



SPECIFICATION MANUAL

TRAVELIFT® CRANE P/N 1986

	<u>Model</u>	<u>Serial Number</u>
MACHINE:	MJ85	1986PD



Hazel Crest, IL 60429 • 708/596-5200 • FAX: 708/225-2302

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INTRODUCTION

The following specifications are specific only for the TRAVELIFT® MJ85 crane with the serial number listed on the cover. If you have any questions about the operating specifications, consult MI-JACK Technical Services personnel at Hazel Crest for assistance.

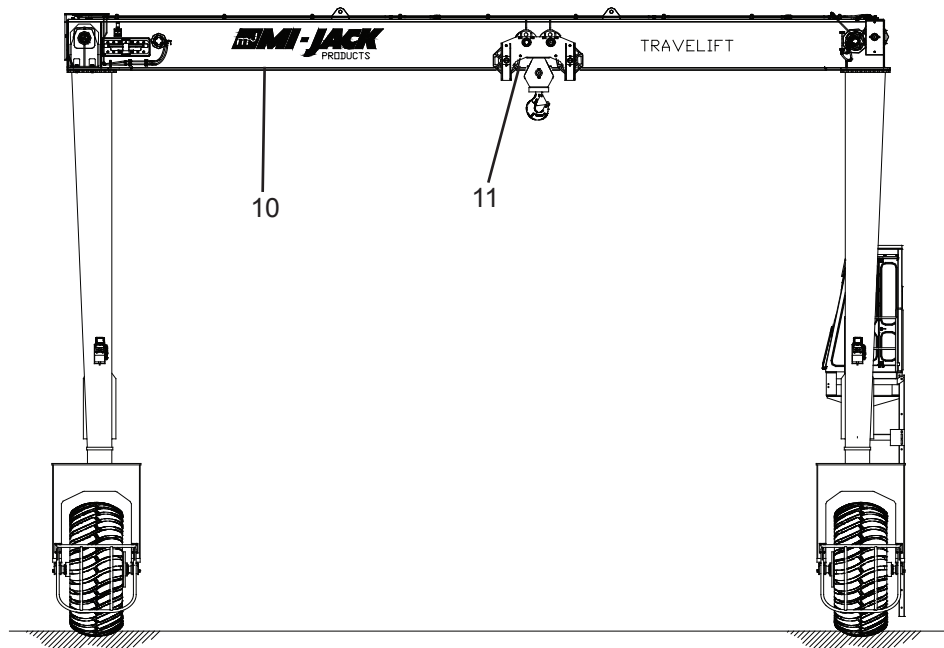
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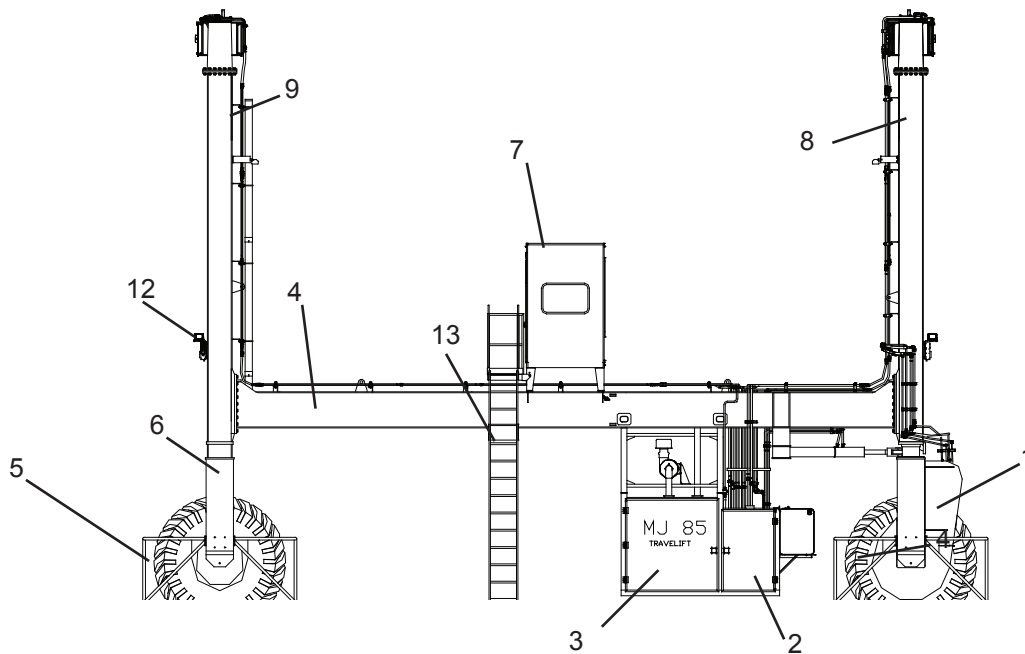
NOMENCLATURE

TRAVELIFT® CRANE

(Inward Facing Cab - MJ85)



20243.EPS



20244.EPS

LEFT SIDE VIEW

- | | |
|--|-----------------------|
| 1. Drive Wheel | 8. Column, Left Rear |
| 2. Location of Hydraulic Pumps and Filters | 9. Column, Left Front |
| 3. Diesel Engine | 10. Front Top Beam |
| 4. Left Side Beam | 11. Trolley |
| 5. Wheel Guards | 12. Drive Lights |
| 6. Wheel Yoke | 13. Ladder |
| 7. Operator's Cab and Controls | |

A. GENERAL MACHINE SPECIFICATIONS

Capacity

Machine Capacity 170,000 lbs. (77,110 kg)

Hoist Hook Block Capacity 85,000 lbs. (38,555 kg)

Engine

Type

Standard Model Cummins QSB6.7 Diesel Engine

Type..... Six cylinder, four cycle, in-line, Turbocharged

Horsepower (rated)..... 220 hp (164 kW) @ 2100 RPM

Engine Fuel System

Fuel Tank Capacity 100 gal. (378.5 L)

Fuel Type..... (See engine manual)

Fuel Filter..... Spin-on type / with strainer

Engine Air Intake System

Type..... Dry type, with air cleaner indicator gauge

Engine Cooling System

Type..... Radiator with belt driven fan

Thermostat Refer to engine manual

Electrical Systems

Electrical System - DC

Type of System.....	24 VDC, negative ground
Batteries (2).....	12 volt connected in series (supplies power to drive lights, power unit lights and the crane's control system)
Alternator with Internal Regulator.....	28 VDC, 90 amp

Electrical System - AC

Type of System.....	120/240 VAC (supplies power to flood lights and generator)
Generator	120/240 VAC 7.5 kW, 60 Hz, 1 Phase, hydraulically driven

Drive System

Type.....	Hydraulic motors with chain drive
Drive Chain Type	Roller
Main Pump	Variable displacement
Supercharge Pump (Integral with main pump).....	Fixed displacement, gear type
Motors (2)	Positive displacement drive motors
Tires.....	33.25 x 35, 56 PLY
Tire Pressure	112 psi

Hoist System

Type.....	Hydraulic
Actuator	Fixed displacement -one on each top beam
Hoist Brake	Multi-disc SAHR (Spring applied, hydraulically released). Located between the hoist motor and the hoist drum
Main Pump	Pressure/flow compensated variable displacement

Traverse System

Type.....	Hydraulic
Drive	Hydraulic motor with chain drive
Motor	Fixed displacement
Pump	Pressure/flow compensated variable displacement
Brake	Spring applied, hydraulically released (SAHR)

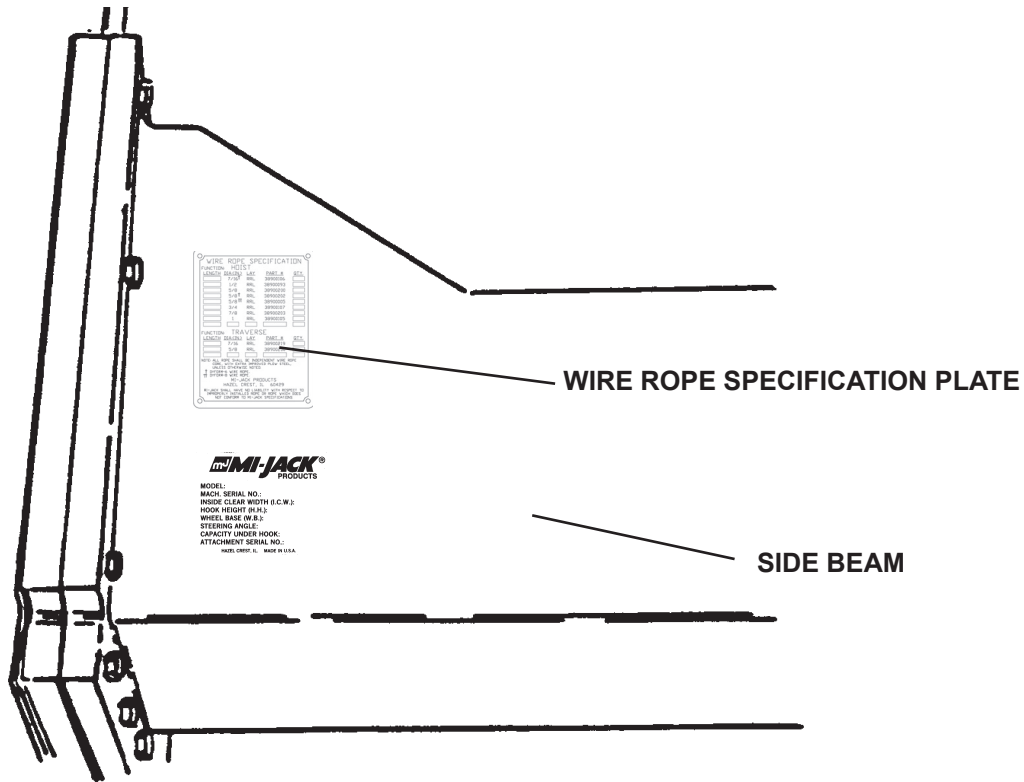
Steer System

Type..... Hydraulic, cylinder actuated
Control..... Solenoid activated
Standard Steer Pivot of rear wheels
Pump Fixed displacement
Valve..... Electric/hydraulic

Park Brake System

Type (Parking - Drive wheels) Spring applied, hydraulically released
(SAHR).

NOTE: Unless otherwise specified, RPM as referenced in these specifications indicate engine RPM as measured at the engine.



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WIRE ROPE MAIN HOIST

PART #	LENGTH	DESCRIPTION
38900037	467'	Type: 8 Compacted Strands Classification: 8 X 19 Diameter: 5/8" Construction: 8 X 25 Filler Lay: RRL Grade: EIPS Nominal Breaking Strength: 52,400 lbs Core: RRL Plastic Coated

B. COMPONENT LUBRICANT/FLUID CAPACITY CHART

COMPONENT	CAPACITY	LUBRICANT/FLUID
Engine Crankcase	17 quarts with filter change. (Fill to level)	See engine manufacturer's manual.
Cooling System (Including Radiator)	25 Quarts (Fill to Capacity)	See engine manufacturer's manual.
Fuel Tank	100 gallons	Diesel fuel as specified in the engine manufacturer's manual.
Hydraulic Reservoir Hydraulic System	51 gallons (Fill to level) 75 to 100 gal. (Fill to level)	Kendall Hyken Golden or equivalent.
Pump Drive Transmission	4 quarts (1 ¼ quarts above level plug)	E. P. 80W-140 API GL5 gear lube
Drive/Hoist Transmission	Fill to level	E.P. 80W-90 API GL5 gear lube

C. MACHINE HYDRAULIC PRESSURE SETTINGS

DRIVE (GANTRY) • Hydraulic Pressures

Supercharge	350 psi
Pressure Override (POR)	5800 psi
Relief Forward	6200 psi
Relief Reverse	6200 psi
Park Brake Relief Pressure	350 psi

LEFT MAIN PUMP • Hydraulic Pressures

Standby Pressure	300 psi
Pressure Compensator	5200 psi
Main Relief (Factory pre-set)	5400 psi

RIGHT MAIN PUMP • Hydraulic Pressures

Standby Pressure	350 psi
Pressure Compensator	5200 psi
Main Relief (Factory pre-set)	5400 psi

GENERATOR PUMP • Hydraulic Pressures

Standby Pressure	300 psi
Pressure Compensator.....	3800 psi

HOIST • Hydraulic Pressures

Port Load Sense Relief.....	4800 psi
Counterbalance Valve	1850 psi

TRAVERSE • Hydraulic Pressures

Port Load Sense Relief.....	4300 psi
Counterbalance Valve (Factory Preset).....	4100 psi

STEERING • Hydraulic Pressures

Extend Port Relief Valve	2750 psi
Retract Port Relief Valve	3480 psi
Extend Load Sense Relief	2350 psi
Retract Load Sense Relief.....	3000 psi

D. CRANE FUNCTION SPEEDS

HOIST

Empty

Hoist Up21 fpm
Hoist Down21 fpm

Loaded

Hoist Up20 fpm
Hoist Down20 fpm

TRAVERSE

Empty

Trolley Speed90 fpm

Loaded

Trolley Speed90 fpm

GANTRY

Forward264 fpm
Reverse.....264 fpm

E. ENGINE SPEEDS

Low Engine 1000 RPM
High Engine (Max. with No Load) Power on Demand

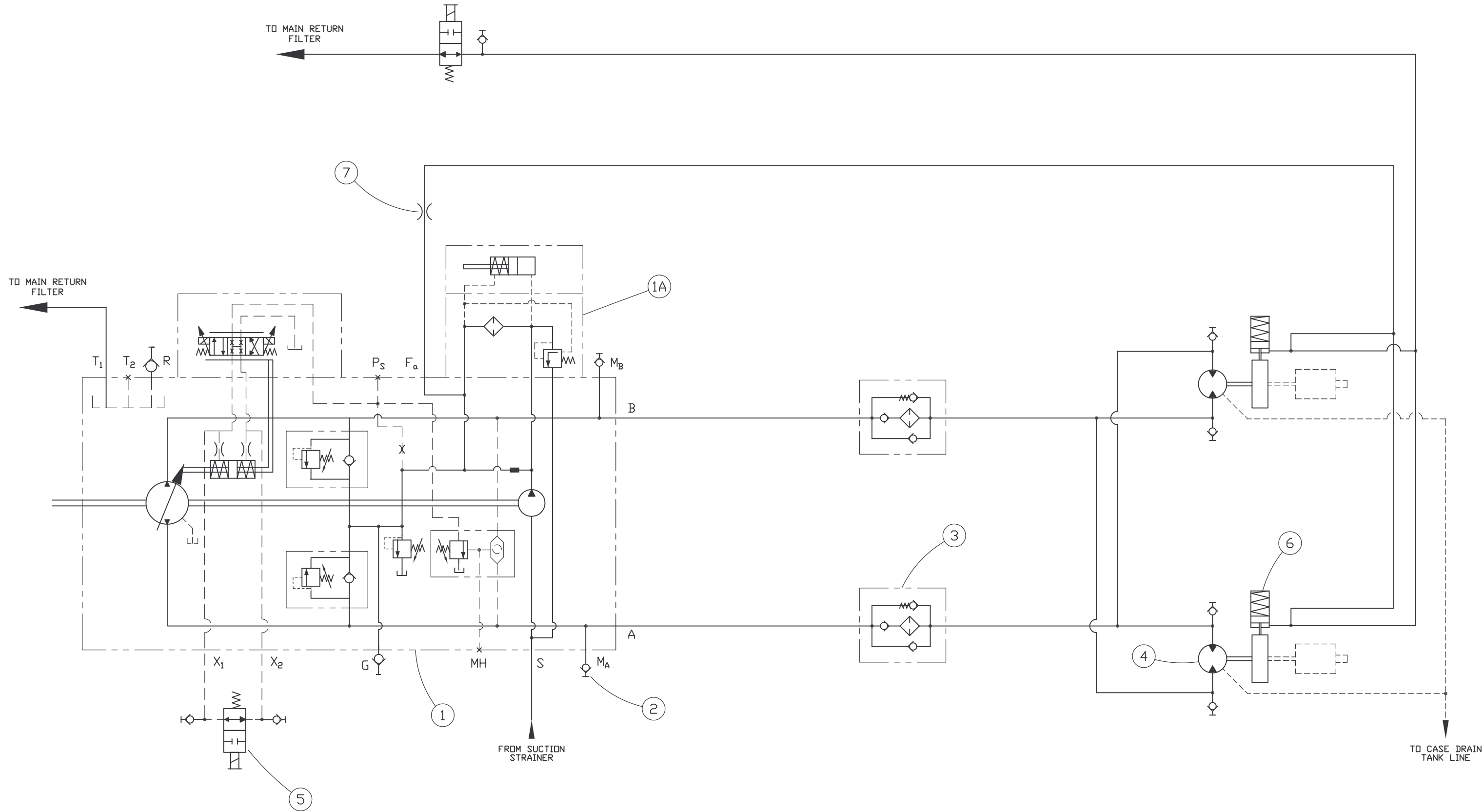
F. MACHINE SCHEMATICS

Hydraulic Schematics

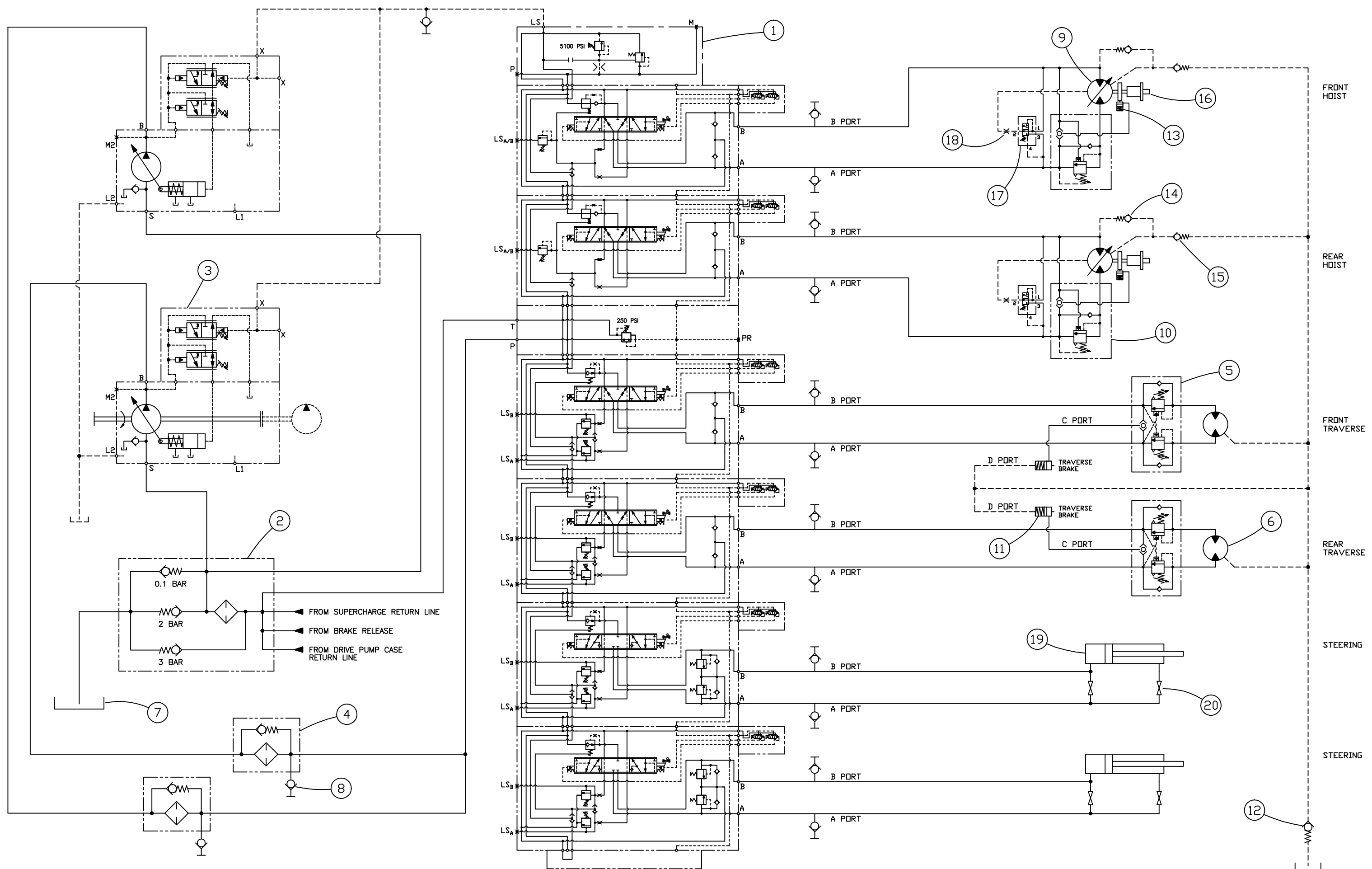
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Electrical Schematics

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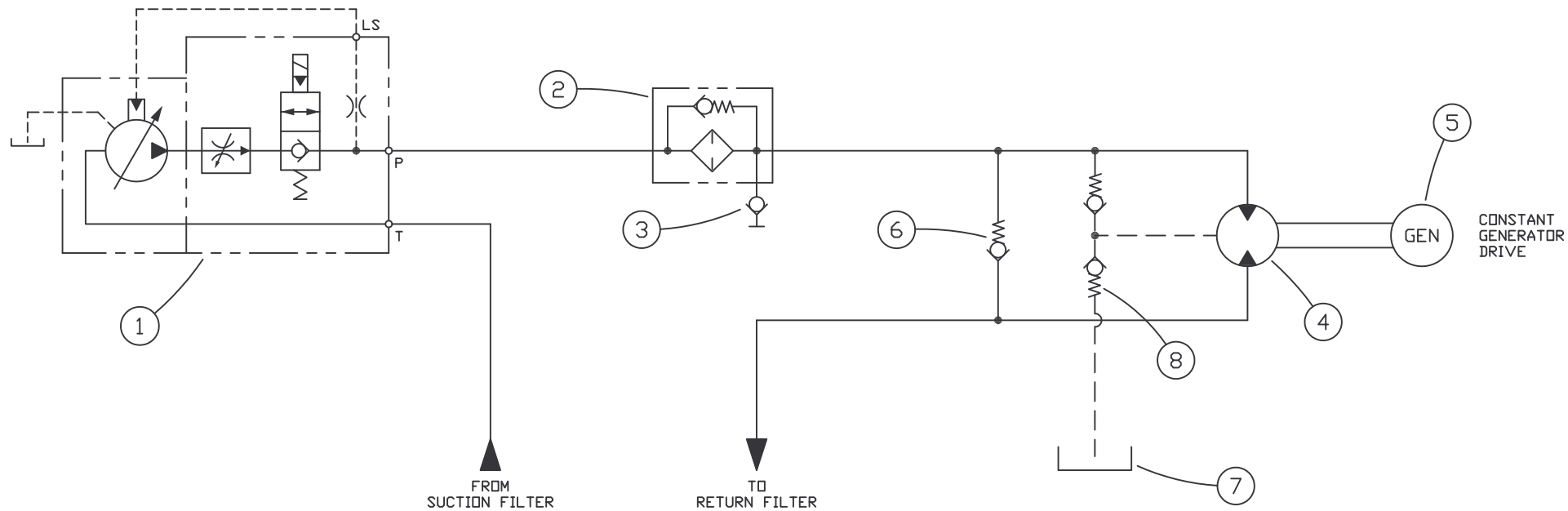


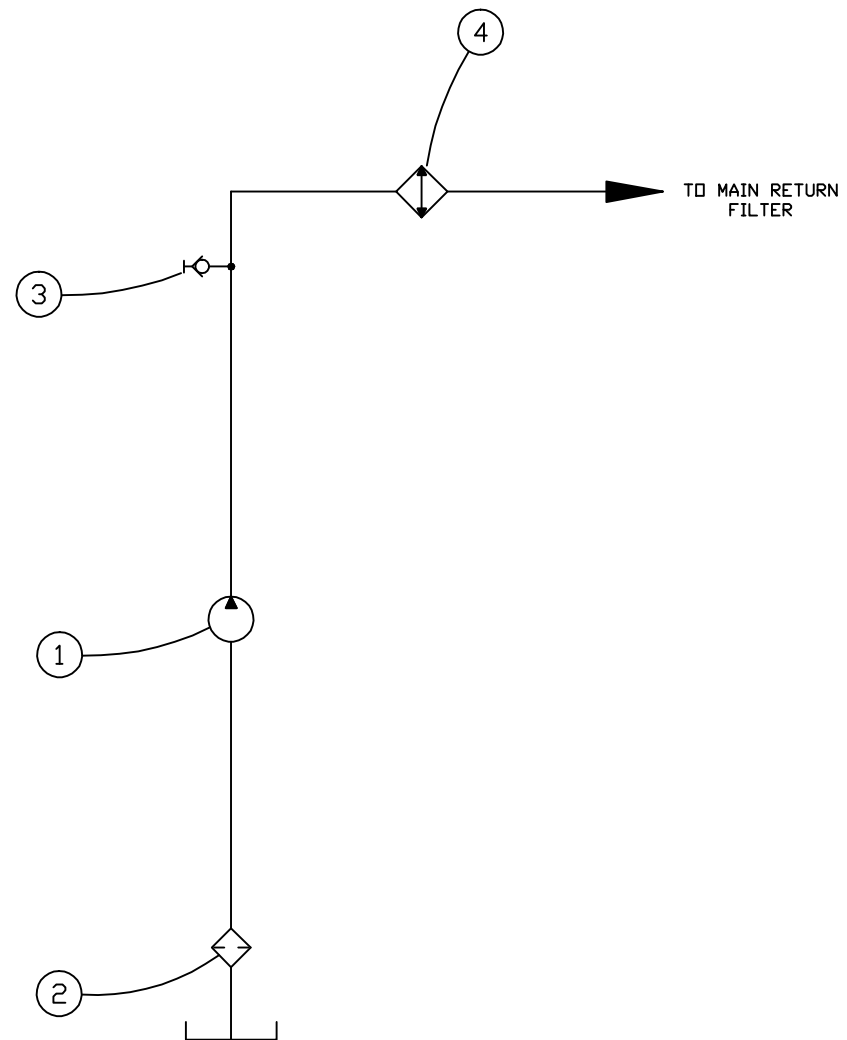
IT.	QTY.	DESCRIPTION	PART NUMBER	QTY.
1	1	PUMP	41080092	
1A	1	ELEMENT, FILTER	31040009	
2	REF	TEST SPUD	79830404	
3	2	FILTER	41040824	
3A	2	ELEMENT, FILTER	31050177	
4	2	MOTOR	41060018	
5	2	VALVE, VENT	31200115	
6	2	GEAR BDX W/BRAKE	41140016	
7	1	ORIFICE	31680004	



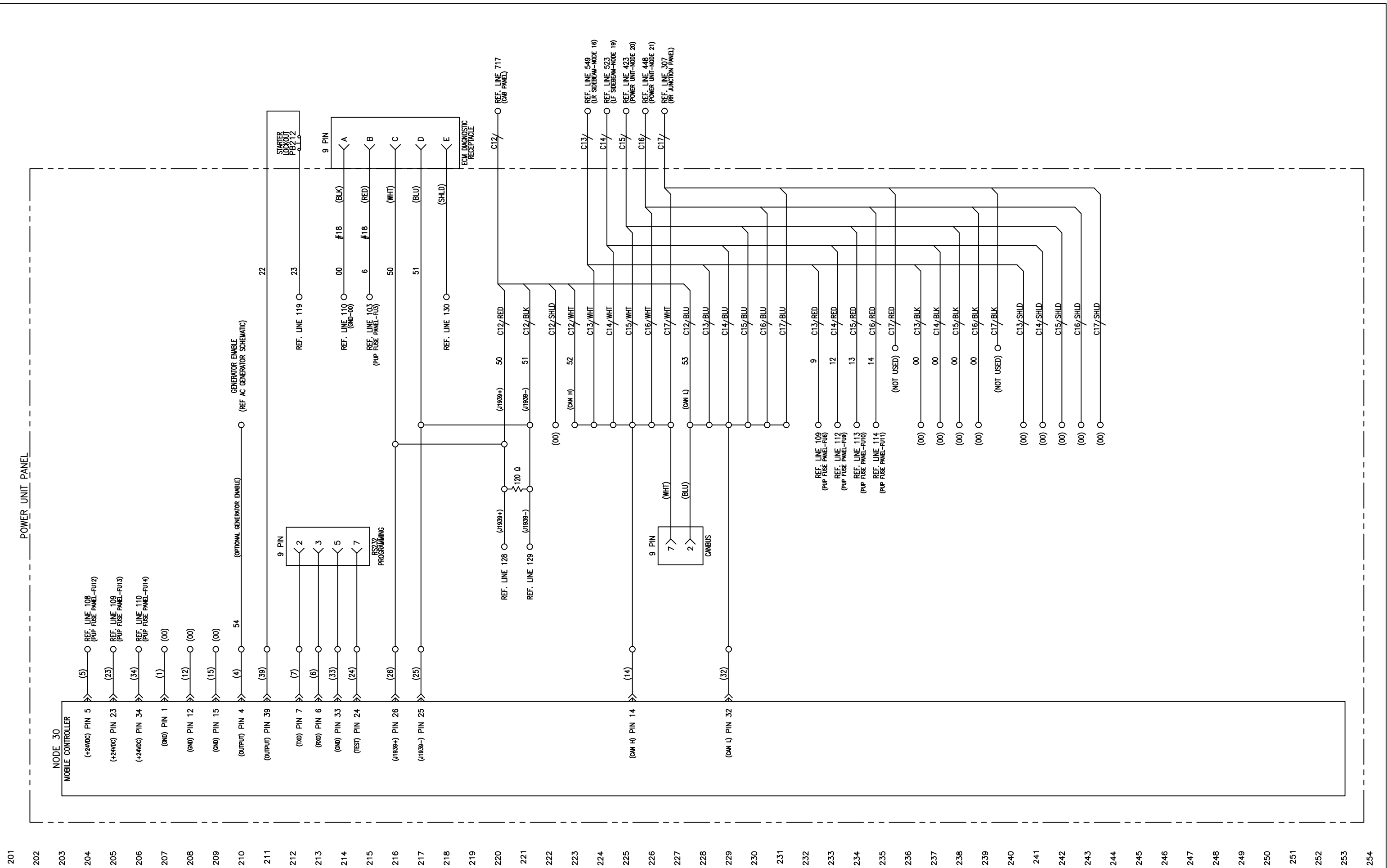
IT.	QTY.	DESCRIPTION	PART NUMBER	PWG SIZE
1	1	DIRECTIONAL CONTROL	41240157	
2	1	FILTER	41040005	
2A	1	ELEMENT, FILTER	31040010	
3	2	PUMP	41080082	
4	2	FILTER	41040823	
4A	2	ELEMENT, FILTER	31050178	
5	2	VALVE, DUAL C/BALANCE	41240087	
5A	4	CARTRIDGE	21540108	
5B	2	BODY	21520010	
6	2	MOTOR	41060016	
7	1	TANK	50540008	
8	REF	TEST SPUD	79830404	
9	2	MOTOR	41060010	
10	2	VALVE, C/BALANCE	41240129	
10A	2	CARTRIDGE	31260004	
10B	2	BODY	21520010	
10C	2	CARTRIDGE	21230004	
11	2	BRAKE	43020008	
12	1	VALVE, CHECK (15 PSI)	31231010	
13	2	BRAKE	43010008	
14	2	VALVE, CHECK (2 PSI)	31230003	
15	2	VALVE, CHECK (5 PSI)	31230631	
16	2	GEAR BOX	41120027	
17	2	MANIFOLD, FLUSHING VALVE	41220001	
17A	2	BODY	31520006	
17B	2	CARTRIDGE	31540009	
18	2	DRIFICE	31590156	
19	2	CYLINDER	41020140	
20	4	VALVE, ALIGNMENT	31210125	

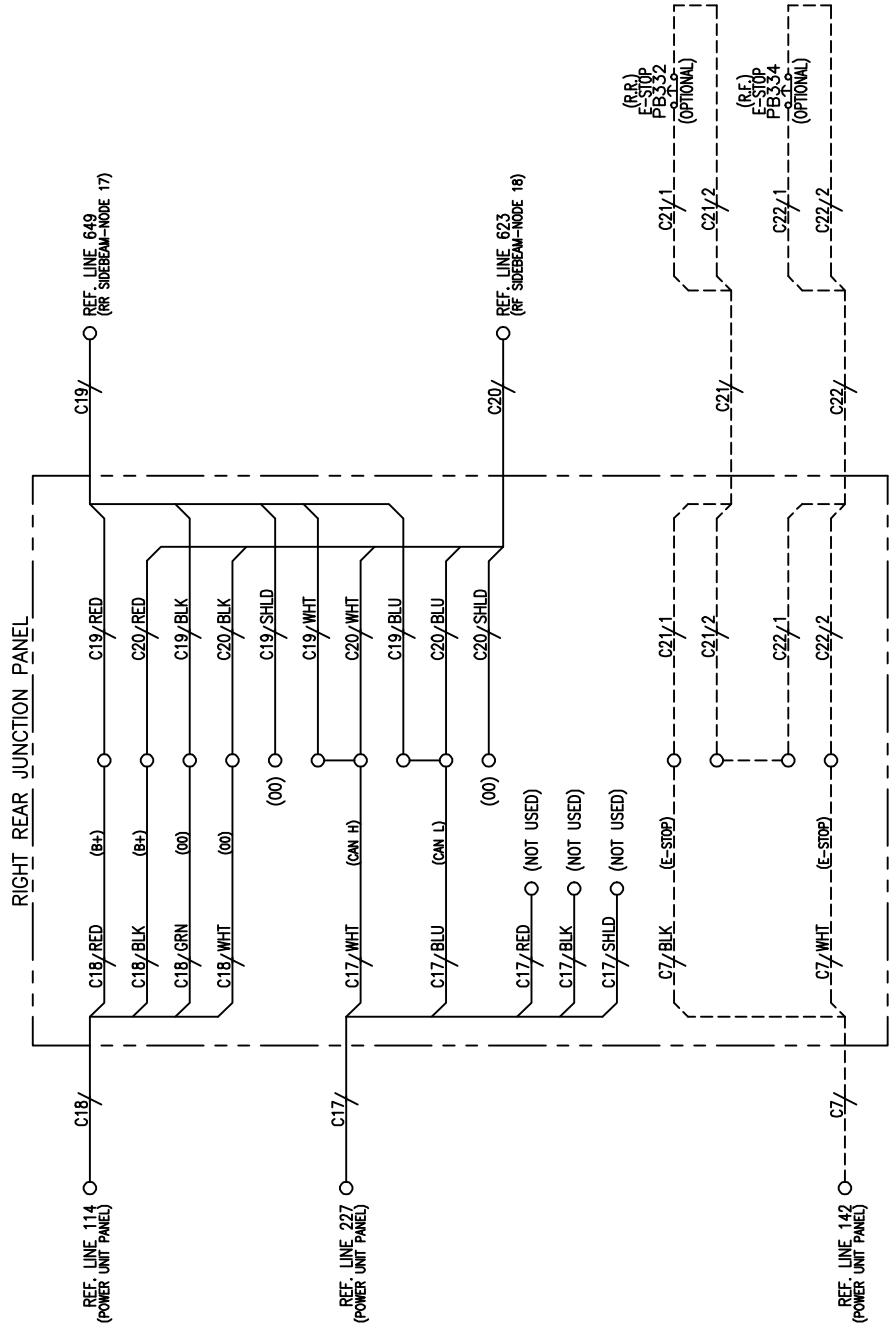
IT.	QTY.	DESCRIPTION	PART NUMBER	DWG. SIZE
1	1	PUMP VALVE	41080153	-
2	1	FILTER	41040008	-
2A	1	ELEMENT	31040015	-
3	REF	TEST SPUD	79830404	-
4	1	MOTOR	41060045	-
5	1	GENERATOR	32020022	-
6	2	CHECK VALVE	31230003	-
7	1	TANK	50540008	-
8	1	CHECK VALVE	31230631	-





IT.	QTY.	DESCRIPTION	PART NUMBER	DWG SIZE
1	1	PUMP	41080037	
2	1	STRAINER	31040013	
3	REF	TEST SPUD	79830404	
4	1	COOLER	53500001	





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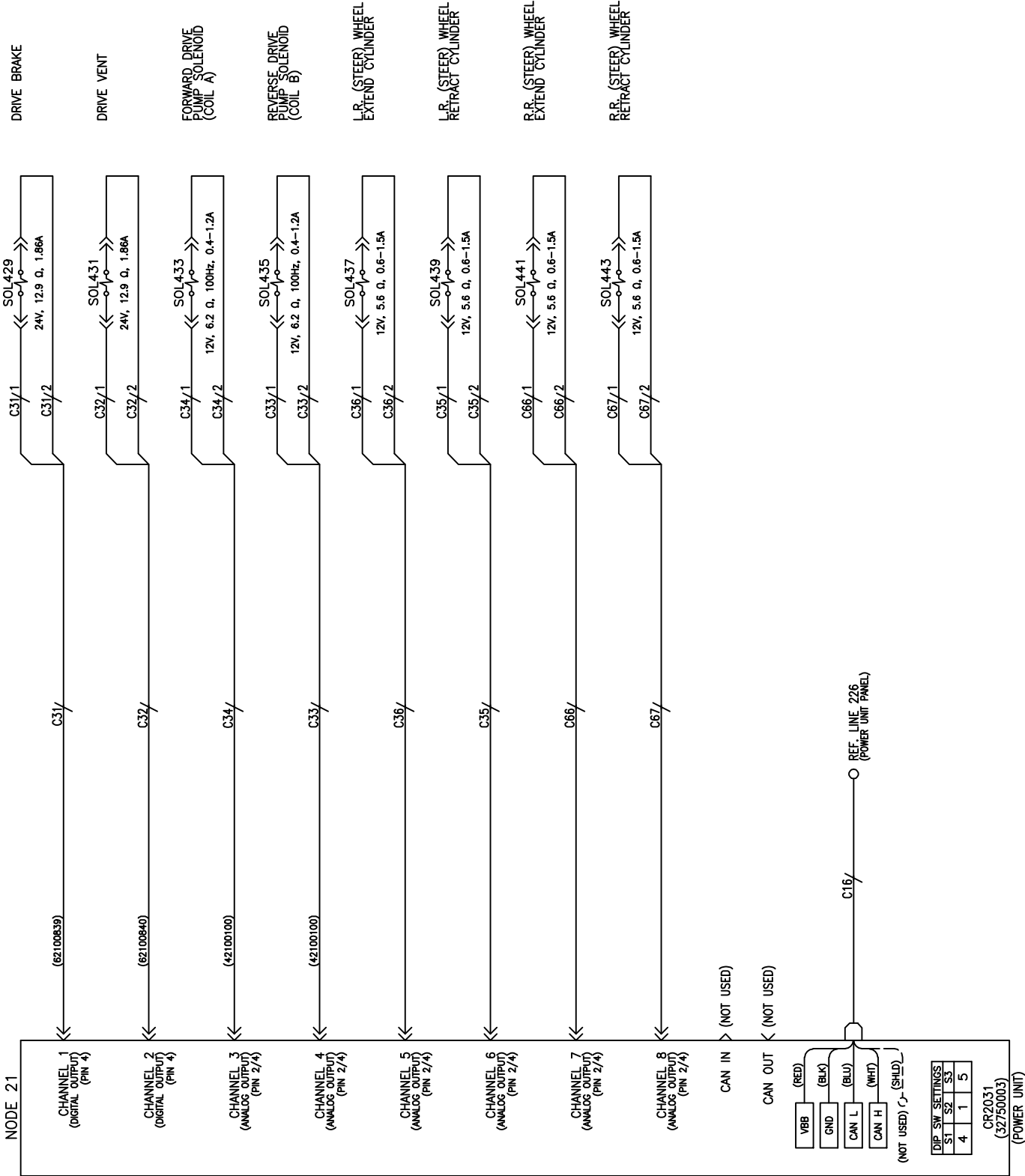
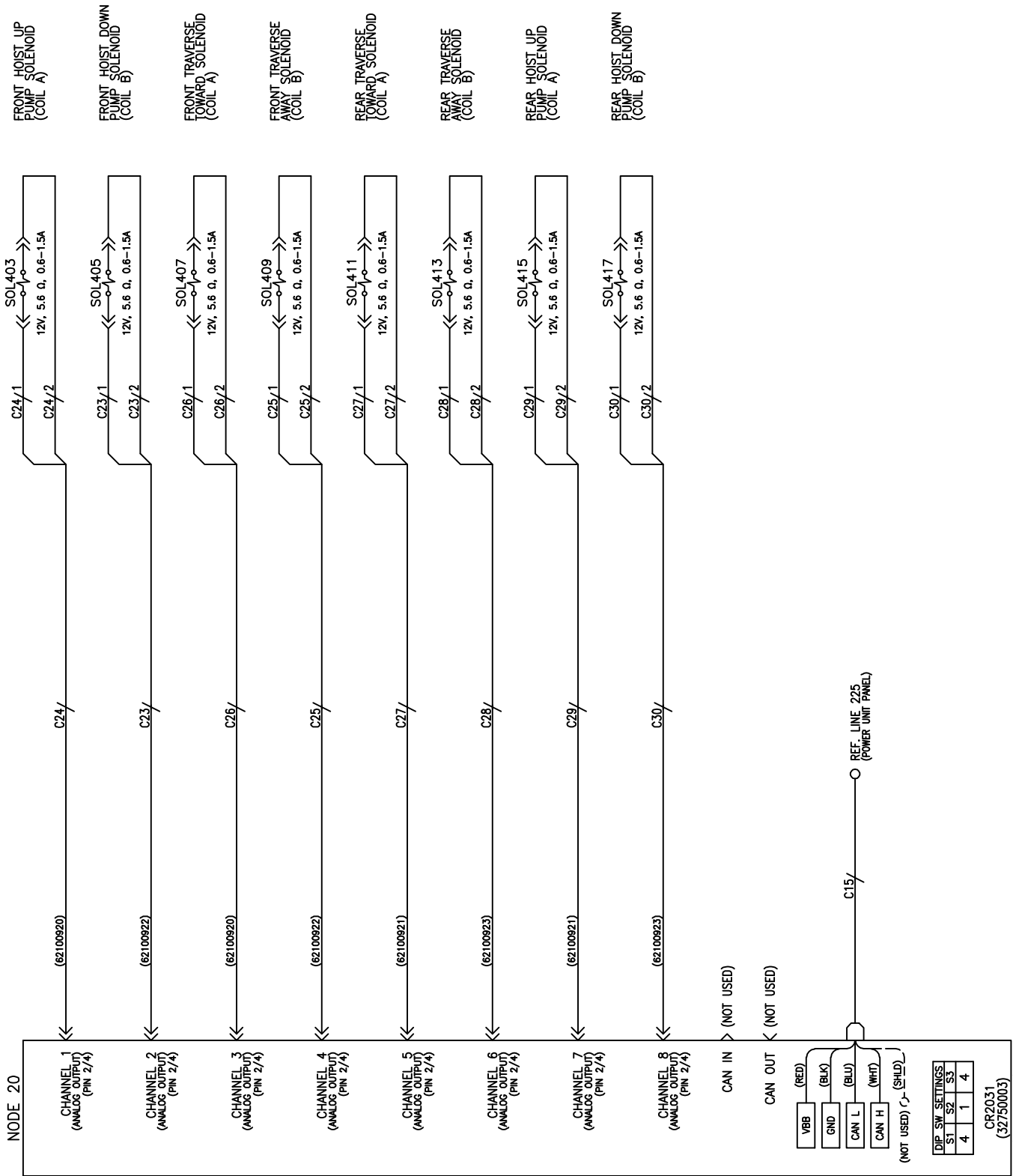
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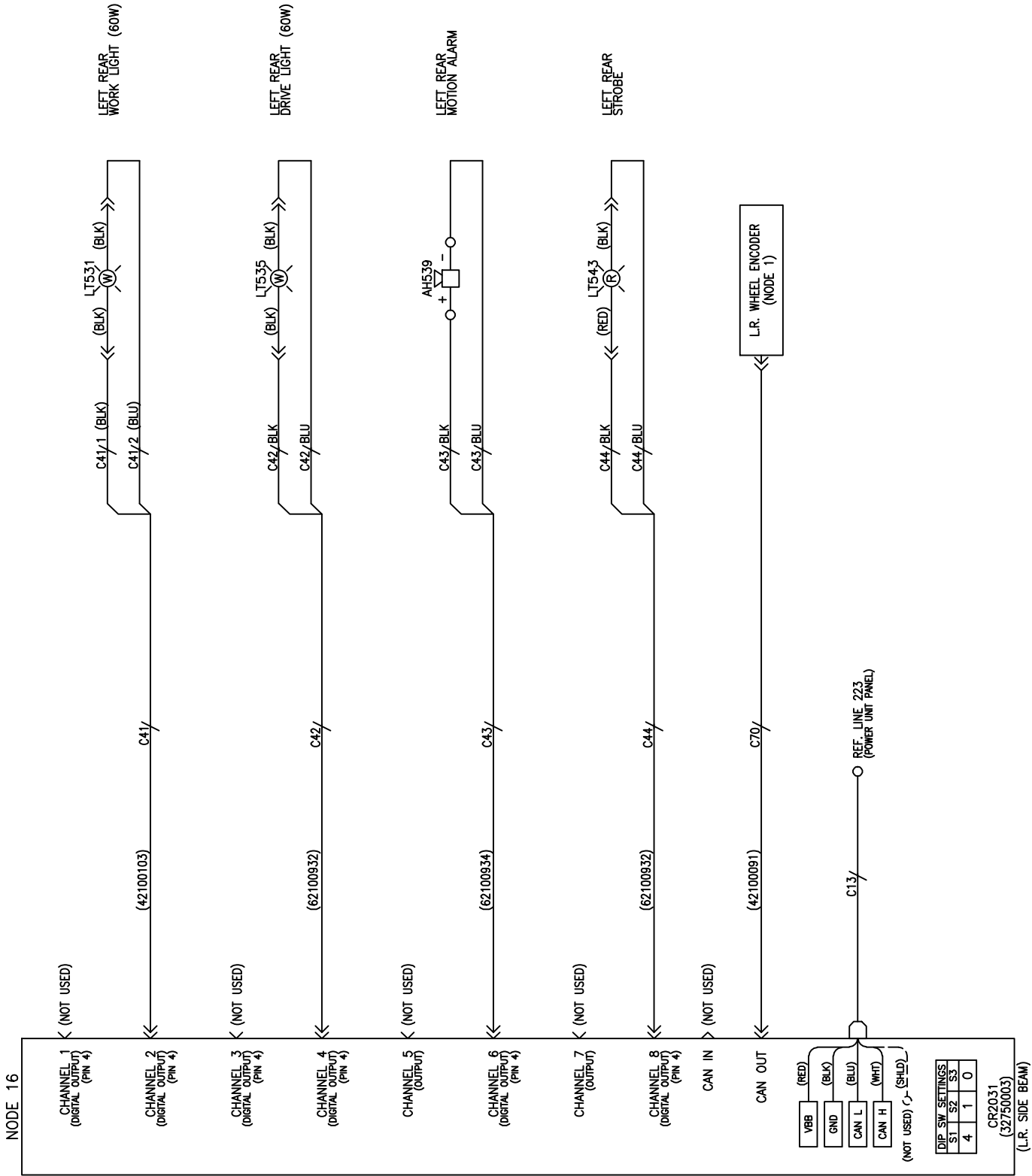
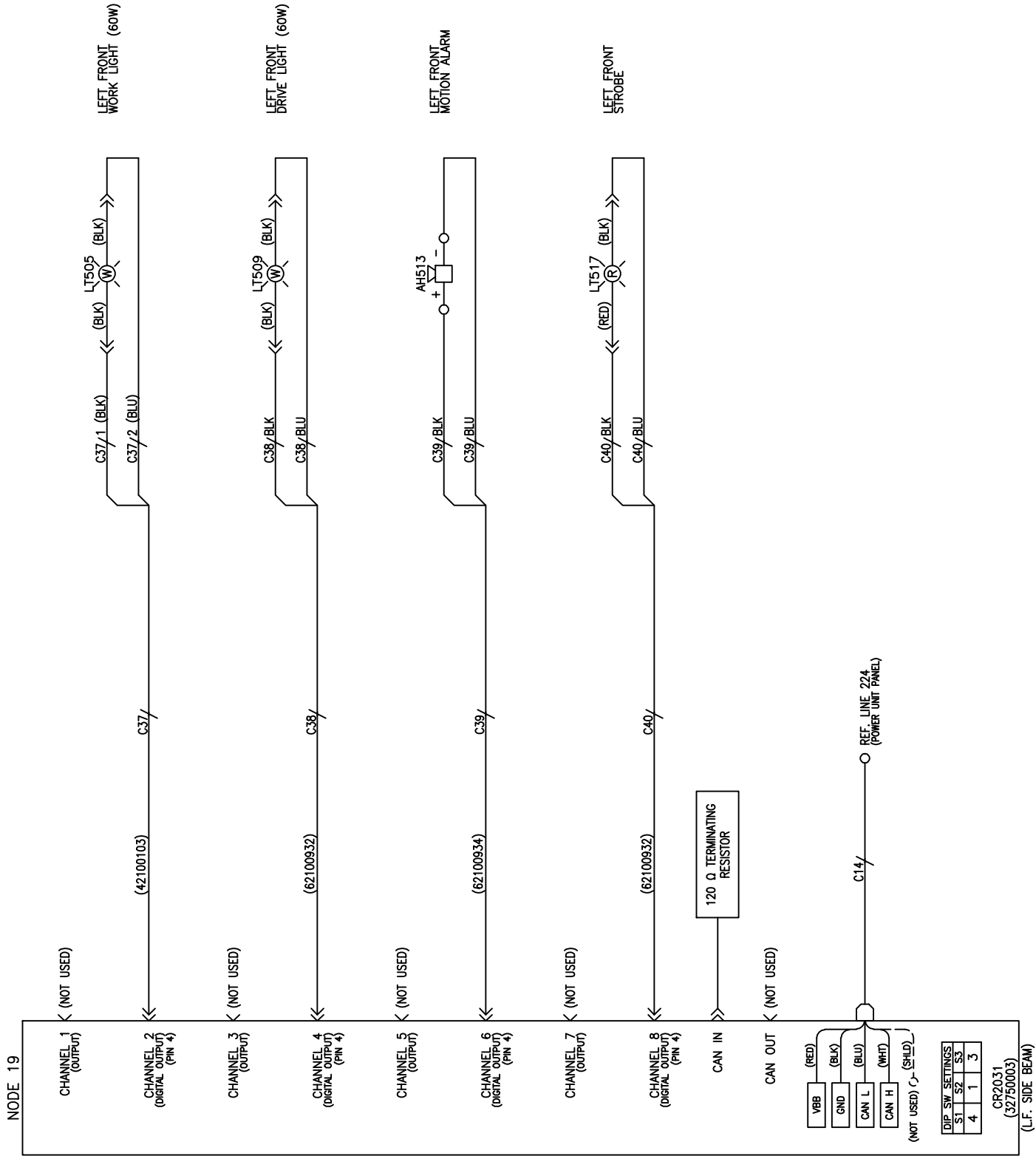
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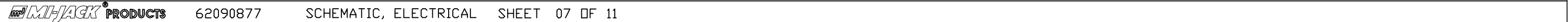
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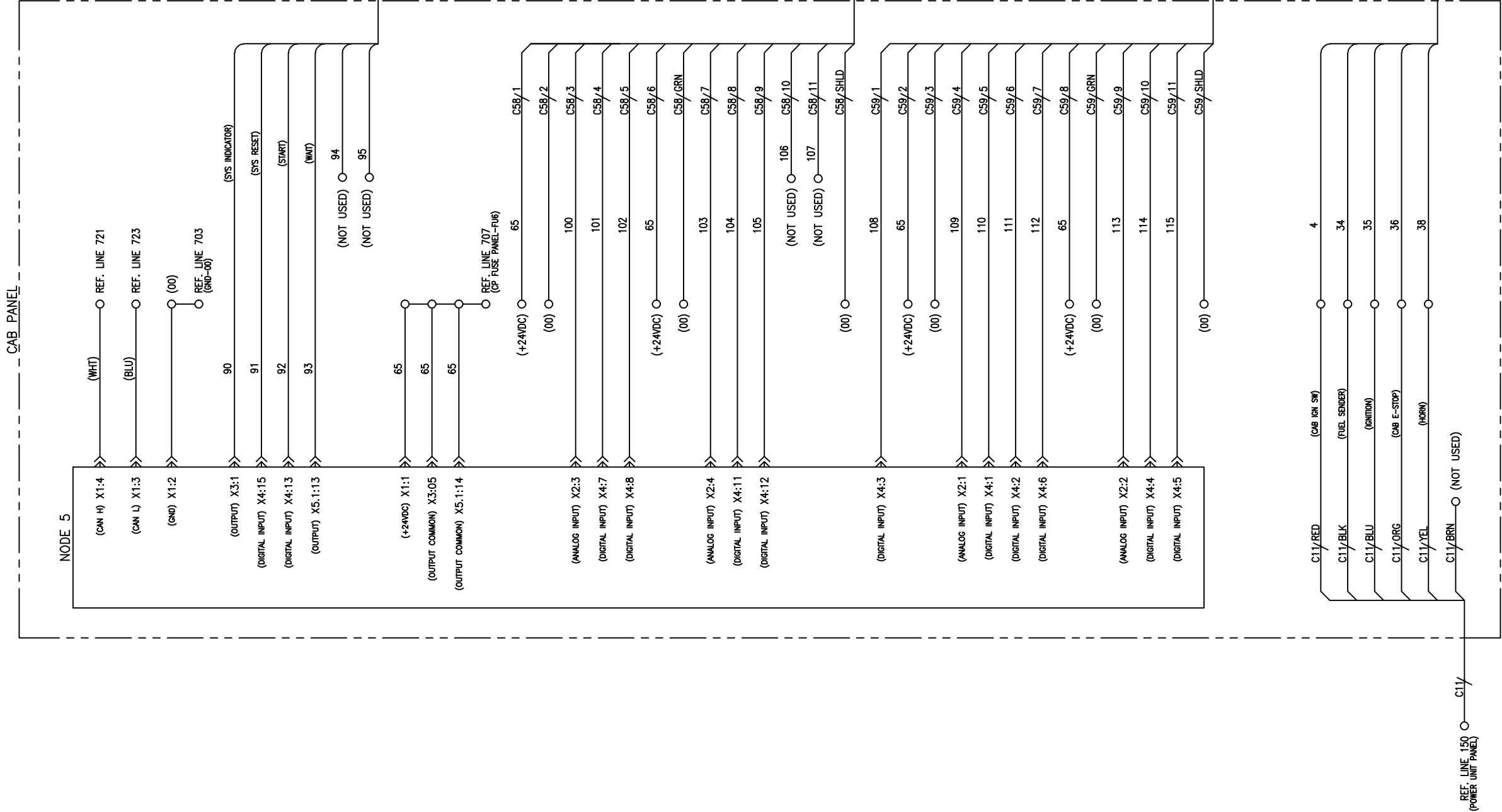
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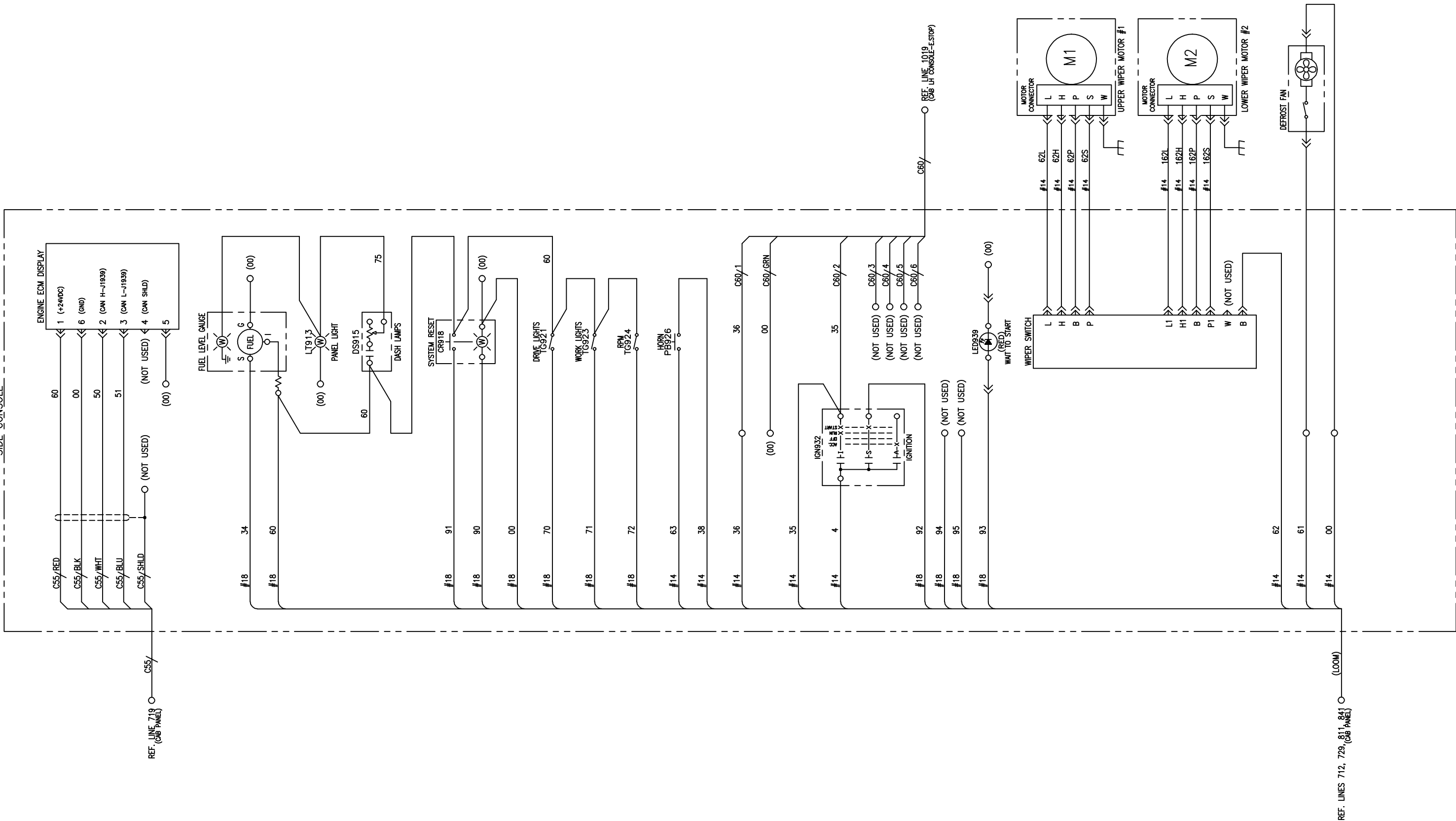
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SIDE CONSOLE



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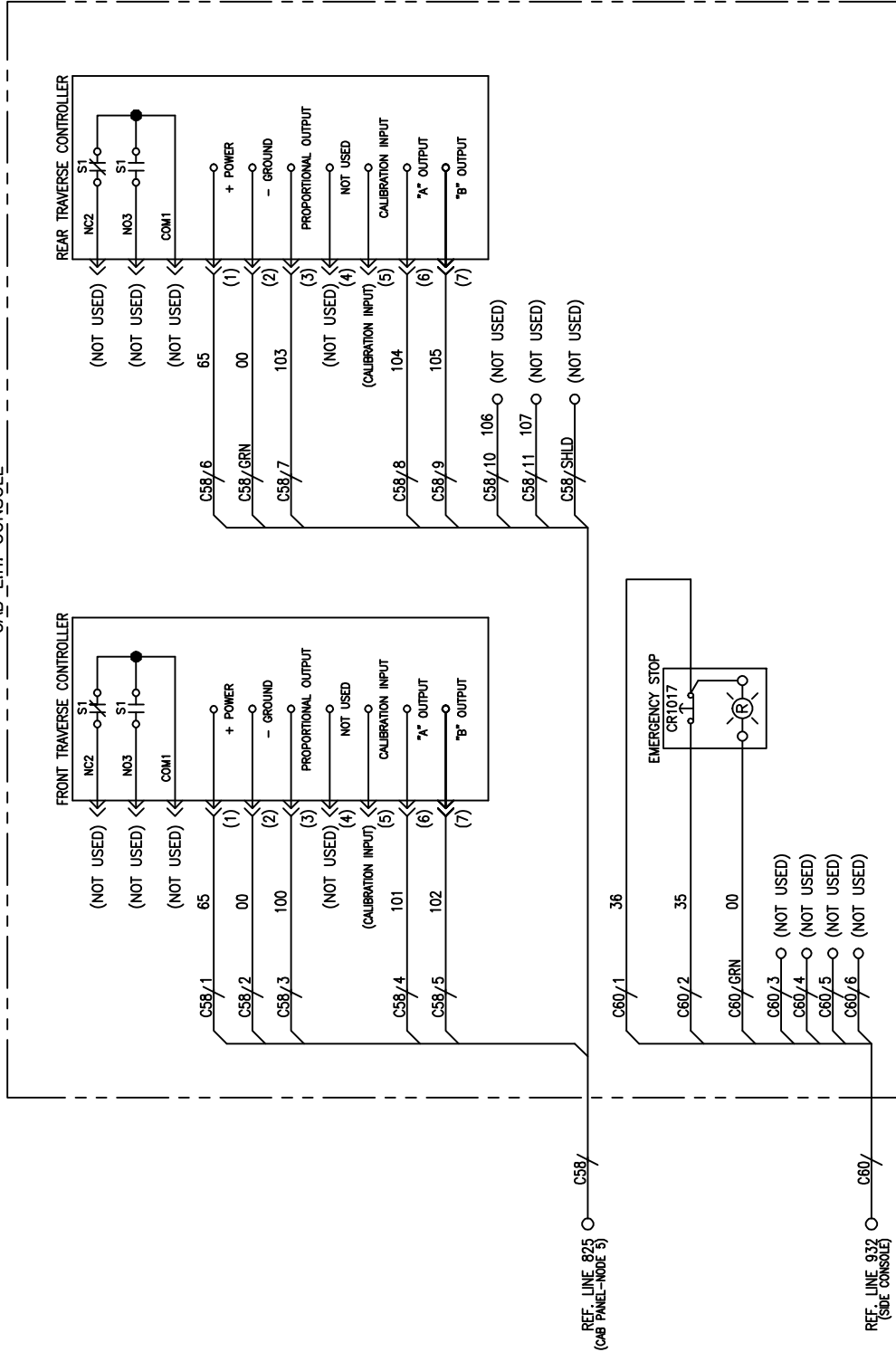
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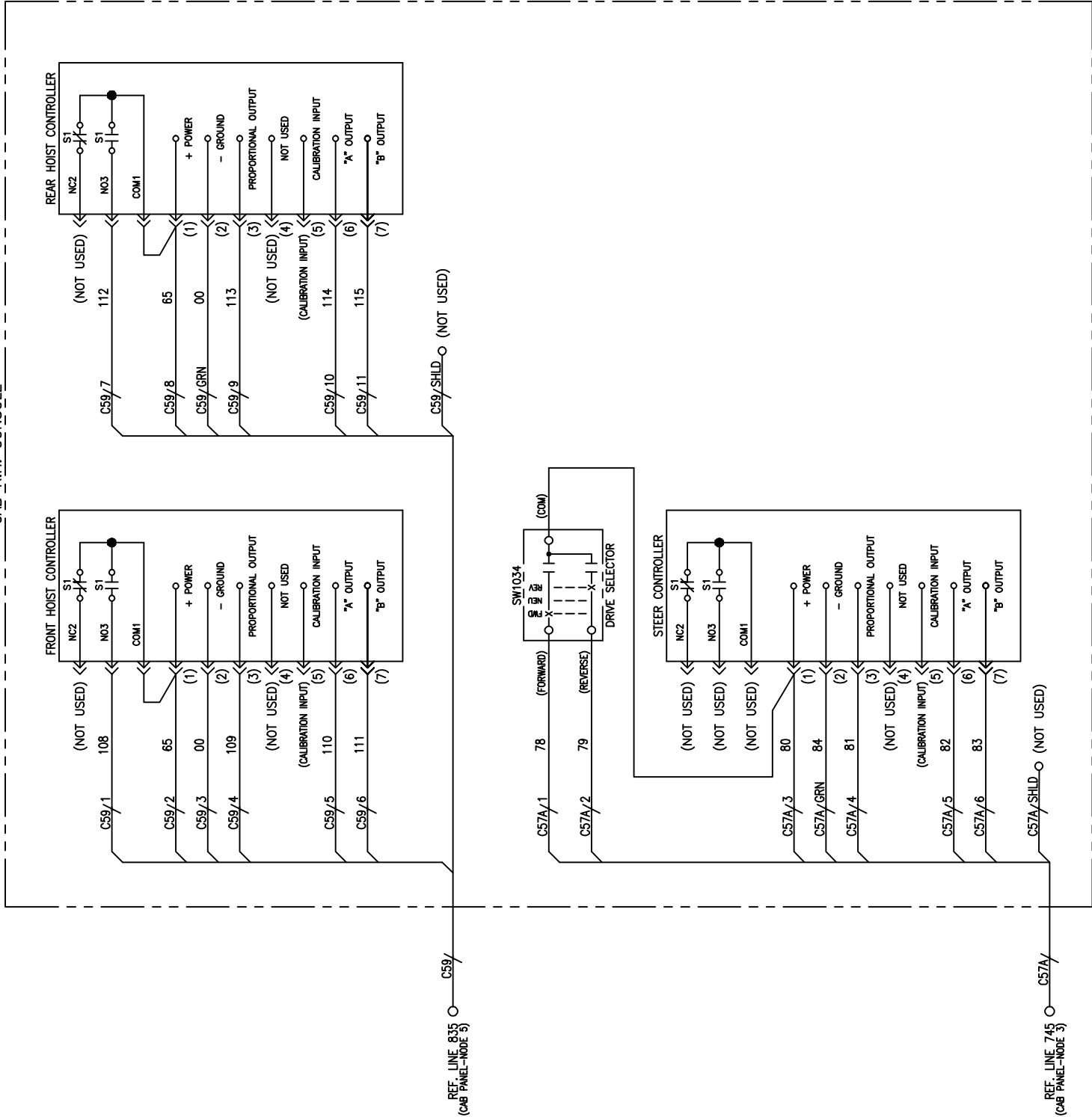
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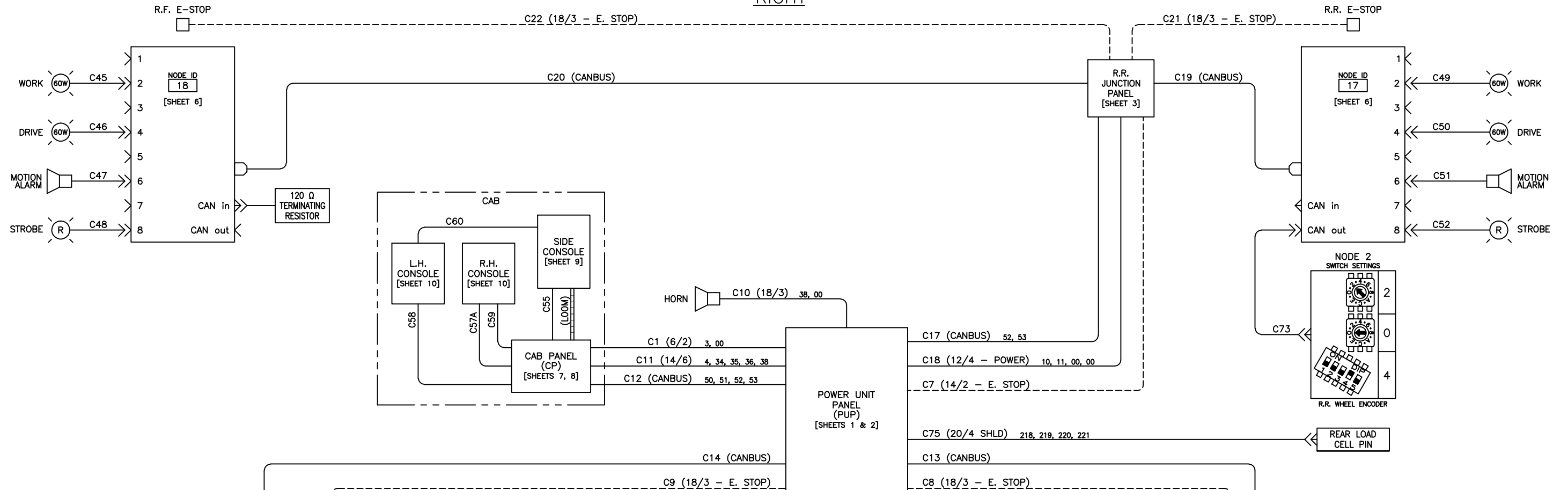
CAB L.H. CONSOLE



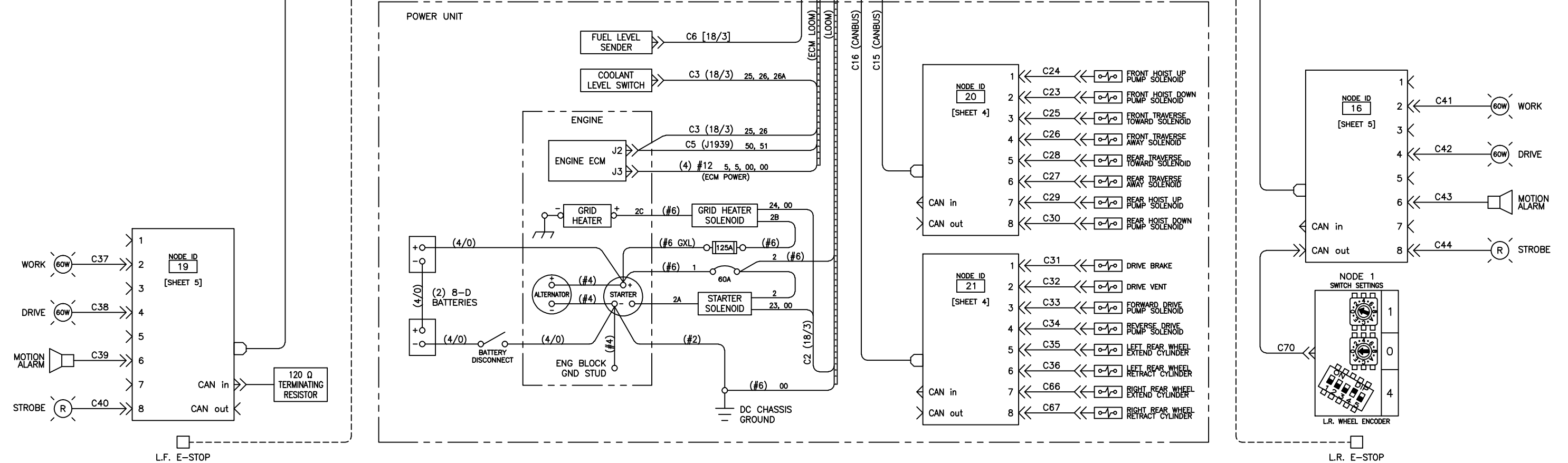
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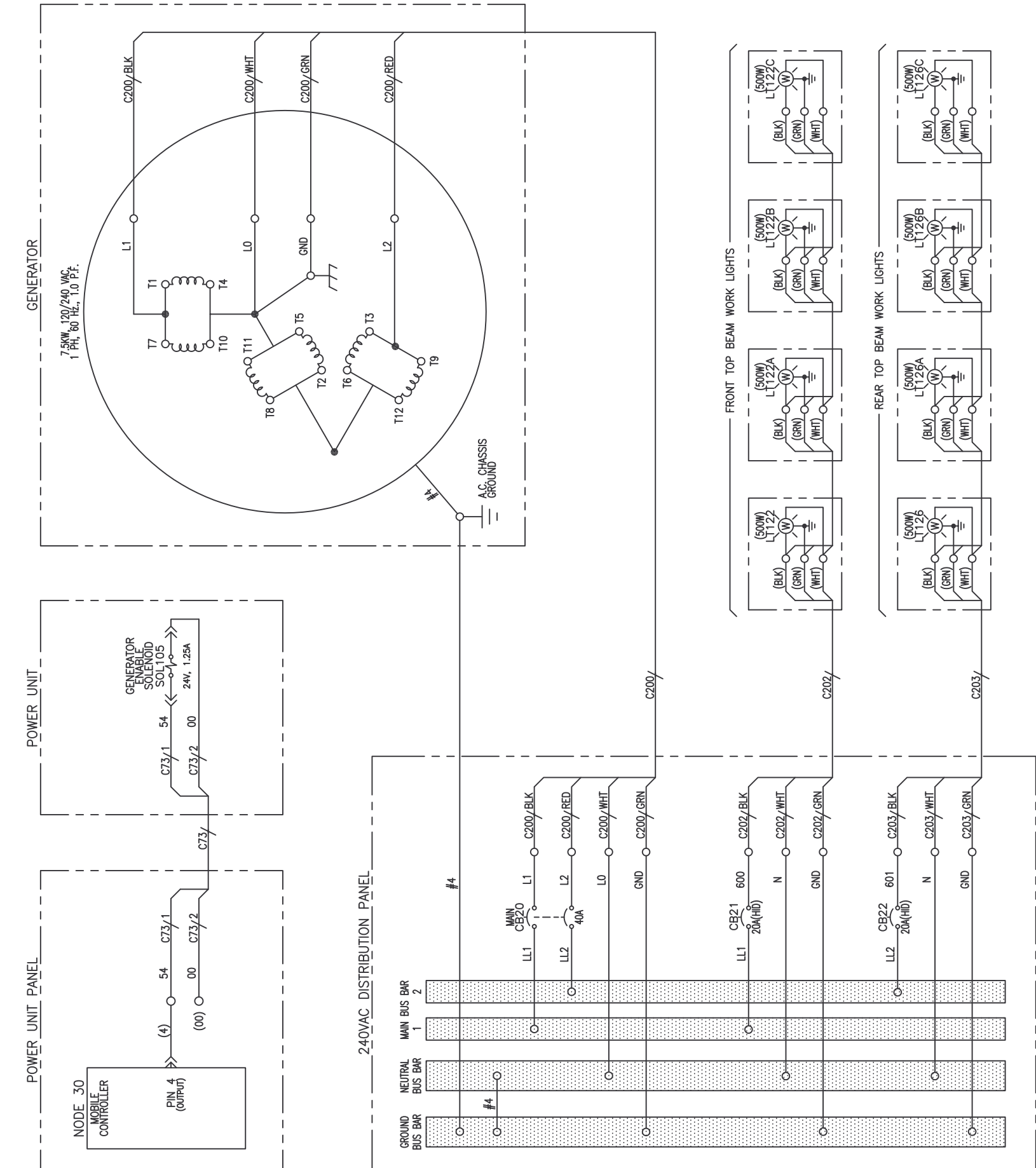
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FRONT



LEFT



FRONT

RIGHT

REAR

