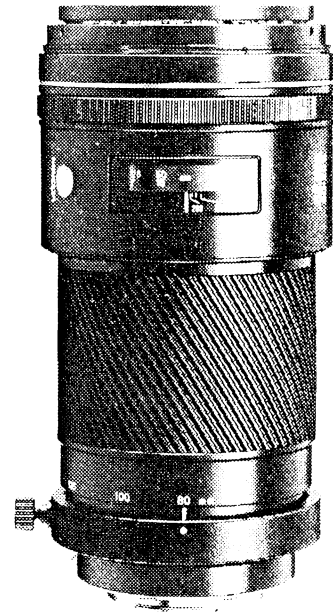
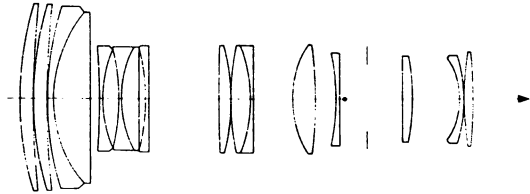


MINOLTA AF ZOOM 80-200mm

F2.8(2589-100)

MINOLTA MAXXUM AF ZOOM 80-200mm F2.8(2589-600)

Lens LENS



Construction : 16 elements in 13 groups
Type : 3-component mechanical-compensation
zoom lens
Coating : Minolta Achromatic
Angle of view : 30°-12°30'
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 : 9 blades

FOCUSING

Focusing : AF, FA, M
Type : Front focusing
Minimum focusing distance : 1.8m
Distance scale : $\frac{6 \quad 7 \quad 8 \quad 10 \quad 15 \quad 25 \quad 50}{1.8 \quad 2 \quad 2.5 \quad 3 \quad 4 \quad 7 \quad 15} \frac{\text{(ft)}}{\text{(m)}} \infty$
Infrared correction scale : Yes 200 80

ZOOMING

Type : Mechanical-compensation zoom lens
Zooming scale : 200 135 100 80
Zooming ratio : $\times 2.5$

DIMENSIONS & WEIGHT

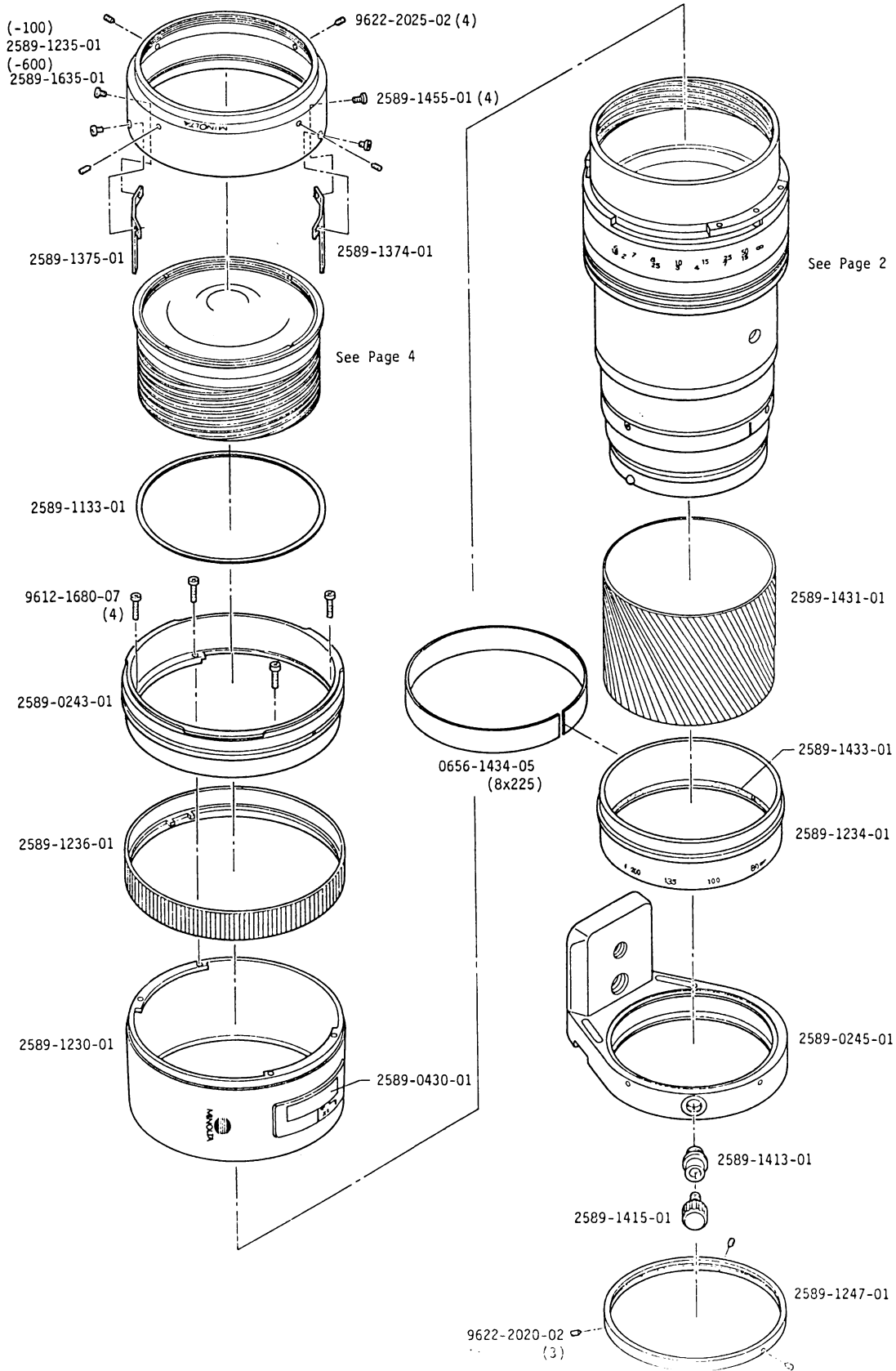
Dimensions : $\phi 87.5$ (max. diameter) \times
166.5mm(max. length)
Weight : 1350g
Filter-thread diameter : $\phi 72$ mm(P=0.75)
Tripod socket : U 1/4", U3/8"

ACCESSORIES

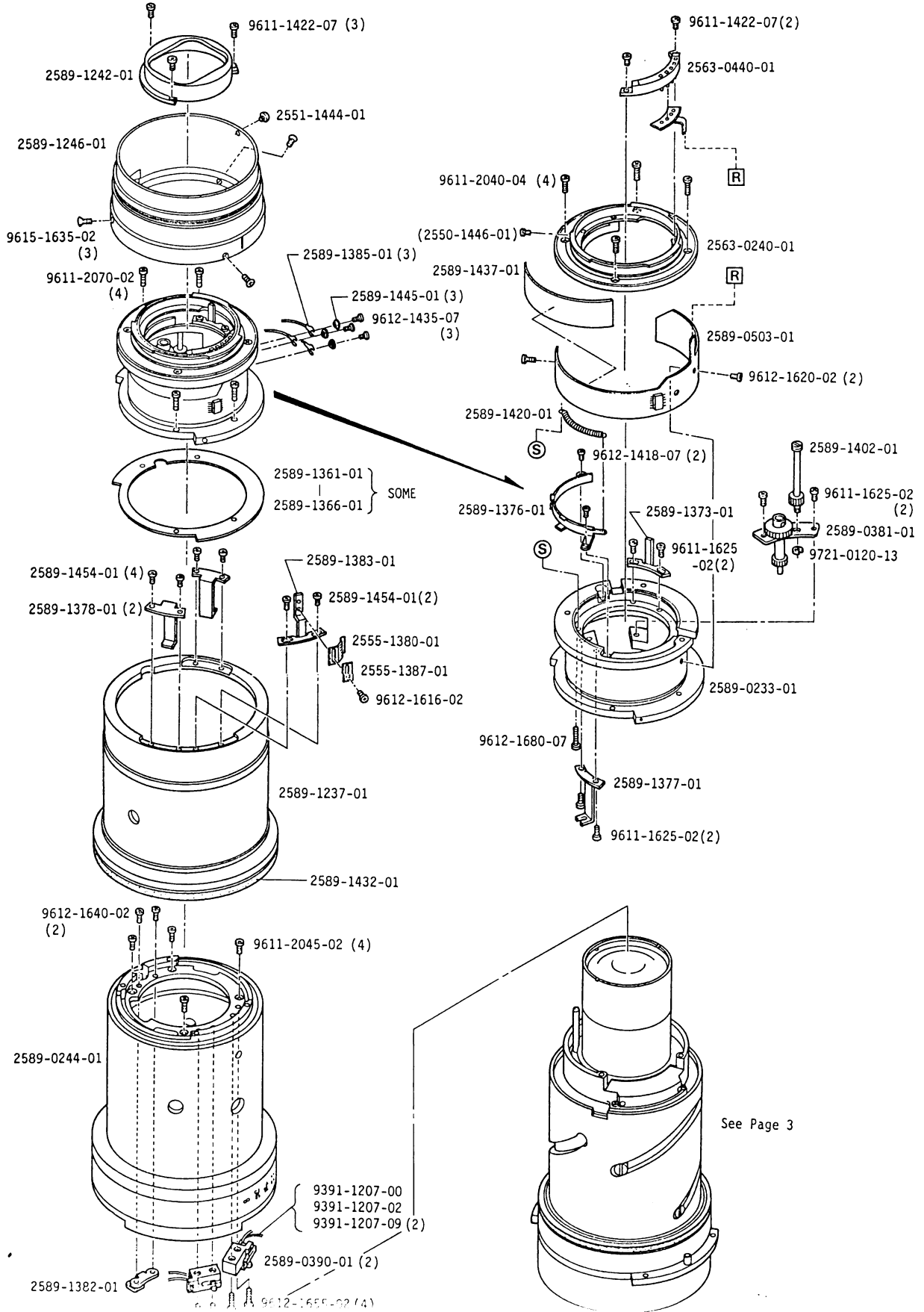
Lens case with a strap : 6589-511
Lens case without a strap : 6589-510
Lens hood : 6589-810 (Bayonet type)

I N D E X

PART NO.	PAGE	PART NO.	PAGE	PART NO.	PAGE
2589-0107	----- 4	2589-1248	----- 3	2589-1452	----- 3
2589-0109	----- 4	2589-1351	----- 4	2589-1453	----- 3
2589-0113	----- 3	2589-1352	----- 3	2589-1454	----- 2
2589-0116	----- 4	2589-1361	----- 2	2589-1455	----- 1
2589-0232	----- 4	2589-1362	----- 2	2589-1456	----- 3
2589-0233	----- 2	2589-1363	----- 2	2589-1635	----- 1
2563-0240	----- 2	2589-1364	----- 2	2589-1801	----- 4
2589-0243	----- 1	2589-1365	----- 2	2589-1802	----- 4
2589-0244	----- 2	2589-1366	----- 2	2589-1805	----- 4
2589-0245	----- 1	2589-1373	----- 2	2589-1808	----- 4
2589-0371	----- 3	2589-1374	----- 1	2589-1809	----- 4
2589-0381	----- 2	2589-1375	----- 1	2589-1812	----- 4
2589-0390	----- 2	2589-1376	----- 2	2589-1815	----- 4
2589-0430	----- 1	2589-1377	----- 2	2589-1816	----- 4
2563-0440	----- 2	2589-1378	----- 2		
2589-0503	----- 2	2555-1380	----- 2	9391-1207-00	----- 2
2589-0810	----- 4	2589-1382	----- 2	9391-1207-02	----- 2
2589-0820	----- 4	2589-1383	----- 2	9391-1207-09	----- 2
		2589-1385	----- 2		
2589-1102	----- 4	2555-1387	----- 2	9611-1422-07	----- 2
2589-1103	----- 4	2589-1387	----- 4	9611-1625-02	----- 2
2589-1104	----- 4	2589-1402	----- 2	9611-2040-04	----- 2
2589-1105	----- 4	2589-1413	----- 1	9611-2045-02	----- 2
2589-1106	----- 4	2589-1415	----- 1	9611-2070-02	----- 2
2589-1108	----- 4	2589-1418	----- 3		
2589-1112	----- 3	2589-1419	----- 3	9612-1418-07	----- 2
2589-1115	----- 4	2589-1420	----- 2	9612-1435-07	----- 2
2589-1117	----- 4	2589-1421	----- 4	9612-1616-02	----- 2
2589-1130	----- 3	2589-1422	----- 3	9612-1620-02	----- 2
2589-1132	----- 3	2589-1431	----- 1	9612-1640-02	----- 2
2589-1133	----- 1	2589-1432	----- 2	9612-1655-02	----- 2
2589-1230	----- 1	2589-1433	----- 1, 3	9612-1680-07	----- 1, 2
2589-1234	----- 1	0656-1434	----- 1	9615-1635-02	----- 2
2589-1235	----- 1	2589-1437	----- 2	9622-1625-02	----- 3
2589-1236	----- 1	2551-1444	----- 2	9622-2020-02	----- 1
2589-1237	----- 2	2589-1445	----- 2	9622-2025-02	----- 1
2589-1242	----- 2	2550-1446	----- 2	9721-0120-13	----- 2
2589-1244	----- 2	2589-1450	----- 2		



PART NO.	PART NAME		QTY.
2589-0243-01	FOCUSING RING HOLDER SET	距離リング受けセット	1
2589-0245-01	TRIPOD BASE RING SET	三脚座セット	1
2589-0430-01	DISTANCE SCALE WINDOW SET	距離表示窓セット	1
2589-1133-01	FOCUS LENS BARREL PRESSURE	フォーカス玉棒押え	1
2589-1230-01	DISTANCE SCALE INDEX RING	距離指標環	1
2589-1234-01	ZOOM SCALE RING	ズーム目盛環	1
2589-1235-01	NAME RING (-100)	鏡頭環	1
2589-1236-01	FOCUSING RING	距離リング	1
2589-1247-01	TRIPOD RING RECEIVER-B	三脚受環B	1
2589-1374-01	HELICOID KEY-A	フォーカス直進キーA	1
2589-1375-01	HELICOID KEY-B	フォーカス直進キーB	1
2589-1413-01	NUT	三脚止めネジ受	1
2589-1415-01	TRIPOD BASE RING SCREW	三脚止めネジ	1
2589-1431-01	RUBBER RING	ズーム操作環ゴムリング	1
2589-1433-01	FRICTION PLATE	摩擦布B	1
0656-1434-05	SCOTCH TAPE (PER ROLL)	補強テープ	1
2589-1455-01	SCREW	止めねじ	4
2589-1635-01	NAME RING (-600)	鏡頭環	1
9612-1680-07	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	4
9622-2020-02	SCREW	とがり先止めねじ	3
9622-2025-02	SCREW	とがり先止めねじ	4



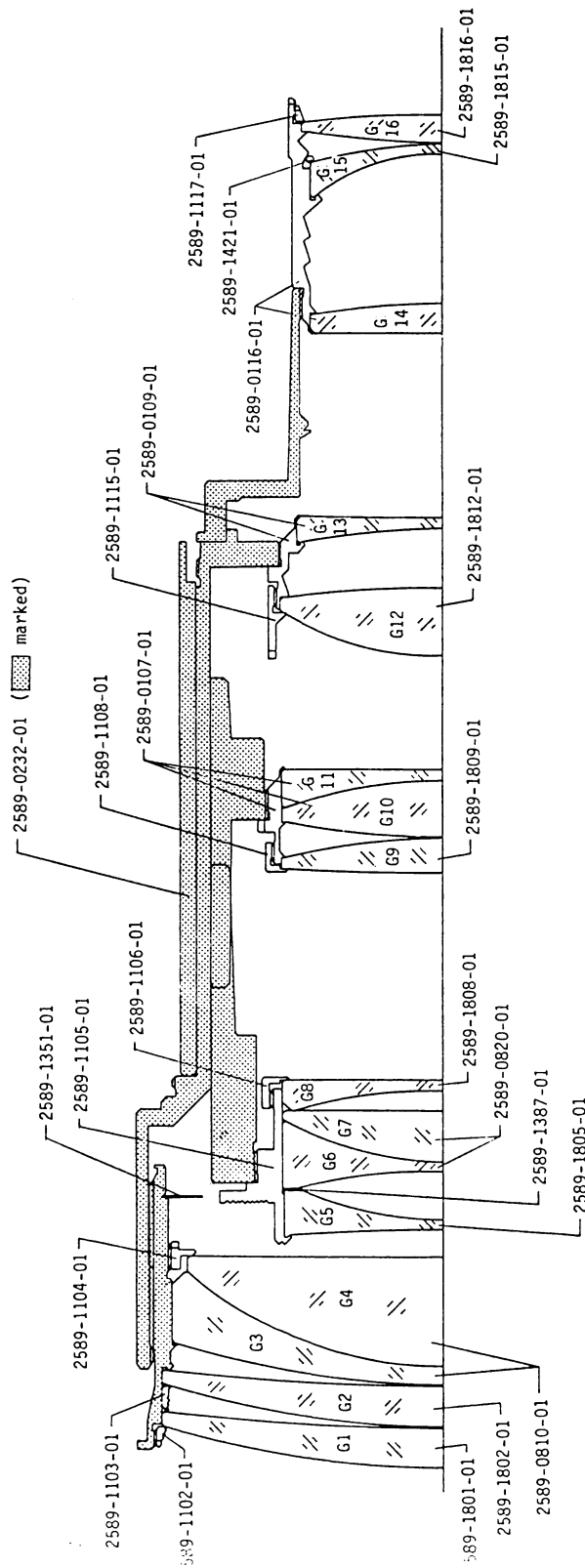
See Page 3

PART NO.	PART NAME		QTY.
2589-0233-01	MOUNT BASE RING SET	マウント取付環セット	1
2563-0240-01	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
2589-0244-01	DISTANCE SCALE RING SET	距離目盛環セット	1
2589-0381-01	GEAR SET	ギヤーセット	1
2589-0390-01	SWITCH SET	スイッチセット	2
2563-0440-01	LENS CONTACT PIN SET	信号ピンセット	1
2589-0503-01	FLEXIBLE PCB SET	フレキセット	1
2589-1237-01	ZOOM RING	ズーム操作環	1
2589-1242-01	LIGHT SHIELD RING	遮光筒	1
2589-1246-01	TRIPOD RING RECEIVER-A	三脚受環A	1
2589-1361-01	BACK WASHER (T=0.05)	バックワッシャー	} SOME
2589-1362-01	BACK WASHER (T=0.07)	バックワッシャー	
2589-1363-01	BACK WASHER (T=0.1)	バックワッシャー	
2589-1364-01	BACK WASHER (T=0.2)	バックワッシャー	
2589-1365-01	BACK WASHER (T=0.5)	バックワッシャー	
2589-1366-01	BACK WASHER (T=1)	バックワッシャー	
2589-1373-01	PRESET LEVER	プリセットレバー	1
2589-1376-01	MAIN SPRING GUIDE	メインスプリングガイド	1
2589-1377-01	DIAPHRAGM CONNECTING FORK	絞連動フォーク	1
2589-1378-01	ZOOMING KEY	ズーム操作レバー	2
2555-1380-01	BRUSH	ブラシ	1
2589-1382-01	GEAR RECEIVER	中間輪受板	1
2589-1383-01	BRUSH PLATE	ブラシ連動板	1
2589-1385-01	LUG PLATE	ラグ板	3
2555-1387-01	BRUSH PRESSURE PLATE	ブラシ押え板	1
2589-1402-01	COUPLER	カプラー	1
2589-1420-01	MAIN SPRING	メインスプリング	1
2589-1432-01	FRICTION PLATE	摩擦布A	1

PART NO.	PART NAME		QTY.
2589-1437-01	TAPE	テープ	1
2551-1444-01	BAYONET POINT	バヨネット標点	1
2589-1445-01	WASHER	絶縁ワッシャー	3
2589-1454-01	SCREW	止めねじ	6
9391-1207-00	LEAD WIRE-BLACK (PER METER)	リード線 黒	1
9391-1207-02	LEAD WIRE-RED (PER METER)	リード線 赤	1
9391-1207-09	LEAD WIRE-WHITE (PER METER)	リード線 白	2
9611-1422-07	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	5
9611-1625-02	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	6
9611-2040-04	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	4
9611-2045-02	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	4
9611-2070-02	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	4
9612-1418-07	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	2
9612-1435-07	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	3
9612-1616-02	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	1
9612-1620-02	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	2
9612-1640-02	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	2
9612-1655-02	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	4
9612-1680-07	PHILLIPS TYPE SCREW	十字穴付なべ小ねじ	1
9615-1635-02	PHILLIPS TYPE SCREW	十字穴付皿小ねじ	3
9721-0120-13	E-RING	Eリング	1

PART NO.	PART NAME		QTY.
2589-0113-01	DIAPHRAGM OPERATION PLATE SET	絞り操作板セット	1
2589-0371-01	DIAPHRAGM BLADE SET	絞り羽根セット	9
2589-1112-01	DIAPHRAGM PRESSURE RING	絞り押え環	1
2589-1130-01	CAM RING PRESSURE	ズームカム押え	1
2589-1132-01	CONNECTING RING PRESSURE	距離目盛受押え	1
2589-1248-01	DISTANCE CONNECTING RING	距離目盛受リング	1
2589-1352-01	LIGHT SHIELD PLATE	遮光板	1
2589-1418-01	ROLLER	ストッパーローラー	2
2589-1419-01	FOCUS STOPPER	フォーカスストッパー	2
2589-1422-01	SPACER	リテーナA	10
2589-1433-01	FRICTION PLATE	摩擦布B	1
2589-1450-01	GUIDE PIN	案内ピン	4
2589-1451-01	GUIDE ROLLER (D=5.49)	ローラーA	} 4
2589-1452-01	GUIDE ROLLER (D=5.50)	ローラーB	
2589-1453-01	GUIDE ROLLER (D=5.51)	ローラーC	
2589-1456-01	SCREW	止めねじ	4
9622-1625-02	SCREW	とがり先止めねじ	4
9758-0150-00	STEEL BALL	スチールボール	12

■ 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。



PART NO.	PART NAME		QTY.
2589-0107-01	2ND. MOVING BARREL SET	第2移動棒セット	1
2589-0109-01	G13 BARREL SET	G13玉棒セット	1
2589-0116-01	MASTER LENS BARREL SET	マスター玉棒セット	1
2589-0232-01	CAM BARREL SET	カム環セット	1
2589-0810-01	LENS G3,G4 SET	レンズG3, G4セット	1
2589-0820-01	LENS G6,G7 SET	レンズG6, G7セット	1
2589-1102-01	G1 PRESSURE RING	G1押え	1
2589-1103-01	SPACER	G1, G2間隔環	1
2589-1104-01	G4 PRESSURE RING	G4押え	1
2589-1105-01	1ST. LENS MOVING BARREL	第1移動玉棒	1
2589-1106-01	G8 PRESSURE RING	G8押え	1
2589-1108-01	G9 PRESSURE RING	G9押え	1
2589-1115-01	G12 PRESSURE RING	G12押え	1
2589-1117-01	G16 PRESSURE RING	G16押え	1
2589-1351-01	LIGHT SHIELD PLATE	遮光板	1
2589-1387-01	LIGHT SHIELD PLATE	遮光座	1
2589-1421-01	SPRING WASHER	スプリングワッシャー	1
2589-1801-01	LENS G1	レンズG1	1
2589-1802-01	LENS G2	レンズG2	1
2589-1805-01	LENS G5	レンズG5	1
2589-1808-01	LENS G8	レンズG8	1
2589-1809-01	LENS G9	レンズG9	1
2589-1812-01	LENS G12	レンズG12	1
2589-1815-01	LENS G15	レンズG15	1
2589-1816-01	LENS G16	レンズG16	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—

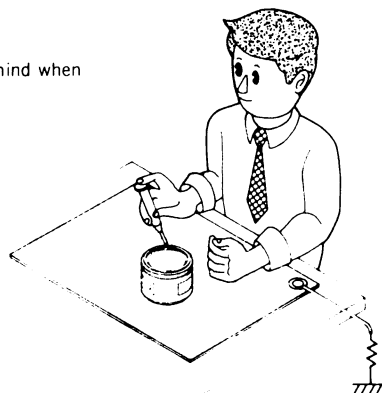
- B** : Adhesive
- S** : Solvent
- A** : Anti-diffusion compound
- G** : Lubricant
- T** : Tool
- : Point of assembling and general caution

■ Assembling and adjusting procedure

	Page
1 Fixed barrel, Zoom cam barrel assembling	1
2 2nd moving barrel, 1st lens moving barrel, Diaphragm operation plate set, Diaphragm blade set, Diaphragm pressure ring, Inner barrel, 2nd-4th lens groups assembling	2
■ Aperture diameter temporary adjusting	2
3 Distance scale ring set, Zoom ring, Switch set assembling	3
■ Wiring diagram of switches	3
4 Back washer, Bayonet mount set, Mount base ring set, Flexible PCB set, Gear set, Brush set assembling	4
■ Lead wire arrangement I & II	4
■ Brush positioning	4
5 Distance scale window set, Focusing ring, Focusing ring holder set, 1st lens group, Name ring assembling	5
■ Focus shift/flange back adjusting	5
6 Zoom scale ring, Tripod base ring set, Light shield ring assembling	6
■ Projection resolving power checking	6
■ Aperture diameter checking	6
■ General function checking	6
■ Description of focusing and zooming	7
■ Circuit diagram and printed wiring diagram	8

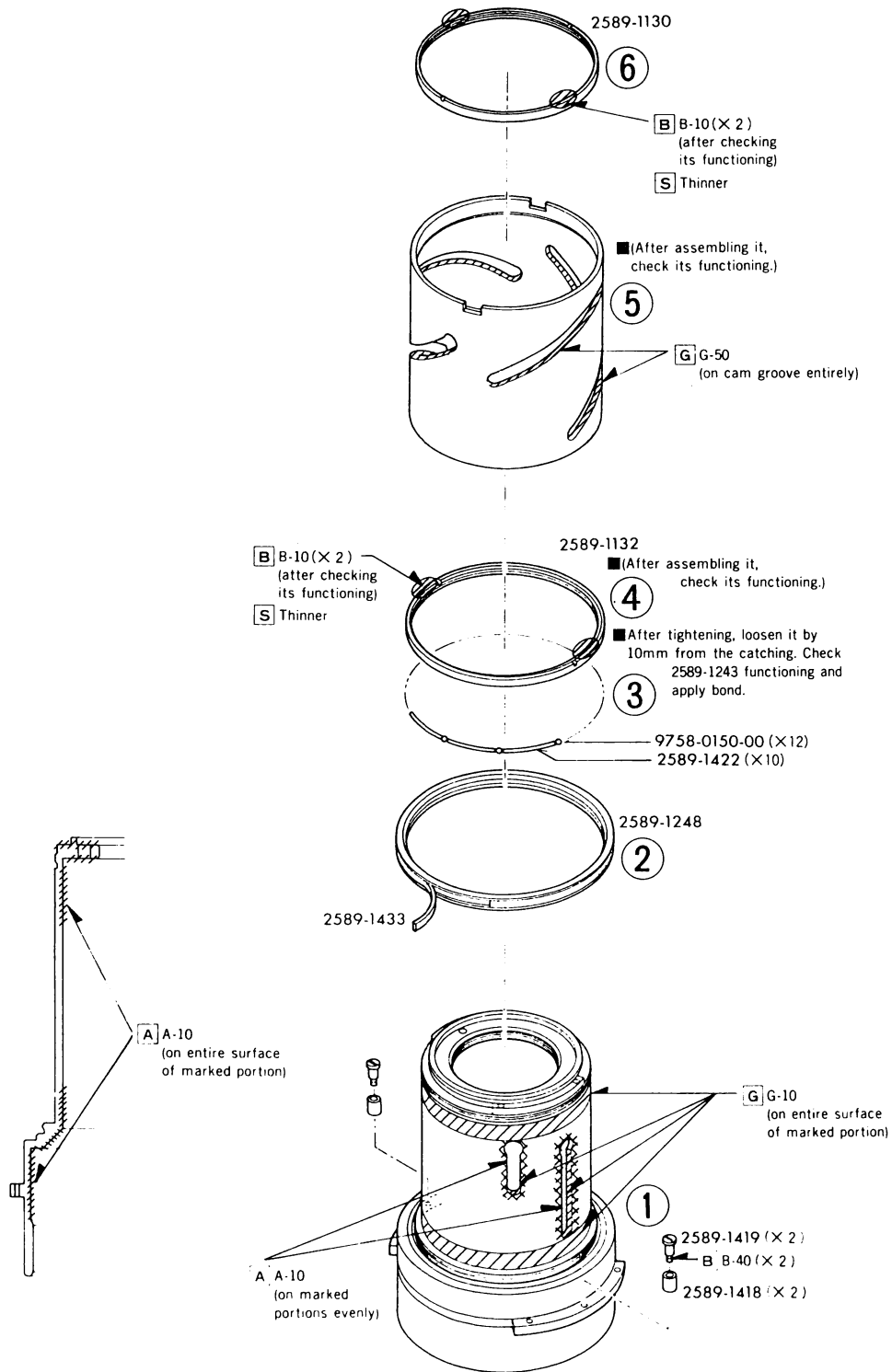
■ Precautions

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



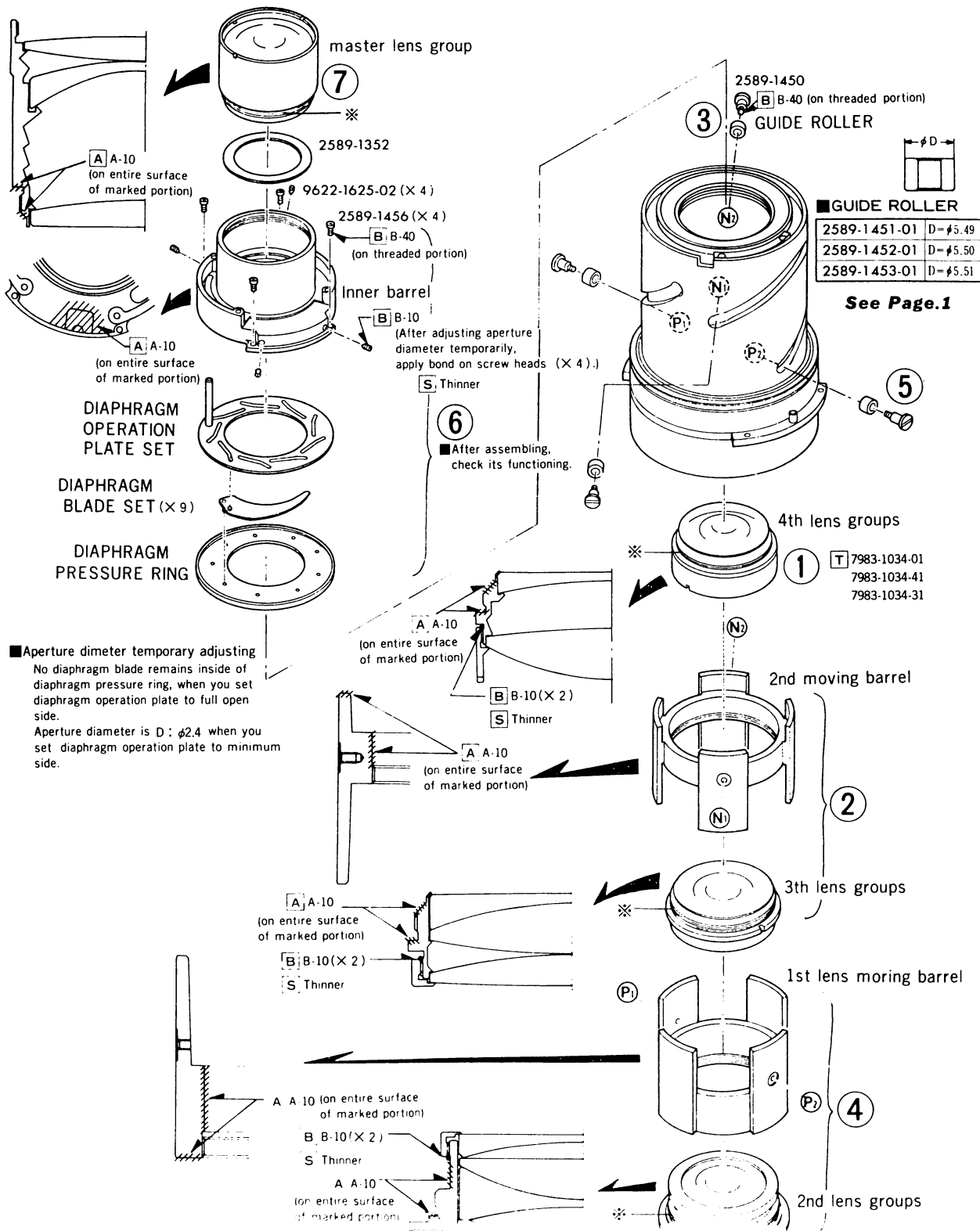
1 Fixed barrel, Zoom cam barrel

■ Assemble the parts in order of ①—⑥.



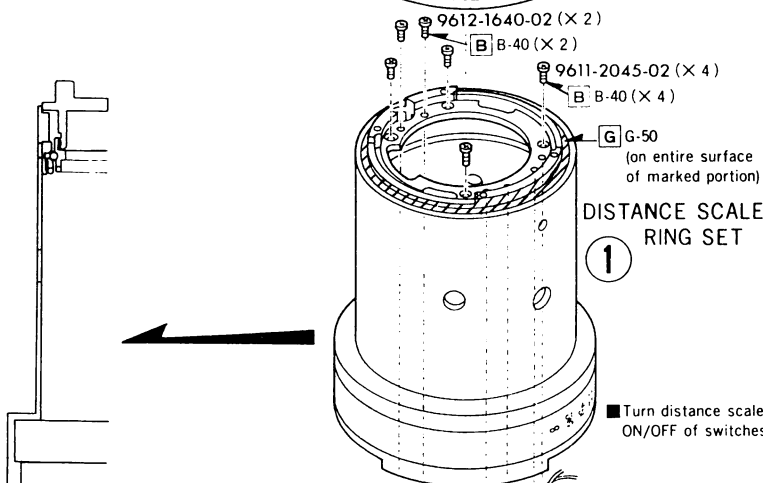
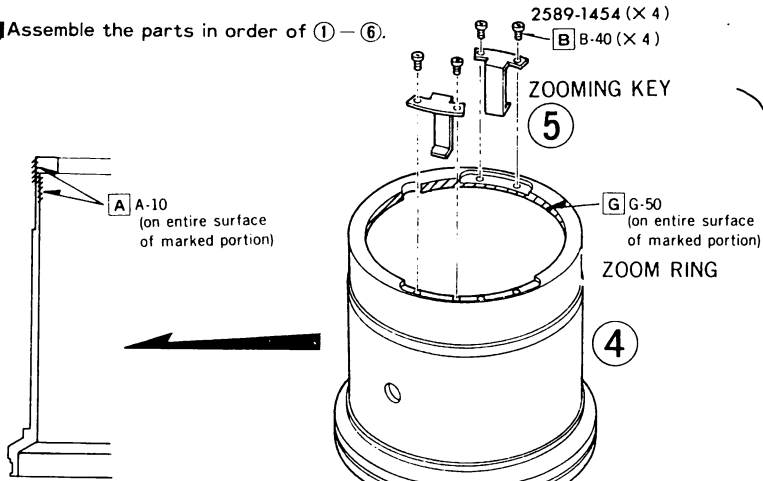
2 2nd moving barrel, 1st lens moving barrel, Diaphragm operation plate set, Diaphragm blade set, Diaphragm pressure ring, Inner barrel, 2nd-4th lens groups.

- Assemble the parts in order of ①—⑦.
- Although bond is already applied to *portion of threaded part, you need not to apply bond when repairing/replacing the parts.



3 Distance scale ring set, Zoom ring, Switch set.

■ Assemble the parts in order of ①—⑥.

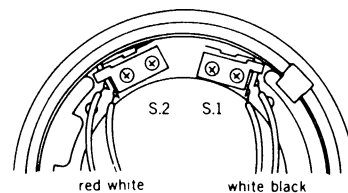


■ Precautions for assembling

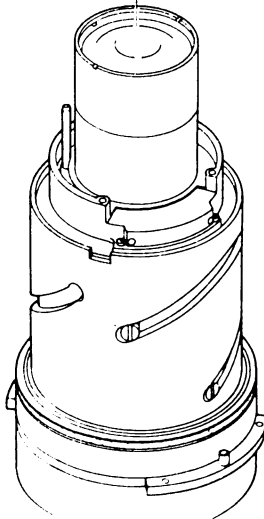
1. Install zoom ring and zooming keys to distance scale ring set. (Assemble ①—⑤.)
2. Turn zoom cam barrel to TELE side slightly. Join "a" portions of zoom cam barrel and zooming keys. Check that zooming keys turn smoothly.
3. Tighten with 9611-2045-02 (× 4).
4. Check that distance scale ring set and zooming keys operate smoothly.

■ Turn distance scale ring set. Check ON/OFF of switches visually or with tester.

■ Wiring diagram of switches



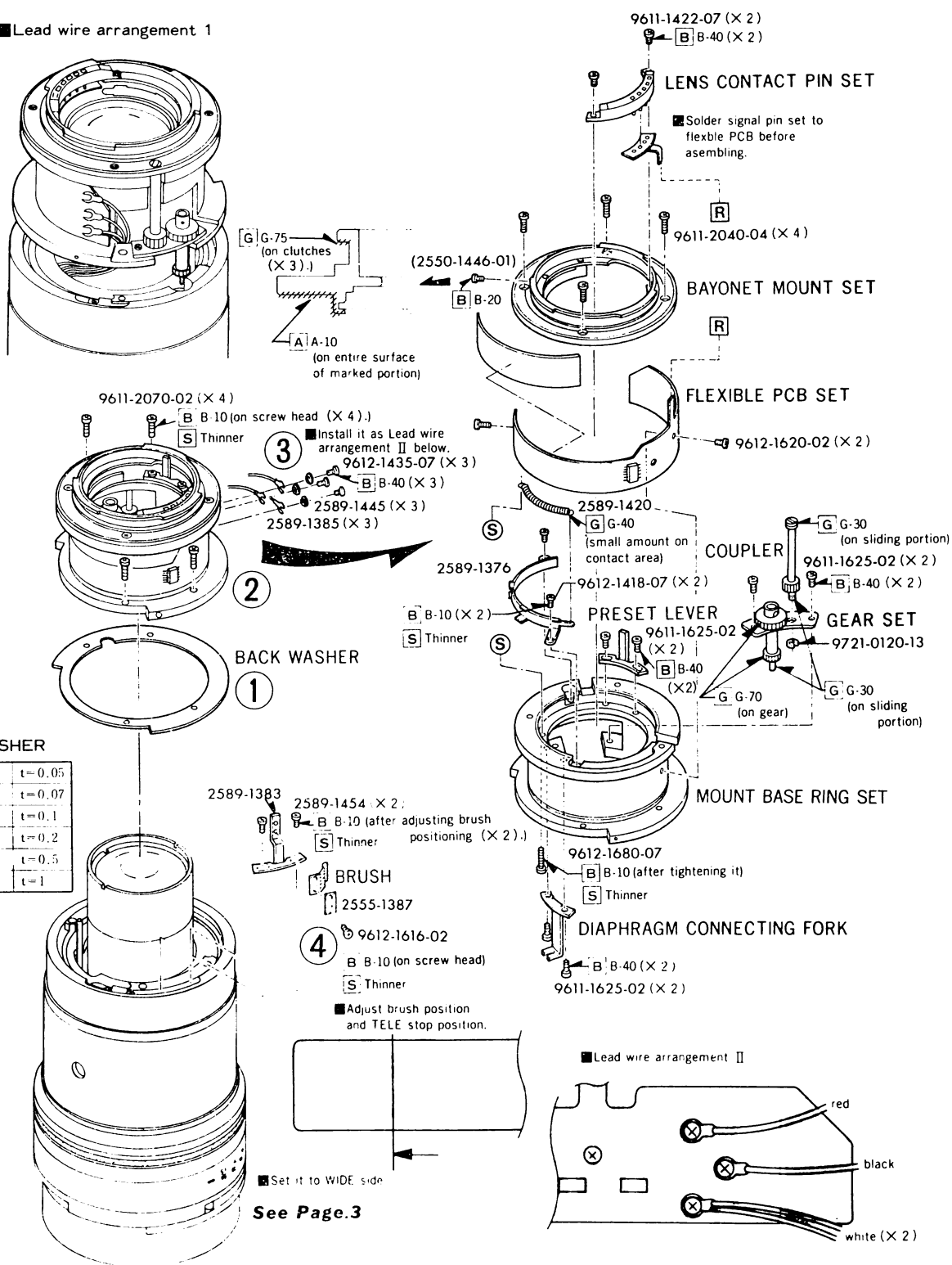
See Page.2



4 Back washer, Bayonet mount set, Mount base ring set, Flexible PCB set, Gear set, Brush set.

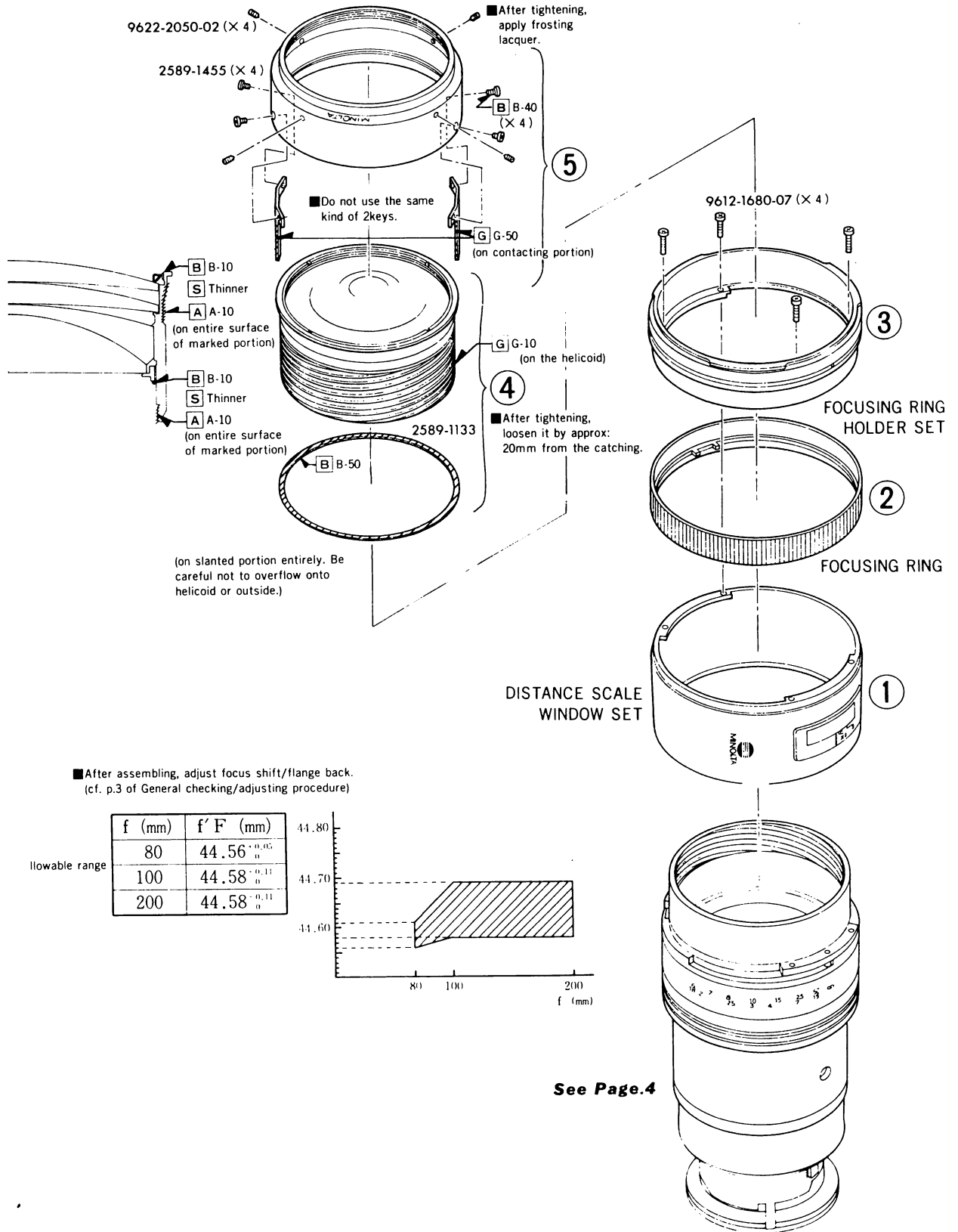
- Assemble the parts in order of ①-④.
- After assembling, check preset lever functioning and brush positioning. (cf. p.14 of General checking/adjusting procedure)

■ Lead wire arrangement 1



5 Distance scale window set, Focusing ring, Focusing ring holder set, 1st lens group, Name ring.

■ Assemble the parts in order ① — ⑤.



6 Zoom scale ring, Tripod base ring set, Light shield ring.

■ Assemble the parts in order of ①—⑦.

■ After assembling, perform the following checking/adjusting.

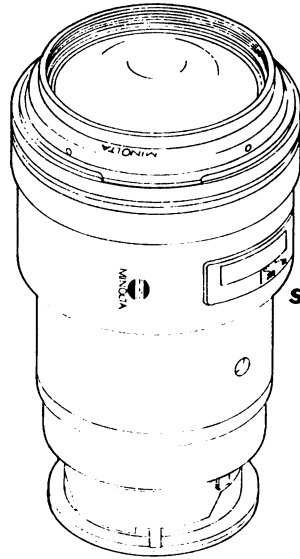
1) Check projection resolving power.

(cf. p.6 of "General checking/adjusting procedure")

Allowable range for servicing

f (mm)	Distance D (m)	Center (y' = 0)	y' = 15	
			S	M
80	2.0~3.0	100	32	40
135	2.5~5.8	100	40	32
200	5.0~8.0	100	40	32

S : Sagittal image
M : Meridional image



See Page.5

2) Check/adjust the aperture diameter.

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

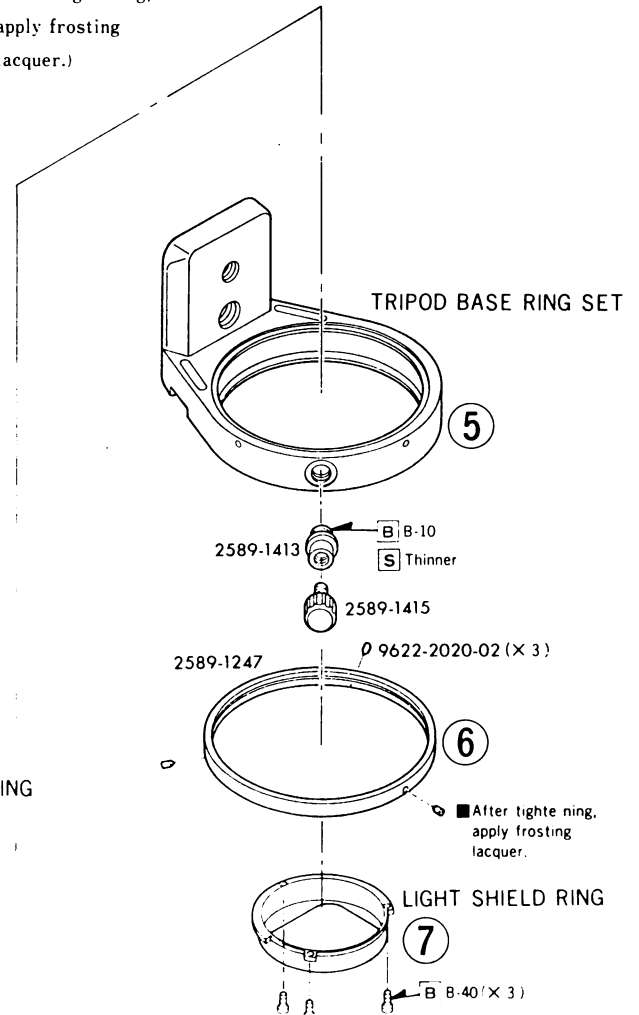
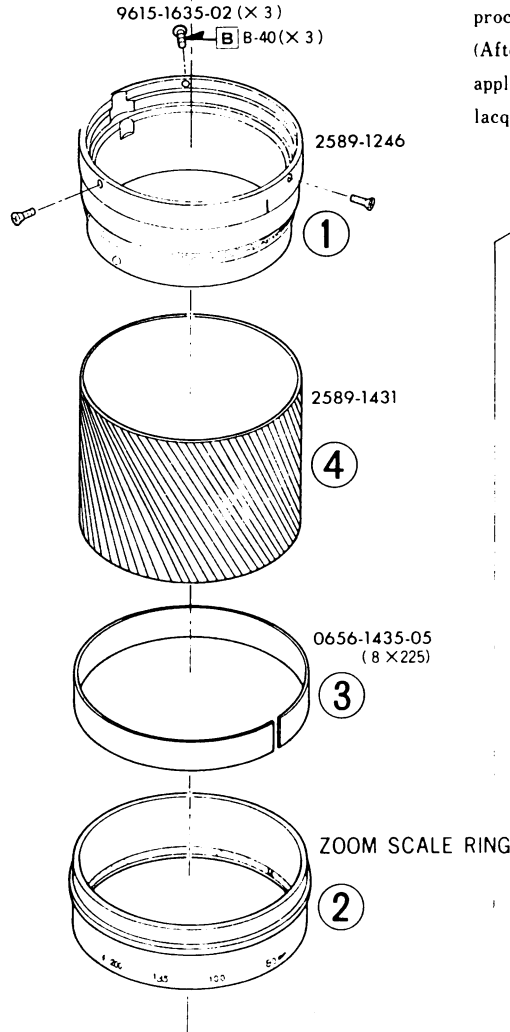
* If out of range, remove light shield ring and loosen the screws (9611-1625-02) (×2) of preset lever. Then adjust it by moving preset lever.

Preset lever

3) Check the general functioning.

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

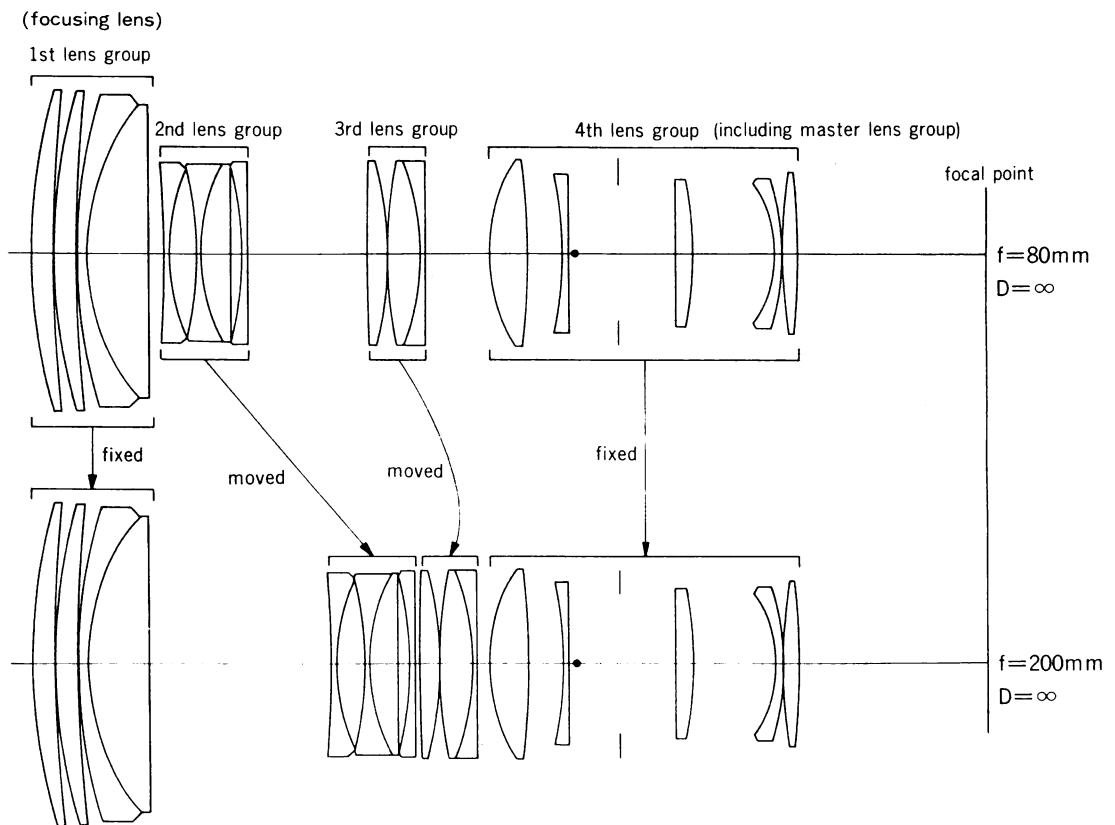
(After tightening, apply frosting lacquer.)



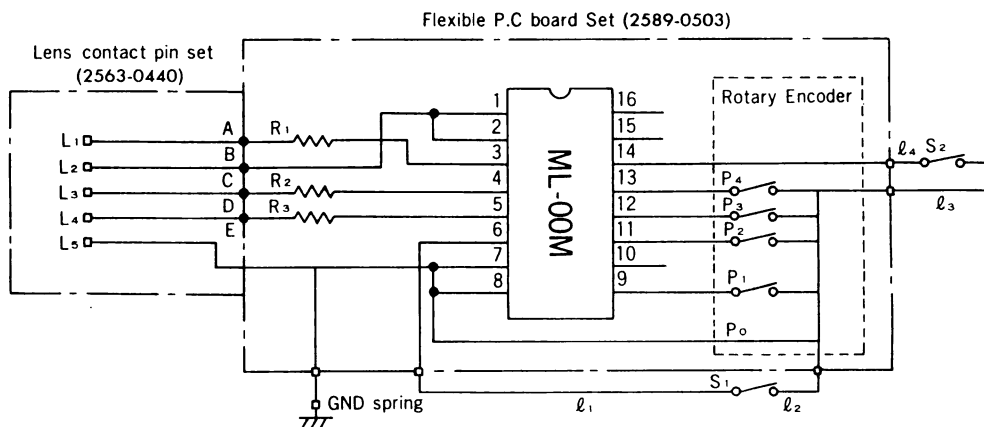
■ Description of focusing and zooming.

System : 3-component mechanical-compensation zoom lens (negative component for 2nd lens group, positive for 1st, 3rd and 4th) When zooming, 2nd and 3rd lens groups are moved individually by rotating two-ring type zoom ring. At that time, total length of lens or full-open aperture diameter doesn't change.

When focusing, 1st lens group (focusing lens group) is moved by rotating AF coupler or focusing ring.



■ Circuit diagram and printed wiring diagram.



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

ML-00M:ROM-IC
A-E :Soldering point
S1 :Distance witch (∞ -7m:OFF,
7m - minimum:ON)
S2 :Distance switch (∞ -15m:OFF,
15m-4m:ON, 4m - minimum:OFF)
*The changeover points are
approximate distance.

l1 :Lead wire Red
l2,l3:Lead wire White
l4 :Lead wire Black

