

# 1 CR16 MECHANISM DISASSEMBLY/ASSEMBLY PROCEDURE

## 1.1. Procedure for removing CD loading mechanism

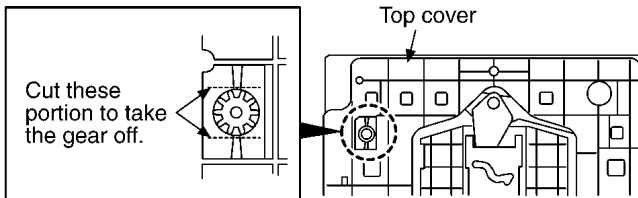
1. Turn off by pressing power SW in the body.
2. Pull out AC plug after the indication of [GOOD-BYE], then disassemble the body.
3. Disassemble the body, and take out CD loading mechanism.
4. Perform disassembly according to the following procedure for disassembly.

## 1.2. CR16 mechanism disassembly procedure

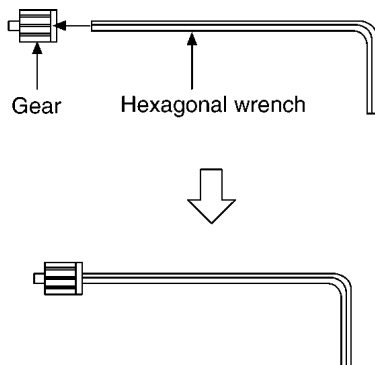
### 1.2.1. Gera for servicing (as jig) information

- This unit has a gear which used for chacking items (open/close of disc tray, up/down operation of traverse unit by manually) when servicing. (For gear information, that is described on the items for disassembly procedures.)
- For preparation of gear (for servicing), perform the procedures as follows.
- In case of re-servicing the same set, the "gear for servicing" may be took off because it had been used. So, the "gear for servicing" must be stored.

1. Remove the gear attached to top cover of CD loading mechanism.



2. Insert the hexgonel wrench (2.5mm) into the gear.

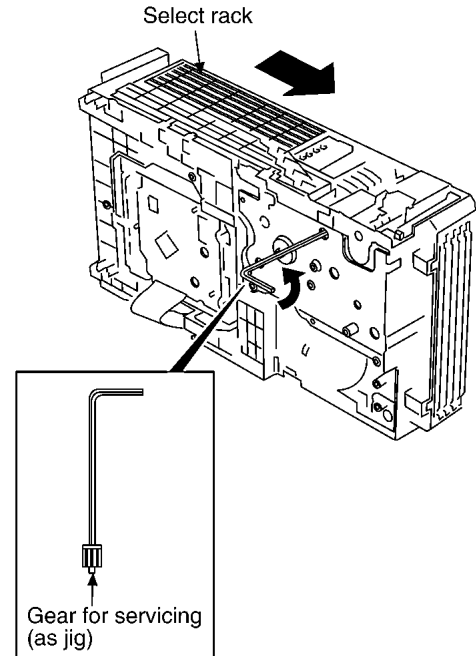


(Preparation of gear as jig is completed.)

### 1.2.2. Replacement for the disc tray

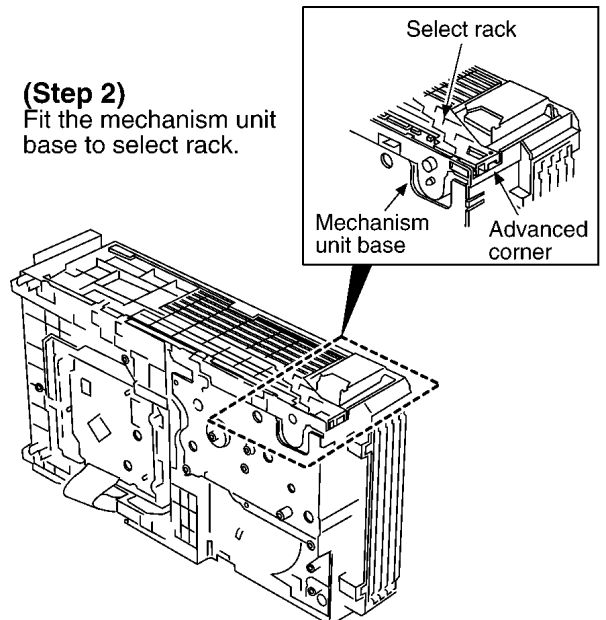
#### (Step 1)

Rotate the gear for servicing and move the select rack to advanced corner.



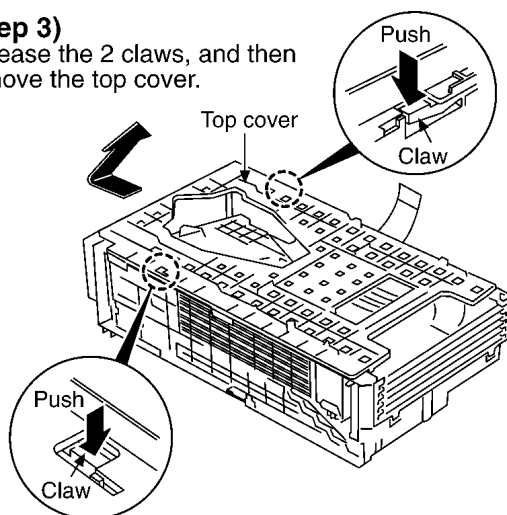
#### (Step 2)

Fit the mechanism unit base to select rack.



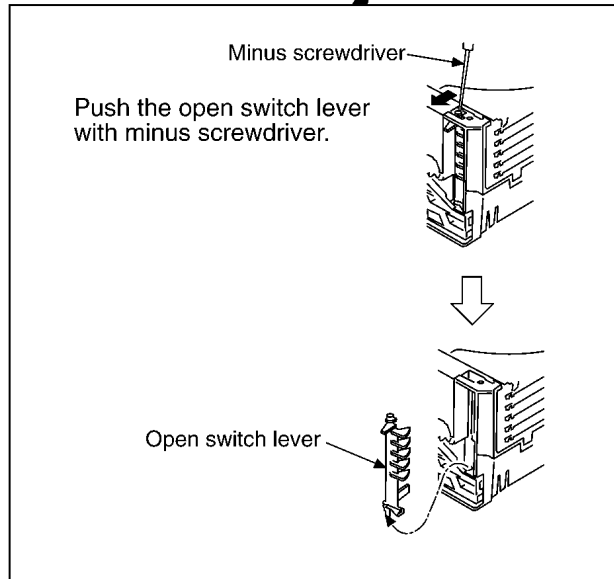
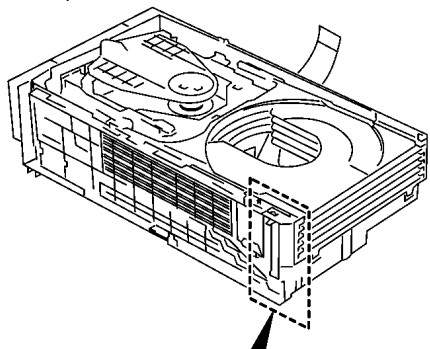
**(Step 3)**

Release the 2 claws, and then remove the top cover.



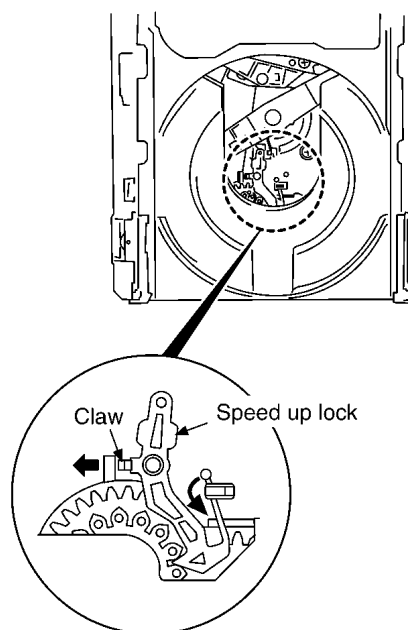
**(Step 4)**

**(Step 4)**  
Remove the open switch lever.



**(Step 5)**

Release the claw, and then remove the speed up lock.



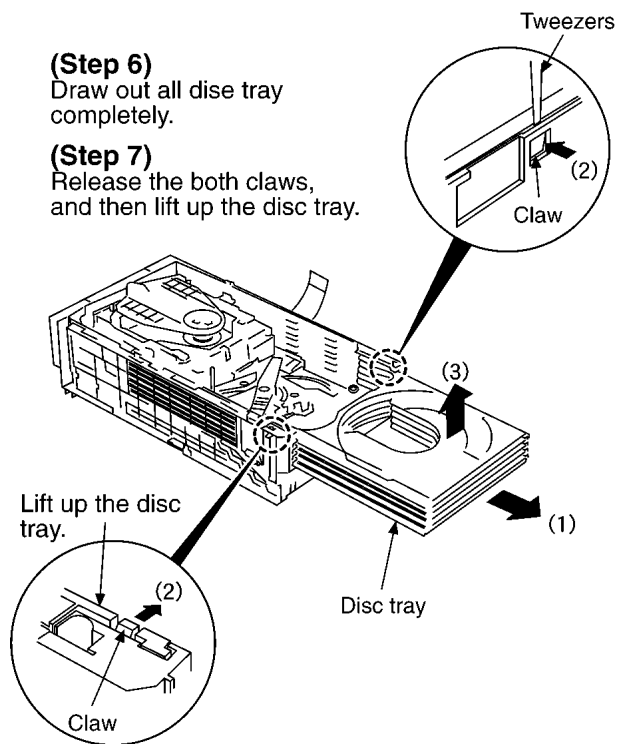
Insert the tweezers between the mechanism base and disc tray, and then lift up the disc tray.

**(Step 6)**

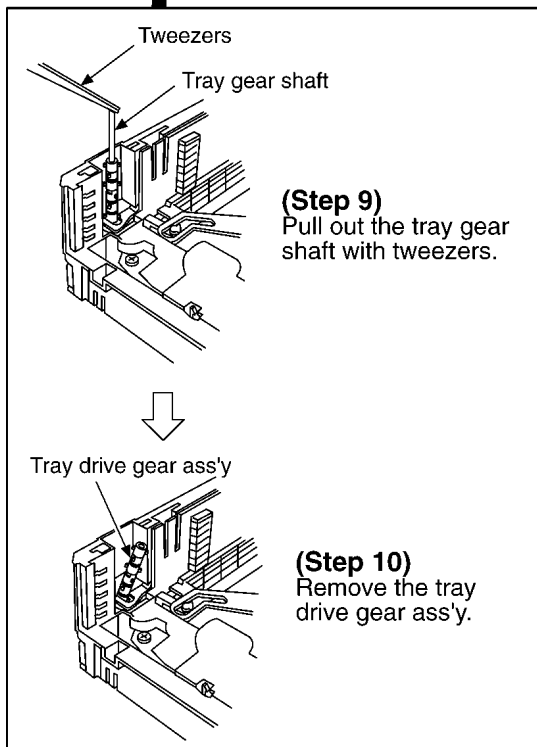
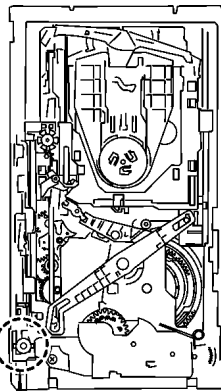
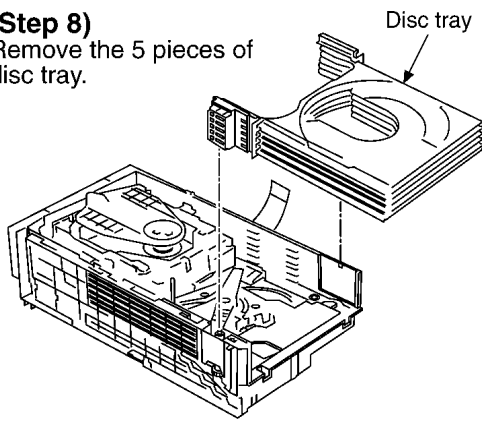
**(Step 5)**  
Draw out all dise tray completely.

**(Step 7)**

Release the both claws,  
and then lift up the disc tray.



**(Step 8)**  
Remove the 5 pieces of disc tray.



### 1.2.3. Replacement for the traverse deck

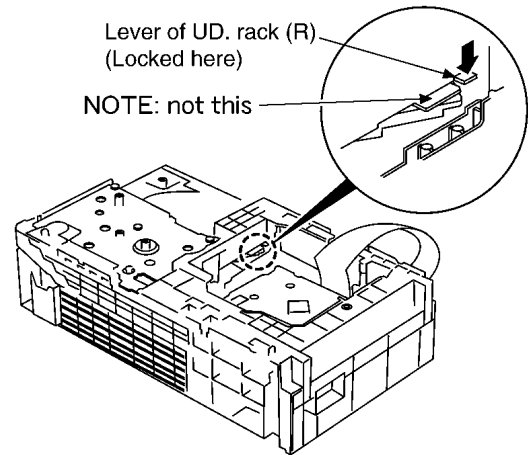
- Follow the **(Step 1)** - **(Step 10)** of item 1.2.2.

**(Step 1)**

Confirm the position for lever of UD. rack (R) to remove traverse unit.

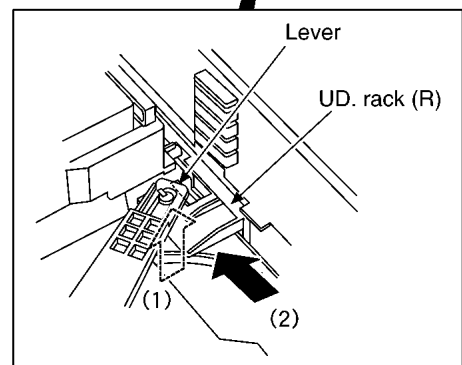
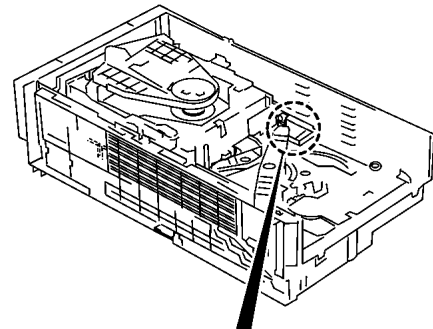
**(Step 2)**

Turn the unit over. (Upside: P.C.B.)

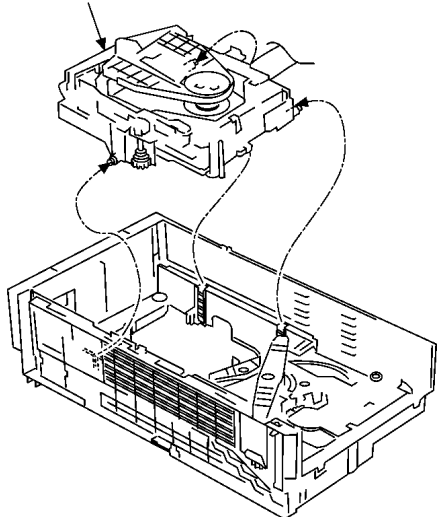


**(Step 3)**

Turn the unit over again, slide UD. rack (R) while pushing up the lever from the bottom.

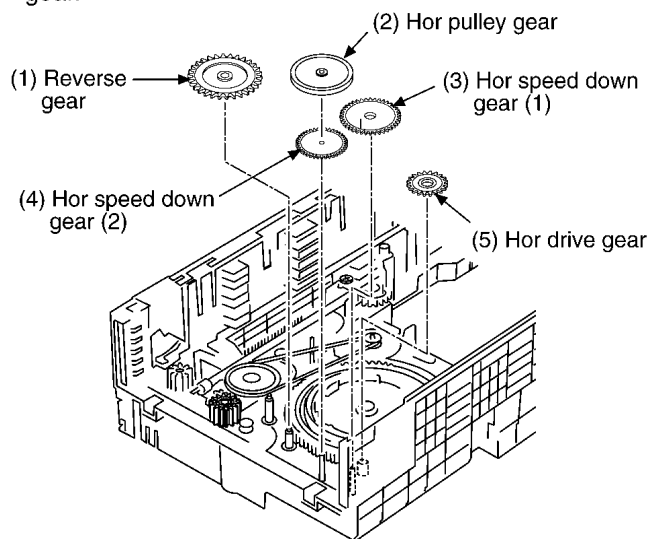


**(Step 4)**  
Remove the traverse unit.



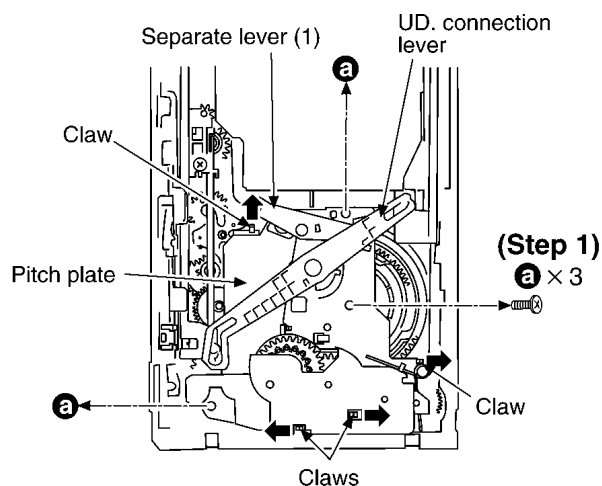
**(Step 4)**

Remove the reverse gear, hor pulley gear, hor speed down gear (1), hor speed down gear (2) and hor drive gear.



## 1.2.4. Disassembly for CD loading unit

- Follow the **(Step 1)** - **(Step 10)** of item 1.2.2.
- Follow the **(Step 1)** - **(Step 4)** of item 1.2.3.

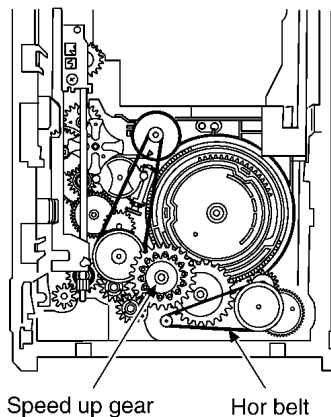


**(Step 2)**

Release the 4 claws, and then remove the pitch plate together with separate lever (1) and UD. connection lever.

**(Step 3)**

Remove the speed up gear and hor belt.

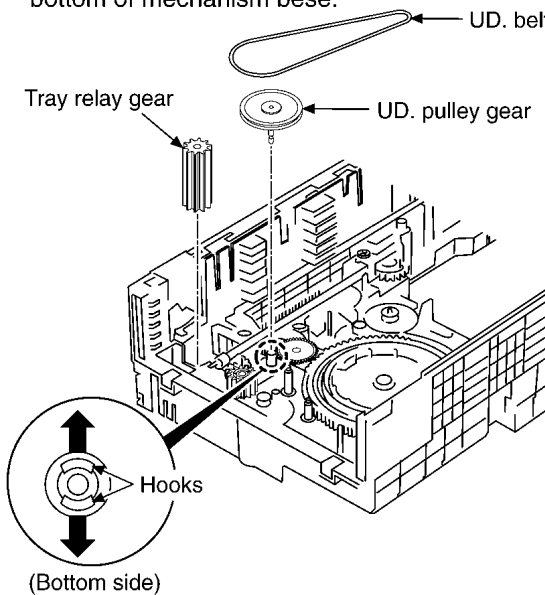


**(Step 5)**

Remove the UD. belt and tray relay gear.

**(Step 6)**

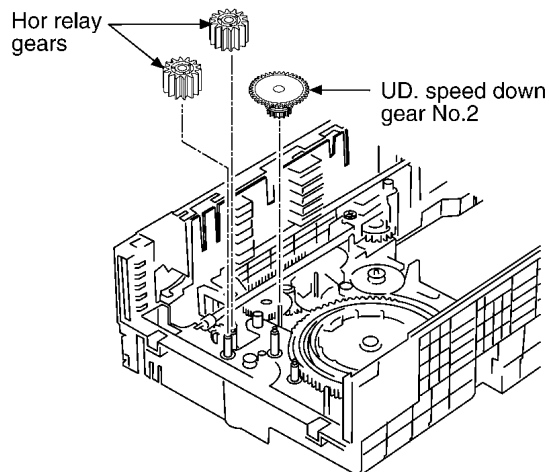
Pull out the UD. pulley gear, loosen 2 hooks of the bottom of mechanism base.





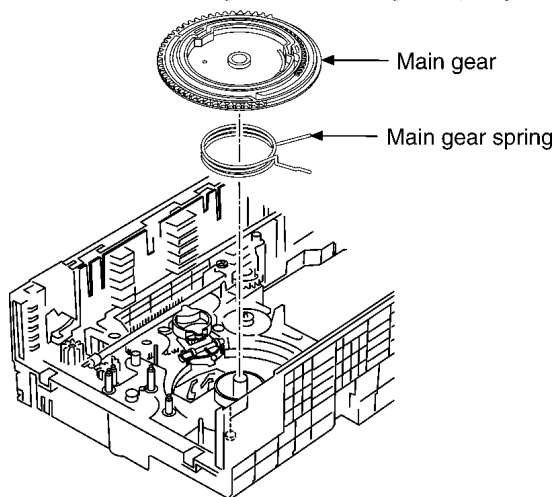
**(Step 7)**

Remove the 2 hor relay gears and UD. speed down gear No.2.



**(Step 8)**

Remove the main gear and main gear spring.

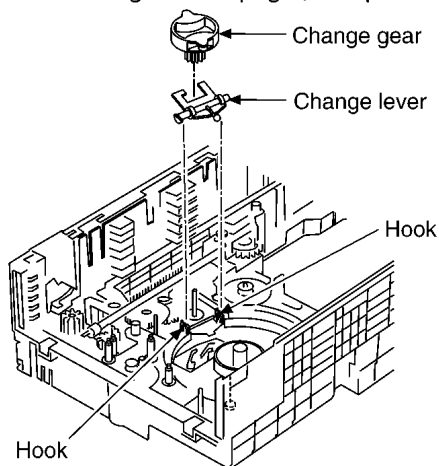


**(Step 9)**

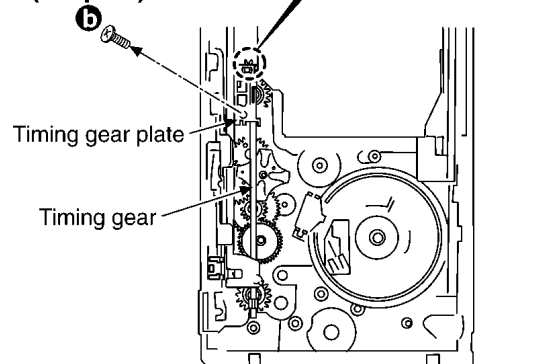
Remove the change gear.

**(Step 10)**

Raise the change lever upright, and pull it out of hook.



**(Step 11)**



**(Step 12)**

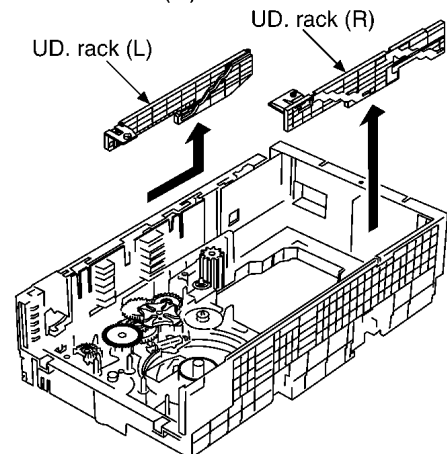
Release the 2 claws, and then remove the timing gear plate and timing gear.

**(Step 13)**

Move the UD. rack (L) to backward, and then remove it.

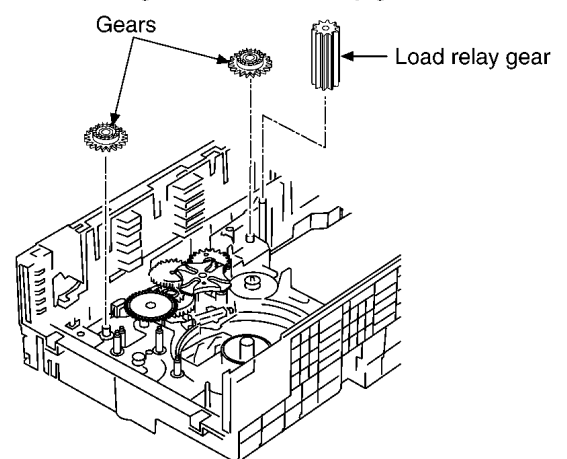
**(Step 14)**

Remove the UD. rack (R).



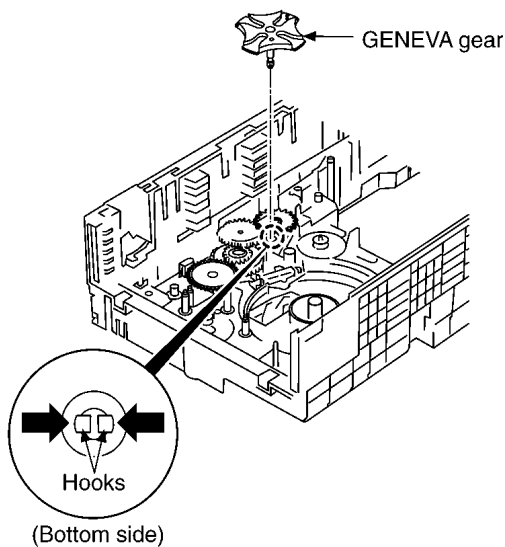
**(Step 15)**

Remove the 2 gears and load relay gear.

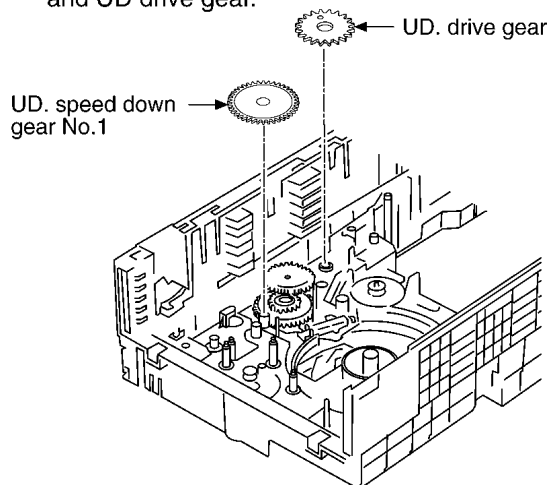


**(Step 16)**

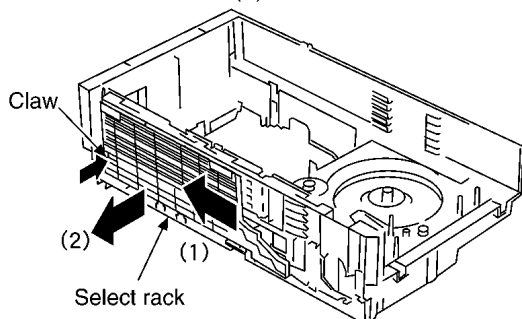
Pull out the GENEVA gear, loosen 2 hooks of the bottom of mechanism base.

**(Step 17)**

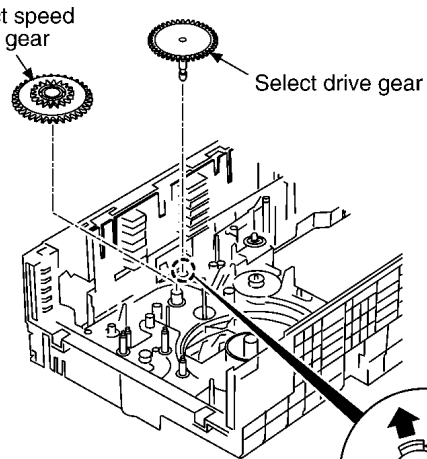
Remove the UD. speed down gear No.1 and UD drive gear.

**(Step 18)**

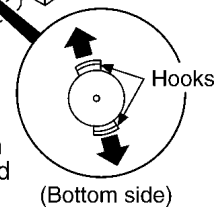
Slide the select rack to the edge direction of the arrow (1). Push the claw and pull out to arrow (2) while sliding the select rack to the arrow (1).



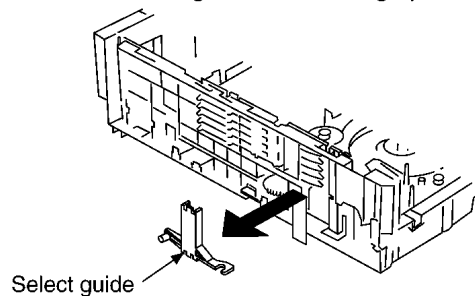
Select speed down gear

**(Step 19)**

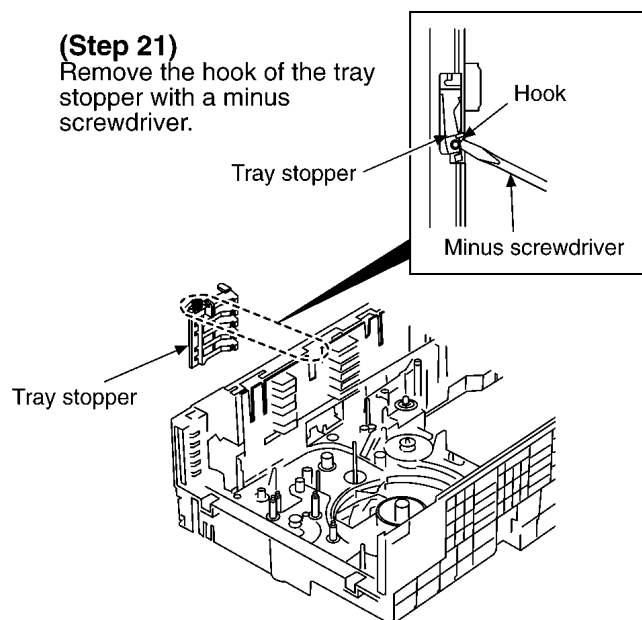
Pull out the select drive gear, loosen 2 hooks of the bottom of mechanism base. Then, remove the select speed down gear.

**(Step 20)**

Remove the select guide after sliding upside.

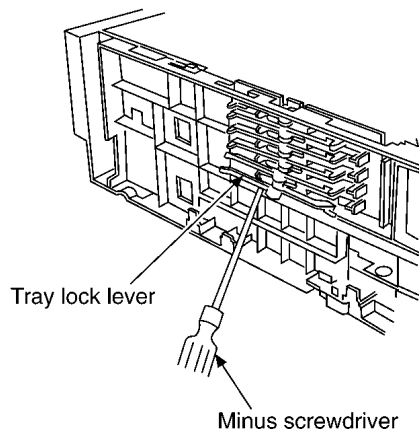
**(Step 21)**

Remove the hook of the tray stopper with a minus screwdriver.



**(Step 22)**

Remove the bottom of the tray lock lever with a minus screwdriver and others.



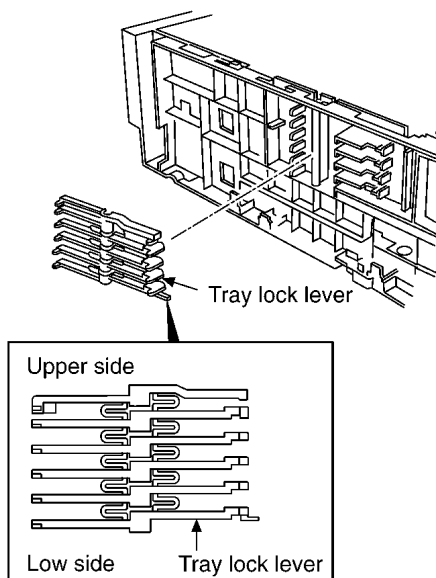
### 1.3. CR16 MECHANISM ASSEMBLY PROCEDURE

The following specified greases and/or oil must be applied when some specific parts are changed.

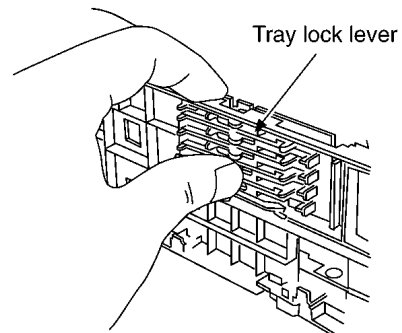
1. Floil grease (VFK1298) : The floil grease must be applied to tray, tray (L) and tray (R).
2. Hanarl oil (VFK1700) : The hanarl oil must be applied to any parts with grease other than the said parts.

**(Step 1)**

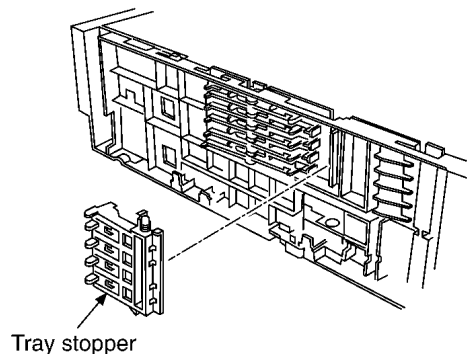
Install the tray lock lever to mechanism base.

**(Step 2)**

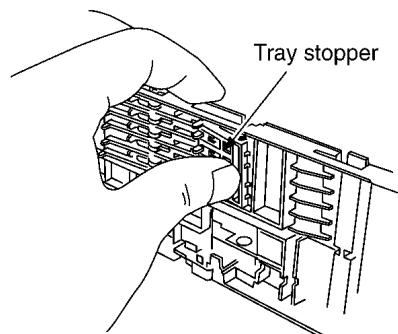
Push the tray lock lever with a hand and install it.

**(Step 3)**

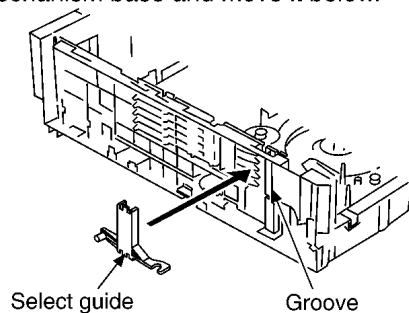
Install the tray stopper to mechanism base.

**(Step 4)**

Push the tray stopper with a hand and install it.

**(Step 5)**

Insert the select guide with a groove of the mechanism base and move it below.



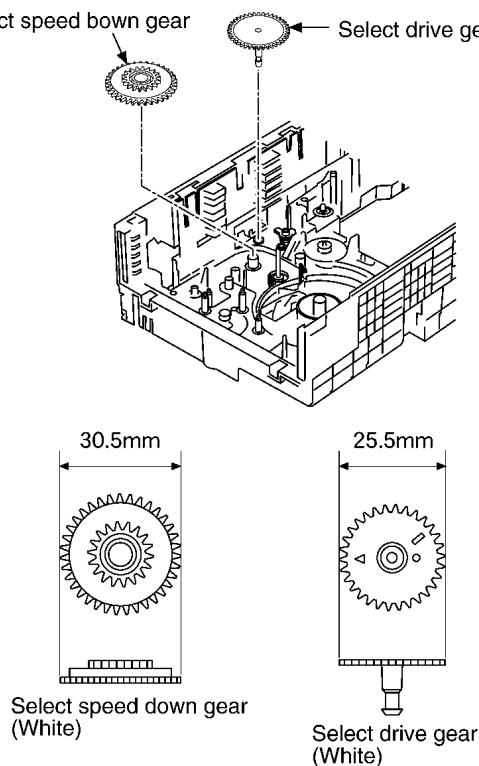
**(Step 6)**

Install the select speed down gear to mechanism base.

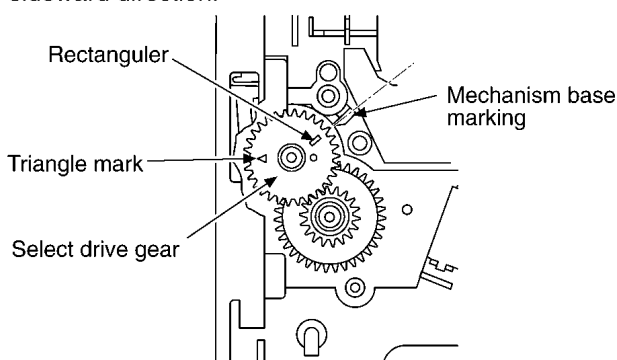
**(Step 7)**

Install the select drive gear to mechanism base.

Select speed down gear      Select drive gear

**(Step 8)**

Fit a mechanism base marking to the rectangular mark of gear so that the triangle mark can indicate the sideward direction.

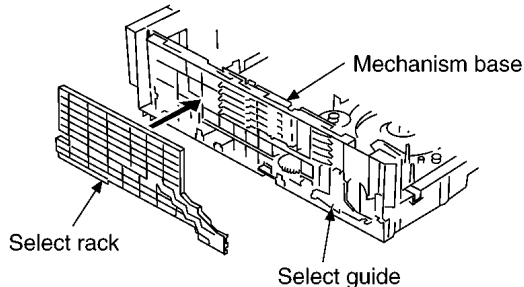
**(Step 9)**

Install the select rack to mechanism base.

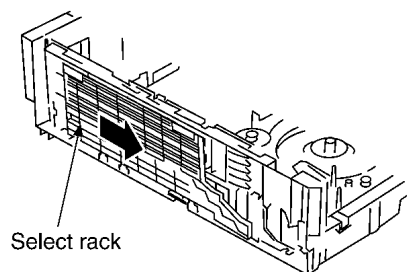
(Checking items before the installation.

1. Check select guide is completely in lowest position.
2. Check its phase of select drive gear is correct position. (Rectangle/Triangular mark) (Refer to Step 8)

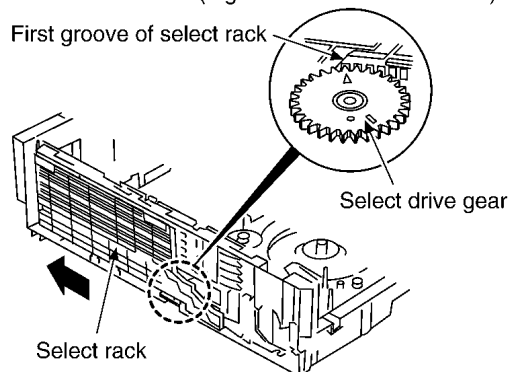
1. Put a select rack down with it fitted to its circumference of mechanism base.



2. Slide the select rack with it's pushing to a little right direction and install it.

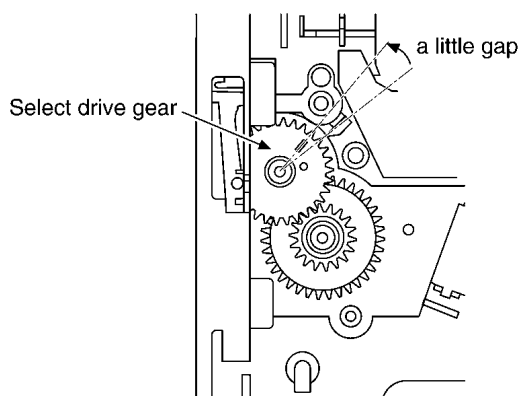


(Figure to see from the inside)



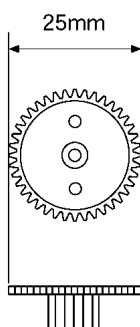
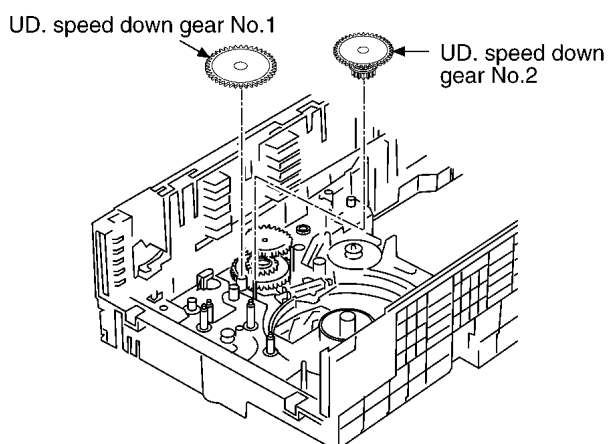
3. Check whether its end of triangular mark is in first groove of select rack, after fixing.
4. After insertion of select rack, continue the following work until the indication that it gose forward. And, all the while it must be checked that select rack is in the extreme end.

5. After insertion the select rack, the marking of select gear has a little gap when it is in the extreme end.

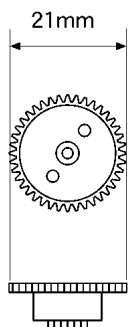


### (Step 10)

Install the UD. speed down gear No.1 and UD. speed down gear No.2.



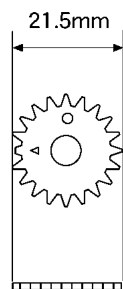
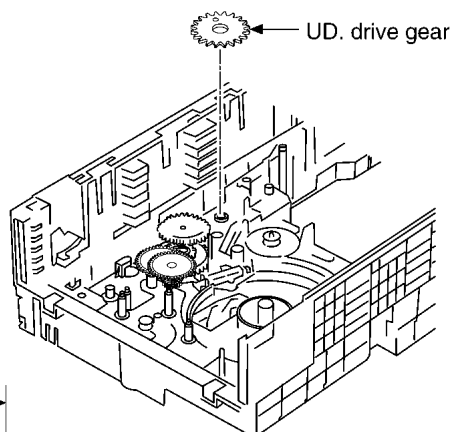
UD. speed down gear No.1  
(White)



UD. speed down gear No.2  
(Semi-transparent)

### (Step 11)

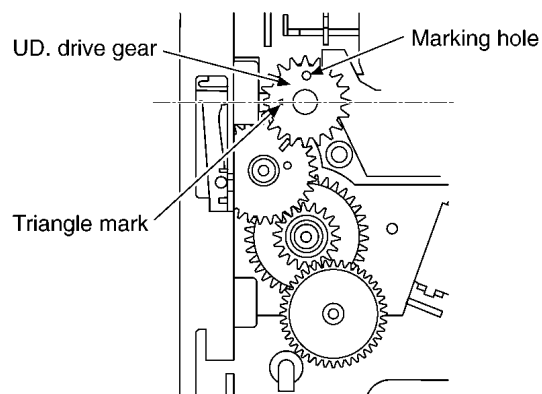
Install the UD. drive gear to mechanism base.



UD drive gear  
(White)

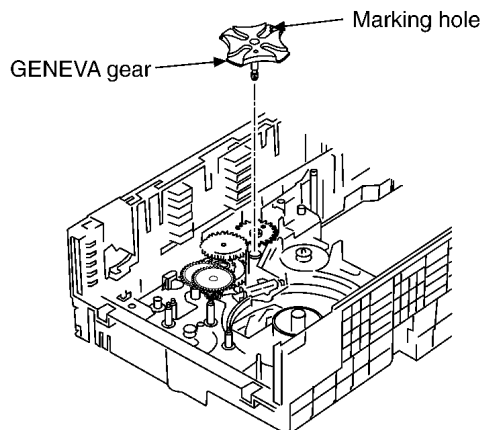
### (Step 12)

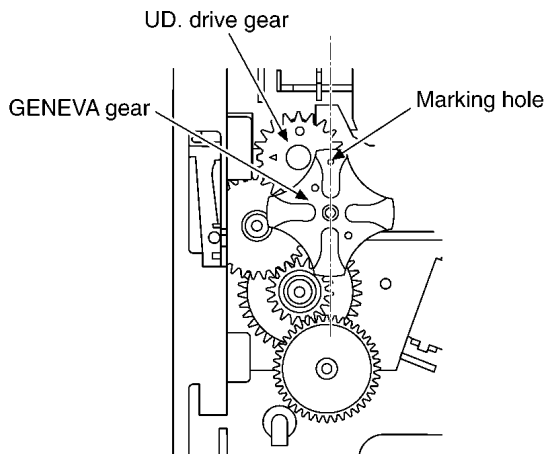
Insert the UD. drive gear with its marking hole upward. At that time, its triangle mark should be sideways.



### (Step 13)

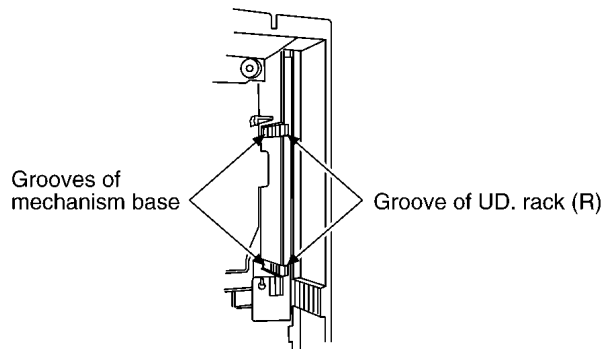
Insert the GENEVA gear with its marking hole upward, and fix it by 2 hooks on bottom of mechanism base. At that time, UD. drive gear mustn't be moved.





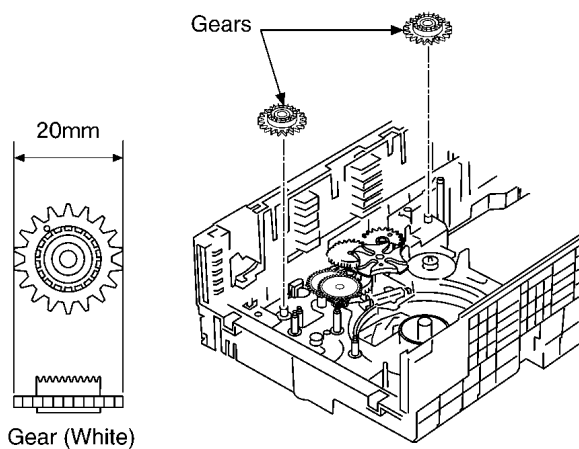
**NOTE:**

Put a groove of the mechanism base to the UD. rack (R).



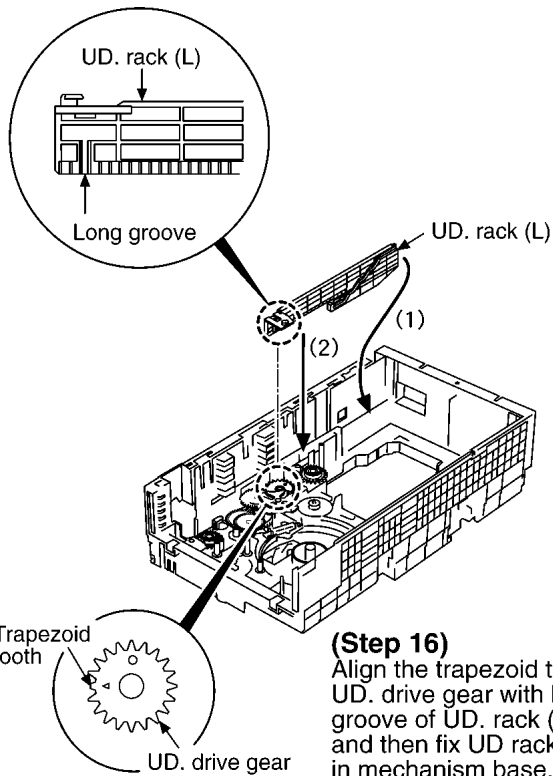
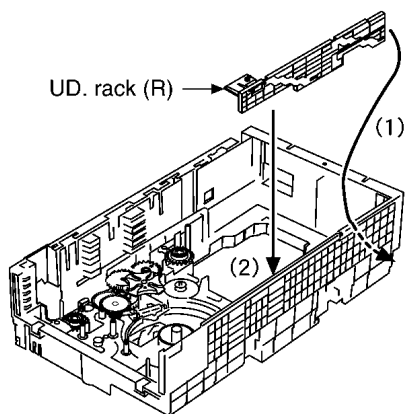
**(Step 14)**

Install the 2 gears to mechanism base.



**(Step 15)**

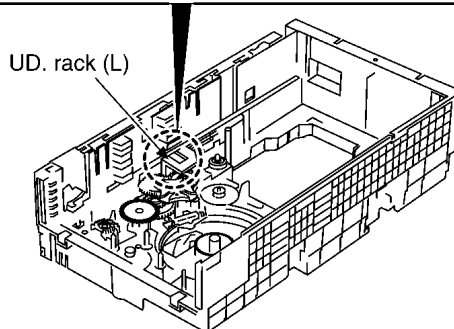
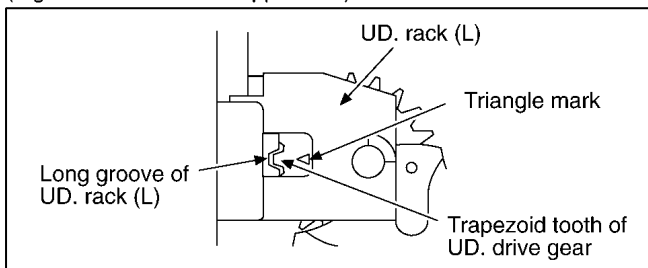
Insert the UD. rack (R) to (2) from arrow (1).



**(Step 16)**

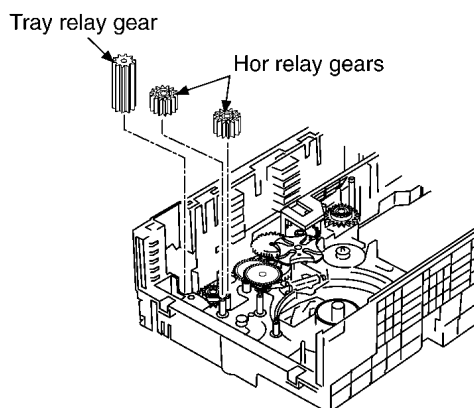
Align the trapezoid tooth of UD. drive gear with long groove of UD. rack (L), and then fix UD rack (L) in mechanism base.

(Figure to see from the upper side)



**(Step 17)**

Install the tray relay gear and 2 hor relay gears.

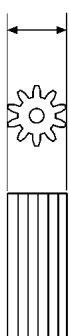


15.5mm



Hor relay gears  
(White)

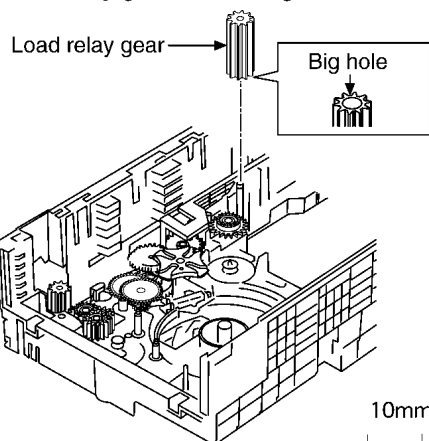
12mm



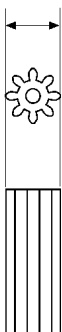
Tray relay gear  
(White)

**(Step 18)**

Install the load relay gear to mechanism base.  
(Fit load relay gear with its big hole downward.)



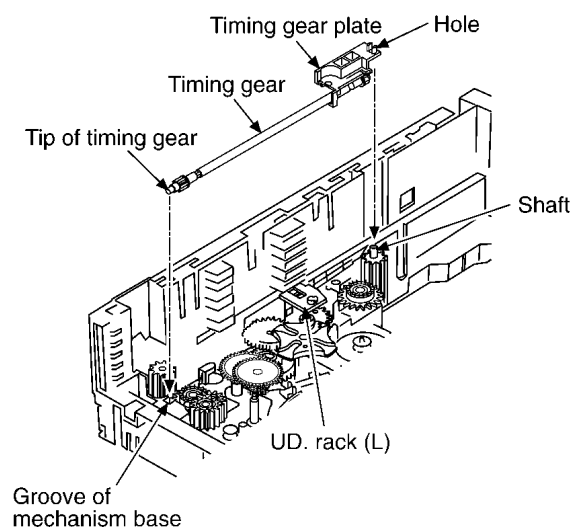
10mm



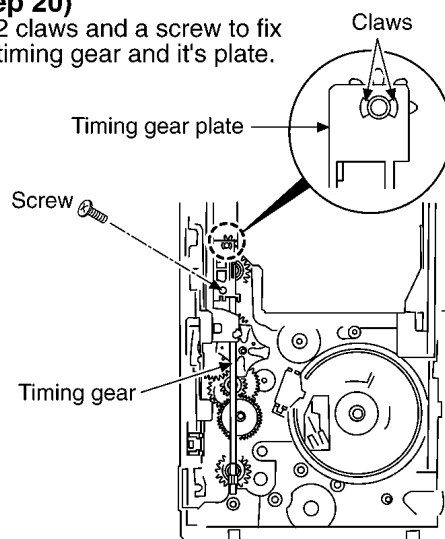
Load relay gear  
(White)

**(Step 19)**

Put on the top of the timing gear, then, install the timing gear and it's plate.  
At that time avoid the UD. rack (L).

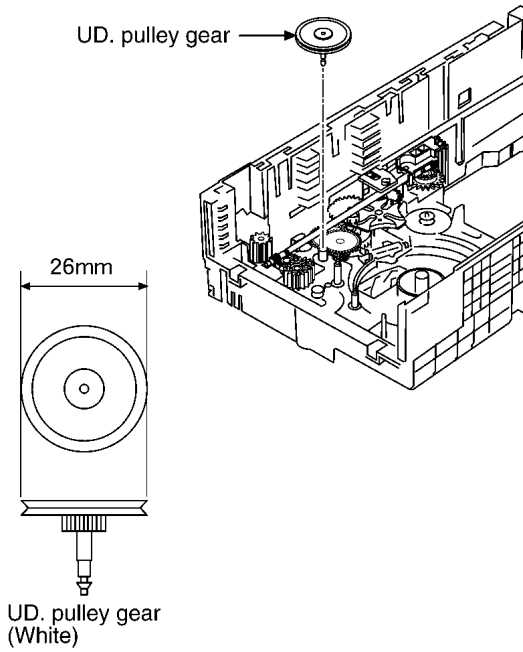
**(Step 20)**

Fix 2 claws and a screw to fix the timing gear and it's plate.

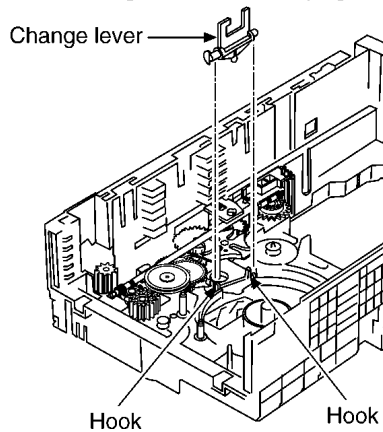


**(Step 21)**

Install the UD. pulley gear to mechanism base.

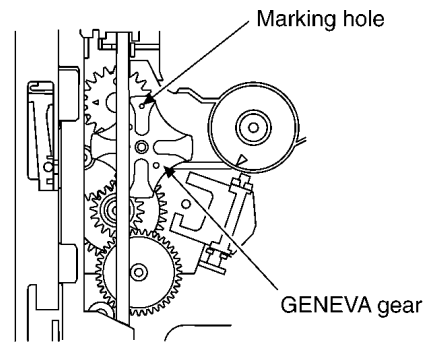
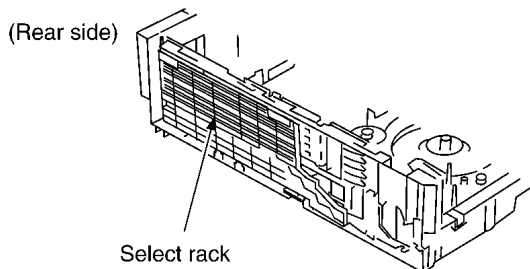
**(Step 22)**

Insert the change lever with it upright.

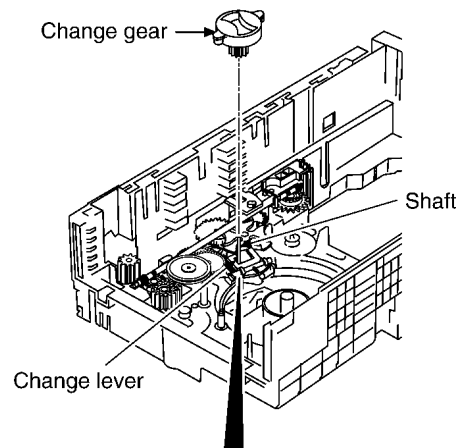
**(Step 23)**


Be sure the notice of bellow before fixing the change gear.

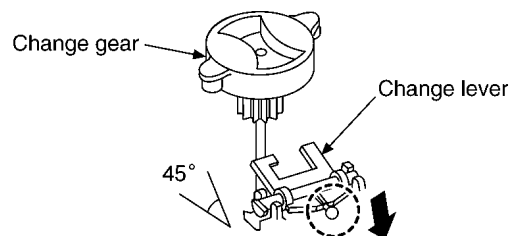
1. Select track should be in the rear of mechanism base.
2. Its hole of GENEVA gear should turn up.

**(Step 24)**

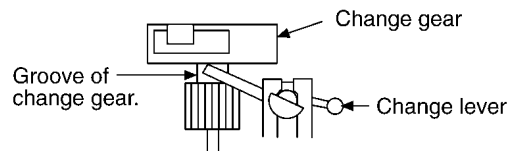
Install the change gear as insert the change lever into the groove of change gear.



1. Pushing the  part and pull up the change lever 45°.



2. Insert the change lever into the groove of change gear.



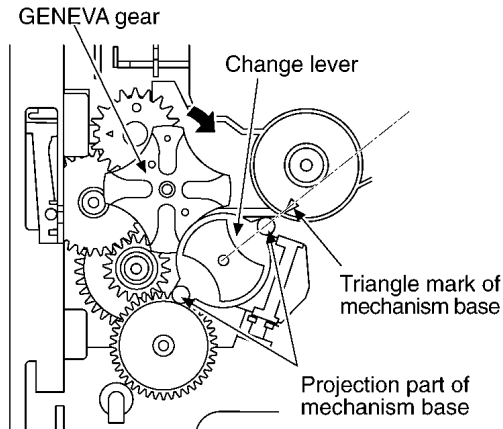


**(Step 25)**

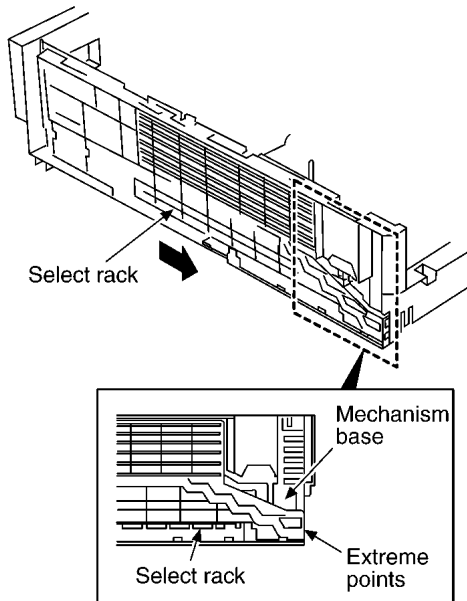
Put change gear down with projection part of change gear fitted to triangle mark of mechanism base, when fixing change gear.  
At that time, check change gear is inserted into the groove of change lever.

**(Step 26)**

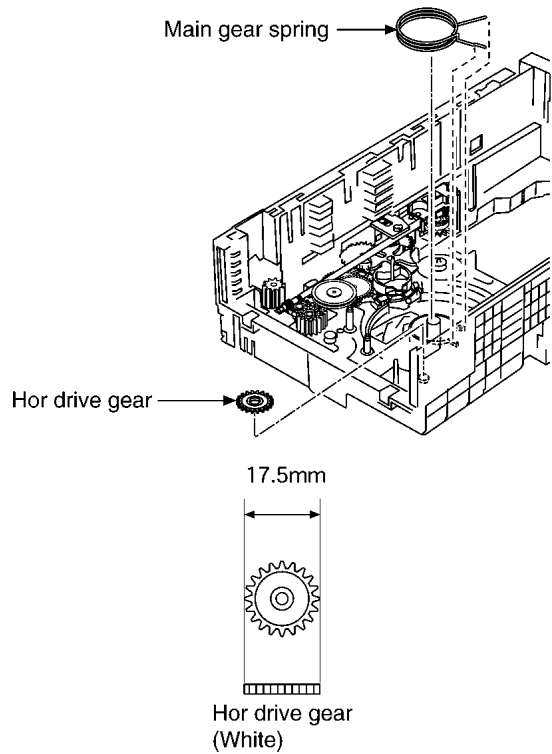
Lastly, turn GENEVA gear clockwise slightly and drop change gear to mechanism base.

**(Step 27)**

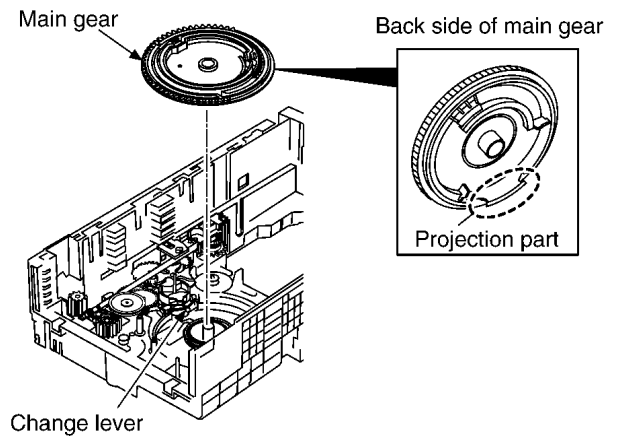
Move the select rack smoothly forward manually until 2 extreme points of both select track and mechanism base.

**(Step 28)**

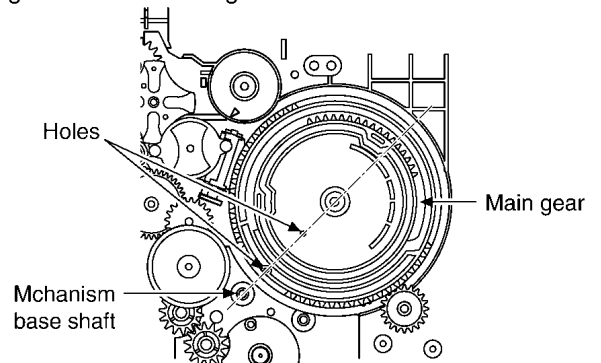
Install the main gear spring and hor drive gear.

**(Step 29)**

Don't bring change lever into touch to projection part of main gear, when fixing main gear in mechanism base.

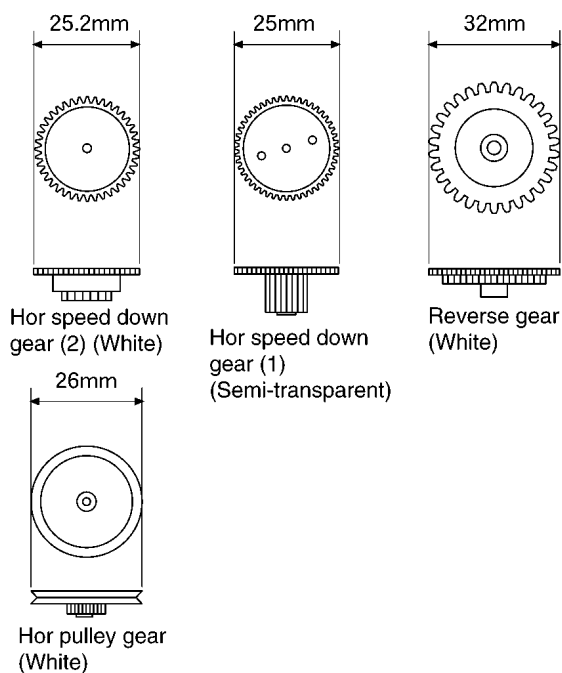
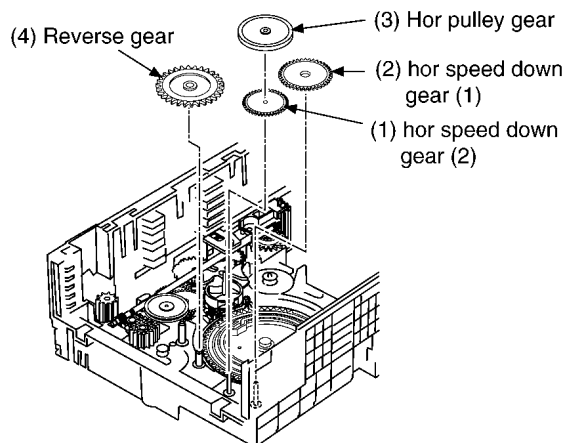
**(Step 30)**

After that, turn main gear so that 2 holes inside main gear would be in alignment with mechanism base.



**(Step 31)**

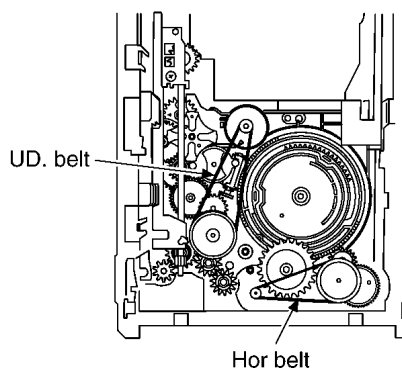
Install the hor speed down gear (2), hor speed down gear (1), hor pully gear and reverse gear.

**(Step 32)**

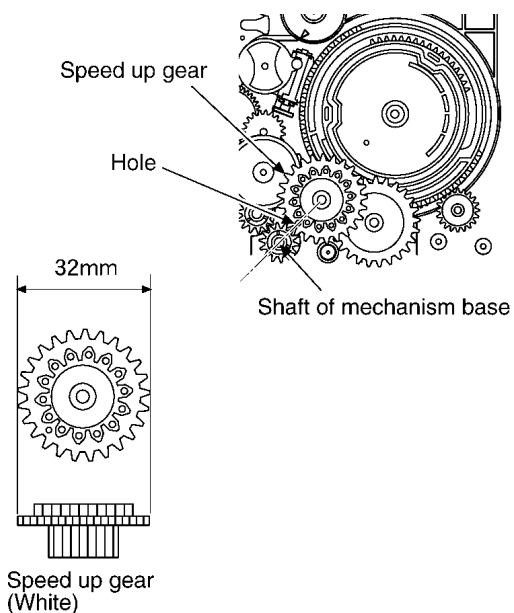
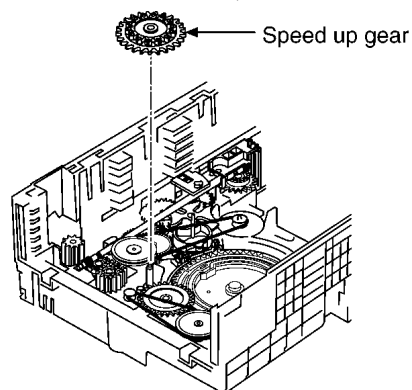
Install the UD. belt and hor belt.

**NOTE:**

1. Take care not apply the grease to the belt.
2. Install the belt without twist.

**(Step 33)**

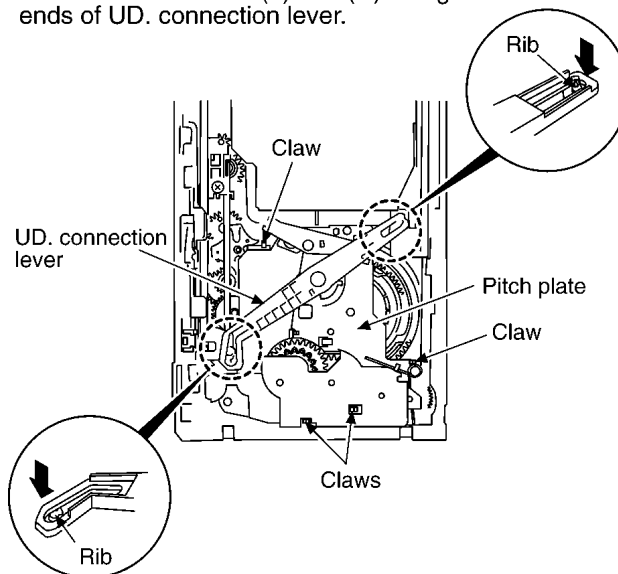
Install speed up gear to its shaft of mechanism base with 2 fitting.

**(Step 34)**

Install the pitch plate. (The 4 claws should be latched.)

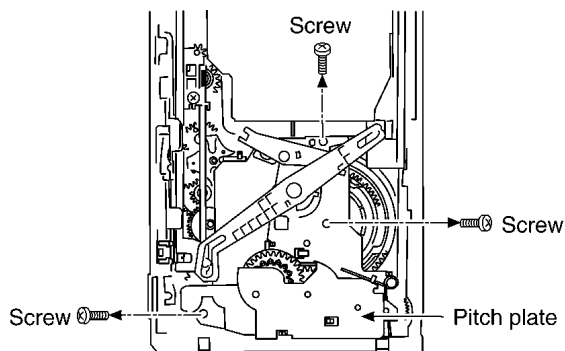
**(Step 35)**

Fix 2 ribs of UD. rack (L) and (R) into groove of both ends of UD. connection lever.



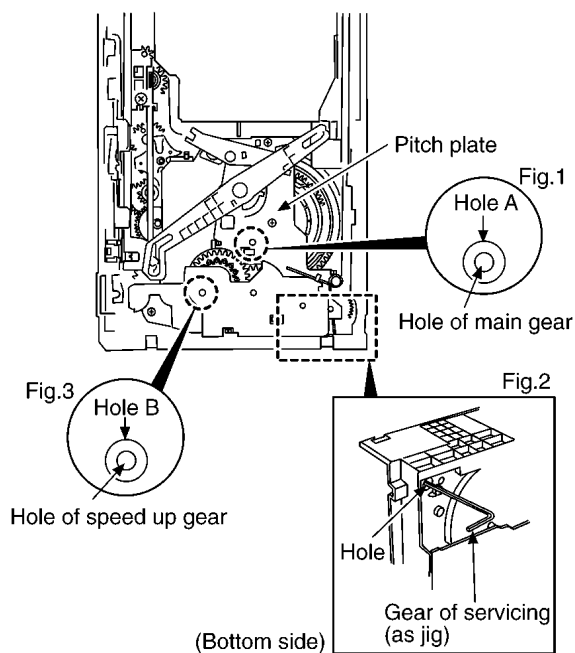
**(Step 36)**

Fixed it by three screws further.

**(Step 37)**

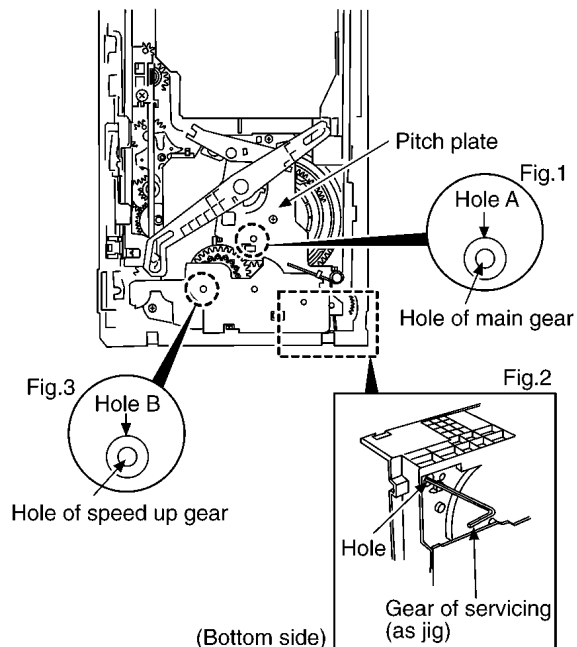
Be sure the notice of below before fixing the traverse mechanism.

1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)  
If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holes of both pitch plate and speed up gear is fitted. (Refer Fig.3)  
If it's not fitted turn the speed up gear to adjust it.

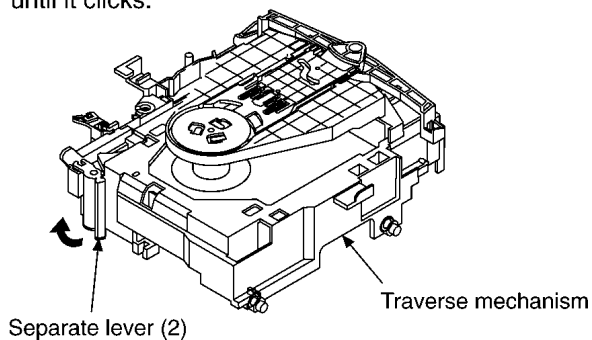
**(Step 37)**

Be sure the notice of below before fixing the traverse mechanism.

1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)  
If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holes of both pitch plate and speed up gear is fitted. (Refer Fig.3)  
If it's not fitted turn the speed up gear to adjust it.

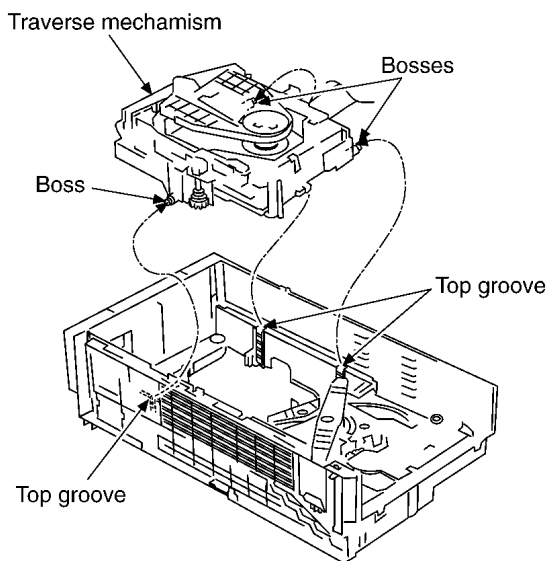
**(Step 38)**

Turn the separate lever (2) slowly toward left side until it clicks.



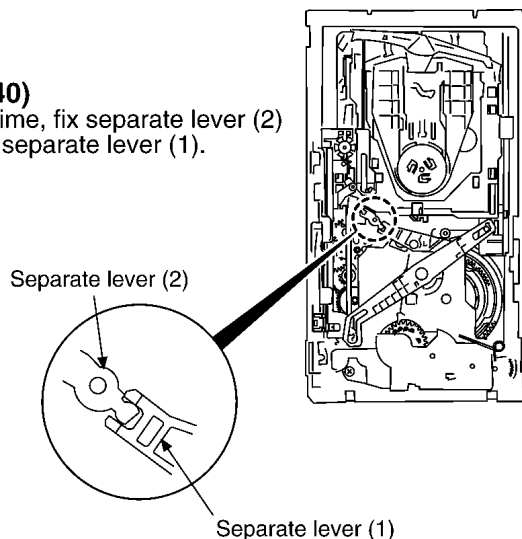
### (Step 39)

Fix the left boss into the top groove of the UD. rack (L) and fix 2 bosses into the groove of the UD. rack (R).



### (Step 40)

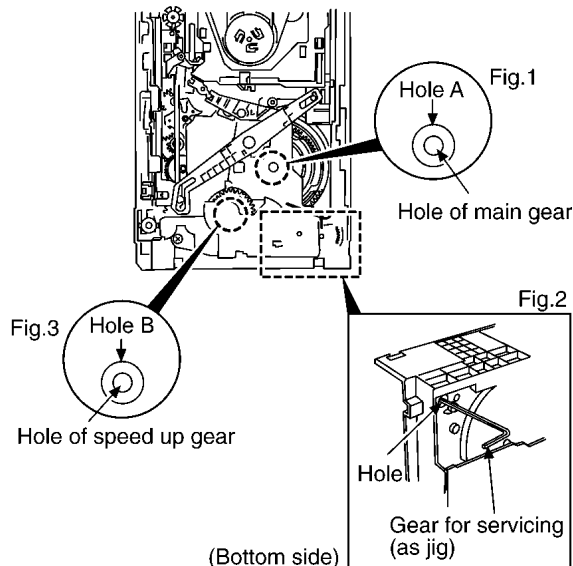
At that time, fix separate lever (2) into the separate lever (1).



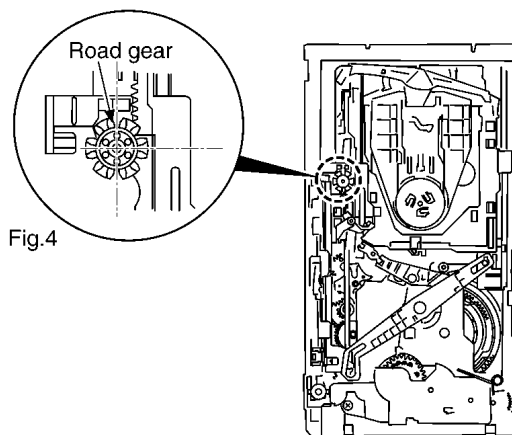
### (Step 41)

After the traverse mechanism fixed, confirm the phase in order below.

1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)  
If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holes of both pitch plate and speed up gear is fitted. (Refer Fig.3)  
If it's not fitted turn the speed up gear to adjust it.

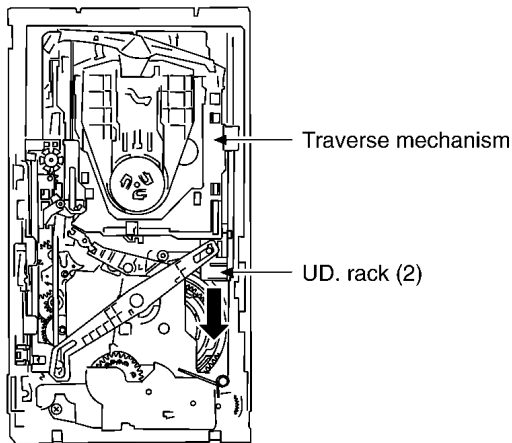


3. In the cog of road gear, the groove with it's cutting halfway set side ward. (Refer to Fig.4)  
Remove the traverse mechanism again when it is not set side ward and install it after adjustment of inserting position.  
NOTE: By this time, do not adjust to rotate the road gear.



**(Step 42)**

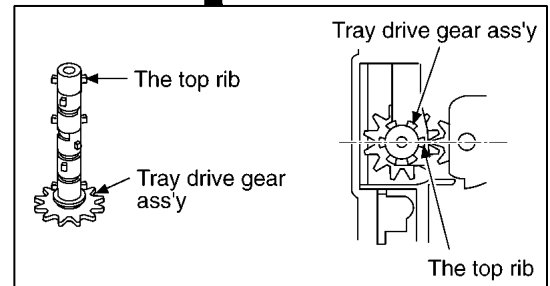
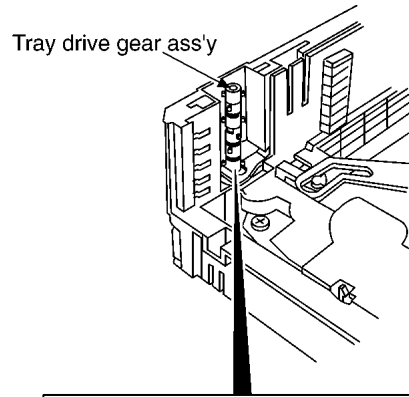
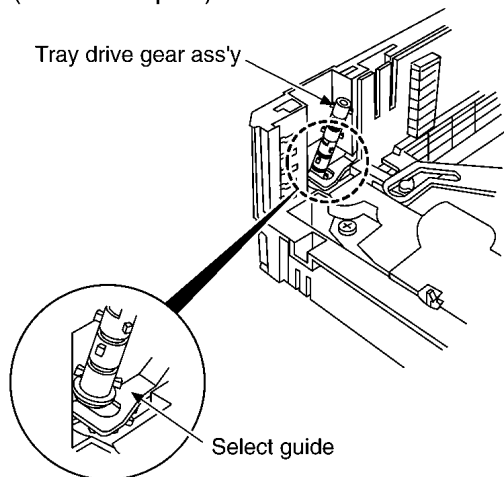
After insertion of traverse mechanism, pull the UD. rack (R) on this side that each phase is "OK" and then lock the traverse mechanism.

**(Step 43)**

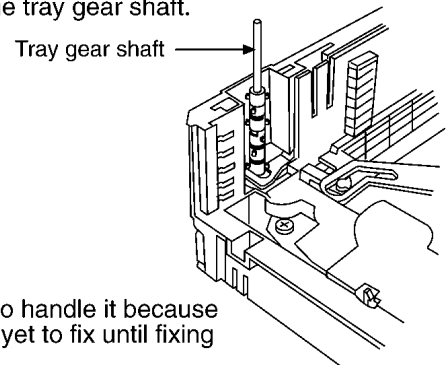
Install the tray drive gear to select guide.  
(Install the top rib of the tray drive gear with side ward.)

**NOTE:**

Confirm the each phase surely before install the tray drive gear. (Refer to Step 41).

**(Step 44)**

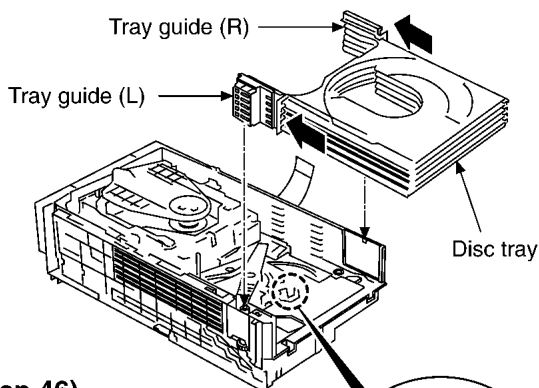
Insert the tray gear shaft.

**NOTE:**

Be careful to handle it because the shaft is yet to fix until fixing top cover.

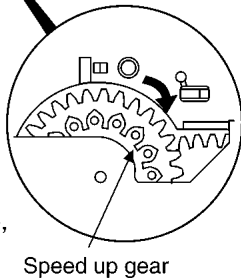
**(Step 45)**

Move the tray guide (R) and (L) to direction of arrow that fixed (stopped) it and install 5 pieces of disc tray.

**(Step 46)**

Confirm that when the disc tray insert the upper side, the speed up gear is rotate clockwise a little.

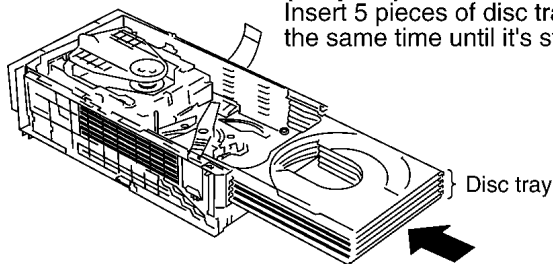
- When the rotation of speed up gear is not clockwise or rotate, repeat from Step 45.
- Until the speed up gear rotate, repeat from Step 45 and 46.

**NOTE:**

While keeping all position, install 5 pieces of disc tray.

**(Step 47)**

Insert 5 pieces of disc tray at the same time until it's stop.

**(Step 48)**

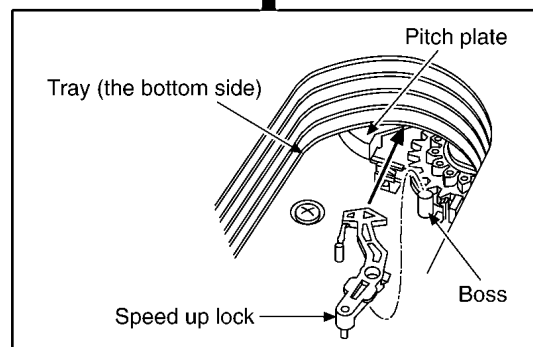
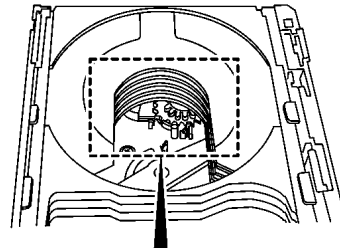
Turn the traverse side 180°.

**(Step 49)**

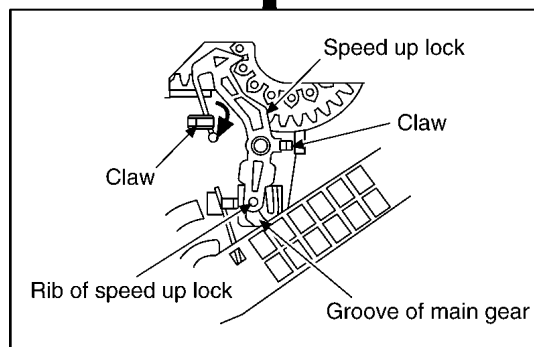
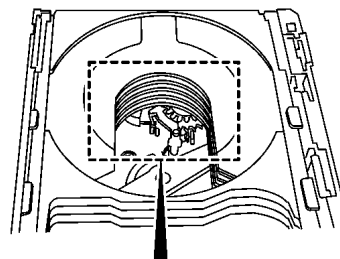
While install the tip of speed up lock between tray (No.1) of the most lower side and pitch plate for the time being. (Do not to insert the cog of speed up gear), insert it to boss.

**NOTE:**

At that time, do not move the tray. (See the tray the most front side)

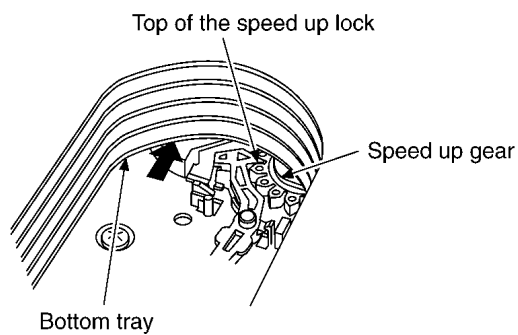
**(Step 50)**

Insert the rib of speed up lock into a groove of main gear, and lock it with 2 claws.

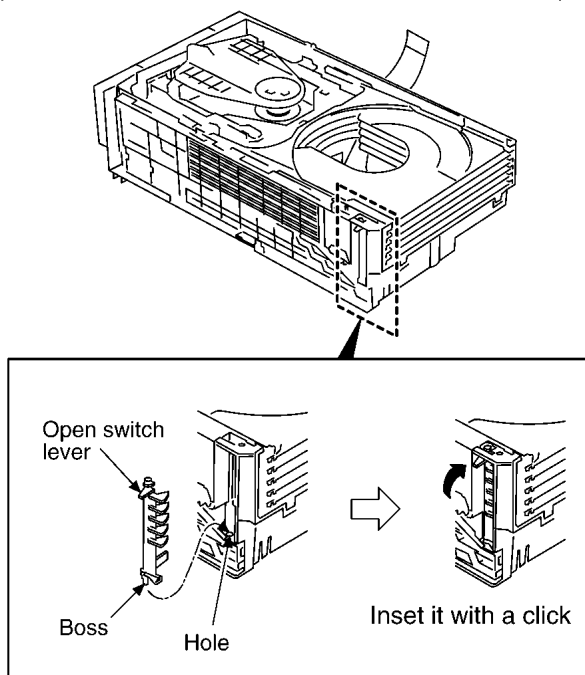


**(Step 51)**

Move the bottom tray to the arrow while pushing the top of the speed up gear. And insert it to a cog of the speed up gear.

**(Step 52)**

Install the open switch lever.  
(Put the boss into the hole of the mechanism base.)

**(Step 53)**

Install the top cover.  
Fix it into hooks and slide direction to the arrow.

**NOTE:**

The claw should be latched.

