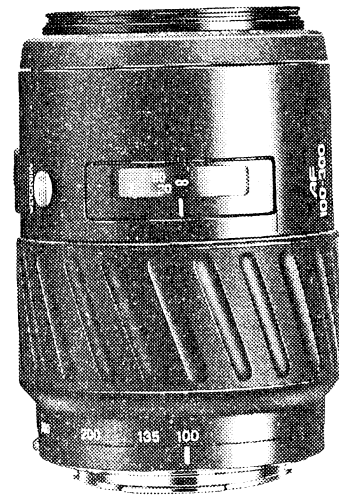
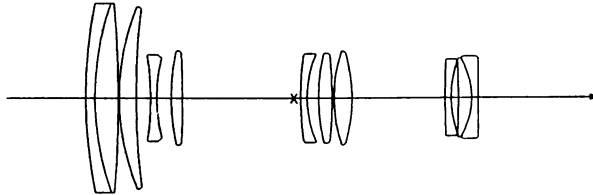


MINOLTA AF ZOOM 100-300mm F4.5(32)-5.6 (2606-100)

MINOLTA MAXXUM AF ZOOM 100-300mm F4.5(32)-5.6 (2606-600)

LENS



Construction : 11 elements in 9 groups
Type : 4-component mechanical-compensation zoom lens
Coating : Minolta Achromatic
Angle of view : 24°—8°10'
Lens mount : Minolta A mount
Diaphragm : Automatic preset diaphragm
Lens signal contact : 5 contacts
f No. : Maximum···WIDE 4.5
TELE 5.6
Minimum···WIDE 32
TELE 38
Full-stop setting-5.5stops
Diaphragm : 9 blades

FOCUSING

Focusing : AF, FA, M
Type : Front-focusing
Minimum focusing distance : 1.5m
Distance scale : $\frac{- M - 7 \quad 8 \quad 10 \quad 15 \quad 50}{1.5 \quad 2 \quad 2.5 \quad 3 \quad 4 \quad 7 \quad 20} \frac{\infty}{(ft)}$
Infrared correction scale : none
Macro capability : $\frac{1}{4} \times$ (maximum magnification).
(AF, FA or M moda is usable.)
Depth-of-field scale : none

ZOOMING

Type : Mechanical-compensation zoom lens,
Rotary 2-ring
Zooming scale : f 300 200 135 100
Zooming ratio : 3 ×

DIMENSIONS & WEIGHT

Dimensions : $\phi 72.5$ (maximum diameter) ×
100(maximum length)mm
Weight : 410g
Filter-thread diameter : $\phi 55$ mm (P=0.75)
Lens hood diameter : $\phi 55$ mm (Clip-on type)

ACCESSORIES

Lens case : (LH-1044)
Lens hood : (6606-810)

I N D E X

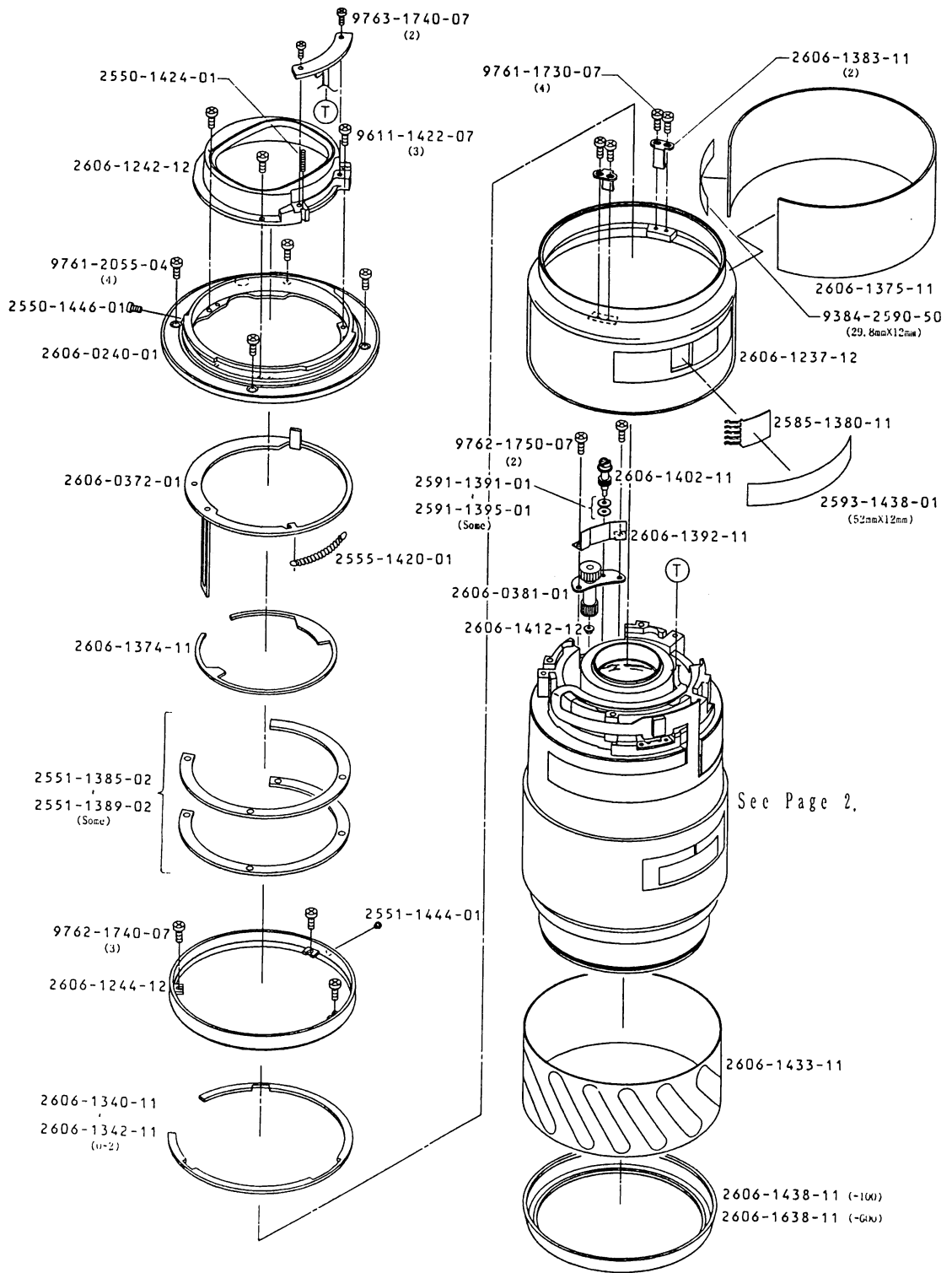
PART NO.	PAGE	PART NO.	PAGE
2606-0031	----- 2	2606-1340	----- 1
2606-0035	----- 3	2606-1341	----- 1
2606-0040	----- 3	2606-1342	----- 1
2606-0045	----- 2	2606-1351	----- 2
2606-0110	----- 4	2606-1357	----- 3
2606-0113	----- 3	2606-1361	----- 2
2606-0232	----- 3	2606-1362	----- 2
2606-0240	----- 1	2606-1363	----- 2
2606-0353	----- 2	2606-1364	----- 2
2606-0371	----- 3	2606-1365	----- 2
2606-0372	----- 1	2606-1366	----- 2
2606-0378	----- 3	2606-1367	----- 2
2606-0381	----- 1	2606-1374	----- 1
2606-0430	----- 4	2606-1375	----- 1
2606-0501	----- 4	2606-1379	----- 4
2606-0810	----- 2	2585-1380	----- 1
		2606-1382	----- 2
2606-1102	----- 2	2606-1383	----- 1
2606-1112	----- 3	2606-1384	----- 4
2606-1230	----- 4	2551-1385	----- 1
2606-1236	----- 4	2551-1386	----- 1
2606-1237	----- 1	2551-1387	----- 1
2606-1242	----- 1	2551-1388	----- 1
2606-1244	----- 1	2551-1389	----- 1

I N D E X

PART NO.	PAGE	PART NO.	PAGE
2606-1390	4	2606-1438	1
2591-1391	1	2606-1439	4
2606-1391	4	2551-1444	1
2591-1392	1	2550-1446	1
2606-1392	1	2606-1451	2
2591-1393	1	2606-1452	4
2591-1394	1	2606-1453	4
2591-1395	1	2606-1460	2, 3
2606-1402	1	2606-1461	2, 3
2606-1412	1	2606-1462	2, 3
2606-1413	3	2606-1463	2, 3
2606-1414	2	2606-1464	2, 3
2606-1415	2	2606-1465	2, 3
2606-1416	2	2606-1466	2, 3
2555-1420	1	2606-1467	2, 3
2606-1421	4	2606-1468	2, 3
2606-1423	4	2606-1470	3
2550-1424	1	2606-1471	3
2606-1427	3	2606-1472	3
2606-1432	4	2606-1473	3
2606-1433	1	2606-1474	3
0656-1434	4	2606-1475	3
2606-1437	2	2606-1476	3
2593-1438	1	2606-1477	3

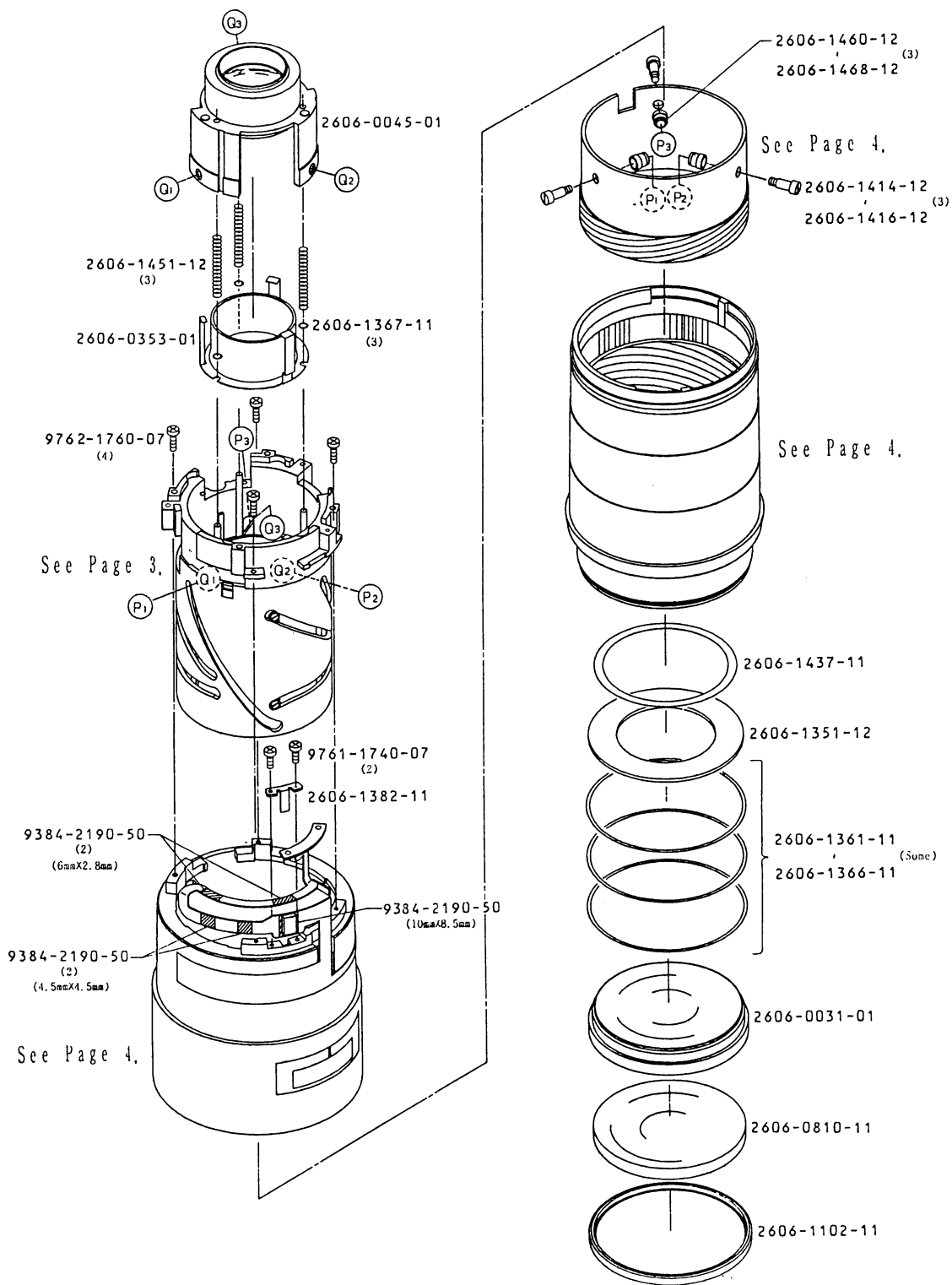
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PART NO.	PAGE
2606-1478 -----	3
2606-1638 -----	1
9384-2190-50-----	2, 4
9384-2590-50-----	1
9611-1422-07-----	1
9611-1625-07-----	3
9761-1720-07-----	4
9761-1730-07-----	1
9761-1740-07-----	2
9761-2055-04-----	1
9762-1740-07-----	1
9762-1750-07-----	1
9762-1760-07-----	2
9763-1740-07-----	1
9794-1830-40-----	4

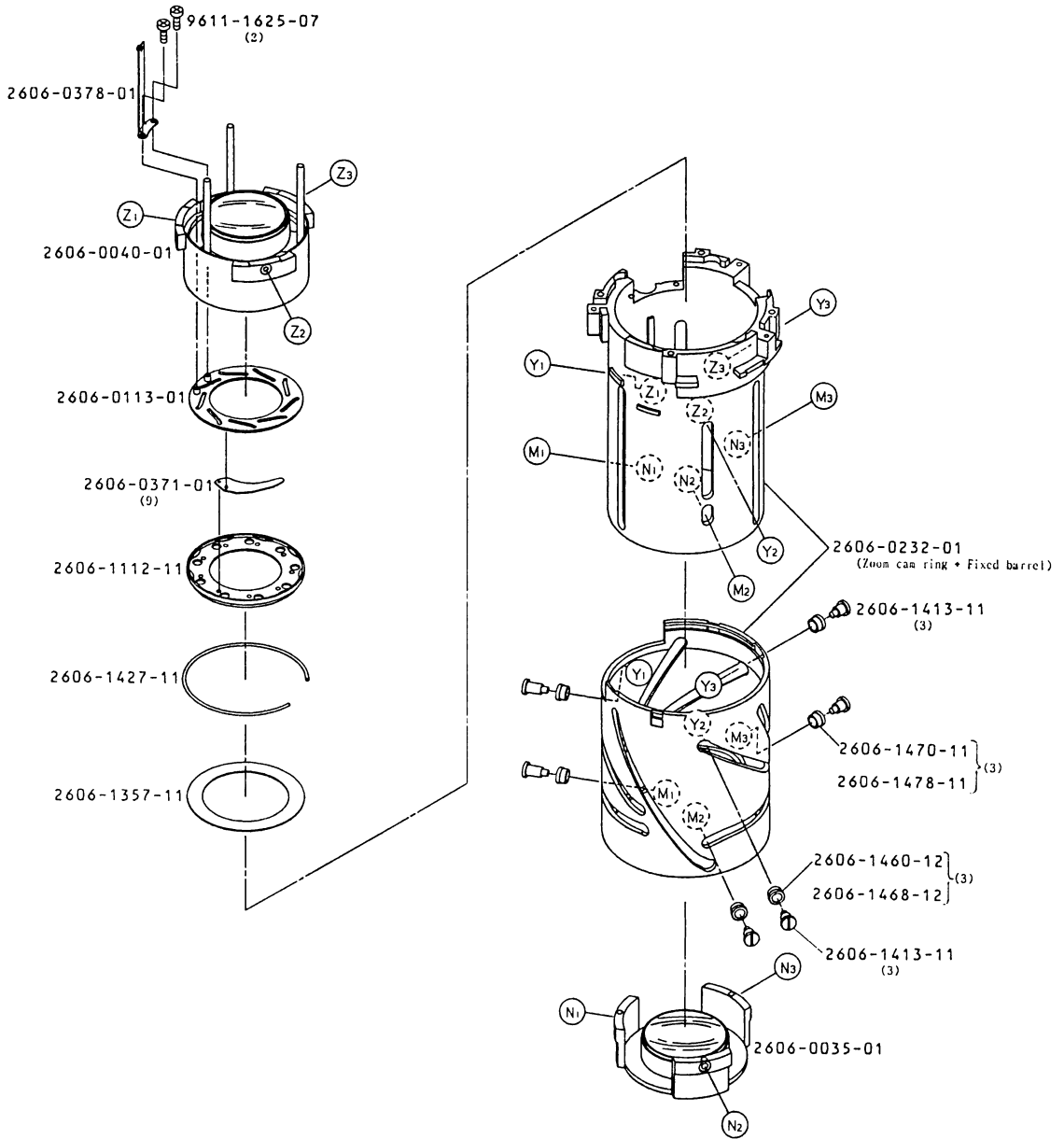


PART NO.	PART NAME		QTY.	PART NO.	
2606-0240-01	BAYONET MOUNT SET	バヨネットマウントセット	1	2550-1444-01	
2606-0372-01	PRESET RING SET	プリセットリングセット	1	2606-1638-01	
2606-0381-01	GEAR SET	ギヤセット	1	9384-2581-01	
2606-1237-12	ZOOM RING	ズーム操作環	1	9611-1427-12	
2606-1242-12	LIGHT SHIELD RING	後遮光筒	1	9761-1742-12	
2606-1244-12	ZOOM RING SET RING	ズーム環抜け止め	1	9761-2044-12	
2606-1340-11	WASHER-A (T=0.05)	ガタ調整ワッシャA	1	9762-1740-11	
2606-1341-11	WASHER-B (T=0.07)	ガタ調整ワッシャB		0~2	9762-1741-11
2606-1342-11	WASHER-C (T=0.1)	ガタ調整ワッシャC			9763-1742-11
2606-1374-11	PRESET RING PRESSURE	プリセットリング押え	1		
2606-1375-11	ZOOM RING PREVENTION BOARD	ズーム環保護板	1		
2585-1380-11	BRUSH	ブラシ	1		
2606-1383-11	ZOOM OPERATION PLATE	ズーム連動板	2		
2551-1385-02	BACK WASHER-A (T=0.05)	バックワッシャA	Some		
2551-1386-02	BACK WASHER-B (T=0.07)	バックワッシャB			
2551-1387-02	BACK WASHER-C (T=0.1)	バックワッシャC			
2551-1388-02	BACK WASHER-D (T=0.2)	バックワッシャD			
2551-1389-02	BACK WASHER-E (T=0.5)	バックワッシャE			
2591-1391-01	ADJUSTMENT WASHER (T=0.05)	カブラー調整ワッシャー	Some		
2591-1392-01	ADJUSTMENT WASHER (T=0.07)	カブラー調整ワッシャー			
2591-1393-01	ADJUSTMENT WASHER (T=0.1)	カブラー調整ワッシャー			
2591-1394-01	ADJUSTMENT WASHER (T=0.2)	カブラー調整ワッシャー			
2591-1395-01	ADJUSTMENT WASHER (T=0.5)	カブラー調整ワッシャー			
2606-1392-11	GEAR COVER	ギヤカバー	1		
2606-1402-11	COUPLER	カブラー	1		
2606-1412-12	AXIS RECEIVER	ギヤA軸受	1		
2555-1420-01	MAIN SPRING	メインスプリング	1		
2550-1424-01	SPRING	アーススプリング	1		
2606-1433-11	RUBBER RING	ズーム操作環ゴムリング	1		
2593-1438-01	TAPE (PER/ROLL)	補強テープ	1		
2606-1438-11	RUBBER RING	距離環ゴムリング	1		
2551-1444-01	BAYONET POINT	バヨネット標点	1		

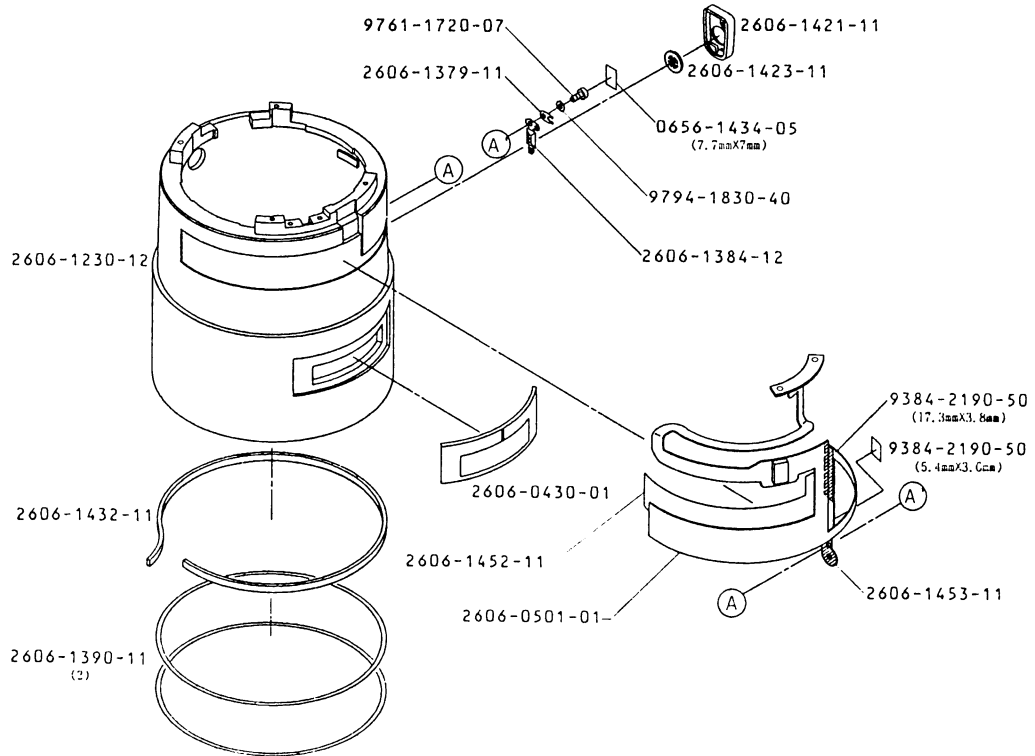
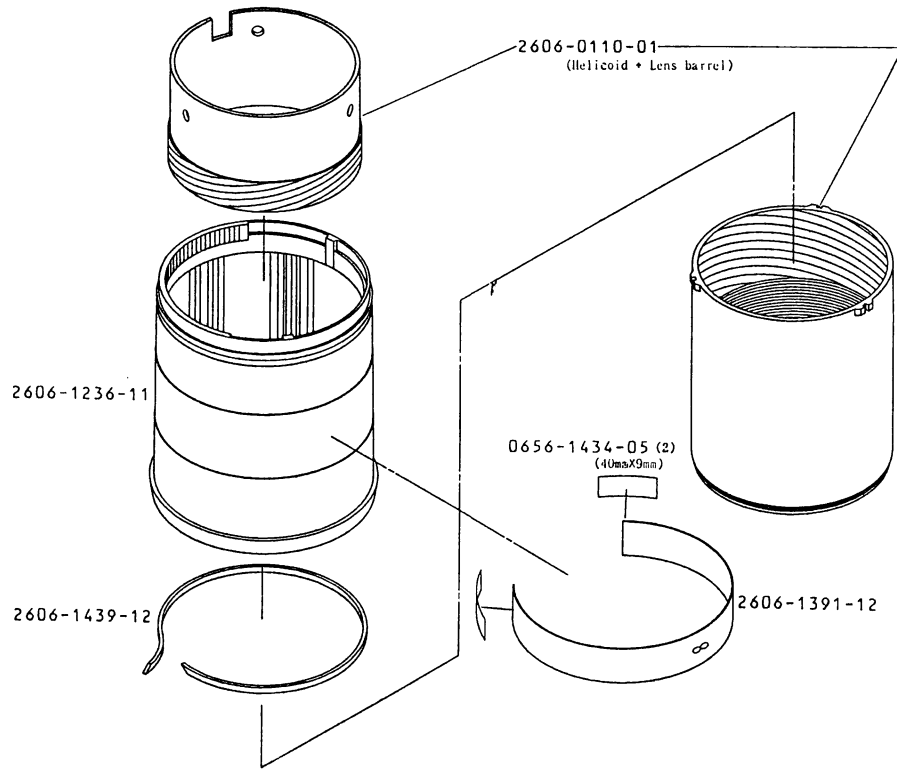
QTY.	PART NO.	PART NAME		QTY.	
1	2550-1446-01	SCREW	ストッパービス	1	
1	2606-1638-11	RUBBER RING	距離環ゴムリング	1	
1	9384-2590-50	MENDING TAPE (1R/50M)	メンディングテープ	1	
1	9611-1422-07	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	3	
1	9761-1730-07	TAP TITE SCREW	十字穴付タップタイトねじ	4	
1	9761-2055-04	TAP TITE SCREW	十字穴付タップタイトねじ	4	
} 0~2	1	9762-1740-07	TAP TITE SCREW	十字穴付タップタイトねじ	3
		9762-1750-07	TAP TITE SCREW	十字穴付タップタイトねじ	2
		9763-1740-07	TAP TITE SCREW	十字穴付タップタイトねじ	2
1					
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PART NO.	PART NAME		QTY.
2606-0031-01	FRONT LENS BARREL SET	前玉枠セット	1
2606-0045-01	4TH MOVING BARREL SET	第4移動枠セット	1
2606-0353-01	MOVING LIGHT SHIELD PLATE SET	移動遮光板セット	1
2606-0810-11	G 1.2 SET	G1.2セット	1
2606-1102-11	G1.2 PRESSURE RING	G1.2 押え	1
2606-1351-12	1ST LIGHT SHIELD PLATE	第1遮光板	1
2606-1361-11	ADJUSTING WASHER-A (T=0.05)	像点移動調整ワッシャA	} Some
2606-1362-11	ADJUSTING WASHER-B (T=0.06)	像点移動調整ワッシャB	
2606-1363-11	ADJUSTING WASHER-C (T=0.07)	像点移動調整ワッシャC	
2606-1364-11	ADJUSTING WASHER-D (T=0.1)	像点移動調整ワッシャD	
2606-1365-11	ADJUSTING WASHER-E (T=0.2)	像点移動調整ワッシャE	
2606-1366-11	ADJUSTING WASHER-F (T=0.5)	像点移動調整ワッシャF	
2606-1367-11	WASHER	スプリング脱落防止ワッシャ	3
2606-1382-11	FOCUS STOPPER	フォーカスストッパー	1
2606-1414-12	GUIDE PIN-B (D=3.61)	案内ピンB	} 3
2606-1415-12	GUIDE PIN-C (D=3.6)	案内ピンC	
2606-1416-12	GUIDE PIN-D (D=3.59)	案内ピンD	
2606-1437-11	TAPE	第1遮光板セットテープ	1
2606-1451-12	SPRING	遮光板押えスプリング	3
2606-1460-12	GUIDE ROLLER-A (D1=4.04 D2=3.75)	案内ローラA	} 3
2606-1461-12	GUIDE ROLLER-B (D1=4.04 D2=3.74)	案内ローラB	
2606-1462-12	GUIDE ROLLER-C (D1=4.04 D2=3.73)	案内ローラC	
2606-1463-12	GUIDE ROLLER-D (D1=4.03 D2=3.75)	案内ローラD	
2606-1464-12	GUIDE ROLLER-E (D1=4.03 D2=3.74)	案内ローラE	
2606-1465-12	GUIDE ROLLER-F (D1=4.03 D2=3.73)	案内ローラF	
2606-1466-12	GUIDE ROLLER-G (D1=4.02 D2=3.75)	案内ローラG	
2606-1467-12	GUIDE ROLLER-H (D1=4.02 D2=3.74)	案内ローラH	
2606-1468-12	GUIDE ROLLER-I (D1=4.02 D2=3.73)	案内ローラI	
9384-2190-50	DOUBLE-FACED TAPE (PER ROLL)	両面テープ	1
9761-1740-07	TAP TITE SCREW	十字穴付タップタイトねじ	2
9762-1760-07	TAP TITE SCREW	十字穴付タップタイトねじ	4



PART NO.	PART NAME		QTY.
2606-0035-01	2ND MOVING BARREL SET	第2移動枠セット	1
2606-0040-01	3RD MOVING BARREL SET	第3移動枠セット	1
2606-0113-01	DIAPHRAGM OPERATION PLATE SET	絞り操作板セット	1
2606-0232-01	ZOOM CAM RING SET	ズームカム環セット	1
2606-0371-01	DIAPHRAGM BLADE SET	絞り羽根セット	9
2606-0378-01	DIAPHRAGM CONNECTING PLATE SET	絞り連動板セット	1
2606-1112-11	DIAPHRAGM PRESSURE RING	絞り押え環	1
2606-1357-11	4TH LIGHT SHIELD PLATE	第4遮光板	1
2606-1413-11	GUIDE PIN-A	案内ピンA	6
2606-1427-11	SPRING WASHER-B	スプリングワッシャB	1
2606-1460-12	GUIDE ROLLER-A (D1=4.04 D2=3.75)	案内ローラA	3
2606-1461-12	GUIDE ROLLER-B (D1=4.04 D2=3.74)	案内ローラB	
2606-1462-12	GUIDE ROLLER-C (D1=4.04 D2=3.73)	案内ローラC	
2606-1463-12	GUIDE ROLLER-D (D1=4.03 D2=3.75)	案内ローラD	
2606-1464-12	GUIDE ROLLER-E (D1=4.03 D2=3.74)	案内ローラE	
2606-1465-12	GUIDE ROLLER-F (D1=4.03 D2=3.73)	案内ローラF	
2606-1466-12	GUIDE ROLLER-G (D1=4.02 D2=3.75)	案内ローラG	
2606-1467-12	GUIDE ROLLER-H (D1=4.02 D2=3.74)	案内ローラH	
2606-1468-12	GUIDE ROLLER-I (D1=4.02 D2=3.73)	案内ローラI	
2606-1470-11	2ND GUIDE ROLLER-A (D1=4.04 D2=3.78)	第2群案内ローラA	3
2606-1471-11	2ND GUIDE ROLLER-B (D1=4.04 D2=3.77)	第2群案内ローラB	
2606-1472-11	2ND GUIDE ROLLER-C (D1=4.04 D2=3.76)	第2群案内ローラC	
2606-1473-11	2ND GUIDE ROLLER-D (D1=4.03 D2=3.78)	第2群案内ローラD	
2606-1474-11	2ND GUIDE ROLLER-E (D1=4.03 D2=3.77)	第2群案内ローラE	
2606-1475-11	2ND GUIDE ROLLER-F (D1=4.03 D2=3.76)	第2群案内ローラF	
2606-1476-11	2ND GUIDE ROLLER-G (D1=4.02 D2=3.78)	第2群案内ローラG	
2606-1477-11	2ND GUIDE ROLLER-H (D1=4.02 D2=3.77)	第2群案内ローラH	
2606-1478-11	2ND GUIDE ROLLER-I (D1=4.02 D2=3.76)	第2群案内ローラI	
9611-1625-07	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	2



PART NO.	PART NAME		QTY.
2606-0110-01	HELICOID SET	ヘリコイドセット	1
2606-0430-01	DISTANCE SCALE WINDOW SET	距離目盛窓セット	1
2606-0501-01	FLEXIBLE PC BOARD SET	フレキセット	1
2606-1230-12	OUTER RING	固定保持環	1
2606-1236-11	FOCUSING RING	距離環	1
2606-1379-11	PRESSURE PLATE	クリック板押え板	1
2606-1384-12	CLICK PLATE	クリックプレート	1
2606-1390-11	RING	固定保持環補強リング	2
2606-1391-12	DISTANCE SCALE PLATE	距離目盛板	1
2606-1421-11	FOCUS HOLD BUTTON PLATE	フォーカスホールドボタン台座	1
2606-1423-11	FOCUS HOLD BUTTON	フォーカスホールドボタン	1
2606-1432-11	FRICTION TAPE-A	摩擦布A	1
0656-1434-05	SCOTCH TAPE (PER ROLL)	補強テープ	1
2606-1439-12	FRICTION TAPE-B	摩擦布B	1
2606-1452-11	TAPE	フレキセットテープB	1
2606-1453-11	TAPE	フレキセットテープC	1
9384-2190-50	DOUBLE-FACED TAPE (PER ROLL)	両面テープ	1
9761-1720-07	TAP TITE SCREW	十字穴付タップタイトねじ	1
9794-1830-40	WASHER	薄ワッシャー	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 —

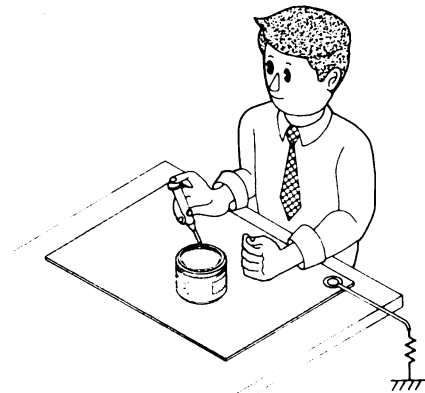
- **B** : Adhesive
- **S** : Solvent
- **A** : Anti-diffusion compound
- **G** : Lubricant
- **T** : Tool
- : Point of assembling and general caution

■ Assembling and adjusting procedure

	Page
① Fixed barrel, Zoom cam ring, 3rd moving barrel, Diaphragm blade assembling	1
■ Attaching position of tapes	2
② Outer ring, Flexible PC board set, Focus hold button, Bayonet mount assembling	3
■ Aperture diameter adjusting	4
③ 2nd moving barrel, 4th moving barrel, Moving light shield plate, Outer ring, Helicoid barrel assembling	5
■ 4th moving barrel, Helicoid barrel installing	6
④ Focusing ring, Lens barrel, Front lens group, Focus stopper, Gear set assembling	7
■ Lens barrel, Focusing ring installing	8
⑤ Zoom ring, Coupler, Bayonet mount, Back washer assembling	9
■ Focus shift/flange back adjusting	10
■ Projection resolving power checking	10
■ Brush position adjusting	10
■ General function checking	10
■ Aperture diameter checking	11
■ Description of focusing and zooming	12
■ Circuit diagram and printed wiring diagram	13

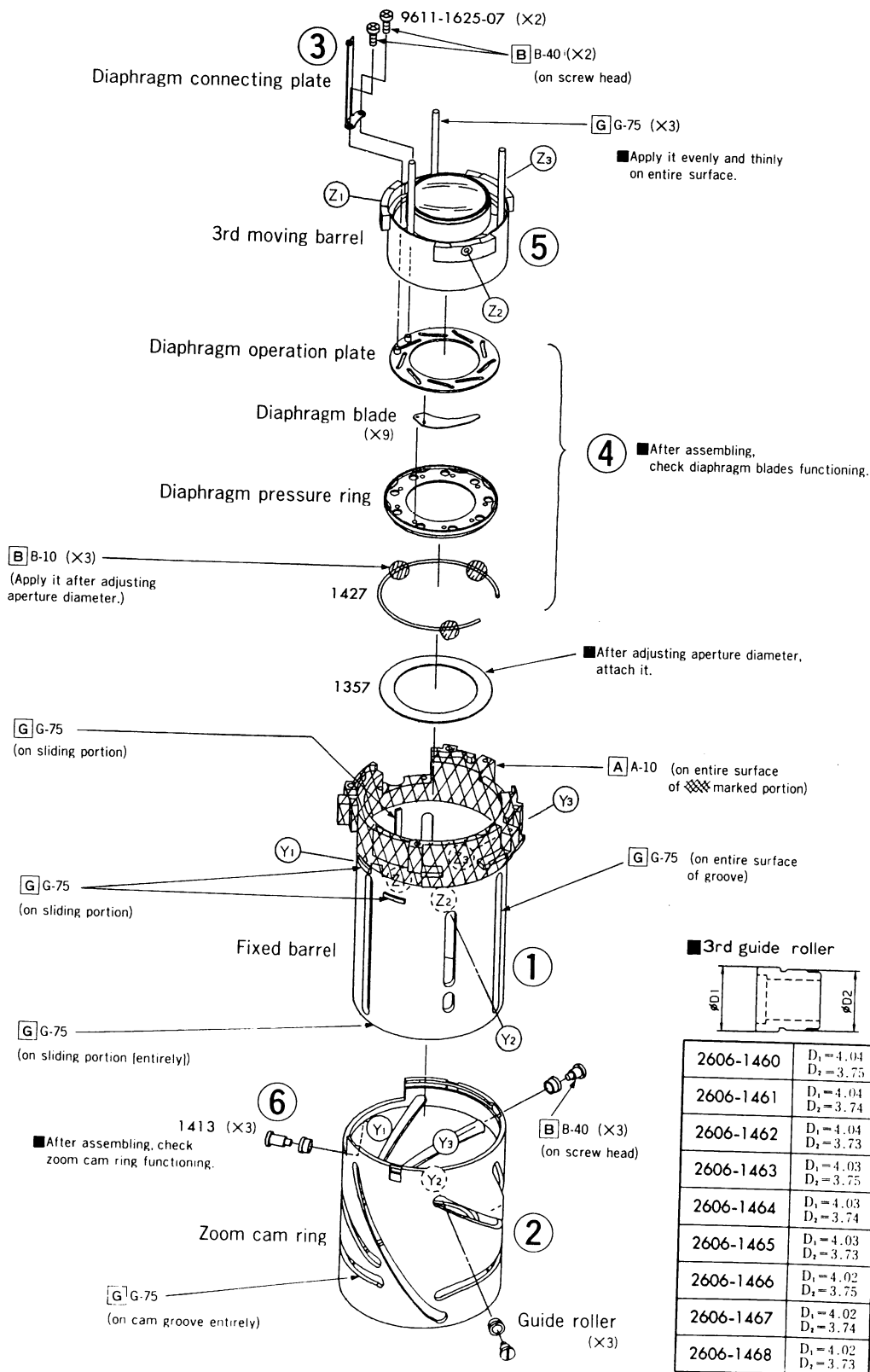
■ Precautions

- Since this lens uses many resin parts, keep the following in mind when assembling and adjusting.
 - Use liquid freon or alcohol when cleaning.
 - Never use 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.



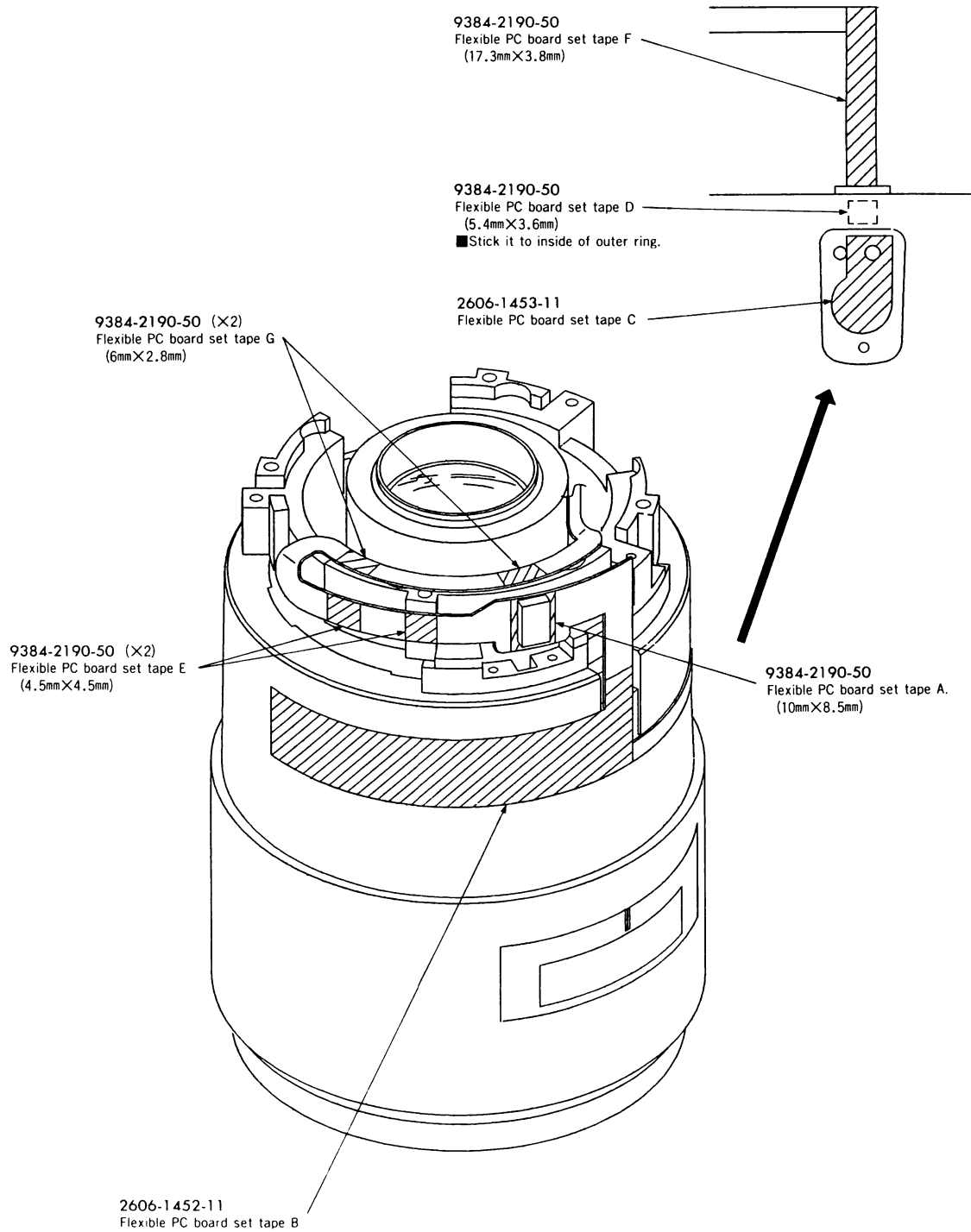
1 Fixed barrel, Zoom cam ring, 3rd moving barrel, Diaphragm blade

■ Assemble the parts in order of ① - ⑥.

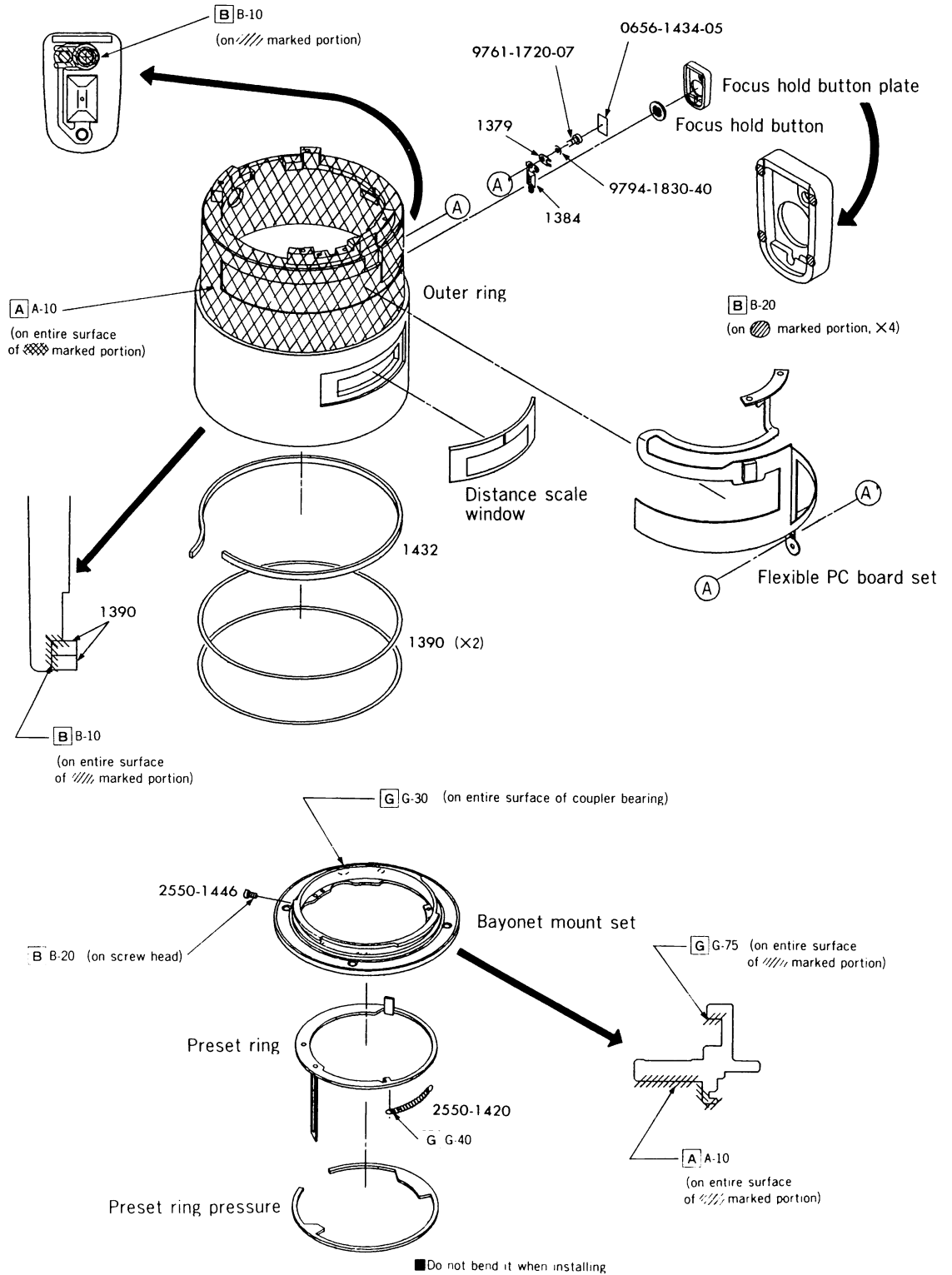


■ Attaching position of tapes

■ Attach flexible-PCB-tapes A-G as shown below.



2 Outer ring, Flexible PC board set, Focus hold button, Bayonet mount



Aperture diameter adjusting

On this model, diaphragm blades are slightly left in light path at full-opening aperture setting. Also, aperture diameter changes by zooming.

Please adjust aperture diameter as follows. Then, check it, according to the procedure on p.11 when assembling is completed.

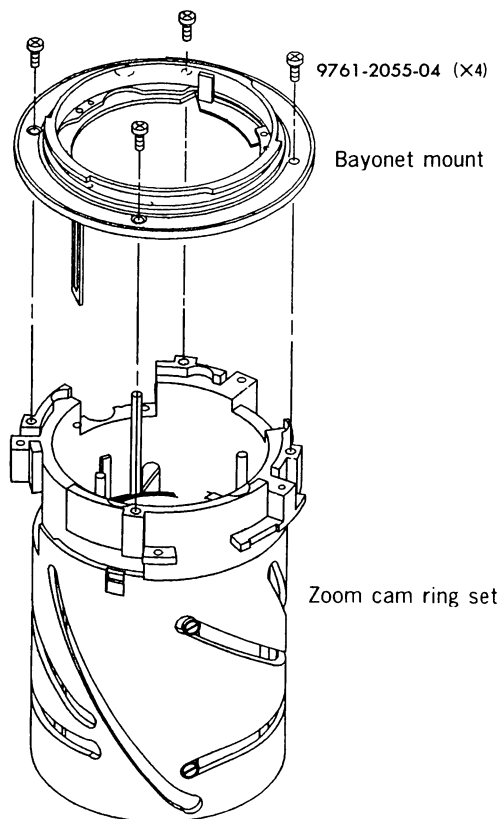
■ Tool : Aperture full-opening jig (2550-0110-75)

■ Adjusting procedure

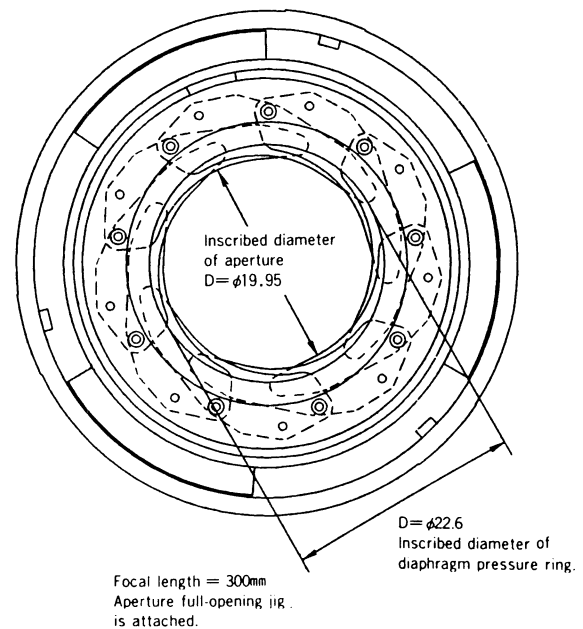
- ① Assemble lens as fig.1.
- ② Set focal length to 300mm.
- ③ Attach the tool to lens so that preset ring opens fully.
- ④ Rising 1427 (spring washer) slightly, rotate diaphragm pressure ring so that inscribed diameter of aperture is set as fig.2.

NOTE : After adjusting, set 1427 and fix it with bond. Then, attach 1357 to 3rd moving barrel. (Refer to p.1)

■ Fig. 1



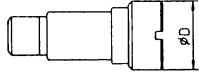
■ Fig. 2



3 2nd moving barrel, 4th moving barrel, Moving light shield plate, Outer ring, Helicoid barrel

■ Assemble the parts in order of ① – ⑨. (Refer to installing procedure on p.6.)

■ 4th guide pin



2606-1414	D=3.61
2606-1415	D=3.6
2606-1416	D=3.59

■ 2nd guide roller

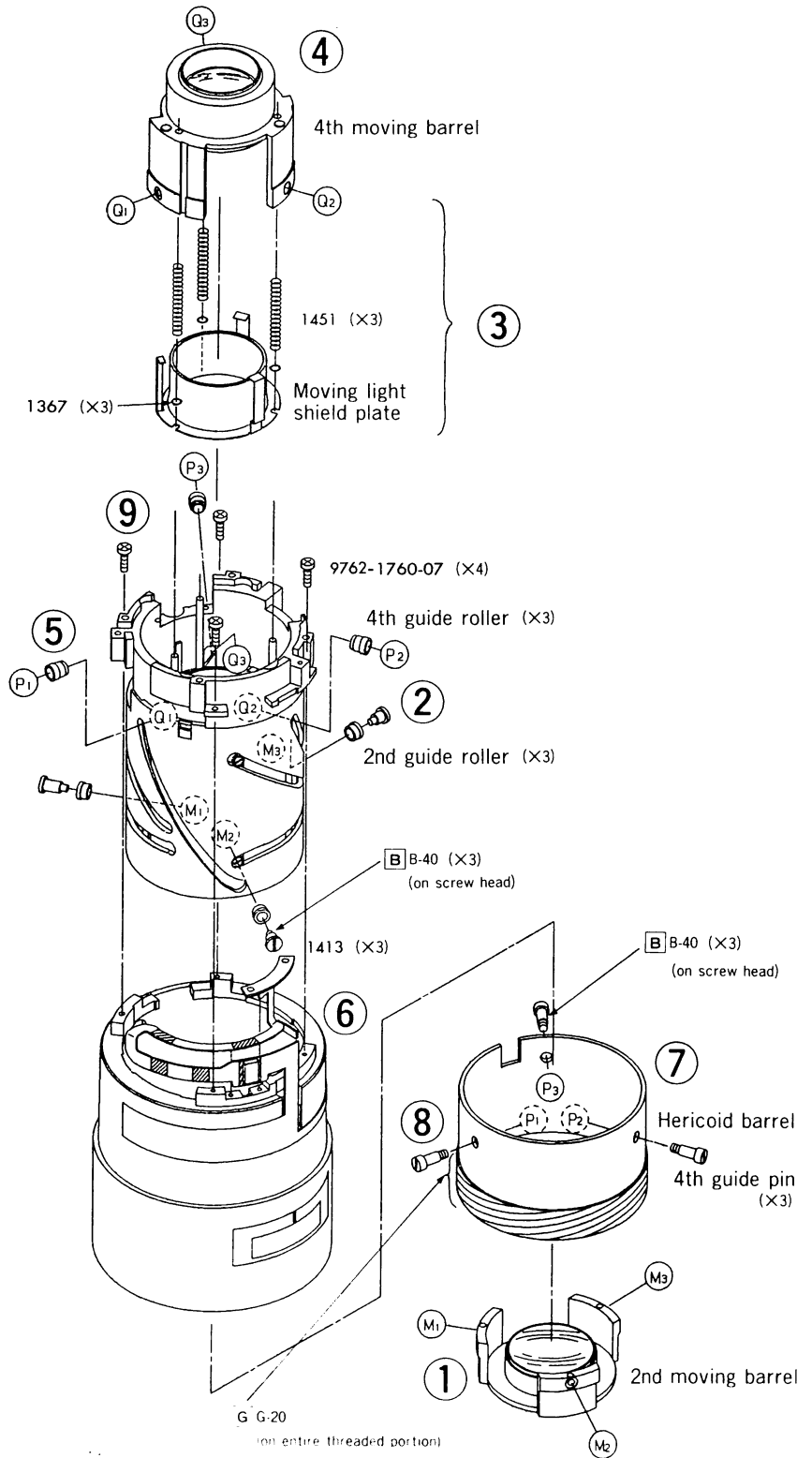


2606-1470	D ₁ = 4.04 D ₂ = 3.78
2606-1471	D ₁ = 4.04 D ₂ = 3.77
2606-1472	D ₁ = 4.04 D ₂ = 3.76
2606-1473	D ₁ = 4.03 D ₂ = 3.78
2606-1474	D ₁ = 4.03 D ₂ = 3.77
2606-1475	D ₁ = 4.03 D ₂ = 3.76
2606-1476	D ₁ = 4.02 D ₂ = 3.78
2606-1477	D ₁ = 4.02 D ₂ = 3.77
2606-1478	D ₁ = 4.02 D ₂ = 3.76

■ 4th guide roller



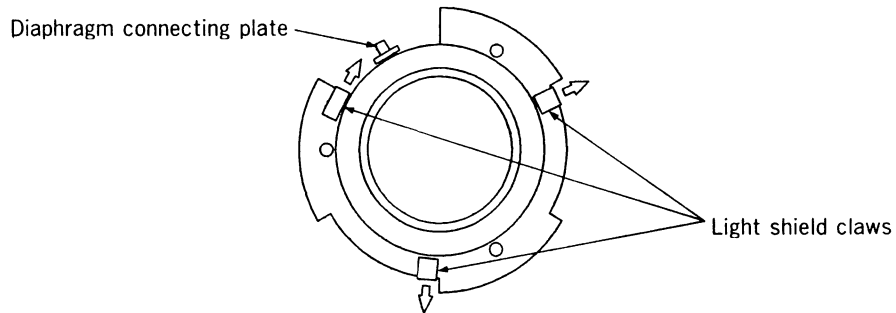
2606-1460	D ₁ = 4.04 D ₂ = 3.75
2606-1461	D ₁ = 4.04 D ₂ = 3.74
2606-1462	D ₁ = 4.04 D ₂ = 3.73
2606-1463	D ₁ = 4.03 D ₂ = 3.75
2606-1464	D ₁ = 4.03 D ₂ = 3.74
2606-1465	D ₁ = 4.03 D ₂ = 3.73
2606-1466	D ₁ = 4.02 D ₂ = 3.75
2606-1467	D ₁ = 4.02 D ₂ = 3.74
2606-1468	D ₁ = 4.02



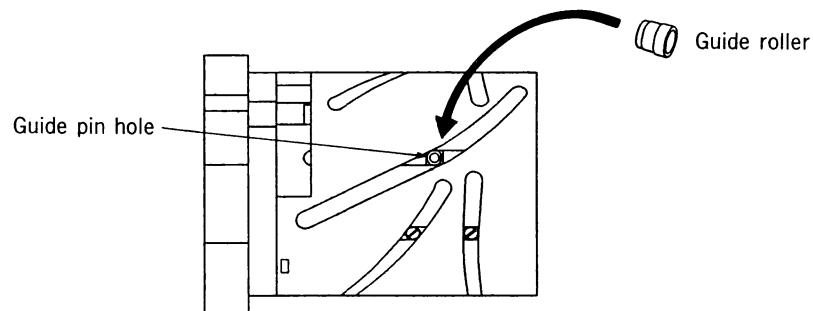
■ 4th moving barrel, Helicoid barrel installing

■ Assemble the parts in the following procedure.

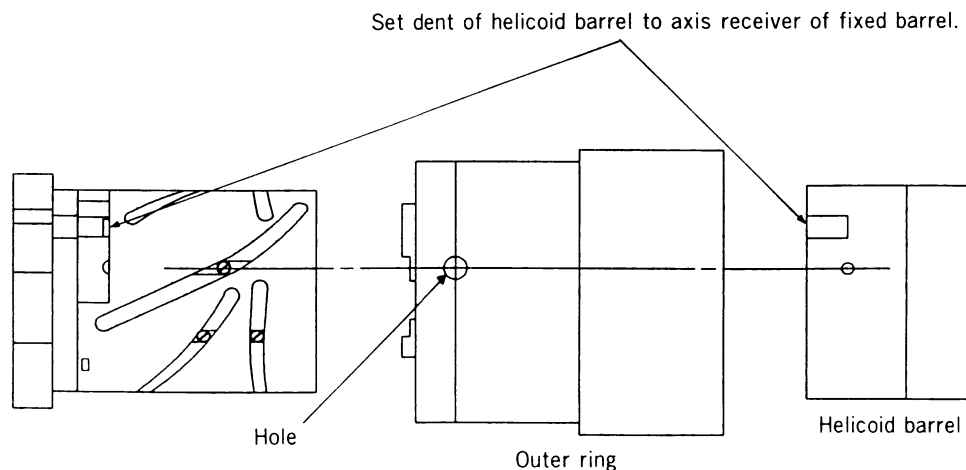
- ① Install 4th moving barrel, 1367 (×3), and 1451 (×3). Then, set moving light shield plate to 4th moving barrel, putting light shield claws aside in the direction of arrows (⇒). Be careful not to bend guide bar and light shield claws.



- ② Rotate zoom cam ring until the guide pin hole on 4th moving barrel appears through cam groove. And install guide rollers (×3)



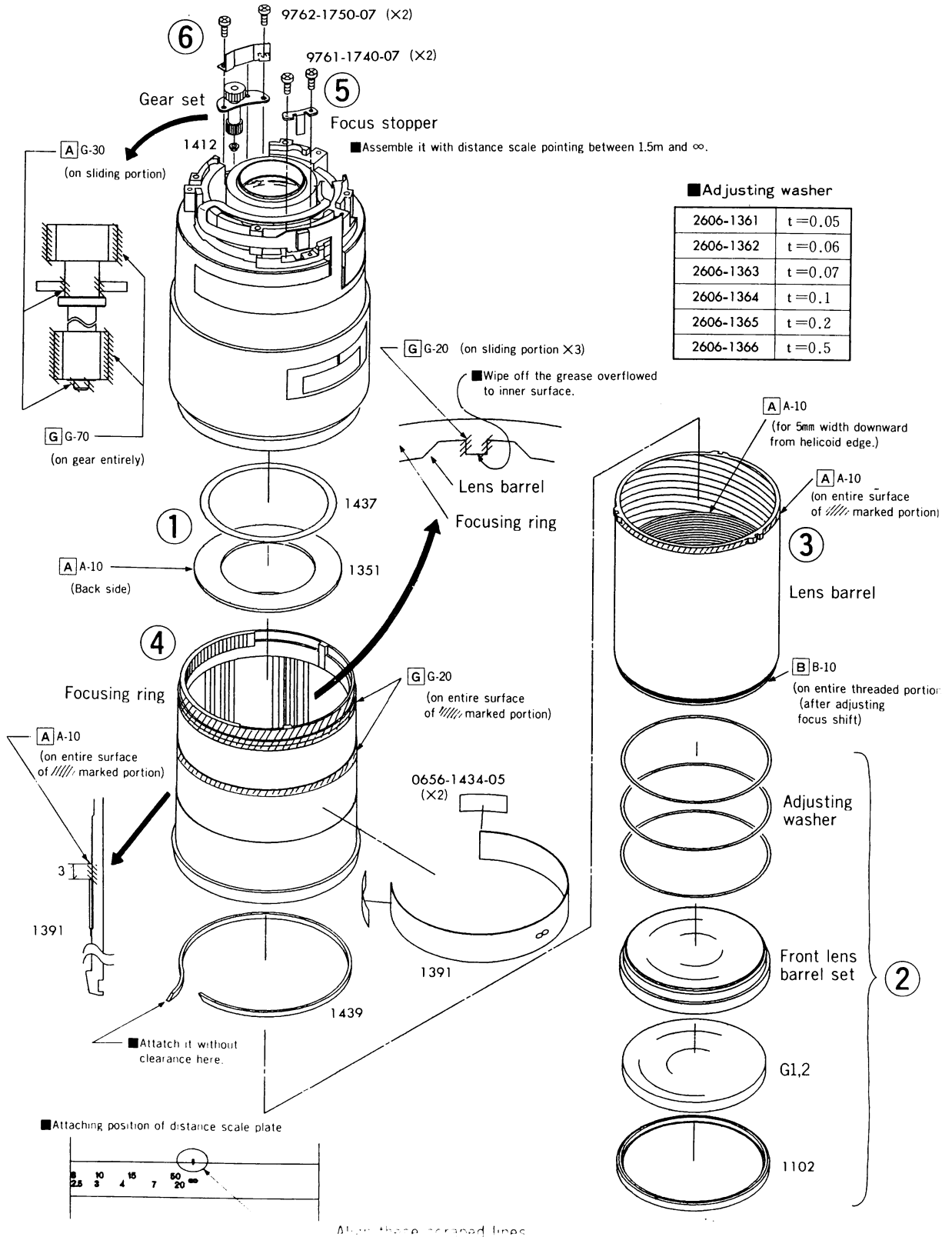
- ③ Assemble outer ring and helicoid barrel as shown below. Tighten guide pin through the hole on outer ring. (For easier assembling of helicoid barrel, set lens barrel beforehand.)



- ④ Rotate outer ring 120° respectively for tightening residual 2 guide pins through the hole.

4 Focusing ring, Lens barrel, Front lens group, Focus stopper, Gear set

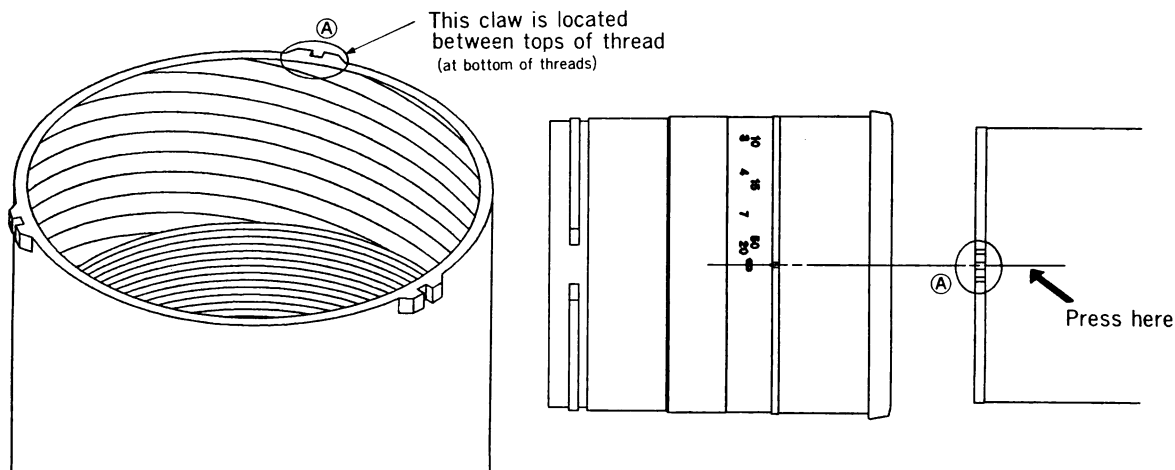
■ Assemble the parts in order of ①—⑥. (Refer to installing procedure on p.8)



■ Lens barrel, Focusing ring installing

■ Assemble the parts in the following procedure.

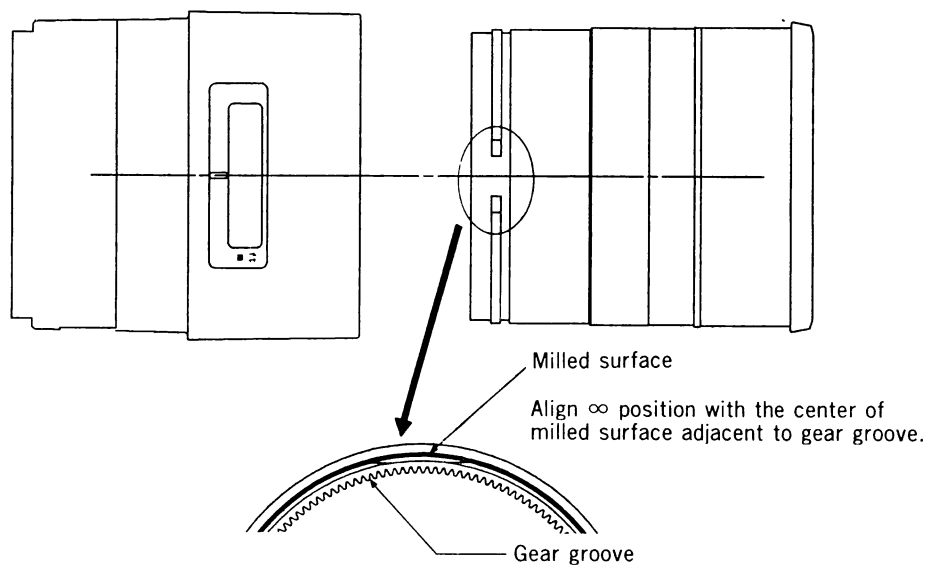
① Align claw "A" of lens barrel with "∞" mark on focusing ring.



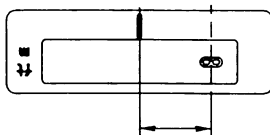
② Fit other claws to rail of focusing ring. Insert lens barrel into focusing ring, pressing the side of "A".

(When disassembling, pull lens barrel, pressing the side of "A".)

③ Align the helicoids as shown below in order to install front lens group.



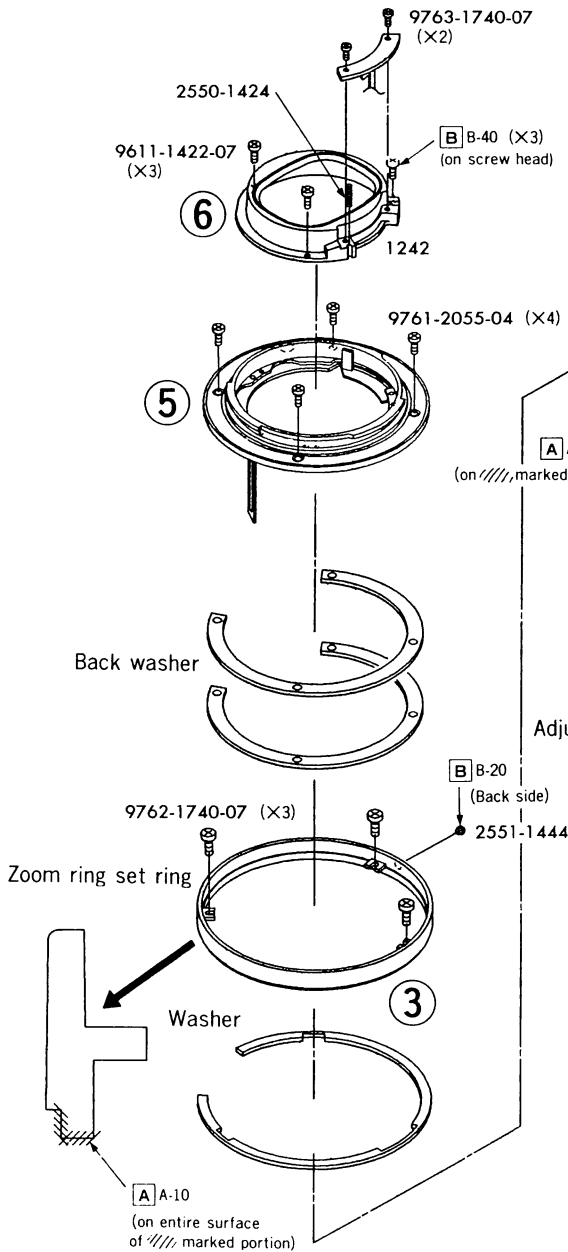
④ Make sure that ∞ overpasses the index about 11mm when helicoid is screwed to the stop.



⑤ If not, repeat above 1 - ③.

5 Zoom ring, Coupler, Bayonet mount, Back washer

■ Assemble the parts in order of ①—⑨.



■ Back washer

2551-1385	t=0.05
2551-1386	t=0.07
2551-1387	t=0.1
2551-1388	t=0.2
2551-1389	t=0.5

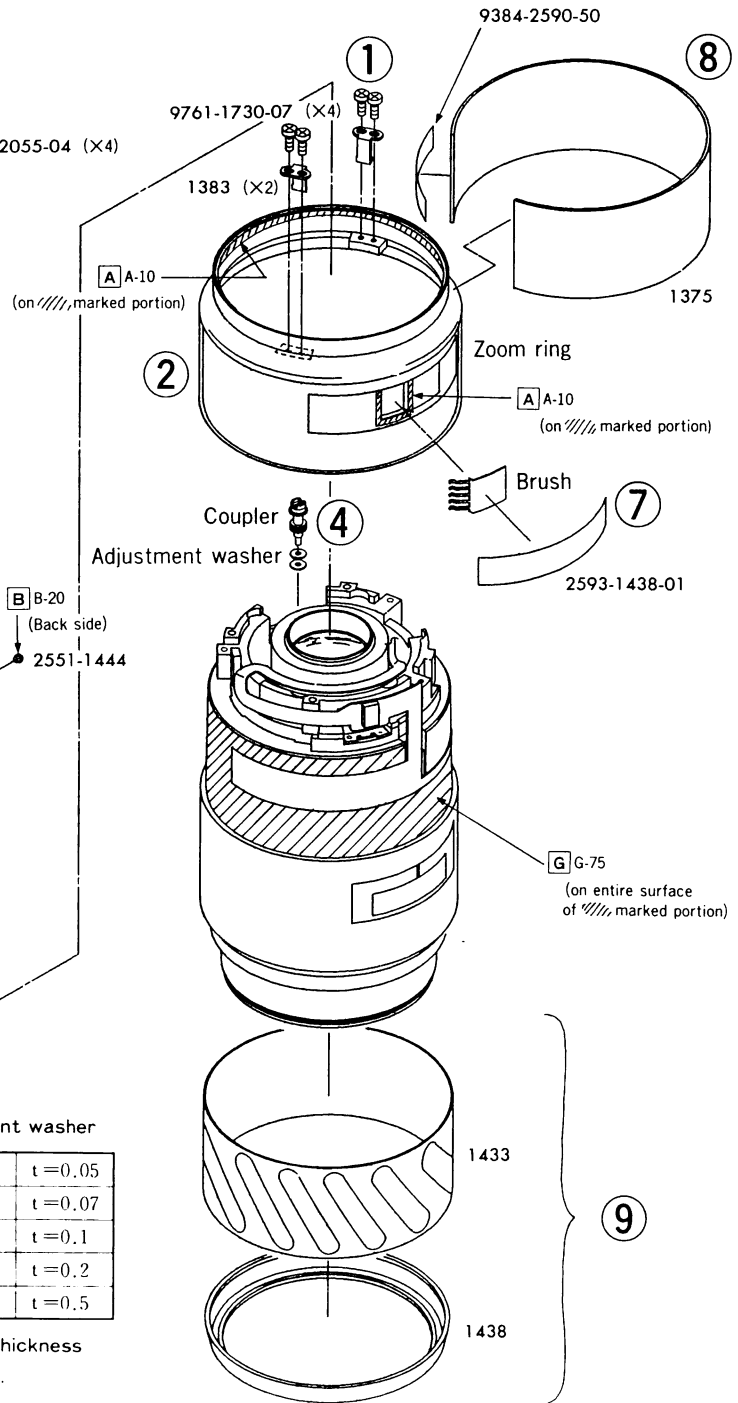
■ Adjustment washer

2591-1391	t=0.05
2591-1392	t=0.07
2591-1393	t=0.1
2591-1394	t=0.2
2591-1395	t=0.5

■ Use adjustment washer of which thickness is obtained from the formula below.

■ Zoom ring installing procedure

- 1) Tighten 1383 (×2) temporarily, then install zoom ring.
- 2) With lens barrel attached, tighten screws, pressing zoom ring to wide side stop.



■ After assembling ①—⑦, adjust and check as follows.

(1) Adjust focus shift/flange back.

Focus shift adjustment procedure

① Measure flange back value at focal length $f=300\text{mm}$ ($=f't$) and at $f=100\text{mm}$ ($=f'w$), referring to pp. 3-4 of "General checking/adjusting procedure".

② Calculate the thickness of adjusting washer ($=T$) from the formula below.

$$T = (f't - f'w) / 6.7559$$

T : Thickness of adjusting washer (mm)
 $f't$: Flange back at $f=300\text{mm}$ (mm)
 $f'w$: Flange back at $f=100\text{mm}$ (mm)

③ If "T" is positive value, increase the thickness of adjusting washer for that value.

If negative, decrease the thickness for that value.

(Adjusting washer : 2606-1361 to -1366, cf. p.7)

④ Measure flange back at each focal length ($f=100, 200, 300$) and make sure that focus shift is within the allowable range.

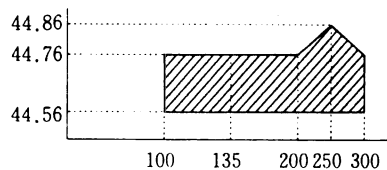
Flange back adjustment

(Refer to p.5 of "General adjusting/checking procedure".)

(Back washer : 2551-1385 to 1389, cf. p.9)

Allowable range

f(mm)	f'F(mm)
100	44.56~44.76
200	44.56~44.76
300	44.56~44.76



(2) Check projection resolving power. (Refer to p.6 of "General checking/adjusting procedure".)

Allowable range for servicing

f(mm)	Distance D(m)	Center (y'=0)	y'=15	
			S	M
100	4.5	80	32	25
200	8.4	80	32	25
300	12.1	80	32	25

S : Sagittal image
M : Meridional image

(3) Adjust brush position. (Refer to p.12 of "General checking/adjusting procedure".)

■ After assembling, check general function. (Refer to p.14 of "General checking/adjusting procedure".)

■ After assembling, check aperture diameter. (Refer to next page.)

[CAUTION]

Use PROGRAM PACK Ver. 6.3 or newer for Camera I/O Tester.

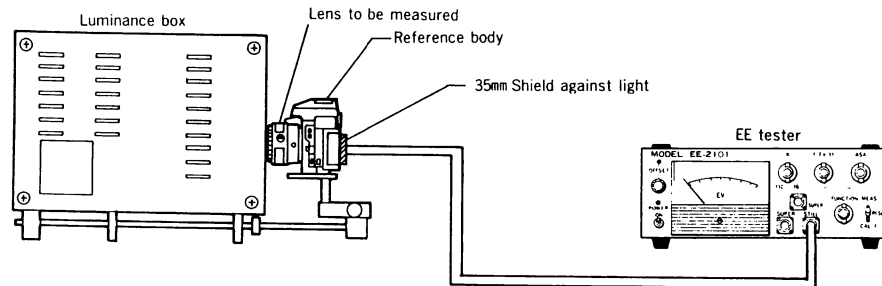
Aperture diameter checking

Since aperture diameter checking procedure of this model differs from that 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*)
: EE tester (Model EE-2101, EE-2111)
: Reference body (Select following p.9 of General checking/adjusting procedure)
※ Discontinued model

■ Preparation

1. Set measuring instruments as below.



- | | | | |
|--------------------|-----------------------------|-------------------------|------------------|
| ● Luminance source | ● Lens to be measured | ● Reference body | ● EE tester |
| K value : 1.3 | Distance scale ring : ∞ | Mode : M | Function : 35 |
| Luminance : Ev 11 | (infinity) | Shutter speed setting : | ASA : F |
| | Zoom operation ring : 300mm | bulb | K value : 1.3 |
| | | Aperture : f/11 | MEAS-CALF : CALF |
| | | Focus mode : M | F : 11 |

■ Checking procedure

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.

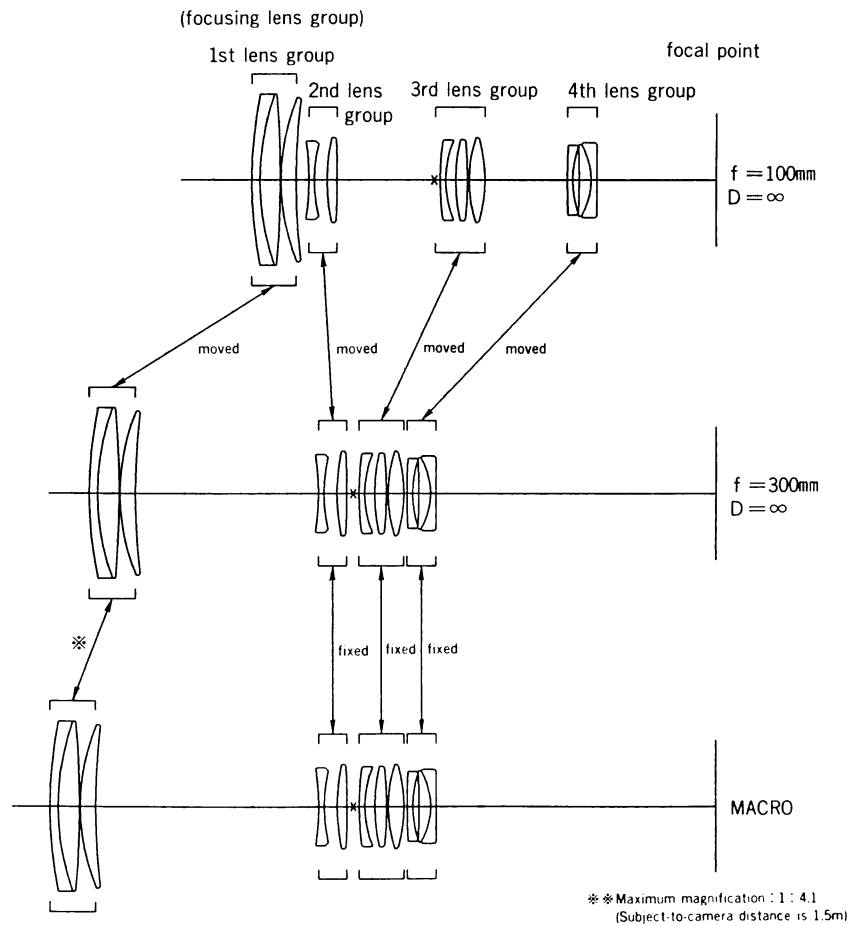
$$\boxed{\text{Aperture diameter error}} = \boxed{\text{Average of reading values}} - \boxed{\text{Error of Reference body}}$$

(cf. p.9 of General checking/adjusting procedure)

Allowable range
$(0 \pm 0.4) \text{Ev}$

■ Description of focusing and zooming

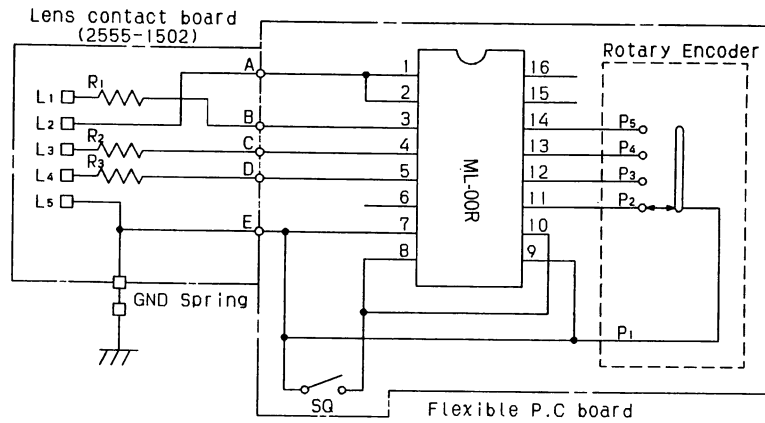
- System : 4-component mechanical-compensation zoom lens (positive, negative, positive and negative for 1st, 2nd, 3rd, and 4th lens group)
By rotating 2-rotary zoom ring, 1st and 4th lens groups are moved together, and 2nd and 3rd lens groups are moved individually.
- Aperture is moved with 3rd lens group. Aperture diameter is changed by zooming.
(Full-opening aperture is $f=4.5$ at focal length 100mm, $f=5.6$ at 300mm.)
- When focusing, focusing lens group (1st lens group) is moved by rotating AF coupler or focusing ring.
- As same as focusing system, macro operation is performed by moving focusing lens group. Maximum magnification is 1 : 4.1 with focal length 300mm, and subject-to-camera distance 1.5m.



⇄ Moved by rotating focusing ring or AF coupler

⇄ Minimum distance for macro operation is 1.5m with any focal length, however subject distance is maximized at tele stop ($f=300\text{mm}$)

■ Circuit diagram and printed wiring diagram



- L₁ ~ L₅ : Lens signal contact
- R₁ ~ R₃ : Printed resistor
- Q-Sw : Focus hold button
- ML-00R : ROM-IC
- A-E : Soldering point between flexible PCB & signal PCB
- P₁ ~ P₅ : Rotary encoder pattern switch (ON/OFF by zooming)

