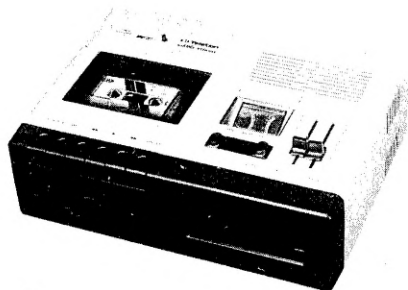




# SERVICE MANUAL

## Stereo Cassette Deck

### MODEL CD-50



Edition E

Specifications are subject to change without notice.

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## CASSETTE DECK ALIGNMENT PROCEDURE

### 1. Tape Speed Adjustment

Equipment Required:

1. Standard alignment tape of 3,000 Hz
2. Wow & Flutter Meter with Tape Speed Meter
3. Amplifier

Procedure:

- a. Connect the deck and speakers to the amplifier.
- b. Connect the Wow and Flutter meter to one of the speakers and playback the standard test tape.
- c. Adjust \*VR on the motor electronic governor circuit to indicate 3,000 Hz on the center frequency range of the meter.

\* This VR is installed inside the motor case. Insert a small screw driver in the hole under the Motor. The VR is covered by a black rubber shroud, but there is a cross-shaped cut in the rubber to allow access to the VR.

### 2. Head Azimuth Alignment

Equipment Required:

1. Standard alignment tape of 6,300 Hz
2. VTVM or Output Meter

Procedure:

- a. Connect the VTVM or Output Meter to one of the speakers and playback the test tape.
- b. Adjust the azimuth alignment screw to obtain maximum output voltage on the VTVM or Output Meter.

### 3. Record Bias Adjustment

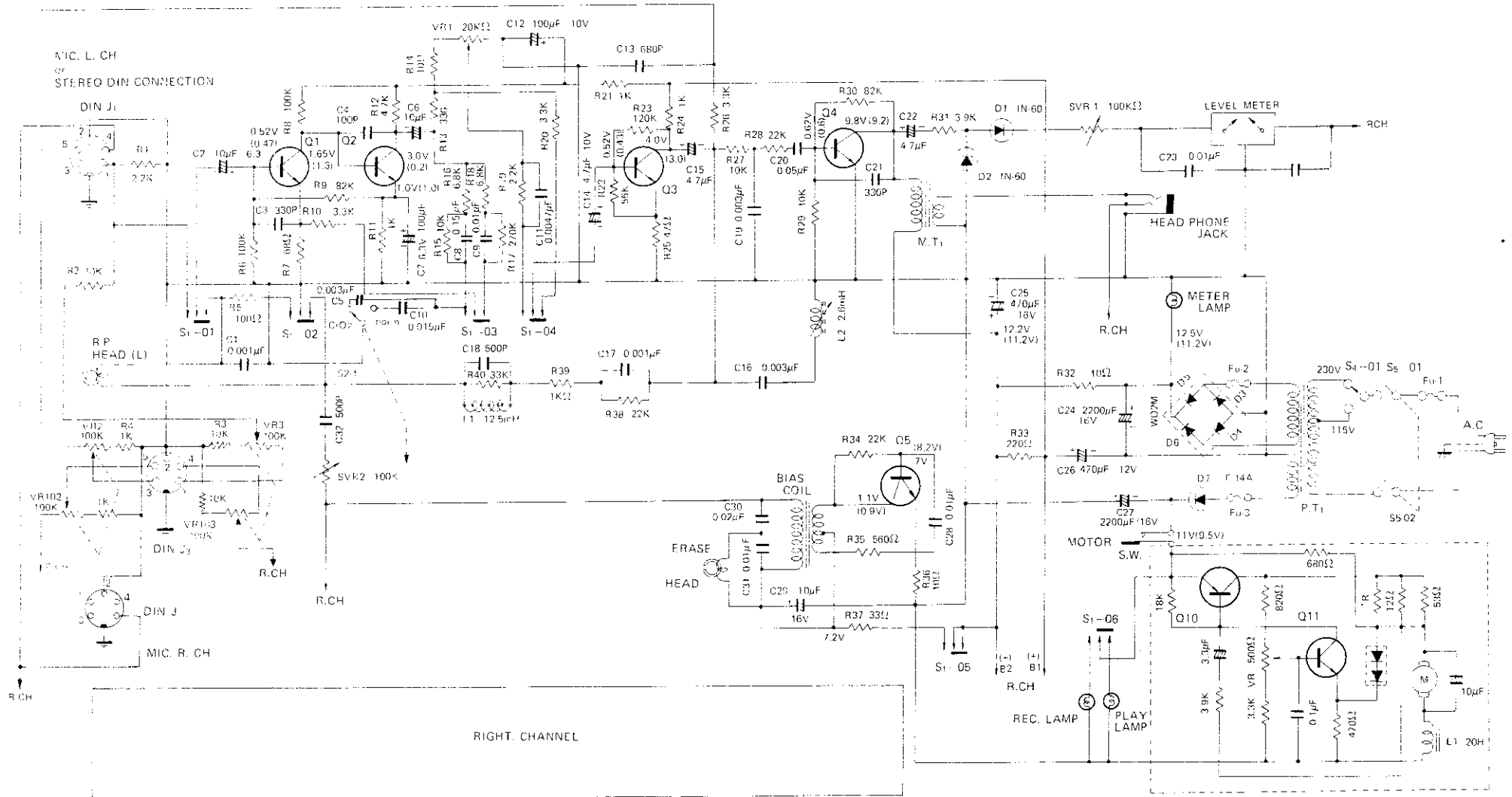
Equipment Required:

1. VTVM

Procedure:

- a. Connect the VTVM to both sides of R5 on the printed circuit board for the left channel.
- b. Set Selector Switch to Record Mode.
- c. Adjust SVR<sub>2</sub> to obtain 45mV on the VTVM.
- d. Change the connection to the right channel resistor and adjust SVR<sub>102</sub> to obtain 45mV on the VTVM.

# SCHEMATIC DIAGRAM

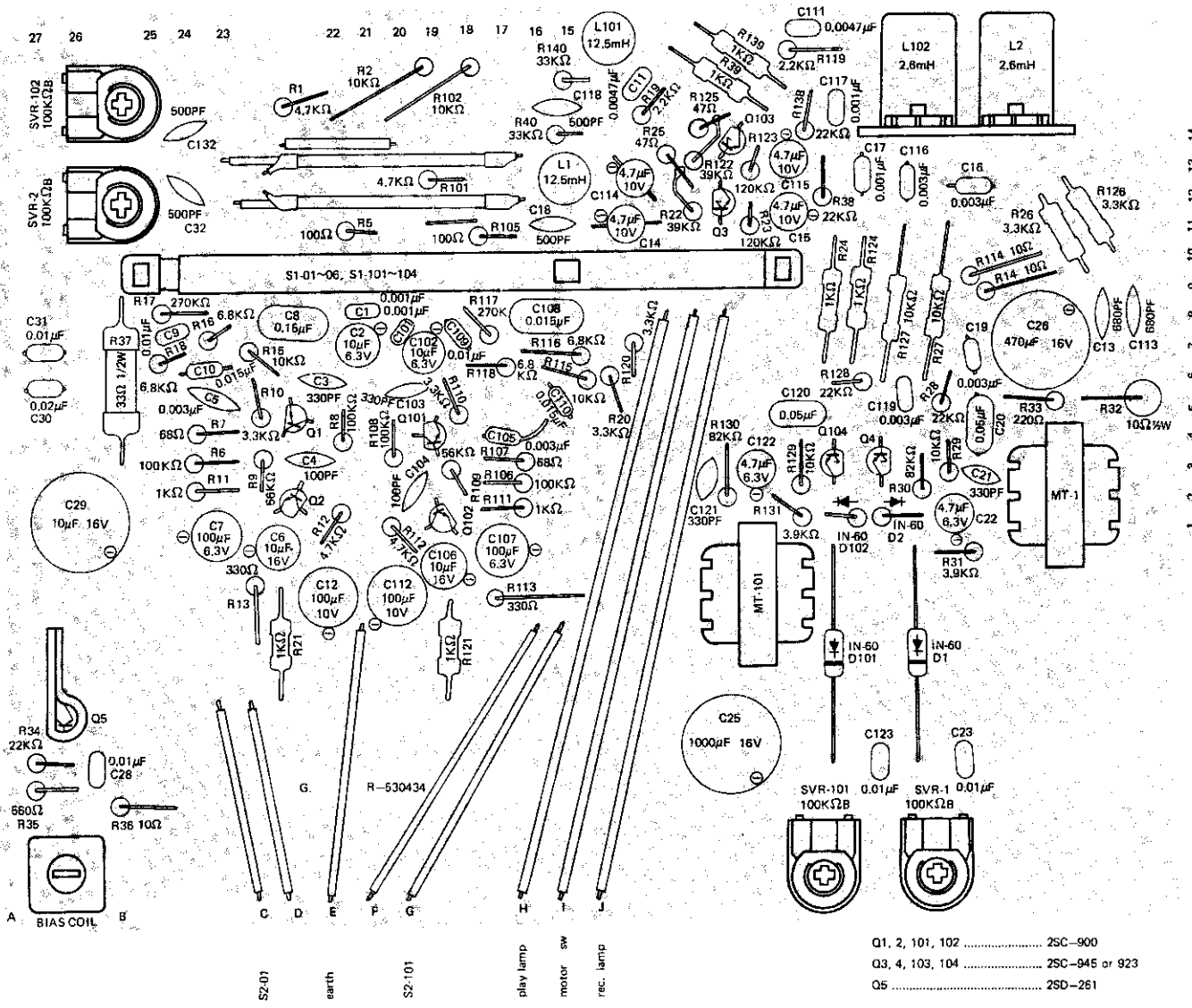


- Q<sub>1</sub> ~ Q<sub>2</sub> 2SC-900
- Q<sub>3</sub> ~ Q<sub>4</sub> 2SC-945 or 923
- Q<sub>5</sub> 2SD-261
- Q<sub>10</sub> 2SB-324
- Q<sub>11</sub> 2SC-828
- D<sub>1-2</sub> 1N-60
- D<sub>3-5</sub> W02M or 1N-4002 x 4

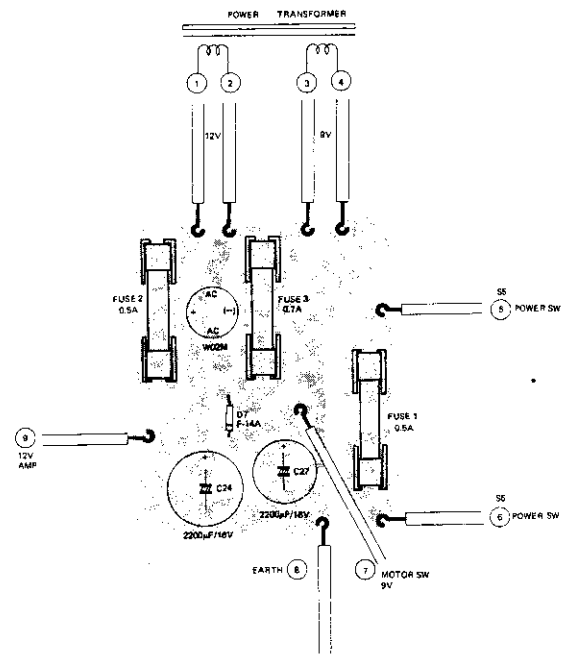
- S<sub>1</sub> 01 ~ 06 : Rec/play Switch, play position
- S<sub>2</sub> 01 ~ 02 : Tape Selector Switch, normal position

Voltage : Shown in playback mode.  
 ( ) record mode.  
 Osc. circuit ( ) values are non-osc. values.

# AMP P. C. BOARD (Top View)



# POWER SUPPLY BOARD (Top View)



- Q1, 2, 101, 102 ..... 2SC-900
- Q3, 4, 103, 104 ..... 2SC-945 or 923
- Q5 ..... 2SD-261

# MAIN PARTS LIST

(Standard Parts as Resistors, Capacitors etc., not listed here.)

| REF. NO.                       | PART NO.   | DESCRIPTION                             |
|--------------------------------|------------|---|
| <b>Chassis</b>                 |            |   |
|                                | R610392A   | Main Chassis                            |
|                                | R610393A   | Front Chassis                           |
|                                | R651880A   | Deck Mounting Metal                     |
|                                | R439011    | 5P Din Jack                             |
|                                | R422047    | Slide Switch 2 circuit 2 point 250V 1A  |
|                                | R361147    | Slide Control Volume A20K Ohm           |
|                                | R429083    | Push Switch 2 circuit 2 point 250V 4A   |
|                                |            | Push Switch 50V 0.5A 2 circuit 2 point  |
|                                | R590068    | Level Meter                             |
|                                | R411111    | Pilot Lamp 9V 40mA                      |
|                                | R651898    | Door Holding Metal                      |
|                                | R361148    | 2 Gang Rotary Volume 100K Ohm A         |
|                                | R851492    | Switch Mask                             |
|                                | R851493    | Volume Mask                             |
|                                | R830627    | Meter Cushion                           |
|                                | R830584    | Lamp Holder (for Meter)                 |
|                                | R439035    | Headphone Jack                          |
|                                | R830589    | Lamp Holder (for Play, Rec.)            |
|                                | R110165    | Power Transformer                       |
|                                | R510007    | Cassette Deck Mecha. Ass'y              |
| <b>Power Supply Board</b>      |            |   |
|                                |            | Silicon Rectifier W02M or 1N4002 x 4    |
|                                |            | Silicon Rectifier F-14A                 |
|                                | R412027    | Fuse L = 30mm 0.5A                      |
|                                | R412030    | Fuse L = 30mm 0.7A                      |
| <b>Amp. P.C. Board</b>         |            |   |
|                                | R422048    | Slide Switch 10 circuit 2 point         |
|                                | R130018    | Matching Transformer P:4K Ohm S:8 Ohm   |
|                                | R382014    | Semi-Fixed Variable Resistor B 100K Ohm |
|                                | R131004    | Bias Osc. Coil                          |
|                                | R161002    | Bias Trap Coil (Variable type)          |
|                                | R161003    | Bias Trap Coil (Fixed type)             |
| <b>Cabinet</b>                 |            |   |
|                                | R840698    | Cabinet Cover (Silver)                  |
|                                | R840700    | Cabinet Bottom Cover (Silver)           |
|                                | R840760    | Cabinet Cover (Black)                   |
|                                | R840761    | Cabinet Bottom Cover (Black)            |
|                                | R840765    | Front Cabinet                           |
|                                | R811436    | Meter Cover                             |
|                                | R871367    | Lens Cover (Silver)                     |
|                                | R871473    | Lens Cover (Black)                      |
|                                | R871399    | Volume Knob (Black)                     |
|                                | R871405    | Select Knob (Black)                     |
|                                | R871472    | Switch Hole Cover (Black)               |
|                                | R871368    | Lens (rec)                              |
|                                | R871467    | Lens (play)                             |
|                                | R871369    | Door                                    |
| <b>Cassette Deck Mechanism</b> |            |   |
| 1                              | 201151-6   | Chassis Ass'y                           |
| 2                              | 301160-8   | Head Chassis Ass'y                      |
| 3                              | 404117-0   | Rev. Cue Spring                         |
| 4                              | 18611150-3 | Head Chassis Back Spring                |
| 5                              | 401030-1   | Plate Spring                            |
| 6                              | 401162-3   | Pinch Roller Lever Ass'y                |
| 7                              | 404114-2   | Pinch Roller Spring                     |
| 8                              | R461031    | R/P Head WY-436                         |
| 9                              | 404111-0   | Head Spring                             |
| 10                             | R461032    | Erase Head WY-241                       |
| 11                             |            |   |
| 12-1                           | 401152-0   | Stop Lever                              |
| 12-2                           | 301153-0   | REC Lever                               |
| 12-3                           | 401154-0   | REW Lever                               |
| 12-4                           | 401155-0   | PLAY Lever                              |
| 12-5                           | 401156-0   | F.F. Lever                              |
| 12-6                           | 401157-0   | Pause Lever                             |
| 13                             | 401014-1   | Brake Movement Plate                    |
| 14                             | 404320-0   | Brake Movement Spring                   |
| 15                             | 402070-0   | Guide                                   |
| 16                             | R811413A   | Cassette Case                           |
| 17                             | R700343    | Cassette Pressure Spring                |
| 18                             | R700342    | Cassette Up Spring (Coil Spring)        |
| 19                             | 405122-0   | Rubber Ring                             |
| 20                             | 401046-0   | Cassette Up Stopper                     |
| 21                             | R925001    | Cassette Case Screw                     |
| 22                             | 401025-5   | Rec. Safety Plate                       |
| 23                             | 402056-0   | Rec. Safety Plate Shaft                 |
| 24                             | 404210-0   | Rec. Safety Plate Spring                |
| 25                             | 401026-1   | Pause Lever                             |
| 26                             | 404109-0   | Pause Arm Spring                        |
| 27                             | 401024-1   | Pause Lock                              |
| 28                             | 404105-0   | Pause Lock Spring                       |

| REF. NO. | PART NO.       | DESCRIPTION                       |
|----------|----------------|-----------------------------------|
| 29       | 401033-0       | Pause Arm                         |
| 30       | 401021-1       | Rev. Cue Lever                    |
| 31       | 404117-0       | Rev. Cue Spring                   |
| 32       | 401158-1       | Brake Arm Ass'y                   |
| 33       | 404116-1       | Brake Spring                      |
| 34       | R651881        | Mecha. Cover                      |
| 35       | R811408        | Cassette Button                   |
| 36       | R680289        | Shaft for Cassette Button         |
| 37       | 404106         | Lock Cam Spring                   |
| 38       | 401011-0       | Rev. Cue Cam                      |
| 39       | 401009-4       | FF. Rev. Cam                      |
| 40       | 401598-0       | P/R Cam                           |
| 41       | 401010-2       | Stop Cam                          |
| 42       | 401013-0       | Push Lever Guide                  |
| 43       | 404107-0       | Push Lever Spring                 |
| 44       | 403099-0       | Plastic Support                   |
| 45       | 401022-1       | Cassette Case Lock Lever          |
| 46       | 404109-0       | Cassette Case Lock Spring         |
| 47       | 402086-0       | Play Lever Bush                   |
| 48       | 401027         | Rev. Move. Plate                  |
| 49       | R421055        | Leaf Switch LSA-1139B-2           |
| 50       | R700344        | Rec. Switch Spring (Board Spring) |
| 101      | R480038        | DC Motor MH1-5R9B                 |
| 102      | 401032-1       | Motor Bracket                     |
| 103      | 402232-0       | Motor Pulley                      |
| 104      | 405212-0       | Square Belt                       |
| 105      | 303179-6       | Gear Holder Ass'y                 |
| 106      |                |                                   |
| 107      |                |                                   |
| 108      | 401181-0       | Fly Wheel Retainer                |
| 109      | 409130-0       | Bearing Spacer                    |
| 110      | 407125-0       | Bearing                           |
| 111      | 405118-2       | Fly Wheel Belt                    |
| 112      | 306123-4       | Fly Wheel                         |
| 113      | 401133-0       | Pause Stopper                     |
| 114      | 301177-1       | Reel Table Chassis Ass'y          |
| 115      | 404484-0       | Reel Table Pressure Spring        |
| 116      | 403090-4       | Wheel                             |
| 117      | 408127-1       | Clutch Felt                       |
| 118      | 404103-4       | Motion Pulley Spring              |
| 119      | 408127-1       | Clutch Felt                       |
| 120      | 30388-6        | Reel Table                        |
| 121      | 403098-1       | Reel Cap                          |
| 122      | 303095-4       | Motion Pulley                     |
| 123      | 404104-1       | Slide Plate Spring                |
| 124      | 401167-1       | FF. Idler Lever Ass'y             |
| 125      | 404106-1       | Spring                            |
| 126      | 403097-0       | FF. Rev. Idler                    |
| 127      | 403097-0       | FF. Rev. Idler                    |
| 128      | 401169-1       | Center Idler Lever Ass'y          |
| 129      | 404108-0       | Center Idler Lever Spring         |
| 130      | 402086-0       | Play Lever Bush                   |
| 131      | 401164-0       | Take Up Idler Arm (A) Ass'y       |
| 132      | 401165-2       | Take Up Idler Arm (B) Ass'y       |
| 133      | 403096-0       | Take Up Idler (L)                 |
| 134      | 403093-1       | Take Up Idler (S)                 |
| 135      | 404112-3       | Take Up Clutch Spring             |
| 136      | 408126-0       | Take Up Clutch                    |
| 137      | 402059-0       | Take Up Idler Bush                |
| 138      | 401170-2       | Rev. Idler Lever Ass'y            |
| 139      | 403097-1       | FF. Rev. Idler                    |
| 140      | 402086-0       | Play Lever Bush                   |
| 141      | 404382-0       | Rev. Spring                       |
| 142      | T3A-R-2-10φ-5L | Counter                           |
| 143      | 401211-2       | Counter Bracket (B)               |
| 144      | 405120-2       | Counter Belt                      |
| 145      | 401073-3       | Shut off Arm                      |
| 146      | 403101-7       | Shut off Lever                    |
| 147      | 404107-0       | Push Lever Spring                 |
| 148      | 401034-1       | Lod Guide                         |
| 149      | 401178-0       | Movement Lever Ass'y              |
| 150      | 401035-3       | Lod                               |
| 151      | 401036-2       | Slide Plate                       |
| 152      | 402086-0       | Play Lever Bush                   |

# CASSETTE MECHANISM

