



## Quick Reference Data

Section 01-05

Komatsu has made effort to make this manual as accurate as possible based on the information available at the time of publication and printing. Continuous improvement and advancement of product design may cause changes to machines which may not have been included in this publication. Komatsu reserves the right to make changes and improvements at any time. To ensure the most current information, please contact your service center.

## Table of Contents

Specification Sheet

Schematics

Bolt Torque Chart Located in Section Titled “General Information”

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### GEN 2 Hydraulic Specifications Sheet

All pressures with Engine at High Throttle		Procedure paragraph number	L-1350	L-1850	L-2350
Governor	System air pressure	A	130psi +5 /-0	130psi +5 /-0	140psi +5 /-0
KLENZ	KLENZ regulator air pressure	B	90 PSI	90 PSI	90 PSI
Hyd Res Air	Hydraulic Reservoir regulator	C	4 to 6 psi	4 to 6 psi	4 to 6 psi
Engine Fan Circuit with single fan pump	Fan Pump (Stand by) - Idle	D	450 ± 50 (Stand-by)	450 ± 50 (Stand-by)	450 ± 50 (Stand-by)
	Fan Pump (Compensator) - High	D	820 RPM @ 1900 Eng RPM	820 RPM @ 1900 Eng RPM (8 blade fan) 750 RPM @ 1900 Engine RPM (11 blade fan)	820 RPM @ 1900 Eng RPM (8 blade fan) 750 RPM @ 1900 Engine RPM (11 blade fan)
	Fan Remote Relief - High	D	800 RPM (Max) @ 1900 Eng RPM	800 RPM @ 1900 Eng RPM (8 blade fan) 700 RPM @ 1900 Engine RPM (11 blade fan)	800 RPM @ 1900 Eng RPM (8 blade fan) 700 RPM @ 1900 Engine RPM (11 blade fan)
Engine Fan Circuit with dual (2) fan pumps	Fan Pump (Stand by) - Idle	D1**	NA	450 ± 50 (Stand-by)	450 ± 50 (Stand-by)
	Fan Pump (Compensator) - High	D1**	NA	750 RPM @ 1900 Engine RPM (11 blade fan)	850 RPM @ 1900 Engine RPM (11 blade fan)
	Fan Remote Relief - High	D1**	NA	800 RPM @ 1900 Engine RPM (11 blade fan)	875 RPM @ 1900 Engine RPM (11 blade fan)
Blower Circuit	Blower Pump (Stand by)	E	450 ± 50 (Stand-by)	450 ± 50 (Stand-by)	450 ± 50 (Stand-by)
	Blower Pump (Compensator)	E	3400 RPM @ Eng 1900	3400 RPM @ Eng 1900	3400 RPM @ Eng 1900
	Blower Remote Relief	E	3100 RPM @ 1900 Eng RPM	3100 RPM @ 1900 Eng RPM	3100 RPM @ 1900 Eng RPM
Accessory Pump	Accessory Pump Compensator	F	2500psi ± 20	2500psi ± 20	2500psi ± 20
Pilot Circuit	Pilot Pressure Relief Valve	G	450 ± 10	450 ± 10	450 ± 10
Driver Filtration	Sequence Valve	H	2200psi ± 20	2200psi ± 20	2200psi ± 20
Hoist / Bucket Circuit	Main Valve Relief	I	4500 psi +50 -0	4500 psi +50 -0	4500 psi +50 -0
	Hoist Base Circuit Relief	I	4500 psi ± 50	4500 psi ± 50	4500 psi ± 50
	Hoist Rod Circuit Relief	I	2000 psi ± 50	2000 psi ± 50	2000 psi ± 50
	Bucket Base Circuit Relief	I	4500 psi ± 50	4500 psi ± 50	4500 psi ± 50
	Bucket Rod Circuit Relief	I	2000 psi ± 50	2000 psi ± 50	2000 psi ± 50
	Hoist & Bucket Pump Compensators	J	4000 psi +100 / -0	4000 psi +100 / -0	4000 psi +100 / -0
	Secondary Dump Relief	K	800 - 1200 psi ± 50	800 psi ± 50	800 psi ± 50
Steer Circuit	Steering Main Relief (Flow Amp)	L	Turn in Full	Turn in Full	Turn in Full
	Steering Remote Relief (L950 & L1150)	L	N/A	N/A	N/A
	Steering Pump (Stand By)	M	450 ± 50 (Stand-by)	450 ± 50 (Stand-by)	450 ± 50 (Stand-by)
	Steering Pump (Compensator)	M	3400 psi ± 50	3400 psi ± 50	3600 psi ± 50
	Steering Crossover Relief Valve	M1	N/A	N/A	4300 psi ± 50
	Shock and Suction (Flow Amp)	N	4000 psi ± 50	4000 psi ± 50	4000 psi ± 50
	Relief (PVG)	O	4000 psi ± 50	4000 psi ± 50	4000 psi ± 50
	Aux. Steering Relief (L950 & L1150)	P	N/A	N/A	N/A
	Aux. Steering Relief (L1350 thru L2350)	Q	2000 psi +50 -0	2000 psi +50 -0	2000 psi +50 -0
Aux Oil Cooler Circuit	Aux oil cooler relief (L950 & L1150)	R	N/A	N/A	N/A
	Aux Oil Cooler Pump (Stand by) (Idle)	S	300 psi	300 psi	300 psi
	Aux Oil Cooler Pump (Compensator)	S	1400 RPM 1050 Hz	1400 RPM 1050 Hz	1400 RPM 1050 Hz
	Aux Remote Relief (High)	S	1300 RPM 975 Hz	1300 RPM 975 Hz	1300 RPM 975 Hz
Gear Box Circuit	Gearbox	Reference	50 to 125 psi at High Throttle	50 to 125 psi at High Throttle	50 to 125 psi at High Throttle
AutoLube Circuit	Pressure Reducing Valve	Reference	3500 psi (Grease Pressure) Non-Adjustable	3500 psi (Grease Pressure) Non-Adjustable	3500 psi (Grease Pressure) Non-Adjustable
	Flow Control	Reference	1.5 to 2 strokes per second Non-Adjustable	1.5 to 2 strokes per second Non-Adjustable	1.5 to 2 strokes per second Non-Adjustable
Cycle Times	Hoist Up		15 Sec	16 Sec	17 Sec
	Hoist Down		9-11 Sec	9-11 Sec	12-14 Sec
	Float		5 Sec	6 Sec	6 Sec
	Bucket Rollback		3-5 Sec	3-5 Sec	3-5 Sec
	Bucket Dump		3 Sec	4 Sec	3 Sec
	Steer Lock to Lock		6 Sec	6 Sec	6 Sec

Revision Notes: Replace Steering Remote Relief (L1350 thru L2350) with Steering Crossover Relief M1. Added procedure D1. NOTES: \*\*Composite Fan, See WARNING about altitude and temperature.

REV12 (02/22/2019)

TA16130A1

## NOTICE

Always follow all local organization/department rules or regulations when making any pressure or flow adjustment on the machine.

### WARNING

Struck-by hazards exist when around hydraulic fluid, fuel, or grease that is under pressure. Hoses under pressure can blow out or come loose from connections, causing a struck-by hazard with deadly force. DO NOT tighten or loosen hydraulic, fuel, or grease lines without first relieving the pressure. DO NOT make adjustments to any fluid pressures or flow while the machine is running. Shut down the machine, make the adjustment, then restart the machine to check the adjustment. Wear safety goggles for eye protection and wear all other locally required personal protective equipment (PPE) when working around possibly pressurized liquids. Failure to use proper PPE or to shut down the machine before making adjustments can cause a struck-by hazard resulting in serious injury or death.

### WARNING

Skin injection hazard exists when around hydraulic fluid, or grease that is under pressure. Fluid leaks under pressure may not be visible. When searching for leaks, NEVER use your hand; use a piece of metal. Wear work gloves and keep your hand well away from the possible source of leakage. Failure to use proper PPE or to shut down the machine before making adjustments can cause a skin injection hazard or a struck-by hazard resulting in serious injury or death.

### WARNING

Burn hazards exist when around hot hydraulic fluid that is under pressure. Hoses under pressure can blow out or come loose from connections, causing a burn hazard from leaks or spraying. DO NOT tighten or loosen hydraulic, fuel without first relieving the pressure. DO NOT make adjustments to any fluid pressures or flow while the machine is running. Shut down the machine, make the adjustment, then restart the machine to check the adjustment. Wear safety goggles for eye protection and wear all other locally required personal protective equipment (PPE) when working around possibly hot pressurized liquids. Failure to use proper PPE or to shut down the machine before making adjustments can cause a burn hazard resulting in serious injury or death.

### WARNING

Struck-by hazards exist when setting fans and blowers. Altitude and air temperature can greatly affect radiator, blower, and auxiliary oil cooler fan speeds. Do not overspeed the fan or blower. Before making fan or blower speed adjustments always decrease the maximum pump pressure. This will help prevent fan or blower overspeed which can cause fan or blower destruction. Failure to reduce maximum pump pressure before making fan or blower speed adjustments can cause struck-by hazards resulting in serious injury or death.

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# **Schematics, Diagrams & Specifications**

## **L-1850 #2210**

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- Auto Lube
- Auxiliary Steering Diagram
- Auxiliary Hydraulic Oil Cooler Diagram



# **Electrical Schematics**

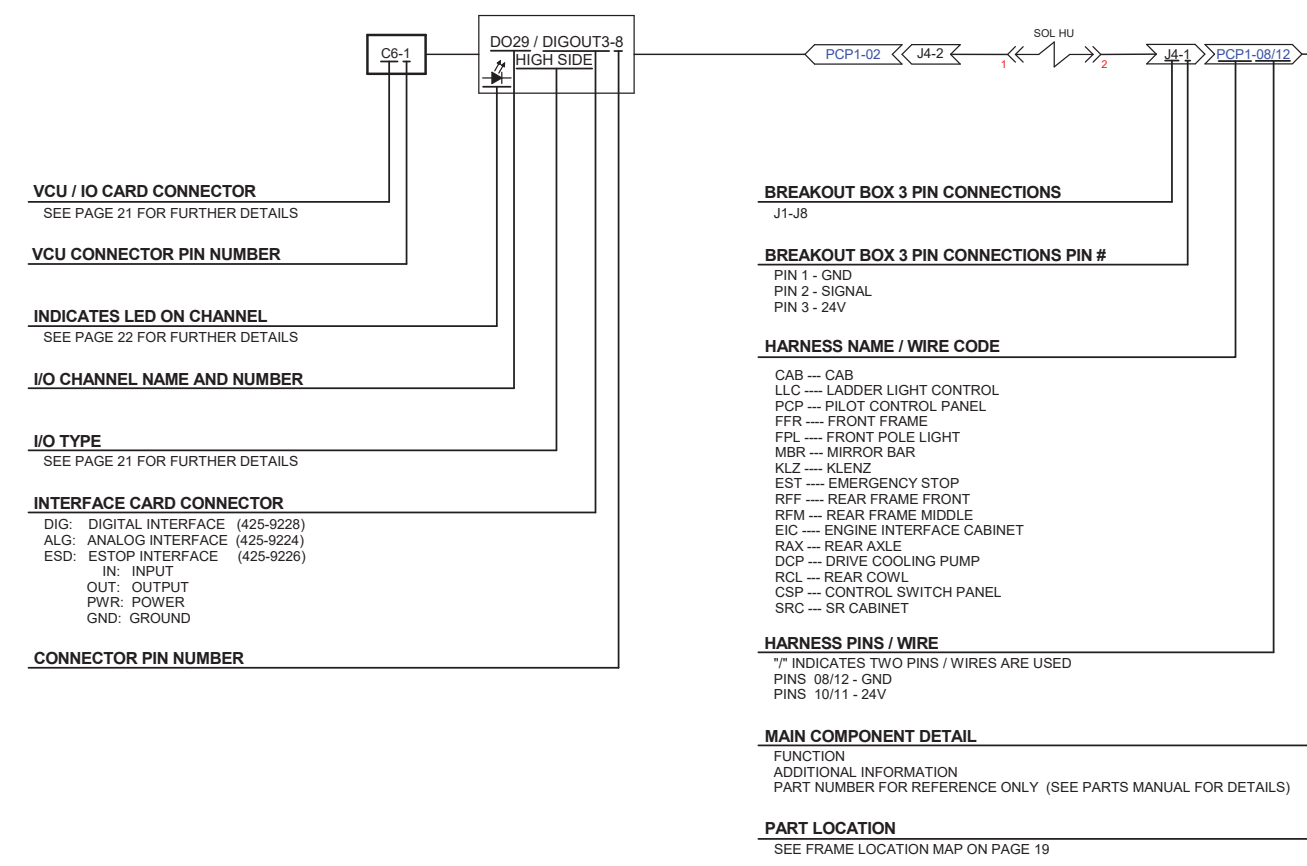


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REV		DESCRIPTION	EN	DATE	CHK	APP
00	RELEASE		NL11-1011	6-02	FL	BAS BS
C2/B1	01	PCP1-02 WAS WHT/BLK; C6-1 WAS C6-8 AT DIG CARD	NL12-1909	8-27	FL	BS BS

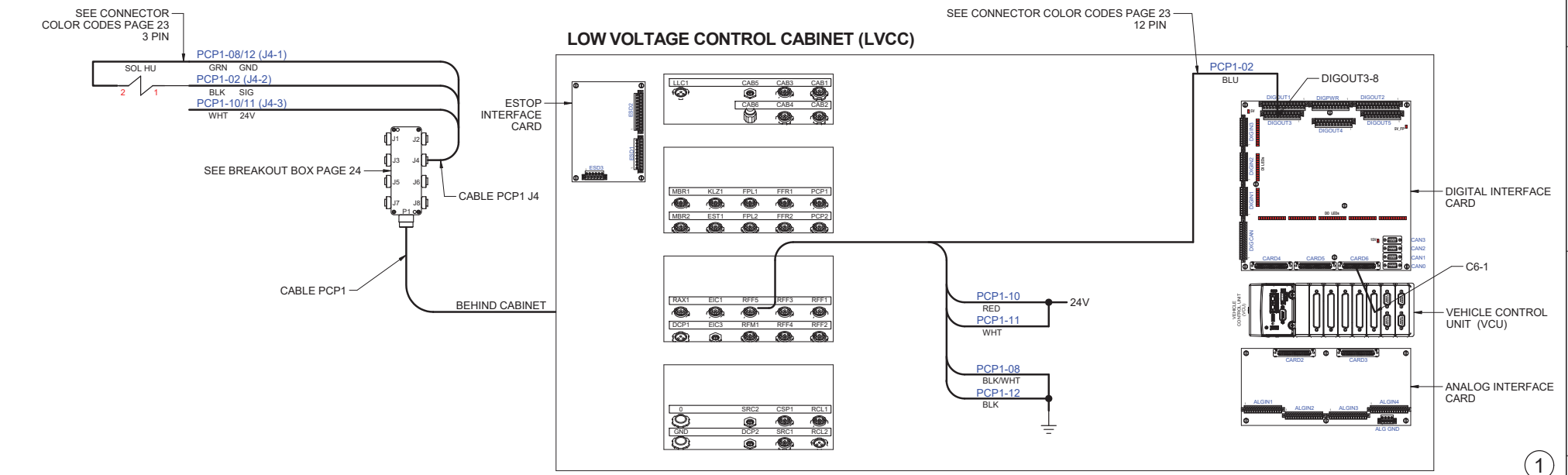
## LEGEND



## NOTES:

- COLOR CODE**  
BLUE: WIRE CODE  
RED: CONNECTION PIN  
MAGENTA: MODEL SPECIFIC
- CROSS REFERENCE**  
(01239)  
SHEET NO. | LINE NO.  
| COLUMN
- GROUND SYMBOLS**  
⏏ GROUND IN LVCC  
⏏ FRAME GROUND
- SEE NOTE(S) AT BOTTOM OF PAGE**
- POWER FLOWS LEFT TO RIGHT**  
- OUTPUTS ON LEFT  
- INPUTS ON RIGHT
- MACHINE STATE:**  
- BATTERIES ISOLATED  
- STARTER ISOLATED  
- E-STOP NOT PRESSED  
- PARK BRAKES ENGAGED  
- ALL LIGHTS OFF  
- LADDER DOWN  
- KEYSWITCHES OFF  
- KLENZ ENABLE  
- FLUIDS FULL  
- FUSES NOT BLOWN  
- HV CABINET DOOR CLOSED

## EXAMPLE CIRCUIT



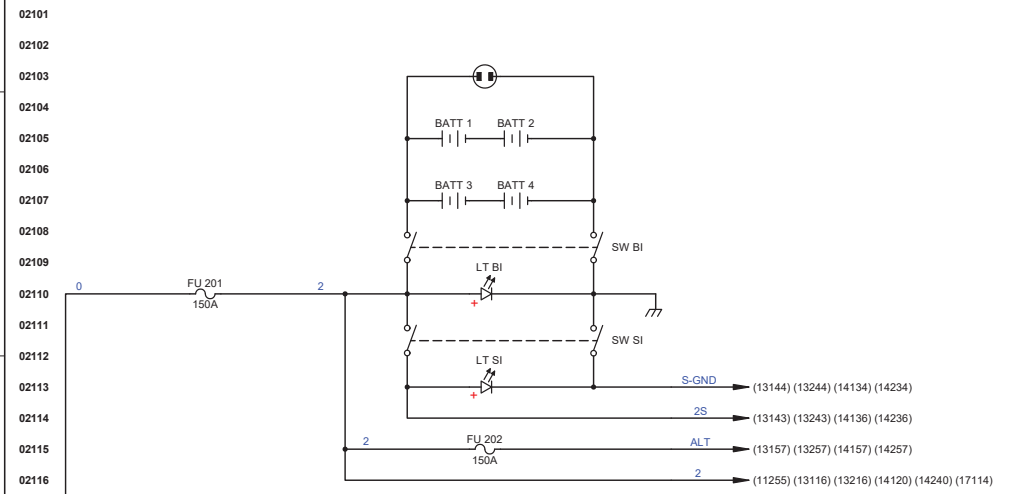
**OLD TEMPLATE (WITH OLD E-STOP)**

THIS DRAWING AND ALL DATA THEREIN IS THE PROPERTY OF LETOURNEAU TECHNOLOGIES. IT IS CONFIDENTIAL AND MUST NOT BE COPIED, IT IS LOANED SUBJECT TO RETURN UPON DEMAND AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO OUR INTEREST.		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES & APPLY BEFORE PLATING OR FINISH COATINGS. TOLERANCES ON: ANGLES FRACTIONS .11" .016 XX DECIMAL .015		FIRST USED ON CONTRACT NO.	
MACHINED CORNERS: .054 X .45		WELD PROPERTIES SHALL MEET THE MINIMUM REQUIREMENTS OF THE BASE MATERIAL.		THIRD ANGLE PROJECTION	
DRWN	flövett	DATE	5-27-2011	LeTourneau Technologies™	
CHK	BAS	DATE	6-02-2011	ELECTRIC SCHEMATIC Lincs II	
ENGR		DATE	5-02-2010	DO NOT SCALE 4266282 01	
PROJ ENGR	BS	DATE	5-02-2010	SCALE NONE 1 OF 24	
PROJ APPROVAL		DATE			
MATL		DATE			

# 24V ELECTRICS

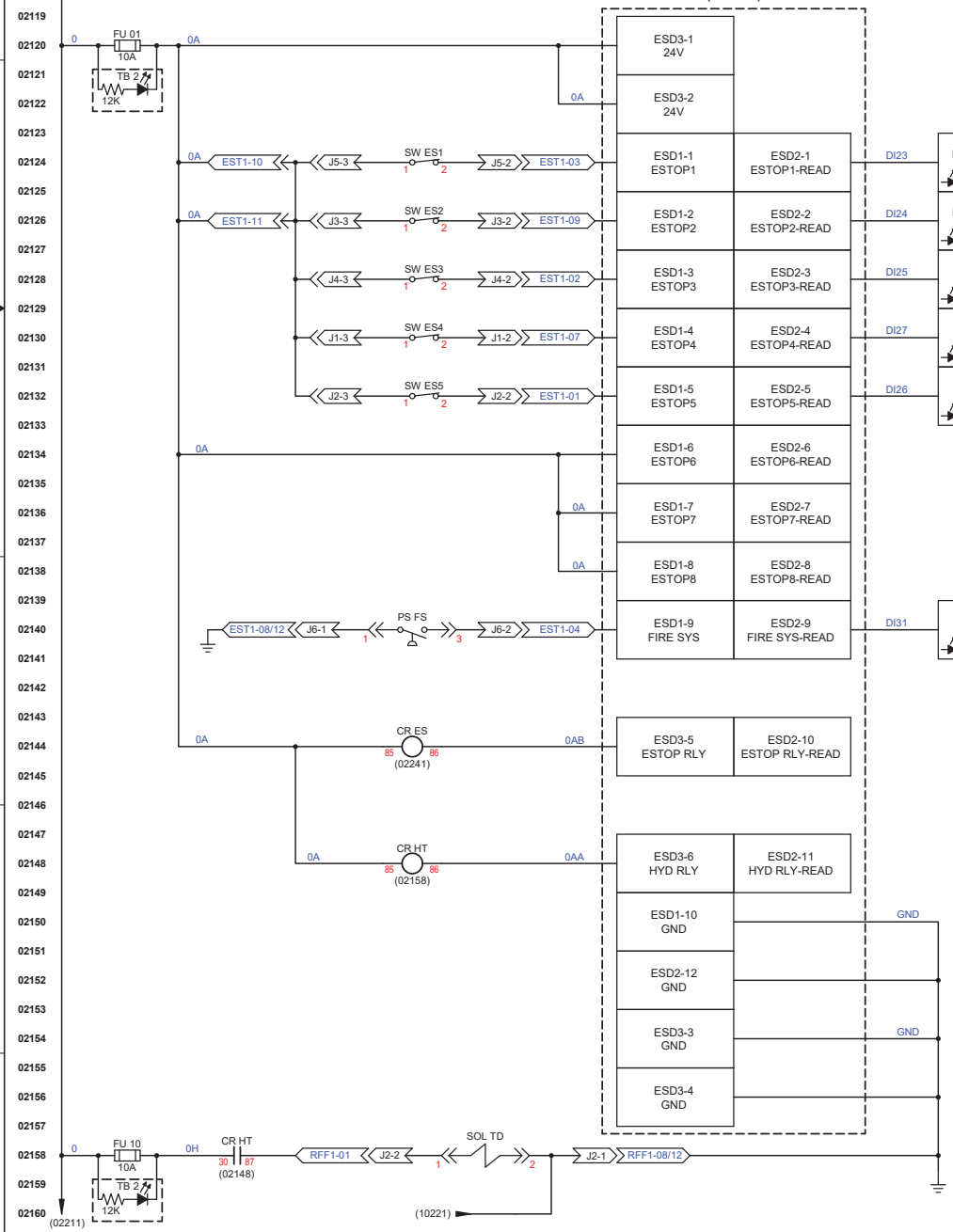
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	01	KEY SWITCH P/N WAS 423-2229	NL12-1909	8-27	FL	BS BS

## BATTERY



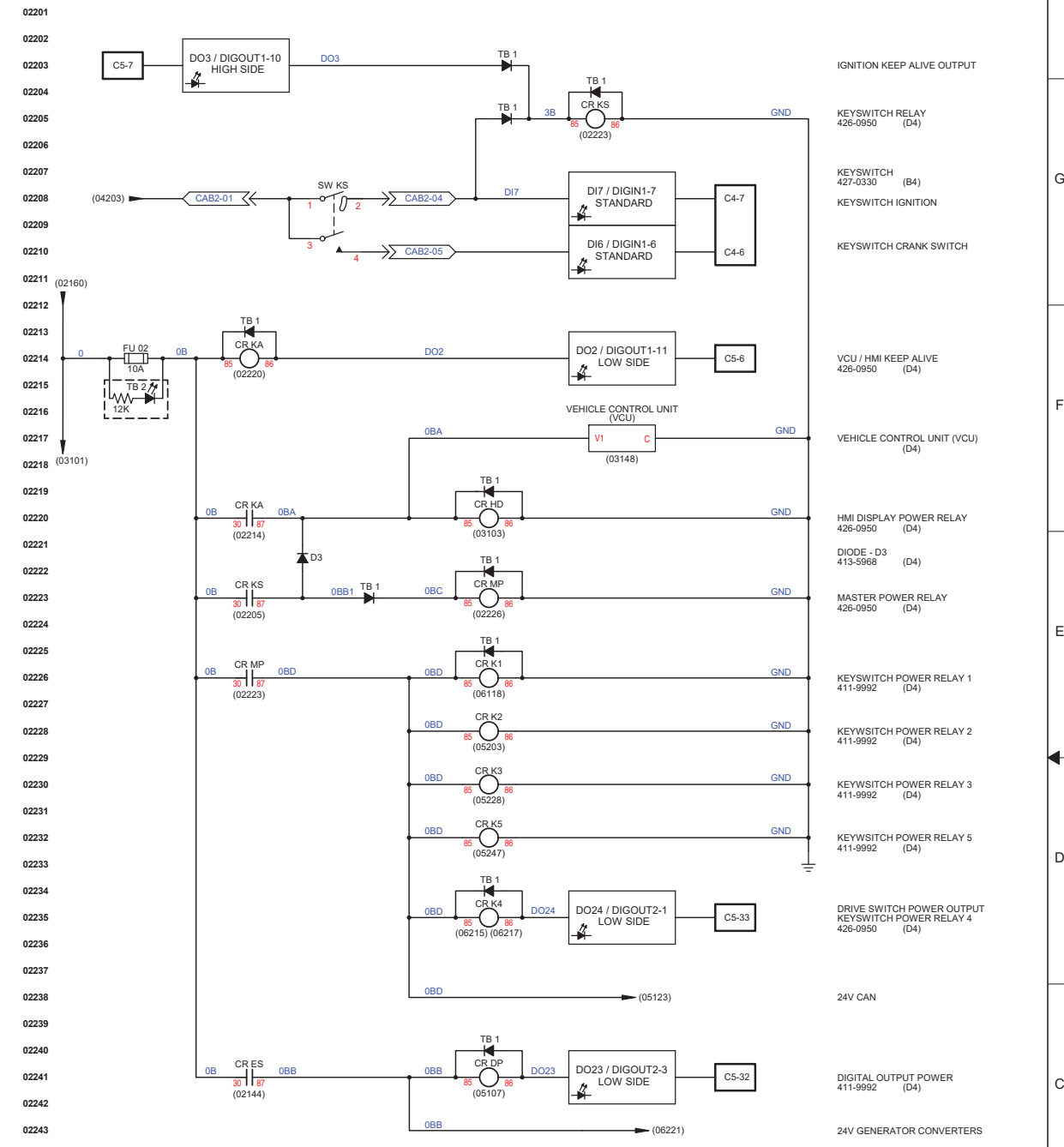
- BATTERY CHARGING SOCKET 416-3355 (D1)
- BATTERY 1 & 2
- BATTERY 3 & 4
- BATTERY ISOLATION SWITCH 426-7269 (D1)
- FU 201 425-9237 (E2)  
LT BI 424-0049 (D1)
- STARTER ISOLATION SWITCH 426-7268 (D1)
- LT SI 424-0048 (D1)
- FU 202 425-9237 (E2)

## EMERGENCY STOP



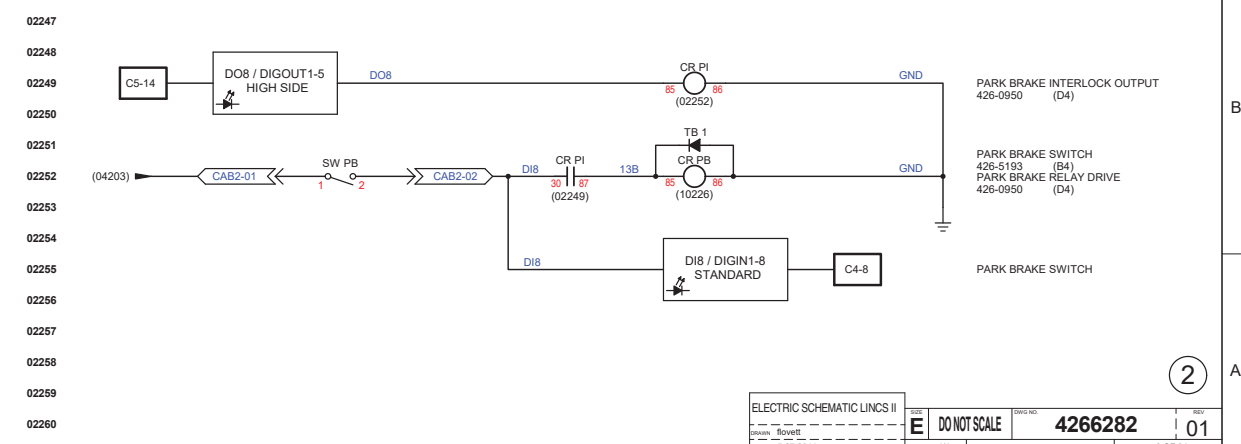
- CAB E-STOP SWITCH 426-5219 (B5)
- HV CABINET E-STOP SWITCH 425-7631 (C4)
- HYD RESERVOIR E-STOP SWITCH 425-7631 (F4)
- RIGHT REAR E-STOP SWITCH 425-7631 (E1)
- LEFT REAR E-STOP SWITCH 425-7631 (D1)
- FIRE SYSTEM STATUS 415-5057 (D4)
- E-STOP RELAY 426-0950 (D4)
- HYD TANK VENT VALVE RELAY 426-0950 (D4)
- HYD TANK DUMP 426-1177 (E4)

## KEYSWITCH



- IGNITION KEEP ALIVE OUTPUT
- KEYSWITCH RELAY 426-0950 (D4)
- KEYSWITCH 427-0330 (B4)
- KEYSWITCH IGNITION
- KEYSWITCH CRANK SWITCH
- VCU / HMI KEEP ALIVE 426-0950 (D4)
- VEHICLE CONTROL UNIT (VCU) (D4)
- VEHICLE CONTROL UNIT (VCU) (D4)
- HMI DISPLAY POWER RELAY 426-0950 (D4)
- DIODE - D3 413-5968 (D4)
- MASTER POWER RELAY 426-0950 (D4)
- KEYSWITCH POWER RELAY 1 411-9992 (D4)
- KEYSWITCH POWER RELAY 2 411-9992 (D4)
- KEYSWITCH POWER RELAY 3 411-9992 (D4)
- KEYSWITCH POWER RELAY 5 411-9992 (D4)
- DRIVE SWITCH POWER OUTPUT KEYSWITCH POWER RELAY 4 426-0950 (D4)
- 24V CAN
- DIGITAL OUTPUT POWER 411-9992 (D4)
- 24V GENERATOR CONVERTERS

## PARK BRAKE

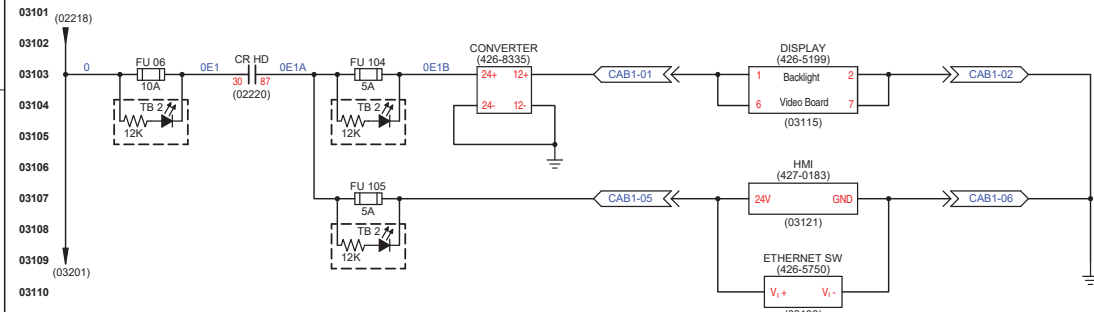


- PARK BRAKE INTERLOCK OUTPUT 426-0950 (D4)
- PARK BRAKE SWITCH 426-5193 (B4)
- PARK BRAKE RELAY DRIVE 426-0950 (D4)
- PARK BRAKE SWITCH

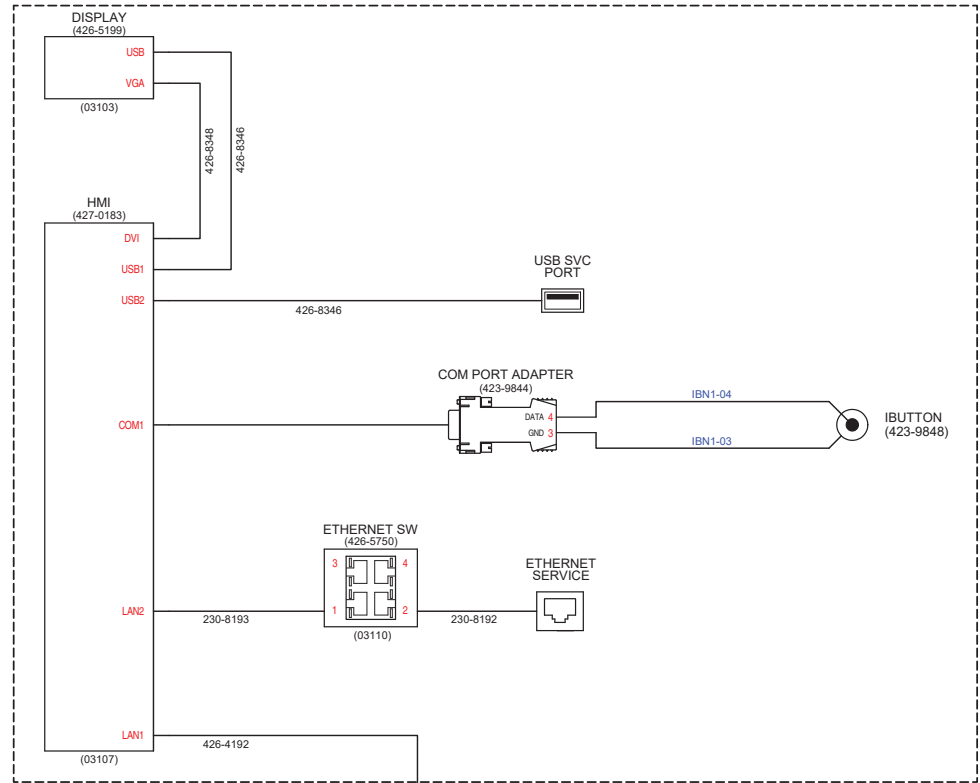
# 24V ELECTRICS

REVISIONS		EN	DATE	CHK	CHK	APP
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B1	01	ADD RESISTOR PART NO.	NL12-1909	8-27	FL	BS

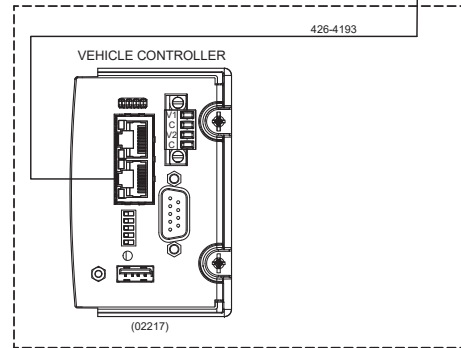
## HUMAN MACHINE INTERFACE (HMI)



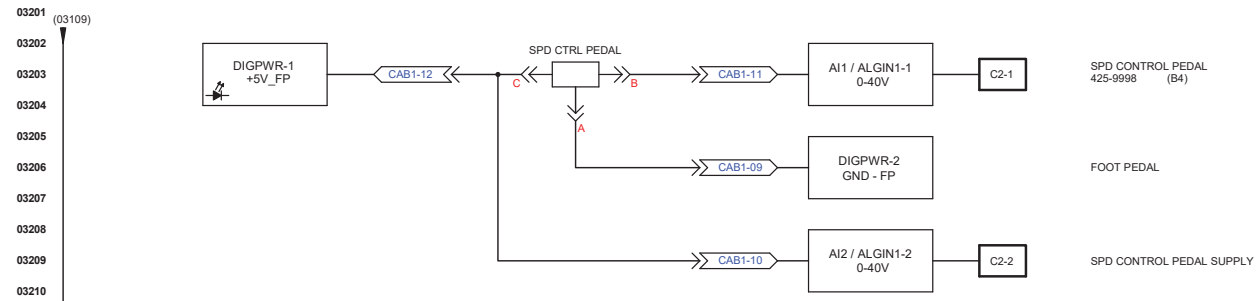
## CAB



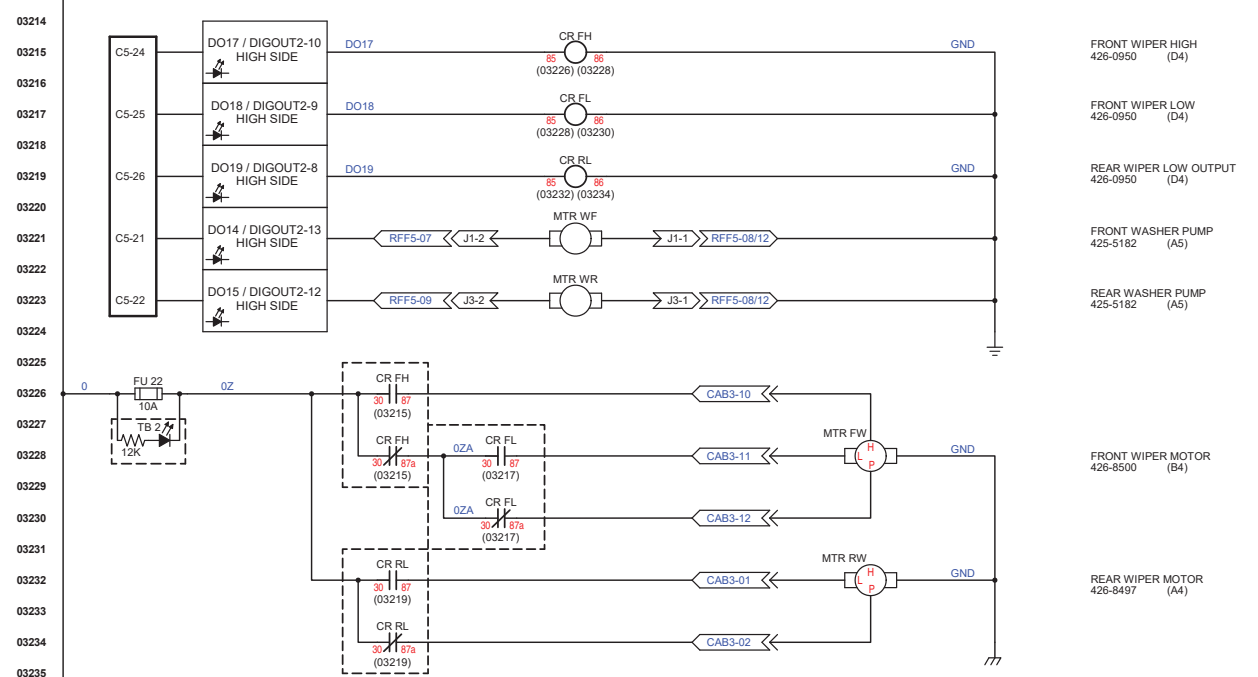
## LOW VOLTAGE CONTROL CABINET (LVCC)



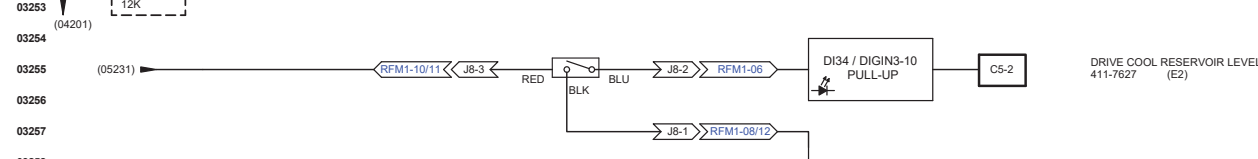
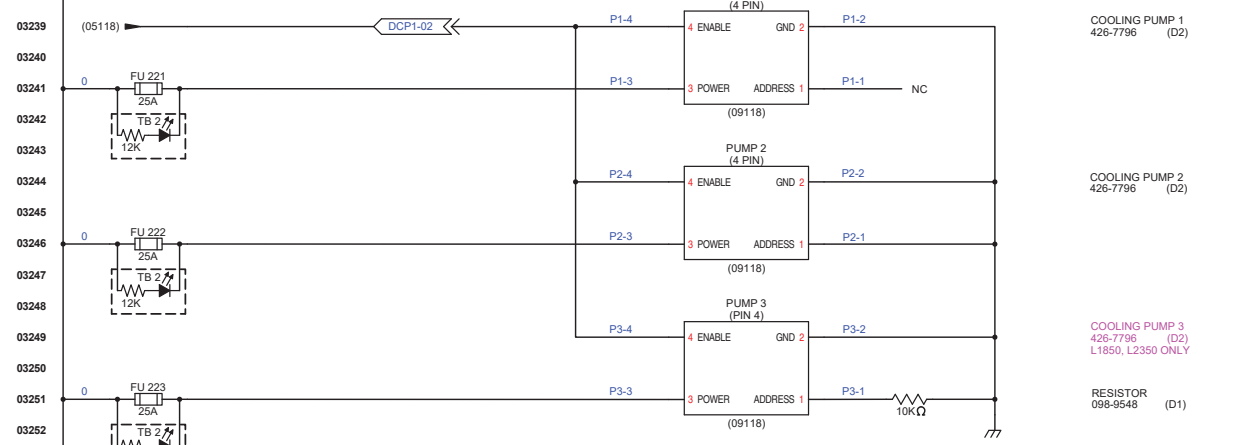
## SPEED CONTROL PEDAL



## WIPERS



## COOLING PUMPS

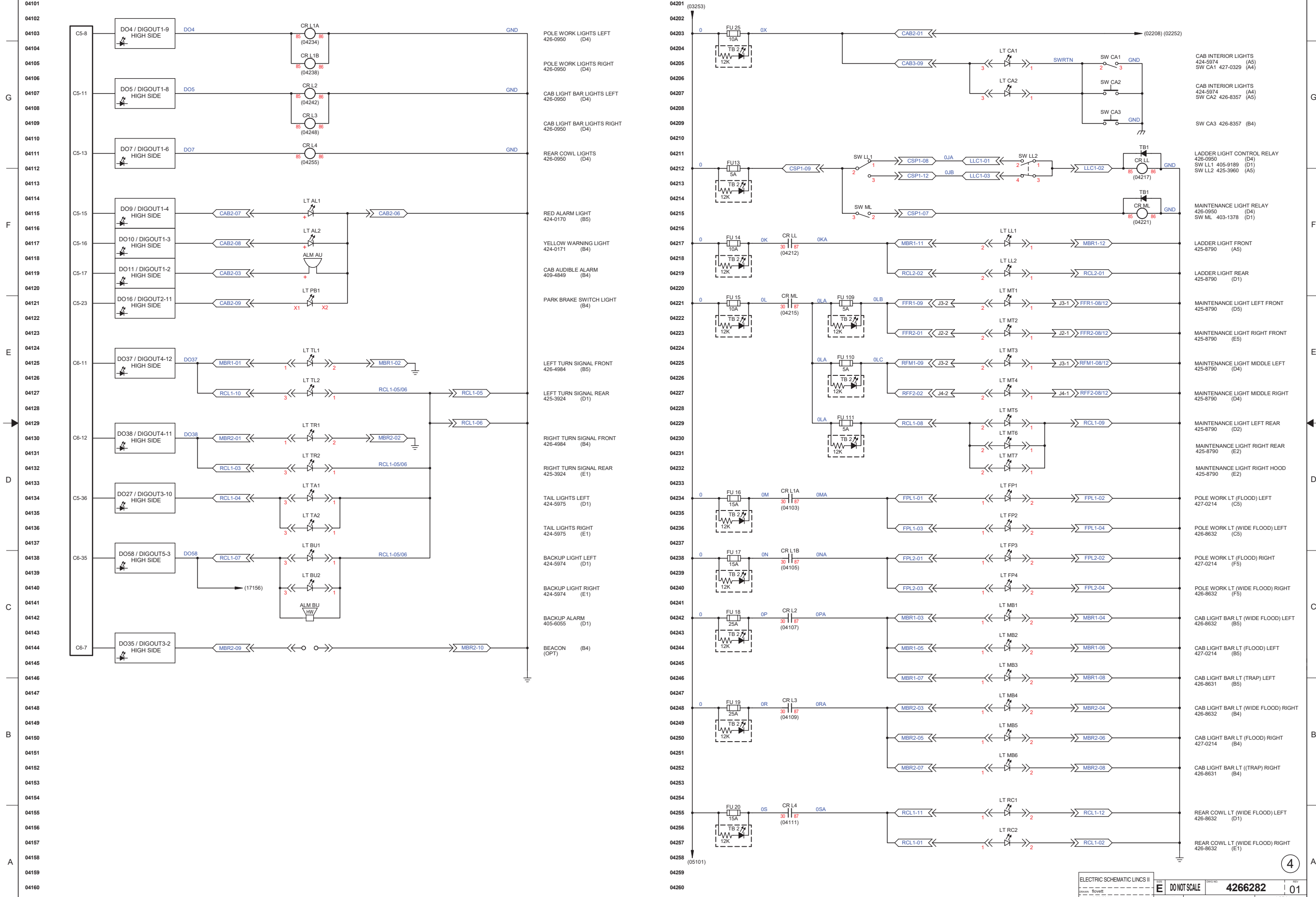


# 24V ELECTRICS

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	00	RELEASE	NL11-1011	6-02	FL	BAS BS
	01	NO CHANGE THIS SHEET	NL12-1909	8-27	FL	BS BS

## LIGHTS & ALARMS

## LIGHTS & ALARMS (CONT.)

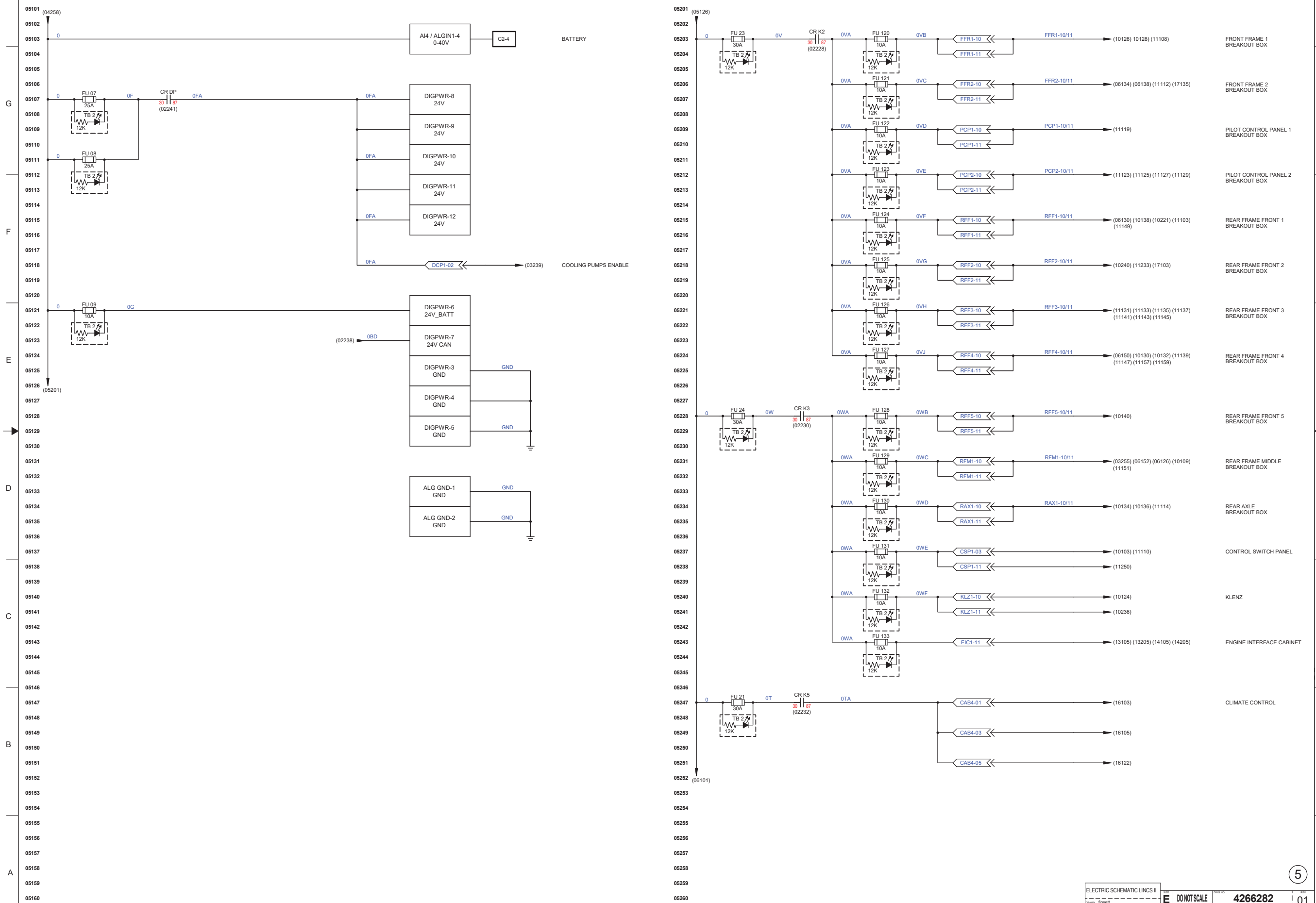


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## POWER DISTRIBUTION

## POWER DISTRIBUTION (CONT.)

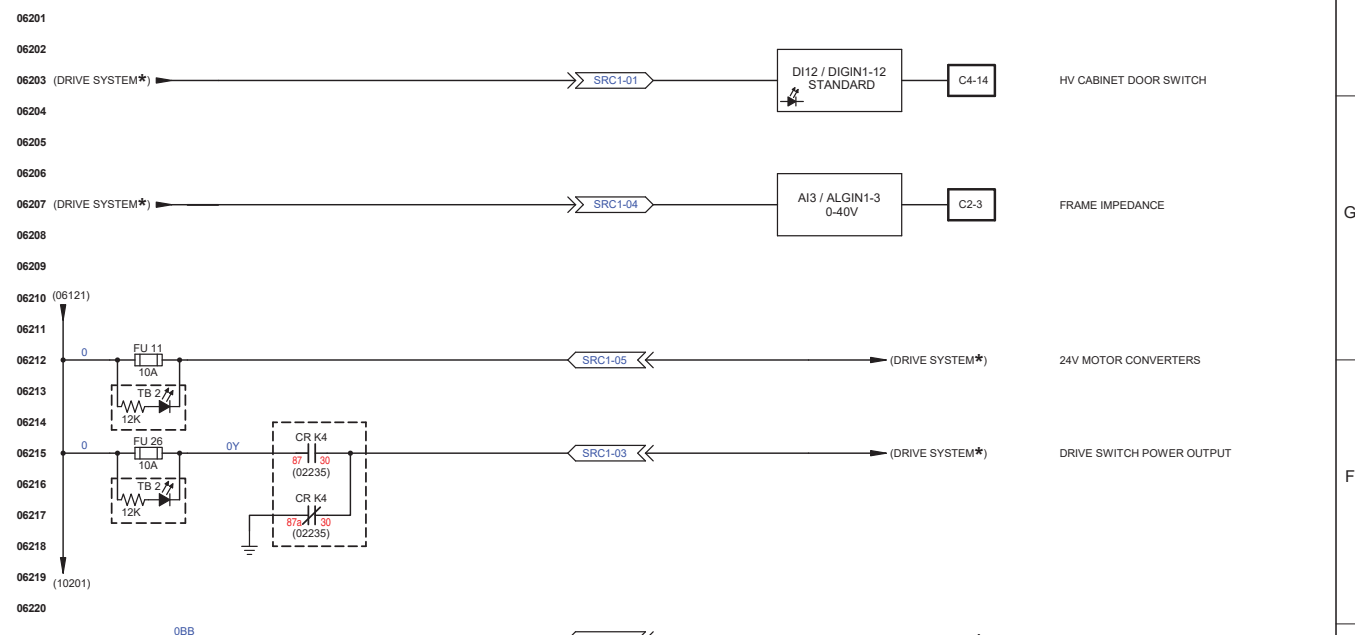
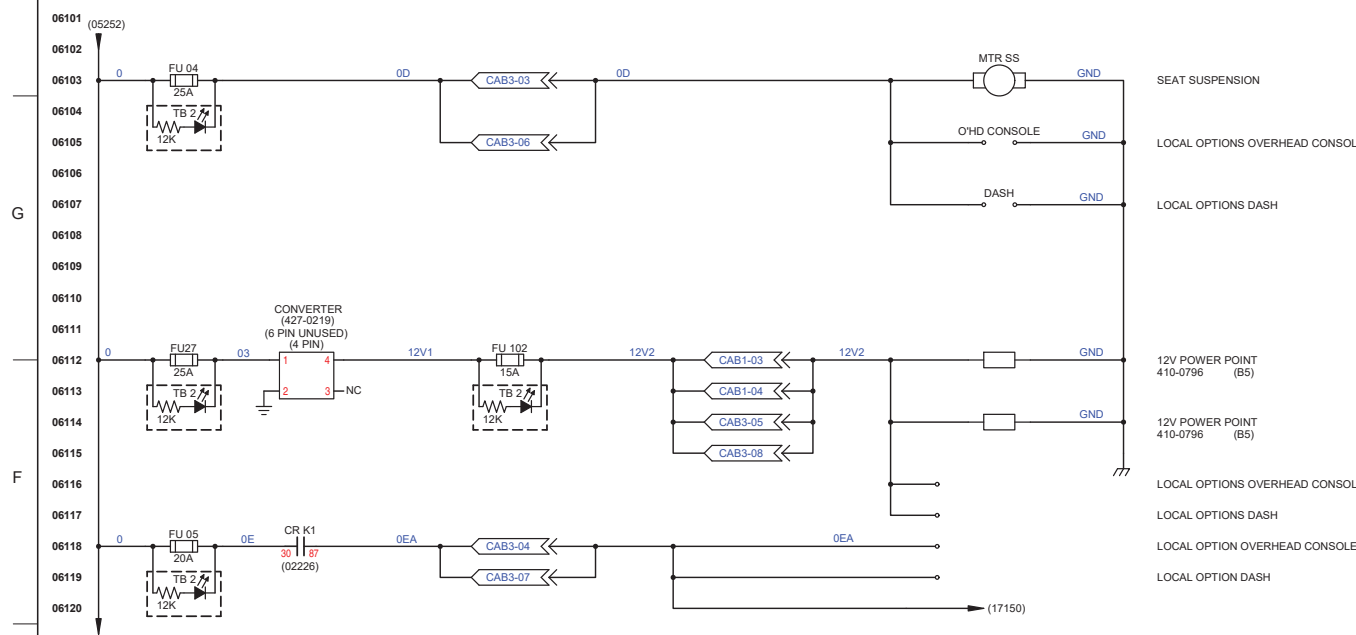


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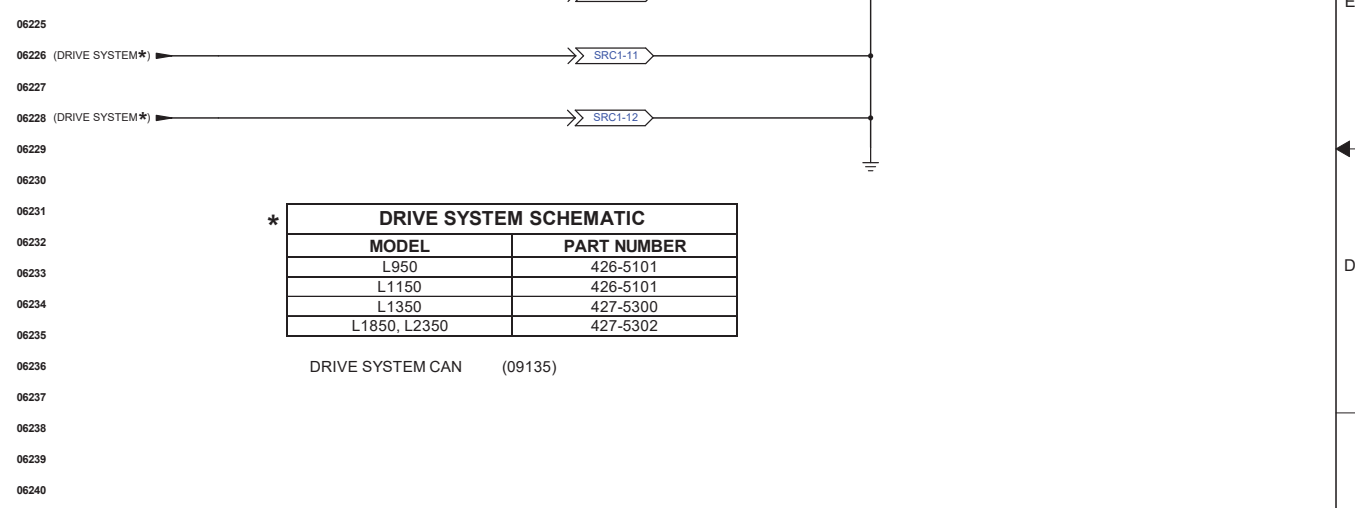
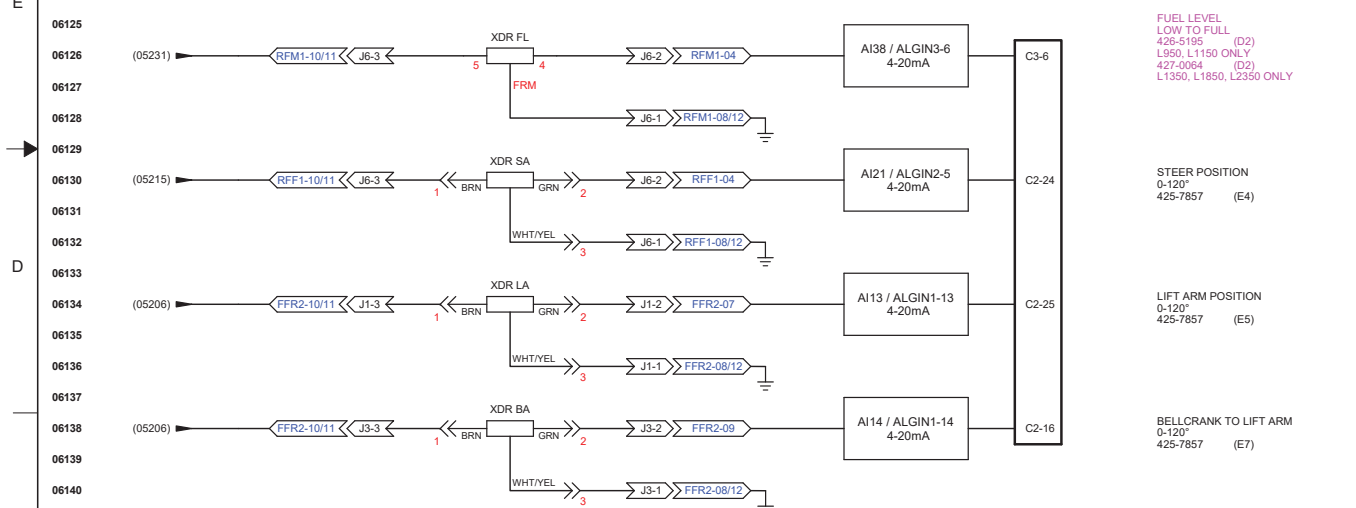
REVISIONS		EN	DATE	CHK	APP
00	RELEASE	NL11-1011	6-02	FL	BAS BS
D3	01 ADD DRIVE SYS SCHEMATIC CHART PART NOS.	NL12-1909	8-27	FL	BS BS

## DEALER OPTIONS

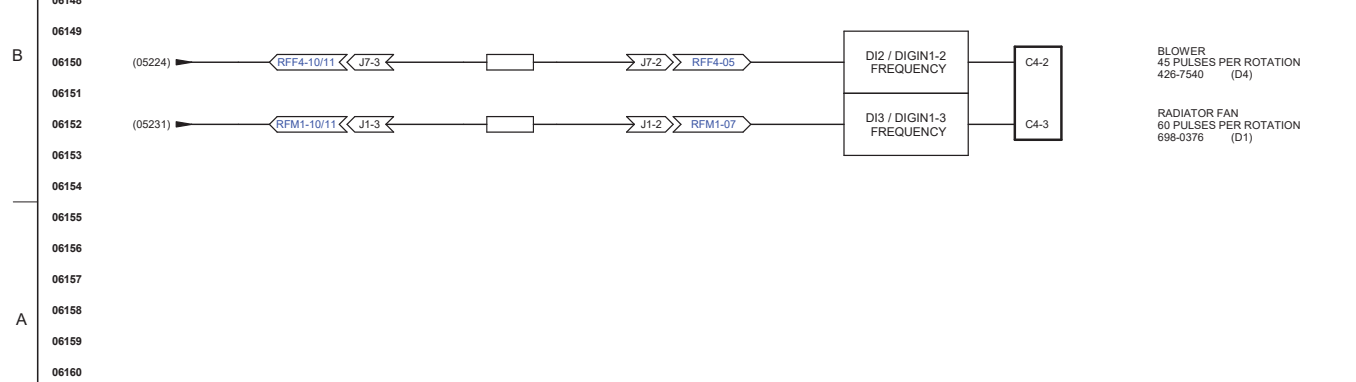
## DRIVE SYSTEM INTERFACE



## POSITION SENSORS



## SPEED SENSORS



\* DRIVE SYSTEM SCHEMATIC

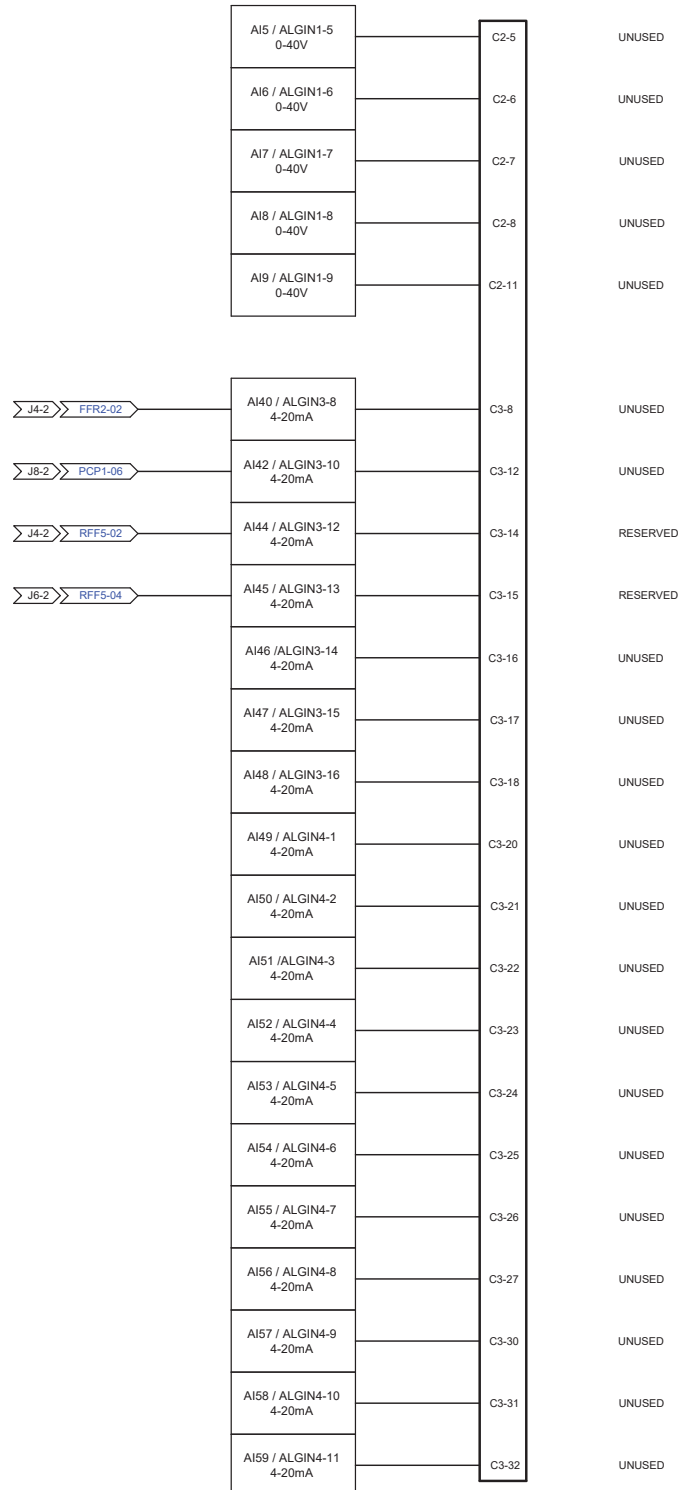
MODEL	PART NUMBER
L950	426-5101
L1150	426-5101
L1350	427-5300
L1850, L2350	427-5302

DRIVE SYSTEM CAN (09135)

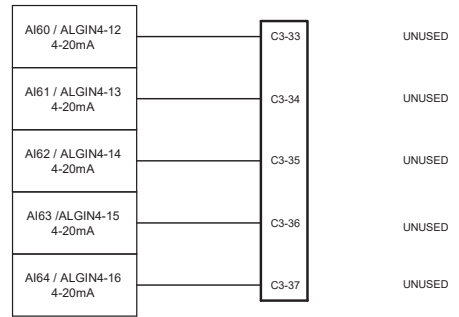
# 24V ELECTRICS

REVISIONS		EN	DATE	CHK	CHK	APP
00	RELEASE	NL11-1011	6-02	FL	BAS	BS
E6	01 MARK AI44 & AI45 AS RESERVED	NL12-1909	8-27	FL	BS	BS

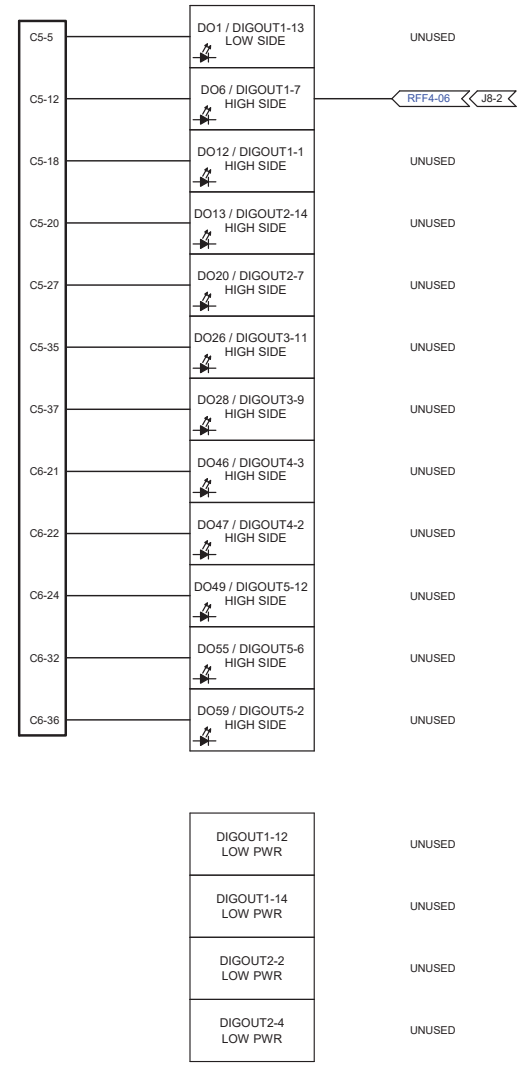
## SPARE I/O - ANALOG INPUT



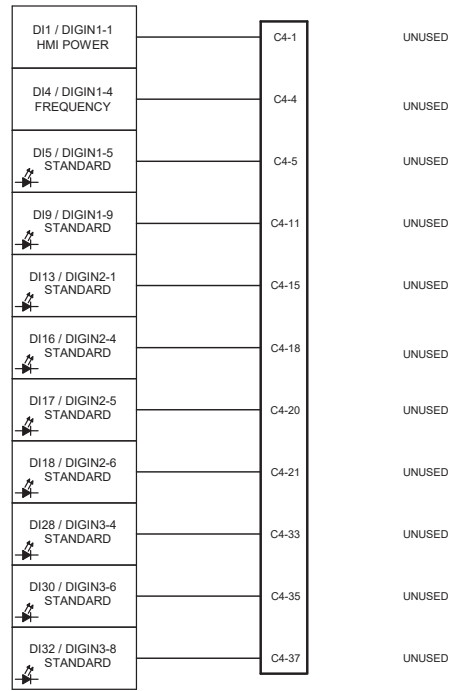
## SPARE I/O ANALOG INPUT (CONT.)



## SPARE I/O DIGITAL OUTPUT



## SPARE I/O DIGITAL INPUT



8

7

6

5

4

3

2

1

		REVISIONS					
ZONE	REV	DESCRIPTION	EN	DATE	CHK	CHK	APP
	00	RELEASE	NL11-1011	6-02	FL	BAS	BS
	01	NO CHANGE THIS SHEET	NL12-1909	8-27	FL	BS	BS

H

G

F

E

D

C

B

A

H

G

F

E

D

C

B

A

BLANK

8

ELECTRIC SCHEMATIC LINGS II		SCALE	1/1	DATE	5-27-2011	REV	01	NO SCALE	4266282	8 OF 24
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8

7

6

5

4

3

2

1

8

7

6

5

4

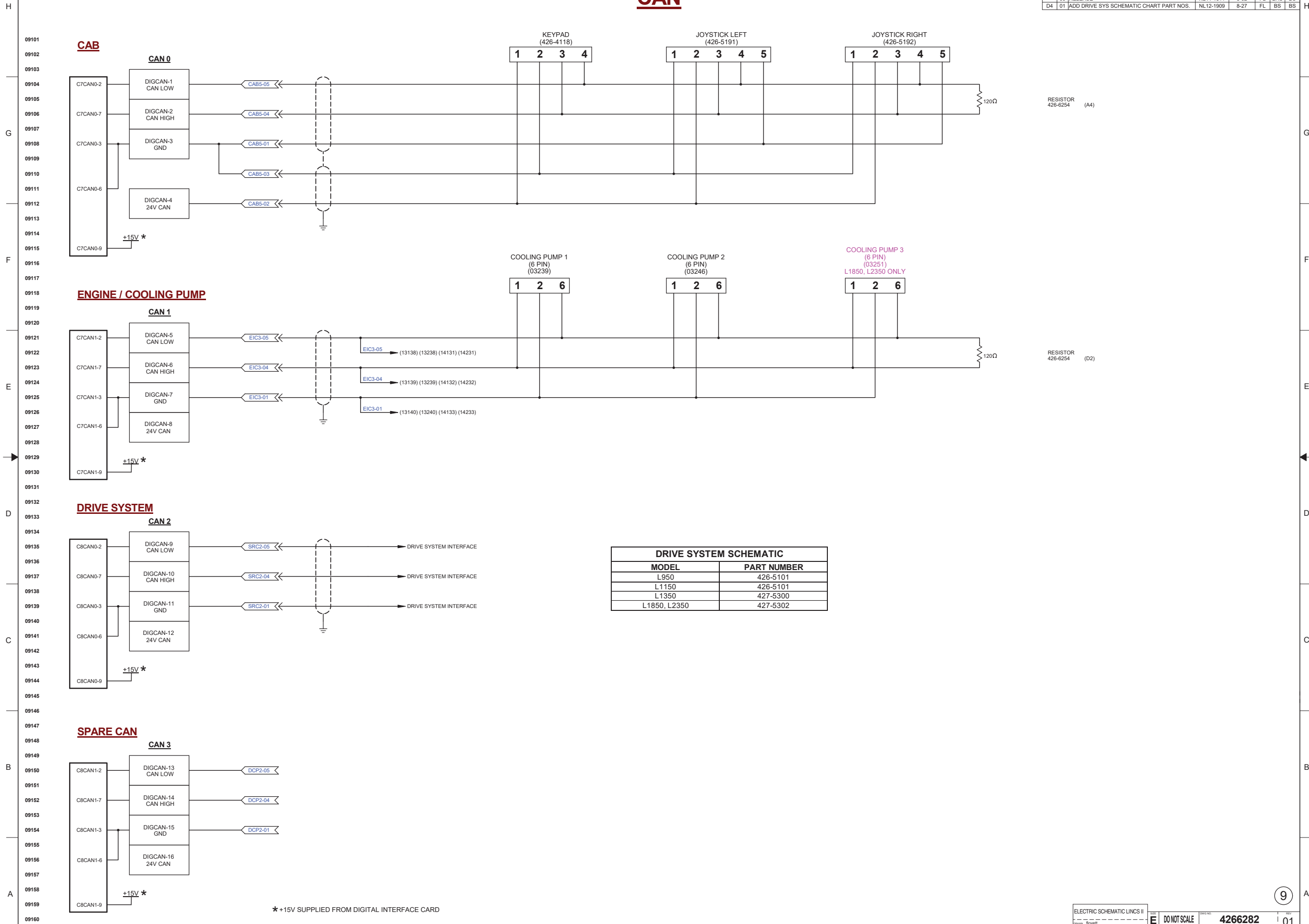
3

2

1

# CAN

REV		DESCRIPTION	EN	DATE	CHK	CHK	APP
00	00	RELEASE	NL11-1011	6-02	FL	BAS	BS
D4	01	ADD DRIVE SYS SCHEMATIC CHART PART NOS.	NL12-1909	8-27	FL	BS	BS



\*+15V SUPPLIED FROM DIGITAL INTERFACE CARD

8

7

6

5

4

3

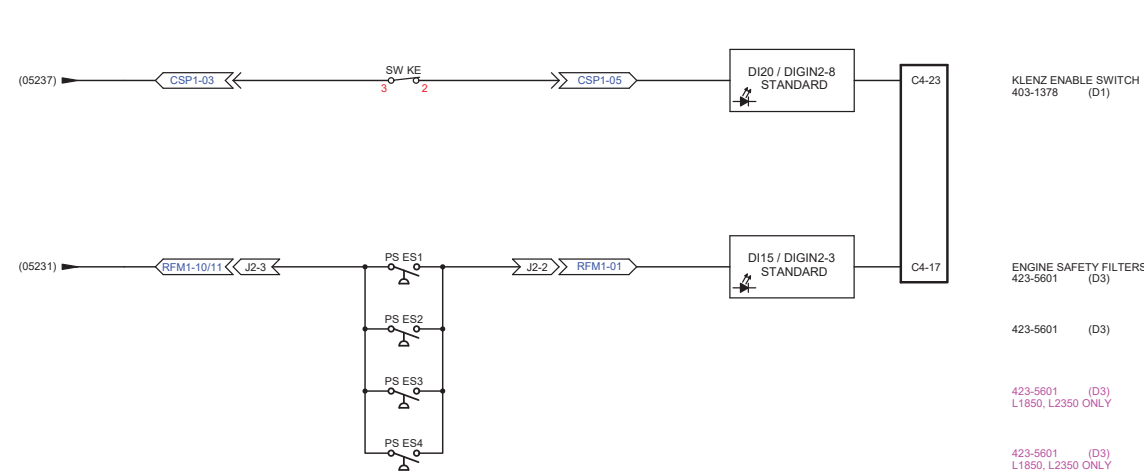
2

1

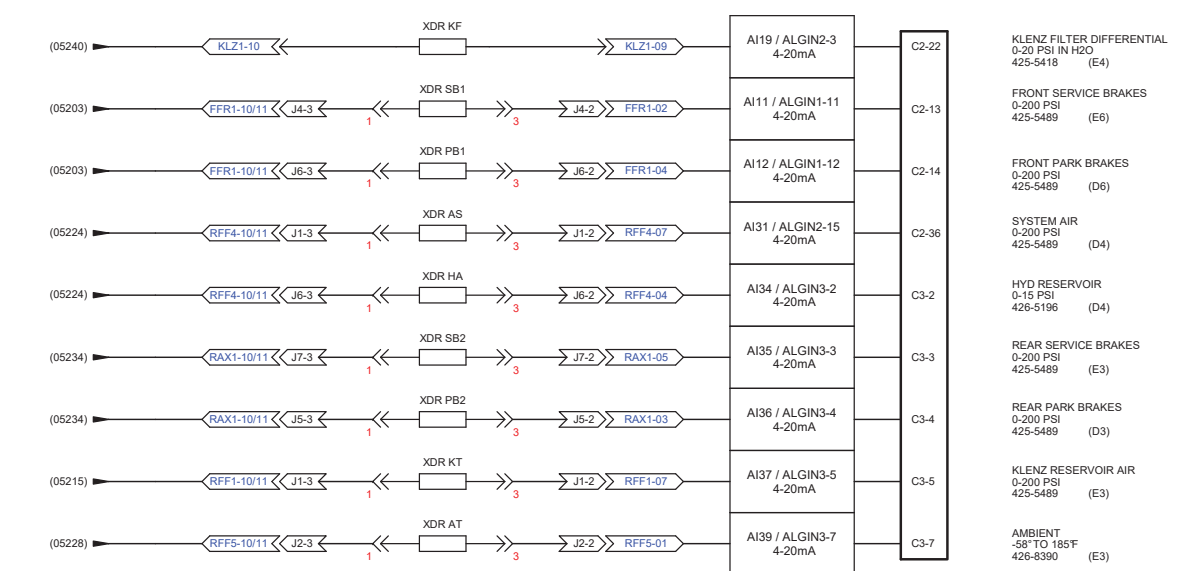
# AIR

REVISIONS						
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
	00	RELEASE	NL11-1011	6-02	FL	BAS BS
G1/F1	01	KLENZ SOLENOIDS PIN WAS 425-5202	NL12-1909	8-27	FL	BS BS

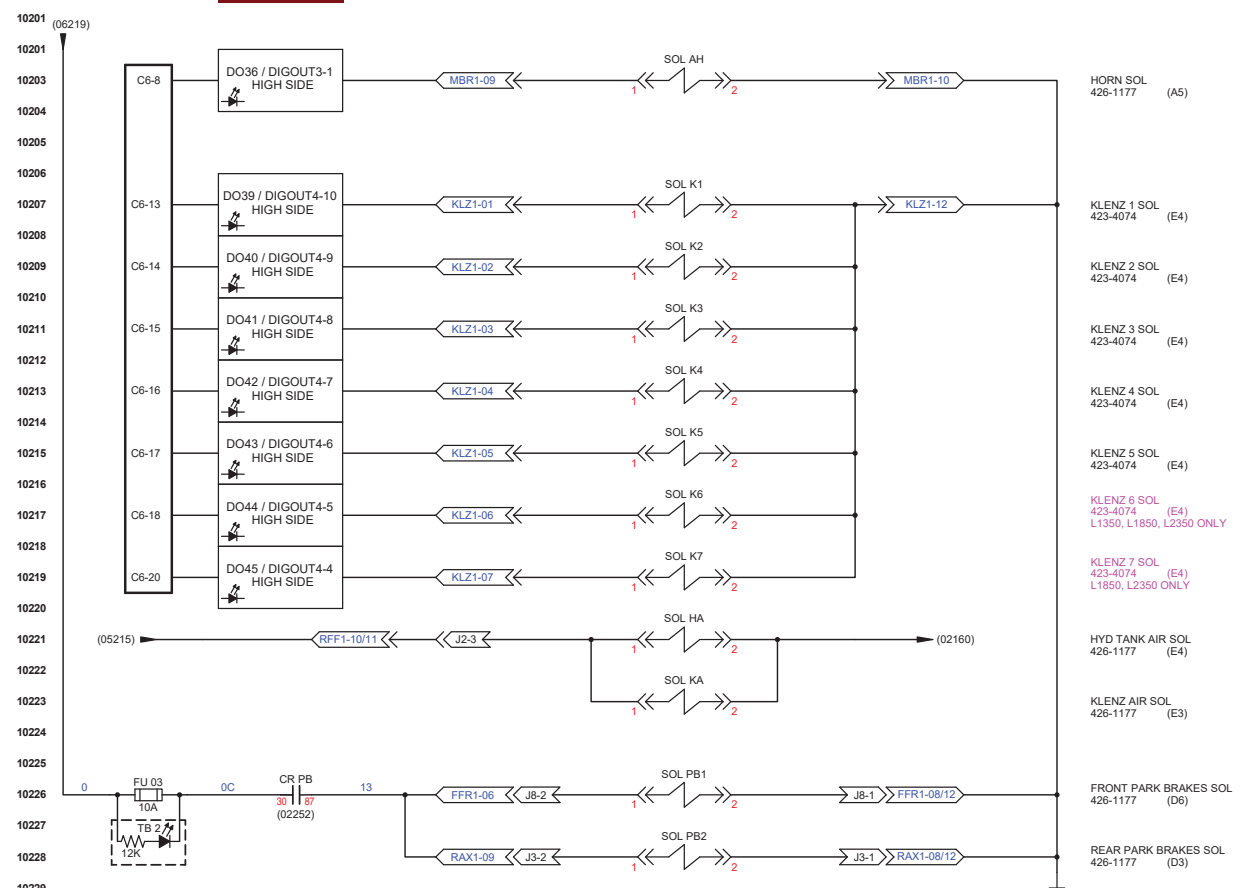
## SWITCHES



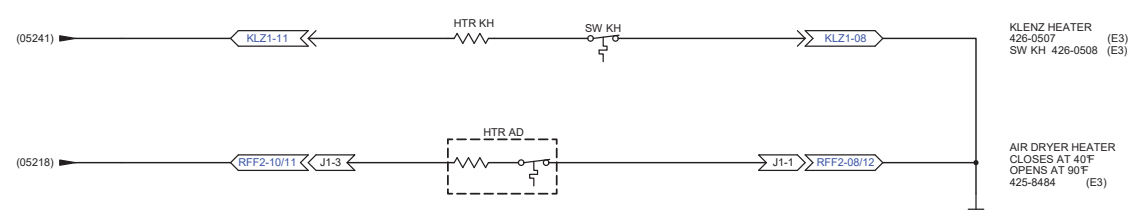
## TRANSDUCERS



## SOLENOIDS



## HEATERS



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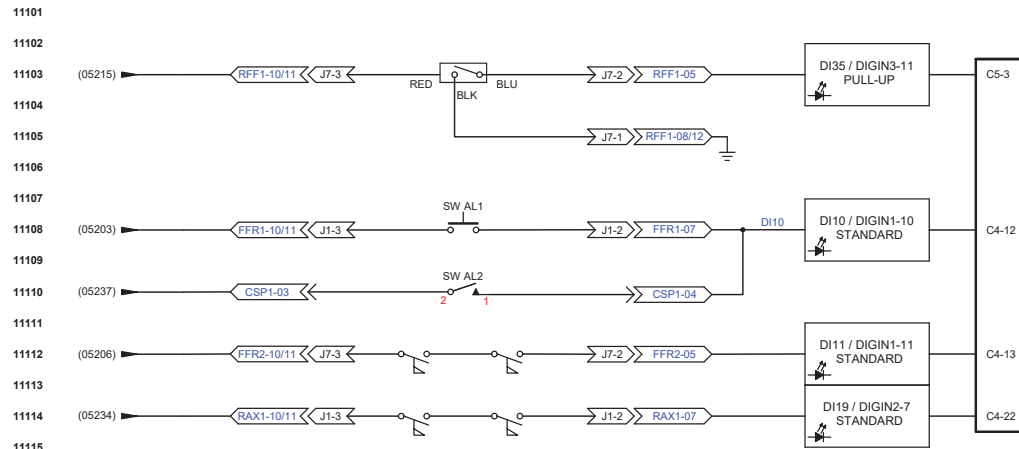
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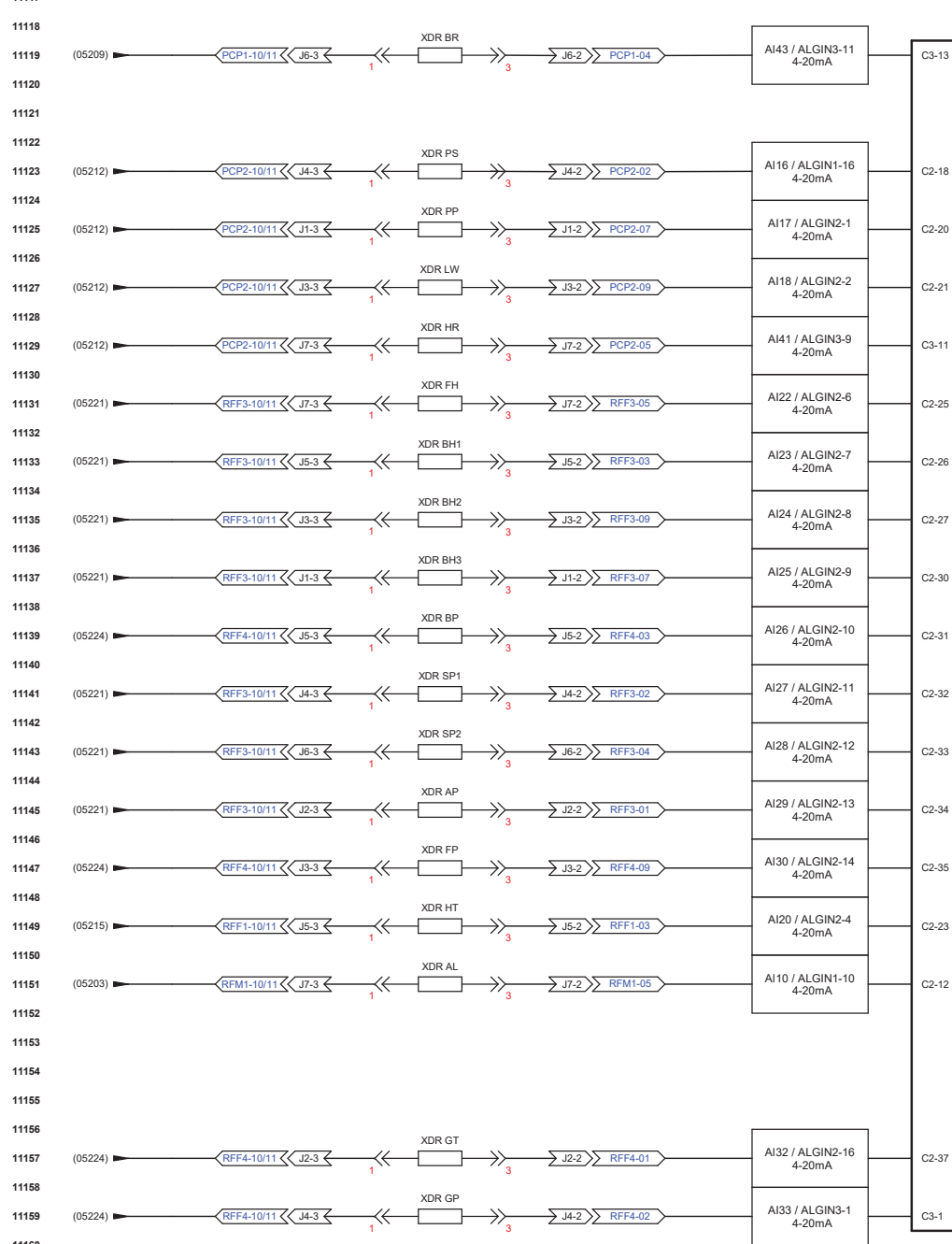
# HYDRAULICS

REV		DESCRIPTION	EN	DATE	CHK	APP
00	RELEASE		NL11-1011	6-02	FL	BAS BS
01	NO CHANGE THIS SHEET		NL12-1909	8-27	FL	BS BS

## SWITCHES



## TRANSDUCERS



HYD RESERVOIR LEVEL SWITCH 411-7627 (E4)

AUTOLUBE SWITCHES SW AL1 423-4957 (E9)

SW AL2 403-1377 (D1)

FRONT DRIVER LUBE FLOW SWITCHES L1350, L1850, L2350 ONLY 427-0058

REAR DRIVER LUBE FLOW SWITCHES L1350, L1850, L2350 ONLY 427-0058

BUCKET CYL ROD 0-5000 PSI 425-5491 (E5)

PILOT SUPPLY 0-1500 PSI 425-5490 (E5)

GREATEST PILOT CMD 0-1500 PSI 425-5490 (E5)

HOIST CYL BASE 0-5000 PSI 425-5491 (E5)

HOIST CYL ROD 0-5000 PSI 425-5491 (E5)

FAST HOIST PUMP 0-5000 PSI 425-5491 (E4)

HOIST / BUCKET PUMP A 0-5000 PSI 425-5491 (E4)

HOIST / BUCKET PUMP B 0-5000 PSI 425-5491 (E4)

HOIST / BUCKET PUMP C 0-5000 PSI 425-5491 (E4)

BLOWER PUMP 0-5000 PSI 425-5491 (D4)

STEER PUMP A 0-5000 PSI 425-5491 (E4)

STEER PUMP B 0-5000 PSI 425-5491 (E4)

ACCESSORY PUMP 0-5000 PSI 425-5491 (E4)

RADIATOR FAN PUMP 0-5000 PSI 425-5491 (D4)

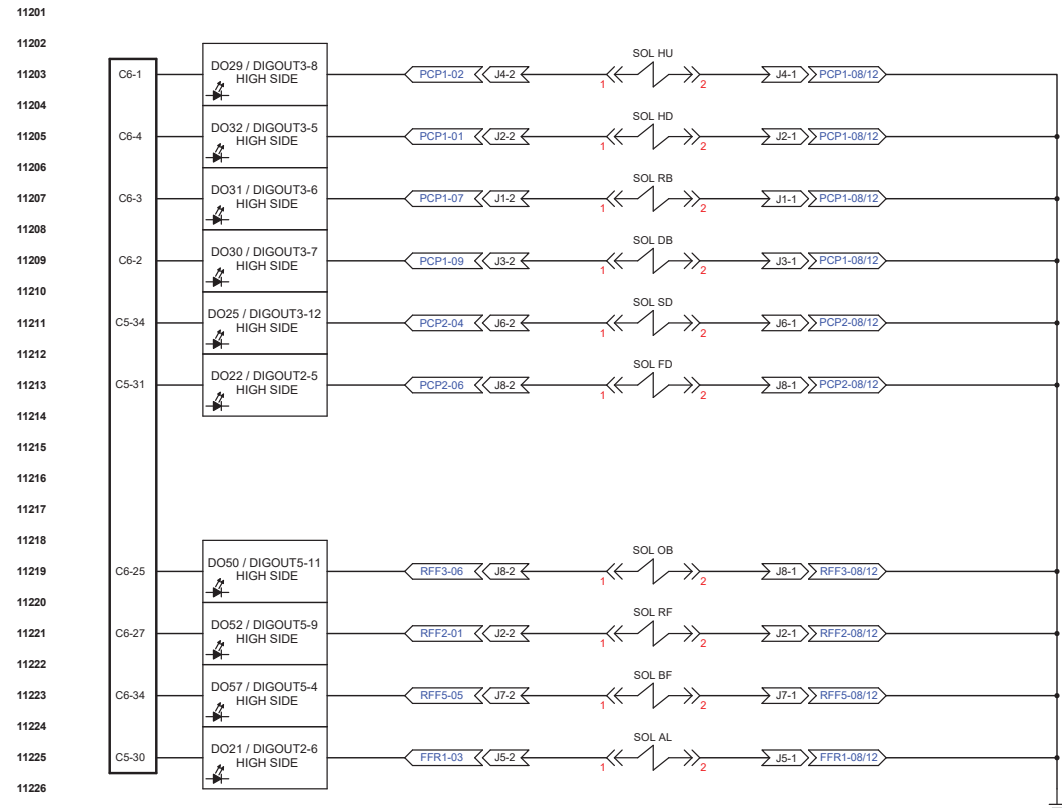
HYD RESERVOIR OIL -13 TO 212°F 425-6107 (E4)

AUTOLUBE GREASE 0-5000 PSI 425-5491 (E6)

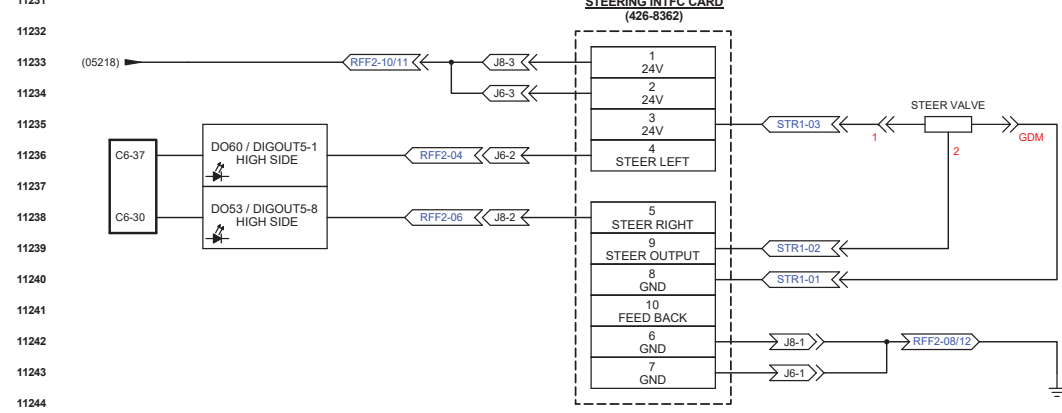
HPD GEARBOX OIL -13 TO 212°F 425-6107 (D4)

HPD GEARBOX 0-200 PSI 425-5489 (D4)

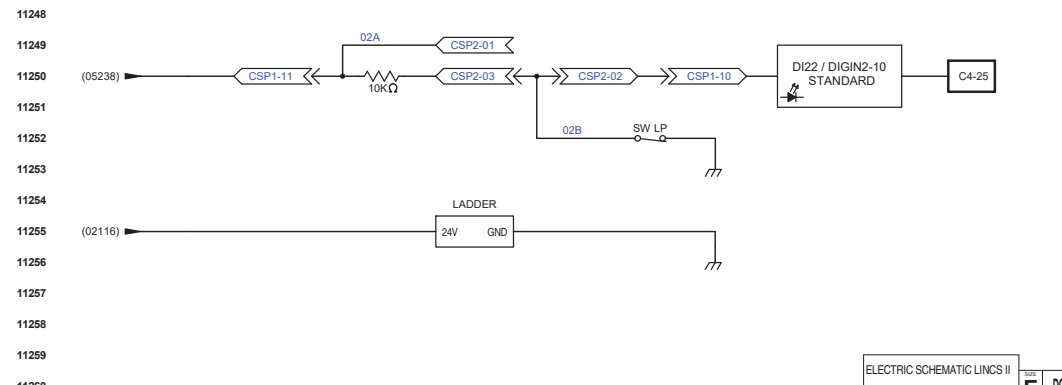
## SOLENOIDS



## STEERING



## LADDER



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		REVISIONS					
ZONE	REV	DESCRIPTION	EN	DATE	CHK	CHK	APP
	00	RELEASE	NL11-1011	6-02	FL	BAS	BS
	01	NO CHANGE THIS SHEET	NL12-1909	8-27	FL	BS	BS

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ELECTRIC SCHEMATIC LINGS II		SCALE	1/1	DATE	5-27-2011	REV	01	NO	4266282	12 OF 24
		<b>E</b> DO NOT SCALE								

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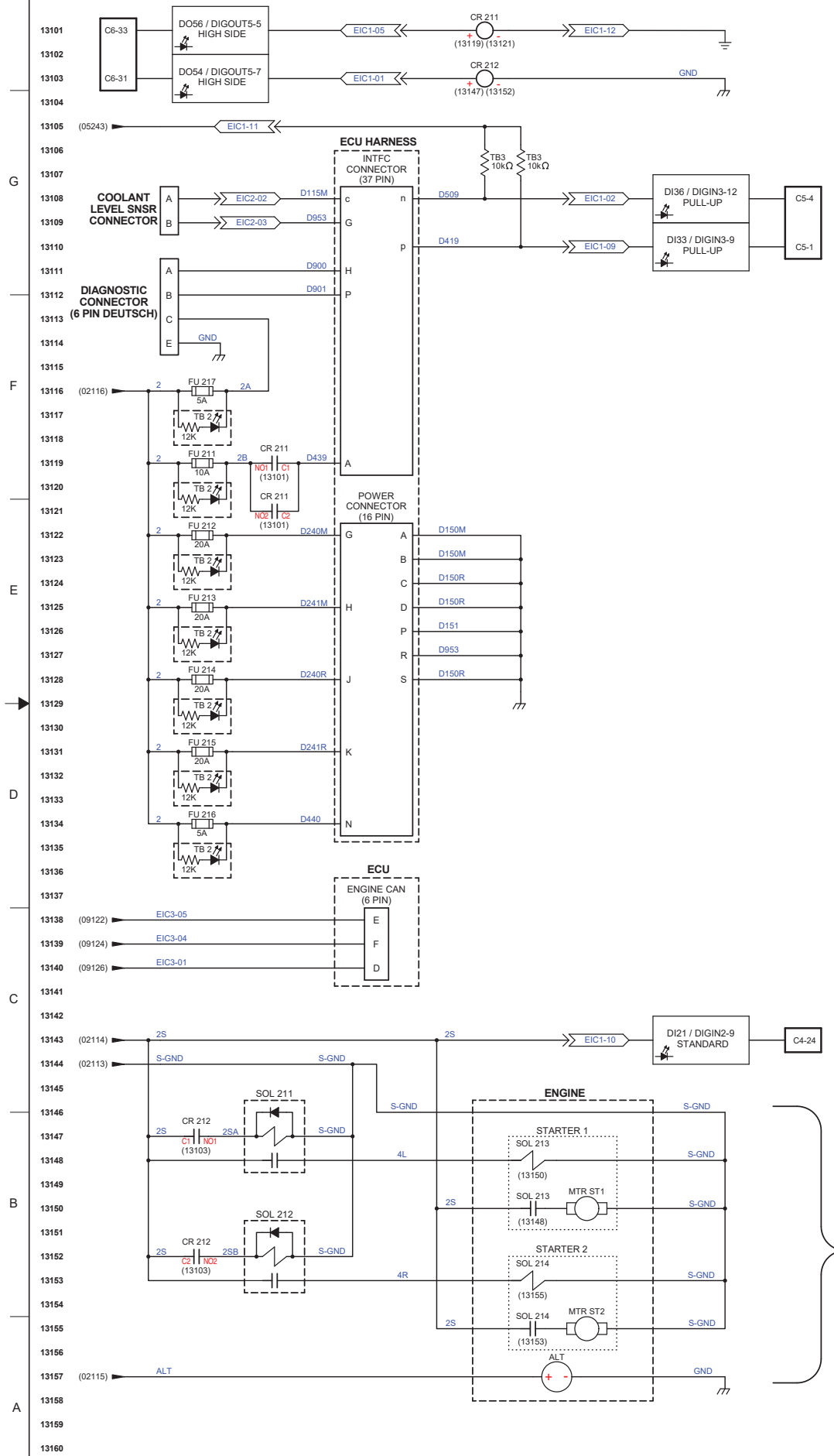
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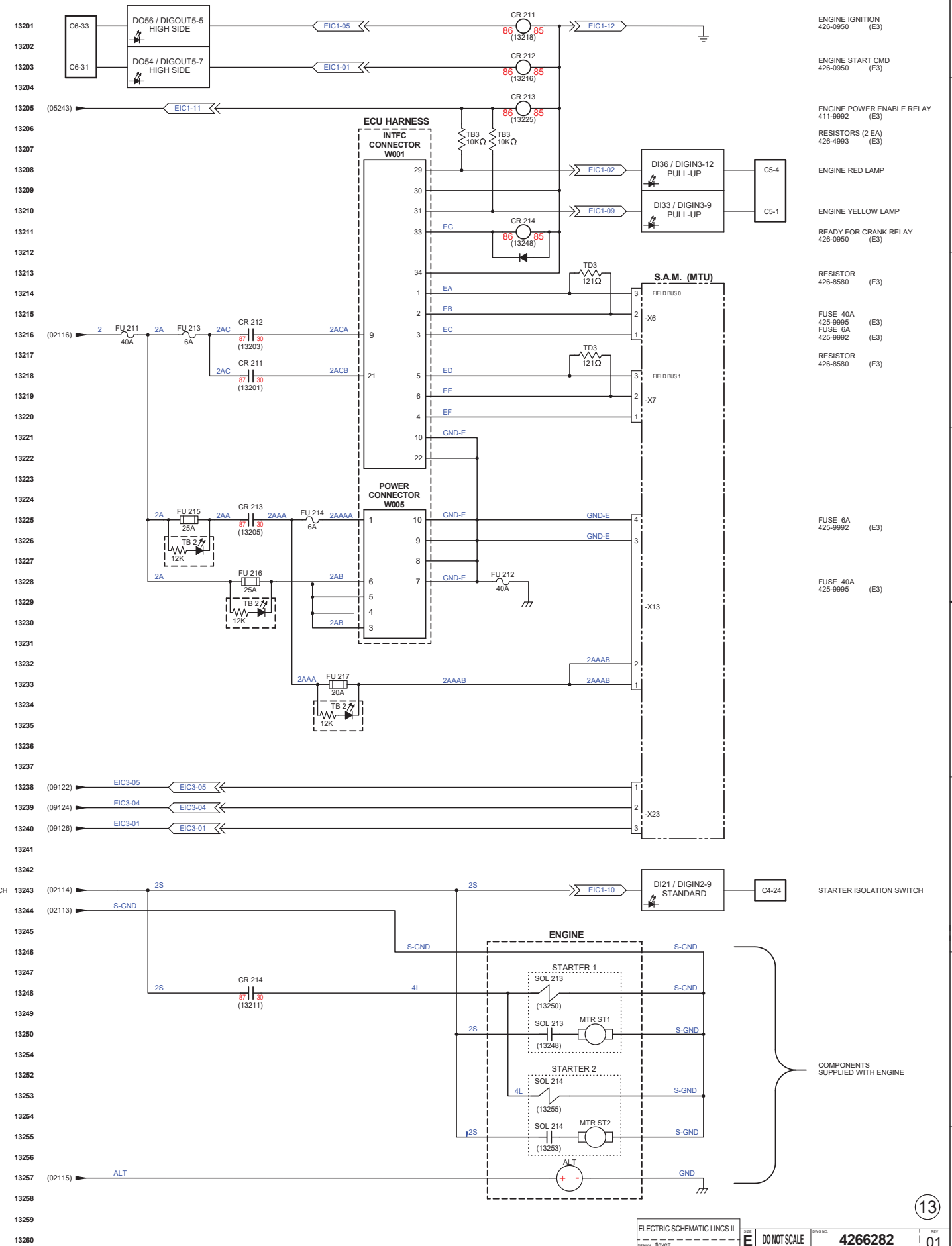
# ENGINE

## ADEC

REVISIONS						
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
00	00	RELEASE	NL11-1011	6-02	FL	BAS BS
F2/D2	01	ADD TD3 TO 121 OHMS RESISTORS, DELETE S.A.M. X19 PIN 5	NL12-1909	8-27	FL	BS BS



- ENGINE IGNITION 422-8641 (E3)
- ENGINE START CMD 422-8641 (E3)
- RESISTORS (2 EA) 426-4993 (E3)
- ENGINE RED LAMP
- ENGINE YELLOW LAMP



- ENGINE IGNITION 426-0950 (E3)
- ENGINE START CMD 426-0950 (E3)
- ENGINE POWER ENABLE RELAY 411-9992 (E3)
- RESISTORS (2 EA) 426-4993 (E3)
- ENGINE RED LAMP
- ENGINE YELLOW LAMP
- READY FOR CRANK RELAY 426-0950 (E3)
- RESISTOR 426-8580 (E3)
- FUSE 40A 425-9995 (E3)
- FUSE 6A 425-9992 (E3)
- RESISTOR 426-8580 (E3)
- FUSE 6A 425-9992 (E3)
- FUSE 40A 425-9995 (E3)

STARTER ISOLATION SWITCH

COMPONENTS SUPPLIED WITH ENGINE

COMPONENTS SUPPLIED WITH ENGINE

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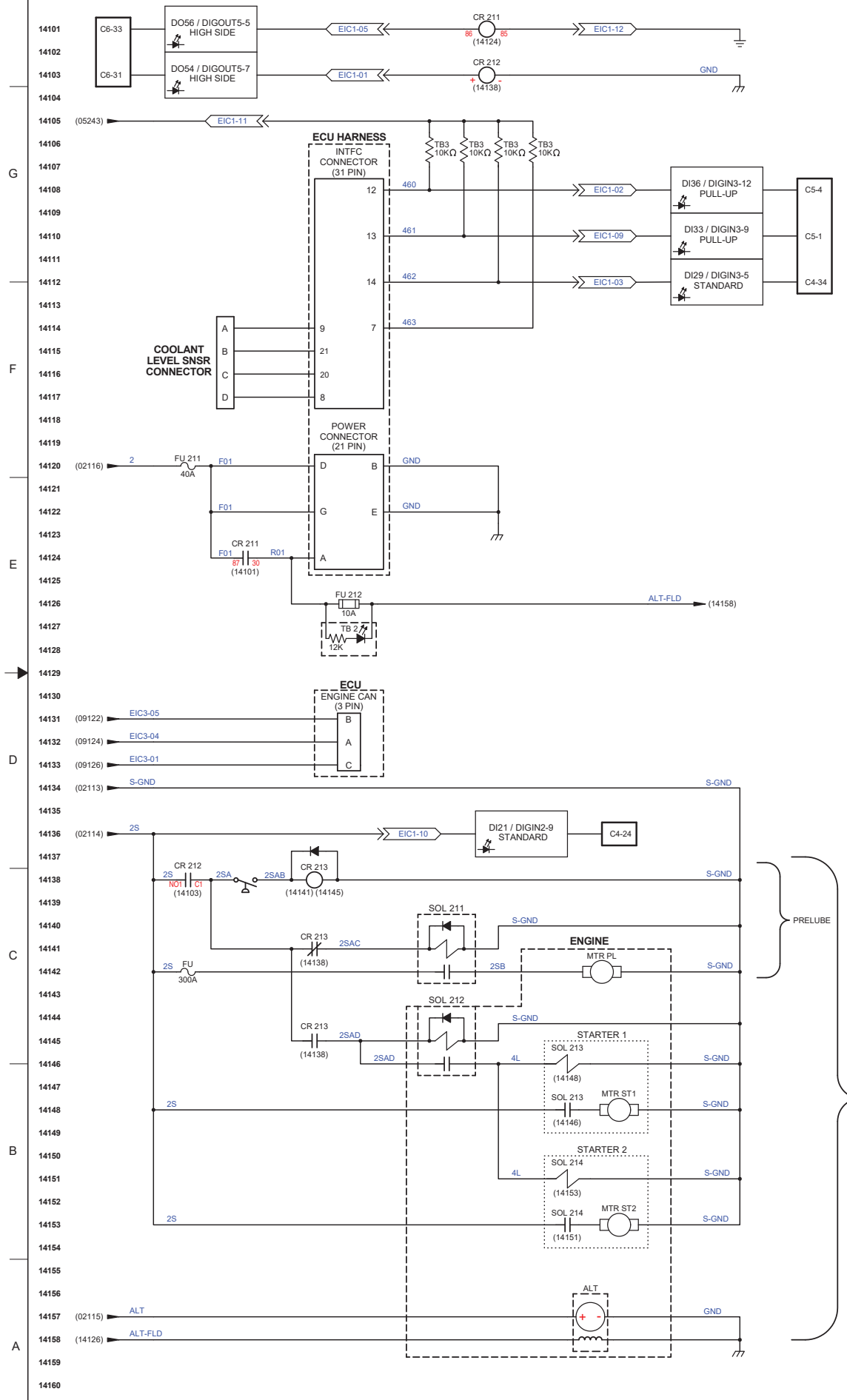
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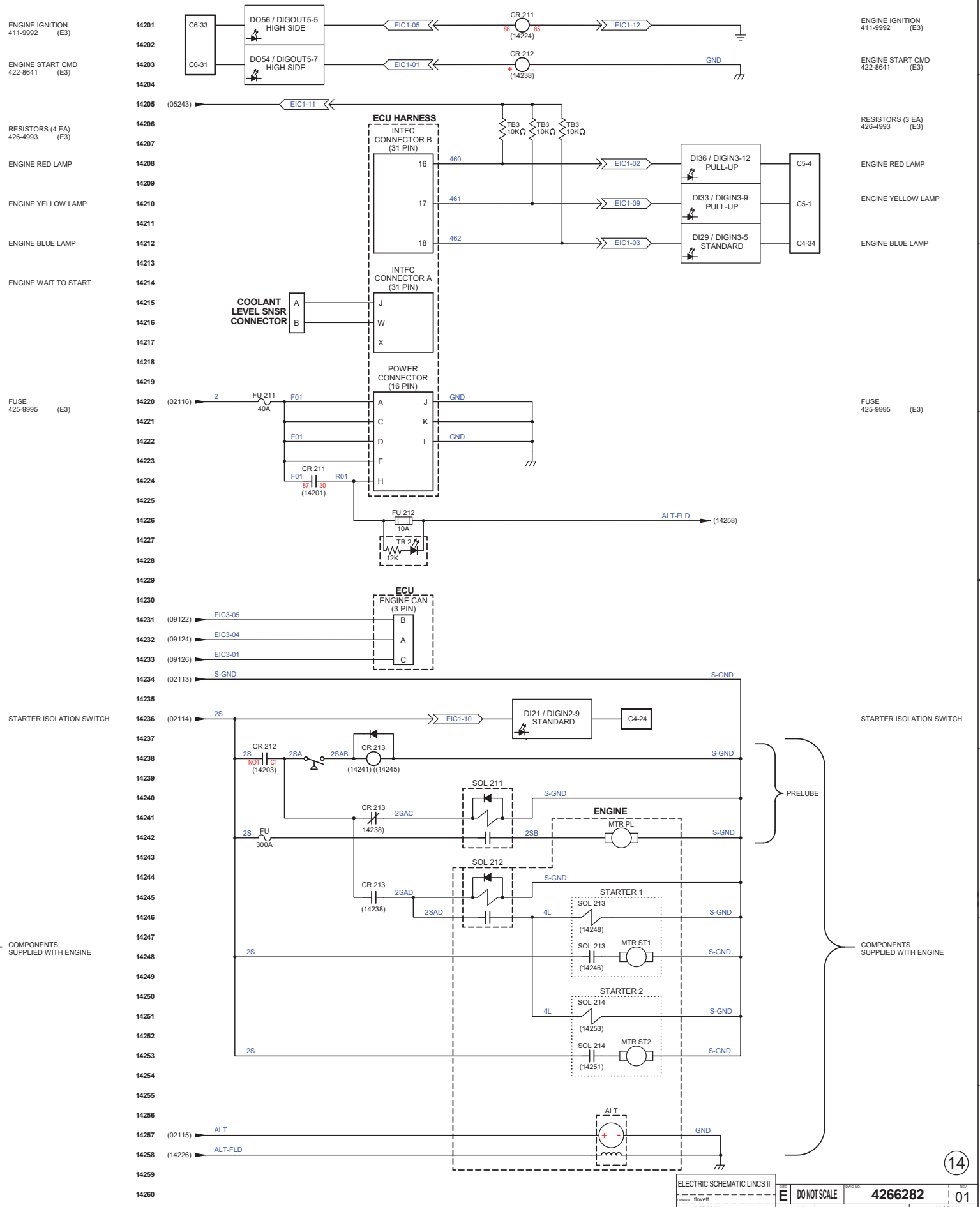
# ENGINE

REVISIONS		EN	DATE	CHK	CHK	APP
00	RELEASE	NL11-1011	6-02	FL	BAS	BS
01	NO CHANGE THIS SHEET	NL12-1909	8-27	FL	BS	BS

## CUMMINS QST30



## CUMMINS QSK38



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		REVISIONS						
ZONE	REV	DESCRIPTION	EN	DATE	CHK	CHK	APP	
	00	RELEASE	NL11-1011	6-02	FL	BAS	BS	
	01	NO CHANGE THIS SHEET	NL12-1909	8-27	FL	BS	BS	

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ELECTRIC SCHEMATIC LINGS II		SCALE	1/1	DATE	5-27-2011	REV	01	NO	15 OF 24
		DO NOT SCALE		4266282					

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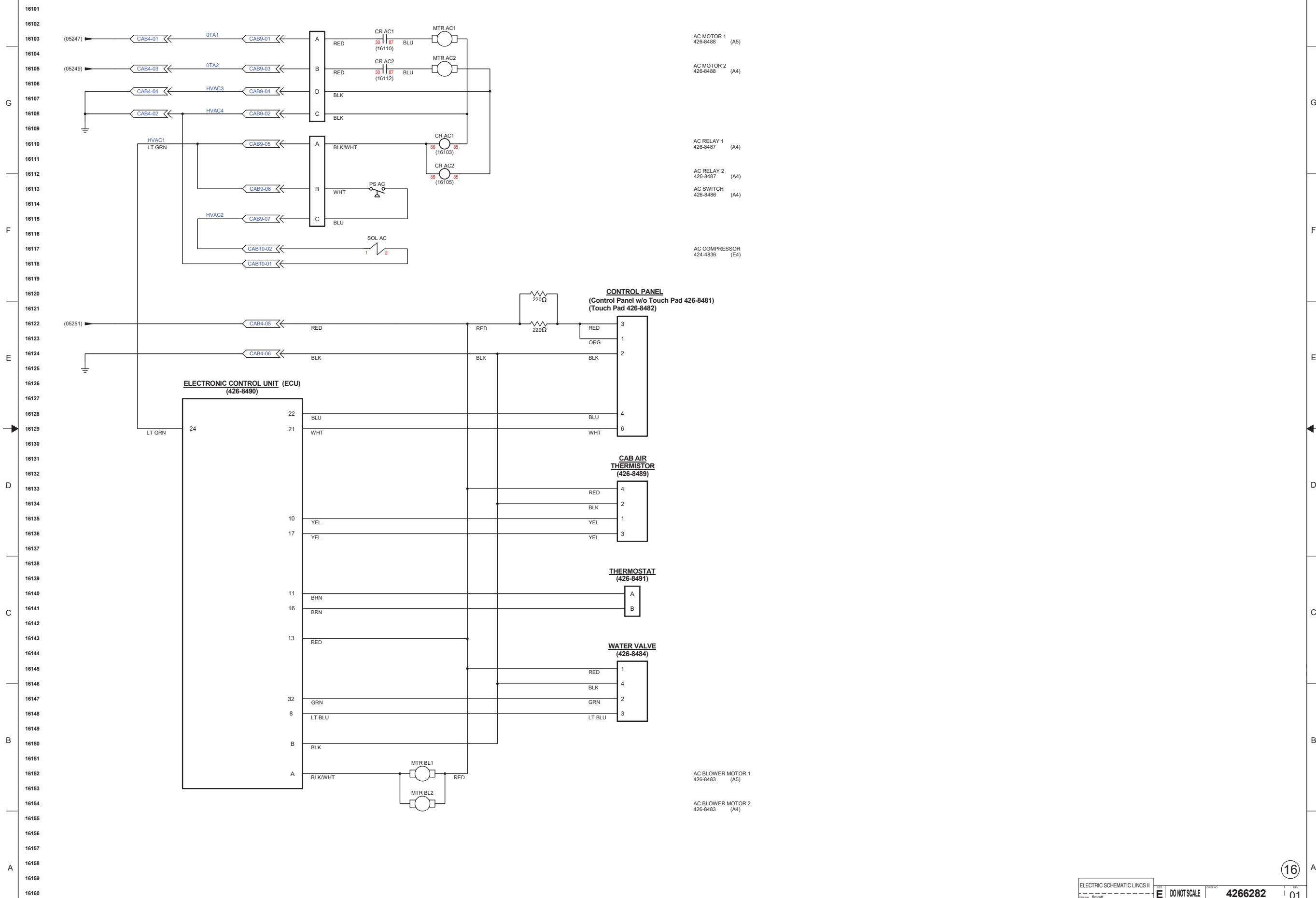
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# CLIMATE CONTROL

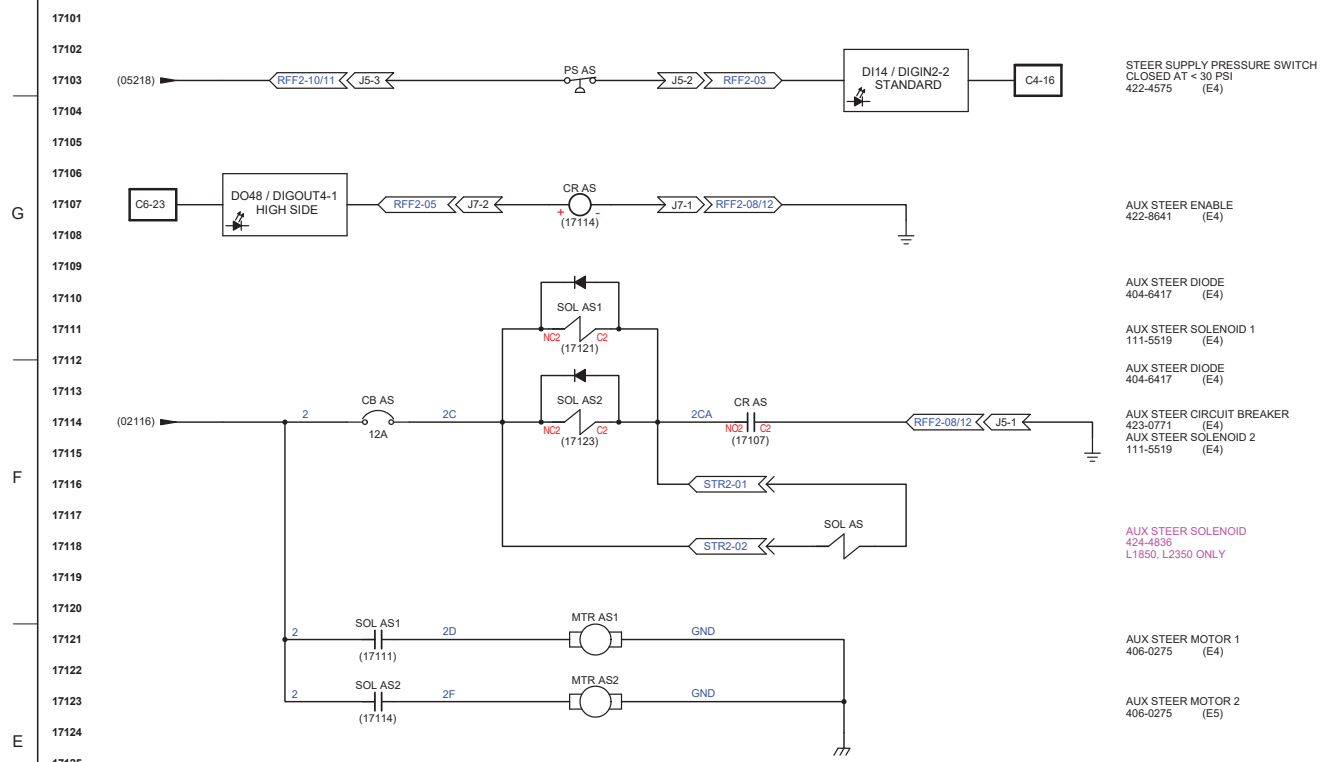
		REVISIONS				
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
	00	RELEASE	NL11-1011	6-02	FL	BAS BS
	01	NO CHANGE THIS SHEET	NL12-1909	8-27	FL	BS BS



# COMPONENT OPTIONS

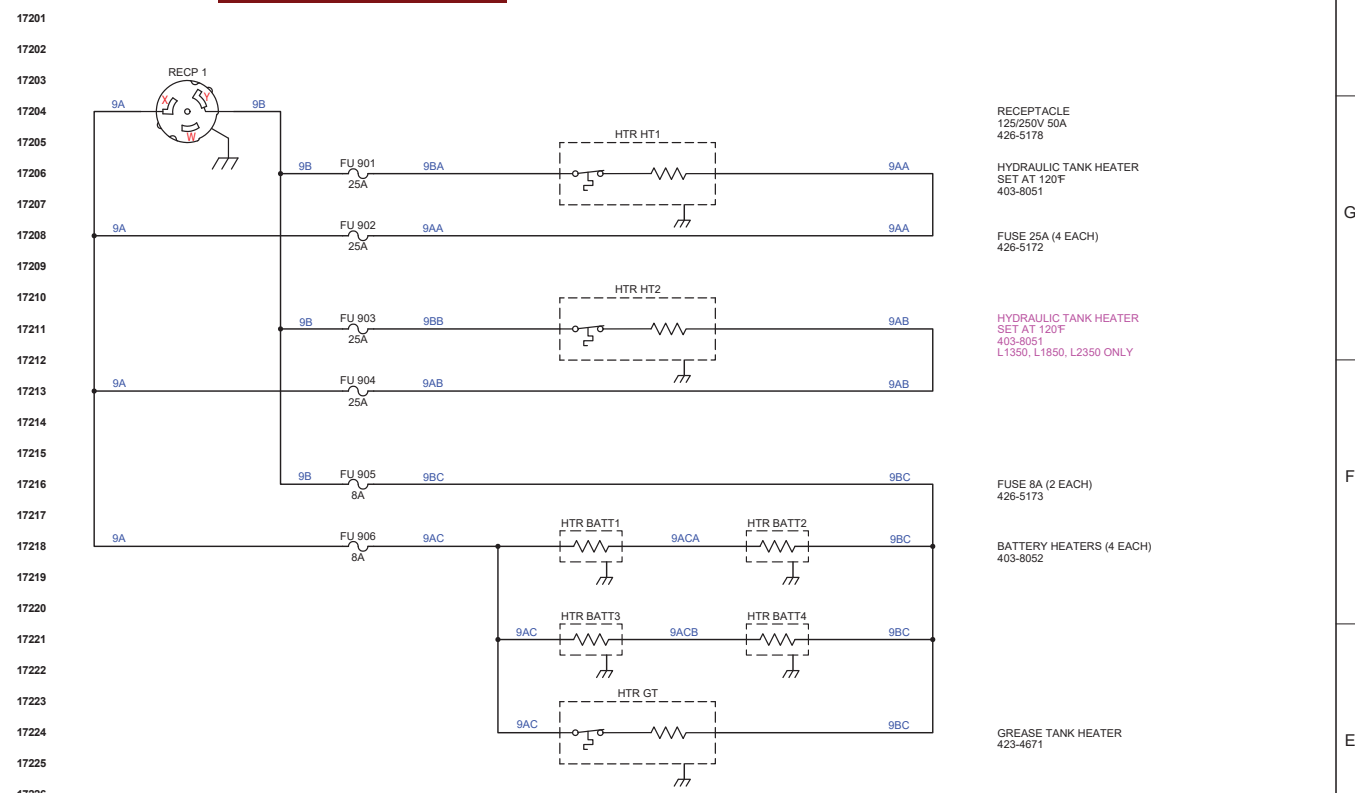
REVISIONS						
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
00	00	RELEASE	NL11-1011	6-02	FL	BAS BS
D5	01	AUX FAN ENABLE SOL P/N WAS 426-4836	NL12-1909	8-27	FL	BS BS

## AUXILIARY STEER



- STEER SUPPLY PRESSURE SWITCH  
CLOSED AT < 30 PSI  
422-4575 (E4)
- AUX STEER ENABLE  
422-8641 (E4)
- AUX STEER DIODE  
404-6417 (E4)
- AUX STEER SOLENOID 1  
111-5519 (E4)
- AUX STEER DIODE  
404-6417 (E4)
- AUX STEER CIRCUIT BREAKER  
423-0771 (E4)
- AUX STEER SOLENOID 2  
111-5519 (E4)
- AUX STEER SOLENOID  
424-4836  
L1350, L2350 ONLY
- AUX STEER MOTOR 1  
406-0275 (E4)
- AUX STEER MOTOR 2  
406-0275 (E5)

## HEATERS (COLD CLIMATE)



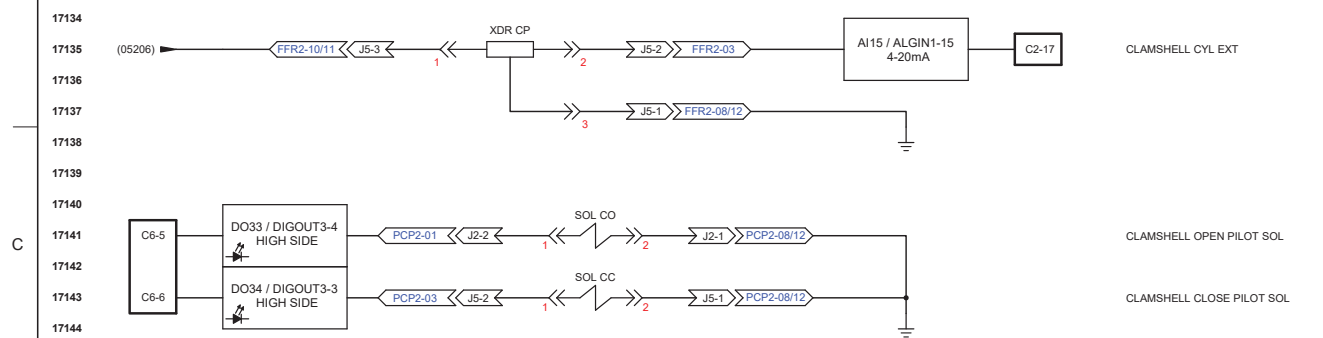
- RECEPTACLE  
125/250V 50A  
426-5178
- HYDRAULIC TANK HEATER  
SET AT 120F  
403-8051
- FUSE 25A (4 EACH)  
426-5172
- HYDRAULIC TANK HEATER  
SET AT 120F  
403-8051  
L1350, L1850, L2350 ONLY
- FUSE 8A (2 EACH)  
426-5173
- BATTERY HEATERS (4 EACH)  
403-8052
- GREASE TANK HEATER  
423-4671
- RECEPTACLE  
125/250V 50A  
426-5178
- FUSE 25A (2 EACH)  
426-5172
- THERMOSTAT  
058-3631  
ENGINE COOLANT HEATER  
085-3460
- ENGINE OIL HEATER LEFT  
425-3381
- FUSE 25A (2 EACH)  
426-5172
- THERMOSTAT  
058-3631  
ENGINE COOLANT HEATER  
085-3460  
L1350 CUMMINS  
L1350, L1850, L2350 ONLY
- ENGINE OIL HEATER RIGHT  
425-3381  
L1350, L1850, L2350 ONLY

## AUXILIARY OIL COOLER



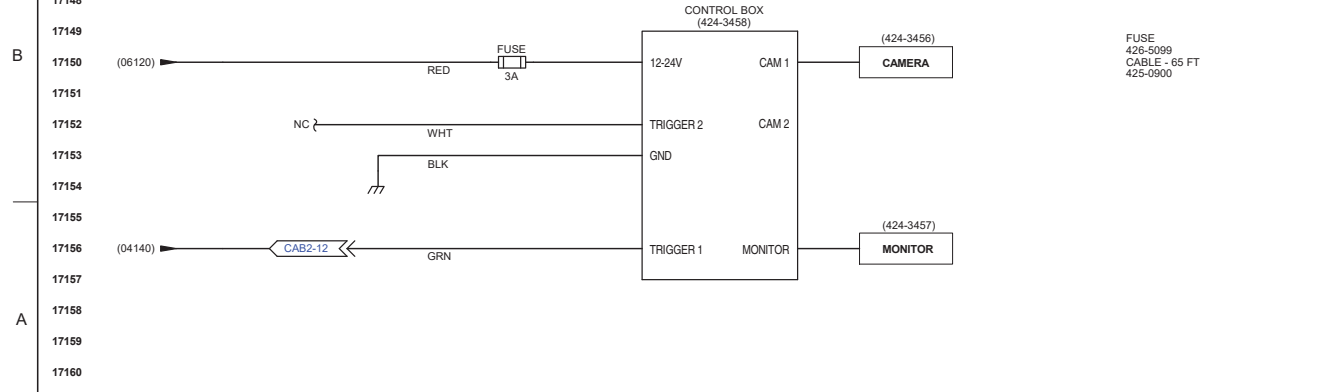
- AUX FAN ENABLE SOL  
424-4836

## CLAMSHHELL



- CLAMSHHELL CYL EXT
- CLAMSHHELL OPEN PILOT SOL
- CLAMSHHELL CLOSE PILOT SOL

## REAR VISION CAMERA



- FUSE  
426-5099  
CABLE - 65 FT  
425-0900

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		REVISIONS					
ZONE	REV	DESCRIPTION	EN	DATE	CHK	CHK	APP
	00	RELEASE	NL11-1011	6-02	FL	BAS	BS
	01	NO CHANGE THIS SHEET	NL12-1909	8-27	FL	BS	BS

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ELECTRIC SCHEMATIC LINGS II		SCALE	1/1	DATE	5-27-2011	REV	01	NO	4266282	18 OF 24
		<b>E</b> DO NOT SCALE								

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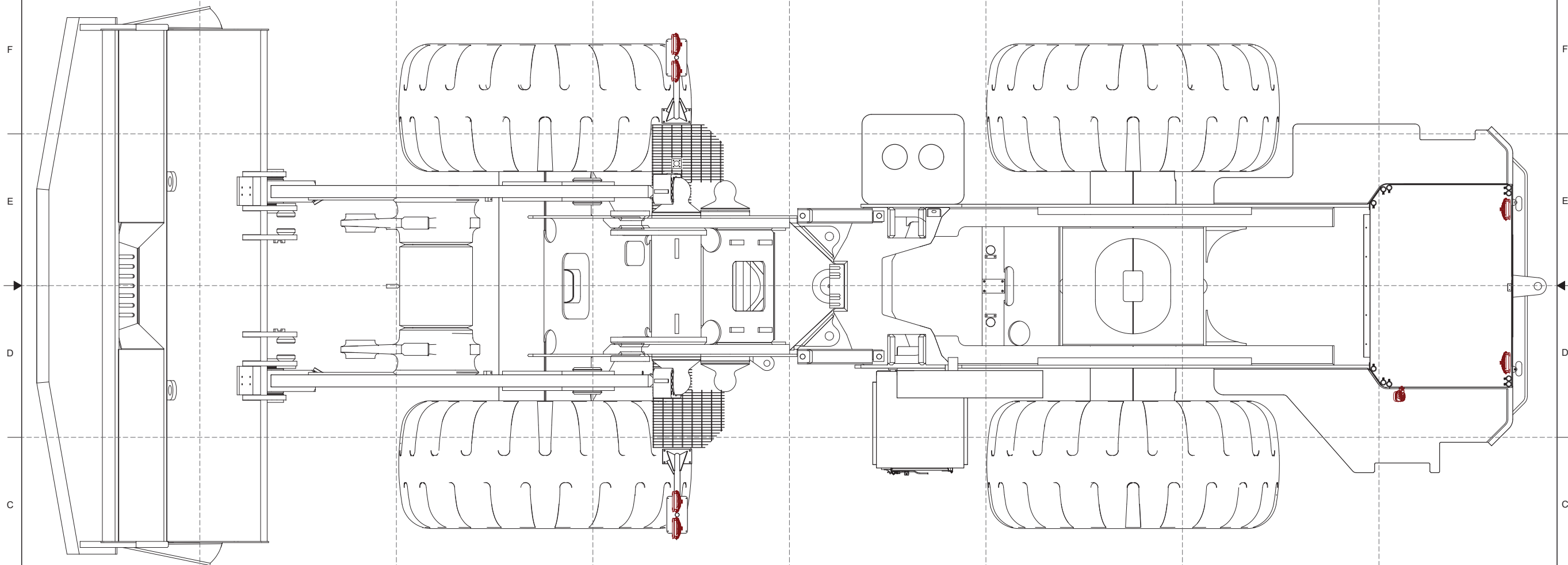
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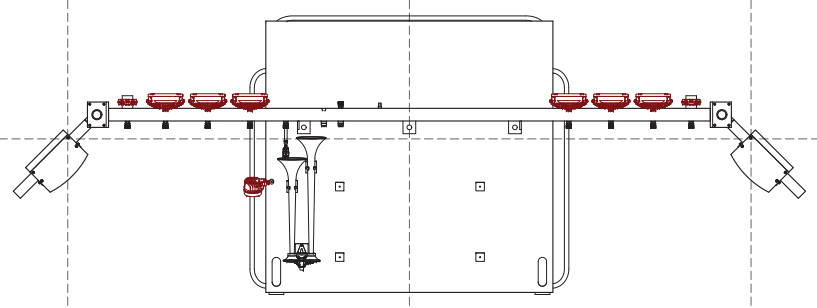
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			REVISIONS				
ZONE	REV	DESCRIPTION	EN	DATE	CHK	CHK	APP
	00	RELEASE	NL11-1011	6-02	FL	BAS	BS
	01	NO CHANGE THIS SHEET	NL12-1909	8-27	FL	BS	BS

# FRAME LOCATION MAP



## CAB & LIGHT BAR LIGHTS



BREAKOUT BOX LOCATIONS	
NAME	LOCATION
PCP1	E5
PCP2	E5
FFR1	D6
FFR2	E6
EST1	D4
RFF1	E4
RFF2	E4
RFF3	E4
RFF4	D4
RFF5	D4
RFM1	D4
RAX1	E3

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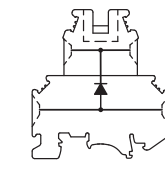
# REFERENCE INFORMATION

REVISIONS							
ZONE	REV	DESCRIPTION	EN	DATE	CHK	CHK	APP
00	00	RELEASE		NL11-1011	6-02	FL	BAS BS
03	01	CHANGE ALL WIRE CODES: SRC1- TO SRC1-		NL12-1909	8-27	FL	BS BS

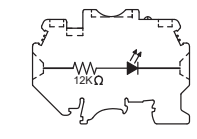
## WIRE LOCATION CHART

WIRE CODE	LINE NO.	WIRE CODE	LINE NO.	WIRE CODE	LINE NO.	WIRE CODE	LINE NO.	WIRE CODE	LINE NO.	WIRE CODE	LINE NO.	WIRE CODE	LINE NO.
0	02110	2B	13119	CAB4-01	05247	EA	13214	FPL1-01	04234	P1-1	03241	RFF3-09	11135
0A	02120	2C	17114	CAB4-02	16108	EB	13215	FPL1-02	04234	P1-2	03239	RFF3-10	05221,11131
0AA	02148	2CA	17114	CAB4-03	05249	EC	13216	FPL1-03	04236	P1-3	03241	RFF3-11	05222,11131
0AB	02144	2D	17121	CAB4-04	16106	ED	13218	FPL1-04	04236	P1-4	03239	RFF3-12	11219
0B	02214	2F	17123	CAB4-05	05251	EE	13219						
0BA	02217	2S	02114,13143,13243,14136,14236	CAB4-06	16124	EF	13220	FPL2-01	04238	P2-1	03246	RFF4-01	11157
0BB	02241					EG	13211	FPL2-02	04238	P2-2	03244	RFF4-02	11159
0BB1	02223			CAB5-01	09108			FPL2-03	04240	P2-3	03246	RFF4-03	11139
0BC	02223			CAB5-02	09112			FPL2-04	04240	P2-4	03244	RFF4-04	10132
0BD	02226	2SA	13147,14138,14238	CAB5-03	09110	EIC1-01	13103,13203,14103,14203	GND-E	13221,13225,13228	P3-1	03251	RFF4-05	06150
0C	10226			CAB5-04	09106	EIC1-02	13108,13208,14108,14208	HVAC1	16110	P3-2	03249	RFF4-06	07307
0D	06103	2SAB	14138,14238	CAB5-05	09104	EIC1-03	14112,14212	HVAC2	16115	P3-3	03251	RFF4-07	10130
0E	06118	2SAC	14141,14241			EIC1-05	13101,13201,14101,14201	HVAC3	16106	P3-4	03249	RFF4-09	11147
0E1	03103	2SAD	14145,14245	CAB9-01	16103	EIC1-09	13110,13210,14110,14210	HVAC4	16108			RFF4-10	05224,06150,10130,11139
0E1A	03103	2SAD	14145,14245	CAB9-02	16108	EIC1-10	13143,13243,14136,14236					RFF4-11	05225,06150,10130,11139
0E1B	03103	2SB	13152,14142,14242	CAB9-03	16105	EIC1-11	05243,13105,13205,14105,14205						
0EA	06118			CAB9-04	16106	EIC1-12	13101,13201,14101,14201						
0F	05107	3B	02205	CAB9-05	16110	EIC2-02	13108	KLZ1-01	10207	RAX1-03	10136	RFF5-01	10140
0FA	05107	4L	13148,13248,14146,14246	CAB9-06	16113	EIC2-03	13109	KLZ1-02	10209	RAX1-05	10134	RFF5-02	07121
0G	05121	4R	13153	CAB9-07	16115	EIC3-01	09125,13140,13240,14133,14233	KLZ1-03	10211	RAX1-07	11114	RFF5-04	07123
0H	02158	460	14108,14208	CAB10-01	16118	EIC3-04	09123,13139,14232	KLZ1-04	10213	RAX1-08	10228	RFF5-05	11223
0JA	04211	461	14110,14210	CAB10-02	16117	EIC3-05	09121,13138,13238,14131,14231	KLZ1-05	10215	RAX1-09	10228	RFF5-07	03221
0JB	04212	462	14112,14212					KLZ1-06	10217	RAX1-10	05234,10134,11114	RFF5-08	03221,11223
0K	04217	463	14114	CSP1-03	05237,11110			KLZ1-07	10219	RAX1-11	05235,10134,11114	RFF5-09	03223
0KA	04217			CSP1-04	11110			KLZ1-08	10236	RAX1-12	10228	RFF5-10	05228,10140
0L	04221	9A	17204,17218	CSP1-05	10103	EST1-01	02132	KLZ1-09	10124			RFF5-11	05229,10140
0LA	04221	9AA	17208	CSP1-07	04215	EST1-02	02128	KLZ1-10	10240	RCL1-01	04257	RFF5-12	03221,11223
0LB	04221	9AA	17208	CSP1-08	04211	EST1-03	02124	KLZ1-11	05241	RCL1-02	04257		
0LC	04225	9AB	17213	CSP1-09	04212	EST1-04	02140	KLZ1-12	10207	RCL1-03	04132	RFM1-01	10109
		9AC	17218	CSP1-10	11250	EST1-07	02130			RCL1-04	04134	RFM1-04	06126
OM	04234	9ACA	17218	CSP1-11	05238,11250	EST1-08	02140	LLC1-01	04211	RCL1-05	04127	RFM1-05	11151
OMA	04234	9ACB	17221	CSP1-12	04212	EST1-09	02126	LLC1-02	04212	RCL1-06	04129	RFM1-06	03255
ON	04238					EST1-10	02124	LLC1-03	04212	RCL1-07	04138	RFM1-07	06152
ONA	04238	9B	17204,17216			EST1-11	02126			RCL1-08	04229	RFM1-08	03257,04225
OP	04242	9BA	17206	CSP2-01	11249	EST1-12	2140	MBR1-01	04125	RCL1-09	04229	RFM1-09	04225
OPA	04242	9BB	17211	CSP2-02	11250	F01	14120,14220	MBR1-02	04125	RCL1-10	04127	RFM1-10	03255,05231,06126,10109,11151
OR	04248	9BC	17216	CSP2-03	11250	FFR1-02	10126	MBR1-03	04242	RCL1-11	04255	RFM1-11	03255,05231,06126,10109,11151
ORA	04248	9CA	17229,17242			FFR1-03	11225	MBR1-04	04242	RCL1-12	04255	RFM1-12	03257,04225
OS	04255	9CAA	17233	D115M	13108	FFR1-04	10128	MBR1-05	04244				
OSA	04255	9CB	17242	D150M	13122	FFR1-06	10226	MBR1-06	04244	RFF1-01	02158	SRC1-01	06203
OT	05247	9CBA	17242	D150R	13124	FFR1-07	11108	MBR1-07	04246	RFF1-03	11149	SRC1-03	06215
OTA	05247	9D	17229,17240	D151	13126	FFR1-08	04221,10226,11225	MBR1-08	04246	RFF1-04	06130	SRC1-04	06207
OTA1	16103	9DA	17231	D240M	13122	FFR1-09	04221	MBR1-09	10203	RFF1-05	11103	SRC1-05	06212
OTA2	16105	9DB	17240	D240R	13128	FFR1-10	05203,10126,11108	MBR1-10	10203	RFF1-06	17129	SRC1-06	06221
OV	05203	ALT	02115,13157,13257,14157,14257	D241M	13125	FFR1-11	05204,10126,11108	MBR1-11	04217	RFF1-07	10138	SRC1-10	06224
OVA	05203			D419	13110	FFR1-12	04221,10226,11225	MBR1-12	04217	RFF1-08	02158,11105,11149	SRC1-11	06226
OVB	05203			D439	13119							SCR1-12	06228
OVC	05206			D440	13134	DCP1-02	03239	MBR2-01	04130	RFF1-10	05215,10138,11149		
OVD	05209			D509	13108	DCP2-01	09154	MBR2-02	04130	RFF1-11	05216,10138,11149	SRC2-01	09139
OVE	05212			D900	13111	DCP2-04	09152	MBR2-03	04248	RFF1-12	02158,11105,11221	SRC2-04	09137
OVF	05215	ALT-FLD	14126,14226	D901	13112	DCP2-05	09150	MBR2-04	04248			SRC2-05	09135
OVG	05218			D953	13109,13127			MBR2-05	04250				
OVH	05221							MBR2-06	04250			S-GND	02113,13144,13244,14134,14234
OVJ	05224	CAB1-01	03103					MBR2-07	04252	RFF2-01	11221		
OW	05228	CAB1-02	03103					MBR2-08	04252	RFF2-02	04227	STR1-01	11240
OWA	05228	CAB1-03	06112					MBR2-09	04144	RFF2-03	17103	STR1-02	11239
OWB	05228	CAB1-04	06113					MBR2-10	04144	RFF2-04	11236	STR1-03	11235
OWC	05231	CAB1-05	03107							RFF2-05	17107		
OWD	05234	CAB1-06	03107							RFF2-06	11238		
OWE	05237	CAB1-09	03206							RFF2-08	04227,10240,11221,17107		
OWF	05240	CAB1-10	03209							RFF2-10	05218,10240,11233,17103		
OX	04203	CAB1-11	03203							RFF2-11	05219,10240,11233,17103		
OY	06215	CAB1-12	03203							RFF2-12	04227,10240,11221,17107		
OZ	03226												
OZA	03228												
02A	11249												
02B	11252												
03	06112												
12V1	06112												
12V2	06112												
13	10226												
13B	02252												
2	02110,13116,13216,14120,14220,17114												
2A	13116,13216												
2AA	13225												
2AAA	13225												
2AAAA	13225												
2AAAB	13233												
2AB	13228												
2AC	13216												
2ACA	13216												
2ACB	13218												

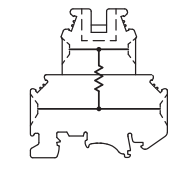
### TB1 DIODE TERMINAL BLOCK (426-4181)



### TB2 ATC FUSE TERMINAL BLOCK (426-4182)



### TB3 RESISTOR TERMINAL BLOCK



#### FUSE LOCATION

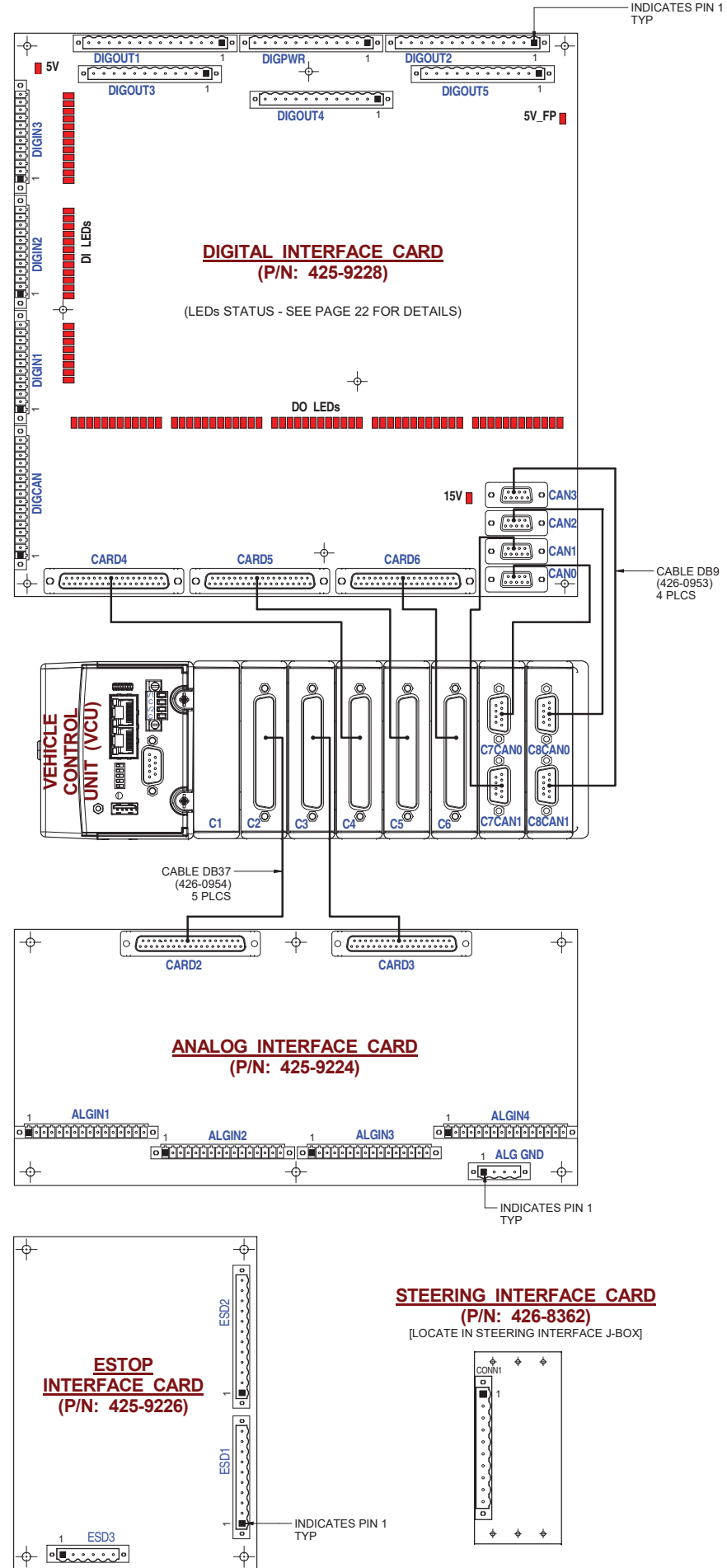
FUSE NUMBER	LOCATION
1-199	(D4)
200-210	(D1)
211-220	(E3)
221-230	(D1)

#### ATC FUSE P/N (USED IN TB2)

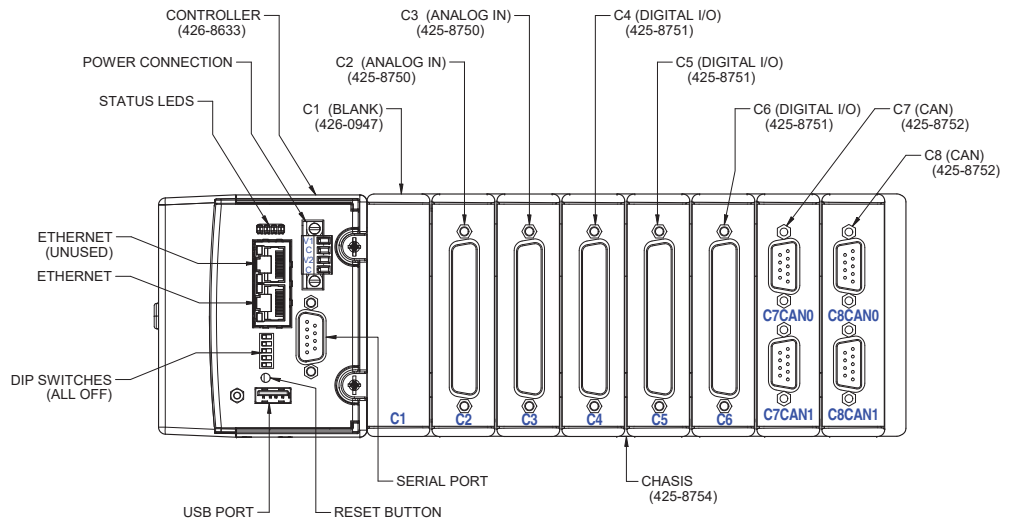
CURRENT RATING	P/N
2A	426-7770
5A	426-5742
10A	426-5743
15A	426-5744
20A	426-5745
25A	426-5746
30A	426-5747

# REFERENCE INFORMATION

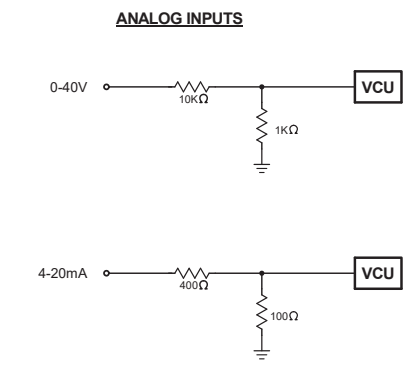
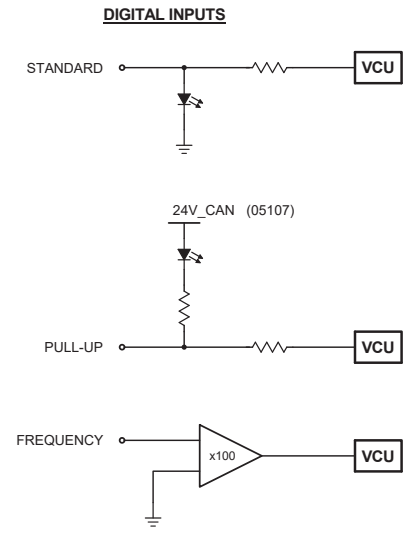
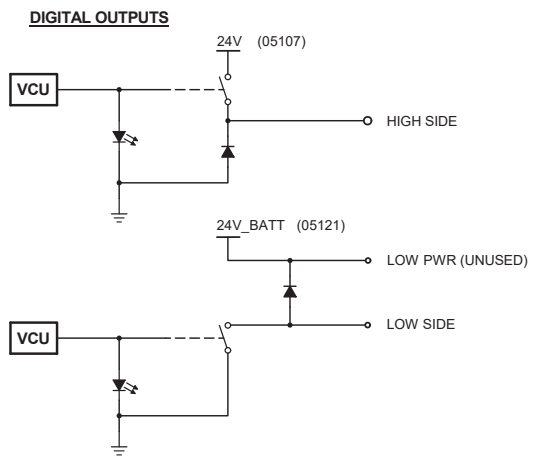
		REVISIONS				
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
	00	RELEASE	NL11-1011	6-02	FL	BAS BS
	01	NO CHANGE THIS SHEET	NL12-1909	8-27	FL	BS BS



## VEHICLE CONTROL UNIT (VCU) COMPONENT IDENTIFICATION



## I/O EQUIVALENT CIRCUITS



REVISIONS		EN	DATE	CHK	APP
00	RELEASE	NL11-1011	6-02	FL	BAS BS
01	NO CHANGE THIS SHEET	NL12-1909	8-27	FL	BS BS

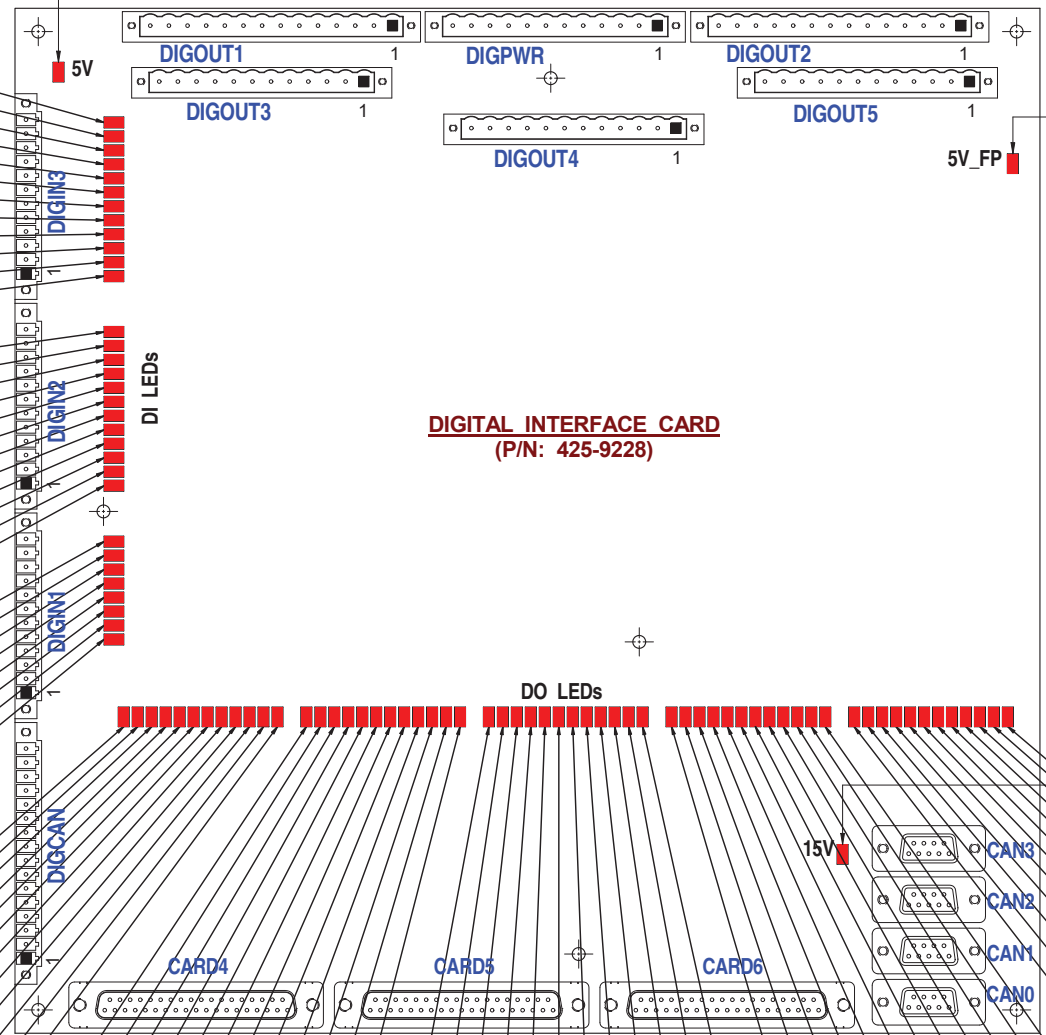
# DIGITAL INTERFACE CARD STATUS LEDs

DI	FUNCTION	LINE #
36	ENGINE RED LAMP	13108, 13208, 14108, 14208
35	HYD RESERVOIR LEVEL SW	11103
34	DRIVE COOL RESERVOIR LEVEL SW	03255
33	ENGINE YELLOW LAMP	13110, 13210, 14110, 14210
32	UNUSED	----
31	FIRE SYSTEM STATUS	02140
30	UNUSED	----
29	ENGINE BLUE LAMP	14112, 14212
28	UNUSED	----
27	RIGHT REAR E-STOP SWITCH	02130
26	LEFT REAR E-STOP SWITCH	02132
25	HYD RESERVOIR E-STOP SW	02128

24	HV CABINET E-STOP SWITCH	02126
23	CAB E-STOP SWITCH	02124
22	LADDER POSITION SWITCH	11250
21	STARTER ISOLATION SWITCH	13143, 13243, 14136, 14236
20	KLENZ ENABLE SWITCH	10103
19	REAR DRIVER LUBE FLOW SWITCH	11114
18	UNUSED	----
17	UNUSED	----
16	UNUSED	----
15	ENGINE SAFETY FILTERS	10109
14	STEER SUPPLY PRESSURE SWITCH	17103
13	UNUSED	----

12	HV CABINET DOOR SWITCH	06203
11	FRONT DRIVER LUBE FLOW SWITCH	11112
10	AUTOLUBE SWITCHES	11108
9	UNUSED	----
8	PARK BRAKE SWITCH	02255
7	KEYSWITCH IGNITION	02208
6	KEYSWITCH CRANK SWITCH	02210
5	UNUSED	----

**DIGITAL INPUTS**  
 DI5 - 32 LED OFF = 0 VDC INPUT LED ON = 24 VDC INPUT  
 DI33 - 36 LED OFF = 24 VDC INPUT LED ON = 0 VDC INPUT



DO	FUNCTION	LINE #
1	UNUSED	----
2	VCU / HMI KEEP ALIVE	02214
3	IGNITION KEEP ALIVE OUTPUT	02203
4	POLE WORK LIGHTS	04103
5	CAB LIGHT BAR LIGHTS	04107
6	UNUSED	----
7	REAR COWL LIGHTS	04111
8	PARK BRAKE INTERLOCK OUTPUT	02249
9	RED ALARM LIGHT	04115
10	YELLOW WARNING LIGHT	04117
11	CAB AUDIBLE ALARM	04119
12	UNUSED	----

25	DUMP PRESS REDUCING SOL	11211
26	UNUSED	----
27	TAIL LIGHTS	04134
28	UNUSED	----
29	HOIST RAISE PILOT SOL	11203
30	BUCKET DUMP PILOT SOL	11209
31	BUCKET ROLL BACK PILOT SOL	11207
32	HOIST LOWER PILOT SOL	11205
33	CLAMSHHELL OPEN PILOT SOL	17141
34	CLAMSHHELL CLOSE PILOT SOL	17143
35	BEACON	04144
36	HORN SOL	10203

37	LEFT TURN SIGNAL	04125
38	RIGHT TURN SIGNAL	04130
39	KLENZ 1 SOL	10207
40	KLENZ 2 SOL	10209
41	KLENZ 3 SOL	10211
42	KLENZ 4 SOL	10213
43	KLENZ 5 SOL	10215
44	KLENZ 6 SOL	10217
45	KLENZ 7 SOL	10219
46	UNUSED	----
47	UNUSED	----
48	AUX STEER ENABLE	17107

49	UNUSED	----
50	OIL COOLER BYPASS SOL	11219
51	AUX FAN ENABLE SOL	17129
52	RADIATOR FAN CONTROL SOL	11221
53	STEER RIGHT OUTPUT	11238
54	ENGINE START CMD	13103, 13203, 14103, 14203
55	UNUSED	----
56	ENGINE IGNITION	13101, 13201, 14101, 14201
57	BLOWER CONTROL SOL	11223
58	BACKUP LIGHTS & ALARM	04138
59	UNUSED	----
60	STEER LEFT OUTPUT	11236

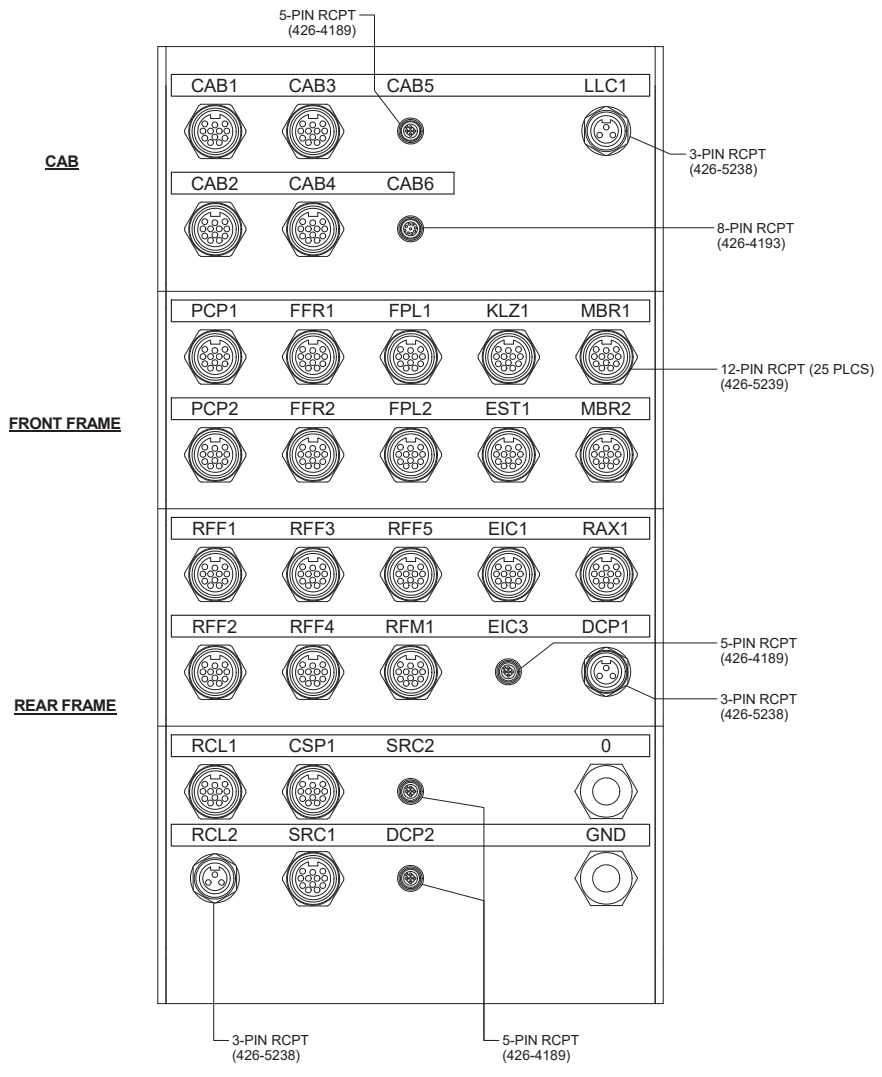
13	UNUSED	----
14	FRONT WASHER PUMP	03221
15	REAR WASHER PUMP	03223
16	PARK BRAKE SWITCH LIGHT	04121
17	FRONT WIPER HIGH	03215
18	FRONT WIPER LOW	03217
19	REAR WIPER LOW OUTPUT	03219
20	UNUSED	----
21	AUTOLUBE SOL	11225
22	FLOAT SOL	11213
23	DIGITAL OUTPUT POWER	02241
24	DRIVE SW POWER OUTPUT	02235

**DIGITAL OUTPUTS**  
 LED OFF = 0% DUTY CYCLE  
 LED ON = >0% DUTY CYCLE  
 (BRIGHTNESS VARIES WITH DUTY CYCLE)

# REFERENCE INFORMATION

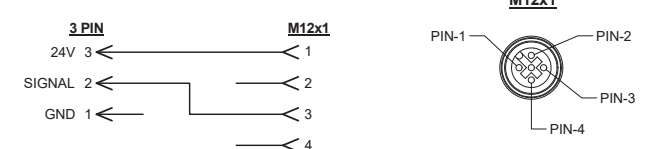
REV		DESCRIPTION	EN	DATE	CHK	CHK	APP
00	RELEASE		NL11-1011	6-02	FL	BAS	BS
01	NO CHANGE THIS SHEET		NL12-1909	8-27	FL	BS	BS

## CONNECTOR IDENTIFICATION BACK PANEL CONNECTOR LOW VOLT CONTROL CABINET (LVCC) (425-8773)

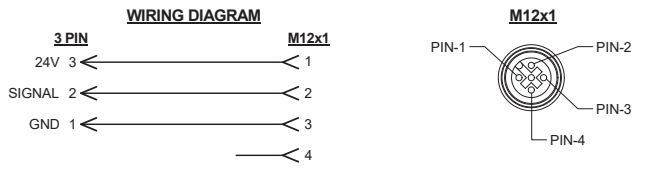


### COMMON CABLES

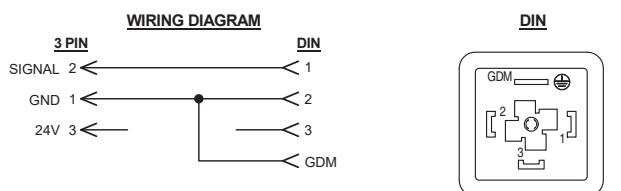
**CABLE 3 PIN - M12x1 (GRAY) (426-5234)**



**CABLE 3 PIN - M12x1 3 CONDUCTOR (YELLOW) (426-7338)**



**CABLE 3 PIN - DIN (YELLOW) (426-5233)**



**FOR ADDITIONAL CABLES SEE:**

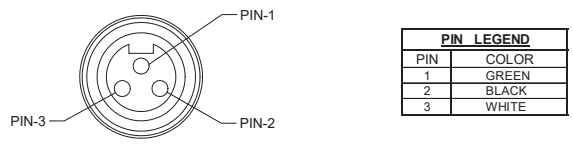
ASSY CAB WITH ELECTRICS 425-8779  
 GP HARNESS FRONT FRAME MACHINE SPECIFIC  
 GP HARNESS REAR FRAME MACHINE SPECIFIC

### CONNECTOR COLOR CODES

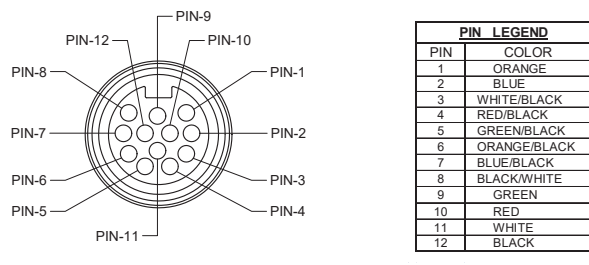
**5 PIN FEMALE CAN RECEPTACLE**



**3 PIN FEMALE RECEPTACLE**



**12 PIN FEMALE RECEPTACLE**



ZONE		REV	DESCRIPTION	EN	DATE	CHK	CHK	APP
00	00	RELEASE		NL11-1011	6-02	FL	BAS	BS
B8	01	RFF3 HST/BCKT PUMP A HARNESS CODE WAS RFF1-J5		NL12-1909	8-27	FL	BS	BS

### BREAKOUT BOXES I/O

### BREAKOUT BOX (426-5235)

#### FFR1

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
FFR1-J1	FFR1-07	AUTO LUBE SWITCHES	FFR1-J2	FFR1-01	UNUSED
FFR1-J3	FFR1-09	MAINTENANCE LIGHT LEFT FRONT	FFR1-J4	FFR1-02	FRONT SERVICE BRAKES XDCR
FFR1-J5	FFR1-03	AUTO LUBE SOL	FFR1-J6	FFR1-04	FRONT PARK BRAKES XDCR
FFR1-J7	FFR1-05	UNUSED	FFR1-J8	FFR1-06	FRONT PARK BRAKES SOL

#### RFF4

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFF4-J1	RFF4-07	SYSTEM AIR PRESS XDCR	RFF4-J2	RFF4-01	HPD GEARBOX TEMP XDCR
RFF4-J3	RFF4-09	RADIATOR FAN PUMP PRESS XDCR	RFF4-J4	RFF4-02	HPD GEARBOX PRESS XDCR
RFF4-J5	RFF4-03	BLOWER PUMP PRESS XDCR	RFF4-J6	RFF4-04	HYD RESERVOIR AIR PRESS XDCR
RFF4-J7	RFF4-05	BLOWER SPEED SENSOR	RFF4-J8	RFF4-06	UNUSED

#### FFR2

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
FFR2-J1	FFR2-07	LIFT ARM POSITION XDCR	FFR2-J2	FFR2-01	MAINTENANCE LIGHT RIGHT FRONT
FFR2-J3	FFR2-09	BELL CRANK TO LIFT ARM XDCR	FFR2-J4	FFR2-02	UNUSED
FFR2-J5	FFR2-03	CLAMSHHELL CYL EXT XDCR (OPT)	FFR2-J6	FFR2-04	UNUSED
FFR2-J7	FFR2-05	FRONT DRIVER LUBE FLOW SWITCHES	FFR2-J8	FFR2-06	UNUSED

#### RFF5

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFF5-J1	RFF5-07	FRONT WASHER PUMP	RFF5-J2	RFF5-01	AMBIENT AIR TEMPERATURE XDCR
RFF5-J3	RFF5-09	REAR WASHER PUMP	RFF5-J4	RFF5-02	L TO R ANGLE (DOZER)
RFF5-J5	RFF5-03	UNUSED	RFF5-J6	RFF5-04	F TO R ANGLE (DOZER)
RFF5-J7	RFF5-05	BLOWER SPEED CONTROL SOL	RFF5-J8	RFF5-06	UNUSED

#### PCP1

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
PCP1-J1	PCP1-07	BUCKET ROLLBACK PILOT SOL	PCP1-J2	PCP1-01	HOIST LOWER PILOT SOL
PCP1-J3	PCP1-09	BUCKET DUMP PILOT SOL	PCP1-J4	PCP1-02	HOIST RAISE PILOT SOL
PCP1-J5	PCP1-03	UNUSED	PCP1-J6	PCP1-04	BUCKET CYL ROD XDCR
PCP1-J7	PCP1-05	UNUSED	PCP1-J8	PCP1-06	UNUSED

#### EST1

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
EST1-J1	EST1-07	RIGHT REAR E-STOP SWITCH	EST1-J2	EST1-01	LEFT REAR E-STOP SWITCH
EST1-J3	EST1-09	HV CABINET E-STOP SWITCH	EST1-J4	EST1-02	HYD RESERVOIR E-STOP SWITCH
EST1-J5	EST1-03	CAB E-STOP SWITCH	EST1-J6	EST1-04	FIRE SYSTEM STATUS
EST1-J7	EST1-05	UNUSED	EST1-J8	EST1-06	UNUSED

#### PCP2

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
PCP2-J1	PCP2-07	GREATEST PILOT CMD XDCR	PCP2-J2	PCP2-01	CLAMSHHELL OPEN PILOT SOL (OPT)
PCP2-J3	PCP2-09	HOIST CYL BASE XDCR	PCP2-J4	PCP2-02	PILOT SUPPLY XDCR
PCP2-J5	PCP2-03	CLAMSEHLL CLOSE PILOT SOL (OPT)	PCP2-J6	PCP2-04	DUMP PRESS REDUCING SOL
PCP2-J7	PCP2-05	HOIST CYL ROD XDCR	PCP2-J8	PCP2-06	FLOAT SOL

#### RAX1

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RAX1-J1	RAX1-07	REAR DRIVER LUBE FLOW SWITCHES	RAX1-J2	RAX1-01	UNUSED
RAX1-J3	RAX1-09	REAR PARK BRAKES SOL	RAX1-J4	RAX1-02	UNUSED
RAX1-J5	RAX1-03	REAR PARK BRAKES XDCR	RAX1-J6	RAX1-04	UNUSED
RAX1-J7	RAX1-05	REAR SERVICE BRAKES XDCR	RAX1-J8	RAX1-06	UNUSED

#### RFF1

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFF1-J1	RFF1-07	KLENZ RESERVOIR AIR XDCR	RFF1-J2	RFF1-01	HYD TANK DUMP SOL
RFF1-J3	RFF1-09	UNUSED	RFF1-J4	RFF1-02	UNUSED
RFF1-J5	RFF1-03	HYD RESERVOIR OIL TEMP XDCR	RFF1-J6	RFF1-04	STEER POSITION XDCR
RFF1-J7	RFF1-05	HYD RESERVOIR LEVEL SWITCH	RFF1-J8	RFF1-06	AUX FAN ENABLE SOL (OPT)

#### RFM1

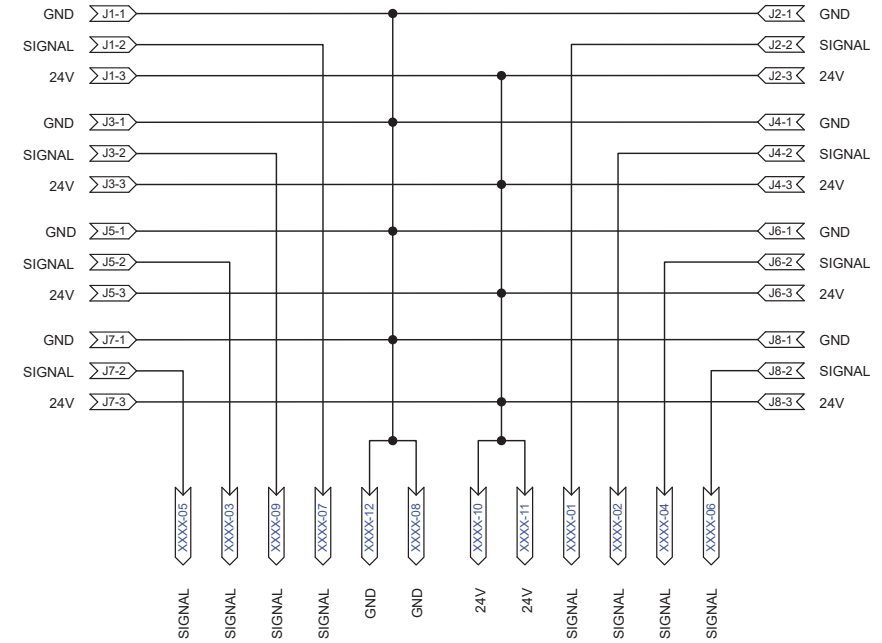
HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFM1-J1	RFM1-07	RADIATOR FAN SPEED SENSOR	RFM1-J2	RFM1-01	ENGINE SAFETY FILTER RESTRICTION
RFM1-J3	RFM1-09	MAINTENANCE LIGHT MIDDLE LEFT	RFM1-J4	RFM1-02	UNUSED
RFM1-J5	RFM1-03	UNUSED	RFM1-J6	RFM1-04	FUEL LEVEL XDCR
RFM1-J7	RFM1-05	AUTO LUBE GREASE XDCR	RFM1-J8	RFM1-06	DRIVE COOL RESERVOIR LEVEL SWITCH

#### RFF2

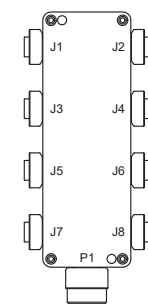
HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFF2-J1	24V ONLY	AIR DRYER HEATER	RFF2-J2	RFF2-01	RADIATOR FAN CONTROL SOL
RFF2-J3	RFF2-09	UNUSED	RFF2-J4	RFF2-02	MAINTENANCE LIGHT MIDDLE RIGHT
RFF2-J5	RFF2-03	* AUX STEER SUPPLY PRESS SWITCH (OPT)	RFF2-J6	RFF2-04	STEER LEFT OUTPUT
RFF2-J7	RFF2-05	* AUX STEER ENABLE (OPT)	RFF2-J8	RFF2-06	STEER RIGHT OUTPUT

#### RFF3

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFF3-J1	RFF3-07	HOIST/BUCKET PUMP C XDCR	RFF3-J2	RFF3-01	ACCESSORY PUMP XDCR
RFF3-J3	RFF3-09	HOIST/BUCKET PUMP B XDCR	RFF3-J4	RFF3-02	STEER PUMP A XDCR
RFF3-J5	RFF3-03	HOIST/BUCKET PUMP A XDCR	RFF3-J6	RFF3-04	STEER PUMP B XDCR
RFF3-J7	RFF3-05	FAST HOIST PUMP XDCR	RFF3-J8	RFF3-06	HYD OIL COOLER BYPASS SOL



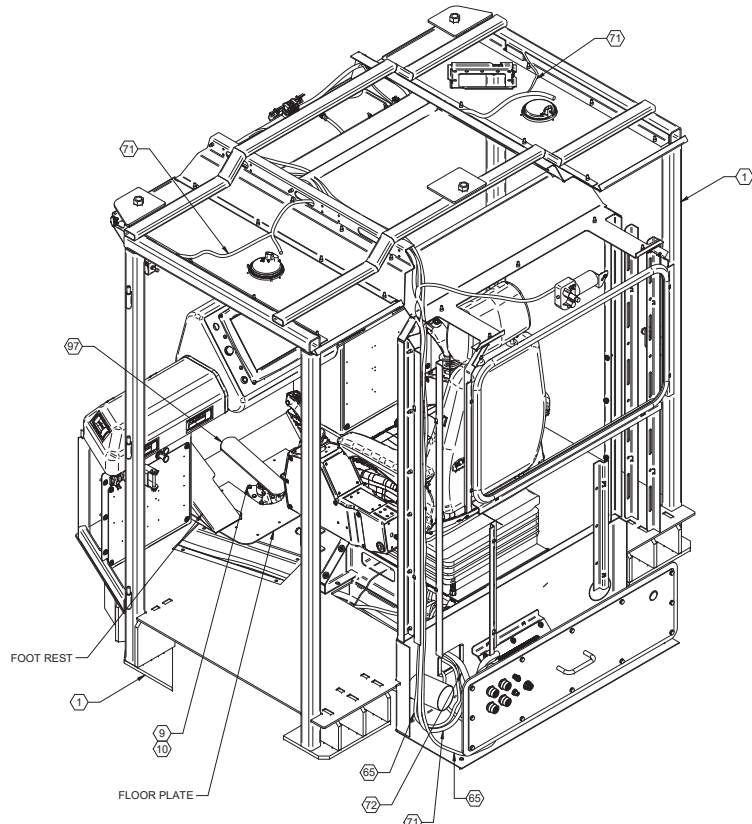
XXXX: HARNESS NAME / WIRE CODE



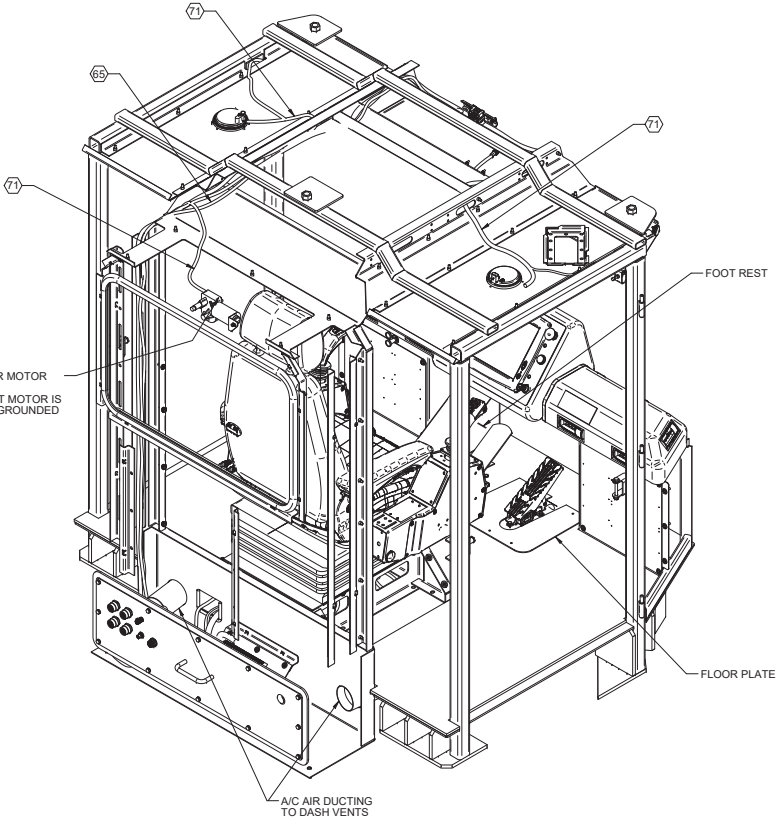
# **Cab Wiring Diagram LINCS II**



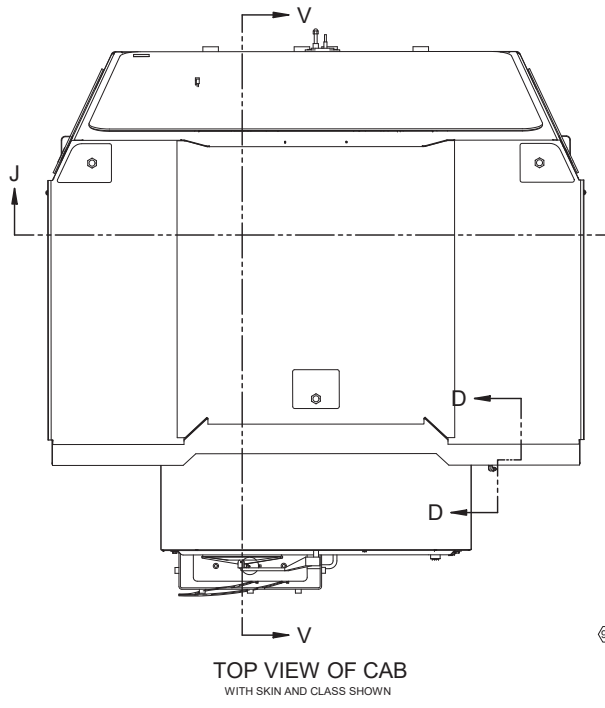
REVISIONS						
DATE	REV	DESCRIPTION	ENR	DATE	CHK	APP
B2 E2	03	ITEM 19 WAS PIN 4266755; ITEM 67 WAS PIN 4265212 IN BOM				
E2	03	ITEM 64 WAS PIN 4266253 IN BOM	1329391	7-20-16	JFM	KD JS



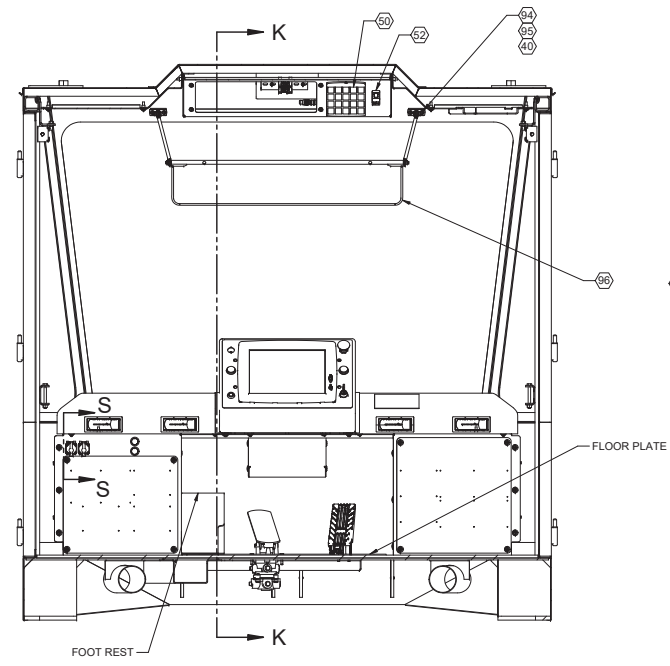
REAR WIPER MOTOR  
NOTE:  
VERIFY THAT MOTOR IS  
PROPERLY GROUNDED



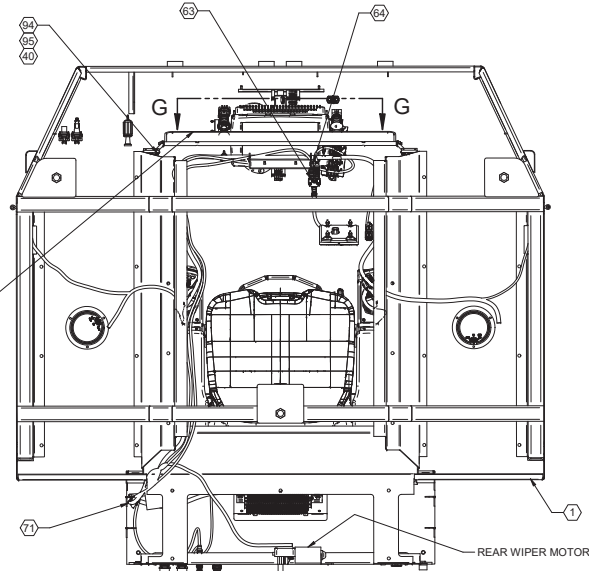
106	4240201	1	WEDGE W3S DEUTSCH
105	4240200	3	SOCKET CONTACT, SIZE 16, GOLD PL
104	4240202	1	PLUG DT06-3S DEUTSCH
103	4240205	3	CONTACT PIN SIZE 16
102	4240206	1	WEDGE W3P DEUTSCH
101	4240204	1	RECEPTACLE DT04-3P DEUTSCH
100	4153882	2	SEALING PLUG #12-16 AWG
99	4274391	1	ASSY AIR BLOW GUN G2
98	4020763	1	90ADPT 1/4MX1/4MJ BULKHEAD
97	4274390	1	ASSY DUAL BRAKE VALVE
96	4116716	1	SUN VISOR ASSEMBLY 6 x 30
95	4012631	4	MSCR PH #10 .438 NF
94	0810880	4	WASHER FLAT .219 .50 .07
93	4270334	1	KIT WINDSHIELD WASHER 10 LITER
92	4266246	1	CABLE EXT CAN 0.5M
91	4270206	20	FERRULE INSUL 14AWG .315LG INSERT BLUE
90	4270205	91	FERRULE INSUL 16AWG .315LG INSERT BLK
89	4228722	1	MARKER DIN TERM BLOCK#21-230
88	4228723	1	MARKER DIN TERM BLOCK#231-240
87	4228710	1	MARKER DIN TERM BLOCK#101-110
86	4266258	1	CODE SHEET CAB LNC'S 2
85	4228711	1	MARKER DIN TERM BLK #111-120
84	4228712	1	MARKER DIN TERM BLOCK#121-130
83	4228713	1	MARKER DIN TERM BLOCK#131-140
82	4228721	1	MARKER DIN TERM BLOCK#211-220
81	4228720	1	MARKER DIN TERM BLOCK#201-210
80	4266261	1	LABELS LINC'S II CAB DASH
79	4228700	2	MARKER DIN TERMINAL BLOCK #1-10
78	4185765	1	WEDGE LOCK, RECEPTACLE
77	4185764	2	SOCKET CONTACT, SIZE 16
76	4185763	10	PIN CONTACT, SIZE 16
75	4185761	1	RECEPTACLE 12 WAY
74	4212588	4.0	WIRE HOOKUP #18 AWG 1000V RED/WHT
73	4120401	34	CABLE #16 AWG EXANE DLO 600 VAC
72	4268381	1	HARNES CAB LOWER
71	4268380	1	HARNES CAB UPPER
70	4274679	1	CAT5e PATCH CABLE 3 FT
69	4274677	1	CAT5e PATCH CABLE 10 FT
68	4259325	15	CONDUIT SLIT LOOM 1/4 INCH
67	4286141	1	CABLE USB 3.0 A MALE-A MALE 2M
66	4239844	1	COM PORT ADAPTER
65	4265838	2	CABLE EXT CAN 4.3M
64	4286130	1	CAN Y MALE - 2 FEM TURCK
63	4267774	1	CABLE KEYPAD LINC'S II
62	4268538	1	CABLE RJ11 - OPEN 3M
61	4268346	REF	CABLE USB TOUCH SCREEN 5M
60	4268348	1	CABLE VIDEO DVI-A M TO HD15 M 3m
59	4264192	1	RCPT E-NET MALE-RJ45/2M
58	4266255	2	RCPT CAN FEED THRU
57	4048966	7	CONDUIT SEAL RING .500
56	4265238	1	RCPT 3 PIN FEM/3M 1/2-14NPT
55	4265239	1	RCPT 12 PIN FEM/3M 1/2-14NPT
54	4265839	1	RECEPTACLE 3 PIN MALE 5M
53	4264983	4	RECP 12 PIN MALE/4M 1/2-14NPT
52	4270329	1	ROCKER SWITCH 15A 24V
51	4268321	4	NUT LOCK NYL INS M5
50	4264118	1	KEYPAD CAN LINC'S II
49	4265750	1	SWITCH NETWORK 4-PORT
48	4266266	19	BRIDGE FIXED PHOENIX FB10-6
47	4228656	12	PLATE SEPARATING PHOENIX TS-KK3
46	4264184	1	TERM BLK COVER PHOENIX 27 71 02 3
45	4265756	7	BRACKET END PHOENIX 08 00 88 6
44	4264180	29	TERM BLK GRAY PHOENIX 27 71 14 6
43	4228646	2	TERM BLOCK 2 TERM #24 - 10 AWG DIN GND
42	4264183	3	TERM BLK GND PHOENIX 27 74 21 1
41	4227190	6	TERM BLOCK 1-2 TERM #10 AWG
40	4010907	10	WASHER LOCK SPR. 190 .334 .047
39	4010283	6	MSCR PH #10 .500 NF
38	4238908	1	RAIL MOUNTING 6 INCH LG DIN
37	4268563	1	TERMINAL MARKERS CAB
36	4251863	2	RAIL MOUNTING 11.00 LONG DIN
35	4094849	1	ALARM ELECTRONIC
31	4270330	1	KEY SWITCH ASSEMBLY
30	4265193	1	OPERATOR PUSH PULL AMBER NC
29	4274443	1	E-STOP SWITCH 22MM
28	4240171	1	LIGHT ASSY YELLOW LED SUPERBRIGHT
27	4240170	1	LIGHT ASSY RED LED SUPERBRIGHT
26	4239848	1	READ HEAD/BUTTON
25	0819904	4	WASH LK STL #8
24	4012415	4	MSCR PH #8-32 UNC X 1.00
23	4265199	1	SCREEN TOUCH LINC'S II
22	4010905	8	WASHER LOCK SPR #4
21	4245454	8	MSCR PH #4 .500 NC SS
20	4240483	2	NUT PLATE - SHELL SIZE 18
19	4286140	1	RCPT USB-A W/CAP
18	4265754	1	RCPT ETHERNET W/CAP
17	4100796	2	LIGHTER 12V
16	0814157	2	BOLT HX .250 1.000 NC G8
15	4259998	1	ACCELERATOR PEDAL 35" FIXED
13	4010922	3	WASHER FLAT .188 .44 .07
12	0184949	3	WASHER STAR EXT #8
11	0989217	3	SCREW PH #8-32 UNC-2A x 5/8LG
10	0213584	9	WASHER LOCK SPR .25 .49 .06
9	4009612	7	BOLT HX .250 1.250 NC G8
8	4266271	1	MOUNT HMI UNO
7	4270183	1	HMI WITH SOFTWARE
6	0753123	4	WASHER LOCK SPR .375 .68 .09
5	0808221	4	WASHER FLAT .375 .81 .08
4	0812921	4	NUT HX 0.375-16UNC-2B G8 PL
3	0808476	4	BOLT HX .375 1.250 NC G8
2	4267775	1	ASSY SEAT LINC'S II
1	4274711	1	CAB W/FLOORPLATE & FOOTREST-G2



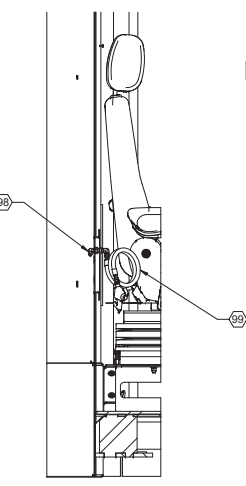
TOP VIEW OF CAB  
WITH SKIN AND GLASS SHOWN



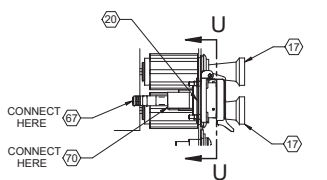
SECTION J-J



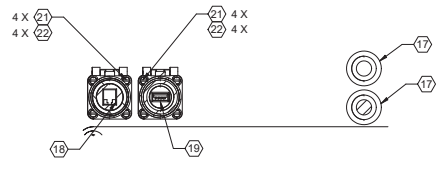
TOP VIEW OF CAB  
WITHOUT SKIN AND GLASS SHOWN



SECTION D-D



SECTION S-S  
1:2



SECTION U-U  
1:2

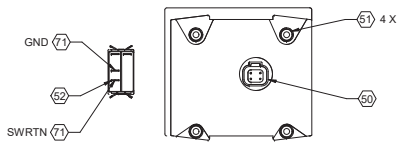
112	4274642	1	PANEL, DISPLAY MNT LINC'S II TOUCH SCREEN
111	4019420	2	WIRE TERM RT 16-14 .25 INS (BLU)
110	0508807	1	WASHER LOCK EXT .256 .51 .03
109	4105645	1	NUT HEX, 1/4-20 UNC-2B SS
108	4105637	1	BOLT HX .250 .500 NC SS
107	4274680	1.5	SELF-GRIPPING VINYL EDGE

UNLESS OTHERWISE SPECIFIED:  
- DIMENSIONS ARE IN INCHES & APPLY BEFORE PLATING OR FINISH COATINGS  
- TOLERANCES ON: FRACTIONS .1" ±.016 ANGLES .1° ±.016 XX DECIMAL ±.03 XXX DECIMAL ±.015  
- MACHINED CORNERS: R54 X .45  
- WELD PROPERTIES SHALL MEET THE MINIMUM REQUIREMENTS OF THE BASE MATERIAL.  
THIRD ANGLE PROJECTION

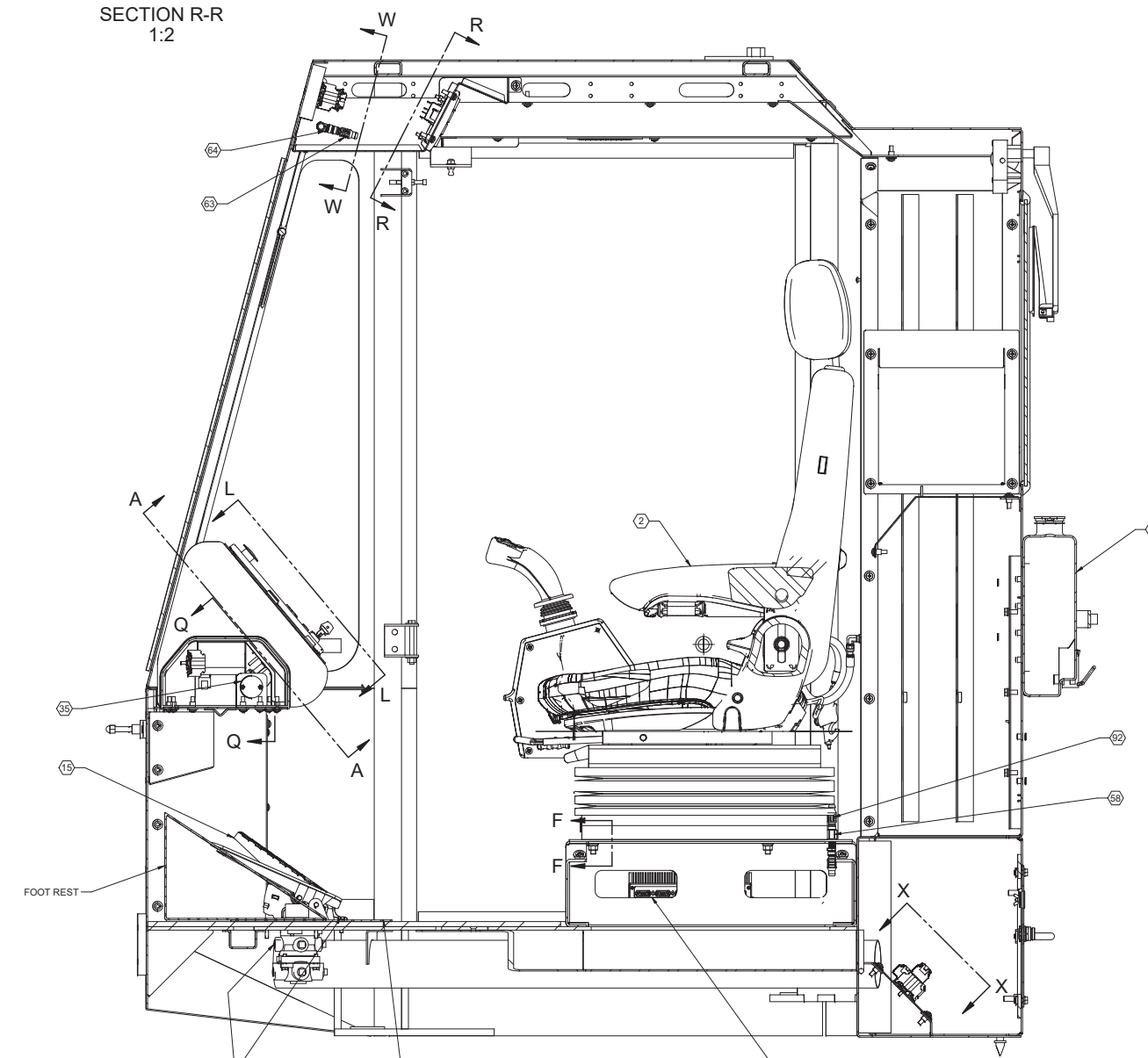
DATE	BY	CHK	ENGR	PROJ ENGR	PROJ APPROVAL	MATL
5-21-12	J. MARTIN		B. SHAFER	B. SHAFER		
5-21-12			B. SHAFER			

**LeTourneau Technologies™**  
**GP CAB WITH ELECTRICS**  
E DO NOT SCALE 4274640 03  
SCALE 1/8 DATE 2413.6 BOM SHEET 1 OF 5

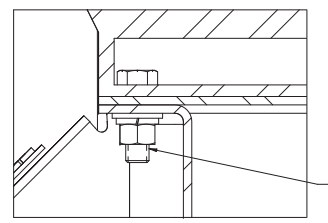
REVISIONS				EN	DATE	CHK	CHK	APP
ZONE	REV	DESCRIPTION		EN	DATE	CHK	CHK	APP
03		NO CHANGE THIS SHEET		1329391	7-20-16	JFM	KD	JS



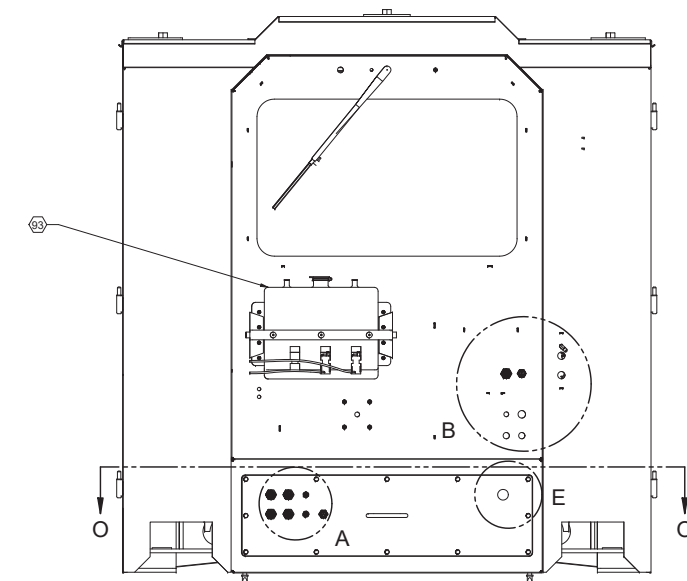
SECTION R-R  
1:2



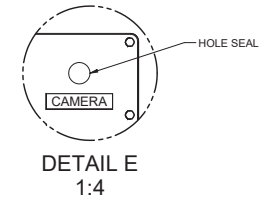
SECTION V-V  
1:4  
FROM TOP VIEW ON SHEET 1



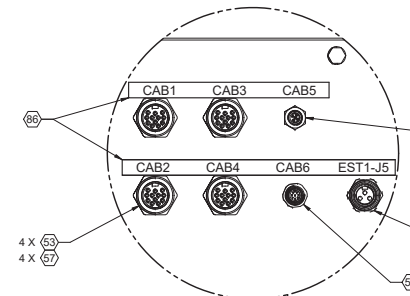
SECTION F-F  
1:1



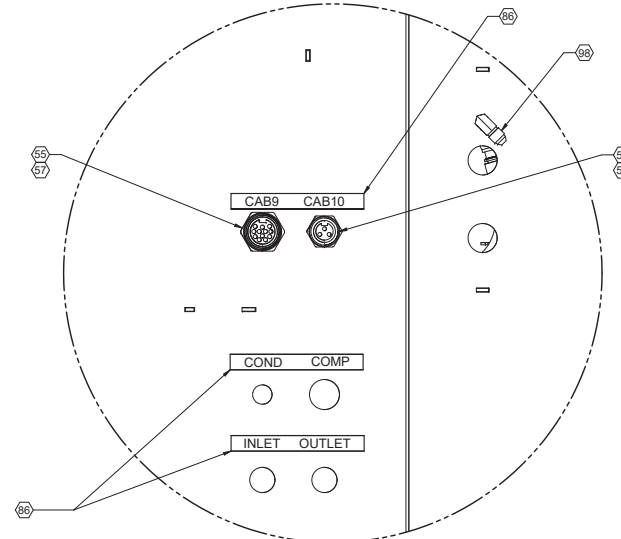
BACK VIEW OF CAB



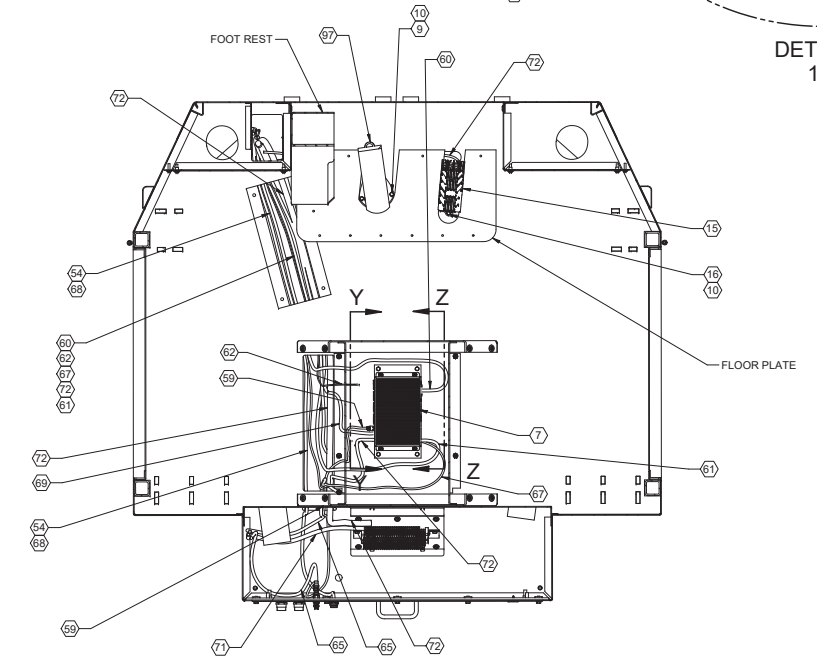
DETAIL E  
1:4



DETAIL A  
1:2



DETAIL B  
1:2



SECTION O-O

GP CAB WITH ELECTRICS		SCALE	1/8	DATE	5-21-12	DESIGNER	J. MARTIN	NO. OF SHEETS	2 OF 5
E		DO NOT SCALE							
4274640									
03									

8

7

6

5

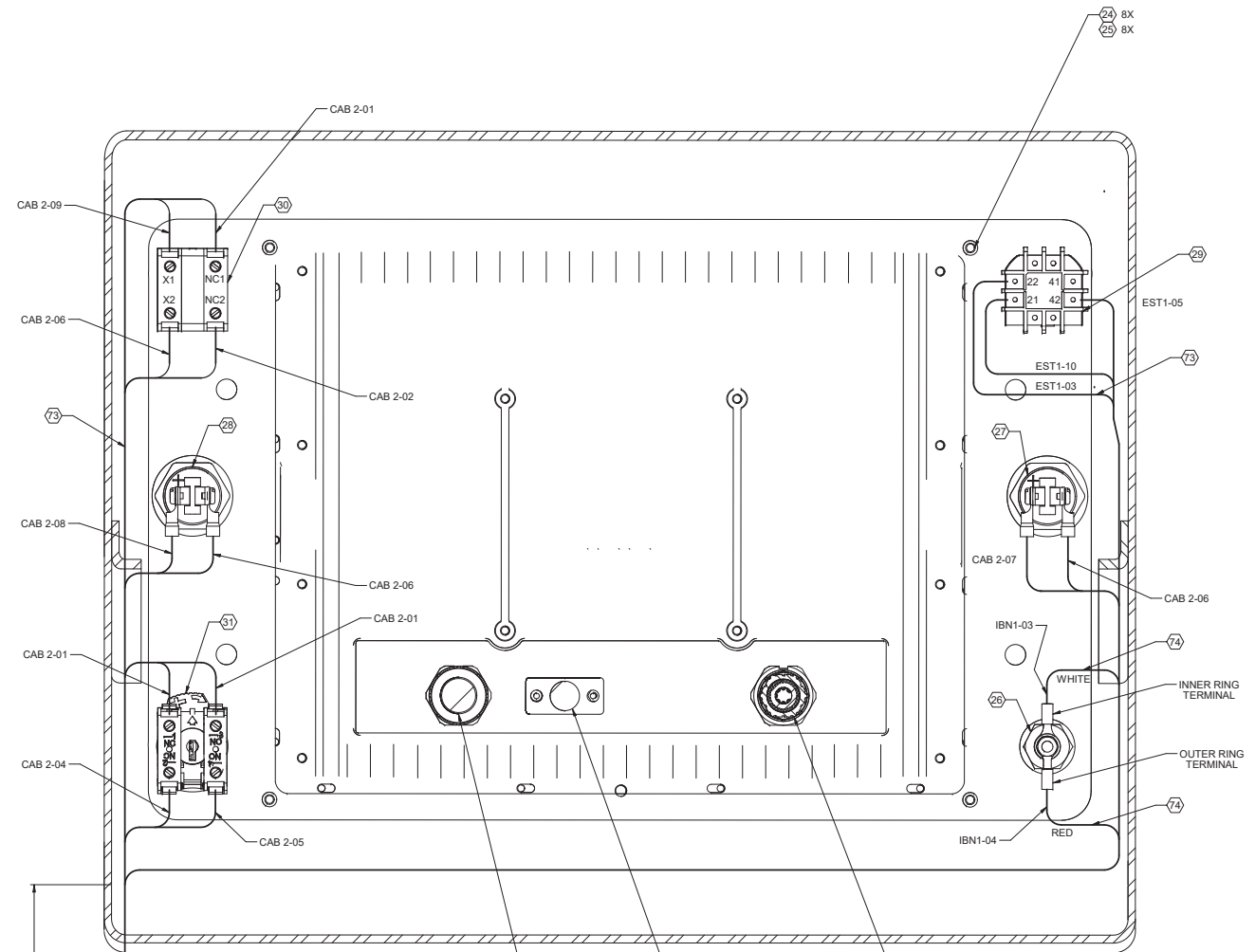
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3

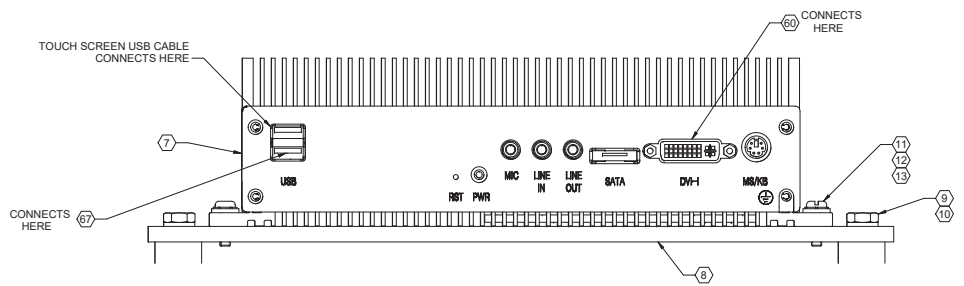
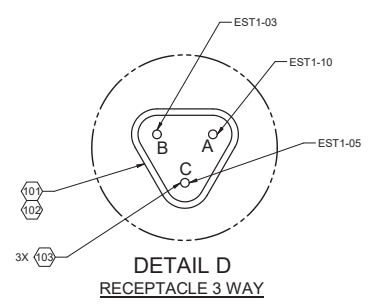
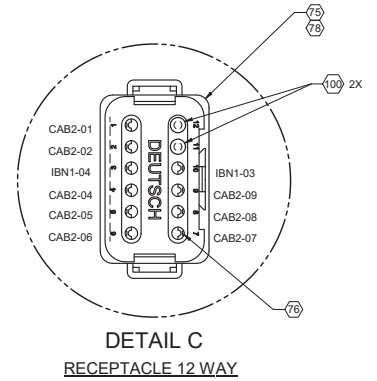
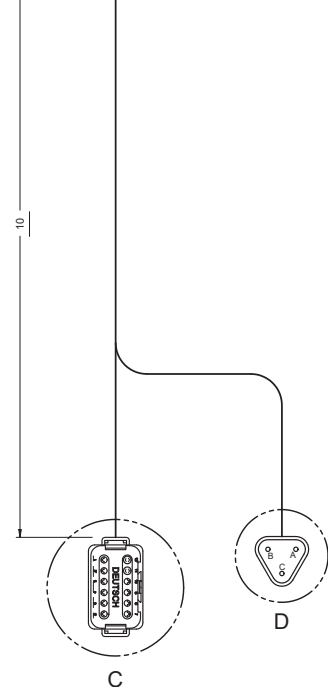
2

1

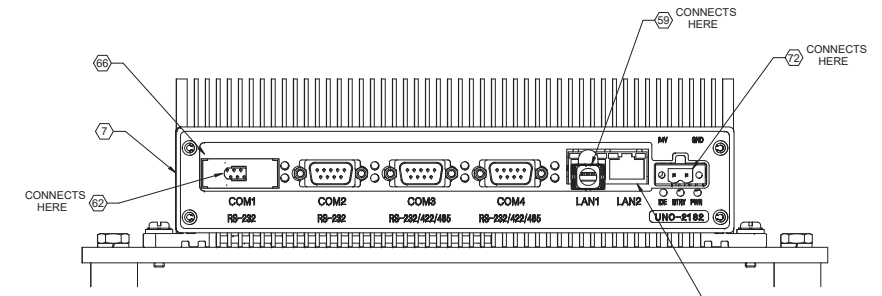
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ZONE	REV	DATE	CHK	DATE	CHK	CHK	APP	
03			NO CHANGE THIS SHEET	1329391	7-20-16	JFM	KD JS	



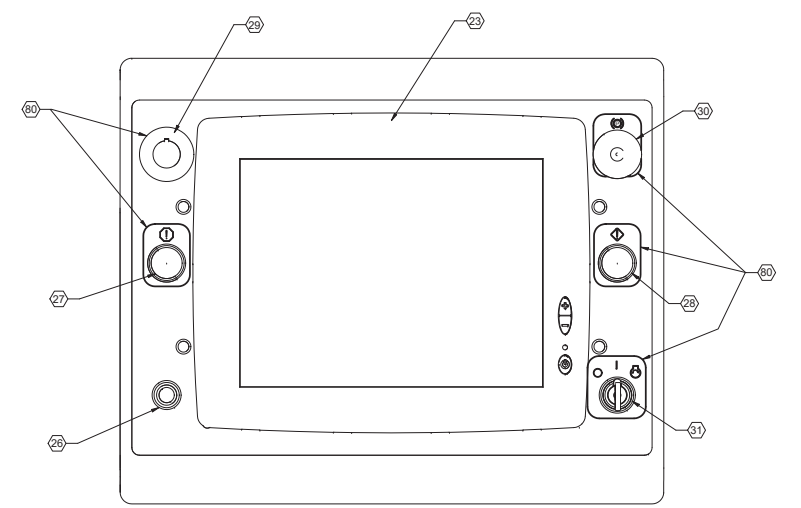
**SECTION A-A**  
1:1  
FROM SECTION V-V SHEET 2  
DASH CENTER CONSOLE WIRING  
REAR VIEW



**SECTION Z-Z**  
1:1  
FROM SECTION V-V SHEET 2

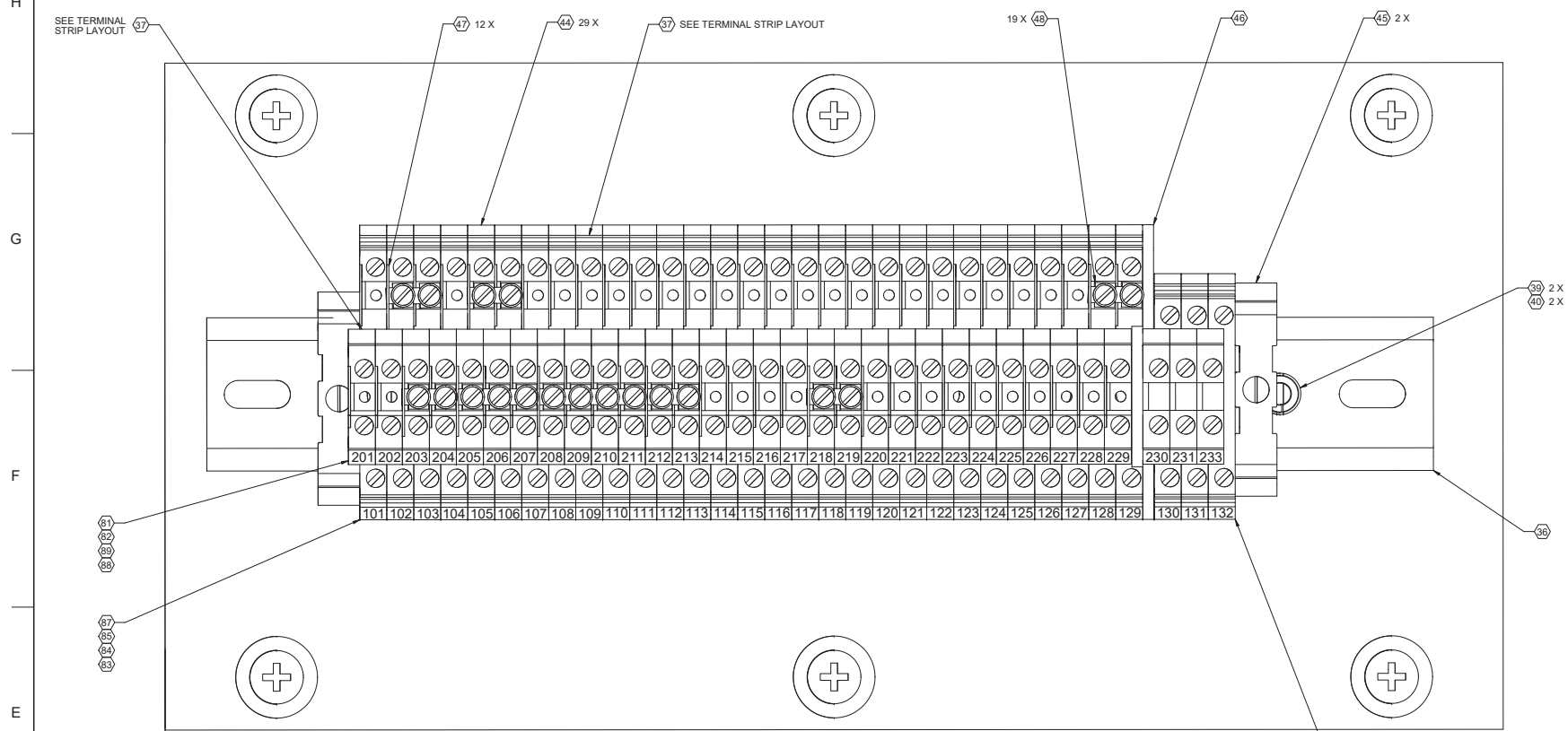


**SECTION Y-Y**  
1:1  
FROM SECTION V-V SHEET 2



**SECTION L-L**  
1:2  
FROM SECTION V-V SHEET 2  
DASH CENTER CONSOLE FRONT VIEW

REVISIONS						
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
03		NO CHANGE THIS SHEET	1329391	7-20-16	JFM	KD JS



**SECTION X-X**  
2:1  
FROM SECTION V-V SHEET 2  
REAR DIN RAIL COMPONENTS

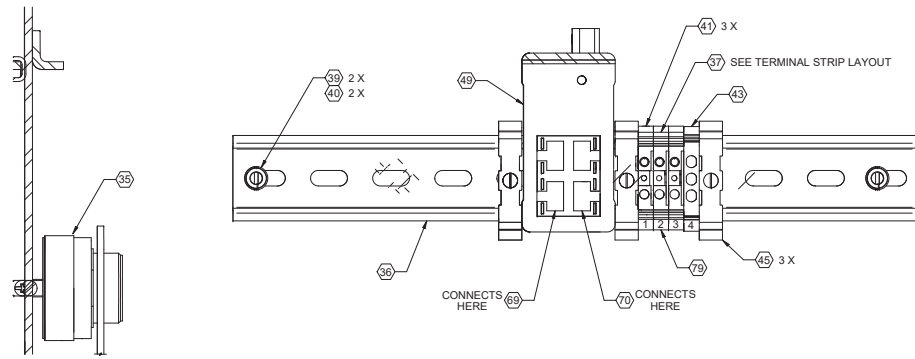
TURCK12 AND 3 PIN CONNECTORS		
CONNECTOR-PIN	WIRE COLOR	DESTINATION TERMINAL BLOCK
CAB1-01	ORN	101-L
CAB1-02	BLU	104-L
CAB1-03	WHT/BLK	208-L
CAB1-04	RED/BLK	209-L
CAB1-05	GRN/BLK	102-L
CAB1-06	ORN/BLK	105-L
CAB1-07	BLU/BLK	107-L
CAB1-08	BLK/WHT	108-L
CAB1-09	GRN	109-L
CAB1-10	RED	110-L
CAB1-11	WHT	111-L
CAB1-12	BLK	112-L
CAB2-01	ORN	113-L
CAB2-02	BLU	114-L
CAB2-03	WHT/BLK	115-L
CAB2-04	RED/BLK	116-L
CAB2-05	GRN/BLK	117-L
CAB2-06	ORN/BLK	118-L
CAB2-07	BLU/BLK	119-L
CAB2-08	BLK/WHT	120-L
CAB2-09	GRN	121-L
CAB2-10	RED	122-L
CAB2-11	WHT	123-L
CAB2-12	BLK	124-L
CAB3-01	ORN	201-L
CAB3-02	BLU	202-L
CAB3-03	WHT/BLK	203-L
CAB3-04	RED/BLK	205-L
CAB3-05	GRN/BLK	210-L
CAB3-06	ORN/BLK	204-L
CAB3-07	BLU/BLK	206-L
CAB3-08	BLK/WHT	211-L
CAB3-09	GRN	212-L
CAB3-10	RED	214-L
CAB3-11	WHT	215-L
CAB3-12	BLK	216-L
CAB4-01	ORN	217-L
CAB4-02	BLU	218-L
CAB4-03	WHT/BLK	220-L
CAB4-04	RED/BLK	221-L
CAB4-05	GRN/BLK	222-L
CAB4-06	ORN/BLK	223-L
CAB4-07	BLU/BLK	224-L
CAB4-08	BLK/WHT	225-L
CAB4-09	GRN	226-L
CAB4-10	RED	227-L
CAB4-11	WHT	228-L
CAB4-12	BLK	229-L
CAB9-01	ORN	217-R
CAB9-02	BLU	218-R
CAB9-03	WHT/BLK	220-R
CAB9-04	RED/BLK	221-R
CAB9-05	GRN/BLK	128-R
CAB9-06	ORN/BLK	129-R
CAB9-07	BLU/BLK	127-L
CAB9-08	BLK/WHT	NC
CAB9-09	GRN	NC
CAB9-10	RED	NC
CAB9-11	WHT	NC
CAB9-12	BLK	NC
CAB10-1	GRN	219-L
CAB10-2	BLK	127-R
CAB10-3	WHT	NC

LOWER HARNESS		UPPER HARNESS	
WIRE CODE	DESTINATION TERMINAL BLOCK	WIRE CODE	DESTINATION TERMINAL BLOCK
CAB1-01	101-R	CAB3-01	201-R
CAB1-02	104-R	CAB3-02	202-R
CAB1-05	102-R	CAB3-09	213-R
CAB1-06	105-R	0D	204-R
CAB1-07	107-R	0EA	206-R
CAB1-08	108-R	12V2	211-R
CAB1-09	109-R	GND	132-R
CAB1-10	110-R		
CAB1-11	111-R		
CAB1-12	112-R		
CAB2-01	113-R		
CAB2-02	114-R		
CAB2-03	115-R		
CAB2-04	116-R		
CAB2-05	117-R		
CAB2-06	118-R		
CAB2-07	119-R		
CAB2-08	120-R		
CAB2-09	121-R		
CAB3-10	214-R		
CAB3-11	215-R		
CAB3-12	216-R		
0D	203-R		
0EA	205-R		
12V2	208-R		
12V2	209-R		
12V2	210-R		
GND	130-R		
GND	131-R		

AC HARNESS	
WIRE COLOR	DESTINATION TERMINAL BLOCK
RED	222-R
BLK	223-R
LT GRN	128-L

EST1-J5 CONNECTOR *		
CONNECTOR-PIN	WIRE COLOR	DESTINATION 3PN CONNECTOR-ITEMS 104, 105 & 106
EST1-05	GRN	PN C
EST1-03	BLK	PN B
EST1-10	WHT	PN A

\* CUT WIRES TO LENGTH NEEDED TO MATE WITH 3 PIN CONNECTOR ITEM 101 FROM THE E-STOP SWITCH.



**SECTION Q-Q**  
1:1  
FROM SECTION V-V SHEET 2  
DASH DIN RAIL COMPONENTS

**12 PIN DEUTSCH CONNECTOR ON LOWER HARNESS**

- NOTES:
- 1) REMOVE WEDGE FROM 12 PIN DEUTSCH CONNECTOR ON LOWER HARNESS
  - 2) CRIMP PINS (ITEM 77) TO WIRES SHOWN ABOVE & LABEL APPROPRIATELY
  - 3) REMOVE PLUGS FROM UNUSED HOLES 3 & 10
  - 4) INSTALL PINS IN CORRECT HOLES AS SHOWN ABOVE
  - 5) REINSTALL THE WEDGE ON THE 12 PIN DEUTSCH CONNECTOR

**NOTE:**  
SEE TERMINAL BLOCK TORQUE SPECIFICATIONS CHART PRIOR TO INSTALLING WIRES IN THE TERMINAL BLOCKS.

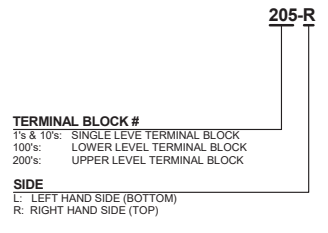
TORQUE SPECIFICATIONS CHART					
ITEM NO.	LT/PIN	MIN TORQUE (lb in)	MAX TORQUE (lb in)	MIN TORQUE (Nm)	MAX TORQUE (Nm)
41	4227190	5.3	7.1	0.6	0.8
42	4264183	5.3	7.1	0.6	0.8
43	4228646	5.3	7.1	0.6	0.8
44	4264180	5.3	7.1	0.6	0.8

TERMINAL STRIP LAYOUT			
LOWER LEVEL		UPPER LEVEL	
TERMINAL BLOCK #	LABEL	TERMINAL BLOCK #	LABEL
101	CAB1-01	201	CAB3-01
102	CAB1-05	202	CAB3-02
103	CAB1-05	203	0D
104	CAB1-02	204	0D
105	CAB1-06	205	0EA
106	CAB1-06	206	0EA
107	CAB1-07	207	0EA
108	CAB1-08	208	12V2
109	CAB1-09	209	12V2
110	CAB1-10	210	12V2
111	CAB1-11	211	12V2
112	CAB1-12	212	CAB3-09
113	CAB2-01	213	CAB3-09
114	CAB2-02	214	CAB3-10
115	CAB2-03	215	CAB3-11
116	CAB2-04	216	CAB3-12
117	CAB2-05	217	0TA1
118	CAB2-06	218	HVAC4
119	CAB2-07	219	HVAC4
120	CAB2-08	220	0TA2
121	CAB2-09	221	HVAC3
122	CAB2-10	222	CAB4-05
123	CAB2-11	223	CAB4-06
124	CAB2-12	224	CAB4-07
125		225	CAB4-08
126		226	CAB4-09
127	HVAC2	227	CAB4-10
128	HVAC1	228	CAB4-11
129	HVAC1	229	CAB4-12
130		230	
131		231	
132		232	

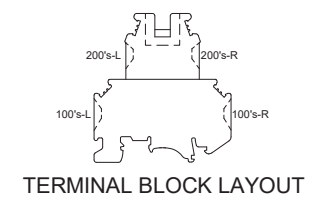
LOWER CONSOLE		UPPER CONSOLE	
1	0D	1	0D
2	0EA	2	0EA
3	12V2	3	12V2
4		4	

H  
G  
F  
E  
D  
C  
B  
A

**LEGEND**



- [ ] : TERMINAL BRIDGE
- - : SEPERATING PLATE
- : SPACER COVER



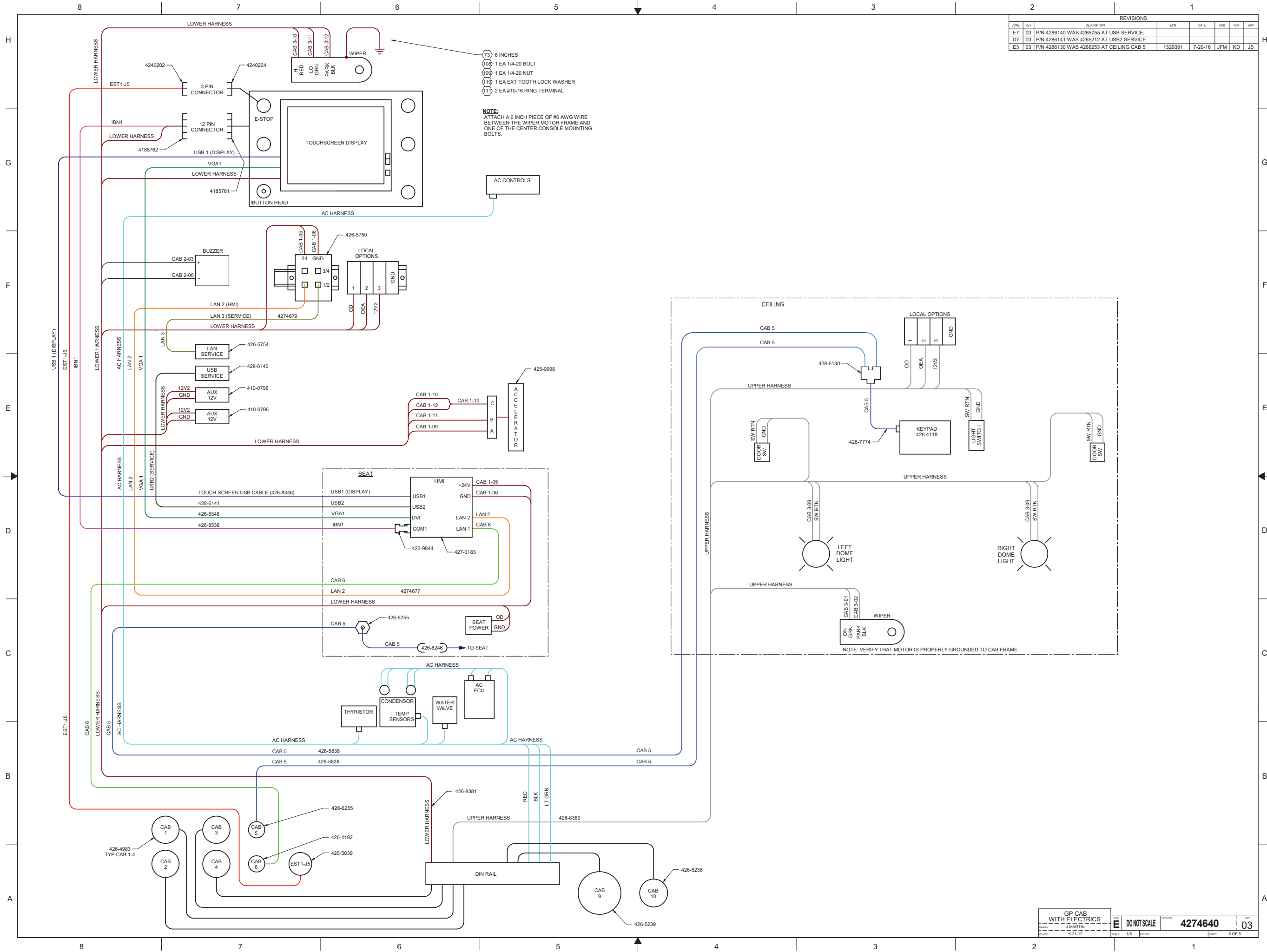
**TERMINAL BLOCK LAYOUT**

		REVISIONS			
ZONE	REV	DESCRIPTION	EN	DATE	CHK
E7	03	PIN 4286140 WAS 4285755 AT USB SERVICE.			
D7	03	PIN 4286141 WAS 4285212 AT USB2 SERVICE			
E3	03	PIN 4286130 WAS 4286253 AT CEILING CAB 5	1329391	7-20-16	JFM KD JS

- (73) 6 INCHES
- (108) 1 EA 1/4-20 BOLT
- (109) 1 EA 1/4-20 NUT
- (110) 1 EA EXT TOOTH LOCK WASHER
- (111) 2 EA #10-16 RING TERMINAL

**NOTE:**  
ATTACH A 6 INCH PIECE OF #6 AWG WIRE BETWEEN THE WIPER MOTOR FRAME AND ONE OF THE CENTER CONSOLE MOUNTING BOLTS.

**NOTE:** VERIFY THAT MOTOR IS PROPERLY GROUNDED TO CAB FRAME.





# **HV Cabinet**

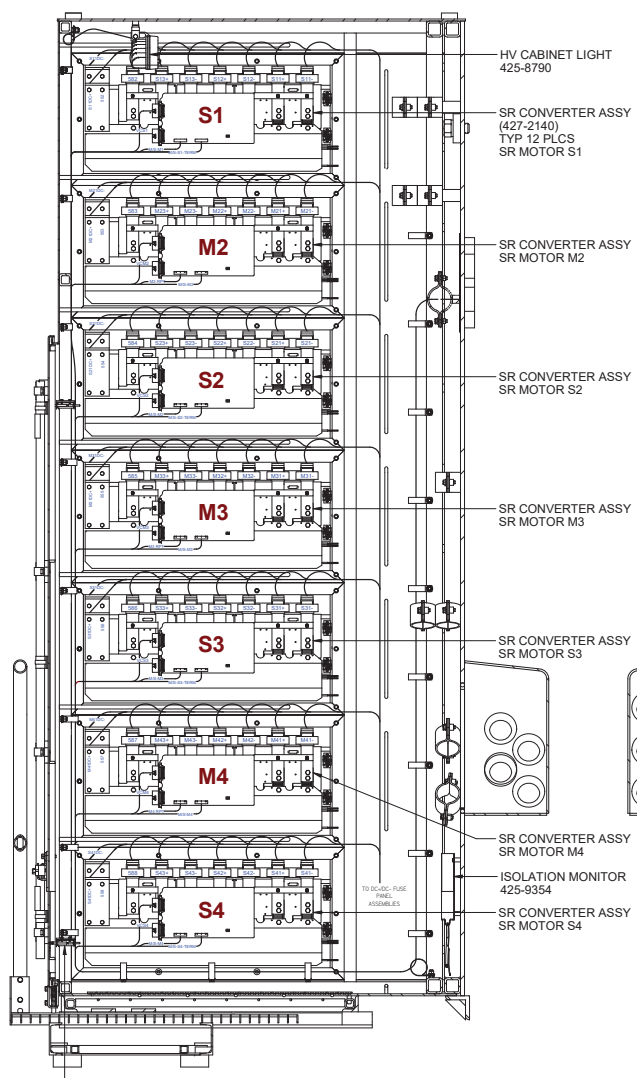


# TABLE OF CONTENTS

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Can Interface.....	1
SR Generator.....	2
SR Motors	
SR Motor 1 Left Front.....	3
SR Motor 2 Right Front.....	3
SR Motor 3 Left Rear.....	4
SR Motor 4 Right Rear.....	4
Reference Information	
Wire Location Chart.....	5

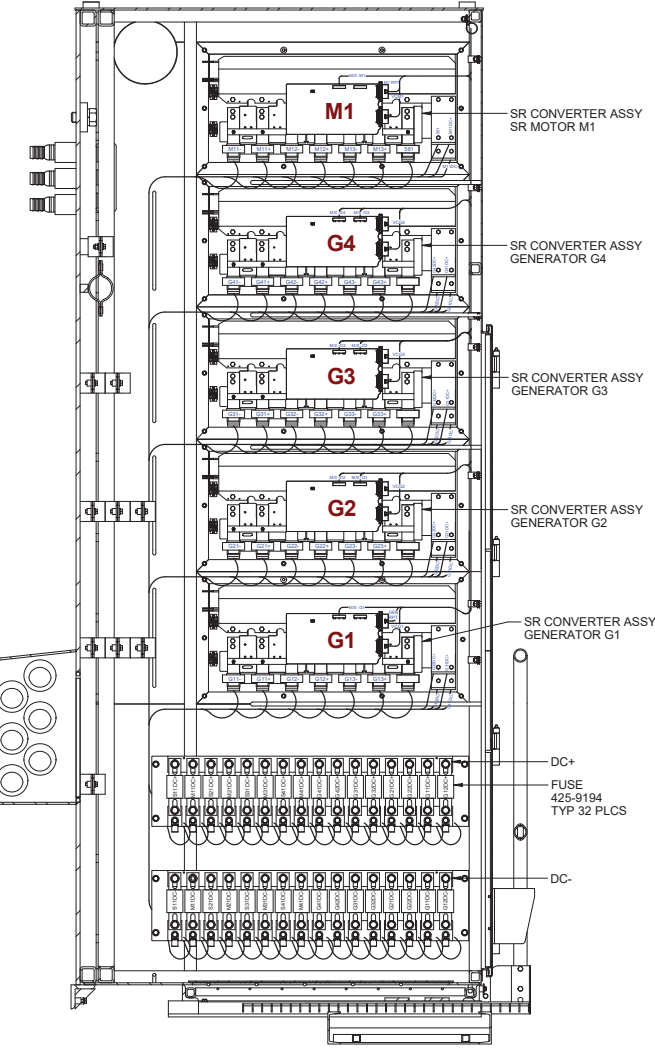
- NOTES:**
- COLOR CODE**  
 BLUE: WIRE CODE  
 RED: CONNECTION PIN  
 ORANGE: RPT / RTD HARNESS  
 GREEN: M/S CONNECTION & TERMINATION  
 MAGENTA: POWER / CONTROL HARNESS
  - CROSS REFERENCE**  
 (01239)  
 SHEET NO. | LINE NO.  
 | COLUMN
  - POWER FLOWS LEFT TO RIGHT**
  - MACHINE STATE:**  
 - ALL LIGHTS OFF  
 - FUSES NOT BLOWN  
 - HV CABINET DOOR CLOSED

## COMPONENT LOCATION / PART NO.



HV CABINET LEFT WALL

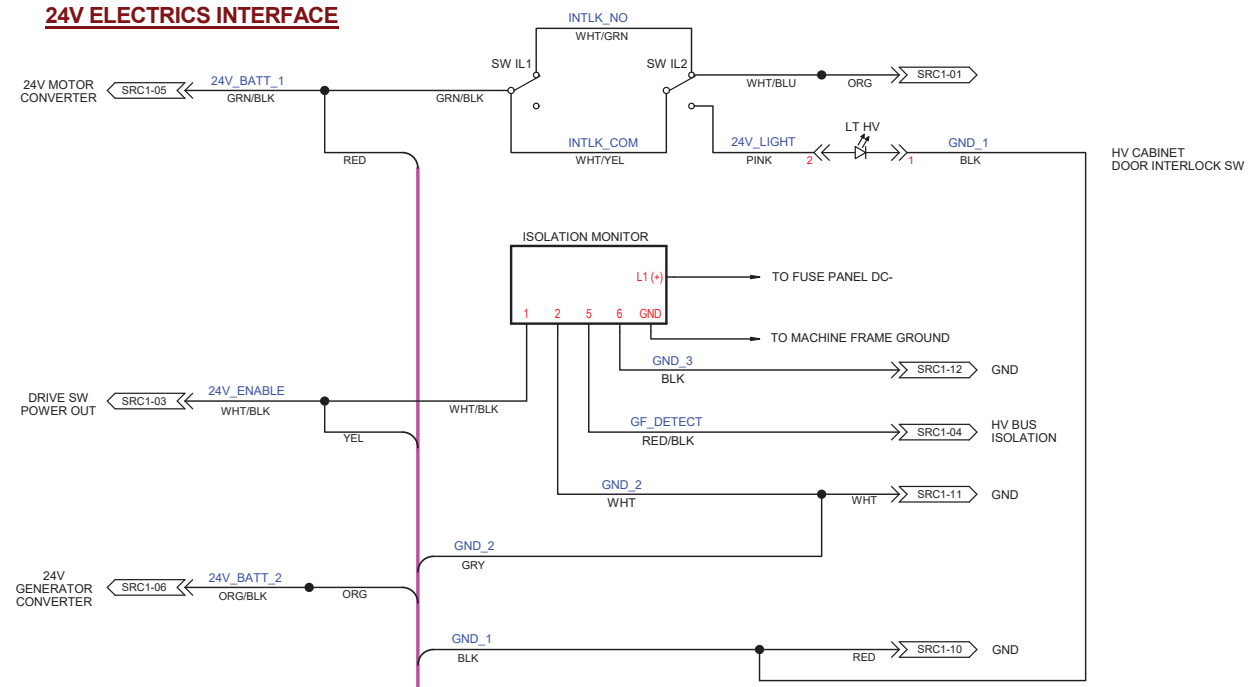
## HV CABINET 4267800



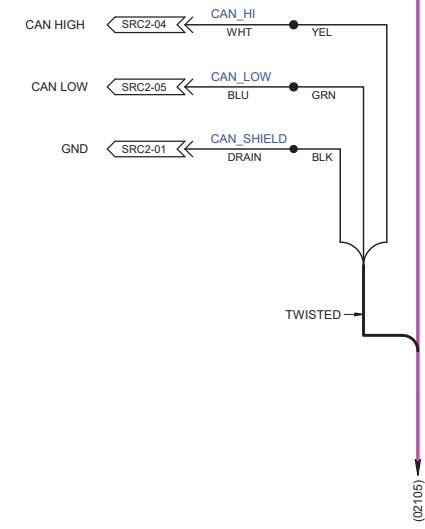
HV CABINET RIGHT WALL

REV		DESCRIPTION	EN	DATE	CHK	APP
00	RELEASE		NL11-1017	8-12	FL	JB

## 24V ELECTRICS INTERFACE



## CAN INTERFACE



THIS DRAWING AND ALL DATA THEREIN IS THE PROPERTY OF LETOURNEAU TECHNOLOGIES. IT IS CONFIDENTIAL AND MUST NOT BE COPIED, IT IS LOANED SUBJECT TO RETURN UPON DEMAND AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO OUR INTERESTS. INTERPRET DIM & TOL PER LETOURNEAU SPEC 1000.00	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES & APPLY BEFORE PLATING OR FINISH COATINGS. TOLERANCES ON: ANGLES: ±1° FRACTIONS: ±1/16 XX DECIMAL: ±0.03 XXX DECIMAL: ±0.015 MACHINED CORNERS: R54 X .45 WELD PROPERTIES SHALL MEET THE MINIMUM REQUIREMENTS OF THE BASE MATERIAL.	FIRST USED ON CONTRACT NO L18502201 / L23502201 DWG: flovett 8-8-11 CHK: JB 8-12-11 ENGR:	<b>LeTourneau Technologies™</b> SCHEMATIC HI VOLT CABT L1850/2350 G2	
	THIRD ANGLE PROJECTION 	PROJ APPROVAL BS 8-12-11	SCALE: 1/1 SHEET: 1 OF 5	REV: 00
	DO NOT SCALE			4275302
	1			00

8

7

6

5

4

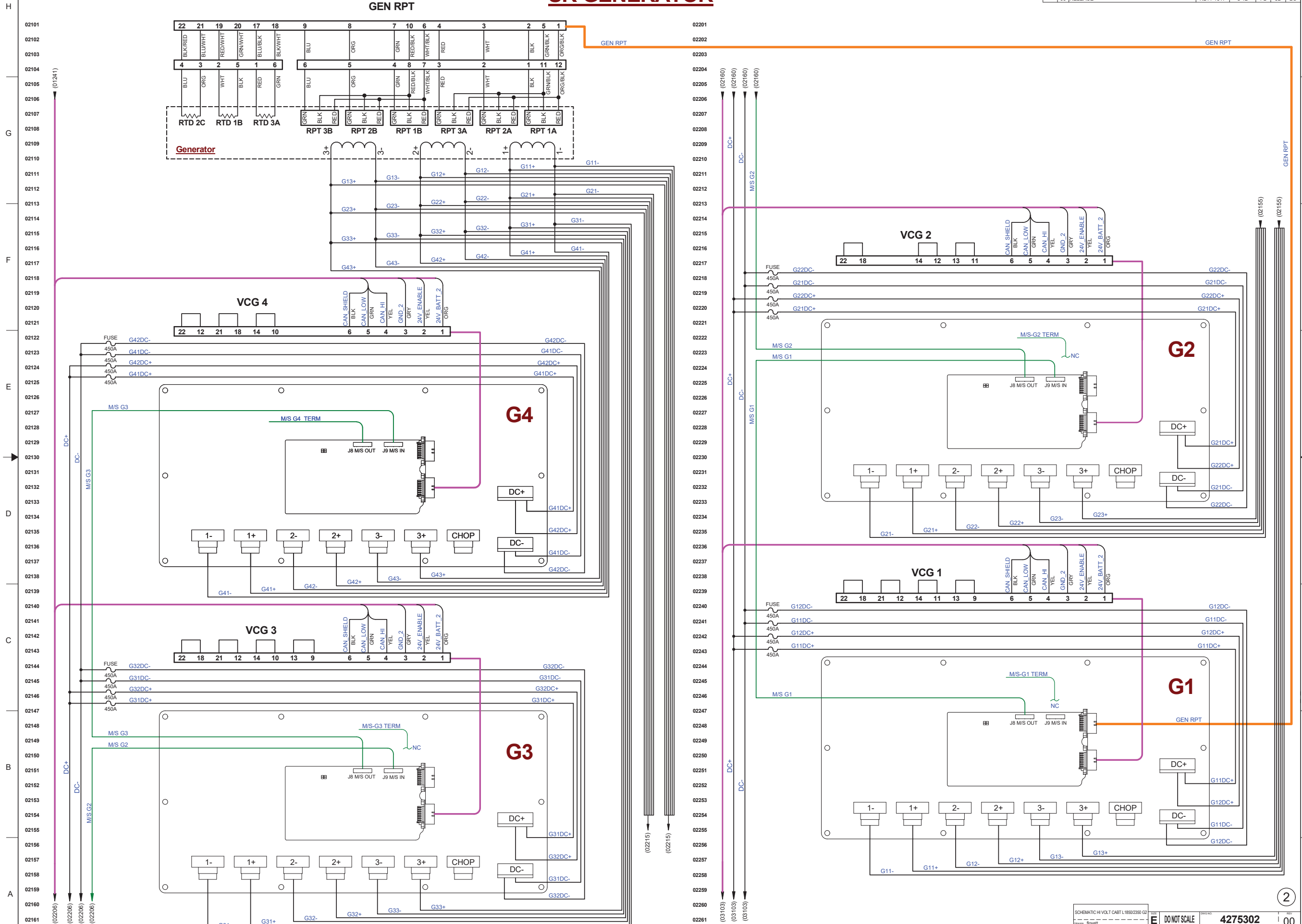
3

2

1

# SR GENERATOR

REVISIONS		EN	DATE	CHK	CHK	APP
00	RELEASE	NL11-1017	8-12	FL	JB	BS

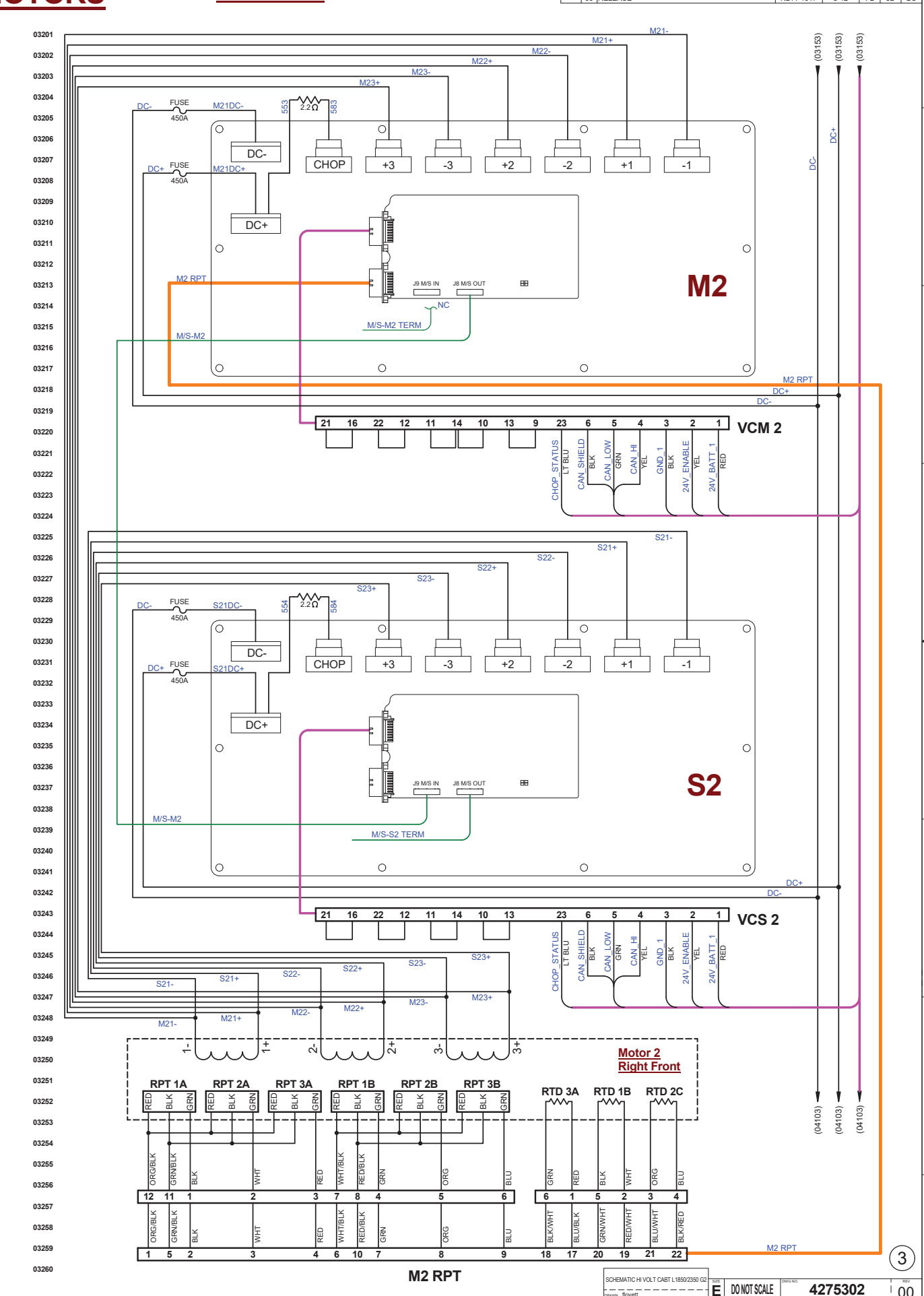
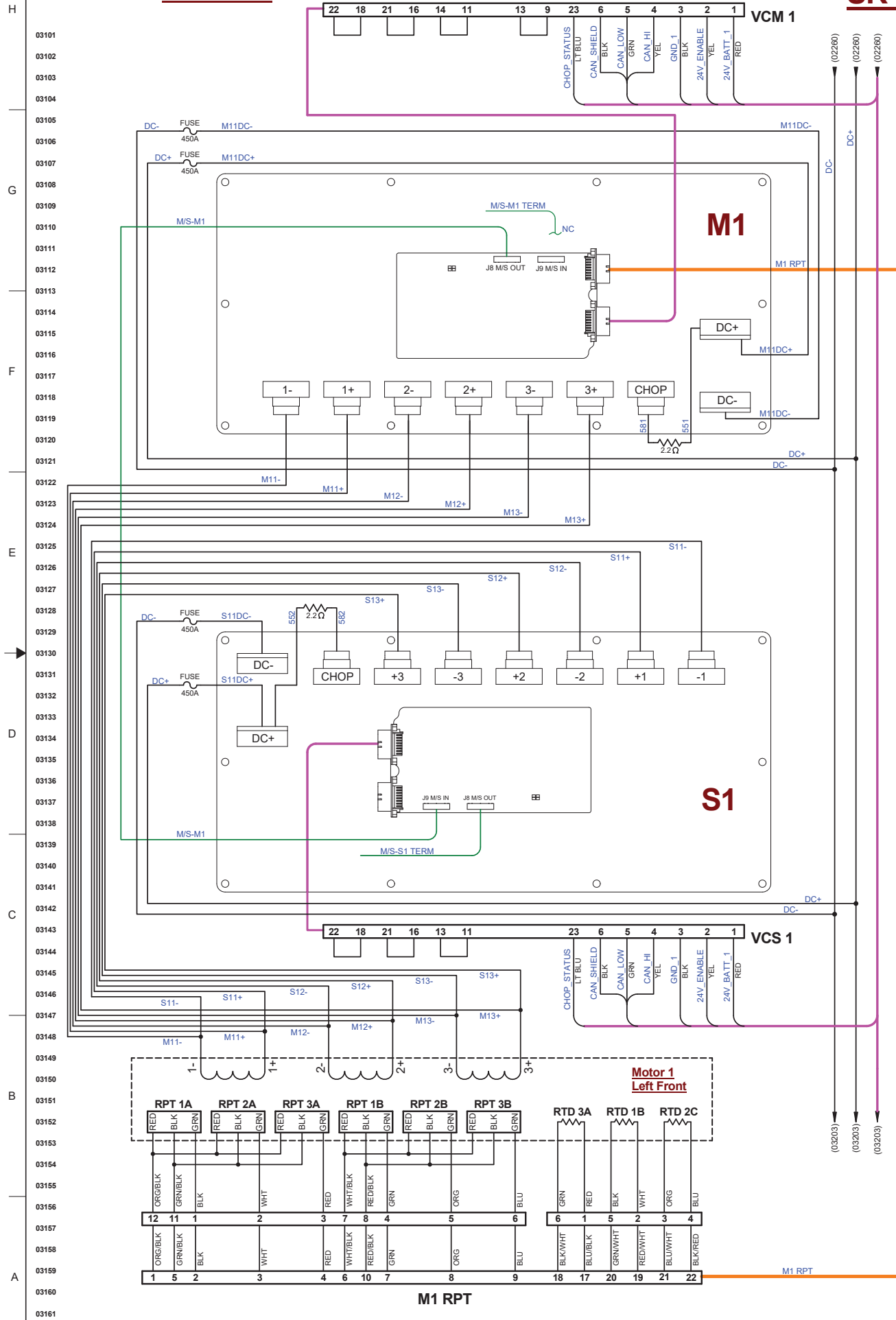


**SR MOTOR 1**

**SR MOTORS**

**SR MOTOR 2**

		REVISIONS			
ZONE	REV	DESCRIPTION	EN	DATE	CHK
	00	RELEASE	NL11-1017	8-12	FL JB BS

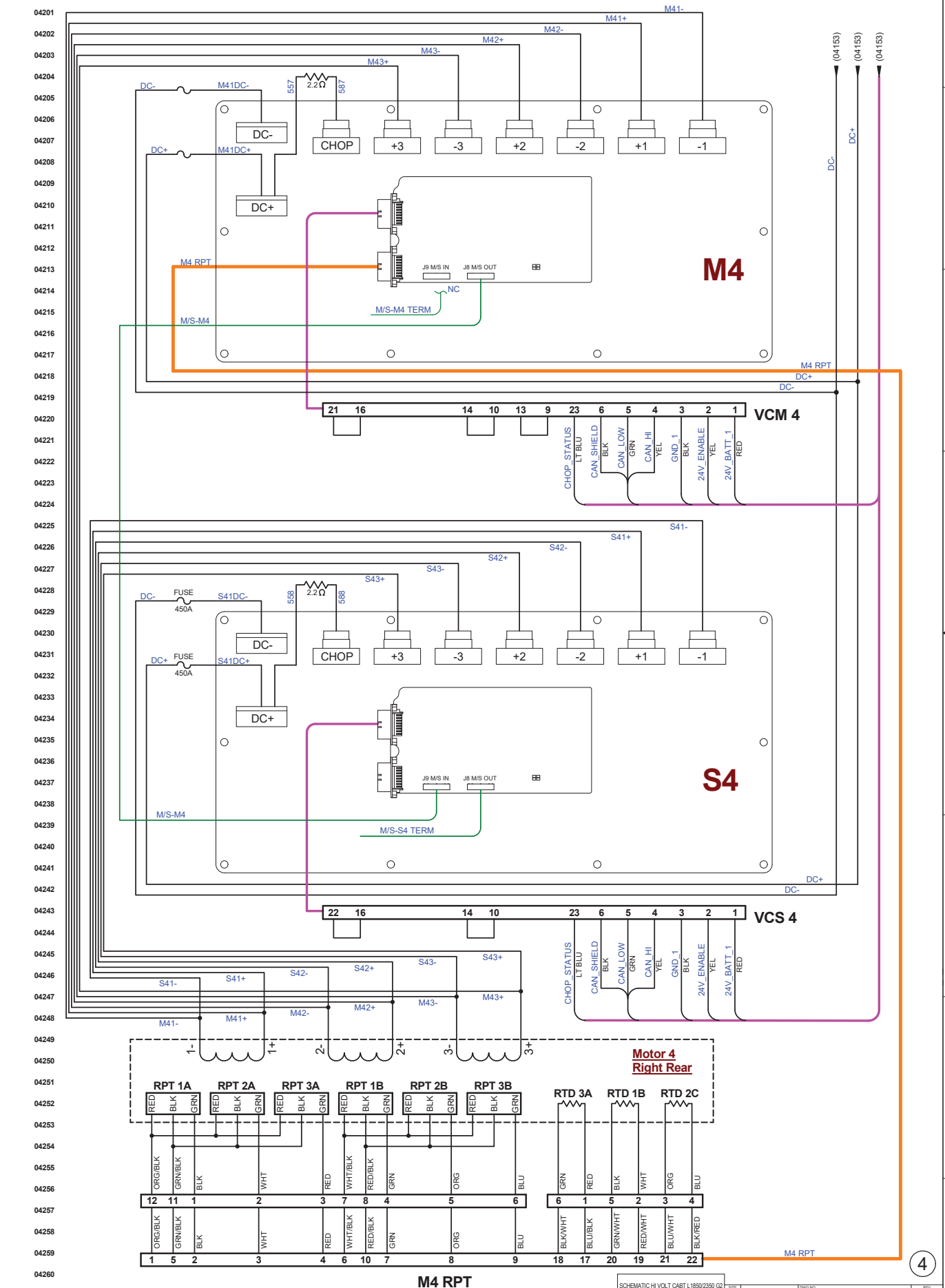
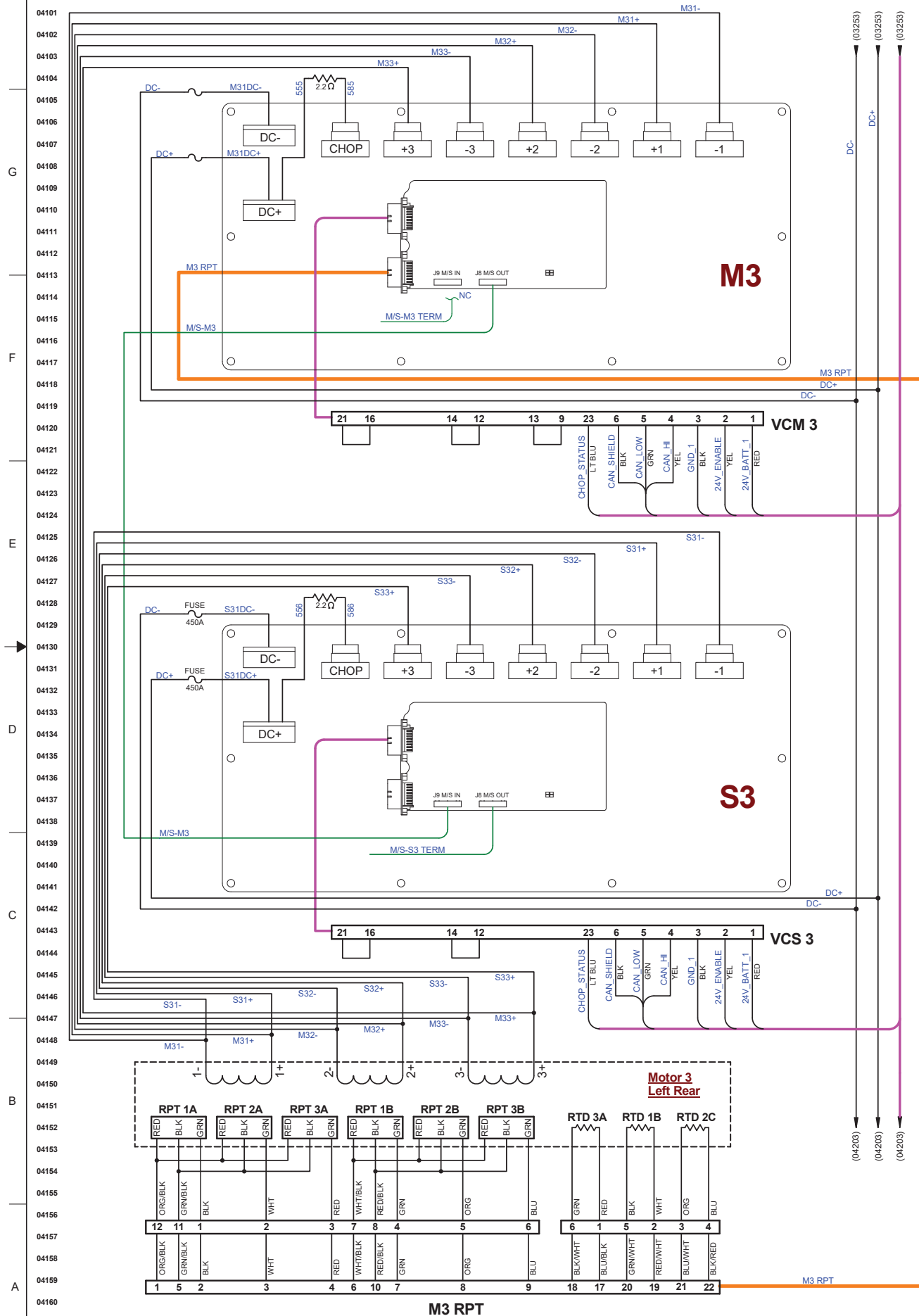


SR MOTOR 3

SR MOTORS (CONT.)

SR MOTOR 4

REV. NO.		DESCRIPTION	EN	DATE	CHK	APP
00	RELEASE		NL11-1017	8-12	FL	JB BS



# REFERENCE INFORMATION

REVISIONS					
ZONE	REV	DESCRIPTION	EN	DATE	CHK APP
00	RELEASE		NL11-1017	8-12	FL JB BS

## WIRE LOCATION CHART

WIRE CODE	LINE NO.	WIRE CODE	LINE NO.	WIRE CODE	LINE NO.	WIRE CODE	LINE NO.
24V_BATT 1	01204, 03103, 03146, 03223, 03246, 04123, 04146, 04223, 04246	GND_1	01206, 01222, 03103, 03146, 03223, 03246, 04123, 04146, 04223, 04246	M1 RPT	03112, 03159	SRC1-01	01203
24V_BATT 2	01220, 02121, 02143, 02216, 02239	GND_2	01217, 02121, 02143, 02216, 02239	M11-	03122, 03148	SRC1-03	01214
24V_ENABLE	01214, 02121, 02143, 02216, 02239, 03103, 03146, 03223, 03246, 04123, 04146, 04223, 04246	GND_3	01213	M11+	03122, 03148	SRC1-04	01215
24V_LIGHT	01206	G11-	02110, 02258	M11DC-	03106, 03119	SRC1-05	01204
551	03120	G11+	02111, 02258	M11DC+	03107, 03116	SRC1-06	01220
552	03129	G11DC-	02241, 02255	M12-	03123, 03148	SRC1-10	01222
553	03205	G11DC+	02243, 02252	M12+	03123, 03148	SRC1-11	01217
554	03229	G12-	02111, 02257	M13-	03124, 03147	SRC1-12	01213
555	04105	G12+	02111, 02257	M13+	03124, 03147	SRC2-01	01230
556	04129	G12DC-	02240, 02256	M2 RPT	03213, 03218, 03259	SRC2-04	01226
557	04205	G12DC+	02242, 02253	M21-	03201, 03248	SRC2-05	01228
558	04229	G13-	02111, 02257	M21+	03201, 03248		
581	03120	G13+	02111, 02257	M21DC-	03205		
582	03129	G21-	02112, 02235	M21DC+	03208		
583	03205	G21+	02113, 02235	M22-	03202, 03248		
584	03229	G21DC-	02218, 02232	M22+	03202, 03248		
585	04105	G21DC+	02220, 02229	M23-	03203, 03247		
586	04129	G22-	02113, 02234	M23+	03203, 03247		
587	04205	G22+	02113, 02234	M3 RPT	04113, 04118, 04159		
588	04229	G22DC-	02217, 02233	M31-	04101, 04148		
CAN_HI	01226, 02121, 02143, 02216, 02239, 03103, 03146, 03223, 03246, 04123, 04146, 04223, 04246	G22DC+	02219, 02230	M31+	04101, 04148		
CAN_LOW	01228, 02121, 02143, 02216, 02239, 03103, 03146, 03223, 03246, 04123, 04146, 04223, 04246	G23-	02113, 02234	M31DC-	04105		
CAN_SHIELD	01230, 02121, 02143, 02216, 02239, 03103, 03146, 03223, 03246, 04123, 04146, 04223, 04246	G23+	02113, 02234	M31DC+	04108		
CHOP_STATUS	03103, 03146, 03223, 03246, 04123, 04146, 04223, 04246	G31-	02114, 02161	M32-	04102, 04148		
DC+	02151, 02225, 03107, 03208, 03132, 03232, 04108, 04132, 04208, 04232	G31+	02114, 02161	M32+	04102, 04148		
DC-	02152, 02226, 03106, 03205, 03129, 03229, 04105, 04129, 04205, 04229	G31DC-	02145, 02158	M33-	04103, 04147		
GEN RPT	02102, 02202, 02248	G31DC+	02146, 02155	M33+	04103, 04147		
GF_DETECT	01215	G32-	02114, 02161	M4 RPT	04213, 04218, 04259		
		G32+	02115, 02161	M41-	04201, 04248		
		G32DC-	02144, 02159	M41+	04201, 04248		
		G32DC+	02146, 02157	M41DC-	04205		
		G33-	02115, 02160	M41DC+	04208		
		G33+	02115, 02160	M42-	04202, 04248		
		G41-	02116, 02139	M42+	04202, 04248		
		G41+	02116, 02139	M43-	04203, 04247		
		G41DC-	02123, 02136	M43+	04203, 04247		
		G41DC+	02124, 02133	S11-	03125, 03146		
		G42-	02117, 02138	S11+	03125, 03146		
		G42+	02117, 02138	S11DC-	03128		
		G42DC-	02122, 02137	S11DC+	03131		
		G42DC+	02124, 02135	S12-	03126, 03146		
		G43-	02117, 02138	S12+	03126, 03146		
		G43+	02117, 02138	S13-	03127, 03145		
		INTLK_NO	01202	S13+	03127, 03145		
		INTLK_COM	01206	S21-	03225, 03246		
		M/S G1	02223, 02246	S21+	03225, 03246		
		M/S G1 TERM	02245	S21DC-	03228		
		M/S G2	02149, 02222	S21DC+	03231		
		M/S G2 TERM	02222	S22-	03226, 03246		
		M/S G3	02127, 02149	S22+	03226, 03246		
		M/S G3 TERM	02148	S23-	03227, 03245		
		M/S G4 TERM	02128	S23+	03227, 03245		
		M/S M1	03110, 03138	S31-	04125, 04146		
		M/S M1 TERM	03109	S31+	04125, 04146		
		M/S S1 TERM	03139	S31DC-	04128		
		M/S M2	03215, 03238	S31DC+	04131		
		M/S M2 TERM	03125	S32-	04126, 04146		
		M/S S2 TERM	03239	S32+	04126, 04146		
		M/S M3	04116, 04138	S33-	04127, 04145		
		M/S M3 TERM	04115	S33+	04127, 04145		
		M/S S3 TERM	04139	S41-	04225, 04246		
		M/S M4	04216, 04238	S41+	04225, 04246		
		M/S M4 TERM	04215	S41DC-	04228		
		M/S S4 TERM	04239	S41DC+	04231		
				S42-	04226, 04246		
				S42+	04226, 04246		
				S43-	04227, 04245		
				S43+	04227, 04245		



# **Front Frame Harness Group**



REV		DESCRIPTION	EN	DATE	CHK	APP
00	RELEASE		NL11-0436	6-16-11	LW	BAS BS
01	NOTE 2 REFERENCED HYD PANEL ASSY PIN WAS 426-4900		NL11-1781	8-31-11	LW	BAS BS
02	DELD TEXT AT HARNESS 3, BOX FFR2; ITEM 12 WAS QTY 2		NL11-1796	9-14-11	JFM	BS BS
03	ITEM 28 WAS QTY 1		NL11-1818	10-14-11	JFM	BS BS
04	DELETED ITEM 13; ITEM 16 WAS QTY 6;					
04	ADDED ITEM 29 (CABLE)		1338264	1-12-17	JFM	JPS JS
05	ADD LABEL LOCATION DETAIL & LABEL NOTES		1355459	12/11/17	CTM	RJM RP

LOW VOLTAGE CONTROL CABINET

BOX: FFR1  
DESCRIPTION: FRONT FRAME #1

HARNESS #1	HARNESS #2	HARNESS #3
LENGTH	LENGTH	LENGTH
PART NO.	PART NO.	PART NO.
6m	1.5m	
426-5229	426-5207	

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	DEVICE CABLES				CONNECTOR		PINOUT
			LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	TYPE	PART NO.	
FFR1-J7	FFR1-05						CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)		
FFR1-J5	FFR1-03	AUTO LUBE SOL	1.4m	426-4197	1m DIN	426-5233			
FFR1-J3	FFR1-09	MAINTENANCE LIGHT LEFT FRONT	6m OPEN	426-5232			2 PIN DEUTSCH	426-1175	
FFR1-J1	FFR1-07	AUTO LUBE SWITCHES	1.8m	426-4198					
FFR1-J2	FFR1-01						CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)		
FFR1-J4	FFR1-02	FRONT SERVICE BRAKES XDCR	3m	426-5213	1m	426-5230	1m XDCR	426-5234	
FFR1-J6	FFR1-04	FRONT PARK BRAKES XDCR	3m	426-5213	1m XDCR	426-5234			
FFR1-J8	FFR1-06	FRONT PARK BRAKES SOL	6m OPEN	426-5232			2 PIN DEUTSCH	426-1175	

BOX: FFR2  
DESCRIPTION: FRONT FRAME #2

HARNESS #1	HARNESS #2	HARNESS #3
LENGTH	LENGTH	LENGTH
PART NO.	PART NO.	PART NO.
6m	4m	
426-5229	426-5227	

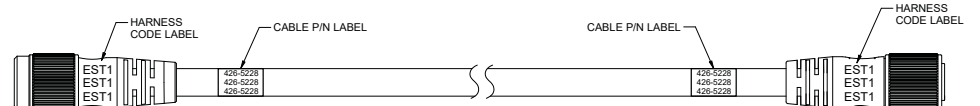
HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	DEVICE CABLES				CONNECTOR		PINOUT		
			LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	TYPE	PART NO.			
FFR2-J7	FFR2-05	FRONT DRIVER LUBE FLOW SWITCHES	1m	426-5230	TEE	427-0079	6m OPEN 6m OPEN	426-5232 426-5232	2 PIN DEUTSCH 2 PIN DEUTSCH	426-1175 426-1175	BLK = 1, WHT = 2 BLK = 1, WHT = 2
FFR2-J5	FFR2-03	* CLAMHELL CYL EXT XDCR (OPT)							CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)		
FFR2-J3	FFR2-09	BELLCRANK TO LIFT ARM XDCR	5m	426-6240	3m	426-7338					
FFR2-J1	FFR2-07	LIFT ARM POSITION XDCR	3m	426-7338							
FFR2-J2	FFR2-01	MAINTENANCE LIGHT RIGHT FRONT	6m OPEN	426-5232					2 PIN DEUTSCH	426-1175	BLK = 2, GRN = 1
FFR2-J4	FFR2-02								CAP - MALE TURCK (QTY - 1)	426-5200	
FFR2-J6	FFR2-04								CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)		
FFR2-J8	FFR2-06								CAP - MALE TURCK (QTY - 1)	426-5200	

\*\* BOX: PCP1  
DESCRIPTION: PILOT CONTROL PANEL #1

HARNESS #1	HARNESS #2	HARNESS #3
LENGTH	LENGTH	LENGTH
PART NO.	PART NO.	PART NO.
6m	2m	2.6m
426-5229	426-5221	426-5224

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	DEVICE CABLES				CONNECTOR		PINOUT		
			LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	TYPE	PART NO.			
PCP1-J7	PCP1-05							CAP - MALE TURCK (PART OF HYD PANEL ASSY)	** 426-5200		
PCP1-J5	PCP1-03							CAP - MALE TURCK (PART OF HYD PANEL ASSY)	** 426-5200		
PCP1-J3	PCP1-09	** BUCKET DUMP PILOT SOL	1m DN	426-5233							
PCP1-J1	PCP1-07	** BUCKET ROLLBACK PILOT SOL	1m DN	426-5233							
PCP1-J2	PCP1-01	** HOIST LOWER PILOT SOL	1m DN	426-5233							
PCP1-J4	PCP1-02	** HOIST RAISE PILOT SOL	1m DN	426-5233							
PCP1-J6	PCP1-04	BUCKET CYL ROD XDCR	1m XDCR	426-5234					CAP - MALE TURCK (PART OF HYD PANEL ASSY)	** 426-5200	
PCP1-J8	PCP1-06								CAP - MALE TURCK (PART OF HYD PANEL ASSY)	** 426-5200	

- LABEL NOTES:**
- LABEL EACH CABLE WITH HARNESS CODE AT EACH END USING A LABEL THAT REPEATS AROUND THE CABLE AS SHOWN.
  - LABEL EACH CABLE WITH ITS PART NUMBER NEAR EACH END USING A 'REPEATING TEXT' LABEL AS SHOWN.
  - COVER ALL LABELS WITH CLEAR HEAT SHRINK.



- NOTES:**
- \* INDICATES MACHINE OPTION --- SHOWN FOR REFERENCE ONLY.
  - \*\* PART OF HYD PANEL ASSY 427-1092.

ITEM	PART NO.	QTY	DESCRIPTION
29	4274511	5	CABLE EXT 4 PIN 3M
28	4274370	2	LABELS FOR BRADY IDPAL LABELER
27	4274371	.125	TAPE STRIPS
26	4170168	3 FT	HEAT SHRINK CLEAR 2.000 2:1
25	4170167	5 FT	HEAT SHRINK CLEAR 1.500 2:1
24	4170166	5 FT	HEAT SHRINK CLEAR 1.000 2:1
23	4170165	5 FT	HEAT SHRINK CLEAR .750 2:1
22	4170164	5 FT	HEAT SHRINK CLEAR .500 2:1
21	4170163	5 FT	HEAT SHRINK CLEAR .375 2:1
20	4265200	2	CAP 7/8 MALE TURCK
19	4265235	2	BREAKOUT BOX 12 PIN 8 X 3 PIN
18	4261175	5	DEUTSCH DT06-2S KIT
17	4270079	1	CABLE 3 PIN SERIES WIRED TEE 1M1M
16	4265229	4	CABLE EXT 12 PIN 6M
15	4265228	1	CABLE EXT 12 PIN 5M
14	4265227	1	CABLE EXT 12 PIN 4M
12	4265224	1	CABLE EXT 12 PIN 2.6M
11	4265221	1	CABLE EXT 12 PIN 2M
10	4265207	1	CABLE EXT 12 PIN 1.5M
9	4267338	2	CABLE 3 PIN MX12 3 COND 3M
8	4265234	5	CABLE 3 PIN MX12 4 PIN 1M
7	4265233	1	CABLE 3 PIN DIN 1M
6	4265232	5	CABLE EXT 3 PIN - OPEN 6M
5	4266240	1	CABLE EXT 3 PIN 5M
4	4265213	2	CABLE EXT 3 PIN 3M
3	4264198	1	CABLE EXT 3 PIN 1.6M
2	4264197	3	CABLE EXT 3 PIN 1.4M
1	4265230	2	CABLE EXT 3 PIN 1M

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UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES & APPLY BEFORE PLATING OR FINISH COATINGS. TOLERANCES ARE: ANGLES FRACTIONS .1" ±.016 XX DECIMAL ±.03 XXX DECIMAL ±.015 MACHINED CORNERS .164 X .45 WELD PROPERTIES SHALL MEET THE MINIMUM REQUIREMENTS OF THE BASE MATERIAL.

THIRD ANGLE PROJECTION

FIRST USED ON CONTRACT NO. 4266328

LeTourneau Technologies™

GP HARNESS FF L1850

DO NOT SCALE

4266332

05

1 OF 2

REV. NO.		DESCRIPTION	EN	DATE	CHK	CHK	APP
00	RELEASE		NL11-0436	6-16-11	LW	BAS	BS
01	SEE SHEET 1 FOR CHANGES		NL11-1781	8-31-11	LW	BAS	BS
02	NO CHG THIS SHEET; SEE SHEET 1 FOR CHG		NL11-1796	9-14-11	JFM	BS	BS
03	NO CHG THIS SHEET; SEE SHEET 1 FOR CHG		NL11-1818	10-14-11	JFM	BS	BS
04	CHGD LGTH & PART NO. AT FPL1, 2 HARNESS 1, 2, 3		1338284	1-12-17	JFM	JPS	JS
05	SEE SHEET 1		1355459	12/11/17	CTM	RJM	RP

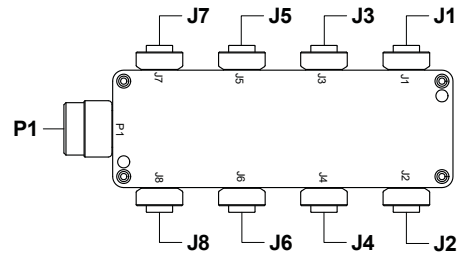
**\*\* BOX: PCP2**  
DESCRIPTION: PILOT CONTROL PANEL #2

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS #1			HARNESS #2			HARNESS #3			CONNECTOR		PINOUT
			LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	TYPE	PART NO.		
PCP2-J7	PCP2-05	HOIST CYL ROD XDCR	1.4m	426-4197	1m XDCR	426-5234					CAP - MALE TURCK (PART OF HYD PANEL ASSY)	** 426-5200		
PCP2-J5	PCP2-03	* CLAMSEHLL CLOSE PILOT SOL (OPT)									CAP - MALE TURCK (PART OF HYD PANEL ASSY)	** 426-5200		
PCP2-J3	PCP2-09	HOIST CYL BASE XDCR	1m XDCR	426-5234	1.4m	426-4197								
PCP2-J1	PCP2-07	** GREATEST PILOT CMD XDCR	1m XDCR	426-5234										
PCP2-J2	PCP2-01	* CLAMSEHELL OPEN PILOT SOL (OPT)									CAP - MALE TURCK (PART OF HYD PANEL ASSY)	** 426-5200		
PCP2-J4	PCP2-02	** PILOT SUPPLY XDCR	1m XDCR	426-5234										
PCP2-J6	PCP2-04	** DUMP PRESS REDUCING SOL	1m DN	426-5233										
PCP2-J8	PCP2-06	** FLOAT SOL	1m DN	426-5233										

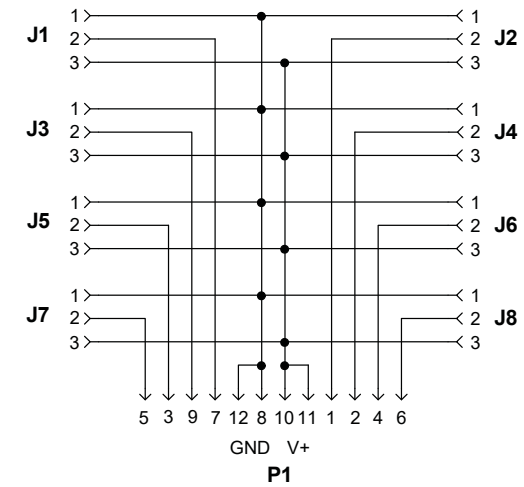
**LOW VOLTAGE CONTROL CABINET**

CABLE	DESCRIPTION	HARNESS #1		HARNESS #2		HARNESS #3		CONNECTOR	
		LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	TYPE	PART NO.
FPL1	FRONT POLE LIGHT	3m	427-4511	3m	427-4511				
FPL2	FRONT POLE LIGHT	3m	427-4511	3m	427-4511	3m	427-4511		

**BREAKOUT BOX 12 PIN - 8 X 3 PIN**  
(P/N: 426-5235)



**TOP VIEW - BREAKOUT BOX**



**SCHEMATIC - BREAKOUT BOX**

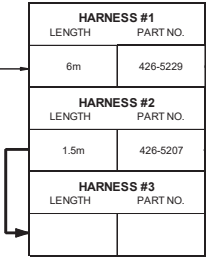
- NOTES:**
- 1) \* INDICATES MACHINE OPTION — SHOWN FOR REFERENCE ONLY.
  - 2) \*\* PART OF HYD PANEL ASSY 427-1092.

# **Rear Frame Harness Group**



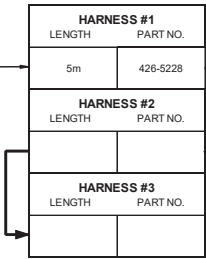
LOW VOLTAGE CONTROL CABINET

BOX: RFM1  
DESCRIPTION: REAR FRAME MID #1



HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS #1			HARNESS #2			HARNESS #3			CONNECTOR		PINOUT
			LENGTH / TYPE	PART NO.		LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	TYPE	PART NO.			
RFM1-J7	RFM1-05	AUTO LUBE GREASE XDCR	5m	426-6240	1m XDCR	426-5234								
RFM1-J5	RFM1-03										CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)			
RFM1-J3	RFM1-09	MAINTENANCE LIGHT MIDDLE LEFT	6m OPEN	426-5232							2 PIN DEUTSCH	426-1175	BLK = 2, GRN = 1	
RFM1-J1	RFM1-07	RADIATOR FAN SPEED SENSOR	5 PIN SPD SNSR 9 FT (2.75m)	426-6267	ENG FAN SPD SNSR 6m	426-0477								
RFM1-J2	RFM1-01	ENGINE SAFETY FILTER RESTRICTION	2m	426-5231										
RFM1-J4	RFM1-02										CAP - MALE TURCK (QTY - 1)	426-5200		
RFM1-J6	RFM1-04	FUEL LEVEL XDCR	6m OPEN	426-5232							OPEN TO T.S. IN SENSOR		BLK = 4, GRN = BOX GND SCREW WHT = 5	
RFM1-J8	RFM1-06	DRIVE COOL RESERVOIR LEVEL SWITCH	5m	426-6240	2m	426-5231	6m OPEN	426-5232			IN LINE SPLICE		BLK = BLU, GRN = BLK WHT = RED	

BOX: EST1  
DESCRIPTION: EMERGENCY STOP #1



HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS #1			HARNESS #2			HARNESS #3			CONNECTOR		PINOUT
			LENGTH / TYPE	PART NO.		LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	TYPE	PART NO.			
EST1-J7	EST1-05										CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)			
EST1-J5	EST1-03	CAB E-STOP SWITCH	5m	426-6240										
EST1-J3	EST1-09	HV CABINET E-STOP SWITCH	5m	426-6240										
EST1-J1	EST1-07	RIGHT REAR E-STOP SWITCH	10m	426-6241	1.6m	426-4198								
EST1-J2	EST1-01	LEFT REAR E-STOP SWITCH	10m	426-6241	2m	426-5231								
EST1-J4	EST1-02	HYD RESERVOIR E-STOP SWITCH	1m	426-5230	3m	426-5213	5m	426-6240						
EST1-J6	EST1-04	FIRE SYSTEM STATUS	6m OPEN	426-5232									GRN = 1, BLK = 2	
EST1-J8	EST1-06										CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)			

REV	DATE	DESCRIPTION	BY	CHK	APP
00	6-16-11	RELEASE	NL11-0436	LW	BAS
01	8-02-11	EST1-J1 HARNESS 2 PIN WAS 4265213 & ITEM 4 QTY WAS 11	NL11-1768	LW	BAS
02	9-14-11	ITEM 1 WAS QTY 8; ITEM 7 WAS QTY 14;	NL11-1796	JFM	BS
02	10-14-11	ITEM 8 WAS QTY 6; ITEM 36 WAS QTY 1	NL11-1818	JFM	BS
03		ITEM 48 WAS QTY 2			
04	2-10-12	ITEM 1 WAS QTY 7; ITEM 3 WAS QTY 6; ADDED ITEM 49 CABLE	NL12-1524	JFM	BS
04		CHGD HARNESS #2 LENGTH & PART NO. AT EST1-J1 & J2			

ITEM	PART NO.	QTY	DESCRIPTION
49	4264198	1	CABLE EXT 3 PIN 1.6M
48	4274370	4	LABELS FOR BRADY IDPAL LABELER
47	4274371	.125	TAPE STRIPS
46	4170168	5 FT	HEAT SHRINK CLEAR 2.000 2:1
45	4170167	15 FT	HEAT SHRINK CLEAR 1.500 2:1
44	4170166	15 FT	HEAT SHRINK CLEAR 1.000 2:1
43	4170165	15 FT	HEAT SHRINK CLEAR .750 2:1
42	4170164	15 FT	HEAT SHRINK CLEAR .500 2:1
41	4170163	15 FT	HEAT SHRINK CLEAR .375 2:1
40	4267798	3	CABLE WATER PUMP LINES II
39	4265200	8	CAP 7/8 MALE TURCK
38	4265235	8	BREAKOUT BOX 12 PIN 8 X 3 PIN
37	4261175	5	DEUTSCH DT06-2S KIT
36	4240140	2	CONNECTOR (PLUG) DIN REXROTH
35	4255187	2	TERMINAL HOUSING
34	4255183	4	TERMINAL
33	4253961	1	CABLE ASSY BLOWER SPEED SENSOR
32	4260477	1	ASSY ENG FAN SPD SNSR HARNESS
31	4266267	2	CABLE 3PIN M-5PIN 9FT SPD SNSR
30	4267339	1	CABLE 12 PIN AC 4.2M
29	4258492	1	WIRE HARNESS KIT-AIR DRYER
28	4264195	1	CABLE EXT E-NET 1.5M
27	4266254	1	CABLE CAN MALE TERM
26	4266253	4	CABLE TEE CAN 2 MALE-FEM
25	4266251	1	CABLE EXT CAN 10M
24	4265838	2	CABLE EXT CAN 4.3M
23	4264188	1	CABLE EXT CAN 1.5M
22	4266249	1	CABLE EXT CAN 1M
21	4266246	2	CABLE EXT CAN 0.5M
20	4266243	4	CABLE EXT 12 PIN 10M
19	4266242	2	CABLE EXT 12 PIN 8M
18	4265229	3	CABLE EXT 12 PIN 6M
17	4265228	1	CABLE EXT 12 PIN 5M
16	4265227	5	CABLE EXT 12 PIN 4M
15	4265226	2	CABLE EXT 12 PIN 3M
14	4265221	1	CABLE EXT 12 PIN 2M
13	4265207	8	CABLE EXT 12 PIN 1.5M
12	4265220	2	CABLE EXT 12 PIN 1M
11	4270079	1	CABLE 3 PIN SERIES WIRED TEE 1M1M
10	4267338	1	CABLE 3 PIN MX12 3 COND .3M
9	4265234	19	CABLE EXT 3 PIN - MX12 4 PIN 1M
8	4265233	5	CABLE EXT 3 PIN - DIN 1M
7	4265232	15	CABLE EXT 3 PIN - OPEN 6M
6	4266241	4	CABLE EXT 3 PIN 10M
5	4266240	11	CABLE EXT 3 PIN 5M
4	4265213	10	CABLE EXT 3 PIN 3M
3	4265231	7	CABLE EXT 3 PIN 2M
2	4264197	1	CABLE EXT 3 PIN 1.4M
1	4265230	5	CABLE EXT 3 PIN 1M

NOTE:  
\* INDICATES MACHINE OPTION  
-- SHOWN FOR REFERENCE ONLY.

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UNLESS OTHERWISE SPECIFIED:  
- DIMENSIONS ARE IN INCHES & APPLY BEFORE PLATING OR FINISH COATINGS  
- TOLERANCES ON: ANGLES FRACTIONS .1" ±.016  
XX DECIMAL ±.03  
XXX DECIMAL ±.015  
- MACHINED CORNERS: R54 X .45  
- WELD PROPERTIES SHALL MEET THE MINIMUM REQUIREMENTS OF THE BASE MATERIAL.

THIRD ANGLE PROJECTION

FIRST USED ON CONTRACT NO. 426-6329

DRAWN: bswirk DATE: 05-17-10  
CHK: BAS DATE: 05-18-11  
ENGR: ENGR

PROJ ENGR: BS DATE: 05-18-11  
PROJ APPROVAL: [Signature]

MATL: [Signature]

LeTourneau Technologies™

GP HARNESS RF L1850

SCALE: 1/1 SHEET: 1 OF 4

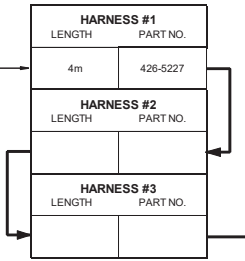
DO NOT SCALE

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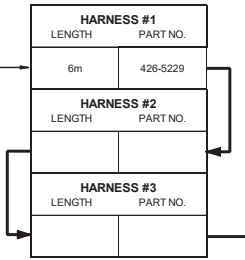
REVISIONS						
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
	00	RELEASE	NL11-0436	8-16-11	LW	BAS BS
	01	SEE SHEET 1 FOR CHANGES	NL11-1768	8-02-11	LW	BAS BS
	02	CHGD STR2 AT STR INT FACE & RFF1-J8 HRN J3	NL11-1796	9-14-11	JFM	BS BS
	03	NO CHG THIS SHEET; SEE SHEET 1 FOR CHG	NL11-1818	10-14-11	JFM	BS BS
	04	NO CHG THIS SHEET; SEE SHEET 1 FOR CHG	NL12-1524	2-10-12	JFM	BS BS

BOX: RFF1  
DESCRIPTION: REAR FRAME FRONT #1



HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS #1			HARNESS #2		HARNESS #3		CONNECTOR		PINOUT
			LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	TYPE	PART NO.		
RFF1-J7	RFF1-05	HYD RESERVOIR LEVEL SWITCH	6m OPEN	426-5232							BLK = BLU, GRN = BLK, WHT = RED	
RFF1-J5	RFF1-03	HYD RESERVOIR OIL TEMP XDCR	2m	426-5231	1m XDCR	426-5234						
RFF1-J3	RFF1-09								CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)			
RFF1-J1	RFF1-07	KLENZ RESERVOIR AIR XDCR	3m	426-5213	1m XDCR	426-5234						
RFF1-J2	RFF1-01	HYD TANK DUMP SOL	5m	426-6240								
RFF1-J4	RFF1-02								CAP - MALE TURCK (QTY - 1)	426-5200		
RFF1-J6	RFF1-04	STEER POSITION XDCR	3m	426-7338								
RFF1-J8	RFF1-06	AUX FAN ENABLE SOL (OPT)	5m	426-6240	1m DN	426-5233			CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)			

BOX: RFF2  
DESCRIPTION: REAR FRAME FRONT #2

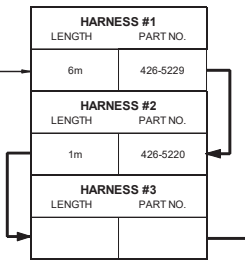


HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS #1			HARNESS #2		HARNESS #3		CONNECTOR		PINOUT
			LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	TYPE	PART NO.		
RFF2-J7	RFF2-05	AUX STEER ENABLE (OPT)	3m	426-5213					CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)			
RFF2-J5	RFF2-03	AUX STEER SUPPLY PRESS SWITCH (OPT)	3m	426-5213					CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)			
RFF2-J3	RFF2-09								CAP - MALE TURCK (QTY - 1)	426-5200		
RFF2-J1	24V ONLY	AIR DRYER HEATER	6m OPEN	426-5232					WIRE HARNESS AIR DRYER	426-8492	WHT = 1, GRN = 2	
RFF2-J2	RFF2-01	RADIATOR FAN CONTROL SOL	5m	426-6240	1m DN	426-5233						
RFF2-J4	RFF2-02	MAINTENANCE LIGHT MIDDLE RIGHT	6m OPEN	426-5232					2 PIN DEUTSCH	426-1175	BLK = 2, GRN = 1	
RFF2-J6	RFF2-04	STEER LEFT OUTPUT	3m	426-5213								
RFF2-J8	RFF2-06	STEER RIGHT OUTPUT	3m	426-5213								



STR1	STR1-02	STEER VALVE	6m OPEN	426-5232					DN	424-0140	BLK = 2, WHT = 1, GRN = GDM
STR2	STR2-02	AUX STEER SOL (OPT)	6m OPEN	426-5232					DN	424-0140	BLK = 1, GRN = 2

BOX: RFF3  
DESCRIPTION: REAR FRAME FRONT #3



HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS #1			HARNESS #2		HARNESS #3		CONNECTOR		PINOUT
			LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	TYPE	PART NO.		
RFF3-J7	RFF3-05	FAST HOIST PUMP XDCR	1m XDCR	426-5234								
RFF3-J5	RFF3-03	HOIST/BUCKET PUMP A XDCR	1m XDCR	426-5234								
RFF3-J3	RFF3-09	HOIST/BUCKET PUMP B XDCR	1m XDCR	426-5234								
RFF3-J1	RFF3-07	HOIST/BUCKET PUMP C XDCR	1m XDCR	426-5234								
RFF3-J2	RFF3-01	ACCESSORY PUMP XDCR	1m XDCR	426-5234								
RFF3-J4	RFF3-02	STEER PUMP A XDCR	1m XDCR	426-5234								
RFF3-J6	RFF3-04	STEER PUMP B XDCR	1m XDCR	426-5234								
RFF3-J8	RFF3-06	HYD OIL COOLER BYPASS SOL	2m	426-5231	1m DN	426-5233						

LOW VOLTAGE CONTROL CABINET

NOTE:  
\* INDICATES MACHINE OPTION  
--- SHOWN FOR REFERENCE ONLY.

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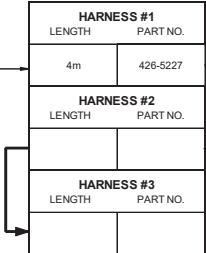
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REVISIONS							
ZONE	REV	DESCRIPTION	EN	DATE	CHK	CHK	APP
	00	RELEASE	NL11-0436	6-16-11	LW	BAS	BS
	01	SEE SHEET 1 FOR CHANGES	NL11-1768	8-02-11	LW	BAS	BS
	02	NO CHG THIS SHEET; SEE SHEET 1 & 2 FOR CHG	NL11-1796	9-14-11	JFM	BS	BS
	03	NO CHG THIS SHEET; SEE SHEET 1 FOR CHG	NL11-1818	10-14-11	JFM	BS	BS
	04	NO CHG THIS SHEET; SEE SHEET 1 FOR CHG	NL12-1524	2-10-12	JFM	BS	BS

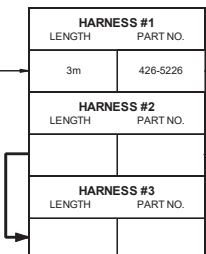
**LOW VOLTAGE CONTROL CABINET**

**BOX: RFF4**  
DESCRIPTION: REAR FRAME FRONT #4



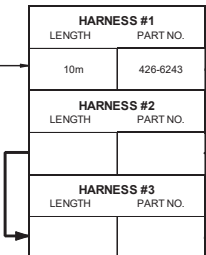
HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	DEVICE CABLES			CONNECTOR		PINOUT
			HARNESS #1 LENGTH / TYPE PART NO.	HARNESS #2 LENGTH / TYPE PART NO.	HARNESS #3 LENGTH / TYPE PART NO.	TYPE	PART NO.	
RFF4-J7	RFF4-05	BLOWER SPEED SENSOR	5 PIN SPD SNSR 9 FT (2.75m)	426-6267	BLOWER SPEED SENSOR 10 FT	425-3961		
RFF4-J5	RFF4-03	BLOWER PUMP PRESS XDCR	1m XDCR	426-5234				
RFF4-J3	RFF4-09	RADIATOR FAN PUMP PRESS XDCR	1m XDCR	426-5234				
RFF4-J1	RFF4-07	SYSTEM AIR PRESS XDCR	1m XDCR	426-5234				
RFF4-J2	RFF4-01	HPD GEARBOX TEMP XDCR	2m	426-5231	1m XDCR	426-5234		
RFF4-J4	RFF4-02	HPD GEARBOX PRESS XDCR	1m XDCR	426-5234				
RFF4-J6	RFF4-04	HYD RESERVOIR AIR PRESS XDCR	1m XDCR	426-5234				
RFF4-J8	RFF4-06						CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)	

**BOX: RFF5**  
DESCRIPTION: REAR FRAME FRONT #5



HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	DEVICE CABLES			CONNECTOR		PINOUT		
			HARNESS #1 LENGTH / TYPE PART NO.	HARNESS #2 LENGTH / TYPE PART NO.	HARNESS #3 LENGTH / TYPE PART NO.	TYPE	PART NO.			
RFF5-J7	RFF5-05	BLOWER SPEED CONTROL SOL	5m	426-6240	1m	426-5230	1m DIN	426-5233		
RFF5-J5	RFF5-03							CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)		
RFF5-J3	RFF5-09	REAR WASHER PUMP	6m OPEN	426-5232				TERMINALS (QTY - 2) HOUSING (QTY - 1)	425-5183 425-5187	BLK, GRN
RFF5-J1	RFF5-07	FRONT WASHER PUMP	6m OPEN	426-5232				TERMINALS (QTY - 2) HOUSING (QTY - 1)	425-5183 425-5187	BLK, GRN
RFF5-J2	RFF5-01	AMBIENT AIR TEMPERATURE XDCR	3m	426-5213	1m	426-5230	1m XDCR	426-5234		
RFF5-J4	RFF5-02							CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)		
RFF5-J6	RFF5-04							CAP - MALE TURCK (QTY - 1)	426-5200	
RFF5-J8	RFF5-06							CAP - MALE TURCK (QTY - 1)	426-5200	

**BOX: RAX1**  
DESCRIPTION: REAR AXLE #1



HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	DEVICE CABLES			CONNECTOR		PINOUT			
			HARNESS #1 LENGTH / TYPE PART NO.	HARNESS #2 LENGTH / TYPE PART NO.	HARNESS #3 LENGTH / TYPE PART NO.	TYPE	PART NO.				
RAX1-J7	RAX1-05	REAR SERVICE BRAKES XDCR	1m XDCR	426-5234							
RAX1-J5	RAX1-03	REAR PARK BRAKES XDCR	1m XDCR	426-5234							
RAX1-J3	RAX1-09	REAR PARK BRAKES SOL	6m OPEN	426-5232				2 PIN DEUTSCH	426-1175	BLK = 1, GRN = 2	
RAX1-J1	RAX1-07	REAR DRIVER LUBE FLOW SWITCHES	2m	426-5231	5m TEE	426-6240 427-0079	6m OPEN 6m OPEN	426-5232 426-5232	2 PIN DEUTSCH 2 PIN DEUTSCH	426-1175 426-1175	BLK = 1, WHT = 2 BLK = 1, WHT = 2
RAX1-J2	RAX1-01							CAP - MALE TURCK (SUPPLIED WITH TURCK BOX)			
RAX1-J4	RAX1-02							CAP - MALE TURCK (QTY - 1)	426-5200		
RAX1-J6	RAX1-04							CAP - MALE TURCK (QTY - 1)	426-5200		
RAX1-J8	RAX1-06							CAP - MALE TURCK (QTY - 1)	426-5200		

NOTE:  
\* INDICATES MACHINE OPTION  
--- SHOWN FOR REFERENCE ONLY.

REVISIONS						
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
	00	RELEASE	NL11-0436	6-16-11	LW	BAS BS
	01	SEE SHEET 1 FOR CHANGES	NL11-1768	8-02-11	LW	BAS BS
	02	NO CHG THIS SHEET; SEE SHEET 1 & 2 FOR CHG	NL11-1796	9-14-11	JFM	BS BS
	03	NO CHG THIS SHEET; SEE SHEET 1 FOR CHG	NL11-1818	10-14-11	JFM	BS BS
	04	NO CHG THIS SHEET; SEE SHEET 1 FOR CHG	NL12-1524	2-10-12	JFM	BS BS

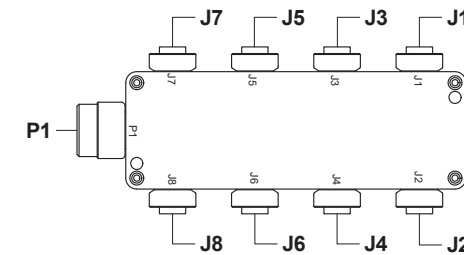
**LOW VOLTAGE CONTROL CABINET**

CABLE	DESCRIPTION	HARNESS #1		HARNESS #2		HARNESS #3		CONNECTOR	
		LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	LENGTH / TYPE	PART NO.	TYPE	PART NO.
KLZ1	KLENZ BOX	4m	426-5227	1.5m	426-5207				
MBR1	MIRROR BAR	8m	426-6242	1.5m	426-5207				
MBR2	MIRROR BAR	8m	426-6242	1.5m	426-5207				
DCP1	DRIVE COOLING PUMP	10m	426-6241	3m	426-5213				
EIC1	ENGINE INTERFACE CABINET	10m	426-6243	4m	426-5227				
EIC3	ENGINE INTERFACE CABINET	10m	426-6251	CABLE TEE	426-6253	4.3m 4.3m	426-5838 426-5838		
	(EIC3 CONT.)	CABLE TEE 0.4m / WATER PUMP	426-6253 426-7798	0.5m	426-6246	CABLE TEE 0.4m / WATER PUMP	426-6253 426-7798		
	(EIC3 CONT.)	0.5m	426-6246	CABLE TEE 0.4m / WATER PUMP	426-6253 426-7798	TERMINATOR	426-6254		
CSP1	CONTROL SWITCH PANEL	10m	426-6243	3m	426-5226				
RCL1	REAR COWL	10m	426-6243	4m	426-5227	2m	426-5221		
RCL2	REAR COWL	10m	426-6241	5m	426-6240	1m	426-5230		
SRC1	SR CABINET	1m	426-5220	HARNESS PROVIDED AS PART OF SR CABINET ASSY					
SRC2	SR CABINET	1m	426-6249	HARNESS PROVIDED AS PART OF SR CABINET ASSY					
LLC1	LADDER LIGHT CONTROL	3m	426-5213	3m	426-5213	1m	426-5230		
CAB1	CAB	1.5m	426-5207						
CAB2	CAB	1.5m	426-5207						
CAB3	CAB	1.5m	426-5207						
CAB4	CAB	1.5m	426-5207						
CAB5	CAB	1.5m	426-4188						
CAB6	CAB	1.5m	426-4195						
CAB9	CAB TO AC CONDENSOR	4.2m	426-7339						
CAB10	CAB TO AC CLUTCH	1.4m	426-4197	1m DIN	426-5233				

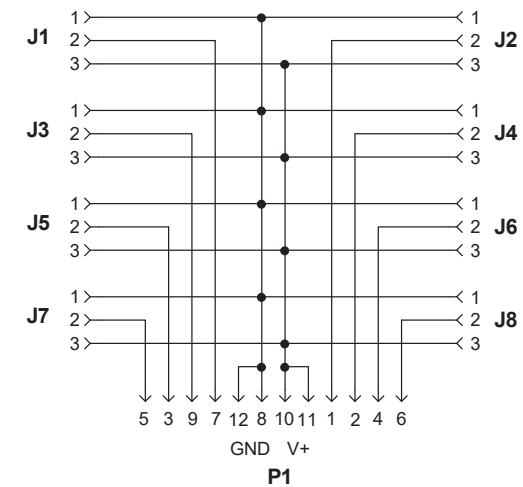
CABLE	DEVICE DESCRIPTION	LENGTH/TYPE	PART NO.	PINOUT
CSP2	LADDER LIMIT SWITCH	6m OPEN	426-5232	POWER STEP: WHT, BLK = GRN

ISOLATION AND CONTROL SWITCHES

**BREAKOUT BOX 12 PIN - 8 X 3 PIN**  
(P/N: 426-5235)



**TOP VIEW - BREAKOUT BOX**



**SCHEMATIC - BREAKOUT BOX**

NOTE:  
\* INDICATES MACHINE OPTION  
--- SHOWN FOR REFERENCE ONLY.

# Fluid Power Diagram



05 ITEM E45 WAS 4271128			1346701	6-21-17	KMD	JD	JD	REVISIONS		
REV	DATE	DESCRIPTION	BY	CHK	APP					
00	RELEASE									
01	ITEM 56 WAS 4274814	NL12-2357	9-27-12	KMD	JD	JD				
02	SEE SHEET 5	NL13-1559	2-26-13	KMD	JD	JD				
03	ITEM E33 WAS 4004299	NL14-1404	2-10-14	KMD	JD	JD				
04	ITEM 176 WAS 4243731, MS5 WAS 6945595	1324708	3-9-16	KMD	JD	JD				

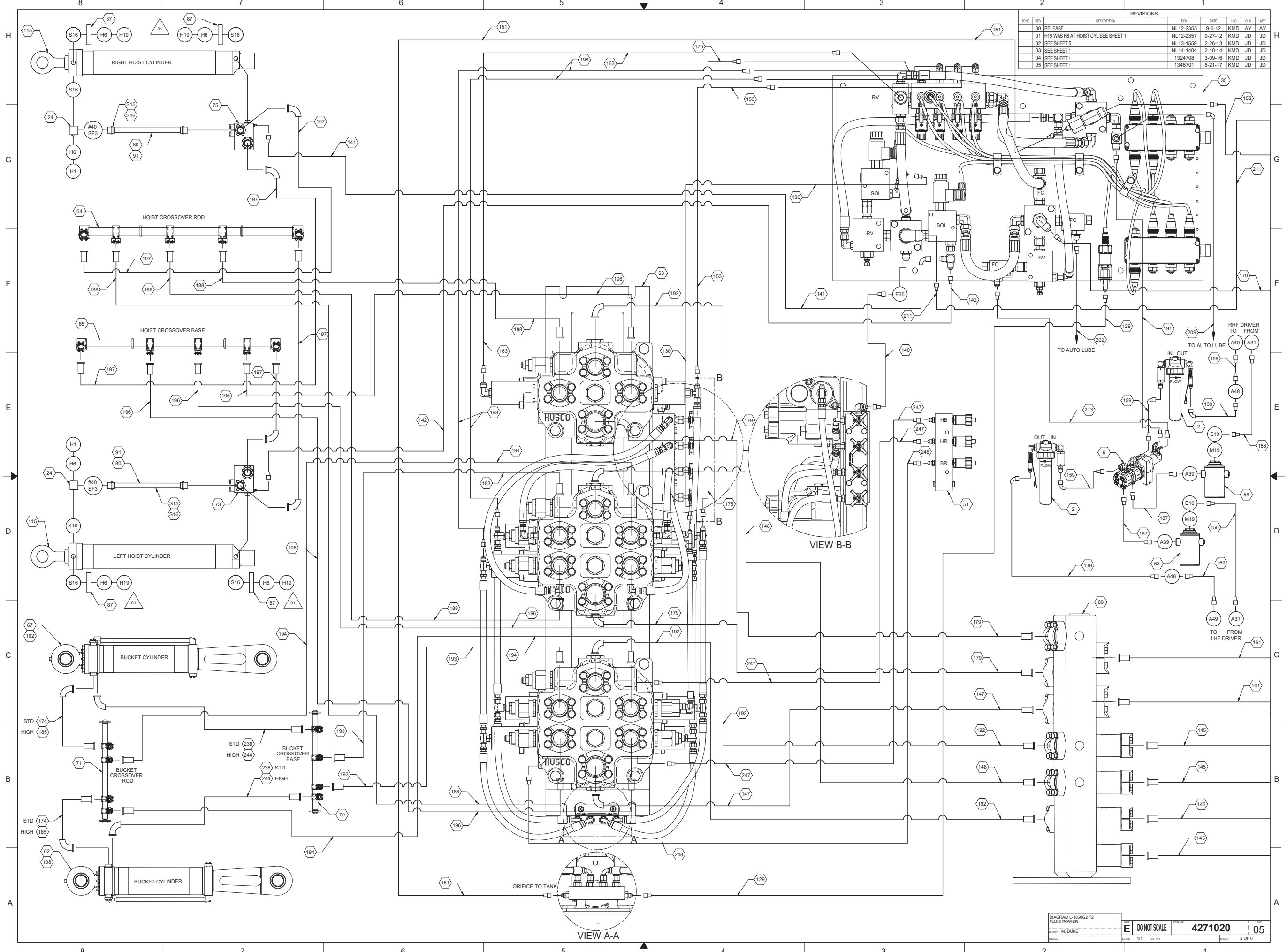
HOSE ASSEMBLIES	
DESIGNATION	DESCRIPTION
QJ	0" JIC END FITTING
45J	45° JIC END FITTING
90J	90° JIC END FITTING
90JL	90° JIC LONG DROP END FITTING
QF	90° SPLIT FLANGE END FITTING
45F	45° SPLIT FLANGE END FITTING
90FJ	90° SPLIT FLANGE END FITTING
	90° SPLIT FLANGE JUMPSIZE END FITTING

DESIGNATOR	DESCRIPTION
CV	CHECK VALVE
FC	FLOW CONTROL PUMP
P	PRESSURE SWITCH
PT	PRESSURE TRANSDUCER
RV	RELIEF VALVE
SOL	SOLENOID
SS	SHOCK SUPPRESSOR
SV	SEQUENCE VALVE
TP	TEST PORT

FITTINGS	
DESIGNATION	DESCRIPTION
FJ	FEMALE JIC
FP	FEMALE PIPE (NPT)
MJ	MALE JIC
MO	MALE O-RING
MP	MALE PIPE (NPT)
SF	SPLIT FLANGE

#	ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION			
#24 SF4 SET	421-0349	BOLT HX .500 5.500 NC G8	P26 426-7483	E29	403-2321	FTG HYD 90 4 FP 4 FP	E28	403-1400	PIPE HYD ST ELB 90 4 MP 4 FP	223	-				
	406-8358	O-RING 1-1/2 SAE SPLIT FLANGE	P25 407-1098				E27	408-1386	FTG HYD 90 12 MJ 10 MO	222	422-2463	HOSE 1250 12 60.0 OJ 90J			
	418-6401	FLANGE HALF 1-1/2 SAE	P24 401-3556				E26	424-4735	FTG HYD 90 16 MP 16 MP	221	-				
	400-9758	BOLT HX .500 5.000 NC G8	P23 426-1677				E25	404-0553	FTG HYD 90 8 MJ 6 MO	220	412-9164	HOSE 4000 6 140.0 OJ OJ			
#24 SF3 SET	421-0349	WASHER FLAT .500 .75 13 HRD	P22 424-1329	E24	424-8951	ASSY ORIFICE .062 90 6MJ 6MO	E24	419-3525	HOSE 5000 4 33.0 OJ OJ	219	419-3525	HOSE 5000 4 33.0 OJ OJ			
	406-8358	O-RING 1-1/2 SAE SPLIT FLANGE	P21 401-3778	E23	404-0554	PIPE PLUG 1/8 NPT HEX HEAD	E23	416-6148	HOSE 1250 12 342.0 OJ 90J	218	416-6148	HOSE 1250 12 342.0 OJ 90J			
	418-6401	FLANGE HALF 1-1/2 SAE	P20 422-3340	E22	425-5263	ELB ST-SAE-1 1/2-60°-C61-160	E22	422-2057	HOSE 1250 12 20.0 OJ OJ	217	422-2057	HOSE 1250 12 20.0 OJ OJ			
#24 SF2 SET	400-9755	BOLT HX .500 3.250 NC G8	P19 400-8733	E21	400-2483	SF / PLUG 1-1/4	E21	400-2483	FTG HYD 90 16 MJ 16 FJ SWV	216	427-0947	HOSE 4000 6 120.0 OJ OJ			
	421-0349	WASHER FLAT .500 .75 13 HRD	P18 424-3929	E20	400-2471	FTG HYD 90 8 MJ 8 MO	E20	426-1643	HOSE 5000 4 350.0 OJ OJ	215	426-1643	HOSE 5000 4 350.0 OJ OJ			
	406-8358	O-RING 1-1/2 SAE SPLIT FLANGE	P17 424-3927	E19	400-2481	FTG HYD 90 12 MJ 12 FJ SWVL	E19	422-2189	HOSE 5000 24 58.0 OF 90FHD1	214	422-2189	HOSE 5000 24 58.0 OF 90FHD1			
	418-6401	FLANGE HALF 1-1/2 SAE	P16 407-8732	E18	401-7400	FTG HYD 90 6 MJ 8 MO JUMP	E18	415-5732	HOSE 4000 6 104.0 OJ OJ	213	415-5732	HOSE 4000 6 104.0 OJ OJ			
	082-7222	BOLT HX .500 2.000 NC G8	P15 422-3348	E17	401-4581	FTG HYD 90 4 MJ 4 MO	E17	412-9107	HOSE 4000 6 26.0 OJ OJ	212	412-9107	HOSE 4000 6 26.0 OJ OJ			
#24 SF1 SET	421-0349	WASHER FLAT .500 .75 13 HRD	P14 402-0769	E16	401-1748	FTG HYD 90 4 MJ 4 MP JUMP	E16	414-3738	HOSE 1250 12 300.0 OJ OJ	211	414-3738	HOSE 1250 12 300.0 OJ OJ			
	406-8358	O-RING 1-1/2 SAE SPLIT FLANGE	P13 404-0567	E15	405-6022	FTG HYD 90 20 MJ 16 MO JUMP	E15	424-3745	HOSE 4000 6 176.0 OJ OJ	210	424-3745	HOSE 4000 6 176.0 OJ OJ			
	418-6401	FLANGE HALF 1-1/2 SAE	P12 401-3958	E14	403-2325	PIPE PLG 1.000 CS SQ MAGNETIC	E14	417-7390	HOSE 2000 8 152.0 OJ 90J	209	417-7390	HOSE 2000 8 152.0 OJ 90J			
#20 SF3 SET	400-9518	BOLT HX .438 4.000 NC G8	P11 403-1553	E13	400-2478	FTG HYD 90 6 MJ 6 FJ SWVL	E13	422-3475	HOSE 375 32 95.0 OF 90F	208	422-3475	HOSE 375 32 95.0 OF 90F			
	421-0348	WASHER 7/16 HARDENED	P10 027-2969	E12	400-2476	FTG HYD 90 20 MJ 20 MO	E12	424-4950	HOSE 300 12 13.0 OJ OJ	207	424-4950	HOSE 300 12 13.0 OJ OJ			
	406-8357	O-RING 1-1/4 SAE SPLIT FLANGE	P9 401-3779	E11	424-1246	FTG HYD 90 12 MJ 8 MO JUMP	E11	424-1246	FTG HYD 90 12 MJ 8 MO JUMP	206	424-1246	FTG HYD 90 12 MJ 8 MO JUMP			
	418-6400	FLANGE HALF 1-1/4 SAE	P8 401-3780	E10	400-2473	FTG HYD 90 12 MJ 12 MO	E10	424-3736	HOSE 200 20 44.0 OJ 90J	205	424-3736	HOSE 200 20 44.0 OJ 90J			
#20 SF2 SET	421-2903	BOLT HX .438 3.000 NC G8	P7 402-0770	E9	400-2471	FTG HYD 90 8 MJ 8 MO	E9	416-2137	HOSE 5000 4 62.0 OJ OJ	204	416-2137	HOSE 5000 4 62.0 OJ OJ			
	421-0348	WASHER 7/16 HARDENED	P6 403-0061	E8	400-2470	FTG HYD 90 6 MJ 6 MO	E8	411-9113	HOSE 2000 8 262.0 OJ OJ	203	411-9113	HOSE 2000 8 262.0 OJ OJ			
	406-8357	O-RING 1-1/4 SAE SPLIT FLANGE	P5 422-3338	E7	400-2467	FTG HYD 90 45 16 MJ 16 MO	E7	698-2815	HOSE 4000 6 158.0 OJ OJ	202	698-2815	HOSE 4000 6 158.0 OJ OJ			
	418-6400	FLANGE HALF 1-1/4 SAE	P4 401-3957	E6	425-5270	ELB ST-SAE-1 1/2-60°-C61-160	E6	408-2856	HOSE 2000 8 182.0 OJ OJ	201	408-2856	HOSE 2000 8 182.0 OJ OJ			
#20 SF1 SET	421-3614	BOLT HX .438 1.750 NC G8	P3 400-8734	E5	411-6444	FTG HYD 90 4 MJ 4 FJ	E5	414-3616	HOSE 4000 6 150.0 OJ OJ	200	414-3616	HOSE 4000 6 150.0 OJ OJ			
	421-0348	WASHER 7/16 HARDENED	P2 041-6273	E4	424-3565	FTG HYD 90 6 MJ 14 MM0	E4	698-9042	HOSE 5000 4 50.0 OJ OJ	199	698-9042	HOSE 5000 4 50.0 OJ OJ			
	406-8357	O-RING 1-1/4 SAE SPLIT FLANGE	P1 422-3339	E3	425-5264	ELB ST-SAE-1 1/2-45°-C61-160	E3	408-0310	HOSE 2250 6 92.0 OJ OJ	198	408-0310	HOSE 2250 6 92.0 OJ OJ			
#16 SF5 SET	418-6400	FLANGE HALF 1-1/4 SAE	ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION	
	080-1173	BOLT HX .375 3.250 NC G8													
	421-0347	WASHER 3/8 HARDENED													
	410-5005	O-RING 1 SAE SPLIT FLANGE													
	418-6491	FLANGE HALF 1 SAE													
	424-3937	BOLT HX M12 X 1.75 X 45.0 (1.77)	M35 694-5598												
#16 SF4 SET	421-0347	WASHER 3/8 HARDENED	M34 401-3799	A51	426-7478	FTG HYD 0 12 MO 12 MO (REF)	A51	426-7478	FTG HYD 0 12 MO 12 MO (REF)	192	422-2192	HOSE 5000 24 72.0 OF 90FHD1	80	424-8529	STR HOIST CYLINDER PIPE
	410-5005	O-RING 1 SAE SPLIT FLANGE	M33 018-0841	A50	424-3980	FTG HYD 0 6 MJ 12 MM	A50	424-3980	FTG HYD 0 6 MJ 12 MM	190	426-1766	HOSE 4000 6 340.0 OJ OJ	78	-	
	422-2102	FLANGE HALF 1 SAE CODE 62	M32 407-7098	A49	426-1726	BUSHING 1-1/4 O-RING X 1/2 NPT/F	A49	426-1726	FTG HYD 0 8 MJ 12 FP	189	424-3527	HOSE 4000 16 76.0 OF 90F	77	-	
	421-3614	BOLT HX .438 1.750 NC G8	M31 426-1627	A48	401-7914	FTG HYD 0 8 MJ 8 FJ UNN	A48	401-7914	FTG HYD 0 8 MJ 8 FJ UNN	188	421-1988	HOSE 5000 24 73.0 OF OF HD	76	425-2629	ASSY PRESS & RETURN MNFLD REAR FR
#16 SF3 SET	421-0348	WASHER 7/16 HARDENED	M30 422-3016	A47	424-4690	FTG HYD 0 24 MP 16 FO	A47	424-4690	FTG HYD 0 24 MP 16 FO	187	418-2364	HOSE 1250 12 17.0 OJ OJ	75	427-3461	ASSY FLOAT VALVE SINGLE RH
	410-5005	O-RING 1 SAE SPLIT FLANGE	M29 426-1624	A46	403-0297	FTG HYD 0 2 MP 2 MP	A46	403-0297	FTG HYD 0 2 MP 2 MP	186	417-7394	HOSE 1250 12 103.0 OJ OJ	74	423-8014	PIPE STR 2
	426-9658	FLANGE HALF 1.00 FORGED C62	M28 416-1034	A45	405-0403	FTG HYD 0 12 MJ 16 MO	A45	405-0403	FTG HYD 0 12 MJ 16 MO	185	422-3472	HOSE 5000 32 124.0 OF 90F L4	73	427-3462	ASSY FLOAT VALVE SINGLE LH
#16 SF2 SET	424-4758	BOLT HX M12 X 1.75 X 70 (2.75)	M27 422-3013	A44	400-2461	FTG HYD 0 24 MJ 24 MO	A44	412-9106	HOSE 4000 6 24.0 OJ OJ	184	412-9106	HOSE 4000 6 24.0 OJ OJ	72	-	
	421-0347	WASHER 3/8 HARDENED	M26 424-1063	A43	403-0778	FTG HYD 0 8 MO 8 MO	A43	424-4745	HOSE 375 32 75.0 OF OF	183	424-4745	HOSE 375 32 75.0 OF OF	71	427-3467	ASSY BUCKET CROSSOVER ROD
	410-5005	O-RING 1 SAE SPLIT FLANGE	M25 416-3818	A42	423-7965	FTG HYD 0 6 MJ 5 MO	A42	427-0953	HOSE 2500 24 75.0 OF OF	182	427-0953	HOSE 2500 24 75.0 OF OF	70	427-3466	ASSY BUCKET CROSSOVER BASE
	422-2102	FLANGE HALF 1 SAE CODE 62	M24 424-1391	A41	405-7053	BUSHING RED 3/8 FF X 5/8 MO	A41	426-1642	HOSE 2500 24 96.0 OF 45F	181	426-1642	HOSE 2500 24 96.0 OF 45F	69	-	
#16 SF1 SET	083-6948	BOLT HX .375 1.750 NC G8	M15 424-1047	A40	411-5550	FTG HYD 0 12 MJ 8 MP JUMP	A40	411-5550	HOSE 4000 6 120.0 OJ 90J	180	411-5550	HOSE 4000 6 120.0 OJ 90J	68	-	
	421-0347	WASHER 3/8 HARDENED	M14 403-2312	A39	404-0581	PIPE HYD NIP 6 MP 8 MP HX	A39	404-0581	FTG HYD 0 12 MJ 16 MP	179	421-3834	HOSE 2500 32 60.0 OF 90F L1	67	427-3480	ASSY BUCKET CYL STD L1850 G2 R
	410-5005	O-RING 1 SAE SPLIT FLANGE	M13 422-3014	A38	403-0078	FTG HYD 0 8 MO 8 MO	A38	403-0078	FTG HYD 0 8 MO 8 MO	178	412-1659	HOSE 1250 12 138.0 OJ OJ	66	-	
	418-6491	FLANGE HALF 1 SAE	M12 021-4976	A37	404-0557	PIPE ELBOW 3/4" NPT	A37	404-0557	FTG HYD 0 6 MJ 8 MP	177	-		65	427-3468	ASSY HOIST CROSSOVER BASE
#12 SF5 SET	080-8476	BOLT HX .375 1.250 NC G8	M19 424-3516	A36	401-5753	FTG HYD 0 12 MJ 8 MP	A36	401-5753	FTG HYD 0 12 MJ 8 MP	176	424-4743	HOSE 5000 20 110.0 OF OF	64	427-3469	ASSY HOIST CROSSOVER ROD
	421-0347	WASHER 3/8 HARDENED	M18 422-3017	A35	400-2425	FTG HYD 0 20 MJ 20 MP	A35	409-7827	HOSE 2250 6 58.0 OJ OJ	175	409-7827	HOSE 2250 6 58.0 OJ OJ	63	-	
	410-5004	O-RING 139 98 95D PY	M17 423-8133	A34	400-2424	FTG HYD 0 16 MJ 16 MP	A34	400-2424	FTG HYD 0 16 MJ 16 MP	174	427-0963	HOSE 4000 32 115.0 OF 90F L4	62	427-3479	ASSY BUCKET CYL STD L1850 G2 L
	400-2219	FLANGE HALF 3/4 SAE CODE 61	M16 423-7927	A33	424-3936	FTG HYD 0 12 MO 4 MJ	A33	424-3936	FTG HYD 0 12 MO 4 MJ	173	426-1671	HOSE 4000 16 52.0 OJ 45F	61	427-5774	SUB ASSY PROPORTIONAL VALVE
#12 SF4 SET	083-6948	BOLT HX .375 1.750 NC G8	M15 424-1047	A32	424-3928	FTG HYD 0 8 MJ 8 BSPP	A32	424-3928	FTG HYD 0 8 MJ 8 BSPP	172	414-3736	HOSE 4000 6 20.0 OJ OJ	60	-	
	421-0347	WASHER 3/8 HARDENED	M14 424-1061	A31	417-2327	FTG HYD 0 12 MJ 12 FP	A31	417-2327	FTG HYD 0 12 MJ 12 FP	171	-		59	-	
	410-5004	O-RING 13													

REVISIONS						
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
	00	RELEASE	NL12-2355	9-6-12	KMD	AY AY
	01	H19 WAS HB AT HOIST CYL. SEE SHEET 1	NL12-2357	9-27-12	KMD	JD JD
	02	SEE SHEET 5	NL13-1559	2-26-13	KMD	JD JD
	03	SEE SHEET 1	NL14-1404	2-10-14	KMD	JD JD
	04	SEE SHEET 1	1324708	3-09-16	KMD	JD JD
	05	SEE SHEET 1	1346701	6-21-17	KMD	JD JD



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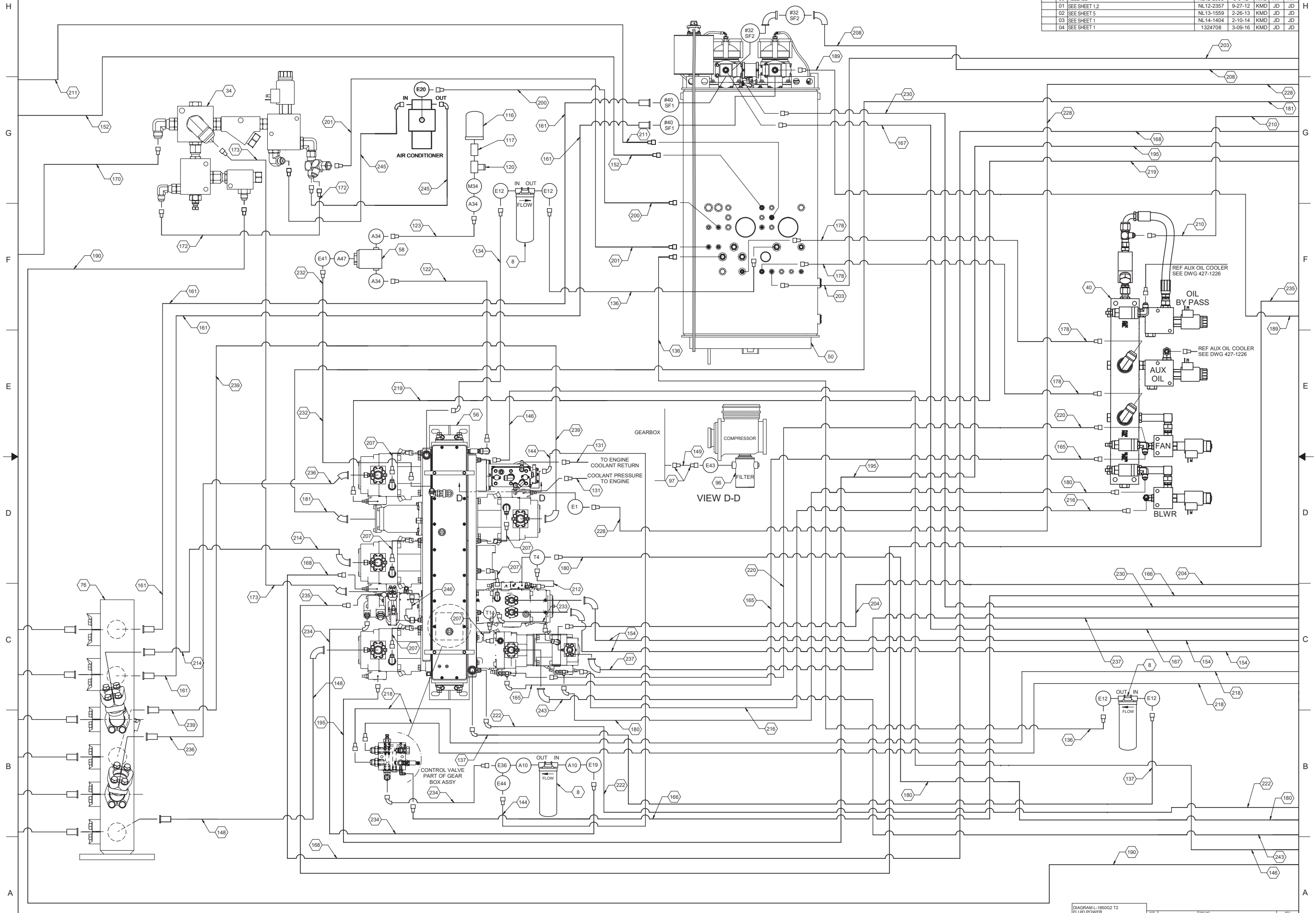
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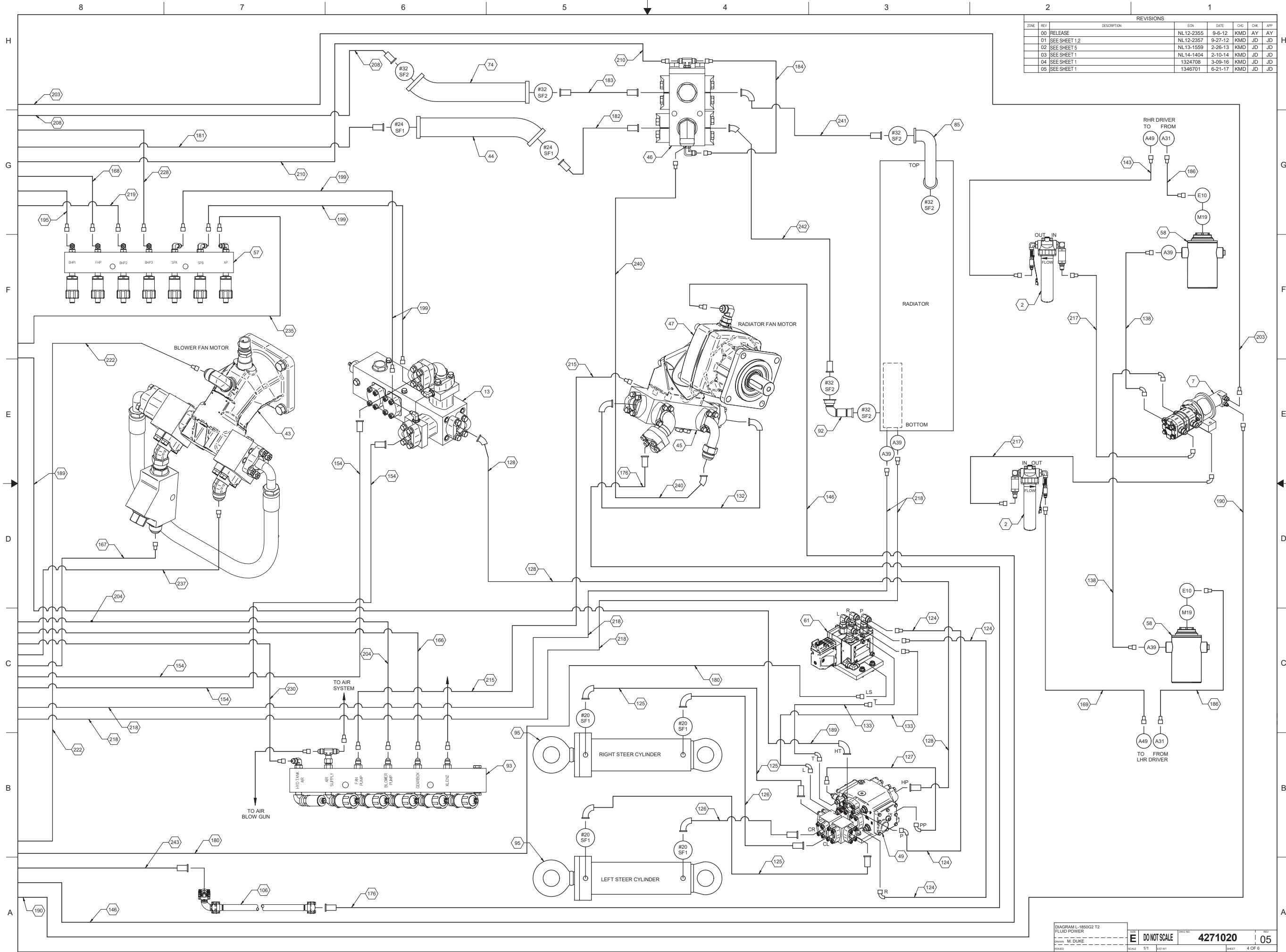
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05 SEE SHEET 1 1346701 6-21-17 KMD JD JD

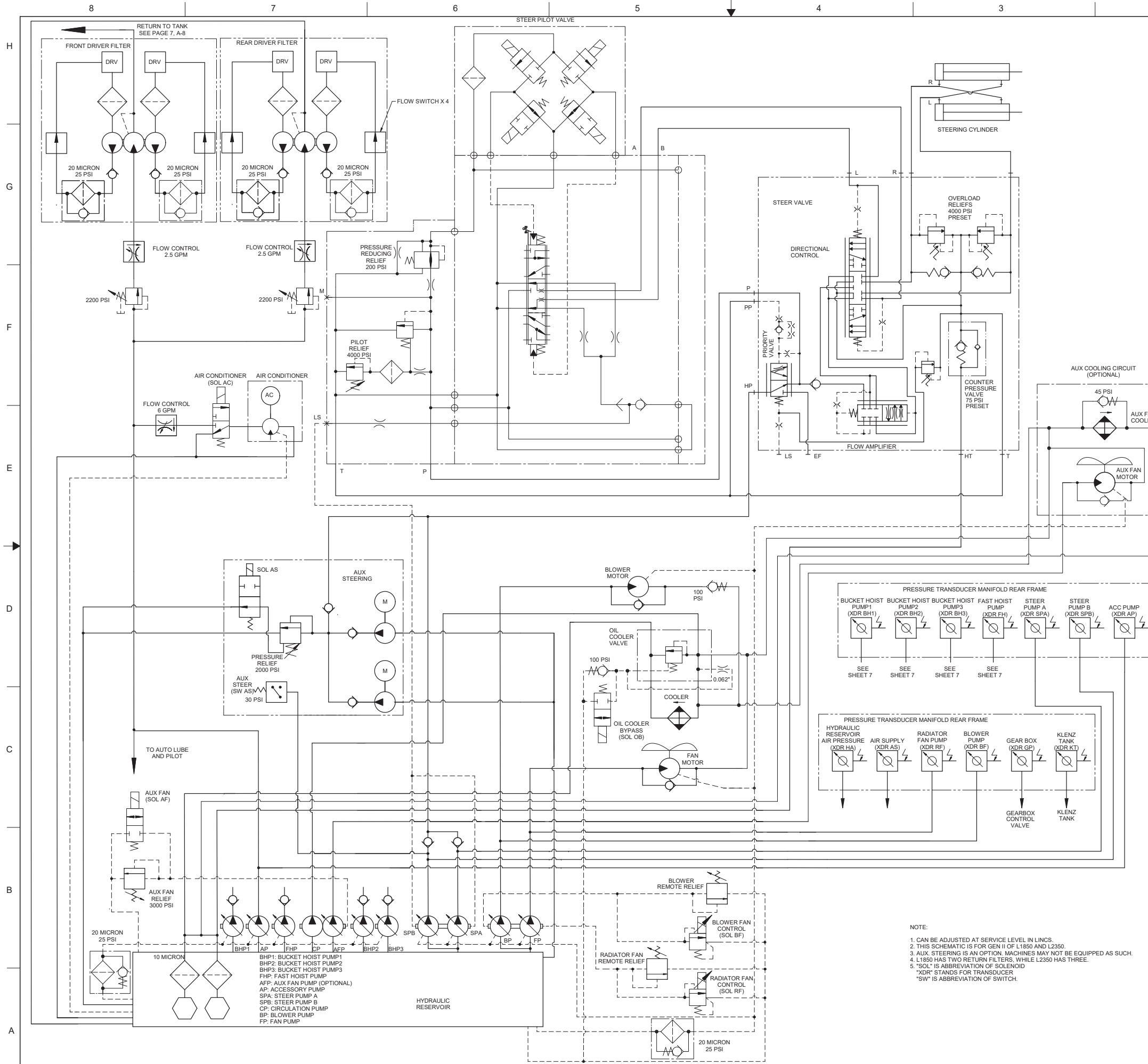
REVISIONS		EN	DATE	CHK	APP
00	RELEASE	NL12-2355	9-6-12	KMD	AY AY
01	SEE SHEET 1,2	NL12-2357	9-27-12	KMD	JD JD
02	SEE SHEET 5	NL13-1559	2-26-13	KMD	JD JD
03	SEE SHEET 1	NL14-1404	2-10-14	KMD	JD JD
04	SEE SHEET 1	1324708	3-09-16	KMD	JD JD



REVISIONS						
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
	00	RELEASE	NL12-2355	9-6-12	KMD	AY AY
	01	SEE SHEET 1,2	NL12-2357	9-27-12	KMD	JD JD
	02	SEE SHEET 5	NL13-1559	2-26-13	KMD	JD JD
	03	SEE SHEET 1	NL14-1404	2-10-14	KMD	JD JD
	04	SEE SHEET 1	1324708	3-09-16	KMD	JD JD
	05	SEE SHEET 1	1346701	6-21-17	KMD	JD JD



		REVISIONS					
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP	
	00	RELEASE	NL12-2355	9-6-12	KMD	AY AY	
	01	SEE SHEET 1,2	NL12-2357	9-27-12	KMD	JD DJ	
	02	UPDATE SPECIFICATIONS	NL13-1559	2-26-13	KMD	JD DJ	
	03	SEE SHEET 1	NL14-1404	2-10-14	KMD	JD DJ	
	04	SEE SHEET 1	1324708	3-09-16	KMD	JD JD	
	05	SEE SHEET 1	1346701	6-21-17	KMD	JD JD	

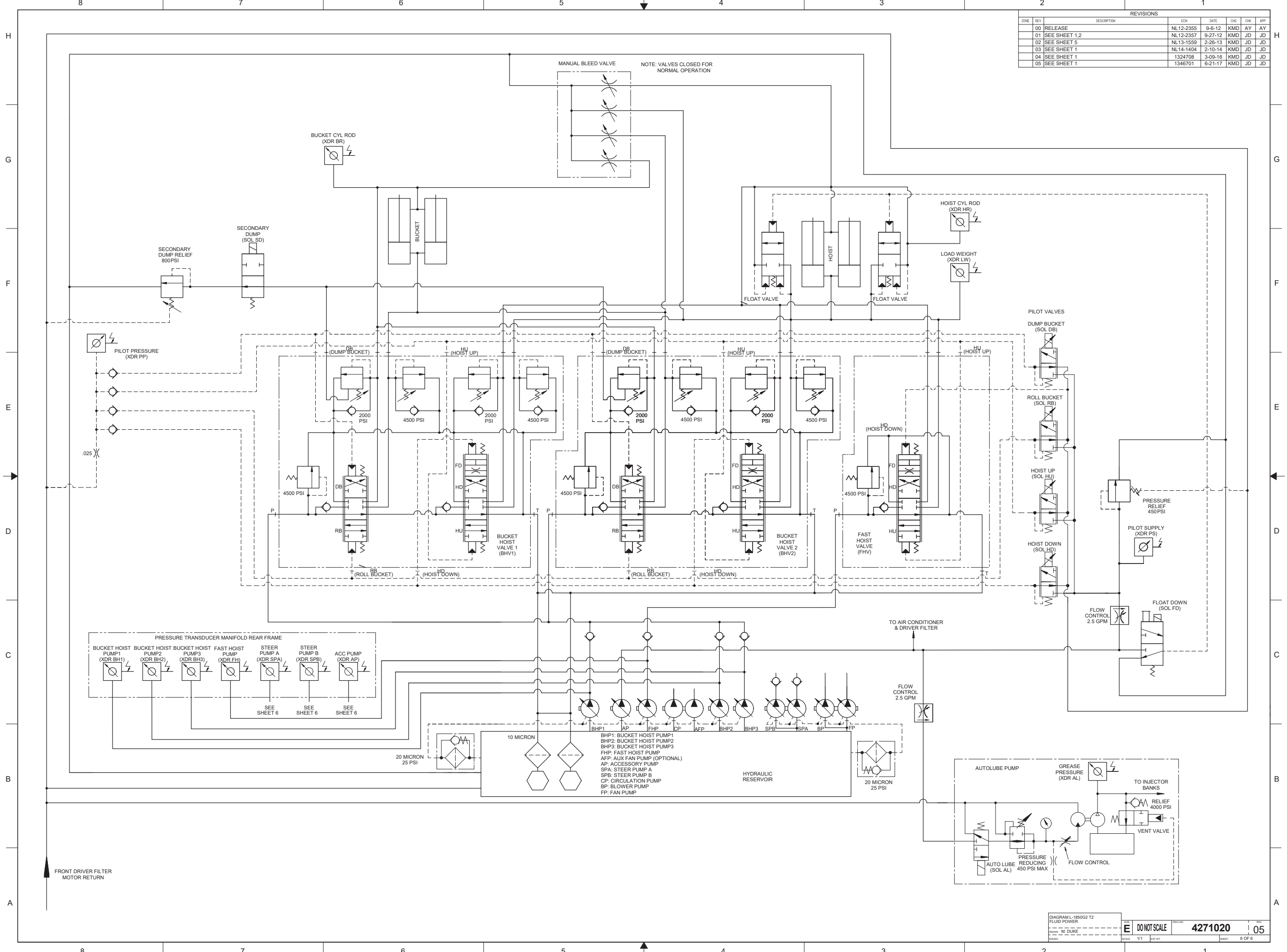


ALL PRESSURES WITH ENGINE AT HIGH THROTTLE

Specifications		
Hyd Res Air	Hydraulic Reservoir Regulator	L-1850 4 to 6 PSI
Engine Fan Circuit	Fan Pump (Stand-by) Idle	450 ± 50 (Stand-by)
	Fan Pump (Compensator)-High	750 RPM @ 1900 Engine RPM (1) blade fan
	Fan Remote Relief-High	700 RPM @ 1900 Engine RPM (1) blade fan
Blower Circuit	Blower Pump (Stand by)	450 ± 50 (Stand-by)
	Blower Pump (Compensator)	3400 RPM @ 1900 Eng RPM
	Blower Remote Relief	3100 RPM @ 1900 Eng RPM
Accessory Pump	Accessory Pump Compensator	2500psi ± 20
Pilot Circuit	Pressure relief valve (new)	450 ± 10
Driver Filtration	Sequence Valve	2200psi ± 20
Hoist / Bucket Circuit	Main Valve Relief	4500 psi - 50 -0
	Hoist Base Circuit Relief	4500 psi ± 50
	Hoist Rod Circuit Relief	2000 psi ± 50
	Bucket Base Circuit Relief	4500 psi ± 50
	Bucket Rod Circuit Relief	2000 psi ± 50
	Hoist & Bucket Pump Compensators	4000 psi ± 100' -0
	Secondary Dump Relief	800 psi ± 50
Steer Circuit (See Note#1)	Steering Main Relief (Flow Amp)	Turn in Full
	Steering Remote Relief (L1950 & L1150)	N/A
	Steering Pump (Stand By)	450 ± 50 (Stand-by)
	Steering Pump (Compensator)	3400 psi ± 50
	Steering Remote Relief (L1350 thru L2350)	4500 psi ± 50
	Shock and Suction Flow Amp	4000 psi ± 50
	Relief (PVG)	4000 psi ± 50
	Aux. Steering Relief (L950 & L1150)	N/A
	Aux. Steering (L1350 thru L2350)	2000 psi -50 -0
Aux Oil Cooler Circuit	Aux Oil Cooler Relief (L950 & L1150)	N/A
	Aux Oil Cooler Pump (Stand by) Idle	300 psi
	Aux Oil Cooler (Compensator)	1400 RPM 1050 Hz
	Aux Remote Relief High	1300 RPM 975 Hz
Gear Box Circuit	Gearbox	50 to 125 psi at High Throttle
AutoLube Circuit	Pressure Reducing Valve	3500 psi (Grease Pressure)
	Flow Control	1.5 to 2 strokes per second
Cycle Times	Hoist Up	16 Sec
	Hoist Down	9-11 Sec
	Float	6 Sec
	Bucket Rollback	3-5 Sec
	Bucket Dump	4 Sec
	Steer Lock to Lock	6 Sec

NOTE:  
 1. CAN BE ADJUSTED AT SERVICE LEVEL IN LINES.  
 2. THIS SCHEMATIC IS FOR GEN II OF L1850 AND L2350.  
 3. AUX. STEERING IS AN OPTION. MACHINES MAY NOT BE EQUIPPED AS SUCH.  
 4. L1850 HAS TWO RETURN FILTERS, WHILE L2350 HAS THREE.  
 5. "SOL" IS ABBREVIATION OF SOLENOID.  
 \*XDR\* STANDS FOR TRANSDUCER  
 \*SW\* IS ABBREVIATION OF SWITCH.

REVISIONS						
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
	00	RELEASE	NL12-2355	9-6-12	KMD	AY AY
	01	SEE SHEET 1,2	NL12-2357	9-27-12	KMD	JD JD
	02	SEE SHEET 5	NL13-1559	2-26-13	KMD	JD JD
	03	SEE SHEET 1	NL14-1404	2-10-14	KMD	JD JD
	04	SEE SHEET 1	1324708	3-09-16	KMD	JD JD
	05	SEE SHEET 1	1346701	6-21-17	KMD	JD JD



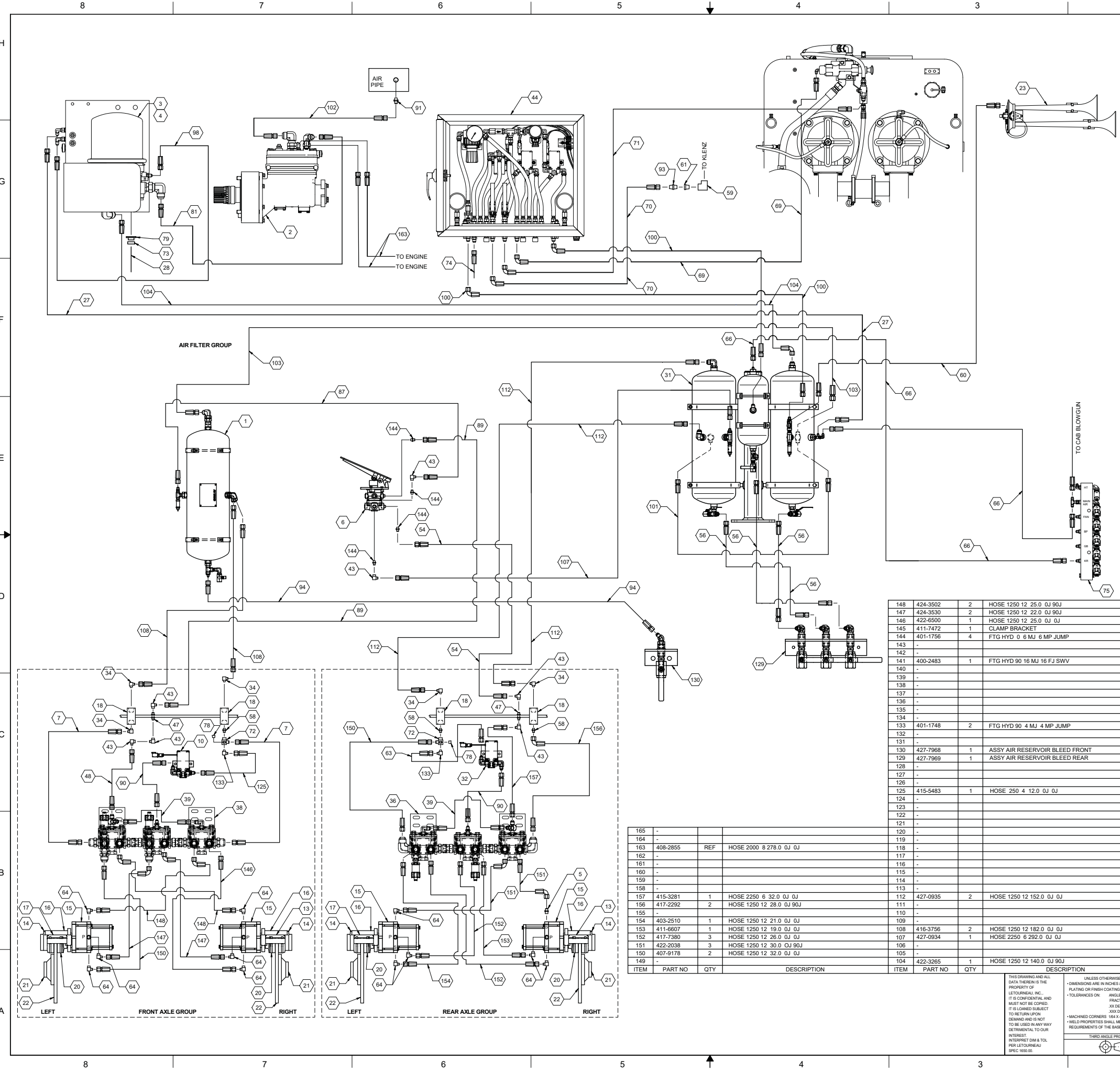
PRESSURE TRANSDUCER MANIFOLD REAR FRAME  
 BUCKET HOIST PUMP1 (XDR BH1)  
 BUCKET HOIST PUMP2 (XDR BH2)  
 BUCKET HOIST PUMP3 (XDR BH3)  
 FAST HOIST PUMP (XDR FH)  
 STEER PUMP A (XDR SPA)  
 STEER PUMP B (XDR SPB)  
 ACC PUMP (XDR AP)

10 MICRON  
 20 MICRON 25 PSI  
 20 MICRON 25 PSI  
 BHP1: BUCKET HOIST PUMP1  
 BHP2: BUCKET HOIST PUMP2  
 BHP3: BUCKET HOIST PUMP3  
 FHP: FAST HOIST PUMP  
 APP: ALIX FAN PUMP (OPTIONAL)  
 AP: ACCESSORY PUMP  
 SPA: STEER PUMP A  
 SPB: STEER PUMP B  
 CP: CIRCULATION PUMP  
 BP: BLOWER PUMP  
 FP: FAN PUMP

AUTOLUBE PUMP  
 GREASE PRESSURE (XDR AL)  
 TO INJECTOR BANKS  
 RELIEF 4000 PSI  
 VENT VALVE  
 PRESSURE REDUCING (SOL AL) 450 PSI MAX  
 FLOW CONTROL

# **Brake Controls Diagram**





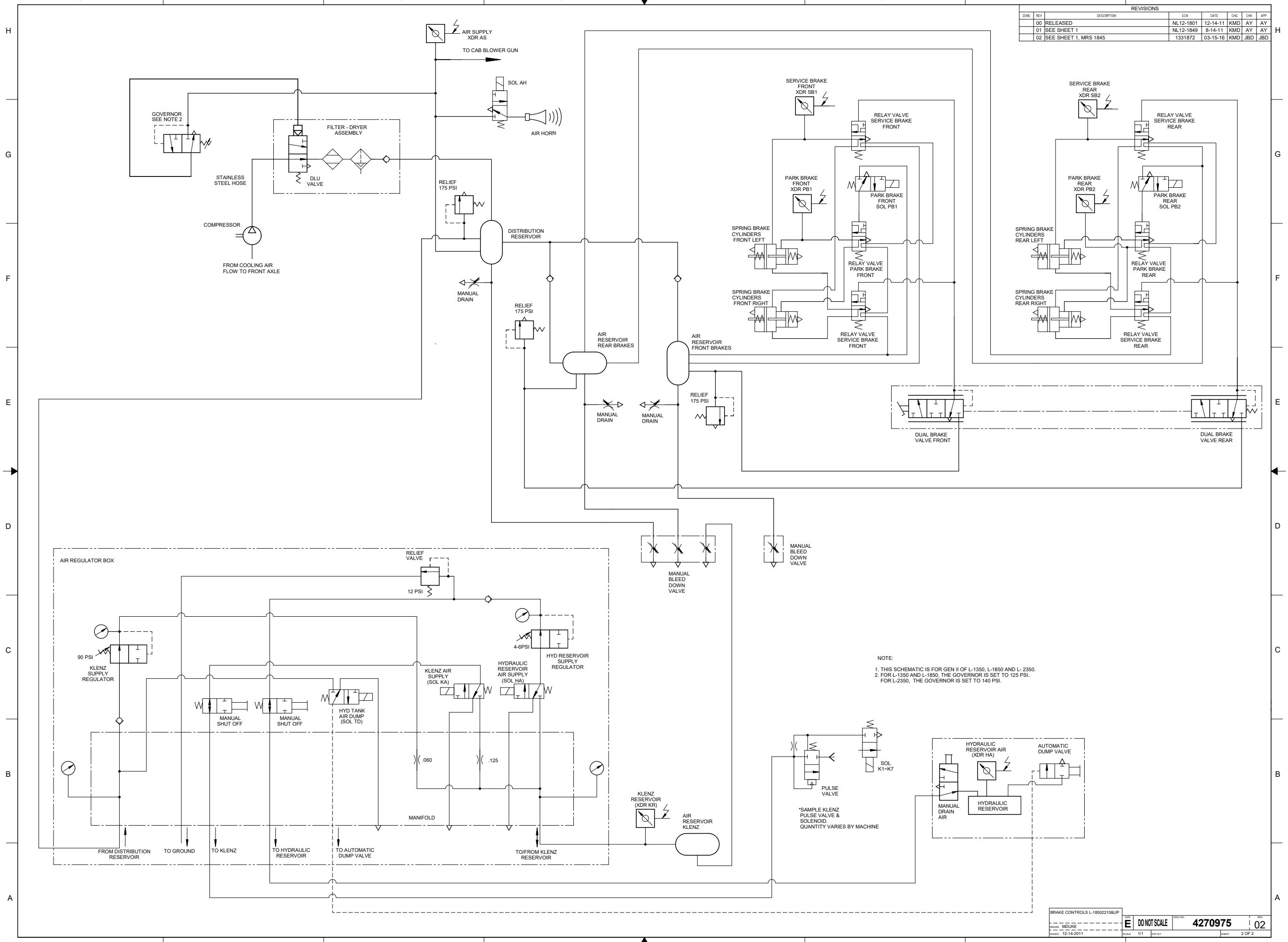
REVISIONS						
DATE	REV	DESCRIPTION	EN	DATE	CHK	APP
	00	RELEASED	NL12-1801	12-14-11	KMD	AY
	01	ITEM 1 WAS 4270895, IT 6 WAS 4002175, IT 10 WAS				
	01	4261177, IT 23 WAS 4213818, IT 36 WAS 4013787,				
	01	IT 38 WAS 4256383, IT 129 WAS 4189287,				
	01	IT 130 WAS 4261747, DELETE IT 8, 11, 12, 19,				
	01	24, 25, 26, 29, 30, 33, 40, 41, 42, 45, 49, 50, 51, 52, 75, 82, 99,				
	01	105, 106, 109, 113, 115, 117, 122, 126, 127, 128, 131,				
	01	132, 134, 138, 140, 142, 143, 149, 155, 160, 162, 164,				
	01	165, ADD IT 32, 146, 147, 153, QTY CHGS IT 43, 61, 70,				
	01	IT 90(3TO2), IT 58(1TO3), IT 133(2TO1), IT 141(3TO1),				
	01	CHG GRAPHICS	NL12-1849	8-14-12	KMD	AY
	02	IT 10 WAS 4272970, ADD IT 75, MRS 1845	1331872	8-15-16	KMD	JBD

103	427-0936	1	HOSE 1250 12 284.0 OJ OJ
102	421-3887	1	HOSE 1000 16 45.0 OJ OJ
101	417-7380	1	HOSE 1250 12 26.0 OJ OJ
100	411-6472	2	HOSE 2000 8 190.0 OJ 90J
99	-	-	-
98	698-9418	1	HOSE 2750 4 34.0 OJ OJ
97	-	-	-
96	-	-	-
95	-	-	-
94	408-9126	1	HOSE 2750 4 70.0 OJ OJ
93	404-0558	1	FTG HYD 0 8 MJ 12 MP JUMP
92	-	-	-
91	400-2424	1	ADAPTER STRAIGHT 1 MJ X 1 MP
90	415-5482	2	HOSE 250 4 10.0 OJ OJ
89	415-3285	1	HOSE 2250 6 334.0 OJ OJ
88	-	-	-
87	409-3109	1	HOSE 2250 6 222.0 OJ OJ
86	425-6308	1	FTG HYD 0 4 MP 12 MP
85	425-6310	1	FTG HYD 0 8 MP 12 MP
84	415-1426	1	HOSE 1000 16 31.0 OJ OJ
83	401-3788	1	PIPE RED .500 250 BSH 6000
82	-	-	-
81	426-1746	1	HOSE 1200 12 120.0 OJ OJ SS
80	-	-	-
79	425-8491	1	EXHAUST COVER
78	027-2969	2	PIPE PLG .250 CS HX
77	-	-	-
76	-	-	-
75	427-5726	REF	ASSY TRANSDUCER REAR FRAME
74	421-3975	1	HOSE 250 4 200.0 OJ OJ
73	071-1253	1	CLAMP HOSE WORM DR .81 1.75
72	424-4689	2	FTG HYD 90 12 MJ 12 FJ MOD
71	427-0933	1	HOSE 2000 8 286.0 OJ 90J
70	421-3508	1	HOSE 2000 8 136.0 OJ 90J
69	427-0932	1	HOSE 2750 4 306.0 OJ 90J
68	-	-	-
67	-	-	-
66	403-4924	2	HOSE 2750 4 80.0 OJ OJ
65	-	-	-
64	408-1386	12	FTG HYD 90 12 MJ 10 MO
63	403-4937	1	HOSE 2750 4 20.0 OJ OJ
62	-	-	-
61	419-3350	1	BUSHING, REDUCING, 1 X 3/4
60	427-0931	1	HOSE 2750 4 400.0 OJ OJ
59	021-3417	1	PIPE ELB 1.000 90
58	400-2422	3	FTG HYD 0 12 MJ 12 MP
57	-	-	-
56	424-3961	3	HOSE 2750 4 152.0 OJ OJ
55	-	-	-
54	427-0930	1	HOSE 2250 6 406.0 OJ OJ
53	008-8402	4	PLUG 3/8 NPT
52	-	-	-
51	-	-	-
50	-	-	-
49	-	-	-
48	924-2071	1	HOSE 2250 6 28.0 OJ OJ
47	405-1616	2	STRADPT 3/8MJX3/8MJ BULKHEAD
46	-	-	-
45	-	-	-
44	427-1109	1	AIR BOX
43	400-2478	7	FTG HYD 90 6 MJ 6 FJ SWVL
42	-	-	-
41	-	-	-
40	-	-	-
39	406-8124	2	HOSE 2250 6 14.0 OJ OJ
38	427-3465	1	ASSY RELAY VALVE L18/2350 FXL
37	052-7116	1	ADAPTER STRAIGHT 3/8 MJ X 1/4 MP
36	427-3473	1	ASSY RELAY VALVE L18/2350 RXL
35	403-2316	1	TEE 12
34	400-2441	5	FTG HYD 90 12 MJ 12 MP
33	-	-	-
32	427-7971	1	ASSY AIR SOLENOID REAR
31	427-3420	1	ASSY AIR TANK STAND
30	-	-	-
29	-	-	-
28	425-8493	1	EXHAUST HOSE
27	403-2077	1	HOSE 2750 4 168.0 OJ OJ
26	-	-	-
25	-	-	-
24	-	-	-
23	-	-	-
22	427-0891	1	KIT AIR HORN
21	424-8784	REF	DISC - 22 OD X 1 LARGE BRAKE
20	423-4511	REF	HUB BRAKE B40
19	424-0108	REF	CARRIER AND LINING ASSEMBLY
18	401-2924	REF	WELD COUPLING 3/4 NPT
17	424-0101	REF	TORQUE TUBE RIGHT MACHINED
16	424-0102	REF	BRAKE ACTUATOR MOUNT
15	424-8969	REF	BRAKE SPRING CYLINDER
14	424-0105	REF	MOUNT CALIPER
13	424-0103	REF	TORQUE TUBE LEFT MACHINED
12	-	-	-
11	-	-	-
10	427-7970	1	ASSY AIR SOLENOID FRONT
9	418-6237	1	HOSE 2750 4 160.0 OJ OJ
8	-	-	-
7	407-8315	3	HOSE 1250 12 30.0 OJ OJ
6	427-4390	1	ASSY DUAL BRAKE VALVE
5	402-1412	1	FTG HYD 0 10 MO 12 MJ
4	425-8482	REF	DESICCANT CARTRIDGE (SERVICE PART)
3	426-4801	1	DRYER AIR
2	426-1543	1	COMPRESSOR
1	427-7972	1	ASSY AIR RESERVOIR FRONT

148	424-3502	2	HOSE 1250 12 25.0 OJ 90J
147	424-3530	2	HOSE 1250 12 22.0 OJ 90J
146	422-6500	1	HOSE 1250 12 25.0 OJ OJ
145	411-7472	1	CLAMP BRACKET
144	401-1756	4	FTG HYD 0 6 MJ 6 MP JUMP
143	-	-	-
142	-	-	-
141	400-2483	1	FTG HYD 90 16 MJ 16 FJ SWV
140	-	-	-
139	-	-	-
138	-	-	-
137	-	-	-
136	-	-	-
135	-	-	-
134	-	-	-
133	401-1748	2	FTG HYD 90 4 MJ 4 MP JUMP
132	-	-	-
131	-	-	-
130	427-7968	1	ASSY AIR RESERVOIR BLEED FRONT
129	427-7969	1	ASSY AIR RESERVOIR BLEED REAR
128	-	-	-
127	-	-	-
126	-	-	-
125	415-5483	1	HOSE 250 4 12.0 OJ OJ
124	-	-	-
123	-	-	-
122	-	-	-
121	-	-	-
120	-	-	-
119	-	-	-
118	-	-	-
117	-	-	-
116	-	-	-
115	-	-	-
114	-	-	-
113	-	-	-
112	427-0935	2	HOSE 1250 12 152.0 OJ OJ
111	-	-	-
110	-	-	-
109	-	-	-
108	416-3756	2	HOSE 1250 12 182.0 OJ OJ
107	427-0934	1	HOSE 2250 6 292.0 OJ OJ
106	-	-	-
105	-	-	-
104	422-3265	1	HOSE 1250 12 140.0 OJ 90J

ITEM	PART NO	QTY	DESCRIPTION	ITEM	PART NO	QTY	DESCRIPTION
165	-	-	-	104	422-3265	1	HOSE 1250 12 140.0 OJ 90J
164	-	-	-	103	-	-	-
163	408-2855	REF	HOSE 2000 8 278.0 OJ OJ	102	-	-	-
162	-	-	-	101	-	-	-
161	-	-	-	100	-	-	-
160	-	-	-	99	-	-	-
159	-	-	-	98	-	-	-
158	-	-	-	97	-	-	-
157	415-3281	1	HOSE 2250 6 32.0 OJ OJ	96	-	-	-
156	417-2292	2	HOSE 1250 12 28.0 OJ 90J	95	-	-	-
155	-	-	-	94	-	-	-
154	403-2510	1	HOSE 1250 12 21.0 OJ OJ	93	-	-	-
153	411-6607	1	HOSE 1250 12 19.0 OJ OJ	92	-	-	-
152	417-7380	3	HOSE 1250 12 26.0 OJ OJ	91	-	-	-
151	422-2038	3	HOSE 1250 12 30.0 OJ 90J	90	-	-	-
150	407-9178	2	HOSE 1250 12 32.0 OJ OJ	89	-	-	-
149	-	-	-	88	-	-	-
148	-	-	-	87	-	-	-
147	-	-	-	86	-	-	-
146	-	-	-	85	-	-	-
145	-	-	-	84	-	-	-
144	-	-	-	83	-	-	-
143	-	-	-	82	-	-	-
142	-	-	-	81	-	-	-
141	-	-	-	80	-	-	-
140	-	-	-	79	-	-	-
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116	-	-	-	55	-	-	-
115	-	-	-	54	-	-	-
114	-	-	-	53	-	-	-
113	-	-	-	52	-	-	-
112	-	-	-	51	-	-	-
111	-	-	-	50	-	-	-
110	-	-	-	49	-	-	-
109	-	-	-	48	-	-	-
108	-	-	-	47	-	-	-
107	-	-	-	46	-	-	-
106	-	-	-	45	-	-	-
105	-	-	-	44	-	-	-
104	-	-	-	43	-	-	-
103	-	-	-	42	-	-	-
102	-	-	-	41	-	-	-
101	-	-	-	40	-	-	-
100	-	-	-	39	-	-	-
99	-	-	-	38	-	-	-
98	-	-	-	37	-	-	-
97	-	-	-	36	-	-	-
96	-	-	-	35	-	-	-
95	-	-	-	34	-	-	-
94	-	-	-	33	-	-	-
93	-	-	-	32	-	-	-
92	-	-	-	31	-	-	-
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76	-	-	-	15	-	-	-
75	-	-	-	14	-	-	-
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72	-	-	-	11	-	-	-

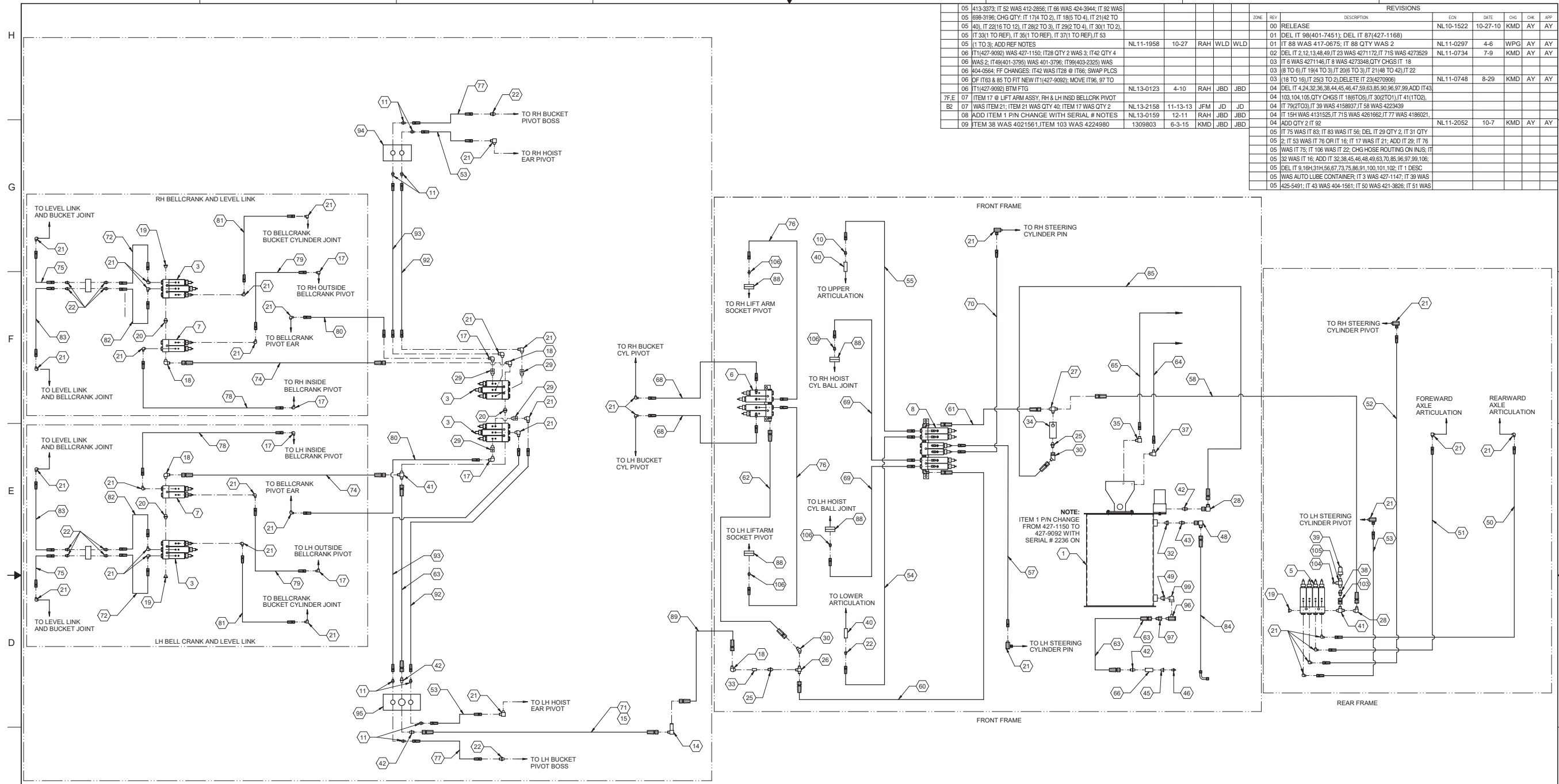
REVISIONS						
ZONE	REV	DESCRIPTION	EN	DATE	CHK	APP
	00	RELEASED	NL12-1801	12-14-11	KMD	AY AY
	01	SEE SHEET 1	NL12-1849	8-14-11	KMD	AY AY
	02	SEE SHEET 1, MRS 1845	1331872	03-15-16	KMD	JBD JBD



# **Auto Lube**



REV	DATE	DESCRIPTION	BY	CHK	APP
00	10-27-10	RELEASE	KMD	AY	AY
01	11-02-09	DEL IT 98(401-7451), DEL IT 87(427-1168)	WPG	AY	AY
02	11-07-34	DEL IT 2,12,13,48,49,IT 23 WAS 4273348,IT 715 WAS 4273529	KMD	AY	AY
03	11-07-48	DEL IT 6 WAS 4271146,IT 8 WAS 4273348,IT 18	KMD	AY	AY
04	11-07-48	DEL IT 8 TO 6,IT 19(4 TO 3),IT 20(6 TO 3),IT 21(48 TO 42),IT 22	KMD	AY	AY
05	11-07-48	DEL IT 16,IT 25(3 TO 2),DELETE IT 23(4270906)	KMD	AY	AY
06	11-11-13	DEL IT 4,24,32,36,38,44,45,46,47,59,63,85,90,96,97,99,ADD IT(43)	KMD	AY	AY
07	11-19-13	ITEM 103,104,105, QTY CHGS IT 18(6 TO 9),IT 30(2 TO 1),IT 41(1 TO 2)	JFM	JD	JD
08	12-11-11	ADD ITEM 1 PIN CHANGE WITH SERIAL # NOTES NL 13-0159	RAH	JBD	JBD
09	6-3-15	ITEM 38 WAS 4021561,ITEM 103 WAS 4224980	KMD	JBD	JBD



- NOTES:
- BOM FOR REFERENCE ONLY
  - ITEMS WITH AN S OR H CORRESPOND TO STANDARD OR HIGH LIFT LOADERS RESPECTIVELY
  - REF 427-4746 FOR L1850 G2 STD LIFTARM HOSE INSTALLATION
  - REF 427-4747 FOR L1850 G2 STD LIFTARM INJECTOR AND HARDWARE INSTALLATION
  - REF 427-4748 FOR L1850 G2 HIGH / L2350 G2 STD LIFTARM HOSE INSTALLATION
  - REF 427-4749 FOR L1850 G2 HIGH / L2350 G2 STD LIFTARM INJECTOR AND HARDWARE INSTALLATION
  - REF 427-4750 FOR L1850 G2 FRONT FRAME HOSE INSTALLATION
  - REF 427-4751 FOR L1850 G2 FRONT FRAME INJECTOR AND HARDWARE INSTALLATION  
GREASE RESV-PUMP PIN CHANGE FROM 427-1150 TO 427-9092 WITH SERIAL # 2236 ON
  - REF 427-4752 FOR L1850 G2 REAR FRAME HOSE INSTALLATION
  - REF 427-4753 FOR L1850 G2 REAR FRAME INJECTOR AND HARDWARE INSTALLATION

ITEM	PART NO.	QTY	DESCRIPTION
106	401-6785	4	FTG HYD 0 4 MJ 4 MP
105	403-1446	1	FTG HYD TE 4 FP 4 FP 4 FP
104	401-3779	1	PIPE PLUG 1/4 NPT HX HD
103	424-4980	1	FTG HYD 0 8 FJ 8 FJ SWV
102	-	-	-
101	-	-	-
100	-	-	-
99	403-2325	1	PIPE HYD ST ELB 90 8 MP 8 FP
98	-	-	-
97	422-2474	1	FTG HYD 0 8 MP 8 FP
96	422-2441	1	FILTER LUBRICATOR #84004
95	421-1962	REF	GREASE BLOCK, 3 WAY
94	421-1961	REF	GREASE BLOCK, 2 WAY
93	418-6021	2	HOSE 5000 4 37.0 OJ OJ

ITEM	PART NO.	QTY	DESCRIPTION	ITEM	PART NO.	QTY	DESCRIPTION
92	424-3746	2	HOSE 5000 4 40.0 OJ OJ	54	415-0735	1	HOSE 5000 4 80.0 OJ OJ
91	-	-	-	53	698-3192	3	HOSE 5000 4 90.0 OJ OJ
89	412-9036	1	HOSE 4250 8 84.0 OJ OJ	52	413-3373	1	HOSE 5000 4 120.0 OJ OJ
88	417-0674	4	PLUG ASSEMBLY, 3"	51	418-6085	1	HOSE 5000 4 154.0 OJ OJ
86	-	-	-	50	417-2340	1	HOSE 5000 4 253.0 OJ OJ
85	412-9012	1	HOSE 4250 8 36.0 OJ OJ	49	401-3795	1	PIPE RED 1.00 500 BSH 6000
84	422-2463	1	HOSE 1250 12 60.0 OJ 90J	48	400-2481	1	FTG HYD 90 12 MJ 12 FJ SWVL
83	412-2857	2	HOSE 5000 4 54.0 OJ OJ	47	-	-	-
82	422-3118	2	HOSE 5000 4 94.0 OJ OJ	46	002-0315	1	GREASE FITTING 1/8 X 11/16
81	697-1718	2	HOSE 5000 4 58.0 OJ OJ	45	422-2475	1	PIPE RED 500 125 BSH 6000
80	421-3531	2	HOSE 5000 4 136.0 OJ OJ	44	-	-	-
79	414-8824	3	HOSE 5000 4 100.0 OJ OJ	43	404-0561	1	FTG HYD 0 12 MJ 16 MP
78	413-0284	2	HOSE 5000 4 29.0 OJ OJ	42	401-8666	4	STRAIGHT ADAPTER, 1/2 MJ X 1/2 MP
77S&H	414-8823	2	HOSE 5000 4 84.0 OJ OJ	41	403-8895	2	FTG HYD TEE 8 MJ X 6 MP X 8 MJ
76	412-2873	2	HOSE 5000 4 68.0 OJ OJ	40	417-0615	2	TUBE, EXTENSION
75	-	-	-	39	425-5496	1	TRANSMITTER PRESS 0-5000 PSIG
74	412-9045	2	HOSE 4250 8 102.0 OJ OJ	38	402-1571	1	ADAPTER, 1/4 MP X 1/2 MJ
73	-	-	-	37	400-2470	REF	FTG HYD 90 3/8 MJ X 3/8 MO
72	415-0738	2	HOSE 5000 4 93.0 OJ OJ	36	-	-	-
71S	412-9045	1	HOSE 4250 8 102.0 OJ OJ	35	411-6644	REF	90° ELBOW 3/8 MJ X 1/4 MO
70	414-8824	1	HOSE 5000 4 100.0 OJ OJ	34	408-6102	REF	GREASE BLOCK - 3/8
69	415-0749	2	HOSE 5000 4 130.0 OJ OJ	33	401-7453	REF	PIPE COUPLING, 3/8 FP
68	419-3532	2	HOSE 5000 4 85.0 OJ OJ	32	401-3799	1	PIPE BUSHING 1.250 1.000 6000
67	-	-	-	31	-	-	-
66	401-7451	REF	COUPLING PIPE 6000 500	30	401-6199	2	45° ELBOW, SWIVEL 1/2 MJ X 1/2 FJ
65	424-3915	REF	HOSE 4000 6 188.0 OJ OJ	29	403-7689	4	90° ELBOW BODY 1/8 MP X 1/8 FP
64	424-3740	REF	HOSE 2250 6 130.0 OJ OJ	28	400-2479	2	90° ELBOW, SWIVEL 1/2 MJ X 1/2 FJ
63	412-2863	2	HOSE 4250 8 33.0 OJ OJ	27	403-8894	1	TEE 1/2 MJ X 1/2 MJ X 3/8 MP
62	415-0768	1	HOSE 4250 8 54.0 OJ OJ	26	404-1768	1	TEE, SWIVEL 1/2 MJ X 1/2 MJ X 1/2 FJ
61	412-9020	1	HOSE 4250 8 52.0 OJ OJ	25	400-2420	2	STRAIGHT ADAPTER, 1/2 MJ X 3/8 MP
60	412-9028	1	HOSE 4250 8 68.0 OJ OJ	24	-	-	-
59	-	-	-	23	-	-	-
58	416-9642	REF	HOSE 4250 8 295.0 OJ OJ	22	097-8632	12	STRAIGHT ADAPTER, 1/4 MJ X 1/8 MP
57	412-2872	1	HOSE 5000 4 70.0 OJ OJ	21	097-9138	36	90° ADAPTER, 1/4 MJ X 1/8 MP
56	-	-	-	20	403-2312	3	HYDRAULIC NIPPLE, 3/8
55	418-6085	2	HOSE 5000 4 154.0 OJ OJ	19	008-8402	3	PLUG, PIPE CS HX 3/8 MP
54	-	-	-	18	400-2439	4	90° ADAPTER, 1/2 MJ X 3/8 MP
53	-	-	-	17	407-8933	6	90° ADAPTER, 1/4 MJ X 1/8 MP
52	-	-	-	16	-	-	-
51	-	-	-	15H	426-1662	1	HOSE 4250 8 109.0 OJ OJ
50	-	-	-	14	401-6701	1	90° BULKHEAD ADAPTER, 1/2 MJ
49	-	-	-	13	-	-	-
48	-	-	-	12	-	-	-
47	-	-	-	11	401-6785	8	STRAIGHT ADAPTER, 1/4 MJ X 1/4 MP
46	-	-	-	10	-	-	-
45	-	-	-	9	-	-	-
44	-	-	-	8	427-4727	1	ASSY LWR INJ FR FRM L18L23 G2
43	-	-	-	7	427-1145	2	2 UNIT-INJECTOR SL-V
42	-	-	-	6	427-4728	1	ASSY UP INJ FR FRM L13L23 G2
41	-	-	-	5	427-1149	1	4 UNIT-INJECTOR SL-V
40	-	-	-	4	-	-	-
39	-	-	-	3	427-0905	4	3 UNIT INJECTOR SL-V-L-XL
38	-	-	-	2	-	-	-
37	-	-	-	1	427-9092	1	ASSY GREASE RESERVOIR-PUMP

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN INCHES & APPLY BEFORE PLATING OR FINISH COATINGS.  
 TOLERANCES ON ANGLES: FRACTIONS ±1° DECIMAL ±0.15 XX DECIMAL ±0.05  
 MACHINED CORNERS: R54 X 45°  
 WELD PROPERTIES SHALL MEET THE MINIMUM REQUIREMENTS OF THE BASE MATERIAL.  
 THIRD ANGLE PROJECTION

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INTERPRET DIM & TOL PER LETOURNEAU SPEC 1000.00

LeTourneau Technologies™  
**REF AUTO LUBE L18502201&UP**

DATE: 10-19-2010  
 DRAWN: M. DUKE  
 CHECKED: AY  
 ENGR: AY  
 PROJ ENGR: AY  
 DATE: 10-19-10

SCALE: 1/1  
 SHEET: 1 OF 1

DO NOT SCALE  
**4270840**  
**09**



# **Auxiliary Steering**



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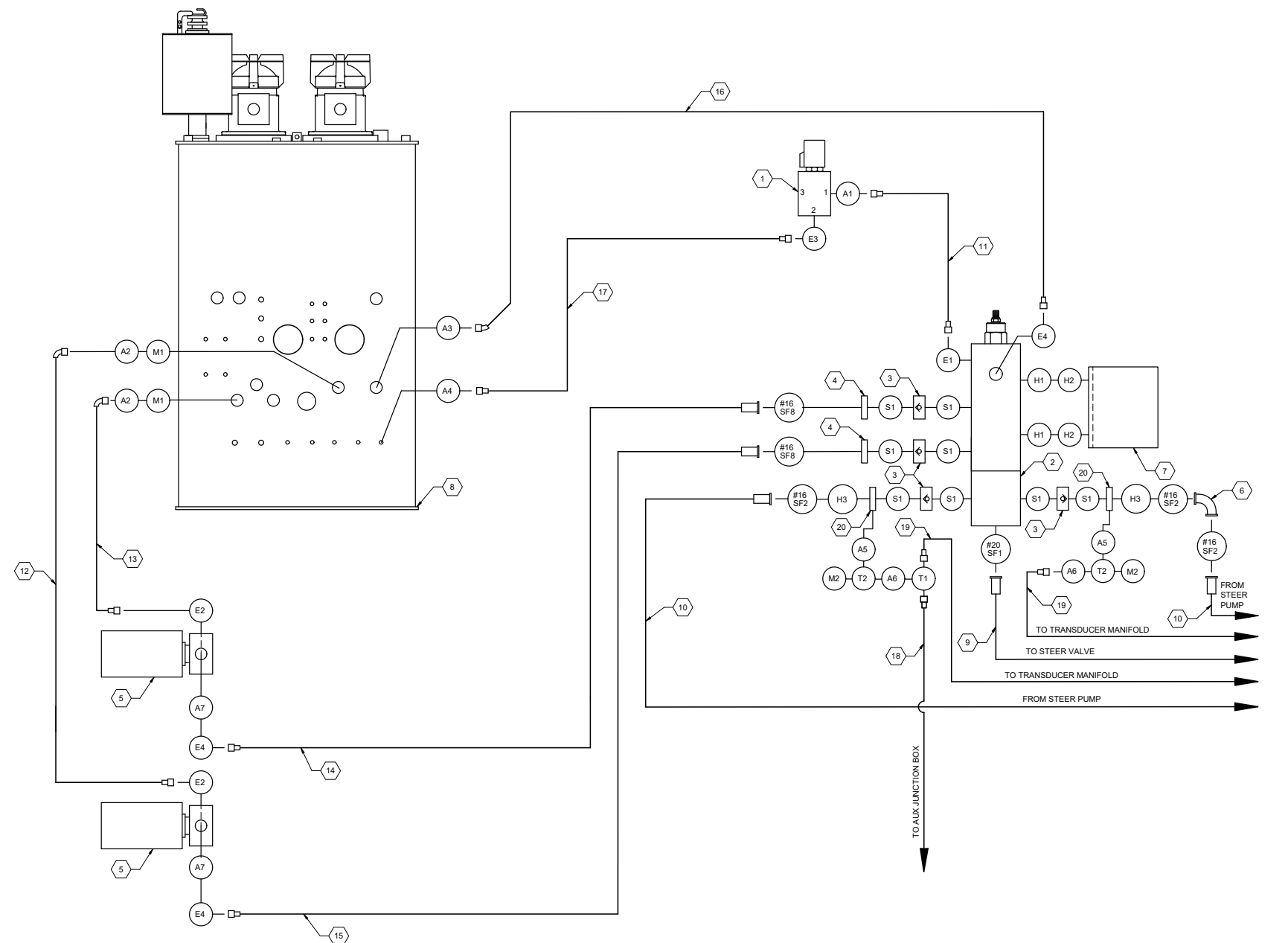
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REVISIONS						
DATE	REV	DESCRIPTION	EN	DATE	CHK	APP
04		REDRAWN, ITEM 9 WAS 424174		NL12-1837	6-21-12	KMD AY AY



ITEM	PART NO.	DESCRIPTION	QTY
<b>SPLIT FLANGE SETS</b>			
T2	403-1446	TEE 8 FP 8 FP 4 FP	2
T1	406-3332	TEE 4 MJ 4 MJ 4 FJ	1
<b>TEES</b>			
S1	410-5005	O-RING, 1" SAE S.F. POLYURETHANE	8
<b>SEALS</b>			
M2	422-3016	COUPLER MALE ASY 4 MP	2
M1	401-3952	PIPE RED 1.50 1.25 BUSHING	2
<b>MISC FITTINGS</b>			
H3	400-1842	CSCR FH .375 3.00 NC G8	8
H2	075-3123	WASHER LOCK SPR. .375 .68 .09	2
H1	400-9649	BOLT HX .375 5.000 NC G8	2
<b>HARDWARE</b>			
E4	400-2475	FTG HYD 90 16 MJ 16 MO	3
E3	401-7400	FTG HYD 90 6 MJ 8 MO	1
E2	400-2476	FTG HYD 90 20 MJ 20 MO	2
E1	400-2470	FTG HYD 90 6 MJ 6 MO	1
<b>ELBOWS</b>			
A7	425-7213	REF FTG HYD 012 MO 16 FO	
A6	401-6785	FTG HYD 0 4 MP 4 MJ	2
A5	405-1567	FTG HYD 0 6 MO 4 MP	2
A4	401-8666	REF FTG HYD 0 8 MP 8 MJ	
A3	403-3994	FTG HYD 0 16 MJ 12 MP	1
A2	400-3425	FTG HYD 0 20 MJ 20 MP	2
A1	402-0771	FTG HYD 0 8 MO 6 MJ	1
<b>ADAPTERS</b>			
20	424-1394	2 TEST BLOCK 1.00 SF C 61 TO C 62	
19	698-9042	2 HOSE 5000 4 50.0 OJ	
18	415-0727	1 HOSE 5000 4 56.0 OJ	
17	415-0900	1 HOSE 2000 8 60.0 OJ	
16	422-3499	1 HOSE 1000 16 76.0 OJ 45J	
15	424-3921	1 HOSE 4000 16 72.0 OJ OF	
14	424-3920	1 HOSE 4000 16 48.0 OJ OF	
13	424-3923	1 HOSE 625 20 32.0 OJ 90J	
12	424-3500	1 HOSE 625 20 26.0 OJ 90J	
11	414-3736	1 HOSE 4000 6 20.0 OJ	
10	424-3727	2 HOSE 5000 16 90.0 OF 90F C62	
9	424-4714	1 HOSE 5000 20 36.0 OF 45F	
8	424-1325	REF HYDRAULIC RESERVOIR	
7	423-8010	REF ANGLE MOUNT	
6	424-1557	1 ELBOW STRUCTURE, 90° #16 C62	
5	421-3992	2 PUMP/DC MOTOR 24V 9HP	
4	421-9017	2 PLATE, 1" CONNECTOR	
3	415-0321	4 CHECK VALVE, 1" S.F.	
2	424-8914	REF ASSY STEERING JUNCTION VALVE	
1	424-4831	1 VALVE ASY SOL 2 WAY NO 24 VDC	

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UNLESS OTHERWISE SPECIFIED:  
 • DIMENSIONS ARE IN INCHES & APPLY BEFORE PLATING OR FINISH COATINGS  
 • TOLERANCES ON: ANGLES ±1° FRACTIONS ±.016 XX DECIMAL ±.03 XXX DECIMAL ±0.015  
 • MACHINED CORNERS: R4 X .45  
 • WELD PROPERTIES SHALL MEET THE MINIMUM REQUIREMENTS OF THE BASE MATERIAL.

THIRD ANGLE PROJECTION

FIRST USED ON CONTRACT NO. 424-5530

OWN	M. DUKE	DATE	6-21-2012
CHK	AY	DATE	6-21-12
ENGR			
PROD ENGR	AY	DATE	6-21-12
PROJ APPROVAL			
MATL			

**LeTourneau Technologies™**

**AUX STEERING L-1850**

SCALE: 1/1  
 SHEET: 1 OF 1  
 PART NO.: 4243922  
 REV: 04

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# **Auxiliary Hydraulic Oil Cooler**



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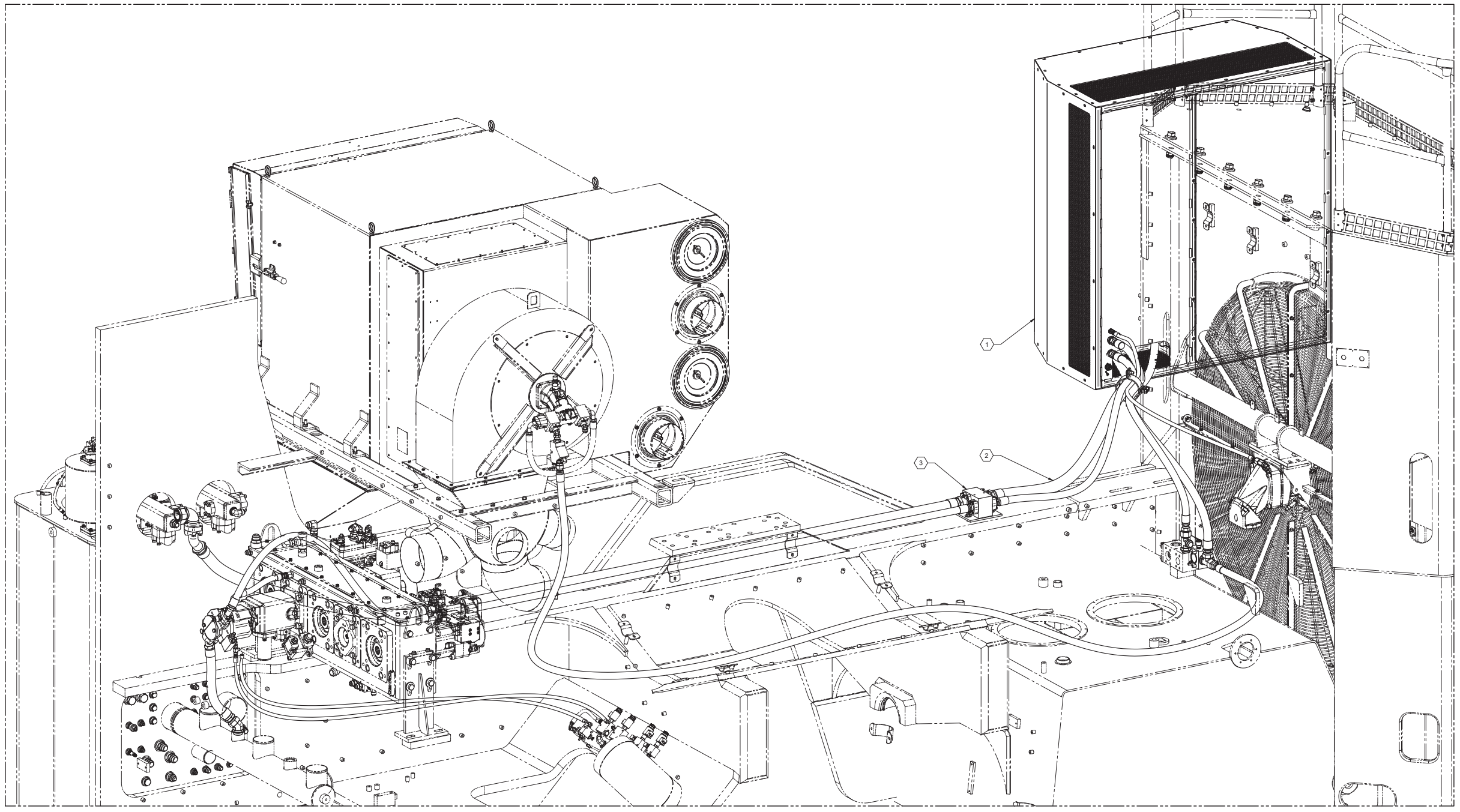
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		REVISIONS						
DATE	REV	DESCRIPTION	ENR	DATE	CHK	APP		
	00	RELEASE	NL10-1855	1-14	TEW	AY	AY	
	01	CORRECTED DRAWING NUMBER	NL11-0760	2-10	TEW	AY	AY	
	02	REDRAW, QTY IT 3 WAS 10; DELETE 4 (4248565), IT 5 (4248563), IT 6 (4237810), IT 7 (0233042), IT 8 (0753123), IT 9 (0829683), IT 10 (0810971); ADD IT 13, 14, 20, 22, 24, 25						
	02	27-60; SEE SHEET 2	NL11-1707	8-5	TW	AY	AY	
	03	REDRAW: ADD NEW BOM	NL12-1868	7-17	TEW	AY	AY	
	04	MRS 1930; DELETE SHEET 2	1331708	8-11-16	RAH	JB	JBO	
	05	#2 WAS 4277973	1366426	06-26-18	EER	EER	EER	



ITEM	PART NO.	QTY	DESCRIPTION
3	4277974	1	GP HW AUX OIL COOLING L1850 G2
2	4294231	1	GP HSEM AUX OIL COOLING L1850 G2
1	4271151	1	ASM AUX OIL CLR L13/18/2350 G2

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UNLESS OTHERWISE SPECIFIED:  
 - DIMENSIONS ARE IN INCHES & APPLY BEFORE PLATING OR FINISH COATINGS.  
 - TOLERANCES ON: ANGLES ±1° FRACTIONS ±0.10 XX DECIMAL ±0.03 XXX DECIMAL ±0.015  
 - MACHINED CORNERS: R64 X .45  
 - WELD PROPERTIES SHALL MEET THE MINIMUM REQUIREMENTS OF THE BASE MATERIAL.

THIRD ANGLE PROJECTION

FIRST USED ON CONTRACT NO. **LeTourneau Technologies™**

DRAWN	twillis	DATE	12-22-2010
CHK	AY	DATE	01-14-2011
ENGR		DATE	
PROD ENGR	AY	DATE	01-14-2011
PROJ APPROVAL		DATE	
MATL		DATE	

**KIT AUX OIL COOLER L1850 G2**

SCALE: 1/8" = 1" (SEE DET 2438.8 DIM)

ITEM NO. **4271226** REV. **05**

SHEET 1 OF 1

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