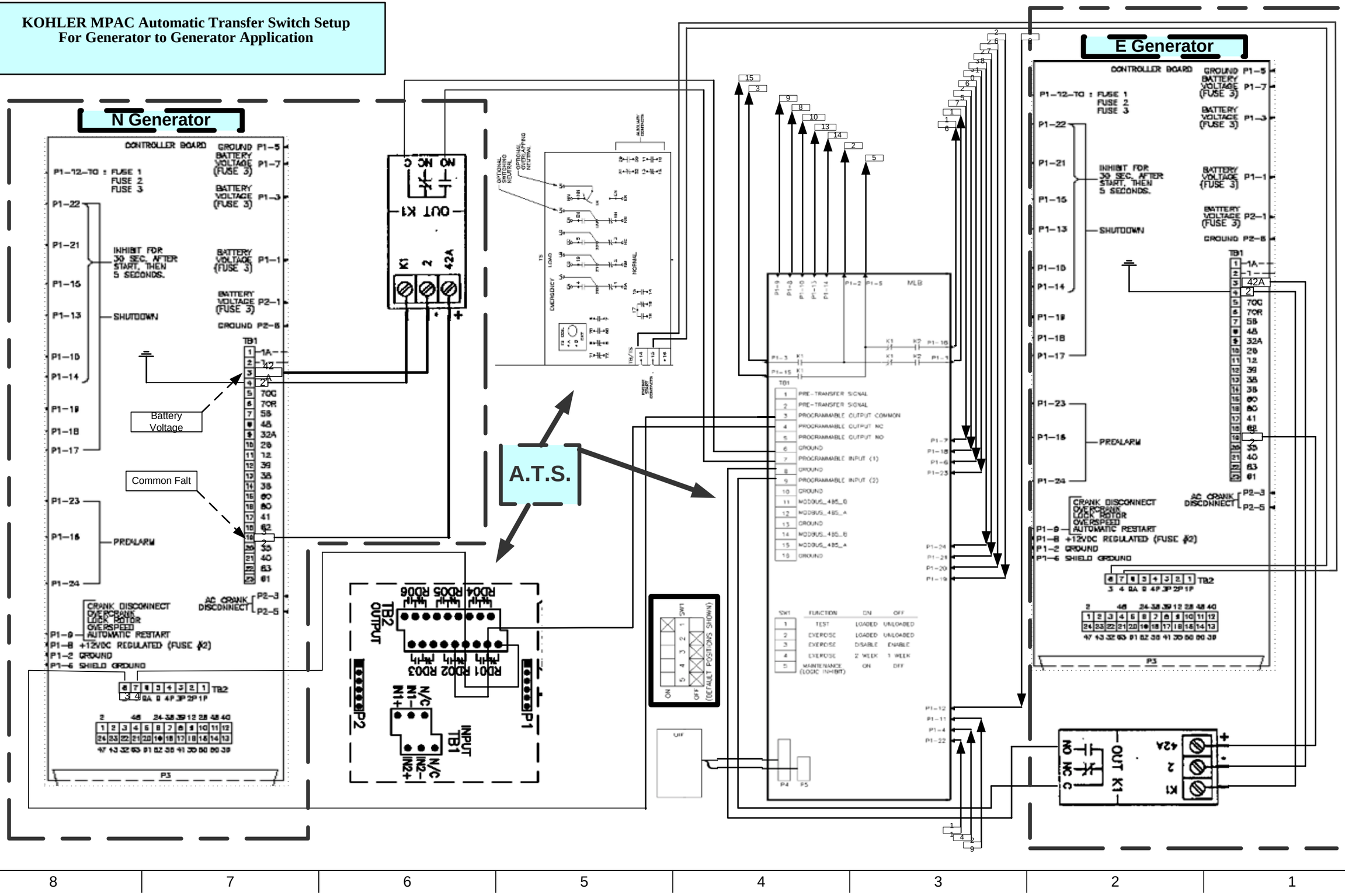
KOHLER MPAC Automatic Transfer Switch Setup
For Generator to Generator Application

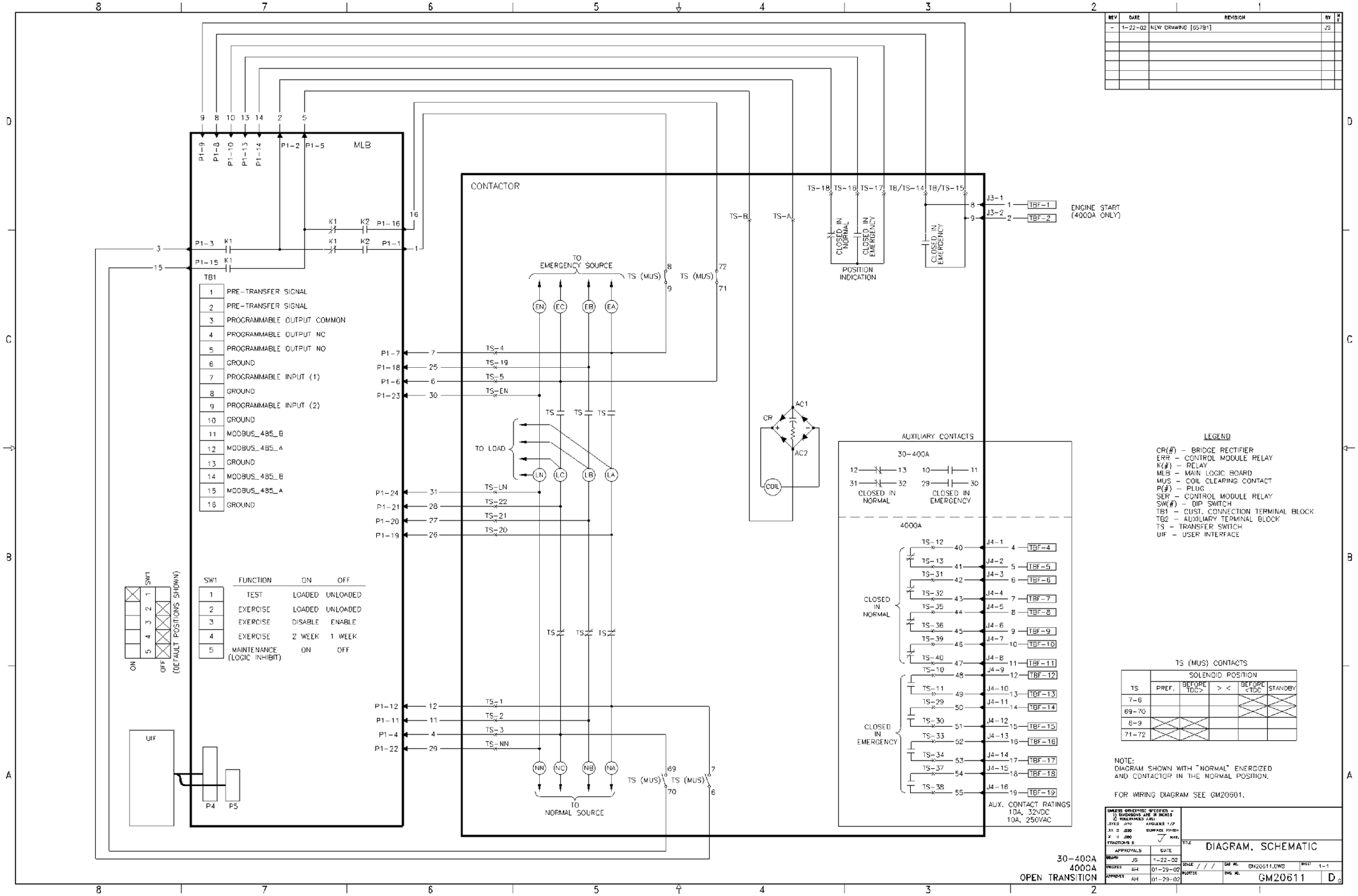
1. Connect PC to ATS via null modem cable or RS485
2. Energize ATS
3. Start the set up program by clicking on the *start* button on the lower left corner of the PC and selecting *programs, setup program, MPAC 1000 setup program*
4. Enter user name (ATS) and password (T340) **these are case sensitive**
5. Go to connection toolbar and scroll down to *connect*, click on it check that the icon in the lower left corner of the PC screen shows that the PC is connected to the ATS controller
6. Go to windows toolbar and select *new window*, select *date/time*, double click date and set date and time
7. Go to windows toolbar and select *new window*, *source info,* double click *source info* screen, check to make sure system voltage for normal and emergency is correct, check to insure phase rotation is correct (generator must be running to check phase rotation) phase rotation **must match for both generators** (change phase A and C to change phase rotation) **CAUTION: DO NOT CONNECT GENERATORS TO THE LOAD UNTIL PHASE ROTATION AND SYSTEM VOLTAGE IS CORRECT OR DAMAGE TO EQUIPMENT WILL OCCUR!**
8. Go to windows toolbar and select *new window*, *system summary,* double click window,
9. Set mode of operation to generator to generator
    A) Leave transition mode as *open*
    B) Deselect *peak shave*
    C) Enable *in phase* monitor and set to 5 deg. Leading. Press OK to save
10. Go to windows toolbar and select *new window*, *programmable input / output*, double click window
    A) Change *main logic board terminal input strip # 1* to *remote common fault* (common fault for generator N)
    B) Change *main logic board terminal input strip # 2* to *remote common fault* (common fault for generator E)
    C) Change *main logic board programmable output* to *start source N generator*
    D) Set *input/output modules output # 1* to *standby source available*
    E) Set *input/output modules output # 2* to *exerciser started*
    F) Click OK to save
11. Go to windows toolbar and select *new window*, *system info* and enter designation, location, branch description, load description per company requirements

KOHLER MPAC ATS
Generator-to-Generator Wiring Instructions

1. Generator “N” start terminals are TB2 3 and 4 (generator “N” is connected to the normal source of the ATS) the start terminals are located in the generator controller (TB2)
2. Connect generator “N” start wire # 3 to the ATS TB1 terminal 3 (TB1 is located on the left side of the ATS controller)
3. Connect ATS TB1 terminal 4 to RDO 1 Common terminal (located on the I/O module board)
4. Install a jumper wire from RDO 1 Common terminal to RDO 2 Common terminal
5. Install a jumper wire from RDO 1 Normally Closed terminal to RDO 2 Normally Closed terminal
6. Install a wire from RDO 2 Normally Closed terminal to generator “N” Start terminal 4
7. Install 2 wires from generator “N”, common fault relay (located in the black box behind the generator controller) terminals “C” and “NO” to the ATS TB1 programmable input 1 (terminals 6 & 7)
8. Connect generator “E” start wire # 3 to the ATS start terminal 15 (located on the lower left side of the ATS contactor) “look for red label marked as such”
9. Connect generator “E” start wire # 4 to the ATS start terminal 14 (located on the lower left side of the ATS contactor) “look for red label marked as such”
10. Install 2 wires from the generator “E” common fault relay (located in the black box behind the generator controller) to the ATS TB1 programmable input 2 (terminals 8 & 9)

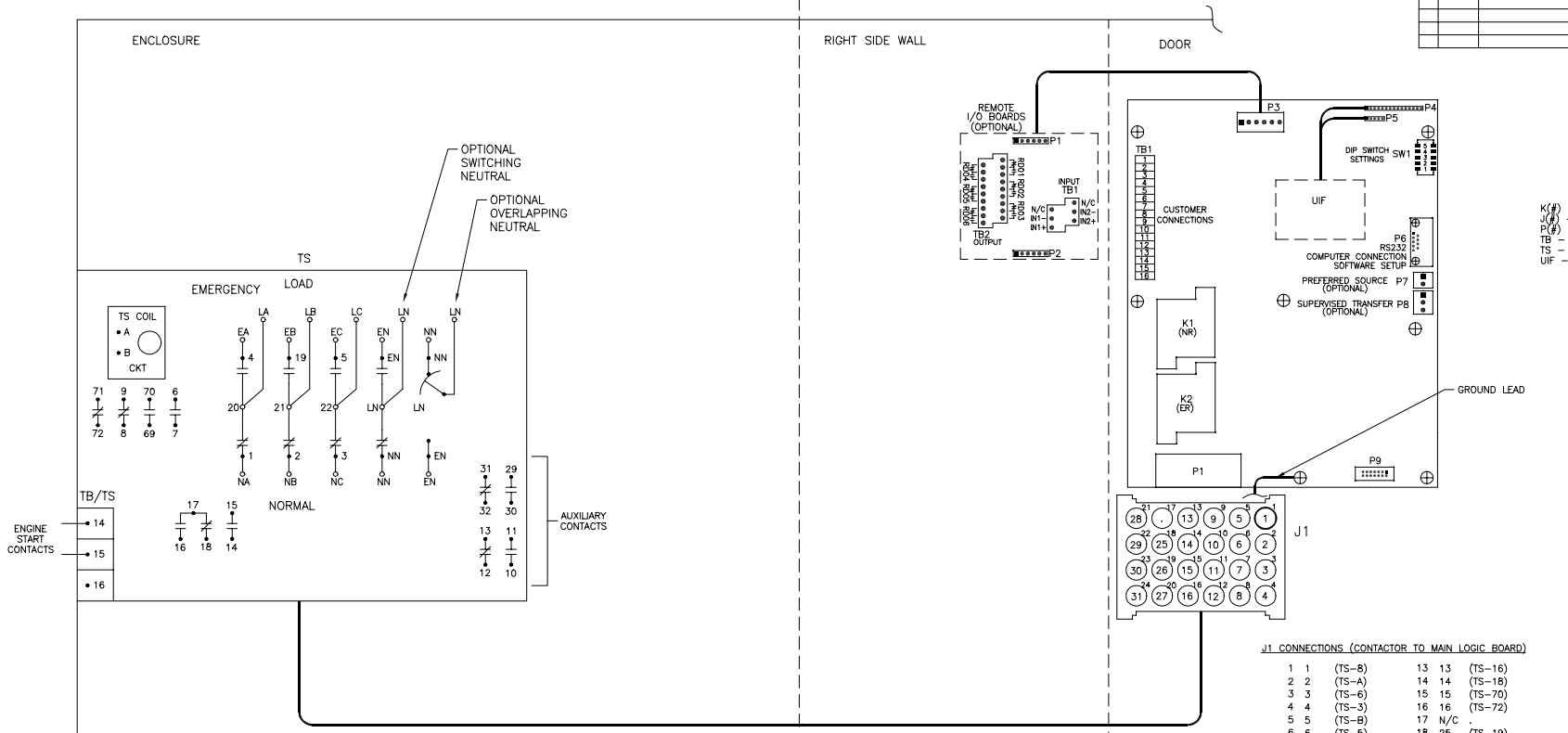
KOHLER MPAC Automatic Transfer Switch Setup
For Generator to Generator Application





Schematic Diagram, Standard, Open Transition, 30-400A and 4000A, GM20611

REV	DATE	REVISION	BY
–	7-26-01	NEW DRAWING [65781]	JS



LEGEND

K(#) – RELAY
J(#) – CONNECTOR
P(#) – PLUG
TB – TERMINAL BLOCK
TS – TRANSFER SWITCH
UIF – USER INTERFACE

J1 CONNECTIONS (CONTACTOR TO MAIN LOGIC BOARD)

1	1	(TS–8)	13	13	(TS–16)
2	2	(TS–A)	14	14	(TS–18)
3	3	(TS–6)	15	15	(TS–70)
4	4	(TS–3)	16	16	(TS–72)
5	5	(TS–B)	17	N/C	.
6	6	(TS–5)	18	25	(TS–19)
7	7	(TS–4)	19	26	(TS–20)
8	8	(TB/TS–14)	20	27	(TS–21)
9	9	(TB/TS–15)	21	28	(TS–22)
10	10	(TS–17)	22	29	(TS–NN)
11	11	(TS–2)	23	30	(TS–EN)
12	12	(TS–1)	24	31	(TS–LN)

FOR SCHEMATIC DIAGRAM SEE GM20611

MODEL K
OPEN TRANSITION
30–150A

UNLESS OTHERWISE SPECIFIED: 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010, .XX ± .030, .X ± .060, FRACTIONS ± ANGLES ± 1/2°, SURFACE FINISH MAX.

APPROVALS		DATE
DRAWN	JS	7-26-01
CHECKED	AH	01-29-02
APPROVED	AH	01-29-02

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POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
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TITLE: DIAGRAM, WIRING

SCALE: / / / | CAD NO.: GM20601.DWG | SHEET: 1–1
PLOTTED | DWG. NO.: GM20601 | D

COMMON FAULT RELAY (Optional) DEC 3+

This board provides a dry set of contacts to activate customer supplied remote alarms, shunt trips, indicators or other accessory devices if any one of various preselected fault conditions occur.

The relay will energize if the generator set is running and an input signal common to the generator set ground potential (-) is directed to the K1 terminal. Once energized the relay will remain latched until the system is reset by the main controller switch.

A common signal will be provided from terminal **32A** if any of the following five faults occur:

36 HIGH ENGINE TEMP.
38 LOW OIL PRESSURE
39 OVERSPEED
26 AUXILLIARY IND.
48 EMERGENCY STOP

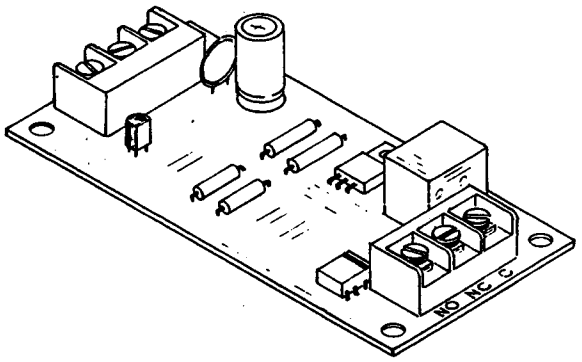
A common signal will be provided from terminal **32** if any of the following occur.

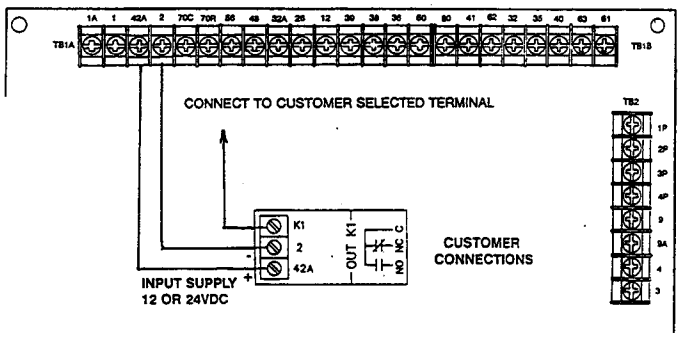
36 HIGH ENGINE TEMP
38 LOW OIL PRESSURE
39 OVERSPEED
26 AUXILLIARY
12 OVERCRANK
35 LOW WATER TEMP.
40 PRE-HIGH ENG. TEMP.
41 PRE-LOW OIL PRESSURE
56 AIR DAMPER

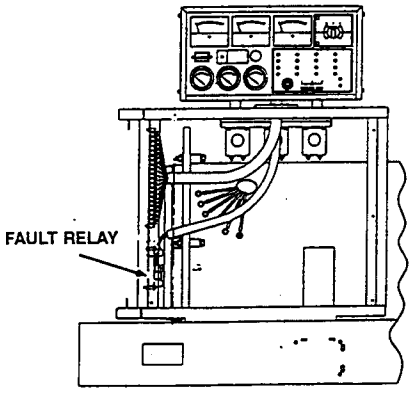
Any of the above can be selected as a single monitored condition if desired.

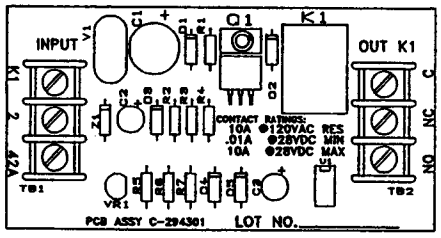
Maximum resistive loads up to 10A @ 120vac can be applied to the output terminals. The relay contacts are gold flashed to allow use of low current draw devices. (.01A @ 28vdc min.)

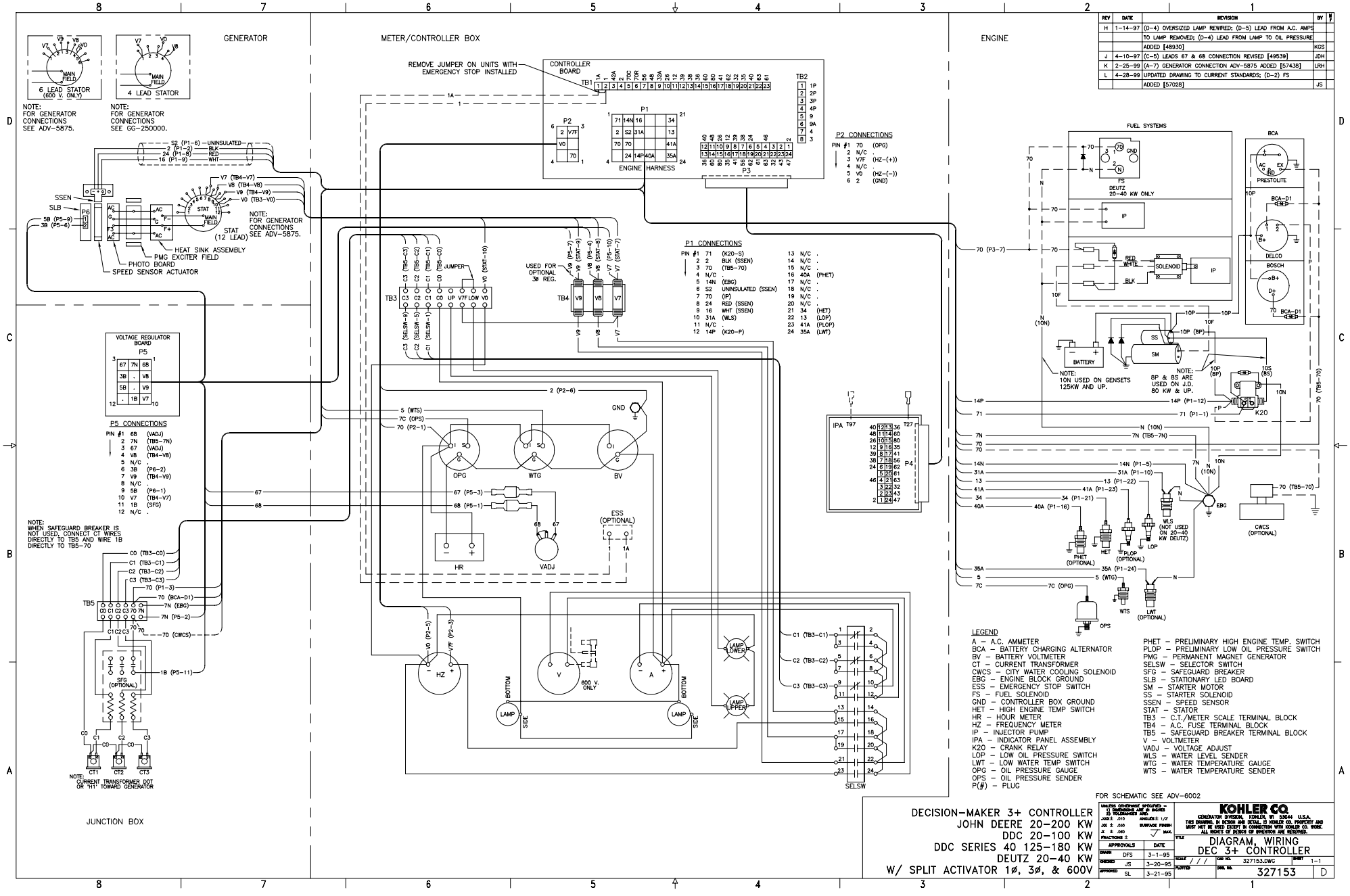
Input power supply 42A and 2 is to the relay coil only and not intended to power customer supplied indicator loads.











REV	DATE	REVISION	BY
H	1-14-97	(D-4) OVERSIZED LAMP REWIRED; (D-5) LEAD FROM A.C. AMPS	
		TO LAMP REMOVED; (D-4) LEAD FROM LAMP TO OIL PRESSURE	
		ADDED [48930]	KGS
J	4-10-97	(C-5) LEADS 67 & 68 CONNECTION REVISED [49539]	JDH
K	2-25-99	(A-7) GENERATOR CONNECTION ADV-5875 ADDED [57438]	LRH
L	4-28-99	UPDATED DRAWING TO CURRENT STANDARDS; (D-2) FS	
		ADDED [57028]	JS

APPROVALS		DATE
DRAWN	DFS	3-1-95
CHECKED	JS	3-20-95
APPROVED	SL	3-21-95

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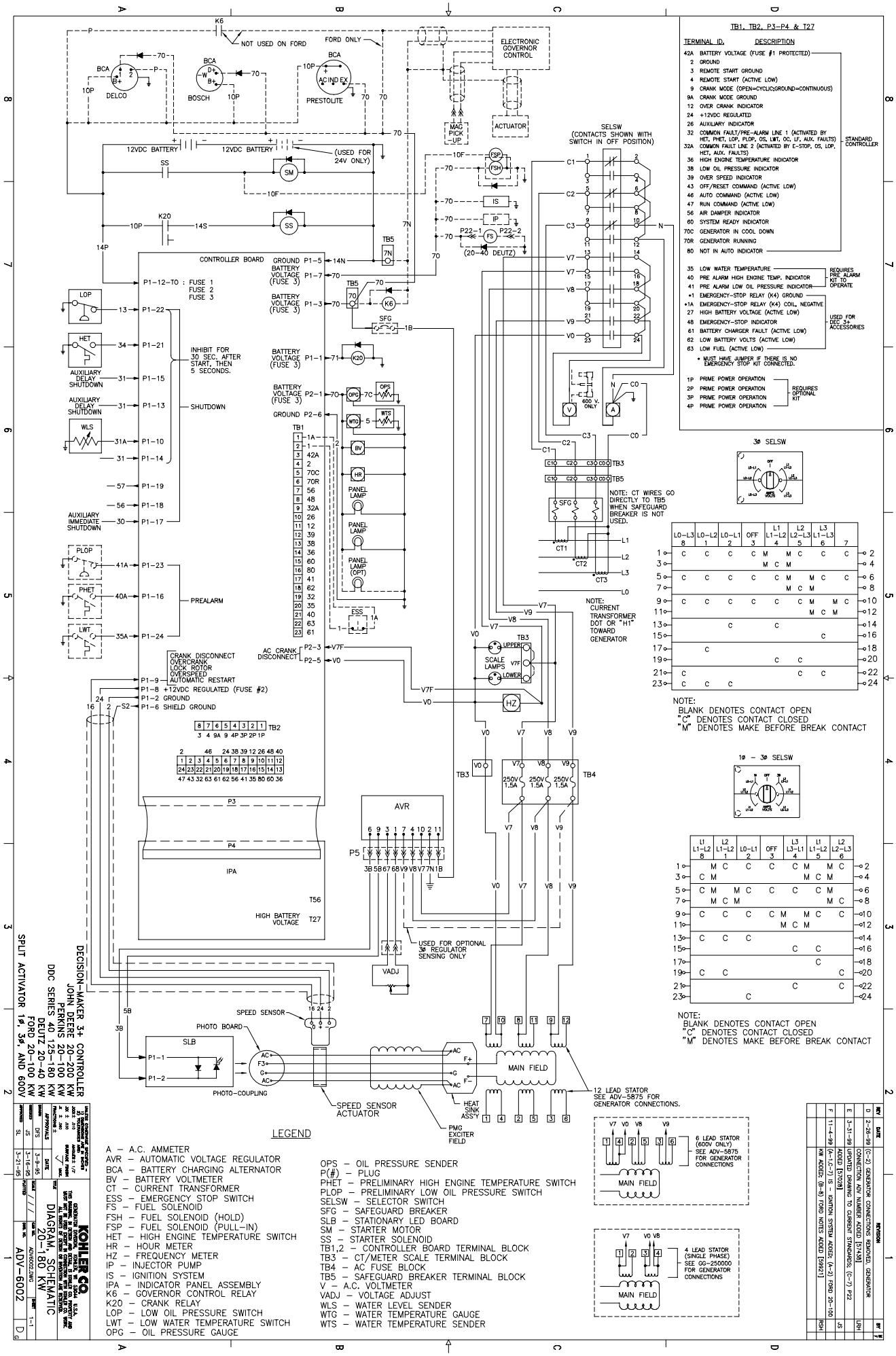

LEGEND

A – A.C. AMMETER
AVR – AUTOMATIC VOLTAGE REGULATOR
BCA – BATTERY CHARGING ALTERNATOR
BV – BATTERY VOLTMETER
CT – CURRENT TRANSFORMER
ESS – EMERGENCY STOP SWITCH
FS – FUEL SOLENOID
FSH – FUEL SOLENOID (HOLD)
FSP – FUEL SOLENOID (PULL-IN)
HET – HIGH ENGINE TEMPERATURE SWITCH
HR – HOUR METER
HZ – FREQUENCY METER
IP – INJECTOR PUMP
IS – IGNITION SYSTEM
IPA – INDICATOR PANEL ASSEMBLY
K6 – GOVERNOR CONTROL RELAY
K20 – CRANK RELAY
LOP – LOW OIL PRESSURE SWITCH
LWT – LOW WATER TEMPERATURE SWITCH
OPG – OIL PRESSURE GAUGE
OPS – OIL PRESSURE SENDER
P(#) – PLUG
PHET – PRELIMINARY HIGH ENGINE TEMPERATURE SWITCH
PLOP – PRELIMINARY LOW OIL PRESSURE SWITCH
SELSW – SELECTOR SWITCH
SFG – SAFEGUARD BREAKER
SLB – STATIONARY LED BOARD
SM – STARTER MOTOR
SS – STARTER SOLENOID
TB1,2 – CONTROLLER BOARD TERMINAL BLOCK
TB3 – CT/METER SCALE TERMINAL BLOCK
TB4 – AC FUSE BLOCK
TB5 – SAFEGUARD BREAKER TERMINAL BLOCK
V – A.C. VOLTMETER
VADJ – VOLTAGE ADJUST
WLS – WATER LEVEL SENDER
WTG – WATER TEMPERATURE GAUGE
WTS – WATER TEMPERATURE SENDER

DECISION-MAKER 3+ CONTROLLER
JOHN DEERE 20-200 KW
PERKINS 20-100 KW
DDC SERIES 40, 125-180 KW
DEUTZ 20-40 KW
FORD 20-100 KW
SPLIT ACTIVATOR 1ø, 3ø, AND 600V

REVISION	DATE	BY
D	2-26-99	(C-2) GENERATOR CONNECTIONS REMOVED, GENERATOR CONNECTION ADV NUMBER ADDED [57438]
E	3-31-99	UPDATED DRAWING TO CURRENT STANDARDS; (C-7) P22 ADDED [57028]
F	11-4-99	(A-1/C-7) IS - IGNITION SYSTEM ADDED; (A-2) FORD 20-100 KW ADDED; (B-9) FORD NOTES ADDED [59921]

DRAWN	DFS	3-8-95
APPROVED	SL	3-16-95
RELEASED		3-27-95

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DIAGRAM, SCHEMATIC 20-180 KW

SCALE	////
DWG. NO.	ADV6002.DWG
SHEET	1-1
PATENT	
ENG. NO.	ADV-6002
REV.	D