



HITACHI

SERVICE MANUAL

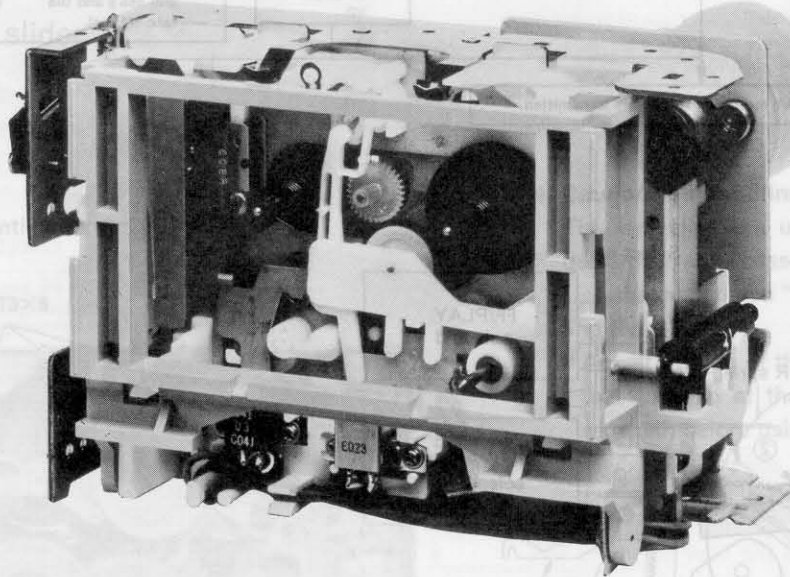
TK

No. 1474E

FL-12 Mechanism

TECHNICAL INFORMATION

This information manual describes Cassette Deck Chassis FL-12 for model D-E55, so read this together with the Service Manual No. 1470.



CONTENTS

| | |
|------------------------------------|---|
| Disassembly | 2 |
| Explanation of new mechanism | 3 |
| Inspection/adjustment | 6 |
| Lubrication..... | 7 |
| Exploded view | 8 |
| Replacement parts list | 9 |

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

FL-12 Mechanism

January 1981

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Codes : All Codes Used



DISASSEMBLY

1. Cassette holder

Press the stopper shown inside the circle in Fig. 1 in the direction of the arrow to remove it, and then push the cassette holder forward and down.

Next, remove the spring shown in Fig. 2, adjust the direction of the stopper inside the circle and remove the cassette holder.

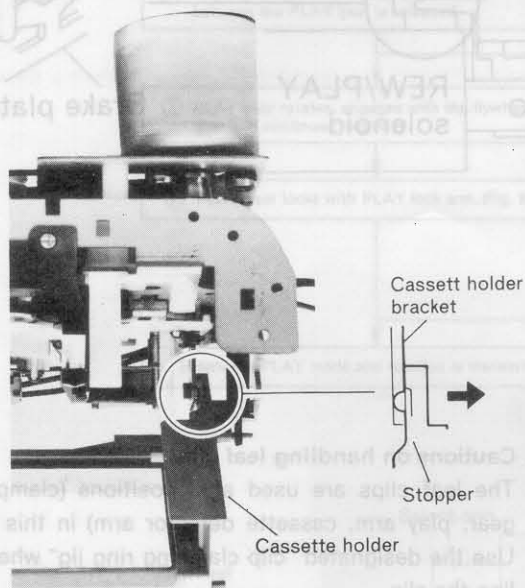


Fig. 1

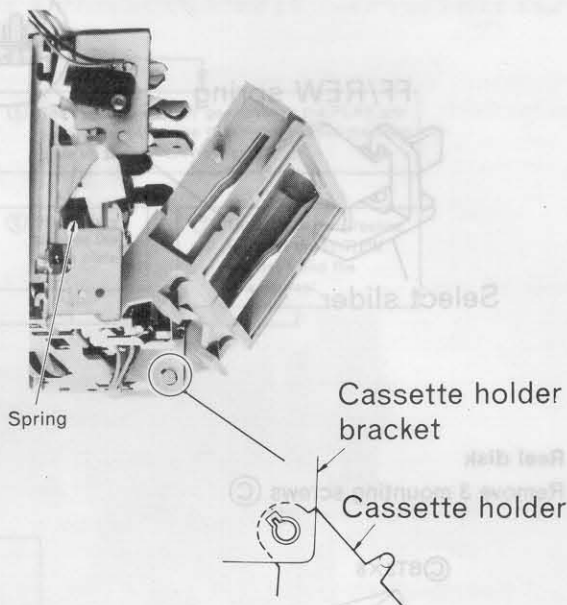


Fig. 2

2. Flywheel bracket ass'y and solenoid plate

1) Flywheel bracket ass'y

Remove the take-up belt from the take-up pulley and set it in the groove of the flywheel bracket ass'y, then set the flywheel belt in the groove of the chassis, and remove the mounting screw (A).

2) Solenoid plate

Remove the 3 mounting screws (B).

*Check the position shown in Fig. 4 when installing the solenoid plate.

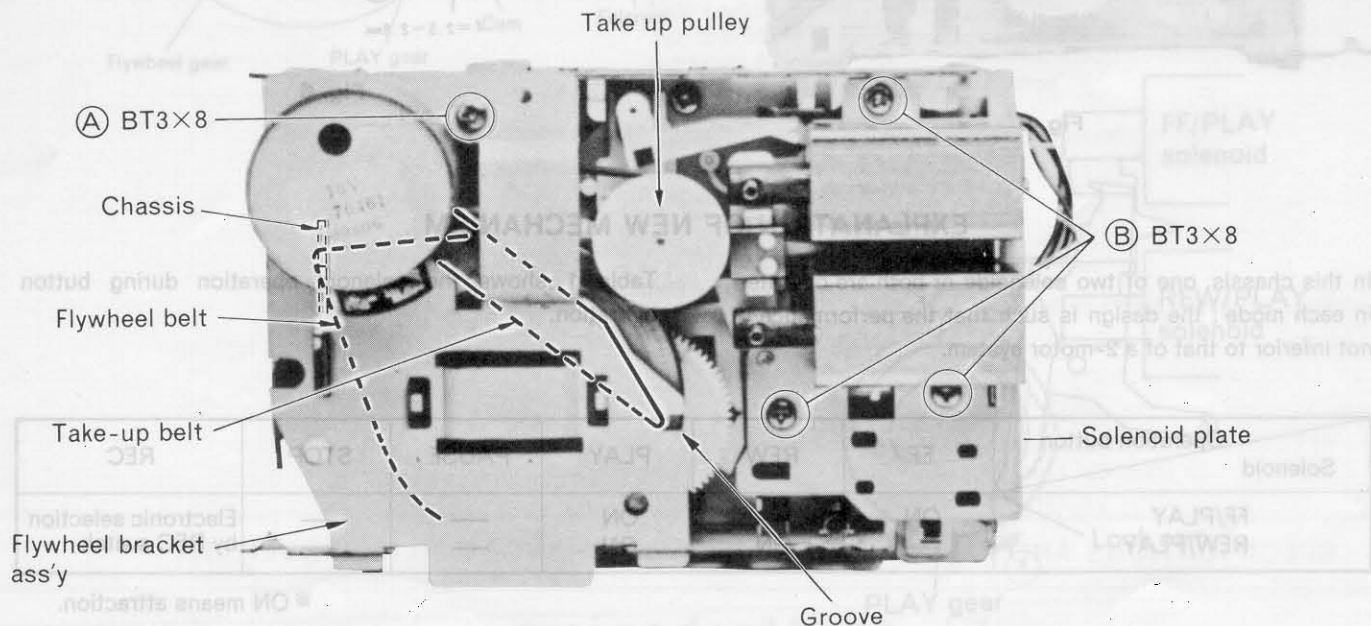


Fig. 3



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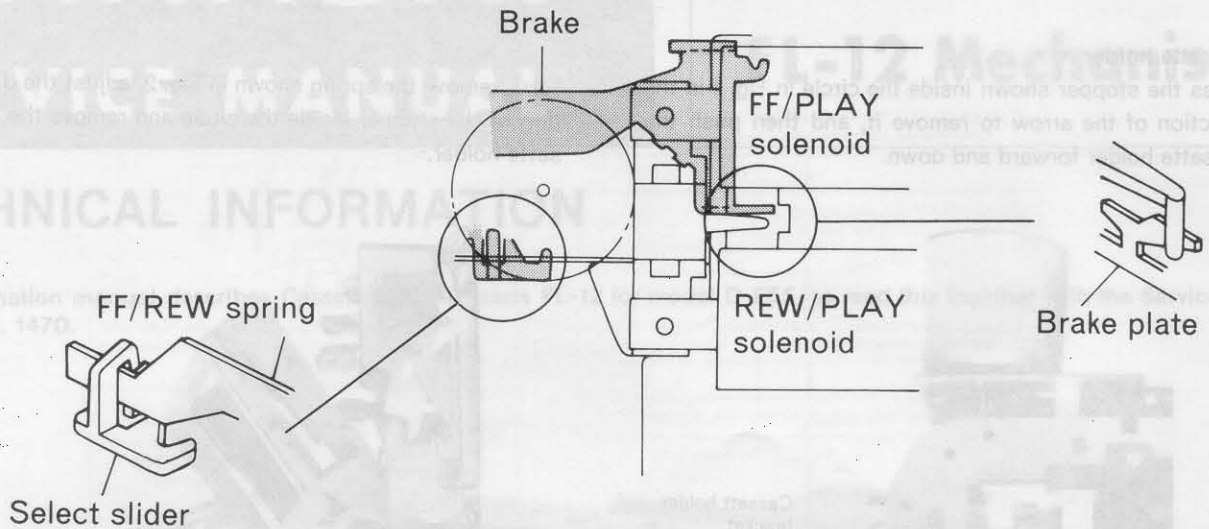


Fig. 4

3. Reel disk

Remove 3 mounting screws (C)

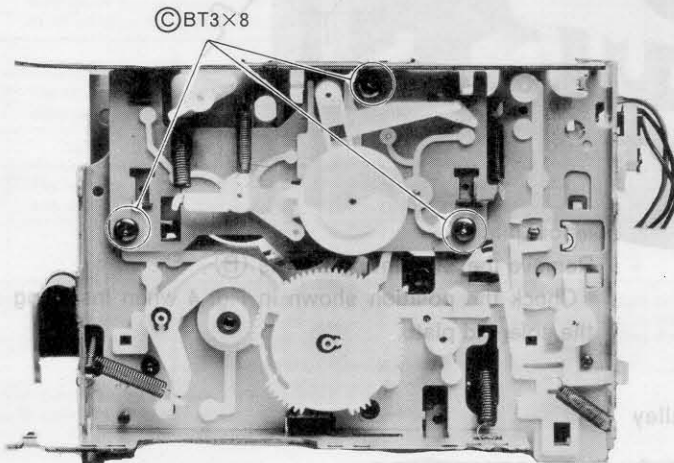


Fig. 5

4. Cautions on handling leaf clip

The leaf clips are used at 3 positions (clamping play gear, play arm, cassette detector arm) in this chassis. Use the designated "clip clamping ring jig" when installing the clip.

* Adjust rattling of the jig using an adjustment screw so that the gap at the tip (l) is 2.5–2.8mm when it is widened, before using it.

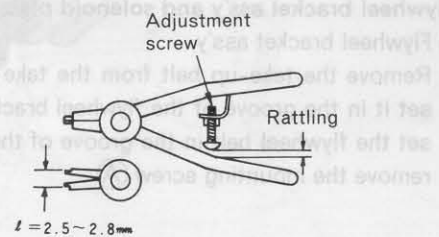


Fig. 6

EXPLANATION OF NEW MECHANISM

In this chassis, one of two solenoids or both are operated in each mode: the design is such that the performance is not inferior to that of a 2-motor system.

Table 1 shows the solenoid operation during button operation.

| Operation button \ Solenoid | FF | REW | PLAY | PAUSE | STOP | REC |
|-----------------------------|----|-----|------|-------|------|------------------------------------|
| FF/PLAY | ON | — | ON | — | — | Electronic selection by REC switch |
| REW/PLAY | — | ON | ON | — | — | |

* ON means attraction.

Table 1

1. PLAY mode

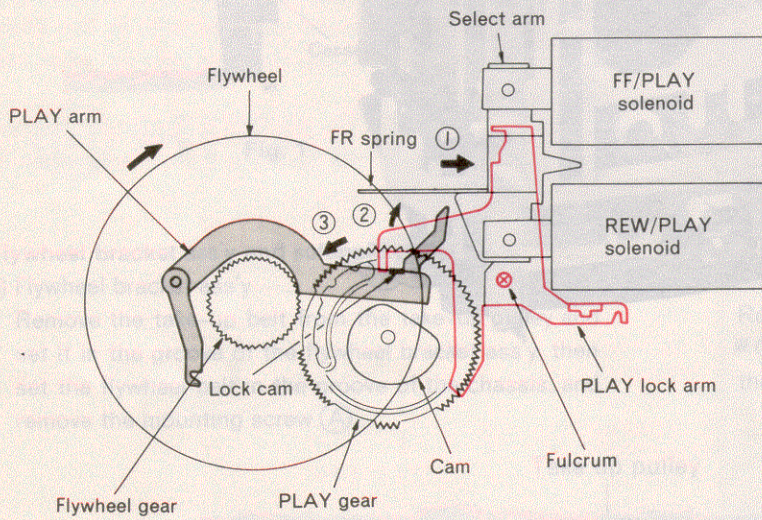
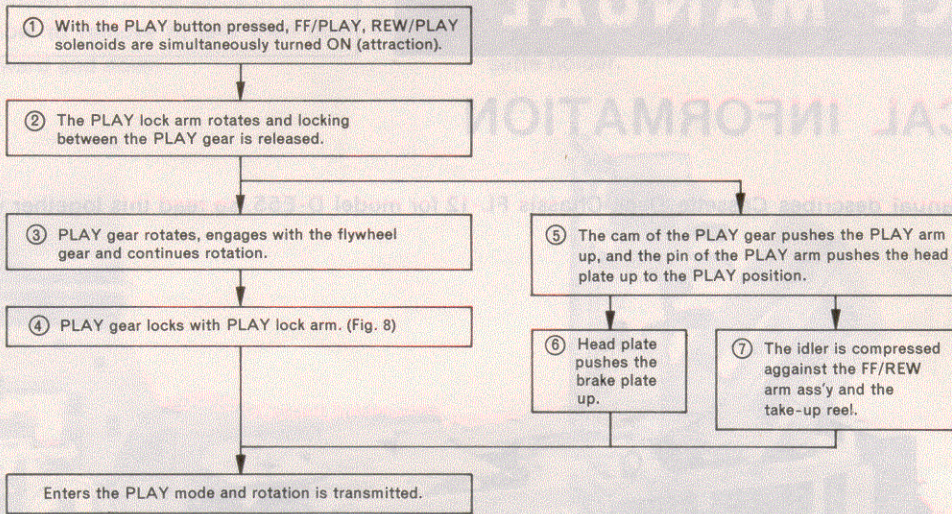


Fig. 7

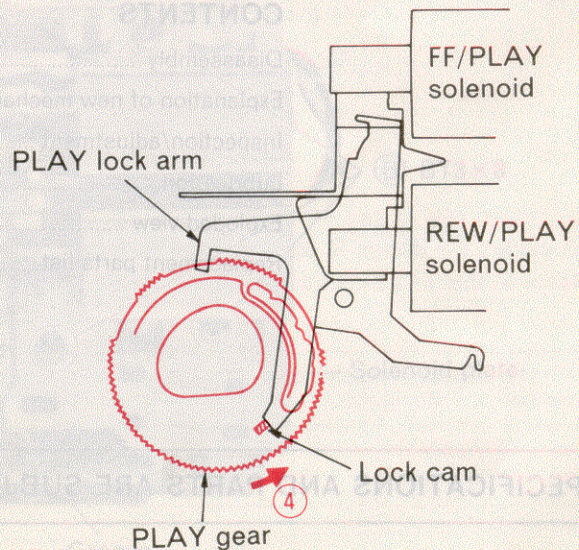


Fig. 8

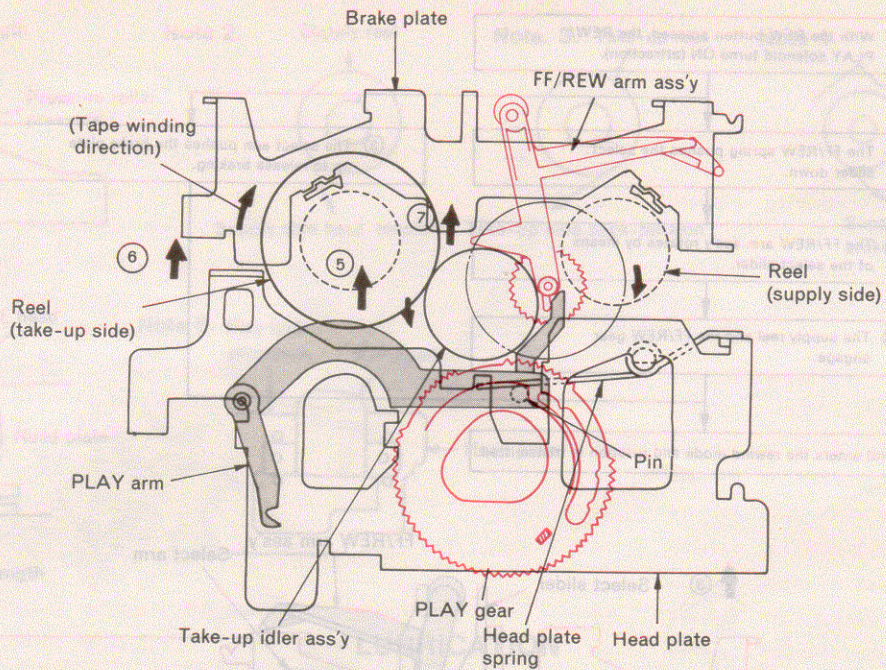


Fig. 9

2. Fast-forward mode

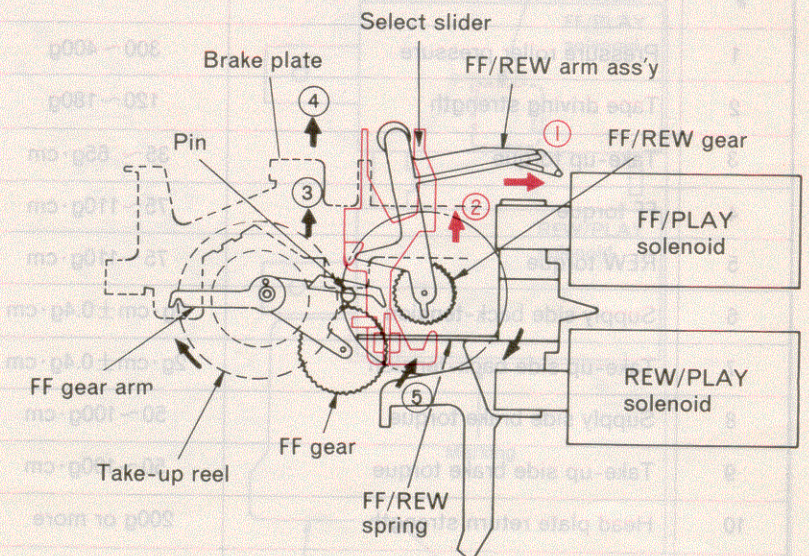
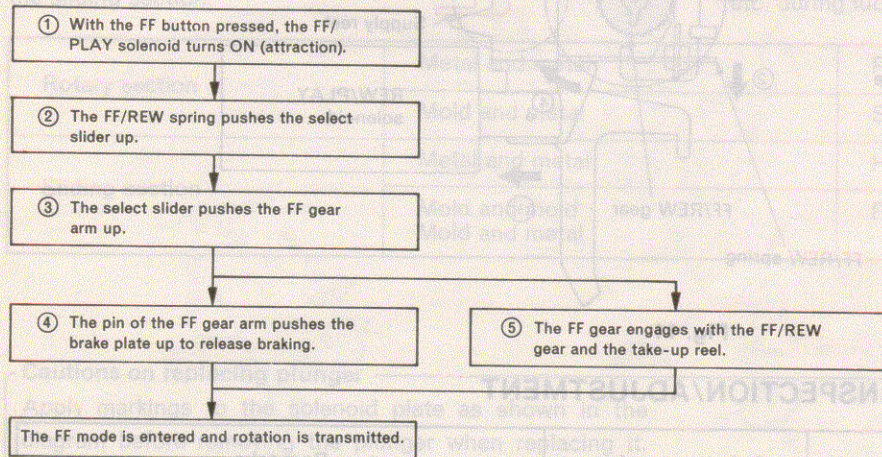


Fig. 10

3. REWIND mode

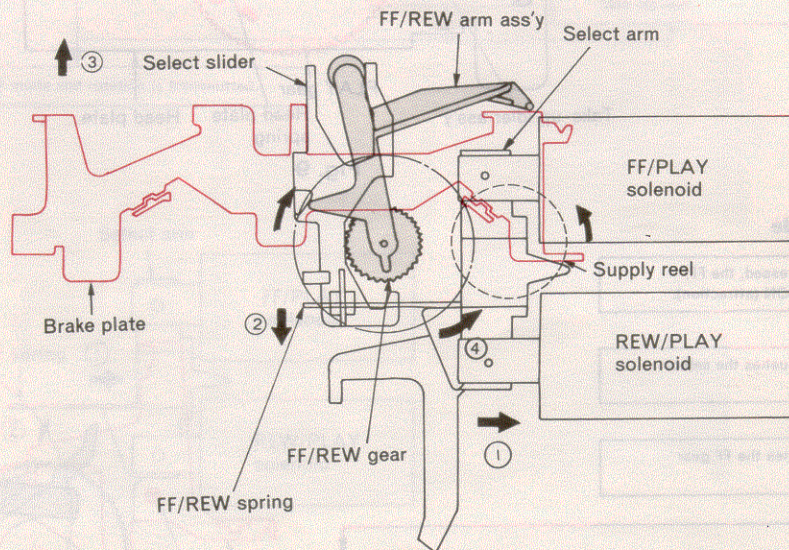
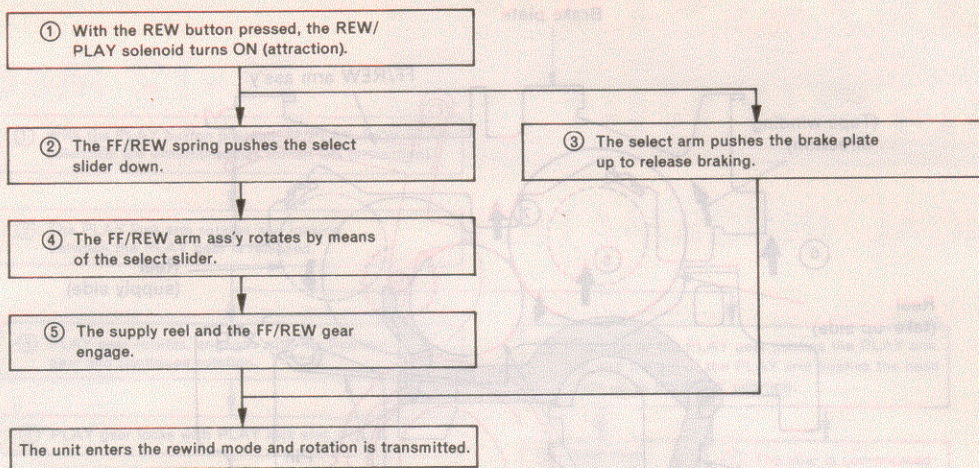
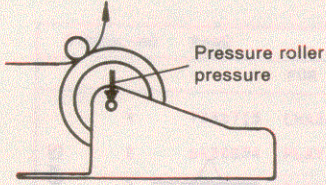


Fig. 11

INSPECTION/ADJUSTMENT

| Item # | Inspection item | Reference value | Remarks |
|--------|----------------------------|-----------------|-------------------------------------|
| 1 | Pressure roller pressure | 300~400g | Note 1 |
| 2 | Tape driving strength | 120~180g | Note 1, After cleaning with alcohol |
| 3 | Take-up torque | 35~65g·cm | |
| 4 | FF torque | 75~110g·cm | |
| 5 | REW torque | 75~110g·cm | |
| 6 | Supply side back-tension | 2g·cm±0.4g·cm | Note 2, PLAY mode |
| 7 | Take-up side back-tension | 2g·cm±0.4g·cm | Note 3, PLAY mode |
| 8 | Supply side brake torque | 50~100g·cm | Note 4, STOP mode |
| 9 | Take-up side brake torque | 50~100g·cm | Note 4, STOP mode |
| 10 | Head plate return strength | 200g or more | Note 5, STOP mode |
| 11 | Play lock allowance | 300g or more | Note 6, PLAY mode |

Note 1. Driving strength



Note 2. Supply reel

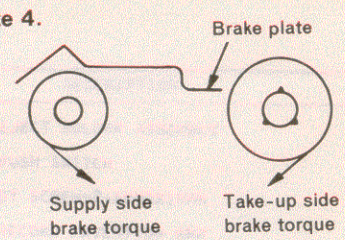
Supply reel



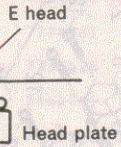
Note 3. Take-up reel



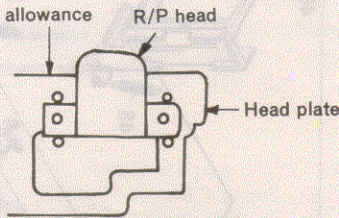
Note 4.



Note 5.



Note 6. Play lock allowance



LUBRICATION

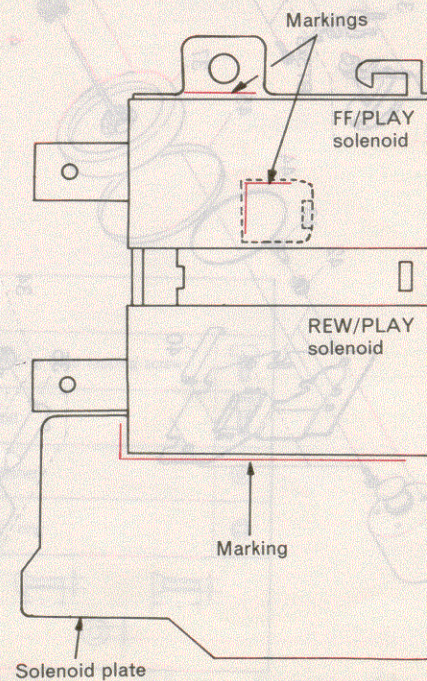
Lubricate the rotary section with 1 or 2 drops of Pan motor oil or Sonic slider oil, and apply Hitasol or white grease to the sliding section.

Lubricate with oil once a year or once 1,000 hours in ordinary use. Be careful that no oil adheres to the belt and idler, etc. during lubrication.

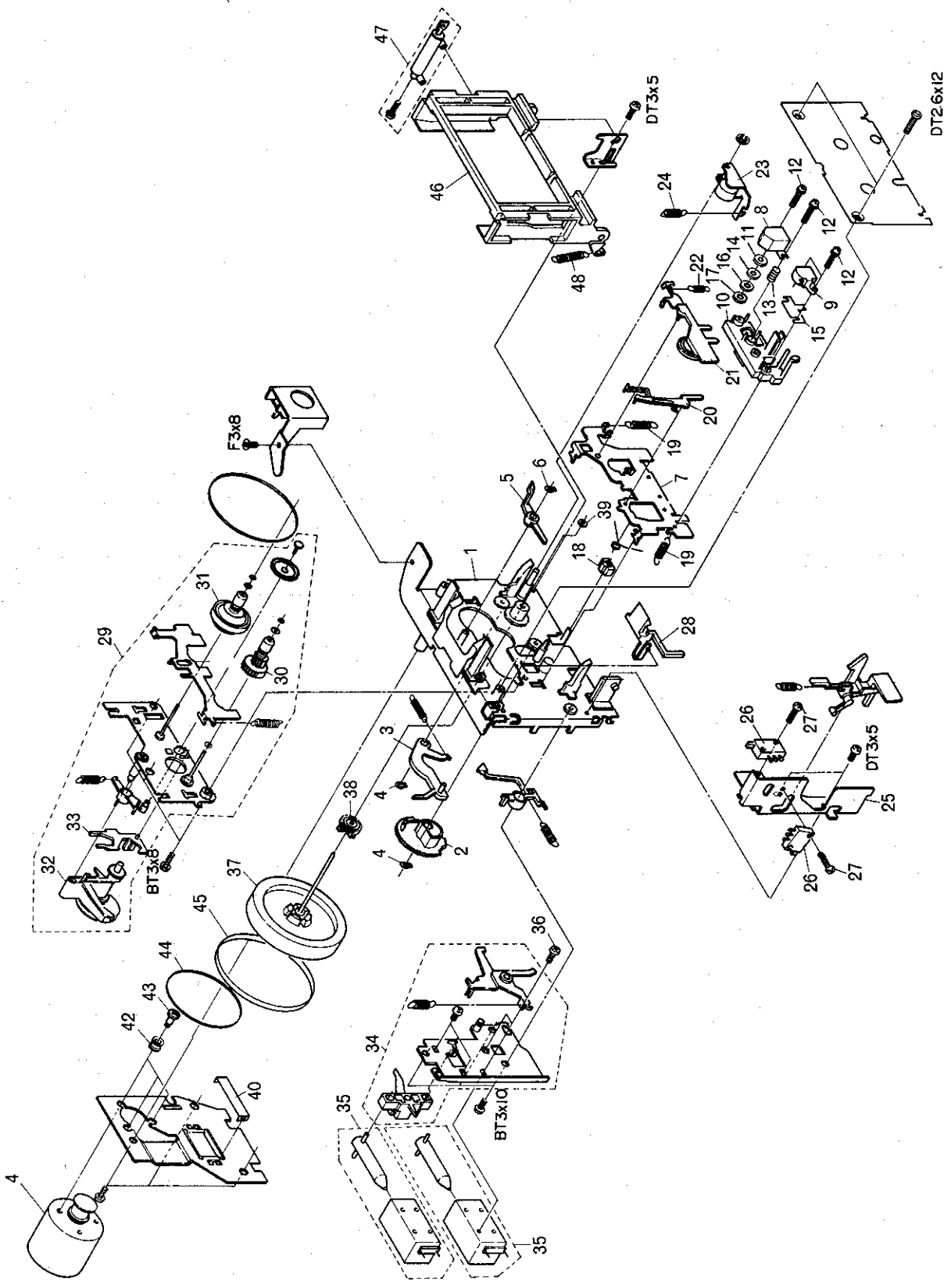
| | | |
|-----------------|---------------------------------|--------------------------|
| Rotary section | Metal and metal | Pan motor oil (10W-40) |
| | Mold and metal | Sonic slider oil (#1600) |
| Sliding section | Metal and metal | Hitasol (MO-138) |
| | Mold and mold Mold and metal | Froil (GB-TS-1) |

Cautions on replacing plunger

Apply markings to the solenoid plate as shown in the diagram before removing the plunger when replacing it. Mount the plunger while matching the markings.

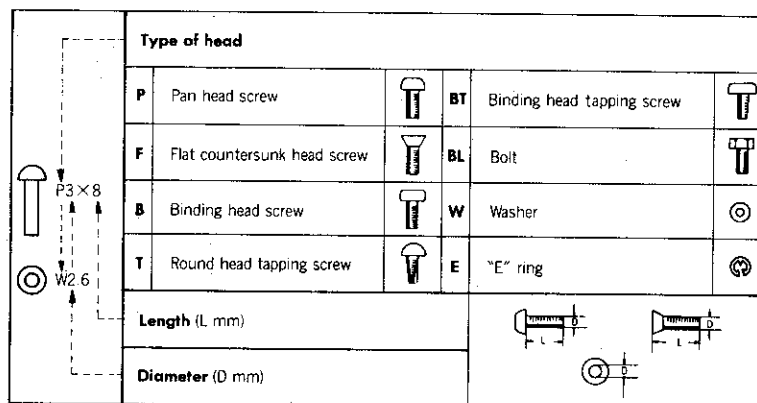


EXPLODED VIEW



REPLACEMENT PARTS LIST

| SYMBOL-NO | P-NO | DESCRIPTION | SYMBOL-NO | P-NO | DESCRIPTION |
|--------------------------------|---------|------------------------------|-----------|---------|------------------------------|
| FOR CASSETTE DECK ASSEMBLY (A) | | | | | |
| 1 | 7330715 | CHASSIS BASE HOLDER ASSEMBLY | 25 | 7330662 | EJECT HOLDER ASSEMBLY |
| 2 | 6430884 | PLAY GEAR | 26 | 5633361 | PUSH SWITCH |
| 3 | 6761782 | PLAY ARM | 27 | 0671310 | DT SCREW-2.6MMDX10MM |
| 4 | 7774761 | CLIP | 28 | 6761814 | RECORD PRVENTION ARM |
| 5 | 6761821 | PICK UP ARM | 29 | 6761694 | REEL BASE ASSEMBLY |
| 6 | 7774761 | CLIP | 30 | 6414202 | TURNTABLE ASSEMBLY (SUPPLY) |
| 7 | 7330628 | HEAD PLATE ASSEMBLY | 31 | 6414212 | TURNTABLE ASSEMBLY (TAKE UP) |
| 8 | 5449041 | RECORD PLAYBACK HEAD | 32 | 6761671 | FF/REWIND ARM ASSEMBLY |
| 9 | 5445342 | ERASE HEAD | 33 | 6761732 | SELECT SLIDER |
| 10 | 6761753 | HEAD PLATE | 34 | 7330724 | SOLENOID PLATE ASSEMBLY |
| 11 | 7768182 | SPACER | 35 | 5642831 | DC SOLENOID |
| 12 | 7775211 | SPECIAL SCREW | 36 | 8741403 | BIND SCREW-3MMDX3MM |
| 13 | 6321733 | HEAD SPRING C | 37 | 6373751 | FLYWHEEL ASSEMBLY |
| 14 | 7771441 | WASHER - 2 MMD | 38 | 6430932 | FLYWHEEL GEAR |
| 15 | 7768181 | HEAD SPACER | 39 | 7786623 | POLY SLIDER WASHER |
| 16 | 7771442 | WASHER-2MMD | 40 | 6534162 | FLYWHEEL SUPPORT SPRING |
| 17 | 7771444 | WASHER-2MMD | 41 | 5576761 | DC MOTOR ASSEMBLY |
| 18 | 6581042 | RUBBER FOR RECORD PRVENTION | 42 | 6589591 | RUBBER PLATE |
| 19 | 6302375 | SPRING | 43 | 7539007 | SPECIAL SCREW |
| 20 | 6761741 | REWIND ARM | 44 | 6355193 | BELT |
| 21 | 6761704 | TAKE UP IDLER ASSEMBLY | 45 | 6357301 | FLYWHEEL BELT |
| 22 | 6320578 | SPRING FOR TAKE UP IDLER | 46 | 6761844 | CASSETTE HOLDER |
| 23 | 7330581 | PRESSURE ROLLER ARM ASS | 47 | 6763431 | DAMPER ASSEMBLY |
| 24 | 6301361 | SPRING | 48 | 6301721 | SPRING |



When ordering hardware excluding stated on these lists, be sure to make your orders with type and size.