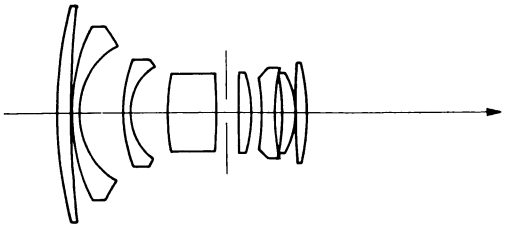
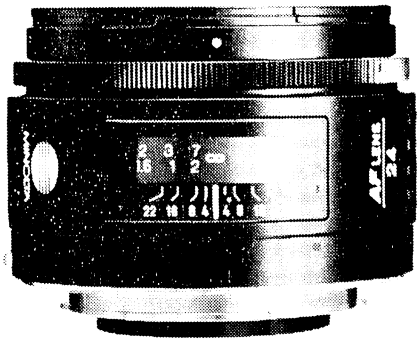
MINOLTA AF 24mm F2.8 (2566-100)
MINOLTA MAXXUM AF 24mm F2.8 (2566-600)

LENS





Construction : 8 elements in 8 groups

Type : Retrofocus

Coating : Minolta Achromatic

Angle of view : 84°

Lens mount : Minolta A mount

Lens signal contact : 5 contacts

Diaphragm : Automatic preset diaphragm

f No. : Maximum···2.8
Minimum···22
Full-stop setting···6 stops

Diaphragm blade : 7 blades

FOCUSING

Focusing : AF, FA, M

Type : Rear-component focusing

Minimum focusing distance : 0.25 m

Distance scale :

0.9	1.1	1.5	2	3	7	∞	(ft)
0.25	0.3	0.4	0.6	1	2		(m)

Infrared correction index : Yes

Depth-of-field scale : 4 8 16 22

DIMENSIONS & WEIGHT

Dimensions : φ65.5 (max. diameter) × 44 mm (max. length)

Weight : 215 g

Filter-thread diameter : φ55 mm (P=0.75)

Lens hood diameter : φ55 mm (Bayonet type)

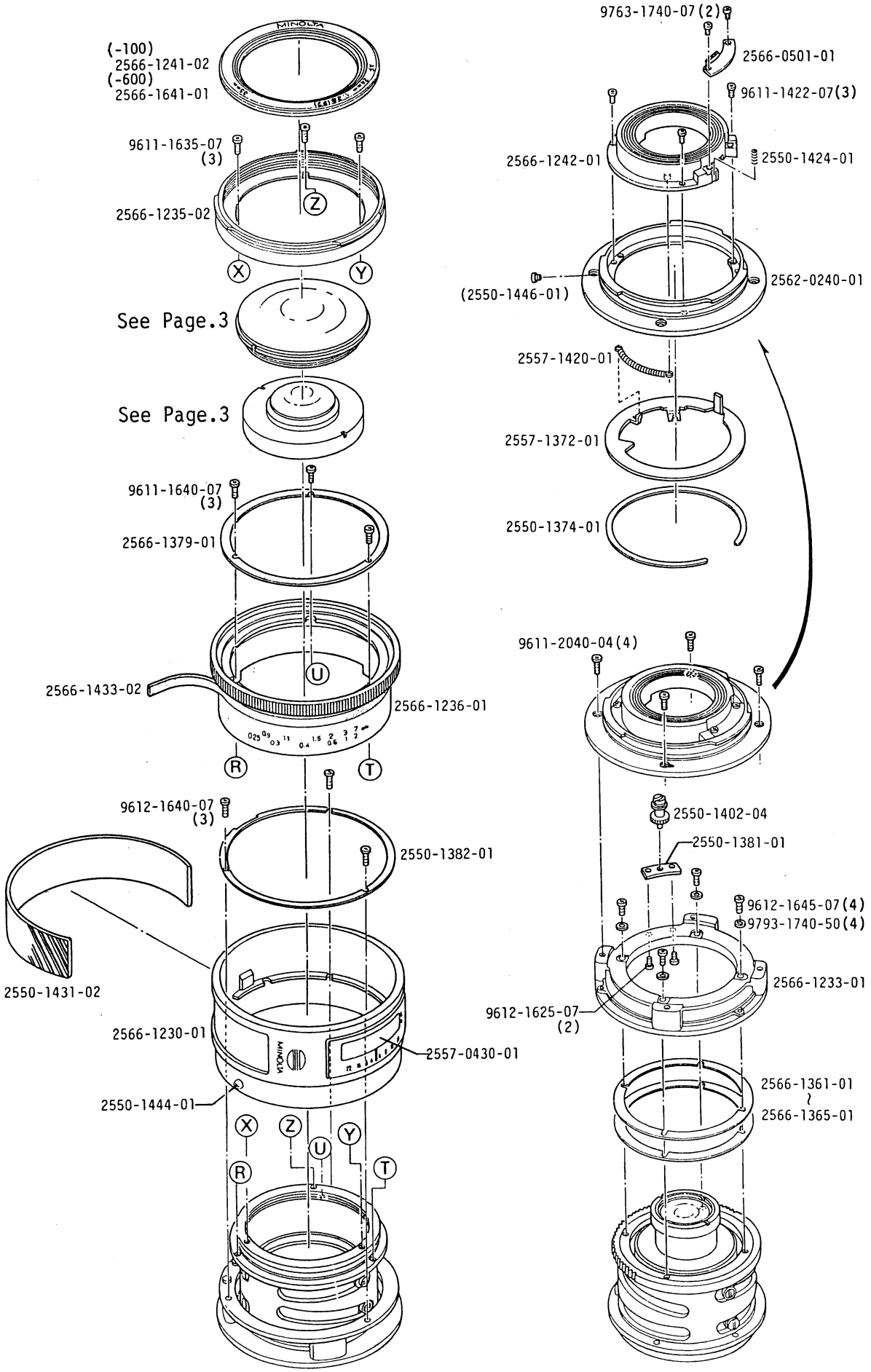
ACCESSORIES

Lens case (LH-1031)

Lens hood (6566-810)

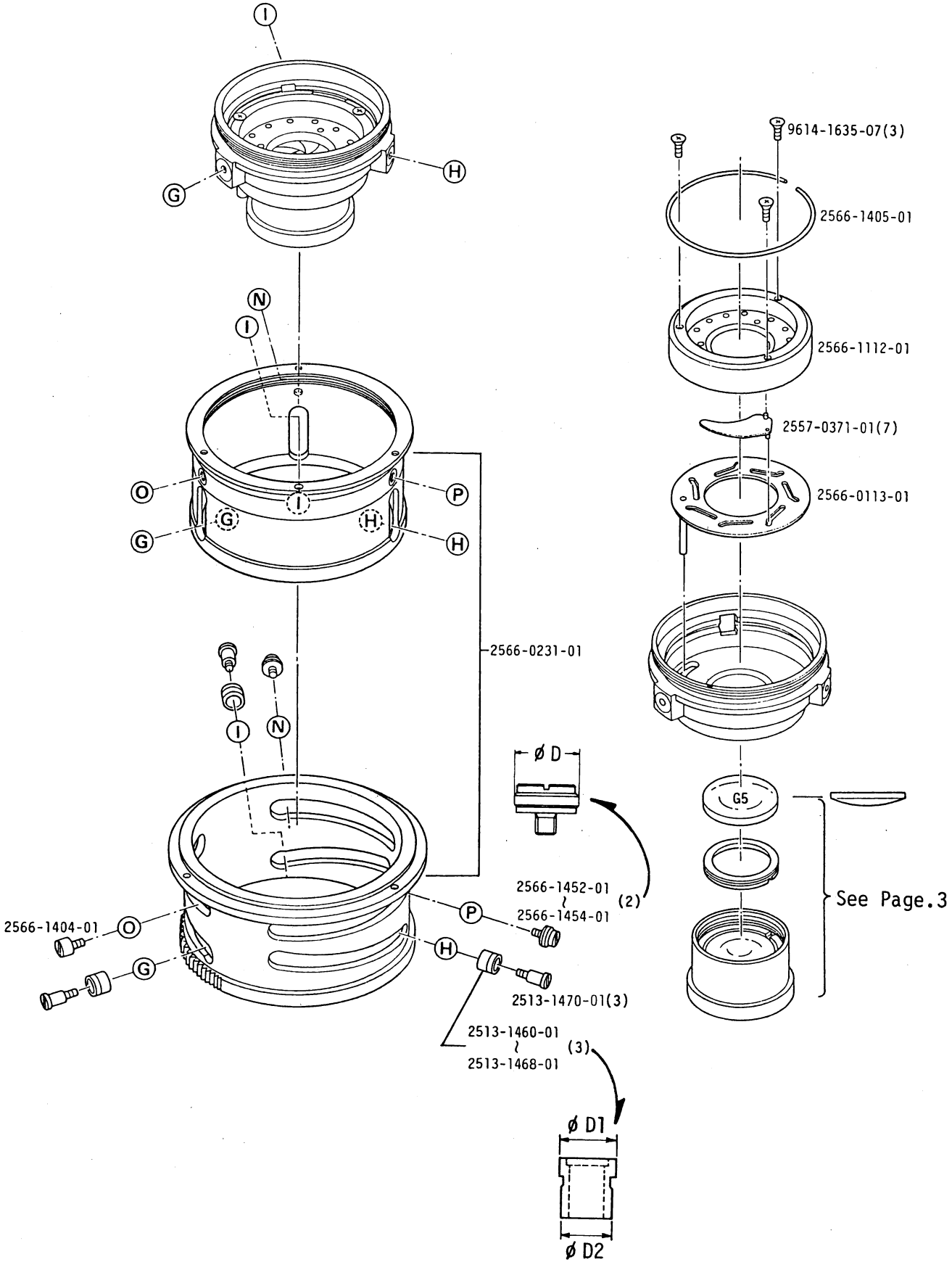
I N D E X

AF 24mm F2.8(22) Code No.2566-100
MAXXUM AF 24mm F2.8(22) Code No.2566-600



Part No.	Part Name		Qty.
2562-0240-01	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
2557-0430-01	Distance scale window set	距離表示窓セット	1
2566-0501-01	Lens contact board set	信号基板セット	1
2566-1230-01	Outer ring	固定保持環	1
2566-1233-01	Outer barrel	外筒	1
2566-1235-02	Filter ring	鏡頭環	1
2566-1236-01	Focusing ring	距離リング	1
2566-1241-02	Name ring (-100)	飾り環	1
2566-1242-01	Light shield ring	遮光筒	1
2566-1361-01	Back washer - A (t=0.05)	バックワッシャーA	Some
2566-1362-01	Back washer - B (t=0.07)	バックワッシャーB	
2566-1363-01	Back washer - C (t=0.1)	バックワッシャーC	
2566-1364-01	Back washer - D (t=0.2)	バックワッシャーD	
2566-1365-01	Back washer - E (t=0.5)	バックワッシャーE	
2557-1372-01	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
2566-1379-01	Focusing ring set plate	距離リング締付板	1
2550-1381-01	Axis receiver - B	軸受B	1
2550-1382-01	Outer ring set plate	固定保持環締付板	1
2550-1402-04	Coupler	カプラー	1
2557-1420-01	Main spring	メインスプリング	1
2550-1424-01	Spring	アーススプリング	1
2550-1431-02	Leather	貼皮	1
2566-1433-02	Friction cloth	摩擦布	1
2550-1444-01	Bayonet point	バヨネット標点	1
2566-1641-01	Name ring (-600)	飾り環	1
9611-1422-07	Phillips type screw	十字穴付なべ頭小ねじ	3
9611-1635-07	Phillips type screw	十字穴付なべ頭小ねじ	3
9611-1640-07	Phillips type screw	十字穴付なべ頭小ねじ	3
9611-2040-04	Phillips type screw	十字穴付なべ頭小ねじ	4
9612-1625-07	Phillips type screw	十字穴付なべ頭小ねじ	2
9612-1640-07	Phillips type screw	十字穴付なべ頭小ねじ	3
9612-1645-07	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
9793-1740-50	Washer	薄ワッシャー	4

AF 24mm F2.8(22) Code No.2566-100
MAXXUM AF 24mm F2.8(22) Code No.2566-600



Part No.	Part Name		Qty.
2566-0113-01	Diaphragm operation plate set	絞り操作板セット	1
2566-0231-01	Cam barrel set	カム環セット	1
2557-0371-01	Diaphragm blade set	絞り羽根セット	7
2566-1112-01	Diaphragm pressure ring	絞り押え環	1
2566-1404-01	Focusing ring stopper	距離リングストッパー	1
2566-1405-01	Diaphragm pressure ring spring	絞り押え環スプリング	1
2566-1452-01	Cam barrel guide roller - B (D= φ5.01)	カム環ガイドローラーB	2
2566-1453-01	Cam barrel guide roller - C (D= φ5.02)	カム環ガイドローラーC	
2566-1454-01	Cam barrel guide roller - D (D= φ5.03)	カム環ガイドローラーD	
2513-1460-01	Guide roller - A (D1= φ5.03,D2= φ4.53)	案内ローラーA	3
2513-1461-01	Guide roller - B (D1= φ5.03,D2= φ4.52)	案内ローラーB	
2513-1462-01	Guide roller - C (D1= φ5.03,D2= φ4.51)	案内ローラーC	
2513-1463-01	Guide roller - D (D1= φ5.02,D2= φ4.53)	案内ローラーD	
2513-1464-01	Guide roller - E (D1= φ5.02,D2= φ4.52)	案内ローラーE	
2513-1465-01	Guide roller - F (D1= φ5.02,D2= φ4.51)	案内ローラーF	
2513-1466-01	Guide roller - G (D1= φ5.01,D2= φ4.53)	案内ローラーG	
2513-1467-01	Guide roller - H (D1= φ5.01,D2= φ4.52)	案内ローラーH	
2513-1468-01	Guide roller - I (D1= φ5.01,D2= φ4.51)	案内ローラーI	
2513-1470-01	Guide pin	案内ピン	3
9614-1635-07	Phillips type screw	十字穴付半丸頭小ねじ	3

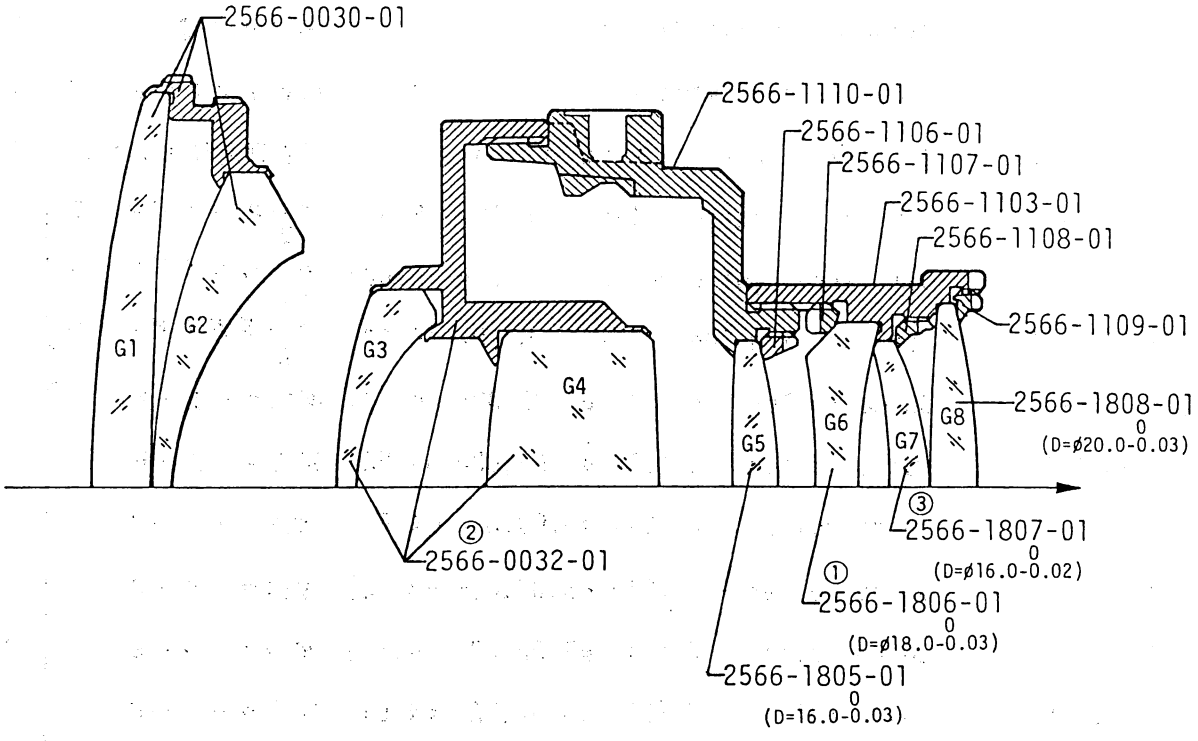
AF 24mm F2.8(22) Code No.2566-100
MAXXUM AF 24mm F2.8(22) Code No.2566-600

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

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

■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：レンズ性能によく影響するレンズ。（数字は順位を示す）



Part No.	Part Name		Qty.
2566-0030-01	Front lens group set	前玉群セット	1
2566-0032-01	Middle lens group set	中玉群セット	1
2566-1103-01	Rear lens barrel	後玉枠	1
2566-1106-01	G5 pressure ring	G5押え	1
2566-1107-01	G6 pressure ring	G6押え	1
2566-1108-01	G7 pressure ring	G7押え	1
2566-1109-01	G8 pressure ring	G8押え	1
2566-1110-01	Inner barrel	内筒	1
2566-1805-01	Lens - G5	レンズG5	1
2566-1806-01	Lens - G6	レンズG6	1
2566-1807-01	Lens - G7	レンズG7	1
2566-1808-01	Lens - G8	レンズG8	1

REPAIR GUIDE

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

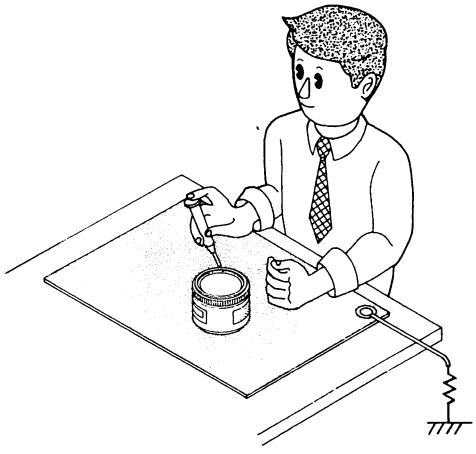
— Description of marks used —

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

■ Assembling and adjusting procedure

■ Precautions

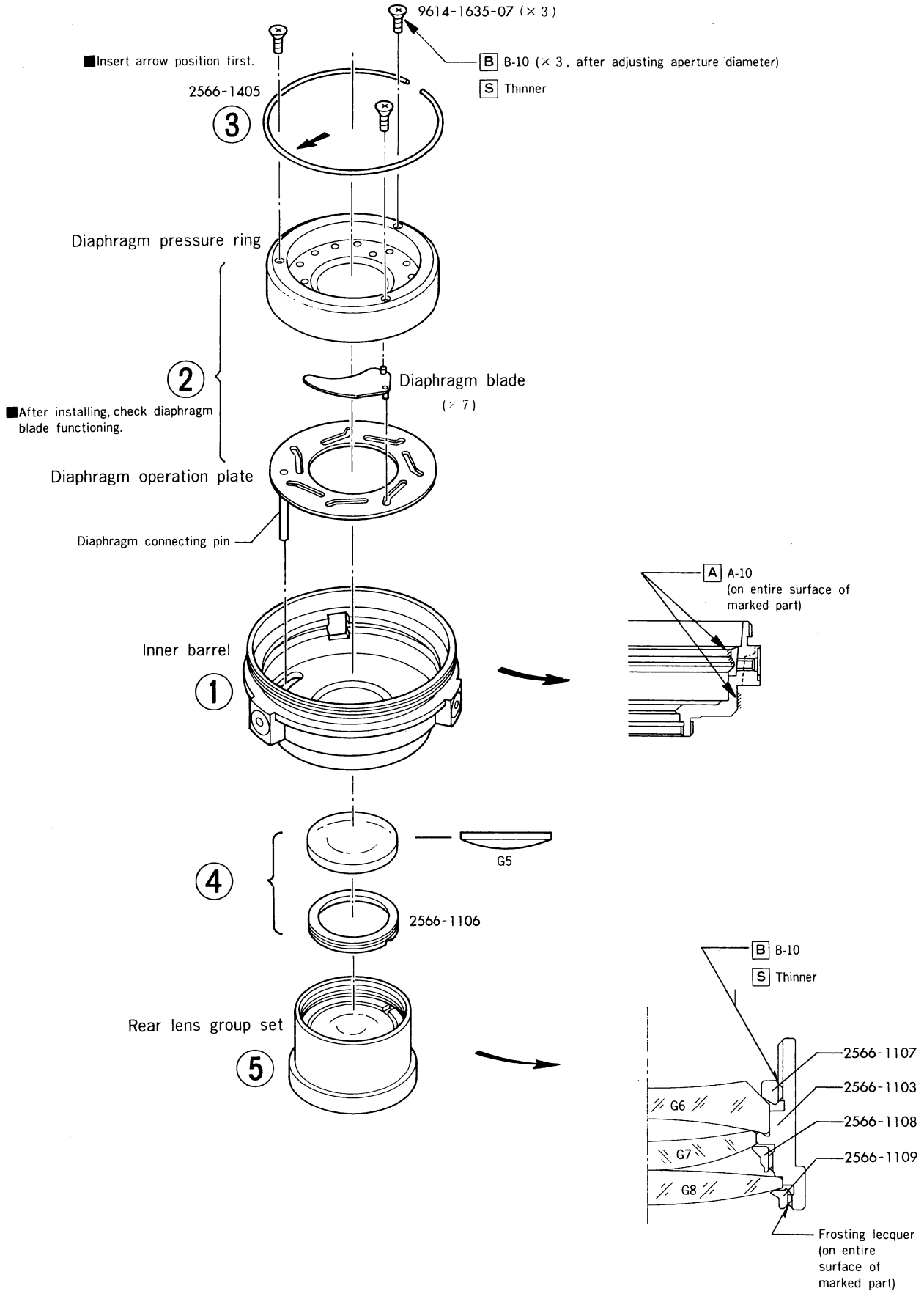
- Since this lens uses many resin parts, keep the following in mind when assembling and adjusting.
  ○ Use Flonsolve or alchol when cleaning. Never use the thinner, ketone or ether.
- Since MOS-IC is used in this lens, it is necessary to take special precautions about static electricity. When performing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



AF 24mm F2.8 (22) Code No. 2566-100
MAXXUM AF 24mm F2.8 (22) Code No. 2566-600

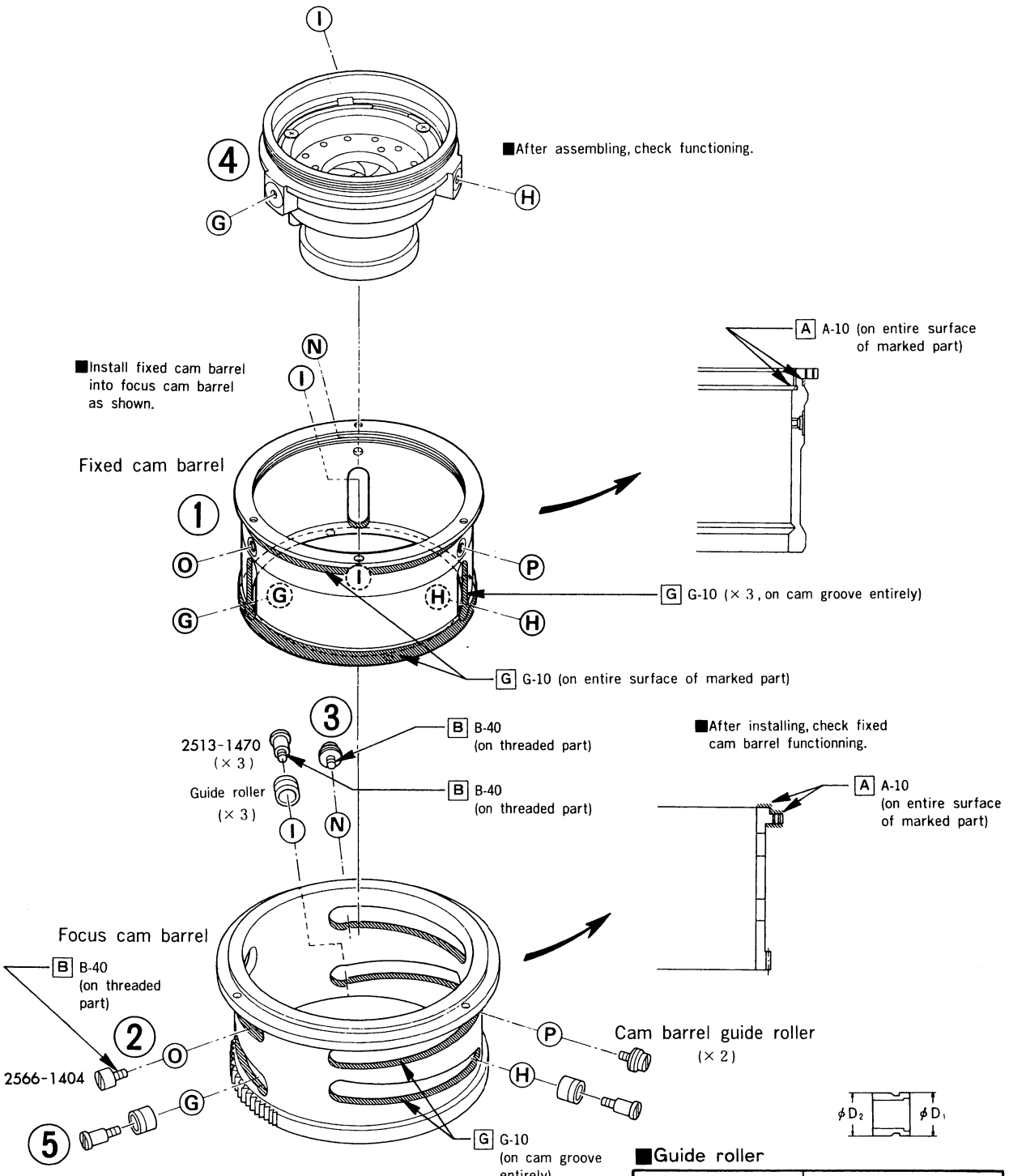
1 Inner barrel, Diaphragm blade, Rear lens group set

■Assemble the parts in the order of ①–⑤.

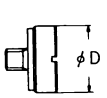


2 Focus cam barrel, Fixed cam barrel

■Assemble the parts in the order of ①–⑤.



■Cam barrel guide roller



2566-1452-01	D=φ5.01
2566-1453-01	D=φ5.02
2566-1454-01	D=φ5.03

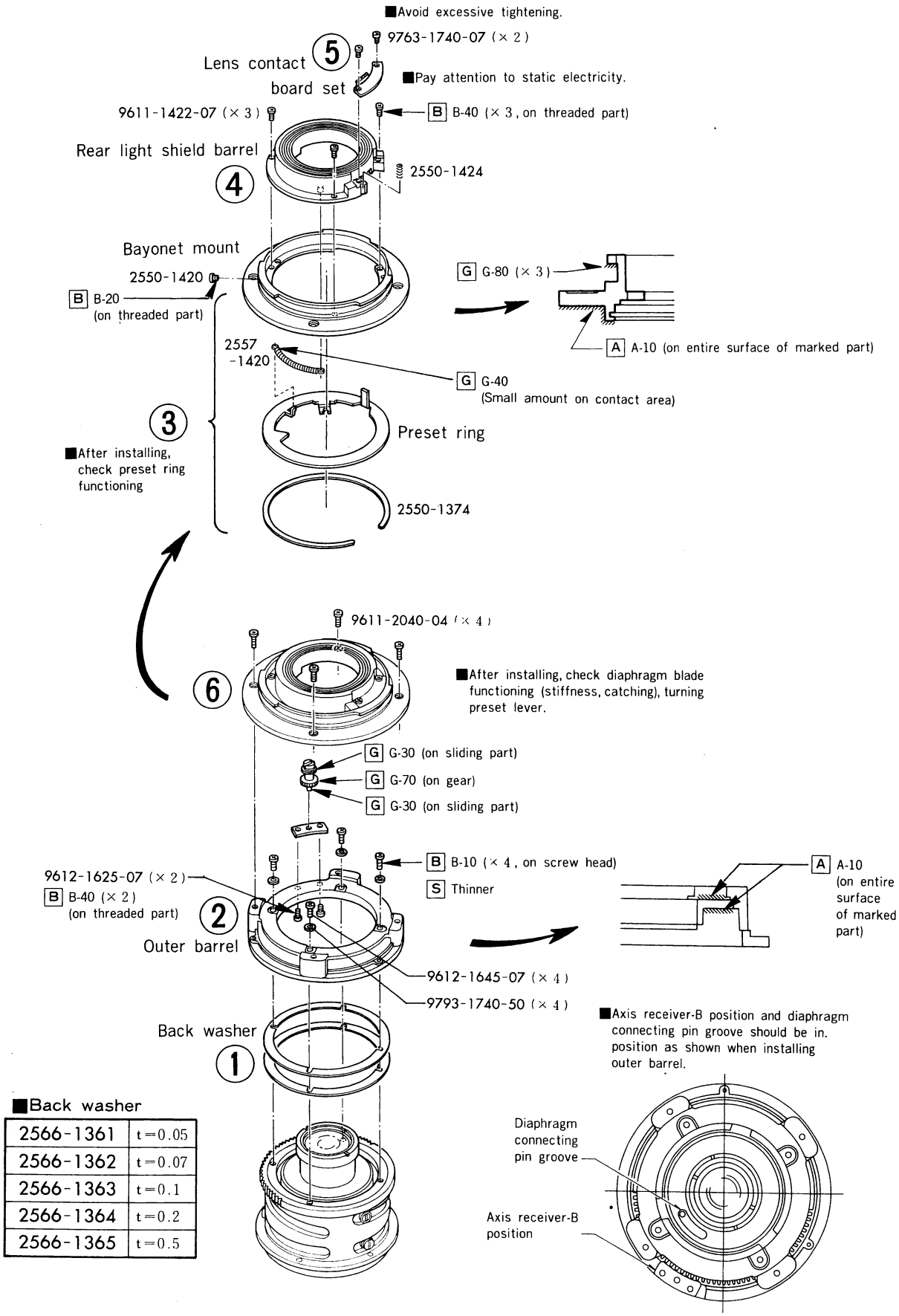
■Guide roller

2513-1460-01	D_1=φ5.03, D_2=φ4.53
2513-1461-01	D_1=φ5.03, D_2=φ4.52
2513-1462-01	D_1=φ5.03, D_2=φ4.51
2513-1463-01	D_1=φ5.02, D_2=φ4.53
2513-1464-01	D_1=φ5.02, D_2=φ4.52
2513-1465-01	D_1=φ5.02, D_2=φ4.51
2513-1466-01	D_1=φ5.01, D_2=φ4.53
2513-1467-01	D_1=φ5.01, D_2=φ4.52
2513-1468-01	D_1=φ5.01, D_2=φ4.51

AF 24mm F2.8 (22) Code No. 2566-100
MAXXUM AF 24mm F2.8 (22) Code No. 2566-600

3 Outer barrel, Bayonet mount, Rear light shield barrel, Lens contact board set

■Assemble the parts in the order of ①–⑥.

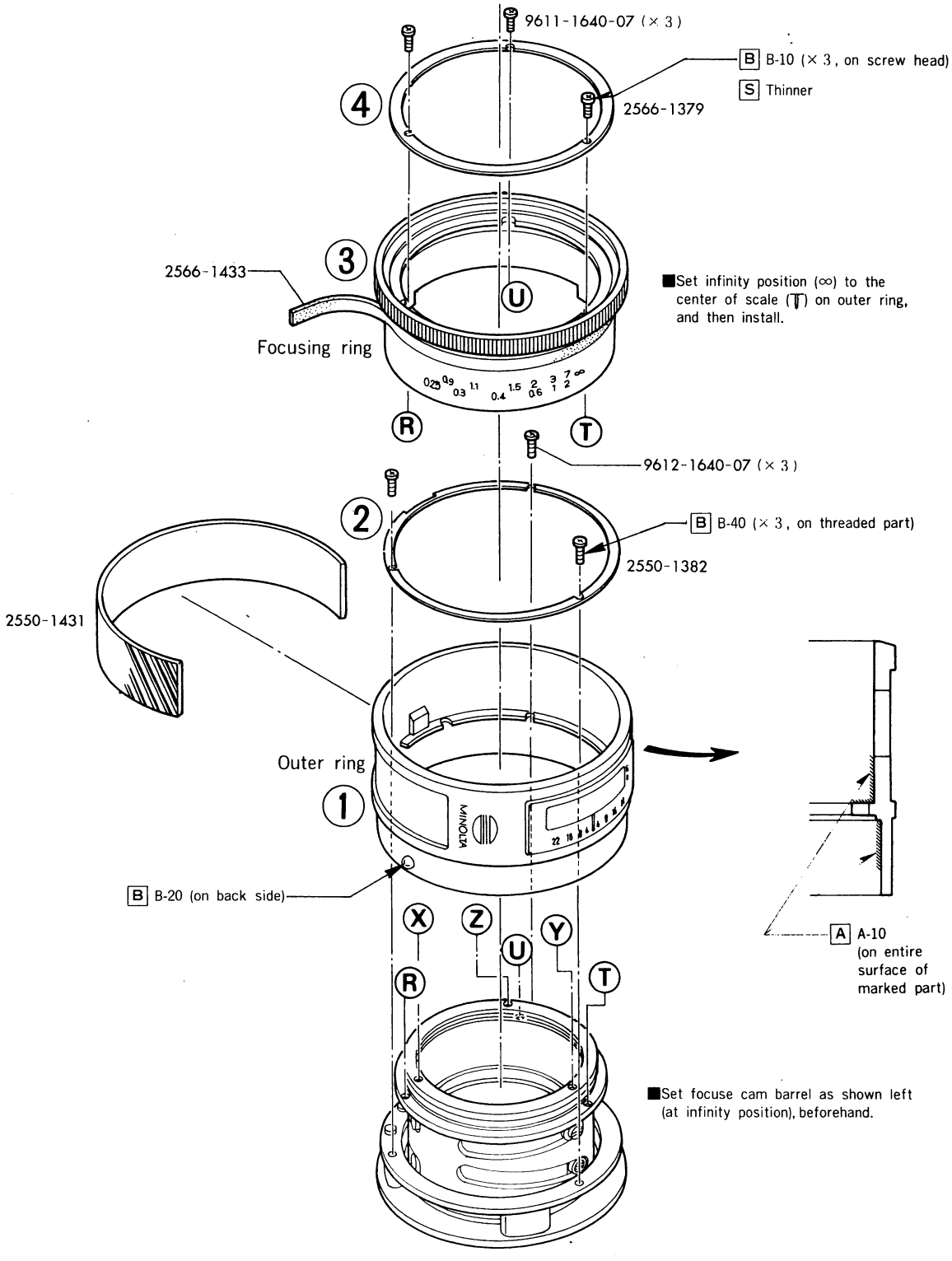


■Back washer

2566-1361	t=0.05
2566-1362	t=0.07
2566-1363	t=0.1
2566-1364	t=0.2
2566-1365	t=0.5

4 Outer ring, Focusing ring

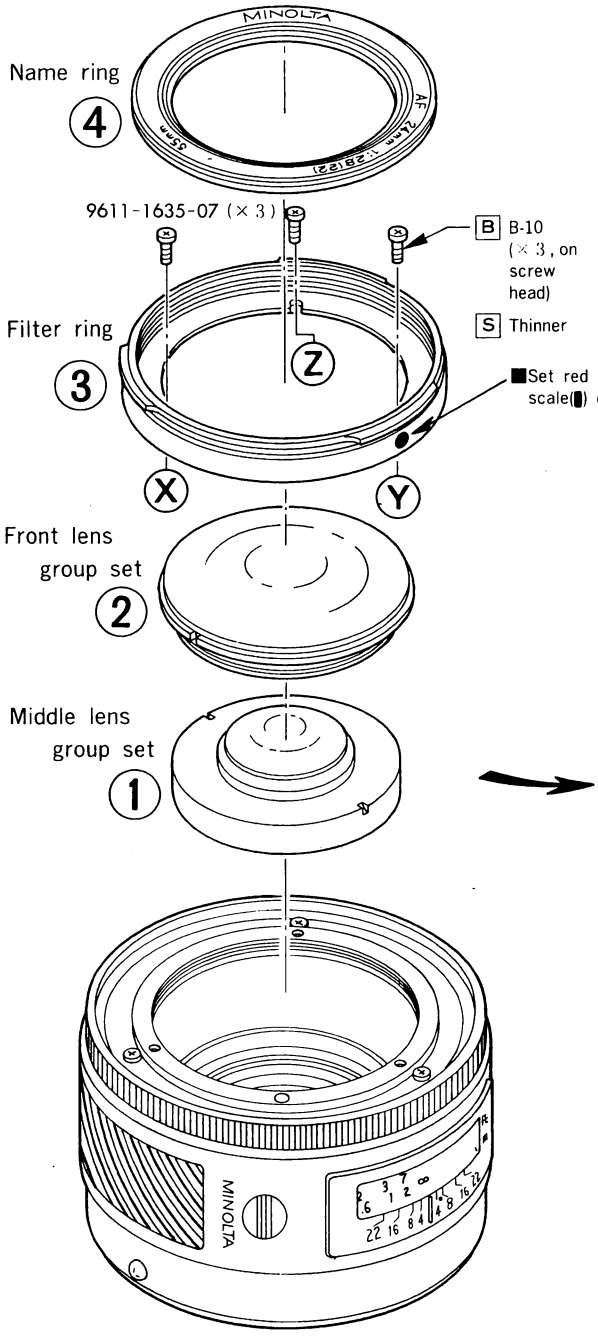
■Assemble the parts in the order of ①–④. After assembling, adjust aperture diameter (including pre-check, referring to General checking/adjusting procedure on p. 8, 9.)



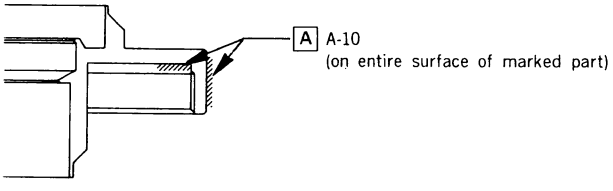
5 Middle lens group set, Front lens group set, Filter ring, Name ring

■ Assemble the parts in the order of ①–④.

T 0515-8241-75



■ Set red index (•) on filter ring to the center of scale(▮) on outer ring, and then install.



■ After assembling, perform the following adjusting.

1. Flange back adjusting (referring to Flange back adjusting procedure on p. 6).

Allowable range $f'F = 44.56^{+0.03}_{0}$

2. Projection resolving power checking (referring to General checking/adjusting procedure on p. 6).

Allowable range for Servicing (min.)

f (mm)	Distance D (m)	Center (y′ = 0)	y′ = 15	
			S	M
24	1.0	100	32	32

S : Sagital image
M : Meridinal image

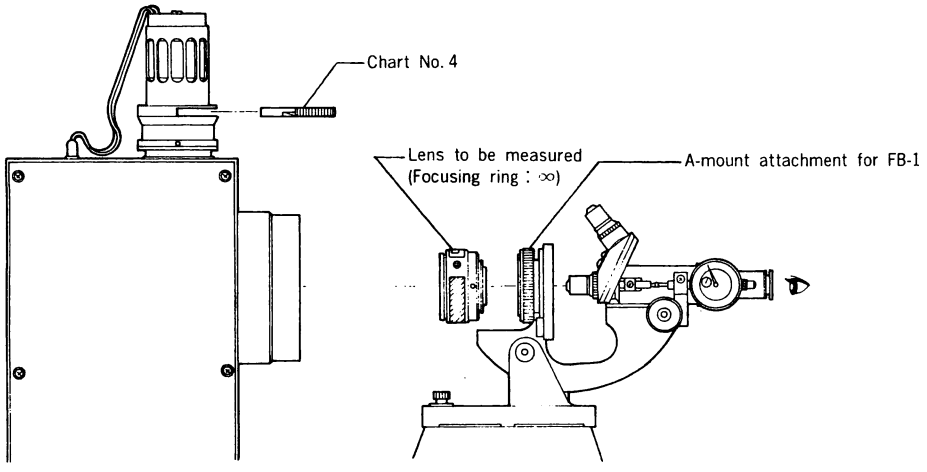
3. Check aperture diameter (referring to General checking/adjusting procedure on p. 9).
4. Check General functioning (referring to General checking/adjusting procedure on p. 14).

■ Flange back adjusting

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

■Preparation

● Set lens and measuring instruments as Fig. below.



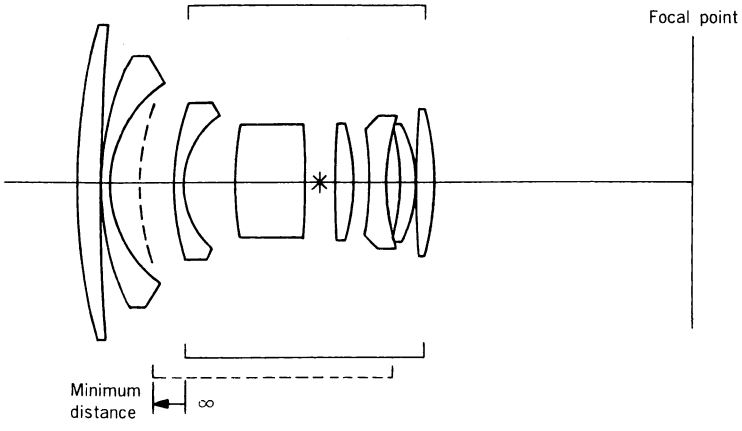
■Adjusting procedure

(For preparation of measuring instruments and measurement of flange back, see "Flange back (f′F) measuring, adjusting procedure" of General checking/adjusting procedure on p. 1.)

1. Check if flange back value meets allowable range ($44.56\ ^{+0.03}_{0}$).
   If out of allowable range, calculate correct value.
   (Example) Measured flange back value : 44.50
   Allowable range : 44.56→44.59
   44.56−44.50=0.06 ⎫ Decrease back washer thickness (0.06→0.09mm)
   44.59−44.50=0.09 ⎭ to meet allowable range.
   ● If measured flange back value is shorter then allowable range···decrease back washer thickness
   ● If measured flange back value is longer than allowable range···increase back washer thickness
2. Remove back washer from lens unit.
3. Measure thickness of original back washer. Then select proper total thickness of back washer. (Classified back washers are given on p. 3.)
4. After assembling, make sure that flange back meets allowable range.
   (If out of allowable range, repeat above procedures 1−3.)

AF 24mm F2.8 (22) Code No. 2566-100
MAXXUM AF 24mm F2.8 (22) Code No. 2566-600

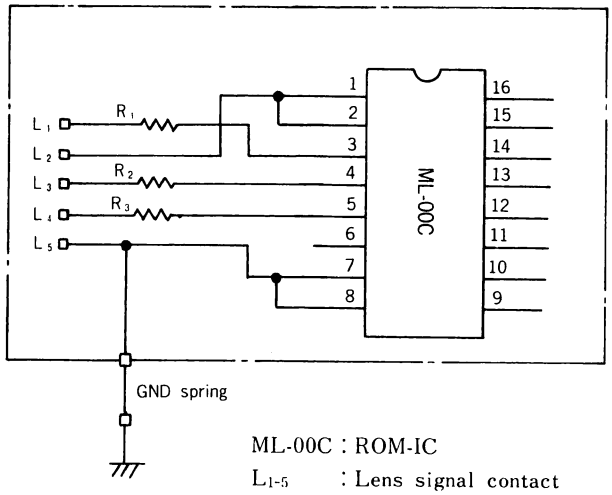
Description of focusing



- Rear focusing system is employed. Focusing lens group moves by rotating focusing ring or AF coupler, and focusing and floating are performed simultaneously.

Wiring schematic diagram, printed wiring diagram

Lens contact board set (2566-0501)



ML-00C : ROM-IC
$L_{1\text{-}5}$: Lens signal contact
$R_{1\text{-}3}$: Printed resistor

Lens contact boad set (2566-0501)