SERVICE MANUAL

StackCruiser® 102
StackCruiser® 103
StackCruiser® 105
Tier 4B (final)
Bale Wagon

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September 2017

MidWestTech | New Holland StackCruiser 102, 103, 105 Tier 4B Bale Wagon Service Manual | Publication 48190534

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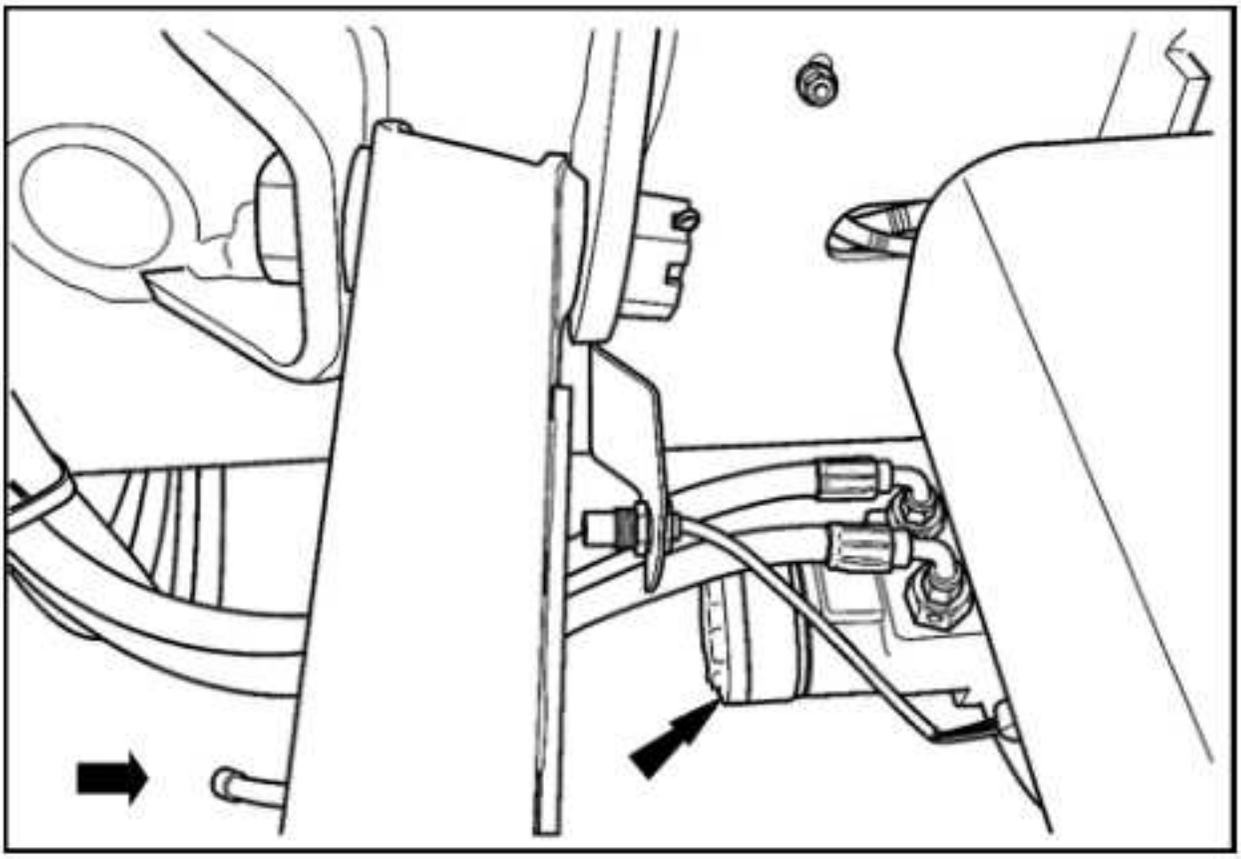
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Orbit motor Cross-conveyor orbit motor - General specification



NHLTBWC093GAA 1

Cross-conveyor orbit motor

Feature	Specification
Displacement	**185.2 cm³/rev (11.3 in³/rev)**
Maximum flow rate	**57 l/min (15 US gpm)**

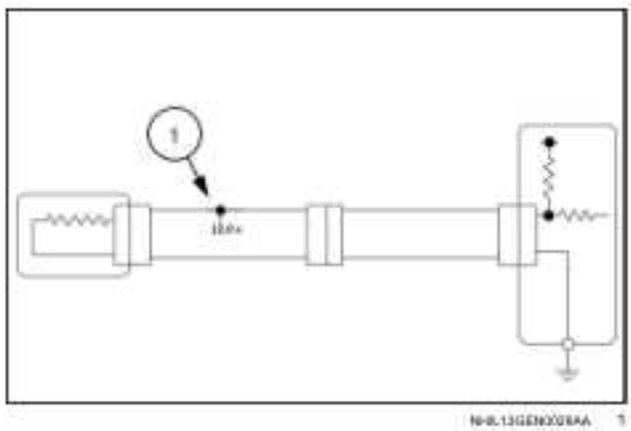
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Wiring harnesses - Electrical test - How to check for a short to voltage condition

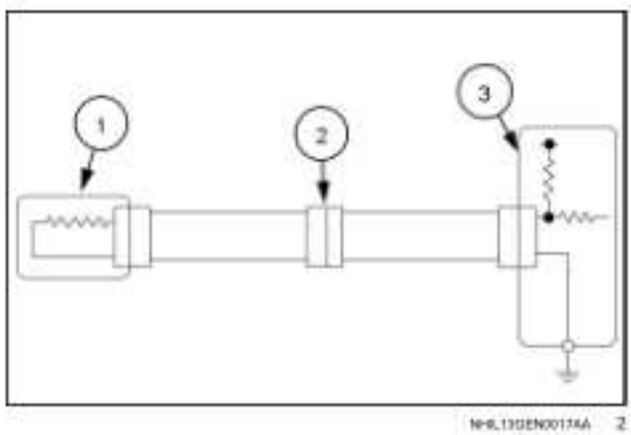
StackCruiser® 102	NA
StackCruiser® 103	
StackCruiser® 105	

NOTE: *This method isolates the circuit completely.*

A short to voltage condition is when a circuit contacts an unexpected voltage source **(1)**.

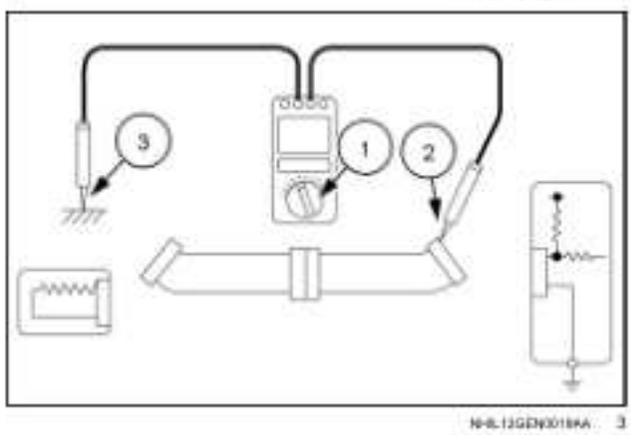


1. Place the ignition (key) switch OFF.
2. Disconnect the electrical connections from the relevant component **(1)** and control module **(3)**. Any in-line connections **(2)** must stay connected.



3. Set the function switch **(1)** on the digital multimeter to the appropriate DC voltage setting.
   - Connect one lead **(2)** of the multimeter to one end of the circuit.
   - Connect one lead **(3)** of the multimeter to chassis (frame) ground.
   - Place the key switch ON.

NOTE: *When isolating the circuit, you may remove the shorted voltage source. See schematics to locate wiring that may be shorted together.*



   - There should be no voltage in the circuit.

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DTC 4F15 - Water in fuel sensor or sensor circuit failure

StackCruiser® 102	NA
StackCruiser® 103	NA
StackCruiser® 105	NA

Control Module: ECU

NOTE: *This fault code is for the Water in Fuel switch with white connector housing.*

Context:
The water in fuel switch S-9102 provides a diagnostic self-test signal (greater than **8.2 V** for **2.5 s +/- 20%**) at key-ON. If the Engine Control Unit (ECU) A-9000 does not sense the diagnostic self-test signal, this fault will occur and there will be no monitoring of water content in the fuel supply.

Cause:
The ECU A-9000 has not received an acceptable water in fuel switch S-9102 self-test signal.

Possible failure modes:

1. Faulty water in fuel switch S-9102 circuit wiring, damaged.
2. Faulty water in fuel switch S-9102, internal failure.
3. Faulty ECU A-9000, software.

Solution:

1. Verify this fault code is still present and in an active state.

   Use the Easy Engine software provided on the Electronic Service Tool (EST) to check the fault status.

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

   B. If the fault is no longer present or is in an inactive state, Continue with Step **6**.
2. Use the EST to check the status of the related fault

   DTC 4415 – Water in fuel detected or water in fuel circuit failure

   A. If fault **DTC 4415 – Water in fuel detected or water in fuel circuit failure** is active, resolve fault **DTC 4415 – Water in fuel detected or water in fuel circuit failure**, then determine if fault **DTC 4F15 – Water in fuel sensor or sensor circuit failure** is also resolved.

   B. If fault **DTC 4415 – Water in fuel detected or water in fuel circuit failure** is not active,continue with Step **3**.
3. Check the water in fuel switch S-9102 for the initial self-test voltage pulse.

   Carefully back probe the water in fuel switch S-9102 at connector **X-9125 pin 1**.

   With the help of an assistant, use a multimeter to perform the following test at Key-ON:

From	To	Value
X-9125 pin 1	Ground	There should be greater than **8.2 V** for **2.5 s +/- 20%**.
NOTE: *The signal line should switch to less than **0.2 V** after the self-test period.*		

   A. If the self-test is successful, continue with Step **4**.

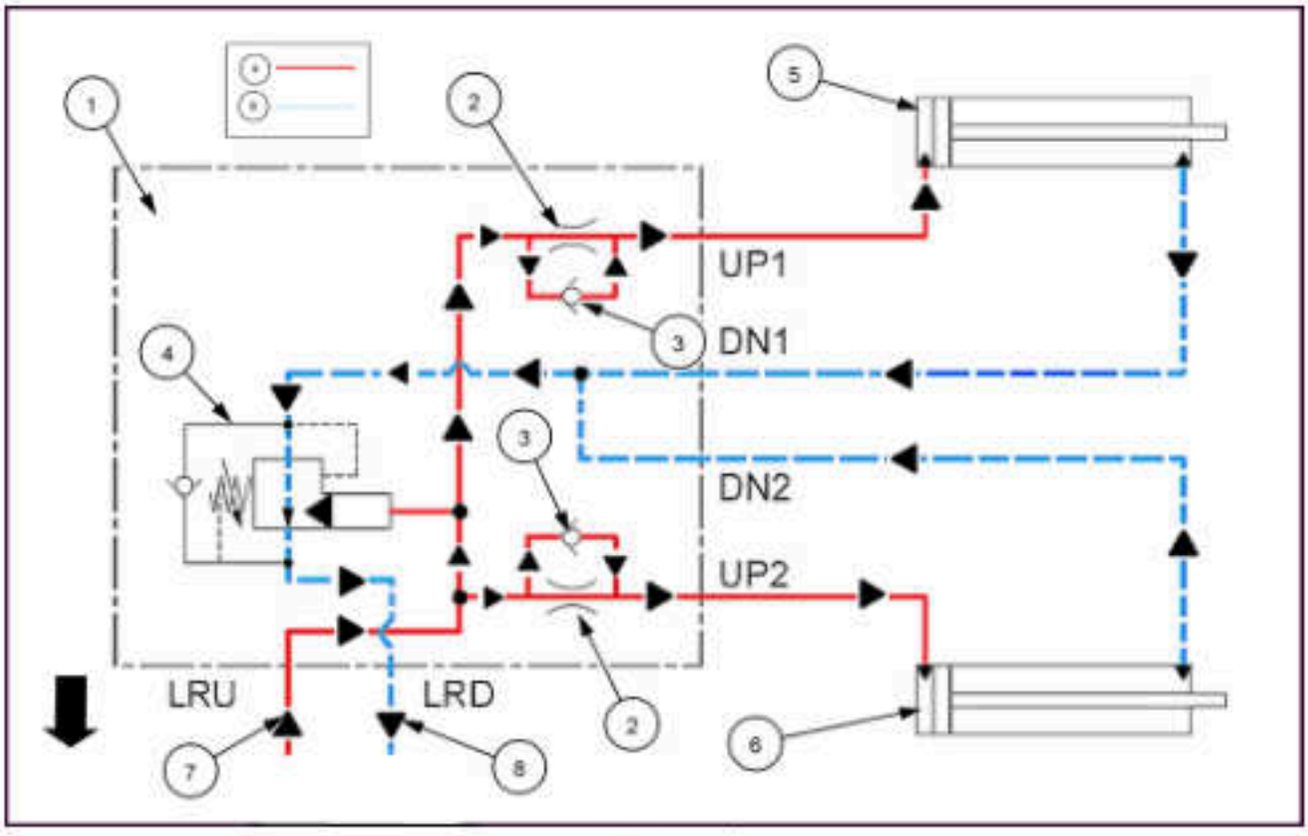
   B. If the self-test is not successful, the water in fuel switch S-9102 has failed internally. Replace the switch.
4. Check for open, short and grounded circuit conditions in the water in fuel switch S-9102 circuit.

   Disconnect the water in fuel switch S-9102 at connector **X-9125**.

   Disconnect the vehicle (VE) harness from the ECU A-9000 at connector **X-9001**.

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Load rack hydraulic cylinder - Overview



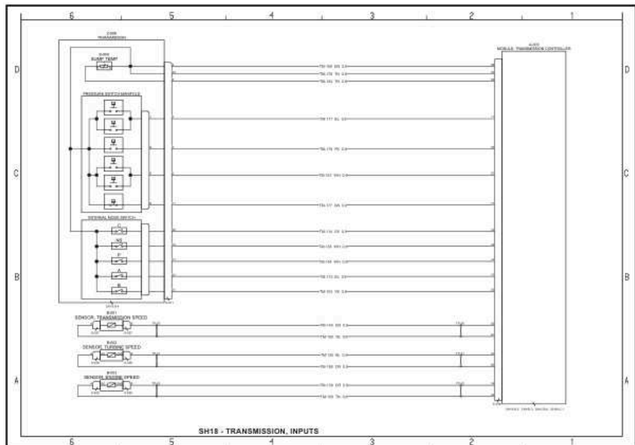
Load rack cylinders up

Ref.	Color	Circuit type
(A)	Red	Pressurized oil flow
(B)	Dashed blue	Return to reservoir

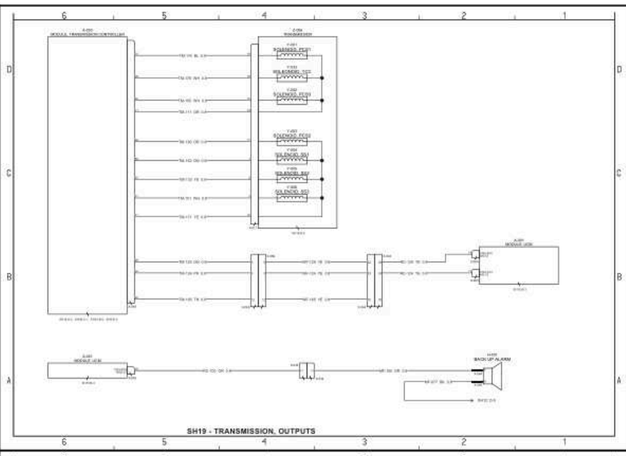
Ref.	Component	Ref.	Component
(1)	Load holding valve	(5)	Right-hand lift cylinder
(2)	**4.775 mm (0.188 in)** orifice plate	(6)	Left-hand lift cylinder
(3)	Check valve	(7)	Load Rack Up (LRU) port
(4)	Counterbalance valve	(8)	Load Rack Down (LRD) port

See **Holding valve - Overview - Load-holding valve manifold (35.359)** for more information.

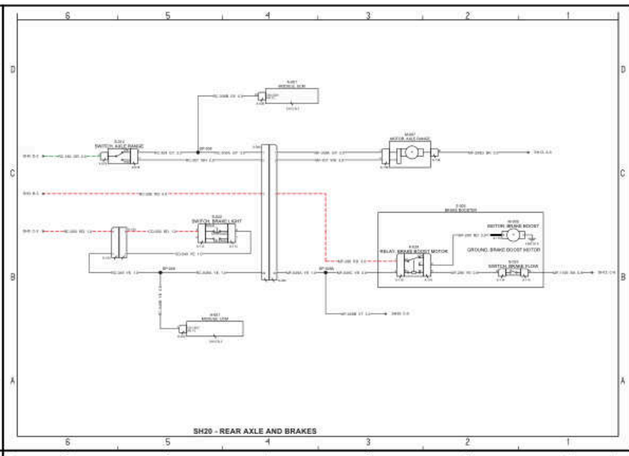
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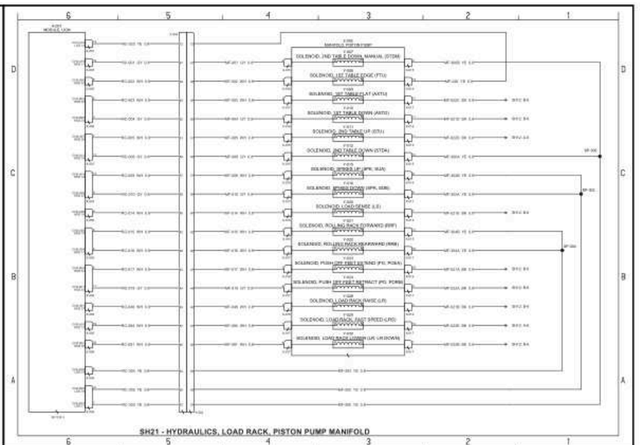
SH18 - TRANSMISSION, INPUTS



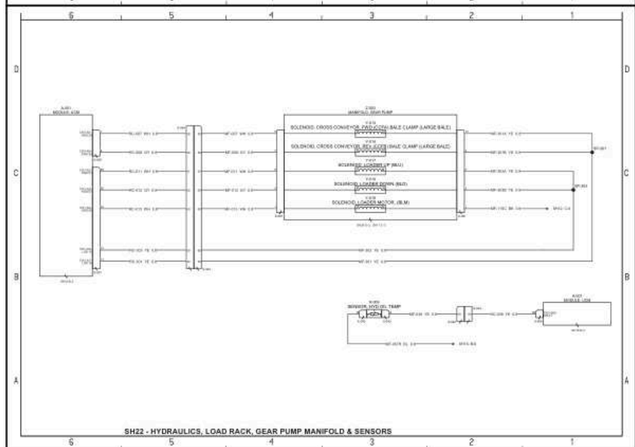
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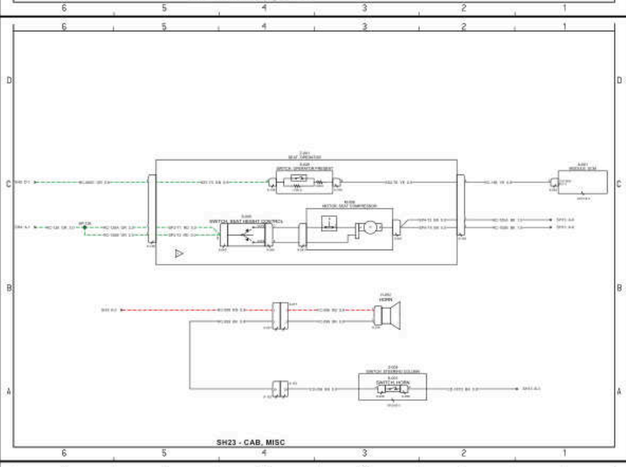
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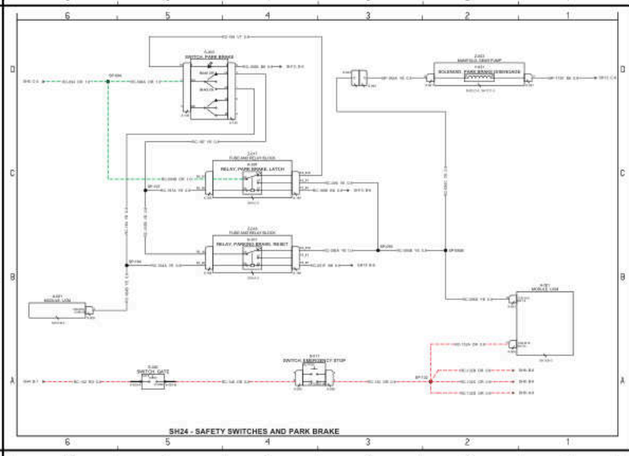
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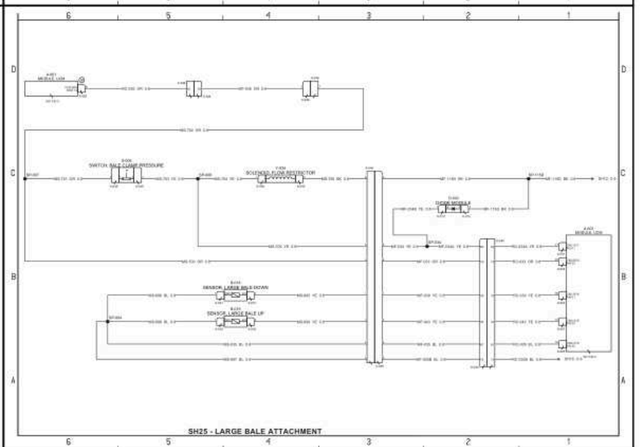
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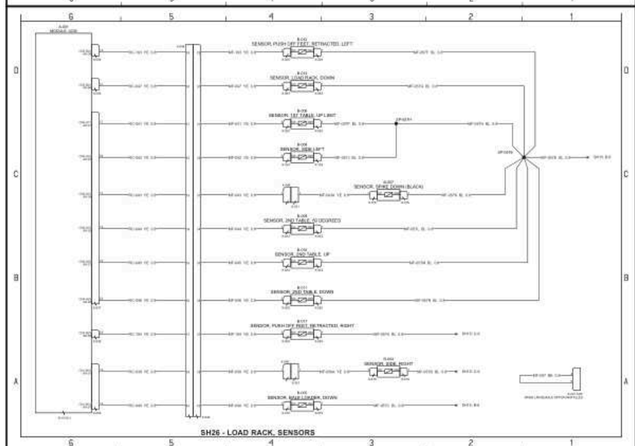
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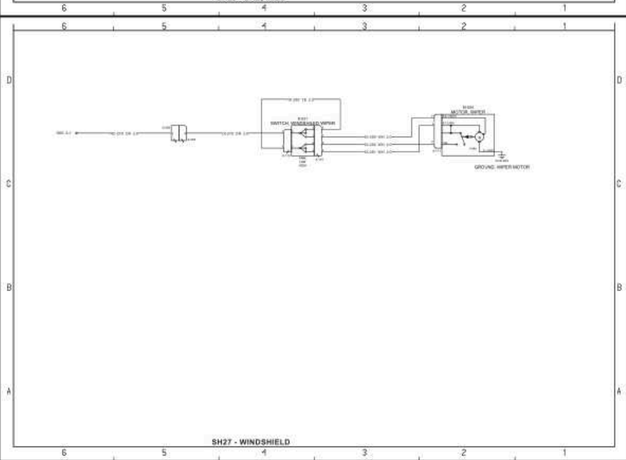
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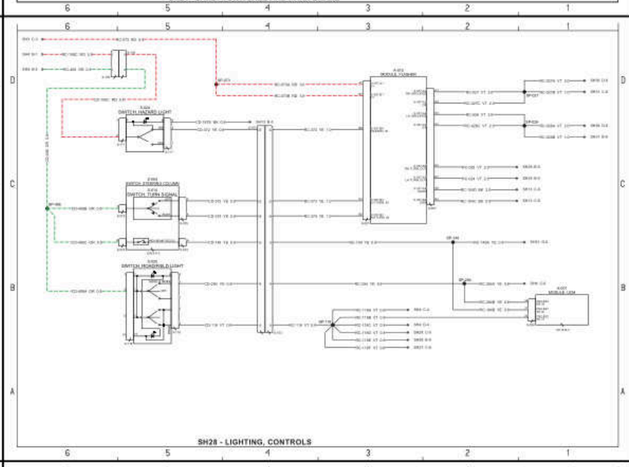
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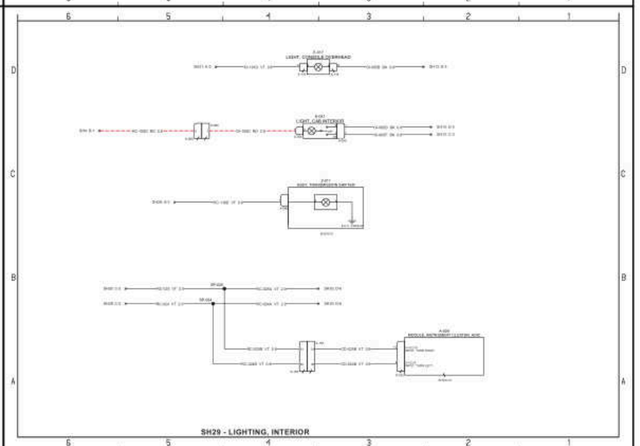
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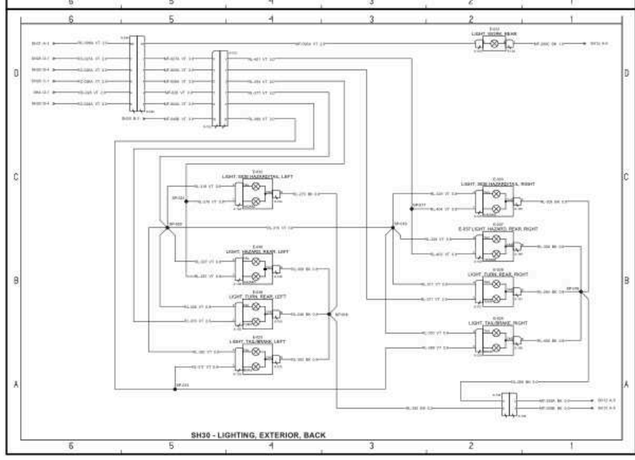
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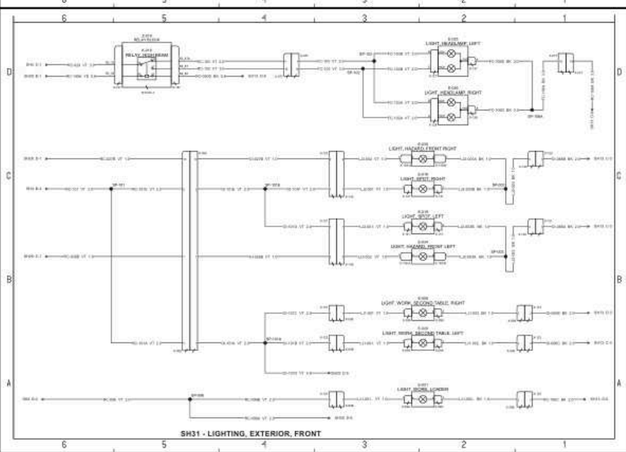
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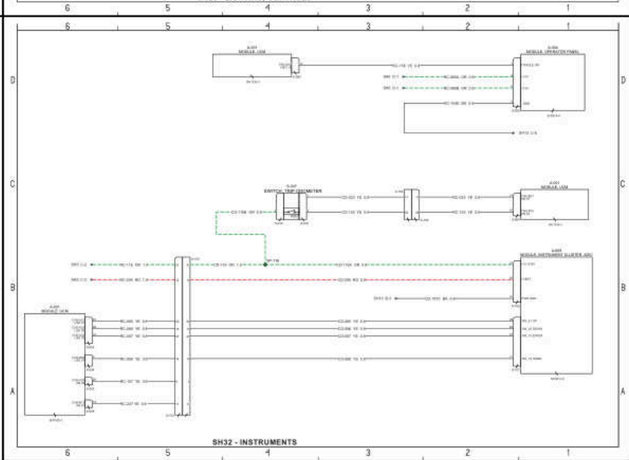
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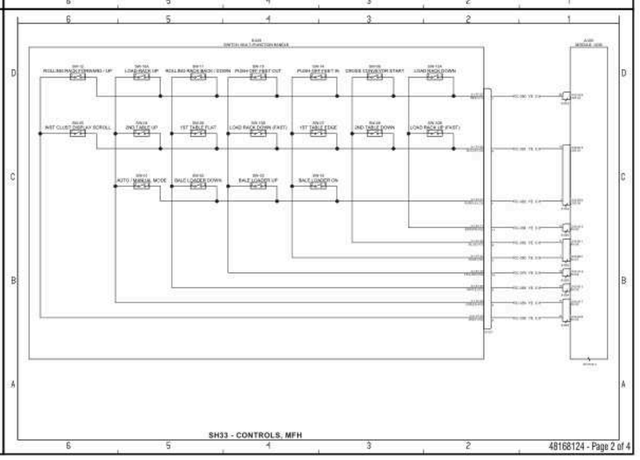
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SH31 - LIGHTING, EXTERIOR, FRONT



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SH33 - CONTROLS, MFH

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