

作成承認印

配布許可印



# AF Nikkor 50mm f/1.8

(New)

Ser.# 4,000,001-



PARTS LIST (REVISED-1)

修理部品表 (改訂 - 1)

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Oct. 31, 1995

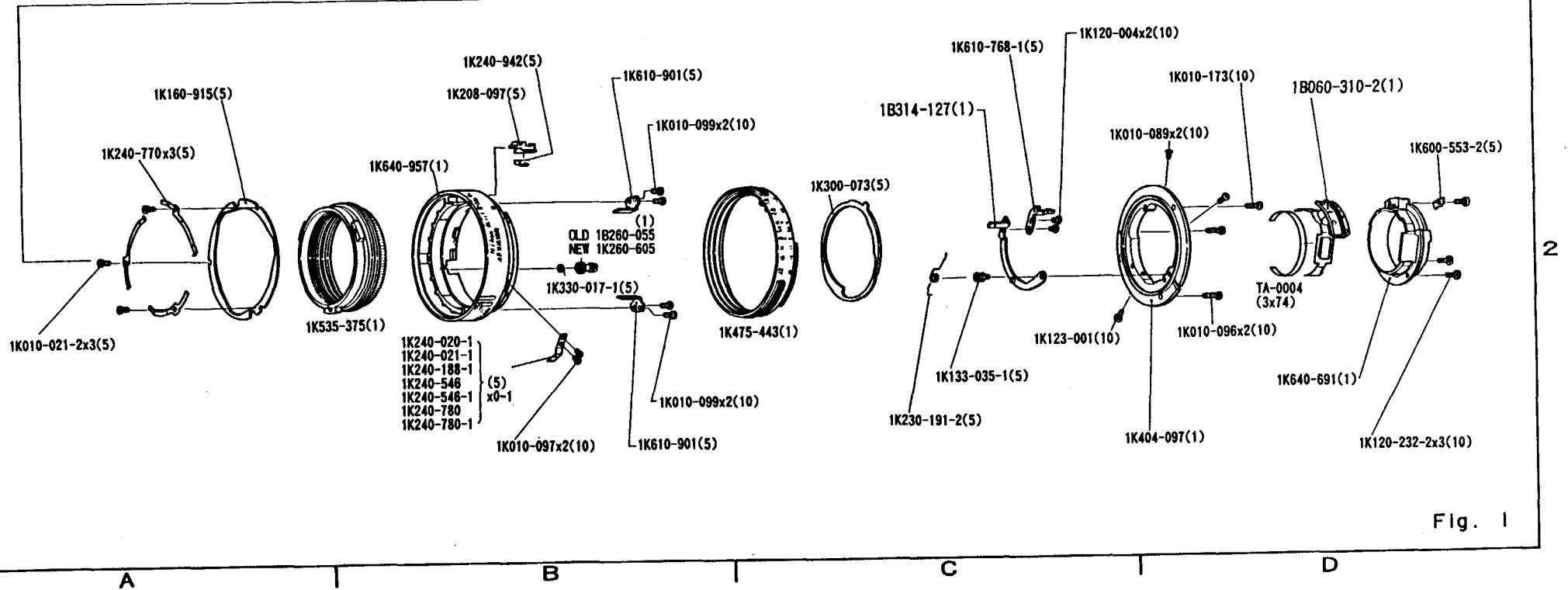
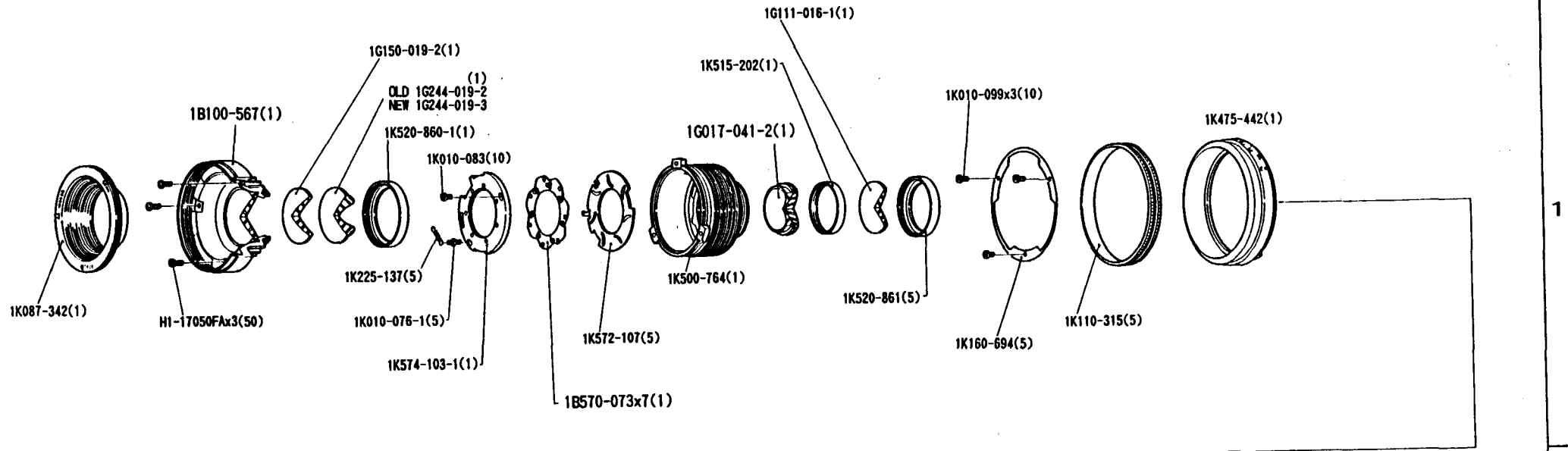


Fig. 1

部品表 Parts List

JAA00903-R. 3273. B

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly	参照 図番 Fig.	販売 区分 Term of Delivery	備考 Remarks	要求 単位 Qty per order
1K010-021-2	83	タップタイト小ネジ Screw	3		A2	○		5
*1K010-076-1 (1K010-076)	55	バネ掛けネジ Screw	1		B1	○		5
*1K010-083	80	タップタイト小ネジ Screw	1		B1	○		10
*1K010-089	91	タップタイト小ネジ Screw	2		D2	○		10
*1K010-096	72	タップタイト小ネジ Screw	2		D2	○		10
*1K010-097	78	タップタイト小ネジ Screw	2		B2	○		10
*1K010-099	82	タップタイト小ネジ Screw	7		B2 C1	○		10
1K010-173	71	タップタイト小ネジ Screw	1		D2	○		10
1K087-342	46	遮光環 Light baffle ring	1		A1	○		1
1K110-315	69	ゴムリング Rubber ring	1		C1	○		5
*1K116-262	100	両面テープ Tape (3x74)	1		D2	×	TA-0004	
*1K120-004	76	小ネジ Screw	2		C2	○		10
*1K120-232-2 (1K120-232)	102	小ネジ Screw	3		D2	○		10
*1K123-001	73	小ネジ Screw	1		C2	○		10
*1K133-035-1 (1K133-035)	53	バネ掛けネジ Screw	1		C2	○		5
*1K160-694	51	座金 Washer	1		C1	○		5
1K160-915	52	座金 Washer	1		A2	○		5
*1K208-097	94	EEロックボタン EE lock button	1		B2	○		5
*1K225-137	57	引張バネ Spring	1		B1	○		5
*1K230-191-2	56	ねじり線バネ Spring	1		C2	○		5

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JAA00903-R. 3273. B

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly	参照 図番 Fig.	販売 区分 Term of Delivery	備考 Remarks	要求 単位 Qty per order
*1K240-020-1 (1K240-020)	36	クリックバネ Click spring	0-1		B2	○		5
*1K240-021-1 (1K240-021)		クリックバネ Click spring	0-1		B2	○		5
*1K240-188-1 (1K240-188)		クリックバネ Click spring	0-1		B2	○		5
*1K240-546		クリックバネ Click spring	0-1		B2	○	RP-9142	5
*1K240-546-1		クリックバネ Click spring	0-1		B2	○	RP-9028 RP-9142	5
*1K240-780		クリックバネ Click spring	0-1		B2	○		5
*1K240-780-1		クリックバネ Click spring	0-1		B2	○		5
*1K240-942 (1K240-563)	95	EEロックバネ EE lock spring	1		B2	○		5
1K240-770	68	板バネ Leaf spring	3		A2	○		5
1K260-605	49	カップリング軸 Coupling shaft	1		B2	○	RP-9220	1
*1K300-073	21	絞りカム Aperture cam	1		C2	○		5
*1K330-017-1 (1K330-017)	47	カップリング軸受 Coupling bearing	1		B2	○		5
*1K404-097	30	バヨネットマウント Bayonet mount	1		D2	○		1
1K475-442	26	距離環 Focus ring	1		D1	○		1
1K475-443	28	絞りリング Aperture ring	1		C2	○		1
1K500-764	24	ヘリコイド環 A Helicoid ring A	1		B1	○		1
*1K515-202	42	G5, G6 間隔リング G5, G6 spacer	1		B1	○	◆-- RP 限定在庫 LIMITED	1
*1K520-860-1 (1K520-860)	41	G2, G3 押え環 G2, G3 retaining ring	1		B1	○		1
*1K520-861	43	G6 押え環 G6 retaining ring	1		C1	○		5
1K535-375	25	ヘリコイド環 B Helicoid ring B	1		A2	○		1





# AF Nikkor 50mm f/1.8 (New)



4,000,001 -

REPAIR MANUAL

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## 〔 1 〕 仕 様

焦 点 距 離 :	5 0 m m
最 大 口 径 比 :	1 : 1 . 8
レ ン ズ 構 成 :	5 群 6 枚
画 角 :	4 6 °
距 離 目 盛 :	$\infty \sim 0 . 4 5 \text{ m}$ , 1 . 5 f t (併記)
フ ォ ー カ シ ン グ :	回 転 式 (回 転 角 1 4 5 ° 4 0 ')
絞 り 目 盛 :	1.8, 2.8, 4, 5.6, 8, 11, 16, 22
絞 り 方 式 :	自 動 絞 り (最 小 絞 り ロ ッ ク 可 能)
測 光 方 式 :	開 放 測 光
マ ウ ン ト :	ニ コ ン F マ ウ ン ト
ア タ ッ チ メ ン ト サ イ ズ :	5 2 m m (P = 0 . 7 5)
大 き さ :	$\phi 6 3$ (最 大 径) $\times$ 3 9 m m (全 長)
重 量 :	約 1 5 5 g

[ 2 ] S p e c i f i c a t i o n s

Focal length:	50mm
Maximum aperture:	1 : 1.8
Lens construction:	6 elements 5 groups
Picture angle:	46°
Distance scale:	$\infty \sim 0.45m, 1.5ft$
Focusing:	Rotating angle 145° 40'
Aperture scale:	1.8, 2.8, 4, 5.6, 8, 11, 16, 22
Diaphragm:	Fully automatic Minimum aperture lock is possible
Metering:	Full-aperture measurement
Mount:	Nikon F mount
Attachment size:	52mm (P=0.75mm)
Dimensions:	$\phi 63$ (dia.) $\times$ 39mm (long)
Weight:	Approx. 155g

〔 4 〕 部 品 对 照 表 Parts Number Reference Table

補助番号 Auxiliary No.	部 品 番 号 Part Number	補助番号 Auxiliary No.	部 品 番 号 Part Number
G 1	1 G 1 5 1 - 0 2 7	5 3	1 K 1 3 3 - 0 3 5 - 1
G 2	1 G 1 5 0 - 0 1 9 - 2	5 5	1 K 0 1 0 - 0 7 6 - 1
G 3	1 G 2 4 4 - 0 1 9 - 2	5 6	1 K 2 3 0 - 1 9 1 - 2
G 4	1 G 2 4 4 - 0 2 0	5 7	1 K 2 2 5 - 1 3 7
G 5	1 G 1 4 4 - 0 1 3	6 0	1 K 6 8 0 - 6 5 1 - 1
G 6	1 G 1 1 1 - 0 1 6 - 1	6 1	1 K 6 8 0 - 6 4 3 - 1
		6 3	1 K 2 4 0 - 4 6 9 - 1
2 1	1 K 3 0 0 - 0 7 3	6 8	1 K 2 4 0 - 7 7 0
2 2	1 K 6 1 0 - 9 0 1	6 9	1 K 1 1 0 - 3 1 5
2 3	1 K 6 1 0 - 7 6 8 - 1	7 0	1 K 3 7 0 - 9 8 8 - 1
2 4	1 K 5 0 0 - 7 6 4	7 1	1 K 0 1 0 - 1 7 3
2 5	1 K 5 3 5 - 3 7 5	7 2	1 K 0 1 0 - 0 9 6
2 6	1 K 4 7 5 - 4 4 2	7 3	1 K 1 2 3 - 0 0 1
2 8	1 K 4 7 5 - 4 4 3	7 6	1 K 1 2 0 - 0 0 4
2 9	1 K 6 4 0 - 9 5 7	7 8	1 K 0 1 0 - 0 9 7
3 0	1 K 4 0 4 - 0 9 7	8 0	1 K 0 1 0 - 0 8 3
3 1	1 K 5 7 0 - 0 7 3	8 2	1 K 0 1 0 - 0 9 9
3 2	1 K 3 7 0 - 0 0 4 - 2	8 3	1 K 0 1 0 - 0 2 1 - 2
3 3	1 K 5 7 2 - 1 0 7	8 4	H 1 - 1 7 0 5 0 F A
3 4	1 K 5 7 4 - 1 0 3 - 1	9 0	1 K 3 7 0 - 9 3 9
3 6	1 K 2 4 0 - 0 2 0 - 1	9 1	1 K 0 1 0 - 0 8 9
3 6	1 K 2 4 0 - 0 2 1 - 1	9 4	1 K 2 0 8 - 0 9 7
3 6	1 K 2 4 0 - 1 8 8 - 1	9 5	1 K 2 4 0 - 5 6 3
3 6	1 K 2 4 0 - 5 4 6	1 0 0	1 K 1 1 6 - 2 6 2
3 8	1 K 4 0 0 - 2 9 9	1 0 1	1 K 6 0 0 - 5 5 3 - 2
3 9	1 K 6 1 0 - 6 9 1	1 0 2	1 K 1 2 0 - 2 3 2 - 2
4 1	1 K 5 2 0 - 8 6 0 - 1		
4 2	1 K 5 1 5 - 2 0 2		
4 3	1 K 5 2 0 - 8 6 1	B 3 1	1 B 5 7 0 - 0 7 3
4 4	1 K 3 1 4 - 2 5 1	B 4 4	1 B 3 1 4 - 1 2 7
4 6	1 K 0 8 7 - 3 4 2	B 4 9	1 B 2 6 0 - 0 5 5
4 7	1 K 3 3 0 - 0 1 7 - 1	Z 3 8	1 B 6 8 0 - 0 4 7 - 2
4 9	1 K 2 6 0 - 2 9 0	B 3 0 1	1 B 0 6 0 - 3 1 0 - 2
5 0	1 K 3 3 0 - 0 1 6		
5 1	1 K 1 6 0 - 6 9 4	L 1	1 G 0 1 7 - 0 4 1 - 2
5 2	1 K 1 6 0 - 9 1 5		

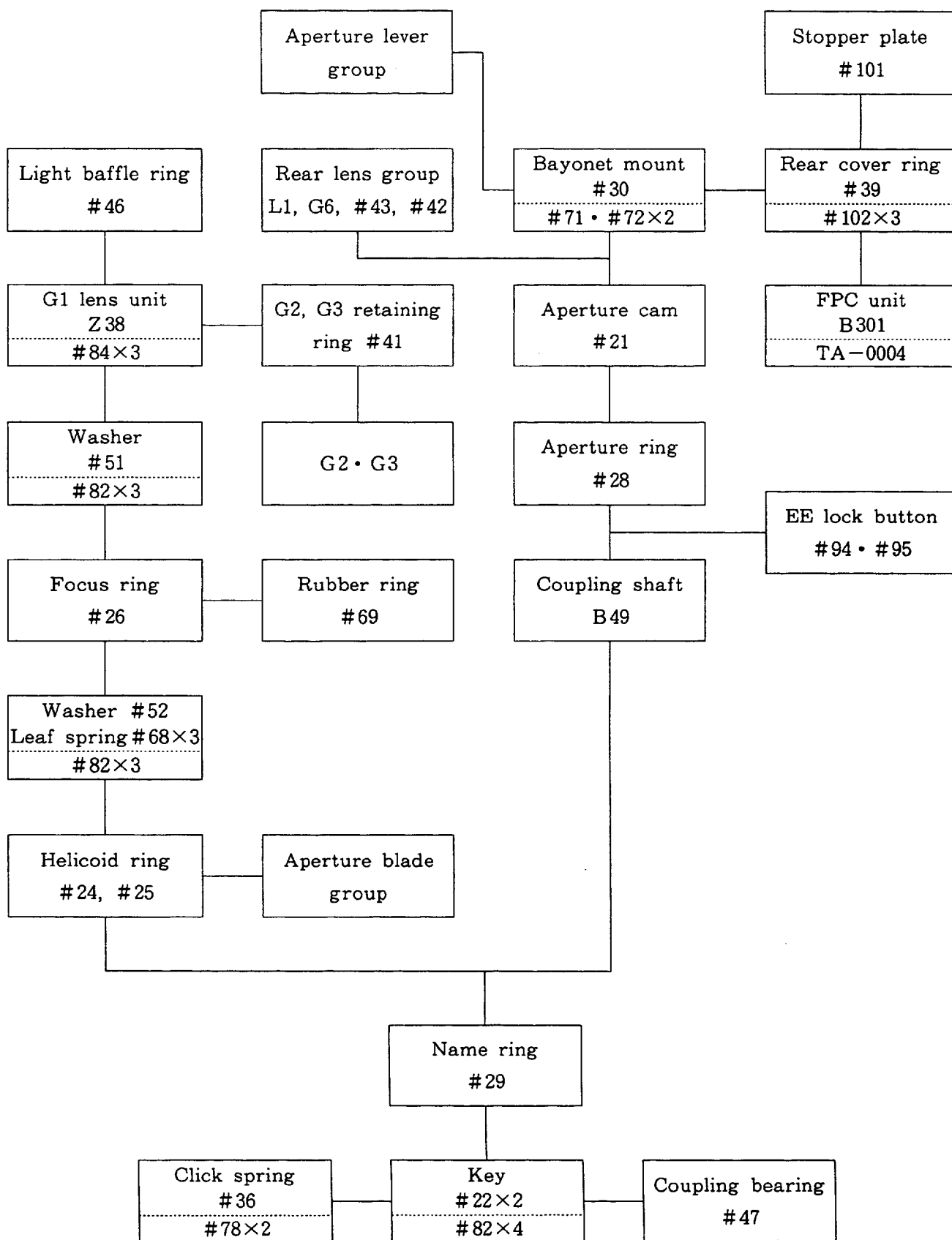
**AF Nikkor 50mm f/1.8  
(New)**



*Disassembling / Assembling / Adjustment*

[ 7 ] DISASSEMBLING / ASSEMBLING / ADJUSTMENT

1. DISASSEMBLING PROCEDURE CHART



## 2. DISASSEMBLING

\*Refer to Disassembling Procedure Chart when disassembling. Notes on the disassembling are described below.

\*Notes on disassembling:

(1) You are not required to remove following parts unless otherwise replacing or cleaning them.

- ① G2 and G3 lens elements (attached to G1 lens unit Z38).
- ② Rubber ring #69 (attached to focus ring #26).
- ③ Aperture blade group (attached to helicoid ring #24).
- ④ Rear cover ring #39 (attached to bayonet mount #30).
- ⑤ Aperture lever group (attached to bayonet mount #30).
- ⑥ FPC unit B301 (attached to rear cover ring #39).
- ⑦ Rear lens group (attached to helicoid ring #24).
- ⑧ EE lock button (attached to name ring #29).
- ⑨ Keys #22×2 (attached to name ring #29).
- ⑩ Click spring #36 (attached to name ring #29).
- ⑪ Coupling bearing #47 (attached to name ring #29).

(2) Notice following parts when disassembling;

- ① G2, G3 retaining ring #41

Remove black paint applied on G3 and #41.

Use alcohol to dissolve "Screw Lock" which secures screw thread part.

- ② G6 retaining ring #49

Use alcohol to dissolve "Screw Lock" which secures screw thread part.

- ③ Helicoid rings #24 and #25

Put in an installation line first when removing helicoid rings #24 and #25.

- ④ Keys #22×2

You are recommended not to remove keys #22×2. Because focus ring operation becomes malfunction if keys #22×2 is mounted in the incorrect position.

## 3. ASSEMBLING

**Note:** ① The tone of pictures may be different from actual one. Make sure of the shape of parts when disassembling and assembling.

② The mark  $\nabla$  shows the position of index.

③ Screw with a dot are tap-tight screws.

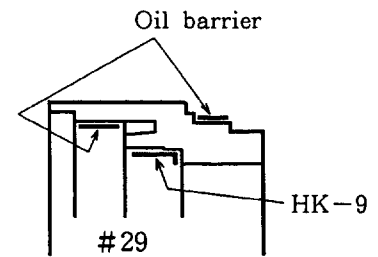
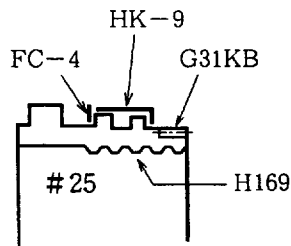
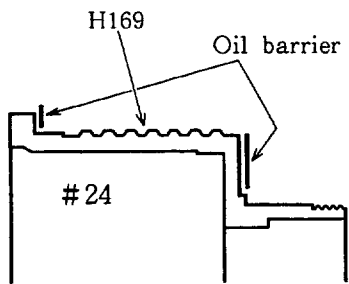
④  : Disassembling/ assembling

: Adjustment

: Additional work

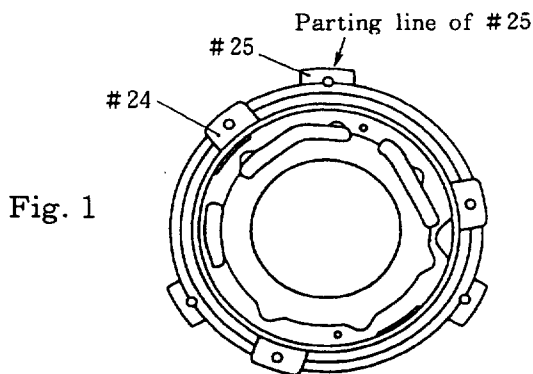
HELICOID RING #24 AND #25, NAME RING #29

\*Portions to which oil should be applied:



\* Apply grease H169 to two portions in the groove for keys #22×2.

**Note:** You can use grease (FC-4) to substitute grease (H169 and HK-9). The effect of the grease is not guaranteed under the low temperature environment (-20°C). Be absolutely sure to use grease (H169 and HK-9) under the low temperature conditions.



Mount helicoïd rings #24 and #25 at the position as indicated in Fig. 1.

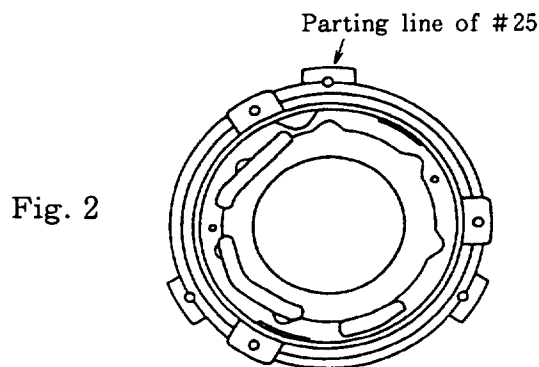
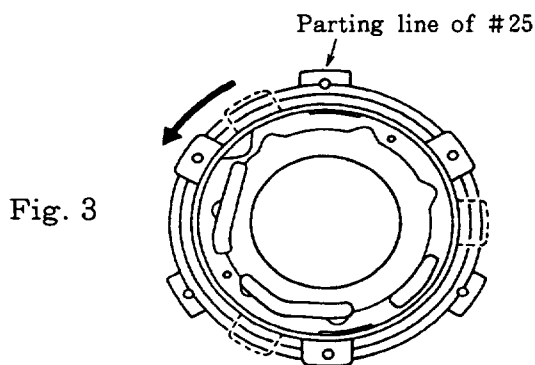
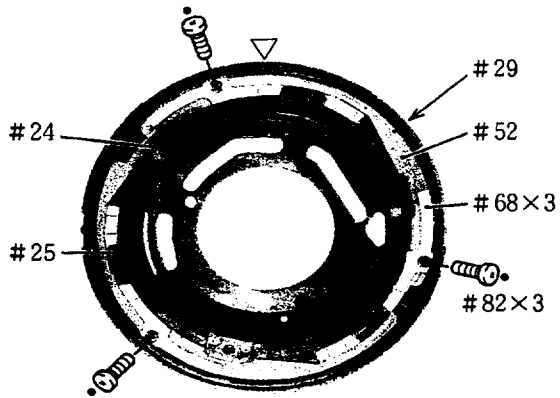


Fig. 2 shows the state where helicoïd rings #24 and #25 have been screwed in fully.



As shown in Fig. 2, screw in #24 fully and rotate the ring in the direction indicated by an arrow so that the projection of #24 comes in the middle of the projections of #25. (Refer to fig. 3)  
Mount focus ring #26 while holding the position.

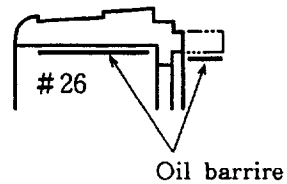
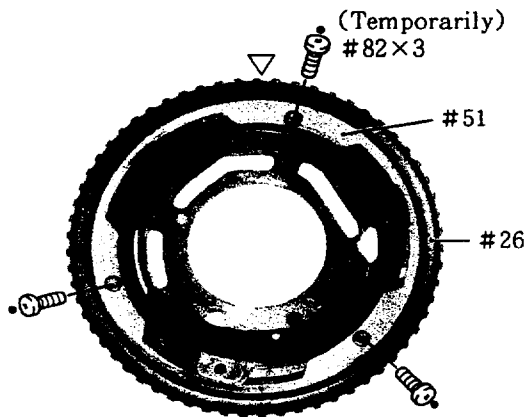


Mount helicoid rings #24 and #25 on #29 with washer #52, leaf springs #68x3, and screws #82x3.

**Note:** Mount washer #52 facing the surface of flash facing outside.

\* If no keys #22x2 are attached, mount with screws #82x4 from the rear.

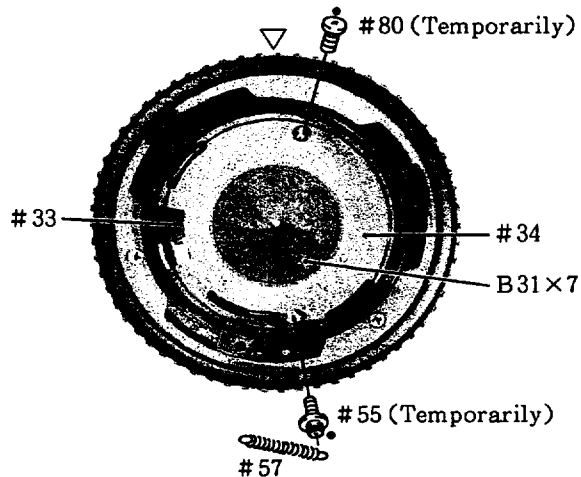
**FOCUS RING #26**



Mount focus ring #26 first, then attach it with washer #51 and screws #82x3 after aligning the ∞ mark with index.

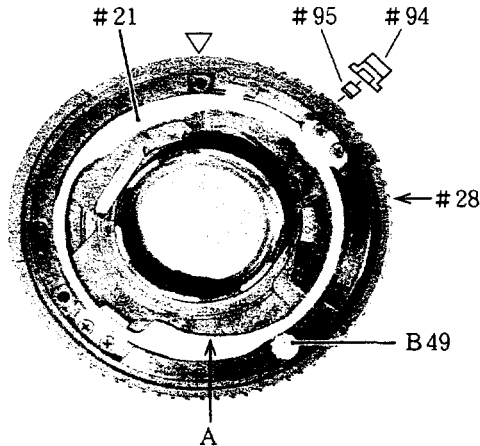
**Inspection:** Check operation by rotating focus ring #26. If not operating properly, adjust the position of the keys #22x2.

**APERTURE BLADE GROUP**





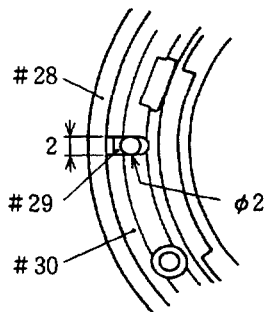
APERTURE RING #28, APERTURE CAM #21, EE LOCK BUTTOM



Portions to which grease G31KB should be applied:

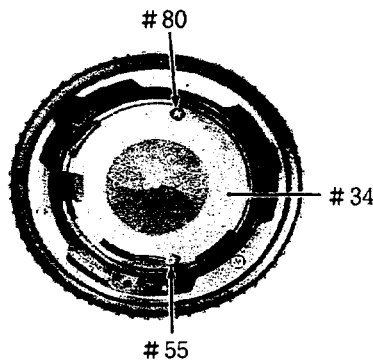
- ① Click groove of #28.
- ② Sliding surface between #28 and #29.
- ③ Internal circumference portion A of #21.
- ④ Gear part and sliding portion of B49.

INSTALLATION OF BAYONET MOUNT



Aligning the 2mm width groove of bayonet mount and  $\phi 2$  hole of #29, fasten the bayonet mount with screws #71 and #72 $\times$ 2. Mount the screw #71 (black) under the index.

ADJUSTMENT OF APERTURE OPENING

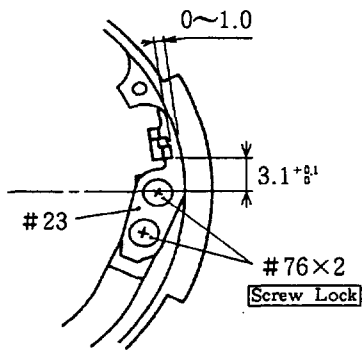


Unit: mm

Aperture setting	Inscribed circle diameter	Tolerance
1.8	21.20	20.52~21.93
2	18.76	17.37~20.26
2.8	13.08	12.11~14.13
4	9.22	8.54~9.96
5.6	6.51	5.80~7.31
8	4.61	4.10~5.17
11	3.26	2.79~3.80
16	2.30	1.97~2.68
22	1.63	1.29~2.05

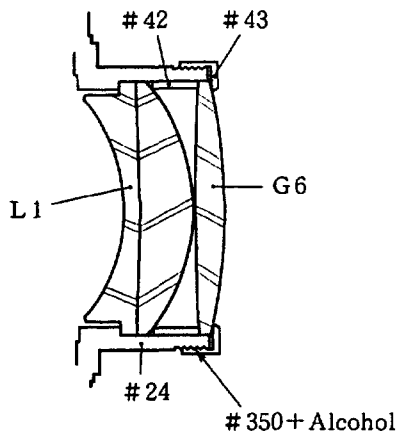
- ① Set aperture ring to f/1.8.
- ② Unfasten screws #55 and #80.
- ③ Move #34 to adjust the aperture diameter to be equal to that of blade actuating ring #33. (The shape of aperture is nearly circle and the diameter is 21.2mm.)
- ④ Fasten screws #55 and #80.
- ⑤ Check to see that aperture diameter does not change by snapping aperture lever.
- ⑥ Secure screws #55 and #80 with Screw Lock.

ADJUSTMENT OF APERTURE LEVER #23 POSITION



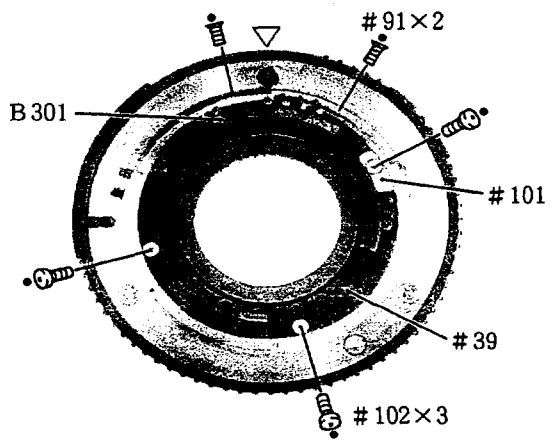
Adjust aperture diameter so that the position of aperture lever #23 comes within standard value of  $3.1^{+0.1}$  by unfastening screws #76×2 at full aperture. Adjust the gap between bayonet and #23 be 0 to 1.0mm. After adjustment, make sure to secure screws #76×2 using Screw Lock.

REAR LENS GROUP



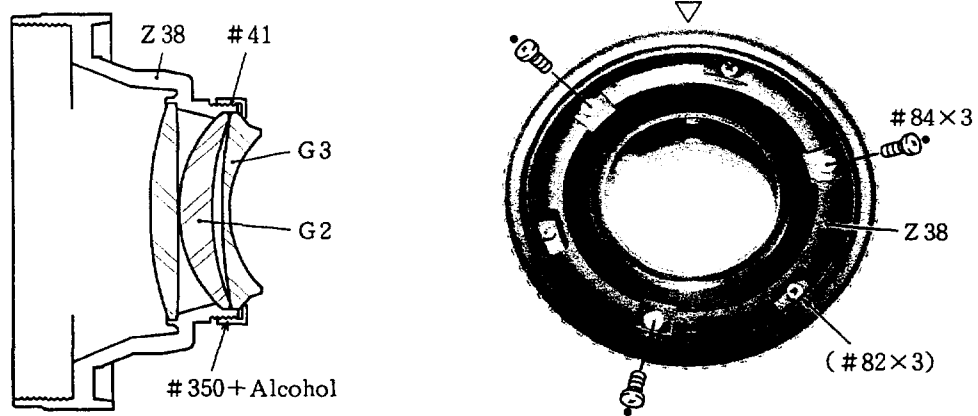
\* You can insert #42 in either side for it has no directional property.

REAR COVER RING #39, FPC UNIT B301



\* Attach #101 so that the stopper of aperture lever comes to  $3.1^{+0.1}$ .

## FRONT LENS GROUP

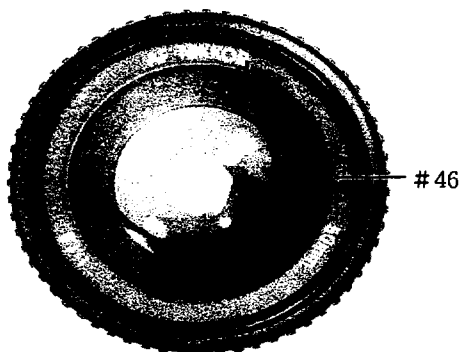


## ADJUSTMENT OF BACK FOCUS

- ① Set focus ring to infinity ( $\infty$ ) setting and secure with adhesive tape.
- ② As shown in the photo above, unfasten screws #82×3 viewed through the hole of Z38.
- ③ Rotate #25 so that it comes within the rated value by using a screw #82.
- ④ Fasten screws #82×3 and secure with Screw Lock.

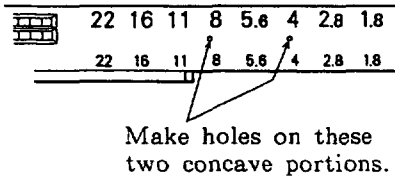
Standard: +0.015 ~ +0.075 mm

## LIGHT BAFFLE RING #46



Attach light baffle ring #46 and make inspection and adjustment of each section.

ATTACHING METER COUPLING SHOE
-------------------------------



- ① Remove aperture ring #28.
- ② Make two holes  $\phi 1.1$  in the concave portion of aperture ring. (Refer to figure.)
- ③ Attach meter coupling shoe.

Meter coupling shoe	1K406-029	× 1
Screw	1K010-002-1	× 2

- ④ Assembling.

**Note:** Attaching position of meter coupling shoe should be within the following range:

- Angle between bayonet mount's 2mm-width groove and a center of meter coupling shoe's 2mm-width groove:  $65^{\circ} \pm 20'$
- Height between reference surface of bayonet mount and the rear edge of meter coupling shoe:  $3 \pm 0.2\text{mm}$