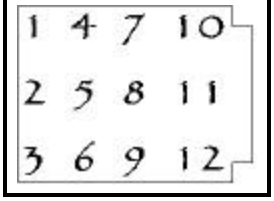
Terminal Number	Signal		6000W Onan PCB Terminals Functions	Voltage[1] Readings	
	To	From		Stop	Run [2]
TM1*up*	RS		Grounds Remote Switch	-	-
TM1*lo*	BK1		Grounds PCB	-	-
TM2	RS		RS (Stop) to TM1	0.	8.9
TM3	RS		RS (Start) to TM1	12.73	0.
TM4		LOP	For LOP Circuit Testing	0.20	8.6
TM5*up*		F1	Fused 12V (Not used, i.e. no female pin in the receptacle.)	12.77	12.8
TM5*lo*	VR1		From TM11 thru 5A fuse (Wires disconnected from VR1.)	12.77	12.8
TM6*up*	RCP		From LOP circuit to RTM and Lights of RTM & RS	0.	12.1
TM6*lo*			Not used.	0.	12.1
TM7		K1-Sol	Start, (K2-Rly, Start-S3) to TM1*lo*	12.7	13.1
			Start, (K2-Rly, Start-S3, TM3, RS) to TM1*up*	-	-
TM8		G1	Run, (Internal Volt. Rgltr. =[CR1, R1, C1] & K2-Sol) to TM11	12.7/**0AC**	13.1/29.8[3]
			Auto-Stop if G1 is below 26VAC. K2 disconnects K3-sol.	-	-
TM9	Onan		Run, K3-Rly to T1, E2, K4	0.	12.5
TM10		K1-Rly	Start, (CR5, R2, K3-Sol) to TM1	0.	0.
TM11			Start, (F1, K3-Rly) to TM9	12.77	13.1
		B (+)	Run, (F1, K3-Rly) to TM9	-	-
		Post	Run, (F1, K2-Rly, LOP-Circuit) to TM12	-	-
		Of	Stop, (K2-Rly, CR7, no volt. to K3-Sol, Stop-S3) to TM1	-	-
		K1-Rly	Stop, (K3-Rly-open by K3-Sol & Stop-S3) to TM9	-	-
			Auto-Stop, (S2, TM12, LOP-Circuit, K3-Sol) no Volt.toTM9	-	-
TM12	S2		Run (S2= normally open, i.e. no ground. S2 is by Oil Filter.)	0.	12.5
			Auto-Stop thru (S2=closed, i.e. no pressure) to Engine Block	680 ohm	-

(1) DC voltage readings with respect to TM1*up*, TM1*lo* and Onan-chassis must be the same.
(2) VR1 disconnected, Living-Area-Battery charger set to 13.1VDC (see TM11 readings).
(3) AC voltage reading with respect to TM11.

Legend	
Rly	Relay contact points
Sol	Relay solenoid
BK1	Bolt below K1-Relay
E2	Fuel Pump
F1	5amp Fuse
G1	Alternator (30V⎓) concted. to K1-B(+)&TM8 via VR1
K1	Starter Relay located below T1.
K2	Start Disconnect Relay, (Normly Closed),
K3	Engine Stop Relay, (Norm.Clsd.Contacts Not Used.)
K4	Fuel Solenoid
LOP	Low Oil Pressure
PCB	Printed Circuit Board
RCP	Remote Control Panel
RS	Remote Switch
RTM	Hobbs Run-Time-Meter
S2	Low Oil Pressure SW
S3	PCB Start-Stop Switch
T1	Ignition Coil
VR1	Voltage Regulator

12PIN Plg.Exptions.	
1=TM1*up*	4=TM1*lo*
5=TM5*up*	6=TM5*lo*



Emergency Start-Stop Operation
1. Jump TM11 with TM9 or TM5 (fused)
2. **Momentarily,** jump TM7 & TM1.
3. To Stop remove Jumper. If runs press S3.
Note: Procedure completely bypasses PCB.

K3 SPDT Relay Replacements
1. NTE ELEC. INC R48-5D10-12, LR48569
2. MS64-901, 64-612081-12, 7804, 28VDC
3. GUARDIAN ELECTRIC MFG.CO, I345 Series, A410-365389-I2
4. CORNELL DUBILIER ELECTRONICS 613-12R, 1077, 937

K2 DPDT Relay Replacements
1. CORNELL DUBILIER ELECTRONICS 683-12V, 1077, 108

Prepared by MIKE KORDAS

Symbol	Description	6000W-Onan PCB Components DC Voltage[4] Readings							
		East		West		North		South	
		Stop	Run	Stop	Run	Stop	Run	Stop	Run
CR6	1N4002 thru 5	0.0	8.6	0.0	8.4	-	-	-	-
R2	150ohm,.5W,10%	0.0	8.6	0.0	11.8	-	-	-	-
CR7	1N4002 thru 5	0.0	11.9	0.0	12.6	-	-	-	-
R7	2.7 ohm, .5W, 5%	-	-	-	-	0.0	18.4	0.0	8.4
CR8	2N5061, 2N5064	0.0	12.5	0.0	12.5	-	-	0.0	8.4
R3	470Kohm,0.5W, 10%	0.0	12.2	0.0	12.5	-	-	-	-
R4	100ohm,.5W, 10%	0.0	12.4	0.0	12.4	-	-	-	-
Q1	2N6027 thru 8	0.0	12.5	0.0	12.5	-	-	0.0	12.1
C4	0.1 MFD, 100V	0.0	8.3	0.0	12.3	-	-	-	-
R6	16 Kohm, .5W, 5%	0.0	12.4	0.0	12.4	-	-	-	-
R5	27 Kohm, .5W, 5%	0.0	12.4	0.0	12.4	-	-	-	-
C3	5 MFD, 25V	0.0	12.3	0.0	12.0	-	-	-	-
C1	100 MFD, 25V	12.8	25.9	12.8	12.9	-	-	-	-
R1	200ohm, 0.5W, 5%	-	-	-	-	12.8	25.7	12.8	32.5
F1	5 A	-	-	-	-	12.8	12.8	12.8	12.8
CR1	1N4002 thru 5	-	-	-	-	12.8	33.0	12.8	13.1
CR5	1N4002 thru 5	-	-	-	-	0.0	12.2	0.0	0.0
K2	Specified above	K2, K3 & S3 voltage readings shown blow.							
K3									
S3									

(4) As a reference, TM 2 thru 6 of the PCB point North.

Onan	6000W-Onan PCB Back Terminals DC Voltage[5] Readings						
	K2				K3		S3
Stop	12.8	0.0	0.0	12.8	12.8	0.0	0.0
	12.8			12.8	0.0		0.0
	12.8			12.8	0.0	0.0	12.8
Run	13.1	0.4	12.9	0.0	12.9	0.0	9.0
	13.1			26.1	0.0		0.0
	0.0			12.9	12.8	0.0	0.0

(5) Table's cells approximate the locations of K2, K3 and S3 terminals.

Note: Surplus Electronic Stores have also new components. **All PCB components cost under $10**.
Napa ($50) or http://www.aircraft-spruce.com/catalog/inpages/hobbs.php ($25) carries RTM.
Two (identical) springs under rocker can fix old S3 or convert new DPDT to momentary.
RS rocker and half of the body perfectly fit new switches of the same function and size.

Prepared by MIKE KORDAS