

For use with Saber 3306  
and 3412 DC Drives.

## TEST METER MODIFICATION

(3306 KITS: MODEL 73449P, MODEL 73494)

**PCB 46S02272-0010 SCHEMATIC 45S02272-0010**

### DESCRIPTION

This modification is one of a series available for Louis Allis Saber DC drives. It consists of components which digitally display important signals such as line voltage, current feedback etc. which aid in the troubleshooting of the drive as a whole. It also includes a modification overlay for the basic schematic in the Controller instruction manual.

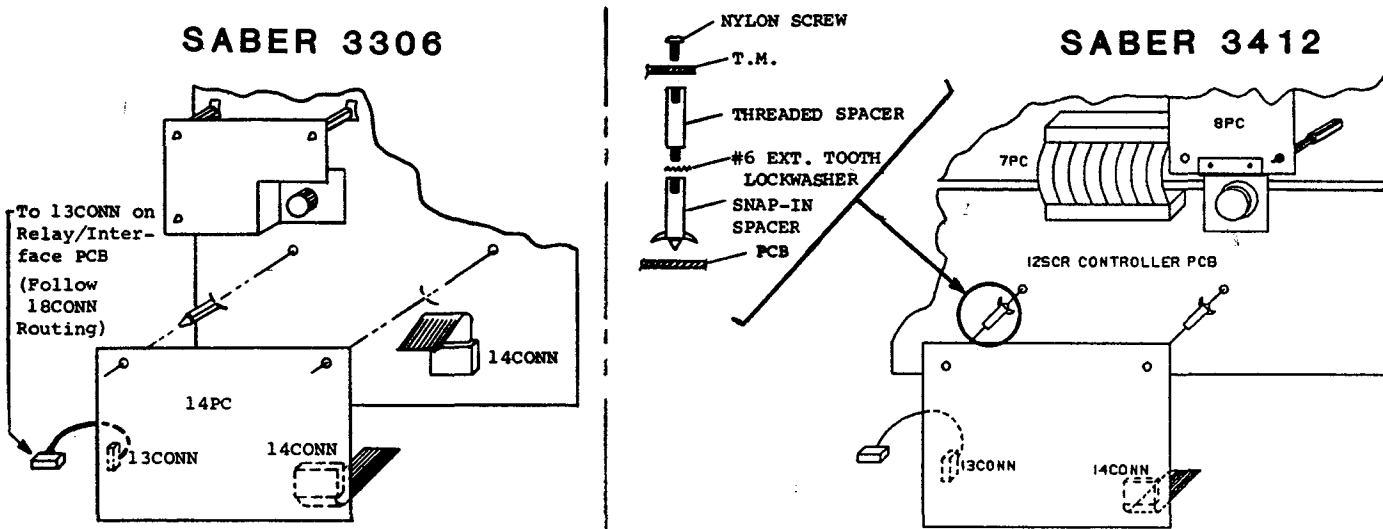
### INSTALLATION

1. The modification PCB is to be installed on the Power Cube swing out panel and secured to the Volt/Speed Main PCB (3306) or 12SCR Controller PCB (3412) as shown in Figure 1. Connect cables 13CONN and 14CONN as shown in Figure 3 or Figure 4. Installation instructions are contained in the Controller instruction manual.

2. See Figure 2. Remove the blank white label from the Power Cube cover. Affix the Test Meter legend plate to the cover, aligning the readout lens and switch cutout with holes in the cover.

### WARNING

REMOVE ALL INPUT POWER TO DRIVE  
BEFORE INSTALLING MODIFICATION KIT.



TD.I.2Y25.0044.FIG1

Figure 1.

CHANGE RECORD				DWG. NO. 02Y00025-0044	
1	STD-1430	3/4/82	4	STD-2666	SHEET 1 OF 4
2	STD-2450	2/1/86	5	STD-2733	EFF. 5/10/82
3	STD-2628	11/7/86			(J)

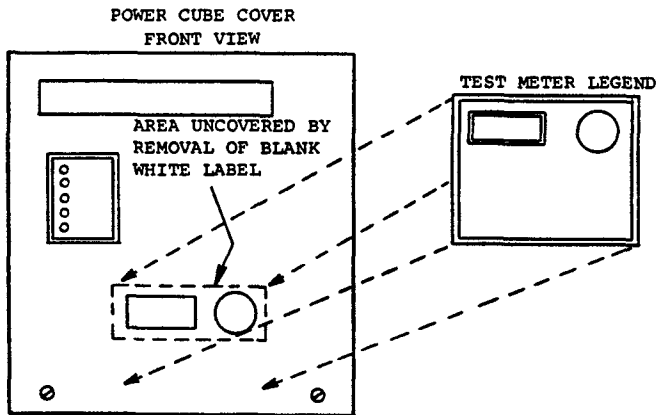


Figure 2.

### ADJUSTMENTS

#### NOTE

1RH (ten-turn pot) has been factory adjusted for 1.000 VDC at 4TP.

Connect the faston clip on the component side of the PCB to the resistor tap marked for the AC line voltage being applied.

### MODIFICATION RECORDS

After completing installation of all modifications:

A. Modify the Controller identification number using Method 1 in the Controller instruction manual. Insert the appropriate designator in block 2.

B. If not already present, affix the OPTION ADJUSTMENTS label to the inside of the Power Cube cover, to the right of the STANDARD ADJUSTMENTS label.

C. On the OPTION ADJUSTMENTS label, record the final settings of all pots or switches on this modification.

D. Insert this instruction sheet immediately behind the front cover of the Controller instruction manual.

### TROUBLESHOOTING

If other mod boards have been installed, troubleshoot them thoroughly before discarding this board as faulty.

Troubleshooting consists of checking the input and output voltages of the circuit while the drive is operating.

1. With power applied measure +5VDC  $\pm$ .5 VDC at 1TP.

2. Also measure -3.3 VDC  $\pm$ .3 VDC at 3TP.

3. Jumper 5TP to 1TP. Display should read -1888. If not, 13MC is suspect.

#### NOTE

The following test assumes proper signals on the Main PCB at the indicated test points.

4. Rotating switch 1SS through each of its positions (0-15), one at a time, will allow proper checkout at 6TP and the LED display, per Table 1.

5. If any reading is incorrect, replace Test Meter PCB.

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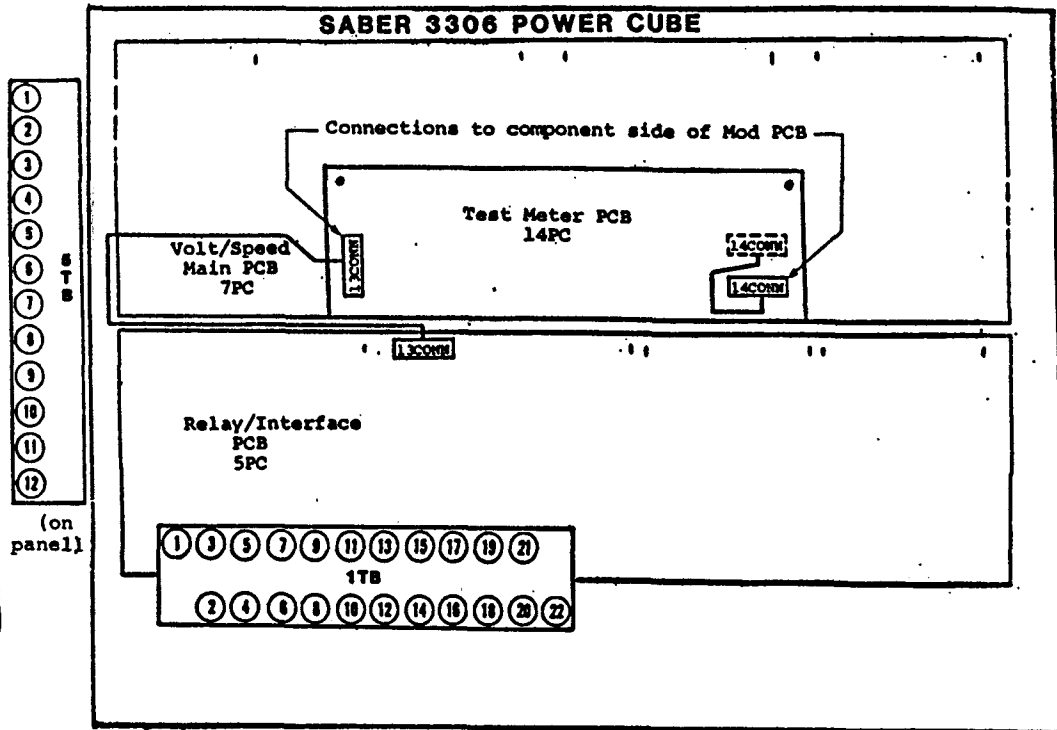


Figure 3. Saber 3306 Installation Diagram

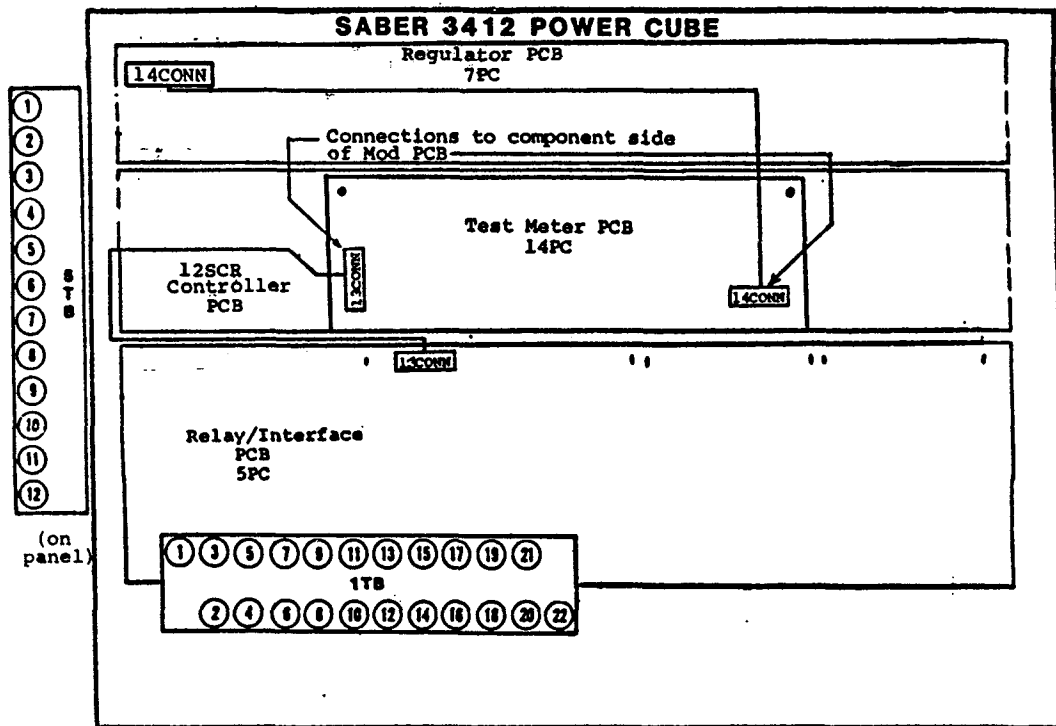


Figure 4. Saber 3412 Installation Diagram

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Table 1.

SWITCH POSITION	PIN ON 14CONN	MAIN PCB TEST POINT AND SIGNAL MONITORED	DC VOLTS MEASURED AT 6TP ON * TEST METER PCB	DISPLAY ON LED'S * (14-17 MC)
0	3	32TP (+10)	+0.99 ±0.04	9.9 ±0.4
1	4	34TP (-10)	-0.99 ±0.04	-9.9 ±0.4
2	15	31TP (+15)	-1.485 ±0.06	14.85 ±0.6
3	1	35TP (-15)	-1.485 ±0.06	-14.85 ±0.6
4	14	36TP (0 to -10)	-0.99 ±0.04 **	-9.9 ±0.4
5	2	30TP (0 to -10)	-0.99 ±0.04 **	-9.9 ±0.4
6	16	40TP (0 to -5)	-0.495 ±0.02 **	4.95 ±0.2
7	NO CONNECTION			
8	10	10TP (0 to +1)	+0.099 ±0.004 **	0.99 ±0.04
9	9	8TP (0 to -5)	-0.495 ±0.02 **	-4.95 ±0.2
10	7	37TP (+24)	+0.237 ±0.008	23.7 ±0.8
11	8	38TP (-24)	-0.237 ±0.008	-23.7 ±0.8
12	6	9TP (0 to +9)	+0.900 ±0.027 **	9.00 ±0.2
13	12	25TP (5.33 @ 460 VAC) (2.66 @ 230 VAC)	+0.459 ±0.02	4.59 ±0.2
14	5	39TP (0 to ±10)	+0.99 ±0.04	9.9 ±0.4
15	11	14TP (0 to -5)	-0.495 ± 0.02 **	-4.95 ±0.2

\* Within 4% of signal monitored

\*\* At Max signal

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