

作成承認印

配布許可印

**ZOOM600****FCA39001****ZOOM600 QD****FCA39201****Lite•Touch Zoom 110****FCA39101****Lite•Touch Zoom 110 QD****FCA39301****PARTS LIST**

修理部品表

**Nikon** | **NIKON CORPORATION**  
Tokyo, Japan

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無断転載を禁ず!!

A

B

FCA39001-R.3440.A

1

2

3

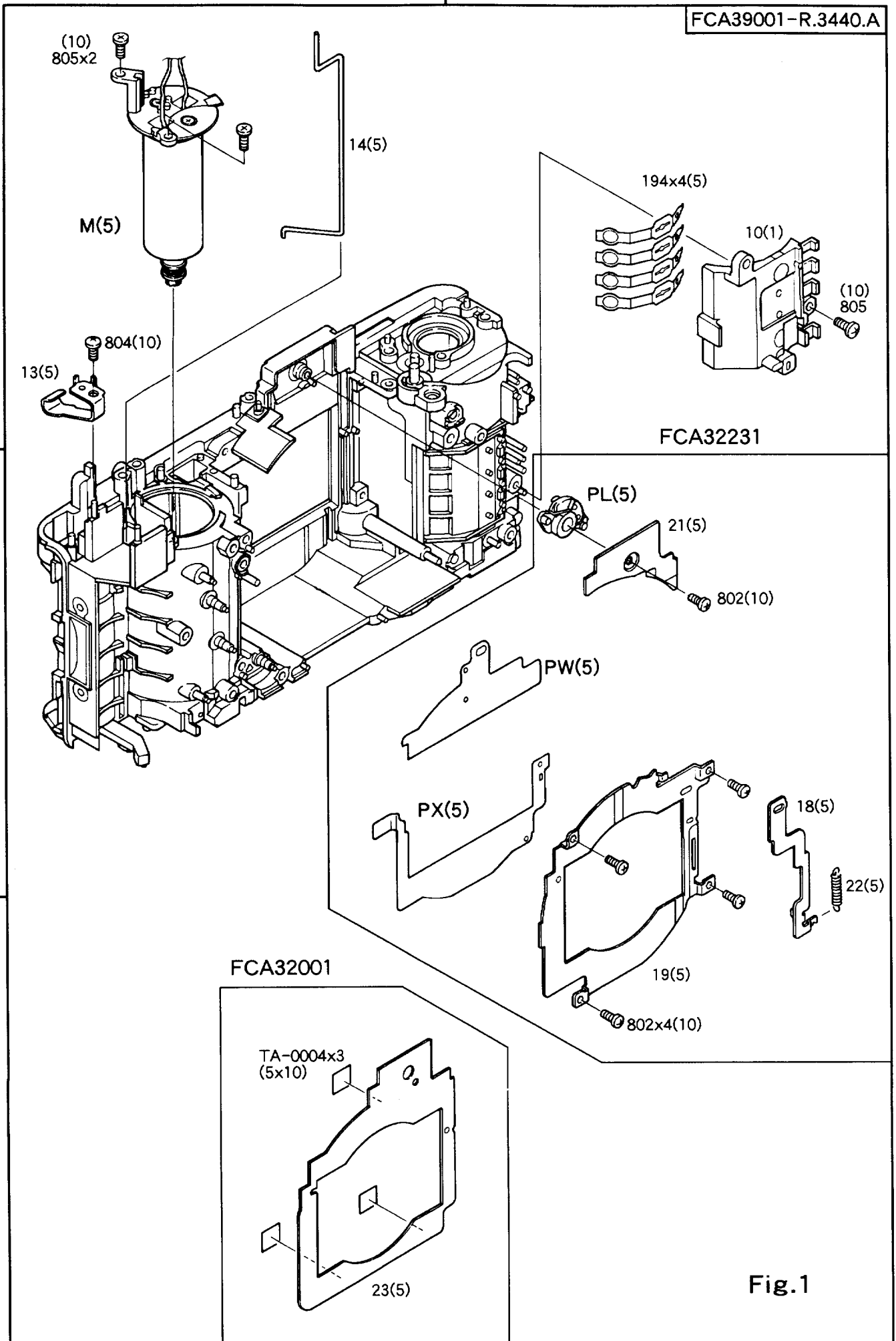
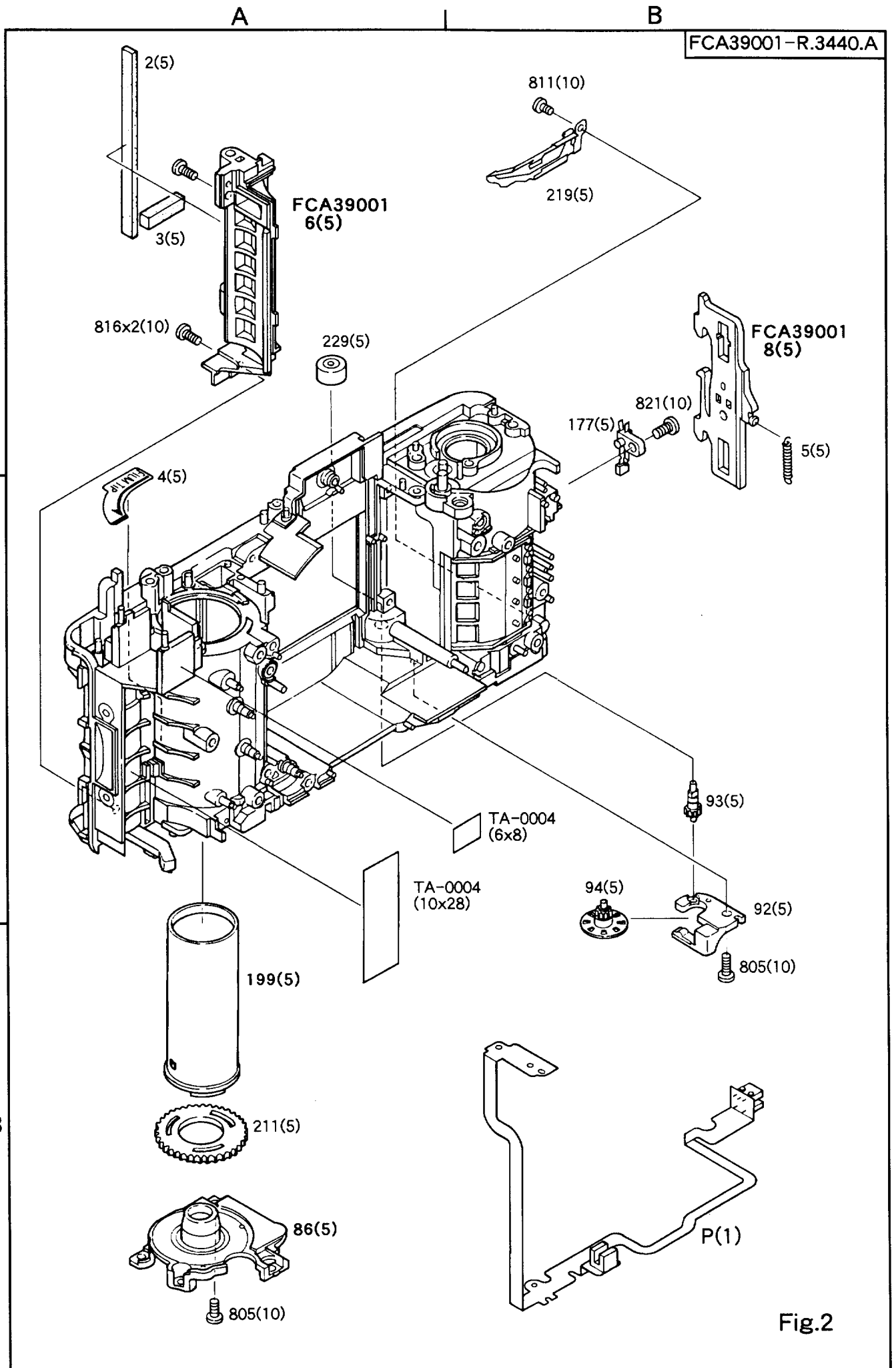


Fig.1



A

B

FCA39001-R.3440.A

FCA32001

801(10)

84(5)

88(5)

B(5)

1

FCA32231

80(5)

(5)

81

79(5)

214x2(5)

213(5)

91(5)

2

TA-0004x2  
(3x6)

(5)

212

228x3(5)

3

203(5)

204(5)

A(5)

90(5)

210(5)

226(5)

87(5)

805x3(10)

807x3(10)

TA-0004x3  
(4x14)

Fig.3

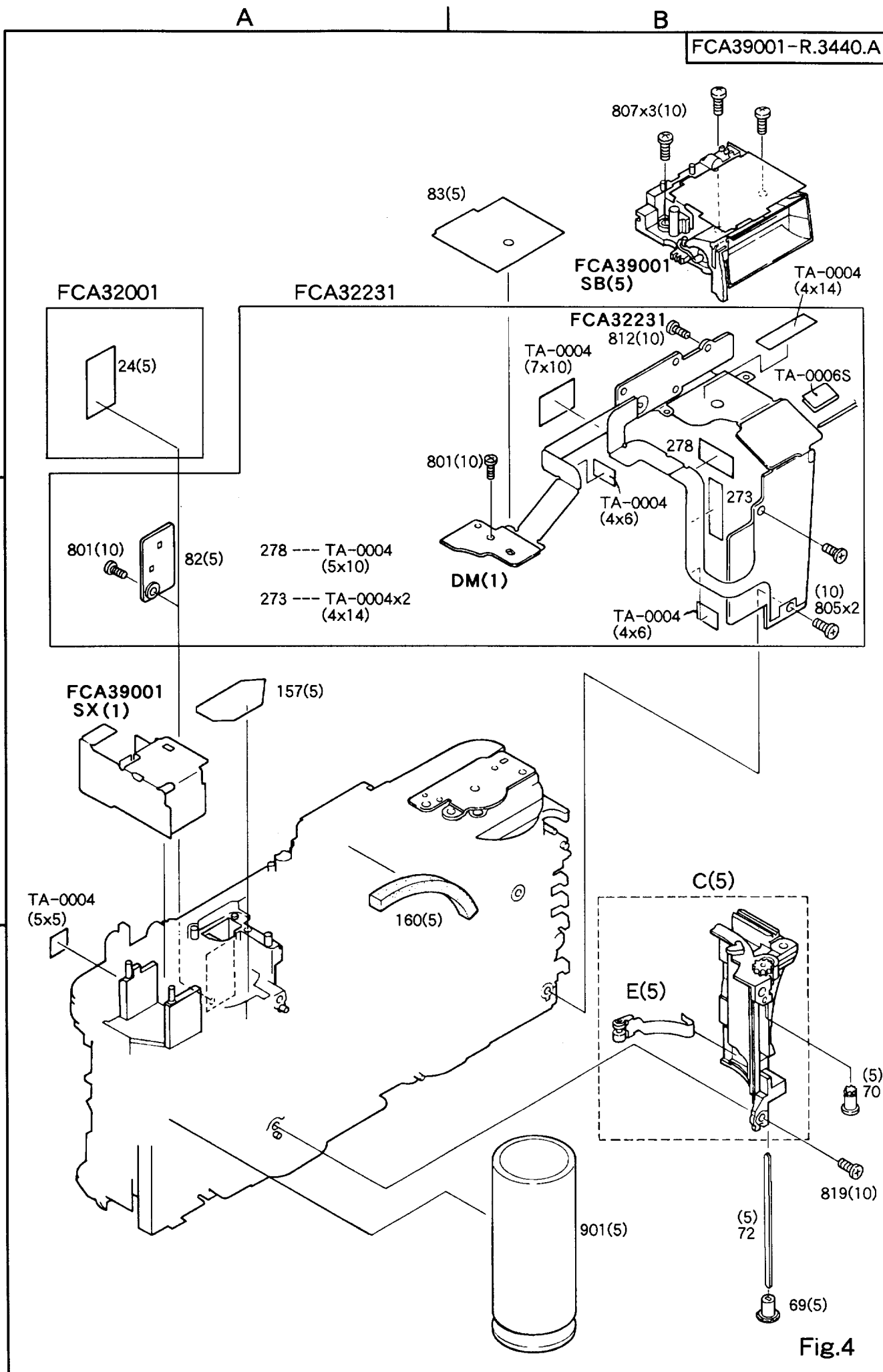


Fig. 4

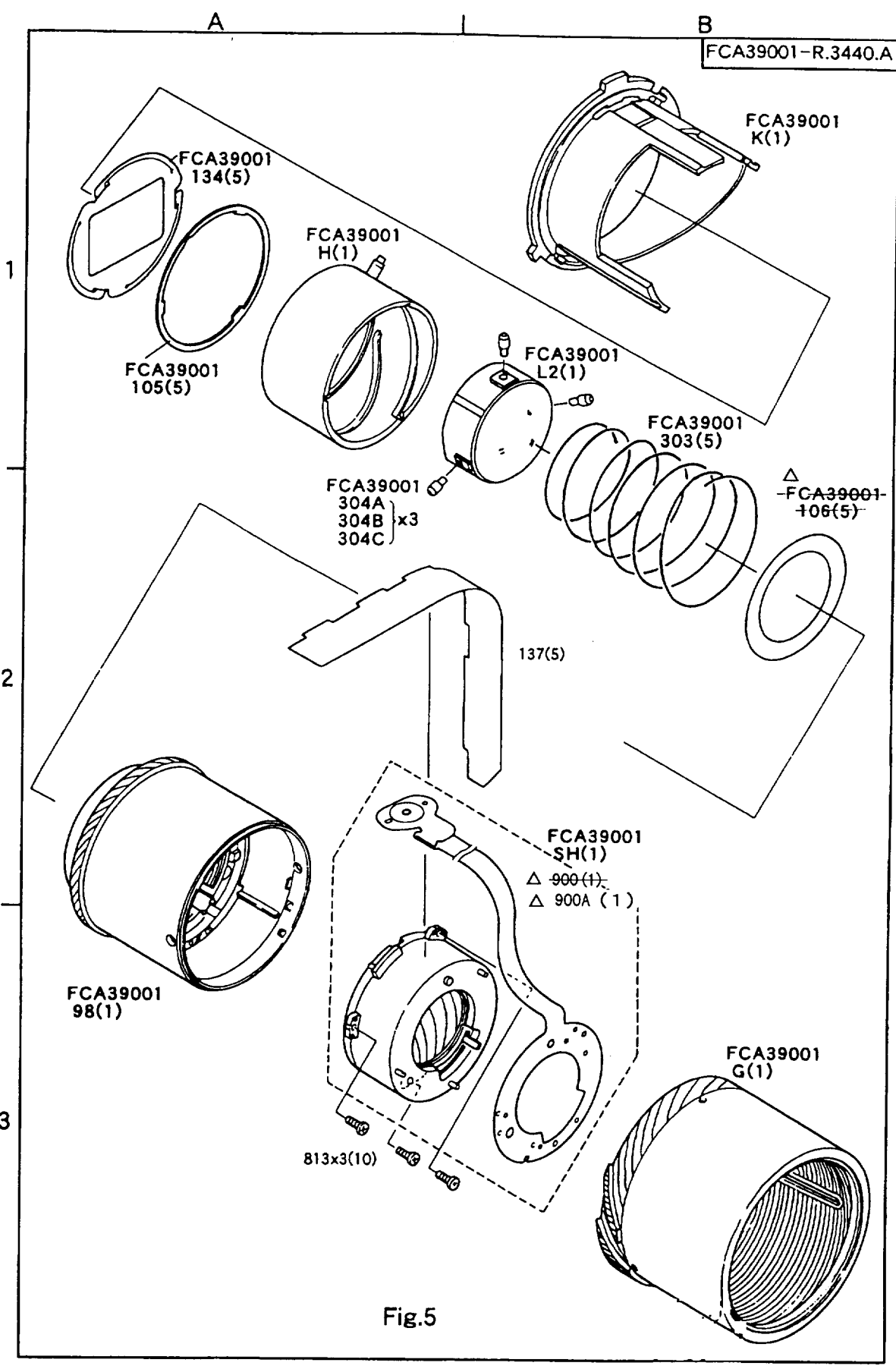


Fig.5

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JUN. 19. 1998



A

B

FCA39001-R.3440.A

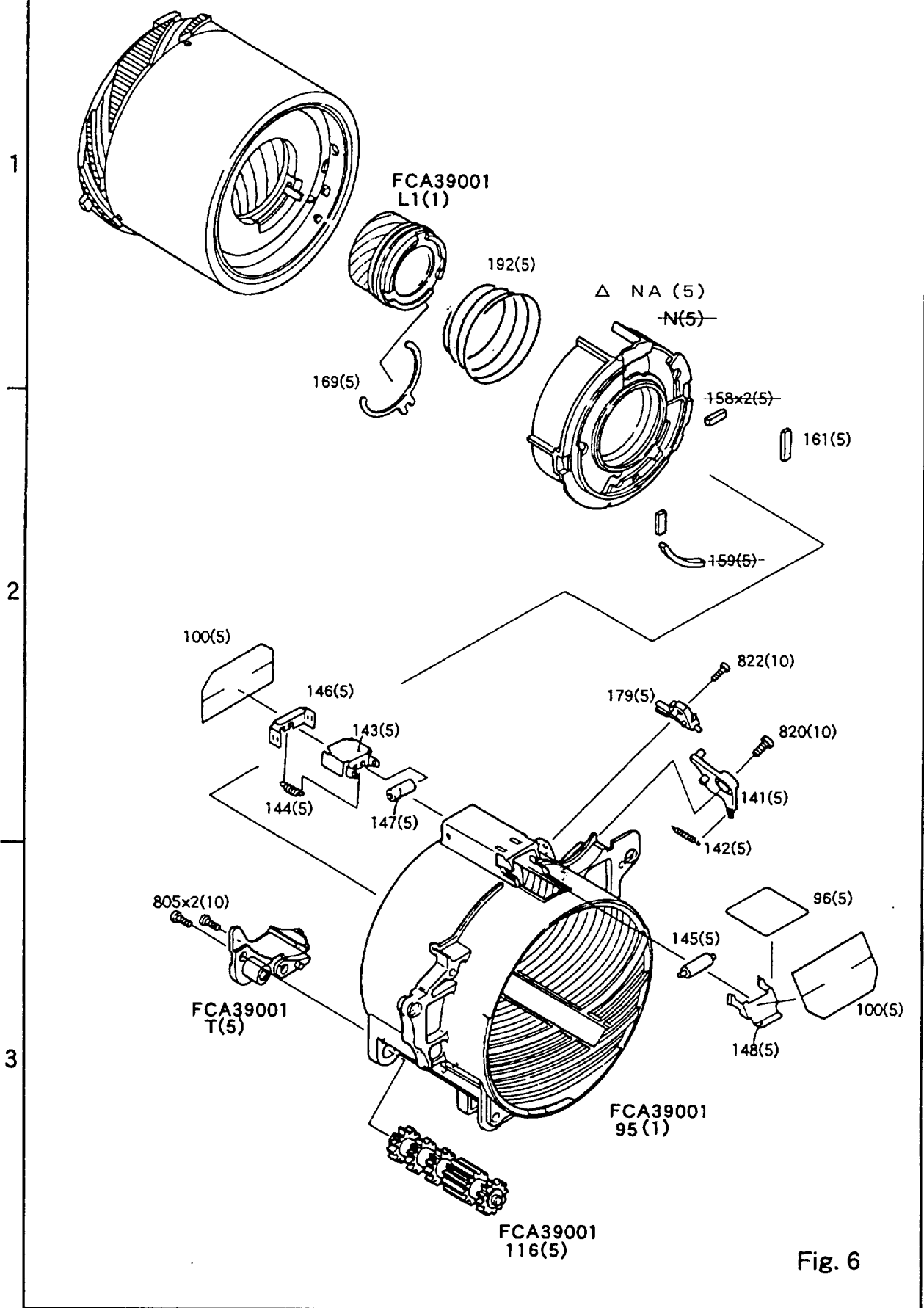


Fig. 6



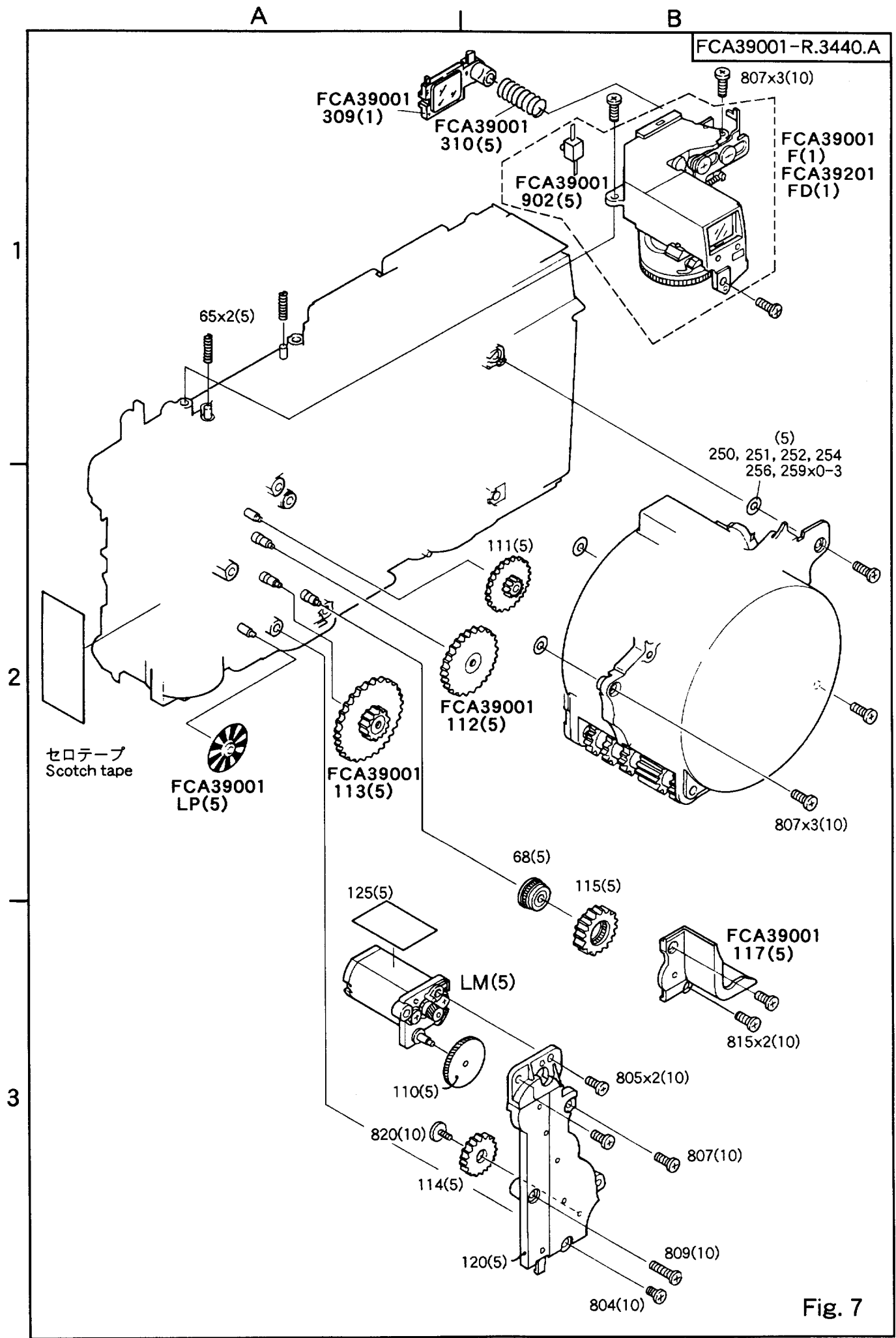
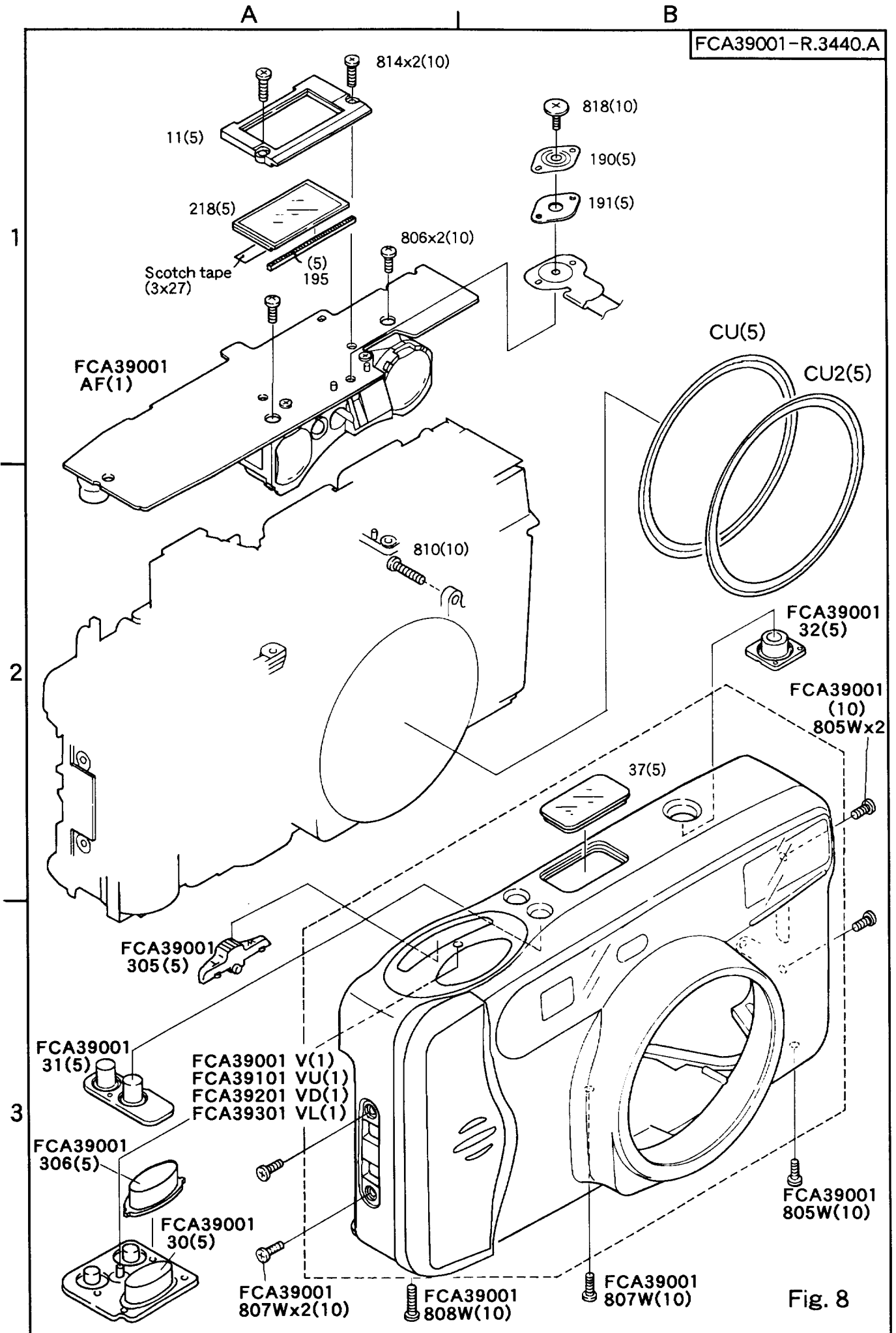


Fig. 7





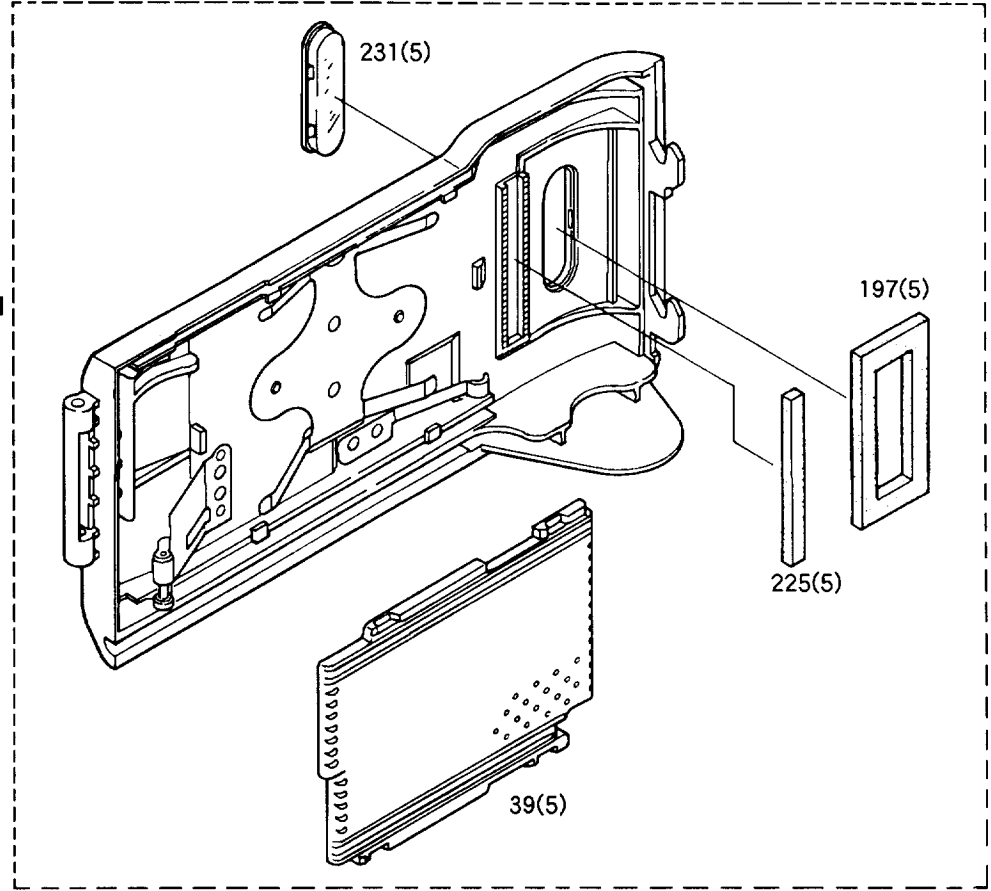
A

B

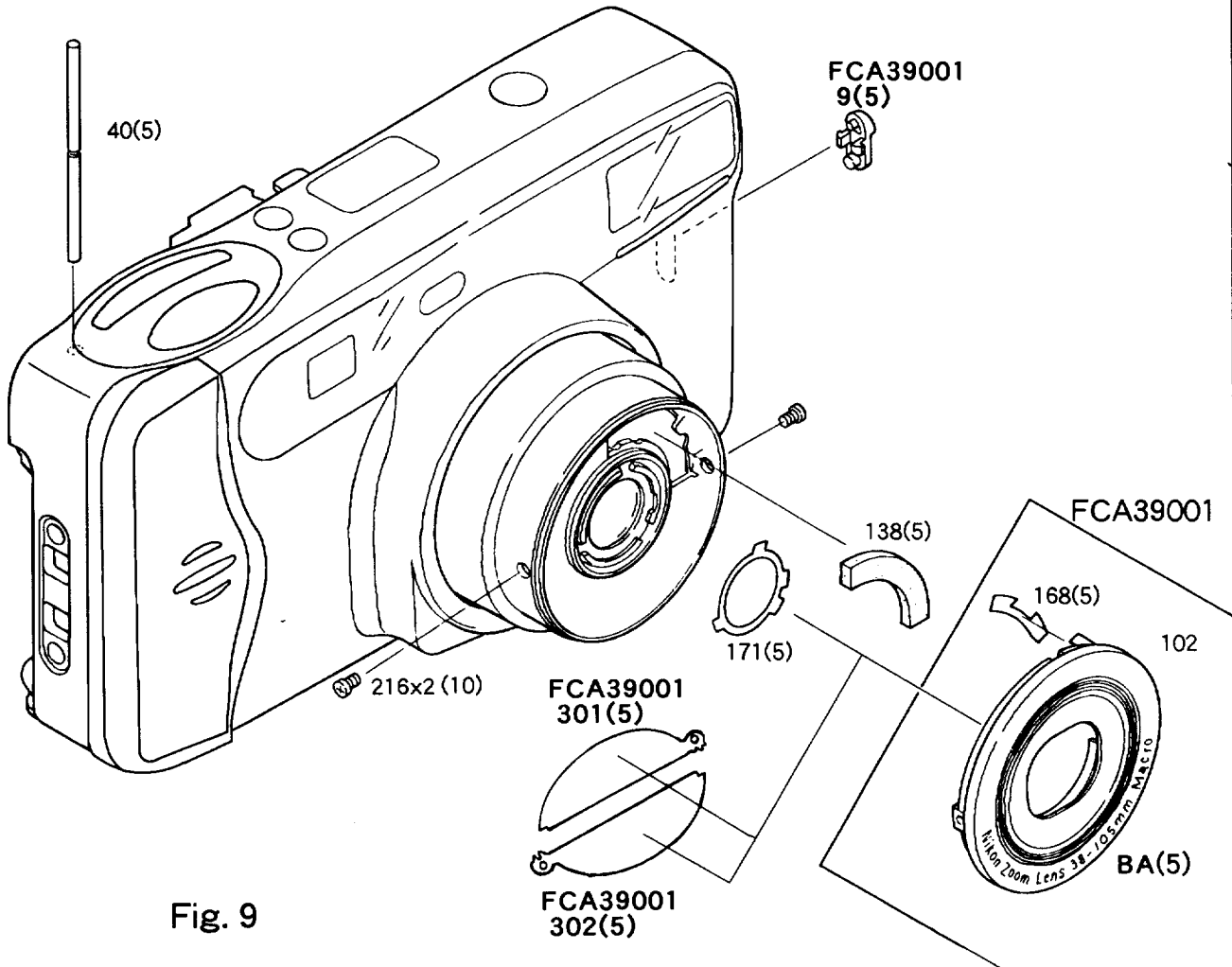
FCA39001-R.3440.A

1

FCA39001  
S(1)



2



3

Fig. 9

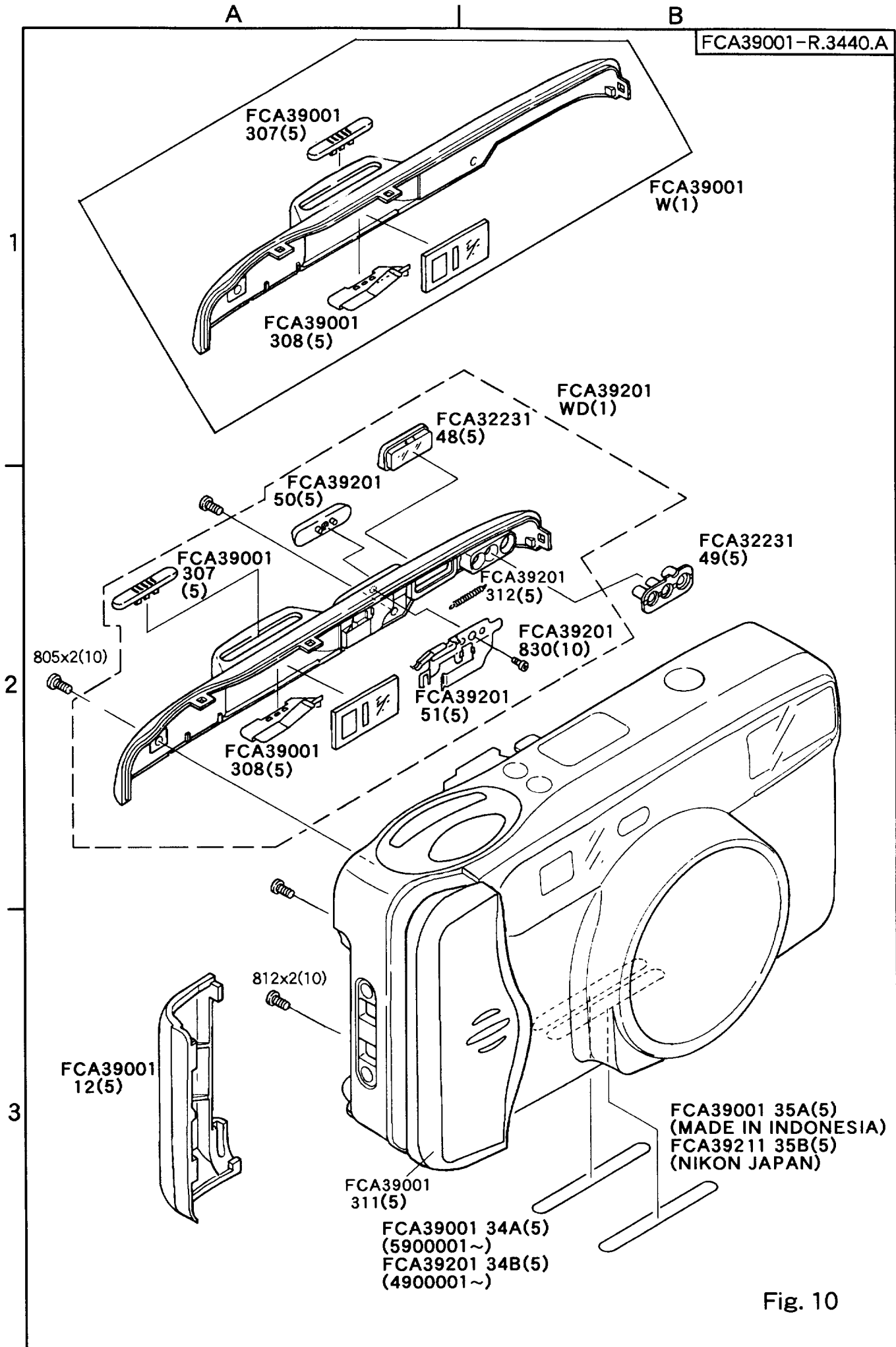


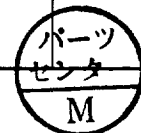
Fig. 10

部品表 Parts List

FCA39001-R. 3440. A

部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly No.	参照 図番 Fig. No.	販売区分 Term of Delivery	備考 Remarks	要求単位 Qty per order
*10 (FCA32001-10)		D Xカバー DX COVER	1		1 B1	○		5
*100 (FCA32001-100)		遮光シート LIGHT SHIELD SHEET	2		6 A2	○		5
105 (FCA39001-105)		押さえ環 RETAINER RING	1		5 A1	○		5
<del>106</del> (FCA39001-106)		シャッター遮光板 SHUTTER LIGHT SHIELD PLATE	1		5 B2	○	RP-9802	5
*11 (FCA32001-11)		L C Dカバー LCD COVER	1		8 A1	○		5
*110 (FCA32001-110)		L 2 - 3ギア L2-3 GEAR	1		7 A3	○		5
*111 (FCA32001-111)		L 4 - 5ギア L4-5 GEAR	1		7 B2	○		5
112 (FCA39001-112)		L 6 - 7ギア L6-7 GEAR	1		7 B2	○		5
113 (FCA39001-113)		L 8 - 9ギア L8-9 GEAR	1		7 A2	○		5
*114 (FCA32001-114)		L 1 0ギア L10 GEAR	1		7 A3	○		5
*115 (FCA32001-115)		L 1 1ギア L11 GEAR	1		7 B3	○		5
116 (FCA39001-116)		L 1 2ギア L12 GEAR	1		6 B3	○		5
117 (FCA39001-117)		L 1 2ギアカバー L12 GEAR COVER	1		7 B3	○		5
12 (FCA39001-12)		電池蓋 BATTERY LID	1		10 A3	○		5
*120 (FCA32001-120)		鏡筒ギア基板 LENS TUBU GEAR BASE PLATE	1		7 B3	○		5
*125 (FCA32001-125)		絶縁シート INSULATE SHEET	1		7 A3	○		5

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部品表 Parts List

FCA39001-R. 3440. A

部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly No.	参照 図番 Fig. No.	販売区分 Term of Delivery	備考 Remarks	要求単位 Q'ty per order
*13 (FCA32001-13)		電池接片1 BATTERY CONTACT 1	1		1 A1	○		5
134 (FCA39001-134)		後部保護板 REAR PROTECTOR PLATE	1		5 A1	○		5
*137 (FCA32001-137)		シャッターカバー SHUTTER COVER	1		5 B2	○		5
*138 (FCA32001-138)		モルト SPONGE	1		9 B3	○		5
*14 (FCA32001-14)		電池接片2 BATTERY CONTACT 2	1		1 A1	○		5
*141 (FCA32001-141)		鏡筒SWレバー LENS TUBU SW LEVER	1		6 B2	○		5
*142 (FCA32001-142)		バネ SPRING	1		6 B3	○		5
*143 (FCA32001-143)		スライダー SLIDER	1		6 A2	○		5
<del>*144 (FCA32001-144)</del>		バネ SPRING	1		6 A2	○	RP-9804	5
*145 (FCA32001-145)		ローラーA ROLLER A	1		6 B3	○		5
*146 (FCA32001-146)		後カバー REAR COVER	1		6 A2	○		5
*147 (FCA32001-147)		ローラーB ROLLER B	1		6 A2	○		5
*148 (FCA32001-148)		前カバー FRONT COVER	1		6 B3	○		5
*157 (FCA32001-157)		遮光シート LIGHT SHIELD SHEET	1		4 A2	○		5
<del>*158 (FCA32001-158)</del>		モルト SPONGE	2		6 B1	○	RP-9802	5
<del>*159 (FCA32001-159)</del>		モルト SPONGE	1		6 B2	○	RP-9802	5
144 (FCA39001-144)		バネ SPRING	1		6 A2	○	RP-9804	5

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部品表 Parts List

FCA39001-R. 3440. A

部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly No.	参照 図番 Fig. No.	販売区分 Term of Delivery	備考 Remarks	要求単位 Q'ty per order
*160 (FCA32001-160)		モルト SPONGE	1		4 A2	○		5
*161 (FCA32001-161)		モルト SPONGE	1		6 B1	○		5
*168 (FCA32001-168)		遮光シート LIGHT SHIELD SHEET	1		9 B3	○		5
*169 (FCA32001-169)		Pリング P RING	1		6 A2	○		5
△ *171 (FCA32001-171)		遮光シート LIGHT SHIELD SHEET	1		9 B3	○	RP-9804	5
*177 (FCA32001-177)		裏蓋SW BACK DOOR BACK SW	1		2 B2	○		5
*179 (FCA32001-179)		鏡筒SW LENS TUBU SW	1		6 B2	○		5
*190 (FCA32001-190)		圧接板 PRESS CONTACT PLATE	1		8 B1	○		5
*191 (FCA32001-191)		圧接ゴム PRESS CONTACT RUBBER	1		8 B1	○		5
*192 (FCA32001-192)		1群バネ 1ST SPRING	1		6 B1	○		5
*194 (FCA20001-37)		DX接片 DX CONTACT	4		1 B1	○		5
*195 (FCA20001-42)		エラスティックコネクター ELASTIC CONNECTOR	1		8 A1	○		5
*197 (FCA20001-88)		モルト SPONGE	1	S	9 B1	○△		5
*199 (FCA20001-141)		スプール SPOOL	1		2 A3	○		5
*2 (FCA32001-2)		ヒンジモルト HINGE SPONGE	1		2 A1	○		5
*203 (FCA20001-151)		ギア2-3 GEAR 2-3	1		3 A3	○		5
△ 171 (FCA39001-171)		遮光シート LIGHT SHIELD SHEET	1		9 B3	○	RP-9804	5

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部品表 Parts List

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部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly No.	参照 図番 Fig. No.	販売区分 Term of Delivery	備考 Remarks	要求単位 Q'ty per order
*204 (FCA20001-152)		ギア4-5 GEAR 4-5	1		3 A3	○		5
*210 (FCA20001-159)		ギア9-10 GEAR 9-10	1		3 A3	○		5
*211 (FCA20001-160)		ギア11 GEAR 11	1		2 A3	○		5
*212 (FCA20001-176)		ギア18 GEAR 18	1		3 B2	○		5
*213 (FCA20001-178)		ギア19 GEAR 19	1		3 B1	○		5
*214 (FCA20001-179)		ギア20 GEAR 20	2		3 B1	○		5
*216 (FCA20001-280)		SCREW SCREW	2		9 A3	○		10
*218 (FCA20001-340A)		LCD LCD	1		8 A1	○		5
*219 (FCA23001-5)		パトローネ押さえ PATORONE RETAINER	1		2 B1	○		5
*225 (FCA23001-145)		モルト SPONGE	1	S	9 B1	○△		5
*226 (FCA23001-64)		ギア6-7レバー軸 GEAR 6-7 LEVER SHAFT	1		3 A3	○		5
*228 (FCA23001-67)		ギア14 GEAR 14	3		3 B2	○		5
*229 (FCA23001-74)		Qドラム Q DRAM	1		2 A1	○		5
*23 (FCA32001-23)		アパーチャー枠 APERTURE FRAME	1		1 A3	○		5
*231 (FCA32001-231)		パトローネ窓 PATORONE WINDOW	1	S	9 A1	○△		5
*24 (FCA32001-24)		シール SEAL	1		4 A1	○		5

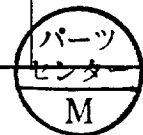
部品表 Parts List

FCA39001-R. 3440. A

部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly No.	参照 図番 No.	販売区分 Term of Delivery	備考 Remarks	要求単位 Qty per order
*250 (FCA32001-250)		ワッシャー T=0.03 WASHER T=0.03	0-3		7 B2	○		5
*251 (FCA23001-251)		ワッシャー T=0.05 WASHER T=0.05	0-3		7 B2	○		5
*252 (FCA23001-252)		ワッシャー T=0.1 WASHER T=0.1	0-3		7 B2	○		5
*254 (FCA23001-253)		ワッシャー T=0.2 WASHER T=0.2	0-3		7 B2	○		5
*256 (FCA23001-254)		ワッシャー T=0.3 WASHER T=0.3	0-3		7 B2	○		5
*259 (FCA23001-256)		ワッシャー T=0.5 WASHER T=0.5	0-3		7 B2	○		5
*3 (FCA32001-3)		下モルト LOWER SPONGE	1		2 A1	○		5
30 (FCA39001-30)		リリース釦 RELEASE BUTTON	1		8 A3	○		5
301 (FCA39001-301)		バリア1 BARRIER 1	1		9 B3	○		5
302 (FCA39001-302)		バリア2 BARRIER 2	1		9 B3	○		5
303 (FCA39001-303)		2群バネ 2ND GROUP SPRING	1		5 B2	○		5
304A (FCA39001-304A)		2群ピン 2ND GROUP PIN	0-3		5 A2	○		5
304B (FCA39001-304B)		2群ピン 2ND GROUP PIN	0-3		5 A2	○		5
304C (FCA39001-304C)		2群ピン 2ND GROUP PIN	0-3		5 A2	○		5
305 (FCA39001-305)		ズーム釦 ZOOM LEVER	1		8 A3	○		5
△ 306 (FCA39001-306)		リリース釦 RELEASE BUTTON	1		8 A3	○	RP-9802	5
△ 306 (FCA39001-306)		リリース釦ゴム RELEASE BUTTON RUBBER	1		8 A3	○	RP-9802	5

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部品表 Parts List

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部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly No.	参照 図番 Fig. No.	販売区分 Term of Delivery	備考 Remarks	要求単位 Q'ty per order
307 (FCA39001-307)		視度調整ノブ DIOPTER ADJUSTMENT KNOB	1	W	10 A1	○△		5
308 (FCA39001-308)		視度調整レバー DIOPTER AJUSTMENT LEVER	1	W	10 A1	○△		5
309 (FCA39001-309)		視度調整レンズ DIOPTER ADJUSTMENT LENS	1		7 A1	○		1
31 (FCA39001-31)		モード釦 MODE BUTTON	1		8 A3	○		5
310 (FCA39001-310)		視度調整バネ DIOPTER AJUSTMENT SPRING	1		7 A1	○		5
311 (FCA39001-311)		グリップ GRIP	1	V	10 A3	○△		5
32 (FCA39001-32)		メイン釦 MAIN BUTTON	1		8 B2	○		5
34A (FCA39001-34A)		製品番号板 PRODUCT NUMBER PLATE	1		10 B3	○		5
35A (FCA39001-35A)		原産地国板 COUNTRY OF ORIGIN PLATE	1		10 B3	○		5
*37 (FCA32001-37)		LCD窓 LCD WINDOW	1	V	8 B2	○△		5
*39 (FCA32001-39)		圧板 PRESSURE PLATE	1	S	9 B2	○△		5
*4 (FCA32001-4)		フィルムシール FILM SEAL	1		2 A2	○		5
*10 (FCA32001-40)		裏蓋軸 BACK DOOR SHAFT	1		9 A2	○		5
*5 (FCA32001-5)		鍵バネ KEY SPRING	1		2 B1	○		5
6 (FCA39001-6)		ヒンジ HINGE	1		2 A1	○		5
*65 (FCA32001-65)		ファインダーバネ FINDER SPRING	2		7 A1	○		5

部品表 Parts List

FCA39001-R. 3440. A

部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly No.	参照 図番 Fig. No.	販売区分 Term of Delivery	備考 Remarks	要求単位 Q'ty per order
*68 (FCA32001-68)		Fギア1 F GEAR 1	1		7 B2	○		5
*69 (FCA32001-69)		Fギア2 F GEAR 2	1		4 B3	○		5
*70 (FCA32001-70)		Fギア3 F GEAR 3	1		4 B3	○		5
*72 (FCA32001-72)		Fギア2-3軸 F GEAR 2-3 SHAFT	1		4 B3	○		5
8 (FCA39001-8)		開閉キー OPENER KEY	1		2 B1	○		5
*801 (FCA20001-801)		SCREW SCREW	2		3 A1	○		10
*804 (FCA10001-619)		SCREW SCREW	2		1 A1	○		10
*805 (FCA11001-810)		SCREW SCREW	16		1 A1	○		10
805W (FCA39001-805W)		SCREW SCREW	3		8 B2	○		10
*806 (FCA10001-620)		SCREW SCREW	2		8 A1	○		10
*807 (FCA11001-817)		SCREW SCREW	13		3 A3	○		10
807W (FCA39001-807W)		SCREW SCREW	3		8 A3	○		10
808W (FCA39001-808W)		SCREW SCREW	1		8 A3	○		10
*809 (FCA32001-809)		SCREW SCREW	1		7 B3	○		10
*810 (FCA20001-820)		SCREW SCREW	1		8 A2	○		10
*811 (FCA06001-502)		SCREW SCREW	1		2 B1	○		10

部品表 Parts List

FCA39001-R. 3440. A

部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly No.	参照 図番 Fig. No.	販売区分 Term of Delivery	備考 Remarks	要求単位 Q'ty per order
*812 (FCA32231-812)		SCREW SCREW	2	V	10 A3	○△		10
*813 (FCA32001-813)		SCREW SCREW	3		5 B3	○		10
*814 (FCA32001-814)		SCREW SCREW	2		8 A1	○		10
*815 (FCA23001-824)		SCREW SCREW	2		7 B3	○		10
*816 (FCA20001-840)		SCREW SCREW	2		2 A1	○		10
*818 (FCA25001-897)		SCREW SCREW	1		8 B1	○		10
*819 (FCA23001-835)		SCREW SCREW	1		4 B3	○		10
*820 (FCA32001-820)		SCREW SCREW	2		7 A3	○		10
*821 (FCA32001-821)		SCREW SCREW	1		2 B1	○		10
*822 (FCA32001-822)		SCREW SCREW	1		6 B2	○		10
*83 (FCA32001-83)		遮光シート LIGHT SHIELD SHEET	1		4 B1	○		5
*84 (FCA32001-84)		デートカバー DATE COVER	1		3 A1	○		5
*86 (FCA32001-86)		スプール基板 SPOOL BASE	1		2 A3	○		5
*87 (FCA32001-87)		下カバー LOWER COVER	1		3 B3	○		5
*88 (FCA32001-88)		巻き戻し基板 REWIND BASE PLATE	1		3 B1	○		5
9 (FCA39001-9)		ノブ KNOB	1		9 B2	○		5

部品表 Parts List

FCA39001-R. 3440. A

部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly No.	参照 図番 Fig. No.	販売区分 Term of Delivery	備考 Remarks	要求単位 Qty per order
*90 (FCA32001-90)		ギア12-13 GEAR 12-13	1		3 B3	○		5
*900 (FCA32001-900)		シャッターFPC SHUTTER FPC	1	SH	5 B3	○△	RP-9804	1
901 (FCA39001-901)		メインコンデンサー MAIN CONDENSER	1		4 B3	○		5
902 (FCA39001-902)		LED LED	1	F	7 B1	○△		5
*91 (FCA32001-91)		ギア18軸 GEAR 18 SHAFT	1		3 B1	○		5
*92 (FCA32001-92)		PI基板 PI BASE	1		2 B2	○		5
*93 (FCA32001-93)		PIギア1 PI GEAR 1	1		2 B2	○		5
*94 (FCA32001-94)		PIギア2 PI GEAR 2	1		2 B2	○		5
95 (FCA39001-95)		固定環 FIXED RING	1		6 B3	○		1
*96 (FCA32001-96)		透光シート LIGHT SHIELD SHEET	1		6 B3	○	RP-9804	5
98 (FCA39001-98)		内ヘリコイド INNER HELICOIDO	1		5 A2	○		1
△ 900 (FCA39001-900)		シャッターFPC SHUTTER FPC	1	SH	5 B3	○△	RP-9804 RP-9805	1
96 (FCA39001-96)		透光シート LIGHT SHIELD SHEET	1		6 B3	○	RP-9804	5
△ 900A (FCA39001-900A)		シャッターFPC SHUTTER FPC	1	SH	5 B3	○△	RP-9805	1



## 部組品表 Assembly List

FCA39001-R. 3440. A

部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	大部組品番号 Main Assembly No.	参照 図番 Fig. No.	備考 Remarks	要求単位 Q'ty per order
*A (FCA20001-B)		ギア6-7レバー部組2 GEAR 6-7 LEVER UNIT 2	1		3 A3		5
AF (FCA39001-AF)		A Fブロック部組 AF BLOCK UNIT	1		8 A1		1
*B (FCA32001-B)		巻き戻しフォーク部組 REWIND FORK UNIT	1		3 B1		5
BA (FCA39001-BA)		レンズカバー部組 LENS COVER UNIT	1		9 B3		5
*C (FCA32001-C)		スプールカバー部組 SPOOL COVER UNIT	1		4 B2		5
*CU (FCA32001-CU)		カーテン部組1 CARTAIN UNIT 1	1		8 B1		5
*CU2 (FCA32001-CU2)		カーテン部組2 CARTAIN UNIT 2	1		8 B1		5
*E (FCA20001-A)		スプールローラー部組 SPOOL ROLLER UNIT	1		4 B3		5
F (FCA39001-F)		ファインダー部組 FINDER UNIT	1		7 A1		1
G (FCA39001-G)		中間ヘリコイド部組 MIDDLE HELICOID UNIT	1		5 B3		1
H (FCA39001-H)		カム環部組 CAM RING UNIT	1		5 A1		1
K (FCA39001-K)		キー溝環部組 KEY GROOVE RING UNIT	1		5 B1		1
L1 (FCA39001-L1)		1群レンズ室部組 1ST LENS HOUSING UNIT	1		6 A1		1
L2 (FCA39001-L2)		2群レンズ室部組 2ND LENS HOUSING UNIT	1		5 B1		1
*LM (FCA32001-LM)		ヘリコイドモーター部組 HELICOID MOTOR UNIT	1		7 A3		5
LP (FCA39001-LP)		P I羽根部組 PI BLADE UNIT	1		7 A2		5

部組品表 Assembly List

FCA39001-R. 3440. A

部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	大部組品番号 Main Assembly No.	参照 図番 Fig. No.	備考 Remarks	要求単位 Q'ty per order
*M (FCA32001-M)		給送モーター部組 FILM ADVANCE MOTOR UNI	1		1 A1		5
*N (FCA32001-N)		遮光環部組 LIGHT SHIELD RING UNIT	1		6 B1	RP-9804	5
*P (FCA32001-P)		PI FPC部組 PI FPC UNIT	1		2 B3		1
S (FCA39001-S)		裏蓋部組 BACK DOOR UNIT	1		9 A1		1
SB (FCA39001-SB)		S B部組 SB UNIT	1		4 B1		5
SH (FCA39001-SH)		シャッター部組 SHUTTER UNIT	1		5 B3		1
SX (FCA39001-SX)		S B FPC部組 SB FPC UNIT	1		4 A2		1
T (FCA39001-T)		CHカム部組 CH CAM UNIT	1		6 A3		5
V (FCA39001-V)		前カバー部組 FRONT COVER UNIT	1		8 A3		1
W (FCA39001-W)		後カバー部組 REAR COVER UNIT	1		10 B1		1
NA (FCA39001-NA)		遮光環部組 LIGHT SHIELD RING UNIT	1		6 B1	RP-9804	5





部品表 Parts List

FCA39201-R. 3440. A

部品番号 Part No.	補助番号 Ckt No.	名称 Name	1台分 個数 Pcs. Per Unit	部組品番号 Assembly No.	参照 図番 Fig. No.	販売区分 Term of Delivery	備考 Remarks	要求単位 Q'ty per order
*18 (FCA32231-18)		パノラマレバー PANORAMA LEVER	1		1 B2	○		5
*19 (FCA32231-19)		パノラマ枠押さえ PANORAMA FRAME RETAINER	1		1 B3	○		5
*21 (FCA32231-21)		パノラマレバー押さえ PANORAMA LEVER RETAINER	1		1 B2	○		5
*22 (FCA32231-22)		パノラマバネ PANORAMA SPRING	1		1 B2	○		5
312 (FCA39201-312)		パノラマバネ PANORAMA SPRING	1	SD	10 A2	○△		5
34B (FCA39201-34B)		製品番号板 PRODUCT NUMBER PLATE	1		10 B2	○		5
*48 (FCA32231-48)		QD LCD窓 QD LCD WINDOW	1	SD	10 A1	○△		5
*49 (FCA32231-49)		デート釦 DATE BUTTON	1		10 B2	○		5
50 (FCA39201-50)		パノラマノブ PANORAMA KNOB	1	SD	10 A2	○△		5
51 (FCA39201-51)		パノラマクリック PANORAMA CLICK	1	SD	10 A2	○△		5
*79 (FCA32231-79)		デートプリズム DATE PRISM	1		3 A1	○		5
*80 (FCA32231-80)		デート絞り DATE APERTURE	1		3 A1	○		5
*802 (FCA23001-802)		SCREW SCREW	5		1 B2	○		10
*81 (FCA32231-81)		遮光シート LIGHT SHIELD SHEET	1		3 A1	○		5
*82 (FCA32231-82)		デートマスク DATA MASK	1		4 A2	○		5
830 (FCA39201-830)		SCREW SCREW	1	SD	10 B2	○△		10









作成承認印

配布許可印

**ZOOM 600****FCA 3 9 0 0 1****ZOOM 600 QD****FCA 3 9 2 0 1****Lite•Touch Zoom 110****FCA 3 9 1 0 1****Lite•Touch Zoom 110 QD****FCA 3 9 3 0 1****REPAIR MANUAL**

**Nikon** | **NIKON CORPORATION**  
Tokyo, Japan

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## Specifications

### Main features

- Model of camera : A camera for 35 mm film
- Size of view angle : In regular mode :24 mm X 36 mm  
In panorama mode::13.3 mm X 36 mm
- Available film type : DX-coded film
- Number of AF step(s) : 41 steps including forced infinity focus mode
- Available lens(es) for shooting :
  - ① Focal length and brightness : f 38 ~ 110 mm / F4 ~ 10.8
  - ② Model / Structure : double lens groups zooming system, six elements in five groups, electro-motive zooming
  - ③ Object distance : 0.86 m ~  $\infty$  as covering whole zooming realm except the range between 0.86 and 0.93 m due to flash mode made for a stopdown to 3EV.  
In the flash cancellation mode, the shutter release mode is automatically locked.
- Auto focus
  - ① System : Active infrared auto focus system
  - ② Metering range : 0.8 m ~  $\infty$
  - ③ Base length : 35.057 mm
  - ④ Focus lock : Available by lightly pressing the shutter release button
  - ⑤ Command infinite focus mode : Available
  - ⑥ Warning mode against close distance : Shown by locking the shutter release operation
- Exposure control
  - ① Available photometric range : For Z11 (W) : Ev 6.0 ~ 15.125  
For Z1 (T) : Ev 7.0 ~ 17.625
  - ② Flashmatic mode : The electronic flashmatic mode working for the auto focus function is employed for flashing during the shutter blade opening.
  - ③ Flashmatic control range : Z11 (W) : F4.0 ~ 17.4  
Z1 (T) : F9.5 ~ 41.5
  - ④ Flashmatic control for the daylight synch. :  
Controlling to make it -1 EV in response to the operational flashmatic value.  
Nothing is controlled for the value beyond the operating flashmatic range.

⑤ Auto exposure shutter speed in sec. :

Auto / constant flash mode	Once per 75.6 sec.
Slow synch. / flash cancellation mode	for Z11 : Once per 8.7 sec. for Z1 : Once per 1.532 sec.

·Film speed

- ① Method : Automatically set by CAS code
- ② Speed to be set : ISO 50, 100, 200, 400, 800 and 1600
- ③ In case of no presence of DX code : Automatically setting to '100' of the speed.

·Viewfinder

- ① Lens structure : four elements in four groups, two pieces of prism
- ② Frame coverage in 35 m :

	full-size	(24 X 36)	panorama-size	(13.3 X 36)
	Vertical	Horizontal	Vertical	Horizontal
Wide-end	87.0 %	88.1 %	82.0 %	88.1 %
Tele-end	89.0 %	86.3 %	85.4 %	86.3 %


③ Magnification :

the end of Wide position	the end of Tele position
0.35 times	0.92 times

·Speed light

- ① Available mode type : auto, flash stop, flash command, red-eye reduction, slow synchro.
- ② Guide Number : 16 (ISO 100, m)
- ③ Illuminating angle : Covering the focal length view angle for the end of Wide position on the shooting lens.

For any specifications other than what are stated here, refer to the content(s) of specifications for the Zoom 500.

<b>⚠ WARNING</b>	
	<ul style="list-style-type: none"> <li>● There are high voltage parts inside. Be careful of this electric shock, when you remove the cover.</li> <li>● You must discharge the main condenser according to the instruction of this repair manual after you remove the front cover.</li> </ul>

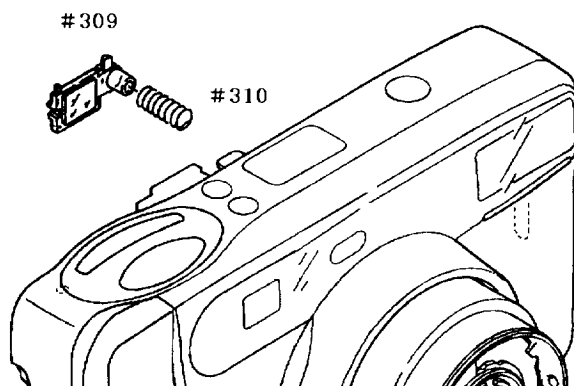
**Notes:**

- ① For disassembly and assembly, comparing to the Zoom 500' s (Lite Touch Zoom 105' s), any different content(s) alone shall be stated.  
In this accord, for any other(s) not mentioned in this guide book, the repair manual for the Zoom 500 (Lite Touch Zoom 105) shall be referable.
- ② Remove battery chamber lid and battery before disassembling.
- ③ When disassembling , pay attention to the wire arrangement and mounting positions and types of screw to be removed.
- ④ Be sure you are grounded when holding AF sensor unit because static electricity exerts serious adverse effects on IC's.
- ⑤ When removing gears , make sure to distinguish the front and back sides.

**DISASSEMBLING****1.SEPARATING REAR BODY AND LENS BARREL**

REAR COVER UNIT

DIOPTER ADJUSTMENT LENS

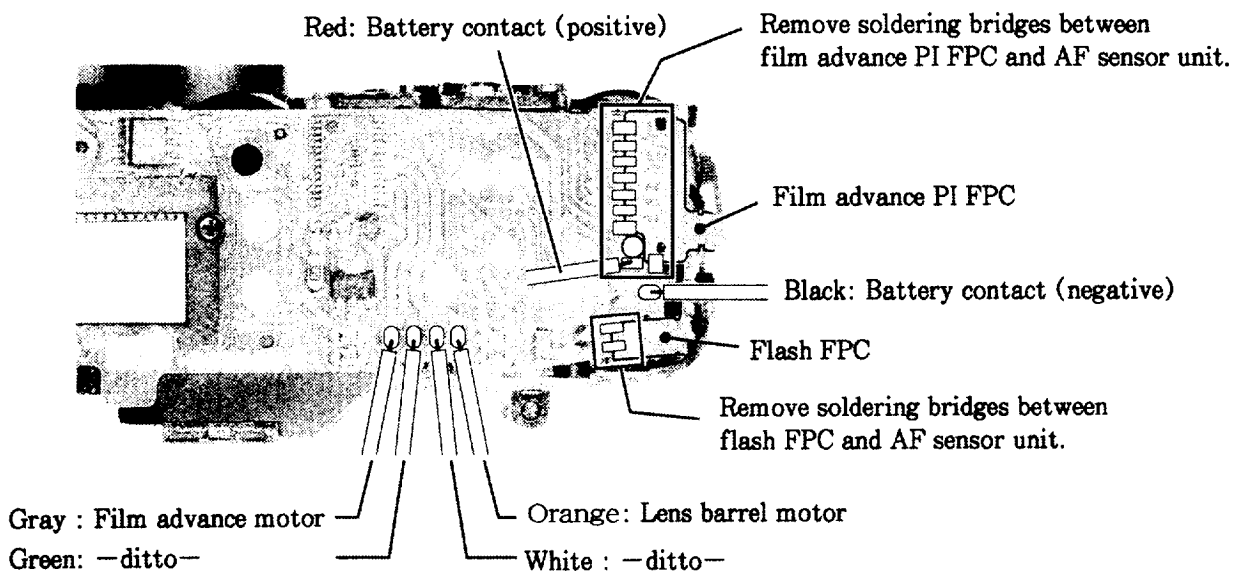
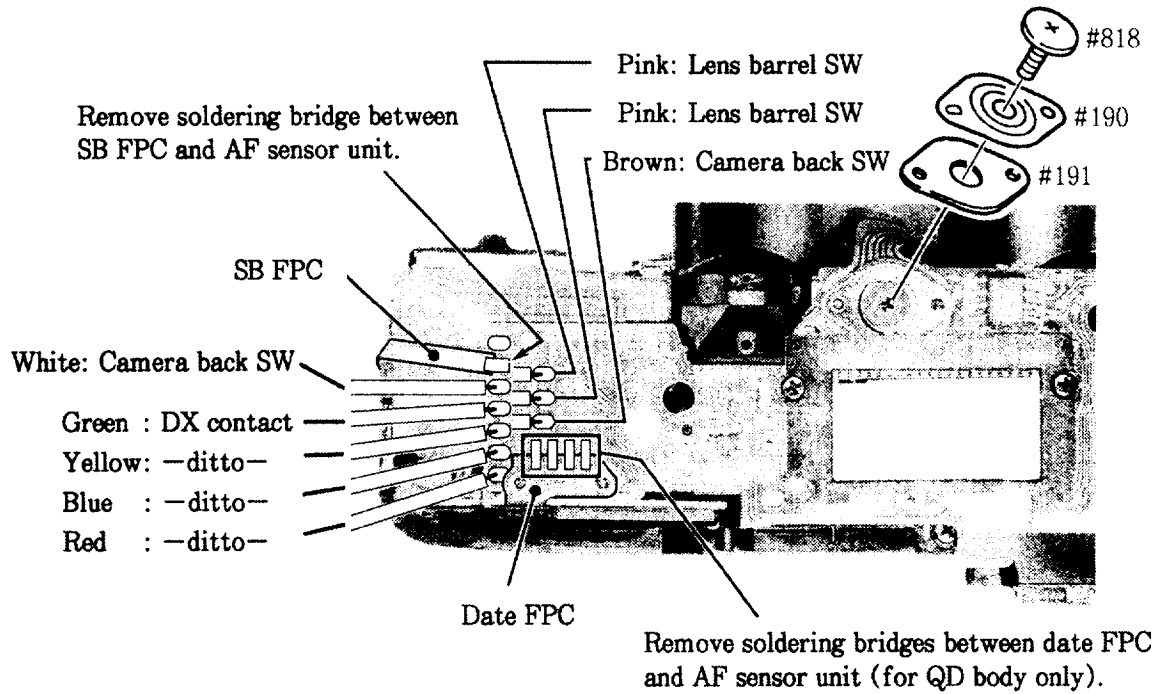


CAMERA BACK

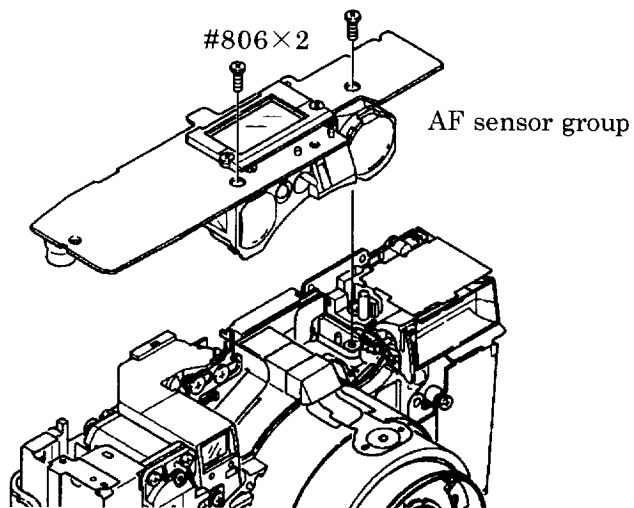
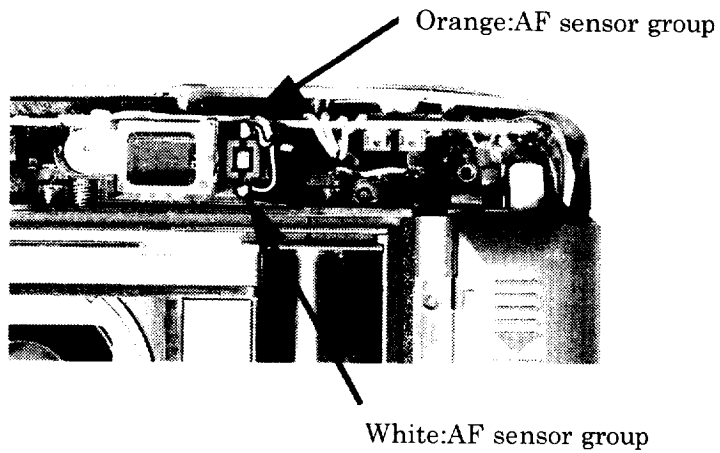
FRONT COVER GROUP

DISCHARGING OF THE MAIN CONDENSER

AF SENSOR GROUP







COUPLING GEAR GROUP

SEPARATING REAR BODY AND LENS BARREL

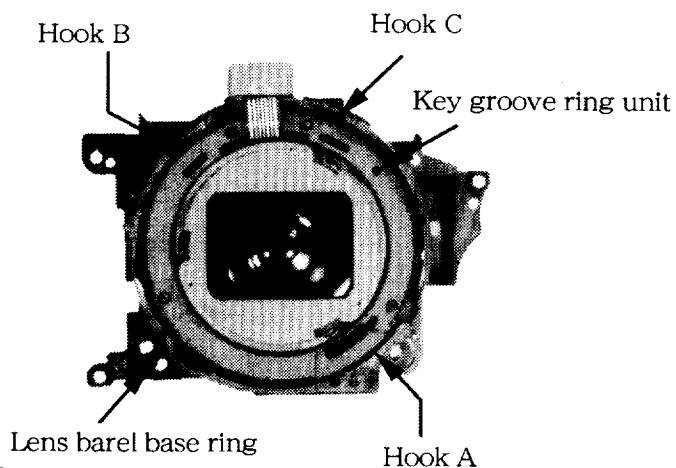
## 2. LENS BARREL

LENS BARREL SW GROUP

SF ROLLER GROUP

LENS BARREL GEAR GROUP

KEY GROOVE RING UNIT

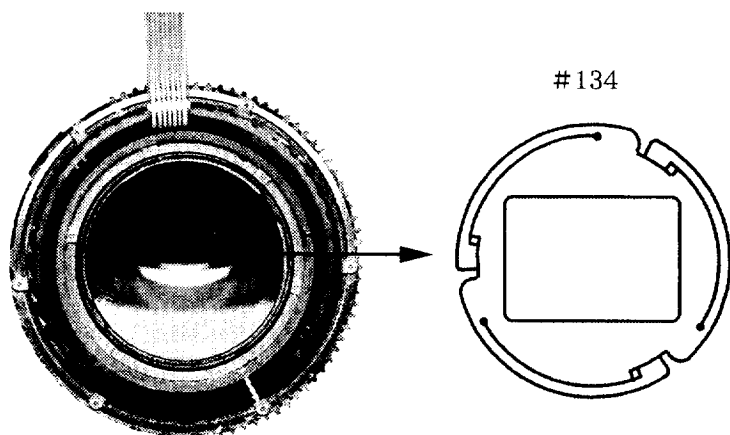


**Attention:** To remove the key groove ring unit, release the three hooks. Note that the hooks are very fragile. When releasing the hooks, take care not to break the hooks by deforming the lens barrel. If just the hook is broken, be sure to replace it with a new key groove ring unit.

- ① The way to remove the both of hook A and hook B shall be the same as the Zoom 500's (Lite Touch Zoom105's).
- ② The way to remove the hook C shall be the same as the hook B's on the Zoom 500 (Lite Touch Zoom 105).
- ③ After removing the three hooks, pull the key groove ring unit out from the lens barrel assembly.

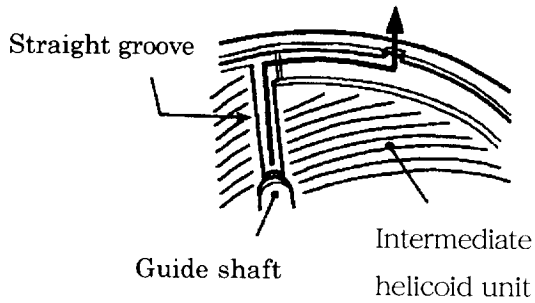
LENS BARREL BASE RING

REAR GUIDE FRAME



**Note :** The rear guide frame #134 used for this shall be set in different direction from the Zoom 500's (Lite Touch Zoom 105's).

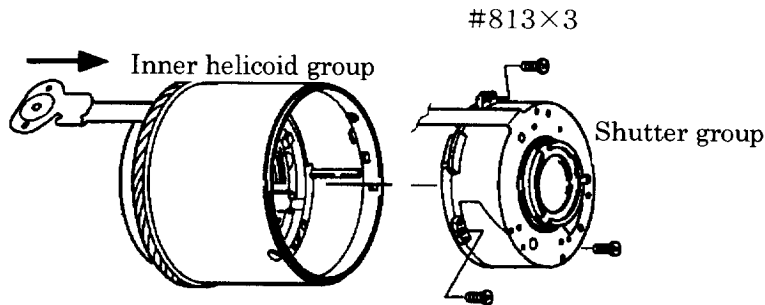
INTERMEDIATE HELICOID UNIT



- Rotate the inner helicoid group clockwise to remove. Pull out the guide shaft from the notch as shown in the figure.

LENS COVER UNIT, LIGHT BAFFLE RING UNIT

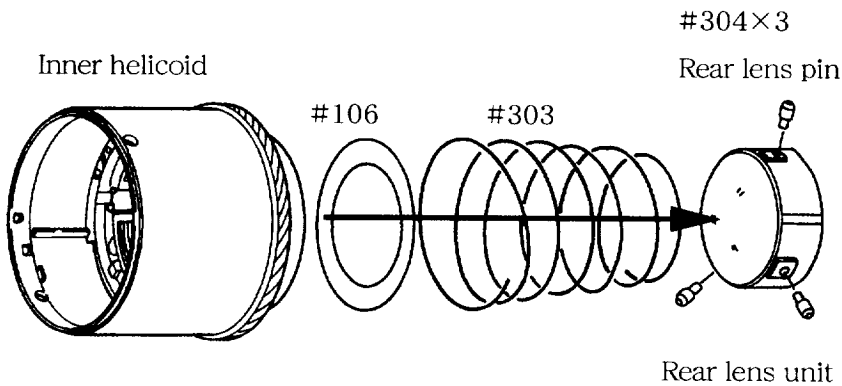
SHUTTER GROUP



FRONT LENS GROUP

CAM RING UNIT

REAR LENS UNIT

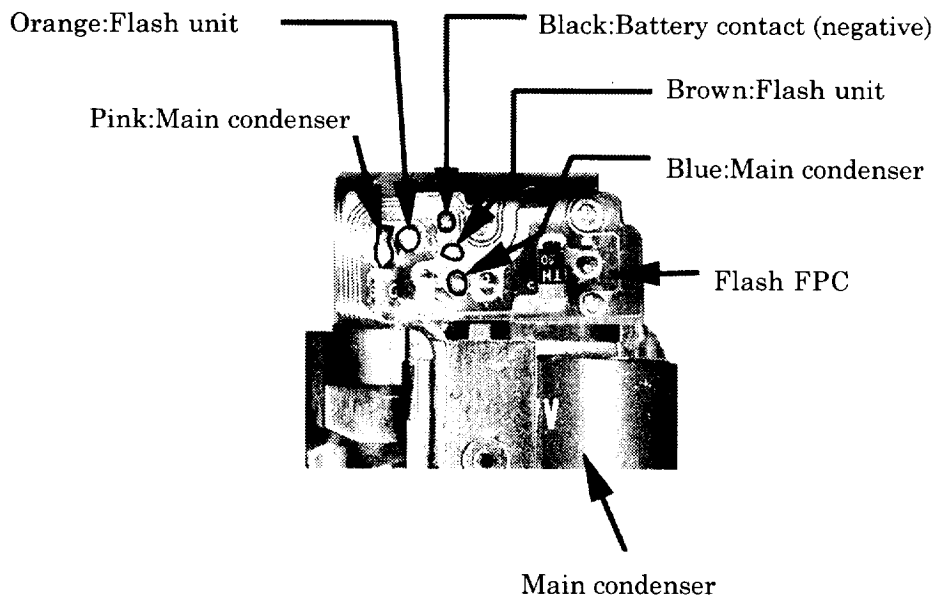


- By drawing out the three pieces of second pin group #304, remove the second lens group, the second spring group #303 and the shutter light shield plate #106 from the inner helicoid group.

### 3. REAR BODY

For disassembling the rear body, the way employed for the Zoom 500 (Lite Touch Zoom 105) shall be also applied to this case other than to 'the speed light FPC' and to 'the main capacitor', so that the repair manual for the Lite Touch Zoom 105 shall be referable.

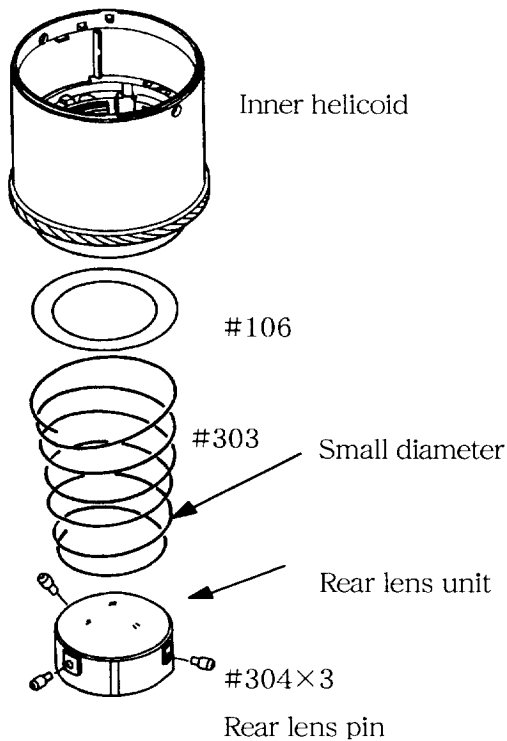
FLASH FPC, MAIN CONDENSER



# ASSEMBLING

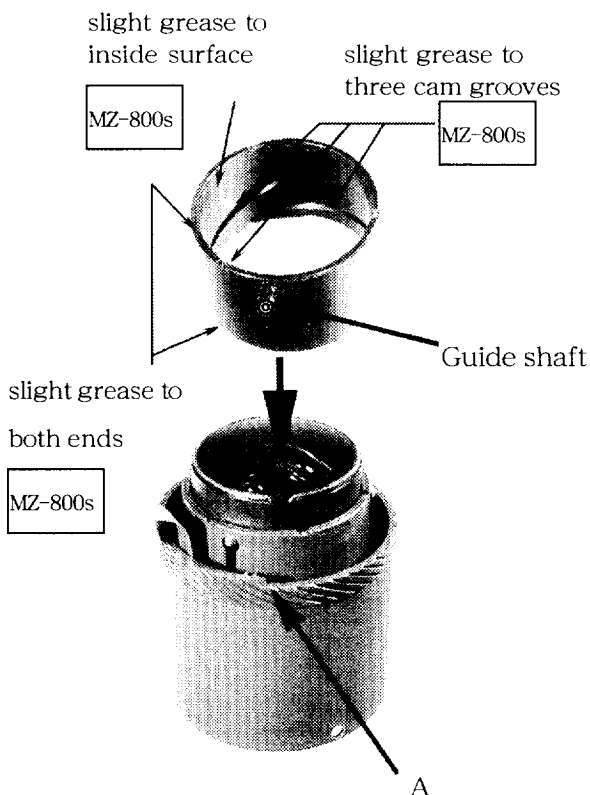
## 1.LENS BARREL

### REAR LENS UNIT, INNER HELICOID



- In the order of the shutter light shield plate #106, the second spring group #303 and the second lens group, fix them together into the inner helicoid group.  
Then, fix three pieces of the second pin group to the second lens group from the guide groove inside the helicoid.

### CAM RING UNIT



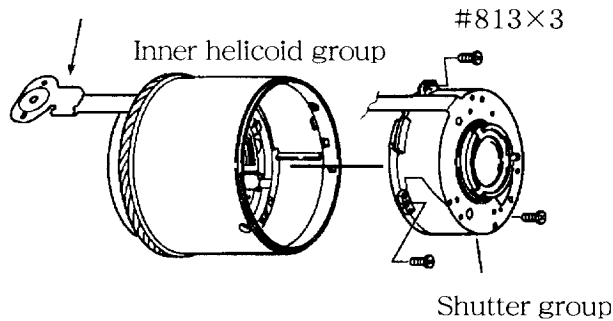
- ① As shown in the left figure, fit the guide shaft in the point A, and then fix the cam ring unit. Then, fit up the second lens group's pin to the cam groove of cam ring unit and rotate the cam ring unit counterclockwise.
- ② Fix the cam C ring by the same method used for the Zoom 500 (Lite Touch Zoom 105).

SHUTTER UNIT, SR SHEET

FRONT LENS UNIT

MOUNTING SHUTTER GROUP

Pull out the shutter FPC through a hole at the back of the inner helicoid

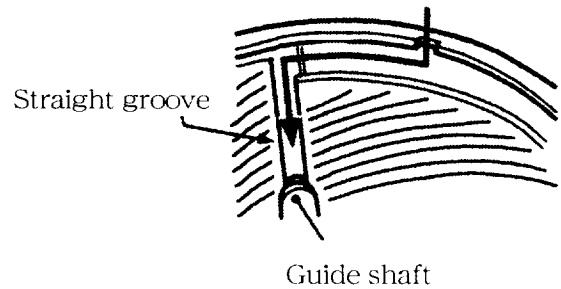


**Attention:** Do not fasten screws #813×3 forcefully as this may damage the screw holes.

INTERMEDIATE HELICOID UNIT

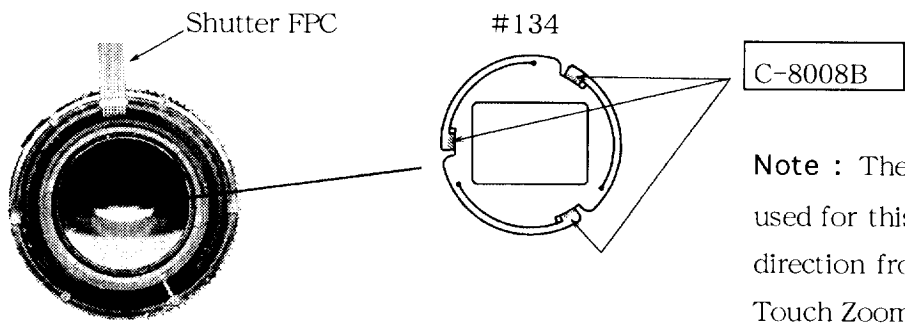


- ① Mount the inner helicoid group on the intermediate helicoid unit at the location shown in the picture on the left.
- ② Fit the guide shaft of the cam ring unit into the straight groove of the intermediate helicoid unit.



- ③ For checking the position to be fixed, the way employed for the Zoom 500 's(Lite Touch Zoom 105' s) shall be applied as well.

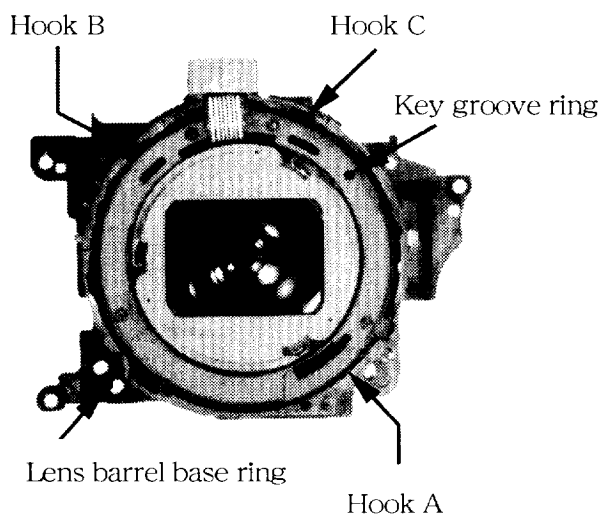
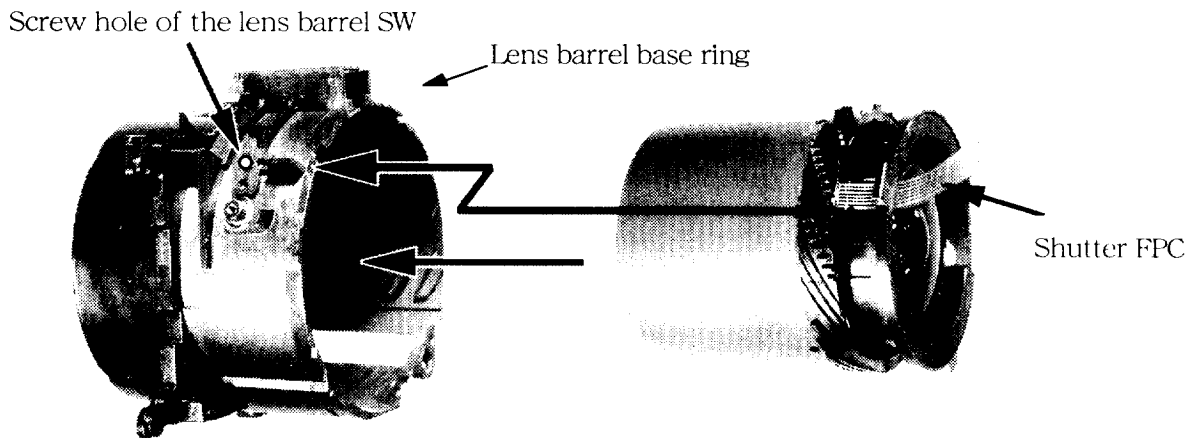
REAR GUIDE FRAME



**Note :** The rear guide frame #134 used for this shall be set in different direction from the Zoom 500's (Lite Touch Zoom 105's).

KEY GROOVE RING UNIT

LENS BARREL BASE RING



- ① Align the lens barrel switch's screw hole and the left-edge position on shutter FPC, and then fix the lens barrel unit into the fixed lens barrel unit.
  - ② Rotate the lens barrel unit clockwise until the linear groove of fixed lens barrel unit meets the projection from key groove ring unit.
  - ③ As shown in the left figure, press the key groove ring unit in it.
- Then, hang the hooks to the appointed three areas on the intermediate helicoid unit.

LENS BARREL GEAR GROUP

SF ROLLER GROUP

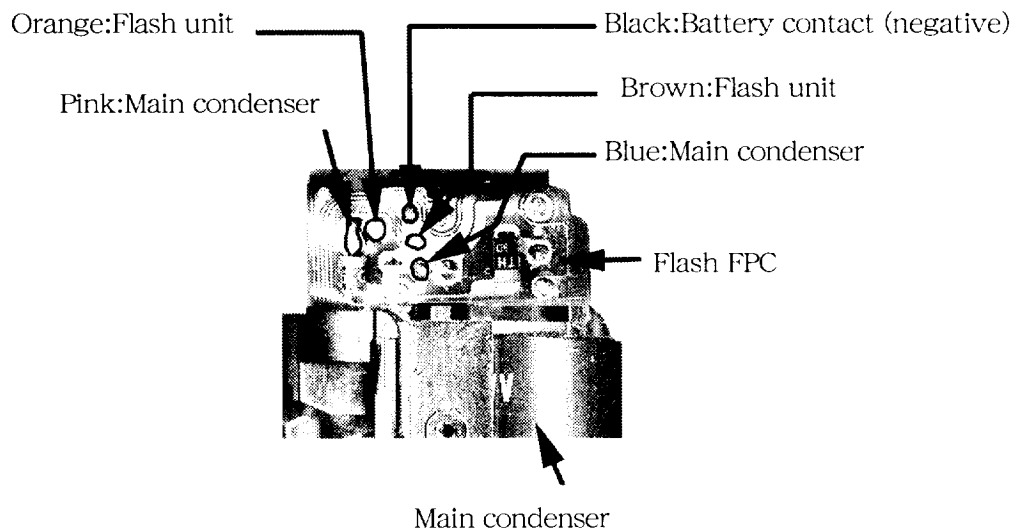
LENS BARREL SW GROUP

LIGHT BAFFLE RING UNIT

## 2. REAR BODY

For assembling the rear body, the way employed for the Zoom 500 (Lite Touch Zoom 105) shall be also applied to this case so that the repair manual for the Zoom 500 (Lite Touch Zoom 105) shall be referable.

FLASH FPC, MAIN CONDENSER





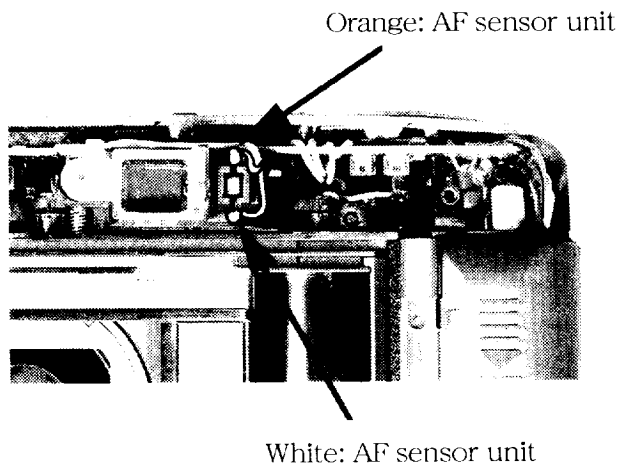
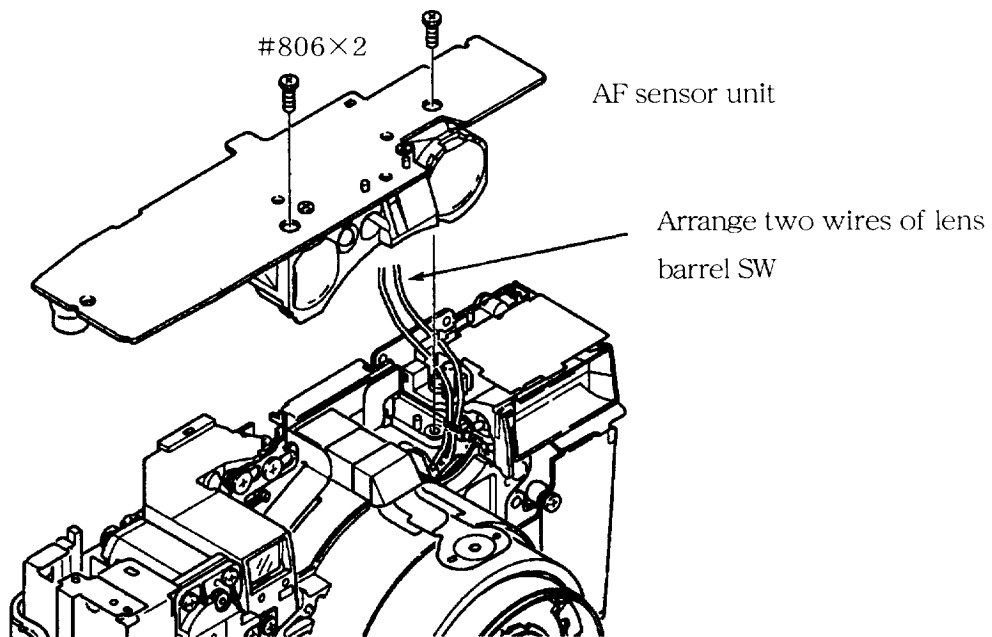
### 3. REAR BODY & LENS BARREL

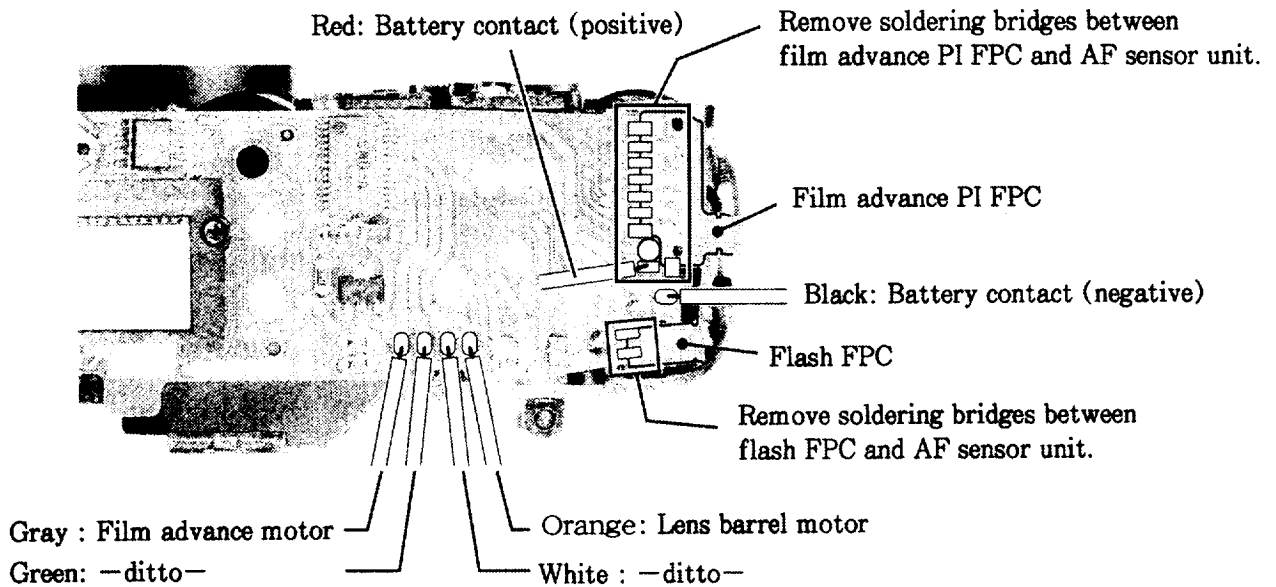
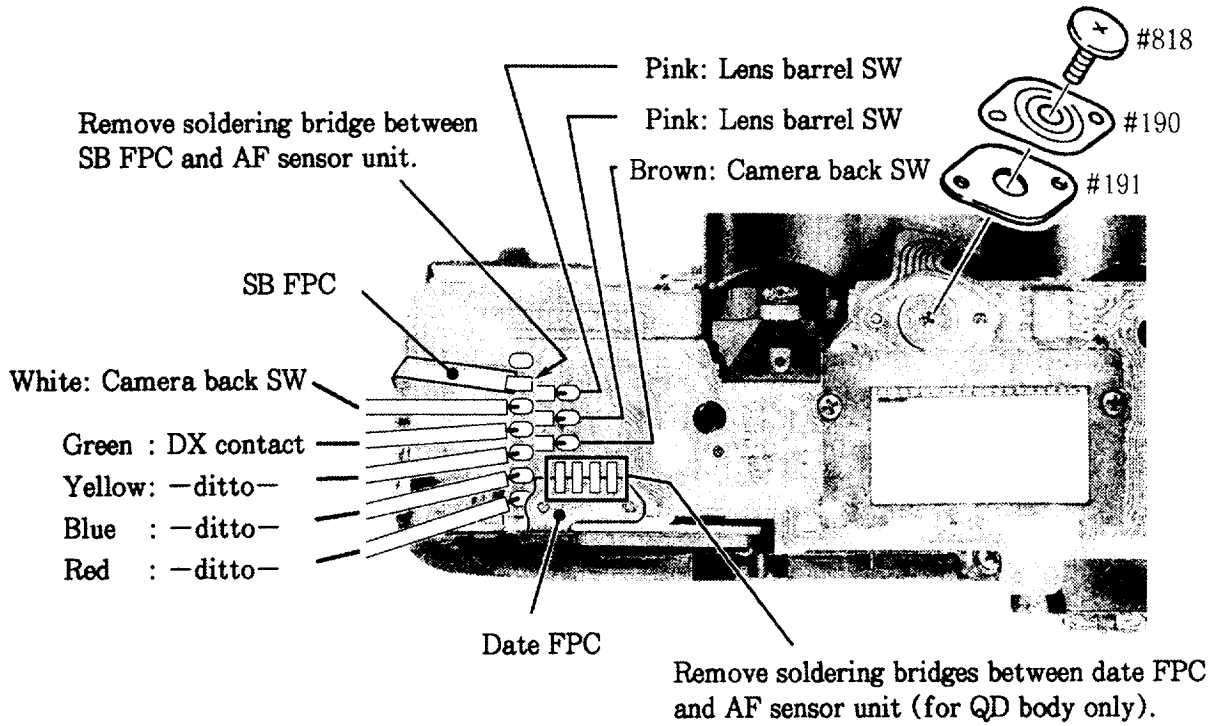
MOUNT LENS BARREL ON REAR BODY

COUPLING GEAR GROUP

SECURE FILM ADVANCE PI FPC

AF SENSOR UNIT

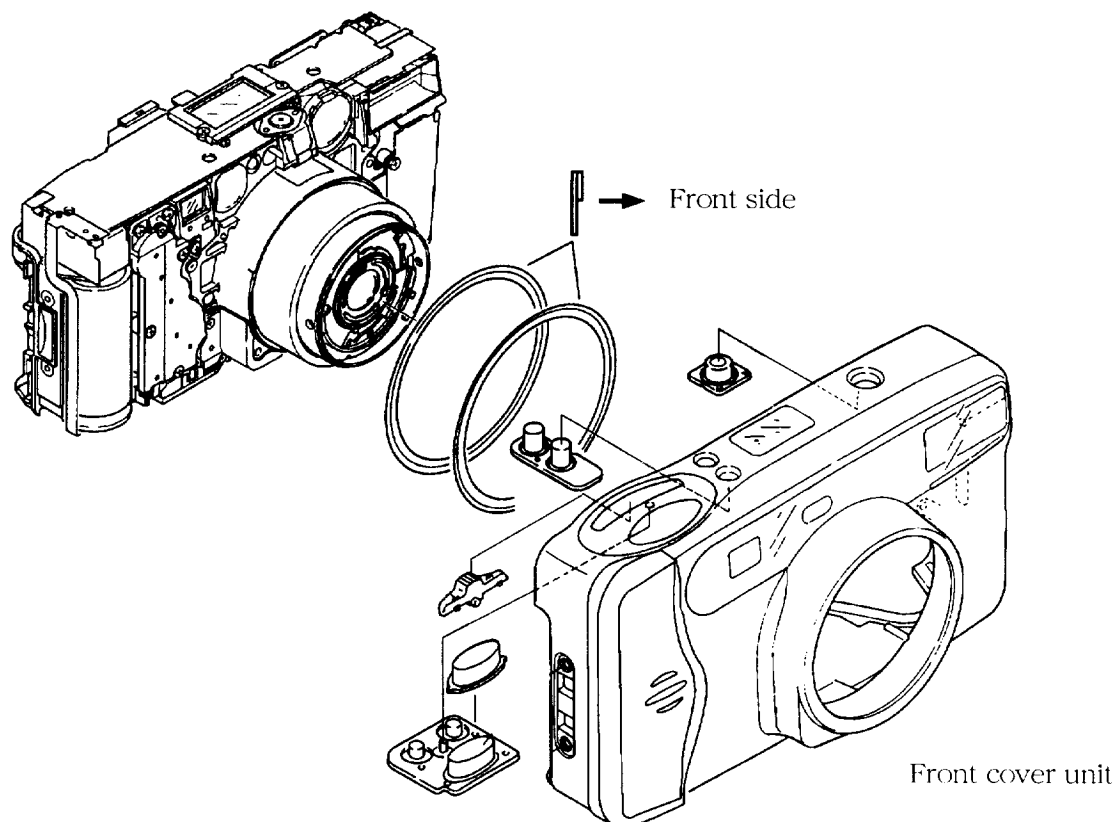




LCD PANEL GROUP

**FRONT COVER GROUP**

- Be careful of FPC's and wires when attaching the front cover.
- Do not attach screws securing the front cover until adjustment of back focus has been completed.

**CHECKING CAMERA OPERATION AND INSPECTION****WITH BULB SETTING AND INFINITY FOCUS IN MANUAL INSPECTION MODE**

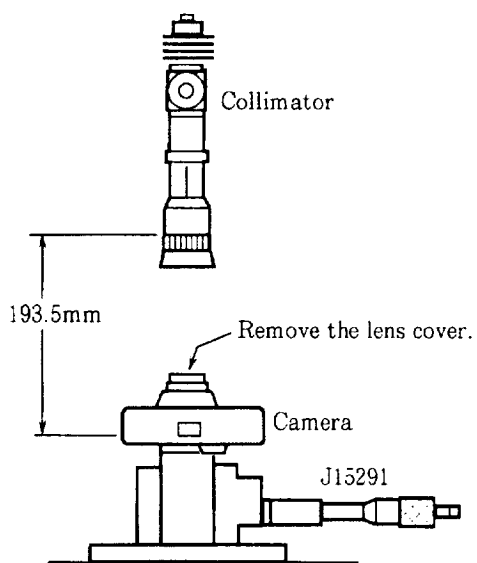
For 'how to set up' and 'how to check and to inspect' in the manual inspection mode, the way employed for the Zoom 500 (Lite Touch Zoom 105) shall be also applied to this case so that the repair manual for the Zoom 500 (Lite Touch Zoom 105) shall be referable.

**INSPECTION AND ADJUSTMENT OF BACK FOCUS**

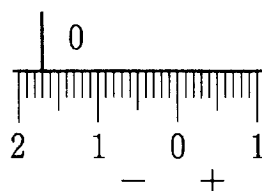
For inspection and adjustment conducted for the back focus, the way employed for the Zoom 500 (Lite Touch Zoom 105) shall be also applied to this case.

**Attention:** When inspecting and adjusting, be sure to mount the front cover and curtain rings.

1. Adjustment at both ends of focal length



- Rotate the objective lens of collimator(J19019) to set the scale to -1.7mm (minus 17 calibration).



- Refer to the repair manual for the zoom 500 (Lite Touch Zoom 105).
- If difference between WIDE end and TELE end is out of the standard range, set the value of the FFD adjustment micro stand to one calculated from the following equation.

**Standard :  $W - T = -0.32 \sim +0.32\text{mm}$**

$B = W + 0.157 (W - T)$  [ Unit : mm ]

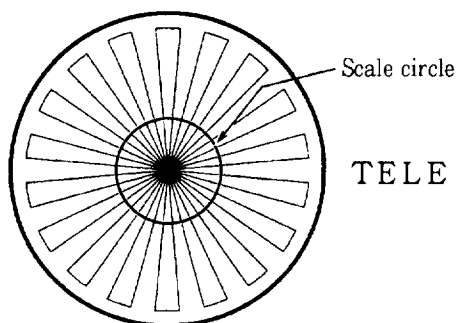
where

B : Set position of the FFD adjustment micro stand

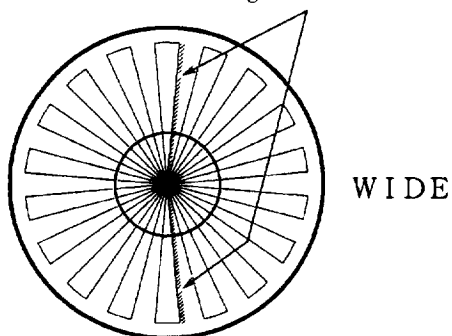
W : Readout value of TELE end

T : Readout value of WIDE end

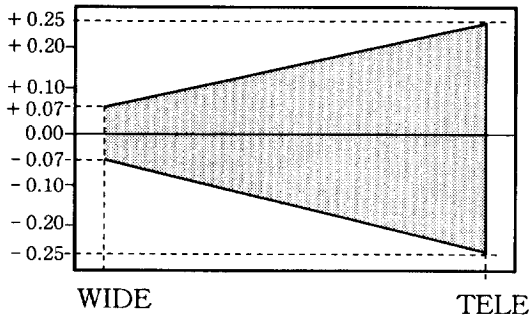
For how to adjust, refer to the repair manual for the Zoom 500 (Lite Touch Zoom 105).



Location where vertical line color changes from blue to red.



2. Adjustment of shift



For shift adjustment, refer to the repair manual for the Zoom 500 (Lite Touch Zoom 105).

**Standard value**

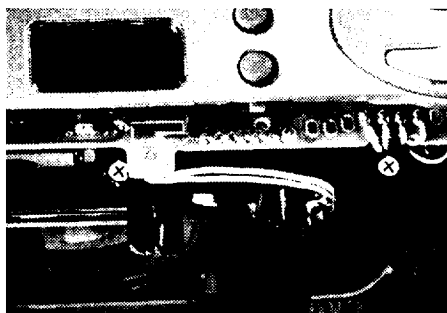
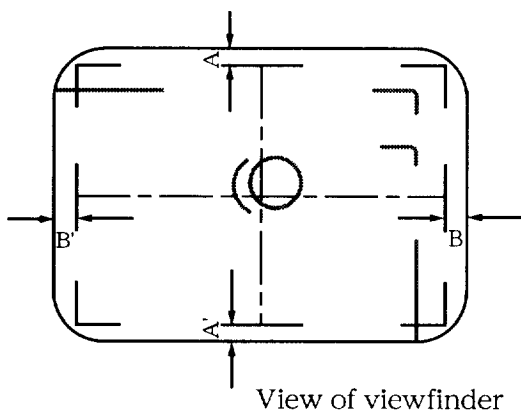
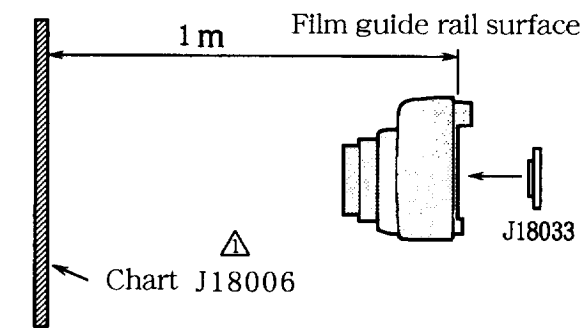
W I D E : ± 0 . 0 7 m m

T E L E : ± 0 . 2 5 m m

- You can also use a personal computer for adjusting back focus.

**ATTACHING FRONT COVER SCREWS**

**ADJUSTMENT OF VIEWFINDER'S PARALLAX**



Adjustment screws

- ① In manual inspection mode, set the camera in Bulb(command No.1) and set the distance step to 36.  $\Delta$
  - ② Set the distance between chart J18006 and camera's film guide rail surface to 1m, and attach tool J18033 on the film guide rail surface.  $\Delta$
  - ③ Set the camera - mounted lens barrel position to the Wide end, and press the shutter release button in order to set the shutter to bulb condition.  $\Delta$
- Then, set to fit up the both central lines of the chart J18006 and the tool J18033.
- Attention :** Avoid keeping the shutter in Bulb mode for more than 2 minutes.
- ④ Rotate 2 pieces of the adjustment screw in order to set the camera's finder field frame position to fit up the chart.

$\Delta$   
**Standard value**

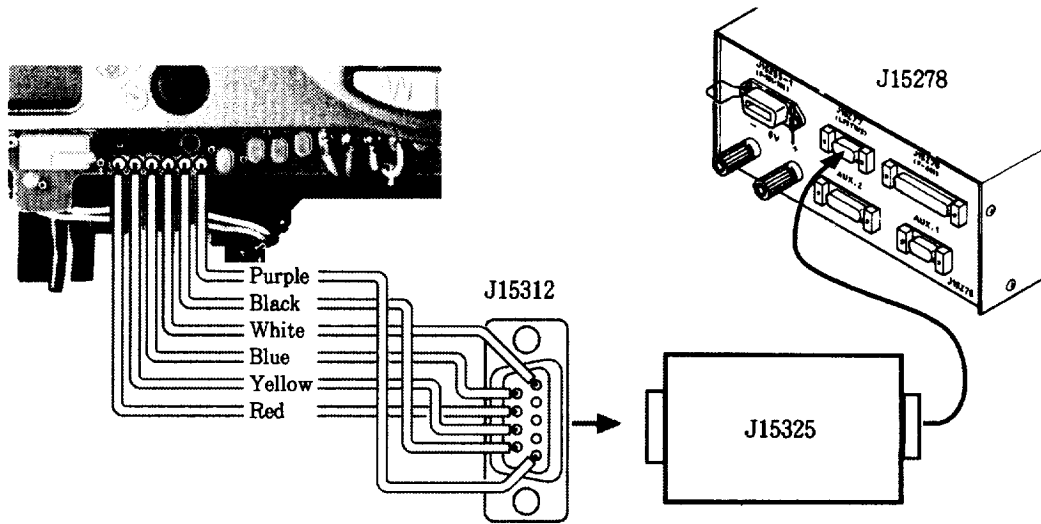
Vertically : Adjust the gap between the finder field frame and the chart's criteria line to meet its requirement as  $A = A'$  .

Horizontally : Adjust the gap between the finder field frame and the chart's criteria line to meet its requirement as  $B = B'$  .



INSPECTION & ADJUSTMENT BY USING A PERSONAL COMPUTER

- Make each inspection and adjustment as indicated on the computer display.  
Set wiring between the camera and communication tool as shown in the figure below.



\*Set the switch to NEW.

CAMERA BACK

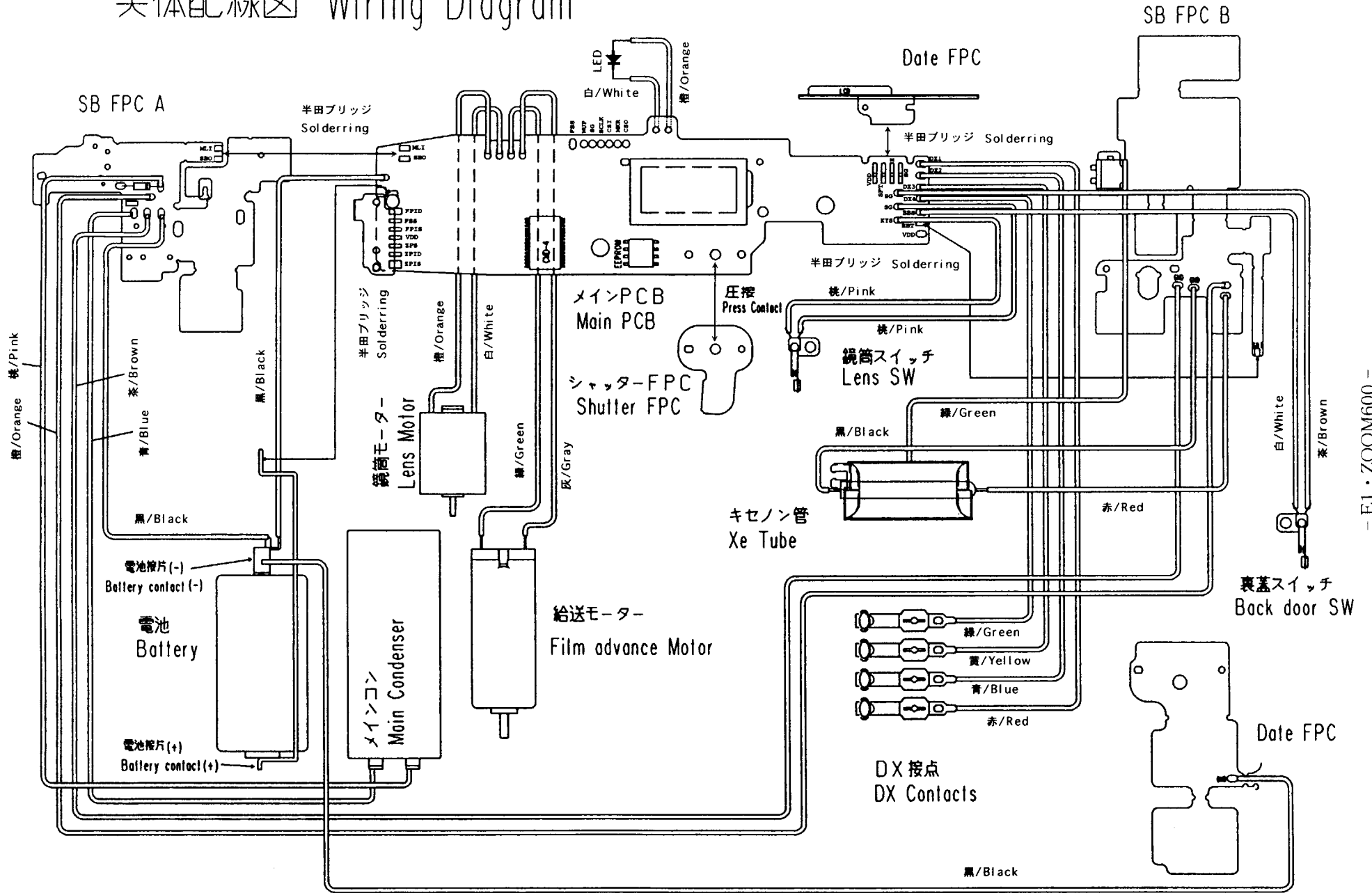
REAR COVER UNIT, LENS COVER UNIT

4. When replacing a part listed below, some adjustment and inspection may be required.

Item to be check and adjusted Parts replaced	AE	AF	Back focus	Viewfinder's parallax	Battery check voltage
AF sensor unit	○	○			○
Shutter unit	○		○		
Shutter FPC	○		○		
Date FPC			○	○	
Viewfinder unit				○	
Front lens unit	○		○		
Rear lens unit	○		○		
Helicoid rings	○		○		

\* Always make inspection of back focus when the lens barrel group assembly is removed.

# 実体配線図 Wiring Diagram



## Inspection standard and repair tools list

Inspection standard for repair ----- R 1  
Any content of statement other than mentioned in this document  
shall be the same as the Zoom 500's (Lite touch zoom 105's).

Tools ----- T 1

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### Conditions for inspection

Normal temperature :  $25 \pm 5^\circ\text{C}$  (Relative humidity)  $65 \pm 20\%$

Power source :  $3.0 \pm 0.03\text{ V}$  , 2A or more at  $0.5\Omega$  load

Light source : Surface light source  $2.854^\circ\text{ K}$

K coefficient : 1.3



# INSPECTION STANDARD

	IITEM	STANDARD				TOOLS									
AF ACCURACY	AF step location and switching position	Distance (m)		Focusing Step		Personal computer  Standard reflector  Tape measure									
		Step	Focusing distance	Switching point	Flash mode		Flash-cancel mode								
		1	21.587	∞	—		1								
		2	12.932	10.785	2		2								
		3	9.25	8.104	3		3								
		4	7.211	6.500	4		4								
		5	5.916	5.432	5		5								
		6	5.021	4.670	6		6								
		7	4.365	4.100	7		7								
		8	3.864	3.656	8		8								
		9	3.496	3.301	9		9								
		10	3.149	3.011	10		10								
		11	2.885	2.770	11		11								
		12	2.663	2.565	12		12								
		13	2.474	2.390	13		13								
		14	2.311	2.238	14		14								
		15	2.170	2.106	15		15								
		16	2.045	1.988	16		16								
		17	1.935	1.884	17		17								
		18	1.836	1.791	18		18								
		19	1.748	1.707	19		19								
		20	1.669	1.632	20		20								
		21	1.596	1.563	21		21								
		22	1.531	1.500	22		22								
		23	1.470	1.442	23		23								
		24	1.415	1.389	24		24								
		25	1.364	1.340	25		25								
		26	1.317	1.295	26		26								
		27	1.274	1.253	27		27								
		28	1.233	1.214	28		28								
		29	1.195	1.177	29		29								
		30	1.160	1.143	30		30								
		31	1.127	1.111	31		31								
		32	1.096	1.081	32		32								
		33	1.066	1.053	33		33								
		34	1.039	1.026	34		34								
		35	1.013	1.001	35		35								
		36	0.988	0.977	36		36								
		37	0.965	0.954	37		37								
		38	0.943	0.933	38		38								
		39	0.922	0.912	39		39								
		40	0.902	0.902	40		40								
		41	0.902	0.800	Release lock		Release lock								
42			Release lock												
LENS BARREL	Time and current when lens barrel swiches over	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Position</td> <td style="width: 33%;">Operating time</td> <td style="width: 33%;">Current</td> </tr> <tr> <td>R e → W</td> <td>Within 0.8sec</td> <td>Within 600mA</td> </tr> <tr> <td>W → · ← T</td> <td>Within 2.8sec</td> <td></td> </tr> </table>				Position	Operating time	Current	R e → W	Within 0.8sec	Within 600mA	W → · ← T	Within 2.8sec		Oscilloscope Stop watch
Position	Operating time	Current													
R e → W	Within 0.8sec	Within 600mA													
W → · ← T	Within 2.8sec														

	IETEM	STANDARD	TOOLS						
BACK FOCUS	Back focus	Set adjustment focus stant on film guide rail and set lens to step 1 .  Wide setting : $\pm 0.07\text{mm}$ Tele setting : $\pm 0.25\text{mm}$ Tele - Wide = $-0.32 \sim +0.32$	Collimator (J19019)  Adjustment focus stand (J15291)						
MOTOR	Film rewind	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 30px; height: 20px; text-align: center;">/</td> <td style="text-align: center;">OPERating time</td> </tr> <tr> <td style="text-align: center;">Film rewind</td> <td style="text-align: center;">Within 55sec</td> </tr> <tr> <td style="text-align: center;">End of film detection</td> <td style="text-align: center;"><math>4.6\text{sec} \pm 1.0\text{sec}</math></td> </tr> </table> <p style="text-align: center;">Note : Film rewind time at 36th frame.</p>	/	OPERating time	Film rewind	Within 55sec	End of film detection	$4.6\text{sec} \pm 1.0\text{sec}$	Stop watch
/	OPERating time								
Film rewind	Within 55sec								
End of film detection	$4.6\text{sec} \pm 1.0\text{sec}$								
FLASH	Flash level Guide number	$16 \pm 0.4 \text{EV}$ ( ISO 100 distance 2m )	Flash meter  Standard reflector						
VIEW-FINDER	Magnification	Wide end : $0.35\text{X} \pm 0.1\text{X}$ Tele end : $0.92\text{X} \pm 0.2\text{X}$	Diopter telescope						

## Tools

Major general tools and testers

Tool No.	Name	Specifications
J 9 0 0 1 - 5	DC regulated power supply	Metronics 526 (0~18V, 2A)
J 9 0 0 6 - 6	Digital multimeter	Hioki 3200
J 1 5 2 9 1	Micro stand for adjusting FFD	
J 1 9 0 1 9	Collimator	Goko 24LT-2DTS, f=193.5
J 1 9 0 3 6	Multi shutter tester	EF-511N
J 1 8 1 9 0	Standard reflector paper	OXORD GRAY No. 2 2
J 1 1 2 3 4	Tool to withdraw 1st lens Same as the Zoom 500's	
J 1 5 3 2 5	Communication I/F Box	
$\Delta$ J 1 8 0 0 6	Parallax adjustment chart	
J 1 8 0 3 3	Focus glass for parallax adjustment	
J 1 8 2 8 7 A	Adjustment FD	NEC 5 inch
J 1 8 2 8 7 B	Adjustment FD	NEC 3.5 inch
J 1 8 2 8 7 C	Adjustment FD	IBM 5 inch
J 1 8 2 8 7 D	Adjustment FD	IBM 3.5 inch