

DWG NO
R56496SH I
CONT. II

SCHEMATIC DIAGRAM INDEX

A	ITEM	DESCRIPTION OF CIRCUITRY	SHEET NO.
ARMATURES	CROWD: DRIVE, CONTROL & PULSE CIRCUITS FEEDBACK & DIVERTER CONTROL CONVERTER, DIVERTER & ARMATURE HOIST #1 (FRONT HOIST): ARMATURE, FEEDBACK & DIVERTER CONTROL DRIVE, CONTROL & PULSE CIRCUITS CONVERTER & DIVERTER SUPPLY SUPPRESSION & SUPPRESSION BREAKER	72,73,74,75 71,79 70 52,79 53,54,55,56 50 3	
B	HOIST #2 (REAR HOIST): ARMATURE, FEEDBACK & DIVERTER CONTROL DRIVE, CONTROL & PULSE CIRCUITS CONVERTER & DIVERTER SUPPLY SUPPRESSION & SUPPRESSION BREAKER	52,79 57,58,59,60 51 3	
C	PROPEL #1 (RIGHT PROPEL): DRIVE, CONTROL & PULSE CIRCUITS CONVERTER & ARMATURE FEEDBACK & DIVERTER CONTROL	53,54,55,56 50 52,79	
D	PROPEL #2 (LEFT PROPEL): DRIVE, CONTROL & PULSE CIRCUITS CONVERTER, DIVERTER & ARMATURE FEEDBACK & DIVERTER CONTROL	72,73,74,75 70 71,79	
E	SWING #1 & SWING #2: DRIVE, CONTROL & PULSE CIRCUITS CONVERTER, DIVERTER & ARMATURE FEEDBACK & DIVERTER CONTROL	63,64,65,66 61 62,79	
F	AUXILIARY TRANSFORMER SECONDARIES AUXILIARY SECONDARY #1: AUXILIARY LOAD CENTER & AUXILIARY EXTRAS AUXILIARY MOTORS/MCC	6,10,11 12,14,15,16,17,25	
G	CENTER, CONTROL CABINET BLOWER, DC CONTACTOR SUPPLY & DUPLEX RECEPTACLES 120V EXTRAS	20,21,22,23 31	
H	AUXILIARY SECONDARY #2: CONTROL SUPPLIES MAIN PHASE SENSING RELAY (PSR)	35,36,37,39 35	
I	MOTOR FIELDS CROWD: DRIVE, CONTROL & PULSE CIRCUITS CONVERTER, FIELD & FEEDBACK	85 84	
J	HOIST: DRIVE, CONTROL & PULSE CIRCUITS CONVERTER, FIELDS & FEEDBACK	81 80	
K	PROPEL: DRIVE, CONTROL & PULSE CIRCUITS SEMICONVERTER, FIELDS & FEEDBACK	85 84	
L	SWING: DRIVE, CONTROL & PULSE CIRCUITS SEMICONVERTER, FIELDS & FEEDBACK	83 82	
M	HIGH VOLTAGE HIGH VOLTAGE & SECONDARY GROUND CIRCUITS	1,2,4,5,6	
N	RPC REACTIVE POWER COMPENSATION: CONTROL & PULSE CIRCUITS CAPACITOR PRESSURE MONITORS FIXED CAPACITORS & REACTORS, SWITCHED CAPACITORS & REACTORS, BREAKERS & INDICATOR CIRCUITS KVAR TRANSDUCER	45,46,47,95 159,160 40,41,42,43,44 39	

A	ITEM	DESCRIPTION OF CIRCUITRY	SHEET NO.
A	TEST METER	METERS METER SELECTOR POWER QUALITY METER	105,106 101 9
B	CONTROL CIRCUITS	ARMATURE & FIELD CONTACTORS C.B. SHUNT TRIP (AUXILIARY) HEATER CIRCUITS (COLD WEATHER) LOWER MAIN TRANSFORMER CONTACTOR (MTC) MASTER CONTROL RELAY (MCR)	34 30 11,31,32,33 25,26 9 30
C	I/O MODULES	I/O MODULE SECTIONS: I/O POWER SUPPLIES I/O-AC800, PROFIBUS, DISTRIBUTION & ETHERNET NETWORK	90,91 92-97
D		CONTROL CABINET LOADING CONTROL CENTER MOTOR CONTROL CENTER CABINET CONVERTER CABINET TRANSFER CABINET RPC CABINET HOIST GEARCASE LUBE ROOM BOOM LOWER CONTROL	100-112 113-120 129-139 140-148 149-157 158-166 167-174 175-184 185-193 194-203
E		INPUTS: AIR HORN AIR SYSTEM PRESSURE TRANSDUCERS ARMATURE CONTACTORS AUXILIARY MOTOR STARTERS BRAKE SET/RELEASE CONTROL SWITCHES CABINET DOOR INTERLOCKS	107,114 103 149 129,130,131 113,114 108,129,141,149, 158,159,195 391
F		TRIPRITE DIVERTER (TRIP & PROTECTION) FIELD CONTACTORS GROUND FAULT (RELAYS & RESET SWITCHES) LOWER LUBE PRESSURE SWITCHES LUBE PRESSURE TRANSDUCERS MAIN TRANSFORMER OVERCURRENT, CONTACTOR OPERATOR'S CONTROLLERS PHASE MONITORS (CONVERTER, MAIN) RPC CAPACITOR PRESSURE SWITCHES START, STOP, & FAULT RESET SWITCHES SUPPLY MONITORS SYSTEM SWITCHES TEMPERATURE SWITCHES (CONVERTER) TEST SELECTOR SWITCH T.O.L.'S (FANS, FIELDS, ARMATURES, MAIN TRANSFORMER)	140 149 150 194,195 175,176 176 102,129 117,118 100,141 159,160 113,114 100,101,140 101,114 141 100 129
G		OUTPUTS: AIR HORN SOLENOID ALARMS: MOTOR OVERLOAD, DELAYED SHUT-DOWN ARMATURE & FIELD CONTACTOR RELAYS AUXILIARY CONTROL RELAYS (START SEQUENCE, CABINET FANS)	107 115 153 130,131,132,133 134,135 107,169,178,179,199
H		BRAKE SOLENOIDS CONTROLL RFI AYS (MTC) DIVERTER CHARGING DIVERTER ENABLE ELAPSED TIME METERS HEATER CONTROL RELAYS LUBE SOLENOIDS MAIN TRANSFORMER OVERLOAD ADJ. RELAY (MTOAR) MISC. HORNS, RELAYS, SOLENOIDS, PILOT LIGHTS	102 142 142 106 135 178,179 135 107 115

A	ITEM	DESCRIPTION OF CIRCUITRY	SHEET NO.
R.H. CAB	RTD'S	CROWD MOTOR, SHIPPER SHAFT, CROWD GEARCASE FRONT SWING MOTORS HOIST MACH./REAR SWING MOTOR HOIST MOTORS LOWER	186,187,188 104,105 152,169 176,177 196,197
R.H. CAB	ALARMS	BRAKE SET/RELEASE CONTROL SWITCHES CONSOLE FAULT LIGHTS HEATERS & AIR CONDITIONING MASTER CONTROLLERS MOTION SELECTOR SWITCHES PILOT LIGHTS RADIO WINDSHIELD WIPER	115 115 115 10 117,118 115 115 23 23,116
OPTIONS	CABLE REEL HEATERS, CABINET HEATERS, ROOM REMOTE HOIST AUXILIARY SUPPLY BREAKER AUTO/LIGHTING TRANSFORMER TRANSFER SWITCH	195 31,32,33 11 101 6 6 6	
MISC	RECEPTACLES, LIGHTING & FLOODLIGHTS AC800 CONTROLLER UNINTERRUPTIBLE POWER SUPPLIES (UPS) UPS DIP SWITCH SETTINGS ETHERNET HUBS GRAPHICAL USER INTERFACE (GUI) FILTRATION SYSTEM-AIR SCRUB PRO TRIPRITE DRIVE	20,21 97 96,97 96,97 96,97 300-304 391	
ENGINEERING REFERENCE SHEETS	SCHEMATIC DIAGRAM INDEX 1 LINE DIAGRAM 1 LINE DIAGRAM 1 LINE DIAGRAM PROFIBUS NETWORK OVERVIEW PROFIBUS NETWORK OVERVIEW ETHERNET NETWORK OVERVIEW LOCATION CODE DEFINITIONS SLIP RING LAYOUT	I II III IV V VI VII VIII IX	

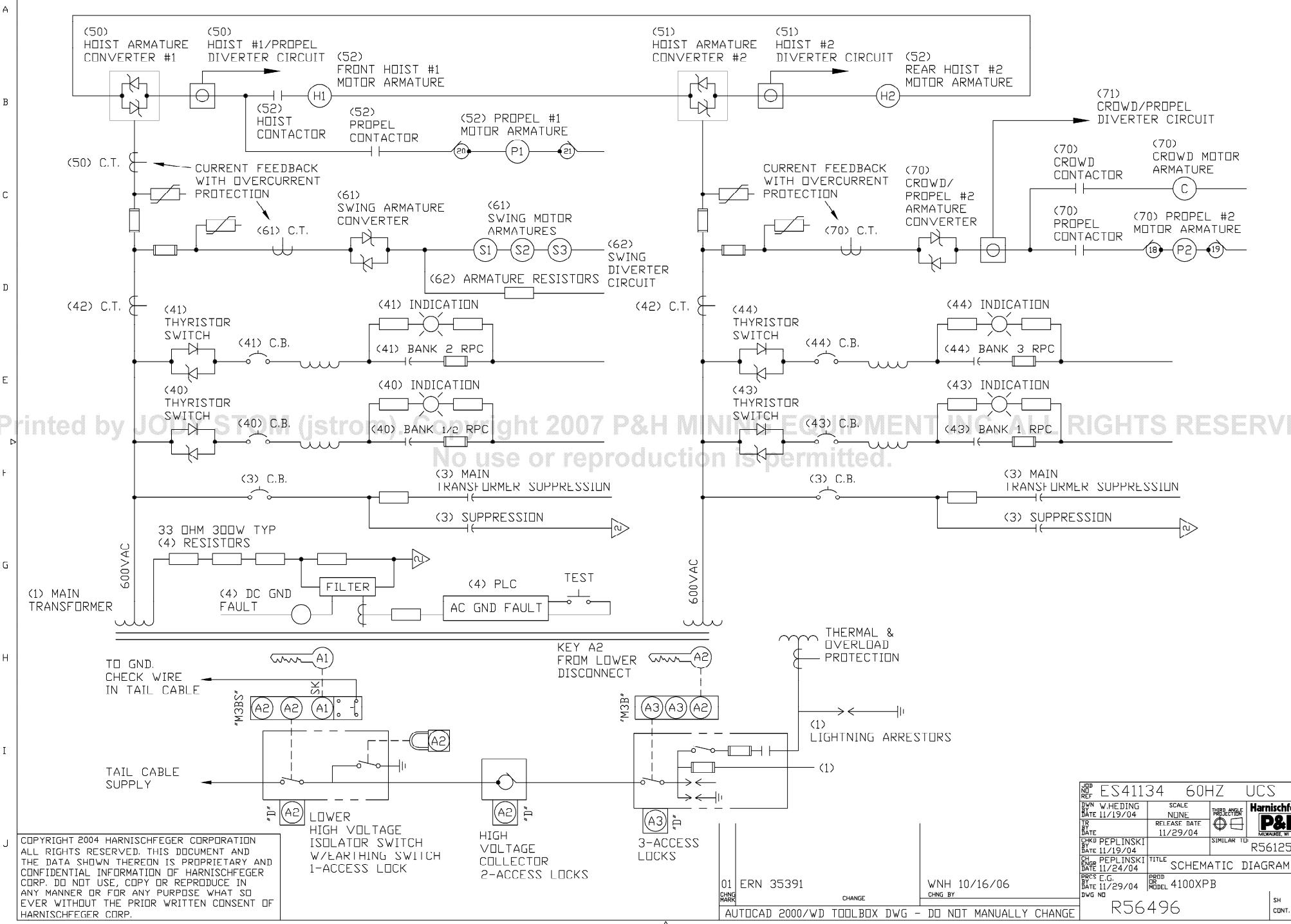
REV.	ERN	Sheets Affected	Name / Date
01	35391	I-IX,1,3,4,5,9-18,20-25,30-33,39,63,72,79,82,90-97, 102-107,113-119,129-135,142,151,152,153,167,168,169, 178,179,186,187,188,196,197,199,300-304,391	WNH 10/16/06

FORDING RIVER COAL

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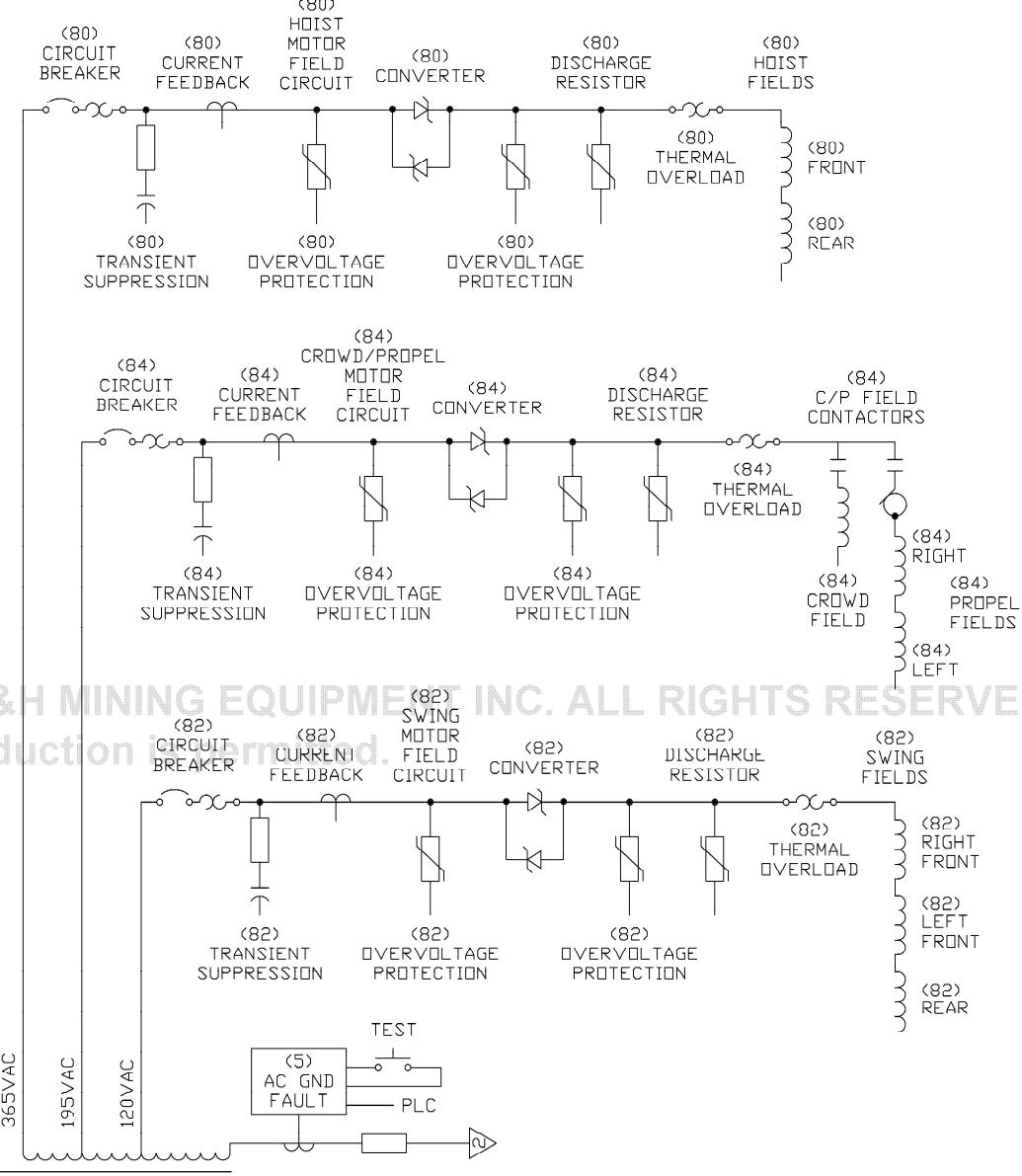
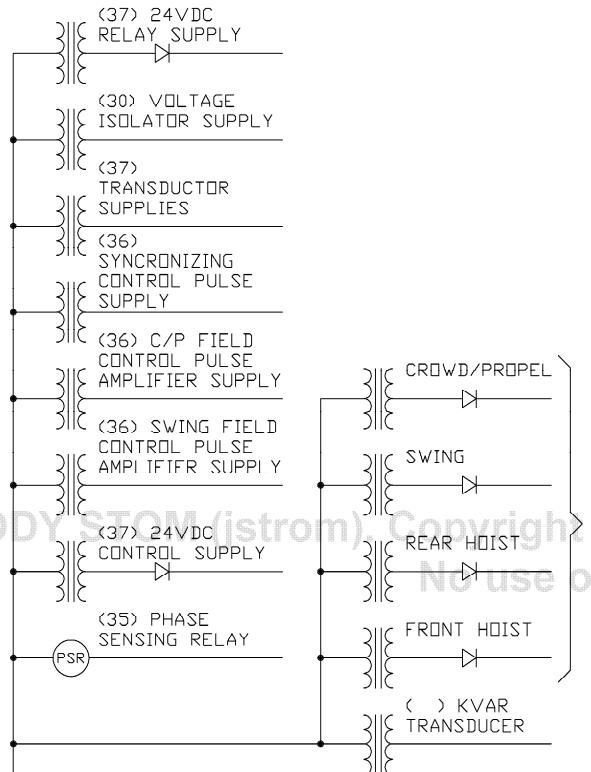
01 ERN 35391
CHNG BY
CHANGE
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE
WNH 10/16/06
CHNG BY
TITLE SCHEMATIC DIAGRAM
ENG'D BY PEPLINSKI DATE 11/24/04
ENG'D BY PEPLINSKI DATE 11/29/04
PROD'D BY MODEL 4100XPB
DWG NO R56496
SH I
CONT. II

REF ID: ES41134 60HZ UCS C
DRAWN BY: W.H. HEDING DATE 11/19/04
DESIGNED BY: J. PEPLINSKI DATE 11/24/04
THIRD ANGLE PROJECTION
Harnischfeger
P&H
Milwaukee, WI USA
SIMILAR TO R56125
TITLE SCHEMATIC DIAGRAM
ENG'D BY PEPLINSKI DATE 11/29/04
PROD'D BY MODEL 4100XPB
DWG NO R56496
SH I
CONT. II

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SH II
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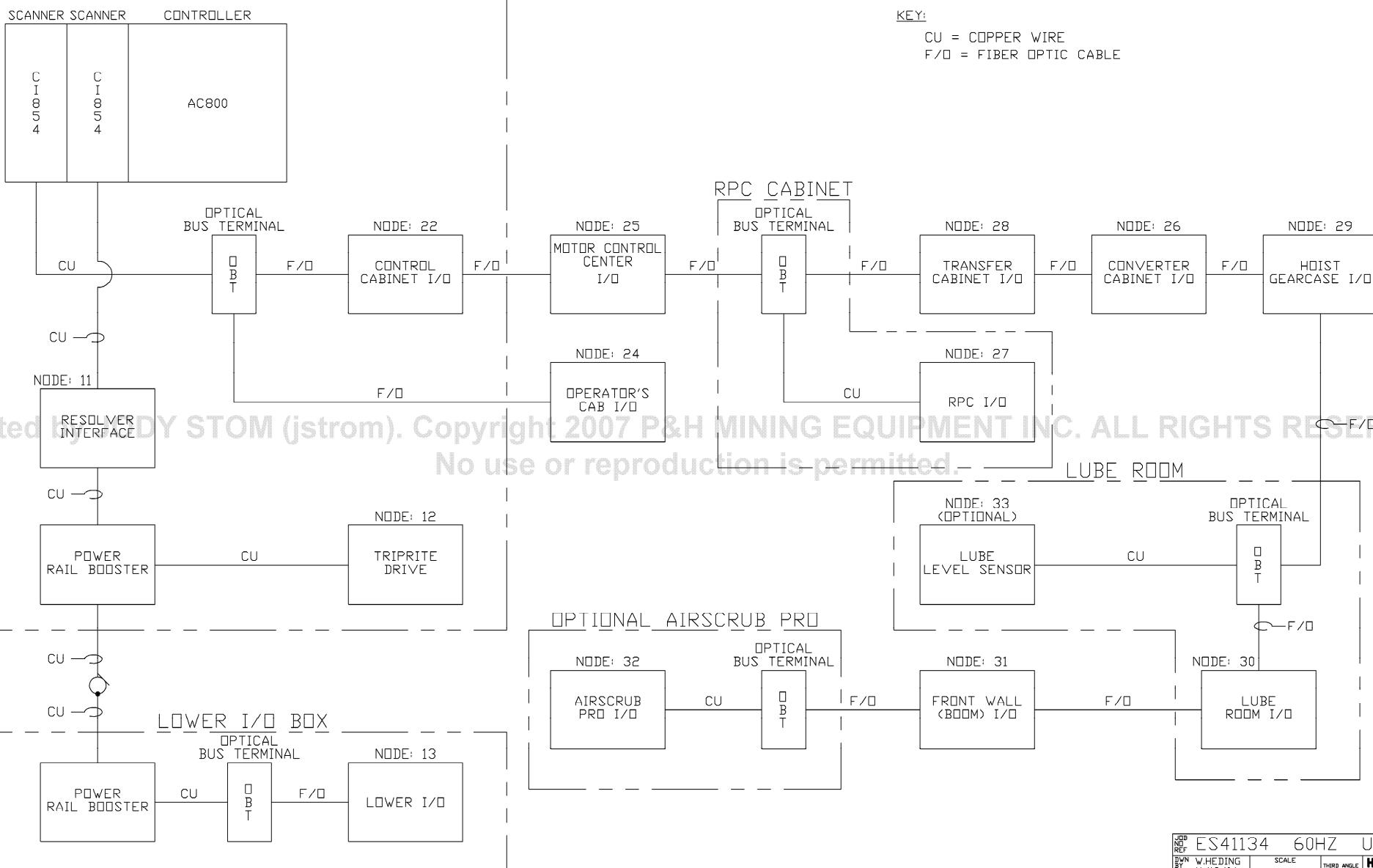


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UPPER FRAME

			11/19/04	RELEASE DATE 11/29/04	
			CJKU PEPLINSKI DATE 11/19/04	SIMILAR TO R56125	
			CJKU PEPLINSKI ENDS DATE 11/24/04	TITLE SCHEMATIC DIAGRAM	
01	ERN 35391	WNH 10/16/06	PBX E.G. DATE 11/29/04 DWG NO.	RBD DR MODEL 4100XPB	
CHNG MARK	CHANGE	CHNG BY			
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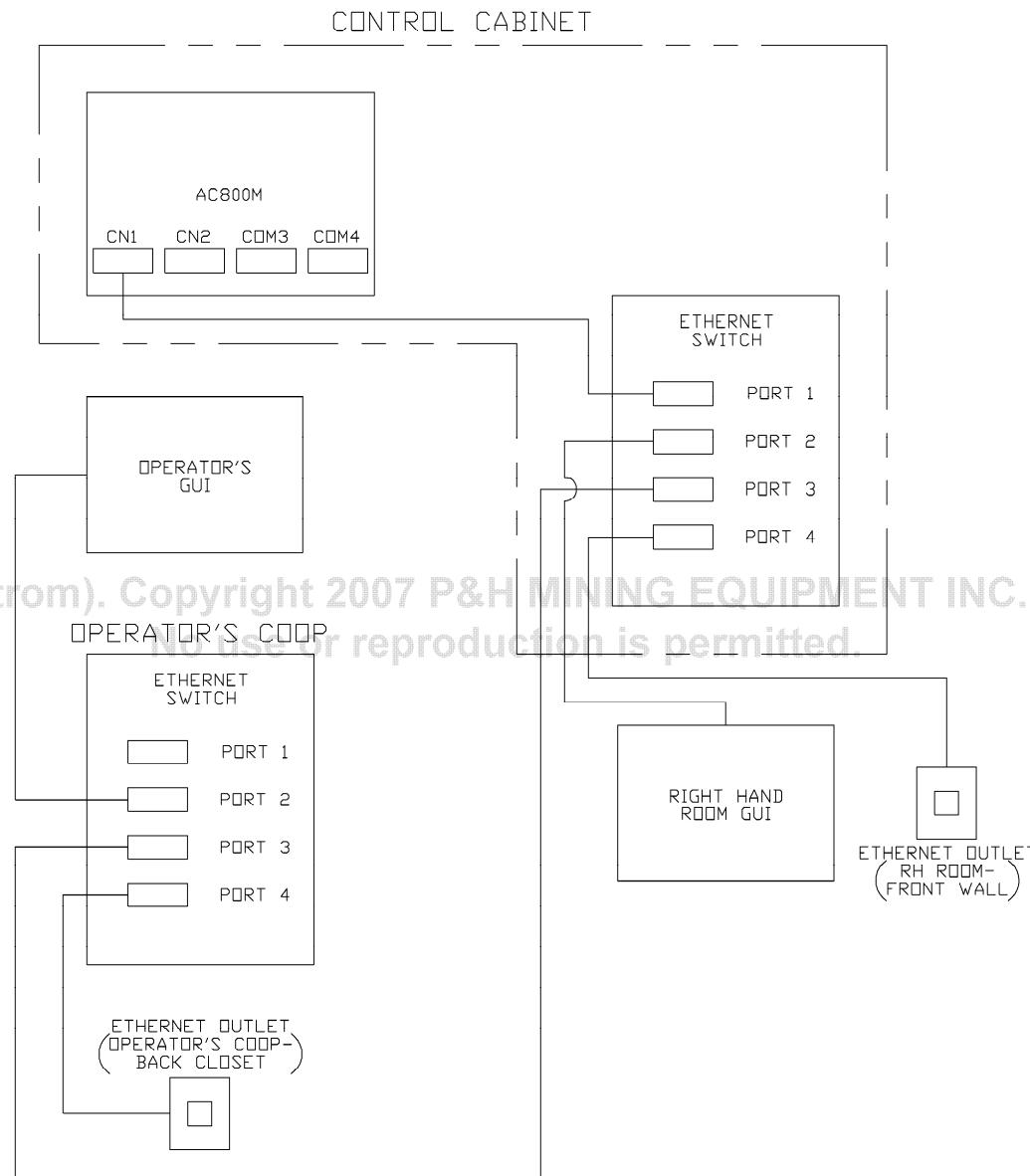
CONTROL CABINET



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			IR DATE 11/29/04	RELEASE DATE 11/29/04	
01	ERN 35391	WNH 10/16/06	CHKD DATE 11/19/04	PEPLINSKI	SIMILAR TO R56125
CHNG MARK	CHANGE	CHNG BY	CH Energ DATE 11/24/04	PEPLINSKI	TITLE SCHEMATIC DIAGRAM
			BRSF E.G. BY DATE 11/29/04 DWG NO	PROD PROD MODEL 4100XPB	
R56496					SH V CENT.VI
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE					

R56496

DWG NO R56496
SH VII
CONT. VIIIETHERNET NETWORK OVERVIEW

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01	ERN 35391	W NH 10/16/06	ES41134 60HZ UCS
CHNG MARK	CHANGE	RELEASE DATE 11/29/04	Harnischfeger
		DATE 11/19/04	P&H
		BY PEPLINSKI	MILWAUKEE WI USA
		DATE 11/24/04	R56125
		ENG'D PEPLINSKI	
		DATE 11/29/04	
		BY'S L.G.	
		DATE 11/29/04	
		PROD DR MODEL 4100XPB	
		DWG NO	
			SH VII
			CONT. VIII

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

R56496

DWG NO R56496

SH VIII
CONT. IX

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ELECTRICAL COMPONENTS
LOCATION CODE NOMENCLATURE

A	AUX. CABINET
B	BOOM
C	OPERATOR'S COOP
E	CONTROL CABINET
F	RPC CABINET
H	H.V. CABINET
K	CONVERTER CABINET
L	LOWER
M	MOTOR CONTROL CENTER CABINET
P	GND FAULT/ SUPPRESSION CABINET
T	TRANSFER CABINET
U	UPPER

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W.NH 10/16/06
CHNG BY

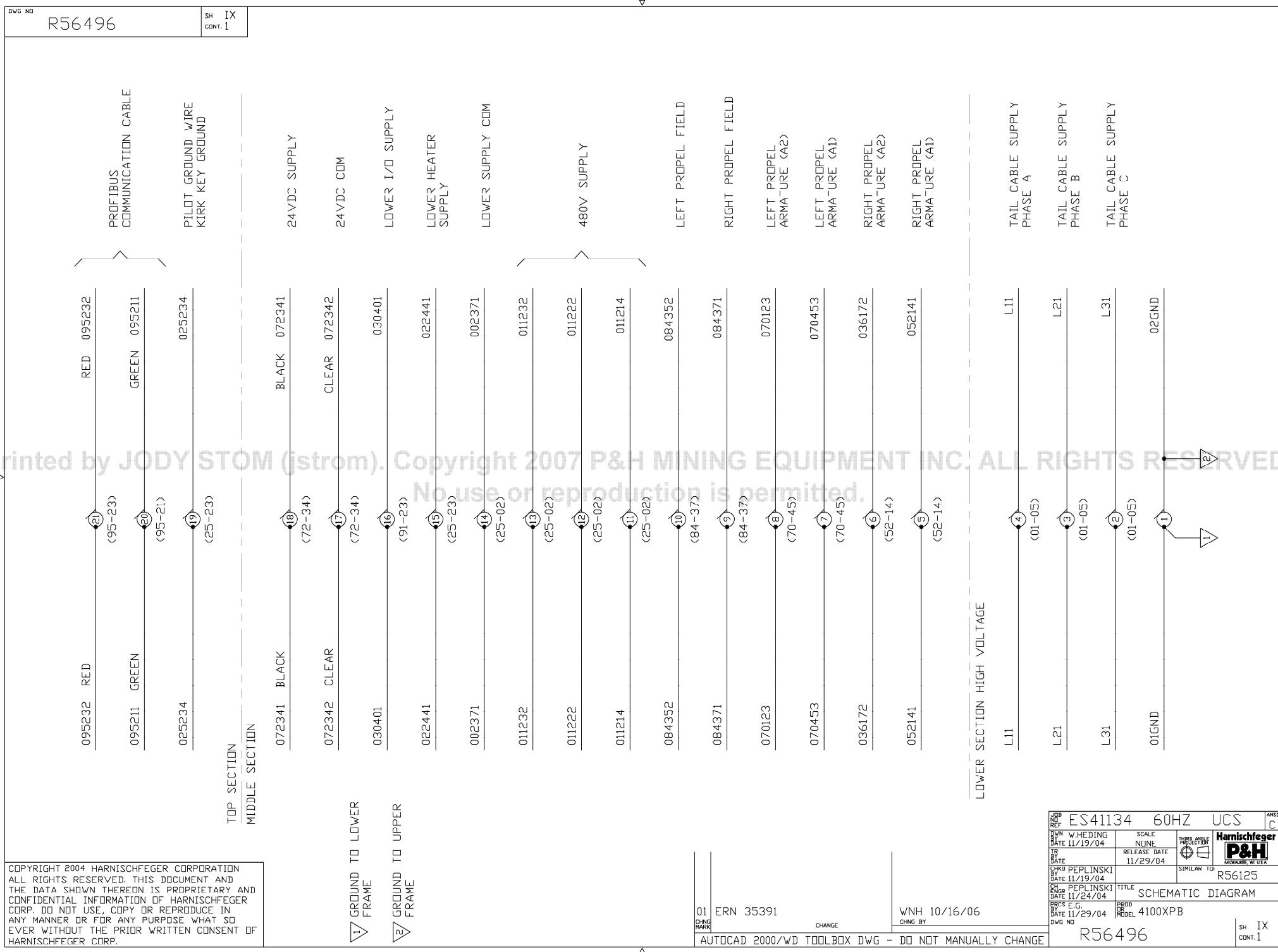
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AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

NO. 10 REF. ES41134 60HZ UCS ANG.
DRAWN W.HEDING DATE 11/19/04 SCALE NLINE THIRD ANGLE
DES BY PEPLINSKI DATE 11/19/04 RELEASE DATE 11/29/04
CHECKED BY PEPLINSKI DATE 11/24/04
ENG'D BY PEPLINSKI DATE 11/24/04 TITLE SCHEMATIC DIAGRAM
SFC'S E.G. DATE 11/29/04 PROD. MODEL 4100XPB
BY D.G. DATE 11/29/04 DWG NO.
Harnischfeger P&H
Milwaukee, WI USA
R56125
SIMILAR TO

R56496

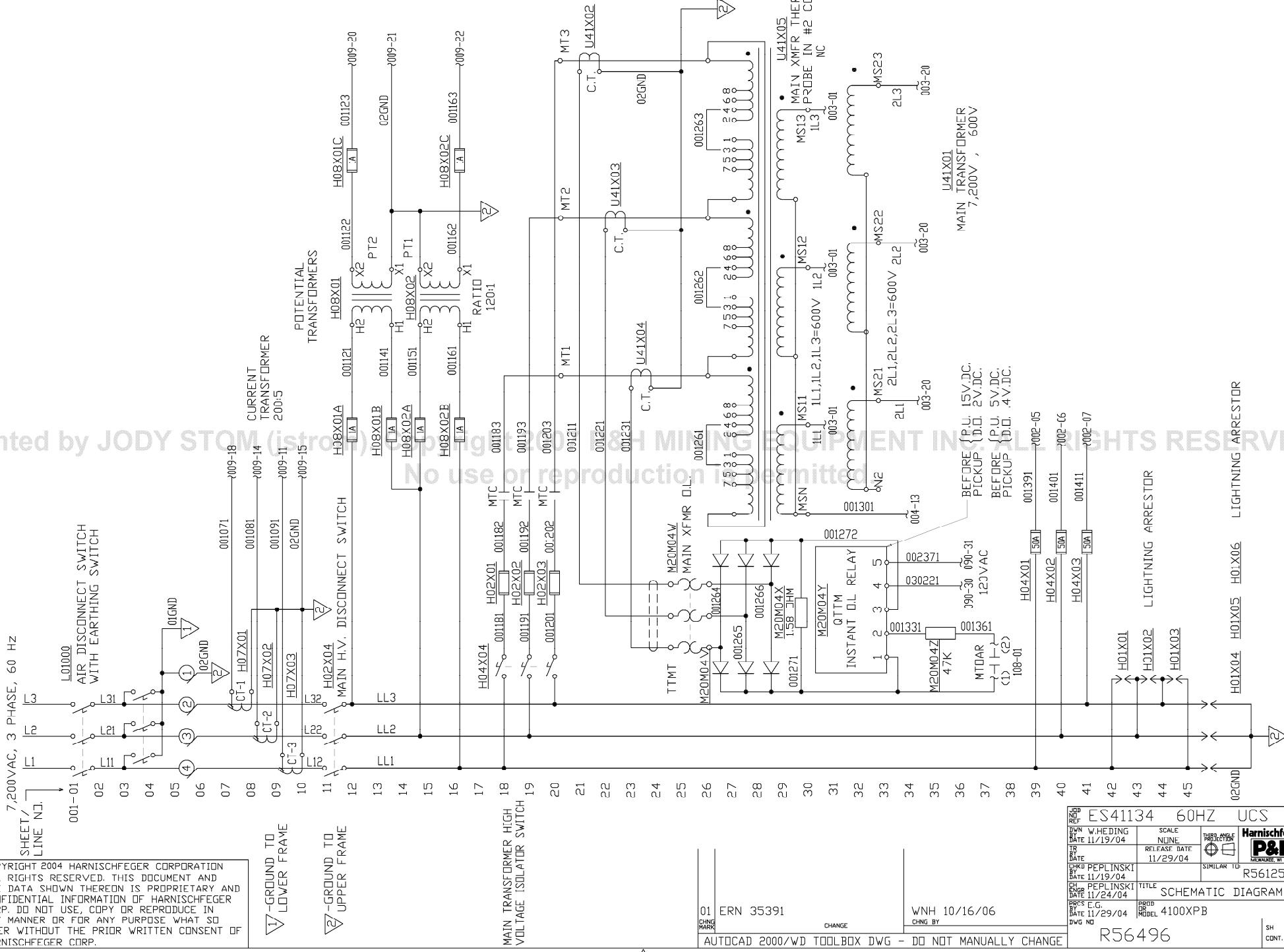
SH VIII
CONT. IX



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R56496

SH 1
CONT. 2



DWG NO. R56496

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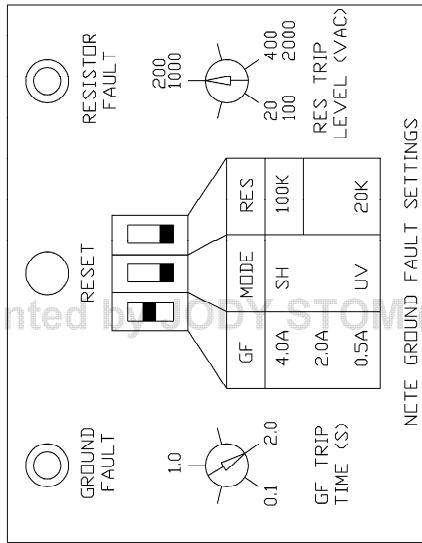
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GROUND TO
UPPER FRAME

NOTE GROUND FAULT SETTINGS



P00X12

FAULT INDICATOR

150-311 090093 090102 153-45

150-311 150311 030053 002371 103-36

150-311 005401 004151 004152 103-45

150-311 005-40 005-11 C.T. F1

150-311 P02N01 CURRENT SENSOR

150-311 004153 004191 004213 004214

150-311 P02R02 CHOKES

150-311 004182 004212 004218

150-311 P02P02 40uF

150-311 P02P03 400uF

150-311 P02R03 CHOKES

150-311 004261 004262 004281

150-311 P02E01A 33ΩHM 300W

150-311 P02E01B 33ΩHM 300W

150-311 P02E01C 33ΩHM 300W

150-311 P02E01D 33ΩHM 300W

150-311 P02R04 CHOKES

150-311 004241 004324 004325

150-311 P02P04 40uF

150-311 P02P05 40uF

150-311 P02R05 CHOKES

150-311 004326 004327 004328

150-311 P02F01 50ΩHM 25W

150-311 004329 004330 004331

150-311 P02F02 50ΩHM 25W

150-311 004332 004333 004334

150-311 P02N04

150-311 004351 004352

150-311 P02N02 GROUND FAULT RELAY (GFRDC)

150-311 004401 004402 004403

150-311 P02F02D 50ΩHM 25W

150-311 004404 004405 004406

150-311 P02N01 GROUND FAULT RELAY (GFRDC)

150-311 004407 004408 004409

150-311 P02F02D 50ΩHM 25W

150-311 004410 004411 004412

150-311 P02N02 GROUND FAULT RELAY (GFRDC)

150-311 004413 004414 004415

150-311 P02F02D 50ΩHM 25W

150-311 004416 004417 004418

150-311 P02N01 GROUND FAULT RELAY (GFRDC)

150-311 004419 004420 004421

150-311 P02F02D 50ΩHM 25W

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150-311 P02F02D 50ΩHM 25W

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150-311 P02N02 GROUND FAULT RELAY (GFRDC)

150-311 004437 004438 004439

150-311 P02F02D 50ΩHM 25W

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150-311 P02N01 GROUND FAULT RELAY (GFRDC)

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150-311 P02N02 GROUND FAULT RELAY (GFRDC)

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150-311 P02N01 GROUND FAULT RELAY (GFRDC)

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150-311 P02F02D 50ΩHM 25W

150-311 004464 004465 004466

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150-311 P02F02D 50ΩHM 25W

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150-311 P02F02D 50ΩHM 25W

150-311 004494 004495 004496

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150-311 004497 004498 004499

150-311 P02F02D 50ΩHM 25W

150-311 004500 004501 004502

150-311 P02N01 GROUND FAULT RELAY (GFRDC)

150-311 004503 004504 004505

150-311 P02F02D 50ΩHM 25W

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150-311 P02N02 GROUND FAULT RELAY (GFRDC)

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150-311 P02N02 GROUND FAULT RELAY (GFRDC)

150-311 004521 004522 004523

150-311 P02F02D 50ΩHM 25W

150-311 004524 004525 004526

150-311 P02N01 GROUND FAULT RELAY (GFRDC)

150-311 004527 004528 004529

150-311 P02F02D 50ΩHM 25W

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150-311 P02N02 GROUND FAULT RELAY (GFRDC)

150-311 004533 004534 004535

150-311 P02F02D 50ΩHM 25W

150-311 004536 004537 004538

150-311 P02N01 GROUND FAULT RELAY (GFRDC)

150-311 004539 004540 004541

150-311 P02F02D 50ΩHM 25W

150-311 004542 004543 004544

150-311 P02N02 GROUND FAULT RELAY (GFRDC)

150-311 004545 004546 004547

150-311 P02F02D 50ΩHM 25W

150-311 004548 004549 004550

150-311 P02N01 GROUND FAULT RELAY (GFRDC)

150-311 004551 004552 004553

150-311 P02F02D 50ΩHM 25W

150-311 004554 004555 004556

150-311 P02N02 GROUND FAULT RELAY (GFRDC)

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150-311 P02N01 GROUND FAULT RELAY (GFRDC)

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150-311 P02N01 GROUND FAULT RELAY (GFRDC)

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150-311 P02N02 GROUND FAULT RELAY (GFRDC)

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150-311 P02F02D 50ΩHM 25W

150-311 004584 004585 004586

150-311 P02N01 GROUND FAULT RELAY (GFRDC)

150-311 004587 004588 004589

150-311 P02F02D 50ΩHM 25W

150-311 004590 004591 004592

150-311 P02N02 GROUND FAULT RELAY (GFRDC)

150-311 004593 004594 004595

150-311 P02F02D 50ΩHM 25W

150-311 004596 004597 004598

150-311 P02N01 GROUND FAULT RELAY (GFRDC)

150-311 004599 004600 004601

150-311 P02F02D 50ΩHM 25W

150-311 004602 004603 004604

150-311 P02N02 GROUND FAULT RELAY (GFRDC)

150-311 004605 004606 004607

150-311 P02F02D 50ΩHM 25W

150-311 004608 004609 004610

150-311 P02N01 GROUND FAULT RELAY (GFRDC)

150-311 004611 004612 004613

150-311 P02F02D 50ΩHM 25W

150-311 004614 004615 004616

150-311 P02N02 GROUND FAULT RELAY (GFRDC)

150-311 004617 004618 004619

150-311 P02F02D 50ΩHM 25W

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DWG NO R56496
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REF	ES41134	60HZ	UCS	C
BY	W.HEDING	SCALE	THIRD ANGLE	
DATE	11/19/04	LINE	SECTION	
ER		RELEASE DATE		
RS		11/29/04		
DATE				
BY	PEPLINSKI			
DATE	11/19/04			
ENG	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
RS				
DATE	11/24/04			
BY	E.G.	PROD	DR	
DATE	11/29/04	MODEL	4100XPB	
DWG NO	R56496	SH	6	

01 ERN 35391
CHNG MARK
W.NH 10/16/06
CHNG BY
CHANGE
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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DWG NO R56496
SH 7
CONT. 8

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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	R56125
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	CHNG BY		
CHNG MARK	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				
DWG NO R56496				
SH 7 CONT. 8				

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DWG NO R56496
SH 8
CONT. 9

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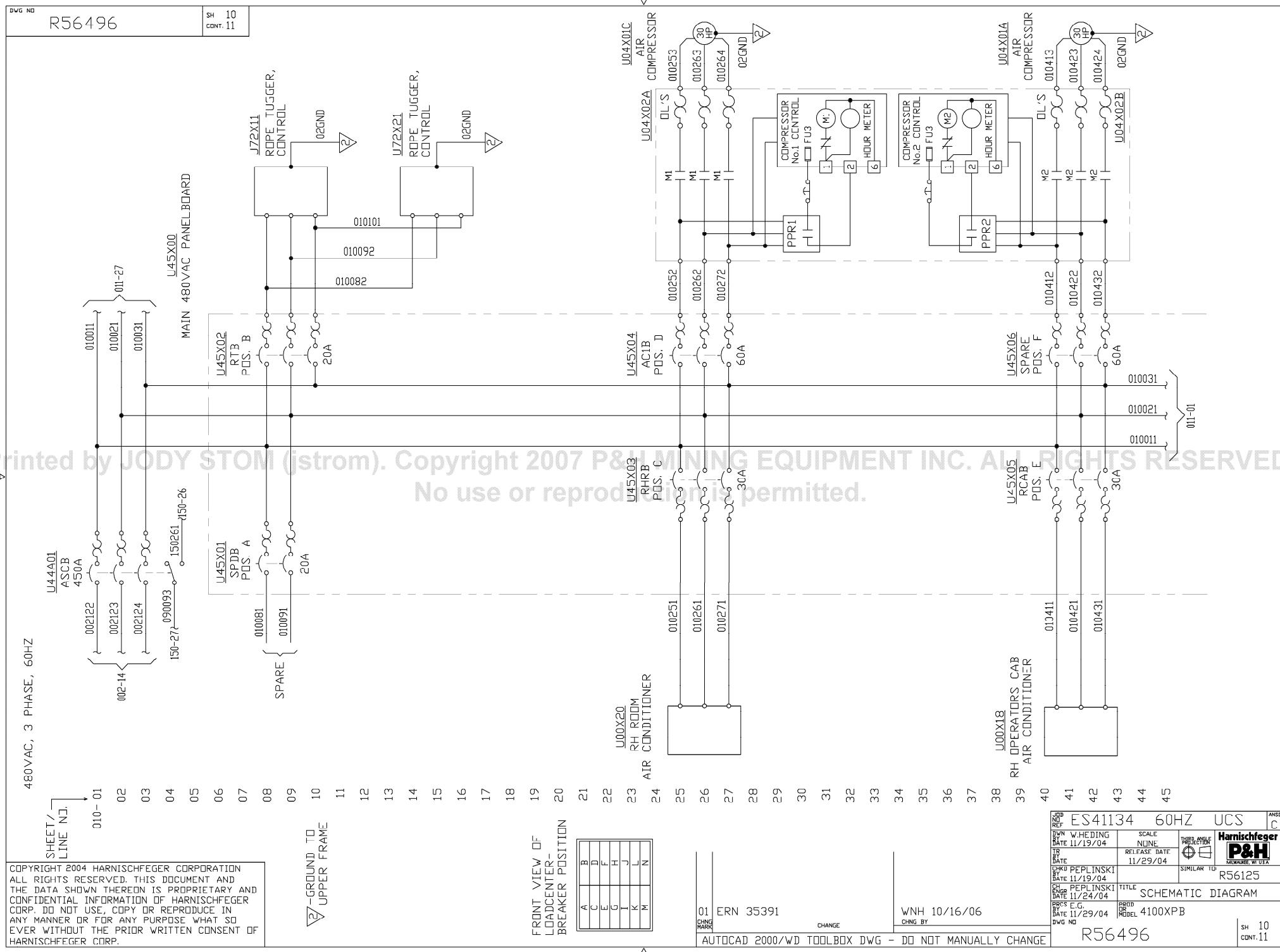
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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.H. DEDING	SCALE	NONE	THIRD ANGLE
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		RELEASER		MILWAUKEE, WI USA
DATE		DATE		R56125
DESIGN BY	DUPEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD. BY	4100XPB	
DATE	10/16/06	PROD. DATE		
CHNG BY		DWG NO		
CHNG MARK				

01 WNH 10/16/06
CHNG BY
CHNG BY
CHANGE

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

R56496
SH 8
CONT. 9



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U45X01 SPARE 012-01 20A 60A
R-HB PDS, I RHC B >PDS, K
U45X03 30A 20A
WSB1 PDS, G
U45X00 60A
U45X11 30A 20A
U34X01 SPARE 60A
U34X00 SPARE 20A

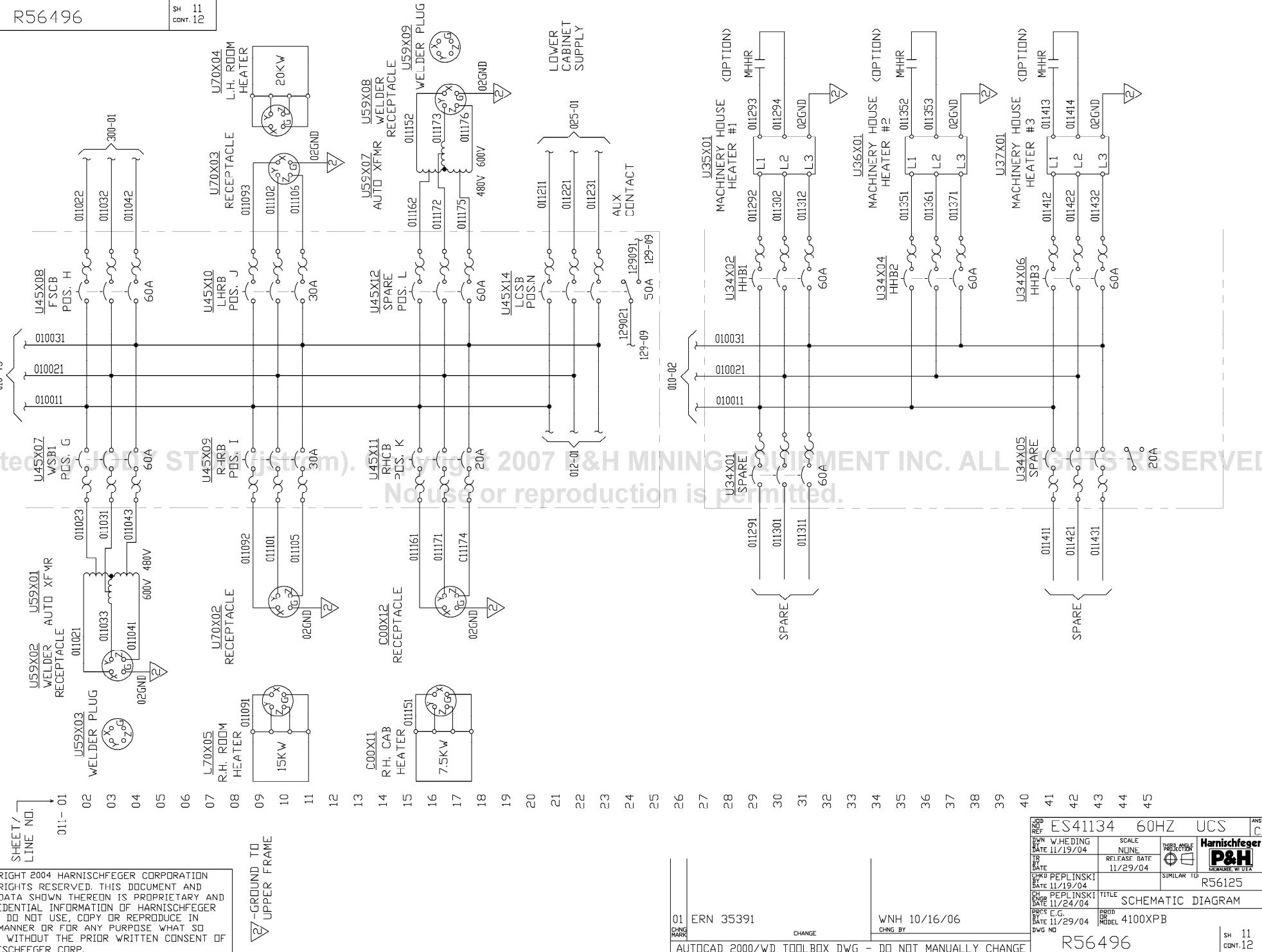
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011021
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011041
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011101
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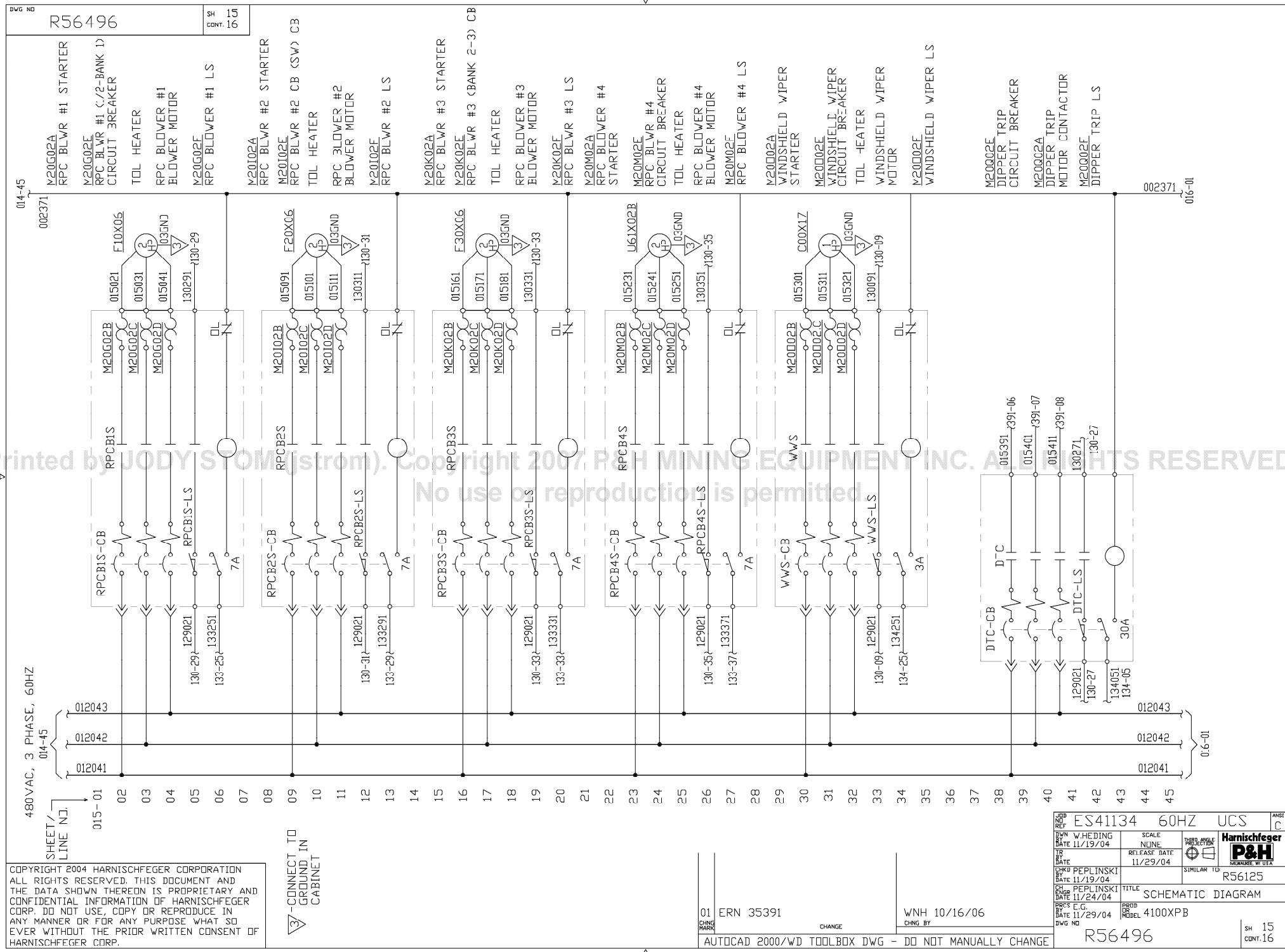


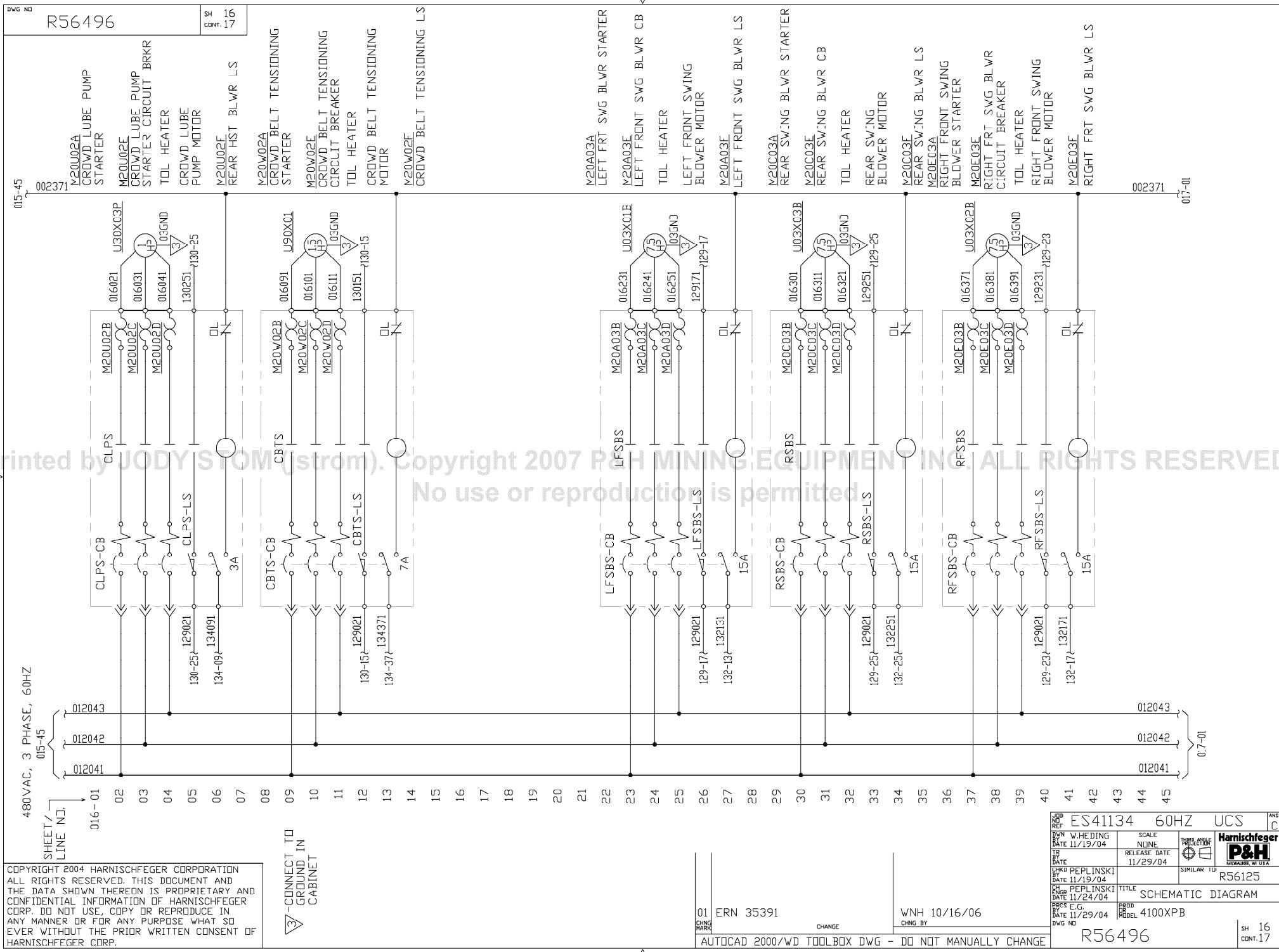
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DWG NO R56496
SH 19
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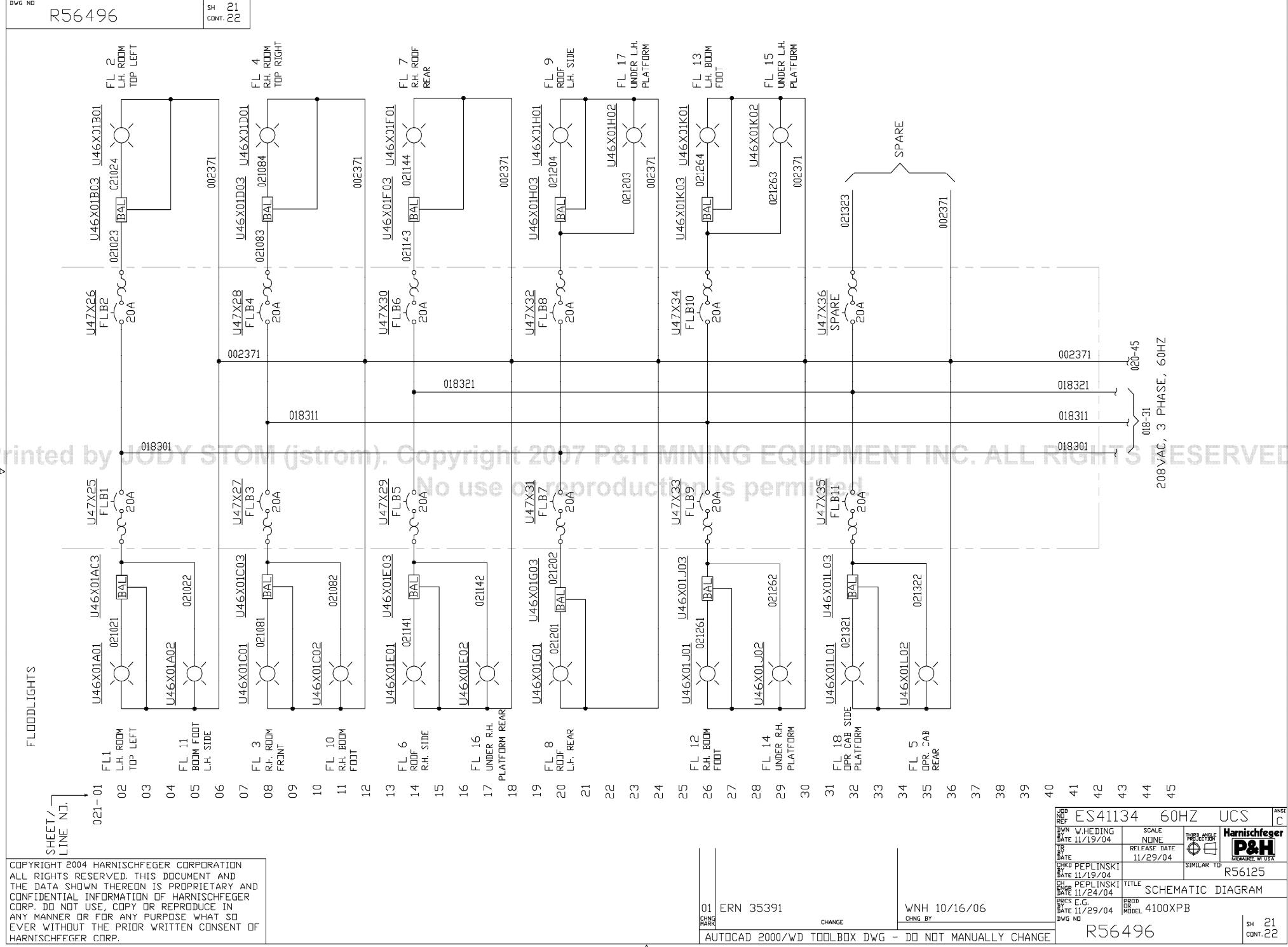
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01	ERN 35391	W NH 10/16/06	ES41134 60HZ UCS	Harnischfeger P&H MILWAUKEE WI USA
CHNG MARK	CHANGE	CHNG BY	REF ID: R56125	
BY PEPLINSKI DATE 11/19/04	ENG PEPLINSKI DATE 11/24/04	TITLE SCHEMATIC DIAGRAM	BY'S E.G. DATE 11/29/04	PROD DR MODEL 4100XPB
ER	RS	RELEASE DATE 11/29/04	BY'S E.G. DATE 11/29/04	DWG NO
DATE	DATE	DATE	DATE	DATE

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

R56496

SH 19
CONT. 20



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DWG NO R56496 SH 22
CONT. 23

208V XFMR

SHEET LINE NO. 022-01

LINE NO.

02 03 04 05 06 07

022-01

U44A02 LIGHTING SECONDARY CIRCUIT BREAKER

MAIN 120V AC PANEL BOARD

U25X00

U22043

U22042

U25X02

U22041

U25X01 HV B

U22061

009-35

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002362

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002371

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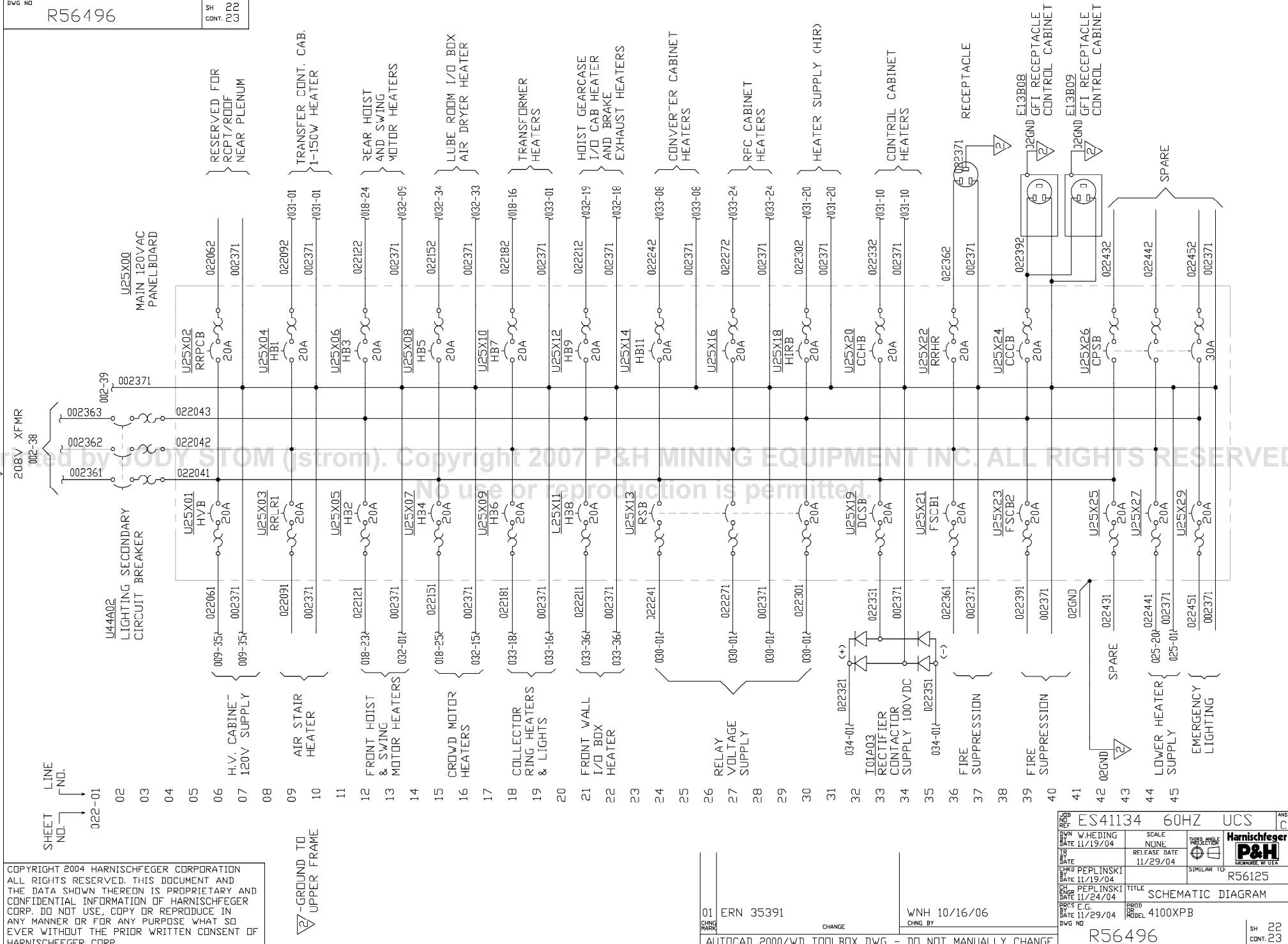
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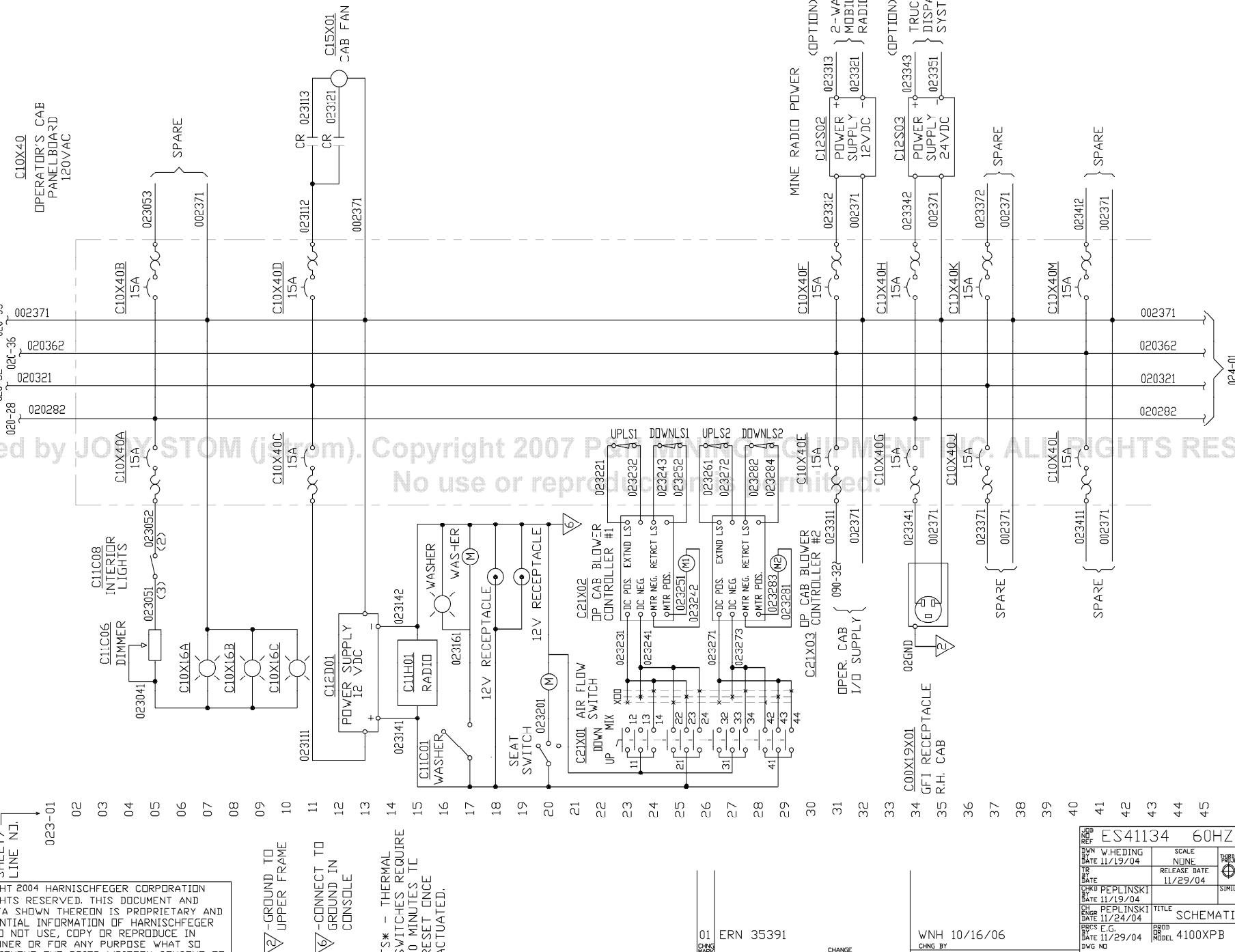
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V2 -GROUND TO
UPPER FRAME

13 14 15
CENSURE THERMAL ACTUATOR
SWITCHES REQUIRE
10 MINUTES TO
RESET ONCE

01 ERN 353
CHNG
MARK

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

JOB NO.	ES41134	60HZ	UCS	ANSI C
DRAWN BY	W.H. DING	SCALE	NINE	
DATE	11/19/04	THIRD ANGLE PROJECTION	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TR		RELEASE DATE	11/29/04	Harnischfeger
CHK'D	CHK'D	SIMILAR TO	R56125	P&H
PEPLINSKI	PEPLINSKI			MILWAUKEE, WI USA
11/19/04	11/24/04	TITLE	SCHEMATIC DIAGRAM	
CHG	CHG	PROD	4100XPB	
BY	E.C.G.	REV		
DATE	11/29/04	MODEL		
DWG NO.	R56496			SH 23
				CNT. 24

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DWG NO R56496
SH 27
CONT. 28

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LINE NO.

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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	1:1	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD. BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	CHNG BY		
CHNG MARK	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				
DWG NO R56496				
SH 27 CONT. 28				

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DWG NO R56496
SH 28
CONT. 29

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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.H. HEDING	SCALE	LINE	THIRD ANGLE
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY	PEPLINSKI	REVISION	0	MILWAUKEE, WI USA
DATE	11/19/04	DATE	11/29/04	R56125
DESIGN BY	W.N.H.	TITLE	SCHEMATIC DIAGRAM	
DATE	11/24/04	ENG'D BY	PEPLINSKI	
DATE	11/29/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD. BY	4100XPB	
DATE	10/16/06	PROD. NO		
CHNG BY	CHANGE	CHNG BY		
CHNG MARK		W.N.H.		
01				
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				
R56496				
SH 28 CONT. 29				

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DWG NO R56496
SH 29
CONT. 30

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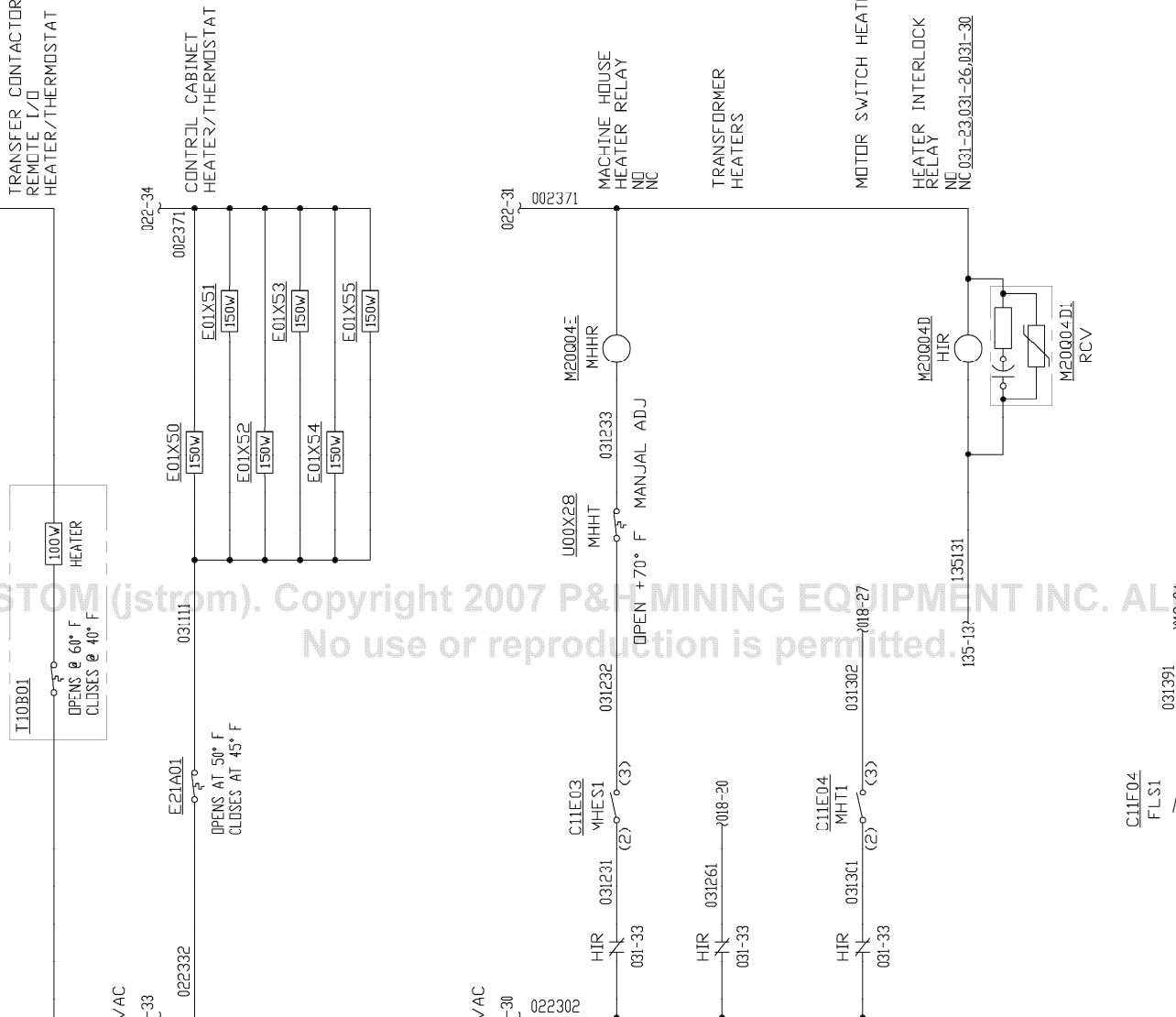
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DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	R56125
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	DR. MODEL 4100XPB	
DATE	10/16/06	CHNG BY	DWG NO	
CHNG MARK		CHANGE		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

R56496

SH 29
CONT. 30

DWG NO R56496
SH CONT. 31
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SHEET / LINE NO
031-01
120VAC
022-09
022092

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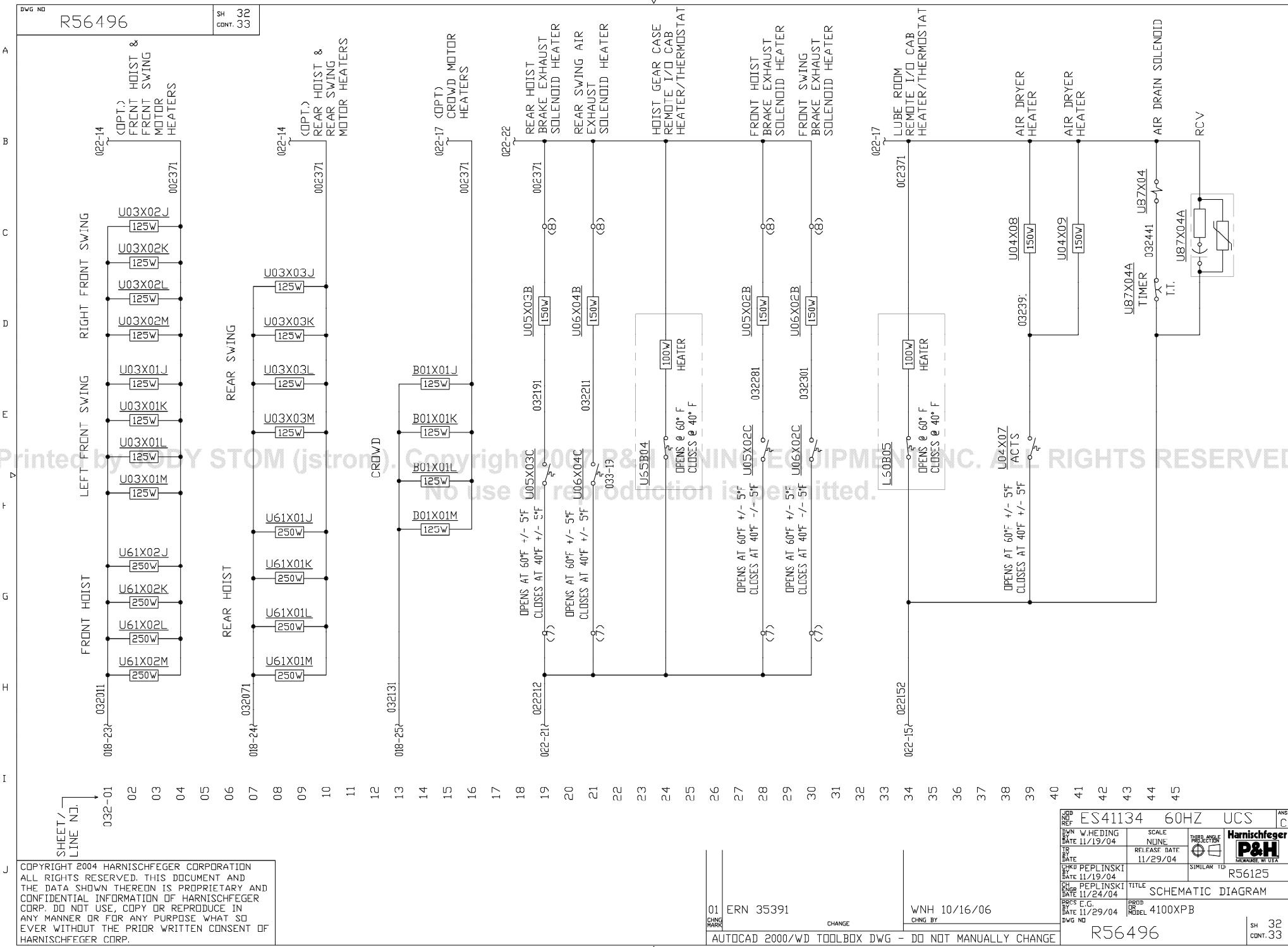
01 ERN 35391
CHNG MARK
W.NH 10/16/06
CHNG BY
CHANGE
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

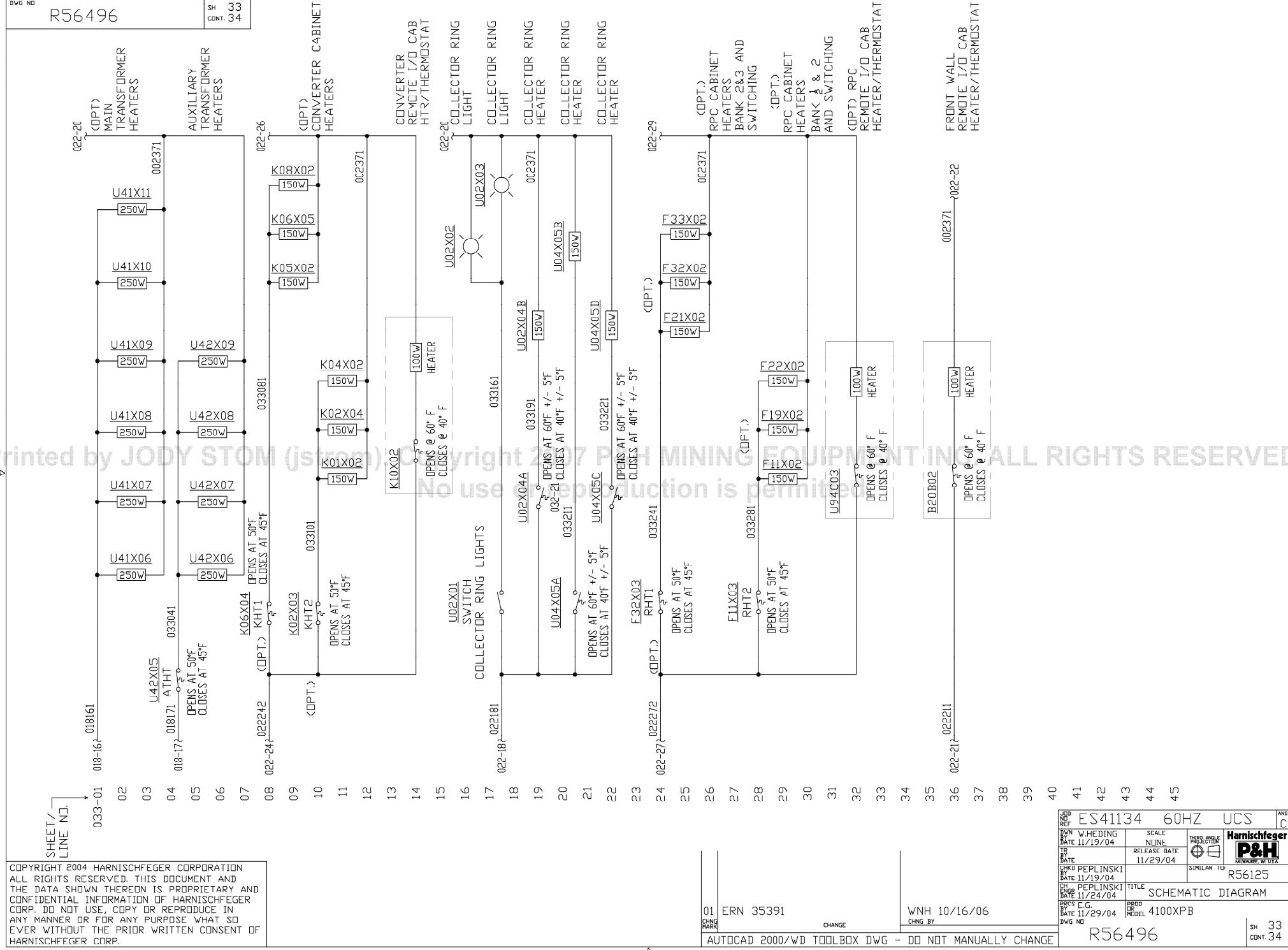
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DRAWN BY W.H. HEDING DATE 11/19/04 RELEASE DATE 11/29/04
DES BY PEPLINSKI DATE 11/19/04
ENG BY PEPLINSKI DATE 11/24/04
SVC'S E.G. DATE 11/29/04
PROD BY MODEL 4100XPB
DWG NO R56496
TITLE SCHEMATIC DIAGRAM
Harnischfeger P&H
MADE IN USA
SIMILAR TO R56125
DATE 11/19/04
DATE 11/24/04
DATE 11/29/04
DWG NO R56496
SCALE N/ONE
THIRD ANGLE PROJECTION
TITLE SCHEMATIC DIAGRAM
PROD MODEL 4100XPB
DWG NO R56496
DATE 11/19/04
DATE 11/24/04
DATE 11/29/04
DWG NO R56496
SH 31
CONT. 32

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Diagram illustrating the LEFT FWD circuit. The circuit starts with a common ground connection. A 125W power source connects to U03X01L, U03X01M, and the common ground. From U03X01L, a signal goes to the coil of relay CR01WD. From the common ground, a signal goes to the coil of relay LS0B05. The contacts of CR01WD (NO, NC) connect to U05X03C, U06X04C, and the common ground. The contacts of LS0B05 (NO, NC) connect to U05X02F, U06X02F, and the common ground. The output of U05X03C connects to U03X01M. The outputs of U05X02F and U06X02F both connect to the coil of relay U55B14.





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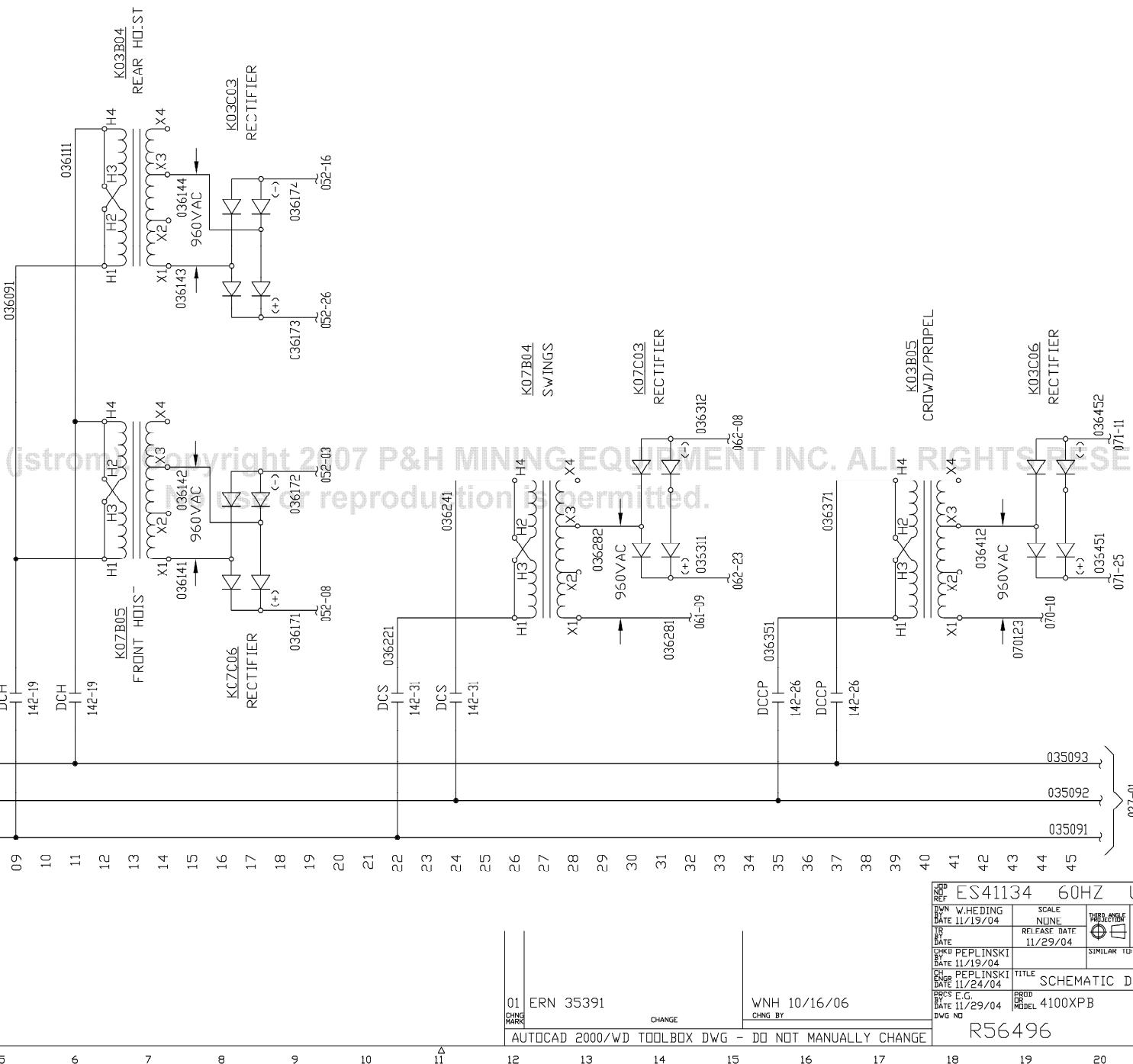
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DRIVE
POWER
SUPPLIES

-1053-04,057-03,063-03,072-03,080-03,081-04,082-04,083-03
-1057-04,163-04,072-04,082-03,083-34,084-03,085-04

240VAC, 3PHASE, 60HZ
035-45

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MARK

AUTOCAD 2000

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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	DWG NO	R56125	
CHNG BY	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

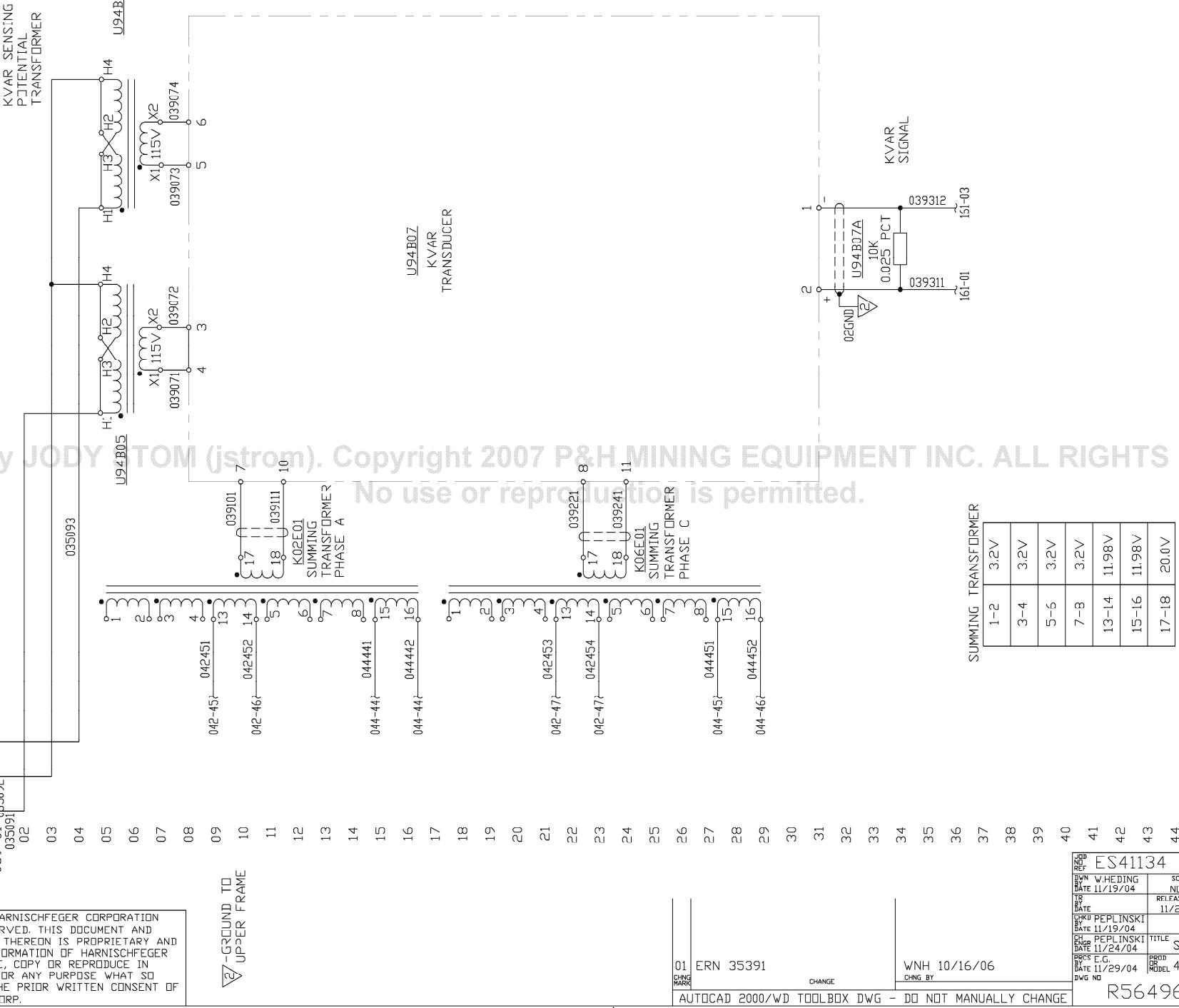
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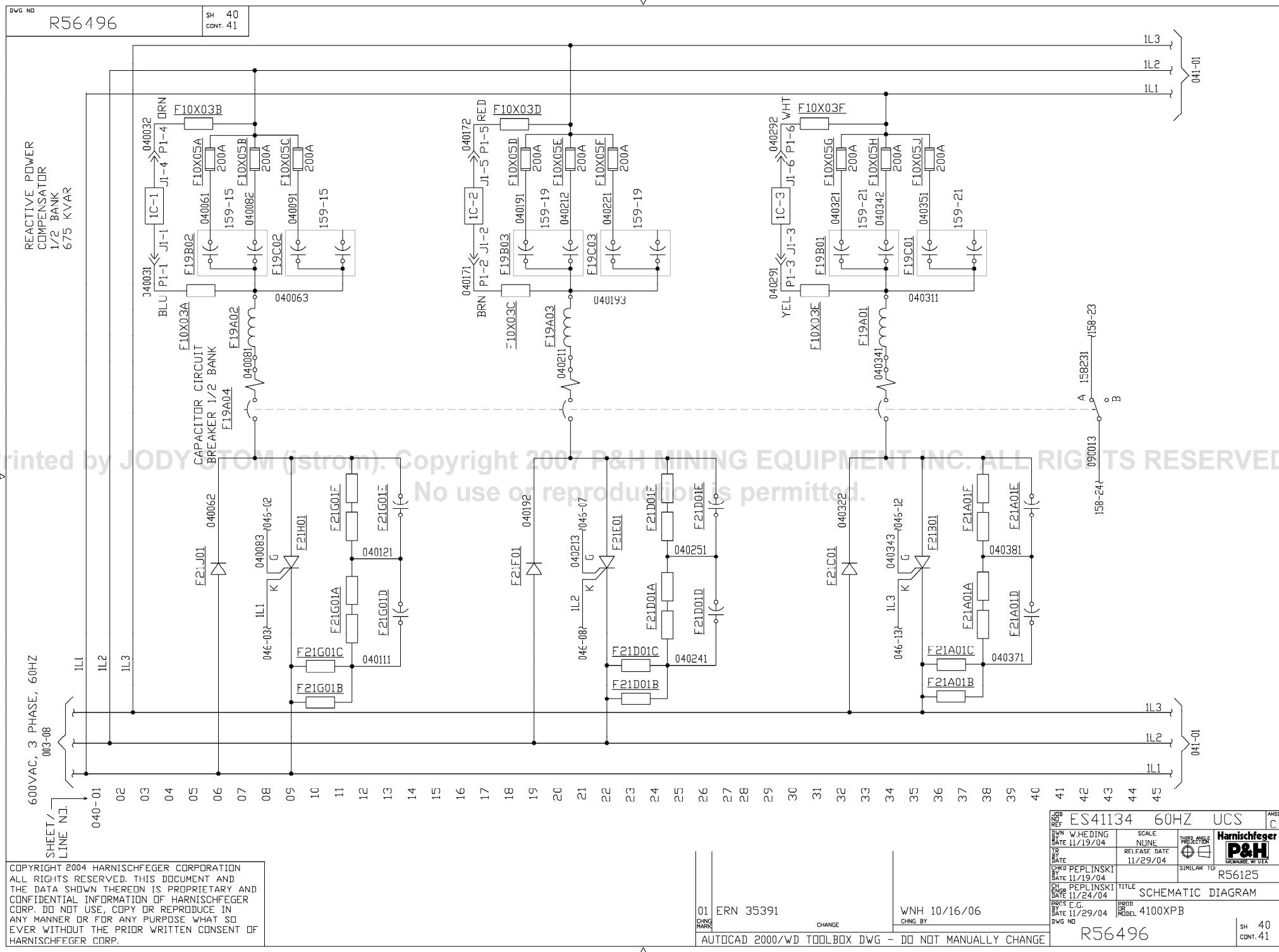
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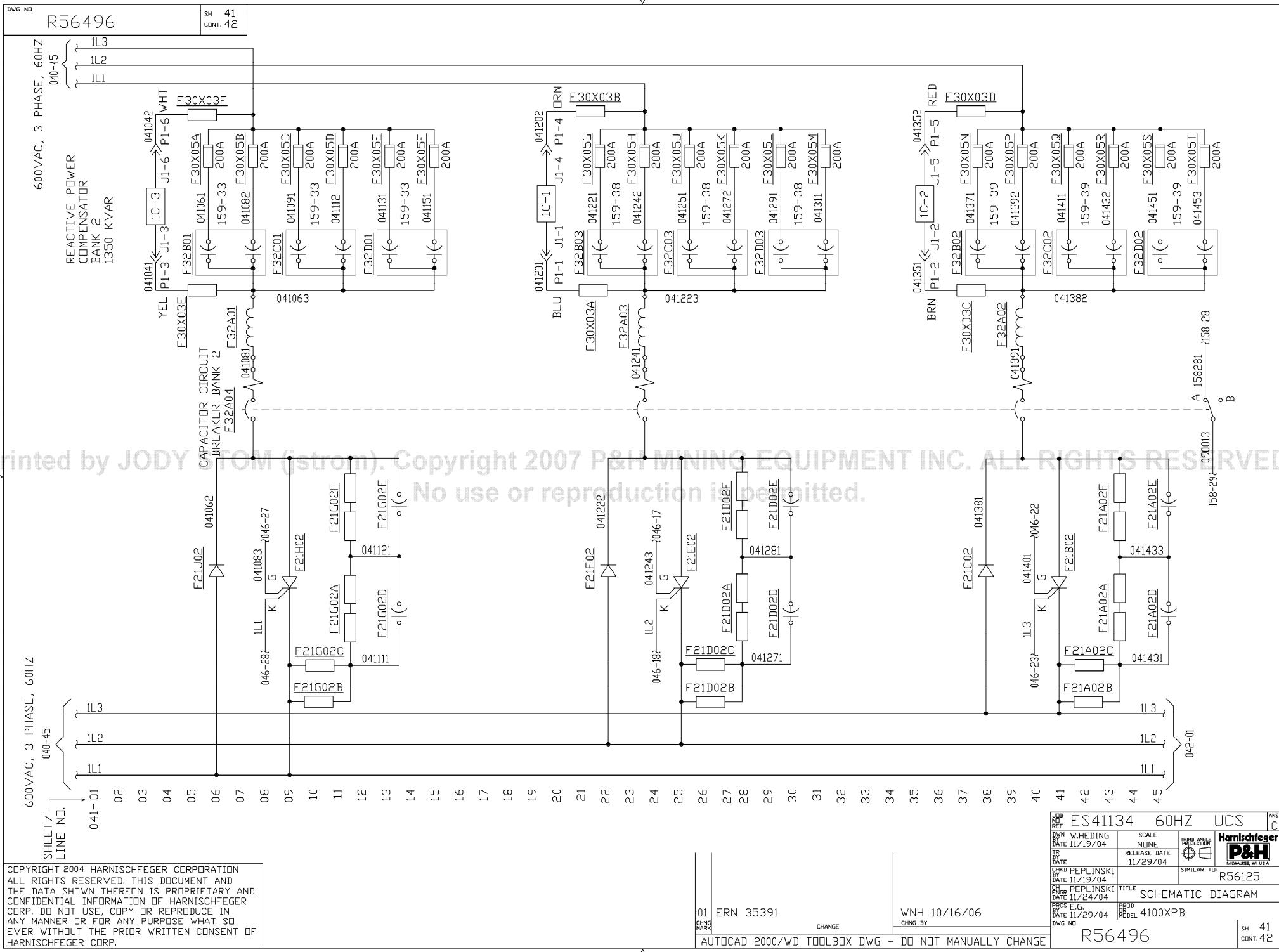
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DWG NO
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SH 39
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600VAC, 3 PHASE, 60Hz
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REF	ES41134	60HZ	UCS	ANGLE
DESIGN	W.HEDING	SCALE	NONE	THIRD ANGLE
BROWNS	DATE 11/19/04	RELEASE DATE	11/29/04	SECTION
ERS		SIMILAR TO	R56125	MARK
DATE		PART NO		
BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D	PEPLINSKI	Harnischfeger
CHNG	ERN 35391	DES C.G.	DATE 11/24/04	P&H
MARK		CHNG BY	DATE 11/29/04	MILWAUKEE WI USA
01	W.NH 10/16/06	PROD	MODEL 4100XPB	
	CHNG BY	DRW	DWG NO	
				R56496
		SH	42	
		CONT.	43	

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

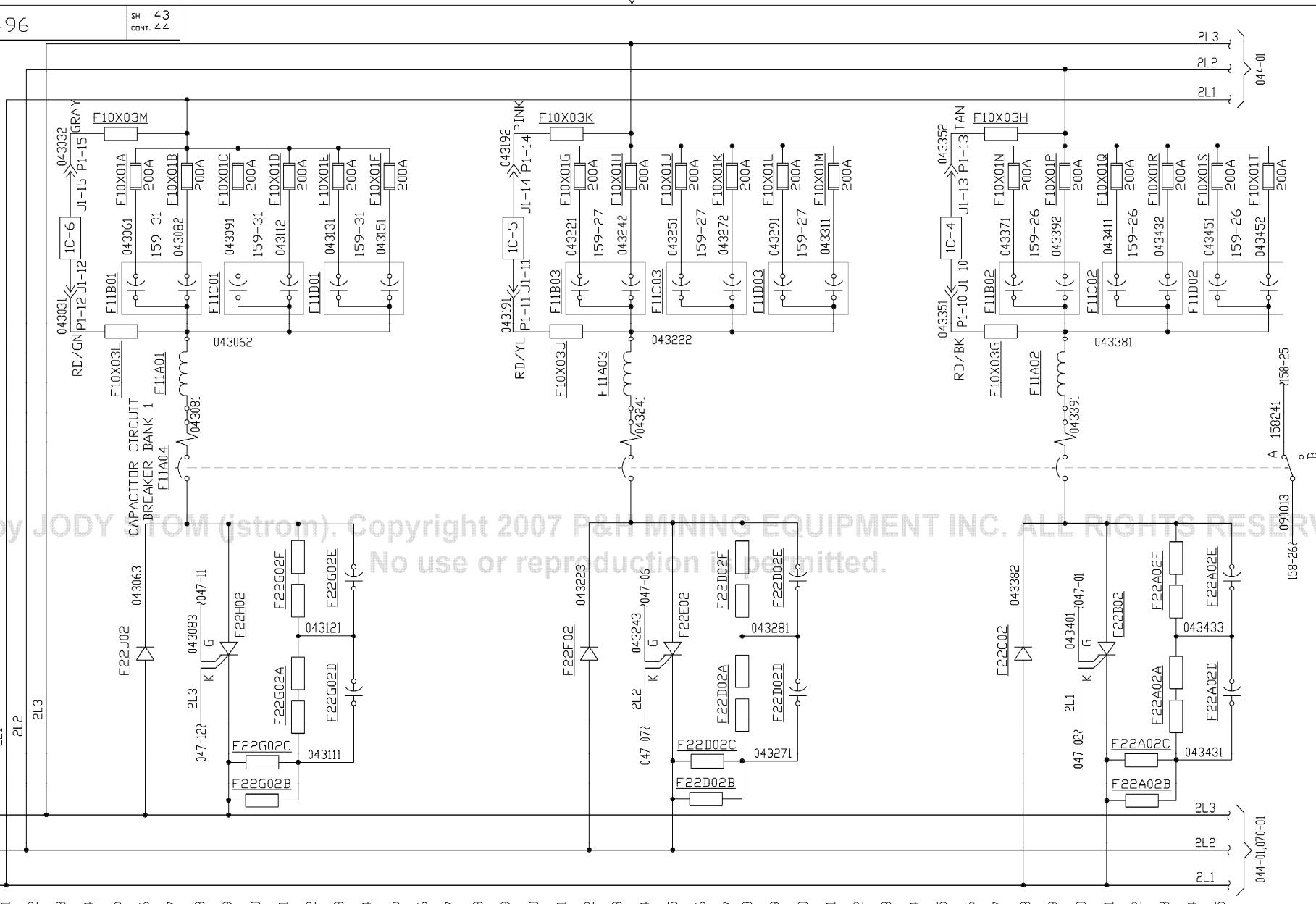
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R56496

REACTIVE POWER
COMPENSATOR
BANK 1
1350 KVAR

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AUTOCAD 2000

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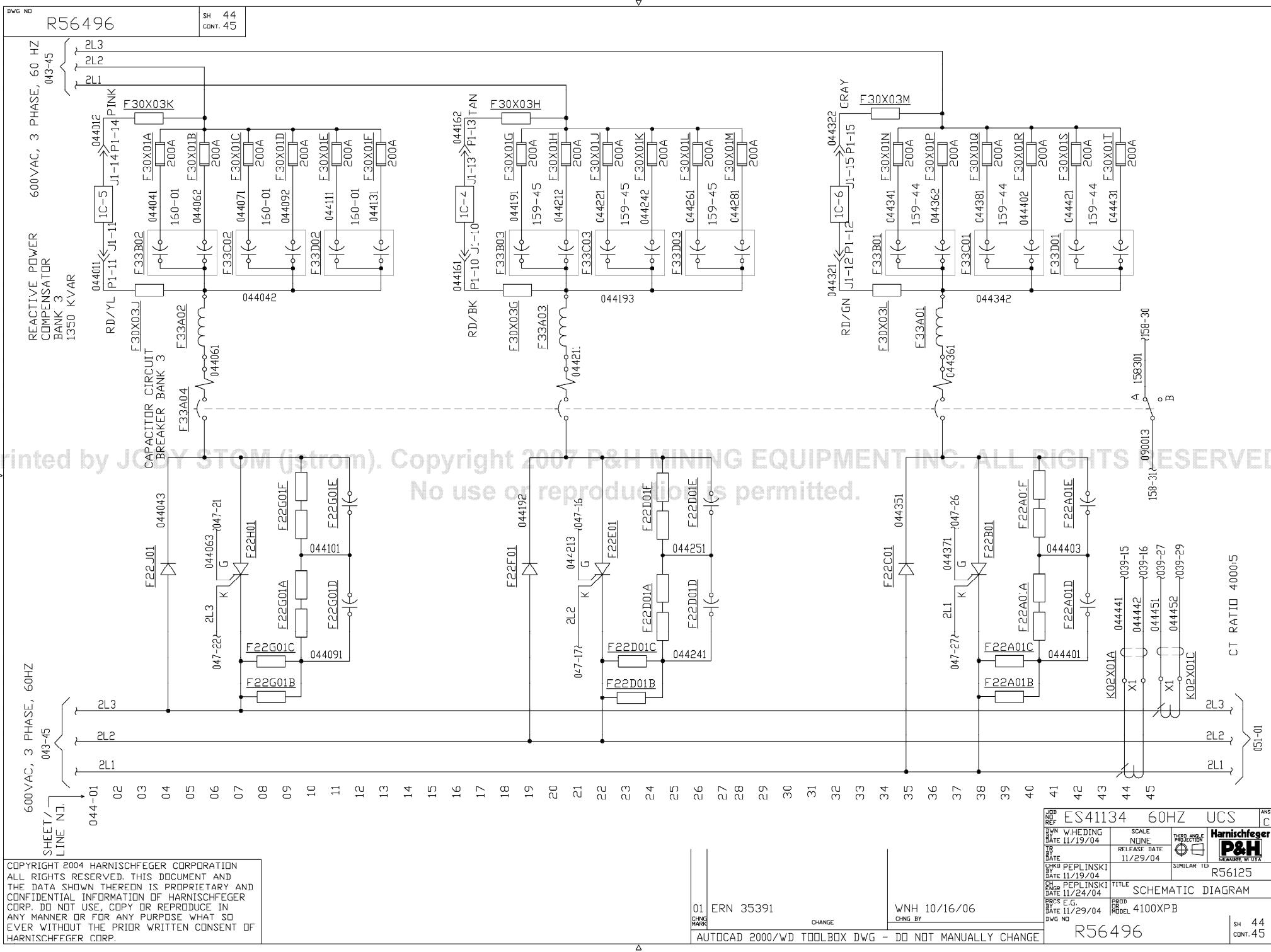
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JOB NO. REF.	ES41134	60HZ	UCS	ANSI C
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TR BY DATE		RELEASE DATE 11/29/04		
LUKU BY DATE	PEPLINSKI 11/19/04		SIMILAR TO	R56125
CHG BY DATE	PEPLINSKI 11/24/04	TITLE	SCHEMATIC DIAGRAM	
PROJ E.G. BY DATE		PROJ CDR MODEL	4100XPB	
DWG NO				
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SH 43 CONT. 44				

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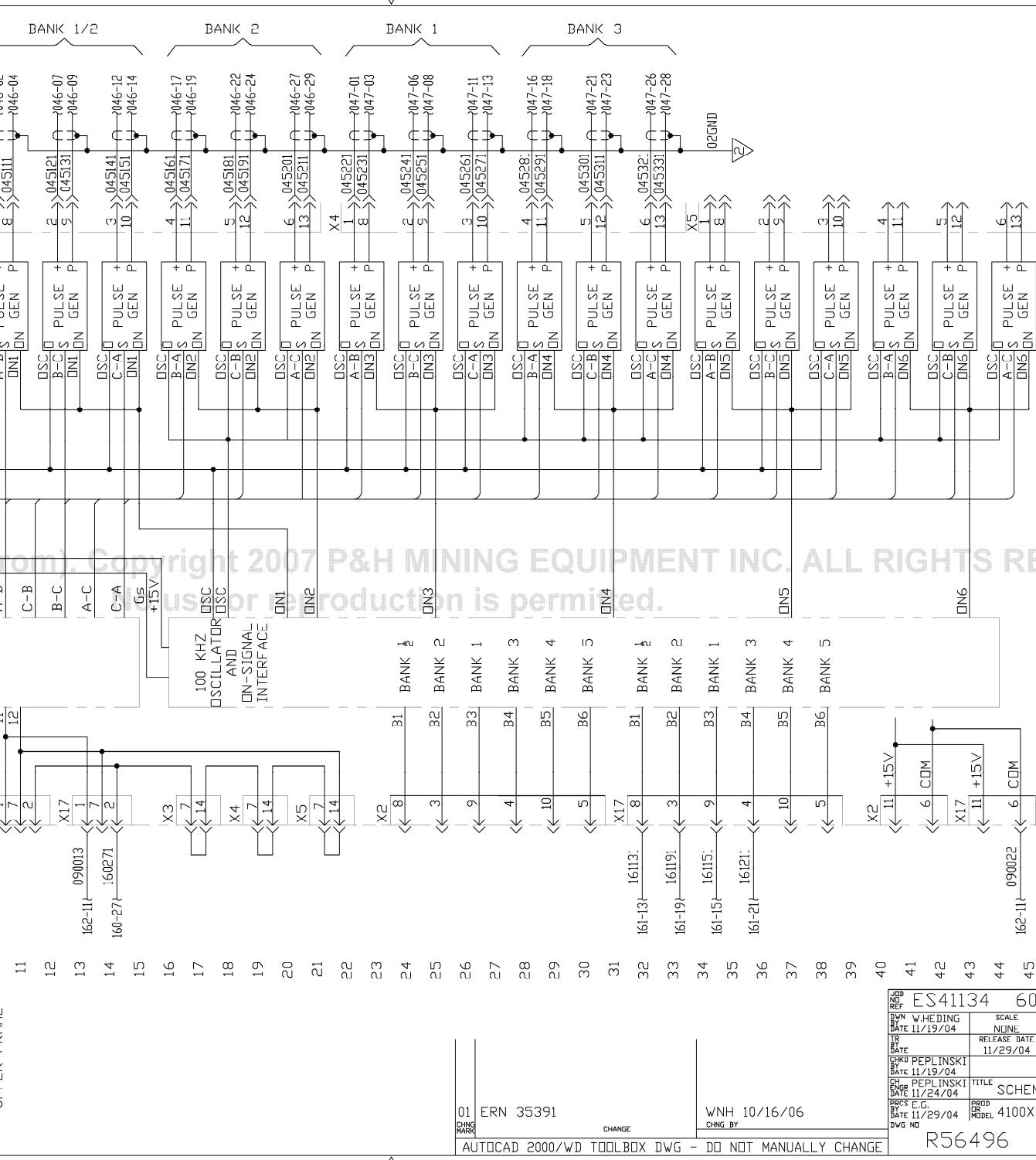
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SH 45
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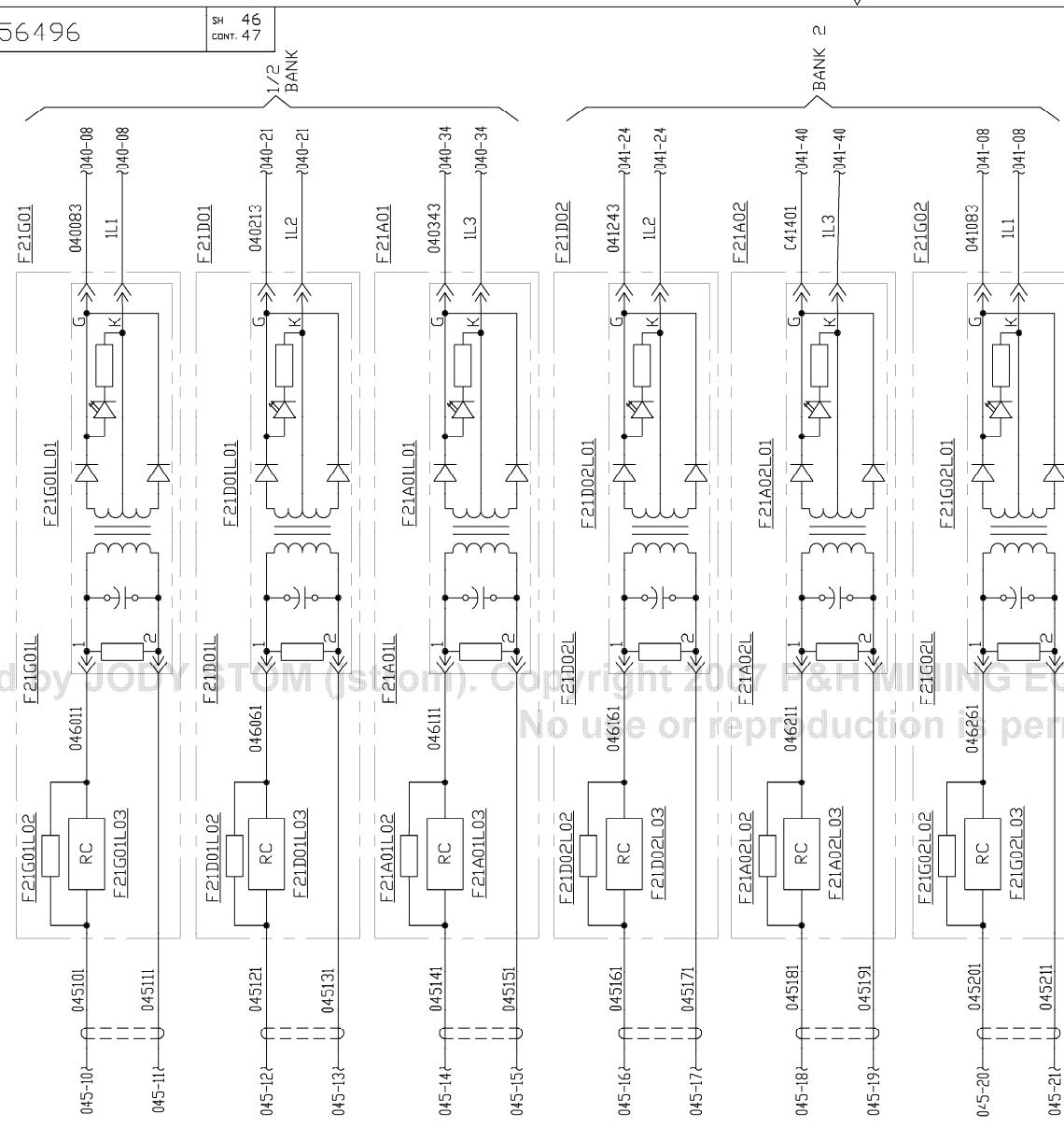
CHANGE AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

REF ID: E541134 60HZ UCS
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DESIGNED BY PEPLINSKI DATE 11/19/04 RELEASE DATE 11/29/04
ENG'D BY PEPLINSKI DATE 11/24/04 TITLE SCHEMATIC DIAGRAM
SVC'S L.G. DATE 11/29/04
DWG NO. 41200
PROD. MODEL 4100XPB
Harnischfeger
P&H
Milwaukee, WI USA
SIMILAR TO R56125
R56496
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DRAWN BY DATE	W.HEDING DATE 11/19/04	SCALE NINER	THIRD ANGLE PROJECTION	Hanschfeger
BY DATE		RELEASE DATE 11/29/04		P&H MILWAUKEE, WI USA
DESIGNED BY DATE	DUKU PEPLINSKI DATE 11/19/04	SIMILAR TO	R56125	
CHANGED BY DATE	DUKU PEPLINSKI DATE 11/24/04	TITLE	SCHEMATIC DIAGRAM	
BPCS E.G. DATE	11/29/04	PROD MODEL	4100XPB	
DWG NO				
R56496				SH 46 CONT. 47

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DWG NO R56496
SH 48
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DESIGN BY	W.H. DEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	ERIK PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	R56125
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DESIGN BY	ERN 35391	DATE	11/24/04	
DATE		CHANGE BY		
CHNG MARK		W.NH 10/16/06	PROD. MODEL	4100XPB
		CHNG BY	DWG NO	
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AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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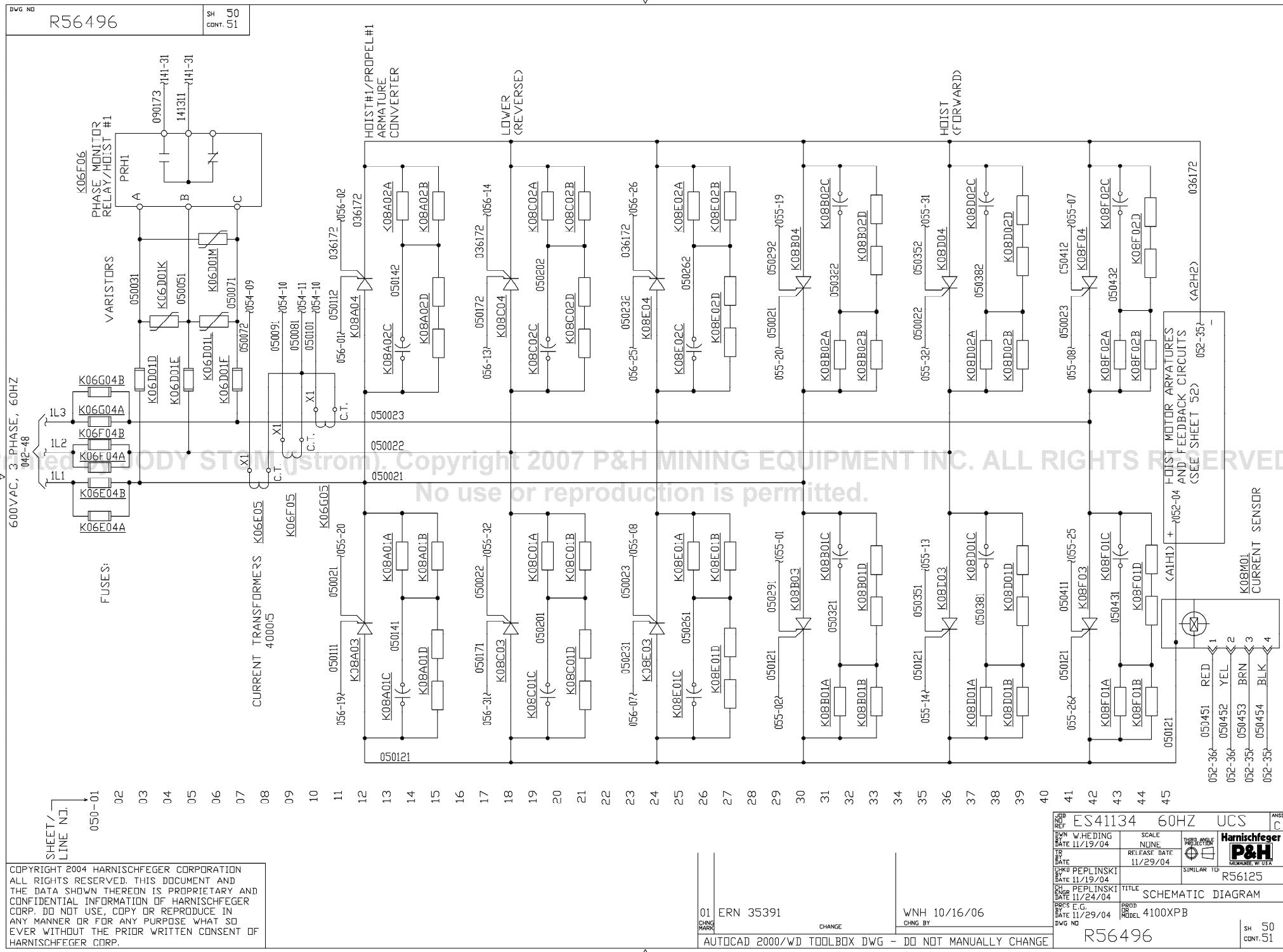
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DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	DWG NO	R56125	
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AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

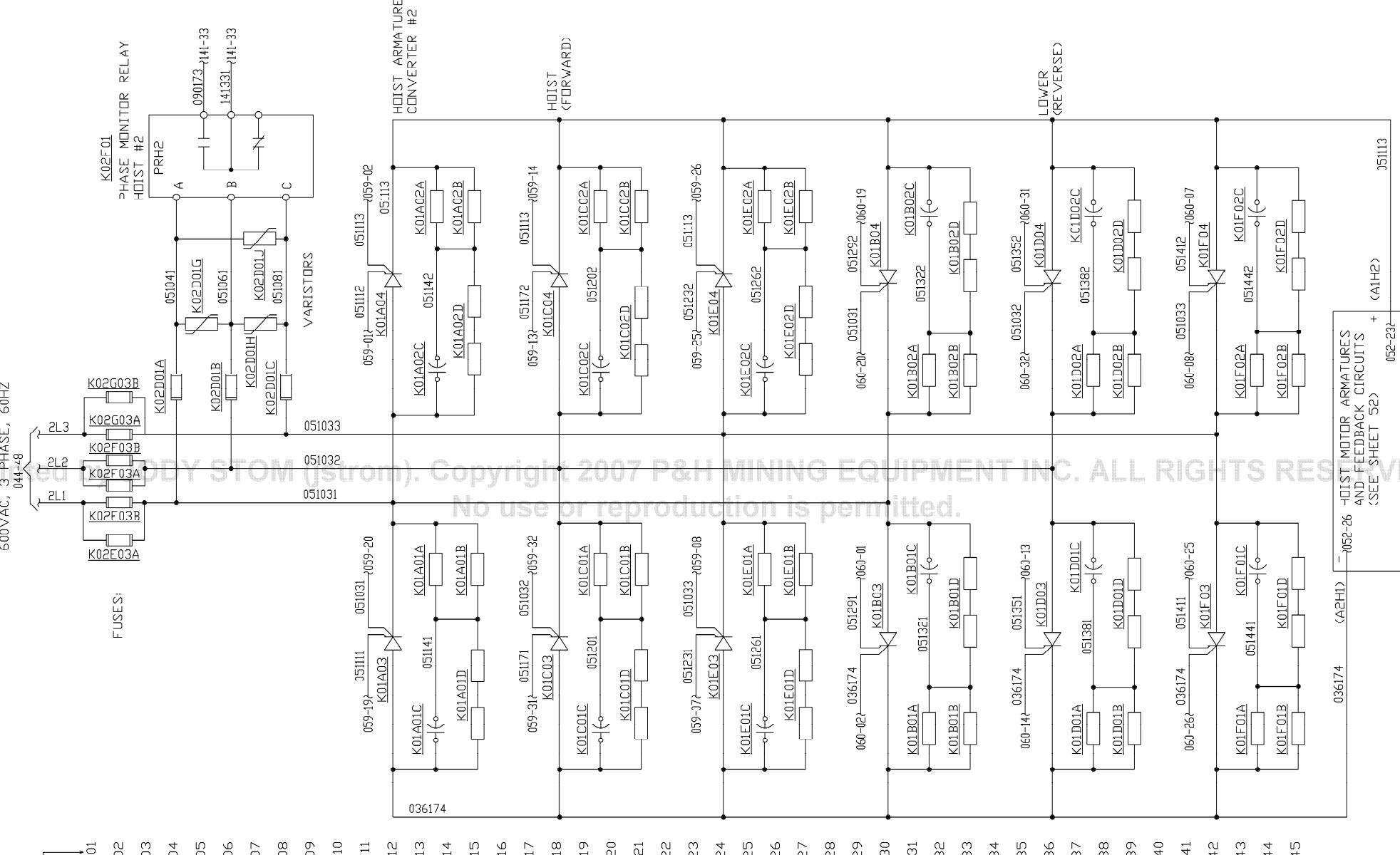
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SH 49
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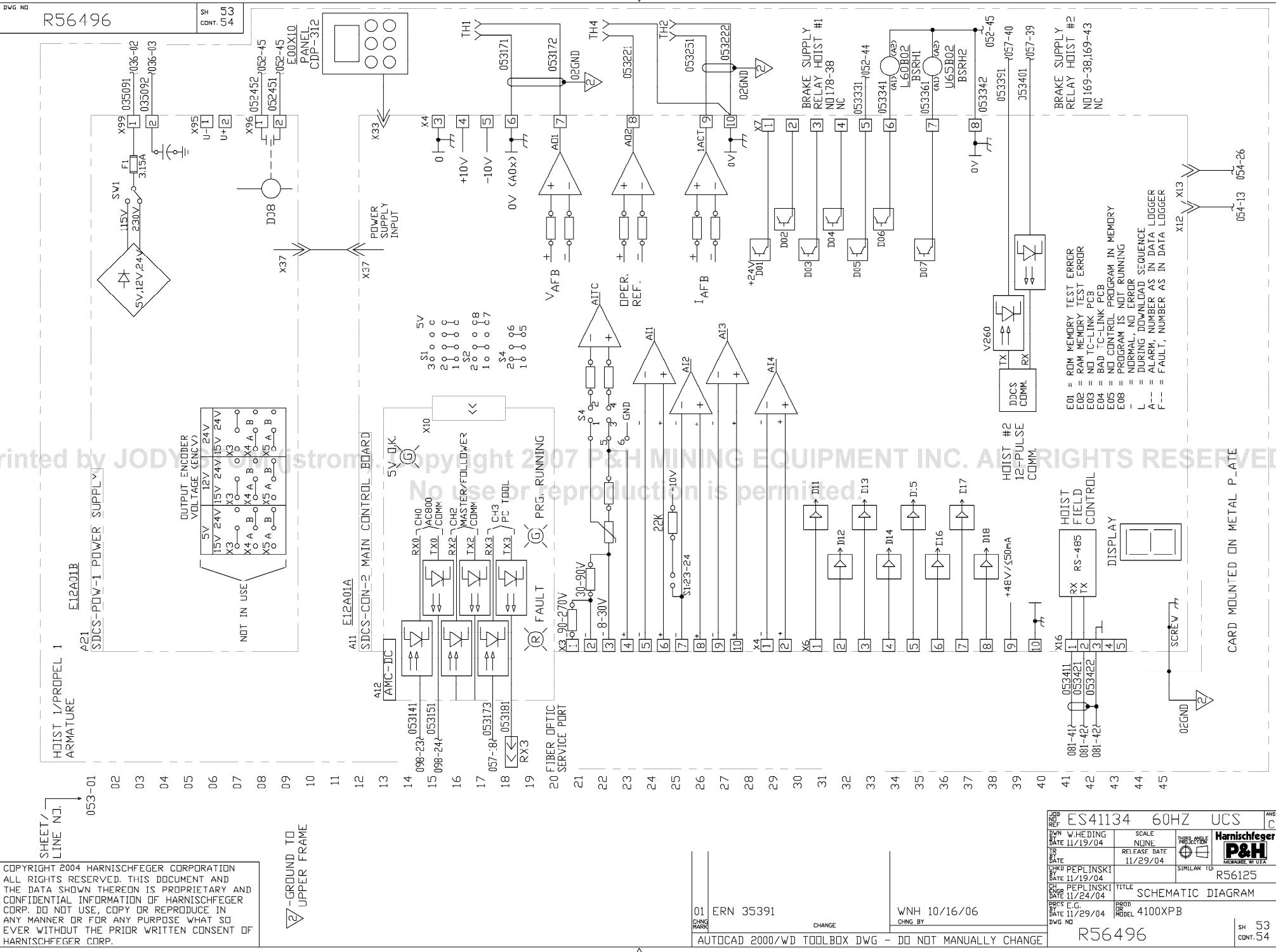
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AUTOCAD 2000/WD TOOL BOX DWG - DO NOT MANUALLY CHANGE

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RELEASE DATE	11/29/04	THIRD ANGLE PROJECTION	
TYPE		RELEASE DATE	
PEP/PL	PEPLINSKI	SIMILAR TO	R56125
REF	PEPLINSKI	TITLE SCHEMATIC DIAGRAM	
ENGR	11/19/04	PRINT	4100XPB
PROJ'S E.C.		DR	
DATE	11/29/04	DWG NO.	
DWG NO.			
R56496			
		SH 51	
		CONT. 32	

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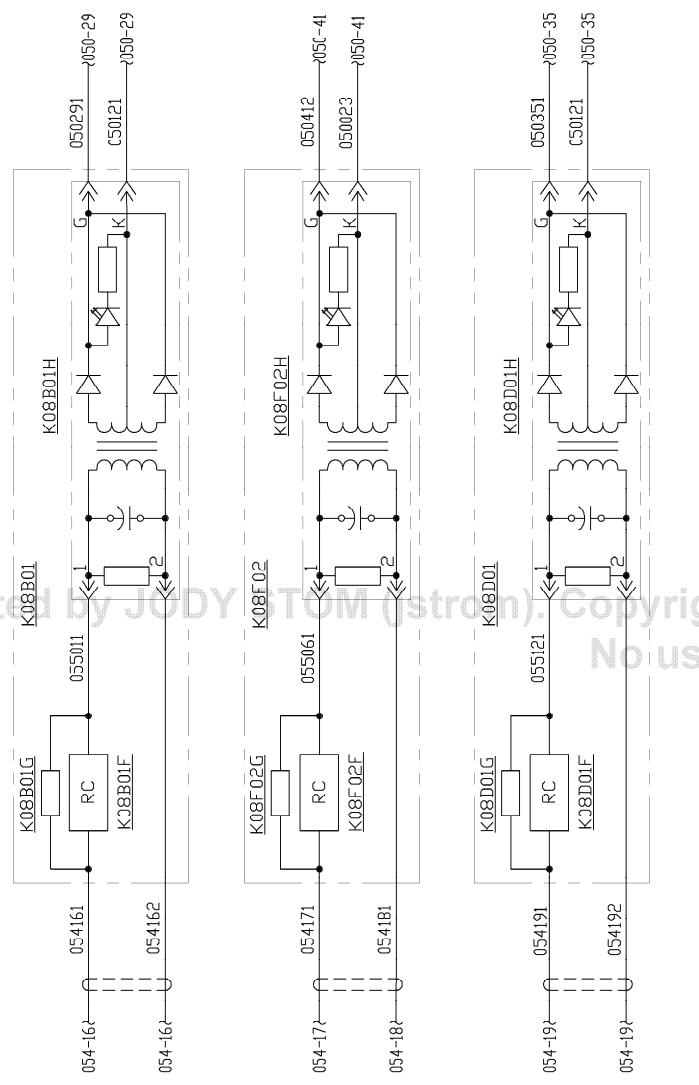
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01 CHNG MARK

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CHNG BY

REF ID: E541134 60HZ UCS
DRAWN BY: W.H. HEDING DATE: 11/19/04 SCALE: N/ONE
DES BY: PEPPLINSKI RELEASE DATE: 11/29/04
ENG BY: PEPPLINSKI TITLE: SCHEMATIC DIAGRAM
TEST BY: PEPPLINSKI
DATE: 11/24/04
SVC'S L.G.: PROD BY: PEPPLINSKI
DATE: 11/29/04 MODEL: 4100XPB
DWG NO: R56125
SIMILAR TO: R56125
DATE: 11/19/04
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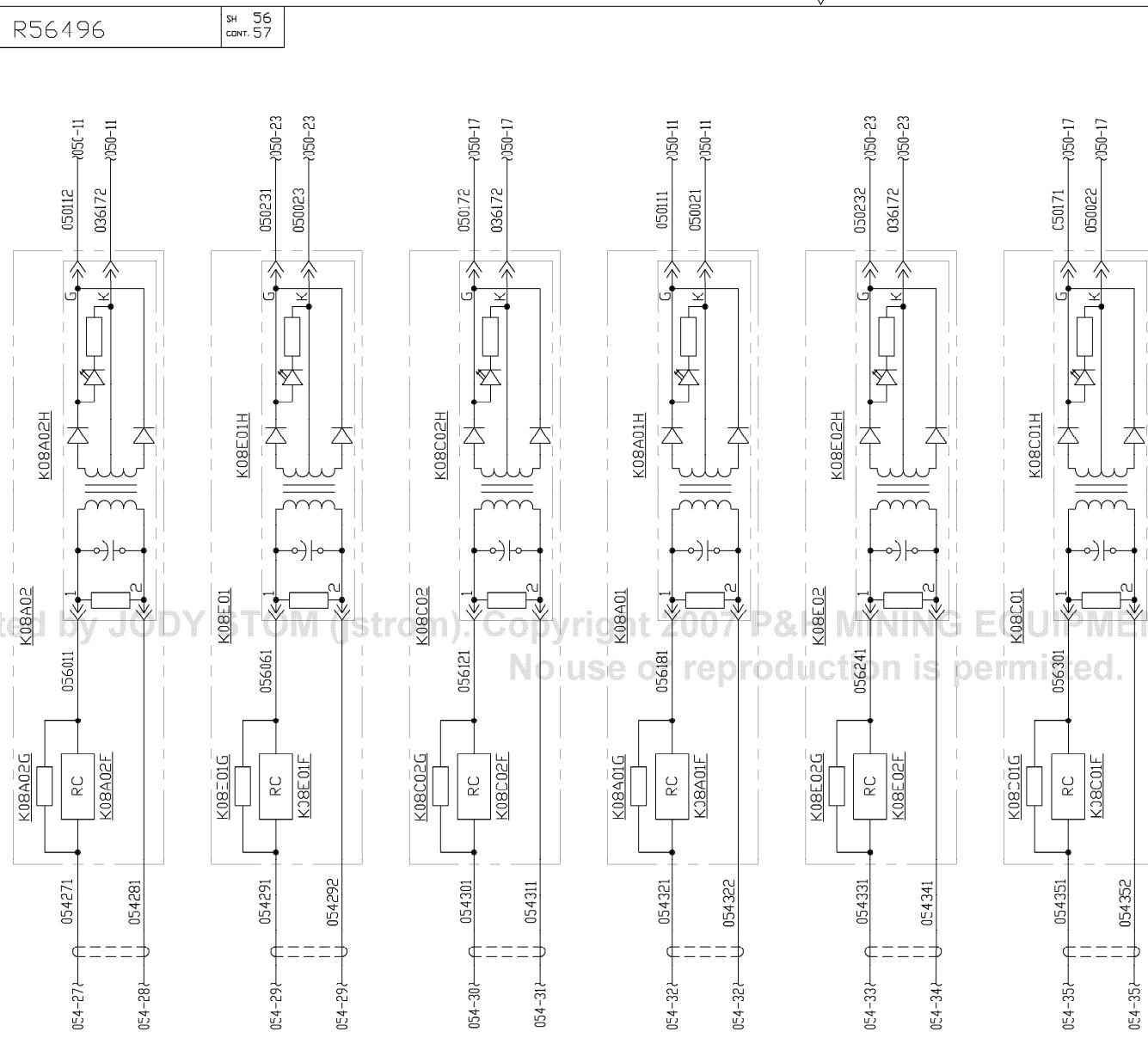
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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DWG NO
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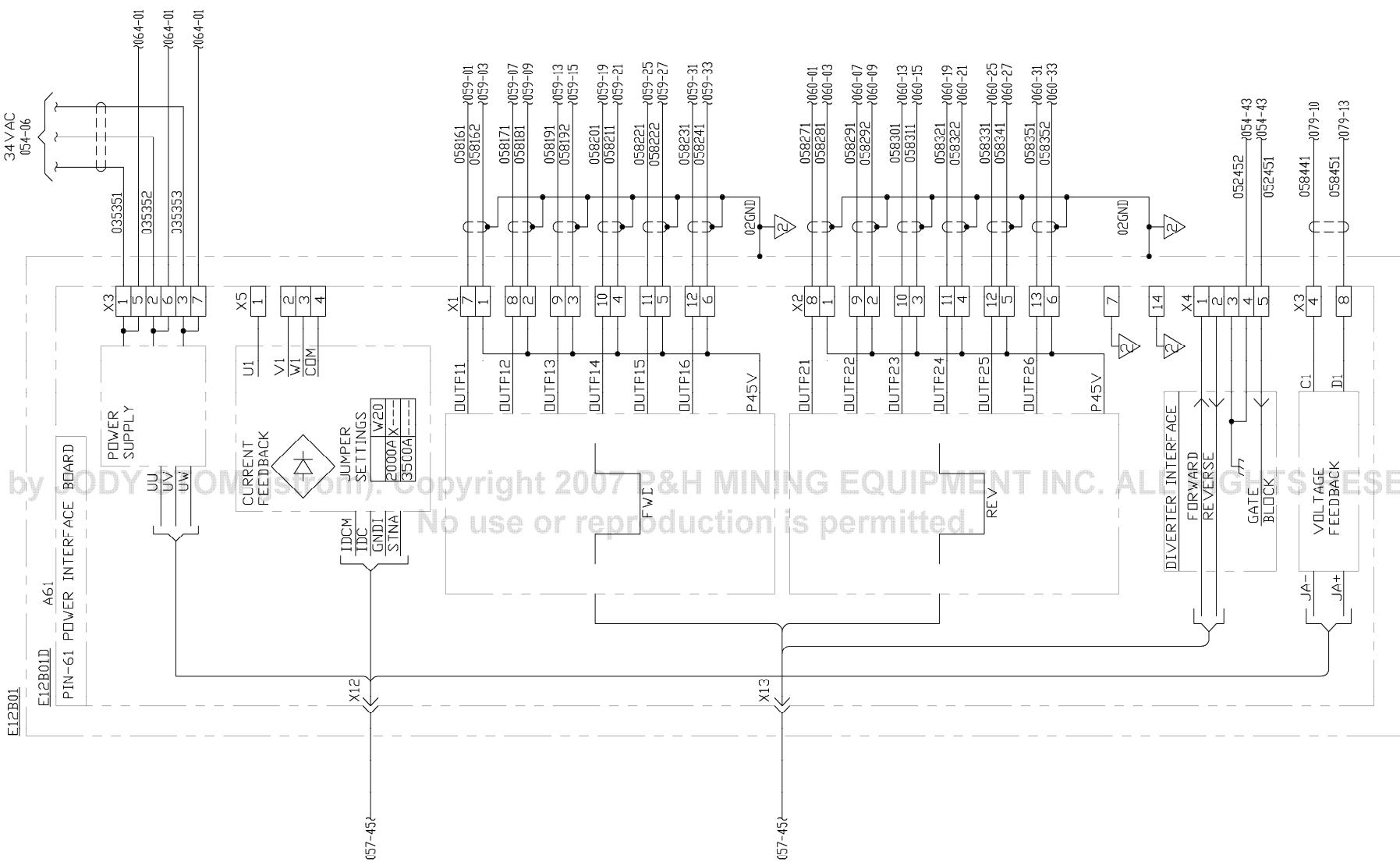
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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DRAWN BY: W.H. HEDING DATE: 11/19/04 RELEASE DATE: 11/29/04
DES BY: PEPLINSKI DATE: 11/24/04
ENG'D BY: PEPLINSKI DATE: 11/29/04
TEST BY: C.G. DATE: 11/29/04
PROD BY: D.R. MODEL: 4100XPB
DWG NO: R56125
SIMILAR TO: R56125
TITLE: SCHEMATIC DIAGRAM
CHNG BY: WNH 10/16/06
CHNG DATE: 11/29/04
DWG NO: R56496
SCALE: N/ONE
ANGLE: 0
RELEASE DATE: 11/29/04
Harnischfeger
P&H
Milwaukee, WI USA
SH CONT. 56
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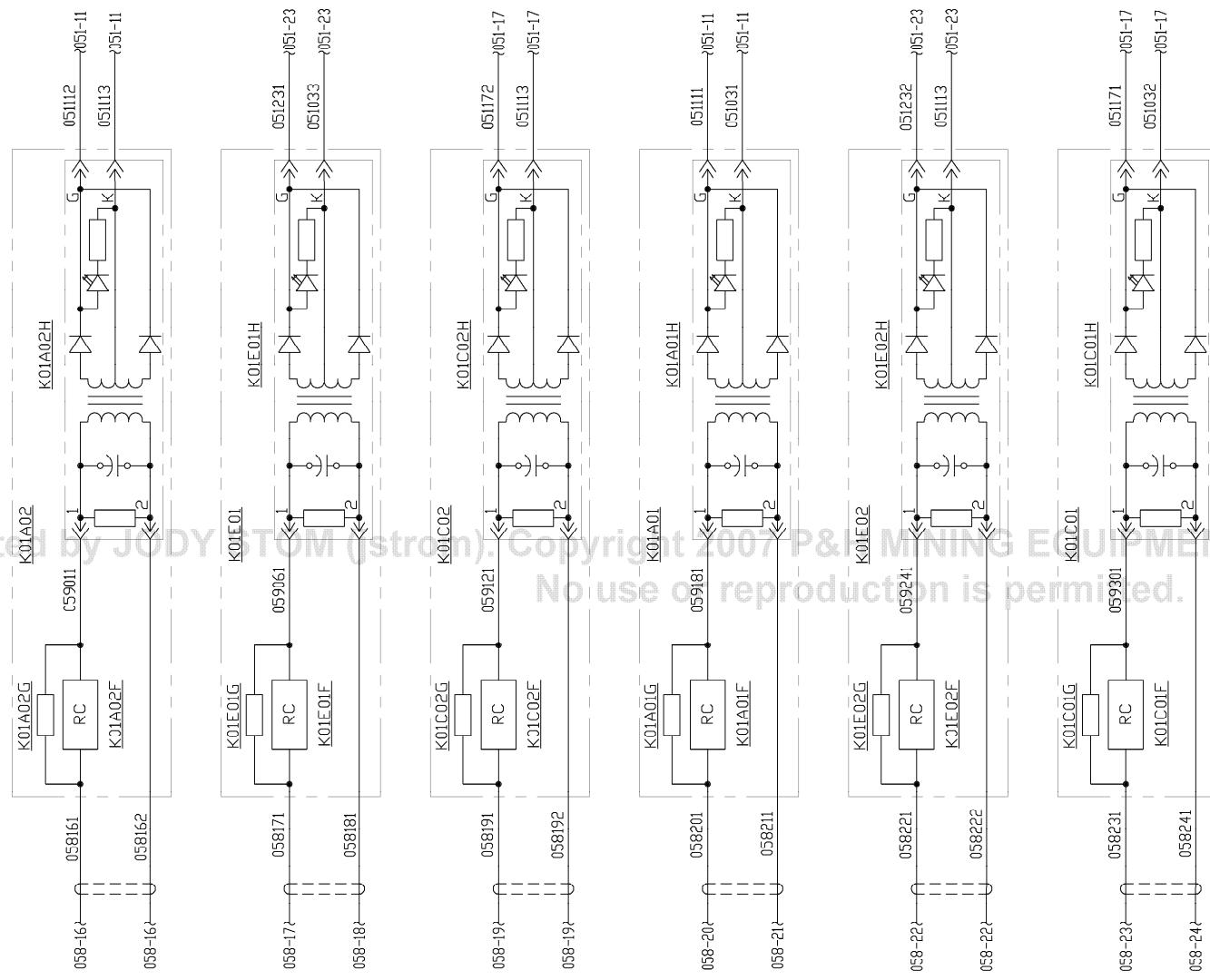
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		DATE 11/19/04		NININE		PROJECTION		
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R56125								
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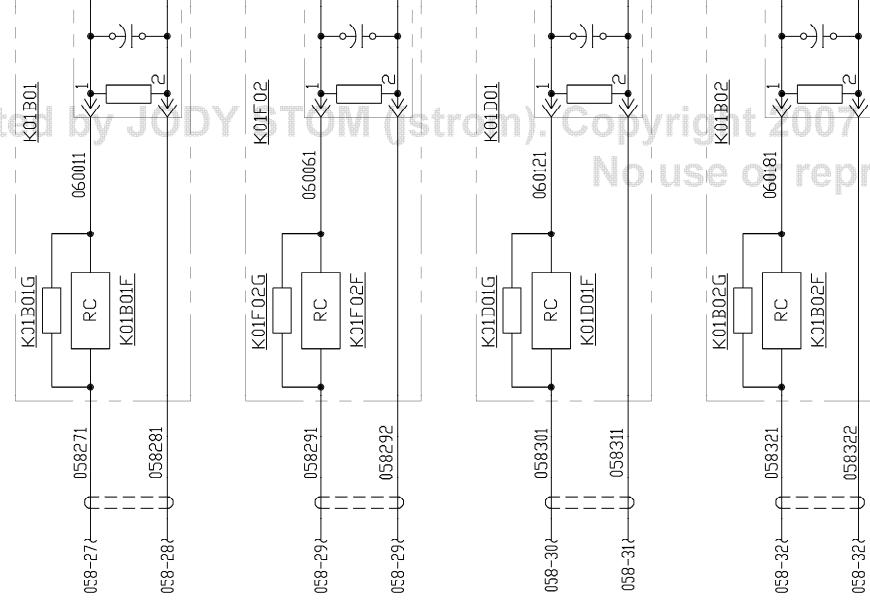
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TEST BY S.C. DATE 11/29/04
DWG NO R56125
SIMILAR TO R56496
TITLE SCHEMATIC DIAGRAM
PROD MODEL 4100XPB
CHNG BY WNH 10/16/06
DWG NO R56496
SH CONT. 59
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DATE 11/24/04
DES'G CO. PEPPLINSKI
DATE 11/29/04
DWG NO 4100XPB

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REF ID: ES41134 60HZ UCS
DRAWN BY W.H. HEDING DATE 11/19/04
DES'G BY PEPLINSKI DATE 11/24/04
ENG'D BY PEPPLINSKI DATE 11/29/04
TITLE SCHEMATIC DIAGRAM
DWG NO R56125
SIMILAR TO R56496
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Milwaukee, WI USA
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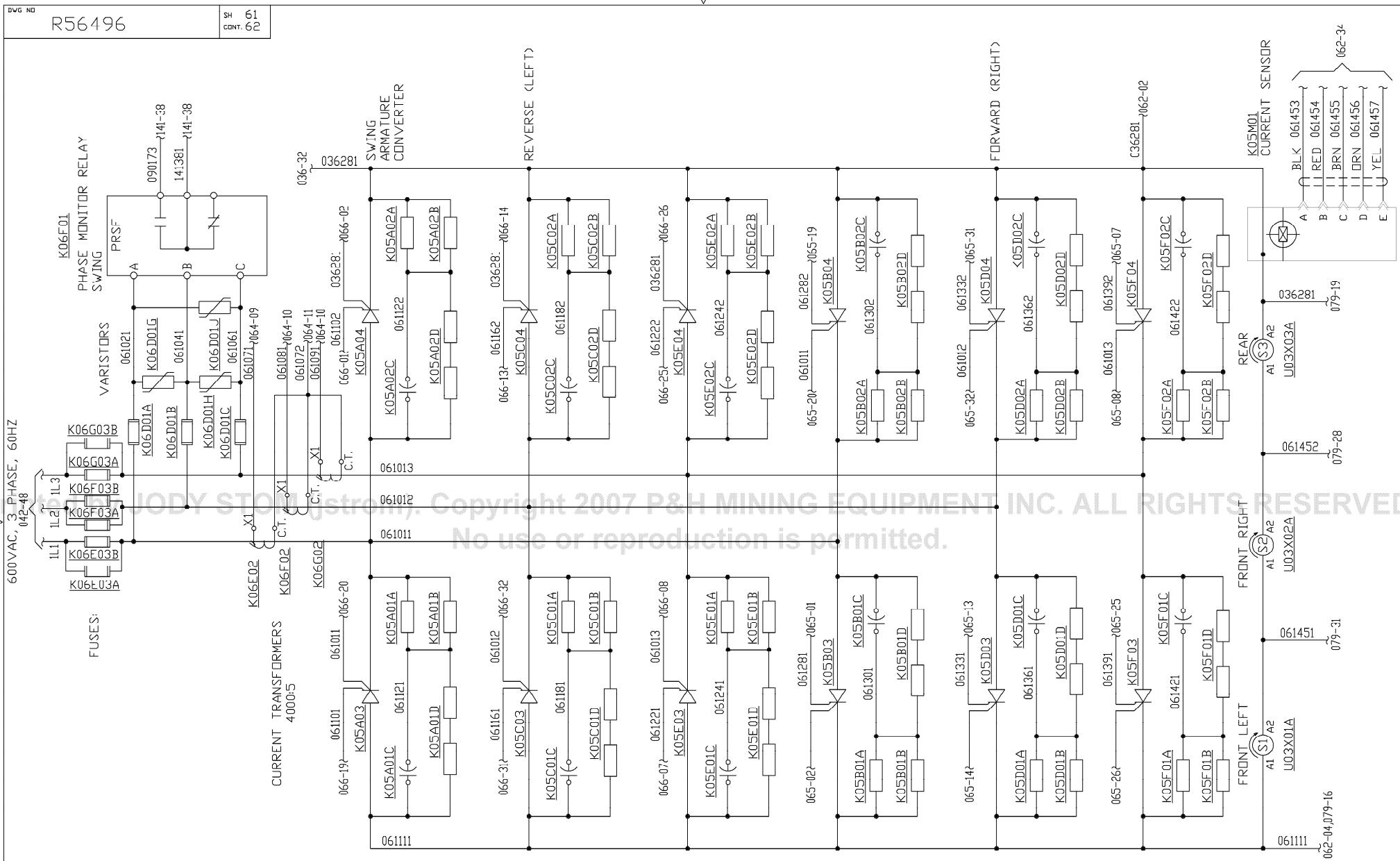
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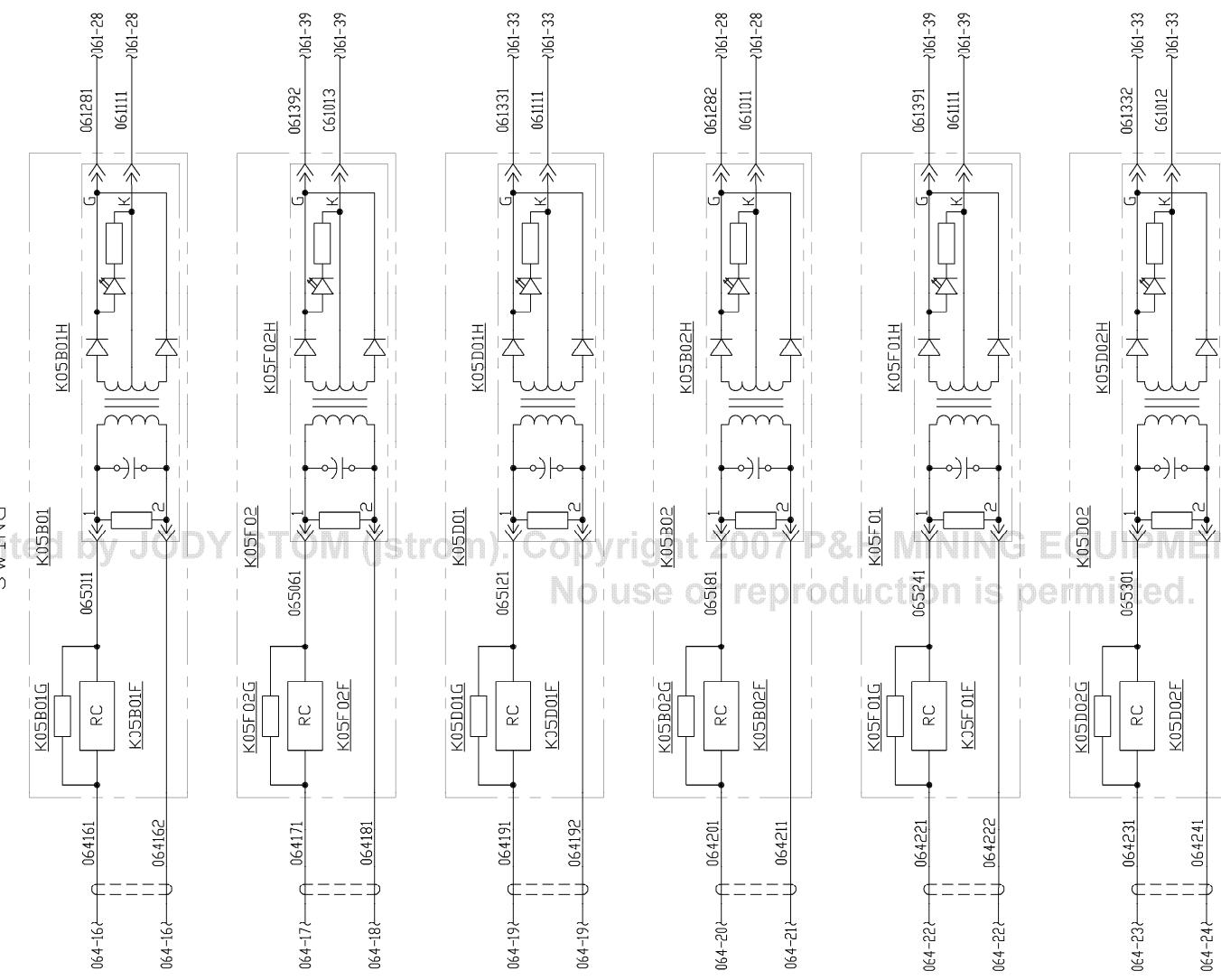
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S/N	W.HEDING	SCALE	NINE	THIRD ANGLE PROJECTION		
B/S	DATE 11/19/04	RELEASE DATE	11/29/04		Harnischfeger	
R/S					P&H	
DATE				MILWAUKEE, WI USA		
BY PEPLINSKI		SIMILAR TO		R56125		
DATE 11/19/04		TITLE		SCHEMATIC DIAGRAM		
BY PEPLINSKI		PART NO.		4100XPB		
DATE 11/24/04		DR. NO.				
BOM'S E.G.		DR. MODEL				
DATE 11/29/04						
DWG NO.						
R56496						
				SH	61	
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DWG NO
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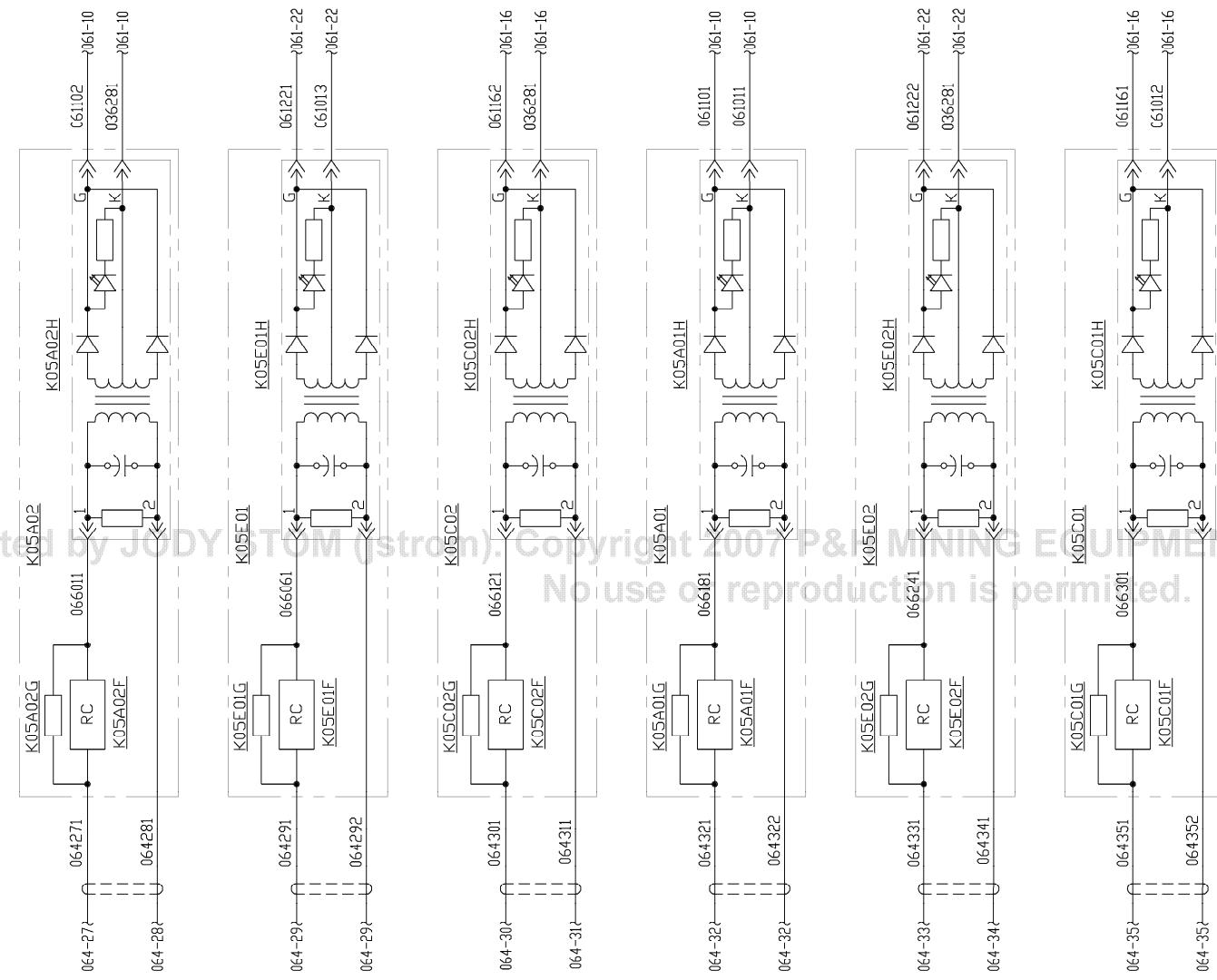
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ENG'D BY: PEPLINSKI DATE: 11/29/04
TEST'G CO. DATE: 11/29/04
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DWG NO: R56125
SIMILAR TO: R56125
TITLE: SCHEMATIC DIAGRAM
CHNG BY: WNH 10/16/06
CHNG DATE: 11/29/04
DWG NO: R56496
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R56496
SH CONT. 66
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REF: E541134 60HZ UCS ANG.
DRAWN BY W.H. HEDING DATE 11/19/04 RELEASE DATE 11/29/04
DES BY PEPLINSKI DATE 11/19/04
ENG BY PEPLINSKI DATE 11/24/04
TEST BY'S E.G. DATE 11/29/04
PROD BY DR. MODEL 4100XPB
DWG NO R56125
SIMILAR TO R56125
TITLE SCHEMATIC DIAGRAM
DATE 11/29/04
DWG NO R56496
SH CONT. 66
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AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.H. DEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	ERIK PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	R56125
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	DR. MODEL 4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	CHNG BY		
CHNG MARK	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

R56496

SH 67
CONT. 68

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DWG NO R56496 SH 68
CONT. 69

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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	DWG NO	R56125	
CHNG BY	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

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SH 68
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SH 69
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DATE				
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DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	DWG NO	R56125	
CHNG BY	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

R56496

SH 69
CONT. 70

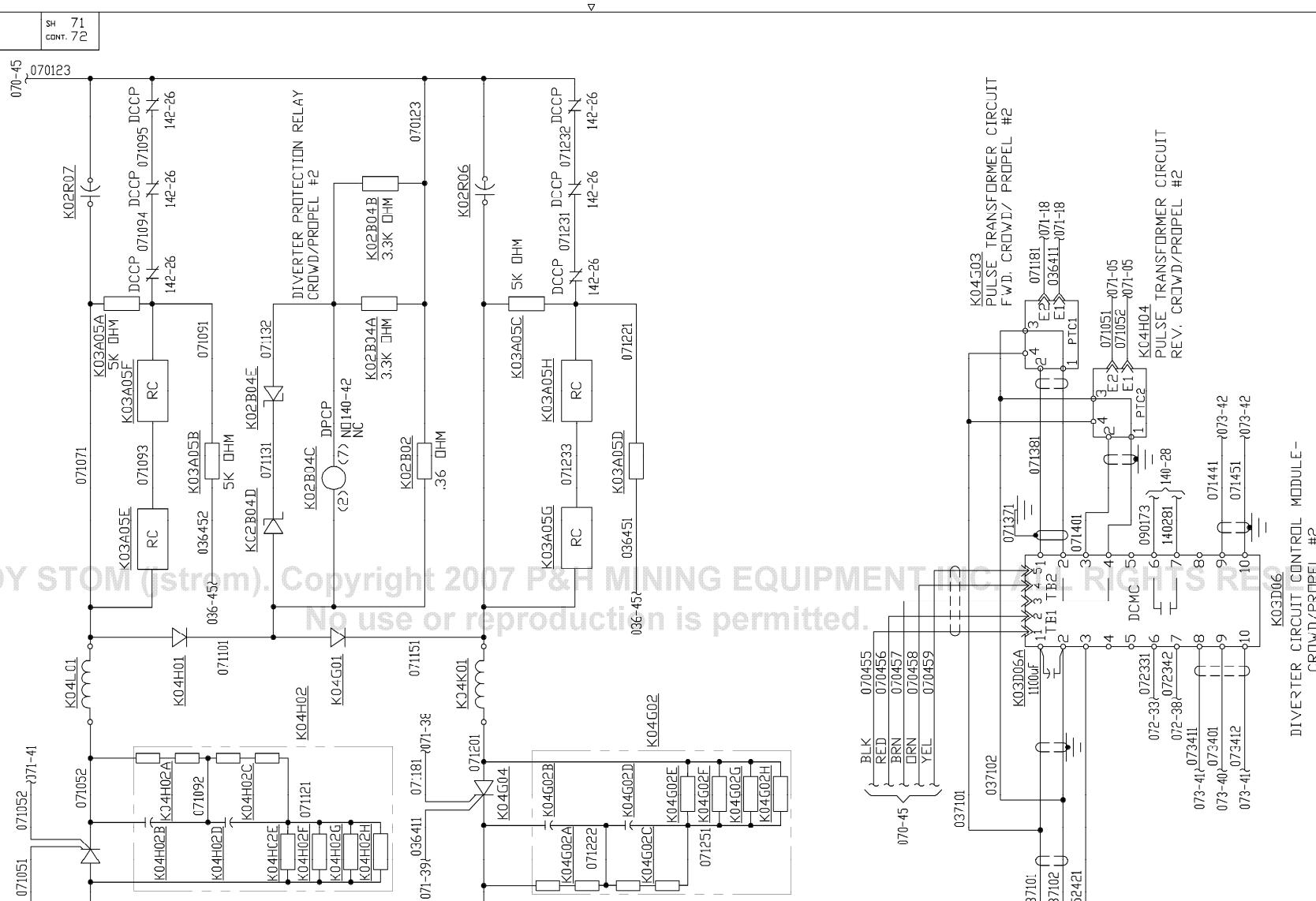
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This electrical circuit diagram illustrates the power distribution and logic control for the K03D06 model. It features a main power source at the top left, connected to various components including relays (K1, K2, K3, K4) and logic gates (NAND and NOR). The circuit includes multiple ground connections and specific connection points labeled 036-451, 036-452, and 036-453. A large central section contains a complex network of logic gates and interconnections. On the right side, there is a detailed view of a logic gate, specifically a DCMC 5, with its internal structure and component connections.

036-4



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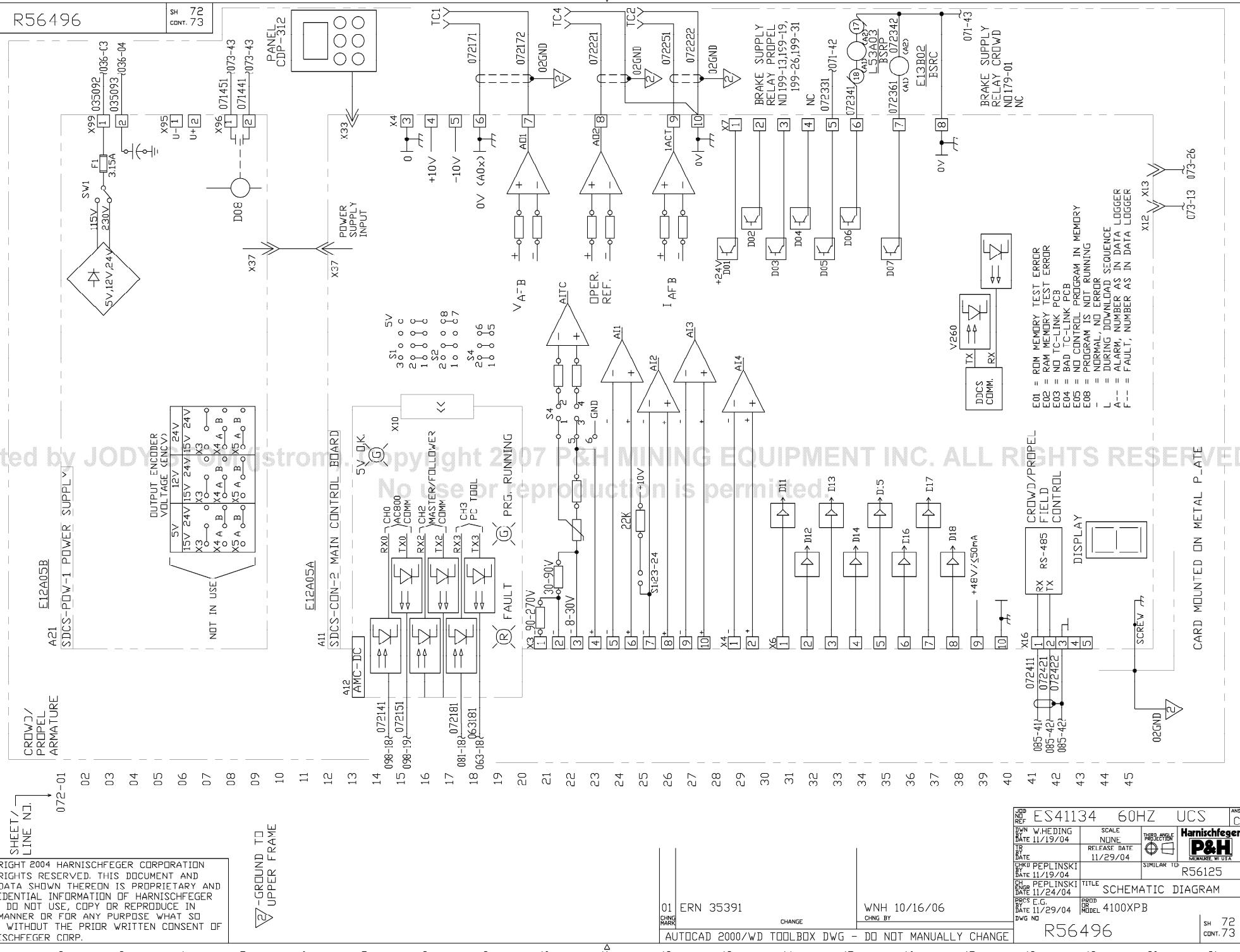
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DATE				P&H
MFG	PEPLINSKI	TITLE	R56125	
	DATE 11/19/04			
ENG	PEPLINSKI	PROD	SCHEMATIC DIAGRAM	
	DATE 11/24/04	MODEL	4100XPB	
REV	E.G.			
	DATE 11/29/04			
WG	NO			
R56496				

DWG NO. D561406 SH. 72

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01 ERN 3539

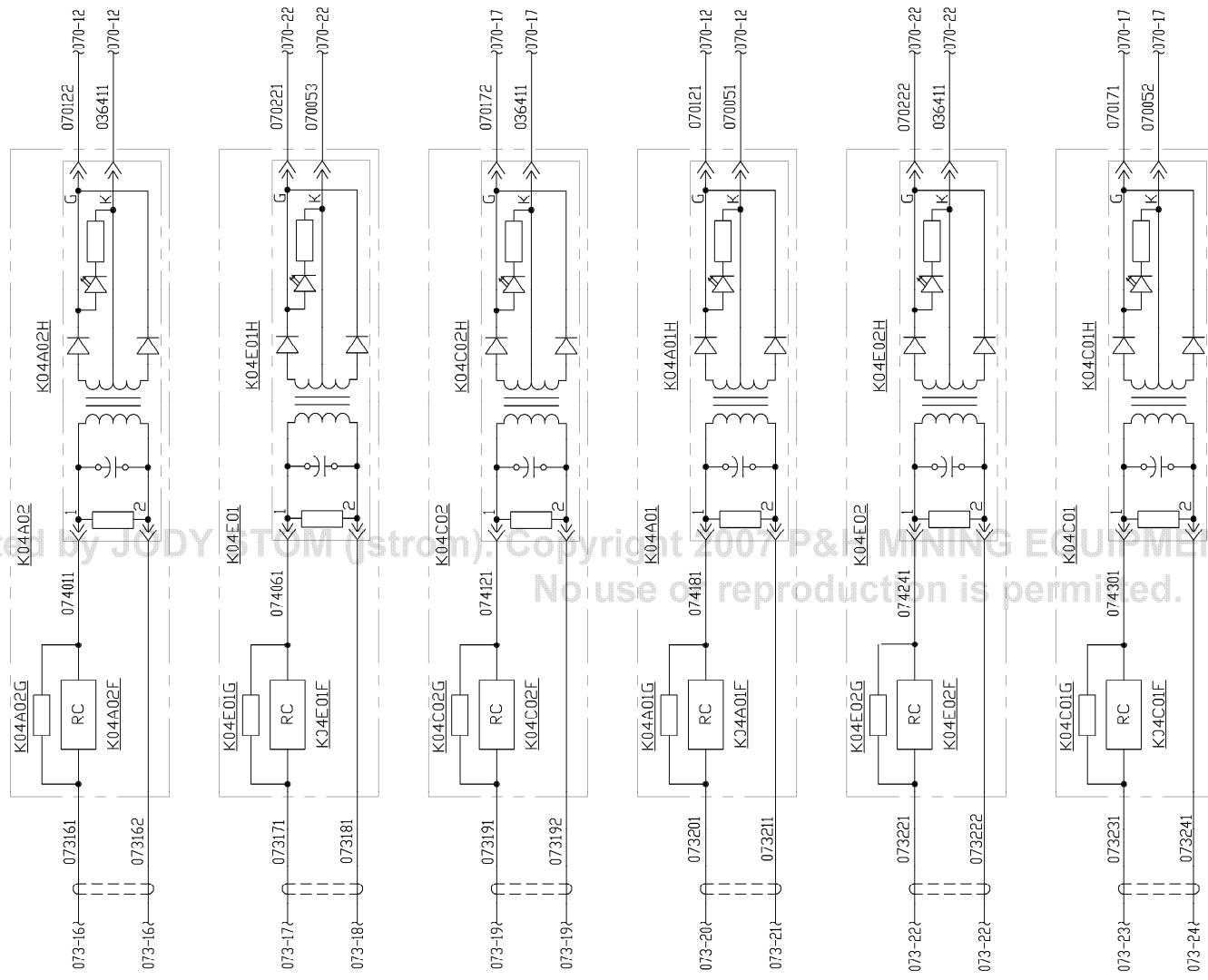
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MARK CHANGE CHNG BY DWG NO R56496 SH 72
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE CONT. 73



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DWG NO
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SH CONT. 74 75

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DRAWN BY: W.H. HEDING DATE: 11/19/04 RELEASE DATE: 11/29/04
DES BY: PEPLINSKI DATE: 11/19/04
ENG'D BY: PEPLINSKI DATE: 11/24/04
TEST BY: C.G. DATE: 11/29/04
PROD BY: D.G. DATE: 11/29/04
TITLE: SCHEMATIC DIAGRAM
DWG NO: 4100XPB
SIMILAR TO: R56125
CHNG BY: ERN 35391
CHNG DATE: 10/16/06
CHANGE: 01
CHNG MARK: 01
W.N.H. 10/16/06
CHNG BY:
DWG NO:
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE
R56496
SH CONT. 74 75

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DWG NO R56496 SH 76
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REF	ES41134	60HZ	UCS	C
DESIGN BY	W.HEDING	SCALE	THIRD ANGLE	Harnischfeger
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ENG'D BY		RELEASE DATE		MILWAUKEE WI USA
DATE		11/29/04		R56125
CHNG BY	01 ERN 35391	CHNG BY	CHNG BY	
CHNG MARK				
DATE	11/19/04	DATE	11/24/04	
ENG'D BY	PEPLINSKI	DESIGNER	PEPLINSKI	TITLE
DATE	11/19/04	DATE	11/24/04	SCHEMATIC DIAGRAM
CHNG BY	W.NH 10/16/06	CHNG BY	CHNG BY	
DATE	11/29/04	DATE	11/29/04	
ENG'D BY	ER	PROD BY	DR	MODEL
DATE	11/29/04	DATE	11/29/04	4100XPB
CHNG BY	DWG NO	CHNG BY	CHNG BY	
	R56496			
	SH 76			
	CONT. 77			

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DWG NO R56496
SH 78
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LINE NO.

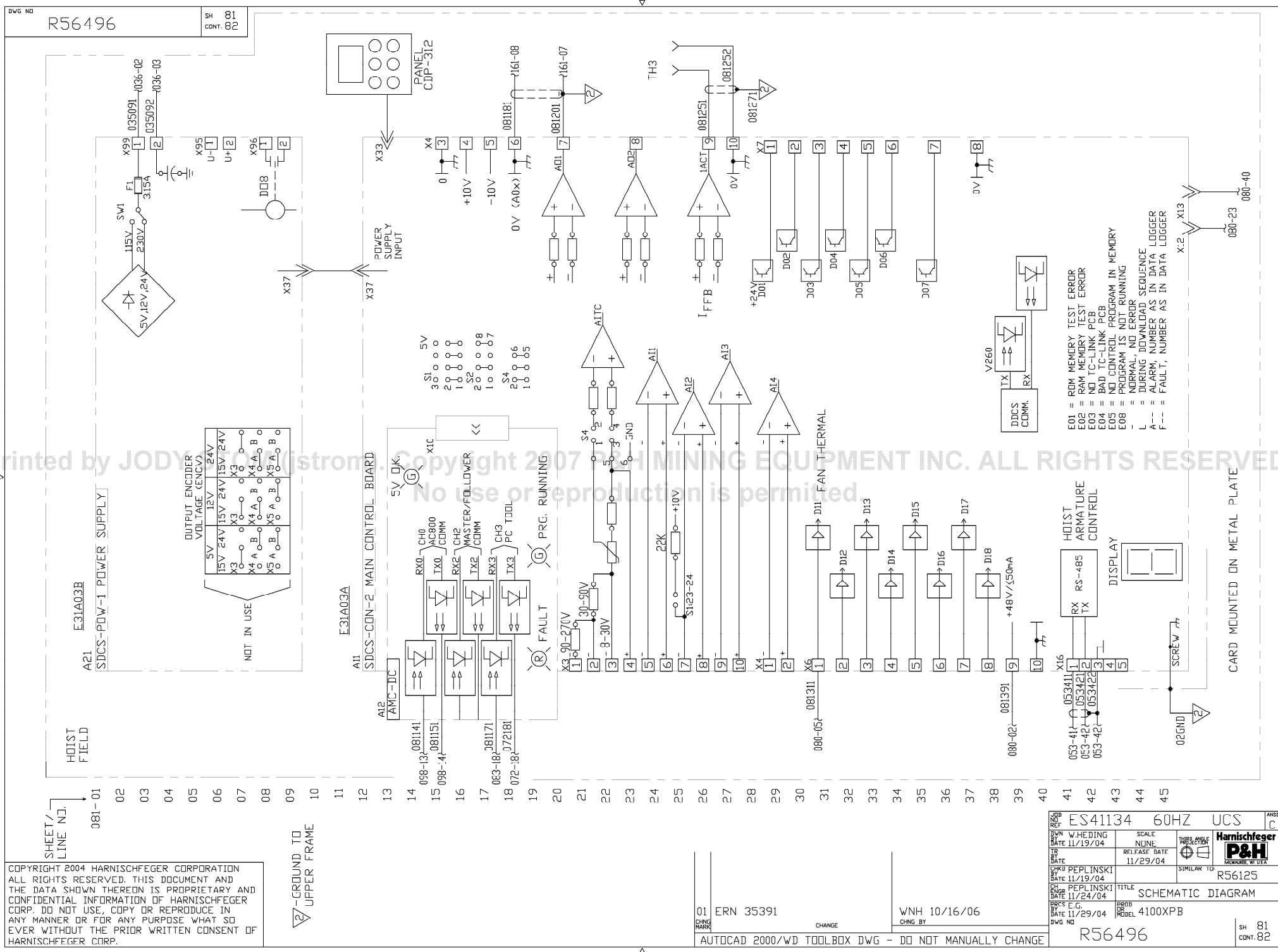
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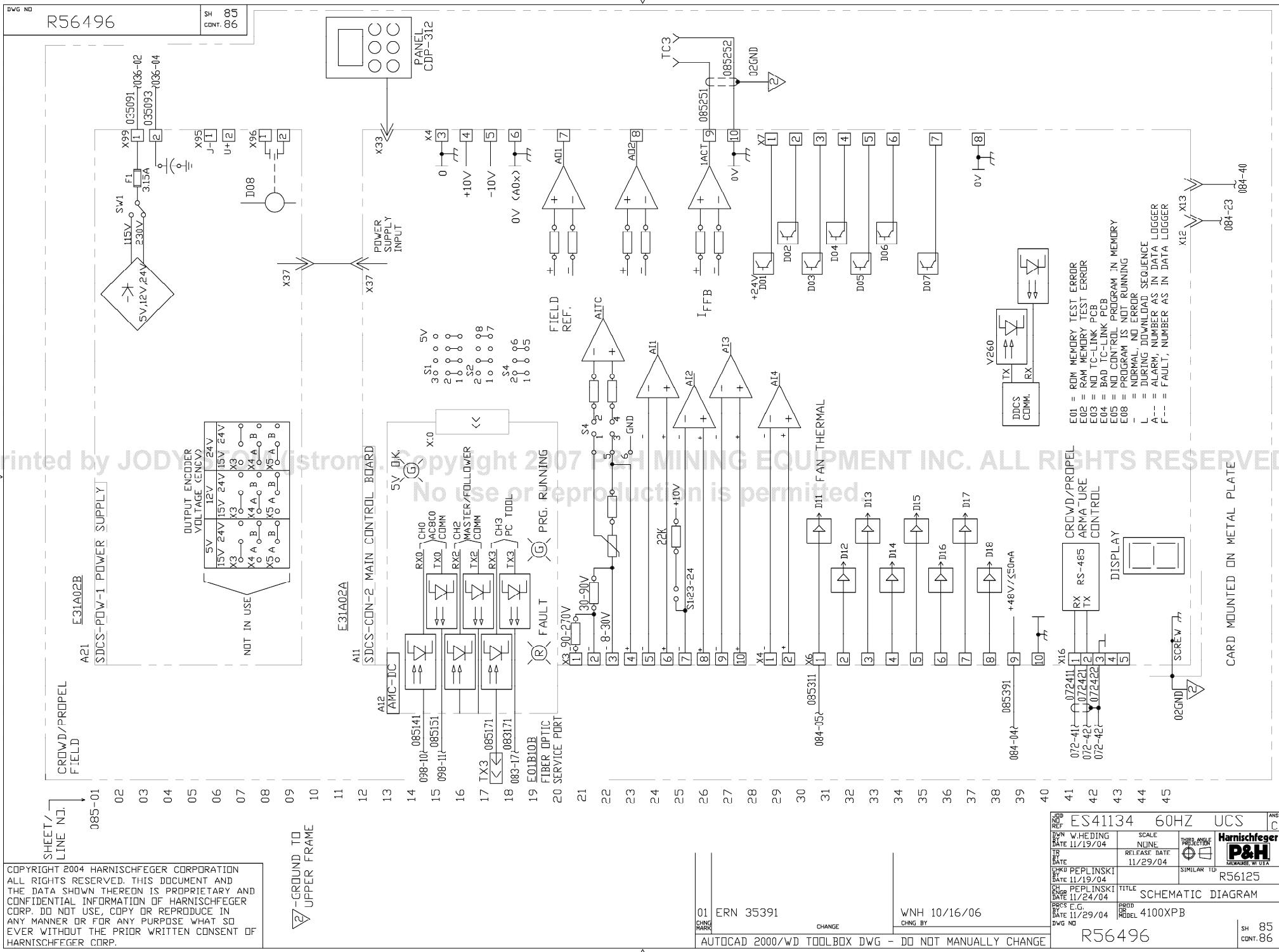
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DATE	11/19/04	LINE	SECTION	P&H
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DATE		11/29/04		R56125
CHNG BY	01 ERN 35391	CHNG BY	TITLE	SCHEMATIC DIAGRAM
DATE	11/19/04	DATE	11/24/04	
CHNG MARK		CHNG BY	DATE	11/29/04
		W.NH 10/16/06	PROD	MODEL 4100XPB
		CHNG BY	DRW	DWG NO
				R56496
			SH	78
			CONT.	79

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE



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This diagram shows the layout of the D11 FAN BOARD. It features several components: a central integrated circuit (U1), a diode (D1) connected to U1 pin 1, a resistor (R1) connected to U1 pin 2, a capacitor (C1) connected to U1 pin 3, a capacitor (C2) connected to U1 pin 4, a resistor (R2) connected to U1 pin 5, and a diode (D2) connected to U1 pin 6. The board also includes a power input terminal block labeled 'POWER/FOLLOWER' with terminals for 12V, 5V, 24V, 15V, X3, X4A, X5A, and X6A. A ground terminal 'GND' is also present. A small 'RUNNING' label is visible near the bottom left. The board is labeled 'D11 FAN BOARD' at the top.



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DWG NO R56496
SH 86
CONT. 87

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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	DWG NO	R56125	
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AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

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SH 86
CONT. 87

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DWG NO R56496
SH 87
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DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	ERIK PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	R56125
DATE	11/19/04	ENG'D BY	PEPLINSKI	
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CHNG MARK		W.NH 10/16/06	PROD. MODEL	4100XPB
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				R56496
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AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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DWG NO R56496
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01	ERN 35391	W NH 10/16/06	SCHEMATIC DIAGRAM	R56125
CHNG MARK	CHANGE	CHNG BY	PROD MODEL 4100XPB	R56496

SH 88
CONT. 89

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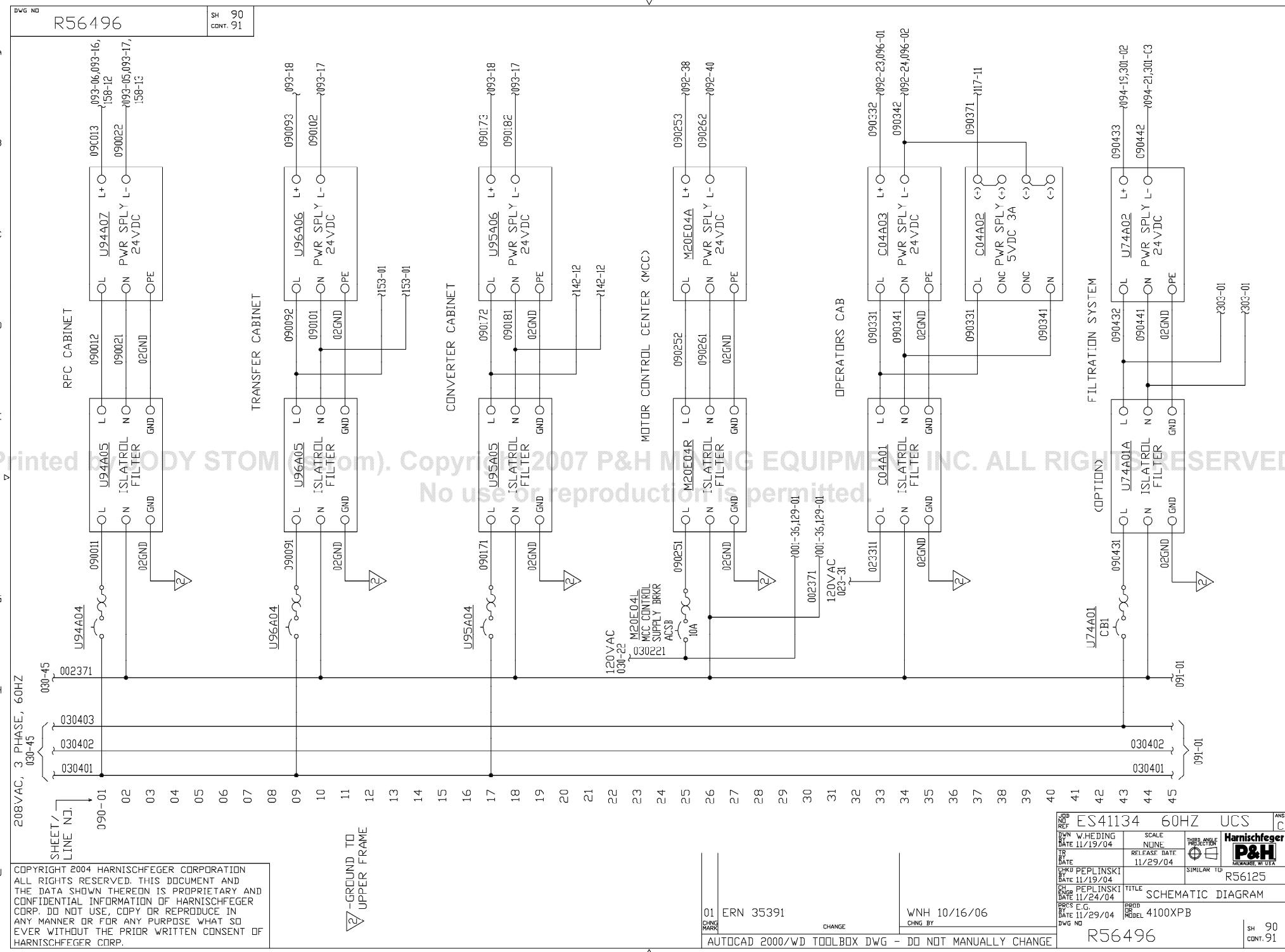
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CHK#	PEPLINSKI	TITLE	Harnischfeger	
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DATE 11/29/04				
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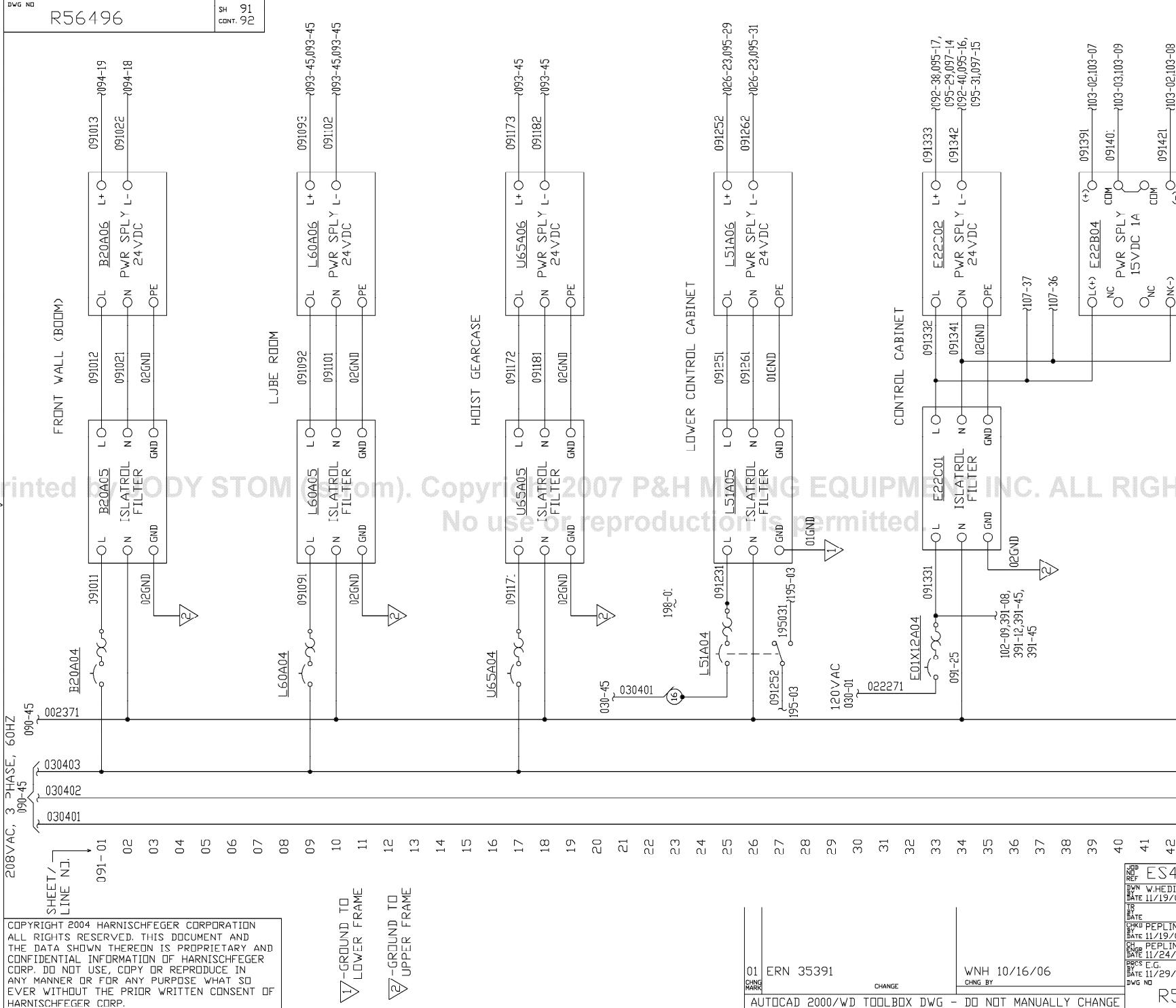
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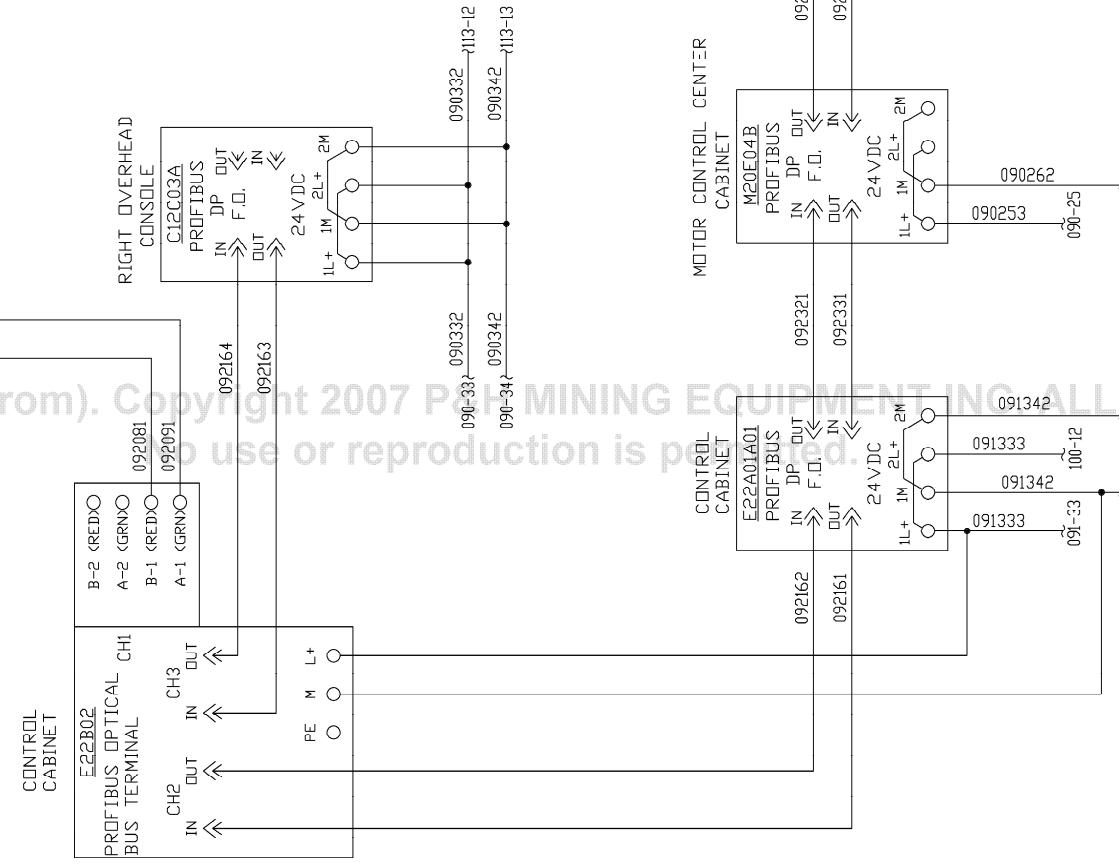
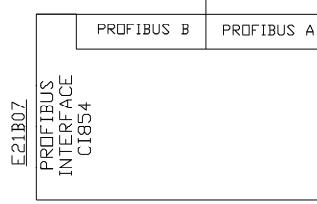
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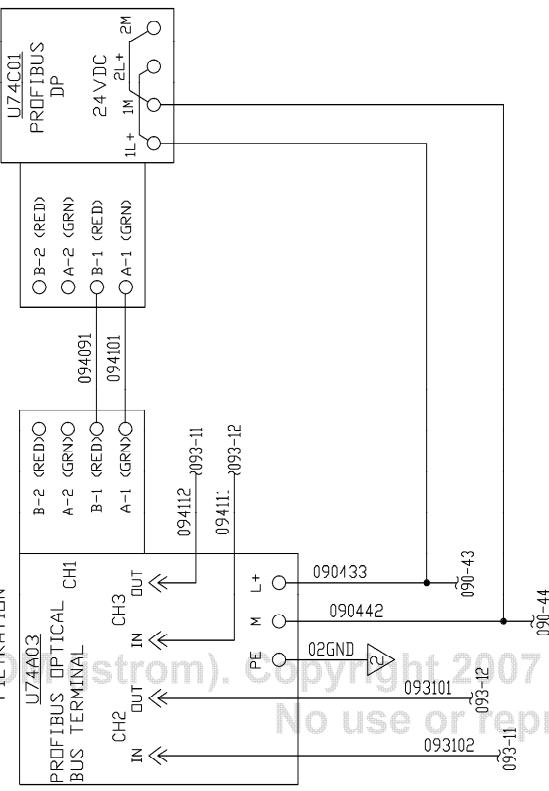
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CHNG BY
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DWG NO R56496
TITLE SCHEMATIC DIAGRAM
ENG'D PEPLINSKI DATE 11/24/04
DES'E L.G. DATE 11/29/04
DWG NO MODEL 4100XPB
SH 92
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REF ID: ES41134 60HZ UCS
DRAWN BY W.H. HEDING DATE 11/19/04
DES'E BY PEPLINSKI DATE 11/24/04
CHNG BY W.NH 10/16/06
DWG NO R56496
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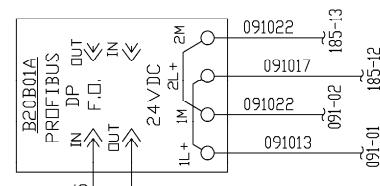
Harnischfeger
P&H
Milwaukee, WI USA

DWG NO R56496
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FILTRATION



FRONT WALL (BOARD)



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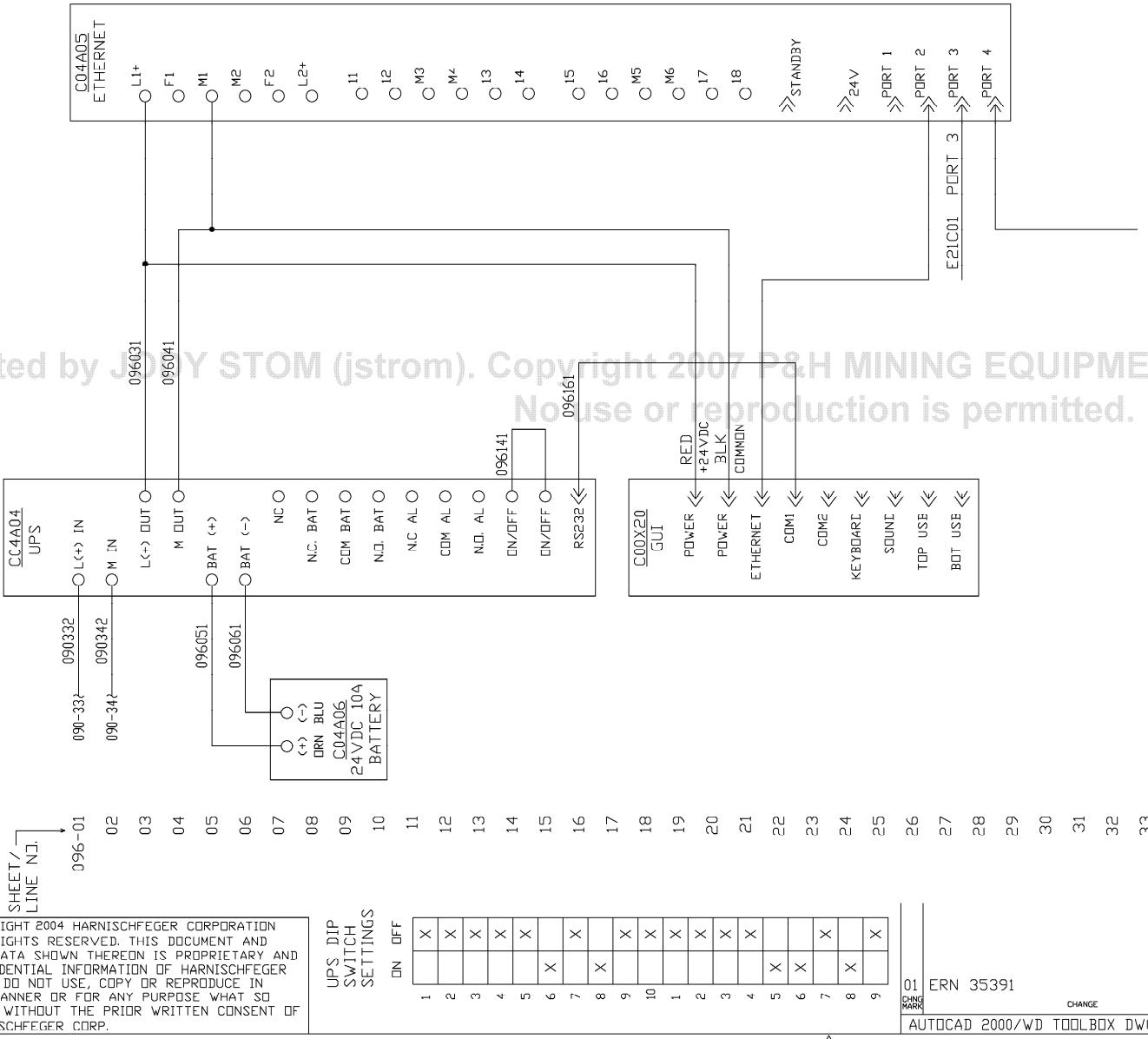
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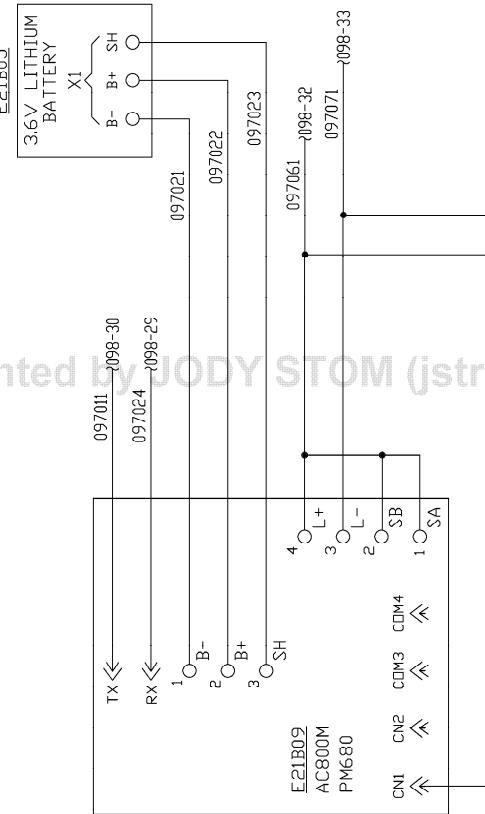
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DRAWN BY: W.H. HEDING DATE: 11/19/04 SCALE: N
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ERNSER: PEPPLINSKI THIRD ANGLE
DATE: 11/19/04
SIMILAR TO: R56125
BROD: PEPPLINSKI TITLE: SCHEMATIC DIAGRAM
ENG'D: PEPPLINSKI DATE: 11/24/04
SVC'S E.G.: PEPPLINSKI DATE: 11/29/04
PROD: MODEL 4100XPB
DATE: 11/29/04
DWG NO: R56496
SH 94
CONT. 95

DWG NO R56496
SH 96
CONT. 97



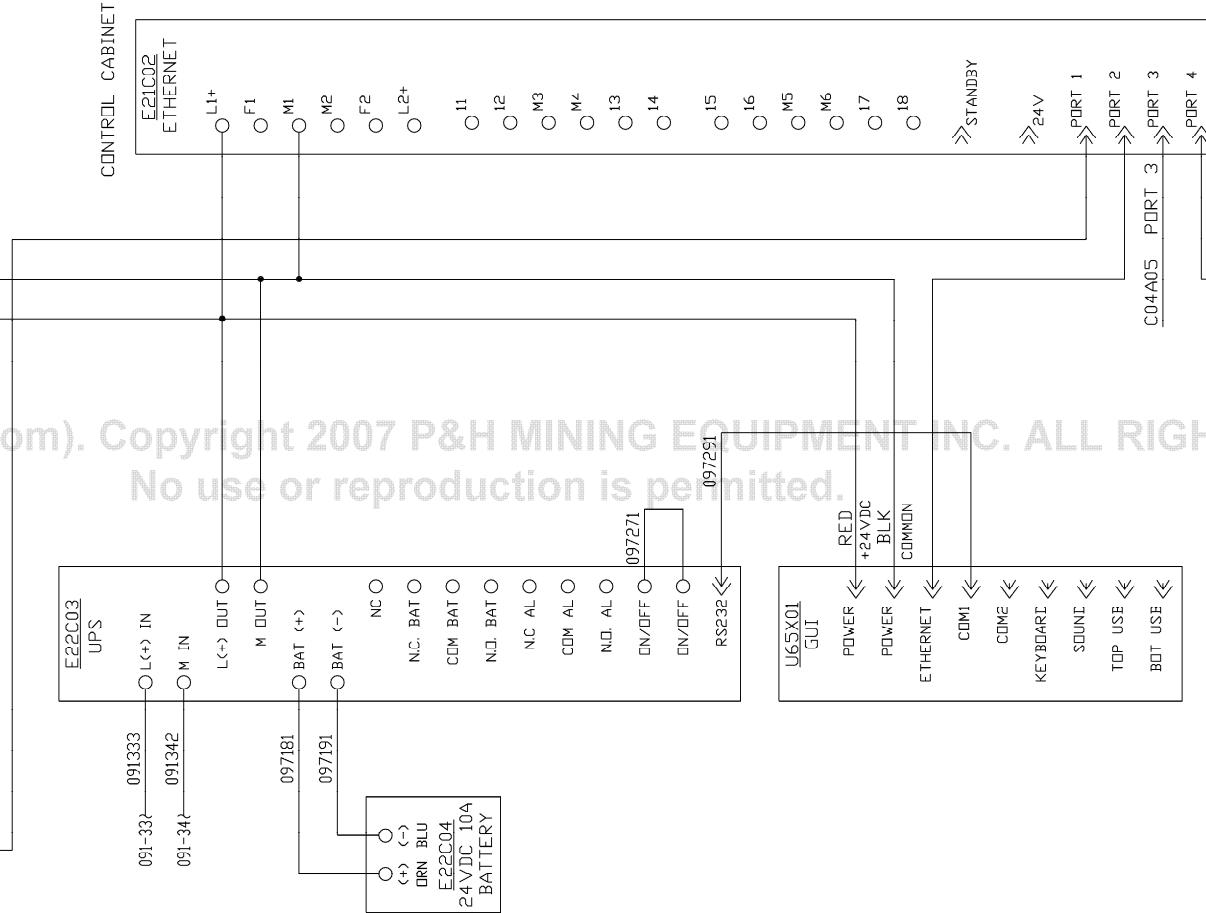
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DES BY: PEPLINSKI DATE: 11/19/04
ENG BY: PEPLINSKI DATE: 11/24/04
REV BY: H. CO. DATE: 11/29/04
PROD BY: P&H MODEL: 4100XPB
SIMILAR TO: R56125
TITLE: SCHEMATIC DIAGRAM
DWG NO: R56496
SH 96
CONT. 97

DWG NO
R56496
SH CONT. 97
98



SHEET / LINE NO
097-01
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OUTLET IN RH ROOM (FRONT WALL)

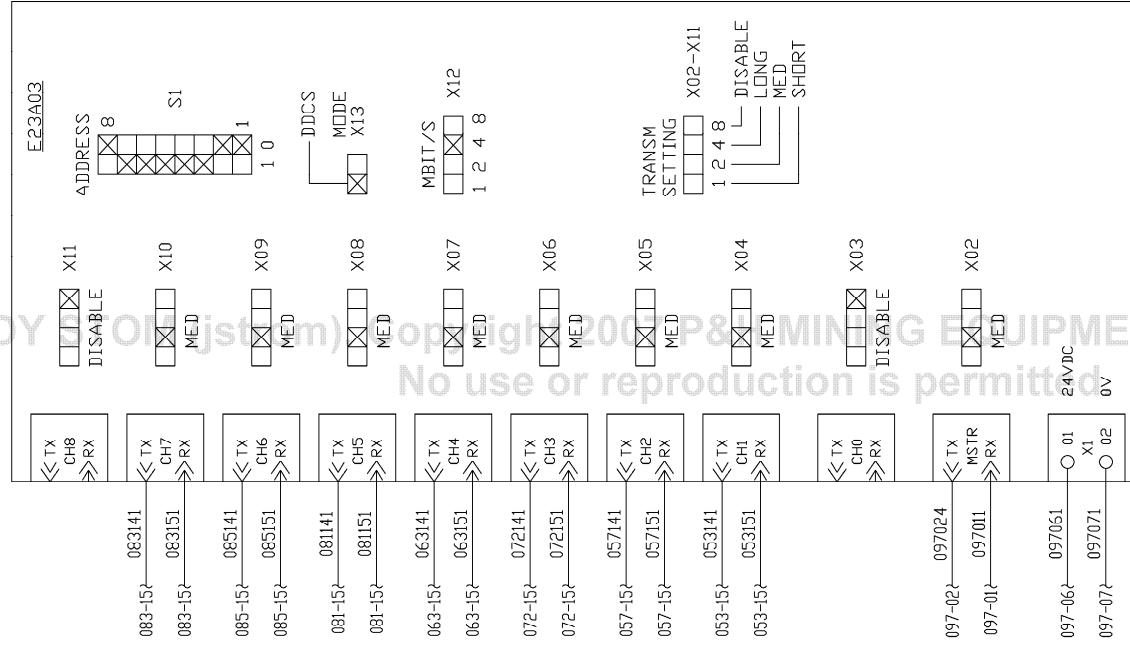
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TITLE: SCHEMATIC DIAGRAM
SCALE: 1:1
RELEASE DATE: 11/29/04
DRAWN BY: PEPLINSKI W.H. DATED: 11/19/04
DESIGNED BY: PEPLINSKI DATED: 11/24/04
ENG'D BY: PEPLINSKI DATED: 11/29/04
REV'D BY: PEPLINSKI DATED: 11/29/04
CUST. NO.: 4100XPB
CUST. NAME: Harnischfeger P&H
CUST. ADDRESS: Milwaukee, WI USA
SIMILAR TO: R56125
PAGE NO: 44
PAGE COUNT: 45
SH CONT. 97
98

DWG NO R56496
SH 98
CONT. 99

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098-01
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DRIVE F.C.
BRANCHING UNIT



01 CHG MARK

ERN 35391

CHANGE

W/NH 10/16/06

CHG BY

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

REF ID: ES41134 60HZ UCS
DRAWN BY: W.HEDING DATE: 11/19/04 RELEASE DATE: 11/29/04
DES BY: PEPLINSKI DATE: 11/24/04
ENG'D BY: PEPLINSKI DATE: 11/29/04
TESTED BY: P&H TITLE: SCHEMATIC DIAGRAM
DATE: 11/29/04
DWG NO: R56125
P&H MILWAUKEE, WI USA
SIMILAR TO: R56125
DATE: 11/19/04
DATE: 11/24/04
DATE: 11/29/04
DWG NO: R56496
TITLE: SCHEMATIC DIAGRAM
DATE: 11/29/04
DWG NO: R56496
SCALE: N/ONE
THIRD ANGLE PROJECTION
Harnischfeger
P&H
Milwaukee, WI USA
SH 98
CONT. 99

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496 SH 99
CONT. 100

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SHEET / LINE NO
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02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

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REF	ES41134	60HZ	UCS	ANGLE
BY	W.HEDING	SCALE	NONE	THIRD ANGLE
DATE	11/19/04	RELEASE DATE	11/29/04	
DESIGNER		SIMILAR TO	R56125	Harnischfeger
CHG BY	PEPLINSKI	ENG'D BY	PEPLINSKI	P&H
DATE	11/19/04	DATE	11/24/04	MILWAUKEE WI USA
CHG MARK	01 ERN 35391	CHG BY	WNH 10/16/06	TITLE
		CHANGE		SCHEMATIC DIAGRAM
				PROD. MODEL 4100XPB
				DWG NO
				SH 99
				CONT. 100

R56496

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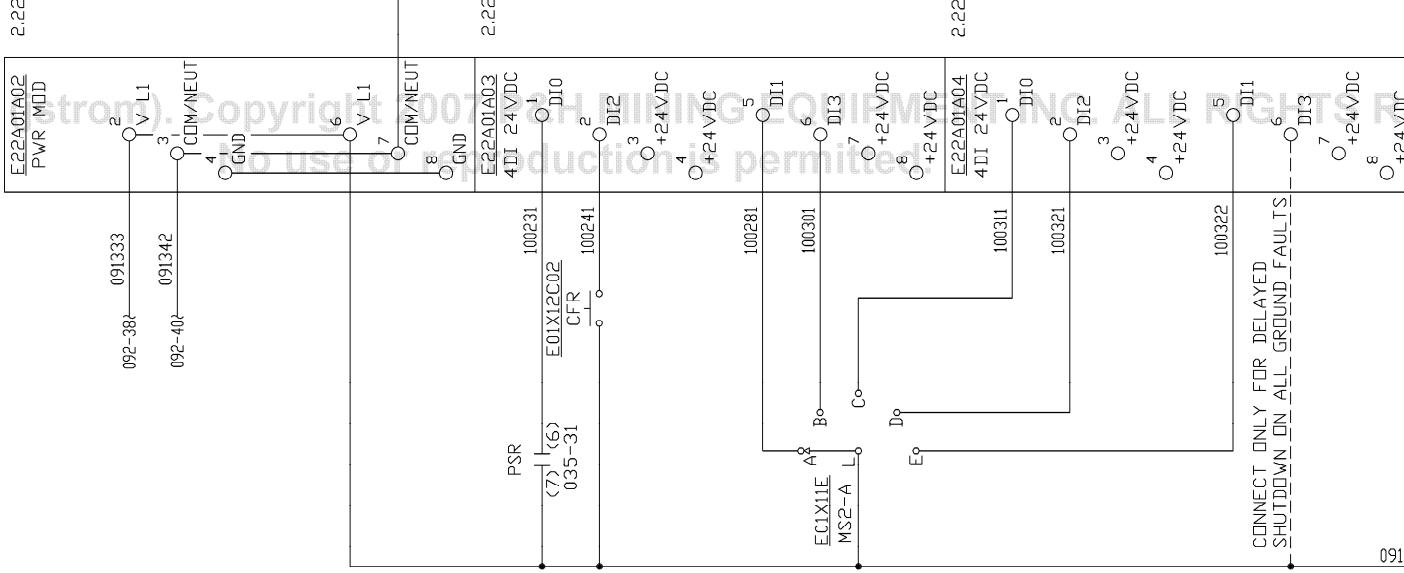
DWG NO R56496
SH 100
CONT. 101

CONTROL CABINET
I/O MODULES

SHEET / LINE NO
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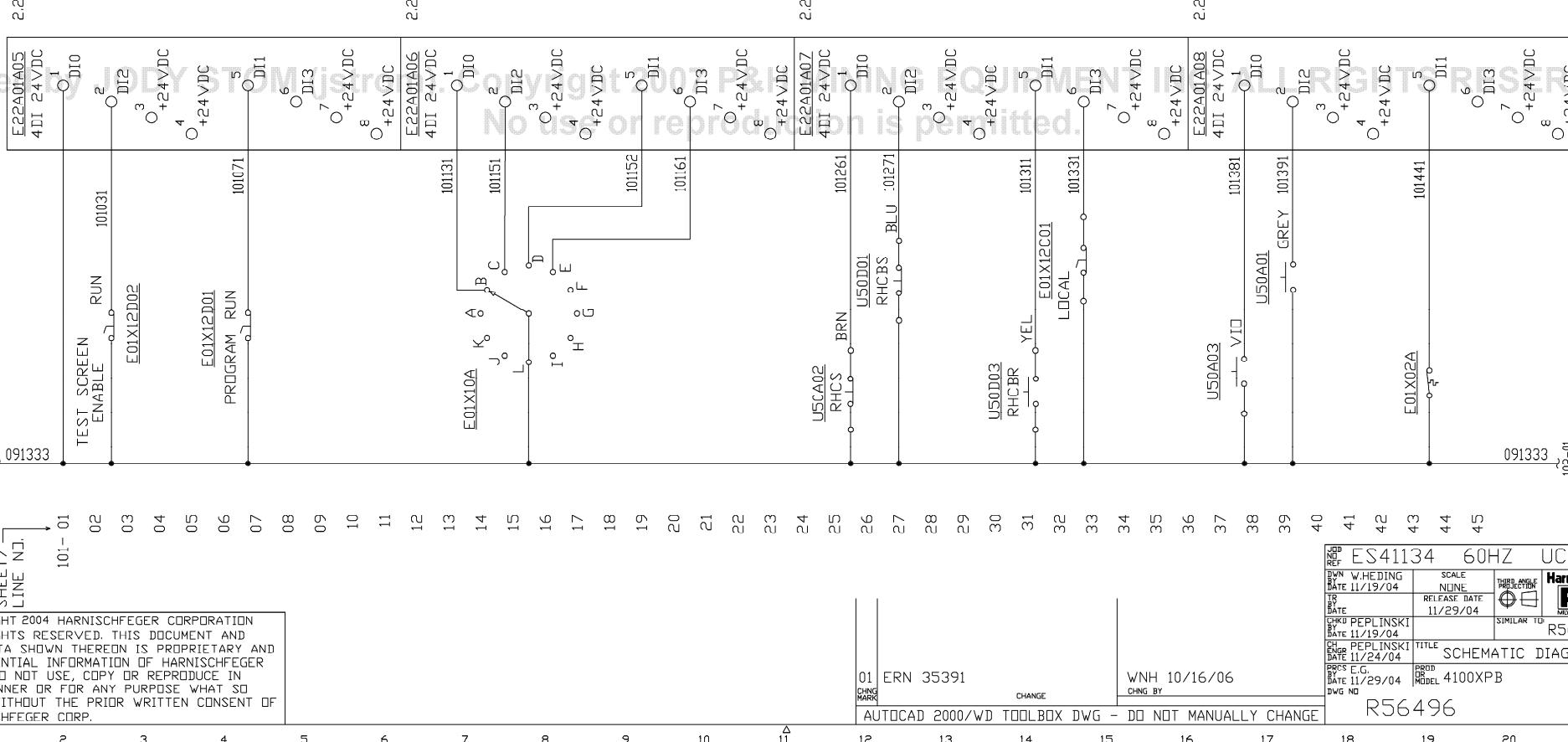


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DRAWN BY: PEPLINSKI DATE: 11/19/04 RELEASE DATE: 11/29/04
DESIGNED BY: PEPLINSKI DATE: 11/19/04
ENGINEERED BY: PEPLINSKI DATE: 11/24/04
B/S: L.G. DATE: 11/29/04
DWG NO: 4100XPB
SIMILAR TO: R56125
TITLE: SCHEMATIC DIAGRAM
PEPPLE L.G. DATE: 11/29/04
DWG NO: 4100XPB
TITLE: SCHEMATIC DIAGRAM
R56496
SH 100
CONT. 101

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SHEET /
LINE N.]

100-45	091342	24 VDC CONTROL SUPPLY MONITOR TEST SCREEN ENABLE KEY SWITCH		LUBE /PLS LIMITS KEY SWITCH
E22A010A5 4DI 24VDC	101031	GREEN RUN	O 1 O 2 O 3 O 4	O 5
E01X12D02			+24VDC +24VDC	O 111
E01X12D01 GRAM RUN				O 101071



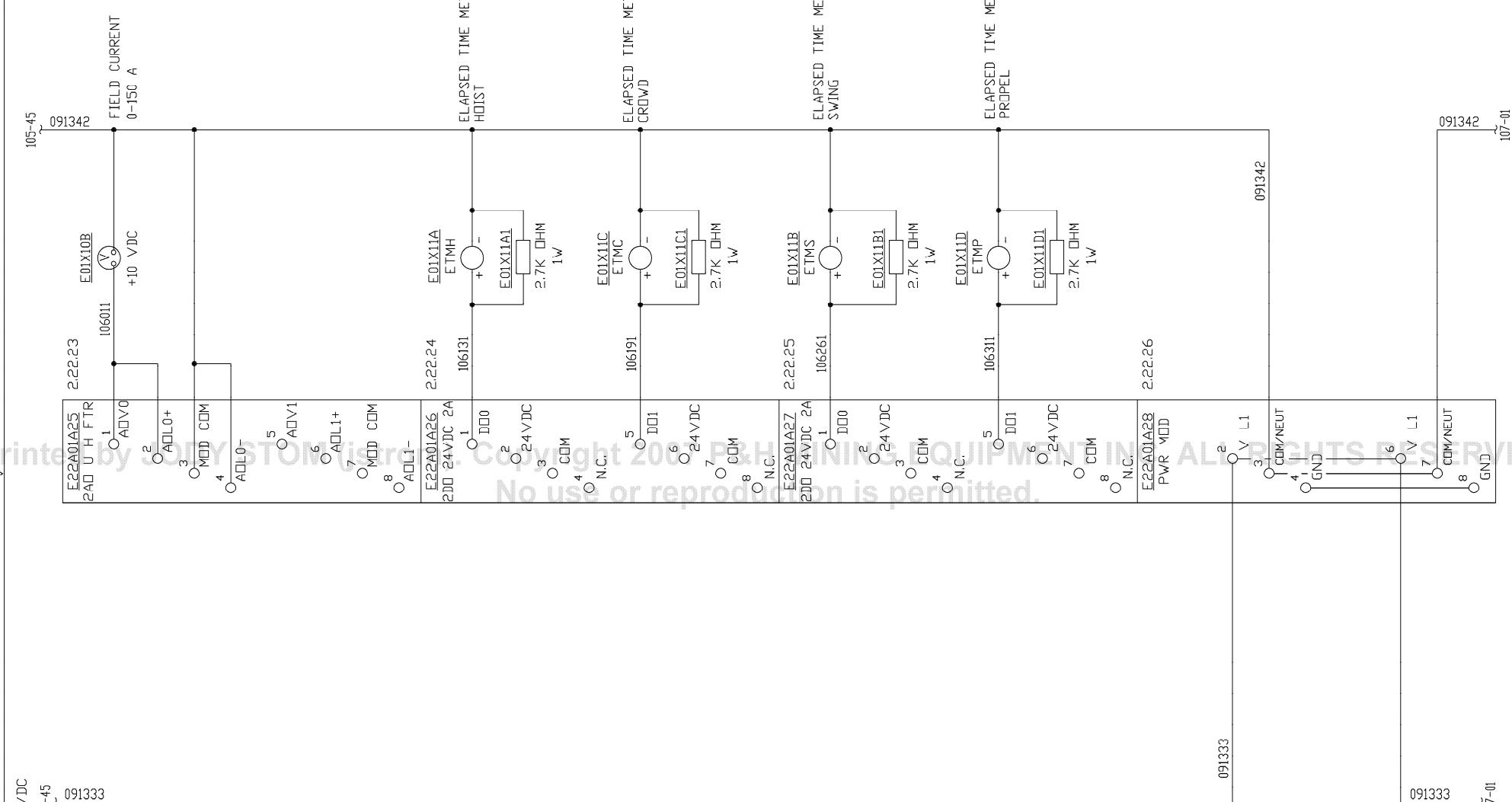
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

R5649

60HZ		UCS	ANSI C
NAME	THEODORE PHILIP LANGE	Harnischfeger	
LINE		P&H	MILWAUKEE, WI U.S.A.
DATE			
9/04		R56125	
SIMILAR TO			
SCHEMATIC DIAGRAM			
100XPB		SH 101	
		CDNT. 102	

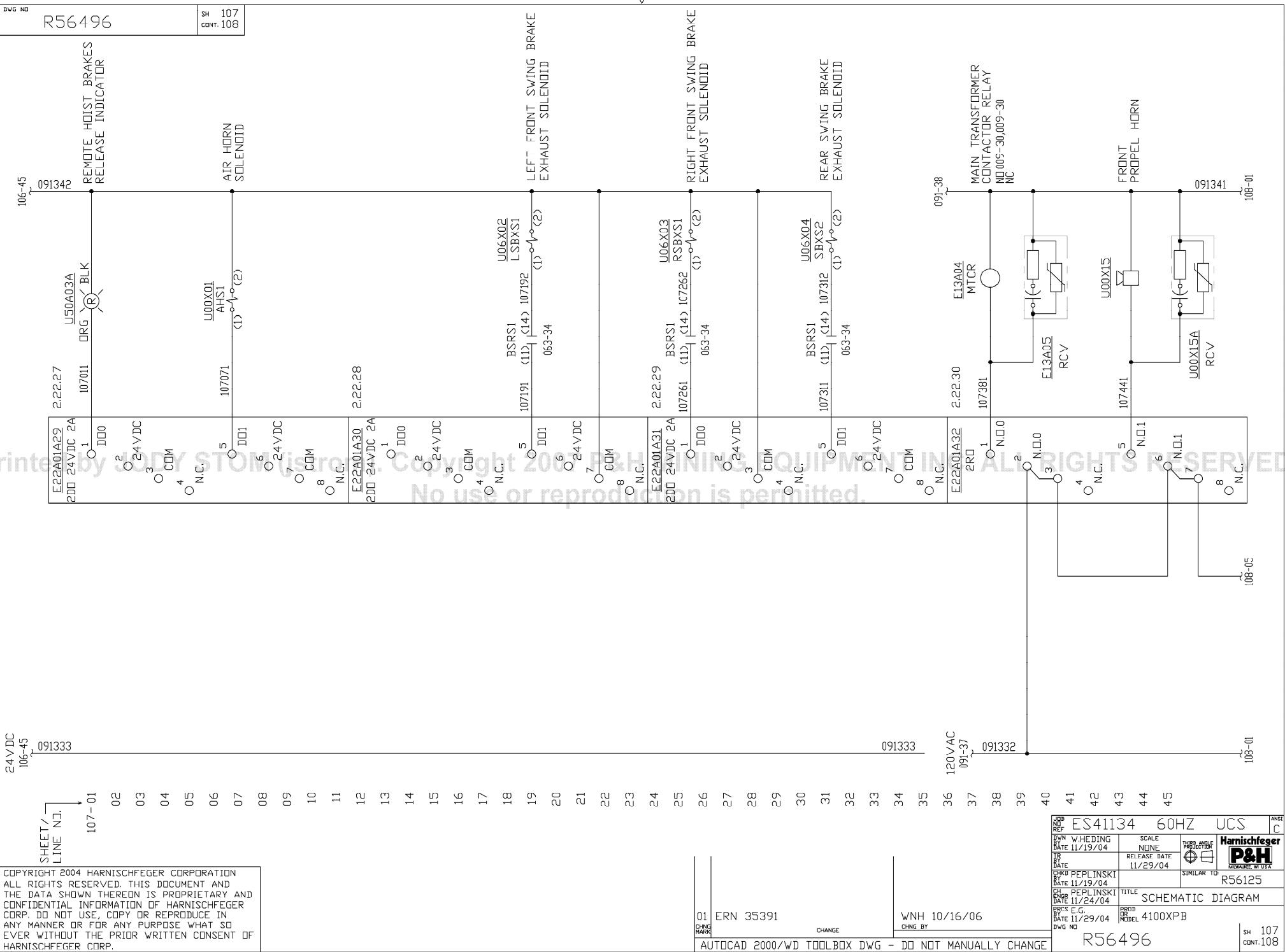
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DWG NO
R56496
SH 106
CONT. 107



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REF ID: ES41134 60HZ UCS
DRAWN BY W.H. HEDING DATE 11/19/04 SCALE 1:1
DES BY ER DATE RELEASE DATE 11/29/04 THIRD ANGLE PROJECTION
CHG BY CHG MARK 01 ERN 35391 CHG BY WNH 10/16/06
ENG'D BY PEPLINSKI DATE 11/24/04 TITLE SCHEMATIC DIAGRAM
TEST BY PEPLINSKI DATE 11/29/04
DWG NO. R56496
PROD. MODEL 4100XPB
SH 106
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DWG NO R56496
SH 109
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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.H. HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE		MILWAUKEE, WI USA
DATE		SECTION		
DESIGN BY	ERIK PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DESIGN BY	ERN 35391	DATE	11/24/04	
DATE		PROD'D BY	4100XPB	
CHNG MARK		CHNG BY	W.N.H. 10/16/06	DWG NO
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				
R56496				
SH 109 CONT. 110				

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496

SH 110
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REF	ES41134	60HZ	UCS	ANGLE
DESIGN BY	W.HEDING	SCALE	NONE	THIRD ANGLE
DATE	11/19/04	RELEASE DATE	11/29/04	
ENG'D BY	PEPLINSKI	SIMILAR TO	R56125	Harnischfeger
DATE	11/19/04			P&H MILWAUKEE WI USA
DESIGN BY	W.NH	TITLE	SCHEMATIC DIAGRAM	
DATE	10/16/06	ENG'D BY	PEPLINSKI	
CHANGE BY	ERN 35391	DATE	11/24/04	
DATE	11/29/04	PROD BY	4100XPB	
DWG NO		MODEL		
R56496				
SH 110 CONT. 111				

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DWG NO R56496
SH 111
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01	ERN 35391	W NH 10/16/06	ES41134 60HZ UCS	Harnischfeger P&H MILWAUKEE WI USA
CHNG MARK	CHANGE	CHNG BY	REF ID: R56125	
BY PEPLINSKI DATE 11/19/04	ENG PEPLINSKI DATE 11/24/04	TITLE SCHEMATIC DIAGRAM	BY'S E.G. DATE 11/29/04	PROD DR MODEL 4100XPB
ER	RS	RELEASE DATE 11/29/04	BY'S E.G. DATE 11/29/04	DWG NO
DATE	DATE	DATE	DATE	DATE

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

R56496

SH 111
CONT. 112

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DWG NO R56496
SH 112
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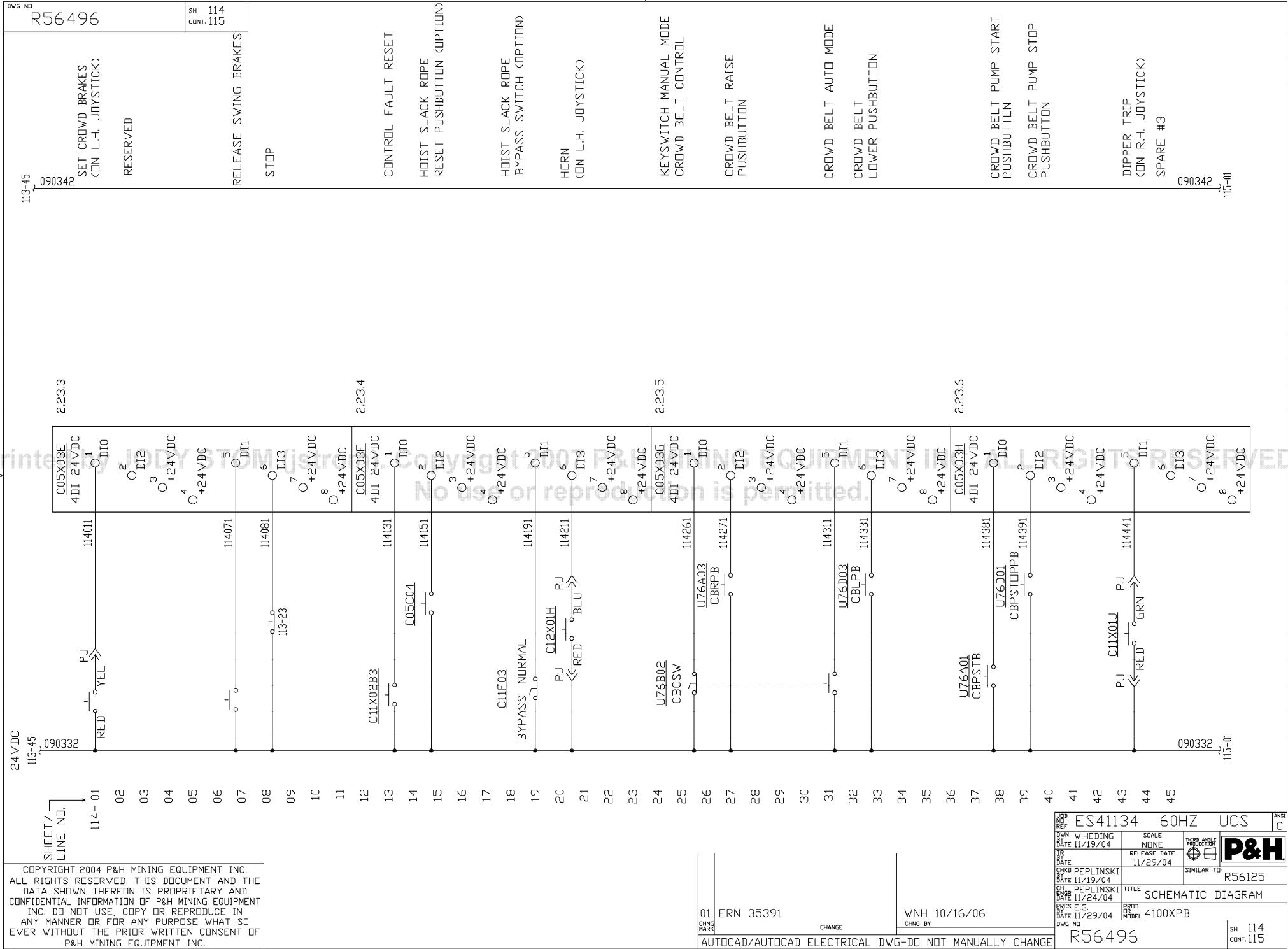
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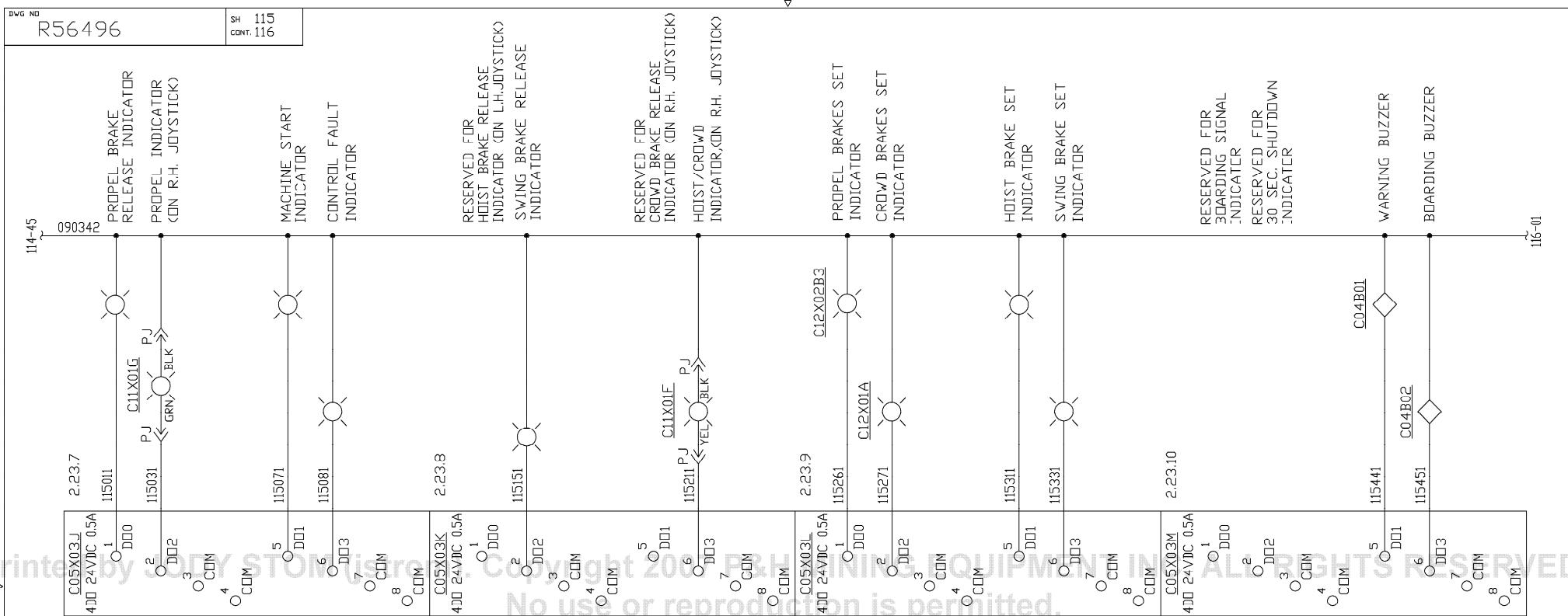
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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	CHNG BY		
CHNG MARK	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				
DWG NO R56496				
SH 112 CONT. 113				



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01 ERN 35391
CHNG MARK

AUTOCAD/AUTOCAD ELECTRICAL DWG-DO NOT MANUALLY CHANGE

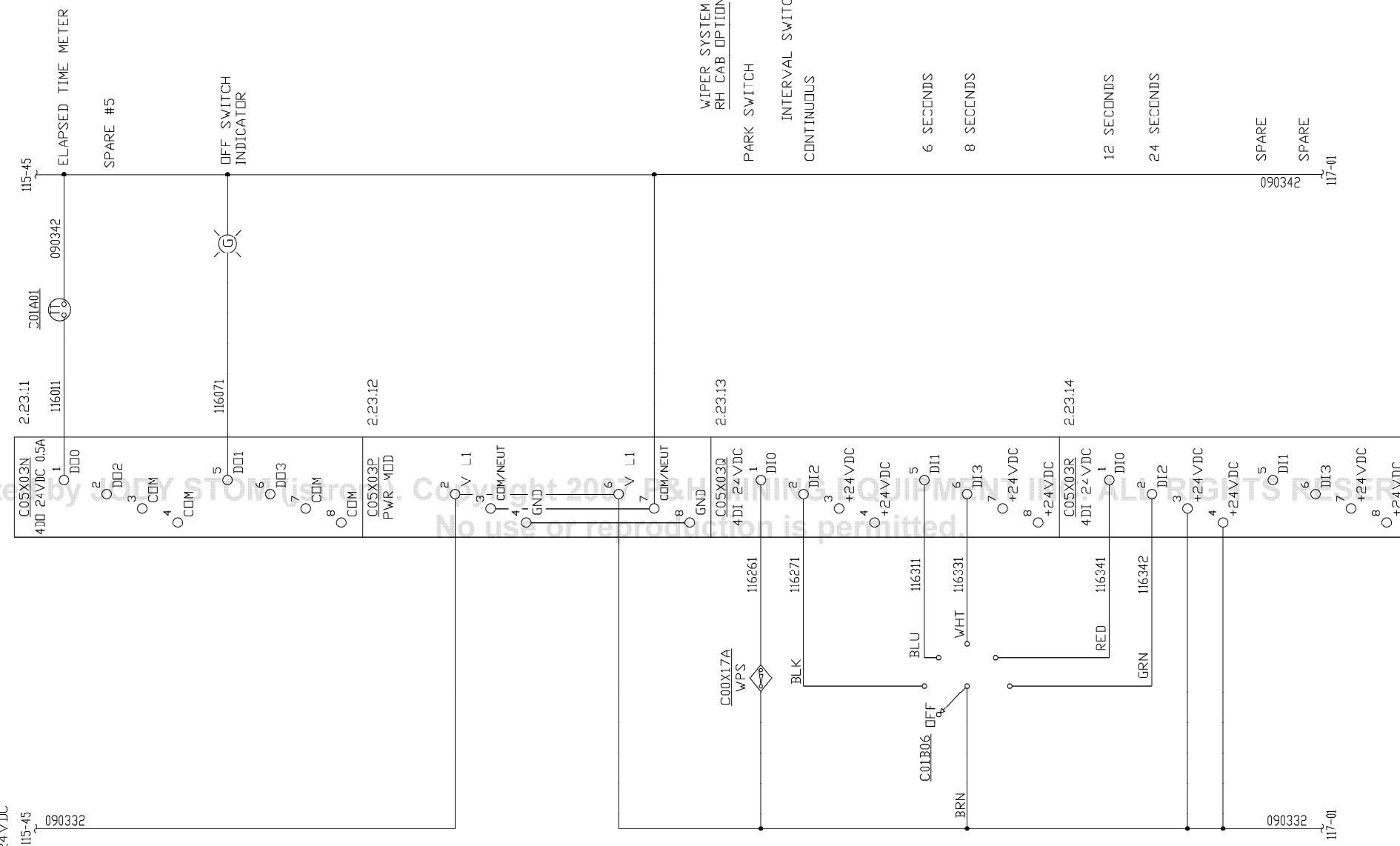
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DES BY DATE			RELEASE DATE 11/29/04		
CHECKED BY DATE		GHDK PEPLINSKI 11/19/04		SIMILAR TO	R56125
APPROVED BY DATE		GH PEPLINSKI 11/24/04	TITLE	SCHEMATIC DIAGRAM	
RECS E.G. DATE			PROD MODEL	4100XPB	
DWG NO.		R56496			
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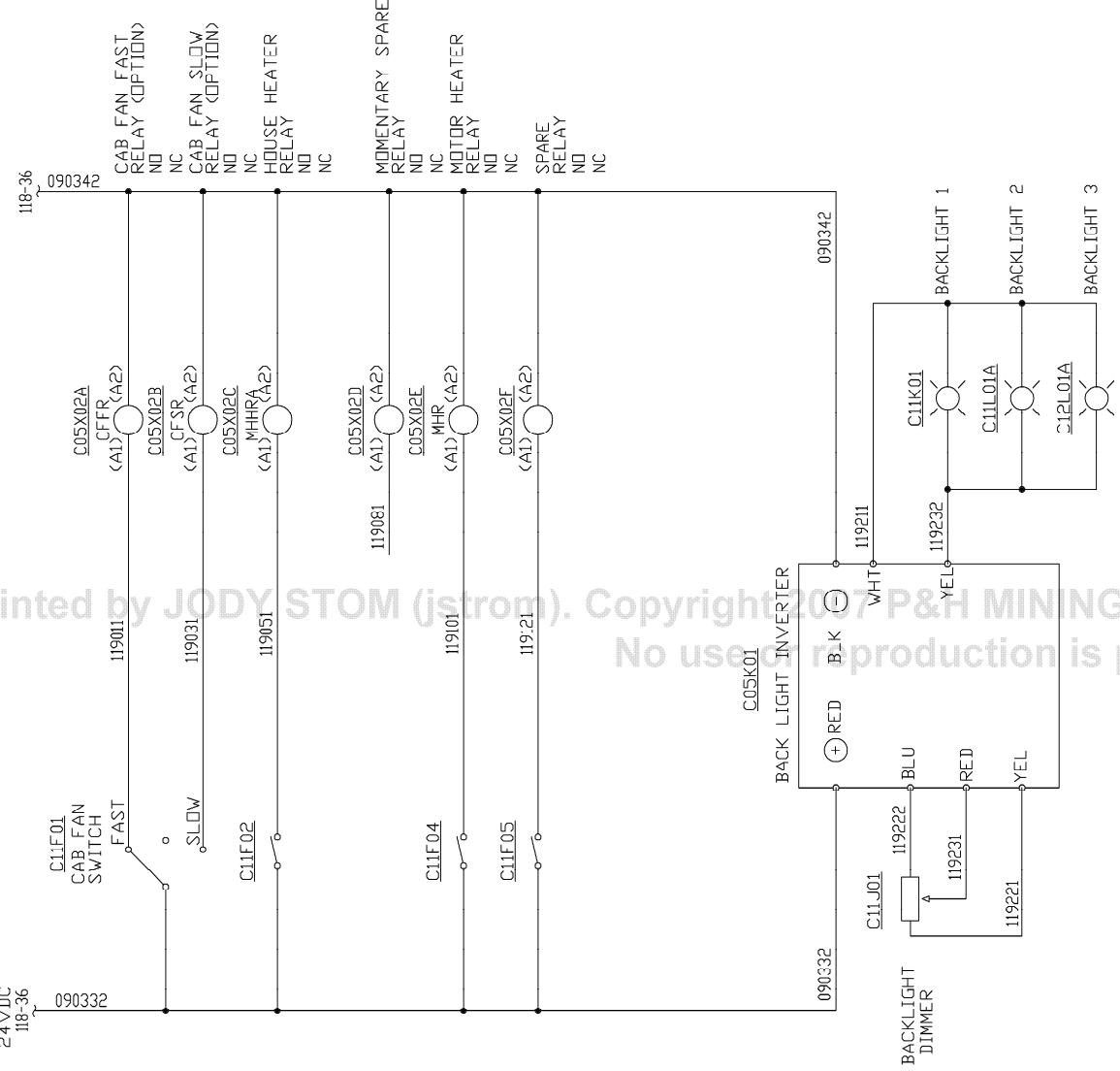
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CHNG

AUTOCAD/AUTOCAD ELECTRICAL DWG-DO NOT MANUALLY CHANGE

JOB NO. REF.	ES41134	60HZ	UCS	ANSI C
BW OWN	W.HEDING	SCALE NONE	THIRD ANGLE PROJECTION	
DATE 11/19/04		RELEASE DATE 11/29/04		
IN DATE				
BY PEPLINSKI	BY 11/19/04	SIMILAR TO	R56125	
CHG PEPLINSKI	DATE 11/24/04	TITLE	SCHEMATIC DIAGRAM	
PROJ E.G.	PROD DATE 11/29/04	MODEL	4100XPB	
DWG NO.				
R56496				

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 DWG NO R56496 SH 119
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REF ID: ES41134 60HZ UCS
 DRAWN BY W.HEDING DATE 11/19/04 RELEASE DATE 11/29/04
 DESIGNED BY PEPLINSKI DATE 11/19/04
 ENGG BY PEPLINSKI DATE 11/24/04
 REV. BY PEPLINSKI DATE 11/29/04
 CHG. BY ERN 35391 TITLE SCHEMATIC DIAGRAM
 DATE 11/29/04
 Dwg No R56496
 SIMILAR TO R56125
 P&H
 BY P&H
 DATE 11/29/04
 Dwg No 41 42 43 44 45
 P&H MODEL 4100XPB
 CHG. BY WNH 10/16/06
 CHG BY ERN 35391
 CHANGE
 AUTOCAD/AUTOCAD ELECTRICAL DWG-DO NOT MANUALLY CHANGE
 DWG NO R56496
 SH 119
 CONT. 120

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DWG NO R56496
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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	LINE	THIRD ANGLE
DATE	11/19/04	RELEASE DATE	11/29/04	Harnischfeger
ENG'D BY	PEPLINSKI	RELEASER	120	P&H
DATE	11/19/04	DATE	11/29/04	MILWAUKEE WI USA
CHNG MARK	01	CHNG BY	TITLE	R56125
BY'S L.G.	ERN 35391	W.NH 10/16/06	SCHEMATIC DIAGRAM	
DATE	11/24/04	DATE	11/29/04	
PROD BY'S L.G.	PEPLINSKI	PROD DATE	4100XPB	
DATE	11/29/04	DATE	11/29/04	
DWG NO		DWG NO		
R56496				
SH	120	CONT.	121	

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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DWG NO R56496

SH 121
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AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

01 ERN 35391
CHNG MARK
W.NH 10/16/06
CHNG BY
CHANGE

REF ID: ES41134 60HZ UCS ANG
DRAWN BY: W.HEDING DATE: 11/19/04 SCALE: N/ONE THIRD ANGLE PROJECTION
DES BY: PEPLINSKI DATE: 11/24/04 RELEASE DATE: 11/29/04
ENG'D BY: PEPLINSKI DATE: 11/19/04
TITLE: SCHEMATIC DIAGRAM
PROD BY: E.G. DATE: 11/29/04
PROD BY: D.R. MODEL: 4100XPB
DWG NO: R56125
SIMILAR TO: R56125
Harnischfeger
P&H
Milwaukee, WI USA
R56496
SH 121
CONT. 122

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			RELEASE DATE 11/29/04	
01	ERN 35391 <small>CHNG MARK</small>	WNH 10/16/06 <small>CHNG BY</small>	CHNU PEPLINSKI BY DATE 11/19/04	SIMILAR TO R56125
			CHG PEPLINSKI BY DATE 11/24/04	TITLE SCHEMATIC DIAGRAM
			PROJ E.G. DATE 11/29/04 DWG NO	PROD MODEL 4100XPB
				SH 122 CONT.123
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				R56496

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496
SH 123
CONT. 124

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01	ERN 35391	W NH 10/16/06	ES41134 60HZ UCS	Harnischfeger P&H MILWAUKEE WI USA
CHNG MARK	CHANGE	CHNG BY	REF ID: PEPLINSKI DATE 11/19/04 DRAWN BY: W.HEDING DATE 11/19/04 DES BY: ER CHECKED BY: ER APPROVED BY: ER DATE 11/29/04 RELEASE DATE 11/29/04	SIMILAR TO R56125
01	PEPLINSKI	ENG'D BY: PEPLINSKI DATE 11/24/04 DES BY: E.G. DATE 11/29/04 APPROVED BY: DR DATE 11/29/04 DWG NO: DR MODEL 4100XPB	TITLE: SCHEMATIC DIAGRAM	
				R56496
				SH 123 CONT. 124

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DWG NO R56496
SH 124
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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.H. HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
DESIGNER		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY		
DESIGNER	PEPLINSKI	DATE	11/24/04	
DATE		BY'S L.G.		
DESIGN BY	ERN 35391	PROD. BY	MODEL 4100XPB	
DATE	10/16/06	CHANGE BY	DWG NO	R56125
CHNG MARK		CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

R56496

SH 124
CONT. 125

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			TR NO. DATE	RELEASE DATE 11/29/04	 P&H MILWAUKEE, WI USA
			CHKU PEPLINSKI BY DATE 11/19/04	SIMILAR TO	R56125
			CH_ PEPLINSKI ENGE DATE 11/24/04	TITLE	SCHEMATIC DIAGRAM
01	ERN 35391	WNH 10/16/06	PROJ E.G. BY DATE 11/29/04	PROD DR DWG NO	4100XPB
CHNG MARK CHANGE CHNG BY				SH 125 CONT.126	
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE					

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DWG NO R56496
SH 126
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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY	PEPLINSKI	THIRD ANGLE PROJECTION		MILWAUKEE WI USA
DATE	11/19/04			
DESIGN BY	W.NH	TITLE	SCHEMATIC DIAGRAM	
DATE	10/16/06	PROD BY	4100XPB	
ENG'D BY	ERN 35391	DATE	11/29/04	DWG NO
DATE	11/24/04	CHNG BY	R56125	
CHNG MARK		CHANGE		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

R56496

SH 126
CONT. 127

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DWG NO R56496
SH 127
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REF ESR41134 60HZ UCS ANG
DRAWN W.HEDING SCALE NLINE THIRD ANGLE
DATE 11/19/04 RELEASE DATE 11/29/04
DES BY PEPPLINSKI SIMILAR TO Harnischfeger
DATE 11/19/04 P&H
ENG'D BY PEPPLINSKI TITLE SCHEMATIC DIAGRAM
DATE 11/24/04
REV'D BY L.G. PROD. MODEL 4100XPB
DATE 11/29/04 DWG NO R56125
CHNG BY
W.NH 10/16/06
CHNG BY
01 ERN 35391
CHNG MARK
CHANGE
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE
R56496
SH 127
CONT. 128

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DWG NO R56496
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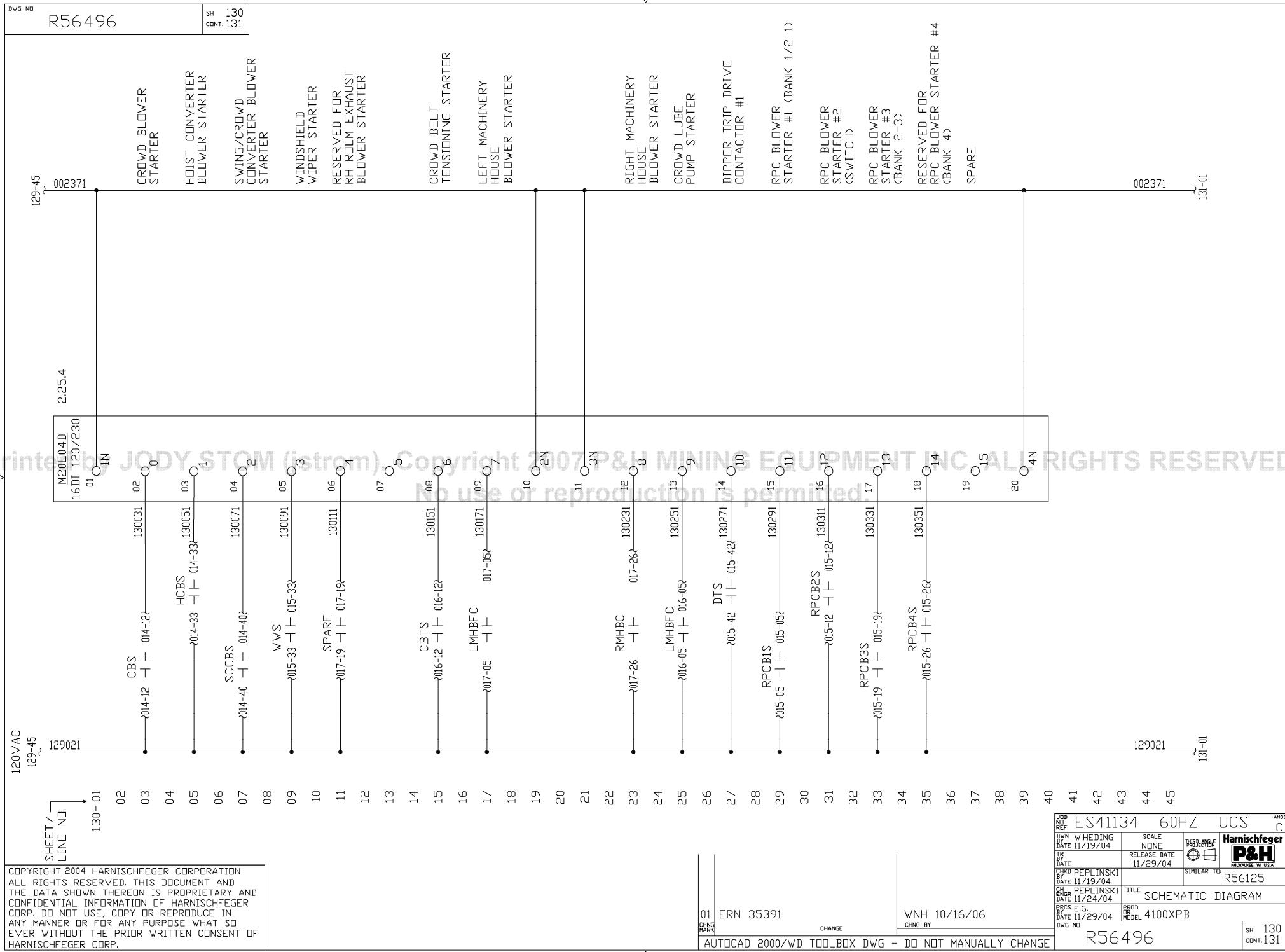
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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.H. HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	ERIK PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	R56125
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	DR. MODEL 4100XPB	
DATE		DATE		
CHNG BY	W.N.H. 10/16/06	CHNG BY		
CHNG MARK	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

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SH 128
CONT. 129



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01 ERN 35391 WNH 10/16/06
CHNG MARK CHNG BY
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

DOD REF		ES41134	60HZ	UCS	ANSI C
DRAWN BY W.HEDING DATE 11/19/04		SCALE NINE	THIRD ANGLE PROJECTION	Harnischfeger P&H MILWAUKEE, WI USA	
DES BY		RELEASE DATE 11/29/04			
REVIEWED BY PEPLINSKI DATE 11/19/04		SIMILAR ID R56125			
REVIEWED BY PEPLINSKI DATE 11/24/04		TITLE SCHEMATIC DIAGRAM			
PROG E.G. DATE 11/29/04		PROD DBS MODEL 4100XPB			
DWG NO					
R56496					
SH 136 CONT.137					

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496 SH 137
CONT. 138

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01	ERN 35391	W NH 10/16/06	ES41134 60HZ UCS	Harnischfeger P&H
CHNG MARK	CHANGE	CHNG BY	REF. DATE 11/19/04 DES. DATE 11/24/04 ENG. DATE 11/29/04 PROD. DATE 11/29/04 DWG NO. 4100XPB	TITLE SCHEMATIC DIAGRAM SHEET NO. 137 RELEASE DATE 11/29/04 SIMILAR TO R56125
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				R56496

SH 137
CONT. 138

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DWG NO R56496
SH 138
CONT. 139

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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	THIRD ANGLE	Harnischfeger
DATE	11/19/04	LINE	SECTION	P&H
ENG'D BY		RELEASE DATE		MILWAUKEE WI USA
DATE		11/29/04		R56125
CHNG BY	01 ERN 35391	CHNG BY	TITLE	SCHEMATIC DIAGRAM
DATE	11/19/04	DATE	11/29/04	
CHNG MARK		CHNG BY	BY'S L.G.	
			PROD	MODEL 4100XPB
			DR	
			DWG NO	R56496
			SH	138
			CONT.	139

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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DWG NO R56496
SH 139
CONT. 140

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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	CHNG BY		
CHNG MARK	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				
DWG NO R56496				
SH 139 CONT. 140				

DWG NO R56496
SH 140
CONT. 141

CONVERTER CABINET
I/J MODULES2.26.0
U95B01B
PWR MJD2.26.1
U95B01C
4DI 24VDC

SWING 1,2 & 3

CROWD

DIVERTER POWER
SUPPLY MONITOR

DIVERTER PROTECTION

HOIST #1

HOIST #2

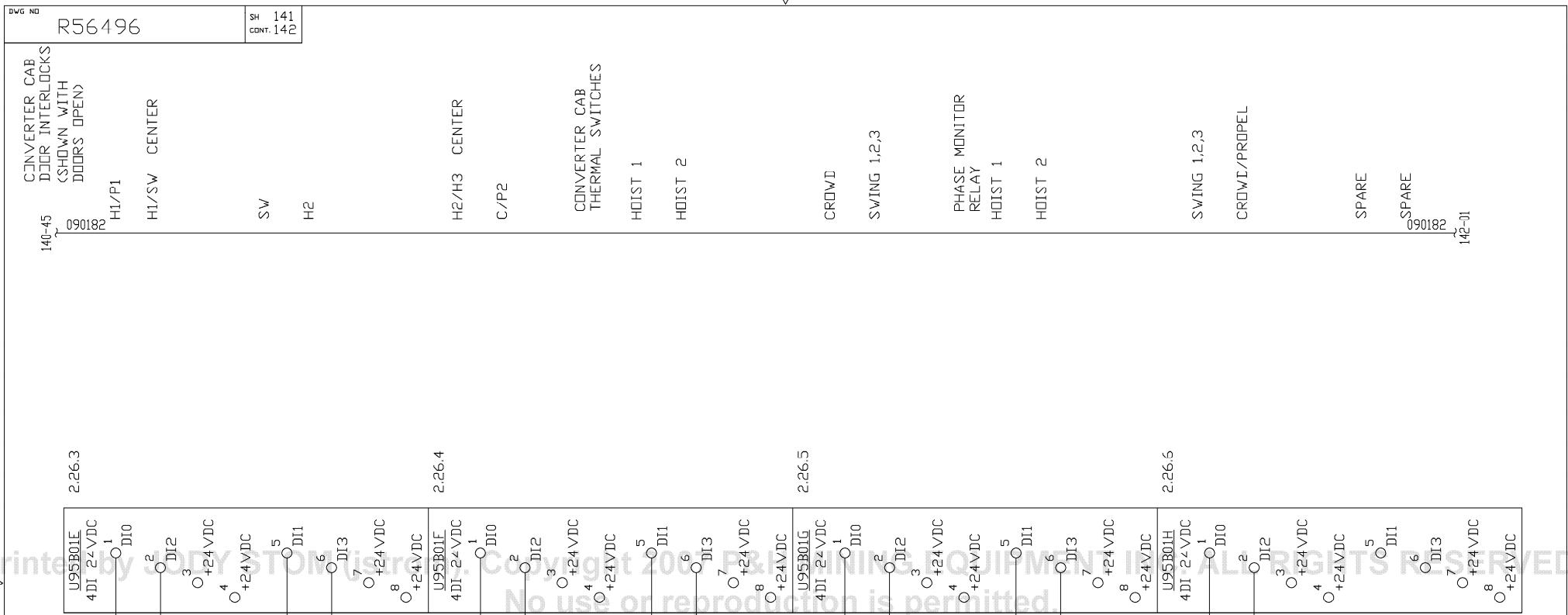
SWING

CROWD/PROPEL #2

090182
141-012.26.2
U95B01D
4DI 24VDC

140231

140241
DCMS140242
DCMC140281
DCMC140351
DPH1140361
DPH2140411
DPS1140421
DPCP140431
DPS2140441
DPCP140451
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DPS61404C1
DPCP1404D1
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DPCP1404IM1
DPS1161404IN1
DPCP1404IO1
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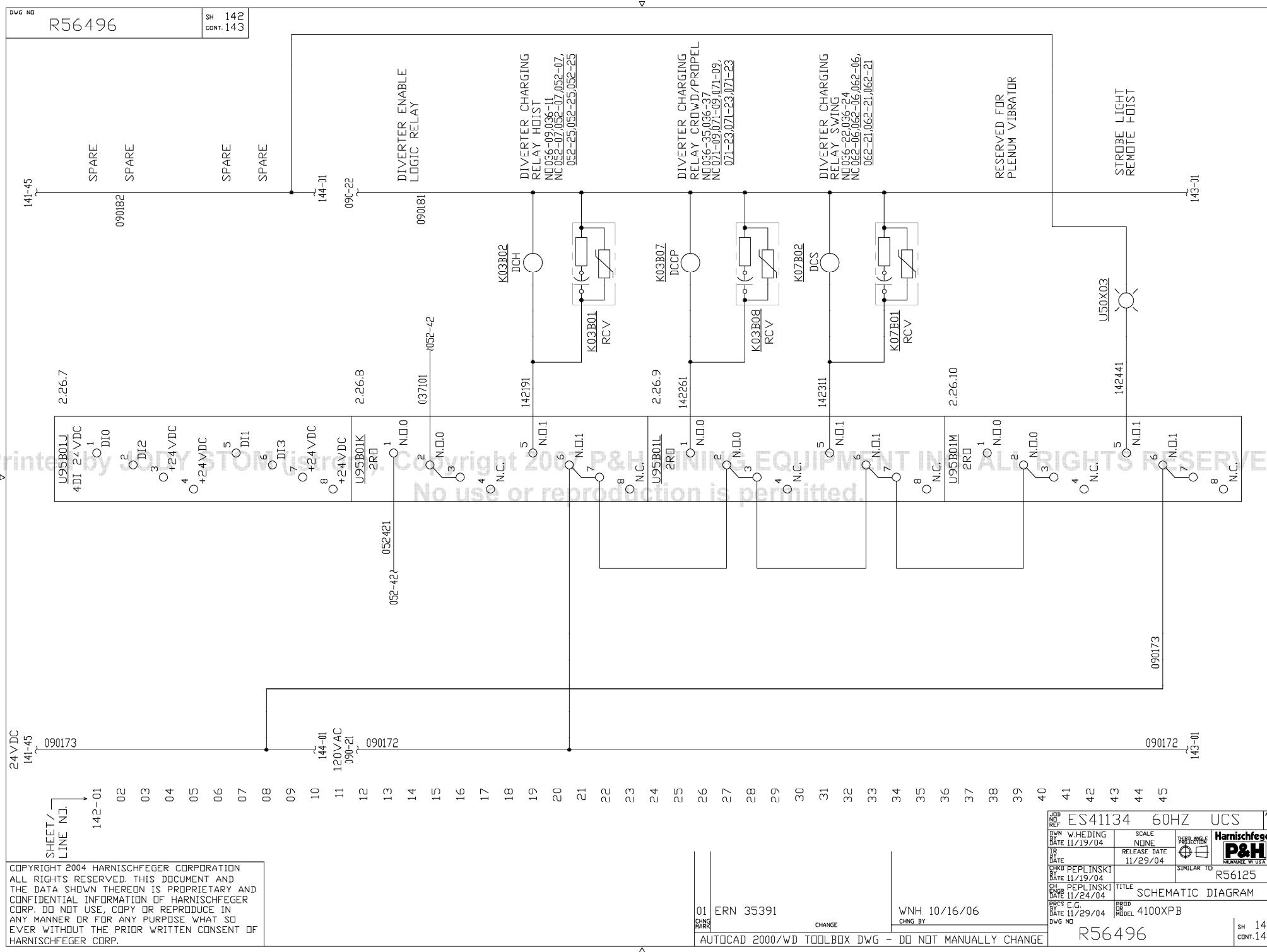


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01 ERN 353
CHNG

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

REF		ES41134		60HZ	UCS	ANSI C
DRAWN BY		W.HEDING		SCALE	NINE	
		DATE 11/19/04		THIRD ANGLE	PROJECTION	
TR	RELEASER	RELEASE DATE				
		11/29/04				
CHECKED		BY CHUCK PEPLINSKI		SIMILAR TO		R56125
DATE		11/19/04				
CHECKED		BY CHUCK PEPLINSKI		TITLE		SCHEMATIC DIAGRAM
DATE		11/24/04				
BROS E.G.		BROD		MODEL		4100XPB
DATE 11/29/04		DWG NO				
DWG NO						
R56496						SH 141
						CONT.142



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DWG NO R56496																							
				SH 143 CONT. 144																			
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REF ESR 35391 DATE 10/16/06 BY PEPLINSKI CHG BY WNH 10/16/06 CHG BY

DRAWN W.H. HEDING DATE 11/19/04 BY PEPLINSKI TITLE SCHEMATIC DIAGRAM
DES. P. H. HEDING DATE 11/24/04 BY PEPLINSKI PROD. MODEL 4100XPB
ENG. P. H. HEDING DATE 11/29/04 BY PEPLINSKI PROD. NO. 4100XPB
RELEASE DATE 11/29/04 BY PEPLINSKI SIMILAR TO R56125
DATE 11/19/04 BY PEPLINSKI Dwg No.
DATE 11/29/04 BY PEPLINSKI Dwg No.

120VAC 142-45 090172
143-01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21
142-45 090181 2.26.11
SPARE
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1 0 N.□.0
2 O N.□.0
3 O N.C.
4 O N.□.1
5 O N.□.0
6 O N.C.
7 O N.□.1
8 O N.C.
2.26.12
SPARE
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2 O N.□.1
3 O N.C.
4 O N.□.0
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2.26.13
SPARE
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SPARE
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3 O N.C.
4 O N.□.0
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DWG NO R56496
SH 144
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SPARE
SPARE

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REF E841134 60HZ UCS ANG
DRAWN W.HEDING DATE 11/19/04 SCALE N/UNE THIRD ANGLE
DES BY PEPLINSKI DATE 11/19/04 RELEASE DATE 11/29/04
ENG'D PEPLINSKI TITLE SCHEMATIC DIAGRAM
TEST L.G. DATE 11/24/04
PROD BY'S L.G. DATE 11/29/04
MODEL 4100XPB
DWG NO R56496
CHNG BY WNH 10/16/06
CHNG MARK ERN 35391
CHANGE
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE
SH 144
CONT. 145

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DWG NO R56496
SH 145
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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE		MILWAUKEE WI USA
DATE		SECTION		
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY		
DESIGN BY	PEPLINSKI	PROD. BY	4100XPB	R56125
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	CHNG BY	DWG NO	
DATE		W.NH 10/16/06		
CHNG MARK		CHANGE		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

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SH 145
CONT. 146

R56496

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DWG NO R56496

SH 146
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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	THIRD ANGLE
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		RELEASER		MILWAUKEE WI USA
DATE		DATE		R56125
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	CHNG BY		
CHNG MARK	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

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SH 146
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DWG NO R56496 SH 147
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REF	ES41134	60HZ	UCS	C
DRAWN BY	W.HEDING	SCALE	1:1	ANGLE
DATE	11/19/04	RELEASE DATE	11/29/04	MARK
DESIGNED BY		SIMILAR TO	R56125	
DATE				
CHNG BY	01	PEPLINSKI	PEPLINSKI	Harnischfeger
DATE	11/19/04	DATE	11/24/04	P&H
ENG'D BY	ERN 35391	DESIGNED BY	ERN 35391	MILWAUKEE, WI USA
DATE		DATE		
CHNG MARK		CHNG BY	W.NH 10/16/06	
DATE		DATE		
01	ERN 35391	CHANGE	W.NH 10/16/06	TITLE
			CHNG BY	SCHEMATIC DIAGRAM
				PROD. MODEL 4100XPB
				DWG NO
				SH 147
				CONT. 148
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				
R56496				

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DWG NO R56496
SH 148
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SHEET /
LINE NO
148-01

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AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

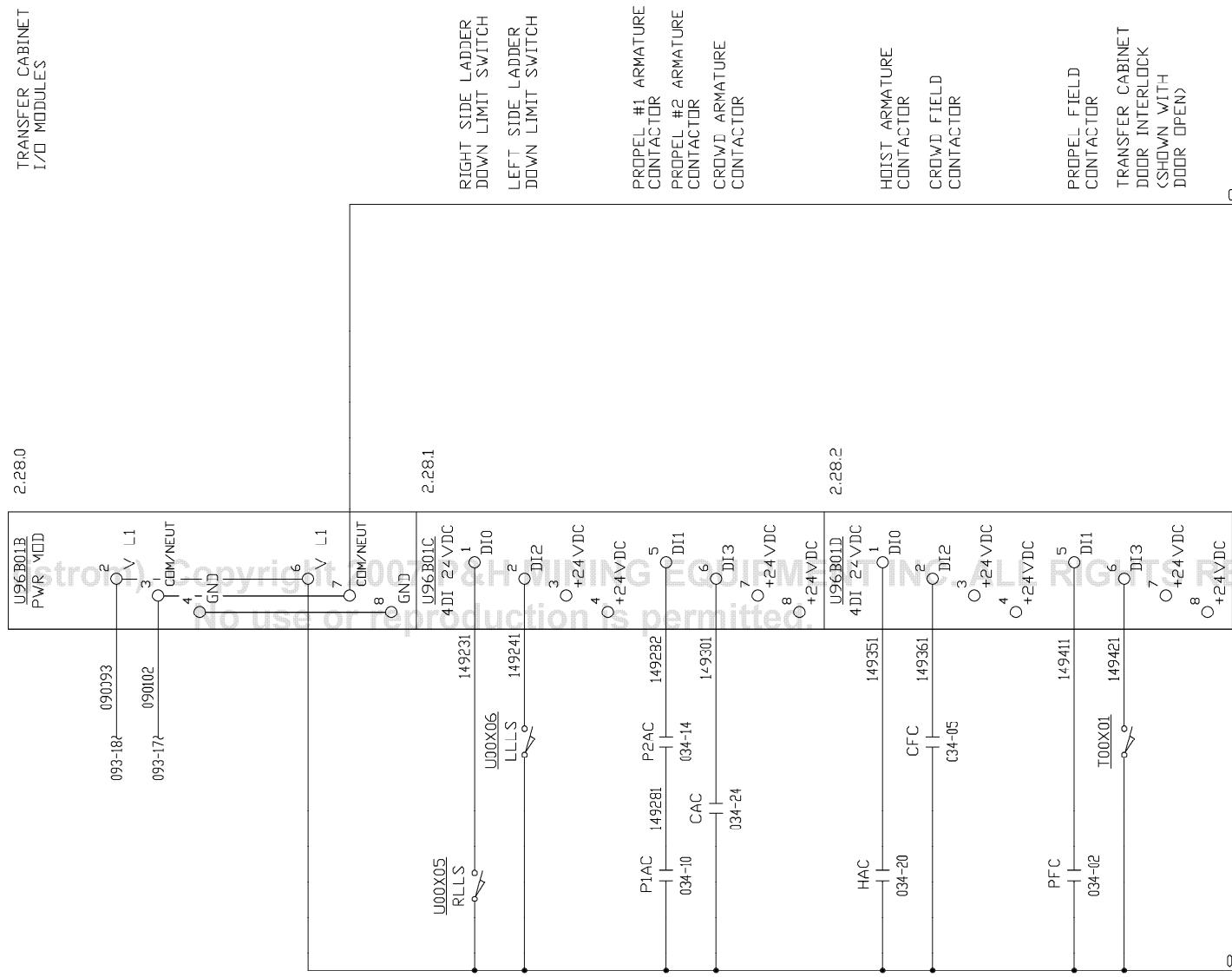
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DRAWN BY: W.HEDING DATE: 11/19/04 SCALE: N/ONE THIRD ANGLE PROJECTION
DES BY: PEPLINSKI DATE: 11/29/04 RELEASE DATE: 11/29/04
CSTR BY: PEPLINSKI DATE: 11/19/04
ENG'D BY: PEPLINSKI DATE: 11/24/04 TITLE: SCHEMATIC DIAGRAM
TEST BY: PEPLINSKI DATE: 11/29/04
PROD BY: PEPLINSKI DATE: 11/29/04 MODEL: 4100XPB
DWG NO: R56125
SIMILAR TO: R56125
Harnischfeger
P&H
Milwaukee, WI USA
R56496
SH 148
CONT. 149

R56496

SH 149
CONT. 150

149-01

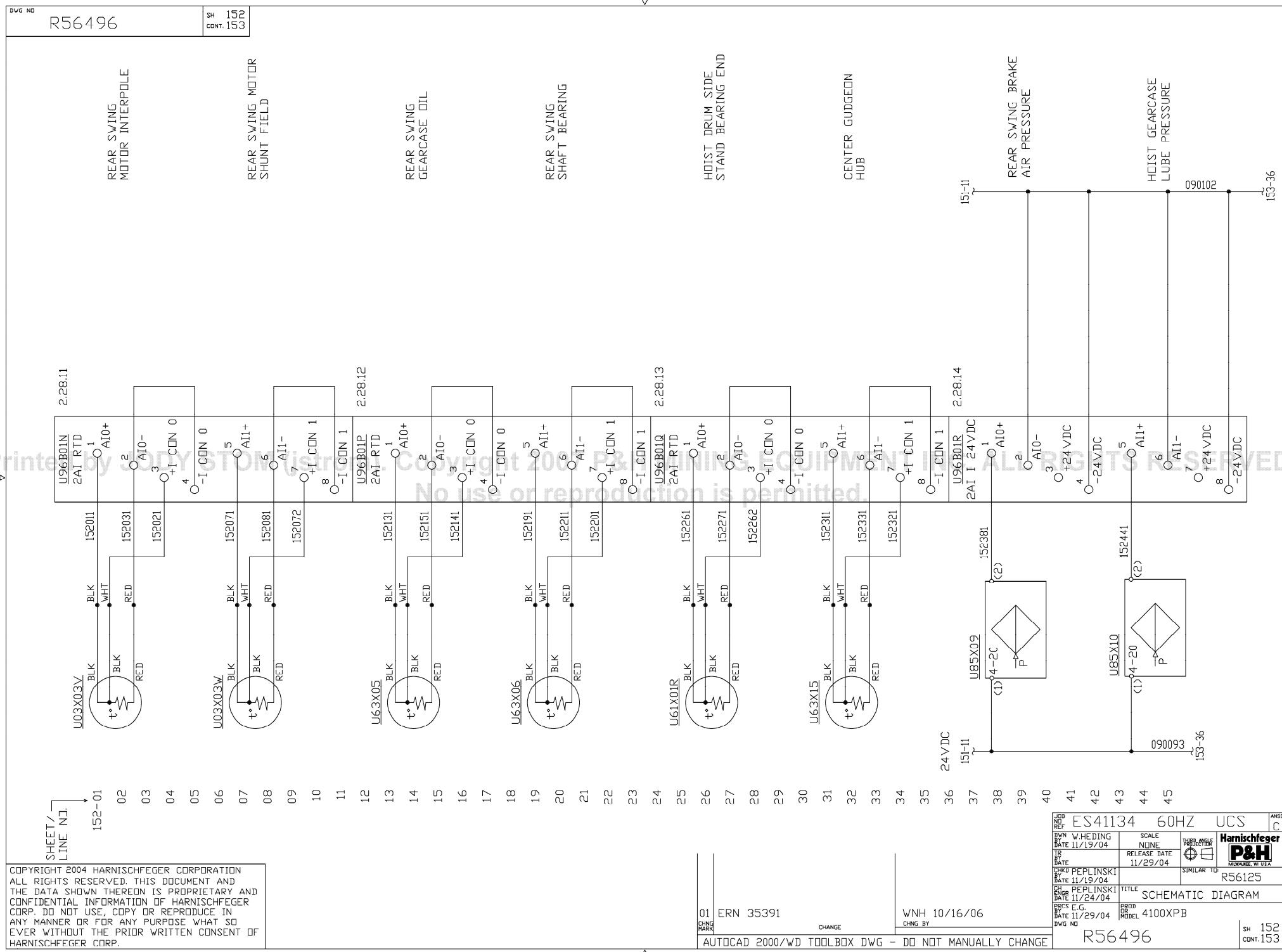
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01	ERN 35391	WNH 10/16/06
CHNG MARK		CHNG BY
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AUTOCAD 2000/WD TOOL BOX DWG - DO NOT MANUALLY CHANGE		

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W.HEDING DATE 11/19/04		SCALE NINE	THIRD ANGLE PROJECTION	
		RELEASE DATE 11/29/04		Harnischfeger
RKO PEPLINSKI DATE 11/19/04		SIMILAR TO	P&H MILWAUKEE, WI USA	
RGP PEPLINSKI DATE 11/24/04		TITLE	R56125	
E.G. DATE 11/29/04		PROD MODEL	SCHEMATIC DIAGRAM	
WG ND		4100XPB		
R56496				



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DWG NO R56496
SH 154
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01	ERN 35391	W NH 10/16/06	ES41134 60HZ UCS	Harnischfeger P&H
CHNG MARK	CHANGE	CHNG BY	REF. DATE 11/19/04 DES. DATE 11/24/04 ENG. DATE 11/29/04 PROD. DATE 11/29/04 DWG NO. 4100XPB	TITLE SCHEMATIC DIAGRAM SHEET NO. 154 RELEASE DATE 11/29/04 SIMILAR TO R56125
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				R56496

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CONT. 155

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DWG NO R56496
SH 155
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SHEET / LINE NO
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REF ESR 01 ERN 35391 WNH 10/16/06
PEPLINSKI PEPLINSKI TITLE SCHEMATIC DIAGRAM
DATE 11/19/04 DATE 11/24/04 BY'S E.G. PROD. MODEL 4100XPB
BY'S E.G. PROD. MODEL 4100XPB
DATE 11/29/04 DATE 11/29/04 DWG NO
DWG NO R56496
SH 155
CONT. 156

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DWG NO R56496
SH 156
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REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	LINE	THIRD ANGLE
DATE	11/19/04	RELEASE DATE	11/29/04	Harnischfeger
ENG'D BY	PEPLINSKI	RELEASER	156125	P&H
DATE	11/19/04	DATE	11/29/04	MILWAUKEE WI USA
CHNG MARK	01 ERN 35391	CHNG BY	W.NH 10/16/06	TITLE
DATE	11/24/04	DATE	11/29/04	SCHEMATIC DIAGRAM
BY'S L.G.	PEPLINSKI	PROD	4100XPB	DWG NO
DATE	11/24/04	DATE	11/29/04	R56496
CHNG BY	CHANGE	CHNG BY	CHNG BY	SH 156 CONT. 157
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

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DWG NO R56496
SH 157
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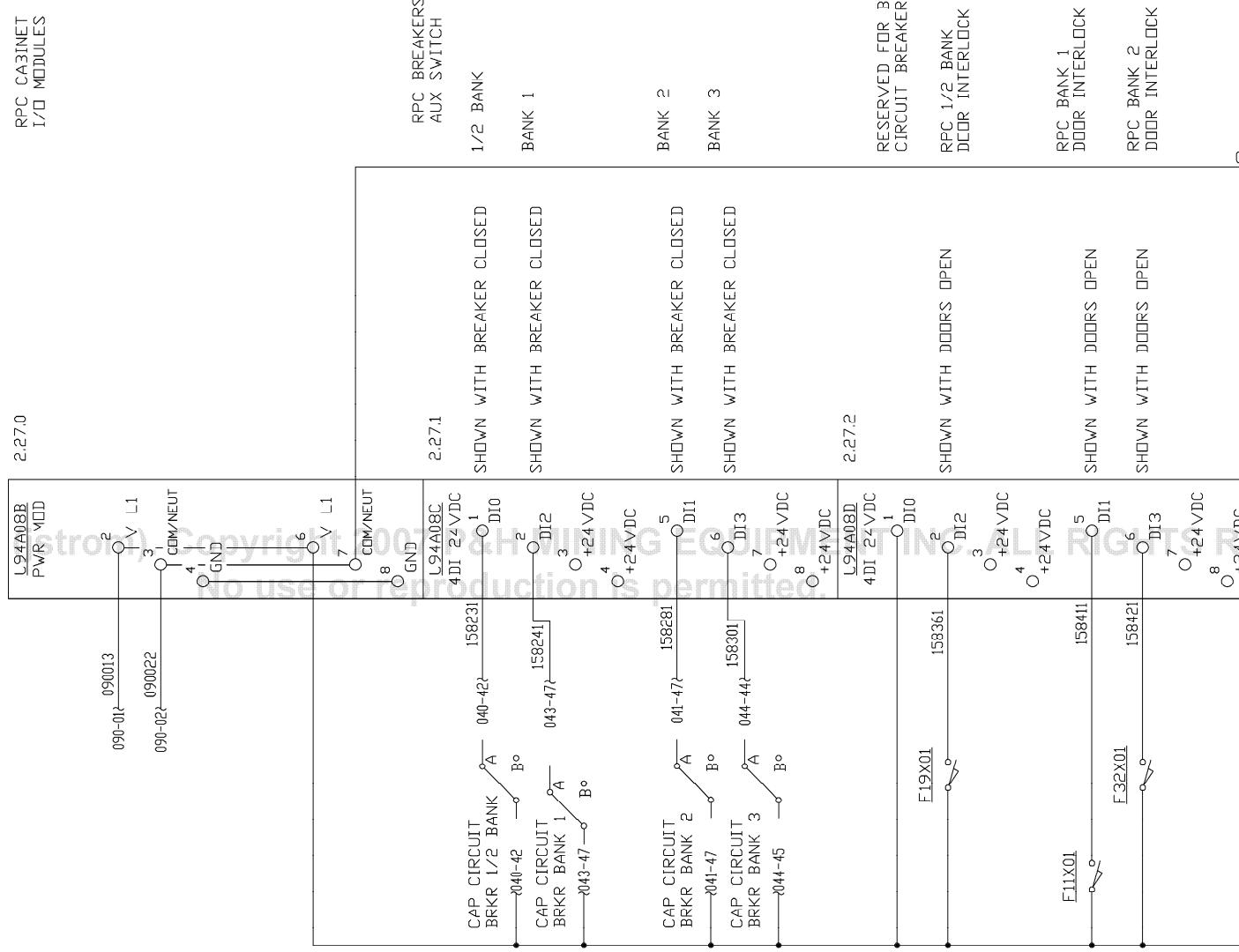
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REF ID: ES41134 60HZ UCS ANGLE C
DRAWN BY W.HEDING SCALE NLINE THIRD ANGLE
DATE 11/19/04 RELEASE DATE 11/29/04
DES BY PEPLINSKI SIMILAR TO R56125
DATE 11/19/04
ENG'D BY PEPLINSKI TITLE SCHEMATIC DIAGRAM
DATE 11/24/04
PROD BY E.G. DATE 11/29/04
DATE 11/29/04
DWG NO DWG NO MODEL 4100XPB
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SH 157
CONT. 158

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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SH 158
CONT. 159



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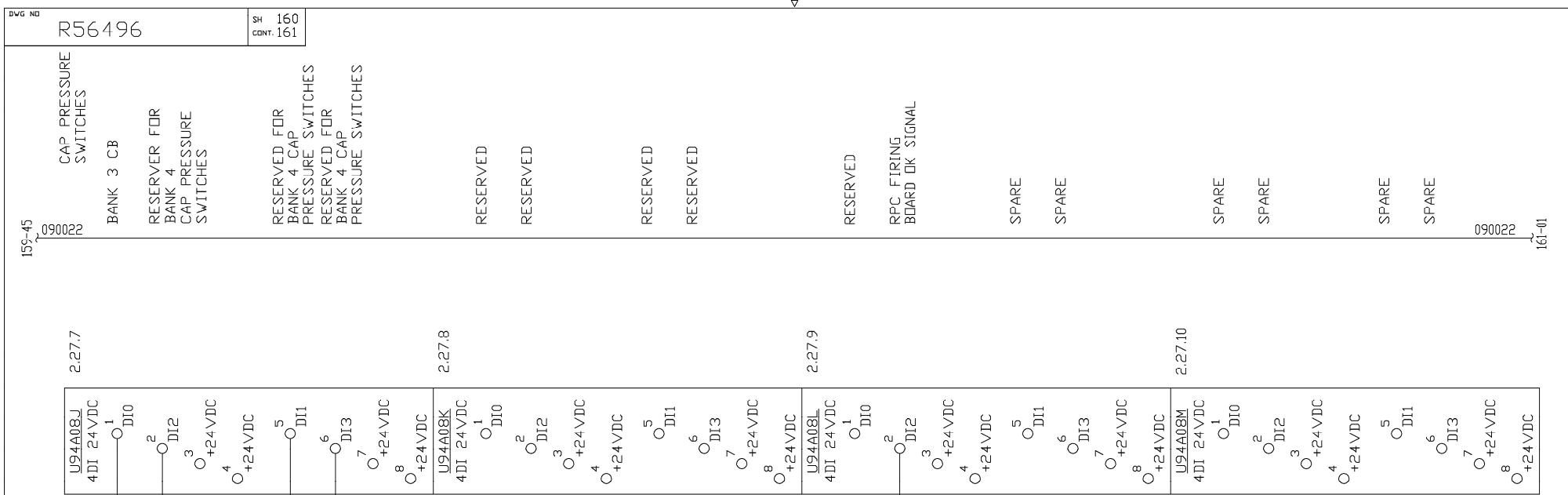
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01 CHNG MARK	ERN 35391	CHANGE	WNH 10/16/06 CHNG BY
AUTOCAD 2000/LWD TOOL BOX.DWG		DO NOT MANUALLY CHANGE	

REF E841134		60HZ	UCS
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DATE 11/19/04		NINE	
TR		THIRD ANGLE	Hanschfeger
DATE		RELEASE DATE	P&H
		11/29/04	MILWAUKEE, W. I. U.S.A.
GPKD PEPPLINSKI		SIMILAR TO	R56125
DATE 11/19/04			
PEPPLINSKI		TITLE SCHEMATIC DIAGRAM	
ENDO		PDRD	
DATE 11/24/04		MODEL 4100XPB	
BY E.G.		SH 158	
DATE 11/29/04		CONT.159	
DWG NO			
R56125			
R56496			

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SH 158
CONT. 159



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01 CHNG MARK	ERN 35391 CHANGE	WNH 10/16/06 CHNG BY
AUTOCAD 2000/WD TOOL-BOX DWG - DO NOT MANUALLY CHAN		

REF		ES41134		60HZ	UCS	ANSI C
DRAWN BY W.H. DEDING DATE 11/19/04		SCALE 1:1	THIRD ANGLE SECTION		Harnischfeger P&H MILWAUKEE, WI USA	
		RELEASE DATE 11/29/04				
DESIGNED BY D. PEPLINSKI DATE 11/19/04		SIMILAR TO R56125				
CHECKED BY D. PEPLINSKI DATE 11/24/04		TITLE SCHEMATIC DIAGRAM				
BROS E.G. DATE 11/29/04		PRINTED DR. MODEL 4100XPB				
DWG NO						
						SH 160
						CONT. 161
R56496						

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DWG NO R56496

SH 162
CONT. 163

161-45 ↑ 090022 SPARE
2.27.15 ↑ 045-45 SPARE

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4 N.C.
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6 N.□.1
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162-01 ↑ 045-13
SHEET / LINE NO. 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

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REF ID: ES41134 60HZ UCS
DRAWN BY W.H. DEDING DATE 11/19/04 SCALE N/ONE
DES BY ER DATE RELEASE DATE 11/29/04
CRAFTS BY DATE
CHNG BY PEPLINSKI DATE 11/19/04
ENG'D BY PEPLINSKI DATE 11/24/04 TITLE SCHEMATIC DIAGRAM
SVC'S E.G. DATE 11/29/04 PROD'D BY MODEL 4100XPB
CHNG BY DATE 11/29/04 DWG NO R56496
Harnischfeger
P&H
Milwaukee, WI USA
SIMILAR TO R56125
SH 162
CONT. 163

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AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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DWG NO R56496
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REF	ES41134	60HZ	UCS	NAME
BORN	W.HEDING	SCALE	THIRD ANGLE	Harnischfeger
DATE	11/19/04	LINE	SECTION	P&H
DES		RELEASE DATE		MILWAUKEE, WI USA
DATE		11/29/04		R56125
BY				
DATE				
01	ERN 35391	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM
CHNG MARK		ENG'D BY PEPLINSKI	DESIGNED BY	
		DATE 11/24/04	DATE 11/29/04	
		CHNG BY	CHNG BY	
		W.NH 10/16/06	PROD BY	MODEL 4100XPB
			DRW	
			DWG NO	
				R56496
				SH 163
				CONT. 164

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01 ERN 35391 W/NH 10/16/06
CHNG BY
CHANGE
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

JDP	ES41134	60HZ	UCS	ANSI C
NO REF				
DWN	W.HEDING	SCALE	THIRD ANGLE PROJECTION	Harnischfeger
DATE	11/19/04	11/29/04		P+H
TR		RELEASE DATE		MILWAUKEE, WI U.S.A.
DATE				
CHG	PEPLINSKI	SIMILAR TO	R56125	
DATE	11/19/04			
CHG	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/24/04			
BPCS	E.G.	PROD	4100XPB	SH 164
DATE	11/29/04	MODEL		CONT. 165
DWG	NO			
R56496				

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496
SH 165
CONT. 166

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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF ID: ES41134 60HZ UCS ANGLE C
DRAWN BY W.HEDING DATE 11/19/04 SCALE N/NE RELEASE DATE 11/29/04
DES BY ER DATE
CHECKED BY PEPLINSKI DATE 11/19/04
ENGD BY PEPLINSKI DATE 11/24/04 TITLE SCHEMATIC DIAGRAM
SVC'S L/G. BY DATE 11/29/04 PROD DR MODEL 4100XPB
DWG NO R56125
R56496
SH 165
CONT. 166

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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DWG NO R56496

SH 166
CONT. 167

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SHEET / LINE NO
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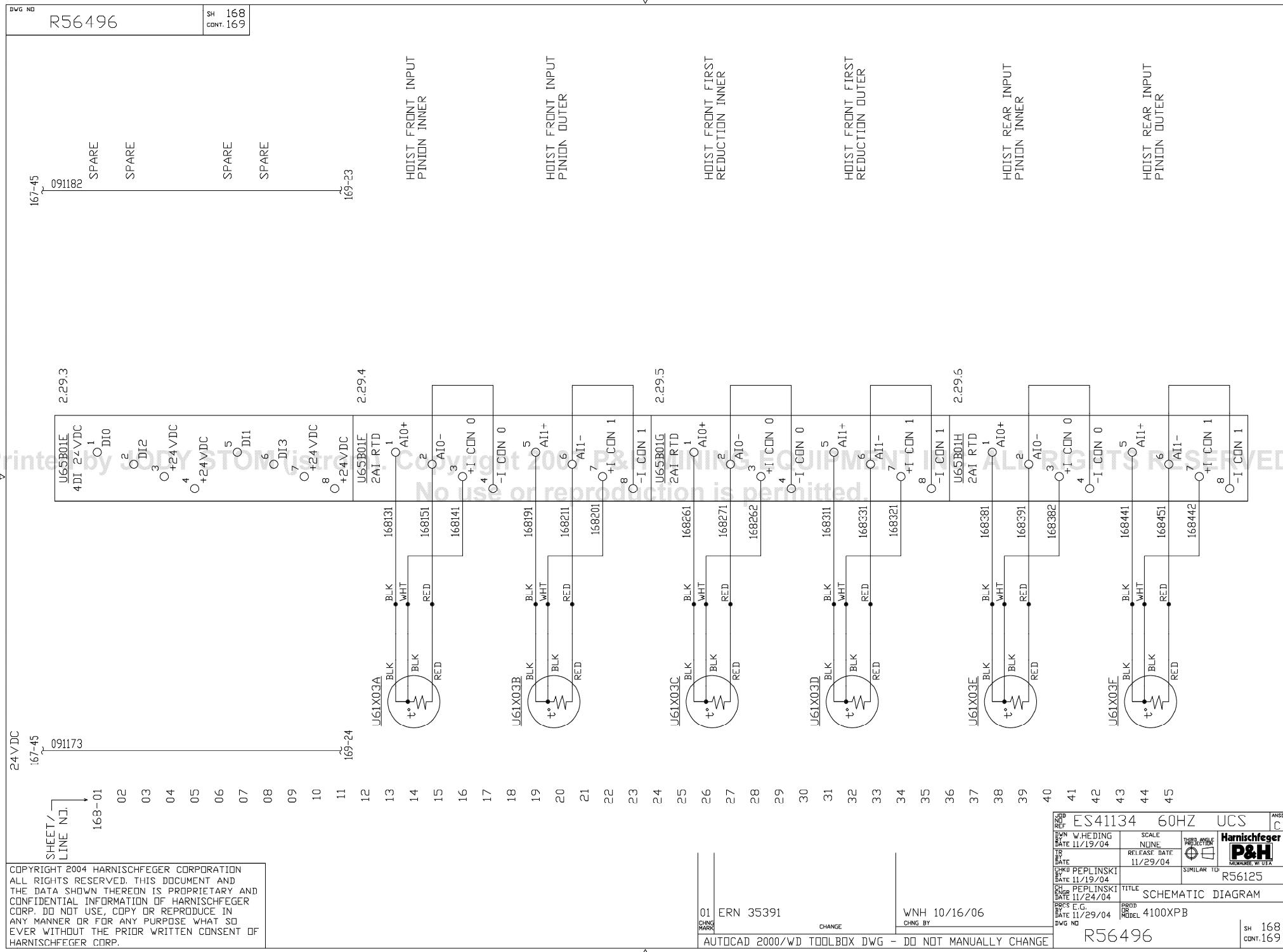
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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	THIRD ANGLE
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		RELEASER		MILWAUKEE WI USA
DATE		DATE		R56125
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	DWG NO		
CHNG MARK	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

R56496

SH 166
CONT. 167



1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496
SH 170
CONT. 171

16S-45
091182 SPARE

2.29.11
U65B01N 2A
2D 24VDC 2A
O 1
D00
O 24VDC
O 2
O CDM
O 3
O N.C.
O 4
O 24VDC
O 5
O 6
O CDM
O 7
O N.C.
O 8
O N.C.

24VDC
16S-45
091173
170-01
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REF E541134 60HZ UCS ANG
DRAWN W.HEDING DATE 11/19/04 SCALE N/UNE THIRD ANGLE
DES BY PEPLINSKI DATE 11/19/04 RELEASE DATE 11/29/04
ENG'D BY PEPLINSKI TITLE SCHEMATIC DIAGRAM
TEST BY PEPLINSKI DATE 11/24/04
PROD BY PEPLINSKI DATE 11/29/04
DWG NO 4100XPB
SIMILAR TO R56125
Harnischfeger
P&H
Milwaukee, WI USA
W.N.H. 10/16/06
CHNG BY
01 ERN 35391
CHANGE
CHNG MARK
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE
R56496
SH 170
CONT. 171

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496

SH 171
CONT. 172

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REF	ES41134	60HZ	UCS	ANGLE
BY	W.HEDING	SCALE	NONE	THIRD ANGLE
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
DESIGNER		RELEASER		MILWAUKEE, WI USA
DATE		DATE		
BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY		
DESIGNER	PEPLINSKI	PROD'D BY	4100XPB	
DATE	11/24/04	DATE	11/29/04	
DESIGNER		DESIGNER		
DATE		DATE		
BY	ERN 35391	CHNG BY	W.NH 10/16/06	
CHNG MARK		CHANGE		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				
R56496				
SH 171 CONT. 172				

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R56496

SH 172
CONT. 173

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01 ERN 35391 W/NH 10/16/06
CHNG BY
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

JDP NO REF		ES41134		60HZ	UCS	ANSI C
DWN W. HEADING DATE 11/19/04		SCALE NONE	THIRD ANGLE PROJECTION		Harnischfeger P&H MILWAUKEE, WI U.S.A.	
TR DATE		RELEASE DATE 11/29/04				
CHGD PEPLINSKI DATE 11/19/04		SIMILAR TO	R56125			
CHGD PEPLINSKI DATE 11/24/04		TITLE		SCHEMATIC DIAGRAM		
BRC'S E.G. DATE 11/29/04 DWG NO		PROD MODEL	4100XPB			
R56496						
SH 172 CONT. 173						

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496
SH 173
CONT. 174

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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF ESR 41134 60HZ UCS ANG C
DRAWN W.HEDING SCALE NLINE THIRD ANGLE
DATE 11/19/04 RELEASE DATE 11/29/04
DES BY PEPLINSKI P&H Harnischfeger
DATE 11/19/04 SIMILAR TO R56125
ERS BY PEPLINSKI TITLE SCHEMATIC DIAGRAM
DATE 11/24/04
CHNG BY WNH 10/16/06
DATE 11/29/04
DWG NO DWG MODEL 4100XPB
R56496 SH 173
CONT. 174

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496
SH 174
CONT. 175

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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

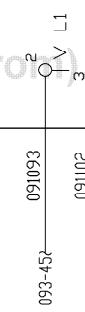
REF	ES41134	60HZ	UCS	NAME
DRAWN BY	W.HEDING	SCALE	NONE	Harnischfeger
DESIGNED BY	DATE 11/19/04	RELEASE DATE	11/29/04	P&H
MADE BY	ER	THIRD ANGLE PROJECTION		MILWAUKEE WI USA
CHNG BY	PEPLINSKI	REVISION	01	SIMILAR TO
CHNG DATE	DATE 11/19/04	DATE	11/29/04	R56125
01	ERN 35391	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM
CHNG MARK	CHANGE	ENG'D BY	DATE 11/24/04	
W.NH 10/16/06	CHNG BY	REV'D BY	DATE 11/29/04	PROD. MODEL 4100XPB
		ER	DWG NO	R56496
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

SH 174
CONT. 175

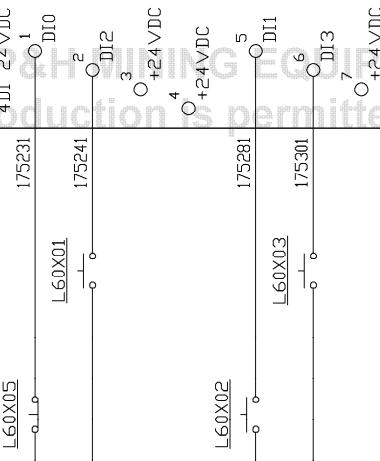
DWG NO R56496
SH 175
CONT. 176

LUBE ROOM
I/O MODULES

2.30.0

L60B01B
PWR VDDLUBE ROOM
I/O MODULES

2.30.1

L60B01C
4DI 24VDC

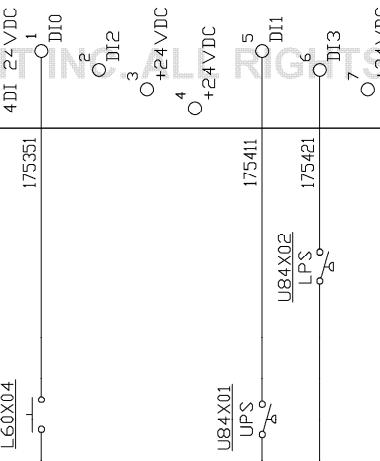
LUBE SYSTEM

ALARM SILENCE

PUSHBUTTON

LUBE PUSHBUTTON
UPPER GREASE

2.30.2

L60B01D
4DI 24VDCLUBE PUSHBUTTON
LOWER GREASE

LUBE PUSHBUTTON

UPPER OPEN GEAR
(ROLLER CIRCLE)

SPARE

PRESSURE SWITCH
UPPER LUBE

PRESSURE SWITCH

LOWER LUBE

091102
176-01

SHEET/
LINE NO
175-01

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01
CHNG MARK

ERN 35391

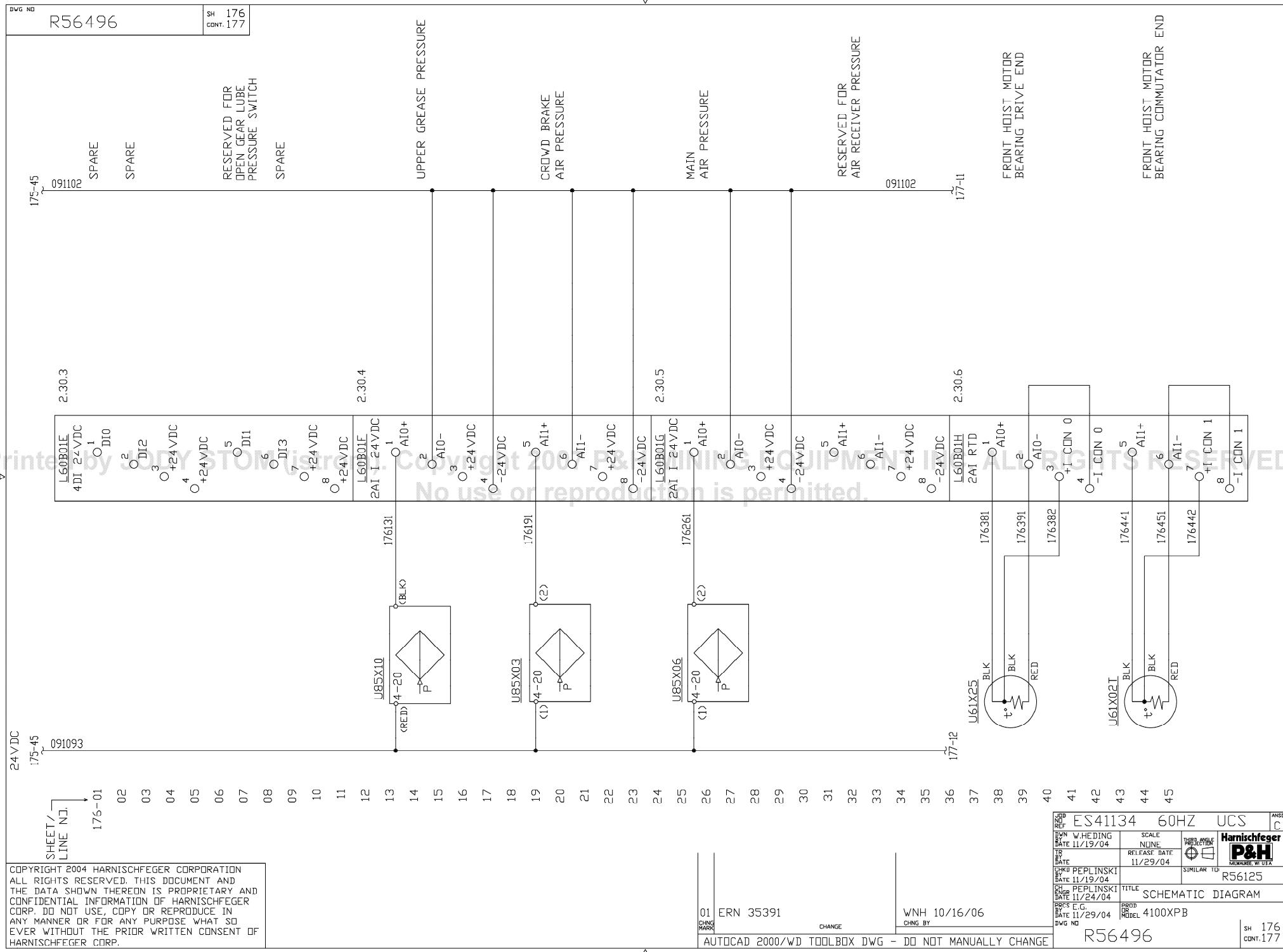
CHANGE

W/NH 10/16/06

CHNG BY

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

REF ID: E841134 60HZ UCS
DRAWN BY: W.HEDING DATE: 11/19/04
DESIGNED BY: PEPLINSKI DATE: 11/19/04
ENGINEERED BY: PEPLINSKI DATE: 11/24/04
REVIEWED BY: PEPLINSKI DATE: 11/29/04
RELEASE DATE: 11/29/04
SIMILAR TO: R56125
TITLE: SCHEMATIC DIAGRAM
DATE: 11/29/04
DWG NO: 4100XPB
MODEL: 4100XPB
R56496
SH 175
CONT.176



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

DWG NO R56496
SH 180
CONT. 181

175-45
091102

2.30.19
L60B01W
PWR VDD

24VDC
179-45
091093
SHEET / LINE NO
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GND

V

L1

CM/NEUT

6

7

CM/NEUT

8

GND

2.30.20
L60B01X
2D0 24VDC 2A
O D00
O 24VDC
O 24VDC
O N.C.
O CM
O N.C.

24VDC

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496
SH 181
CONT. 182

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LINE NO
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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.H.EDDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	R56125
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	CHNG BY		
CHNG MARK	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				
DWG NO R56496				
SH 181 CONT. 182				

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496
SH 183
CONT. 184

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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	CHNG BY	DWG NO	R56125
CHNG MARK	CHANGE	CHNG BY	CHNG BY	
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				

R56496

SH 183
CONT. 184

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496
SH 184
CONT. 185

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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	NONE	Harnischfeger
DATE	11/19/04	RELEASE DATE	11/29/04	P&H
ENG'D BY		THIRD ANGLE PROJECTION		MILWAUKEE, WI USA
DATE				
DESIGN BY	PEPLINSKI	TITLE	SCHEMATIC DIAGRAM	
DATE	11/19/04	ENG'D BY	PEPLINSKI	
DATE	11/24/04	DATE	11/29/04	
DESIGN BY	ERN 35391	PROD BY	4100XPB	
DATE		DATE		
CHNG BY	W.NH 10/16/06	CHNG BY		
CHNG MARK	CHANGE	CHNG BY		
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				
DWG NO R56496				
SH 184 CONT. 185				

DWG NO R56496
SH 185
CONT. 186

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I/O MODULES

2.31.0

B20B01B
PWR VDD

094-19 091013

094-18 091022

2.31.1

B20B01C
4DI 24VDC

DI0 1

DI0 2

DI1 2

DI1 3

DI1 4

DI1 5

DI1 6

DI1 7

DI1 8

DI1 9

DI1 10

DI1 11

DI1 12

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DI1 14

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DI1 33

DI1 34

DI1 35

CROWD BRAKE
RELEASE SWITCH
CROWD BRAKE
WEAR SWITCH

SPARE

CROWD BELT TENSIONER
BRAKE RELEASE SWITCH

SPARE

CROWD BELT TENSIONER
BRAKE RELEASE SWITCH

SPARE

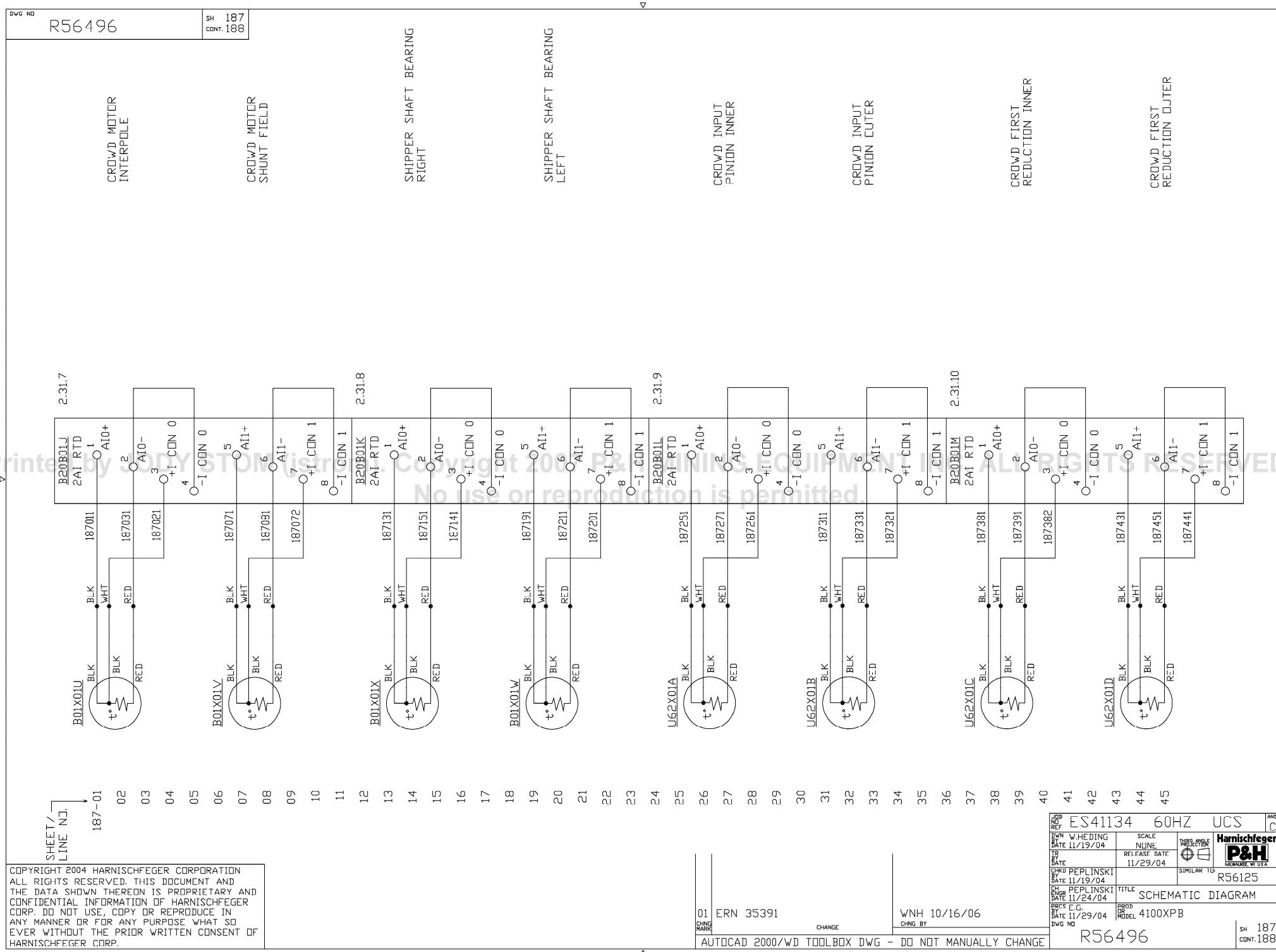
091022
186-01B20B01R
(WHT)

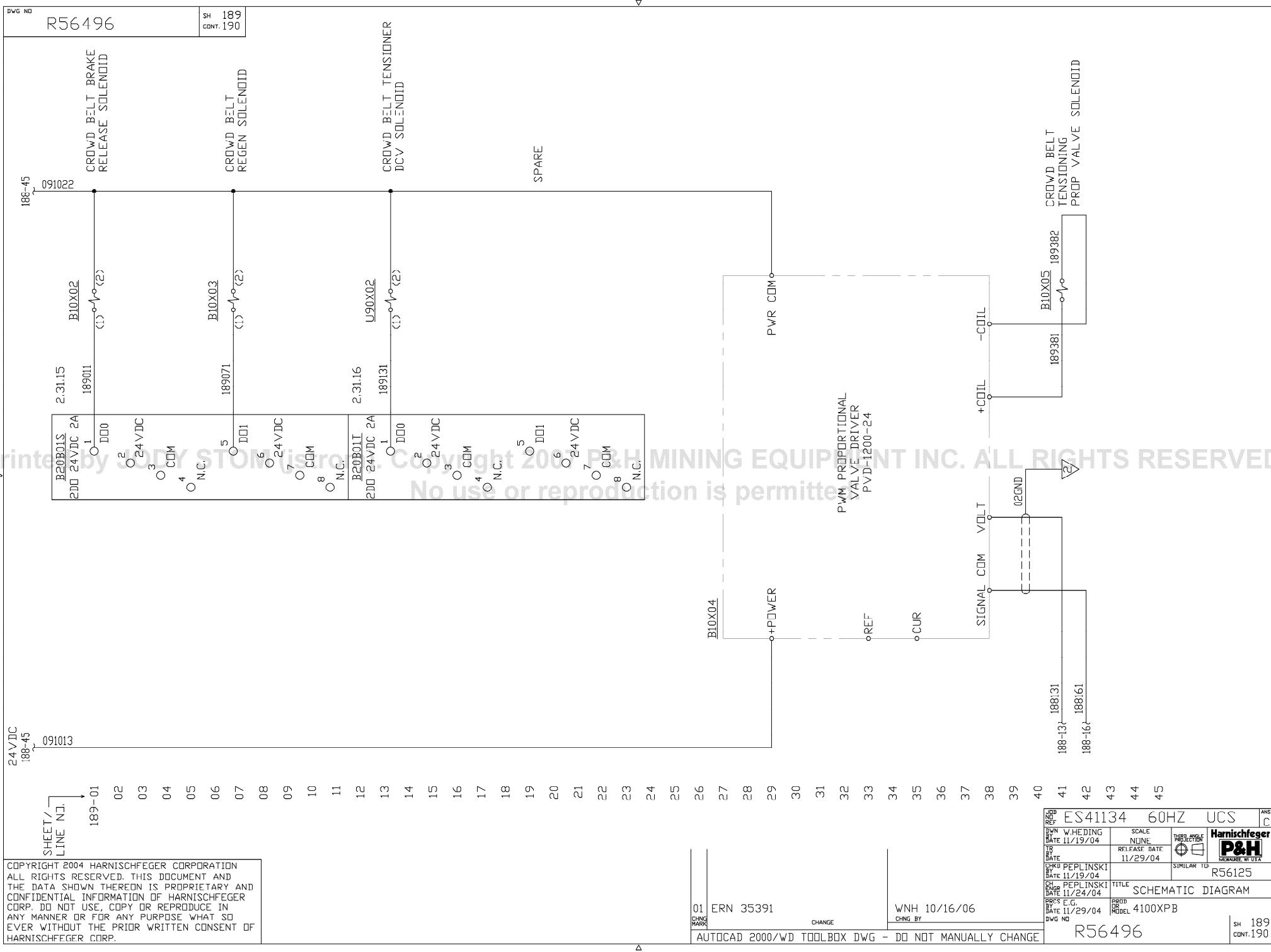
185231

B04X02R
(BLK)

185241

(RED)





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DWG NO R56496
SH 190
CONT. 191

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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

01	ERN 35391	W NH 10/16/06	ES41134 60HZ UCS	Harnischfeger P&H MILWAUKEE, WI USA
CHNG MARK	CHANGE	CHNG BY	REF ID: R56125	DATE 11/29/04
BY PEPLINSKI DATE 11/19/04	ENG PEPLINSKI DATE 11/24/04	DES E.G. DATE 11/29/04	SCHEMATIC DIAGRAM PROD MODEL 4100XPB	TITLE
DES BY DATE 11/19/04	PROD BY DATE 11/29/04	CHNG NO	SH 190 CONT. 191	DATE 11/29/04
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE				R56496

R56496

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CONT. 192

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LINE NO.

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

01	ERN 35391	CHANGE	WNH 10/16/06 CHNG BY
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE			

JDF NO REF		ES41134	60HZ	UCS	ANSI C
DWN W. HEADING DATE 11/19/04		SCALE NONE	THIRD ANGLE PROJECTION 		Harnischfeiger P+H MILWAUKEE, WI U.S.A.
TR DATE 11/19/04		RELEASE DATE 11/29/04			
CHGD PEPLINSKI DATE 11/24/04		SIMILAR TO	R56125		
CHGD PEPLINSKI DATE 11/24/04		TITLE	SCHEMATIC DIAGRAM		
PROCS E.G. DATE 11/29/04 DWG NO		PROD MODEL	4100XPB		
R56496					
SH 191 CONT. 192					

1 2 3 4 5 6 7 8 9 10 11 ▽ 12 13 14 15 16 17 18 19 20 21

DWG NO R56496
SH 192
CONT. 193

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1 2 3 4 5 6 7 8 9 10 11 ▲ 12 13 14 15 16 17 18 19 20 21

REF	ES41134	60HZ	UCS	NAME
DESIGN BY	W.HEDING	SCALE	THIRD ANGLE	Harnischfeger
DATE	11/19/04	LINE	SECTION	P&H
ENG'D BY		RELEASE DATE		MILWAUKEE WI USA
DATE		11/29/04		R56125
CHNG BY	01 ERN 35391	CHNG BY	TITLE	SCHEMATIC DIAGRAM
DATE	11/19/04	DATE	11/29/04	
CHNG MARK		CHNG BY	BY'S L.G.	
			PROD	MODEL 4100XPB
			DR	
			DWG NO	R56496
			SH	192
			CONT.	193

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

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DWG NO R56496
SH 193
CONT. 194

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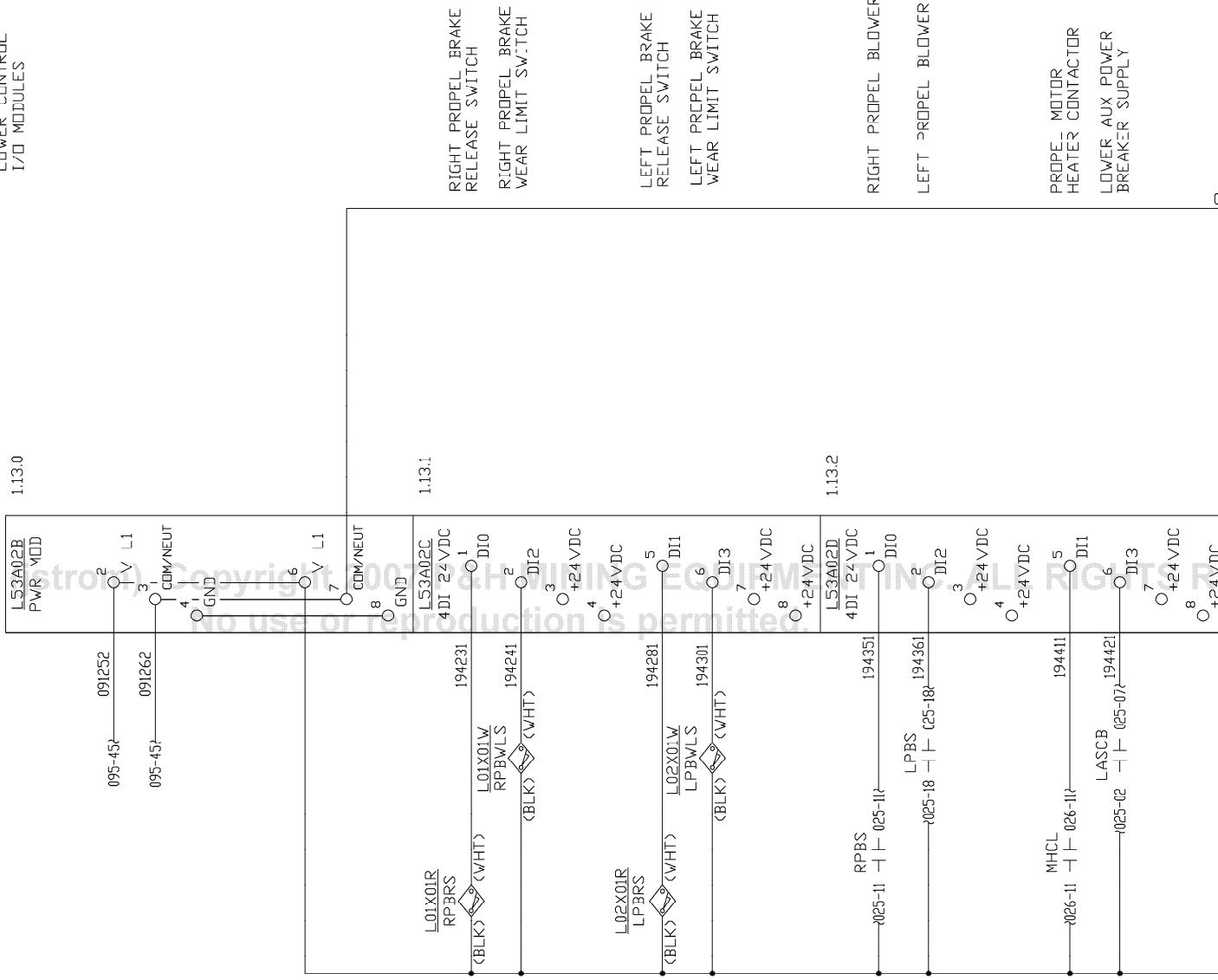
REF ESR 41134 60HZ UCS ANG C
DRAWN W.HEDING SCALE NLINE THIRD ANGLE
DATE 11/19/04 RELEASE DATE 11/29/04
DES BY PEPLINSKI P&H Harnischfeger
DATE 11/19/04 SIMILAR TO R56125
ERS BY PEPLINSKI TITLE SCHEMATIC DIAGRAM
DATE 11/24/04
CHNG BY WNH 10/16/06
DATE 11/29/04
DWG NO DWG MODEL 4100XPB
R56496 SH 193
CONT. 194

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

R56496

SH 194
CONT. 195

LOWER CONTROL
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01 ERN 3539
CHNG

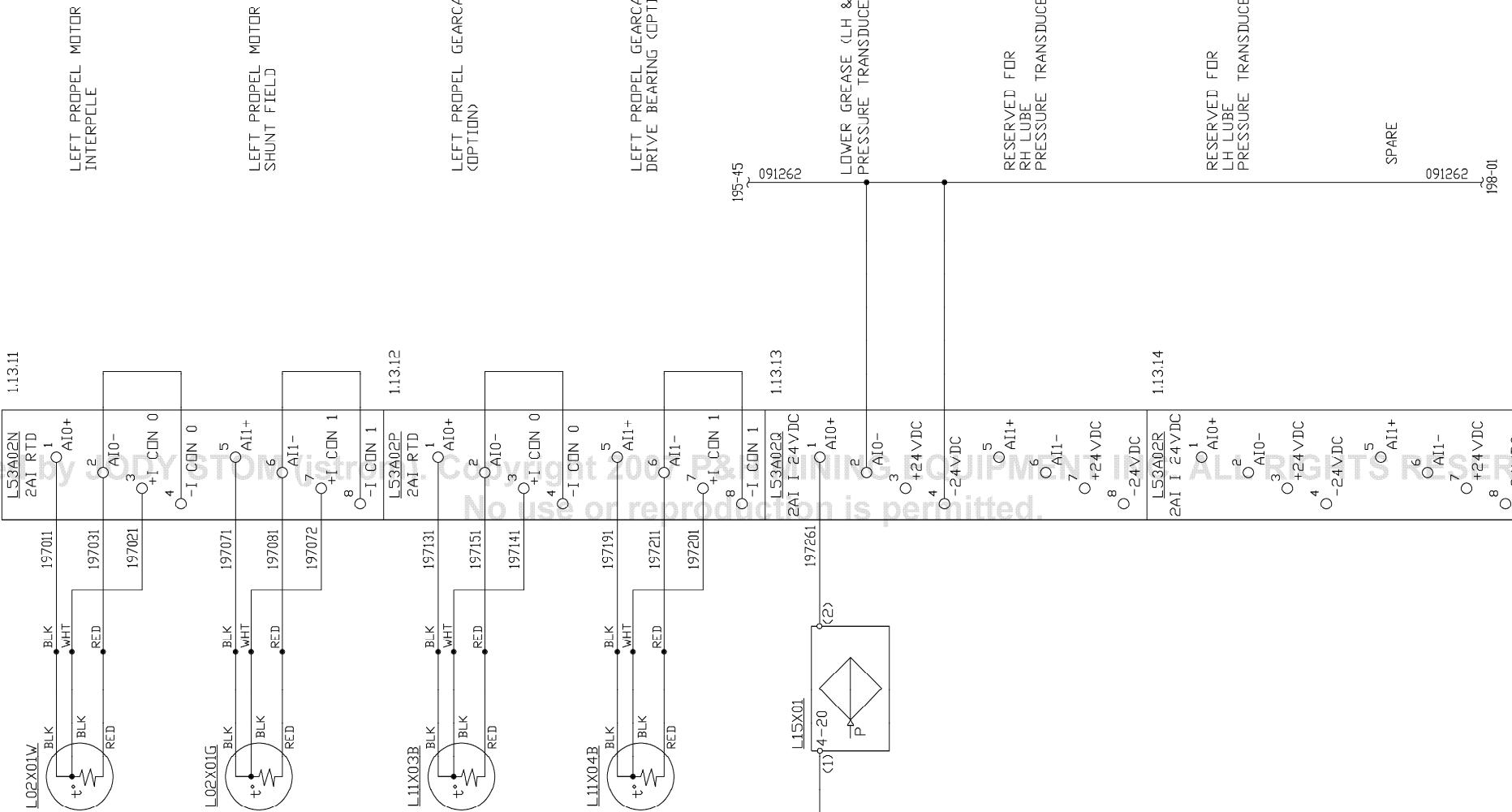
AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

ES41134		60HZ	UCS	ANSI C
W.H. HEADING	SCALE NINE	THIRD ANGLE PROJECTION	Harnischfeger P&H MILWAUKEE, WI U.S.A.	
DATE 11/19/04	RELEASE DATE 11/29/04			
KD PEPLINSKI	SIMILAR TO	R56125		
DATE 11/19/04	TITLE SCHEMATIC DIAGRAM			
NG PEPLINSKI	PROD MODEL 4100XPB			
PC E.G. DATE 11/29/04	PROD MODEL 4100XPB			
WG NO				
R56496				
				SH 194
				CONT. 195

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R56496

197
CONT. 198



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01 ERN 3539

CHNG
MARK

AUTOCAD 200

WNH 10/16/0

CHNG BY

DWG - DO NOT MANU

JOB NO. REF.	ES41134	60HZ	UCS	ANGI C
DRAWN BY W.HEDING DATE 11/19/04		SCALE NONE	THIRD ANGLE PROJECTION	
TR BY DATE		RELEASE DATE 11/29/04		MILWAUKEE, WI USA
CHK'D PEPLINSKI DATE 11/19/04		SIMILAR TO	R56125	
CHG'D PEPLINSKI DATE 11/24/04		TITLE	SCHEMATIC DIAGRAM	
PBCS E.G. DATE 11/29/04 JWG NO	PROD DR	MODEL	4100XPB	
R56496				
				SH 197 CONT.198

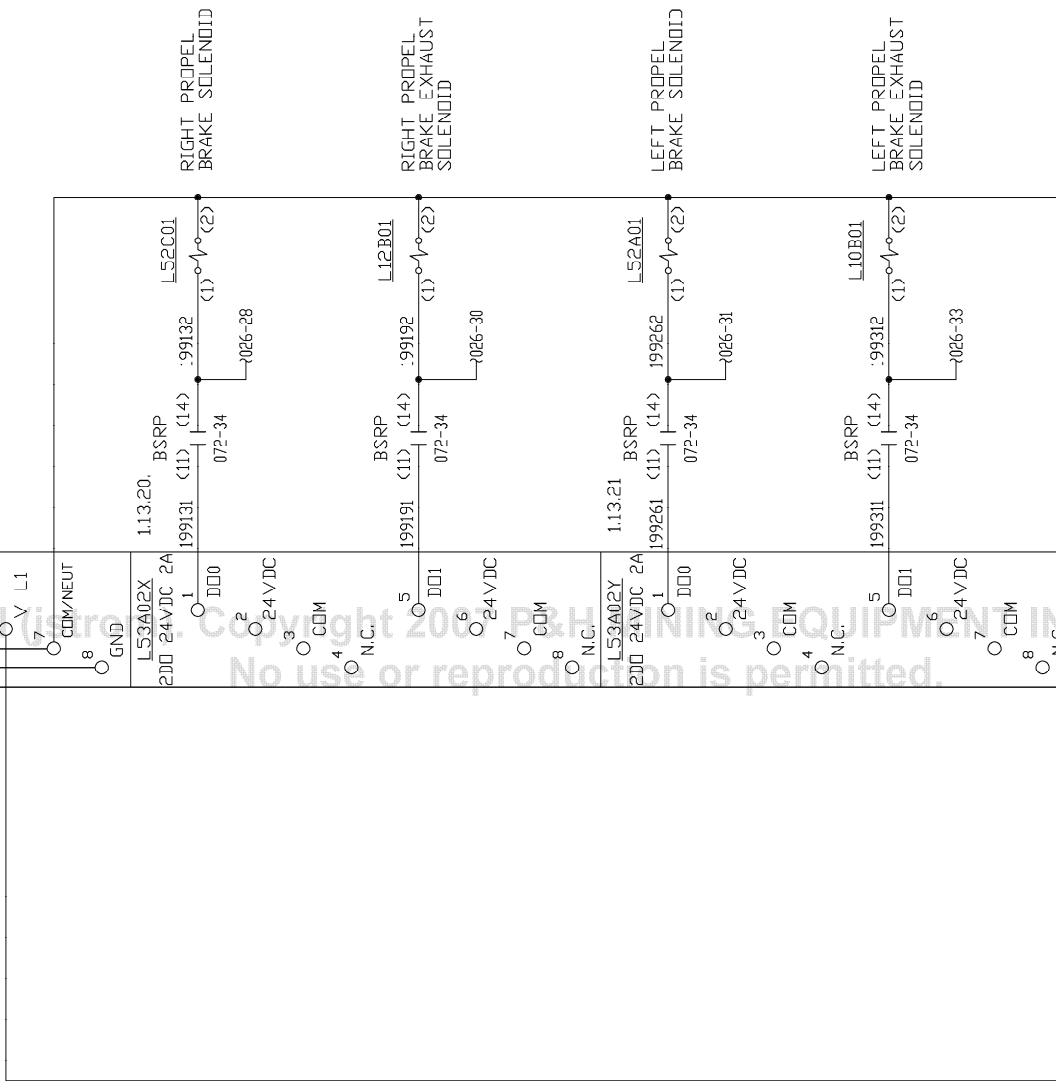
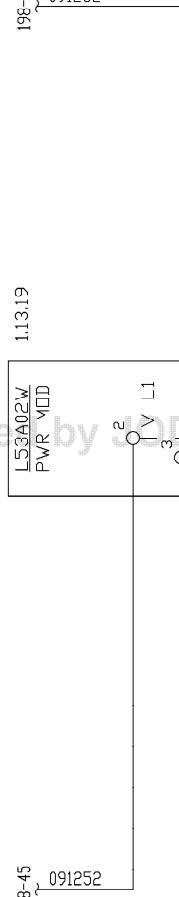
No R56496

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CHNG

000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

41	42	43	44	45		
ES41134					60HZ	UCS
W.HEDING DATE 11/19/04		SCALE NINE	THIRD ANGLE PROJECTION	Harnischfeger P+H MILWAUKEE, WI U.S.A.		
RELEASE DATE 11/29/04		SIMILAR TO R56125				
KDO PEPLINSKI DATE 11/19/04		TITLE SCHEMATIC DIAGRAM				
GP PEPLINSKI DATE 11/24/04		PROD MODEL 4100XPB				
OS E.G. DATE 11/29/04						
WG ND						
R56496						

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DWG NO R56496
SH 200
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01	ERN 35391	W NH 10/16/06	ES41134 60HZ UCS	Harnischfeger P&H MILWAUKEE, WI USA
CHNG MARK	CHANGE	CHNG BY	REF ID: R56125	
BY PEPLINSKI DATE 11/19/04	ENG PEPLINSKI DATE 11/24/04	TITLE SCHEMATIC DIAGRAM	BY'S E.G. DATE 11/29/04	PROD DR MODEL 4100XPB
ER	RS	RELEASE DATE 11/29/04	BY'S E.G. DATE 11/29/04	DWG NO
DATE	DATE	DATE	DATE	DATE

AUTOCAD 2000/WD TOOLBOX DWG - DO NOT MANUALLY CHANGE

R56496

SH 200
CONT. 201

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DWG NO R56496
SH 201
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REF	ES41134	60HZ	UCS	NAME
BORN	W.H. DEDING	SCALE	NONE	THIRD ANGLE
DATE	11/19/04	RELEASE DATE	11/29/04	Harnischfeger
BY		REVISION		P&H
DATE		DATE		MILWAUKEE, WI USA
01	ERN 35391	PEPLINSKI	TITLE	R56125
CHNG MARK		ENG'D BY	SCHEMATIC DIAGRAM	
		PEPLINSKI		
		DATE 11/19/04		
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DWG NO R56496
SH 202
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01	ERN 35391	W NH 10/16/06	ES41134 60HZ UCS	Harnischfeger P&H MILWAUKEE, WI USA
CHNG MARK	CHANGE	CHNG BY	REF ID: R56125	SH 202 CONT. 203
BY: PEPLINSKI DATE: 11/19/04	ENG: PEPLINSKI DATE: 11/24/04	TITLE: SCHEMATIC DIAGRAM	BY: S.C.G. DATE: 11/29/04	PROD: MODEL 4100XPB
BY: PEPLINSKI DATE: 11/19/04	ENG: PEPLINSKI DATE: 11/24/04	RELEASE DATE: 11/29/04	BY: C.G. DATE: 11/29/04	DWG NO: R56496
12	13	14	15	16
17	18	19	20	21
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27	28	29	30	31
32	33	34	35	36
37	38	39	40	41
42	43	44	45	46

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DWG NO R56496
SH 203
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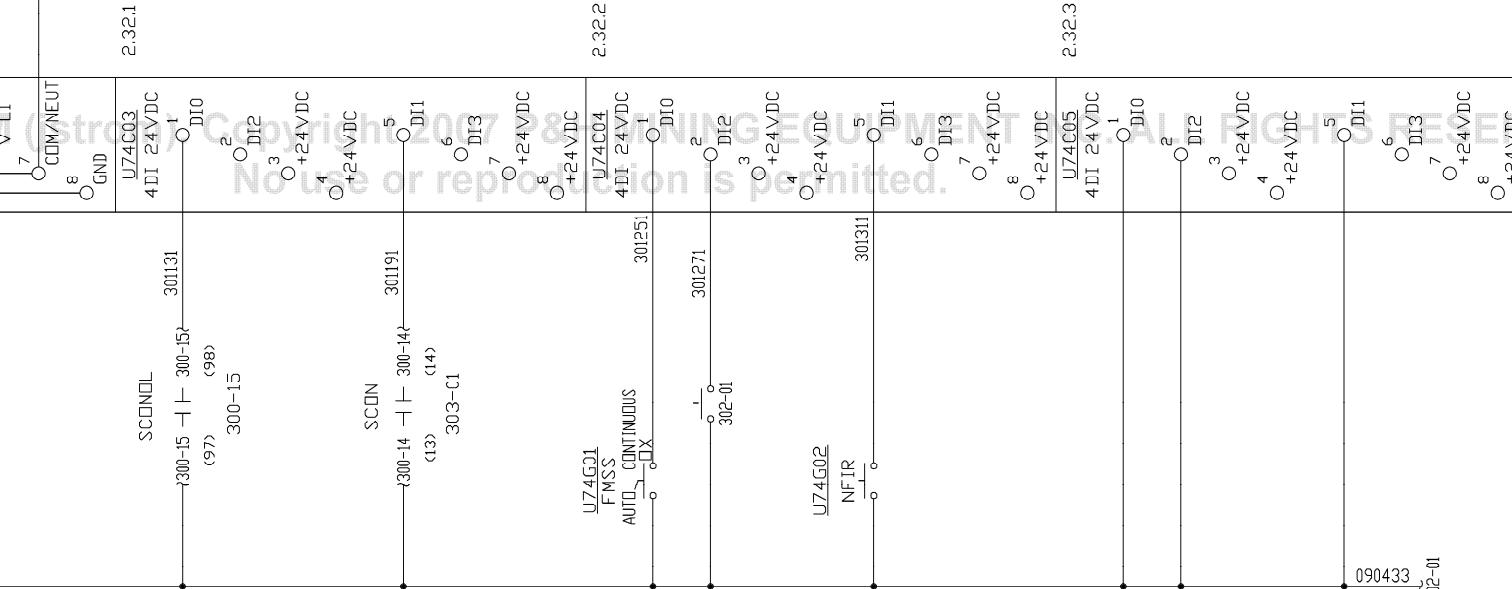
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REF ESR 35391 DATE 10/16/06
BY PEPLINSKI BY PEPLINSKI TITLE SCHEMATIC DIAGRAM
CHNG MARK CHNG BY
01
DATE 11/19/04
ENG DATE 11/24/04
DES DATE 11/29/04
RND DATE 11/29/04
DATE 11/29/04
DWG NO 4100XPB
SIMILAR TO R56125
Harnischfeger
P&H
MILWAUKEE, WI USA
R56496
SH 203
CONT. 300

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DWG NO
R56496SH 301
CONT. 302FILTRATION SYSTEM
I/O MODULES

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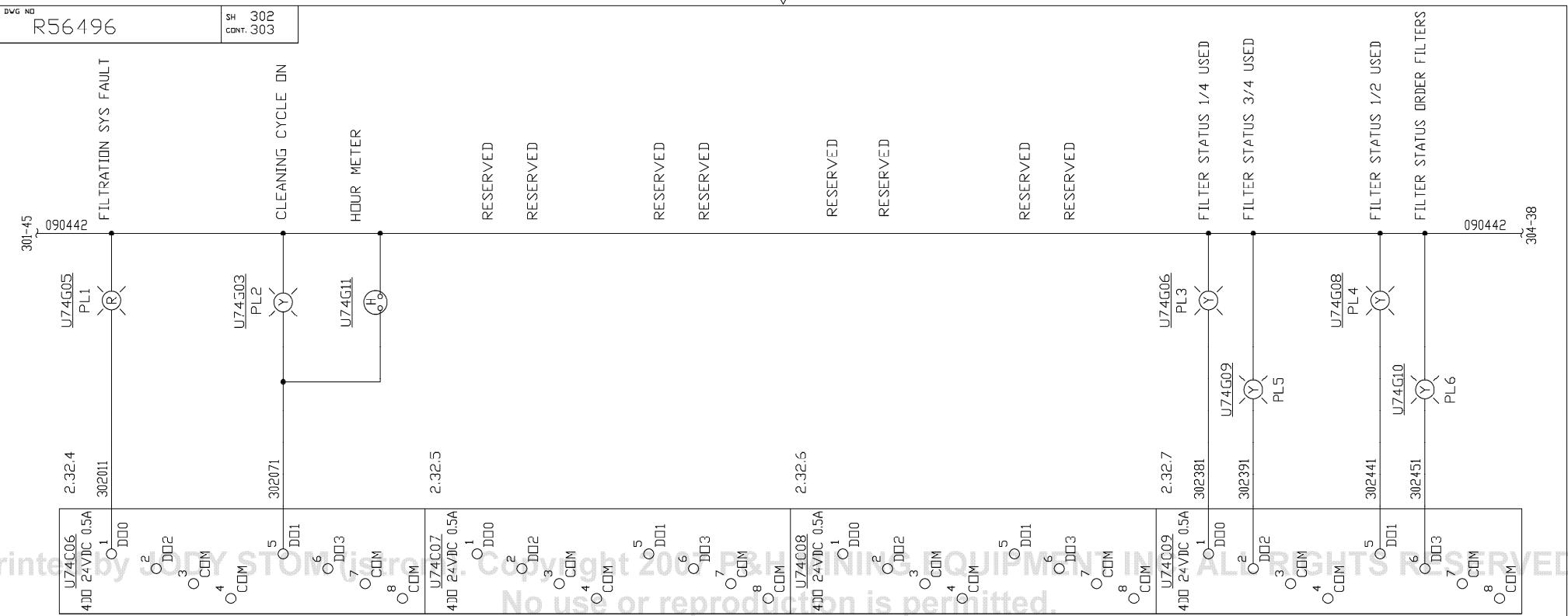
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REF	ES41134	60HZ	UCS
DRAWN BY	W.H. HEDING	SCALE	THIRD ANGLE
DATE	11/19/04	LINE	SECTION
DESIGNER		RELEASE DATE	
DATE		11/29/04	
CHG MARK	01 ERN 35391	CHG BY	SIMILAR TO
		W.N.H. 10/16/06	R56125
		CHANGE	
		W.N.H. 10/16/06	
		CHG BY	

AUTOCAD/AUTOCAD ELECTRICAL DWG - DO NOT MANUALLY CHANGE

R56496

SH 301
CONT. 302



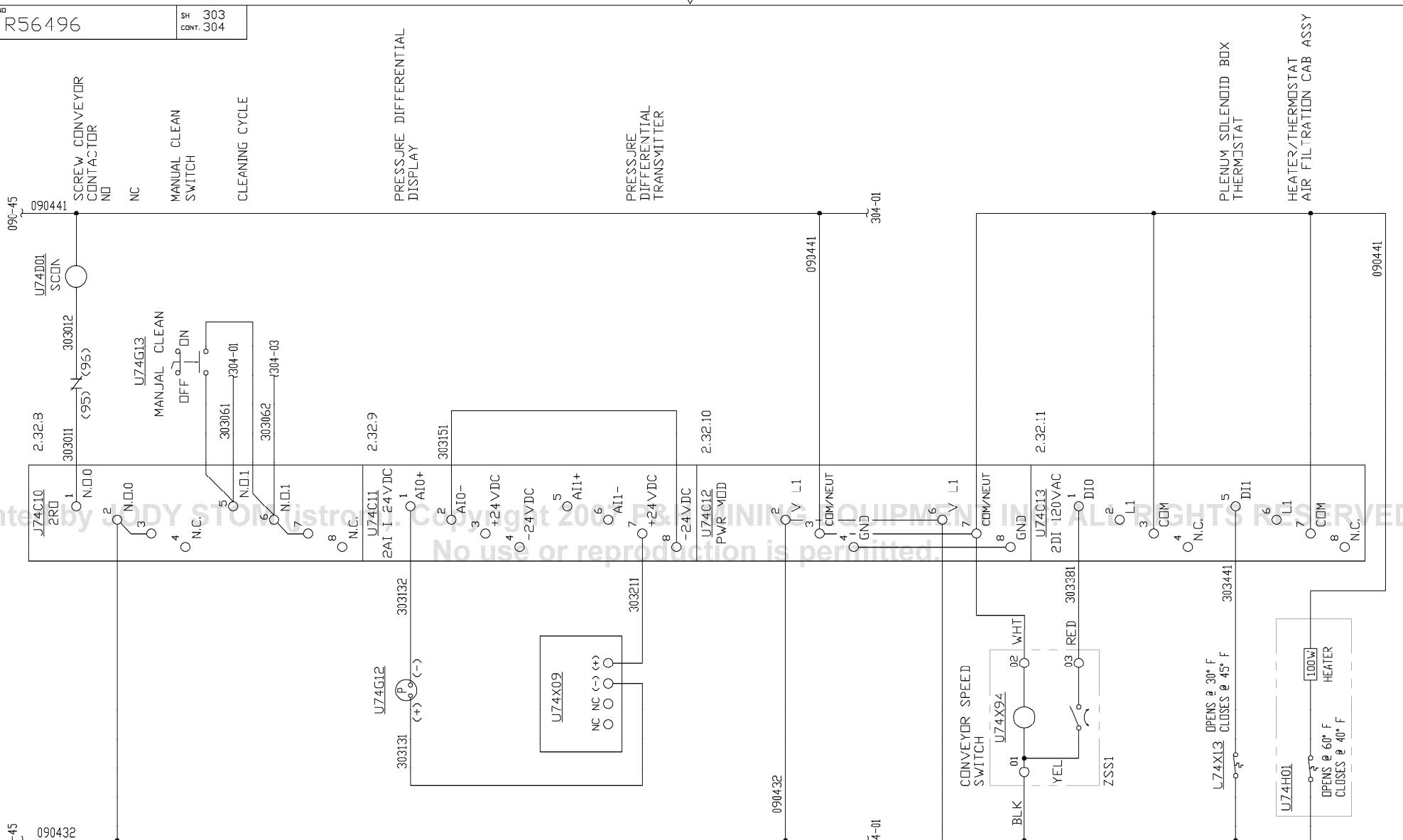
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01 ERN 35391 WNH 10/16/06
CHNG BY
AUTOCAD/AUTOCAD ELECTRICAL DWG-DO NOT MANUALLY CHANGE

JOB NO	ES41134	60HZ	UCS	ANSI REF
BORN	W.HEDING	SCALE	THIRD ANGLE PROJECTION	C
DATE	11/19/04	NINE		
ER		RELEASE DATE		
DATE		11/29/04		
GHD	PEPLINSKI	SIMILAR TO	R56125	
DATE	11/19/04	TITLE	SCHEMATIC DIAGRAM	
GHD	PEPLINSKI	PCB		
DATE	11/24/04	MODEL	4100XPB	
BRC'S E.G.		PCB		
DATE	11/29/04	MODEL		
DWG NO		SH	302	
CONT. 303				
R56496				

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P&H MINING EQUIPMENT INC.



		DATE 11/17/04	LINE	PRINTED	P&H
		TIR	RELEASE DATE	11/29/04	BY
		BX	SIMILAR TO	R56125	DATE
		OKU PEPLINSKI			
		DATE 11/19/04			
		CHG PEPLINSKI			
		DATE 11/24/04			
01	ERN 35391	POST LG.	PROD	SCHEMATIC DIAGRAM	
CHNG MARK		DATE 11/29/04	DR	MODEL 4100XPB	
	CHANGE	DWG NO			
	CHNG BY				
WNH 10/16/06					
AUTOCAD/AUTOCAD ELECTRICAL DWG-DO NOT MANUALLY CHANGE					
R56496					
SH 303					
CONT. 304					

