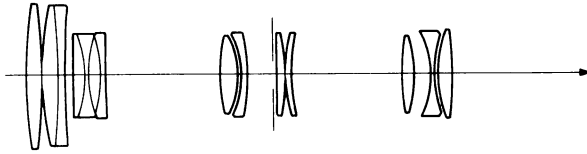


MINOLTA AF ZOOM 75-300mm F4.5 (32)-5.6 (2561-100)

MINOLTA MAXXUM AF ZOOM 75-300mm F4.5 (32)-5.6 (2561-600)

LENS



- Construction : 13 elements in 11 groups
- Type : 4-component mechanical-compensation zoom lens
- Coating : Minolta Achromatic
- Angle of view : 32°-8°10'
- Lens mount : Minolta A mount
- Lens signal contact : 5 contacts
- Diaphragm : Automatic preset diaphragm
- f No. : Maximum...WIDE 4.5
TELE 5.6
Minimum...WIDE 32
TELE 38
Full-stop setting...5.5 stops
- Diaphragm blade : 9 blades

FOCUSING

- Focusing : AF, FA, M
- Type : Front-component focusing
- Minimum focusing distance : 1.5m
- Distance scale : $\frac{5 \ 5.5 \ 6 \ 7 \ 8 \ 10 \ 15 \ 20 \ 50}{1.5 \ 1.7 \ 2 \ 2.5 \ 3 \ 4 \ 5 \ 7 \ 20}$ (ft) $\frac{\infty}{(m)}$
- Infrared correction scale : (300 100 75)
- With macro capability : 1/3.9× (max. magnification), AF, FA, M
- Others : Focus range limiter



ZOOMING

- Type : Mechanical-compensation zoom lens, Rotary 2-ring
- Zooming scale : f 300 250 200 135 100 75mm
- Zooming ratio : 4×

DIMENSIONS & WEIGHT

- Dimensions : $\phi 72.5$ (max. diameter) × 163.5mm (max. length)
- Weight : 870 g
- Filter-thread diameter : $\phi 55$ mm (clip-on)

ACCESSORIES

- Lens case : (LH-1031)
- Lens hood : (6561-810)

I N D E X

Part No.	Page	Part No.	Page	Part No.	Page
2561-0032-----	6	2561-1108-----	6	2561-1242-----	1
2561-0035-----	6	2561-1109-----	6		
				2561-1351-----	3
2561-0110-----	4,5	2561-1112-----	4	2561-1352-----	3
2561-0113-----	4			2561-1353-----	6
		2561-1127-----	1		
2553-0240-----	1	2561-1128-----	1	2554-1361-----	1
				2554-1362-----	1
2561-0371-----	4	2561-1130-----	3	2554-1363-----	1
2561-0378-----	4	2561-1133-----	5	2554-1364-----	1
2561-0381-----	2	2561-1134-----	5	2554-1365-----	1
		2561-1135-----	5	2561-1366-----	1
2561-0430-----	3			2561-1367-----	3
		2561-1230-----	3	2561-1368-----	3
2561-0810-----	6	2561-1231-----	3	2561-1369-----	3
2561-0820-----	6	2561-1232-----	3		
		2561-1233-----	1	2561-1373-----	1
2561-1101-----	6	2561-1234-----	1	2561-1374-----	4
2561-1102-----	6	2561-1235-----	5	2561-1376-----	3
2561-1103-----	6	2561-1237-----	2	2561-1377-----	1
2561-1104-----	6	2561-1238-----	5	2561-1379-----	1

I N D E X

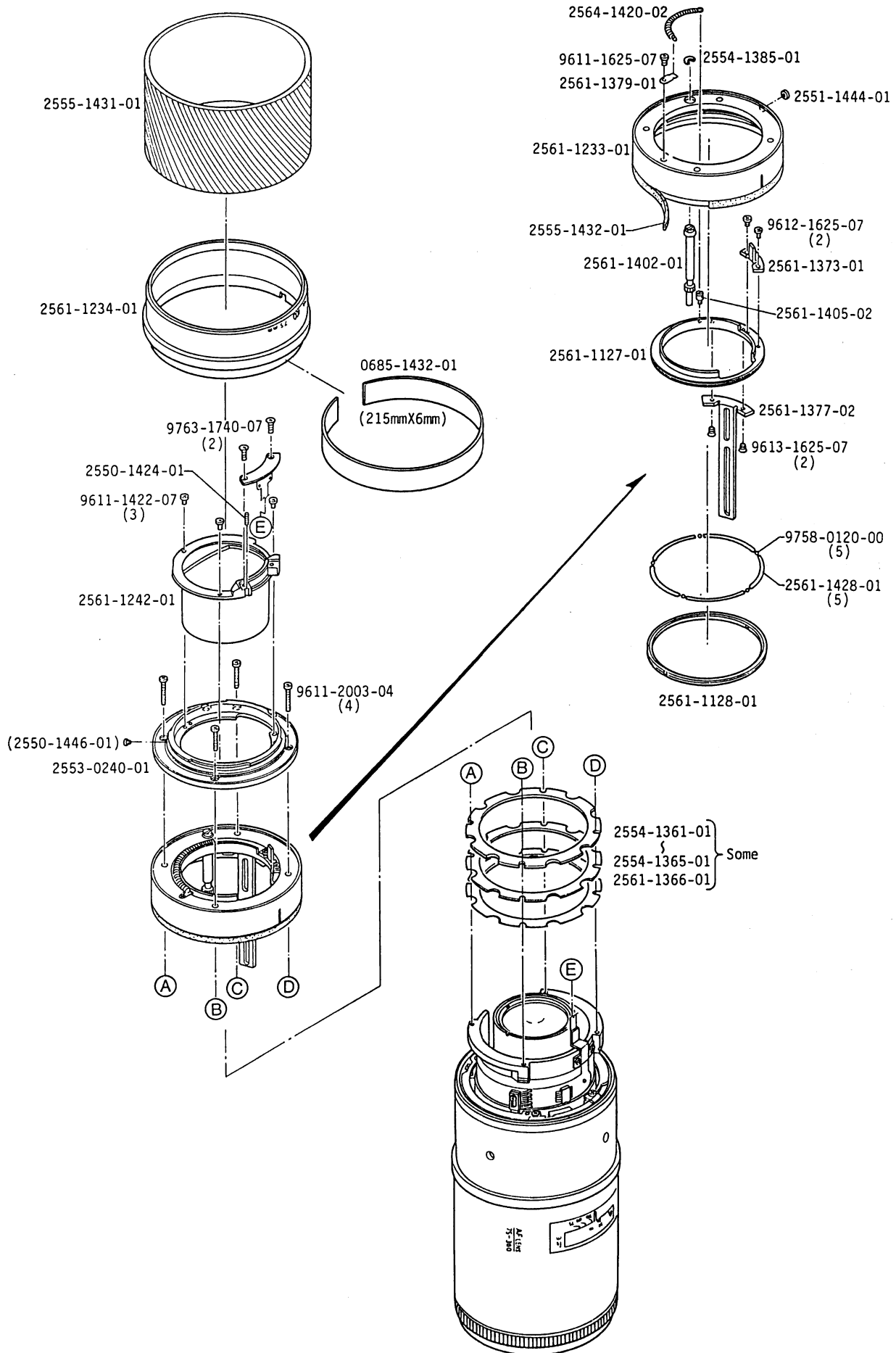
Part No.	Page	Part No.	Page	Part No.	Page
2555-1380-----	2	2564-1420-----	1	2525-1462-----	3
2561-1382-----	2	2561-1421-----	4	2525-1463-----	3
2561-1383-----	2	2525-1423-----	3	2525-1464-----	3
2561-1384-----	2	2550-1424-----	1	2525-1465-----	3
2554-1385-----	1	2561-1425-----	3	2525-1466-----	3
2561-1386-----	2	2554-1426-----	2,5	2525-1467-----	3
2555-1387-----	2	2561-1427-----	5	2525-1468-----	3
		2561-1428-----	1		
2561-1402-----	1	2561-1429-----	3	2525-1470-----	3
2513-1403-----	3	2555-1431-----	1	2525-1471-----	3
2561-1405-----	1	0685-1432-----	1	2525-1472-----	3
2561-1408-----	4	2555-1432-----	1	2525-1473-----	3
		2561-1433-----	5	2525-1474-----	3
2561-1413-----	3	2554-1435-----	5	2525-1475-----	3
2561-1414-----	3	2561-1437-----	5	2525-1476-----	3
2561-1415-----	3	2561-1438-----	3	2525-1477-----	3
2554-1416-----	5	2551-1444-----	1	2525-1478-----	3
2554-1417-----	5	2550-1446-----	1		
2525-1418-----	3			2561-1501-----	3
2554-1418-----	5	2525-1460-----	3	2555-1502-----	3
2561-1419-----	3	2525-1461-----	3	2561-1503-----	3

I N D E X

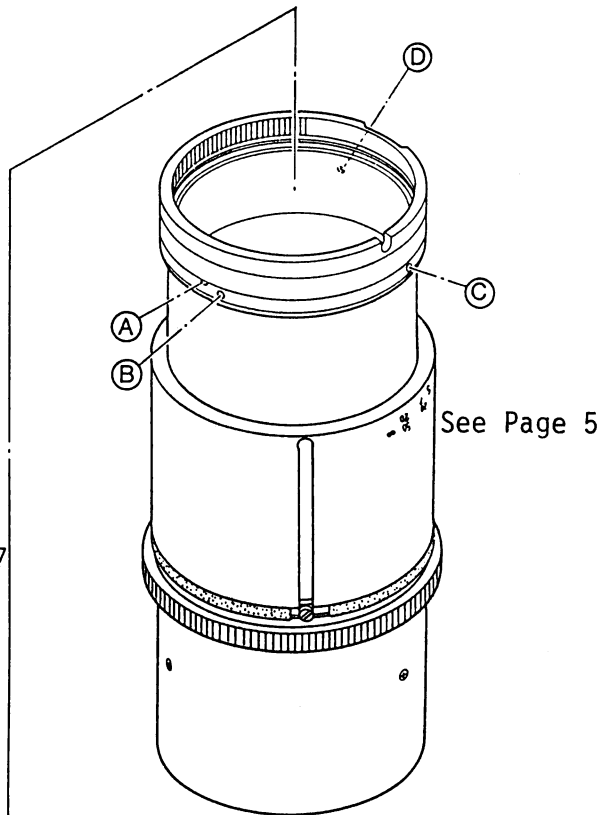
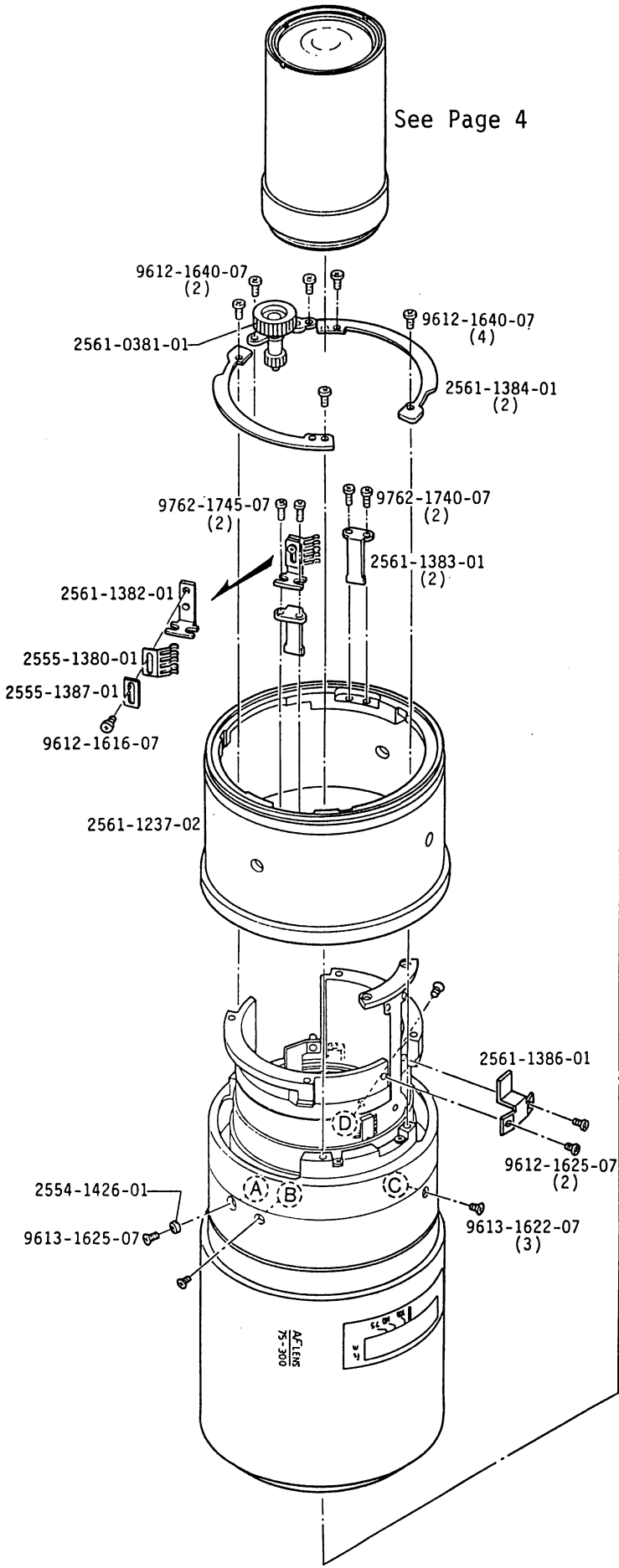
Part No.	Page	Part No.	Page
		9614-1690-07-----	3
2561-1635-----	5	9622-1625-02-----	4
2561-1801-----	6	9758-0120-00-----	1
2561-1806-----	6	9758-0150-00-----	3
2561-1813-----	6		
		9762-1740-07-----	2
9611-1422-07-----	1	9762-1745-07-----	2
9611-1625-07-----	1	9763-1740-07-----	1
9611-1630-07-----	5		
9611-1635-07-----	3	9791-2440-40-----	3
9611-2003-04-----	1	9792-1740-50-----	3
		9792-2440-40-----	3
9612-1616-07-----	2,3	9793-2440-40-----	3
9612-1625-07-----	1,2		
9612-1640-07-----	2		
9613-1622-07-----	2		
9613-1625-07---	1,2,5		
9613-1628-12-----	5		

AF ZOOM 75~300mm F4.5~5.6(32)
MAXXUM AF ZOOM 75~300mm F4.5~5.6(32)

Code No.2561-100
Code No.2561-600

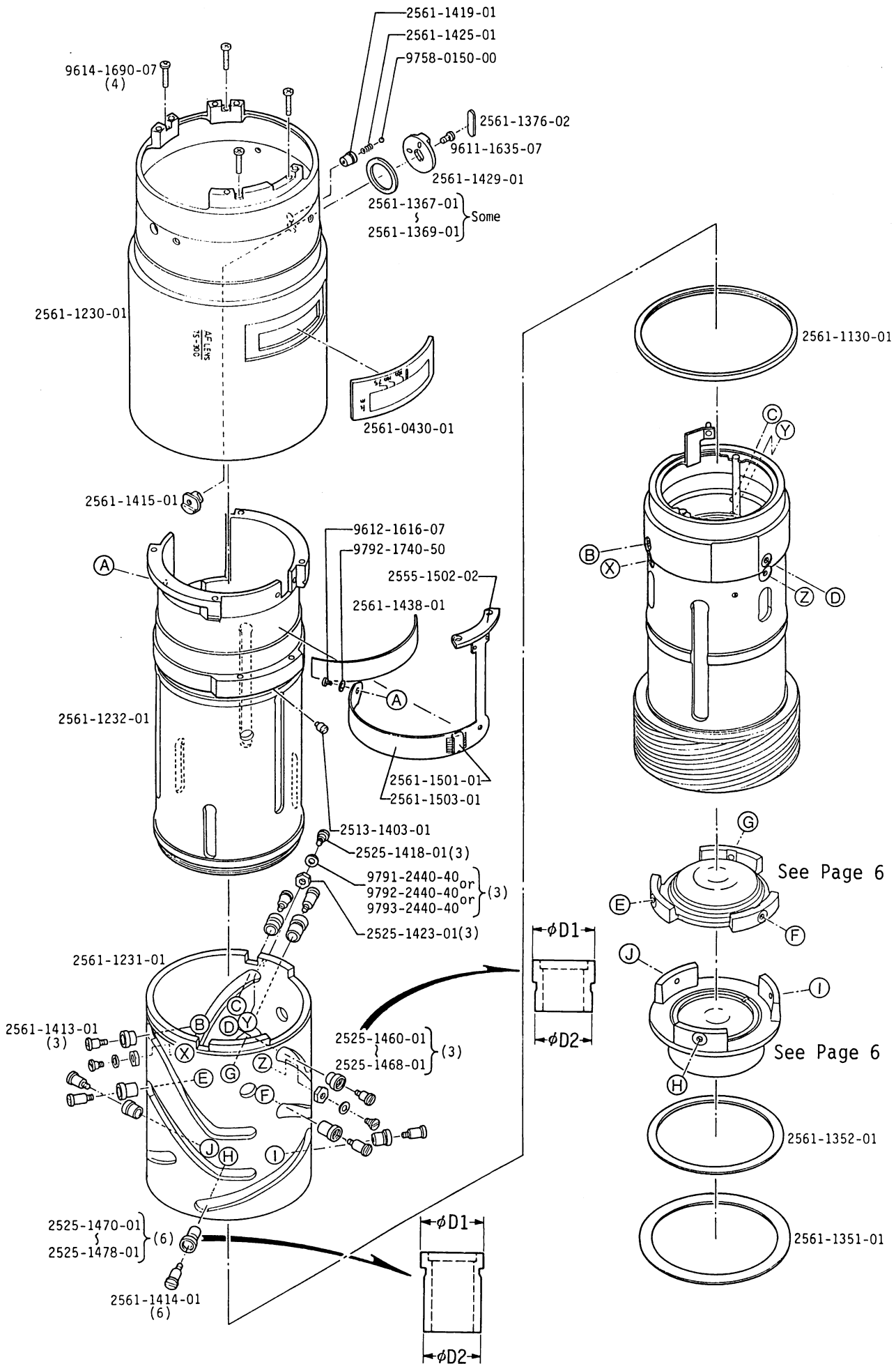


Part No.	Part Name		Qty.
2553-0240-01	Bayonet mount set	バヨネットマウントセット	1
(2550-1446-01)	Screw	ストッパービス	1
2561-1127-02	Preset ring	プリセットリング	1
2561-1128-01	Preset ring Pressure	プリセットリング押え	1
2561-1233-01	Outer barrel	外筒	1
2561-1234-01	Zoom scale ring	ズーム目盛環	1
2561-1242-01	Light shield barrel	遮光筒	1
2554-1361-01	Back Washer - A(t=0.05)	バックワッシャーA	} Some
2554-1362-01	Back Washer - B(t=0.07)	バックワッシャーB	
2554-1363-01	Back Washer - C(t=0.1)	バックワッシャーC	
2554-1364-01	Back Washer - D(t=0.2)	バックワッシャーD	
2554-1365-01	Back Washer - E(t=0.5)	バックワッシャーE	
2561-1366-01	Back Washer - F(t=1)	バックワッシャーF	
2561-1373-01	Preset lever	プリセットレバー	1
2561-1377-02	Preset connecting fork	プリセット連動フォーク	1
2561-1379-01	Spring hanger	メインSP掛け	1
2554-1385-01	C - Washer	Cワッシャー	1
2561-1402-01	Coupler	カプラー	1
2561-1405-02	Spring hanger - B	メインSP掛けB	1
2564-1420-02	Main spring	メインスプリング	1
2550-1424-01	Spring	アーススプリング	1
2561-1428-01	Spacer	スペーサー	5
2555-1431-01	Rubber ring	ゴムリング	1
0685-1432-01	Tape(Per roll/30m)	補強テープ	1
2555-1432-01	Friction tape - A	摩擦布 A	1
2551-1444-01	Bayonet Point	バヨネット標点	1
9611-1422-07	Phillips type screw	十字穴付なべ小ねじ	3
9611-1625-07	Phillips type screw	十字穴付なべ小ねじ	1
9611-2003-04	Phillips type screw	十字穴付なべ小ねじ	4
9612-1625-07	Phillips type screw	十字穴付なべ小ねじ	2
9613-1625-07	Phillips type screw	十字穴付半丸小ねじ	2
9758-0120-00	Steel ball	スチールボール	5
9763-1740-07	Tap tite screw	十字穴付タップタイトねじ	2

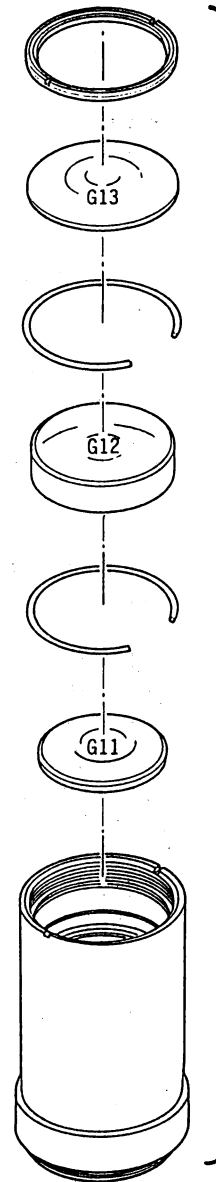
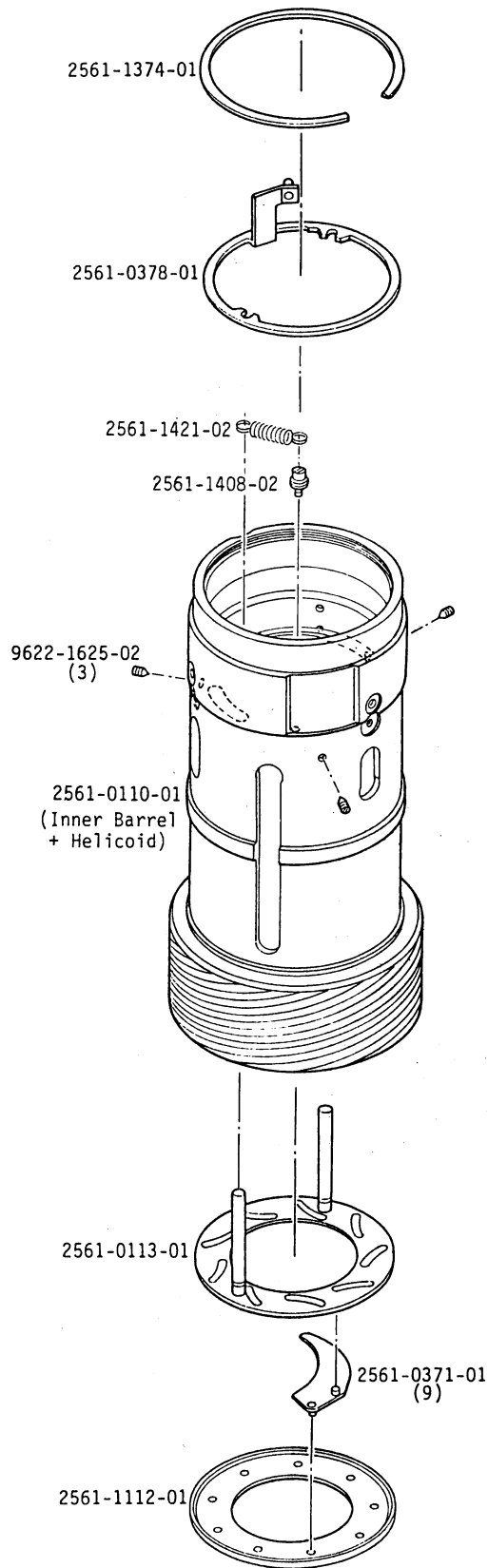


AF ZOOM 75~300mm F4.5~5.6(32) Code No.2561-100
 MAXXUM AF ZOOM 75~300mm F4.5~5.6(32) Code No.2561-600

Part No.	Part Name		Qty.
2561-0381-01	Gear set	ギヤーセット	1
2561-1237-02	Zoom ring	ズーム操作環	1
2555-1380-01	Brush	ブラシ	1
2561-1382-01	Brush connecting plate	ブラシ連動板	1
2561-1383-01	Zoom operation plate	ズーム連動板	2
2561-1384-01	Zoom ring pressure	ズーム操作環押え	2
2561-1386-01	Flexible board pressure	フレキ台板	1
2555-1387-01	Brush pressure plate	ブラシ押え板	1
2554-1426-01	Focus stopper	フォーカスストッパー	1
9612-1616-07	Phillips type screw	十字穴付なべ小ねじ	1
9612-1625-07	Phillips type screw	十字穴付なべ小ねじ	2
9612-1640-07	Phillips type screw	十字穴付なべ小ねじ	6
9613-1622-07	Phillips type screw	十字穴付半丸小ねじ	3
9613-1625-07	Phillips type screw	十字穴付半丸小ねじ	1
9762-1740-07	Tap tite screw	十字穴付タップタイトねじ	2
9762-1745-07	Tap tite screw	十字穴付タップタイトねじ	2

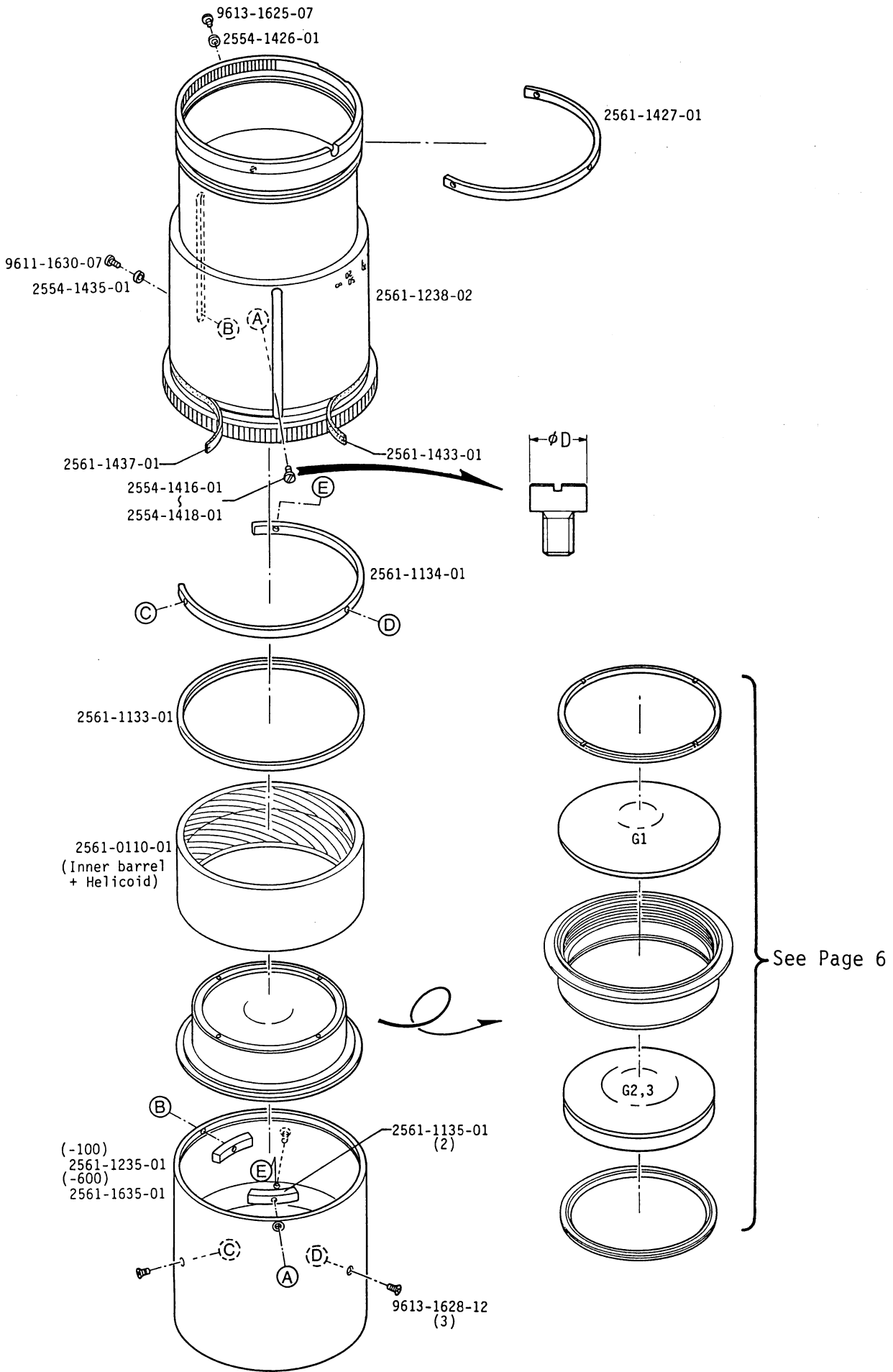


Part No.	Part Name		Qty.
2561-0430-01	Distance scale window set	距離表示窓セット	1
2561-1130-01	Zoom cam ring pressure	ズームカム環押え	1
2561-1230-01	Outer ring	固定保持環	1
2561-1231-01	Zoom cam ring	ズームカム環	1
2561-1232-01	Fixed barrel	固定筒	1
2561-1351-01	Light shield plate - A	遮光板 A	1
2561-1352-01	Light shield plate - B	遮光板 B	1
2561-1367-01	Washer - A (t=0.05)	ガタ調整ワッシャーA	} Some
2561-1368-01	Washer - B (t=0.1)	ガタ調整ワッシャーB	
2561-1369-01	Washer - C (t=0.2)	ガタ調整ワッシャーC	
2561-1376-02	Cover plate	飾り板	1
2513-1403-01	Focusing stopper	ズームストッパー	1
2561-1413-01	1st & 4th guide pin	第1,4案内ピン	3
2561-1414-01	Guide pin	移動枠案内ピン	6
2561-1415-01	Focus range plate	フォーカス範囲ストッパー	1
2525-1418-01	Guide pin	案内ピン	3
2561-1419-01	Click spring receiver	クリック座	1
2561-1423-01	Zoom adjusting rubber	ズーム調整ゴム	3
2525-1425-01	Click spring	フォーカスクリックSP	1
2561-1429-01	Focus range limiter	フォーカスレンジ切換ノブ	1
2561-1438-01	Tape	テープ	1
2525-1460-01	1st&4th guide roller (D1=φ5.04, D2=φ4.54)	第1,4案内ローラー	} 3
2525-1461-01	1st&4th guide roller (D1=φ5.04, D2=φ4.53)	第1,4案内ローラー	
2525-1462-01	1st&4th guide roller (D1=φ5.04, D2=φ4.52)	第1,4案内ローラー	
2525-1463-01	1st&4th guide roller (D1=φ5.03, D2=φ4.54)	第1,4案内ローラー	
2525-1464-01	1st&4th guide roller (D1=φ5.03, D2=φ4.53)	第1,4案内ローラー	
2525-1465-01	1st&4th guide roller (D1=φ5.03, D2=φ4.52)	第1,4案内ローラー	
2525-1466-01	1st&4th guide roller (D1=φ5.02, D2=φ4.54)	第1,4案内ローラー	
2525-1467-01	1st&4th guide roller (D1=φ5.02, D2=φ4.53)	第1,4案内ローラー	
2525-1468-01	1st&4th guide roller (D1=φ5.02, D2=φ4.52)	第1,4案内ローラー	
2525-1470-01	2nd&3rd guide roller (D1=φ5.04, D2=φ4.54)	第2,3案内ローラー	} 6
2525-1471-01	2nd&3rd guide roller (D1=φ5.04, D2=φ4.53)	第2,3案内ローラー	
2525-1472-01	2nd&3rd guide roller (D1=φ5.04, D2=φ4.52)	第2,3案内ローラー	
2525-1473-01	2nd&3rd guide roller (D1=φ5.03, D2=φ4.54)	第2,3案内ローラー	
2525-1474-01	2nd&3rd guide roller (D1=φ5.03, D2=φ4.53)	第2,3案内ローラー	
2525-1475-01	2nd&3rd guide roller (D1=φ5.03, D2=φ4.52)	第2,3案内ローラー	
2525-1476-01	2nd&3rd guide roller (D1=φ5.02, D2=φ4.54)	第2,3案内ローラー	
2525-1477-01	2nd&3rd guide roller (D1=φ5.02, D2=φ4.53)	第2,3案内ローラー	
2525-1478-01	2nd&3rd guide roller (D1=φ5.02, D2=φ4.52)	第2,3案内ローラー	
2561-1501-01	IC (TOSHIBA MLOOD)	IC	1
2555-1502-02	Lens contact board	信号基板	1
2561-1503-01	Flexible PC board	フレキシブル基板	1
9611-1635-07	Phillips type screw	十字穴付なべ小ねじ	1
9612-1616-07	Phillips type screw	十字穴付なべ小ねじ	1
9614-1690-07	Phillips type screw	十字穴付半丸小ねじ	4
9758-0150-00	Steel ball	スチールボール	1
9791-2440-40	Washer	薄ワッシャー	0~3
9792-1740-50	Washer	薄ワッシャー	1
9792-2440-40	Washer	薄ワッシャー	} 0~3
9793-2440-40	Washer	薄ワッシャー	



See Page 6

Part No.	Part Name		Qty.
2561-0110-01	Helicoid set	ヘリコイドセット	1
2561-0113-01	Diaphragm operation plate set	絞り操作板セット	1
2561-0371-01	Diaphragm blade set	絞り羽根セット	9
2561-0378-01	Diaphragm connecting plate set	絞り連動板セット	1
2561-1112-01	Diaphragm pressure ring	絞り押え環	1
2561-1374-01	Connecting plate pressure	絞り連動板押え	1
2561-1408-02	Sub spring hanger	サブスプリング掛け	1
2561-1421-02	Sub spring	サブスプリング	1
9622-1625-02	Screw	とがり先止めねじ	3

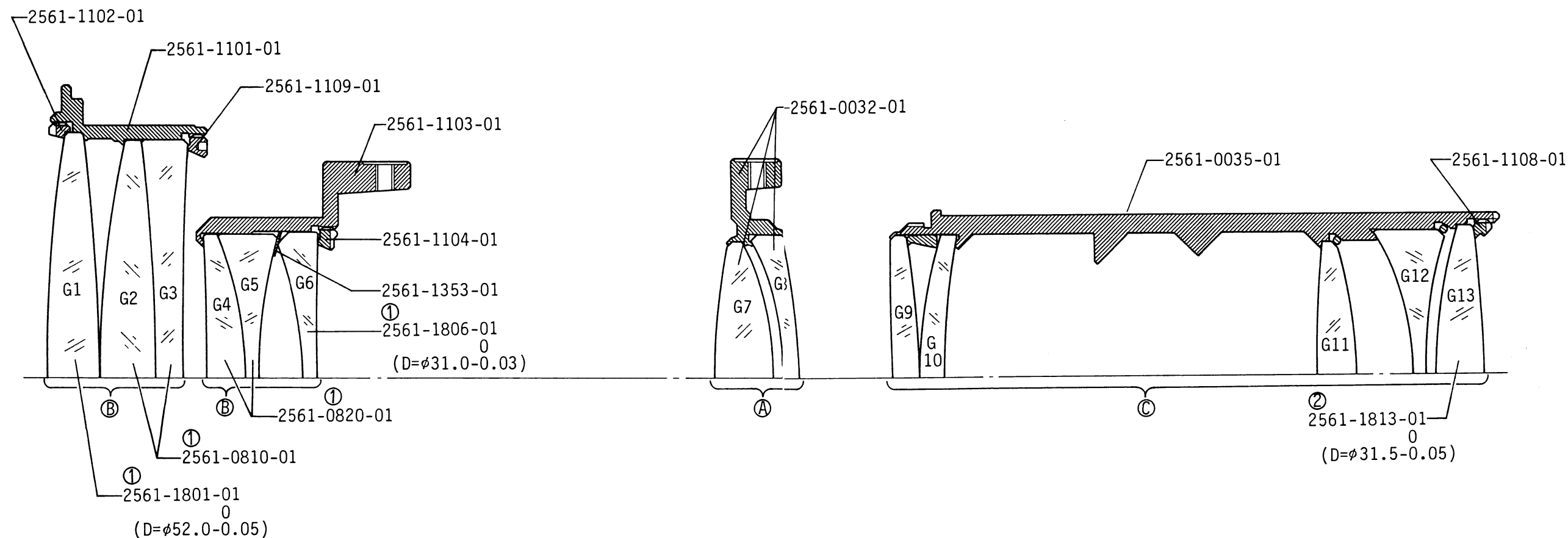


■ When repairing following parts, must be checked resolving power by projection.

- ①: The influential lens element in the lens performance. (Number shows in order.)
- Ⓐ: The influential lens group in the lens performance. (Influence: In alphabetical order)

■ 下記部品を修理した場合は、必ず投影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)
- Ⓐ: 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.
2561-0032-01	3rd moving barrel set	1
2561-0035-01	Rear lens set	1
2561-0810-01	G2,G3 set	1
2561-0820-01	G4,G5 set	1
2561-1101-01	Front lens barrel	1
2561-1102-01	G1 pressure ring	1
2561-1103-01	2nd moving barrel	1
2561-1104-01	G6 pressure ring	1
2561-1108-01	G13 pressure ring	1
2561-1109-01	G2,G3 pressure ring	1
2561-1353-01	Light shield plate	1
2561-1801-01	Lens- G1	1
2561-1806-01	Lens- G6	1
2561-1813-01	Lens- G13	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—

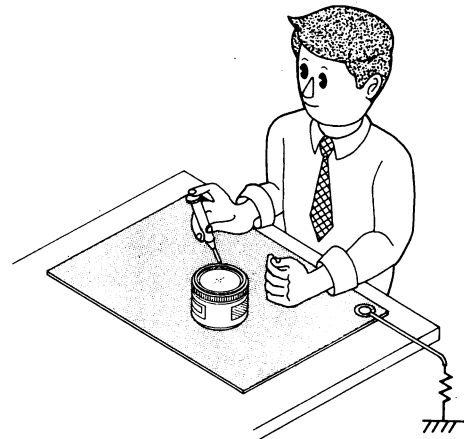
- ▢ : Adhesive
- ▣ : Solvent
- ▣ : Anti-diffusion agent
- ▣ : Grease
- ▣ : Tool
- : Point of assembling and general caution

■ Assembling and adjusting procedure

① Inner barrel, Diaphragm blades, Rear lens set	p. 1
② Fixed barrel, Zoom cam barrel, Flexible PC board set	p. 2
③ Temporary assembling for aperture diameter adjusting, Outer barrel	p. 3
■ Aperture diameter adjusting	p. 4
④ Focusing ring, Helicoid, Front lens group set, Filter ring	p. 5
⑤ Outer ring, 2nd moving barrel set, 3rd moving barrel set	p. 6
⑥ Zoom ring, Brush, Gear set	p. 7
■ Focusing ring and front lens group assembling	p. 8
⑦ Back washer, Outer barrel set, Bayonet mount, Light shield barrel, Lens contact board, Zoom scale ring, Rubber ring	p. 9
■ Focus shift/flange back (f'F) adjustings	p. 10
■ Brush position adjusting	p. 10
■ Projection resolving power checking	p. 10
■ General function checking	p. 10
■ Aperture diameter checking	p. 11
■ Flexible PC board replacing	p. 12
■ Description of focusing and zooming	p. 13
■ Substantial circuit diagram and printed wiring diagram	p. 14

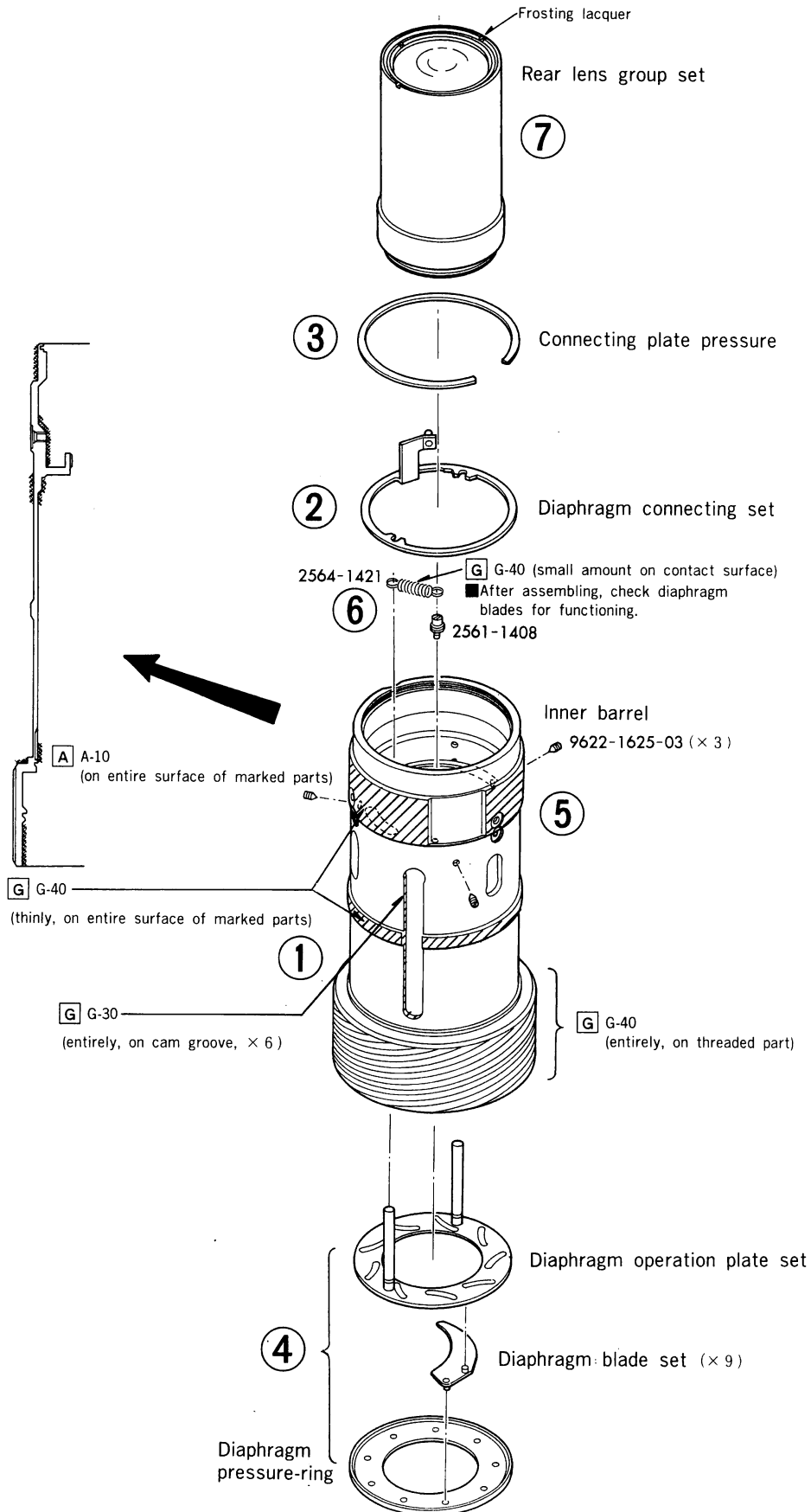
■ Precautions

- Since this lens uses many resin parts, keep the following in mind when assembling and adjusting.
 - Use Fronsolve 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 as shown.



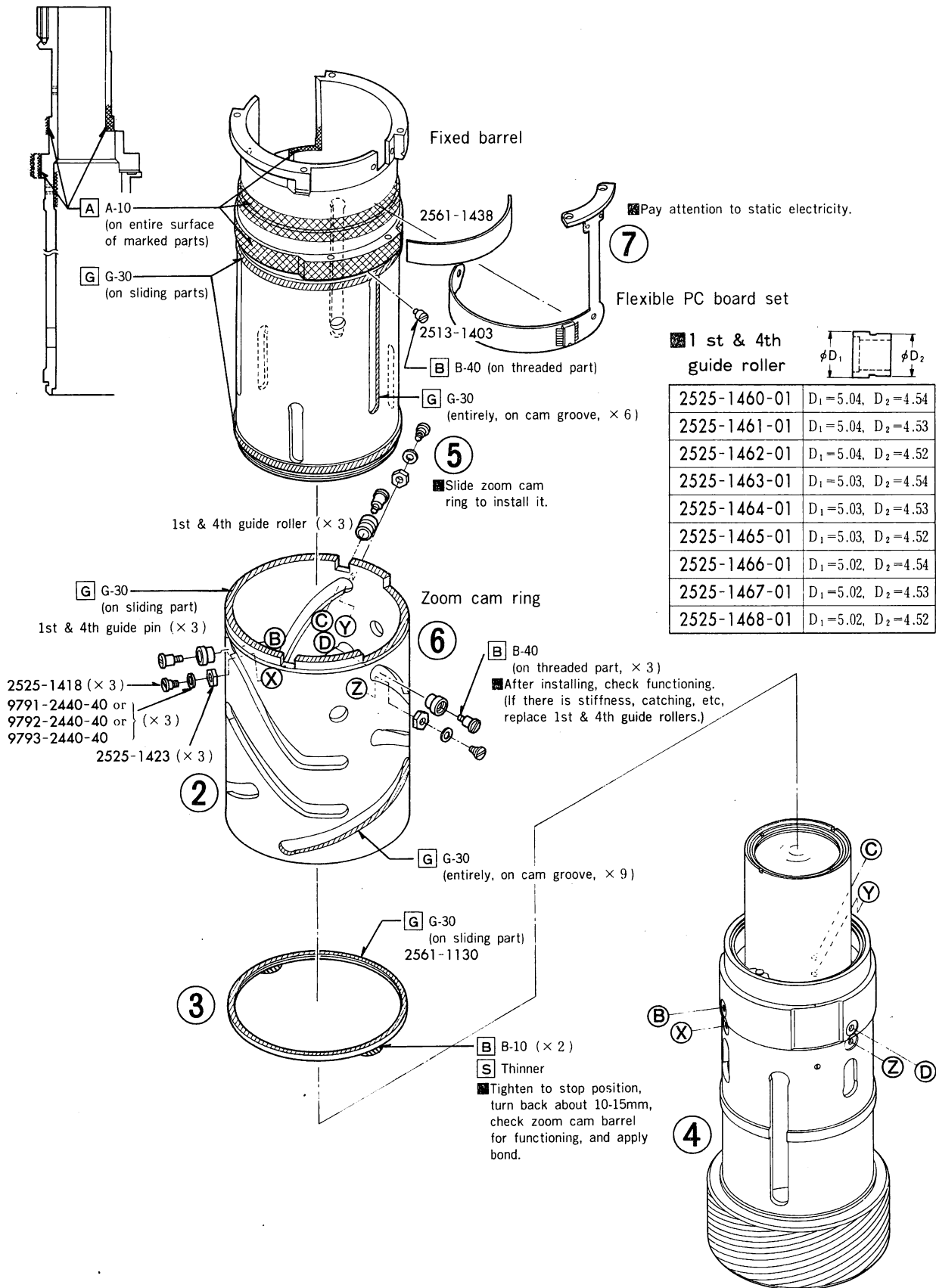
1 Inner barrel, Diaphragm blades, Rear lens set

■ Assemble the parts in order of ①-⑦.



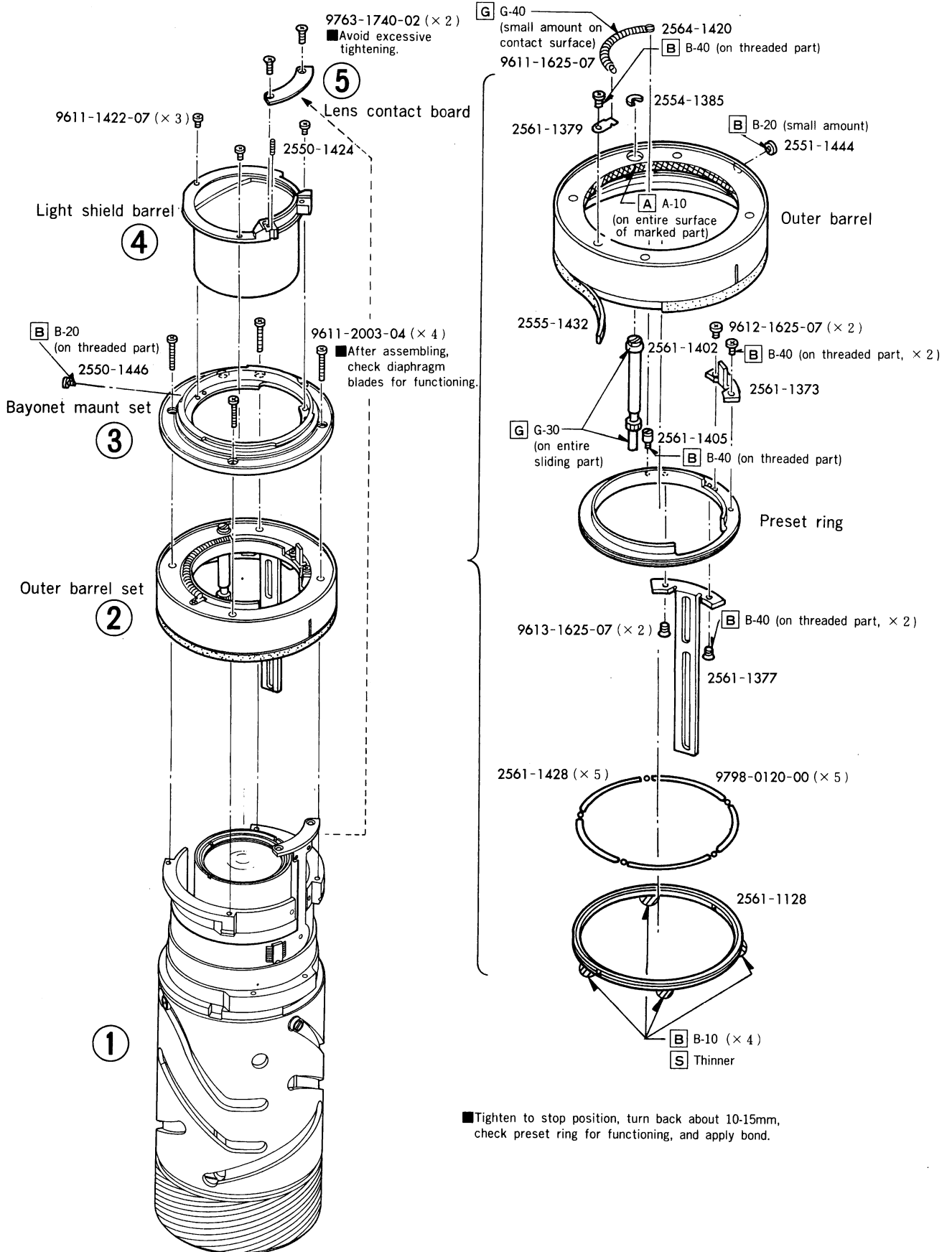
2 Fixed barrel, Zoom cam barrel, Flexible PC board

Assemble the parts in order of ①-⑦.



3 Temporary assembling for aperture diameter adjusting, Outer barrel

- Assemble the parts in order of ①-⑤.
- After assembling, adjust aperture diameter, following the procedure p. 4.



Aperture diameter adjusting

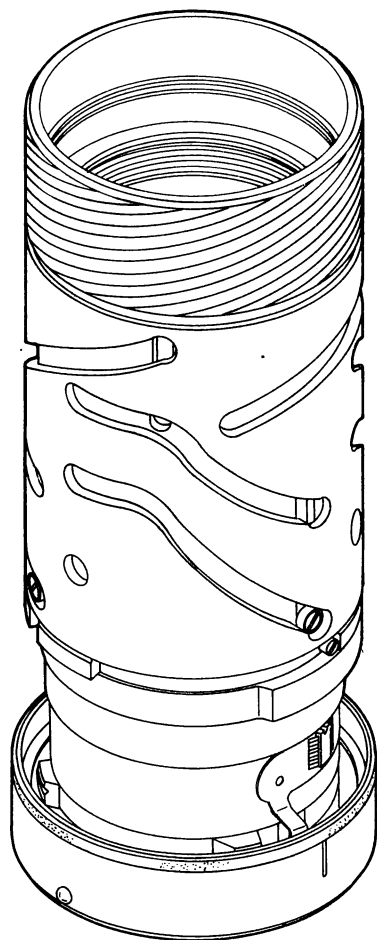
In this lens, diaphragm blades still remain in optical path regardless of full opening. Also, aperture diameter changes by zooming operation. Therefore, adjust aperture diameter, following procedure below.
(After assembling is completed, check aperture diameter, following p. 9.)

■ Exclusive tool : Aperture full-opening tool (2550-0110-75)

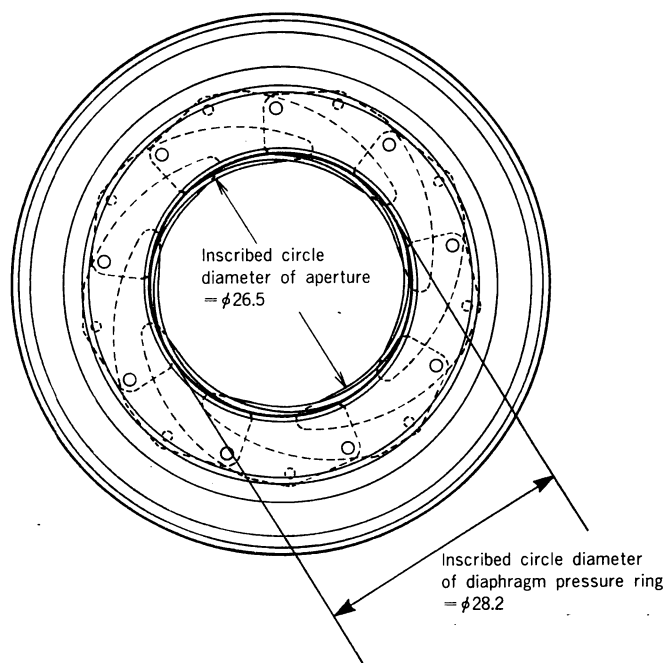
■ Adjusting

1. Assemble lens, following pp.1-3. (See fig.1.)
2. Set focal length at $f=75\text{mm}$ (minimum).
3. Set aperture full-opening tool to the lens in order to keep preset ring at full open position.
4. Loosen screws (9622-1625-02, $\times 3$) slightly. Adjust inscribed circle diameter of aperture, rotating diaphragm pressure ring. (See fig.2.)
5. Re-tighten the screws.

■ Fig. 1



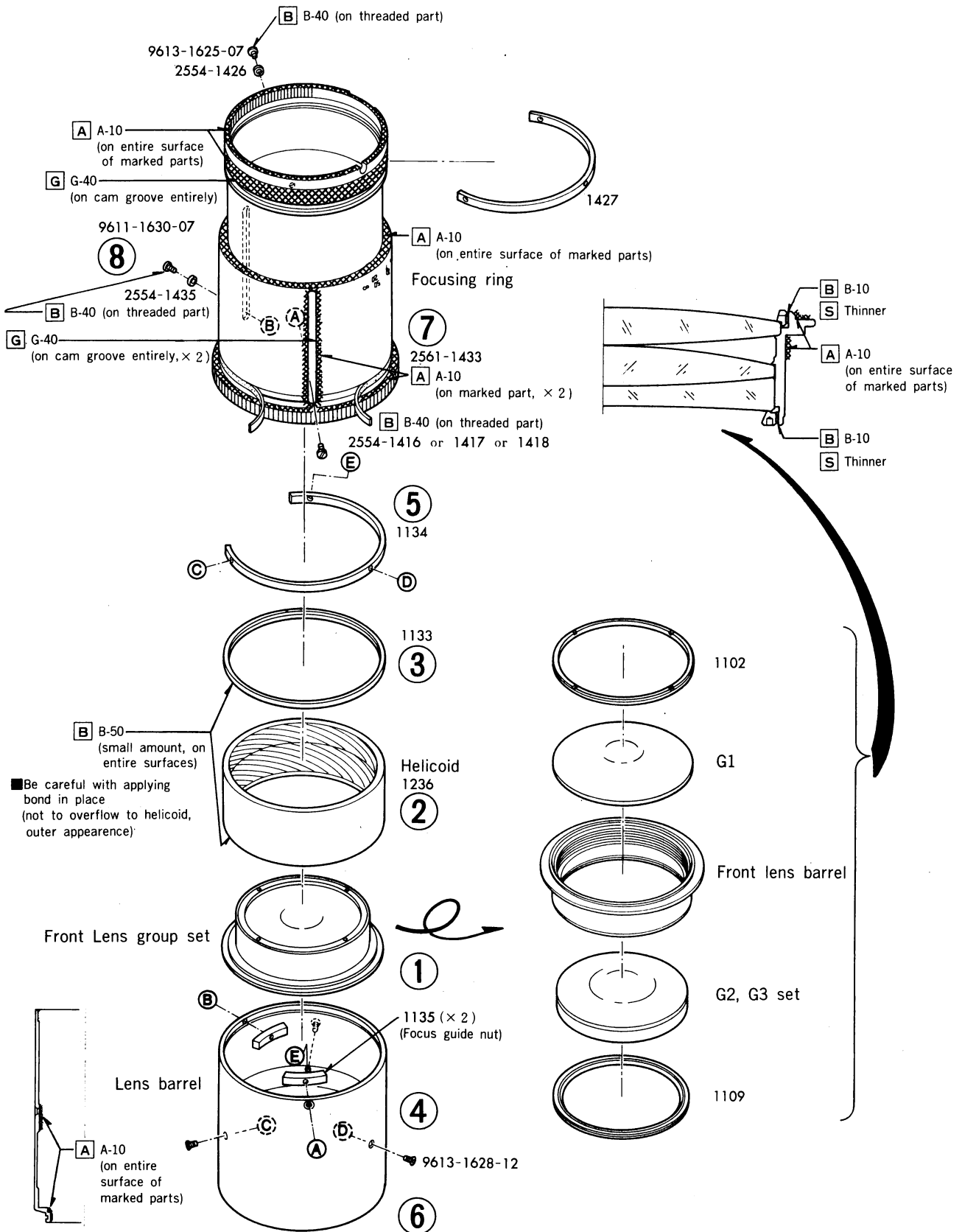
■ Fig. 2



- Focal length $f=75\text{mm}$
- With aperture full-opening tool

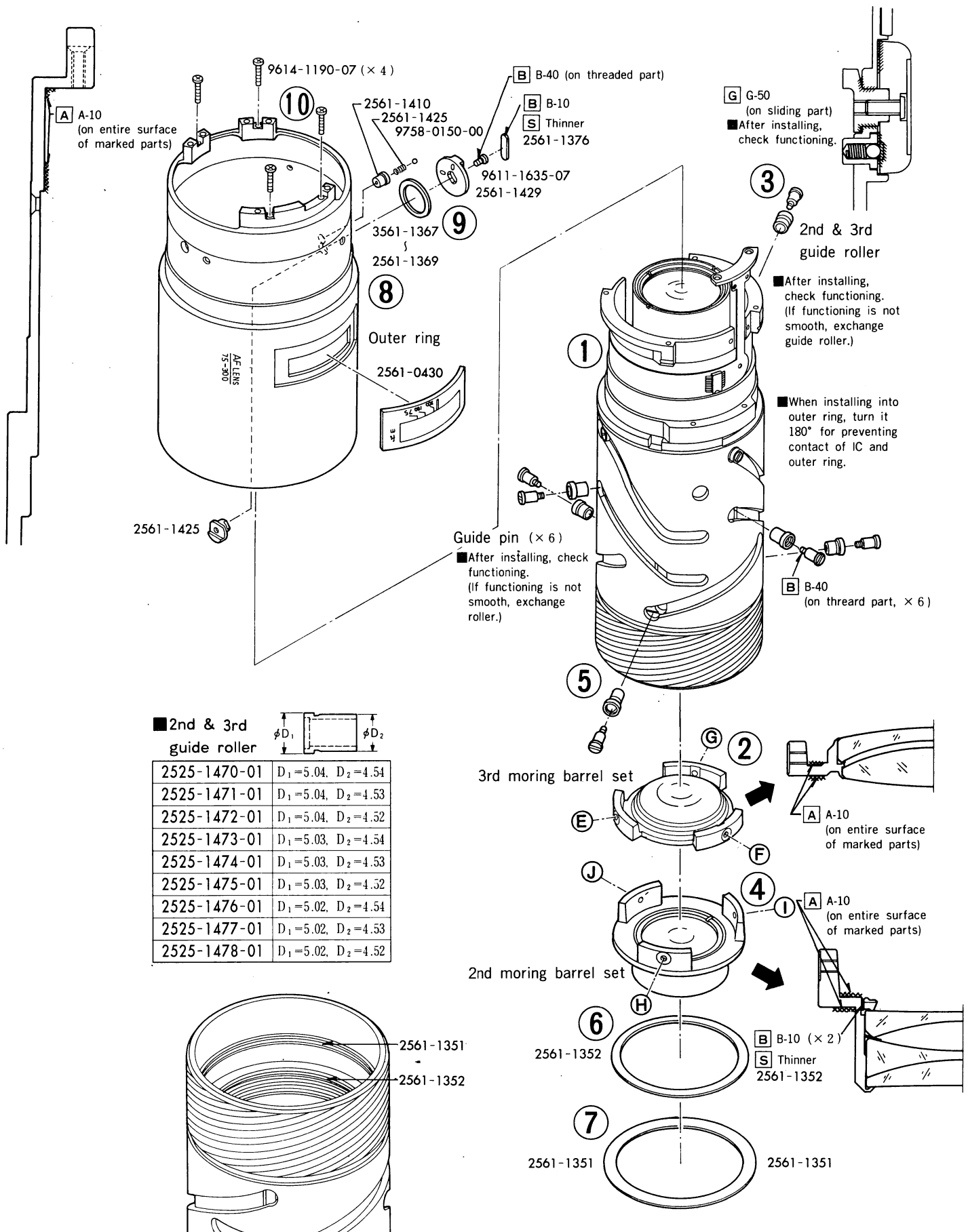
4 Focusing ring, Helicoid, Front lens group set, Filter ring

Assemble the parts in order of ①-⑧.



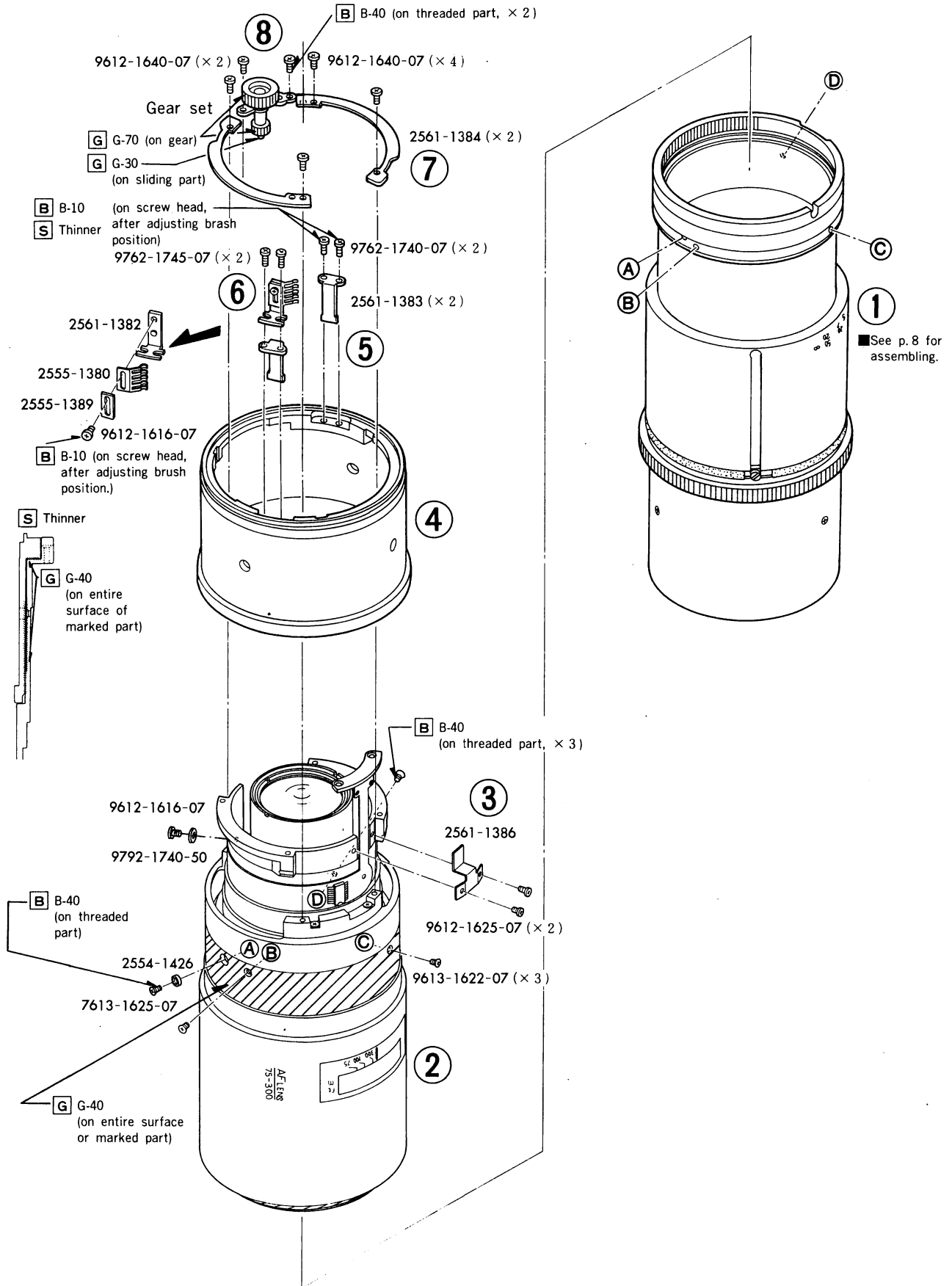
5 Outer ring, 2nd moving barrel set, 3rd moving barrel set

Assemble the parts in order of ①-⑩.



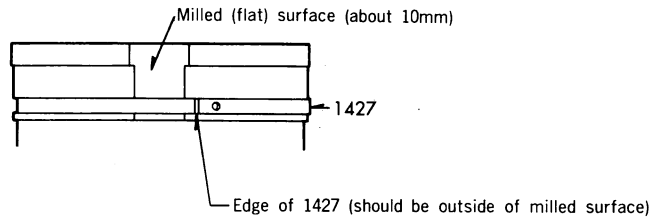
6 Zoom ring, Brush, Gear set

■ Assemble the parts in order or ①-⑧.

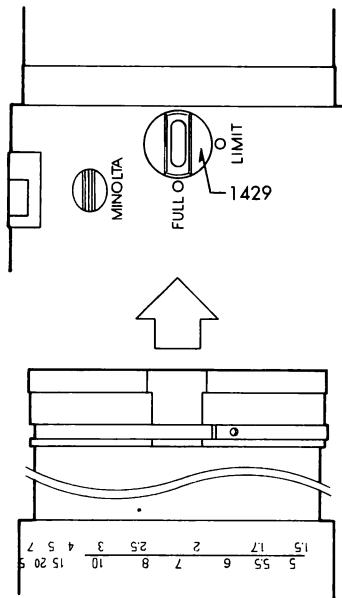


■ Focusing ring and front lens group assembling

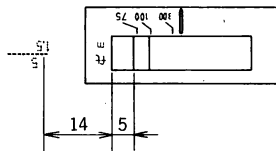
- ① Align edge of 1427 on focusing ring as shown below.



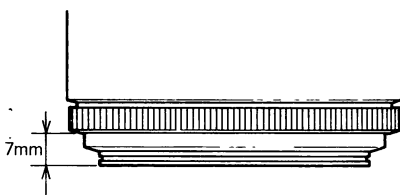
- ② Align 1429 and center of milled surface, and insert focusing ring into outer ring. (Zoom should be at 75mm.)



- ③ Slide focusing ring in the direction of arrow about 14mm from the point where "1.5m" (on distance scale) becomes invisible. Then screw in the helicoid to assemble front lens group.



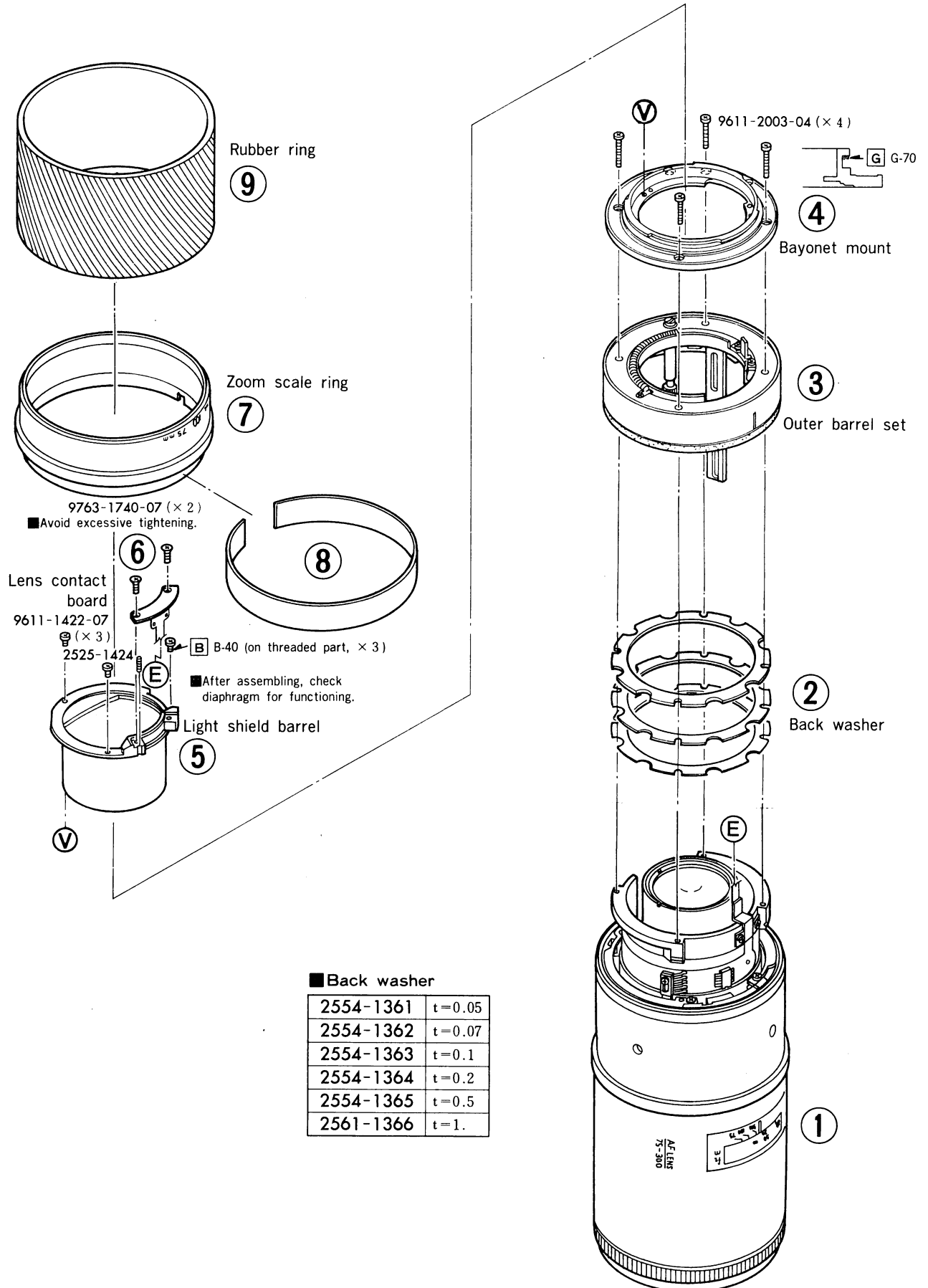
- ④ Make sure that filter ring projects about 7mm from focusing ring in the following conditions: Zoom ring = 75mm (shortest) Camera — to — subject distance = ∞ Then tighten screws, keeping 1427 in position. (See p. 7.)



- ⑤ If the projection is not about 7mm, perform procedure ③ and ④ again.

7 Back washer, Outer barrel set, Bayonet mount, Light shield barrel, Lens contact board, Zoom scale ring, Rubber ring

■ Assemble the parts in order of ①-⑨.



■ Back washer

2554-1361	t=0.05
2554-1362	t=0.07
2554-1363	t=0.1
2554-1364	t=0.2
2554-1365	t=0.5
2561-1366	t=1.

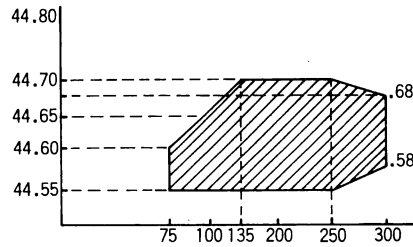
■ After assembling the parts ①-⑥, perform the following checking and adjusting.

(1) Adjust focus shift/flange back.

(See General checking/adjusting procedure p. 3.)

Allowable range

f (mm)	f' F (mm)
75	$44.55^{+0.05}_0$
200	$45.55^{+0.15}_0$
300	$45.58^{+0.10}_0$



(2) Check projection resolving power.

(See General checking/adjusting procedure p. 6.)

Allowable range for servicing

f (mm)	Distance D (m)	Center (y' = 0mm)	y' = 15mm	
			S	M
75	2.0 ~ 3.3	100	40	32
200	5.0 ~ 8.3	100	40	32
300	7.7 ~ 10.0	80	32	32

S : Sagittal image
 M : Meridional image

(3) Adjust brush position.

(See General checking/adjusting procedure p. 12.)

■ After assembling, check general function.

(See General checking/adjusting procedure p. 14.)

■ After assembling, check aperture diameter. (See p. 11)

[Caution]

“Program pack Ver. 1.1” of camera I/O tester cannot be used for checking this lens.

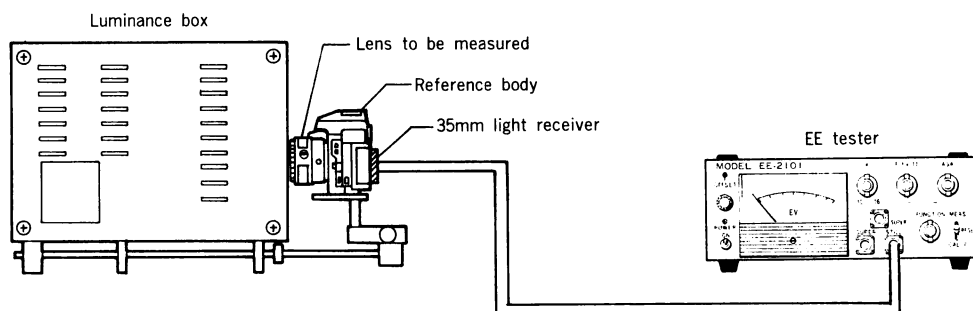
Aperture diameter checking

Since aperture diameter checking procedure of this model differs from one of regular A-lens, "General checking/adjusting procedure" is not usable. Therefore, check aperture diameter, following procedure below.

- Measuring instruments : Luminance source (model L-2101, L-222*, L-223*) ※ : Discontinued model
- : EE tester (model EE-2101, EE-2111)
- : 35mm light receiver
- : Reference body (Select, following "General checking/adjusting procedure p. 9.)

Preparation

Set measuring instruments as below.



- Luminance source
- K value : 1.3
- Luminance : Ev 11

- Lens to be measured
- Focusing ring : ∞ (infinity)
- Zoom ring : 75mm

- Reference body
- Mode : M
- Shutter speed setting : bulb
- Aperture : f/11
- Focus mode : M

- EE tester
- FUNCTION : 35
- ASA : F
- K value : 1.3
- MEAS-CALF : CALF
- F : 11

Checking procedures

1. Release the shutter several times and take the average of reading values.
2. Make sure that aperture diameter error, which is calculated as below, is within the allowable range.

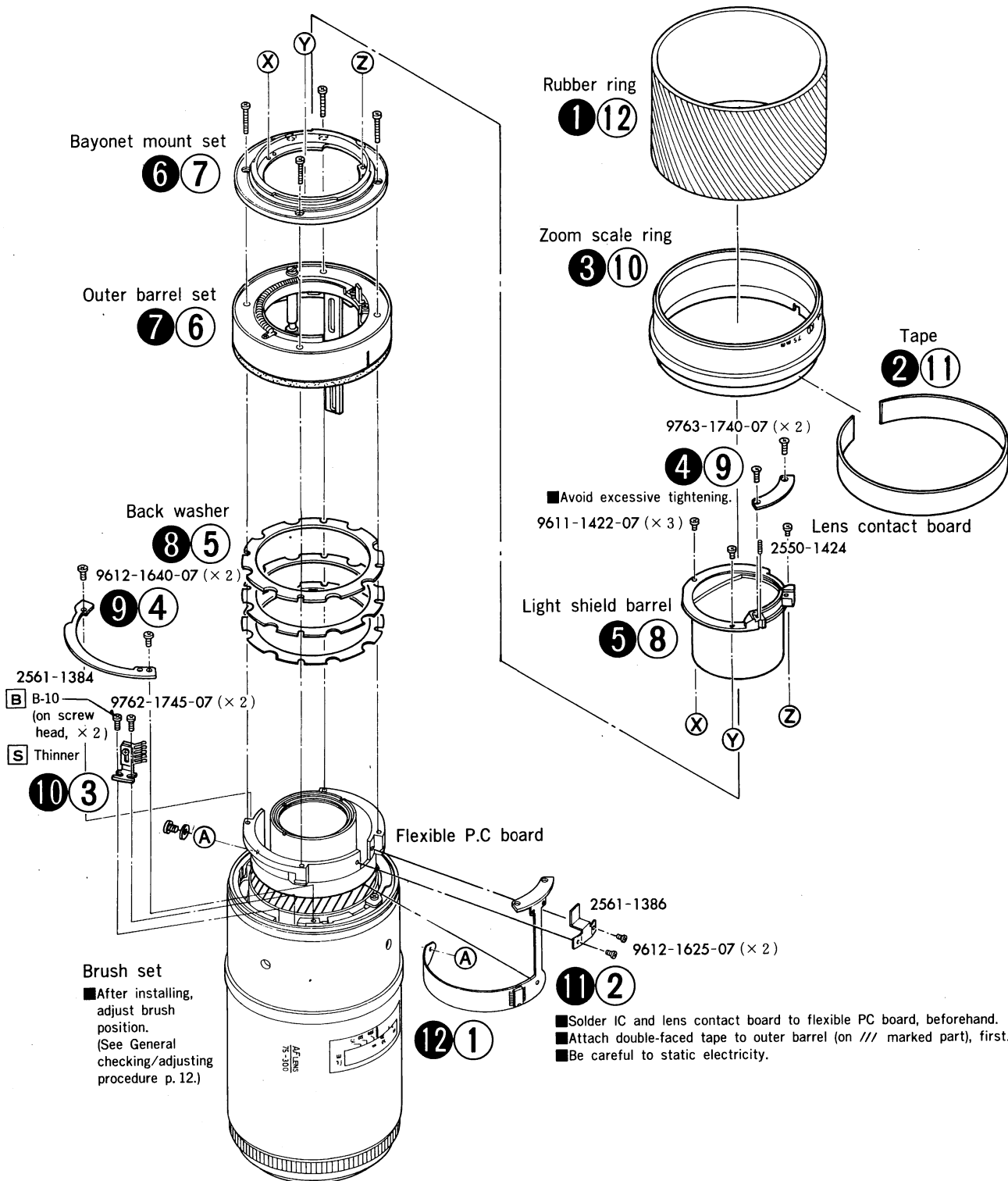
$$\boxed{\text{Aperture diameter error}} - \boxed{\text{Average of reading values}} - \boxed{\text{Reference values}}$$

(Refer to General checking/adjusting procedure p. 9.)

Allowable range
(0±0.4) Ev

Flexible PC board replacing

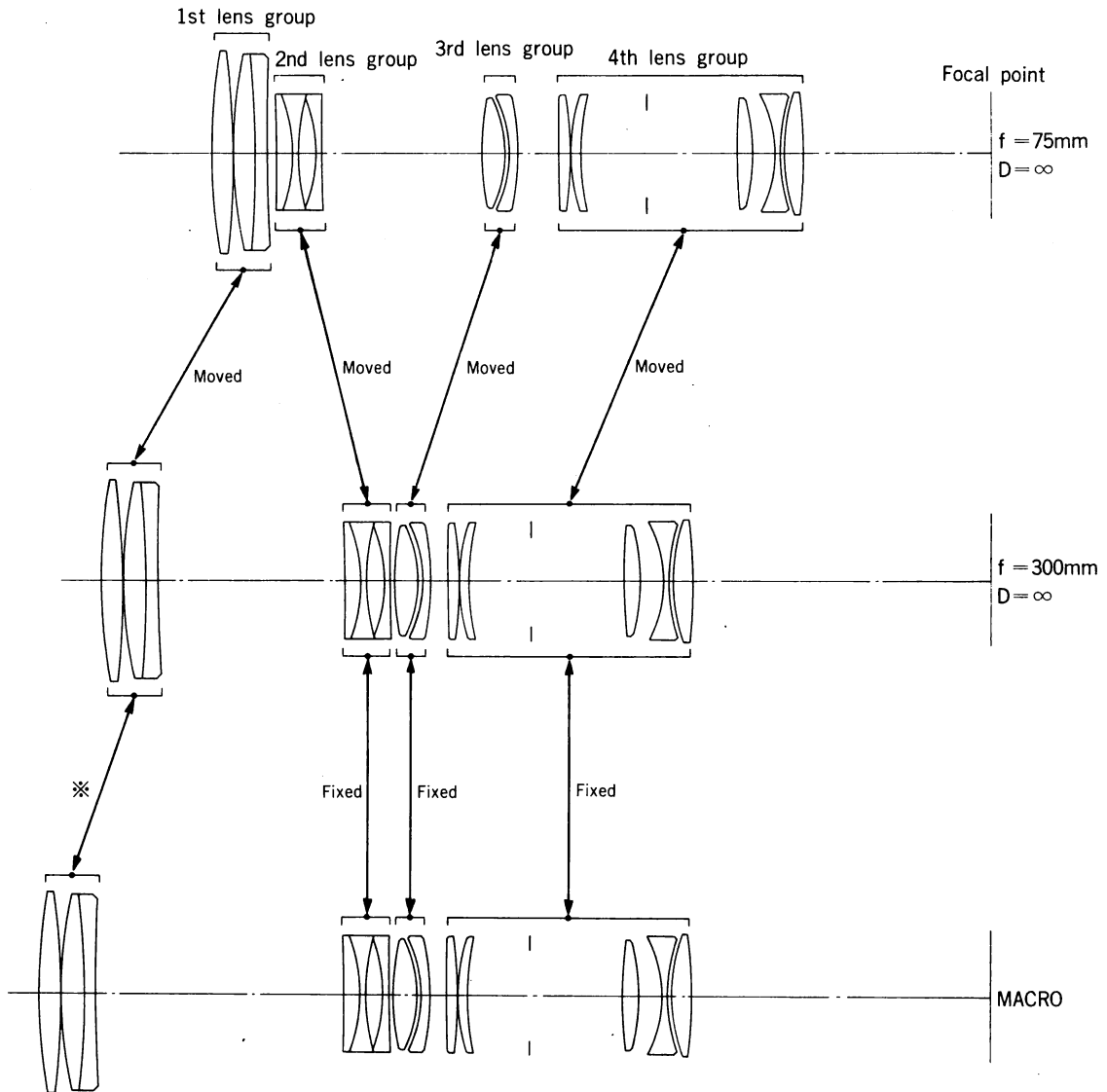
- Disassemble the parts in the order of ①-⑧.
- Assemble the parts in the order of ①-⑧.
- After assembling, check general function. (See General checking/adjusting procedure p. 14.)
- When installing flexible PC board, be careful with the followings:
 - (1) Do not allow air between flexible PC board and double-faced tape.
 - (2) Do not install flexible PC board slanted.



■ Description of focusing and zooming

- 4-component mechanical-compensation zoom lens (positive, negative, positive, positive). When zooming, by rotating zoom ring, 1st and 4th lens groups are moved together, 2nd and 3rd lens group are moved individually.
- The diaphragm parts are fixed with 4th lens group without aperture diameter changing. Effective-full-aperture is changed from f/4.5 to f/5.6. (f/4.5 : 70mm, f/5.6 : 300mm)
- When focusing, 1st lens group (focusing lens group) is moved by rotating AF coupler or focusing ring.
- Magnification, which is obtained by rotating focusing lens group, is 1 : 3.9 (max.) at subject-to-camera distance (D)=1.5m, f=300mm.

(Focusing lens group)

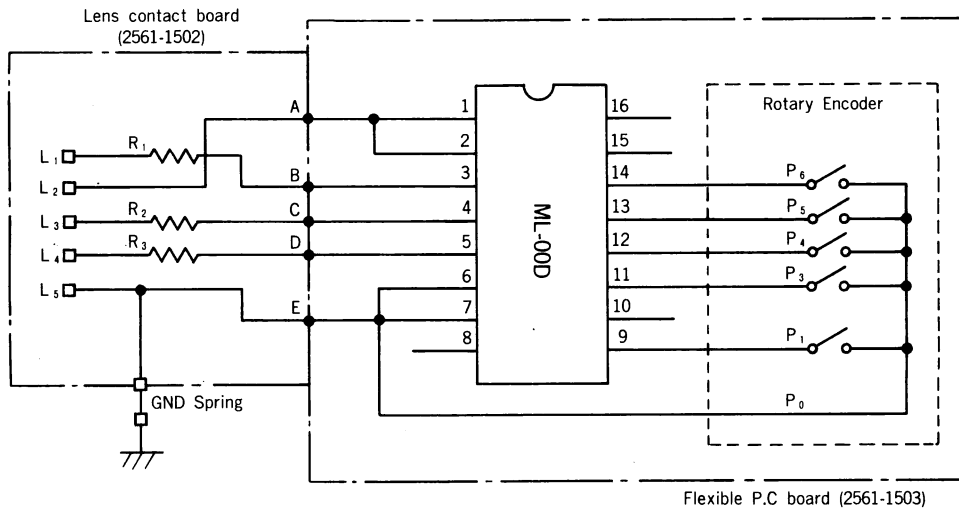


D=1.5m, magnification 1 : 3.9**

※Moved by rotating AF coupler or focusing ring

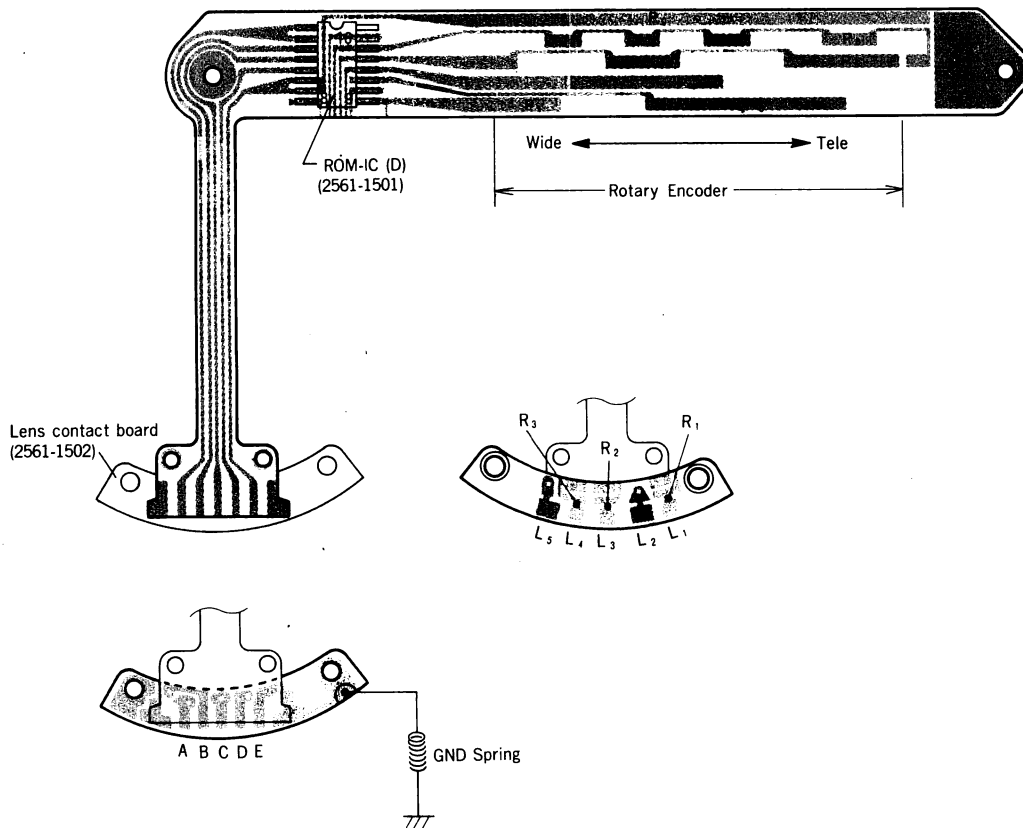
**Minimum camera-to-subject distance is 1.5m regardless of zoom ring setting so that maximum magnification 1 : 3.9 can be got at tele stop position (f=300mm).

Substantial circuit diagram and printed wiring diagram



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

ML-00D : ROM-IC
 A-E : Soldering point
 P0-6 : Rotary encoder pattern switch (ON/OFF at certain zooming point)



SERVICE MANUAL SUPPLEMENTARY INFORMATION

AF ZOOM 75-300mm F4.5-5.6
Model MAXXUM AF ZOOM 75-300mm F4.5-5.6

Code No. **2561-100, -600**

■ Parts modification for improvement
of zooming adjustment

■ Summary

On conventional product, zooming adjustment (for smooth operation) can be made only when assembling fixed-barrel and zoom-cam-ring. On new product (※1), some parts have been modified so that zooming can also be adjusted before and after installing 2nd & 3rd moving-barrel-sets on fixed-barrel + zoom-cam-ring.

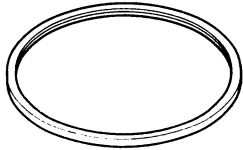
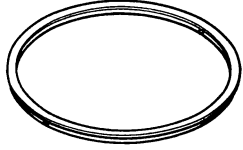
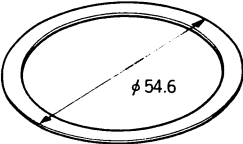
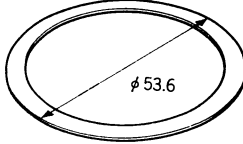
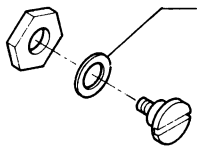
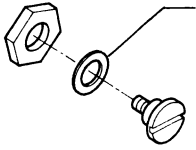
※1 New product : manufactured in and after July 1986.

CONTENTS

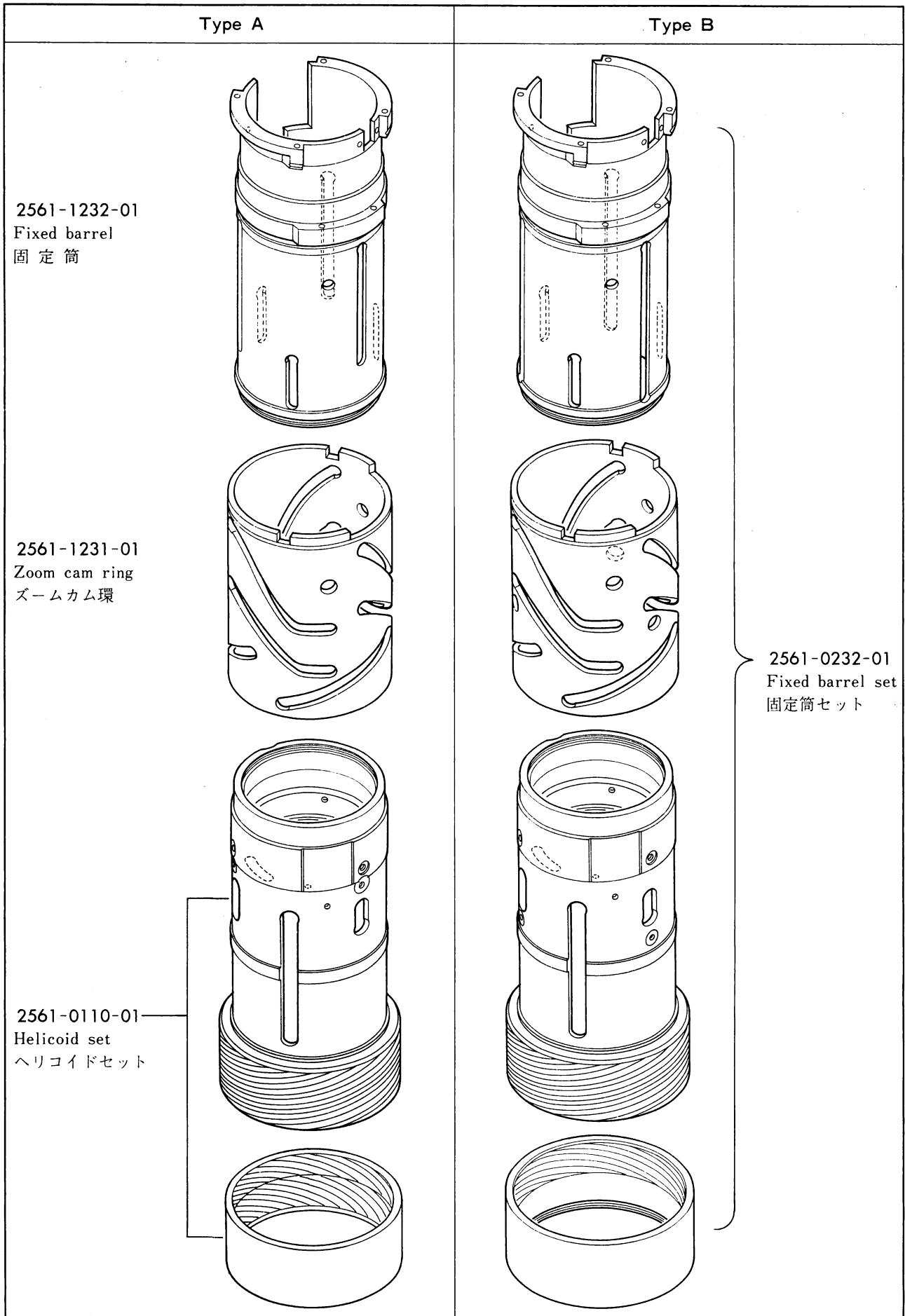
- Parts modification p. 1 ~ p. 3
(Here summarized are Parts List p.3~p.6 in conventional Service Manual)
- Modification of Repair Guide p. 4 ~ p. 7
(Modified from Repair Guide p.2, p.5~p.8 in conventional Service Manual)

■ Parts modification

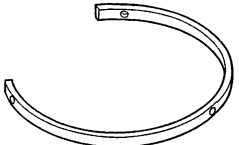
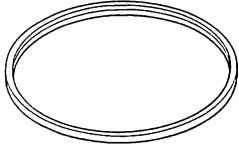
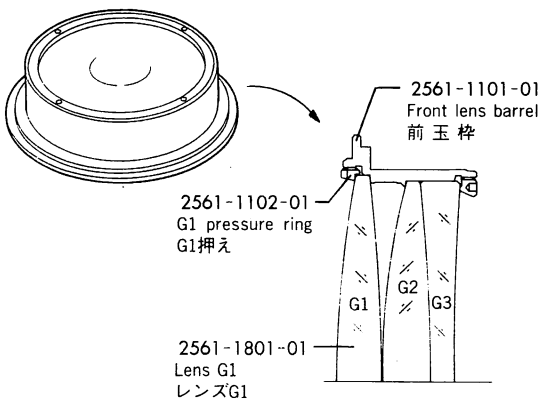
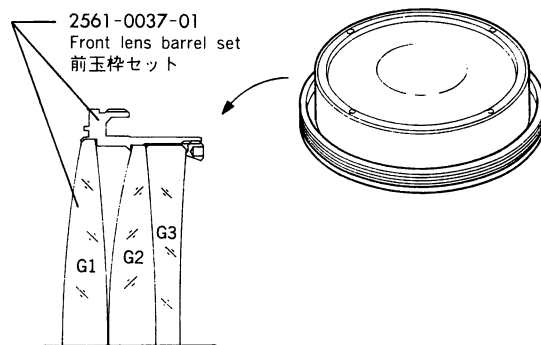
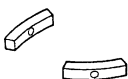
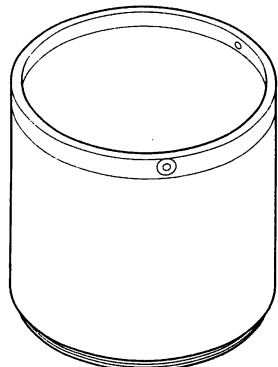
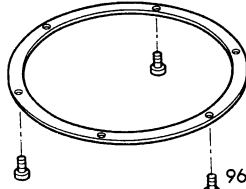
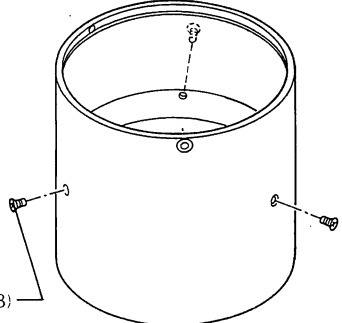
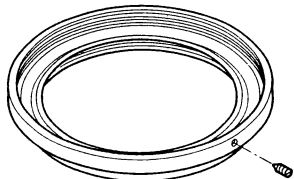
● Interchangeability : No interchangeability as single part except 2561-1130

Type A	Type B
<p>2561-1130-01 Zoom cam ring pressure ズームカム環押え</p> <ul style="list-style-type: none"> • Type B can be used • Type B使用可 	<p>2561-1130-02 Zoom cam ring pressure ズームカム環押え</p> 
<p>2561-1351-01 Light shield plate-A 遮光板A</p>  <p style="text-align: center;">φ54.6</p>	<p>2561-1351-02 Light shield plate-A 遮光板A</p>  <p style="text-align: center;">φ53.6</p>
<p>2525-1423-01 (3) Zoom adjusting rubber ズーム調整ゴム</p>  <p>9791-2440-40 or 9792-2440-40 or 9793-2440-40</p> <p>2525-1418-01 (3) Guide pin 案内ピン</p>	<p>2561-1448-02 (3) Zoom adjusting rubber ズーム調整ゴム</p>  <p>9791-2840-40 or 9792-2840-40 or 9793-2840-40</p> <p>2561-1447-02 (3) Guide pin 案内ピン</p>

Continued on next page

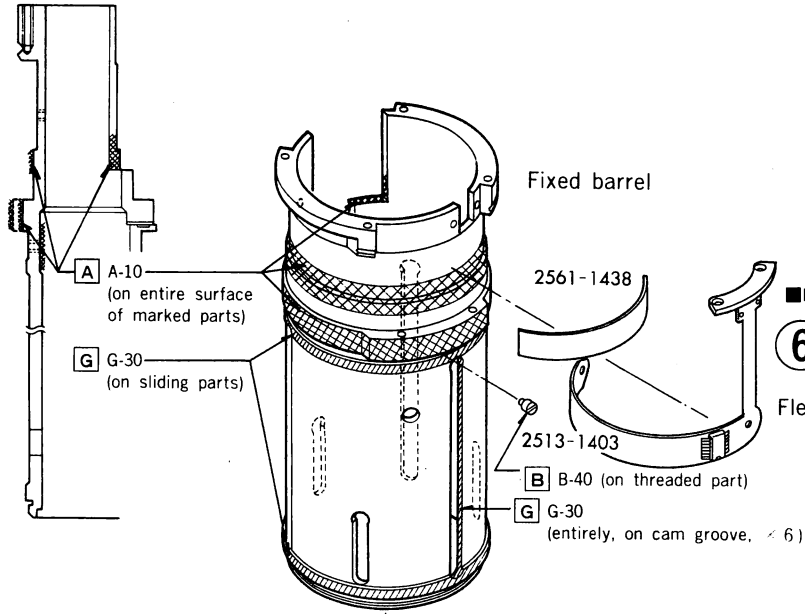


Continued on next page

Type A	Type B
<p>2561-1134-01 Helicoid pressure B ヘリコイド押えB</p> 	<p>Not used 使用せず</p>
<p>2561-1133-01 Helicoid pressure A ヘリコイド押えA</p> 	<p>Not used 使用せず</p>
 <p>2561-1101-01 Front lens barrel 前玉枠</p> <p>2561-1102-01 G1 pressure ring G1押え</p> <p>2561-1801-01 Lens G1 レンズG1</p>	 <p>2561-0037-01 Front lens barrel set 前玉枠セット</p> <p>G1 G2 G3</p> <p>• 1102 : discon. 1101 & 1801 riveted.</p>
<p>2561-1135-01 (2) Focus guide nut フォーカスガイドナット</p> 	<p>Not used 使用せず</p>
<p>Not used 使用せず</p>	<p>2561-1241-01 Lens barrel-B 鏡頭環B</p> 
<p>Not used 使用せず</p>	<p>2561-1375-01 Lens barrel pressure 鏡頭環 締付板</p>  <p>9611-1630-07 (3)</p>
<p>[~100] 2561-1235-01 [-600] 2561-1635-01 Lens barrel 鏡頭環</p>  <p>9613-1628-12 (3)</p>	<p>[~100] 2561-1235-03 [-600] 2561-1635-03 Lens barrel-A 鏡頭環A</p>  <p>9621-1616-02</p>

2 Fixed barrel, Zoom cam barrel, Flexible PC board

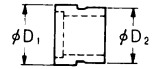
Assemble the parts in order of ①-⑥.



Pay attention to static electricity.

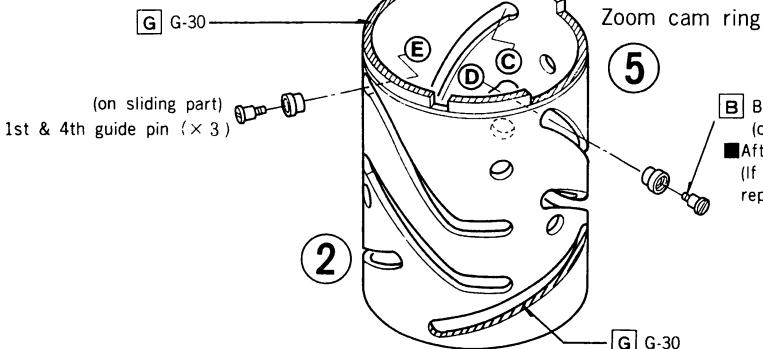
6

1 st & 4th guide roller



2525-1460-01	$D_1 = 5.04, D_2 = 4.54$
2525-1461-01	$D_1 = 5.04, D_2 = 4.53$
2525-1462-01	$D_1 = 5.04, D_2 = 4.52$
2525-1463-01	$D_1 = 5.03, D_2 = 4.54$
2525-1464-01	$D_1 = 5.03, D_2 = 4.53$
2525-1465-01	$D_1 = 5.03, D_2 = 4.52$
2525-1466-01	$D_1 = 5.02, D_2 = 4.54$
2525-1467-01	$D_1 = 5.02, D_2 = 4.53$
2525-1468-01	$D_1 = 5.02, D_2 = 4.52$

1st & 4th guide roller ($\times 3$)



2

5

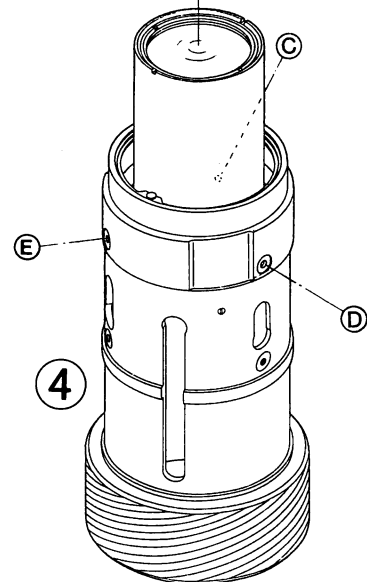
3

G-30 (entirely, on cam groove, $\times 9$)

G-30 (on sliding part) 2561-1130

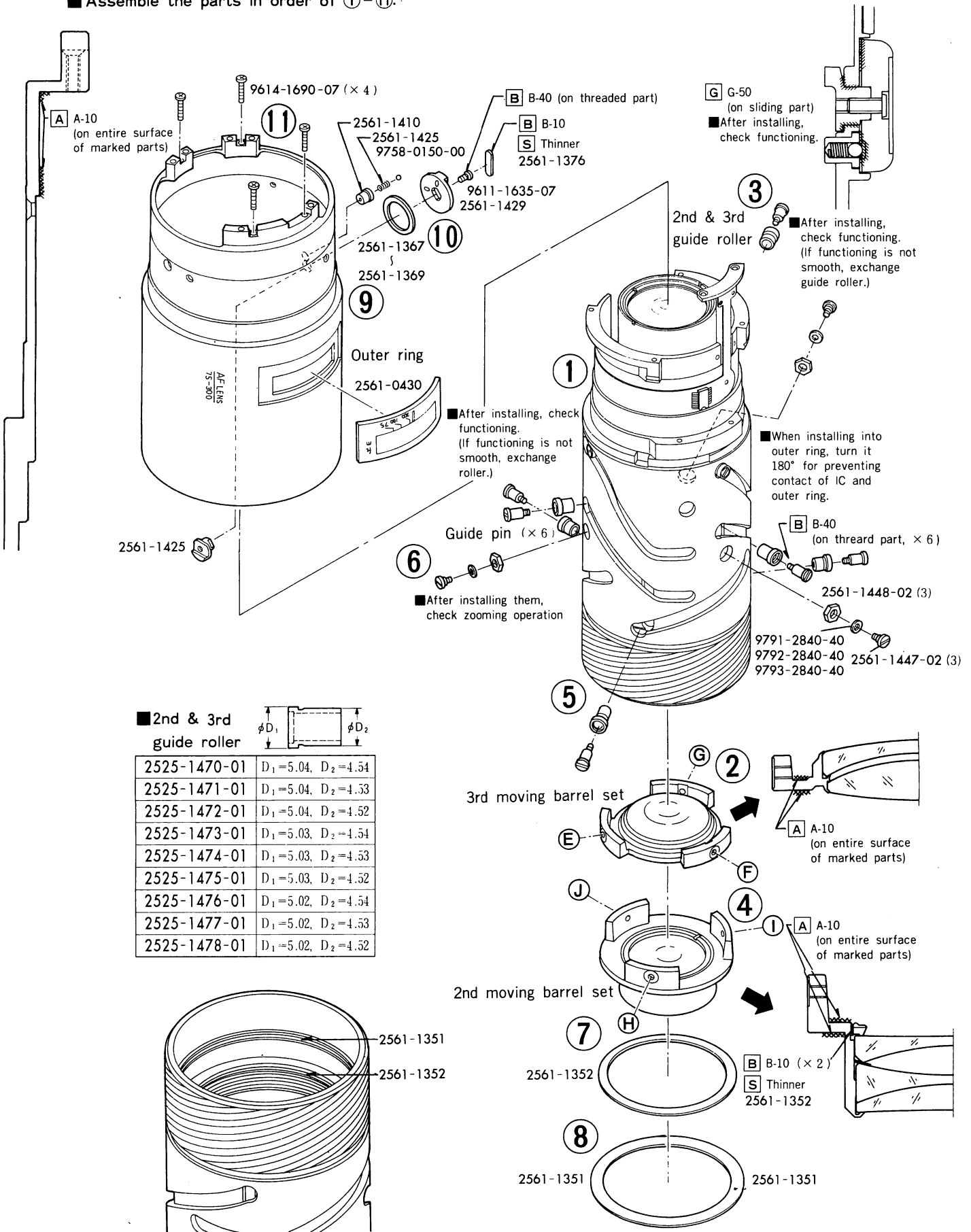
B-10 ($\times 2$)
Thinner

Tighten to stop position, turn back about 10-15mm, check zoom cam barrel for functioning, and apply bond.



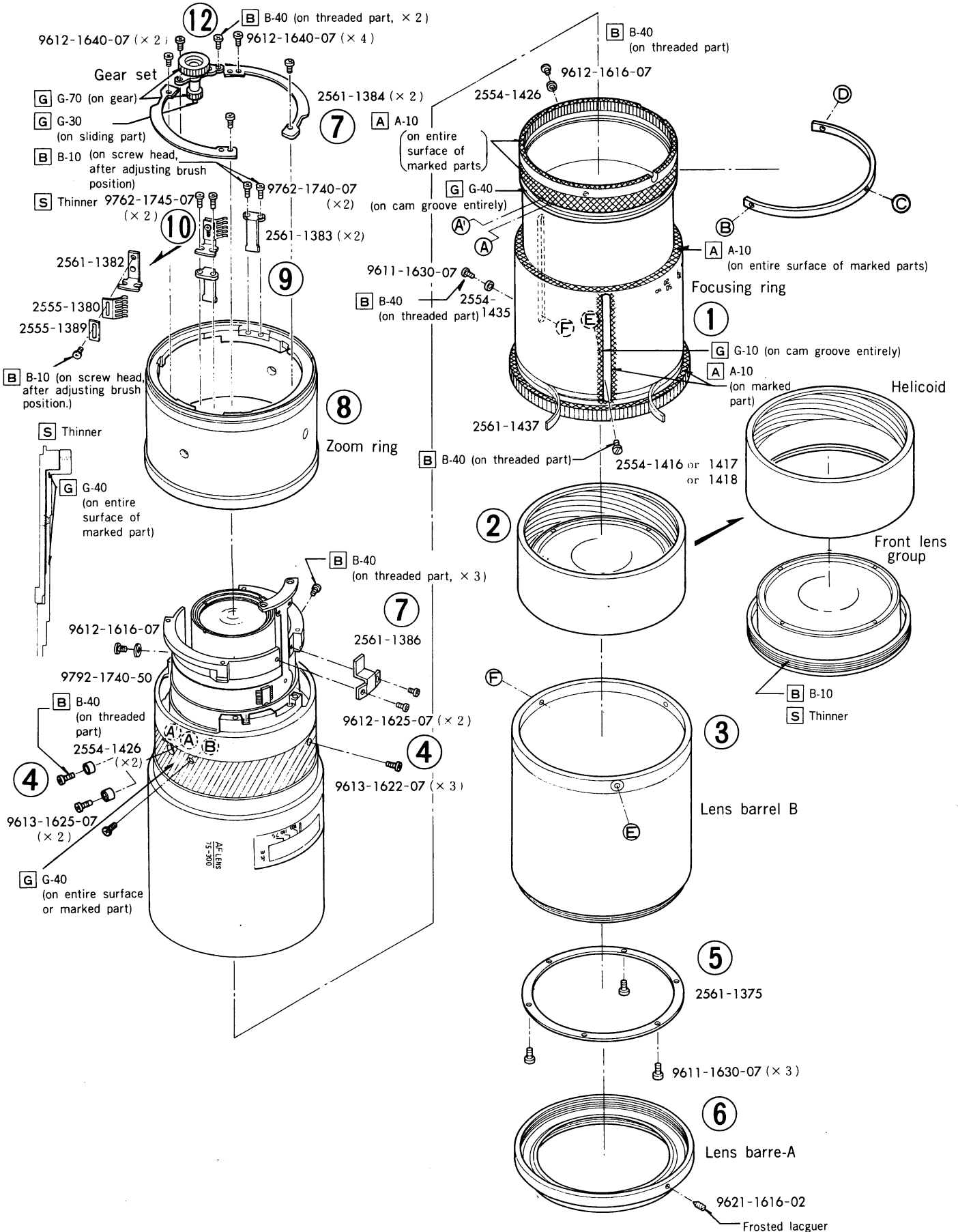
5 Outer ring, 2nd moving barrel set, 3rd moving barrel set

■ Assemble the parts in order of ①-⑪.



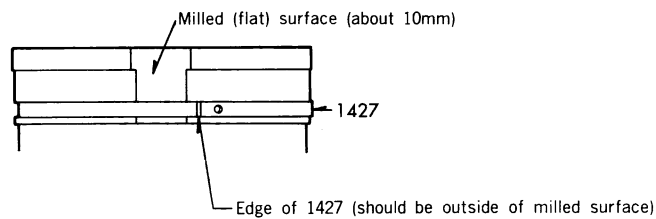
Zoom ring, Brush, Gear set, Focusing ring, Helicoid, Front lens group Lens barrel A, Lens barrel B

Assemble the parts in the order of ①-⑫. For installing ①-⑥, see p. 7.

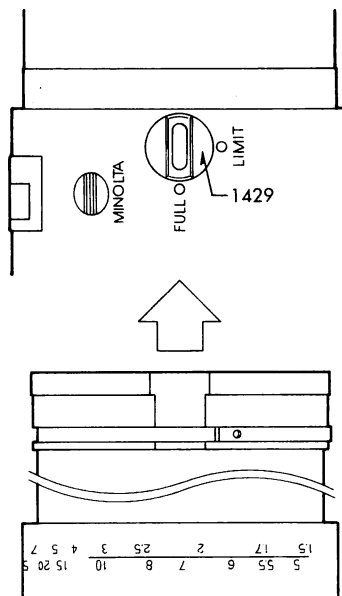


■ Focusing ring and front lens group assembling

- ① Align edge of 1427 on focusing ring as shown below.



- ② Align 1429 and center of milled surface, and insert focusing ring into outer ring. (Zoom should be at 75mm.)



- ③ Engage with helicoid of inner barrel, then rotate front lens group set (with helicoid attached) about 10mm to screw in.
- ④ With focusing ring pulled about 10mm out, install lens barrel-B.
(For easier installing, set the zoom ring to tele side.)
- ⑤ Rotate focusing ring to attach 2554-1426 ($\times 2$) and 9613-1625-07 ($\times 2$).
Then tighten 9613-1622-07 ($\times 3$).
- ⑥ Screw front lens group set until it stops, then unscrew about 10mm (max).
Install 2561-1375 and lens barrel-A.
- ⑦ Make sure that lens barrel-A projects about 7mm from focusing ring in the following conditions:
zoom ring=75mm; focusing ring= ∞ . (If the projection is not about 7mm, perform procedure ⑥ again.)
Then secure lens barrel-A with 9621-1616-02.

