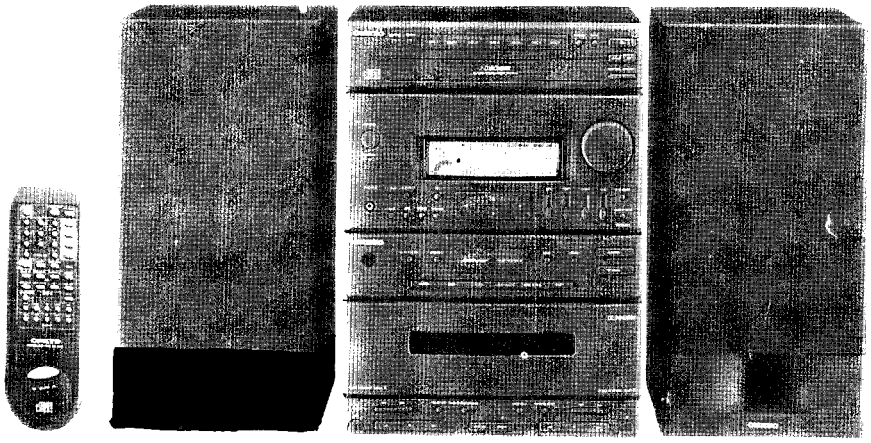
REF. NO. 3522

ONKYO® SERVICE MANUAL

PERSONAL COMPONENT SYSTEM

PCS-207



U	120 AC, 60Hz

Mechanical Adjustment Only

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

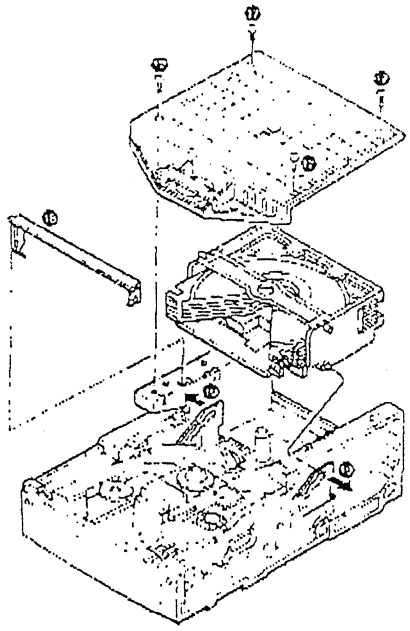
MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®
AUDIO COMPONENTS

DISASSEMBLY FOR REPAIR

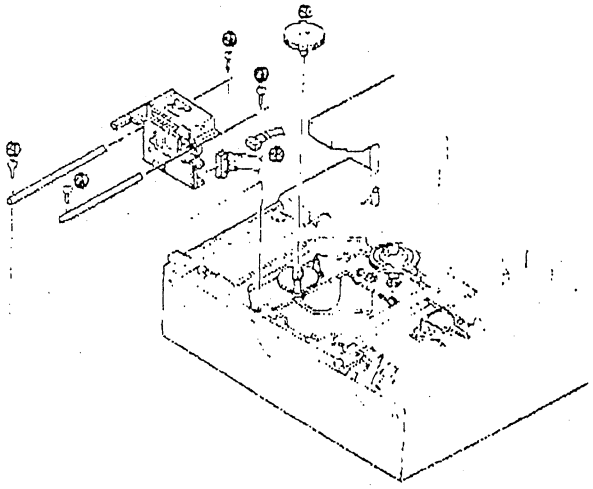
3. How to remove the stocker assembly

1. Remove the four screws (⑰) to remove the top cover.
2. Remove the assist arm (⑱).
3. Push the stocker cam (⑲) outward with a blade-point screwdriver, etc. to remove the stocker assembly.



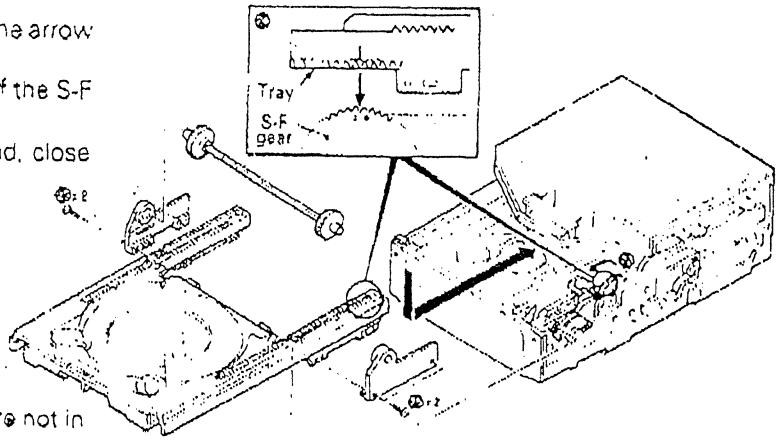
4. How to remove the pickup

1. Remove the gear (⑳).
2. Remove the four screws (㉑).
3. Remove the two connectors (㉒), then remove the pickup.



5. How to install the tray

1. Turn the gear to the end in the direction of the arrow (㉓) (to open the tray).
2. Matching the mark of the tray gear to that of the S-F gear (㉔), install the tray.
3. Holding down both sides of the tray by hand, close the tray.



* If the tray is not fully closed, the gears (㉔) are not in correct positions. Check them.

4. Install the four screws (㉕).

2. REMOVAL PROCEDURES

2.1. Mechanism Ass'y

(1) Remove the Tope Cover.
(2) Turn ON the power and press the Eject/Load button to eject the Tray Ass'y.
(3) Remove the Tray Panel Ass'y from the Tray Ass'y upwardly.
(4) Press the Eject/Load button to load the Tray Ass'y.
(5) Turn OFF the power and unplug the power cord from the wall outlet.
(6) To disassemble the Front Panel Ass'y, remove 4 screws at both ends and 4 screws (3 screws for MB-3s) on the bottom.
(7) Shortcircuit the lands "A" of the Laser Pickup. Refer to Fig. 2.1.

CAUTIONS: 1. Use a soldering iron whose metal part is grounded, or a ceramic soldering iron.
2. Do not forget shortcircuiting the lands "A" as the laser diode in the Laser Pickup will be damaged when the connectors of the Laser Pickup are removed from the Main P.C.B. Ass'y.

(8) Disconnect 5 connectors of the Mechanism Ass'y.
(9) Remove screws F01 (3 pcs.) and F02 (2 pcs.), and disassemble F03 (Mechanism Ass'y) and F04 (Mecha Holder).
(10) Remove 7 screws to remove F04 (Mecha Holder) from F03 (Mechanism Ass'y).

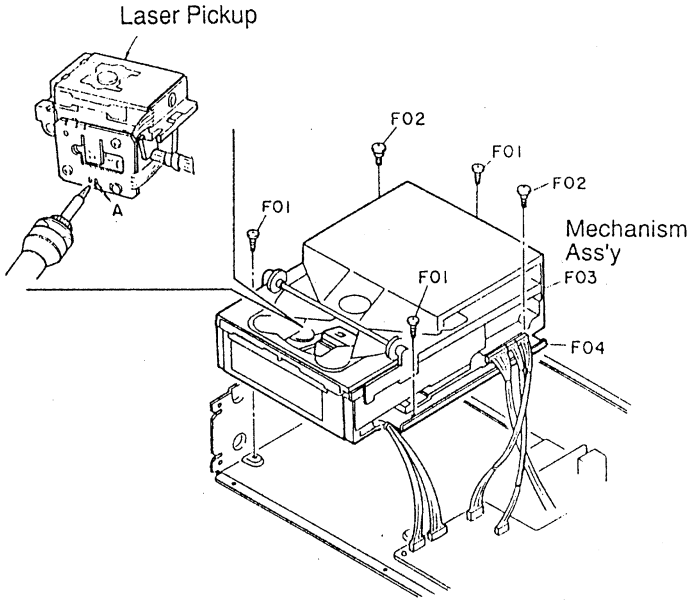


Fig. 2.1

2.2. Mechanism Top Cover

Refer to Figs. 2.2.1 and 2.2.2.

(1) Remove the Mechanism Ass'y . Refer to item 2.1.
(2) Remove screws F01 (4 pcs.) and disassemble F02 (Top Cover).
(3) Remove F03 (Assist Arm).

NOTE: When assembling F03 (Assist Arm), make sure that F03 (Assist Arm) is in place as shown in the figure.
Also, make sure that the lowest carriage is held by the angle "B" of F03 (Assist Arm) as shown in Fig. 2.2.2 so that the carriages are in horizontal position. (Refer to "Leveling the carriages at the left side" in item 2.7.3.)

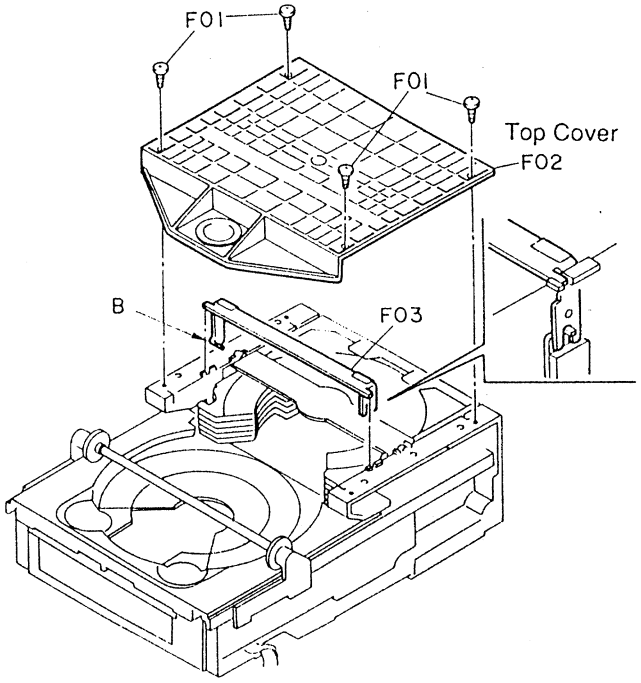


Fig. 2.2.1

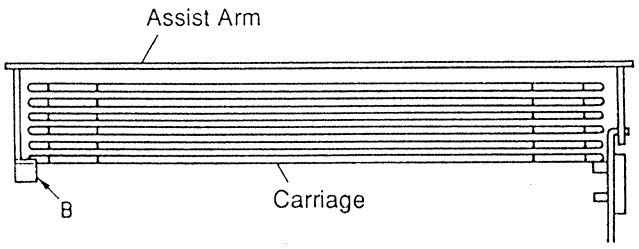


Fig. 2.2.2 Leveling the carriages at the left side

(3) Leveling the carriages:
The carriages must be set in correct position where they are in horizontal position.

• Leveling carriages at the right side
Lift the right end of the carriages (6 pcs.) with your finger tip as shown in Fig. 2.7.4, and place the lowest carriage onto the pin "G" (white one).

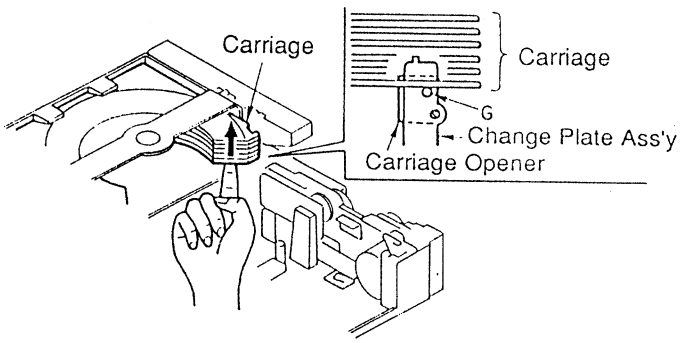


Fig. 2.7.4 Leveling the carriages at the right side

• Leveling the carriages at the left side
Lift the left end of the carriages (6 pcs.) with your finger tip and place the lowest carriage onto the angle "B" of the Assist Arm. Refer to Fig. 2.7.5.

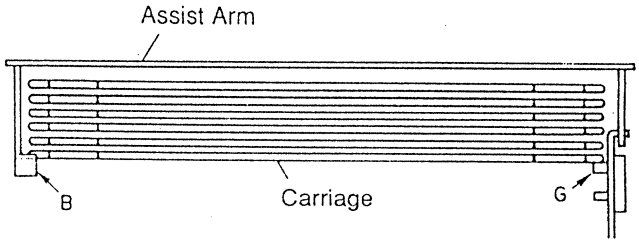


Fig. 2.7.5 Leveling the carriages

2.8. Side Chassis L
Refer to Fig. 2.8.
(1) Remove the Drive Unit Section. Refer to item 2.6.
(2) Remove screws F01 (3 pcs.) and F02 (2 pcs.), and disassemble F03 (Side Chassis L).

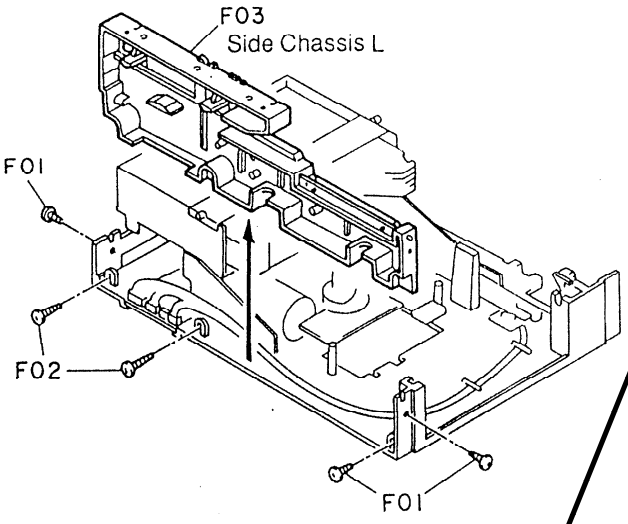
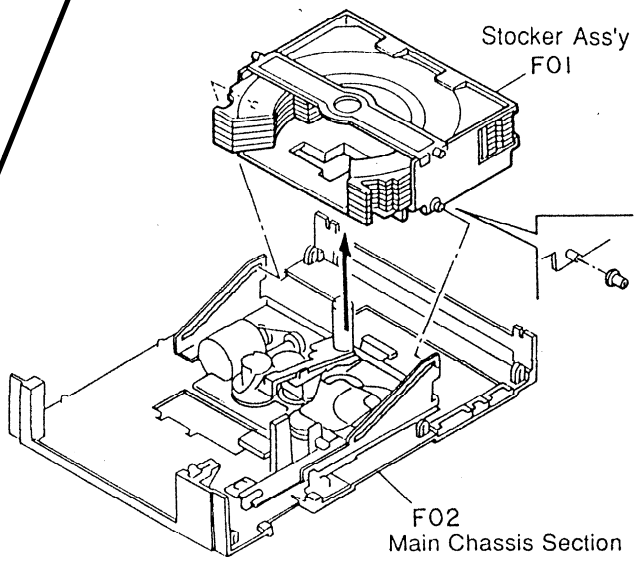


Fig. 2.8

To remove stacker, loosen L+R sides and spread apart then remove stacker.

2.9. Stocker Ass'y and Main Chassis Section
Refer to Fig. 2.9.
(1) Remove the Side Chassis R Section and Side Chassis L. Refer to items 2.7 and 2.8.
(2) Remove F01 (Stocker Ass'y including the carriages) from F02 (Main Chassis Section) as shown in the figure.



To reinstall tray and stacker: reinstall tray with carriage. Power up and let carriage go in @ disc 1(lowest).
Then slide eack stacker by hand in to the carriage.

2.3. Drawing the Tray Ass'y

Refer to Fig. 2.3.

(1) Remove the Mechanism Ass'y. Refer to item 2.1.
(2) Turn the pulley in the direction of the arrow to draw the Tray Ass'y. (You can only access to the bottom part of the pulley.)
(3) After drawing the Tray Ass'y about 3cm or so, you can draw the rest of it by hand.

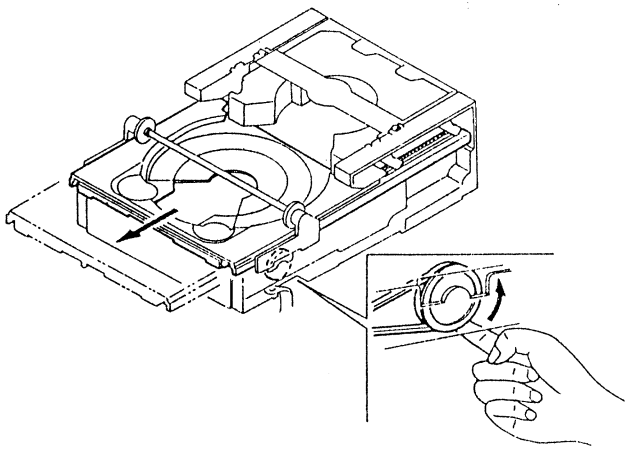


Fig. 2.3

2.4. Laser Pickup

2.4.1. Removing the Laser Pickup

Refer to Fig. 2.4.1.

(1) Draw the Tray Ass'y. Refer to item 2.3.
(2) Remove screws F01 (2 pcs.) and disassemble F02 (Plate Rack).
(3) Remove screws F03 (4 pcs.) and disassemble F04 (Laser Pickup with Guide Bars A and B).
(4) Pull out the Guide Bars A and B from the Laser Pickup.

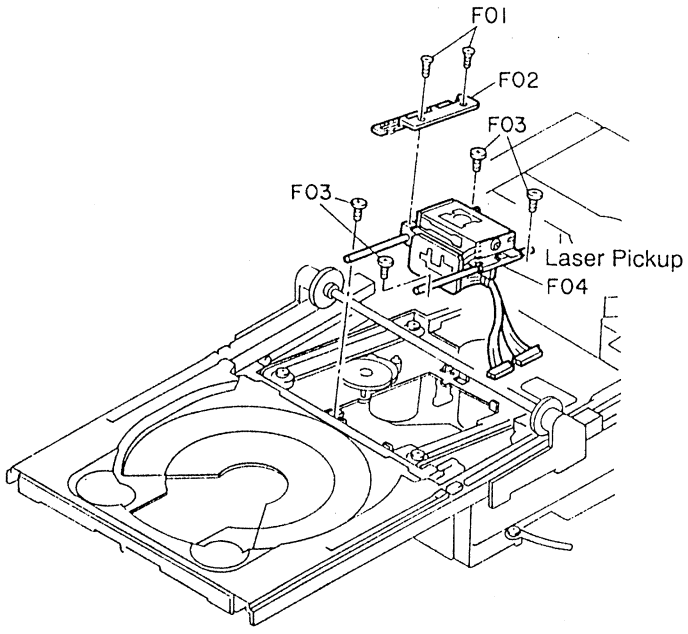


Fig. 2.4.1

2.4.2. Installing a New Laser Pickup

Refer to Fig. 2.4.2.

NOTE: As a Laser Pickup is packed in a conductive pack, do not take it out of the pack until you need it.

(1) Install the Laser Pickup by reversing the above procedure.
(2) Before fixing the Mechanism Ass'y with screws F01 and F02, connect the connectors of the Laser Pickup to the Main P.C.B. Ass'y. Then, remove the soldering bridge on the lands "A" shown in the figure with a soldering iron whose metal part is grounded or with a ceramic iron.

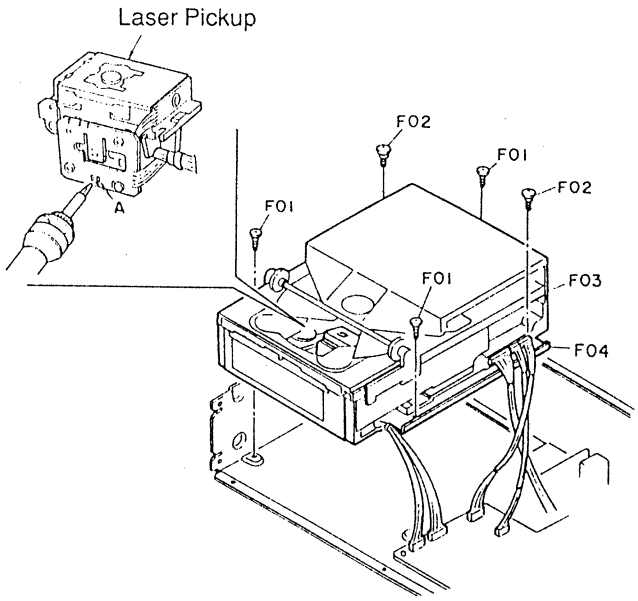


Fig. 2.4.2

2.5. Tray Ass'y

2.5.1. Removing the Tray Ass'y

Refer to Fig. 2.5.1.

(1) Draw the Tray Ass'y. Refer to item 2.3.
(2) Remove screws F01 (4 pcs.) and disassemble F02 (Tray Holder L) and F03 (Tray Holder R).
(3) Remove F04 (Timing Ass'y).
(4) Remove F05 (Tray Ass'y).

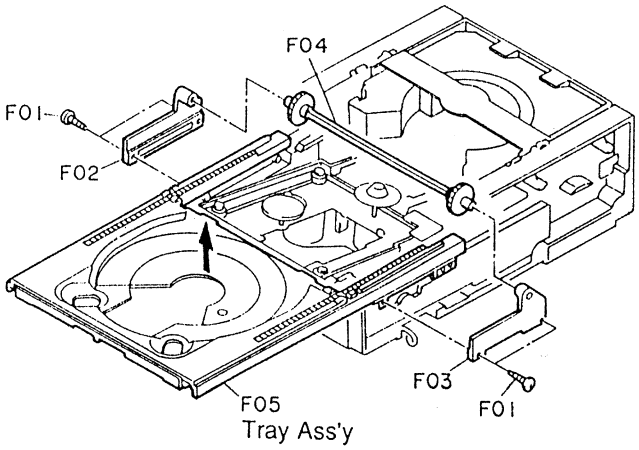


Fig. 2.5.1

2.5.2. Installing the Tray Ass'y

When installing the Tray Ass'y, perform positioning as follows:

(1) Turn the pulley in the direction of the arrow until it stops. Refer to Fig. 2.5.2.
(2) Turn the pulley in the opposite direction a little so that the center of two marks (holes) "C" on the S-F-Gear is in the vertical position. Refer to Fig. 2.5.2.
(3) Place the Tray Ass'y so that the protrusion "D" of the Tray Ass'y is positioned between the marks (holes) "C" on the S-F-Gear. Refer to Fig. 2.5.3.
(4) Reverse the removal procedure in item 2.5.1.

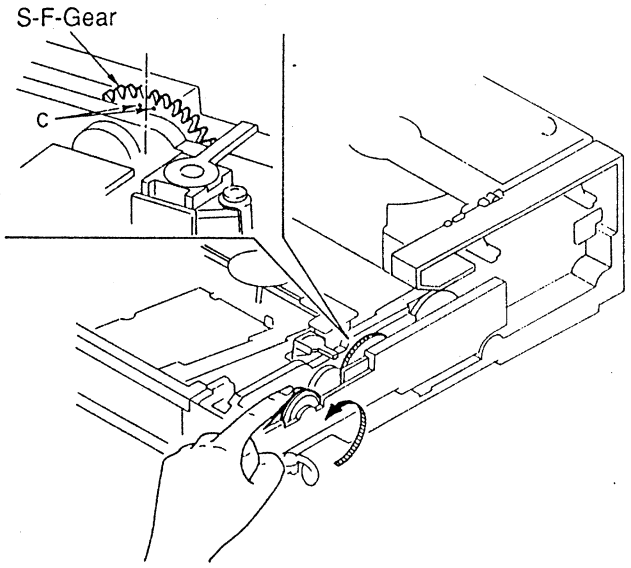


Fig. 2.5.2

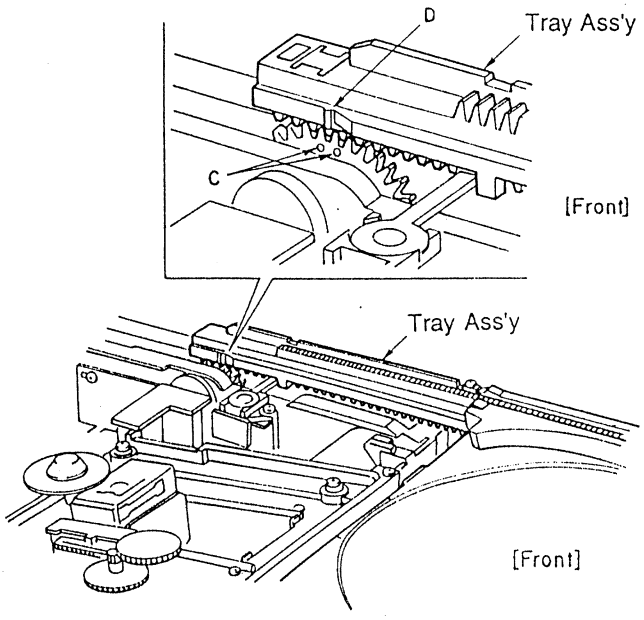


Fig. 2.5.3

2.6. Drive Unit Section

Refer to Fig. 2.6.

(1) Remove the Laser Pickup. Refer to item 2.4.
(2) Remove the Tray Ass'y. Refer to item 2.5.
(3) Remove screws F01 (2 pcs.) and disassemble F02 (Disc Det. P.C.B.).
(4) Remove screws F03 (2 pcs.) and disassemble F04 (Mecha B Stopper).
(5) Disconnect a connector and remove F05 (Drive Unit Section).

NOTE: When installing F05 (Drive Unit Section), insert the pin "E" of the Drive Unit Section into the groove of the Mecha UD Cam as shown in the figure.

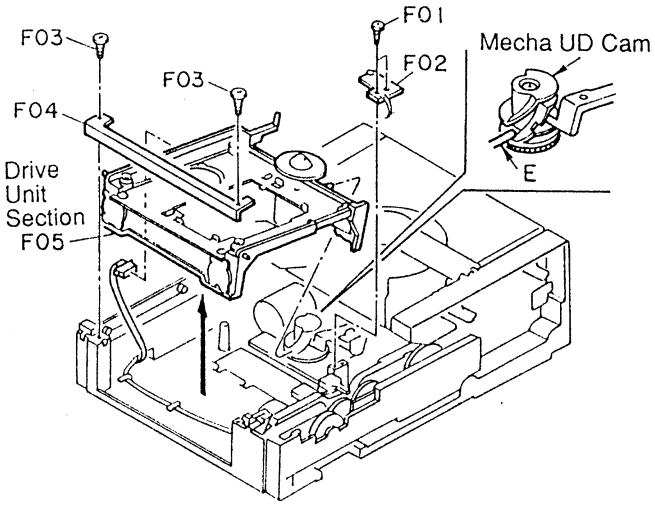


Fig. 2.6

2.7. Side Chassis R Section

2.7.1. Removing the Side Chassis R Section

Refer to Fig. 2.7.1.

(1) Remove the Drive Unit Section. Refer to item 2.6.
(2) Remove a screw F01 and F02 (Wire Clamper), and disassemble F03 (Eject/Close P.C.B.).
(3) Remove a screw F04 and disassemble F05 (Store P.C.B.).
(4) Disconnect 2P connector of the Loading Motor from the Connector P.C.B. at the back of the Mechanism Unit.
(5) Remove screws F06 (2 pcs.) and F07 (3 pcs.), and disassemble F08 (Side Chassis R Section) in the direction of the arrow.

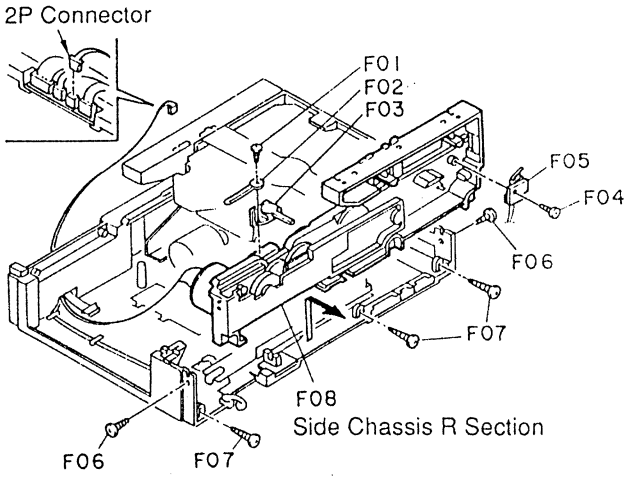


Fig. 2.7.1

2.7.2. Accessing to the Gears and Loading Motor Belt

Refer to Fig. 2.7.2.

(1) Remove screws F09 (3 pcs.), F10 (1 pce.) and F11 (2 pcs.), and disassemble F12 (Gear Holder). Then, you can access to the gears (S-F-Gear, S-I-Gear and S-M-Gear) and Loading Motor Belt F13 (Belt-C-S).
NOTE: When you replace one of gears, perform gear positioning according to 3.1 "Gear Positioning".
(2) Remove screws F14 (3 pcs.) and disassemble F15 (Change Plate Ass'y) and F16 (Carriage Opener). Then, you can access to the Change Gear.
NOTE: When you replace the Change Gear, perform gear positioning according to 3.1 "Gear Positioning".

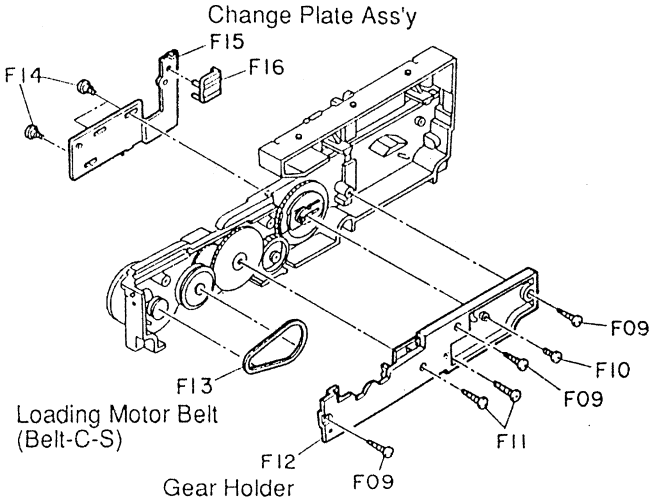


Fig. 2.7.2

2.7.3. Installing the Side Chassis R Section

NOTE: When you replace one of gears in the Side Chassis R Section , perform 3.1 "Gear Positioning" before installing the Side Chassis R Section.

(1) Push the Change Arm against the D6-ST-Gear so that they are engaged each other. Refer to Fig. 2.7.3.
(2) Place the Side Chassis R Section so that the pin "F" of the Side Chassis R Section is inserted into the hole in the Change Arm, as shown in Fig. 2.7.3.

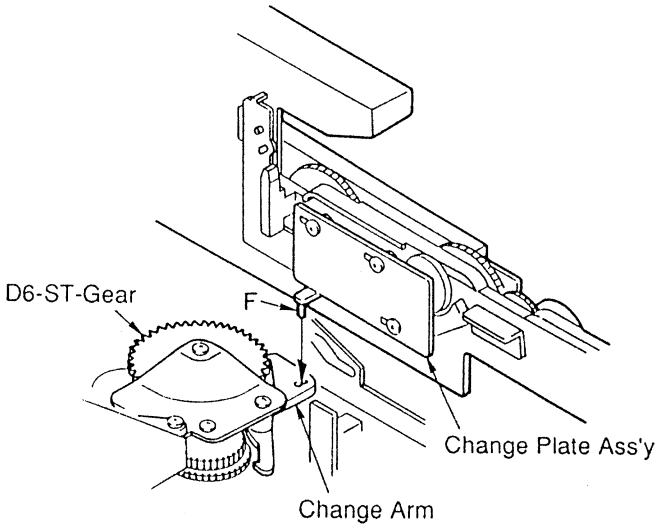


Fig. 2.7.3

3. MECHANICAL ADJUSTMENTS

3.1. Gear Positioning in the Side Chassis R Section

When one of the gears in the Side Chassis R section is replaced, perform the following gear positioning. (To access to the gears, refer to 2.7 "Side Chassis R Section".)

3.1.1. Positioning Three Gears

Refer to Fig. 3.1.1.

(1) Align the marks (holes) of the S-I-Gear with the mark (hole) of the S-F-Gear and S-M-Gear as shown in the figure.
NOTE: The S-F-Gear and S-M-Gear have another mark (hole). Pay attention so as not to align with the wrong hole.

(2) Insert the pin of the Tray Arm Ass'y into the groove of the S-M-Gear as shown in the figure.

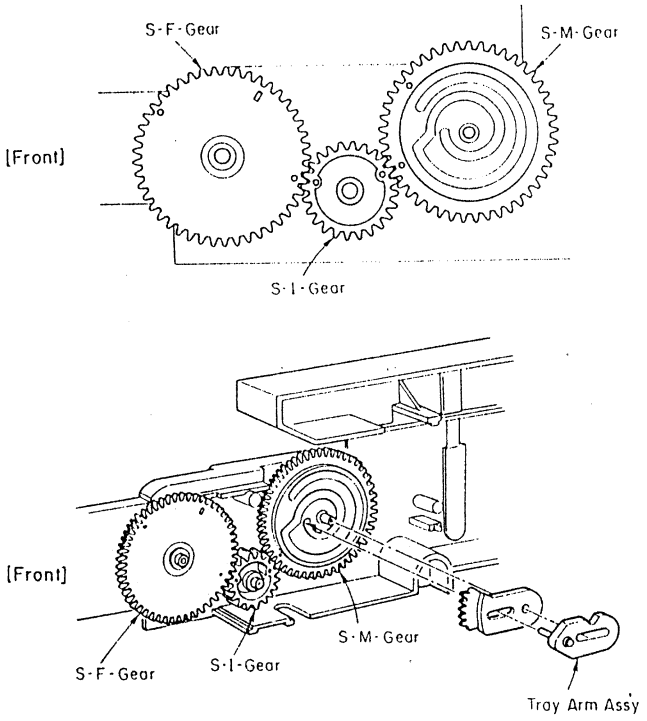


Fig. 3.1.1 Positioning of Three Gears

3.1.2. Positioning the Change Gear

Refer to Fig. 3.1.2.

(1) Position the Change Gear so that the notch of the Change Gear meets the mark "A" of the S-F-Gear.

(2) Insert the pin of the Change Plate Ass'y into the groove of the Change Gear, and mount the Change Plate Ass'y with three screws.

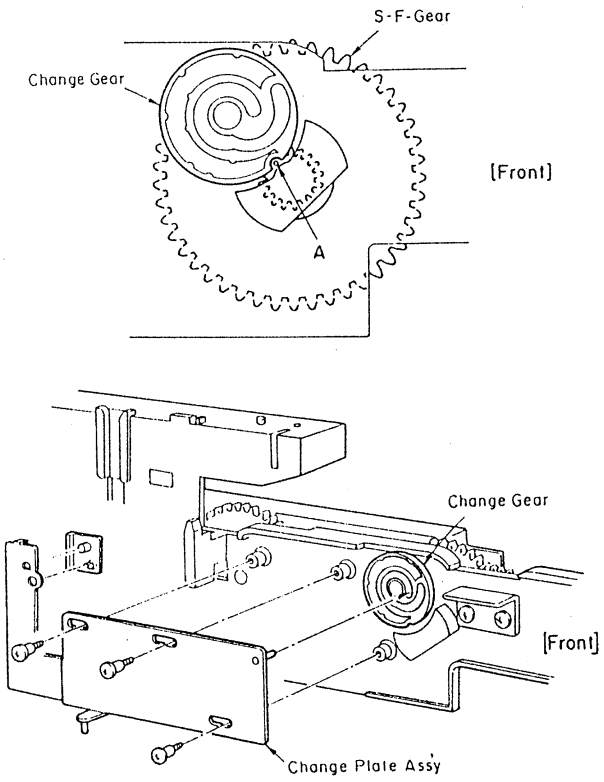


Fig. 3.1.2 Positioning of the Change Gear

3.2. Positioning the Tray Ass'y

When installing the Tray Ass'y on the mechanism unit, perform the following positioning. (Refer to 2.5.2 "Installing the Tray Ass'y".)

(1) Install the Tray Ass'y so that the protrusion "B" of the Tray Ass'y is positioned between two marks (holes) "C" of the S-F-Gear. Refer to Fig. 3.2.

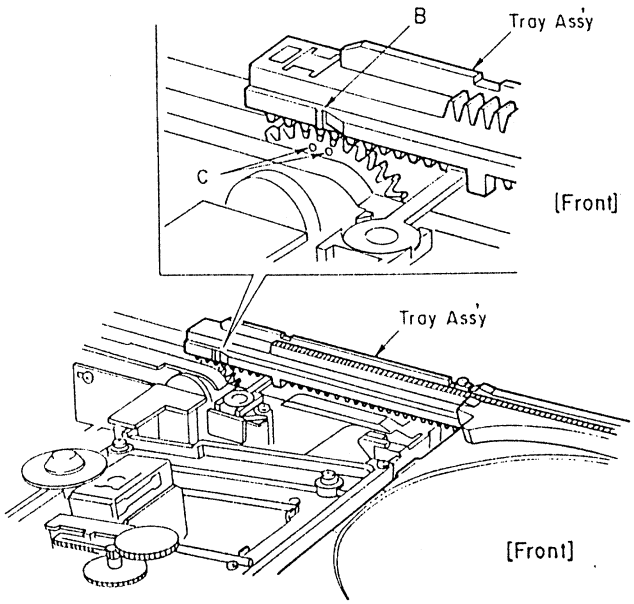
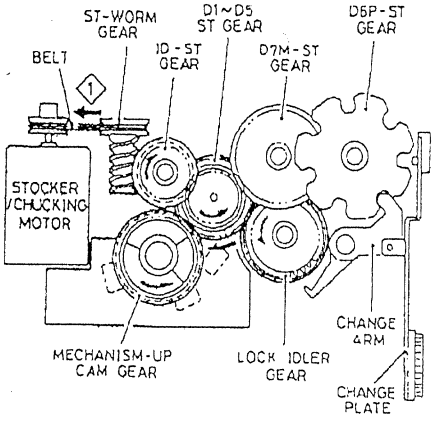


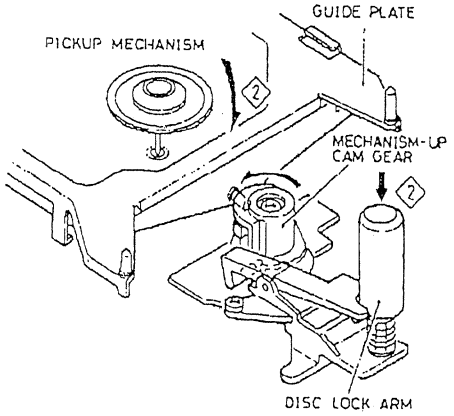
Fig. 3.2 Positioning of the Tray Ass'y

DESCRIPTION OF CD MECHANISM ACTION

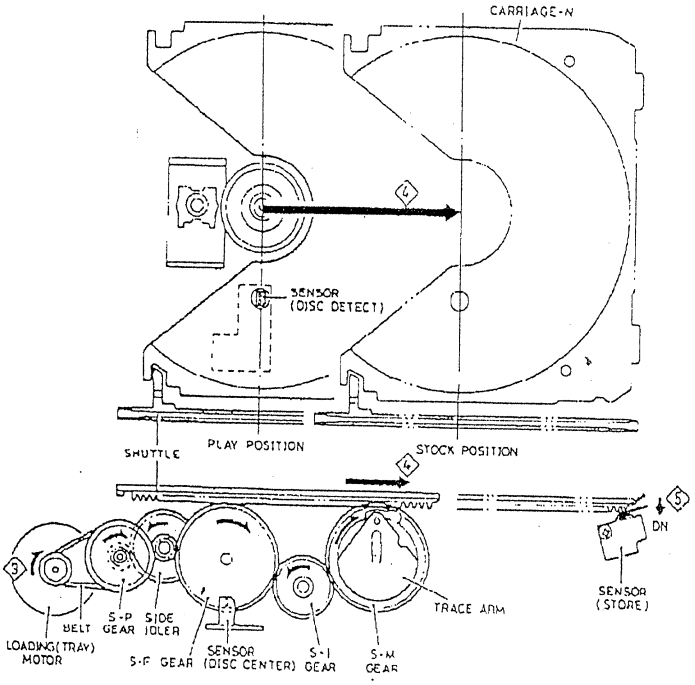
4. From tray closed status to disc change operation (DISC SELECT button pressed)

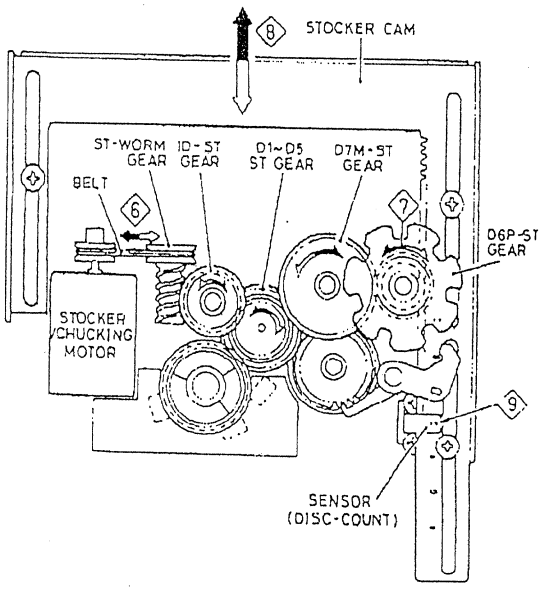
1) The stocker/chucking motor begins to turn in the direction indicated by the arrow (①).
2) The driving force from this rotation is conveyed to the mechanism-up cam gear via a belt and a sequence of gears (ST-worm gear, ID-ST gear, and D1 through D5-ST gears). The rotating direction of the mechanism-up cam gear is indicated by the arrow.
3) The pickup mechanism, guide plate, and disc lock arm lower (②). When the sensor (cam position) detects that they have reached the bottom position, the stocker/chucking motor stops immediately.





4) The loading (tray) motor begins to turn in the direction indicated by the arrow (③).
5) The driving force from this rotation is conveyed to the S-M gear via a belt and a sequence of gears (S-P gear, side idler, S-F gear, and S-I gear). The driving force thus conveyed is transferred to the shuttle, causing it to move horizontally toward the rear (④)and loading carriage-N into the stocker.
6) When the sensor (store) detects (⑤) that carriage-N is stored, the loading (tray) motor stops immediately.
7) The stocker/chucking motor begins to turn in the direction indicated by the arrow (⑥).
8) The driving force from this rotation is conveyed to the D6P-ST gear via a belt and a sequence of gears (ST-worm gear, ID-ST gear, D1 through D5-ST gears, and D7M-ST gear). The rotating direction of D6P-ST gear is indicated by the arrow (⑦).
9) The rotation of the D6P-ST gear causes the stocker cam to move horizontally in the direction of the specified disc (⑧). and, at the same time, the stocker to move vertically toward the specified disc.
10) The sensor (disc count) counts (⑨) the slits in the stocker cam. After the specified disc number (slit number) is counted (the slit passes by), the stocker/chucking motor stops immediately.
11) The operations after this step are identical to steps 5 through 15 of the initial operation.
12) This completes the disc change operation.



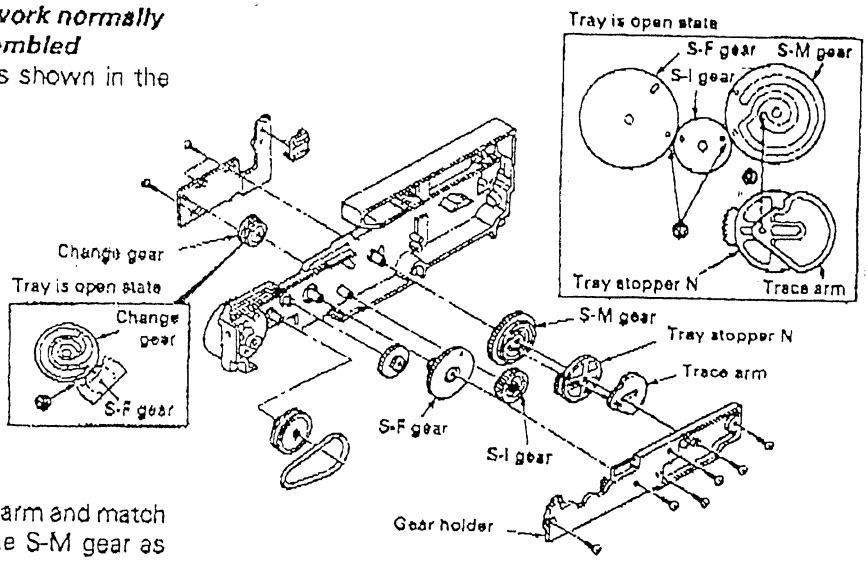


DISASSEMBLY FOR REPAIR

6. How to adjust the gears

**** When the installed tray does not work normally***
**** When the gears have been disassembled***

1. Install the gears S-F, S-I and S-M as shown in the figure at right (㉖).



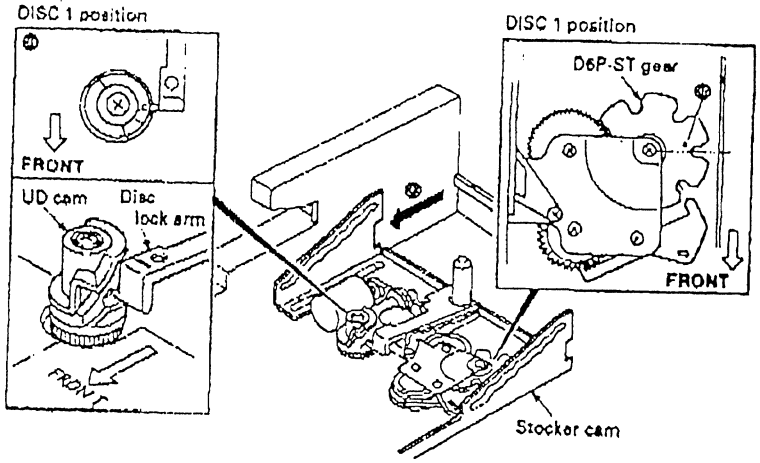
2. Match the tray stopper N to the trace arm and match the projection of the trace arm to the S-M gear as shown in the figure (㉗), then install the other gears and parts. Finally, install the gear holder with the screws.
3. Match the mark of the change gear to that of the S-F gear (rear side) (㉘), then install the change plate, etc. with the screws.

7. Relationship of locations of the stocker arm, D6P-ST gear and UD cam

1. When the stocker arm is pulled in the direction of the arrow (㉙) (Home position), the through hole (㉚) of the D6P-ST gear and the UD cam (㉛) are positioned as shown at right.

Home position (Initial condition of mechanism)

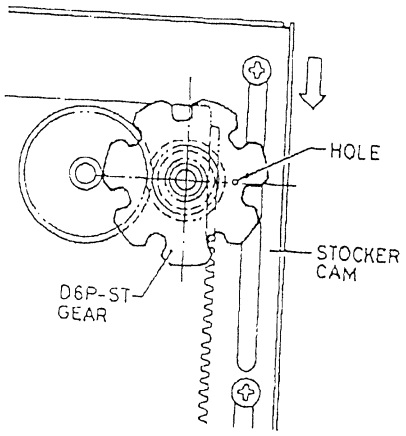
* The tray is closed and the stocker is at the top and the pickup is lowered.



ADJUSTMENT CD MECHANISM

1. Gear positioning in bottom chassis section

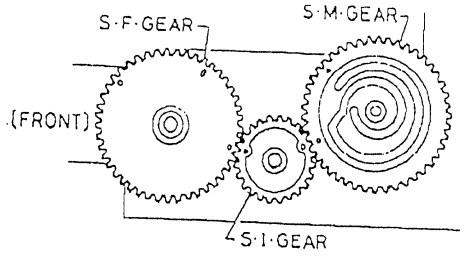
While pressing foward on the stocker cam in the direction indicated by the arrow, align the maker (hole) of the D6P-ST gear so that it is level relative to the stocker cam.

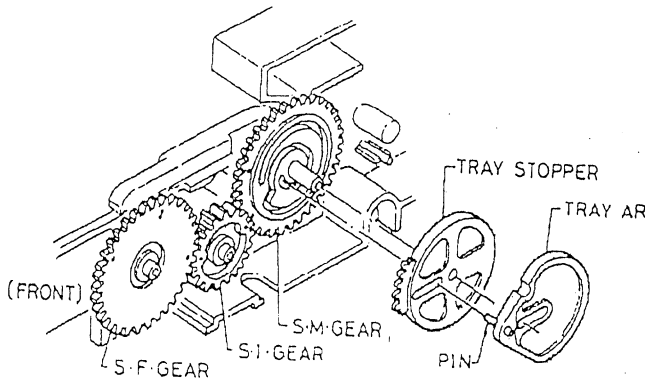


2. Gear positioning in side chassis R section

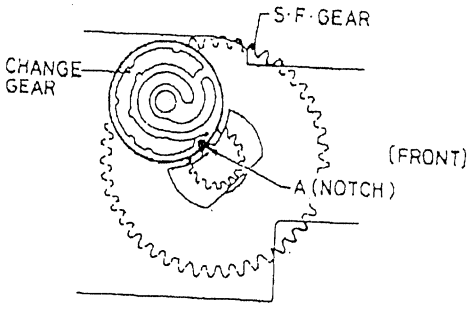
When one of the side chassis R section is replaceed, perform the following gear positioning.

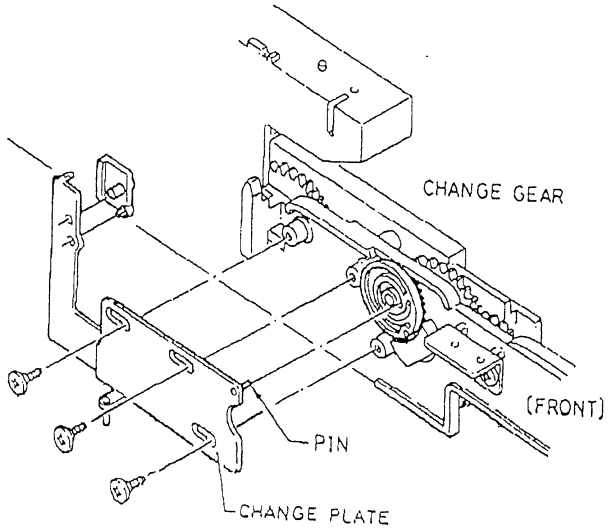
1. Positioning of three gears
   1) Align marks (holes) of the S-I Gear with the marks (hole) of the S-F Gear and S-M Gear as shown in the figure.
      Note: The S-F Gear and S-M Gear have another mark (hole). Pay attention so as not to align with the wrong hole
   2). Insert the pin of the Tray Arm into the groove of the S-M Gear as shown in the figure.





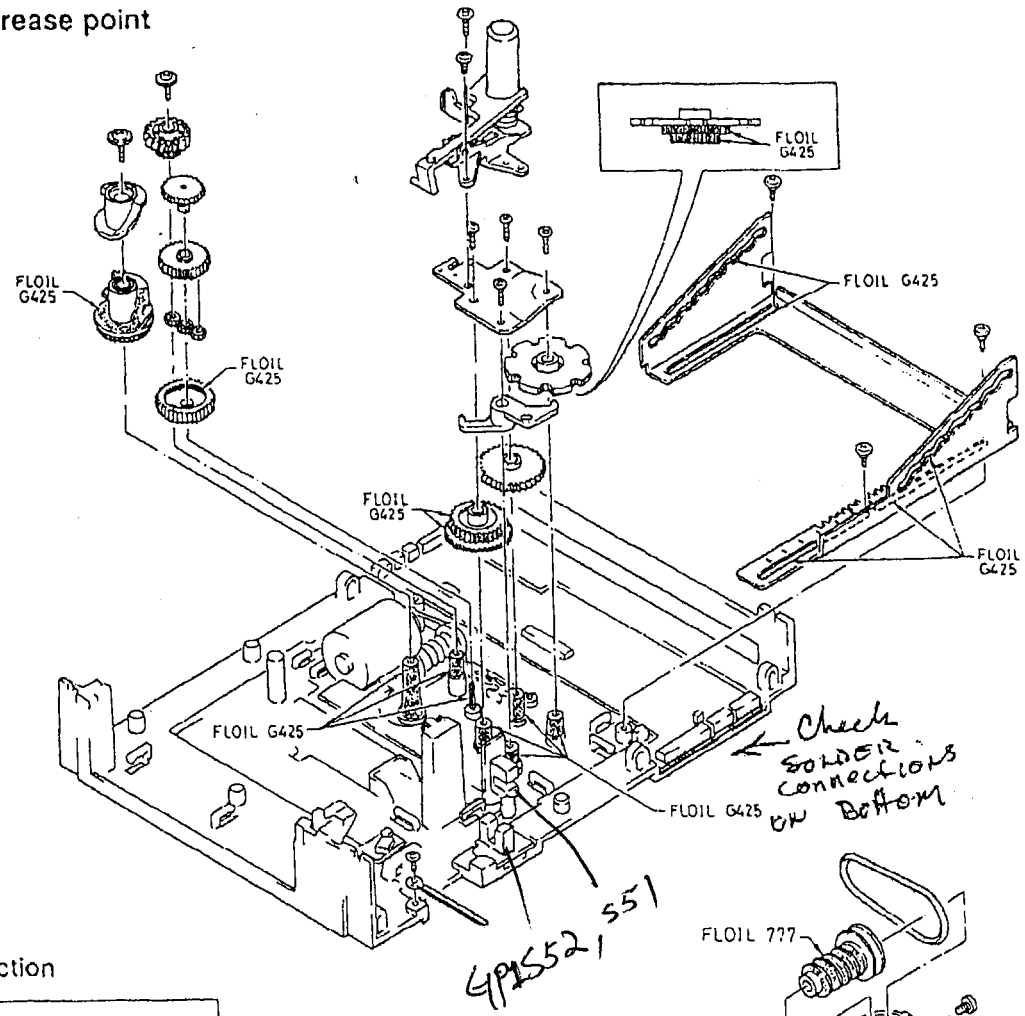
2. Positioning of change gear
   1) Position the Change Gear so that the notch of the Change Gear meets the mark "A" of the S-F Gear.
   2) Insert the pin of the Change Plate into the groove of the Change Gear, and mount the Change Plate with three screw



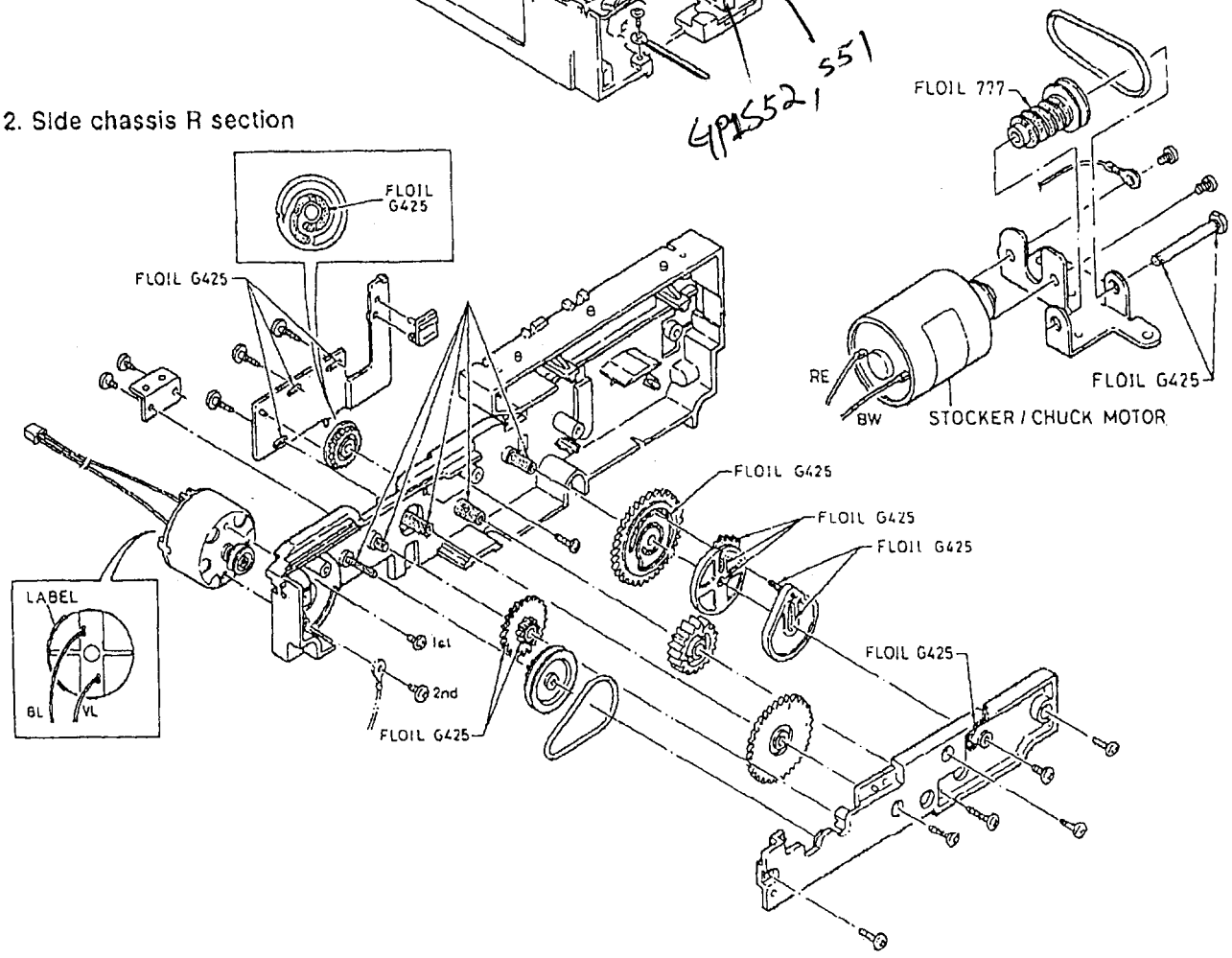


Applying grease and grease point

1. Bottom section



2. Side chassis R section



7.6. Drive Unit Section (B03)

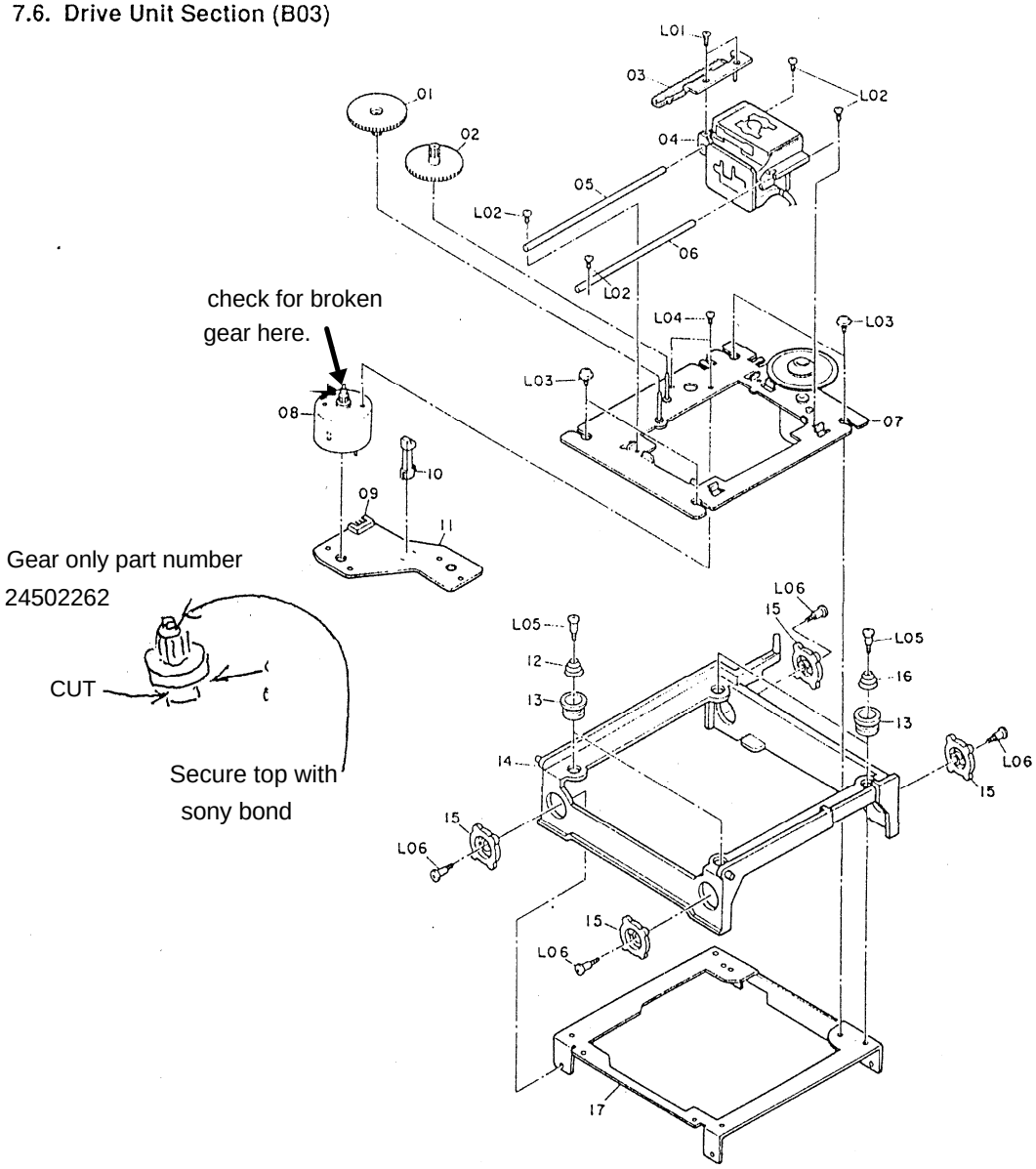


Fig. 7.6