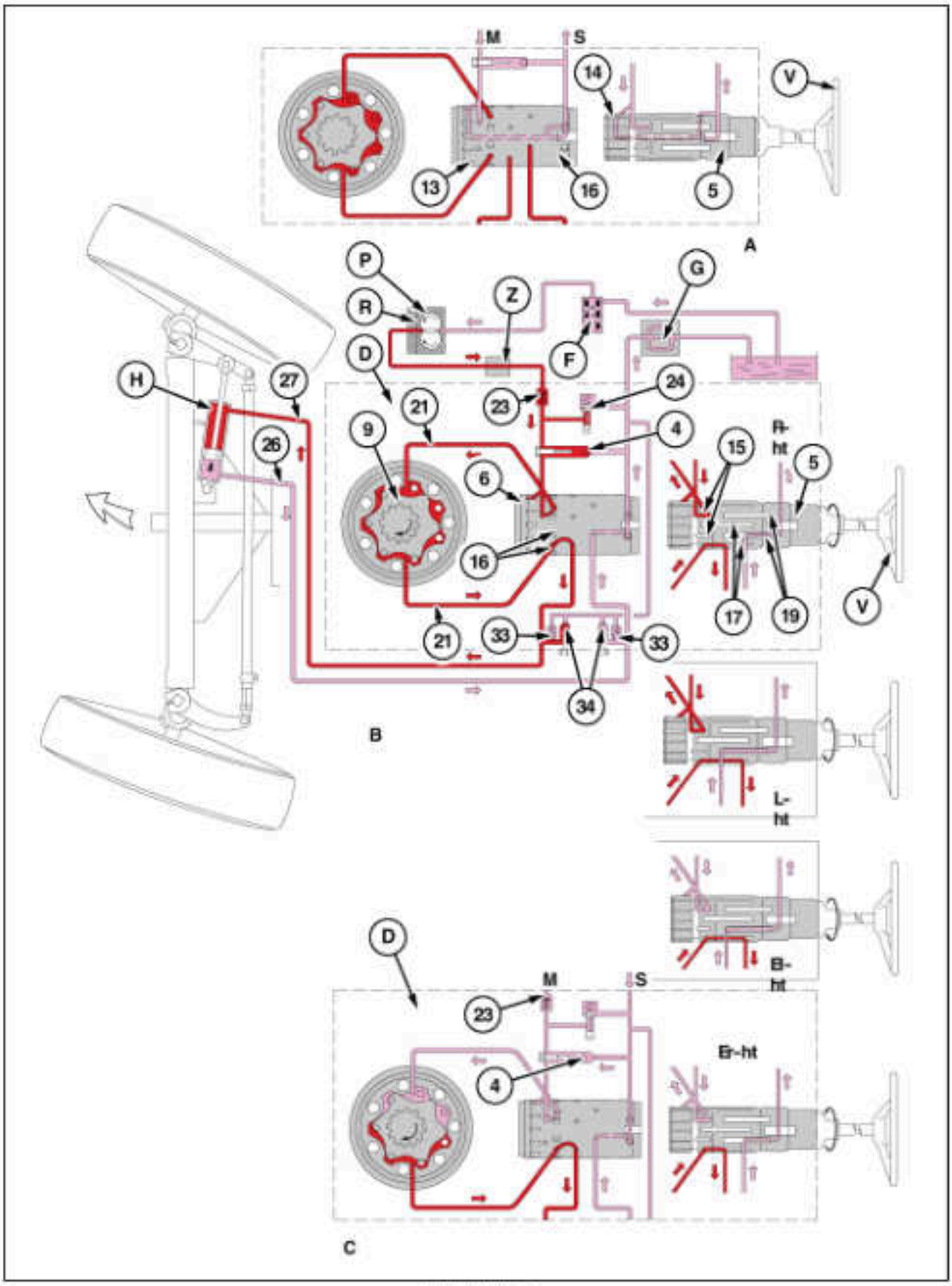
Oil in suction, delivery or return

Oil at static rest

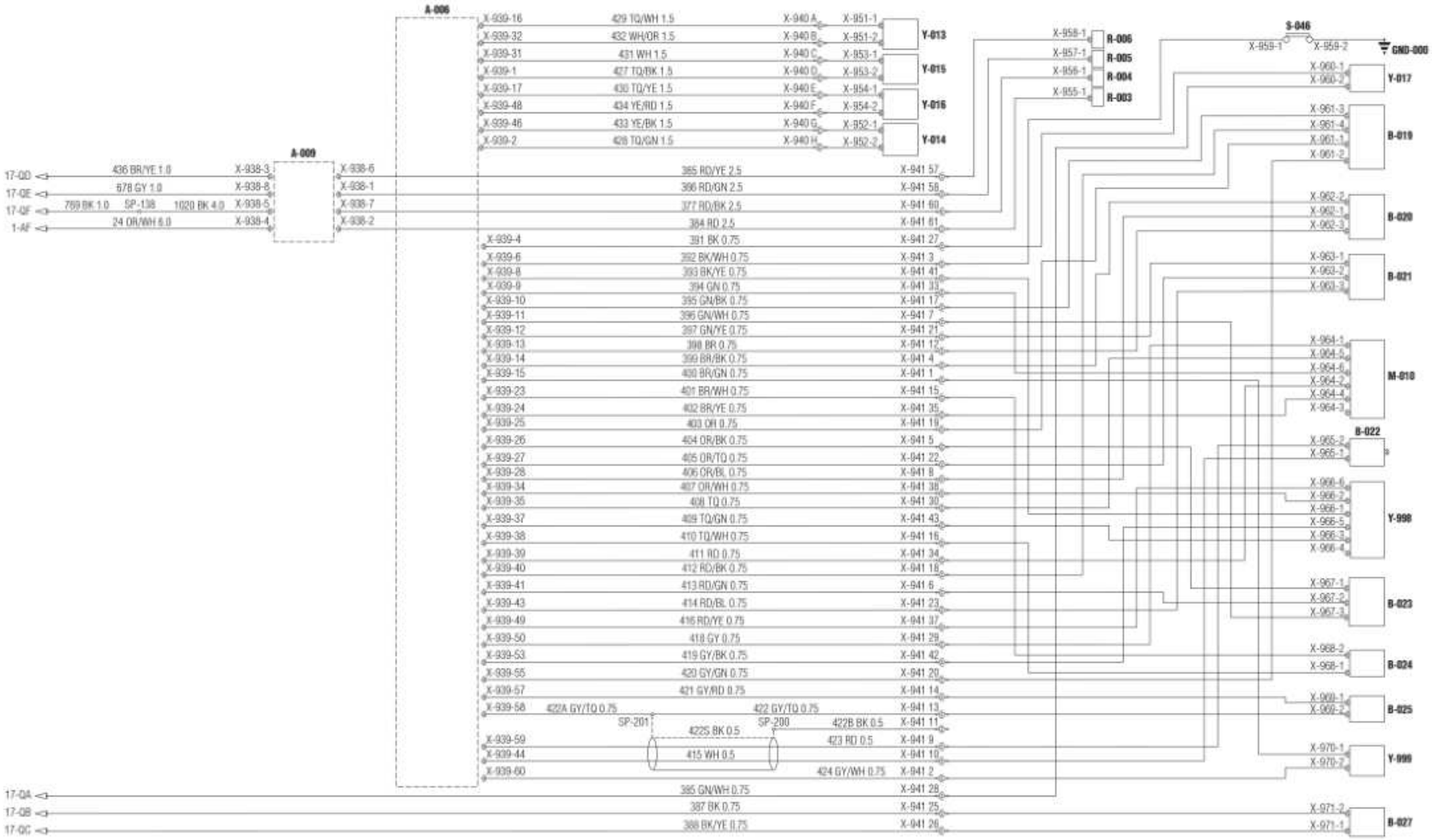
Lifting

On pulling back the control lever (located in the cab), the control valve stem **(2)** shifts and the detent balls **(26)** engage the left hand groove, where they are held in place by the support **(28)** and spring **(24)**. The movement of the spool

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