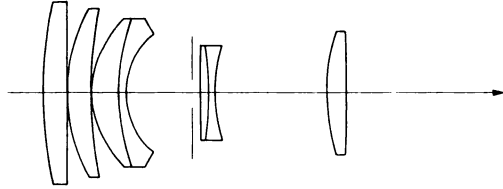

MINOLTA AF 135mm F2.8 (2556-100)

MINOLTA MAXXUM AF 135mm F2.8 (2556-600)

LENS



Construction : 7 elements in 5 groups
Type : Telephoto
Coating : Minolta Achromatic
Angle of view : 18°
Lens mount : Minolta A mount
Lens signal contact : 5 contacts
Diaphragm : Automatic preset diaphragm
f No. : Maximum···2.8
 Minimum···32
 Full-stop setting···7 stops
Diaphragm blade : 7 blades

FOCUSING

Focusing : AF, FA, M
Type : Internal-component focusing
Minimum focusing distance : 1 m
Distance scale : $\frac{3.5 \quad 4 \quad 4.5 \quad 5 \quad 6 \quad 8 \quad 10 \quad 15 \quad 30}{1 \quad 1.1 \quad 1.3 \quad 1.5 \quad 2 \quad 3 \quad 5 \quad 10} \begin{matrix} \text{(ft)} \\ \text{(m)} \end{matrix}$
Infrared correction index : Yes
Depth-of-field scale : 16 32



DIMENSIONS & WEIGHT

Dimensions : $\phi 65.5$ (max. diameter) \times
 83 mm (max. length)
Weight : 365 g
Filter-thread diameter : $\phi 55$ mm (P=0.75)
Lens hood : Built-in

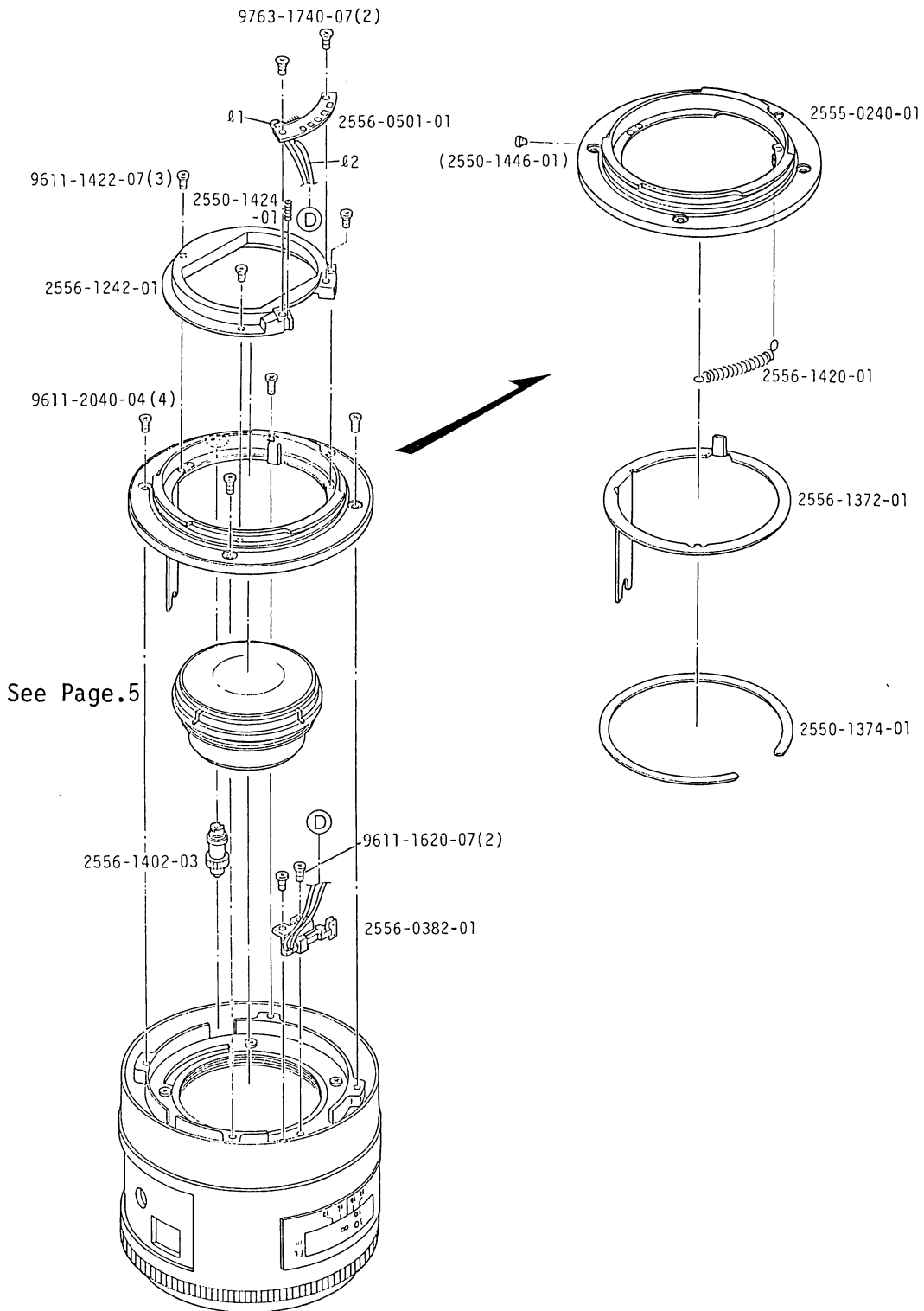
ACCESSORIES

Lens case (LH-1013)

I N D E X

Part No.	Page	Part No.	Page	Part No.	Page
2556-0030-----	5	2556-1378-----	4	2556-1463-----	1
2556-0033-----	5	2556-1379-----	1		
2556-0040-----	5	2556-1381-----	3	2556-1641-----	1
2555-0240-----	2				
2556-0371-----	4	2556-1402-----	2	Screw	
2556-0382-----	2	2556-1409-----	4	9611-1422-07-----	2
0593-0425-----	1	2556-1420-----	2	9611-1616-04-----	4
2556-0430-----	3	0669-1424-----	1	9611-1620-07-----	2
2556-0501-----	2	2550-1424-----	2	9611-1623-07-----	3
		2556-1431-----	1	9611-1625-07-----	4
2556-1110-----	4	0593-1433-----	1	9611-1635-07-----	3
2556-1112-----	4	2556-1433-----	3	9611-2040-04-----	2
2556-1113-----	4	2550-1444-----	3	9612-1645-07-----	3
		2550-1446-----	2	9613-1625-12-----	1
2556-1230-----	3	2556-1451-----	4	9763-1740-07-----	2
2556-1232-----	4	2556-1452-----	4		
2556-1233-----	3	2556-1453-----	4	Washer	
2556-1235-----	1	2556-1454-----	4	9793-1736-50-----	3
2556-1236-----	3	2556-1455-----	4	9793-1740-50-----	3
2556-1241-----	1	2556-1456-----	4	9793-2144-50-----	4
2556-1242-----	2	2556-1457-----	4		
2556-1243-----	1	2556-1458-----	4	Lead wire	
		2556-1459-----	4	9391-0807-00-----	2
2556-1372-----	2	2556-1460-----	4		
2550-1374-----	2	2556-1461-----	4		

Part No.	Part Name		Qty.
0593-0425-01	Hood friction spring	フード摩擦スプリング	1
2556-1235-01	Filter ring	鏡頭環	1
2556-1241-01	Name ring (-100)	飾り環	1
2556-1243-01	Hood	フード	1
2556-1379-02	Hood stopper	フードストッパー	1
2556-1431-02	Leather	張皮	1
0593-1433-02	Tape-A (Per roll/30m)	補強テープA	2
2556-1463-02	Plate	補強板	2
2556-1641-01	Name ring (-600)	飾り環	1
0669-1424-03	Friction cloth-B (3mmX205mm)	摩擦布 B	1
9613-1625-12	Phillips type screw	十字穴付半丸頭小ねじ	3



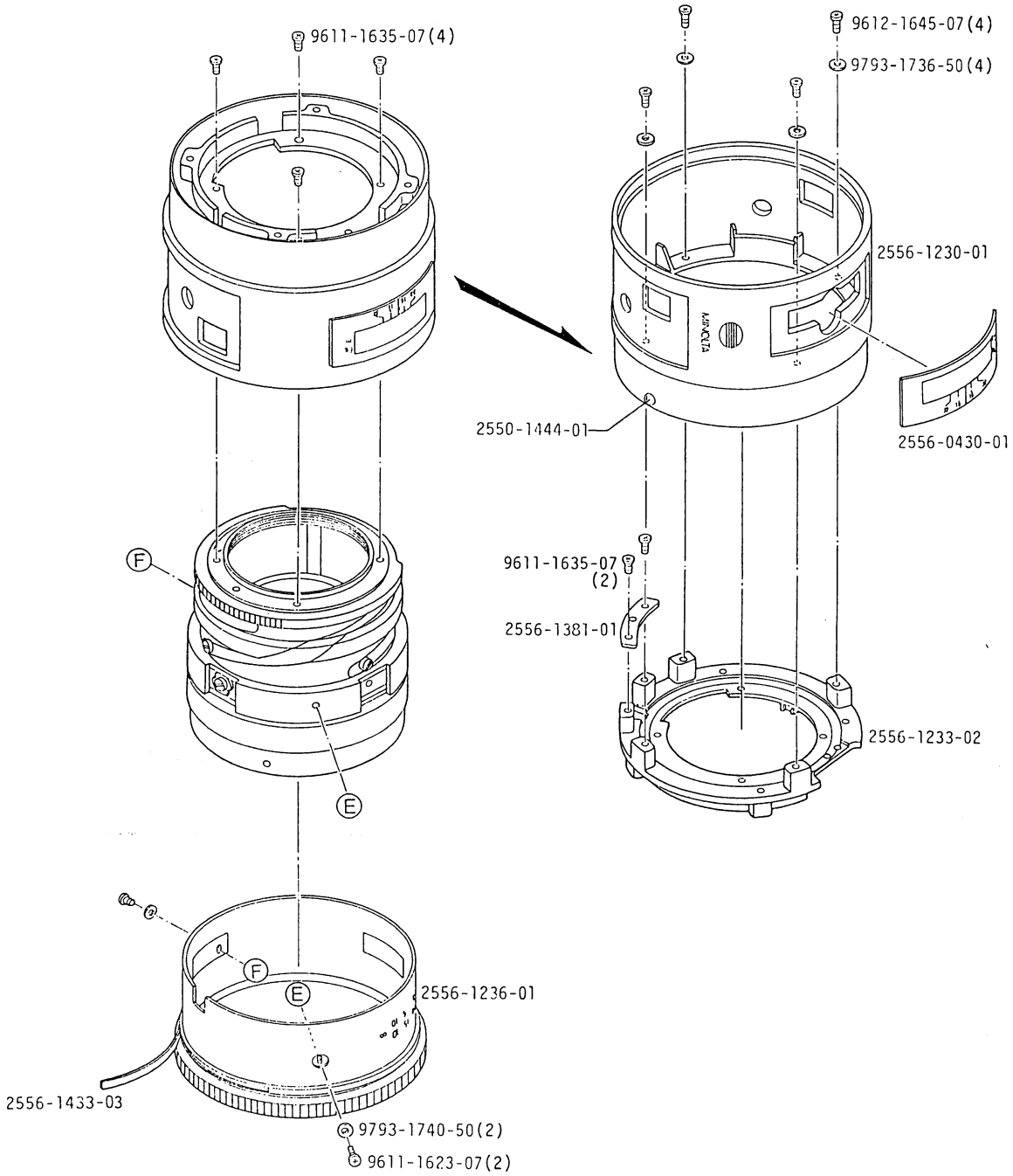
Part No.	Part Name		Qty.
2555-0240-01	Bayonet mount set	バヨネットマウントセット	1
(2550-1446-01)	Screw	ストッパービス	1
2556-0382-01	Distance switch set	距離スイッチセット	1
2556-0501-01	Lens contact board set	信号基板セット	1
2556-1242-01	Rear light shield ring	後遮光筒	1
2556-1372-01	Preset ring	プリセットリング	1
2550-1374-01	Preset ring pressure	プリセットリング押え	1
2556-1402-03	Coupler	カプラー	1
2556-1420-01	Main spring	メインスプリング	1
2550-1424-01	Spring	アーススプリング	1
9611-1422-07	Phillips type screw	十字穴付なべ頭小ねじ	3
9611-1620-07	Phillips type screw	十字穴付なべ頭小ねじ	2
9611-2040-04	Phillips type screw	十字穴付なべ頭小ねじ	4
9763-1740-07	Tap tite screw	十字穴付半丸頭タップタイトねじ	2

Lead wire

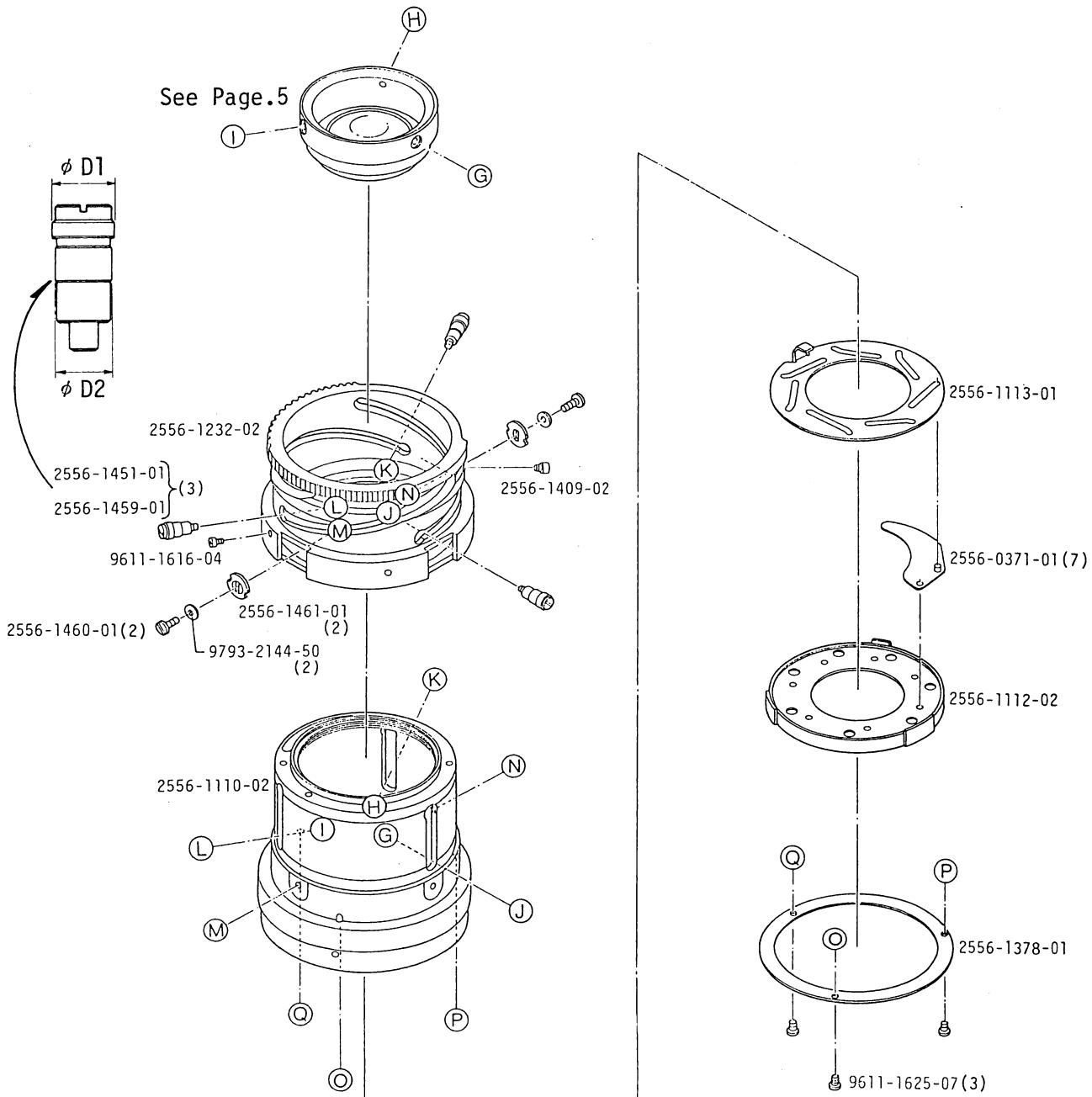
Symbol	Part No.	Color	Type	Qty
ℓ1, ℓ2	9391-0807-00	Black	φ0.08/7 ℓ=90	2

3

AF 135mm F2.8(32) Code No.2556-100
MAXXUM AF 135mm F2.8(32) Code No.2556-600



Part No.	Part Name		Qty.
2556-0430-01	Distance scale window set	距離表示窓セット	1
2556-1230-01	Outer ring	固定保持環	1
2556-1233-02	Fixed barrel	固定筒	1
2556-1236-01	Focusing ring	距離リング	1
2556-1381-01	Gear base plate	ギヤ台板	1
2556-1433-03	Friction cloth (2mmX185mm)	距離環摩擦布	1
2550-1444-01	Bayonet point	バヨネット標点	1
9611-1623-07	Phillips type screw	十字穴付なべ頭小ねじ	2
9611-1635-07	Phillips type screw	十字穴付なべ頭小ねじ	6
9612-1645-07	Phillips type screw	十字穴付なべ頭小ねじ	4
9793-1736-50	Washer	薄ワッシャー	4
9793-1740-50	Washer	薄ワッシャー	2



Part No.	Part Name		Qty.
2556-0371-01	Diaphragm blade set	絞り羽根セット	7
2556-1110-02	Inner barrel	内筒	1
2556-1112-02	Diaphragm pressure ring	絞り押え環	1
2556-1113-01	Diaphragm operation plate	絞り操作板	1
2556-1232-02	Focus cam barrel	フォーカスカム環	1
2556-1378-01	Diaphragm pressure plate	絞り押え板	1
2556-1409-02	Focusing ring stopper	距離リングストッパー	1
2556-1451-01	Focus guide pin - A	フォーカス案内ピンA	} 3
2556-1452-01	Focus guide pin - B	フォーカス案内ピンB	
2556-1453-01	Focus guide pin - C	フォーカス案内ピンC	
2556-1454-01	Fucus guide pin - D	フォーカス案内ピンD	
2556-1455-01	Focus guide pin - E	フォーカス案内ピンE	
2556-1456-01	Focus guide pin - F	フォーカス案内ピンF	
2556-1457-01	Focus guide pin - G	フォーカス案内ピンG	
2556-1458-01	Focus guide pin - H	フォーカス案内ピンH	
2556-1459-01	Focus guide pin - I	フォーカス案内ピンI	
2556-1460-01	Screw	止めねじ	2
2556-1461-01	Guide roller	カム環案内ローラー	2
9611-1616-04	Phillips type screw	十字穴付なべ頭小ねじ	1
9611-1625-07	Phillips type screw	十字穴付なべ頭小ねじ	3
9793-2144-50	Washer	薄ワッシャー	2

AF 135mm F2.8(32) Code No.2556-100
 MAXXUM AF 135mm F2.8(32) Code No.2556-600

■ When repairing following parts, must be checked resolving power by projection.

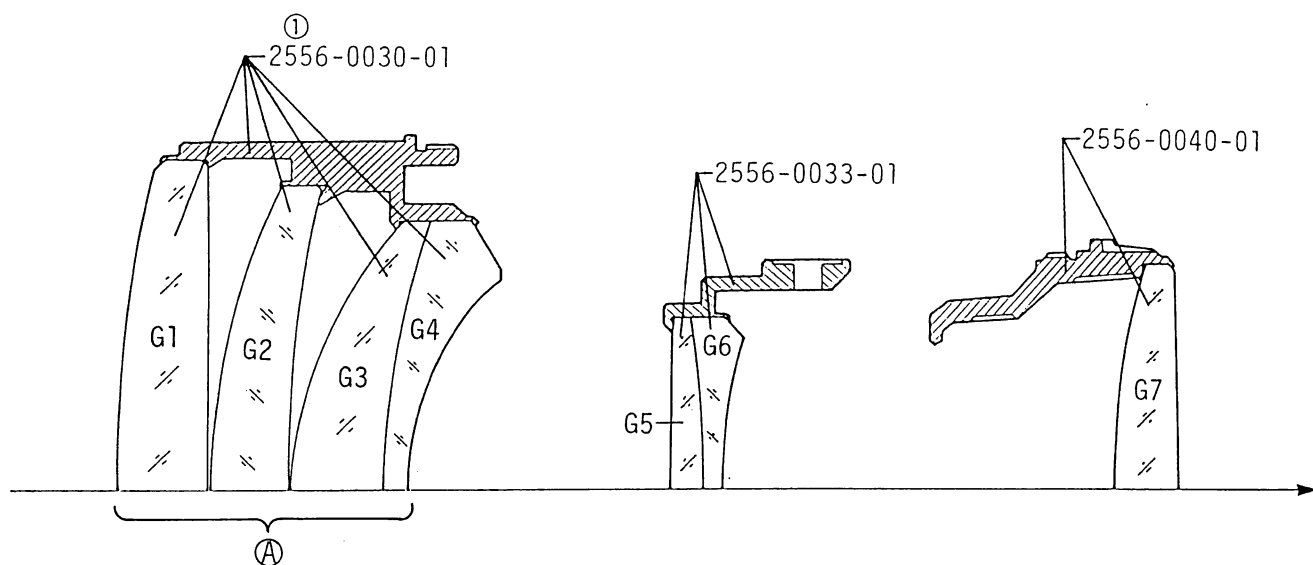
■ 下記部品を修理した場合は、必ず投影解像力を確認して下さい。

①: The influential lens element in the lens performance. (Number shows in order.)

①: レンズ性能によく影響するレンズ。(数字は順位を示す)

Ⓐ: The influential lens group in the lens performance. (Influence: In alphabetical order)

Ⓐ: レンズ性能によく影響するレンズ群。(影響度：アルファベット順)



Part No.	Part Name	Qty.
2556-0030-01	Front lens group set 前玉群セット	1
2556-0033-01	Moving barrel set 移動枠セット	1
2556-0040-01	Rear lens set 後玉セット	1

REPAIR GUIDE

■ The contents of this manual are in accordance with the assembling procedure. Therefore, follow the reverse procedure when disassembling.

— Description of marks used —

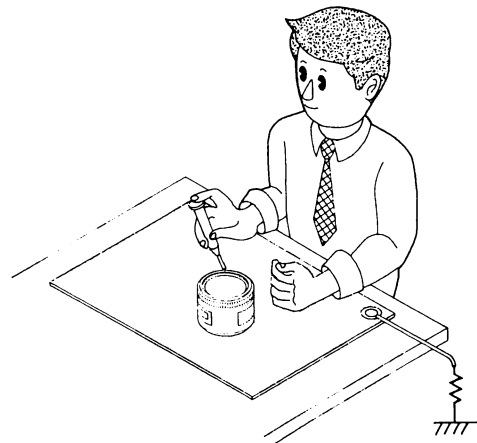
- B : Adhesive
- S : Solvent
- A : Anti-diffusion compound
- G : Lubricant
- T : Tool
- : Point of assembling and general caution

■ Assembling and adjusting procedure

	Page
① Inner barrel, Focus cam barrel, Diaphragm blade, Moving barrel set assembling	1
② Outer ring, Fixed barrel assembling	2
③ Bayonet mount set, Preset ring assembling	2
④ Distance switch set, Rear lens set, Bayonet mount, Rear light shield ring, Front lens group set assembling	3
■ Distance switch set checking	3
■ Aperture diameter adjusting (including pre-check)	3
■ Flange back adjusting	3
■ Arrangement of lead wire	4
■ Distance switch set checking procedure	4
■ Flange back adjusting procedure	5
⑤ Focusing ring, Hood, Filter ring, Name ring assembling	6
■ Projection resolving power checking	6
■ General function checking	6
■ Description of focusing	7
■ Wiring schematic diagram, Printed wiring diagram	8

■ Precautions

- Since this lens uses many resin parts, keep the following in mind when assembling and adjusting.
 - Use Flonsolve or alcohol when cleaning. Never use the thinner, ketone or ether.
- Since MOS-IC is used in this lens, it is necessary to take special precautions about static electricity. When performing repairs, use the conductive mat without fail, as shown.



1 Inner barrel, Focus cam barrel, Diaphragm blade, Moving barrel set

Assemble the parts in the order of ①→⑦.

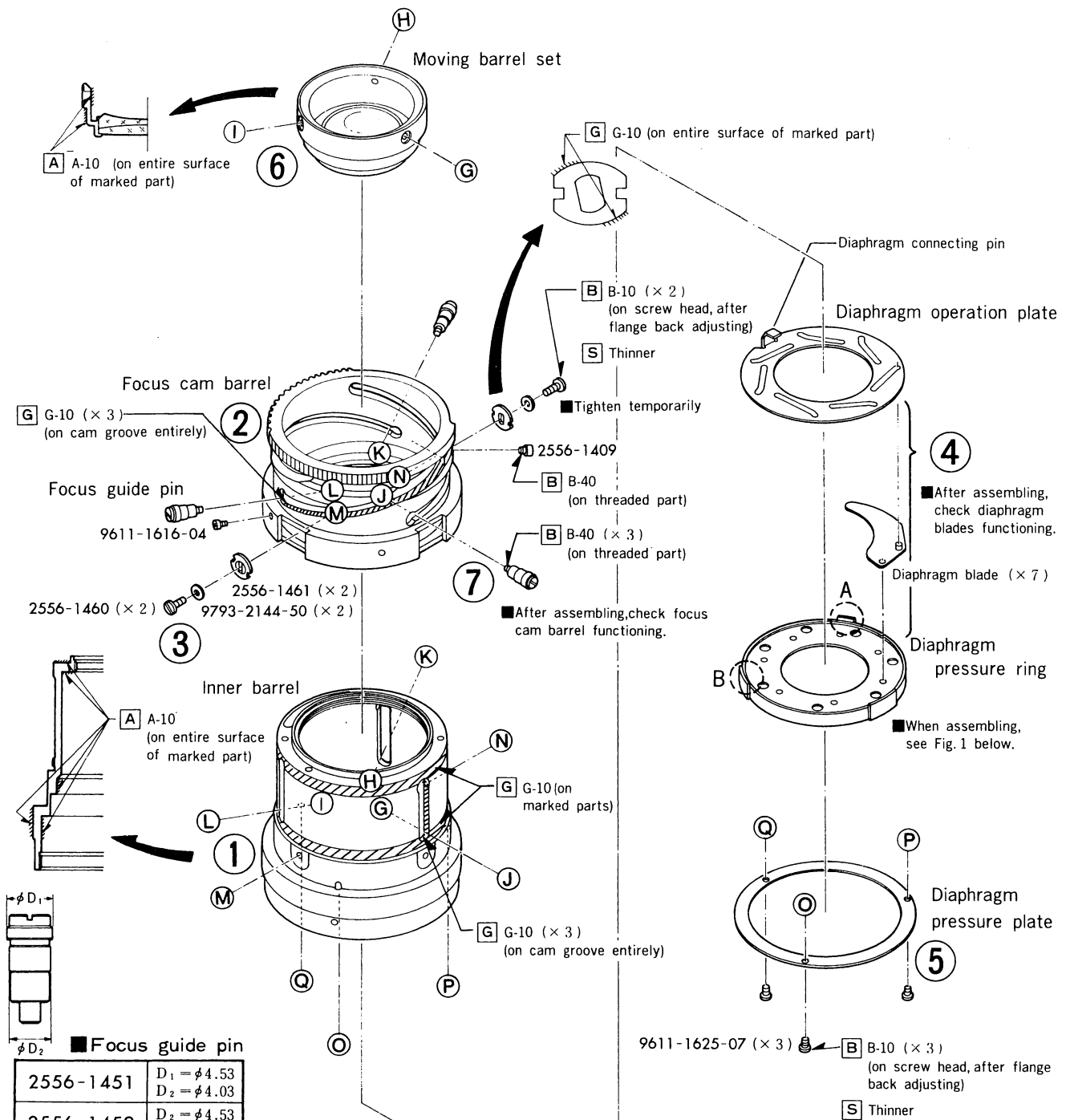
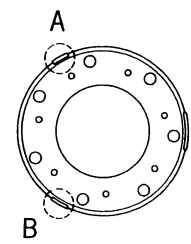


Fig. 1

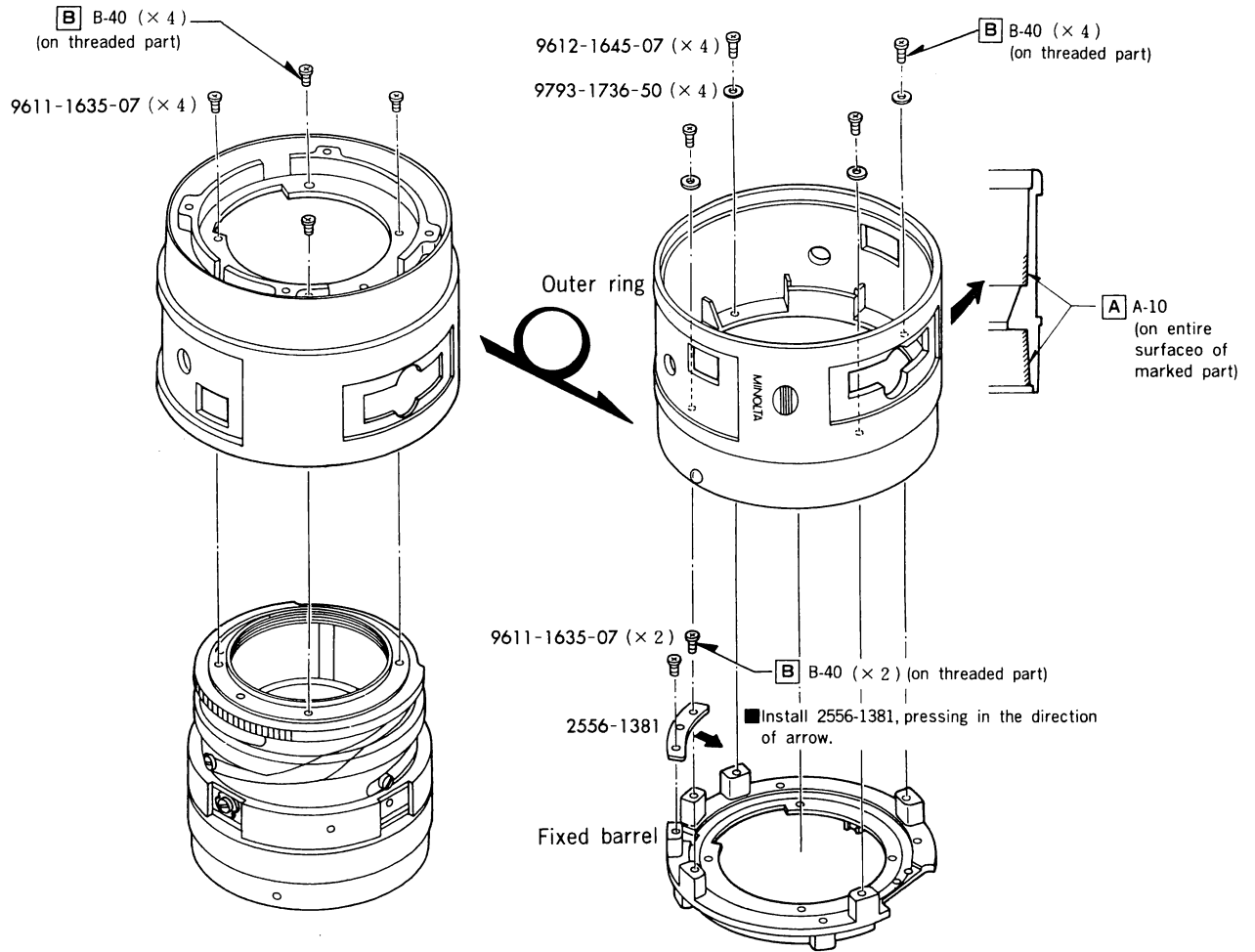


Coincide diaphragm connecting pin with center of A and B.

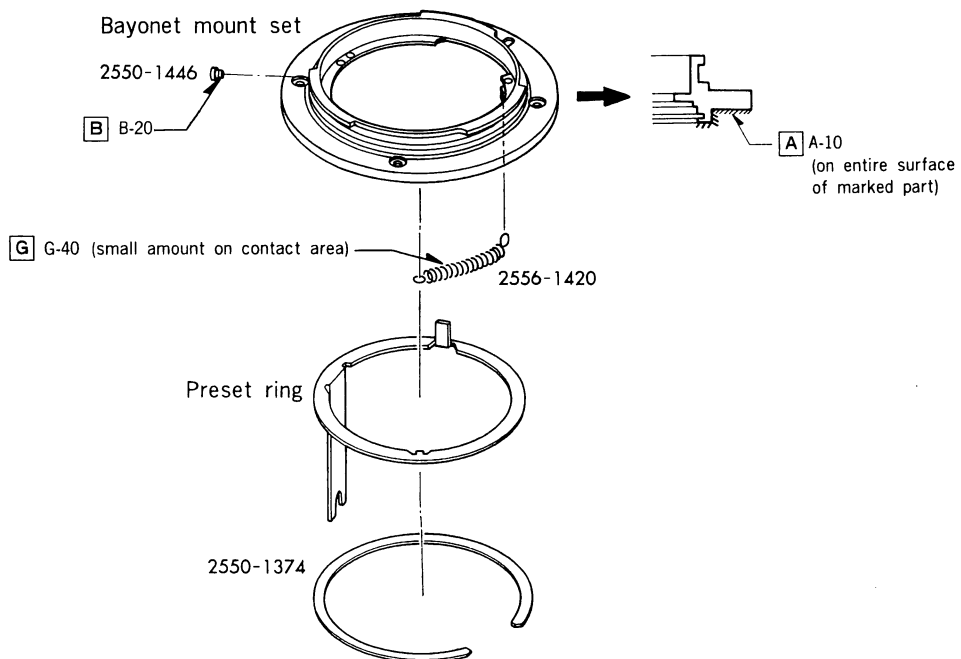
Focus guide pin

2556-1451	D ₁ = φ 4.53 D ₂ = φ 4.03
2556-1452	D ₁ = φ 4.53 D ₂ = φ 4.02
2556-1453	D ₁ = φ 4.53 D ₂ = φ 4.01
2556-1454	D ₁ = φ 4.52 D ₂ = φ 4.03
2556-1455	D ₁ = φ 4.52 D ₂ = φ 4.02
2556-1456	D ₁ = φ 4.52 D ₂ = φ 4.01
2556-1457	D ₁ = φ 4.51 D ₂ = φ 4.03
2556-1458	D ₁ = φ 4.51 D ₂ = φ 4.02
2556-1459	D ₁ = φ 4.51 D ₂ = φ 4.01

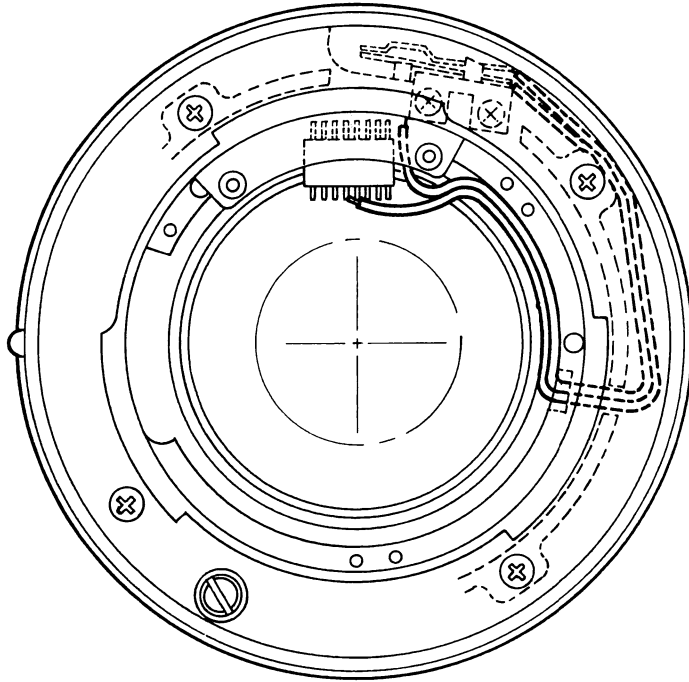
2 Outer ring, Fixed barrel



3 Bayonet mount set, Preset ring

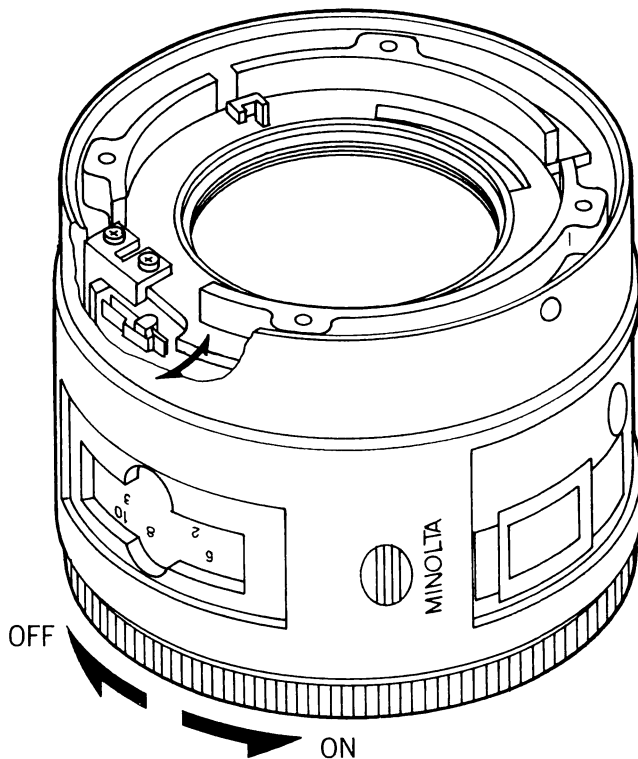


■ Arrangement of lead wires



- (1) Arrange lead wires as shown left.
- (2) When installing bayonet mount and rear light-shield barrel, do not catch lead wires.

■ Distance switch set checking



- Check distance switch set functioning.
- (a) Near side ↔ 2.5m : OFF
 - (b) 2.5m ↔ infinity (∞) side : ON

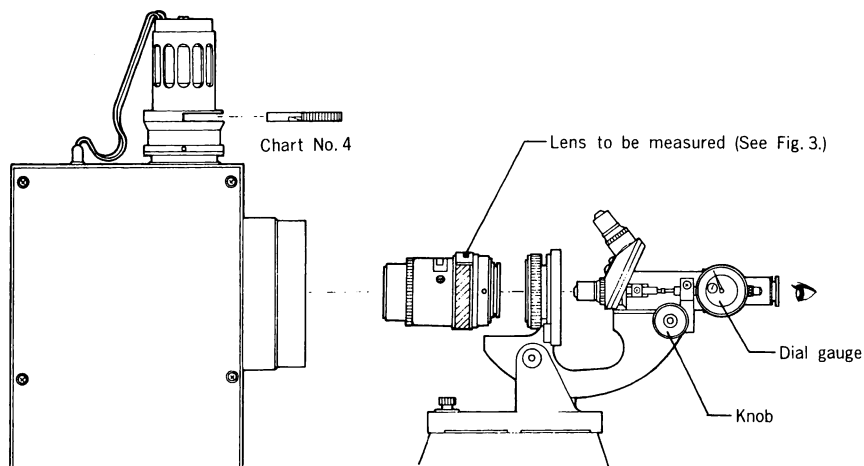
Flange back adjusting procedure

- Measuring instruments : Collimator (Model RC-1000 I*, II*, III) ※Discontinued mode)
 : Flange back checking tester (FB-1)
 : A mount attachment for FB-1
 : Flange back gauge (43.50mm)

■ Preparation

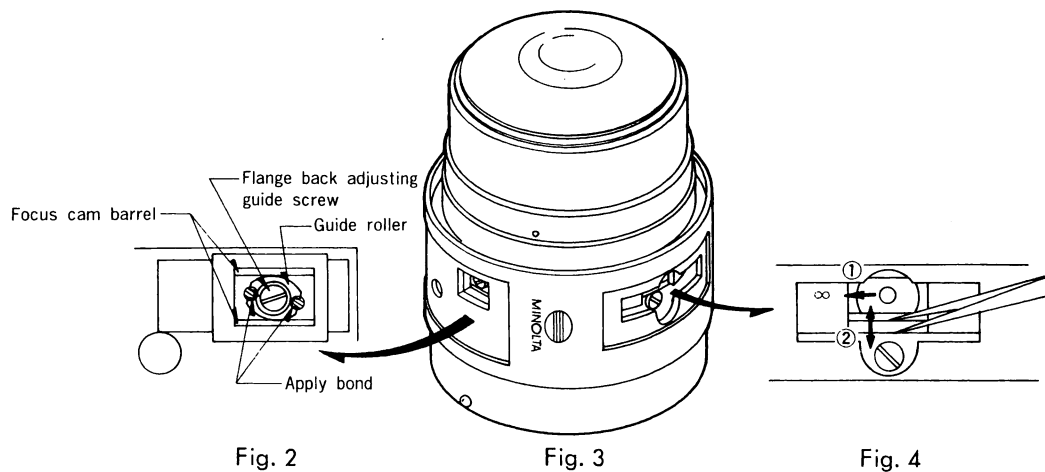
1. Set lens and measuring instruments as shown in Fig. 1.
 (Refer to flange back measuring/adjusting procedure on General adjusting procedure p. 1.)

■ Fig. 1



■ Adjusting procedure

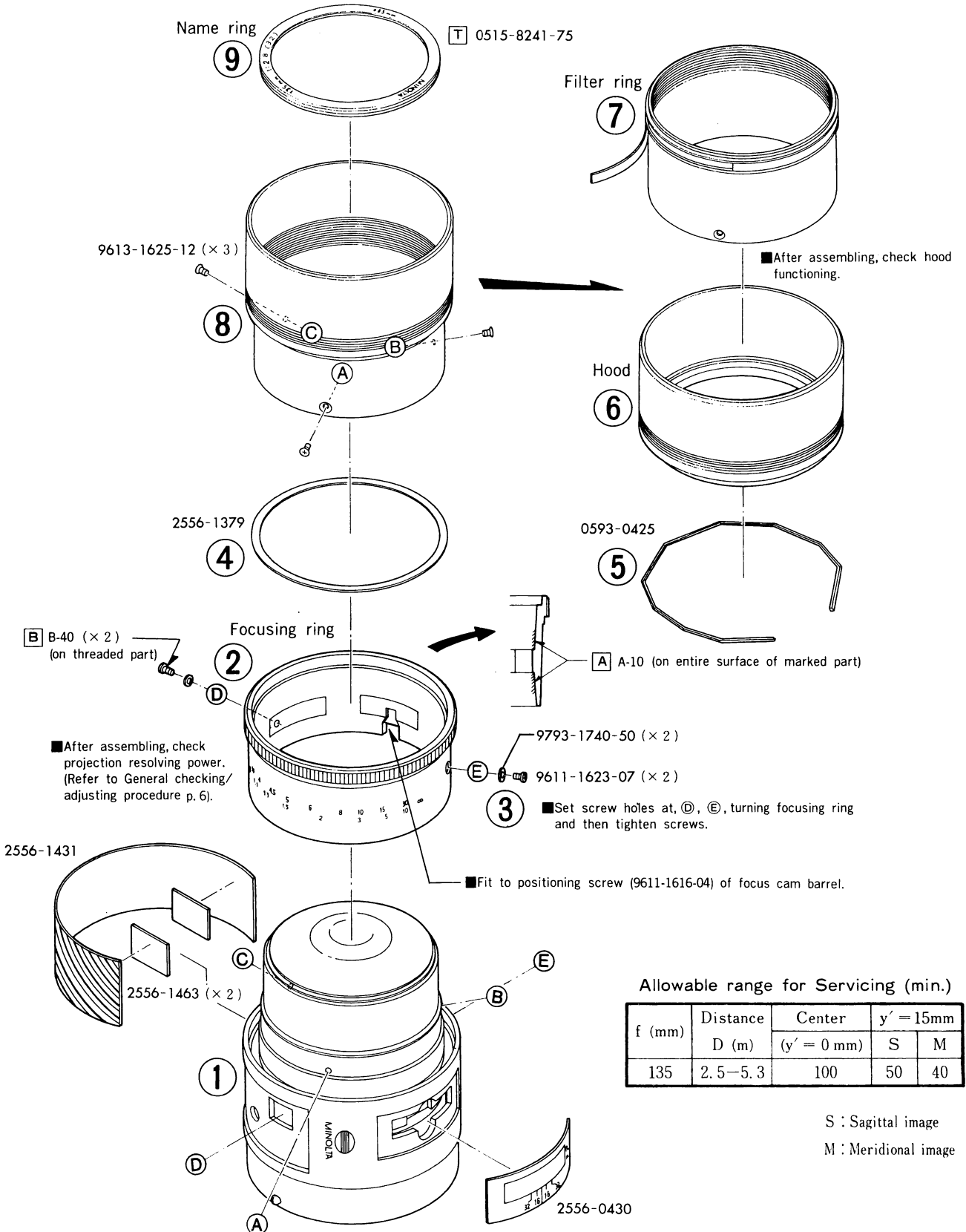
1. Loosen flange-back-adjusting-guide-screws (× 2), set guide rollers (× 2) to be free. (Fig. 2)



2. Turn knob and set dial gauge at middle of flange back allowable range (44.59-44.62mm).
3. Adjust flange back turning focus cam barrel. (Fig. 4)
 Shift focus cam barrel back and forth (in the direction of arrow ②) pressing it to infinity side (in the direction of arrow ①) and then adjust focus. (Stop turning at the in-focus point where green and red colors appear in equal quantity.)
4. Tighten guide rollers. (Fig. 2)
 Incline guide roller holding focus cam barrel not to be moved and tighten flange-back-adjusting-guide-screws to set position of focus cam barrel. (2 places)
5. Check if flange back meets allowable range. (If out of allowable range, repeat above procedures 1 → 4.)
6. Apply bond (B-10) on guide roller and flange-back-adjusting-guide-screw.

5 Focusing ring, Hood, Filter ring, Name ring

- Assemble the parts in the order of ① → ⑨.
- After assembling the parts ① → ⑧, check general function, referring General checking/adjusting procedure p. 14.



Allowable range for Servicing (min.)

f (mm)	Distance D (m)	Center (y' = 0 mm)		y' = 15mm	
		S	M	S	M
135	2.5-5.3	100	50	40	

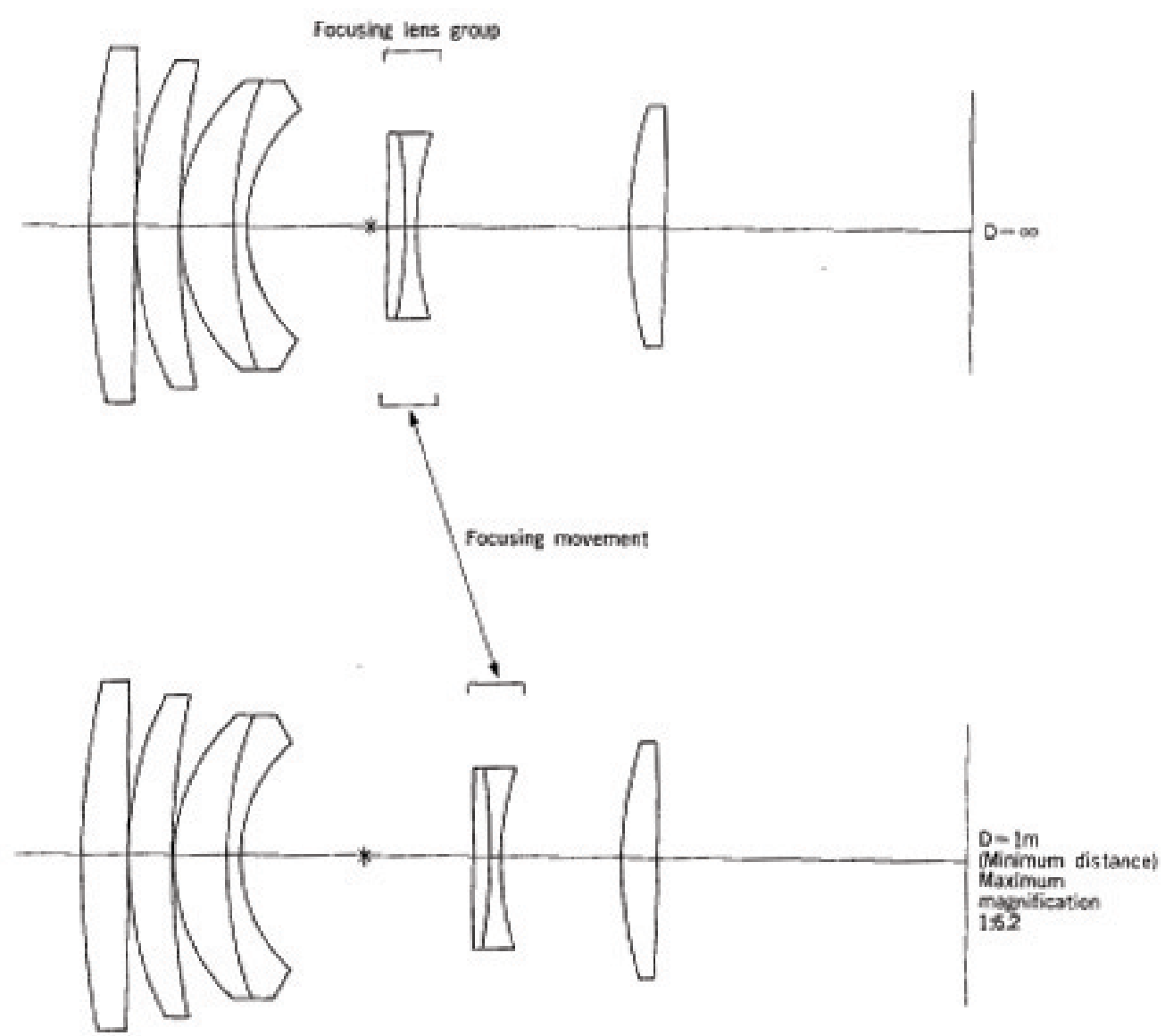
S : Sagittal image
M : Meridional image

■ Description of focusing

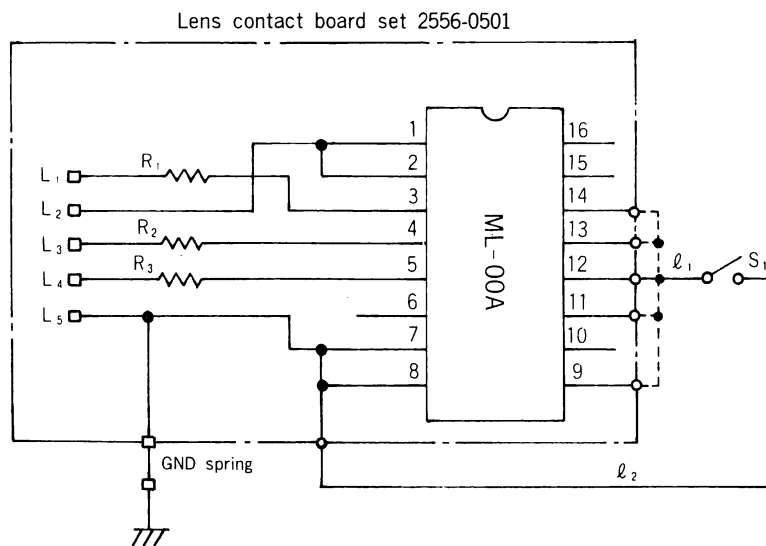
- Focal length of this lens is 135mm.

Focusing lens group moves by rotating AF coupler or focusing ring.

IF (internal focusing) system is employed, so total length of lens does not change regardless of subject distance (D) from ∞ to minimum distance side.



■ Wiring schematic diagram, printed wiring diagram



L₁₋₅ : Lens signal contact
R₁₋₃ : Printed resistor

ML-00A : ROM-IC

S₁ : Distance switch set

(∞ ↔ 2.5m : ON,

2.5m ↔ minimum distance : OFF)

ℓ₁ : Lead wire (black)

※can be soldered to one (or some)

of pin No. 9, 11, 12, 13, 14.

(Pin No. 9, 11, 12, 13, 14 are common.)

ℓ₂ : Lead wire (black)

