SERVICE MANUAL

T8.275 / T8.300 / T8.330 / T8.360 / T8.390

Tractor

Part number 84533052
English
July 2011
Replaces part number 84474541

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Fuse no.	Circuit	Fuse amp
24	Power mirror/radio	10
25	Tractor control unit (TCU) B+	20
26	Suspended axle B+	5
27	Front roof HID lights/roof side work lights	20
28	Tractor control unit (TCU) B+	20
29	Seat heater	10
30	Side wiper	10
31	ISO 11783	10
32	Tractor control unit (TCU) B+	5
33	Right hand armrest control system (2)	10
34	True ground speed/radar	5
35	Autoguidance	5
36	Tractor control unit (TCU) B+	20
37	Instrumentation cluster (2)	5
38	Tractor control unit (TCU) B+	15
39	PTO control system	15
40	ECU control module	10
41	Trailer tail lamps	20
42	Data bus diagnostic connector	10
43	Brakes	15
44	Transmission control system	20
45	Display B+	10
46	Right hand front post/right hand fender 3-pin connectors (2)	30
47	HVAC control module	30
48	Headliner shelf 3-pin connectors (2)	20
49	HVAC blower	30
50	Armrest control unit	10
51*	Front wiper/washer	15
52	Rear/side wiper/washer	20
53	Egress lighting	30
54	FNR switched B+	15
55	Tractor control unit (TCU) switched B+	20
56	Tractor control unit (TCU) B+	20

(1) - Unswitched power (continuous)

(2) - Power available when key switch is in the on position.

* = Circuit breaker

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B. If the harness is okay, download the correct level of software. If the fault reoccurs, remove and replace the tractor control unit (TCU).

Wiring harness - Electrical schematic frame 16 (A.30.A.88-C.20.E.16)
Wiring harness - Electrical schematic frame 71 (A.30.A.88-C.20.E.71)

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4309-Rear remote no. 6 - float position not reached

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

Possible failure modes:

1. Incorrect hydraulic pressure
2. Faulty EHR valve

Solution:

1. Check for other active EHR error code(s).

   Make a note of the error code(s), clear the error code(s) and test the system for normal operation.

   A. Fault code does not re-display. Return unit to field operation and monitor.

   B. Fault codes re-displays. Continue to step **2**.

2. Check the regulated circuit hydraulic pressures, for further information refer to hydraulic testing in service manual.

   A. If the pressures are incorrect, repair or replace component(s) as required.

   B. If the pressures are correct, continue to step **3**.

3. Download the correct level of software into the EHR valve and configure the EHR valve.

   Test valve operation.

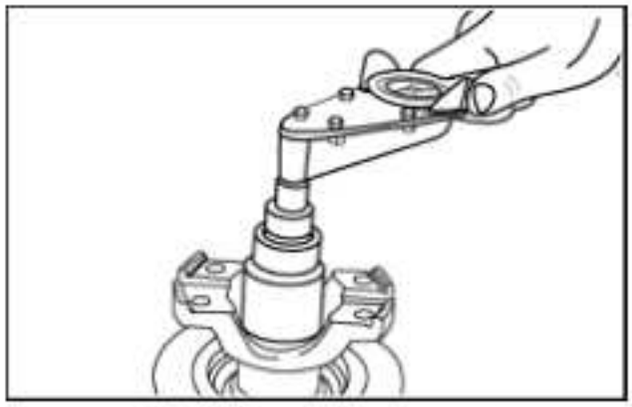
   A. Fault code does not re-display. Return unit to field operation.

   B. Fault code re-displays. Install and configure a new EHR valve section.

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4. Using an torque wrench, measure the rolling torque needed to turn the pinion shaft. The torque must be **2.26 - 4.5 Nm** (**20 - 40 lb in**). If rolling torque is within the specified range, continue to Step **5**. If rolling torque is not within range:

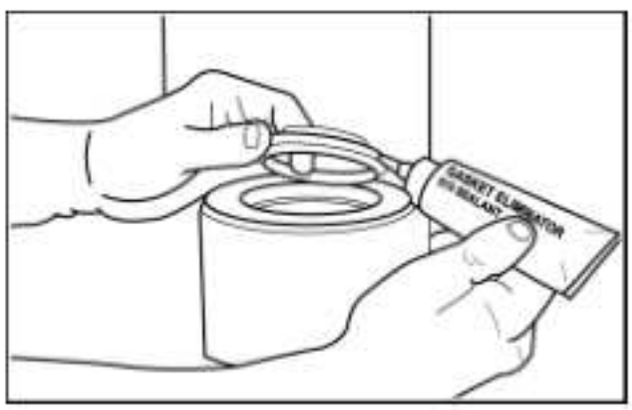
   - To increase rolling torque, remove a small amount of thickness from the **1.778 mm** (**0.070 in**) shim pack. For example, replace a **0.381 mm** (**0.015 in**) shim with a **0.3556 mm** (**0.014 in**) shim. Repeat the torque check procedure.
   - To decrease rolling torque, add a small amount of thickness to the shim pack. For example, replace a **0.3556 mm** (**0.014 in**) shim with a **0.381 mm** (**0.015 in**) shim. Repeat the torque check procedure.



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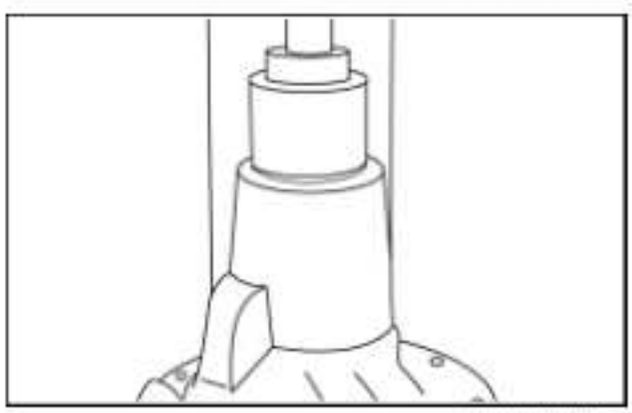
NOTE: *Shim kits contain the following sizes:* ***0.254 mm (0.010 in), 0.3556 mm (0.014 in), 0.381 mm (0.015 in), 0.406 mm (0.016 in), 0.457 mm (0.018 in), 0.508 mm (0.020 in), 0.533 mm (0.021 in), 0.559 mm (0.022 in), 0.5842 mm (0.023 in)*** *and* ***0.762 mm (0.030 in)****.*

5. Remove the nut and yoke. Apply Permatex® D to the housing face and to the outer diameter of oil seal.



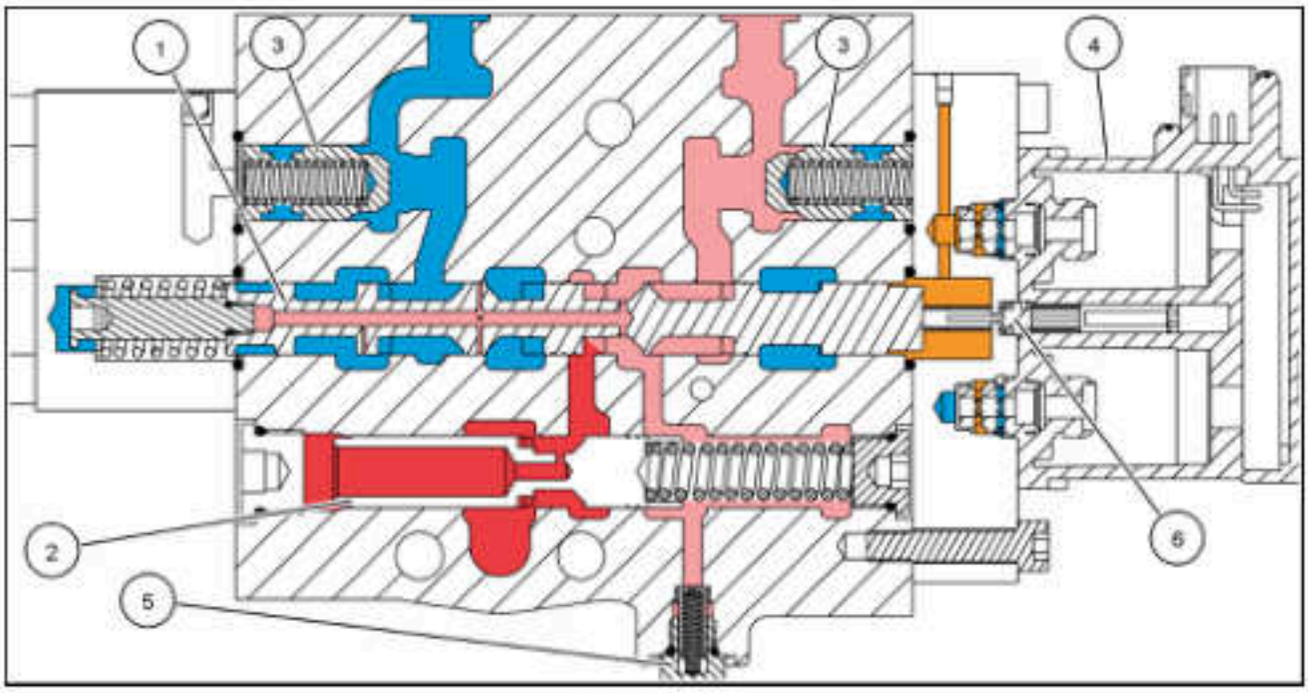
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6. Use special tool **CAS1899** to install a new pinion shaft oil seal. Install the seal with the lip toward the pinion shaft.



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PFC pump pressure	Return to tank pressure
Remote valve operating pressure	Trapped oil
Pilot pressure	
1. Main valve spool	4. Extend/retract solenoid valve assembly with micro processor
2. Flow control spool	5. Signal check
3. Lock check	6. Spool position sensor

Retract position

When the remote control lever is moved to the retract position, the main valve spool shifts to the right a fixed distance by supply pressure from the retract solenoid valve. The main spool position is based on input from armrest controller, spool position sensor and the extend/retract valve solenoid assembly with micro processor. The position of the main valve spool determines the flow rate to the retract port.

At the same time, work pressure is communicated to the signal check through the center drilled passage in the main valve spool. The signal check is forced off the seat and signal pressure is directed to the pump compensator to increase pump flow.

Also as the main spool begins to shift, any pressure trapped on the spring end of both lock checks is drained to tank. The flow exiting the retract port is now in a free flow condition shifting the lock check and out the retract port: Return oil from the extend coupler is directed into the extend port, shifting lock check to right, continuing past the spool and returning to tank.

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Wiring harness - Electrical schematic frame 93 - Color legends and abbreviations

Color legend

	INDICATES CONSTANT POWER
	INDICATES POWER WHEN THE KEY SWITCH IS ON
	INDICATES POWER WHEN THE KEY SWITCH IS IN THE START POSITION
	INDICATES 24V CIRCUIT

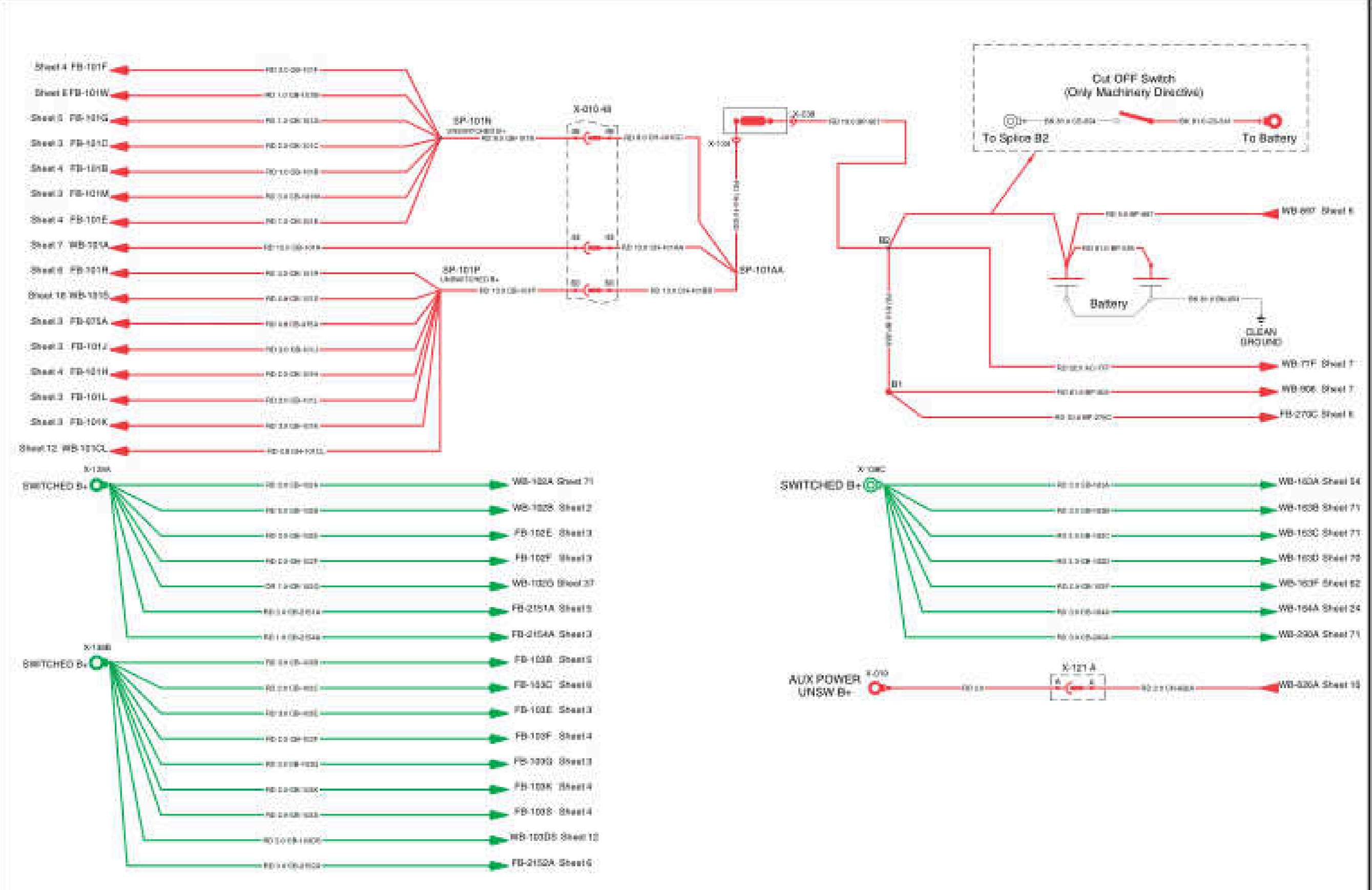
Color abbreviations

Abbreviation	Color		Abbreviation	Color
RD	Red		OR	Orange
TN	Tan		PK	Pink
WH	White		VT	Violet (purple)
YE	Yellow		BL	Dark blue
BK	Black		LB	Light blue
GY	Gray		GN	Green

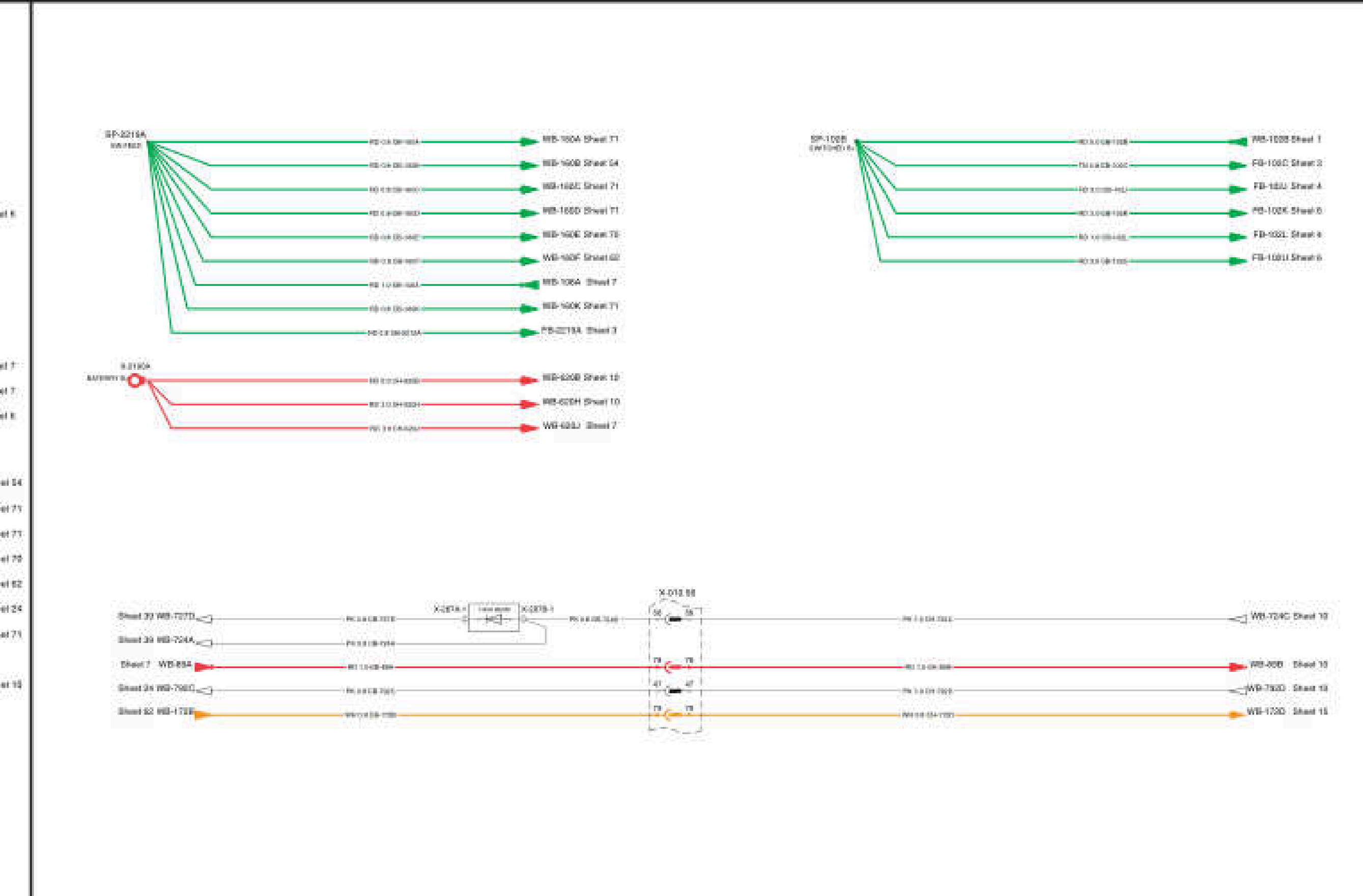
Harness name

Abbreviation	Harness		Abbreviation	Harness
CH	Chassis		SD	Secondary can diagnostic
CB	Cab — Magnum/T8. series		CR	Cab roof — T8. series
EN	Engine		DS	Beacon (dual strobe)
HA	Alternator		FA	Front aux
CG	Clutch gnd		FP	Front PTO
AU	Aux — Magnum/T8. series		SA	Suspended Axle
HL	Headlight — Magnum series		FR	Fender right hand — EURO
HN	Headlamp — T8. series NAO		FL	Fender left hand — EURO
HE	Headlamp — T8. series EURO		LF	Left fender — NAO
HT	Can terminator		RF	Right fender — NAO
SW	SWCD		GP	GPS Antenna
AG	Autoguidance outside		AR	Armrest
IS	ISO outside		EL	EDC link
AI	Inside autoguidance		SS	Steering sensor
AN	Adapter, 7-pin — NAO		AH	Aux headlight
AE	Adapter, 7-pin — EURO		FB	Fuse box (GEP)
BA	Backup alarm		HF	Flasher jumper
TR	Terminal (CODI)		HS	Shelf
SB	Secondary can bus		TB	Trailer brakes

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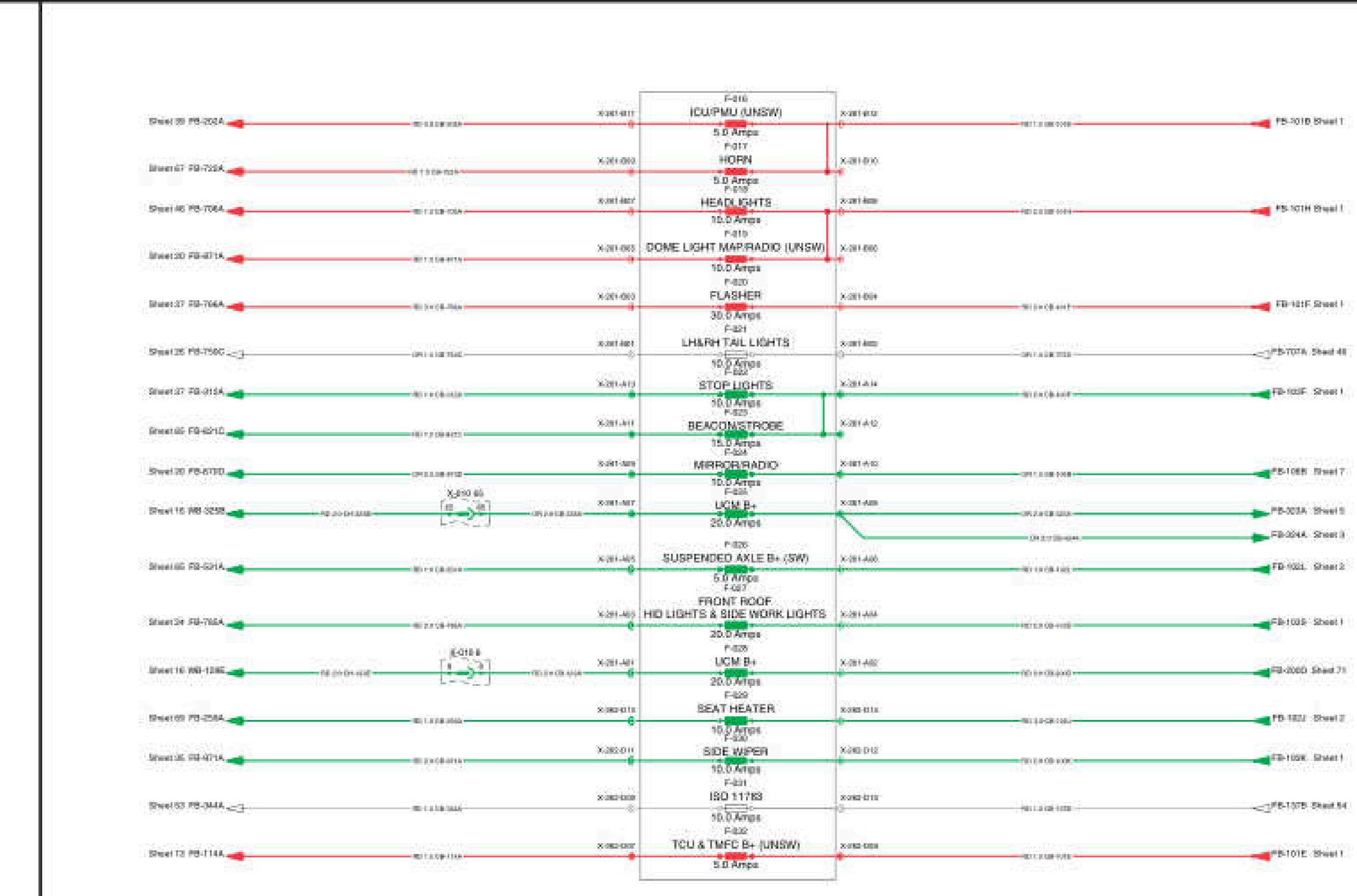
POWER DISTRIBUTION 1



POWER DISTRIBUTION 2



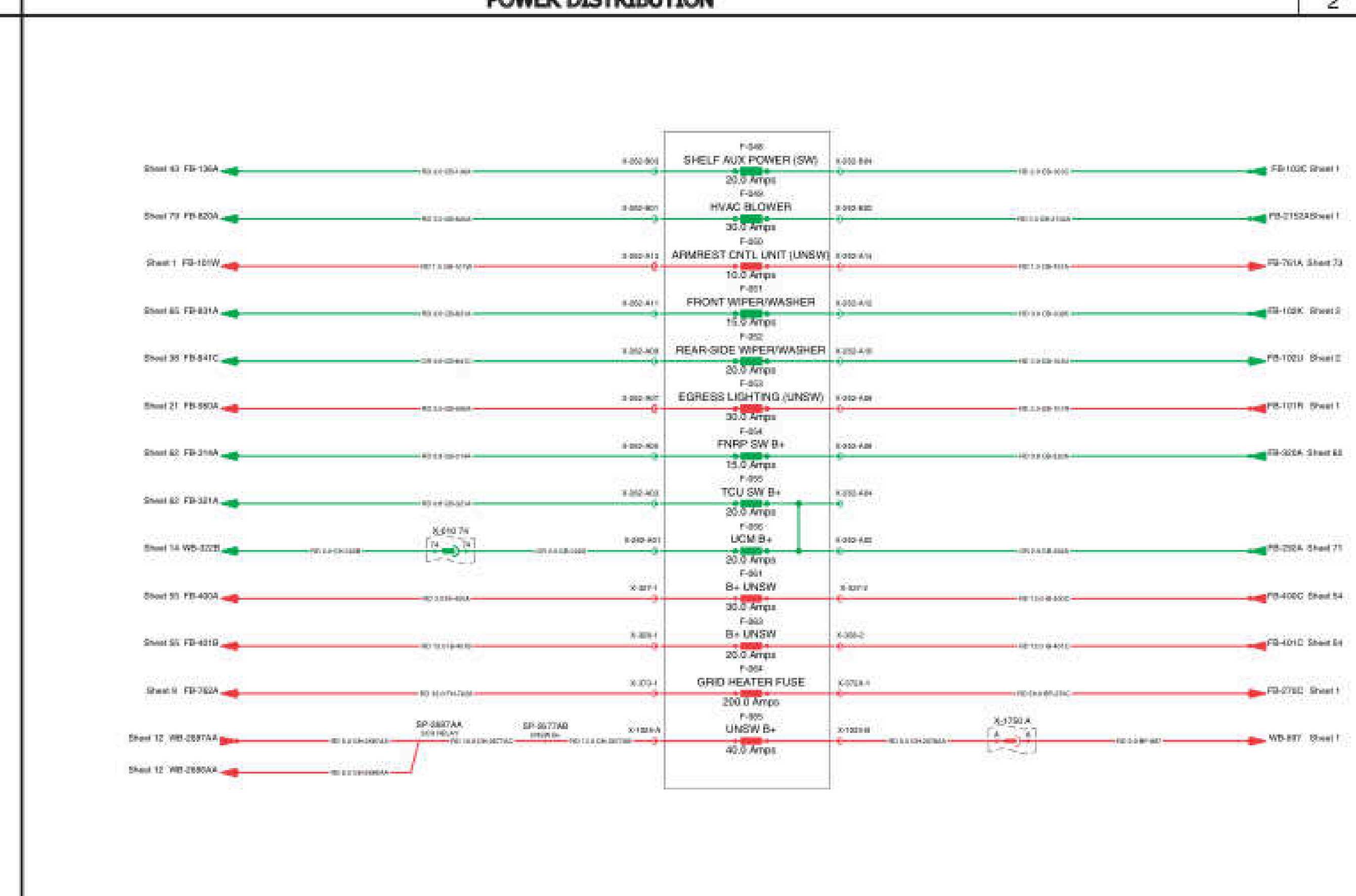
POWER DISTRIBUTION - FUSES 1 TO 15 3



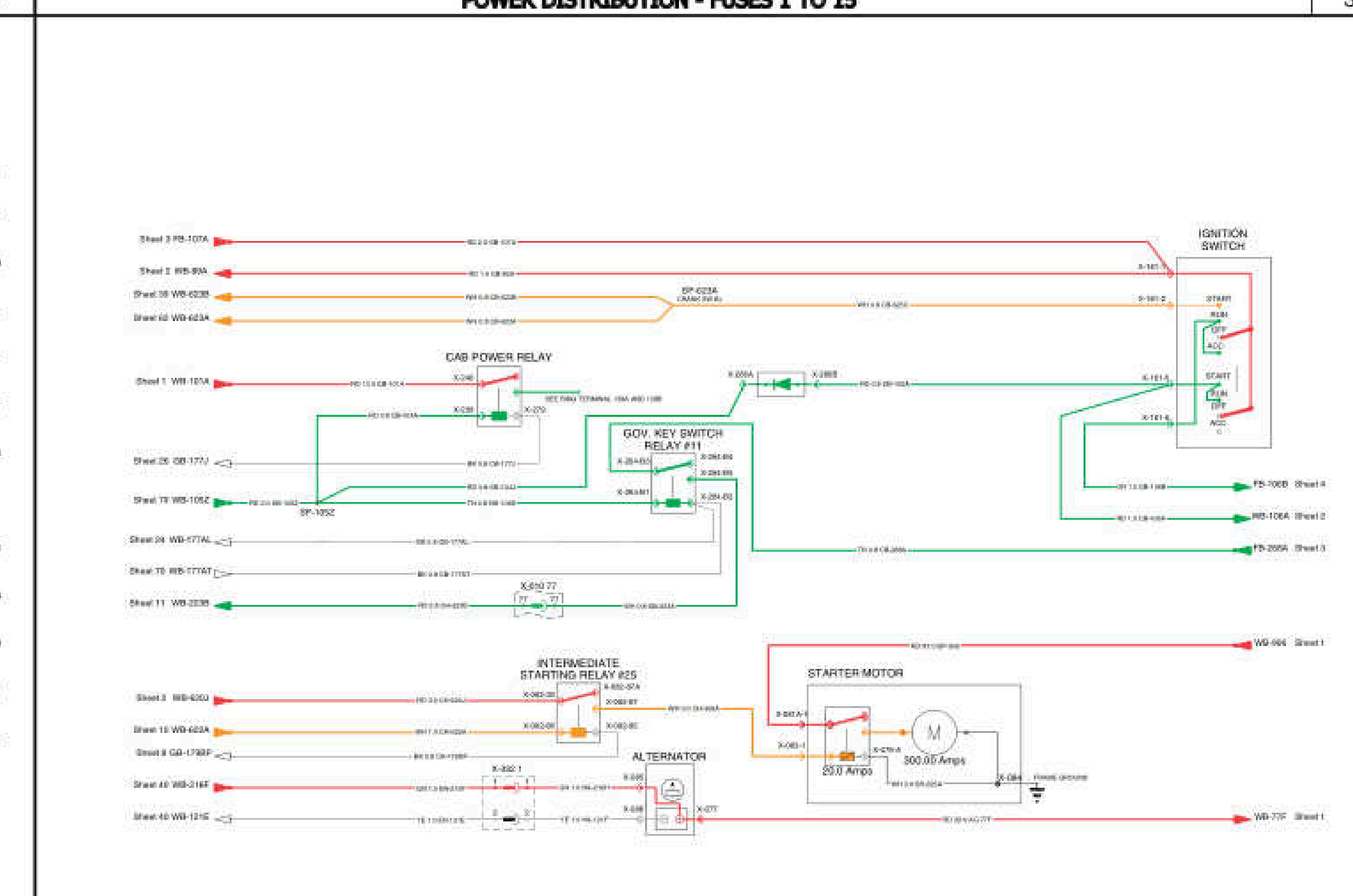
POWER DISTRIBUTION - FUSES 16 TO 32 4



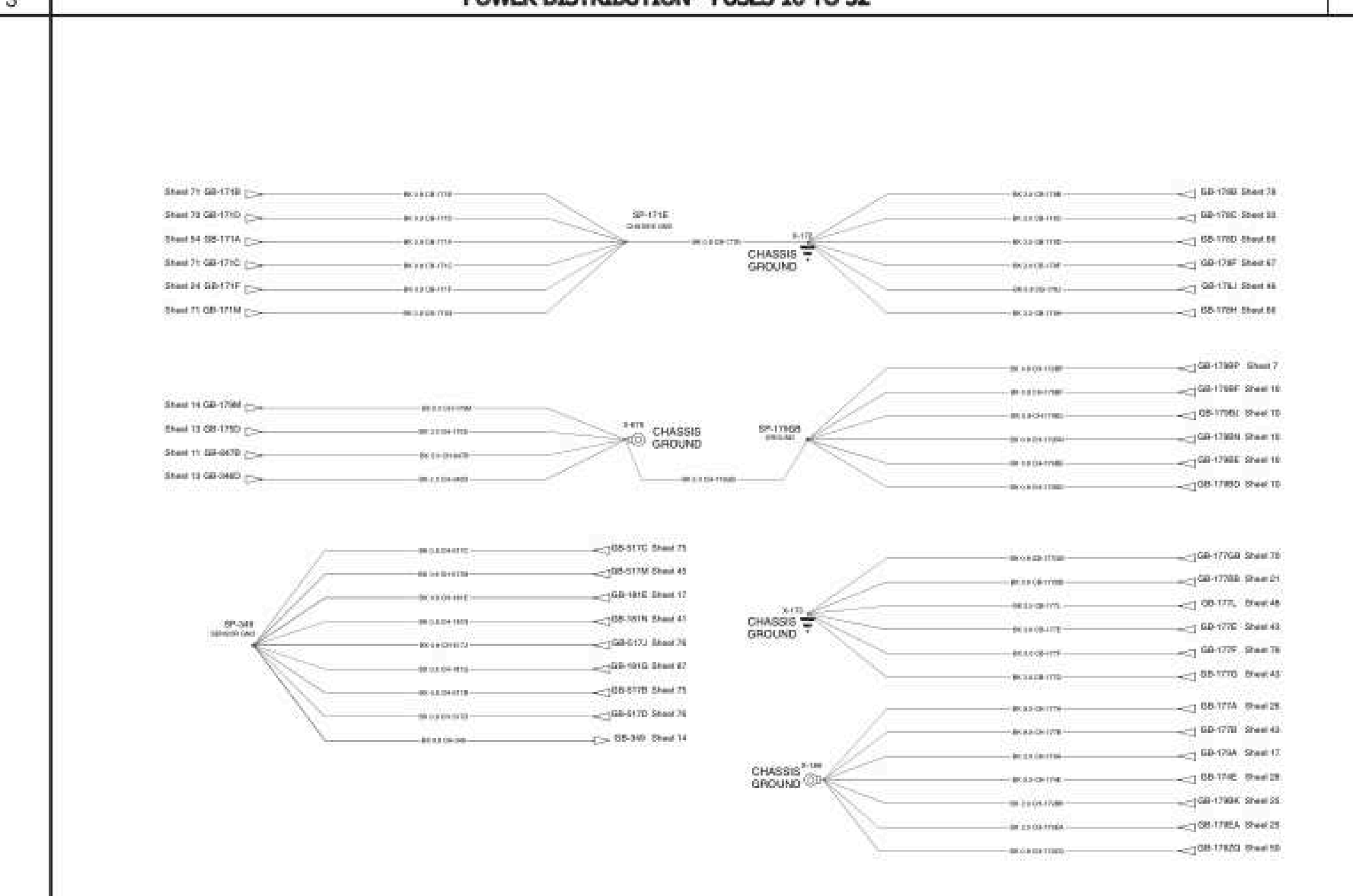
POWER DISTRIBUTION - FUSES 33 TO 47 5



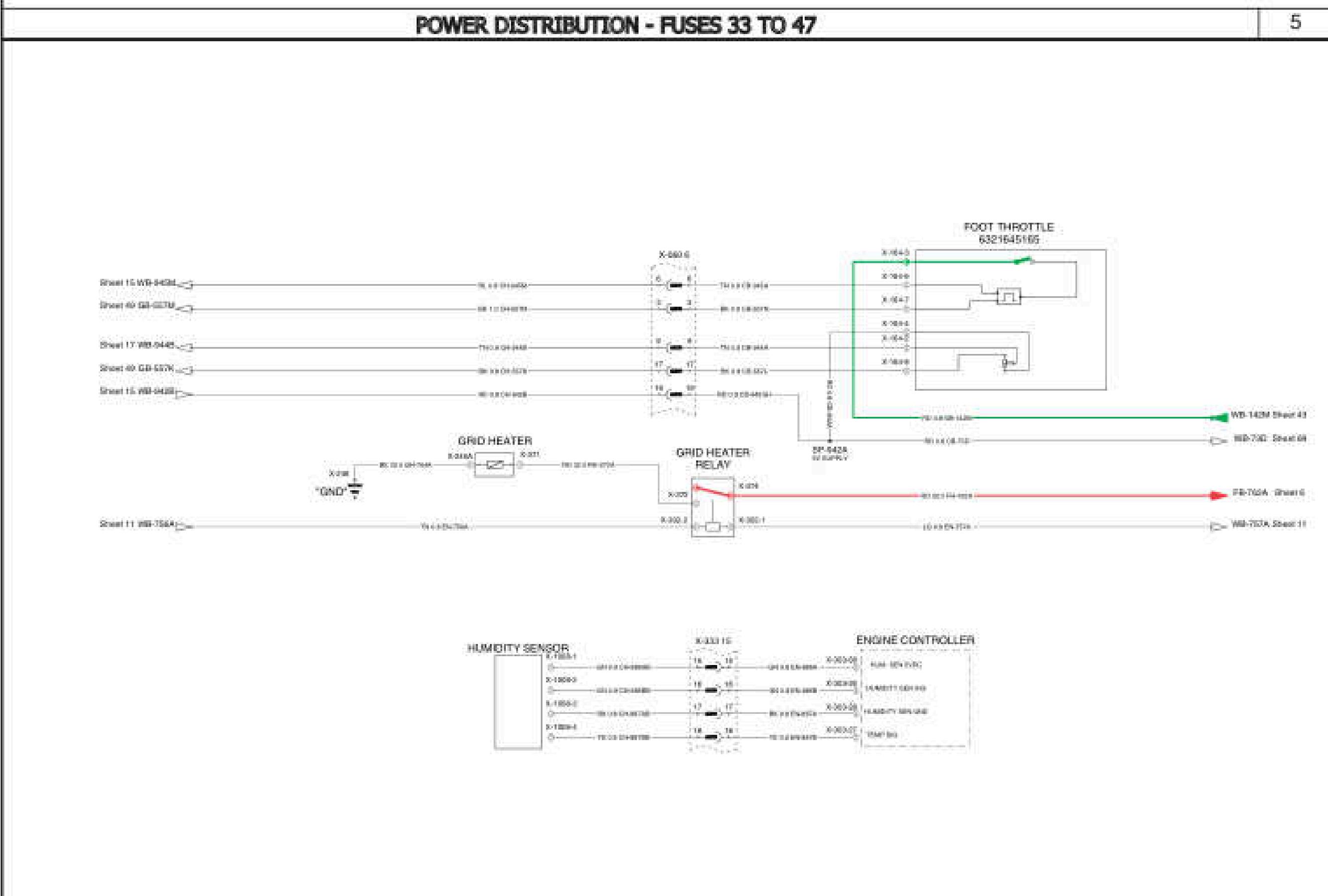
POWER DISTRIBUTION - FUSES 48 TO 65 6



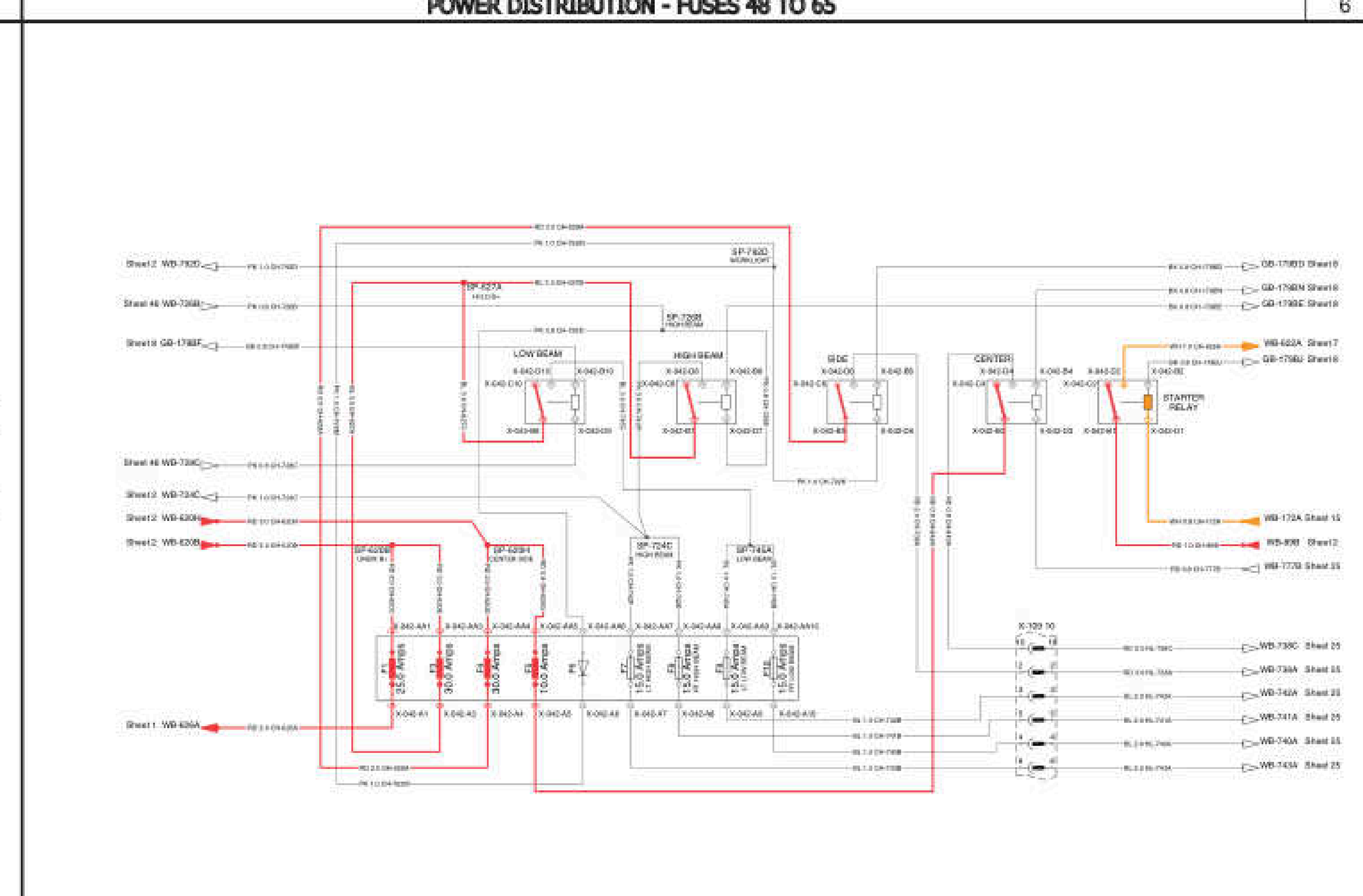
STARTING/CHARGING SYSTEM 7



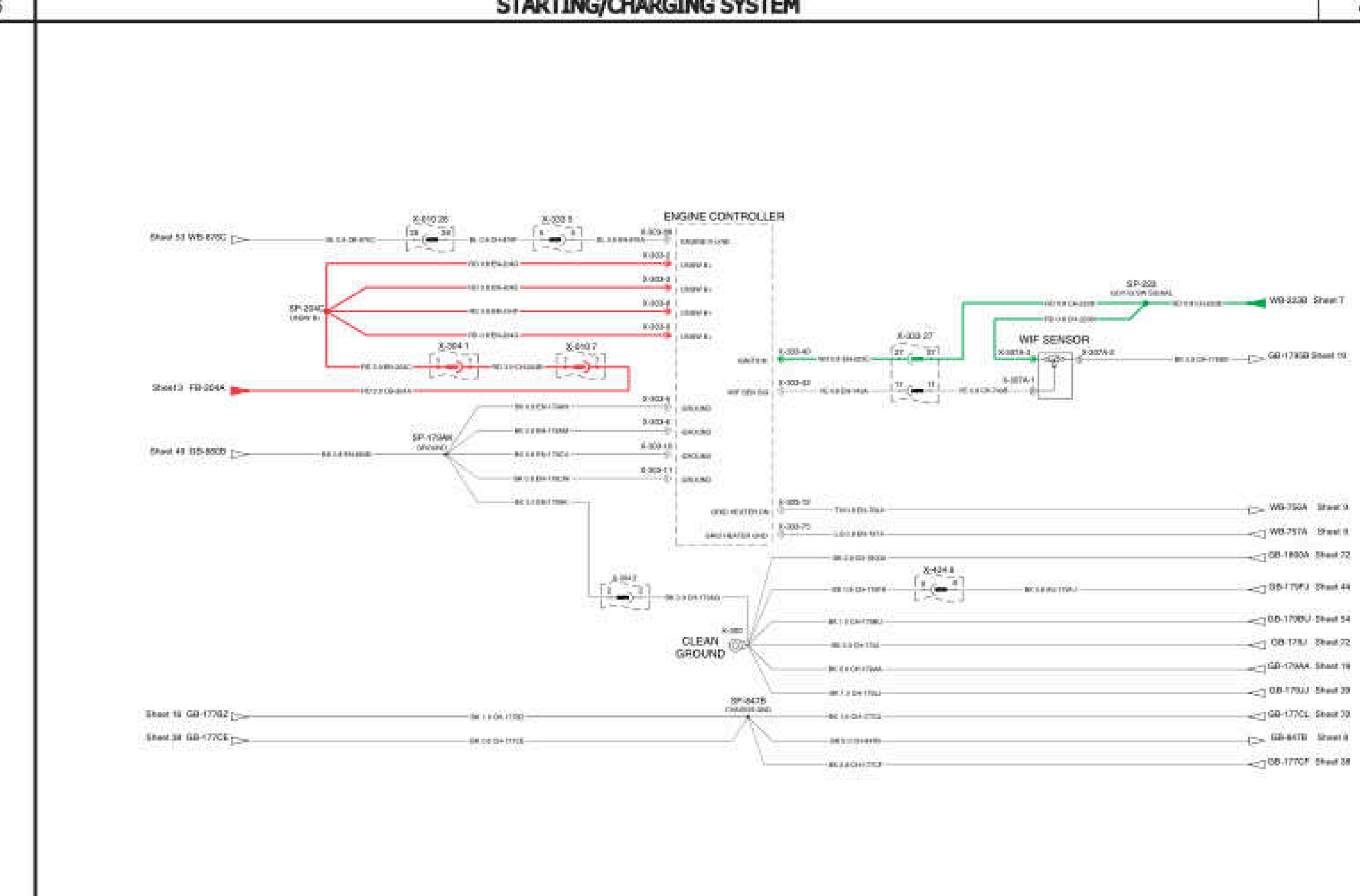
GROUNDING SYSTEM 8



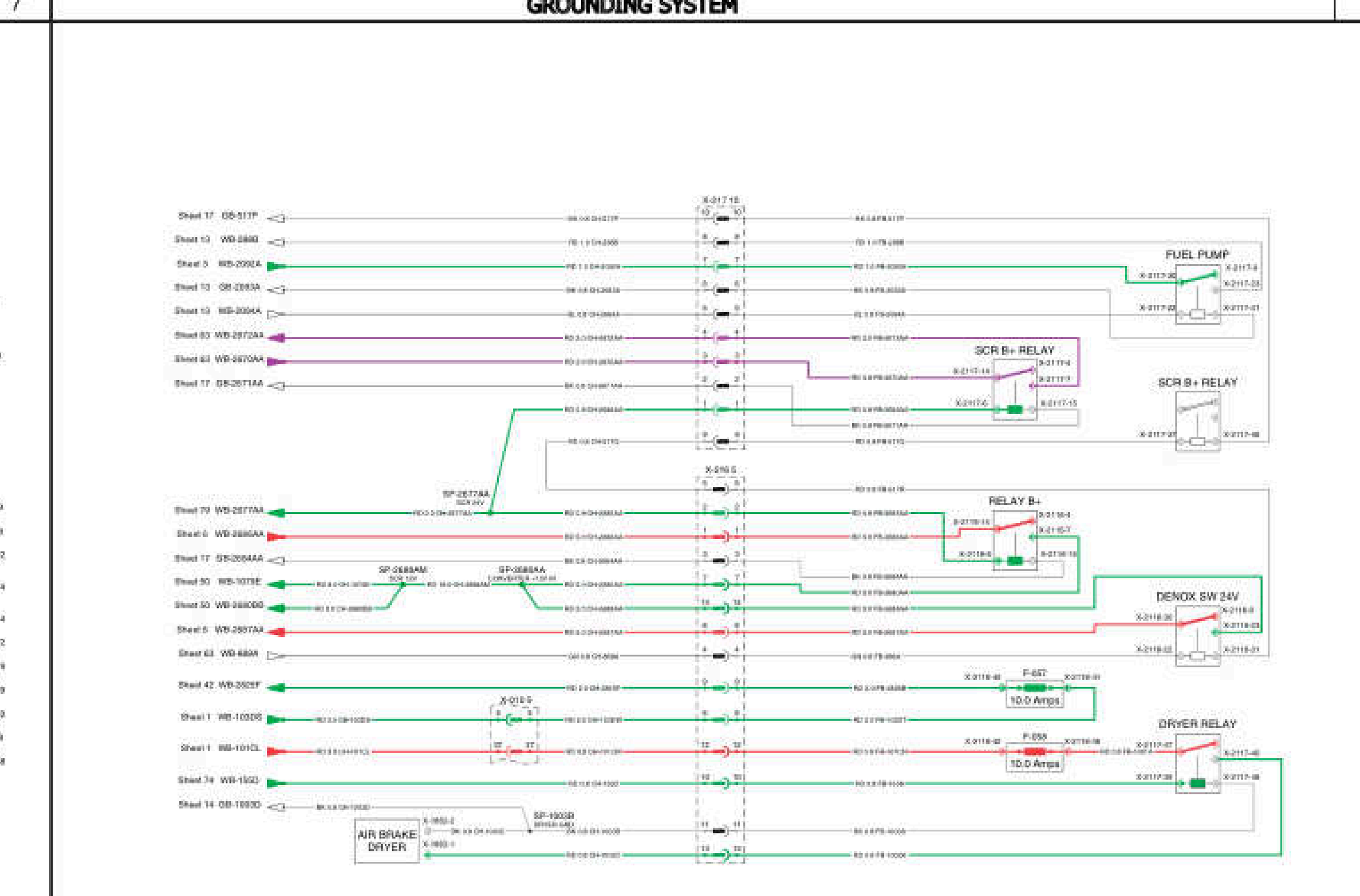
ELECTRONIC ENGINE 9



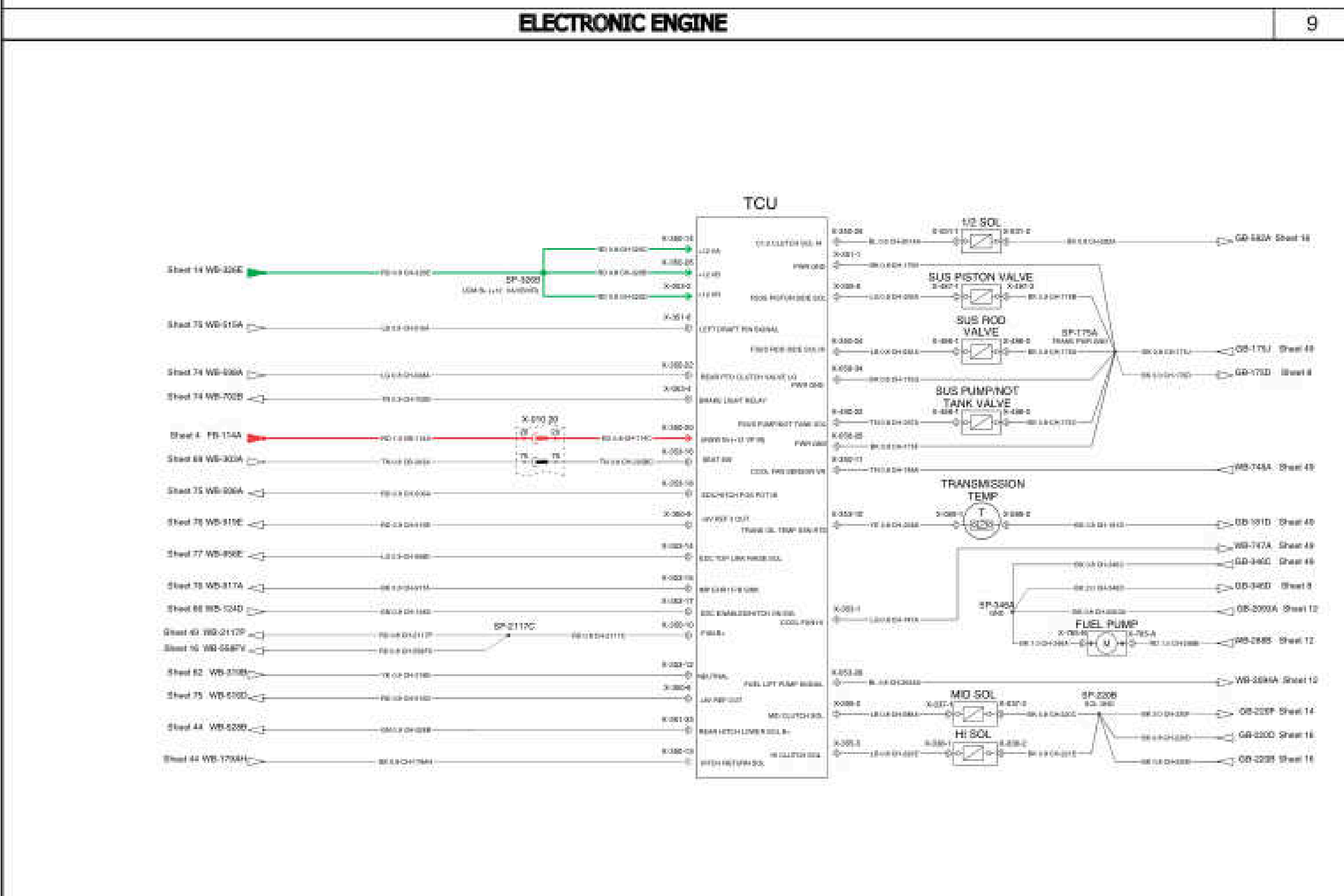
ENGINE FUSE BOX 10



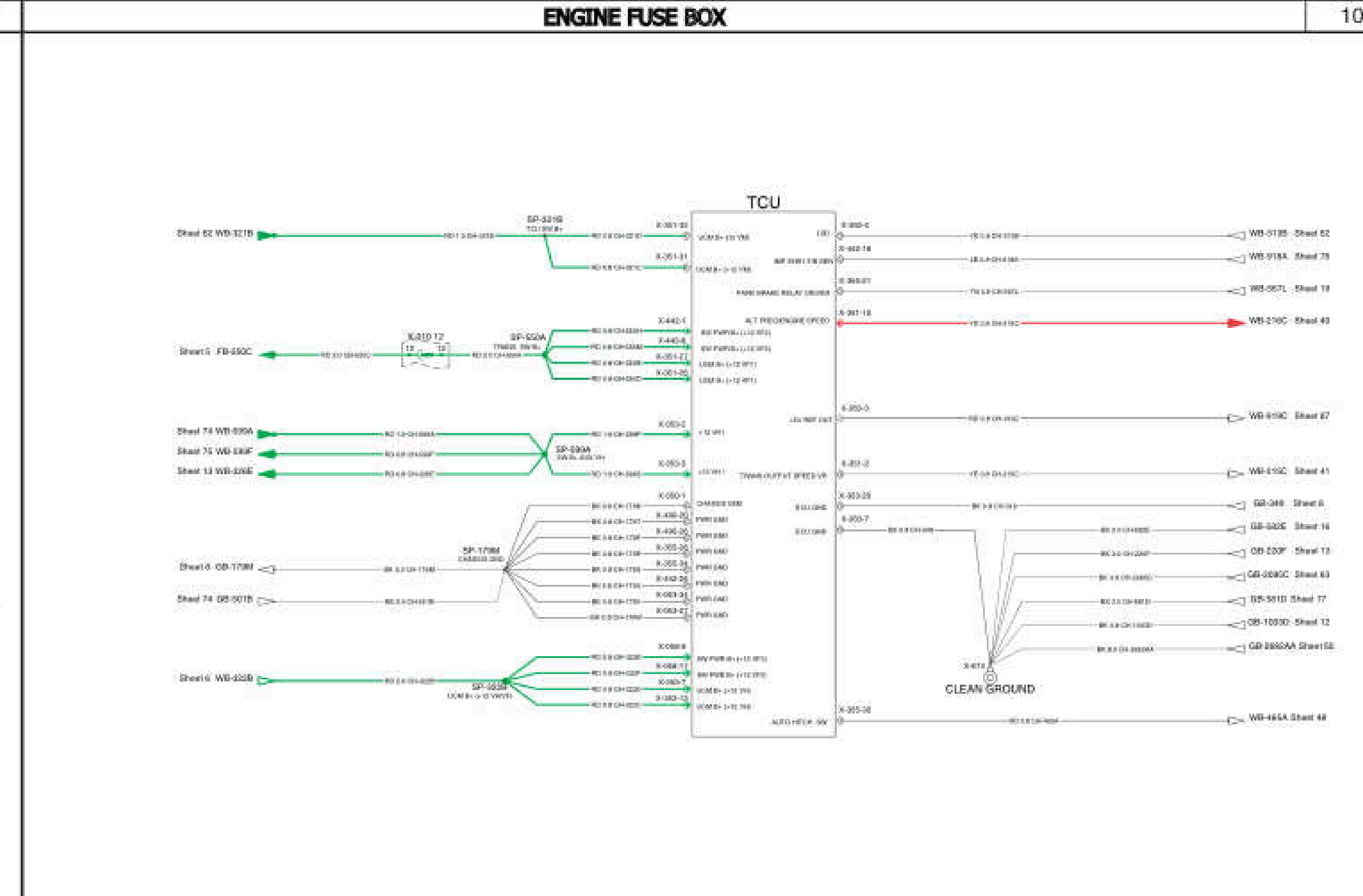
ELECTRONIC ENGINE CONTROLLER 11



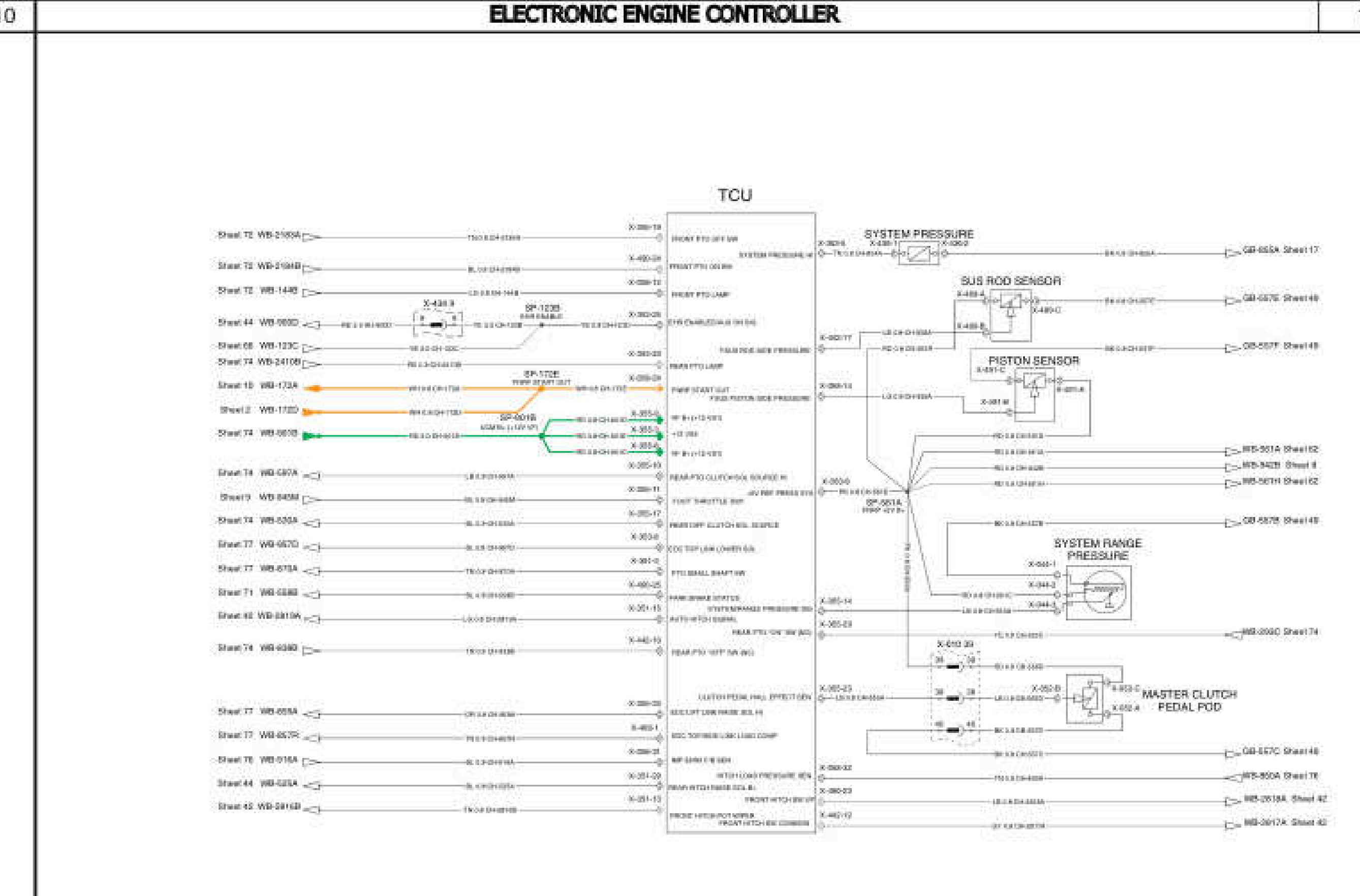
FUSES AND RELAYS BOX 12



POWER SHIFT TRANSMISSION CONTROL SYSTEM 13



POWER SHIFT TRANSMISSION CONTROL SYSTEM 14



POWER SHIFT TRANSMISSION CONTROL SYSTEM 15

T8.275, T8.300, T8.330, T8.360 AND T8.390 TRACTOR SERIES ELECTRICAL SCHEMATIC RAC 84414790

LEGEND

INDICATES CONSTANT POWER (red)

INDICATES POWER WHEN KEY SWITCH IS ON (green)

INDICATES POWER WHEN KEY SWITCH IS IN START POSITION (orange)

INDICATES 24 VOLT CIRCUIT (purple)

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