Magnum™ 250
Magnum™ 280
Magnum™ 310
Magnum™ 340
Magnum™ 310 Rowtrac™
Magnum™ 340 Rowtrac™
Powershift Transmission (PST) Tractor

PIN ZGRF05001 and above; PIN ZHRF01001 and above

SERVICE MANUAL

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April 2017

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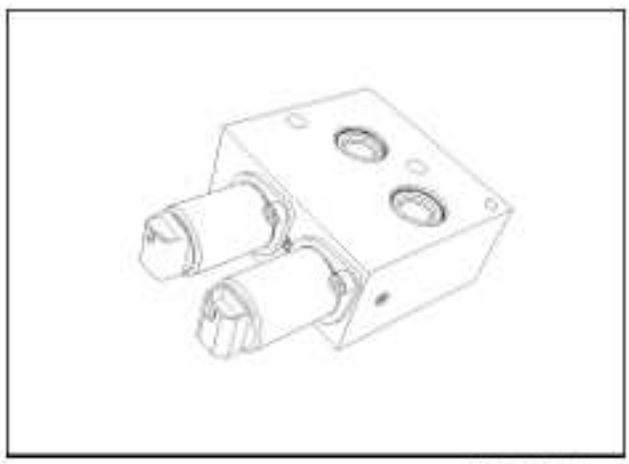
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Power Take-Off (PTO) control valve - Disassemble - 102 mm (4.0 in) or 114 mm (4.5 in) axle

Magnum™ 250 PST TIER 4B [ZGRF05001 -]	
Magnum™ 280 PST TIER 4B [ZGRF05001 -]	
Magnum™ 310 PST TIER 4B [ZGRF05001 -]	
Magnum™ 340 PST TIER 4B [ZGRF05001 -]	

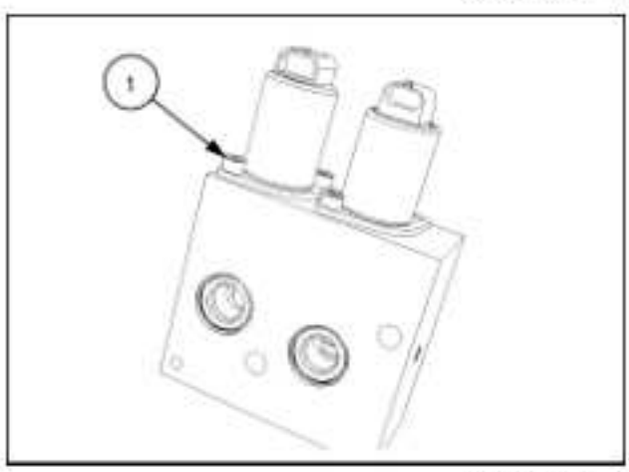
Prior operation:
Powershift transmission - **Power Take-Off (PTO) control valve - Remove - 102 mm (4.0 in) or 114 mm (4.5 in) axle (31.104)**
Prior operation:
CVT transmission - **Power Take-Off (PTO) control valve - Remove - 102 mm (4.0 in) or 114 mm (4.5 in) axle (31.104)**

1. Place the Power Take-Off (PTO) valve on a clean work-bench.



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2. Remove the hex socket screws **(1)**.

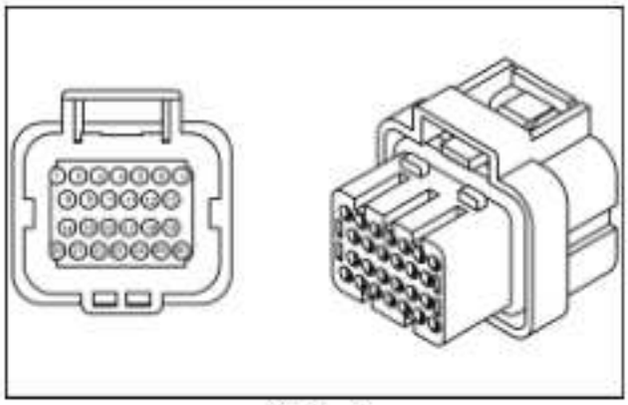


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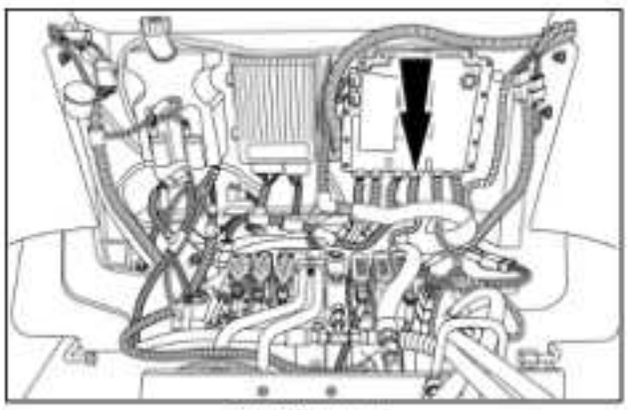
Pin	From	Wire	Description	Color-Size	Frame
31	SP-323-P-X	OC-323A	+12VM	OR - 0.8	**SHEET 14**
32	SP-323-P-X	OC-323B	+12VM	OR - 0.8	
33	**X-026 (Male) pin AB8** TO OUTSIDE CAB HARNESS	OC-528	EDC LOWER SOLENOID	WH - 0.8	**SHEET 16**
34	SP-131P-P-X	OC-131R	CAN HI (TR)	YE - 0.8	**SHEET 43**
34	A-044-P-34	WIRE171	WIRE171		

X-353 - CN2A [A-044] (82028493) (Female)



82028493 5

82028493



RAIL147R0682AAA B

Pin	From	Wire	Description	Color-Size	Frame
1	**X-008 (Female) pin C1** TO CAB HARNESS	OC-747	FAN COIL HIGH	WH - 0.8	**SHEET 15**
2	SP-599A-P-X	OC-599D	+12 VH1	OR - 0.8	**SHEET 14**
3	SP-599A-P-X	OC-599E	+12 VH1	OR - 0.8	
5	**X-026 (Male) pin AB3** TO OUTSIDE CAB HARNESS	OC-854	SYSTEM PRESS/ACC BYPASS VALVE HI	WH - 0.8	**SHEET 13**
6	**X-026 (Male) pin AB7** TO OUTSIDE CAB HARNESS	OC-912	OIL COOLER BYPASS SOL HI	WH - 0.8	**SHEET 51**
7	SP-432-P-X	OC-432C	+12 VH	OR - 0.8	**SHEET 14**
8	**X-448 (Male) pin 3** TO OUTSIDE CAB HARNESS	OC-957	EDC TOP LINK LOWER SOL HI	WH - 0.8	**SHEET 42**
9	**X-221 (Male) pin A** TRAILED UP/DOWN IMPLEMENT SW	OC-347	TRAILED IMPLEMENT UP/DOWN	YE - 0.8	**SHEET 16**
10	**X-026 (Male) pin BA6** TO OUTSIDE CAB HARNESS	OC-264	TRANS OIL TEMP SENSOR	YE - 0.8	**SHEET 13**
12	**X-010 (Female) pin AA4** TO CAB HARNESS	OC-319B	NEUTRAL	YE - 0.8	**SHEET 39**
13	SP-432-P-X	OC-432D	+12 VH/ VF	OR - 0.8	**SHEET 14**
14	**X-448 (Male) pin 2** TO OUTSIDE CAB HARNESS	OC-958	EDC TOP LINK RAISE SOLENOID HIGH	WH - 0.8	**SHEET 42**
15	**X-918 (Female) pin 3** IMPLEMENT POT	OC-917	IMP EHR1 F/B SINK	YE - 0.8	**SHEET 36**
16	**X-010 (Female) pin AC6** TO CAB HARNESS	OC-303BC	SEAT SWITCH SIGNAL	YE - 0.8	**SHEET 40**
17	**X-010 (Female) pin BD1** TO CAB HARNESS	OC-124A	EDC ENABLED/HITCH ON SIG	YE - 0.8	**SHEET 37**

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4150 - Rear remote no. 4 - float position not reached

NOTE: *Each remote valve consists of a valve body and a pilot head. The pilot contains the extend and retract solenoids, a sensor to determine spool position, as well as a microprocessor. The pilot head can only be serviced as a compete assembly. The microprocessor controls the extend and retract solenoids and reports the position of the main spool over the CAN bus to the Armrest Control Unit (ARU) and the lower display on the Instrument Control Unit (ICU).*

Cause:
Pilot head for remote valve 4 detects that the float position was not reached.

Possible failure modes:

1. Incorrect hydraulic pressure
2. Faulty pilot head on the remote valve.
3. Damage or wear in the valve body.

Solution:

1. Check if the error code is still active.

   Clear the error code and test the system for normal operation.

   A. Fault code does not redisplay. Return unit to field operation and monitor for recurring problem.

   B. Fault codes redisplays. Continue to step **2**.
2. Check the regulated circuit hydraulic pressures. See hydraulic testing in this manual for more information.

   A. Pressures are incorrect. Repair or replace component(s) as required. Return unit to field operation.

   B. Pressures are correct. Continue to step **3**.
3. Download the most current software into all remote valves. (All pilot heads must be at the same software level.)

   Renumber the remote valves.

   Calibrate the armrest control levers using the procedure in this manual. When calibration is complete, set all timers to continuous and set the flow controls to continuous.

   Calibrate the remote valves using the procedure in this manual.

   Test remote system operation.

   A. Error code does not redisplay. Return unit to field operation.

   B. Error code redisplays. Continue to step **4**.
4. Remove the pilot head from the remote valve causing the error code.

   Press on the end of the spool with your thumb to test operation.

   Spool should move freely within the bore and extend out slightly – approximately **9.350 mm** (**0.368 in**) – beyond the body surface.

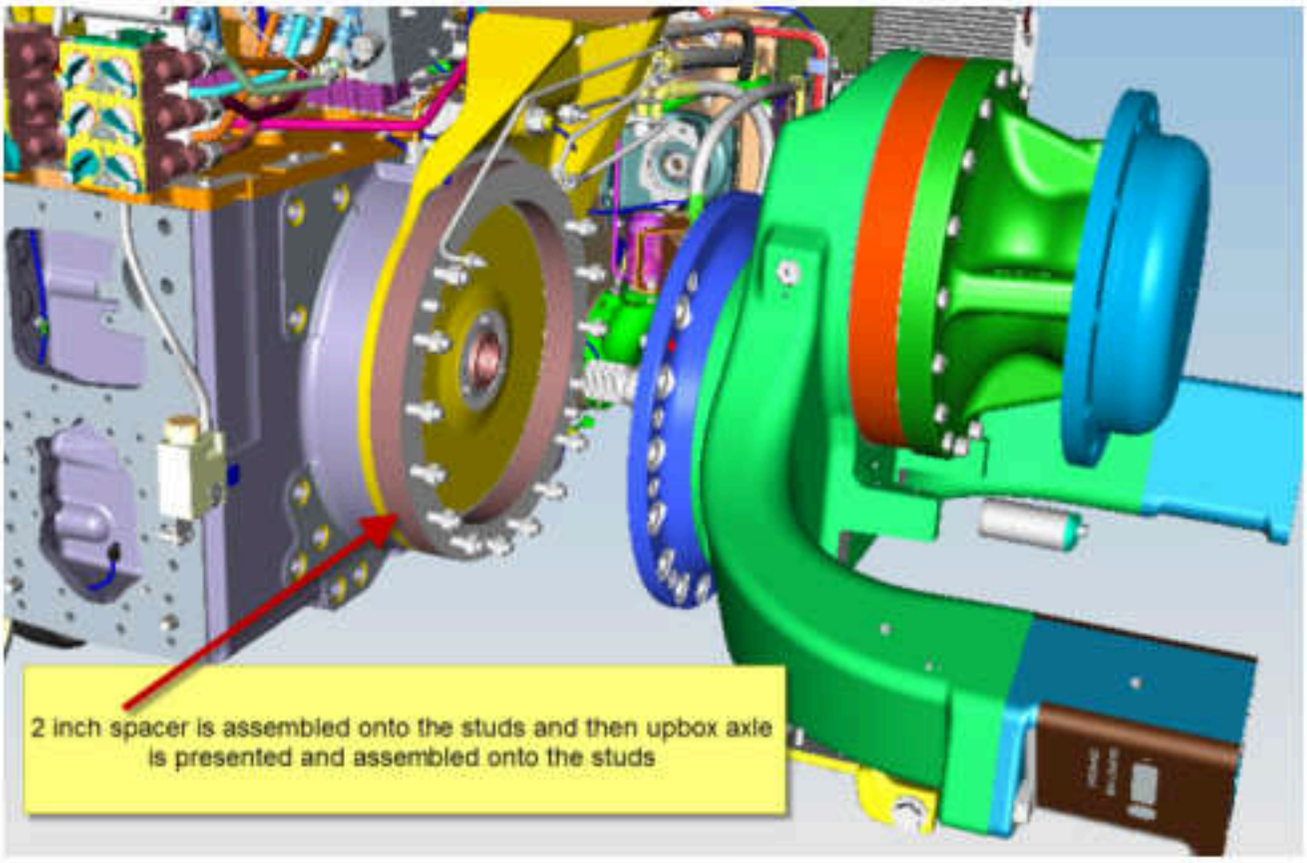
   A. Spool does not move freely. Continue with step **6**.

   B. Spool moves freely. Continue with step **5**.
5. Swap the pilot head causing the error with another pilot head.

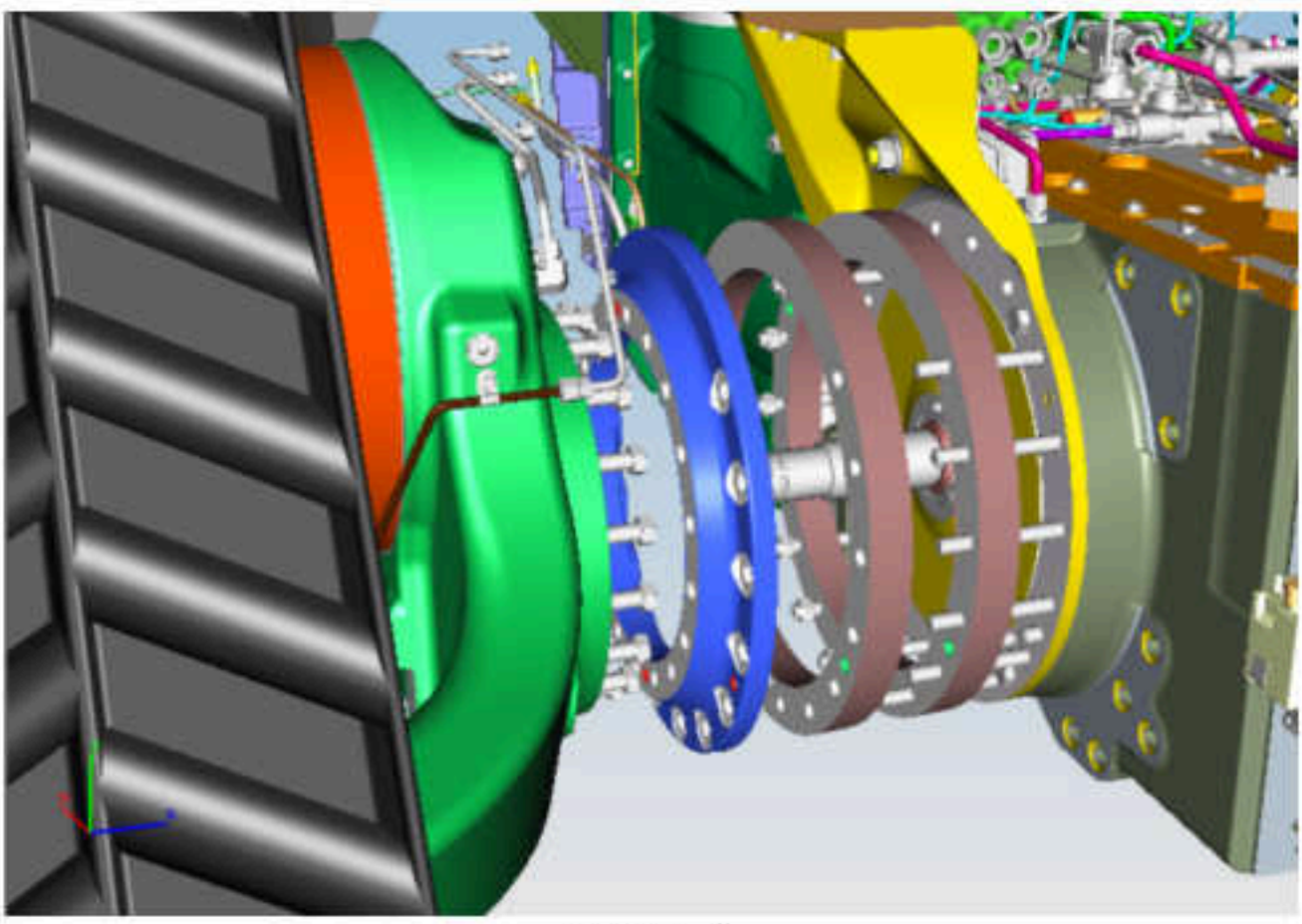
   Retest system operation.

   A. Error code follows the pilot head move. Replace the pilot head. Return unit to field operation.

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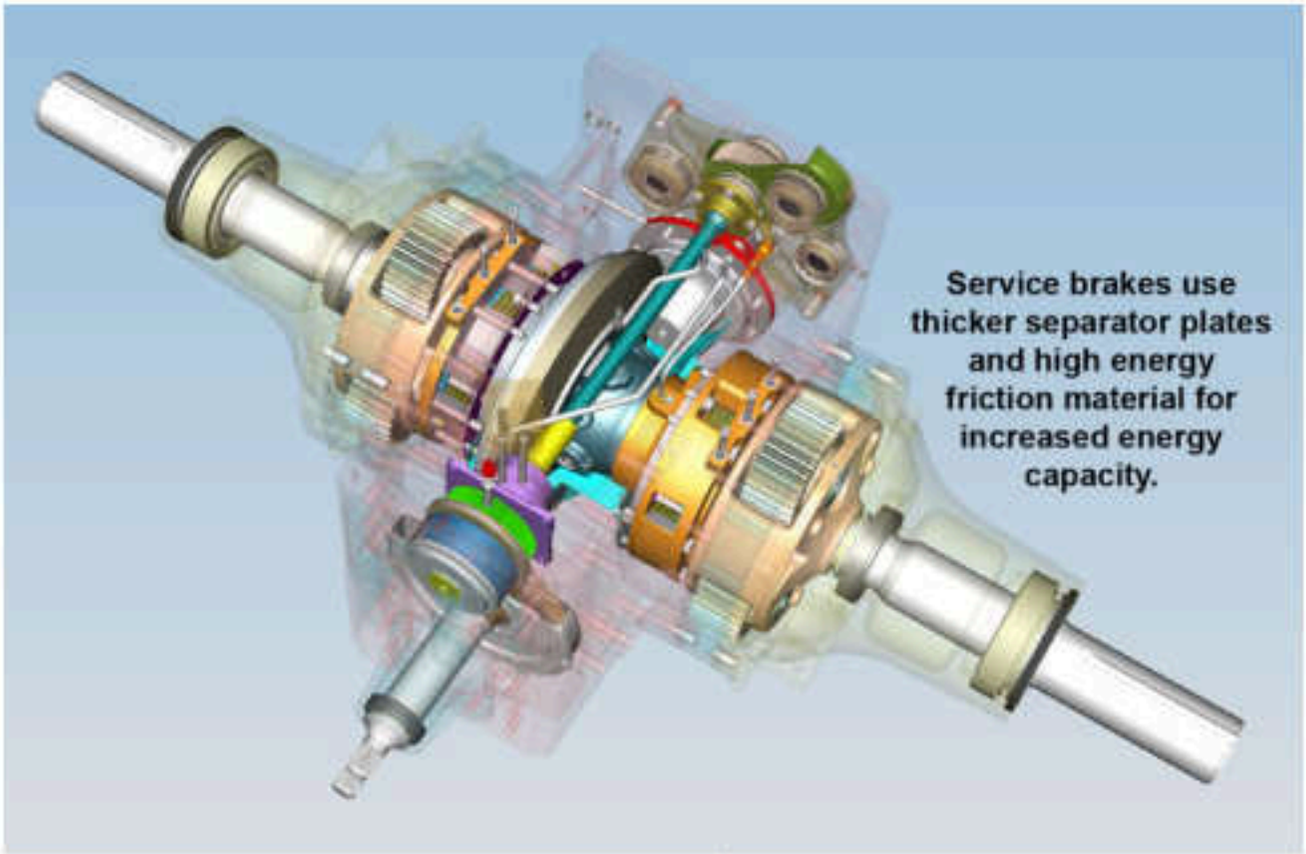


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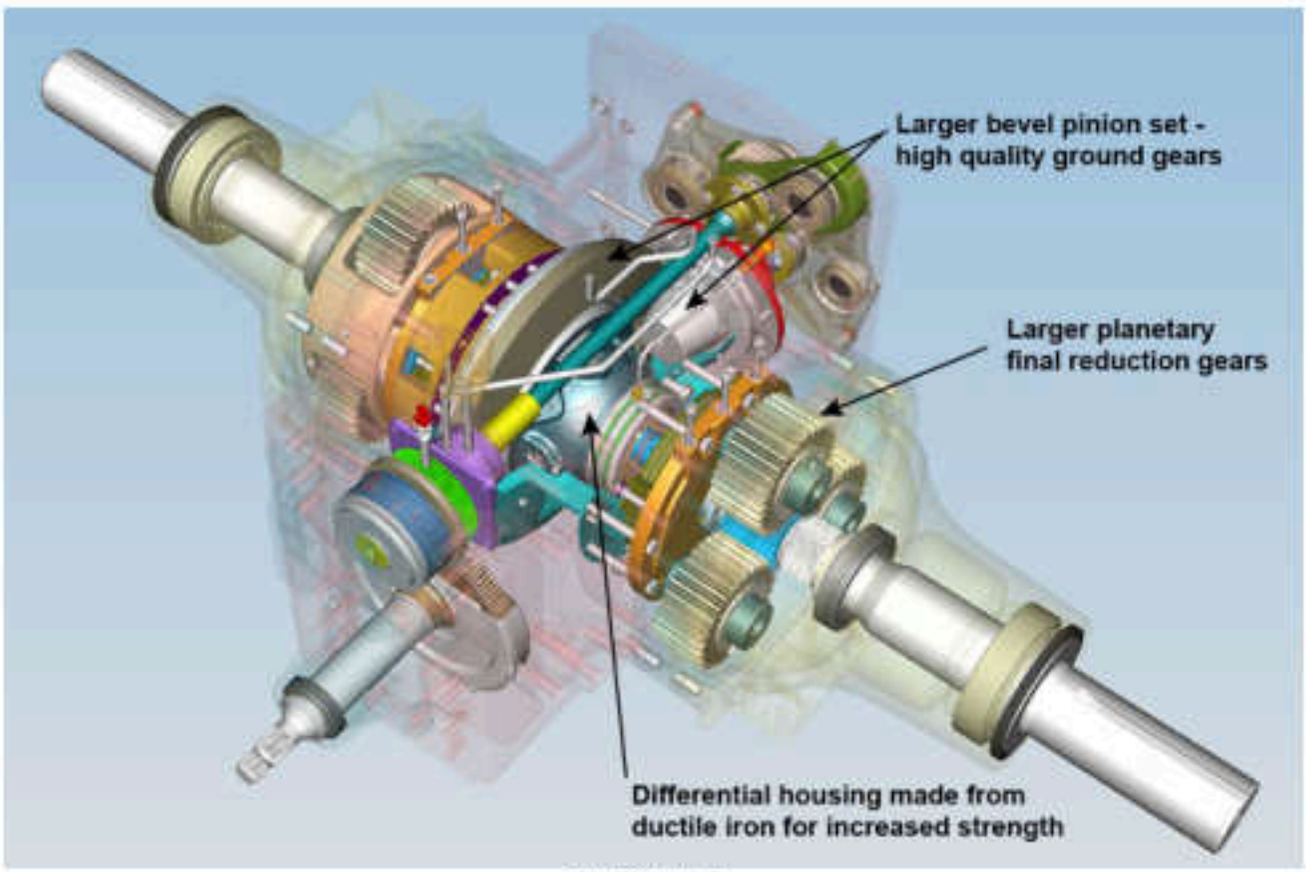
2032 mm (80 in) tread spacing

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Heavy Duty 5" Rear Axle and Final Drive

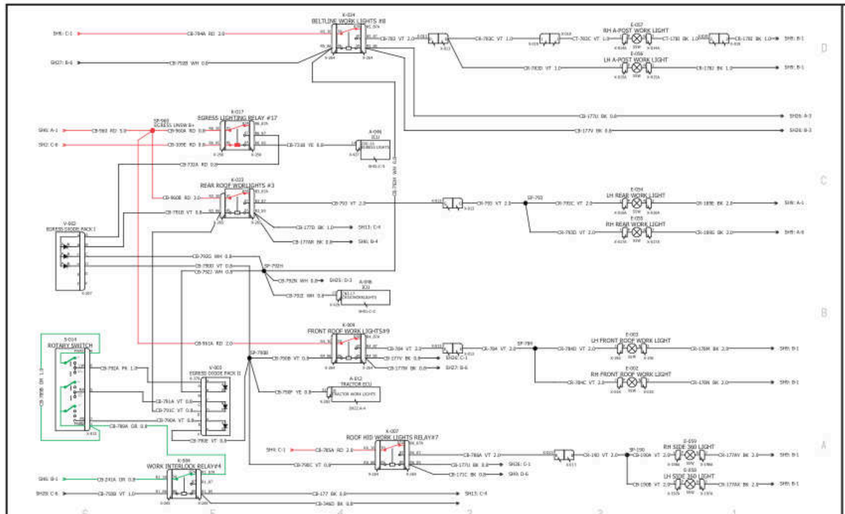


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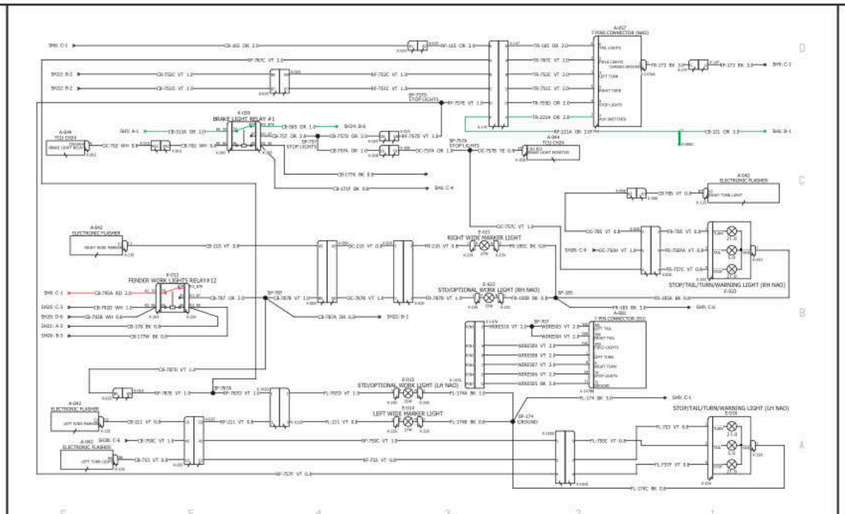


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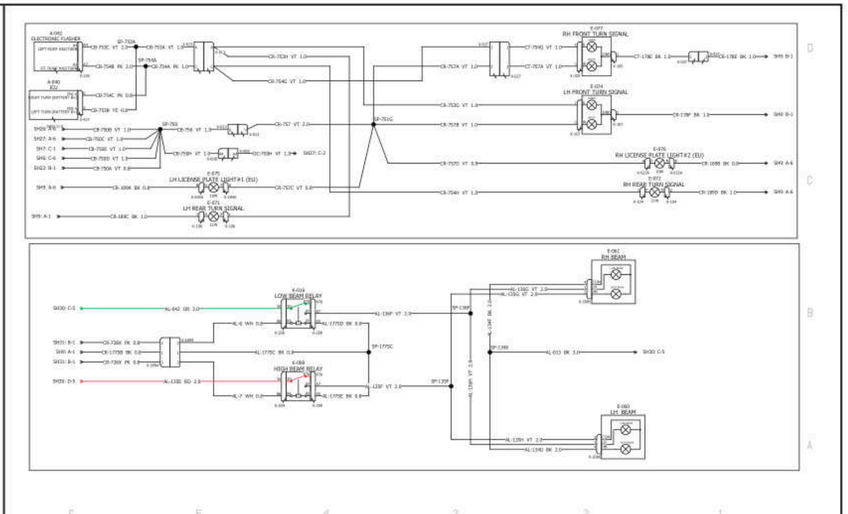
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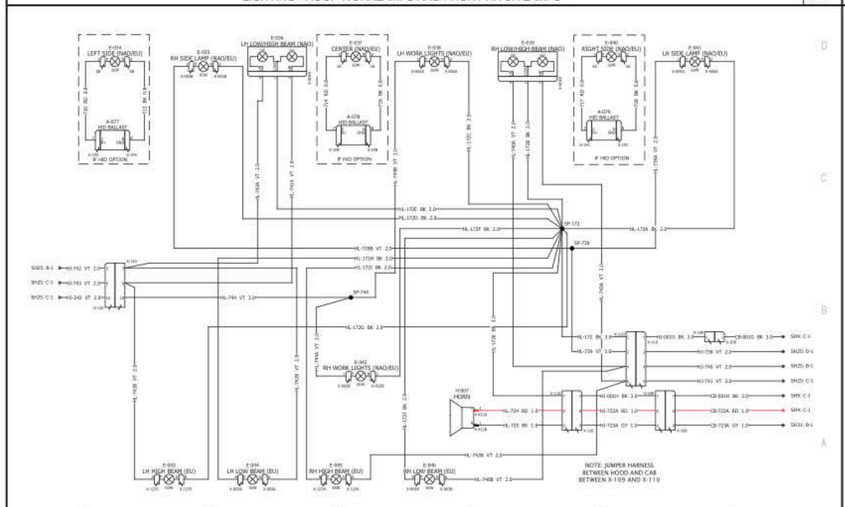
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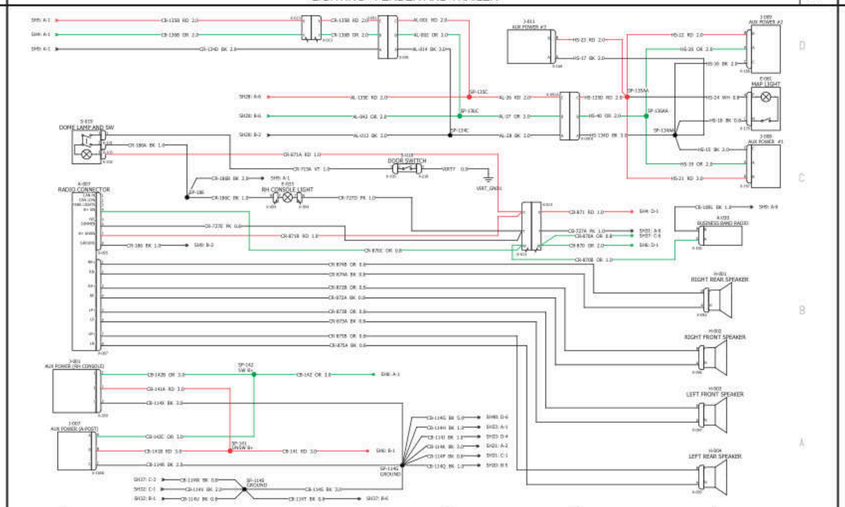
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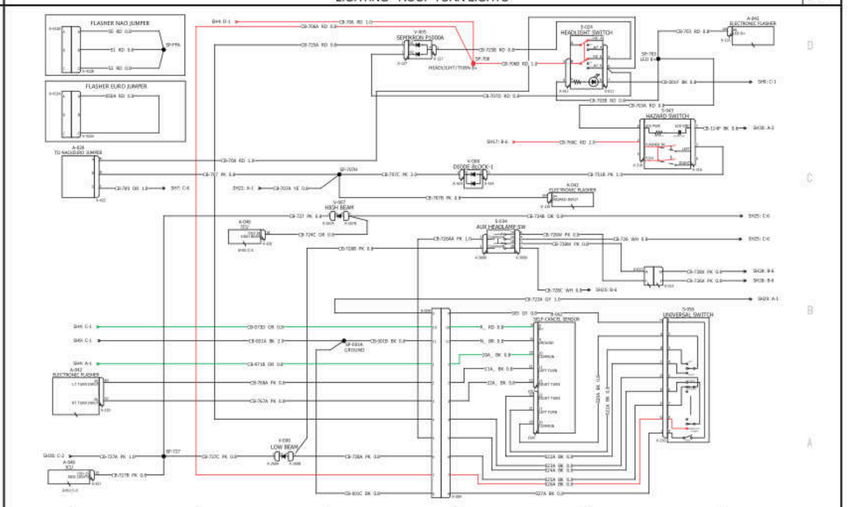
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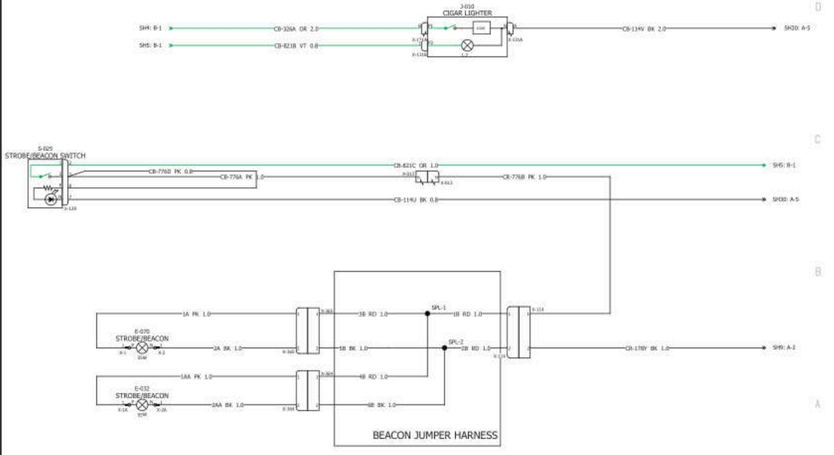
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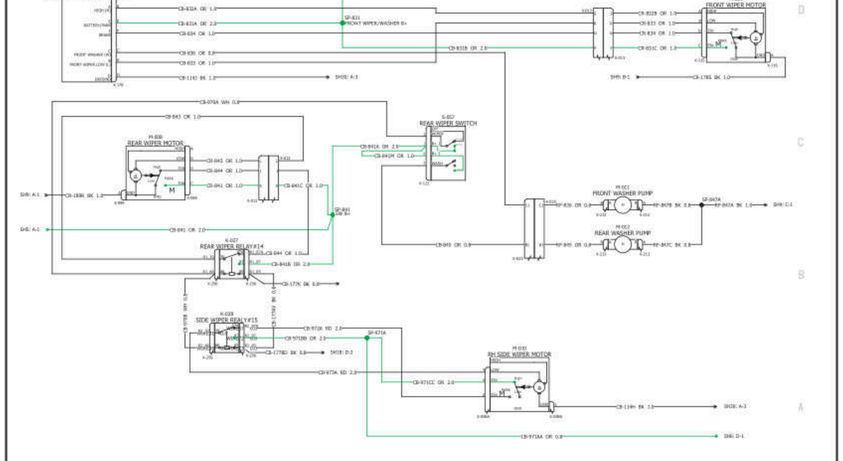
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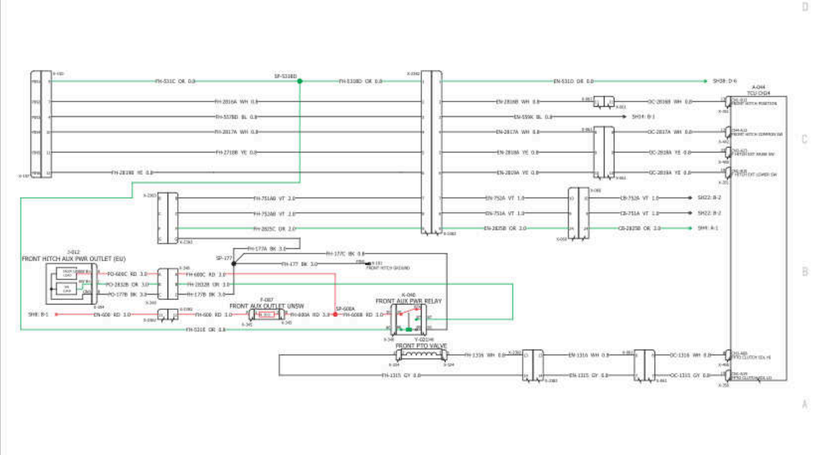
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