

CANON NEW F-1



SERVICE MANUAL

EXPLODED VIEWS

AND

PARTS LIST

CANON INC. JAPAN

Contents

1.	SWITCH POSITION AND NOMENCLATURE	4
2.	COVERS	6
3.	FRONT PANEL UNIT ATTACHMENT AND REMOVAL	10
4.	FRONT BODY	12
5.	UPPER BODY (WINDING SIDE).....	16
6.	TUNGSTEN CABLE ADJUSTMENT	19
7.	SPOOL	20
8.	SPROCKET	22
9.	CHECKS AND ADJUSTMENTS	23
10.	UPPER BODY (REWIND SIDE).....	31
11.	LOWER BODY (I)	34
12.	LOWER BODY LUBRICATION.....	38
13.	LOWER BODY (II)	39
14.	ELECTRICAL ADJUSTMENTS.....	42
15.	FRONT PANEL UNIT ASSEMBLY AND DISASSEMBLY	50
16.	EYE LEVEL FINDER.....	61
17.	MOISTURE RESISTANT TREATMENT	66
18.	WATER RESISTANT TREATMENT	68
19.	SHUTTER SPEED VARIATIONS.....	70
20.	SERVICE TOOLS LIST.....	71
21.	TROUBLESHOOTING CHARTS	74
22.	PARTS LISTS.....	89

Introduction

The NEW F-1 is the base of a completely new Integrated Functional System. It is based on the original F-1 but utilizing many advances in electronics, precision machining and precision optics made since the original F-1 was developed ten years ago.

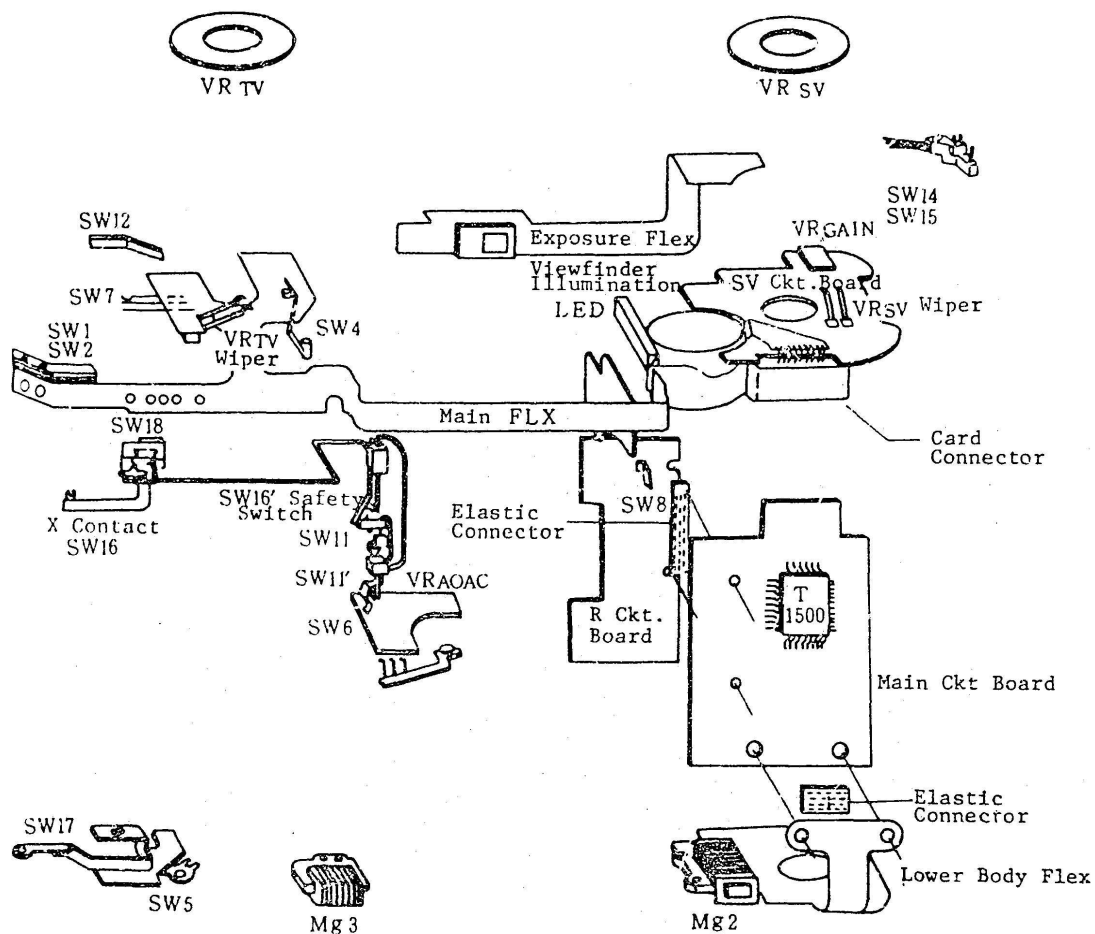
The following considerations should be kept in mind when repairing the New F-1:

1. To maintain complete interchangeability between the camera body and the system accessories, repair personnel must understand the interfaces (mechanical and electronic) between the body and accessories. They must also be familiar with repair standards, checking, adjustment and tools maintenance procedures.
2. Preventive maintenance (lubrication, adjustment and parts replacement) are necessary to insure the reliability of the NEW F-1.

Special Repair Instructions

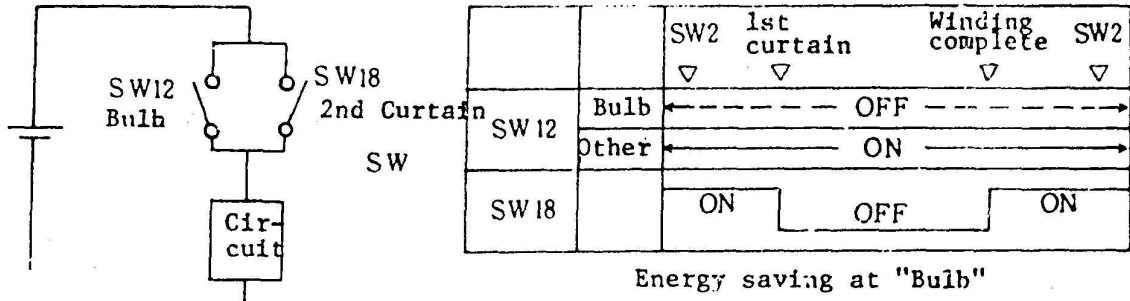
1. Many of the electrical contacts in the camera are molded into plastic insulators. When making solder connections, the soldering time should be kept as short as possible.
2. 3% silver solder should be used to solder the IC's.
3. Many bearing balls are used in the winding mechanism. Be careful during assembly and disassembly to insure that no balls get lost in surrounding mechanisms.
4. When the rewind crank is not installed, if the rewind shaft is pushed down past a certain point it becomes impossible to open the back cover without removing certain parts that normally need not be removed. This results in lost time.
5. Be sure that the elastic connectors used to connect the flexible and rigid circuit boards are kept clean and free of contamination.
6. The water and moisture proofing complicates many repair procedures. Take care that they are correctly performed
7. If the tungsten cable is kinked or frayed, repair is difficult and time-consuming. It is much more cost efficient to be careful to not damage the cable than to repair or replace it.
8. The correct adjustment of the AV AE shutter speed indicator output resistor (RM TV2) and the TV AE aperture determination resistor (RAE) are basic to maintaining system interchangeability.

1. Switch position and nomenclature

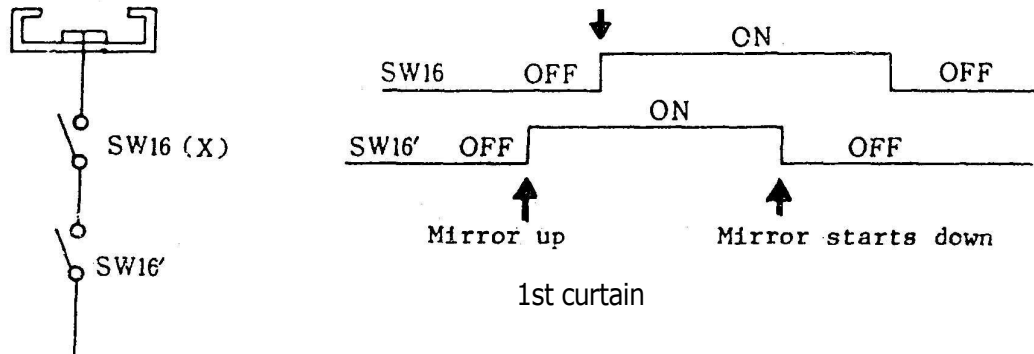


Name	Operation
SW1 Metering Switch	ON: Metering activated
SW2 Release Switch	ON: Starts Release sequence
SW4 Count Switch	OFF: Shutter exposure timing starts
SW5 Winding Complete Switch	OFF: Winding complete
SW6 Stop-down (S.D.) Switch	ON: Stopped-down (ganged with SW11 ¹)
SW7 Self Timer Switch	ON: Self timer activated
SW8 Battery Check Switch	ON: Battery Check
SW11 Lens A-M Switch.	ON: Lens set to "a" mark
SW11' Stop-down switch	OFF: Lens stopped down
SW12 Bulb switch	OFF: "Bulb" shutter speed
SW14 Timer Switch	ON: Timer Activated
SW15 Lamp Switch	ON: Viewfinder illumination on
SW16 X Sync Switch	ON: 1st curtain open; OFF: Winding complete
SW16' Safety Switch	ON: Mirror up; OFF: Mirror down
SW17 Film End Switch	ON: No film on take-up spool
SW18 2nd Curtain Switch	OFF: When 2nd curtain starts

1) SW12 and SW18 Relationship

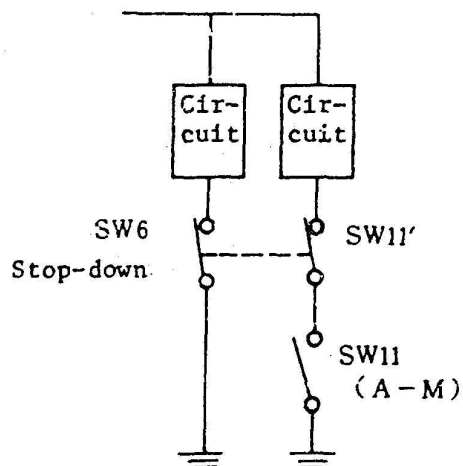


2) SW16 and SW16' Relationship



X contact must turn off after the 2nd curtain closes and before winding is complete.

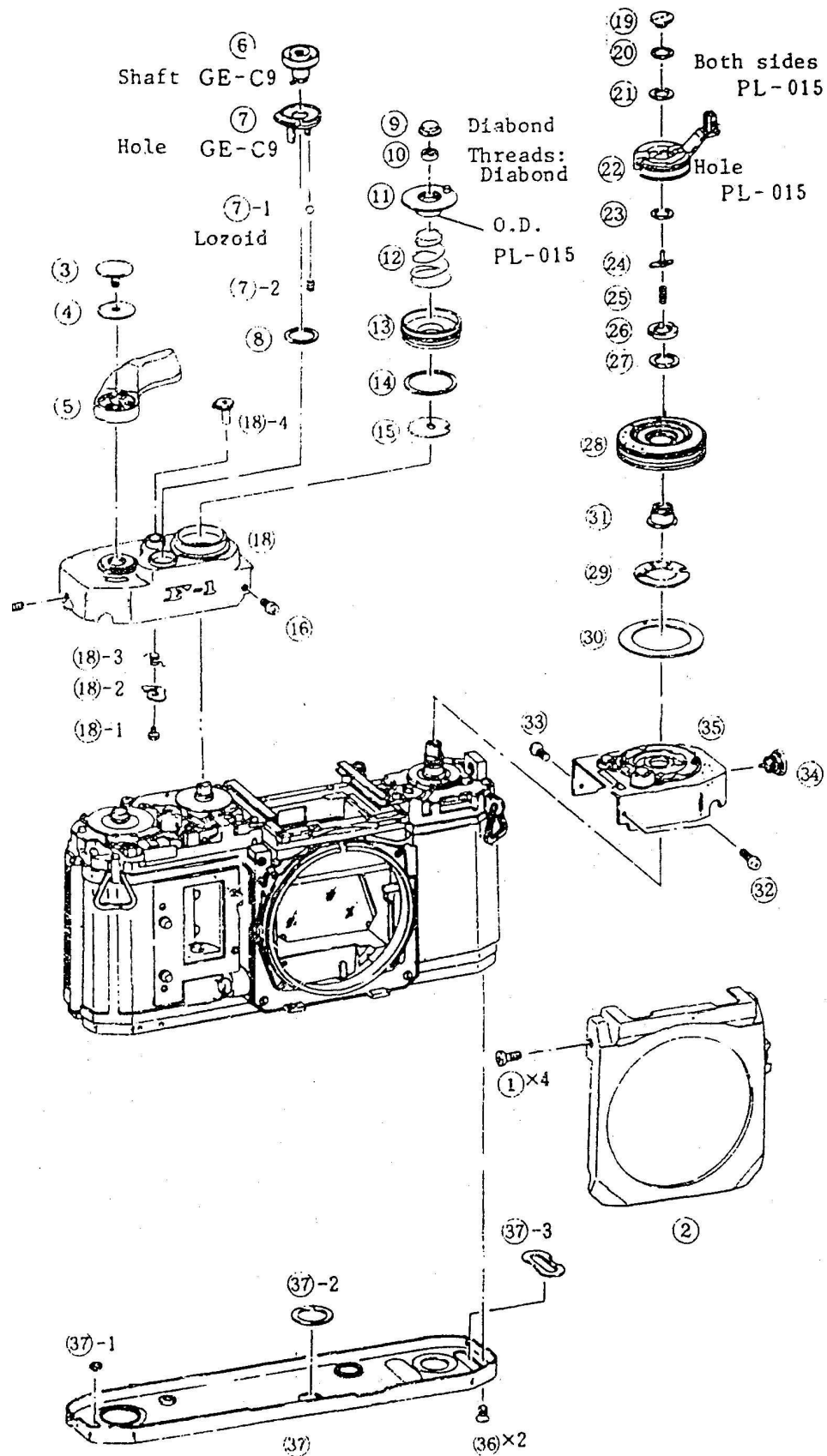
3) SW11, SW6 and SW11' Relationship



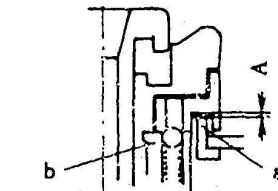
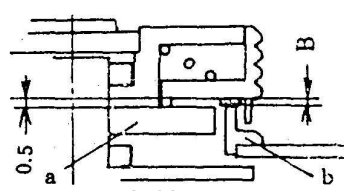
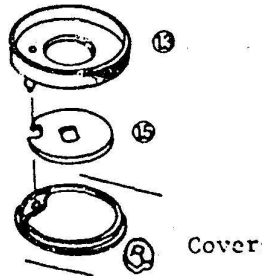
	Lens "A"		Lens "M"	
	Max.	S.D.	Max.	S.D.
SW11	ON		OFF	
SW6,1	ON	OFF	ON	OFF

Max: Open aperture S.D.:
Stopped down

2. Covers



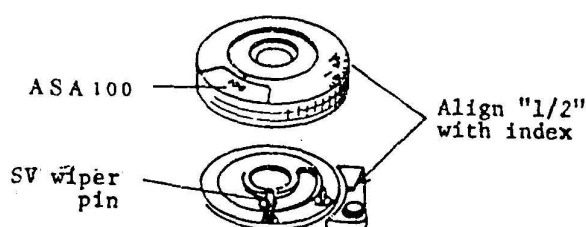
Numbers 1-37

Disassembly Notes	Assembly and Adjustment Notes
1. Remove the smooth face screw (3) and shutter button (6) with tool (CY9-6131-000). 2. Be careful not to lose detent ball (7)-2 inside the camera. 3. The shutter dial cap (9) is glued in place. 4. Seals (8)(14)(29) and (30) are available in more than one thickness to insure correct sealing. 5. When the rewind crank (22) is not installed, don't push the rewind shaft all the way down into its holder. (If it is, time will be lost in unnecessary work, because of the click spring.) 6. Press the opening safety stopper while removing the left top cover (35). 7. (35).	4. Place teflon washer (8) under the lock lever (7). Use a washer that is 0.3mm thicker than the "A" dimension shown below. (Water resistance)  $A = l.l-(a-b) \text{ mm}$ Washer $t = A + 0.3\text{mm}$ 5. The teflon washer (14) used under the shutter dial should be 0.1mm thicker than the "B" dimension shown below. (Water resistance)  $B = 0.5-(a-b)$ Washer $t = B + 0.1\text{mm}$
Assembly and Adjustment Notes	
1. Put Diabond into the winding lever shaft hole before final installation of the screw (3). 2. Lubricate the shutter button shaft (6) and the interior or the release lock (7) with GE-C9 [See Water-resistant treatment (XIX)]. 3. Put Lozoid in the detent groove of the release lock (7).	6. When installing the shutter dial, align the notch in (15) and the pin in the shutter dial ring (13) with the hole in the top cover. The shutter must be set to "A" before the dial is installed.  Covers

Note: Numbers in parentheses in the text correspond to circled numbers one page 6. Disassemble in normal order and reassemble in reverse order.

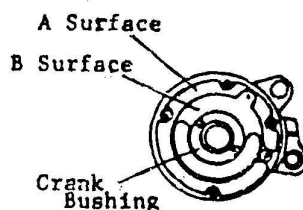
Assembly and Adjustment Notes

7. Adjust the rewind crank (22) slip torque by changing the friction washer (21).
Torque Limits: 35 to 55 gcm.
8. Lubricate both sides of friction spring (20) with PL-015.
9. Hold the rewind fork. Raise the rewind crank knob and turn in the rewind direction. The clutch should engage within one half turn,
10. To install the ASA Dial, set the SV wiper wiper pin as shown and align the "1/2" on the exposure compensation dial with the index.



11. Check the difference in height between the rewind crank bushing and the "A" and "B" surfaces. Install a slightly thinner washer as indicated below.

11.1. Washer (30) "A" Difference Check at four points.



Ex: Difference	Washer "t"
0.15mm	---→ 0.1mm
0.2mm	---→ 0.2mm
0.1mm	---→ No washer

11.2. Washer (29) "B" Difference

Ex: Difference	Washer "t"
0.55mm	---→ 0.5mm
0.4mm	---→ 0.4mm
0.35mm	---→ No washer

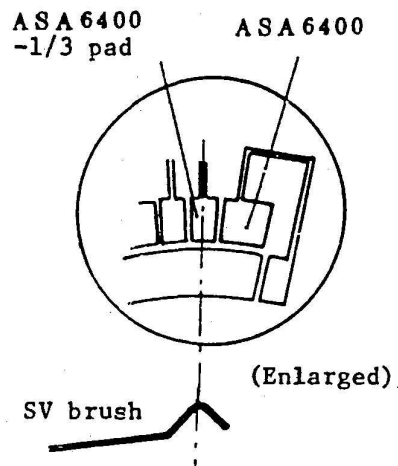
Note: Numbers in parentheses in the text correspond to circled numbers on page 6. Disassemble in normal order and reassemble in reverse order.

Assembly and Adjustment Notes

12. SV Brush Adjustment

- 12.1. Set the SV (ASA.) dial to ASA 6400 -1/3.
- 12.2. Set the exposure compensation dial at "1".
- 12.3. Check the position of the brush through the P.C. terminal hole.

Note: Shining the light source (a penlight or the illuminator D or M) through the loupe makes the brush position easier to see.

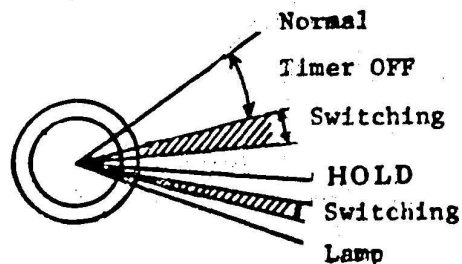


- 12.4. Look at the underside of the SV board to check if the brush if the brush is positioned as shown on the ASA 6400 -1/3 pad.

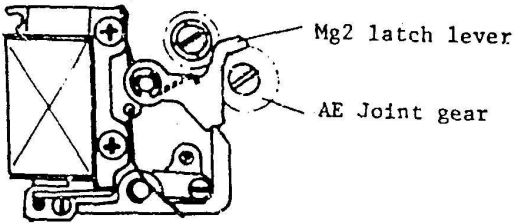
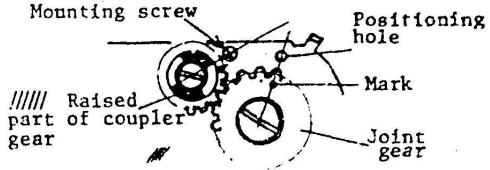
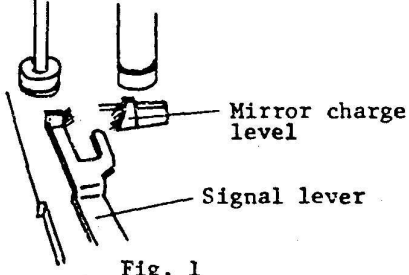
Note: It must stay on the pad at both extremes of dial play.

- 12.5. Set the dial to ASA 6400 and check that the meter doesn't vary suddenly either up or down.
 - 12.6. If the adjustment is not correct adjust the SV board eccentric.
13. After installing the top cover (35), check the operation of the NORMAL-TIMER-LAMP switch.

It should switch from one function to the next as shown.



3. Front panel unit attachment and removal

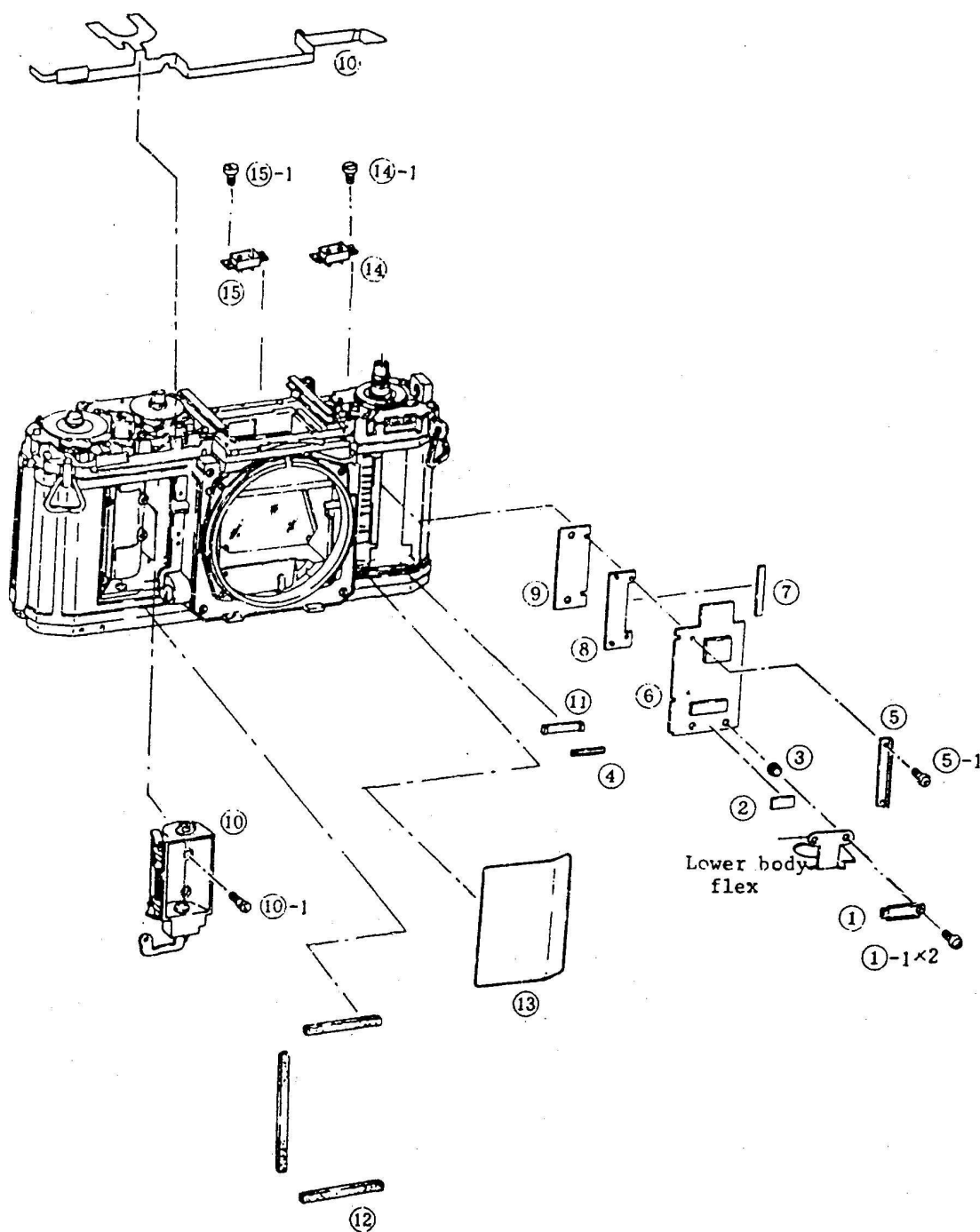
Disassembly Notes	Assembly and Adjustment Notes
To remove the front panel unit, remove the following parts. 1 Remove the top covers, mount apron and bottom cover. 2 Body coverings (front) 3 Beeper plate 4 Removing the Mg2 latch lever makes the AE joint gear easier to remove.  Mg2 latch lever AE Joint gear 5 AE Joint Gear Position the main diaphragm lever so the gear can be removed. 6 Tripod Socket 7 Diaphragm Stricker lever 8 Battery Chamber Cover 9 Pentaprism rails 10 Unsolder eleven leads to main circuit board. 11 X sync contact yellow cord 12 Battery Check contact	1 AE Joint Gear and AE Coupler Installation  Mounting screw Positioning hole Mark Raised part of coupler gear Joint gear 1.1 Lubricate the joint gear and coupler shafts with Astro-Oil-MIL-G. 1.2 Align the raised portion of the coupler gear with the mounting screw as shown. 1.3 Align the mark on the joint gear with the positioning hole as shown. 2 Front Panel Unit Installation 2.1 Lubricate the marked parts of the mirror charge and signal levers (in the body) with Lozoid.  Mirror charge level Signal lever Fig. 1 2.2 Wind until the curtain edge is approximately in the center of the frame. 2.3 In this semi-wound condition, do not move the signal lever (Fig. 1) or Intermediate signal lever (Fig. 4, next page).

Note: Numbers in parentheses in the text correspond to circled numbers on page 6. Disassemble in normal order and reassemble in reverse order.

Disassembly Notes	Assembly and Adjustment Notes
13. If the SV board is to be removed, remove the white cord from the P.C. Terminal. If the SV board is not going to be removed, lift the front panel and unsolder to white cord from the front panel (SW16') end. 14. Remove the plastic foam light shields from the battery box area. 15. If the moisture seal rubber around the main circuit board is damaged, replace it.	2.4 In the order shown in figure 2, set the levers as shown in figure 3. Fig. 2 Fig. 3 3.1. With the levers positioned as in figure 3, install so they are between the mirror charge and signal levers (Fig. 1. page 6). Caution: If this operation is not done correctly, winding timing will be incorrect and the shutter will not cock. 3.2. While performing the above step, it is possible that the signal lever will get pushed out of position. Check that the levers are positioned as shown below. (Another method is to hold the intermediate signal lever toward the mount side while installing the unit.) Fig. 4 3.3. While holding the body 1st curtain latch lever out of the way, position the 1st curtain start lever toward the rear. 3.4. Put Arontite R on the threads of the mirror striker lever screw before installing it.

Note: Numbers in parentheses in the text correspond to circled numbers on page 6.

4. Front body



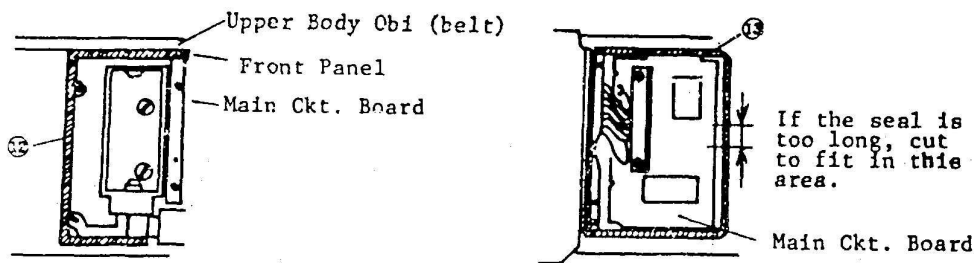
Numbers 1-16

Disassembly Notes	Assembly and Adjustment Notes
1. To remove the main circuit board (6), the lower body flex must be moved slightly. 2. When the battery cover is removed, temporarily replace the earth (grounding) screw.	4. Clean the connector portions of the resistor board (R Board) (9) and main circuit board (6) (rear side) and apply electrolub. 5. Install the resistor board (9) into the body. Put diabond on the rear of the board around the mounting holes. 6. Battery Chamber Unit (10) Post Installation Checks
Assembly and Adjustment Notes	
1. Apply electrolub to the connector portions of the main circuit board (6) and lower body flex. 2. Clean the elastic connectors (2) and (7) with electrolub. ① - 1 ① Shorter end down ② All the way in ⑥ 3. Install cushion II (4) as shown below. Cushion II Main Ckt. Board	6.1. Without a battery installed, the swinging release rod (p/6 the battery chamber unit) must overlap the release pin below it by at least 1/2 the pin diameter. 6.2. When the minus contact of the battery box is pressed down and then released slowly, the rod must return completely and smoothly. 7. Install cushion I (11) as shown below. Push it in until it is flush against the main circuit board and diabond it to the body.

Note: Numbers in parentheses in the text correspond to circled numbers on page 12. Disassemble in normal order and reassemble in reverse order.

Assembly and Adjustment Notes

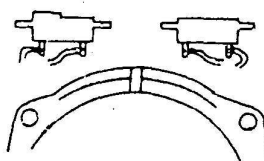
8. Attach the light shield (12) and seal (13) as shown.



9. Pentaprism Contact Installation

- 9.1. Don't interchange the position of the left and right contacts, or reverse either of them.

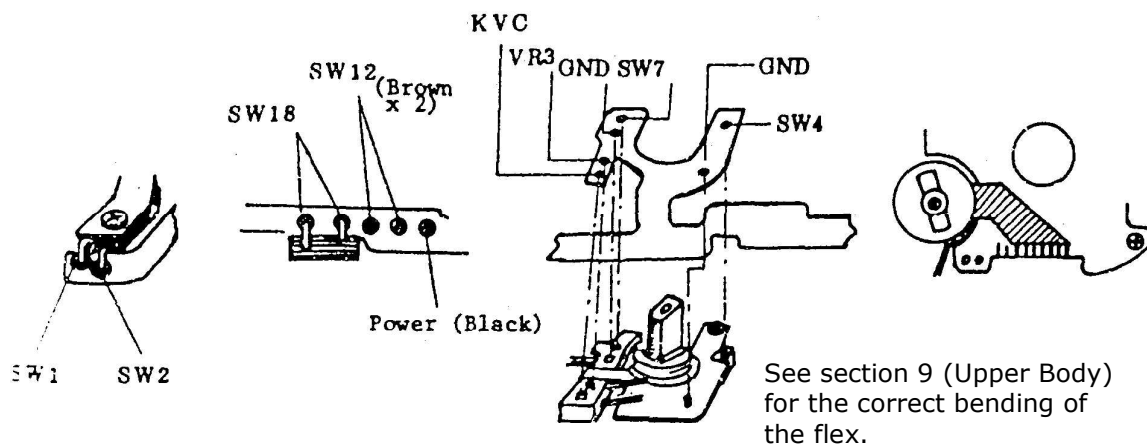
White Pink Black Yellow



- 9.2. Solder the leads as quickly as possible. Excessive heat will loosen the contact pins.

10. Main Flex Installation

- 10.1. Solder the main flex (16) at the following positions.
- 10.2. To prevent the main flex from interfering with the top cover screw holes, fix it with double-sided tape.
- 10.3. The brown leads to SW12 are interchangeable.

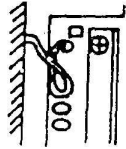


Note: Numbers in parentheses in the text correspond to circled numbers on page 12. Disassemble in normal order and reassemble in reverse order.

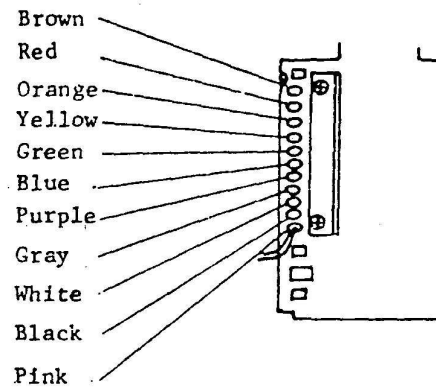
Assembly and Adjustment Notes

11. Front Panel Lead Soldering

- 11.1. Put flux on the main circuit board solder lands.
- 11.2. Solder from the bottom up.
- 11.3. Dress extra lead toward the bottom as shown.

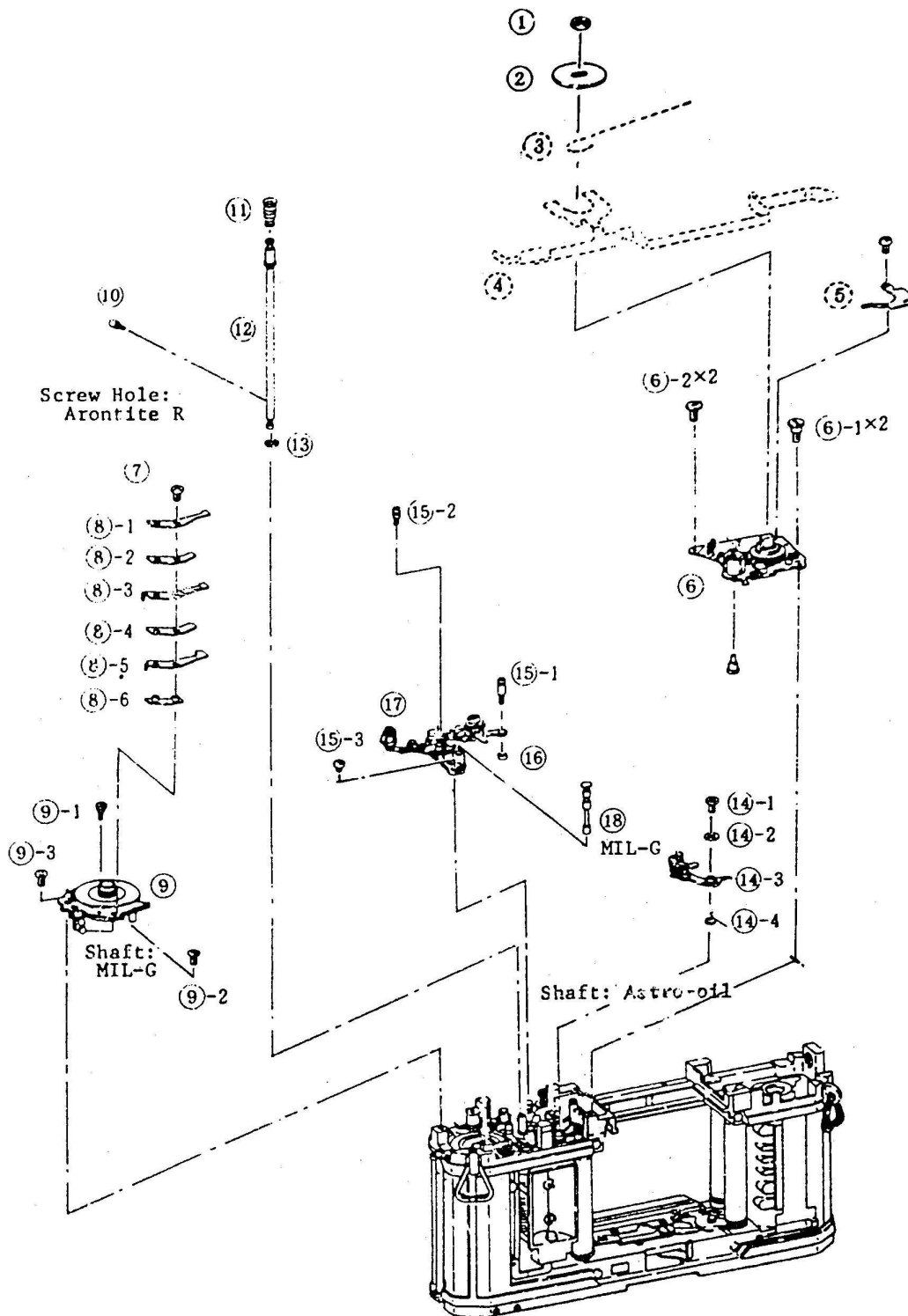


Note: The thick white lead goes to the P.C. terminal.

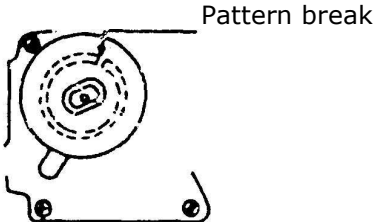
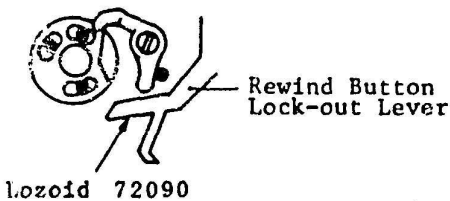
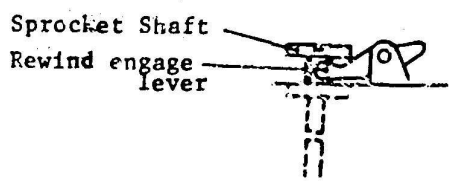


Note: Numbers in parentheses in the text correspond to circled numbers on page 12.
Disassemble in normal order and reassemble in reverse order.

5. Upper Body (Winding side)



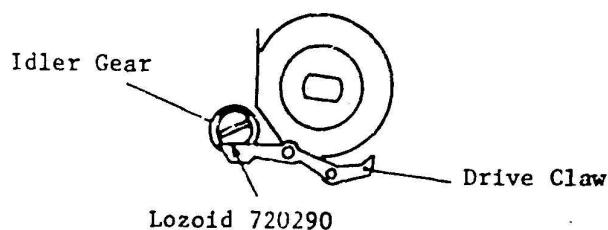
(6) can be displaced without removing (1) - (5)

Disassembly Note	Assembly and Adjustment Notes
1. Shutter Speed Selector 1.1. To remove the shutter speed selector (6), unsolder the black lead from SW4 and remove four screws [(6)-1 x 2 and (6)-2 x 2]. Notes: - One of the (6)-1 screws is partially hidden by flex (5) and hard to remove. - Be careful not to damage the main flex. 1.2 To remove the selector (6) completely, unsolder the black and brown leads and disengage the tungsten cable. 1.3 To temporarily remove (6) without removing the tungsten cable: - Set the shutter to the "B" position and remove the screws. Carefully lift the selector off. - Place the selector out of the way but where the cable will remain taut and not become kinked. 2. Mounting screw (9)-2 for the winding base is under main switch (8). 3. The entire 2nd curtain brake assembly (17) can be removed without disassembling it by removing three screws (15) and collar (16). Disengage the brake lever from the master gear and (17) can be removed.	- The shutter speed selector (6) TV double brushes must be aligned both vertically and radially, so they will both make contact with the correct pad. - Clean the TV resistor board (2) and install it so that break in the pattern is at the upper right with the shutter at "A".  Pattern break 3. Shutter Speed Selector (6) 3.1 Installation - Lubricate the (Upper) Rewind button lock-out lever with Lozoid 72090.  Lozoid 72090  Sprocket Shaft Rewind engage lever 3.2 Post-Installation Checks - Check that the see-saw lever works smoothly. - There should be less than 0.2mm difference in the height of the fixed cam and see-saw lever.  Cam See-saw lever less than 0.2mm

Assembly and Adjustinent Notes

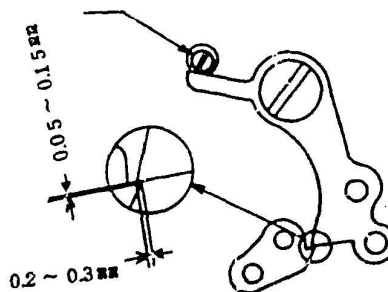
4. Winding Unit (9) Installation

- 4.1. Lubricate the winding coupler joint with MIL-G.
- 4.2. Lubricate the friction surfaces of the idler gear and frame counter drive claw with Lozoid 720290.



- 4.3. Install with the frame counter drive claw pulled out of the way.
5. Put a little Arontite L in the Key screw (10) hole in the sprocket shaft (12) and install the screw.
6. 2nd Curtain Cam Follower (13)-3 Installation

- 6.1. In the wound condition, the gap between the 2nd Curtain Cam Follower and the hook should be 0.05 to 0.15mm. Adjustment: The follower is available in several sizes.
- 6.2. Lubricate the pivot shaft with astro-oil.
- 6.3. The end play of the follower should be less than 0.15mm, and it must return by the spring pressure.
- 6.4. The mesh of the follower and the hook should be 0.2 to 0.3mm. Adjustment: Eccentric
- 6.5. Lubricate the mesh surfaces of the follower and hook with astro-oil.



7. 2nd Curtain Release Lever

- 7.1. Lubricate the shaft with astro-oil.
- 7.2. Thrust play should be under 0.05mm and end play under 0.2mm. Use washers to adjust the play.

8. 2nd Curtain Brake Assembly (17)

- 8.1. While holding the brake lever out of the way (toward the prism rails), slip the brake assembly (17) into place under the master gear.
- 8.2. Tighten the screws starting with the one at the front (mount) side.

Note: Numbers in parentheses in the text correspond to circled numbers on page 16.
Disassemble in normal order and reassemble in reverse order.

6. Tungsten cable adjustment

Assembly and Adjustment Notes

1. Put the knotted end of the cable into the slot in the indicator pulley. Charge the pulley one revolution and temporarily install a pin to hold it.

2. Check that the cable lies correctly in the pulley.

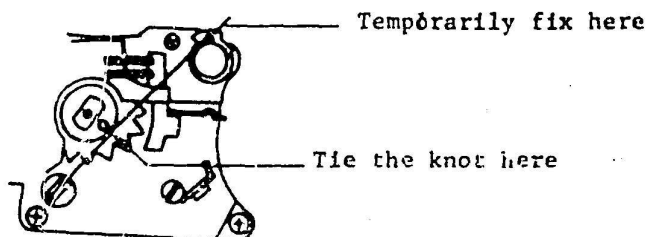
3. Set the shutter dial at "B".

Information
pulley

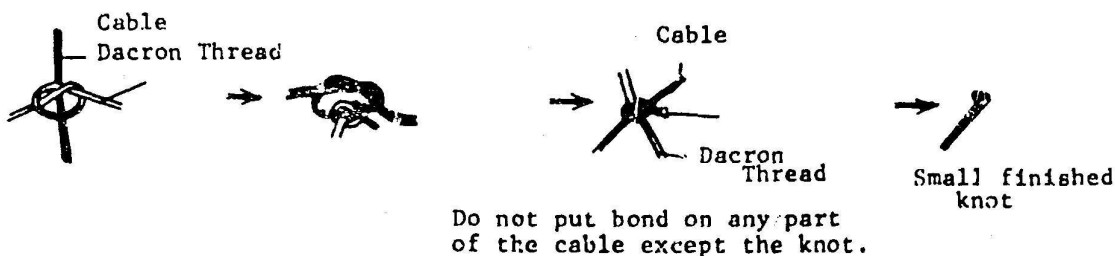


4. Thread the cable as shown in figure 1.

5. Remove the pin from the indicator pulley and find the spot where the "B" appears in the finder. Temporarily fix the end as shown in figure 2. At the point on the shutter dial pulley where the slot is a very small knot must now be formed.



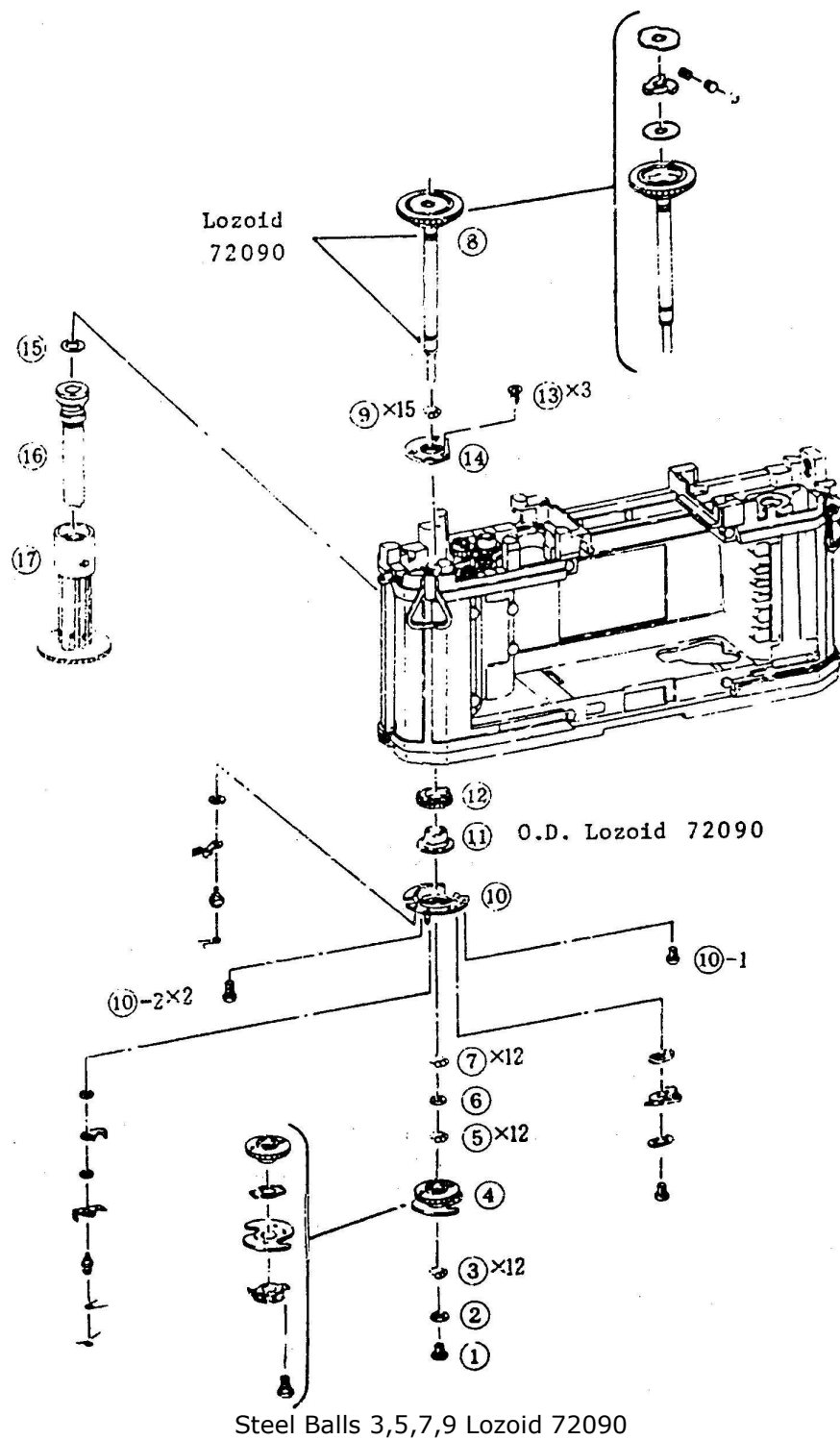
6. Tie the knot as shown below.



7. Insert the knot into the slot.
8. Put cyanobond on the knot slot. Do not get bond on the cable or in the pulley groove.
9. Check the entire range of shutter speeds. If they are not correctly aligned in the information window, adjust the nut on, the information pulley vertically until they are. After adjustment, stake the nut with black diabond.
10. Check that the right-side viewfinder information disappears when the dial is moved from 1/2000 to "A".

Check that the right-side viewfinder information appears when the dial is moved from "A" to 1/2000 and remains visible through the entire shutter-speed range from 1/2000 to "B".

7. Spool

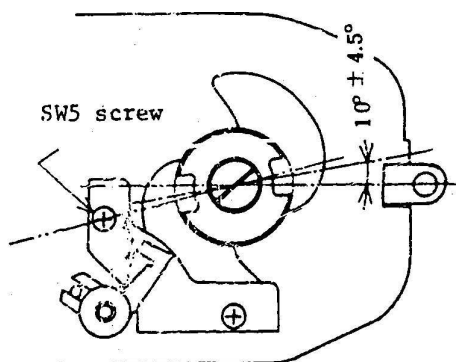


Disassembly Notes

Be careful not to loose any of the bearing balls inside the camera. (See the facing page for the number of balls in each location.)

Assembly and adjustment

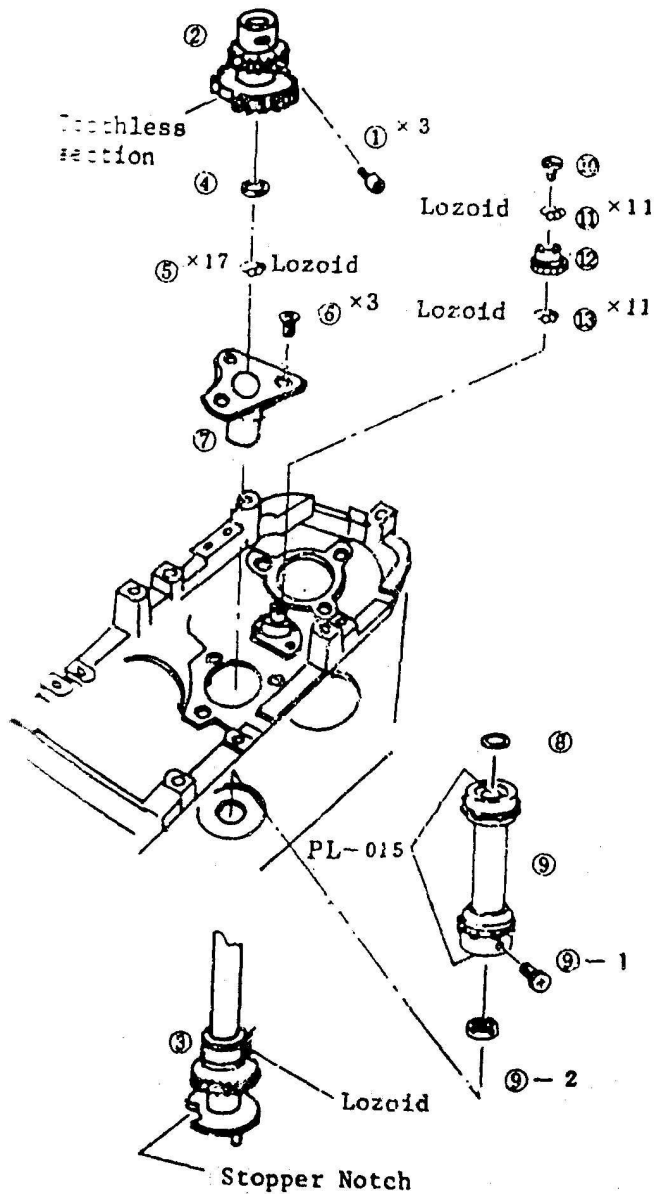
1. Winding Coupler (4)
 - 1.1 With the shutter completely wound {winding stopper engaged) , the winding coupler should be positioned as shown ($10^{\circ} \pm 4.5^{\circ}$ off the body centerline).



- 1.2 Visual angle check: the: line formed by the axis of the winding shaft and the mounting screw for SW5 is the maximum limit (14.5°) for the coupler.
2. Spool Torque
 - 2.1 Lubricate the spool unit fiber friction washers with a mixture of FLA and PO A2 grease. (7:3)
 - 2.2 Exercise the spool mechanism 30 to 50 times. Then measure the torque.
Std: 110 - 150 gcm
3. Post Assembly Checks
 - 3.1 After the spool unit is installed in the camera the correct tension measured at the spool circumference (equivalent to spool friction torque) 170 to 230g.
 - 3.2 Adjust the thrust play to 0.1 to 0.3mm by changing washer (15).
4. Adjust winding shaft thrust play to 0.05 to 0.15mm by changing washer (2).

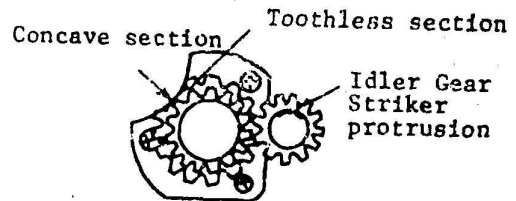
Note: Numbers in parentheses in the text correspond to circled numbers on page 20.
Disassemble in normal order and reassemble in reverse order.

8. Sprocket



Assembly and adjustment notes

1. Lubricate the upper and lower sprocket bushings with PL-015.
2. Adjust thrust play to 0.1 to 0.2mm with washer (8).
3. Align the toothless section of the main gear with the stopper notch in the sprocket shaft (3)
4. Adjust thrust play of the main gear to 0.03 to 0.15mm by-washer (4).
5. Align the main gear (2) and idler gear (12) as shown below and mesh them.



The protruding striker section should be as shown ± 2 teeth.

Lozoid: Loroid 72090

9. Checks and adjustments

Assembly and Adjustment Notes

1. Shutter Curtains Installation

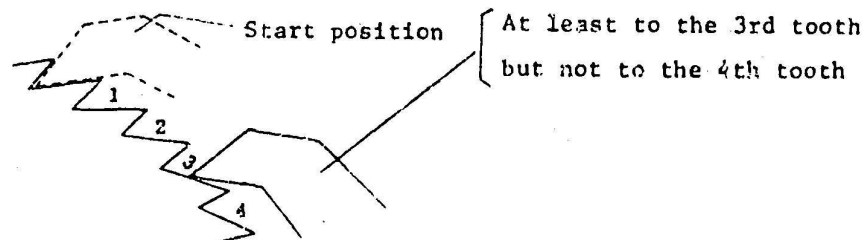
- 1.1. In the wound condition, the leading edge of the 2nd curtain should be from 5.4 to 5.9mm from the edge of the film aperture.
- 1.2. The leading edge should be parallel with the edge within 0.2mm.
- 1.3. In the wound condition, the trailing edge of the 1st curtain should overlap the leading edge of the 2nd curtain by 2.0 to 2.5mm, and this overlap should be maintained throughout the winding cycle.
- 1.4. The edge of the 1st curtain should be parallel with the edge of the 2nd curtain within 0.2mm.

Note: The 2nd curtain "minus latch" should not latched at the full wound (5.4 - 5.9mm) position.

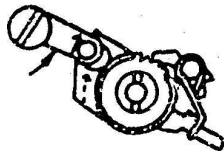
2. 1st Curtain Brake

2.1. Check

- 1) From the maximum curtain travel position* to the fully wound condition, the ratchet should move from the start position to the middle of the third tooth.



- 2) Even if the brake lever is pushed in the direction to the end of its travel the ratchet should not go to the 4th tooth,



* Maximum curtain travel position: The curtains usually stop slightly short of this position because of the brakes. For accurate checks, they can be pushed to the maximum with the master gear.

Assembly and Adjustment Notes

2.2. 1st Curtain Brake Adjustment

From the maximum curtain travel position, wind, release the shutter with the seesaw lever at "B", and check the difference in the position where the curtain stops and the maximum curtain travel position. It should be no more than half-a-tooth on the master gear.

- 1) To increase brake torque, turn the nut CW, but don't overtighten it. When you reach the point where it starts to get tight, back off 90°.
- 2) To weaken torque, turn the nut CCW, but don't turn it too far. It should not be high enough to touch the cam follower at the maximum follower play.
- 3) If the adjustment cannot be made with the nut, three different diameters (strengths) of the coil spring are available (0.6, 0.65 and 0.7mm dia.).
- 4) After adjustment apply diabond to the nut. Do not use enough to increase the height of the nut.

3. 2nd Curtain Brake

3.1 Adjustment

- 1) Standard: 0 to 0.5 teeth (master gear) Check as explained in 2.2 above.

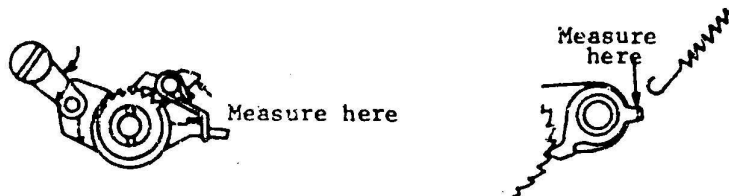
The nut must not exceed the height of the shutter speed selector base.

- 2) Other adjustments are identical to the 1st curtain brake adjustment.

3.2 Brake Torque Check (Reference)

Measure the tension at the ratchet pawl as indicated.

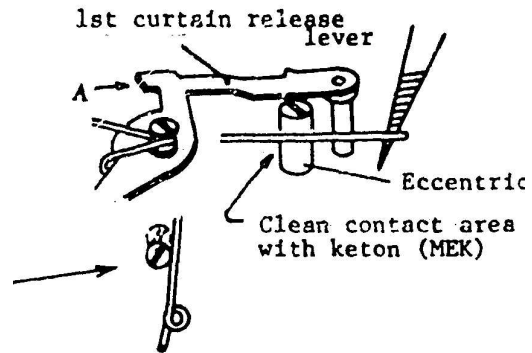
1st Curatin Brake:	About	2nd Curtain Brake
	800g	(with return spring disengaged)



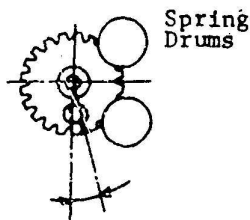
Adjustment Notes

4. SW4 OFF Timing

- 4.1 Clean the contact surface with keton.
- 4.2 Slowly push the 1st curtain release lever in the "A" direction and note where the latch is released. Adjust the switch with the eccentric so that SW4 goes off at 0.1 to 0.2mm additional travel.
- 4.3 The eccentric should be adjusted so that longer side is toward the rear.



5. Dowel Gear Position



At the maximum curtain travel position, and with the camera mount toward you, the dowel should be within 0.5 teeth left to 1 tooth right of the centerline.

6. SW5 Timing

6.1 Switching Position

At a point 0.8mm from the bottom of the stopper notch on the engagement stroke of the stopper claw, SW5 should switch on.

- 1) Make sure that the stopper is not 0.8mm from the bottom of the disengagement stroke.
- 2) Check the position of the drive pin. It is different from engagement and disengagement.
- 3) Do not forget to retighten the nut after adjustment.

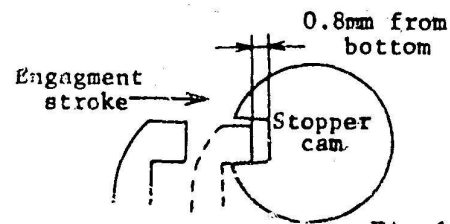


Fig 1

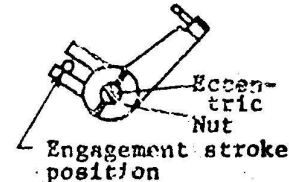
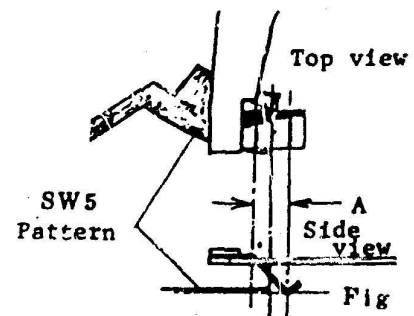


Fig 2

- 6.2 As a visual check of the SW5 brush position the edge of the pattern should be located approximately under the midpoint of the slope "A" of the brush.

- 6.3 In the wound condition, SW5 must be off and turn on during winding.

- 6.4 After the check is finished, stake the nut with diabond.

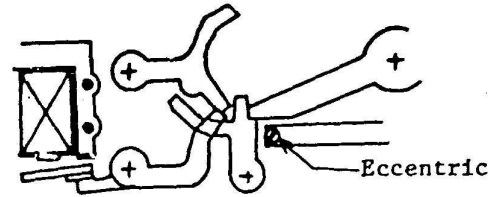


Fig

Adjustment Notes

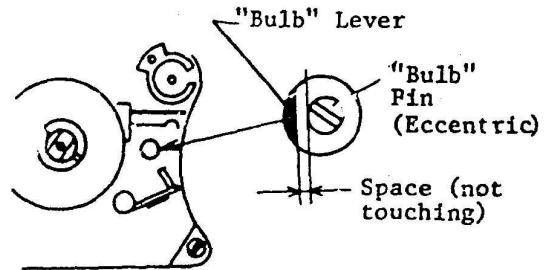
7. Mechanical Release Stroke Adjustment

The shutter should release at 1.4 ± 0.15 mm of the shutter button stroke. Adjust with the eccentric.



8. "Bulb" Pin Adjustment

Adjust so that at 1.25mm of the shutter button stroke the "bulb" pin and "bulb" lever are not touching.

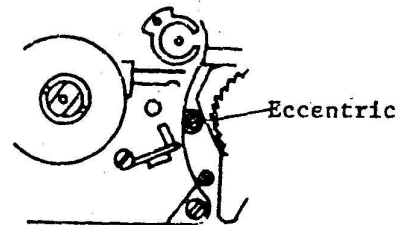


9. Rewind Button Release Stroke Adjustment

9.1 Close the back cover. Set the rewind (R) button.

9.2 Adjust the eccentric so that the R button is released at 1.0 ± 0.2 mm of the shutter button stroke.

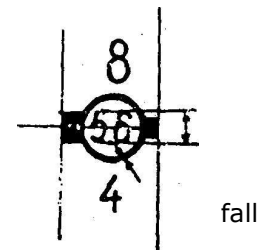
9.3 Check that the sprocket is free and turns smoothly when the R button is set.



10. Following Needle Position

10.1 Mount the "tool standard" lens and set the diaphragm at f/5.6.

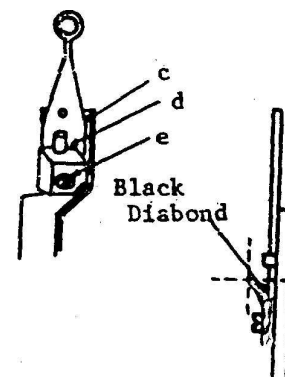
10.2 Limit: A line "a" through the center of the following must on the f/stop number (dimension "b"). The height of the f/stop numbers is equal to 0.6 f/stops.



10.3 There must be approximately the width of the following needle ring clearance between the outer edge of the needle circle and the edge of the aperture scale make.

10.4 After adjustment, apply a small amount of cyanobond at "c", "d" and "e".

10.5 Apply diabond to the root of the needle.



Adjustment Notes

11. Mechanical Shutter

11.1 Curtain Travel Time

- 1) Standard: $7.5 \pm 0.2\text{ms}$ (1/1000)(34mm slit spacing).
- 2) Adjustment: Spring Drum Gear

11.2 Shutter Speed (Exposure Time)

- 1) Adjust at 1/250 using the 2nd Curtain Release Lever (Seesaw Lever) Turning the seesaw eccentric CW increases shutter speed.

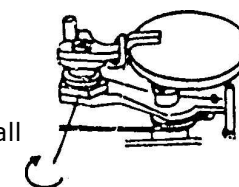
- 2) Adjust 1/2000 with the 2nd curtain cam follower.

- 3) Adjust repeating steps 1 and 2 until the best balance of all speeds is obtained.

- 4) Shutter Accuracy (measured in EV)

1/2000, 1/1000: $\pm 0.4\text{EV}$

1/500 - 8 sec : $\pm 0.2\text{EV}$

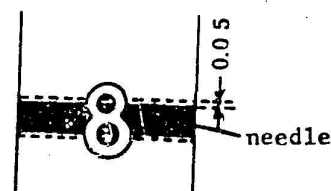


Faster

12. Meter Position Adjustment

- 12.1 Connect a 10kohm variable resistor and microammeter in series to the + side of the power supply set to about 2V. Adjust the resistor for a current flow of 459uA through the meter.

- 12.2 Adjust the meter housing position so that the meter needle is centered on the "8" $\pm 0.05\text{mm}$.



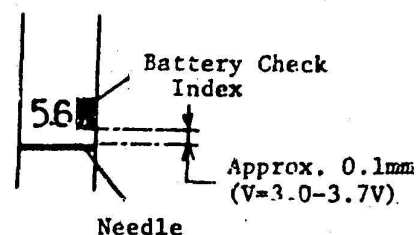
The needle is 0.22 f/stops wide.

- 12.3 Adjust the current and check the following positions:

- 12.4 Bond the meter housing to the die casting with black diabond. (Do not leave any strings of bond.)

13. Battery Check and Low voltage Interlock¹

- 13.1 Reduce the power supply voltage until the top of the meter needle is about 0.1mm below the bottom of the battery check index. At this point check that the applied voltage is from 3.0 to 3.7 volts.



- 13.2 Check that the low voltage interlock activates at 3.2 volts.

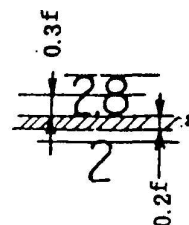
Note: 1. Low voltage interlock is the voltage where shutter release is prevented by the cameras program.

Adjustment Notes

14. Maximum Aperture (AVO) Indicator

- 14.1 Set AVO= 2.8 (Max. Aperture Pin Height = $6.9 \pm 0.03\text{mm}$)

- 14.2 Bend the lever (dwg.) so that the top of the red mark is positioned within the hatched area.



- 14.3 Check other maximum apertures. They should also fall within 0.3 to 0.5f of the same position.

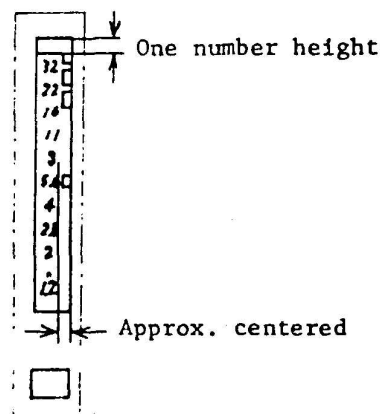
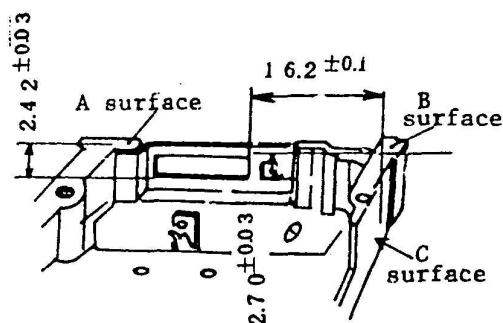
15. Aperture Mask Installation and Adjustment

- 15.1 The distance from the "A" surface to the bottom of the mask opening is $2.42 \pm 0.03\text{mm}$.

- 15.2 The distance from the "B" surface to the bottom edge of the shutter speed opening is $2.70 \pm 0.03\text{mm}$.

- 15.3 The distance from the C surface to the f/1.2 end of the aperture scale mask aperture is $16.2 \pm 0.1\text{mm}$. When the mask is correctly positioned, bond it with diabond.

- 15.4 To position the aperture scale film, install the film with diabond, install the prism and position the film before the bond hardens.

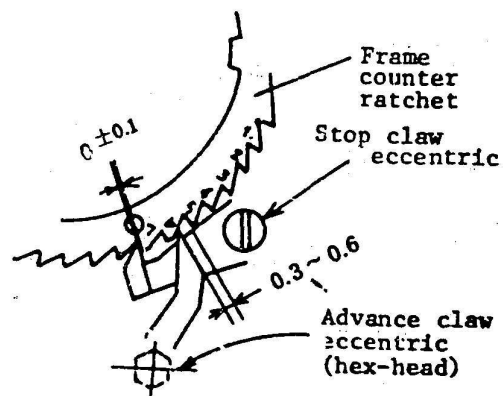


16. Frame Counter Adjustment

- 16.1 With the frame counter in the returned position, the stop claw should be engaged and flush against the 7th tooth ± 0.1 . Adjust with the eccentric.

- 16.2 Adjust the advance claw with the hex-head eccentric so the tip of the claw is 0.3 to 0.6mm up the slope of the 5th ratchet tooth.

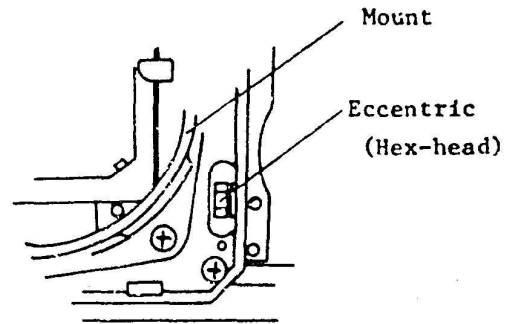
- 16.3 When the advance claw is at maximum stroke, adjust so that the clearance of the stop claw is 0.2 to 0.4mm.



Adjustment Notes

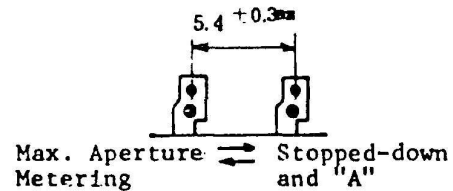
17. Following Needle Hidden Position

- 17.1 Activate the stop-down lever, with the lens on or off of "A", the following needle must not be visible.
- 17.2 Push the stop-down lever back into the normal position. With the lens off of "A" the following needle is visible. It must disappear when the lens is set to "A".



- 17.3 Adjust the hex-head eccentric (dwg.) to meet these requirements.

17.4 Following Needle Movement (Reference)



18. Release Stroke and Pressure (Checks)

18.1 Mechanical Release (without battery)

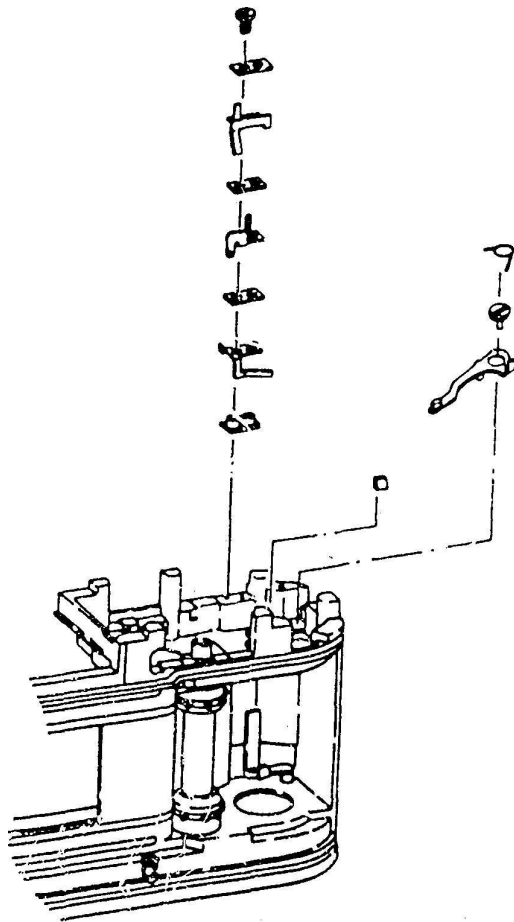
Shutter button protrusion	:	1.0±0.2mm (Std: Shutter Ring)
Release Stroke	:	1.4±0.2mm
Total Stroke	:	1.7±0.1mm
Release pressure	:	Under 1,000 g

18.2 Electromagnetic Release

SW 1 ON	:	0.8±0.2mm	
SW 2 ON	:	1.4±0.2mm	
SW 1 - SW 2 Separation	:	At least 0.5mm	
Total Stroke	:	1.7±0.1mm	
SW 1 Pressure	:	100±20 g	(except when R button set or at "B")
SW 2 Pressure	:	350±50 g	

Adjustment Notes

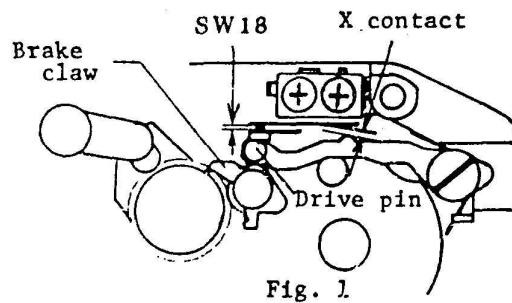
19. SW 18, X Sync Check and Adjustment



19.1 X Contact Check

When winding from the maximum curtain travel position (MCTP), the contact separation is 0.3mm when the brake claw is on the third ratchet tooth.

Also, when winding from the MCTP, the contact drive dowel must have at least 0.5mm total travel.

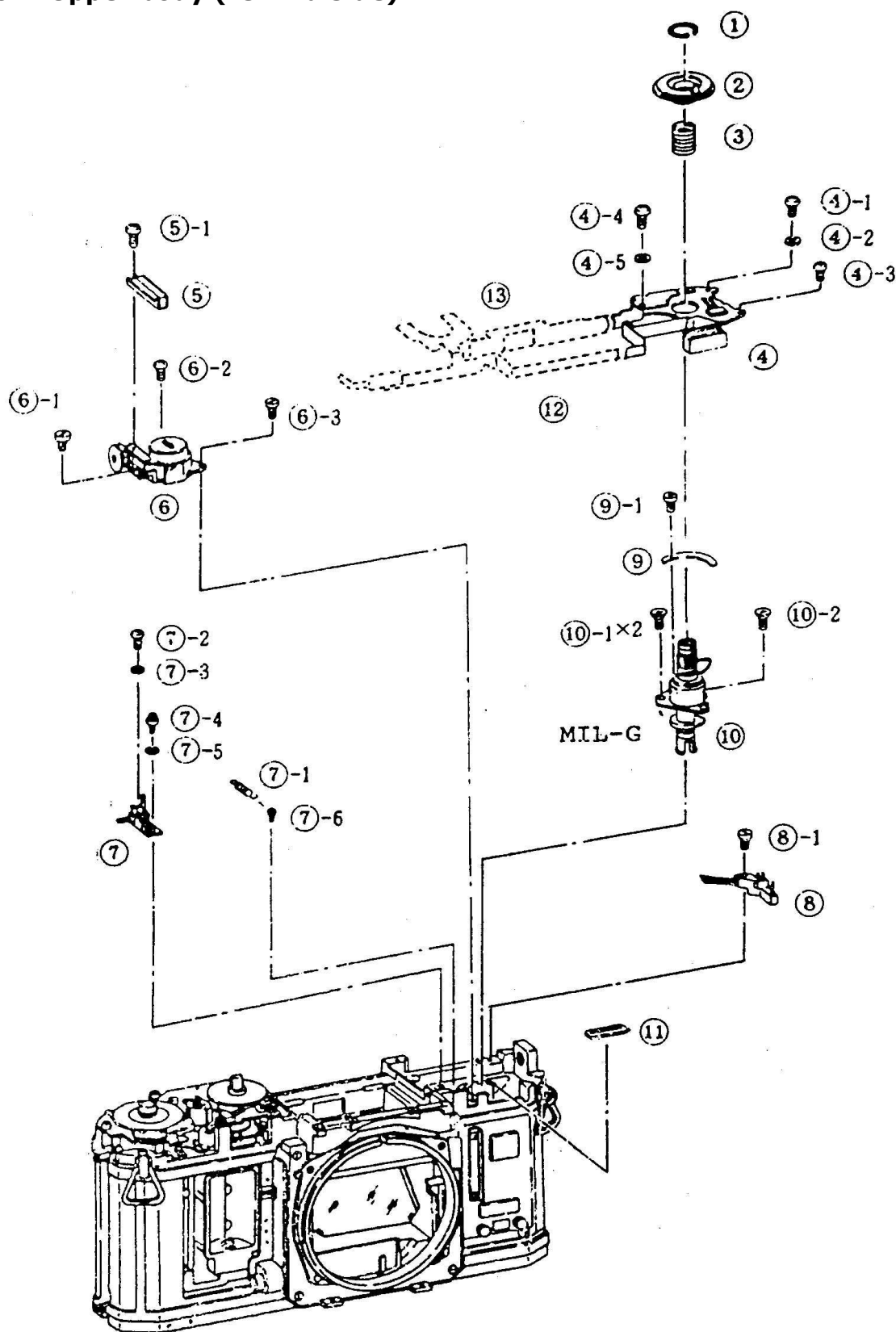


19.2 SW 18 Check and Adjustment

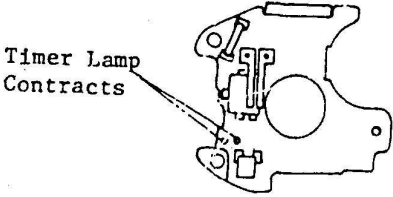
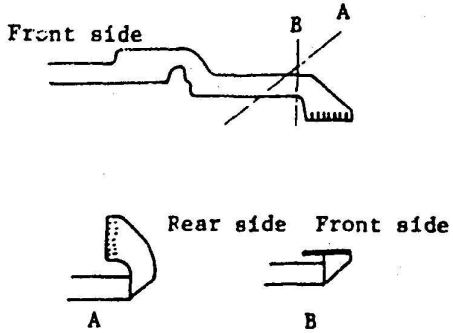
- 1) While winding slowly from the MCTP, adjust so that SW 18 turns on when the brake claw has traveled 2 to 2.5 teeth. Adjust by bending the fixed contact.
- 2) (Visual Check)

With the brake claw at the third tooth, check that there is at least 0.2mm separation between the drive pin and the switch lever.
- 3) Apply TUFFY TF-1156 to the marked areas in figure 1.

10. Upper body (rewind side)

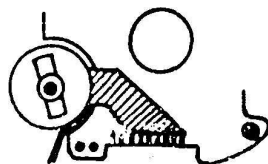


Number 1-13

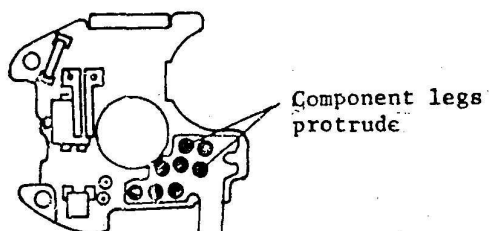
Disassembly Notes	Assembly and Adjustment Note
1. SV Circuit Board (S Board)* 1.1 If the SV circuit board need only be moved out of the way: 1) Remove three screws, 2) Raising the board slightly, unsolder the timer lamp contacts. (See dwg.)  Timer Lamp Contracts By taking these steps, the SV board can be removed from the rewind shaft without disconnecting it from the main and exposure flexs. 1.2 To change the SV ckt. board, unsolder it from the main and exposure flex. 2. Meter Unit 2.1 Before removing the meter unit (6) fix the information pulley with a pin at one turn change. 2.2 Move the meter needle in the normal deflection direction and the AVO indicator (7) toward the penta-rail so the meter can be removed without the needle catching. 3. Exposure Flex (EXP FLX) * The exposure flex cannot be removed without disconnecting the SV Ckt. board (4) and the meter/indicator unit (5) & (6) must be disconnected. *: () indicate abbreviations used on Electrical Diagrams.	1. SV Ckt. Board 1.1 SV contact height = 3-4mm  1.2 The SV brush (wiper) must move smoothly without catching. 2. Put the opening in the C ring toward the front of the camera. 3. Before installing the SV ckt. board, clean the main ckt. board contact and apply electrolub.  Electrolub 4. Don't depress the rewind shaft (10) too far when the SV ckt. board is installed. 5. Using an installed flex as a guide, bend the main flex as shown. 

Assembly and Adjustment Notes

- 5.1 Make sure the connector legs are correctly aligned with the solder lands on the main ckt. board and then solder them together.



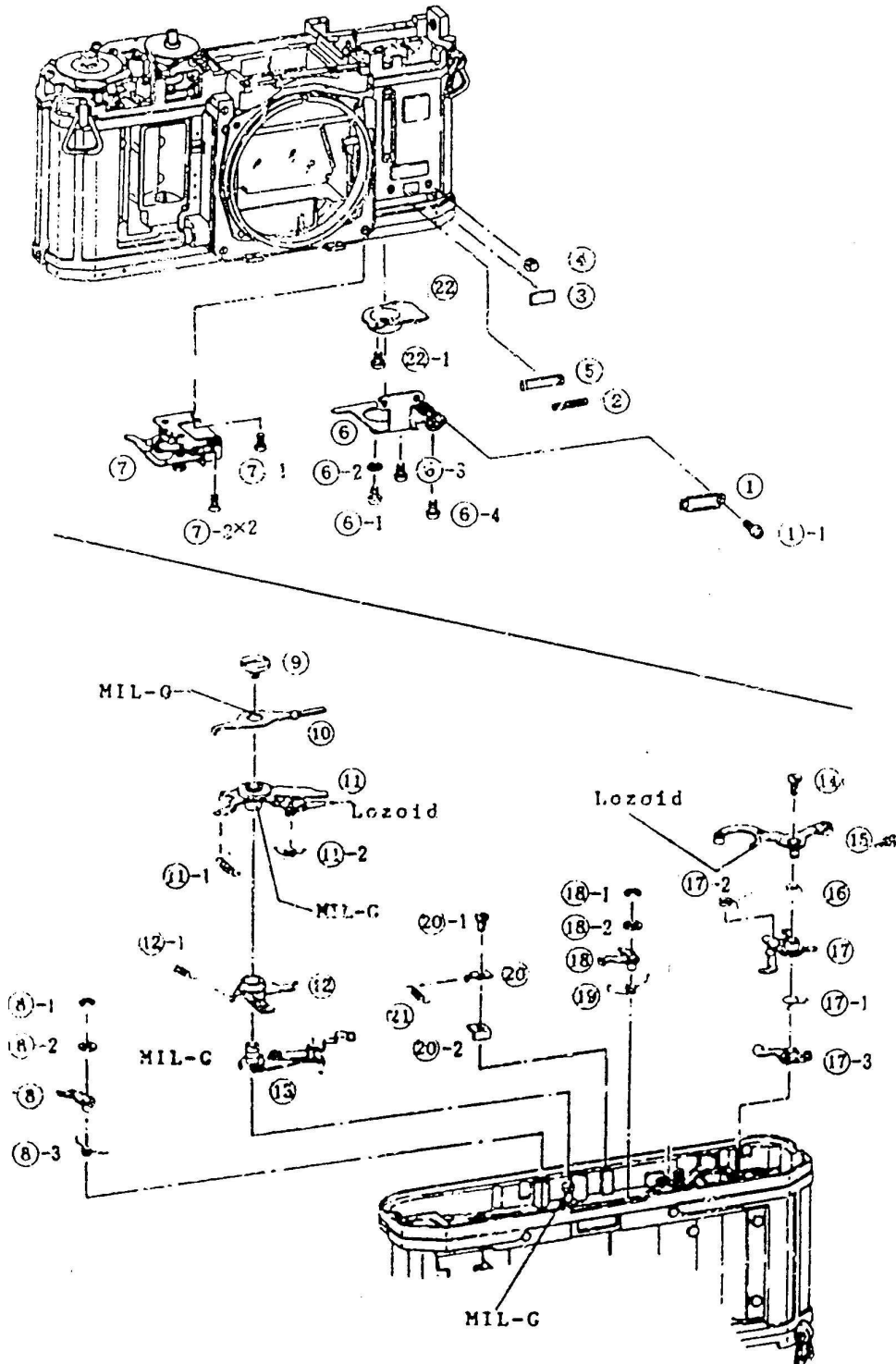
6. When installing the meter/indicator unit (5) + (6), make sure the meter needle clears the red mark on the AVC indicator (7).
7. Exposure Flex Installation
- 7.1 Before connecting the exposure flex to the meter indicator unit (5&6) or the SC ckt. board, put it through the body opening (Once attached, it will not fit).
- 7.2 Apply flux to the marked areas and solder. Soldering time should be somewhat longer than normal.



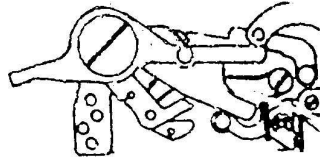
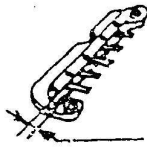
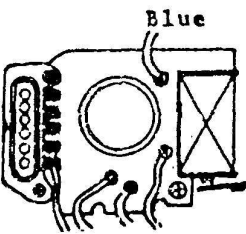
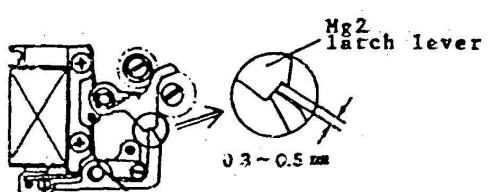
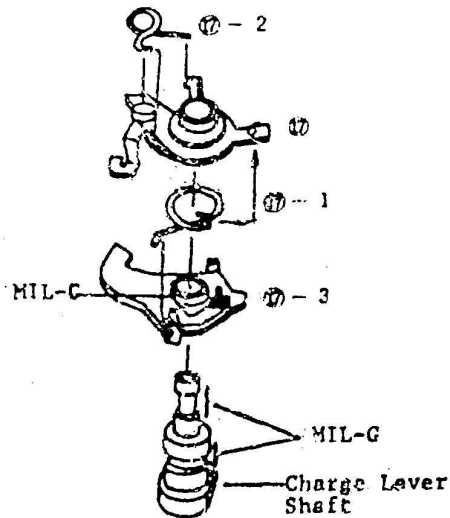
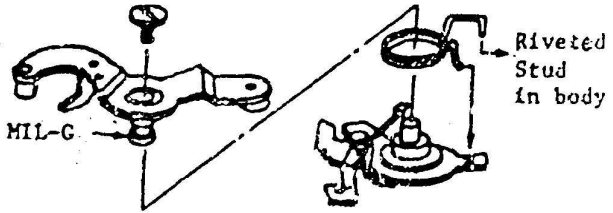
8. Even when moved quite slowly, the AVO Indicator (7) should move smoothly.

Note: Numbers in parentheses in the text correspond to circled numbers on page 31.
Disassemble in normal order and reassemble in reverse order.

11. Lower body (I)



Numbers 1-22

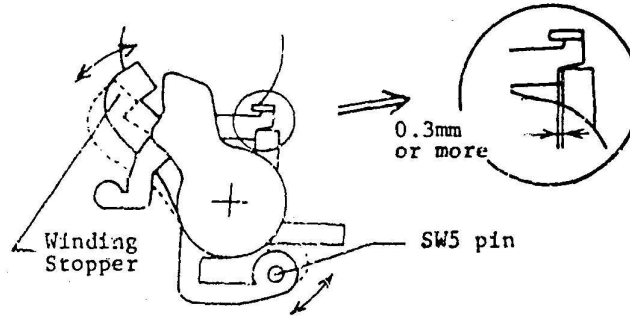
Disassembly	Assembly and Adjustment Notes
1. The mounting screw (7)-1 for Mg2 is hidden under the lead solder connection. 2. Mg2 Lead is a single solid, lead. Take care not to kink the cable.	
Assembly and Adjustment Notes	
1. Lower body Flex Apply Tuffy TF-1156 to the MD Contacts on the lower flex as shown. 1) MD contact Assembly (Back side)  2) MD Contacts (Front side)  1.1 Don't forget washer (6)-2. 2. 2. Mg2 2.1 The Mg2 latch lever should have 0.3 to 0.5mm overcharge 2.2 Adjust the overcharge by bending charge lever (10). 	3. The shorter hook of the main diaphragm charge lever spring (11)-2 hooks at the diaphragm release drive lever (Matsuba lever) -which is part of the diaphragm charge lever (11). 4. Winding Stopper Levers 4.1 Assemble the stopper charge lever (17) and the winding stopper (16) and mount them on the shaft.  4.2 Onto them install spring (15) and charge lever (15).  Note: Numbers in parentheses in the text correspond to circled numbers page 34. Disassemble in normal order and reassemble in reverse order.

Assembly and Adjustment Notes

4.3 Winding Stopper and Charge Lower Check

After installing (15) through (17) check the following points.

- 1) Winding Latch Overcharge: 0.3mm or more



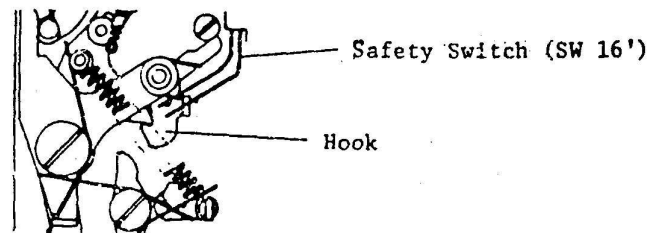
- 2) When the SW5 pin is moved, the stopper lever must move smoothly without catching.

Note: Numbers in parentheses in the text correspond to circled numbers on page 34.
Disassemble in normal order and reassemble in reverse order.

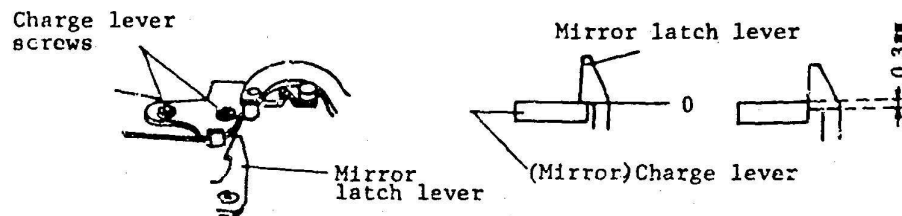
Assembly and Adjustment Notes

5. Mirror Charge Timing

- 5.1 Wind until the hook (see dwg.) on the mirror mechanism side of the front panel is set (The hook is easier to see if the battery box is removed).



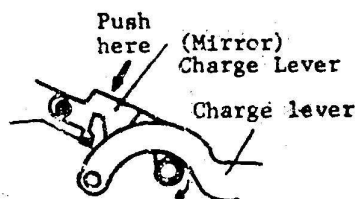
- 5.2 In this condition check the position of the charge lever and the mirror latch lever. It should be as shown.



To adjust, loosed the lever screw and move the lever.

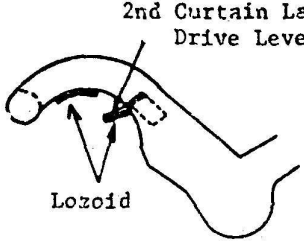
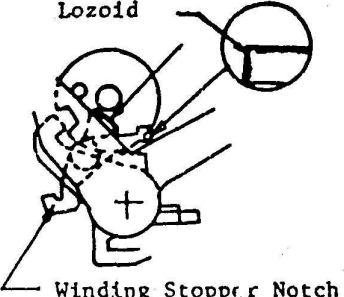
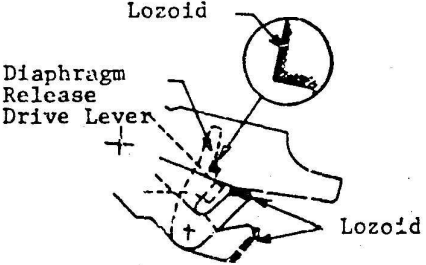
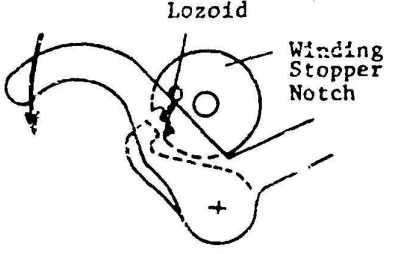
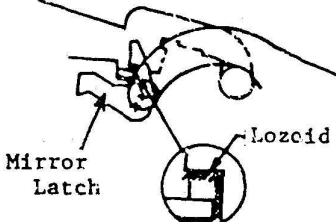
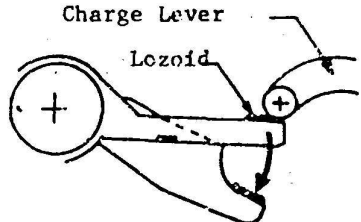
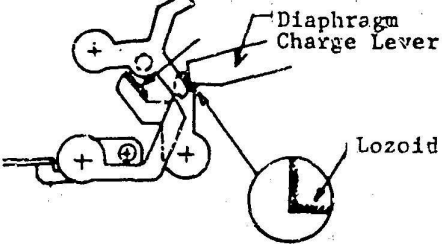
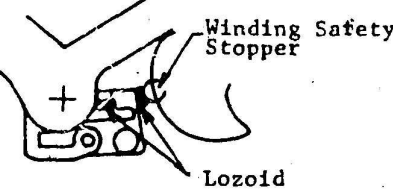
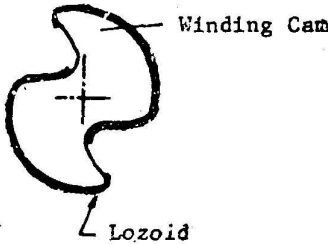
5.3 Post-Adjustment Checks

- 1) At maximum charge the separation between the two levers (above step) is 0.5mm or more.
- 2) At maximum charge, the mirror charge lever must have overtravel left (push as shown to check).
- 3) Stake the mirror charge lever screws with Aron Alpha.

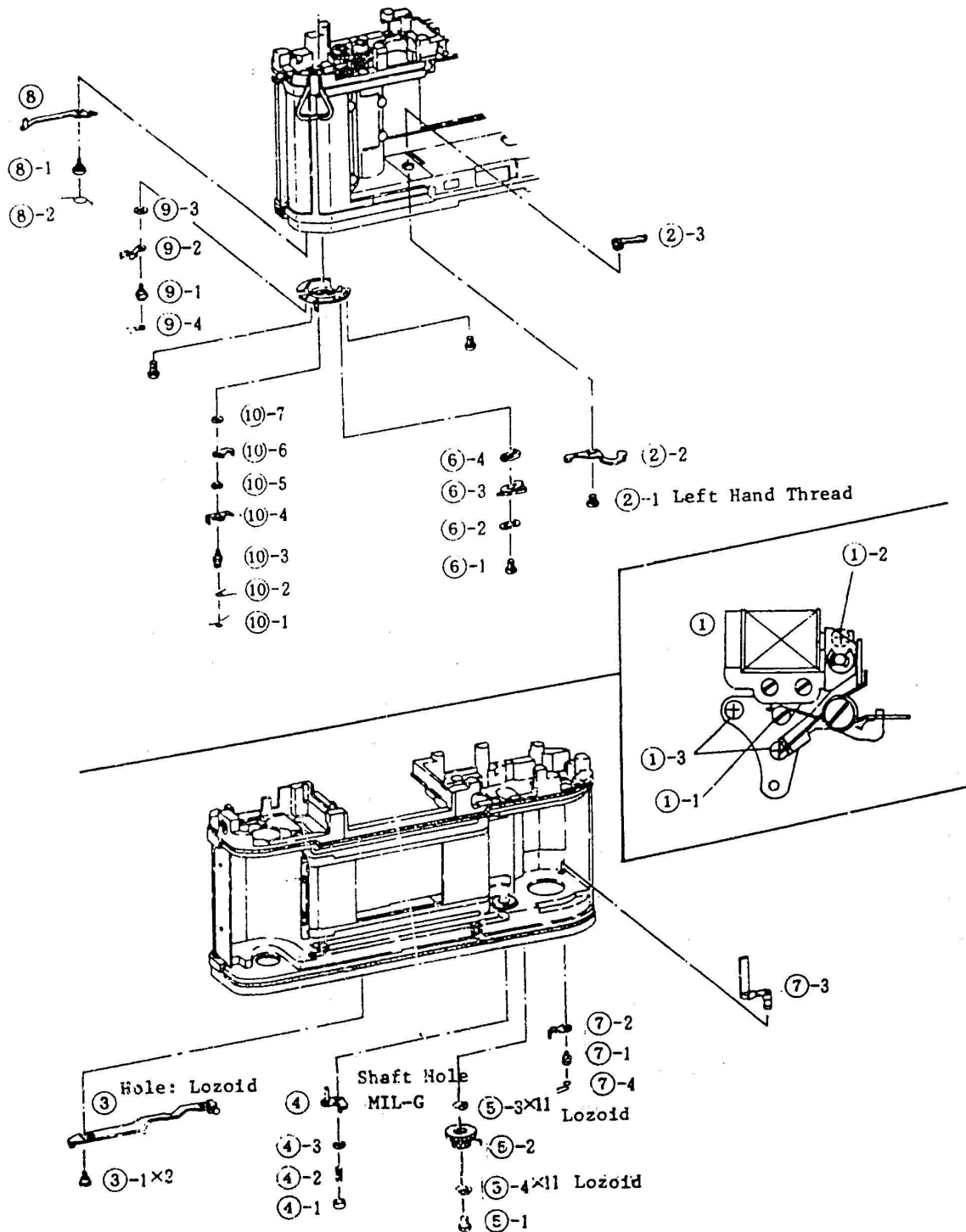


12. Lower body lubrication

Lozoid 72090 at //// points

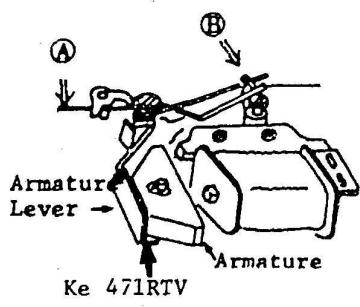
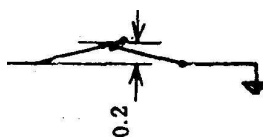
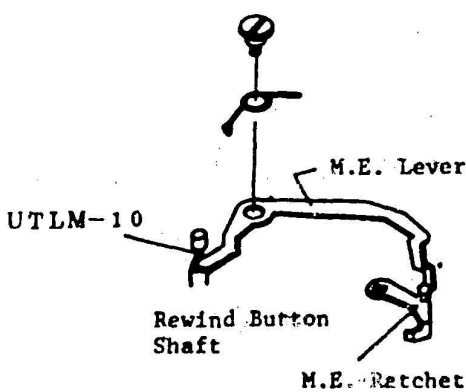
1)  2nd Curtain Latch Drive Lever Lozoid	6)  Lozoid Winding Stopper Notch
2)  Lozoid Diaphragm Release Drive Lever Lozoid	7)  Lozoid Winding Stopper Notch
3)  Mirror Latch Lozoid	8)  Charge Lever Lozoid
4)  Diaphragm Charge Lever Lozoid	9)  Winding Safety Stopper Lozoid
5)  Winding Cam Lozoid	

13. Lower body (II)



Numbers 1-10

5 - 10 can be assembled or disassembled independently

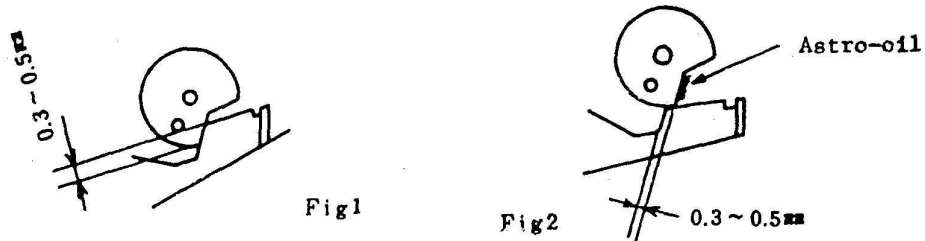
Disassembly Notes	Assembly and Adjustment Notes
1. Mg3 1.1 To remove Mg3 (1), remove screw (1)-1. Open the armature and remove (1)-2 using a small cross-recess screwdriver. Remove one more screw (1)-3 and the magnet can be removed. 1.2 The armature is bonded to its base with silicone rubber. 1.3 Apply current (8mA) to close the the magnet. In this condition, run silicone KE 471RTV into the crack between the armature and armature lever, and let dry about 12 hours. 2. Signal Lever (2)-2's screw (2)-1 has left-handed threads.	1.4 When current flows through the coil the armature closes to the yoke. 2. Rewind Switch (SW 17) Adjustment 2.1 Bend the lever at the point shown to meet the following two conditions.  1) With at least one layer of film on the spool, there should be at least 0.2mm separation between the contacts. (Visual check) 
Assembly and Adjustment Notes	
1. Mg3 Holding Power Check 1.1 Unhook the spring. 1.2 Push at "A" until the dowel spacing is 0.1 to 0.2mm. The armature should set. 1.3 Apply 8mA current through the magnet coil and push with a tension page at "B". Read just before the armature releases. Std: 280g or greater 	2) With no film on the spool, the contacts should have at least 0.2mm of overtravel. (Visual check)  2.1 Check with a continuity checker. 3. To install the multi-exposure (M.E.) lever (9), hold the M.E. ratchet lever (9)-2 out of the way. 

Note: Numbers in parentheses in the text correspond to circled numbers on page 39.
Disassemble in normal order and reassemble in reverse order.

Assembly and Adjustment Notes

4. 2nd Curtain Latch Adjustment

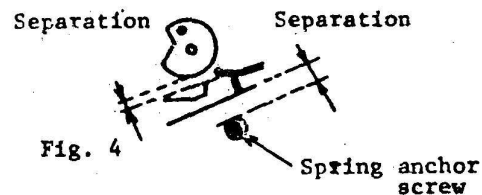
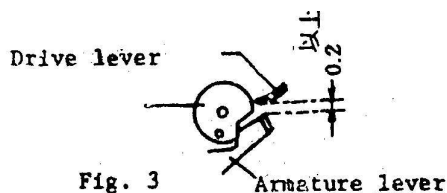
- 4.1 Unsolder the data back direct contact and run keton (MEK) in around it.
- 4.2 Push the contact out from the inside.
- 4.3 Push on the armature lever and check the latch mesh. (Fig. 1)



- 4.4 Adjust the overlap to the limit shown in figure 2.
- 4.5 Stake the setscrews with Arontite R.
- 4.6 Apply Astro-oil to the latch surface.

5. 2nd Curtain Latch Operatic Check

- 5.1 In the wound condition the separation of the armature lever and drive lever is 0.2 mm or more. (Fig. 3)
- 5.2 At all times during winding there must be some separation between the levers, and between the armature lever and spring hanger screw. (Fig. 4)



- 5.3 If the above conditions are not met, bend the drive lever.

14. Electrical adjustments

Introduction and Contents

There are many electrical checks and adjustments for this camera, but they need not all be checked every time work is performed on the camera. The following table is a combined table of contents and guide to pertinent checks depending on the type of repair performed.

Adjustment	Type of repair			
	Normal Adjustment	IC-1 Replaced	Main CKT Replaced	AV METER Replaced
1. Offset		Do		
2. R OSC2 (R43)	Check	Do	Do	
3. R TC (R6)		Do		
4. VR TV (VR3)				
5. V AVO Output				
6. SV (VR1) Output				
1. VR GAIN (VR2)	Do	Do	Do	
8. VR AV LEVEL (VR7)	Dc	Do	Do	
9. VR TV Level (VR6)	Do	Do	Do	
10. B.C.,V AV Output			Check	
11. EF Mode V AV Output			Check	
12. VR MAV (VR5) Adj.	Do	Do	Do	
13. R MTV2 (R15) Sel*	Check	Check	Check	
14. R AE (R26) Sel.	Do	Do	Do	
15. RT ADJ (R42) Sel.	Do	Do	Do	
16. AV Meter Needle				Do
17. ASA Eccentric Adj.	Check	Check	Check	Check

Notes: **Do** indicates a required step.

Check indicates an advisable step.

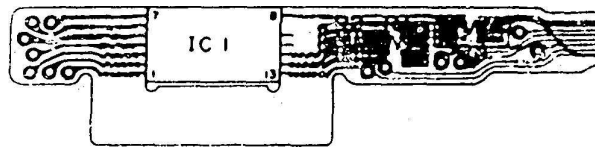
Sel.* Selection of a fixed resistor

Assembly and Adjustment Notes

1. Offset

1.1 Offset Voltage Check

- 1) Unsolder one end of the RTC resistor
- 2) Short pins 9 and 11 .



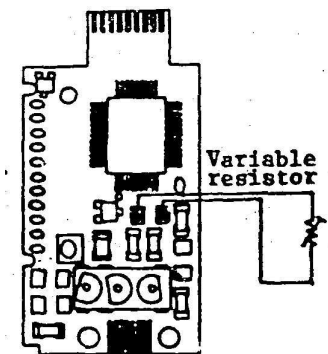
- 3) Measure the voltage from pin 10 to Gnd. (V1).
- 4) Measure the voltage from pin 11 to Gnd. (V2).
- 5) If $V1 - V2 = 0 \pm 1\text{mV}$, adjustment is not necessary.

1.2 Offset Adjustment

- 1) If difference is greater than 1mV, adjust the offset.
- 2) Remove R1 or R2 and install a 200kohm variable resistor in its place.
- 3) Adjust the variable until the difference is less than 1mV.
- 4) Remove the variable and read its resistance.
- 5) Pick a fixed resistor closest to the variable resistors value and install it.

1.3 Offset Post-Adjustment Procedure

- 1) Remove the short between pins 9 and 11.
- 2) Resolder the resistor RT leg unsoldered in Step 1



2. R OSC2(R43)

2.1 Check

- 1) Set the camera to 1/2 sec. shutter speed.
- 2) Check the shutter speed. If it is within the range 490 to 510 mS ($500\text{ms} \pm 2\%$), no adjustment is necessary.

Assembly and Adjustment Notes

2.2 (R43) Adjustment

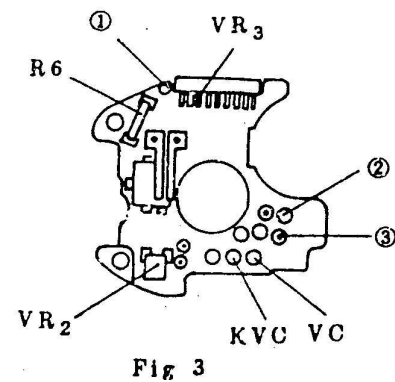
If the oscillator is not within limits, proceed as follows.

- 1) Remove the ROSC resistor and replace it temporarily with an approximately 200kohm variable resistor.
- 2) Adjust the variable resistor until the shutter speed is within limits. Remove the variable and measure it. Install a fixed resistor with a resistance as near as possible to the resistance of the variable.
- 3) Recheck with the new resistor installed.

3. R TC (R6) Adjustment

- 3.1 Set the power supply so V BAT is 5.0V.
- 3.2 Measure VC (1.3 50mV). The value of R TC is determined by the value of VC.

VC(v)	RTC
1.25-1.285	2.05kohm
1.285-1.315	2.00kohm
1.315-1.350	1.96kohm



- 3.3 Install the correct value R TC (R6) on the SV ckt. board.

4. VR TV (VR 3) Output Check

- 4.1 Measure VC and KVC.
- 4.2 Set the shutter dial to "A". Check that the output voltage of VR 3 (Fig. 3) is equal to KVC.
- 4.3 Check VR 3 output at all shutter speed settings.
The correct value for each shutter speed is VC multiplied by the number listed below for each speed. The limit is 15mV for all speeds.

Assembly and Adjustment Notes

Shutter speed	TVS	VR3 Output	Shutter speed	TVS	VR3 Output
1/2000	11	1.3461*VC	1/4	2	0.6538*VC
1/1000	10	1.2692*VC	1/2	1	0.5769*VC
1/500	9	1.1923*VC	1"	0	0.5000*VC
1/250	8	1.1153*VC	2"	-1	0.4230*VC
1/125	7	1.0384*VC	4"	-2	0.3461*VC
1/60	6	0.9615*VC	8"	-3	0.2692*VC
1/30	5	0.8846*VC	R		0
1/15	4	0.8076*VC	B		0
1/8	3	0.7307*VC			

5. V AVO Output Check (Checkpoint Fig. 3 #1)

- 5.1 Check the output at 1 (Fig. 3) for each maximum aperture pin height (AVO). It should be the produce of VC times the number listed below +/-4mV.

AVO (f/No.)	V AVO	AVO (f/No.)	V AVO
0.5 (1.2)	1.225*VC		
1 (1.4)	1.250*VC		
2 (2.0)	1.300*VC	1.7 (1.8)	1.285
3 (2.8)	1.350*VC	2.633 (2.5)	1.332
4 (4.0)	1.400*VC	3.6 (3.5)	1.380
5 (5.6)	1.450*VC	4.333 (4.5)	1.4 17

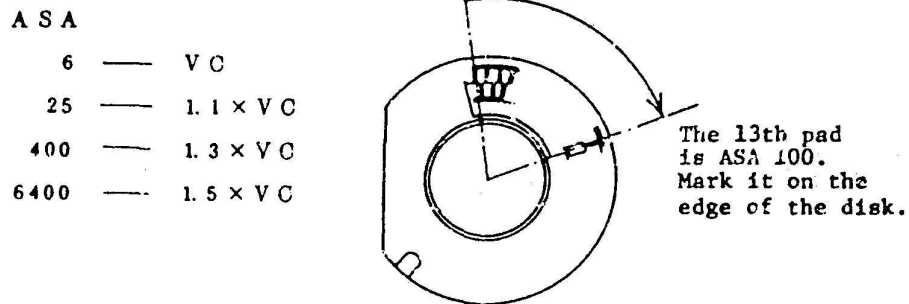
- 5.2 Activate the stop-down slide. The V AVO value is the same as for AVO 5.

6. SV (ASA) Resistor (VR1) ASA 100 Positioning

- 6.1 Turn the ASA resistor so that the output at #2 (Fig. 3) is 1.2VC. This is the ASA 100 position. If the position is not pre-marked, make a reference mark on the edge of the resistor disk.
- 6.2 The VR SV positioning tool can be used to hold the resistor disk in position for other adjustments.

Assembly and Adjustment Notes

6.3 Reference



7. VR GAIN (VR 2) Adjustment

- 7.1 Mount the tool standard FD5C/1.4, standard focusing screen (PE) and pentaprism.
- 7.2 Check the output at #3 (Fig. 3) with the light source at EV 9 and EV 15 and record the values as V EV9 and V EV15.
- 7.3 Adjust VR 2 so that the difference between V EV9 and V EV15 is equal to VC/30x6 (±2mV)

$$(V_{EV9}) - (V_{EV15}) = \frac{V_C}{30} \times 6 \pm 2 \text{ mV}$$

8. VR AV (VR 7) Level Adjustment

- 8.1 Set the shutter speed to 1/60 (TVS=6) and the light source to EV 12.
- 8.2 Measure the output at #1 (Fig. 4) and adjust VR 7 until the output (V AV) is equal to VC (±2mV). (This is V AV9.)
- 8.3 Set the shutter speed to 1/8 (TVS=3)
- 8.4 Measure the output at #1 again. It should equal 1.3333VC±19mV. (This is V AV9.)

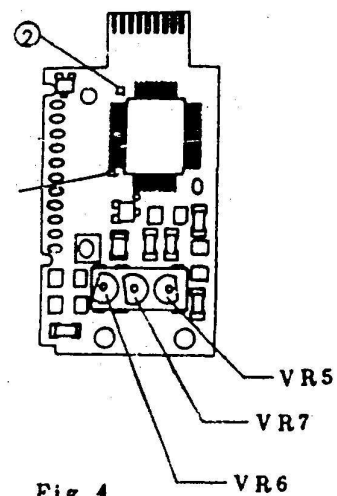


Fig 4

Assembly and Adjustment Notes

9. VR TV (VR 6) Level Adjustment

- 9.1 Set the aperture to f/5.6 (AVS=5), the shutter speed to "A" and the EV Tester light source to EV12.
- 9.2 Release the shutter and adjust VR6 so the exposure tester reads 0 ± 0.1 EV
- 9.3 Another method is to check the voltage (V TV) at Fig. 4 #2.
It should be: $V_{TV} = 1.0433 (VC) \cdot 5mV$.

10. Battery Check Mode V AV Check

When E1 (measured at SV ckt. board) is 3.50V and the battery check is on, the output at #1 (Fig. 4) is $1.108 + 30mV$.

11. EV Mode Fig. 4 #1 Output

With the dedicated flash inputs (|AV|, EF), the output at #1 (Fig. 4) should be as shown.

$$\begin{array}{rcl}
 |A V| & E F & \\
 \frac{17}{16} V C (F 2.8) & \longrightarrow & \frac{6}{9} \cdot V C \\
 V (F 4.0) & \longrightarrow & \frac{7}{9} \cdot V C \quad \pm 14.4 m v \\
 \frac{15}{16} V C (F 5.6) & \longrightarrow & \frac{8}{9} \cdot V C
 \end{array}$$

12. VR MAV (VR5) Adjustment

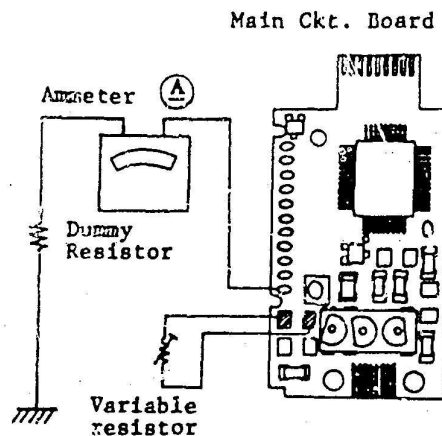
- 12.1 Set the shutter dial to 1/60 (TV=6).
- 12.2 Set the light source to EV 12 and adjust VR5 (Fig. 4) so the meter needle is at $f/8 \pm 0.3f$.
- 12.3 Reset the light source to EV 9. The meter should be at $f/2.8 \pm 0.3f$. Reset the shutter to 1/250. The meter should now read $f/1.4 \pm 0.3f$.

Assembly and Adjustment Notes

13. R MTV2 (JUS) Adjustment

- 13.1 Check the internal resistance of the ammeter "A".
- 13.2 Add a dummy resistor to make the interval resistance + dummy resistor = 330ohm.
- 13.3 Set the shutter to "A" and the aperture to f/5.6 (AV5).
- 13.4 Set the light source to EV 12.
- 13.5 Install an approximately 500ohm variable resistor as shown and adjust for a current of $488.25 \mu\text{A} \pm 7\mu\text{A}$.
- 13.6 Remove the variable resistor. Measure its resistance and install the nearest available fixed resistor in its place.
- 13.7 EV 9 : $380.25\mu\text{A} \pm 12\mu\text{A}$.
- 13.8 EF Mode : $470.25\mu\text{A} \pm 10\mu\text{A}$.
- 13.9 Check the AE Finder Indication

Light Source	Aperture
EV 12	AV6 (f/8) TV 6 (1/6C) ± 0.4
EV 9	AV6 (f/8) TV 3 (1/8) ± 0.5



Assembly and Adjustment Notes

14. R AE Selection and Installation

- 14.1 Set the light source to LV 12.6 (819.6), the aperture to f/8 (AV 6) and shutter to 1/125 (TV 7).

Note: If light source cannot be set to 12.6, set the aperture to f/6.7 (AV 5.5) and the light source to LV 12.

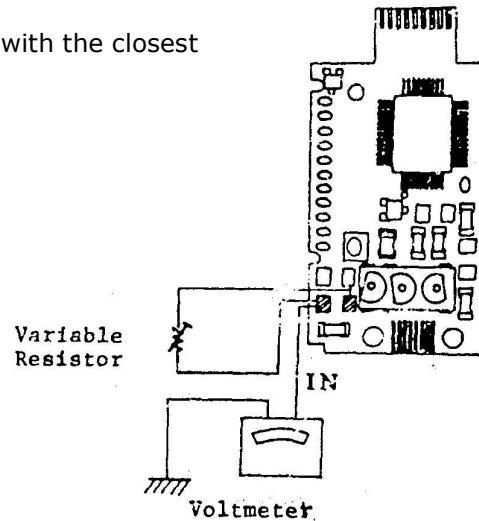
- 14.2 Install a 100kohm variable resistor.

- 14.3 Adjust the variable resistor so that the "IN" voltage is equal to $VC \pm 2mV$.

- 14.4 Remove, read and replace the variable resistor with the closest available fixed resistor.

- 14.5 Check operation with the AE Motor Drive FN.

Lens: "A"	Shutter: 1/125
Light source	AVC (Lens Aperture)
EV15	$f/16 \pm 0.3f$
EV12	$f/5.6 \pm 0.3f$
EV9	$f/2.0 \pm 0.3f$



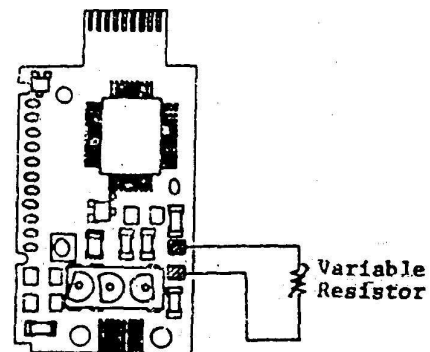
15. RT ADJ (R-S2) Selection

- 15.1 Set the shutter to "A".

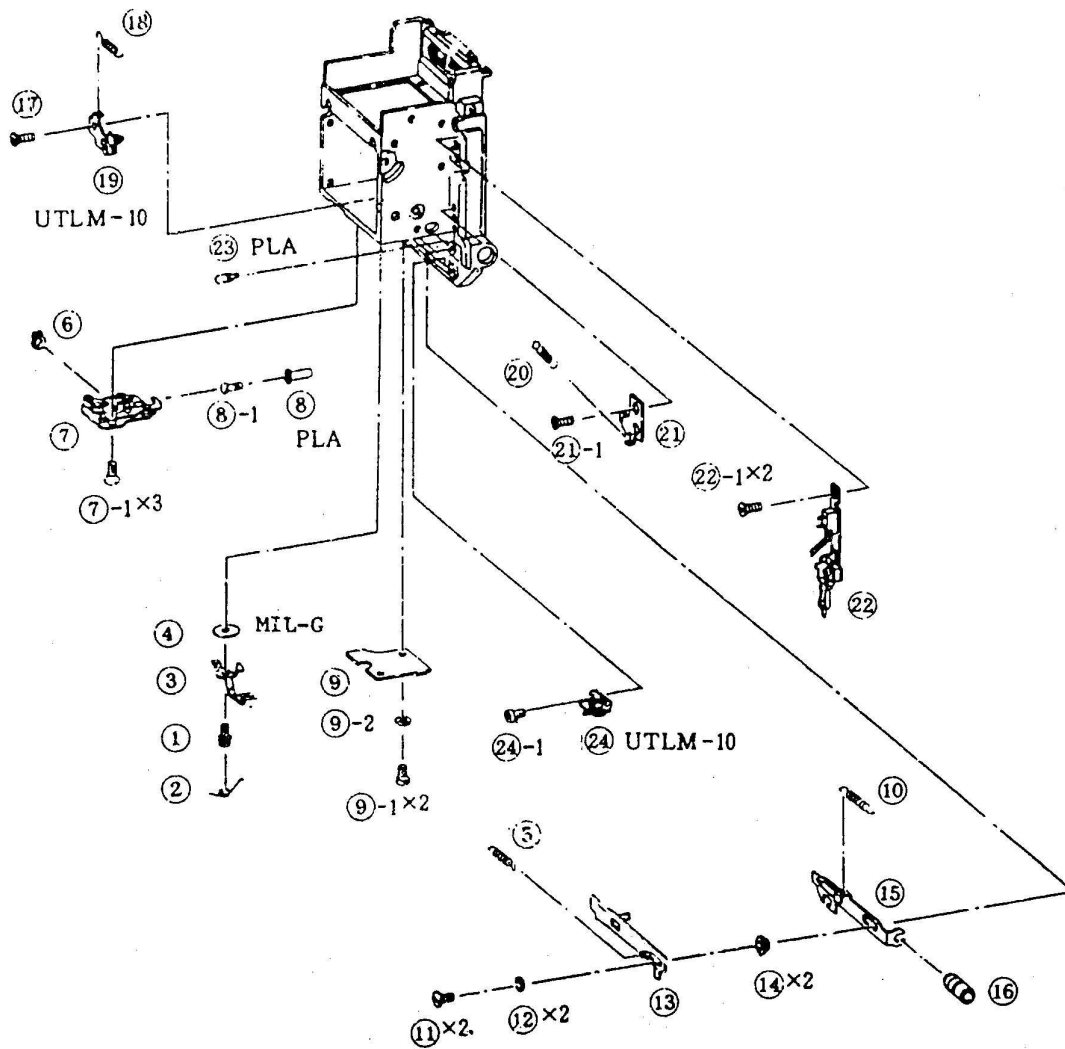
- 15.2 Install variable resistor as shown.

- 15.3 Adjust the resistor so the shutter speed is $0.9S \pm 0.05mS$ (1/1000 sec.)

- 15.4 Install the closest fixed resistor to the variable resistor a value.

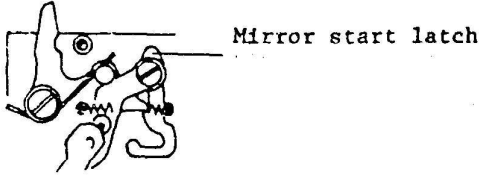
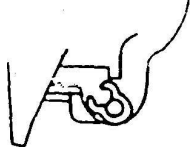
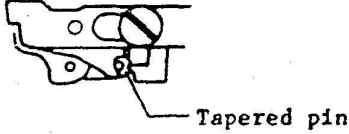


15. Front panel unit assembly and disassembly



13, 15 slot, cam UTLM-10

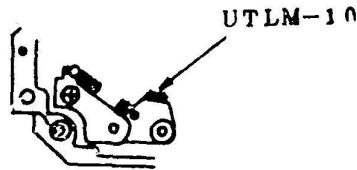
Numbers 1-24

Disassembly Notes	Assembly and Adjustment Notes
1. Do not bend the brush contacts on VR AOAC (VR 9) wiper (3). 2. To remove the A Mode (switch) assy. (22), first remove spring holder (21), spring (20) and the mirror start latch (see dwg.). 	2.2 Check that the height of the pin in the relaxed position is 5.7 ± 0.05mm below the mount surface. 2.3 The pin (8) must work smoothly. 3. G Ring (6) 3.1 Install G ring (6) in the direction shown and insure that it is completely seated. 
Assembly and Adjustment Notes	
1. VR AOAC Lever 1.1 Check that both contacts of the VR AOAC (VR 9) wiper brush (3) are the same height and the brushes work smoothly without catching. 1.2 Lubricate the shaft hole of (3) and washer (4) with MIL-G. 1.3 Clean the pattern surface of VR AOAC resistor board (9). 1.4 Check that the VR AOAC wiper (3) operates smoothly even when the maximum aperture correction pin (8) is moved slowly. 2. Maximum Aperture Correction Pin (8) 2.1 Lubricate the max. aperture correction pin (8) and the hole it works in with a small amount of FLA (not enough to come out of the hole).	3.2 After installing the G ring (6). Check that the following needle holder works smoothly. 4. Do not forget the mylar washers (9)-2 when installing the VR AOAC board (9). 5. Diaphragm Closing Slide (15) 5.1 Do not forget collar (12) when assembling slides (15) and (13) with screw (11). 5.2 Lubricate the slide (15) and A Mode slide (13) friction surfaces with UTL-10. 5.3 When installing the slide (15), make sure that the tapered pin on stop-down lock lever (19) fits as shown below. 

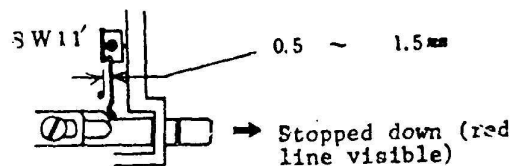
Note: Numbers in parentheses in the text correspond to circled numbers on page 50.
Disassemble in normal order and reassemble in reverse order.

Assembly and Adjustment Notes

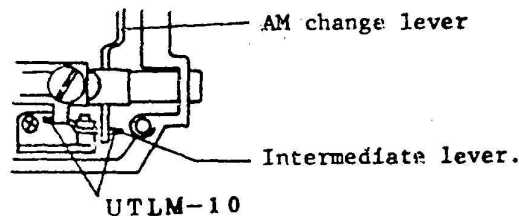
- 5.4 Attach spring (10) to hooks of (15) and (21) and spring (5) to hooks of (13) and (7).
- 5.5 Check that the stop-down slide operates normally.
6. Lubricate the cam surface of the stop-down lock lever with UTLM-10.



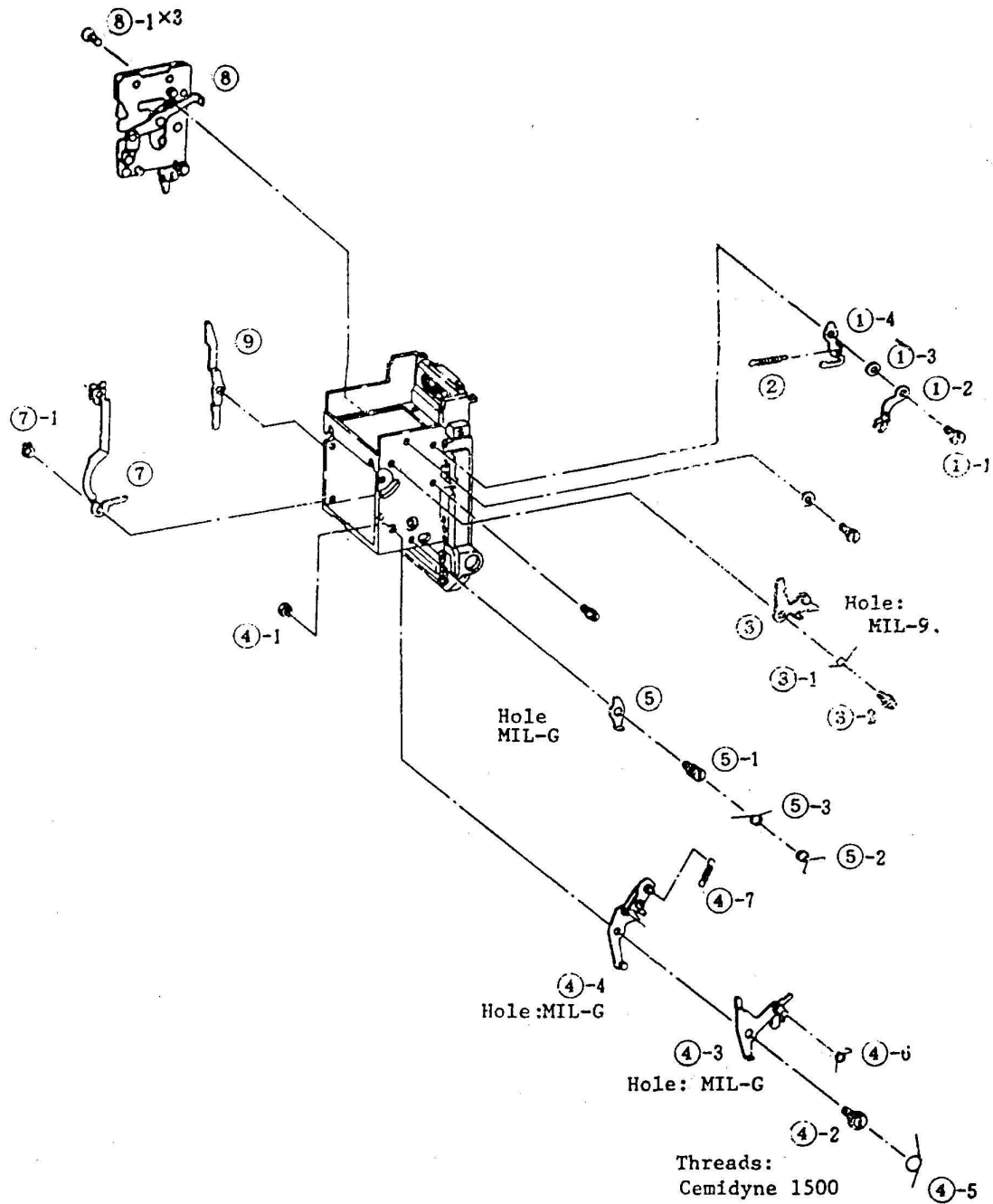
7. Lubricate the A-M pin (23) with FLA.
8. A-M Changeover
 - 8.1 Check the A-M pin after installing the A Mode Assy. (22).
 - 1) A-M pin height (Std: Mount surface) : 0.05mm.
 - 2) A-M pin returns smoothly and positively.
 - 3) A-M switch is on when A-M pin is 0.4 to 0.6mm below mount surface.
 - 8.2 With the lens on "A" the lock pin of (19) must not release.
 - 8.3 Check that SW II' is on when the stop-down slide is in the normal position and off when the slide is extended.



- 8.4 When installing the A Mode Assy. (22), the A-M change lever should be over the intermediate lever (18).
9. Lubricate the friction surfaces of intermediate lever (24) with UTLM-10.



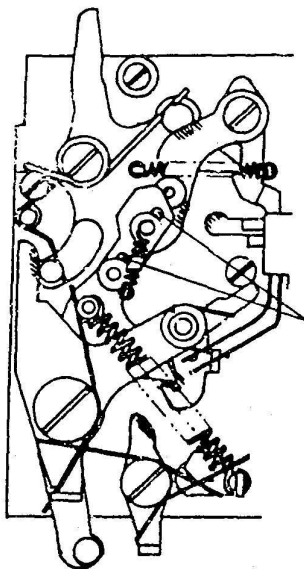
Note: Numbers in parentheses in the text correspond to circled numbers on page 50.
Disassemble in normal order and reassemble in reverse order.



Numbers 1-9

Assembly and Adjustment Notes

1. Lubricate all lever pivot shafts with MIL-G.
2. Lubricate the friction surfaces (///// marks) with Lozoid 72090. Lubricate the slots of the brake lever [p/o the mirror charge lever (4)-4] with MIL-G.

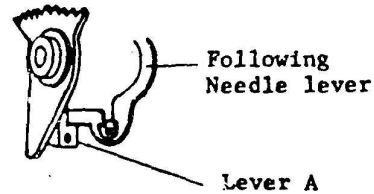


MIL-G
Brake Lever
Slots

3. Check the positions of all the springs (see above).

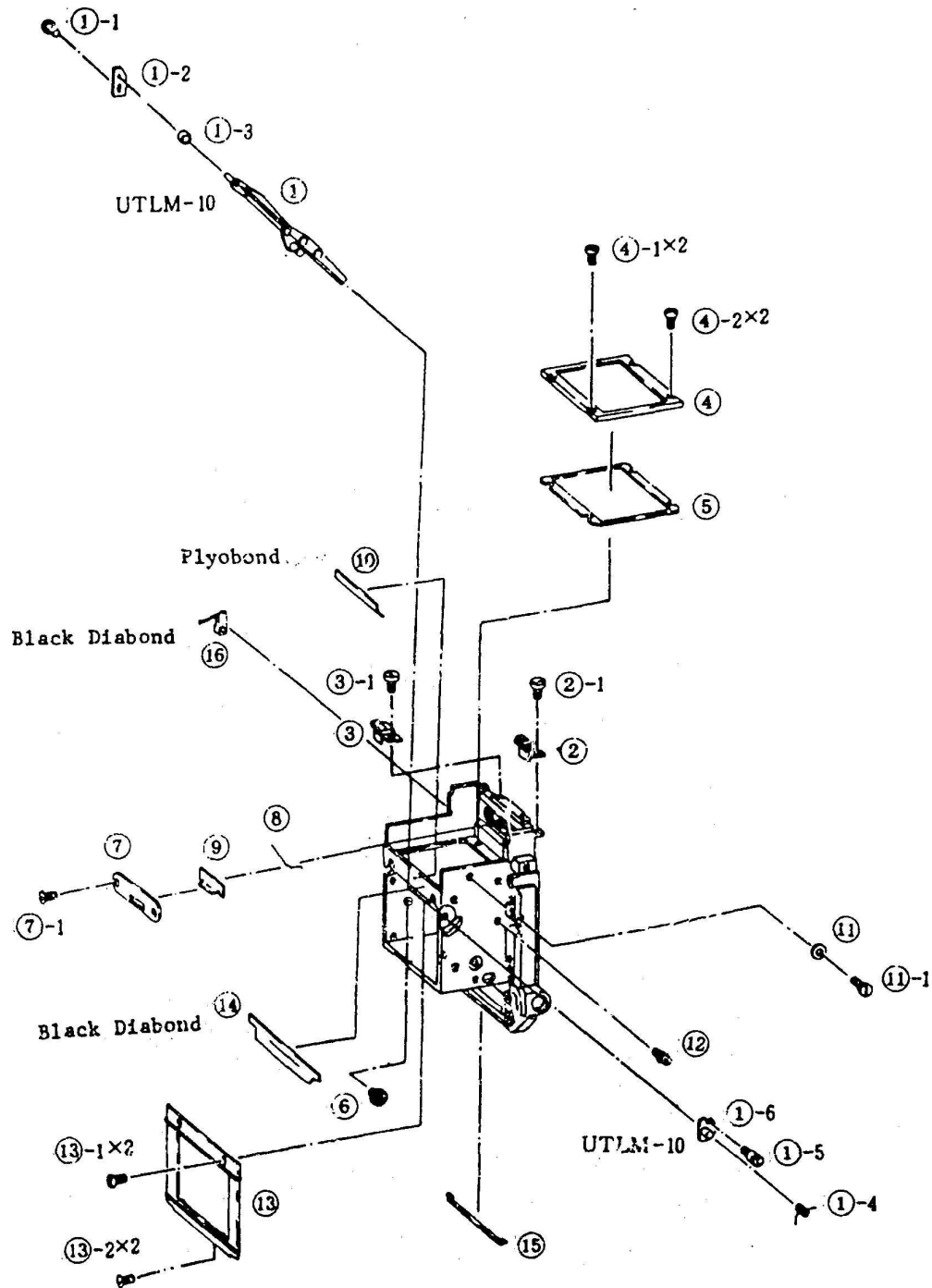
4. Following needle lever

- 4.1 Slip the end of the following needle lever (7) under the resistor section of AE unit.
- 4.2 The bottom end of lever (7) should be engaged with the lowest part of lever A and shown below.



- 4.3 The aperture signal lever should work smoothly with no trace of roughness.
- 4.4 Lever (7) must also work smoothly when the stop-down slide is activated.
- 4.5 When the max. aperture correction pin is moved the correction lever (9) must work smoothly.

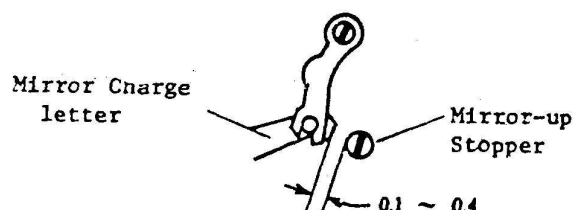
Note: Numbers in parentheses in the text correspond to circled numbers on page 53.
Disassemble in normal order and reassemble in reverse order.



Numbers 1-13

Assembly and Adjustment Notes

1. Mirror
 - 1.1 Lubricate the mirror hinge with UTLM-10.
 - 1.2 Mirror (1) thrust play should be between 0.05 to 0.25mm. Adjust collar (1)-3.
 - 1.3 Mirror (1) must move smoothly under its own weight.
2. Pentaprism Contacts
 - 2.1 Soldering time to the pentaprism contacts (2) and (3) should be kept as short as possible to avoid loosening of the contacts in their plastic seats. (Placing the contacts on a damp sponge while soldering is one possible method.)
 - 2.2 The left and right contacts are different. Take care not to reverse them. When viewed from the mount (front) side, the contact with the recessed (X sync) pin goes on the left.
3. The upper left and lower right screws (4)-I holding the focusing screen mask (4) are positioning screws.
4. Mirror Shock Absorber (6)
 - 4.1 The clearance between the mirror (1) and the shock absorber (6) should be 0.1 to 0.4mm (after the mirror angle has been adjusted). The absorber (6) is available in several sizes to make the adjustment.
 - 4.2 Align the light shield ridges on the shock absorber (6) with those on the inside of the front panel.
5. Install the rubberized fabric light shield (10) with the rubberized side forward (toward the mount), put it flush at the top and adjust horizontally as it is installed. Use plyobond.
6. With the mirror in the full-up position against the light shield, the clearance between the mirror charge lever and the mirror-up stopper is 0.1 to 0.4mm. If it is out of tolerance, change to a different sized mirror-up stopper (12).

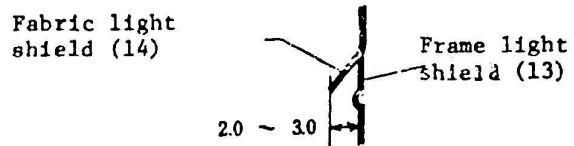


Note: Numbers in parentheses in the text correspond to circled numbers on page 55.
Disassemble in normal order and reassemble in reverse order.

Assembly and Adjustment Notes

7. Light Shields

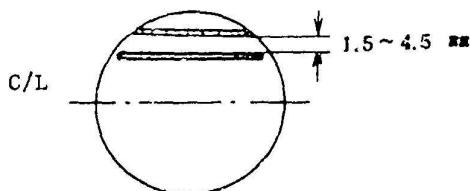
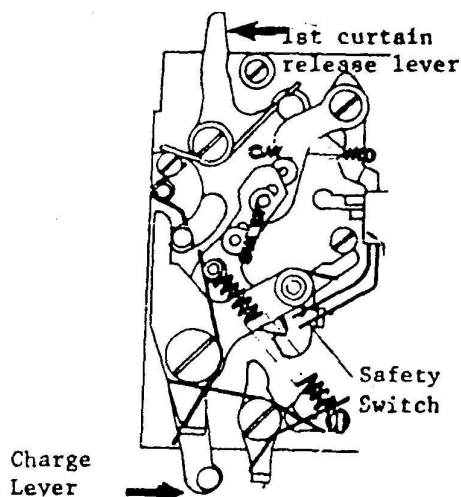
- 7.1 Both light shields (10) and (14) have heat-sealed edges to prevent fraying,
- 7.2 Light shield (14) should stand away from the frame light shield (13) by 2 to 3 mm. Heat it with a soldering iron to shape it correctly.



Assembly and Adjustment Notes

1 1st Curtain Release (Mirror Release)

- 1.1 Move the mirror charge lever in the direction shown at the right.
- 1.2 Move the lever until the mirror is at mid-position, then set the 1st curtain release lever as shown.
- 1.3 Slowly return the mirror charge lever and note the position of the mirror when the 1st curtain release releases.
- 1.4 The correct position for the 1st curtain release lever to release is when the mirror is 1.5 to 4.5mm below the light shield at the top of the mirror box.

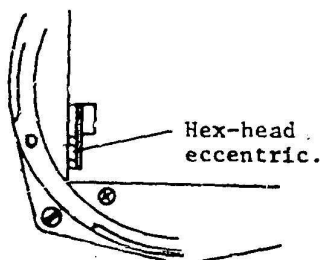


2 Safety Switch

The safety switch must make (turn on) when the edge of the mirror is at the optical axis. The limits are from 1mm below to 10mm above the optical axis.

3 Mirror Angle (45°) Adjustment

- 3.1 Horizontal Level Adjustment Limit $\pm 3'$
- 3.2 Angle Adjustment: $45^\circ \pm 3'$. Adjust with the hex-head eccentric.



- 3.3 After the adjustment is correct, apply Aron Alpha 802* to the hex-head eccentric. Do not apply to other parts.

*: Aron Alpha 80 2 is thicker than the regular Aron Alpha

Assembly and Adjustment Notes

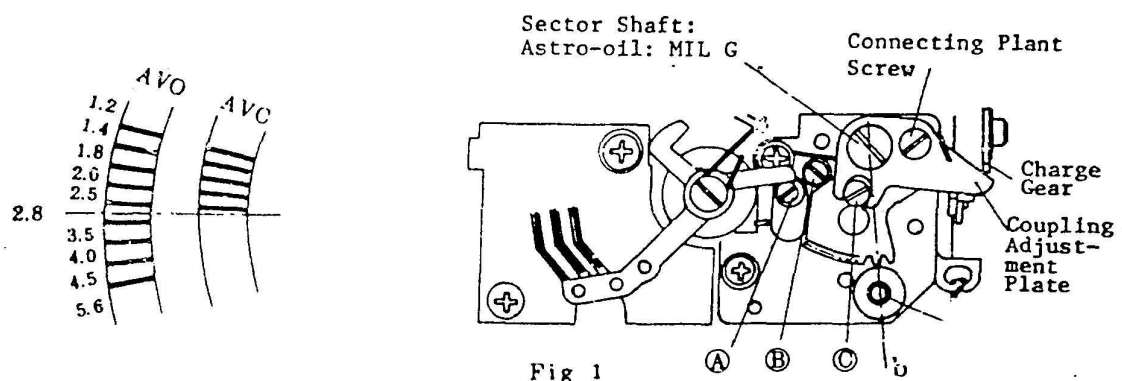
4. VR AOAC (VR9) Wiper Adjustment

4.1 In the relaxed position (AVO=5.6) the pin height* should be $5.7 \pm 0.05\text{mm}$.

*: Pin height is repair jargon. In the case of lenses, it is correct, since the pin protrusion above the standard mount surface if measured. In the body, the opposite is true. The pin height is a measure of how much the pin is recessed below the mount standard surface.

4.2 Set the max. aperture pin to the f/2.8 height. Check that the AVO and AVC brushes are on the proper pattern (A loupe will probably be necessary). Adjust with eccentric A.

4.3 Check the brush position also at AVO S f/1.2 and f/5.6.

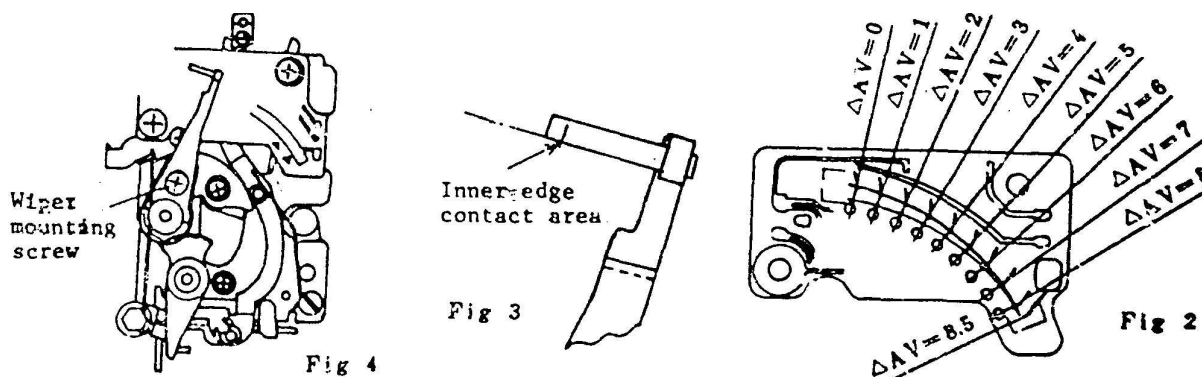


5. Sector Gear Return Position Adjustment

Adjust eccentric (B) so that a line through the axes of the sector gear and coupler (line "b") bisects the second tooth of the sector gear.

6. R AV Wiper Position Adjustment

6.1 Stop down the tool-standard lens 4 AV (f/5.6) and adjust so the inner edge of the wiper (Fig. 3) is on the AV=4 position of the AV resistor board (Fig. 2). The adjustment is made by loosening the wiper mounting screw and repositioning the wiper.



Assembly and Adjustment Notes

- 6.2 Check the brush position also at AV=0, AV=4 and AV=8 also. The limit is ± 0.2 AV. (each pattern element is 0.1AV).

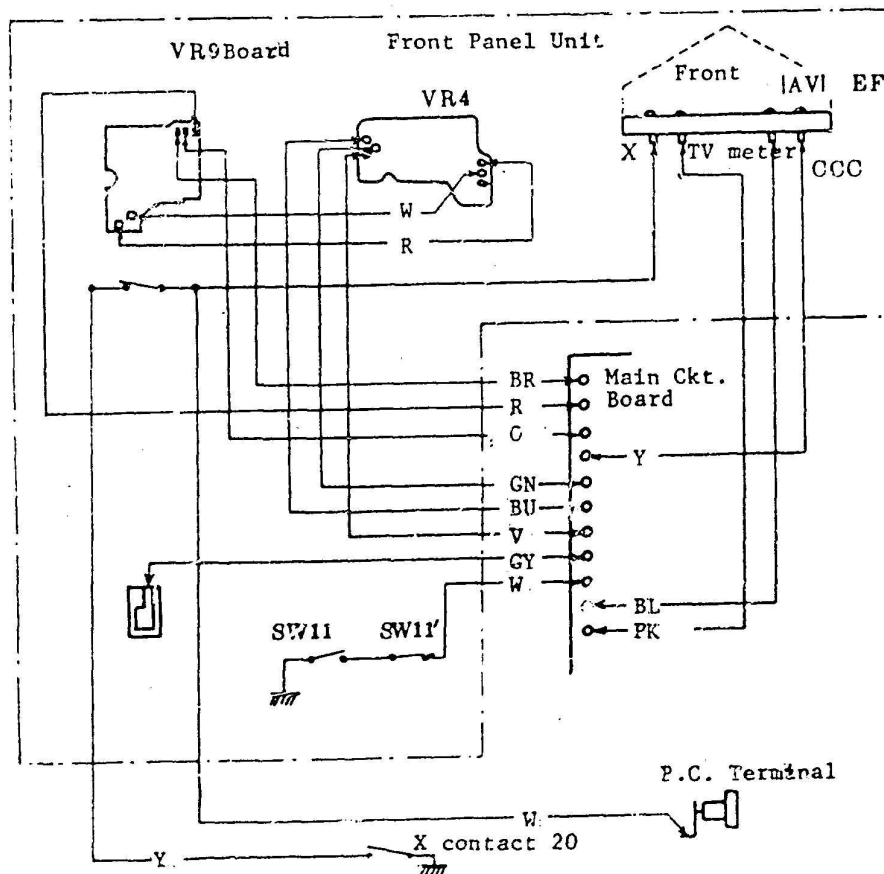
Note: Some R AV boards have circular marks indicating full step intervals and others have triangular marks.

- 6.3 After the adjustment is finished, stake the mounting screw with diabond.

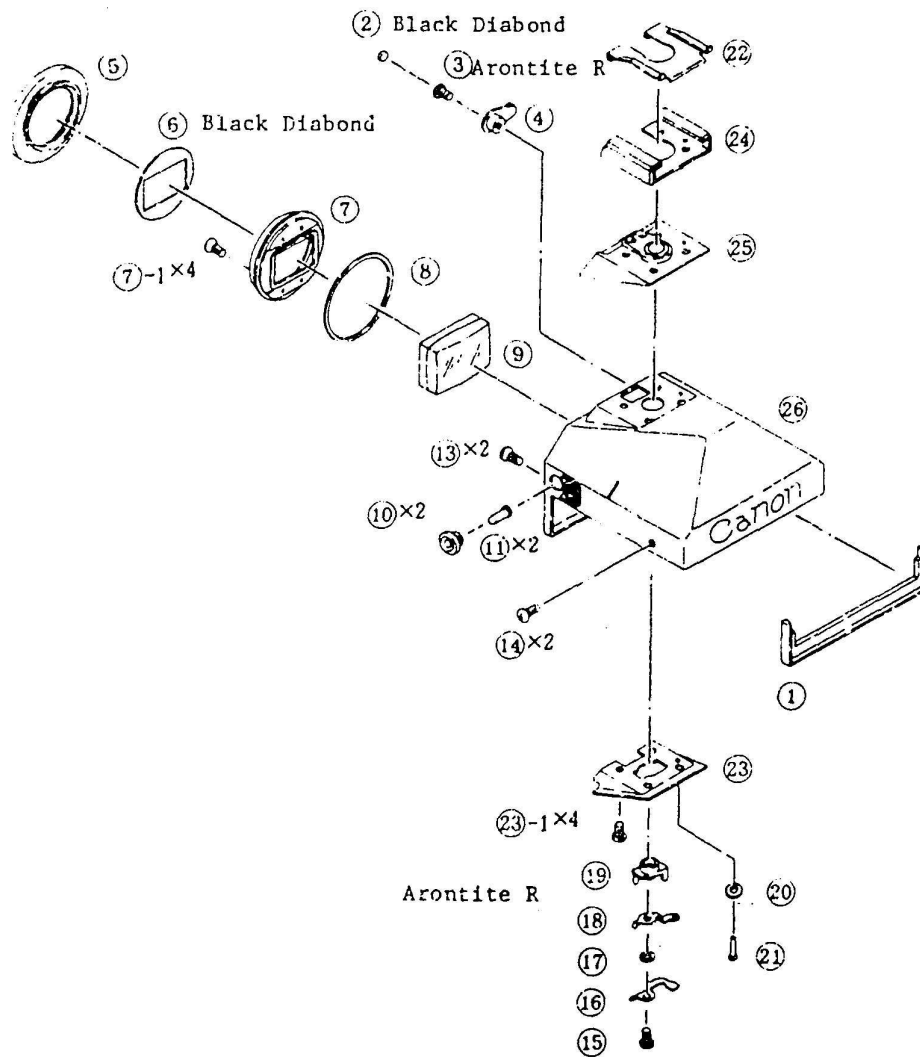
7. Coupling Adjustment Plate Adjustment

- 7.1 Set the tool standard lens to "A".
- 7.2 Loosen the coupling lever screw.
- 7.3 Adjust the eccentric (C) (Fig. 1) so that there is no space between the charge gear and coupling lever.
- 7.4 After adjustment stake both the eccentric (C) and coupling lever screw with diabond.
- 7.5 Lubricate the friction surfaces of the charge gear and coupling lever with UTLM-10.

8. Front Panel Unit Wiring Diagram



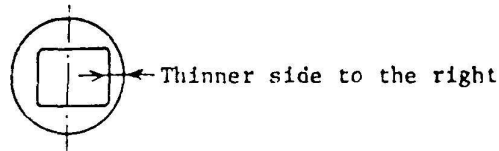
16. Eye level finder



Numbers 1-26

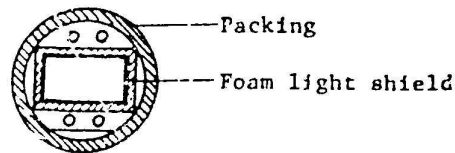
Assembly and Adjustment Notes

1. The thinner side of the eyepiece mask (6) goes to the right.



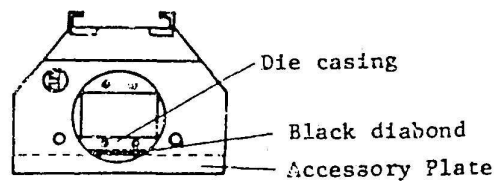
2. Eyepiece Frame (7)

- 2.1 The plastic foam light shield in eyepiece frame (7) should not be visible.

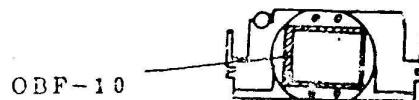


- 2.2 The notch in the frame goes down.

3. Full the space between the accessory cover (1) and the diecast pentaprism box with black diabond.



4. Apply oil retardant OBF-10 around the junction of the die casting and eyepiece lens.
(Water resistance)



5. Use the special tool to install the Button ring (10),

6. Pentaprism Cover Installation

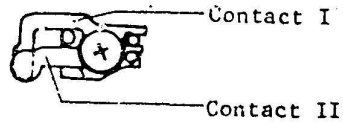
- 6.1 Install the cover from the front first.

- 6.2 When covering rear (eyepiece) side keep the cover level as it is lowered into place.

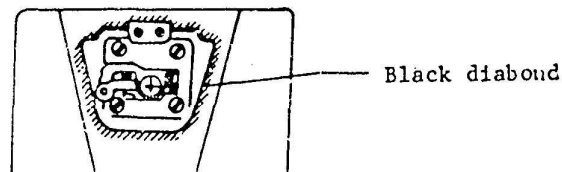
Note: Numbers in parentheses in the text correspond to circled numbers on page 61.
Disassemble in normal order and reassemble in reverse order.

Assembly and Adjustment Notes

7. Assemble the contacts (16) and (18) so contact I (18) is under contact II (18).



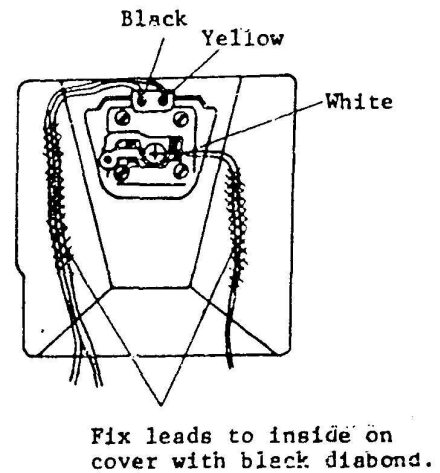
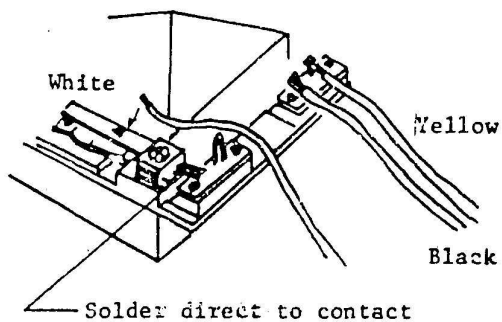
8. After installing the accessory shoe mounting plate (23), apply black diabond all around the joint with the prism cover so no crack is left open. (Water resistance)



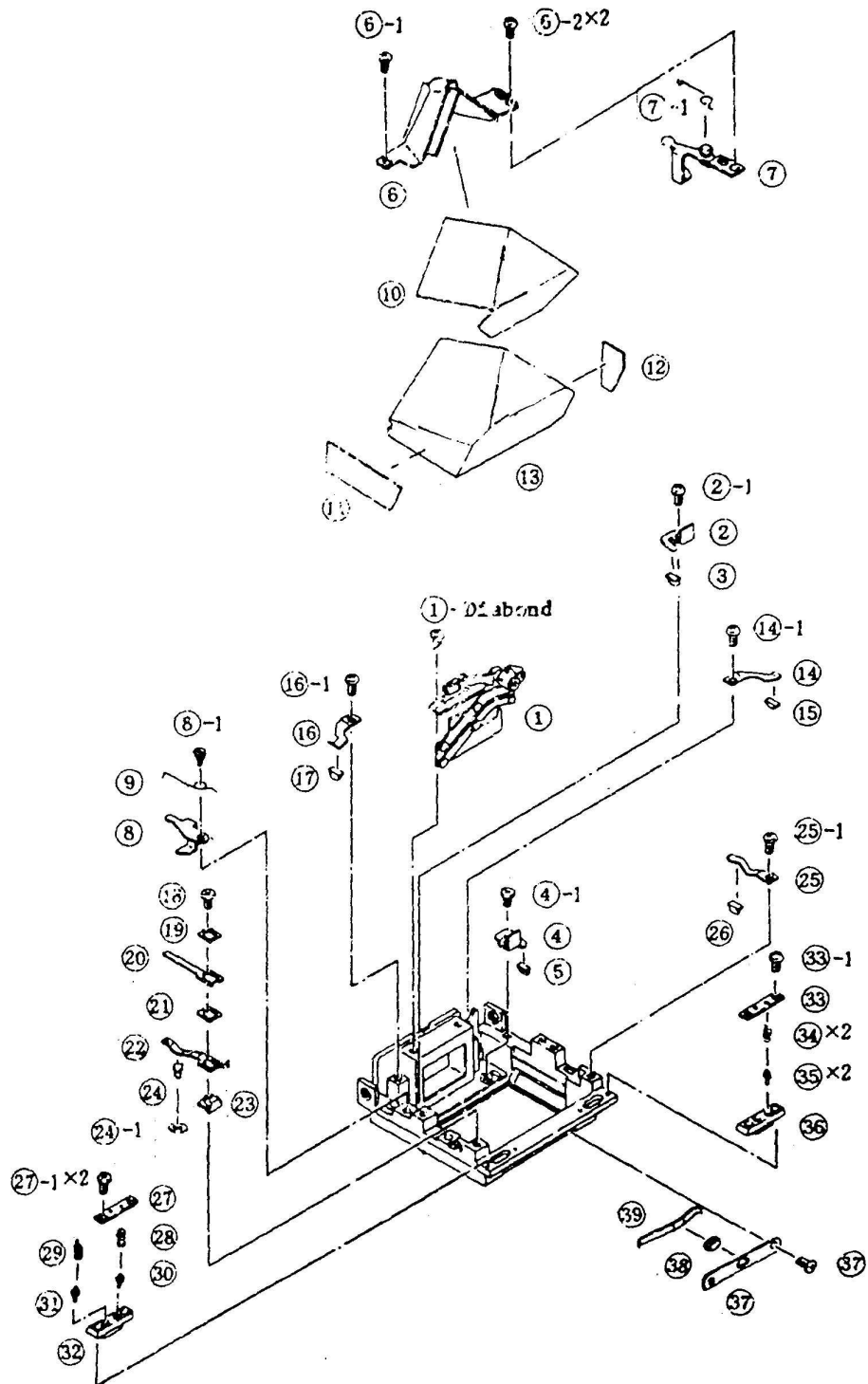
9. Pentaprism Cover, Lead Dress

- 9.1 Solder the black and yellow leads as quickly as possible to prevent loosening of the contacts in their plastic mounts (the contact assembly can be placed on a damp sponge).

- 9.2 Solder the leads and dress as shown.



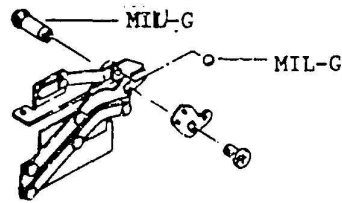
Note: Numbers in parentheses in the text correspond to circled numbers on page 61.
Disassemble in normal order and reassemble in reverse order.



Numbers 1-39

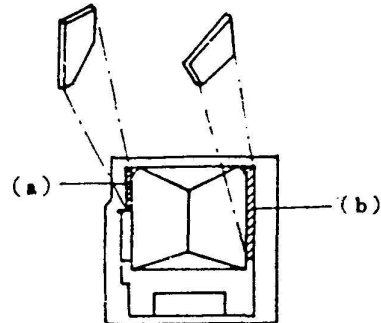
Assembly and Adjustment Notes

1. The eyepiece shutter is assembled as shown.



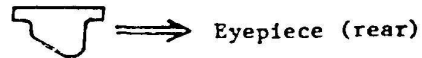
2. Pentaprism Play Removal

- 2.1 Select the correct spacer (a) for the left side.
- 2.2 Select the correct spacer (b) for the right side.
(Both spacers are available in several sizes.)



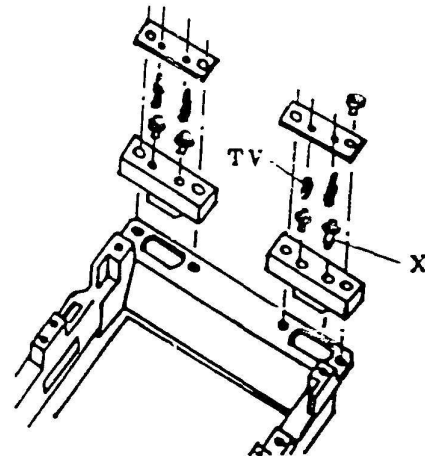
- 2.3 Bond the spacers in place with black diabond.

3. The rail pressure pins (15), (17) and (26) have to be installed in the correct direction.



4. Contact Pressure Springs

- 1) The springs must be used in the correct positions.
- 2) The X contact spring is approximately 0.5mm longer than the others.
- 3) The TV contact spring (second from the right) has a flush end.
- 4) 4.2 Align the contact assemblies so they do not extend over the edge of the pentaprism box and tighten the mounting screws.

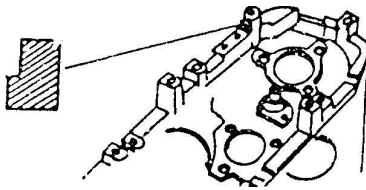


Note: Numbers in parentheses in the text correspond to circled numbers on page 64.
Disassemble in normal order and reassemble in reverse order.

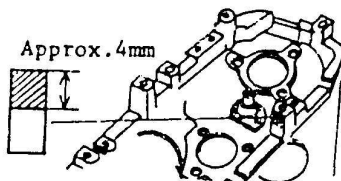
17. Moisture Resistant Treatment

Apply moisture-proofing (Tuffly TF-1156) at the points indicated by hatching.

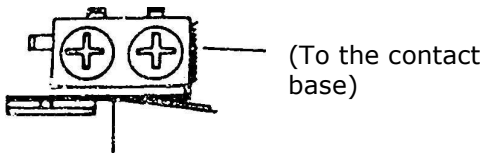
1. On the body at the SW 18 mounting position.



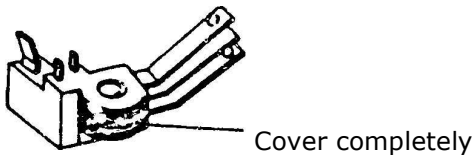
2. On the body at the SW 12 mounting position.



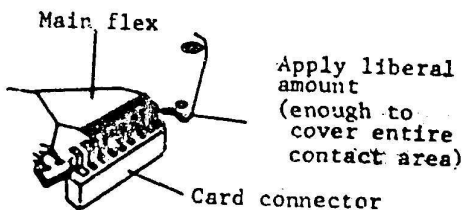
3. SW 18 assembly



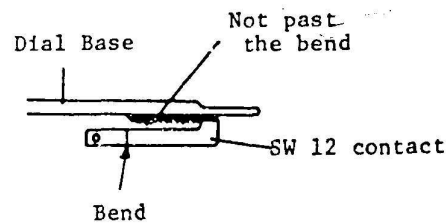
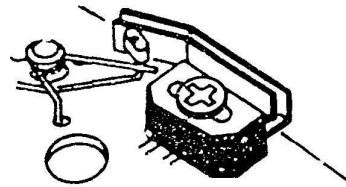
4. Timer lamp contact assy.



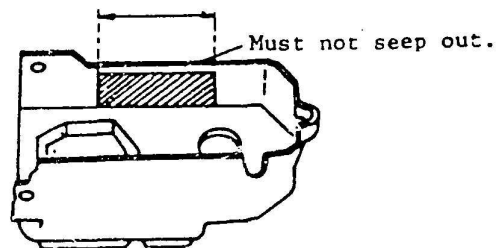
5. Main flex./ SV Connector



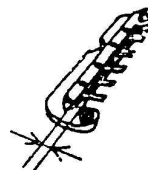
6. Pentaprism Contacts (X contact)



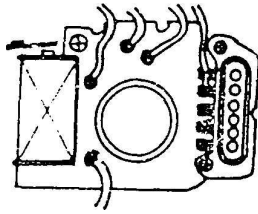
7. Top Cover (Right) Approx. 30mm



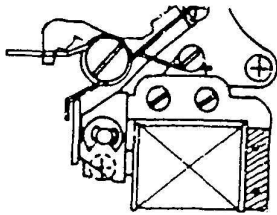
8. MD contact (back side)



9. MD Contact (Front side)



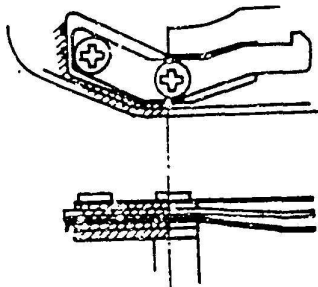
10. MG 3 Lead connections



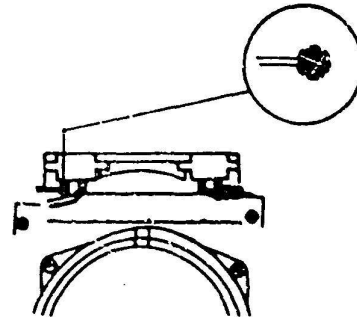
11. Main flex front side soldering



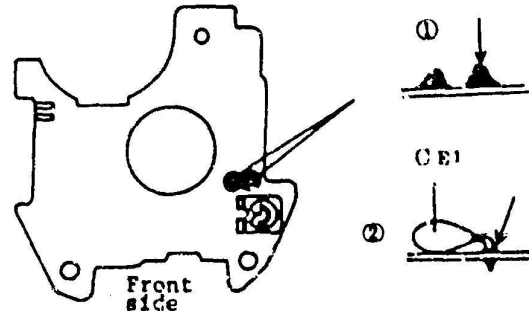
12. SW 1



13. Pentaprism Contacts (X contacts)

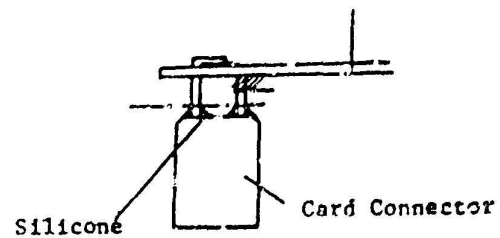


14. Capacitor CE1 (SV Board)



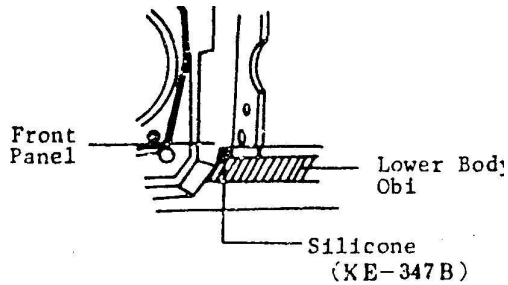
- (1) Soldering points on front of board.
- (2) Rear Side: Capacitor leg and hole - Liberal amount

15. Card Connector (Rear of SV board)

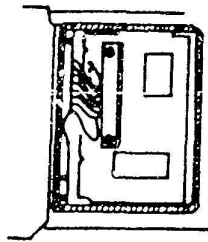


18. Water resistant treatment

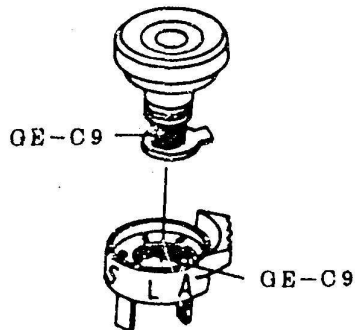
1. Inject silicone in the space between the front panel and the lower body "obi" (band).



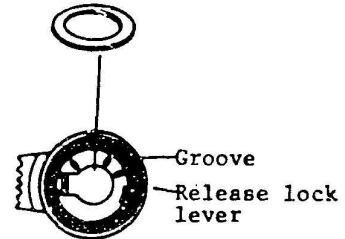
2. Put the rubber seal in the groove and apply silicone (KE-347B) on it.



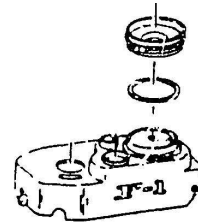
3. Apply grease (GE-C9) between the shutter button assembly and the release lock ring.



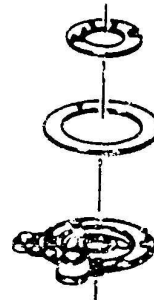
4. Use the teflon washer in the release lock lever.



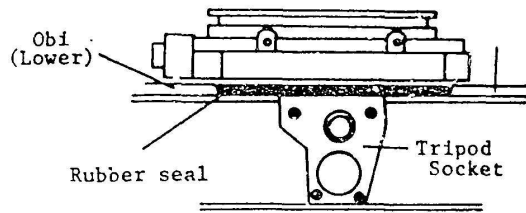
5. Place the teflon washer in the shutter dial seat under the shutter dial.



6. Put two types of teflon washers in the ASA dial.

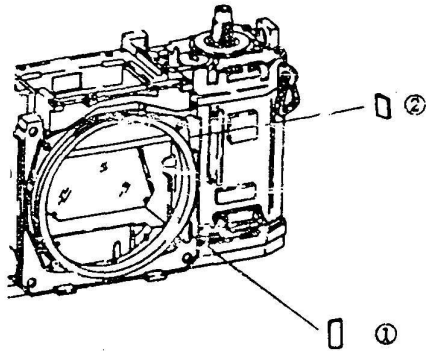


7. Place the rubber seal between the front panel and body die castings.

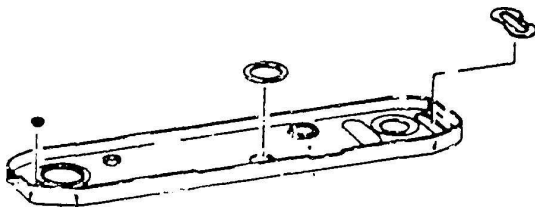


8. Bond the following needle adjustment hole cover in place (1).

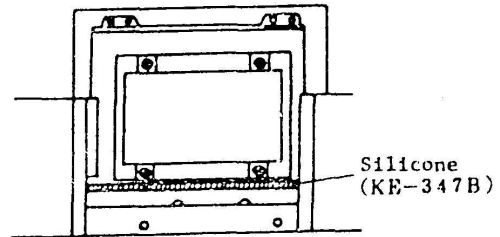
9. Insert the SW 18 conductive rubber cover (2).



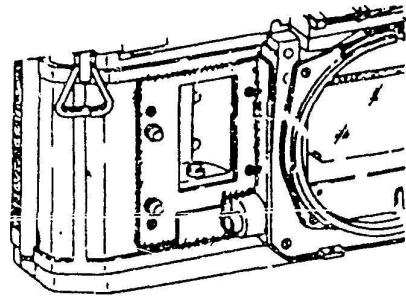
10. Install the water seals in the base cover.



11. Lift the exposure flex out of the way and put silicone (KE 347B) in the space shown below.



12. Put silicone (KE 347B) in the crack around the battery cover.



19. Shutter speed variations

(Based on +/- EV) $T=2^{-n}$

EV \	2000	1000	500	250	125	60	30	15	8	4	2	1"	2"	4"	8"
	11	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-3
0.500	0.691	1.381	2.762	5.524	11.05	22.10	44.19	88.39	176.8	353.6	707.1	1414.2	2828	5657	11314
0.450	0.667	1.334	2.668	5.336	10.67	21.34	42.69	85.38	170.8	341.5	683.0	1366.0	2732	5464	10928
0.400	0.644	1.289	2.577	5.154	10.31	20.62	41.23	82.47	164.9	329.9	659.8	1319.5	2639	5278	10556
0.350	0.622	1.245	2.489	4.979	9.957	19.92	39.83	79.66	159.3	318.6	637.3	1274.6	2549	5098	10197
0.300	0.601	1.202	2.405	4.809	9.618	19.24	38.47	76.95	153.9	307.8	615.6	1231.1	2462	4925	9849
0.250	0.581	1.161	2.323	4.545	9.291	18.58	37.16	74.33	148.7	297.3	594.6	1189.2	2378	4757	9514
0.200	0.561	1.122	2.244	4.487	8.974	17.95	35.90	71.79	143.6	287.2	574.3	1148.7	2297	4595	9190
0.150	0.542	1.084	2.167	4.334	8.669	17.34	34.67	69.35	138.7	277.4	554.8	1109.6	2219	4438	8877
0.100	0.523	1.047	2.093	4.187	8.375	16.75	33.49	66.99	134.0	267.9	535.9	1071.8	2144	4287	8574
+0.050	0.505	1.011	2.022	4.044	8.088	16.18	32.35	64.70	129.4	258.8	517.6	1035.3	2071	4141	8282
0	0.488	0.977	1.953	3.906	7.813	15.62	31.25	62.50	125	250	500	1000	2000	4000	8000
-0.050	0.472	0.943	1.887	3.773	7.546	15.09	30.19	60.37	120.7	241.5	483.0	965.9	1931.9	3864	7727
0.100	0.456	0.911	1.822	3.654	7.289	14.58	29.16	58.31	116.6	233.3	466.5	933.0	1866.1	3732	7464
0.150	0.44C	0.580	1.760	3.521	7.041	14.08	28.16	56.33	112.7	225.3	450.6	901.3	1802.5	3605	7210
0.200	0.425	0.850	1.700	3.401	6.801	13.60	27.20	54.41	108.8	217.6	435.3	870.5	1741.1	3482	6964
0.250	0.411	0.821	1.642	3.285	6.569	13.14	26.28	52.56	105.1	210.2	420.4	840.9	1681.8	3364	6727
0.300	0.397	0.793	1.586	3.173	6.346	12.69	25.38	50.77	101.5	203.1	406.1	812.3	1624.5	3249	6498
0.350	0.383	0.766	1.532	3.065	6.130	12.26	24.52	49.04	98.07	196.1	392.3	784.6	1569.2	3138	6277
0.400	0.370	0.740	1.480	2.960	5.920	11.84	23.68	47.37	94.73	189.5	378.9	757.9	1515.7	3031	6063
0.450	0.357	0.715	1.430	2.860	5.719	11.44	22.88	45.75	91.51	183.0	366.0	732.0	1464.1	2928	5856
0.500	0.345	0.691	1.381	2.762	5.524	11.05	22.10	44.19	88.39	176.8	353.6	707.1	1414.2	2828	5657

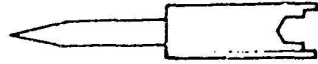
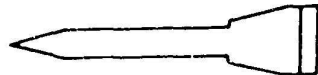
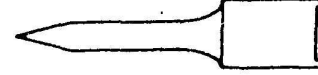
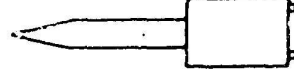
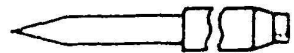
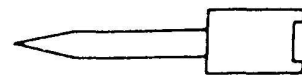
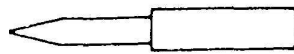
20. Service tools list

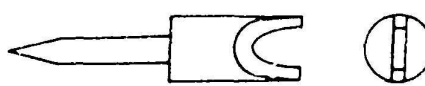
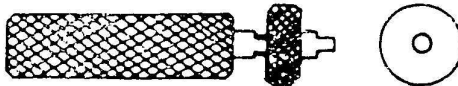
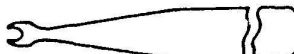
(Ref. No. C1-0751)

TEST EQUIPMENT

(USE)	(NAME OF TEST EQUIPMENT)
1. Shutter	Shutter Tester (Model 7J-18C) or PA-16 Transistorized Shutter Tester or Simplified Shutter Tester
2. Exposure Meter	2.1 D.C Voltage Tester (Digital Tester Model VOAC 7 07 or VOAC 77) (Must measure to 1mV) 2.2 Standard Brightness Checker (CdS) or Canon Luminance Meter (S.B.C) 2.3 Oscilloscope (Electric Circuit General Check)
3. Range-Viewfinder	Universal Range-Viewfinder Collimator (SU-006-2) or Universal Range-finder Collimator
4. Mirror for 45°	Universal Type 90° Collimator
5. Field of View	Universal Range-Viewf inder Collimator (SU-006-2). or Universal Parallax Collimator
6. Flange - Focal Distance	42.14mm Dial Gauge
7. Adjustments	7.1. Dial Tension Cages (Correx.) 0-300 g, 0-1Kg 7.2. Depth Gage (Max. Aperture correction Pin) 7.3. Retaining Ring Pliers AOG
8. Electrical Adjustment	Precision Variable Resistors (for selecting adjustment resistor values) - Local Purchase 1. 200kohm 2. 10kohm 3. 500kohm

SMALL HAND TOOLS
Canon NEW F-1
(C12-0751)

Place of use		
Rewind Shaft	CY9-6129-000 	
AVO Wiper	CY9-6130-000 	
Winding Lever Screw, Shutter Button Ring	CY9-6131-000 	
ASA Dial Nut	CY9-6132-000 	
2nd Curtain Latch	CY9-6133-000 	
Rewind Knob Pin-face Screw	CY9-6134-000 	
Pentaprism Button Holder	CY9-6135-000 	
Charge lever Shaft	CY9-6125-000 	
1st. Curtain Brake Shaft	CY9-6126-000 	

Indicator Cable	CY9-6127-000 
VR TV Circuit Board	CY9-6128-000 
Shutter Adj.	CY9-6136-000 
P.C. Terminal	CY9-6137-000 
Mirror Angle (45°) Adj	CY9-6138-000 
SW 5 Nut	CY9-6139-000 
Frame Counter Ratchet	CY9-6140-000 
Following Needle Adj	CY9-6141-000 
Winding Tool	CY9-6142-000 

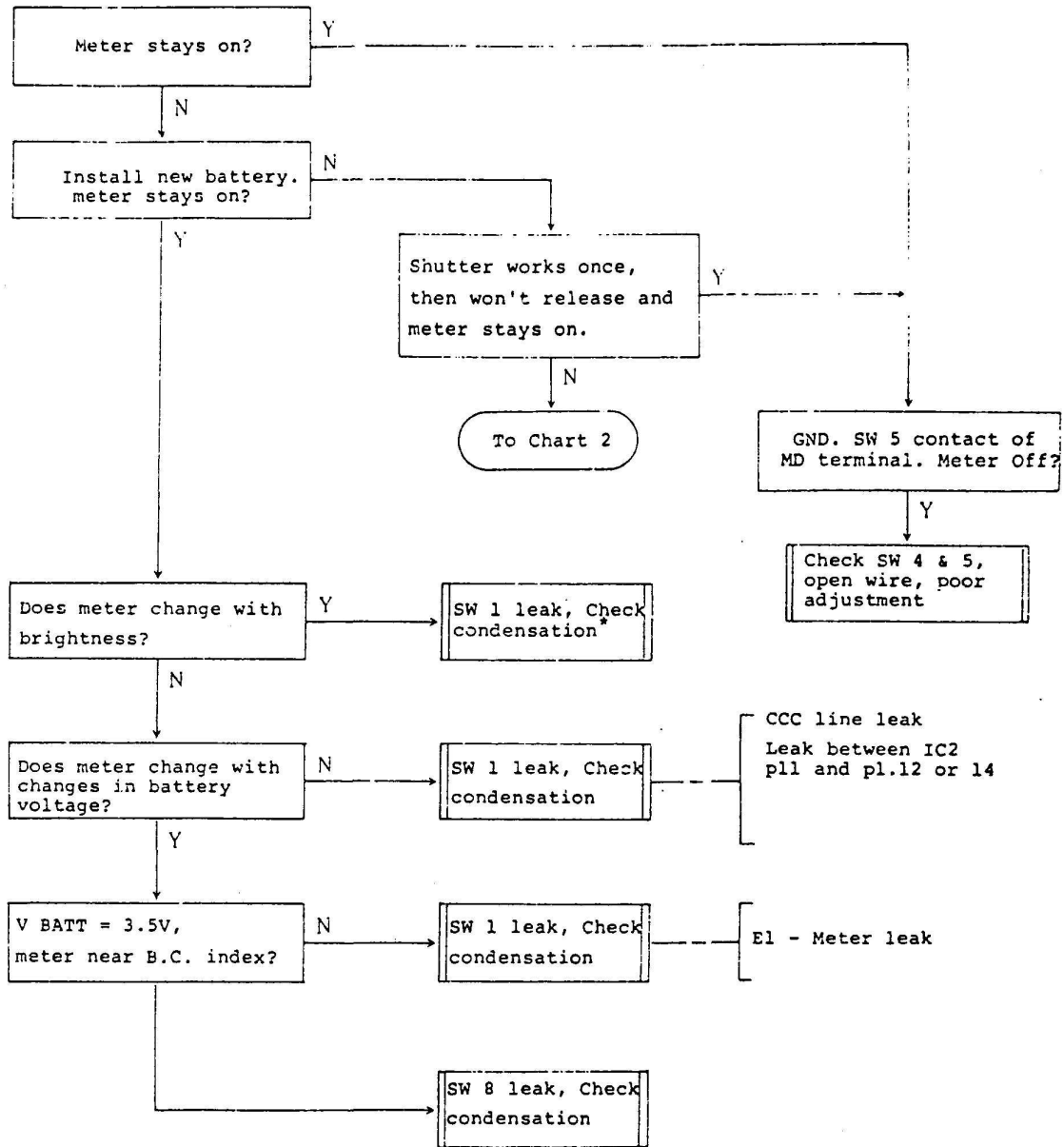
21. Troubleshooting charts

Series 1: Shutter Will Not Release

- 1.1 Meter Always ON
- 1.2 Miscellaneous
- 1.3 No V Batt
- 1.4 No E 1
- 1.5 No Vc
- 1.6 No KVc
- 1.7 Sw 2 Check
- 1.8 Sw 4 Check
- 1.9 Sw 5 Check
- 1.10 Sw 11 Check
- 1.11 Mg 3 Check
- 1.12 Mg 3 Check
- 1.13 No Clock Pulse

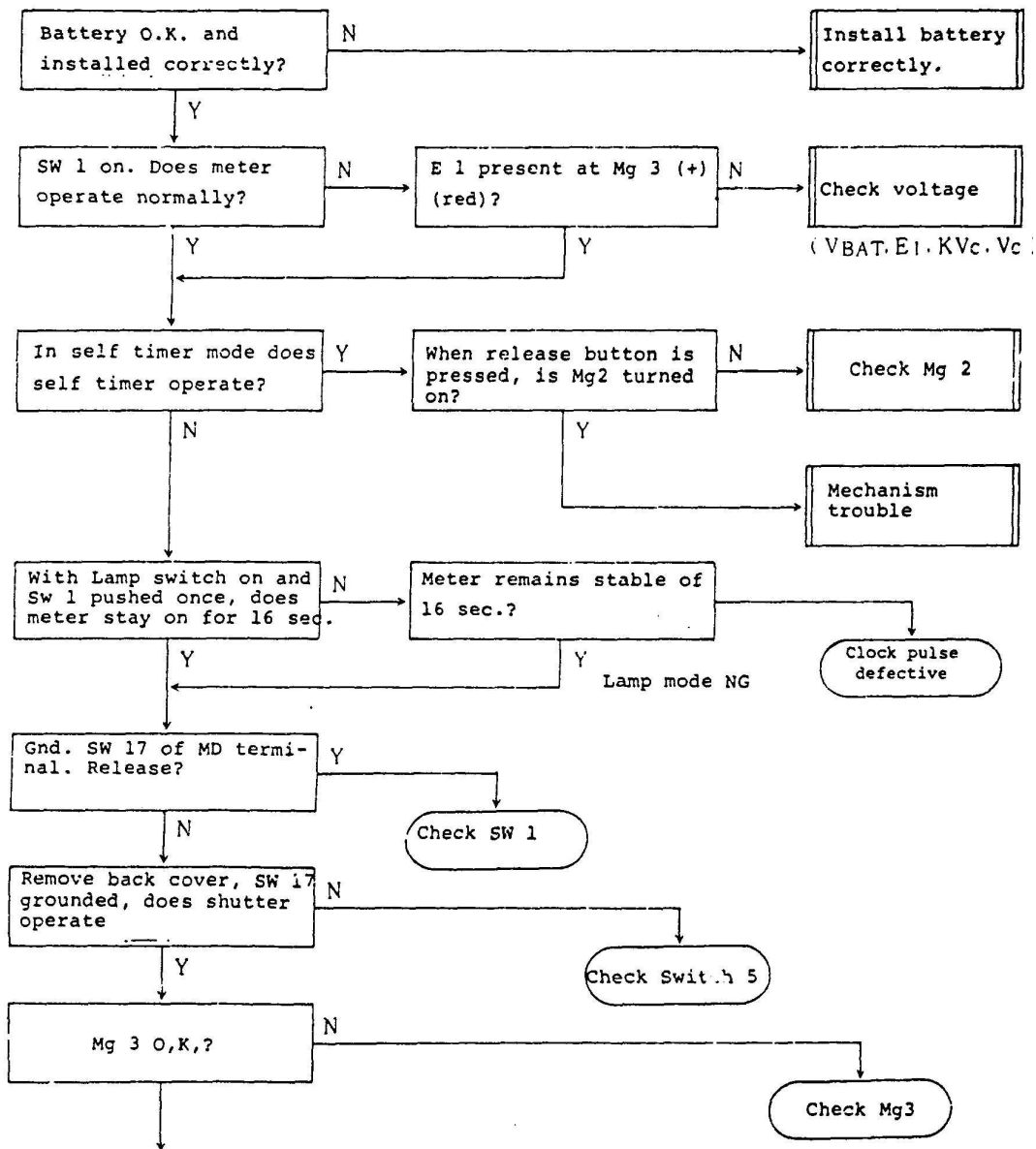
Note: All circuits are coated with Tuffly TF-1156 which must be penetrated to make contact with the probe.

1.1 Meter always on

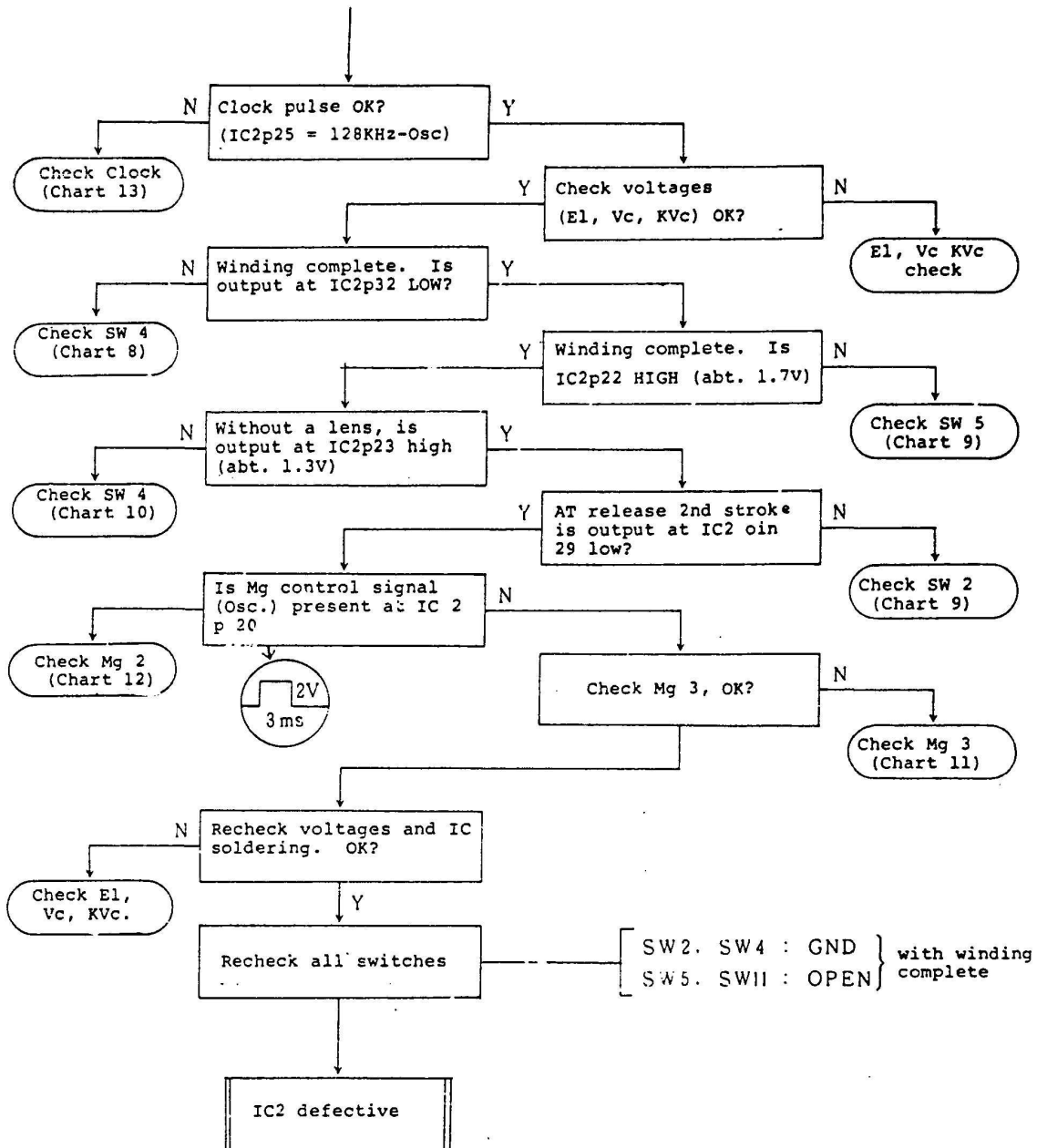


*: Check for after effects (stains, etc.) of moisture condensation.

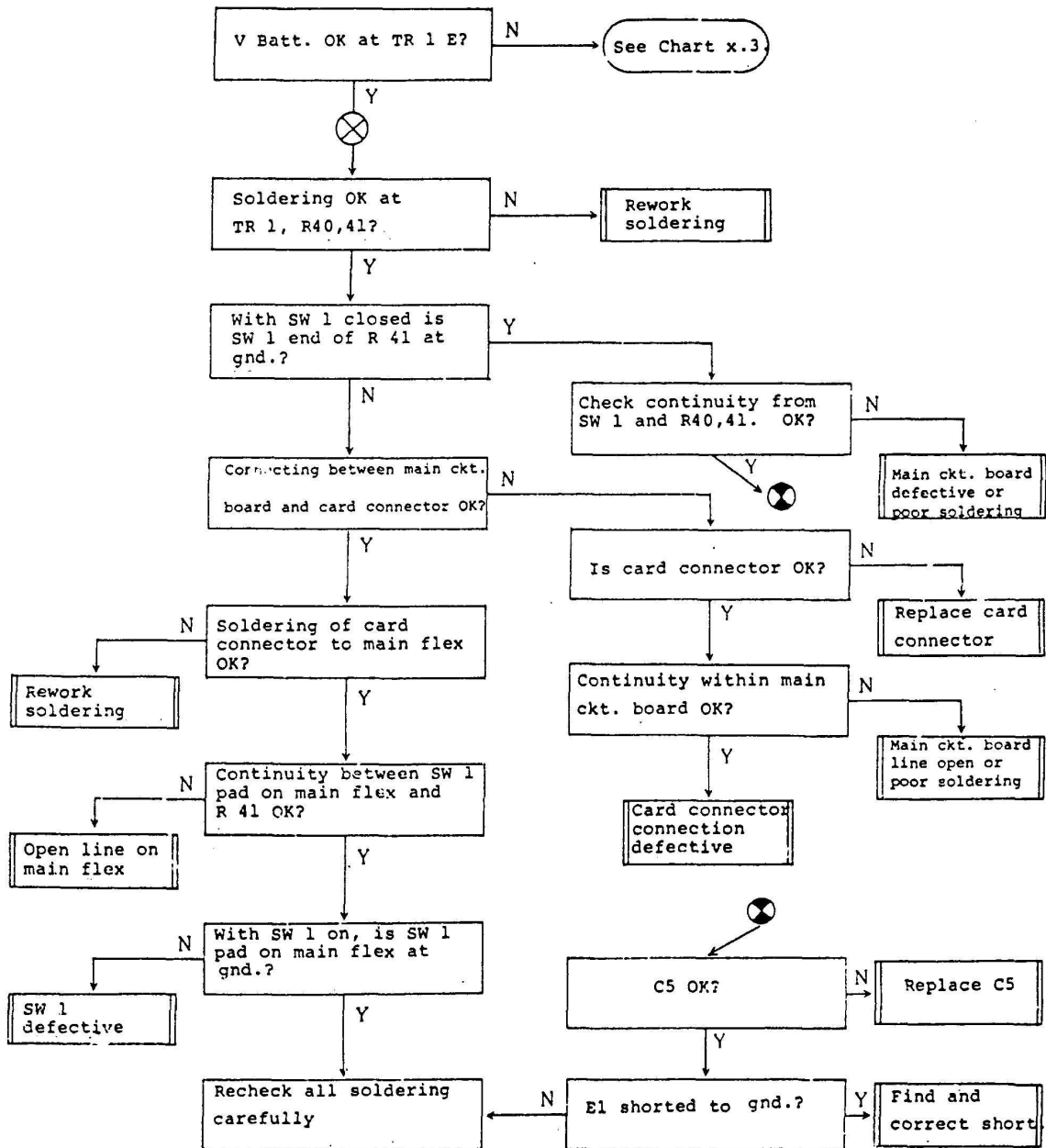
1.2 Miscellaneous



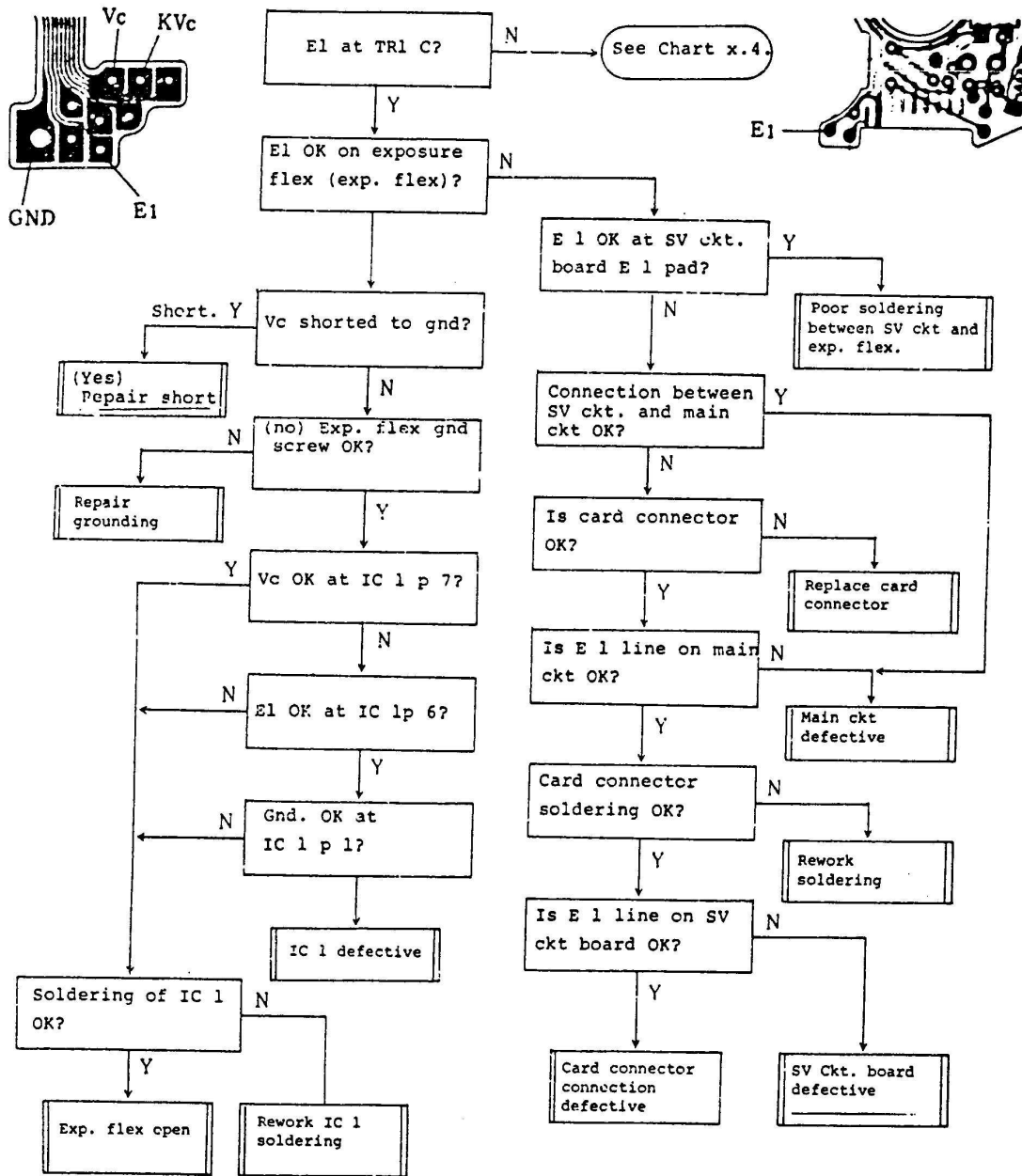
1.2 Miscellaneous (contd.)



1.4 No E 1

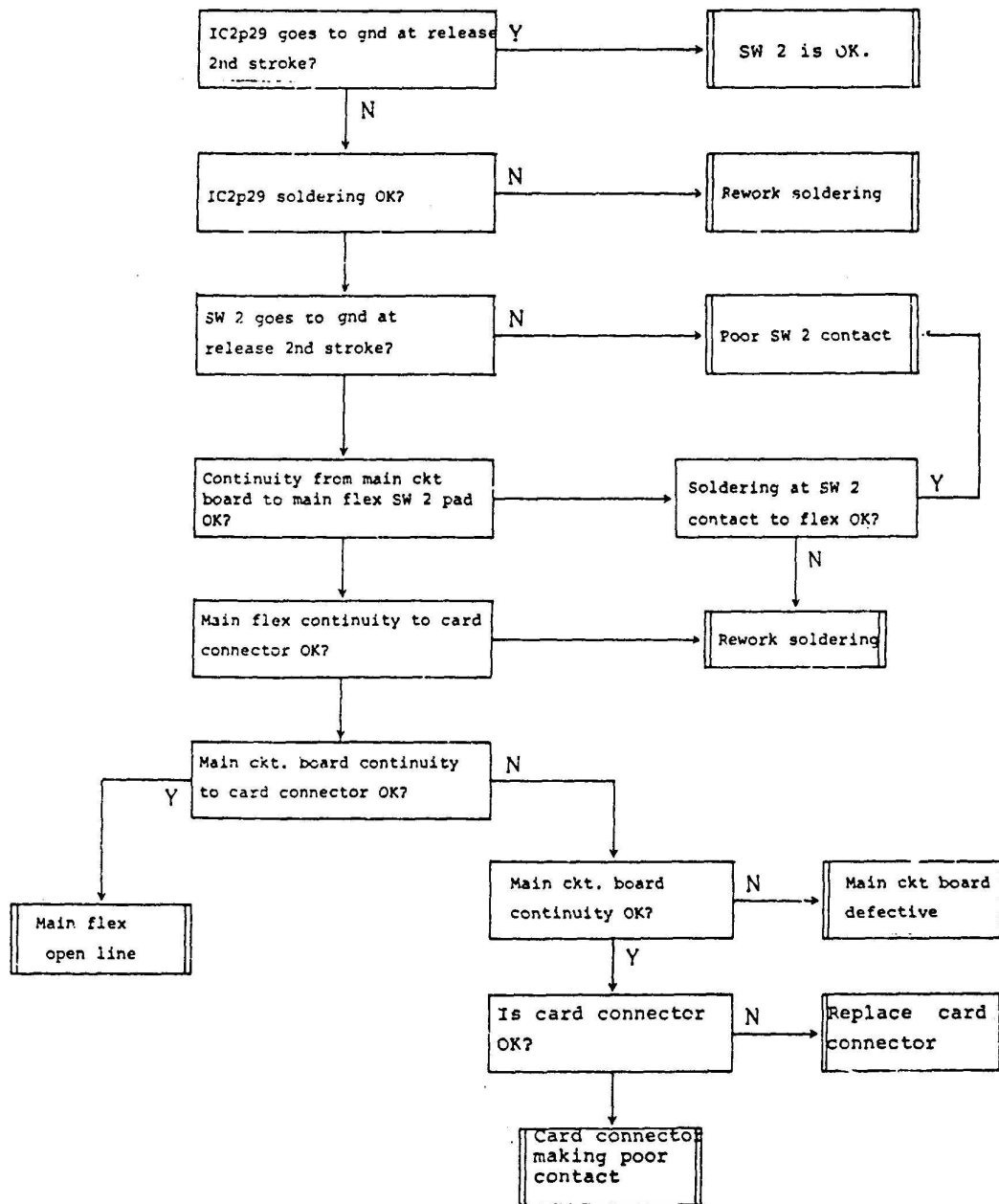


1.5 No Vc (Correct Vc : 1.3V +/- 50mV)

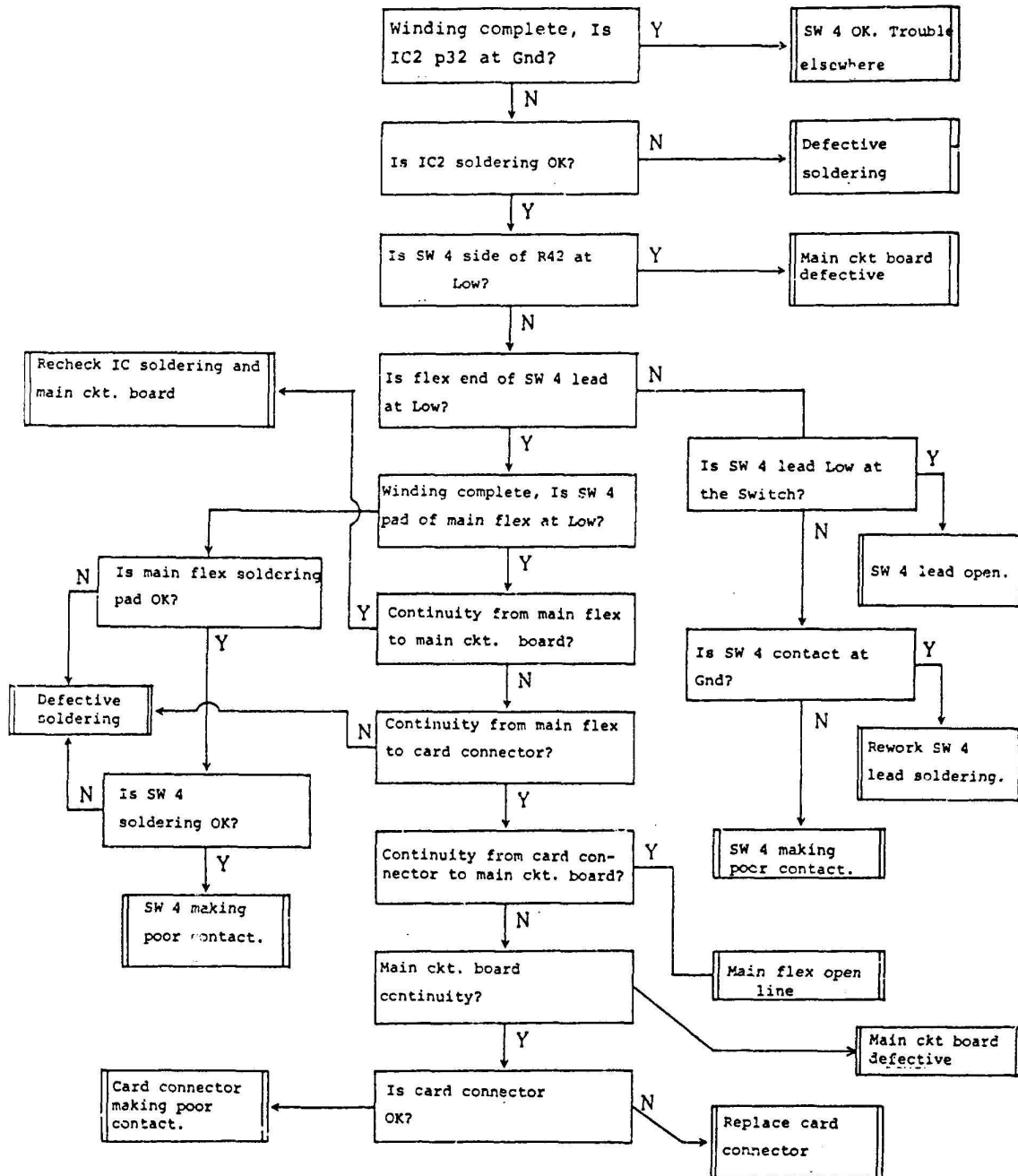


1.6 No KVC Page missing

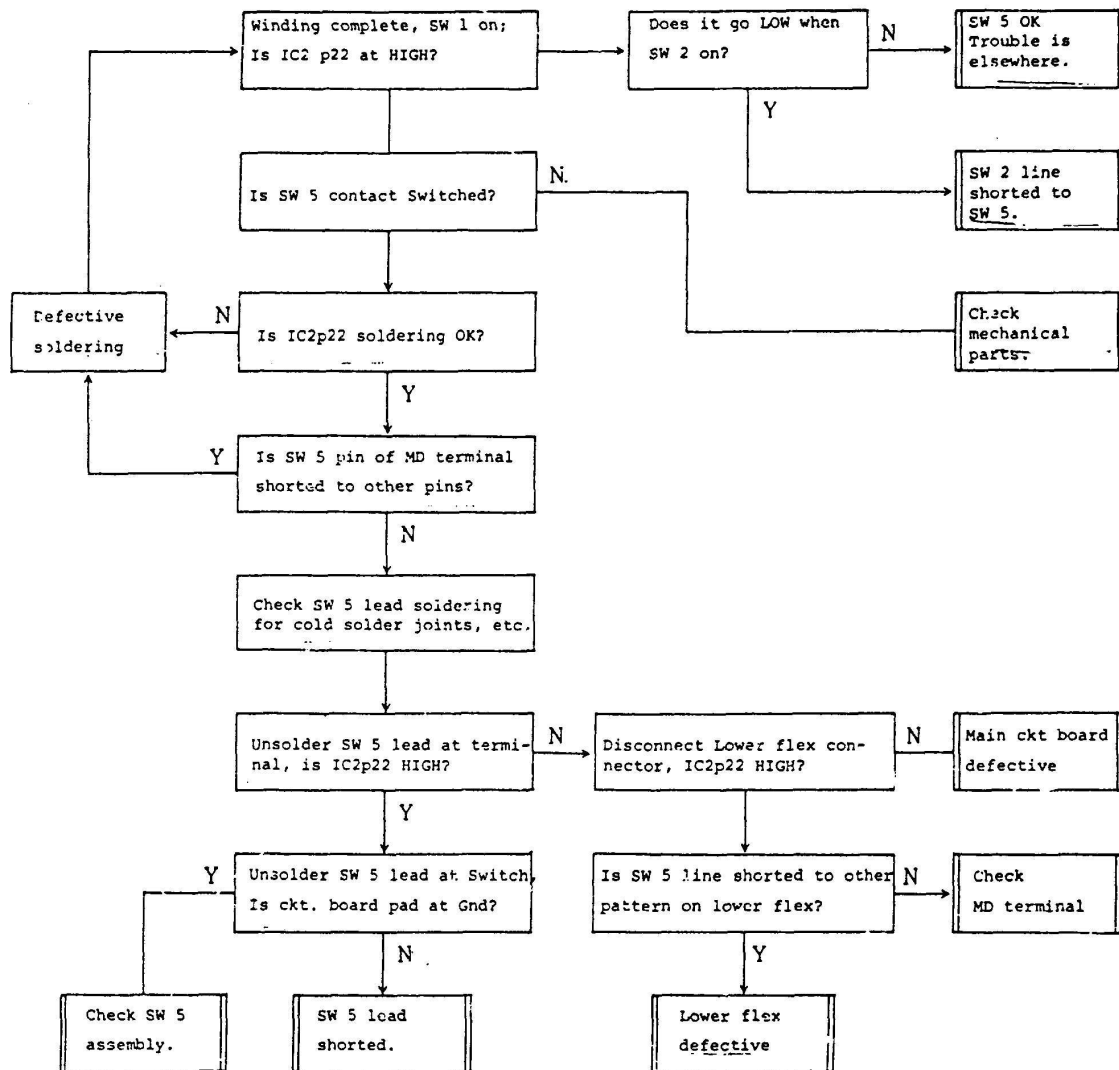
1.7 SW 2 Check



1.8 SW 4 Check

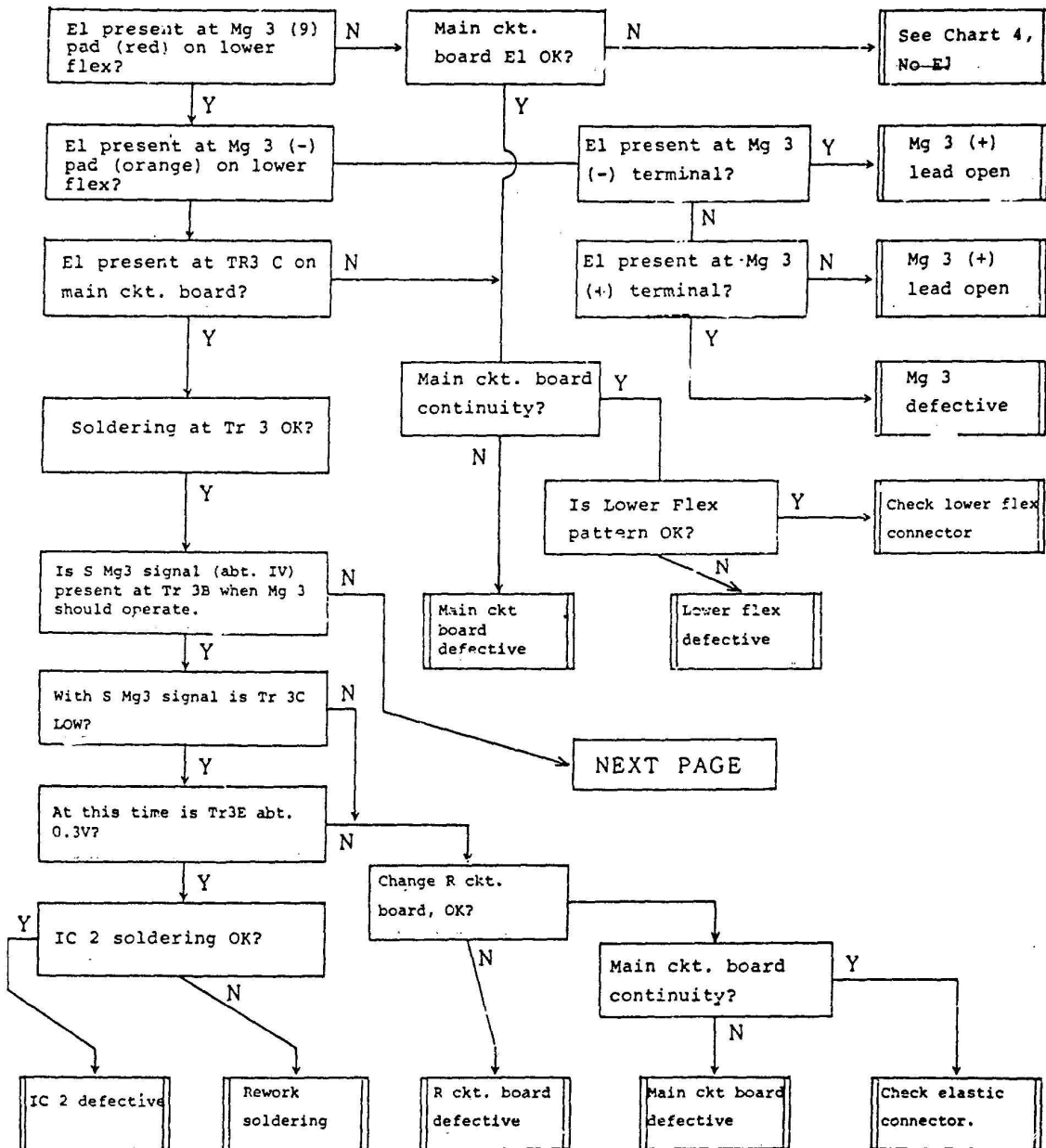


1.9 SW 5 Check

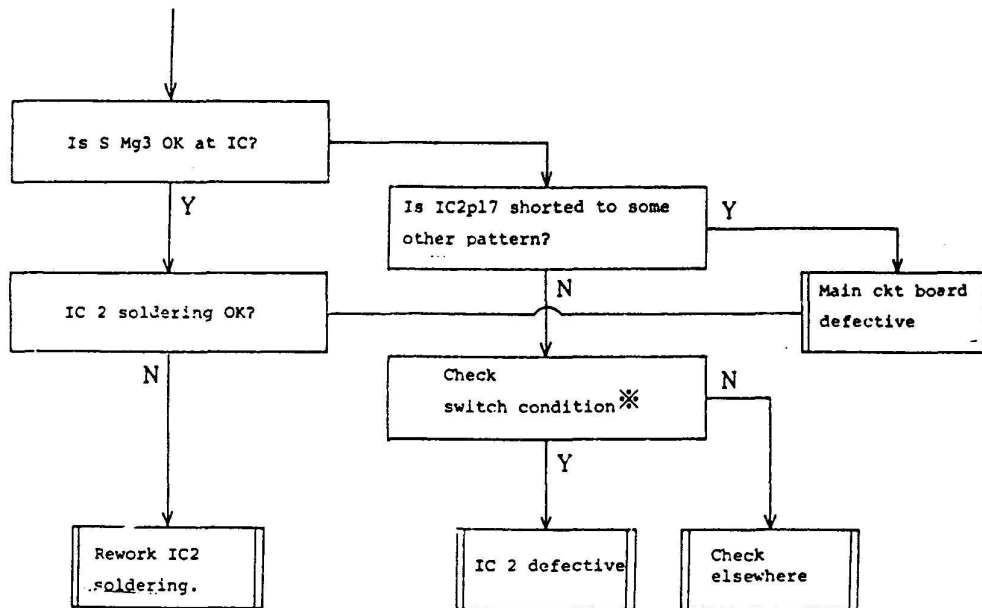


1.10 SW 11 Check Page missing

1.11 Mg 3 Check

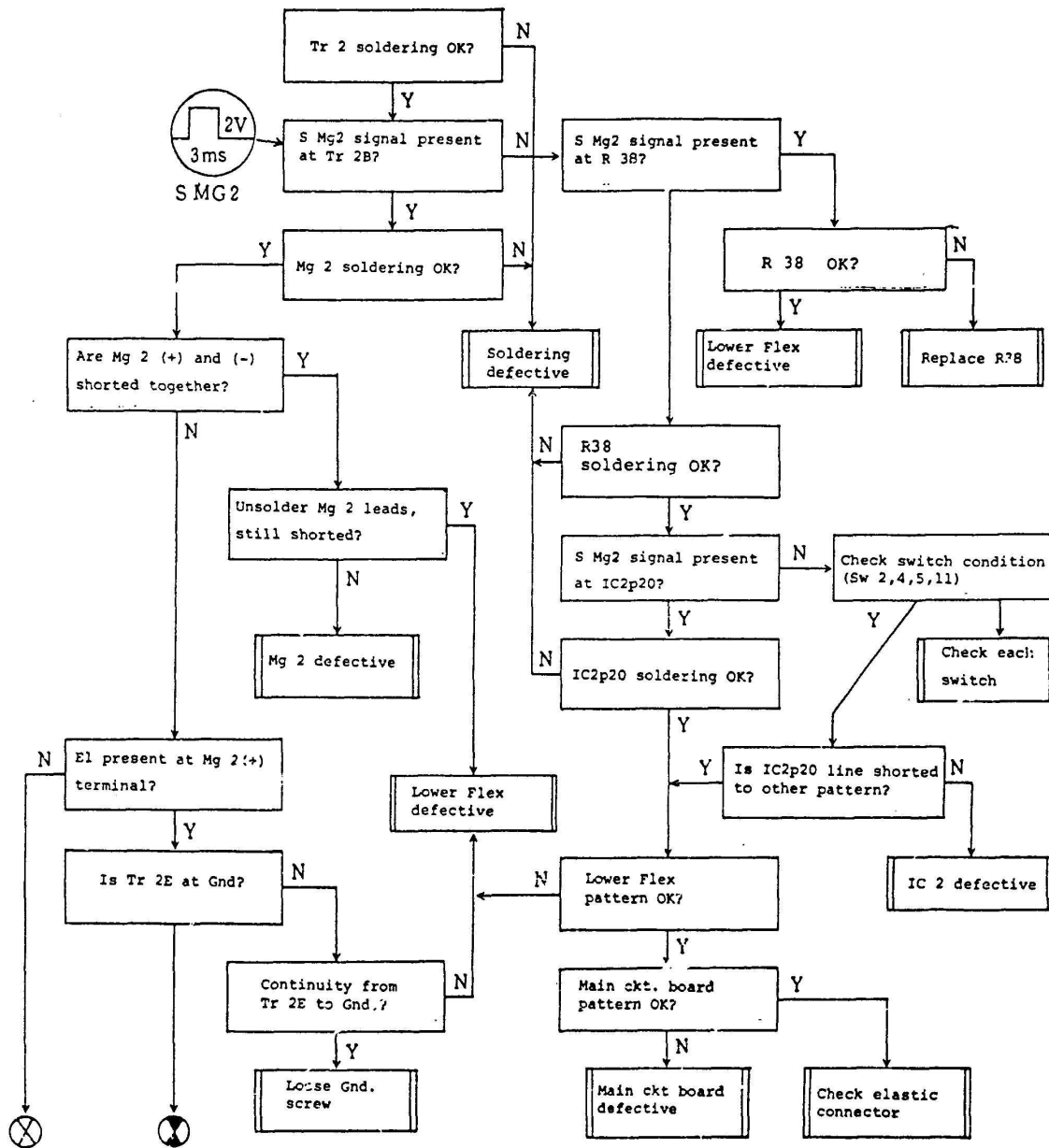


1.11 Mg 3 Check (contd.)

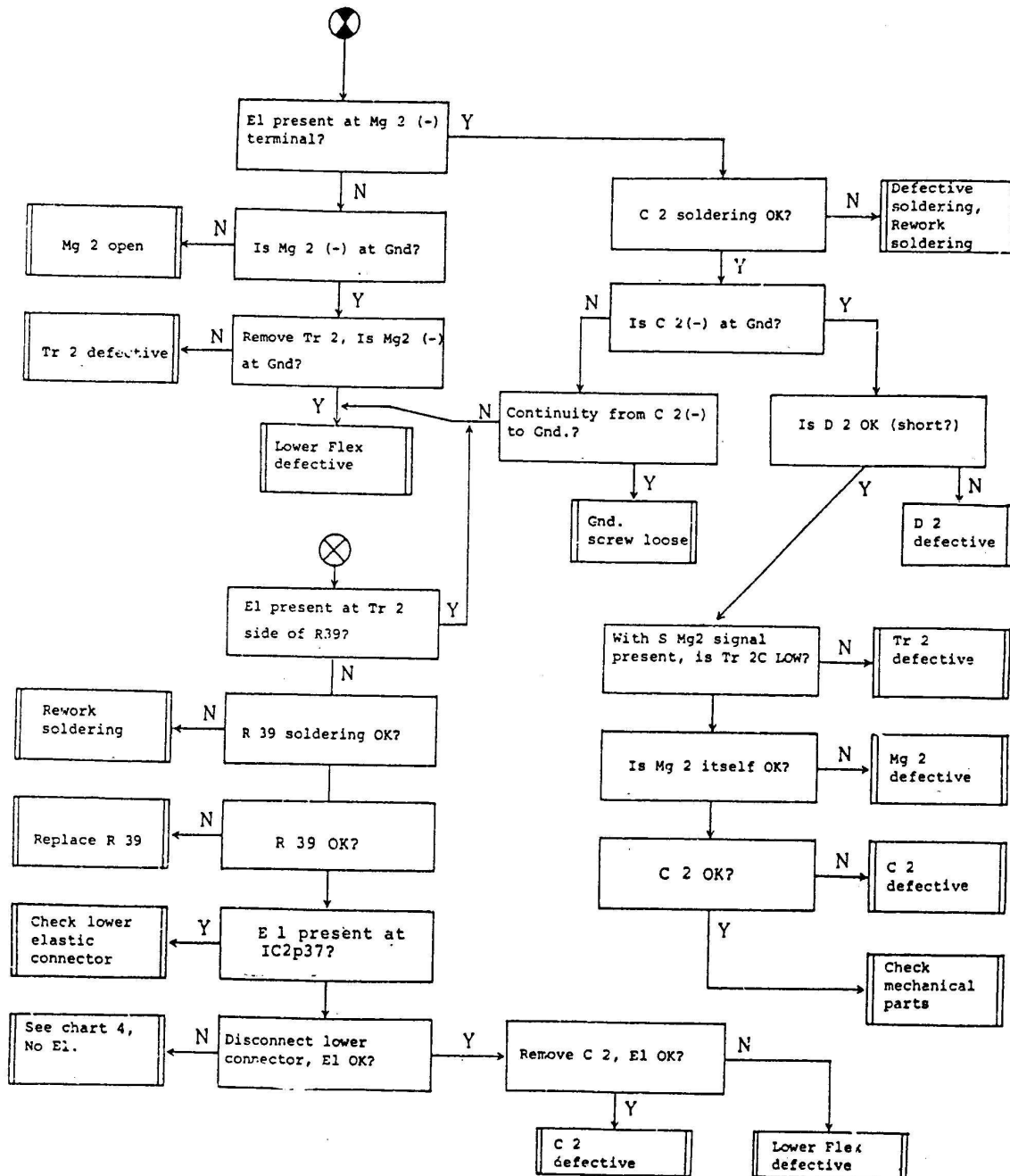


※: Winding Complete at release { SW2, SW4 : GND
SW5, SW11 : OPEN

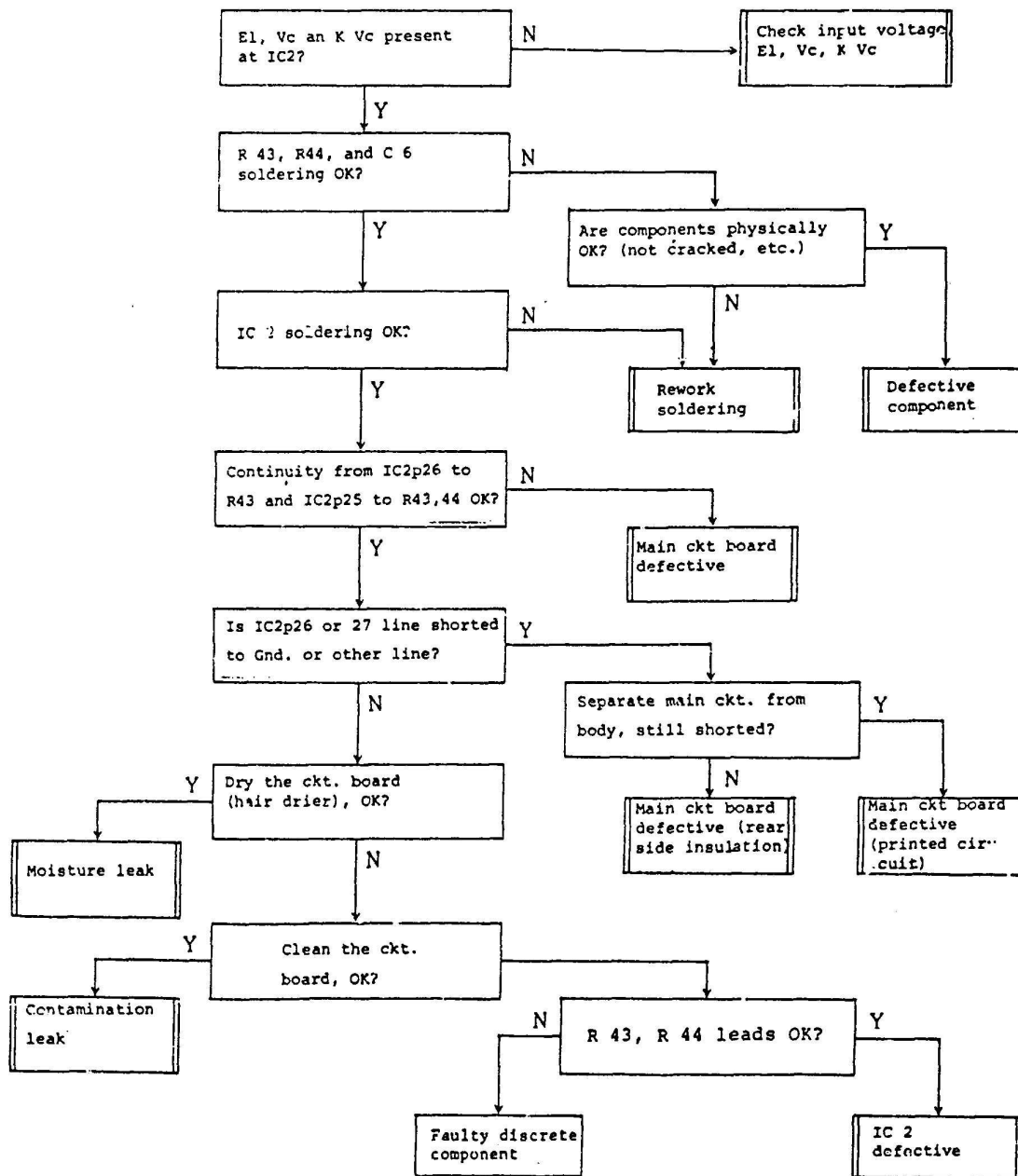
1.12 Mg 2 Check



1.12 Mg 2 Check (contd.)



1.13 No Clock Pulse



22. Parts Lists

CANOW NEW F-1 SERVICE PARTS POLICY

1. THE POLICY OF CAMERA SERVICE, TOKYO, IS TO STOCK ALL PARTS NECESSARY TO EFFECT EFFICIENT ECONOMICAL SERVICE. IT IS NEITHER NECESSARY NOR TECHNICALLY FEASIBLE TO STOCK SEPARATELY EVERY PART THAT GOES INTO EACH PRODUCT.

IN ESTABLISHING THE SPARE PARTS LIST, WE CONSIDER REPAIR DIFFICULTY, LABOR COST, SPECIAL TOOL REQUIREMENTS AND INDIVIDUAL PARTS Vs. ASSEMBLED UNIT COST TO DETERMINE IN WHICH FORM PARTS WILL BE STOCKED.

2. A RECENT REVIEW HAS SHOWN THAT IT IS MORE ECONOMICAL AND ADVANTAGEOUS TO THE CUSTOMER, THE SERVICE FACILITY AND US TO STOCK INDIVIDUAL PARTS UNLESS THERE IS AN OVERRIDING REASON FOR STOCKING PRE-ASSEMBLED UNITS.

THE UNITS LISTED BELOW ARE STOCKED AS UNITS BECAUSE THEY REQUIRE TOOLS OR TECHNIQS NOT NORMALLY AVAILABLE AT FIELD SERVICE LEVEL.

CG1-0131-000 MASTER GEAR UNIT
CG1-0132-000 SPRING DRUM UNIT

CG1-0139-000 ELECTRIC PARTS UNIT
CG1-0141-000 ACTION GRIP UNIT

IN ADDITION TO THE ABOVE, WHICH ARE STOCKED ONLY AS UNITS, SOME INDIVIDUAL PARTS ARE STOCKED FOR THE FOLLOWING UNITS IN ADDITION TO THE UNIT.

CY1-1210-000 SPOOL ASSY
CG1-0133-000 MAGNET-3 UNIT
CG1-C134-000 HAGNET-2 UNIT
CG1-0135-000 BATTERY CHAMBER UNIT

CG1-0137-000 METER/INDICATOR UNIT
CG1-0142-000 WINDING UNIT
CG1-0143-000 SHUTTER SPEED SELECTOR

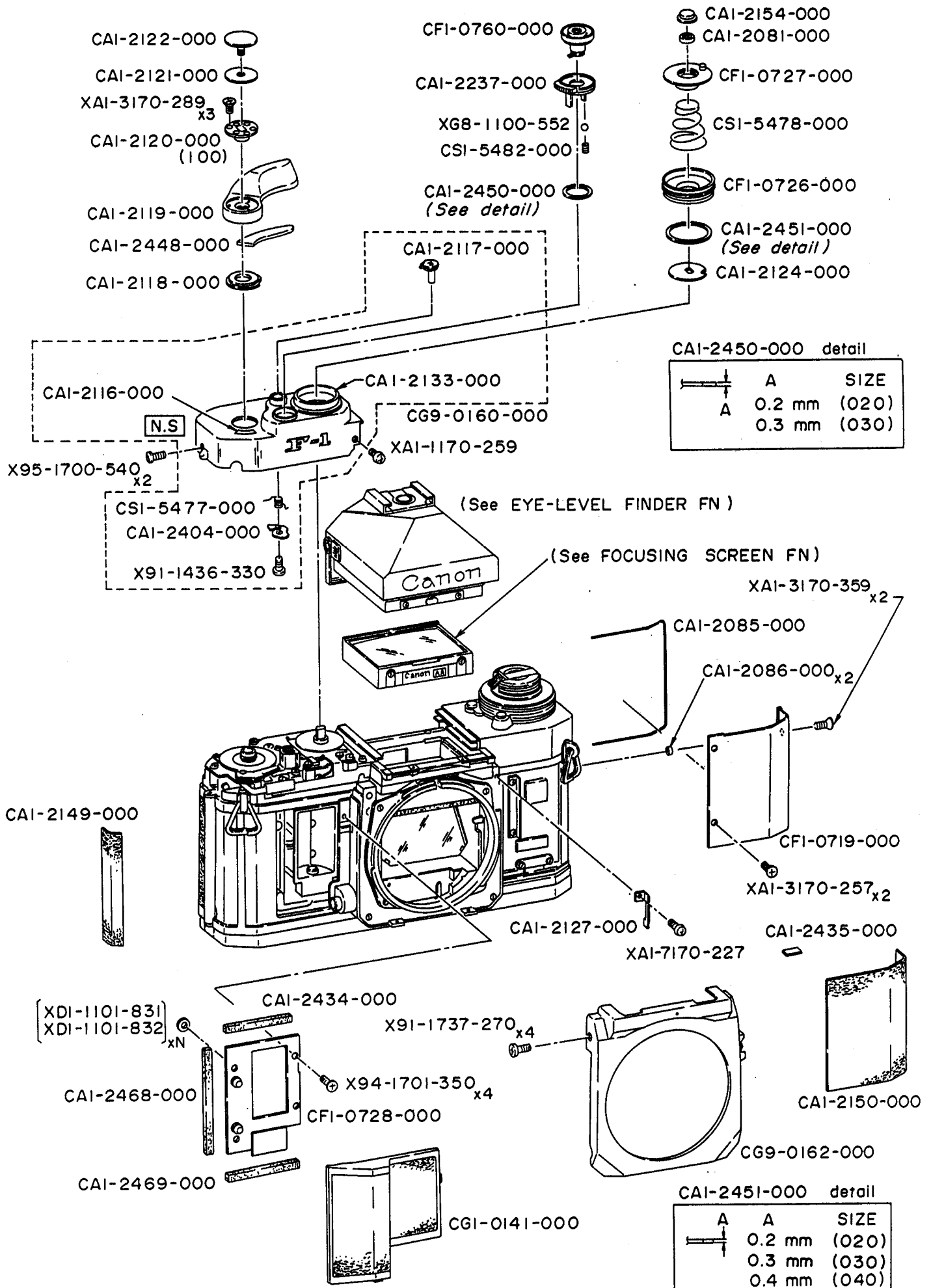
CG9-0156-000 SAFETY LOCK ASSY
CG9-0167-000 REWIND CRANK UNIT
CG9-0171-000 AE RESISTOR UNIT
CG9-0172-000 MAX. APERTURE
CORRECTION UNIT
CG9-0174-000 MIRROR ASSY
CG9-0177-0C0 A MODE ASSY

3. INDIVIDUAL ELECTRICAL COMPONENTS WHICH MAY REQUIRE REPLACEMENT ARE STOCKED. OTHERS ARE LISTED WITH THEIR SPECIFICATIONS ON THE BACK OR THE WIRING DIAGRAM.
4. THE SPARE PARTS LIST IS ADJUSTED PERIODICALLY TO INSURE THE NECESSARY PARTS ARE ALWAYS AVAILABLE, AND UNNECESSARY PARTS ARE REMOVED FROM THE STOCK LIST.
5. ASSEMBLIES SHOWN WITH THE N.S. MARK ARE SHOWN FOR CLARITY ONLY. THEY ARE NOT STOCKED IN THE FORM SHOWN.
6. THE PARTS STOCKED AS SERVICE PARTS ARE NOT ALWAYS EXACTLY THE SAME PART USED ON THE ASSEMBLY LINE, BUT THEY ARE PROPERLY INTERCHANGEABLE(SCREWS, WASHERS, LEAD WIRE, ETC.)
7. IN THE EXPLODED VIEW, THERE ARE CERTAIN SCREWS WITH A "7" AS THE FINAL DIGIT OF THEIR PART NUMBER. THESE SCREWS PROVIDE ELECTRICAL GROUPS. SCREWS WITH A "9" FINAL DIGIT, WHICH CAN USUALLY BE SUBSTITUTED FOR "7" SCREWS, CANNOT BE USED IN THESE CASES.

CONTENTS

	PAGE
EXTERNAL PARTS	1
REWIND CRANK & BACK COVER	2
BACK COVER	3
METER/INDICATOR & REWIND	4
SHUTTER SPEED SELECTOR	5
FRONT PANEL UNIT & MAIN P.C.B	6
MIRROR ASSY & LIGHT SHIELDS	7
AE RESISTOR MAX. APERTURE CORRECTION UNITS ...	6
INTERLOCKING LEVER & A MODE SWITCH ASSY	9
WINDING UNIT & PHOTORECEPTOR ASSY	10
BATTERY CHAMBER & MAGNET-2 UNIT	11
SHUTTER MECHANISM	12
WINDING SHAFT & SPOOL	13
LOWER BODY PARTS	14
UPPER BODY PARTS	15
SPROCKET	16
ELECTRIC PARTS UNIT	17
WIRING DIAGRAM	18
ELECTRIC PARTS LIST	19
ELECTRIC PARTS LIST	20
INDEX OF PART NUMBERS	21

CANON NEW F-1



PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
CA1-2081-000	D	1	NUT
CA1-2085-000	D	1	RING, O
CA1-2086-000	D	2	COLLAR
CA1-2116-000	C	1	WINDOW, FILM COUNTER
CA1-2117-000	C	1	BUTTON, REWIND
CA1-2118-000	D	1	SPACER
CA1-2119-000	C	1	LEVER, WINDING
CA1-2120-000(100)	E	1	GUIDE, WINDING LEVER
CA1-2121-000	C	1	SPACER
CA1-2122-000	A	1	SCREW, FLAT FACE
CA1-2123-000	D	1	SEAL, MOISTURE
CA1-2124-000	E	1	PLATE, COUPLING
CA1-2127-000	D	1	CONTACT
CA1-2149-000	C	1	RUBBER, GRIP
CA1-2150-000	C	1	RUBBER, GRIP
CA1-2154-000	A	1	CAP
CA1-2237-000	B	1	LOCK, RELEASE
CA1-2404-000	E	1	LEVER, REWIND BUTTON LOCK
CA1-2434-000	C	1	SHIELD, LIGHT
CA1-2435-000	D	1	PLATE, LIGHT SHIELD
CA1-2448-000	C	1	PLATE, WINDING LEVER
CA1-2450-000(XXX)	D	1	WASHER
CA1-2451-000(XXX)	D	1	WASHER
CA1-2468-000	C	1	SHIELD, LIGHT
CA1-2469-000	C	1	SHIELD, LIGHT
CF1-0719-000	D	1	BEEPER ASS'Y
CF1-0726-000	D	1	RING, SHUTTER DIAL
CF1-0727-000	C	1	DIAL, SHUTTER SPEED
CF1-0728-000	D	1	COVER, BATTERY COMPARTMENT
CF1-0760-000	B	1	BUTTON, SHUTTER
CG1-0141-000	B	1	GRIP ASS'Y, ACTION
CG9-0160-000	B	1	COVER, TOP(RIGHT)
CG9-0162-000	B	1	COVER ASS'Y, FRONT
CS1-5477-000	E	1	SPRING
CS1-5478-000	D	1	SPRING, COIL
CS1-5482-000	E	1	SPRING, COIL
X91-1436-330		1	SCREW
X91-1737-270		4	SCREW
X94-1701-350		4	SCREW
X95-1700-540		2	SCREW
XA1-1170-259		1	SCREW
XA1-3170-257		2	SCREW
XA1-3170-289		3	SCREW
XA1-3170-359		2	SCREW
XA1-7170-227		1	SCREW
XD1-1101-831		1	WASHER
XD1-1101-832		1	WASHER
XG8-1100-552		1	BALL

CANON NEW F-1

CAI-2102-000 detail

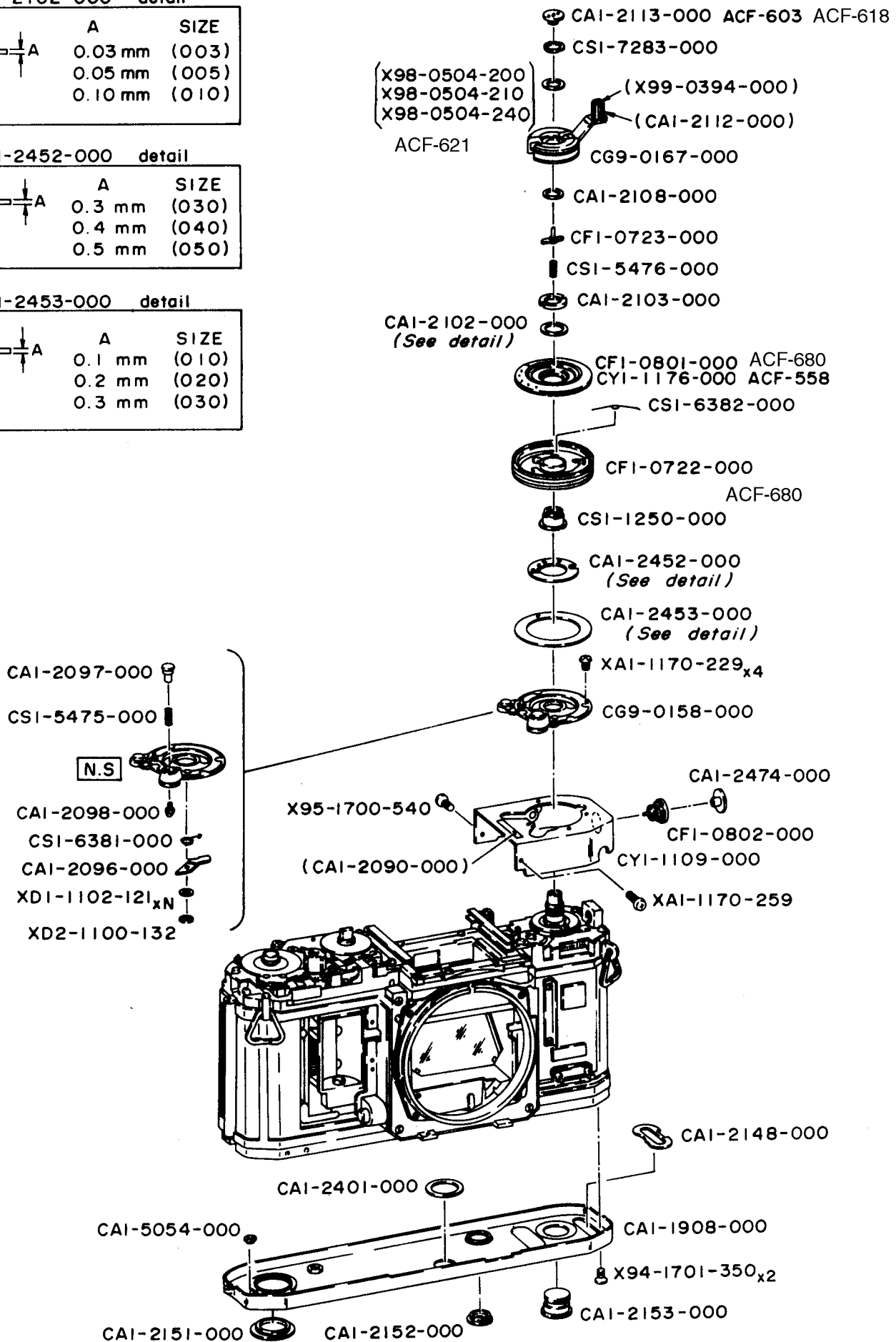
	A	SIZE
	0.03 mm	(003)
	0.05 mm	(005)
	0.10 mm	(010)

CAI-2452-000 detail

	A	SIZE
	0.3 mm	(030)
	0.4 mm	(040)
	0.5 mm	(050)

CAI-2453-000 detail

	A	SIZE
	0.1 mm	(010)
	0.2 mm	(020)
	0.3 mm	(030)

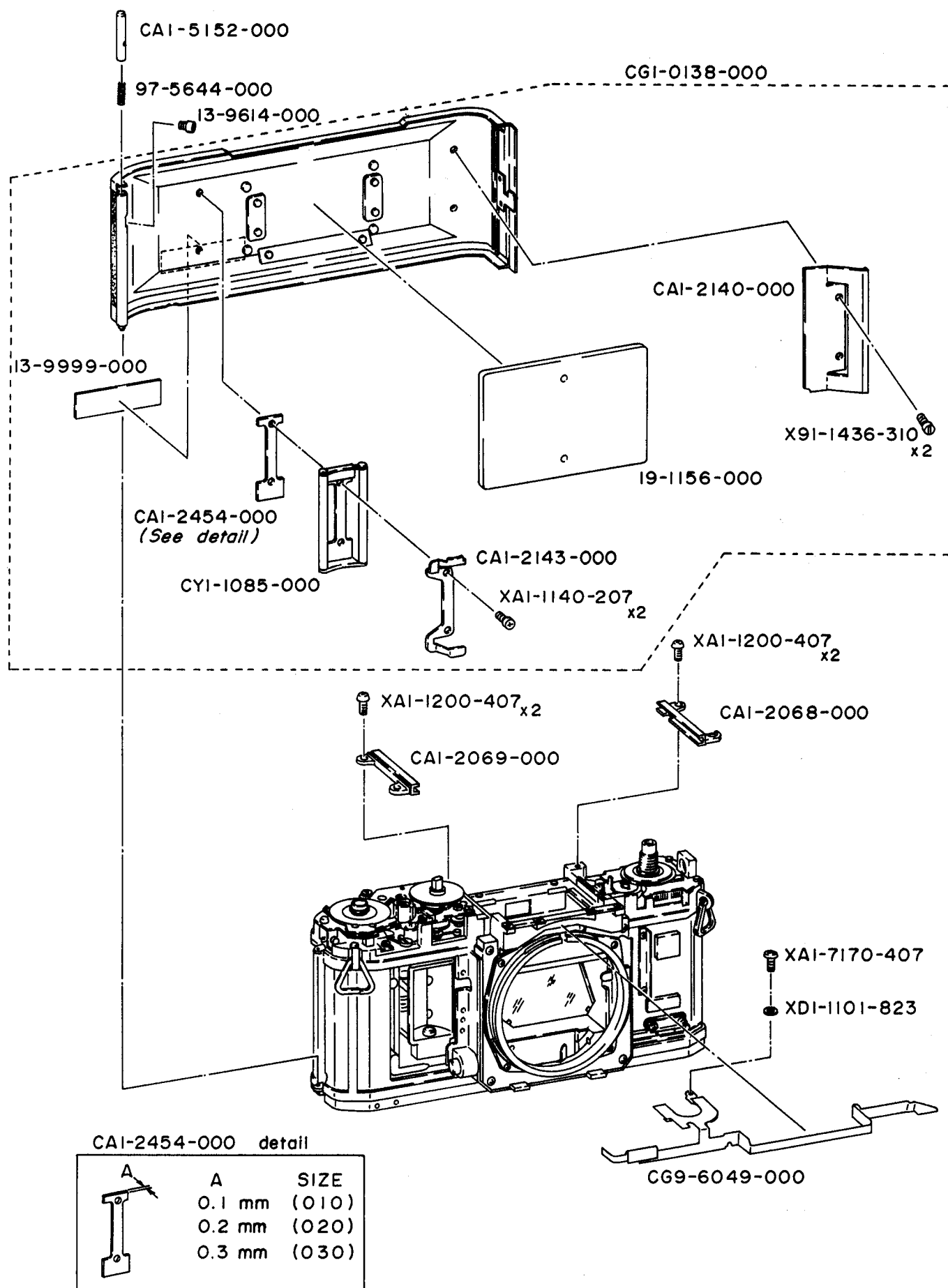


PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
CA1-1908-000	B	1	COVER, BASE
CA1-2090-000	D	1	WINDOW
CA1-2096-000	E	1	LEVER, LOCK
CA1-2097-000	C	1	LATCH, SAFETY
CA1-2098-000	E	1	CONE
CA1-2102-000(XXX)	D	1	WASHER
CA1-2103-000	D	1	NUT
CA1-2108-000	C	1	WASHER
CA1-2112-000	B	1	KNOB, REWIND CRANK
CA1-2113-000	B	1	SCREW
CA1-2148-000	D	1	SPACER
CA1-2151-000	A	1	CAP, M.D.COUPLER
CA1-2152-000	A	1	CAP, AE COUPLER
CA1-2153-000	B	1	CAP, CARTRIDGE COMPARTMENT
CA1-2401-000	C	1	SPACER
CA1-2452-000(XXX)	D	1	SPACER
CA1-2453-000(XXX)	D	1	WASHER
CA1-2474-000	A	1	CAP, P.C.TERMINAL
CA1-5054-000	C	1	COLLAR
CF1-0722-000	C	1	DIAL, ASA
CF1-0732-000	D	1	CLUTCH, REWIND
CF1-0801-000	C	1	DIAL ASS'Y, ASA(WHITE)
CF1-0802-000	C	1	TERMINAL, P.C.
CG9-0158-000	C	1	LOCK ASS'Y, SAFETY
CG9-0167-000	C	1	CRANK UNIT, REWIND
CS1-1250-000	E	1	BUSHING
CS1-5475-000	E	1	SPRING, COIL
CS1-5476-000	E	1	SPRING, COIL
CS1-6381-000	E	1	SPRING
CS1-6382-000	C	1	SPRING
CS1-7283-000	C	1	SPRING, FRICTION
CY1-1109-000	B	1	COVER, TOP(LEFT)
CY1-1176-000	C	1	DIAL ASS'Y, ASA(GREEN)
XA1-1170-229		4	SCREW
XA1-1170-259		1	SCREW
XD1-1102-121		1	RING, E
XD2-1100-132		1	SCREW
X94-1701-350		2	SCREW
X95-1700-540		1	WASHER
X98-0504-200		1	WASHER
X98-0504-210		1	SCREW
X99-0394-000		1	SCREW
X98-0504-240		1	WASHER

CANON NEW F-1

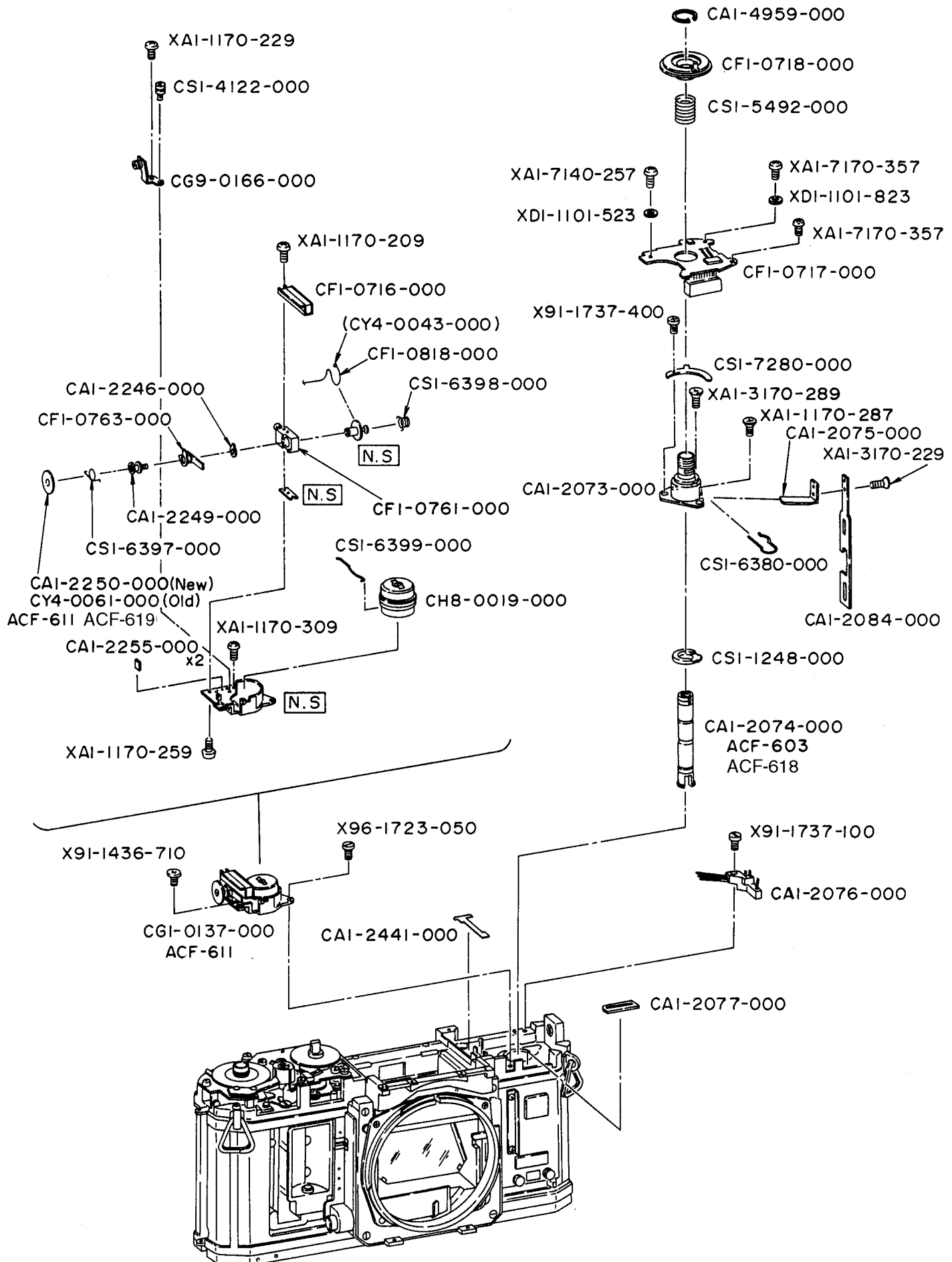


PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
13-9614-000	E	1	STOPPER
13-9999-000	E	1	PLATE, NAME
19-1156-000	B	1	PLATE, PRESSURE
97-5644-000	E	1	SPRING, COIL
CA1-2068-000	C	1	RAIL(RIGHT)
CA1-2069-000	C	1	RAIL(LEFT)
CA1-2140-000	D	1	HOLDER, CARTRIDGE
CA1-2143-000	D	1	PRESSURE, FILM
CA1-2454-000(XXX)	E	1	WASHER
CA1-5152-000	D	1	SHAFT, HINGE
CG1-0138-000	D	1	COVER UNIT, BACK
CG9-6049-000	C	1	BOARD, PRINTED CIRCUIT
CY1-1085-000	D	1	ROLLER ASS'Y
X91-1436-310		2	SCREW
XA1-1140-207		2	SCREW
XA1-1200-407		4	SCREW
XA1-7170-407		1	SCREW
XD1-1101-823		1	WASHER

CANON NEW F-1

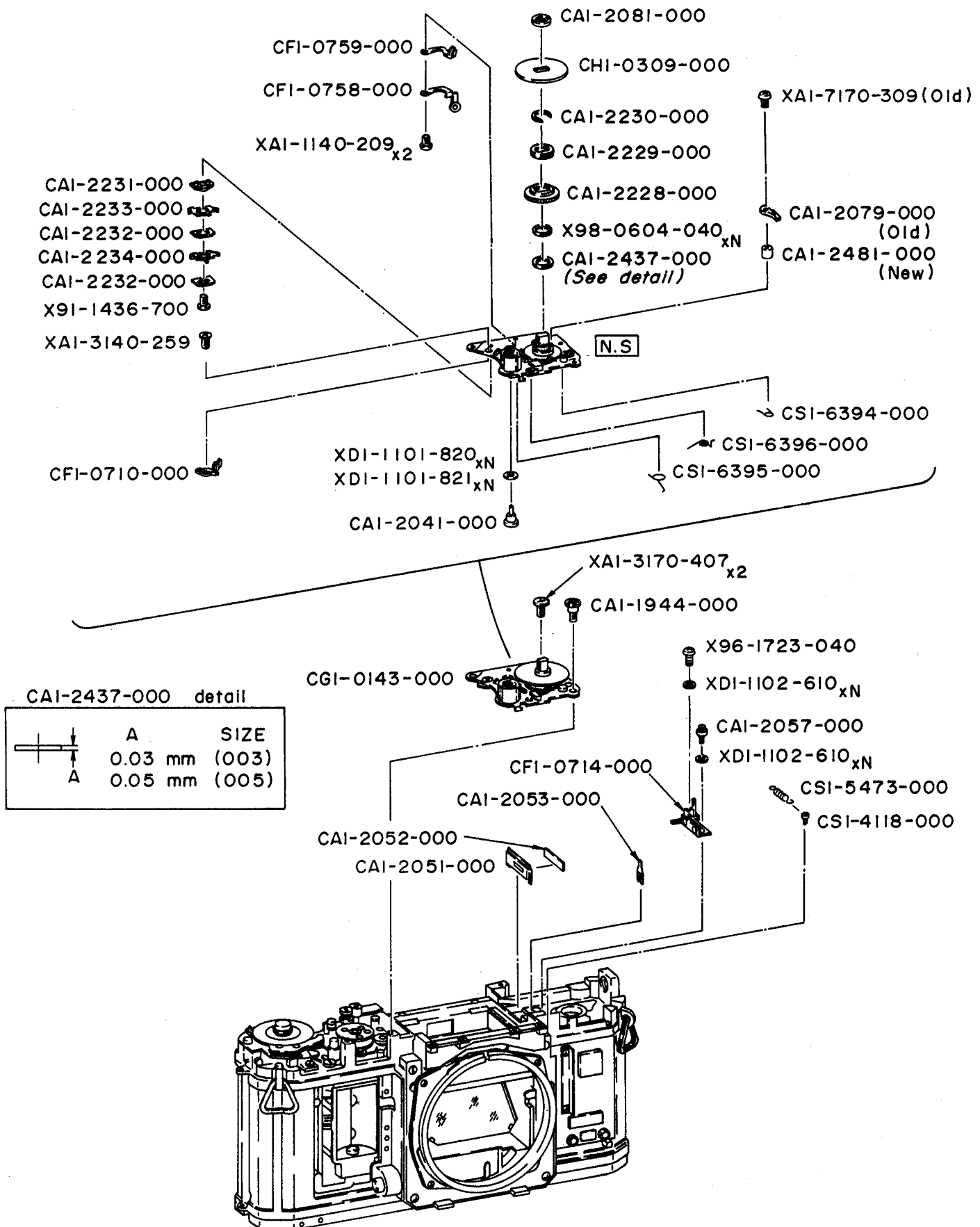


PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
CA1-2073-000	E	1	HOLDER, REWIND SHAFT
CA1-2074-000	C	1	FORK, REWIND
CA1-2075-000	E	1	OPENER, BACK COVER
CA1-2076-000	D	1	CONTACT
CA1-2077-000	D	1	SEAL, CONNECTOR
CA1-2084-000	E	1	HOOK
CA1-2246-000	E	1	CLAW, FINDER INFORM.BRIND
CA1-2249-000	E	1	BASE, SHUTTER SPEED INDICATION
CA1-2250-000	D	1	INDICATOR, SHUTTER SPEED
CA1-2255-000	E	2	STOPPER, METER NEEDLE
CA1-2441-000	D	1	SHIELD, LIGHT
CA1-4959-000	B	1	RING, C
CF1-0717-000	C	1	PCB ASS'Y
CF1-0718-000	C	1	RESISTOR, ASA
CF1-0761-000	D	1	PULLEY, 3RD
CF1-0763-000	E	1	BRIND, FINDER INFORMATION
CF1-0818-000	C	1	STRING
CG1-0137-000	D	1	INDICATOR UNIT, METER
CG9-0166-000	D	1	PULLEY, 4TH
CH8-0019-000	D	1	METER
CS1-1248-000	E	1	LIFTER, HOOK
CS1-4122-000	D	1	STUD
CS1-5492-000	E	1	SPRING, COIL
CS1-6380-000	E	1	SPRING
CS1-6397-000	D	1	SPRING
CS1-6398-000	D	1	SPRING
CS1-6399-000	E	1	SPRING
CS1-7280-000	D	1	SPRING, PLATE
CY1-1148-000	D	1	PRISM, FINDER INFORMATION
CY4-0043-000	E	1	THREAD
CY4-0061-000	D	1	INDICATOR, SHUTTER SPEED
X91-1436-710		1	SCREW
X91-1723-050		1	SCREW
X91-1737-100		1	SCREW
X91-1737-400		1	SCREW
XA1-1100-229		1	SCREW
XA1-1170-209		1	SCREW
XA1-1170-259		1	SCREW
XA1-1170-287		1	SCREW
XA1-1170-309		1	SCREW
XA1-3170-229		1	SCREW
XA1-3170-289		1	SCREW
XA1-7140-257		1	SCREW
XA1-7170-357		1	SCREW
XD1-1101-523		1	WASHER
XD1-1101-823		1	WASHER

CANON NEW F-1

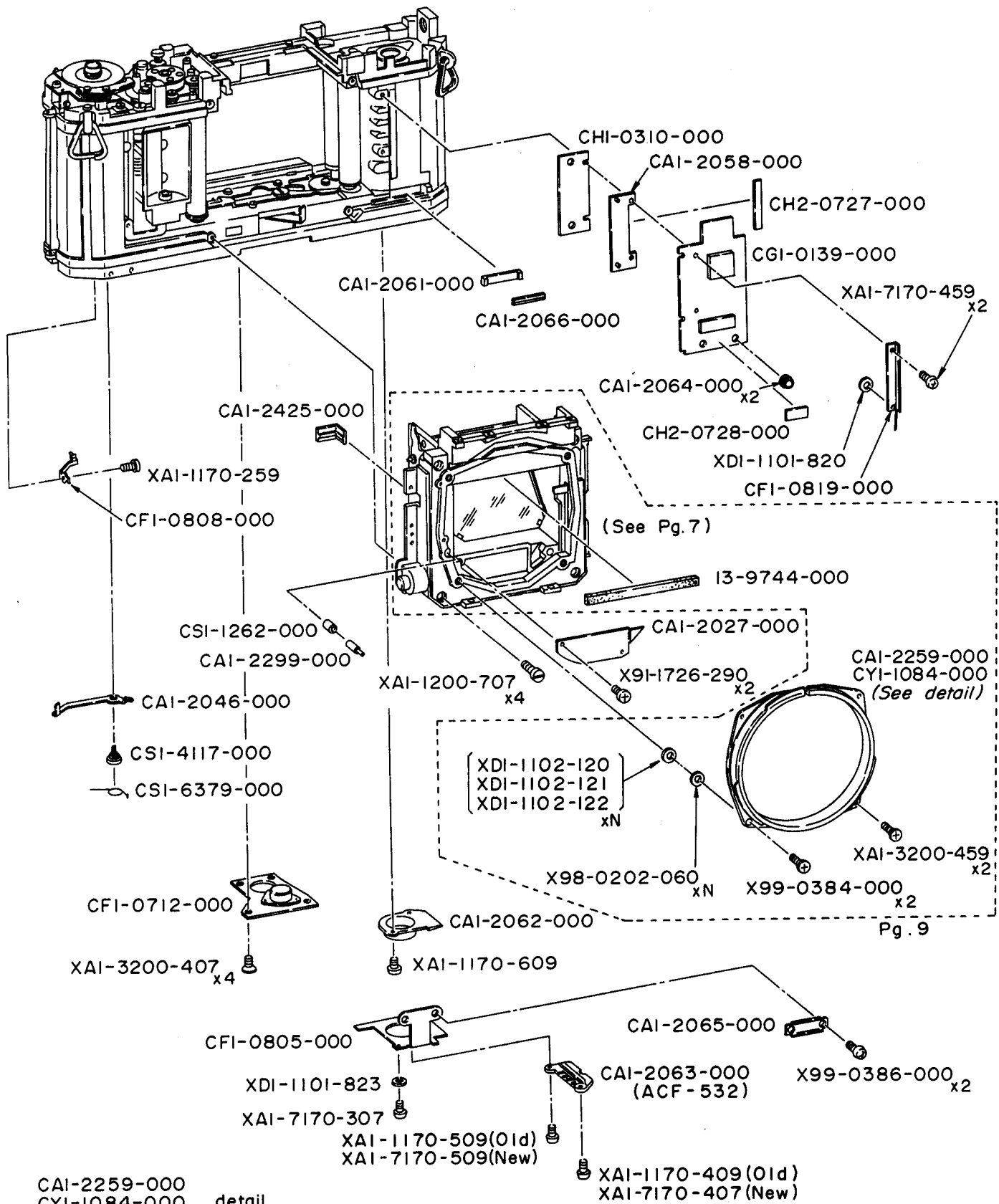


PARTS LIST

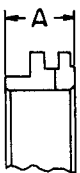
REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
CA1-1944-000	D	1	SCREW, SLOTTED, SHOULDER
CA1-2041-000	E	1	ROD, RELEASE
CA1-2051-000	D	1	FRAME, INFORMATION INDICATOR
CA1-2052-000	C	1	SHEET, DIAPHRAGM INDEX
CA1-2053-000	B	1	NEEDLE, FOLLOWING
CA1-2057-000	E	1	GUIDE, AVO INDICATOR
CA1-2079-000	D	1	TERMINAL, SW4
CA1-2081-000	D	1	NUT
CA1-2228-000	E	1	CAM, CLICK
CA1-2229-000	E	1	PULLEY
CA1-2230-000	C	1	RING, C
CA1-2231-000	E	1	BASE, CONTACT
CA1-2232-000	D	2	INSULATOR
CA1-2233-000	C	1	CONTACT
CA1-2234-000	C	1	CONTACT
CA1-2437-000(XXX)	D	1	WASHER
CA1-2481-000	D	1	COLLAR
CF1-0710-000	E	1	LEVER, REWIND BUTTON
CF1-0714-000	D	1	INDICATOR, AVO
CF1-0758-000	D	1	PULLEY, 2ND
CF1-0759-000	D	1	PULLEY, 1ST
CG1-0143-000	D	1	SELECTOR UNIT, SHUTTER SPEED
CH1-0309-000	C	1	BOARD, PRINTED RESISTOR
CS1-4118-000	E	1	SCREW
CS1-5473-000	D	1	SPRING, COIL
CS1-6394-000	D	1	SPRING
CS1-6395-000	D	1	SPRING
CS1-6396-000	D	1	SPRING
X91-1436-700		1	SCREW
X96-1723-040		1	SCREW
X98-0604-040			WASHER
XA1-1140-209		2	SCREW
XA1-3140-259		1	SCREW
XA1-3170-407		2	SCREW
XA1-7170-309		1	SCREW
XD1-1101-820			WASHER
XD1-1101-821			WASHER
XD1-1102-610			WASHER

CANON NEW F-1



CAI-2259-000
CYI-1084-000 detail



	A
CAI-2259-000	5.5 mm (ST'D)
CYI-1084-000	5.3 mm (SERVICE)

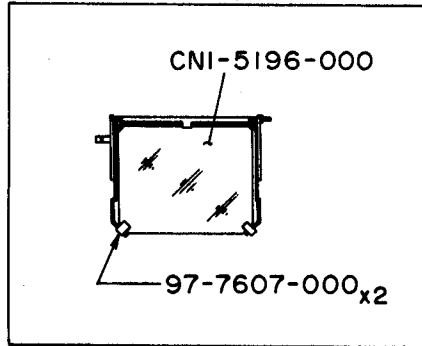
PARTS LIST

REF.NO.C12-0751

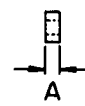
NEW PARTS NO.	CLASS	QTY	DESCRIPTION
13-9744-000	D	1	CUSHION
CA1-2027-000	C	1	PLATE, ACCESSORY
CA1-2046-000	E	1	LEVER, M.E. SET
CA1-2058-000	E	1	PLATE, POSITION SET
CA1-2061-000	E	1	CUSHION
CA1-2062-000	E	1	HOLDER, REWIND SHAFT
CA1-2063-000	C	1	TERMINAL, M.D.
CA1-2064-000	E	2	COLLAR
CA1-2065-000	E	1	HOLDER
CA1-2066-000	E	1	CUSHION
CA1-2259-000	C	1	MOUNT, BODY
CA1-2299-000	D	1	PIN, AE SIGNAL
CA1-2425-000	E	1	SHIELD, LIGHT
CF1-0712-000	D	1	SOCKET, TRIPOD
CF1-0805-000	C	1	PCB ASS'Y
CF1-0808-000	E	1	PIN, RELEASE
CF1-0819-000	E	1	HOLDER, CIRCUIT BOARD
CG1-0139-000	C	1	PCB ASS'Y
CH1-0310-000	C	1	BOARD, PRINTED RESISTOR
CH2-0727-000	C	1	CONNECTOR
CH2-0728-000	C	1	CONNECTOR
CS1-1262-000	D	1	GUIDE, AE SIGNAL PIN
CS1-4117-000	E	1	SCREW
CS1-6379-000	E	1	SPRING
CY1-1084-000	C	1	MOUNT, BODY
X91-1726-290		2	SCREW
X98-0202-060			WASHER
X99-0384-000		2	SCREW
X99-0386-000		2	SCREW
XA1-1170-259		1	SCREW
XA1-1170-409		1	SCREW
XA1-1170-509		1	SCREW
XA1-1170-609		1	SCREW
XA1-1200-707		4	SCREW
XA1-3200-407		4	SCREW
XA1-3200-459		2	SCREW
XA1-7170-307		1	SCREW
XA1-7170-407		1	SCREW
XA1-7170-459		2	SCREW
XA1-7170-509		1	SCREW
XD1-1101-820		1	WASHER
XD1-1101-823		1	WASHER
XD1-1102-120			WASHER
XD1-1102-121			WASHER
XD1-1102-122			WASHER

CANON NEW F-1

CG9-0174-000



CAI-2270-000 detail

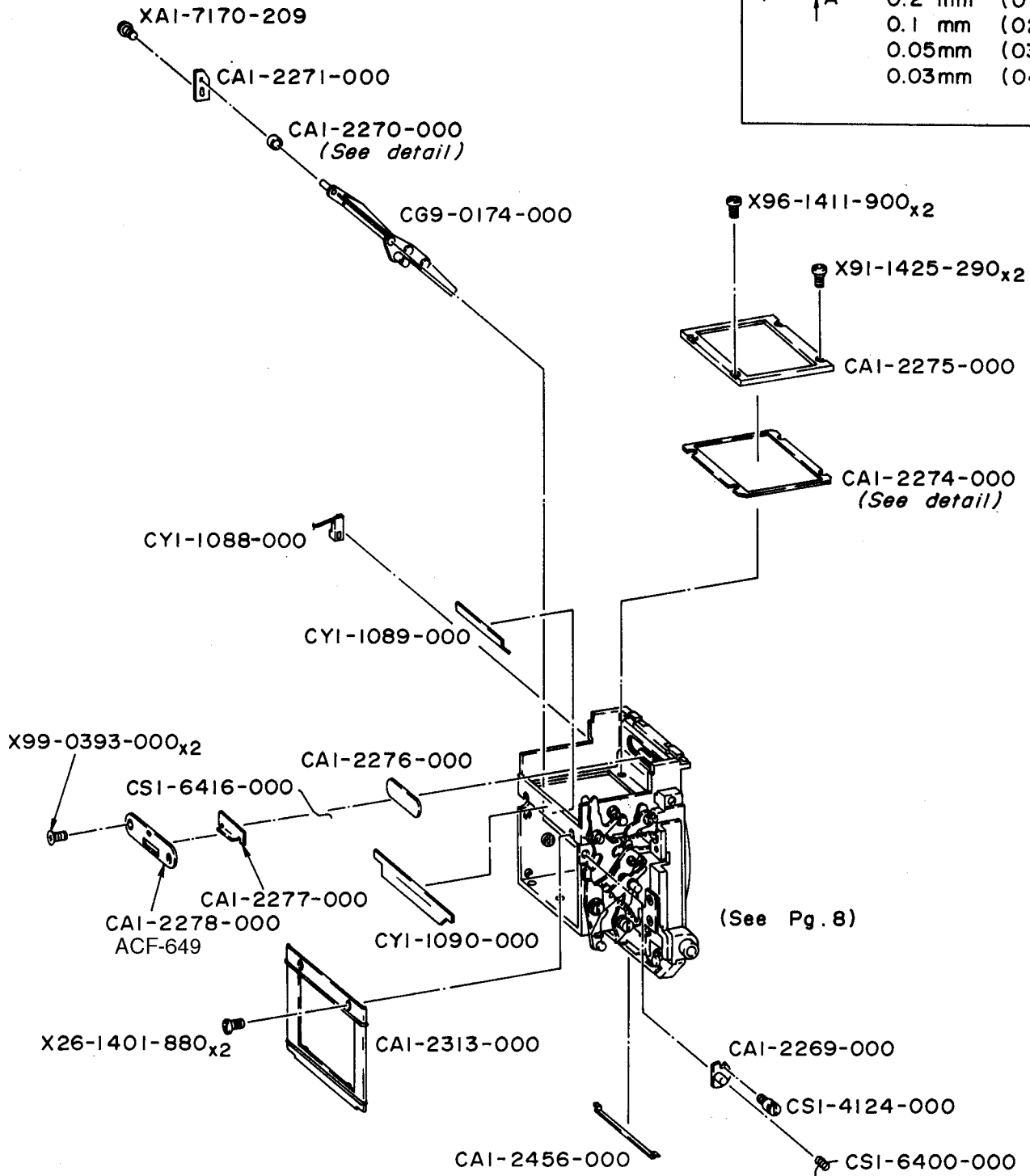


A	SIZE
1.1 mm	(010)
1.2 mm	(020)
1.3 mm	(030)

CAI-2274-000 detail



A	SIZE
0.2 mm	(010)
0.1 mm	(020)
0.05mm	(030)
0.03mm	(040)

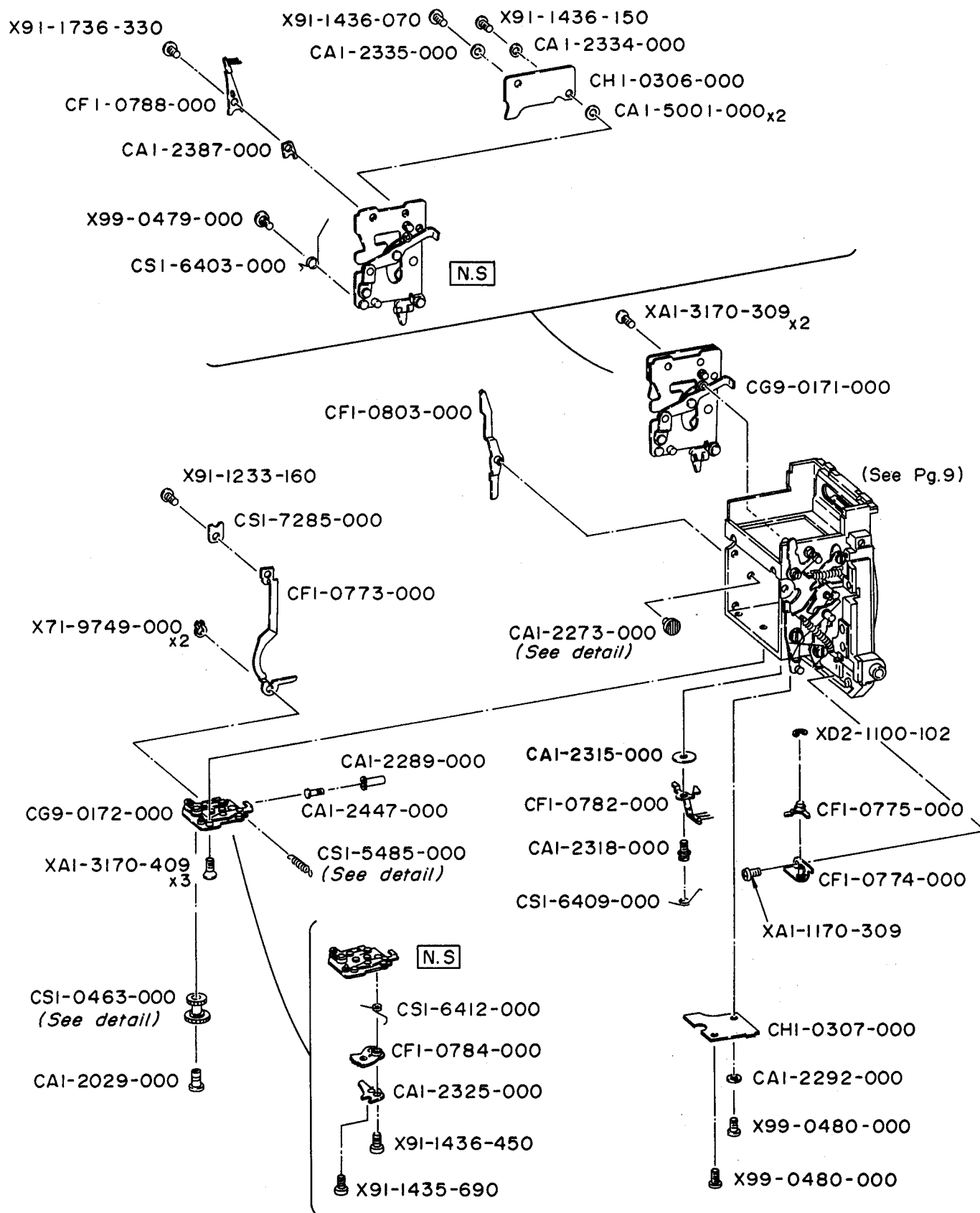


PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
97-7607-000	B	2	HOLDER, MIRROR
CA1-2269-000	E	1	SHAFT, MIRROR
CA1-2270-000(XXX)	E	1	COLLAR
CA1-2271-000	E	1	HOLDER, MIRROR HINGE
CA1-2274-000(XXX)	C	1	WASHER, ADJUSTING
CA1-2275-000	D	1	MASK
CA1-2276-000	E	1	PLATE, PROTECTION
CA1-2277-000	D	1	HOLDER, FOCUSING SCREEN UNIT
CA1-2278-000	D	1	PLATE, ACCESSORY
CA1-2313-000	E	1	SHIELD, LIGHT
CA1-2456-000	D	1	CUSHION
CG9-0174-000	C	1	MIRROR ASS'Y(W/FRAME)
CN1-5196-000	C	1	MIRROR
CS1-4124-000	E	1	SCREW, SHAFT
CS1-6400-000	D	1	SPRING
CS1-6416-000	E	1	SPRING
CY1-1088-000	D	1	SW-8 ASS'Y
CY1-1089-000	D	1	SHIELD, LIGHT
CY1-1090-000	E	1	SHIELD, LIGHT
X26-1401-880		2	SCREW
X91-1425-290		2	SCREW
X96-1411-900		2	SCREW
X99-0393-000		2	SCREW
XA1-7170-209		1	SCREW

CANON NEW F-1



CAI-2273-000 detail

A	SIZE
φ4.6 mm	(010)
φ5.0 mm	(020)
φ5.4 mm	(030)
φ6.0 mm	(040)

CSI-0463-000 detail

A	SIZE
φ9.00 mm	(010)
φ8.82 mm	(030)

CSI-5485-000 detail

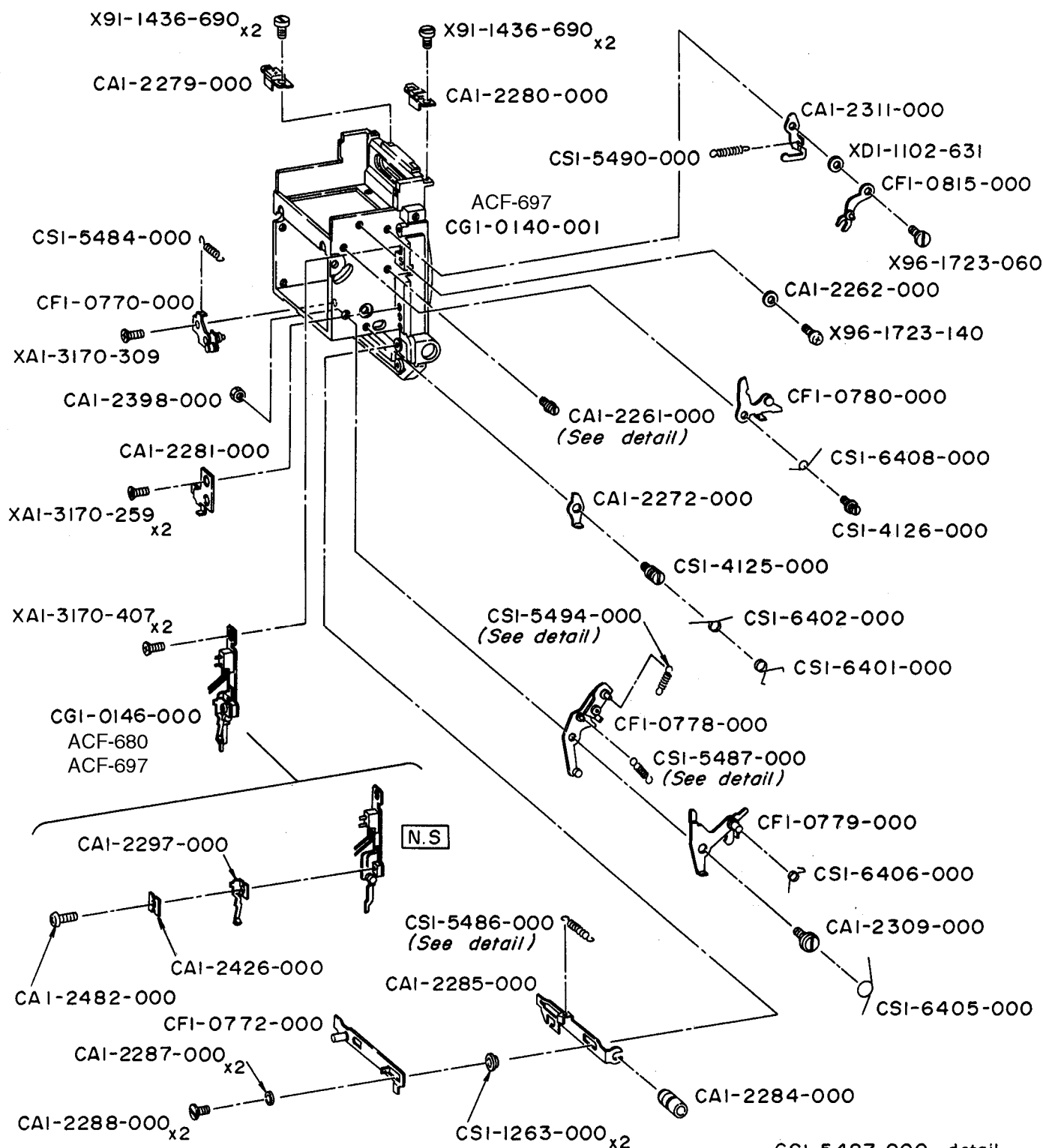
Strength	SIZE
40 g	(010)
50 g	(020)
70 g	(030)

PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
CA1-2029-000	E	1	STUD
CA1-2273-000(XXX)	E	1	CUSHION
CA1-2289-000	D	1	PIN, MAX.APERTURE CORRECTION
CA1-2292-000	D	1	INSULATOR
CA1-2315-000	E	1	WASHER
CA1-2318-000	E	1	SHAFT, CORRECTION LEVER
CA1-2325-000	D	1	LEVER, COUPLING ADJ.
CA1-2334-000	E	1	WASHER, SPRING
CA1-2335-000	D	1	INSULATOR
CA1-2387-000	D	1	WASHER
CA1-2447-000	D	1	SCREW, MAX.APERTURE CORRECT.
CA1-5001-000	E	2	INSULATOR
CF1-0773-000	E	1	HOLDER, FOLLOWING NEEDLE
CF1-0774-000	E	1	BRACKET, INTERMEDIATE
CF1-0775-000	E	1	LEVER, INTERMEDIATE
CF1-0782-000	C	1	WIPER
CF1-0784-000	D	1	GEAR, SECTOR
CF1-0788-000	C	1	WIPER
CF1-0803-000	E	1	LEVER, CORRECTION
CG9-0171-000	D	1	AE UNIT
CG9-0172-000	D	1	MAX.APERTURE CORRECTION UNIT
CH1-0306-000	C	1	BOARD, PRINTED RESISTOR
CH1-0307-000	C	1	BOARD, PRINTED RESISTOR
CS1-0463-000(XXX)	E	1	GEAR, AE COUPLING
CS1-5485-000(XXX)	D	1	SPRING, COIL
CS1-6403-000	C	1	SPRING
CS1-6409-000	D	1	SPRING
CS1-6412-000	D	1	SPRING
CS1-7285-000	D	1	SPRING, PLATE
X71-9749-000		2	RETAINER
X91-1233-160		1	SCREW
X91-1435-690		1	SCREW
X91-1436-070		1	SCREW
X91-1436-150		1	SCREW
X91-1436-450		1	SCREW
X91-1736-330		1	SCREW
X99-0479-000		1	SCREW
X99-0480-000		2	SCREW
XA1-1170-309		1	SCREW
XA1-3170-309		2	SCREW
XA1-3170-409		3	SCREW
XD2-1100-102		1	E RING

CANON NEW F-1



N.S

CAI-2261-000 detail

A	SIZE
Φ2.6 mm	(010)
Φ3.0 mm	(020)
Φ3.4 mm	(030)

CSI-5486-000 detail

STRENGTH	SIZE
950 g	(010)
870 g	(020)
720 g	(030)
670 g	(040)

CSI-5487-000 detail

STRENGTH	SIZE
690 g	(010)
630 g	(020)
610 g	(030)

CSI-5494-000 detail

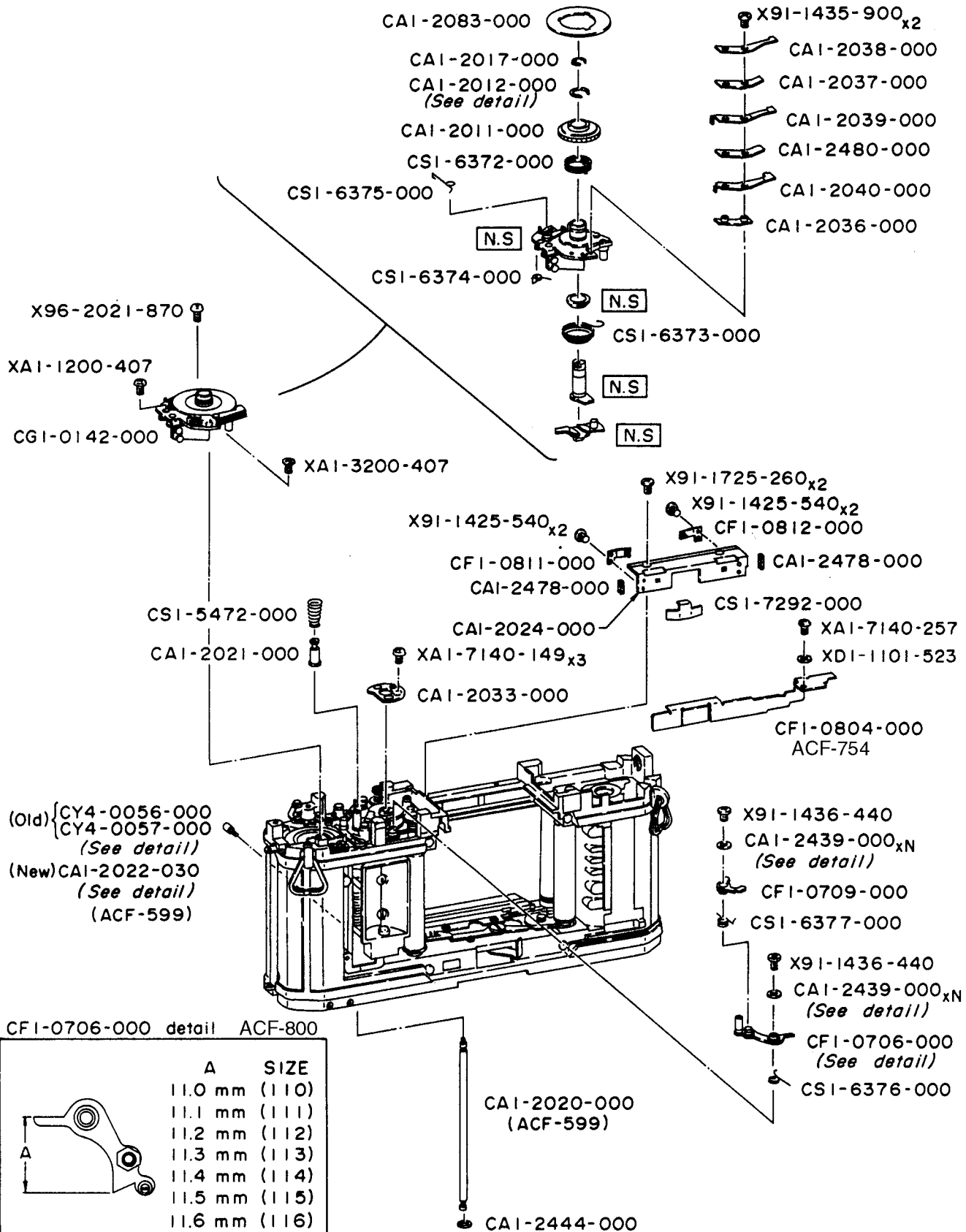
STRENGTH	SIZE
150 g	(010)
175 g	(020)
200 g	(030)

PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
CA1-2261-000(XXX)	D	1	STOPPER
CA1-2262-000	E	1	COLLAR
CA1-2272-000	E	1	LEVER, MIRROR RETURN
CA1-2279-000	D	1	CONTACT, FINDER(RIGHT)
CA1-2280-000	D	1	CONTACT, FINDER(LEFT)
CA1-2281-000	E	1	HOLDER, SPRING
CA1-2284-000	C	1	BUTTON, STOP DOWN MEASURING
CA1-2285-000	E	1	SLIDE, DIAPHRAGM CLOSING
CA1-2287-000	D	2	COLLAR
CA1-2288-000	E	2	SCREW
CA1-2297-000	C	1	CONTACT
CA1-2309-000	E	1	SCREW, SHAFT
CA1-2311-000	E	1	LATCH, MIRROR START
CA1-2398-000	E	1	NUT
CA1-2426-000	D	1	INSULATOR
CA1-2482-000	E	1	SCREW
CF1-0770-000	E	1	BASE, STOP DOWN LOCK
CF1-0772-000	E	1	SLIDE, A MODE(FOLLOW NEEDLE)
CF1-0778-000	E	1	LEVER, MIRROR CHARGE
CF1-0779-000	E	1	LEVER, MIRROR DRIVE
CF1-0780-000	E	1	LEVER, 1ST CURTAIN START
CF1-0815-000	E	1	LEVER, 1ST CURTAIN RELEASE
CG1-0140-001	E	1	PANEL, FRONT
CG1-0146-000	D	1	MODE ASS'Y, A
CS1-1263-000	E	2	COLLAR
CS1-4125-000	E	1	SCREW
CS1-4126-000	E	1	SCREW
CS1-5484-000	D	1	SPRING, COIL
CS1-5486-000(XXX)	E	1	SPRING, COIL
CS1-5487-000(XXX)	D	1	SPRING, COIL
CS1-5490-000	D	1	SPRING, COIL
CS1-5494-000(XXX)	D	1	SPRING, COIL
CS1-6401-000	D	1	SPRING
CS1-6402-000	D	1	SPRING
CS1-6405-000	D	1	SPRING
CS1-6408-000	D	1	SPRING
X91-1436-690		4	SCREW
X96-1723-060		1	SCREW
X96-1723-140		1	SCREW
XA1-3170-259		2	SCREW
XA1-3170-309		1	SCREW
XA1-3170-407		2	SCREW
XD1-1102-631		1	WASHER

CANON NEW F-1



CFI-0706-000 detail ACF-800

A	SIZE
11.0 mm	(110)
11.1 mm	(111)
11.2 mm	(112)
11.3 mm	(113)
11.4 mm	(114)
11.5 mm	(115)
11.6 mm	(116)

CAI-2012-000 detail

A	SIZE
0.15 mm	(015)
0.18 mm	(018)
0.23 mm	(023)
0.28 mm	(028)

CAI-2022-030 (New)

CY4-0056-000 (Old)

A	(New)	(Old)
φ 1.76 mm	(176)	CY4-0056-000
φ 1.78 mm	(178)	CY4-0057-000

CAI-2439-000 detail

A	SIZE
0.03 mm	(003)
0.05 mm	(005)
0.10 mm	(010)

PARTS LIST

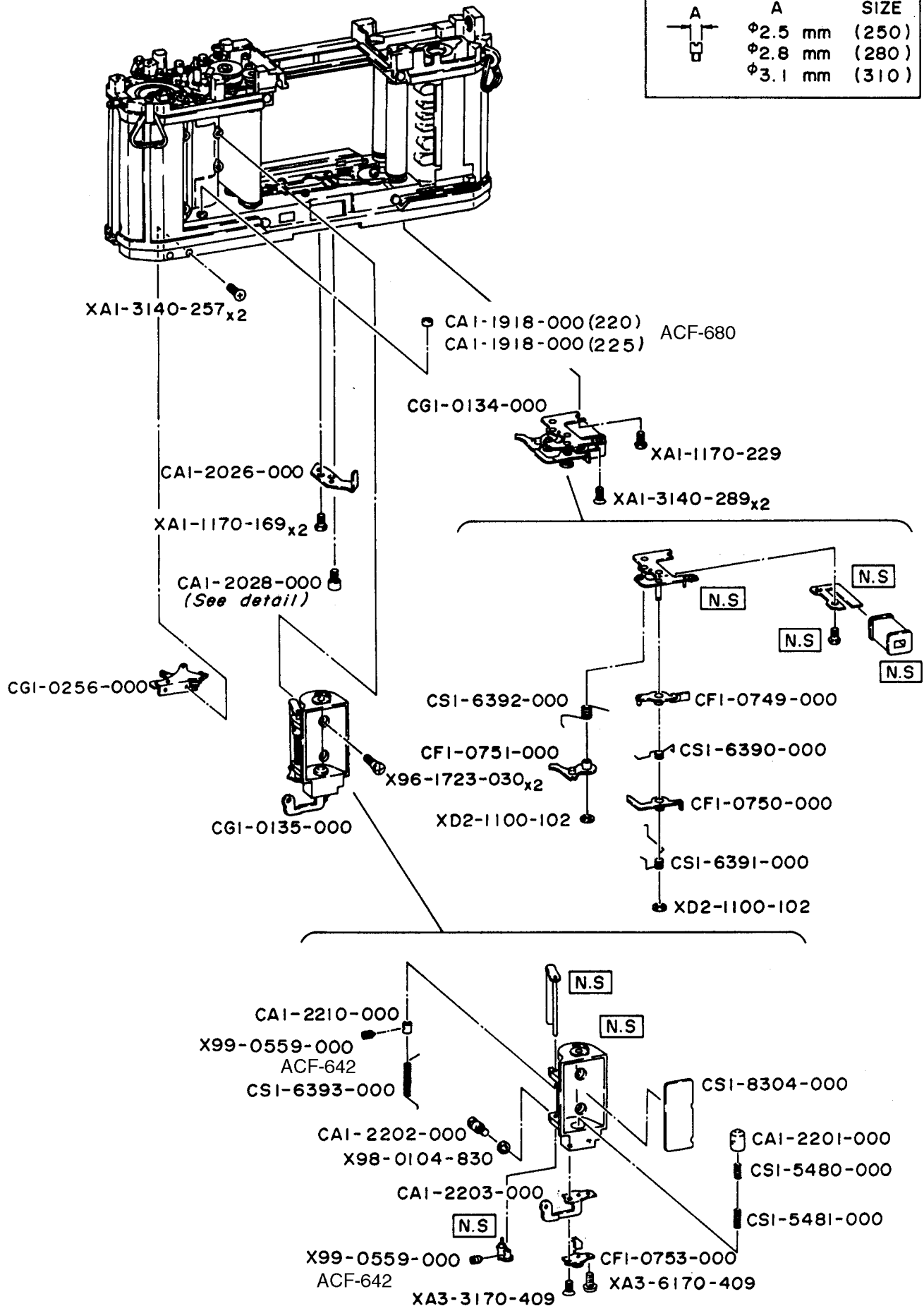
REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
CA1-2011-000	D	1	GEAR, COUNTER
CA1-2012-000(XXX)	C	1	RING, C
CA1-2017-000	C	1	RING, C
CA1-2020-000	D	1	SHAFT, SPROCKET
CA1-2021-000	E	1	STUD
CA1-2022-030(XXX)	D	1	SCREW, SPROCKET
CA1-2024-000	E	1	CASE, CLICK
CA1-2033-000	D	1	CAM, RELEASE
CA1-2036-000	E	1	BASE, CONTACT
CA1-2037-000	D	1	INSULATOR
CA1-2038-000	C	1	CONTACT, RELEASE
CA1-2039-000(XXX)	D	1	CONTACT, RELEASE-2
CA1-2040-000	D	1	CONTACT, RELEASE-3
CA1-2083-000	C	1	DIAL, FILM COUNTER
CA1-2439-000(XXX)	D	1	WASHER
CA1-2444-000	C	1	LEATHER
CA1-2478-000	D	2	SHIELD, LIGHT
CA1-2480-000	D	1	INSULATOR
CF1-0706-000(XXX)	D	1	LEVER, 2ND CURTAIN RELEASE
CF1-0709-000	E	1	LEVER, 2ND CURTAIN RELEASE
CF1-0804-000	C	1	PCB ASS'Y
CF1-0811-000	D	1	PLATE, CLICK
CF1-0812-000	D	1	PLATE, CLICK
CG1-0142-000	D	1	WINDING UNIT
CS1-5472-000	E	1	SPRING, COIL
CS1-6372-000	D	1	SPRING
CS1-6373-000	E	1	SPRING
CS1-6374-000	D	1	SPRING
CS1-6375-000	D	1	SPRING
CS1-6376-000	D	1	SPRING
CS1-6377-000	E	1	SPRING
CS1-7292-000	E	1	SPRING, PLATE
CY4-0056-000	D	1	SCREW
CY4-0057-000	D	1	SCREW
X91-1425-540		4	SCREW
X91-1435-900		2	SCREW
X91-1436-440		2	SCREW
X91-1725-260		2	SCREW
X96-2021-870		1	SCREW
XA1-1200-407		1	SCREW
XA1-3170-407		1	SCREW
XA1-7140-149		3	SCREW
XA1-7140-257		1	SCREW
XD1-1101-523		1	WASHER

CANON NEW F-1

CAI-2028-000 detail

A	A		SIZE
		φ2.5 mm	(250)
		φ2.8 mm	(280)
		φ3.1 mm	(310)

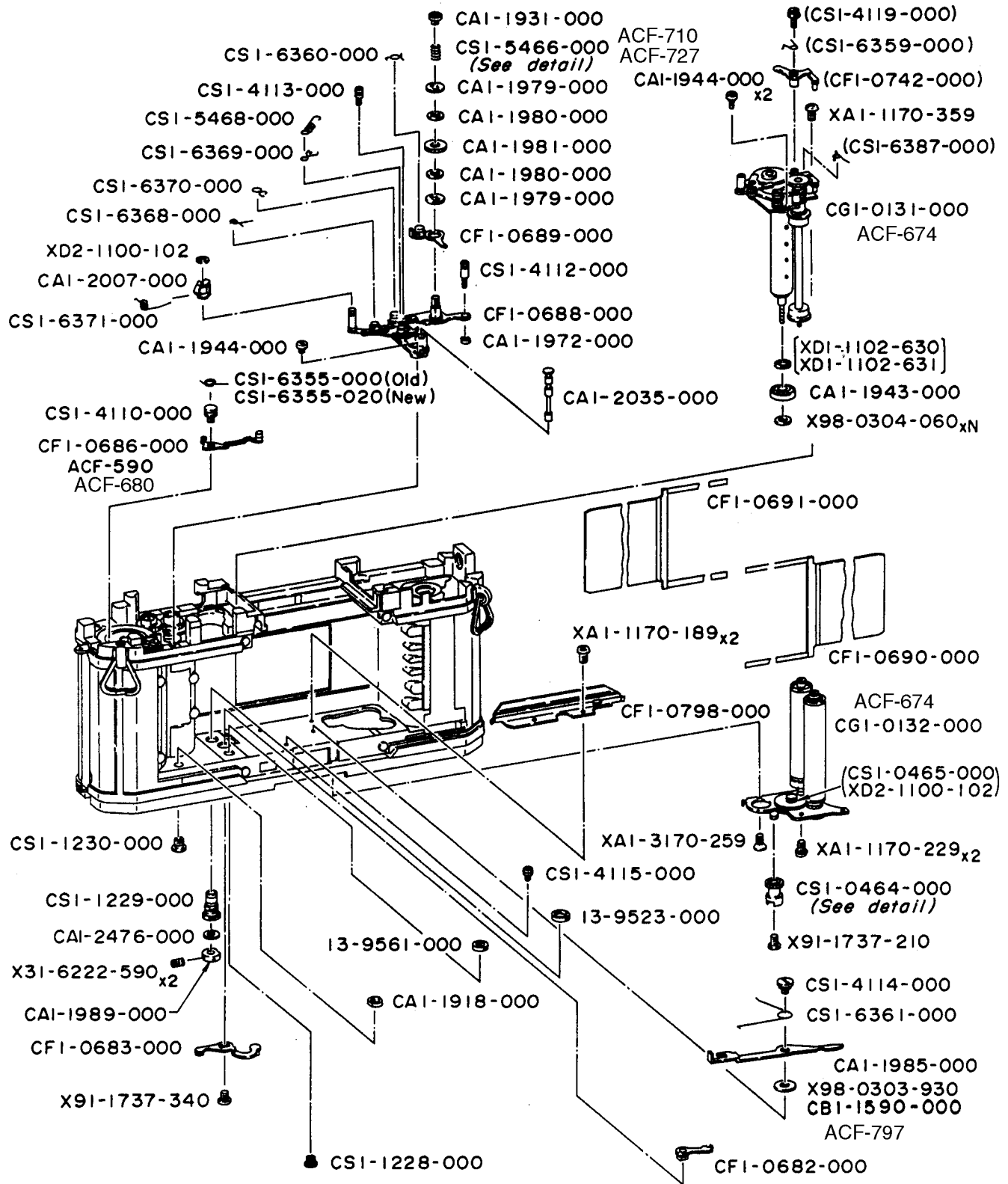


PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
CA1-1918-000(220)	E	1	NUT, ADJUSTING
CA1-1918-000(225)	E	1	NUT, ADJUSTING
CA1-2026-000	E	1	LEVER, DIAPHRAGM RELEASE
CA1-2028-000(XXX)	E	1	SCREW
CA1-2201-000	C	1	CONTACT, BATTERY(-)
CA1-2202-000	E	1	SCREW
CA1-2203-000	D	1	CONTACT, EARTH
CA1-2210-000	E	1	COLLAR, STOPPER
CF1-0749-000	D	1	ARMATURE
CF1-0750-000	E	1	LEVER, ARMATURE RELEASE
CF1-0751-000	E	1	LEVER, MAGNET RELEASE
CF1-0753-000	E	1	BASE, CONTACT(-)
CG1-0134-000	D	1	MAGNET-2 UNIT
CG1-0135-000	D	1	CHAMBER UNIT, BATTERY
CG1-0256-000	E	1	SW5 ASS'Y
CS1-5480-000	C	1	CONTACT, SPRING
CS1-5481-000	C	1	CONTACT, SPRING
CS1-6390-000	D	1	SPRING
CS1-6391-000	D	1	SPRING
CS1-6392-000	D	1	SPRING
CS1-6393-000	D	1	SPRING
CS1-8304-000	C	1	SEAL, BATTERY
X96-1723-030		1	SCREW
X98-0104-830		1	WASHER
X99-0559-000		2	SCREW, SET
XA1-1170-229		1	SCREW
XA1-3140-257		2	SCREW
XA1-3140-289		2	SCREW
XA11170-169		2	SCREW
XA3-3170-409		1	SCREW
XA3-6170-409		1	SCREW
XD2-1100-102		2	SCREW

CANON NEW F-1



CSI-0464-000 detail

A	SIZE
∅ 6.42 mm (642)	
∅ 6.60 mm (660)	
∅ 6.78 mm (678)	

ACF-710 ACF-727
CSI-5466-000 detail

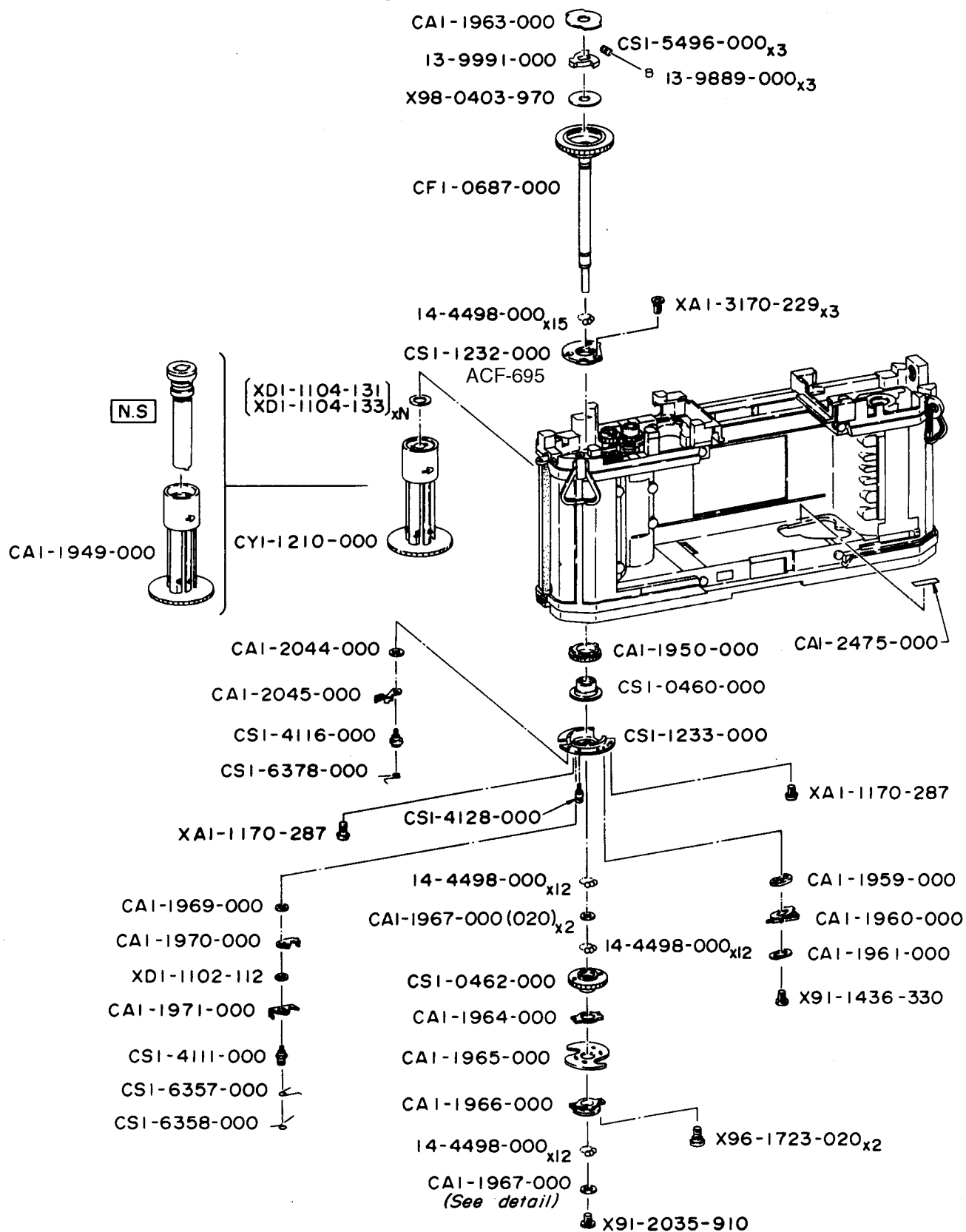
A	SIZE
∅ 0.60 mm (060)	
∅ 0.65 mm (065)	
∅ 0.70 mm (070)	
∅ 0.75 mm (075)	

PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
13-9523-000	E	1	NUT
13-9561-000	E	1	NUT
CA1-1918-000	D	1	NUT
CA1-1931-000	E	1	NUT, BRAKE
CA1-1943-000	E	1	COLLAR
CA1-1944-000	D	3	SCREW
CA1-1972-000	E	1	COLLAR
CA1-1979-000	E	2	WASHER
CA1-1980-000	C	2	LEATHER, 2ND CURTAIN BRAKE
CA1-1981-000	D	1	DISK, 2ND CURTAIN BRAKE
CA1-1985-000	E	1	LEVER, SIGNAL
CA1-1989-000	E	1	CAM, 2ND CURTAIN LATCH
CA1-2007-000	D	1	CLAW, COUNTER FEEDING
CA1-2035-000	D	1	SHAFT, SHUTTER RELEASE
CA1-2476-000	E	1	WASHER
CB1-1590-000		1	WASHER
CF1-0682-000	E	1	LEVER, MIRROR CHARGE
CF1-0683-000	E	1	LEVER, SIGNAL
CF1-0686-000	E	1	LEVER, SWITCH
CF1-0688-000	E	1	BASE, BRAKE
CF1-0689-000	D	1	BRAKE, 2ND CURTAIN
CF1-0690-000	C	1	CURTAIN, 1ST
CF1-0691-000	C	1	CURTAIN, 2ND
CF1-0742-000	E	1	LEVER, 1ST CURTAIN RELEASE
CF1-0789-000	D	1	SHIELD, LIGHT
CG1-0131-000	D	1	GEAR UNIT, MASTER
CG1-0132-000	D	1	DRUM UNIT, SPRING
CG1-0464-000(XXX)	D	1	GEAR, AE COUPLER
CS1-0465-000	E	1	IDLER
CS1-1228-000	E	1	BUSH
CS1-1229-000	E	1	BUSH
CS1-1230-000	E	1	BUSH
CS1-4110-000	E	1	SCREW
CS1-4112-000	E	1	STUD
CS1-4113-000	E	1	STUD
CS1-4114-000	E	1	SCREW
CS1-4115-000	E	1	STUD
CS1-4119-000	E	1	SPRING
CS1-5466-000(XXX)	E	1	SPRING, COIL
CS1-5468-000	D	1	SPRING, COIL
CS1-6355-000	E	1	SPRING
CS1-6355-020	E	1	SPRING
CS1-6359-000	D	1	SPRING
CS1-6360-000	E	1	SPRING
CS1-6361-000	E	1	SPRING
CS1-6368-000	E	1	SPRING
CS1-6369-000	E	1	SPRING
CS1-6370-000	E	1	SPRING
CS1-6371-000	E	1	SPRING
CS1-6387-000	E	1	SPRING
X31-6222-590	E	2	SCREW
X91-1737-210	E	1	SCREW
X91-1737-340	E	1	SCREW
X98-0303-930	E	1	WASHER
X98-0304-060	E	1	WASHER
XA1-1170-189	E	2	SCREW
XA1-1170-229	E	2	SCREW
XA1-1170-359	E	1	SCREW
XA1-3170-259	E	1	SCREW
XD1-1102-630	E	1	WASHER
XD1-1102-631	E	1	WASHER
XD2-1100-102	E	2	RING, E

CANON NEW F-1



CAI-1967-000 detail

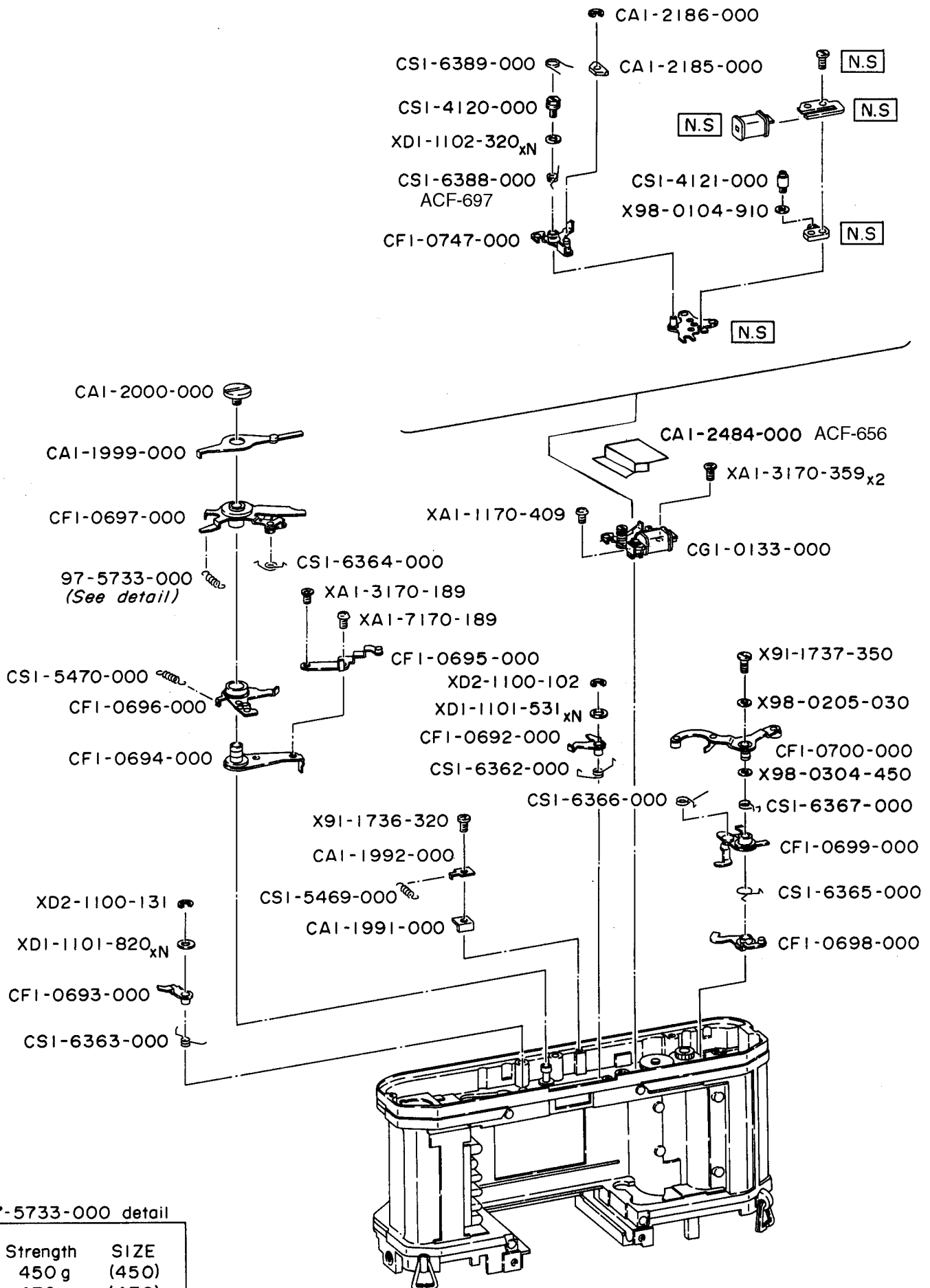
A	SIZE
	0.05 mm (005)
	0.10 mm (010)
	0.20 mm (020)

PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
13-9889-000	E	3	ROLLER
13-9991-000	D	1	CAM, CLUTCH
14-4498-000	C	51	BALL, STEEL
CA1-1949-000	D	1	SPOOL
CA1-1950-000	D	1	RATCHET, MULTI-EXPOSURE
CA1-1959-000	E	1	BASE, CONTACT
CA1-1960-000	D	1	CONTACT
CA1-1961-000	E	1	INSULATOR
CA1-1963-000	E	1	PLATE, CLUTCH HOLD
CA1-1964-000	E	1	SPACER, WINDING CAM
CA1-1965-000	D	1	CAM, WIINDING
CA1-1966-000	D	1	COUPLER, WINDING
CA1-1967-000(XXX)	D	2	WASHER
CA1-1969-000	E	1	SPACER
CA1-1970-000	E	1	CAM, LOWER REVERSE LOCK
CA1-1971-000	E	1	CAM, UPPER REVERSE LOCK
CA1-2044-000	E	1	SPACER
CA1-2045-000	E	1	LEVER, M.E. LATCHET
CA1-2475-000	D	1	SHIELD, LIGHT
CF1-0687-000	D	1	SHAFT/GEAR, WINDING
CS1-0460-000	E	1	GEAR, SPOOL
CS1-0462-000	D	1	GEAR, WINDING COUPLER
CS1-1232-000	E	1	BUSHING
CS1-1233-000	E	1	HOLDER, WINDING GEAR
CS1-4111-000	E	1	STUD
CS1-4116-000	E	1	SCREW
CS1-4128-000	E	1	STUD
CS1-5496-000	B	3	COIL, SPRING
CS1-6357-000	E	1	SPRING
CS1-6358-000	E	1	SPRING
CS1-6378-000	E	1	SPRING
CY1-1210-000	C	1	SPOOL, ASS'Y
X91-1436-330		1	SCREW
X91-2035-910		1	SCREW
X96-1723-020		2	SCREW
X98-0403-970		1	WASHER
XA1-1170-287		2	SCREW
XA1-3170-229		3	SCREW
XD1-1102-112		1	WASHER
XD1-1104-131		1	WASHER
XD1-1104-133		1	WASHER

CANON NEW F-1

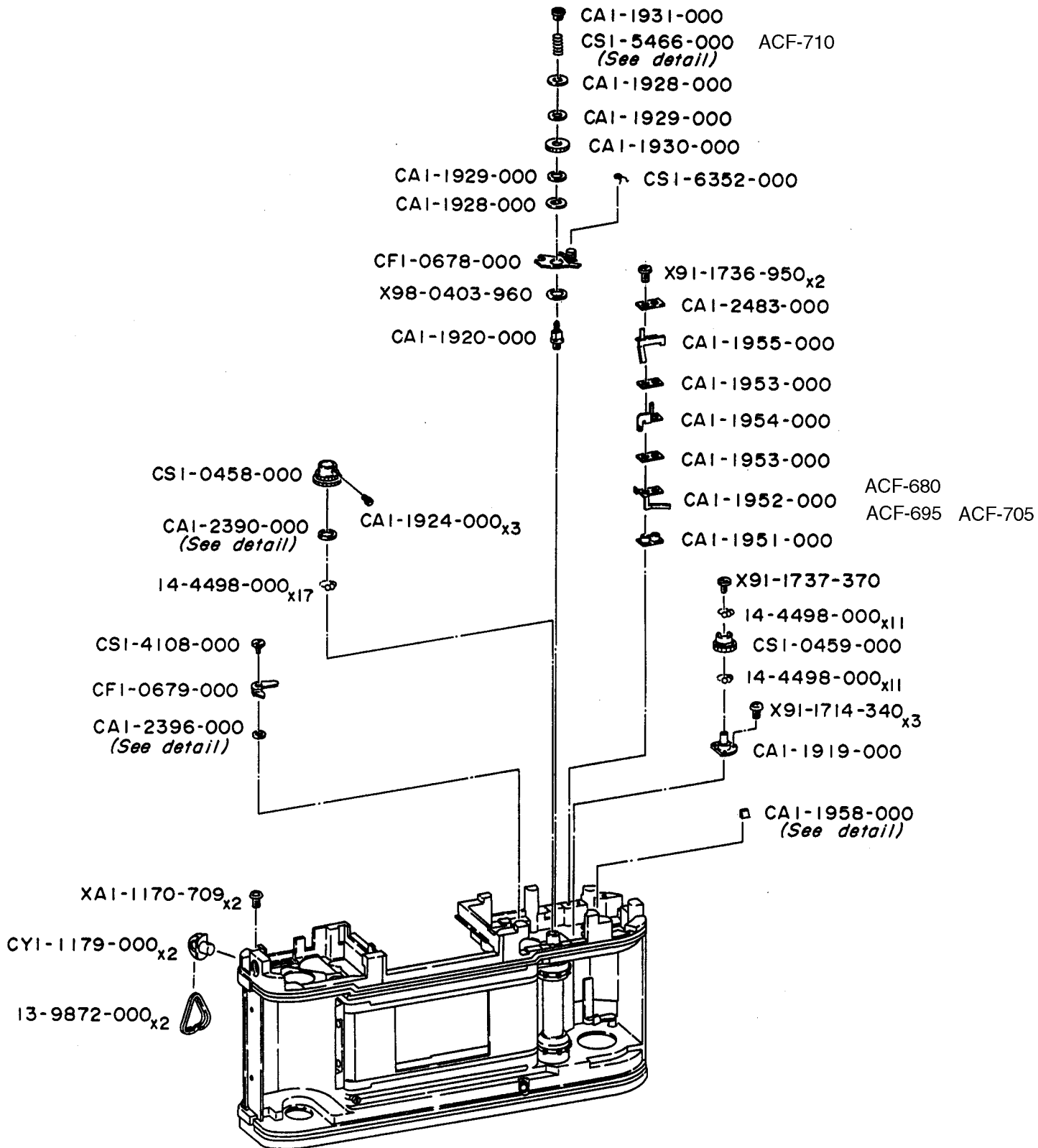


PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
97-5733-000(XXX)	E	1	SPRING, COIL
CA1-1991-000	E	1	CUSHION
CA1-1992-000	E	1	HOLDER, CUSHION
CA1-1999-000	E	1	LEVER, MAGNET CHARGE
CA1-2000-000	E	1	SCREW
CA1-2185-000	C	1	ARMATURE
CA1-2186-000	C	1	E RING
CA1-2484-000	E	1	COVER, DUST
CF1-0692-000	E	1	LEVER, MIRROR RELEASE
CF1-0693-000	E	1	LEVER, DIAPHRAGM RELEASE
CF1-0694-000	E	1	LEVER, MIRROR CHARGE
CF1-0695-000	E	1	LEVER, CHARGE
CF1-0696-000	E	1	LEVER, DIAPHRAGM RELEASE
CF1-0697-000	D	1	LEVER, DIAPHRAGM CHARGE
CF1-0698-000	D	1	LEVER, WINDING STOPPER
CF1-0699-000	D	1	LEVER, STOPPER CHARGE
CF1-0700-000	E	1	LEVER, CHARGE
CF1-0747-000	E	1	LEVER, ARMATURE
CG1-0133-000	D	1	MAGNET-3 UNIT
CS1-4120-000	E	1	SCREW
CS1-4121-000	E	1	SCREW, SHAFT
CS1-5469-000	D	1	SPRING, COIL
CS1-5470-000	E	1	SPRING, COIL
CS1-6362-000	E	1	SPRING
CS1-6363-000	E	1	SPRING
CS1-6364-000	E	1	SPRING
CS1-6365-000	E	1	SPRING
CS1-6366-000	E	1	SPRING
CS1-6367-000	E	1	SPRING
CS1-6388-000	D	1	SPRING
CS1-6389-000	D	1	SPRING
X91-1736-320		1	SCREW
X91-1737-350		1	SCREW
X98-0104-910		1	WASHER
X98-0205-030		1	WASHER
X98-0304-450		1	WASHER
XA1-1170-409		1	SCREW
XA1-3170-189		1	SCREW
XA1-3170-359		2	SCREW
XA1-7170-189		1	SCREW
XD1-1101-531		1	WASHER
XD1-1101-820		1	WASHER
XD1-1102-320		1	WASHER
XD2-1100-102		1	RING, E
XD2-1100-131		1	RING, E

CANON NEW F-1



CAI-1958-000 detail

A	SIZE
 A	1.40 mm (140)
	1.70 mm (170)
	1.85 mm (185)
	2.00 mm (200)

CAI-2390-000 detail

A	SIZE
 A	0.1 mm (010)
	0.2 mm (020)

CAI-2396-000 detail

A	SIZE
 A	0.15 mm (015)
	0.18 mm (018)
	0.20 mm (020)
	0.25 mm (025)

ACF-710

CSI-5466-000 detail

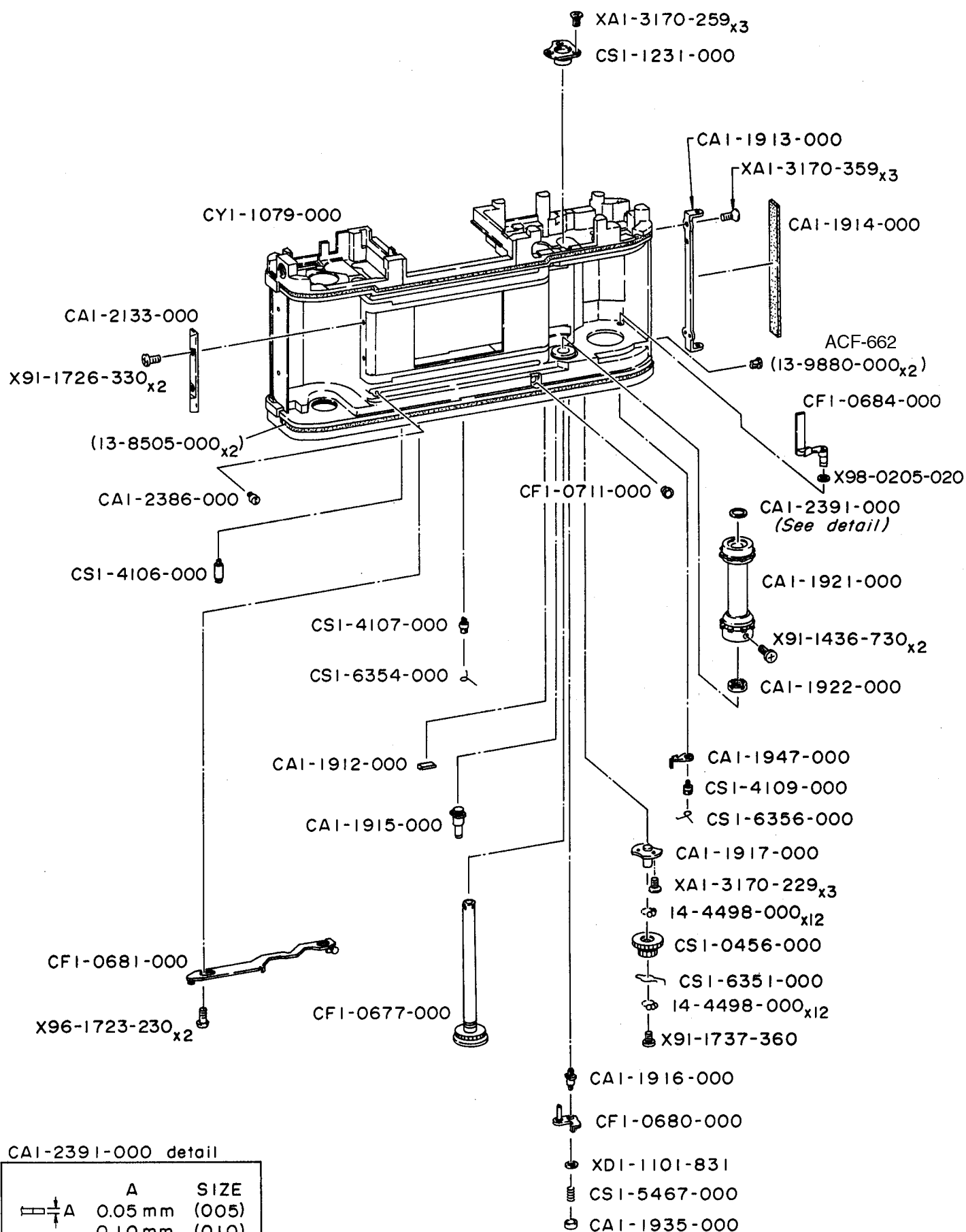
A	SIZE
 A	0.60 mm (060)
	0.65 mm (065)
	0.70 mm (070)
	0.75 mm (075)

PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
13-9872-000	B	2	RING, NECK STRAP
14-4498-000	C	39	BALL, STEEL
CA1-1919-000	E	1	SHAFT, IDLER
CA1-1920-000	E	1	SHAFT, BRAKE
CA1-1924-000	D	3	SCREW
CA1-1928-000	E	2	WASHER
CA1-1929-000	C	2	LEATHER, 1ST CURTAIN BRAKE
CA1-1930-000	D	1	DISK, 1ST CURTAIN BRAKE
CA1-1931-000	E	1	NUT, BRAKE
CA1-1951-000	E	1	BASE, CONTACT
CA1-1952-000	D	1	CONTACT, X
CA1-1953-000	D	2	INSULATOR
CA1-1954-000	D	1	CONTACT
CA1-1955-000	D	1	CONTACT
CA1-1958-000(XXX)	D	1	STOPPER, X CONTACT
CA1-2390-000(XXX)	DD	1	WASHER
CA1-2396-000(XXX)	D	1	WASHER
CA1-2483-000	D	1	INSULATOR
CF1-0678-000	E	1	BRAKE, 1ST CURTAIN
CF1-0679-000	E	1	LEVER, 1ST CURTAIN BRAKE SET
CS1-0458-000	D	1	GEAR, SPROCKET
CS1-0459-000	E	1	IDLER
CS1-4108-000	E	1	SCREW
CS1-5466-000(XXX)	D	1	SPRING, COIL
CS1-6352-000	E	1	SPRING
CY1-1179-000	C	2	LUG, NECK STRAP
X91-1714-340		3	SCREW
X91-1736-950		2	SCREW
X91-1737-370		1	SCREW
X98-0403-960		1	WASHER
XA1-1170-709		2	SCREW

CANON NEW F-1



PARTS LIST

REF.NO.C12-0751

NEW PARTS NO.	CLASS	QTY	DESCRIPTION
13-8505-000	A	2	SHIELD, LIGHT
13-9880-000	E	2	PIN, STOPPER
14-4498-000	C	24	BALL, STEEL
CA1-1912-000	D	1	CUSHION
CA1-1913-000	D	1	HOLDER, SHAFT
CA1-1914-000	D	1	SHIELD, LIGHT
CA1-1915-000	E	1	STUD
CA1-1916-000	E	1	SHAFT, RELEASE SPRING
CA1-1917-000	E	1	SHAFT, GEAR
CA1-1921-000	D	1	SPROCKET
CA1-1922-000	E	1	CLUTCH, SPROCKET
CA1-1935-000	E	1	NUT
CA1-1947-000	E	1	LEVER, SWITCH(E)
CA1-2133-000	C	1	STABILIZER, CARTRIDGE
CA1-2386-000	D	1	GUIDE, FILM
CA1-2391-000(XXX)	D	1	WASHER
CF1-0677-000	D	1	GEAR, SPROCKET
CF1-0680-000	E	1	RELEASE, MECHANICAL
CF1-0681-000	D	1	SLIDE, MECHANICAL RELEASE
CF1-0684-000	E	1	LEVER, ACTIVATOR
CF1-0711-000	D	1	CONTACT, DATA BACK
CS1-0456-000	D	1	GEAR
CS1-1231-000	E	1	STUD,WINDING GEAR
CS1-4106-000	E	1	STUD
CS1-4107-000	E	1	STUD
CS1-4109-000	E	1	STUD
CS1-5467-000	D	1	SPRING, COIL
CS1-6351-000	E	1	SPRING
CS1-6354-000	E	1	SPRING
CS1-6356-000	E	1	SPRING
CY1-1079-000	E	1	BODY
X91-1436-730		2	SCREW
X91-1726-330		2	SCREW
X91-1737-360		1	SCREW
X96-1723-230		2	SCREW
X98-0205-020		1	WASHER
XA1-3170-229		3	SCREW
XA1-3170-259		3	SCREW
XA1-3170-359		3	SCREW
XD1-1101-831		1	WASHER

ELECTRIC PARTS LIST

REF.NO.C12-0751

NEW	SYMBOL	PARTS NO.	CLASS	QTY	DESCRIPTION	REMARK
		CY4-0055-000	D	1	RESISTOR, HIGH VOLTAGE	50 OHM 1/8W ACF-545
	IC1	CH4-0055-000	C	1	IC	T2682A
	R1	VR9-1103-000	E	1	RESISTOR	33KOHM 1/8W
	R1	VR9-1109-000	E	1	RESISTOR	56KOHM 1/8W
	R1	VR9-1367-000	E	1	RESISTOR	24.9KOHM 1/8W
	R1	VR9-1412-000	E	1	RESISTOR	91KOHM 1/8W
	R1	VR9-1753-000	E	1	RESISTOR	47KOHM 1/8W
	R1	VR9-1888-000	E	1	RESISTOR	27KOHM 1/8W
	R1	VR9-1889-000	E	1	RESISTOR	30KOHM 1/8W
	R1	VR9-1891-000	E	1	RESISTOR	36KOHM 1/8W
	R1	VR9-1892-000	E	1	RESISTOR	39KOHM 1/8W
	R1	VR9-1893-000	E	1	RESISTOR	43KOHM 1/8W
	R1	VR9-1897-000	E	1	RESISTOR	68KOHM 1/8W
	R1	VR9-1899-000	E	1	RESISTOR	82KOHM 1/8W
	R1	VR9-1970-000	E	1	RESISTOR	300KOHM 1/8W
	R1	VR9-2098-000	E	1	RESISTOR	130KOHM 1/8W
	R1	VR9-2099-000	E	1	RESISTOR	180KOHM 1/8W
	R1	VR9-3055-000	E	1	RESISTOR	23.7 KOHM 1/8W
	R2	VR9-1103-000	E	1	RESISTOR	33KOHM 1/8W
	R2	VR9-1109-000	E	1	RESISTOR	56KOHM 1/8W
	R2	VR9-1367-000	E	1	RESISTOR	24.9KOHM 1/8W
	R2	VR9-1412-000	E	1	RESISTOR	91KOHM 1/8W
	R2	VR9-1753-000	E	1	RESISTOR	47KOHM 1/8W
	R2	VR9-1888-000	E	1	RESISTOR	27KOHM 1/8W
	R2	VR9-1889-000	E	1	RESISTOR	30KOHM 1/8W
	R2	VR9-1891-000	E	1	RESISTOR	36KOHM 1/8W
	R2	VR9-1892-000	E	1	RESISTOR	39KOHM 1/8W
	R2	VR9-1893-000	E	1	RESISTOR	43KOHM 1/8W
	R2	VR9-1897-000	E	1	RESISTOR	68KOHM 1/8W
	R2	VR9-1899-000	E	1	RESISTOR	82KOHM 1/8W
	R2	VR9-1970-000	E	1	RESISTOR	300KOHM 1/8W
	R2	VR9-2098-000	E	1	RESISTOR	130KOHM 1/8W
	R2	VR9-2099-000	E	1	RESISTOR	180KOHM 1/8W
	R2	VR9-3055-000	E	1	RESISTOR	23.7KOHM 1/8W
	R6	CH9-0059-000	E	1	RESISTOR	1.96KOHM
	R6	CH9-0060-000	E	1	RESISTOR	2.0KOHM
	R6	CH9-0061-000	E	1	RESISTOR	2.05KOHM
	R1	VR9-1421-000	E	1	RESISTOR	301KOHM 1/8W
	RMTV	VR5-0131-400	E	1	RESISTOR	140 OHM 1/8W ACF-642
	RMTV	VR5-0131-690	E	1	RESISTOR	169 OHM 1/8W ACF-642

ELECTRIC PARTS LIST

REF.NO.C12-0751

NEW	SYMBOL	PARTS NO.	CLASS	QTY	DESCRIPTION	REMARK
	RMTV	VR5-0131-960	E	1	RESISTOR	196 OHM 1/8W ACF-642
	RMTV	VR5-0132-260	E	1	RESISTOR	226 OHM 1/8W ACF-642
	RMTV	VR5-0132-490	E	1	RESISTOR	249 OHM 1/8W ACF-642
	RMTV	VR5-0132-740	E	1	RESISTOR	274 OHM 1/8W ACF-642
	RMTV	VR5-0133-010	E	1	RESISTOR	301 OHM 1/8W ACF-642
	RMTV	VR5-0133-320	E	1	RESISTOR	332 OHM 1/8W ACF-642
	RMTV	VR5-0133-650	E	1	RESISTOR	365 OHM 1/8W ACF-642
	RMTV	VR5-0133-830	E	1	RESISTOR	383 OHM 1/8W ACF-642
	RMTV	VR5-0140-101	E	1	RESISTOR	100 OHM 1/8W ACF-642
	RMTV	VR5-0140-121	E	1	RESISTOR	120 OHM 1/8W ACF-642
	RMTV	VR5-0140-180	E	1	RESISTOR	180HM 1/8W ACF-642
	RMTV	VR5-0140-470	E	1	RESISTOR	470HM 1/8W ACF-642
	RMTV	VR5-0140-750	E	1	RESISTOR	750HM 1/8W ACF-642
	RAE	VR5-0131-822	E	1	RESISTOR	18.2 KOHM 1/8W ACF-642
	RAE	VR5-0132-002	E	1	RESISTOR	20.0 KOHM 1/8W ACF-642
	RAE	VR5-0132-212	E	1	RESISTOR	22.1 KOHM 1/8W ACF-642
	RAE	VR5-0132-432	E	1	RESISTOR	24.3 KOHM 1/8W ACF-642
	RAE	VR5-0132-742	E	1	RESISTOR	27.4 KOHM 1/8W ACF-642
	RAE	VR5-0133-012	E	1	RESISTOR	30.1 KOHM 1/8W ACF-642
	RAE	VR5-0133-322	E	1	RESISTOR	33.2 KOHM 1/8W ACF-642
	RAE	VR5-0133-652	E	1	RESISTOR	36.5 KOHM 1/8W ACF-642
	RAE	VR5-0133-922	E	1	RESISTOR	39.2 KOHM 1/8W ACF-642
	RAE	VR5-0134-322	E	1	RESISTOR	43.2 KOHM 1/8W ACF-642
	RAE	VR5-0134-752	E	1	RESISTOR	47.5 KOHM 1/8W ACF-642
	RAE	VR5-0135-112	E	1	RESISTOR	51.1 KOHM 1/8W ACF-642
		VR5-0140-103	E	1	RESISTOR	10 KHOM 1/8W AG1-036
	R42	VR9-1103-000	E	1	RESISTOR	33 KHOM 1/8W
	R42	VR9-1109-000	E	1	RESISTOR	56 KHOM 1/8W
	R42	VR9-1306-000	E	1	RESISTOR	86.6 KHOM 1/8W
	R42	VR9-1308-000	E	1	RESISTOR	95.3 KHOM 1/8W
	R42	VR9-1309-000	E	1	RESISTOR	100 KHOM 1/8W
	R42	VR9-1310-000	E	1	RESISTOR	105 KHOM 1/8W
	R42	VR9-1311-000	E	1	RESISTOR	110 KHOM 1/8W
	R42	VR9-1312-000	E	1	RESISTOR	115 KHOM 1/8W
	R42	VR9-1313-000	E	1	RESISTOR	121 KHOM 1/8W
	R42	VR9-1314-000	E	1	RESISTOR	127 KHOM 1/8W
	R42	VR9-1315-000	E	1	RESISTOR	133 KHOM 1/8W
	R42	VR9-1316-000	E	1	RESISTOR	140KHOM 1/8W
	R42	VR9-1317-000	E	1	RESISTOR	147KHOM 1/8W
	R42	VR9-1318-000	E	1	RESISTOR	154 KHOM 1/8W

ELECTRIC PARTS LIST

REF.NO.C12-0751

NEW	SYMBOL	PARTS NO.	CLASS	QTY	DESCRIPTION	REMARK
	R42	VR9-1597-000	E	1	RESISTOR	51 KHOM 1/8W
	R42	VR9-1753-000	E	1	RESISTOR	47 KHOM 1/8W
	R42	VR9-1885-000	E	1	RESISTOR	16 KHOM 1/8W
	R42	VR9-1887-000	E	1	RESISTOR	24 KHOM 1/8W
	R42	VR9-1892-000	E	1	RESISTOR	39 KHOM 1/8W
	R42	VR9-1896-000	E	1	RESISTOR	62 KHOM 1/8W
	R42	VR9-1897-000	E	1	RESISTOR	68 KHOM 1/8W
	R42	VR9-1898-000	E	1	RESISTOR	75 KHOM 1/8W
	R42	VR9-1899-000	E	1	RESISTOR	82 KHOM 1/8W
	RTSC	VR5-0133-922	E	1	RESISTOR	39 KHOM 1/8W
		VR5-0134-322	E	1	RESISTOR	43 KHOM 1/8W
		VR5-0134-752	E	1	RESISTOR	47 KHOM 1/8W
		VR5-0135-112	E	1	RESISTOR	51 KHOM 1/8W
		VR5-0135-622	E	1	RESISTOR	56 KHOM 1/8W
	Tr2	WA2-0229-000	D	1	TRANSISTOR	2SD813
	VR2	VR9-1660-000	E	1	RESISTOR, VARIABLE	330OHM
		Y11-3701-000			LEAD	WHITE
		Y11-3702-000			LEAD	BLACK
		Y11-3707-000			LEAD	YELLOW
		Y11-3901-000			LEAD	WHITE
		Y11-3903-000			LEAD	RED
		Y11-3906-000			LEAD	ORANGE
		Y11-3909-000			LEAD	GREEN
		Y11-4501-000			LEAD	WHITE
		Y11-4502-000			LEAD	BLACK
		Y11-4503-000			LEAD	RED
		Y11-4506-000			LEAD	ORANGE
		Y11-4507-000			LEAD	YELLOW
		Y11-4509-000			LEAD	GREEN
		Y11-4511-000			LEAD	BLUE
		Y11-4512-000			LEAD	PURPLE
		Y11-4514-000			LEAD	GRAY
		Y11-7312-000			HEAT SHRINKABLE TUBE	