



作成承認印	配布許可印
	

AF Zoom-Nikkor 70-300/4-5.6G

REPAIR MANUAL

Nikon | NIKON CORPORATION
Tokyo, Japan

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※DISASSEMBLING/ASSEMBLING/ADJUSTMENT

①This repair manual is made simply because the basic structure of this lens is the same as JAA76451 (AF ED 70-300/4.5-6D).

When repairing the lens, please refer to the drawings and the Repair Manual for JAA76451 (AF ED 70-300/4-5.6D).

②If removing the 4th lens group and then mounting it as it is, the error occurs in the projection resolution. Therefore, the adjustment for optical axis is needed.

Repair and adjust the lens that is needed the adjustment for optical axis at the place where the point tester is set up.

Do not remove the 4th lens group if the point tester is not set up.

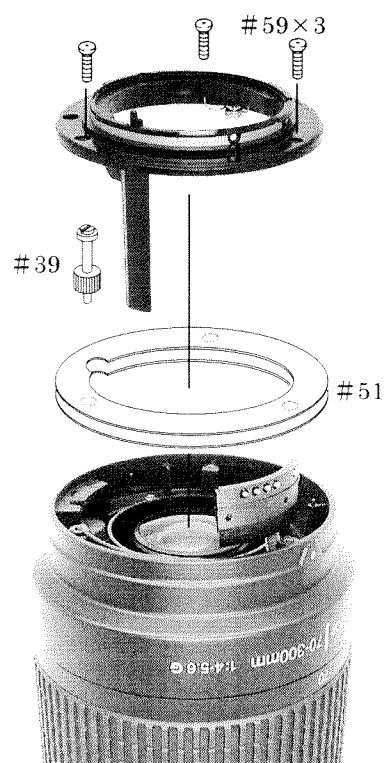
DISASSEMBLING/ASSEMBLING/ADJUSTMENT

1. DISASSEMBLING

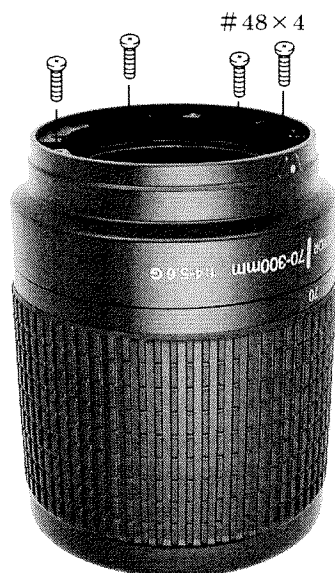
REAR COVER RING



BAYONET MOUNT



REAR LENS BARREL UNIT

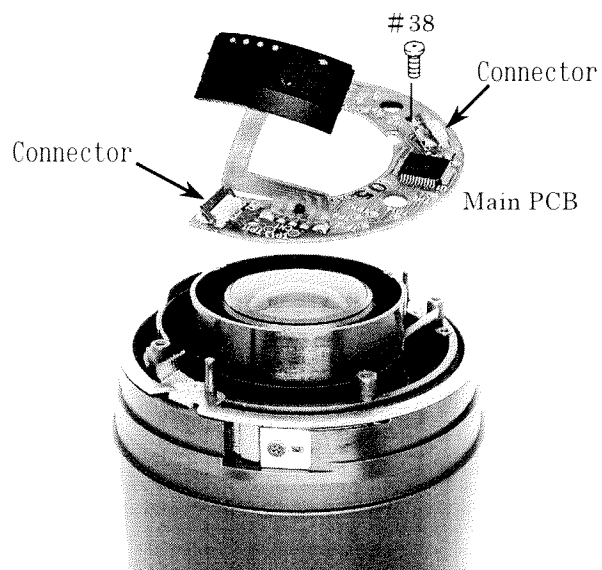


Rear lens barrel unit.

Do not damage the connection FPC when removing the rear lens barrel unit.



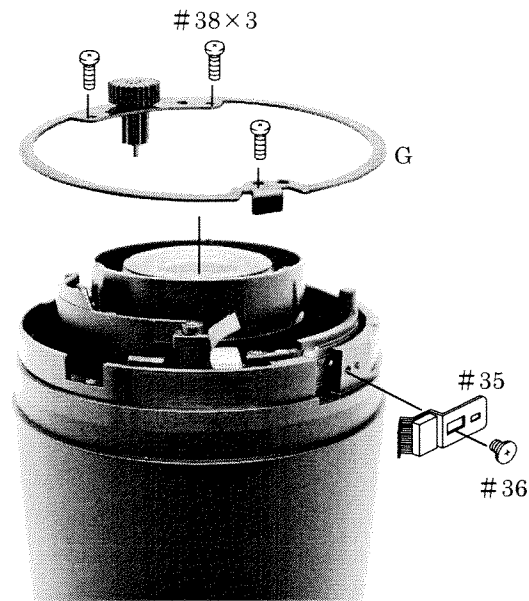
MAIN PCB



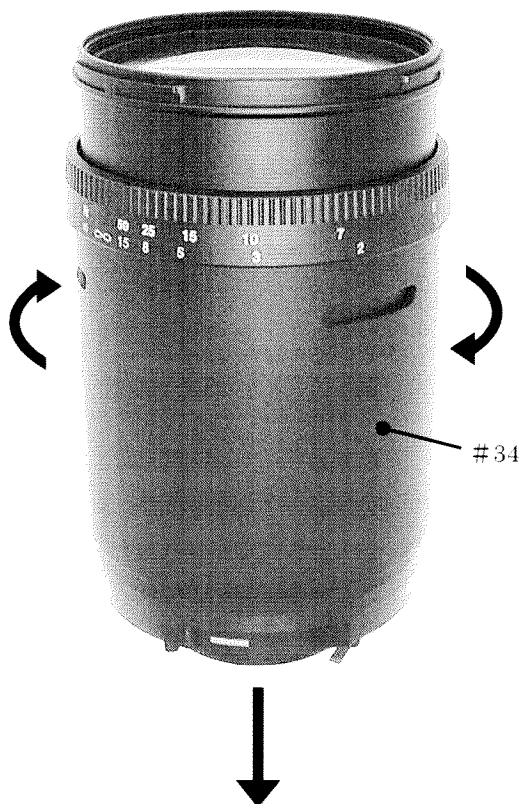
①Remove the FPC from the connector.

②Unscrew the screw #38 and remove the main PCB.

GEAR HOLDER RING UNIT, FOCUS ENCODER BRUSH

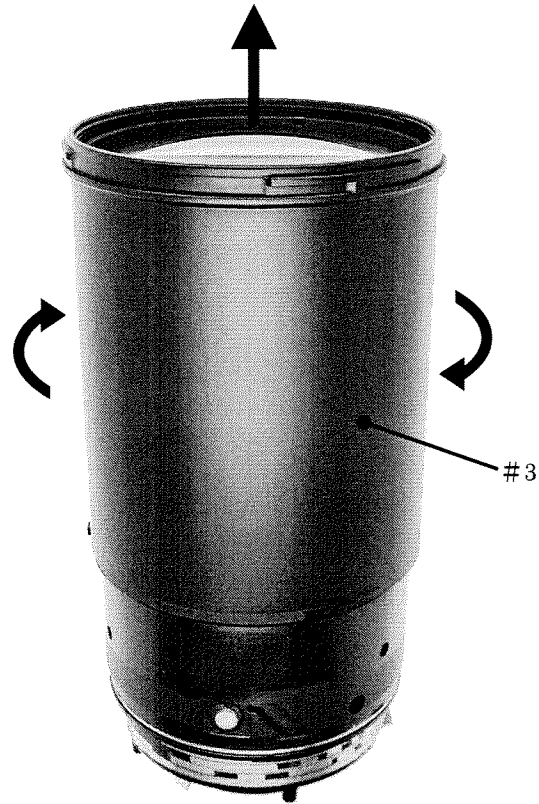


FOCUS RING

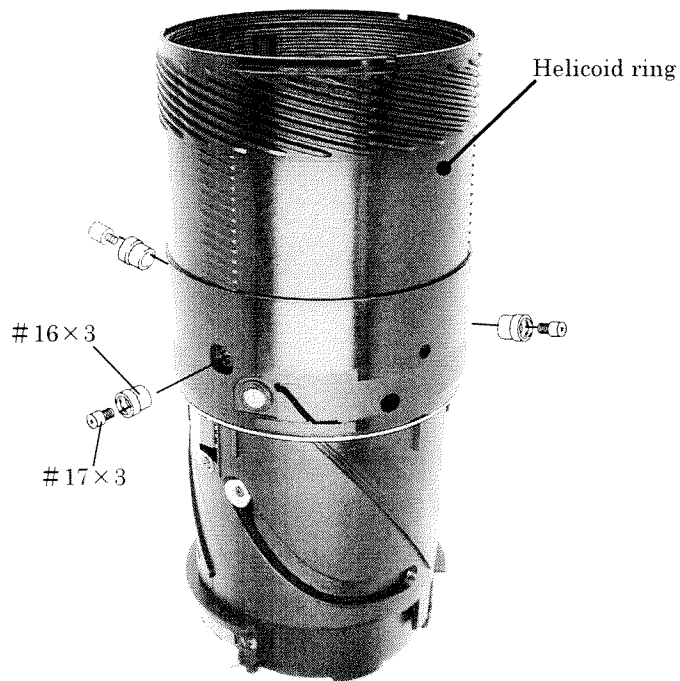


- ① Rotate the focus ring #34 in the arrow direction.
- ② When the joint is separated, remove the focus ring #34 backward.

EXTERNAL HELICOID

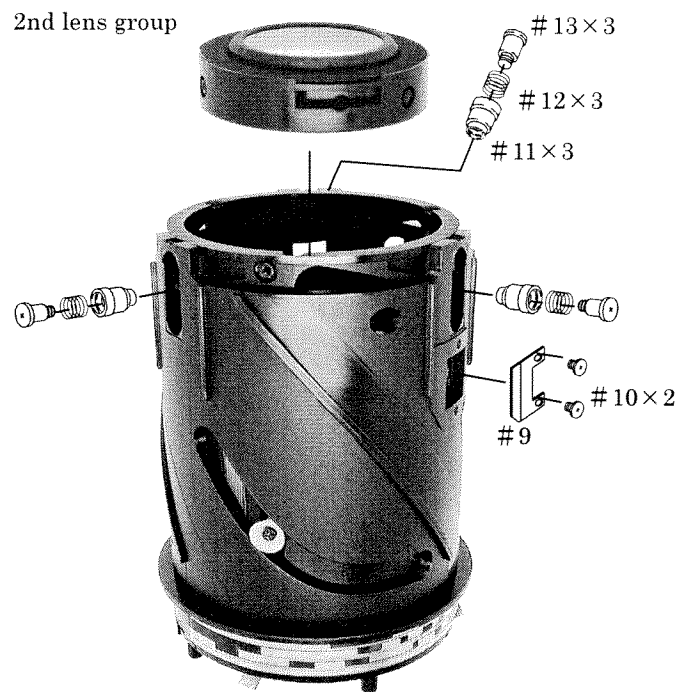


- ① Remove the external helicoid #3 to the front while rotating it in the arrow direction.

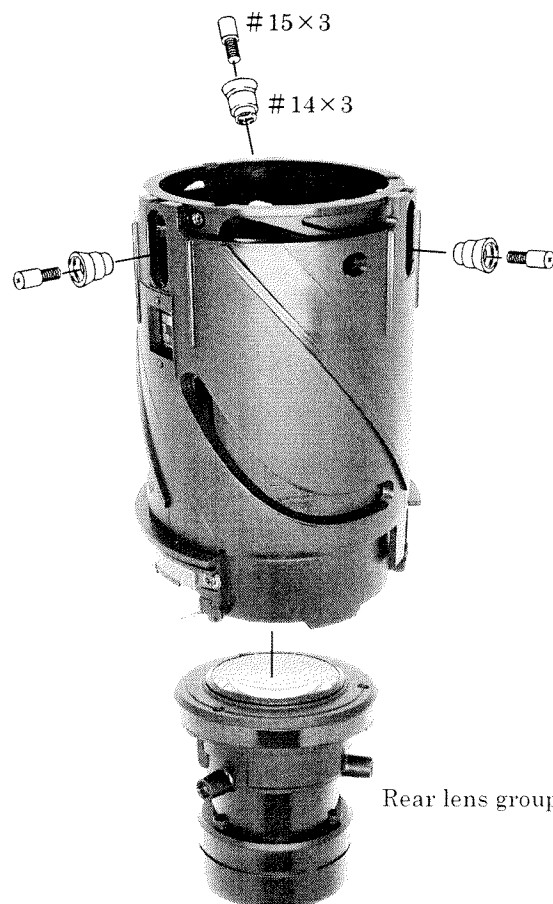


- ② Remove #16 x 3 and #17 x 3 and then remove the helicoid ring.

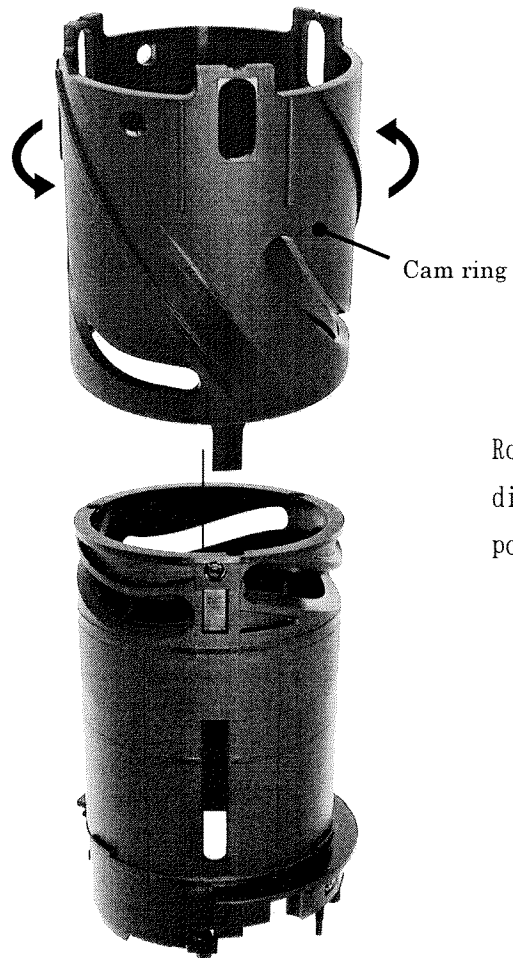
2nd LENS GROUP



REAR LENS GROUP



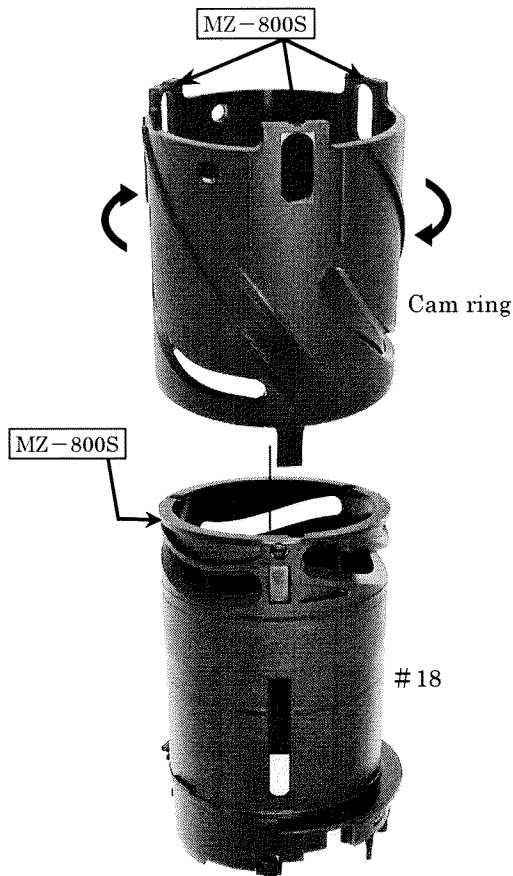
CAM RING GROUP



Rotate the cam ring in the arrow direction and remove it at the position that it meets the limit.

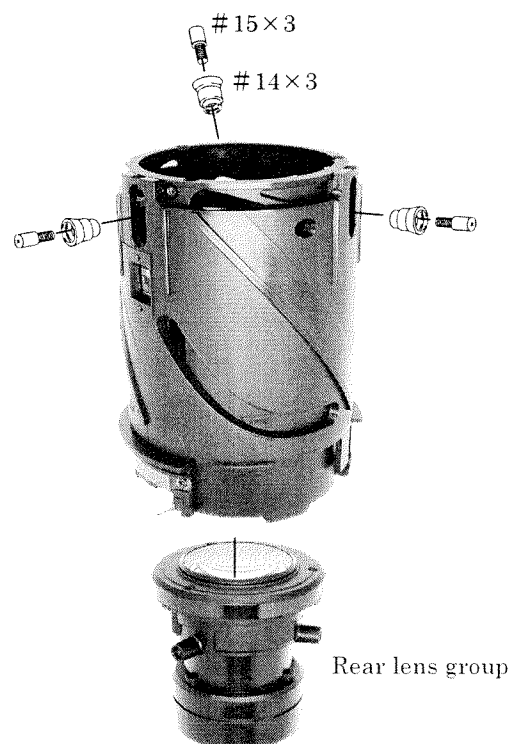
2. ASSEMBLING/ADJUSTMENT

CAM RING GROUP

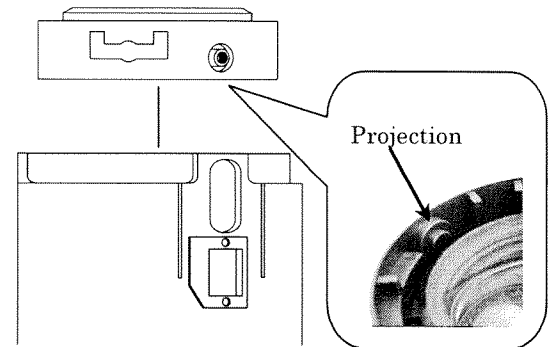
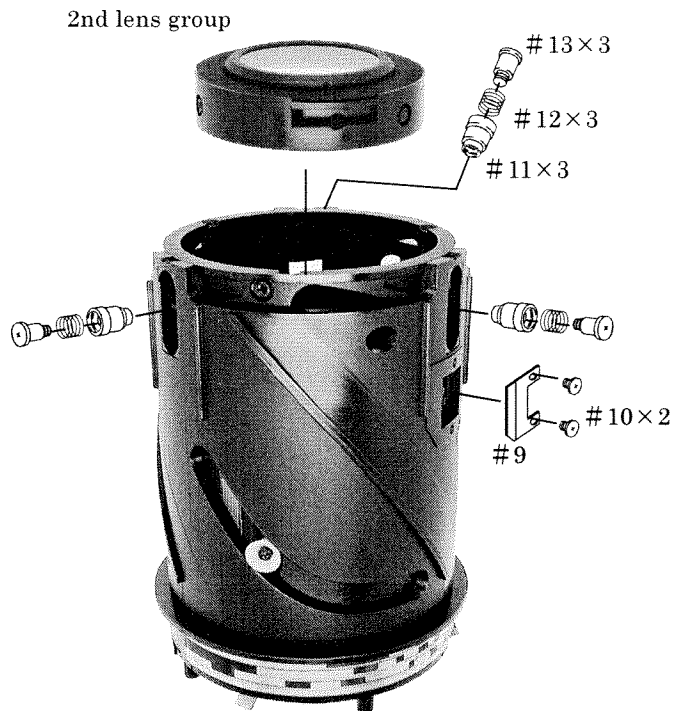


- ①Apply GE-8 to the cam ring, the cam groove and the straight groove of the straight groove ring #18 and each sliding part.
- ②Mount the cam ring at the position shown in Picture on the left, and then rotate it in the arrow direction.

REAR LENS GROUP

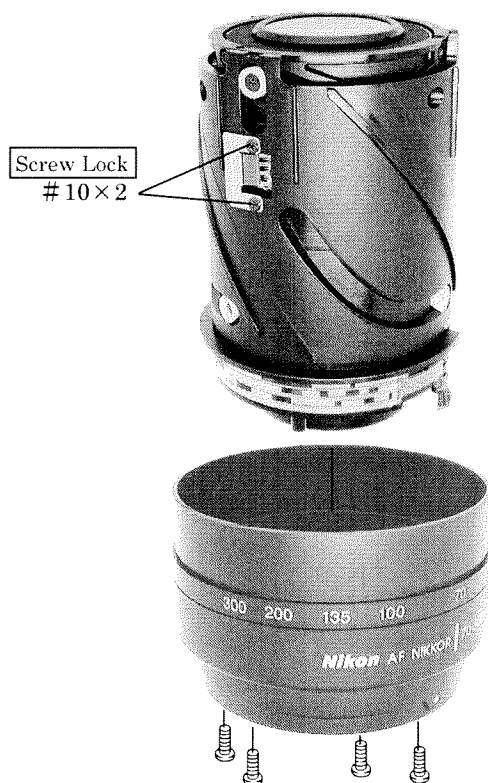


2nd LENS GROUP



• Mount the 2nd group lens at the position shown in Figure above.

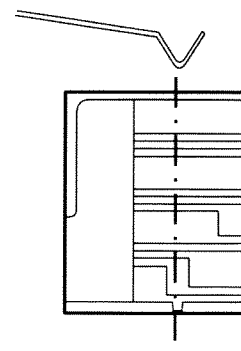
ADJUSTMENT OF ZOOM ENCODER BRUSH POSITION



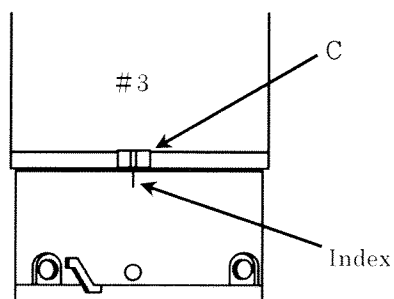
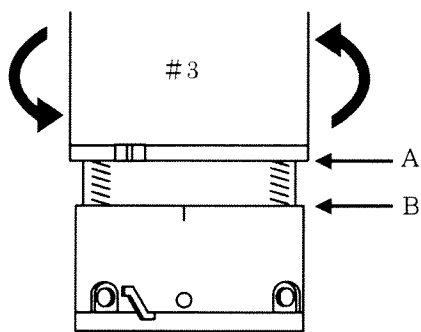
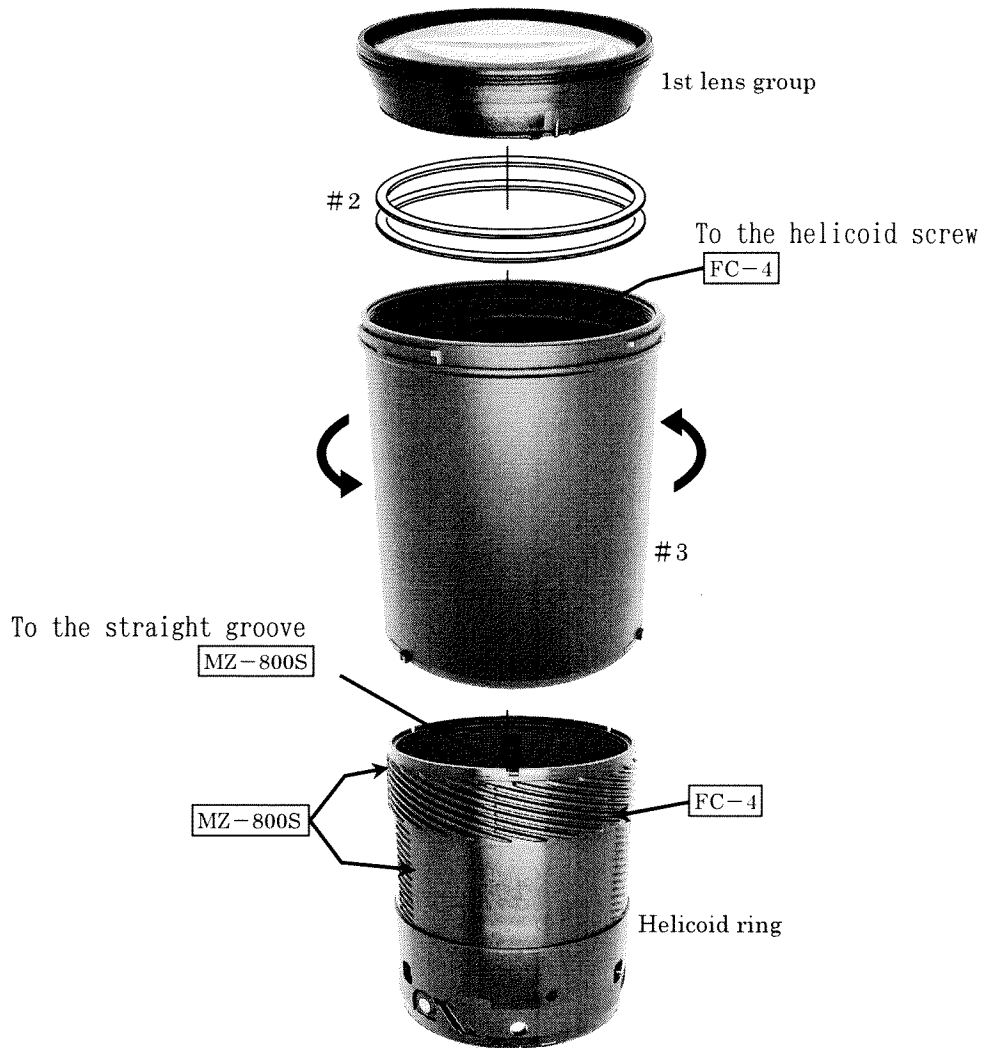
① Attach the hand-made tool. (Refer to L15 for the making method of the hand-made tool.)

② Set the zoom to 70mm.

③ Loosen the screw #10 x 2 and adjust the position of the brush so that the end of the brush is at the position shown in Figure below.



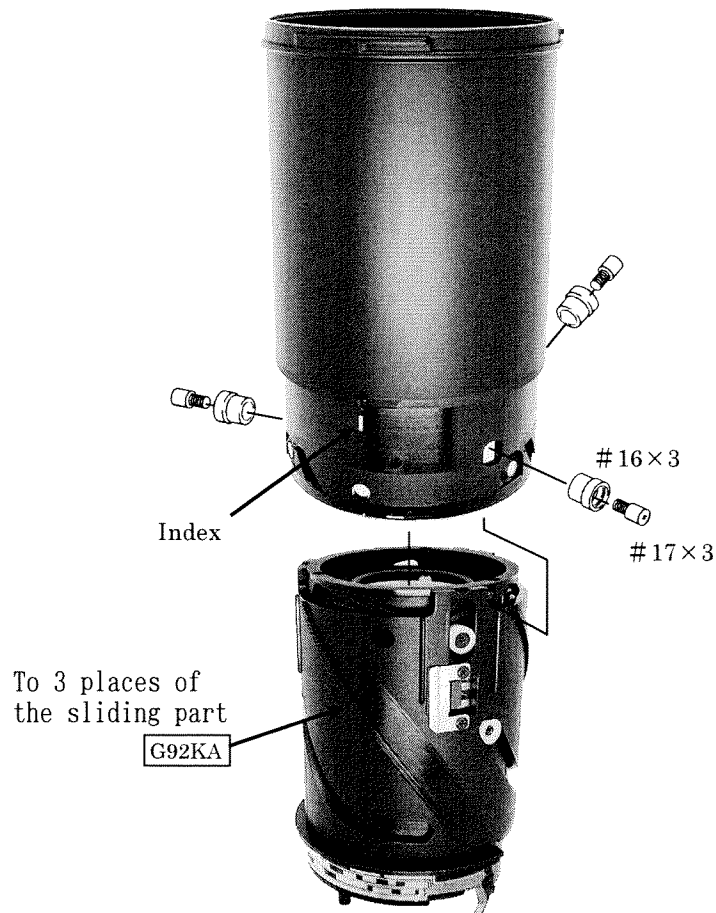
1st HELICOID GROUP



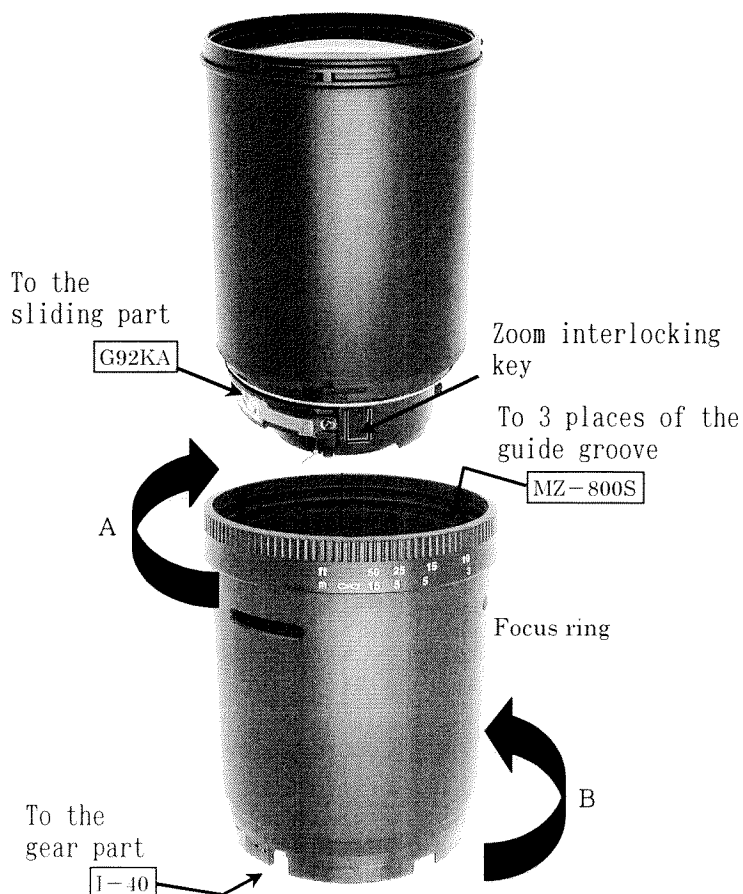
<Check>

The projection C and the index should be match when the end face A of #3 comes to the position of the end face B as shown in Figure on the left.

EXTERNAL HELICOID



FOCUS RING

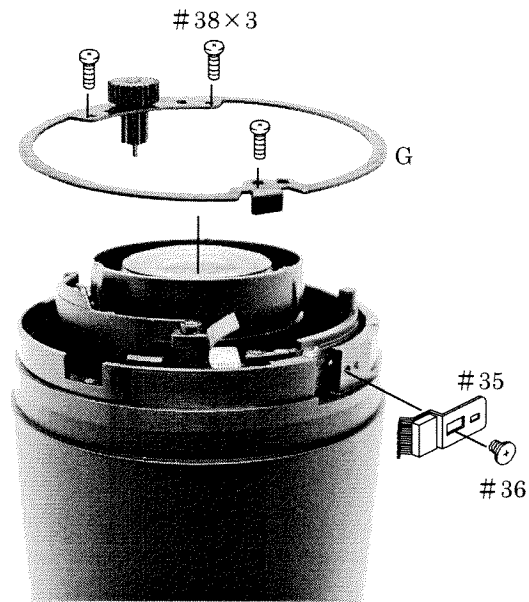


• Set the lens barrel body to the WIDE end.

• Set the ∞ mark and the zoom interlocking key of the lens barrel body, and then assemble them. Then, put the 3 projection of the external helicoid in the guide grooves inside the focus ring.

• Rotate the focus ring slowly in the arrow direction A. When it meets the joint position, push the focus ring slightly to the front and rotate it in the arrow direction B.

REAR HOLDER RING UNIT, FOCUS ENCODER BRUSH

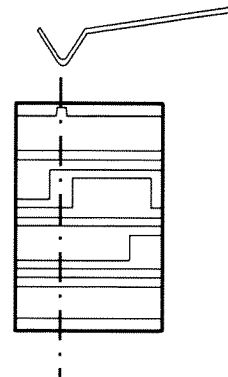


ADJUSTMENT OF FOCUS ENCODER BRUSH POSITION

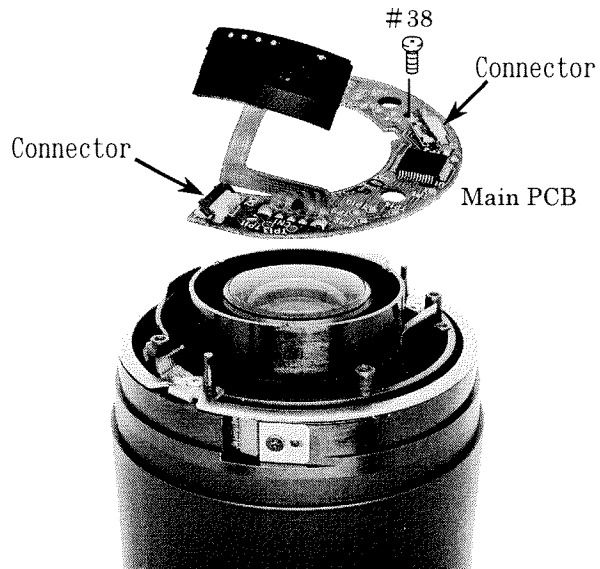


①Make the focus ring meet the ∞ stopper.

②Loosen the screw #36 and adjust the position of the brush so that the end of the brush is at the position shown in Figure below.



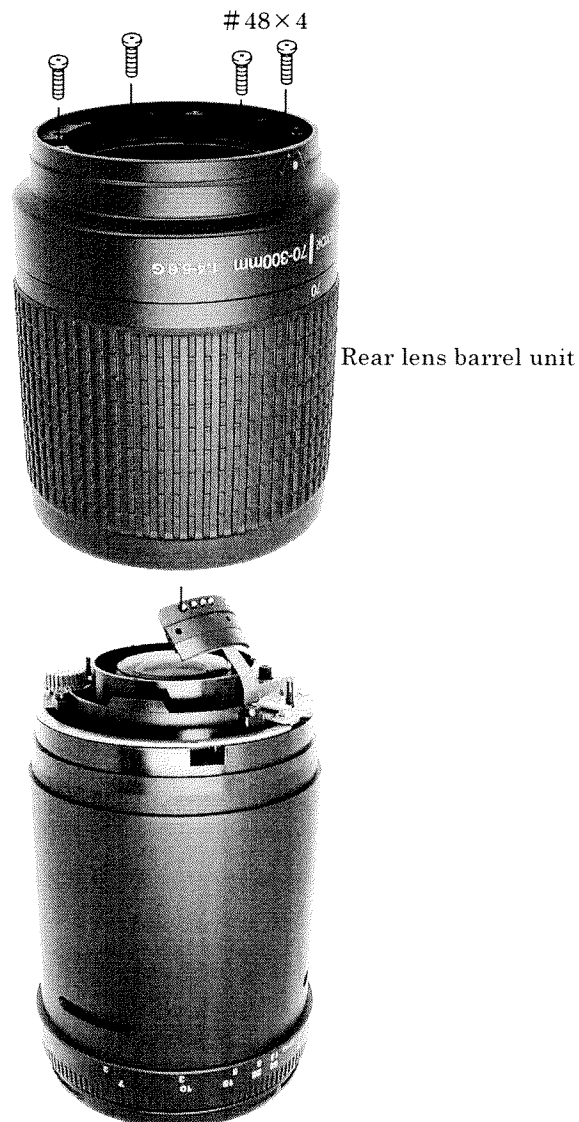
MAIN PCB



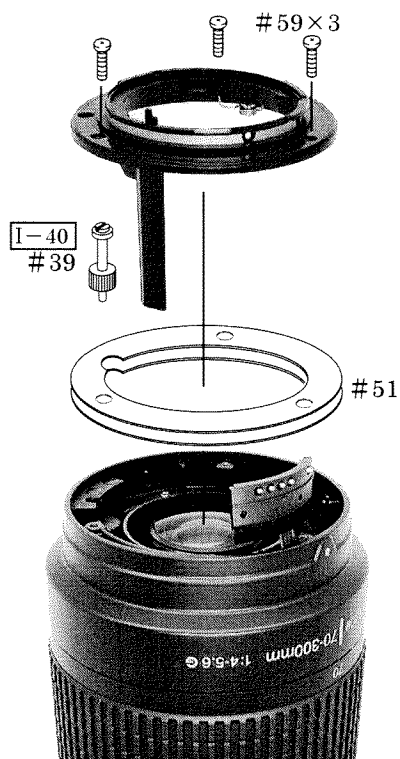
①Mount the main PCB by the screw #38.

②Connect the FPC to 2 places of the connector.

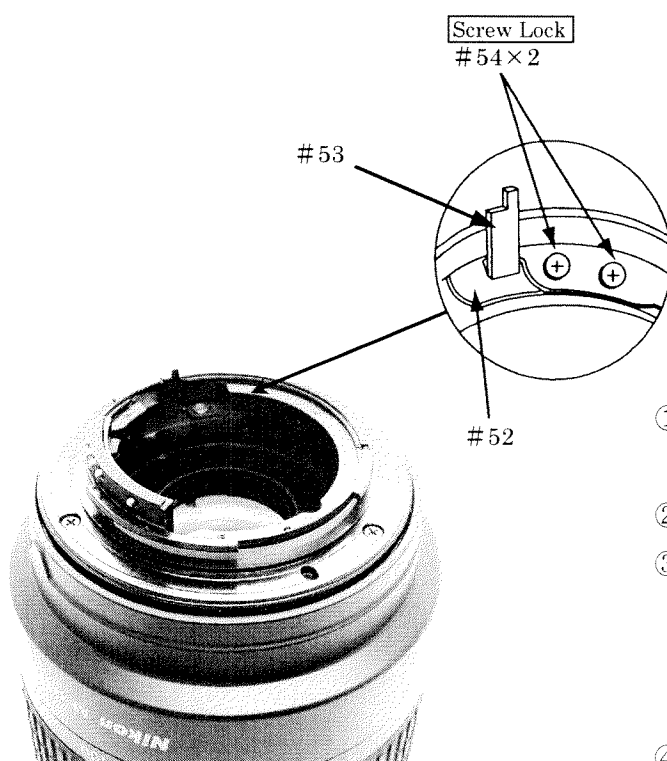
REAR LENS BARREL UNIT



BAYONET MOUNT



APERTURE DIAMETER ADJUSTMENT



- ①Set the lever #53 to the maximum aperture position.
- ②Loosen the screw #54x2.
- ③Move the aperture operation lever #52 to the position where the aperture blade does not project the open diameter.
- ④Tighten the screw #54 x 2 and fix them by the screw lock.

FFD ADJUSTMENT

For the FFD adjustment, please refer to the Repair Manual for JAA76451 (AF ED 70-300/4-5.6D).

- γ adjustment

The difference between the measured value of TELE side and WIDE side should be within
 . 0.05 to +0.15mm.

- Adjustment for ∞ stopper

Standard: 46.5 +1.4 to +2.0

OPTICAL AXIS ADJUSTMENT

For the optical axis adjustment, please refer to the Repair Manual for JAA13051 (AF 14/2.8D) (Page A13 to A15). Adjust it by moving the 4th group lens.

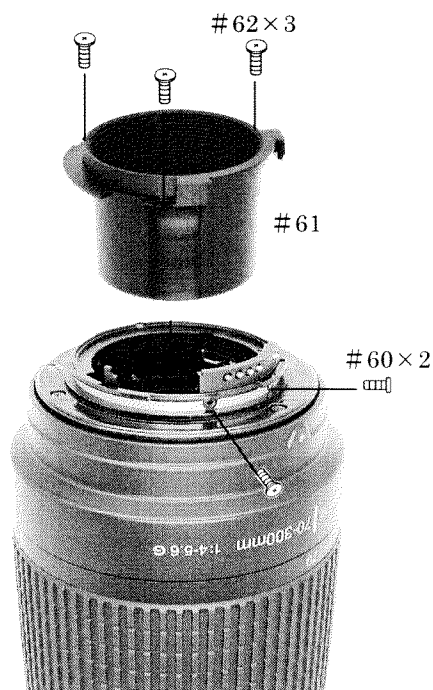
Notes :

It is impossible to set the aperture position at will, therefore, fix the aperture lever by a piece of tape etc. to make it the maximum aperture condition.

Measure the optical axis after setting the focus ring to the ∞ position.

Use the chart for 14/2.8mm (J15383) for the point tester.

REAR COVER RING



PROJECTION RESOLUTION ADJUSTMENT

For the set up condition and the standard of the lens, please refer to [RESOLUTION REFERENCE] being distributed to the service facilities that has the resolution projector.

INSPECTION OF ENCODER SIGNAL

For the inspection method, please refer to the Repair Manual for JAA76451 (AF ED 70-300/4-5.6D).

Distance scale position \ Zoom position	f = 7 0 mm			f = 1 3 5 mm			f = 3 0 0 mm		
	Encoder signal								
	1	2	3	1	2	3	1	2	3
Most infinity position	DEh	5Ah	5Ah	DEh	5Ah	E6h	DEh	5Ah	1Fh
5 m							DEh	E6h	1Fh
Most close distance position							DEh	1Fh	1Fh

HAND-MADE TOOL

- Use a repair part and cut the oblique lined part to make the tool as shown in Figure below.

