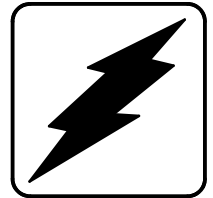


# Wiring Diagrams

## Industrial Generator Sets



Models:

**20–2000 kW**

Controller:

Decision-Maker<sup>†</sup> 340 Controller Kits

**KOHLER**<sup>®</sup>  
POWER SYSTEMS

**ISO 9001**  
**KOHLER**  
GENERATORS  
INTERNATIONALLY REGISTERED  
U.S.A. Plant ISO Registered

TP-5851 9/98

# Introduction

This manual contains the wiring diagrams for the 20–2000 kW models equipped with the Decision-Makerä 340. Use the wiring diagram cross-reference to determine the wiring diagrams for your application.

All information in this publication represents data available at time of printing. 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 following generator set model numbers and specification (spec) numbers. On occasion this manual may be applicable to specs not listed below, such as when similar new specs are created prior to an updated reprint, or when the current 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 choose the wiring diagrams in the column below your generator set model number. Wiring diagram pages are numbered and arranged in numerical sequence by the numeric part of the alphanumeric part number.

## Wiring Diagram Cross-Reference

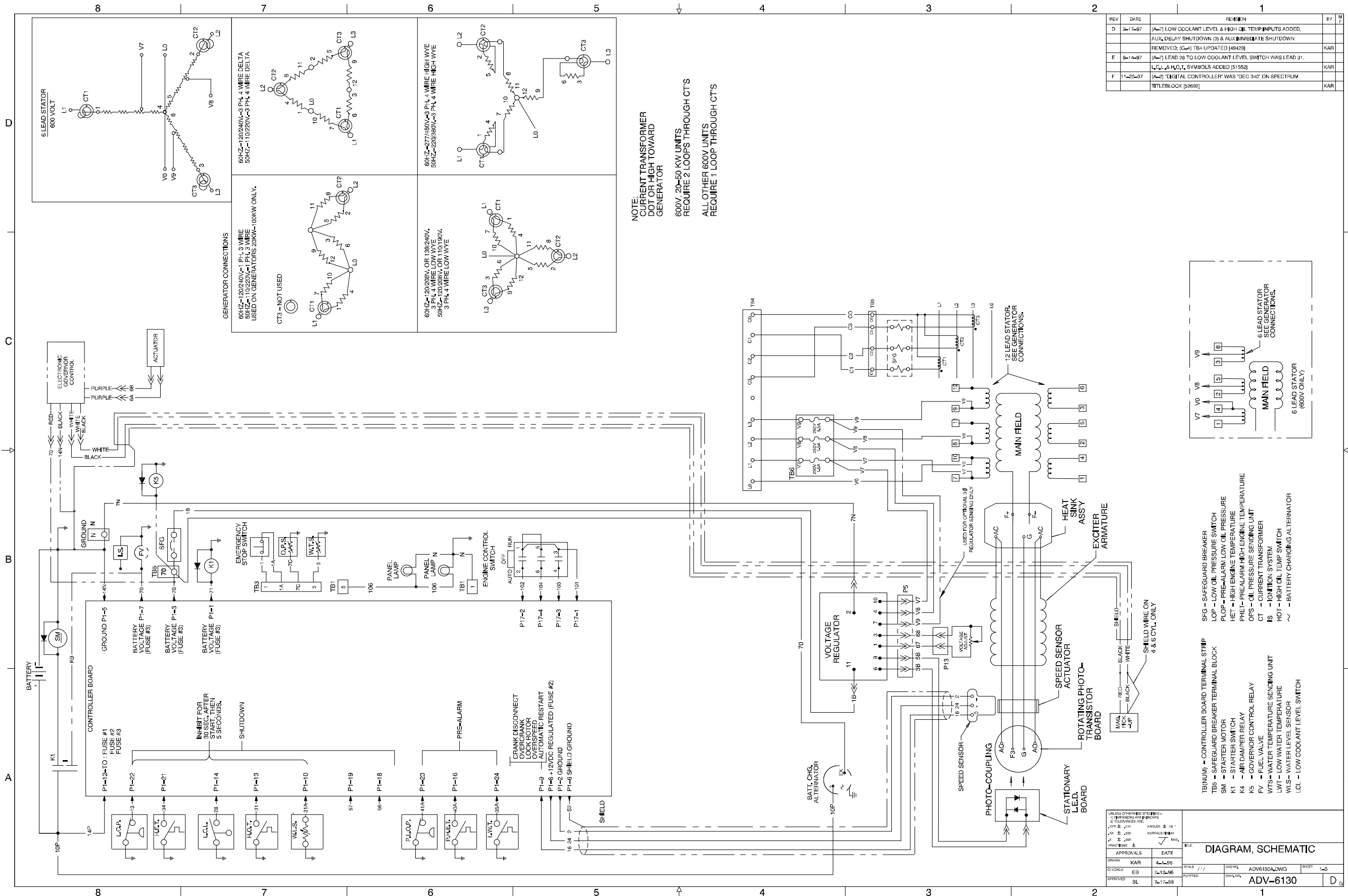
Model No.	Spec. No.	Wiring Diagram Version No.
20RZ	185084-	1
30RZ	185090-	1
35RZ	183037-	1
45RZ	183238-	1
50RZ	187139-	1
60RZ	187076-	1
70RZ	187272-	1
80RZ	187341-	1
100RZ	187441-	1
135RZD	194006-	1
150RZD	194016-	1
180RZD	194026-	1
200RZD	194205-	1
230RZD	194215-	1
250RZD	194225-	1
275RZD	194235-	1
20ROZJ	189022-	1
30ROZJ	189123-	1
40ROZJ	189222-	1
50ROZJ	189316-	1
60ROZJ	189412-	1
80ROZJ	189530-	1
100ROZJ	189629-	1
125ROZJ	189701-	1
135ROZJ	189721-	1
150ROZJ	189821-	1
180ROZJ	189932-	1
20REOZJ	189029-	1
30REOZJ	189129-	1
40REOZJ	189229-	1
50REOZJ	189325-	1
60REOZJ	189416-	1
80REOZJ	189539-	1
100REOZJ	189641-	1

Model No.	Spec. No.	Wiring Diagram Version No.
20ROZP	192007-	1
30ROZP	192107-	1
40ROZP	192207-	1
50ROZP	192307-	1
60ROZP	192405-	1
80ROZP	192507-	1
100ROZP	192607-	1
125ROZP	192705-	1
150ROZP	192807-	1
180ROZP	192907-	1
80REOZP	192513-	1
100ROZP	192613-	1
200ROZD	132417-	1
230ROZD	132433-	1
250ROZD	132439-	1
275ROZD	132445-	1
300ROZD	132451-	1
230REOZD	194316-	1
250REOZD	194332-	1
275REOZD	194348-	1
300REOZD	194364-	1
350REOZD	194374-	1
350ROZD	132519-	1
400ROZD	132524-	1
450ROZD	132531-	1
500ROZD	132536-42, 132628-	1
600ROZD	132543-49, 132636-	1
750ROZD	132550-6, 132975-	1
800ROZD	132557-63, 132778-	1
900ROZD	132583-	1
1000ROZD	132590-	1
1200ROZD	132576-82, 132730-	1
1250ROZD	132740-	1
1500ROZD	132423-	1
1600ROZD	132428-	1
2000ROZD	132720-	1

# Controller Wiring Diagrams Reference

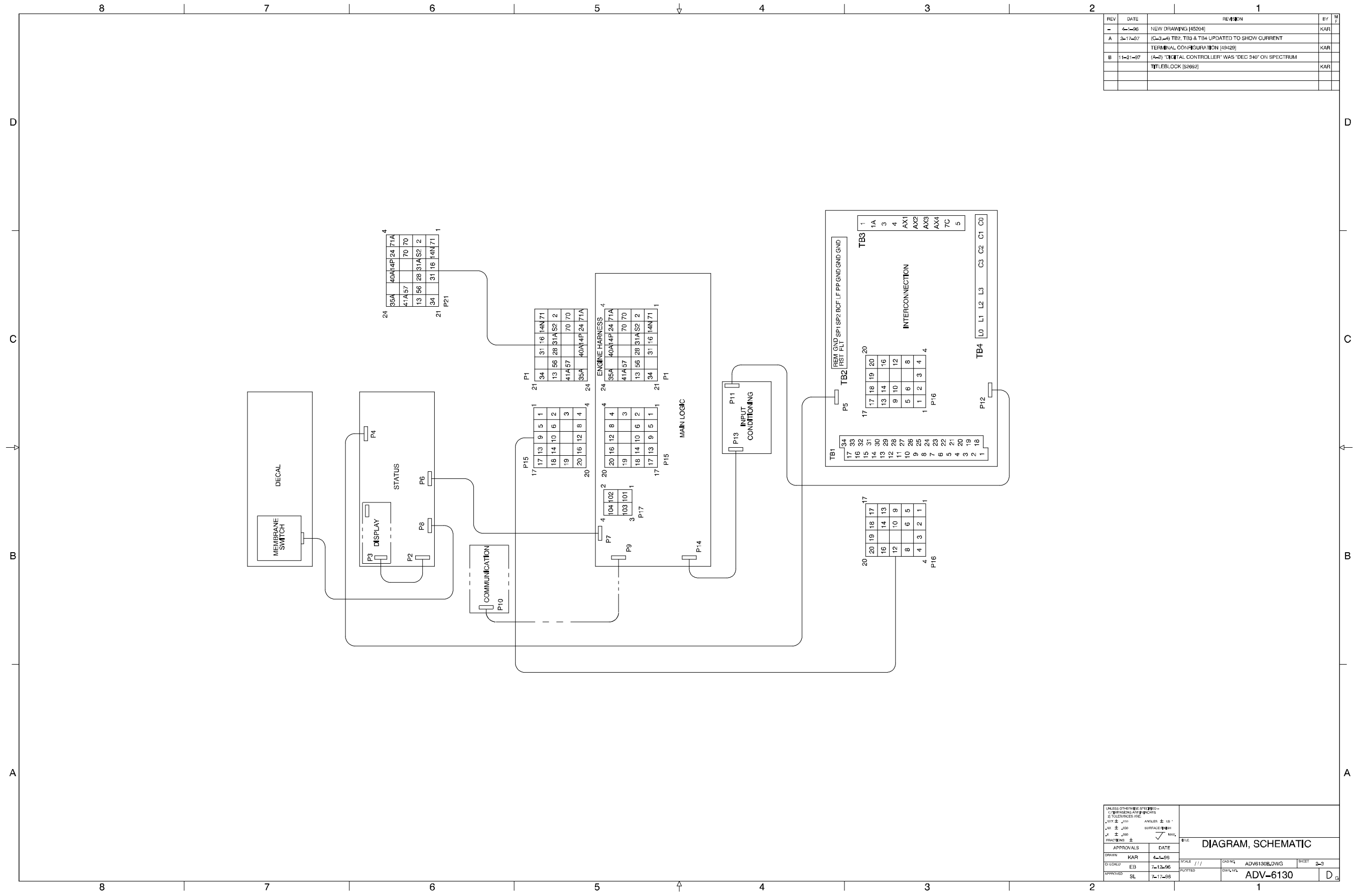
	20-100RZ		135-275RZD		20-180ROZJ		20-180ROZJ		20-180ROZP		80-100REOZP	
	Version 1	Pg	Version 1	Pg	Version 1	Pg	Version 1	Pg	Version 1	Pg	Version 1	Pg
<b>Decision-Makert 340</b> Point-to-Point Wiring Diagram Sheet 1 Sheet 2 Schematic Diagram Sheet 1 Sheet 2 Sheet 3 Sheet 4 Accessory Connections Sheet 1 Sheet 2	347940A-G	23	347942A-G	27	347941A-G	25	347941A-G	25	347941A-G	25	347941A-G	25
	347940B-B	24	347942B-D	28	347941B-C	26	347941B-C	26	347941B-C	26	347941B-C	26
	ADV-6130A-F	1	ADV-6132A-E	7	ADV-6130A-F	1	ADV-6130A-F	1	ADV-6130A-F	1	ADV-6130A-F	1
	ADV-6130B-B	2	ADV-6132B-A	8	ADV-6130B-B	2	ADV-6130B-B	2	ADV-6130B-B	2	ADV-6130B-B	2
	ADV-6130C-C	3	ADV-6132C-B	9	ADV-6130C-C	3	ADV-6130C-C	3	ADV-6130C-C	3	ADV-6130C-C	3
			ADV-6132D-C	10								

	200-300ROZD		230-300REOZD		350REOZD		350-1600ROZD		2000ROZD	
	Version 1	Pg	Version 1	Pg	Version 1	Pg	Version 1	Pg	Version 1	Pg
<b>Decision-Makert 340</b> Point-to-Point Wiring Diagram Sheet 1 Sheet 2 Schematic Diagram Sheet 1 Sheet 2 Sheet 3 Sheet 4 Accessory Connections Sheet 1 Sheet 2	347943A-G	29	343463A-	19	343578A-	21	347944A-G	31	347945A-F	33
	347943B-C	30	343463B-	20	343578B-	22	347944B-C	32	347945B-C	34
	ADV-6130A-F	1	ADV-6398A-	15	ADV-6401A-	17	ADV-6131A-E	4	ADV-6133A-E	11
	ADV-6130B-B	2	ADV-6398B-	16	ADV-6401B-	18	ADV-6131B-B	5	ADV-6133B-A	12
	ADV-6130C-C	3					ADV-6131C-C	6	ADV-6133C-B	13
									ADV-6133D-C	14



REV	DATE	REVISION	BY
D	3-17-97	(A-7) LOW COOLANT LEVEL & HIGH OIL TEMP INPUTS ADDED, AUX. DELAY SHUTDOWN (S) & AUX. IMMEDIATE SHUTDOWN REMOVED; (L-4) TB4 UPDATED [49425]	KAR
E	9-14-97	(A-7) LEAD 26 TO LOW COOLANT LEVEL SWITCH WAS LEAD 31, LCL & HCO, T, SYMBOLS ADDED [51552]	KAR
F	11-23-97	(A-2) DIGITAL CONTROLLER WAS "DEC 340" ON SPECTRUM TITLEBLOCK [2682]	KAR

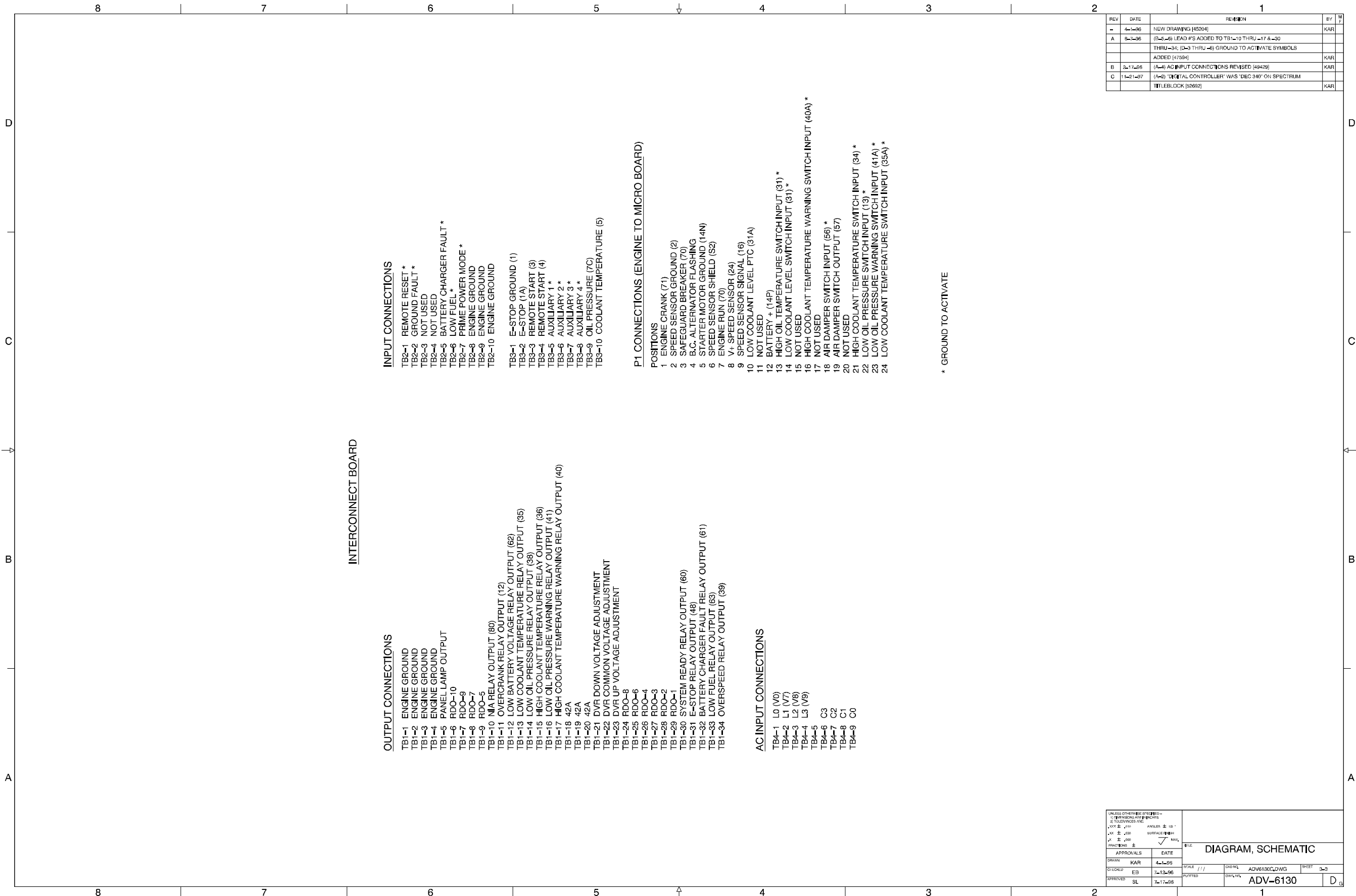
Schematic Diagram, Sheet 1, ADV-6130A-F



REV	DATE	REVISION	BY	CHK
-	4-1-88	NEW DRAWING (45204)	KAR	
A	2-17-87	(C-3-4) TB2, TB3 & TB4 UPDATED TO SHOW CURRENT TERMINAL CONFIGURATION (49428)	KAR	
B	11-21-87	(A-2) DIGITAL CONTROLLER WAS DEC 340' ON SPECTRUM TITLEBLOCK (2692)	KAR	

UNLESS OTHERWISE SPECIFIED - DIMENSIONS ARE IN INCHES TOLERANCES ARE: X.XX ± .010 ANGLE ± 10° X.X ± .030 SURFACE FINISH FINISH ± .005		TITLE <b>DIAGRAM, SCHEMATIC</b>	
APPROVALS	DATE	SCALE	SHEET
DRAWN: KAR	4-1-88	ADW6130B, DWG	2-3
CHECKED: EB	7-12-86		
APPROVED: SL	7-17-88	ADV-6130	D

Schematic Diagram, Sheet 2, ADV-6130B-B



REV	DATE	REVISION	BY	CHK
-	4-1-98	NEW DRAWING (45204)	KAR	
A	8-1-98	(B2-6) LEAD #S ADDED TO TB1-10 THRU-17 & -30 THRU-34; (D-3 THRU -6) GROUND TO ACTIVATE SYMBOLS	KAR	
		ADDED (47584)	KAR	
B	2-17-98	(A-1) AC INPUT CONNECTIONS REVISED (49428)	KAR	
C	11-21-97	(A-2) DIGITAL CONTROLLER WAS 'DEC 340' ON SPECTRUM	KAR	
		TITLEBLOCK (32692)	KAR	

**INPUT CONNECTIONS**

- TB2-1 REMOTE RESET \*
- TB2-2 GROUND FAULT \*
- TB2-3 NOT USED
- TB2-4 NOT USED
- TB2-5 BATTERY CHARGER FAULT \*
- TB2-6 LOW FUEL \*
- TB2-7 PRIME POWER MODE \*
- TB2-8 ENGINE GROUND
- TB2-9 ENGINE GROUND
- TB2-10 ENGINE GROUND
- TB3-1 E-STOP GROUND (1)
- TB3-2 E-STOP (1A)
- TB3-3 REMOTE START (3)
- TB3-4 REMOTE START (4)
- TB3-5 AUXILIARY 1 \*
- TB3-6 AUXILIARY 2 \*
- TB3-7 AUXILIARY 3 \*
- TB3-8 AUXILIARY 4 \*
- TB3-9 OIL PRESSURE (7C)
- TB3-10 COOLANT TEMPERATURE (5)

**P1 CONNECTIONS (ENGINE TO MICRO BOARD)**

- POSITIONS**
- 1 ENGINE CRANK (71)
  - 2 SPEED SENSOR GROUND (2)
  - 3 SAFEGUARD BREAKER (70)
  - 4 B.C. ALTERNATOR FLASHING
  - 5 STARTER MOTOR GROUND (14N)
  - 6 SPEED SENSOR SHIELD (S2)
  - 7 ENGINE RUN (70)
  - 8 V1 SPEED SENSOR (24)
  - 9 SPEED SENSOR SIGNAL (16)
  - 10 LOW COOLANT LEVEL PTC (31A)
  - 11 NOT USED
  - 12 BATTERY + (14F)
  - 13 HIGH OIL TEMPERATURE SWITCH INPUT (31) \*
  - 14 LOW COOLANT LEVEL SWITCH INPUT (31) \*
  - 15 NOT USED
  - 16 HIGH COOLANT TEMPERATURE WARNING SWITCH INPUT (40A) \*
  - 17 NOT USED
  - 18 AIR DAMPER SWITCH INPUT (56) \*
  - 19 AIR DAMPER SWITCH OUTPUT (57)
  - 20 NOT USED
  - 21 HIGH COOLANT TEMPERATURE SWITCH INPUT (34) \*
  - 22 LOW OIL PRESSURE SWITCH INPUT (13) \*
  - 23 LOW OIL PRESSURE WARNING SWITCH INPUT (41A) \*
  - 24 LOW COOLANT TEMPERATURE SWITCH INPUT (35A) \*

\* GROUND TO ACTIVATE

**INTERCONNECT BOARD**

**OUTPUT CONNECTIONS**

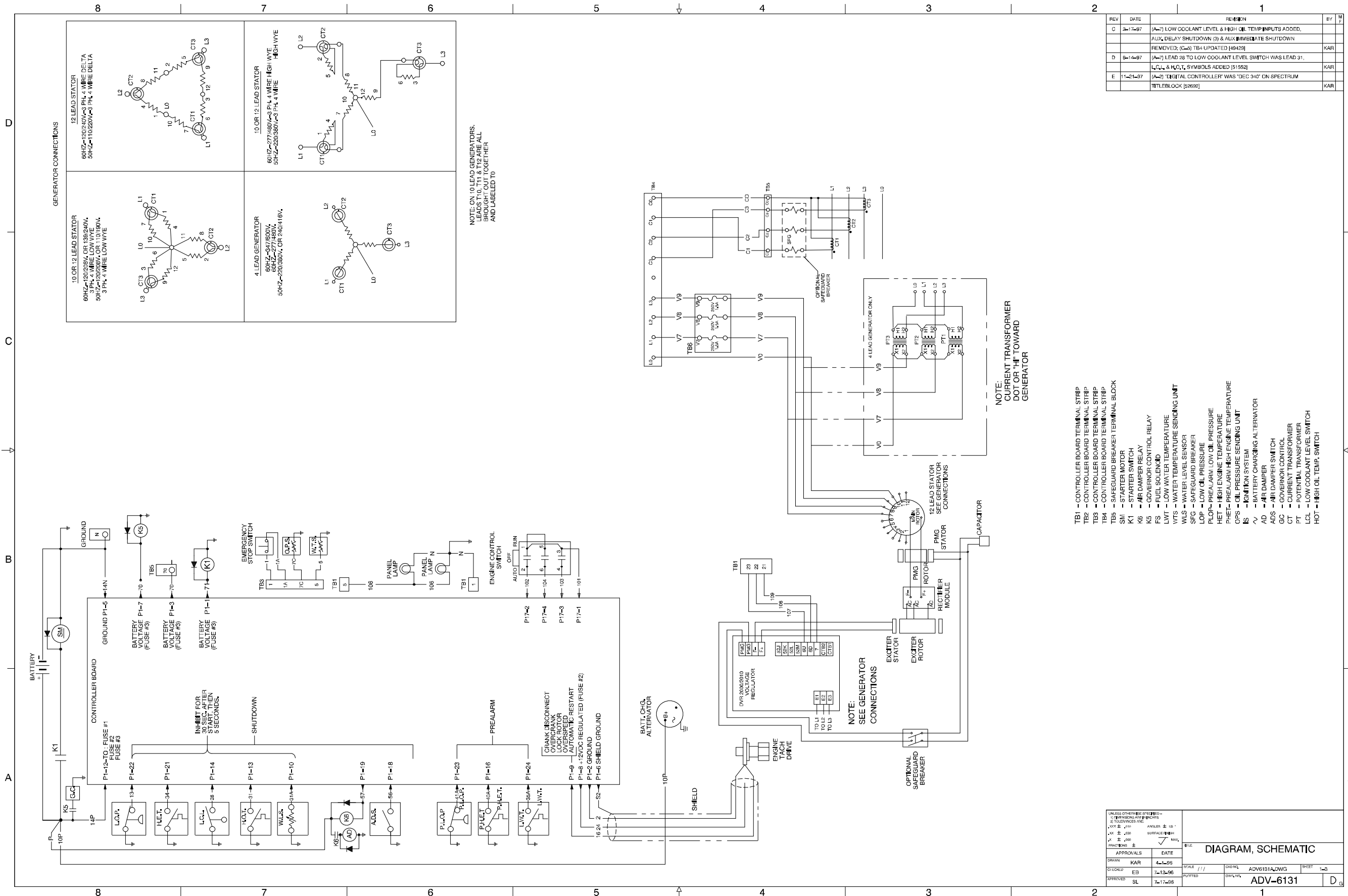
- TB1-1 ENGINE GROUND
- TB1-2 ENGINE GROUND
- TB1-3 ENGINE GROUND
- TB1-4 ENGINE GROUND
- TB1-5 PANEL LAMP OUTPUT
- TB1-6 RDO-10
- TB1-7 RDO-9
- TB1-8 RDO-7
- TB1-9 RDO-5
- TB1-10 M/A RELAY OUTPUT (80)
- TB1-11 OVERCRANK RELAY OUTPUT (12)
- TB1-12 LOW BATTERY VOLTAGE RELAY OUTPUT (62)
- TB1-13 LOW COOLANT TEMPERATURE RELAY OUTPUT (35)
- TB1-14 LOW OIL PRESSURE RELAY OUTPUT (38)
- TB1-15 HIGH COOLANT TEMPERATURE RELAY OUTPUT (36)
- TB1-16 LOW OIL PRESSURE WARNING RELAY OUTPUT (41)
- TB1-17 HIGH COOLANT TEMPERATURE WARNING RELAY OUTPUT (40)
- TB1-18 42A
- TB1-19 42A
- TB1-20 42A
- TB1-21 DVR DOWN VOLTAGE ADJUSTMENT
- TB1-22 DVR COMMON VOLTAGE ADJUSTMENT
- TB1-23 DVR UP VOLTAGE ADJUSTMENT
- TB1-24 RDO-8
- TB1-25 RDO-6
- TB1-26 RDO-4
- TB1-27 RDO-3
- TB1-28 RDO-2
- TB1-29 RDO-1
- TB1-30 SYSTEM READY RELAY OUTPUT (60)
- TB1-31 E-STOP RELAY OUTPUT (48)
- TB1-32 BATTERY CHARGER FAULT RELAY OUTPUT (61)
- TB1-33 LOW FUEL RELAY OUTPUT (63)
- TB1-34 OVERSPEED RELAY OUTPUT (39)

**AC INPUT CONNECTIONS**

- TB4-1 L0 (V0)
- TB4-2 L1 (V7)
- TB4-3 L2 (V8)
- TB4-4 L3 (V9)
- TB4-5
- TB4-6 C3
- TB4-7 C2
- TB4-8 C1
- TB4-9 C0

UNLESS OTHERWISE SPECIFIED - 1. DIMENSIONS ARE IN INCHES 2. TOLERANCES ARE: XXX ± .010 ANGLE ± 10° XX ± .030 SURFACE FINISH X ± .060 FINISH ±		TITLE <b>DIAGRAM, SCHEMATIC</b>	
APPROVALS	DATE	SCALE	SHEET
DRAWN KAR	4-1-98	ADWG ADV6130C/DWG	3-3
CHECKED EIB	7-12-98	PRINTED	D
APPROVED SL	7-17-98	ADV-6130	

Schematic Diagram, Sheet 3, ADV-6130C-C



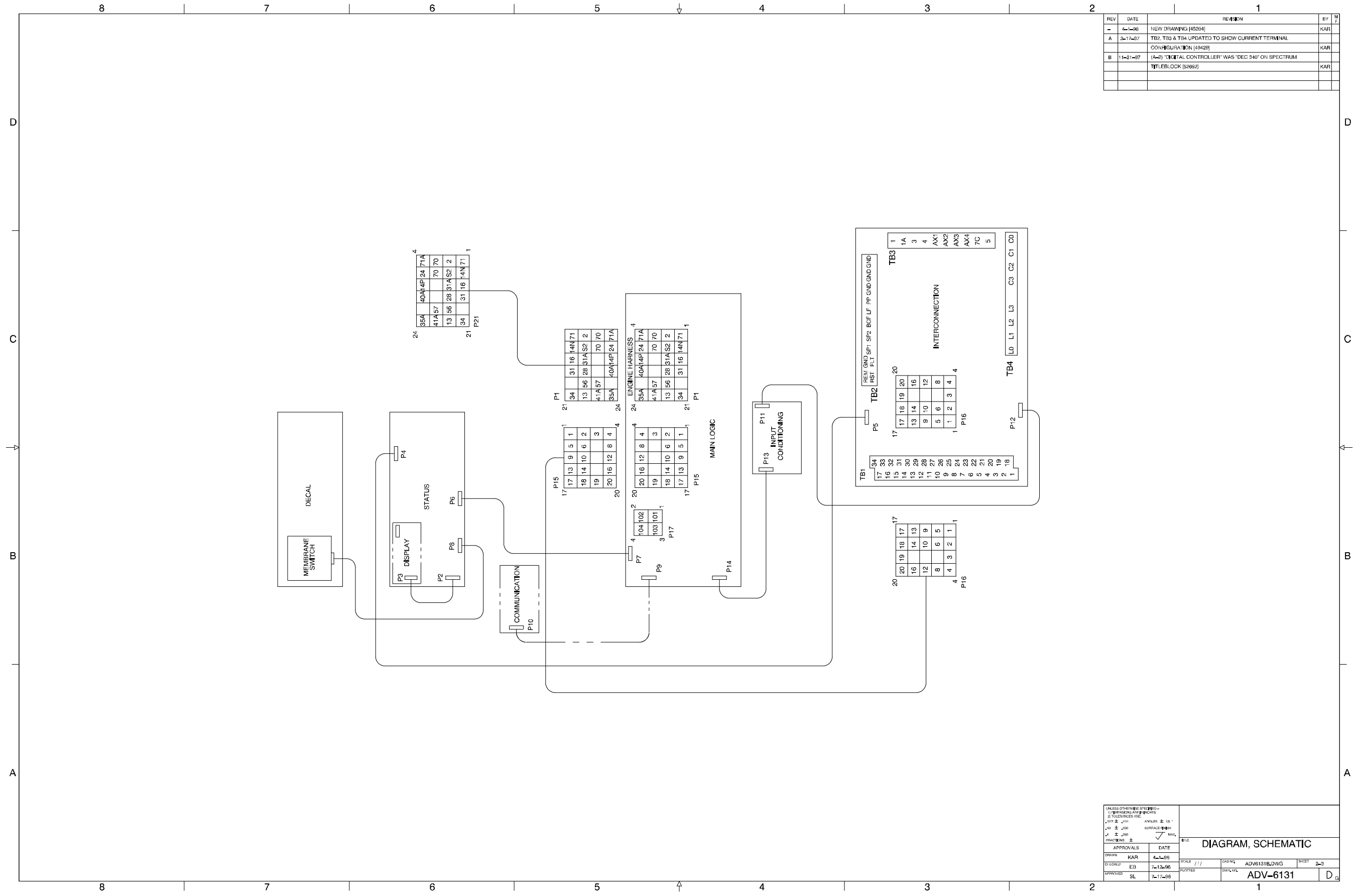
REV	DATE	REVISION	BY	CHK
C	3-17-97	(A-7) LOW COOLANT LEVEL & HIGH OIL TEMP INPUTS ADDED, AUX. DELAY SHUTDOWN (S) & AUX. IMMEDIATE SHUTDOWN REMOVED; (C-5) TB4 UPDATED [49425]	KAR	
D	9-14-97	(A-7) LEAD 28 TO LOW COOLANT LEVEL SWITCH WAS LEAD 31, LCL & HCL SYMBOLS ADDED [51552]	KAR	
E	11-21-97	(A-2) 'DIGITAL CONTROLLER' WAS 'DEC 340' ON SPECTRUM TITLEBLOCK [52692]	KAR	

APPROVALS		DATE		SCALE		SHEET	
DESIGN	KAR	4-1-99		DATE	ADV6151ADWG	SHEET	1-3
CHECKED	EB	7-12-96		PLOTTED	ADV-6131		
APPROVED	SL	7-17-98					D

Schematic Diagram, Sheet 1, ADV-6131A-E

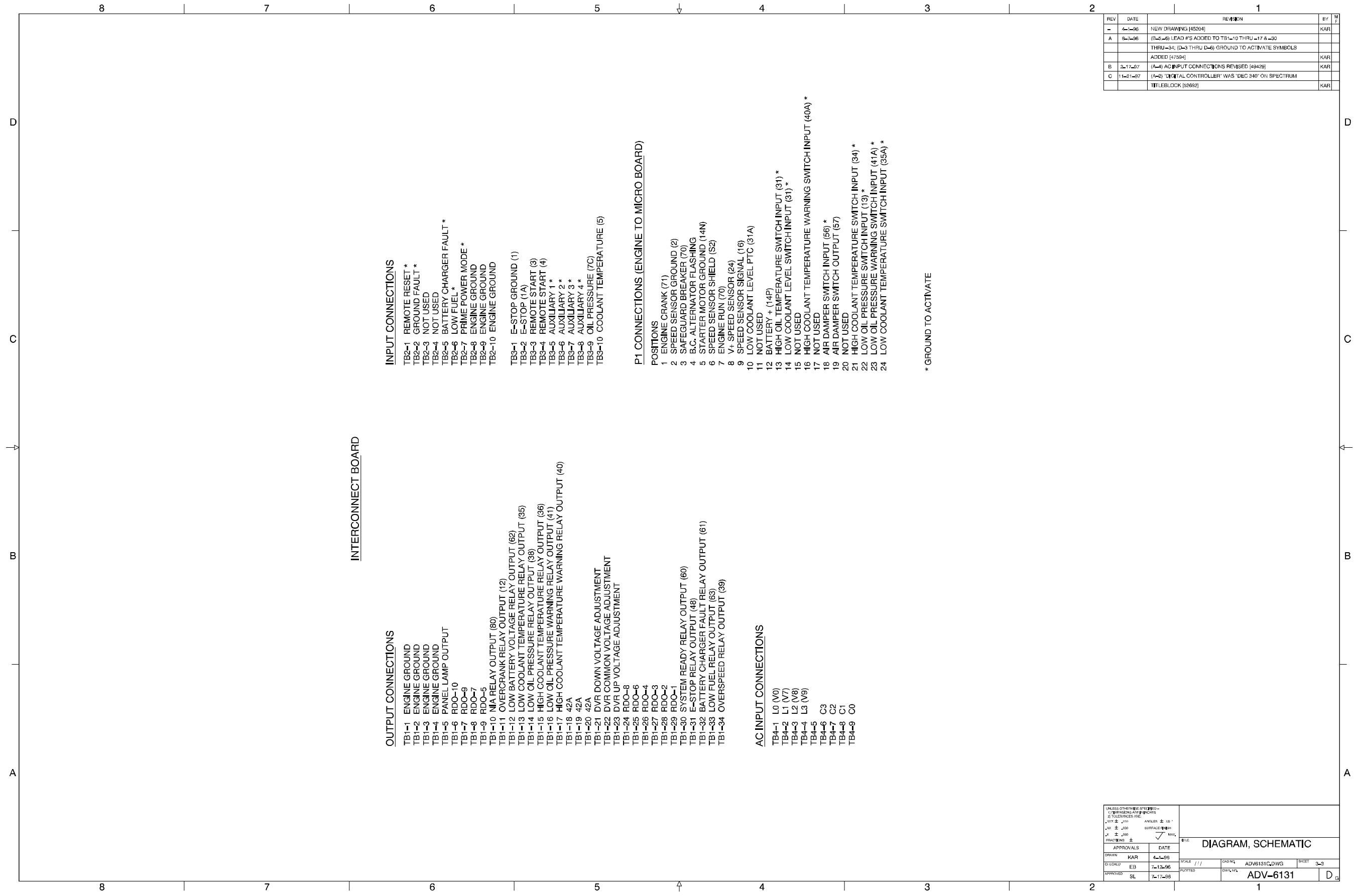


REV	DATE	REVISION	BY	CHK
-	4-1-88	NEW DRAWING (45204)	KAR	
A	2-17-87	TB2, TB3 & TB4 UPDATED TO SHOW CURRENT TERMINAL CONFIGURATION (48429)	KAR	
B	11-21-87	(A-2) DIGITAL CONTROLLER WAS "DEC 340" ON SPECTRUM TITLEBLOCK (52692)	KAR	



UNLESS OTHERWISE SPECIFIED - DIMENSIONS ARE IN INCHES TOLERANCES ARE: X.XX ± .010 ANGLE ± 10° X.X ± .030 SURFACE FINISH FINISH ± .005		TITLE <b>DIAGRAM, SCHEMATIC</b>	
APPROVALS	DATE	SCALE	SHEET
DRAWN: KAR	4-1-88	ADW6131B.DWG	2-3
CHECKED: EB	7-12-86		
APPROVED: SL	7-17-88	ADV-6131	D

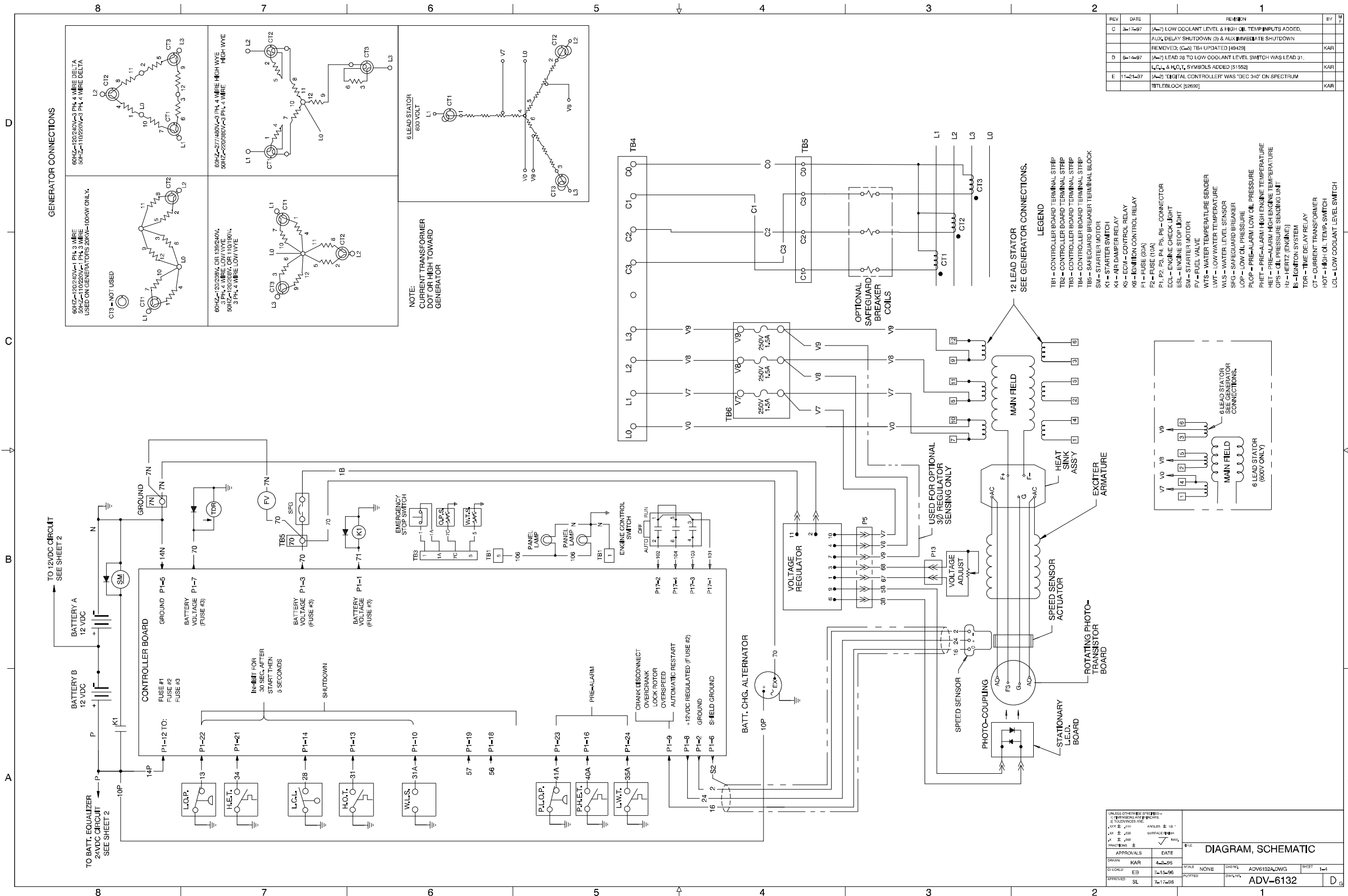
Schematic Diagram, Sheet 2, ADV-6131B-B



REV	DATE	REVISION	BY	CHK
-	4-1-98	NEW DRAWING (45204)	KAR	
A	8-1-98	(B2-6) LEAD #S ADDED TO TB1-10 THRU-17 & -30 THRU-34; (D-3 THRU D-6) GROUND TO ACTIVATE SYMBOLS ADDED (47584)	KAR	
B	2-17-97	(A-1) AC INPUT CONNECTIONS REVISED (49428)	KAR	
C	11-21-97	(A-2) DIGITAL CONTROLLER WAS 'DEC 340' ON SPECTRUM	KAR	
		TITLEBLOCK (32692)	KAR	

UNLESS OTHERWISE SPECIFIED - 1 DIMENSIONS ARE IN INCHES 2 TOLERANCES ARE: XXX ± .010 ANGLE ± 10° XX ± .030 SURFACE FINISH X ± .060 FINISH ±		<b>DIAGRAM, SCHEMATIC</b>	
APPROVALS	DATE	SCALE	SHEET
DRAWN KAR	4-1-98	DATE	3-3
CHECKED EEB	7-12-96	DWG. NO. ADV6131C/DWG	
APPROVED SL	7-17-98	PRINTED	ADV-6131

Schematic Diagram, Sheet 3, ADV-6131C-C

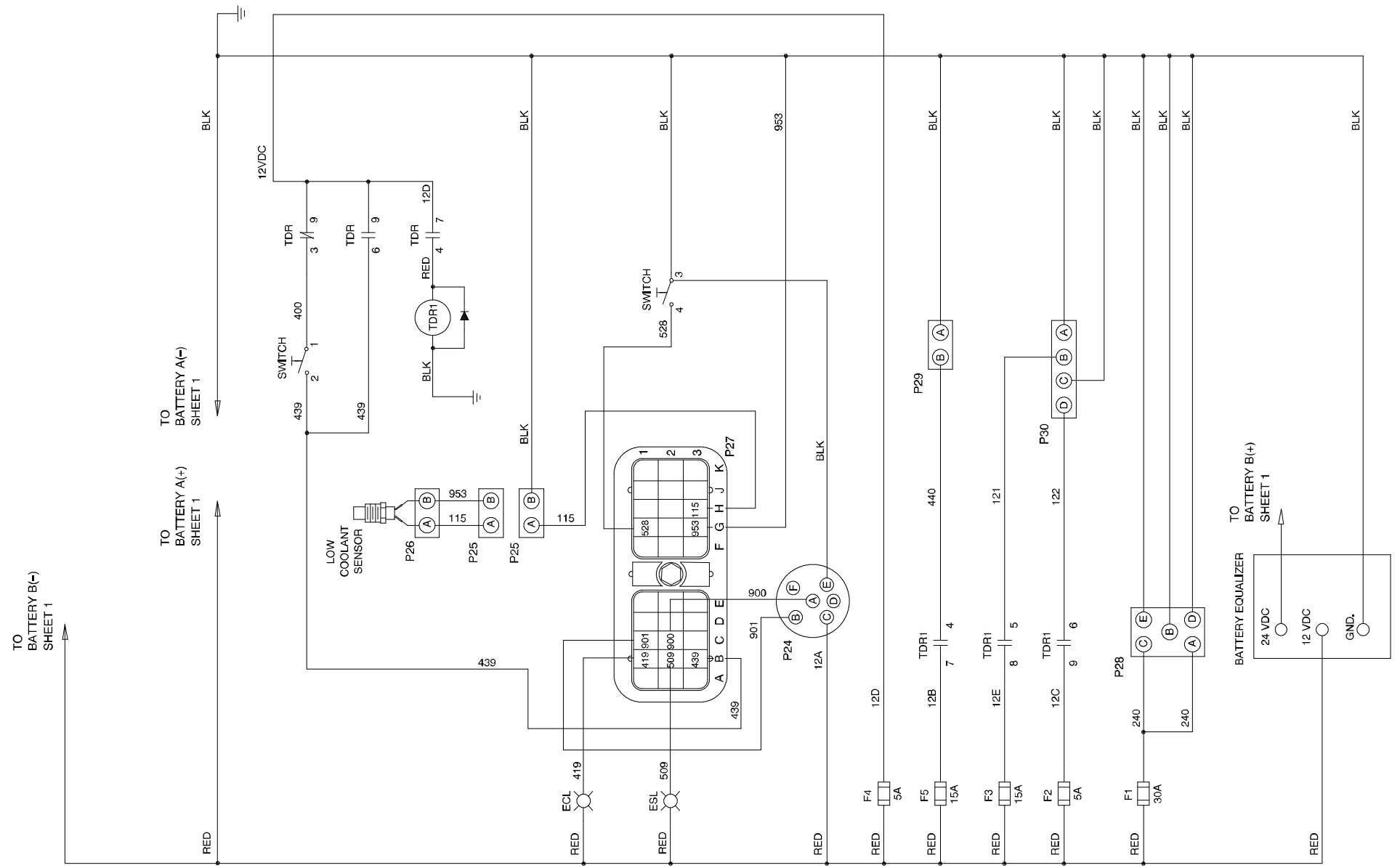


Schematic Diagram, Sheet 1, ADV-6132A-E

REV	DATE	REVISION	BY	APP
-	4-2-98	NEW DRAWING (45204)	KAR	
A	8-13-98	(A=5) JUMP LEAD FROM P27-A3 TO P27-D1 REMOVED; (A=6) LEAD 953 FROM P27-G3 TO BATT A(+) ADDED (47244)	KAR	

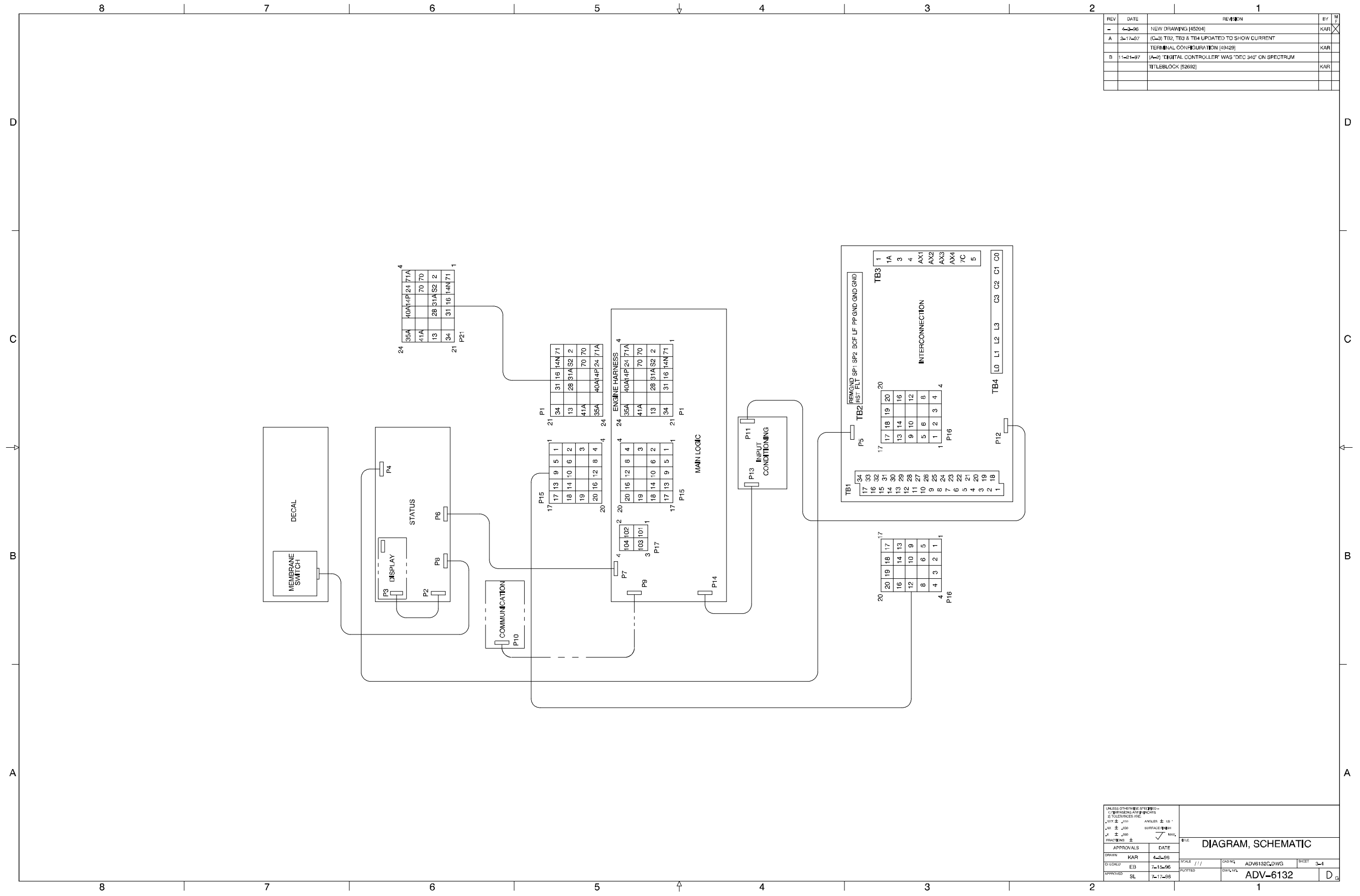
CIRCUIT	CONTACTS	OFF
1	1 → 2	☒
2	3 → 4	☒

SPRING RETURN FROM CODE TO DDR



UNLESS OTHERWISE SPECIFIED:		TITLE	
1) DIMENSIONS ARE IN INCHES	2) TOLERANCES ARE:	DIAGRAM, SCHEMATIC	
.XX ± .010	ANGLE: 125/130		
.XX ± .030	SURFACE FINISH		
.XX ± .060	MAX		
FRACTIONS ±			
APPROVALS	DATE	SCALE	NONE
DRAWN: KAR	4-2-98	CAD FILE	ADV6132BLOW3
CHECKED: EB	7-16-98	SHEET	2-4
APPROVED: BL	7-17-98	PLOTTED	DATE PLOTTED
		ADV-6132	

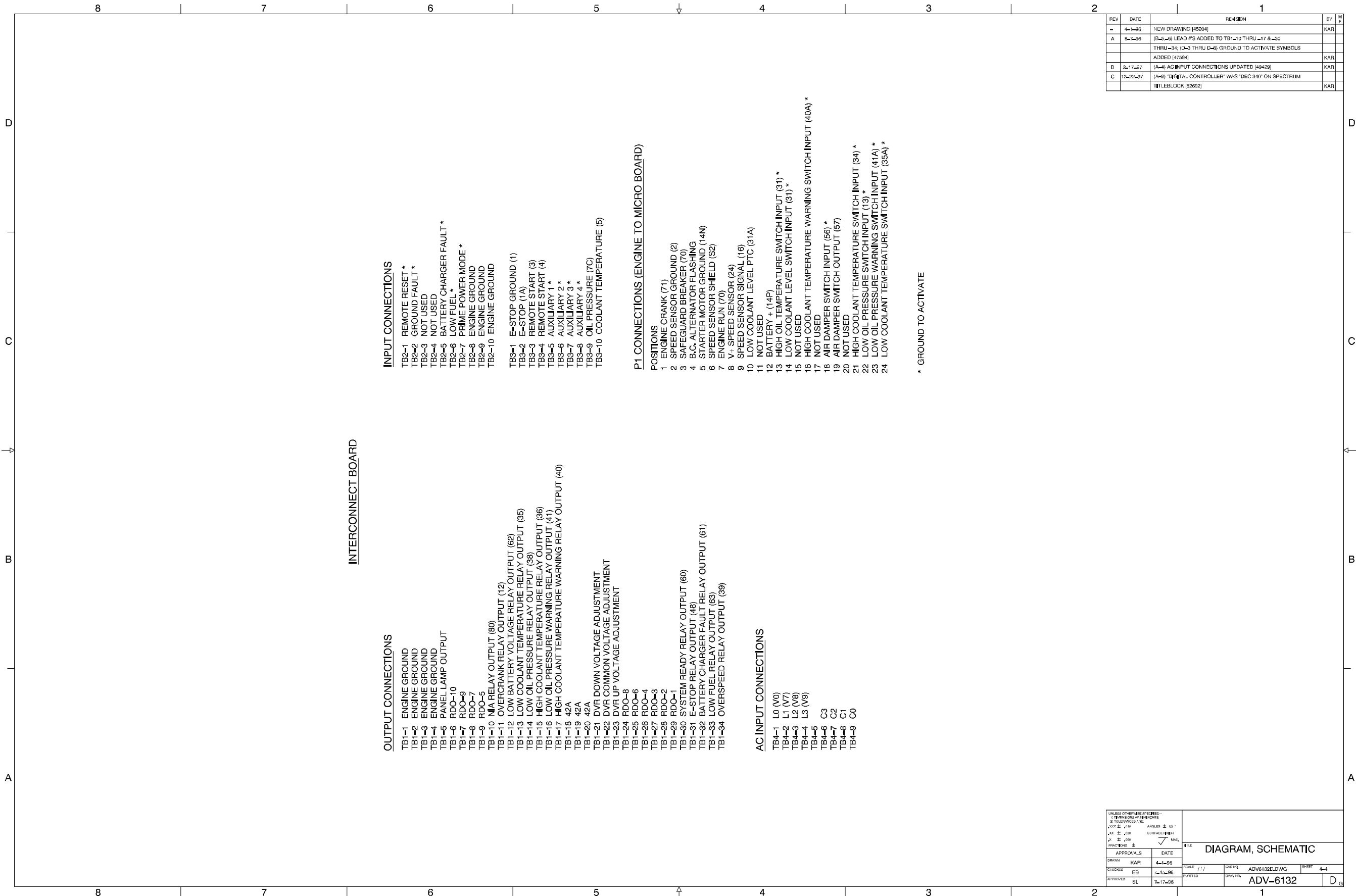
Schematic Diagram, Sheet 2, ADV-6132B-A



REV	DATE	REVISION	BY
-	4-2-98	NEW DRAWING (45204)	KAR
A	3-17-97	(C-3) TB2, TB3 & TB4 UPDATED TO SHOW CURRENT TERMINAL CONFIGURATION (44429)	KAR
B	1-21-97	(A-2) "DIGITAL CONTROLLER" WAS "DEC 342" ON SPECTRUM	KAR
		TITLEBLOCK (52692)	KAR

UNLESS OTHERWISE SPECIFIED - DIMENSIONS ARE IN INCHES TOLERANCES ARE: X.X ± .015 ANGLE ± 10° X.X ± .030 SURFACE FINISH FINISH ± .005		TITLE <b>DIAGRAM, SCHEMATIC</b>	
APPROVALS	DATE	SCALE	SHEET
DRAWN KAR	4-2-98	ADW6132C/DWG	3-4
CHECKED EJB	7-15-96		
APPROVED SL	7-17-98	ADV-6132	D

Schematic Diagram, Sheet 3, ADV-6132C-B



REV	DATE	REVISION	BY	CHK
-	4-1-88	NEW DRAWING (45204)	KAR	
A	8-1-88	(B2-6) LEAD #S ADDED TO TB1-10 THRU-17 & -30 THRU-34; (D-3 THRU D-6) GROUND TO ACTIVATE SYMBOLS ADDED (47584)	KAR	
B	2-17-87	(A-1) AC INPUT CONNECTIONS UPDATED (49+28)	KAR	
C	12-23-87	(A-2) DIGITAL CONTROLLER WAS DEC 340 ON SPECTRUM	KAR	
		TITLEBLOCK (20692)	KAR	

**INPUT CONNECTIONS**

- TB2-1 REMOTE RESET \*
- TB2-2 GROUND FAULT \*
- TB2-3 NOT USED
- TB2-4 NOT USED
- TB2-5 BATTERY CHARGER FAULT \*
- TB2-6 LOW FUEL \*
- TB2-7 PRIME POWER MODE \*
- TB2-8 ENGINE GROUND
- TB2-9 ENGINE GROUND
- TB2-10 ENGINE GROUND
- TB3-1 E-STOP GROUND (1)
- TB3-2 E-STOP (1A)
- TB3-3 REMOTE START (3)
- TB3-4 REMOTE START (4)
- TB3-5 AUXILIARY 1 \*
- TB3-6 AUXILIARY 2 \*
- TB3-7 AUXILIARY 3 \*
- TB3-8 AUXILIARY 4 \*
- TB3-9 OIL PRESSURE (7C)
- TB3-10 COOLANT TEMPERATURE (5)

**P1 CONNECTIONS (ENGINE TO MICRO BOARD)**

- POSITIONS**
- 1 ENGINE CRANK (71)
  - 2 SPEED SENSOR GROUND (2)
  - 3 SAFEGUARD BREAKER (70)
  - 4 B.C. ALTERNATOR FLASHING
  - 5 STARTER MOTOR GROUND (14N)
  - 6 SPEED SENSOR SHIELD (S2)
  - 7 ENGINE RUN (70)
  - 8 V+ SPEED SENSOR (24)
  - 9 SPEED SENSOR SIGNAL (16)
  - 10 LOW COOLANT LEVEL PTC (31A)
  - 11 NOT USED
  - 12 BATTERY + (14F)
  - 13 HIGH OIL TEMPERATURE SWITCH INPUT (31) \*
  - 14 LOW COOLANT LEVEL SWITCH INPUT (31) \*
  - 15 NOT USED
  - 16 HIGH COOLANT TEMPERATURE WARNING SWITCH INPUT (40A) \*
  - 17 NOT USED
  - 18 AIR DAMPER SWITCH INPUT (56) \*
  - 19 AIR DAMPER SWITCH OUTPUT (57)
  - 20 NOT USED
  - 21 HIGH COOLANT TEMPERATURE SWITCH INPUT (34) \*
  - 22 LOW OIL PRESSURE SWITCH INPUT (13) \*
  - 23 LOW OIL PRESSURE WARNING SWITCH INPUT (41A) \*
  - 24 LOW COOLANT TEMPERATURE SWITCH INPUT (35A) \*

\* GROUND TO ACTIVATE

**INTERCONNECT BOARD**

**OUTPUT CONNECTIONS**

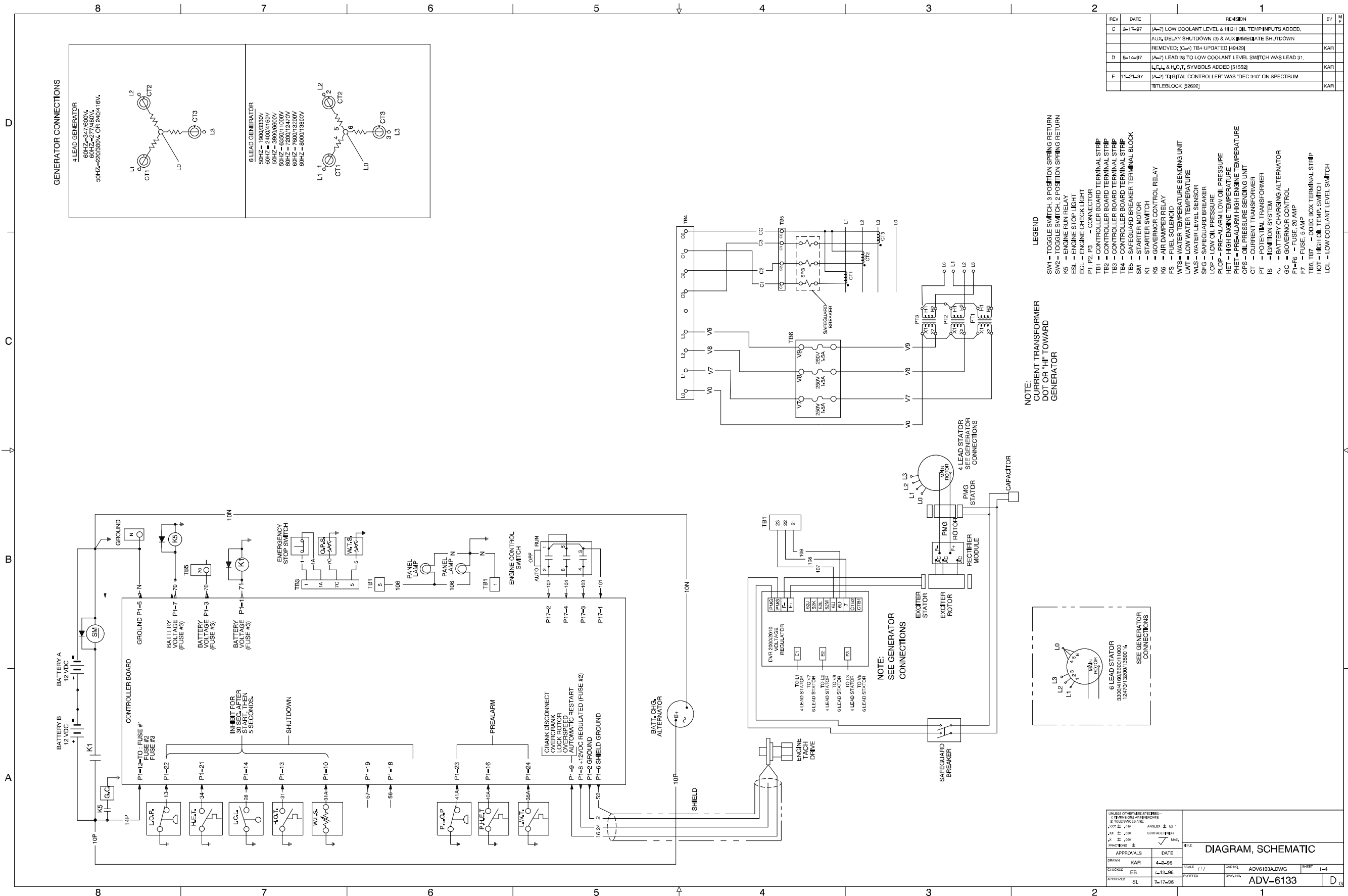
- TB1-1 ENGINE GROUND
- TB1-2 ENGINE GROUND
- TB1-3 ENGINE GROUND
- TB1-4 ENGINE GROUND
- TB1-5 PANEL LAMP OUTPUT
- TB1-6 RDO-10
- TB1-7 RDO-9
- TB1-8 RDO-7
- TB1-9 RDO-5
- TB1-10 M/A RELAY OUTPUT (80)
- TB1-11 OVERCRANK RELAY OUTPUT (12)
- TB1-12 LOW BATTERY VOLTAGE RELAY OUTPUT (62)
- TB1-13 LOW COOLANT TEMPERATURE RELAY OUTPUT (35)
- TB1-14 LOW OIL PRESSURE RELAY OUTPUT (38)
- TB1-15 HIGH COOLANT TEMPERATURE RELAY OUTPUT (36)
- TB1-16 LOW OIL PRESSURE WARNING RELAY OUTPUT (41)
- TB1-17 HIGH COOLANT TEMPERATURE WARNING RELAY OUTPUT (40)
- TB1-18 42A
- TB1-19 42A
- TB1-20 42A
- TB1-21 DVR DOWN VOLTAGE ADJUSTMENT
- TB1-22 DVR COMMON VOLTAGE ADJUSTMENT
- TB1-23 DVR UP VOLTAGE ADJUSTMENT
- TB1-24 RDO-8
- TB1-25 RDO-6
- TB1-26 RDO-4
- TB1-27 RDO-3
- TB1-28 RDO-2
- TB1-29 RDO-1
- TB1-30 SYSTEM READY RELAY OUTPUT (60)
- TB1-31 E-STOP RELAY OUTPUT (48)
- TB1-32 BATTERY CHARGER FAULT RELAY OUTPUT (61)
- TB1-33 LOW FUEL RELAY OUTPUT (63)
- TB1-34 OVERSPEED RELAY OUTPUT (39)

**AC INPUT CONNECTIONS**

- TB4-1 L0 (V0)
- TB4-2 L1 (V7)
- TB4-3 L2 (V8)
- TB4-4 L3 (V9)
- TB4-5 C3
- TB4-6 C3
- TB4-7 C2
- TB4-8 C1
- TB4-9 C0

UNLESS OTHERWISE SPECIFIED - 1 DIMENSIONS ARE IN INCHES 2 TOLERANCES ARE: XXX ± .010 ANGLE ± 10° XX ± .030 SURFACE FINISH X ± .060 FINISH ±		TITLE	
APPROVALS		DATE	
DESIGN KAR	DATE 4-1-88	SCALE 1/1	SHEET 4-1
DRAWN EIB	DATE 7-15-86	ADV-6132	
CHECKED SL	DATE 7-17-88	ADV-6132	

Schematic Diagram, Sheet 4, ADV-6132D-C



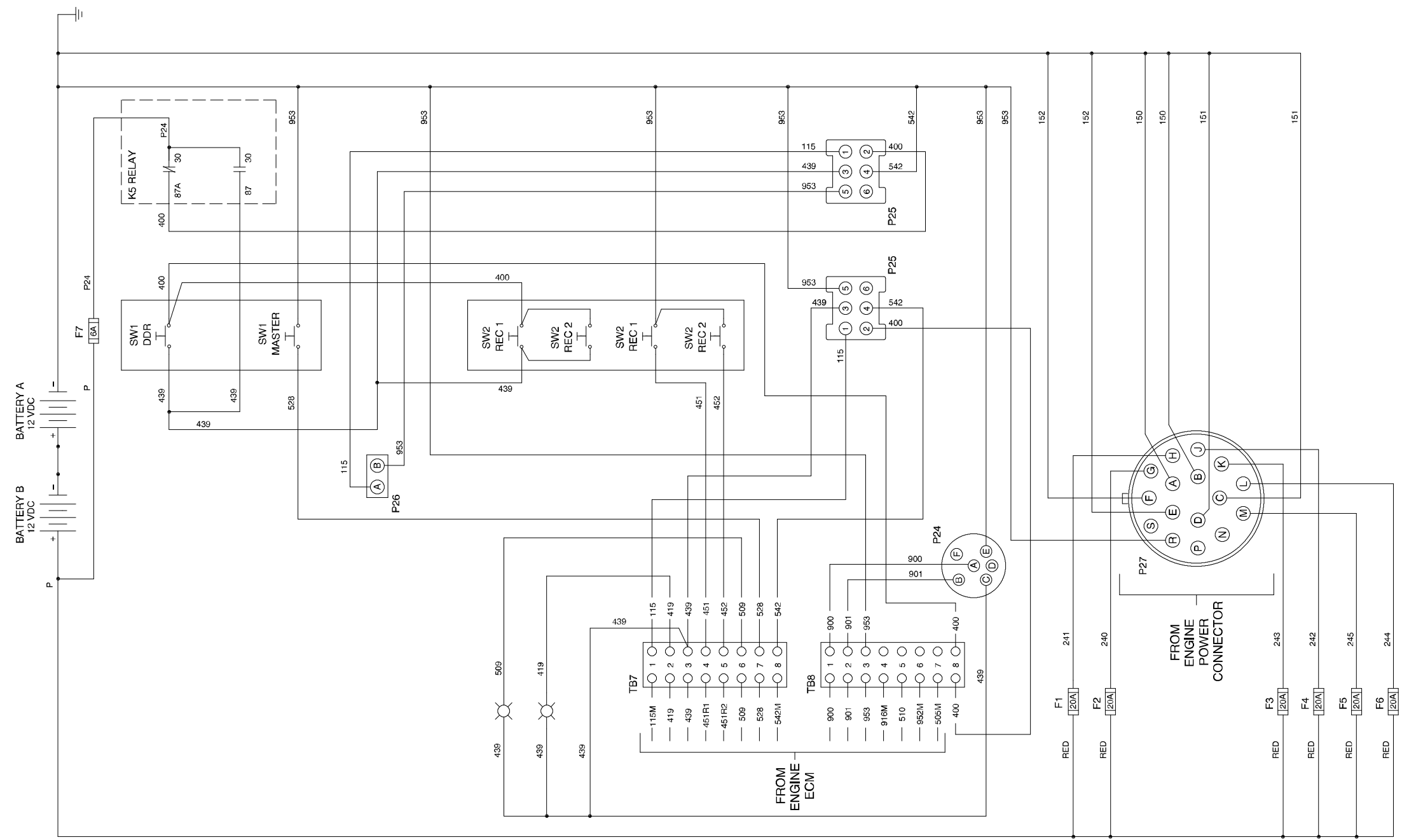
Schematic Diagram, Sheet 1, ADV-6133A-E

REV	DATE	REVISION	BY	APP
-	4-2-58	NEW DRAWING [45204]	KAR	
A	5-6-58	(B,C-5) SW1 & SW2 CONTACT DEVELOPMENT CHARTS REVISED.	KAR	
		(C-5) SW2 REVISED & LEADS 400 & 439 ADDED; (A-2-3)		
		RED LEADS WERE P25 THRU P30 [47564]	KAR	

CONTACTS	REC 1	REC 2
1	•	•
2	•	•
3	•	•
4	•	•
5	•	•
6	•	•
7	•	•
8	•	•

CIRCUIT	CONTACTS	OFF
1	•	•
2	•	•
3	•	•
4	•	•

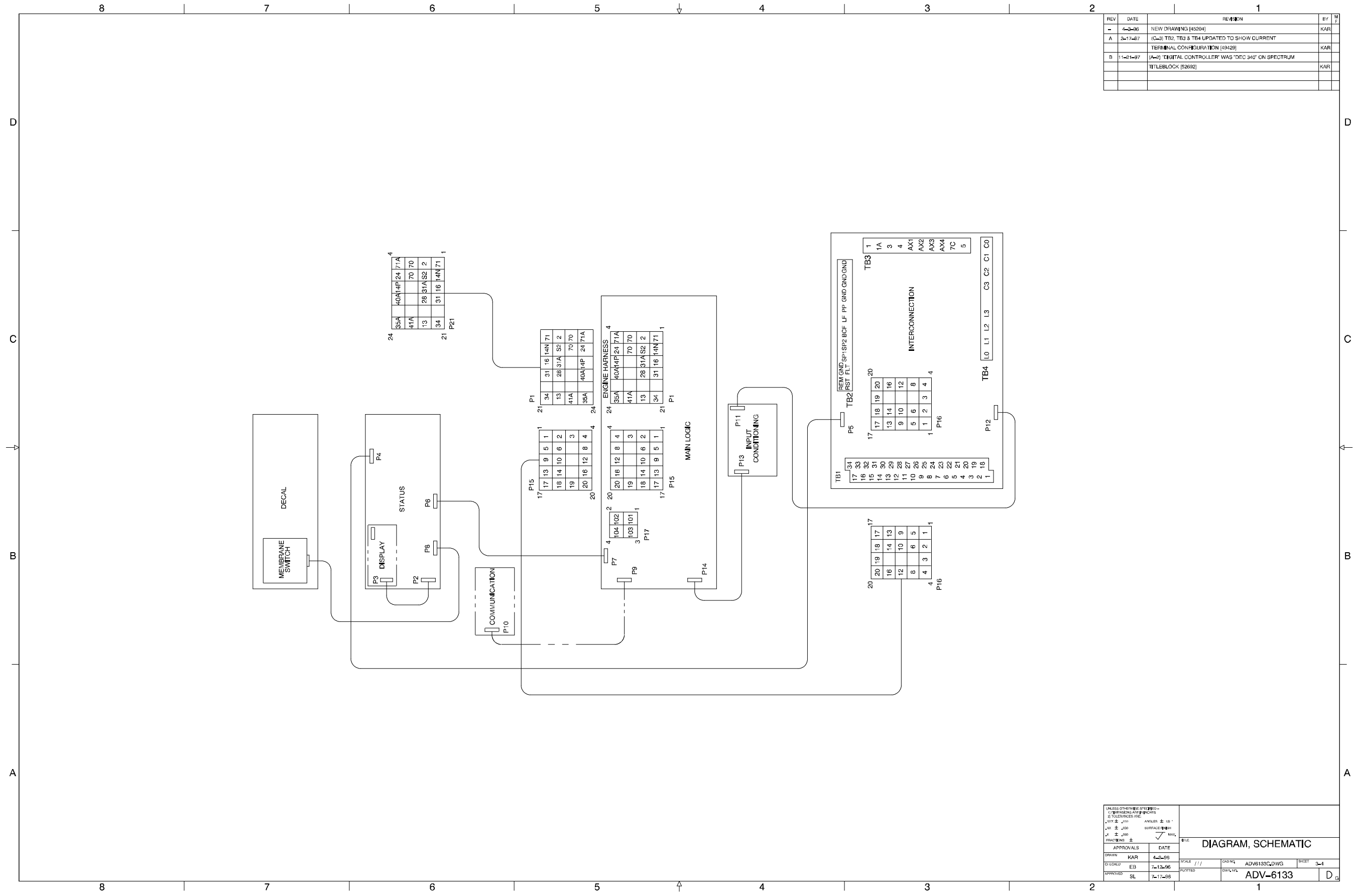
SPRING RETURN FROM DDR/MASTER TO OFF



UNLESS OTHERWISE SPECIFIED:		TITLE	
1) DIMENSIONS ARE IN INCHES	2) TOLERANCES ARE:	DIAGRAM, SCHEMATIC	
.XX ± .010	ANGLES: 125/30		
.XX ± .030	SURFACE FINISH		
.XX ± .060	MAX.		
FRACTIONS ±	✓		
APPROVALS	DATE	SCALE	NONE
DRAWN: KAR	4-2-58	CAD FILE	ADV6133B.DWG
CHECKED: EB	7-12-86	PLOTTED	DWG FILE
APPROVED: SL	7-17-86	ADV-6133	

Schematic Diagram, Sheet 2, ADV-6133B-A

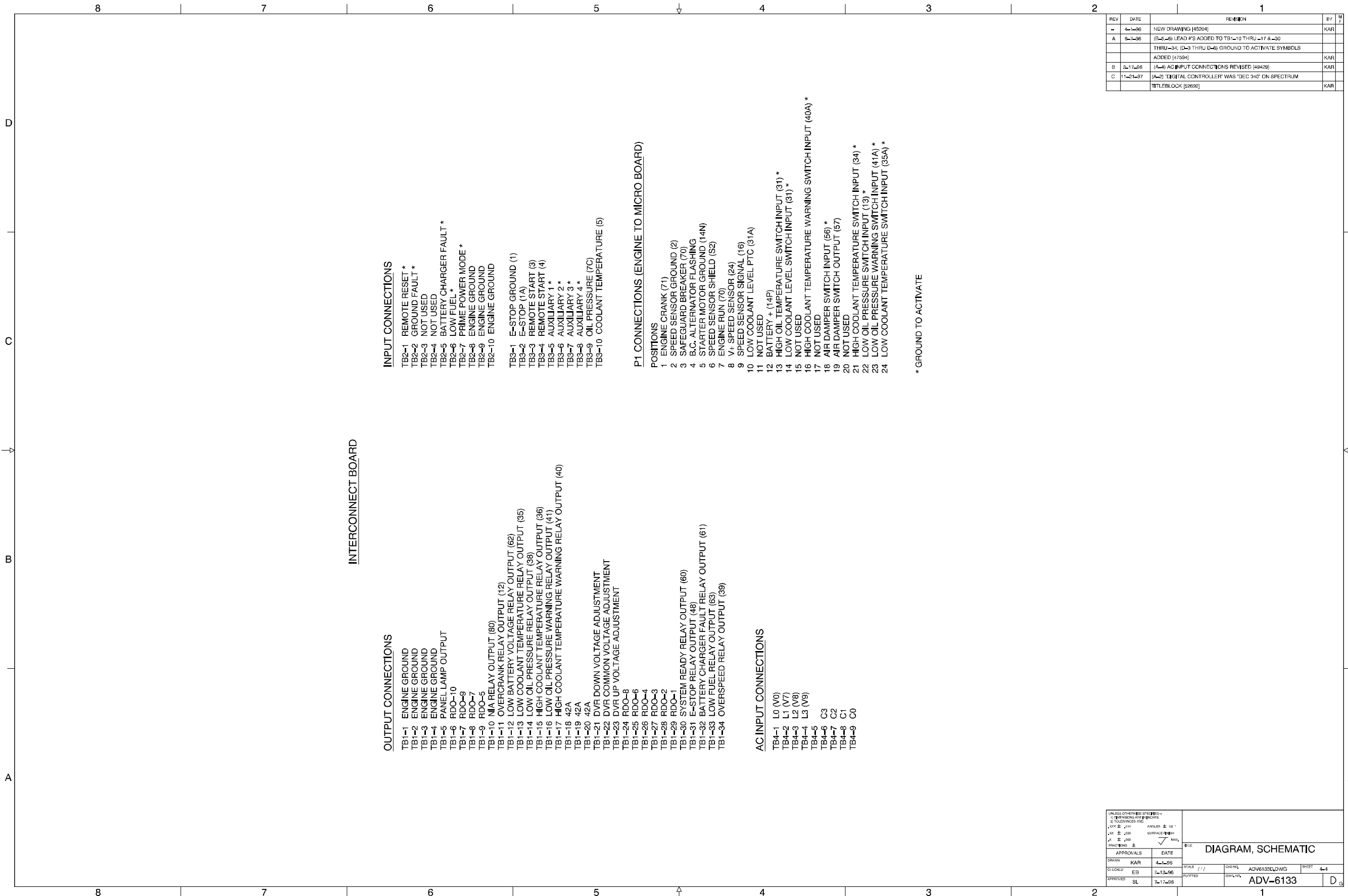




REV	DATE	REVISION	BY
-	4-3-86	NEW DRAWING (45204)	KAR
A	3-17-87	(C-3) TB2, TB3 & TB4 UPDATED TO SHOW CURRENT TERMINAL CONFIGURATION (49429)	KAR
B	11-21-87	(A-2) 'DIGITAL CONTROLLER' WAS 'DEC 342' ON SPECTRUM TITLEBLOCK (52692)	KAR

UNLESS OTHERWISE SPECIFIED - 1. DIMENSIONS ARE IN INCHES 2. TOLERANCES ARE: XXX ± .010 ANGLE ± 10° XX ± .005 SURFACE FINISH X ± .005 FINISH ±		TITLE <b>DIAGRAM, SCHEMATIC</b>	
APPROVALS	DATE	SCALE	SHEET
DRAWN KAR	4-2-89	ADW6133C.DWG	3-1
CHECKED EEB	7-12-86	ADV-6133	D
APPROVED SL	7-17-88		

Schematic Diagram, Sheet 3, ADV-6133C-B



INTERCONNECT BOARD

OUTPUT CONNECTIONS

- TB1-1 ENGINE GROUND
- TB1-2 ENGINE GROUND
- TB1-3 ENGINE GROUND
- TB1-4 ENGINE GROUND
- TB1-5 PANEL LAMP OUTPUT
- TB1-6 RDO-10
- TB1-7 RDO-9
- TB1-8 RDO-7
- TB1-9 RDO-5
- TB1-10 M/A RELAY OUTPUT (80)
- TB1-11 OVERCRANK RELAY OUTPUT (12)
- TB1-12 LOW BATTERY VOLTAGE RELAY OUTPUT (62)
- TB1-13 LOW COOLANT TEMPERATURE RELAY OUTPUT (35)
- TB1-14 LOW OIL PRESSURE RELAY OUTPUT (38)
- TB1-15 HIGH COOLANT TEMPERATURE RELAY OUTPUT (36)
- TB1-16 LOW OIL PRESSURE WARNING RELAY OUTPUT (41)
- TB1-17 HIGH COOLANT TEMPERATURE WARNING RELAY OUTPUT (40)
- TB1-18 42A
- TB1-19 42A
- TB1-20 42A
- TB1-21 DVR DOWN VOLTAGE ADJUSTMENT
- TB1-22 DVR COMMON VOLTAGE ADJUSTMENT
- TB1-23 DVR UP VOLTAGE ADJUSTMENT
- TB1-24 RDO-8
- TB1-25 RDO-6
- TB1-26 RDO-4
- TB1-27 RDO-3
- TB1-28 RDO-2
- TB1-29 RDO-1
- TB1-30 SYSTEM READY RELAY OUTPUT (60)
- TB1-31 E-STOP RELAY OUTPUT (48)
- TB1-32 BATTERY CHARGER FAULT RELAY OUTPUT (61)
- TB1-33 LOW FUEL RELAY OUTPUT (63)
- TB1-34 OVERSPEED RELAY OUTPUT (39)

AC INPUT CONNECTIONS

- TB4-1 L0 (V0)
- TB4-2 L1 (V7)
- TB4-3 L2 (V8)
- TB4-4 L3 (V9)
- TB4-5 C3
- TB4-6 C3
- TB4-7 C2
- TB4-8 C1
- TB4-9 C0

INPUT CONNECTIONS

- TB2-1 REMOTE RESET \*
- TB2-2 GROUND FAULT \*
- TB2-3 NOT USED
- TB2-4 NOT USED
- TB2-5 BATTERY CHARGER FAULT \*
- TB2-6 LOW FUEL \*
- TB2-7 PRIME POWER MODE \*
- TB2-8 ENGINE GROUND
- TB2-9 ENGINE GROUND
- TB2-10 ENGINE GROUND
- TB3-1 E-STOP GROUND (1)
- TB3-2 E-STOP (1A)
- TB3-3 REMOTE START (3)
- TB3-4 REMOTE START (4)
- TB3-5 AUXILIARY 1 \*
- TB3-6 AUXILIARY 2 \*
- TB3-7 AUXILIARY 3 \*
- TB3-8 AUXILIARY 4 \*
- TB3-9 OIL PRESSURE (7C)
- TB3-10 COOLANT TEMPERATURE (5)

P1 CONNECTIONS (ENGINE TO MICRO BOARD)

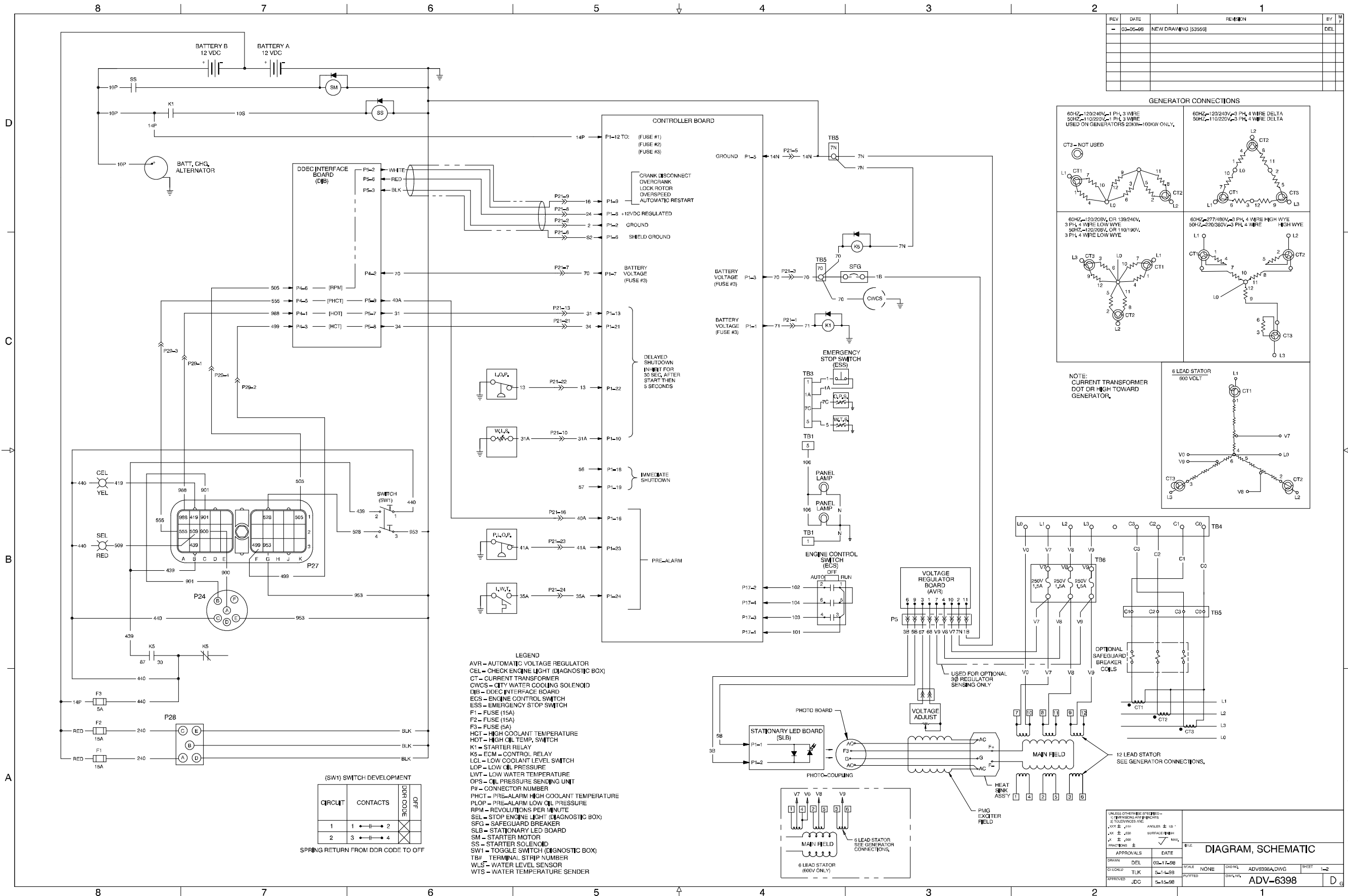
- POSITIONS
- 1 ENGINE CRANK (71)
  - 2 SPEED SENSOR GROUND (2)
  - 3 SAFEGUARD BREAKER (70)
  - 4 B.C. ALTERNATOR FLASHING
  - 5 STARTER MOTOR GROUND (14N)
  - 6 SPEED SENSOR SHIELD (S2)
  - 7 ENGINE RUN (70)
  - 8 V+ SPEED SENSOR (24)
  - 9 SPEED SENSOR SIGNAL (16)
  - 10 LOW COOLANT LEVEL PTC (31A)
  - 11 NOT USED
  - 12 BATTERY + (14F)
  - 13 HIGH OIL TEMPERATURE SWITCH INPUT (31) \*
  - 14 LOW COOLANT LEVEL SWITCH INPUT (31) \*
  - 15 NOT USED
  - 16 HIGH COOLANT TEMPERATURE WARNING SWITCH INPUT (40A) \*
  - 17 NOT USED
  - 18 AIR DAMPER SWITCH INPUT (56) \*
  - 19 AIR DAMPER SWITCH OUTPUT (57)
  - 20 NOT USED
  - 21 HIGH COOLANT TEMPERATURE SWITCH INPUT (34) \*
  - 22 LOW OIL PRESSURE SWITCH INPUT (13) \*
  - 23 LOW OIL PRESSURE WARNING SWITCH INPUT (41A) \*
  - 24 LOW COOLANT TEMPERATURE SWITCH INPUT (35A) \*

\* GROUND TO ACTIVATE

REV	DATE	REVISION	BY	CHK
-	4-1-88	NEW DRAWING (45204)	KAR	
A	8-1-88	(B-5-6) LEAD #S ADDED TO TB1-10 THRU-17 & -30 THRU-34; (D-3 THRU D-6) GROUND TO ACTIVATE SYMBOLS ADDED (47584)	KAR	
B	2-17-88	(A-1) AC INPUT CONNECTIONS REVISED (49428)	KAR	
C	11-21-87	(A-2) DIGITAL CONTROLLER WAS "DEC 340" ON SPECTRUM	KAR	
		TITLEBLOCK (52682)	KAR	

UNLESS OTHERWISE SPECIFIED - DIMENSIONS ARE IN INCHES TOLERANCES ARE: X.XX ± .010 ANGLE ± 10° X ± .030 SURFACE FINISH FINISH ± .005		TITLE <b>DIAGRAM, SCHEMATIC</b>	
APPROVALS	DATE	SCALE	SHEET
DRAWN KAR	4-1-88	ADW6133D/DWG	4-1
CHECKED EEB	7-12-86	ADV-6133	D
APPROVED SL	7-17-88		

Schematic Diagram, Sheet 4, ADV-6133D-C



Schematic Diagram, Sheet 1, ADV-6398A-

REV	DATE	REVISION	BY	CHK
-	02-17-98	NEW DRAWING (S3556)		DEL

**INTERCONNECT BOARD**

**OUTPUT CONNECTIONS**

- TB1-1 ENGINE GROUND
- TB1-2 ENGINE GROUND
- TB1-3 ENGINE GROUND
- TB1-4 ENGINE GROUND
- TB1-5 PANEL LAMP OUTPUT
- TB1-6 RDO-10
- TB1-7 RDO-9
- TB1-8 RDO-7
- TB1-9 RDO-5
- TB1-10 N/A RELAY OUTPUT (80)
- TB1-11 OVERCRANK RELAY OUTPUT (12)
- TB1-12 LOW BATTERY VOLTAGE RELAY OUTPUT (62)
- TB1-13 LOW COOLANT TEMPERATURE RELAY OUTPUT (35)
- TB1-14 LOW OIL PRESSURE RELAY OUTPUT (38)
- TB1-15 HIGH COOLANT TEMPERATURE RELAY OUTPUT (36)
- TB1-16 LOW OIL PRESSURE WARNING RELAY OUTPUT (41)
- TB1-17 HIGH COOLANT TEMPERATURE WARNING RELAY OUTPUT (40)
- TB1-18 42A
- TB1-19 42A
- TB1-20 42A
- TB1-21 DVR DOWN VOLTAGE ADJUSTMENT
- TB1-22 DVR COMMON VOLTAGE ADJUSTMENT
- TB1-23 DVR UP VOLTAGE ADJUSTMENT
- TB1-24 RDO-8
- TB1-25 RDO-6
- TB1-26 RDO-4
- TB1-27 RDO-3
- TB1-28 RDO-2
- TB1-29 RDO-1
- TB1-30 SYSTEM READY RELAY OUTPUT (60)
- TB1-31 E-STOP RELAY OUTPUT (48)
- TB1-32 BATTERY CHARGER FAULT RELAY OUTPUT (61)
- TB1-33 LOW FUEL RELAY OUTPUT (63)
- TB1-34 OVERSPEED RELAY OUTPUT (39)

**AC INPUT CONNECTIONS**

- TB4-1 L0 (V0)
- TB4-2 L1 (V7)
- TB4-3 L2 (V8)
- TB4-4 L3 (V9)
- TB4-5
- TB4-6 C3
- TB4-7 C2
- TB4-8 C1
- TB4-9 C0

**INPUT CONNECTIONS**

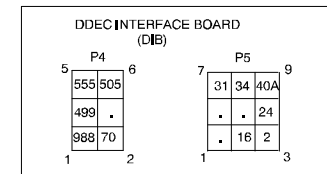
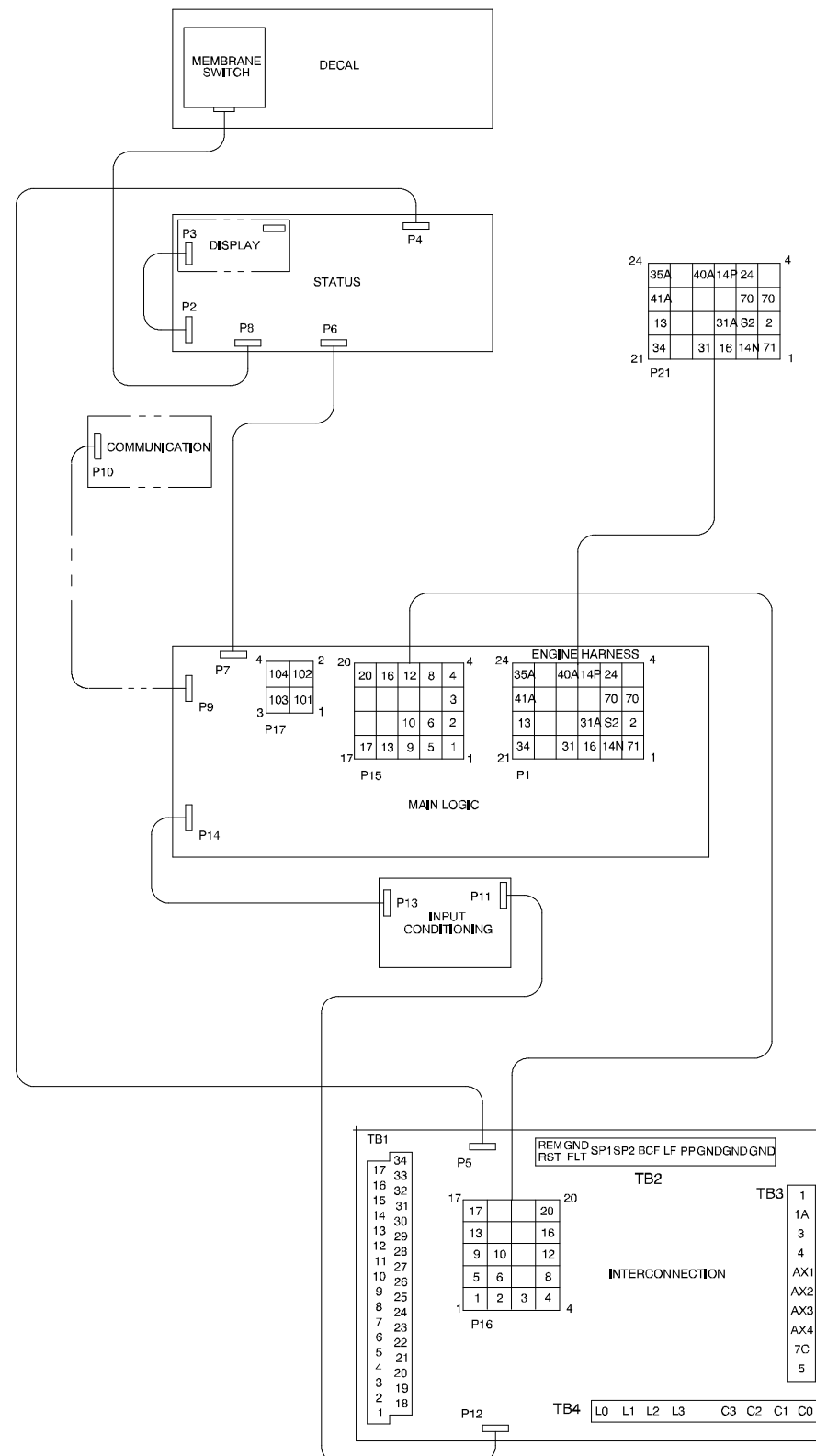
- TB2-1 REMOTE RESET \*
- TB2-2 GROUND FAULT \*
- TB2-3 NOT USED
- TB2-4 NOT USED
- TB2-5 BATTERY CHARGER FAULT \*
- TB2-6 LOW FUEL \*
- TB2-7 PRIME POWER MODE \*
- TB2-8 ENGINE GROUND
- TB2-9 ENGINE GROUND
- TB2-10 ENGINE GROUND
- TB3-1 E-STOP GROUND (1)
- TB3-2 E-STOP (1A)
- TB3-3 REMOTE START (3)
- TB3-4 REMOTE START (4)
- TB3-5 AUXILIARY 1 \*
- TB3-6 AUXILIARY 2 \*
- TB3-7 AUXILIARY 3 \*
- TB3-8 AUXILIARY 4 \*
- TB3-9 OIL PRESSURE SENDING UNIT (7C)
- TB3-10 WATER TEMPERATURE SENDING UNIT (5)

**P1 CONNECTIONS (ENGINE TO MICRO BOARD)**

**POSITIONS**

- 1 ENGINE CRANK (71)
- 2 SPEED SENSOR GROUND (2)
- 3 SAFEGUARD BREAKER (70)
- 4 B.C. ALTERNATOR FLASHING
- 5 STARTER MOTOR GROUND (14N)
- 6 SPEED SENSOR SHIELD (S2)
- 7 ENGINE RUN (70)
- 8 V+ SPEED SENSOR (24)
- 9 SPEED SENSOR SIGNAL (16)
- 10 LOW COOLANT LEVEL PTC (31A)
- 11 NOT USED
- 12 BATTERY + (14P)
- 13 HIGH OIL TEMPERATURE SWITCH INPUT (31) \*
- 14 LOW COOLANT LEVEL SWITCH INPUT (31) \*
- 15 NOT USED
- 16 HIGH COOLANT TEMPERATURE WARNING SWITCH INPUT (40A) \*
- 17 NOT USED
- 18 AIR DAMPER SWITCH INPUT (56) \*
- 19 AIR DAMPER SWITCH OUTPUT (57)
- 20 NOT USED
- 21 HIGH COOLANT TEMPERATURE SWITCH INPUT (34) \*
- 22 LOW OIL PRESSURE SWITCH INPUT (13) \*
- 23 LOW OIL PRESSURE WARNING SWITCH INPUT (41A) \*
- 24 LOW COOLANT TEMPERATURE SWITCH INPUT (35A) \*

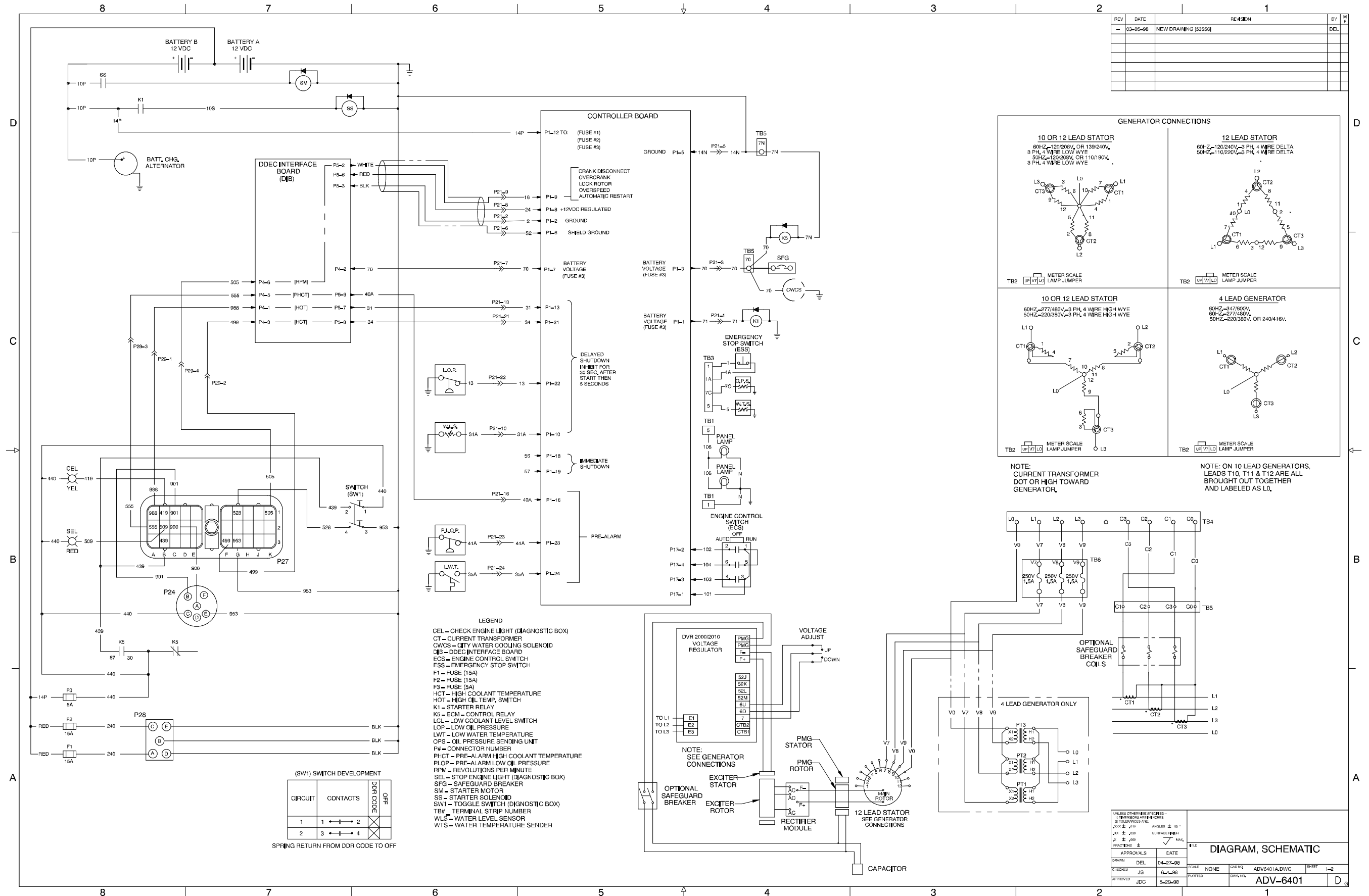
\* GROUND TO ACTIVATE



UNLESS OTHERWISE SPECIFIED - DIMENSIONS ARE IN INCHES TOLERANCES ARE: DIMENSIONS SURFACE FINISH FRACTIONS ± .005 MAX. DECIMALS ± .005 MAX.		DATE		REV	
APPROVALS		DATE		DIAGRAM, SCHEMATIC	
DRAWN	DEL	02-17-98	SCALE	ADVISOR/DWG	SHEET 2-2
CHECKED	TLK	02-17-98	DATE	ADV-6398	D
APPROVED	JDC	02-17-98	DATE		

Schematic Diagram, Sheet 2, ADV-6398B-

REV	DATE	REVISION	BY	CHK
-	03-05-98	NEW DRAWING (S3558)	DEL	



- LEGEND**
- CEL - CHECK ENGINE LIGHT (DIAGNOSTIC BOX)
  - CT - CURRENT TRANSFORMER
  - CWCS - CITY WATER COOLING SOLENOID
  - DB - DDEC INTERFACE BOARD
  - ECS - ENGINE CONTROL SWITCH
  - ESS - EMERGENCY STOP SWITCH
  - F1 - FUSE (15A)
  - F2 - FUSE (15A)
  - F3 - FUSE (5A)
  - HCT - HIGH COOLANT TEMPERATURE
  - LOP - LOW COOLANT LEVEL SWITCH
  - LWT - LOW WATER TEMPERATURE
  - OPS - OIL PRESSURE SENDING UNIT
  - P# - CONNECTOR NUMBER
  - PHCT - PRE-ALARM HIGH COOLANT TEMPERATURE
  - PLOP - PRE-ALARM LOW OIL PRESSURE
  - RPM - REVOLUTIONS PER MINUTE
  - SEL - STOP ENGINE LIGHT (DIAGNOSTIC BOX)
  - TBF - TERMINAL STRIP NUMBER
  - WLS - WATER LEVEL SENSOR
  - WTS - WATER TEMPERATURE SENDER

(SW1) SWITCH DEVELOPMENT

CIRCUIT	CONTACTS	DDR CODE	OFF
1	1 → 2	X	
2	3 → 4	X	

SPRING RETURN FROM DDR CODE TO OFF

UNLESS OTHERWISE SPECIFIED -  
 1. DIMENSIONS ARE IN INCHES  
 2. TOLERANCES ARE:  
 .005 ± .001 ANGLES ± 10°  
 .01 ± .005 SURFACE FINISH  
 .01 ± .005 FINISH

APPROVALS	DATE	SCALE	OTHER
DESIGN DEL 04-27-98		NONE	
DRAWING JS 04-28-98			
APPROVED JDC 05-29-98			

**DIAGRAM, SCHEMATIC**

ADV-6401

Schematic Diagram, Sheet 1, ADV-6401A-

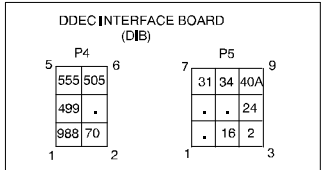
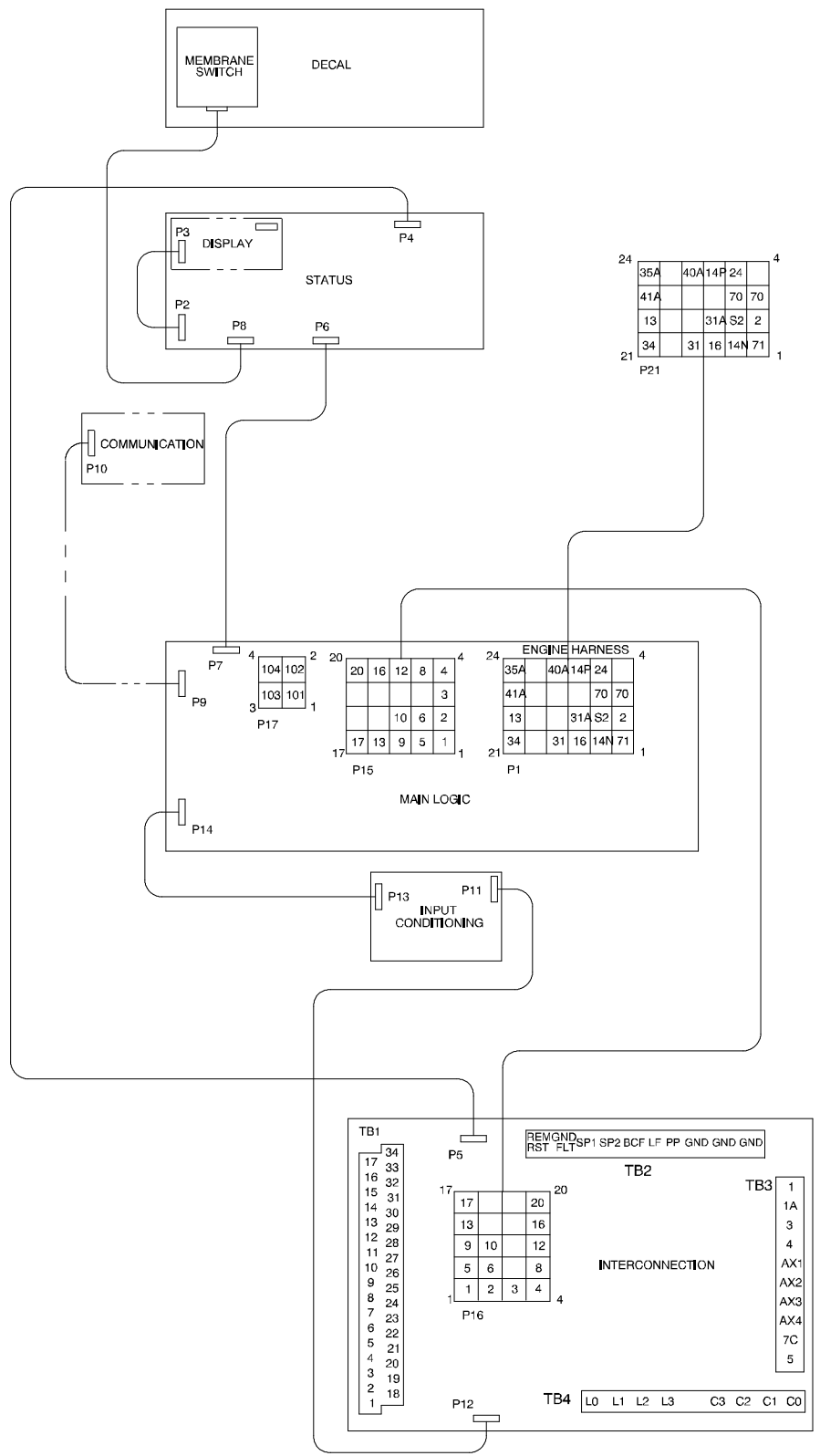
REV	DATE	REVISION	BY	CHK
-	04-27-98	NEW DRAWING (S3556)		

**INTERCONNECT BOARD**

- OUTPUT CONNECTIONS**
- TB1-1 ENGINE GROUND
  - TB1-2 ENGINE GROUND
  - TB1-3 ENGINE GROUND
  - TB1-4 ENGINE GROUND
  - TB1-5 PANEL LAMP OUTPUT
  - TB1-6 RDO-10
  - TB1-7 RDO-9
  - TB1-8 RDO-7
  - TB1-9 RDO-5
  - TB1-10 N/A RELAY OUTPUT (80)
  - TB1-11 OVERCRANK RELAY OUTPUT (12)
  - TB1-12 LOW BATTERY VOLTAGE RELAY OUTPUT (62)
  - TB1-13 LOW COOLANT TEMPERATURE RELAY OUTPUT (35)
  - TB1-14 LOW OIL PRESSURE RELAY OUTPUT (38)
  - TB1-15 HIGH COOLANT TEMPERATURE RELAY OUTPUT (36)
  - TB1-16 LOW OIL PRESSURE WARNING RELAY OUTPUT (41)
  - TB1-17 HIGH COOLANT TEMPERATURE WARNING RELAY OUTPUT (40)
  - TB1-18 42A
  - TB1-19 42A
  - TB1-20 42A
  - TB1-21 DVR DOWN VOLTAGE ADJUSTMENT
  - TB1-22 DVR COMMON VOLTAGE ADJUSTMENT
  - TB1-23 DVR UP VOLTAGE ADJUSTMENT
  - TB1-24 RDO-8
  - TB1-25 RDO-6
  - TB1-26 RDO-4
  - TB1-27 RDO-3
  - TB1-28 RDO-2
  - TB1-29 RDO-1
  - TB1-30 SYSTEM READY RELAY OUTPUT (60)
  - TB1-31 E-STOP RELAY OUTPUT (48)
  - TB1-32 BATTERY CHARGER FAULT RELAY OUTPUT (61)
  - TB1-33 LOW FUEL RELAY OUTPUT (63)
  - TB1-34 OVERSPEED RELAY OUTPUT (39)
- AC INPUT CONNECTIONS**
- TB4-1 L0 (V0)
  - TB4-2 L1 (V7)
  - TB4-3 L2 (V8)
  - TB4-4 L3 (V9)
  - TB4-5
  - TB4-6 C3
  - TB4-7 C2
  - TB4-8 C1
  - TB4-9 C0

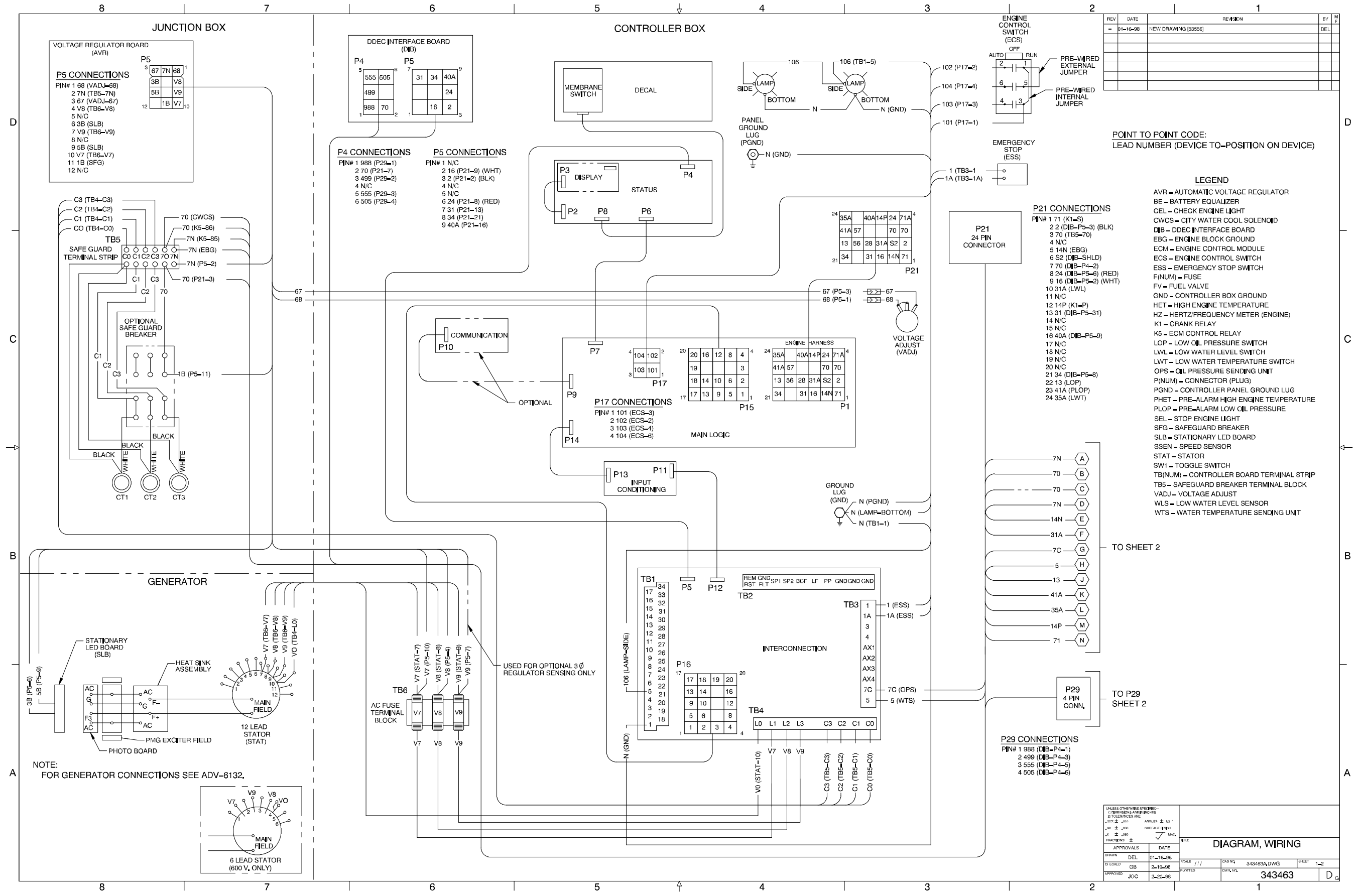
- INPUT CONNECTIONS**
- TB2-1 REMOTE RESET \*
  - TB2-2 GROUND FAULT \*
  - TB2-3 NOT USED
  - TB2-4 NOT USED
  - TB2-5 BATTERY CHARGER FAULT \*
  - TB2-6 LOW FUEL \*
  - TB2-7 PRIME POWER MODE \*
  - TB2-8 ENGINE GROUND
  - TB2-9 ENGINE GROUND
  - TB2-10 ENGINE GROUND
  - TB3-1 E-STOP GROUND (1)
  - TB3-2 E-STOP (1A)
  - TB3-3 REMOTE START (3)
  - TB3-4 REMOTE START (4)
  - TB3-5 AUXILIARY 1 \*
  - TB3-6 AUXILIARY 2 \*
  - TB3-7 AUXILIARY 3 \*
  - TB3-8 AUXILIARY 4 \*
  - TB3-9 OIL PRESSURE SENDING UNIT (7C)
  - TB3-10 WATER TEMPERATURE SENDING UNIT (5)
- P1 CONNECTIONS (ENGINE TO MICRO BOARD)**
- 1 ENGINE CRANK (71)
  - 2 SPEED SENSOR GROUND (2)
  - 3 SAFEGUARD BREAKER (70)
  - 4 B.C. ALTERNATOR FLASHING
  - 5 STARTER MOTOR GROUND (14N)
  - 6 SPEED SENSOR SHIELD (S2)
  - 7 ENGINE RUN (70)
  - 8 V+ SPEED SENSOR (24)
  - 9 SPEED SENSOR SIGNAL (16)
  - 10 LOW COOLANT LEVEL PTC (31A)
  - 11 NOT USED
  - 12 BATTERY + (14P)
  - 13 HIGH OIL TEMPERATURE SWITCH INPUT (31) \*
  - 14 LOW COOLANT LEVEL SWITCH INPUT (31) \*
  - 15 NOT USED
  - 16 HIGH COOLANT TEMPERATURE WARNING SWITCH INPUT (40A) \*
  - 17 NOT USED
  - 18 AIR DAMPER SWITCH INPUT (56) \*
  - 19 AIR DAMPER SWITCH OUTPUT (57)
  - 20 NOT USED
  - 21 HIGH COOLANT TEMPERATURE SWITCH INPUT (34) \*
  - 22 LOW OIL PRESSURE SWITCH INPUT (13) \*
  - 23 LOW OIL PRESSURE WARNING SWITCH INPUT (41A) \*
  - 24 LOW COOLANT TEMPERATURE SWITCH INPUT (35A) \*
- \* GROUND TO ACTIVATE

- POSITIONS**
- 1 ENGINE CRANK (71)
  - 2 SPEED SENSOR GROUND (2)
  - 3 SAFEGUARD BREAKER (70)
  - 4 B.C. ALTERNATOR FLASHING
  - 5 STARTER MOTOR GROUND (14N)
  - 6 SPEED SENSOR SHIELD (S2)
  - 7 ENGINE RUN (70)
  - 8 V+ SPEED SENSOR (24)
  - 9 SPEED SENSOR SIGNAL (16)
  - 10 LOW COOLANT LEVEL PTC (31A)
  - 11 NOT USED
  - 12 BATTERY + (14P)
  - 13 HIGH OIL TEMPERATURE SWITCH INPUT (31) \*
  - 14 LOW COOLANT LEVEL SWITCH INPUT (31) \*
  - 15 NOT USED
  - 16 HIGH COOLANT TEMPERATURE WARNING SWITCH INPUT (40A) \*
  - 17 NOT USED
  - 18 AIR DAMPER SWITCH INPUT (56) \*
  - 19 AIR DAMPER SWITCH OUTPUT (57)
  - 20 NOT USED
  - 21 HIGH COOLANT TEMPERATURE SWITCH INPUT (34) \*
  - 22 LOW OIL PRESSURE SWITCH INPUT (13) \*
  - 23 LOW OIL PRESSURE WARNING SWITCH INPUT (41A) \*
  - 24 LOW COOLANT TEMPERATURE SWITCH INPUT (35A) \*



UNLESS OTHERWISE SPECIFIED - DIMENSIONS ARE IN MILLIMETERS 寸法単位はミリメートル		TITLE	
APPROVALS		DATE	
DRAWN	DEL	04-27-98	
CHECKED	JS	04-27-98	
APPROVED	JDC	04-27-98	
SCALE		1:1	
Dwg No.		ADV6401B.DWG	
SHEET		2-2	
PROJECT		ADV-6401	

Schematic Diagram, Sheet 2, ADV-6401B-



REV	DATE	REVISION	BY	CHK
1	01-16-98	NEW DRAWING (343463)		

POINT TO POINT CODE:  
LEAD NUMBER (DEVICE TO-POSITION ON DEVICE)

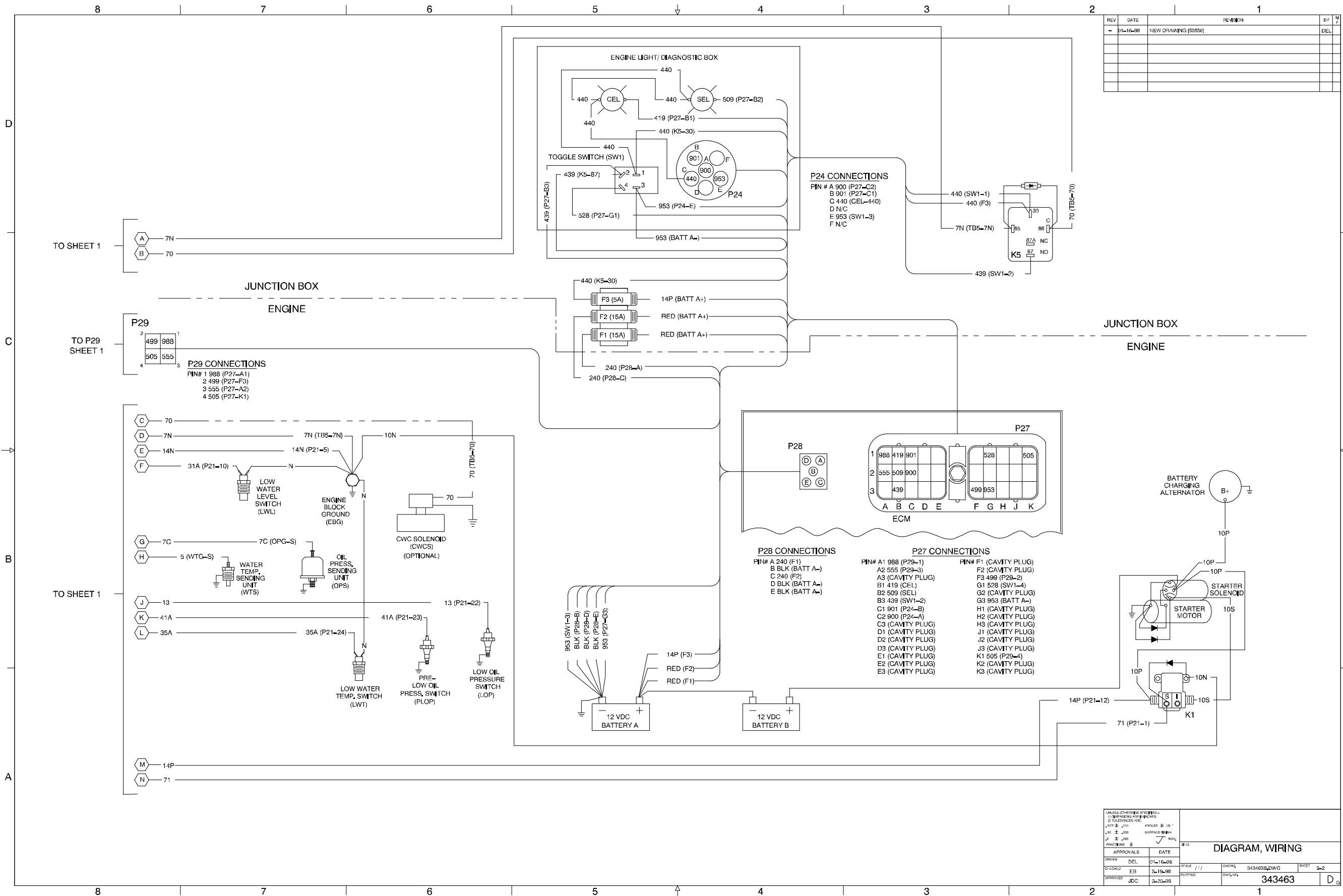
- LEGEND**
- AVR - AUTOMATIC VOLTAGE REGULATOR
  - BE - BATTERY EQUALIZER
  - CEL - CHECK ENGINE LIGHT
  - CWCS - CITY WATER COOL SOLENOID
  - DIB - DDEC INTERFACE BOARD
  - EBG - ENGINE BLOCK GROUND
  - ECM - ENGINE CONTROL MODULE
  - ECS - ENGINE CONTROL SWITCH
  - ESS - EMERGENCY STOP SWITCH
  - F(NUM) - FUSE
  - FV - FUEL VALVE
  - GND - CONTROLLER BOX GROUND
  - HET - HIGH ENGINE TEMPERATURE
  - HZ - HERTZ/FREQUENCY METER (ENGINE)
  - K1 - CRANK RELAY
  - K5 - ECM CONTROL RELAY
  - LOP - LOW OIL PRESSURE SWITCH
  - LWL - LOW WATER LEVEL SWITCH
  - LWT - LOW WATER TEMPERATURE SWITCH
  - OPS - OIL PRESSURE SENDING UNIT
  - P(NUM) - CONNECTOR (PLUG)
  - PGND - CONTROLLER PANEL GROUND LUG
  - PHET - PRE-ALARM HIGH ENGINE TEMPERATURE
  - PLOP - PRE-ALARM LOW OIL PRESSURE
  - SEL - STOP ENGINE LIGHT
  - SFG - SAFEGUARD BREAKER
  - SLB - STATIONARY LED BOARD
  - SSEN - SPEED SENSOR
  - STAT - STATOR
  - SW1 - TOGGLE SWITCH
  - TB(NUM) - CONTROLLER BOARD TERMINAL STRIP
  - TB5 - SAFEGUARD BREAKER TERMINAL BLOCK
  - VADJ - VOLTAGE ADJUST
  - WLS - LOW WATER LEVEL SENSOR
  - WTS - WATER TEMPERATURE SENDING UNIT



- P29 CONNECTIONS**  
 PIN# 1 988 (DIB-P4-1)  
 2 499 (DIB-P4-3)  
 3 555 (DIB-P4-5)  
 4 505 (DIB-P4-6)

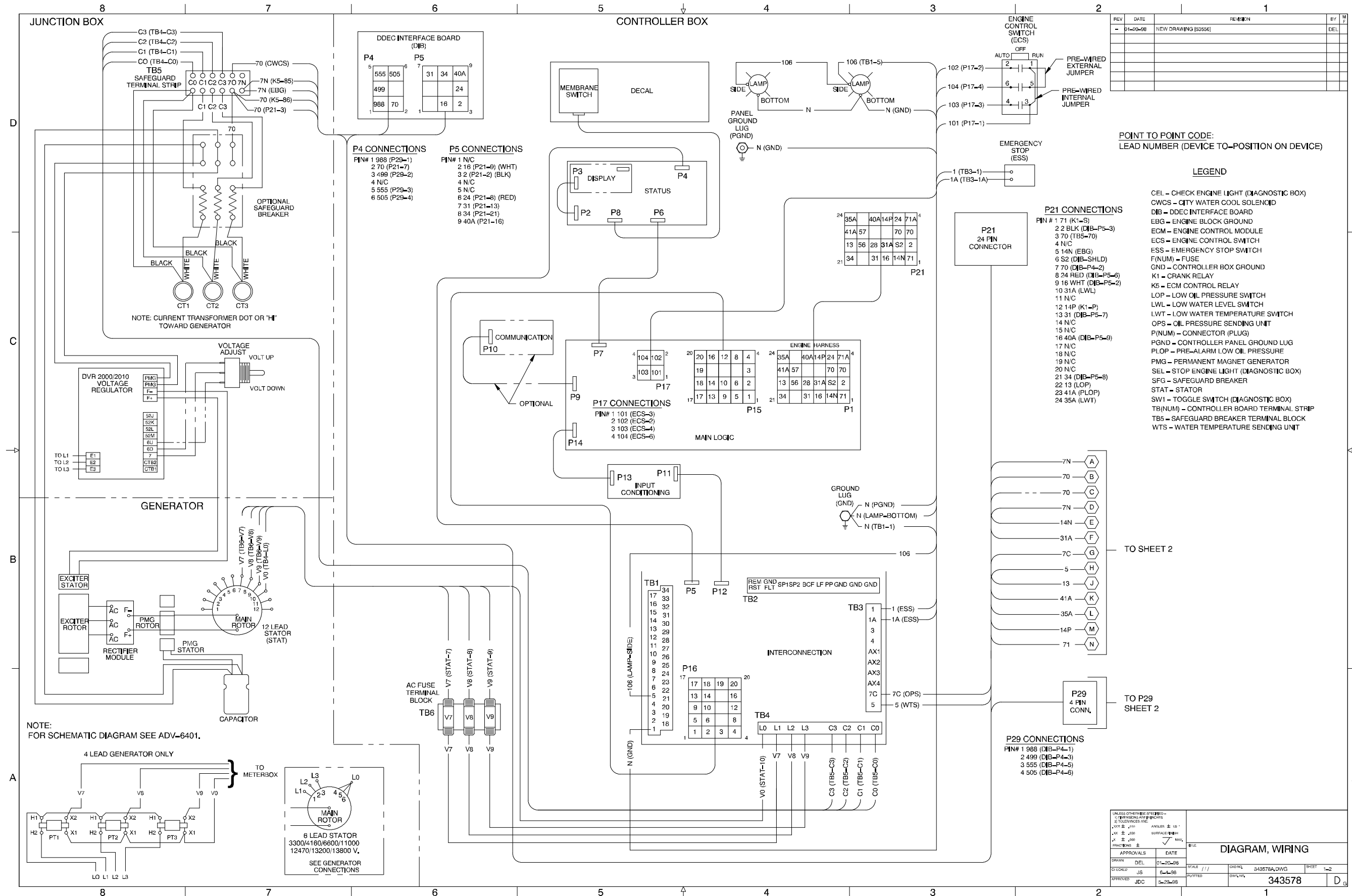
UNLESS OTHERWISE SPECIFIED - 1 DIMENSIONS ARE IN INCHES 2 TOLERANCES ARE: DIMENSIONS IN INCHES: ANGLES ± 10° ± .005 SURFACE FINISH: MAX. FINISHES ± .005		DATE		REV	
APPROVALS	DATE	DIAGRAM, WIRING			
DRW: DEL	01-16-98	SCALE: 1/1	DRW: JOC	343463A.DWG	SHEET 1-2
CHKD: CB	2-15-98	PLT: JOC	DATE: 2-20-98	343463	DEL

Point-to-Point Wiring Diagram, Sheet 1, 343463A-



Point-to-Point Wiring Diagram, Sheet 2, 343463B-

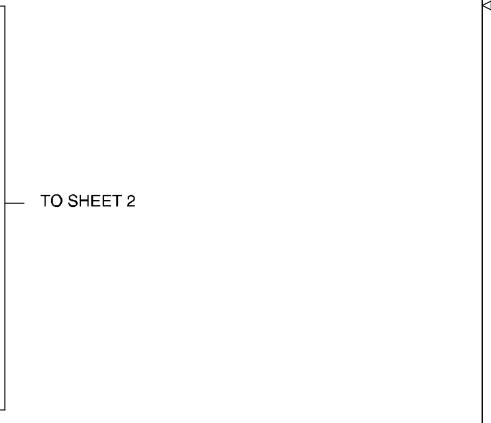




REV	DATE	REVISION	BY	CHK
1	01-20-98	NEW DRAWING (343578)	DEL	

POINT TO POINT CODE:  
LEAD NUMBER (DEVICE TO-POSITION ON DEVICE)

- LEGEND**
- CEL - CHECK ENGINE LIGHT (DIAGNOSTIC BOX)
  - CWCS - CITY WATER COOL SOLENOID
  - DIB - DDEC INTERFACE BOARD
  - EBG - ENGINE BLOCK GROUND
  - ECM - ENGINE CONTROL MODULE
  - ECS - ENGINE CONTROL SWITCH
  - ESS - EMERGENCY STOP SWITCH
  - F(NUM) - FUSE
  - GND - CONTROLLER BOX GROUND
  - K1 - CRANK RELAY
  - K5 - ECM CONTROL RELAY
  - LOP - LOW OIL PRESSURE SWITCH
  - LWL - LOW WATER LEVEL SWITCH
  - LWT - LOW WATER TEMPERATURE SWITCH
  - OPS - OIL PRESSURE SENDING UNIT
  - P(NUM) - CONNECTOR (PLUG)
  - PGND - CONTROLLER PANEL GROUND LUG
  - PLOP - PRE-ALARM LOW OIL PRESSURE
  - PMG - PERMANENT MAGNET GENERATOR
  - SEL - STOP ENGINE LIGHT (DIAGNOSTIC BOX)
  - SFG - SAFEGUARD BREAKER
  - STAT - STATOR
  - SW1 - TOGGLE SWITCH (DIAGNOSTIC BOX)
  - TB(NUM) - CONTROLLER BOARD TERMINAL STRIP
  - TB5 - SAFEGUARD BREAKER TERMINAL BLOCK
  - WTS - WATER TEMPERATURE SENDING UNIT



- P29 CONNECTIONS**
- 1 988 (DIB-P4-1)
  - 2 499 (DIB-P4-3)
  - 3 555 (DIB-P4-5)
  - 4 505 (DIB-P4-6)

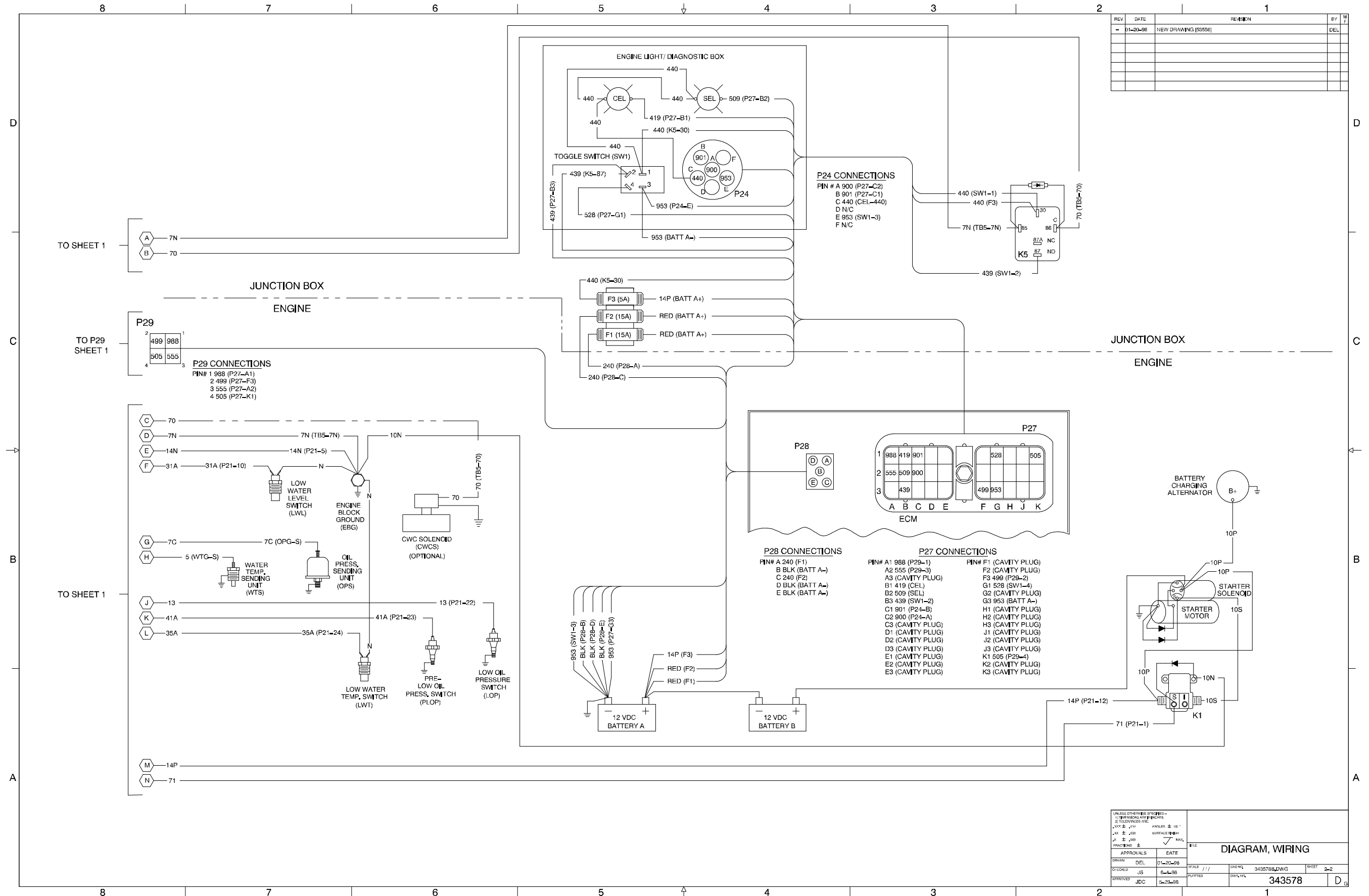
APPROVALS		DATE	SCALE	DATE	DRWNG	343578A.DWG	SHEET	1-2
DESIGNED	DEL	01-20-98						
CHECKED	JS	01-20-98						
APPROVED	JDC	01-20-98						

UNLESS OTHERWISE SPECIFIED -  
1 DIMENSIONS ARE IN INCHES  
2 TOLERANCES ARE:  
DIMENSIONS IN INCHES: ANGLES ± 10°  
± .005 SURFACE FINISH  
± .005 SURFACE FINISH  
± .005 SURFACE FINISH

**DIAGRAM, WIRING**

343578

Point-to-Point Wiring Diagram, Sheet 1, 343578A-



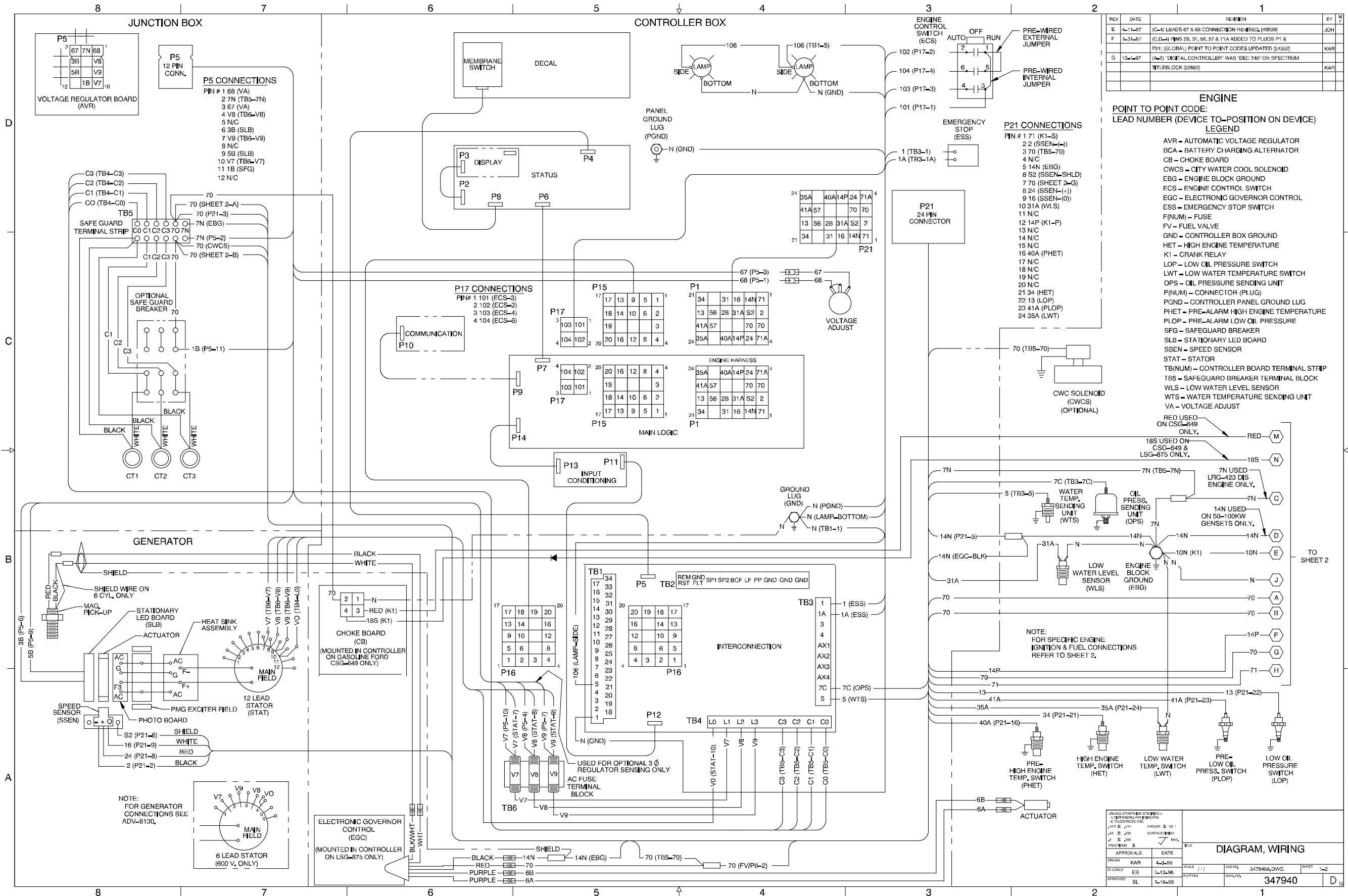
REV	DATE	REVISION	BY	CHK
1	01-20-98	NEW DRAWING (343578)	DEL	

APPROVALS		DATE	SCALE	DWG NO.	SHEET
DESIGN	DEL	01-20-98	1/1	343578B.DWG	2-2
CHECKED	JIS	01-20-98			
APPROVED	JDC	01-20-98			

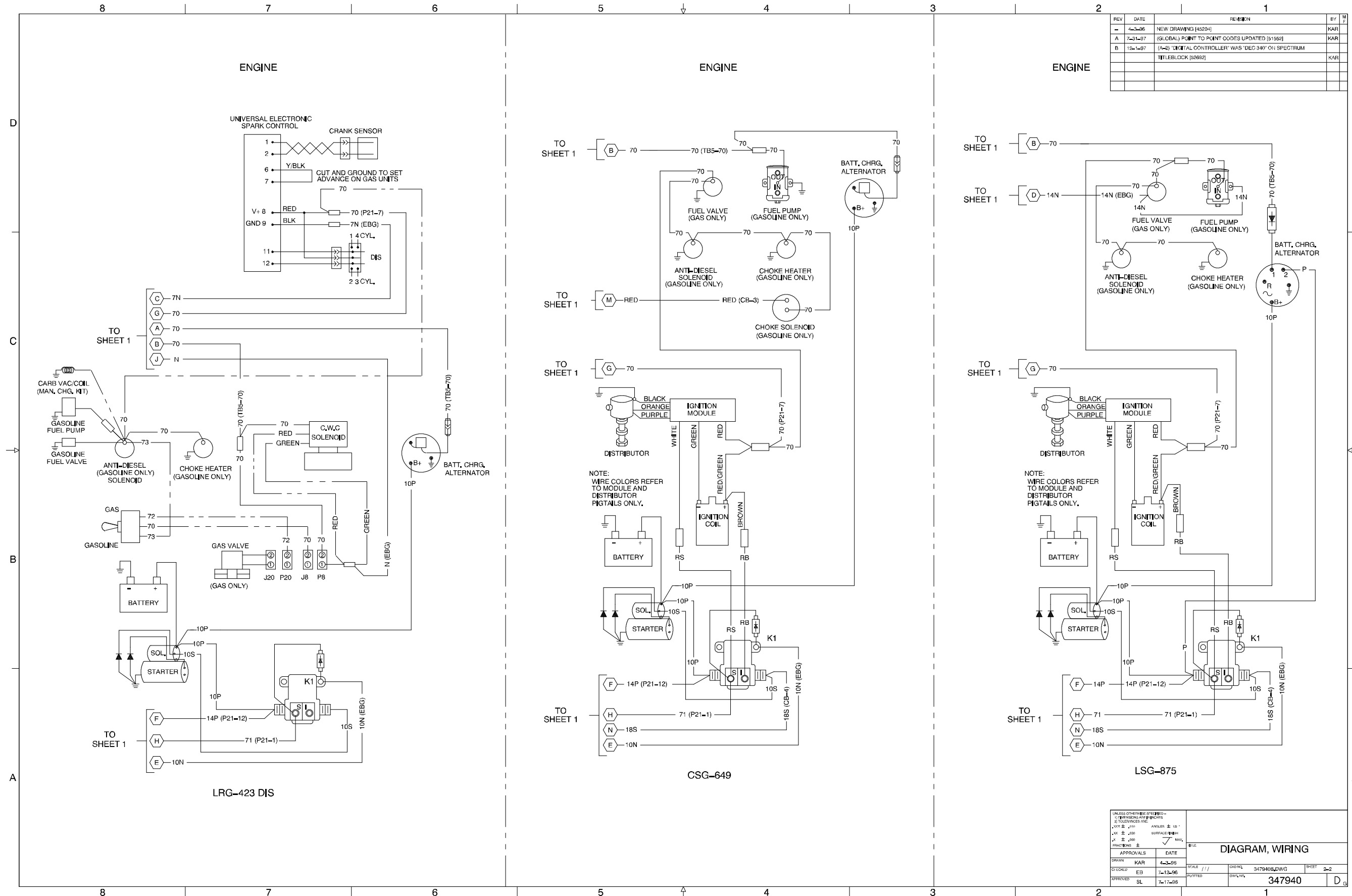
**DIAGRAM, WIRING**

343578  
D

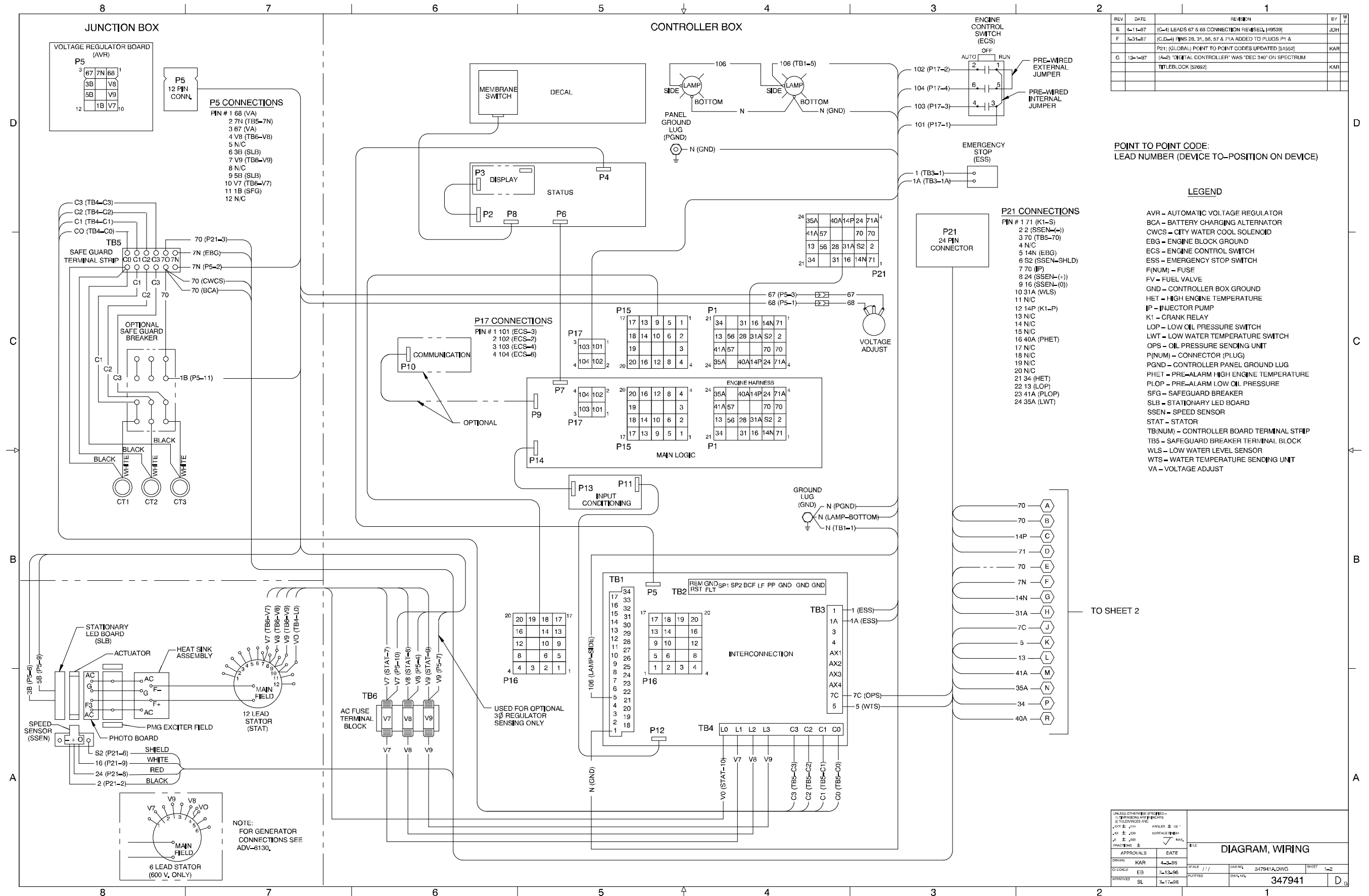
Point-to-Point Wiring Diagram, Sheet 2, 343578B-



Point-to-Point Wiring Diagram, Sheet 1, 347940A-G



Point-to-Point Wiring Diagram, Sheet 2, 347940B-B



REV	DATE	REVISION	BY	CHK
E	4-11-97	(C-1) LEADS 67 & 68 CONNECTION REVISED, [49538]		JDH
F	4-31-97	(C,D-4) PINS 28, 31, 95, 57 & 71A ADDED TO PLUGS P1 & P21; (GLOBAL) POINT TO POINT CODES UPDATED [51552]		KAR
G	12-1-97	(A-2) DIGITAL CONTROLLER WAS DEC 340' ON SPECTRUM		KAR
		TITLEBLOCK [52692]		

POINT TO POINT CODE:  
LEAD NUMBER (DEVICE TO-POSITION ON DEVICE)

- LEGEND**
- AVR - AUTOMATIC VOLTAGE REGULATOR
  - BCA - BATTERY CHARGING ALTERNATOR
  - CWCS - CITY WATER COOL SOLENOID
  - EBG - ENGINE BLOCK GROUND
  - ECS - ENGINE CONTROL SWITCH
  - ESS - EMERGENCY STOP SWITCH
  - F(NUM) - FUSE
  - FV - FUEL VALVE
  - GND - CONTROLLER BOX GROUND
  - HET - HIGH ENGINE TEMPERATURE
  - IP - INJECTOR PUMP
  - K1 - CRANK RELAY
  - LOP - LOW OIL PRESSURE SWITCH
  - LWT - LOW WATER TEMPERATURE SWITCH
  - OPS - OIL PRESSURE SENDING UNIT
  - P(NUM) - CONNECTOR (PLUG)
  - PGND - CONTROLLER PANEL GROUND LUG
  - PHET - PRE-ALARM HIGH ENGINE TEMPERATURE
  - PLOP - PRE-ALARM LOW OIL PRESSURE
  - SFG - SAFEGUARD BREAKER
  - SLB - STATIONARY LED BOARD
  - SSEN - SPEED SENSOR
  - STAT - STATOR
  - TB(NUM) - CONTROLLER BOARD TERMINAL STRIP
  - WLS - LOW WATER LEVEL SENSOR
  - WTS - WATER TEMPERATURE SENDING UNIT
  - VA - VOLTAGE ADJUST

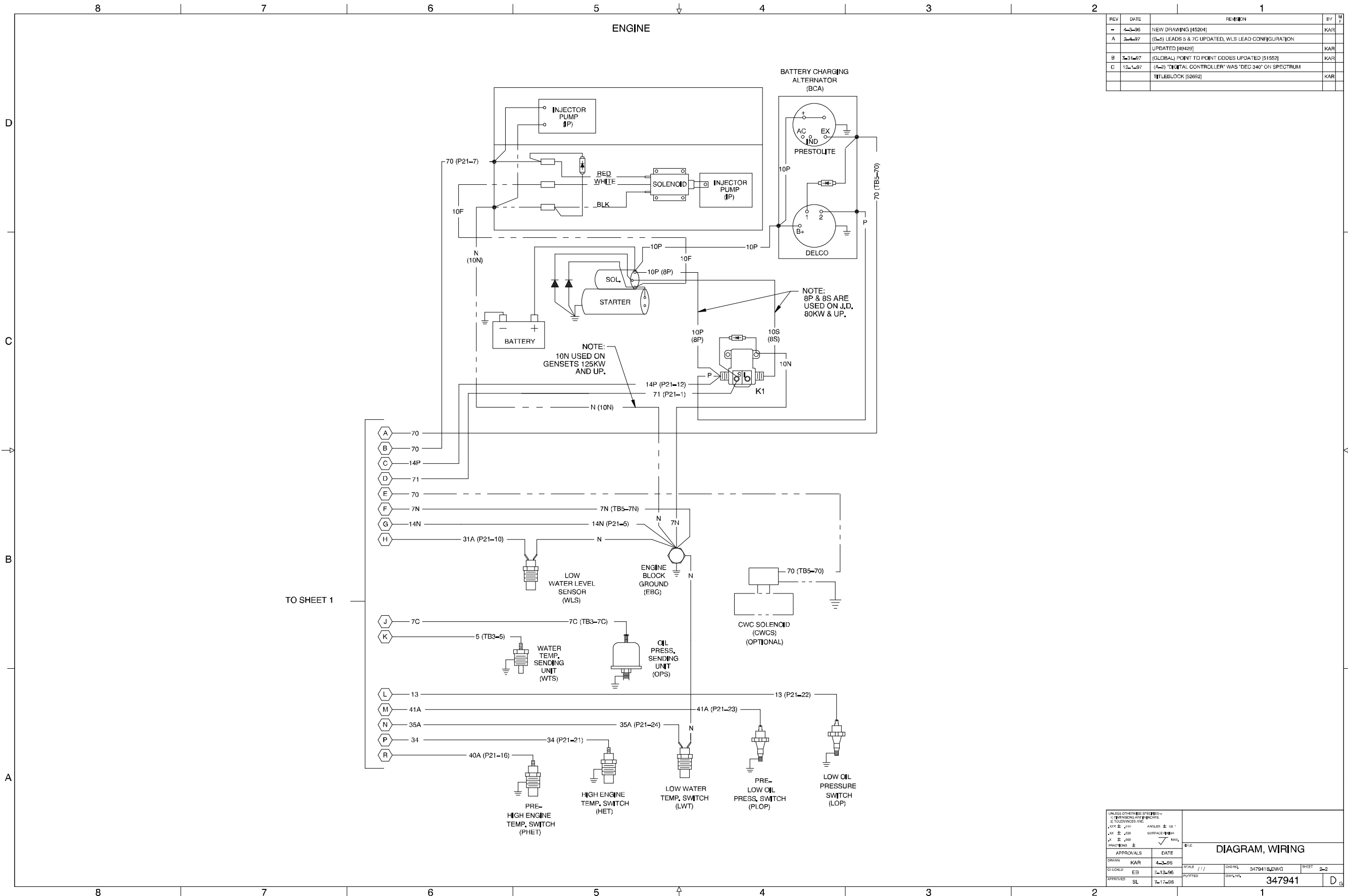


UNLESS OTHERWISE SPECIFIED - DIMENSIONS ARE IN INCHES TOLERANCES ARE: DIMENSIONS ± .010 ANGLE ± 10° SURFACE FINISH: MAX. FINISH ± .000		DATE		DRAWN		CHECKED		APPROVED	
APPROVALS		DATE		DRAWN		CHECKED		APPROVED	
DRAWN: KAR		DATE: 4-2-99		DRAWN: EBJ		CHECKED: SL		APPROVED: SL	
C/CHECKED: EBJ		DATE: 7-12-96		DRAWN: SL		CHECKED: SL		APPROVED: SL	
APPROVED: SL		DATE: 7-17-98		DRAWN: SL		CHECKED: SL		APPROVED: SL	

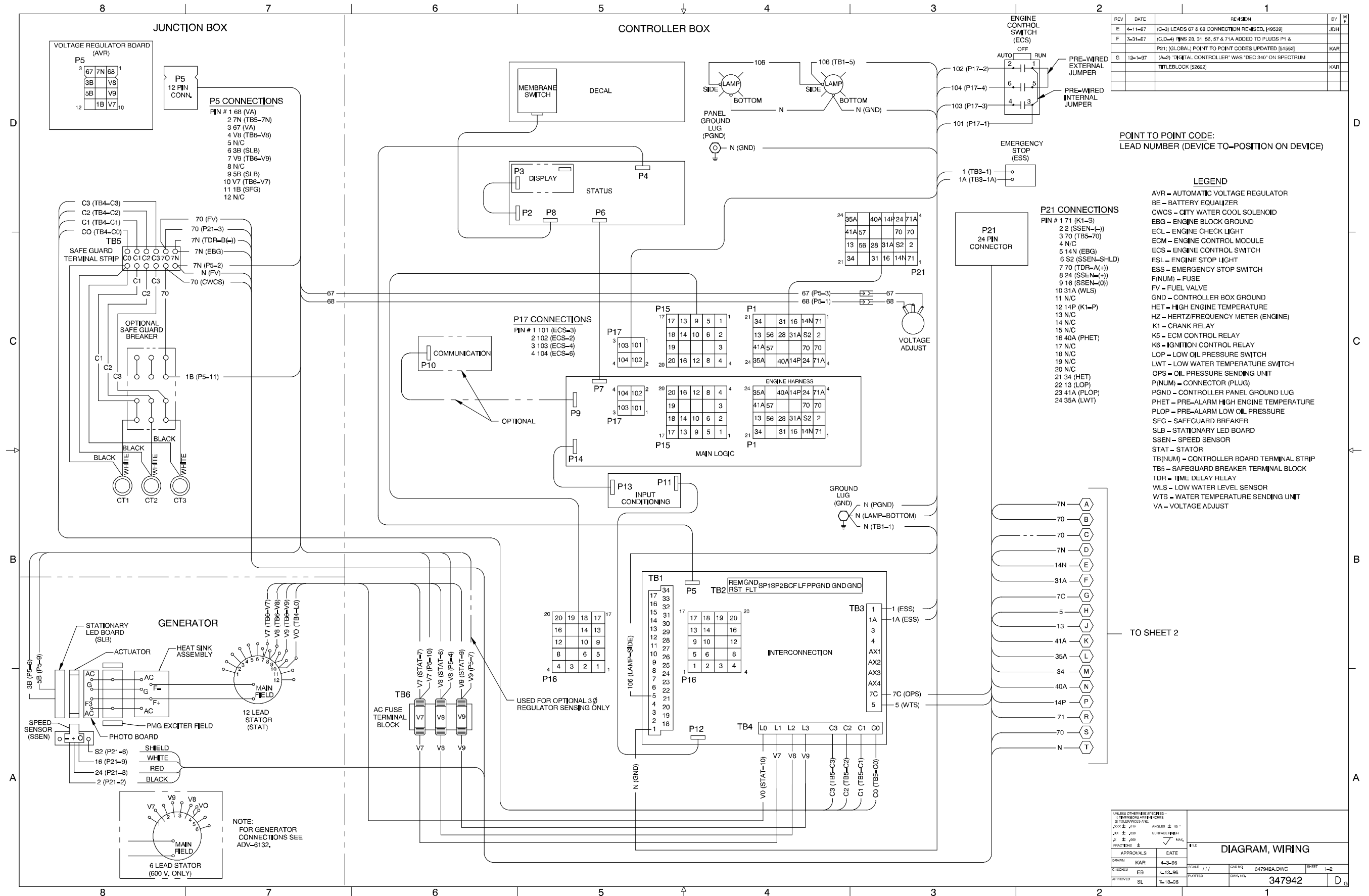
**DIAGRAM, WIRING**

347941

Point-to-Point Wiring Diagram, Sheet 1, 347941A-G



Point-to-Point Wiring Diagram, Sheet 2, 347941B-C



REV	DATE	REVISION	BY	CHK
E	4-11-97	(C-3) LEADS 67 & 68 CONNECTION REVISED, [49539]		JDH
F	7-31-97	(C,D-4) PINS 28, 31, 95, 57 & 71A ADDED TO PLUGS P1 & P21; (GLOBAL) POINT TO POINT CODES UPDATED [51552]		KAR
G	12-1-97	(A-2) DIGITAL CONTROLLER WAS DEC 340' ON SPECTRUM TITLEBLOCK [52692]		KAR

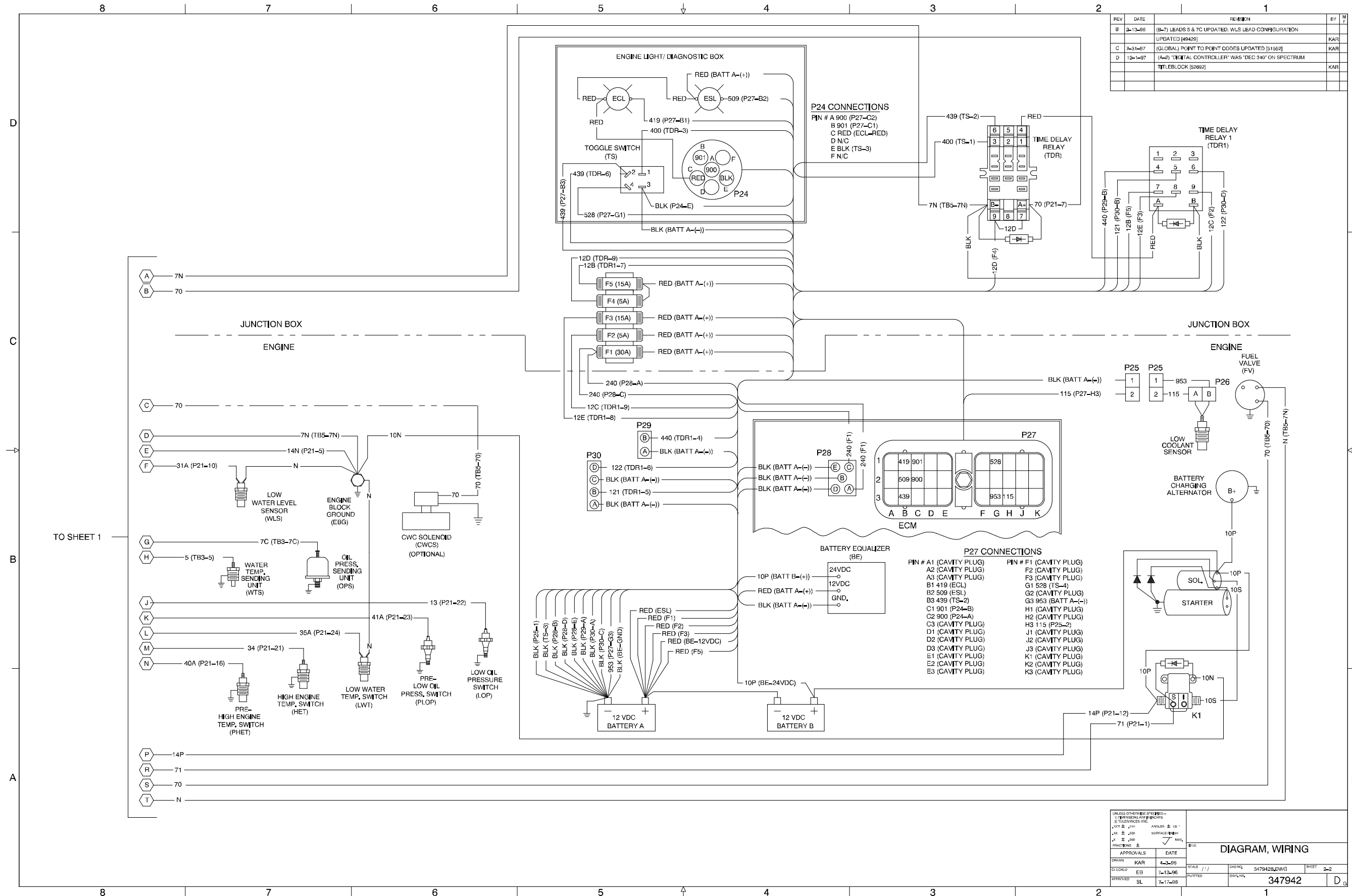
POINT TO POINT CODE:  
LEAD NUMBER (DEVICE TO-POSITION ON DEVICE)

- LEGEND**
- AVR - AUTOMATIC VOLTAGE REGULATOR
  - BE - BATTERY EQUALIZER
  - CWCS - CITY WATER COOL SOLENOID
  - EBG - ENGINE BLOCK GROUND
  - ECL - ENGINE CHECK LIGHT
  - ECM - ENGINE CONTROL MODULE
  - ECS - ENGINE CONTROL SWITCH
  - ESL - ENGINE STOP LIGHT
  - ESS - EMERGENCY STOP SWITCH
  - F(NUM) - FUSE
  - FV - FUEL VALVE
  - GND - CONTROLLER BOX GROUND
  - HET - HIGH ENGINE TEMPERATURE
  - HZ - HERTZ/FREQUENCY METER (ENGINE)
  - K1 - CRANK RELAY
  - K5 - ECM CONTROL RELAY
  - K6 - IGNITION CONTROL RELAY
  - LOP - LOW OIL PRESSURE SWITCH
  - LWT - LOW WATER TEMPERATURE SWITCH
  - OPS - OIL PRESSURE SENDING UNIT
  - P(NUM) - CONNECTOR (PLUG)
  - PGND - CONTROLLER PANEL GROUND LUG
  - PHET - PRE-ALARM HIGH ENGINE TEMPERATURE
  - PLOP - PRE-ALARM LOW OIL PRESSURE
  - SFG - SAFEGUARD BREAKER
  - SLB - STATIONARY LED BOARD
  - SSEN - SPEED SENSOR
  - STAT - STATOR
  - TB(NUM) - CONTROLLER BOARD TERMINAL STRIP
  - TB5 - SAFEGUARD BREAKER TERMINAL BLOCK
  - TDR - TIME DELAY RELAY
  - WLS - LOW WATER LEVEL SENSOR
  - WTS - WATER TEMPERATURE SENDING UNIT
  - VA - VOLTAGE ADJUST

- TO SHEET 2
- 7N (A)
  - 70 (B)
  - 70 (C)
  - 7N (D)
  - 14N (E)
  - 31A (F)
  - 7C (G)
  - 5 (H)
  - 13 (J)
  - 1A (K)
  - 4 (L)
  - 41A (M)
  - 35A (N)
  - 34 (O)
  - 40A (P)
  - 14P (Q)
  - 71 (R)
  - 70 (S)
  - N (T)

UNLESS OTHERWISE SPECIFIED - 1. DIMENSIONS ARE IN INCHES 2. TOLERANCES ARE: DIMENSIONS IN INCHES: ANGLES ± 10° DIMS ± .030 SURFACE FINISH: MAX. FINISHES ±		DATE		REV	
APPROVALS	DATE	SCALE	1/1	DWG NO.	347942A.DWG
DESIGN	KAR	7-12-96		SHEET	1-2
CHECKED	EB	7-12-96		PLOTTED	
APPROVED	SL	7-15-96		DWG. NO.	347942

Point-to-Point Wiring Diagram, Sheet 1, 347942A-G



REV	DATE	REVISION	BY
B	2-13-88	(B-7) LEADS 5 & 7C UPDATED. WLS LEAD CONFIGURATION UPDATED [49426]	KAR
C	2-21-87	(GLOBAL) POINT TO POINT CODES UPDATED [51552]	KAR
D	12-1-87	(A-2) "DIGITAL CONTROLLER" WAS "DEC 340" ON SPECTRUM TITLEBLOCK [52692]	KAR

APPROVALS		DATE	SCALE	SHEET
DESIGN	KAR	4-2-89	1/1	2-2
DRAWN	EB	7-12-86		
CHECKED	SL	7-17-88		

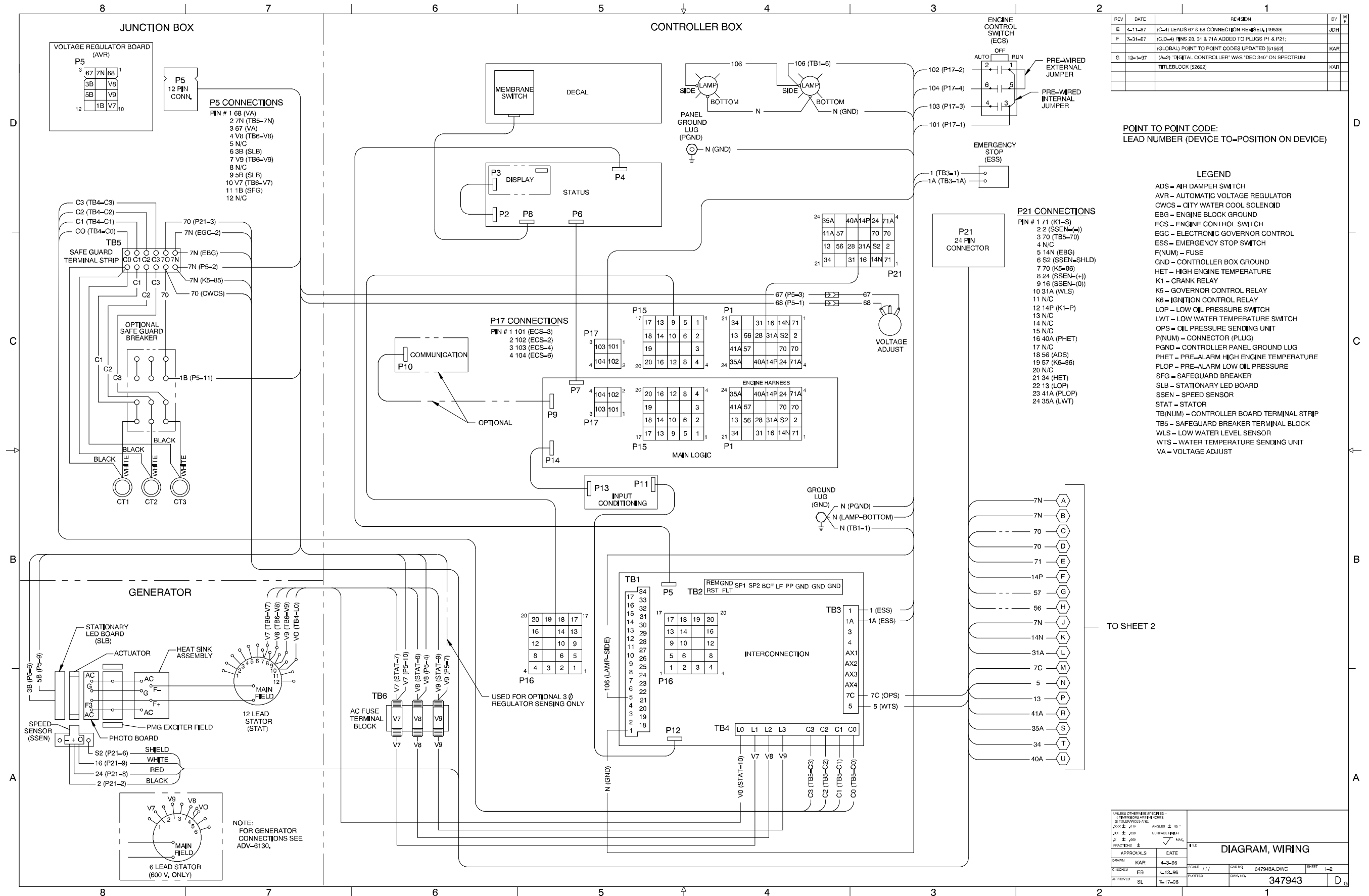
UNLESS OTHERWISE SPECIFIED -  
 1 DIMENSIONS ARE IN INCHES  
 2 TOLERANCES ARE:  
 FRACTIONS ± .010 ANGLES ± 10°  
 DECIMALS ± .000 SURFACE FINISH  
 MAX.  
 FINISHES ±

DIAGRAM, WIRING

347942

Point-to-Point Wiring Diagram, Sheet 2, 347942B-D





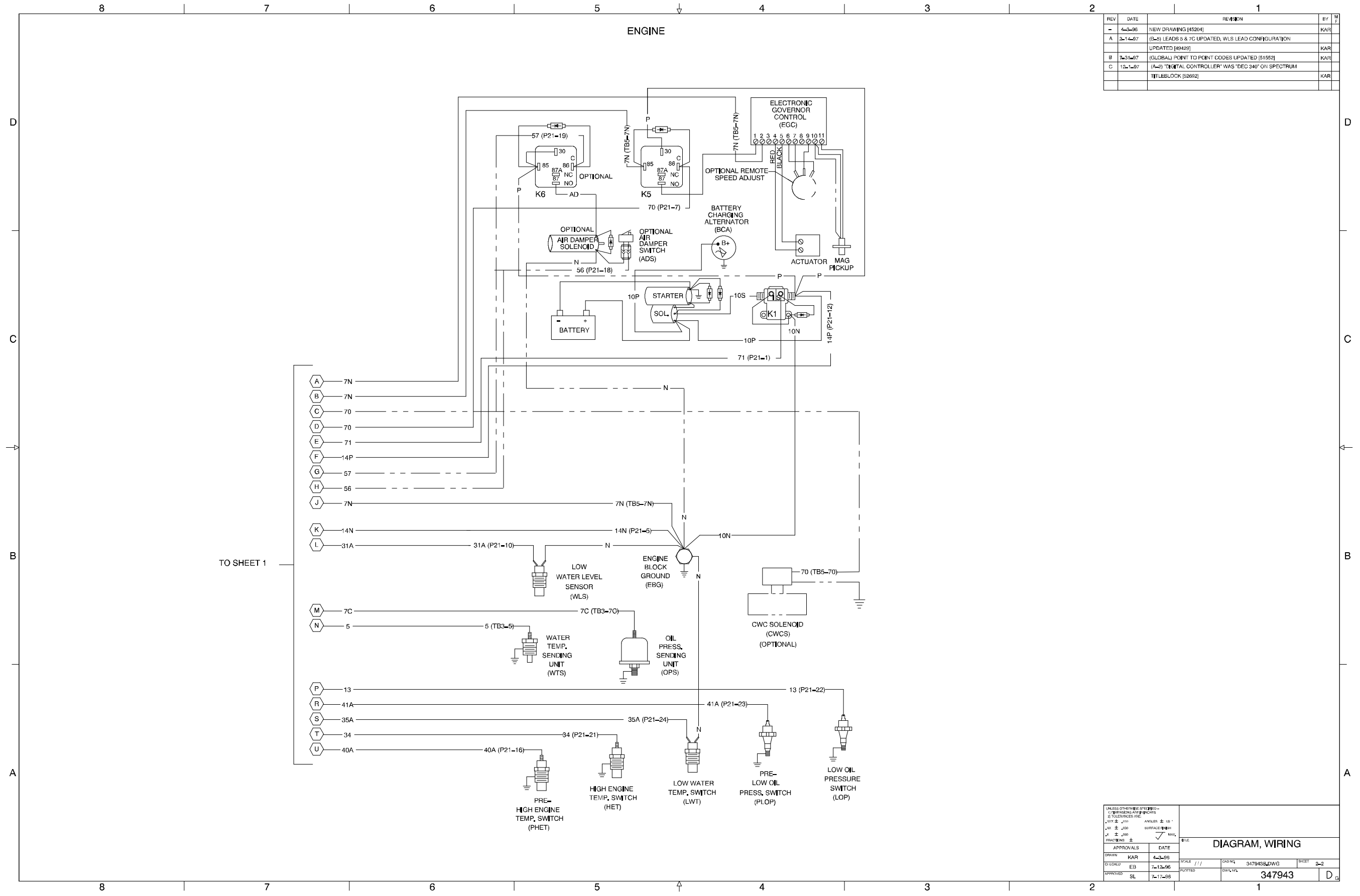
REV	DATE	REVISION	BY	CHK
E	4-11-87	(C-1) LEADS 67 & 68 CONNECTION REVISED, [49538]		JDH
F	7-31-87	(C,D-4) PINS 28, 31 & 71A ADDED TO PLUGS P1 & P21.		KAR
G	12-1-87	(A-2) DIGITAL CONTROLLER WAS DEC 340' ON SPECTRUM		KAR
		TITLE BLOCK [52692]		

POINT TO POINT CODE:  
LEAD NUMBER (DEVICE TO-POSITION ON DEVICE)

- LEGEND**
- ADS - AIR DAMPER SWITCH
  - AVR - AUTOMATIC VOLTAGE REGULATOR
  - CWCS - CITY WATER COOL SOLENOID
  - EBG - ENGINE BLOCK GROUND
  - ECS - ENGINE CONTROL SWITCH
  - EGC - ELECTRONIC GOVERNOR CONTROL
  - ESS - EMERGENCY STOP SWITCH
  - F(NUM) - FUSE
  - GND - CONTROLLER BOX GROUND
  - HET - HIGH ENGINE TEMPERATURE
  - K1 - CRANK RELAY
  - K5 - GOVERNOR CONTROL RELAY
  - K6 - IGNITION CONTROL RELAY
  - LOP - LOW OIL PRESSURE SWITCH
  - LWT - LOW WATER TEMPERATURE SWITCH
  - OPS - OIL PRESSURE SENDING UNIT
  - P(NUM) - CONNECTOR (PLUG)
  - PGND - CONTROLLER PANEL GROUND LUG
  - PHET - PRE-ALARM HIGH ENGINE TEMPERATURE
  - PLOP - PRE-ALARM LOW OIL PRESSURE
  - SFG - SAFEGUARD BREAKER
  - SLB - STATIONARY LED BOARD
  - SSEN - SPEED SENSOR
  - STAT - STATOR
  - TB(NUM) - CONTROLLER BOARD TERMINAL STRIP
  - TBS - SAFEGUARD BREAKER TERMINAL BLOCK
  - WLS - LOW WATER LEVEL SENSOR
  - WTS - WATER TEMPERATURE SENDING UNIT
  - VA - VOLTAGE ADJUST

UNLESS OTHERWISE SPECIFIED - 1. DIMENSIONS ARE IN INCHES 2. TOLERANCES ARE: DIMENSIONS IN INCHES: ANGLES ± 10° FRACTIONS ± .005 SURFACE FINISH: MAX. DECIMALS ± .005		DATE		FILE	
APPROVALS	DATE	SCALE	1/1	DWG NO.	347943A.DWG
DESIGN	KAR	7-12-86		SHEET	1-2
CHECKED	EB	7-12-86		PLOTTED	
APPROVED	SL	7-17-86		DWG. NO.	347943

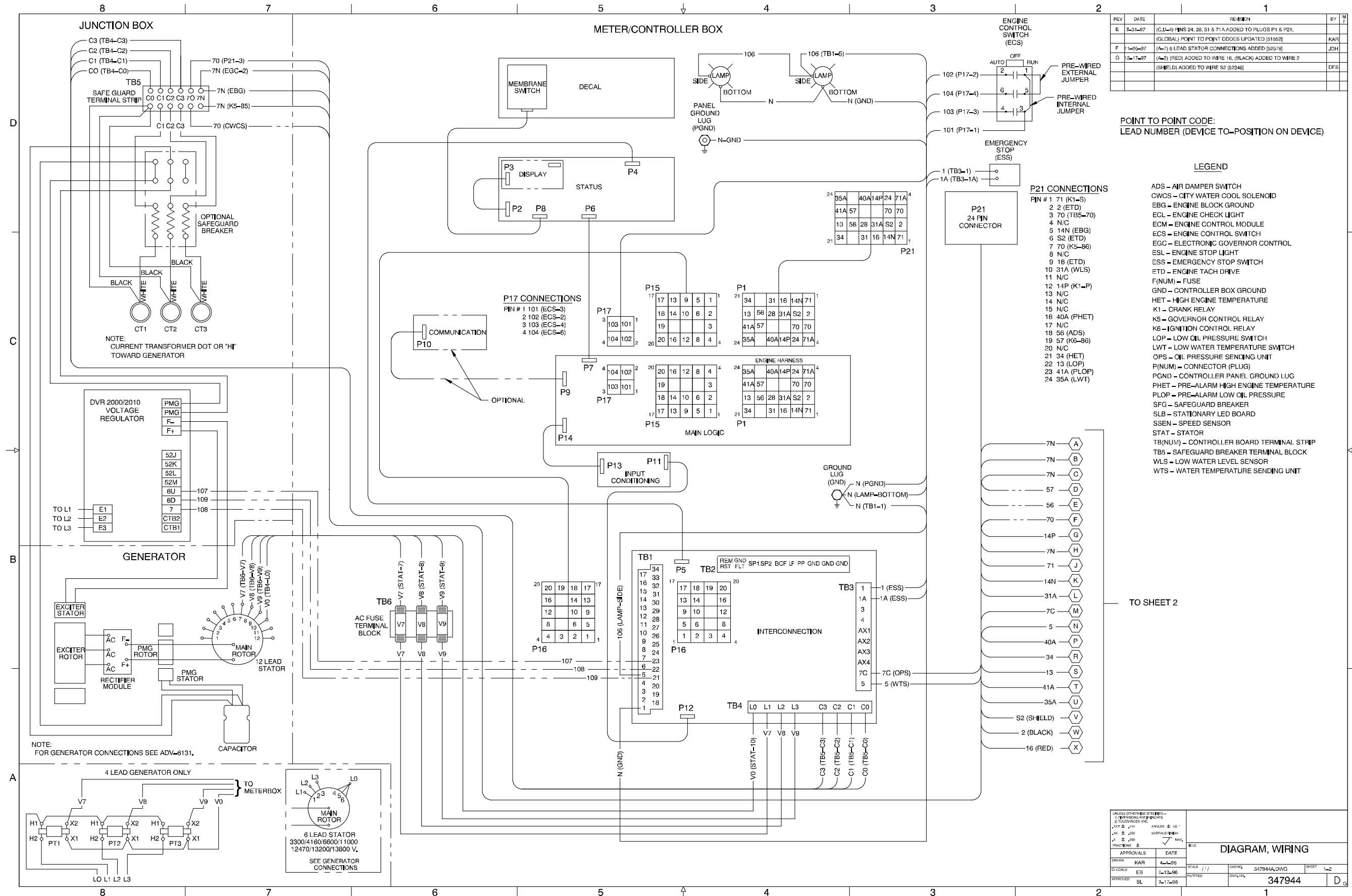
Point-to-Point Wiring Diagram, Sheet 1, 347943A-G



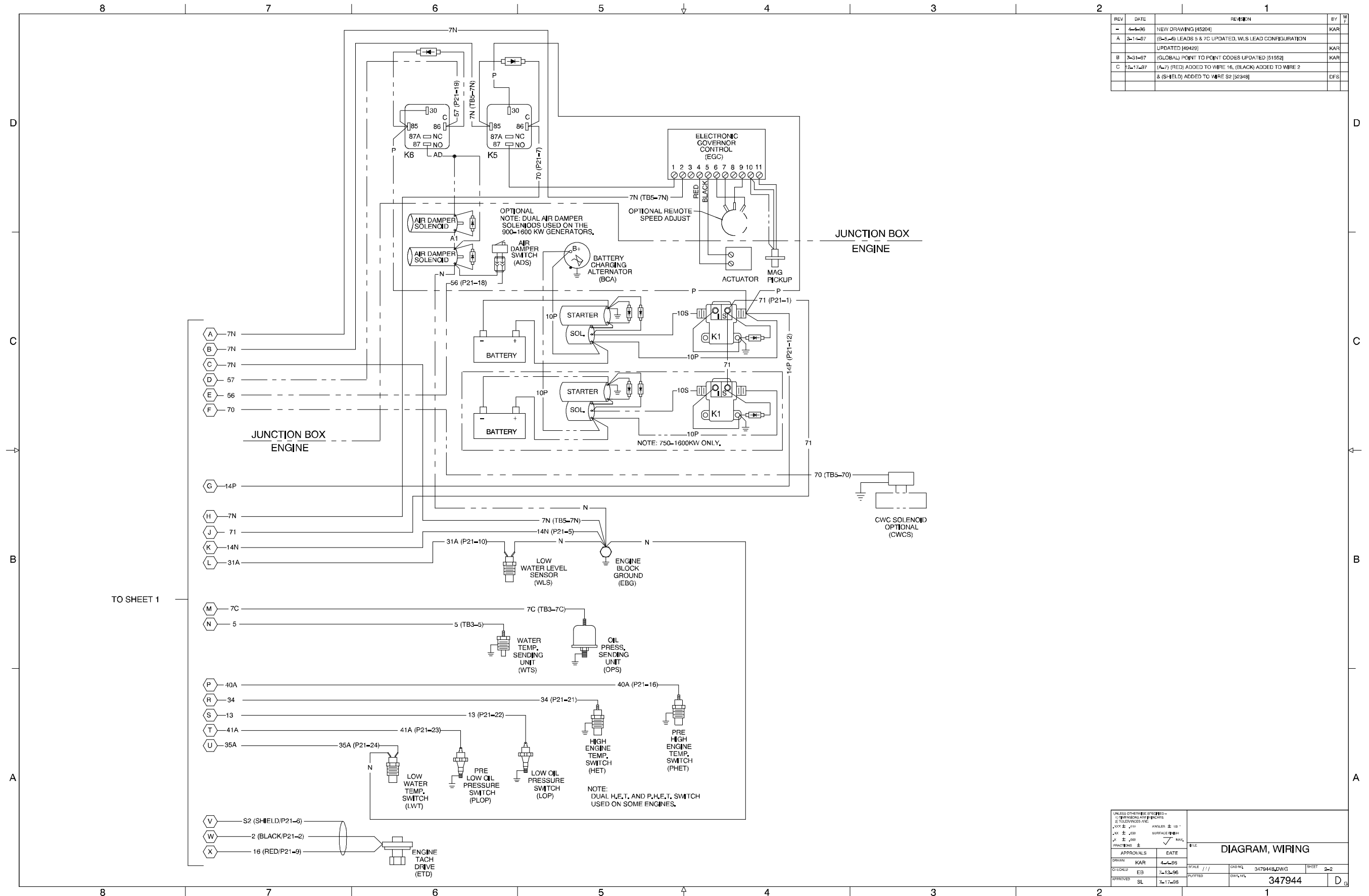
REV	DATE	REVISION	BY
-	4-3-96	NEW DRAWING [45204]	KAR
A	3-14-97	(5-5) LEADS 8 & 7C UPDATED, WLS LEAD CONFIGURATION	KAR
		UPDATED [48428]	KAR
B	7-31-97	(GLOBAL) POINT TO POINT CODES UPDATED [51552]	KAR
C	12-1-97	(A-2) "DIGITAL CONTROLLER" WAS "DEC 340" ON SPECTRUM	KAR
		TITLEBLOCK [52692]	KAR

UNLESS OTHERWISE SPECIFIED - DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± .015 ANGLES ± 10° DECIMALS ± .005 SURFACE FINISH FRACTIONS ± .005 MAX		TITLE	
APPROVALS		DATE	
DRAWN	KAR	DATE	4-3-96
CHECKED	EB	SCALE	1/1
APPROVED	SL	DATE	7-12-96
PART NO.		347943B-DWG	SHEET 2-2
PRINTED		347943	D

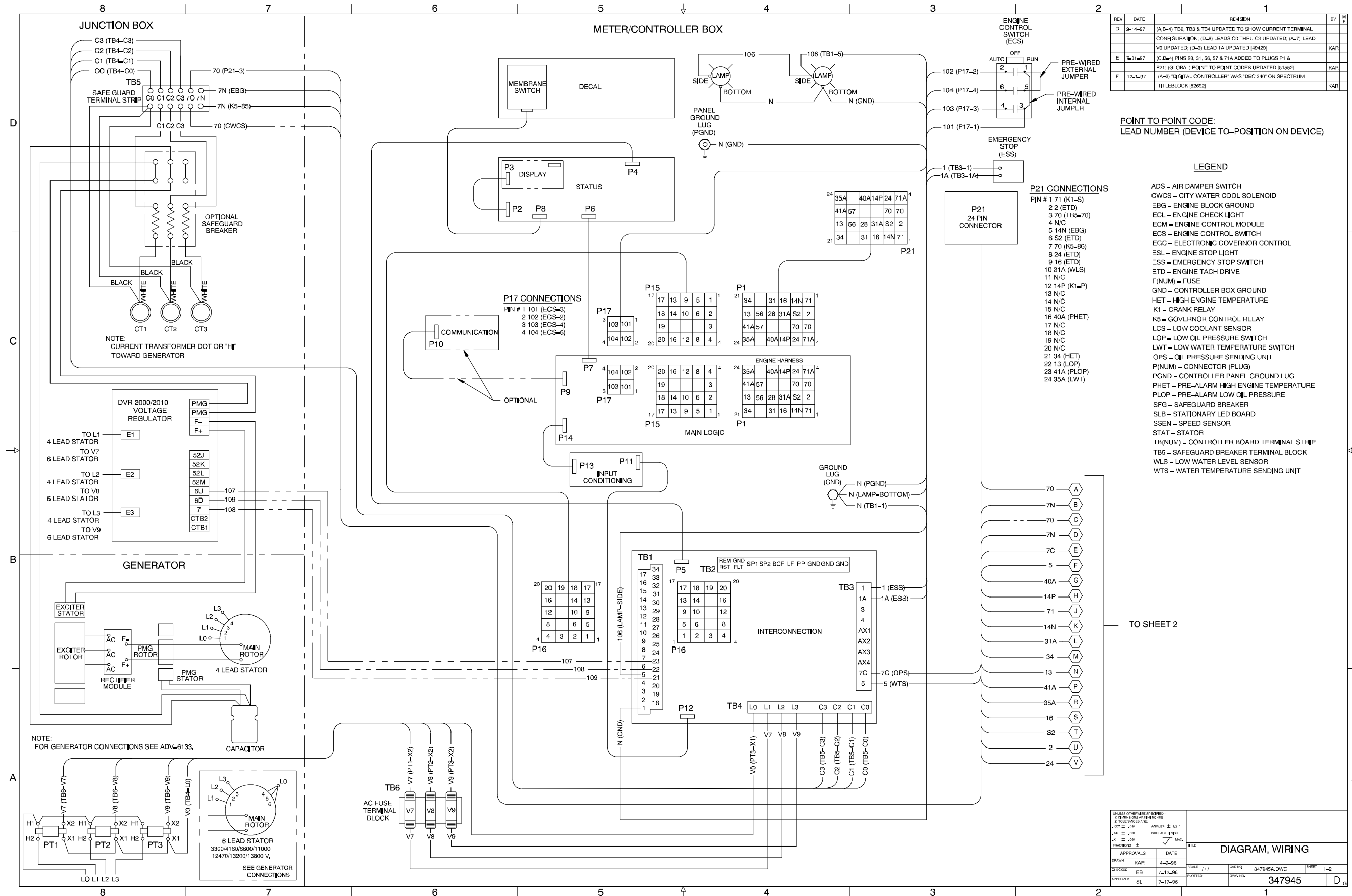
Point-to-Point Wiring Diagram, Sheet 2, 347943B-C



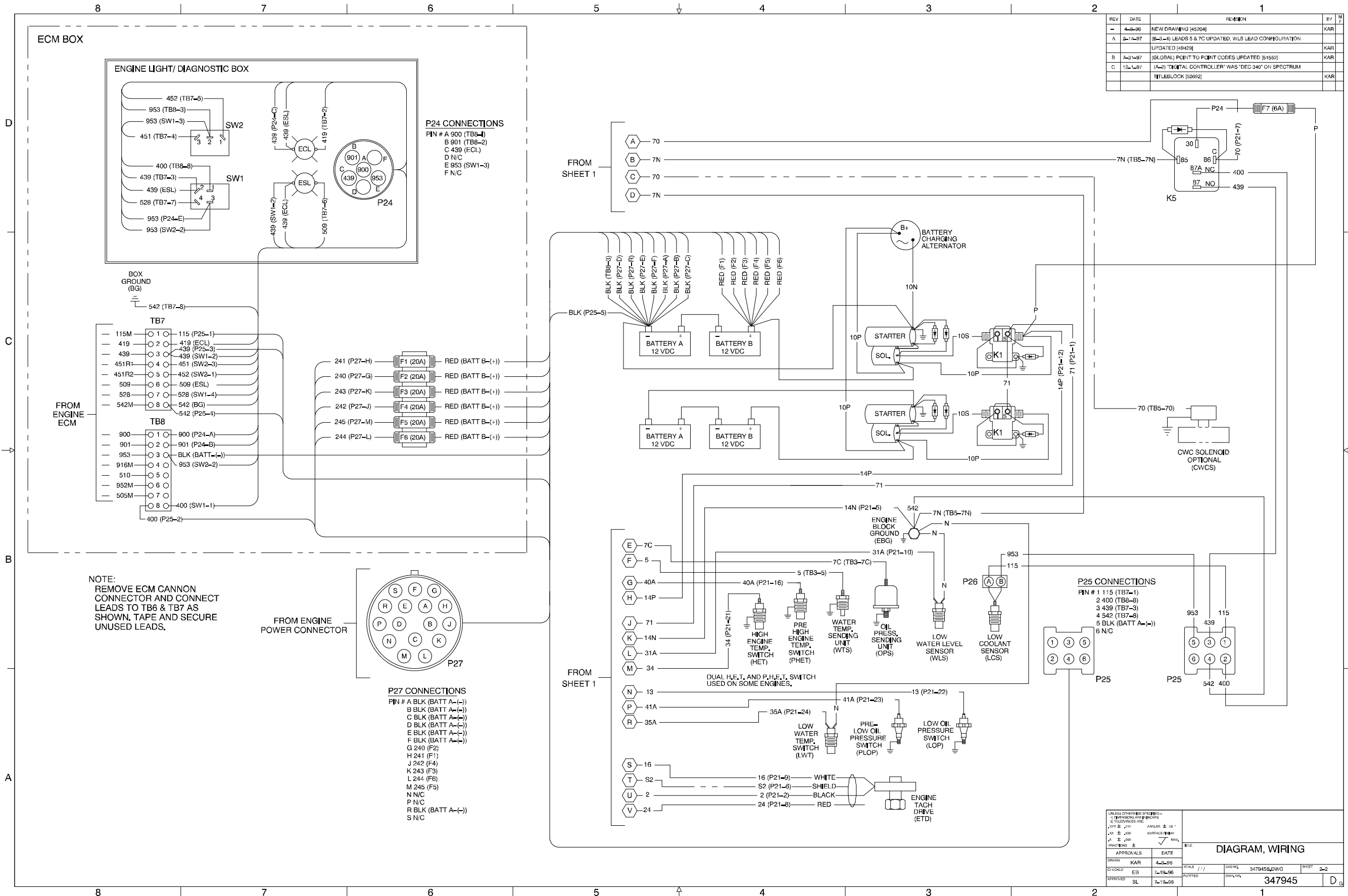
Point-to-Point Wiring Diagram, Sheet 1, 347944-G



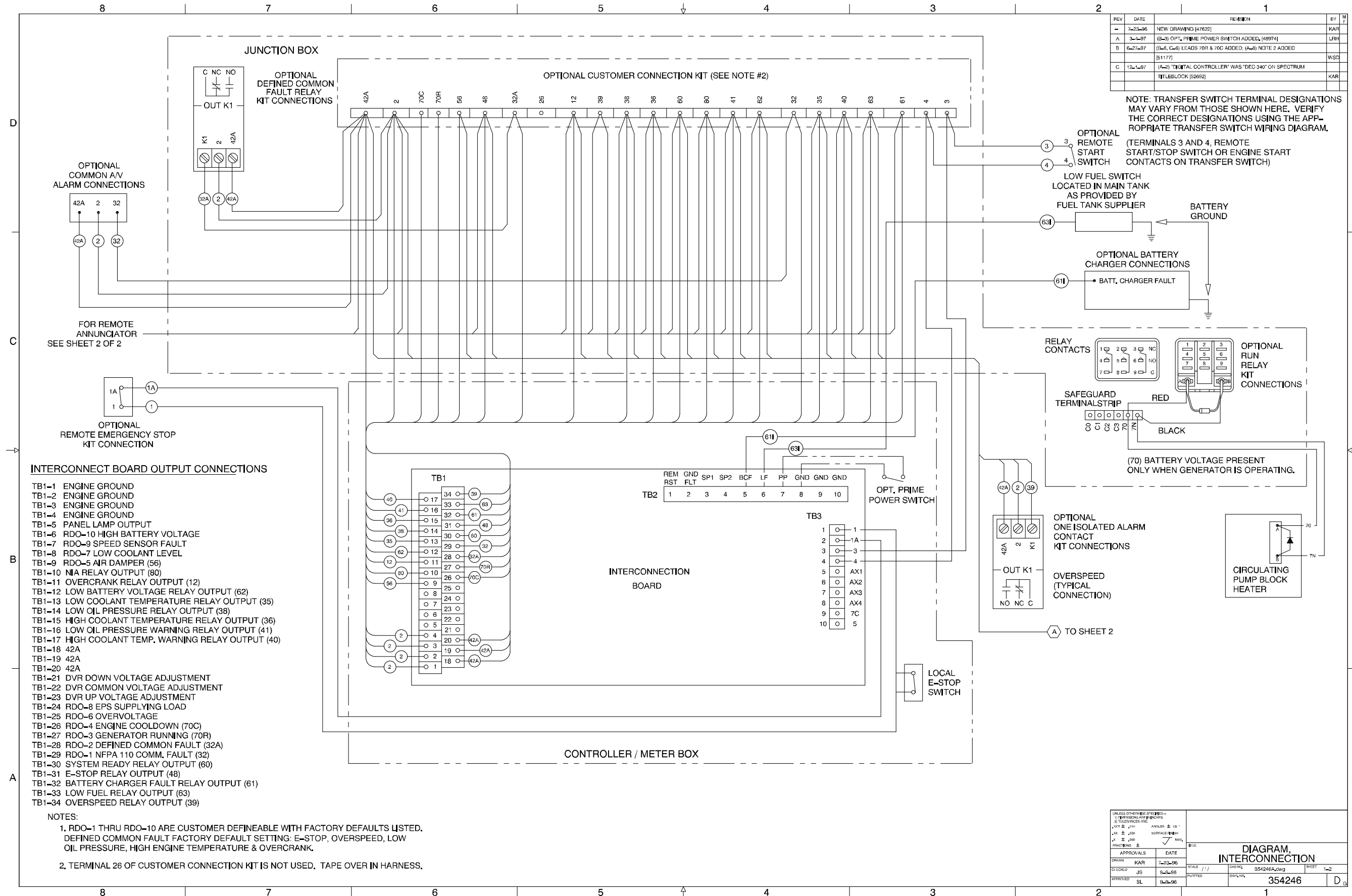
Point-to-Point Wiring Diagram, Sheet 2, 347944B-C



Point-to-Point Wiring Diagram, Sheet 1, 347945-A-F

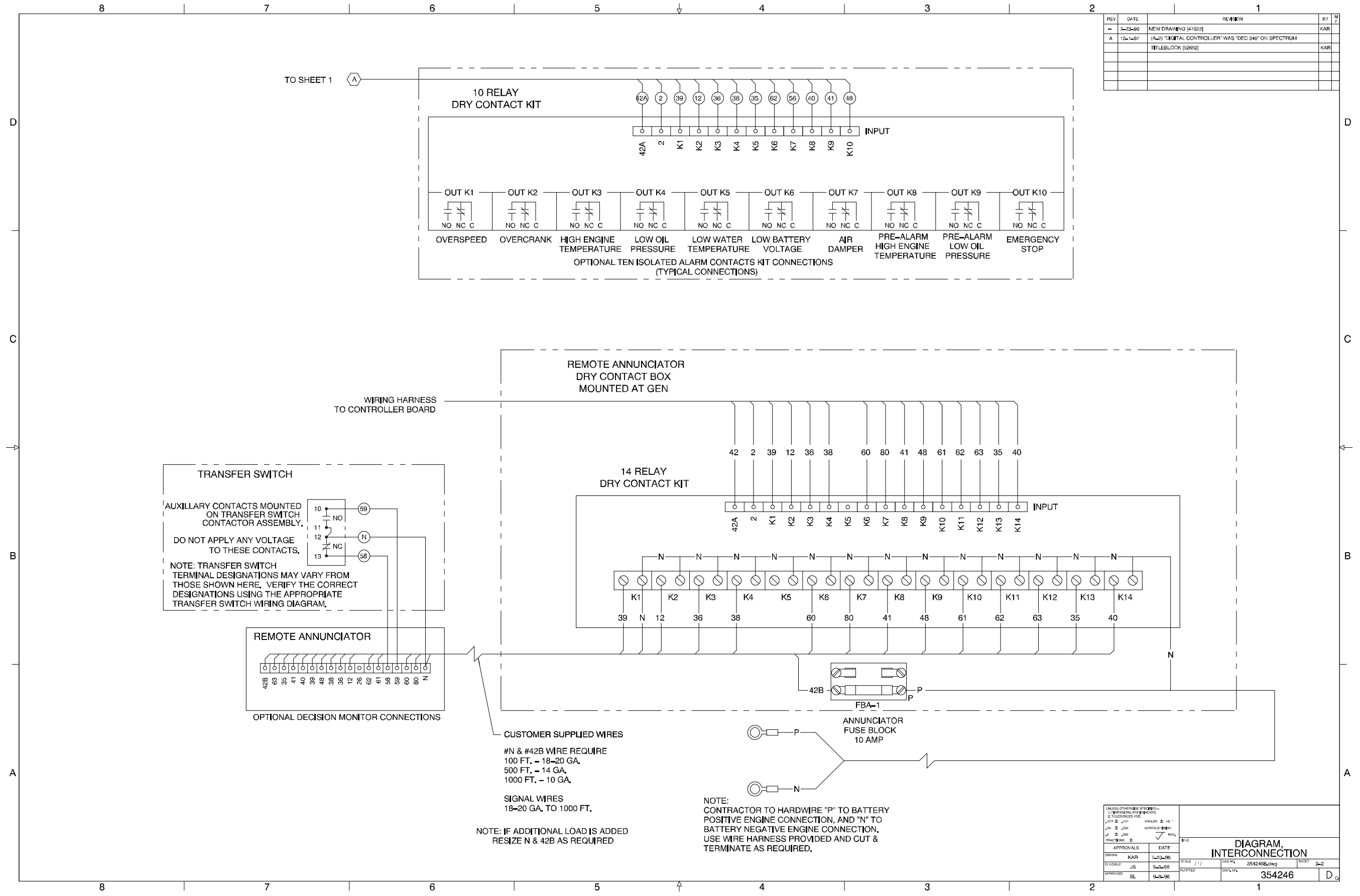


Point-to-Point Wiring Diagram, Sheet 2, 347945B-C



Decision-Maker 340 Accessory Connections, Accessories, 354246A-C

REV	DATE	REVISION	BY	CHK
-	7-23-98	NEW DRAWING [47622]	KAR	
A	12-1-97	(A-2) "DIGITAL CONTROLLER" WAS "DEC 340" ON SPECTRUM	KAR	
		TITLEBLOCK [58692]		



APPROVALS		DATE	SCALE	DWG NO.	SHEET
DRAWN	KAR	7-23-98	1/1	354246B.DWG	2-2
CHECKED	JS	8-5-98			
APPROVED	SL	8-3-98			

UNLESS OTHERWISE SPECIFIED -  
 DIMENSIONS ARE IN INCHES  
 TOLERANCES ARE:  
 FRACTIONS DECIMALS ANGLES ± 10°  
 .XX ± .000 SURFACE FINISH  
 .X ± .005  
 FINISHES ± MAX.

FILE: **DIAGRAM, INTERCONNECTION**

354246

Decision-Maker 340 Accessory Connections, Remote Annunciator Kit, 10-Relay/14-Relay, 354246B-A



**TP-5851 9/98**

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Phone 1-800-544-2444

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