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assigns it.



Wiring Diagrams

**Marine
GenSets**

To be used **ONLY** by

Distributor
Service Organization

Or

Distributor/Dealer

WIRING DIAGRAMS FOR ONAN MARINE GENERATORS

All wiring diagrams in this manual apply to Onan Marine GenSets. When using diagrams, remember all relays are shown in the de-energized position.

Find the model in question in the left hand column, then look to the right for the appropriate wiring diagram and the page where it is located.

If unable to find the generator set you need, use the wiring diagram for the basic unit. For example a spec 2268 or 3316 indicate cooling options which would not effect the electrical control. You will then use the basic specification for the particular set you are working on.

Sets designated -53CR are the same as -3CR, and -518R the same as -18R. Again, use the basic wiring diagram.

MODEL NUMBER AND SPEC LETTER**WIRING DIAGRAM****SEE GRID****Marine Gasoline**

3.0MAJ-1R/1R
3.0MAJB-1R/1A

610-0364
610-0372

A14
B1

4.0MCCK-1A/--A,B
4.0MCCK-3A/--C
4.0MCCK-1A/6704C
4.0MCCK-1A/--D
4.0; 6.5MCCK-3A/--D
4.0; 6.5MCCK-1A/--E,F,G

613-0001
613-0003
613-0006
613-0007
613-0008
613-0009

G5
G6
G7
G8
G9
G10

4.0; 6.5MCCK-3CR/--A,B,C
4.0; 6.5MCCK-3CR/--D
4.0; 6.5MCCK-3CR/--E,F
4.0; 6.5MCCK-3CR/--G
4.0; 6.5MCCK-3CR/--H
4.0; 6.5MCCK-3CR7--H (With Spec D HA Panel)

611-0697
611-1060
611-1096
611-1143
611-1145
611-1165

B2
B9
B10
B11
B12
B13

6.0; 7.5MJB-3CR/--L,P,R

611-0705

B4

10.0; 12.0; 15.0MJC-3CR/--P,R,S

612-2750

C1

MODEL NUMBER AND SPEC LETTER**WIRING DIAGRAM****SEE GRID****Marine Diesel**

3.0MDJA-1R/--R,S
3.0MDJA-1R/--T,U,V
3.0MDJA-1R3/--S
3.0MDJA-1R4/--T, 9374 T,U,V

610-0181
610-0328
610-0264
610-0341

A10
A12
A11
A13

6.0MDJB-3CR/--S
6.0MDJB-3CR/10141S

611-0703
611-0934

B3
B8

10.0 & 12.0MDJC--R/--S,T,U
10.0 & 12.0MDJC--R/--AA
10.0 & 12.0MDJC--R/--AB,AC
10.0 & 12.0MDJC--R7--AD

612-2334
612-4792
612-5557
612-6065

B14
C5
D11
E11

10.0 & 12.0MDJC--R/10141AA, R3945AA, 10142AA, 16520AA,
17803AA, 15238AA

612-4853

C6

10.0 & 12.0MDJC--R/10141AB,AC, 10142AB,AC, 16520AB,AC

612-5567

D12

10.0 & 12.0MDJC--R/11620AA

612-5171

D2

10.0 & 12.0MDJC--R/11620AB

612-5651

E1

10.0 & 12.0MDJC--R/10141AD, 15238AD

612-6064

E10

10.0 & 12.0MDJC--R/11620AD

612-6154

F7

MODEL NUMBER AND SPEC LETTER**WIRING DIAGRAM****SEE GRID****Marine Diesel**

6.0 & 7.5MDJE--R/--A

6.0 & 7.5MDJE--R/4B,9374 B,C

6.0 & 7.5MDJE--R/--B,C

6.0 & 7.5MDJE--R/11620B,C

6.0 & 7.5MDJE--R/3945B,C, 10141B,C, 10142B,C

6.0 & 7.5MDJE--R/--AA,AB

6.0 & 7.5MDJE--R/AC,AD,AE,

6.0 & 7.5MDJE--R/--AF

6.0 & 7.5MDJE--R/3945AA,AB, 10141AA,AB, 10142AA,AB,

16520AA,AB, 15459AA,AB

6.0 & 7.5MDJE--R/3945AC,AD,AE, 10141AC,AD,AE, 10142AC,AD,AE

16520AC,AD,AE

6.0 & 7.5MDJE--R/10141AF, 10142AF, 16520AF

6.0 & 7.5MDJE--R/11620AA,AB

6.0 & 7.5MDJE--R/11620AC,AD,AE, 24131AC,AD,AE,

6.0 & 7.5MDJE--R/11620AF

6.0 & 7.5MDJE--R/14439AF, 25302AF

6.0 & 7.5MDJE--R/9374AA,AB

6.0 & 7.5MDJE-99CR/8227AA

611-0703

611-0722

611-0811

611-0884

611-0934

612-4792

612-5557

612-6065

612-4853

612-5567

612-6064

612-5171

612-5651

612-6154

612-6107

612-4889

612-5387

B3

B5

B6

B7

B8

C5

D11

E11

C6

D12

E10

D2

E1

F7

F4

C8

D9

MODEL NUMBER AND SPEC LETTER**WIRING DIAGRAM SEE GRID****Marine Diesel**

12.0 & 15.0MDJF--R/--B,C,D
12.0 & 15.0MDJF--R/--AA, 4686AA, 14852AA, 20143AA
12.0 & 15.0MDJF--R/--AB,AC, 4686AB,AC
12.0 & 15.0MDJF--R/--AD, 4686AD, 14852AD
12.0 & 15.0MDJF--R/10141AA, 10142AA, 16520AA, 3945AA
12.0 & 15.0MDJF--R/10641AA, 9374AA
12.0 & 15.0MDJF--R/10141AB, 14852AB, 16520AB
12.0 & 15.0MDJF--R/10141AD 26296AD
12.0 & 15.0MDJF--R/13981AA
12.0 & 15.0MDJF--R/9374AB,AC 4AB
12.0 & 15.0MDJF--R/9374AD
12.0 & 15.0MDJF--R/11620AA
12.0 & 15.0MDJF--R/11620AB, 22783AB
12.0 & 15.0MDJF--R/11620AD
12.0 & 15.0MDJF--R/20377AA
12.0 & 15.0MDJF--R/14439AA
12.0 & 15.0MDJF--R/22838AD
12.0 & 15.0MDJF--R/13981AB

612-2334	B14
612-4792	C5
612-5557	D11
612-6065	E11
612-4853	C6
612-4889	C8
612-5567	D12
612-6064	E10
612-4854	G7
612-5701	E2
612-6068	E12
612-5171	D2
612-5651	E1
612-6154	F7
612-5647	D14
612-4938	C13
612-6123	F6
612-5782	E4

MODEL NUMBER AND SPEC LETTER**WIRING DIAGRAMS****Marine Diesel**

	AC	GRID	DC	GRID
3.5MDKC-53CR/1A	612-6184	F8	612-6187	F10
3.5MDKC-518R/1A	612-6185	F9	612-6187	F10
4.0MDKC-1R/1A	612-6184	F8	612-6187	F10
4.0MDKC-3CR/1A	612-6184	F8	612-6187	F10
4.0MDKC-3CR/26501A	612-6184	F8	612-6187	F10
4.0MDKC-18R/1A	612-6185	F9	612-6187	F10
6.5MDKD-53CR/1A,B, 26501A,B	612-6184	F8	612-6187	F10
6.5MDKD-518R/1A,B	612-6185	F9	612-6187	F10
8.0MDKD-1R/1A,B	612-6184	F8	612-6187	F10
8.0MDKD-3CR/1A, 26501A,B	612-6184	F8	612-6187	F10
8.0MDKD-3CR/26669A,B	612-6185	F9	612-6187	F10
8.0MDKD-18R/1A,B	612-6185	F9	612-6187	F10
12.0MDL3-53CR/1A	612-6094	F3	612-6396	G4
15.0MDL3-3CR/1A, 28396A, 28555A	612-6093	F2	612-6396	G4
16.0MDL4-53CR/1A,2A	612-6093	F2	612-6090	E13
16.0MDL4-53CR/1B	612-6093	F2	612-6372	G1
16.0MDL4-53CR/3A	612-6093	F2	612-6091	E14
16.0MDL4-53CR/3B	612-6093	F2	612-6374	G2
16.0MDL4-518R/1A,2A	612-6094	F3	612-6090	E13
16.0MDL4-518R/3A	612-6094	F3	612-6091	E14
20.0MDL4-3CR/1B, 28396B, 28479B	612-6093	F2	612-6372	G1
20.0MDL4-3CR/1A, 2A, 27821A, 28193A, 28396A	612-6093	F2	612-6090	E13
20.0MDL4-3CR/3A, 25803A	612-6093	F2	612-6091	E14
20.0MDL4-3CR/4A, 25593A, 25804A	612-6093	F2	612-6092	F1
20.0MDL4-3CR/25804B	612-6093	F2	612-6375	G3
20.0MDL4-3CR/27550A	612-6094	F3	612-6090	E13
20.0MDL4-3CR/27843A	612-6093	F2	612-6354	F14
20.0MDL4-3CR/28479A	612-6093	F2	612-6090	E13
20.0MDL4-18R/1A, 2A, 14527A	612-6094	F3	612-6090	E13
20.0MDL4-18R/1B	612-6094	F3	612-6372	G1
20.0MDL4-18R/3B	612-6094	F3	612-6374	G2

MODEL NUMBER AND SPEC LETTER

Marine Diesel

20.0MDTA-517R/1A
25.0MDTA-53R/1A
25.0MDTA-3R/1A, 4A¹
25.0MDTA-3R/23281A
25.0MDTA-4R/1A
25.0MDTA-5DR/1A
25.0MDTA-3R/4A

WIRING DIAGRAMS

AC	GRID	DC	GRID
612-5799	E7	612-5716	E3/E4
612-5788	E6	612-5716	E3/E4
612-5788	E6	612-5716	E3/E4
612-5881	E8	612-5716	E3/E4
612-5799	E7	612-5716	E3/E4
612-5799	E7	612-5716	E3/E4
612-6256	*G2	612-6257	*G3

- 1 - Spec/4 indicates 32V cranking, 25.0MDTA sets in some Hatteras yachts have been modified to use a 20.0MDL4 control.
These controls are identifiable by absence of fault lights on panel.

- * - Use wiring diagrams.

25.0MDEH-515R/14H, 10651J
25.0MDEH-515R/1J, 10149J, 18406H
25.0MDEH-515R/1K, 10149K
25.0MDEH-515R/15858G
30.0MDEH-3R/14J
30.0MDEH-3R/1K, 14K
30.0MDEH-3R/9134J, 11275J, 23629
30.0MDEH-15R/14H 14J
30.0MDEH-15R/1K, 10149K
30.0MDEH-15R/14K
30.0MDEH-15R/9134J, 11275J, 18027H, 22236J, 9222J
30.0MDEH-15R/11275K
30.0MDEH-15R/12282J
30.0MDEH-15R/1G, 9222G
30.0MDEH-15R/14492G, 16384G
30.0MDEH-15R/15858G
30.0MDEH-3R/1G
30.0MDEH-3R/10158G
30.0MDEH-3R/11275C

612-5301	D4	612-5347	D7
612-5300	D3	612-5347	D7
612-5300	D3	612-6120	F4
612-5014	C14	612-4401	C3
612-5303	D6	612-5347	D4
612-5302	D5	612-6120	F4
612-5303	D6	612-5348	D8
612-5301	D4	612-5347	D7
612-5300	D3	612-6120	F5
612-5301	D4	612-6120	F5
612-5301	D4	612-5348	D8
612-5301	D4	612-6298	F13
612-5301	D4	612-5590	D13
612-4929	C9	612-4401	C3
612-4390	C10	612-4704	C4
612-5014	C14	612-4401	C3
612-4932	C11	612-4401	C3
612-4933	C12	612-4401	C3
612-4384	C2	612-4704	C4

MODEL NUMBER AND SPEC LETTER**Marine Diesel**

30.0MDEH-3R/11275G

30.0MDEH-3R/18428H

30.0MDEH-3R/24957J

40.0MDEG-515R/1L

40.0MDEG-515R/1K, 10149K

40.0MDEG-515R/10149H

40.0MDEG-515R/11345

50.0MDEG-15R/1J, 14J

50.0MDEG-15R/1L

50.0MDEG-15R/14K

50.0MDEG-15R/14L

50.0MDEG-15R/9134J

50.0MDEG-15R/10149H

WIRING DIAGRAMS

AC	GRID	DC	GRID
612-4933	C12	612-4704	C4
612-5303	D6	612-5439	D10
612-6048	E9	612-5439	D10
612-5300	D3	612-6120	F5
612-5300	D3	612-5347	D7
612-4929	C9	612-4401	C3
612-4930	C10	612-5115	D1
612-5300	D3	612-5347	D7
612-5300	D3	612-6120	F5
612-5301	D4	612-5347	D7
612-5301	D4	612-6120	F5
612-5301	D4	612-5348	D8
612-4929	C9	612-4401	C3

Replacement Control for 300-0859 PC Board

INSTRUCTION SHEET

300-1796 MCCK Only

C156

WIRING DIAGRAM

611-1143

GRID

B11

MODEL NUMBER AND SPEC LETTER**WIRING DIAGRAM SEE GRID****H.A. Auto Demand****B+ Switching**

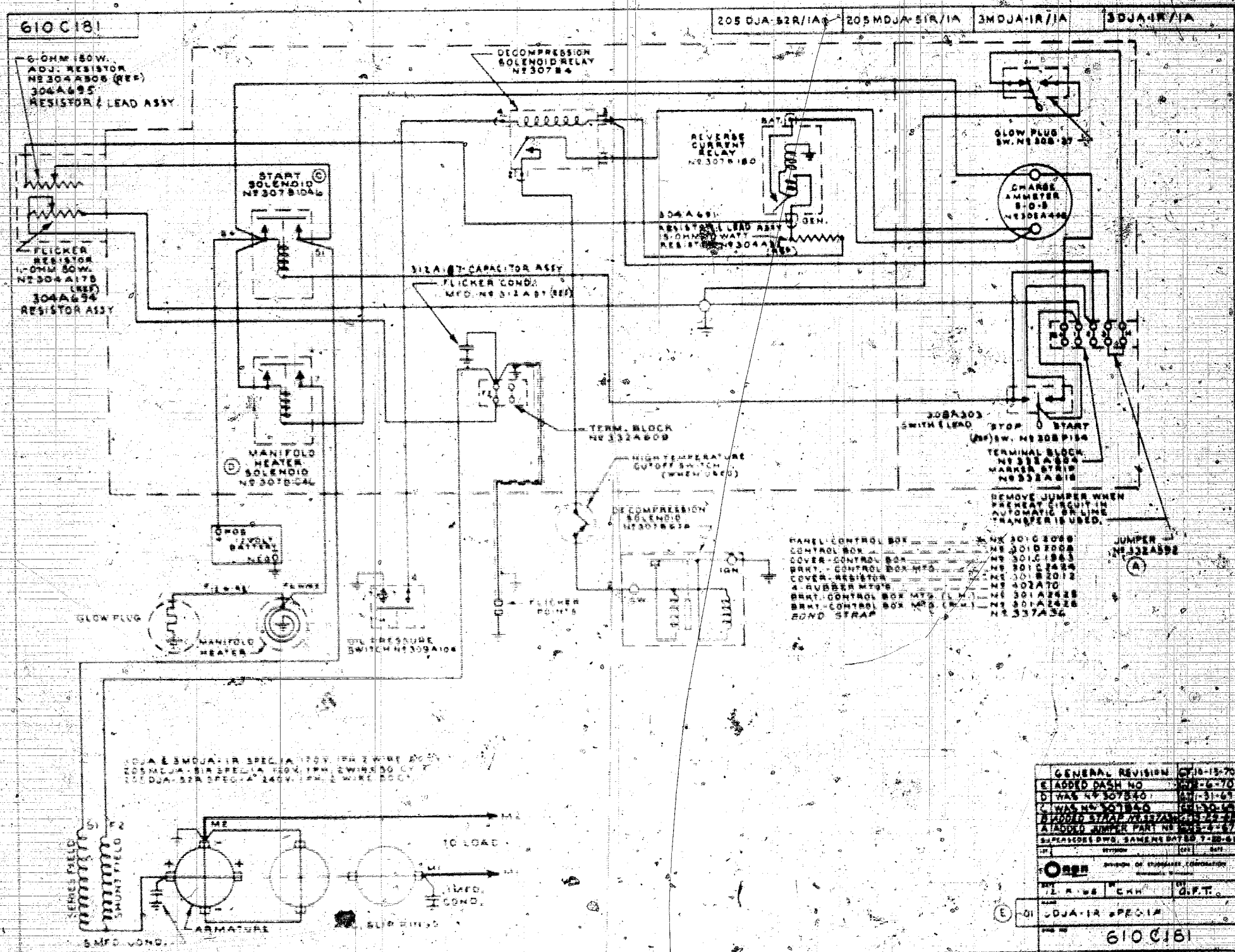
7.5HA-21/1D
7.5HA-21/10D, 12D
7.5HA-23/1D
7.5HA-23/10D, 12D
15.0HA-23/1D
15.0HA-23/10D, 12D

617-0147	G11
617-0149	G12
617-0153	G13
617-0155	G14
617-0156	A1
617-0158	A2

B- Switching

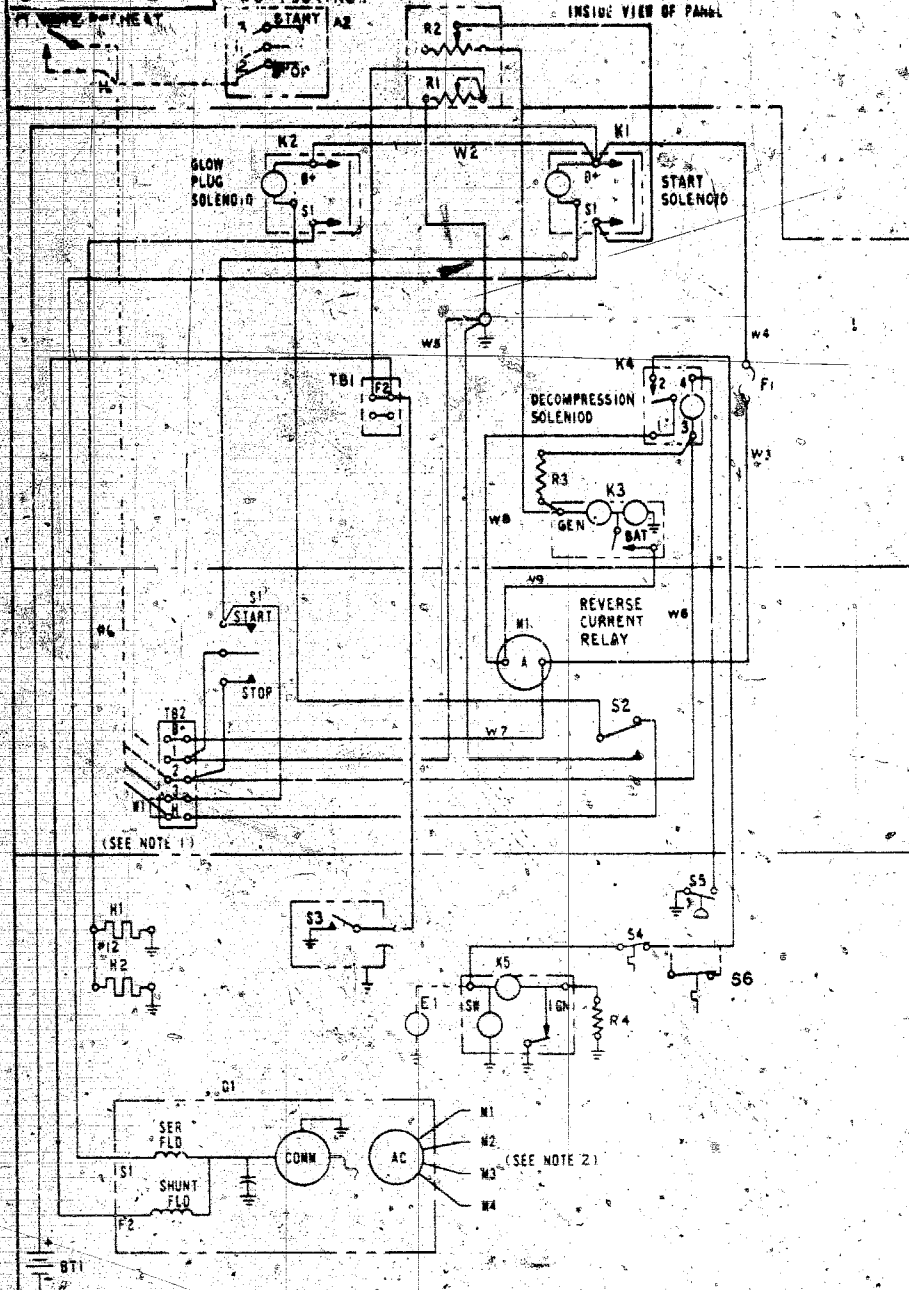
7.5HA-21/24D
7.5HA-21/25D
7.5HA-23/24D
7.5HA-23/25D
15.0HA-23/24D
15.0HA-23/25D

617-0170	A3
617-0169	A4
617-0171	A5
617-0172	A6
617-0173	A7
617-0174	A8



GENERAL REVISION		07-18-13-70
E ADDED DASH NO.		07-18-13-70
D WAS NS 307B40		07-13-69
C WAS NS 301B40		07-13-69
B ADDED START ASSISTANCE		07-13-69
A ADDED JUMPER PART NS 332A592		07-13-69
SUPERSEDES DWS, SAME DATE 7-20-61		
BY	CHK	APP
BY	CHK	APP
E-01 3DJA-1R SPEC. 1A		
610C181		

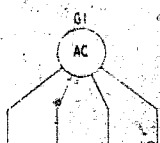
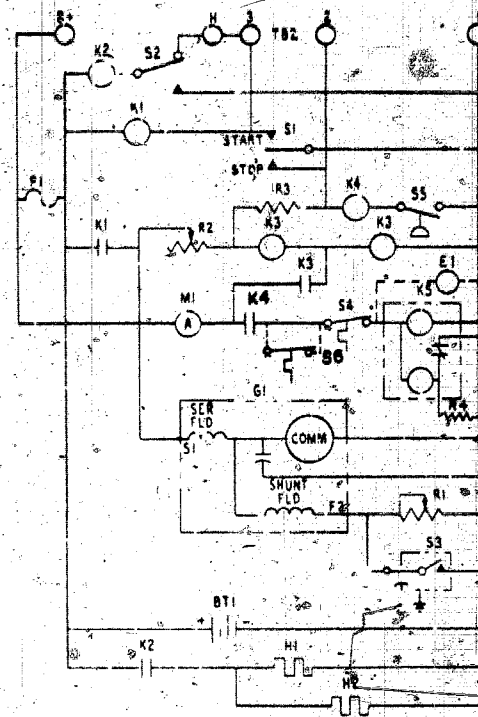
610C328

OPTIONAL 12V
12V 2.50 VDCWIRING DIAGRAM
INSIDE VIEW OF PANEL

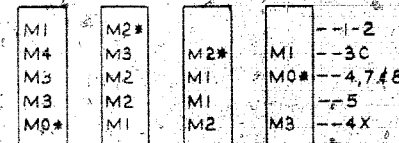
NOTES:

1. REMOVE JUMPER (W1) WHEN PREHEAT CIRCUIT IN AUTOMATIC OR LINE TRANSFER IS USED
2. ALL AC LEADS HAVE .1 MFD CAPACITORS TO GROUND IN GENERATOR
3. UNLESS OTHERWISE NOTED ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION

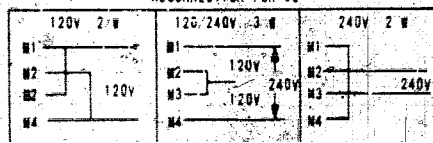
SCHEMATIC



AC SLIP RINGS

VOLTAGE
CODECOMM
ENDBEARING
END

RECONNECTION FOR 3C



REF	DES	PART NO	QTY	DESCRIPTION
K1		30781046	1	RELAY - START SOLENOID
K2		30781046	1	RELAY - GLOW PLUG SOLENOID
K3		30781046	1	RELAY - REVERSE CURRENT
K4		30781046	1	RELAY - DECOMPRESSION SOLENOID
F1		321-0146	1	FUSE - 10 AMP
F2		321-0178	1	HOLD-IN - FUSE
F3		302A446	1	ARMATURE - CHANGE 5-0-A
R1		304A884	1	RESISTOR ASBY
R2		304A17A(L)	1	RESISTOR - FLICKER (1.1 50 W)
R3		304A884	1	RESISTOR - LEAD ASBY
R4		304A884	1	RESISTOR - NO. 100 W
R5		304A884	1	RESISTOR - NO. 100 W
S1		308P184(R)	1	SWITCH - START STOP
S2		308-204	1	SWITCH - GLOW PLUG ASBY
S3		332A609	1	BLOCK - TERMINAL
S4		332A609	1	STRIP - HARDER
S5		332A609	1	LEAD ASBY
S6		332A609	1	JUMPER (SEE NOTE 1)
W1		332A609	1	JUMPER
W2		332A609	1	LEAD ASBY
W3		332A609	1	COVER-CONTROL BOX
W4		332A609	1	CONTROL BOX
W5		332A609	1	PANEL - CONTROL BOX
W6		332A609	1	BRACKET - MTG
W7		332A609	1	BRACKET - CONT BOX MTG (L.H.)
W8		332A609	1	BRACKET - CONTROL BOX MTG (R.H.)
W9		332A609	1	COVER-RESISTOR
BT1		332A609	1	SCREEN - RECONNECTION
BT2		332A609	1	RUBBER MOUNTS
BT3		332A609	1	STRAP-BOND

PARTS LIST ENG GEN (REF)

8263019

REF	DES	PART NO	QTY	DESCRIPTION
BT1		332A609	1	BATTERY 12V
E1		332A609	1	FUEL PUMP
G1		332A609	1	GENERATOR
H1		332A609	1	HEATER - MANIFOLD
H2		332A609	1	GLOW PLUG
K5		332A609	1	SOLENOID - DECOMPRESSION
K6		332A609	1	RESISTOR - 50 W
S3		332A609	1	POINTS - FLICKER
S4		332A609	1	SWITCH - HIGH AIR TEMP
S5		332A609	1	SWITCH - OIL PRESS
A2		332A609	1	CONTROL-REMOTE (STANDARD)
S6		332A609	1	SWITCH HIGH EXH TEMP - 02
W5,6		332A609	1	LEAD
W7		332A609	1	LEAD
W8,9		332A609	1	LEAD
BT1		332A609	1	GROMMET
BT2		332A609	1	WASHER
BT3		332A609	1	JUMPER-TERMINAL

WHEN USED

REF	DES	PART NO	QTY	DESCRIPTION
BT1		332A609	1	BATTERY 12V
E1		332A609	1	FUEL PUMP
G1		332A609	1	GENERATOR
H1		332A609	1	HEATER - MANIFOLD
H2		332A609	1	GLOW PLUG
K5		332A609	1	SOLENOID - DECOMPRESSION
K6		332A609	1	RESISTOR - 50 W
S3		332A609	1	POINTS - FLICKER
S4		332A609	1	SWITCH - HIGH AIR TEMP
S5		332A609	1	SWITCH - OIL PRESS
A2		332A609	1	CONTROL-REMOTE (STANDARD)
S6		332A609	1	SWITCH HIGH EXH TEMP - 02
W5,6		332A609	1	LEAD
W7		332A609	1	LEAD
W8,9		332A609	1	LEAD
BT1		332A609	1	GROMMET
BT2		332A609	1	WASHER
BT3		332A609	1	JUMPER-TERMINAL

ON

DIVISION OF STANLEY CORPORATION

CIP

JWD

G-1-70

CONTROL-GEN SET

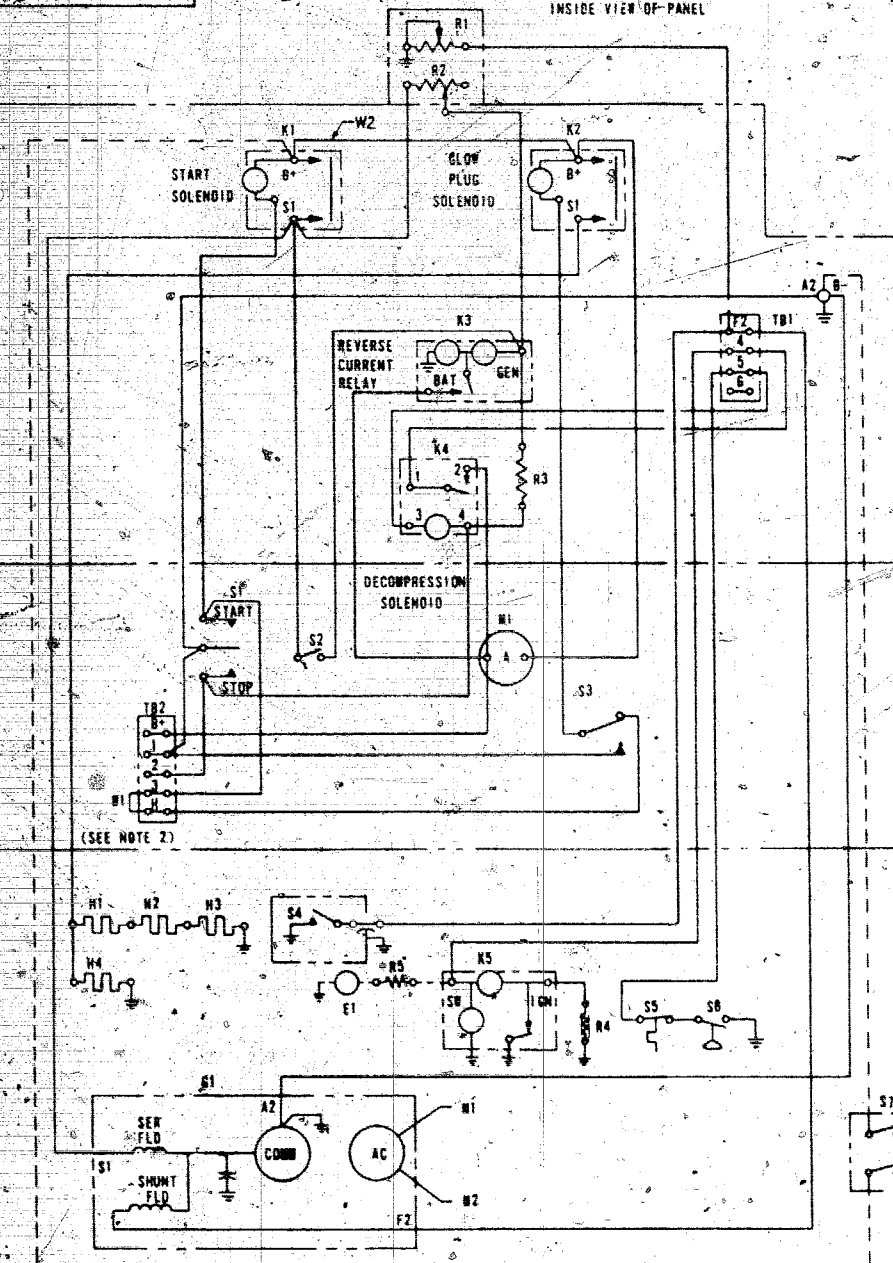
G-1-70

(WIRING DIAGRAM)

12V

610C328

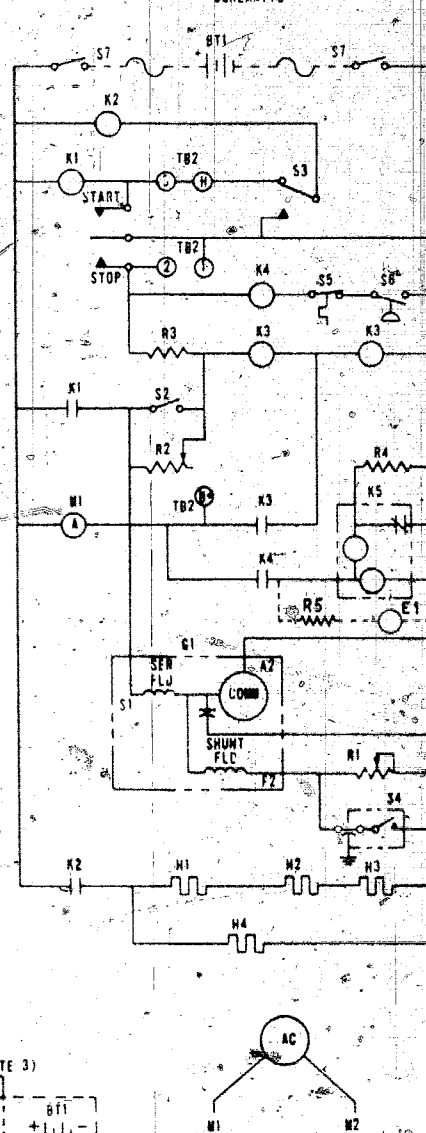
610C 341

WIRING DIAGRAM
INSIDE VIEW OF PANEL

NOTES

- W2 IS GROUND AC LEAD IN GENERATOR. ALL OTHERS HAVE 1 MFD CAPACITORS TO GROUND IN GENERATOR.
- REMOVE JUMPER (W1) WHEN PREHEAT CIRCUIT IN AUTOMATIC OR LINE TRANSFER IS USED.
- FUSED SWITCH (S7) IS FURNISHED BY CUSTOMER. (100 AMPERE SUPER LAM FUSES)
- UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION.

SCHEMATIC



PARTS LIST			DESCRIPTION
REF. DES.	PART NO.	QTY	
K1	307861	1	RELAY - START SOLENOID
K2	307861	1	RELAY - GLOW PLUG SOLENOID
K3	3078496	1	RELAY - REVERSE CURRENT
K4	301A2694	1	BRACKET - RELAY NTB
K4	30784	1	RELAY - DECOMPRESSION SOLENOID
M1	302-81	1	AMMETER - CHARGE 0-30
R1	304A18	1	RESISTOR - FLICKER 2 50 50W
R2	304A588	1	RESISTOR 60 50W
R3	304A257	1	RESISTOR 750 75W
S1	308P154	1	SWITCH - START STOP
S2	308-7	1	SWITCH - HT LO CHARGE
S3	308-37	1	SWITCH - GLOW PLUG
TB1	332A537	1	BLOCK - TERMINAL
	332A554	1	STRIP - MARKER
TB2	332A804	1	BLOCK - TERMINAL
	332A818	1	STRIP - MARKER
W1	332A582	1	JUMPER (SEE NOTE 2)
W2	332A602	1	JUMPER
	301U2008	1	CONTROL BOX
	301C2285	1	PANEL - CONTROL BOX
	301C2424	1	BRACKET - NTB
	301A2425	1	BRACKET - CON BOX NTB (L H)
	301A2428	1	BRACKET - CONTROL BOX NTB (R H)
	301B2012	1	COVER - RESISTOR
PARTS LIST ENG. GEN. (REF.)			1730019
BT1	1	BATTERY	32V
E1	1	FUEL PUMP	
G1	1	GENERATOR	
H1, 2, 3, 4	3	HEATER - MANIFOLD	
	1	GLOW PLUG	
K5	307C1180	1	SOLENOID - DECOMPRESSION
R4	304A110	1	RESISTOR - 600 50W
R5	304A921	1	RESISTOR - 100 10W
S4		1	POINTS + CAPACITOR ASSY - FLICKER
S5	308A151	1	SWITCH - HIGH AIR TEMP (300JA)
	308A182	1	SWITCH - HIGH AIR TEMP (30JA)
S6	308A184	1	SWITCH - OIL PRESSURE
S7		1	SWITCH - FUSED (SEE NOTE 3)

* WHEN USED

A ADDED COVER		FORM 3-14-77	
DIVISION		ENGINEERING	
DIVISION OF SUBSIDIARY CORPORATION		MOTOR	
DATE	6-25-71	BY	MFR
NAME		CONTROL - GEN SET	
		(WIRING DIAGRAM) 32V	
DWG NO		610C341	

3.0MDJA-1R/5T
120V 1 PH
2W 60 CY

610-0364

C

01 205MAJ-1R/1U

MOMENTARY
CONTACT SW.
N° 308-97
(WHEN USED)

LOW OIL PRESSURE
SWITCH N° 305P237
(WHEN USED)

TEMP. SW. N° 809-2
(WHEN USED)

TERMINAL BLOCK ASSY 332A2122

TERMINAL BLOCK
N° 332A222 (REF)

TERMINAL BLOCK

12V BRKT. N° 332A198
(REF)

STOP

SWITCH
N° 305P154
(REF)

START

FUSEHOLDER
N° 321-0175 (A)
FUSE-10 AMP
N° 321-0146

FI

LEAD ASSY 8"
N° 336-3473

START
SOLENOID
N° 307B1046

RELAY & LEAD ASSY
307A1636
5 AMP DISCONNECT REF.
RELAY N° 307B642

10-0HM 50 WATT
11230444

TO 12 VOLT BATTERY

GROUND TERM
ON GENERATOR FRAME

ELECTRIC CHOKE
(WHEN USED)

5MFD COND
N° 312A27

1MFD COND
N° 315A88

TO LOCAL

CONTROL BOX N° 301-4659 (D)
COVER N° 301-1858 (C)
SILKSCREEN N° 98-3429 (A)

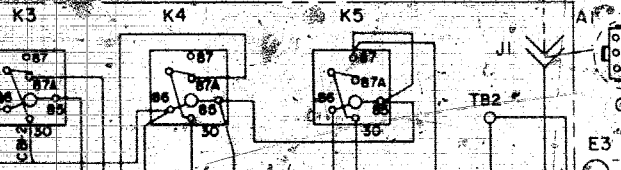
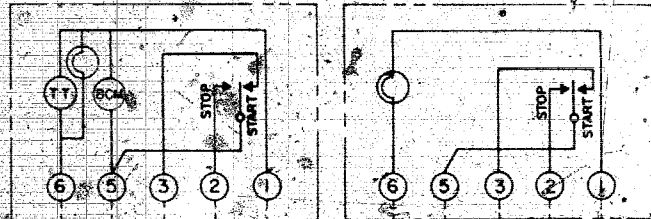
205AJ-4R/1H 120VOLT 1PH 2WIRE 60CY.
2AJ-51R/1H 120VOLT 1PH 2WIRE 60CY.

C1 ADDED N° 336-3473 (A) 11-9-50	
DESIGN 332A1376	DATE 11-9-50
DESIGN 307B1046	DATE 11-9-50
REVISION	DATE
MAIL WIRING DIAGRAM	
D. W. ONAN AND SONS INC.	
MINNEAPOLIS, MINNESOTA	
DR. 76-5-4	CHK. 11/12/50
CONTROL-GEN SET	

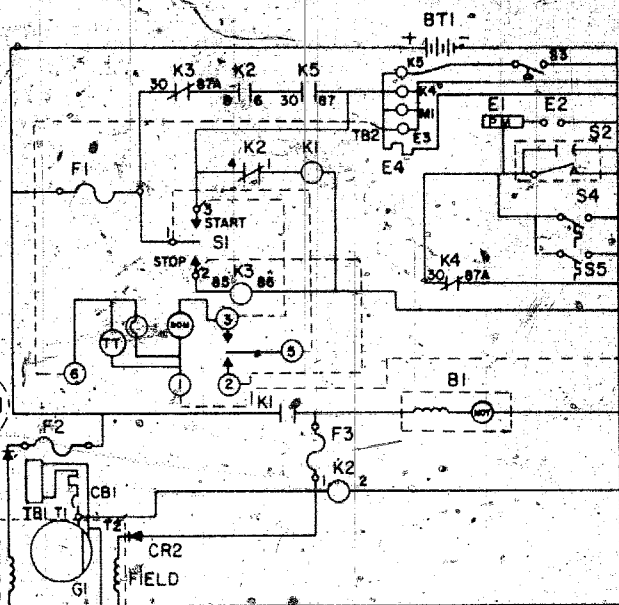
610-0372

WIRING DIAGRAM

REMOTE



SCHEMATIC

T1 120V
T2 120V

ER No.	LT	No.	Revision	Appr'd	Chg'd	Appr'd	Date
25652	A	1	RLSE FOR PROD				12-18-84
25879	B	1	CHANGED PICT SEE ER				2-8-85
26098	C	1	UPDATE MARKINGS				4-3-85

NOTES:
1. ALL COMPONENTS SHOWN IN
DE-ENERGIZED POSITION

C1			CAPACITOR
TB1			BLOCK-TERMINAL
T1			TERMINAL - CONNECTION
S5			SWITCH-HIGH EXH TEMP
S4			SWITCH-HIGH ENG TEMP
S3			SWITCH-LOW OIL PRESSURE
S2			SWITCH-BREAKER POINTS
S1	308-0759		SWITCH-START, STOP
M1	320-0085		METER-TIME TOTALIZING
K3,4,5	307-1866		RELAY
K2	307-2492		RELAY-START DISCONNECT
K1	307-1617		RELAY-START SOLENOID
J1			PLUG (REMOTE CONNECTIONS)
G1			GENERATOR
F2	321-0256		FUSE (15 AMP 32V)
F1, F3	321-0146		FUSE (10 AMP 32V)
F1,2,3	321-0175		HOLDER-FUSE
E4			CHOKE-ELECTRIC (ONAN)
E3			PUMP-FUEL
E2			PLUG-SPARK
E1			MAGNETO
CR1,2	305-0030	P	RECTIFIER
CB1			CIRCUIT BREAKER-AC OUTPUT
B1			MOTOR-STARTING
BT1			BATTERY-12V

ALL PART NOS LISTED ABOVE, ARE REF ONLY

A2	300-2944	C	1	PANEL ASSY-CONTROL
A1	300-2945	D	1	CONTROL ASSY

-01 3.0 MAJB-IR/IA

Do Not Scale Print	Tolerance as unless otherwise specified	Scale 1:1	Sheet 1 of 1
Print	Print	Print	Print

Part No.	610-0372
Rev	1
Date	11-14-84
By	JIM CAMERON
Appr'd	R. WALTZ

Part No.	610-0372
Rev	1
Date	11-14-84
By	JIM CAMERON
Appr'd	R. WALTZ

Part No.	610-0372
Rev	1
Date	11-14-84
By	JIM CAMERON
Appr'd	R. WALTZ

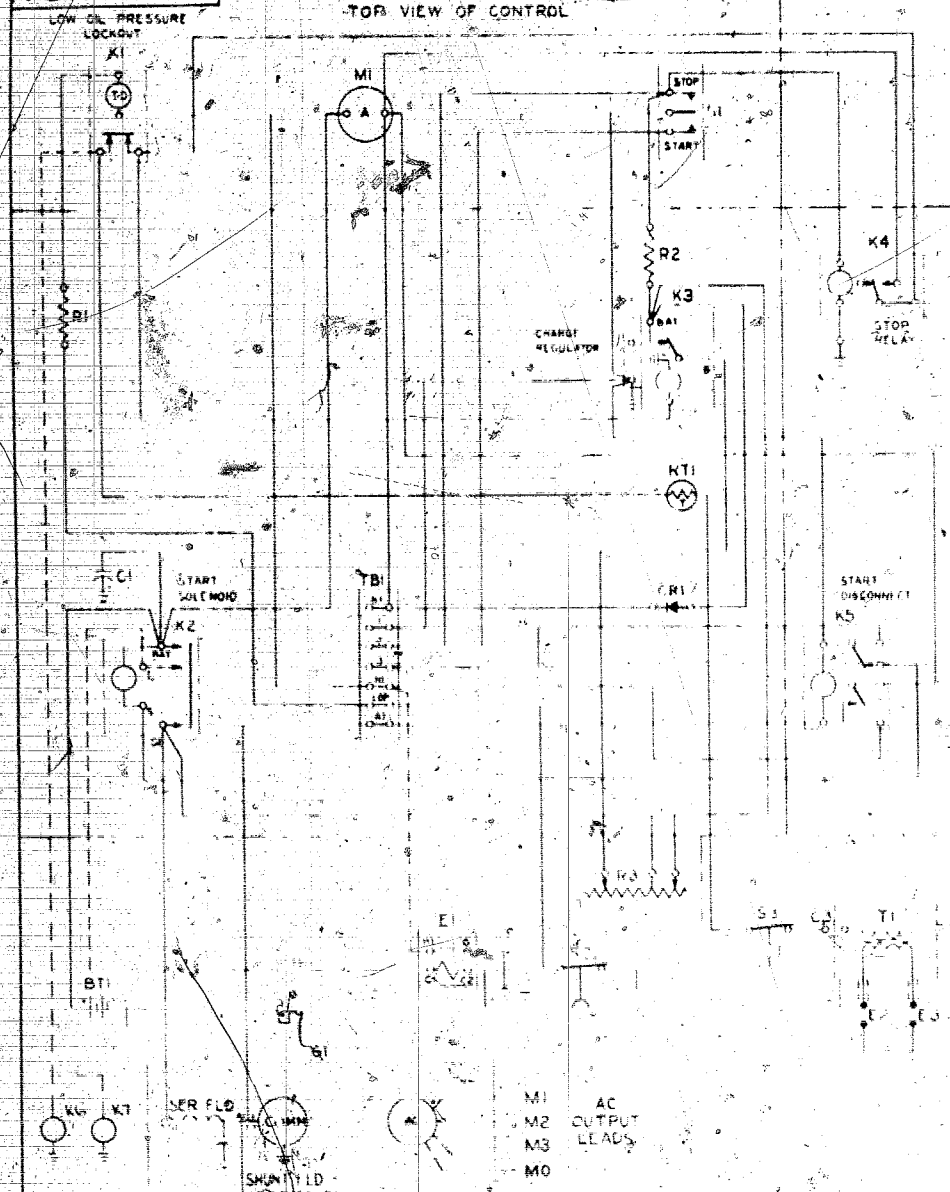
Onan Corporation

Minneapolis, Minnesota

CONTROL-GENSET (WD)

610-0372

WIRING DIAGRAM :
TOP VIEW OF CONTROL



```

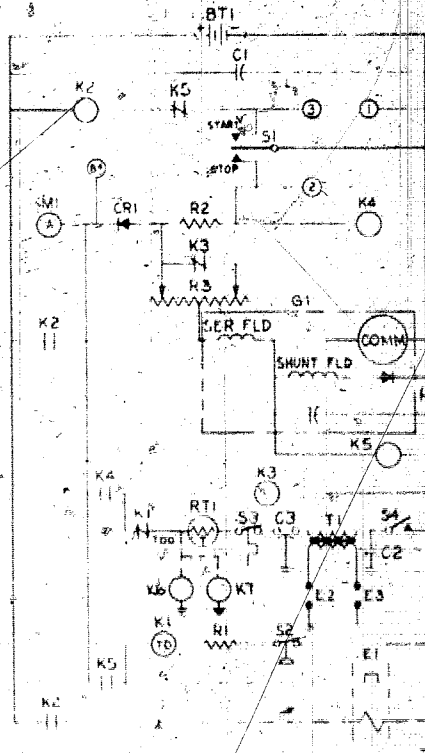
AC  L P  RINGS
M2*  M1
M3   M2*  M1
M3   M2   M1  M4
M0*  M1   M2  M3
COMM  ←  ←  READING
END   ←  ←  END

```

VOLTAGE 表 集
CODE

M1	AC
M2	OUTPUT
M3	LEADS
M0	

SCHEMATIC DIAGRAM



REF DES		PART NO	QTY	DESCRIPTION
CRI	305A235		1	DIODE - REVERSE CURRENT
	305A254		1	HEAT SINK
C1	312A57		1	CAPACITOR 10 MFD
K1	320B104		1	RELAY - LOW OIL PRESS. LOCKOUT
K2	307B845		1	RELAY - START SOLENOID
K3	305B383		1	RELAY - 2 STEP CHARGE RES
K4	307B253		1	RELAY - STOP
K5	307B852		1	RELAY - START DISCONNECT
MI	302A58		1	AMMETER - CHARGE, 10-0-10
R1	304A217		1	RESISTOR - 1 OHM, 10W
R2	304A251		1	RESISTOR - 30 OHM, 5W
R3	304A483		1	RESISTOR - HIGH LOW CHARGE
RT1	304A60		1	RESISTOR - HYDRA-CO 1.72 OHM, 25W
S1	30BP154		1	SWITCH - START STOP
TB1	332A745		1	BLOCK - TERMINAL
	332A922		1	STRIP - MARKER

301C2525	1	CONTROL BOX PANEL ASSY.
301B2532	1	BRACKET-CONTROL BOX MTG.
301C1244	1	COVER
301B2528	1	BOX-RESISTOR MTG.
301B2597	1	END PLATE
33B6357	1	ILLUSTRATION-SUPPRESSION
98A1612	1	SILKSCREEN-START STOP
98A1625	1	SILKSCREEN-EMERGENCY RELAY

PARTS LIST (ENG-GEN)

BATTERY 12V	
CAPACITOR - IGNITION POINTS	
CAPACITOR - FEED THRU	
FUEL SOLENOID (WHEN USED)	
WATER SOLENOID (WHEN USED)	
CHOKE - ENGINE	(WHEN USED)
SPARK PLUGS	6692110
GENERATOR	
SWITCH - LOW OIL PRESSURE	
SWITCH - HIGH WATER TEMP	
SWITCH - IGNITION POINTS	
COIL - IGNITION	

N	REM 132A14Z (102)	57	6-18-70
G	ADDED DASH NO	77	2-3-70
F	ADDED TR MODEL	77	4-9-69
E	ADDED WATER SOLENOID	77	10-2-68
D	ADDED 4R MODEL	67	6-7-68
C	ADDED K5 TO SCHMATIC	67	11-28-68
B	MOVED K6	67	7-18-67
B	ADDED KG	67	1-12-67
A	ADDED SILKSCREENS	67	10-13-66
	SURDS DWG SAME NR 2	67	7-32

ORDER OF THE BOARD OF DIRECTORS OF THE CORPORATION

9-22-66 CDR [Signature] WJE

NAME **WIRING & SCHEMATIC DIAGRAM**
ENGINE CONTROL

611C703

LOW OIL PRESSURE
SWITCH

TOP VIEW

6MDJE-53R/1A

705MDJE-3R/1A

5MDJB-53R/1L

6MDJB-3R/1L

MANIFOLD
HEATER
SWITCH
N2308P37START
RELAY
N2307B597START
DISCONNECT
FUEL SOLENOID
RELAY
N2307B623START
SOLENOID
N2307B1046T2 MUST
BE GROUNDEDGND
STUDJUMPER
N2332A602FUEL
SOLENOID
N2307B623MANIFOLD
HEATER
SOLENOID
N2307B104615-OHM, 10WATT
RESISTOR
N2304A321-OHM, 10WATT
RESISTOR
N2304A217EMERGENCY
RELAY
N2320B104
(LOW OIL PRESS)CHARGE
AMMETER
5-0-5
N2302A448TERMINAL BLOCK
N2332A706
MARKER STRIP
N2332A739CHARGE
RECTIFIER
N2305A235CENTRIFUGAL
SWITCHSWITCH
N2308P154TERM. BLOCK
N2332A604
MARKER STRIP
N2332A616REMOVE JUMPER WHEN
PREHEAT CIRCUIT IN AUTOMATIC
OR LOAD TRANSFER IS USED.HIGH TEMPERATURE
CUT-OUT SWITCH
(WHEN USED)MANIFOLD
HEATER

N212 WIRE

N212 WIRE

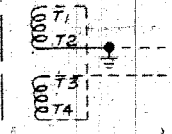
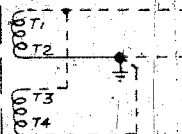
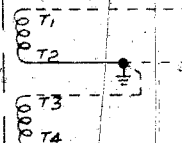
STARTER

GND TO ENGINE
ELECTRIC FUEL
PUMP
(WHEN USED)CHARGE RESISTOR
2-OHM, 150WATT
N2304A500-REF
RESISTOR ASSY.
N2304A505

SILK SCREEN N298B1589

NOTE:

A.C. LOAD CONNECTIONS

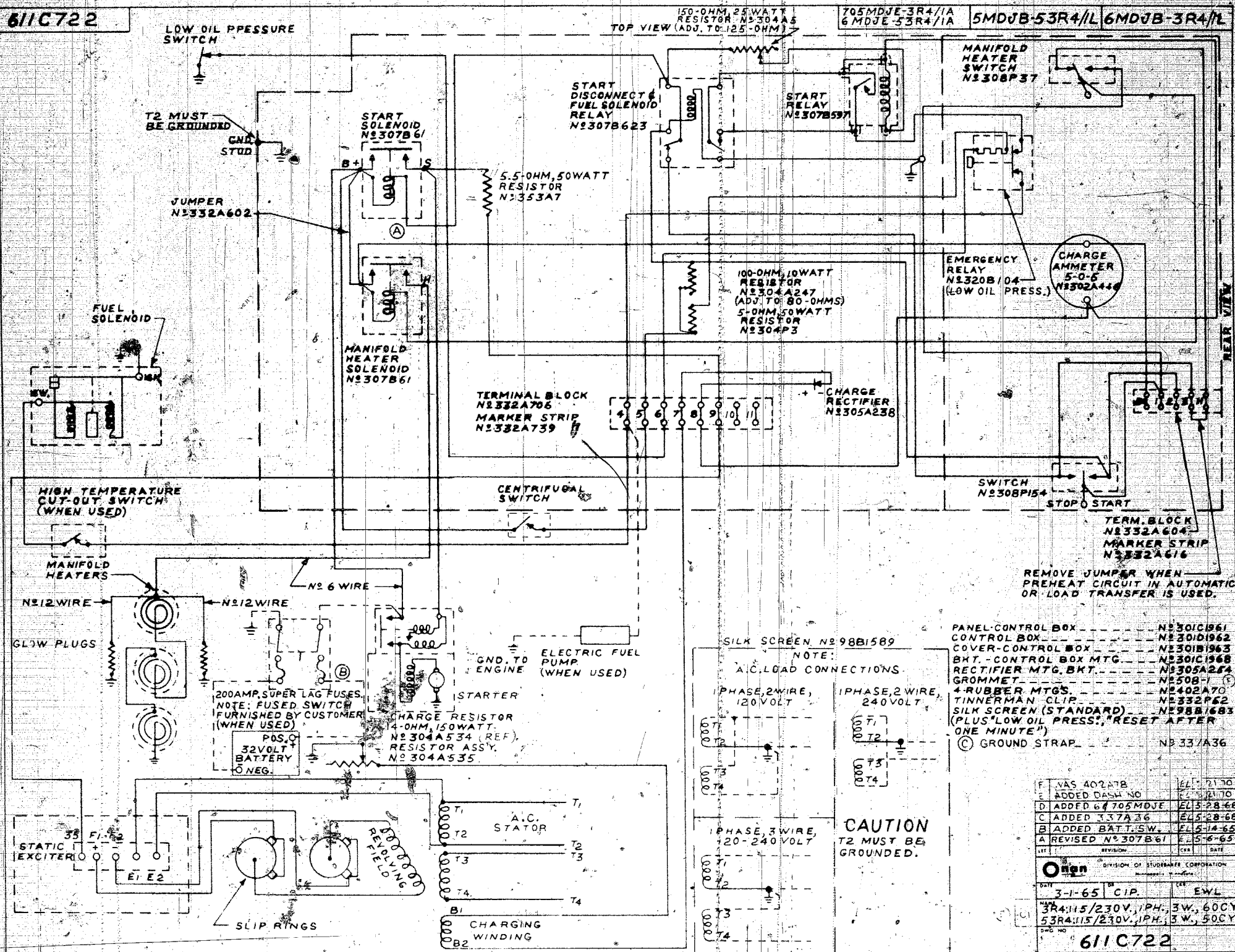
1 PHASE, 2 WIRE,
120 VOLT1 PHASE, 2 WIRE,
240 VOLT1 PHASE, 3 WIRE,
120-240 VOLTCAUTION
T2 MUST BE
GROUNDED.

PANEL CONTROL BOX N2301C1961
CONTROL BOX N2301B1962
COVER CONTROL BOX N2301B1963
BKT. - CONTROL BOX MTC N2301C1968
RECTIFIER MTC, BKT. N2305A254
GROMMET N2508-1
4-RUBBER MTCs N2402A70
TINNEMAN CLIP N2332P62
SILK SCREEN (STANDARD) N298B1683
(PLUS LOW OIL PRESS, RESET AFTER
ONE MINUTE)
(A) GROUND STRAP N2337A36

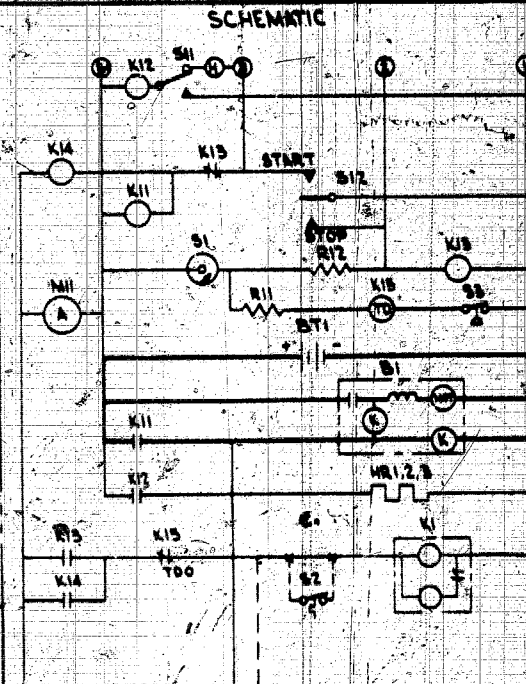
D	ADDED DASH NO.	62-2-70
C	WAS N2307B40	10-15-69
B	ADDED 66705MDJE	15-28-68
A	ADDED 337A36	27-25-67
REV	REVISION	DATE
1	29-65	CLP
2	29-65	EWL
3	20/240V, 1PH, 3W, 60CY.	
4	53R: 120/240V, 1PH, 3W, 50CY.	
5		

611C703

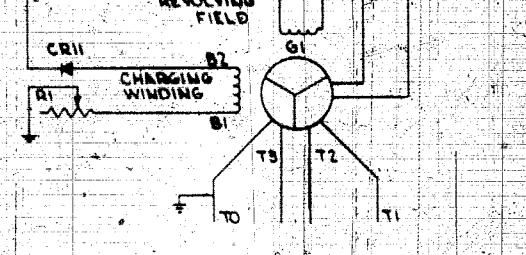
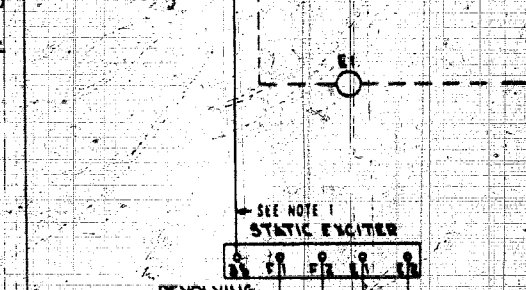
611C722



INSIDE VIEW OF CONTROL BOX



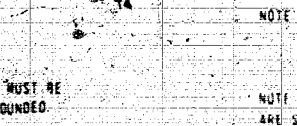
REMOVE JUMPER WHEN
PRE-HEAT CIRCUIT IN AUTOMATIC
OR LOAD TRANSFER IS USED



MUST BE GROUNDED
ON 4R 7R 7XR
UNGROUNDED ON
4XR 5DR 6DR 9XR

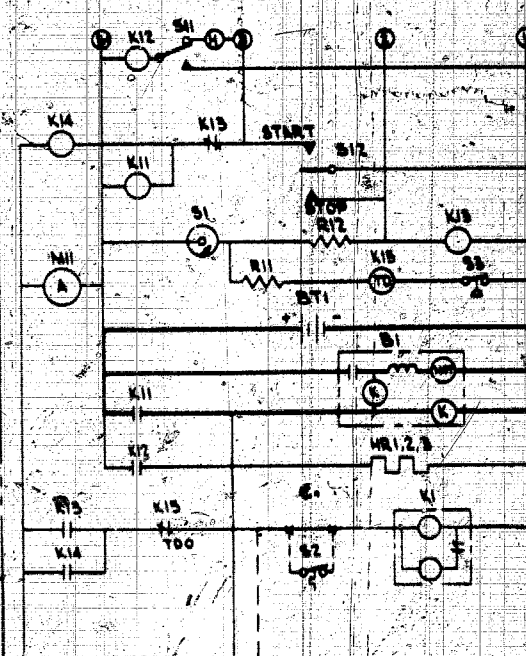


NOTE: THIS WIRE USED FOR 1CR 4R 7R 7IR ONLY

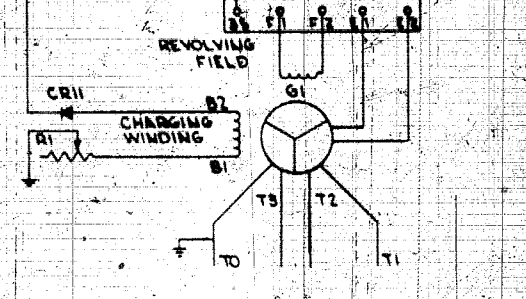


NOTE: UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION.

SCHEMATIC



SEE NOTE 1
STATIC EXCITER



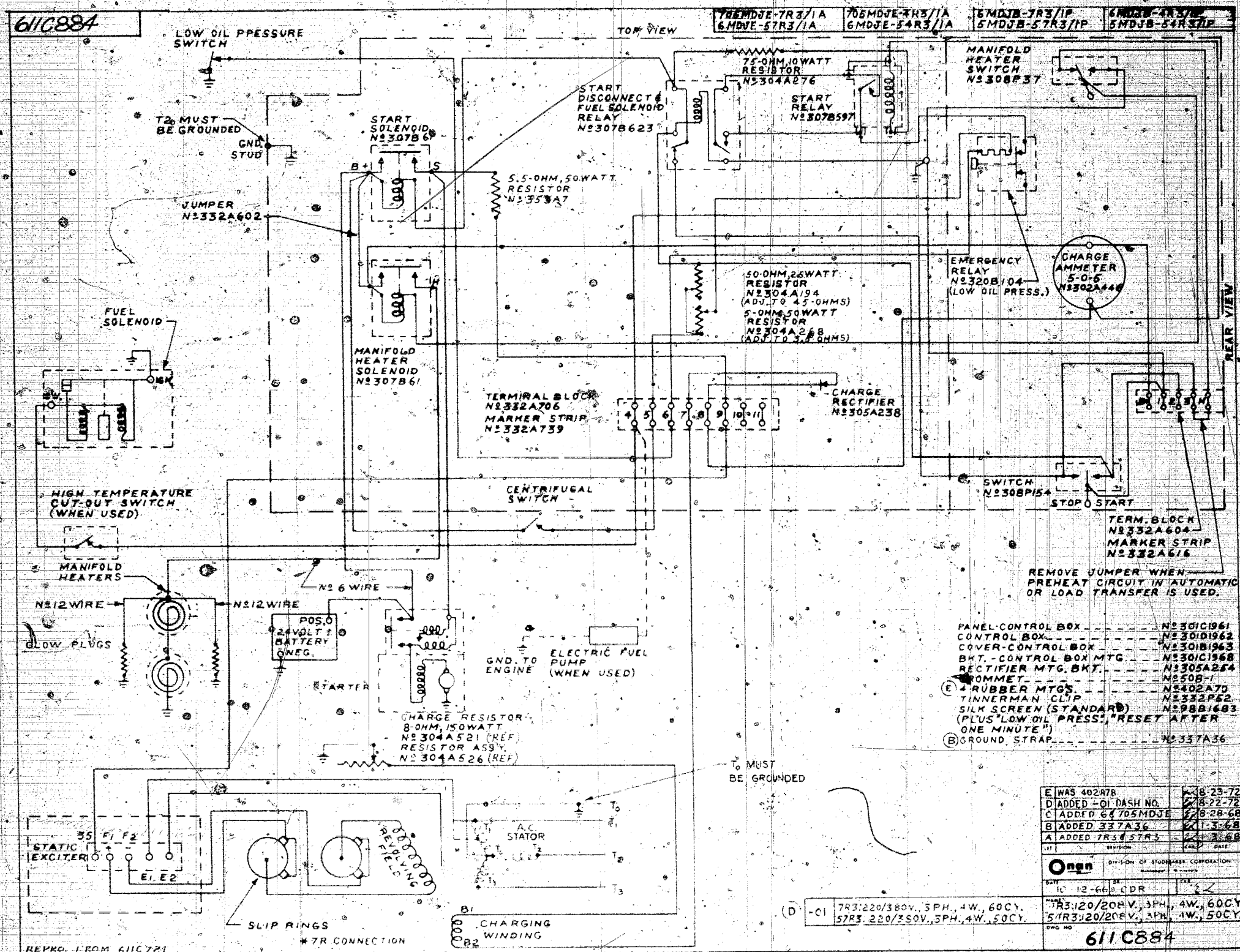
THE-101 PARTY LOW PRESS			
REF. DES.	PART NO.	QTY	DESCRIPTION
B1			STARTER & RELAY
B11			STARTER - 1V
B1			FUEL PUMP
B1			HEATER & HEATING SYSTEM KIT
H11			HEATER - 1/2 HP
H12			HEATER - 1/2 HP
H1	307A021		SOLENOID - FUEL
H1	304A009		RESISTOR - 100 OHM 1/2W
B1			SWITCH-CONTROL FUEL
B2			SWITCH-HEAT TANK
B3			SWITCH-LOW OIL PRESS
	CONTROL BOX PARTS		LIST
	305A486		RECTIFIER & LEAD ASSY
CH11	306A235 (REF.)		DIODE-RECTIFIER
	306A284 (REF.)		BRACKET-RECTIFIER KIT
K11	307B1040		RELAY-START 12VDC 10
K12	307B1040		RELAY-MANIFOLD HEATER
K13	307B023		RELAY-START 12VDC & FUEL
	307B1120		RELAY & LEAD ASSY
K14	307B097 (REF.)		RELAY-START 10V
K15	325B104		RELAY-EMERGENCY (LOW)
M11	305A440		DIODE-RECTIFIER 1/2W
	304A007		RESISTOR - 1/2W
M11	304A177 (REF.)		RESISTOR - 1/2W 1/2W
	300A304		SWITCH & LEAD KIT
N11	308P237 (REF.)		RELAY-MANIFOLD HEATER
	300B207		SWITCH & RELAY ASSY
N12	308P154 (REF.)		SWITCH-START STOP
N12	304A322 (REF.)		RESISTOR 1/2W 100
TB11	322A004		TERMINAL BLK
	322A010		MARKER STRIP
TB12	322A700		TERMINAL BLOCK
	322A730		MARKER STRIP
B1	330A1932		LEAD ASSY 1/2
B2	330A1400		LEAD ASSY 1/2
B3	330A2005		LEAD ASSY 1/2
B4	330A1040		LEAD ASSY 1/2
B5	330A1470		LEAD ASSY 1/2
B6	330A1400		LEAD ASSY 1/2
B7	330A174		LEAD ASSY 1/2
B8	332A002		JUMPER
	301C1901		PANEL-CONTROL BOX
	30101902		CONTROL BOX
	30101903		COVER-CONTROL BOX
	301C1908		BRACKET-CONTROL BOX KIT
	50BP1		GROMMET
	402A70		MOUNTS-BURGER
	337A52		STRAP-BURGER
	332P52		CLIP
	90B1803		SCREEN (ADD "LOW OIL PRESS"
			& RESET AFTER ONE MINUTE")
	90B1504		SCREEN (3 CR ONLY)

[REDACTED]		GENERAL REVISION		11-10	
A.	ADDED MARINE MODELS		10162	1597	
SUPERSEDES DUE SAME NO. AND		11-10-68			
REV.	#	DESCRIPTION	COMMENTS		
Ogn		DIVISION OF STUDENT INFORMATION			
DAT	11-25-69	JTM	PK		
TITLE	WIRING DIAGRAMS SCHEMATIC ENG GEN CONTROL				
DWG NO.	611C811				

50 MDJB **R/15
60 MDJB **R/15
20 MDJB **R/15
105 MDJB **R/15
50 DJB **R/0 P
60 DJB **R/96P

30 of 60 Cr

611C811



E	WAS 402A7B	18-23-72
D	ADDED -OI DASH NO.	18-22-72
C	ADDED 64 705MDJE	18-28-68
B	ADDED 337A36	1-3-68
A	ADDED 1756 57MA3	3-3-68
111	REVISION	DATE

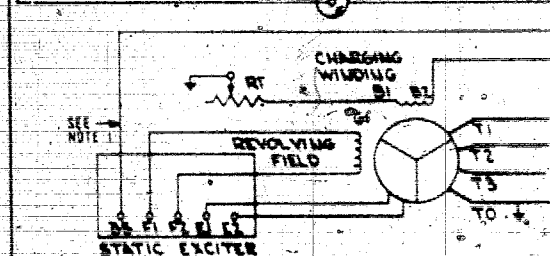
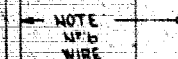
Ogen DIVISION OF FURNACE CORPORATION
 Manager ☐ Asst. Manager ☐

DATE: 10-12-66 SE: CDR CLK:

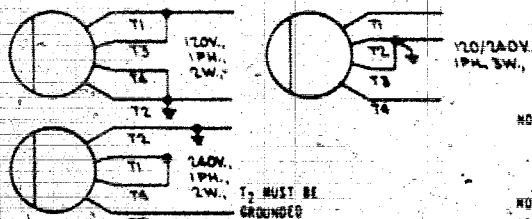
ANALYST: J3:120/200V, 3PH, 4W, 60CY
 5:1R3:120/200V, 3PH, 4W, 50CY

DWG NO. 611C884

INSIDE VIEW OF CONTROL BOX



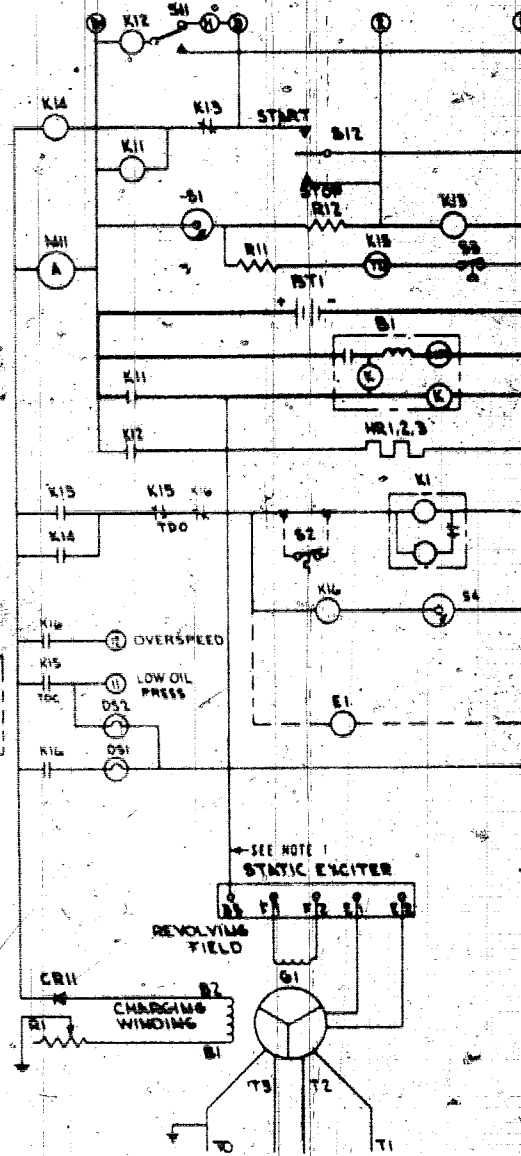
SINGLE PHASE AC LOAD CONNECTIONS (3CR)



NOTE: THIS WIRE USED FOR 3CR, 4R, 7R, 7XR ONLY

NOTE 2 UNLESS OTHERWISE NOTED, ALL COMPONENTS
ARE SHOWN IN THE UN-ENERGIZED POSITION

SCHEMATIC



REF. DES.	PART NO.	QTY	DESCRIPTION
B1			STARTER & SOLENOID
B21			BATTERY 12V
E1			FUEL PUMP
B1			GENERATOR & STATIC EXCITER ASSY
H11			HEATER - MANIFOLD
HR2 3			HEATER - GLD PLUM
H1	3070828		SOLENOID - FUEL
H1	304A908		RESISTOR - CHARGE ASSY
E1			SWITCH - CANTROL/MAIN
E2			SWITCH - HIGH TEMP
E3			SWITCH - LOW OIL PRESS
E4			SWITCH - OVERHEATED
CONTROL BOX PARTS LIST			
CR11	305A239		RECTIFIER - CHARGE
	309A293		RTG BRACKET - MULTIPLIER
DS1	322-4		LAMP - OVERHEATED
DS2	322-4		LAMP - LOW OIL PRESS
	322P88		HOLDER - LAMP
K11	30701048		RELAY - START SOLENOID
K12	30701048		RELAY - MANIFOLD HEATER
K13	3070853		RELAY - START OIL & FUEL SOLENOID
K14	3070857		RELAY - START
K15	329221		RELAY - EMERGENCY STOP
K18	307A830000P2		RELAY - EMERGENCY LATCH (OVERPRESS)
	307A1189		RELAY ASSY (H16)
K11	302A448		AMMETER - CHARGE 5-0-5
K11	304A217		RESISTOR - 1 OHM 10W
K12	304A217		RESISTOR - 10 OHM 10W
E11	308P37		SWITCH - MANIFOLD HEATER
E12	308P134		SWITCH - START STOP
TR11	332A804		TERMINAL BLOCK
	332A814		MARKER STRIP
JM	332A751		TERMINAL BLOCK
	332A1235		MARKER STRIP
W1	332A602		JUMPER
	301C2376		PANEL - CONTROL BOX
	301C1882		CONTROL BOX
	301C1883		COYLN - CONTROL BOX
	301C1888		RTG BRACKET - CONTROL BOX
	508P1		GROMMET
	402A70		RUBBER MOUNTS
	337A36		GROUND STRAP
	322P52		TINWELDER CLIP
	3081883		SILKSCHIRM (BLANK) HGT HIGH TEMP
	0001500		SILKSCHIRM (3CH ONLY)

A		ADDED 307A1129 ASSY(D)		2275742	
SUPERSEDES DWG SAME NAME DATED 5-11-67					
LET		REVISION		CR. PERS.	DATE

 DIVISION OF STUDENT CORPORATION

* WHEN USED

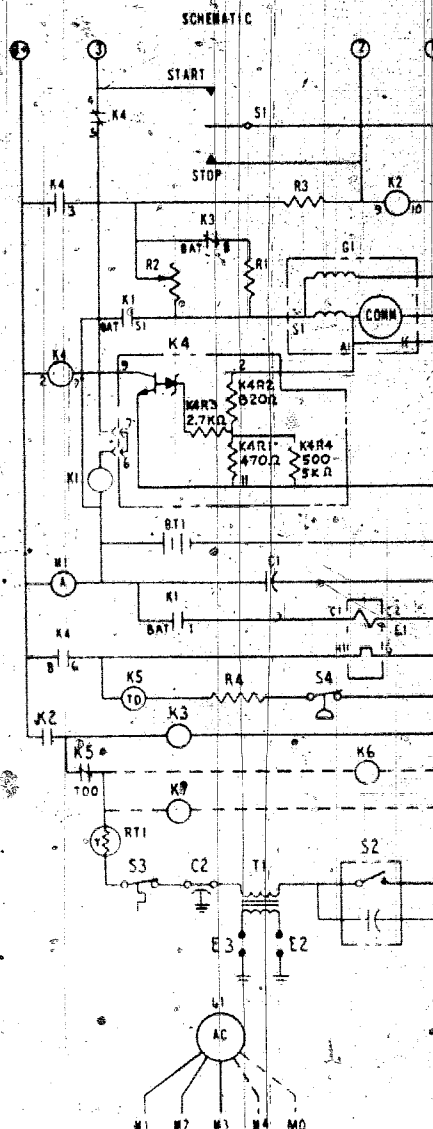
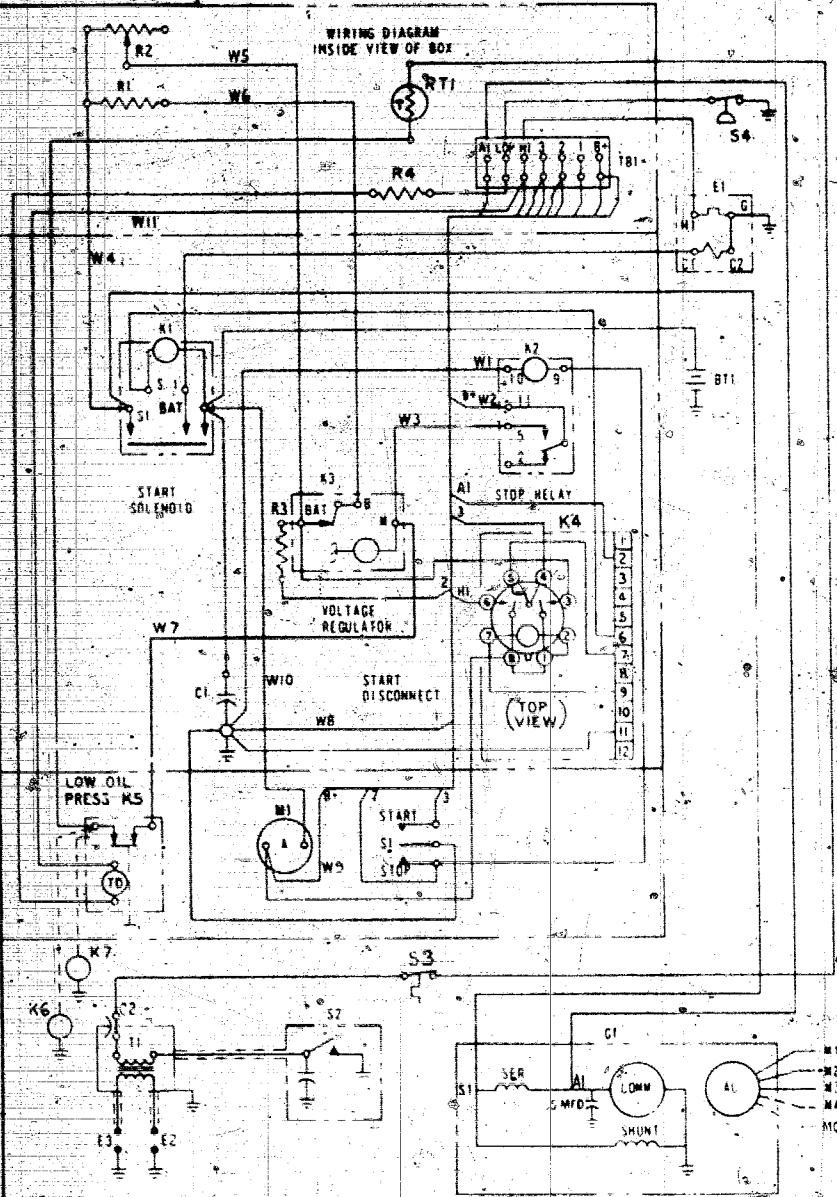
TO: 405 QJB R/6591P	DATE: 12-4-68	FROM: JTM	REF: 2
INFO: 608-00 R/6591P	SUBJECT: WIRING DIAGRAM SCHEMATIC ENG - GEN CONTROL		

30 OR 60 CY

611C934

KW	DASH
SCR	NO
ALL OTHERS	-01
	-02

611C1060



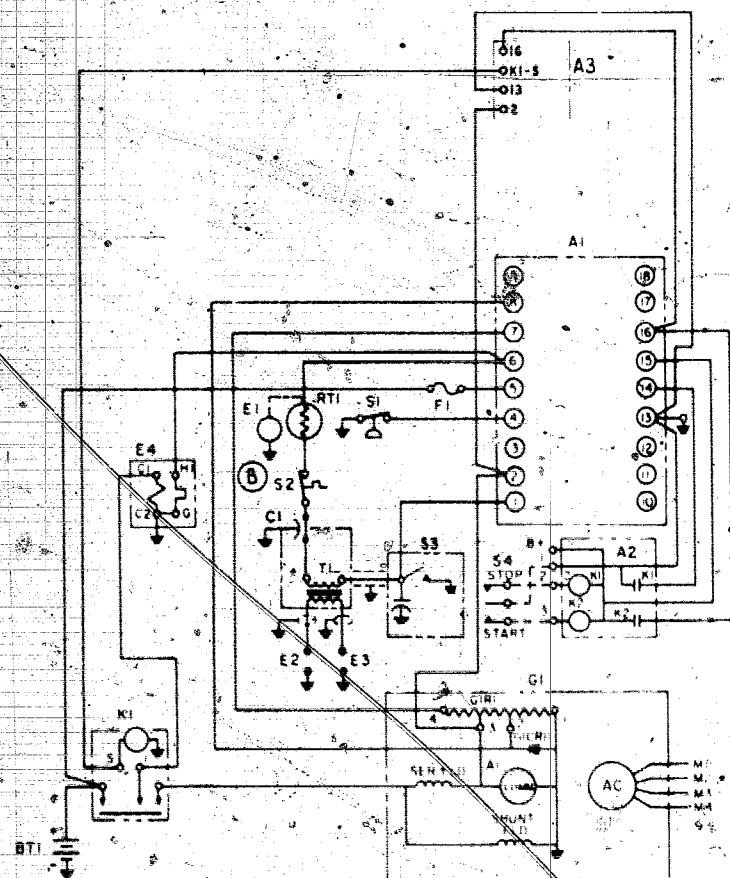
REV. DES.	PART NO.	QTY.	DESCRIPTION
B1	312A155	1	CAPACITOR 1.8 MFD
K1	307B045	1	RELAY-START SOLENOID
K2	307B1052	1	RELAY-STOP
K3	308B283	1	RELAY-2 STEP VOLTAGE REG
K4	308B231	1	RELAY ASSY-START DISC
	307B107A (REF)	1	RELAY-START DISCONNECT
	308A734 (REF)	1	AMPLIFIER-START DISC
K5	320B104	1	RELAY-LOW OIL PRESS
M1	302A50	1	AMMETER-CHARGE 10-0-10
R1	353A6	1	RESISTOR 100 50 W
R2	304A032	1	RESISTOR 100 100 W ADJ
R3	304A084	1	RESISTOR 2 LEAD ASSY
	304A251 (REF)	1	RESISTOR 300 5 W
R4	304A093	1	RESISTOR 2 LEAD ASSY
	304A217 (REF)	1	RESISTOR 10 10 W
RT1	304A092	1	RESISTOR 2 LEAD ASSY
	304A60 (REF)	1	RESISTOR-HYTERCO 1 720 25 W
S1	308A293	1	SWITCH 2 LEAD ASSY
	308B154 (REF)	1	SWITCH-START STOP
TB1	332A745	1	BLOCK-TERMINAL
	332A922	1	STRIP-MARKER
W1	336A2007	1	LEAD ASSY
W2	336A2005	1	LEAD ASSY
W3	336A2008	1	LEAD ASSY
W4	336A2013	1	LEAD ASSY
W5	336A2014	1	LEAD ASSY
W6	336A2015	1	LEAD ASSY
W7	336A1431	1	LEAD ASSY
W8	336A1045	1	LEAD ASSY
W9	336A1263	1	LEAD ASSY
W10	336A369	1	LEAD ASSY
W11	336A1262	1	LEAD ASSY
	323B093 (REF)	1	SOCKET 7SSV-START DISC
	301A306 (REF)	1	SPRING
	98A1076	1	SILKSCREEN-RECONNECTION (3CR ONLY)
	98A2276	1	SILKSCREEN-START STOP
	50B-1	1	GROMMET
	331-88	2	GROMMET
	50BP180	1	GROMMET
	301B3319	1	CONTROL BOX
	301B3302	1	COVER-CONTROL BOX

REV. DES.	PART NO.	QTY.	DESCRIPTION
B1	312A155	1	CAPACITOR 1.8 MFD
C2	307B045	1	RELAY-START SOLENOID
E1	307B1052	1	RELAY-STOP
E2 3	308B283	1	RELAY-2 STEP VOLTAGE REG
G1	308B231	1	RELAY ASSY-START DISC
K6	307B107A (REF)	1	RELAY-START DISCONNECT
K7	308A734 (REF)	1	AMPLIFIER-START DISC
S2	320B104	1	RELAY-LOW OIL PRESS
S3	302A50	1	AMMETER-CHARGE 10-0-10
S4	353A6	1	RESISTOR 100 50 W
T1	304A032	1	RESISTOR 100 100 W ADJ

12V REMOTE

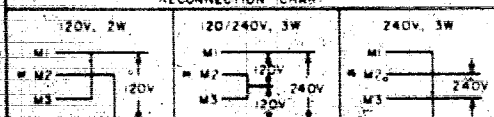
611C1096

WIRING DIAGRAM



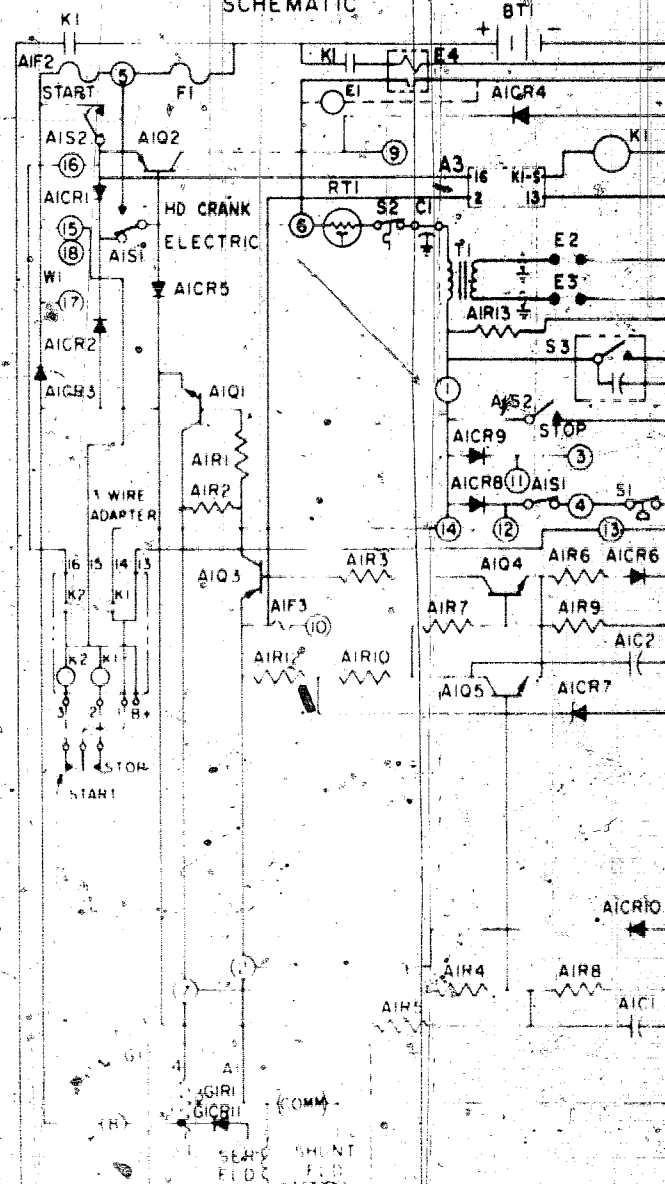
AC SLIP RINGS			VOLTAGE CODE	
M4	M3	M2M	M1	3C 120/240V, 1PH
M3	M2	MOM	M1	4 120/208V, 3PH
M3	M2	MOM	M1	5D 120/240V, 3PH
M3	M2	MOM	M1	7 220/380V, 3PH
M5	M2	MOM	M1	4X 277/480V, 3PH
COMM. END			BEARING END	

RECONNECTION CHART



* GROUND AC LEAD

SCHEMATIC



DASH NO	CHOKE	MODEL	WIRING HARNESS	CONTROL ASSY
01	THERMO MAG CHOKE	MCK	3380712	300C1002
-02	THERMO MAG CHOKE	MCK	3380712	300C1114

REF. DES.	PART NO.	QTY	PARTS LIST DESCRIPTION
SEE TAB		1	CONTROL ASSY
A1	300C080(REF)	1	CONTROL-GEN SET ASSY
A2	300C039(REF)	1	CONTROL-START ADAPTER (4 TO 3 WIRE)
A3	300C122(REF)	1	CONTROL-WIRE ADAPTER
W1	SEE TAB	1	WIRING HARNESS

PARTS LIST ENG. GEN. (REF.)		
BATTERY-12 VDC	1	
CAPACITOR-0.1 MFD	1	
PUMP-FUEL, WHEN USED	1	
SPARK PLUG	2	
CHOKE THERMO MAG	1	
GENERATOR	1	
DIODE 3A	1	
RESISTOR	1	
RELAY START SOLENOID	1	
FUSE 5A	1	
RESISTOR HYTENG-1, 2W, 25V	1	
SWITCH LOW OIL PRESS	1	
SWITCH HIGH WATER TEMP WHEN USED	1	
BREAKER & CAP ASSY	1	
SWITCH STANTY STOP (CUSTOMER REMOTE)	1	
COIL IGNITION	1	

96010119

REVISOR WIRING OF 611C1096/1-10-73
 A. ADDED A3
 SUPERSEDES DWG SAME NO DATED 2-18-73
 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)

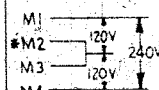
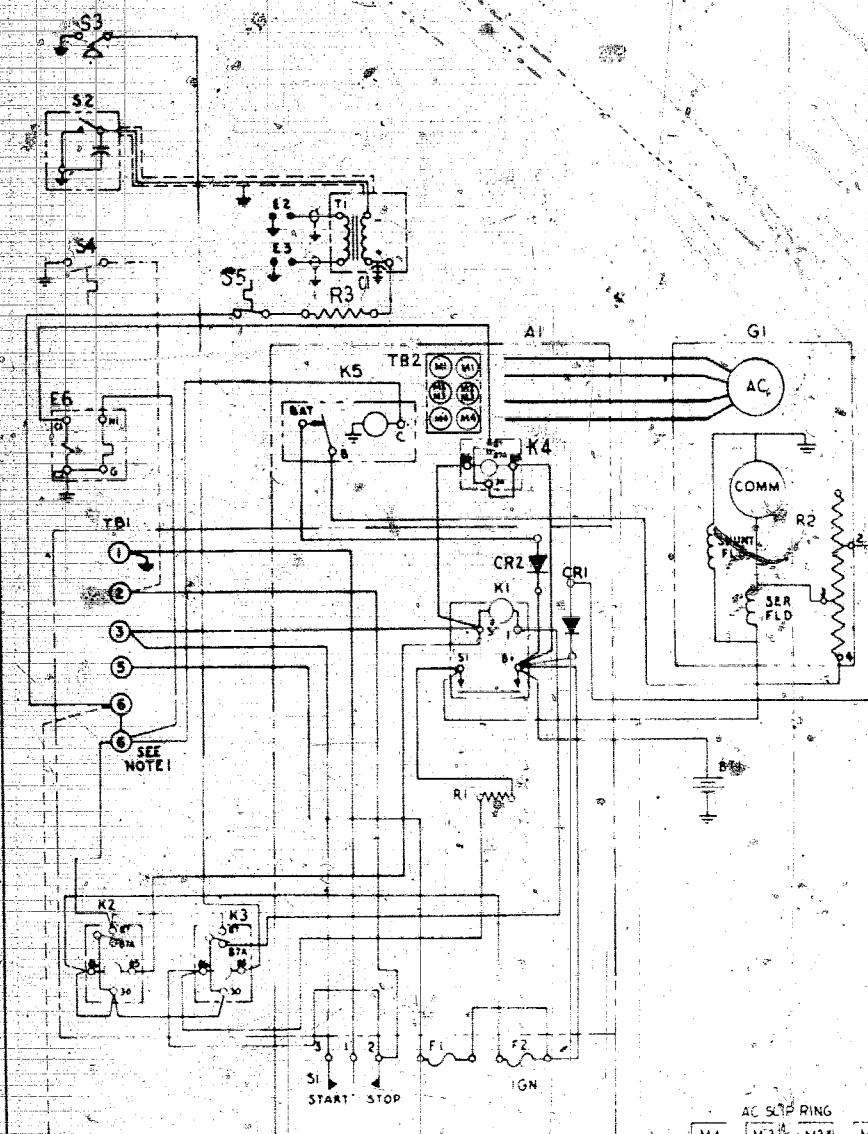
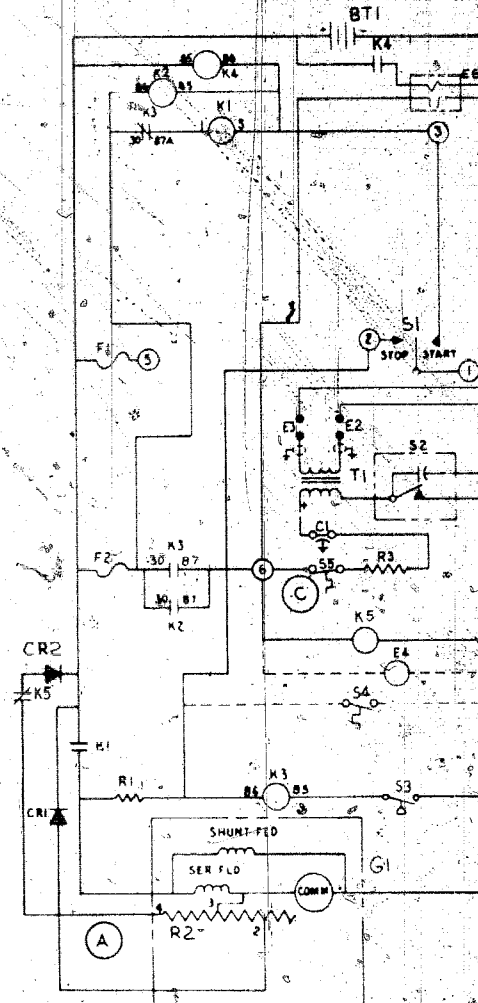
Original
 DIVISION OF STURGEON CORPORATION
 2-12-75 CDR [Signature] [Signature]

-01	40 & 6.5 MCK-3CR/IE	120/240V, 1 PH
-02	40 & 6.5 MCK-3CR/IF	120/240V, 1 PH

611C1096

7

BT



* GROUNDED
AC LEAD

AC 50° RING			
M4	M3	M2	M1
M3	M2	M0	M1
M3	M2	M0	M1
M3	M2	M0	M1
M3	M2	M0	M1
M3	M2	M0	M1
COMM			BEARING
END			END

VOLTAGE CODE
 3C 120/240V, 1PH
 4 120/208V, 3PH
 5D 120/380V, 3PH
 7 220/380V, 3PH
 4x 277/480V, 3PH
 7x 240/416V, 3PH

DASH NO.	CHOKE	MODEL	CONTROL ASSY
-01	THERMO MAG	MCCK	300-1645 (D)

NAME NEL	DATE IN	MODEL NO
PRICE NEL	400	6.5 MCKK-3CR/1G

✓	✓	✓	✓	✓	✓	✓	✓	120/240 V	
ME	SS	S	24	S				4 W	60 Hz

PARTS LIST

REF DES	PART NO	QTY	DESCRIPTION
A1	SEE TAB D	1	CONTROL ASSY
ALL PART NOS LISTED BELOW ARE REF ONLY			
B1		1	BATTERY - 12V
C1	312-0050	A	CAPACITOR
C1-2	357-0030	P	RECTIFIER (BATT. CHARGING)
E2		2	SPARK - PLUG
E4	149-1542	T	FUEL PUMP
F1		1	
F1	321-0175	P	FUSE HOLDER
	321-0174	2	FUSE - 5 AMP 32V
G1		1	GENERATOR
H1	307-1017	B	START SOLENOID
K2	307-1575	P	RELAY - CRANK-IGNITION
K3	307-1575	P	RELAY - RUN-IGNITION
R1	352-0161	P	RESISTOR - 100 ohm 5W
R2			RESISTOR
K5		P	RELAY-CHARGE
K4	307-1018	A	RELAY ASSY
S1	308-0383	A	SWITCH - START STOP
S2		1	SWITCH - BREAKER & CAP ASSY
S3		1	SWITCH - LOW OIL PRESS
	166-0643	1	COIL - IGNITION
TD1	332-0699	A	TERMINAL BLOCK
	98-3448	B	SILKSCREEN - WD (RBF)
S4		1	SWITCH - HIGH AIR TEMP
S5		1	SWITCH - HIGH WATER TEMP
E6		1	CHOKE - THERMO MAG
TB2	332-0236	A	TERMINAL BLOCK
	332-2117	A	STRIP-MARKER
R3	304-0060	A	RESISTOR-HYTEMCO 172 Ω 25W

NOTE

1. TBI-5 IS FOR 8. OR REMOTE BATTERY CONDITION METER
TBI-6 IS FOR A REMOTE RUNNING TIME METER OR
RUNNING LIGHT

C	55 WAS SHOWN NORM OPEN	W/H	SE	5-22-78
B	9B-3448 WAS 9B-3430	W/H	SE	6-13-78
A	ADDED LINE FROM R2-4 TO K5	W/H	SE	6-23-78
55	REVISION	DATE	CON	DATE

ORCA DIVISION OF OMAR CORPORATION
Minneapolis, Minnesota

DATE	12-21-77	DAY	THU	CDR
CONTROL - GEN SET (WIRING DIAGRAM)				

611-1142	611-1143	C
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611-1145

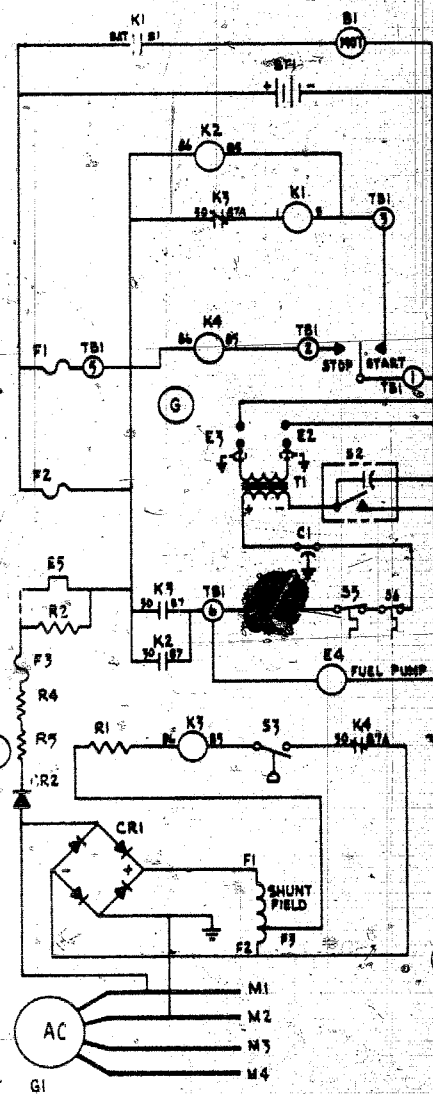
C

OPTIONAL DELUXE
REMOTE CONTROL (REF)OPTIONAL STANDARD
REMOTE CONTROL (REF)

SCHEMATIC

PARTS LIST

REF. DE.	PART NO.	QTY	DESCRIPTION
	300-1781	D	CONTROL ARMY
PARTS LIST CONTROL (REF)			
B1			BATTERY-12V
B1			MOTOR-STARTER
C1	312-0083	P	CONDENSER .0015 MFD 100 VDC
CR1	305-0883	P	RECTIFIER-BRIDGE
CR2	357-0830	P	RECTIFIER-SILICON (E-12A, 280V)
E2		2	PLUG-SPARK
E4			PUMP-FUEL
E5			CHOKE-ELCOT (GNAN)
F1-2	321-0174	2	FUSE-5 AMP 32V
F3	321-0178	P	HOLDER-FUSE
F3	321-0183	P	FUSE-5 AMP
G1			GENERATOR
K1	307-1817	B	RELAY-START SOLENOID
K2	307-1878	P	RELAY-CRANK IGNITION
K3	307-1878	P	RELAY-RUN IGNITION
K4	307-1878	P	RELAY STOP
R1	382-0181	P	RESISTOR-1000 OHM
R2			RESISTOR-250 OHM
R4	304-0080	A	RESISTOR-HYTERCO 1/2 W 250
R4, R5		2	RESISTOR-250 OHM
S1	308-0383	A	SWITCH-START STOP
S2			SWITCH-BREAKER & CAP ARMY
S3			SWITCH-LOW OIL PRESSURE
S3			SWITCH-HIGH WATER TEMP
S6			SWITCH-HIGH EXH TEMP
T1			COIL-IGNITION
TB1	332-0888	A	TERMINAL BLOCK
TB2	332-2103	A	YARNER STRIP
TB2	332-0226	A	TERMINAL BLOCK
TB2	332-2117	A	WARKER STRIP
A2	300-0986	B	CONTROL-DELUXE REMOTE
A3	300-0986	B	CONTROL-REMOTE STANDARD



NOTE:

1. TB1-5 IS FOR B+ OR REMOTE BATTERY CONDITION METER
TB1-6 IS FOR REMOTE RUNNING TIME METER OR
RUNNING LIGHT

RECONNECTION CHART 1PH, 4W



AC SLIP RING			
END		*	BEARING
M4	M3	M2	M1

3C 120/240V, 1PH

* = GOUNDED
AC LEAD

MCCK

120/240V

1PH

SERIAL

DATE

NCP

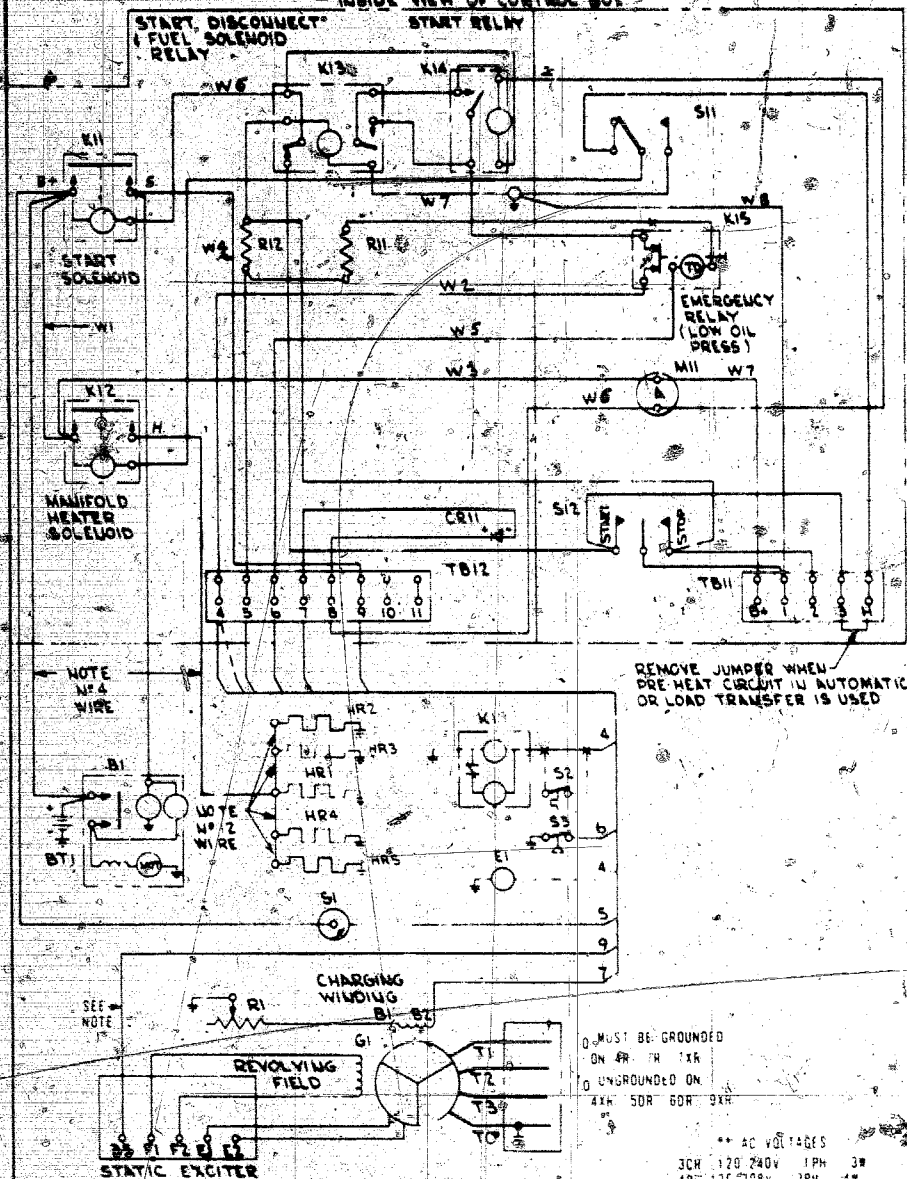
CONTROL - GEN SET
(WIRING DIAGRAM)

611-1145

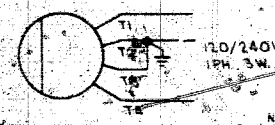
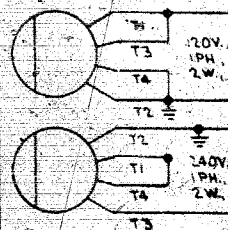
612C2334

WIRING DIAGRAM

INSIDE VIEW OF CONTROL BOX



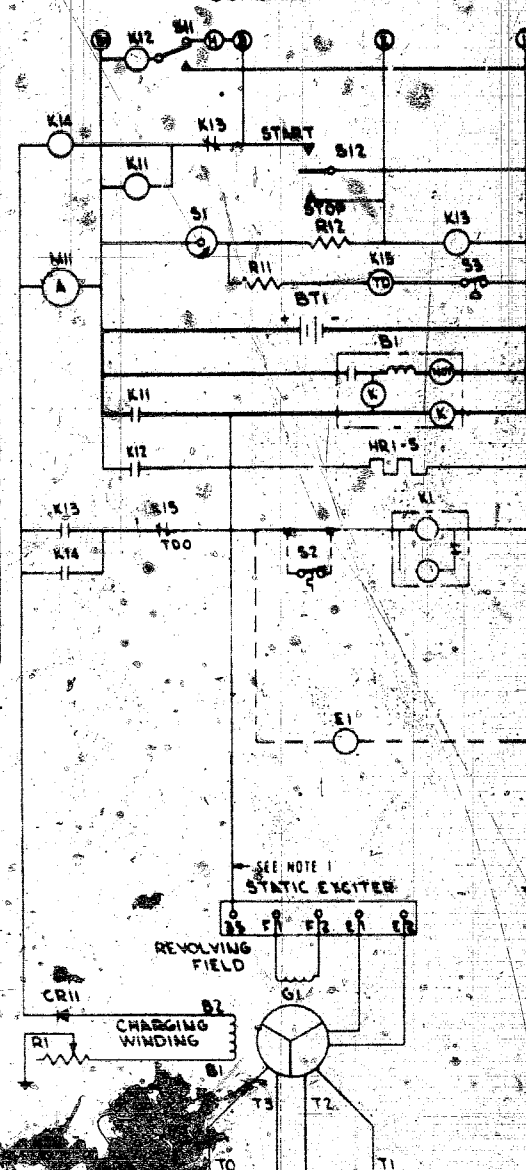
SINGLE PHASE AC LOAD CONNECTIONS (3CR)



NOTE 1 THIS WIRE USED FOR 3CR 3W 1PH 1R ONLY

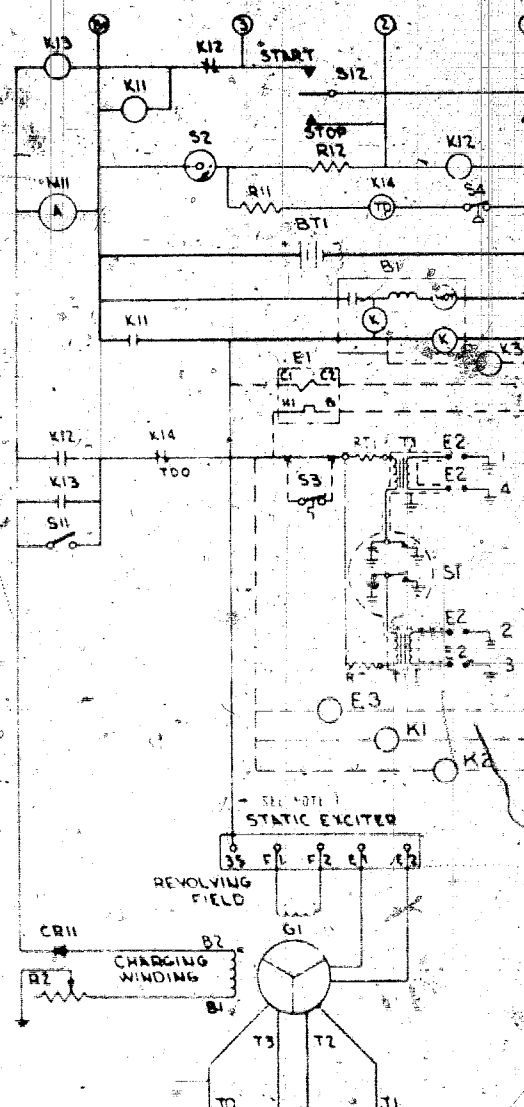
NOTE 2 UNLESS OTHERWISE NOTED ALL COMPONENTS ARE SHOWN IN THE DE ENERGIZED POSITION

SCHEMATIC



REF	USER	PART NO	QTY	DESCRIPTION
B1			1	STARTER & SOLENOID
CT1			1	BATTERY 12V
E1			1	FUEL PUMP
R1			1	GENERATOR & STATIC EXCITER ASSEMBLY
HR1			1	HEATER-MANIFOLD
HR2-S			1	HEATER-LOW OIL PRESS
K1		3070020	1	RELAY-START/STOP
K2		3040000	1	RELAY-START/STOP
K3			1	RELAY-START/STOP
K4			1	RELAY-START/STOP
K5			1	RELAY-START/STOP
K6			1	RELAY-START/STOP
K7			1	RELAY-START/STOP
K8			1	RELAY-START/STOP
CONTINUED ON PAGE LIST				
		300A400	1	RECTIFIER & LEAD ASSEMBLY
CR11		300A200(REF)	1	DIODE-RECTIFIER
		300A200(REF)	1	DIODE-RECTIFIER
K11		3070100	1	RELAY-START/STOP
K12		3070100	1	RELAY-START/STOP
K13		3070020	1	RELAY-START/STOP
		3070110	1	RELAY-START/STOP
K14		3070002(REF)	1	RELAY-START/STOP
K15		3200100	1	RELAY-START/STOP
K16		307A400	1	RELAY-START/STOP
K17		304A217	1	RELAY-START/STOP
		300A200	1	RELAY-START/STOP
K18		300P37(REF)	1	RELAY-START/STOP
		300P207	1	RELAY-START/STOP
K19		300A104(REF)	1	RELAY-START/STOP
K20		304A202(REF)	1	RELAY-START/STOP
CONTINUED ON PAGE LIST				
TR11		332A004	1	TERMINAL BLOCK
		332A010	1	TERMINAL BLOCK
TR12		332A700	1	TERMINAL BLOCK
		332A720	1	TERMINAL BLOCK
W1		332A000	1	WIRE
W2		330A1032	1	WIRE
W3		330A1400	1	WIRE
W4		330A2000	1	WIRE
W5		330A1040	1	WIRE
W6		330A1470	2	WIRE
W7		330A1400	2	WIRE
W8		330A170	1	WIRE
CONTINUED ON PAGE LIST				
		301C1001	1	COVER-CONTROL BOX
		301C1002	1	COVER-CONTROL BOX
		301C1003	1	COVER-CONTROL BOX
		301C1000	1	COVER-CONTROL BOX
		301C2400	1	COVER-CONTROL BOX
		300P1	1	COVER-CONTROL BOX
		402A70	4	COVER-CONTROL BOX
		337A36	1	COVER-CONTROL BOX
		301A2400	1	COVER-CONTROL BOX
		301A2407	1	COVER-CONTROL BOX
		300P117	1	COVER-CONTROL BOX
		300P1003	1	COVER-CONTROL BOX
		300A1500	1	COVER-CONTROL BOX

SCHEMATIC



ENG - GEN PARTS LIST (REF)			
REF. DES.	PART NO.	QTY.	DESCRIPTION
B1		1	STARTER & SOLENOID-ENGINE
BT1		1	BATTERY 12V
E1		1	CHOKE-THERMO WAG
E2		4	SPARK PLUG
E3		1	FUEL PUMP
G1		1	GENERATOR & STATIC EXCITER ASSY
K1		1	SOLENOID-FUEL
K2		1	SOLENOID-DAY TANK FUEL
K3		1	SOLENOID-PRIMER
R1	30A469	2	RESISTOR-HITENDO 1.7 A, 25W
R2	30A505	1	RESISTOR-CHARGE ASSY
S1		1	BREAKER ASSY
S2		1	SWITCH-CENTRIFUGAL
S3		1	SWITCH-HIGH TEMP
S4		1	SWITCH-LOW OIL PRESS
T1		2	COIL-IGNITION
CONTROL BOX PARTS LIST			
	30SA498	1	RECTIFIER & LEAD ASSY
CR1	30SA239(REF.)	1	DIODE-RECTIFIER
	30SA254(REF.)	1	BRACKET-RECTIFIER
K1	30T81046	1	RELAY-START SOLENOID
K2	30T8623	1	RELAY-START DISC & ION
	30T81920	1	RELAY & LEAD ASSY
K3	30T8687(REF.)	1	RELAY-START ION
K4	30T8104	1	RELAY-EMERGENCY (LGP)
M1	30ZM448	1	AMMETER-CHARGE S-O-S
R1	30A4217	1	RESISTOR 1 OHM 10 W
	30CA305	1	SWITCH & LEAD ASSY
S1	30BP2(REF.)	1	SWITCH-MAND CRANK
	30PB307	1	SWITCH & RESISTION ASSY
S2	30BA154(REF.)	1	SWITCH-START STOP
R2	30A432(REF.)	1	RESISTOR-15 OHM
T1	332A537	1	TERMINAL BLOCK
	332A568	1	MARKER STRIP
T-12	30AB756	1	TERMINAL BLOCK
	33-4719	1	SHIM-MARKER
	33GA1332	1	LEAD ASSY B
A2	33GA146E	1	LEAD ASSY 3-1-2
A3	33GA2665	1	LEAD ASSY 7
A4	33AI345	1	LEAD ASSY 8
A5	33GA147B	2	LEAD ASSY 9
A6	33GA1485	2	LEAD ASSY 12
A7	33BA149	1	LEAD ASSY 12
	30B246	1	SEAL KIT FOR OUT BOX
	33C135	1	PANEL-CONTROL BOX
	30F01362	1	CONTROL BOX
	30I31563	1	COVER-CONTROL BOX
	30B1564	1	BRACKET-CONT BOX NIB (LN)
	30B1265	1	BRACKET-CONT BOX NIB (LN)
	30B1267	1	OUTPUT BOX
	30B1266	1	COVER-OUTPUT BOX
	30BP117	1	GROMMET
	9901482	1	SILASCREEN 1400 LOW OIL PRESS & RESET
	9901589	1	SILASCREEN (JCN)
	50B-9	1	GROMMET
	339B375	1	SUPPRESSION DWG

• 雷州府志 卷五

APSD DRG SAME NO DATED 4-22-66

100-443887-100

Only DIVISION OF LABORATORY TRANSPORT

04	Memorandum, May 1946
1	1

12-28-70 BUL 1-2

WIRING DIAGRAM: SCHWARTZ
ELEC - GEN CONTROL

ENG - GEN CONTROL

61202750

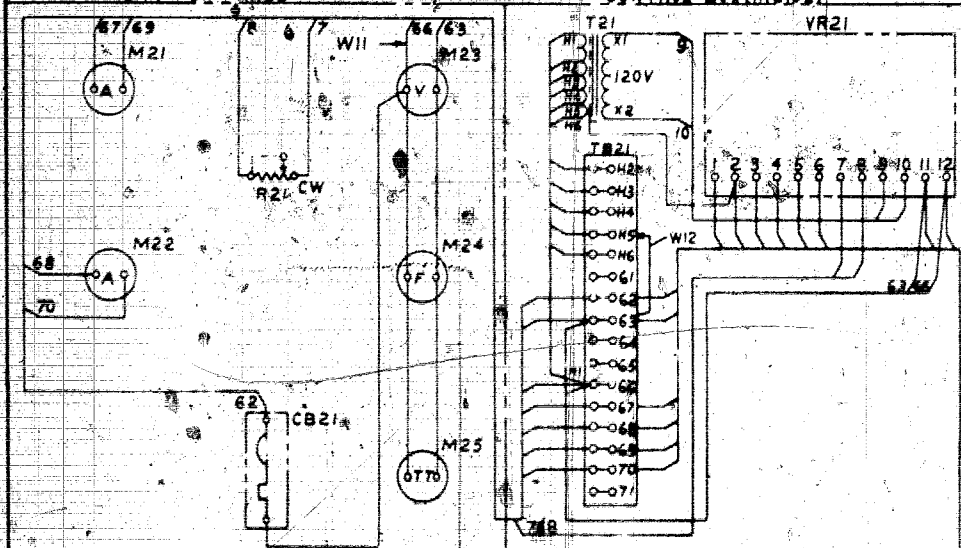
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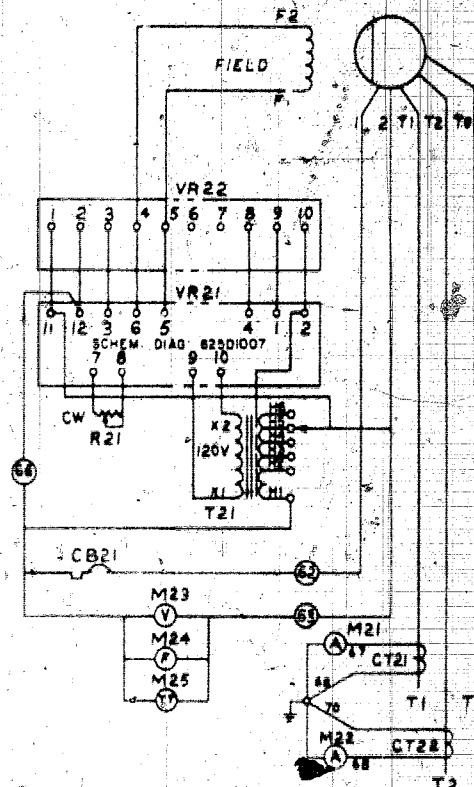
Figure 1. The effect of the number of iterations on the accuracy of the proposed algorithm. The accuracy of the proposed algorithm increases with the number of iterations. The accuracy of the proposed algorithm is 0.9999 after 100 iterations.

612C-384

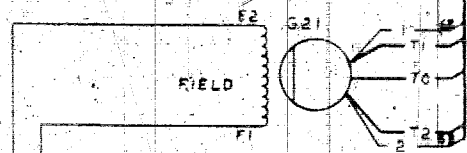
REAR VIEW PANEL WIRING DIAGRAM



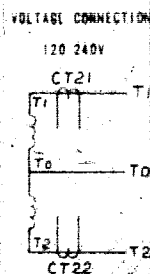
SCHEMATIC DIAGRAM

[illegible]

6/20/84



VR22(MOUNTED IN GEN)



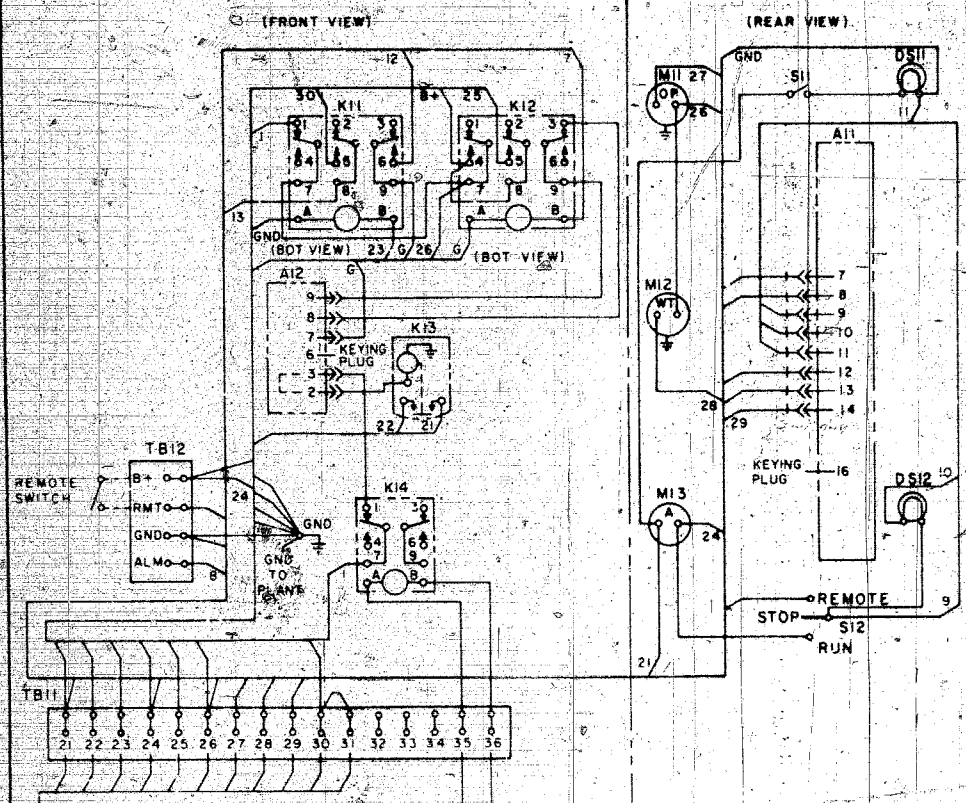
NOTE:
UNLESS OTHERWISE NOTED ALL
COMPONENTS ARE SHOWN IN THE

KW	00HZ	721000
28-45	-01	-02

REV	REVISION	DATE
1	ORIGINAL	10-1-71
2	REVISION	10-1-71
3	REVISION	10-1-71
4	REVISION	10-1-71
5	REVISION	10-1-71
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97	REVISION	10-1-71
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99	REVISION	10-1-71
100	REVISION	10-1-71

612C4401

WIRING DIAGRAM

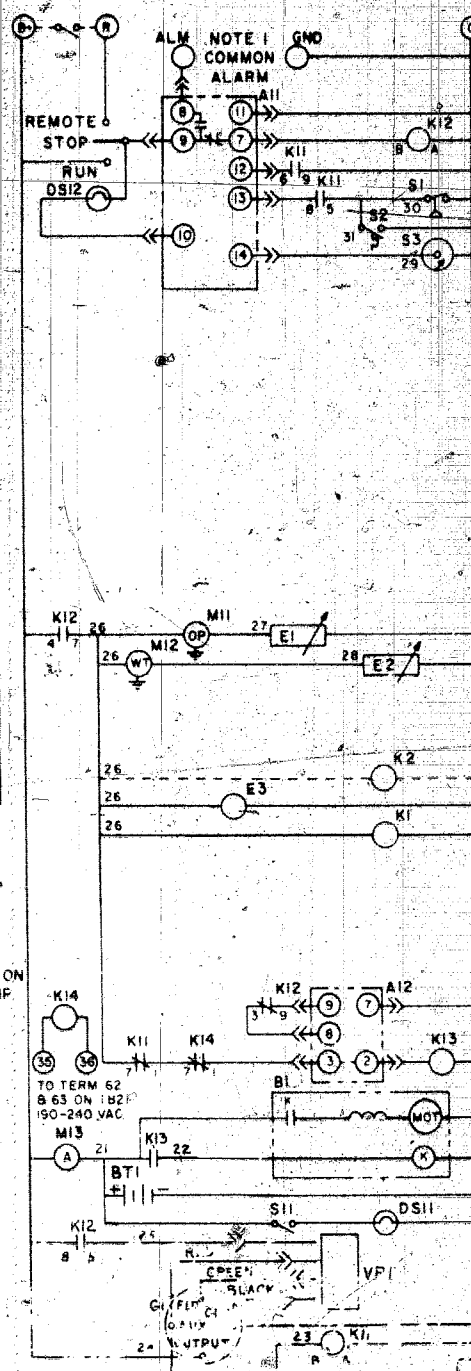


NOTES:

1. REMOTE ALARM CIRCUIT RATED 5AMP MAX
2. SHUTDOWN & ALARMS
- 2.1 STD CONTROL
- 2.1.1 SAFETY SHUTDOWN & ALARM ON OVERCRANK, OVERSPEED, HI ENG TEMP & LO OIL PRESS

3. S3 OVERSPEED SWITCH MOUNTED IN GENERATOR END BELL
4. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION

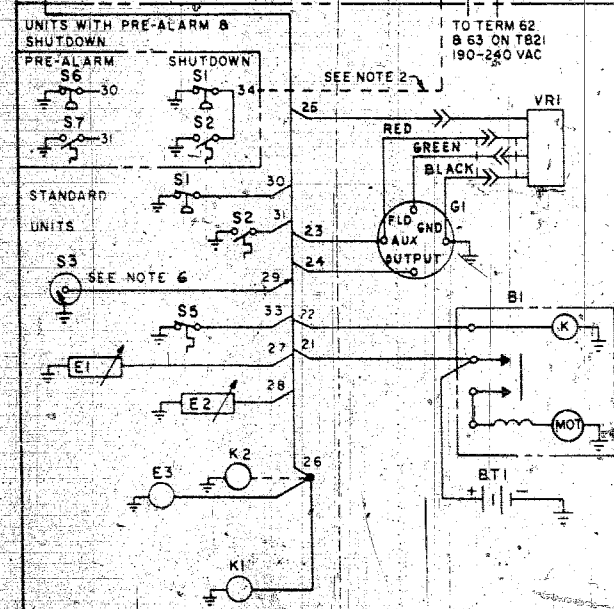
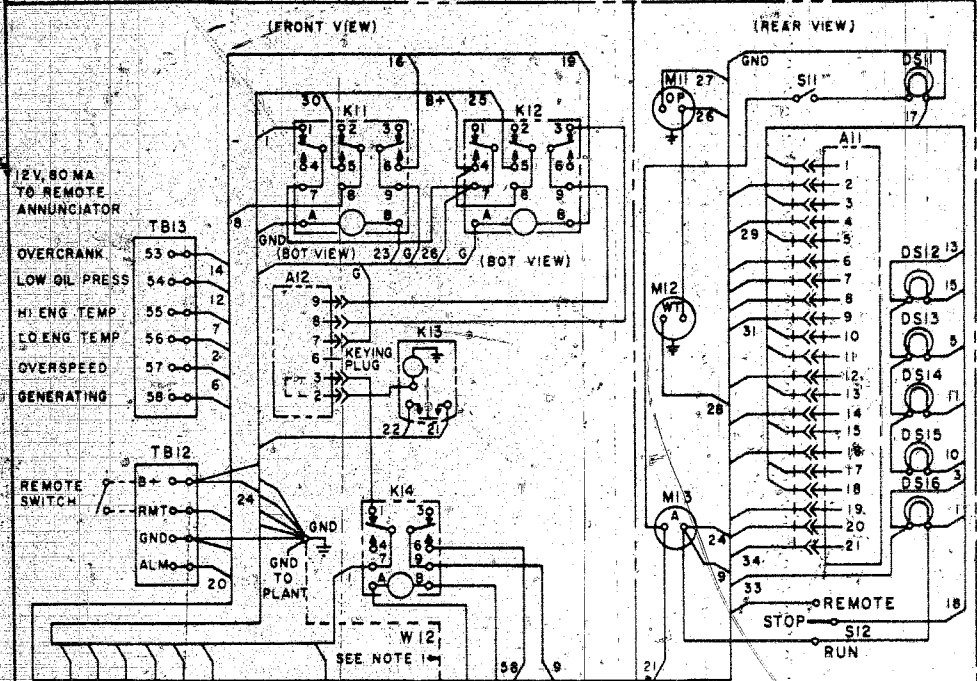
SCHEMATIC DIAGRAM



ENGINE		PARTS LIST (REF)	
REF. DES.	PART NO.	QTY.	
B1		1	STARTER & SOLENOID
BT1		1	BATTERY-12V
E1	193A108	1	SENDER-OIL PRESSURE
E2	193A109	1	SENDER-WATER TEMP
E3		1	FUEL PUMP
G1		1	ALTERNATOR
K1		1	SOLENOID-ENG STOPPING
K2		1	SOLENOID-WATER
S1		1	SWITCH-LOW OIL PRESSURE
S2		1	SWITCH-HIGH WATER TEMP
S3		1	SWITCH-OVERSPEED
VR1		1	VOLTAGE REGULATOR
CONTROL BOX PART LIST			
A11	308C79	1	MONITOR-ENGINE CONTROL
A12	308C733	1	CONTROL-STD CRANKER
DS11	322-4	1	LAMP-PANEL
	322P-49	1	HOLDER-LAMP
DS12	322A128	1	LAMP-FAULT
K11	30781058	1	RELAY-START DISCONNECT
K12	30781058	1	RELAY-IGNITION
K13	30781051	1	RELAY-START SOLENOID
K14	30781051	1	RELAY-STARTER PROTECTION
M11	1938107	1	GAUGE-OIL PRESSURE
M12	1938106	1	GAUGE-WATER TEMP
M13	307A61	1	AMMETER-CHARGE 30-0-30
S11	308-2	1	SWITCH-PANEL LIGHT
	308A3	1	PLATE-INSTR ON/OFF
S12	308P138	1	SWITCH-SELECTOR
TR11	332A795(REF)	1	TERMINAL BLOCK
	332A1241	1	MARKER STRIP
TR12	332A537(REF)	1	TERMINAL BLOCK
	332A1239	1	MARKER STRIP
W11	338D528	1	WIRING HARNESS
	301D3253	1	BRACKET-ENG CONTROL
	301C3165	1	PANEL-ENGINE CONTROL
	545A25	1	PARTS LIST-CONT H/W
	332-1276	2	PLUG-KEYING
	-98B2178	1	SILKSCREEN
	307P1157	3	SPRING-RELAY HALDDOWN (K11, 12, 14)

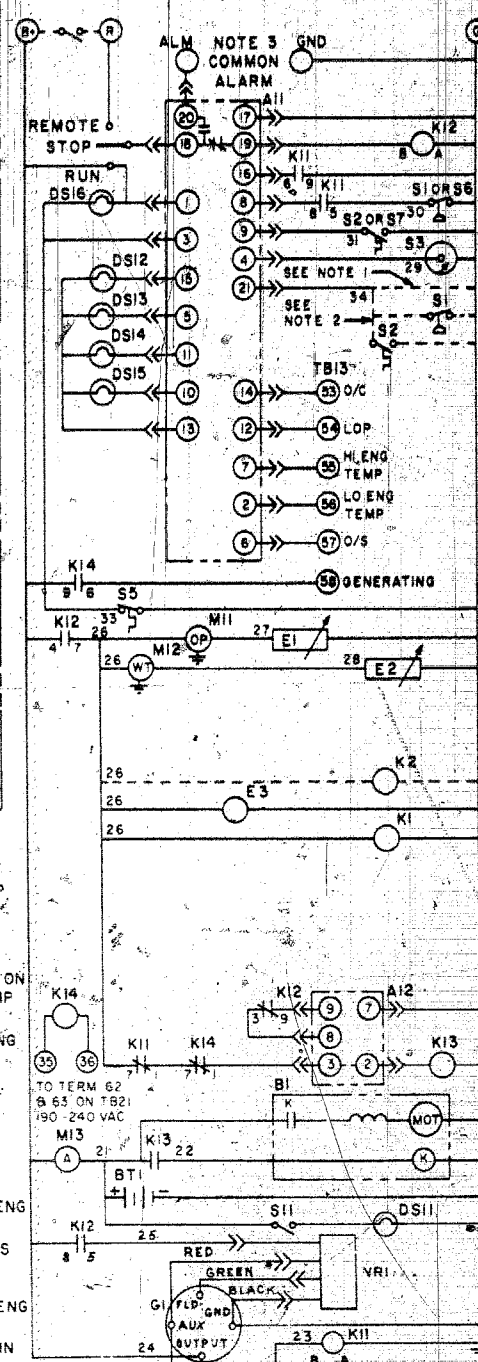
612C4704

WIRING DIAGRAM



- NOTES:
1. W12 USED ON STD CONTROL ONLY
 2. USED ON PRE-ALARM CONTROL ONLY
 3. REMOTE ALARM CIRCUIT RATED 5AMP MAX
 4. SHUTDOWN & ALARMS
 - 4.1.1 SAFETY SHUTDOWN & ALARMS ON OVERCRANK, OVERSPEED, HI ENG TEMP & LO OIL PRESS
 - 4.1.2 SAFETY ALARM ONLY ON LO ENG TEMP
 5. PRE-ALARM CONTROL
 - 5.1.1 SAFETY PRE-ALARMS ON HI ENG TEMP & LO OIL PRESS
 - 5.1.2 SAFETY SHUTDOWN & ALARMS ON OVERCRANK, OVERSPEED, HI ENG TEMP & LO OIL PRESS
 - 5.1.3 SAFETY ALARM ONLY ON LO ENG TEMP
 6. S3 OVERSPEED SWITCH MOUNTED IN GENERATOR END BELL
 7. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION

SCHEMATIC DIAGRAM



REF DES	PART NO	QTY	DESCRIPTION
B1	3000601	1	STARTER & FUEL INJECTOR
B11	3000601	1	BATTERY-12V
E1	193A108	1	SENDER-OIL PRESSURE
E2	193A104	1	SENDER-WATER TEMP
E3	3000601	1	FUEL PUMP
G1	3000601	1	ALTERNATOR
K1	3000601	1	SOLENOID-ENG STOPPING
K2	3000601	1	SOLENOID-WATER
S1	3000601	1	SWITCH-LOW OIL PRESSURE
S2	3000601	1	SWITCH-HIGH WATER TEMP
S3	3000601	1	SWITCH-OVERSPEED
S5	3000601	1	SWITCH-LOW WATER TEMP
S6	3000601	1	SWITCH-LOW OIL PRESS (PRE-ALARM)
S7	3000601	1	SWITCH-HIGH WATER TEMP (PRE-ALARM)
VR1	3000601	1	VOLTAGE REGULATOR
W1	3000601	1	CONTROL BOX PARTS LIST
A11	3000601	1	MONITOR-ENGINE CONTROL
A12	3000601	1	CONTROL-STD CRANKER
3000601	3000601	1	CONTROL-CYCLE CHANGER
3000601	3000601	1	PLUG-KEYING
DS11	3000601	1	LAMP-PANEL
DS12	3000601	1	HOLDER-LAMP
DS13	3000601	1	LAMP-OVERCRANK
DS14	3000601	1	LAMP-OVER-PEED
DS15	3000601	1	LAMP-LO OIL PRESS
DS16	3000601	1	LAMP-HI ENG TEMP
DS17	3000601	1	LAMP-LO ENG TEMP
K11	3000601	1	RELAY-START DISCONNECT
K12	3000601	1	RELAY-IGNITION
K13	3000601	1	RELAY-STARTY SOLENOID
K14	3000601	1	RELAY-STARTER PROTECTION
M11	3000601	1	GAUGE-OIL PRESSURE
M12	3000601	1	GAUGE-WATER TEMP
M13	3000601	1	AMMETER-CHARGE 30-0-30
S11	3000601	1	SWITCH-PANEL LIGHT
S12	3000601	1	SWITCH-SELECTOR
TB11	3000601	1	TERMINAL BLOCK
TB12	3000601	1	MARKER STRIP
TB13	3000601	1	TERMINAL BLOCK
TB14	3000601	1	MARKER STRIP
W11	3000601	1	WIRING HARNESS
W12	3000601	1	LEAD ASSY (STD CONT ONLY)
W13	3000601	1	PARTS LIST-CONT GEN (ENG)
3000601	3000601	1	BRACKET-ENG CONTROL
3000601	3000601	1	PANEL-ENG CONTROL
3000601	3000601	1	SILKSCREEN
3000601	3000601	3	SPRING-RELAY HOLDDOWN (KIT, 12, 14)

WHEN USED

STD CONTROL	CYCLE CRANKER	2 WIRE REMOTE STARTING
-01	-03	-04
PRE-ALARM		

WAS 022-74 & 322-73

3-25-72 CIP

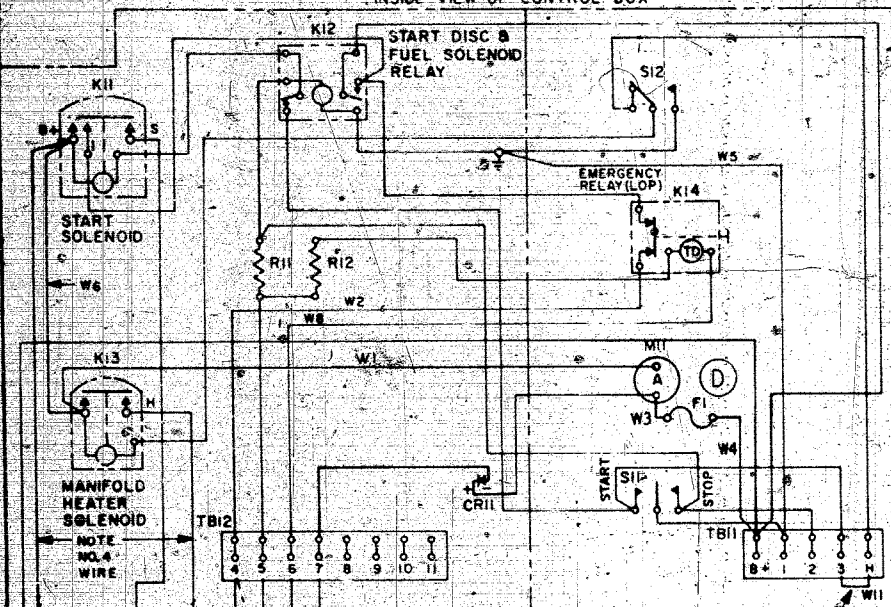
CONTROL GEN SET ENGL (2V/DESEL) (WIRING DIAGRAM)

612C4704

612-4792

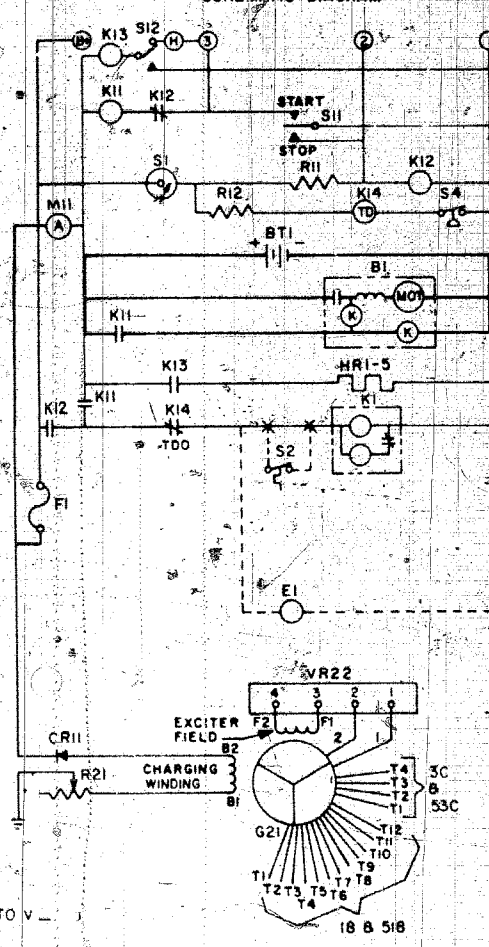
WIRING DIAGRAM

INSIDE VIEW OF CONTROL BOX



REMOVE JUMPER WHEN
PRE-HEAT CIRCUIT IN AUTOMATIC
OR LOAD TRANSFER IS USED

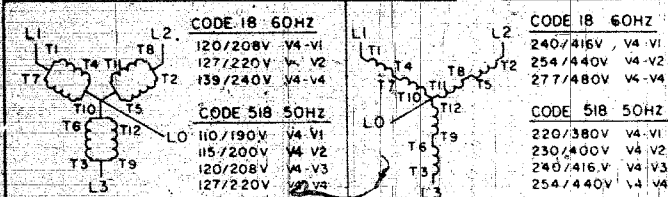
SCHEMATIC DIAGRAM



NOTES

1. CONNECT LEAD W10 FROM V4 TO V-
PER VOLTAGE CHART BELOW.
2. CONNECT X1 TO 5 FOR CODE 53C B 518 (50HZ)
CONNECT X1 TO 6 FOR CODE 3C B 18 (60HZ)
3. UNLESS OTHERWISE NOTED, ALL COMPONENTS
ARE SHOWN IN THE DE-ENERGIZED POSITION.

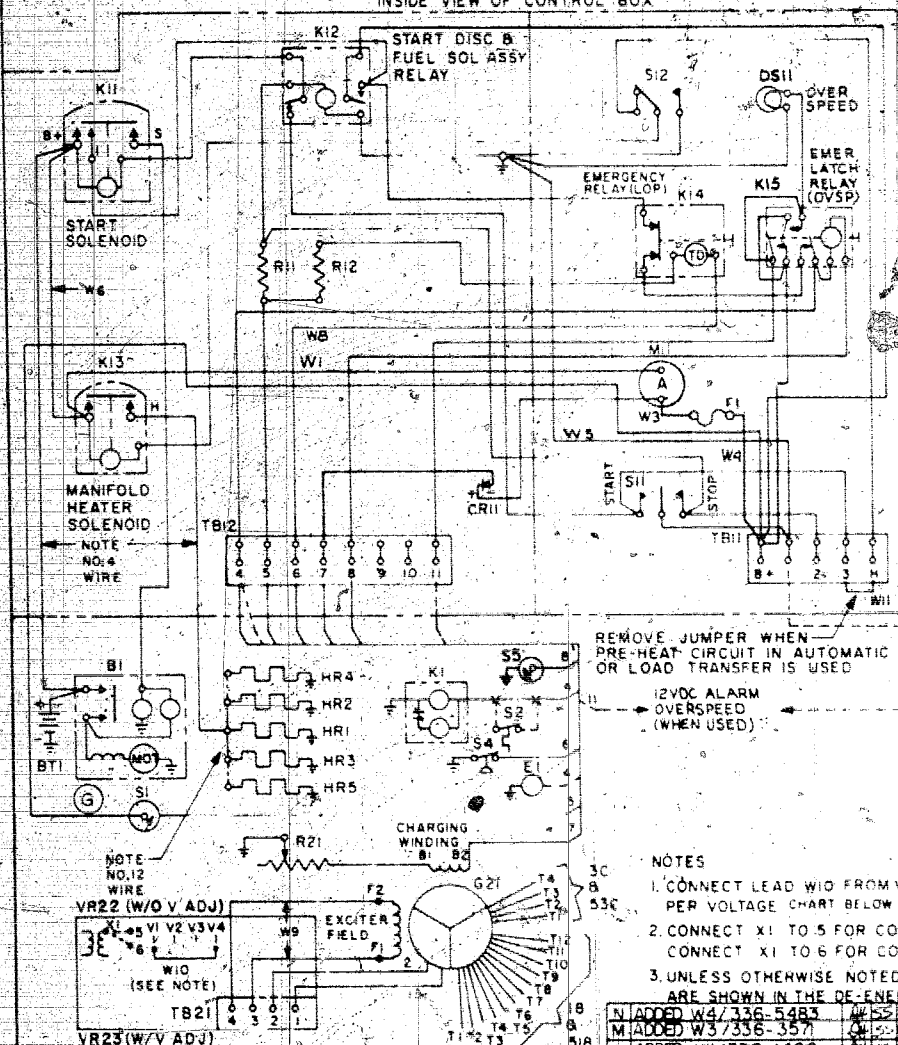
G ADDED W4/336-5483 24/55/842-7



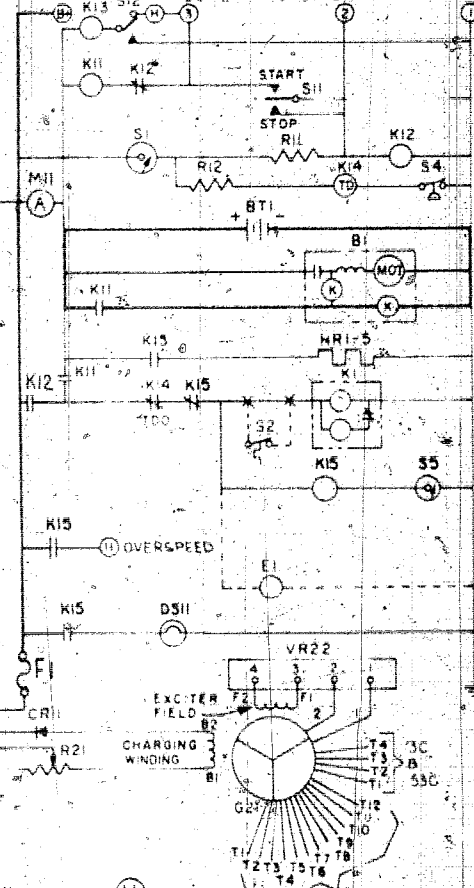
612-4853

WIRING DIAGRAM

INSIDE VIEW OF CONTROL BOX



SCHEMATIC DIAGRAM



ENG PARTS LIST (REF)

REF	DES	QTY	NO	DESCRIPTION
B1	STARTER & SOLENOID	1		
BT1	BATTERY 12V	1		
E1	FUEL PUMP	1		
HR1	HEATER-MANIFOLD	1		
HR2,3	HEATER-GLOW PLUG (2 CYL)	2		
HR2,5	HEATER-GLOW PLUG (4 CYL)	4		
K1	SOLENOID-FUEL	1		
S1	SWITCH-CENTRIFUGAL	1		
S2	SWITCH-HIGH TEMP	1		
S4	SWITCH-LOW OIL PRESS	1		
S5	SWITCH-OVERSPEED	1		

AC PARTS LIST

QTY	DES	NO	DESCRIPTION
G21	GENERATOR	1	
VR21	RESISTOR ASSY	1	
VR22	REGULATOR ASSY-VOLTAGE	1	
VR23	REGULATOR ASSY-VOLTAGE	1	
W9	WIRING HARNESS (F1-F2)	1	

CONTROL BOX PARTS LIST

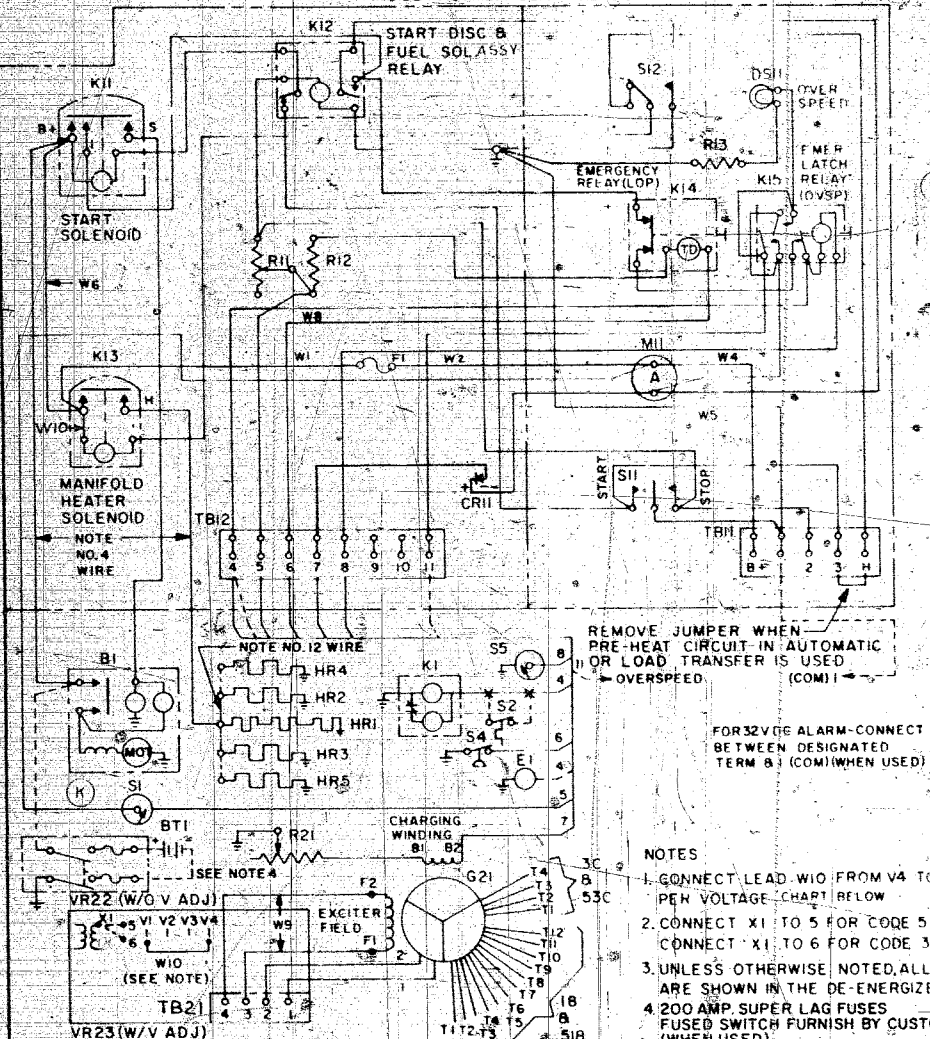
QTY	DES	NO	DESCRIPTION
CR11	RECTIFIER & LEAD ASSY	1	
DS11	LAMP-OVERSPEED	1	
DS12	HOLDER-LAMP	1	
F1	FUSE 10 AMP	1	
F2	HOLDER-FUSE	1	
K12	RELAY / LEAD ASSY	1	
K13	RELAY-MANIFOLD HEATER	1	
K14	RELAY-EMERGENCY (LOPI)	1	
K15	RELAY-ASSY	1	
K16	RELAY-EMER LATCH (OVSP)	1	
K17	RELAY-START SOLENOID	1	
M11	AMMETER-CHARGE 5-0-5	1	
R11, R12	SWITCH & RESISTOR ASSY	1	
R13	RESISTOR-LEAD	1	
S12	SWITCH & LEAD ASSY	1	
TB11	TERMINAL BLOCK	1	
TB12	MARKER STRIP	1	
TB13	TERMINAL BLOCK	1	
TB14	MARKER STRIP	1	
W1	LEAD ASSY	1	
W2	LEAD ASSY	1	
W3	LEAD ASSY	1	
W4	LEAD ASSY	1	
W5	LEAD ASSY	1	
W6	JUMPER	1	
W7	LEAD ASSY	1	
W8	JUMPER	1	
W9	LEAD ASSY	1	
W10	LEAD ASSY	1	
W11	LEAD ASSY	1	
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W94	LEAD ASSY	1	
W95	LEAD ASSY	1	
W96	LEAD ASSY	1	
W97	LEAD ASSY	1	
W98	LEAD ASSY	1	
W99	LEAD ASSY	1	
W100	LEAD ASSY	1	

(CONT.)

* WHEN USED		A KIZ MAR 207-0423	
DIESEL		BLIDS SAME DWG NO. DATED 9-27-73	
MODEL NO		Onn	
4.510KWK-53K/3945AA		5-10-76	
4.510KWK-51K/3945AA		ADS	
4.510KWK-51K/3945AA		CONTROL-GEN SET	
4.510KWK-18K/3945AA		(WIRING DIAGRAM)	
6.010K/12.0KWK-53K/3945AA		SERIA FROM DWG NO	
7.010K/12.0KWK-51K/3945AA		612-4853	
7.010K/12.0KWK-3K/3945AA		GIE-4792	
7.512.015.0KWK-18K/3945AA		612-4853	
18SPH.50&60HZ		C	

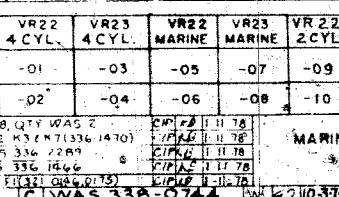
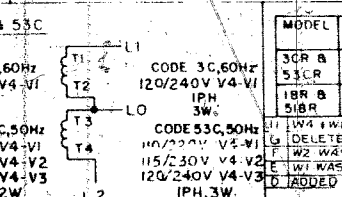
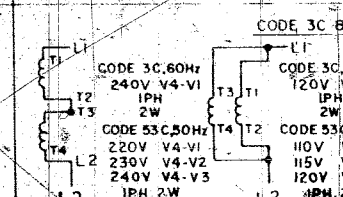
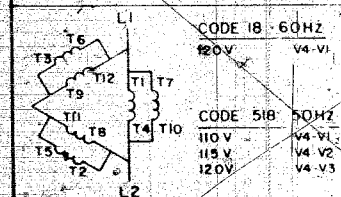
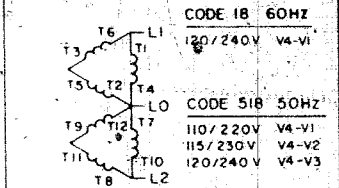
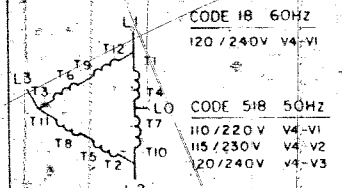
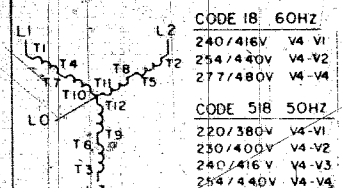
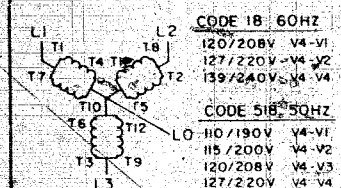
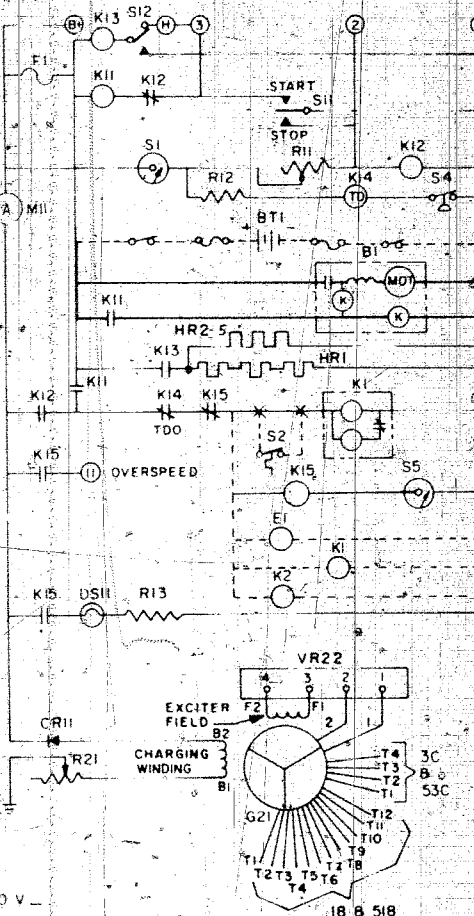
SCHEMATIC DIAGRAM

INSIDE VIEW OF CONTROL BOX



NOTES

1. CONNECT LEAD W/O FROM V4 TO V₁ PER VOLTAGE CHART BELOW
2. CONNECT X1 TO 5 FOR CODE 53C 8.5B (50HZ)
CONNECT X1 TO 6 FOR CODE 3C 8.1B (60HZ)
3. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION.
4. 200 AMP. SUPER LAG FUSES
FUSED SWITCH FURNISH BY CUSTOMER
(WHEN USED)



REF OF	PART NO	ENG PART NO	PARTS LIST REF	DESCRIPTION
B1		1		STARTER & SOLENOID
BT1		1		BATTERY 32 V
E1		1		FUEL PUMP
HR1		1		HEATER-MANIFOLD
HR2-3		2		HEATER-GLOW PLUG (2 CYL)
HR2-5		4		HEATER-GLOW PLUG (4 CYL)
K1		1		SOLENOID-FUEL
S1		1		SWITCH-CENTRIFUGAL
S2		1		SWITCH-HIGH TEMP
S4		1		SWITCH-LOW OIL PRESS
S5		1		SWITCH-OVERSPEED

A-C PARTS LIST

G21				I	GENERATOR
R21	304-0910	B		I	RESISTOR ASSY
VR22	305-0532	D		I	REGULATOR ASSY-VOLTAGE (W/V A.D.J.) 01-02, 05-06, -09, -10
VR23	305-0533	D		I	REGULATOR ASSY-VOLTAGE (W/V A.D.J.) 03-04, 07-08, -11, -12
W9	338-0917	A		I	WIRING HARNESS (F1-F2)

CONTROL BOX PARTS LIST

CRII	305-0338	A	1	RECTIFIER & LEAD ASSY
DSH	322-0004	A	1	LAMP-OVERSPED
	322-0069	P	1	HOLDER-LAMP
FI	321-0146	A	1	FUSE-10 AMP
	321-0175	A	1	HOLDER-FUSE
K12	307-1527	B	1	RELAY-START DISC & FUEL SOL ASSY
K13	307-0061	B	1	RELAY-MANIFOLD HEATER
K14	320-0104	B	1	RELAY-EMERGENCY (LOP)
K15	307-1129	A	1	RELAY-ASSY
	307-0655	A (REF)	1	RELAY-EMERGENCY LATCH (OVSP)
K11	307-0875	B	1	RELAY-START SOLENOID
M11	302-0446	A	1	AMMETER-CHARGE 5-0-5
R11, S11	308-0351	B	1	SWITCH & RESISTOR ASSY
R12	304-0003	P	1	RES-30OHM, 50W
R13	304-0520	A	1	RES-30OHM, 10W
S12	308-0304	A	1	SWITCH & LEAD ASSY
TB11	332-0604	A	1	TERMINAL BLOCK
	332-0616	A	1	MARKER STRIP
TB12	332-0706	A	1	TERMINAL BLOCK
	332-0739	A	1	MARKER STRIP
W1	336-3572	A	1	LEAD ASSY
W2	336-3571	A	1	LEAD ASSY
W4	336-1465	A	1	LEAD ASSY
W5	336-0179	A	1	LEAD ASSY
W6	332-0602	A	1	JUMPER

W8	336-1045	A	1	LEAD ASSY
	517-0012		1	DOT BUTTON
	301-2376	C	1	PANEL-CONTROL BOX
	301-1962	D	1	CONTROL BOX
	301-3714	B	1	COVER-REGULATOR
	301-3683	C	1	SADDLE-CONTROL BOX
	301-3682	C	1	OUTPUT BOX -01,-02,-03,-04
	301-0856	B	1	COVER -01,-02,-03,-04
	301-2467	B	1	OUTPUT BOX -05 THRU -12
	301-2466	A	1	COVER -05 THRU -12
	508-0183	P	1	GROMMET
	402-0070	A	4	RUBBER MOUNTS
	337-0036	A	1	GROUND STRAP & LOP LIGHT
	98-1683	B	1	SILKSCREENHOUSE 4515 DELETE IN TEMP
	98-2606	A	2	SILKSCREEN(3CR,3SCR)-01 THRU-11
	98-2607	B	1	SILKSCREEN(UBR,51CR)-01 THRU-1

B	WIO	337-0089	A	1	STRAP-JUMPER			
* WHEN USED					B	ADDED 337-0089		2/2/59
					A	ADDED 337-0089		2/2/59

DIESEL		A. ADDED-09 THRU-12		EC22P	
MODEL NO. 53CR/13981AA		Ongn		DATE	
890 KW 518 R/13981AA		9-27-73		GJC	
89120KW 3CR/13981AA		CONTROL-GEN SET		(WIRING DIAGRAM)	
0000120KW 53CR/13981AA		612-4854		C	
00008120KW 518 R/13981AA					
00000120KW 53CR/13981AA					
00000120KW 518 R/13981AA					

612-4929

REAR VIEW PANEL

WIRING DIAGRAM

CONTROL BOX (INSIDE)

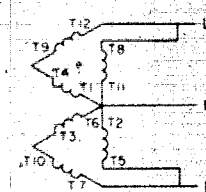
SCHEMATIC DIAGRAM

PARTS LIST

DESCRIPTION

REF. DES.	PART NO.	QTY	DESCRIPTION
CB21	320B431	1	CIRCUIT BREAKER 2 AMP
CR21	320P307	1	LOCK-CKT BRKR HANDLE (PENN STATE)
	305G324	1	RECTIFIER BRIDGE
DS21	322A131	1	LIGHT-UPPER SCALE
DS22	322A130	1	LIGHT-LOWER SCALE
G21		1	GENERATOR
K21	307B1061	1	RELAY-VOLTAGE SELECTOR
	301B3244	1	BRACKET-RELAY MTG
	307P1157	1	SPRING-RELAY HOLDDOWN
L21	315B384	1	REACTOR ASSY COMM
M21	302B718	1	VOLTMETER-AC, 0-300, 0-600
M22	302P466	1	METER-RUNNING TIME (60 Hz)
	302P469	1	METER-RUNNING TIME (50 Hz)
R21	303P170	1	RHEOSTAT-VOLTAGE ADJ 35K 25W
	303P32	1	KNOB-RHEOSTAT
R22	350-556(REF)	1	RESISTOR 47000, 1/2 WATT
S21	308A12	1	SWITCH-VOLTMETER
	303-76	1	KNOB
626v-219			
T21	3150342	1	TRANSFORMER-VOLT REF
T821	332A1248	1	MARKER-STRIP
VR21	332D1268	1	BOARD ASSY-PC VOLTAGE RGLTR
W12	338D784	1	WIRING HARNESS
	338A1913	1	LEAD ASSY
	301C3274	1	PANEL-GEN CONTROL
	301D3158	1	CONTROL BOX
	402A70	4	DAMPENER-VIBRATION
	337-49	1	STRAP-BOND
	508P1	4	GROMMET-RUBBER
	98C2169	1	SILKSCREEN-CONTROL PANEL AC
	545A22	1	PARTS LIST-AC CONT-HDW

1 PHASE
 110/220V, 50 Hz, (H6)
 515R 115/230V, 50 Hz, (H8)
 15R 120/240V, 60 Hz, (H5)

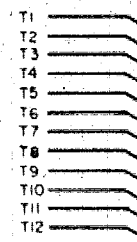
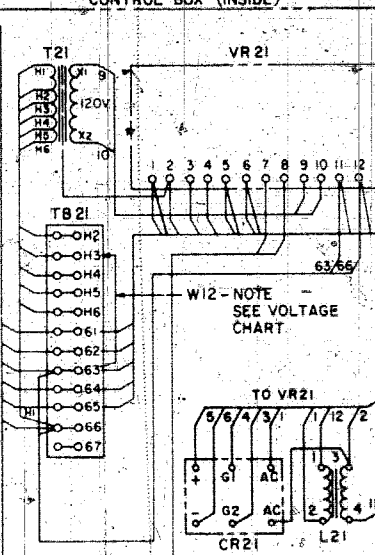


D WAS 301-3188		
C ADDED 302-0469 -03		11-74
B ADDED 302-0466		11-74
A REVISED VOLT CHART		11-74

612-4929		
CONTROL-GEN SET AC		
(WIRING DIAGRAM)		
612-4929		

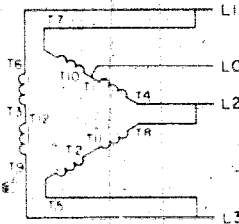
MODEL NO
 25-90KW-15R/
 25-90KW-515R/1
 BRUSHLESS
 3PH, 50/60 Hz
 12 W RECONNECTABLE

60 Hz	PENN 60 Hz	50 Hz
-01	-02	-03

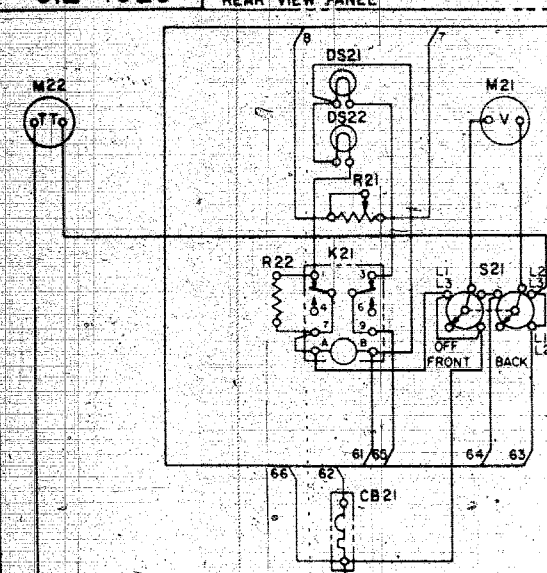


NOTE
 CONNECT LEAD W12 FROM
 TERMINAL TB21-63 TO TB21-(H-) 3 PHASE
 PER VOLTAGE CHART BELOW

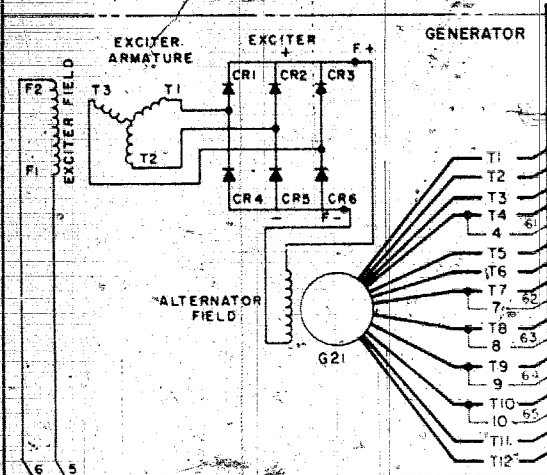
127/220V, 50 Hz, (H5)	254/440V, 50 Hz, (H5)
120/208V, 50 Hz, (H4)	240/416 V, 50 Hz, (H4)
110/190V, 50 Hz, (H3)	220/380V, 50 Hz, (H3)
115/200V, 50 Hz, (H4)	230/400V, 50 Hz, (H4)
120/208V, 60 Hz, (H3)	240/416 V, 60 Hz, (H3)
127/220 V, 60 Hz, (H4)	254/440V, 60 Hz, (H4)
139/240V, 60 Hz, (H5)	277/480V, 60 Hz, (H5)



NOTE
 UNLESS OTHERWISE NOTED,
 ALL COMPONENTS ARE SHOWN
 IN THE DE ENERGIZED
 POSITION

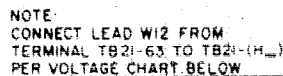
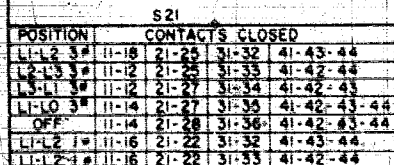
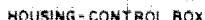


HOUSING-CONTROL BOX



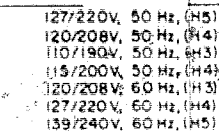
REAR VIEW PANEL

CONTROL BOX (INSIDE)



VOLTAGE CONNECTIONS
3 PHASE

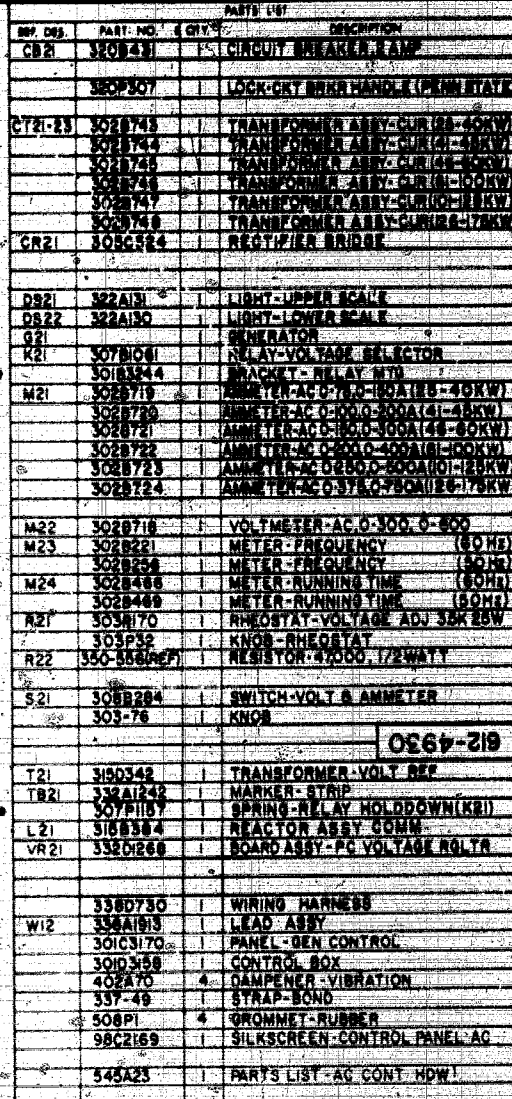
	110/220V, 50 Hz, (H6)
515R	115/230V, 50 Hz, (H6)
1BR	120/240V, 60 Hz, (H5)



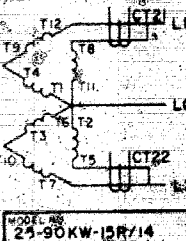
NOTE
UNLESS OTHERWISE NOTED,
ALL COMPONENTS ARE SHOWN
IN THE DE-ENERGIZED
POSITION

SCHEMATIC DIAGRAM


FOR VR SYSTEM SCHEMATIC
SEE 1245(D)



I PHASE
R110/220V, 50 Hz, (H6)
R115/230V, 50 Hz, (H6)
R120/240V, 60 Hz, (H5)



MODEL ASS
25-90KW-15R/14
25-90KW-315R/14
100-175KW-15R/1
100-175KW-315R/1
BULGH. ESS
3PH, 50/60 HZ
12W RECONNECT

A REVISED VOLT CHART		SHEET 1	
17	REVISION	DATE	BY
 DIVISION OF STUDSBAKE CORPORATION MANASSAS, VIRGINIA			
DATE	1-10-74	BY	CH
REASON - CONTROL GEN SET AC (WIRING DIAGRAM)			
Drawn by		612-4930	

612-4932

WIRING DIAGRAM

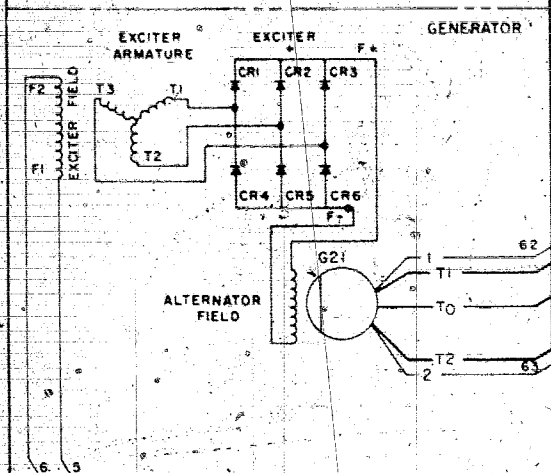
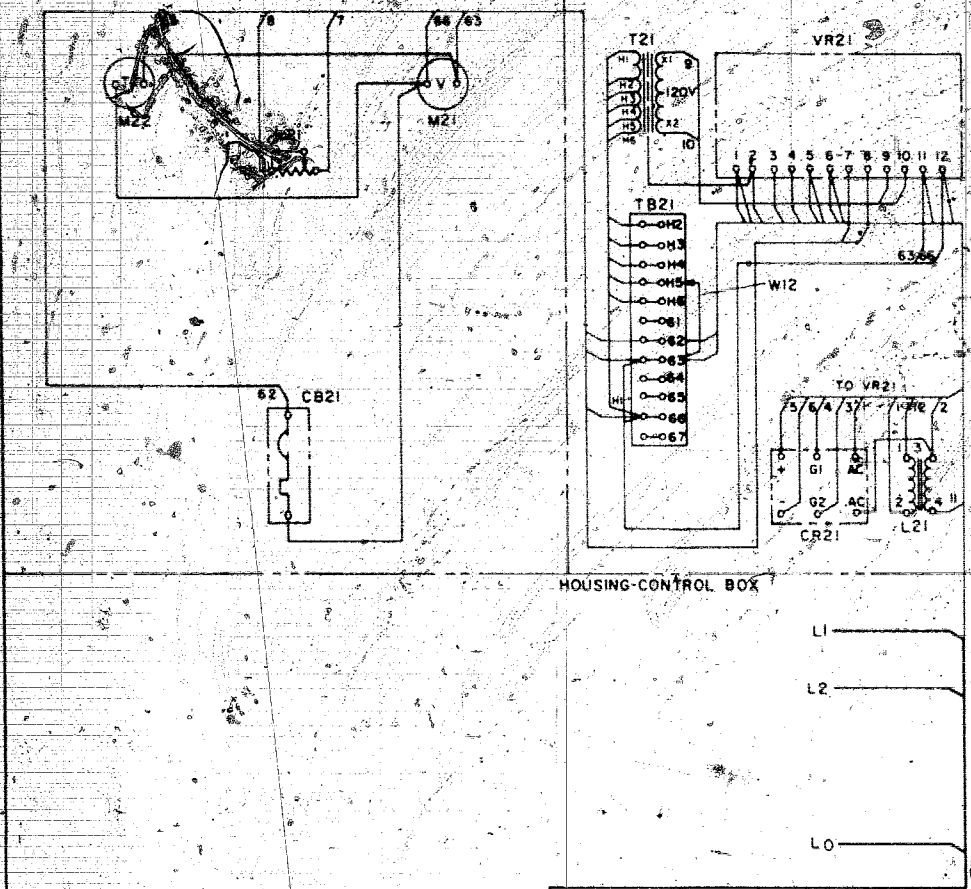
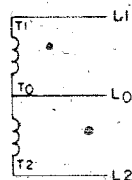
REAR VIEW PANEL

CONTROL BOX (INSIDE)

SCHEMATIC DIAGRAM

AC CONTROL			PARTS LIST		DESCRIPTION
REF QRS	PART NO.	QTY	QTY	QTY	
CB21	320-0431	B	1		CIRCUIT BREAKER, 2A
CR21	320-0307	P	1		LOCK-CHT BRKR HANDLE (PENN STATE)
CR21	305-0524	C	1		RECTIFIER BRIDGE
G21					GENERATOR
L21	318-0384	B	1		REACTOR ASSY COMM
M21	302-0421	P	1		VOLTMETER-AC, 0-300V
M22	302-0466	P	1		METER-RUNNING TIME
R21	303-0170	P	1		RHEOSTAT-VOLTAGE ADJ. 3.5K, 25W
	303-0032	P	1		KNOB-RHEOSTAT
T21	315-0342	D	1		TRANSFORMER-VOLT REF
TB21	332-1242	B	1		MARKER STRIP
VR21	332-1268	D	1		BOARD ASSY-PC VOLTAGE REG
W12	338-0765	D	1		WIRING HARNESS
W12	336-1913	A	1		LEAD ASSY
	301-3822	C	1		PANEL-GEN CONTROL
	301-3158	D	1		CONTROL BOX
	402-0070	A	4		DAMPENER-VIBRATION
	337-0049	-	1		STRAP-BOND
	508-0001	P	4		GROMMET-RUBBER
	545-0021	A	1		PARTS LIST-AC CONT HOW
	98-2169	C	1		SILKSCREEN-CONTROL PANEL AC

612-4932

VOLTAGE CONNECTION
120/240 V

-01 STD
 -02 PENN STATE

NOTE:
 UNLESS OTHERWISE NOTED,
 ALL COMPONENTS ARE SHOWN
 IN THE DE-ENERGIZED
 POSITION.

25-45KW-3R/1	CONTROL-GEN SET AC (WIRING DIAGRAM)	612-4932	DWG SIZE: C
120/240V, 1PH, 3W, 60Hz			

C WAS 301-3187	11-1974
B ADDED 302-0466	11-1974
A ADDED DASH NO.	3224
REVISION	DATE

ONY
 DIVISION OF STANBACOR CORPORATION

612-4933

REAR VIEW PANEL

WIRING DIAGRAM

CONTROL BOX (INSIDE)

SCHEMATIC DIAGRAM

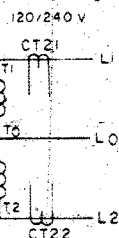
AC CONTROL PARTS LIST

REF. DES.	PART NO.	QTY	DESCRIPTION
CB21	320-0431	1	CIRCUIT BREAKER 2A
	320-0807	1	LOCK-OUT BRKR HANDLE (PENN STATE)
CR21	305-0824	1	RECTIFIER BRIDGE
CT21,22	308-0739	2	TRANSFORMER ASSY - CUR
G21		1	GENERATOR
L21	316-0284	1	REACTOR ASSY COMM
M21,22	302-0412	2	AMMETER-AC, 0-250 AMP
M23	302-0425	1	VOLTMETER-AC, 0-500V
M24	302-0421	1	METER-FREQUENCY
M25	302-0468	1	METER-RUNNING TIME
R21	303-0170	1	RHEOSTAT-VOLTAGE ADJ 3.5K 25W
	303-0032	1	KNOB-RHEOSTAT
T21	315-0342	1	TRANSFORMER-VOLT REF
TB21	332-1242	1	MARKER STRIP
VR21	332-1268	1	BOARD ASSY-PC VOLTAGE REGULN
W11	336-0735	1	WIRING HARNESS
W12	336-1913	1	LEAD ASSY
301-3189	C	1	PANEL-GEN CONTROL
301-3188	D	1	CONTROL BOX
402-0070	A	4	DAMPENER-VIBRATION
337-0049	-	1	STRAP-BOND
508-0001	P	4	GROMMET-RUBBER
545-0021	A	1	PARTS LIST-AC CONT HOW
98-2182	C	1	SILKSCREEN-CONTROL PANEL AC

612-4933

HOUSING-CONTROL BOX

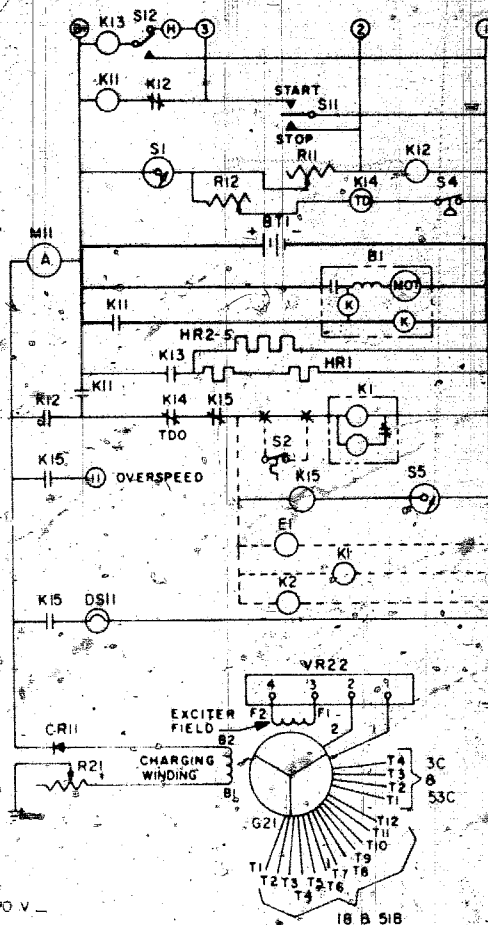
VOLTAGE CONNECTION



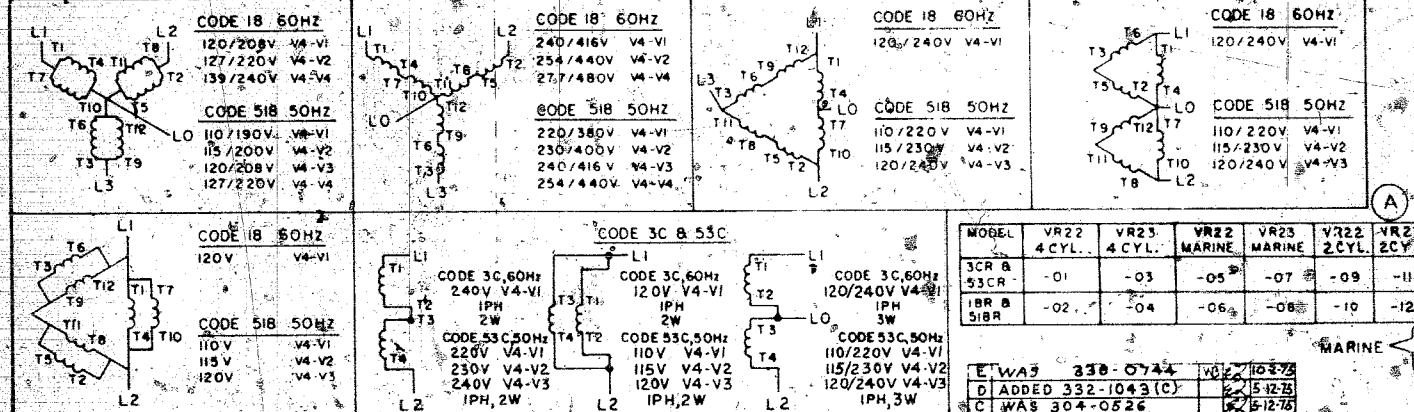
NOTE:
UNLESS OTHERWISE NOTED,
ALL COMPONENTS ARE SHOWN
IN THE DE-ENERGIZED
POSITION

STD	PENN STATE	Onn
-01	-02	
25-45KW-3R/14	1-18-74	CIP
BRUSHLESS	CONTROL GEN SET AC	(WIRING DIAGRAM)
120/240V, 1PH, 3W, 60HZ	612-4933	DWG C

SCHEMATIC DIAGRAM



- NOTES
1. CONNECT LEAD W10 FROM V4 20 V _
PER VOLTAGE CHART BELOW
 2. CONNECT X1 TO 5 FOR CODE 53C8.51B(50HZ)
CONNECT X1 TO 6 FOR CODE 3C.81B(60HZ)
 3. UNLESS OTHERWISE NOTED, ALL COMPONENTS
ARE SHOWN IN THE DE-ENERGIZED POSITION.



ENG. PARTS LIST (REF)

REF. DES	PART NO.	QTY	DESCRIPTION
B1		1	STARTER & SOLENOID
BT1		1	BATTERY 24 V
E1		1	FUEL PUMP
HR1		1	HEATER-MANIFOLD
HR2-3		2	HEATER-GLOW PLUG (12 CYL)
HR2-5		4	HEATER-BLOW PLUG (4 CYL)
K1		1	SOLENOID-FUEL
SI1		1	SWITCH-CENTRIFUGAL
S2		1	SWITCH-HIGH TEMP
S4		1	SWITCH-LOW OIL PRESS
S5		1	SWITCH-OVERSPEED

AC PARTS LIST

G21		1	GENERATOR
R21	304-0718	B	RESISTOR ASSY
VR22	305-0932	D	REGULATOR ASSY-VOLTAGE
			(W/O V ADJ) -01-02-05-08-09-10
VR23	305-0933	D	REGULATOR ASSY-VOLTAGE
			(W/V ADJ) -03-04-07-08-11-12
W9	338-0917	A	WIRING HARNESS (F1-F2)

CONTROL BOX PARTS LIST

CR11	305-0938	A	RECTIFIER & LEAD ASSY
DS11	322-0017	-	LAMP-OVERSPEED
	322-0069	P	HOLDER-LAMP
K11	307-0875	B	RELAY-START SOLENOID
K12	307-0423	B	RELAY-START DISC & FUEL SOLENOID
K13	307-0081	B	RELAY-MANIFOLD HEATER
K14	320-0104	B	RELAY-EMERGENCY (LOP)
K15	307-1129	A	RELAY-ASSY
	307-0655	A (REF)	RELAY-EMERGENCY LATCH (OVSP)
	332-1043	C	JUMPER (FOR TB11)
M11	302-0446	A	AMMETER-CHARGE 3-0-3
R11, S11	308-0354	B	SWITCH & RESISTOR ASSY
R12	304-0268	A	RES-50HM, 50W
			(ADJ TO 3.5 - OHMS)
S12	308-0304	A	SWITCH & LEAD ASSY
TB11	332-0604	A	TERMINAL BLOCK
	332-0616	A	MARKER-STRIP
TB12	332-0706	A	TERMINAL BLOCK
	332-0739	A	MARKER STRIP
W1	336-1466	A	LEAD ASSY
W2	336-2289	A	LEAD ASSY
W3	336-1470	A	LEAD ASSY
W4	336-1465	A	LEAD ASSY
W5	336-0179	A	LEAD ASSY
W6	332-0602	A	JUMPER
W7	336-1470	A	LEAD ASSY
W8	336-1045	A	LEAD ASSY
	517-0012	-	DOT BUTTON
	301-2376	C	PANEL-CONTROL BOX
	301-1962	O	CONTROL BOX
	301-3714	B	COVER-REGULATOR
	301-3683	C	SADDLE-CONTROL BOX
	301-3682	C	OUTPUT BOX -01-02-03-04
	301-0856	B	COVER -01-02-03-04
	301-2467	B	OUTPUT BOX -05 THRU -12
	301-2466	A	COVER -05 THRU -12
	508-0183	P	GROMMET
	402-0070	A	RUBBER MOUNTS
	337-0036	A	GROUND STRAPS LOP LIGHT
	98-1683	B	SILKSCREEN USE AS IS, DEL. RE HI TEMP
	98-2606	A	SILKSCREEN (3CR, 53CR) -01 THRU -11
	98-2607	B	SILKSCREEN (51AR) -02 THRU -12
W10	337-0089	A	1 STRAP-JUMPER

9264-219

* WHEN USED

DIESEL (24 V)

MODEL NO.

15B90KW-53CR/14439AA
 15B90KW-518R/14439AA
 60.020KW-3CR/14439AA
 60.020KW-18R/14439AA
 60.100B120KW-53CR/14439AA
 60.100B120KW-518R/14439AA
 75.120B150KW-3CR/14439AA
 75.120B150KW-18R/14439AA

Orig

1-25-74 CIP

CONTROL-GEN SET
(WIRING DIAGRAM)

143PH, 50 & 60HZ

612-4854

612-4938

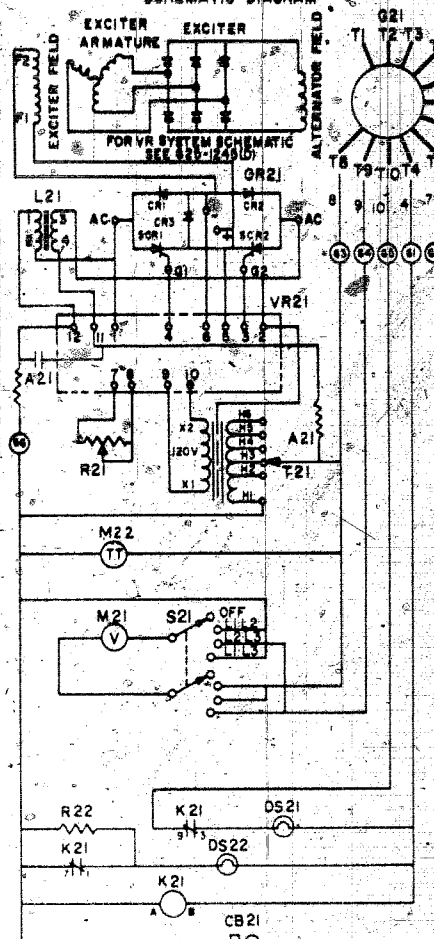
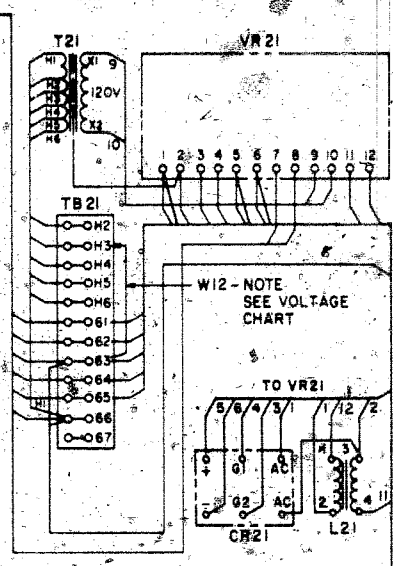
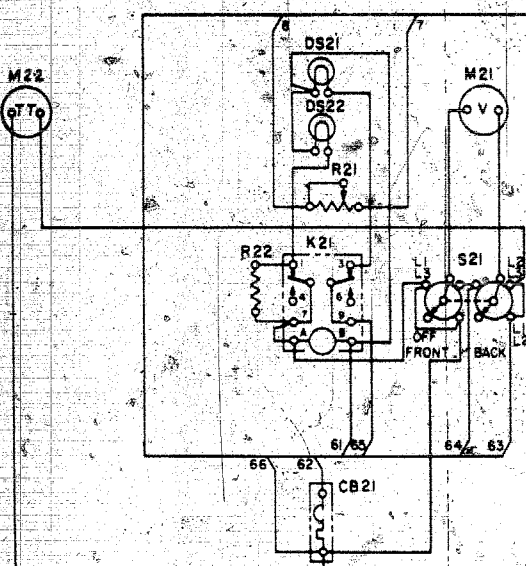
612-5014

REAR VIEW PANEL

WIRING DIAGRAM

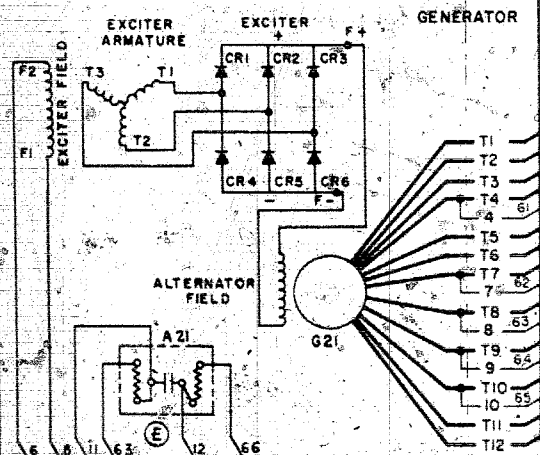
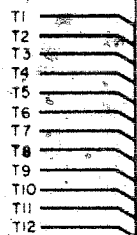
CONTROL BOX (INSIDE)

SCHEMATIC DIAGRAM



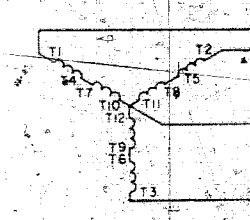
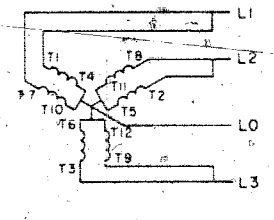
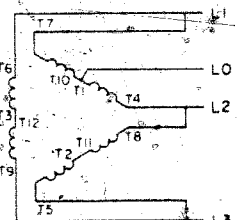
REF DES	PART NO.	QTY	DESCRIPTION
A21	332A130	1	LED - BLUE ARMY
CB21	302P469	1	CIRCUIT BREAKER, 1/2 AMP
CR21	302P469	1	LOCK-OUT BREAK HANDLE (PENNY STATE)
CR21	302P469	1	RECTIFIER BRIDGE
DS21	332A130	1	LIGHT - UPPER SCALE
DS22	332A130	1	LIGHT - LOWER SCALE
G21	307B1061	1	GENERATOR
K21	307B1061	1	RELAY - VOLTAGE SELECTOR
K21	307B1061	1	BRACKET - RELAY MTO
L21	307P469	1	SPRING-RELAY HOLD-DOWN
L21	307P469	1	REACTOR ARMY COMM
M21	302B718	1	VOLTMETER-AC, 0-300, 0-600
M22	302P469	1	METER-RUNNING TIME (60 Hz)
M22	302P469	1	METER-RUNNING TIME (60 Hz)
R21	303P170	1	RHEOSTAT-VOLTAGE ADJ. 35K 25W
R22	303P32	1	KNOB - RHEOSTAT
R22	350-558 (REF)	1	RESISTOR 47000, 1/2 WATT
S21	308A12	1	SWITCH-VOLTMETER
S21	303-76	1	KNOB
T21	3150342	1	TRANSFORMER-VOLT REF
TB21	332A1248	1	MARKER - STRIP
VR21	332D1268	1	BOARD ASSY-PC VOLTAGE ROLTR
W12	338D784	1	WIRING HARNESS
W12	336A1913	1	LEAD ASSY
W12	301C3274	1	PANEL-GEN CONTROL
W12	301D3158	1	CONTROL BOX
W12	402A70	4	DAMPENER-VIBRATION
W12	337-49	1	STRAP-BOND
W12	508P1	4	GROMMET-RUBBER
W12	98C2169	1	SILKSCREEN-CONTROL PANEL AC
W12	545A22	1	PARTS LIST-AC CONT HDW

HOUSING-CONTROL BOX

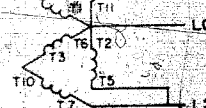


NOTE
CONNECT LEAD W12 FROM
TERMINAL TB21-63 TO TB21-1H-1
VOLTAGE CONNECTIONS
PER VOLTAGE CHART BELOW

110/220V, 50 Hz, (H6)	127/220V, 50 Hz, (H5)	254/440V, 50 Hz, (H5)
515R 115/230V, 50 Hz, (H6)	120/208V, 50 Hz, (H4)	240/416V, 50 Hz, (H4)
15R 120/240V, 60 Hz, (H5)	110/190V, 50 Hz, (H3)	220/380V, 50 Hz, (H3)
	115/200V, 50 Hz, (H4)	230/400V, 50 Hz, (H4)
	120/208V, 60 Hz, (H3)	240/416V, 60 Hz, (H3)
	127/220V, 60 Hz, (H4)	254/440V, 60 Hz, (H4)
	139/240V, 60 Hz, (H5)	277/480V, 60 Hz, (H5)



1 PHASE
110/220V, 50 Hz, (H6)
515R 115/230V, 50 Hz, (H6)
15R 120/240V, 60 Hz, (H5)



NOTE
UNLESS OTHERWISE NOTED,
ALL COMPONENTS ARE SHOWN
IN THE DE-ENERGIZED
POSITION

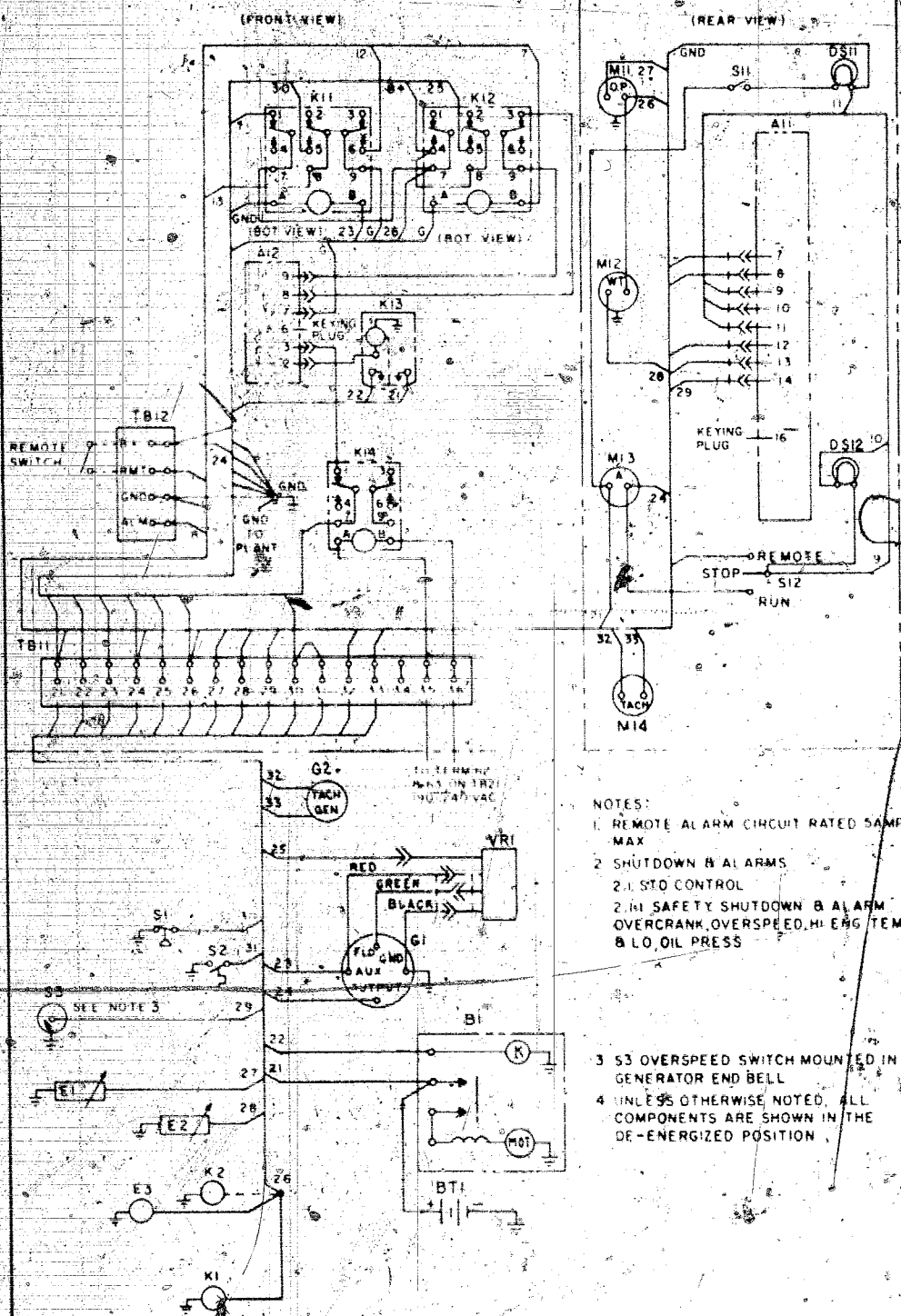
REVISED A21 CIRCUIT	214-276
A21 WAS 232-2219	214-276
C WAS 301-3168	214-276
B ADDED 302-0469 -03	214-276
A ADDED 302-0466	214-276
612-5014	612-5014

60 Hz	PENN 60 Hz	50 Hz
-01	-02	-03

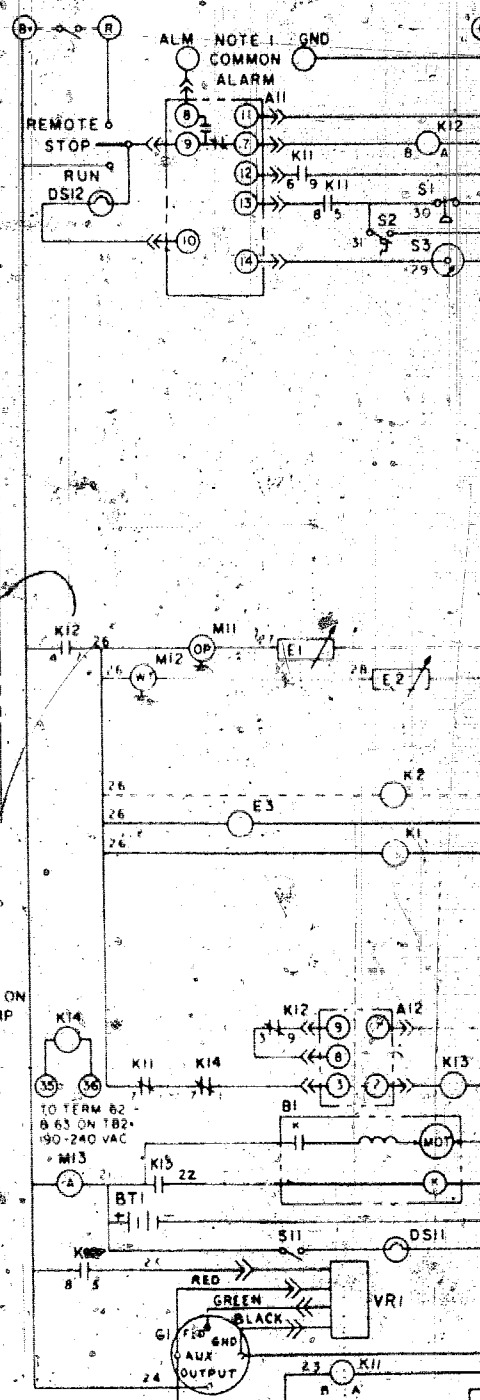
MODEL NO.	25-90KW-15R/13415
25-90KW-515R/13415	BRUSHLESS
3PH, 50/60 Hz	12 W RECONNECTABLE
42-4989	612-5014

612-5115

WIRING DIAGRAM



SCHEMATIC DIAGRAM



ENGINE		PARTS LIST (REF)	
REF. DES.	PART	QTY	DESCRIPTION
BT1		1	STARTER & SOLENOID-ENGINE
		1	BATTERY-12V
E1	193A108	1	SENDER-OIL PRESSURE
E2	193A109	1	SENDER-WATER TEMP
E3		1	FUEL PUMP
G1		1	ALTERNATOR
G2		1	GENERATOR-TACHOMETER
K1		1	SOLENOID-ENG STOPPING
S2		1	SOLENOID WATER
S1		1	SWITCH-LOW OIL PRESSURE
S2		1	SWITCH-HIGH WATER TEMP
S3		1	SWITCH-OVERSPEED
VR1		1	VOLTAGE REGULATOR
CONTROL BOX PART LIST			
A11	300C679	1	MONITOR-ENGINE CONTROL
A12	300C733	1	CONTROL-STD CRANKER
DS11	322A128	1	LAMP PANEL
DS12	322A128	1	HOLDER-LAMP
DS12	322A128	1	LAMP-FAULT
K11	307B1030	1	RELAY-START DISCONNECT
K12	307B1058	1	RELAY-IGNITION
K13	307B1037	1	RELAY-START SOLENOID
K14	307B1061	1	RELAY-STARTER PROTECTION
M11	193B107	1	GAUGE OIL PRESSURE
M12	193B106	1	GAUGE-WATER TEMP
M13	302A61	1	AMMETER-CHARGE 30-0-30
M14	302B769	1	TACHOMETER-ELECTRIC 2500RPM
S11	3087	1	SWITCH-PANEL LIGHT
S12	308A3	1	PLATE INSTR ON-OFF
S12	308P138	1	SWITCH-SELECTOR
TR11	332A1241	1	TERMINAL BLOCK
TR12	332A1241	1	WARRER STRIP
TR13	332A1241	1	TERMINAL BLOCK
TR14	332A1239	1	WARRER STRIP
3380528		1	WIRING HARNESS
30103253		1	BRACKET-ENG CONTROL
30103204		1	PANEL-ENGINE CONTROL
545A25		1	PARTS LIST-CONTROL
3321276		2	PLUG-KEYING
3887170		1	SILKSCREEN
307P1157		3	SPRING-RELAY HOLDDOWN (K11,12,14)

612-5115

* WHEN USED

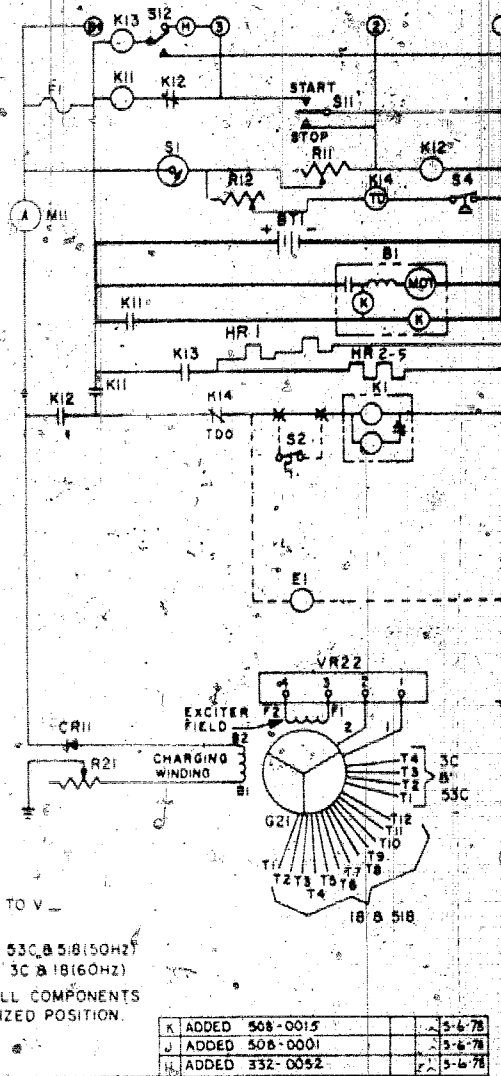
SERIAL FROM 612C4401

MOORE
MDEF-R/11345F
MDEC-R/11345D
MDEH-R/11345D
2 WIRE REMOTE
STARTING

7-2-75	DFO	11/12/75
CONTROL-GEN SET-ENG (12V DIESEL)		
(WIRING DIAGRAM)		
612-5115		C

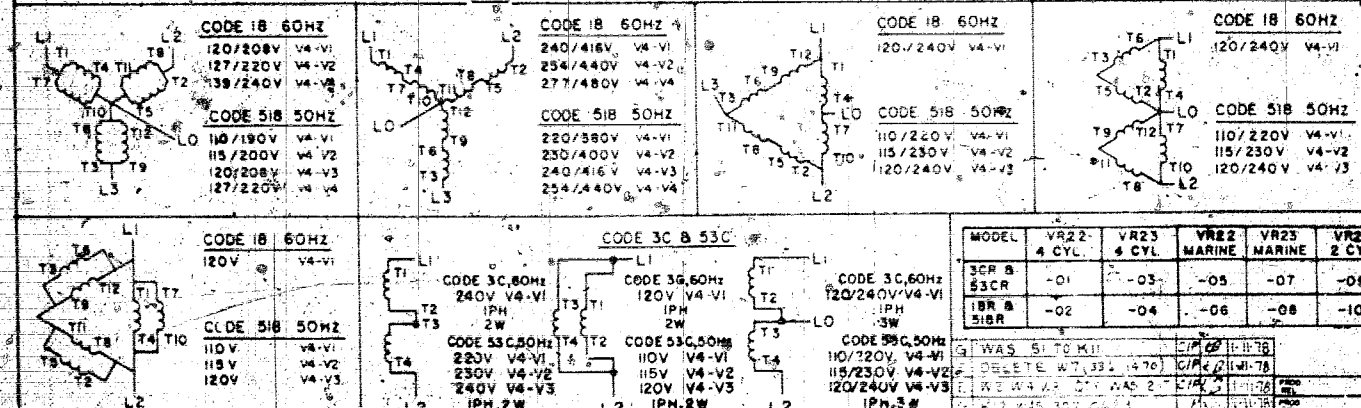
SCHEMATIC DIAGRAM

SCHEMATIC DIAGRAM



- NOTES
1. CONNECT LEAD W/0 FROM V4 TO V...
PER VOLTAGE CHART BELOW
 2. CONNECT X1 TO 3 FOR CODE 53C 8 5B150HZ
CONNECT X1 TO 6 FOR CODE 3C 8 1B160HZ
 3. UNLESS OTHERWISE NOTED, ALL COMPONENTS
ARE SHOWN IN THE DE-ENERGIZED POSITION.

K	ADDED	508-0015			5-6-78
J	ADDED	508-0001			5-6-78
I	ADDED	332-0052			5-6-78



REF. DES.		PART NO.	QTY	DESCRIPTION
BI			1	STARTER & SOLENOID
BY			1	BATTERY SW
E1			1	FUEL PUMP
HR1			2	HEATER-MANFOLD
HR2-3			2	HEATER-BLOW PLUG (3 CYL)
HR2-5			4	HEATER-BLOW PLUG (4 CYL)
K1			1	SOLENOID-FUEL
SI			1	SWITCH-CENTRIFUGAL
S2			1	SWITCH-HIGH TEMP
S4			1	SWITCH-LOW OIL PRESS

AC PARTS LIST			
Q2		I	GENERATOR
R2	304-076 B		RESISTOR 40W
VR22	309-0832 D		REGULATOR ASSY-VOLTAGE
			(W/V ADJ.)-01-02-03-04-05-06-07-08-09-10
VR23	309-0832 D	I	REGULATOR ASSY-VOLTAGE
			(W/V ADJ.)-01-04-07-08-09-11-12
WS	330-097 A	I	WIRING HARNESS (FI-FE)

CONTROL BOX PARTS LIST				
CRI	308-0358	A	RECTIFIER & LEAD ASSY	
F1	321-0146	A	FUSE 10AMP	
	321-0178	A	HOLDER-FUSE	
	332-0052	P	CLIP-WIRE	
K11	307-0878	B	RELAY-START SOLENOID	
K12	307-1527	B	RELAY-START DISC & FUEL SOL.	ASSY
K13	307-0061	B	RELAY-MANIFOLD HEATER	
K14	320-0104	B	RELAY-EMERGENCY (LOP)	
	508-0001	P	GROMMET	
	508-0018	P	WASHER-FIBER	
	332-1043	C	JUMPER (TB11)	
M11	308-0448	A	AMMETER-CHARGE 0-50-0	
R11, R11	308-0374	B	SWITCH & RESISTOR ASSY	
R12	304-0266	A	RES. 3 OHM, 20 W	1Z16-210
			(ADD TO 33 CHMS)	
S12	308-0304	A	SWITCH & LEAD ASSY	
TB11	332-0504	A	TERMINAL BLOCK	
	332-0816	A	MARKER STRIP	
TB12	332-0708	A	TERMINAL BLOCK	
	332-0738	A	MARKER STRIP	
W1	336-3572	A	LEAD ASSY	
W2	336-2288	A	LEAD ASSY	
W3	336-3571	A	LEAD ASSY	
W4	336-1488	A	LEAD ASSY	
W5	336-0178	A	LEAD ASSY	
W6	332-0602	A	JUMPER	

WB	336-1045	A	1	LEAD ASSY
WII	337-0089	A	1	STRAP- JUMPER
	301-1981	C	1	PLAN-CONTROL BOX
	301-1982	D	1	CONTROL BOX
	301-3714	B	1	COVER-REGULATOR
	301-3683	C	1	SADDLE-CONTROL BOX
	301-3682	C	1	OUTPUT BOX -01, 02, 03, 04
	301-0856	B	1	COVER -01, 02, 03, 04
	301-2467	B	1	OUTPUT BOX -05 THRU -12
	501-2466	A	1	COVER -08 THRU -12
	508-0183	P	1	GROMMET
	402-0070	A	4	RUBBER MOUNTS
	337-0030	A	1	GROUND STRAP
	98-1603	B	1	SILKSCREEN(MIX LOW OIL & RESET)
	98-2806	A	1	SILKSCREEN(SCR,SSCR)-01 THRU -11
	98-2807	B	1	SILKSCREEN(18R,518R)-02 THRU -12

* WHEN USED	C	W3 WAS 33-145	11	11	11
	B	W1 WAS 33-146	11	11	11
	A	ADDED F1/321-0140175	11	11	11
	11		11	11	11
DIESEL (24V)					
MODEL NO.	Onan				
459.5 KW-53CR / 11620AA	ONAN ENGINE CORPORATION				
459.5 KW-53CR / 11620AA	11				
6.0 B12 KW-3CR / 11620AA	11				
6.0 B12 KW-18R / 11620AA	11				
6.0 J10 B12 KW-3CR / 11620AA	11				
6.0 J10 B12 KW-18R / 11620AA	11				
7.5 J12 B15 KW-5CR / 11620AA	11				
7.5 J12 B15 KW-18R / 11620AA	11				
1133 F1.50 60HZ	612-5171				

612-5171

612-5300

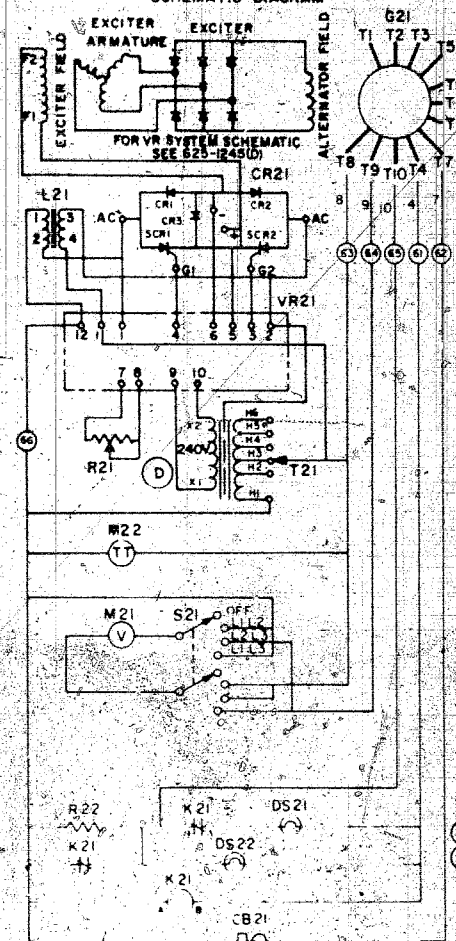
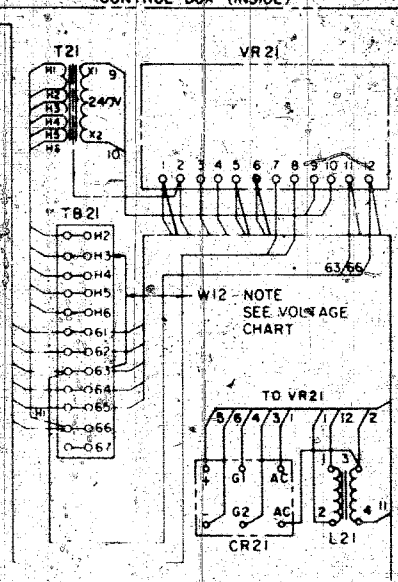
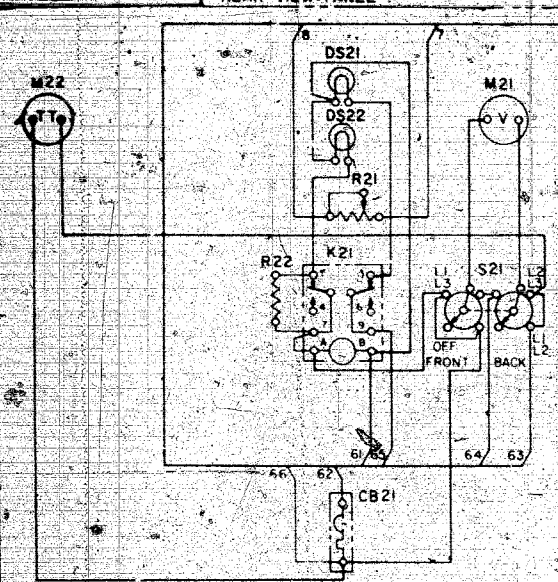
REAR VIEW PANEL

WIRING DIAGRAM

CONTROL BOX (INSIDE)

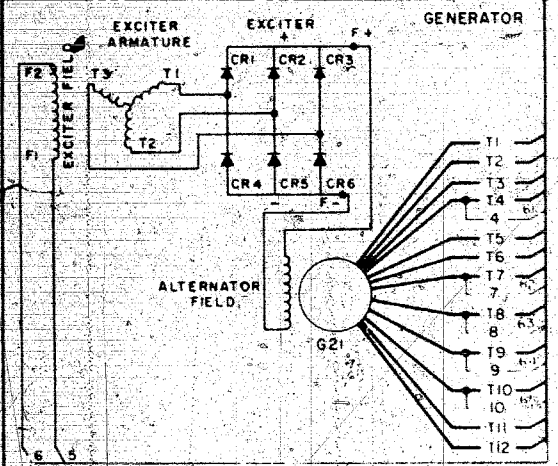
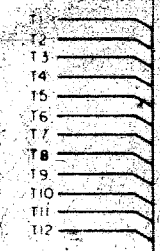
SCHEMATIC DIAGRAM

PARTS LIST



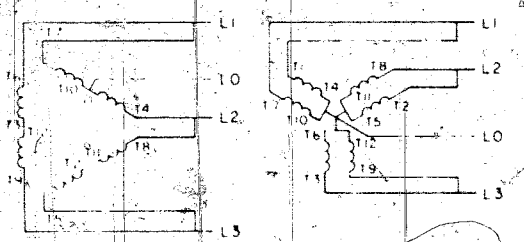
REF. DES.	PART NO.	QTY.	DESCRIPTION
CB21	320B431	1	CIRCUIT BREAKER, 2 AMP
CR21	320P307	1	LOCK-CKT BRKR HANDLE (PC)
CR21	305C524	1	RECTIFIER BRIDGE
DS21	322A131	1	LIGHT-UPPER SCALE
DS22	322A130	1	LIGHT-LOWER SCALE
G21		1	GENERATOR
K21	307B1061	1	RELAY-VOLTAGE SELECTOR
	301B3244	1	BRACKET-RELAY MTO
	307R1157	1	SPRING-RELAY HOLDDOWN
L21	315B384	1	REACTOR ASSY COMM
M21	302B718	1	VOLTMETER-AC, 0-300, 0-600
M22	302P466	1	METER-RUNNING TIME (60HZ)
	302P469	1	METER-RUNNING TIME (30HZ)
R21	303P170	1	RHEOSTAT-VOLTAGE ADJ 35K/25W
	303P32	1	KNOB-RHEOSTAT
R22	350-556(REF)	1	RESISTOR 47000, 1/2WATT
S21	308A12	1	SWITCH-VOLTMETER
	303-76	1	KNOB
T21	315D431	1	TRANSFORMER VOLT REF
TB21	332A1248	1	MARKER-STRIP
VR21	332D1956	1	BD ASSY-PC VLT REG (01, 02, 03)
VR21	332D2045	1	BD ASSY-PC VLT REG (04) (05)
W21	338D764	1	WIRING HARNESS
	336A1913	1	LEAD ASSY
	301C3274	1	PANEL GEN CONTROL
	301D3158	1	CONTROL BOX
	402A70	4	DAMPENER VIBRATION
	337-49	1	STRAP-BOND
	508PI	4	GROMMET-RUBBER
	98C2169	1	SILKSCREEN-CONTROL PANEL AC
	545A22	1	PARTS LIST-AC CONT HDW

HOUSING, CONTROL BOX

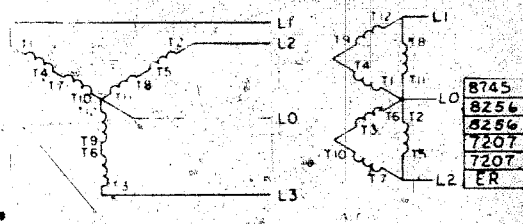


NOTE
CONNECT LEAD W12 FROM
TERMINAL TB21 61 TO TB21 11
PER VOLTAGE CHART BELOW

VOLTAGE CONNECTIONS	3 PHASE
127/220V, 50 Hz, (H5)	254/440V, 50 Hz, (H5)
120/208V, 50 Hz, (H4)	240/416V, 50 Hz, (H4)
110/190V, 50 Hz, (H3)	220/396V, 50 Hz, (H3)
115/200V, 50 Hz, (H4)	230/400V, 50 Hz, (H4)
120/208V, 60 Hz, (H3)	240/416V, 60 Hz, (H3)
127/220V, 60 Hz, (H4)	254/440V, 60 Hz, (H4)
139/240V, 60 Hz, (H5)	277/480V, 60 Hz, (H5)



VOLTAGE CONNECTIONS	1 PHASE
110/220V, 50 Hz, (H6)	220/440V, 50 Hz, (H6)
515R 115/238V, 50 Hz, (H6)	230/476V, 50 Hz, (H6)
15R 120/240V, 60 Hz, (H5)	240/480V, 60 Hz, (H5)



NOTE
UNLESS OTHERWISE NOTED
ALL COMPONENTS ARE SHOWN
IN THE DE-ENERGIZED
POSITION

60 Hz	PENN 60 Hz	50 Hz
-01	02-05	-03
-04		

8745	D	NAS 120V	11-18-82
8256	C	ADDED -05	01/01/11-17-81
8256	B	ADDED -05	01/01/11-17-81
7207	B	ADDED 332 D 2045	11/11/11-17-81
7207	A	ADDED DASH NOS.	11/11/11-17-81
ER			

Original

MODEL NO.
25-90KW-15R/1
25-90KW-15R/1
BRUSHLESS
3PH, 50/60 Hz,
12V RECONNECTABLE

CONTROL GEN. SET AC
(WIRING DIAGRAM)

612-5300

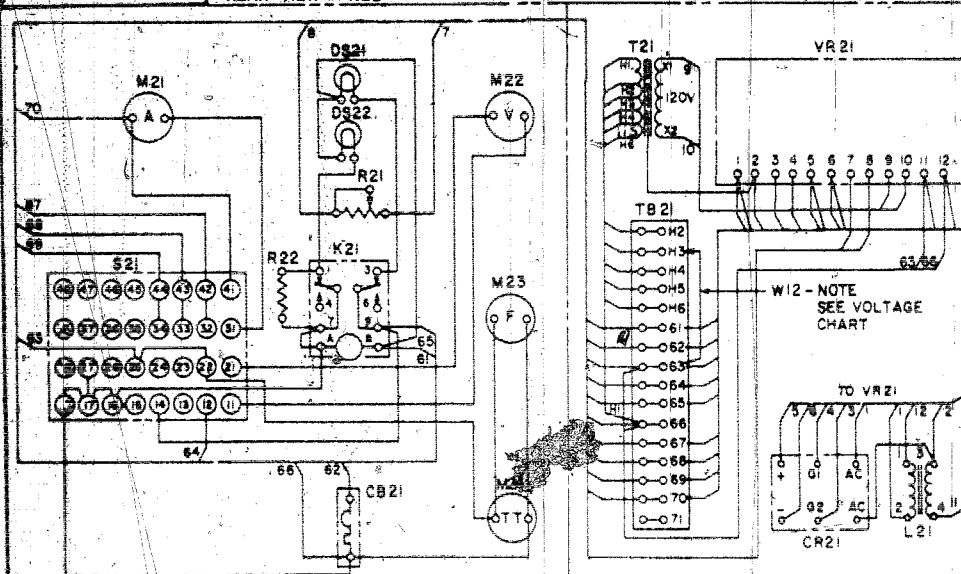
612-5301

REAR VIEW PANEL

WIRING DIAGRAM

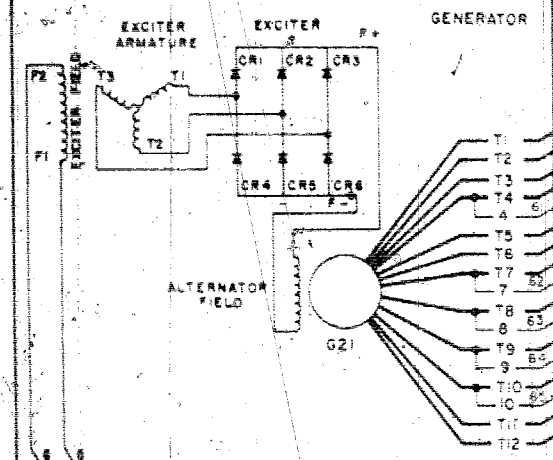
CONTROL BOX (INSIDE)

SCHEMATIC DIAGRAM

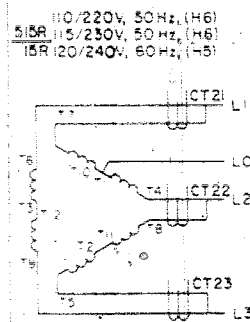


HOUSING-CONTROL BOX

POSITION	CONTACTS CLOSED
1-1-1	2-1-2
2-1-3	3-1-4
3-1-5	4-1-6
4-1-7	5-1-8
5-1-9	6-1-10
6-1-11	7-1-12
7-1-13	8-1-14
8-1-15	9-1-16
9-1-17	10-1-18
10-1-19	11-1-20
11-1-21	12-1-22

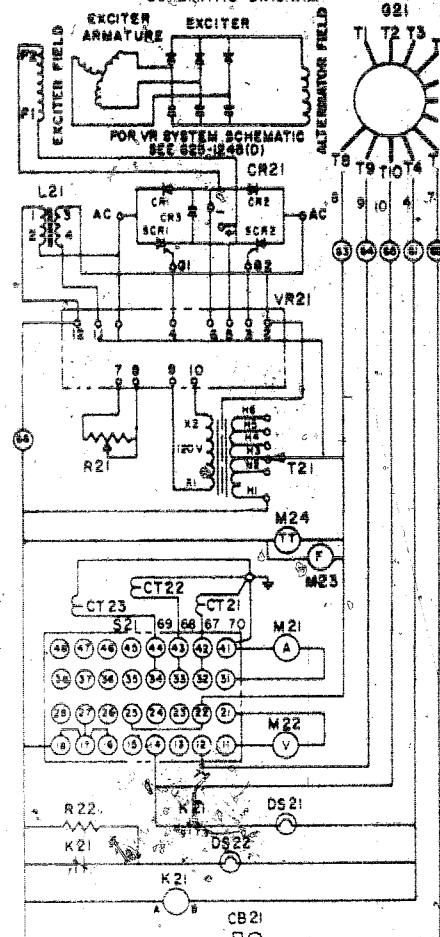


NOTE
CONNECT LEAD W12 FROM
TERMINAL TB21-63 TO TB21-11
PER VOLTAGE CHART BELOW



NOTE
UNLESS OTHERWISE NOTED,
ALL COMPONENTS ARE SHOWN
IN THE DE-ENERGIZED
POSITION

KW	60Hz	50Hz	PENN 60Hz	50Hz	51R	55R	51R	55R
25-40	-01	-07	-13	-19	-25	-31	-37	-43
41-45	-02	-08	-14	-20	-26	-32	-38	-44
46-60	-03	-09	-15	-21	-27	-33	-39	-45
61-100	-04	-10	-16	-22	-28	-34	-40	-46
101-125	-05	-11	-17	-23	-29	-35	-41	-47



REF. DES.	PART NO.	QTY.	DESCRIPTION
CB21	320B431	1	CIRCUIT BREAKER, 2AMP
	320P307	1	LOCK-OUT BRKR HANDLE (PENN STATE)
CT21-23	302B745	1	TRANSFORMER ASSY-CUR (25-40KW)
	302B744	1	TRANSFORMER ASSY-CUR (41-45KW)
	302B745	1	TRANSFORMER ASSY-CUR (46-60KW)
	302B746	1	TRANSFORMER ASSY-CUR (61-100KW)
	302B747	1	TRANSFORMER ASSY-CUR (101-125KW)
	302B748	1	TRANSFORMER ASSY-CUR (126-150KW)
CR21	305C524	1	RECTIFIER BRIDGE
DS21	322A131	1	LIGHT-UPPER SCALE
DS22	322A130	1	LIGHT-LOWER SCALE
G21		1	GENERATOR
K21	307B1061	1	RELAY-VOLTAGE SELECTOR
	301B3244	1	BRACKET-RELAY MTS
M21	302B719	1	AMMETER-AC 0-750-150A (25-40KW)
	302B720	1	AMMETER-AC 0-1000-200A (41-45KW)
	302B721	1	AMMETER-AC 0-1500-300A (46-60KW)
	302B722	1	AMMETER-AC 0-2500-400A (61-100KW)
	302B723	1	AMMETER-AC 0-3500-500A (101-125KW)
	302B724	1	AMMETER-AC 0-3750-750A (126-150KW)
M22	302B718	1	VOLTMETER-AC 0-300-0-600
M23	302B221	1	METER-FREQUENCY (60Hz)
	302B256	1	METER-FREQUENCY (50Hz)
M24	302B466	1	METER-RUNNING TIME (60Hz)
	302B469	1	METER-RUNNING TIME (50Hz)
R21	303P170	1	RHEOSTAT-VOLTAGE ADJ 33K 25W
	303P32	1	KNOB-RHEOSTAT
R22	350-556(REF)	1	RESISTOR-47000, 1/2WATT
S21	308B284	1	SWITCH-VOLT & AMMETER
	303-76	1	KNOB
			1059-219
T21	315D431	1	TRANSFORMER-VOLT REF
TB21	304A1242	1	MARKER-STRIP
	307P1157	1	SPRING-RELAY HOLD-DOWN(K21)
L21	315B384	1	REACTOR ASSY COMM
VR21	332D1956	1	NO ASSY-PC VOLTAGE REG (T21-51THRU-18)
VR21	332D2048	1	NO ASSY-PC VOLTAGE REG (T21-51THRU-18)
	338D730	1	WIRING HARNESS
W12	338A1913	1	LEAD ASSY
	301C3170	1	PANEL-GEN CONTROL
	301D3158	1	CONTROL BOX
	402A70	4	DAMPENER-VIBRATION
	337-49	1	STRAP-BOND
	508P1	4	GROMMET-RUBBER
	98C2169	1	SILKSCREEN-CONTROL PANEL AC
	545A23	1	PARTS LIST-AC CONT HDW

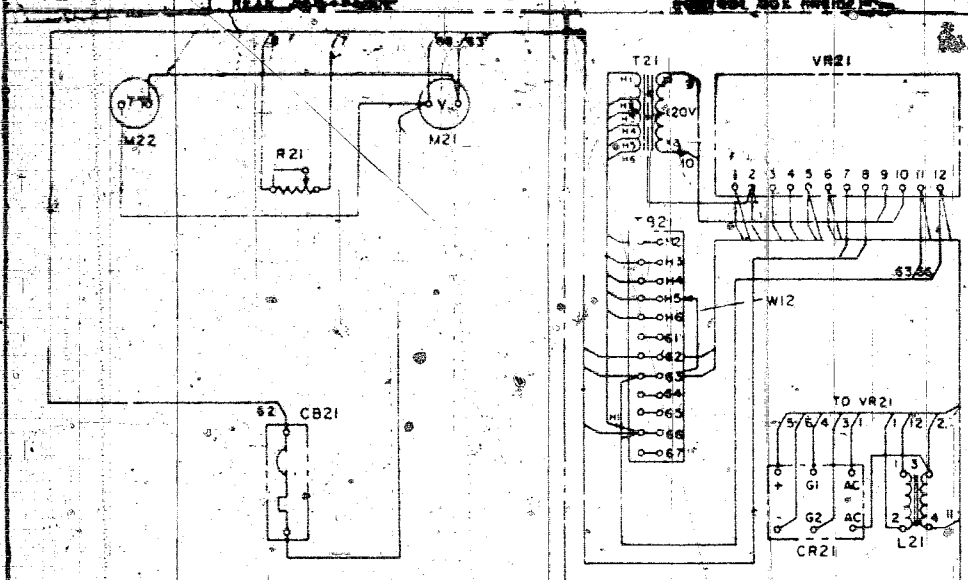
1 PHASE	2 PHASE	3 PHASE
110/220V, 50 Hz, (H6)	110/220V, 50 Hz, (H6)	110/220V, 50 Hz, (H6)
15R 115/230V, 50 Hz, (H6)	15R 115/230V, 50 Hz, (H6)	15R 115/230V, 50 Hz, (H6)
15R 120/240V, 60 Hz, (H5)	15R 120/240V, 60 Hz, (H5)	15R 120/240V, 60 Hz, (H5)

2007 D ADDED - 31 THRU - 56	25-40KW-15R/14
9049 C ADDED - ENT - 19 THRU - 312	25-30KW-51R/14
8256 B ADDED - 25 THRU - 30 (PENN)	100-180KW-15R/1
8256 A ADDED - 19 THRU - 24 (60HZ) (CNS 17-8)	190-180KW-51R/1
	BRUSHLESS
	3PH, 50/60 Hz,
	12 W RECONNECTABLE

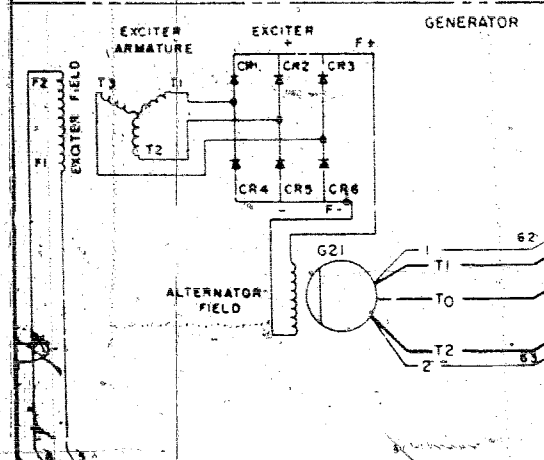
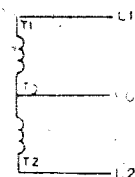
612-5301

612-5302

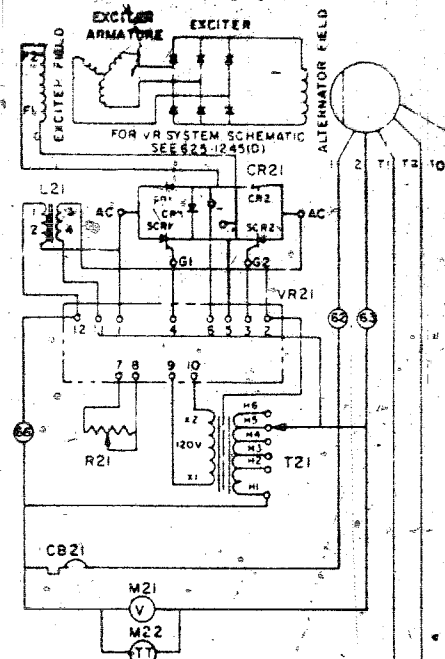
WIRING DIAGRAM



HOUSING-CONTROL BOX

VOLTAGE CONNECTION
120/240 V

SCHEMATIC DIAGRAM



REF.	DES.	PART NO.	QTY.	DESCRIPTION
G21	320-0431	B	1	CAPACITOR SPEARED 1A
G21	320-0307	P	1	LOCK-OUT SWITCH HANDLE PENN 350
CR21	105-0524	C	1	RECTIFIER BRIDGE
G21				GENERATOR
L21	315-0304	B	1	REACTOR ASSY COMM
M21	302-0421	P	1	VOLTMETER-AC, 0-300V
M22	302-0466	P	1	METER-RUNNING TIME
R21	303-0170	P	1	RHEOSTAT-VOLTAGE ADJ 3.5K, 25W
	303-0032	P	1	KNOB-RHEOSTAT
T21	315-0431	D	1	TRANSFORMER-VOLT REF
TB21	332-1242	B	1	MARKER STRIP
VR21	332-1958	D	1	BOARD ASSY-PC VOLTAGE RGLTR
	338-0763	D	1	WIRING HARNESS
W2	336-1913	A	1	LEAD ASSY
	301-3822	C	1	PANEL-GEN CONTROL
	301-3158	D	1	CONTROL BOX
	402-0070	A	4	DAMPENER-VIBRATION
	337-0049	-	1	STRAP-BOND
	508-0001	P	4	BROMMET-RUBBER
	543-0021	A	1	PARTS LIST-AC CONT NOW
	98-2189	C	1	SKRSCREEN-CONTROL PANEL AC

612-5302

-01 STD
-02 PENN STATENOTE:
UNLESS OTHERWISE NOTED,
ALL COMPONENTS ARE SHOWN
IN THE ENERGIZED
POSITION.25-45KW-3R/1
BRUSHLESS
120/240V, 1PH,
3W, 60HZ

Onan

11-13-77 J.C.
CONTROL-GEN SET AC
(WIRING DIAGRAM)

612-5302

612-5303

REAR VIEW PANEL

WIRING DIAGRAM

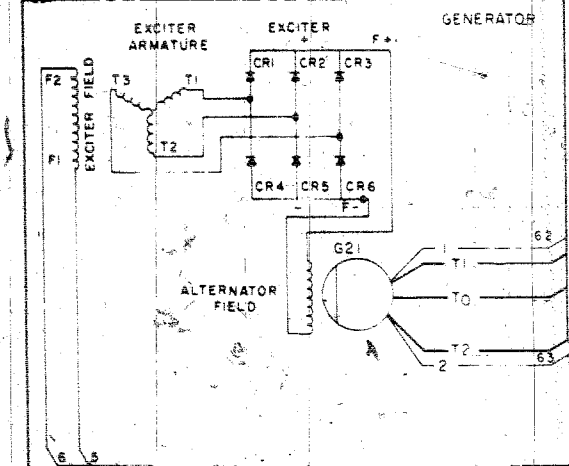
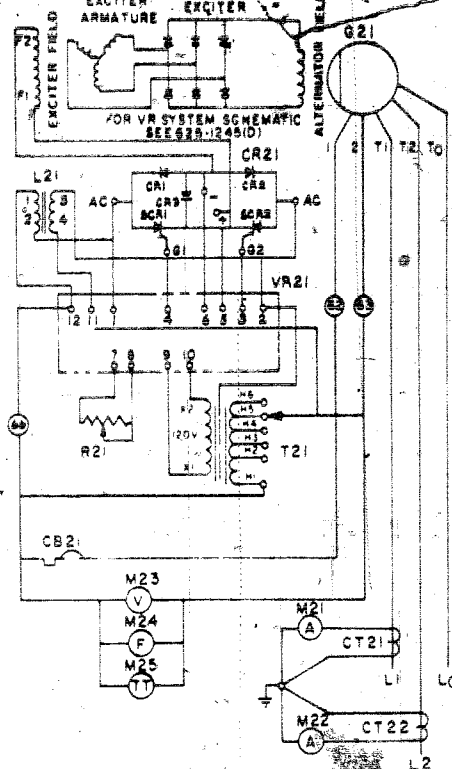
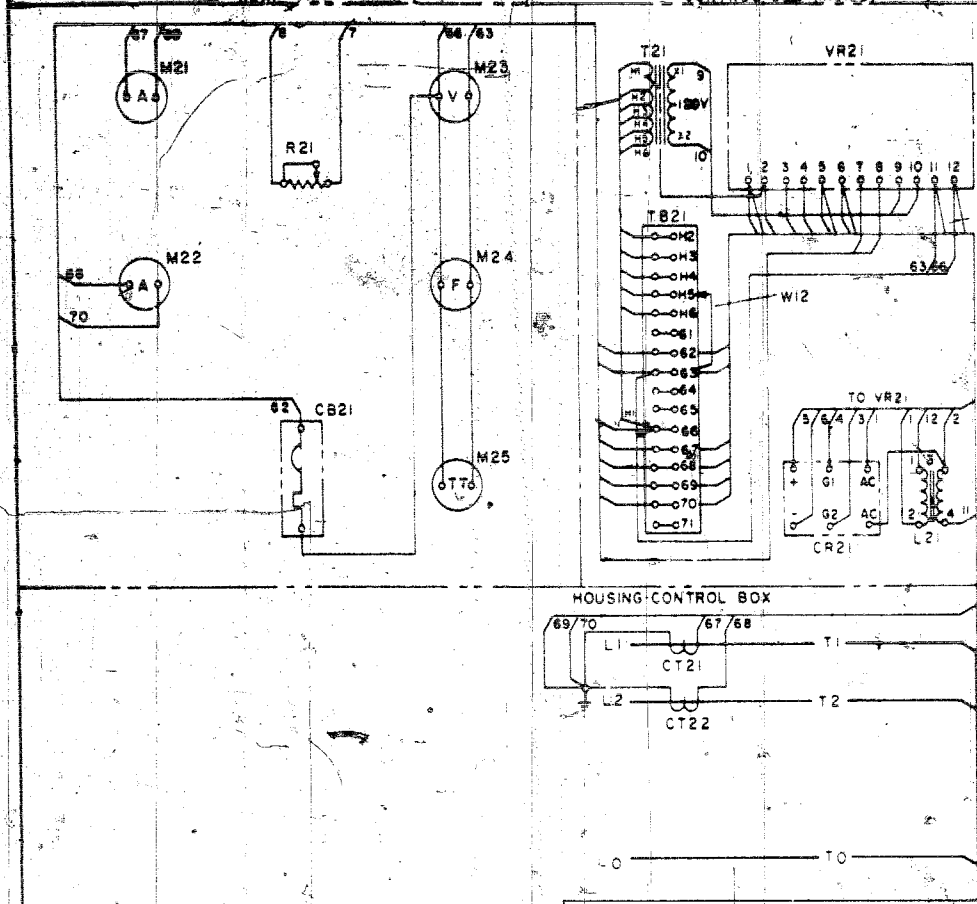
CONTROL BOX (INSIDE)

SCHEMATIC DIAGRAM

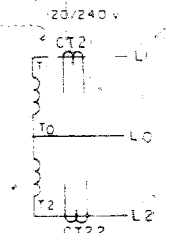
AC CONTROL PARTS LIST

REF. DES.	PART NO.	QTY.	DESCRIPTION
CB21	302-0431	1	CIRCUIT BREAKER, 2A
CR21	302-0307	1	LOCK-OUT BRKR HANDLE (PENN 13472)
CR21	302-0304	1	RECTIFIER BRIDGE
CTR22	302-0739	1	TRANSFORMER ASSY-GWR
G21			GENERATOR
L21	315-0384	1	REACTOR ASSY COMM
M21,22	302-0412	2	AMMETER-AC, 0-350 AMP
M23	302-0421	1	VOLTMETER-AC, 0-300V
M24	302-0221	1	METER-FREQUENCY
M25	302-0466	1	METER-RUNNING TIME
R21	303-0170	1	RHEOSTAT-VOLTAGE ADJ 3-5K, 25W
	303-0032	1	KNOB-RHEOSTAT
T21	315-0431	1	TRANSFORMER-VOLT REF
TB21	332-1242	1	MARKER STRIP
VR21	332-1958	1	BOARD ASSY-PC VOLTAGE REGTR
	336-0735	1	WIRING HARNESS
W12	336-1913	1	LEAD ASSY
	301-3189	1	PANEL-GEN CONTROL
	301-3188	1	CONTROL BOX
	402-0070	1	DAMPENER-VIBRATION
	337-0045	1	STRAP-BOND
	508-0001	1	GROMMET-RUBBER
	545-0021	1	PARTS LIST-AC CONT MDW
	98-2169	1	SILKSCREEN-CONTROL PANEL AC

612-5303



VOLTAGE CONNECTION



NOTE:
UNLESS OTHERWISE NOTED,
ALL COMPONENTS ARE SHOWN
IN THE DE-ENERGIZED
POSITION.

STD. PENN STATE
-01 -02

1-13-77 JC

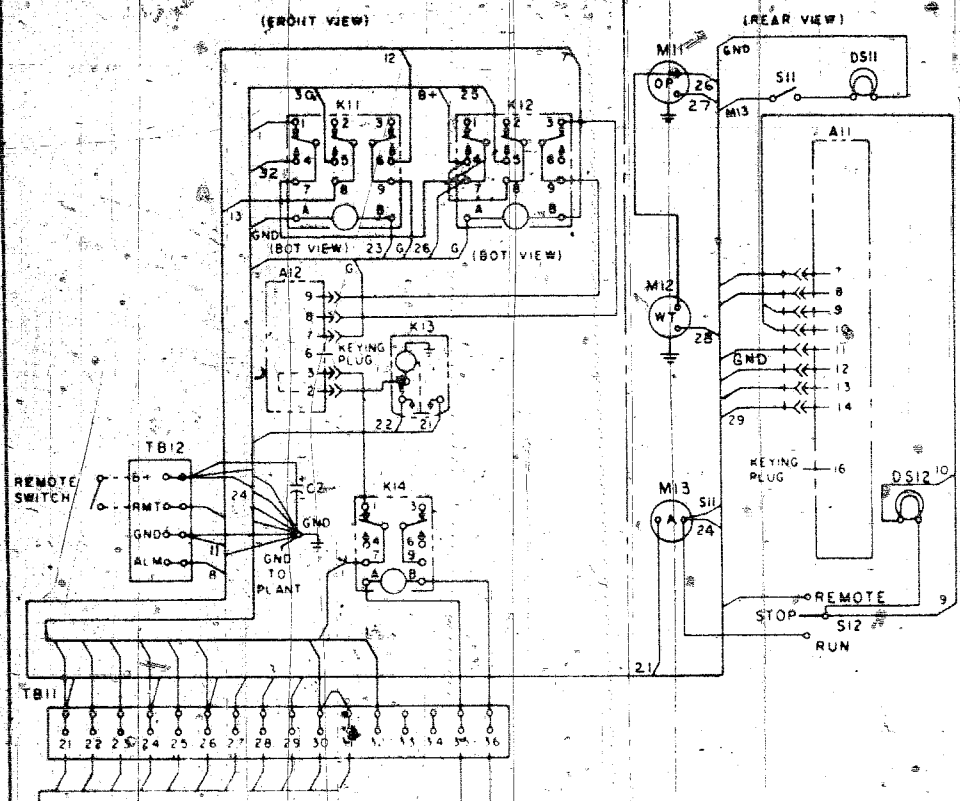
25-45KW-3R/14
BRUSHLESS
120/240V, 1PH,
3W, 60HZ

CONTROL-GEN SET AC
(WIRING DIAGRAM)

612-5303

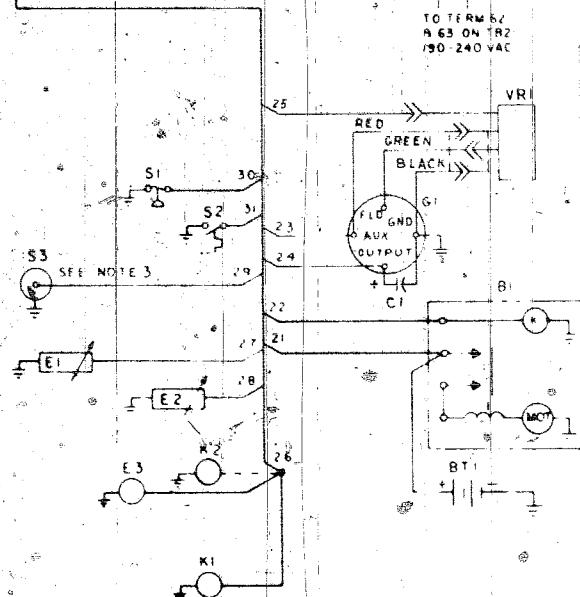
612-5347 C

WIRING DIAGRAM

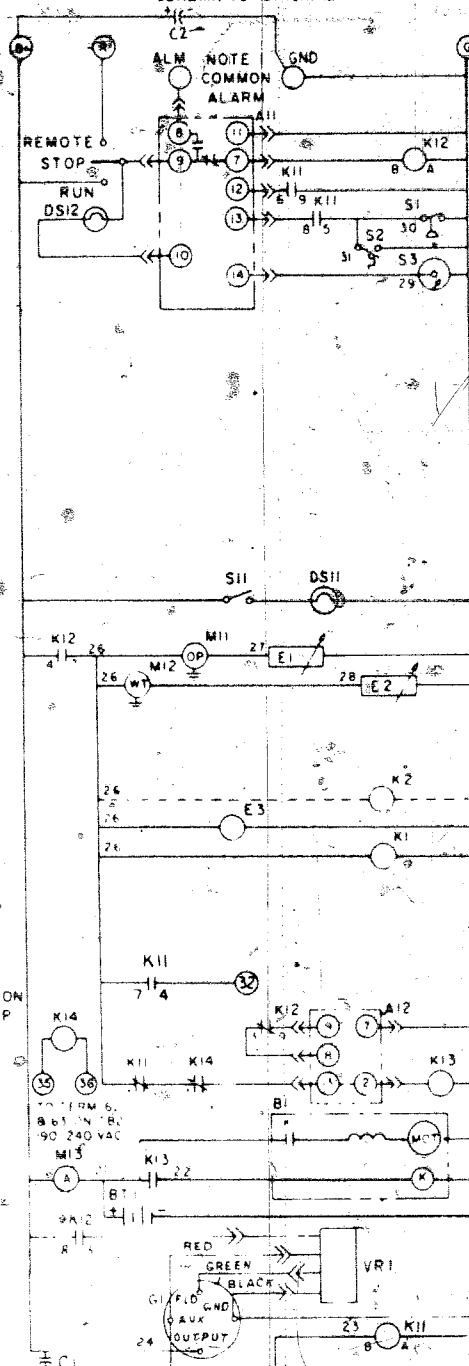


NOTES

1. REMOTE ALARM CIRCUIT RATED 5AMP MAX
2. SHUTDOWN & ALARMS
 - 2.1 STD CONTROL
 - 2.1.1 SAFETY SHUTDOWN & ALARM ON OVERCRANK, OVERSPEED, HI ENG TEMP & LO OIL PRESS.
 - 2.2 PENN STATE CONTROL
 - 2.2.1 SAFETY SHUTDOWN & ALARM ON OVERCRANK & OVERSPEED
 - 2.2.2 SAFETY ALARM ON HI ENG TEMP & LO OIL PRESS
3. S3 OVERSPEED SWITCH MOUNTED IN GENERATOR END BELL
4. UNLESS OTHERWISE NOTED ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION



SCHEMATIC DIAGRAM



ENGINE		PARTS LIST (REF)	
REF DES	PART NO	QTY	DESCRIPTION
B1		1	STARTER & SOLENOID-ENGINE
B11		1	BATTERY-12V
C1		1	CAPACITOR-BY PASS
E1	93A 244	1	SENDER-OIL PRESSURE
E2	93A 246	1	SENDER-WATER TEMP
E3		1	FUEL PUMP
G1		1	ALTERNATOR
K1		1	SOLENOID-ENG STOPPING
K2		1	SOLENOID-WATER
S1		1	SWITCH-LOW OIL PRESSURE
S2		1	SWITCH-HIGH WATER TEMP
S3		1	SWITCH-OVERSPEED
VR1		1	VOLTAGE REGULATOR
CONTROL BOX PART LIST			
A11	3000619	1	MONITOR-ENGINE CONTROL (STD)
A12	3000130	1	MONITOR-ENGINE CONTROL(ALL PENN STATE)
A17	3000733	1	CONTROL-STD CRANKER
	3000714	1	CONTROL-CYCLE CRANKER
C2	356A0077	1	CAPACITOR ASSY
	356A0072	1	CAPACITOR (4000 MFD@30VDC)
DS12	307A128	1	LAMP-FAULT
K11	307B1058	1	RELAY-START DISCONNECT
K12	307B1058	1	RELAY-IGNITION
K13	307B1031	1	RELAY-START SOLENOID
K14	307B1061	1	RELAY-STARTER PROTECTION
M11	93B 243	1	GAUGE OIL PRESSURE
M12	93B 245	1	GAUGE WATER TEMP
M13	307A61	3	AMMETER-CHARGE 30-B-30
	307P157	1	SPRING-RELAY HOLDDOWN (K11, K14)
DS11	322-0004	1	LAMP-PANEL
	322-0149(P)	1	HOLDER-LAMP
S11	308-0002(P)	1	SWITCH-PANEL LIGHT
S12	308P118	1	SWITCH-SELECTOR (-01, -03)
	308P127	1	SWITCH-SELECTOR (-02, -04)
TR1	337A 35-REF	1	TERMINAL BLOCK
	337A1241	1	MARKER STRIP
	337A53 (REF)	1	TERMINAL BLOCK
	337A1239	1	MARKER STRIP
	338D1065	1	WIRING HARNESS
	30103253	1	BRACKET-ENG CONTROL
	304C3155	1	PANEL-ENGINE CONTROL
	54A475	1	PARTS LIST CONT MOD
	332 1276	1	PLUG KEYING
	988710	1	SH-SCREEN (-01, -03)
	9887510	1	SH-SCREEN (-02, -04)

* WHEN USED

9968	C	322-0004 WAS -0017	2-24-77	CIP	1	2-24-77
B711	B	ADDED S11 & DS11	2-24-77	CIP	1	2-24-77
A	A	ADDED C2	2-24-77	CIP	1	2-24-77
ER	ER		2-24-77	CIP	1	2-24-77

ON 10/10/77

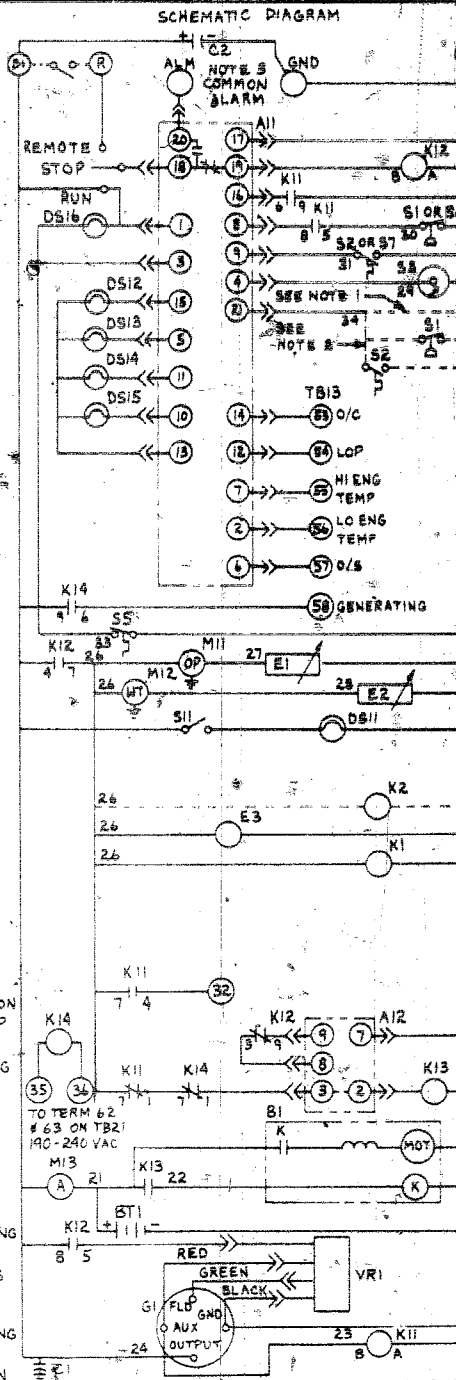
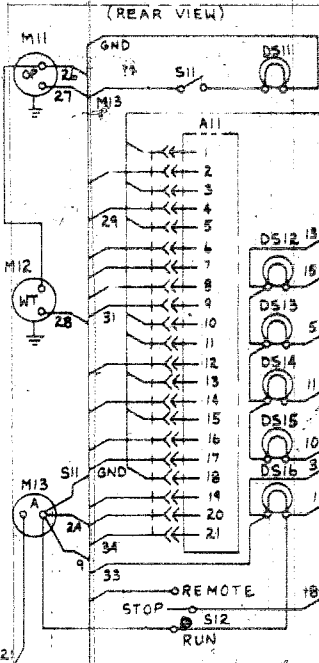
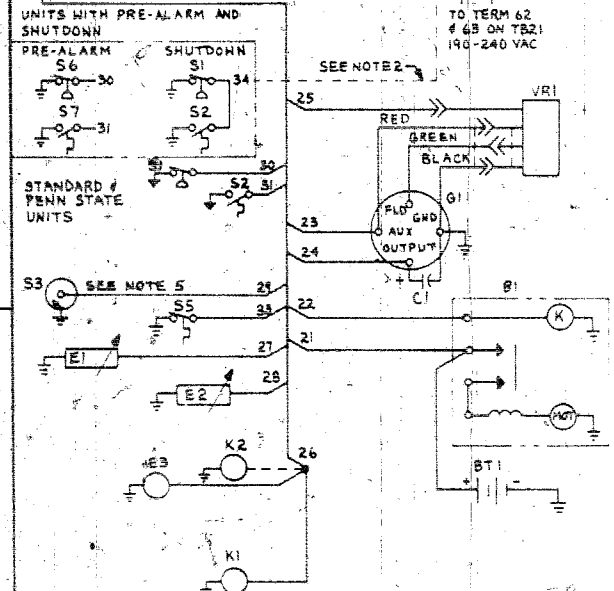
	STD CRANKER	CYCLE CRANKER	MODEL NO
STD MONITOR	-01	-03	MDER-R 1H
PENN MONITOR	-02	-04	MDER-R 1U
			2 WIRE REMOTE STARTING

CONTROL-GEN SET ENGL (WIRING DIAGRAM)

612-5347 C

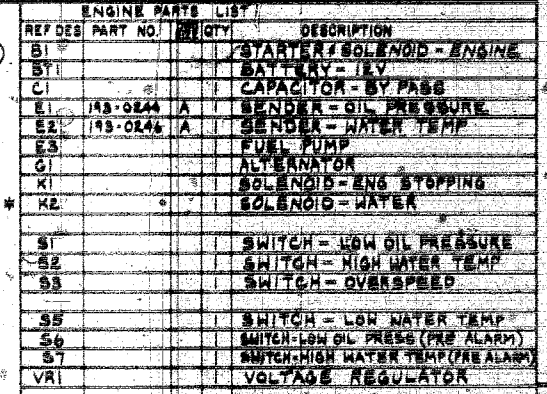
SEPLA FROM 612-5328

C	WIRING DIAGRAM
(FRONT VIEW)	



NOTES:

- 1 WIZED UP ON STD CONTROL ONLY
- 2 USED ON PRE-ALARM CONTROL ONLY
- 3 REMOTE ALARM CIRCUIT RATED 5AMP MAX
- 4 SHUTDOWN, 4 ALARMS
- 4.1 STD CONTROL
- 4.1.1 SAFETY SHUTDOWN & ALARMS ON OVERCRANK, OVERSPEED, HI ENG TEMP & LO OIL PRESS
- 4.1.2 SAFETY ALARM ONLY ON LO ENG TEMP
- 4.2 PENN STATE CONTROL
- 4.2.1 SAFETY SHUTDOWN & ALARMS ON OVERCRANK & OVERSPEED
- 4.2.2 SAFETY ALARMS ON HI ENG TEMP, LO OIL PRESS & LO ENG TEMP
- 4.3 PRE-ALARM CONTROL
- 4.3.1 SAFETY PRE-ALARMS ON HI ENG TEMP & LO OIL PRESS
- 4.3.2 SAFETY SHUTDOWN & ALARMS ON OVERCRANK, OVERSPEED, HI ENG TEMP & LO OIL PRESS
- 4.3.3 SAFETY ALARM ONLY ON LO ENG TEMP
- 5 53 OVERSPEED SWITCH MOUNTED IN GENERATOR END BELL
- 6 UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION



		CONTROL	BOX	PARTS	LIST
	A11	300-0681	D		MONITOR - ENGINE CONTROL
	A12	300-0753	A		CONTROL - STD CRANKER
		300-0714	C		CONTROL - CYCLE CRANKER
		332-1276	-		PLUG - KEYING
	C2	356-0079	A		CAPACITOR ASSY
		356-0072	A		CAPACITOR (4000 MFD @ 35VDC)
	DS12	322-0107	A		LAMP - OVERCRANK
	DS13	322-0111	A		LAMP - OVERSPEED
	DS14	322-0108	A		LAMP - LOW OIL PRESS
	DS15	322-0109	A		LAMP - HI ENG TEMP
	DS16	322-0110	A		LAMP - LO ENG TEMP
	K11	301-1058	B		RELAY - START DISCONNECT
	K12	301-1058	B		RELAY - IGNITION
	K13	301-1021	B		RELAY - START SOLENOID
	K14	301-1061	B		RELAY - STARTER PROTECTION
	M11	193-0243	B		GAUGE - OIL PRESSURE
	M12	193-0245	B		GAUGE - WATER TEMP
	M13	302-0061	A		AMMETER - CHARGE 30-0-30
	DS11	322-0004	-		LAMP - PANEL
		322-0149	P		HOLDER - LAMP
*	S12	308-0138	P		SWITCH - SELECTOR (-01, 02, 03, 04)
	TB11	332-1005	A		TERMINAL BLOCK
		332-1559	A		MARKER STRIP
	TB12	332-0531	A		TERMINAL BLOCK
		332-1239	A		MARKER STRIP
	TB13	332-0699	A		TERMINAL BLOCK
		332-1240	A		MARKER STRIP
		338-1066	D		WIRING HARNESS
	W12	336-1418	A		LEAD ASSY (STD CONT ONLY)
		545-0026	A		PARTS LIST - CONT HDH (ENG)
		301-3253	D		BRACKET - ENG CONTROL
		301-3267	C		PANEL - ENG CONTROL
		98-2170	B		SILKSCREEN (-01, 02, 03, 04)
		98-2510	B		SILKSCREEN (-05, 06)
		308-0327	P		SWITCH SELECTOR (-05, 06)
		307-1157	P	3	SPRING RELAY HOLDDOWN (K11, K12, K14)
*	S11	308-0002	P		SWITCH - PANEL LIGHT

* WHEN USED

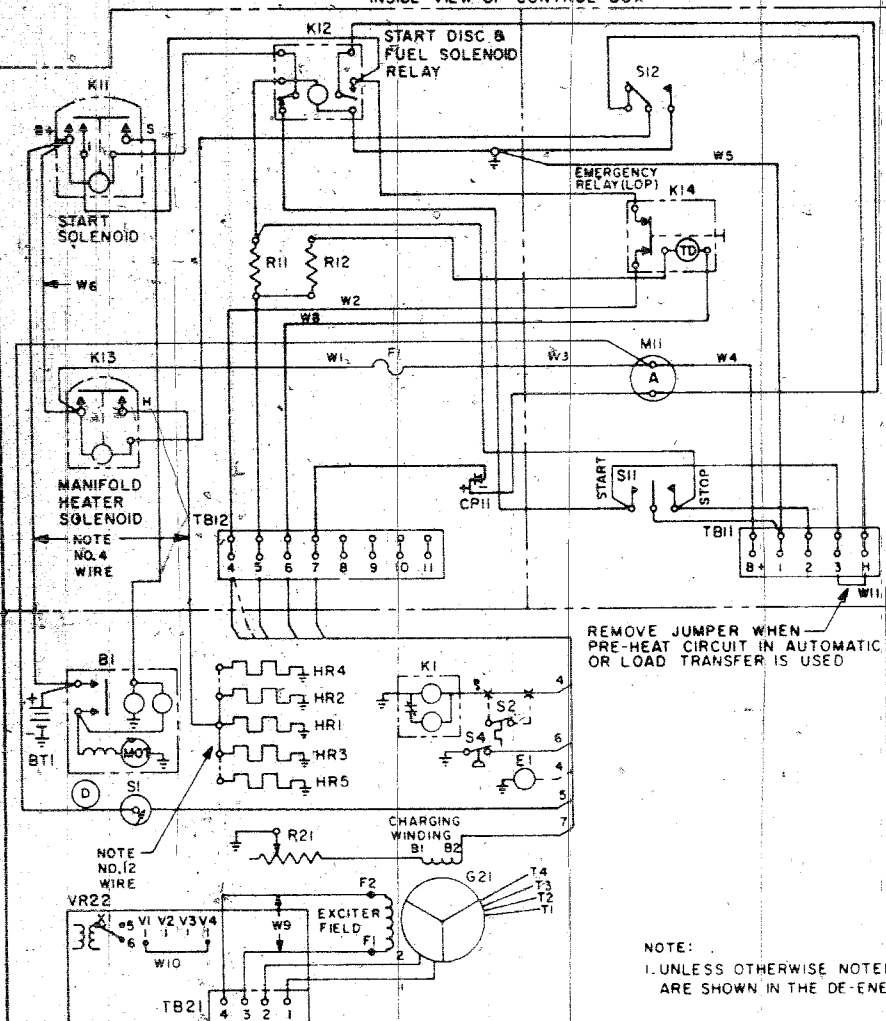
24602	E	1	REDRAWN W/O CHNG.	-	CH	P/A	7-5-84
ER NO	LTR NO		REVISION	ZONE	DR	EXTD	DATE

[illegible]

612-5387

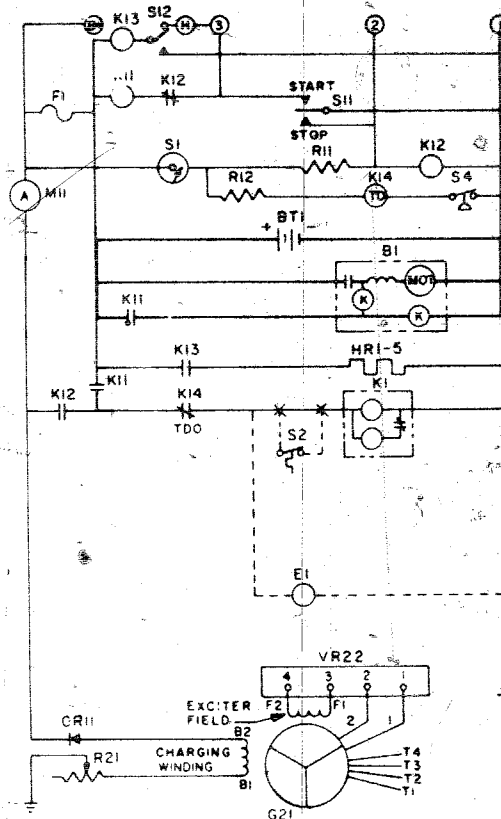
WIRING DIAGRAM

INSIDE VIEW OF CONTROL BOX



NOTE:
1. UNLESS OTHERWISE NOTED, ALL COMPONENTS
ARE SHOWN IN THE DE-ENERGIZED POSITION.

SCHEMATIC DIAGRAM



ENG PARTS LIST (REF)				
REF	DES	QTY	NO.	DESCRIPTION
B1				STARTER B1 SOLENOID
BT1				BATTERY 12V
E1				FUEL PUMP
HR1				HEATER-MANIFOLD
HR2,3				HEATER-GLOW PLUG (2 CYL)
HR2-5				HEATER-GLOW PLUG (4 CYL)
K1	307-0628	B		SOLENOID-FUEL
S1				SWITCH-CENTRIFUGAL
S2				SWITCH-HIGH TEMP
S4				SWITCH-LOW OIL PRESS
AC PARTS LIST				
G21				GENERATOR
R21	304-0709	B		RESISTOR ASSY
VR22	305-0558	D		REGULATOR ASSY-VOLTAGE (W/V ADJ)
W9	338-0744	A		WIRING HARNESS (F1-F2)
CONTROL BOX PARTS LIST				
CR11	305-0496	A		RECTIFIER & LEAD ASSY
F1	321-0156	A		FUSE 10AMP
	321-0175	A		HOLDER-FUSE
K11	307-0845	B		RELAY-START/SOLENOID
K12	307-1527	B		RELAY & LEAD ASSY
K13	307-1046	B		RELAY-MANIFOLD HEATER
K14	320-0104	B		RELAY-EMERGENCY (LOP)
M11	302-0446	A		AMMETER-CHARGE 5-0-5
R11, S11	308-0307	B		SWITCH & RESISTOR ASSY
R12	304-0697	A		RESISTOR-LEAD
ASSEMBLY				
S12	308-0304	A		SWITCH & LEAD ASSY
TB11	332-0604	A		TERMINAL BLOCK
	332-0616	A		MARKER STRIP
TB12	332-0706	A		TERMINAL BLOCK
	332-0739	A		MARKER STRIP
W1	336-3572	A		LEAD ASSY
W2	336-2289	A		LEAD ASSY
W3	336-3571	A		LEAD ASSY
W4	336-1465	A		LEAD ASSY
W5	336-0179	A		LEAD ASSY
W6	332-0602	A		JUMPER
W8	336-1045	A		LEAD ASSY
W11	332-1043	A		JUMPER
	301-1961	C		PANEL-CONTROL BOX
	301-1962	D		CONTROL BOX
	301-3714	B		COVER-REGULATOR
	301-3683	C		SADDLE-CONTROL BOX
	301-3682	C		OUTPUT BOX -02
	301-0856	B		COVER -02
	301-2467	B		OUTPUT BOX -01, -03, -04
	301-2466	A		COVER -01, -03, -04
	508-0183	P		GROMMET
	402-0070	A		RUBBER MOUNTS
	337-0036	A		GROUND STRAP
	98-1683	B		SILKSCREEN-ADD LOW OIL & RESET
	98-2847	A		SILKSCREEN-LOAD DES

WHEN USED

DIESEL

MODEL NO
6.0 & 12.0 KW-99CR
SPEC 18227AA

MARINE
7.5, 12.0 & 15.0 KW-99CR
SPEC 18227AA

IPH, 60Hz

C ADDED W3 (336-3571) QTY 1 CIP 10-12-78
B W/F WAS 336-1466 CIP 10-12-78
A ADDED F1 (321-0146, 0175) CIP 10-12-78

Ongn

6-3-77

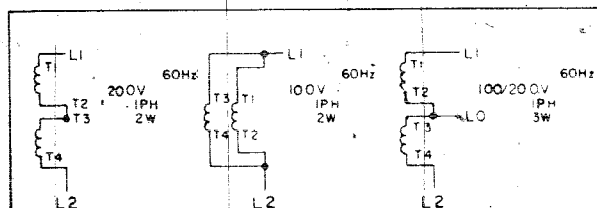
CIP

CDR

CONTROL-GEN SET
(WIRING DIAGRAM)

612-5387

C



MODEL	STD	MARINE
2 CYL	-01	-03
4 CYL	-02	-04

B WAS 310 K11

10-12-78

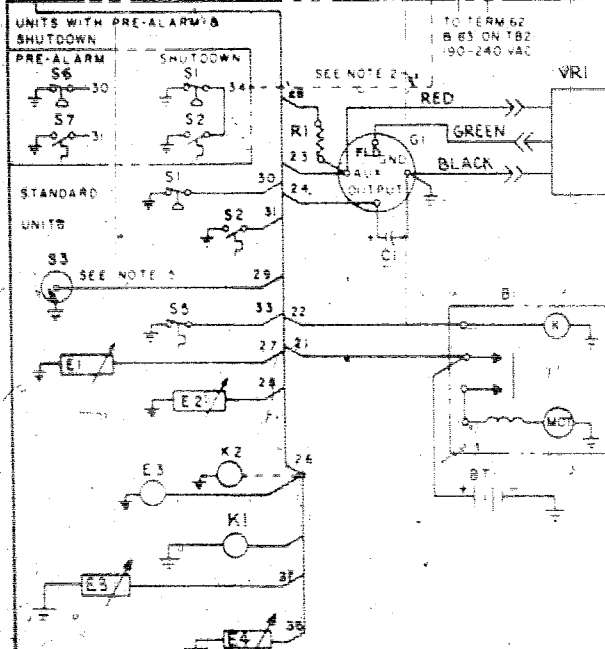
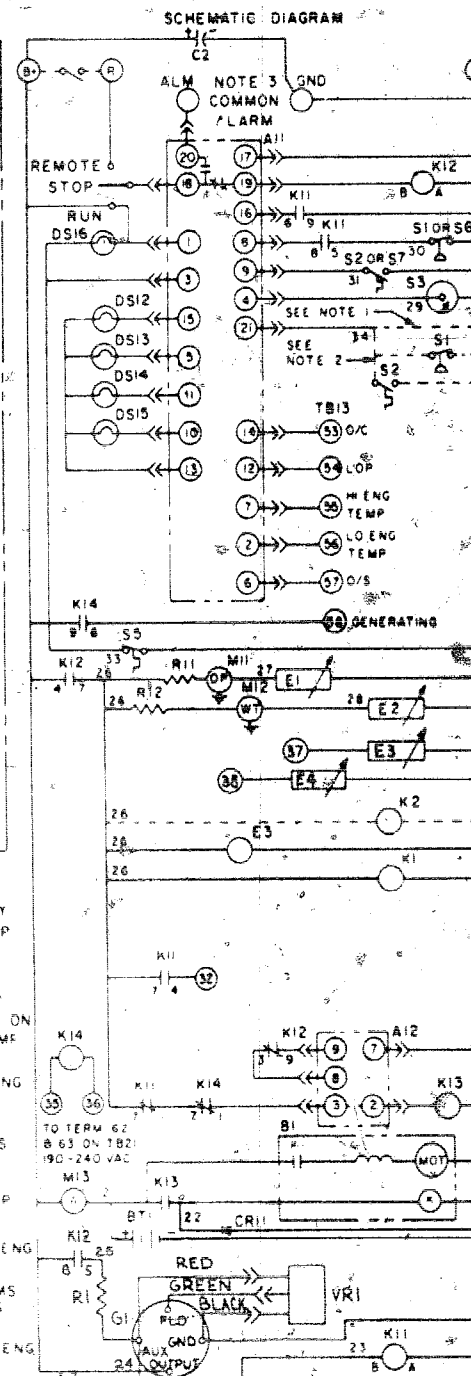
F1

F2

F3

F4

WIRING DIAGRAM



- *NOTES
- 1. W/2 USED ON STD CONTROL ONLY
- 2. USED ON PRE-ALARM CONTROL ONLY
- 3. REMOTE ALARM CIRCUIT RATED 5AMP MAX
- 4. SHUTDOWN & ALARMS
 - 4.1 STD CONTROL
 - 4.1.1 SAFETY SHUTDOWN & ALARMS ON OVERCRANK, OVERSPEED, HI ENG TEMP & LO OIL PRESS
 - 4.1.2 SAFETY ALARM ONLY ON LO ENG TEMP
 - 4.2
 - 4.2.1 SAFETY SHUTDOWN & ALARMS ON OVERCRANK & OVERSPEED
 - 4.2.2 SAFETY ALARMS ON HI ENG TEMPO OIL PRESS & LO ENG TEMP
 - 4.3 PRE-ALARM CONTROL
 - 4.3.1 SAFETY PRE-ALARMS ON HI ENG TEMP & LO OIL PRESS
 - 4.3.2 SAFETY SHUTDOWN & ALARMS ON OVERCRANK, OVERSPEED, HI ENG TEMP & LO OIL PRESS
 - 4.3.3 SAFETY ALARM ONLY ON LO ENG TEMP
- 5. 53 OVERSPEED SWITCH MOUNTED IN GENERATOR END BELL
- 6. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION

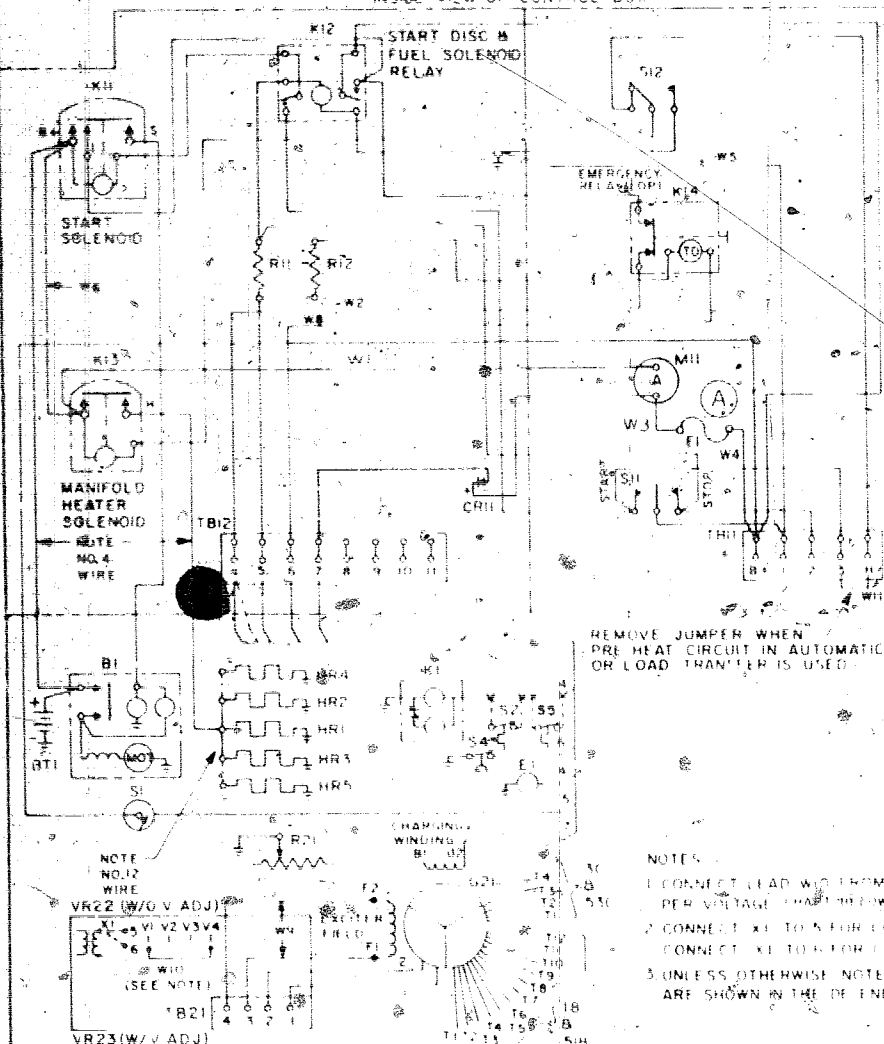
REF DES	PART NO	QTY	DESCRIPTION
B1		1	STARTER & SOLENOID-ENGINE
B11		1	BATTERY-24 V
C1		1	CAPACITOR-BY PASS
E13	193A244	2	SENDER-OIL PRESSURE
E24	193B247	2	SENDER-WATER TEMP
F1		1	FUEL PUMP
G1		1	ALTERNATOR
K1		1	SOLENOID-ENG STOPPING
M2		1	SOLENOID-WATER
R1		1	RESISTOR-300.0
S1		1	SWITCH-ENG OIL PRESSURE
S2		1	SWITCH-HIGH WATER TEMP
S3		1	SWITCH-OVERSPED
S5		1	SWITCH-LOW WATER TEMP
S6		1	SWITCH-100 OIL PRESS (P/S-ALARM)
S7		1	SWITCH-HIGH WATER TEMP (P/S-ALARM)
VR1		1	VOLTAGE REGULATOR
CONTROL BOX PARTS LIST			
356A2431		1	LEAD ASSY
307P1157		3	SPRING-RELAY HOLD-DOWN (K11, K12, K13)
A11	3080582	1	HORN-TRAILING CONTROL
A12	3084751	1	SWITCH-ENGINE CRANKER
	3080713	1	SWITCH-ENGINE CRANKER
	332-1278	3	PLUG-ENG
C2	356A0079	1	CAPACITOR ASSY
	356A0072 (REF)	1	CAPACITOR (4000MFD @ 50 WDC)
D812	3272A119	1	LAMP-OVERCRANK
D813	3272A123	1	LAMP-OVERSPED
D814	3272A120	1	LAMP-LOW OIL PRESS
D815	3272A124	1	LAMP-HI ENG TEMP
D816	3272A122	1	LAMP-LO ENG TEMP
K11	307B1056	1	RELAY-START DISCONNECT
K12	307B1056	1	RELAY-IGNITION
K13	307B1061	1	RELAY-START SOLENOID
K14	307B1061	1	RELAY-STARTER PROTECTION
M11	193B243	1	GAUGE-OIL PRESSURE
M12	193B245	1	GAUGE-WATER TEMP
M13	302AB1	1	AMMETER-CHARGE 20-80
M11, M12	193P250	1	RESISTOR-GAUGE
S12	308P138	1	SWITCH-SELECTOR (-01, -02, -03, -04)
TB11	332A1005 (REF)	1	TERMINAL BLOCK
	332A1939	1	MARKER STRIP
TB12	332A537 (REF)	1	TERMINAL BLOCK
	332A1238	1	MARKER STRIP
TB13	332A899 (REF)	1	TERMINAL BLOCK
	332A1240	1	MARKER STRIP
	33801066	1	WIRING HARNESS
VR12	336A1918	1	LEAD ASSY-STD CONT ONLY
	545426	1	PARTS LIST CONT HORN & ENG
	30103293	1	BRACKET-ENG CONTROL
	30103269	1	PANEL-ENG CONTROL
	9887630	1	SCREEN-01, 02, 03, 04
CR1	357A18	1	DIODE-ASSY

• **WIKI** **USE**

62-5557

WIRING DIAGRAM

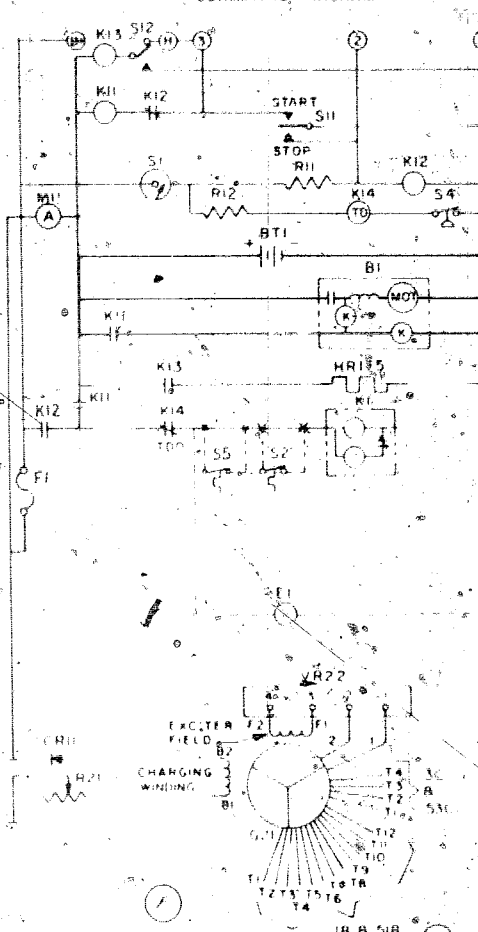
INSIDE VIEW OF CONTROL BOX



NOTES

1. CONNECT LEAD W/O FROM V4 TO PER VOLTAGE TRANSFORMER
2. CONNECT X1 TO X2 FOR CODE 51, B5H 10HZ. CONNECT X1 TO X3 FOR CODE 51, B5H 10HZ.
3. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION.

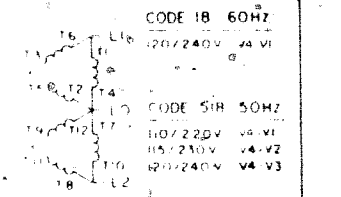
SCHEMATIC DIAGRAM



TERMS (CONT)

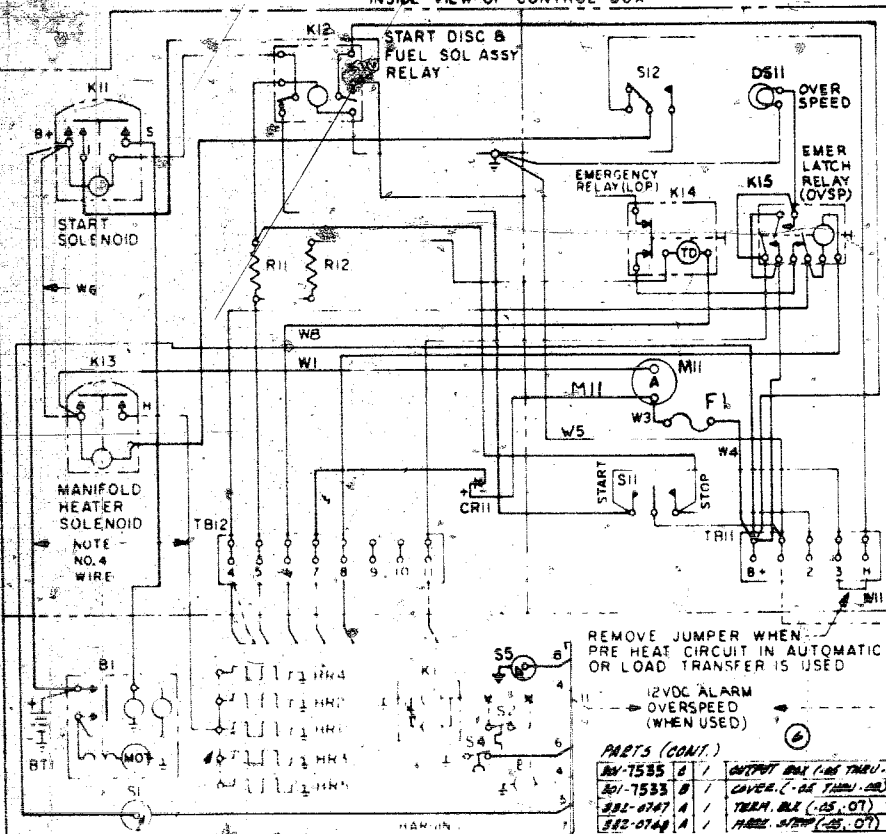
- 332 0747 A 1 TERMINAL BLOCK (05-07)
- 332 0748 A 1 MARINE STRIP (05-07)

L	301-1533 WAS 301-5992	9718	1	14-26-42
K	301-1535 WAS 301-5990	9718	1	14-26-42
J	DELETED DASH NOS PER CR	4336	1	11-13-81

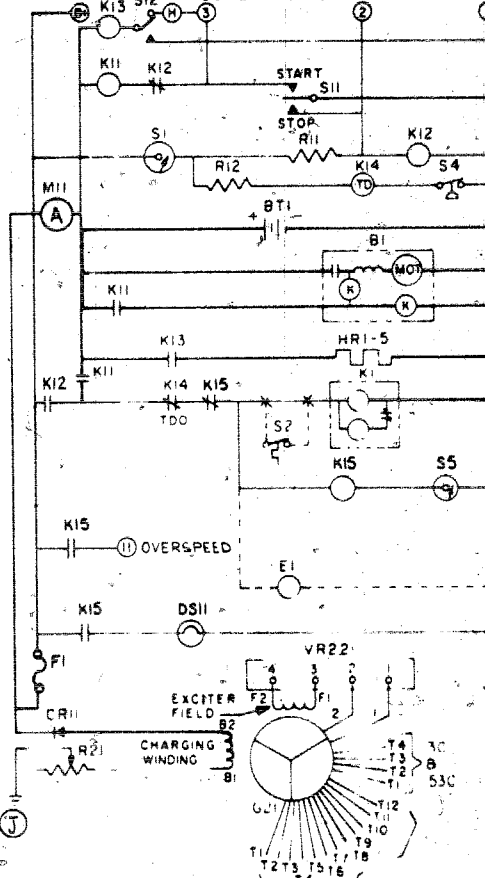


VR24	VR22	VR23	VR22	VR22	VR22
4 CYL	MARINE	MARINE	MARINE	MARINE	MARINE
03	04	07	09	10	
04	06	08			
ER 4131	10-18-80				
7 0628 ER 3115	10-18-80				
24 22 24	6-3-80				
3 NOS PER ER 1915	2-9-80				
3 30 5483	8-22-79				

612-5567

WIRING DIAGRAM
INSIDE VIEW OF CONTROL BOX

SCHEMATIC DIAGRAM



PARTS (CONT.)

308-0001	P	1	GROMMET
332-0052	P	1	CLIP-WIRE
308-0015	-	4	WASHER FIBER

SEE ER NO. 9718

DELETED DASH NOS PER ER

REPAIR PART NO. 307-0628

274 6 BARRED PLUS PER ER

1915 1 CHG P/N'S DASH NOS PER ER

CODE 18 60HZ

240/240V V4-V1

240/240V V4-V2

240/240V V4-V3

240/240V V4-V4

240/240V V4-V5

240/240V V4-V6

240/240V V4-V7

240/240V V4-V8

240/240V V4-V9

240/240V V4-V10

240/240V V4-V11

240/240V V4-V12

240/240V V4-V13

240/240V V4-V14

240/240V V4-V15

240/240V V4-V16

240/240V V4-V17

240/240V V4-V18

240/240V V4-V19

240/240V V4-V20

240/240V V4-V21

240/240V V4-V22

240/240V V4-V23

240/240V V4-V24

240/240V V4-V25

240/240V V4-V26

240/240V V4-V27

240/240V V4-V28

240/240V V4-V29

240/240V V4-V30

240/240V V4-V31

240/240V V4-V32

240/240V V4-V33

240/240V V4-V34

240/240V V4-V35

240/240V V4-V36

240/240V V4-V37

240/240V V4-V38

240/240V V4-V39

240/240V V4-V40

240/240V V4-V41

240/240V V4-V42

240/240V V4-V43

240/240V V4-V44

240/240V V4-V45

240/240V V4-V46

240/240V V4-V47

240/240V V4-V48

240/240V V4-V49

240/240V V4-V50

240/240V V4-V51

240/240V V4-V52

240/240V V4-V53

240/240V V4-V54

240/240V V4-V55

240/240V V4-V56

240/240V V4-V57

240/240V V4-V58

240/240V V4-V59

240/240V V4-V60

240/240V V4-V61

240/240V V4-V62

240/240V V4-V63

240/240V V4-V64

240/240V V4-V65

240/240V V4-V66

240/240V V4-V67

240/240V V4-V68

240/240V V4-V69

240/240V V4-V70

240/240V V4-V71

240/240V V4-V72

240/240V V4-V73

240/240V V4-V74

240/240V V4-V75

240/240V V4-V76

240/240V V4-V77

240/240V V4-V78

240/240V V4-V79

240/240V V4-V80

240/240V V4-V81

240/240V V4-V82

240/240V V4-V83

240/240V V4-V84

240/240V V4-V85

240/240V V4-V86

240/240V V4-V87

240/240V V4-V88

240/240V V4-V89

240/240V V4-V90

240/240V V4-V91

240/240V V4-V92

240/240V V4-V93

240/240V V4-V94

240/240V V4-V95

240/240V V4-V96

240/240V V4-V97

240/240V V4-V98

240/240V V4-V99

240/240V V4-V100

240/240V V4-V101

240/240V V4-V102

240/240V V4-V103

240/240V V4-V104

240/240V V4-V105

240/240V V4-V106

240/240V V4-V107

240/240V V4-V108

240/240V V4-V109

240/240V V4-V110

240/240V V4-V111

240/240V V4-V112

240/240V V4-V113

240/240V V4-V114

240/240V V4-V115

240/240V V4-V116

240/240V V4-V117

240/240V V4-V118

240/240V V4-V119

240/240V V4-V120

240/240V V4-V121

240/240V V4-V122

240/240V V4-V123

240/240V V4-V124

240/240V V4-V125

240/240V V4-V126

240/240V V4-V127

240/240V V4-V128

240/240V V4-V129

240/240V V4-V130

240/240V V4-V131

240/240V V4-V132

240/240V V4-V133

240/240V V4-V134

240/240V V4-V135

240/240V V4-V136

240/240V V4-V137

240/240V V4-V138

240/240V V4-V139

240/240V V4-V140

240/240V V4-V141

240/240V V4-V142

240/240V V4-V143

240/240V V4-V144

240/240V V4-V145

240/240V V4-V146

240/240V V4-V147

240/240V V4-V148

240/240V V4-V149

240/240V V4-V150

240/240V V4-V151

240/240V V4-V152

240/240V V4-V153

240/240V V4-V154

240/240V V4-V155

240/240V V4-V156

240/240V V4-V157

240/240V V4-V158

240/240V V4-V159

240/240V V4-V160

240/240V V4-V161

240/240V V4-V162

240/240V V4-V163

240/240V V4-V164

240/240V V4-V165

240/240V V4-V166

240/240V V4-V167

240/240V V4-V168

240/240V V4-V169

240/240V V4-V170

240/240V V4-V171

240/240V V4-V172

240/240V V4-V173

240/240V V4-V174

240/240V V4-V175

240/240V V4-V176

240/240V V4-V177

240/240V V4-V178

240/240V V4-V179

240/240V V4-V180

240/240V V4-V181

240/240V V4-V182

240/240V V4-V183

240/240V V4-V184

240/240V V4-V185

240/240V V4-V186

240/240V V4-V187

240/240V V4-V188

240/240V V4-V189

240/240V V4-V190

240/240V V4-V191

240/240V V4-V192

240/240V V4-V193

240/240V V4-V194

240/240V V4-V195

240/240V V4-V196

240/240V V4-V197

240/240V V4-V198

240/240V V4-V199

240/240V V4-V200

240/240V V4-V201

240/240V V4-V202

240/240V V4-V203

240/240V V4-V204

240/240V V4-V205

240/240V V4-V206

240/240V V4-V207

240/240V V4-V208

240/240V V4-V209

240/240V V4-V210

240/240V V4-V211

240/240V V4-V212

240/240V V4-V213

240/240V V4-V214

240/240V V4-V215

240/240V V4-V216

240/240V V4-V217

240/240V V4-V218

240/240V V4-V219

240/240V V4-V220

240/240V V4-V221

240/240V V4-V222

240/240V V4-V223

240/240V V4-V224

240/240V V4-V225

240/240V V4-V226

240/240V V4-V227

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240/240V V4-V231

240/240V V4-V232

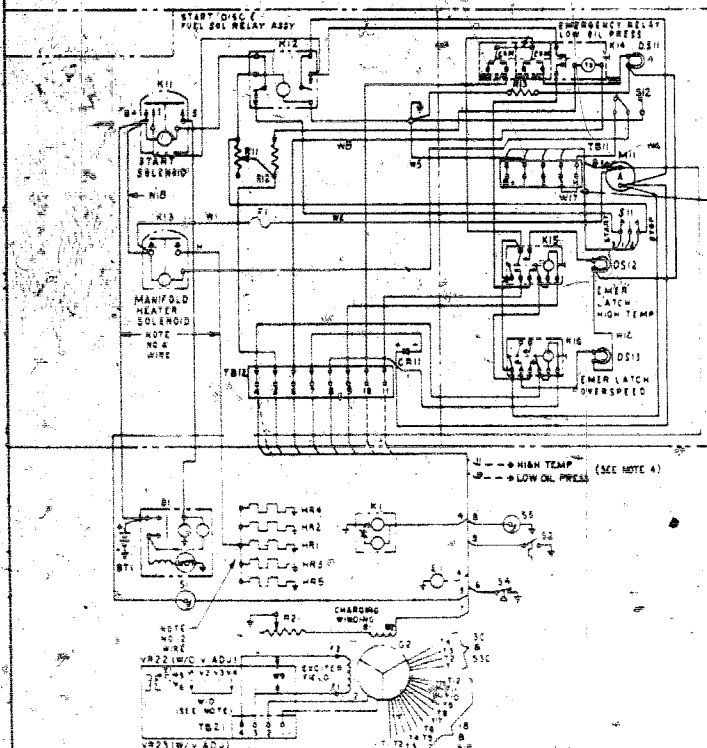
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240/240V V4-V234

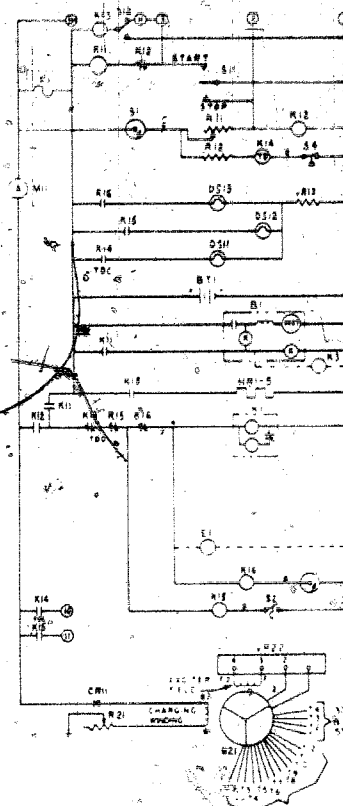
240/240V V4-V235

240/240V V4-V236

612-5647 D

WIRING DIAGRAM
REAR VIEW OF PANELINSIDE VIEW OF
CONTROL BOX

SCHEMATIC DIAGRAM



NOTES:

1. CONNECT LEAD WIRE FROM A TERMINAL BLOCK TO A TERMINAL BLOCK.

2. CONNECT A TO B FOR CODE 55C/56B/57C/58C/59C/60C/61C/62C/63C/64C/65C/66C/67C/68C/69C/70C/71C/72C/73C/74C/75C/76C/77C/78C/79C/80C/81C/82C/83C/84C/85C/86C/87C/88C/89C/90C/91C/92C/93C/94C/95C/96C/97C/98C/99C/100C.

3. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE ENERGIZED POSITION.

4. FOR 24VDC ALARM - CONNECT BETWEEN DESIGNATED TERM 1 (COM) (WHEN USED).

TERMINAL	WIRE	DESCRIPTION
1	100-0001	START SOLENOID
2	100-0002	STOP SOLENOID
3	100-0003	EMERGENCY RELAY
4	100-0004	LOW OIL PRESS
5	100-0005	START SOLENOID
6	100-0006	STOP SOLENOID
7	100-0007	EMERGENCY RELAY
8	100-0008	LOW OIL PRESS
9	100-0009	START SOLENOID
10	100-0010	STOP SOLENOID
11	100-0011	EMERGENCY RELAY
12	100-0012	LOW OIL PRESS
13	100-0013	START SOLENOID
14	100-0014	STOP SOLENOID
15	100-0015	EMERGENCY RELAY
16	100-0016	LOW OIL PRESS
17	100-0017	START SOLENOID
18	100-0018	STOP SOLENOID
19	100-0019	EMERGENCY RELAY
20	100-0020	LOW OIL PRESS
21	100-0021	START SOLENOID
22	100-0022	STOP SOLENOID
23	100-0023	EMERGENCY RELAY
24	100-0024	LOW OIL PRESS
25	100-0025	START SOLENOID
26	100-0026	STOP SOLENOID
27	100-0027	EMERGENCY RELAY
28	100-0028	LOW OIL PRESS
29	100-0029	START SOLENOID
30	100-0030	STOP SOLENOID
31	100-0031	EMERGENCY RELAY
32	100-0032	LOW OIL PRESS
33	100-0033	START SOLENOID
34	100-0034	STOP SOLENOID
35	100-0035	EMERGENCY RELAY
36	100-0036	LOW OIL PRESS
37	100-0037	START SOLENOID
38	100-0038	STOP SOLENOID
39	100-0039	EMERGENCY RELAY
40	100-0040	LOW OIL PRESS
41	100-0041	START SOLENOID
42	100-0042	STOP SOLENOID
43	100-0043	EMERGENCY RELAY
44	100-0044	LOW OIL PRESS
45	100-0045	START SOLENOID
46	100-0046	STOP SOLENOID
47	100-0047	EMERGENCY RELAY
48	100-0048	LOW OIL PRESS
49	100-0049	START SOLENOID
50	100-0050	STOP SOLENOID
51	100-0051	EMERGENCY RELAY
52	100-0052	LOW OIL PRESS
53	100-0053	START SOLENOID
54	100-0054	STOP SOLENOID
55	100-0055	EMERGENCY RELAY
56	100-0056	LOW OIL PRESS
57	100-0057	START SOLENOID
58	100-0058	STOP SOLENOID
59	100-0059	EMERGENCY RELAY
60	100-0060	LOW OIL PRESS
61	100-0061	START SOLENOID
62	100-0062	STOP SOLENOID
63	100-0063	EMERGENCY RELAY
64	100-0064	LOW OIL PRESS
65	100-0065	START SOLENOID
66	100-0066	STOP SOLENOID
67	100-0067	EMERGENCY RELAY
68	100-0068	LOW OIL PRESS
69	100-0069	START SOLENOID
70	100-0070	STOP SOLENOID
71	100-0071	EMERGENCY RELAY
72	100-0072	LOW OIL PRESS
73	100-0073	START SOLENOID
74	100-0074	STOP SOLENOID
75	100-0075	EMERGENCY RELAY
76	100-0076	LOW OIL PRESS
77	100-0077	START SOLENOID
78	100-0078	STOP SOLENOID
79	100-0079	EMERGENCY RELAY
80	100-0080	LOW OIL PRESS
81	100-0081	START SOLENOID
82	100-0082	STOP SOLENOID
83	100-0083	EMERGENCY RELAY
84	100-0084	LOW OIL PRESS
85	100-0085	START SOLENOID
86	100-0086	STOP SOLENOID
87	100-0087	EMERGENCY RELAY
88	100-0088	LOW OIL PRESS
89	100-0089	START SOLENOID
90	100-0090	STOP SOLENOID
91	100-0091	EMERGENCY RELAY
92	100-0092	LOW OIL PRESS
93	100-0093	START SOLENOID
94	100-0094	STOP SOLENOID
95	100-0095	EMERGENCY RELAY
96	100-0096	LOW OIL PRESS
97	100-0097	START SOLENOID
98	100-0098	STOP SOLENOID
99	100-0099	EMERGENCY RELAY
100	100-0100	LOW OIL PRESS

WHEN USED

TERMINAL	WIRE	DESCRIPTION
1	100-0001	START SOLENOID
2	100-0002	STOP SOLENOID
3	100-0003	EMERGENCY RELAY
4	100-0004	LOW OIL PRESS
5	100-0005	START SOLENOID
6	100-0006	STOP SOLENOID
7	100-0007	EMERGENCY RELAY
8	100-0008	LOW OIL PRESS
9	100-0009	START SOLENOID
10	100-0010	STOP SOLENOID
11	100-0011	EMERGENCY RELAY
12	100-0012	LOW OIL PRESS
13	100-0013	START SOLENOID
14	100-0014	STOP SOLENOID
15	100-0015	EMERGENCY RELAY
16	100-0016	LOW OIL PRESS
17	100-0017	START SOLENOID
18	100-0018	STOP SOLENOID
19	100-0019	EMERGENCY RELAY
20	100-0020	LOW OIL PRESS
21	100-0021	START SOLENOID
22	100-0022	STOP SOLENOID
23	100-0023	EMERGENCY RELAY
24	100-0024	LOW OIL PRESS
25	100-0025	START SOLENOID
26	100-0026	STOP SOLENOID
27	100-0027	EMERGENCY RELAY
28	100-0028	LOW OIL PRESS
29	100-0029	START SOLENOID
30	100-0030	STOP SOLENOID
31	100-0031	EMERGENCY RELAY
32	100-0032	LOW OIL PRESS
33	100-0033	START SOLENOID
34	100-0034	STOP SOLENOID
35	100-0035	EMERGENCY RELAY
36	100-0036	LOW OIL PRESS
37	100-0037	START SOLENOID
38	100-0038	STOP SOLENOID
39	100-0039	EMERGENCY RELAY
40	100-0040	LOW OIL PRESS
41	100-0041	START SOLENOID
42	100-0042	STOP SOLENOID
43	100-0043	EMERGENCY RELAY
44	100-0044	LOW OIL PRESS
45	100-0045	START SOLENOID
46	100-0046	STOP SOLENOID
47	100-0047	EMERGENCY RELAY
48	100-0048	LOW OIL PRESS
49	100-0049	START SOLENOID
50	100-0050	STOP SOLENOID
51	100-0051	EMERGENCY RELAY
52	100-0052	LOW OIL PRESS
53	100-0053	START SOLENOID
54	100-0054	STOP SOLENOID
55	100-0055	EMERGENCY RELAY
56	100-0056	LOW OIL PRESS
57	100-0057	START SOLENOID
58	100-0058	STOP SOLENOID
59	100-0059	EMERGENCY RELAY
60	100-0060	LOW OIL PRESS
61	100-0061	START SOLENOID
62	100-0062	STOP SOLENOID
63	100-0063	EMERGENCY RELAY
64	100-0064	LOW OIL PRESS
65	100-0065	START SOLENOID
66	100-0066	STOP SOLENOID
67	100-0067	EMERGENCY RELAY
68	100-0068	LOW OIL PRESS
69	100-0069	START SOLENOID
70	100-0070	STOP SOLENOID
71	100-0071	EMERGENCY RELAY
72	100-0072	LOW OIL PRESS
73	100-0073	START SOLENOID
74	100-0074	STOP SOLENOID
75	100-0075	EMERGENCY RELAY
76	100-0076	LOW OIL PRESS
77	100-0077	START SOLENOID
78	100-0078	STOP SOLENOID
79	100-0079	EMERGENCY RELAY
80	100-0080	LOW OIL PRESS
81	100-0081	START SOLENOID
82	100-0082	STOP SOLENOID
83	100-0083	EMERGENCY RELAY
84	100-0084	LOW OIL PRESS
85	100-0085	START SOLENOID
86	100-0086	STOP SOLENOID
87	100-0087	EMERGENCY RELAY
88	100-0088	LOW OIL PRESS
89	100-0089	START SOLENOID
90	100-0090	STOP SOLENOID
91	100-0091	EMERGENCY RELAY
92	100-0092	LOW OIL PRESS
93	100-0093	START SOLENOID
94	100-0094	STOP SOLENOID
95	100-0095	EMERGENCY RELAY
96	100-0096	LOW OIL PRESS
97	100-0097	START SOLENOID
98	100-0098	STOP SOLENOID
99	100-0099	EMERGENCY RELAY
100	100-0100	LOW OIL PRESS

DIESEL

100-0001

100-0002

100-0003

100-0004

100-0005

100-0006

100-0007

100-0008

100-0009

100-0010

100-0011

100-0012

100-0001

100-0002

100-0003

100-0004

100-0005

100-0006

100-0007

100-0008

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100-0002

100-0003

100-0004

100-0005

100-0006

100-0007

100-0008

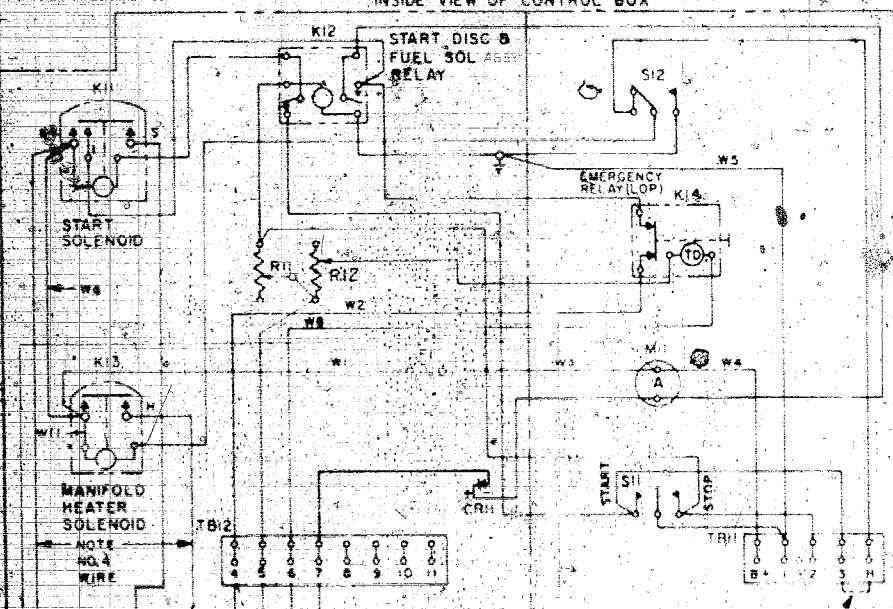
100-0009

100-0010

612-5651

WIRING DIAGRAM

INSIDE VIEW OF CONTROL BOX

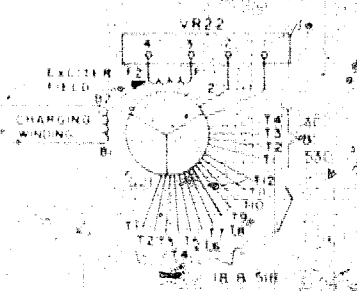
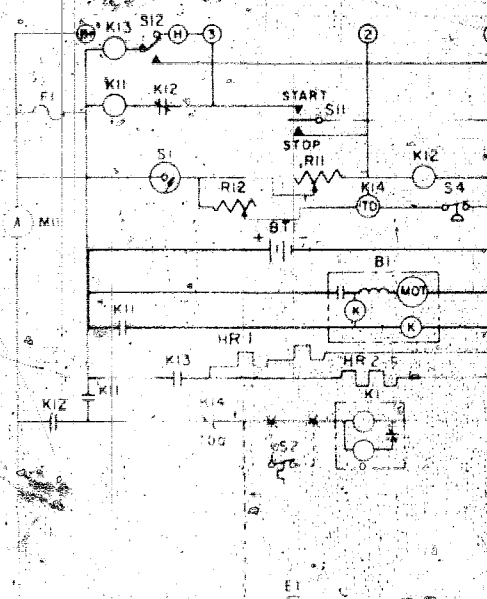


REMOVE JUMPER WHEN
PRE HEAT CIRCUIT IN AUTOMATIC
OR LOAD TRANSFER IS USED

NOTES

1. CONNECT LEAD W/O FROM V4 TO V5 PER VOLTAGE CHART BELOW
2. CONNECT X1 TO 5 FOR CODE 518 60HZ
CONNECT X1 TO 6 FOR CODE 518 50HZ
3. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION

SCHEMATIC DIAGRAM



ENG. PARTS LIST (REF.)

REF. DES.	PART NO.	DESCRIPTION
B1	304-07	STARTER & SOLENOID
BT1	305-0550	BATTERY 24V
E1	305-0590	FUEL PUMP
HR1	305-0590	HEATER-MANIFOLD
HR2,3	305-0590	HEATER-GLOW PLUG (2 CYL)
HR2-6	305-0590	HEATER-GLOW PLUG (4 CYL)
K1	305-0590	SOLENOID-FUEL
S1	305-0590	SWITCH-CENTRIFUGAL
S2	305-0590	SWITCH-HIGH TEMP
S4	305-0590	SWITCH-LOW OIL PRESS

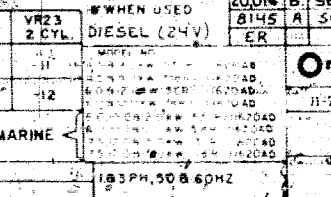
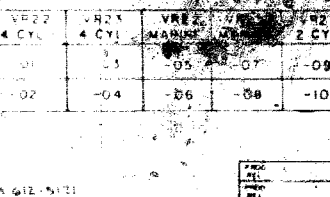
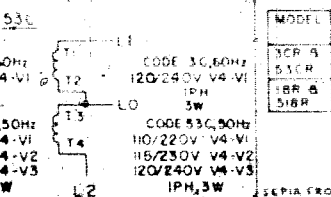
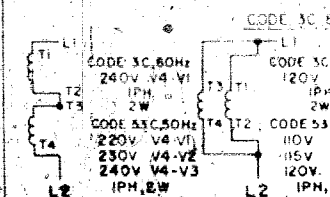
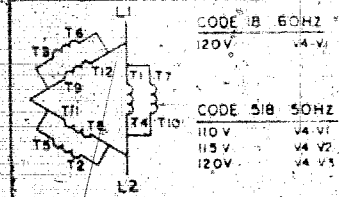
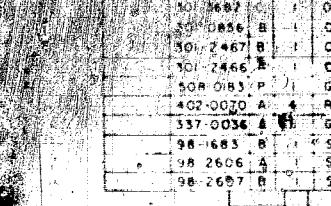
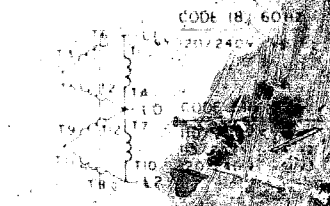
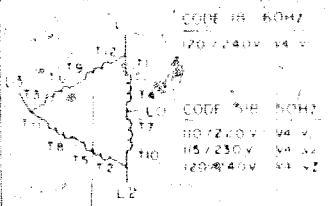
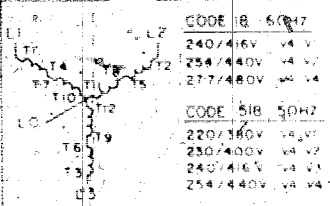
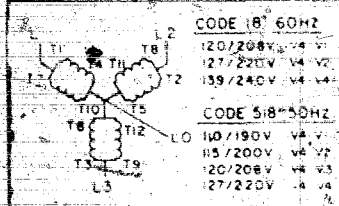
AC PARTS LIST

REF. DES.	PART NO.	DESCRIPTION
G21	304-07	GENERATOR
R21	305-0550	RESISTOR ASSY
VR22	305-0550	REGULATOR ASSY-VOLTAGE (W/O V ADJ) 01-02-03-06-08-10
VR23	305-0590	REGULATOR ASSY-VOLTAGE (W/O V ADJ) 03-04-07-08-11-12
W9	308-0744	WIRING HARNESS (F1-F2)

CONTROL BOX PARTS LIST

REF. DES.	PART NO.	DESCRIPTION
CR1	305-0550	RECTIFIER & LEAD ASSY
F1	305-0550	FUSE 10 AMP
F2	305-0550	HOLDER FUSE
K1	305-0550	CLIP-WIRE
K2	305-0550	RELAY-START SOLENOID
K3	305-0550	RELAY-START DISC & FUEL SOL
K4	305-0550	RELAY-MANIFOLD HEATER
K5	305-0550	RELAY-EMERGENCY (LOP)
K6	305-0550	GROMMET
K7	305-0550	WASHER-FIBER
K8	305-0550	JUMPER (TB1)
M1	305-0550	AMMETER-CHARGE 5-D-5
M2	305-0550	SWITCH & RESISTOR ASSY
M3	305-0550	RES 5 OHM 50 W
M4	305-0550	ADJ TO 3.5 OHMS
M5	305-0550	SWITCH & LEAD ASSY
M6	305-0550	TERMINAL BLOCK
M7	305-0550	MARKER STRIP
M8	305-0550	TERMINAL BLOCK
M9	305-0550	MARKER STRIP
M10	305-0550	LEAD ASSY
M11	305-0550	LEAD ASSY
M12	305-0550	LEAD ASSY
M13	305-0550	LEAD ASSY
M14	305-0550	LEAD ASSY
M15	305-0550	LEAD ASSY
M16	305-0550	JUMPER

332-0141 A	1	TERMINAL BLOCK 05 THRU 08
332-0146 A	1	MARKER STRIP 05 THRU 08
301-1533 C	1	OUTPUT BOX 05 THRU 08
301-1533 B	1	COVER 05 THRU 08



MODEL	VR22	VR21	VR20	VR19	VR18	VR17	VR16	VR15	VR14	VR13	VR12	VR11	VR10	VR09	VR08	VR07	VR06	VR05	VR04	VR03	VR02	VR01	VR00
304-07	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550	305-0550

Original

CONTROL GEN SET
(WIRING DIAGRAM)

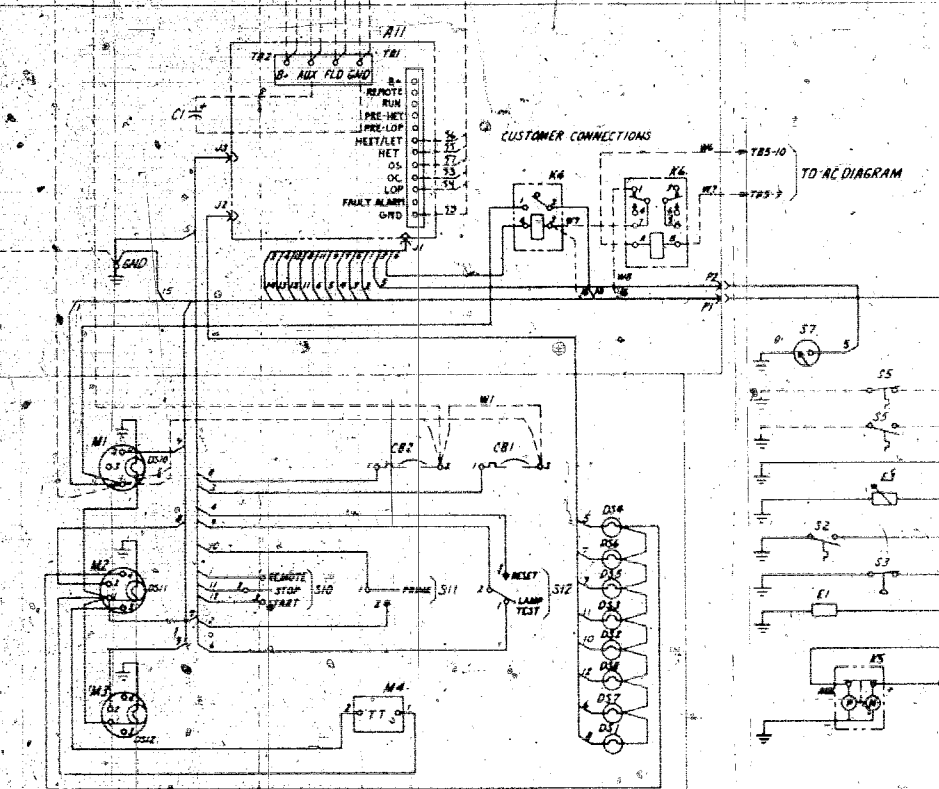
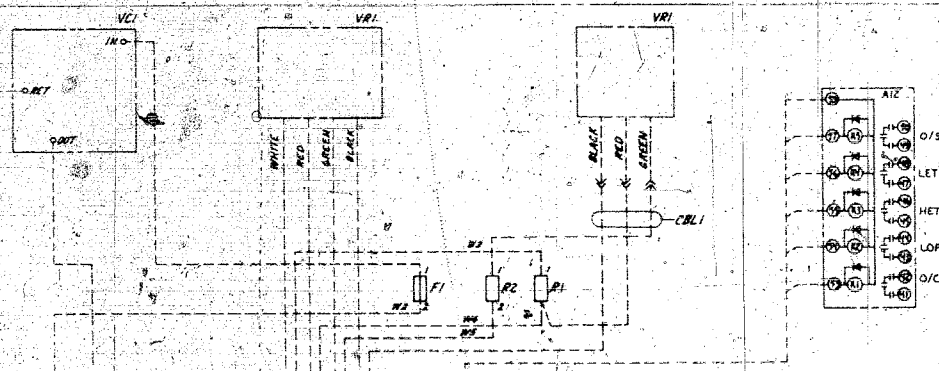
612-5651

612-5716

WIRING DIAGRAM

BACK OF CONTROL BOX

BOTTOM OF CONTROL BOX

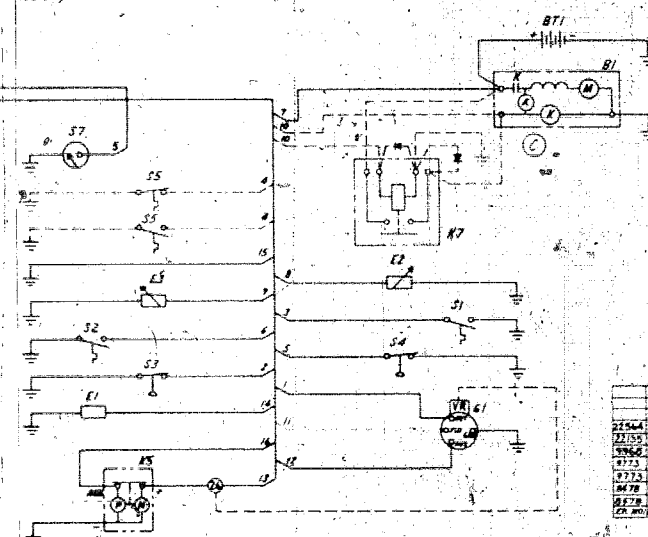


BACK OF CONTROL PANEL, TOP EDGE

NOTES:

1. DASHED CONNECTIONS INDICATE "WHEN USED".
2. WHEN 2 FLANGED SPARE CONNECTORS ARE USED ON THE SAME GREEN TERMINAL, INSTALL THE LOWER CONNECTOR WITH FLANGES TOWARD TERMINAL BLOCK AND UPPER CONNECTOR WITH FLANGES AWAY FROM TERMINAL BLOCK.
3. INSTALL S11 AND S12 SO THAT PROTRUSION OF ACTUATOR IS UP.
4. UNLESS OTHERWISE SPECIFIED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION.
5. USE THERMAL GREASE (524-D177) BETWEEN VCI HEAT SINK BRACKET AND HEAT SINK.
6. STD METERING INCLUDES 3 DC GAUGES AND 1 TIME METER, DOES NOT INCLUDE ANY AC METERING.

MODEL	DASH NO.	STD.	FAULT RELAYS
MDTA-1V	-01	X	
MDTA-2V	-02	X	
MDTA-3V	-03	X	
MDTA-12V	-04	X	X

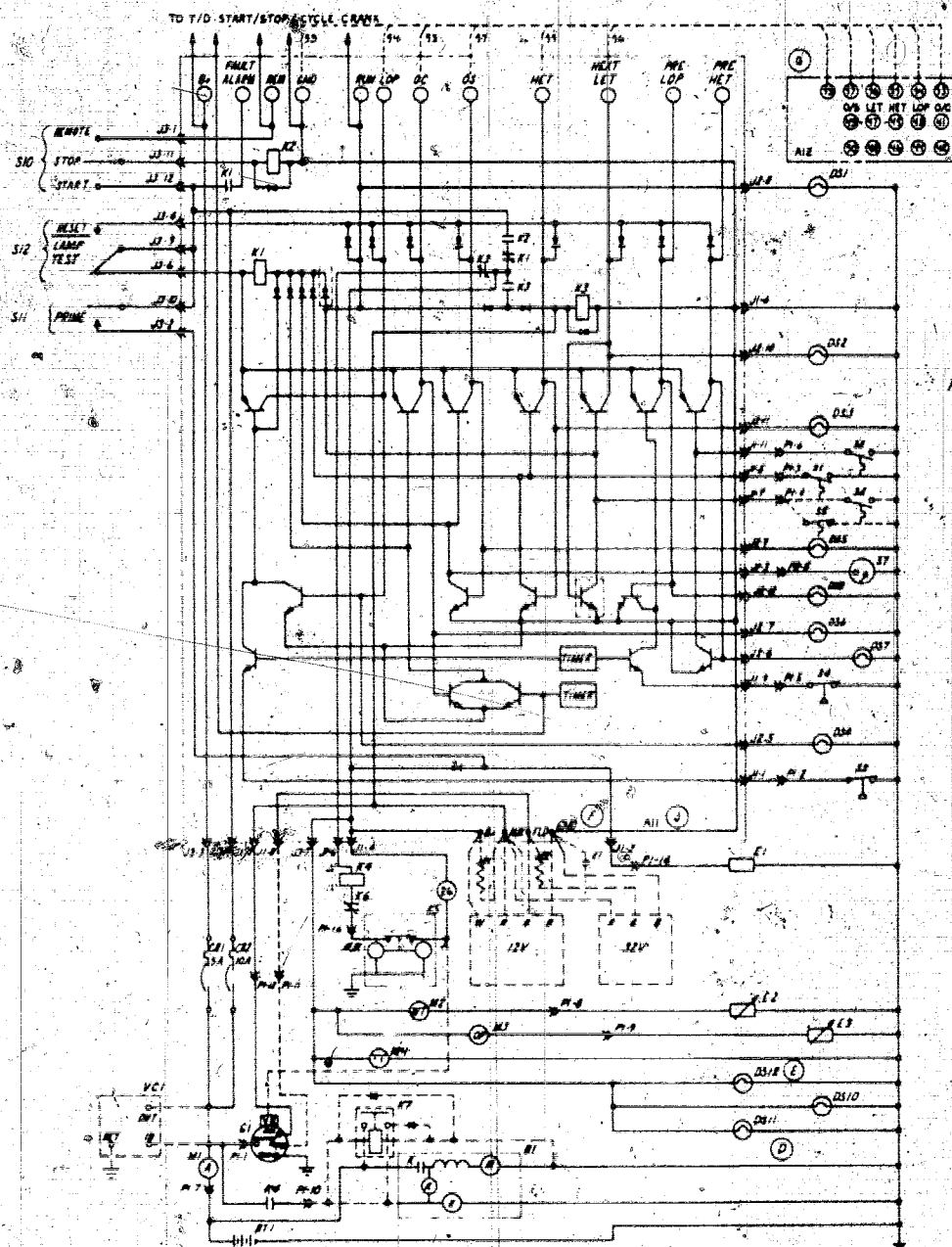


REF	DESIGN	NO.	QUANTITY	DESCRIPTION
1	STARTER	1	1	STARTER (1000W)
2	STARTER	1	1	STARTER (1000W)
3	STARTER	1	1	STARTER (1000W)
4	STARTER	1	1	STARTER (1000W)
5	STARTER	1	1	STARTER (1000W)
6	STARTER	1	1	STARTER (1000W)
7	STARTER	1	1	STARTER (1000W)
8	STARTER	1	1	STARTER (1000W)
9	STARTER	1	1	STARTER (1000W)
10	STARTER	1	1	STARTER (1000W)
11	STARTER	1	1	STARTER (1000W)
12	STARTER	1	1	STARTER (1000W)
13	STARTER	1	1	STARTER (1000W)
14	STARTER	1	1	STARTER (1000W)
15	STARTER	1	1	STARTER (1000W)
16	STARTER	1	1	STARTER (1000W)
17	STARTER	1	1	STARTER (1000W)
18	STARTER	1	1	STARTER (1000W)
19	STARTER	1	1	STARTER (1000W)
20	STARTER	1	1	STARTER (1000W)
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98	STARTER	1	1	STARTER (1000W)
99	STARTER	1	1	STARTER (1000W)
100	STARTER	1	1	STARTER (1000W)

SEE NOTES

		WTS-1	SEE SHEET 1				
		WTS-2	RODDED CHAIN				
		WTS-3	RODDED CHAIN				
		WTS-4	RODDED CHAIN, SHY 1/2"				
2154	S	SH1513 SWIMMED P/N'S					
2155	A	SEE SHEET 2					
2156	P	SH1513-012					
2173	N	1730 913 913 913					
2174	N	1730 913 913 913					
2175	N	1730 913 913 913					
2176	N	1730 913 913 913					
2177	N	1730 913 913 913					
2178	N	1730 913 913 913					
2179	N	1730 913 913 913					
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2201	N	1730 913 913 913					
2202	N	1730 913 913 913					
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2208	N	1730 913 913 913					
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2343	N	1730 913 913 913					

612-5716 SMT 2
OF 2



NOTE:
1. DASHED LINES ARE WHEN USED

[illegible]

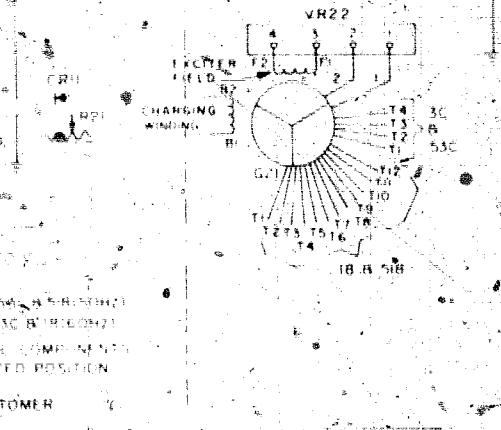
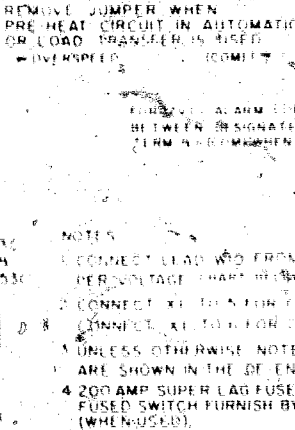
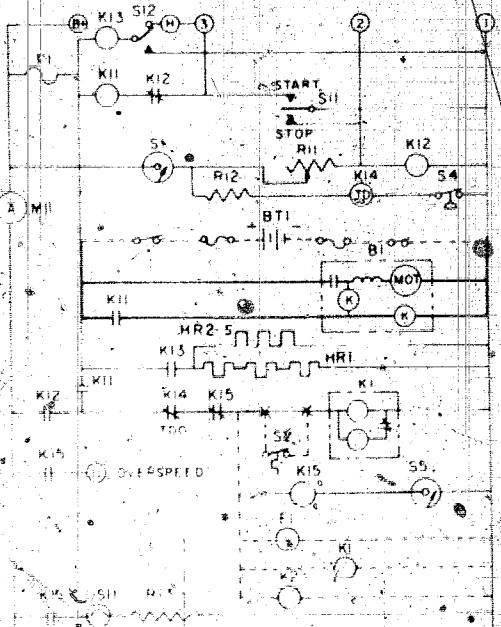
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41116	J	ADDED AIR	3	NO
41117	G	ADDED AIR	3	NO
41118	I	ADDED AIR	3	NO
41119	L	ADDED AIR	3	NO
41120	P	ADDED AIR	3	NO
41121	S	ADDED AIR	3	NO
41122	T	ADDED AIR	3	NO
41123	V	ADDED AIR	3	NO
41124	X	ADDED AIR	3	NO
41125	Y	ADDED AIR	3	NO
41126	Z	ADDED AIR	3	NO
41127	A	ADDED AIR	3	NO
41128	B	ADDED AIR	3	NO
41129	C	ADDED AIR	3	NO
41130	D	ADDED AIR	3	NO
41131	E	ADDED AIR	3	NO
41132	F	ADDED AIR	3	NO
41133	G	ADDED AIR	3	NO
41134	H	ADDED AIR	3	NO
41135	I	ADDED AIR	3	NO
41136	J	ADDED AIR	3	NO
41137	K	ADDED AIR	3	NO
41138	L	ADDED AIR	3	NO
41139	M	ADDED AIR	3	NO
41140	N	ADDED AIR	3	NO
41141	O	ADDED AIR	3	NO
41142	P	ADDED AIR	3	NO
41143	Q	ADDED AIR	3	NO
41144	R	ADDED AIR	3	NO
41145	S	ADDED AIR	3	NO
41146	T	ADDED AIR	3	NO
41147	U	ADDED AIR	3	NO
41148	V	ADDED AIR	3	NO
41149	W	ADDED AIR	3	NO
41150	X	ADDED AIR	3	NO
41151	Y	ADDED AIR	3	NO
41152	Z	ADDED AIR	3	NO
41153	A	ADDED AIR	3	NO
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41174	V	ADDED AIR	3	NO
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41189	K	ADDED AIR	3	NO
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41195	Q	ADDED AIR	3	NO
41196	R	ADDED AIR	3	NO
41197	S	ADDED AIR	3	NO
41198	T	ADDED AIR	3	NO
41199	U	ADDED AIR	3	NO
41200	V	ADDED AIR	3	NO
41201	W	ADDED AIR	3</	

NOTA 6 DSA

CONTROL - GEN SEC. DC
 (SCHEMATIC) (STD WATERING)
 612-5716

SCHEMATIC DIAGRAM

SCHEMATIC DIAGRAM



REF. DES.	PART NO.	QTY.	DESCRIPTION
BI		1	STARTER & SOLENOID
BT1		1	BATTERY 32 V
ET		1	FUEL PUMP
HR1		1	HEATER-MANIFOLD
HR2,3		2	HEATER-GLOW PLUG (2 CY.)
HR2-5		4	HEATER-GLOW PLUG (4 CY.)
KL1		1	SOLENOID-FUEL
S1		1	SWITCH CENTRIFUGAL
S2		1	SWITCH-HIGH TEMP
S4		1	SWITCH-LOW OIL PRESS
S5		1	SWITCH-OVERSPEED
AC PARTS LIST			
G21		1	GENERATOR
R21	304-0710	B	RESISTOR ASSY
VR22	305-0589	D	REGULATOR ASSY-VOLTAGE (WV.O. ADJ.)-01-02-05-06-09-10
VR23	305-0590	D	REGULATOR ASSY-VOLTAGE (WV.O. ADJ.)-03-04-07-08-11-12
W9	338-0917	A	WIRING HARNESS (F1-F2)
CONTROL BOX PARTS LIST			
CR10	305-0538	A	RECTIFIER & LEAD ASSY
DSH	322-0004	F	LAMP-OVERSPEED
F	322-0069	P	HOLDER LAMP
F	321-0041	A	FUSE 10 AMP
H2	307-0615	A	HOLDER FUSE
K1	307-0277	B	RELAY-START DISC & FUEL SOL ASSY
K1	307-0061	B	RELAY-MANIFOLD HEATER
K1	320-0104	B	RELAY-EMERGENCY LATCH
K1	307-0129	A	RELAY ASSY
K1	307-0655	A	RELAY-EMERGENCY LATCH (OVSP)
K1	307-0875	B	RELAY-START SOLENOID
M11	302-0446	A	AMMETER-CHARGE 5-0-5
M11	308-0351	B	SWITCH & RESISTOR ASSY
R12	304-0003	P	RES-50HM, 50W
R13	304-0520	A	RES-80OHM, 10W
S12	308-0304	A	SWITCH & LEAD ASSY
TH11	332-0604	A	TERMINAL BLOCK
TH12	332-0616	A	MARKER STRIP
TH12	332-0706	A	TERMINAL BLOCK
TH12	332-0739	A	MARKER STRIP
W1	336-3578	A	LEAD ASSY
W2	336-3571	A	LEAD ASSY
W4	336-1465	A	LEAD ASSY
W5	336-0179	A	LEAD ASSY
W6	332-0802	A	JUMPER
W11	331-1045	A	LEAD ASSY
	517-0012	A	DOT BUTTON
	307-2376	C	PANEL-CONTROL BOX
	301-1962	D	CONTROL BOX
	301-3764	B	COVER-REGULATOR
	301-3683	C	SADDLE-CONTROL BOX
	301-3682	C	OUTPUT BOX-01-02-03-04
	301-0856	B	COVER-01-02-03-04
	301-2467	B	OUTPUT BOX-03 THRU-12
	301-2466	A	COVER-05 THRU-12
	308-0183	P	GROMMET
	402-0070	A	RUBBER MOUNTS
	337-0036	A	GROUND STRAP & LOP LIGHT
	98-1683	B	SILKSCREEN(USE ASSIS,DELETE HI TEMP)
	98-2606	A	SILKSCREEN(3CR,53CR1-D1 THRU-11)
	98-2607	B	SILKSCREEN(1BR,51BR1-02 THRU-12)
W10	337-2089	A	STRAP-JUMPER

* WHEN USED

RELEASED PER 621559

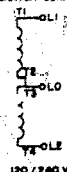
6215782

CONTROL GEN SET
(WIRING DIAGRAM)

1-3-80

62-5782

SERIAL FROM 612-4854



612-5788

612-5799

WIRING

CONTROL BOX

10 DC DIAGRAM

DI 15

KA 1

TOP OF PANEL (REAR VIEW)

WIRING DIAGRAM

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T-251

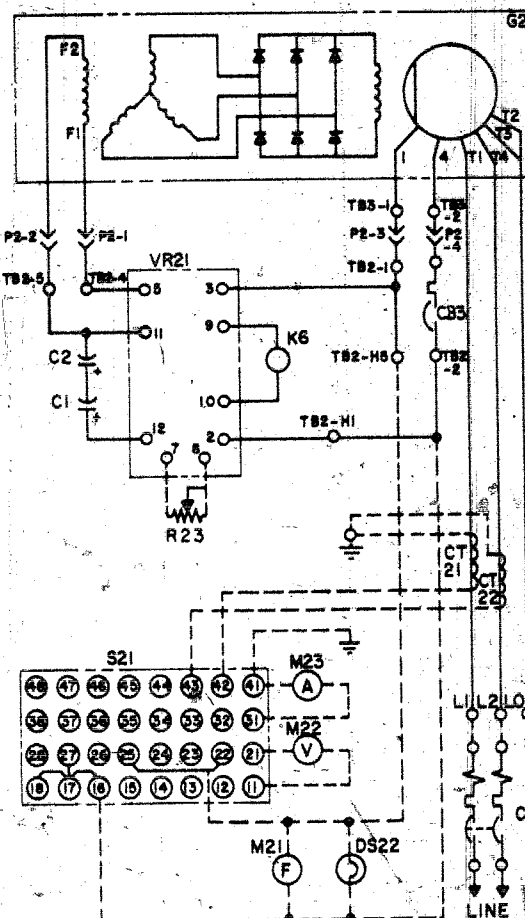
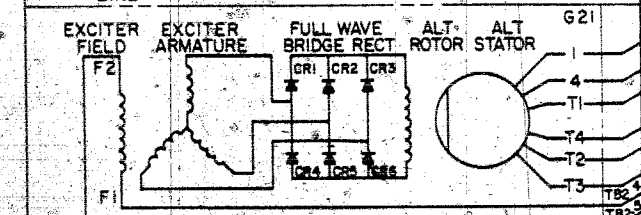
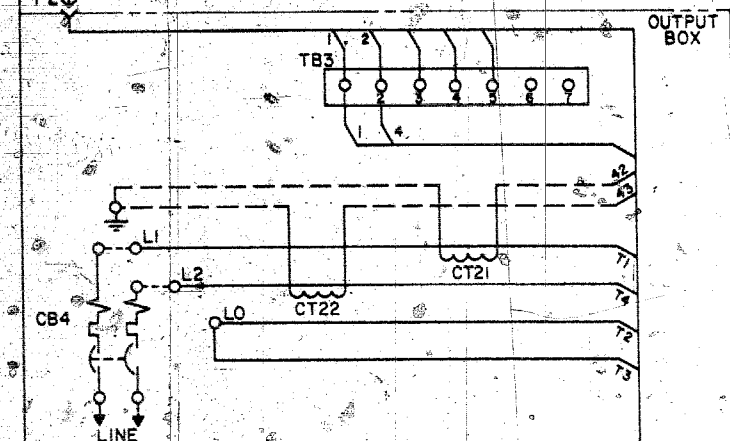
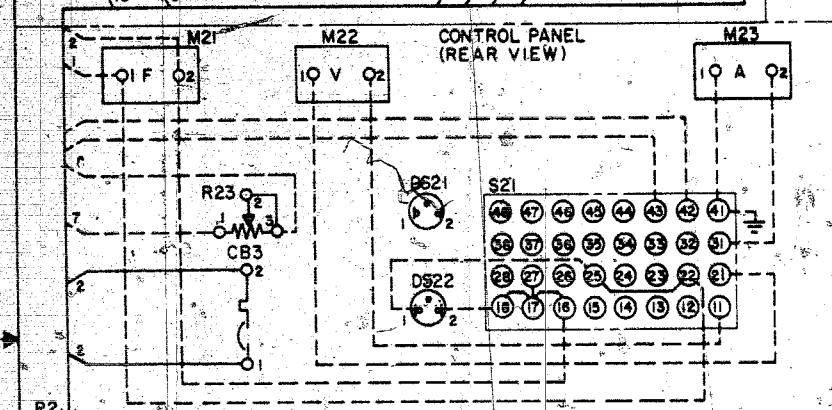
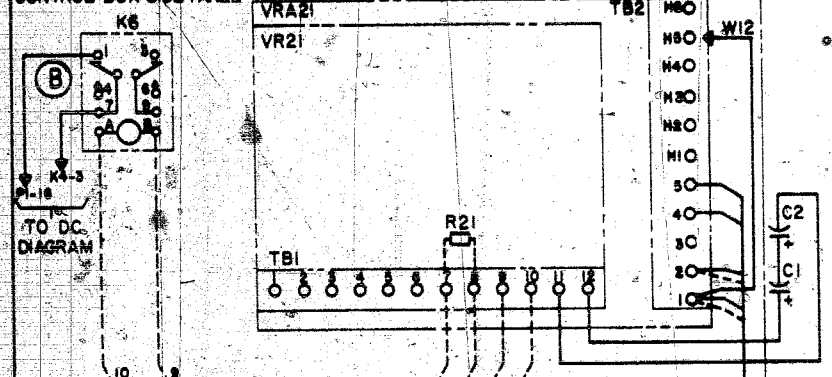
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T-254

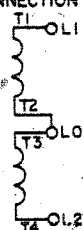
612-5881

CONTROL BOX SIDE PANEL



MODEL	STANDARD			W/METER PACKAGE		
	60 Hz	50Hz	PENN	60 Hz	50 Hz	PENN
MDTA/DTA	-01			-02	-03	

GENERATOR CONNECTION



S21		CONTACTS CLOSED			
POSITION					
L1-L2	3	11-16	21-25	31-32	41-43-44
L2-L3	3	11-12	21-25	31-33	41-42-44
L3-L1	3	11-12	21-27	31-34	41-42-43
L1-L0	3	11-14	21-27	31-35	41-42-43-44
OFF	11-14	21-28	31-36	41-42-43-44	
L1-L2	1	11-16	21-22	31-32	41-43-44
L1-L2	1	11-16	21-22	31-33	41-42-44

PARTS LIST					
REF DES	PART NO.	QTY	DESCRIPTION		
CB3	320-0650 C	1	CIRCUIT BREAKER (SA)		
CB4	REF	1	CIRCUIT BREAKER		
CT21,22	REF	2	XFMR - CURRENT	(-02,-03)	
DS21,22	322-0211 B	2	LAMP-AC METER	(-02,-03)	
G21	REF	1	GENERATOR		
K6	REF	1	RELAY-STARTER PROTECTION		
M21	302-1153 B	1	METER-FREQUENCY 60Hz	(-02)	
M22	302-1149 B	1	METER-VOLT AC	(-02,-03)	
M23	302-1442 B	1	METER-AMPS (0-50)	(-02,-03)	
R21	350-1190 REF	1	RESISTOR	(-01)	
R23	303-0170 P	1	POTENTIOMETER-VOLT	(-02,-03)	
	303-0058 P	2	KNOB		
S21	308-0284 P	1	SWITCH-VOLT & AMMETER	(-02,-03)	
TB3	REF	1	TERMINAL BOARD-OUTPUT		
VRA21	305-0854 C	1	REGULATOR ASSY-VOLTA		
VR21	REF	1	PC BOARD-VOLTAGE REGULATOR		
W12	336-8183 A	1	LEAD (TB2-1 TO TB2-H)		
	336-1472 O/C	1	WIRING HARNESS	(-01)	
	336-1471 O/D	1	WIRING HARNESS	(-02,-03)	
C1,2	356-0090 P	2	CAPACITOR		
	356-0102 P	2	MOUNT-CAPACITOR		
	336-7831 A	1	LEAD		
	336-8228 A	1	LEAD		
	336-8230 A	1	LEAD		

NOTE:

1. REMOVE R21 FROM VRA21 FOR -02 & -03.

8136	C	WKS 502-1176	0-200A	CA	1/15-02
7024	B	CONN WAS K4-B TO K6-4	CA	8-13-81	
7115	A	ADD C1,2 & RELATED PARTS	PS	1/17-81	
3990	-	RISE FOR PROD			

DIVISION OF ORAN CORPORATION
Minneapolis, Minnesota

DATE: 11-4-80 DAY: 11/4/80

CONTROL-GEN SET AC
(WIRING DIAGRAM)

612-5881

612-6048C

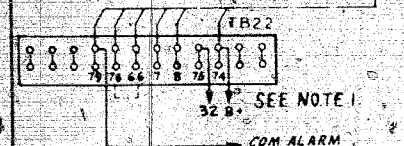
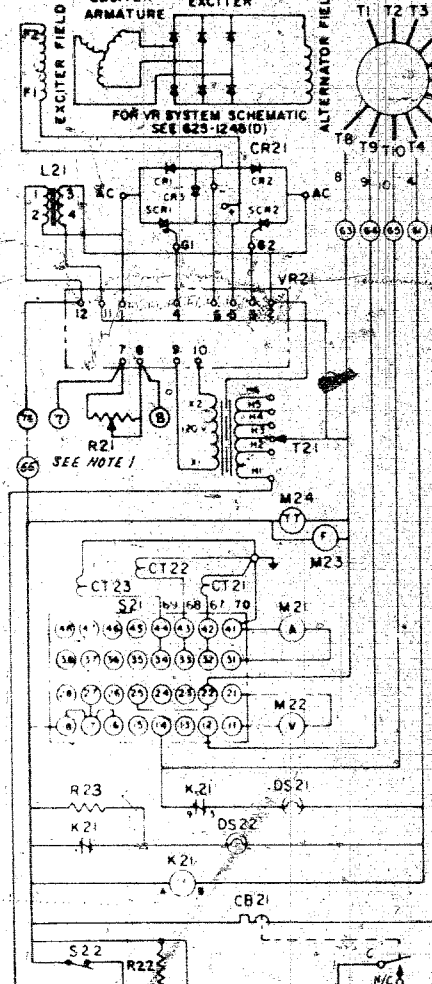
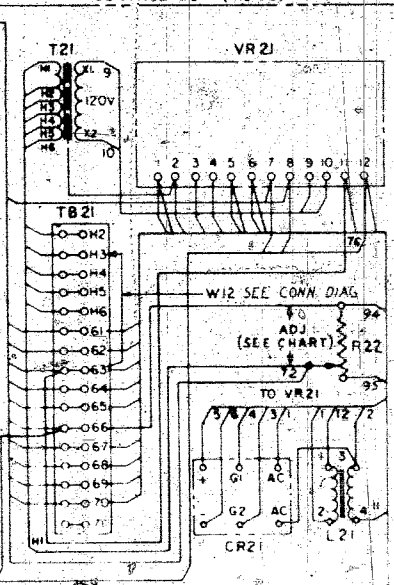
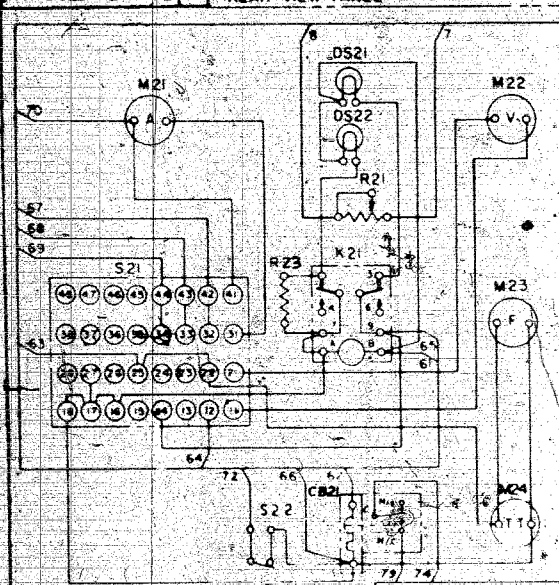
REAR VIEW PANEL

WIRING DIAGRAM

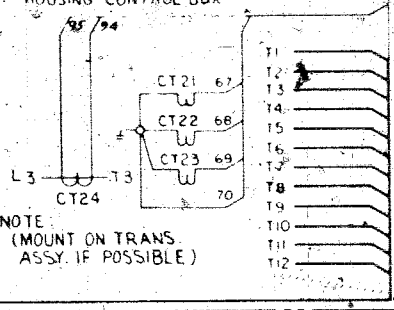
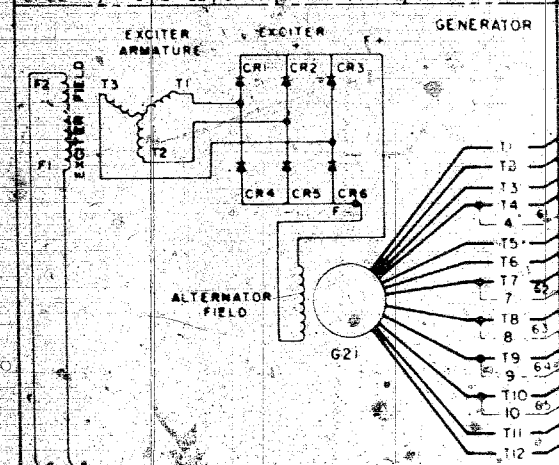
CONTROL BOX (INSIDE)

SCHEMATIC DIAGRAM

PARTS LIST

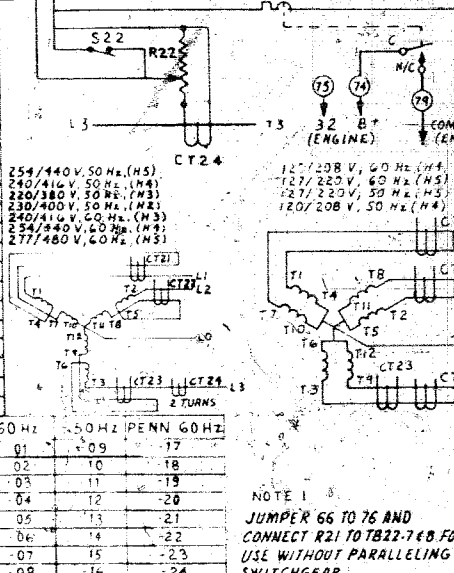


POSITION	CONTACTS CLOSED
L1-L2 3*	11-18 21-25 31-32 41-43 44
L2-L3 3*	11-12 21-25 31-33 41-42 44
L3-L4 3*	11-12 21-27 31-34 41-42 43
L1-L4 3*	11-14 21-27 31-35 41-42 43 44
OFF	11-14 21-28 31-36 41-42 43 44
L1-L2 1*	11-16 21-22 31-32 41-43 44
L1-L2 1*	11-16 21-22 31-33 41-42 44



#	R22 RESISTOR	R22 ADJ TO OHMS
25-40	304-0094 (A) (500Ω)	398
45	304-0282 (A) (300Ω)	268
50	304-0282 (A) (300Ω)	239
55	304-0282 (A) (300Ω)	217
60	304-0282 (A) (300Ω)	198
65	304-0282 (A) (300Ω)	185
70	304-0282 (A) (300Ω)	174
75	304-0282 (A) (300Ω)	159
80	304-0005 (A) (150Ω)	140
85	304-0005 (A) (150Ω)	136
90	304-0005 (A) (150Ω)	120
95	304-0005 (A) (150Ω)	104
100	304-0112 (A) (100Ω)	95
105	304-0112 (A) (100Ω)	85
110	304-0112 (A) (100Ω)	79
115	304-0112 (A) (100Ω)	70
120	304-0112 (A) (100Ω)	68
125	304-0112 (A) (100Ω)	65

NOTE
UNLESS OTHERWISE NOTED,
ALL COMPONENTS ARE SHOWN
IN THE DE ENERGIZE
POSITION



REF. DES.	PART NO.	QTY	DESCRIPTION
CB2	320B439	1	CIRCUIT BREAKER, 2 AMP
	300P307	1	LOCK-CKT BRKR HANDLE (PENN STATE)
CT21-23	302B743	2	TRANSFORMER ASSY CUR (25-40 KW)
	302B744	1	TRANSFORMER ASSY CUR (41-40 KW)
	302B745	1	TRANSFORMER ASSY CUR (46-60 KW)
	302B746	1	TRANSFORMER ASSY CUR (61-100 KW)
	302B747	1	TRANSFORMER ASSY CUR (101-125 KW)
	302B748	1	TRANSFORMER ASSY CUR (126-100 KW)
CT24	302C826	1	TRANSFORMER 3000/1R, 2 VA (PRI TURN (CROSS CURRENT))
CR21	305C524	1	RECTIFIER BRIDGE
DS21	322A131	1	LIGHT-UPPER SCALE
DS22	322A130	1	LIGHT-LOWER SCALE
G21			GENERATOR
K21	307B1061	1	RELAY-VOLTAGE SELECTOR
	301B3244	1	BRACKET-RELAY MTD
M21	302B719	1	AMMETER-AC 0-75.0-150A (25-40 KW)
	302B720	1	AMMETER-AC 0-100.0-200A (41-45 KW)
	302B721	1	AMMETER-AC 0-150.0-300A (46-60 KW)
	302B722	1	AMMETER-AC 0-200.0-400A (61-100 KW)
	302B723	1	AMMETER-AC 0-250.0-500A (101-125 KW)
	302B724	1	AMMETER-AC 0-375.0-750A (126-100 KW)
M22	302B718	1	VOLTMETER-AC 0-300, 0-600
M23	302B221	1	METER-FREQUENCY (60 Hz)
	302B256	1	METER-FREQUENCY (50 Hz)
M24	302B466	1	METER-RUNNING TIME (60 Hz)
	302B469	1	METER-RUNNING TIME (50 Hz)
R21	303P170	1	RHEOSTAT-VOLTAGE ADJ 35X25W
	303P32	1	KNOB-RHEOSTAT
R23	350-5560REF	1	RESISTOR-47000, 1/2 WATT
R22	SEE CHART	1	RES-CROSS CUR, 25 WATT
S21	308B284	1	SWITCH-VOLT & AMMETER
	303-76	1	KNOB
S22	308P69	1	SWITCH-CROSS CUR
	308A2313	1	SILKSCREEN
T21	3150-43	1	TRANSFORMER-VOLT REF
TB21	332A1242	1	MARKER STRIP
	307P1157	1	SPRING-RELAY HOLD-DOWN (K21)
L21	315B384	1	REACTOR ASSY COMM
VR21	33201956	1	BOARD ASSY-PC VOLTAGE REG LTR
	338D730	1	WIRING HARNESS (MODIFY)
W12	336A1913	1	LEAD ASSY
	301C370	1	PANEL-GEN CONTROL (MODIFY)
	301D358	1	CONTROL BOX
	402A70	4	DAMPENER VIBRATION
	337-49	1	STRAP-BOND
	508P1	4	GROMMET-RUBBER
	38C2169	1	SILKSCREEN-CONTROL PANEL AC
	545A23	1	PARTS LIST-AC CONT HOW
	332A607	1	TERMINAL BLOCK
	332A642	1	MARKER STRIP

9931 RELEASED PER

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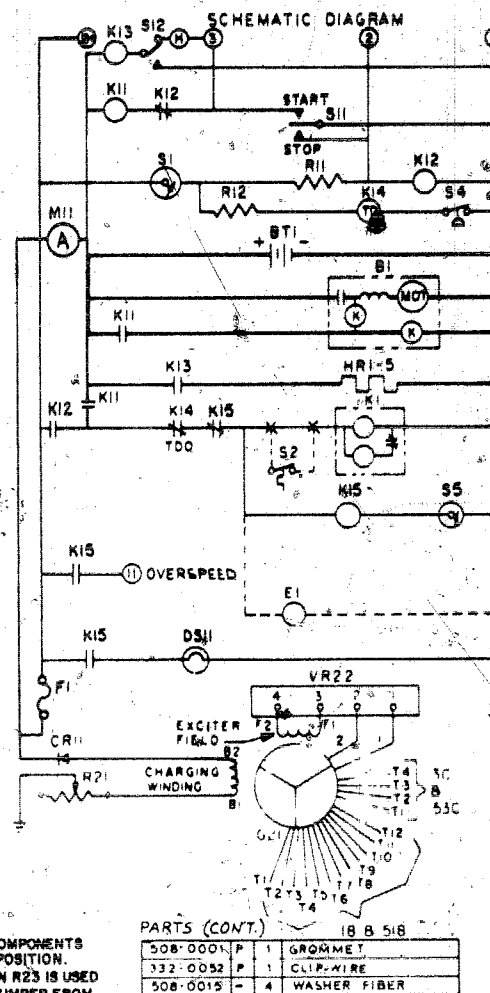
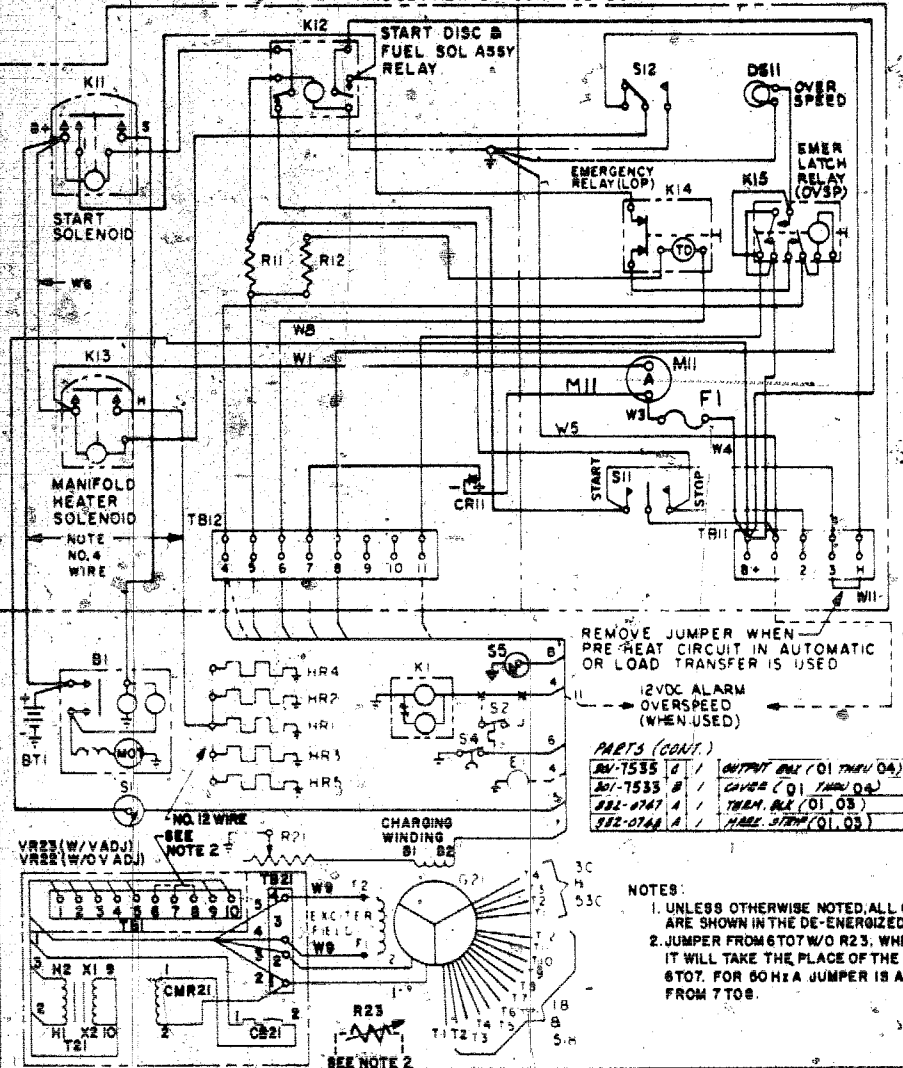
5-20-87

3PH, 50/60 Hz, RECONNECTABLE, 12W.

612-6048C

SEPIA FROM 612-5874

WIRING DIAGRAM
INSIDE VIEW OF CONTROL BOX



AC PARTS LIST			
G21			GENERATOR
R21	304-0709	B	RESISTOR ASSY
VR22	305-0459	D	REGULATOR ASSY-VOLTAGE
			(W/O V. ADJ.) 01-02-03-04
VR23	305-0460	D	REGULATOR ASSY-VOLTAGE
			(W/V ADJ.) 03-04-07-08
W9	338-0917	A	WIRING HARNESS (F-18)

CONTROL BOX PARTS LIST			
CR11	305-0496	A	RECTIFIER & LEAD ASSY
DS1	322-0004	A	LAMP-OVERSPEED
	322-0069	B	HOLDER-LAMP
F1	321-0146	A	FUSE 10AMP
	321-0175	A	HOLDER-FUSE
K12	307-1927	B	RELAY / LEAD ASSY
K13	307-1046	B	RELAY-MANIFOLD HEATER
K14	320-0104	B	RELAY-EMERGENCY (LOP)
K15	307-1129	A	RELAY-ASSY
	307-0655	A	RELAY-EMER LATCH (OVSF)
K11	307-0845	B	RELAY-START SOLENOID
M1	302-0446	A	AMMETER-CHARGE 0-0-5
RT, S11	308-0807	B	SWITCH & RESISTOR ASSY
R12	304-0887	A	RESISTOR-LEAD

ASSEMBLY (W/OUT TOW)			
S12	308-0304	A	SWITCH & LEAD ASSY
TB11	332-0204	A	TERMINAL BLOCK
	332-0616	A	MARKER STRIP
TB12	332-0708	A	TERMINAL BLOCK
	332-1773	A	MARKER STRIP
W1	336-1406	A	LEAD ASSY
W2	336-2229	A	LEAD ASSY
W3	336-3571	A	LEAD ASSY
W4	336-5483	A	LEAD ASSY
W5	336-0179	A	LEAD ASSY
W6	332-0402	A	JUMPER
W8	334-1045	A	LEAD ASSY
W11	332-1043	C	JUMPER
	517-0012	-	DOT BUTTON
	301-2376	C	PANEL CONTROL BOX
	301-1962	D	CONTROL BOX
	301-3714	B	COVER-REGULATOR
	301-3685	C	SADDLE-CONTROL BOX

301-2467	E	1	OUTPUT BOX-OS THRU -06
301-2468	A	1	COVER-OS THRU-06
50A-0183	P	1	QIMBY
402 0070	A	96	RUBBER MOUNTS
337-0036	A	1	GROUND STRAP
98-1683	B	1	SILKSCREENDELETE LOPEHT LIGHT
98-4961	A	1	SILKSCREEN13R,53CR1-01 THRU - 1
98-4960	A	1	SILKSCREEN13R,53CR1-02 THRU - 1

(CONT.)	20241	B	GENERAL REV BEER	Rv	1/7	2-24
WHEN USED	20244	A	CHANGED NOTE 4	Rv	1/7	2-16
	20202	-	ALSO FOR PAGE			
DIESEL	FORM 127		REVISION			CHANGING DATE

Onen

CONTROL-GEN SET (WIRING DIAGRAM)

612-6064

MODEL	VR22 MARINE	VR23 MARINE	VR22 2 CYL	VR23 2 CYL
3CR 8 51CR	-01	-03	-05	-07
3CR 8 51CR	-02	-04	-06	-08

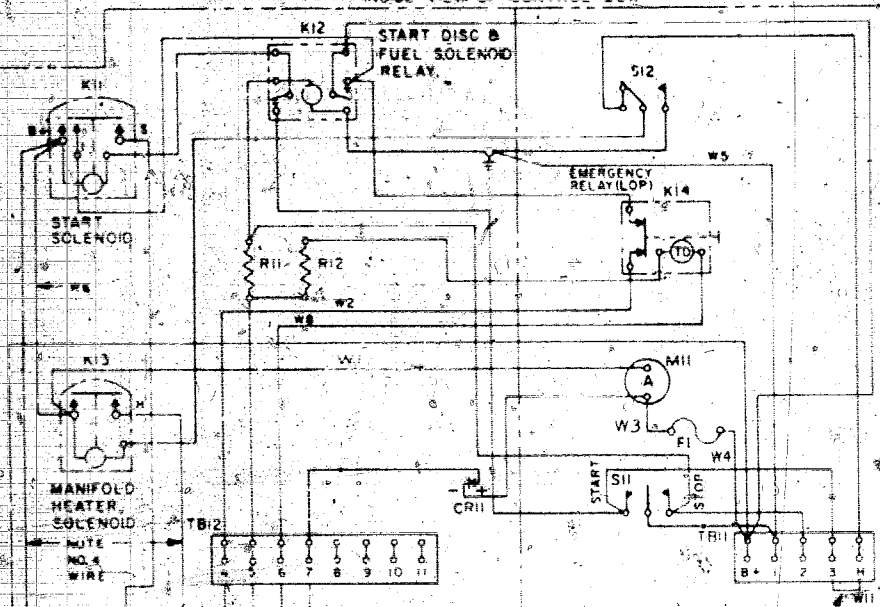
MARINE 7.5, 12.0 OF 12.0 KW-34R
7.5, 12.0 OF 13.0 KW-34R
7.5, 12.0 OF 15.0 KW-18R/3
123FM, 308 60HZ

SEPIA FROM 612-6064

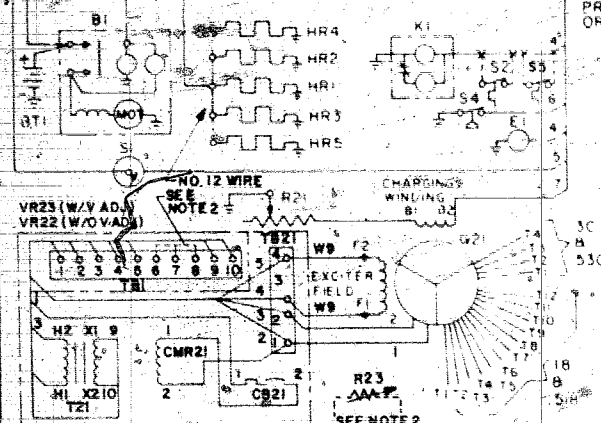
612-6065

WIRING DIAGRAM

INSIDE VIEW OF CONTROL BOX



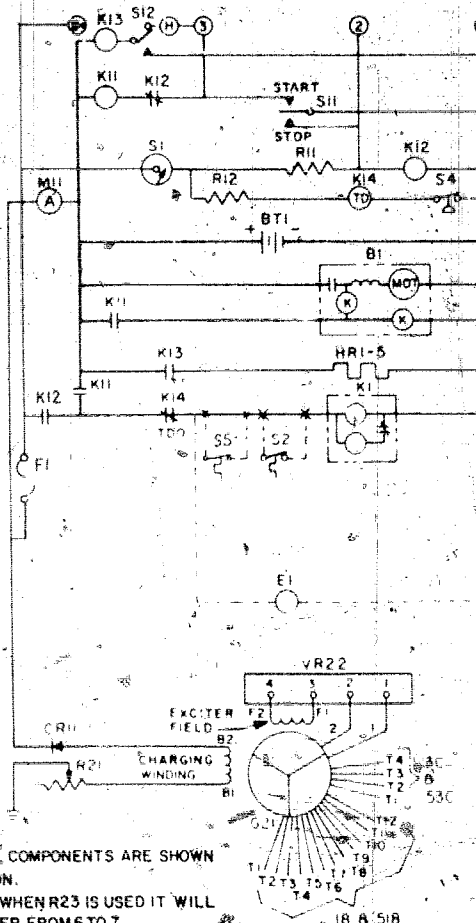
REMOVE JUMPER WHEN
PRE-HEAT CIRCUIT IN AUTOMATIC
OR LOAD TRANSFER IS USED.



NOTES:

1. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION.
2. JUMPER FROM 6 TO 7 W/O R23. WHEN R23 IS USED IT WILL TAKE THE PLACE OF THE JUMPER FROM 6 TO 7. FOR 50 Hz A JUMPER IS ALSO NEEDED FROM 7 TO 8.

SCHEMATIC DIAGRAM



PARTS LIST

332-0747	A	1	TERMINAL BLOCK (-01, -03)
332-0748	A	1	MARKER STRIP (-01, -03)

REL. DES.	PART NO.	QTY	ENG. PARTS LIST (DEP.)	DESCRIPTION
B1		1	STARTER & SOLENOID	
BT1		1	BATTERY 12V	
E1		1	FUEL PUMP	
HR1		1	HEATER-MANFOLD	
HR2,3		2	HEATER-GLOW PLUG (2 CYL.)	
HR2-5		4	HEATER-GLOW PLUG (4 CYL.)	
K1		1	SOLENOID-FUEL	
S1		1	SWITCH-CENTRIFUGAL	
S2		1	SWITCH-HIGH TEMP	
S4		1	SWITCH-LOW OIL PRESS	
S5		1	SWITCH-HIGH EXH TEMP	

REL. DES.	PART NO.	QTY	ENG. PARTS LIST (DEP.)	DESCRIPTION
G21		1	GENERATOR	
R23	304-0709	B	RESISTOR ASSY	
VR22	305-0699	D	REGULATOR ASSY-VOLTAGE	
			(W/O V ADJ) -01, -02, -05, -06, -09, -10	
VR23	305-0690	D	REGULATOR ASSY-VOLTAGE	
			(W/V ADJ) -03, -04, -07, -08, -11, -12	
W9	338-0744	A	WIRING HARNESS (FI-F2)	

REL. DES.	PART NO.	QTY	ENG. PARTS LIST (DEP.)	DESCRIPTION
CR11	305-0496	A	RECTIFIER & LEAD ASSY	
F1	321-0146	A	FUSE-10 AMP	
	321-0175	A	HOLDER-FUSE	
	201-1555	C	OUTPUT BOX (-01, -02, -04)	
K11	307-0845	B	RELAY-START SOLENOID	
K12	307-1527	B	RELAY & LEAD ASSY	
K13	307-1046	B	RELAY-MANIFOLD HEATER	
K14	320-0804	B	RELAY-EMERGENCY (LOP)	
	508-0001	F	GROMMET	
	332-0052	P	CLIP-WIRE	
	508-0015	-	WASHER-FIBER	
M11	302-0446	A	AMMETER-CHARGE 5-0-5	
R11, S1	308-0307	B	SWITCH & RESISTOR ASSY	
R12	304-0697	A	RESISTOR-LEAD	
	301-7533	B	COVER (-01, -02, -04)	5909-219
S12	308-0304	A	SWITCH & LEAD ASSY	
TB11	332-0604	A	TERMINAL BLOCK	
	332-0616	A	MARKER STRIP	
TB12	332-0706	A	TERMINAL BLOCK	
	332-0739	A	MARKER STRIP	
W1	336-1466	A	LEAD ASSY	
W2	336-2289	A	LEAD ASSY	
W3	336-3671	A	LEAD ASSY	
W4	336-5482	A	LEAD ASSY	
W5	336-0179	A	LEAD ASSY	
W6	332-0602	A	JUMPER	

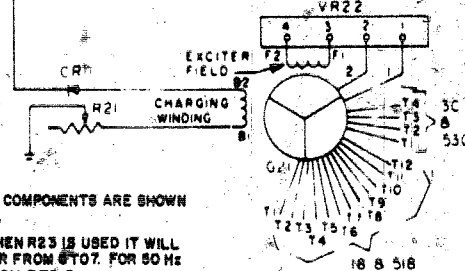
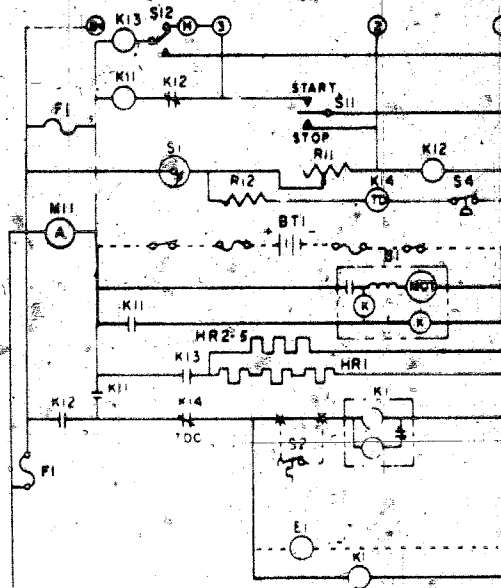
REL. DES.	PART NO.	QTY	ENG. PARTS LIST (DEP.)	DESCRIPTION
W8	336-1045	A	LEAD ASSY	
W10	332-1043	A	JUMPER	
	301-1961	C	PANEL CONTROL BOX	
	301-1962	D	CONTROL BOX	
	301-3714	B	COVER-REGULATOR	
	301-3683	C	SADDLE-CONTROL BOX	
	301-3682	C	OUTPUT BOX (-03 THRU -12)	
	301-0836	B	COVER (-03 THRU -12)	
	301-2467	B	OUTPUT BOX (-05 THRU -08)	
	301-2466	B	COVER (-05 THRU -08)	
	508-0183	P	GROMMET	
	402-0070	A	RUBBER MOUNTS	
	337-0036	A	GROUND STRAP	
	98-1683	B	SILKSCREEN (ADD LOW OIL & RESET)	
	98-4951	A	SILKSCREEN (3CR, 53CR) -01 THRU -11	
	98-4950	B	SILKSCREEN (51BR, 51CR) -02 THRU -12	

MODEL	VR22	VR23	VR22	VR23	VR22	VR23
	MARINE	MARINE	2 CYL	2 CYL	4 CYL	4 CYL
3CR B	-01	-03	-05	-07	-09	-11
53CR						
1BR B	-02	-04	-06	-08	-10	-12
51BR						

MODEL	VR22	VR23	VR22	VR23	VR22	VR23
	MARINE	MARINE	2 CYL	2 CYL	4 CYL	4 CYL
45 KW-33CR/96AG						
45 KW-51BR/96AG						
60 KW-3CR/96AG						
60 KW-51BR/96AG						
60 KW-51BR/96AG						
60 KW-51BR/96AG						
75 KW-51BR/96AG						
75 KW-51BR/96AG						

612-6065


SCHEMATIC DIAGRAM

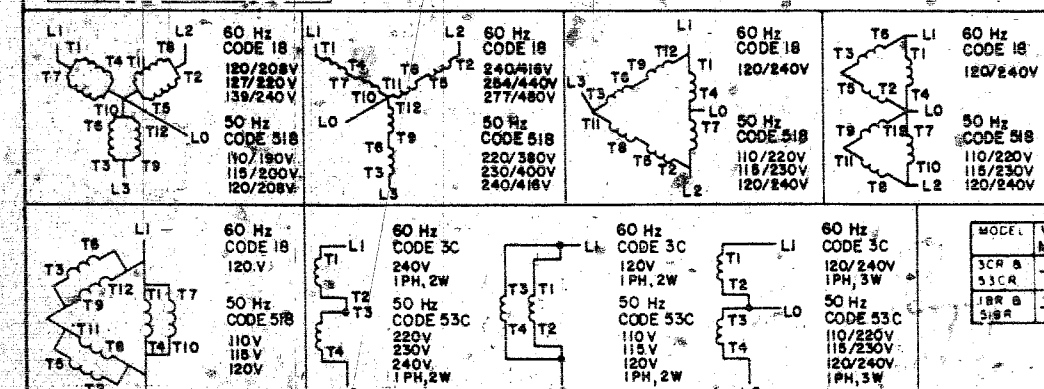


- NOTES:
1. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION.
 2. JUMPER FROM 6 TO 7 W/O R23. WHEN R23 IS USED IT WILL TAKE THE PLACE OF THE JUMPER FROM 6 TO 7. FOR 50 Hz A JUMPER IS ALSO NEEDED FROM 7 TO 8.
 3. 200 AMP SUPER LAG FUSES, FUSED SWITCH FURNISHED BY CUSTOMER (WHEN USED)

PARTS (CONT.)		18 8 318
332 0148	A	MARKER STRIP (01,03)

REF. DES.	PART NO.	QTY.	DESCRIPTION
B1		1	STARTER & SOLENOID
BT1		1	BATTERY 32 V
E1		1	FUEL PUMP
HR1		1	HEATER-MANIFOLD
HR2-3		2	HEATER-BLOW PLUG (8 CYL.)
HR2-9		4	HEATER-BLOW PLUG (4 CYL.)
R1		1	SOLENOID-FUEL
S1		1	SWITCH-CENTRIFUGAL
S2		1	SWITCH-HIGH TEMP
S4		1	SWITCH-LOW OIL PRESS
AC PARTS LIST			
G2		1	GENERATOR
R2	304-0710	B	RESISTOR ASSY
VR22	305-0889	D	REGULATOR ASSY-VOLTAGE (W/V ADJ.)-01-02-03-08
VR23	305-0890	D	REGULATOR ASSY-VOLTAGE (W/V ADJ.)-03-04-07-08
W9	338-0744	A	WIRING HARNESS (FI-F2)
CONTROL BOX PARTS LIST			
CR11	305-0938	A	RECTIFIER & LEAD ASSY
F1	321-0148	A	FUSE-10AMP
	321-0175	A	HOLDER-FUSE
	307-1535	A	RELAY-START SOLENOID
R11	307-0879	B	RELAY-LEAD ASSY
K12	307-1527	B	RELAY-MANIFOLD HEATER
R13	307-0061	B	RELAY-EMERGENCY (LOP)
R14	320-0104	B	COILS (-01 THRU -04)
	338-0917		LEAD ASSY
W11	338-1980		LEAD ASSY
M11	302-0146	A	AMMETER-CHARGE 5-0-5
R11, S1	308-0331	B	SWITCH & RESISTOR ASSY
R12	304-0003	P	RES-30HM, 30W
W3	332-1043	C	JUMPER
S21	309-0304	A	SWITCH & LEAD ASSY
YB11	332-0604	A	TERMINAL BLOCK
	332-0616	A	MARKER STRIP
TB12	332-0706	A	TERMINAL BLOCK
	332-0739	A	MARKER STRIP
W1	336-1488	A	LEAD ASSY
W2	336-2289	A	LEAD ASSY
W3	336-3571	A	LEAD ASSY
W4	336-5483	A	LEAD ASSY
W5	336-0179	A	LEAD ASSY
W6	332-0602	A	JUMPER
	336-0747	A	TERMINAL BLOCK (-01, -03)
W6	336-0845	A	LEAD ASSY
W10	337-0089	A	STRAP-JUMPER
	309-1951	C	PANEL-CONTROL BOX
	301-1962	O	CONTROL BOX
	301-3714	B	COVER-REGULATOR
	301-3683	C	SADDLE-CONTROL BOX
	301-2467	B	OUTPUT BOX (-05 THRU -08)
	301-2466	A	COVER (-08 THRU -08)
	508-0183	P	GROMMET
	402-0070	A	RUBBER MOUNTS
	337-0036	A	GROUND STRAP & LOP LIGHT
	98-1683	B	SILKSCREEN ADD' LOW OIL & RESET
	98-4981	A	SILKSCREEN ION, SCR1-O THRU-7
	98-4950	B	SILKSCREEN ION, SCR2-O THRU-7

* WHEN USED *	20999 A	CHANGED NOTE 5	R374B93	
DIESEL	20202	RLSE FOR PROD		
	ER	SET	EXP. DATE	
MODEL NO	ORIGINAL CORPORATION			
5 KW - 53R / 9374 AD				
8 KW - 58R / 9374 AD				
10 KW - 5CR / 9374 AD				
15 KW - 1BR / 9374 AD				
20 KW - 1CR / 9374 AD				
25 KW - 1CR / 9374 AD				
30 KW - 1CR / 9374 AD	7-8-82	RLW	WMM	JC
35 KW - 1CR / 9374 AD	CONTROL GEN SET			
40 KW - 1CR / 9374 AD	(WIRING DIAGRAM)			
45 KW - 1CR / 9374 AD	SERIAL FROM			
50 KW - 1CR / 9374 AD	CIG. FROM			
55 KW - 1CR / 9374 AD	612-6068			
60 KW - 1CR / 9374 AD	DATE			



MODEL	VR22 MARINE	VR23 MARINE	VR22 2 CYL	VR23 2 CYL
3CR & 53CR	-01	-03	-05	-07
1BR & 51BR	-02	-04	-06	-08

INCIDENT					
DATE	TIME	LOCATION	REMARKS		
10/10/71	10:10	101	101		
10/10/71	10:10	102	102		
10/10/71	10:10	103	103		
10/10/71	10:10	104	104		
10/10/71	10:10	105	105		
10/10/71	10:10	106	106		
10/10/71	10:10	107	107		
10/10/71	10:10	108	108		
10/10/71	10:10	109	109		
10/10/71	10:10	110	110		
10/10/71	10:10	111	111		
10/10/71	10:10	112	112		
10/10/71	10:10	113	113		
10/10/71	10:10	114	114		
10/10/71	10:10	115	115		
10/10/71	10:10	116	116		
10/10/71	10:10	117	117		
10/10/71	10:10	118	118		
10/10/71	10:10	119	119		
10/10/71	10:10	120	120		
10/10/71	10:10	121	121		
10/10/71	10:10	122	122		
10/10/71	10:10	123	123		
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10/10/71	10:10	126	126		
10/10/71	10:10	127	127		
10/10/71	10:10	128	128		
10/10/71	10:10	129	129		
10/10/71	10:10	130	130		
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10/10/71	10:10	155	155		
10/10/71	10:10	156	156		
10/10/71	10:10	157	157		
10/10/71	10:10	158	158		
10/10/71	10:10	159	159		
10/10/71	10:10	160	160		
10/10/71	10:10	161	161		

[illegible]

CONTROL BOX PARTS LISTED ONLY

301-7701	5	FACE CONTROL
88-483	8	SILVERSCREEN-CONTROL FACE (FOR PART 85-301-7701)
228-574-01	5	WIRING HARNESS-ENG

CONTROL BOX PARTS KIT - C2 ONLY
USPS-03 0 01 WIRING PACKAGE CONT. LOC

	22-1674	D	WIRING HARNESS ENG
	201-7686	D	FACE CONTROL
	88-4849	B	SILKSCREEN-CONTROL FACE 1/2" PART NO. 201-7686
M12	652-2282	P	GUAGE-OIL PRESSURE
M13	652-0291	F	GUAGE-COOLANT TEMP
M14	652-1642	F	VOLTMETER (18-24V)
M15	652-0250	P	RESISTOR-GAUGE

[illegible]

Onen		MAX SUPPORTING STRENGTHS REPORT	
DATE 9-28-01		TIME 10:05 PM LN	
TITLE CONTROL GEN SET DC (24V)			
SIGNAL TO		SIN NO 612-609	
		SMT 07	

32V CONTROL SCHEMATIC

The diagram illustrates the electrical control system for a 32V unit. Key components and connections include:

- Power Input:** Labeled "B", "START", "AC", "STOP", "SHUTDOWN", and "END".
- Control Switches:**
 - S1:** A selector switch with "START" and "STOP" positions, enclosed in a dashed box.
 - S2, S3, S5:** Additional control switches.
 - S6:** A switch located near the motor.
- Relays and Contactors:**
 - K15:** A relay or contactor used for starting and stopping the motor.
 - K12:** A relay or contactor used for shutdown and restart.
 - K13:** A relay or contactor used for emergency stop.
 - CB1, CB2:** Circuit breakers.
- Resistors:**
 - R1, R2, R4:** Resistors used in the control circuit.
 - RNI:** A resistor used in the heating element circuit.
- Motor:** Labeled "M1", a three-phase motor.
- Heating Elements:** A bank of four heating elements labeled HR1, HR2, HR3, and HR4, connected to a common terminal.
- Emergency Stop:** A red button labeled "BT1" (Emergency Stop).
- Interlocks:** Various interlocking connections between switches and relays to ensure safe operation.

[illegible]

- NOTES:
1. CONNECT AND LEAD TO LOWER BOLT OF LIFTING BRACKET ON GLOW PLUG SIDE USING .896 C/C LK WASHER AND 1/4"
 2. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN DE-ENERGIZED POSITION.
 3. DASHED LINES INDICATE CONNECTIONS WHEN USED.
 4. USE ONE WASHER ON EACH GROUND STUD AGAINST CONTROL BOX BOTTOM.
 5. INSTALL INSULATION RINGS ON 301-7685, 301-7686 AND 301-7687 WITH LARGE C-CLAMP HOLES.
- (A)

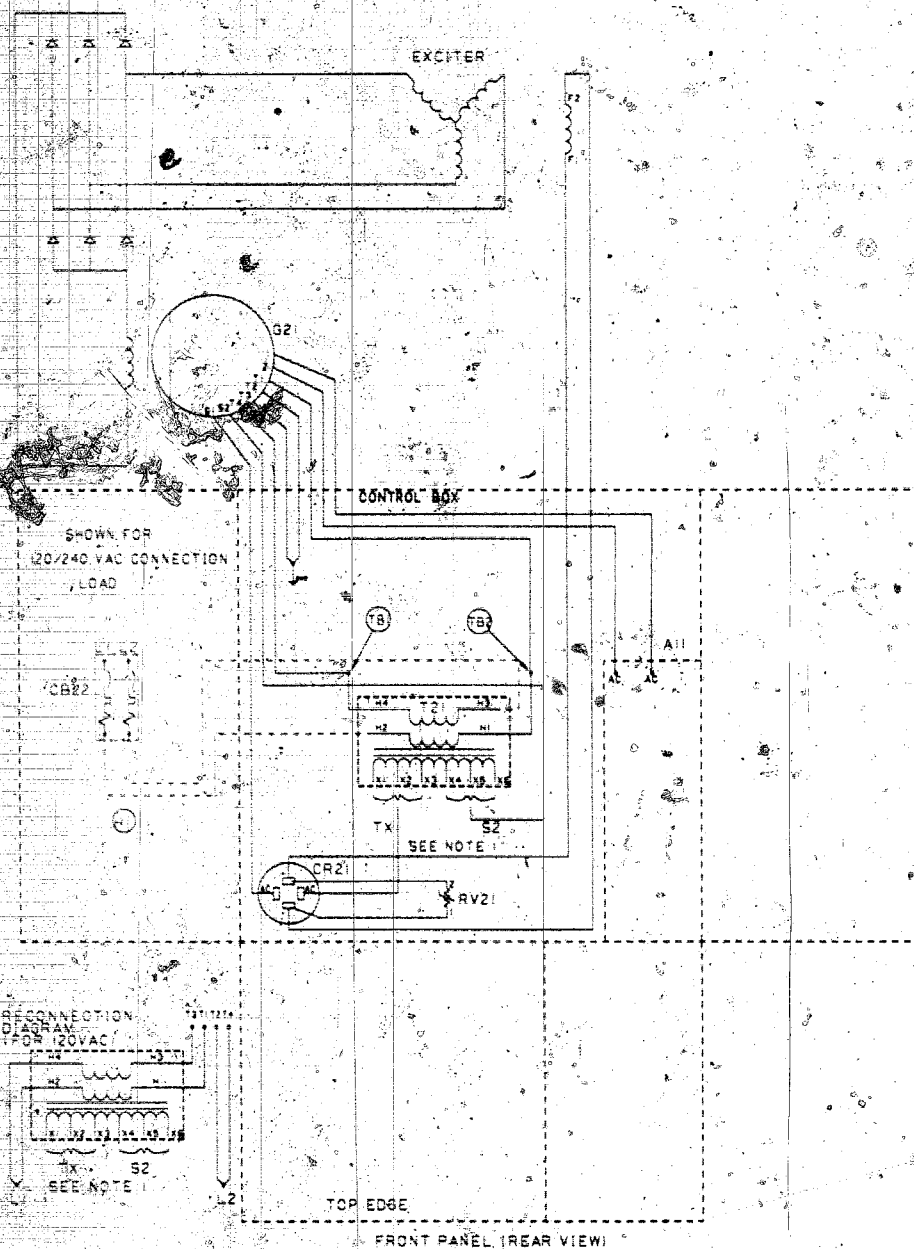
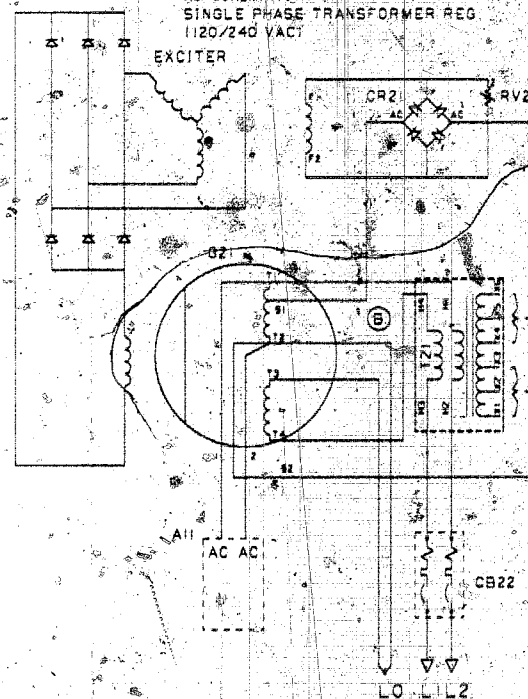
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SEC 17W	RETRON	DATE 1001	UNIT 1
			
1000 CAMPUS DR WILMINGTON, MASS 01897			
DATE 9-29-82	ON MCM	FRS SLS	LEN LN
TOTAL CONTROL-GEN SET OC 132V			
SIMILAR TO	ORDER NO	SHT	
	6-2-6092	32	

CADD SYSTEM DWG

612-6093

AC WIRING DIAGRAM

AC SCHEMATIC
SINGLE PHASE TRANSFORMER REG
1120/240 VAC

NOTES:
1. TO ADJUST OUTPUT VOLTAGE, MOVE TAPS ON T21 ACCORDING TO FOLLOWING CHART.

OUTPUT VOLTAGE ADJUSTMENT	60HZ (1-01) TAP POSITION		50HZ (1-021) TAP POSITION	
	TX	S2	TX	S2
INCREASE	X3	X4	X1	X4
	X2	X4	X2	X5
	X1	X4	X2	X5
STD	X3	X5	X1	X5
	X2	X5	X3	X6
	X1	X5	X2	X6
DECREASE	X3	X6	X1	X6
	X2	X6		
	X1	X6		

2. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION.
3. DASHED LINES INDICATE WHEN USED.
4. INSTALL STRAP UNDER CONTROL BETWEEN THE 5/16 WELD NUT NEAR CENTER HOLE AND BOLT ATTACHING 301-7951 PLATE TO FRONT LEFT MOUNTING ISOLATOR USING ONE 856-0008 UNDER EACH END OF STRAP.

CADD SYSTEM DWG

REV	DATE	BY	CHKD	APPD	DESCRIPTION
1	10-10-62	MDL4	MDL4	MDL4	60HZ (MDL4)
2	10-10-62	MDL4	MDL4	MDL4	50HZ (MDL4)
3	10-10-62	MDL4	MDL4	MDL4	60HZ (MDL4)
4	10-10-62	MDL4	MDL4	MDL4	CONTROL GEN SET AC (PH 52) REG
5	10-10-62	MDL4	MDL4	MDL4	MDL4/MDL3

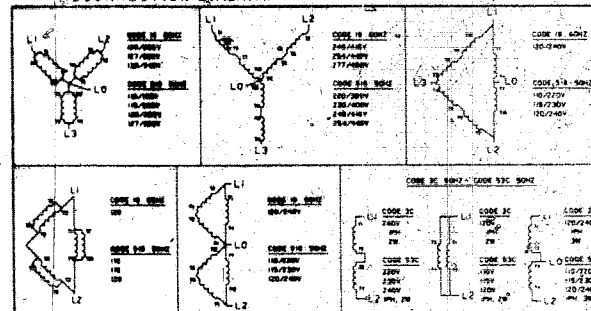
REV	DATE	BY	CHKD	APPD	DESCRIPTION
1	10-10-62	MDL4	MDL4	MDL4	60HZ (MDL4)
2	10-10-62	MDL4	MDL4	MDL4	50HZ (MDL4)
3	10-10-62	MDL4	MDL4	MDL4	60HZ (MDL4)
4	10-10-62	MDL4	MDL4	MDL4	CONTROL GEN SET AC (PH 52) REG
5	10-10-62	MDL4	MDL4	MDL4	MDL4/MDL3

AC WIRING DIAGRAM - ELECTRONIC REGULATION 15, 515, 3C, 53C



1. CUT LEADS 3 & 4 FROM L21. THESE LEADS ARE NOT USED.
2. UNLESS OTHERWISE NOTED, ALL CONNECTIONS ARE TO BE SHOWN IN DE-ENERGIZED POSITION.
3. DASHED LINES INDICATE CONNECTIONS WHEN USED.
4. USE 4 SCREW WITH 301-7694 FACE-CONT AND 301-7695 WING NUTS SURROUNDING 3522 OPENING.
5. INSTALL STRAP UNDER CONTROL BOX. STRAP SHOULD BE ATTACHED TO CENTER HOLE AND BOLT ATTACHING 301-7694 PLATE TO FRONT LEFT MOUNTING ISOLATOR USING ONE 301-7695 WASHER UNDER EACH END OF STRAP.

AC SCHEMATIC - ELECTRONIC REG
VOLTAGE CODES 118 & 518, 30 & 530



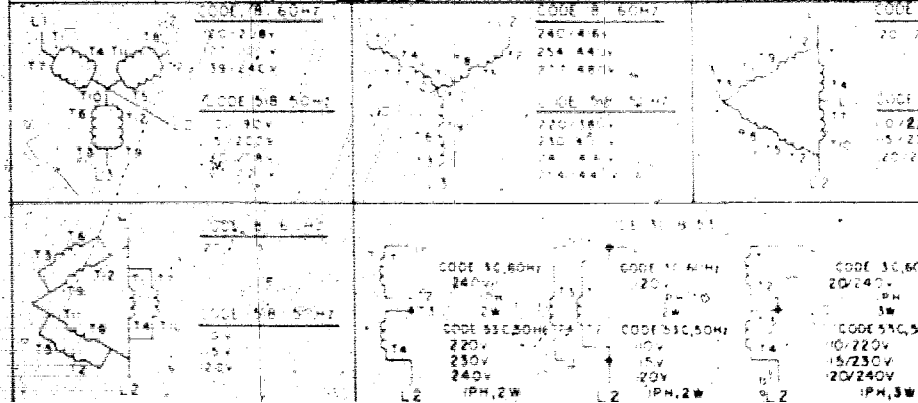
CADD SYSTEM DWG

LINE NO.	DATE	TIME	LOCATION	REMARKS
1	9-20-62	01	60	
2	9-20-62	02	50	
3	9-20-62	03	50	

REF	DES	PART	QTY	PARTS LIST	UNIT	QTY	DESCRIPTION
AI/	REF						PCB ASSY-ENGINE MONITOR
CB21	320-192	B					CIRCUIT BREAKER-MAG 25A
CB22	REF						CIRCUIT BREAKER-MAG
Q2	REF						GENERATOR INLS
L21	315-0361	C					REACTOR ASSY-COM
L21	315-0365	C					TRANSFORMER-WOLT REF
V21	305-0069	D					REGULATOR 250V-10V/AGE
	982-0003	B					WASHER-ETIC 1/4"
							USE WITH 982-0070 & 872-0071
	872-0070	A					SCREEN-AM 1/4 32X 1/4"
							USE WITH 982-0071
	912-0037	A					SCREEN-AM 1/4 32X 1/4"
							USE WITH 982-0071
A	301-7634	C					PAGE CONTROL
	827-0064	B					SCREEN-AM 1/4 32X 1/4"
							SEE NOTE 1
	332-2617	A					TERMINAL TAB 187056 WITH WPT
	38-9547	B					SILKSCREEN-CONT PAGE 1401
	338-1679	A					WIRING DIAGRAM-CONT 3000
	337-0043	A					STRAP-BONDING (SEE NOTE 5)
	958-0008	A					WASHER-ETIC 1/4 32X 1/4"
	982-0004	B					SCREEN-AM 1/4 32X 1/4"
							1/4 5-16 X 1/2 SEE NOTE 1
PARTS LIST - 01 ONLY							
	332-2605	F					JUMPER-TERM USE ON V21-A
	98-9957	B					SILKSCREEN-MARINE 200
PARTS LIST - 02 ONLY							
	332-2605	F					JUMPER-TERM USE ON V21-A
	98-9957	B					SILKSCREEN-MARINE 200
PARTS LIST - 03 ONLY							
	332-2605	F					JUMPER-TERM USE ON V21-A
	98-9957	B					SILKSCREEN-MARINE 200
	332-2617	A					TERMINAL TAB 187056 WITH WPT

[illegible]

INSIDE VIEW OF CONTROL BOX



508-0001	P	1	GROMMET
333-0052	P	1	CLIP-WIRE
508-0015	-	4	WASHER FIBER

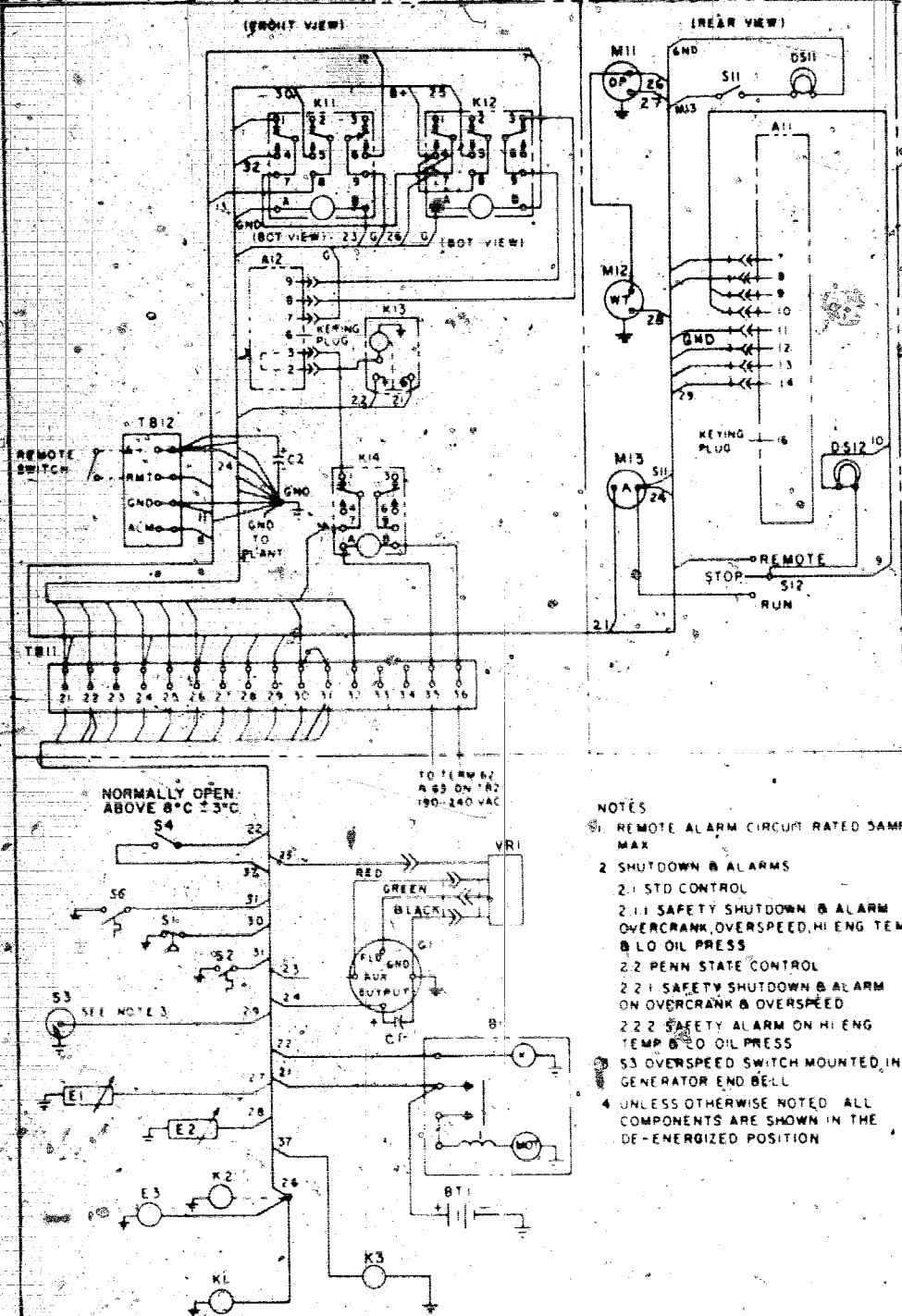
1. UNLESS OTHERWISE NOTED ALL COMPONENTS
ARE SHOWN IN THE DE ENERGIZED POSITION.
2. JUMPER FROM 6T07 WOR 23 WHEN R23 IS USED IT WILL TAKE THE PLACE OF THE
JUMPER FROM 6T07. FOR 60HA JUMPER IS ALSO NEEDED FROM 7 TO 8.

(CONT)									
* WHEN USED		20590		- ALSO FOR PROO					
ZAV DIESEL		SER NO. LET		REVISION				CONTROL SET	
1. NEW - 1000/25302 AG		<div style="border: 1px solid black; padding: 5px; text-align: center;">Orign</div>		<div style="border: 1px solid black; padding: 5px; text-align: center;">4-7-82</div>		<div style="border: 1px solid black; padding: 5px; text-align: center;">EE</div>		<div style="border: 1px solid black; padding: 5px; text-align: center;">106</div>	
2. NEW - 1000/25302 AG									
3. NEW - 1000/25302 AG									
4. NEW - 1000/25302 AG									
5. NEW - 1000/25302 AG									
6. NEW - 1000/25302 AG		<div style="border: 1px solid black; padding: 5px; text-align: center;">CONTROL-GEN SET (WIRING DIAGRAM)</div>		<div style="border: 1px solid black; padding: 5px; text-align: center;">DEPA FROM 612-604</div>		<div style="border: 1px solid black; padding: 5px; text-align: center;">612-6107</div>			
7. NEW - 1000/25302 AG									
8. NEW - 1000/25302 AG									
9. NEW - 1000/25302 AG									
10. NEW - 1000/25302 AG									
11. NEW - 1000/25302 AG									
12. NEW - 1000/25302 AG									
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58. NEW - 1000/25302 AG									
59. NEW - 1000/25302 AG									
60. NEW - 1000/25302 AG									

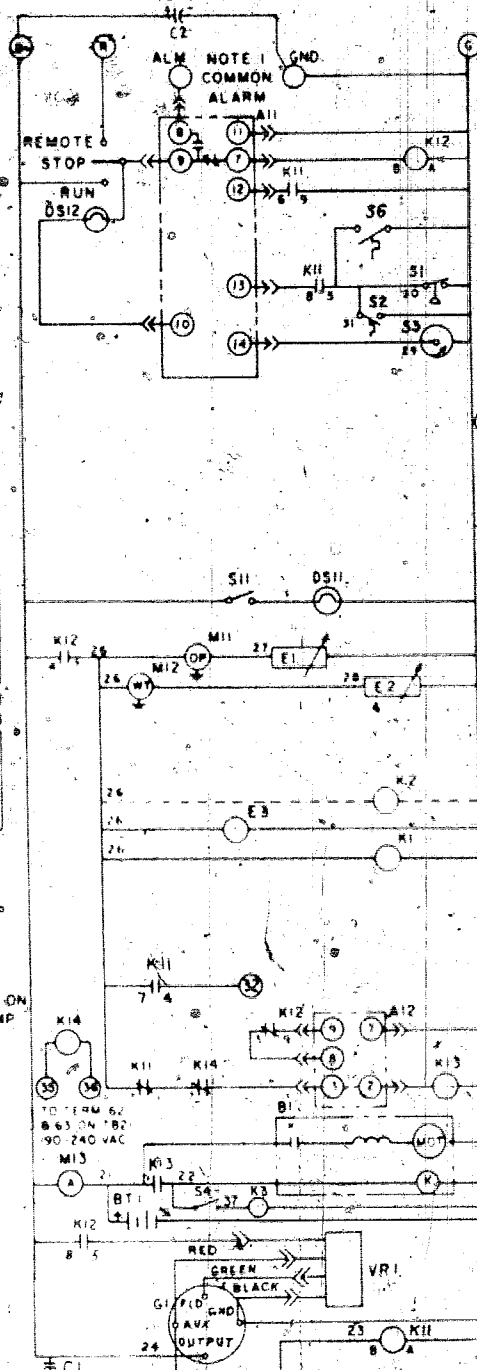
612-6120

C

WIRING DIAGRAM



SCHEMATIC DIAGRAM



REV	DES	DATE	NO	QTY	DESCRIPTION
B1				1	STARTER & SAFETY SWITCH
B11				1	SAFETY STOP
C1				1	CAPACITOR BY PASS
E1	182A 245			1	SENDER-OIL PRESSURE
E2	182A 245			1	SENDER-WATER TEMP
E3				1	FUEL PUMP
G1				1	ALTERNATOR
G2				1	SOLENOID-ENG STOPPING
K2				1	SOLENOID-WATER
K3				1	SOLENOID-EXCESS FUEL
S1				1	SWITCH-LOW OIL PRESSURE
S2				1	SWITCH-HIGH WATER TEMP
S3				1	SWITCH-OVERSPEED
VR1				1	VOLTAGE REGULATOR
S4				1	SWITCH-EXCESS FUEL
S6				1	SWITCH-HI EXH TEMP
CONTROL BOX PART LIST					
A11	300C870			1	MONITOR-ENGINE CONTROL (STD)
A12	300C733			1	MONITOR-ENGINE CONTROL (PENN STATE)
A13	300C733			1	CONTROL STD CRANKER
C2	300C714			1	CONTROL CYCLE CRANKER
C2	300A0079			1	CAPACITOR ARMY
C2	300A0079			1	CAPACITOR (4000 MFD @ 50 VDC)
DS17	322A170			1	LAMP FAULT
K11	307B1050			1	RELAY START DISCONNECT
K12	307B1050			1	RELAY IGNITION
K13	307B1050			1	RELAY-START SOLENOID
K14	307B1050			1	RELAY-STARTER PROTECTION
M11	930 245			1	GAUGE OIL PRESSURE
M12	930 245			1	GAUGE WATER TEMP
M13	307A157			1	AMMETER-CHARGE 30-8-30
DS11	322-0004			1	SPRING-RELAY HOLD-DOWN (K11, K12, K14)
DS11	322-0149(P)			1	LAMP-PANEL
S11	308-0002(P)			1	HOLDER-LAMP
S12	308P130			1	SWITCH-PANEL LIGHT
S12	308P130			1	SWITCH-SELECTOR (-01, -03)
S12	308P130			1	SWITCH-SELECTOR (-02, -04)
TR1	322A-52-R1(P)			1	TERMINAL BLOCK
TR1	322A-52-R1(P)			1	BARBER STRIP
TR1	322A-52-R1(P)			1	TERMINAL BLOCK
TR1	322A-52-R1(P)			1	BARBER STRIP
W1	322A-52-R1(P)			1	WIRING HARNESS
W1	322A-52-R1(P)			1	BRACKET-ENG CONTROL
W1	322A-52-R1(P)			1	PANEL-ENGINE CONTROL
W1	322A-52-R1(P)			1	PARTS LIST CONT NOB
W1	322A-52-R1(P)			1	PLUG KEYING
W1	322A-52-R1(P)			1	SHLDScreen (-01, -03)
W1	322A-52-R1(P)			1	SHLDScreen (-02, -04)
W1	322A-52-R1(P)			1	SHLDScreen (-05, -06)
W1	322A-52-R1(P)			1	SHLDScreen (-07, -08)
W1	322A-52-R1(P)			1	SHLDScreen (-09, -10)
W1	322A-52-R1(P)			1	SHLDScreen (-11, -12)
W1	322A-52-R1(P)			1	SHLDScreen (-13, -14)
W1	322A-52-R1(P)			1	SHLDScreen (-15, -16)
W1	322A-52-R1(P)			1	SHLDScreen (-17, -18)
W1	322A-52-R1(P)			1	SHLDScreen (-19, -20)
W1	322A-52-R1(P)			1	SHLDScreen (-21, -22)
W1	322A-52-R1(P)			1	SHLDScreen (-23, -24)
W1	322A-52-R1(P)			1	SHLDScreen (-25, -26)
W1	322A-52-R1(P)			1	SHLDScreen (-27, -28)
W1	322A-52-R1(P)			1	SHLDScreen (-29, -30)
W1	322A-52-R1(P)			1	SHLDScreen (-31, -32)
W1	322A-52-R1(P)			1	SHLDScreen (-33, -34)
W1	322A-52-R1(P)			1	SHLDScreen (-35, -36)
W1	322A-52-R1(P)			1	SHLDScreen (-37, -38)
W1	322A-52-R1(P)			1	SHLDScreen (-39, -40)
W1	322A-52-R1(P)			1	SHLDScreen (-41, -42)
W1	322A-52-R1(P)			1	SHLDScreen (-43, -44)
W1	322A-52-R1(P)			1	SHLDScreen (-45, -46)
W1	322A-52-R1(P)			1	SHLDScreen (-47, -48)
W1	322A-52-R1(P)			1	SHLDScreen (-49, -50)
W1	322A-52-R1(P)			1	SHLDScreen (-51, -52)
W1	322A-52-R1(P)			1	SHLDScreen (-53, -54)
W1	322A-52-R1(P)			1	SHLDScreen (-55, -56)
W1	322A-52-R1(P)			1	SHLDScreen (-57, -58)
W1	322A-52-R1(P)			1	SHLDScreen (-59, -60)
W1	322A-52-R1(P)			1	SHLDScreen (-61, -62)
W1	322A-52-R1(P)			1	SHLDScreen (-63, -64)
W1	322A-52-R1(P)			1	SHLDScreen (-65, -66)
W1	322A-52-R1(P)			1	SHLDScreen (-67, -68)
W1	322A-52-R1(P)			1	SHLDScreen (-69, -70)
W1	322A-52-R1(P)			1	SHLDScreen (-71, -72)
W1	322A-52-R1(P)			1	SHLDScreen (-73, -74)
W1	322A-52-R1(P)			1	SHLDScreen (-75, -76)
W1	322A-52-R1(P)			1	SHLDScreen (-77, -78)
W1	322A-52-R1(P)			1	SHLDScreen (-79, -80)
W1	322A-52-R1(P)			1	SHLDScreen (-81, -82)
W1	322A-52-R1(P)			1	SHLDScreen (-83, -84)
W1	322A-52-R1(P)			1	SHLDScreen (-85, -86)
W1	322A-52-R1(P)			1	SHLDScreen (-87, -88)
W1	322A-52-R1(P)			1	SHLDScreen (-89, -90)
W1	322A-52-R1(P)			1	SHLDScreen (-91, -92)
W1	322A-52-R1(P)			1	SHLDScreen (-93, -94)
W1	322A-52-R1(P)			1	SHLDScreen (-95, -96)
W1	322A-52-R1(P)			1	SHLDScreen (-97, -98)
W1	322A-52-R1(P)			1	SHLDScreen (-99, -100)

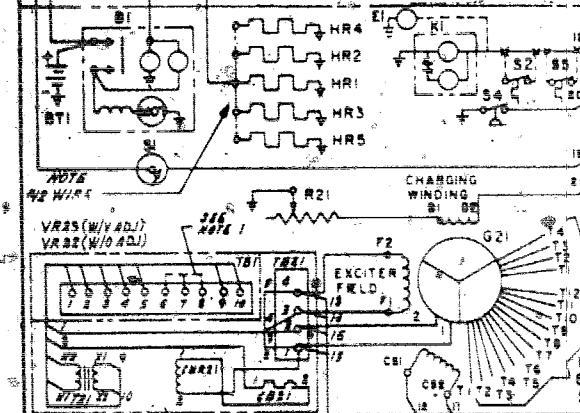
 REPL FROM
 612-5347

STD	CRANKER	CYCLE	MODEL NO	DATE
STD MONITOR	-01	-03	MDER-R/1H	10-7-82
PENN MONITOR	-02	-04	MDER-R/1H	10-7-82
2 WIRE REMOTE STARTING				10-7-82
CONTROL GEN SET EMER (WIRING DIAGRAM)				10-7-82

612-6120

FIG. 1

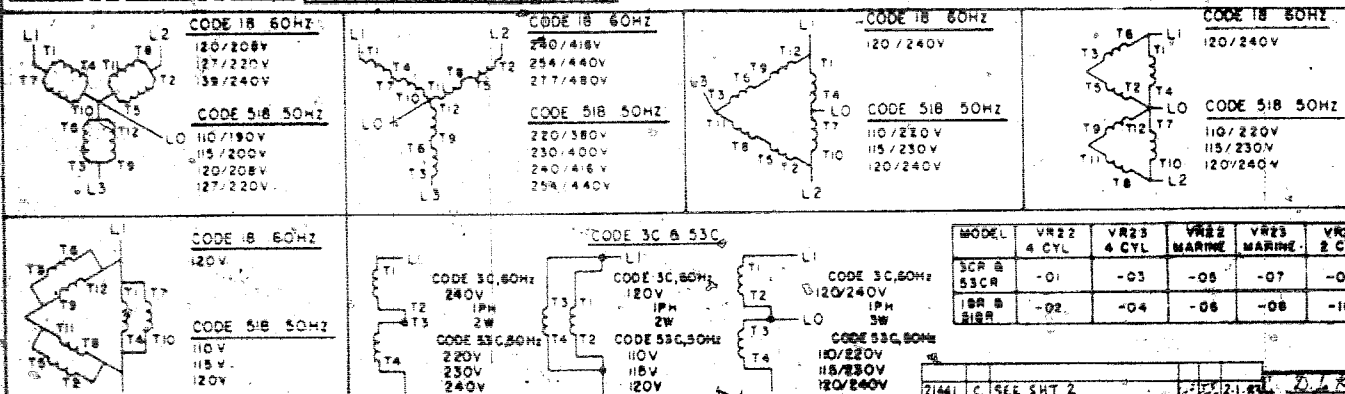
FIG. 2



NOTE: -
REMOVE JUMPER(W11) WHEN
PRE-HEAT CIRCUIT IN AUTOMATIC
OR LOAD TRANSFER IS USED

1. JUMPER FROM 6 TO 7 W/O R23. WHEN R23 IS USED IT WILL TAKE THE PLACE OF THE JUMPER FROM 6 TO 7. FOR 50Hz A JUMPER IS ALSO NEEDED FROM 7 TO 8.

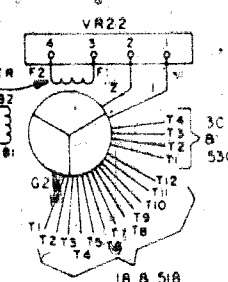
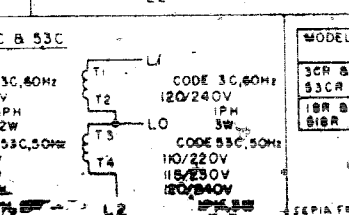
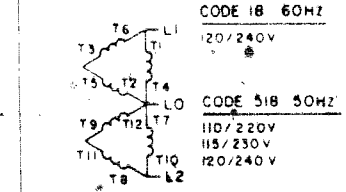
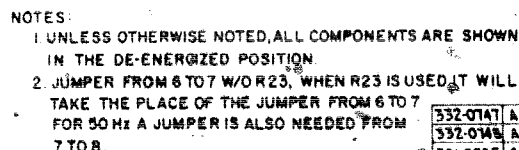
2. CONNECT X1 TO 5 FOR CODE 53C 5 518 (50HZ)
CONNECT X1 TO 6 FOR CODE 3C 5 18 (60HZ)
3. UNLESS OTHERWISE NOTED, ALL COMPONENTS
ARE SHOWN IN THE DE-ENERGIZED POSITION.



10 6 518

PAR. NO.	QTY	UNIT	QTY	DESCRIPTION
B1	1		1	STARTER & SW
B1	1		1	BATTERY INV
B1	1		1	FUEL PUMP
H1	1		1	HEATER-MANIFOLD
H1,3	2		2	HEATER-BLOW PLUG (EVL)
H1,3	2		2	HEATER-BLOW PLUG (EVL)
H1	1		1	SOLENOID-PUMP
B1	1		1	SWITCH-CONTROL VAL
B2	1		1	SWITCH-HIGH TEMP
B4	1		1	SWITCH-LOW OIL PRESS
B5	1		1	SWITCH-HIGH OIL TEMP
AC PARTS LIST				
G1	1		1	GENERATOR
R1	304-0700	D	1	RESISTOR ASBY
VR2	309-0850	D	1	REGULATOR ASBY-VOLTAGE (W/O V ADJ)-01-02-03-04-05-06-07-08-09-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-85

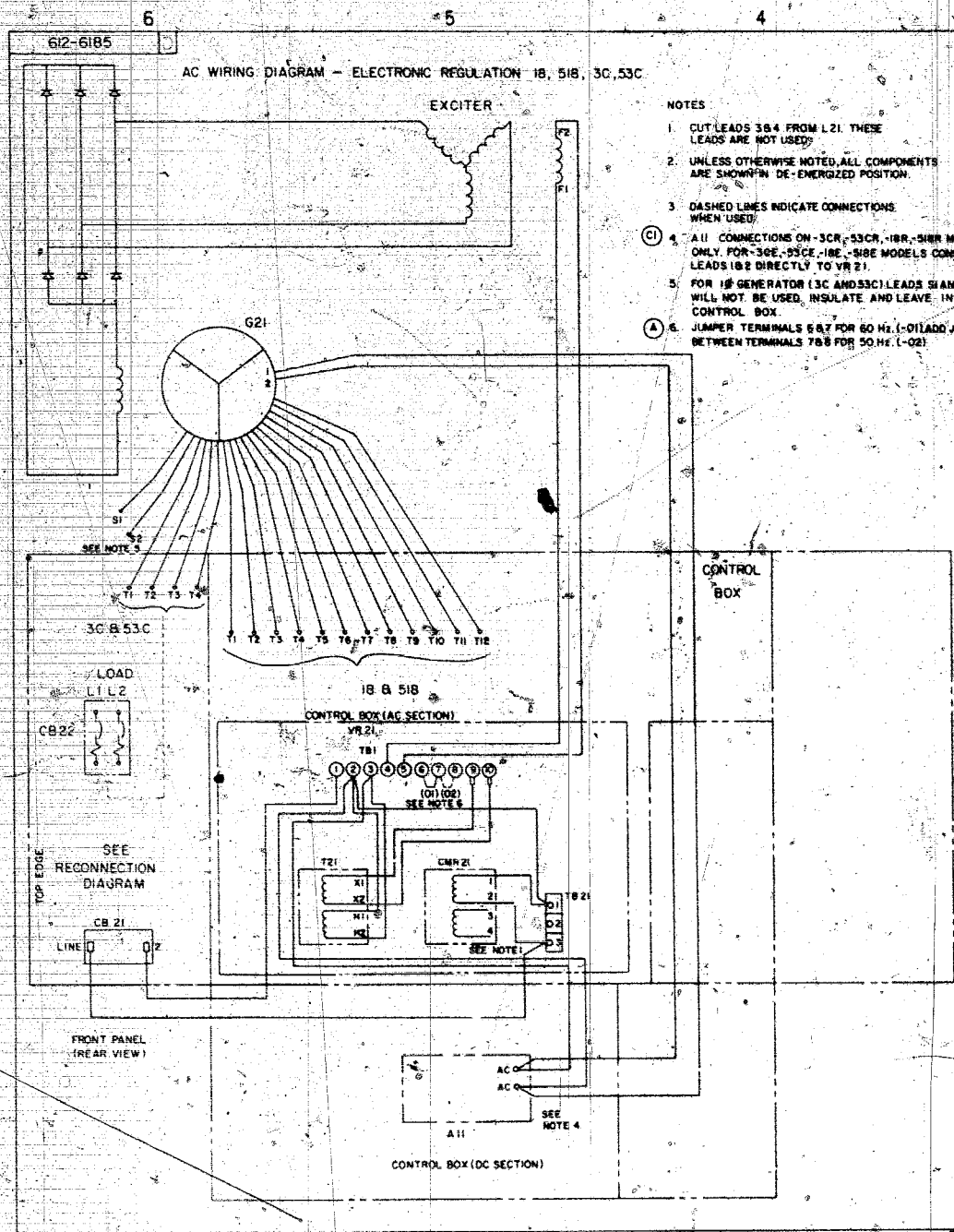
INSIDE VIEW OF CONTROL BOX



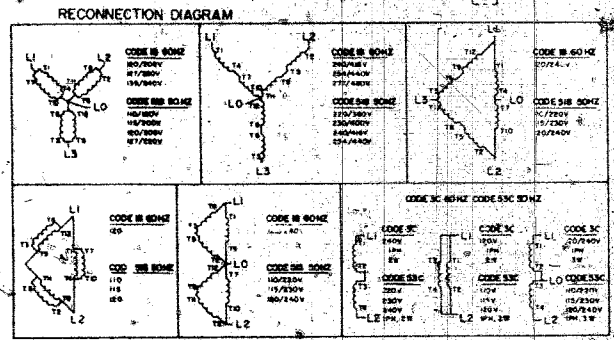
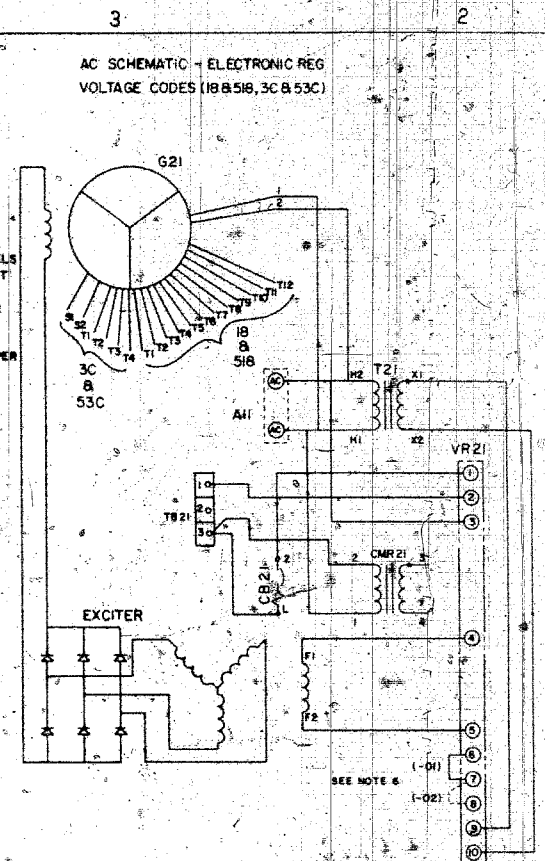
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Ogen
 OGEN CORPORATION
 1-12-83
CONTROL-GEN SET
(WIRING DIAGRAM)

612-6154

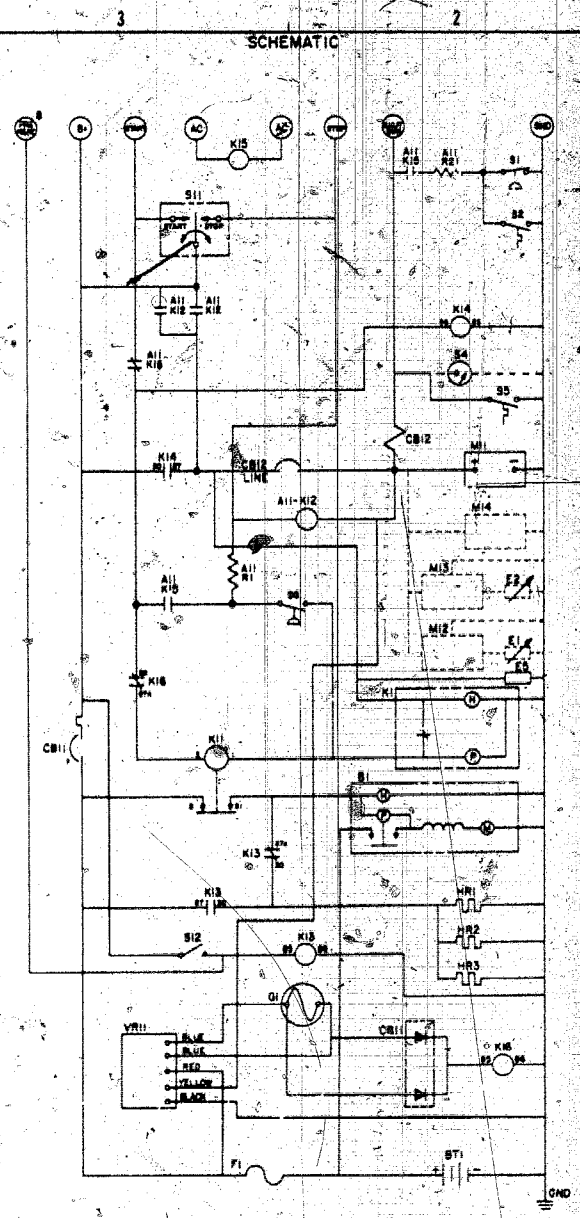
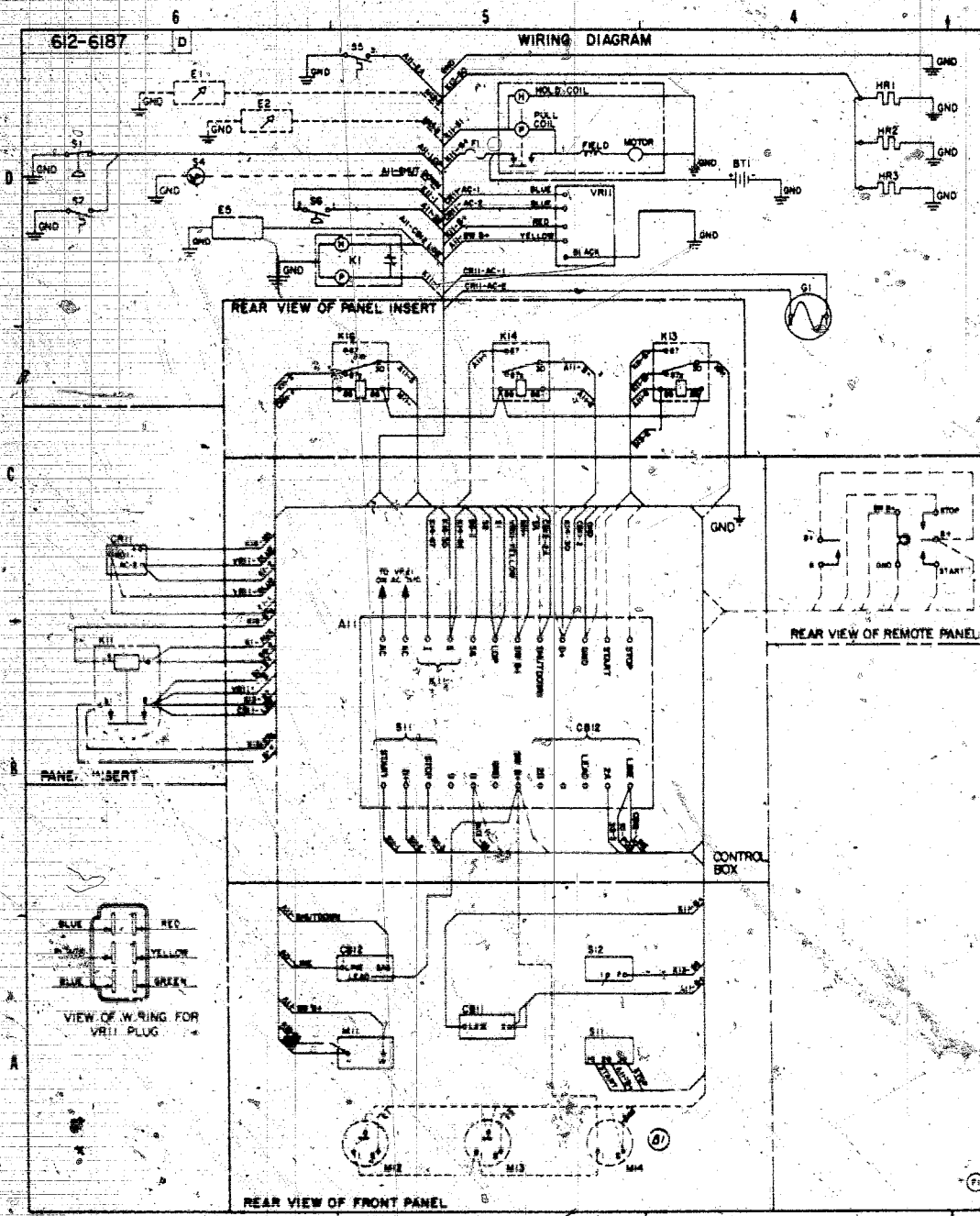


- NOTES
1. CUT LEADS 3 & 4 FROM L21. THESE LEADS ARE NOT USED.
 2. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN DE-ENERGIZED POSITION.
 3. DASHED LINES INDICATE CONNECTIONS WHEN USED.
 4. ALL CONNECTIONS ON 3C & 53C, 18, 518, 518R MODELS ONLY. FOR 30E, 35CE, 18E, 518E MODELS CONNECT LEADS 18 & 2 DIRECTLY TO VR21.
 5. FOR 18 GENERATOR (3C AND 53C) LEADS 5 AND 82 WILL NOT BE USED, INSULATE AND LEAVE IN CONTROL BOX.
 6. JUMPER TERMINALS 6 & 7 FOR 60 HZ (-01) AND JUMPER BETWEEN TERMINALS 7 & 8 FOR 50 HZ (-02).



PARTS LIST (ALL DASH NO'S)			
REF DES	PART NO	QTY	DESCRIPTION
A11	REF	1	PCB ASSY-ENGINE MONITORING BOARD
CB22	REF	1	CIRCUIT BREAKER-LOAD
CB21	REF	1	GENERATOR (AC)
VR21	30E-0691	1	REGULATOR-555V-VOLTAGE
352-1564	A	2	TERMINAL TAB 250 (USE ON BOTH A11-AC TERMINALS)
98-5140	A	1	SILKSCREEN-CONT FACE (AC) (USE ON 30E-0559)
338-1774	A	1	WIRING PACKAGE (AC CONT)
337-0049	A	1	STRAP-BONDING
856-0005	2	1	WIREBOND LVL (5/16)
800-0005	1	1	SCREW-1/8X1/2-18X5/16
821-0004	3	1	SCREW-LX 1/8X1/2-32X5/16 (USE ON VR21)

ADDITIONAL	-01	60 HZ	Onan
518 & 53	-02	50 HZ	CONTROL-GEN SET ACT (18 & 518)
			612-6185



REF	SYM	VAL	DESC	QTY	UNIT	REMARKS
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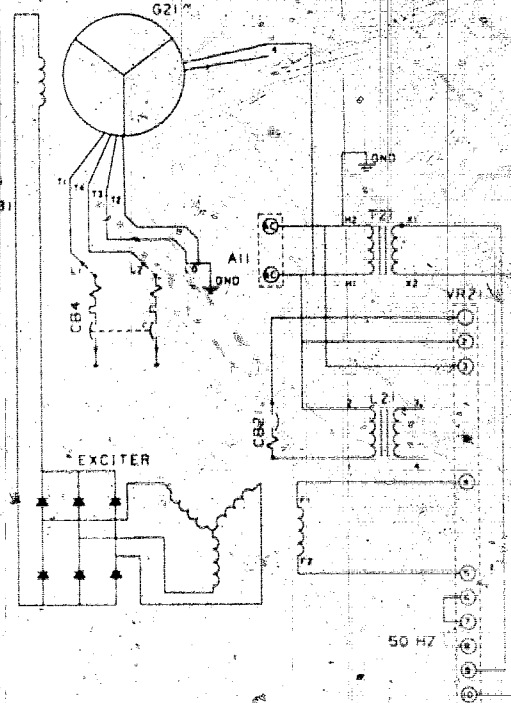
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MDKC	MDKC	-02
MDKC	MDKC	-03
MDKC	MDKC	-04

DATE	BY	CHKD	APPD	REV	DATE
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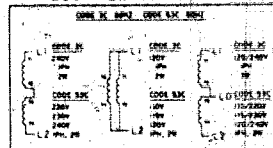
54-6256



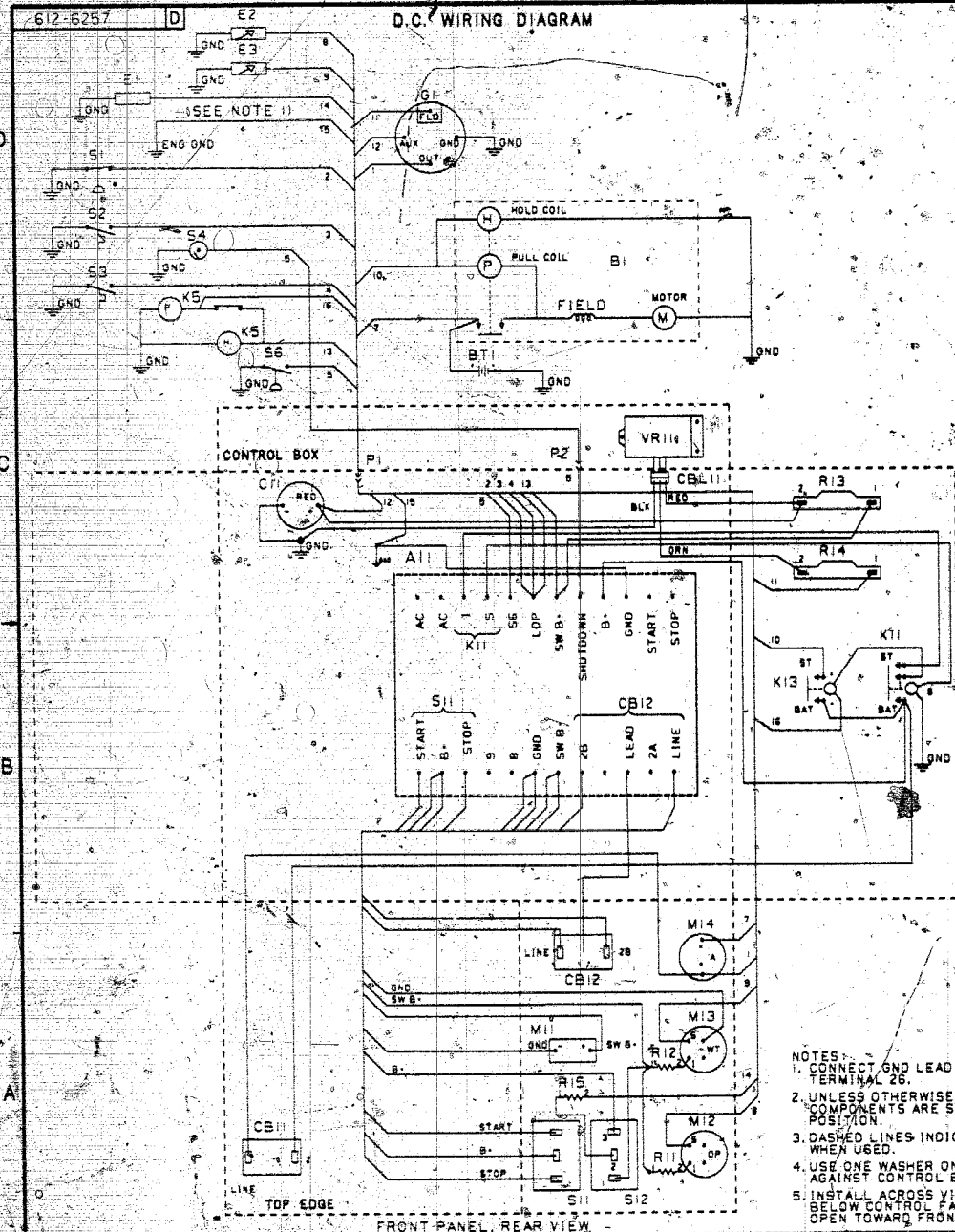
1. CUT LEADS 3 & 4 FROM E21. THESE LEADS ARE NOT USED.
2. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN DE-ENERGIZED POSITION.
3. DASHED LINES INDICATE CONNECTIONS WHEN USED.
4. USE 4 SCREW WITH 301-7694 FACE COU AND 4 IN WELD NUTS SURROUNDING CB22 OPENING.
5. INSTALL STRAP UNDER CONTROL BETWEEN THE 5/16 IN WELD NUT NEAR CENTER HOLE AND BOLT ATTACHING MTG BRKT 1301-30061 TO FRONT LEFT MTG BRACKET USING ONE WASHER 156-0008 UNDER EACH END.



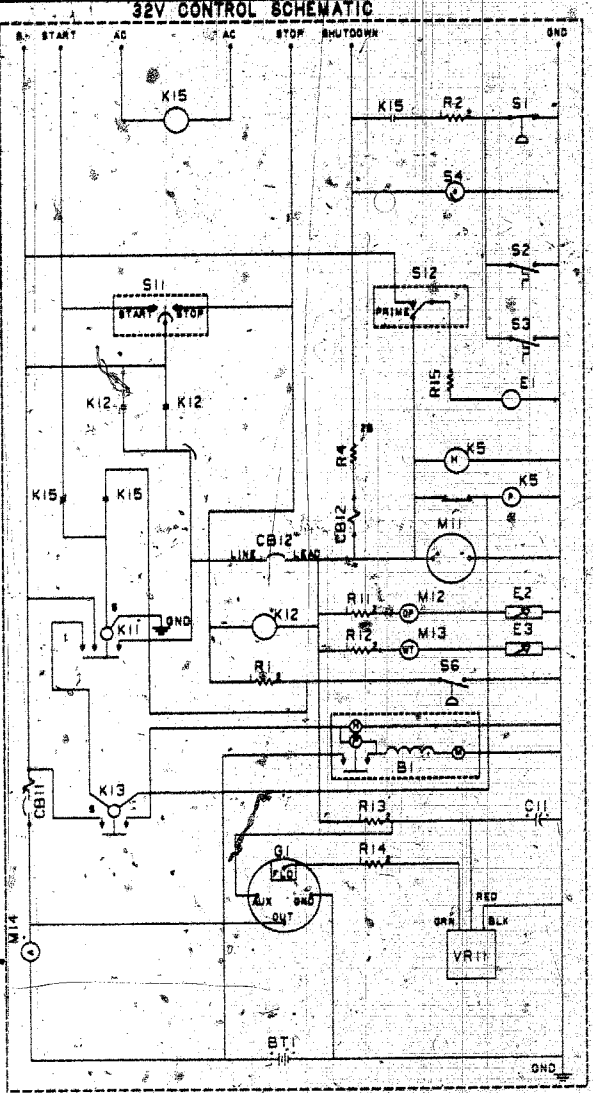
RECONNECTION DIAGRAM



PARTS LIST				DESCRIPTION
REF. DES. PART NO.	QTY	UNIT		
Q04	REF.			DCR ASSY. ENGINE, W/PLATE
Q04	REF.			ICE BREAKER DOUBLE POLE
Q07	320-112	B		CIRCUIT BREAKER, MAG 15A
Q21	REF.			GENERATOR 1AC
Q22	316-228			FLIGHT CONTROL ASS'Y
Q23	316-228			TRAINING CONTROL, VOLS REF
Q03	REF.			TERMINAL BLOCK OUTPUT
VR7	308-0688	D		REGULATOR ASSY, VOLTAGE
	322-2605			FLIGHT CONTROL ASS'Y, A & B
	322-2317	A		TERMINAL TAB, 187, USE ON VR7
	652-0003			WASHER, E L 146
				USE WITH 812-0070 & 812-0071
	812-0070			SCREW, 1/4 X 32, 1/4 IN. L
				USE WITH VR2
	812-0071			SCREW, 1/4 X 32, 1/4 IN. L
				USE WITH L2 & 32
	3011-1684			PLATE COVER
	821-0004	B		SCREW, 1/4 X 1/2, 1/4 IN. L
				SEE NOTE 5
	3011-1684	B		PLATE COVER
	88-4847	D		SCREW, 1/4 X 1/2, 1/4 IN. L
				USE ON 3011-1684
	226-2910	E		LOAD PACKAGE AC
	327-0049	A		LEAD BONDING LUG, 1/2 IN. L
	8444-0009			SCREW, 1/4 X 1/2, 1/4 IN. L
	832-0014			SCREW, 1/4 X 1/2, 1/4 IN. L
				SEE NOTE 5
	232-7805	F		CLAMP, TERMINUS ON VR2



- NOTES:
1. CONNECT GND LEAD TO MOUNTING BOLT OF TERMINAL 26.
 2. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN DE-ENERGIZED POSITION.
 3. DASHED LINES INDICATE CONNECTIONS WHEN USED.
 4. USE ONE WASHER ON EACH GROUND STUD AGAINST CONTROL BOX BOTTOM.
 5. INSTALL ACROSS VIBRATION ISOLATORS BELOW CONTROL FACE WITH BRACKET OPEN TOWARD FRONT.
 6. INSTALL ACROSS VIBRATION ISOLATORS BELOW CONTROL REAR WITH BRACKET OPEN TOWARD REAR.



ITEM	DESCRIPTION	QUANTITY	REMARKS
1	ACROSS VIBRATION ISOLATOR	1	
2	ACROSS VIBRATION ISOLATOR	1	
3	ACROSS VIBRATION ISOLATOR	1	
4	ACROSS VIBRATION ISOLATOR	1	
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98	ACROSS VIBRATION ISOLATOR	1	
99	ACROSS VIBRATION ISOLATOR	1	
100	ACROSS VIBRATION ISOLATOR	1	

CADD SYSTEM DWG

DATE: 1-1-74

BY: J. J. JONES

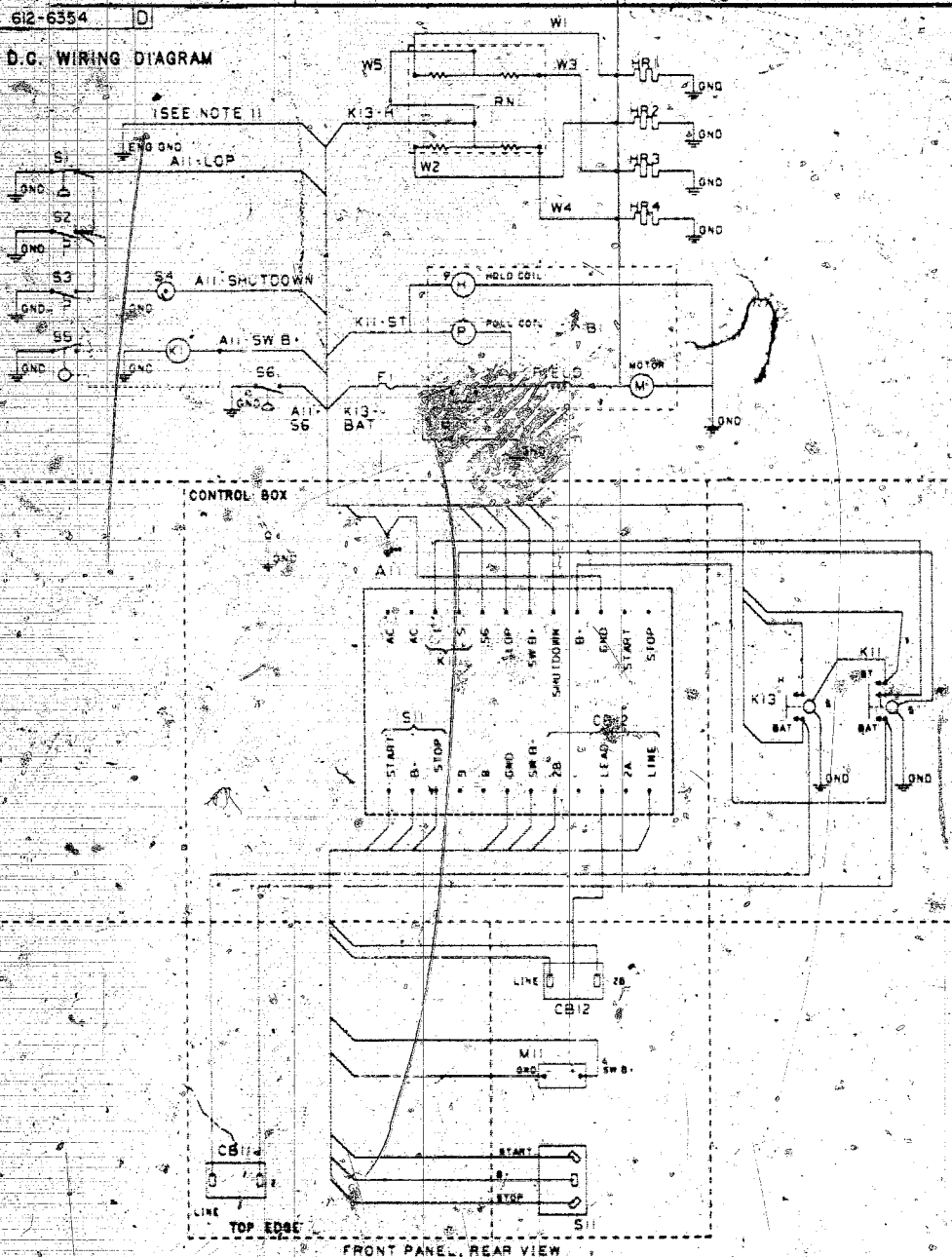
CHKD: J. J. JONES

APPD: J. J. JONES

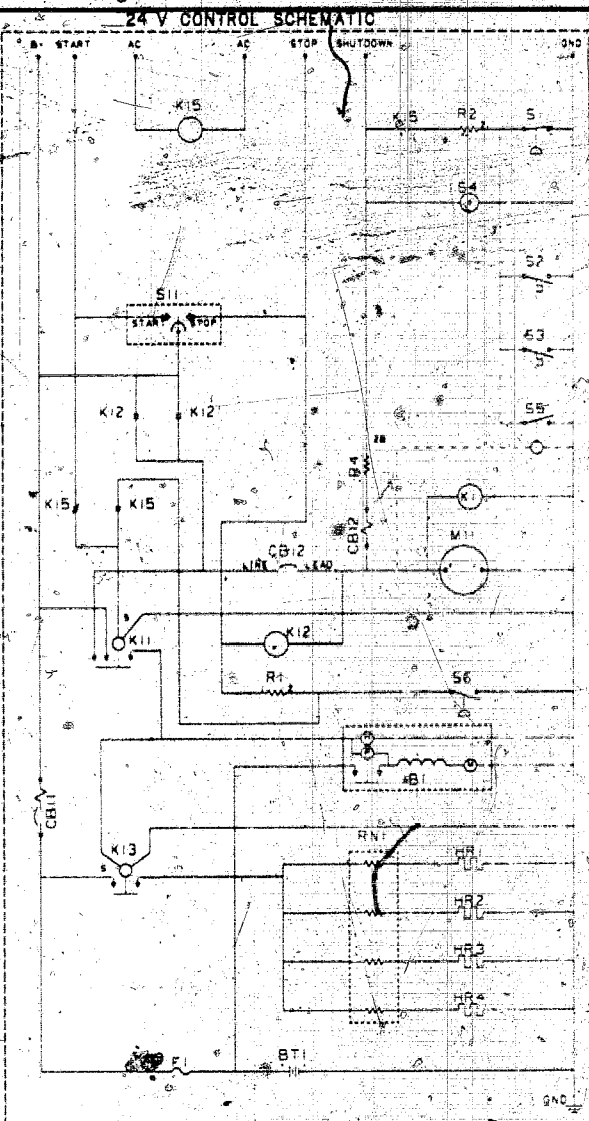
CONTROL GEN SET DC 32V

612-6257

D.C. WIRING DIAGRAM



24 V CONTROL SCHEMATIC

[illegible]

1. CONNECT END LEADS TO WHEN USING BRACKET ON A LINE.
2. USES OTHERS TO IDENTIFY COMPONENTS ARE SWAY AND LEAD POSITION.
3. DASHED LINES TO CONNECT WHEN USED.
4. USE ONE WASH OR LEAD LINE TO ADJUST TO THE LINE.
5. INSTANT INSULATION RINGS PLATE CONCEPTS WITH LARGE OBJECTS.

GROUP PAGE	SHEET NO.	MODEL NO.	Omnicon	DATE OF PURCHASE
PAGE NO. <i>WAF</i>	-0-	STD	TITLE CONTROL GEN SET DC (24V)	DATE OF PURCHASE
PROD CAT		MOL	Serial No. 62-6354	BY

D.C. WIRING DIAGRAM

SEE NOTE 1

K13 BAT

M12 S

M13 S

K16 B

JA BOP

STOP SHUTDOWN

SW B

RED A

RED A

RED A

RED A

RED A

RED A

RED A

RED A

RED A

RED A

RED A

RED A

RED A

RED A

RED A

RED A

RED A

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RED A

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RED A

RED A

12V CONTROL SCHEMATIC

ISTART AC

AC

STOP SHUTDOWN

GND

K15

K15

K15

K15

K15

K15

K15

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K15

1. CONNECT GND LEAD TO LOWER BOLT OF LIFTING BRACKET ON GLOW PLUG SIDE. (LINE ONE, REAR COIL, WASHER UNDER TERMINAL)
2. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN DE ENERGIZED POSITION
3. DASHED LINES INDICATE CONNECTIONS WHEN USED
4. USE WASHER ON EACH GROUND STUD AGAINST CONTROL BOX BOTTOM
5. INSTALL INSULATION RINGS ON JOI JOE PLATE CONCENTRIC WITH LARGE CENTER HOLE

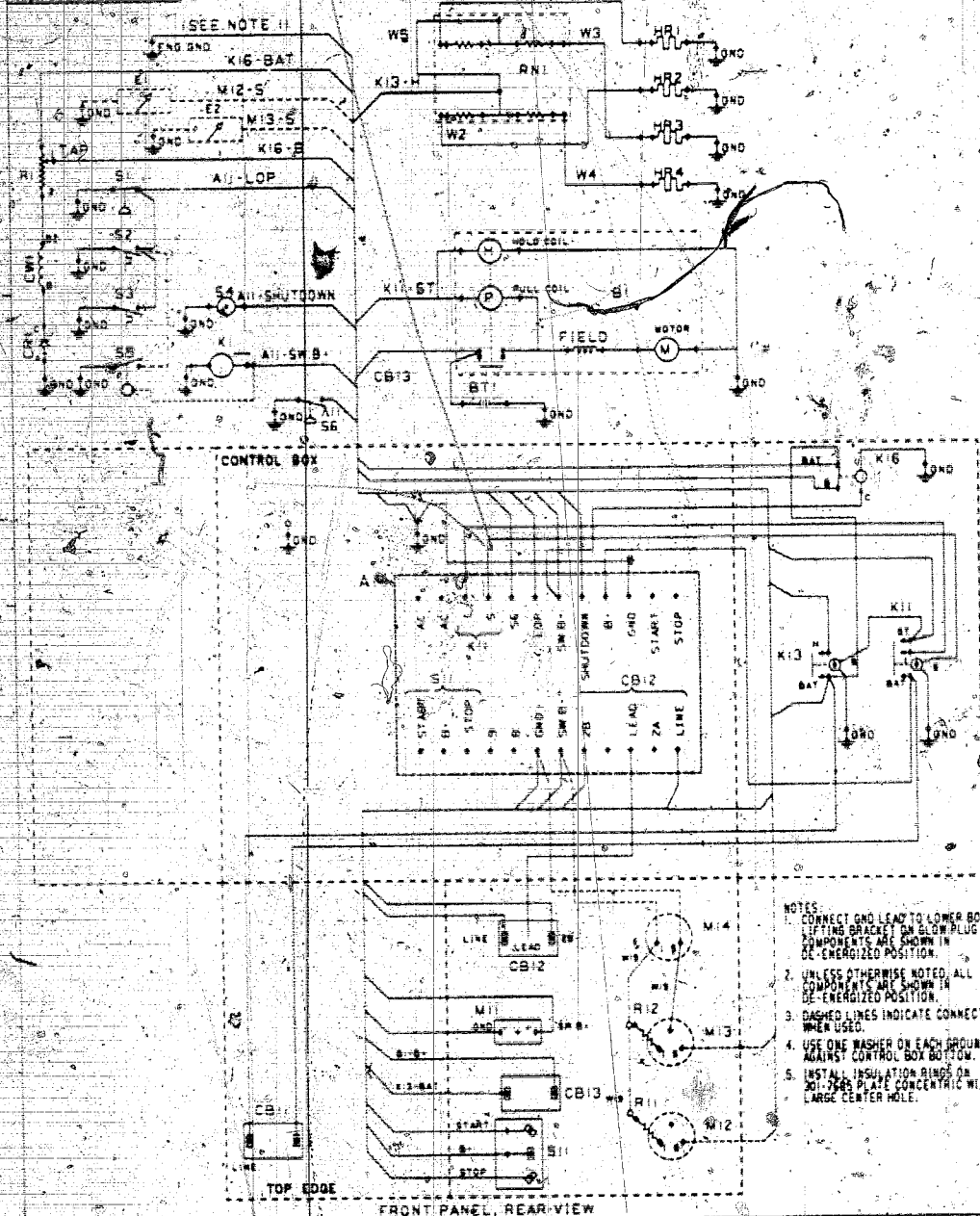
CADD SYSTEM DWG

DATE	BY	CHKD	APP'D	REV	DESCRIPTION
01-01-80	WMH			01	STD W/GAUGES
02-01-80	WMH			02	MDL 4

Onan	CONTROL - GEN SET DC 12V
167-0000	167-0000

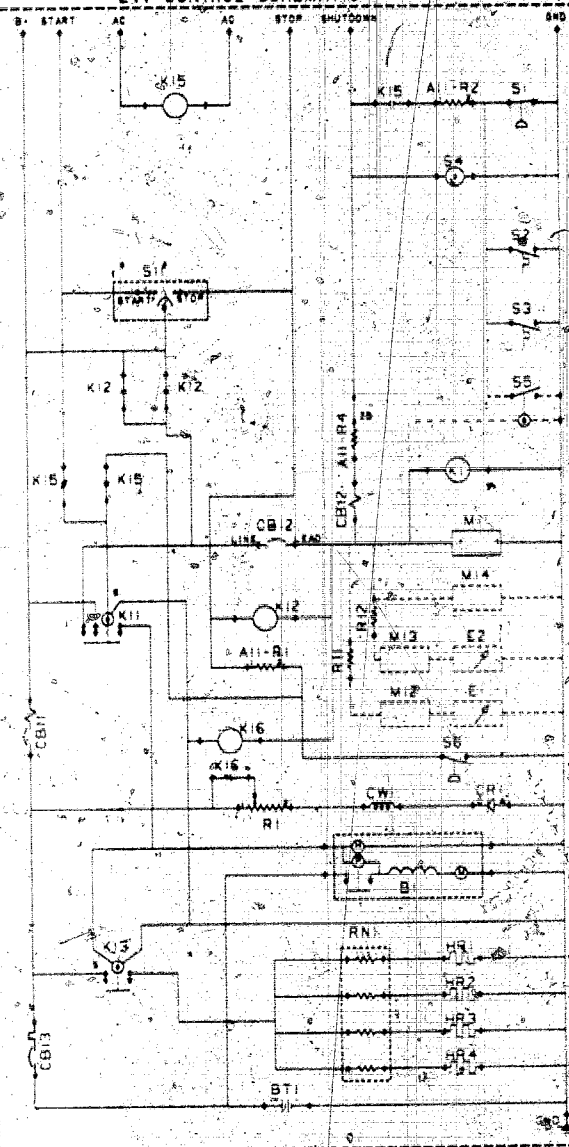
REV	DES	PART NO	QTY	DESCRIPTION
01				STARTER & SOLENOID ENGINE
02				BATTERY
03				HEATER BLOW PLUG
04				RELAY
05				RELAY
06				RELAY
07				RELAY
08				RELAY
09				RELAY
10				RELAY
11				RELAY
12				RELAY
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612-6374 D.C. WIRING DIAGRAM



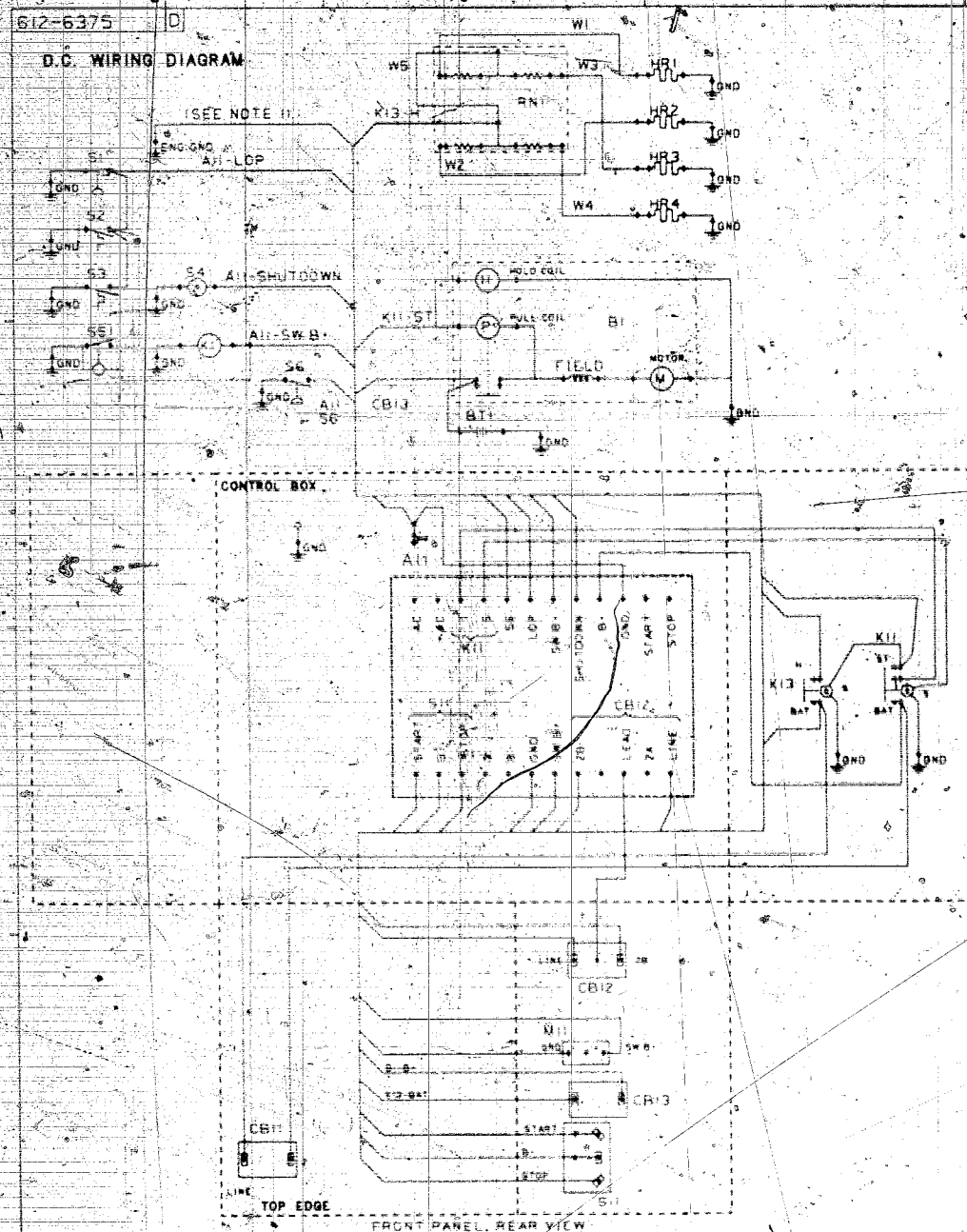
- NOTES:
1. CONNECT GND LEAD TO LOWER BOLT OF LIFTING BRACKET ON GLOW PLUG SIDE. COMPONENTS ARE SHOWN IN DE-ENERGIZED POSITION.
 2. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN DE-ENERGIZED POSITION.
 3. DASHED LINES INDICATE CONNECTIONS WHEN COILS.
 4. USE ONE WASHER ON EACH GROUND STUD MOUNTING CONTROL BOX BOTTOM.
 5. INSTALL INSULATION RINGS ON 20-240V PLATE CONCENTRIC WITH LARGE CENTER HOLE.

24V CONTROL SCHEMATIC



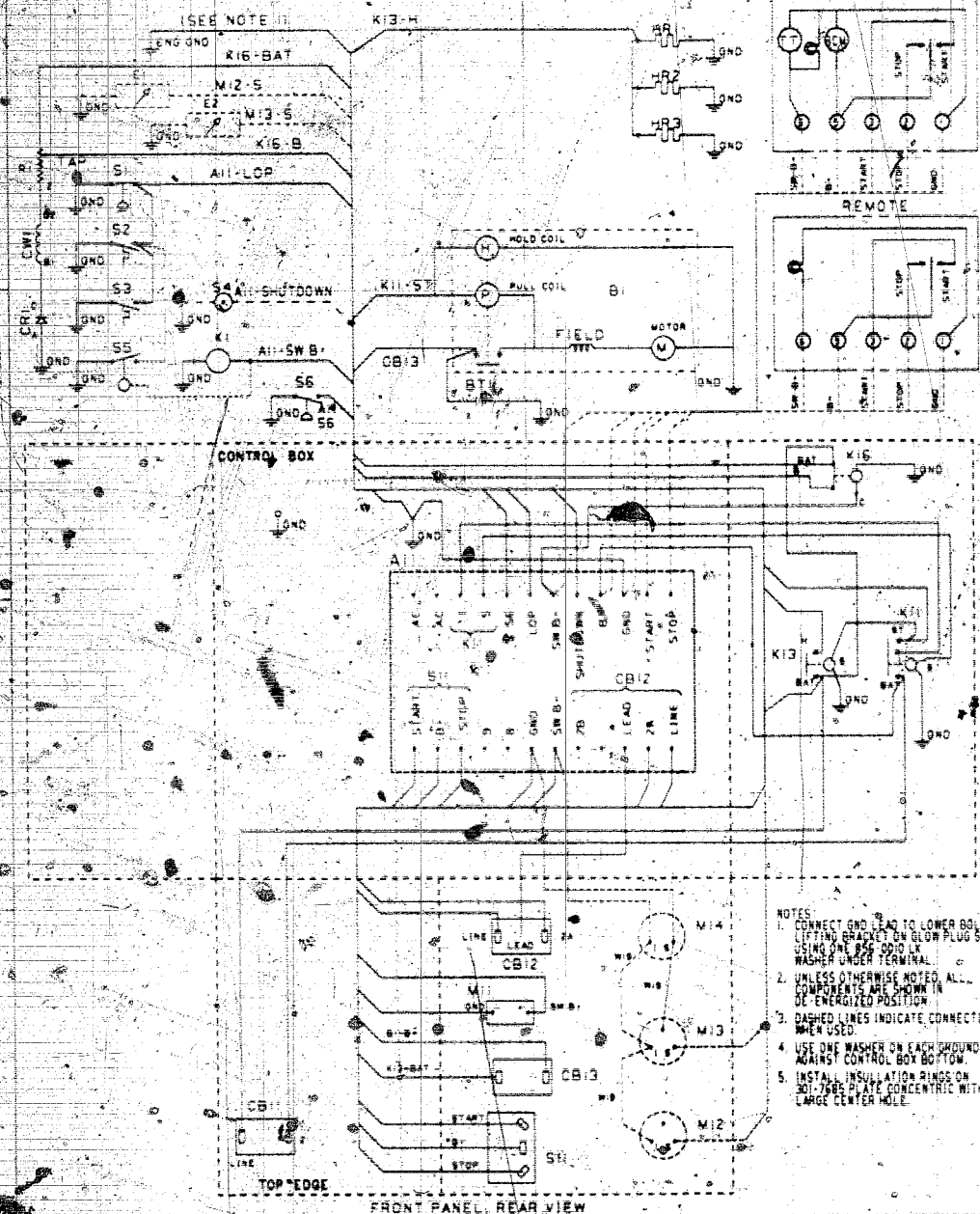
612-6375

D.C. WIRING DIAGRAM



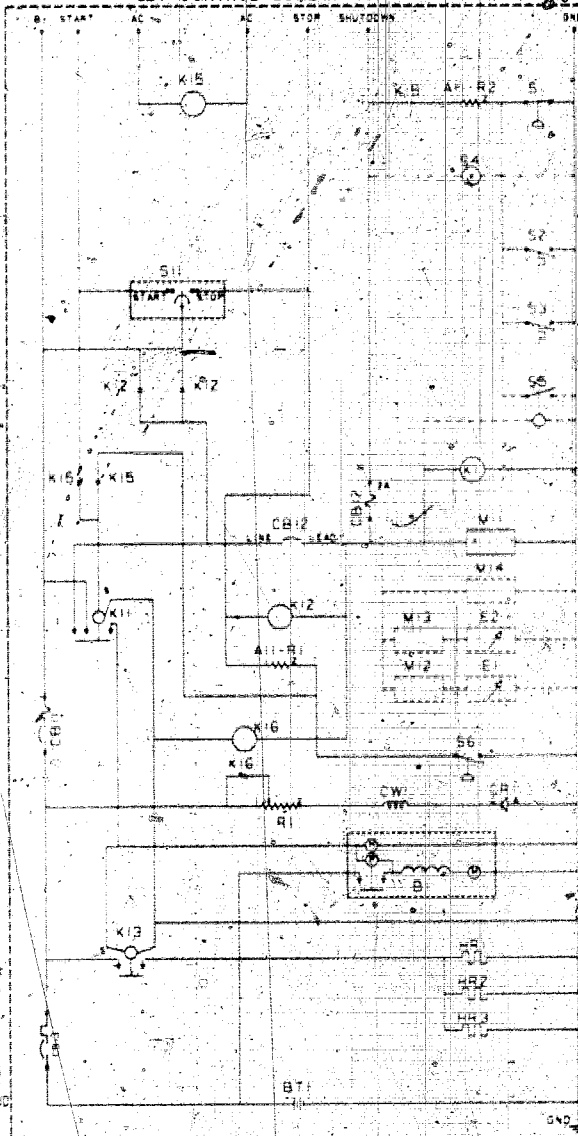
612-6396

D.C. WIRING DIAGRAM



- NOTES
1. CONNECT GND LEAD TO LOWER BOLT OF LIFTING BRACKET ON GLOW PLUG SIDE. USE ONE WASHER ON EACH GROUND STUD AGAINST CONTROL BOX BOTTOM.
 2. UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN DE ENERGIZED POSITION.
 3. DASHED LINES INDICATE CONNECTIONS WHEN USED.
 4. USE ONE WASHER ON EACH GROUND STUD AGAINST CONTROL BOX BOTTOM.
 5. INSTALL INSULATION RINGS ON 301-7688 PLATE CONCENTRIC WITH LARGE CENTER HOLE.

12V CONTROL SCHEMATIC



CADD SYSTEM DWG

DATE	10-1-78	BY	WJH	CHKD	WJH
REV	01	STD			
REV	02	W/GAUGES			
REV	03	W/WH			
REV	04				
REV	05				
REV	06				
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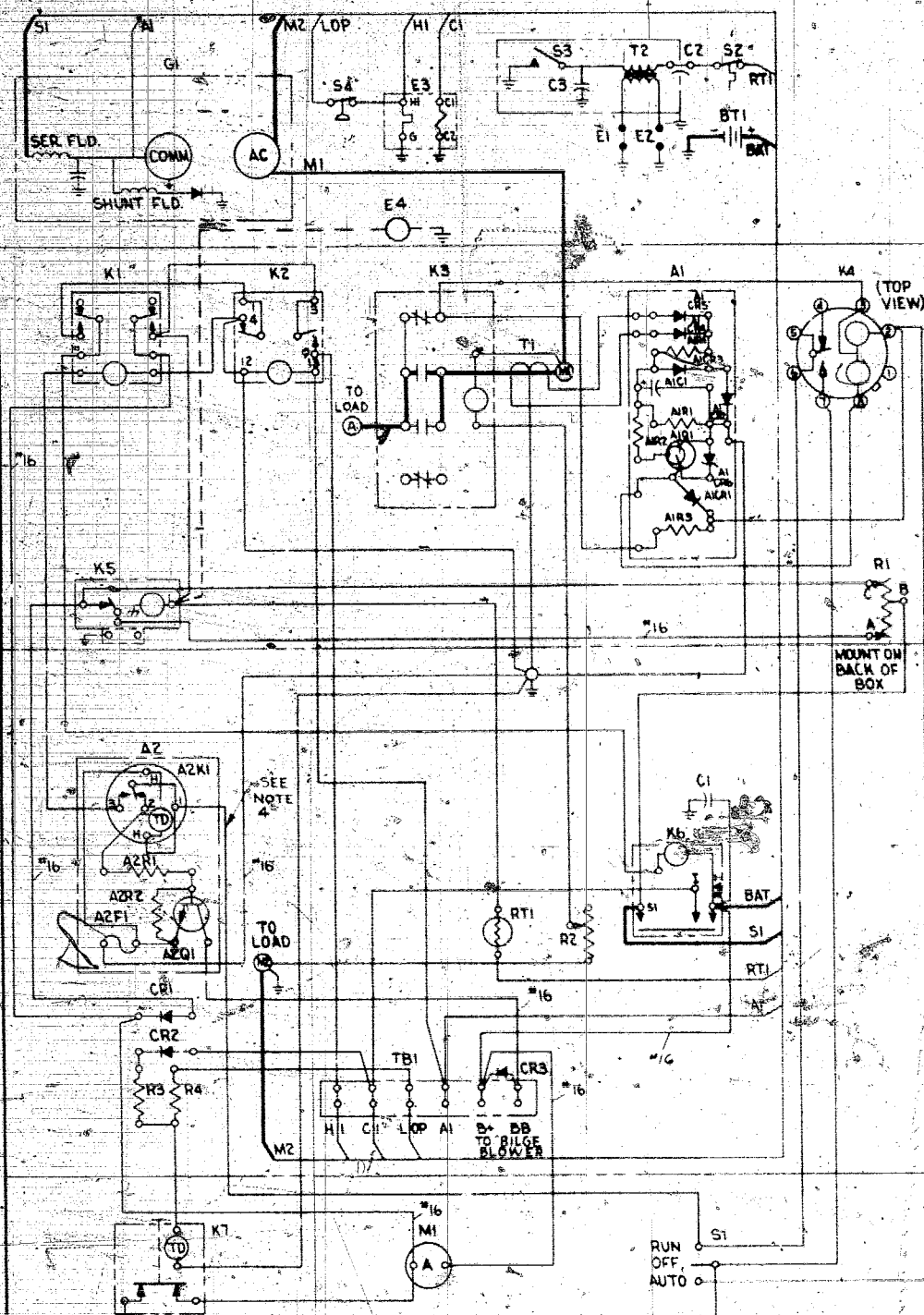
Onn

CONTROL GEN SET DC (12V)

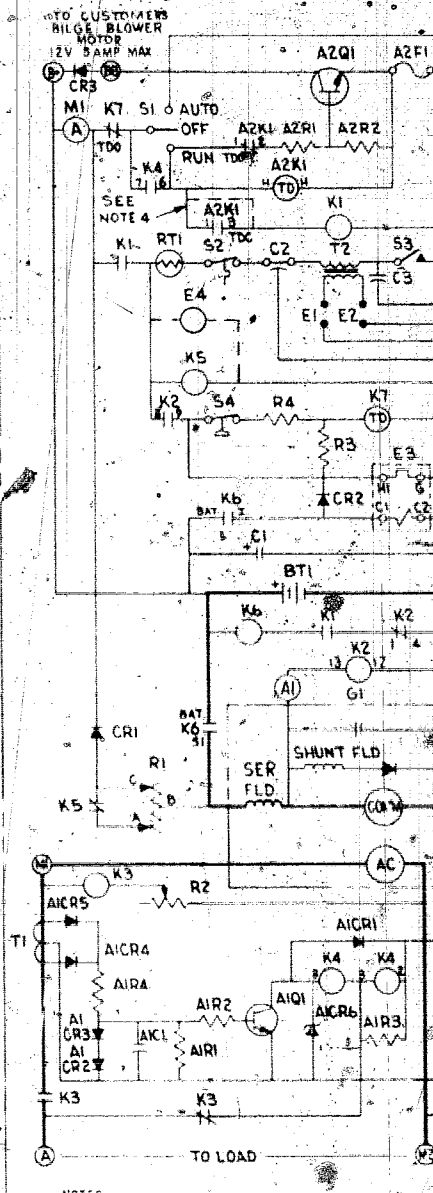
612-6396

613C1

WIRING DIAGRAM



SCHEMATIC



NOTES

1. MOUNT 337A56 GROUND STRAP UNDER HEAD OF GROUNDING SCREW ON UNDER SIDE OF CHASSIS FOR FUTURE CONNECTION TO GENERATOR FRAME
2. MOUNT K1 & K2 WITH CONTACT TERMINALS DOWN
3. TO AVOID CONTACT BETWEEN COVER AND LEAD TERMINATIONS ON CONTACTOR ROUTE ALL LEADS DOWN OR OUT TO THE SIDE OF CONTACTOR
4. TO DISABLE BILGE BLOWER CONTROL AND ELIMINATE TIME DELAY ON START MOVE THIS LEAD FROM A2K1 TERMINAL 1 TO A2K1 TERMINAL 3

NOTE

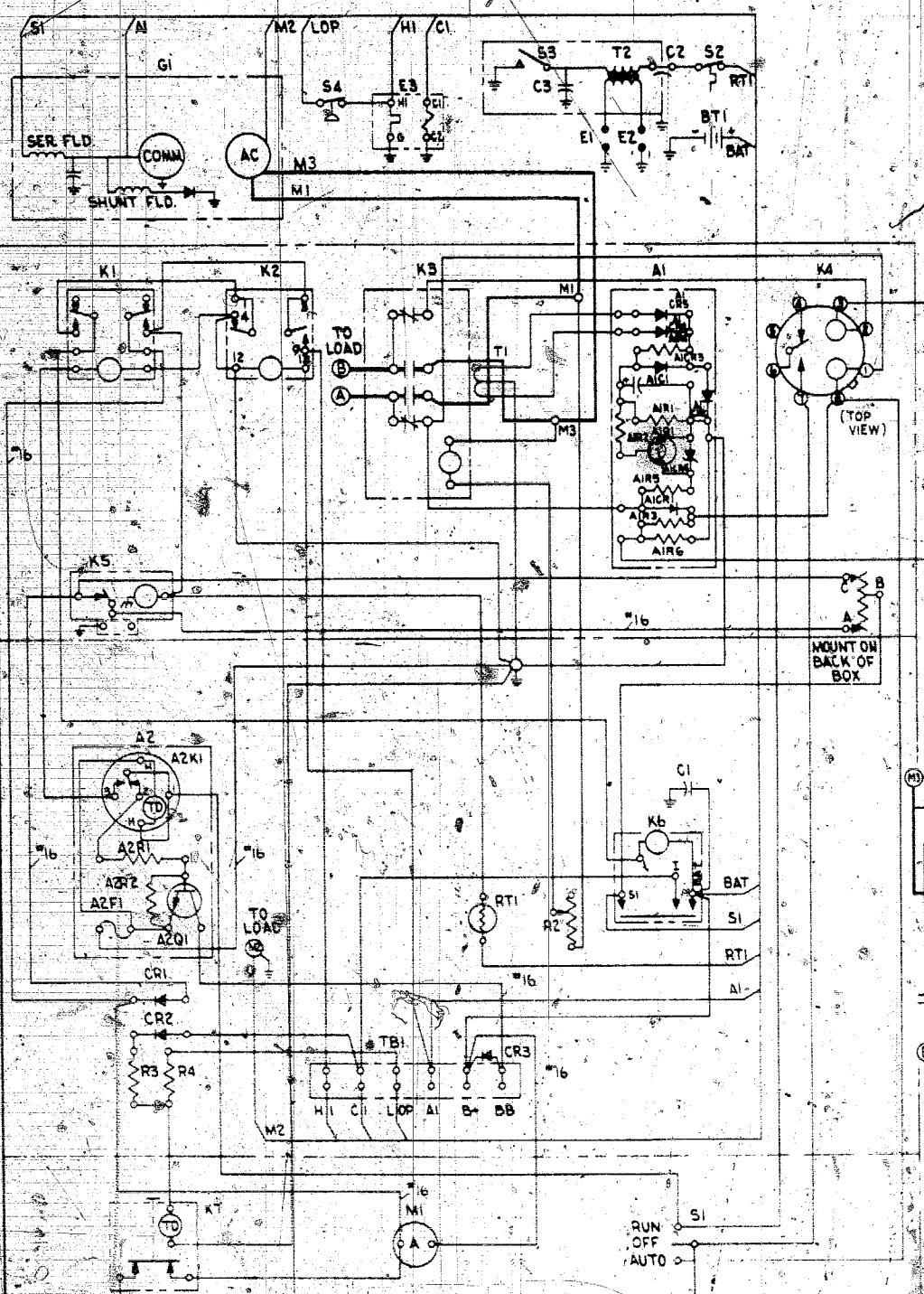
UNLESS OTHERWISE NOTED,
ALL COMPONENTS ARE SHOWN IN
THE DE ENERGIZED POSITION

REF. DES.	PART NO.	QTY.	PARTS LIST	DESCRIPTION
A1	300B573	1	AMPLIFIER ASSY - LOAD SENSOR	
	332A932	1	BOARD - INSULATING	
A2	300B567	1	ASSY - BILGE BLOWER CONTROL	
	337A1179	3	SPACER	
C1	312A57	1	CAPACITOR, 1.0 MFD.	
CR1 2	305A235	2	DIODE - REVERSE CURRENT	
	303A29	1	HEAT SINK - 2 DIODE	
CR3	357A4	1	DIODE	
K1	307A981	1	RELAY - START STOP	
	307B642	1	RELAY - START DISCONNECT	
K3	307C665	1	CONTACTOR	
	307A685	2	JUMPER	
	332-142	2	TERMINAL	
K4	98A2045	1	LABEL - CAUTION	
	307A62	1	RELAY - START RUN	
	337P321	1	SOCKET	
K5	305B383	1	RELAY - 2 STEP CHARGE REG.	
K6	307B845	1	RELAY - START SOLENOID	
K7	302B104	1	RELAY - EMERGENCY	
M1	302A50	1	AMMETER - CHARGE 10-0-10	
R1	304A483	1	RESISTOR - HIGH, LOW CHARGE	
	301A2058	1	SPRINT - RESISTOR MTG	
R2	304A483	1	RESISTOR 300 OHM - 25 W	
R3	304A483	1	RESISTOR 300 OHM - 10 W	
R4	304A483	1	RESISTOR 300 OHM - 10 W	
R11	304A60	1	RESISTOR HYTENC 1/2 72 OHM 25 W	
S1	308P138	1	SWITCH - SELECTOR	
T1	319A241	1	TRANSFORMER ASSY - CURRENT	
YB1	332A689	1	BLOCK TERMINAL	
	301D288B	1	CHASSIS - CONTROL BDX	
	301D288B	1	PANEL - CONTROL BOX	
	301C288B	1	COVER - CONTROL BOX	
	301C288B	1	PLATE - CONTROL BOX MTS	
	301B2532	1	BRACKET - MTG/GEN	
	402A354	4	MOUNT - SHOCK	
	407P331	2	FOOT - PRESS ON MTS	
	408A318	1	HANDLE	
	332-142	2	TERMINAL GNF	
	337A56	1	GROUND STRAP	
	518-56	2	SCREW - WING 1/8-32 x 1 1/2 LG	
	870-129	2	NUT - NYLON	
	508P21	1	GROMMET	
	98B1955	1	SILKSCREEN	
	98A1986	1	SILKSCREEN - INSTRUCTION	
	98A2058	1	SILKSCREEN - SCHEMATIC	
	98B2011	1	SILKSCREEN - CHASSIS	
	* 334A1654 12 FT. WIRE - ELECTRICAL 20 AWG			
	PARTS LIST (LONG QTY)			
B1	1	BATTERY 12V		
C2	1	CAPACITOR - FEED THRU		
C3	1	CAPACITOR - IGNITION POINTS		
E1 E2	2	SPARK PLUG		
E3	1	CHOKE - ENGINE		
G1	1	GENERATOR		
S2	1	SWITCH - HIGHWATER TEMP		
S3	1	SWITCH - IGNITION POINTS		
S4	1	SWITCH - LOW OIL PRESS		
T2	1	COIL - IGNITION		
E4	1	PUMP - FUEL (WHEN USED)		
	D. ADDED CASH N3			
	C. ADDED E4			
	B. ADDED 334A1654 WIRE			
	A. WAS 30 B2871 RES 300 OHM 25 W			
	SUPERSEDES 613C1 DATED 3-23-67			
	ON			
	DIVISION OF STEELCASE, CHICAGO, ILL.			
	MCCX-4F51A/6704A			
	MCCX-4F51A/IC			
	120 V. 50-60 CY			
	WIRING SCHEMATIC DIAGRAM			
	ENGINE GEN. AUTOMATIC CONTROL			

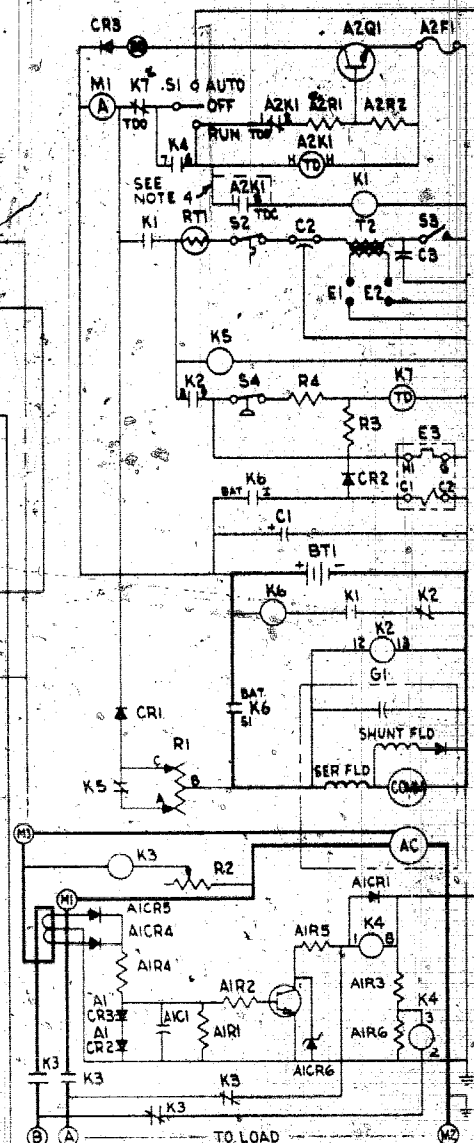
613C1

613C3

WIRING DIAGRAM



SCHEMATIC



NOTES

1. MOUNT 337A56 GROUND STRAP UNDER HEAD OF GROUNDING SCREEN ON UNDER SIDE OF CHASSIS FOR FUTURE CONNECTION TO GENERATOR FRAME
2. MOUNT K1 & K2 WITH CONTACT TERMINALS DOWN
3. TO 4VOLT CONTACT BETWEEN COVER AND LEAD TERMINATIONS ON CONTACTOR. ROUTE ALL LEADS DOWN OR OUT TO THE SIDE OF CONTACTOR
4. TO DISABLE BILGE BLOWER CONTROL AND ELIMINATE TIME DELAY ON START MOVE THIS LEAD FROM AZK1 TERMINAL 1 TO AZK1 TERMINAL 3

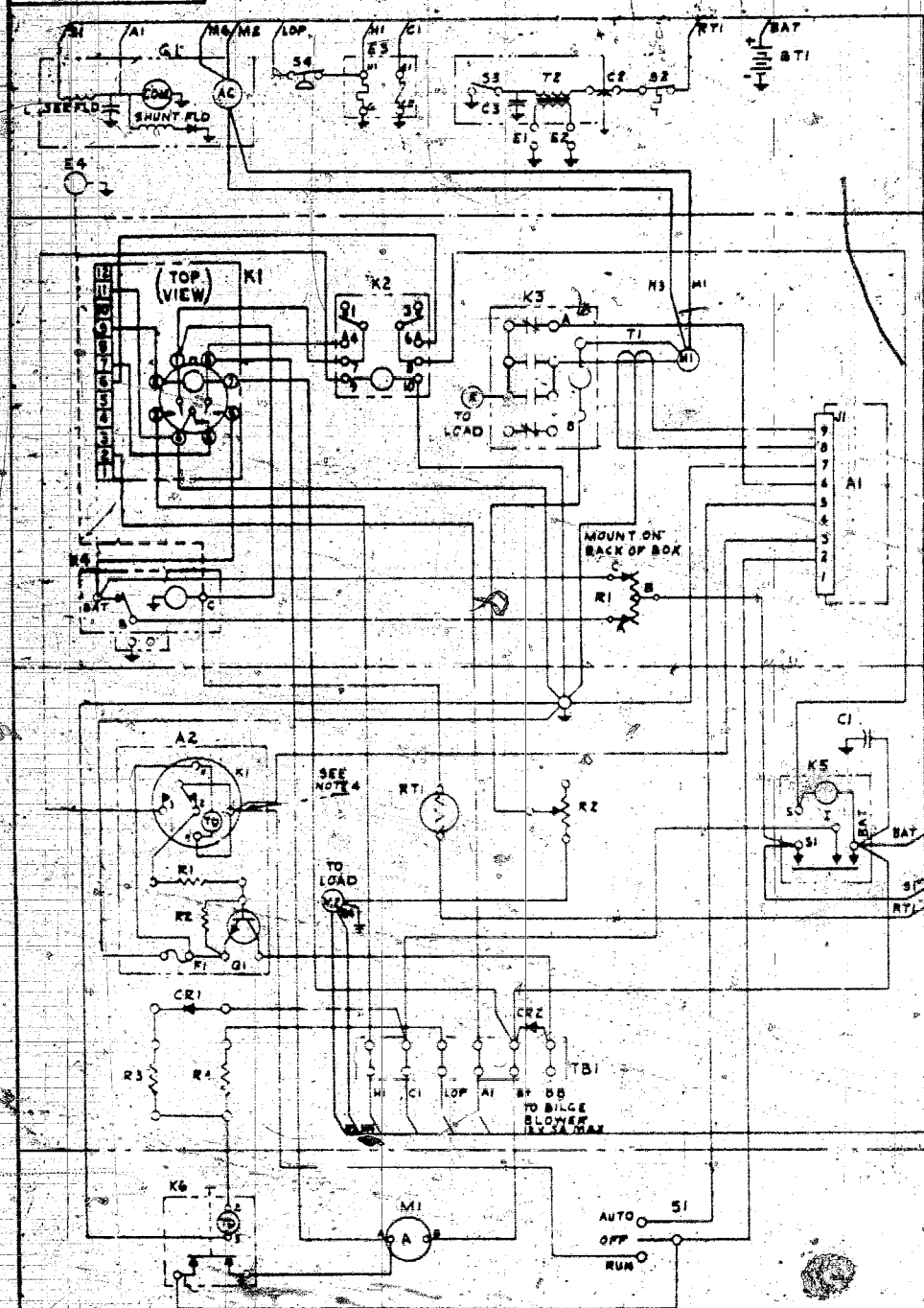
NOTE
UNLESS OTHERWISE NOTED
COMPONENTS ARE SHOWN IN
DE-ENERGIZED POSITION

REF. DES.	PART NO.	QTY.	(R BULK)	DESCRIPTION
A1	3008875	1		AMPLIFIER RELAY - LOAD ARMOR
A2	332A832	1		BOARD - INSULATING
A3	3008887	1		ARMY - BILGE BLOWER CONTROL
A4	332A1178	2		SPACER
C1	312A57	1		CAPACITOR 1.0 MFD
CR1	208A235	2		DIODE - REVERSE CURRENT
A5	383A28	1		HEAT SINK - 2 HIGH
CR3	357A4	1		DIODE
K1	307A981	1		RELAY - START STOP
K2	3078842	1		RELAY - START DISCONNECT
K3	307C886	1		CONTACTOR
	160-144	2		STRAP
	332-517	4		TERMINAL
	98A2045	1		LABEL - CAUTION
K4	307A856	1		RELAY - START RUN
	323P321	1		SOCKET
K5	3058383	1		RELAY - 2 STEP CHARGE RELAY
K6	3078645	1		RELAY - START SOLENOID
K7	320B184	1		RELAY - EMERGENCY
M1	302A58	1		AMMETER - CHARGE 10-0-10
R1	304A483	1		RESISTOR - HIGH LOW CHARGE
	301B3056	1		GROUND - RESISTOR
R2	304A191	1		RESISTOR 750-OHM 25 W
R3	304A182	1		RESISTOR 3-OHM 10 W
R4	304A217	1		RESISTOR 1-OHM 10 W
RT1	304A80	1		RESISTOR HYTENG 172-OHM 25 W
S1	308P138	1		SWITCH - SELECTOR
T1	315A791	1		TRANSFORMER ASSY - CURRENT
TB1	332A899	1		BLOCK TERMINAL
	301D2888	1		CHASSIS - CONTROL BOX
	301B2888	1		PANEL - CONTROL BOX
	301C2888	1		COVER - CONTROL BOX
	301C2887	1		PLATE - CONTROL BOX MTG
	301B532	1		BRACKET - MTG (GEN)
	402A354	4		MOUNT - SHOCK
	402P331	2		FOOT - PRESS ON MTG
	408A318	1		HANDLE
	332-517	2		TERMINAL GND
	337A56	1		GROUND STRAP
	518-56	2		SCREW - NING 10-32 X 1/2 LG.
	870-129	2		NUT - NYLON
	508P21	1		GROUND
	98B1955	1		SILKSCREEN
	98A1988	1		SILKSCREEN - INSTRUCTION
	98A2063	1		SILKSCREEN - SCHEMATIC
	98B2011	1		SILKSCREEN - CHASSIS
	* 334A1634	27 FT		WIRE-ELECTRICAL 20 AWG
				PARTS LIST (ENG-GEN)
B11		1		BATTERY 12V
C2		1		CAPACITOR - FEED THRU
C9		1		CAPACITOR - IGNITION POINTS
E1 E2		2		SPARK PLUG
E3		1		CHOKE - ENGINE
G1		1		GENERATOR
S2		1		SWITCH - HIGHWATER TEMP
S3		1		SWITCH - IGNITION POINTS
S4	309B183	1		SWITCH - LOW OIL PRESS.
T2		1		COIL - IGNITION

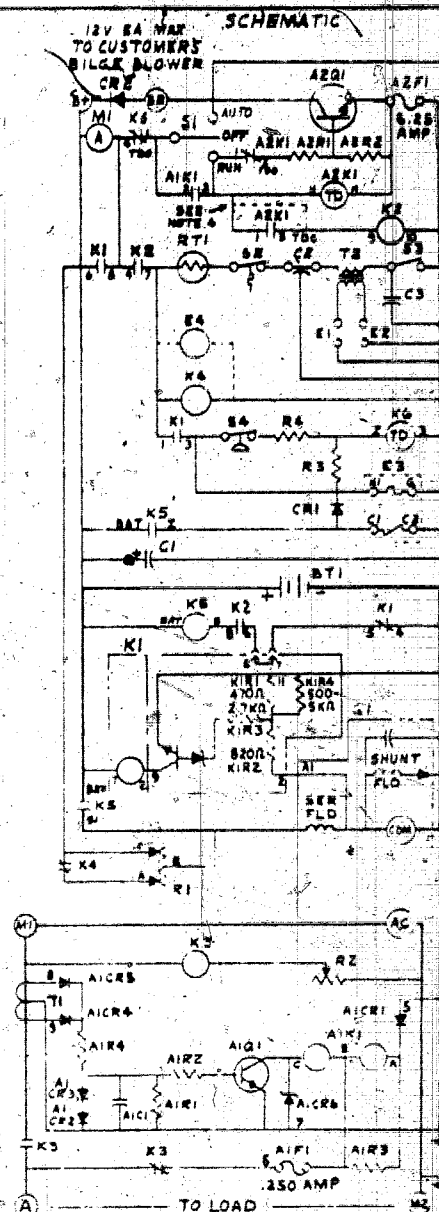
C ADDED DASH NO. 7/23/70
 B ADDED 334A1634 WIRE WJ 2-2-70
 A WAS 301B2871 WJ 10-24-68
 SURDS 613C3 DATED 4-4-67
 DIVISION OF STURGEON GENERAL
 8-16-68 WJ WJ 1/18
 WIRING & SCHEMATIC DIAGRAM
 ENGINE, GEN AUTO CONTROL
 120/240V, 1PH 613C3

613C7

WIRING DIAGRAM



SCHEMATIC

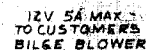


NOTES:

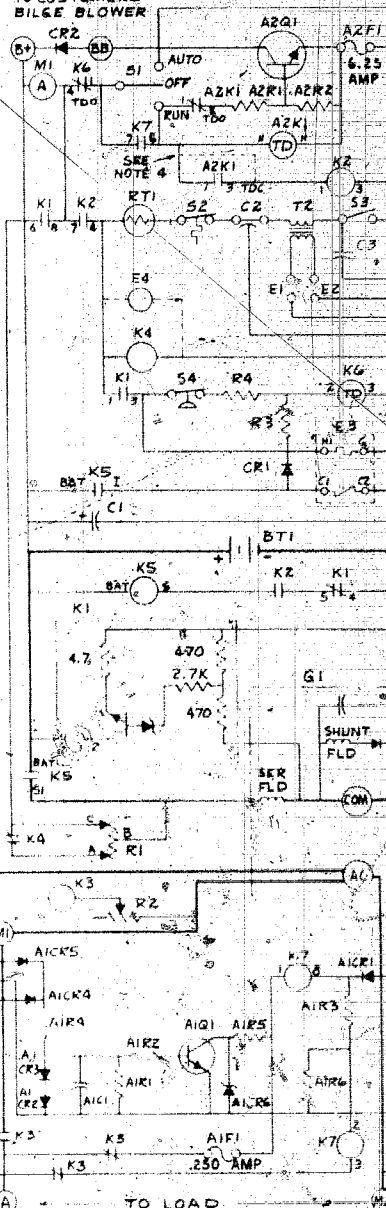
1. MOUNT 337A58 GROUND STRAP UNDER HEAD OF GROUNDING SCREW ON UNDER SIDE OF CHASSIS FOR FUTURE CONNECTION TO GENERATOR FRAME
2. MOUNT K3 WITH CONTACT TERMINALS DOWN
3. TO K4010 CONTACT BETWEEN COVER AND LEAD TERMINATIONS ON CONTACTOR. ROUTE ALL LEADS DOWN ON ONE TO THE SIDE OF CONTACTOR
4. TO DISCARD BILGE BLOWER CONTROL AND ELIMINATE 1/2 SEC DELAY ON START, MOVE THIS LEAD FROM A221 TERMINAL 1 TO A221 TERMINAL 2

PARTS LIST			
REF. DES.	PART NO.	QTY.	DESCRIPTION
A1	3082748	1	CONTROL-LOAD BLOWER
A2	3082748	1	CONTROL-LOAD BLOWER
A3	3082748	1	CONTROL-LOAD BLOWER
A4	3082748	1	CONTROL-LOAD BLOWER
A5	3082748	1	CONTROL-LOAD BLOWER
A6	3082748	1	CONTROL-LOAD BLOWER
A7	3082748	1	CONTROL-LOAD BLOWER
A8	3082748	1	CONTROL-LOAD BLOWER
A9	3082748	1	CONTROL-LOAD BLOWER
A10	3082748	1	CONTROL-LOAD BLOWER
A11	3082748	1	CONTROL-LOAD BLOWER
A12	3082748	1	CONTROL-LOAD BLOWER
A13	3082748	1	CONTROL-LOAD BLOWER
A14	3082748	1	CONTROL-LOAD BLOWER
A15	3082748	1	CONTROL-LOAD BLOWER
A16	3082748	1	CONTROL-LOAD BLOWER
A17	3082748	1	CONTROL-LOAD BLOWER
A18	3082748	1	CONTROL-LOAD BLOWER
A19	3082748	1	CONTROL-LOAD BLOWER
A20	3082748	1	CONTROL-LOAD BLOWER
A21	3082748	1	CONTROL-LOAD BLOWER
A22	3082748	1	CONTROL-LOAD BLOWER
A23	3082748	1	CONTROL-LOAD BLOWER
A24	3082748	1	CONTROL-LOAD BLOWER
A25	3082748	1	CONTROL-LOAD BLOWER
A26	3082748	1	CONTROL-LOAD BLOWER
A27	3082748	1	CONTROL-LOAD BLOWER
A28	3082748	1	CONTROL-LOAD BLOWER
A29	3082748	1	CONTROL-LOAD BLOWER
A30	3082748	1	CONTROL-LOAD BLOWER
A31	3082748	1	CONTROL-LOAD BLOWER
A32	3082748	1	CONTROL-LOAD BLOWER
A33	3082748	1	CONTROL-LOAD BLOWER
A34	3082748	1	CONTROL-LOAD BLOWER
A35	3082748	1	CONTROL-LOAD BLOWER
A36	3082748	1	CONTROL-LOAD BLOWER
A37	3082748	1	CONTROL-LOAD BLOWER
A38	3082748	1	CONTROL-LOAD BLOWER
A39	3082748	1	CONTROL-LOAD BLOWER
A40	3082748	1	CONTROL-LOAD BLOWER
A41	3082748	1	CONTROL-LOAD BLOWER
A42	3082748	1	CONTROL-LOAD BLOWER
A43	3082748	1	CONTROL-LOAD BLOWER
A44	3082748	1	CONTROL-LOAD BLOWER
A45	3082748	1	CONTROL-LOAD BLOWER
A46	3082748	1	CONTROL-LOAD BLOWER
A47	3082748	1	CONTROL-LOAD BLOWER
A48	3082748	1	CONTROL-LOAD BLOWER
A49	3082748	1	CONTROL-LOAD BLOWER
A50	3082748	1	CONTROL-LOAD BLOWER
A51	3082748	1	CONTROL-LOAD BLOWER
A52	3082748	1	CONTROL-LOAD BLOWER
A53	3082748	1	CONTROL-LOAD BLOWER
A54	3082748	1	CONTROL-LOAD BLOWER
A55	3082748	1	CONTROL-LOAD BLOWER
A56	3082748	1	CONTROL-LOAD BLOWER
A57	3082748	1	CONTROL-LOAD BLOWER
A58	3082748	1	CONTROL-LOAD BLOWER
A59	3082748	1	CONTROL-LOAD BLOWER
A60	3082748	1	CONTROL-LOAD BLOWER
A61	3082748	1	CONTROL-LOAD BLOWER
A62	3082748	1	CONTROL-LOAD BLOWER
A63	3082748	1	CONTROL-LOAD BLOWER
A64	3082748	1	CONTROL-LOAD BLOWER
A65	3082748	1	CONTROL-LOAD BLOWER
A66	3082748	1	CONTROL-LOAD BLOWER
A67	3082748	1	CONTROL-LOAD BLOWER
A68	3082748	1	CONTROL-LOAD BLOWER
A69	3082748	1	CONTROL-LOAD BLOWER
A70	3082748	1	CONTROL-LOAD BLOWER
A71	3082748	1	CONTROL-LOAD BLOWER
A72	3082748	1	CONTROL-LOAD BLOWER
A73	3082748	1	CONTROL-LOAD BLOWER
A74	3082748	1	CONTROL-LOAD BLOWER
A75	3082748	1	CONTROL-LOAD BLOWER
A76	3082748	1	CONTROL-LOAD BLOWER
A77	3082748	1	CONTROL-LOAD BLOWER
A78	3082748	1	CONTROL-LOAD BLOWER
A79	3082748	1	CONTROL-LOAD BLOWER
A80	3082748	1	CONTROL-LOAD BLOWER
A81	3082748	1	CONTROL-LOAD BLOWER
A82	3082748	1	CONTROL-LOAD BLOWER
A83	3082748	1	CONTROL-LOAD BLOWER
A84	3082748	1	CONTROL-LOAD BLOWER
A85	3082748	1	CONTROL-LOAD BLOWER
A86	3082748	1	CONTROL-LOAD BLOWER
A87	3082748	1	CONTROL-LOAD BLOWER
A88	3082748	1	CONTROL-LOAD BLOWER
A89	3082748	1	CONTROL-LOAD BLOWER
A90	3082748	1	CONTROL-LOAD BLOWER
A91	3082748	1	CONTROL-LOAD BLOWER
A92	3082748	1	CONTROL-LOAD BLOWER
A93	3082748	1	CONTROL-LOAD BLOWER
A94	3082748	1	CONTROL-LOAD BLOWER
A95	3082748	1	CONTROL-LOAD BLOWER
A96	3082748	1	CONTROL-LOAD BLOWER
A97	3082748	1	CONTROL-LOAD BLOWER
A98	3082748	1	CONTROL-LOAD BLOWER
A99	3082748	1	CONTROL-LOAD BLOWER
A100	3082748	1	CONTROL-LOAD BLOWER

WIRING DIAGRAM



SCHEMATIC



PARTS LIST

REF. DES.	PART NO.	QTY.	DESCRIPTION
A1	3008747	1	CONTROL-LOAD SENSOR
	301A3280	2	BACKET-MOUNTING
	518A295	2	FASTENER-SNAP IN
A2	3008587	1	ASSY-BLGE BLOWER CONTROL
	332A1179	3	SPACER
C1	312AT55	1	CAPACITOR ASSY 1 0 MFD
C1	305A235	1	DIODE-REVERSE CURRENT
	305A254	1	HEAT SINK
CR2	357A4(REF)	1	DIODE
K1	307B1070	1	RELAY-START DISCONNECT
	300A734	1	AMPLIFIER
K2	307A981	1	RELAY-START STOP
K3	307C666	1	CONTACTOR
	160-144	2	STRAP
	332-517	4	TERMINAL
K4	3050303	1	RELAY-2 STEP CHARGE REG
K5	3078845	1	RELAY-START SOLENOID
K6	300B104	1	RELAY EMERGENCY
K7	307A859	1	RELAY-START RUN
	301A3295	1	BRACKET
M1	302A58	1	AMMETER-CHARGE 10-0-10
R1	304AA483	1	RESISTOR-HIGH LOW CHARGE
	301A3058	1	BRACKET-RESISTOR MTG
R2	304A131	1	RESISTOR-750 OHM 25W
R3	304A192(REF)	1	RESISTOR 3 OHM 10W
R4	304A217(REF)	1	RESISTOR 1 OHM 10W
RT	304A60	2	RESISTOR HYTOMO 1 12 OHM 25W
S1	308P138	1	SWITCH-SELECTOR
T1	315A344	1	TRANSFORMER ASSY-CURRENT
TB1	332A899(REF)	1	TERMINAL BLOCK
W1	330D555	1	WIRING HARNESS
	301Q3287	1	CHASSIS-CONTROL BOX
	301B2886	1	PANEL-CONTROL BOX
	301C2888	1	COVER-CONTROL BOX
	301C2887	1	PLATE-CONTROL BOX MTG
	402A354	4	MOUNT-SHOCK
	402P331	2	FOOT-PRESS ON MTG
	406A318	1	HANDLE
	332-517	2	TERMINAL
	337A56	1	GROUND STRAP
	98B1955	1	SILKSCREEN-INSTRUCTION
	98B2254	1	SILKSCREEN-SCHEMATIC
	98B2011	1	SILKSCREEN-CHASSIS
PARTS LIST (ENG-GEN)			
B11		1	BATTERY 12V
C2		1	CAPACITOR-FEED THRU
C3		1	CAPACITOR-IGNITION POINTS
E1, E2		2	SPARK PLUG
E3		1	CHOKE-ENGINE
G1		1	GENERATOR
S2		1	SWITCH-HIGHWATER TEMP
S3		1	SWITCH-IGNITION POINTS
S4	309B183	1	SWITCH-LOW OIL PRESS
T2		1	COIL-IGNITION
F4		1	PUMP-FUEL (WHEN USED)

PARTS LIST (ENG-GEN)

B11		1	BATTERY 12V
C2		1	CAPACITOR-FEED THRU
C3		1	CAPACITOR-IGNITION POINTS
E1, E2		2	SPARK PLUG
F3		1	CHOKE-ENGINE
G1		1	GENERATOR
S2		1	SWITCH-HIGHWATER TEMP
S3		1	SWITCH-IGNITION POINTS
S4	309B183	1	SWITCH-LOW OIL PRESS
T2		1	COIL-IGNITION
F4		1	PUMP-FUEL (WHEN USED)

NOTES

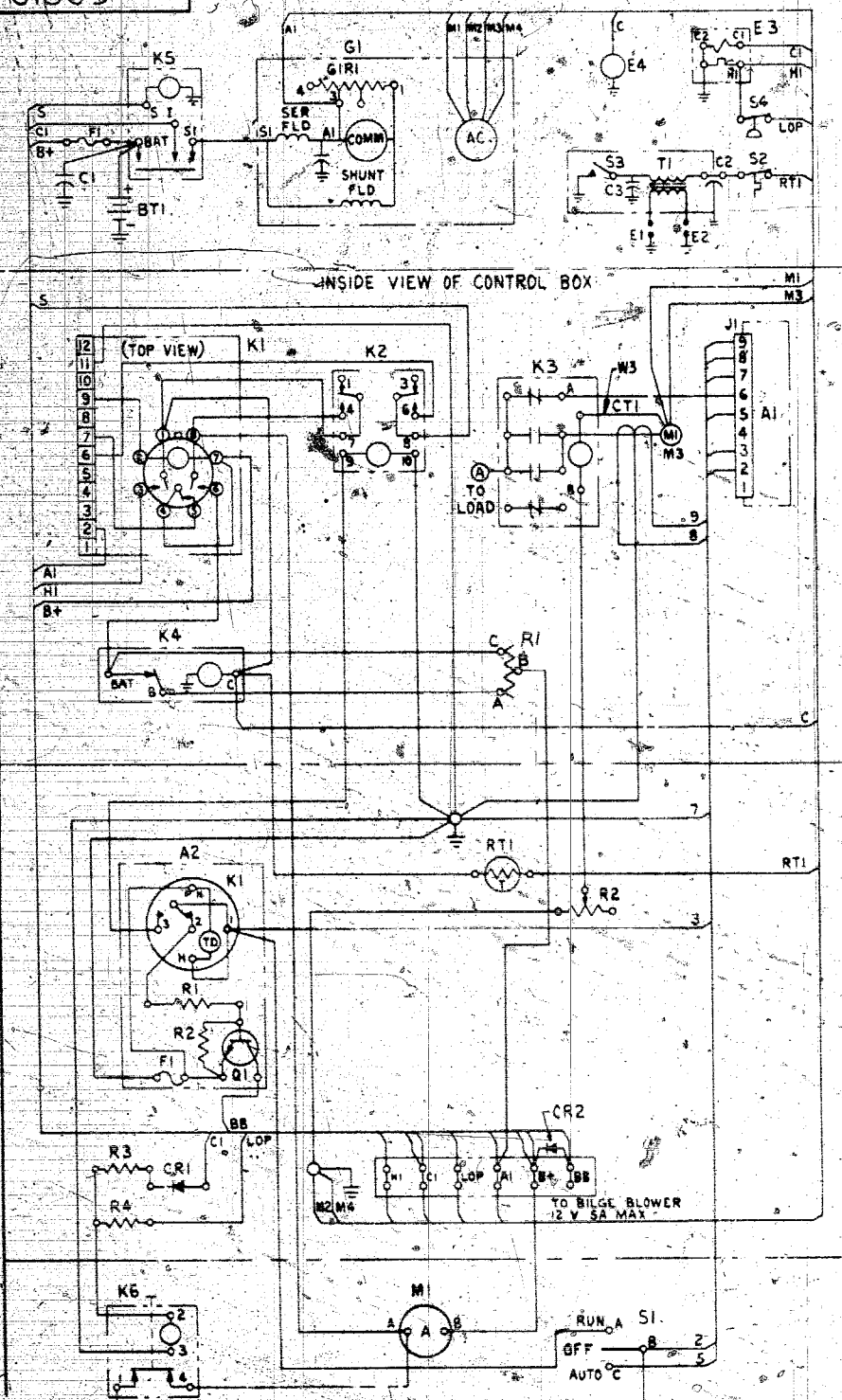
- 1 MOUNT 337A56 GROUND STRAP UNDER HEAD OF GROUNDING SCREW ON UNDER SIDE OF CHASSIS FOR FUTURE CONNECTION TO GENERATOR FRAME
 - 2 MOUNT K3 WITH CONTACT TERMINALS DOWN
 - 3 TO AVOID CONTACT BETWEEN COVER AND LEAD TERMINATIONS ON CONTACTOR ROUTE ALL LEADS DOWN OR OUT TO THE SIDE OF CONTACTOR
 - 4 TO DISABLE BILGE BLOWER CONTROL AND ELIMINATE TIME DELAY ON START, MOVE THIS LEAD FROM A2K1 TERMINAL 1 TO A2K1 TERMINAL 3

5 UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION

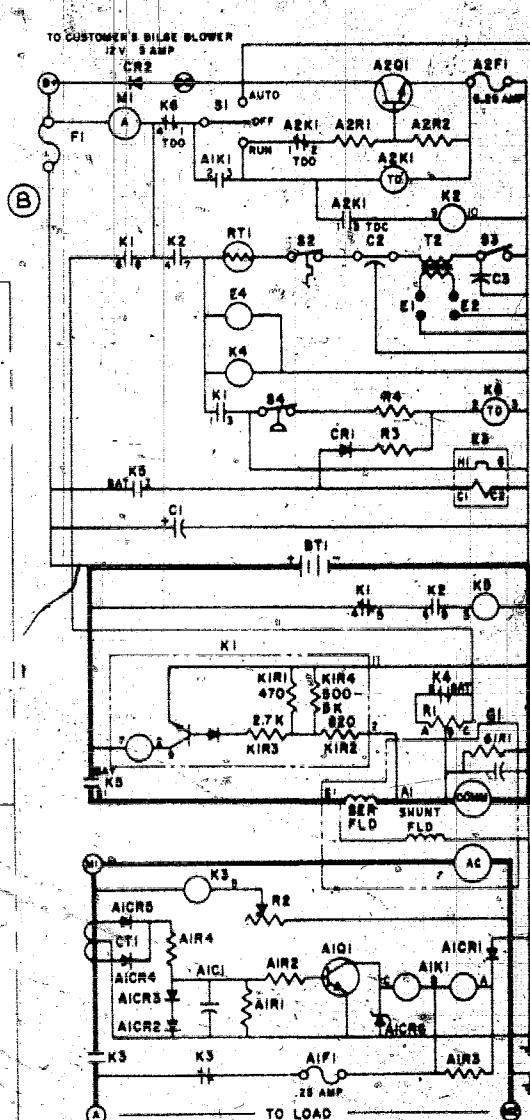
A DELETED 301-2532		10	10-29-75
101	DIVISION	SEE PAGE	DATE
On		DIVISION OF STUDENT-EMPLOYMENT CORPORATION	
		MILWAUKEE, WISCONSIN	
DATE	BY	TIME	DATE
3-23-70	WKR	1:45 PM	J.W.D.
NAME			
WIRING DIAGRAM			
CONTROL-GEN SET-AUTO			
Dwg NO			
613C8			

613C9

WIRING DIAGRAM



SCHEMATIC



NOTES

- *MOUNT 337A58 GROUND STRAP UNDER HEAD OF GROUNDING SCREW ON UNDER SIDE OF CHASSIS TO MTG SCREW OF START SOL
- MOUNT K3 WITH CONTACT TERMINALS DOWN
- TO AVOID CONTACT BETWEEN COVER AND LEAD TERMINATIONS ON CONTACTOR ROUTE ALL LEADS DOWN OR OUT TO THE SIDE OF CONTACTOR

⑥

- UNLESS OTHERWISE NOTED ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION

K1 ADDED 336-2597 W3 5-26-78
J1 ADD REF TO W2 4-27-78

REF. DES.	PART NO.	QTY.	PARTS LIST	DESCRIPTION
A1	300B740	1	CONTROL-LOAD SENSOR	
A2	301A3280	2	BRACKET-MOUNTING	
	518A285	2	FASTENER-SNAP IN	
A2	300B587	1	ASSY-BILGE BLOWER CONTROL	
C1	312A185	3	CAPACITOR	ASSY-1.0 MFD
CR1	305A235	1	DIODE-REVERSE CURRENT	
	305A254	1	HEAT SINK	
CR2	357A4(REF)	1	DIODE	
CT1	315A344	1	TRANSFORMER ASSY-CURRENT	
K1	302B1070	1	RELAY-START DISCONNECT	
	300A734	1	AMPLIFIER	
K2	307A981	1	RELAY-START STOP	
K3	307C885	1	CONTACTOR	
	160A144	1	JUMPER	
	307A983	2	JUMPER	
K4	305B383	1	RELAY-3 STEP CHARGE REG	
K5	307B1188	1	RELAY-START SOLENOID	
K6	302B104	1	RELAY-EMERGENCY	
H1	302A58	1	AMMETER-CHARGE 10-0-10	
R2	304A282	1	RESISTOR 300 OHM 25 W	
R3	304A182(REF)	1	RESISTOR 3 OHM 10 W	
R4	304A217(REF)	1	RESISTOR 1 OHM 10 W	
RT1	304A60	1	RESISTOR HYTHERM 77 OHM 25 W	
S1	308P138	1	SWITCH-SELECTOR	
TR1	337A58(REF)	1	TERMINAL BLOCK	
W1	330B883	1	WIRING HARNESS	
	301A3307	1	SPACER-CONTROL BOX (USED ON K1)	
	301A3308	1	SPRING-CONTROL BOX (USED ON K1)	
R2	330B647(REF)	1	WIRING HARNESS (GEN OUT PUT)	
	301D3588	1	CHASSIS-CONTROL BOX	
	301W2888	1	PANEL-CONTROL BOX	
	301C2888	1	COVER-CONTROL BOX	
	301D3588	1	PLATE-CONTROL BOX MTO	
WB	336A3897	1	LEAD	
	402A394	4	ROUND-SHOCK	
	402P931	1	FOOT-PRESS ON MTG	
	408P318	1	HANDLE	
	332-142	2	TERMINAL END	
	337A58	1	GROUND STRAP	
	8881935	1	SILKSCREEN-INSTRUCTION	
	8882450	1	SILKSCREEN-SCHMATIC	
	88A2520	1	SILKSCREEN-CHASSIS	
	332-142	2	TERMINAL (USE ON K1)	
	88A2581	1	SILKSCREEN-PLATE-CONT BOX MTO	

REF. DES.	PART NO.	QTY.	PARTS LIST	DESCRIPTION
BT1	301A3307	1	BATTERY 12 V	
C2	301A3308	1	CAPACITOR-FEED THRU	
C3	301A3309	1	CAPACITOR-IGNITION POINTS	
E1 E2	301A3310	2	SPARK PLUG	
E3	301A3311	1	CHOKE-ENGINE	
Q1	301A3312	1	GENERATOR	
Q1R1	353-47(REF)	1	RESISTOR-FIXED (10 & 50 W)	
S2	301A3313	1	SWITCH-HIGHWATER TEMP	
S3	301A3314	1	SWITCH-IGNITION POINTS	
S4	309B183(REF)	1	SWITCH-LOW OIL PRESS	
T2	301A3315	1	COIL-IGNITION	
E4	301A3316	1	PUMP-FUEL (WHEN USED)	
F1	321A0226	1	FUSE ASSY	
R1	304A483	1	RESISTOR-HIGH / LOW CHARGE	
	301A3058	1	BRACKET-RESISTOR MTG	

REF. DES.	PART NO.	QTY.	PARTS LIST	DESCRIPTION
H1	336A3897	1	LEAD	
H2	336A3897	1	LEAD	
H3	336A3897	1	LEAD	
H4	336A3897	1	LEAD	
H5	336A3897	1	LEAD	
H6	336A3897	1	LEAD	
H7	336A3897	1	LEAD	
H8	336A3897	1	LEAD	
H9	336A3897	1	LEAD	
H10	336A3897	1	LEAD	

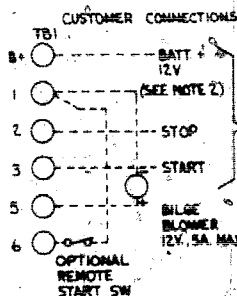
MOCK-1A & 51A/IF
MOCK-1A & 51A/IF
CONTROL-O-MATIC

120V, 1PH,
2-W, 50/60 Hz

3-30-72 FOR 15.1
CONTROL-SEN SET (AUTO)
(WIRING DIAGRAM)

613C9

21



OPERATE WITH NEGATIVE GROUND ONLY
TO START AUTOMATICALLY - APPLY LOAD
LOAD FOR 120V; INCANDESCENT LAMP OF 40W OR HEATER
OF 425W MIN. (35-OHMS)
LOAD FOR 240V; INCANDESCENT LAMP OF 100W OR HEATER
OF 1000W MIN. (37-OHMS)
TO STOP AUTOMATICALLY - REMOVE ALL LOAD



- 1 OPERATE WITH NEGATIVE GROUND ONLY
- 2 IT IS NOT NECESSARY TO CONNECT TERMINAL 1 TO GEN.
BECAUSE GENERATOR AND CONTROL ARE CONNECTED THRU THE AD
GROUND LEAD
- 3 CAUTION: - IF GEN IS CONNECTED TO LOAD TERMINALS
OF CONTACTOR (K2), THE AD OUTPUT VOLTAGE WILL BELOW
THE PROTECTIVE FUSE.
- 4 MOUNT SWITCH WITH FINISHING NUT ON THE FRONT PANEL
5. HYPOT TEST WITH 1500V FOR ONE SECOND, FROM K2-A
TO GEN-TB2 BEFORE R+1 IS CONNECTED TO IT.

UNLESS OTHERWISE NOTED, ALL
COMPONENTS ARE SHOWN IN THE
DE-ENERGIZED POSITION.

617-0149

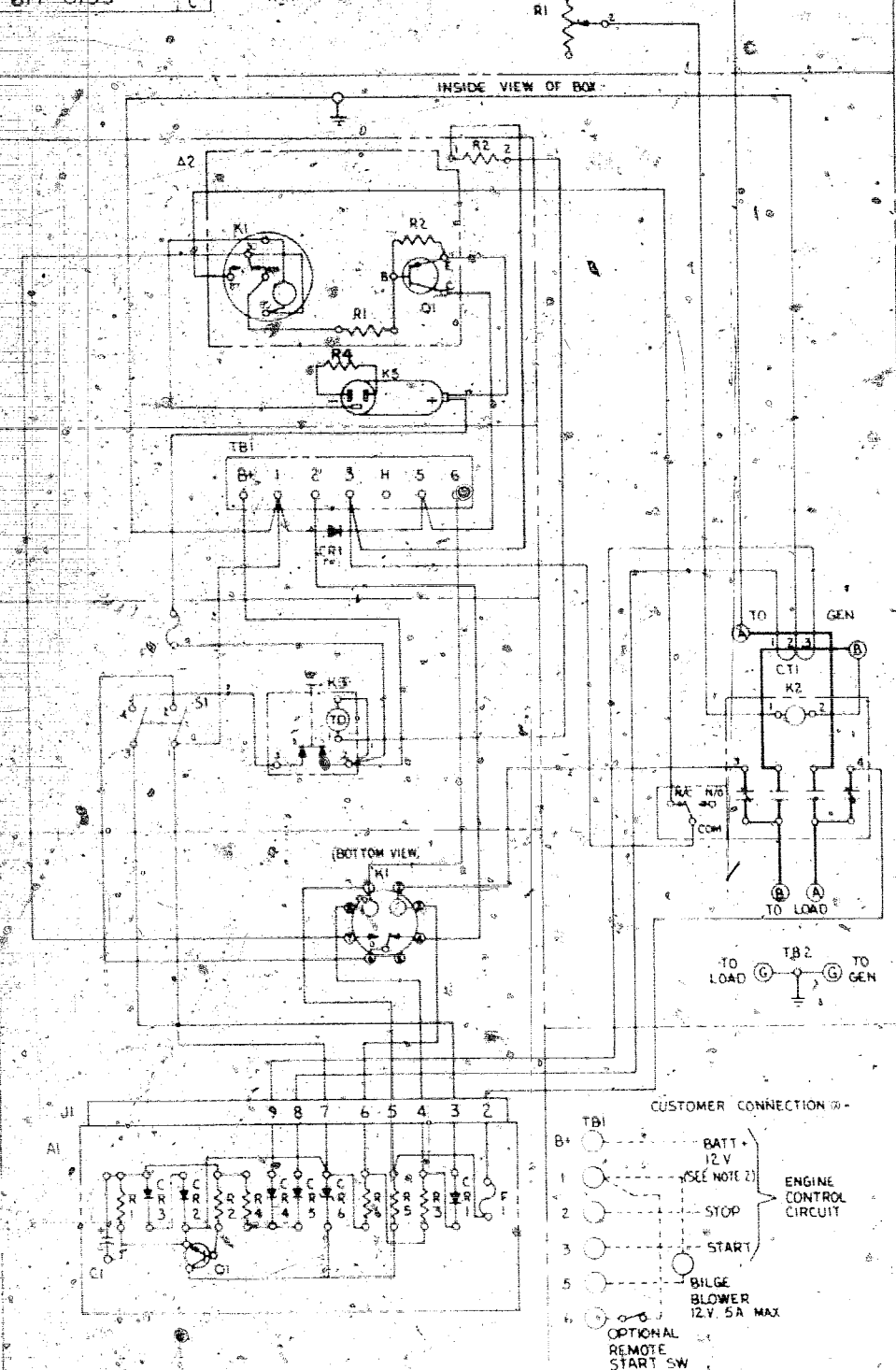
H	ADDED NOTE 5	WJ	2/1	3-8-76
G	ADDED 307-1577/425-1199	WJ	2/1	2-6-76
F	ADDED 858-0593	WJ	2/1	5-27-76
E	PART NO. WAS 99-0966	WJ	2/1	5-27-76
D	ADDED 330-1189	WJ	2/1	4-27-76
C	REVISED NOTE 3	WJ	2/1	4-28-76
B	ADDED CLIP	WJ	2/1	4-28-76
A	ADDED NUMBER TO PARTS LIST	WJ	2/1	4-28-76
157	REVISED	WJ	2/1	4-28-76

Oregon DIVISION OF OREGON CORPORATION
Minneapolis, Minnesota

GROUP NO.		SHEET NO.		MODEL NO.		DATE	12-17-75	DFO	JM	CJR
PANEL NO.	-01		7.5 HA - 21/10D							
PANEL NO.	VHX	-02	7.5 HA - 21/12D							
PANEL NO.				AUTOMATIC DEMAND CONTROL (WIRING DIAGRAM)						
PANEL NO.			IZOV., IPH.,	SEP. FROM 617-01A9						

617-0153

WIRING DIAGRAM



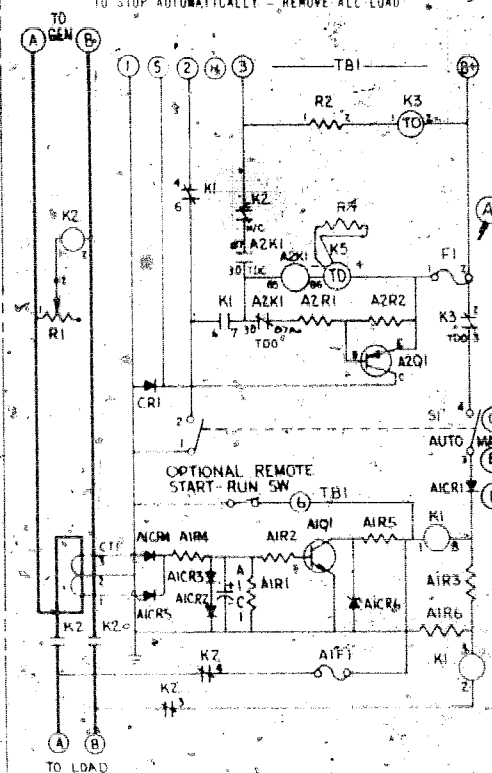
OPERATE WITH NEGATIVE GROUND ONLY

TO START AUTOMATICALLY - APPLY LOAD

LOAD FOR 120V; INCANDESCENT LAMP OF 40W OR HEATER
OF 425W @ 114 (35-OHMS)

LOAD FOR 240V; INCANDESCENT LAMP OF 100W OR HEATER
OF 1000W MIN (57-OHMS).

TO STOP AUTOMATICALLY - REMOVE ALL LOAD



NOTES

1. OPERATE WITH NEGATIVE GROUND ONLY

IT IS NOT NECESSARY TO CONNECT TERMINAL 1 TO GEN
BECAUSE GENERATOR AND CONTROL ARE CONNECTED THRU THE
AC GROUND LEAD

(B) CAUTION: IF GEN IS CONNECTED TO LOAD TERMINALS OF CONTACTOR
K2, THE AC OUTPUT VOLTAGE WILL BLOW THE PROTECTIVE
FUSE



4. MOUNT SWITCH WITH FINISHING NUT ON THE FRONT PANEL

(F) 5. HYPOT TEST: WITH 1800V FOR ONE SECOND, FROM K2-A TO GND-TB2 AND FROM K2-B TO GND-TB2

NOTE

UNLESS OTHERWISE NOTED ALL COMPONENTS ARE
SHOWN IN THE DE-ENERGIZED POSITION.

REF ID	PART NO	QTY	DESCRIPTION
A1	300-0747	B	1 AMPLIFIER ASSY-LOAD SENSOR
	101-3280	B	2 BRACKET MOUNTING
	518-0295	A	2 FASTENER-SNAP IN
A2	300-0587	B	1 BILGE BLOWER CONT. ASSY
	332-1179	A	4 SPACER
CRI	357-0004	A	1 DIODE
C11	315-0478	FX	1 TRANSFORMER ASSY-CUP
F1	321-0139		1 FUSE-6 25 AMP
	321-0104	P	1 HOLDER-FUSE
X1	307-0850	A	1 RELAY-START RUN
#2	301-0666	F	1 CONTACTOR
	180-0144	A	2 STRAP
	332-0517	A	4 TERMINAL
	309-0042	A	1 SWITCH-AUXILIARY
	309-0193	A	1 INSULATOR
	98-2045	A	1 LABEL-DEN CAUTION
	304-0014	-	1 WASHER-CENTERING
R3	320-0104	B	1 RELAY-CRANKING LIMITER
R1	304-0320	A	1 RESISTOR ASSY
	394-0310	A	1 RESISTOR-750 Ω .25W
	304-0292	A	1 INSULATOR
R2	304-0192	A	1 RESISTOR-3 Ω .10W
S1	188-0088	P	1 SWITCH-AUTO MANUAL
	332-1972	A	1 TERMINAL BLOCK
	332-1939	A	1 MARKER STRIP
1B2	332-0517	A	2 TERMINAL-GROUND
R4	350-1189	A	1 RESISTOR-ASSY
X5	307-1577	A	1 RELAY
	425-1799	F	1 CLAMP
	698-0598	-	15" SLEEVING (USED ON CRI)
	332-0050		1 CLIP-WIRE
	338-1025	B	1 WIRING HARNESS-CONTROL
	301-3011	E	1 BRACKET
	301-1012	G	1 CONTROL BOX
	301-3010	B	1 COVER CONTROL BOX
	98-2996	A	1 SILKSCREEN-SCHEMATIC
	98-2081	C	1 SILKSCREEN-AUTO DEMAND CONT. COVER
	98-2082	A	1 SILKSCREEN-AUTO DEMAND CONT. BACK
	99-3966	A	1 NAMEPLATE

F	ADDED NOTE 5			3-8-76
E	ADDED 307-4577-425-1799	W	EC	4-9-76
D	ADDED 896-0593	W	EC	5-21-76
C	ADDED 350-1189	W	EC	6-8-76
B	REVISED NOTE 3	W	EC	6-8-76
A	ADDED WASHER TO PARTS LIST	W	EC	6-8-76
LET	revision	Exam	Corr	Date
 <div style="text-align: center;"> DIVISION OF OSHKOSH CORPORATION Minneapolis, Minnesota </div>				
DATE	DR	EXT	ATTN	CDR
1-7-76	DFO	31M		
CONTROL - AUTO DEMAND (WIRING DIAGRAM)				
 <div style="text-align: center;"> 617-0153 </div>				

10

WIRING DIAGRAM



SCHEMATIC

OPERATE WITH NEGATIVE GROUND ONLY

TO START AUTOMATICALLY - APPLY LOAD

LOAD FOR 120V, INCANDESCENT LAMP OF 40W OR HEATER
OF 425W MIN (35-OHMS)

LOAD FOR 240V; INCANDESCENT LAMP OF 100W OR HEATER
OF 1000W MIN. (57-OHMS)

TO STOP AUTOMATICALLY. REMOVE ALL LOAD



- NOTE

UNLESS OTHERWISE NOTED, ALL COMPONENTS ARE
SHOWN IN THE DE-ENERGIZED POSITION.

NAME	DATE	MODEL NO.
WMA	-01	75 WA-23/10D
	-02	75 WA-23/32D
		120/240V

WES DES	PART NO	QTY	DESCRIPTION
A1	310-0747	B 1	AMPLIFIER ASSY-LOAD SENSOR
	301-3280	B 2	BRACKET MOUNTING
	518-0295	A 2	FASTENER-SNAP IN
A2	300-0587	B 1	PILLOW BLOWER CONT ASSY
	332-1178	A 4	SPEAKER
CR1	357-0004	A 1	DIOBE
CT1	315-0428	B 1	TRANSFORMER ASSY-CUR
F1	321-0138	I 1	FUSE 6 25 AMP
	321-0104	P 1	HOLDER-FUSE
K1	307-0539	A 1	RELAY-START RUN
K2	207-0888	C 1	CONTACTOR
	180-0144	A 2	STRAP
	932-0517	A 4	TERMINAL
	309-0042	A 1	SWITCH-AUXILIARY
	309-0193	A 1	INSULATOR
	98-2045	A 1	LABEL-GEN CAUTION
	301-0814	I 1	WASHER-CENTS LING
K3	320-0004	B 1	RELAY-CRANKING LIMITER
K4	307-0645	A 1	RELAY-TIME DELAY (3 SEC)-01
	307-0689	A 1	RELAY-TIME DELAY (4 SEC)-02
R1	304-0720	A 1	RESISTOR ASSY
	304-0392	A 1	INSULATOR
	304-0130	A 1	RESISTOR-7500 1/2 W
R2	304-0382	A 1	RESISTOR- 3 1/2 10W
S1	108-0008	P 1	SWITCH-AUTO MANUAL
TB1	332-1932	A 1	TERMINAL BLOCK
	332-1939	A 1	MARKER STRIP
TB2	332-0617	A 2	TERMINAL-GROUND
R4	350-1180	A 1	RESISTOR-ASSY
K5	307-1577	A 1	RELAY
	425-1799	P 1	CLAMP
	098-0553	I 15	SLEEVING (USED ON CR1)
	332-0050	I 1	CLIP-WIRE
	318-1049	D 1	WIRING HARNESS-CONTROL
	301-3411	D 1	BRACKET
	301-3012	D 1	CONTROL BOX
	301-3010	B 1	COVER-CONTROL BOX
	98-2995	A 1	SILKSCREEN-SCHEMATIC
	98-2081	C 1	SILKSCREEN-AUTO DEMAND CONT COVER
	98-2082	A 1	SILKSCREEN-AUTO DEMAND CONT BRKT
	99-0966	A 1	NAMEPLATE

F	ADDED NOTE 5	11	3-8-76
E	ADDED 306 (5727445-1799	14	1-8-76
D	ADDED 806 0503	15	5-21-76
C	ADDED 350-1100	21	4-8-76
B	REVISED NOTE 3	24	11-17-76
A	ADDED WARNING TO PARTS LIST	25	10-6-76

LET	NO/ISSUE	ISSUE NO	DATE

DIVISION OF CHAM CORPORATION
Minneapolis, Minnesota

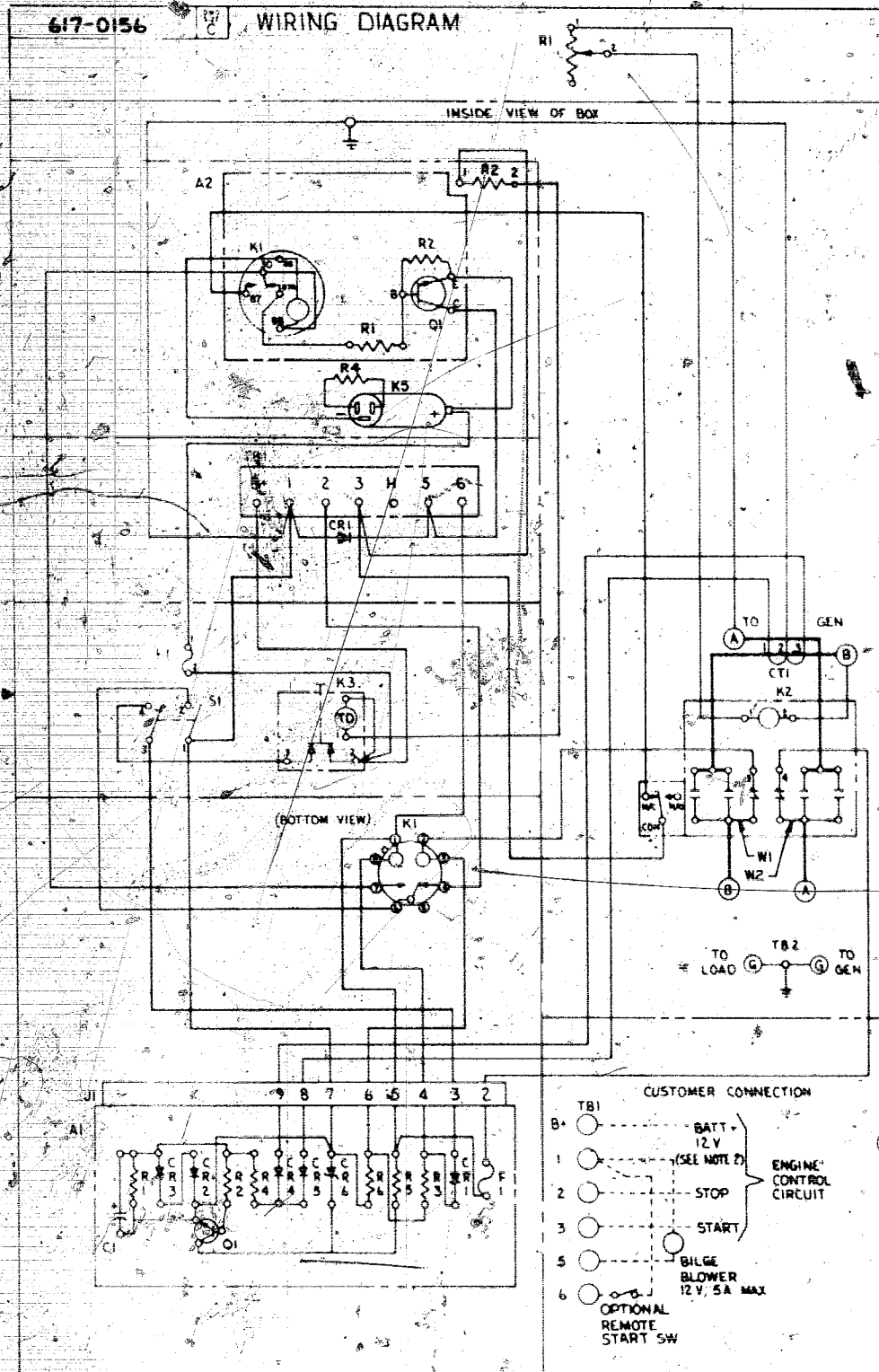
1-7-76 DFO TM CDR

CONTROL - AUTO DEMAND
(WIRING DIAGRAM)

617-0155

617-0156

WIRING DIAGRAM

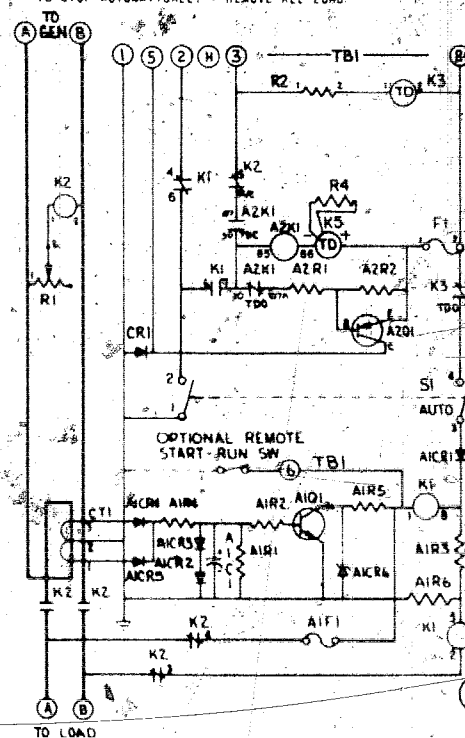


OPERATE WITH NEGATIVE GROUND ONLY

TO START AUTOMATICALLY - APPLY LOAD

LOAD FOR 120V INCANDESCENT LAMP OF 40W OR HEATER
OF 425W MIN (35-OHMS)LOAD FOR 240V INCANDESCENT LAMP OF 100W OR HEATER
OF 1000W MIN (57-OHMS)

TO STOP AUTOMATICALLY - REMOVE ALL LOAD



NOTES

- 1 OPERATE WITH NEGATIVE GROUND ONLY
- 2 IT IS NOT NECESSARY TO CONNECT TERMINAL 1 TO GEN BECAUSE GENERATOR AND CONTROL ARE CONNECTED THRU THE AC GROUND LEAD
- 3 CAUTION - IF GEN IS CONNECTED TO LOAD TERMINALS OF CONTACTOR (K2) THE AC OUTPUT VOLTAGE WILL BLOW THE PROTECTIVE FUSE.
- 4 MOUNT SWITCH WITH FINISHING NUT ON THE FRONT PANEL
- 5 HYPOT TEST: WITH 1800V FOR ONE SECOND, FROM K2-A TO GND-TB2, AND FROM K2-B TO GND-TB2

NOTE

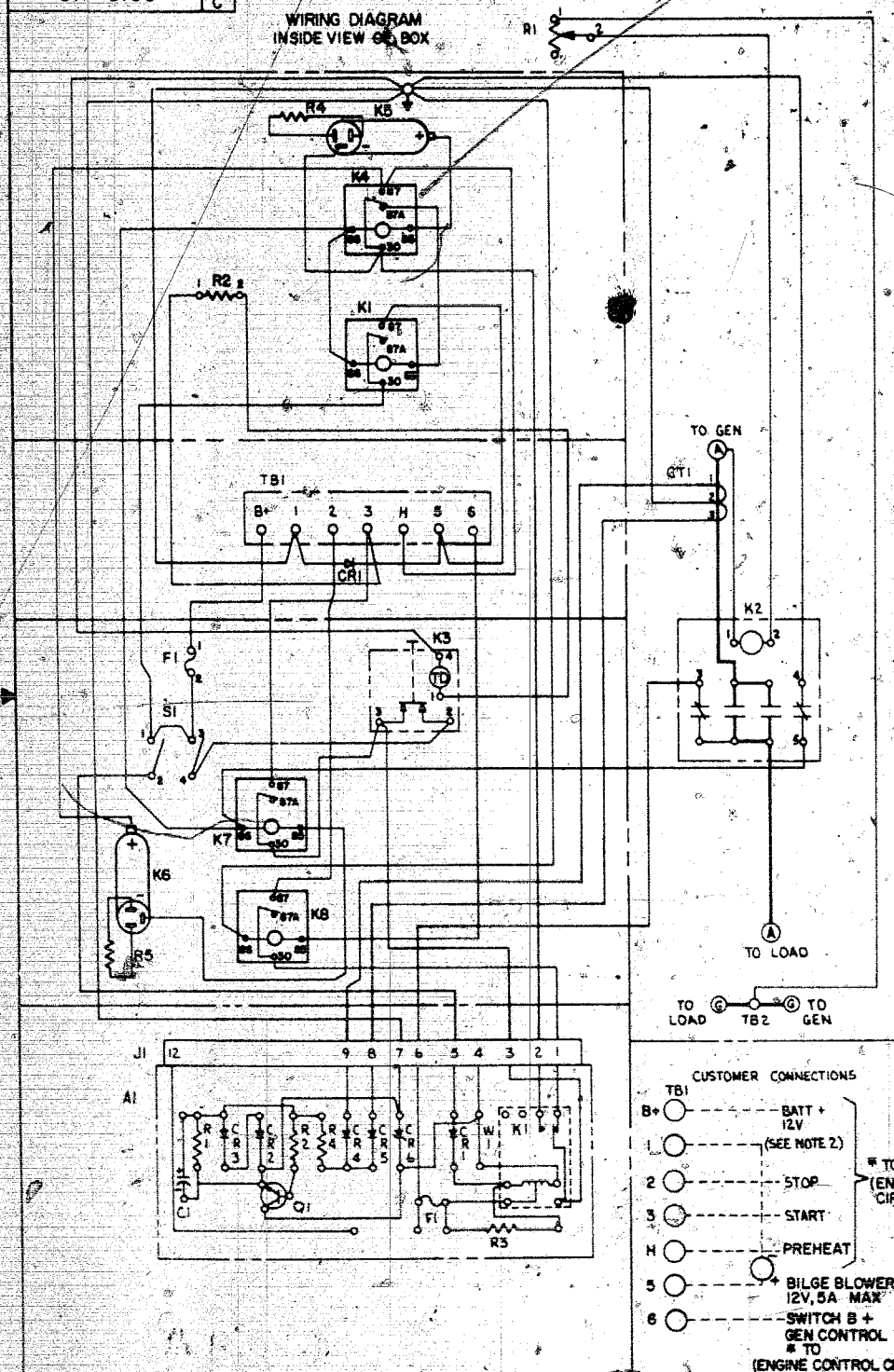
UNLESS OTHERWISE NOTED ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION

QTY	PART NO	DESC	QTY	PART NO	DESC
1	300-0741	AMP. PR. ASSY. LOAD SENSOR	1	300-0741	AMP. PR. ASSY. LOAD SENSOR
1	301-3280	BRACKET MOUNTING	1	301-3280	BRACKET MOUNTING
1	518-0295	COVER SHIELD	1	518-0295	COVER SHIELD
1	300-0587	BILGE BLOWER CONT ASSY	1	300-0587	BILGE BLOWER CONT ASSY
1	332-1479	SPACER	1	332-1479	SPACER
1	357-0004	DIODE	1	357-0004	DIODE
1	315-0426	TRANSFORMER - CURRENT	1	315-0426	TRANSFORMER - CURRENT
1	321-0139	FUSE 25 AMP	1	321-0139	FUSE 25 AMP
1	321-0104	RELAY CRANKING LIMITER	1	321-0104	RELAY CRANKING LIMITER
1	307-0850	RELAY START-RUN	1	307-0850	RELAY START-RUN
1	307-0667	CONTACTOR	1	307-0667	CONTACTOR
1	332-0142	TERMINAL	1	332-0142	TERMINAL
1	307-0685	JUMPER-CONTACTOR	1	307-0685	JUMPER-CONTACTOR
1	358-0042	SWITCH-AUXILIARY	1	358-0042	SWITCH-AUXILIARY
1	307-1577	RELAY	1	307-1577	RELAY
1	425-1799	CLAMP	1	425-1799	CLAMP
1	309-0193	INSULATOR	1	309-0193	INSULATOR
1	307-1577	BUS BAR-CONTACTOR	1	307-1577	BUS BAR-CONTACTOR
1	898-0692	SLEEVING (EXPAND FIRST)	1	898-0692	SLEEVING (EXPAND FIRST)
1	98-2045	LABEL-GEN CAUTION	1	98-2045	LABEL-GEN CAUTION
1	320-0104	RELAY CRANKING LIMITER	1	320-0104	RELAY CRANKING LIMITER
1	304-0014	WASHER-CENTERING	1	304-0014	WASHER-CENTERING
1	304-0720	RESISTOR ASSY	1	304-0720	RESISTOR ASSY
1	304-0131(IMP)	RESISTOR-750.0, 25W	1	304-0131(IMP)	RESISTOR-750.0, 25W
1	304-0292	INSULATOR	1	304-0292	INSULATOR
1	304-0120(IMP)	RESISTOR 3.0, 10W	1	304-0120(IMP)	RESISTOR 3.0, 10W
1	308-0088	SWITCH-AUTO-MANUAL	1	308-0088	SWITCH-AUTO-MANUAL
1	332-1972	TERMINAL-BLOCK	1	332-1972	TERMINAL-BLOCK
1	332-1939	MARKER STRIP	1	332-1939	MARKER STRIP
1	332-0142	TERMINAL-GND	1	332-0142	TERMINAL-GND
1	334-2597	LEAD ASSY	1	334-2597	LEAD ASSY
1	350-1189	RESISTOR-ASSY	1	350-1189	RESISTOR-ASSY
1	332-0050	CLIP-WIRE	1	332-0050	CLIP-WIRE
1	338-1025	WIRING HARNESS-CONTROL	1	338-1025	WIRING HARNESS-CONTROL
1	301-3011	BRACKET	1	301-3011	BRACKET
1	301-3012	CONTROL BOX	1	301-3012	CONTROL BOX
1	301-3010	COVER-CONTROL-BOX	1	301-3010	COVER-CONTROL-BOX
1	98-2996	SILKSCREEN-SCHEMATIC	1	98-2996	SILKSCREEN-SCHEMATIC
1	98-2081	SILKSCREEN-AUTO-DEMAND CONT COVER	1	98-2081	SILKSCREEN-AUTO-DEMAND CONT COVER
1	98-2087	SILKSCREEN-AUTO-DEMAND CONT BRKT	1	98-2087	SILKSCREEN-AUTO-DEMAND CONT BRKT
1	99-0544	NAMEPLATE	1	99-0544	NAMEPLATE
1	898-0593	SLEEVING (USED ON CR1)	1	898-0593	SLEEVING (USED ON CR1)

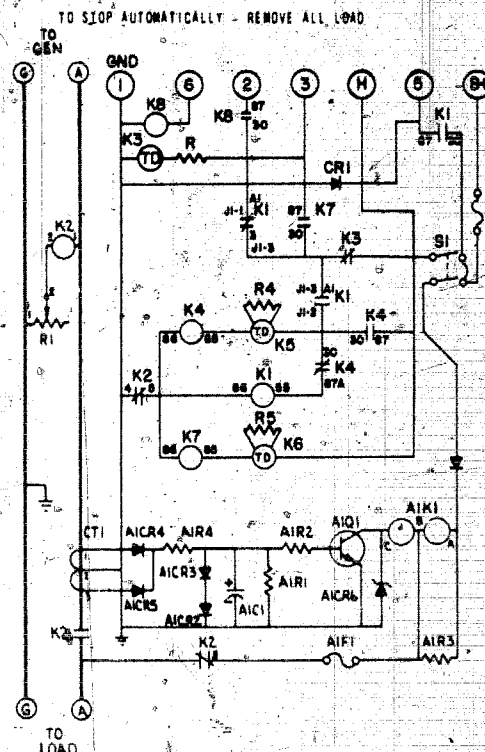
J	ADDED NOTE 5	11-5-76
H	ADDED 307-1577(425-1799)	11-5-76
G	ADDED 898-0593	11-5-76
F	ADDED 350-1189	11-5-76
E	REVISED NOTE 3	11-5-76
D	WAS 301-3047	11-5-76
C	WAS 332-0517	11-5-76
B	WAS 332-0517	11-5-76
A	ADDED WASHES TO PARTS LIST	11-5-76
1	REVISION	11-5-76

DIVISION OF OMC CORPORATION	
Minneapolis, Minnesota	
DATE	1-6-76
BY	DEO
CHKD	DEO
CONTROL - AUTO DEMAND	
(WIRING DIAGRAM)	
617-0156	

A circuit diagram showing a resistor labeled R_1 connected to a switch and a lamp. The switch is currently open, and the lamp is not illuminated.




OPERATE WITH NEGATIVE GROUND ONLY
TO START AUTOMATICALLY APPLY LOAD
LOAD FOR 120V INCANDESCENT LAMP OF 40W OR HEATER
OF 425W MIN (35-OHMS)



- OPERATE WITH NEGATIVE GROUND ONLY
- IT IS NOT NECESSARY TO CONNECT TERMINAL 1 TO GEN¹ BECAUSE GENERATOR AND CONTROL ARE CONNECTED THRU THE GROUND LEAD
- CAUTION. IF GEN IS CONNECTED TO LOAD TERMINALS OF CONTACTOR (K2) THE AC OUTPUT VOLTAGE WILL BLOW^{ON} THE PROTECTIVE FUSE.
- MOUNT SWITCH WITH FINISHING NUT ON THE FRONT PANEL
- HYPOT TEST: WITH 1500V FOR ONE SECOND, FROM K2-A TO GEN-TB2 BEFORE R1-1 IS CONNECTED TO IT.

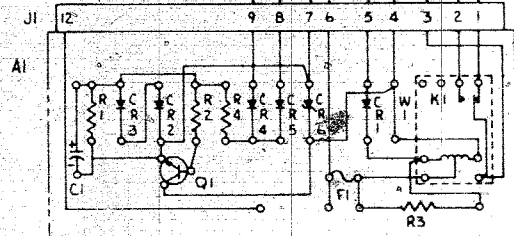
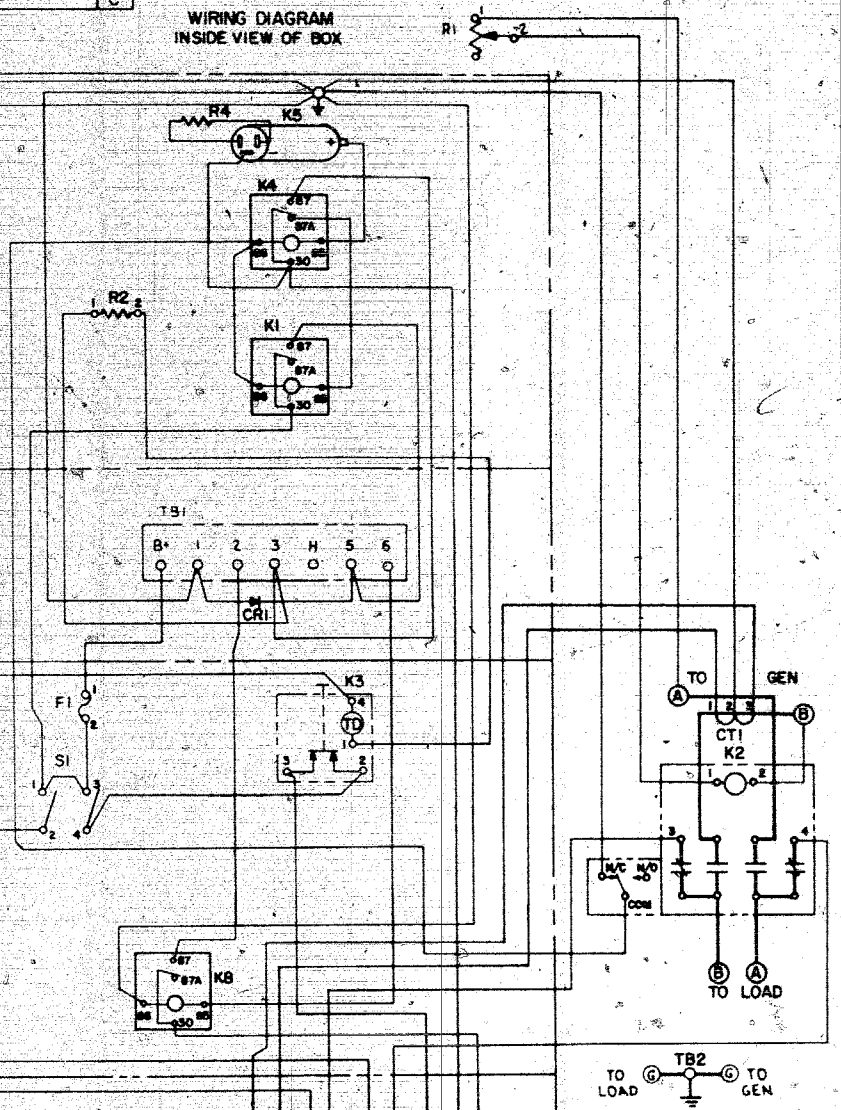
UNLESS OTHERWISE NOTED ALL
COMPONENTS ARE SHOWN IN THE
DE-ENERGIZED POSITION

REF DES	PART NO	QTY	DESCRIPTION
A1	300-0740	A 1	CONTROL - LOAD "INCH"
	301-0280	A 2	BRACKET - MOUNTING
	518-0295	A 2	FASTENER - SNAP IN
CT1	315-0427	A 1	TRANSFORMER ASSY CUR
CR1	357-0804	A 1	D100E
F1	321-0139	A 1	FUSE 0.35 AMP
	321-0175	P 1	HOLDER - FUSE
K2	307-0885	C 1	CONTACTOR
	332-0142	A 2	TERMINAL
	307-0885	A 2	JUMPER
	98-2045	A 1	CAUTION LABEL
	40-0444	A 1	STRAP
K3	320-0104	B 1	REEL CRANKING LIMITER
K10,7,6	307-1886	A 1	RELAY
	304-0014	P 1	WASHER - CENTERING
R1	304-0719	A 1	RESISTOR ASSY
	304-0292	A 1	INSULATOR
	304-0282	A 1	RESISTOR - 300 Ω , 25W
R2	304-0182	A 1	RESISTOR - 5A, 10W
S1	308-0088	P 1	SWITCH - AUTO/MANUAL
R4	330-1189	A 1	RESISTOR - ASSY
R5	330-1215	A 1	RESISTOR - ASSY
T81	332-1972	A 1	BLOCK TERMINAL
	332-1959	A 1	STRIP MARKER
T82	332-0142	A 2	TERMINAL - GROUND
K9,6	307-1577	A 2	RELAY
	425-1799	P 2	CLAMP
	895-0533	- 1	SLEEVING (USED ON CR1)
	332-0050	- 1	CLIP - WIRE
	338-1959	D 1	WIRING HARNESS - CONTROL
	301-9516	B 1	BRACKET W/DMT - CONTROL
	301-3012	D 1	CONTROL BOX - AUTO DEMAND
	301-3010	B 1	COVER CONTROL BOX
	98-5545	B 1	SILKSCREEN SCHEMATIC
	98-2081	C 1	SILKSCREEN AUTO DEMAND CONT COVER
	98-2082	A 1	SILKSCREEN AUTO DEMAND CONT BAKT
	99-0945	A 1	NAMEPLATE

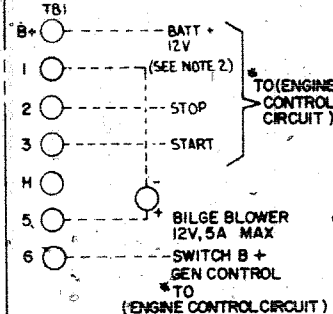
26742	A	FILE FOR PROO		P	2-2-61
ER NO.	LET NO.	REASON	APPROV	CORR	DATE
			DIVISION OF OMAN CORPORATION Minneapolis, Minnesota		
DIV	B-I-85	JC	W/n	R	
AUTOMATIC DEMAND CONTROL (WIRING DIAGRAM)					
SIP-A FORM	617-0169	617-0169			FOR FILE C

617-0171

C

WIRING DIAGRAM
INSIDE VIEW OF BOX

CUSTOMER CONNECTIONS



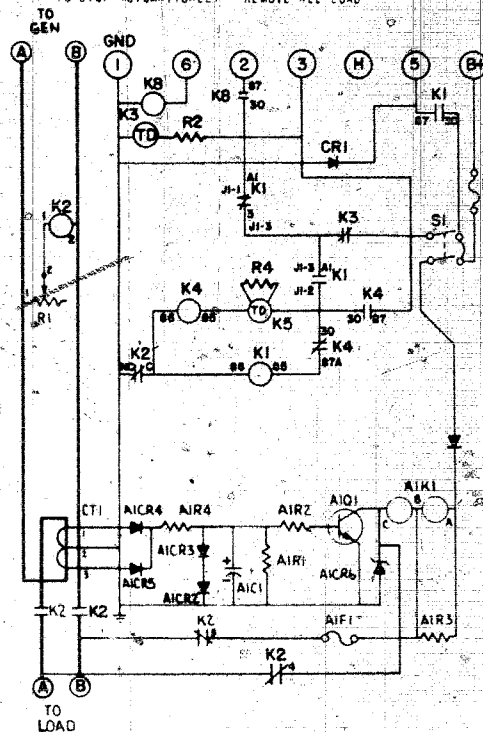
SCHEMATIC

OPERATE WITH NEGATIVE GROUND ONLY

TO START AUTOMATICALLY - APPLY LOAD

LOAD FOR 120V, INCANDESCENT LAMP OF 40W OR HEATER
OF 475W MIN (35 OHMS)LOAD FOR 240V, INCANDESCENT LAMP OF 100W OR HEATER
OF 1000W MIN (57 OHMS)

TO STOP AUTOMATICALLY - REMOVE ALL LOAD



NOTES

1. OPERATE WITH NEGATIVE GROUND ONLY.
2. IT IS NOT NECESSARY TO CONNECT TERMINAL 1 TO GEN BECAUSE GENERATOR AND CONTROL ARE CONNECTED THRU THE AC GROUND LEAD.
3. CAUTION - IF GEN IS CONNECTED TO LOAD TERMINALS OF CONTACTOR (K2), THE AC OUTPUT VOLTAGE WILL BLOW THE PROTECTIVE FUSE.
4. MOUNT SWITCH WITH FINISHING NUT ON THE FRONT PANEL.
5. HYPOT TEST WITH 1500V FOR ONE SECOND FROM K2 A TO GEN-TB2 BEFORE R1-1 IS CONNECTED TO IT.

NOTE:

UNLESS OTHERWISE NOTED ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION

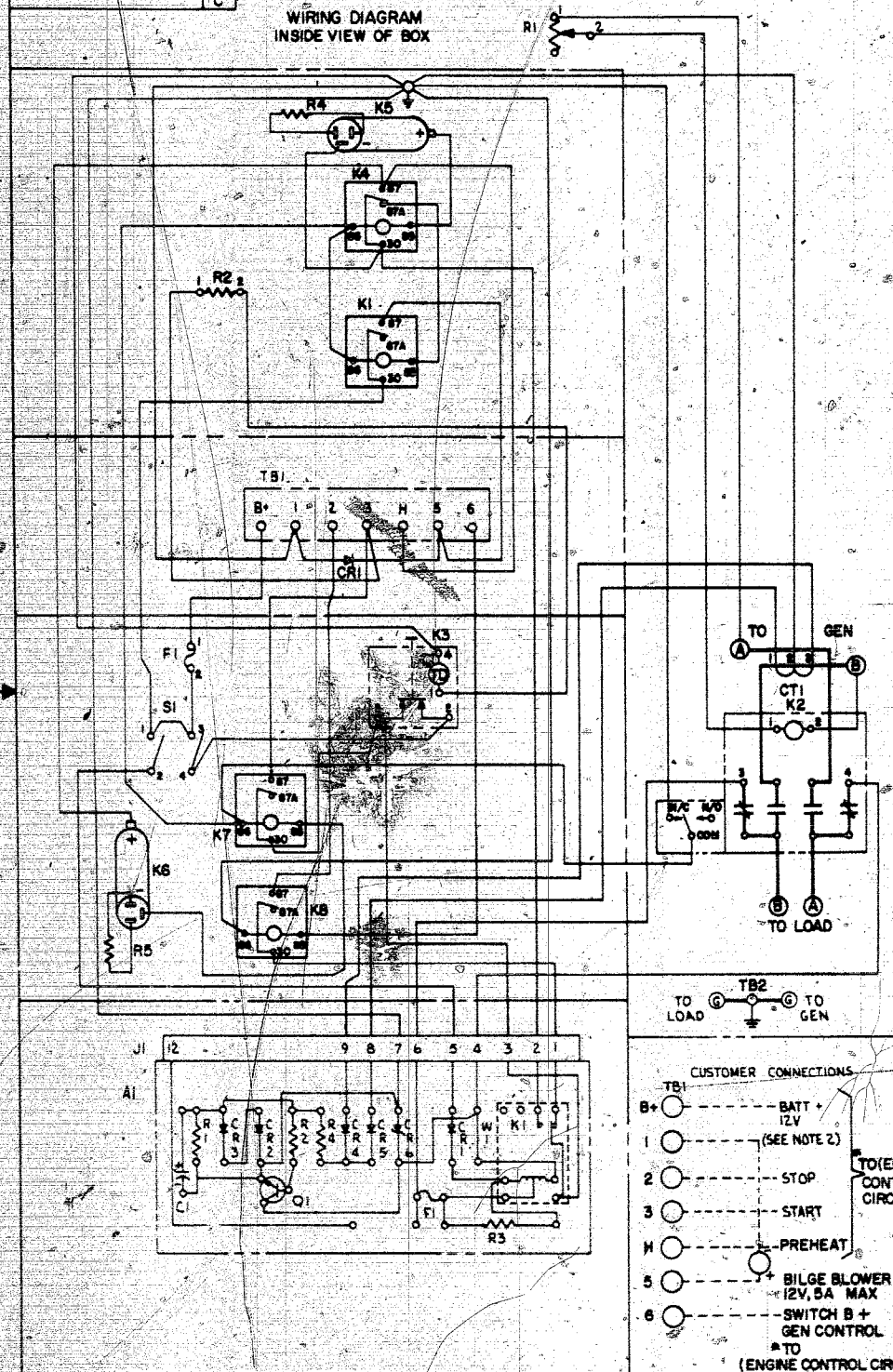
REF. DES.	PART. NO.	QTY.	DESCRIPTION
A1	300-0741	1	CONTROL LOAD SENSING
	301-3280	2	BRACKET MOUNTING
	318-0295	2	FASTENING SNAP IN
CT1	315-0428	1	TRANSFORMER ASSY-200
CR1	357-0004	1	DIODE
F1	321-0139	1	FUSE 6.75 AMP
	321-0175	1	HOLDER FUSE
K2	307-0666	1	CONTACTOR
	332-0617	4	TERMINAL
	98-2045	1	CAUTION LABEL
	440-0144	2	STRAP
K3	320-0104	1	RELAY DRAWING LIMITER
K1A, B	307-1886	1	RELAY
	304-0014	1	WASHER-CENTERING
R1	304-0720	1	RESISTOR ASSY
	304-0292	1	INSULATOR
	304-0131	1	RESISTOR-750 Ω, 25W
R2	304-0192(R1)	1	RESISTOR-5A, 10W
S1	108-0088	1	SWITCH AUTO-MANUAL
R4	350-1189	1	RESISTOR-ASSY
TB1	337-1972	1	BLOCK TERM. W.
	337-1939	1	STRIP WARKER
TB2	337-0142	1	TERMINAL GROUND
K5	307-1577	1	RELAY
	425-1799	1	CLAMP
	898-0593	1	SLEEVEING (USED ON CR1)
	332-0050	1	CLIP WIRE
	338-1960	1	WIRING HARNESS-CONTROL
	301-9516	1	BRACKET W/SLMT-CONTROL
	301-3012	1	CONTROL BOX-AUTO DEMAND
	301-3010	1	COVER CONTROL BOX
	98-5546	1	SCREEN SCHEMATIC
	98-2081	1	SCREEN AUTO DEMAND CONT COVER
	98-2082	1	SCREEN AUTO DEMAND CONT BPA
	99-0948	1	NAMEPLATE

26742	A	1	RLSE FOR PROD	2/25/85
ER NO.	NO			

Original DIVISION OF OMAN CORPORATION
Minneapolis, Minnesota
8-1-85 JC 12/5/81 K4
AUTOMATIC DEMAND CONTROL
(WIRING DIAGRAM)

WIRING NO.	75HA-23/24D	20,240V	1PH.	50/60 Hz	617-0149	617-0171
REV.	W/IN R-26-85	3W				

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OPERATE WITH NEGATIVE GROUND ONLY

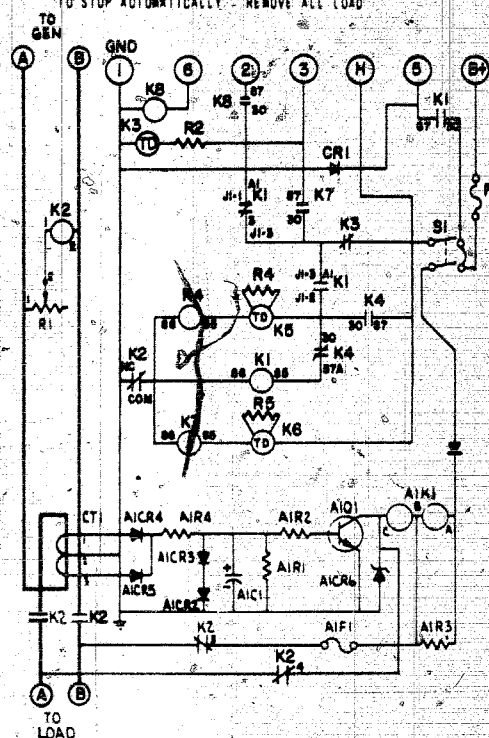
OPERATE WITH NEGATIVE GROUND ONLY

TO START AUTOMATICALLY APPLY LOAD

LOAD FOR 120V, INCANDESCENT LAMP, OF 40W OR HEATER
OF 425W MIN (35-OHMS)

LOAD FOR 240V, INCANDESCENT LAMP OF 100W OR HEATER
OF 1000W MIN. 57 OHMS

TO STOP AUTOMATICALLY - REMOVE ALL LOAD



NOTES

1. OPERATE WITH NEGATIVE GROUND ONLY.
2. IT IS NOT NECESSARY TO CONNECT TERMINAL 1 TO GEN BECAUSE GENERATOR AND CONTROL ARE CONNECTED THRU THE AC GROUND LEAD.
3. CAUTION. IF GEN IS CONNECTED TO LOAD TERMINALS OF CONTACTOR K2, THE AC OUTPUT VOLTAGE WILL **BLOW THE PROTECTIVE FUSE.**
4. MOUNT SWITCH WITH FINISHING NUT ON THE FRONT PANEL.
5. HYPOT TEST WITH 1500V FOR ONE SECOND, FROM K2-A3 TO GEN-TB2 BEFORE R17 IS CONNECTED TO IT.

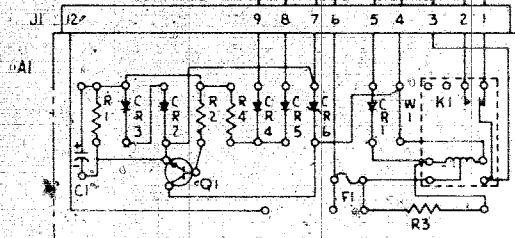
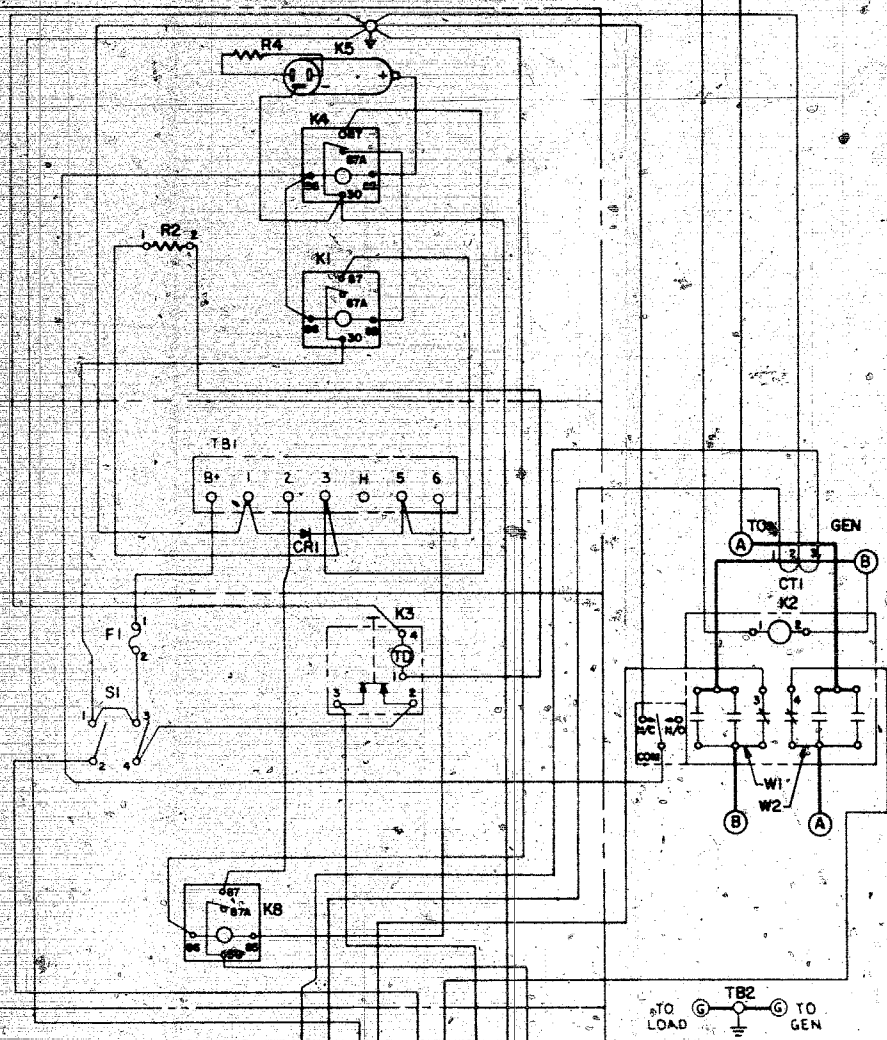
NOTE:

UNLESS OTHERWISE NOTED ALL
COMPONENTS ARE SHOWN IN THE
DE-ENERGIZED POSITION

REF DES	PART NO	QTY	DESCRIPTION
A1	330-0741	B	CONTROL-LOAD SENSOR
	301-2780	A	BRACKET-MOUNTING
	518-0295	A	FASTENER-SNAP IN
CT1	515-0428	A	TRANSFORMER ASSY-UP
CR1	957-0004	A	0J081
FI	321-0738	A	FUSE 6.75 AMP
	321-0176	P	NO-BUR FUSE
K2	307-0886	C	CONTACTOR
	532-0817	A	TERMINAL
	506-0042	A	SWITCH-AUXILIARY
	98-2045	A	CAUTION LABEL
	160-0144	A	STRAP
	309-0183	A	INSULATOR
K3	320-0164	B	RELAY-CANNING LIMITER
KL7,8	507-1888	A	RELAY
	304-0014	A	WASHER-CENTERING
RI	304-0720	A	RESISTOR ASSY
	304-0292	A	INSULATOR
	304-0131	A	RESISTOR-750 OHM 25 W
R2	304-0182	A	RESISTOR-50 OHM
S1	308-0088	P	SWITCH-AUTO-MANUAL
R4	350-1189	A	RESISTOR-ASSY
R5	380-1215	A	RESISTOR-ASSY
TB1	332-1972	A	BLOCK-TERMINAL
	282-1939	A	STRIP-MARKER
TB2	332-0147	A	TERMINAL-GROUND
VB,6	307-1577	B	RELAY
	425-1799	P	CLAMP
	698-0593	-	SLEEVING (USED ON CR1)
	332-0050	-	CLIP-WIRE
	338-1963	D	WIRING HARNESS-CONTROL
	301-9516	B	BRACKET WELDING-CONTROL
	301-3012	D	CONTROL-BOI-AUTO DEMAND
	301-3010	B	COVER-CONTROL BOI
	98-5547	B	SILKSCREEN-SHEMATIC
	98-7081	C	SILKSCREEN-AUTO DEMAND CONT COVER
	98-2082	A	SILKSCREEN-AUTO DEMAND CONT BRKT
	99-0968	A	NAMEPLATE

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CUSTOMER CONNECTIONS

TBI

B+ (12V) ——— BATT + 12V

1 (SEE NOTE 2)

2 STOP

3 START

H

5 ———+ BILGE BLOWER 12V, 5A MAX

6 ——— SWITCH B + GEN CONTROL TO (ENGINE CONTROL CIRCUIT)

TO (ENGINE CONTROL CIRCUIT)

NOTE:
UNLESS OTHERWISE NOTED, ALL
COMPONENTS ARE SHOWN IN THE
DE-ENERGIZED POSITION.

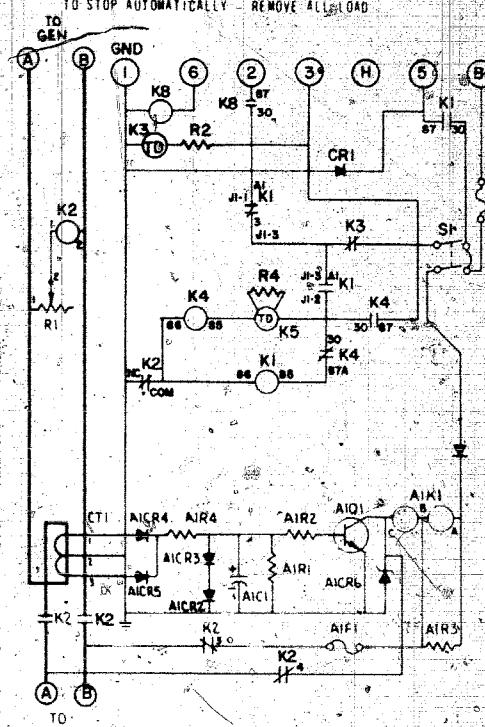
OPERATE WITH NEGATIVE GROUND ONLY

TO START AUTOMATICALLY — APPLY LOAD

LOAD FOR 120V, INCANDESCENT LAMP OF 40W OR HEATER
OF 475W MIN (35 OHMS)

LOAD FOR 240V, INCANDESCENT LAMP OF 100W OR HEATER
OF 1000W MIN (57 OHMS)

TO STOP AUTOMATICALLY — REMOVE ALL LOAD



- 1 OPERATE WITH NEGATIVE GROUND ONLY.
- 2 IT IS NOT NECESSARY TO CONNECT TERMINAL 1 TO GEN
3 BECAUSE GENERATOR AND CONTROL ARE CONNECTED THRU THE AC
4 GROUND LEAD.
- 5 CAUTION IF GEN IS CONNECTED TO LOAD TERMINALS
6 OF CONTACTOR K2, THE AC OUTPUT VOLTAGE WILL BLOW
7 THE PROTECTIVE FUSE.
- 8 MOUNT SWITCH WITH FINISHING NUT ON THE FRONT PANEL.
- 9 HYPOT TEST WITH 1500V FOR ONE SECOND FROM K2-A
10 TO GEN-TB2 BEFORE R11 IS CONNECTED TO IT.

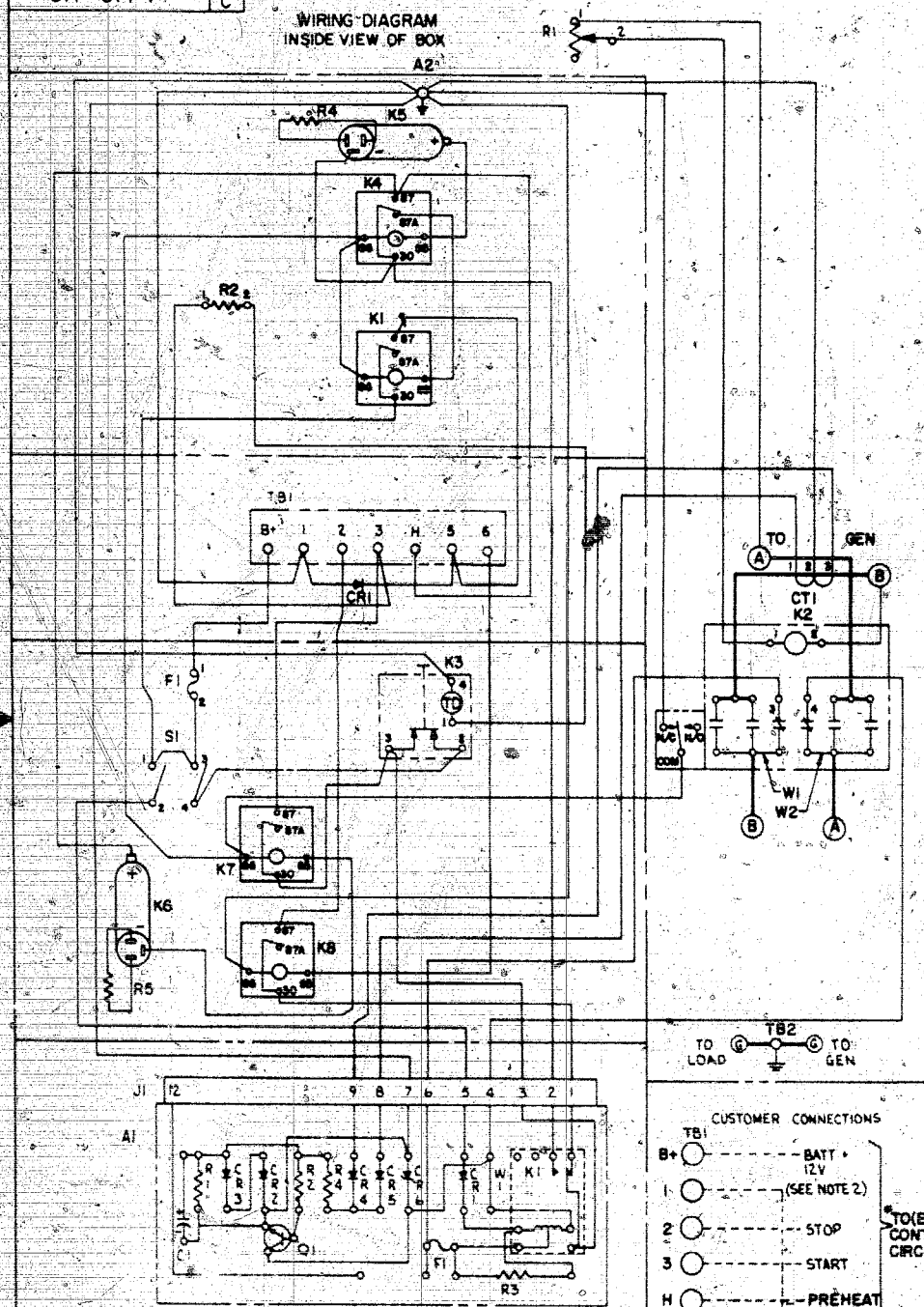
NOTE:
UNLESS OTHERWISE NOTED, ALL
COMPONENTS ARE SHOWN IN THE
DE-ENERGIZED POSITION.

REF	QTY	PART NO	QTY	DESCRIPTION
A1	1	300-0741	B	CONTROL LOAD SENSOR
	1	101-3280	A	BRACKET MOUNTING
	1	518-0299	A	FASTENER SNAP IN
	1	309-0042	A	SWITCH-AUXILIARY
	1	309-0093	A	INSULATOR
C1	1	305-0426	A	TRANSFORMER ASSY SUB
C1	1	351-0004	A	DIODE
F1	1	321-0119	A	FUSE 6.25 AMP
	1	321-0175	P	HOLDER FUSE
K2	1	307-0667	C	CONTACTOR
	4	332-0142	A	TERMINAL
	4	307-0685	A	JUMPER
	1	98-2045	A	CAUTION LABEL
	1	160-0184	A	STRAP
	2	307-1517	A	BUS BAR-CONTACTOR
	2	898-0692	-	SLEEVING (EXPAND FIRST)
K3	1	320-0704	B	RELAY CRANKING (INTER)
K1A, B	1	307-1886	A	RELAY
	1	304-0014	-	WASHER-CENTERING
R1	1	304-0720	A	RESISTOR-ASSY
	1	304-0292	A	INSULATOR
	1	304-0131	A	RESISTOR-750 Ω , 25 W
R2	1	304-0192 (REF)	A	RESISTOR-3A, 10W
	1	308-0088	P	SWITCH AUTO-MANUAL
R4	1	350-1189	A	RESISTOR-ASSY
	1	332-1972	A	BLOCK TERMINAL
	1	332-1939	A	STRIP WIRE
TB2	1	332-0142	A	TERMINAL GROUNDING
K5	1	307-1577	A	RELAY
	1	425-1799	P	CLAMP
	1	898-0593	-	SLEEVING (USED ON C1)
W1, 2	2	336-2587	A	LEAD
	1	332-0050	-	CLIP-WIRE
	1	338-1960	D	WIRING HARNESS-CONTROL
	1	301-9516	B	BRACKET W/DMT-CONTROL
	1	301-3012	D	CONTROL BOX-AUTO DEMAND
	1	101-2010	B	COVER CONTROL BOX
	1	98-5546	C	STINKSCREEN SCHEMATIC
	1	98-2081	C	STINKSCREEN AUTO DEMAND CONT COVER
	1	98-2082	C	STINKSCREEN AUTO DEMAND CONT BRKT
	1	99-0368	A	NAMEPLATE

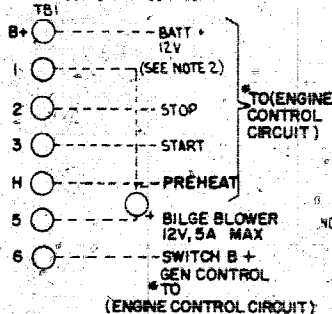
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617-0174

C

WIRING DIAGRAM
INSIDE VIEW OF BOX

CUSTOMER CONNECTIONS



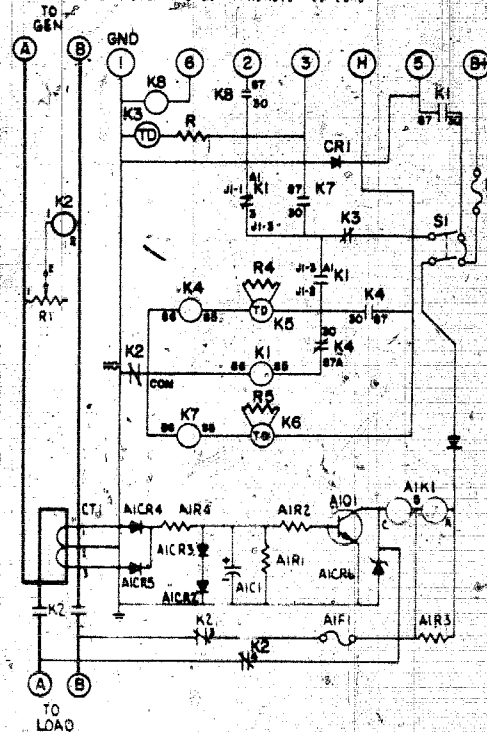
SCHEMATIC

OPERATE WITH NEGATIVE GROUND ONLY

TO START AUTOMATICALLY APPLY LOAD

LOAD FOR 120V, INCANDESCENT LAMP OF 40W OR HEATER
OF 425W MIN 15 OHMSLOAD FOR 240V, INCANDESCENT LAMP OF 100W OR HEATER
OF 1000W MIN 15 OHMS

TO STOP AUTOMATICALLY REMOVE ALL LOAD



NOTES

- OPERATE WITH NEGATIVE GROUND ONLY
- IT IS NOT NECESSARY TO CONNECT TERMINAL 1 TO GEN BECAUSE GENERATOR AND CONTROL ARE CONNECTED THRU THE AC GROUND LEAD
- CAUTION IF GEN IS CONNECTED TO LOAD TERMINALS OF CONTACTOR K2 THE AC OUTPUT VOLTAGE WILL BLOW THE PROTECTIVE FUSE.
- MOUNT SWITCH WITH FINISHING NUT ON THE FRONT PANEL
- HYPOT TEST WITH 1500V FOR ONE SECOND FROM K2-A TO GEN-TB2 BEFORE RE-1 IS CONNECTED TO IT

NOTE:

UNLESS OTHERWISE NOTED ALL COMPONENTS ARE SHOWN IN THE DE-ENERGIZED POSITION

REF. DES.	PART NO.	QTY.	DESCRIPTION
A1	300-0741	8	CONTROL-LOAD SENSING
	301-3280	2	BRACKET MOUNTING
	518-0295	2	FASTENER SNAP IN
	309-0042	1	SWITCH-AUXILIARY
	309-0193	1	INSULATOR
CR1	305-0426	1	TRANSFORMER ASSY. 200V
CR1	357-0004	1	0-500
F1	321-0138	1	FUSE 25 AMP
	321-0178	1	HOLDER FUSE
K2	307-0867	1	CONTACTOR
	392-0142	4	TERMINAL
	307-0685	4	JUMPER
	98-2045	1	CAUTION LABEL
	160-0144	1	STRAP
	307-1517	2	BUS BAR-CONTACTOR
	898-0892	2	SLEEVING (EXPAND FIRST)
A2	320-1104	1	RELAY CRANKING LIMITER
K1A7.8	307-1886	1	REF RELAY
	304-0014	1	WASHER-CLEANING
R1	304-0720	1	RESISTOR 100V
	304-0292	1	INSULATOR
	304-0131	1	REF RESISTOR 70W
R2	304-0192	1	RESISTOR
S1	308-0088	1	SWITCH
R4	350-1185	1	RESISTOR
R5	350-1215	1	RESISTOR
	332-1972	1	BLOCK STRAP
	332-1939	1	STR. P.WARPER
	332-0142	2	TERMINAL GROUND
K5.6	307-1577	2	RELAY
	425-1799	2	CLAMP
	898-0893	1	SLEEVING (USED ON CR1)
W1.2	356-2597	2	LEAD
	332-0050	1	CLIP-WIRE
	336-1983	1	WIRING HARNESS CONTROL
	301-8818	1	BRACKET WLDOMY CONTROL
	301-3012	1	CONTROL KIT-AUTO DEMAND
	301-3010	1	COVER CONTROL BOX
	98-5547	1	5-LASCREEN SCHEMATIC
	98-2081	1	5-LASCREEN AUTO DEMAND CONT. COVER
	98-2082	1	5-LASCREEN AUTO DEMAND CONT. BRKT
	99-0948	1	NAMEPLATE

26742	A1	RLSE FOR PROD	REV. 1-85
ER NO.	NO.	NO.	NO.
DIVISION OF OMAN CORPORATION Minneapolis, Minnesota			
8-1-85	UC	2	2
AUTOMATIC DEMAND CONTROL (WIRING DIAGRAM)			
120/240V	1PH.	617-0174	2