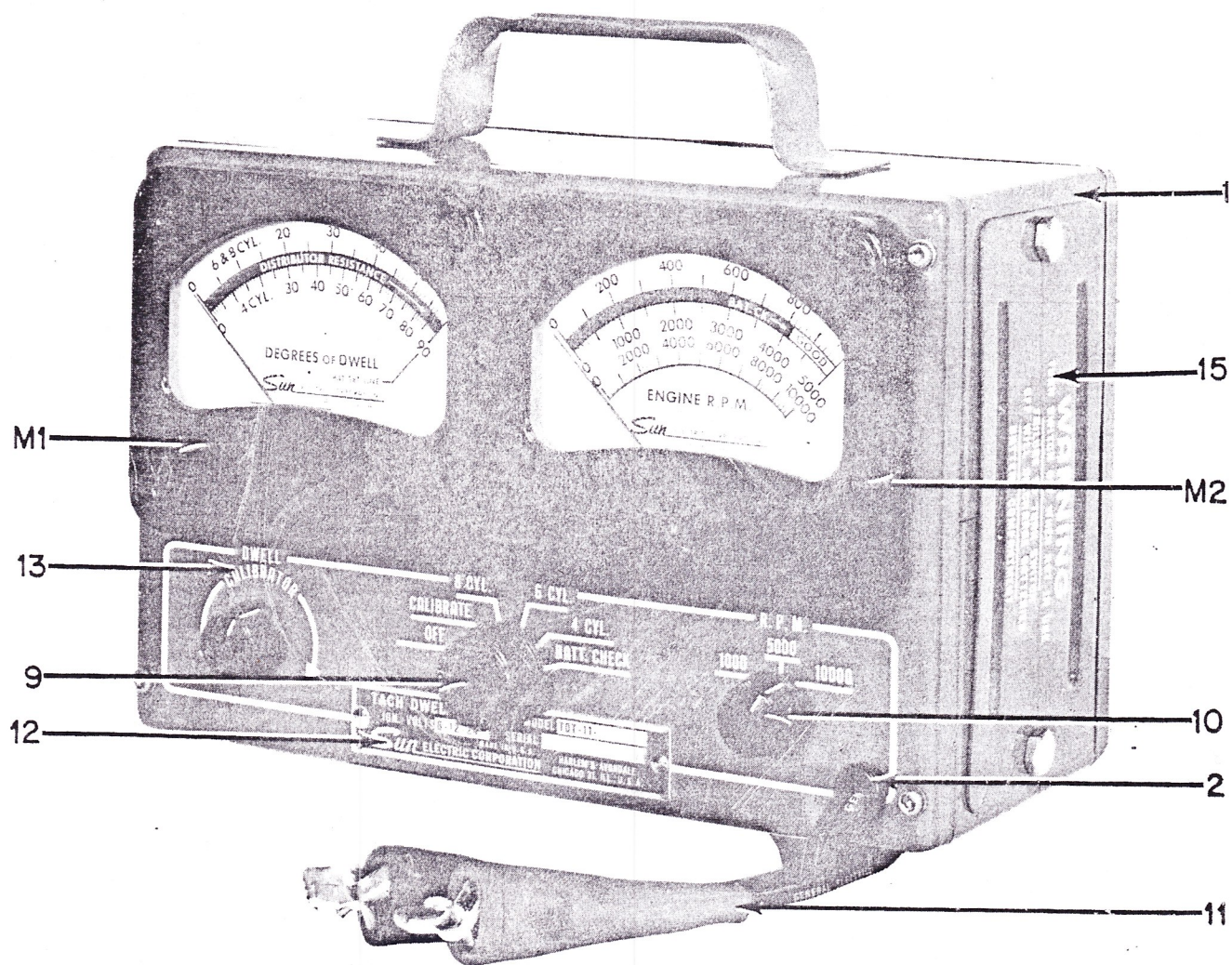
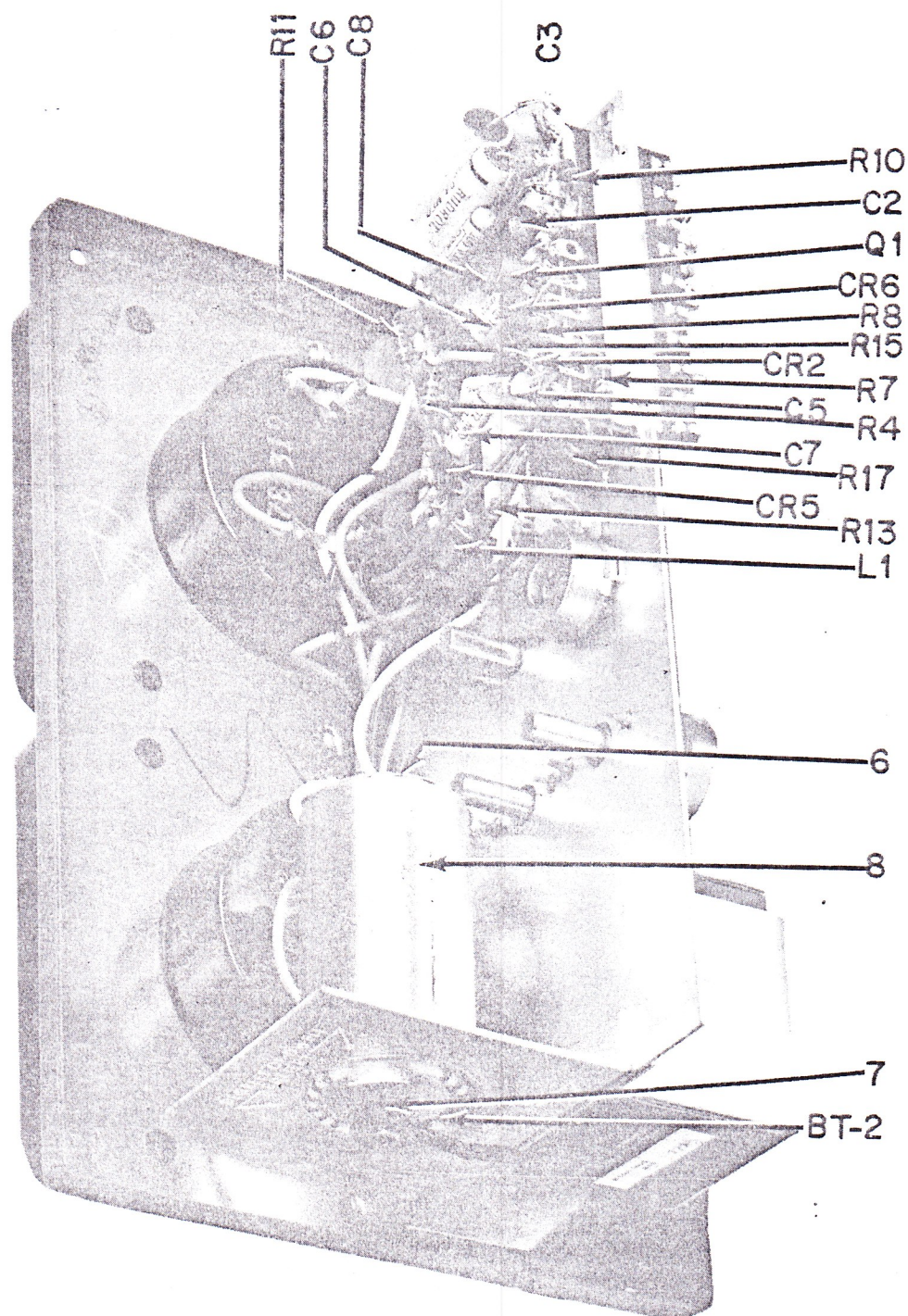


TACH-DWELL TESTER
FEBRUARY, 1965

MODEL: TDT-11
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PAGE 1

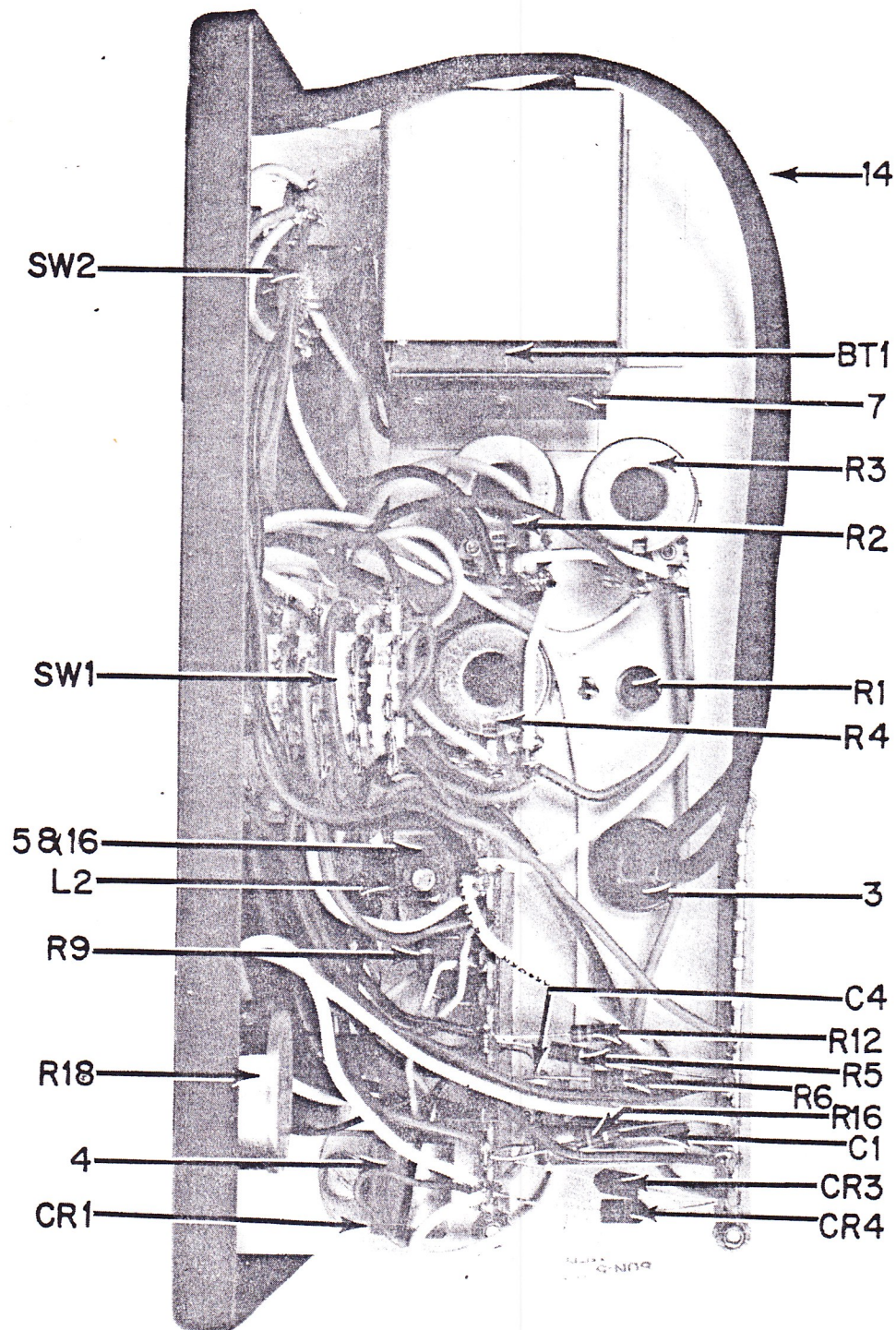
REPAIR MANUAL





TACH-DWELL TESTER
FEBRUARY, 1965

MODEL: TDT-11
SERIAL: "A"
PAGE 3



ITEM	DESCRIPTION	QUAN. USED	PART NO.
BT1	BATTERY, 9 Volt - M6	1	768-009
BT2	BATTERY, 1.5 Volt - "D" size	1	768-1
C1,2	CAPACITOR, 500 MFD - 4 Volt	2	679-58
C3	CAPACITOR, 1.5 MFD - 150 Volt	1	679-166
C4	CAPACITOR, .01 MFD - 100 Volt	1	679-180
C5	CAPACITOR, .10 MFD - 100 Volt	1	679-183
C6	CAPACITOR, .22 MFD - 100 Volt	1	679-188
C7	CAPACITOR, .02 MFD - 200 Volt	1	679-287
C8	CAPACITOR, .15 MFD - 200 Volt	1	679-141
C9	CAPACITOR, (Padders as Required)		679*
CR1	RECTIFIER, Selenium - Bridge	1	774-402
CR2,3,4,5	RECTIFIER, Silicon	4	771-117
CR6	DIODE, Zener	1	772-104
L1	COIL, Choke	1	484-2
L2	COIL, Choke	1	484-4
M1	METER, Dwell	1	678-319
M2	METER, Tach.	1	678-320
Q1	TRANSISTOR (N372A)	1	776-101
R1	RESISTOR, 25 K OHM - Variable	1	685-109
R2,3,4	RESISTOR, Dual - 0-600, 0-3K OHM	3	685-111
R5	RESISTOR, 150 OHM - 1/2 W - 10%	1	680-3
R6	RESISTOR, 100 OHM - 1/2 W - 10%	1	680-6
R7	RESISTOR, 470 OHM - 1/2 W - 10%	1	680-25
R8,9	RESISTOR, 1 K OHM - 1/2 W - 10%	2	680-43
R10	RESISTOR, 680 OHM - 1/2 W - 5%	1	680-67
R11	RESISTOR, 330 OHM - 1/2 W - 10%	1	680-106
R12,14	RESISTOR, 3300 OHM - 1/2W - 10%	2	680-113
R13	RESISTOR, 2700 OHM - 1/2W - 10%	1	680-124
R15	RESISTOR, 1800 OHM - 1/2 W - 10%	1	680-128
R16	RESISTOR, 270 OHM - 1/2 W - 10%	1	680-160
R17	RESISTOR, 10K OHM - 1/2 W - 10%	1	680-205
R18	RESISTOR, 300 OHM - Variable	1	685-59
SW1	SWITCH, 8 Pole - 6 Position	1	762-154
SW2	SWITCH, 3 Pole - 3 Position	1	762-52
1.	BOX ASSEMBLY	1	7020-491
2.	BUSHING, Heyco - 5P-1	1	2035-5
3.	BUSHING, Heyco Terminal (DC - 68-2-2)	1	2035-107
4.	CLAMP, Capacitor	1	1131-12
5.	CLAMP, Coil	2	1419
6.	CONTACT, Battery Spring	1	479-A
7.	CONTACT RETAINER ASS'Y, Battery	1	7008-109

TACH - DWELL TESTER
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MODEL: TDT-11
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ITEM	DESCRIPTION	QUAN: USED	PART NO.
8.	HOLDER, Battery	1	101-2
9.	KNOB, 1 1/8"	1	1492-6
10.	KNOB, 13/16"	2	1493-3
11.	LEAD ASSEMBLY, Test	1	6004-042
	Insulator, Red	1	190-2
	Insulator, Black	1	190-1
	Clip, Battery	2	672-3
	Lug, Faston	2	676-071
	Lug, Terminal	2	676-253
12.	NAME PLATE	1	1242-69
	Rivet	2	608-30
13.	PANEL, Front.	1	7014-628
14.	PANEL, Mounting	1	7008-108
	Strip, Terminal	4	1039-035
15.	PLATE ASSEMBLY, End	1	7009-204
	Pad, Sponge Rubber	2	7033-011
	Label, Tape.	1	682-216
16.	PLATE, Coil Mounting	2	1426
17.	PLUG WITH LEADS, Battery.	1	768-502

ACCESSORIES

MANUAL, Instruction.	1	692-587
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PACKING MATERIAL

CARTON	1	673-6
Scored and Slit Sheet	1	673-6-1-
Scored Sheet	1	673-6-2

CALIBRATION AND ADJUSTMENT PROCEDURE

EQUIPMENT NEEDED

SRT-1

Distributor Bench Set Up (Section 1-B, page 1, figure 2)
Calibration Distributor (1 lobe)
8 Lobe Distributor

PRELIMINARY INSPECTION

1. Perform visual inspection as outlined in the "Introduction to Repair Manual."
2. Install fresh flashlight cell.

TACHOMETER BATTERY CHECK

1. Disconnect R7 (470 ohm resistor) from R17 (10K resistor).
2. Turn Unit Selector switch to the BATTERY CHECK position and adjust the meter calibration rheostat (R1) until Tach meter reads full scale.
3. Release Unit Selector switch and resolder R7 (470 ohm resistor) into the circuit.
4. Turn Unit Selector switch to BATTERY CHECK position. Tach meter should read above 900 RPM on the 1000 RPM scale.

DWELL METER CALIBRATION

1. Install the 8 lobe distributor in the distributor tester as shown in section 1-B, page 1, figure 2.
2. Turn Unit Selector switch to the 4 CYLINDER position. Adjust Dwell Calibrator (R18) to 1/4 of its fully clockwise position. Adjust R2B until meter reads on the SET LINE.
3. Turn Unit Selector switch to the 6 CYLINDER position. Dwell meter should remain on the SET LINE.
4. Turn Unit Selector switch to the 8 CYLINDER position and adjust R3B until the Dwell meter reads 45° on the 60° scale.

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5. Turn Unit Selector switch to the CALIBRATE position and adjust R4B until the meter reads on the SET LINE.
6. Turn Unit Selector switch to the 8 CYLINDER position and connect test leads to the 8 lobe distributor, operating at 1000 distributor RPM. Adjust distributor points until the Dwell meter reads $22\frac{1}{2}^\circ$ on the 60° scale. Check the 4 and 6 CYLINDER positions for the following readings.

6 cylinder	30°
4 cylinder	45°

7. Remove unit leads from the distributor. Turn Unit Selector switch to the CALIBRATE position. The Dwell Calibrator should regulate a minimum of 3 divisions on either side of the SET LINE.
8. Turn Unit Selector switch to the 6 CYLINDER position and perform the circuit balance test by varying a D.C. voltage applied to the test leads, observing polarity, from 0 to 14 volts. Unit Dwell meter should fall to zero and remain on zero $\pm 1/2$ division from 4.5 to 14 volts.

NOTE: If reading is off scale to the left, replace CR3.

9. Repeat step 8 in the CALIBRATE position.

TACHOMETER CALIBRATION

1. Turn Unit Tach Range switch to 10,000 RPM position. Connect Unit test leads to the 8 lobe distributor observing proper polarity.
2. Use a fluorescent light to strobe the distributor tester at 2400 RPM.

NOTE: Strobing at the above speed can best be performed by observing the three jaw chuck.

Adjust the corresponding calibration rheostats for the readings shown in the following table.

Cylinder Position	Adjust	RPM
4	R4A	9600
6	R2A	6400
8	R3A	4800

NOTE: If 4 cylinder rheostat cannot be adjusted to give a tach reading of 9600 RPM, pad C6 the minimum amount necessary to allow R4A to adjust to the tach reading of 9600 RPM.

3. Strobe the three jaw chuck at 1200 RPM. Turn Unit switches to the 4 CYLINDER and 5000 RPM positions. Pad C8 until tach meter reads 4800 RPM $\pm 1/2$ division.
4. Turn Unit Test Selector to the 6 CYLINDER position. Strobe distributor machine at 1800 RPM and observe tach readings of 4800 RPM ± 1 division.

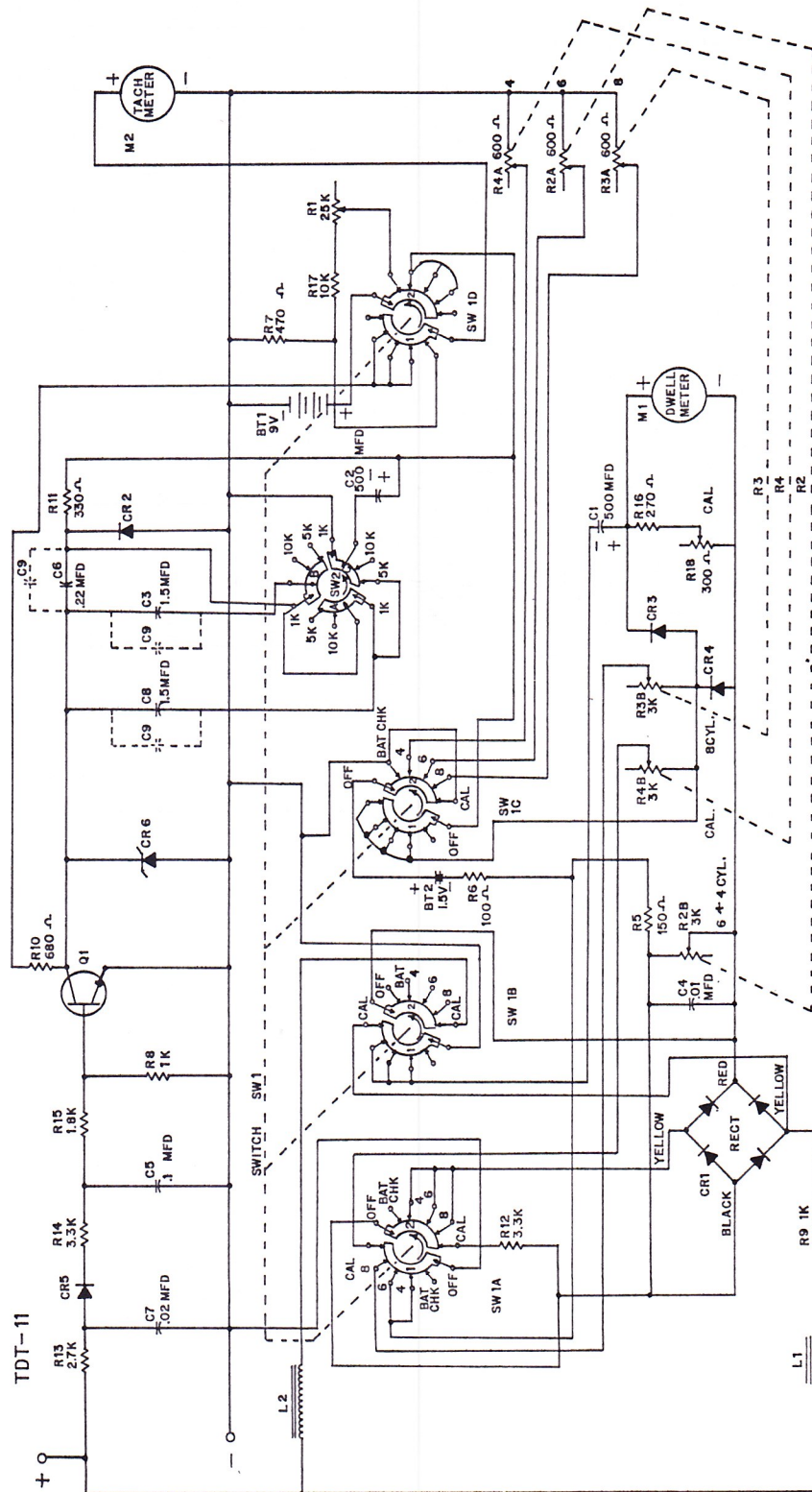
NOTE: Basic padding of condenser is performed in the 4 CYLINDER position, therefore, it may be necessary to readjust R2A to bring the tach reading into tolerance. If 1 division tolerance cannot be maintained in the 10,000 RPM and 5000 RPM ranges change the tach meter.

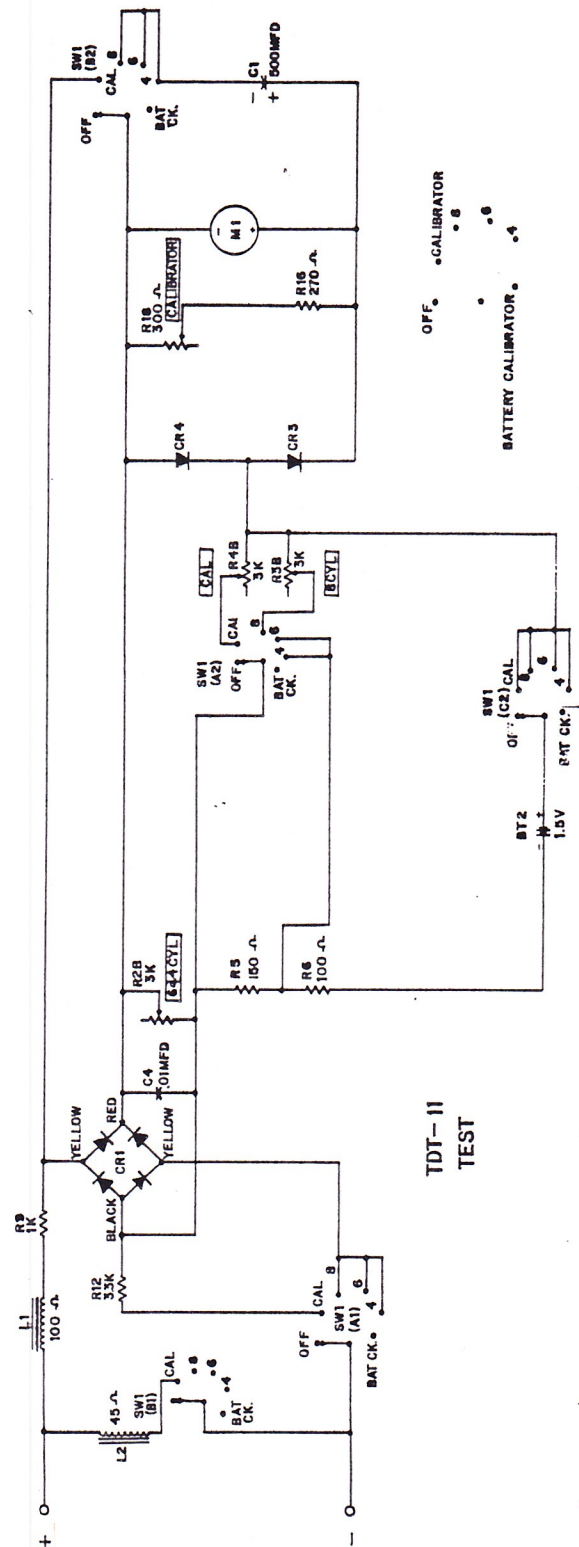
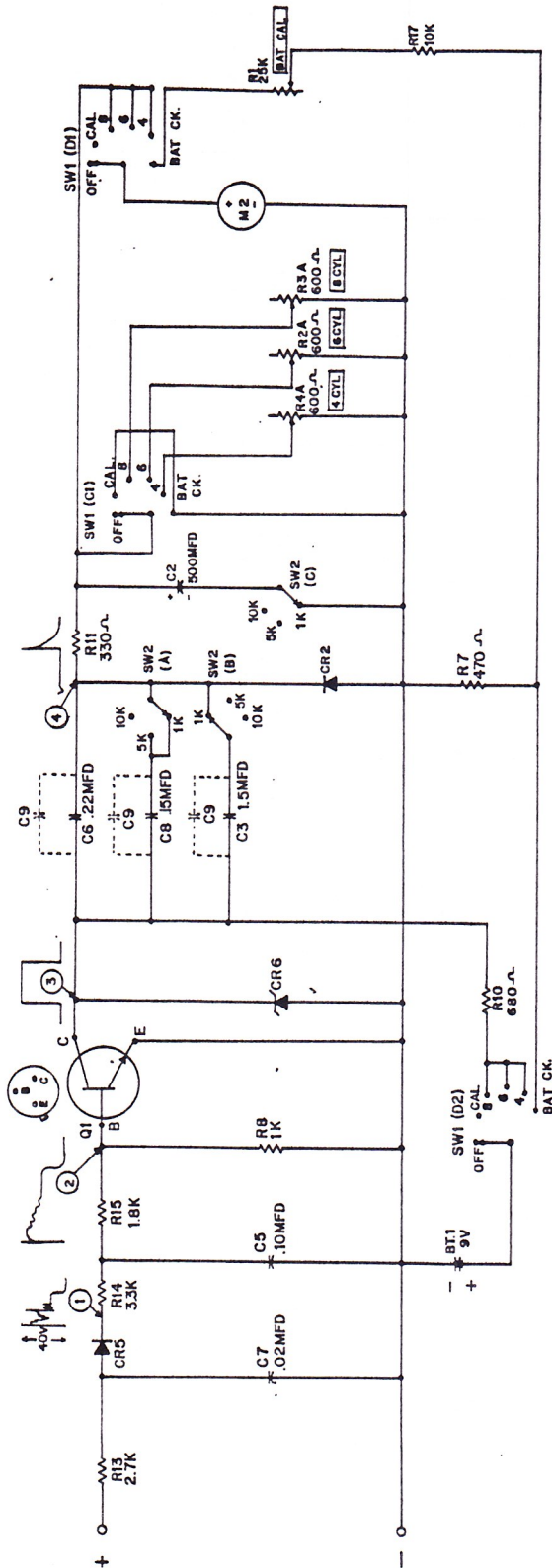
5. Turn the Unit Test Selector switch to the 8 CYLINDER position and strobe distributor machine at 2400 RPM and observe tach reading of 4800 RPM ± 1 division.

NOTE: Basic padding of condensers is performed in the 4 CYLINDER position, therefore, it may be necessary to readjust R3A to bring the tach reading into tolerance. If 1 division tolerance cannot be maintained in the 10,000 RPM and 5,000 RPM ranges change the tach meter.

6. Remove the 8 lobe distributor from the distributor machine and install the 1 lobe distributor. Turn Unit switches to the 4 CYLINDER and 1,000 RPM positions. Strobe the distributor machine at 1800 RPM. Pad C3 until tach meter reads 900 RPM. Check 8 and 6 CYLINDER positions for the following readings check ± 1 division.

Cylinder Position	RPM
8	450
6	600





USE BACK SIDE IF NECESSARY