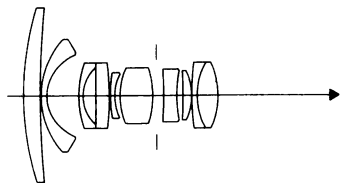


**MINOLTA AF20mm F2.8 (2579-100)**

**MINOLTA MAXXUM AF20mm F2.8 (2579-600)**

**LENS**



Construction : 10 elements in 9 groups  
Type : Retrofocus  
Coating : Minolta Achromatic  
Angle of view : 94°  
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

**DIMENSIONS & WEIGHT**

Dimensions :  $\phi$ 77.5 (max. diameter) ×  
53.5mm (max. length)  
Weight : 285 g  
Filter-thread diameter :  $\phi$ 72mm (P=0.75)  
Lens hood diameter :  $\phi$ 72mm (Bayonet type)

**FOCUSING**

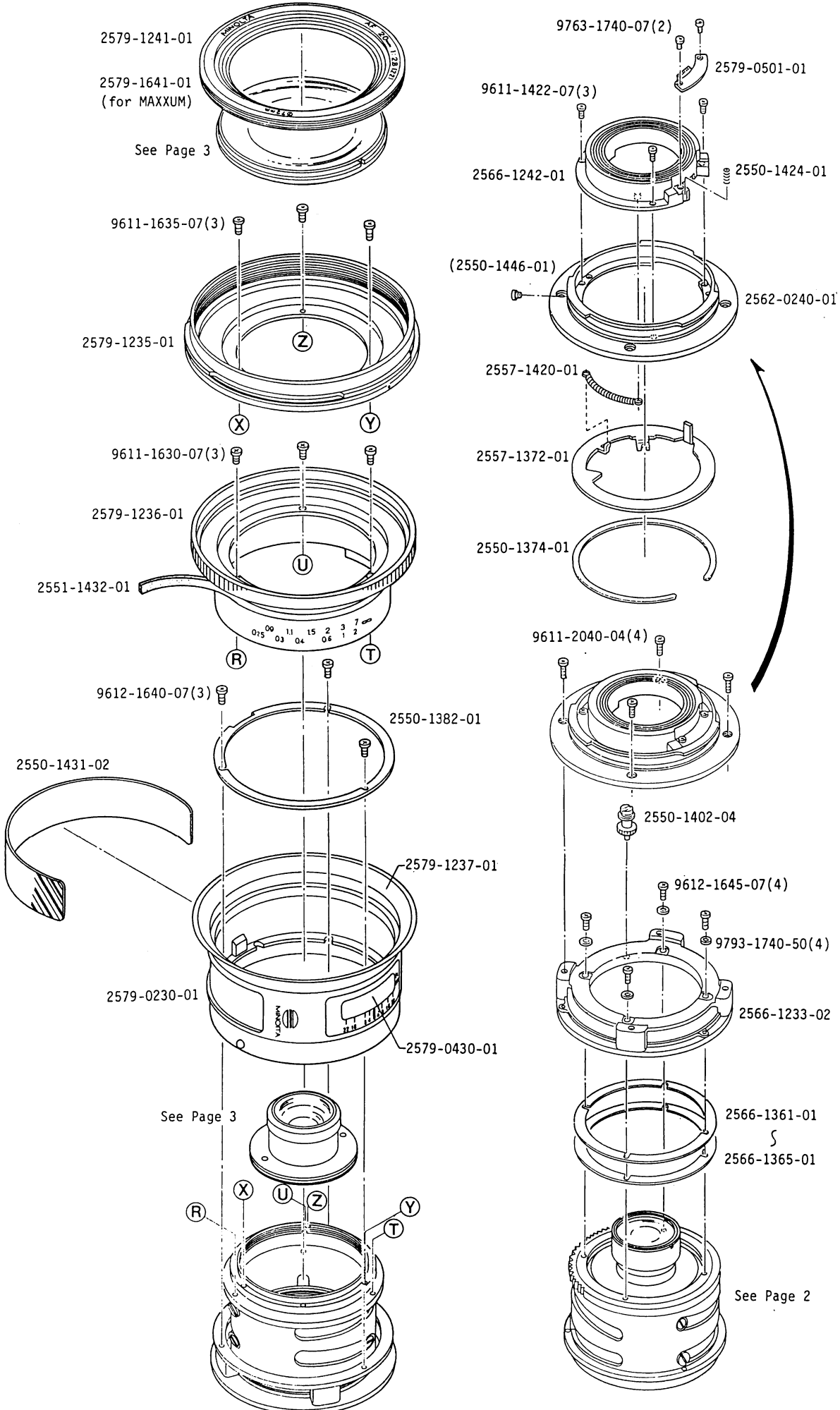
Focusing : AF, FA, M  
Type : Rear-component focusing  
Minimum focusing distance : 0.25 m  
Distance scale :  $\frac{0.9 \quad 1.1 \quad 1.5 \quad 2 \quad 3 \quad 7}{0.25 \quad 0.3 \quad 0.4 \quad 0.6 \quad 1 \quad 2} \frac{\text{(ft)}}{\text{(m)}} \infty$   
Infrared correction index : Yes  
Depth-of-field scale : 4 8 16 22

**ACCESSORIES**

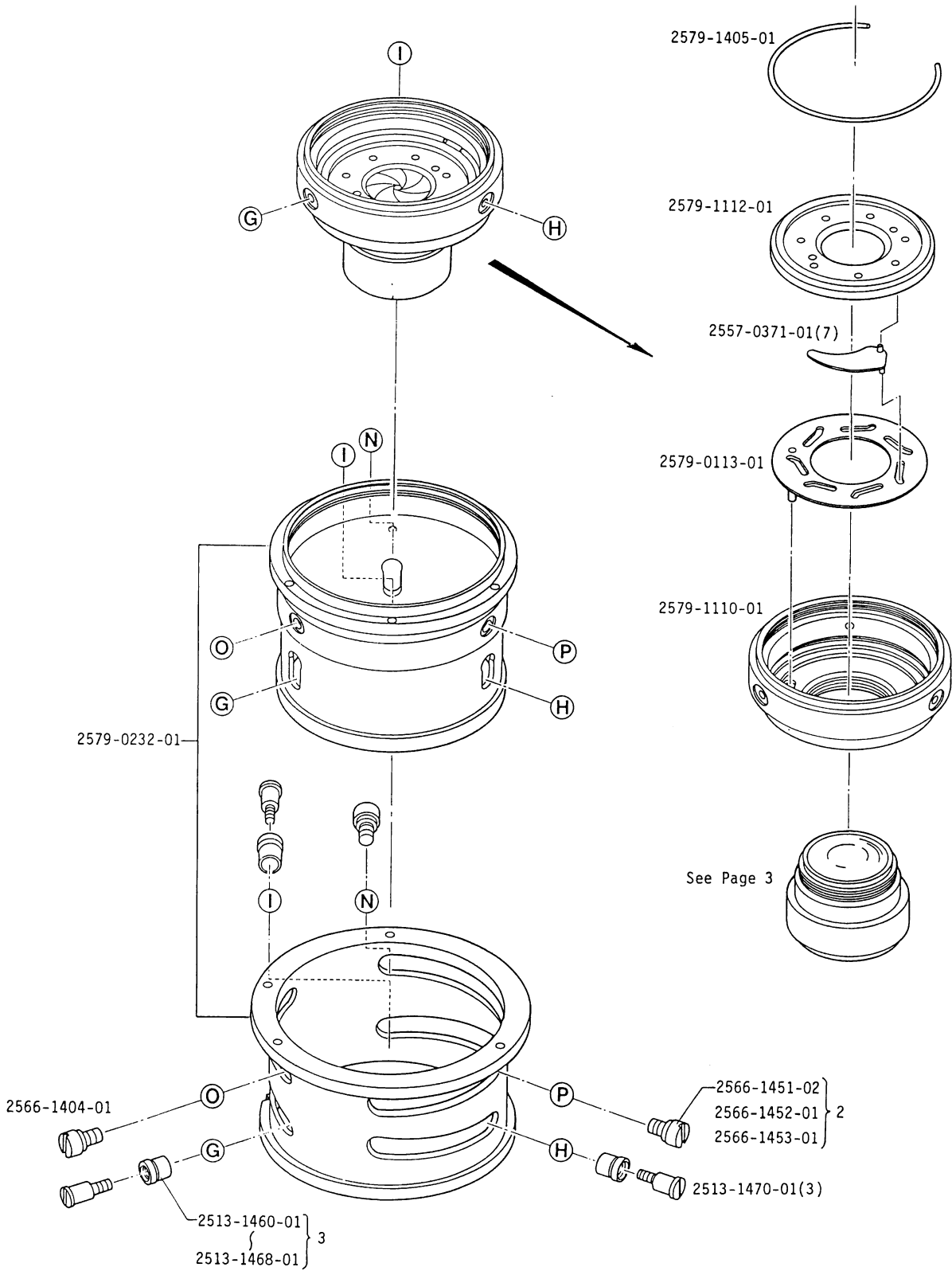
Lens case (LH-1052)  
Lens hood (6579-810)

# I N D E X

| PART NO.       | PAGE | PART NO.       | PAGE | PART NO.         | PAGE |
|----------------|------|----------------|------|------------------|------|
| 2579-0030----- | 3    | 2566-1364----- | 1    | 2579-1803-----   | 3    |
| 2579-0036----- | 3    | 2566-1365----- | 1    | 2579-1804-----   | 3    |
| 2579-0041----- | 3    | 2557-1372----- | 1    | 2579-1805-----   | 3    |
|                |      | 2550-1374----- | 1    | 2579-1808-----   | 3    |
| 2579-0113----- | 2    | 2550-1382----- | 1    |                  |      |
| 2579-0230----- | 1    |                |      | 9611-1422-07---- | 1    |
| 2579-0232----- | 2    | 2550-1402----- | 1    | 9611-1630-07---- | 1    |
| 2562-0240----- | 1    | 2566-1404----- | 2    | 9611-1635-07---- | 1    |
| 2557-0371----- | 2    | 2579-1405----- | 2    | 9611-2040-04---- | 1    |
| 2579-0430----- | 1    | 2557-1420----- | 1    |                  |      |
| 2579-0501----- | 1    | 2550-1424----- | 1    | 9612-1640-07---- | 1    |
| 2579-0810----- | 3    | 2550-1431----- | 1    | 9612-1645-07---- | 1    |
|                |      | 2551-1432----- | 1    |                  |      |
| 2579-1104----- | 3    | 2550-1446----- | 1    | 9763-1740-07---- | 1    |
| 2579-1105----- | 3    | 2566-1451----- | 2    |                  |      |
| 2579-1106----- | 3    | 2566-1452----- | 2    | 9793-1740-50---- | 1    |
| 2579-1107----- | 3    | 2566-1453----- | 2    |                  |      |
| 2579-1110----- | 2    | 2513-1460----- | 2    |                  |      |
| 2579-1112----- | 2    | 2513-1461----- | 2    |                  |      |
|                |      | 2513-1462----- | 2    |                  |      |
| 2566-1233----- | 1    | 2513-1463----- | 2    |                  |      |
| 2579-1235----- | 1    | 2513-1464----- | 2    |                  |      |
| 2579-1236----- | 1    | 2513-1465----- | 2    |                  |      |
| 2579-1237----- | 1    | 2513-1466----- | 2    |                  |      |
| 2579-1241----- | 1    | 2513-1467----- | 2    |                  |      |
| 2566-1242----- | 1    | 2513-1468----- | 2    |                  |      |
|                |      | 2513-1470----- | 2    |                  |      |
| 2566-1361----- | 1    |                |      |                  |      |
| 2566-1362----- | 1    | 2579-1641----- | 1    |                  |      |
| 2566-1363----- | 1    |                |      |                  |      |



| Part No.       | Part Name                 |              | Qty.   |
|----------------|---------------------------|--------------|--------|
| 2579-0230-01   | Outer ring set            | 固定保持環セット     | 1      |
| 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      |
| 2579-0430-01   | Distance scale window set | 距離表示窓セット     | 1      |
| 2579-0501-01   | Lens contact board set    | 信号基板セット      | 1      |
| 2566-1233-02   | Outer barrel              | 外筒           | 1      |
| 2579-1235-01   | Filter ring               | 鏡頭環          | 1      |
| 2579-1236-01   | Focusing ring             | 距離リング        | 1      |
| 2579-1237-01   | Fixed ring                | 固定環          | 1      |
| 2579-1241-01   | Name ring                 | 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      |
| 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      |
| 2551-1432-01   | Friction tape             | 摩擦布          | 1      |
| 2579-1641-01   | Name ring (For MAXXUM)    | 飾り環          | 1      |
| 9611-1422-07   | Phillips type screw       | 十字穴付なべ小ねじ    | 3      |
| 9611-1630-07   | Phillips type screw       | 十字穴付なべ小ねじ    | 3      |
| 9611-1635-07   | Phillips type screw       | 十字穴付なべ小ねじ    | 3      |
| 9611-2040-04   | Phillips type screw       | 十字穴付なべ小ねじ    | 4      |
| 9612-1640-07   | Phillips type screw       | 十字穴付なべ小ねじ    | 3      |
| 9612-1645-07   | Phillips type screw       | 十字穴付なべ小ねじ    | 4      |
| 9763-1740-07   | Tap tite screw            | 十字穴付タップタイトねじ | 2      |
| 9793-1740-50   | Washer                    | 薄ワッシャー       | 4      |



| Part No.     | Part Name                          |             | Qty. |
|--------------|------------------------------------|-------------|------|
| 2579-0113-01 | Diaphragm operation plate set      | 絞り操作板セット    | 1    |
| 2579-0232-01 | Cam barrel set                     | カム環セット      | 1    |
| 2557-0371-01 | Diaphragm blade set                | 絞り羽根セット     | 7    |
| 2579-1110-01 | Inner barrel                       | 内筒          | 1    |
| 2579-1112-01 | 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    |
| 2579-1405-01 | Pressure spring                    | 絞り押え環SP     | 1    |
| 2566-1451-02 | Cam barrel guide roller-A (D=5.00) | カム環ガイドローラーA | } 2  |
| 2566-1452-01 | Cam barrel guide roller-B (D=5.01) | カム環ガイドローラーB |      |
| 2566-1453-01 | Cam barrel guide roller-C (D=5.02) | カム環ガイドローラーC |      |
| 2513-1460-01 | Guide roller-A (D1=5.03, D2=4.53)  | 案内ローラーA     | } 3  |
| 2513-1461-01 | Guide roller-B (D1=5.03, D2=4.52)  | 案内ローラーB     |      |
| 2513-1462-01 | Guide roller-C (D1=5.03, D2=4.51)  | 案内ローラーC     |      |
| 2513-1463-01 | Guide roller-D (D1=5.02, D2=4.53)  | 案内ローラーD     |      |
| 2513-1464-01 | Guide roller-E (D1=5.02, D2=4.52)  | 案内ローラーE     |      |
| 2513-1465-01 | Guide roller-F (D1=5.02, D2=4.51)  | 案内ローラーF     |      |
| 2513-1466-01 | Guide roller-G (D1=5.01, D2=4.53)  | 案内ローラーG     |      |
| 2513-1467-01 | Guide roller-H (D1=5.01, D2=4.52)  | 案内ローラーH     |      |
| 2513-1468-01 | Guide roller-I (D1=5.01, D2=4.51)  | 案内ローラーI     |      |
| 2513-1470-01 | Guide pin                          | 案内ピン        | 3    |

■ 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。

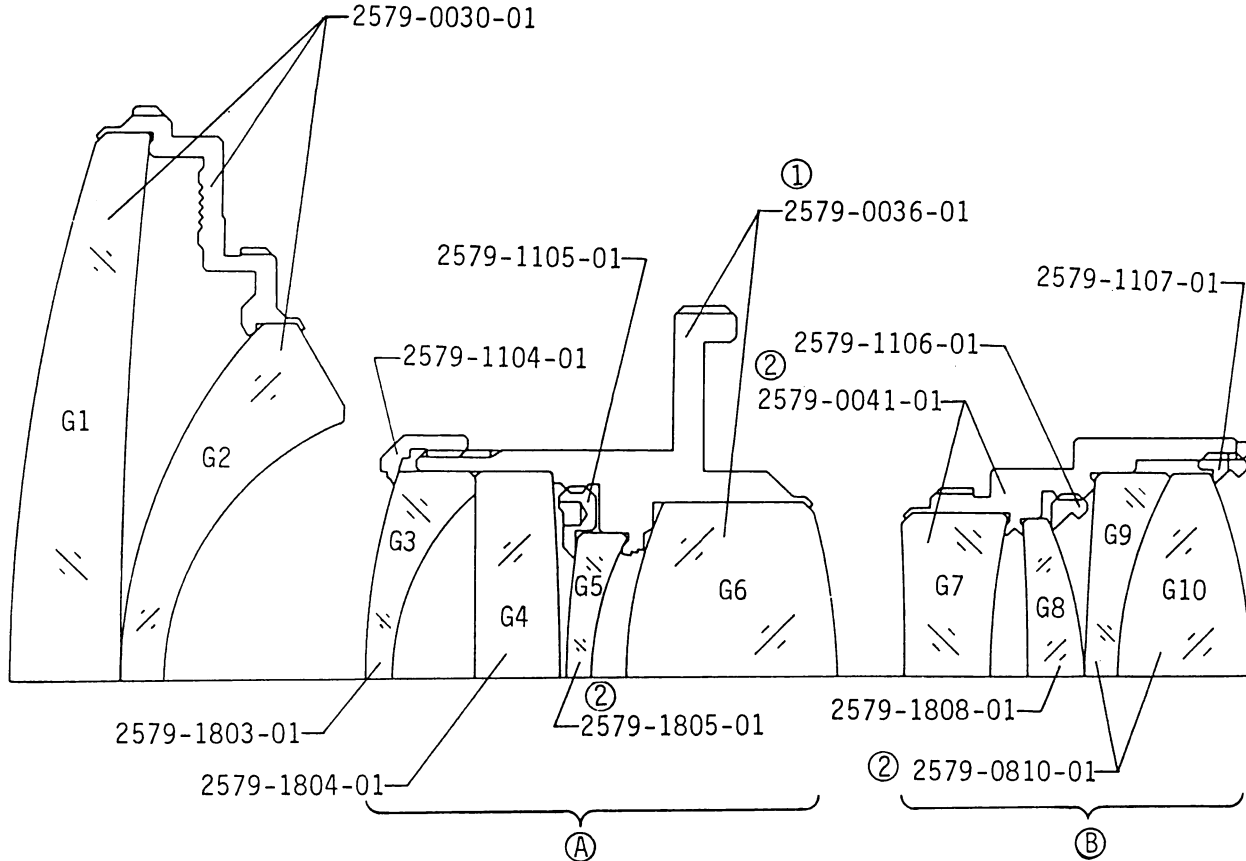
■ When repairing following parts, must be checked resolving power by projection.

①: レンズ性能によく影響するレンズ。(数字は順位を示す)

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

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



| Part No.     | Part Name              |               | Qty. |
|--------------|------------------------|---------------|------|
| 2579-0030-01 | Front lens barrel set  | 前玉枠セット        | 1    |
| 2579-0036-01 | Middle lens barrel set | 中玉枠セット        | 1    |
| 2579-0041-01 | Rear lens barrel set   | 後玉枠セット        | 1    |
| 2579-0810-01 | Lens G9,10 set         | レンズG9, G10セット | 1    |
| 2579-1104-01 | G3,4 pressure ring     | G3, 4 押え      | 1    |
| 2579-1105-01 | G5 pressure ring       | G5 押え         | 1    |
| 2579-1106-01 | G8 pressure ring       | G8 押え         | 1    |
| 2579-1107-01 | G9,10 pressure ring    | G9, 10 押え     | 1    |
| 2579-1803-01 | Lens-G3                | レンズG3         | 1    |
| 2579-1804-01 | Lens-G4                | レンズG4         | 1    |
| 2579-1805-01 | Lens-G5                | レンズG5         | 1    |
| 2579-1808-01 | 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 —

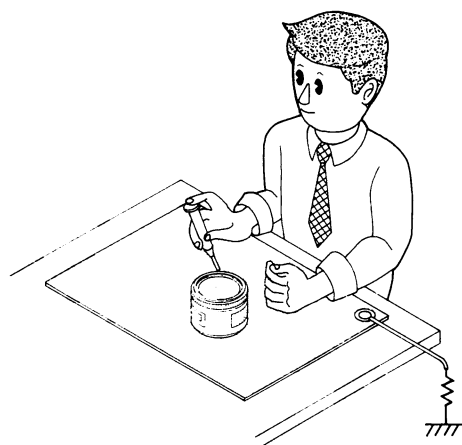
- ⓑ : Adhesive
- Ⓢ : Solvent
- Ⓐ : Anti-diffusion compound
- ⓐ : Lubricant
- Ⓣ : Tool
- : Point of assembling and general caution

## ■ Assembling and adjusting procedure

|  | Page |
|--|------|
| ① Inner barrel, Diaphragm blade, Rear lens group set assembling .....                          | 1    |
| ② Focus cam barrel, Fixed cam barrel assembling .....  | 2    |
| ③ Outer barrel, Bayonet mount, Rear light shield ring, Lens contact board set assembling ..... | 3    |
| ④ Outer ring, Focusing ring assembling .....   | 4    |
| ■ Aperture diameter adjusting (including pre-check) .....                                      | 4    |
| ⑤ Middle lens group set, Front lens group set, Filter ring, Name ring assembling .....         | 5    |
| ■ Flange back (f'F) adjusting .....  | 5    |
| ■ Projection resolving power checking .....  | 5    |
| ■ Aperture diameter checking .....   | 5    |
| ■ General function checking .....  | 5    |
| ■ Flange back adjusting procedure .....  | 6    |
| ■ Description of focusing .....  | 7    |
| ■ Wiring schematic diagram, printed wiring diagram .....                                       | 7    |

## ■ Precautions

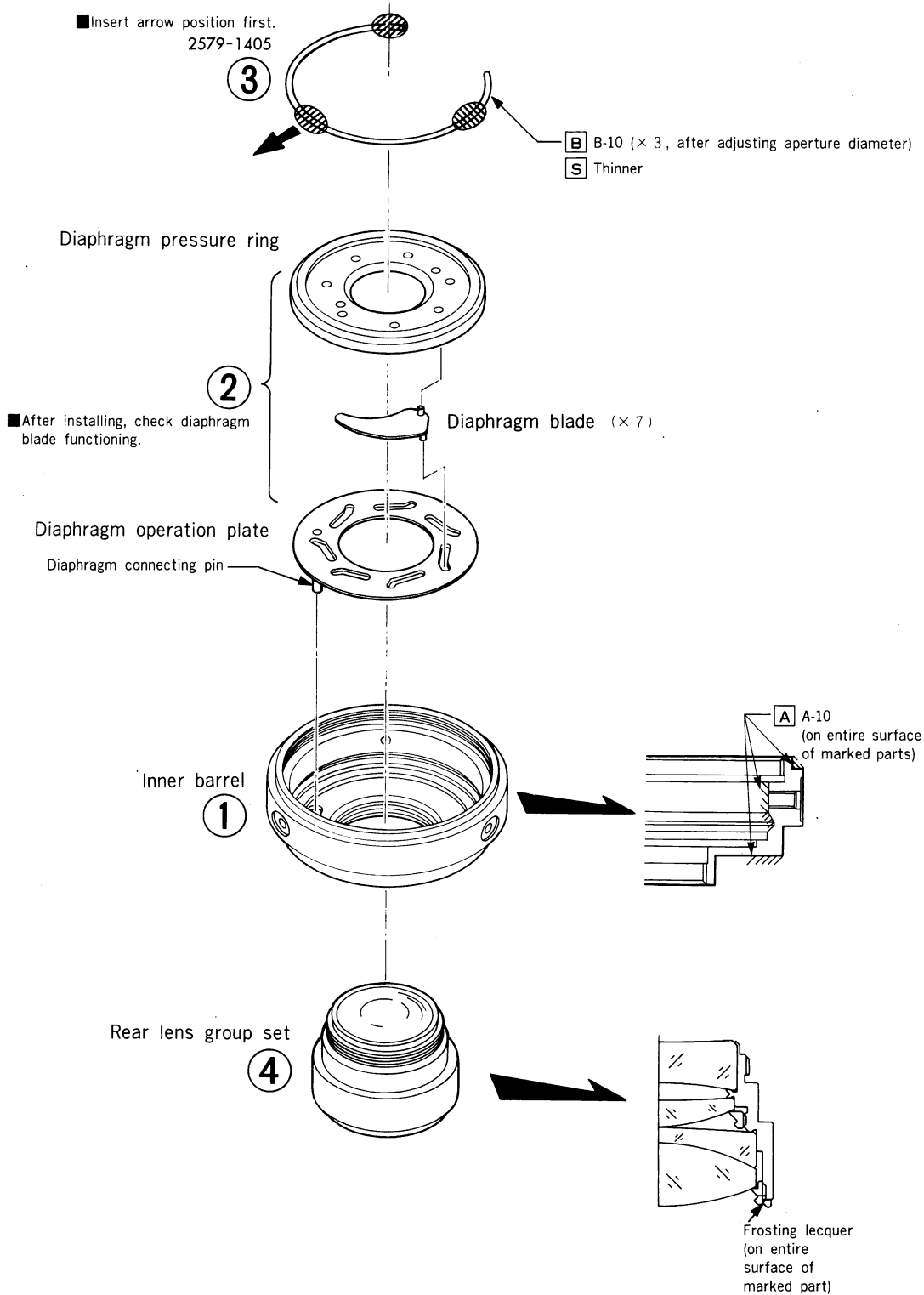
- Since this lens uses many resin parts, keep the following in mind when assembling and adjusting.
  - Use Flonsolve or alcohol when cleaning. Never use the thinner, ketone or ether.
- Since MOS-IC is used in this lens, it is necessary to take special precautions about static electricity. When performing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





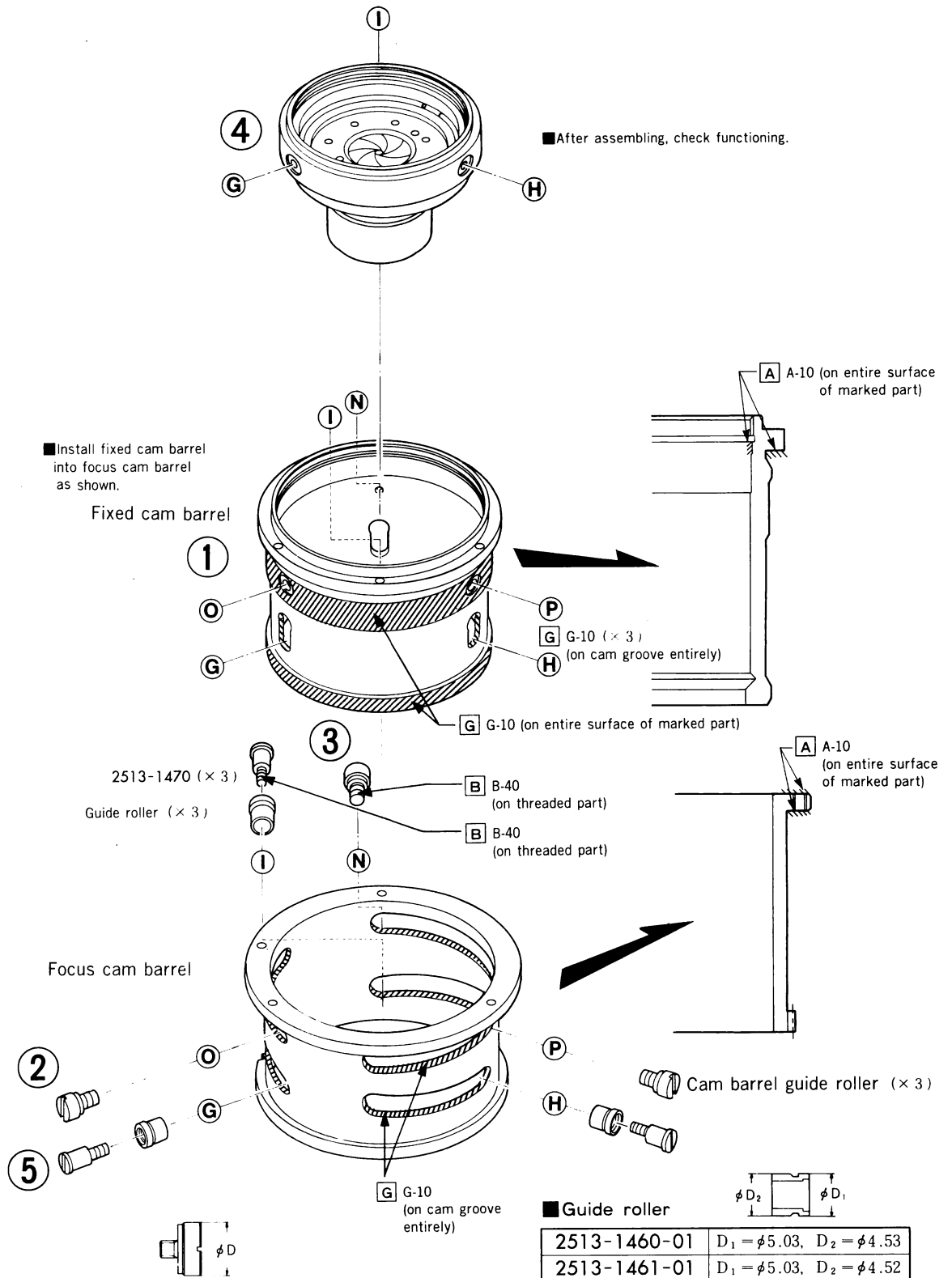
# 1 Inner barrel, Diaphragm blade, Rear lens group set

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



## 2 Focus cam barrel, Fixed cam barrel

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



■ Cam barrel guide roller

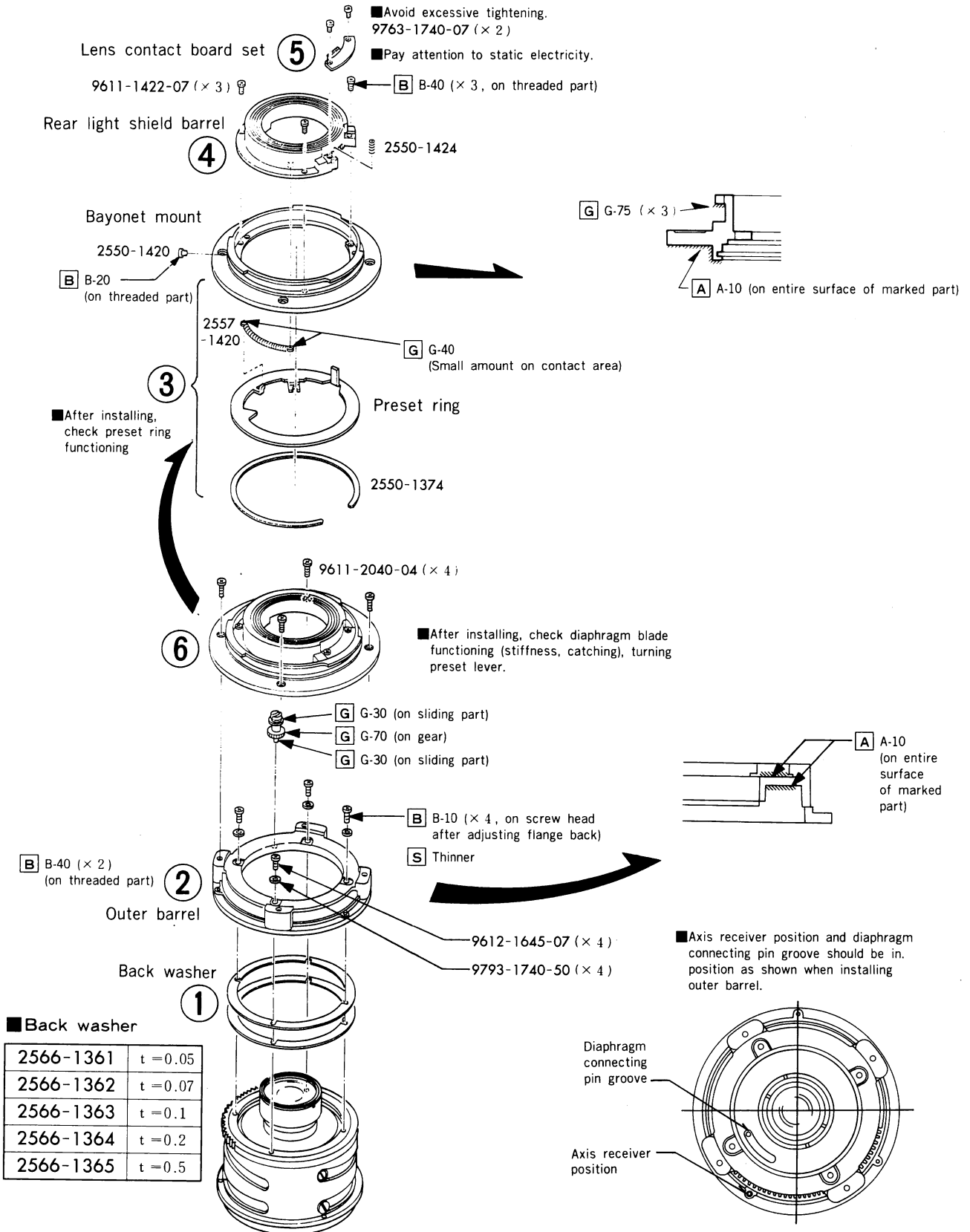
|              |         |
|--------------|---------|
| 2566-1451-01 | D=φ5.00 |
| 2566-1452-01 | D=φ5.01 |
| 2566-1453-01 | D=φ5.02 |

■ Guide roller

|              |  |
|--------------|--|
| 2513-1460-01 | D <sub>1</sub> = φ5.03, D <sub>2</sub> = φ4.53 |
| 2513-1461-01 | D <sub>1</sub> = φ5.03, D <sub>2</sub> = φ4.52 |
| 2513-1462-01 | D <sub>1</sub> = φ5.03, D <sub>2</sub> = φ4.51 |
| 2513-1463-01 | D <sub>1</sub> = φ5.02, D <sub>2</sub> = φ4.53 |
| 2513-1464-01 | D <sub>1</sub> = φ5.02, D <sub>2</sub> = φ4.52 |
| 2513-1465-01 | D <sub>1</sub> = φ5.02, D <sub>2</sub> = φ4.51 |
| 2513-1466-01 | D <sub>1</sub> = φ5.01, D <sub>2</sub> = φ4.53 |
| 2513-1467-01 | D <sub>1</sub> = φ5.01, D <sub>2</sub> = φ4.52 |
| 2513-1468-01 | D <sub>1</sub> = φ5.01, D <sub>2</sub> = φ4.51 |

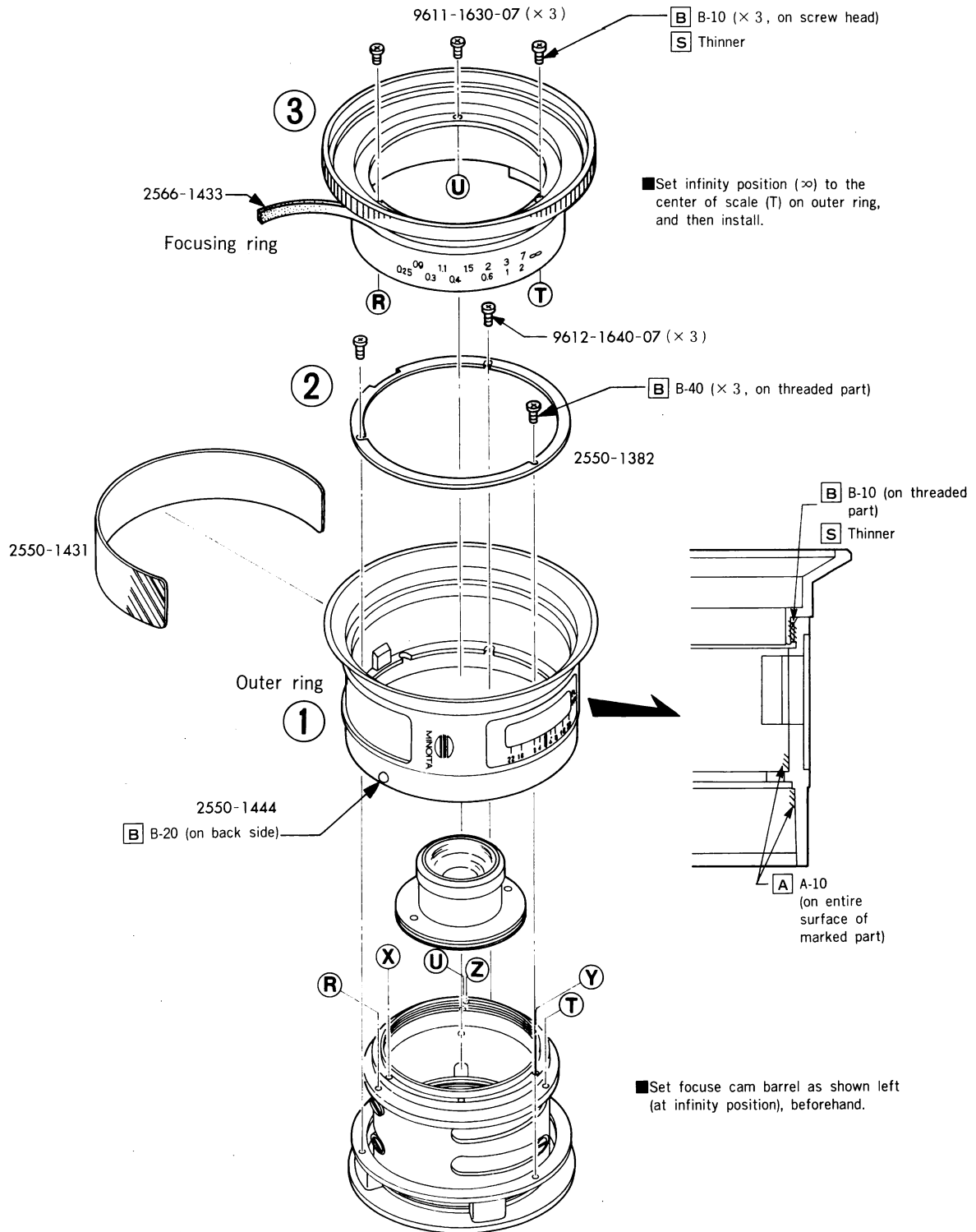
# 3 Outer barrel, Bayonet mount, Rear light shield barrel, Lens contact board set

Assemble the parts in the order of ①-⑥.



## 4 Outer ring, Focusing ring

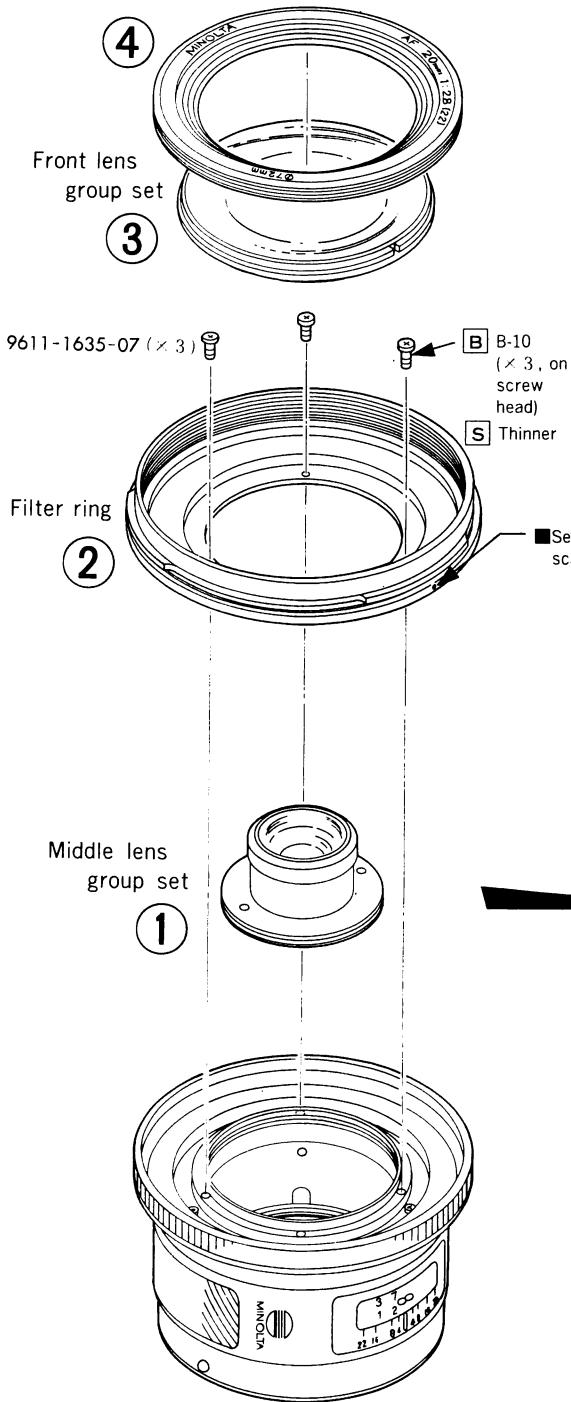
■ Assemble the parts in the order of ①-③. After assembling, adjust aperture diameter (including pre-check, referring to General checking/adjusting procedure on p. 8, 9.)



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

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

T 0676-8241-75



■ After assembling, perform the following adjusting.

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

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

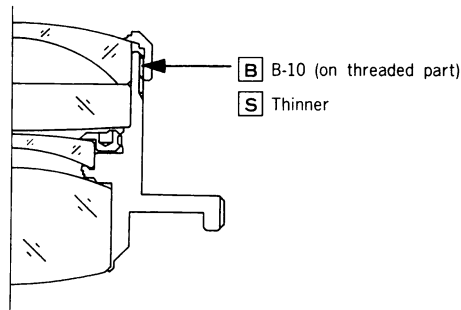
2. Projection resolving power checking (referring to General checking/adjusting procedure on p. 6).

Allowable range for Servicing (min.)

| f (mm) | Distance D (m) | Center (y' = 0) | y' = 15 |    |
|--------|----------------|-----------------|---------|----|
|        |                |                 | S       | M  |
| 20     | 0.7~0.8        | 100             | 40      | 40 |

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).

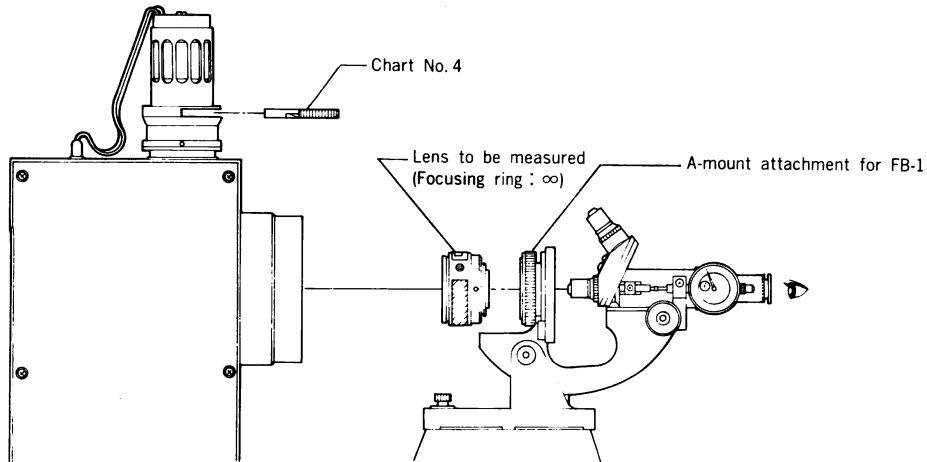


## ■ Flange back adjusting

- 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.

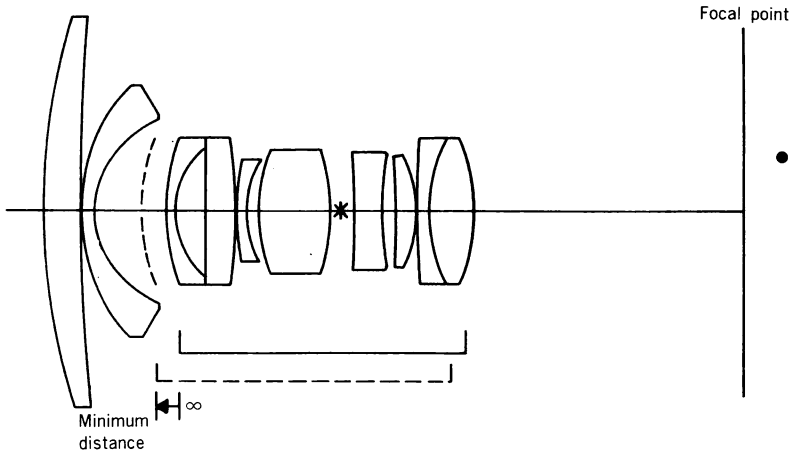
(Example) Measured flange back value : 44.50

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 than 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.)

## ■ 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

