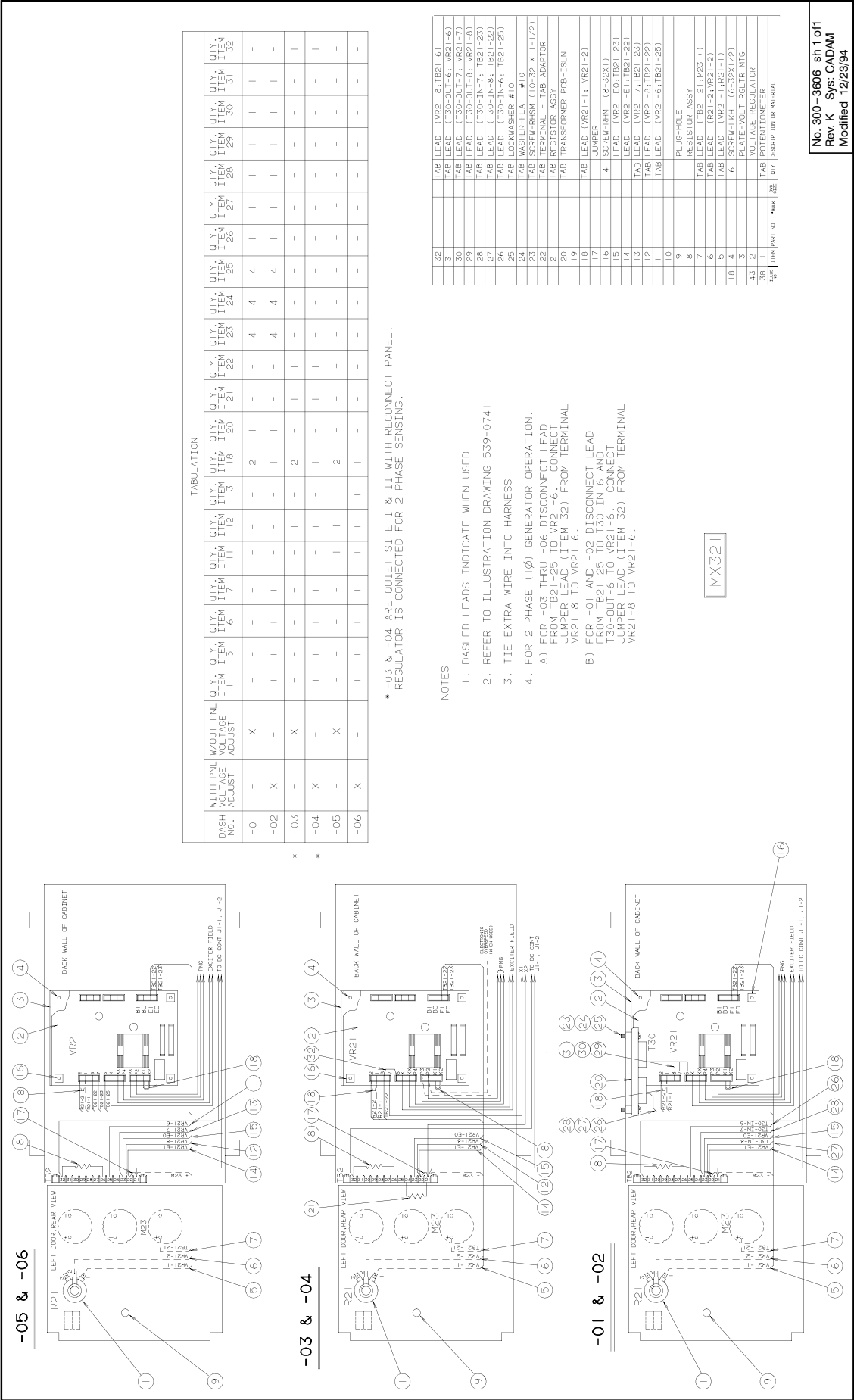


FIGURE 8-19. AC WIRING DIAGRAM/SCHEMATIC (WITH METERS)



NEWAGE ENGINEERS LTD  
STAMFORD, ENGLAND  
REF ID: E000-2321.0  
SERIES: MK321 AVR  
SENSING: 1 OR 3 PH

## SPECIFICATIONS

### SENSING INPUT

VOLTAGE  
FREQUENCY  
PHASE  
WIRE

170-250 VAC MAX  
50 - 60 HZ NOMINAL  
1 OR 3  
2 OR 3

### POWER INPUT (PMG)

VOLTAGE  
CURRENT  
FREQUENCY  
PHASE  
WIRE

170 - 220 VAC  
3 AMPS/PHASE  
100 - 120 HZ NOMINAL  
3  
3

### OUTPUT

VOLTAGE  
CURRENT  
CONTINUOUS  
TRANSIENT

120VDC MAX  
2.7A  
6A FOR 10 SECONDS  
15 OHMS MINIMUM

### FIELD RESISTANCE

REGULATION

+/- 0.5%RMS (W/4% ENGINE GOVERNING)  
0.5% FOR 40°C. CHANGE  
3 SECONDS

### THERMAL DRIFT (AFTER 10 MINUTE WARM UP)

SOFT START RAMP TIME

TYPICAL SYSTEM RESPONSE

FIELD CURRENT TO 90%

MACHINE VOLTS TO 97%

80 MS  
300MS  
+/- 6% WITH 4.7K TRIMMER (1 WATT)

### EXTERNAL VOLTAGE ADJUSTMENT

UNDER FREQUENCY PROTECTION

SET POINT

STATIC SLOPE

DYNAMIC SLOPE

UNIT POWER DISSIPATION

ACCESSORY INPUT

QUADRATURE DROOP MAX. SENSITIVITY (10R BURDEN)

CURRENT LIMIT SENSITIVITY RANGE (10R BURDEN)

OVER VOLTAGE PROTECTION

SET POINT

TIME DELAY - (FIXED)

CIRCUIT BREAKER- TRIP COIL VOLTAGE

CIRCUIT BREAKER- TRIP COIL RESISTANCE

OVER EXCITATION PROTECTION

SET POINT

TIME DELAY - (FIXED)

ENVIRONMENTAL

VIBRATION

HUMIDITY

OPERATING TEMPERATURE

STORAGE TEMPERATURE

20 - 100HZ  
100 - 2K HZ  
0 - 60C  
-40 TO +60C  
-55 TO +80C

No. 305-0823 sh 1 of 1  
Rev. D Sys: CADAM  
Modified 12/23/94

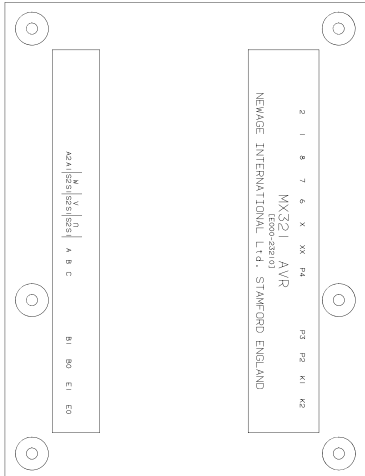
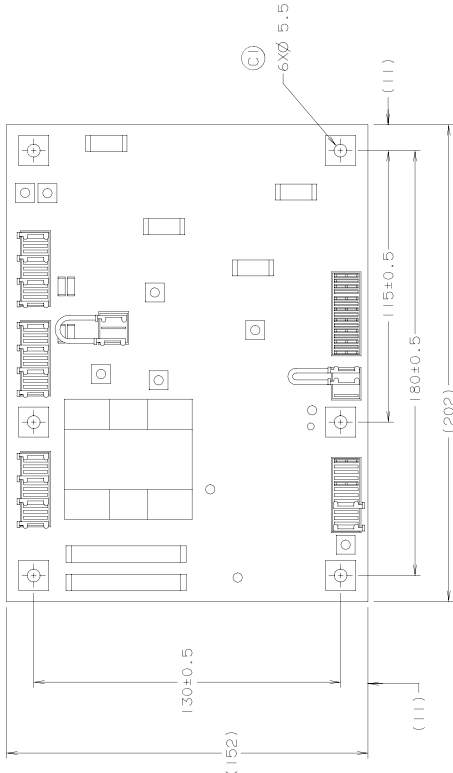


FIGURE 8-21. PMG VOLTAGE REGULATOR TECHNICAL DATA

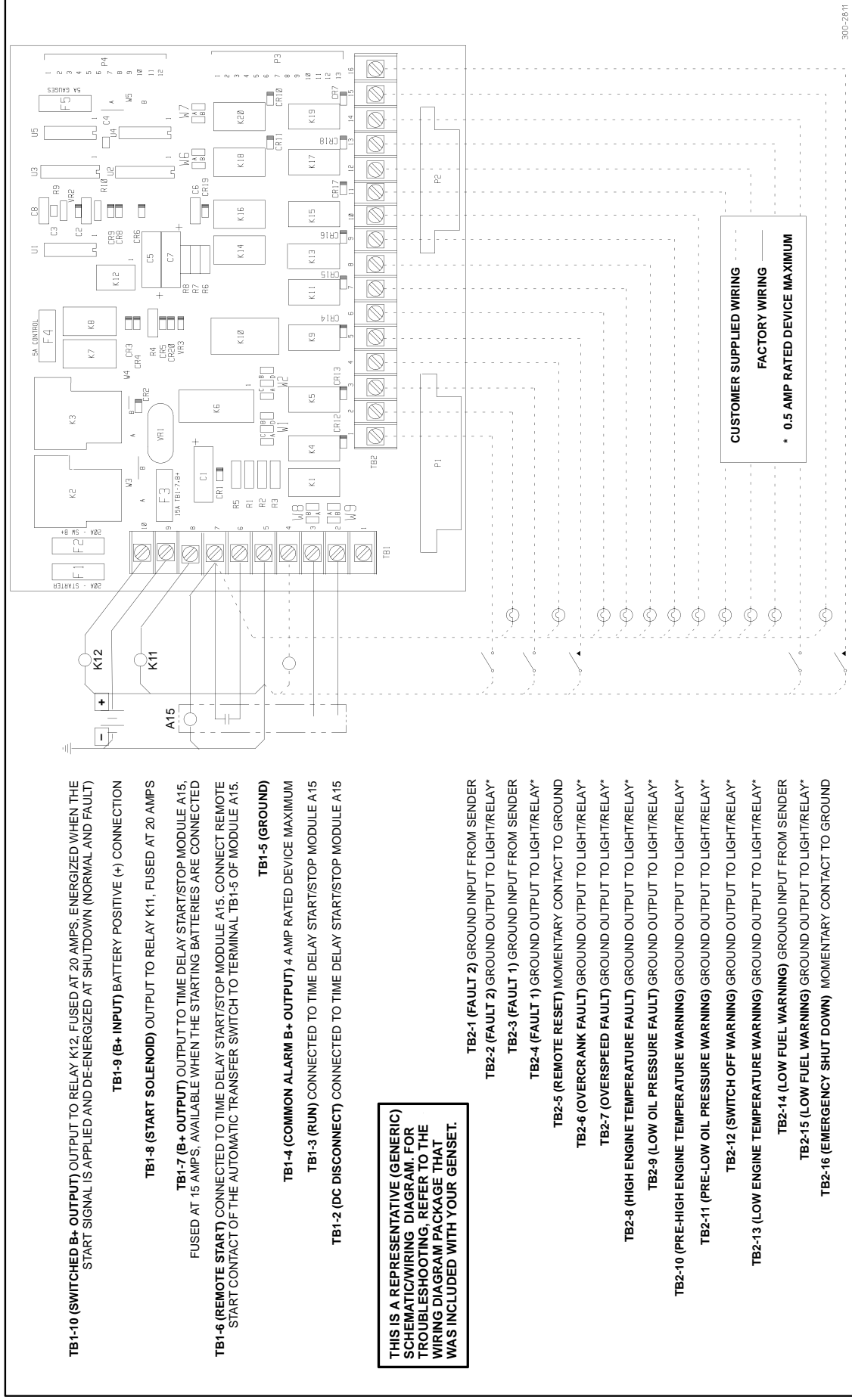


FIGURE 8-22. CUSTOMER CONNECTIONS AT THE ENGINE MONITOR BOARD

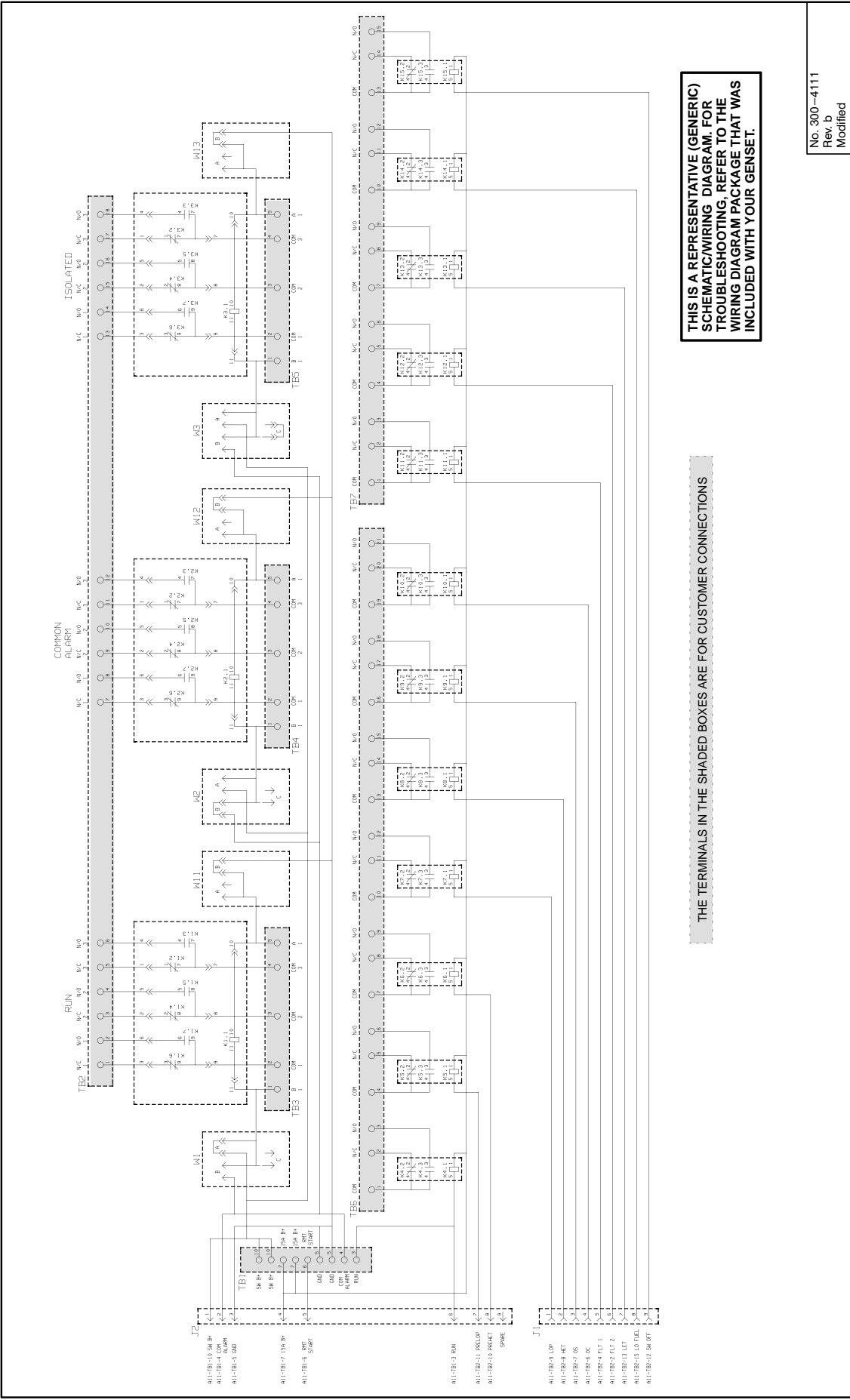
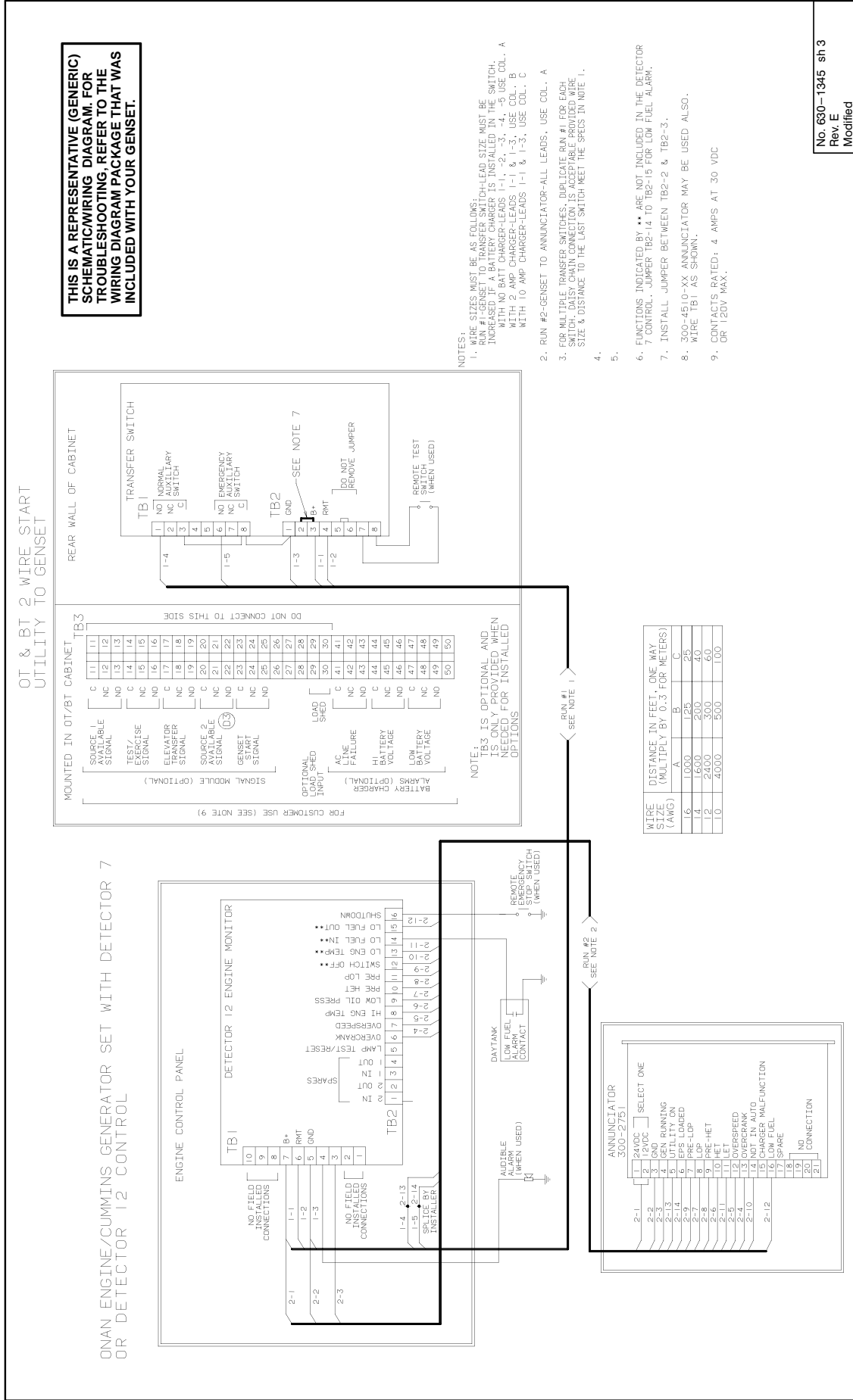


FIGURE 8-23. CUSTOMER CONNECTIONS AT THE AUXILIARY RELAY BOARD

FIGURE 8-24. ACCESSORY INTERCONNECT DIAGRAM



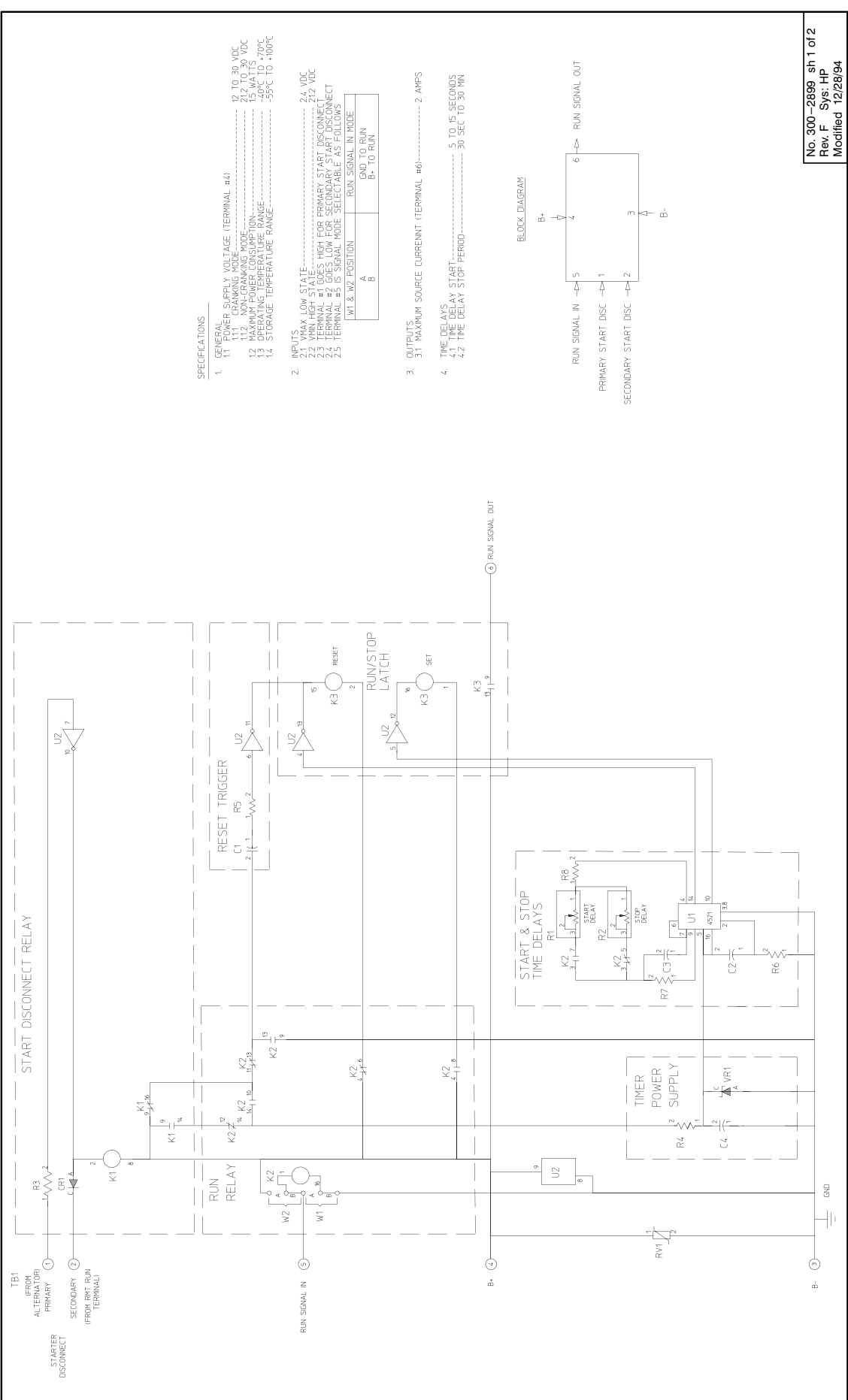
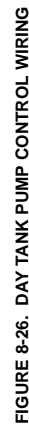
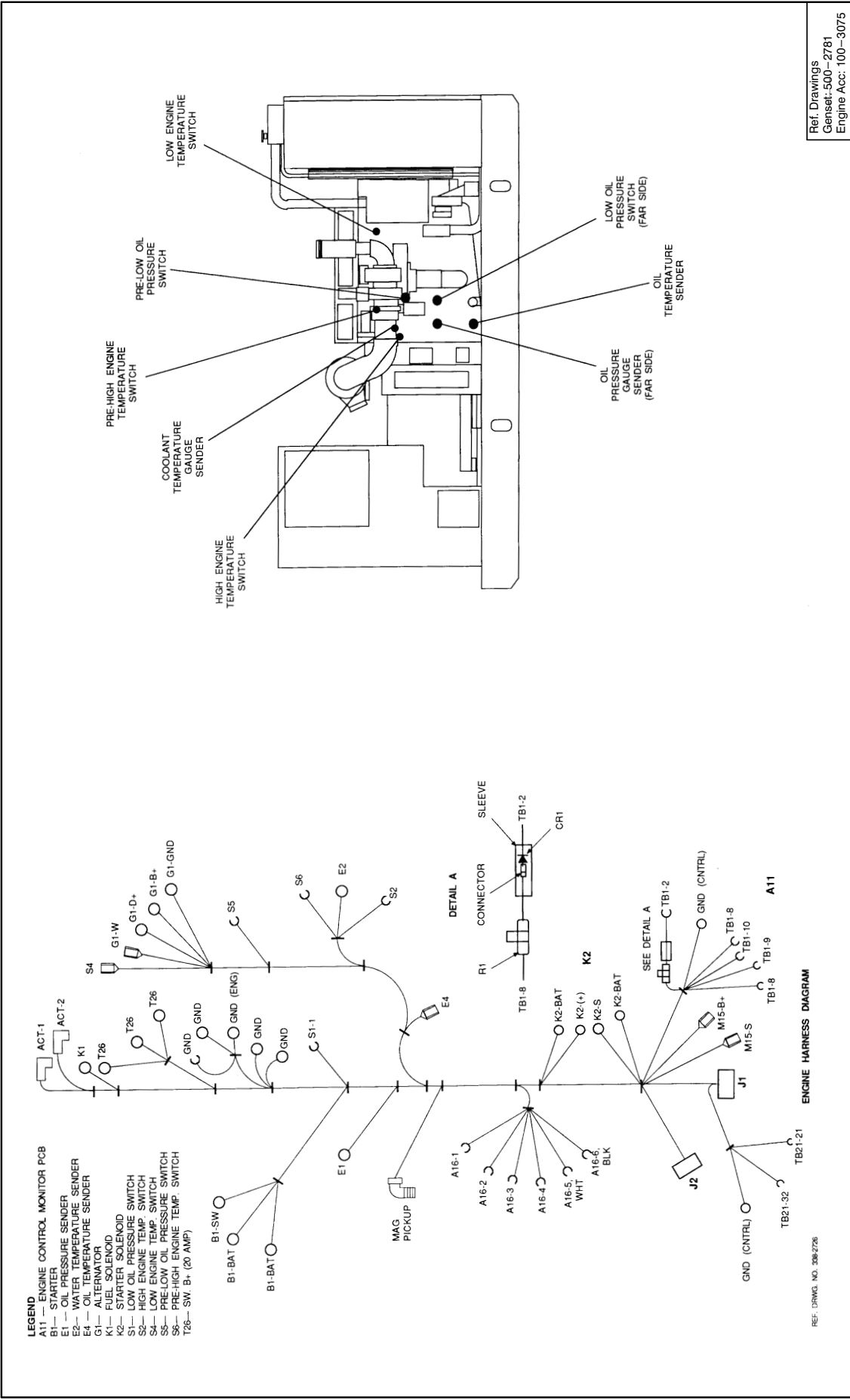


FIGURE 8-25. TIME DELAYED START/STOP MODULE







Ref. Drawings  
Genset: 500-2781  
Engine Acc: 100-3075

FIGURE 8-27. L10 SERIES ENGINE SENSOR LOCATIONS

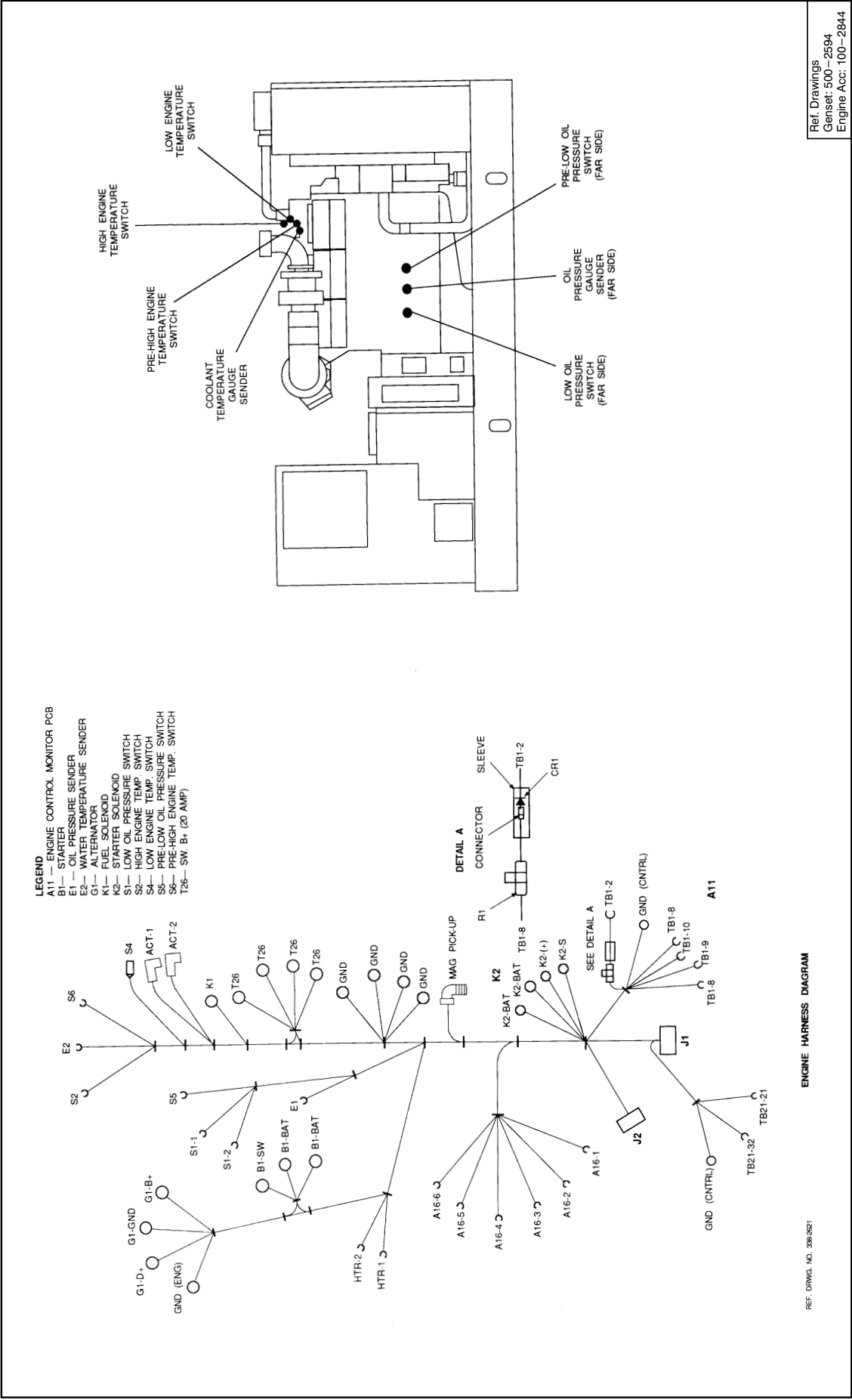


FIGURE 8-28. NT855 SERIES ENGINE SENSOR LOCATIONS

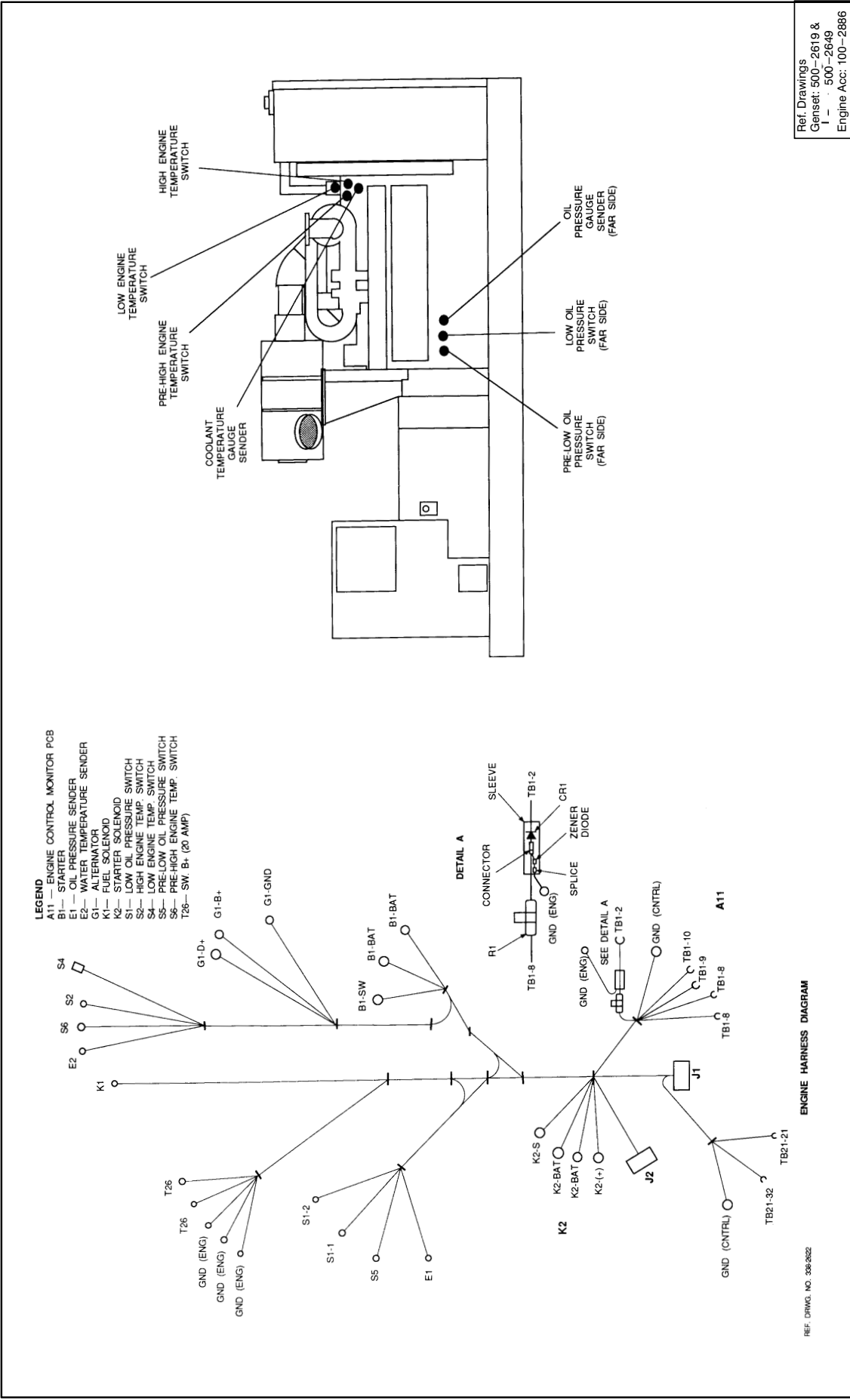
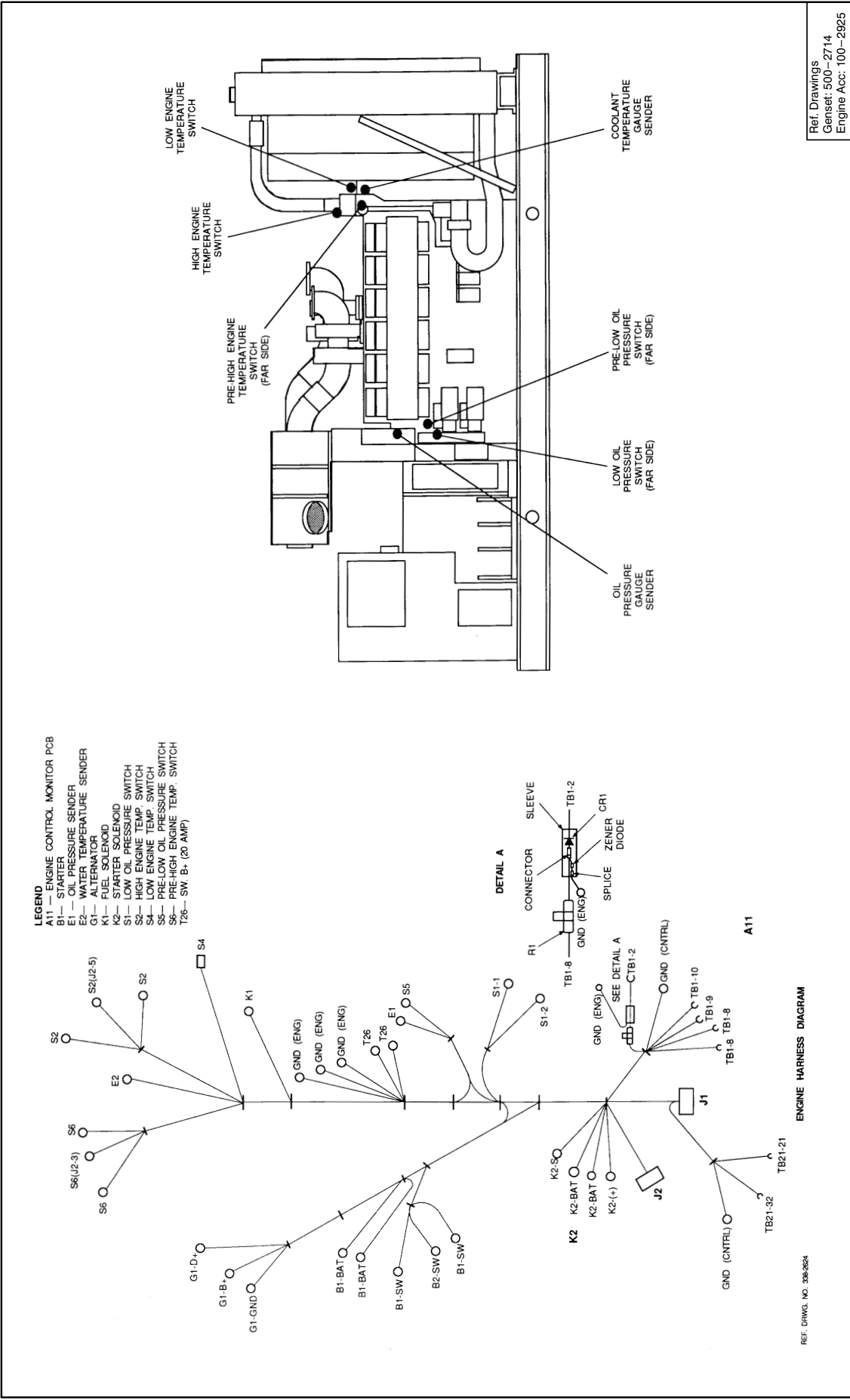


FIGURE 8-29. KT19 SERIES ENGINE SENSOR LOCATIONS



8-31

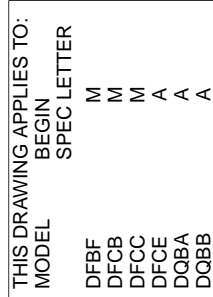


Ref. Drawings  
 Genset: 500-2714  
 Engine Acc: 100-2925

FIGURE 8-31. KT38 SERIES ENGINE SENSOR LOCATIONS







LEAD TABULATION	
FROM STATION	TO STATION
CR1-1	R1-2
S2-2	GND-ENG
CR3-2	A11-TB1-2
R1-1	A11-TB1-8
K4-S	A11-TB1-8
J1-1	TB21-21
J1-2	TB21-32
J1-3	G1-D+
J1-6	GND-CONT
J1-7	E1-4
J1-8	E2
J2-1	S4
J2-2	S5
J2-3	S6
J2-4	S1-1
J2-5	S2-1
S7-S1G	S2-1/S6
G1-B+	P3-A
G1-GND	P3-C
126	P5-B

VR21	VOLTAGE REGULATOR	
S8	LOW FUEL	
S7	LOW COOLANT LEVEL (LCL)	
S6	TERMOSTAT (PRE-HEAT)	
S5	SWITCH-PRESS (PRE-OP)	
S4	SWITCH-LOW ENGINE TEMP (LET)	
S3	SWITCH-OVERSPED (OS)	
S2	TERMOSTAT (HET)	
S1	SWITCH-OIL PRESS (LOP)	
P1	MAG PICKUP	
K4	STARTER PILOT SOLENOID	
K2	PREHEAT SOLENOID (GLOW PLUGS)	
K1	SOLENOID	
HTR	ENGINE HEATER	
G1	ALTERNATOR	
E7	EXH TEMP (RIGHT)	
E6	EXH TEMP (LEFT)	
E5	TACHOMETER	
E4	SENDER-OIL TEMP	
E3	SENDER-WATER TEMP (RIGHT)	
E2	SENDER-WATER TEMP (LEFT)	
E1	SENDER-OIL PRESSURE	
B1	BATTERY-STORAGE	
B1	STARTER & SOLENOID	
A12	GOVERNOR	

No. 338-3343  
Rev. C Sys: Revisio  
Modified 4/17/97



**Cummins Power Generation**  
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