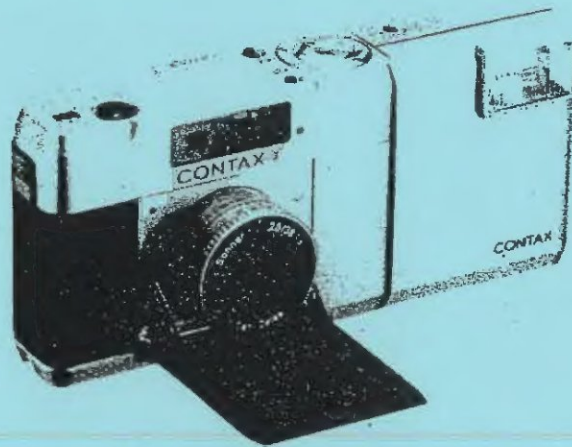


CONTAX T

CONTAX T14 AUTO

REPAIR MANUAL



CONTAX T

With T14 Auto electronic flash



KYOCERA CORPORATION
YASHICA DIVISION



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SPECIFICATIONS

Type	: 35mm lens shutter, ultra compact AE camera.
Image size	: 24×36mm
Lens	: Sonnar T* 38mm F2.8 lens (5-element, four-lens group composition.) • Aperture scale of 2.8 to 16. • Minimum focusing distance : 1 meter.
Shutter Type	: Aperture priority AE type electromagnetic shutter (8 to 1/500 sec.)
Synch Terminal	: X-Contact (using dedicated electronic flash), synchronizes at speeds slower than 1/125 sec.
Self-timer	: Electronic type. • 10 second delay. • LED flashes during countdown (accelerating 2 seconds before shutter release).
Shutter Release	: Electromagnetic type.
Rangefinder	: Coupled rangefinder of image merging type.
Viewfinder	: Reverse-Galilean finder with Albada type bright picture frame.
Viewfinder Display	: Picture frame, focusing zone, self-timer warning lamp, 4 exposure LEDs (including overexposure warning, and T14 AUTO flash-ready indicator function).
Metering System	: Aperture priority AE type (with SPD cell). Metering range from EV 0 to EV17. Film speed coupling range from ISO 25 to 1000. Backlight compensation of +1.5EV.
Film Advance	: Lever type, 120 degree setting angle, 10 degree rest.
Film Rewind	: Film rewind crank.
LCD Frame Counter	: Registers to 79; auto-resetting, additive type.
Body Cover	: Removable type, using release knob.
Power Source	: Uses two 1.55 V silver-oxide (SR44) or 1.5 V alkaline (LR44) batteries.
Power Switch	: Switch coupled to front cover operation. (When switched OFF, all camera functions except LCD frame counter memory will cease.)
Exposure meter switch	: Turned ON by pressing Shutter release button part way (automatically turns OFF in 10 sec.).
Dimensions	: 98 (W)×66.5 (H)×32.5 (D) mm. (With lens retracted)
Weight	: 270g (without batteries).

1. DISASSEMBLING OF THE EXTERIOR PARTS.

※ Indicates parts No that are Silver type of Contax T.

(1) Body Cover;

- a) Slide the Body Cover Release Knod (352321) and then remove the Body Cover (041315) by drawing it all the way off.

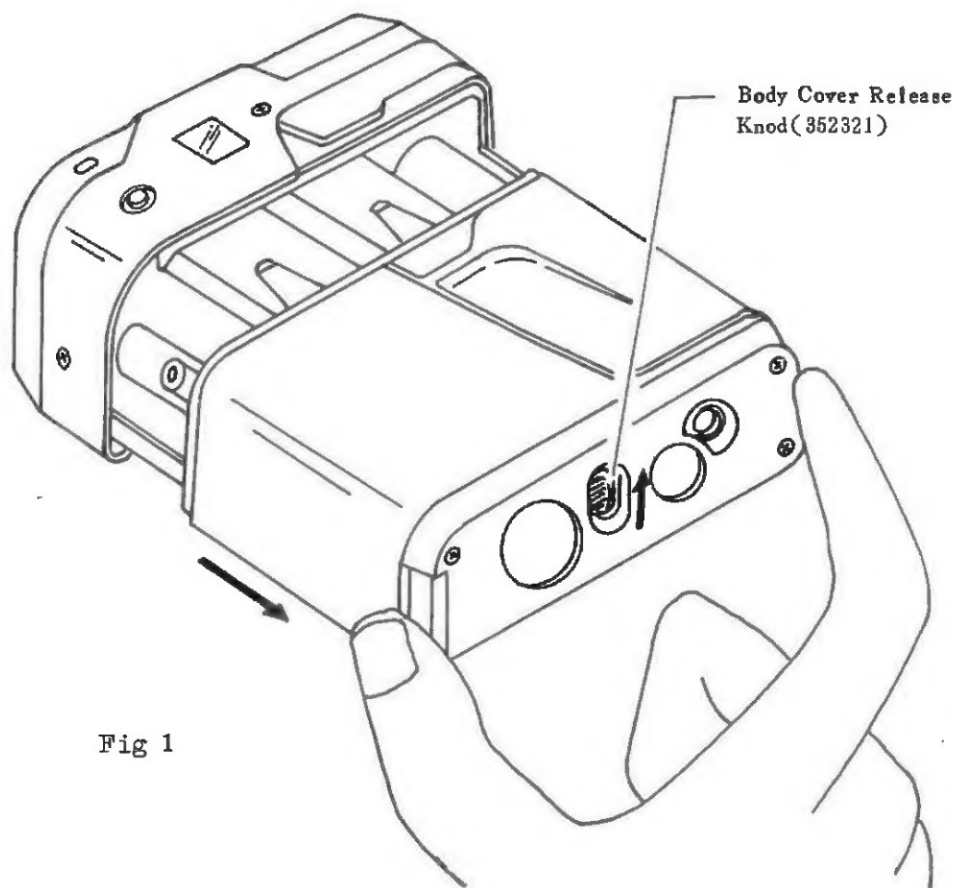


Fig 1

(2) Top Cover;

- a) Remove three Top Cover Set Screws (61812521×2)(61813021).
See(Fig 2).
b) Setting the film speed.

While pressing down the Film Speed Dial Release Button, use the lever-tab on the Film Speed Dial top to turn the Dial until unclick stopped position as Shown in (Fig 3).

c) Remove the Top Cover Assy (041301) in the upward direction.

- Note:** a) Backlight Compensation Button (352310), Backlight Compensation Button Spring (352314), Shutter Release Button (352304) and Self-timer Switch Button (352309) W/Self Name Plate (352312) easily fall off when the Camera Body is turned upside-down. See (Fig 2).
- b) Make sure the Backlight Compensation Button, Backlight Compensation Button Spring, Shutter Release Button and Self-timer Switch Button W/Self Name Plate are in position when reassembling.

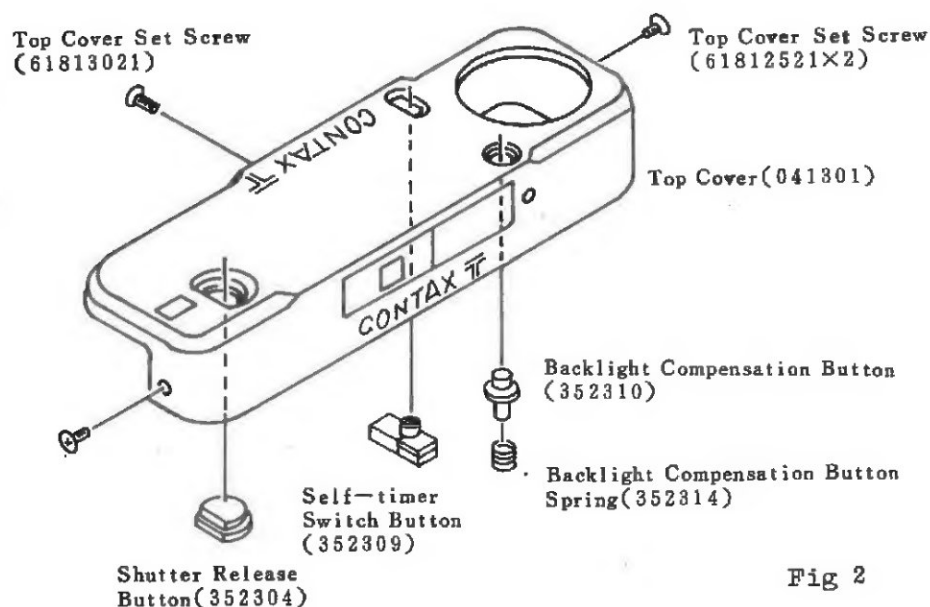


Fig 2

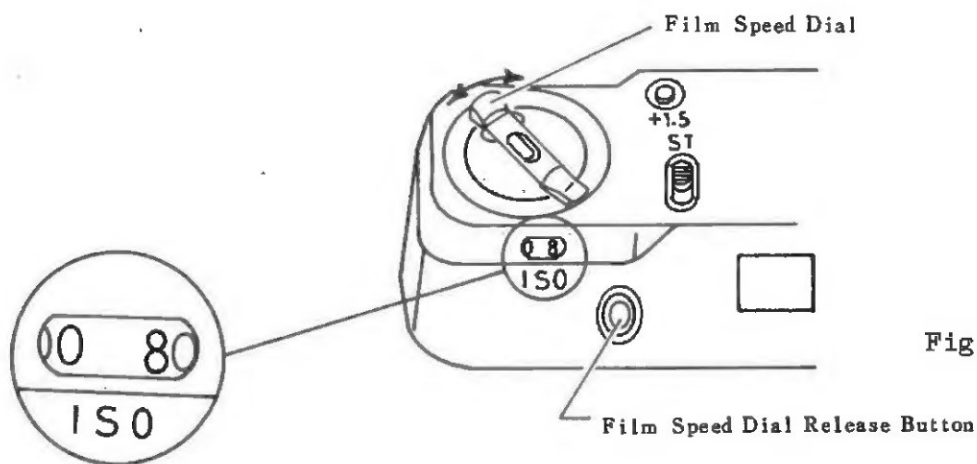


Fig 3

(3) Rewinding Knob Ass'y (W/ASA Dial);

- a) Hold the Rewinding Shaft (352561) then remove (counter clockwise) the Rewinding Knob Ass'y (041553).

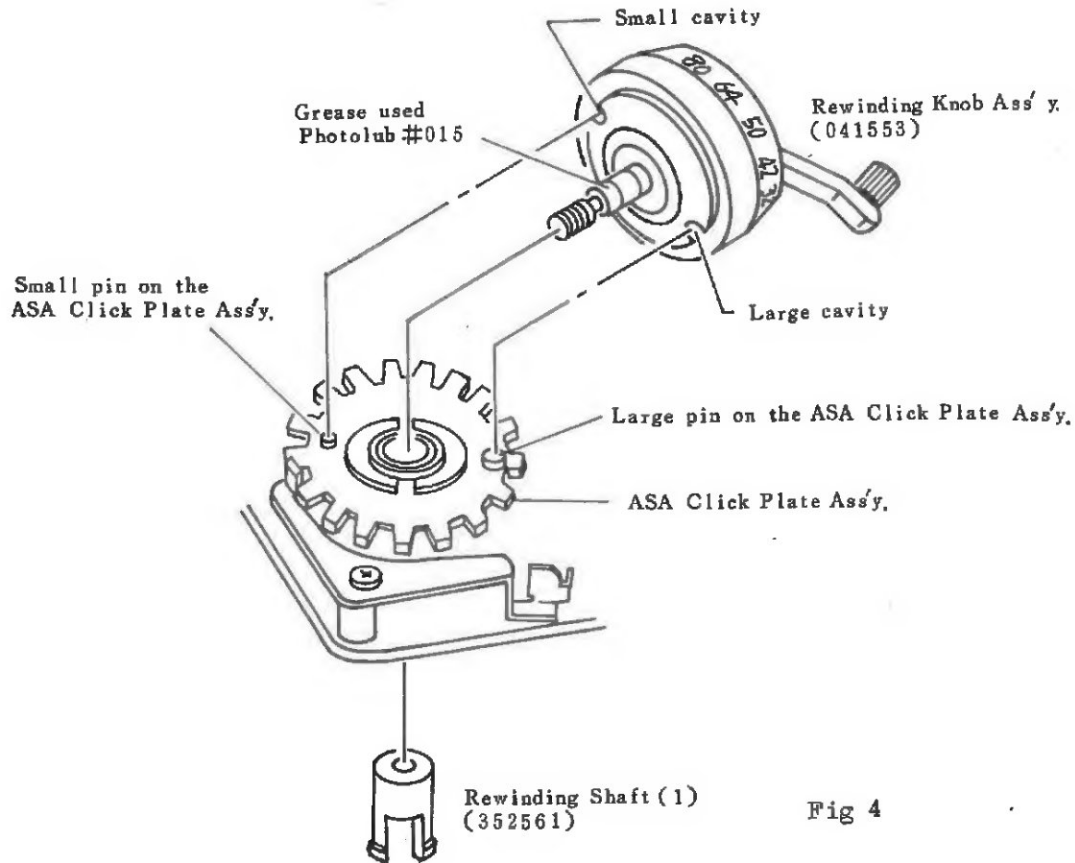


Fig 4

[Note for mounting the Rewinding Knob Ass'y.]

The large cavity of the Rewinding Knob Ass'y engages with the large pin on the ASA Click Plate Ass'y, as shown in (Fig 4).

(4) Disassembling of the Rewinding Knob Ass'y.;

Remove the respective parts ①~⑭ shown in (Fig 5) in numerical order.

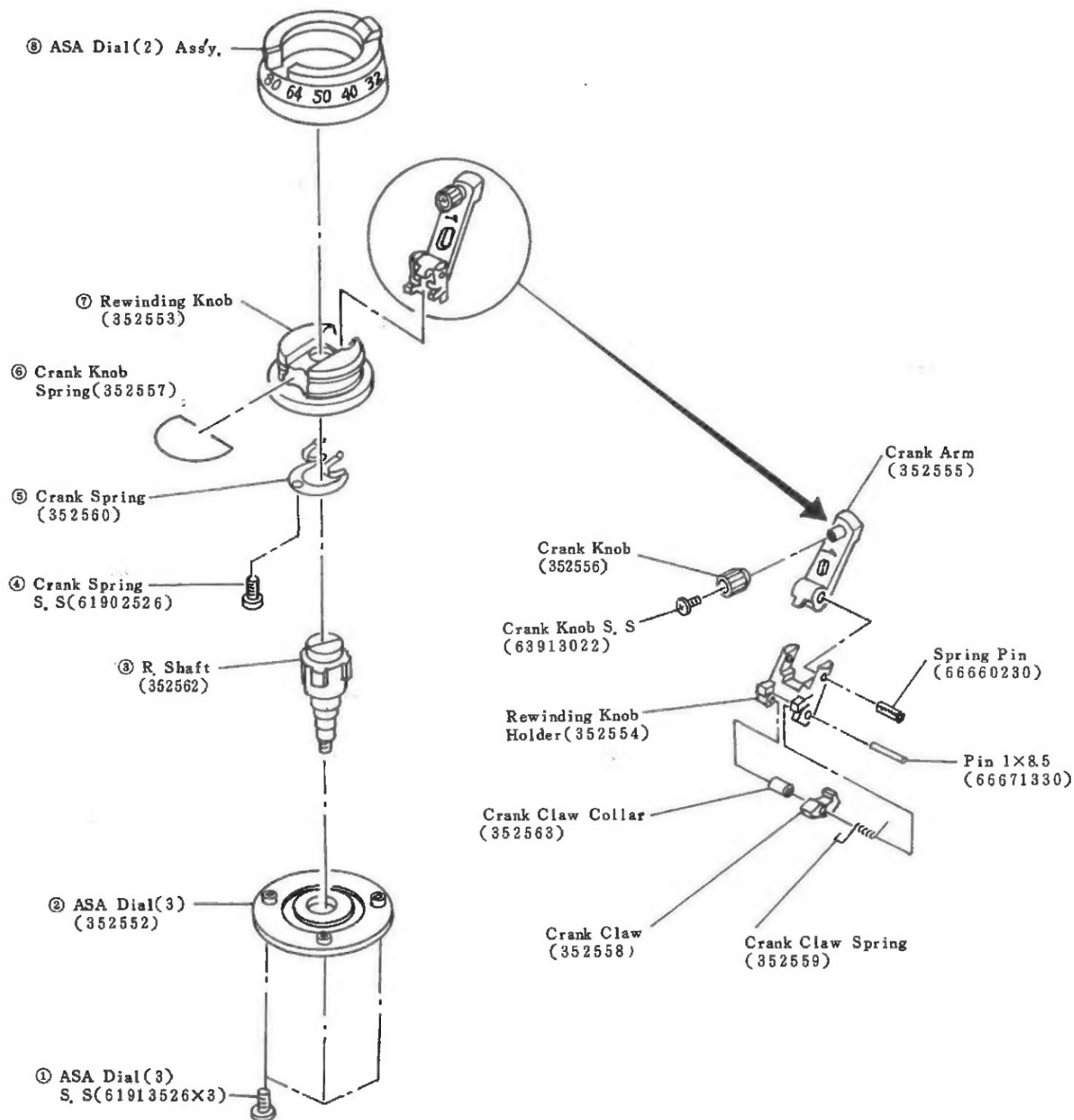


Fig 5

2. DISASSEMBLING OF FLEXIBLE PRINTED CIRCUIT (F. P. C) AND WINDING BASE PLATE ASS'Y.

FLEXIBLE PRINTED CIRCUIT

(1) Unsolder 10 Lead Wires;

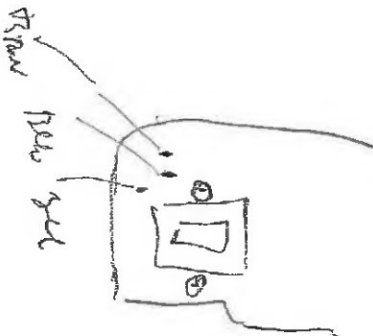
- a) Unsolder Yellow, Brown and Black lead wires (from Body Contact Base).
- b) Unsolder Pink and Grey lead wires (from R2 Switch).
- c) Unsolder Red and Green lead wires (from WE Switch).
- d) Unsolder Black lead wire (from F.LED Base).
- e) Unsolder Red and Purple lead wires (from C.Switch).

See(Fig 6).

(2) Remove the LCD Frame Counter (Liquid Crystal Display);

- a) Remove two LCD Holder Set Screws (63903526×2)
- b) Remove LCD Holder (352401), LCD Panel (352503), LCD Connector (352512×2) and LCD Spacer (352402).
- c) Remove Top Cover Contact Spring (352341) and Top Cover Contact Post (352342).
- d) Remove FPC Set Screw (63904026).

See(Fig 6).



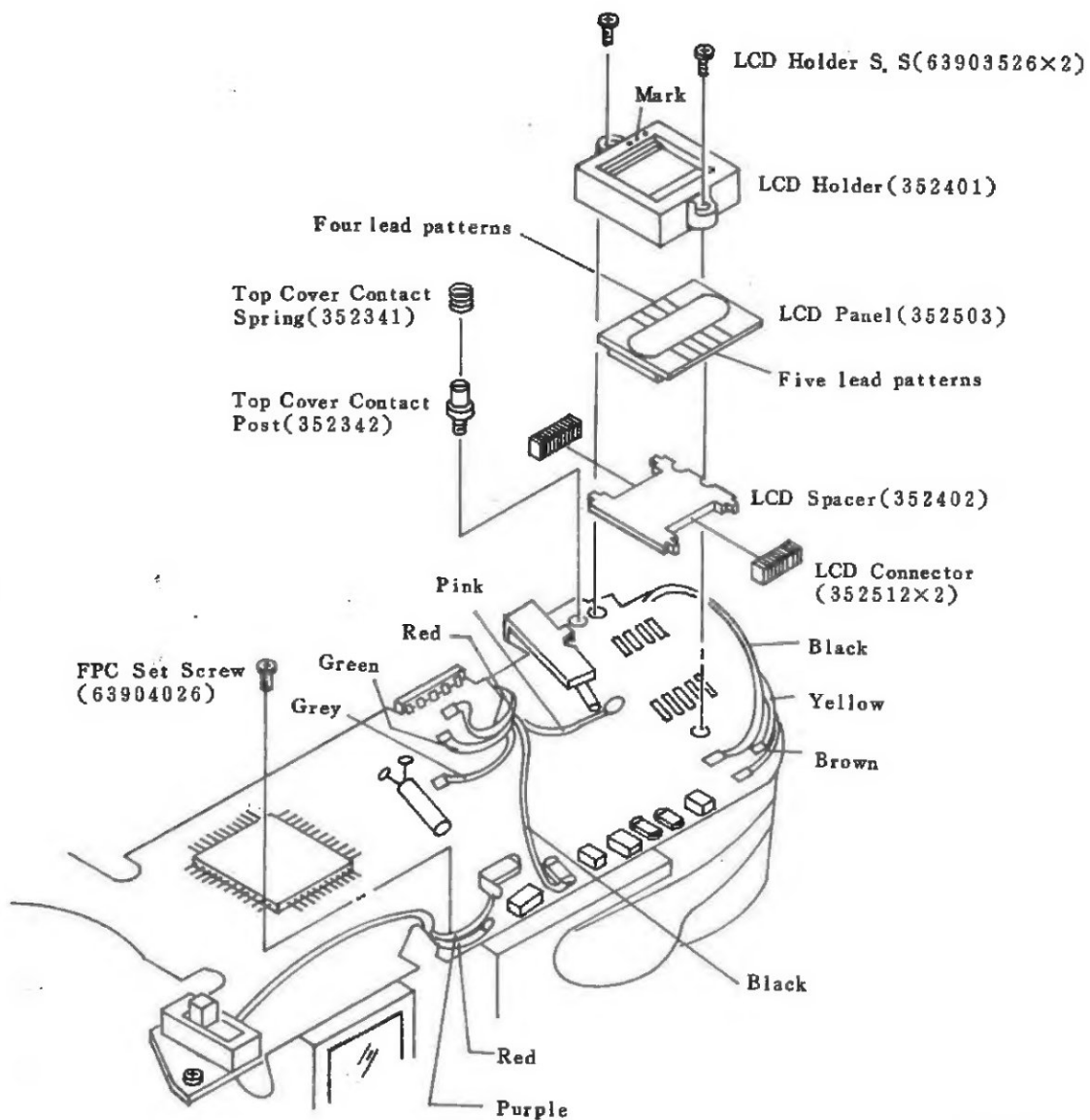


Fig 6

[Note for reassembling]

- a) Clean the contact surfaces of LCD Connector, Lead Patterns of LCD Panel and FPC with alcohol.
- b) Align the Lead Patterns of LCD Panel and Printed Circuit Patterns correctly, shown in (Fig 7) and fix firmly with screws. If it is not correctly position, LCD frame counter does not display.

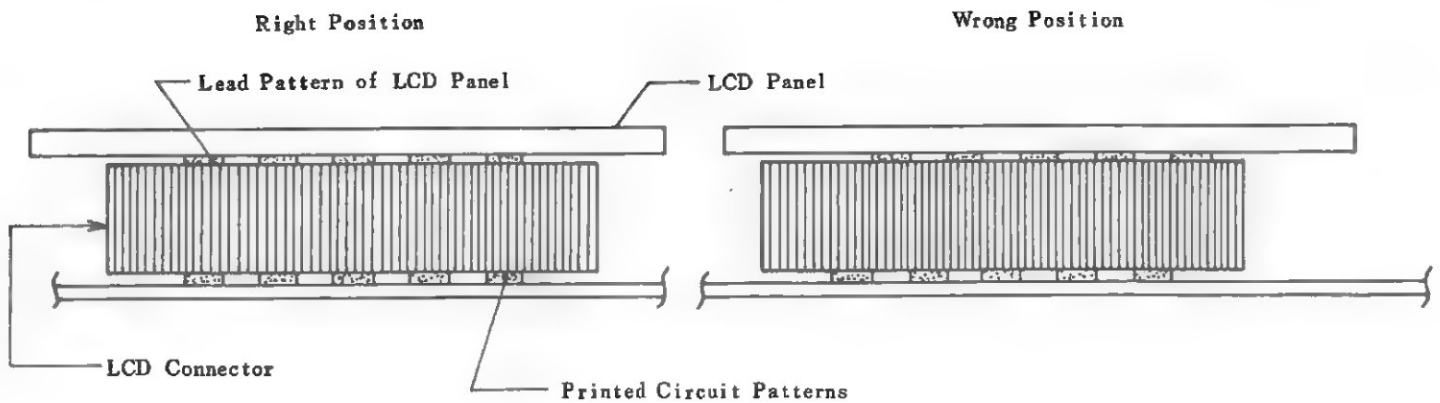


Fig 7

(3) Remove the ASA Base and Self Switch Base Plate;

- a) Remove ASA Lock Plate Spring (352578).
- b) Remove ASA Lock Plate Set Screws (63903026) and ASA Lock Plate Assy (041577).
- c) Remove ASA Click Plate Fixer (352566) and ASA Click Plate Assy (041567).
- d) Remove two ASA Base Set Screws (61901426×2).
- e) Peel off Self Base Mylar (352338).
- f) Remove Self Base Set Screw (61901426).
- g) Remove Self Switch Set Screw (61901426) and Self Switch Assy with FPC.
- h) Remove two Self Switch Base Plate Set Screws (61901426×2), Self Switch Base Plate (352581) and ASA Lock Plate Spring (352578).
- i) Unsolder Orange lead wire (from F-LED Base).
- j) Unsolder five soldering points of LED Array and FPC.

See (Fig 8)

Note: Take care not to deform the click groove of ASA Click Plate and contact of the change mech.

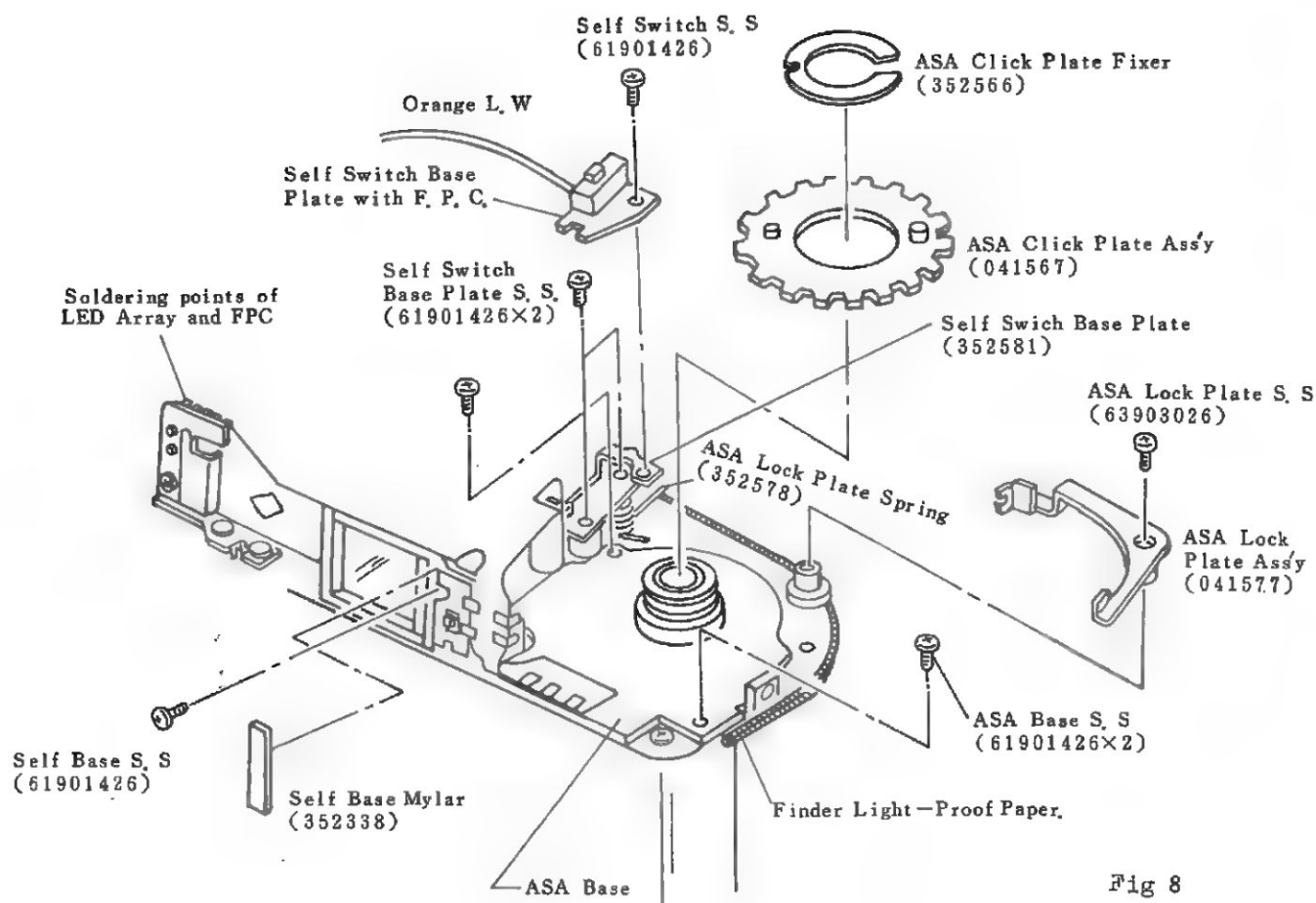


Fig 8

(4) Remove the Range-finder Base;

- a) Peel off Finder Light-Proof Paper (352337).
- b) Remove FPC Ass'y as Shown in (Fig 9).
- c) Remove two Range-finder Base Set Screws (63914026x2) and Range-finder Base (041801).

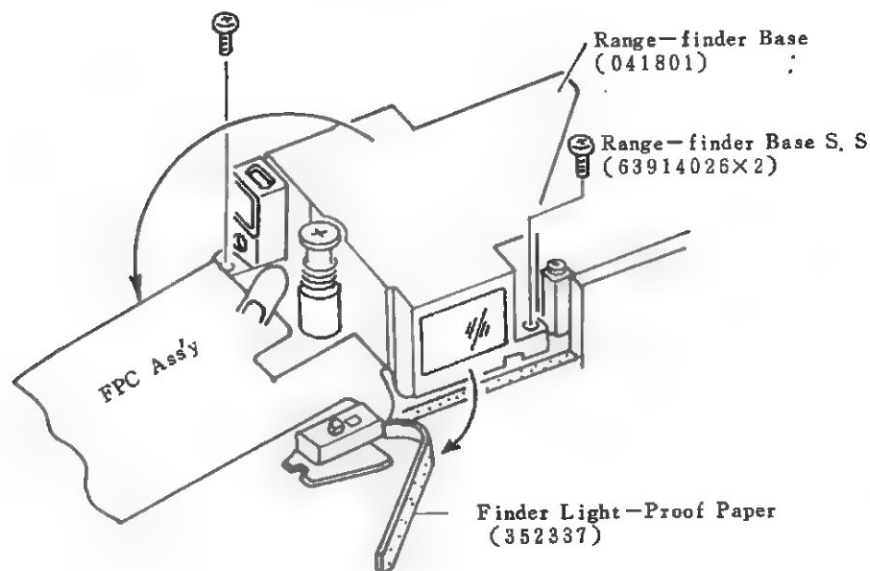


Fig 9

[Note for reassembling Range-finder Base]

- a) The Front Cover is closed part way or complete then reassemble the Range-finder Base in the camera body and tighten two Set Screws (63914026×2).

Adjusting Range-finder for Focusing.

(Coincidence type Range-finder)

※ A Range-finder which obtains distance to the object by coinciding two images of the object delivered by light that reaches the Range-finder through two windows.

. Vertical adjustment at the infinity (∞) position.

a) Peel off Black Tape.

b) Adjust by turning the Coarse Vertical Adjust-screw (A) inner side of Range-finder Base.

c) Check and adjust at the nearest subject distance 1m, and make adjustment by moving the Lever Pin Adjust-plate (B).

It located under the Range-finder Base. See (Fig 11)

d) Check again at the infinity (∞) position.

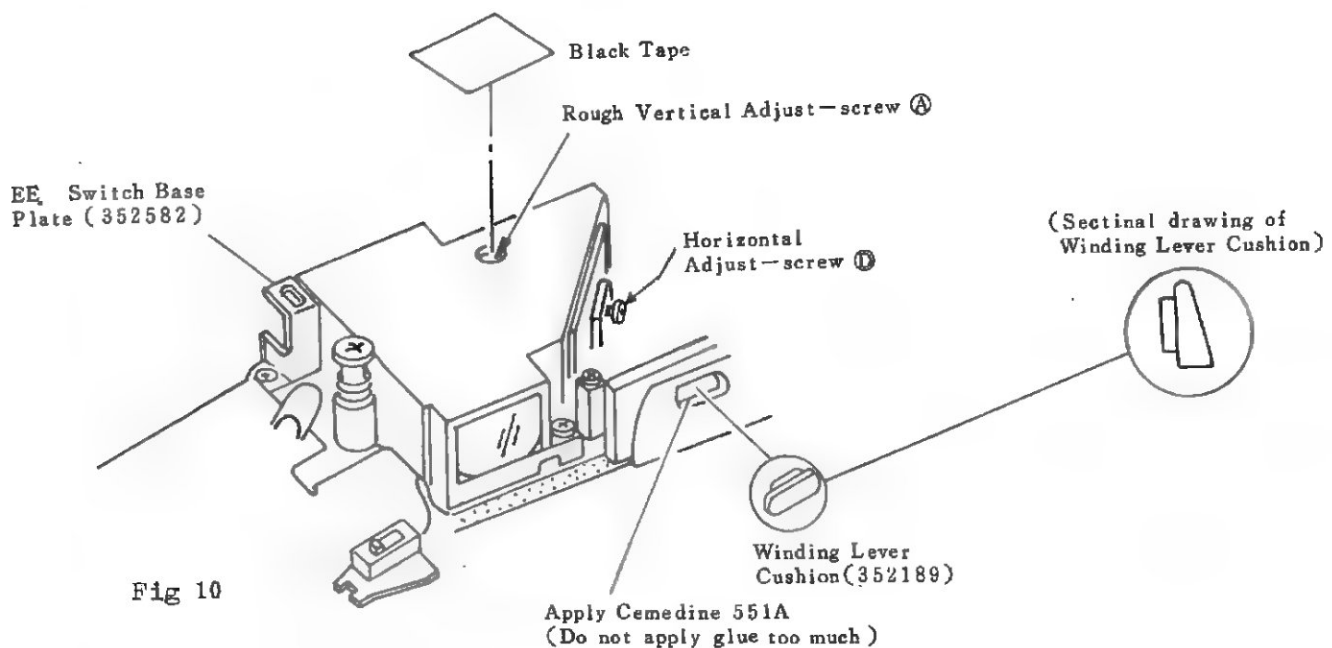
And adjust fine adjustment of vertical, adjust by turning the fine vertical adjust-screw (C) as shown in (Fig 11).

. Horizontal adjustment at the infifinity (∞) position.

e) Peel off Winding Lever Cushion (352189).

f) Adjust by turing the Horizontal Adjust-screw (D).

※ When the adjustment is complete, be sure to secure the screw with adhesive (Screw Lock 1401-B).



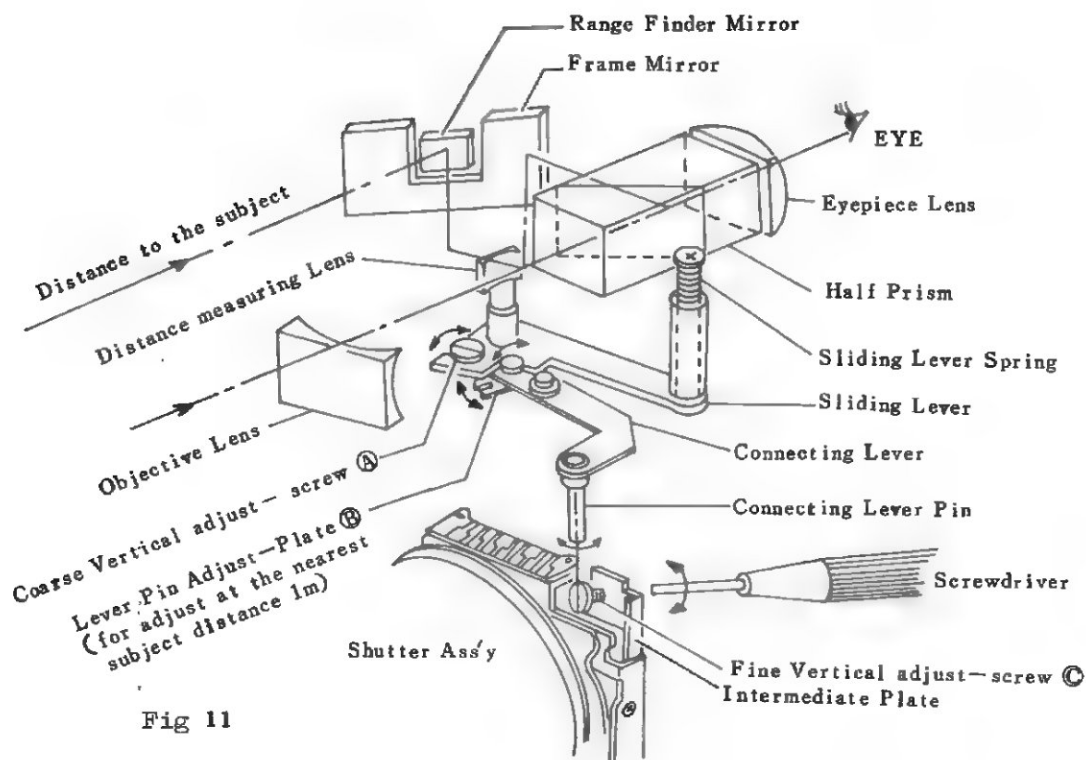


Fig 11

(5) Remove the Winding Base Plate Ass'y;

- Remove the Winding Base Plate Z Pin (352691) in the direction of the arrow as shown below.
- Remove the three Set screws (64114526)(64113026×2).
- Remove the Winding Base Plate Ass'y (041601) in the upward direction.
See (Fig 12)

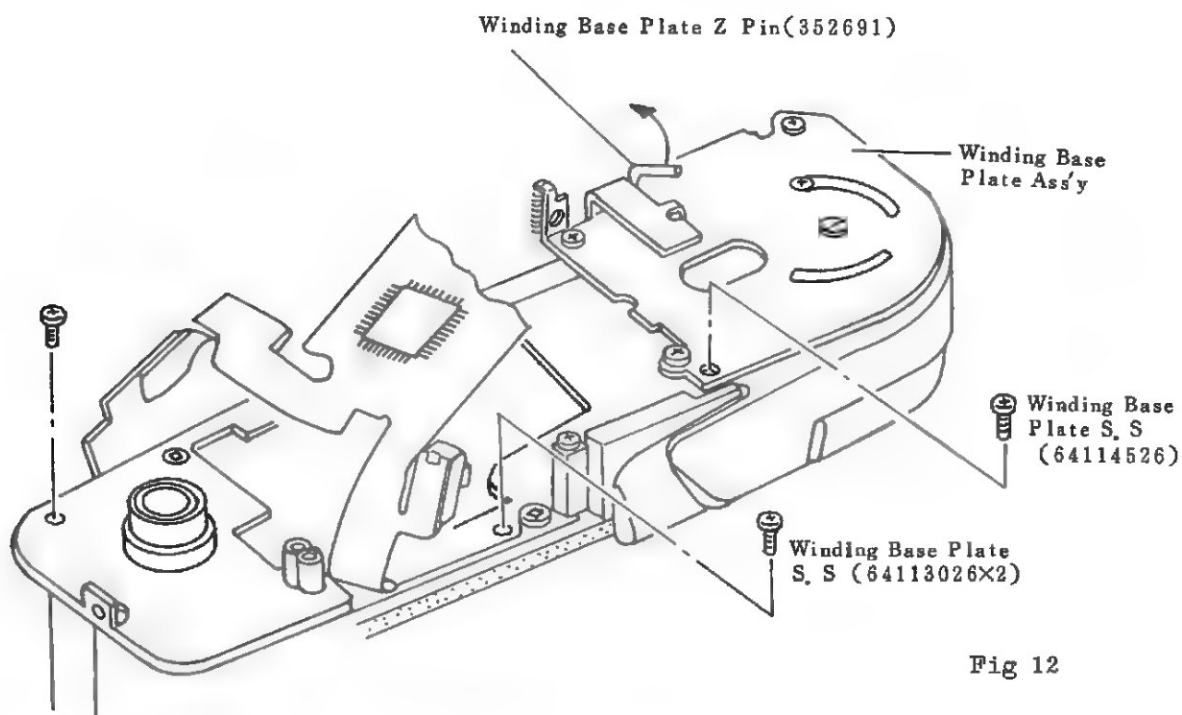


Fig 12

[Note for reassembling Winding Base Plate Ass'y]

- a) The Front Cover is closed part way or complete then reassemble the Winding Base Plate Ass'y in the camera body and tighten three Winding Base Plate S.S (64114526)(64113026×2) and remove the Winding Base Plate Z Pin (352691).

(6) Remove the FPC Ass'y;

- a) Unsolder Red lead wire (from Battery Base Plate) and Black lead wire (from Battery Case).
- b) Remove four Switch Base Plate Set Screws (61912026×3)(61812026) and FPC Ass'y (041501).
- c) Remove the Shutter Set Pin (352147).

[Note for disassembling and reassembling]

- a) Shutter Set Pin (352147) easily falls off when the camera body is turned upside-down.
- b) Make sure the Shutter Set Pin is in position when reassembling.
- c) Do avoid damage to the Shutter Switch during the repair.

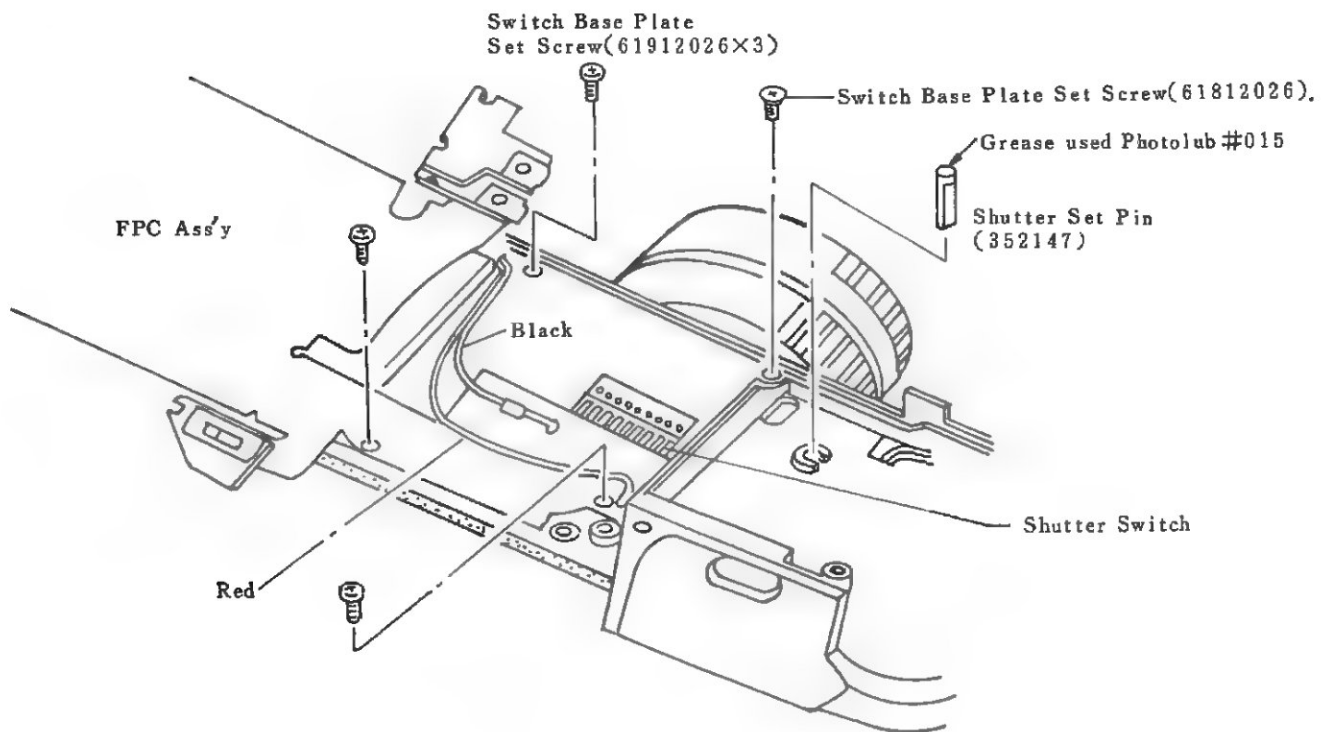


Fig 13

(7) Disassembling of the Winding Base Plate Ass'y;

Remove the respective parts ①~⑮ shown in (Fig 14) in numerical order.

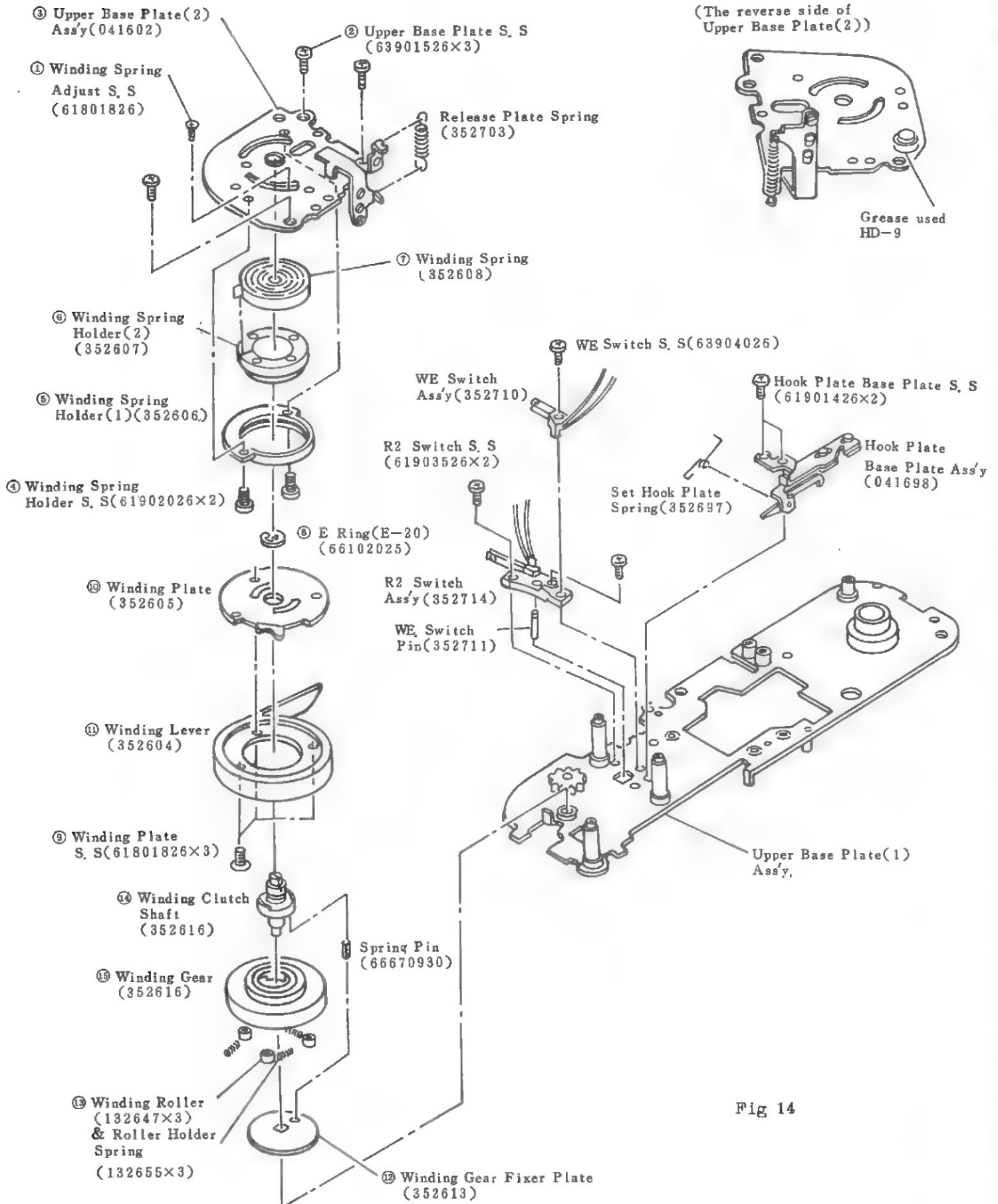


Fig 14

[Reassembly of Winding Lever with Winding Gear and Winding Roller]

- Set Winding Lever (352604) and Winding Gear (352612) upside down and assemble the following parts ① through ⑤ in this sequence.

- ① Winding Lever (352604)
- ② Winding Gear (352612)
- ③ Winding Roller (132647×3)
- ④ Roller Holder Spring (132655×3)
- ⑤ Winding Gear Fixer Plate (352613)

Note: Remove any oil from Winding Roller Winding Clutch Shaft and inside of Winding Gear.

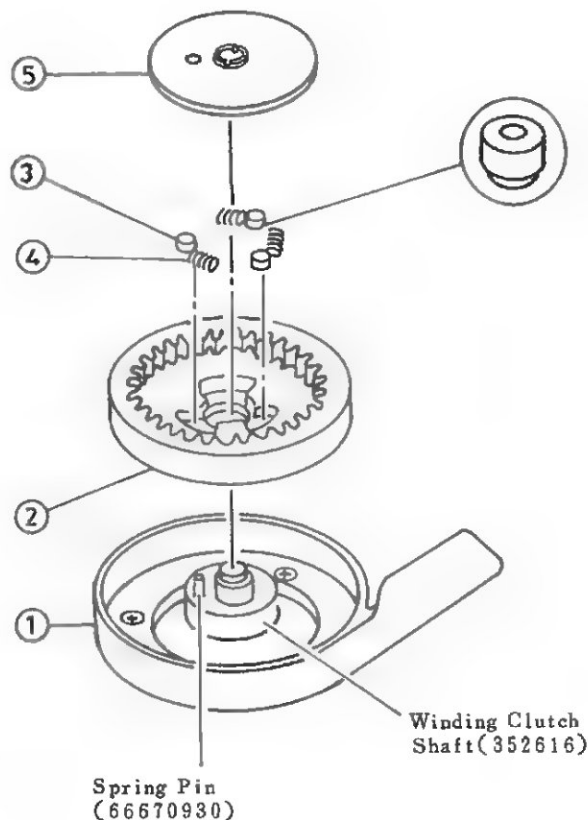


Fig 15

[Operating reliability of Winding Lever]

A single stroke of the Winding Lever must cause film feeding to the next frame and charging of the Shutter without fail.

Even when winding operation is performed abruptly, the Shutter must be set without fail.

Smoothness of operation.

Film must be wound smooth with no remarkable seizure, rattling, friction, creak or abnormal noise at the initial stage.

Force required for turning.

Measure without film set in position.....1.5 Kg-cm Max.

Measure with film set in position.....2.5Kg-cm Max.

[Check and Adjustment of Winding and Release Lock Mechanism]

(1) Force required for turning Adjustment of Winding Lever.

- a) Turn the Winding Spring (352608) about one-half ($1/2$ time) to the clockwise to provide the spring with a restoring force.
- b) To apply torque to Winding Lever, rotate Winding Spring Holder (2) (352607) turns Clockwise and by adjusting position of Winding Spring Adjust Set Screw (61801826).

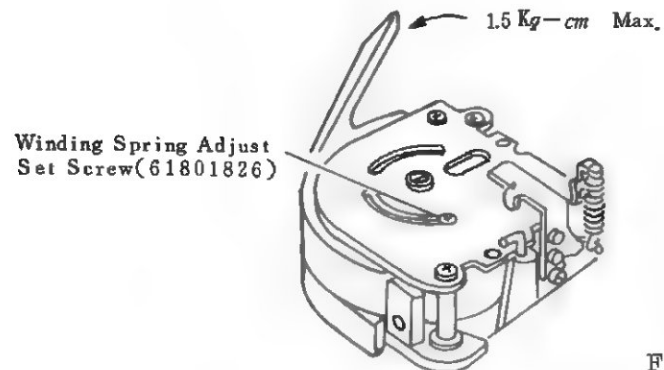


Fig 16

(2) Release Lock Mechanism.

- a) Check and adjustment of the Release Lock Plate correct position when Front Cover is opened or closed.
- b) Adjust by bending Release Lock Plate.

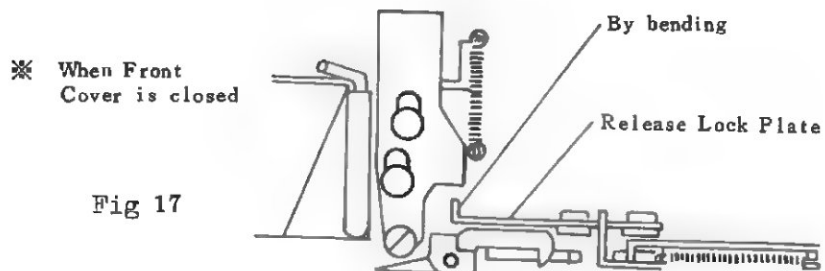


Fig 17

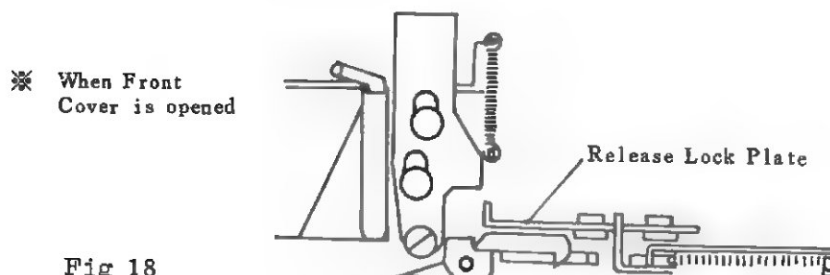


Fig 18

- c) Set the Body Cover into the camer Body.
- d) The Winding Lever is advanced complately.
- e) The Front Cover is closed part way.
- f) When pushing the Release then Release is locked and does not touch with Hook Plate Claw and Release as shown in (Fig 19).
- g) Adjust by turing the Eccentric Post.
- h) Pushing the Release when the Front Cover is opened completely then the Hook Plate Claw is released from the Set Plate.

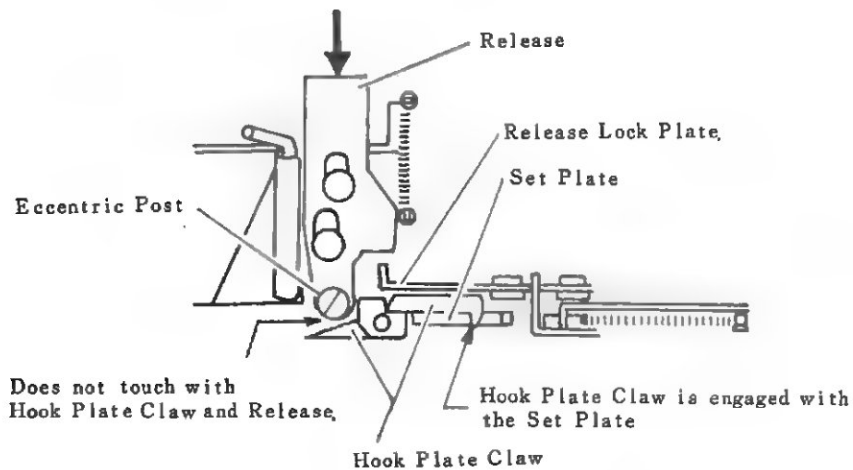


Fig 19

(3) Check and Adjustment of Winding.

- a) Release the Shutter.
- b) Winding does not operate when Front Cover is closed.
- c) If winding operate when Front Cover is closed, adjust by bending W. Wire(352724) located under the Upper Base Plate(1) Assy as shown in (Fig 20).

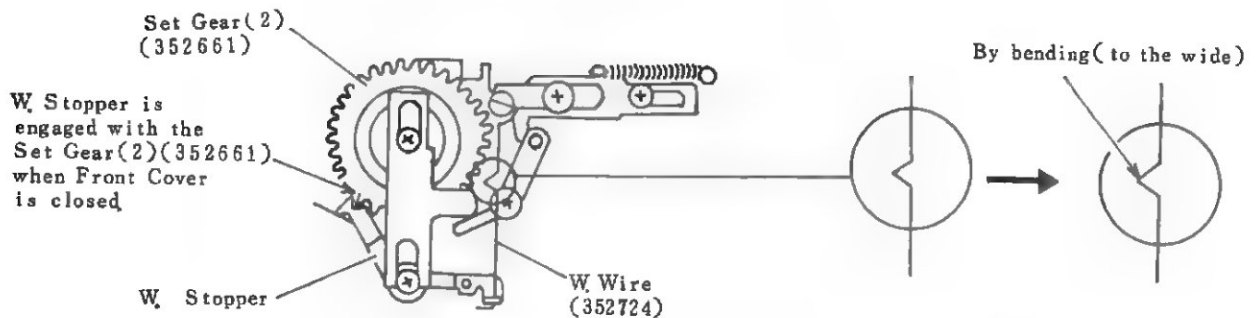


Fig 20

- d) Winding is not smooth(creak) when Front Cover is opened completely.
- e) Adjust by bending W. Wire (352724) as shown in (Fig 21).

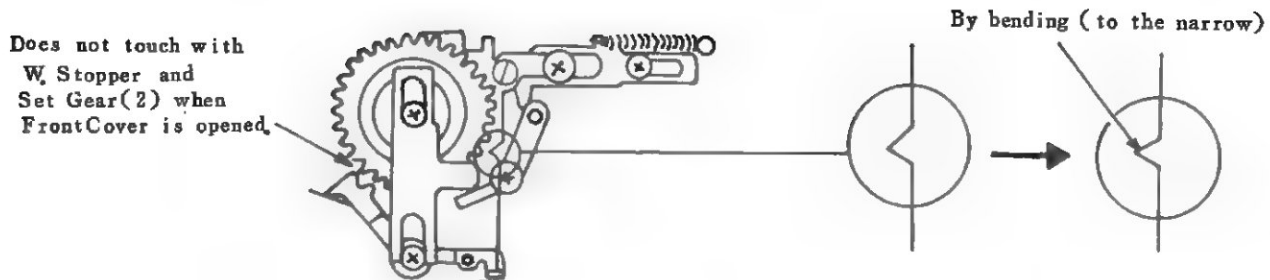


Fig 21

[Check and Adjustment of Switch.]

a) R(2) Switch.

R(2) Switch is arranged on the Upper Base Plate Ass'y. When the Shutter Release Button is depressed, R(2) Switch is changed to "ON" to supply electric power to the electric circuit. and R(2) Switch should be "OFF" When the film Advance Lever is stroked fully.

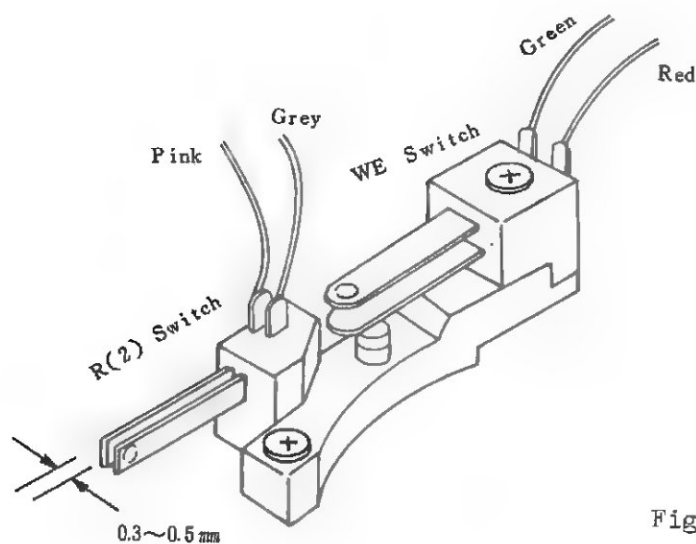


Fig 22

b) WE. Switch.

This switch is starting to activate the LCD Frame Counter, turned "ON" by cocking the film Advance Lever part way (See Fig 23) and the WE Switch should be "OFF" when the film Advance Lever is stroked fully.

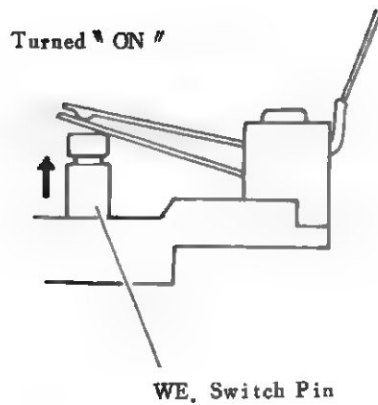


Fig 23

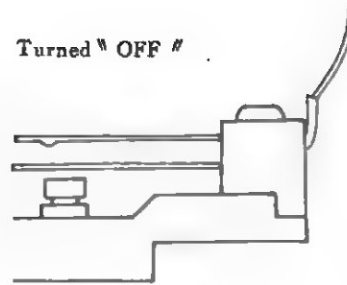


Fig 24

c) C. Switch

This switch is reset the LCD Frame Counter.

Turned "ON" by removing the Body Cover (See Fig 25) and turned "OFF" by replacing the Body Cover (See Fig 26).

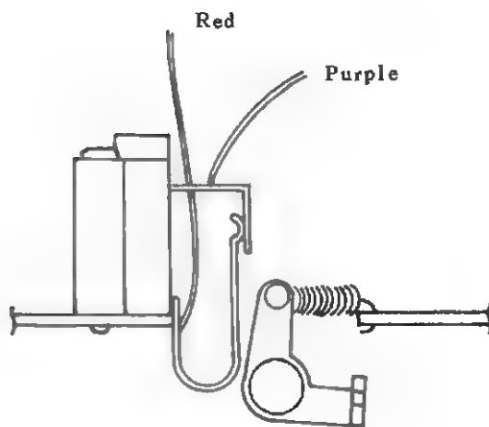


Fig 25

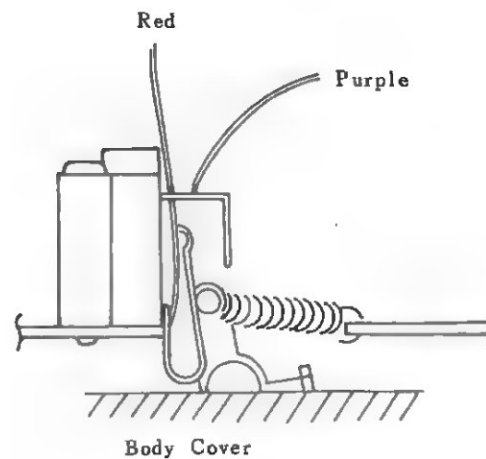


Fig 26

d) EE Switch

EE Switch is arranged on the FPC Assy. When the backlight compensation is used, the exposure value will be increased by 1.5EV.

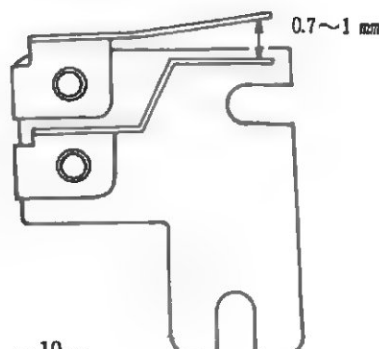


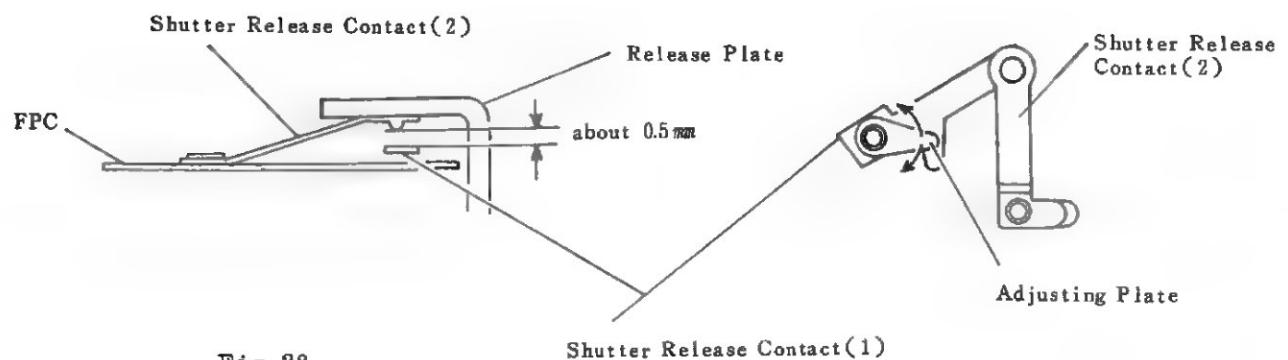
Fig 27

e) Shutter Release Switch

Shutter Release Switch is arranged on the FPC Ass'y.

By depressing the Shutter Release Button about 0.5mm, Shutter Release Switch is turned "ON" and then exposure LED will light up in viewfinder. Then press Shutter Release Button all the way the Hook Plate Claw is released from the Set Plate. See(Fig 19) Adjust by turning Adjusting Plate as shown below.

Note: The Adjusting Plate must be locked with solder after adjustment.



3. DISASSEMBLING OF SHUTTER ASS'Y WITH FRONT COVER

(1) Body Aperture Ass'y;

- a) Remove four Aperture Set Screws (61801826×4) and Aperture Ass'y (041175) toward from the camera body.
 - b) Pull out Light-proof Barrel (A4-338) and peel off Shutter Light-proof Cloth (A4-1020).
- See (Fig 29)

Note: Take care of Aperture Ass'y (041175) when removing, otherwise Aperture Ass'y will be bend.

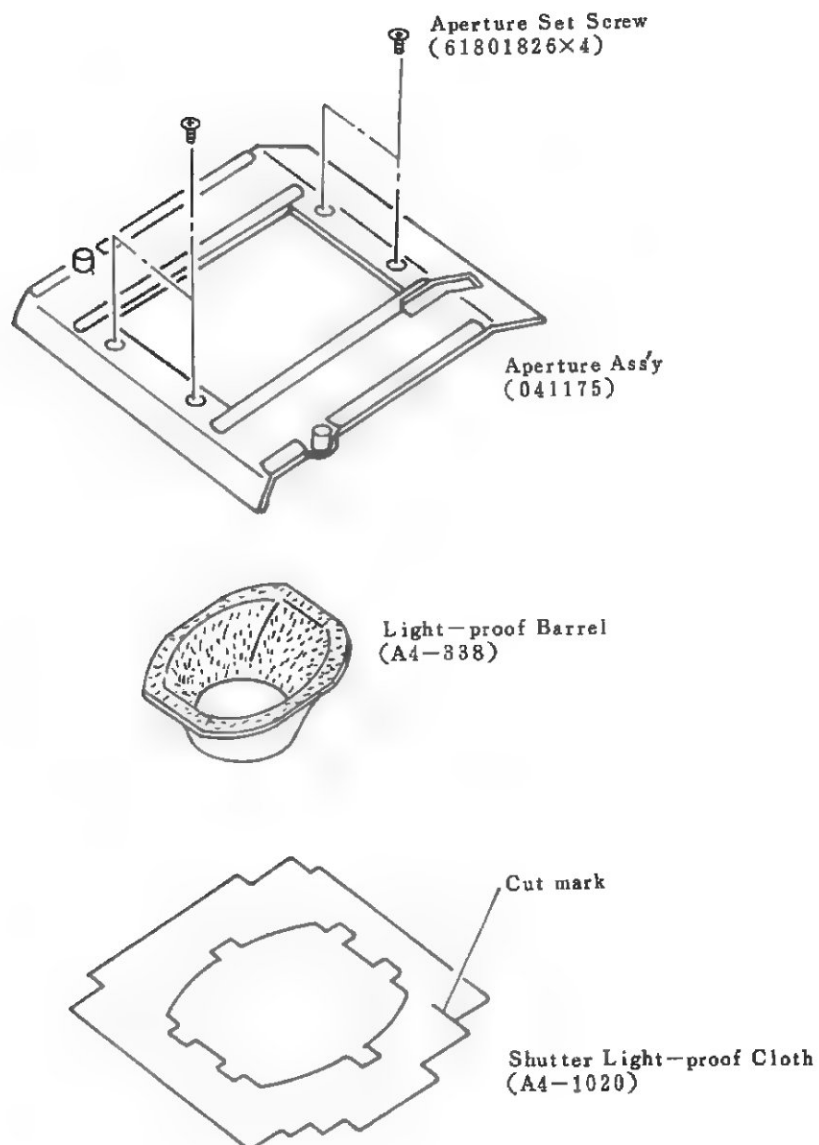
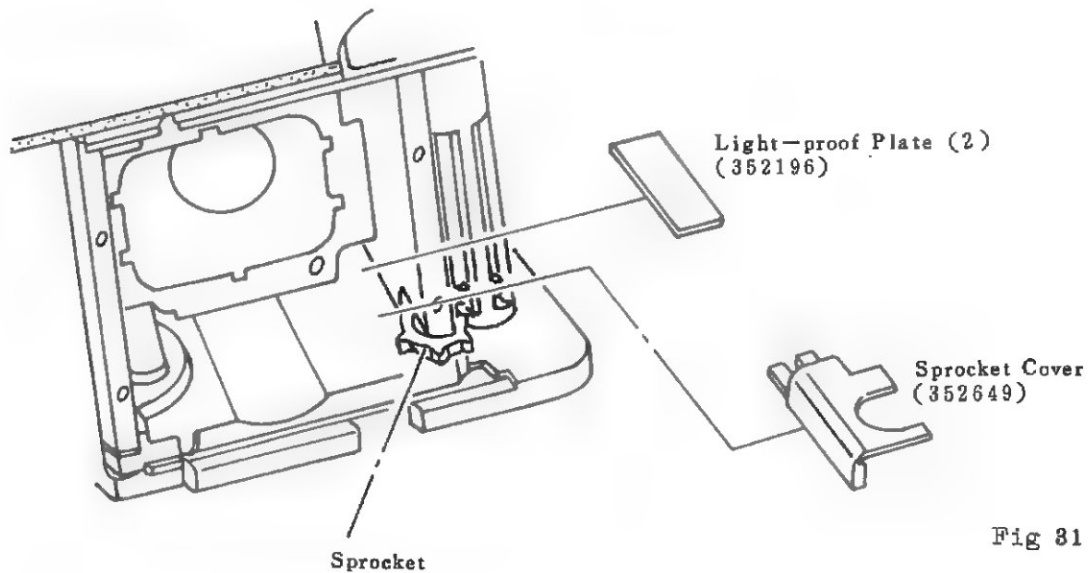
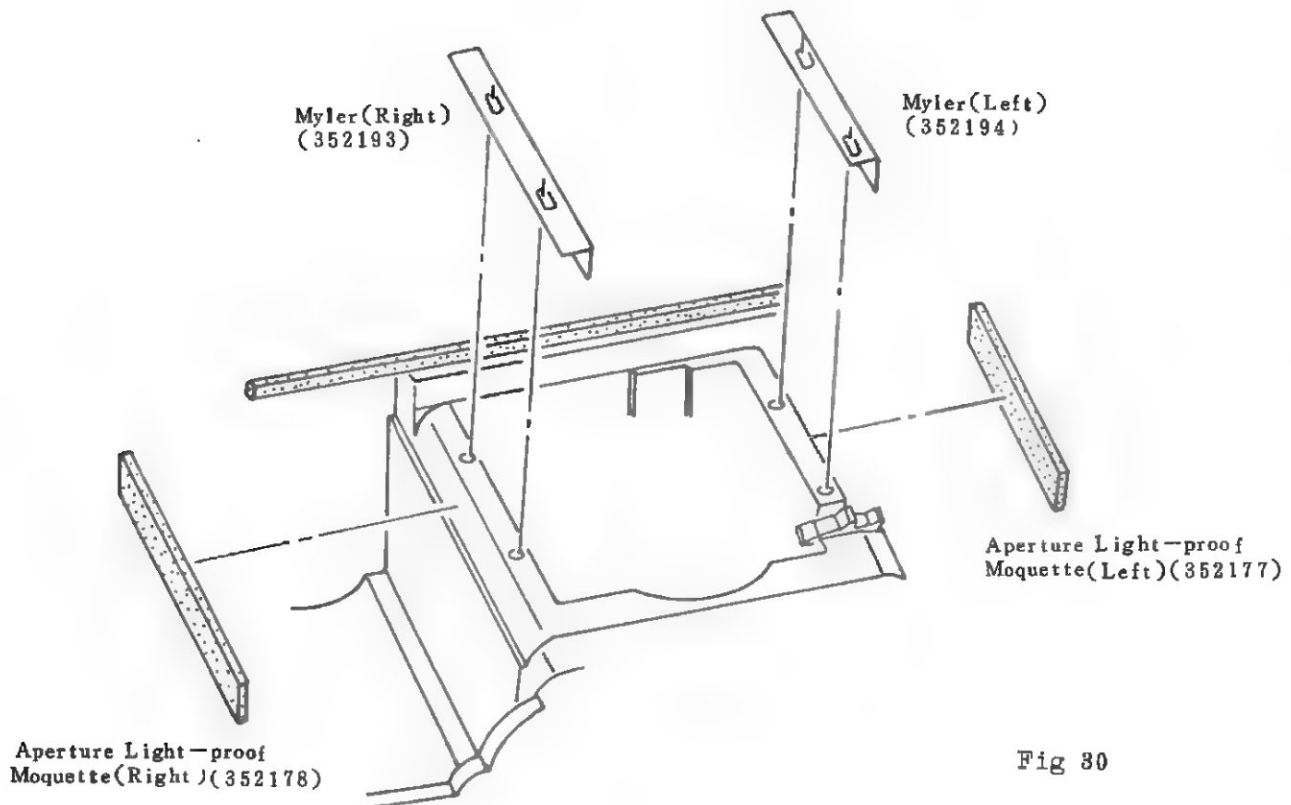


Fig 29

- c) Peel off Aperture Light-proof Moquette(Left) (352177) and Aperture Light-proof Moquette (Right) (352178).
- d) Peel off Myler (Left)(352194) and Myler (Right)(352193).
- See (Fig 30)

Note: Used Mylers are not re-usable.

- e) Peel off Light-proof Plate(2)(352196) and Sprocket Cover (352649).
- See (Fig 31)



[Note for reassembling Sprocket Cover]

- a) Reassembling the Sprocket Cover (352649) and Light-proof Plate(2) (352196) are in position as shown in (Fig 32).

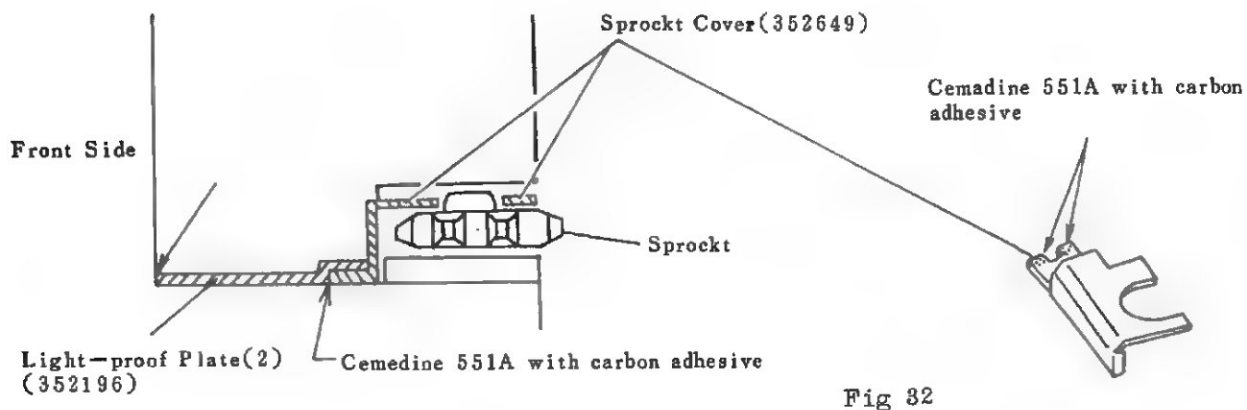


Fig 32

(2) Battery Case;

- a) Remove the Battery Cap Ass'y (041162).
 b) Remove four Battery Base Plate Set Screws (61913526)(61812529×3) and Battery Base Plate Ass'y (014159). See (Fig 33)
 c) Unsolder Red lead wire (From FPC Ass'y).
 See (Fig 34)

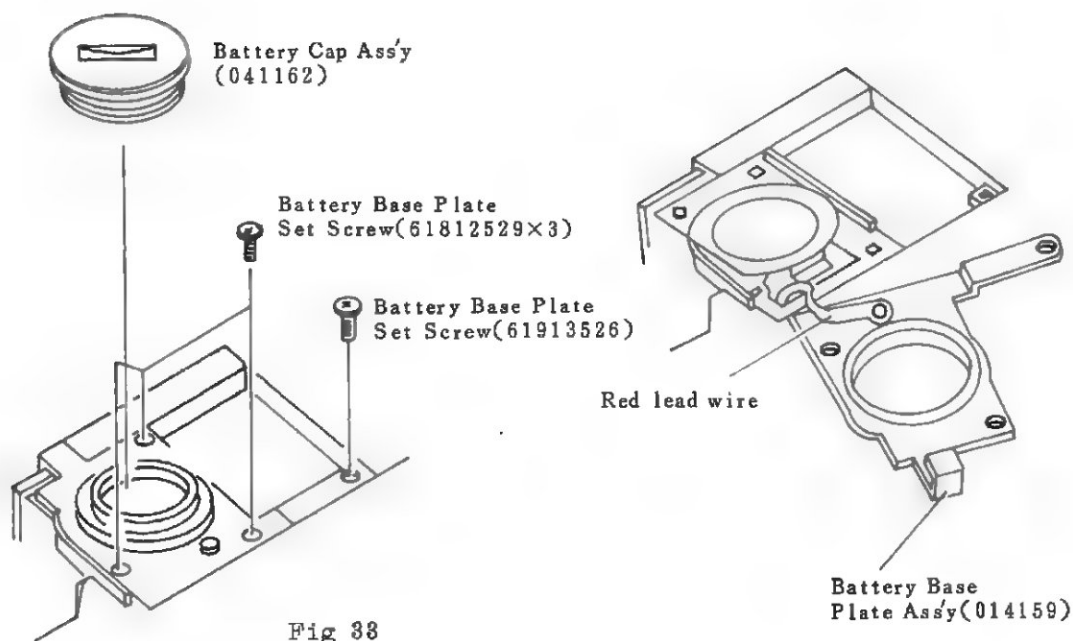


Fig 33

Fig 34

d) Remove the Shielding adhesive from around the Battery case (Fig 35).

※ Thinner is solvent of shielding adhesive.

e) Pushing the Battery Case downward in direction of arrow as shown in (Fig 35)

f) Unsolder Black lead wire (From FPC Ass'y).

See (Fig 36)

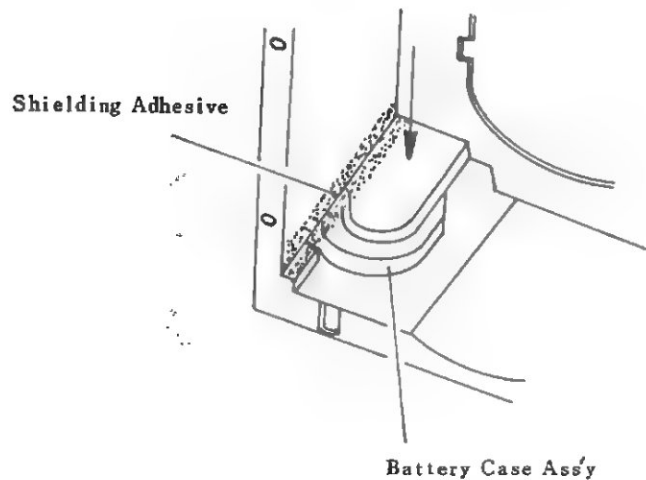


Fig 35

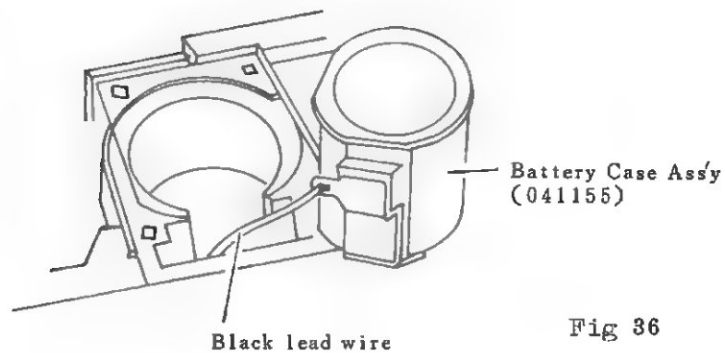


Fig 36

(3) Shutter Ass'y with Front Cover;

a) Remove six Front Cover Set Screws (61812529×6)

b) Remove the Shielding adhesive from around the corner of camera body as shown in (Fig 38)

c) While pushing the Shutter Ass'y forward slowly from camera body as shown in (Fig 38)

d) Remove the Release Plate (352180), Release Pin (352181) and Release Pin Spring (352181).

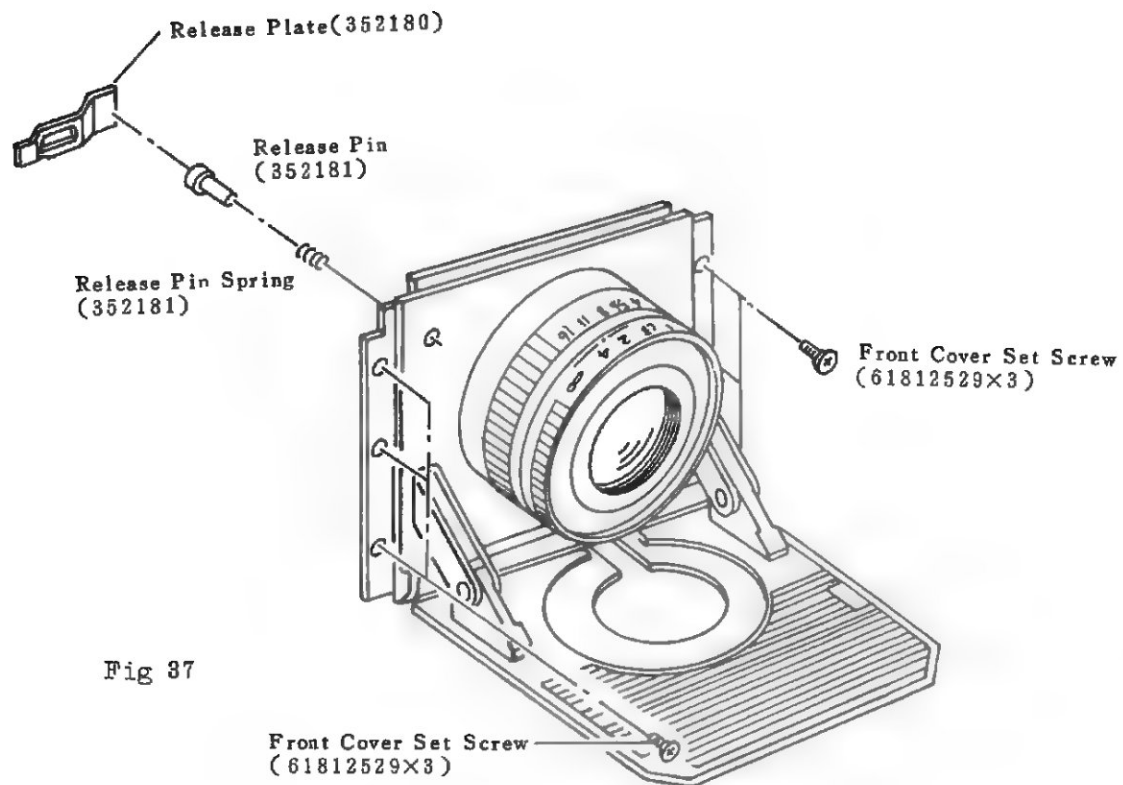


Fig 37

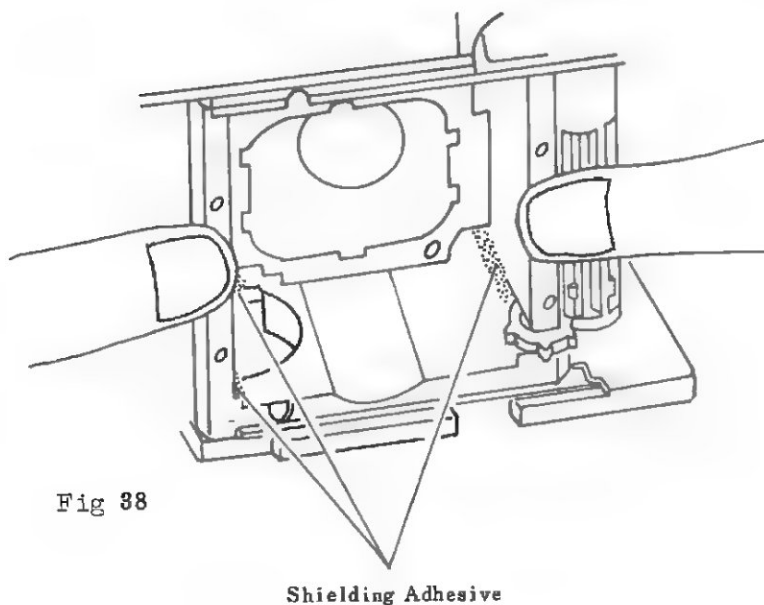


Fig 38

[Note for checking Front Cover operations]

When check Front Cover and Arm for their operations, hold the on the left and right side of the Arm softly as shown in (Fig 39)
They should normally be operated smooth.

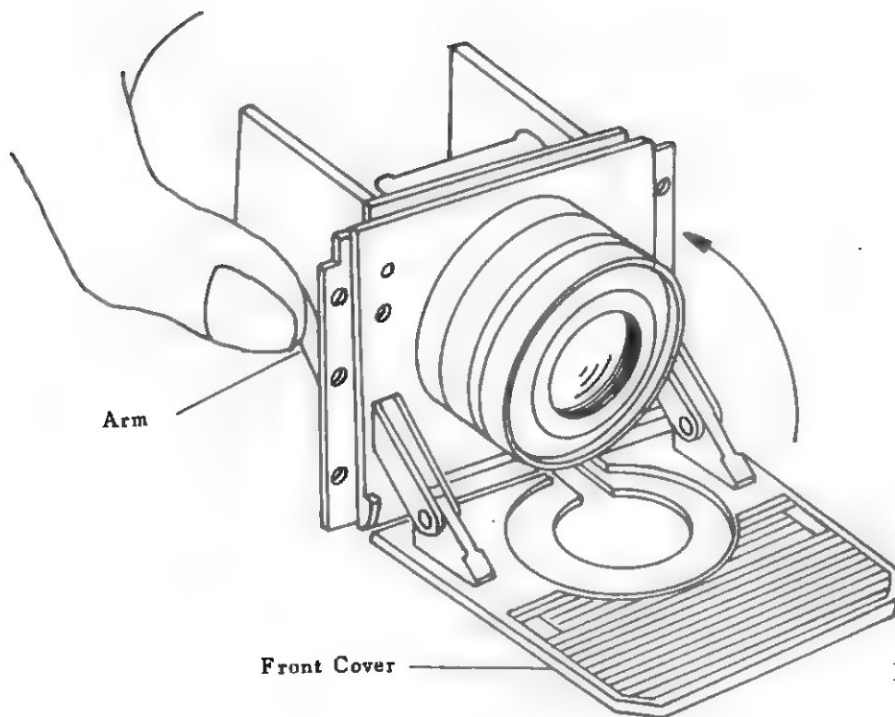
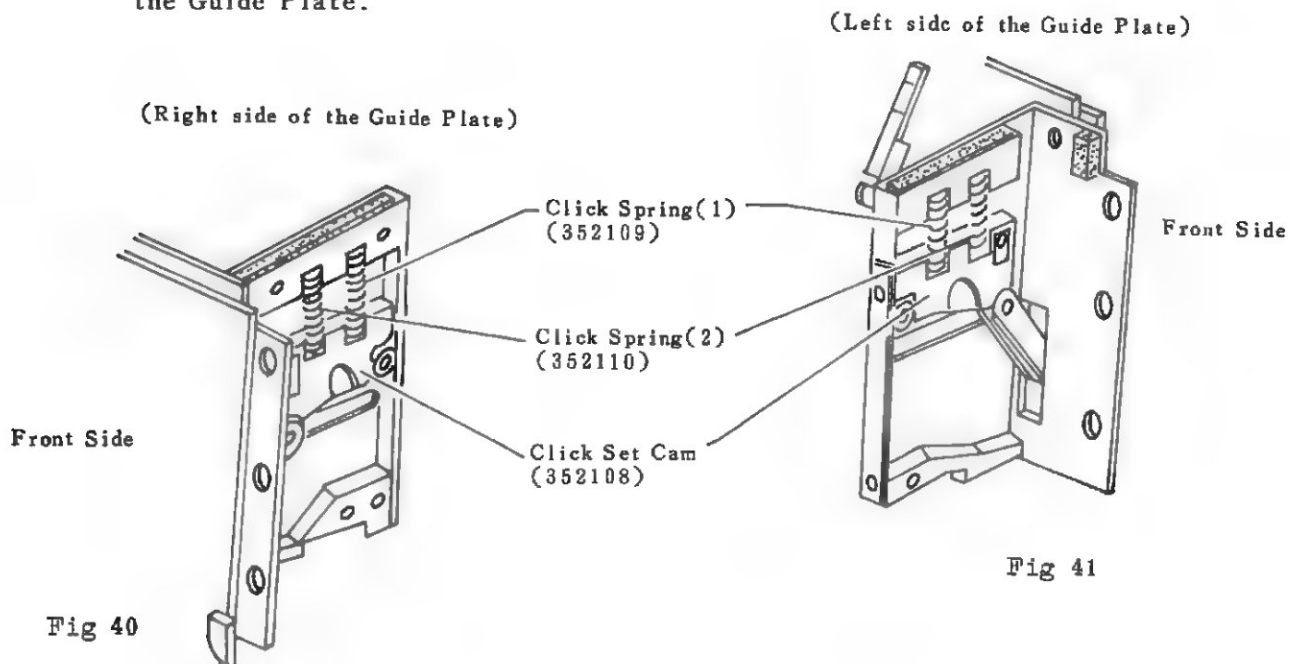


Fig 39

(4) Shutter Ass'y;

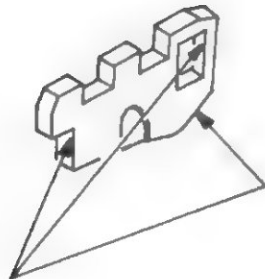
- a) Remove two Click Spring(1)(352109×2) and Click Spring(2)(352110×2) on the left and right side of the Guide Plate.
- b) Remove two Click Set Cam (352108×2) on the left and right side of the Guide Plate.



Note:

	Exterior finish	(Elastic force)
Click Spring(1)(352109).....	Brass color	(strong)
Click Spring(2)(352110).....	Chorme color	(weak)

Lubricate the Click Set Cam



Grease used Photolub #015

Fig 42

Lubricate the Click Spring(1) & (2)

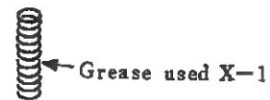


Fig 43

- c) Pushing the Shutter Ass'y forward in direction of arrow as shown in (Fig 44).

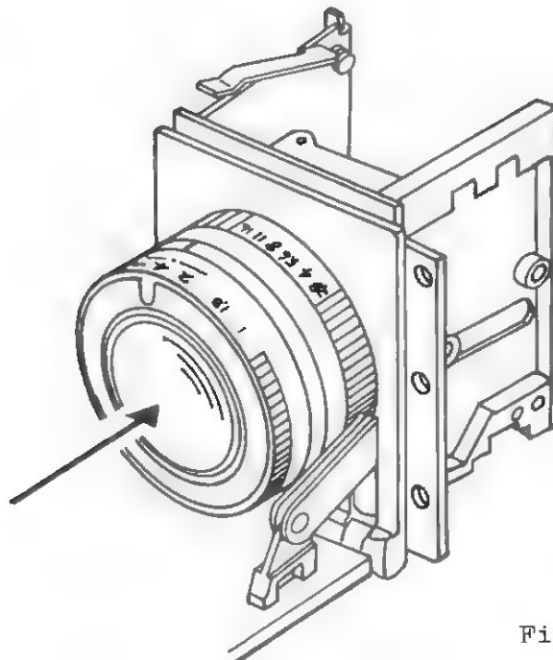


Fig 44

[Note for reassembling Shutter Ass'y into the Guid Plate]

- Front Cover is closed
- hold the on the left and right side of the Arm softly. See (Fig 45)
- Reassemble the Shutter Ass'y into the Guid Plate then the pin of the Arm should engage into the hole of the shutter.

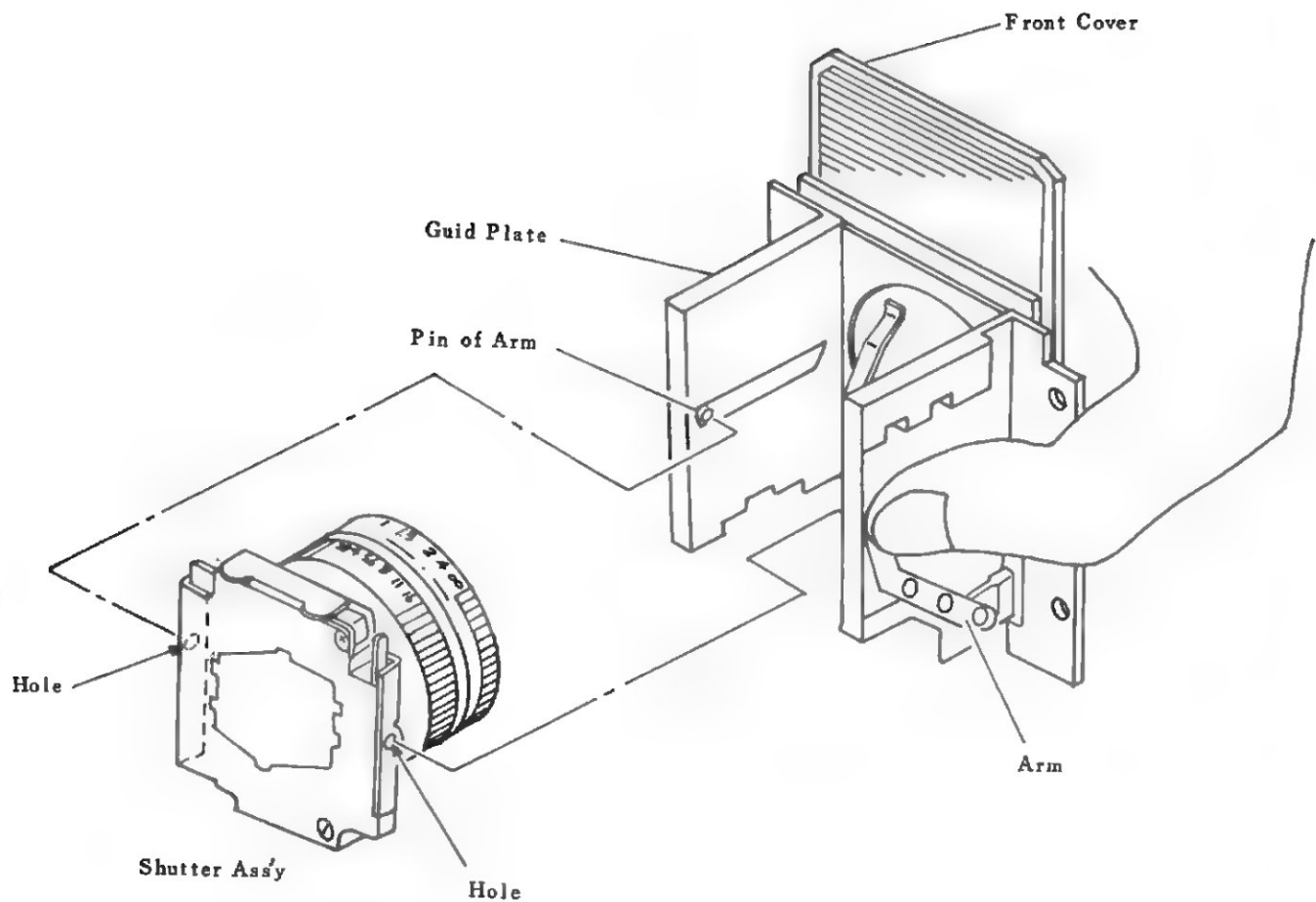
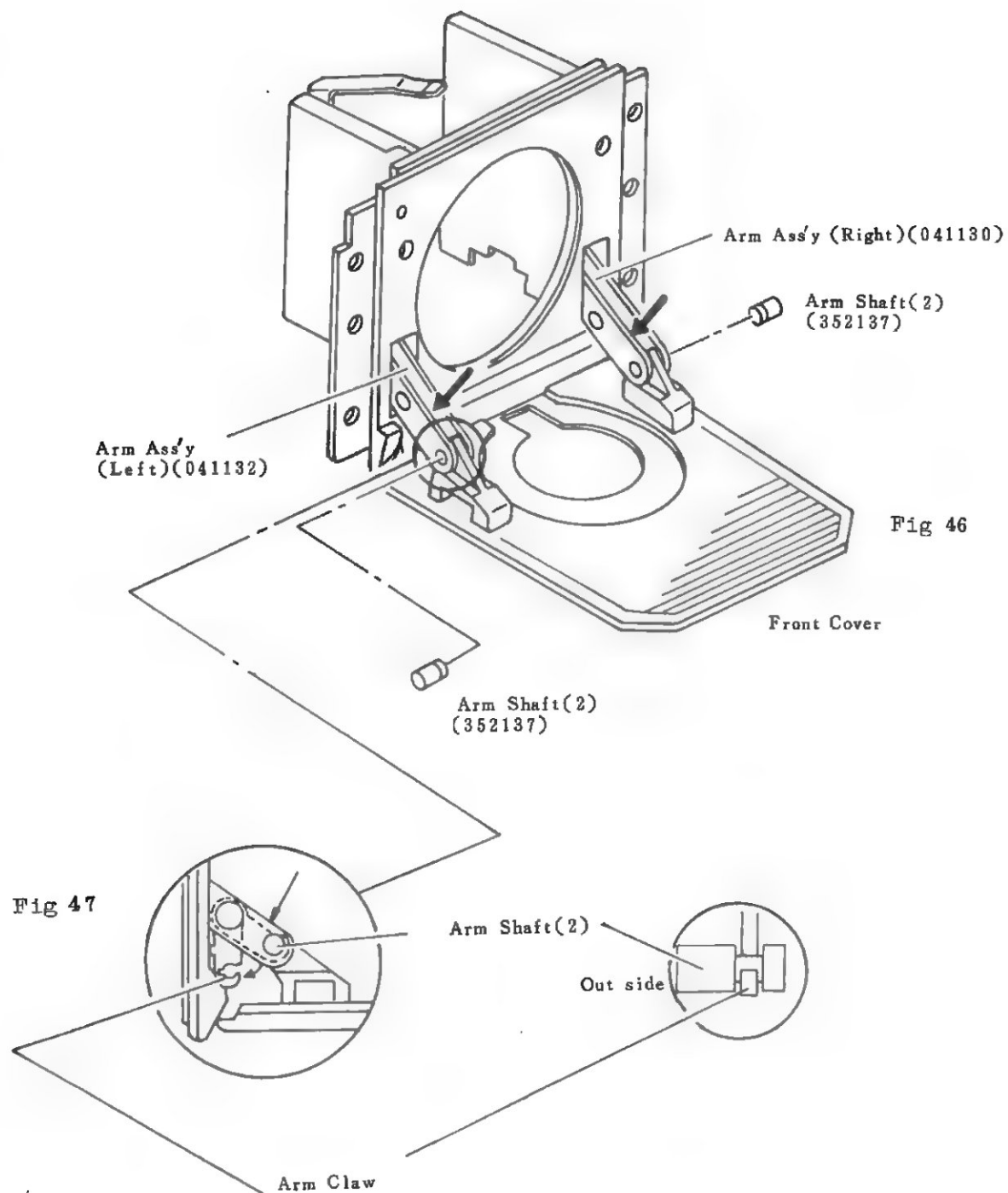


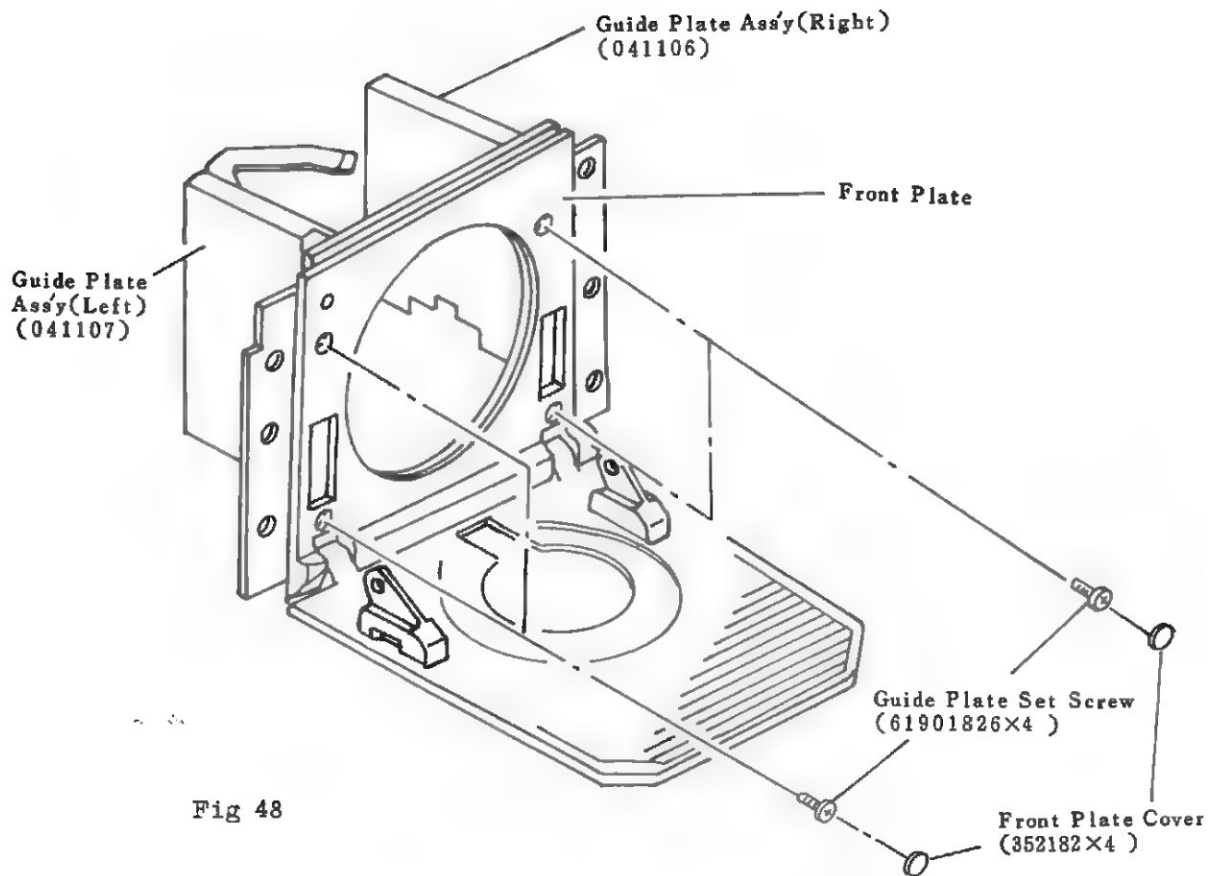
Fig 45

(5) Front Cover;

- a) Push the Arm Claw (Left)(352142) and Arm Claw (Right)(352141) insid of Arm Ass'y in the direction of the arrow as shown in (Fig 47).
- b) Romove the Arm Shaft(2)(352137) left and right side.
See (Fig 46)
- c) Romove the Arm Ass'y (Left)(041132) and Arm Ass'y (Right) (041130) from Front Cover.



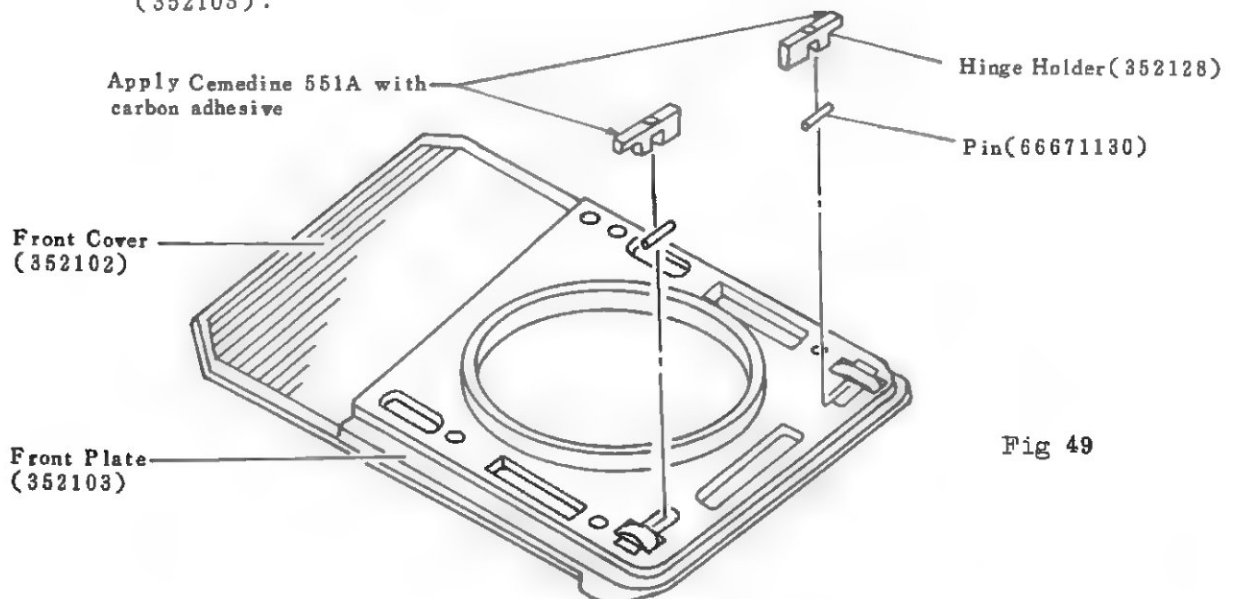
- d) Remove four Front Plate Covers(352182×4).
- e) Remove four Guide Plate Set Screws (61901826×4), Guide Plate Ass'y (Left)(041107) and Guide Plate Ass'y (Right)(041106).



※ Front Plate and Front Plate Cover are glued with cemedine 551A.

f) Remove two Hinge Holder (352128×2).

g) Remove two Pin (66671130×2), Front Cover (352102) and Front Plate (352103).



(6) Disassembling of the Guid Plate (Right) & (Left)

a) Guid Plate (Right);

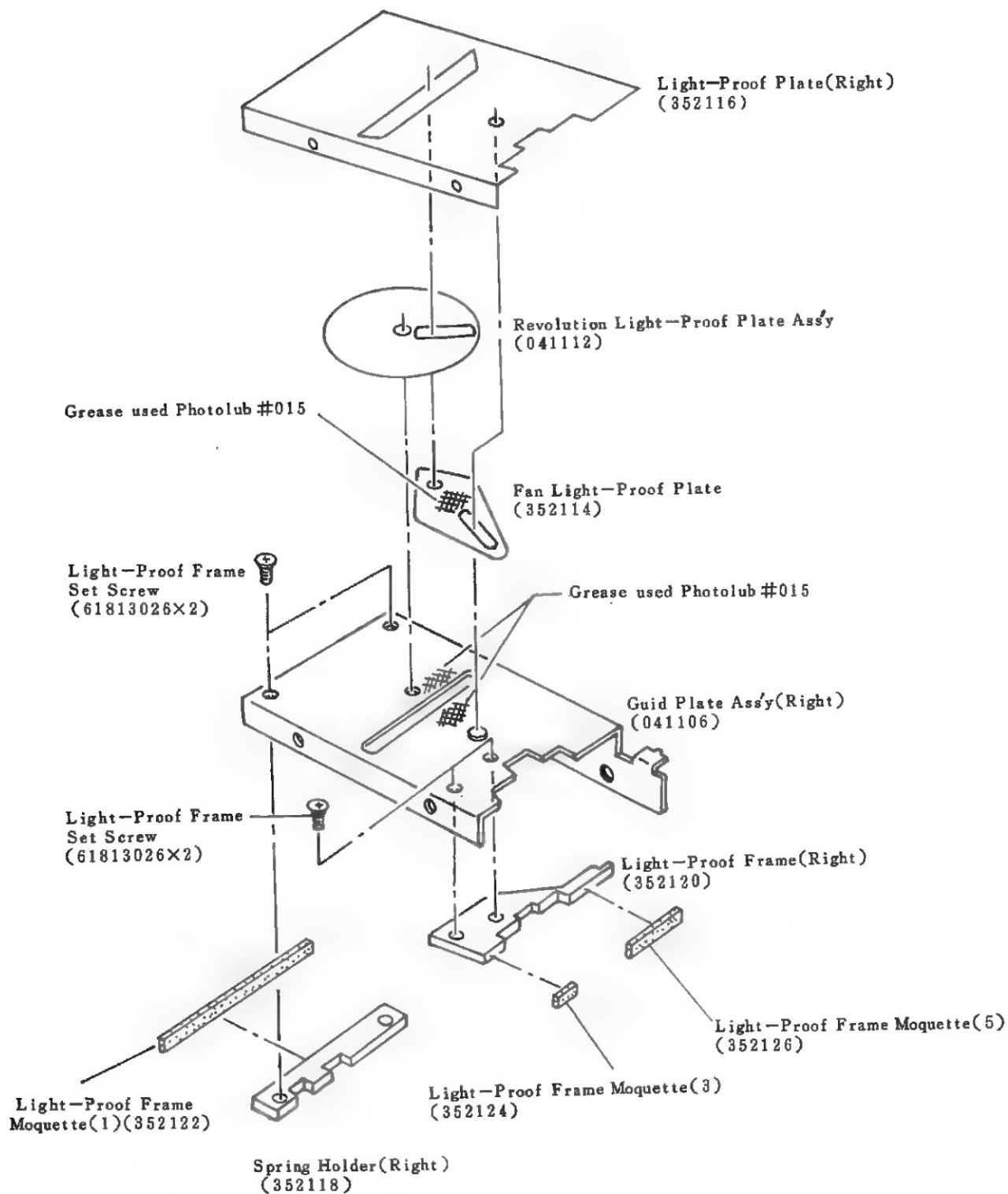


Fig 50

b) Guid Plate (Left);

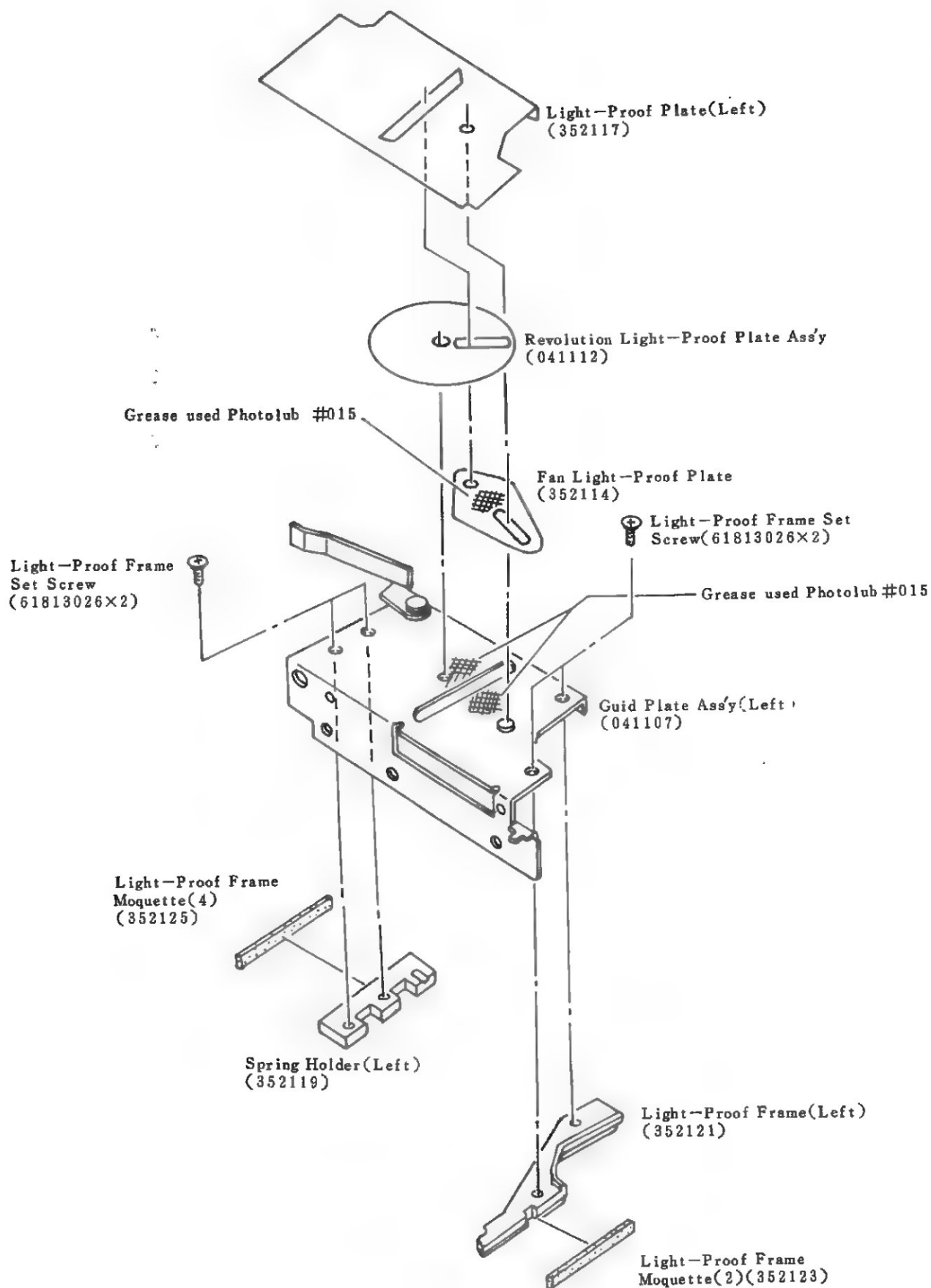


Fig 51

4. DISASSEMBLING OF SHUTTER ASS'Y AND TAKING LENS FOCUS ADJUSTMENT.

(1) Focusing Ring;

- a) Remove the Decorating Ring Name Plate (352225).
- b) Remove two Decorating Ring Set Screws (61902026×2) and Decorating Ring (352233).
See (Fig 52)

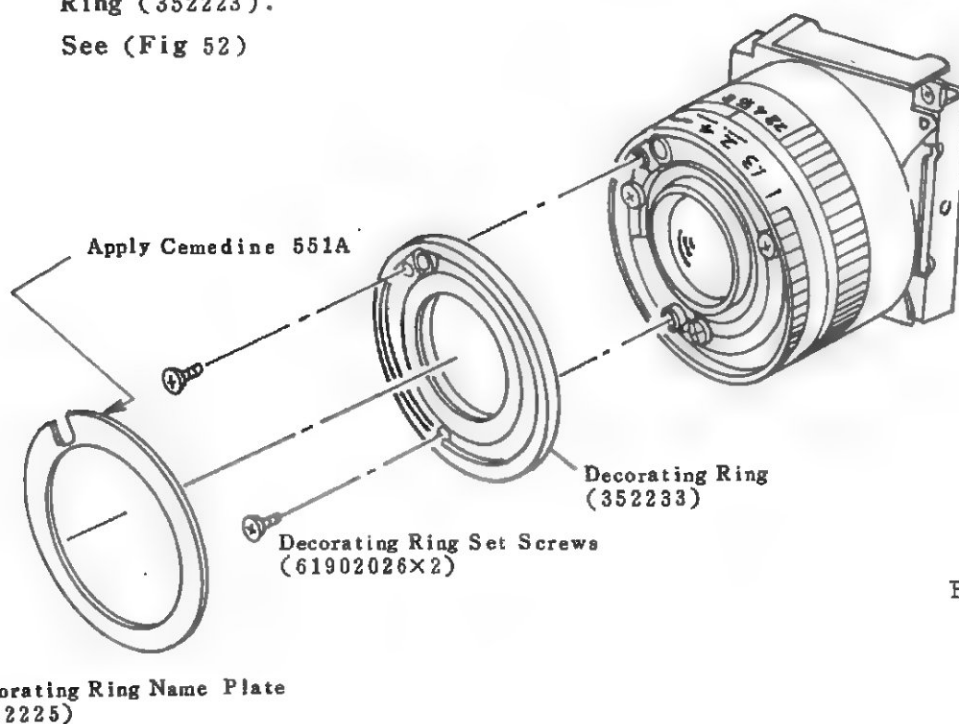


Fig 52

- c) Remove the Focusing Ring Nut(2)(352222).

Note: Focusing Ring Nut (2) is counter clockwise screw.

- d) Remove three Lens Focus Adjusting Set Screws (6600150×3).
- e) Remove the Focusing Ring Nut(1)(352221) and Focusing Ring (352220).

Note: Focusing Ring Nut (1) is counte clockwise screw.

- f) Remove the Focusing Interlocking Pin (352212) and two Decorating Ring Post (352224).
- g) Remove two Indicator Ring Set Screws (66001050×2) and Indicator Ring Ass'y (041210).
See (Fig 53)

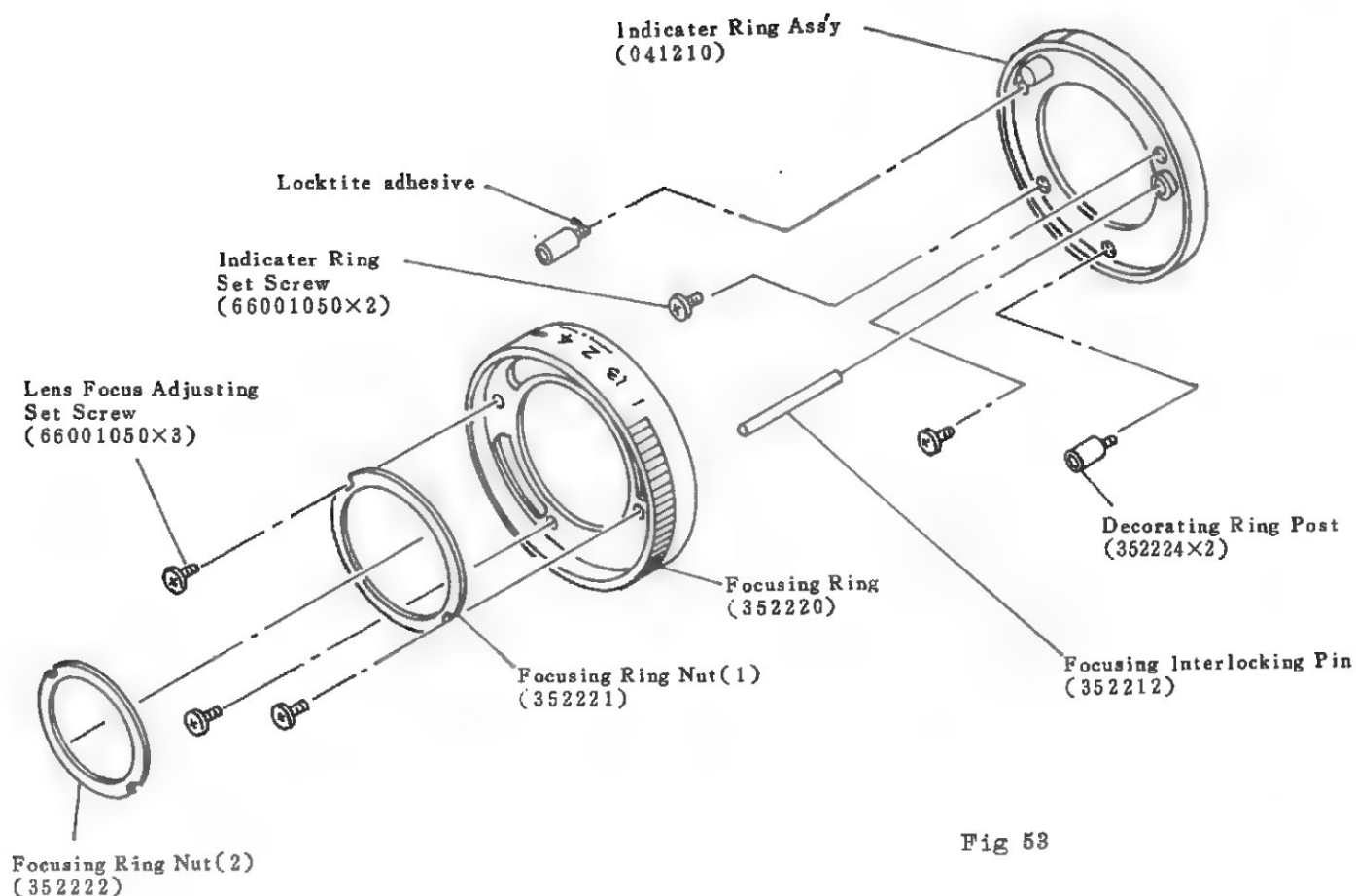


Fig 53

[Note for the Focusing Ring functions]

- a) The Focusing Ring must turn smooth with no abnormal noise.
- b) Torque required for Focusing Ring..... 700g Max.
- c) Adjustment of Focusing Ring turning torque, tighten or untighten Focusing Ring Nut (1) and (2).
- d) Focusing Ring Nut(2) must be loked with Cemedine 551A after torque adjustment.

(2) Aperture Barrel Ass'y with Lens;

- a) Remove two Aperture Interlocking Set Screws (66001050x2) and Aperture Interlocking Lever (352206).
- b) Remove the Aperture Ring Ass'y (041204), Steel Ball (Ø 12)(66701220) and Aperture Click Spring (352207).
- c) Remove two Indicator Ring Post (352211x2).
- d) Remove two Aperture Barrel Set Screws (2)(61912822x2), Aperture Barrel Set Screw (1)(61911529) and Washer (60111810).
- e) Unsolde White and Black lead wires.
- f) Remove Aperture Barrel Ass'y with Lens (352201) from Shutter Ass'y (352202)

See (Fig 54)

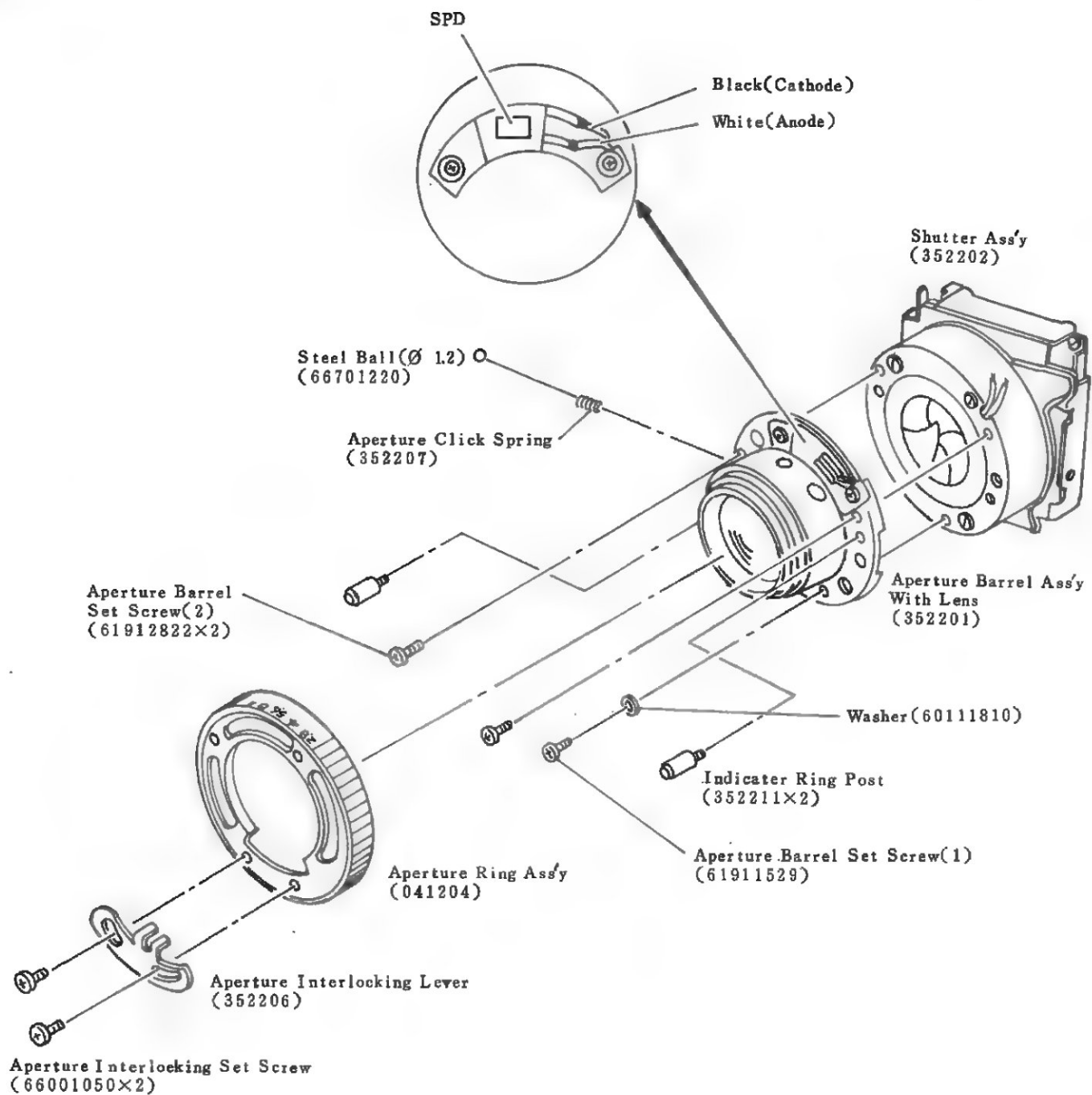


Fig 54

[Note for reassembling Aperture Interlocking Lever and effective aperture position]

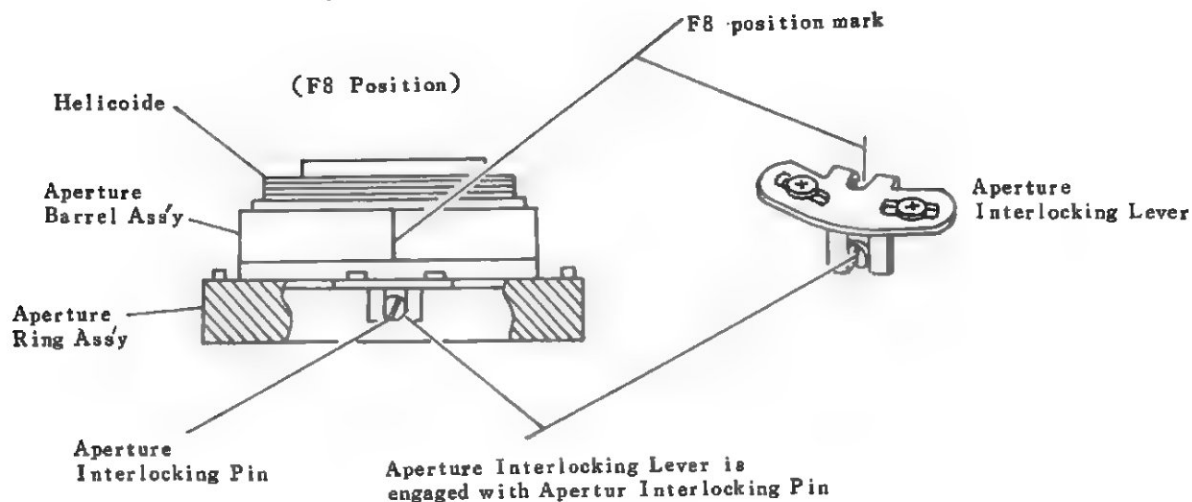


Fig 55

(3) Taking Lens Focus Adjustment.

- ① Remove Top Cover Ass'y.
- ② Load the fresh film into the camera body and advance several frames.
- ③ Short the lead wire (resloder temporary lead wire) which is connected to the Trigger Switch to GND position as shown in (Fig 56).
- ④ Set the Focusing Ring at ∞ (infinity) and set the aperture ring at f 2.8. See (Fig 57).
- ⑤ Set the lens tester (colimator) at 0
- ⑥ Completely pushing the Shutter Release Button, while the Shutter Blades can be opened and then check.
- ⑦ Untighten three Lens Focus Adjusting Set Screws (66001050×3) and then adjust by turning the Helicoide. See (Fig 58)

The focal length of
your Lens Tester

Setting position for Helicoid of
Lens Tester (colinator) at 0

F=1935mm

0 ± 10

[Model for 24LT-2DTS (GOKO-SHA)]

※ Three Lens Focus Adjusting Set Screws must be locked with Cemedine 551A after adjustment.

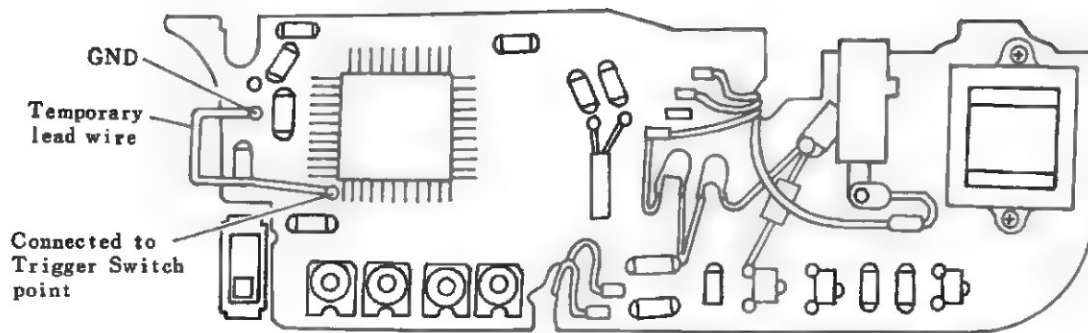


Fig 56

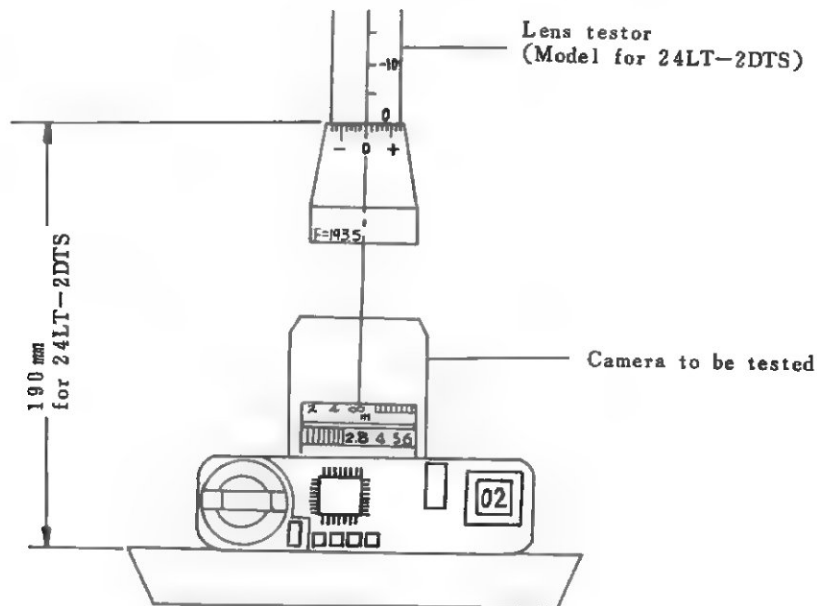


Fig 57

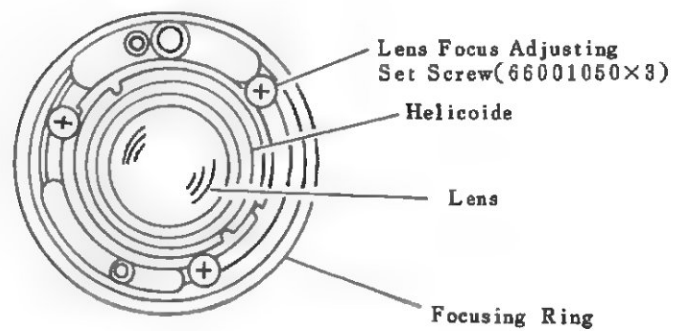


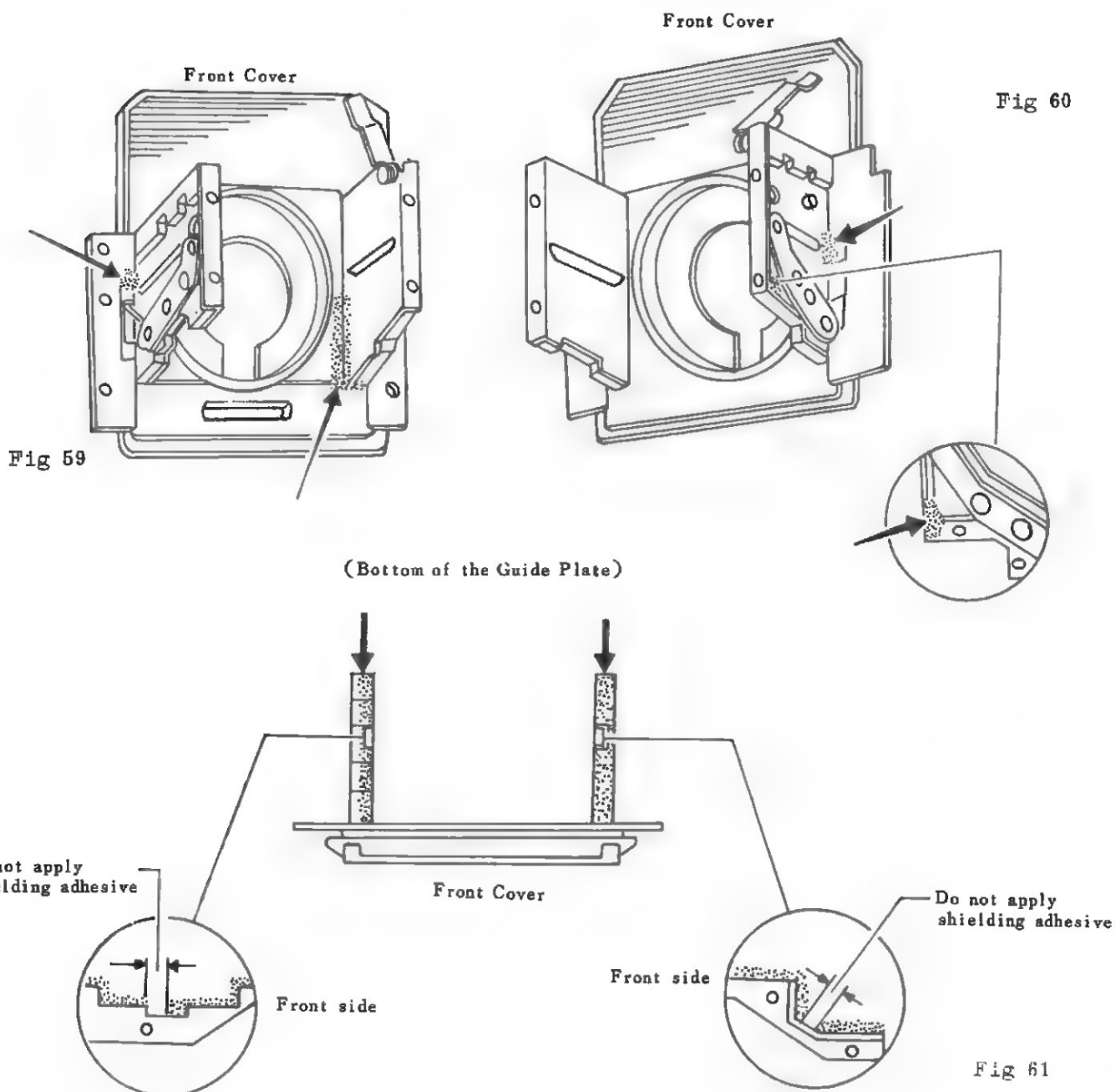
Fig 58

5. CAMERA BODY AND PARTS WHERE SHIELDING ADHESIVE SHALL BE USED.

※ This shielding adhesive is available from KYOCERA CORPORATION YASHICA DIVISION.

※ If do not apply shielding adhesive, light leaks from the camera body.

- 1) Before reassembling the Shutter Assy into the Guid Plate where shielding adhesive shall be used.



(Front side of the camera body)

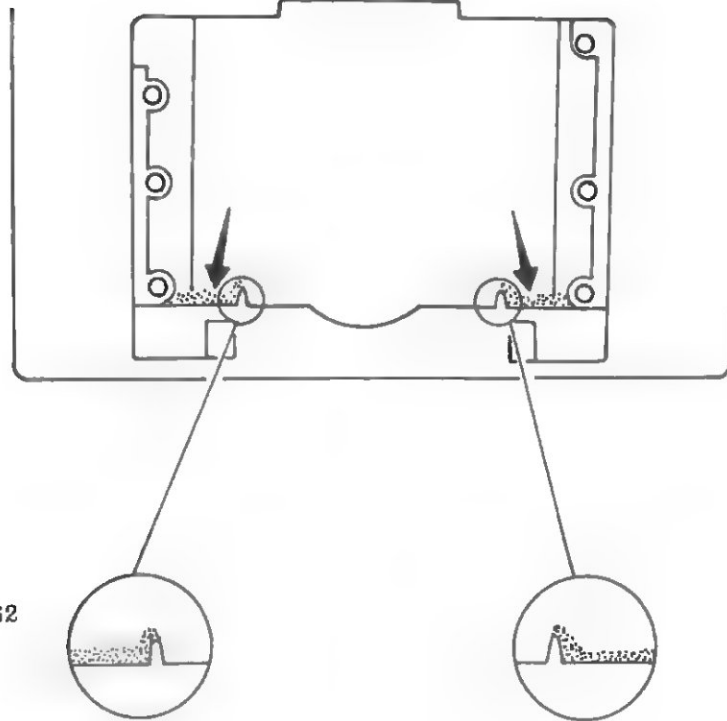


Fig 62

- 2) After reassembling the Guid Plate with Shutter Ass'y into the camera body, where shielding adhesive shall be used.

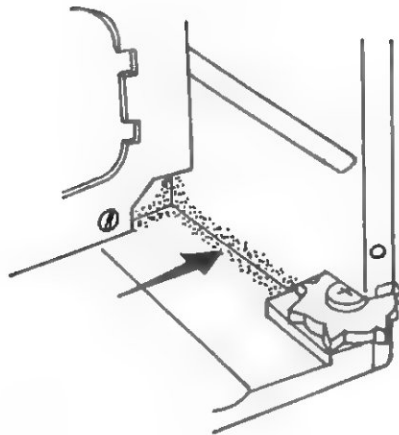


Fig 63

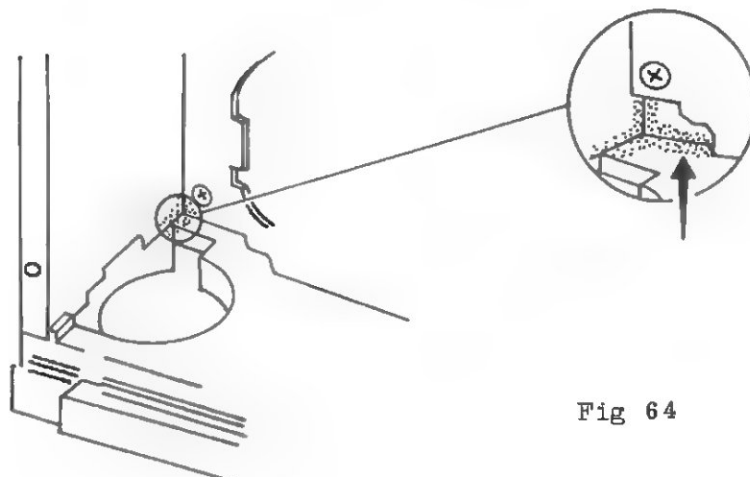
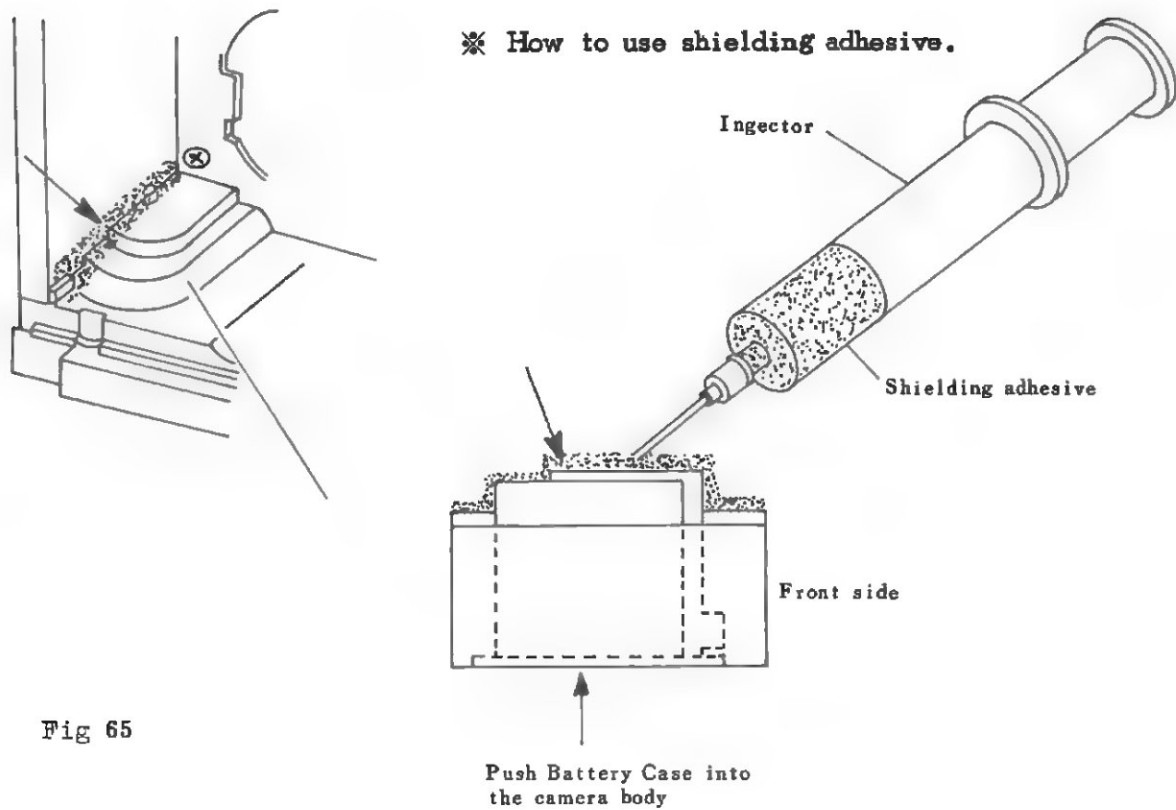


Fig 64

- 3) After reassembling the Battery Case Ass'y into the camera body, where shielding adhesive shall be used.



- 4) Body Cover Ass'y where shielding adhesive shall be used.

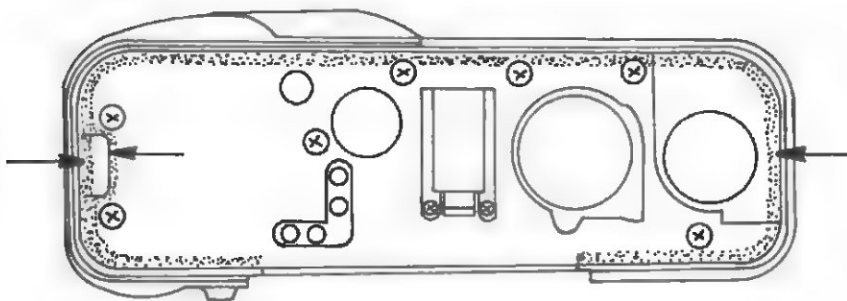


Fig 66

6. DISASSEMBLING OF FILM WINDING MECHANISM

(1) Disassembling of Winding Shaft.

a) Remove the respective parts ①~⑦ Shown in (Fig 67) in numerical order.

(At bottom of the camera body)

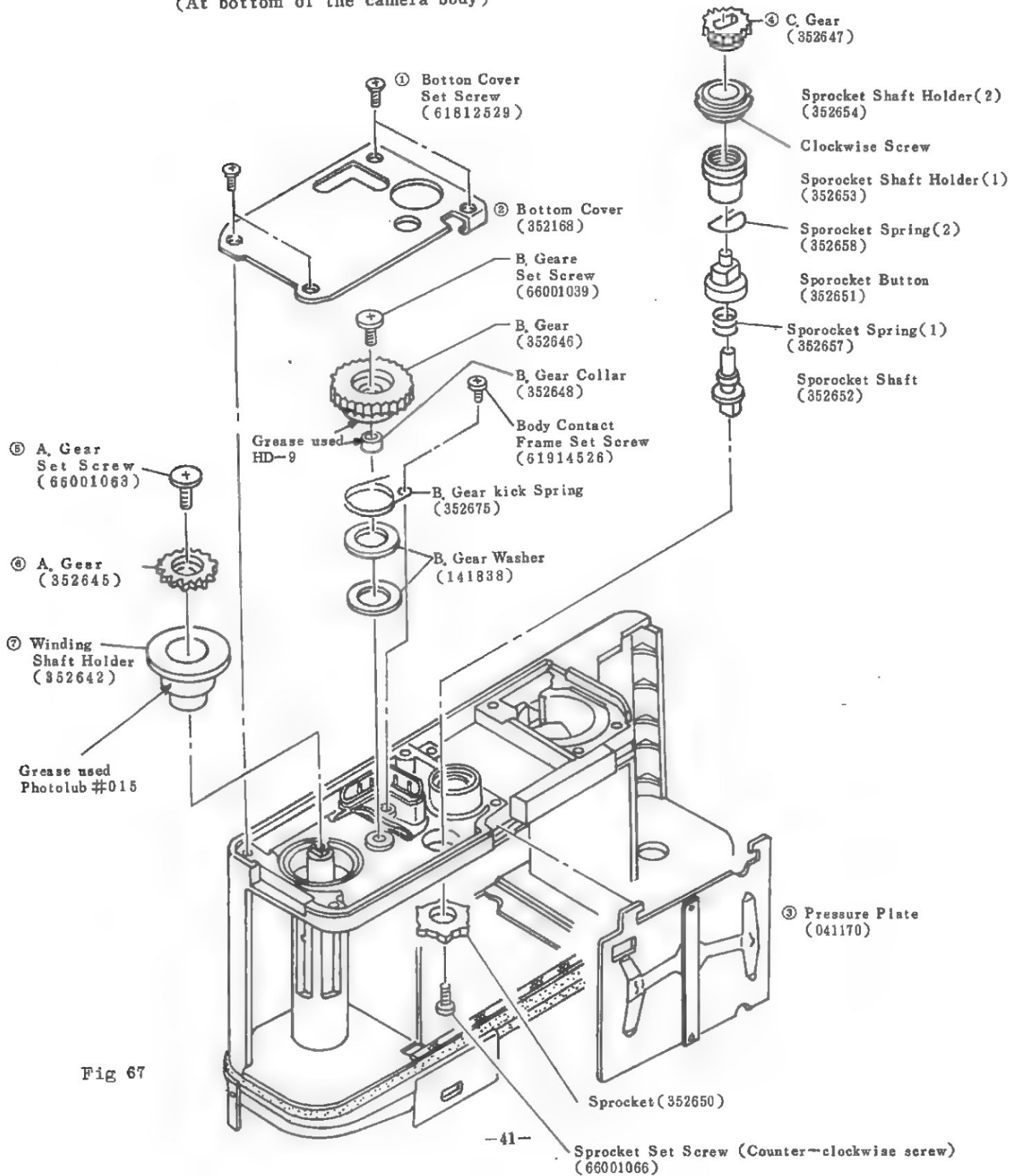


Fig 67

b) Remove the respective parts ① ~ ④ Shown in (Fig 68) in numerical order.

(At upper part of the camera body)

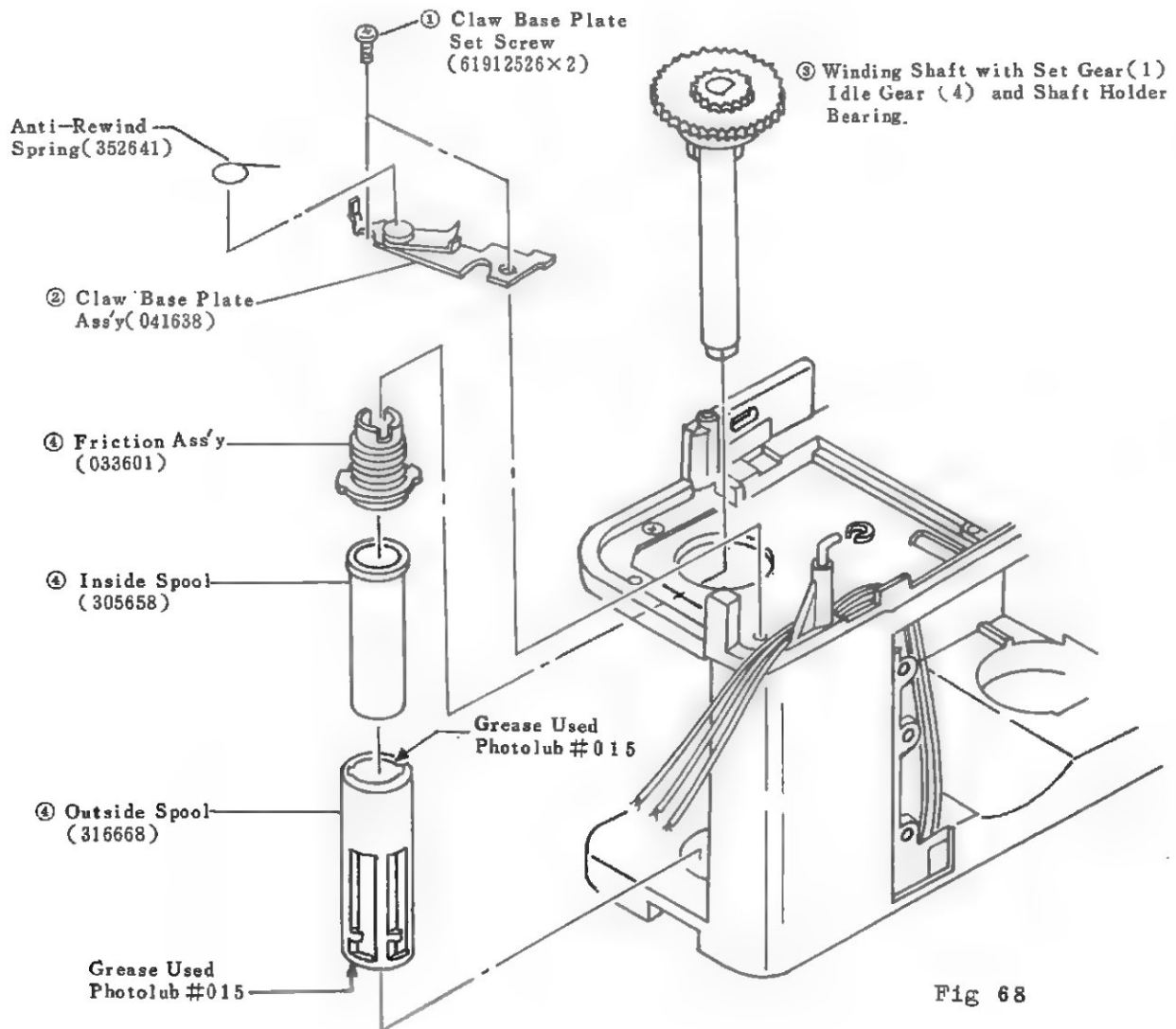


Fig 68

C) Disassembling of Winding Shaft.

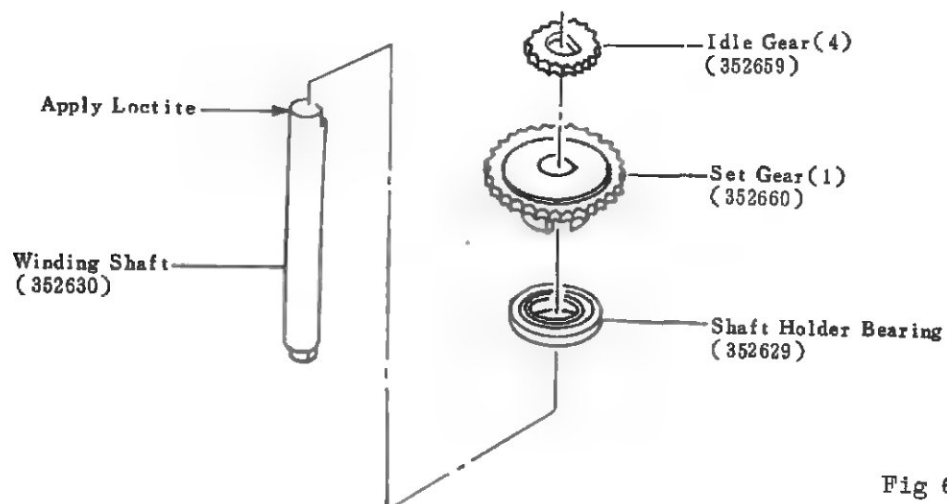


Fig 69

[Note for reassembling of Film Winding Mechanism]

a) Reassembling of Winding Shaft Holder.

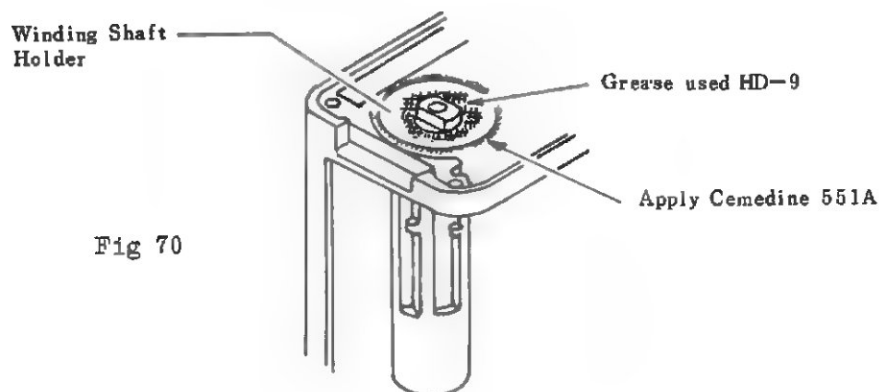


Fig 70

b) Reassembling of Sprocket Shaft Holder(1).

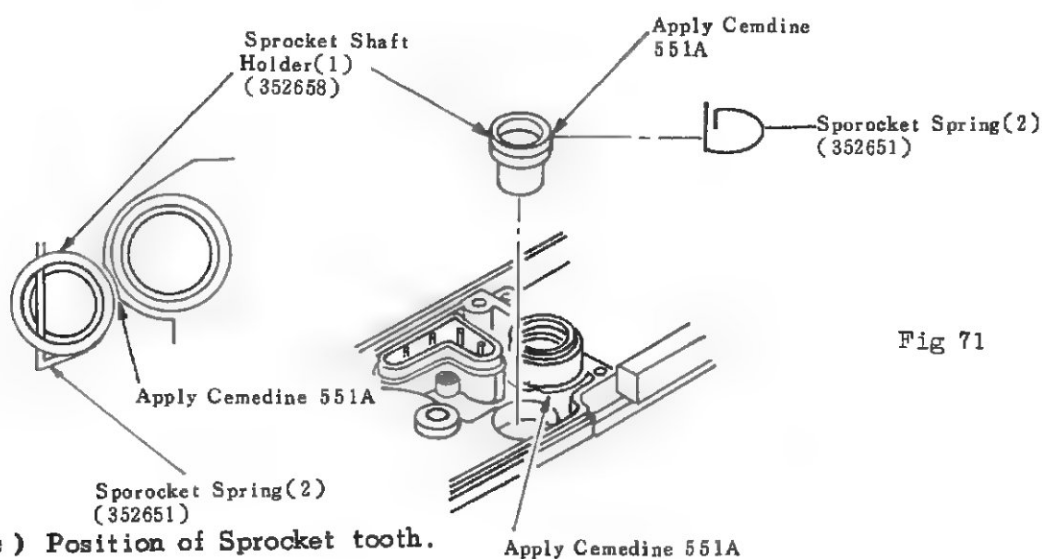


Fig 71

c) Position of Sprocket tooth.

o Properly position the Sprocket by adjusting position of C. Gear.

- ① Replace the Body Cover.
- ② The film advance lever is storked fully and remove the Body Cover from the camera body.
- ③ Turn Sprocket tooth in position as shown below.
- ④ Drop C. Gear onto the Sporocket Button.

※ After removing C.Gear, be sure to adjust position of the Sprocket.

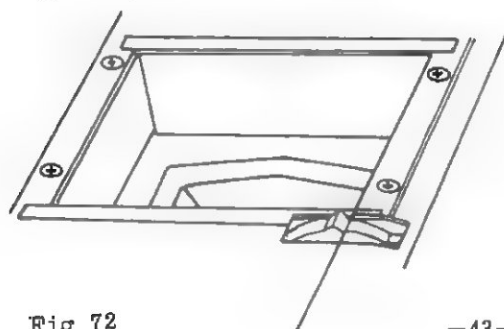


Fig 72

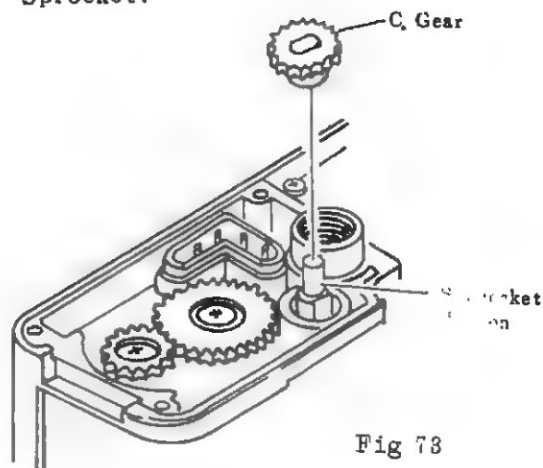
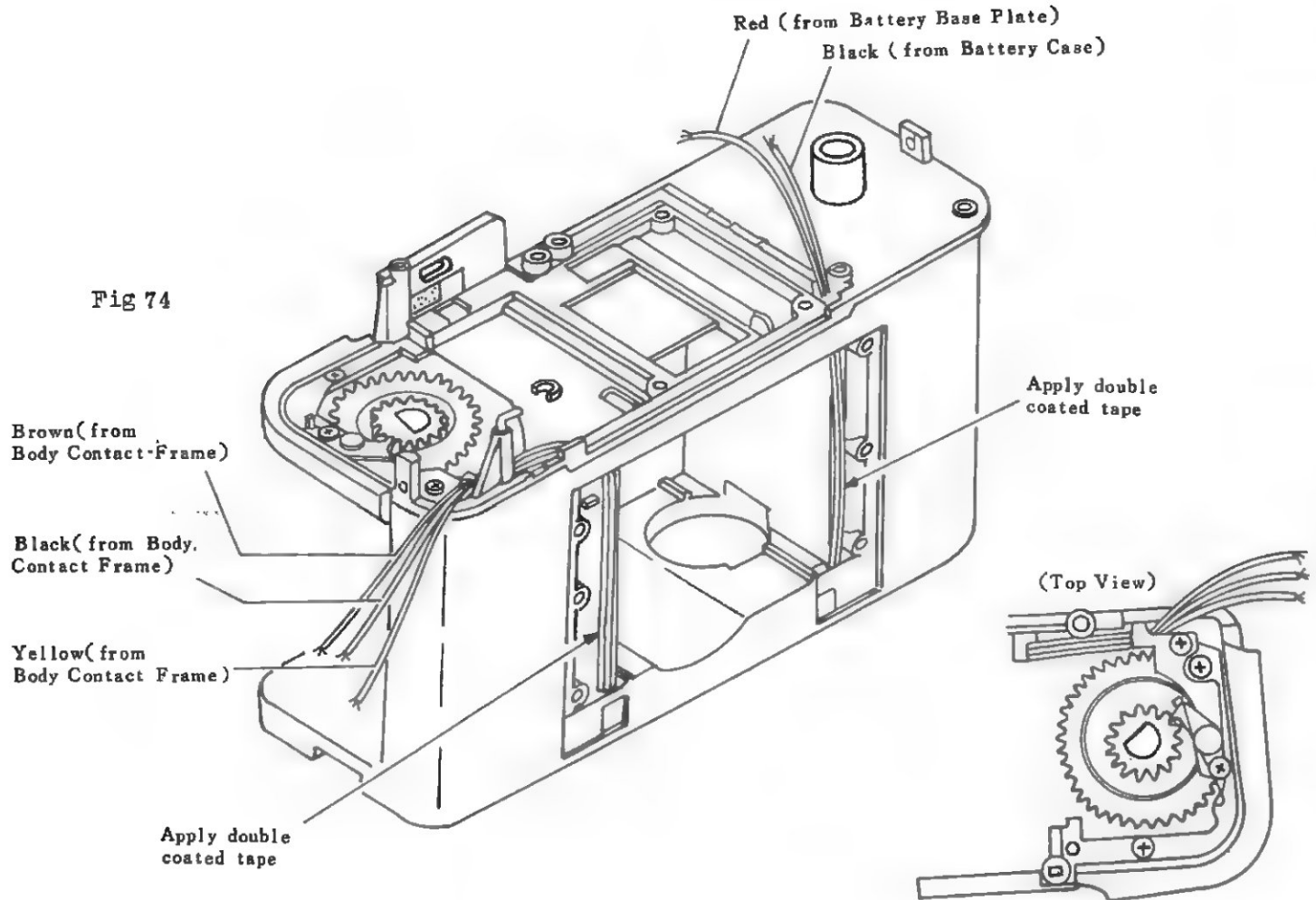


Fig 73

(2) Forming of Lead wires

o Forming lead wires on side camera body as shown below



(3) Camera Body where shielding adhesive shall be used.

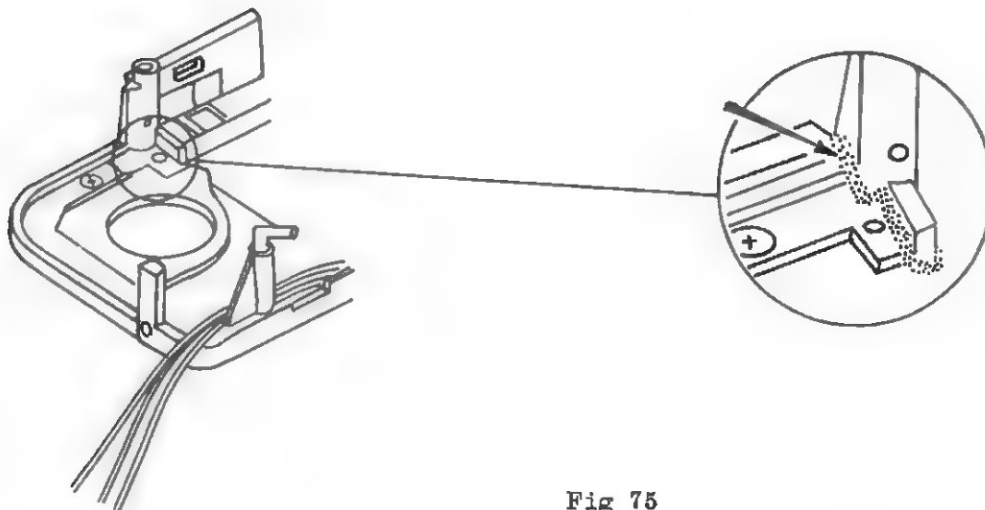


Fig 75

Forming of FPC Ass'y

o Bend the FPC Ass'y as shown below.

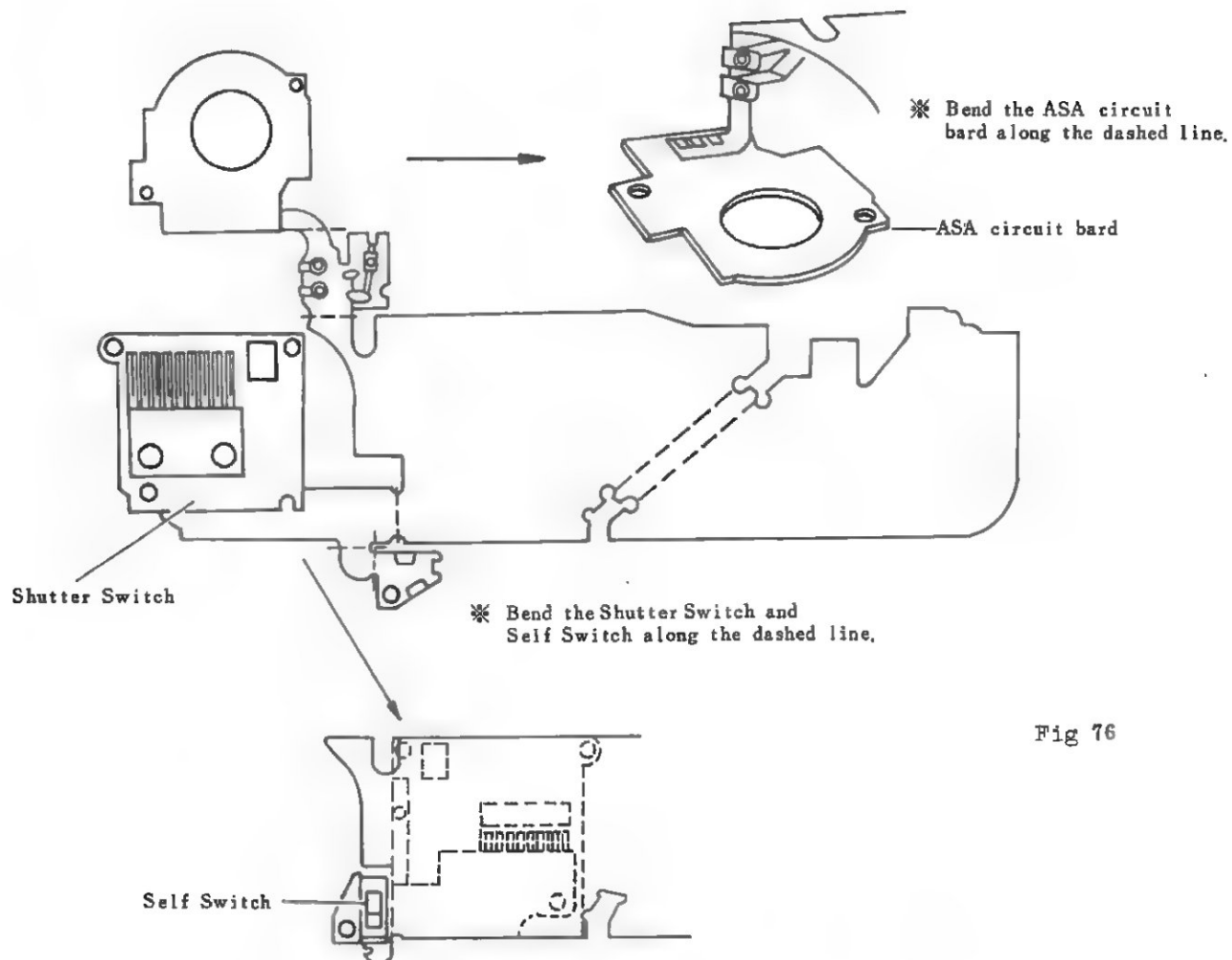


Fig 76

Forming of Light-Proof Moquette and Finder Light-Proof Paper.

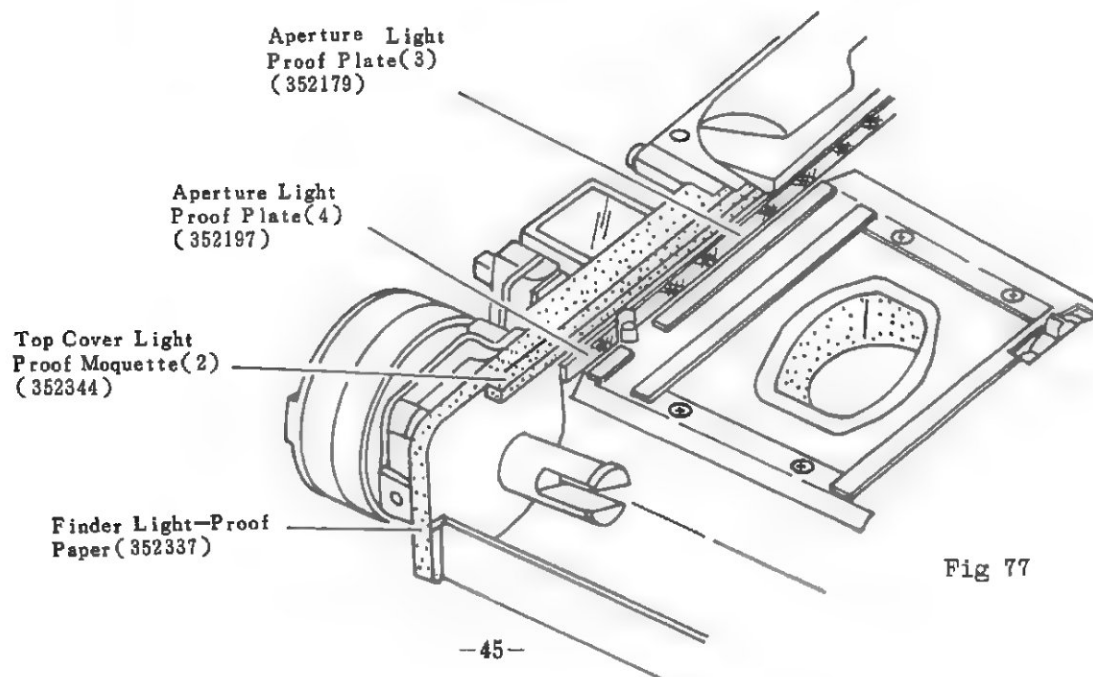


Fig 77

7. ADJUSTMENT OF EXPOSURE CONTROL CIRCUIT

[Information]

The principal Voltages for balancing the electronic circuit including voltages below mentioned have been correctly adjusted already when the Flexible Printed Circuit has been assembled in the factory, Spare Parts as well.

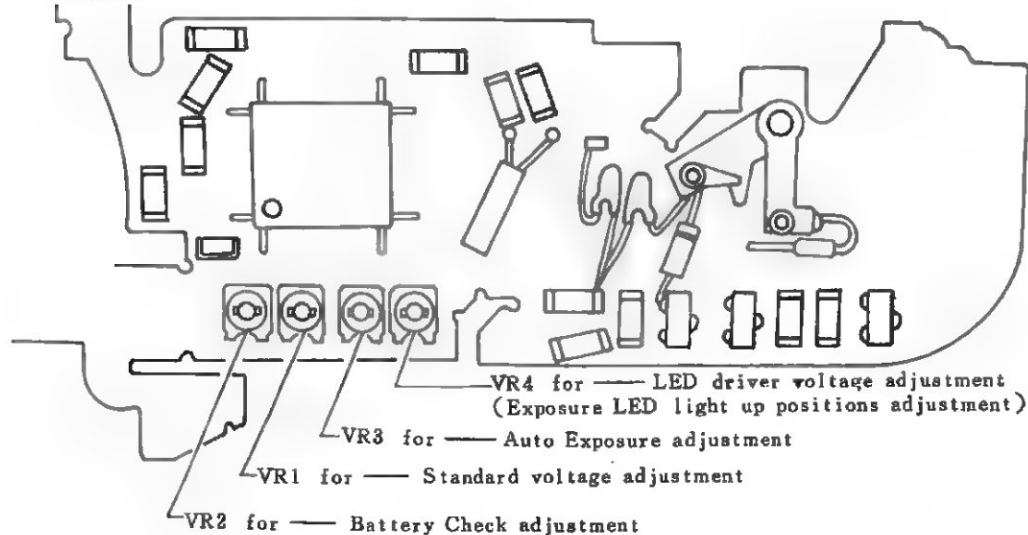


Fig 78

(1) Standard Voltage (VR1)

Note: Do not adjust standard voltage, spare parts as well.

(2) Battery Check Adjustment (VR2)

- o Supply the respective voltage listed in the table below and see the performance of the Exposure LED in the viewfinder by depressing the Shutter Release Button part way (it works for 10 sec.)

When the adjustment is required, adjust it with the semi-fixed resistor VR2 but spare parts as well.

Power Source Voltage	Performance of the Exposure LED in the viewfinder
2.35 ~ 3 volts	LED lights continuously
less than 2.25 volts	LED does not light at all

(3) Auto Exposure Adjustment (VR3)

a) The Modified Body Cover

The modified Body Cover is required when checking the Automatic Exposure off the film plane with the EE Tester (Multi Camera Tester).

Modification

Cut out the  portion of the used Body Cover the Contax T. as shown below.

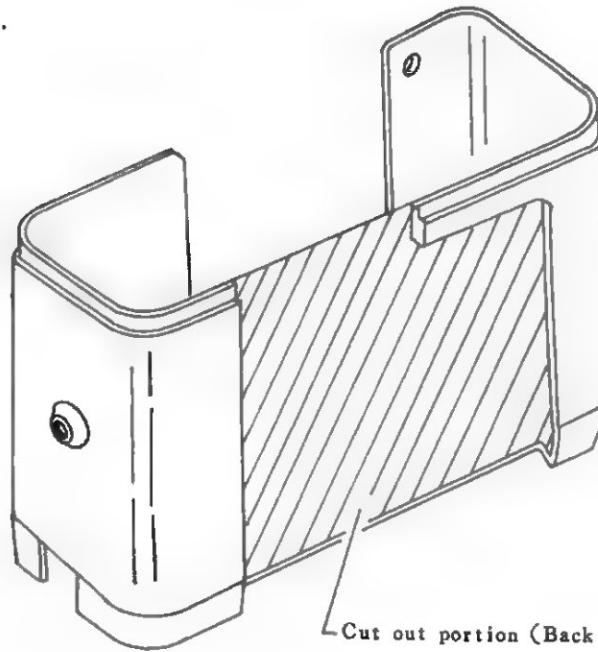


Fig 79

b) When checking the exposure without Top Cover, cover the upper part of the camera with black cloth as shown below.

Extraneous light on the SPD will give an erroneous reading.

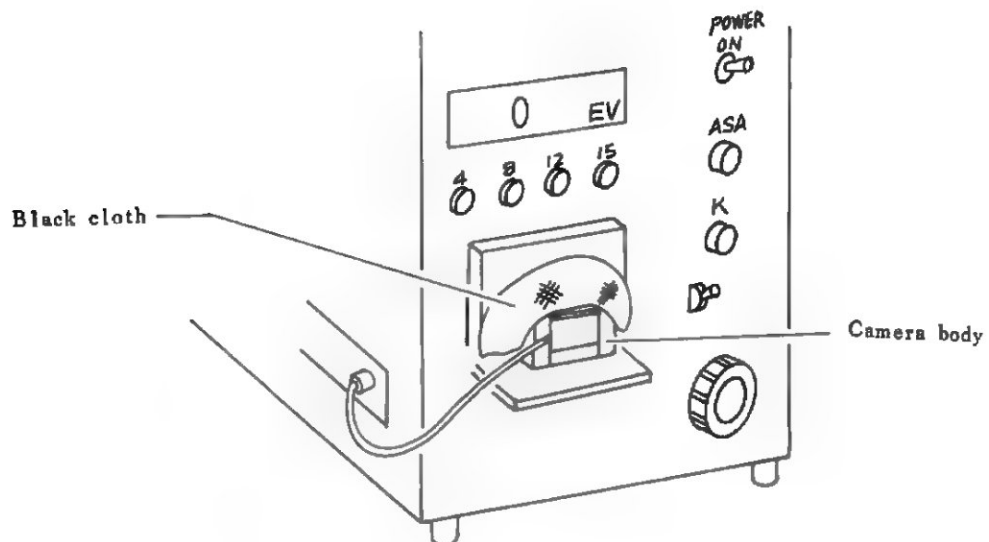


Fig 80

c) Automatic Exposure Adjustment.

- o Set the EE Tester (Multi Camera Tester)..... ASA 100, K=1.3
- o Set the Camera to be tested..... ISO 100,

Automatic exposure can be adjusted by turning the VR3 semi-fixed resistor.

Tolerance Limits

LV	F.No	EV Tolerance
LV 8	5.6	-0.4 ~ +0.5 5
LV12	8	-0.23 ~ +0.76
LV15	11	-0.2 ~ +1.0

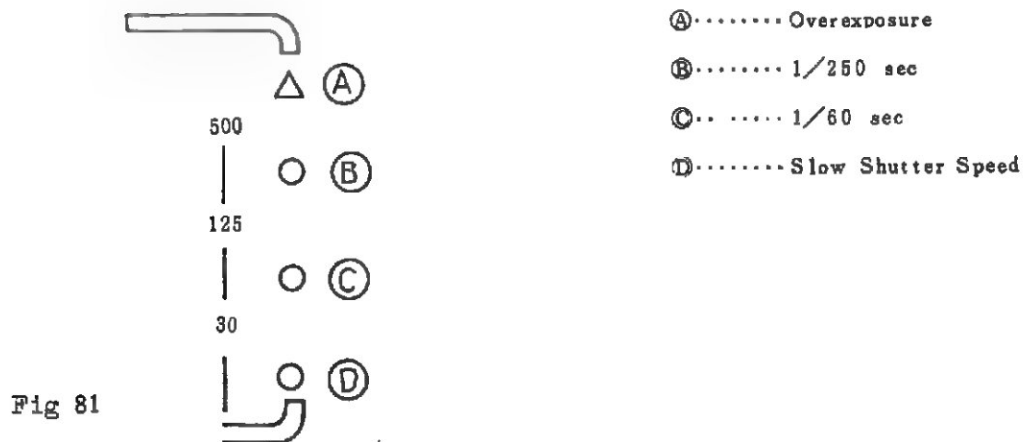
- o Maximum exposure time in dark.....At least 8 sec.

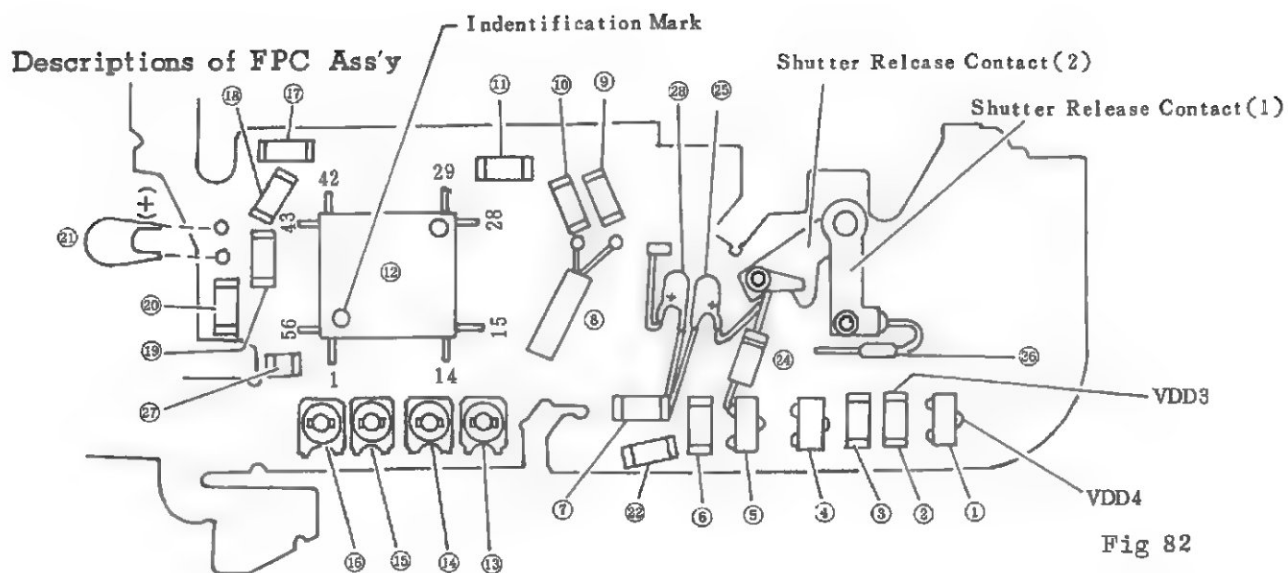
d) Exposure LED light up positions Adjustment.(VR4)

Perform Exposure LED light up positions adjustment by turning the VR4 semi-fixed resistor.

LV	ISO	F.No	LED light up position
LV12	100	8	Ⓒ LED light up
LV15	100	11	Ⓑ LED light up

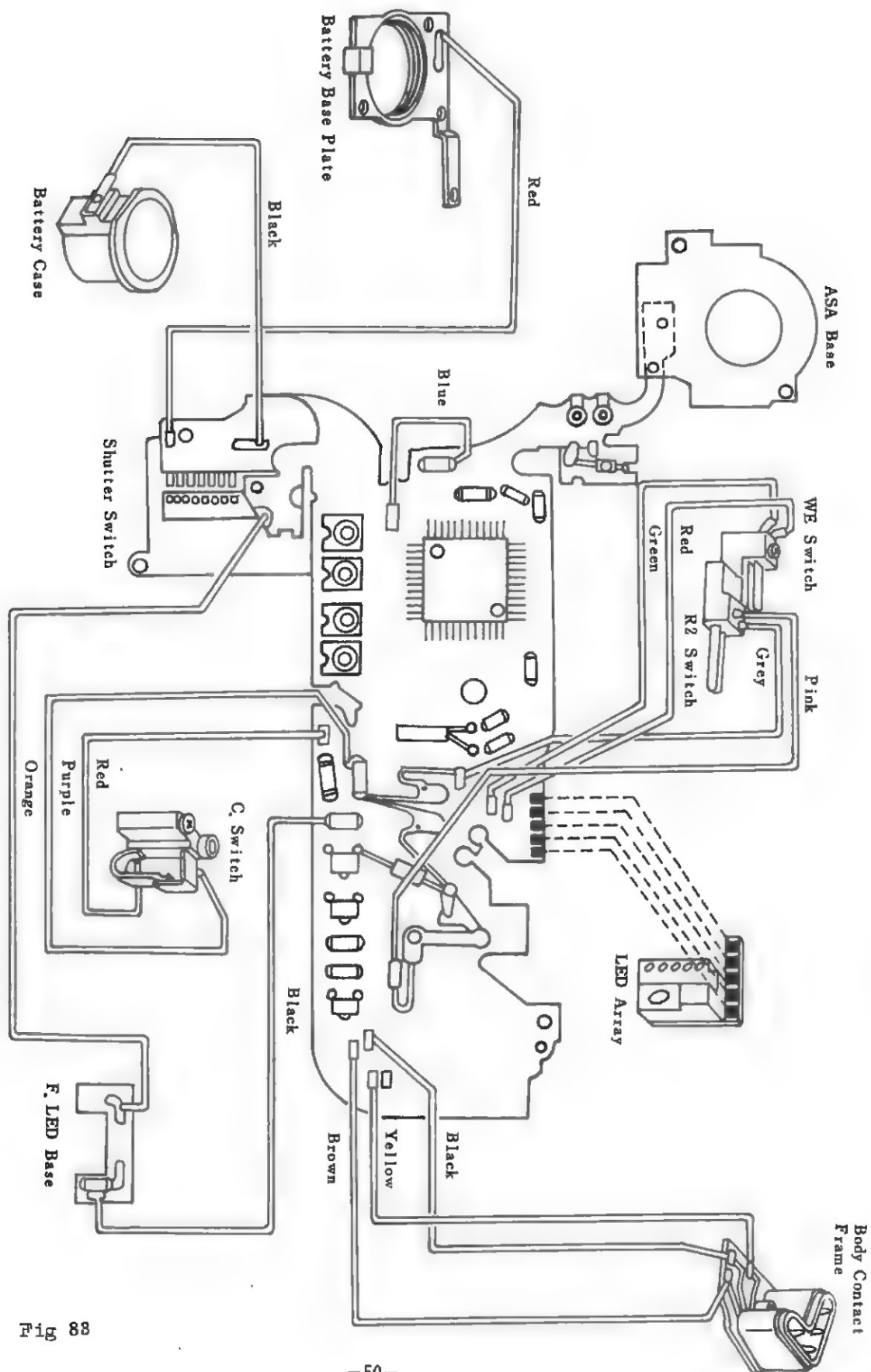
Exposure LED





No.	Description	Performace
1	Transistor	VDD4(Sequence) power source out put voltage
2	Capacitor	Stability of voltage for LCD(Liquid Crystal Disply) drive
3	Capacitor	Power-on reset out put voltage
4	Transistor	Opening Magnet drive
5	Transistor	Closing Magnet drive
6	Transistor	Absorption of Closing Magnet adverse electromotive
7	Capacitor	LCD Frame Counter reset, absorption of noise
8	Quart	Crystal oscillation
9, 10	Capacitor	For Oscillation
11	Capacitor	LCD drive
12	Digital IC	Control IC
13	Semi-fixed resistor	VR4 for exposure LED light up positions adjustment
14	Semi-fixed resistor	VR3 for Auto exposure adjustment
15	Semi-fixed resistor	VR1 for standard voltage adjustment
16	Semi-fixed resistor	VR2 for battery check adjustment
17	Resistor	Current limit of Opening Magnet
18	Resistor	Out put voltage of IC terminal #47
19	Capacitor	Controlling Auto exposure
20	Capacitor	Stability of IC terminal #51 to #55
21	Capacitor	Opening Magnet drive
22	Capacitor	Memory for LCD Frame Counter
24	Diode	Prevention of mismotion while releasing the shutter
25	Capacitor	Prevention of mismotion for R(2) Switch
26	Resistor	Prevention of mismotion for R(2) Switch
27	Capacitor	Flash out put
28	Capacitor	Prevention of mismotion while releasing the shutter

CONTAX T WIRING DIAGRAM



CONTAX T14 AUTO FLASH UNIT

9. SPECIFICATIONS FOR THE T14 AUTO

Type : Dedicated electronic flash for the Contax T.
Guide Number : 14 (ISO 100.m)
Flash control system : Output automatically controlled using on-camera sensor cell. Synchronizes at all apertures.
Camera Connection : Connects to camera side, copuled via dedicated terminal.
Color Temperature : Equivalent to daylight.
Recycling time : 7 seconds, using fresh alkaline batteries.
Number of Flashes : 250 flashes, using fresh alkaline batteries.
Power Source : Uses two 1.5 V type AA alkaline or manganese batteries.
Dimensions : 58(W)×66.5(H)×32.5(D)mm.
Weight : 70grams (without batteries).

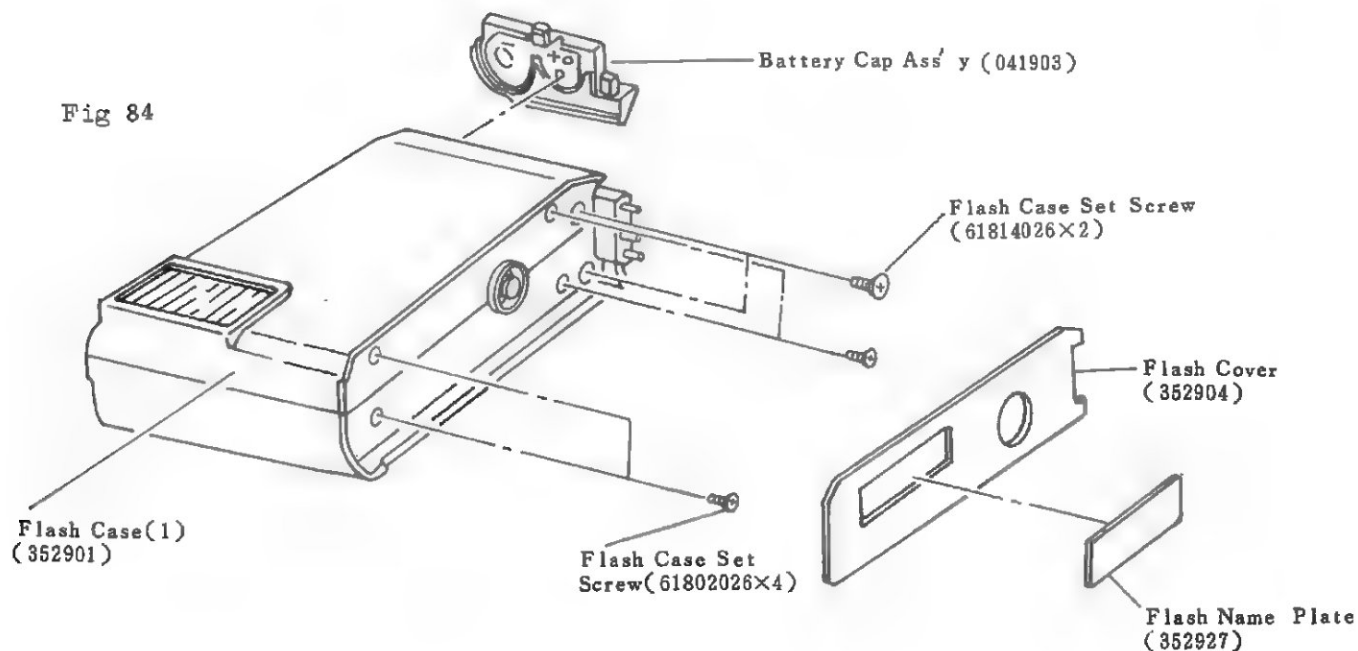
Flash Range Guide Chart

I S O	100	Flash Range
f number	2.8	1.5 ~ 5 m
	4	1 ~ 3.5 m
	5.6	1 ~ 2.5 m
	8	1 ~ 1.75 m
	11	1 ~ 1.3 m
	16	Underexposed

10. DISASSEMBLING OF THE EXTERIOR PARTS.

(1) Flash Case(1);

- a) Remove the Battery Cap Ass'y (041903).
- b) Peel off the Flash Cover (352904) and Flash Name Plate (352927).
- c) Remove six Flash Case Set Screw (61814026×2), (61802026×4).
- d) Remove the Flash Case (1)(352901)
- e) Unsolder Orang and Black leard wires (from Xe Lamp to Flash Switch Base) and Black leard wire (Insulating Tube)(from Xe Lamp to Trigger Coil).



[Note for reassembling Flash Case(1)]

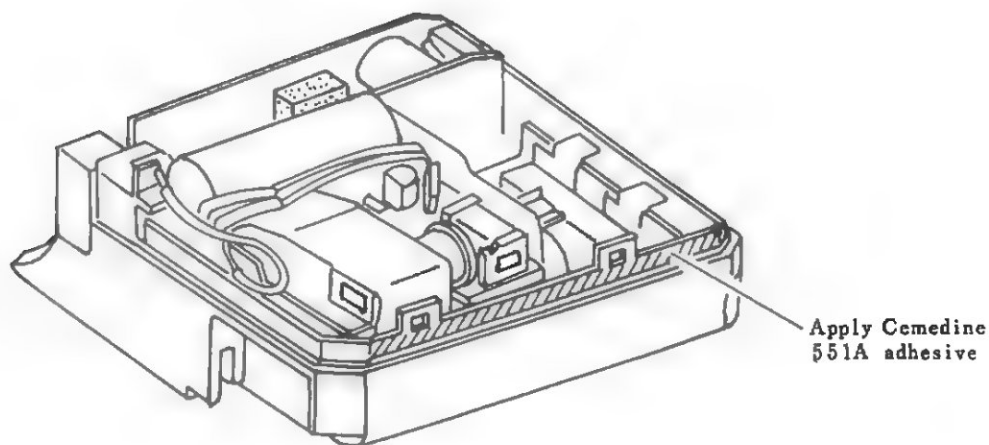


Fig 85

(2) Flash Case(2);

- a) Remove the Main Capacitor (352960).
- b) Peel off the Capacitor Supporter Moquette (352933).
- c) Unsolder Black lead wire.
- d) Remove two FPC-C Set Screws (64113526×2).
- e) Remove two Flash Switch Base Set Screws (64113526×2).
- f) FPC-C Assy will be removed together with Flash Switch Base Assy, ,
Sealed Plate, S. Contact Base Assy and Main Capacitor.

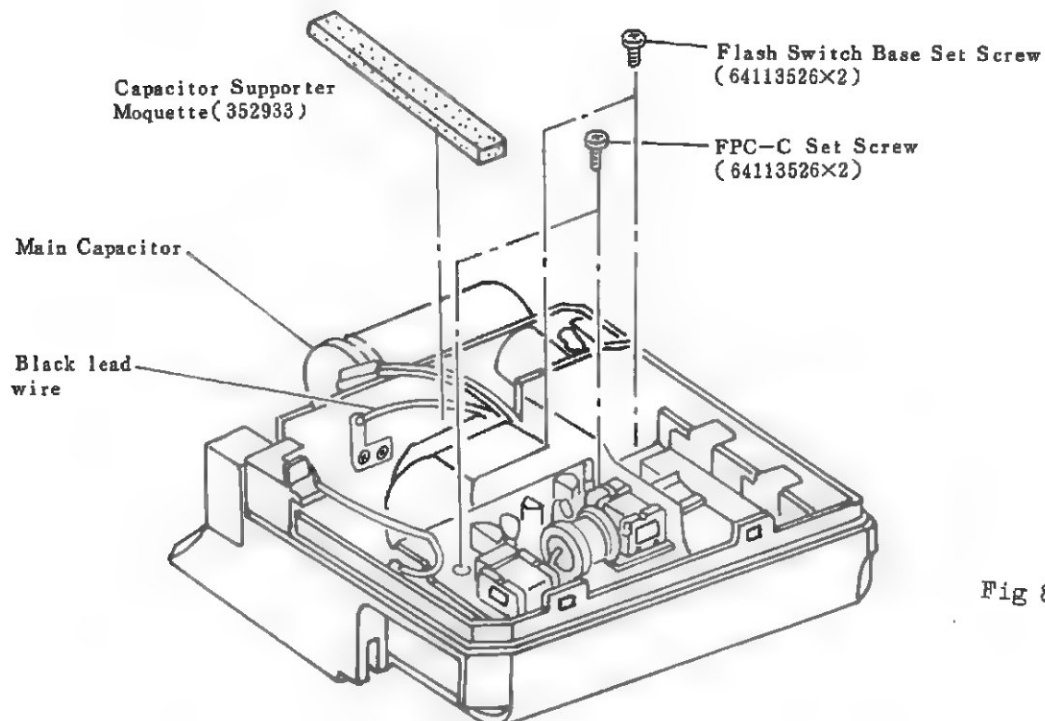


Fig 86

- g) Remove Flash Switch Button (352910) and Case Base Plate Assy (041916).

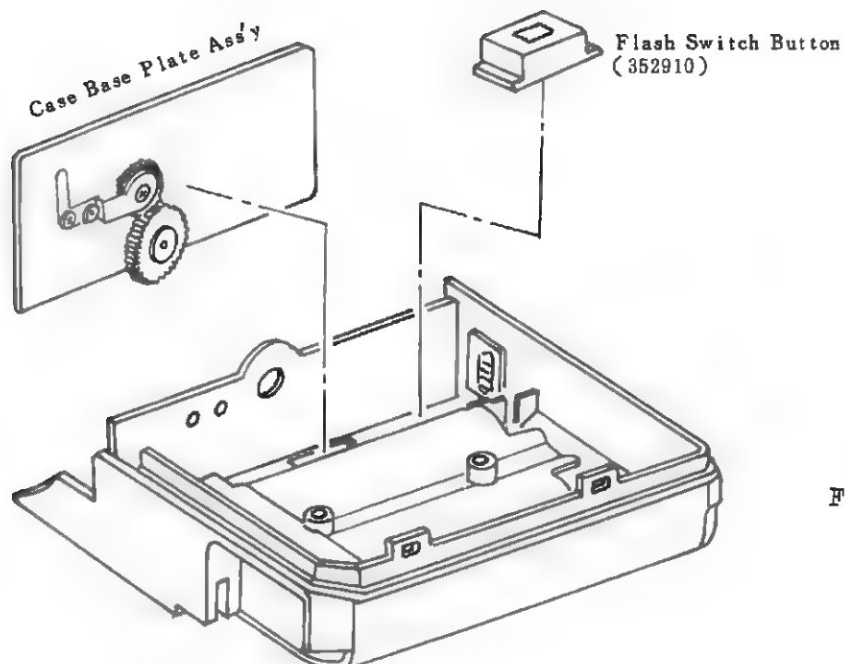


Fig 87

(3) Disassembling of Reflector Frame with Xe Lamp;

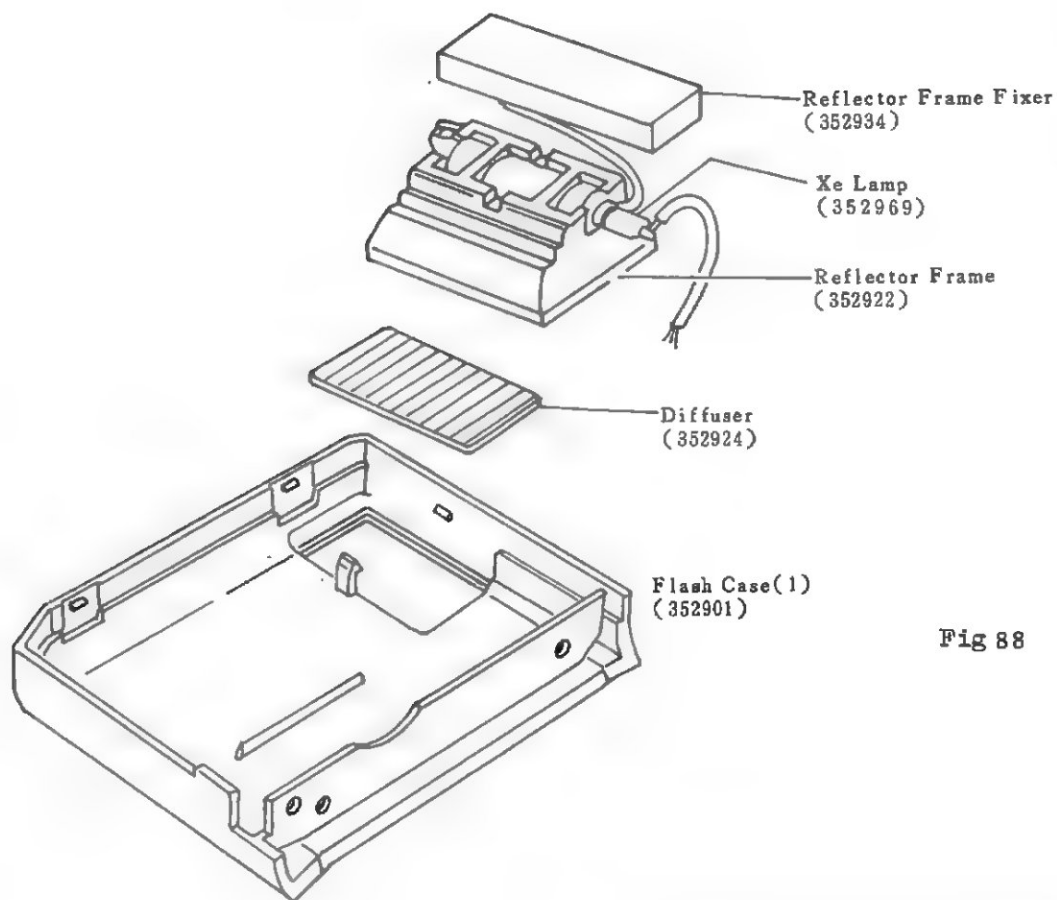


Fig 88

(4) Descriptions of FPC-C Ass'y;

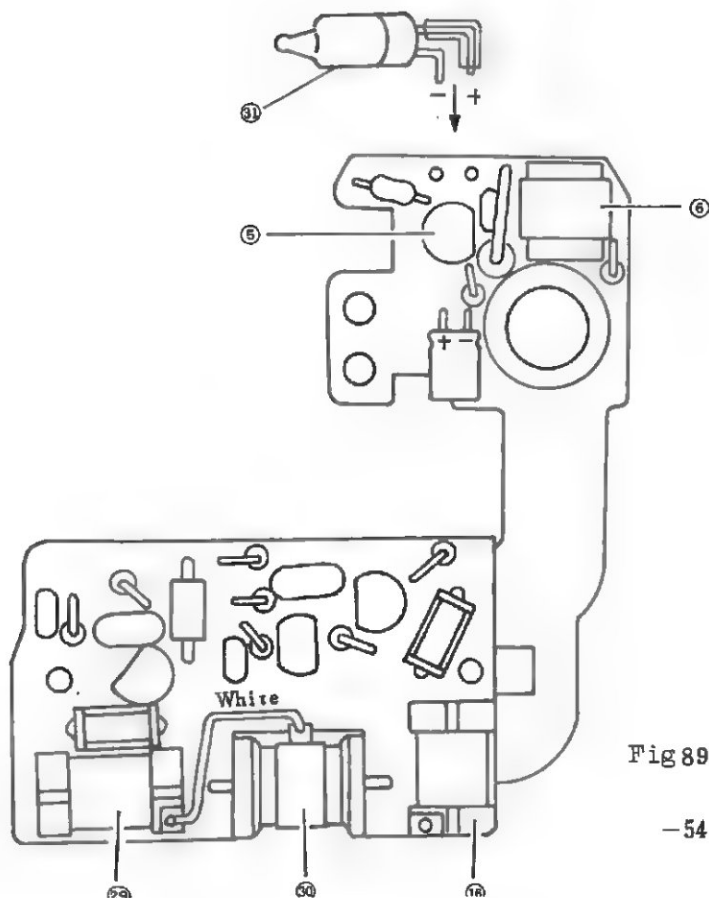


Fig 89

No	Description
5	Transistor
6	Oscillation Transformer
16	Trigger Coil
29	Trigger Coil
30	Arrester
31	Ne Lamp

(5) Check for Flashing;

- a) Install the Batteries into the Flash Unit.
- b) Turn on Power Switch.
- c) Connect (+) of 3.0 volts from Regulated D.C. Power Supply to Coupling Terminal of Flash Unit, (-) of Regulated D.C. Power Supply to Coupling Terminal of Flash Unit and the Flash will fire as shown below.

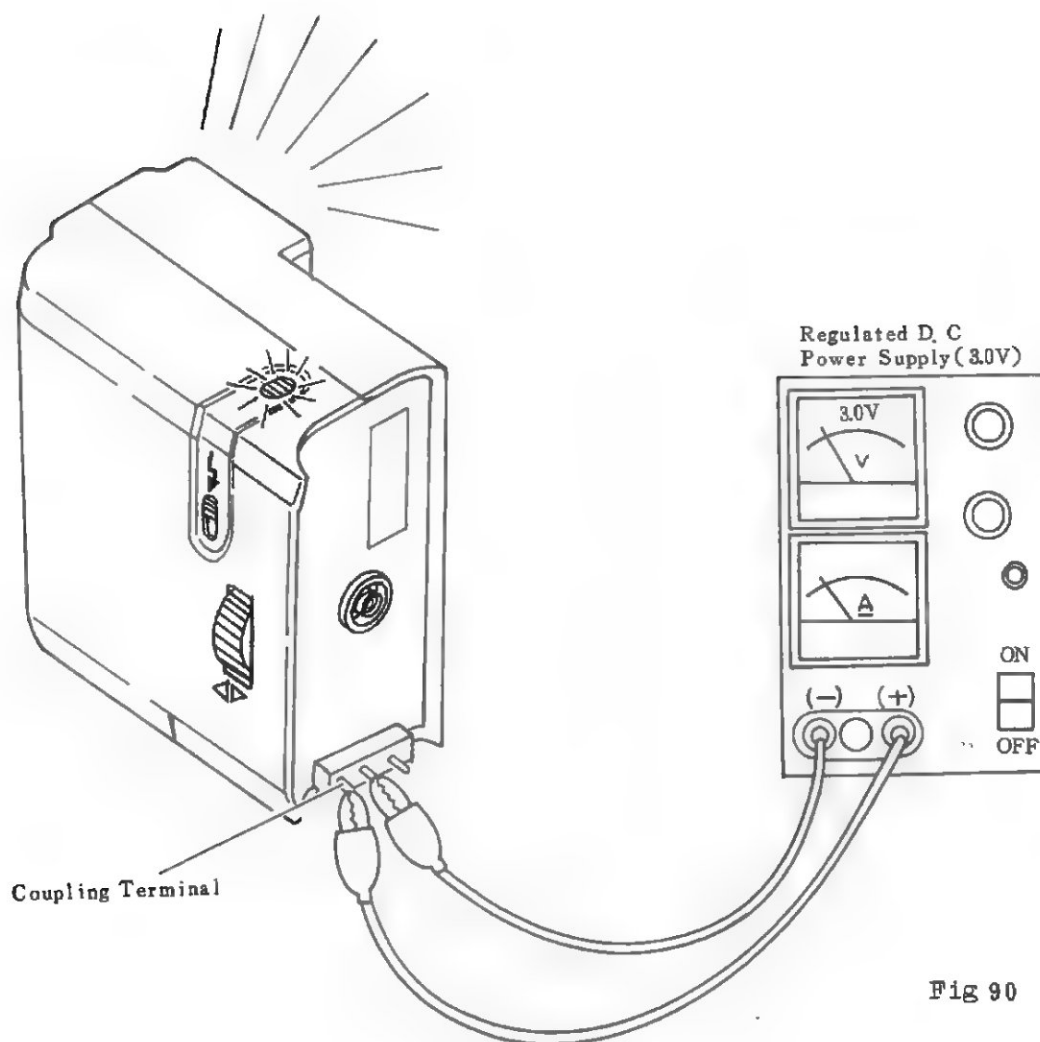


Fig 90

CONTAX T14 AUTO FLASH UNIT WIRING DIAGRAM

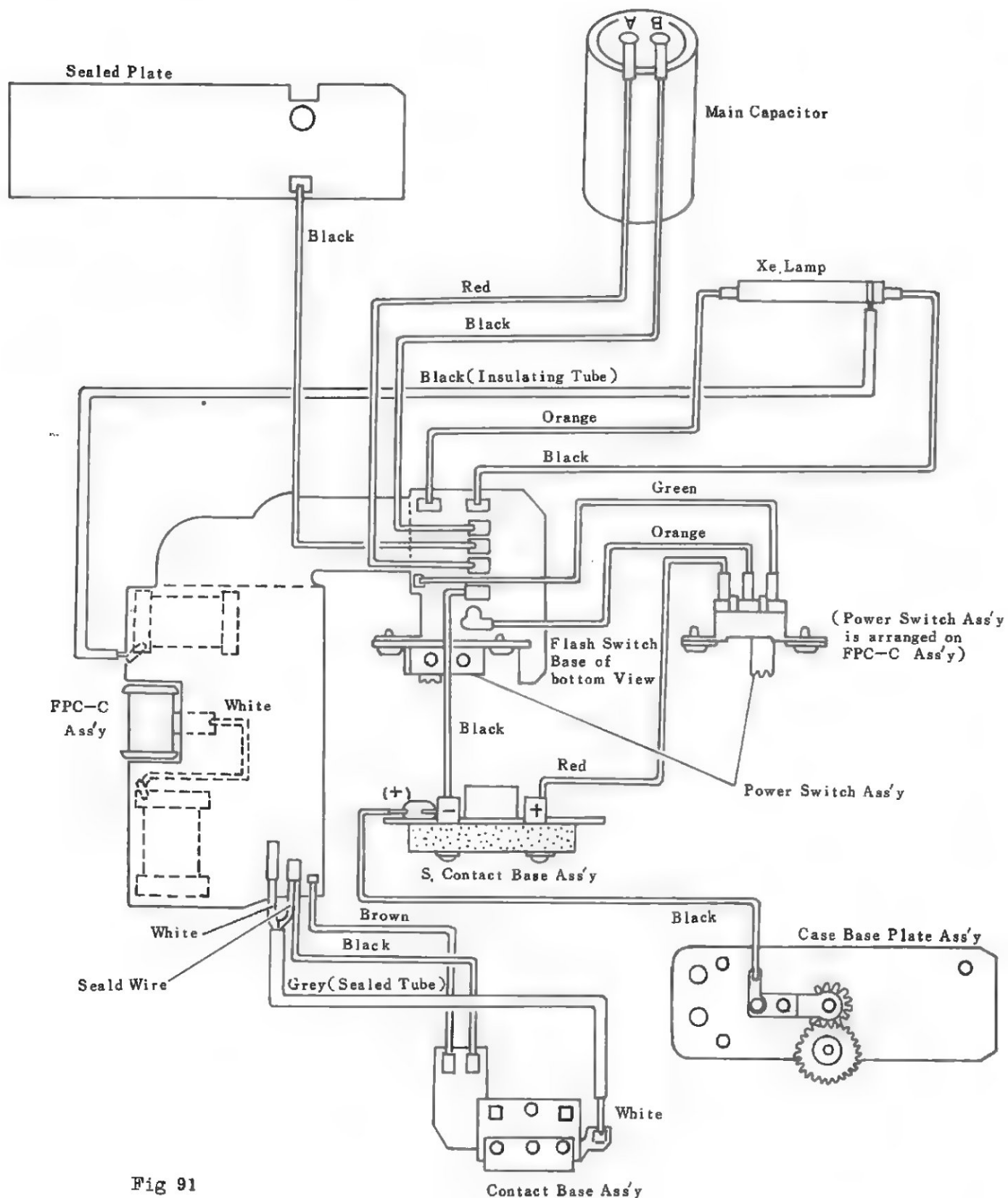


Fig 91

MALFUNCTION AND CAUSES

1 Defective of Shutter Mechanism.

1-1) Shutter sticks close and LCD Frame Counter does not operate.
(The film is not exposed always).

- (1) Bad soldering of Black lead wire of Battery Case Ass'y.
- (2) Bad soldering of Red lead wire of Battery Base Plate Ass'y.
- (3) Bad soldering of X' tal, defective of X' tal.

1-2) Shutter sticks close but LCD Frame Counter operate.
(The film is not exposed occasionally or always).

- (1) Bad soldering of Black and Red lead wire of Shutter FPC.
(From Opening Magnet)
- (2) Bad soldering of ② Capacitor on the FPC Ass'y.
- (3) Bad soldering of ④, ⑤ Transistor on the FPC Ass'y.
- (4) WE Switch is kept "ON" always or short circuit between WE Switch and post of Upper Base Plate (1) Ass'y.
- (5) Malcontact of R(2) Switch.
- (6) The Shutter Release Switch turns "ON" too deep.
(When Release Button is depressed, the Shutter Release Switch turns "ON" after the Hook Plate Claw is released from the Set Plate.)
- (7) Shutter Set Plate does not set.
Cause.....Too much Play in Shutter Set Plate and then Shutter Set Plate is not engaged with Shutter Hook Plate Claw.
Remedy.....Reduce play to minimum.

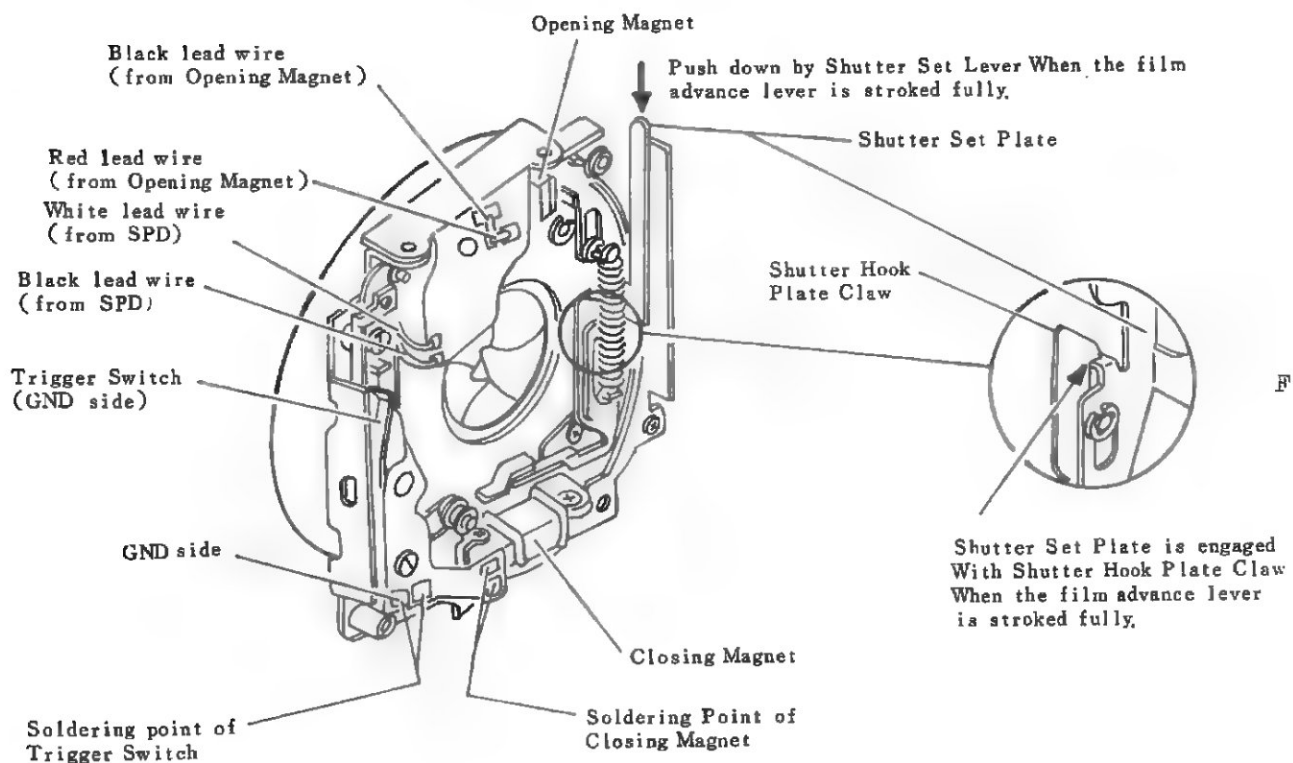


Fig 92

(8) While closing the Shutter Blades, the Shutter Set Plate does not return upward.

Cause Shutter Set Plate does not operate smoothly.
 Shutter Set Lever does not operate smoothly.
 Shutter Set Pin is clogged. See (Fig 13).

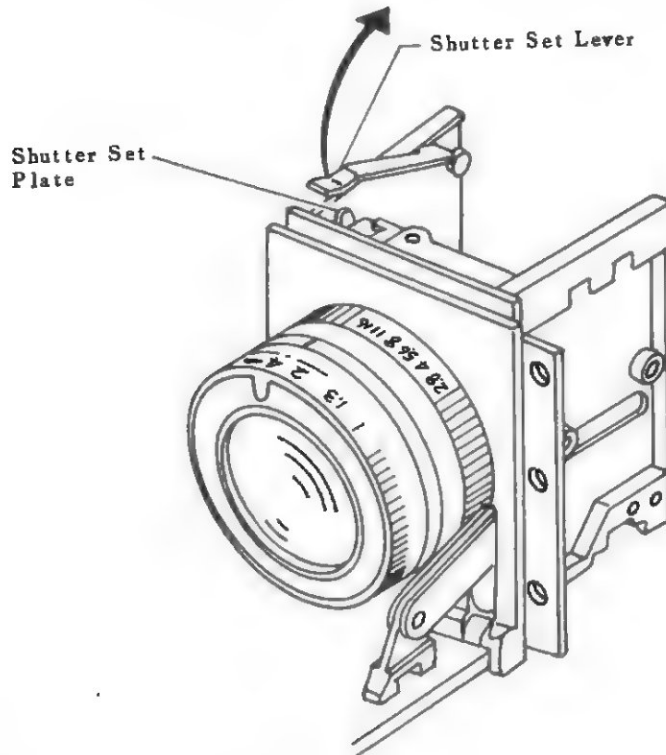


Fig 93

(9) Malcontact of Trigger Contact No.4 as shown below.

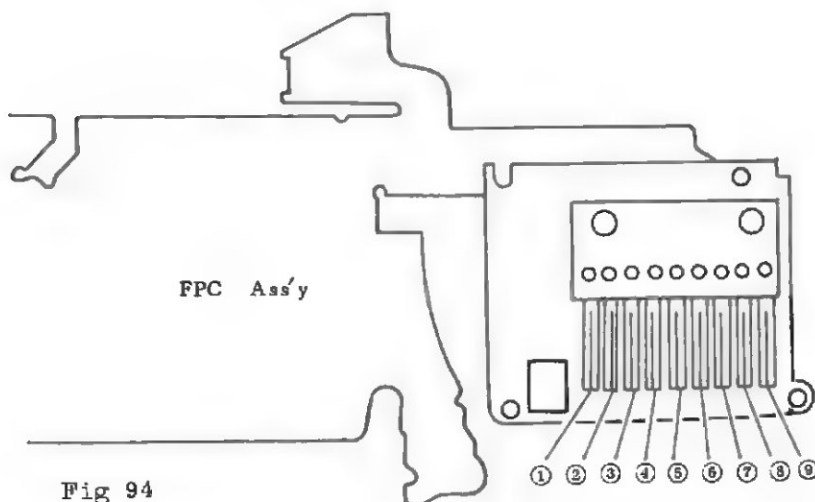


Fig 94

Shutter Switch

- ① SPD (Anode side)
- ② SPD (Cathode side)
- ③ GND
- ④ Trigger Contact
- ⑤ Opening Magnet (⤿)
- ⑥ Opening Magnet (⤵)
- ⑦ Closing Magnet (⤿)
- ⑧ VDD2 (power source voltage about 28V)
Closing Magnet (⤵)
- ⑨ VDD1 (power source voltage about 28V)

(10) W. Wire (352724) has slipped out of the position. See (Fig 20).

(11) Short circuit between Trigger Switch (GND side) and camera body. See (Fig 92)

(12) Malcontact of Trigger Switch.

1-3) Shutter remains open or shutter speed is too slow.

- (1) Malcontact of SPD contact No.1 and No.2 as shown in Fig 94.
- (2) Bad soldering of white and Black lead wire of SPD.
- (3) Short circuit between Trigger contact No 4 and GND contact No 3 as shown in Fig 94.
- (4) Bad soldering of ① Transistor on the FPC Ass'y.
- (5) Bad soldering of ⑨ Capacitor on the FPC Ass'y.
- (6) Foreign object lodged in Opening Magnet (Parmanent magnet).
- (7) Short circuit between soldering point of ASA Base and FPC.
- (8) Contact surface of Closing Magnet is dirty or defective of Closing Magnet mechanism.

1-4) Shutter speed is too fast and extremely under exposed.

- (1) Bad soldering of ⑤ Transistor on the FPC Ass'y.
- (2) Short circuit between EE Switch and camera body.
- (3) Bad soldering of Closing Magnet or broken wire of Closing Magnet.
- (4) Short circuit between SPD (Anode side) and Shutter.
- (5) Broken of FPC

Remedy.....Addition to lead wire as shown below.

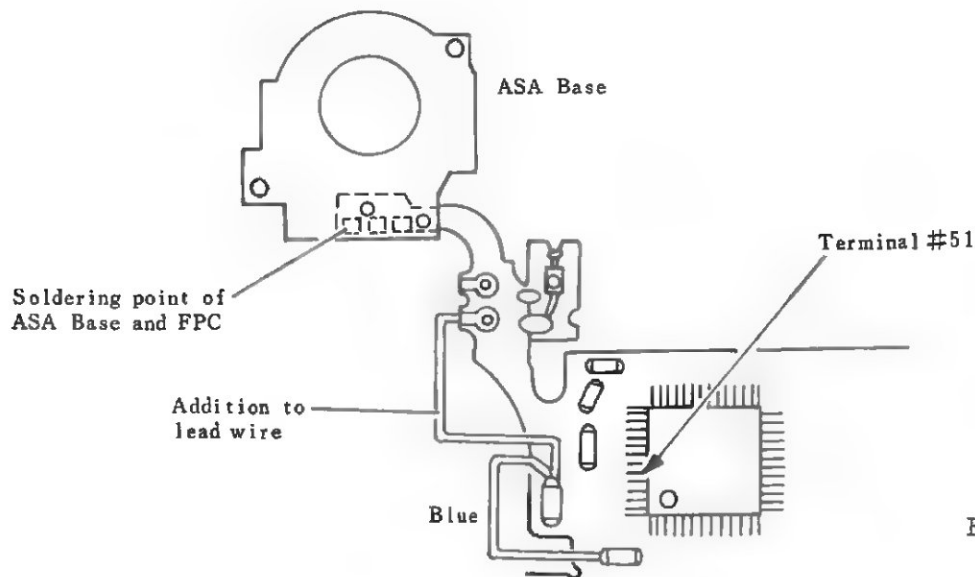


Fig 95

- (6) Bad soldering of IC terminal #51.
- (7) Malcontact of ASA Click Plate contact.
- (8) Bad soldering of ASA Base and FPC.

- 1-5) Release finger from the Shutter Button and then closes the Shutter in under low light conditions.
- (1) Shutter Release Contact (1) and Shutter Release Contact(2) is dirty.
- 1-6) Shutter operate always self mode.
- (1) Excessive solder on F. LED Base is touching the reverse side of FPC Ass'y and broken of FPC.

Remedy.....Addition to Acetate Cloth Tape as shown below.

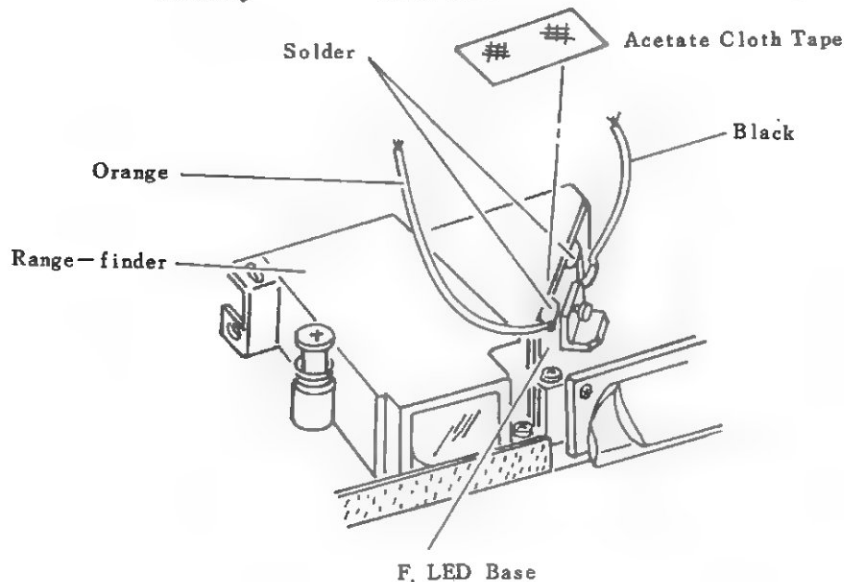


Fig 96

2 Defective of Winding Mechanism.

2-1) Does not Wind

- (1) W. Wire (352724) has Slipped out of the position or broken.
- (2) Release Lock Plate is operating defect.
- (3) Foreign object is between Gears and Levers.
- (4) Stiffen the Cam of the Set Gear(2) with Stopper. They are arranged under the Upper Base Plate(1).

2-2) When the Front Cover is opened and replace the Body Cover.

Then the film advance lever is stroked fully and slowly cock the film advance lever again, but does not stop.

- (1) Broken cam of the Set Gear(2)(352661) as shown below.
Set Gear(2) is arranged under the Upper Base Plate(1) Ass'y.

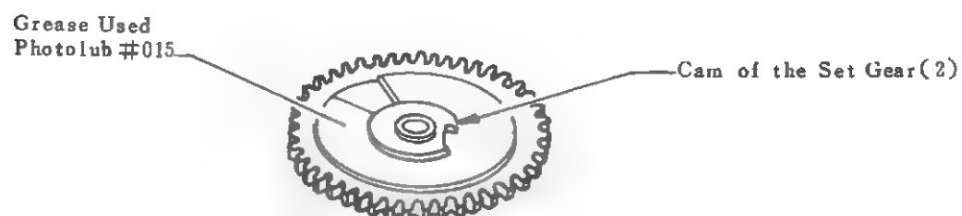


Fig 97

2-3) Winding is not smooth.

- (1) The W. Stopper is touching the Set Gear(2) as shown in Fig 21.
- (2) The Bottom cover(352168) is touching the A.Gear(352645) and B.Gear(352646)
- (3) Defective of upper Base Plate(1) Assy

2-4) Winding Lever does not return.

- (1) Winding Lever is touching the camera body as shown in (Fig 98).

Remedy.....Untighten three Winding Plate Set Screws

(61801826×3) and Shake the Winding Plate (352605) a little to the right in the direction of the arrow as shown in (Fig 99).

Then tighten three Winding Plate Set Screws

(61801826×3).

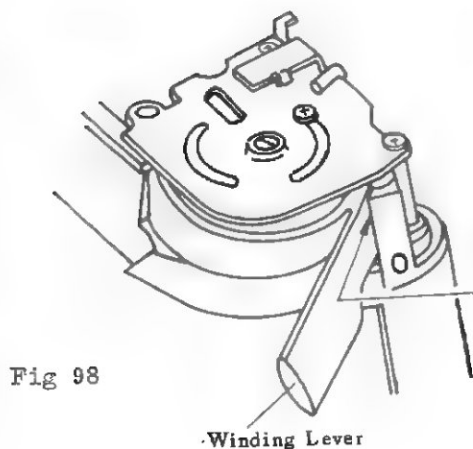


Fig 98

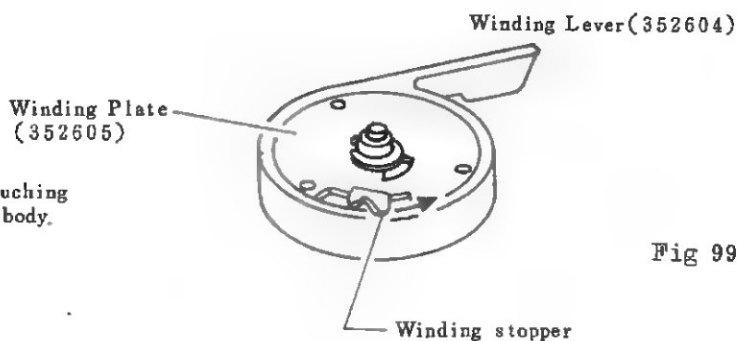


Fig 99

3 Defective of Exposure LED

3-1) Exposure LEDs do not light.

- (1) Bad soldering or soldering short circuit of LED Array.
- (2) Defective of LED Array.
- (3) Broken of FPC.

3-2) When Shutter Release Button is depressed "Over" or "under" side is displayed and does not change.

- (1) Bad soldring of Black and White lead wire (from SPD to Shutter FPC).
- (2) Bad soldering of ASA Base and FPC.
- (3) Bad soldering of VR4.
- (4) Defective of IC.

3-3) Exposure LED is unstable.

- (1) Malcontact of ASA Click Plate contact.
- (2) Broken of Shutter FPC.
- (3) Malcontact of SPD contact No 1 and No 2 as shown in Fig 94.
- (4) Soldering short circuit of LED Array.

3-4) Exposure LED "Over" position can not be adjusted.

- (1) Defective of IC.

3-5) When Front Cover is opened and the exposure LED remains lights continuously.

- (1) Shutter Release Switch is kept "ON".

4 Defective of Self-Timer.

4-1) Self-timer does not operate.

- (1) Bad soldering of Self Switch and FPC. See (Fig100)
- (2) Defective of Self Switch.
- (3) Soldering short circuit of Self LED. See (Fig100)
- (4) Bad soldering of IC terminal #35.
- (5) Defective of IC.

4-2) Self-timer activate about 5 seconds.

- (1) Defective of IC.

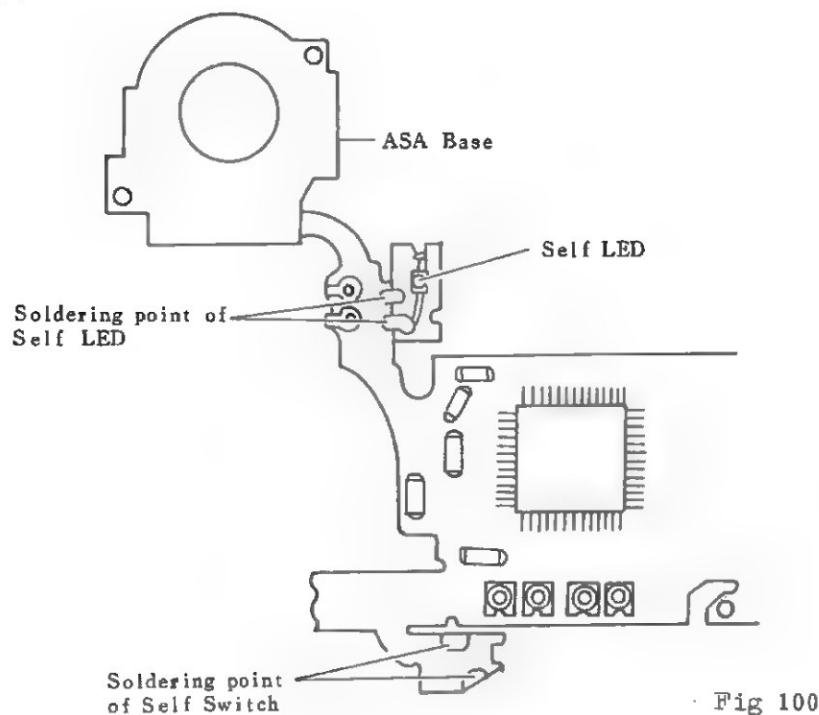


Fig 100

5 Auto Exposure is Incorrect.

5-1) Auto exposure and Exposure LED light up positions can not be adjusted and Auto exposure is incorrect.

- (1) Malcontact of Shutter Switch.
- (2) Broken of FPC.
Remedy.....Same as 1-4) No 5. P58.
- (3) Bad soldering or defective of ⑤ Transistor on the FPC Ass'y.
- (4) Bad soldering of IC terminal #51, #54, #56.
- (5) Bad soldering or defective of VR1.
- (6) Defective of IC.

5-2) When Shutter is released then all Exposure LED light up in a moment and Auto exposure is incorrect.

- (1) The EE. Switch is touching the EE Switch Base Plate(352582).
See (Fig 10)

6 Defective of LCD Frame Counter.

6-1) LCD Frame Counter will not automatically clear after closing of the Front Cover.

- (1) Short circuit between Release Plate and Shutter Release Contact(2).
Cause.....C Insulation Sheet(352333) is missing.
- (2) Short circuit between minus circuit (GND) and plus circuit (camera body).
- (3) Defective of IC.

6-2) LCD Frame Counter does not count each time the film advance lever is fully stroked.

- (1) Malcontact of R(2) Switch.
- (2) Bad soldering of pink and Grey lead wire of R(2) Switch.
- (3) Malcontact of WE. Switch.
- (4) Bad soldering of Green and Red lead wire of WE. Switch.
- (5) Bad soldering of IC terminal #14.
- (6) Defective of IC.

6-3) LCD Frame Counter indicate is abnormality.

- (1) LCD Panel mounted upside down.
- (2) Mismotion of LCD due to static electricity.
Remedy.....Remove the Body Cover and then replace the
Body Cover into the camera body.
- (3) Defective of IC.

6-4) After flash shots and then resets to start "--" mark.

- (1) Malcontact of Top Cover and Top Cover Contact Spring(352341).
Remedy.....Shave off the coat of surface of Top Cover as shown below.
- (2) Broken of FPC.

Top Cover (inside View)

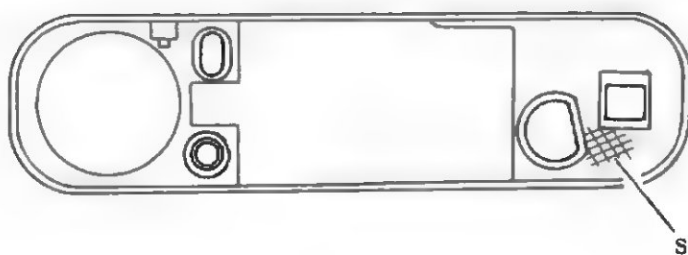


Fig 101

6-5) Resets to start "--" mark when shooting outdoors.

- (1) Bad soldering of ⑦ Capacitor on the FPC Assy.

6-6) LCD Frame Counter indicate is dimly.

- (1) Broken of FPC.

6-7) LCD Frame Counter figure is missing.

- (1) LCD Connector(352512×2) and Printed Circuit Patterns is dirty.
- (2) LCD Connector(352512×2) and LCD Panel(352503) is dirty.

7 Defective of Flash.

7-1) Flash does not work.

(does not charge at all)

- (1) Corrosion due to dirt of the Battery Contact of Flash Unit and the Battery Cap Contact.
- (2) Bad soldering of Red, Orange and Green lead wire of Power Switch Ass'y.
- (3) Defective of Power Switch Ass'y.
- (4) Defective of ⑥ Oscillation Transformer.
- (5) Defective of ⑤ Transistor on the FPC-C Ass'y.
- (6) Defective of Main Capacitor.
- (7) Failure in soldering.

7-2) Fails to Flash.

- (1) Malcontact of Flash Connector(2) of Body Cover and Coupling Terminal of Flash Unit. Malcontact of Flash Connector(1) of Body Cover and Body Contact Frame of camera body.
Remedy.....To clean Flash Connector(2) and Flash Connector(1) of Body Cover with ether and alcohol(ether and alcohol mixture ratio:(7:3))
- (2) Bad soldering or defective of ⑩ ⑭ Trigger Coil on the FPC-C Ass'y.
- (3) Bad soldering two Black and Orange lead wire of Xe Lamp or defective of Xe Lamp.
- (4) Bad soldering or defective of ⑩ Arrestor on the FPC-C Ass'y.
- (5) Failure in soldering of lead wire and parts of Flash Unit.
- (6) Bad soldering of FPC-B inside of Body Cover as shown in Fig.102
- (7) Bad soldering Black, Yellow and Brown lead wire from Body Contact Frame on the FPC Ass'y.
- (8) Defective of IC.

7-3) Battery drain or short circuit.

- (1) The Battery Contact(-) is touching the Case Plate Ass'y.
- (2) Not properly soldered of Red and Black lead wire of Main Capacitor.

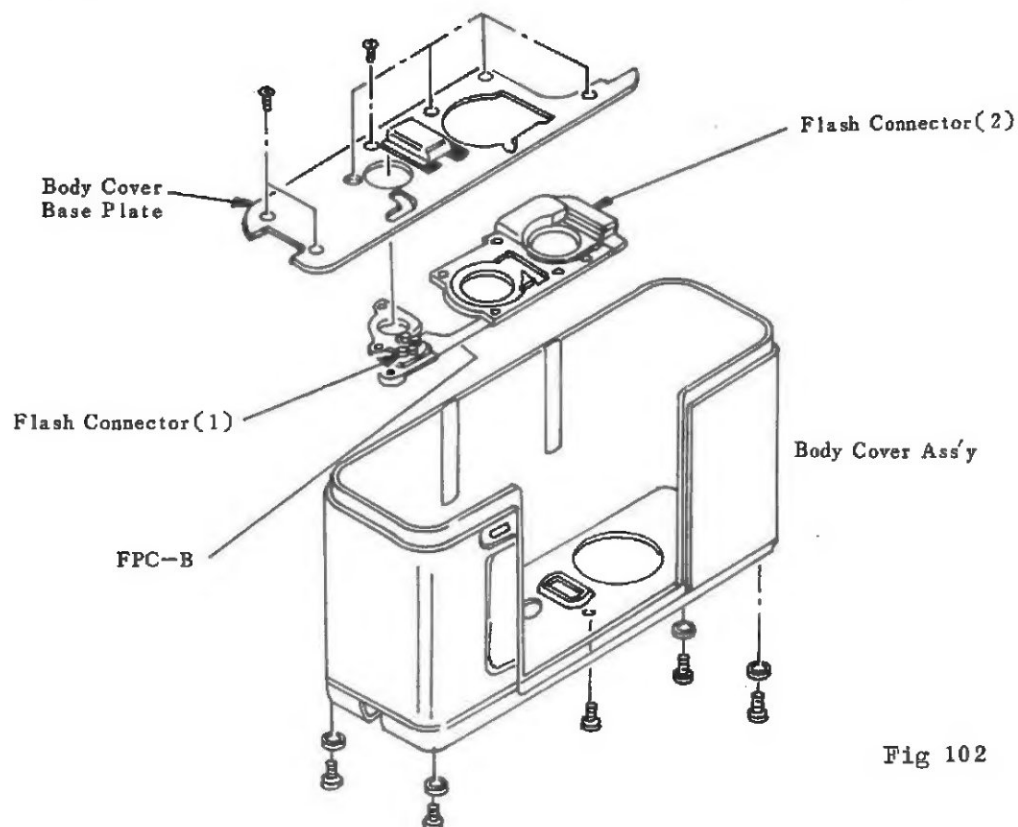


Fig 102

[Checking procedure of soldering FPC-B with Flash Connector(1) and Flash Connector(2)]

- a) Install the Batteries into the Flash Unit.
- b) Flash Unit set to Body Cover Ass'y as shown below. And turn the power Switch "ON" .
- c) Connect(+) of 3.0 volts from Regulated D.C. Power Supply to Flash Connector(1) of Body Cover Ass'y, (-) of Regulated D.C. Power Supply to Flash Connector(1) of Body Cover Ass'y and the Flash will fire as shown below.

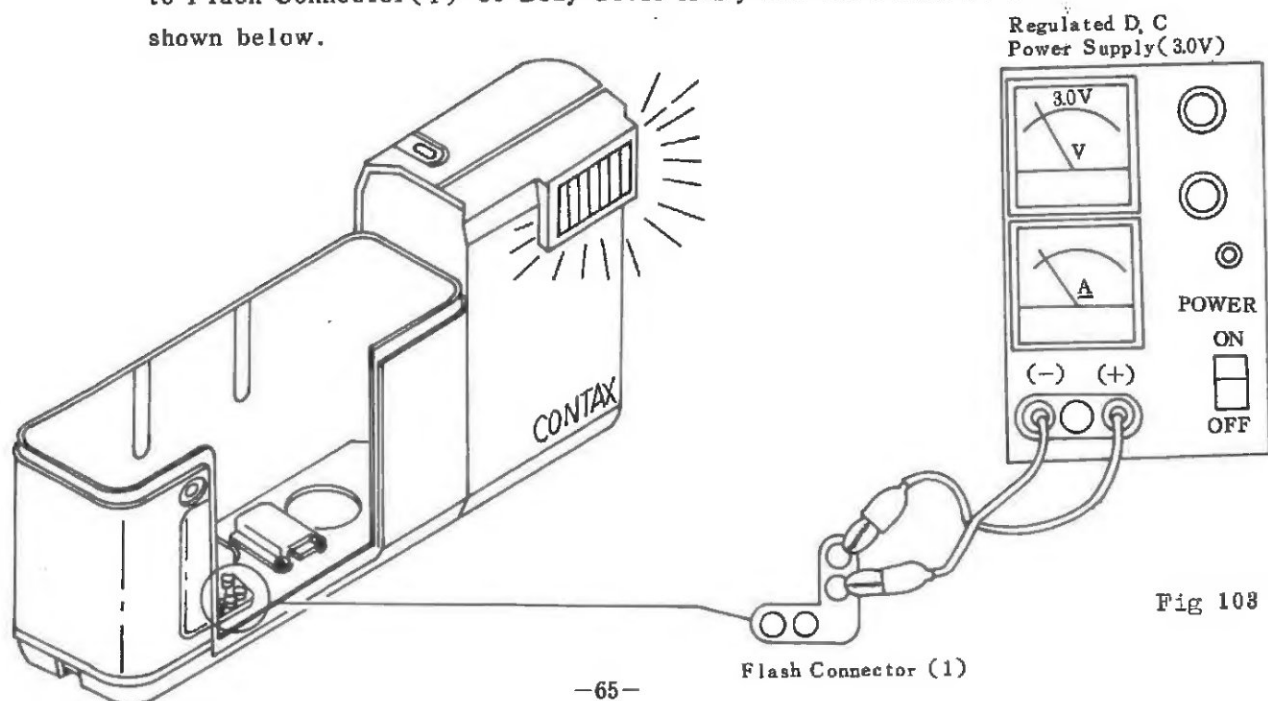
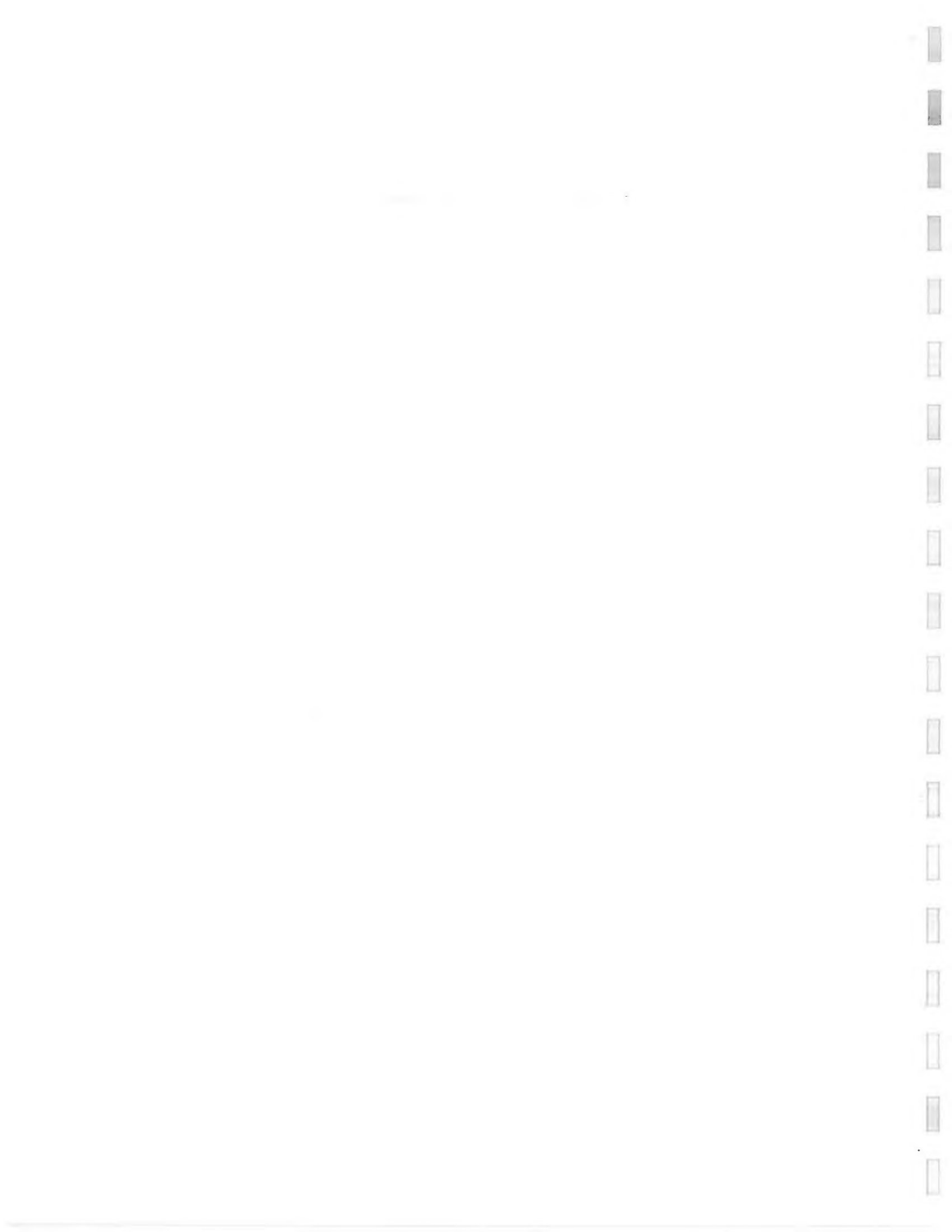
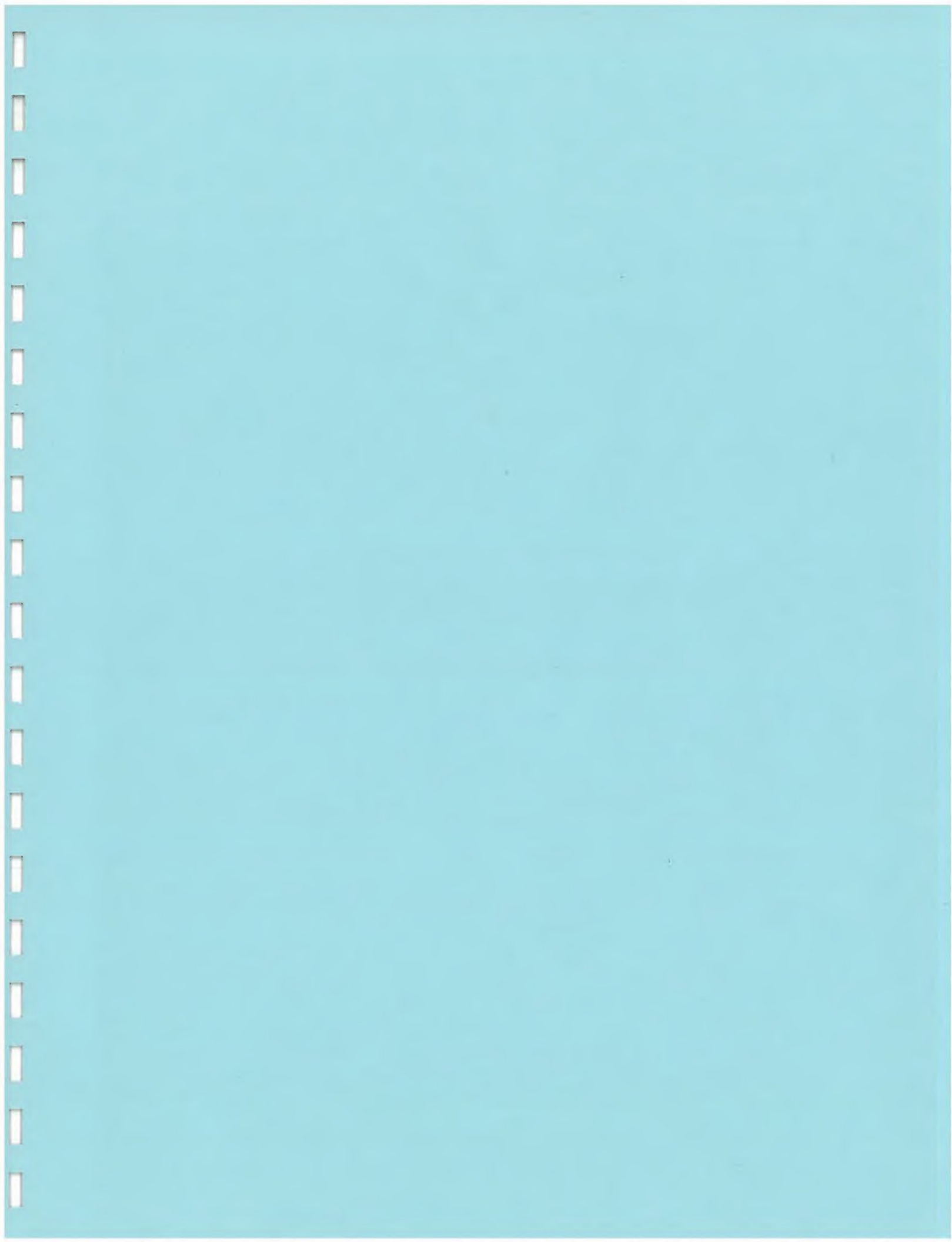


Fig 103







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