

AMPEX TAPE RECORDERS  
SERVICE BULLETIN NO. 1B, MODEL 300

1. Brake bands.

There have been several instances in which the brake bands have broken on machines that are in use. Investigation of the broken bands has revealed that the fracture has always occurred in the same place.

The brake bands have therefore been redesigned to relieve all possible strains at the point which the breakage has occurred. Two reinforcing leaves have been added to relieve the strain. The link, A-330, has been reversed. This causes band to rest more firmly against the housing and thereby prevents any tendency for the brake to drag. Adjustment of proper brakeband length is made at the point where the band is attached to the A-330 link. It will be noted that the band is slotted for this purpose. The band should be positioned so that when the solenoid is operated, the band is expanded firmly and uniformly against the inner wall of the housing, completely free of the brake drum. However, care must be taken so that the projecting portion of the band near the A-330 link bows only slightly. Excessive bending of the band at this point may be the cause of future failure, or in the case of A.C. solenoids, the cause of excessive audible noise.

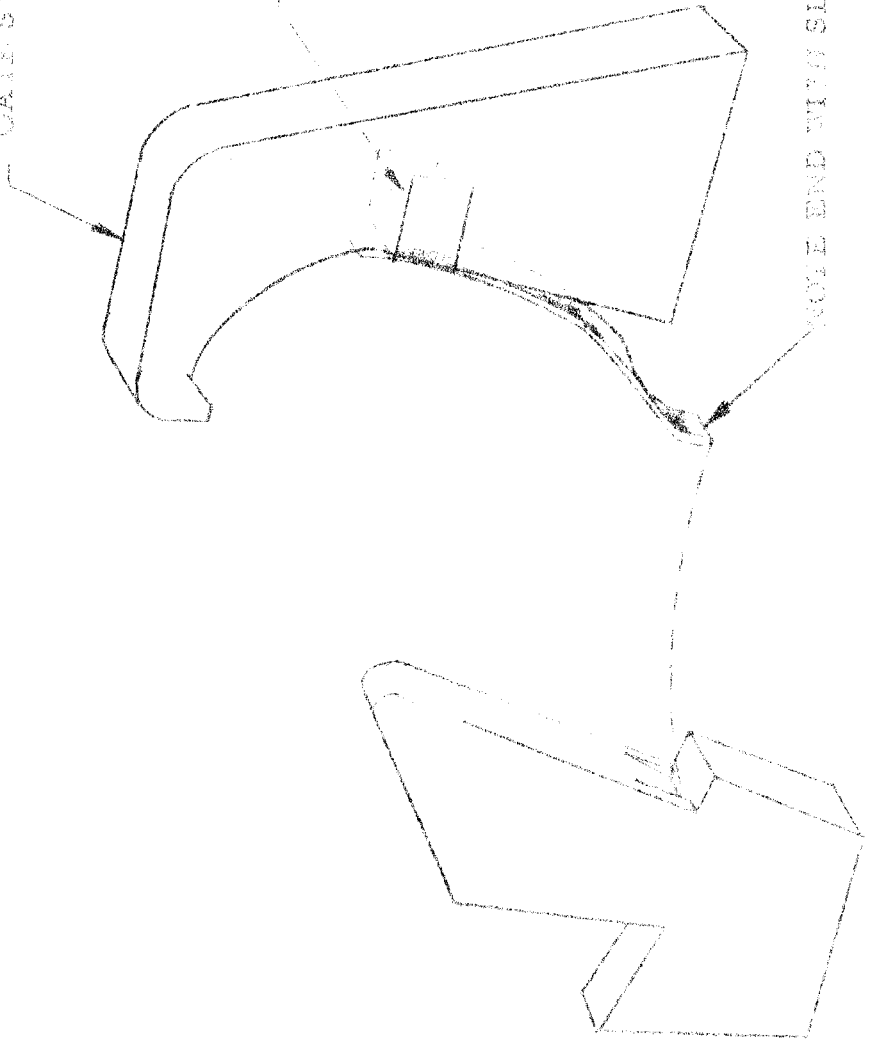
After installation, the brake bands must be "run in" before brake settings will be stable. This is done by putting the machine in Rewind or fast Forward, as the case may be, and disconnecting the brake solenoid. Allow the motor to run at full speed for 10 minutes with the brakes on.

After allowing sufficient time for the brakes to return to room temperature, adjust the brakes to provide a tension of 14 oz. on the standard NAB reel hub, when pulled in the direction in which the tape unwinds.

GATE STOP POST

USE MASKING TAPE TO  
TEMPORARILY SECURE LEAF  
SPRING IN PLACE

NOTE END WITH SLIGHT CRIMP



WHILE HOLDING GATE OPEN, PLACE GATE STOP POST IN POSITION AS INDICATED BY DOTTED LINE.  
LET GATE SLOWLY CLOSE. INSERT ALLEN SCREWS & TIGHTEN. REMOVE MASKING TAPE.

INSTALLATION OF GATE SPRINGS

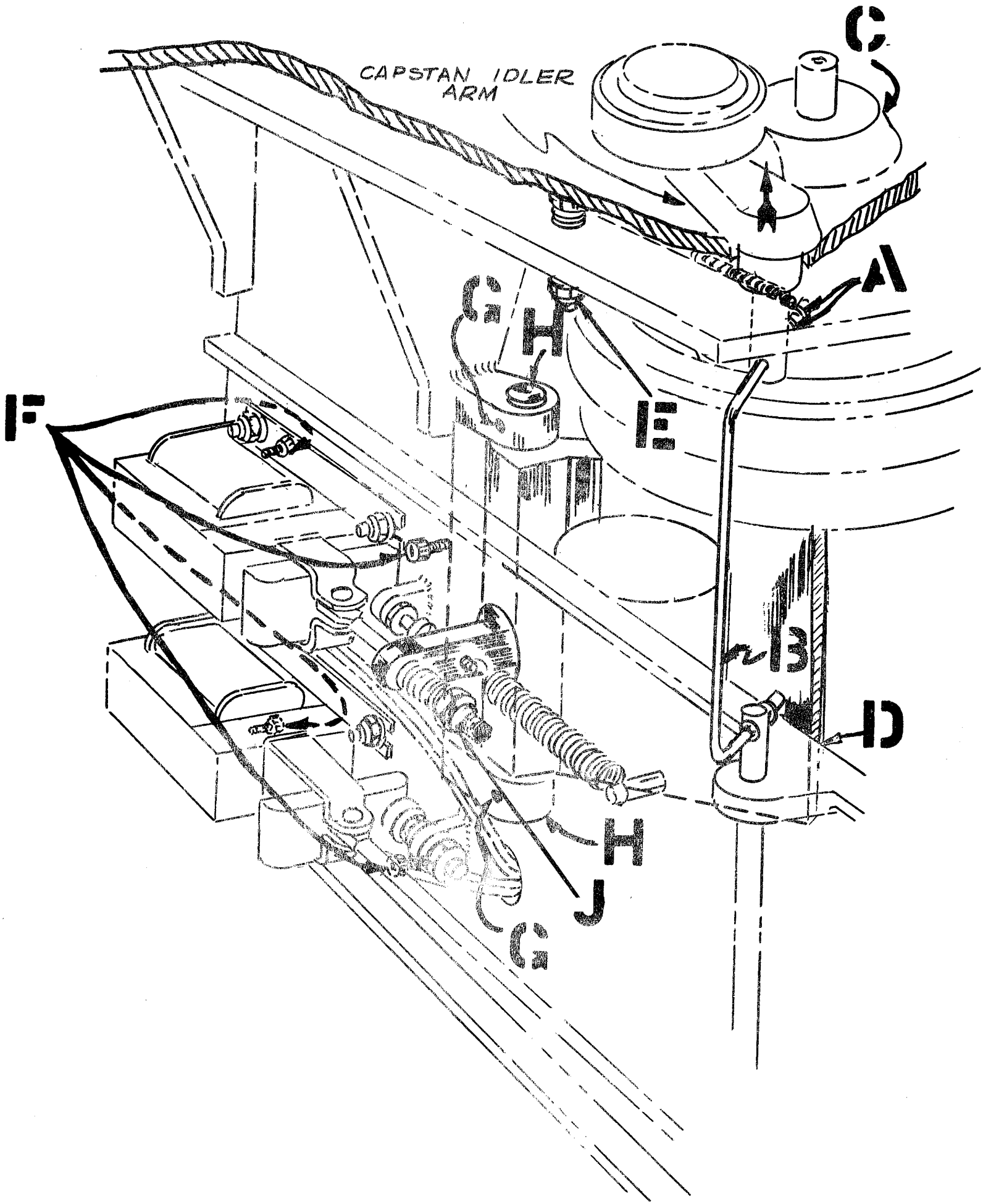
SERVICE BULLETIN #4  
MODEL 300

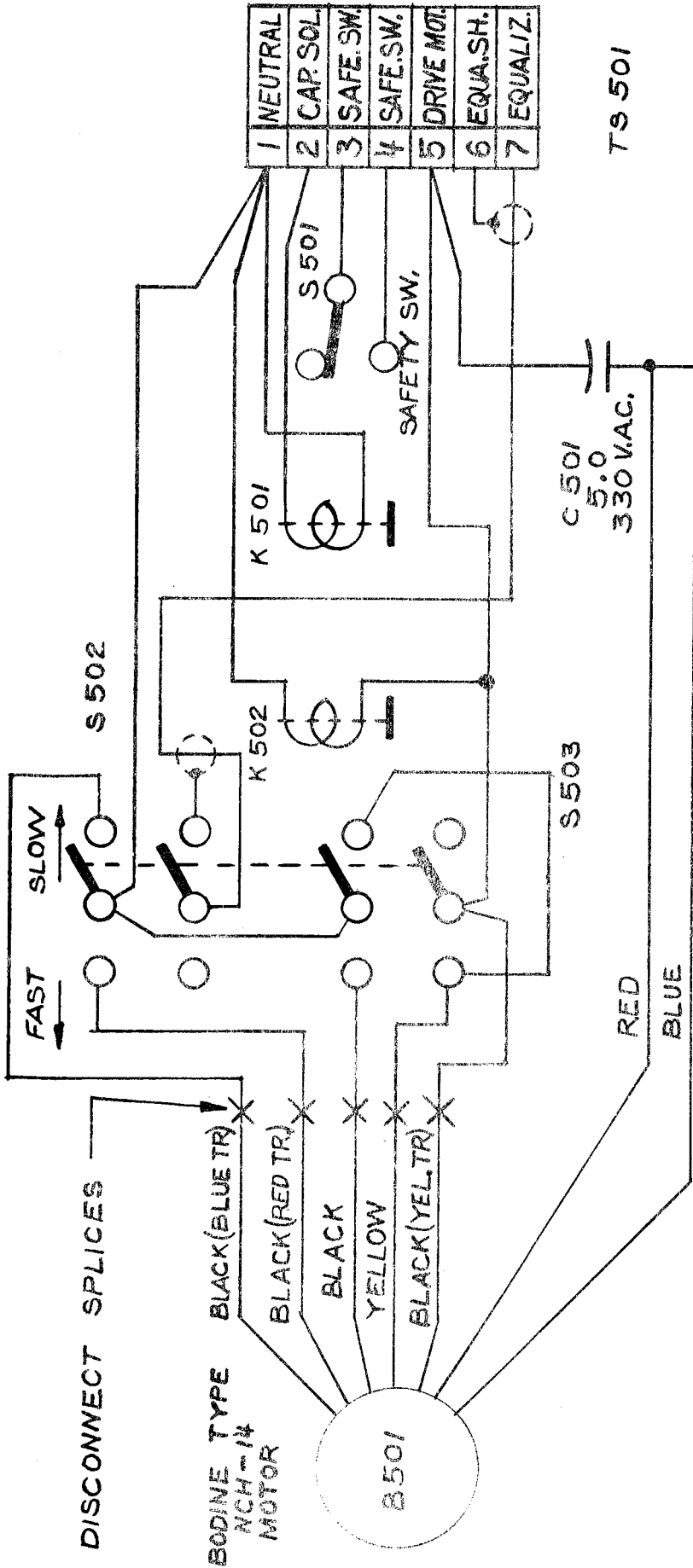
REPLACEMENT INSTRUCTIONS FOR REPLACING CYCLOHM DRIVE MOTOR  
WITH BODINE DRIVE MOTOR, SERIAL NOS. 113 TO 500

The Bodine Drive Motor which has been developed for the Model 300 runs at double the speed of the Cyclohm Drive Motor used on machines of Serial #113 to 500, and consequently uses a pulley of half the diameter. To install the Bodine Drive Motor therefore requires that a new hinge bracket be installed which will support the new motor in the proper position to engage the capstan flywheel. Also, since the windings on the Bodine Motor are different than on the Cyclohm Motor, it must be connected in a different manner.

The procedure for making this replacement is as follows:

1. Remove retaining rings "A" on Capstan Idler link "B".
2. Remove Capstan Idler link "B".
3. Remove Capstan Idler arm from Top-Plate.
4. Remove Capstan cap by loosening set screw "C".
5. Disconnect wiring harness from Drive Assembly terminal strip "D".
6. Remove Drive Assembly from machine by removing 4 elastic stop nuts "E" (only one shown).
7. Remove 4 screws "F" and drop solenoid mounting plate. Note that two screws are on the solenoid side and the remainder on the opposite side of the plate.
8. Carefully remove drive lok pins "G". Be careful not to damage ears of casting.
9. Remove two bracket hinge pins "H".
10. Remove bearings from old brackets and install in new bracket. CAUTION: In removing bearings be careful not to injure bearing dust shield. Injury to this shield could lead to freezing of the bearing.
11. Install new bracket and motor by reversing foregoing procedure.
12. Re-assemble remainder of Drive Assembly and re-install on Top-Plate.
13. Adjust solenoid adjusting nut "J" for proper speed. Since there is sometimes more than one point at which the proper speed is obtained, for stable operation, be sure nut is tightened to the point where further tightening reduces the Capstan speed.
14. Check motor return stop bumper. A 1/16" clearance between motor pulley and capstan fly-wheel is required when motor is at rest. Add or remove washers beneath bumper to attain required clearance.
15. For modified wiring for Bodine Motor see attached wiring Diagram EA-1552.





ALLOW 8" LEAD LENGTH FROM MOTOR TO DISCONNECT SPLICES

NAME OR MATERIAL

SCHEMATIC DIAGRAM  
BODINE DRIVE MOTOR FOR  
MACHINES SERIAL No 113 TO 500

TOLERANCE UNLESS OTHERWISE NOTED:

DECIMAL  
ANGULAR  
FRACTIONAL  
ECCENTRICITY



ELECTRIC CORPORATION  
SAN CARLOS, CALIFORNIA

FOR ASSEMBLY NO.

MARSH  
DRAWN BY:

2-2-51  
DATE

DWG. NO.

EA-1552

CHK. BY

APPROVED

MODEL

SCALE

AMPEX ELECTRIC CORPORATION

Howard Avenue at Laurel - San Carlos, California

PARTS REQUIRED FOR CONVERSION OF AMPEX RECORDERS,  
MODELS 300, 301 AND 302 TO BODINE DRIVE MOTOR

MODEL 300 - Serial No. 113 to 500

<u>Quantity</u>	<u>Description</u>	<u>Part No.</u>
1	Bodine Drive Motor Assembly	B1030
1	Bracket, Hinge	B1511
1	Capacitor *	C080

Serial No. 501 to 600

1	Bodine Drive Motor Assembly	B1030
1	Bracket, Hinge	B1072

MODEL 301 AND 302 - Serial No. 113 to 500

1	Bodine Drive Motor Assembly	B1075
1	Bracket, Hinge	B1981
1	Capacitor	C080
1	Capstan Assembly	C366

Serial No. 501 to 600

1	Bodine Drive Motor Assembly	B1075
1	Bracket, Hinge	B518-3
1	Capacitor	C080
1	Capstan Assembly	C366

Prices on request.

\* Only required where original motor was manufactured by Electric Industries. DeWolfe and Bodine Drive Motors use same capacitor.

AMPEX ELECTRIC CORPORATION

Howard Avenue at Laurel - San Carlos, California

SERVICE BULLETIN #4A

AMPEX MODEL 300, 301, 302

INSTRUCTIONS FOR REPLACING CYCLOHM OR ELECTRIC INDICATOR  
DRIVE MOTORS WITH BODINE MOTOR IN MACHINES, SERIAL NO. 501 TO 699

Replacement of the Cyclohm or Electric Indicator Motors in machines, Serial Nos. 501 to 699, is easily accomplished. It is only necessary to remove the old motor and the hinge bracket on which it is mounted and replace with the new parts. Removal is accomplished by disconnecting motor leads from terminal block, removing stop nut and spring connecting the solenoid to the hinge bracket, and removing the bracket and motor by unscrewing the old bracket from its hinge springs. The new parts will exactly replace the old. In Model 301 and 302 machines, the capstan assembly must also be replaced as a different size drive pulley is used with the Bodine Motor. The Bodine Motor (B-501 in the figure) should be connected in accordance with the accompanying diagram which is a replacement of Figure 7 in the Instruction Manual.

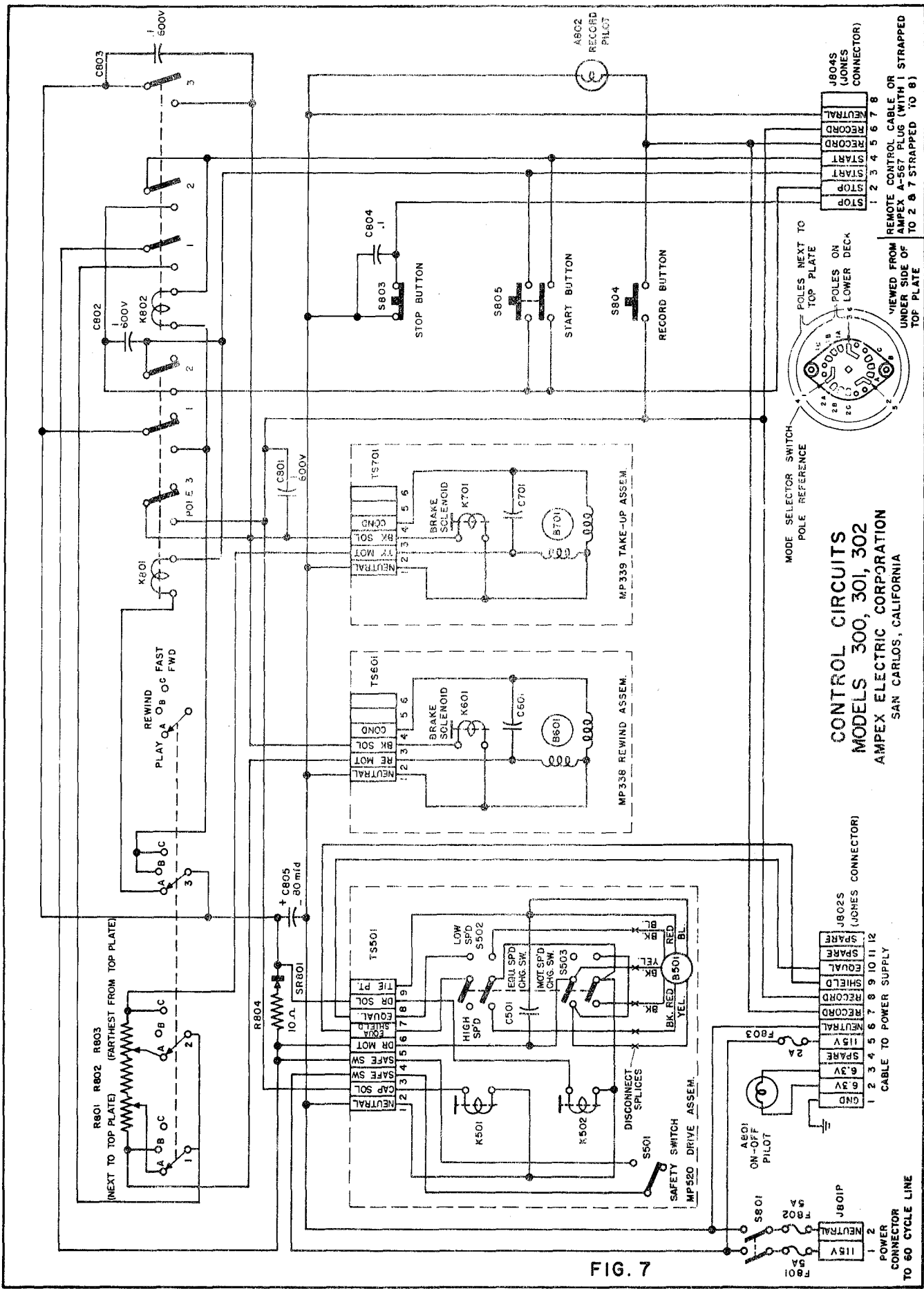
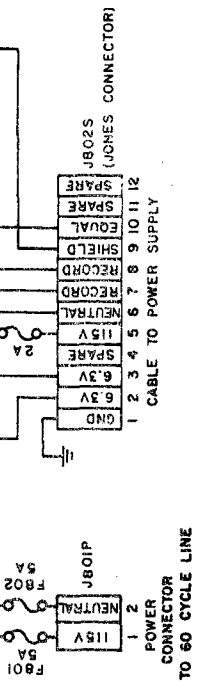
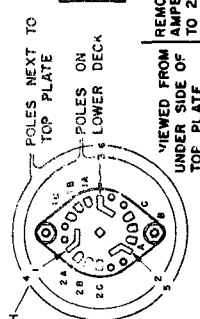


FIG. 7

CONTROL CIRCUITS  
 MODELS 300, 301, 302  
 AMPEX ELECTRIC CORPORATION  
 SAN CARLOS, CALIFORNIA

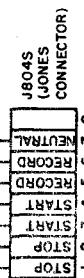


POWER CONNECTOR TO 60 CYCLE LINE

CABLE TO POWER SUPPLY

MODE SELECTOR SWITCH POLE REFERENCE

REMOTE CONTROL CABLE OR AMPEX A-567 PLUG (WITH 1 STRAPPED TO 2 & 7 STRAPPED TO 8)



POLES NEXT TO TOP PLATE

POLES ON LOWER DECK

VIEWED FROM UNDER SIDE OF TOP PLATE