

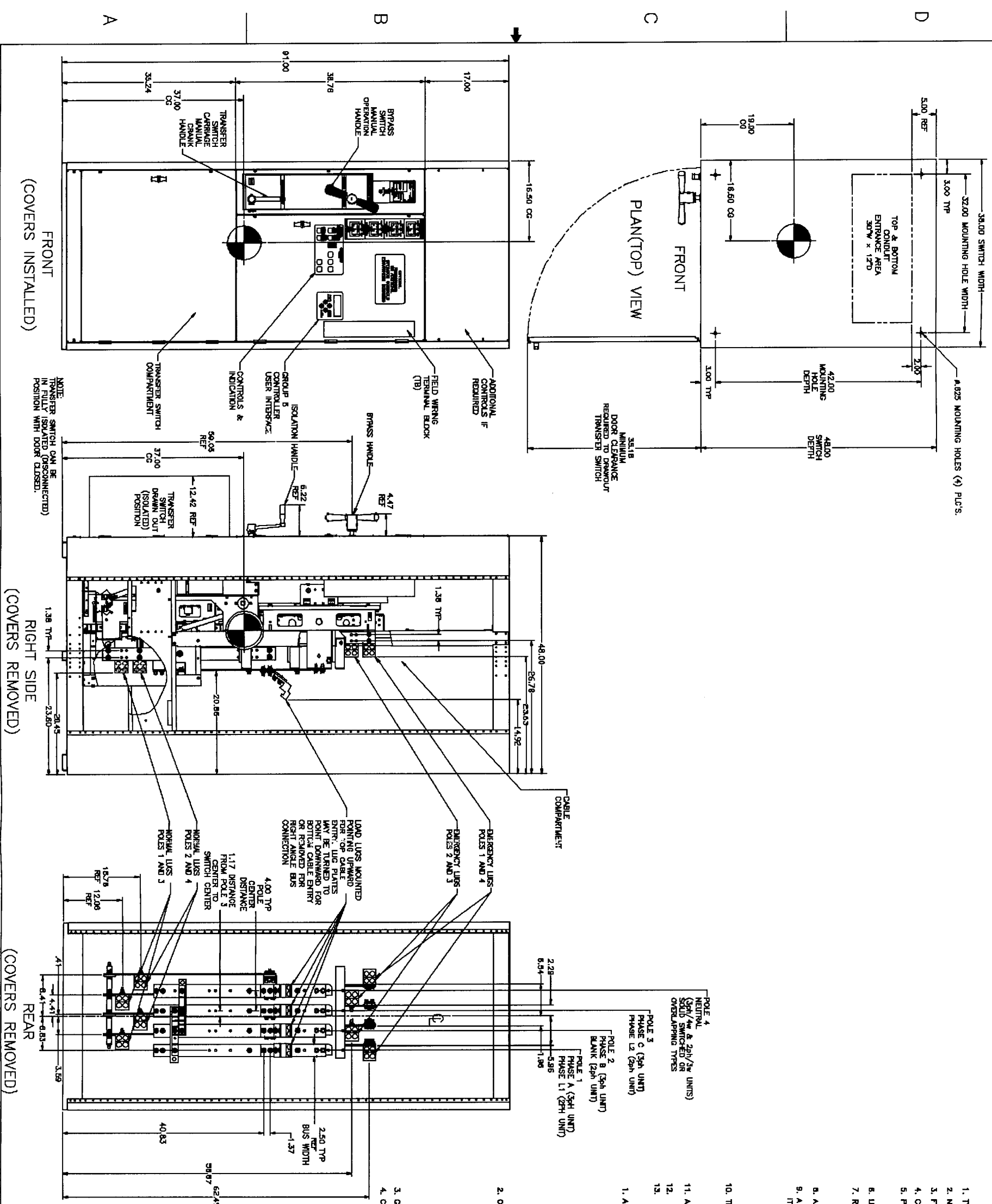
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GENERAL NOTES

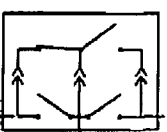
1. TYPE 1 ENCLOSURE, FREE STANDING, FLOOR MOUNTED. 12 GAUGE FORMED FRAME CONSTRUCTION.
2. NEC STANDARD GAUGE PAN TYPE DOORS WITH LOCKABLE HANDLES AND REMOVABLE COVERS.
3. FINISH: ASA 61 GRAY, POLYESTER POWDER. UL RECOGNIZED.
4. CONSTRUCTION IS IN ACCORDANCE WITH UL 1008.
5. PADLOCKING PROVISIONS ARE INCLUDED.
ISOLATION HANDLE: THE TRANSFER SWITCH ISOLATION HANDLE MAY BE PADLOCKED WITH THE TRANSFER SWITCH IN THE FULLY ISOLATED (DISCONNECTED POSITION).
6. UNIT CAN BE ADAPTED FOR CONNECTION OF BUS DUCT FLANGES. (CONSULT FACTORY)
7. RECOMMENDED CLEARANCES:
FRONT: 48 INCHES
REAR: 36 INCHES
8. A 20% MATED GROUND BUS IS PROVIDED AT THE BOTTOM REAR OF THE CABLE COMPARTMENT.
9. A FULL RATED NEUTRAL CONNECTION FOR EACH SOURCE AND THE LOAD IS OPTIONAL. WHEN PROVIDED IT IS IN ONE OF THE FOLLOWING FORMATS AS SPECIFIED BY THE CATALOG NO. NEUTRAL TYPE:
TYPE A: SOLID NEUTRAL BUS
TYPE B: SWITCHED NEUTRAL POLE
TYPE C: OVERLAPPING NEUTRAL POLE (NOT AVAILABLE ON 7A0TB & 7A0TB UNITS)
10. THE STANDARD SWITCH CONFIGURATION IS FOR TOP EMERGENCY, CENTER LOAD, AND BOTTOM NORMAL. OPTIONALLY, THE SWITCH MAY BE SUPPLIED WITH REVERSE SOURCES.
(REFER TO THE WIRING DIAGRAM FURNISHED WITH EACH TRANSFER SWITCH TO DETERMINE TERMINATION POSITIONS).
11. APPROXIMATE WEIGHT: 1560 LBS.
12. STANDARD OUTLINE FOR 4 POLE (BS) 400 AMP 7A0TB.
13.  DENOTES CENTER OF GRAVITY

CABLING NOTES

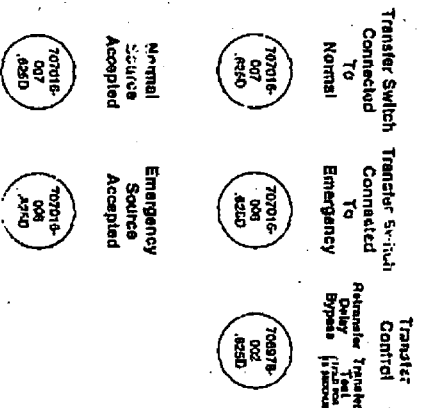
- A. ALL SIZES SUPPLIED STANDARD WITH MECHANICAL (SCREW TYPE) LUGS ON THE NORMAL EMERGENCY & LOAD. ONE (1) LUG PER PHASE AND NEUTRAL. EACH SUITABLE FOR CONNECTION OF TWO (2) #2-800 MCM CU/AL CABLE FOR 600 AMP SWITCH AND FOUR POLE (B3) 400 AMP.
- FOUR (4) 1/0-750 MCM CU/AL CABLE FOR 800-1200 AMP SWITCH.
- A. LUG MATERIAL: ALUMINUM ALLOY 6061-T3 WITH ELECTRO TIN PLATED FINISH.
- B. SCREW MATERIAL: ALUMINUM ALLOY 6062-T3 WITH ELECTRO TIN PLATED FINISH.
- C. U/L LISTED, CSA CERTIFIED.
- D. LUG SCREW TIGHTENING TORQUE PER UL 4868, 375 IN.-LBS.
- E. SUITABLE WIRE BENDING SPACE IS PROVIDED FOR UP TO TWO (2) 50MCM CABLES PER TERMINAL FOR THE 600 AMP SWITCH & FOUR (4) 900 MCM CABLES PER TERMINAL FOR THE 800-1200 AMP
2. OPTIONAL COPPER CRAMP LUGS MAY BE SUPPLIED. UP TO THREE (3) TWO HOLE LONG BARREL CU CRAMPS LUGS RATED FOR UP TO 750MVA. (REFER TO CRAMP LUG INSTALLATION DATA PROVIDED WITH UNIT FOR FULL INSTALLATION DETAILS).
- A. LUG MATERIAL: HIGH CONDUCTIVITY WROUGHT COPPER FINISH, ELECTRO TIN PLATED.
- B. U/L LISTED, CSA CERTIFIED.
- C. LUG MOUNTING HARDWARE TIGHTENING TORQUE. (REFER TO WITHSTAND CURRENT RATING LABEL PROVIDED ON EACH TRANSFER SWITCH).
- D. SUITABLE WIRE BENDING SPACE IS PROVIDED FOR UP TO THREE (3) 750MCM CABLES PER TERMINAL.
3. GROUND LUGS FOR UP TO (12) 750MCM - 1/0 CU/AL CABLES ARE PROVIDED AS STANDARD.
4. CONSULT FACTORY FOR OTHER TERMINATION REQUIREMENTS.

[illegible]

Automatic Transfer & Bypass - Isolation Switch



ASCO POWER TECHNOLOGIES - Flushing Park, New Jersey 07032

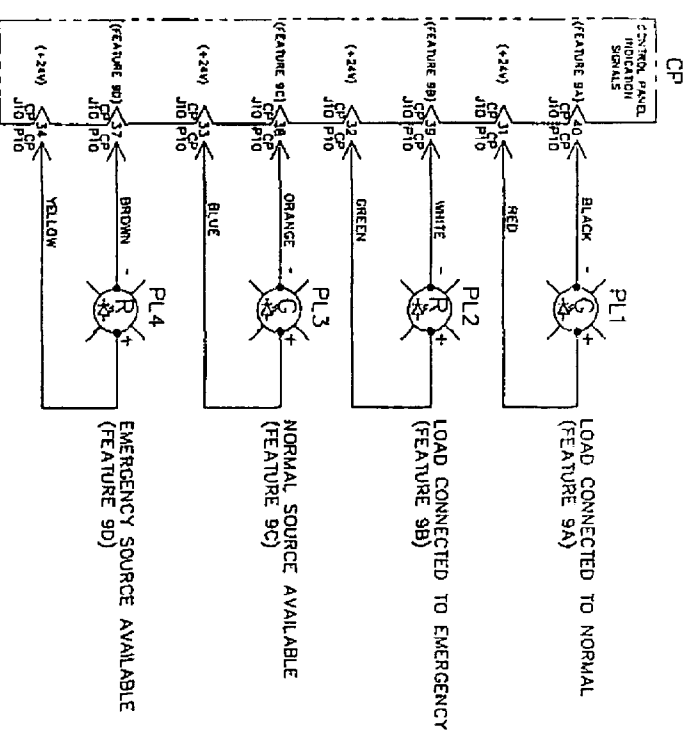


ID	DESCRIPTION
PL1	TS CONNECTED TO NORMAL (GREEN)
PL2	TS CONNECTED TO EMERGENCY (RED)
PL3	NORMAL SOURCE ACCEPTED (GREEN)
PL4	EMERGENCY SOURCE ACCEPTED (RED)
SS1	TRANSFER CONTROL TEST - TD BYPASS

OPERATOR CONTROLS

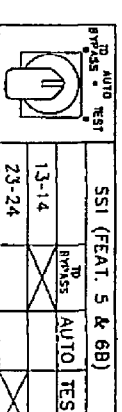
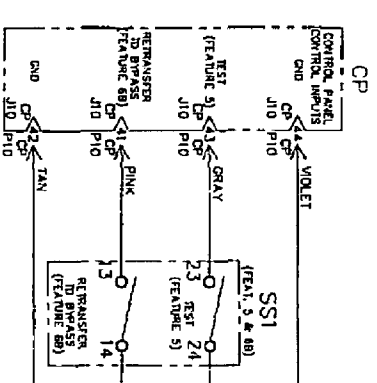
NOTES:

1. USE LABEL 613645.
2. AFFIX LABEL TO CONTROL NAMEPLATE 605473-001.
3. LOCATE COMPONENTS AS SHOWN AT DIE CUT HOLE LOCATION.



HAINESNESS 713083 (D)		CL/R	AWG
CP-P10-31, PL 1(+)		RED	
CP-P10-42, SS1-14		TAN	
CP-P10-40, PL 1(-)		BLK	
CP-P10-38, PL 2(-)		WHT	
CP-P10-36, PL 3(+)		ORG	
CP-P10-37, PL 4(-)		BRN	
CP-P10-43, SS1-23		GRY	
CP-P10-41, SS1-13		PNK	
CP-P10-37, PL 2(+)		GRN	
CP-P10-33, PL 3(+)		BLU	
CP-P10-34, PL 4(+)		YEL	
CP-P10-44, SS1-24		VD	

22
(12 COMMON)



PROJECT NAME:										CHANGE LETTER	ECN NO.	BY	APP.	DATE
DOOR CONTROL										SUBSIDIARY DISTRIBUTION				
7000 SERIES: 7ATB STANDARD										THIRD ANGLE PROJECTION				
9A,9B,9C,9D,5U														
MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003. FOR PLASTIC PARTS SEE MP-1-055										ASSEM. REF. NO.				
PROPERTY OF AUTOMATIC SWITCH COMPANY. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.										ASCO POWER TECHNOLOGIES, L.P. FLORHAM PARK, NEW JERSEY 07932 PRINTED IN U.S.A.				
DRAWN BY JPB 10/97 CHECKED DRAFTING APPROVAL FINAL APPROVAL JPB 10/97										SCALE 1.5:1 SIZE DWG. NO. COMPUTER GENERATED DRAWING FILE				
BS 613654-001 CHANGE A ECN 156897 SHEET														

THREE PHASE WIRING FOR ASCO 7000 SERIES AUTOMATIC TRANSFER & BYPASS-ISOLATION SWITCHES TYPE H7ATB RATED 600-1200 AMPERES

FEATURES, SETTINGS, OPERATION, ACCESSORIES & NOTES

ENGINE EXERCISER

THE ENGINE EXERCISER FEATURE PROVIDES A MEANS TO PERFORM AUTOMATIC EXERCISING OF THE ENGINE-GENERATOR SET EITHER WITH OR WITHOUT LOAD TRANSFER. THE USER CAN ENABLE OR DISABLE EXERCISE ROUTINES. EACH ROUTINE INCLUDES:

1. ENABLE OR DISABLE TRANSFER OF THE LOAD DURING THE ROUTINE
2. SET START TIME OF ROUTINE
3. SET STOP TIME OF ROUTINE

4. SET THE DURATION OF THE ROUTINE

PARAMETER	(CLOCK SET)	RANGE OF SETTINGS	DEFAULT SETTINGS
MONTH	JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC		CURRENT DATE
DAY	1-31		
YEAR	00-99		
HOUR	0-23		
MINUTE	0-59		
ENABLE ROUTINE (ROUTINE 1-7)	YES/NO		NO
TRANSFER LOAD	YES/NO		NO
START HOUR	0-59		
START MINUTE	0-59		
RUN WEEK	ALL ALTERNATE 1st, 2nd, 3rd, 4th, 5th		ALL
RUN DAY	SUN MON TUE WED THU FRI SAT		SUN
DURATION HOURS	0-23		0

SIGNALS & AVAILABILITIES

- A. FEATURE 7 - ENGINE START SIGNAL
SIGNAL INITIATED BY DROPOUT OF CONTROL PANEL RELAY (NR) FOLLOWING EXPIRATION OF THE FEATURE 10 TIME DELAY (DELAY TO OVERRIE MOMENTARY NORMAL SOURCE OUTAGES). FEATURE 7 CLOSES TO SIGNAL ENGINE START. ENGINE STARTING SIGNAL RESETS FOLLOWING RETRANSFER TO THE NORMAL SOURCE AND EXPIRATION OF THE FEATURE 2E (ENGINE COOL DOWN) TIME DELAY.
- B. FEATURE 7 CONSISTS OF A FORM A CONTACT CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB). CONTACTS RATED 5 AMPS AT 32VDC/120VAC RESISTIVE.
- B. FEATURES 14AC & 14BC - TRANSFER SWITCH AUXILIARY POSITION INDICATING CONTACTS. NIGHT (B) FORM C CONTACTS TO INDICATE CONNECTION OF THE TRANSFER SWITCH TO NORMAL (14A) AND BIGHT (B) FOR EMERGENCY (14B). CONTACTS RATED TO AMPS. 32 VDC, 250 VAC.
- C. FEATURE 17 - REMOTE TRANSFER TO EMERGENCY.
REQUIRES A CUSTOMER SUPPLIED NORMALLY OPEN CONTACT. CLOSING OF THE CONTACT CAUSES ENGINE START AND TRANSFER TO THE EMERGENCY SOURCE. DELAY PRIOR TO RETRANSFER. IN THE EVENT THE EMERGENCY SOURCE FAILS WHILE THE TRANSFER SWITCH IS CONNECTED TO EMERGENCY AND THE REMOTE CONTACT IS CLOSED, THE TRANSFER SWITCH WILL RETRANSFER TO THE NORMAL SOURCE. CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB).

OPERATION

IF THE NORMAL SOURCE FAILS, THE TRANSFER SWITCH INITIATES STARTING OF THE ENGINE-GENERATOR SET. WHEN PROPER VOLTAGE AND FREQUENCY HAVE BEEN ATTAINED, THE LOAD WILL BE TRANSFERRED TO THE EMERGENCY SOURCE.

WHEN THE NORMAL SOURCE IS RESTORED FOR THE DURATION OF THE FEATURE 3A (RETRANSFER TO NORMAL) TIME DELAY SETTING, THE LOAD WILL BE RETRANSFERRED TO THE NORMAL SOURCE.

THE ENGINE WILL CONTINUE TO RUN FOR THE ENGINE COOL DOWN PERIOD, FEATURE 2E.

USER CONTROLS AND INDICATIONS

- A. FEATURES 5 & 6B - TRANSFER TEST/RETRANSFER TIME DELAY BYPASS CONTROLS.
- TRANSFER TEST:
OPERATION CAUSES A NORMAL SOURCE FAILURE SEQUENCE ACTIVATE AND HOLD FOR AT LEAST 15 SECONDS TO ALLOW TIME FOR THE ENGINE-GENERATOR TO START. RETRANSFER TIME DELAY BYPASS:
- B. FEATURES 9A & 9B - TRANSFER SWITCH POSITION INDICATORS.
- FEATURE 9A: TRANSFER SWITCH CLOSED ON NORMAL (GREEN LED)
- FEATURE 9B: TRANSFER SWITCH CLOSED ON EMERGENCY (RED LED)
- C. FEATURES 9C & 9D - SOURCE ACCEPTANCE INDICATORS.
- FEATURE 9C: NORMAL SOURCE ACCEPTED (GREEN LED)
- FEATURE 9D: EMERGENCY SOURCE ACCEPTED (RED LED)

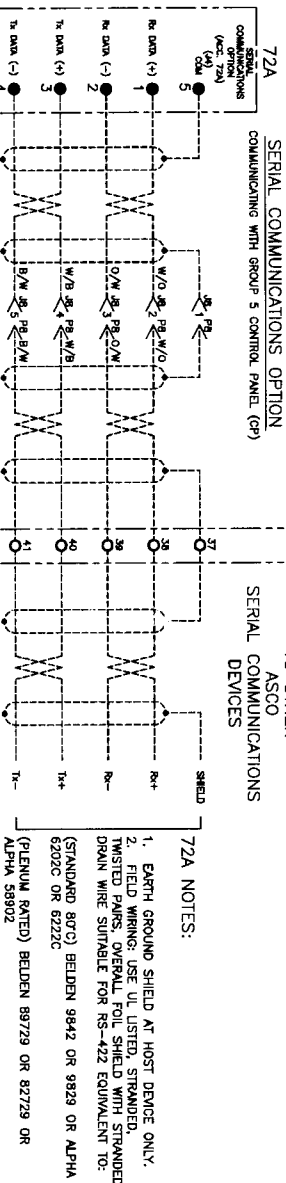
TECHNICAL DATA

BYPASS SWITCH AUXILIARY CONTACTS

BP AUXILIARY CONTACT	STATUS (*)	BP SWITCH POSITION (AUX3)	BP POSITION (AUX4)
81-82	●	EMERG	OFF
83-84	●	EMERG	OFF
85-86	●	EMERG	OFF
87-88	●	EMERG	OFF
89-90	●	EMERG	OFF
91-92	●	EMERG	OFF
93-94	●	EMERG	OFF
101-102	●	EMERG	OFF
103-104	●	EMERG	OFF
105-106	●	EMERG	OFF
107-108	●	EMERG	OFF
109-110	●	EMERG	OFF
111-112	●	EMERG	OFF
113-114	●	EMERG	OFF
115-116	●	EMERG	OFF
117-118	●	EMERG	OFF
119-120	●	EMERG	OFF
121-122	●	EMERG	OFF
123-124	●	EMERG	OFF
125-126	●	EMERG	OFF
127-128	●	EMERG	OFF

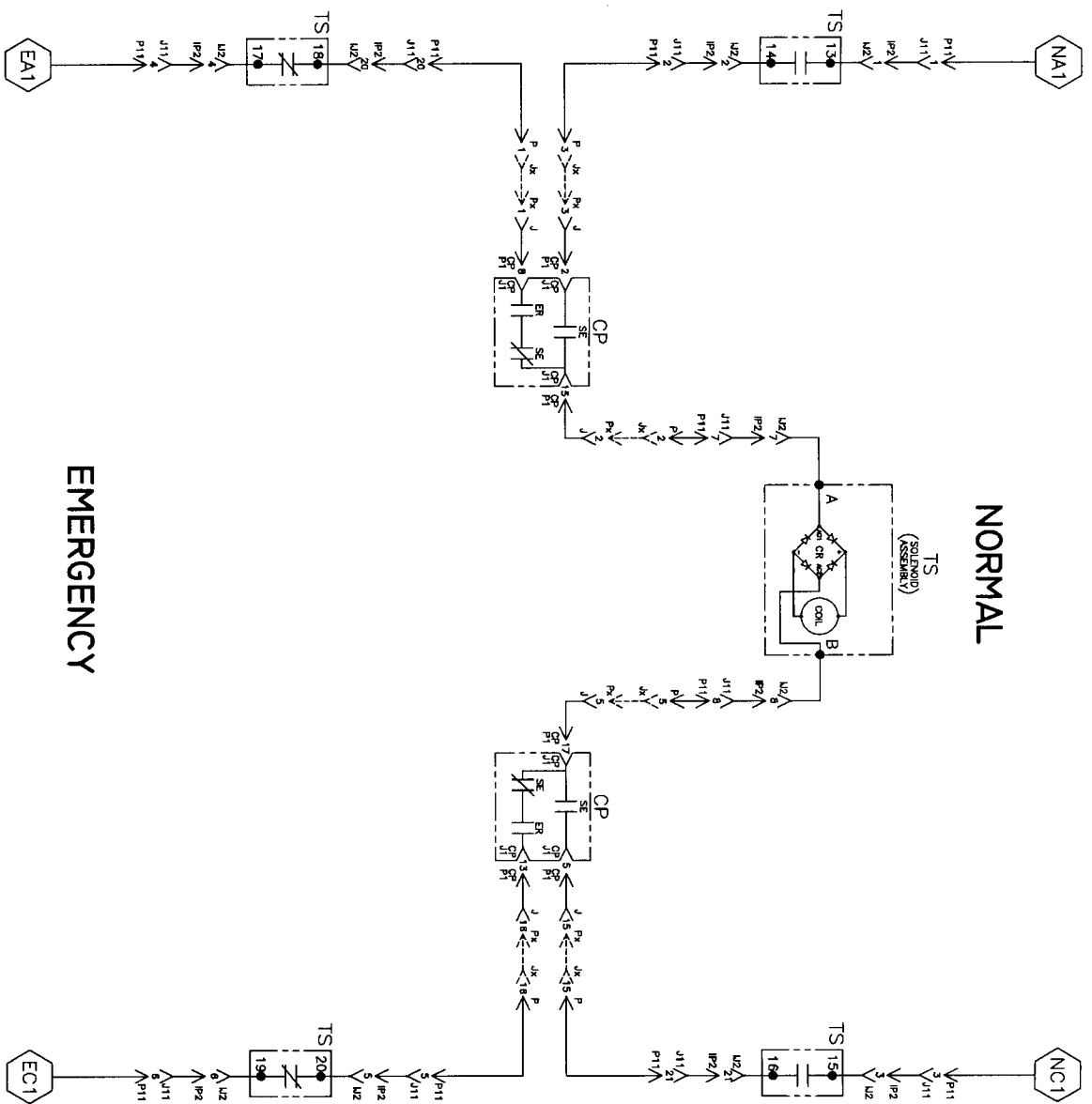
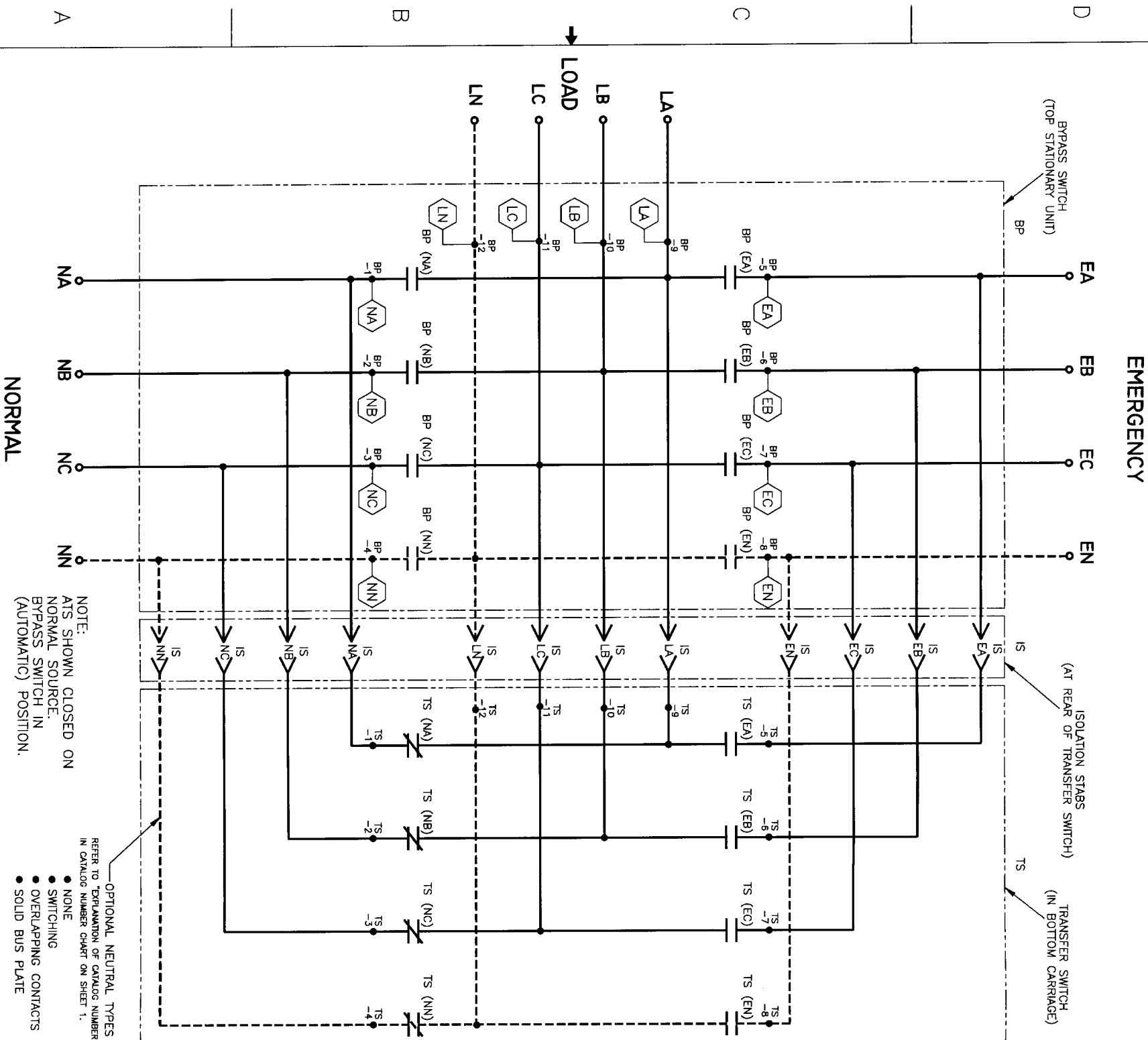
BYPASS SWITCH OPERATOR AUXILIARY CONTACTS

BP AUXILIARY CONTACT	STATUS (*)	BP HANDLE POSITION (AUX4)	
		EMERG (OUT)	NORMAL (IN)
137-138	●	X	X
137-139		X	X
140-141	●	X	X
140-142		X	X

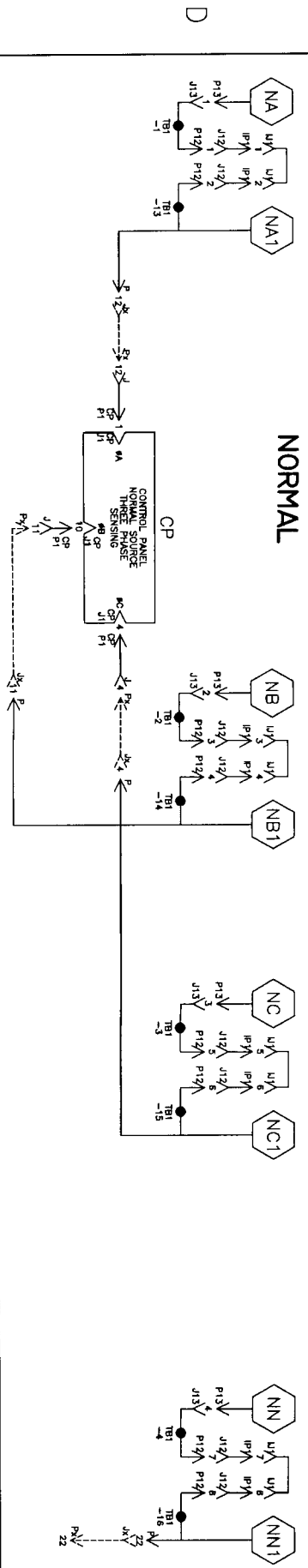


PROJECT NAME:		DRAWING		TITLE	
WIRING		ID (HAB)		THIRD ANGLE PROJECTION	
7000 SERIES (HAB)		7000 SERIES (HAB)		THIRD ANGLE PROJECTION	
1/2" FRAME, GROUP 5 CONTROLS		1/2" FRAME, GROUP 5 CONTROLS		THIRD ANGLE PROJECTION	
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DESIGNED BY		DATE		CHECKED BY	
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APPROVED BY		DATE		CHECKED BY	
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1:1		AS SHOWN		SCALE	
COMPUTER AIDED DRAWING		DATE		CHECKED BY	
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SCALE		AS SHOWN		SCALE	
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DESIGNED BY		DATE		CHECKED BY	
SDH		02/03/09		SDH	
APPROVED BY		DATE		CHECKED BY	
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DESIGNED BY		DATE		CHECKED BY	
SDH		02/03/09		SDH	
APPROVED BY		DATE		CHECKED BY	
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SCALE		AS SHOWN		SCALE	
1:1		AS SHOWN		SCALE	
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DESIGNED BY		DATE		CHECKED BY	
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APPROVED BY		DATE		CHECKED BY	
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APPROVED BY		DATE		CHECKED BY	
SDH		02/03/09		SDH	
SCALE		AS SHOWN		SCALE	
1:1		AS SHOWN		SCALE	
COMPUTER AIDED DRAWING		DATE		CHECKED BY	
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DESIGNED BY		DATE		CHECKED BY	
SDH		02/03/09		SDH	
APPROVED BY		DATE		CHECKED BY	
SDH		02/03/09		SDH	
SCALE		AS SHOWN		SCALE	
1:1		AS SHOWN		SCALE	
COMPUTER AIDED DRAWING		DATE		CHECKED BY	
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DESIGNED BY		DATE		CHECKED BY	
SDH		02/03/09		SDH	
APPROVED BY		DATE		CHECKED BY	
SDH		02/03/09		SDH	
SCALE		AS SHOWN		SCALE	
1:1		AS SHOWN		SCALE	
COMPUTER AIDED DRAWING		DATE		CHECKED BY	
SDH		02/03/09		SDH	
DESIGNED BY		DATE		CHECKED BY	
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APPROVED BY		DATE		CHECKED BY	
SDH		02/03/09		SDH	
SCALE		AS SHOWN		SCALE	
1:1		AS SHOWN		SCALE	
COMPUTER AIDED DRAWING		DATE		CHECKED BY	
SDH		02/03/09		SDH	
DESIGNED BY		DATE		CHECKED BY	
SDH		02/03/09		SDH	
APPROVED BY		DATE		CHECKED BY	
SDH		02/03/09		SDH	
SCALE					

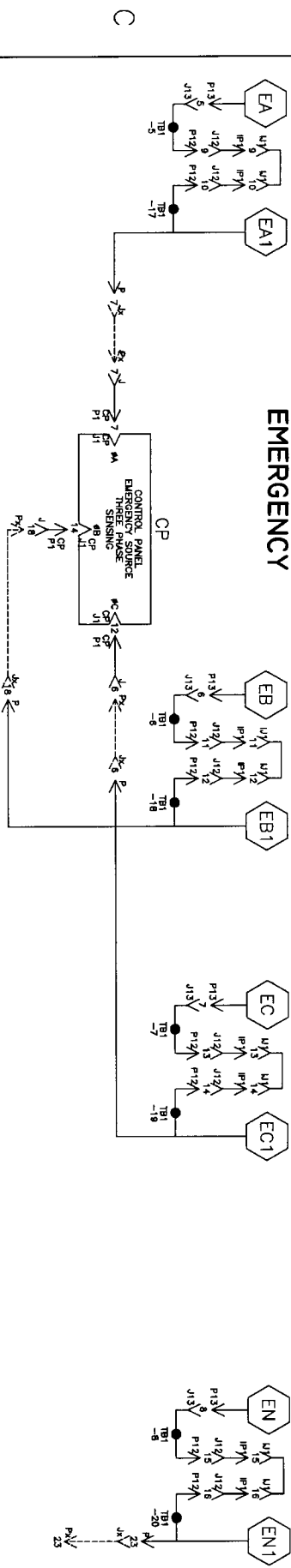
MAIN POWER POLES TS OPERATOR CIRCUIT



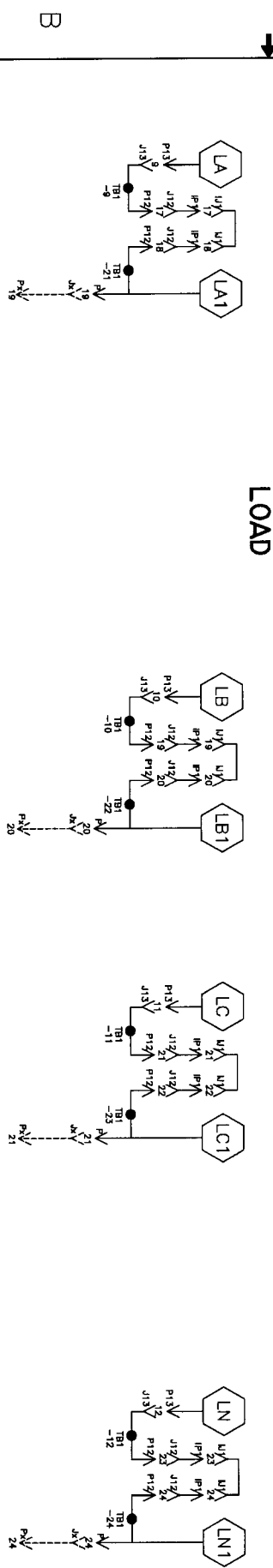
NORMAL SOURCE CIRCUITS



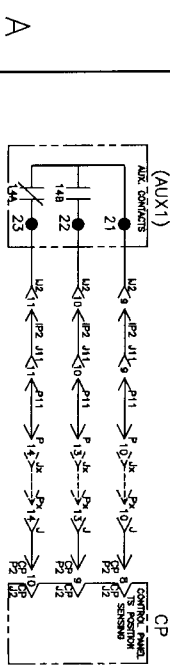
EMERGENCY SOURCE CIRCUITS



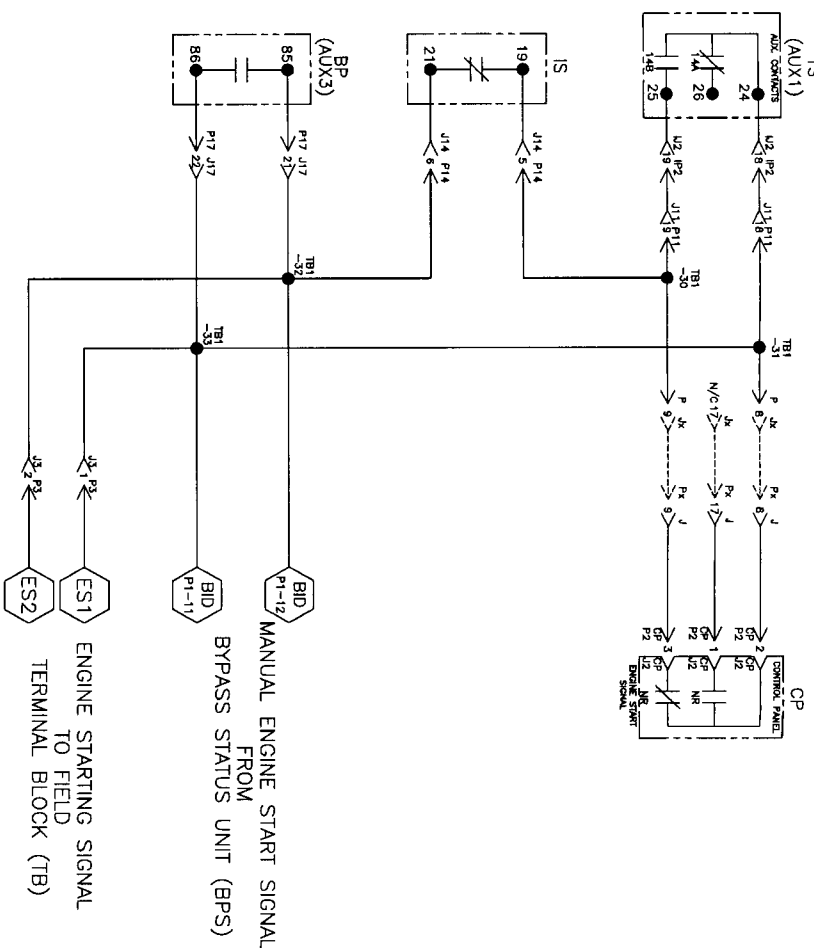
LOAD TERMINAL CIRCUITS



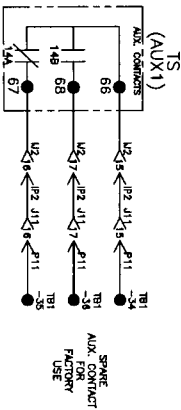
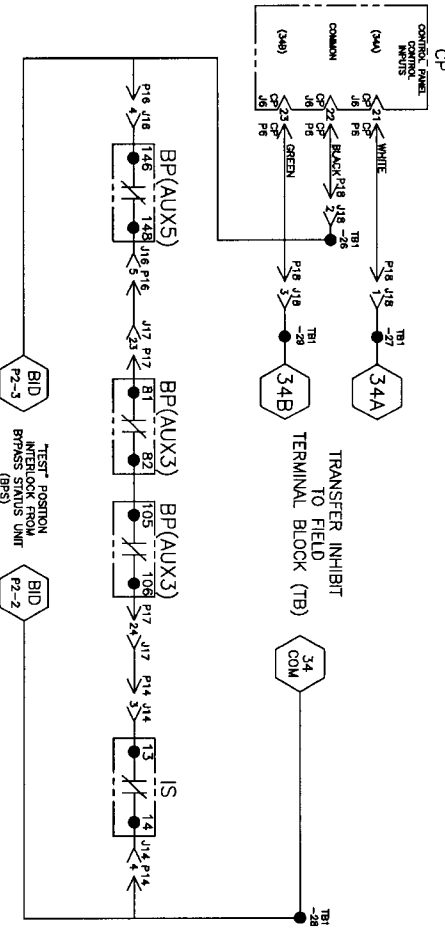
CONTROL SIGNALS & INDICATION



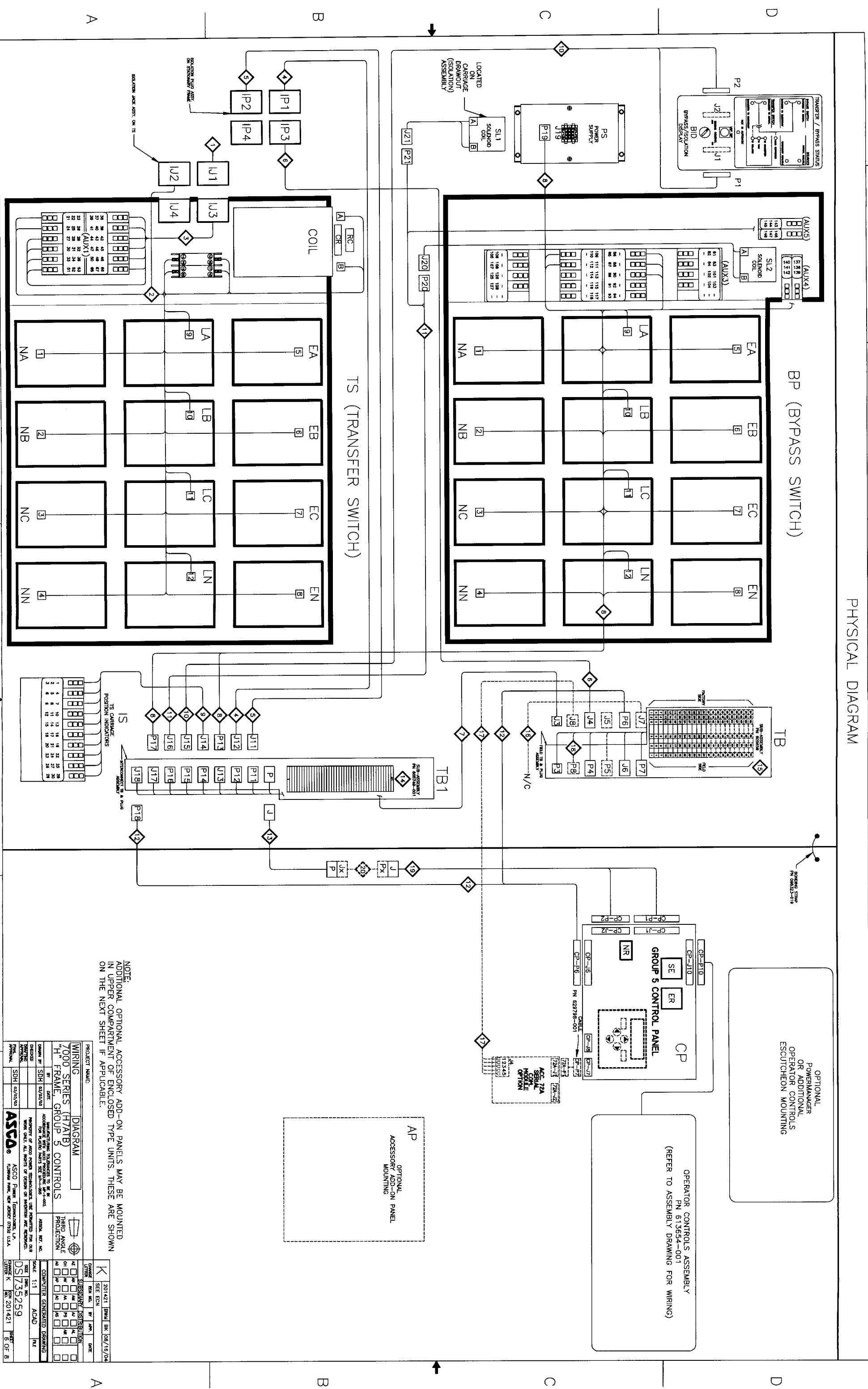
ENGINE START CIRCUIT



CONTROL PANEL/BYPASS-ISOLATION INTERLOCKS



PROJECT NAME:		WIRING DIAGRAM		SUBSIDIARY DISTRIBUTION	
7000 SERIES (HYATB)		THIRD ANGLE PROJECTION		SCALE: 1:1	
H" FRAME, GROUP 5 CONTROLS		PROPERTY OF ASCO POWER TECHNOLOGIES, USE RESTRICTED FOR SALE		DATE: 10/15/03	
SDH		SDH		ACAD	
ASCOD		DSJ735259		PAGE: 4 OF 8	



NOTE:
ADDITIONAL OPTIONAL ACCESSORY ADD-ON PANELS MAY BE MOUNTED IN UPPER COMPARTMENT OF ENCLOSED TYPE UNITS. THESE ARE SHOWN ON THE NEXT SHEET IF APPLICABLE.

PROJECT NAME: DRAWING									
7000 SERIES (H/ATB)									
"H" FRAME, GROUP 3 CONTROLS									
DRAWN BY: SDH DATE: 02/03/03 CHECKED BY: SDH DATE: 02/03/03 APPROVED BY: SDH DATE: 02/03/03  THIRD ANGLE PROJECTION									
MANUFACTURING INSTRUCTIONS: SEE THE REVISIONS TO THIS DRAWING FOR THE LATEST REVISIONS. SEE 10-1-001. WORKING OF ASCO POWER TRANSDUCERS, THE REQUIRED PARTS AND MATERIALS, ALL TYPES OF DESIGN OR MODIFICATION ARE PROHIBITED. ASSY. REF. NO. _____ ASSY. PART NO. _____									
ASCO ASCO POWER TRANSDUCERS, U.S.A. FLORHAM PARK, NEW JERSEY 07632 U.S.A. SEE REVISIONS SEE EDITION									
DATE: 02/03/03 TIME: 10:14:21 CONDUCTOR GENERATED DRAWING									
SIZE: 11x17 OR: 11x17 DATE: 11/1 ACD PZ									
03/1735259 DATE: 03/1735259									
03/1735259 DATE: 03/1735259									
03/1735259 DATE: 03/1735259									
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[illegible]

THREE PHASE WIRING FOR ASCO 7000 SERIES AUTOMATIC TRANSFER & BYPASS-ISOLATION SWITCHES TYPE H7ATB RATED 600-1200 AMPERES

FEATURES, SETTINGS, OPERATION, ACCESSORIES & NOTES

ENGINE EXERCISER

THE ENGINE EXERCISER FEATURE PROVIDES A MEANS TO PERFORM AUTOMATIC EXERCISING OF THE ENGINE-GENERATOR SET EITHER WITH OR WITHOUT LOAD TRANSFER. THE EXERCISE ROUTINES INCLUDES:
1. ENABLE OR DISABLE TRANSFER OF THE LOAD DURING THE ROUTINE
2. SET START TIME OF ROUTINE -
- TIME OF DAY
- DAY OF WEEK
- WEEK OF MONTH (1st, 2nd, 3rd, 4th, ALTERNATE OR ALL)
3. SET THE DURATION OF THE ROUTINE

PARAMETER	(CLOCK SET)	RANGE OF SETTING	DEFAULT SETTING
MONTH	JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC		CURRENT DATE
DAY	1-31	00-99	
YEAR	00-99	0-23	
HOUR	0-23	0-59	
MINUTE	0-59	YES/NO	NO
ENABLE ROUTINE (ROUTINE 1-7)	YES/NO	YES/NO	NO
START HOUR	0-23	ALL	0
START MINUTE	0-59	ALL	0
RUN WEEK	ALL	ALTERNATE, 1st, 2nd, 3rd, 4th, 5th	ALL
RUN DAY	SUN MON TUE WED THU FRI SAT	SUN	0
DURATION HOURS	0-23	0-23	0
DURATION MINUTES	0-59	0-59	0

SIGNALS & AUXILIARIES

A. FEATURE 7 - ENGINE START SIGNAL
SIGNAL INITIATED BY DROPOUT OF CONTROL PANEL RELAY (NR) FOLLOWING EXPIRATION OF THE FEATURE 1C TIME DELAY (DELAY TO OVERRIDE MOMENTARY NORMAL SOURCE OUTAGES).
FEATURE 7 CLOSURES TO SIGNAL ENGINE START. ENGINE STARTING SIGNAL RESETS FOLLOWING RETRANSFER TO THE NORMAL SOURCE AND EXPIRATION OF THE FEATURE 2E (ENGINE COOL DOWN) TIME DELAY.
FEATURE 7 C CONSISTS OF A FORM A CONTACT CONNECTED TO THE FIELD CONNECTIONS NORMAL (144) AND EIGHT (8) FOR EMERGENCY (148). CONTACTS CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB). CONTACTS RATED TO AMPS, 32 VDC, 250 VAC.
B. FEATURES 14A & 14B - TRANSFER SWITCH AUXILIARY POSITION INDICATING CONTACTS.
EIGHT (8) FORM C CONTACTS TO INDICATE CONNECTION OF THE TRANSFER SWITCH TO NORMAL (144) AND EIGHT (8) FOR EMERGENCY (148). CONTACTS CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB). CONTACTS RATED TO AMPS, 32 VDC, 250 VAC.
C. FEATURE 17 - REMOTE TRANSFER TO EMERGENCY.
REQUIRES A CUSTOMER SUPPLIED NORMALLY OPEN CONTACT. CLOSING OF THE CONTACT CAUSES ENGINE START AND TRANSFER TO THE EMERGENCY SOURCE. OPENING OF THE CONTACT ACTIVATES THE FEATURE 3A (RETRANSFER TO NORMAL) DELAY PRIOR TO RETRANSFER. IN THE EVENT THE EMERGENCY SOURCE FAILS WHILE THE TRANSFER SWITCH IS CONNECTED TO EMERGENCY AND THE REMOTE CONTACT IS CLOSED, THE TRANSFER SWITCH WILL RETRANSFER TO THE NORMAL SOURCE. CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB).

IF THE NORMAL SOURCE FAILS, THE TRANSFER SWITCH INITIATES STARTING OF THE ENGINE-GENERATOR SET. WHEN PROPER VOLTAGE AND FREQUENCY HAVE BEEN ATTAINED, THE LOAD WILL BE TRANSFERRED TO THE EMERGENCY SOURCE.
WHEN THE NORMAL SOURCE IS RESTORED FOR THE DURATION OF THE FEATURE 3A (RETRANSFER TO NORMAL) TIME DELAY SETTING, THE LOAD WILL BE RETRANSFERRED TO THE NORMAL SOURCE.
THE ENGINE WILL CONTINUE TO RUN FOR THE ENGINE COOL DOWN PERIOD. FEATURE 2E.

USER CONTROLS AND INDICATIONS
A. FEATURES 5 & 6B - TRANSFER TEST/RETRANSFER TIME DELAY BYPASS CONTROLS.
TRANSFER TEST:
OPERATION CAUSES A NORMAL SOURCE FAILURE SEQUENCE. ACTIVATE AND HOLD FOR AT LEAST 15 SECONDS TO ALLOW TIME FOR THE ENGINE-GENERATOR TO START. RETRANSFER TIME DELAY BYPASS.
OPERATION WILL BYPASS THE FEATURE 3A (RETRANSFER TO NORMAL DELAY).

B. FEATURES 9A & 9B - TRANSFER SWITCH POSITION INDICATORS.
FEATURE 9A: TRANSFER SWITCH CLOSED ON NORMAL (GREEN LED)
FEATURE 9B: TRANSFER SWITCH CLOSED ON EMERGENCY (RED LED)
C. FEATURES 9C & 9D - SOURCE ACCEPTANCE INDICATORS.
FEATURE 9C: NORMAL SOURCE ACCEPTED (GREEN LED)
FEATURE 9D: EMERGENCY SOURCE ACCEPTED (RED LED)

TECHNICAL DATA

BYPASS SWITCH AUXILIARY CONTACTS

BP AUXILIARY CONTACT	STATUS (*)	SWITCH POSITION (AUX)	BP AUXILIARY CONTACT	STATUS (*)	SWITCH POSITION (AUX)
81-82	●	EMERG	83-84	●	EMERG
85-86	●	EMERG	87-88	●	EMERG
89-90	●	EMERG	91-92	●	EMERG
93-94	●	EMERG	95-96	●	EMERG
97-98	●	EMERG	99-100	●	EMERG
101-102	●	EMERG	103-104	●	EMERG
105-106	●	EMERG	107-108	●	EMERG
109-110	●	EMERG	111-112	●	EMERG
113-114	●	EMERG	115-116	●	EMERG
117-118	●	EMERG	119-120	●	EMERG
121-122	●	EMERG	123-124	●	EMERG
125-126	●	EMERG	127-128	●	EMERG

BYPASS SWITCH OPERATOR AUXILIARY CONTACTS

BP AUXILIARY CONTACT	STATUS (*)	SWITCH POSITION (AUX)	BP AUXILIARY CONTACT	STATUS (*)	SWITCH POSITION (AUX)
131-132	●	EMERG	133-134	●	EMERG
135-136	●	EMERG	137-138	●	EMERG
139-140	●	EMERG	141-142	●	EMERG

BYPASS SWITCH OPERATOR AUXILIARY CONTACTS

BP AUXILIARY CONTACT	STATUS (*)	SWITCH POSITION (AUX)	BP AUXILIARY CONTACT	STATUS (*)	SWITCH POSITION (AUX)
143-144	●	EMERG	145-146	●	EMERG
147-148	●	EMERG	149-150	●	EMERG

ISOLATION (TRANSFER SWITCH CARRIAGE POSITION) AUXILIARY CONTACTS

IS AUXILIARY CONTACT	STATUS (*)	TRANSFER SWITCH POSITION	IS AUXILIARY CONTACT	STATUS (*)	TRANSFER SWITCH POSITION
1-2	●	CONNECT	1-2	●	CONNECT
3-4	●	TEST	3-4	●	TEST
5-6	●	ISOLATE	5-6	●	ISOLATE
7-8	●	ISOLATE	7-8	●	ISOLATE
9-10	●	ISOLATE	9-10	●	ISOLATE
11-12	●	ISOLATE	11-12	●	ISOLATE
13-14	●	ISOLATE	13-14	●	ISOLATE
15-16	●	ISOLATE	15-16	●	ISOLATE
17-18	●	ISOLATE	17-18	●	ISOLATE
19-20	●	ISOLATE	19-20	●	ISOLATE
21-22	●	ISOLATE	21-22	●	ISOLATE
23-24	●	ISOLATE	23-24	●	ISOLATE
25-26	●	ISOLATE	25-26	●	ISOLATE
27-28	●	ISOLATE	27-28	●	ISOLATE
29-30	●	ISOLATE	29-30	●	ISOLATE

(*) CONTACT AVAILABILITY STATUS:

CONTACT PROVIDED & USED IN CIRCUITRY
"BLANK" CONTACT NOT USED, IF PHYSICALLY AVAILABLE.
CONTACT IS FOR FACTORY USE ONLY.

CATALOG NUMBER	201421	BMK	108/16/04
CERTIFIED TO	167206	DJB	06/02/04
BY	167206	DJB	06/02/04
DATE	167206	DJB	06/02/04

FORM REV K	167206	DJB	06/02/04
PROJECT NAME	167206	DJB	06/02/04
WIRING	167206	DJB	06/02/04
"H" FRAME	167206	DJB	06/02/04
GROUP 5 CONTROLS	167206	DJB	06/02/04
THIRD ANGLE	167206	DJB	06/02/04
PROJECTION	167206	DJB	06/02/04
SIZE	167206	DJB	06/02/04
SCALE	167206	DJB	06/02/04
COMPUTER GENERATED DRAWING	167206	DJB	06/02/04
DATE	167206	DJB	06/02/04

WIRING	167206	DJB	06/02/04
"H" FRAME	167206	DJB	06/02/04
GROUP 5 CONTROLS	167206	DJB	06/02/04
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PROJECTION	167206	DJB	06/02/04
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SCALE	167206	DJB	06/02/04
COMPUTER GENERATED DRAWING	167206	DJB	06/02/04
DATE	167206	DJB	06/02/04

BYPASS SWITCH & ISOLATION USER CONTROLS & INDICATIONS

A. BYPASS / ISOLATION DISPLAY INDICATORS - LED TYPE, COMMON LAMP TEST

NORMAL SOURCE AVAILABLE - GREEN
EMERGENCY SOURCE AVAILABLE - RED
TRANSFER SWITCH CONNECTED TO NORMAL - GREEN
TRANSFER SWITCH CONNECTED TO EMERGENCY - RED
BYPASS SWITCH CONNECTED TO EMERGENCY - RED
BYPASS SWITCH CONNECTED TO EMERGENCY - RED
LOAD CONNECTED - AMBER
TS IN CONNECTED POSITION - AMBER
TS IN TEST POSITION - AMBER
TS ISOLATED - AMBER
UNIT NOT IN AUTOMATIC - AMBER
B. BYPASS / ISOLATION DISPLAY ENGINE CONTROL SWITCH
TWO (2) POSITION
"AUTO" - ENGINE STARTING CONTROLLED BY TRANSFER SWITCH CONTROL PANEL.
"RUN" - SIGNALS ENGINE TO START
C. BYPASS / ISOLATION INTERLOCKS (SOLENOID ACTUATED)
S1: INTERLOCKS THE TRANSFER SWITCH ISOLATION CRANK WITH THE TRANSFER AND BYPASS SWITCHES TO INSURE THAT:
THE TRANSFER SWITCH CANNOT BE DISCONNECTED WITHOUT BEING BYPASSED.
THE TRANSFER SWITCH CANNOT BE RECONNECTED UNLESS IT IS IN THE SAME POSITION AS THE BYPASS SWITCH.
S1.2: INTERLOCKS THE BYPASS SWITCH OPERATOR WHEN THE TRANSFER SWITCH IS IN THE CONNECTED POSITION TO INSURE THAT THE BYPASS SWITCH CANNOT BE OPERATED TO A SOURCE OTHER THAN THAT WHICH THE TRANSFER SWITCH IS CONNECTED TO.
GENERAL NOTES
1. SWITCH SHOWN DE-ENERGIZED AND CONNECTED TO THE NORMAL SOURCE. THE BYPASS SWITCH OPERATOR IS IN THE "OFF" (AUTOMATIC) POSITION WITH THE ISOLATION CRANK (TS) IN THE FULLY CONNECTED POSITION.
2. DEVICE SYMBOLS AND DESIGNATIONS ARE IN ACCORDANCE WITH NEMA PUBLICATION ICS 1-1983, PART 1-107A.
3. ALL WIRING IS #16 AWG, TINNED, STRANDED COPPER UNLESS OTHERWISE INDICATED.
4. O ON TERMINAL BLOCKS INDICATES AVAILABLE FIELD CONNECTION POINT.
5. ● ON TERMINAL BLOCKS INDICATES FACTORY CONNECTION POINT.
6. CONTROL AND ACCESSORY WIRING IS ROUTED IN ACCORDANCE WITH ASCO ASSEMBLY PROCEDURE 05451261.
7. AN OPERATOR'S MANUAL IS FURNISHED WITH EACH AUTOMATIC TRANSFER SWITCH. REFER TO THIS PUBLICATION PRIOR TO INSTALLATION AND OPERATION OF THE UNIT.

FEATURES, SETTINGS, OPERATION, ACCESSORIES & NOTES

ENGINE EXERCISER

THE ENGINE EXERCISER FEATURE PROVIDES A MEANS TO PERFORM AUTOMATIC EXERCISING OF THE ENGINE-GENERATOR SET EITHER WITH OR WITHOUT LOAD TRANSFER. THE EXERCISE ROUTINES INCLUDES:
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2. SET START TIME OF ROUTINE -
- TIME OF DAY
- DAY OF WEEK
- WEEK OF MONTH (1st, 2nd, 3rd, 4th, ALTERNATE OR ALL)
3. SET THE DURATION OF THE ROUTINE

PARAMETER	(CLOCK SET)	RANGE OF SETTING	DEFAULT SETTING
MONTH	JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC		CURRENT DATE
DAY	1-31	00-99	
YEAR	00-99	0-23	
HOUR	0-23	0-59	
MINUTE	0-59	YES/NO	NO
ENABLE ROUTINE (ROUTINE 1-7)	YES/NO	YES/NO	NO
START HOUR	0-23	ALL	0
START MINUTE	0-59	ALL	0
RUN WEEK	ALL	ALTERNATE, 1st, 2nd, 3rd, 4th, 5th	ALL
RUN DAY	SUN MON TUE WED THU FRI SAT	SUN	0
DURATION HOURS	0-23	0-23	0
DURATION MINUTES	0-59	0-59	0

SIGNALS & AUXILIARIES

A. FEATURE 7 - ENGINE START SIGNAL
SIGNAL INITIATED BY DROPOUT OF CONTROL PANEL RELAY (NR) FOLLOWING EXPIRATION OF THE FEATURE 1C TIME DELAY (DELAY TO OVERRIDE MOMENTARY NORMAL SOURCE OUTAGES).
FEATURE 7 CLOSURES TO SIGNAL ENGINE START. ENGINE STARTING SIGNAL RESETS FOLLOWING RETRANSFER TO THE NORMAL SOURCE AND EXPIRATION OF THE FEATURE 2E (ENGINE COOL DOWN) TIME DELAY.
FEATURE 7 C CONSISTS OF A FORM A CONTACT CONNECTED TO THE FIELD CONNECTIONS NORMAL (144) AND EIGHT (8) FOR EMERGENCY (148). CONTACTS CONNECTED TO THE FIELD CONNECTIONS TERMINAL BLOCK (TB). CONTACTS RATED TO AMPS, 32 VDC, 250 VAC.
B. FEATURES 14A & 14B - TRANSFER SWITCH AUXILIARY POSITION INDICATING CONTACTS.
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THE ENGINE WILL CONTINUE TO RUN FOR THE ENGINE COOL DOWN PERIOD. FEATURE 2E.

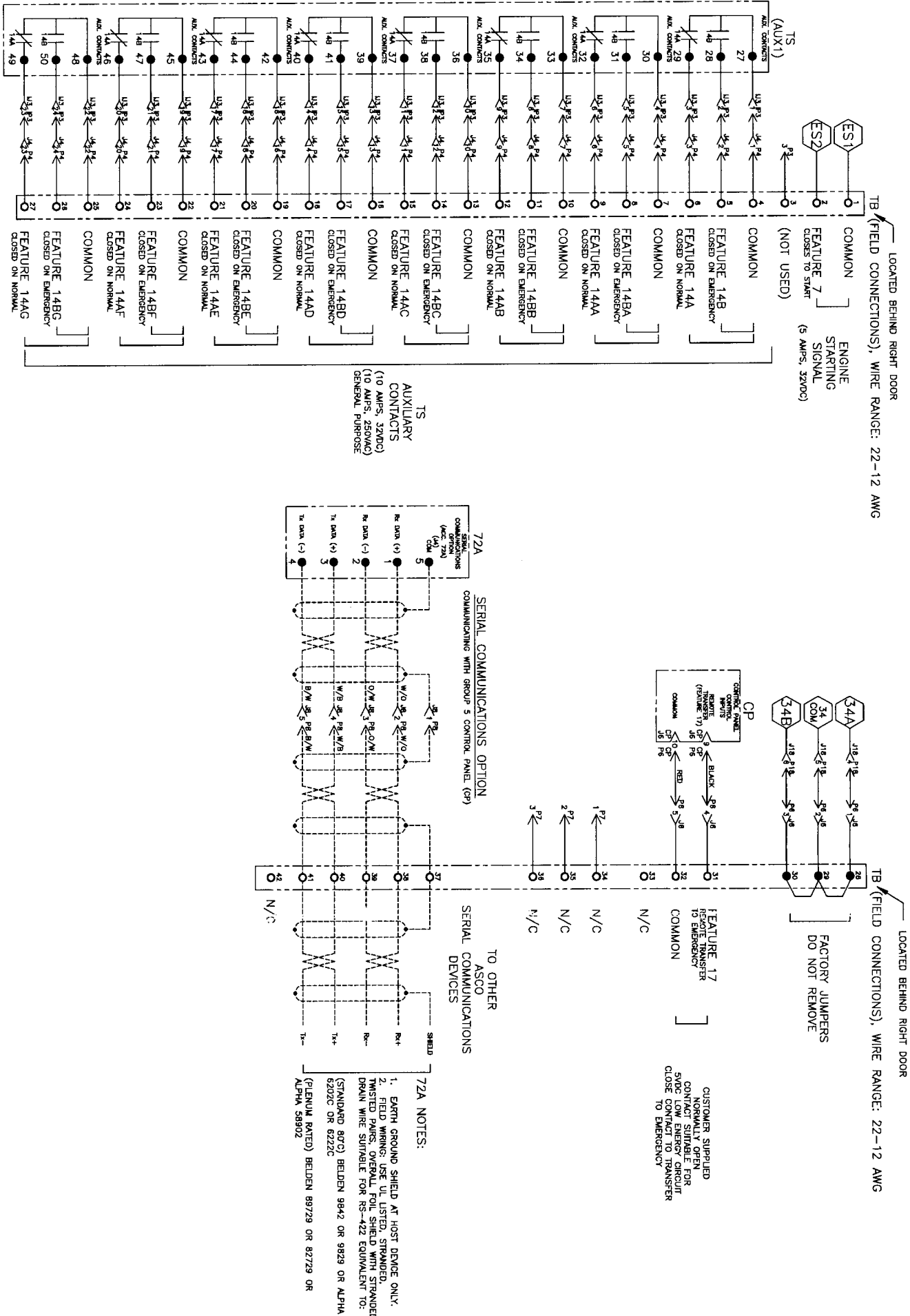
USER CONTROLS AND INDICATIONS
A. FEATURES 5 & 6B - TRANSFER TEST/RETRANSFER TIME DELAY BYPASS CONTROLS.
TRANSFER TEST:
OPERATION CAUSES A NORMAL SOURCE FAILURE SEQUENCE. ACTIVATE AND HOLD FOR AT LEAST 15 SECONDS TO ALLOW TIME FOR THE ENGINE-GENERATOR TO START. RETRANSFER TIME DELAY BYPASS.
OPERATION WILL BYPASS THE FEATURE 3A (RETRANSFER TO NORMAL DELAY).

B. FEATURES 9A & 9B - TRANSFER SWITCH POSITION INDICATORS.
FEATURE 9A: TRANSFER SWITCH CLOSED ON NORMAL (GREEN LED)
FEATURE 9B: TRANSFER SWITCH CLOSED ON EMERGENCY (RED LED)
C. FEATURES 9C & 9D - SOURCE ACCEPTANCE INDICATORS.
FEATURE 9C: NORMAL SOURCE ACCEPTED (GREEN LED)
FEATURE 9D: EMERGENCY SOURCE ACCEPTED (RED LED)

CATALOG NUMBER	201421	BMK	108/16/04
NEUTRAL TYPE	167206	DJB	06/02/04
DESCRIPTION	167206	DJB	06/02/04
ENCLOSURE CODES	167206	DJB	06/02/04
DESCRIPTION	167206	DJB	06/02/04

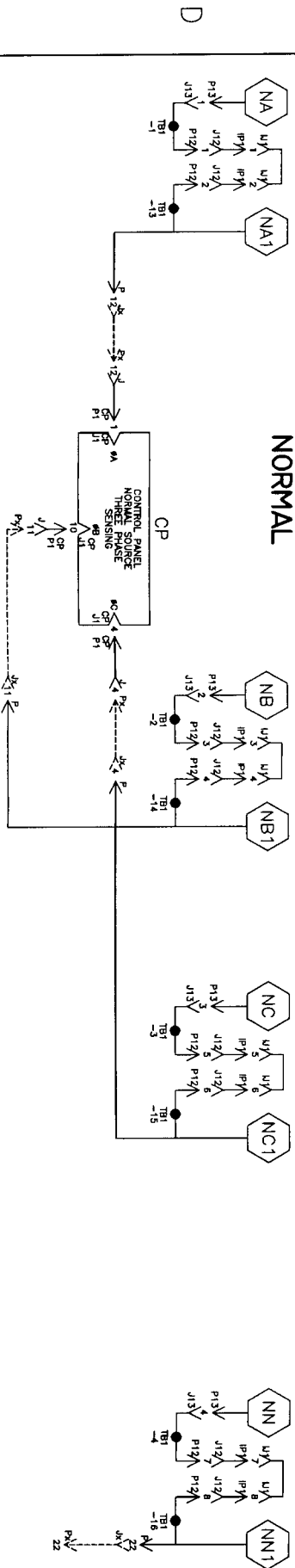
CATALOG NUMBER	201421	BMK	108/16/04
NEUTRAL TYPE	167206	DJB	06/02/04
DESCRIPTION	167206	DJB	06/02/04
ENCLOSURE CODES	167206	DJB	06/02/04
DESCRIPTION	167206	DJB	06/02/04

FIELD CONNECTIONS

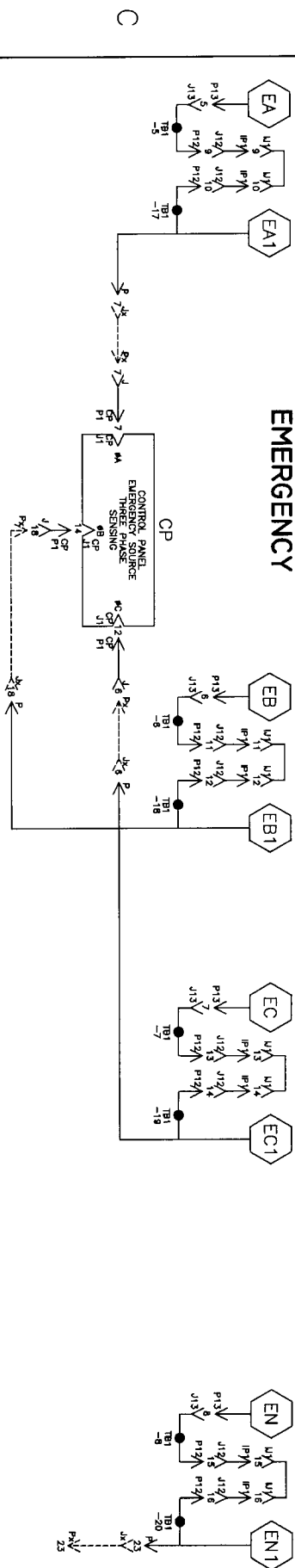


PROJECT NAME:		201421		BRM	BR	08/16/04
WIRING		DIAGRAM		SHEET		
7000 SERIES (H7ATB)		THIRD ANGLE		PROJECTION		
H" FRAME, GROUP 5 CONTROLS		THIRD ANGLE		PROJECTION		
DATE	03/03/03	MANUFACTURER'S TOLERANCES TO BE IN ACCORDANCE WITH ASME Y14.5-2001	ASSEMBLY NO.			
BY	SDH	DESIGNED BY	SDH			
CHECKED		APPROVED				
DATE	03/03/03	DATE	03/03/03			
ASCO POWER TECHNOLOGIES, L.P.		ASCO POWER TECHNOLOGIES, L.P.				
735259		735259				
201421		201421				
2 OF 8		2 OF 8				

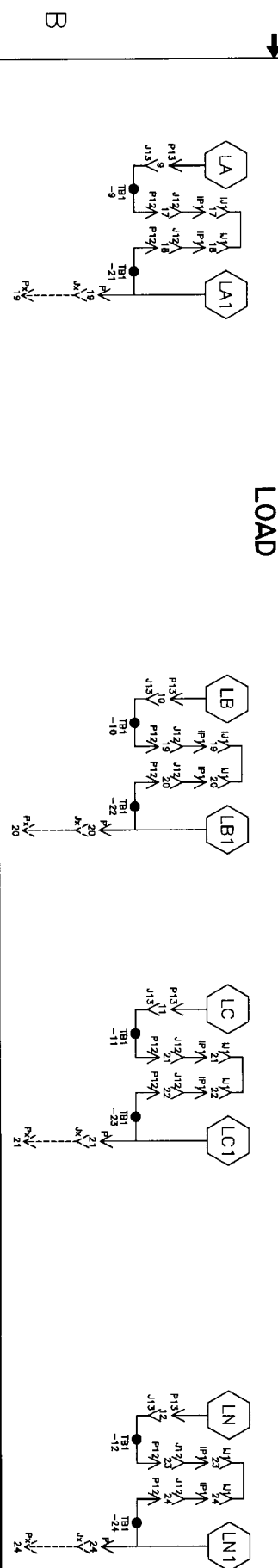
NORMAL SOURCE CIRCUITS



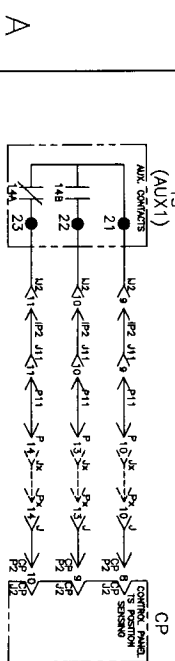
EMERGENCY SOURCE CIRCUITS



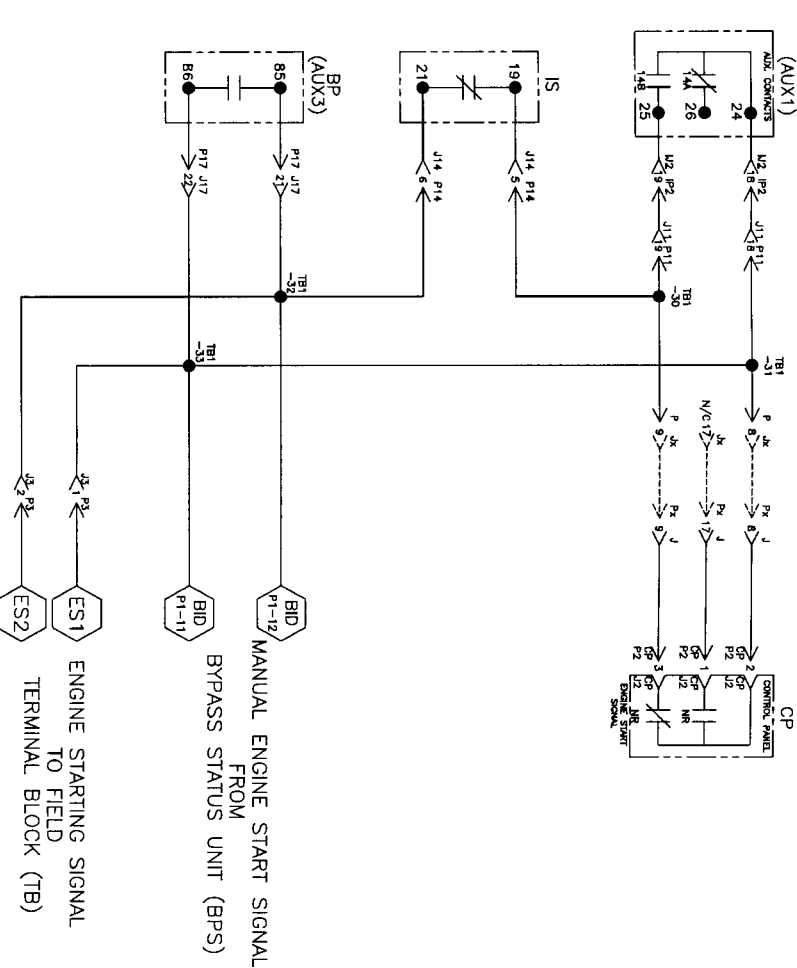
LOAD TERMINAL CIRCUITS



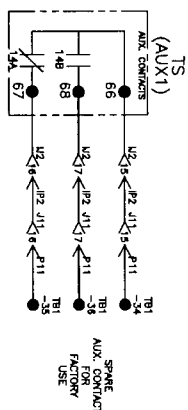
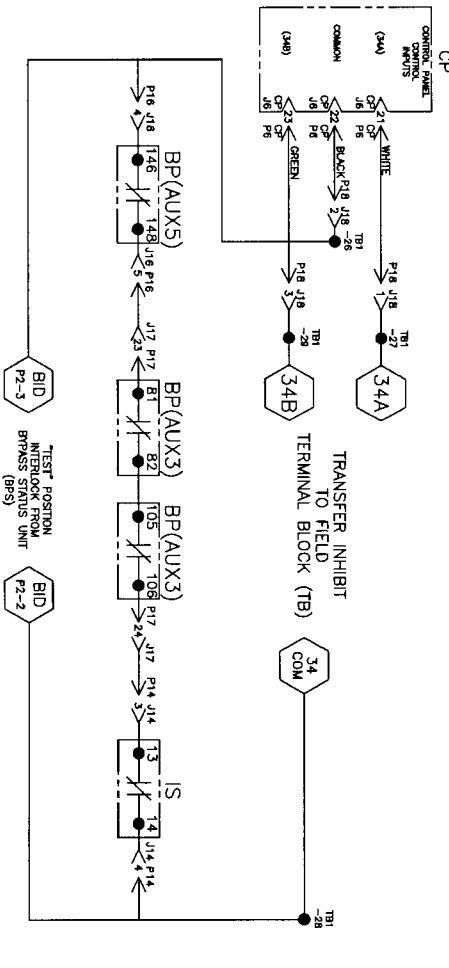
CONTROL SIGNALS & INDICATION



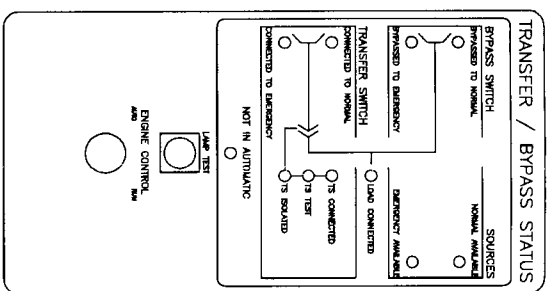
ENGINE START CIRCUIT



CONTROL PANEL/BYPASS-ISOLATION INTERLOCKS

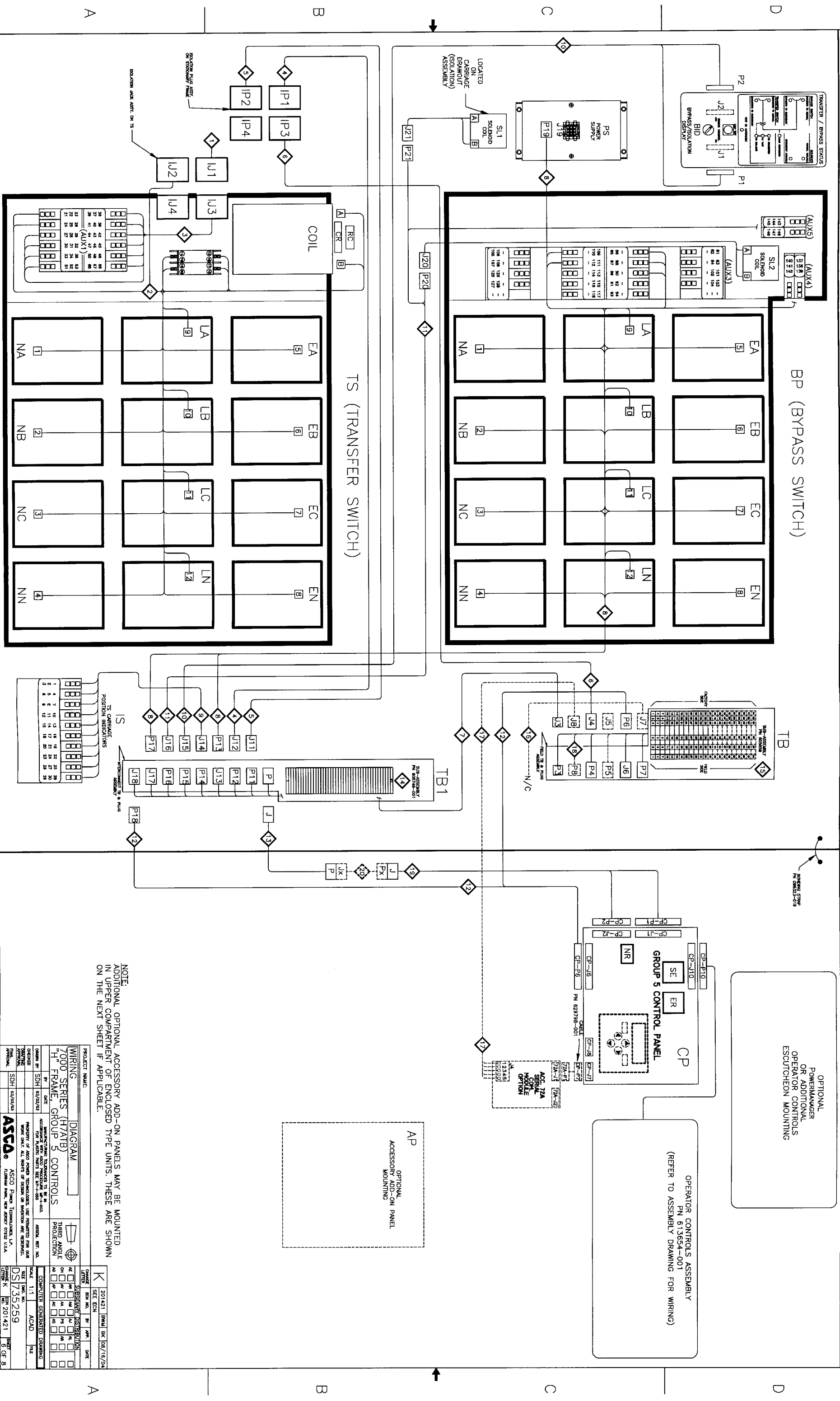


PROJECT NAME:		SUBSIDIARY DISTRIBUTION		DATE	
WIRING		THIRD ANGLE		DATE	
7000 SERIES (HYATB)		PROJECTION		DATE	
H" FRAME GROUP 5 CONTROLS		SCALE 1:1		ACAD	
MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASME PROCEDURE B8.2-1963 (SEE SECTION 1000 FOR DETAILS)		MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASME PROCEDURE B8.2-1963 (SEE SECTION 1000 FOR DETAILS)		MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASME PROCEDURE B8.2-1963 (SEE SECTION 1000 FOR DETAILS)	
DRAWING BY: SDH		CHECKED BY: SDH		DATE: 10/19/04	
APPROVED BY: SDH		DATE: 10/19/04		DATE: 10/19/04	
REVISIONS		REVISIONS		REVISIONS	
SDH		SDH		SDH	
ASCO		ASCO		ASCO	
ASCO POWER TECHNOLOGIES, L.P.		ASCO POWER TECHNOLOGIES, L.P.		ASCO POWER TECHNOLOGIES, L.P.	
201421		201421		201421	
K		K		K	
201421		201421		201421	
BOM		BOM		BOM	
201421		201421		201421	
4 OF 8		4 OF 8		4 OF 8	



PROJECT NAME:		WIRING		ID/ADAM	
7000 SERIES (H/AB)		THIRD ANGLE		PROJECTION	
H FRAME, GROUP 3		CONTROLS			
DRAWN BY SDH		DATE		ASCO, REF. NO.	
DESIGNED BY SDH		DATE		ASCO, REF. NO.	
CHECKED BY SDH		DATE		ASCO, REF. NO.	
APPROVED BY SDH		DATE		ASCO, REF. NO.	
PANEL NUMBER		SDH		SDH	
ASCO		ASCO		ASCO	
ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.	
FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA	
DATE		DATE		DATE	
TIME		TIME		TIME	
SHEET NO.		SHEET NO.		SHEET NO.	
TOTAL SHEETS		TOTAL SHEETS		TOTAL SHEETS	
DRAWN BY		DATE		DATE	
CHECKED BY		DATE		DATE	
APPROVED BY		DATE		DATE	
PANEL NUMBER		SDH		SDH	
ASCO		ASCO		ASCO	
ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.	
FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA	
DATE		DATE		DATE	
TIME		TIME		TIME	
SHEET NO.		SHEET NO.		SHEET NO.	
TOTAL SHEETS		TOTAL SHEETS		TOTAL SHEETS	
DRAWN BY		DATE		DATE	
CHECKED BY		DATE		DATE	
APPROVED BY		DATE		DATE	
PANEL NUMBER		SDH		SDH	
ASCO		ASCO		ASCO	
ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.	
FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA	
DATE		DATE		DATE	
TIME		TIME		TIME	
SHEET NO.		SHEET NO.		SHEET NO.	
TOTAL SHEETS		TOTAL SHEETS		TOTAL SHEETS	
DRAWN BY		DATE		DATE	
CHECKED BY		DATE		DATE	
APPROVED BY		DATE		DATE	
PANEL NUMBER		SDH		SDH	
ASCO		ASCO		ASCO	
ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.	
FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA	
DATE		DATE		DATE	
TIME		TIME		TIME	
SHEET NO.		SHEET NO.		SHEET NO.	
TOTAL SHEETS		TOTAL SHEETS		TOTAL SHEETS	
DRAWN BY		DATE		DATE	
CHECKED BY		DATE		DATE	
APPROVED BY		DATE		DATE	
PANEL NUMBER		SDH		SDH	
ASCO		ASCO		ASCO	
ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.	
FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA	
DATE		DATE		DATE	
TIME		TIME		TIME	
SHEET NO.		SHEET NO.		SHEET NO.	
TOTAL SHEETS		TOTAL SHEETS		TOTAL SHEETS	
DRAWN BY		DATE		DATE	
CHECKED BY		DATE		DATE	
APPROVED BY		DATE		DATE	
PANEL NUMBER		SDH		SDH	
ASCO		ASCO		ASCO	
ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.	
FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA	
DATE		DATE		DATE	
TIME		TIME		TIME	
SHEET NO.		SHEET NO.		SHEET NO.	
TOTAL SHEETS		TOTAL SHEETS		TOTAL SHEETS	
DRAWN BY		DATE		DATE	
CHECKED BY		DATE		DATE	
APPROVED BY		DATE		DATE	
PANEL NUMBER		SDH		SDH	
ASCO		ASCO		ASCO	
ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.	
FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA	
DATE		DATE		DATE	
TIME		TIME		TIME	
SHEET NO.		SHEET NO.		SHEET NO.	
TOTAL SHEETS		TOTAL SHEETS		TOTAL SHEETS	
DRAWN BY		DATE		DATE	
CHECKED BY		DATE		DATE	
APPROVED BY		DATE		DATE	
PANEL NUMBER		SDH		SDH	
ASCO		ASCO		ASCO	
ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.		ASCO POWER TECHNOLOGIES, INC.	
FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA		FLORHAM PARK, NEW JERSEY 07033 USA	
DATE		DATE		DATE	

PHYSICAL DIAGRAM



NOTE: ADDITIONAL OPTIONAL ACCESSORY ADD-ON PANELS MAY BE MOUNTED IN UPPER COMPARTMENT OF ENCLOSED TYPE UNITS. THESE ARE SHOWN ON THE NEXT SHEET IF APPLICABLE.

[illegible]

WIRE RUN LISTING

WIRE RUN LISTING			
WIRE No.	SUB-ASSEMBLY	CLR	AWG
1 P-2-P11-1	605749-001		16
21 P-3-P11-2			
3 P-4-P11-15			
5 P-5-P11-8			
7 P-6-P11-19			
5 P-7-P11-17			
120 P-8-P11-31			
28 P-9-P11-30			
2 P-11-P11-14			
1 P-12-P11-13			
30 P-13-P11-10			
29 P-14-P11-11			
24 P-16-P11-5			
6 P-18-P11-18			
10 P-19-P11-21			
10 P-20-P11-22			
4 P-21-P11-12			
8 P-23-P11-20			
12 P-24-P11-24			
1 P11-1-P11-13			
3 P11-2-P11-15			
5 P11-3-P11-17			
37 P11-4-P11-19			
30 P11-5-P11-39			
33 P11-6-P11-40			
35 P11-7-P11-34			
36 P11-8-P11-36			
120 P11-9-P11-31			
38 P11-10-P11-30			
39 P11-20-P11-15			
40 P11-21-P11-15			
1 P12-1-P12-1			
1 P12-2-P12-13			
2 P12-3-P12-2			
2 P12-4-P12-14			
3 P12-5-P12-3			
3 P12-6-P12-15			
4 P12-7-P12-4			
5 P12-8-P12-16			
5 P12-10-P12-17			
6 P12-11-P12-6			
6 P12-12-P12-18			
7 P12-13-P12-7			
7 P12-14-P12-19			
8 P12-15-P12-8			
8 P12-16-P12-20			
8 P12-18-P12-31			
10 P12-19-P12-10			
10 P12-20-P12-22			
11 P12-21-P12-11			
11 P12-22-P12-23			
12 P12-23-P12-12			
12 P12-24-P12-24			
1 P13-1-P13-1			
2 P13-2-P13-3			
3 P13-3-P13-4			
4 P13-4-P13-4			
5 P13-5-P13-5			
6 P13-6-P13-6			
7 P13-7-P13-7			
8 P13-8-P13-8			
10 P13-10-P13-10			
10 P13-11-P13-11			
12 P13-12-P13-12			
151 P14-1-P14-28			
38 P14-2-P14-30			
121 P14-3-P14-32			
31 P14-4-P14-37			
153 P14-5-P14-3			
154 P14-6-P14-4			
157 P14-7-P14-17			
158 P14-8-P14-18			
159 P14-9-P14-17			
121 P15-1-P15-32			
120 P15-2-P15-33			
31 P15-3-P15-37			
170 P15-4-P15-38			
172 P15-5-P15-2			
176 P15-6-P15-10			
177 P15-7-P15-9			
32 P15-8-P15-39			
33 P15-9-P15-40			
154 P15-10-P15-41			
149 P15-11-P15-13			
152 P15-12-P15-10			
151 P15-13-P15-28			
154 P16-1-P16-41			
170 P16-2-P16-38			
191 P16-3-P16-26			
170 P16-4-P16-36			
31 P17-1-P17-37			
150 P17-2-P17-38			
35 P17-3-P17-40			
121 P17-4-P17-32			
120 P17-5-P17-35			
150 P17-6-P17-3			
150 P17-7-P17-3			
232 P18-24			

WIRE No.	SUB-ASSEMBLY	CLR	AWG
210 J18-1-J18-27	605749-001		16
191 J18-2-J18-26			
210 J18-3-J18-29			
151 J18-4-J18-28			
211 J18-5-J18-29			
120 J18-31-J18-33			
REMOVE WIRES			
ADD WIRES			
312 P-17			
41 P11-22			
42 P11-23			
43 P11-24			
26 J13-13			
27 J13-15			
341 J13-16			
341 J13-17			
343 J13-18			
344 J13-19			
345 J13-20			
346 J13-21			
349 J13-22			
348 J13-23			
159 P14-1			
27 P14-2			
169 P14-7			
168 P14-8			
165 P14-14			
161 P14-16			
163 P14-18			
164 P14-20			
165 P14-21			
166 P14-22			
167 P14-23			
167 P14-24			
173 P15-7			
174 P15-8			
175 P15-9			
176 P15-10			
177 P15-11			
178 P15-12			
179 P15-13			
180 P15-14			
181 P15-15			
182 P15-16			
183 P15-17			
184 P15-18			
185 P15-19			
186 P15-20			
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188 P15-22			
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197 P15-31			
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218 P15-52			
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221 P15-55			
222 P15-56			
223 P15-57			
224 P15-58			
225 P15-59			
226 P15-60			
227 P15-61			
228 P15-62			
229 P15-63			
230 P15-64			
231 P15-65			
232 P15-66			

WIRE No.	SUB-ASSEMBLY	CLR	AWG
120 J18-1-J18-27	605659		16
121 J18-2-J18-26			
122 J18-3-J18-29			
50 J18-4-J18-1			
51 J18-5-J18-2			
52 J18-6-J18-3			
53 J18-7-J18-4			
54 J18-8-J18-5			
55 J18-9-J18-6			
56 J18-10-J18-7			
57 J18-11-J18-8			
58 J18-12-J18-9			
59 J18-13-J18-10			
61 J18-14-J18-12			
60 J18-15-J18-11			
62 J18-16-J18-13			
63 J18-17-J18-15			
64 J18-18-J18-14			
65 J18-19-J18-16			
66 J18-20-J18-17			
68 J18-21-J18-19			
69 J18-22-J18-21			
70 J18-23-J18-20			
71 J18-24-J18-22			
72 J18-25-J18-24			
73 J18-26-J18-23			
74 J18-27-J18-25			
150 J18-28-J18-2			
211 J18-29-J18-3			
243 J18-31-J18-4			
244 J18-32-J18-5			
245 J18-33-J18-6			
246 J18-34-J18-7			
247 J18-35-J18-8			
248 J18-36-J18-9			
249 J18-37-J18-10			
250 J18-38-J18-11			
251 J18-39-J18-12			
252 J18-40-J18-13			
253 J18-41-J18-14			
254 J18-42-J18-15			
255 J18-43-J18-16			
256 J18-44-J18-17			
257 J18-45-J18-18			
258 J18-46-J18-19			
259 J18-47-J18-20			
260 J18-48-J18-21			
261 J18-49-J18-22			
262 J18-50-J18-23			
263 J18-51-J18-24			
273 P7-4			
274 P7-5			
275 P7-6			
276 P7-7			
277 P7-8			
278 P7-9			
279 P7-10			
280 P7-11			
281 P7-12			
282 P7-13			
283 P7-14			
284 P7-15			
285 P7-16			
286 P7-17			
287 P7-18			
288 P7-19			
289 P7-20			
290 P7-21			
291 P7-22			
292 P7-23			
293 P7-24			

WIRE No.	SUB-ASSEMBLY	CLR	AWG
120 J18-1-J18-27	605454-005		16
121 J18-2-J18-26			
122 J18-3-J18-29			
50 J18-4-J18-1			
51 J18-5-J18-2			
52 J18-6-J18-3			
53 J18-7-J18-4			
54 J18-8-J18-5			
55 J18-9-J18-6			
56 J18-10-J18-7			
57 J18-11-J18-8			
58 J18-12-J18-9			
59 J18-13-J18-10			
61 J18-14-J18-12			
60 J18-15-J18-11			
62 J18-16-J18-13			
63 J18-17-J18-15			
64 J18-18-J18-14			
65 J18-19-J18-16			
66 J18-20-J18-17			
68 J18-21-J18-19			
69 J18-22-J18-21			
70 J18-23-J18-20			
71 J18-24-J18-22			
72 J18-25-J18-24			
73 J18-26-J18-23			
74 J18-27-J18-25			
150 J18-28-J18-2			
211 J18-29-J18-3			
243 J18-31-J18-4			
244 J18-32-J18-5			
245 J18-33-J18-6			
246 J18-34-J18-7			
247 J18-35-J18-8			
248 J18-36-J18-9			
249 J18-37-J18-10			
250 J18-38-J18-11			
251 J18-39-J18-12			
252 J18-40-J18-13			
253 J18-41-J18-14			
254 J18-42-J18-15			
255 J18-43-J18-16			
256 J18-44-J18-17			
257 J18-45-J18-18			
258 J18-46-J18-19			
259 J18-47-J18-20			
260 J18-48-J18-21			
261 J18-49-J18-22			
262 J18-50-J18-23			
263 J18-51-J18-24			
273 P7-4			
274 P7-5			
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281 P7-12			
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285 P7-16			
286 P7-17			
287 P7-18			
288 P7-19			
289 P7-20			
290 P7-21			
291 P7-22			
292 P7-23			
293 P7-24			

WIRE No.	SUB-ASSEMBLY	CLR	AWG
120 J18-1-J18-27	605454-007		16
121 J18-2-J18-26			
122 J18-3-J18-29			
50 J18-4-J18-1			
51 J18-5-J18-2			
52 J18-6-J18-3			
53 J18-7-J18-4			
54 J18-8-J18-5			
55 J18-9-J18-6			
56 J18-10-J18-7			
57 J18-11-J18-8			
58 J18-12-J18-9			
59 J18-13-J18-10			
61 J18-14-J18-12			
60 J18-15-J18-11			
62 J18-16-J18-13			
63 J18-17-J18-15			
64 J18-18-J18-14			
65 J18-19-J18-16			
66 J18-20-J18-17			
68 J18-21-J18-19			
69 J18-22-J18-21			
70 J18-23-J18-20			
71 J18-24-J18-22			
72 J18-25-J18-24			