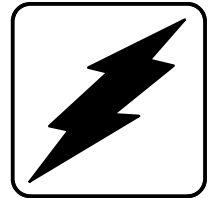


Wiring Diagrams

Fast-Response™ II Industrial Generator Sets



Models:

200-300ROZD (Detroit Diesel Powered)

Controllers:

Decision-Maker™ 3+

Decision-Maker™ 3

Engine Gauge Box for Paralleling (Switchgear)



KOHLER[®]
POWER SYSTEMS

TP-5721 7/96e

Introduction

This manual contains the wiring diagrams for the 200-300ROZD Detroit Diesel-powered models equipped with one of the following controllers:

- Microprocessor, Decision-Maker™ 3+ Controller
 - 16-Light
 - 7-Light
- Microprocessor, Decision-Maker™ 3 Controller
 - 16-Light
 - 6-Light
- Engine Gauge Box for Paralleling (Switchgear)

Use the wiring diagram cross-reference to determine the correct wiring diagrams.

All information in this publication represents data available at time of print. Kohler Co. reserves the right to change this literature and the products represented without incurring obligation.

Service Assistance

For sales and service in the U.S.A. and Canada check the yellow pages of the telephone directory under the heading GENERATORS—ELECTRIC for an authorized service distributor/dealer or call 1-800-544-2444.

For sales and service outside the U.S.A. and Canada, contact your local distributor.

For further information or questions, contact the company directly at:

KOHLER CO., Kohler, Wisconsin 53044 U.S.A.
Phone: 920-565-3381
Fax: 920-459-1646 (U.S.A. Sales)
920-459-1614 (International)

Kohler Power Systems
Asia Pacific Headquarters
7 Jurong Pier Road
Singapore 619159
Phone: (65)264-6422, Fax (65)264-6455

To ensure supply of correct parts or information, make note of the following identification numbers in the spaces provided:

GENERATOR SET

MODEL, SPEC, and SERIAL numbers are found on the nameplate attached to the generator set.

Model No. _____

Specification No. _____

Serial No. _____

GENERATOR SET ACCESSORIES

An alternate nameplate inside the junction box identifies factory-installed generator set accessories.

Accessory Nos. _____

ENGINE

The engine serial number is found on the engine nameplate.

Engine Serial No. _____

Wiring Diagrams

At the time of print, this manual applied to the model numbers and specification (spec) numbers following. On occasion this manual may be applicable to specs not listed below, such as when similar new specs are created prior to the updated reprint or in cases where the manual is deemed an acceptable substitute for a manual under development.

Use the Wiring Diagram Cross-Reference to determine the correct version number for a given model number and spec number. Find that version number in the Controller Wiring Diagrams Reference and locate the wiring diagrams corresponding to the generator set's controller type. Wiring diagram pages are in numerical sequence by the numeric part of the alphanumeric part number.

Wiring Diagram Cross-Reference

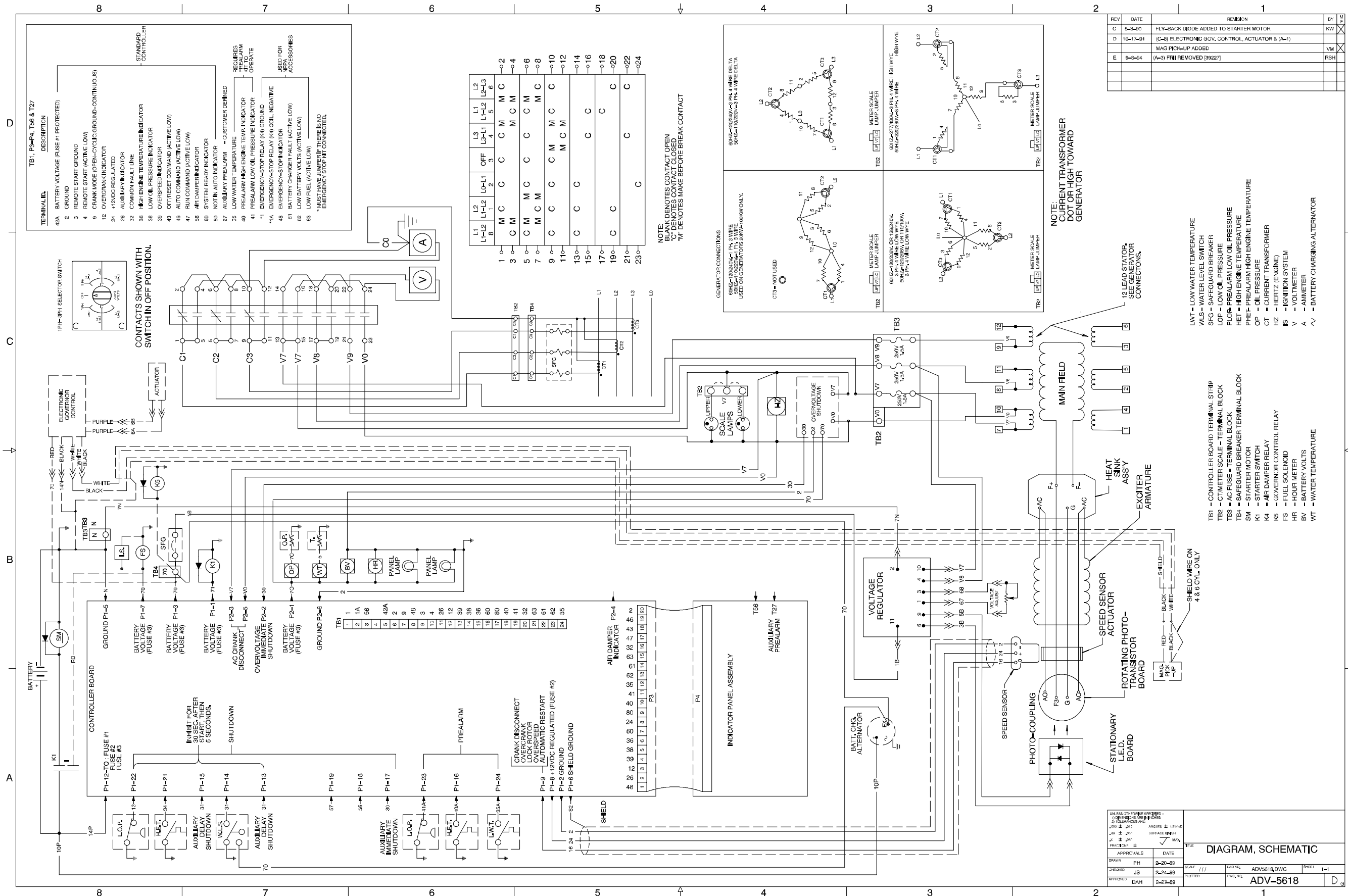
Model No.	Spec. No.	Wiring Diagram Version No.
200ROZD	132401-	(1, 2)*
230ROZD	132501-	(1, 2)*
250ROZD	132601-	(1, 2)*
275ROZD	132650-	(1, 2)*
300ROZD	132701-	(1, 2)*

* Use version 1 for serial no. below 363369.
Use version 2 for serial no. 363369 and above.

Controller Wiring Diagrams Reference

Controller Description (200-300ROZD)	Version 1	Pg	Version 2	Pg
Microprocessor, Decision-Maker™ 3+and Decision-Maker™ 3 Controller				
Point-to-Point Wiring Diagram				
Standard	274248-G	15	347156-B	18
Oversize	273854-E	14	347157-A	19
Schematic Diagram				
1ph/3ph	ADV-5618-E	1	ADV-6002-C	5
3ph/600V	ADV-5619-J	2	ADV-6004-C	6
Microprocessor Controller Accessory Connections				
Accessories	255828A-M	7	328912A-E	16
Remote Annunciator Kit				
10-Relay	255828B-M	8	-	-
14-Relay	255828C-D	9	328912B-C	17
Engine Gauge Box for Paralleling Controller (Switchgear)				
Point-to-Point Wiring Diagram				
Sheet 1	261151A-H	10	261151A-H	10
Sheet 2	261151B-G	11	261151B-G	11
Sheet 3	261151C-G	12	261151C-G	12
Sheet 4	261151D-G	13	261151D-G	13
Schematic Diagram	ADV-5727A-C	3	ADV-5727A-C	3
Accessories	ADV-5727B-B	4	ADV-5727B-B	4

NOTE: Version 1 uses the Microprocessor Decision-Maker™ 3 controller.
Version 2 uses the Microprocessor Decision-Maker™ 3+ controller.



TERMINAL ID	DESCRIPTION
42A	BATTERY VOLTAGE (FUSE #1 PROTECTED)
3	GROUND
4	REMOTE START (ACTIVE LOW)
9	CRANK MODE (OPEN-CYCLE-GROUND-CONTINUOUS)
12	OVERCRANK INDICATOR
24	12VDC REGULATED
28	AUXILIARY INDICATOR
32	COMMON FAULT LINE
36	HIGH ENGINE TEMPERATURE INDICATOR
38	LOW OIL PRESSURE INDICATOR
39	OVERSPEED INDICATOR
43	OFFERSET COMMAND (ACTIVE LOW)
46	AUTO COMMAND (ACTIVE LOW)
47	RUN COMMAND (ACTIVE LOW)
56	SYSTEM READY INDICATOR
60	NOT IN AUTO INDICATOR
61	AUXILIARY PREALARM - CUSTOMER DEFINED
62	LOW WATER TEMPERATURE
63	PREALARM HIGH ENGINE TEMP. INDICATOR
64	PREALARM LOW OIL PRESSURE INDICATOR
65	EMERGENCY STOP RELAY (K4) GROUND
66	EMERGENCY STOP RELAY (K4) CIL NEGATIVE
67	EMERGENCY STOP INDICATOR
68	BATTERY CHARGER FAULT (ACTIVE LOW)
69	LOW BATTERY VOLTS (ACTIVE LOW)
70	LOW FUEL (ACTIVE LOW)
71	* MUST HAVE JUMPER IF THERE IS NO EMERGENCY STOP INPUT CONNECTED.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1-L2	L1-L2	L0-L1	OFF	L3	L1	L1	L2	L3	L1-L2	L1-L2	L3	L1	L1	L2	L3	L1-L2	L1-L2	L3	L1	L1	L2	L3	L1-L2
M	C	C	C	C	M	C	M	C	M	C	M	C	M	C	M	C	M	C	M	C	M	C	M

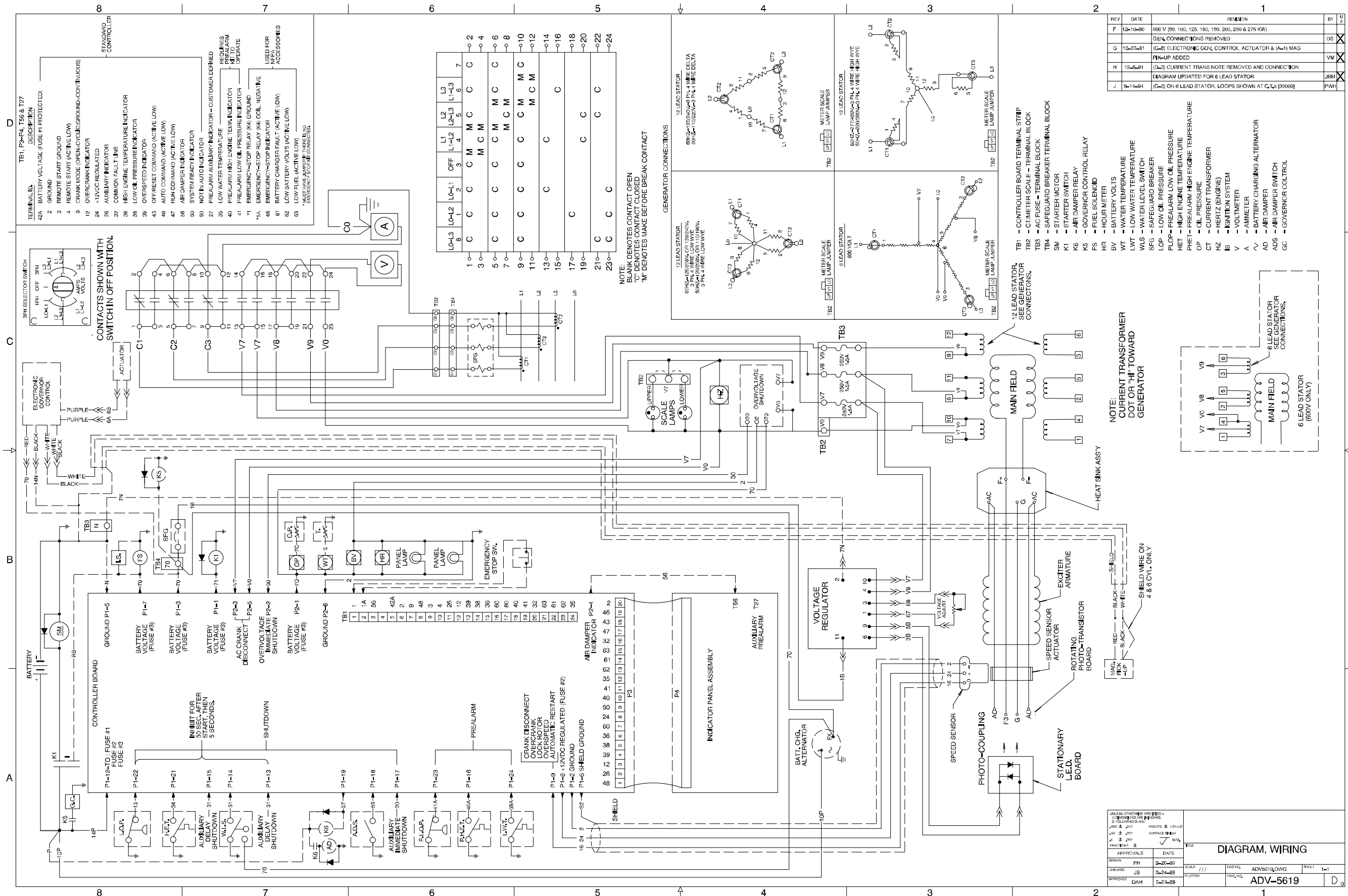
NOTE: BLANK DENOTES CONTACT OPEN
 'C' DENOTES CONTACT CLOSED
 'M' DENOTES MAKE BEFORE BREAK CONTACT

REV	DATE	REVISION	BY	CHK
C	5-8-80	FLY-BACK DIODE ADDED TO STARTER MOTOR	KW	✓
D	10-17-81	(C-8) ELECTRONIC GOV. CONTROL, ACTUATOR S. (A-1)	VM	✓
E	9-8-84	MAG PICK-UP ADDED	FSH	✓
		(A-3) FFI REMOVED (39227)		

- 19 LEAD STATOR GENERATOR CONNECTIONS
- NOTE: CURRENT TRANSFORMER DOT OR HIGH TOWARD GENERATOR
- WLT - LOW WATER TEMPERATURE
 WLS - WATER LEVEL SWITCH
 SFG - SAFEGUARD BREAKER
 LOP - LOW OIL PRESSURE
 FLOP - PREALARM LOW OIL PRESSURE
 HET - HIGH ENGINE TEMPERATURE
 PHEP - PREALARM HIGH ENGINE TEMPERATURE
 OP - OIL PRESSURE
 CT - CURRENT TRANSFORMER
 HZ - HERTZ (ENGINE)
 IS - IGNITION SYSTEM
 V - VOLT/METER
 A - AMP/METER
 ~ - BATTERY CHARGING ALTERNATOR
- TB1 - CONTROLLER BOARD TERMINAL STRIP
 TB2 - CT/METER SCALE - TERMINAL BLOCK
 TB3 - AC FUSE - TERMINAL BLOCK
 TB4 - SAFEGUARD BREAKER TERMINAL BLOCK
 SM - STARTER MOTOR
 K1 - STARTER SWITCH
 K4 - AIR DAMPER RELAY
 K5 - GOVERNOR CONTROL RELAY
 FS - FULL SOLENOID
 BV - BATTERY VOLTS
 WT - WATER TEMPERATURE
- 19 LEAD STATOR GENERATOR CONNECTIONS
- UNLESS OTHERWISE SPECIFIED - ALL DIMENSIONS ARE IN INCHES ± .005
 SURFACE FINISH: ALL SURFACES TO BE FINISHED TO 32 RMS UNLESS OTHERWISE SPECIFIED
 DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY
 DIMENSIONS IN SQUARE BRACKETS ARE FOR INFORMATION ONLY

APPROVALS				DATE			
DESIGNED	PH	2-20-89	CHECKED	JS	2-24-89	DRAWN	PH
APPROVED	DAH	2-24-89	PLOTTED			TITLE	DIAGRAM, SCHEMATIC
SCALE		1/1	SHEET NO.		ADV5618.DWG	SHEET	
PROJECT			REV.		ADV-5618	1-1	

Microprocessor Controller, Schematic Diagram, 1 ph/3 ph, ADV-5618-E



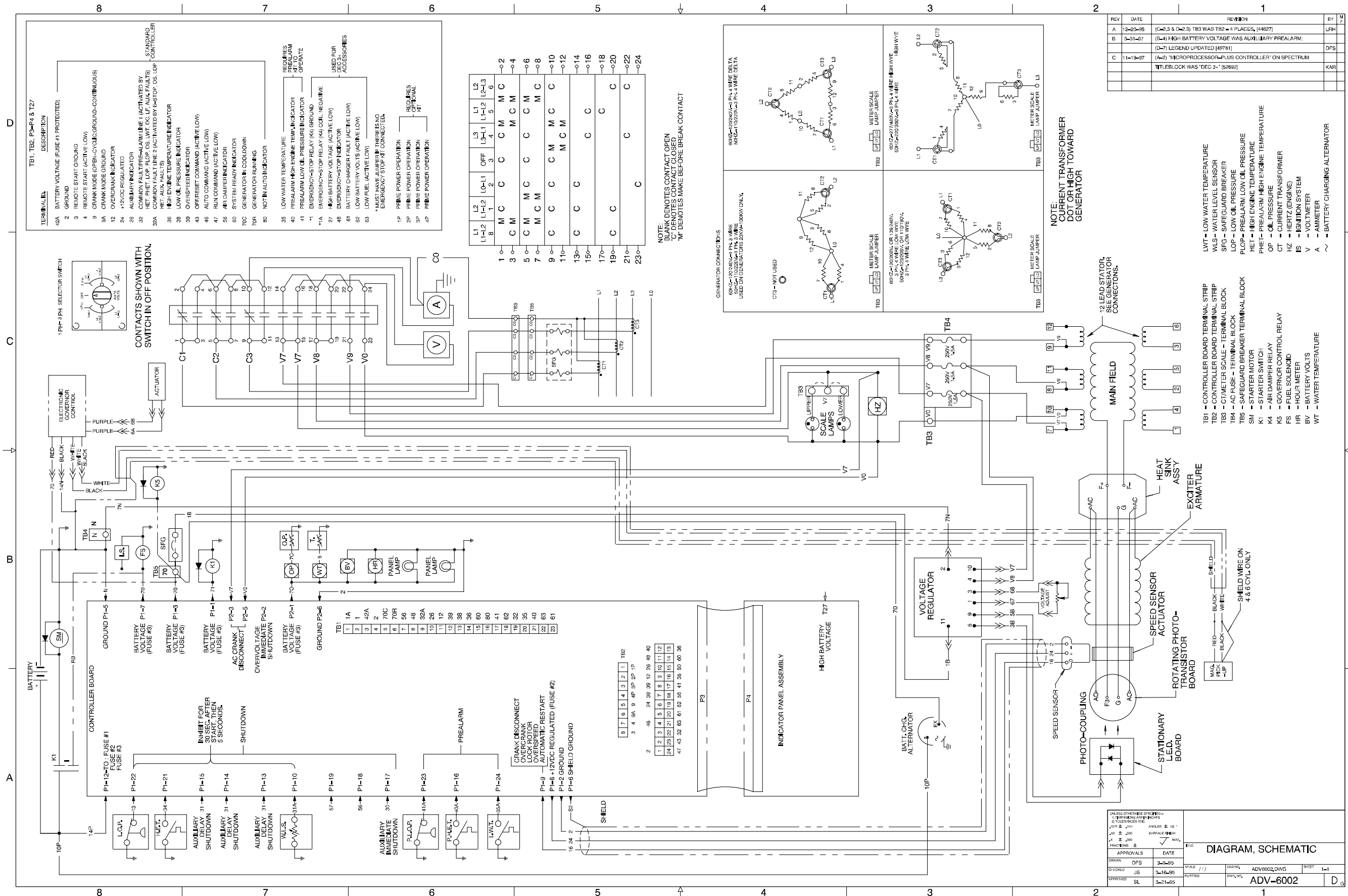
REV	DATE	REVISION	BY	CHK
F	12-10-90	600 V (80, 100, 125, 150, 180, 200, 250 & 275 KW) GEN. CONNECTIONS REMOVED	DS	✓
G	10-22-91	(C-5) ELECTRONIC GOV. CONTROL ACTUATOR & (A-1) MAG PICK-UP ADDED	VM	✓
H	12-2-91	(L-3) CURRENT TRANS NOTE REMOVED AND CONNECTION DIAGRAM UPDATED FOR 6 LEAD STATOR	JEM	✓
J	9-1-94	(C-3) ON 6 LEAD STATOR, LOOPS SHOWN AT C.T. 3 [B3660]	PWH	✓

APPROVALS		DATE	SCALE	CAD FILE	DRWG	SHEET	1-1
DESIGNED	FH	2-20-89	1/1	ADV5619.DWG			
CHECKED	JS	2-24-89					
APPROVED	DAH	2-24-89					

DIAGRAM, WIRING

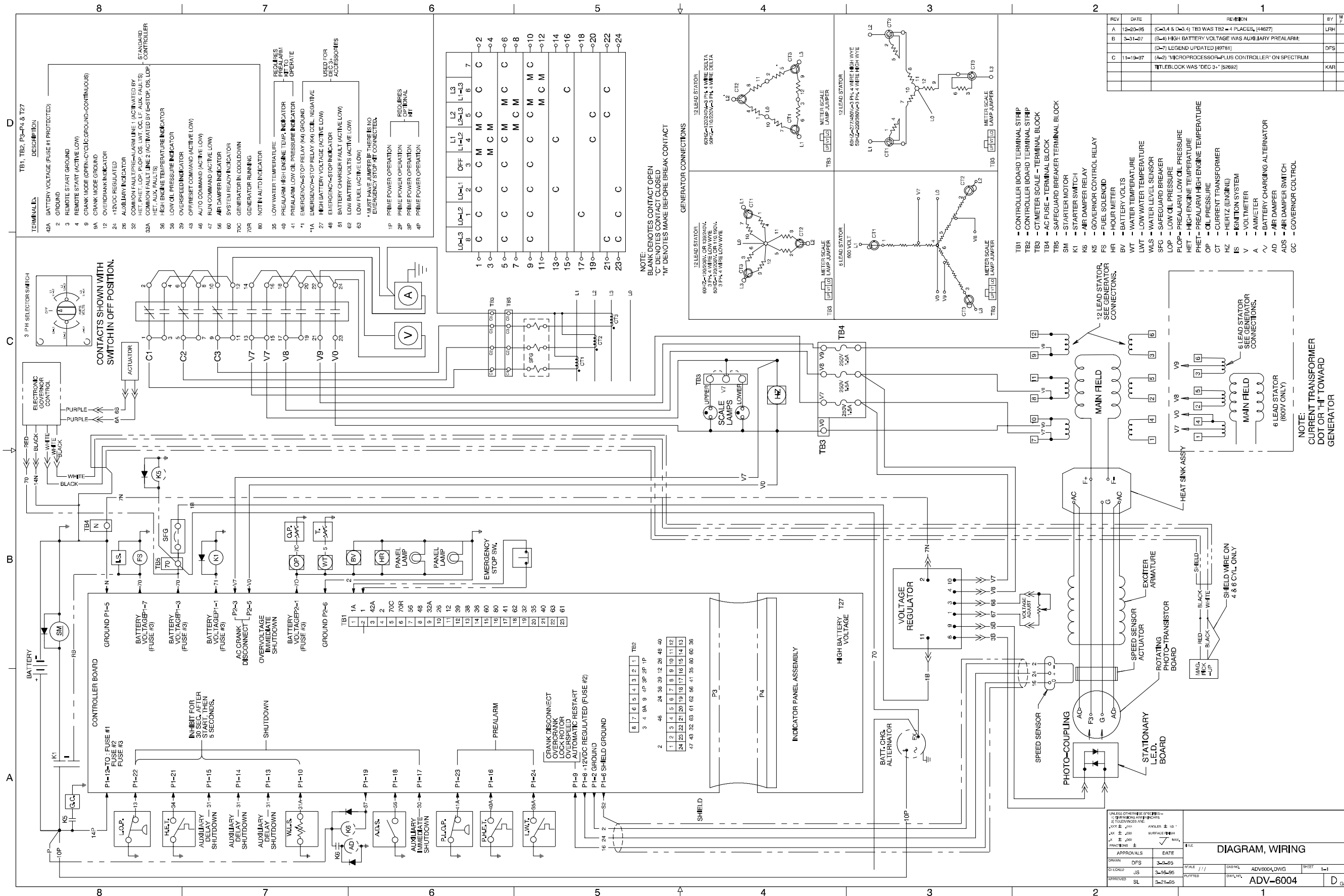
ADV-5619

Microprocessor Controller, Schematic Diagram, 3 ph/600 V, ADV-5619-J

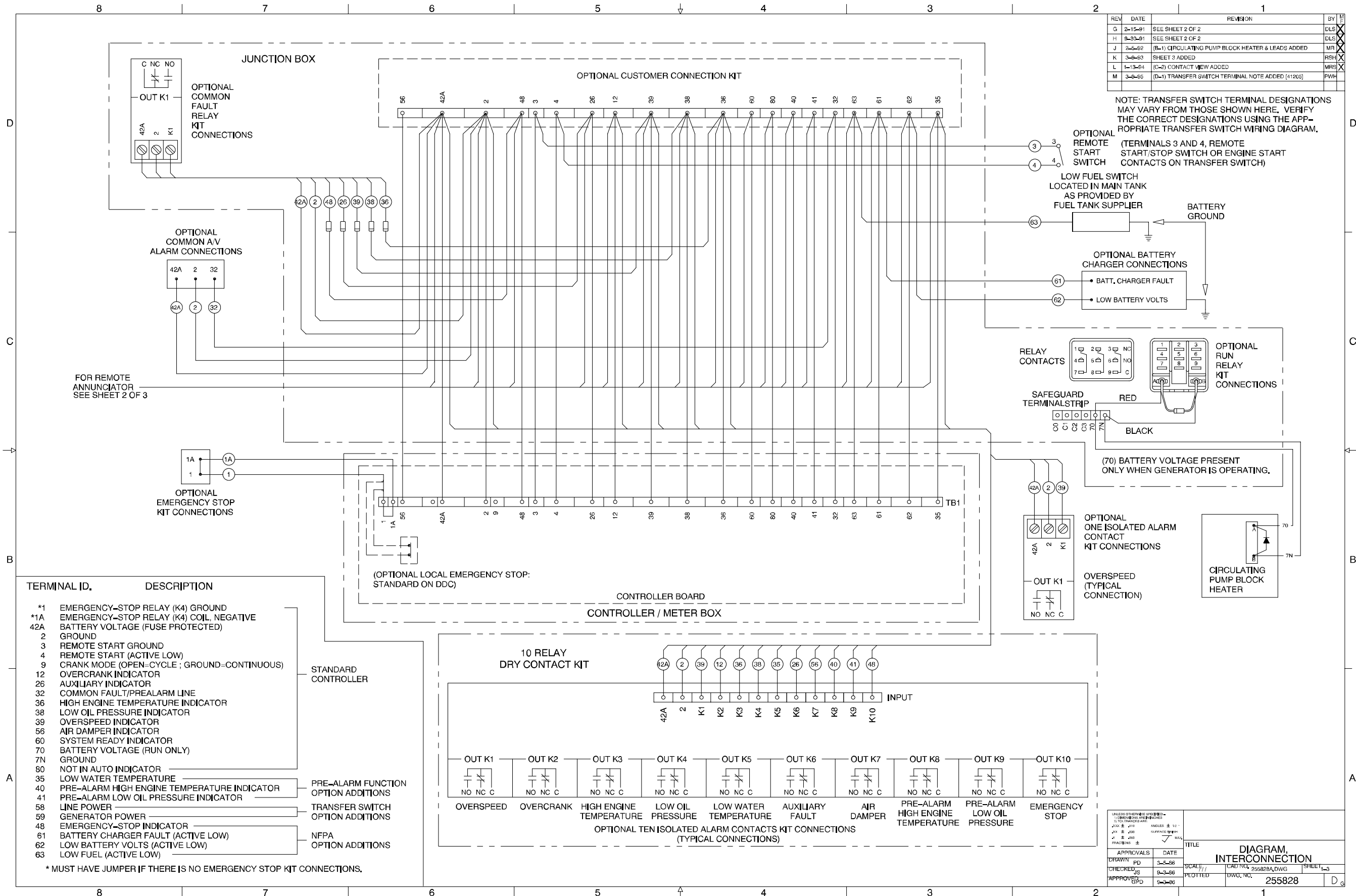


Microprocessor Controller, Schematic Diagram, 1 ph/3 ph, ADV-6002-C

TP-5718 2/98
 MP-5721 7/96
 TP-5719 6/96

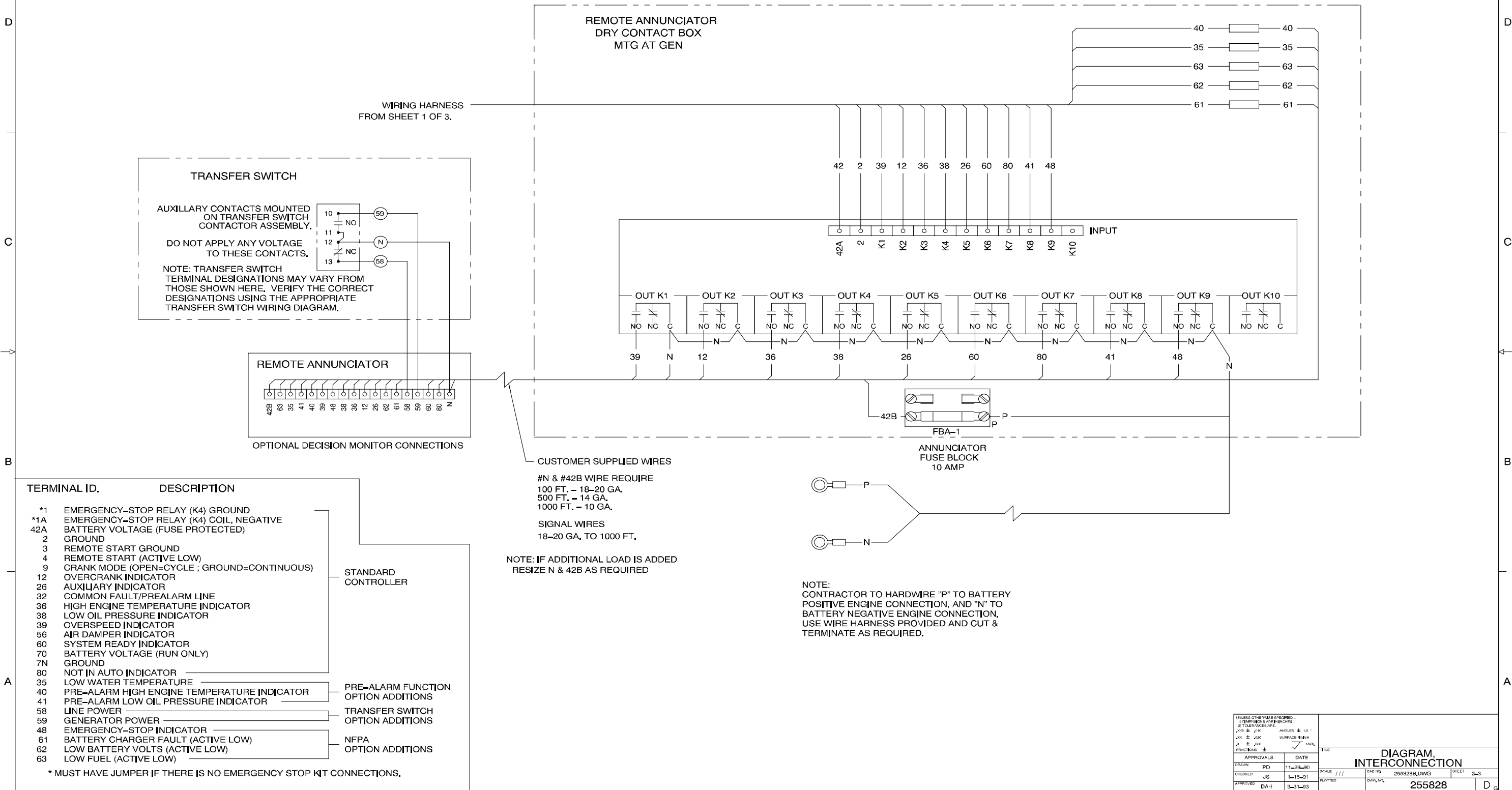


Microprocessor Controller, Schematic Diagram, 3 ph/600 V, ADV-6004-C



Microprocessor Controller Accessory Connections, Accessories, 255828A-M

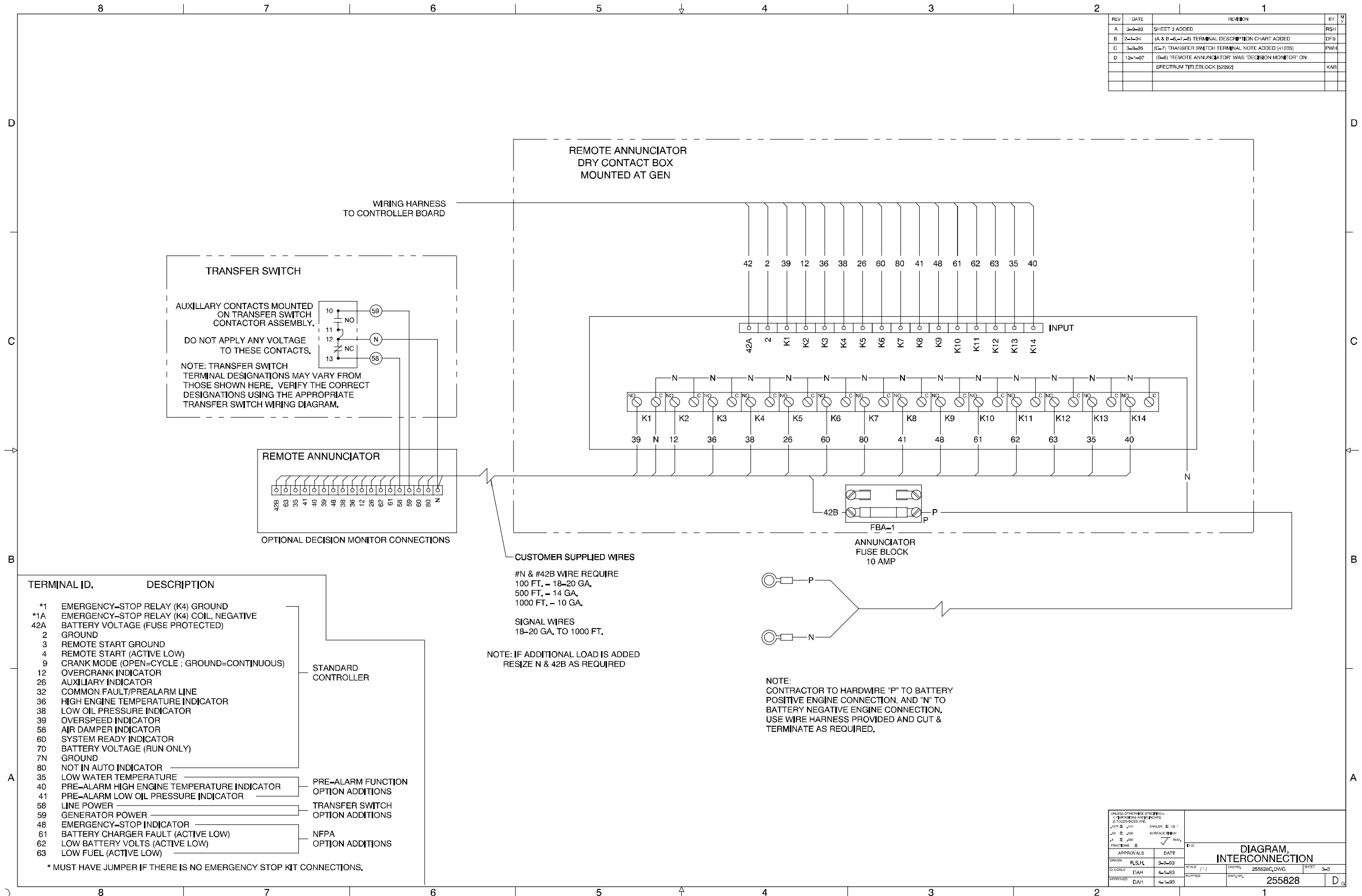
REV	DATE	REVISION	BY	APP
H	8-20-91	(B-8) 42B WAS 42A; (B-4) ADDED ANNUNCIATOR FUSE BLOCK		
		WIRING & NOTE	DLS	
J	3-5-93	SHEET 3 ADDED	RSH	
K	2-1-94	(A & B-6-7-8) TERMINAL DESCRIPTION CHART ADDED	DFS	
L	3-9-95	(C-7) TRANSFER SWITCH TERMINAL NOTE ADDED (#120S)	PWH	
M	12-1-97	(B-7) REMOTE ANNUNCIATOR WAS "DECISION MONITOR" ON SPECTRUM TITLEBLOCK (52692)	KAR	



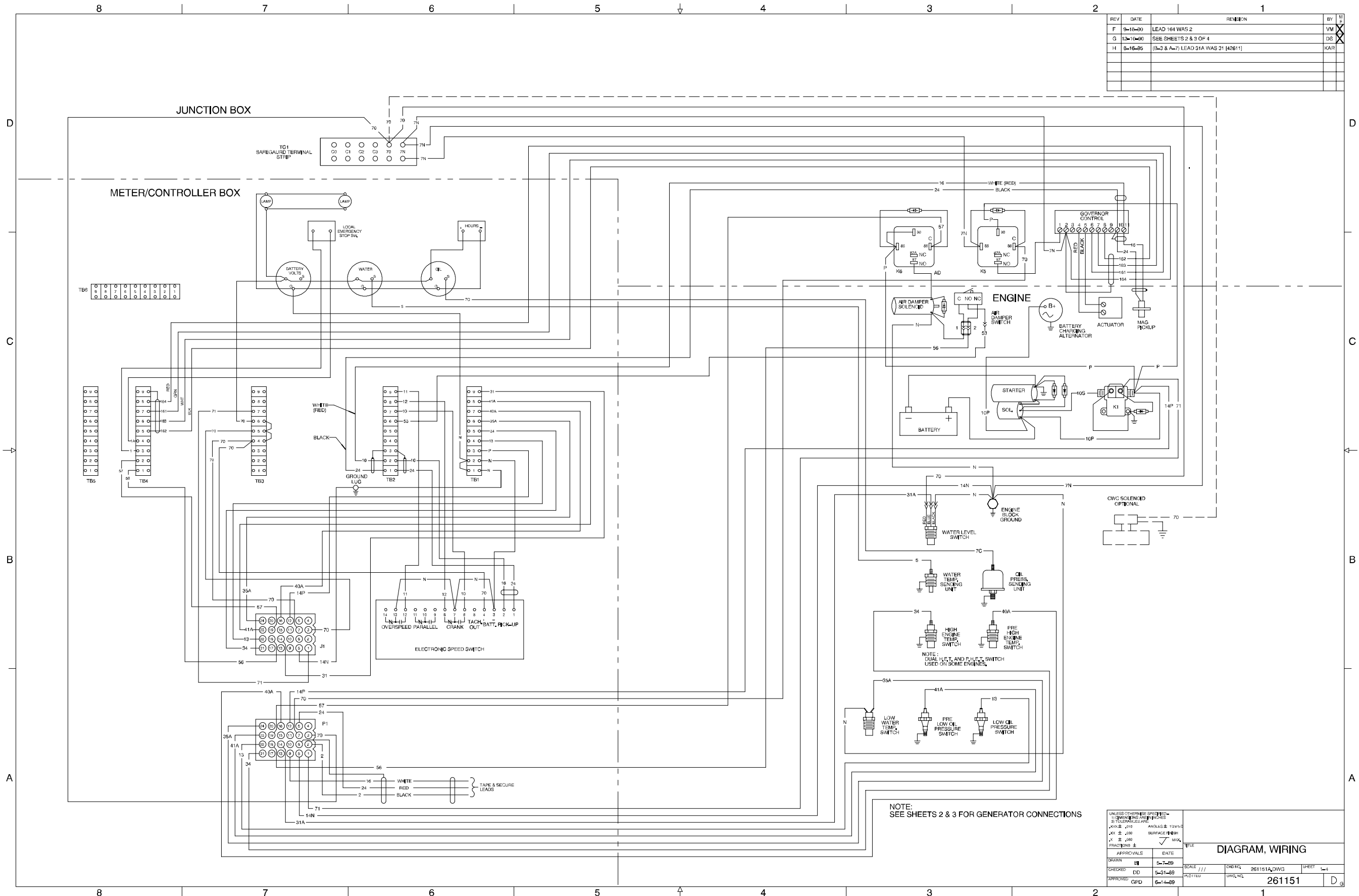
Microprocessor Controller, Remote Annunciator Kit, 10-Relay, 255828B-M

UNLESS OTHERWISE SPECIFIED - 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .005 ± .001 ANGLES ± 1.0° .01 ± .002 SURFACE FINISH .01 ± .002 SURFACE FINISH .01 ± .002 SURFACE FINISH		TITLE DIAGRAM, INTERCONNECTION	
APPROVALS	DATE	SCALE	SHEET
DRAWN PD	11-23-90	SCALE 1/1	SHEET 2-3
CHECKED JIS	1-15-91	DWG NO. 255828B.DWG	
APPROVED DAH	3-31-93	PLOTTED	
		DWG. NO.	DWG.
		255828	D

REV	DATE	REVISION	BY	CHK
A	3-3-93	SHEET 3 ADDED	RSJ	
B	2-1-94	(A & B - 42A, 42B) TERMINAL DESCRIPTION CHART ADDED	DFS	
C	3-3-95	(C-7) TRANSFER SWITCH TERMINAL NOTE ADDED (41205)	PWH	
D	12-1-97	(B-6) 'REMOTE ANNUNCIATOR' WAS 'DECISION MONITOR' ON SPECTRUM TITLEBLOCK (52892)	KAR	



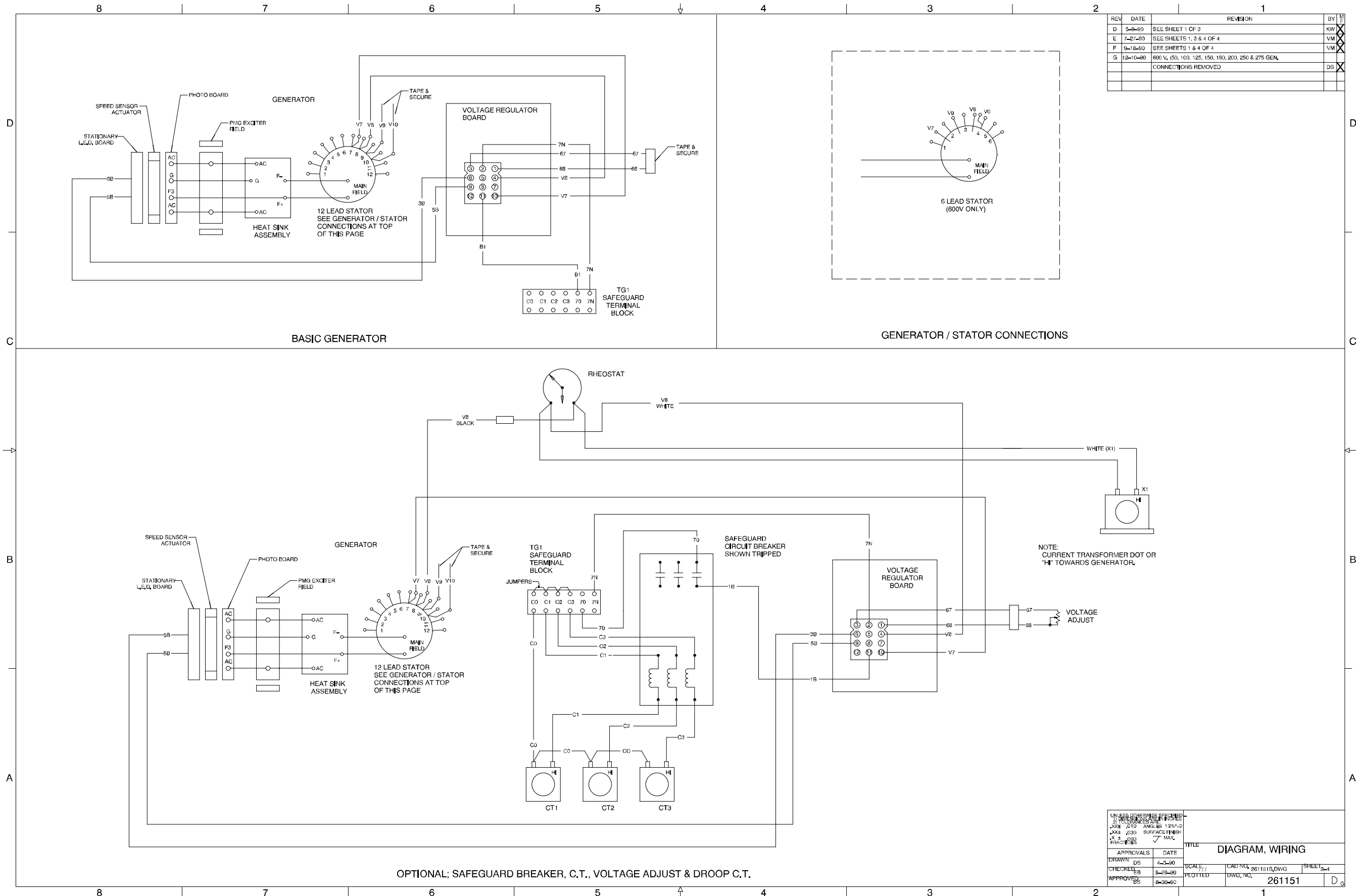
Microprocessor Controller, Remote Annunciator Kit, 14-Relay, 255828C-D



REV	DATE	REVISION	BY
F	9-18-80	LEAD 164 WAS 2	VM
G	10-10-80	SEE SHEETS 2 & 3 OF 4	DS
H	8-16-85	(B-3 & A-7) LEAD 31A WAS 31 (42611)	KAR

APPROVALS		DATE	SCALE	DWG NO.	261151A/DWG	SHEET	1
DRAWN	DD	5-7-89	1/1	PLD/TBU	UPW/NL	261151	D
CHECKED	DD	5-31-89					
APPROVED	GPD	6-1-89					

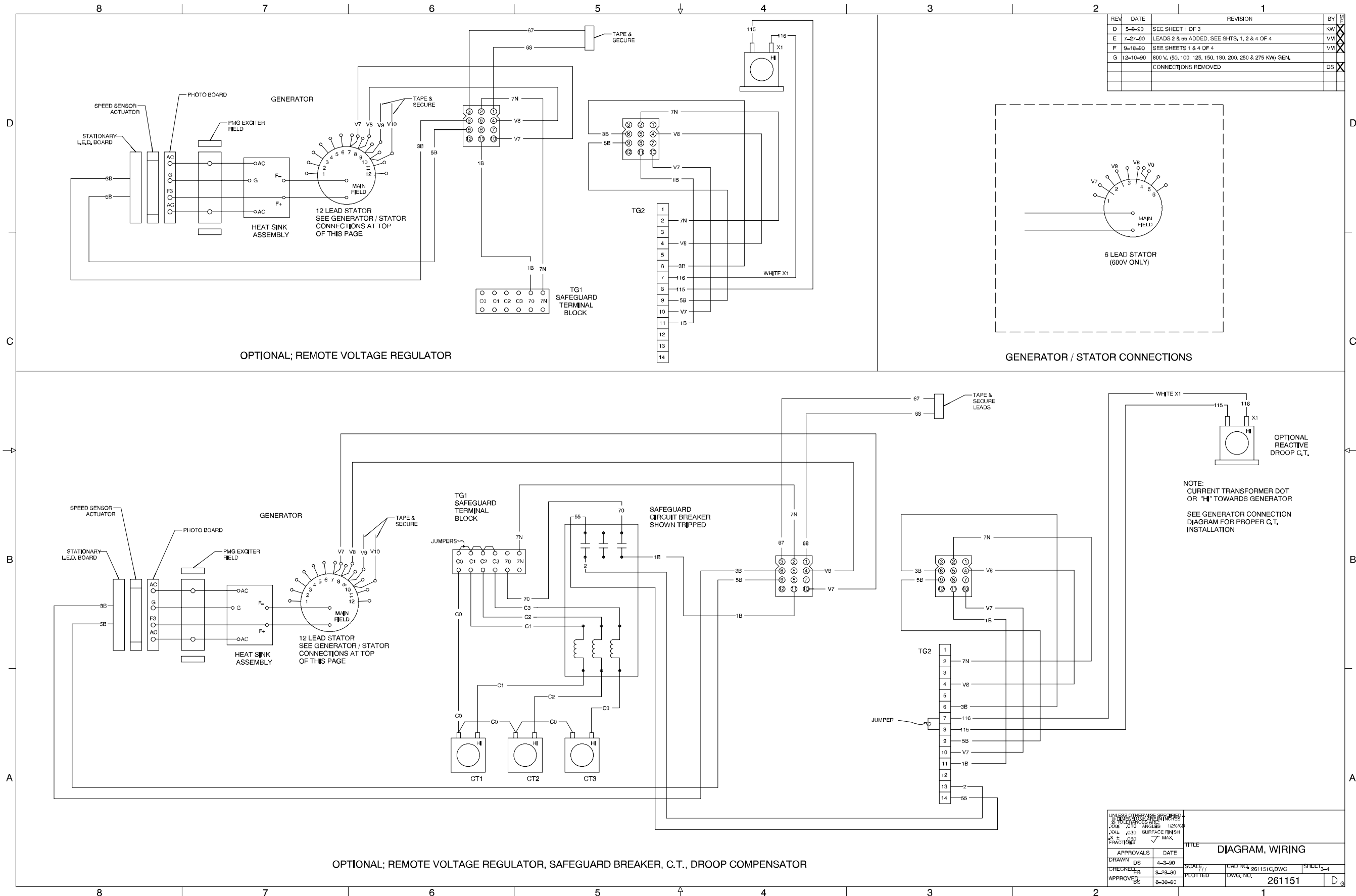
Engine Gauge Box for Paralleling Controller, Point-to-Point Wiring Diagram, Sheet 1, 261151A-H



REV	DATE	REVISION	BY
D	5-9-90	SEE SHEET 1 OF 3	KW
E	7-27-90	SEE SHEETS 1, 3 & 4 OF 4	VM
F	9-18-90	SEE SHEETS 1 & 4 OF 4	VM
G	12-10-90	600 V, (50, 100, 125, 150, 180, 200, 250 & 275 GEN, CONNECTIONS REMOVED	DS

UNLESS OTHERWISE SPECIFIED		TITLE	
SCALE	AS SHOWN	DIAGRAM, WIRING	
DRAWN	DS	SCALE	1/2"
CHECKED	ES	CAD NO.	261151B.DWG
APPROVED	ES	PLOTTED	261151
DATE	4-3-90	DWG. NO.	261151
DATE	8-28-90		
DATE	8-30-90		

Engine Gauge Box for Paralleling Controller, Point-to-Point Wiring Diagram, Sheet 2, 261151B-G



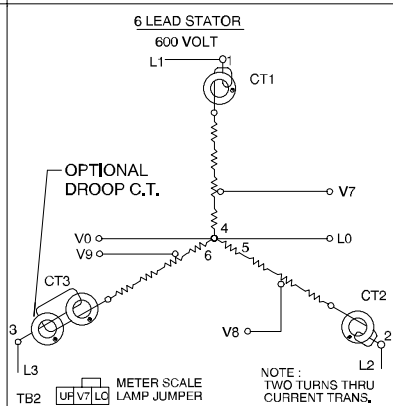
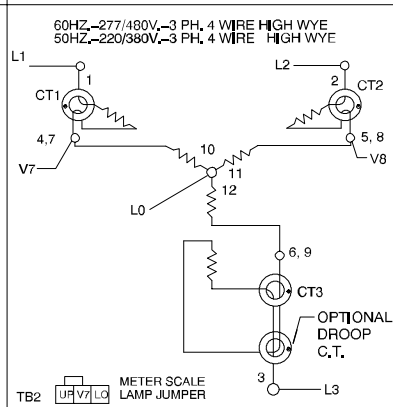
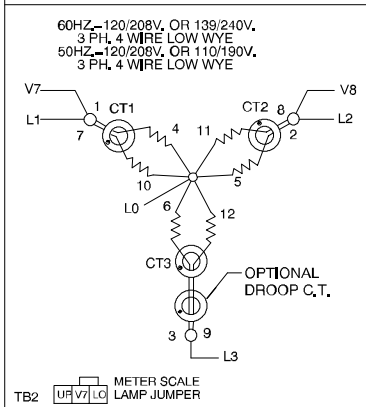
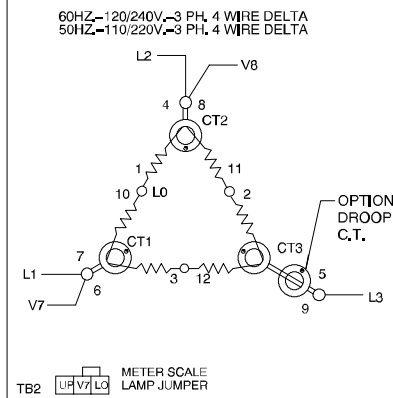
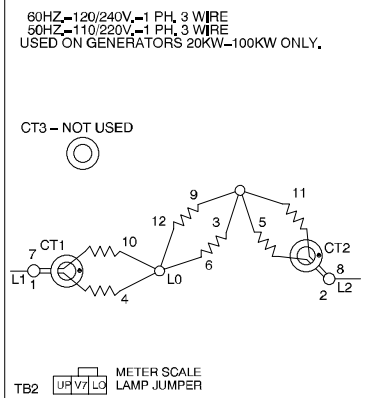
REV	DATE	REVISION	BY
D	5-9-90	SEE SHEET 1 OF 3	KW
E	7-27-90	LEADS 2 & 95 ADDED, SEE SHTS. 1, 2 & 4 OF 4	VM
F	9-18-90	SEE SHEETS 1 & 4 OF 4	VM
G	12-10-90	600 V, (50, 100, 125, 150, 180, 200, 250 & 275 KW GEN. CONNECTIONS REMOVED)	DS

APPROVALS	DATE	TITLE
DRAWN DS	4-3-90	DIAGRAM, WIRING
CHECKED EB	8-28-90	SCALE: / /
APPROVED BS	8-30-90	CAD NO. 261151C.DWG

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 ANGLES 12%
 SURFACE FINISH
 MAX.
 FRACTIONS

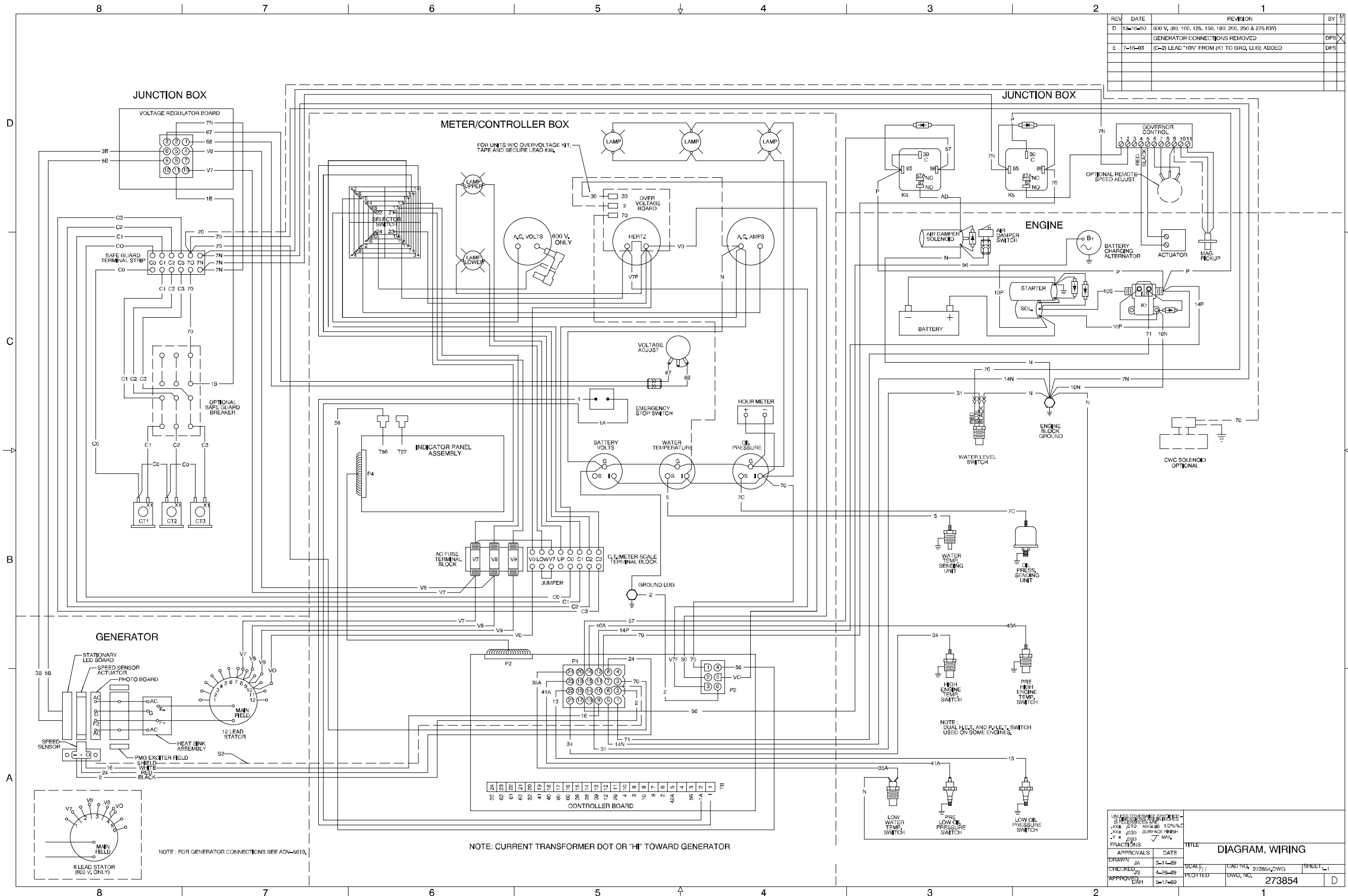
261151

REV	DATE	REVISION	BY
E	7-27-90	SHEET 4 ADDED	VM
F	9-18-90	OPTIONAL DROOP C.T. NOTE ADDED	VM
G	12-10-90	SEE SHEETS 2 & 3 OF 4	DS



- NOTE:
- CURRENT TRANSFORMER DOT OR "H" TOWARDS GENERATOR.
 - V = SENSING
L = POWER
(UNLESS NOTED)
 - PHASE ROTATION
A, B, C = L1, L2, L3
 - 120-240 VOLT GENERATOR SETS REQUIRE ONE (1) TURN OF OUTPUT LEADS THROUGH CURRENT TRANSFORMER. 480 VOLT & 600 VOLT GENERATOR SETS REQUIRE TWO (2) TURNS OF OUTPUT LEADS THROUGH CURRENT TRANSFORMER.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES 1/2% SURFACE FINISH TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONS MAX.	TITLE DIAGRAM, WIRING
APPROVALS DRAWN DS CHECKED EB APPROVED BS	DATE 4-3-90 8-28-90 8-30-90
SCALE 1/1	CAD NO. 261151D.DWG
PLOTTED	DWG. NO. 261151
	SHEET 4



REV	DATE	REVISION	BY
D	12-10-90	600 V, (80, 100, 125, 150, 180, 200, 250 & 275 KW) GENERATOR CONNECTIONS REMOVED	DFS
E	7-15-93	(C-2) LEAD "10N" FROM (K1 TO GRD, LUG) ADDED	DFS

UNLESS OTHERWISE SPECIFIED		TITLE	
DRAWN	JA	DATE	3-17-89
CHECKED	JS	SCALE	1:1
APPROVED	EAH	DATE	5-17-89
SHEET NO. 1		CAD NO.	273854.DWG
DWG. NO.		273854	

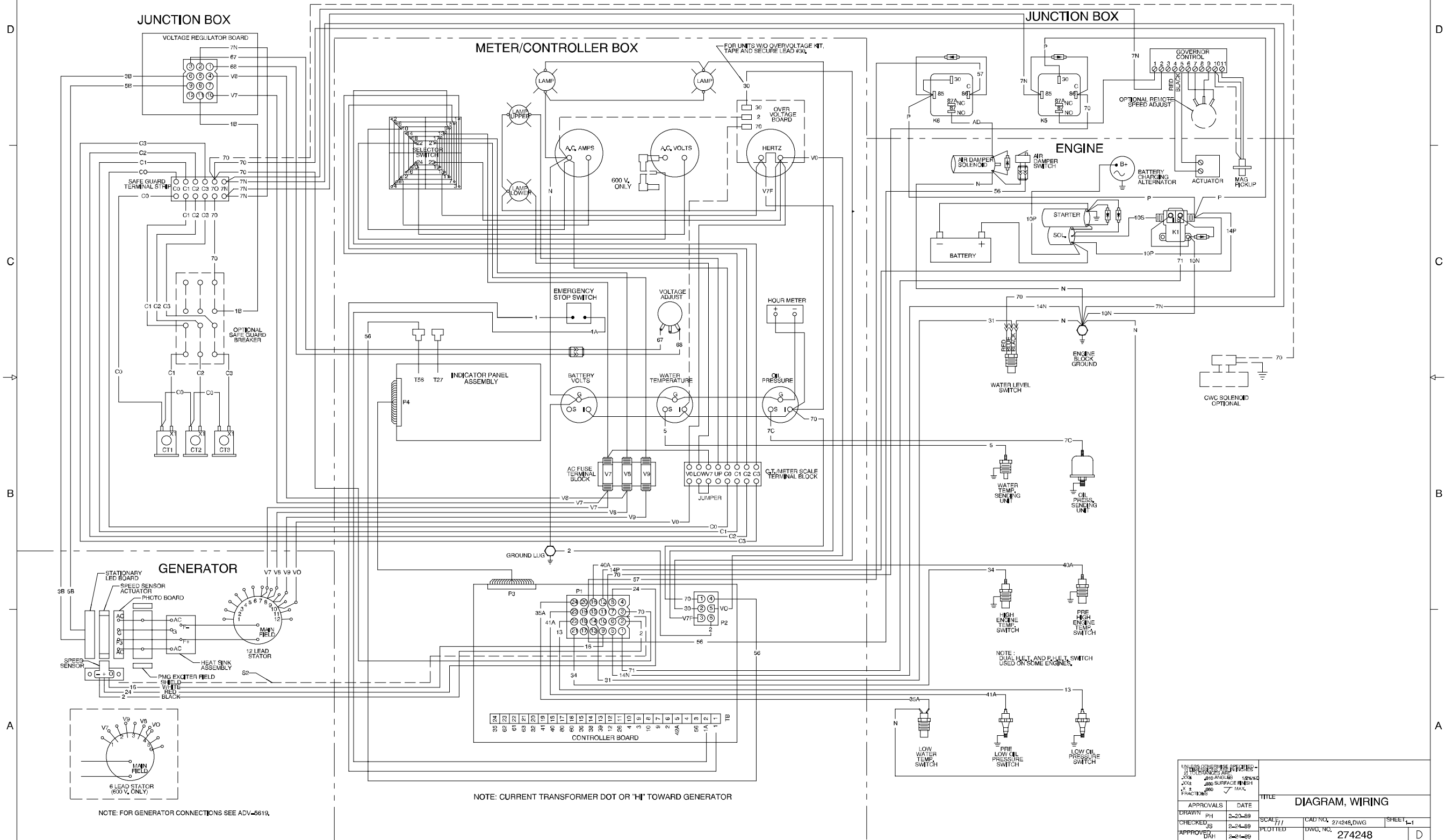
NOTE: CURRENT TRANSFORMER DOT OR "HI" TOWARD GENERATOR

NOTE: FOR GENERATOR CONNECTIONS SEE ADV-5619.

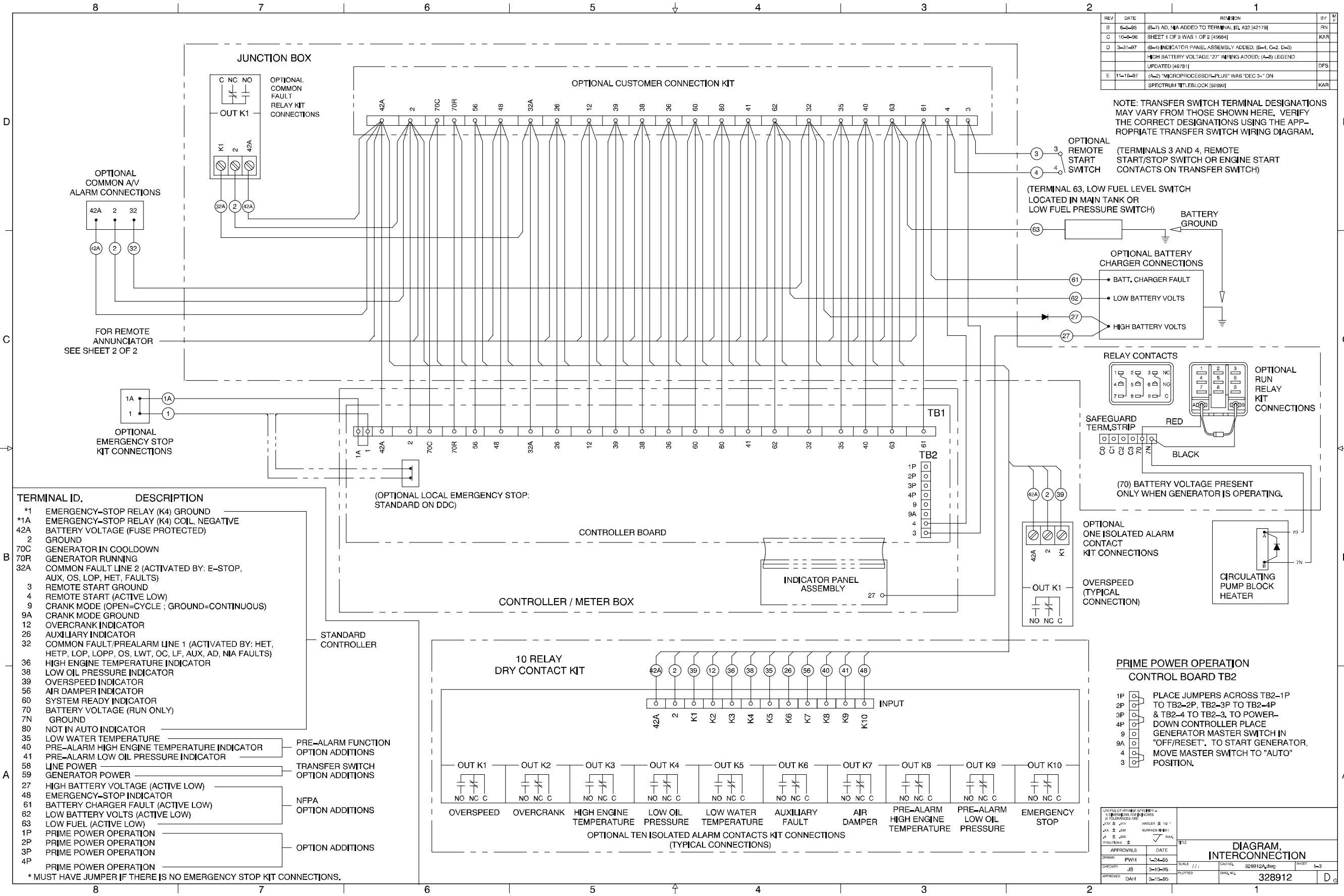
NOTE: DUAL INLET AND PALET SWITCH USED ON SOME ENGINES.

Microprocessor Controller, Point-to-Point Wiring Diagram, Oversize, 273854-E

REV	DATE	REVISION	BY
F	12-10-90	600 V (50, 100, 125, 150, 180, 200, 250 & 275 KW GEN.	DFS
		CONNECTIONS REMOVED	DFS
G	7-16-93	LEAD '10N' FROM (K1 TO GRD, LUG) ADDED	DFS

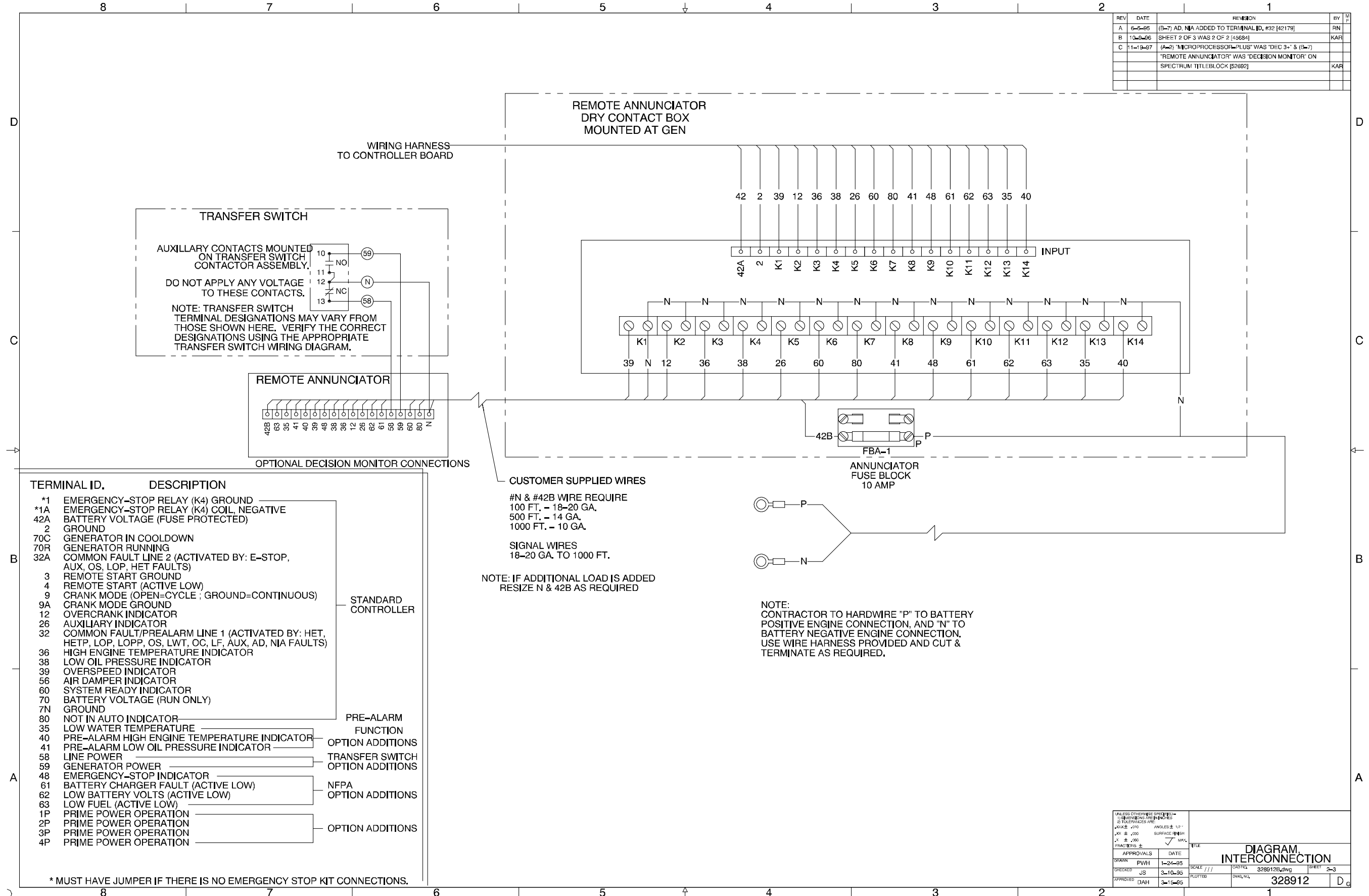


Microprocessor Controller, Point-to-Point Wiring Diagram, Standard, 274248-G

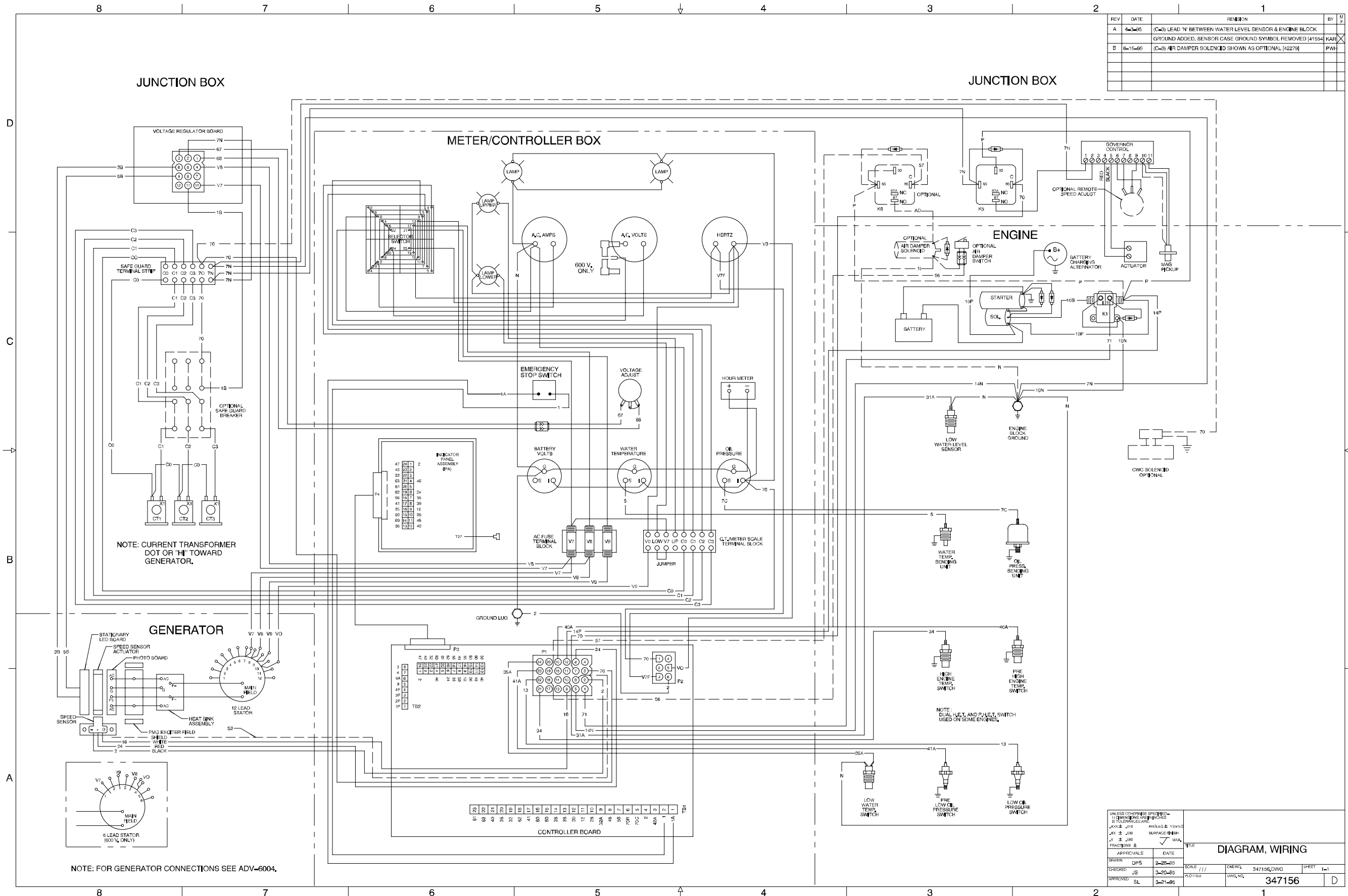


Microprocessor Controller Accessory Connections, Accessories, 328912A-E

REV	DATE	REVISION	BY
A	6-5-95	(B-7) AD. NIA ADDED TO TERMINAL ID. #32 [42179]	RN
B	10-3-96	SHEET 2 OF 3 WAS 2 OF 2 [45684]	KAR
C	11-19-97	(A-2) "MICROPROCESSOR PLUS" WAS "DEC 3+" & (B-7) "REMOTE ANNUNCIATOR" WAS "DECISION MONITOR" ON SPECTRUM TITLEBLOCK [52682]	KAR



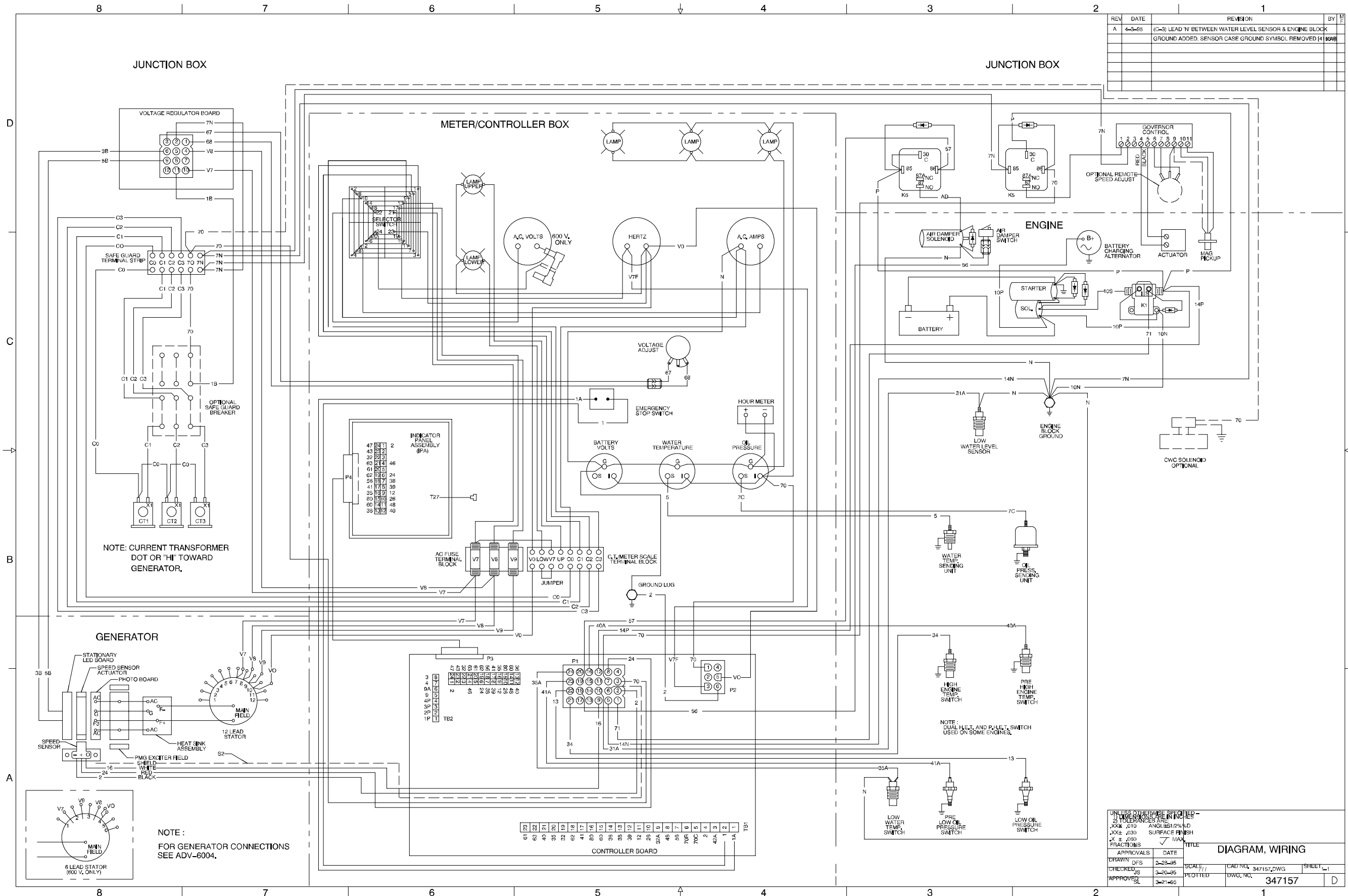
Microprocessor Controller Accessory Connections, Remote Annunciator Kit, 14-Relay, 328912B-C



REV	DATE	REVISION	BY	CHK
A	4-3-85	(C-5) LEAD 'N' BETWEEN WATER LEVEL SENSOR & ENGINE BLOCK	KAR	
B	6-15-85	GROUND ADDED, SENSOR CASE GROUND SYMBOL REMOVED (41554)	PWH	
		(C-3) AIR DAMPER SOLENOID SHOWN AS OPTIONAL (42278)		

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES FRACTIONS ± .005 DECIMALS ± .001 ANGLES ± 12.5% SURFACE FINISH FRACTIONS ± .001 DECIMALS ± .001		TITLE	
APPROVALS		DATE	
DRAWN	DPS	3-28-85	SCALE
CHECKED	JS	3-20-85	DWG NO.
APPROVED	SL	3-21-85	347156
SHEET		1-1	

Microprocessor Controller, Point-to-Point Wiring Diagram, Standard, 347156-B



Microprocessor Controller, Point-to-Point Wiring Diagram, Oversize, 347157-A

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KOHLER[®] POWER SYSTEMS

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