

M645 SUPER

2 CAMERA BODY

7 TECHNICAL BULLETIN

|                     |     |    |    |
|---------------------|-----|----|----|
| NEW S. BUTTON GUIDE | 1/1 | 76 | 10 |
|---------------------|-----|----|----|

OUR REF.NO. 060

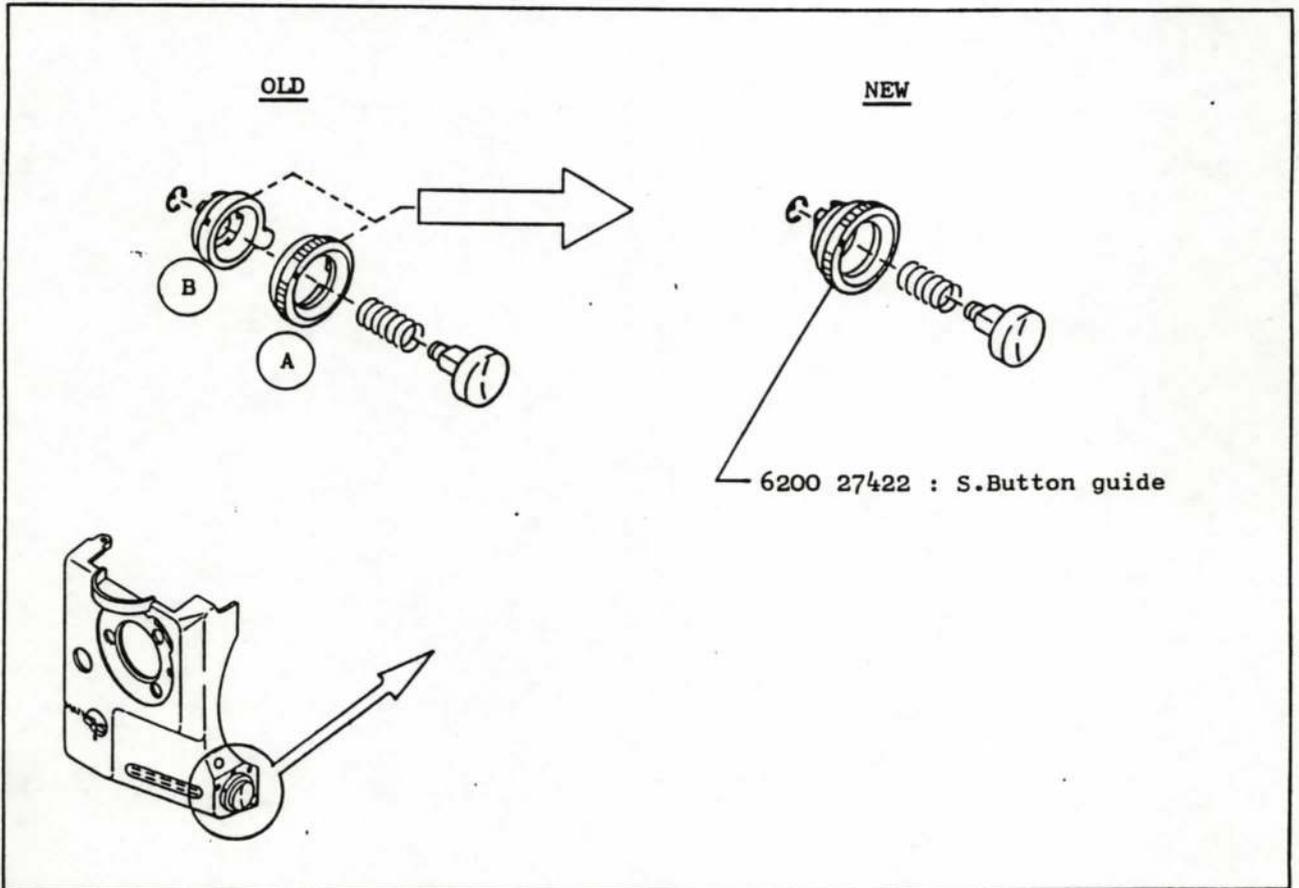
The (A) and (B) parts of the S.Button guide has been modified in a unit part to avoid dropping out of (A) parts.

Modification Date : Since 1987 October.

1. Old New Parts Interchangeability :

YES.

NO.



Remarks

|    |     |    |
|----|-----|----|
| 20 | JUL | 88 |
|----|-----|----|

M645 SUPER

2 CAMERA BODY

7 TECHNICAL BULLETIN

NEW SUPPLY SPARE PARTS

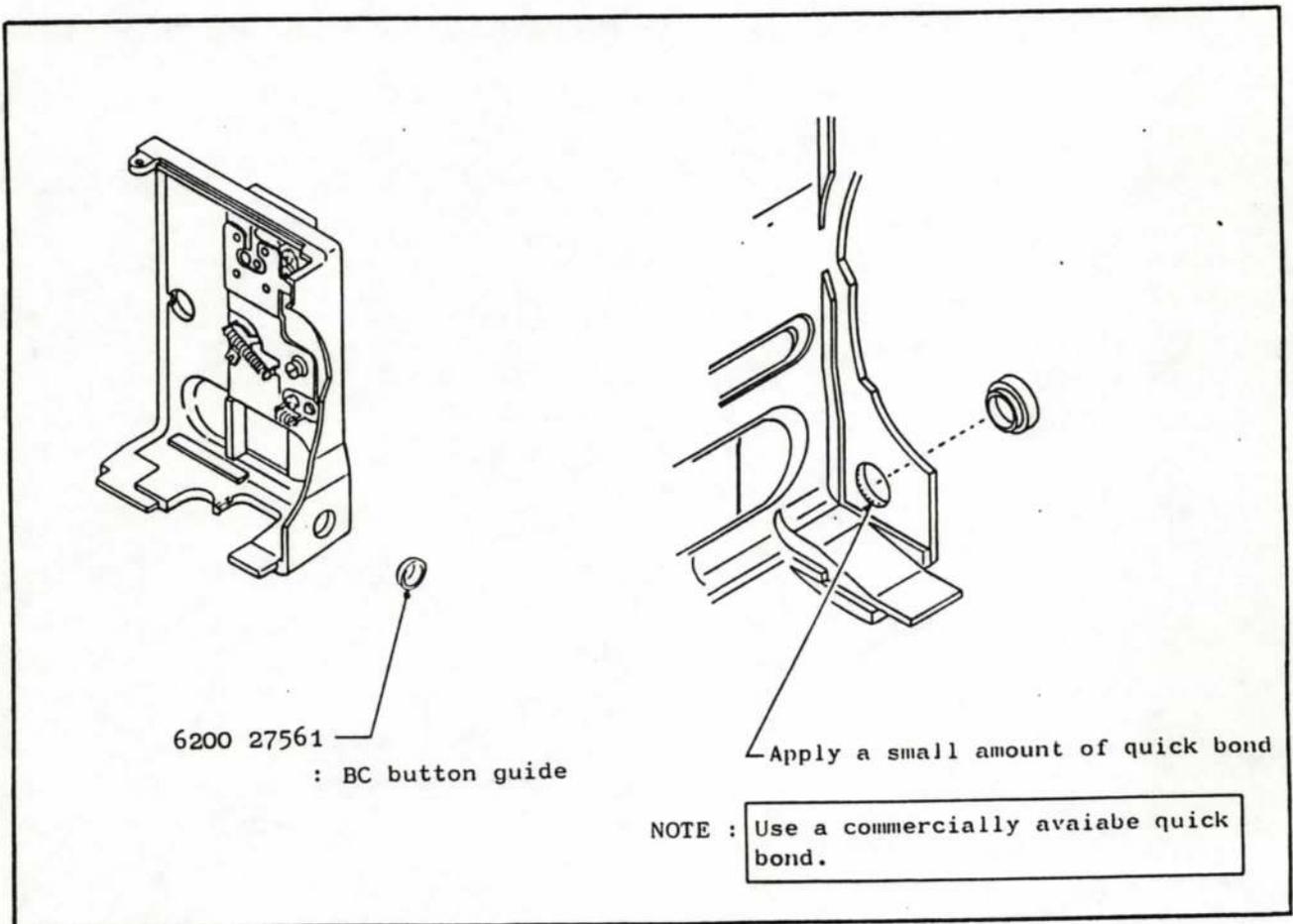
1/1

76

9

OUR REF. NO. 047

\* Spare parts supply : from 25 May 1987.



Remarks

12 MAY 87

M645 SUPER

|   |                    |
|---|--------------------|
| 2 | CAMERA BODY        |
| 7 | TECHNICAL BULLETIN |

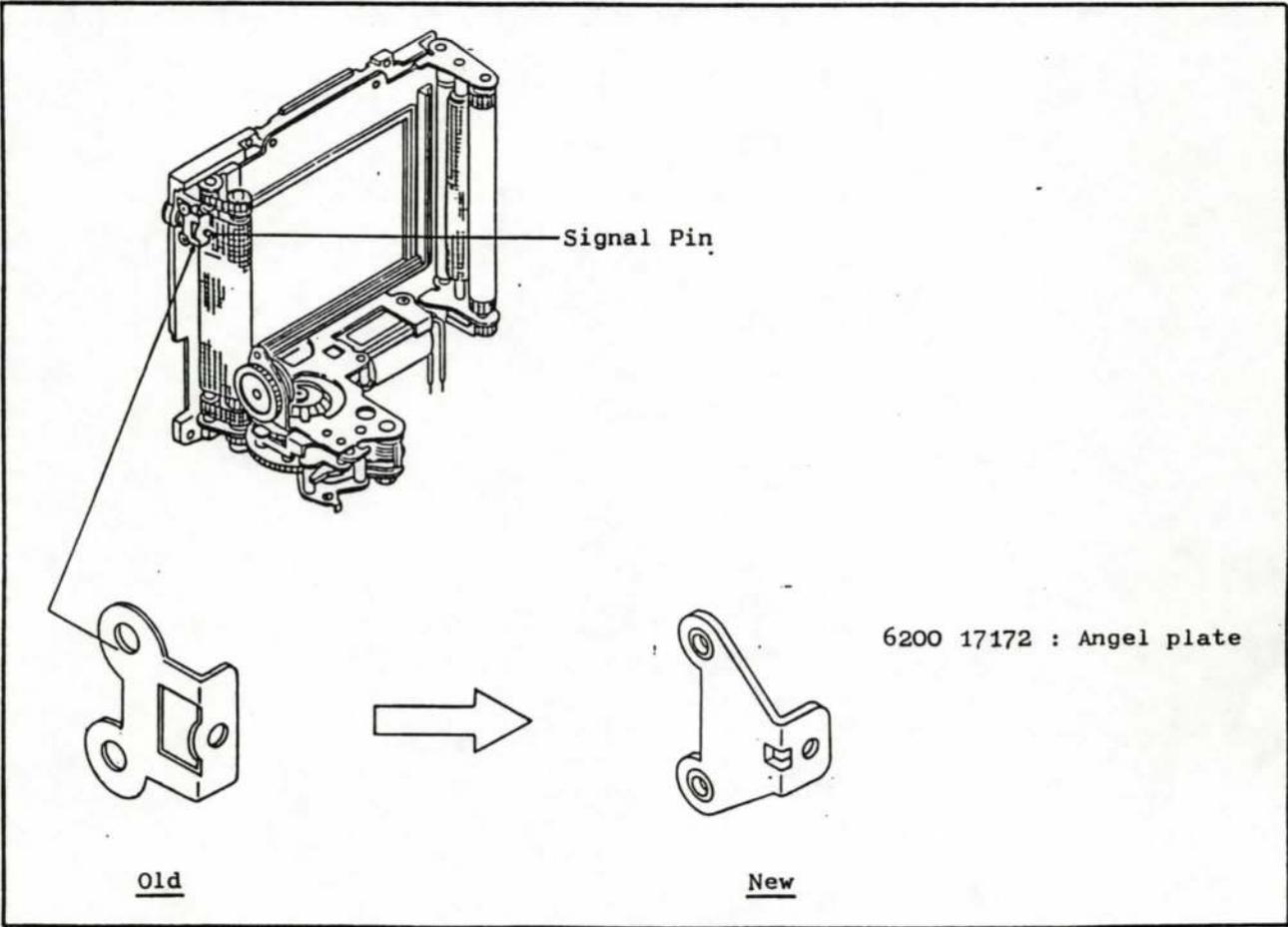
|                 |     |    |   |
|-----------------|-----|----|---|
| NEW ANGEL PLATE | 1/1 | 76 | 8 |
|-----------------|-----|----|---|

OUR REF.NO. 046

Phenomenon : Signal Pin do not operate properly.

Modification : Shape of Angel plate.

Modification Date : Since 1987 May Production.



Remarks

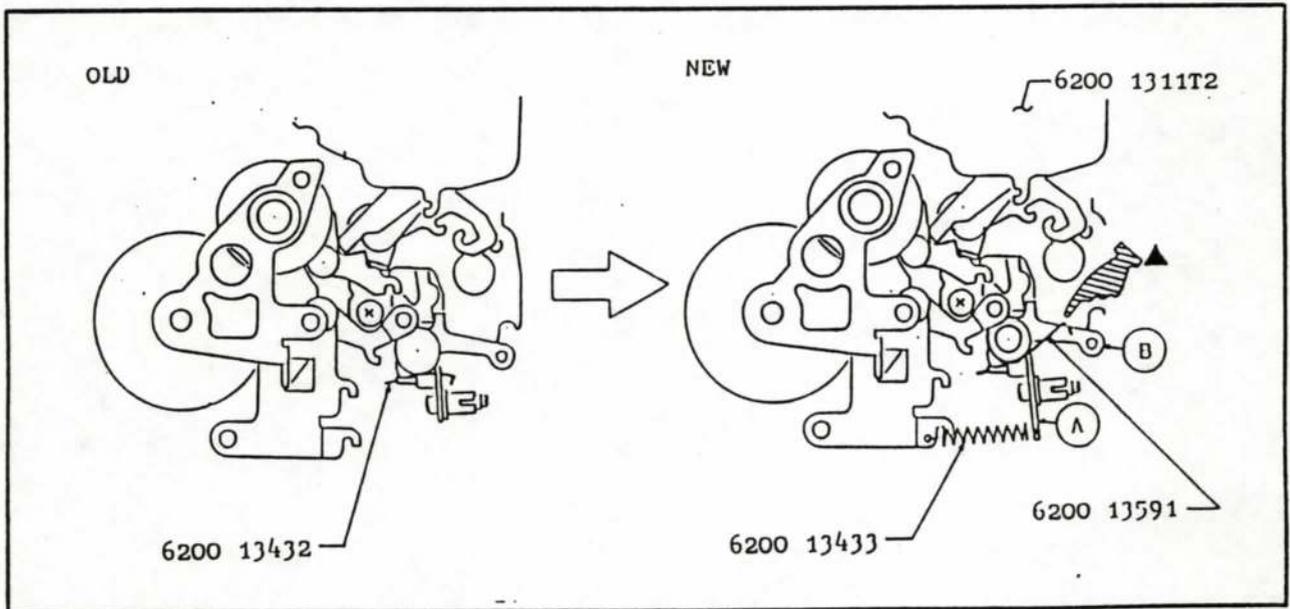
08 MAY 87

Phenomenon : When winding crank is wound, suddenly mirror is released and stays at upper position.

Cause : Lever A and B do not operate properly.

Modification : 1) An additional new spring : 6200 13432  
2) Change of spring shape and its fixing position.

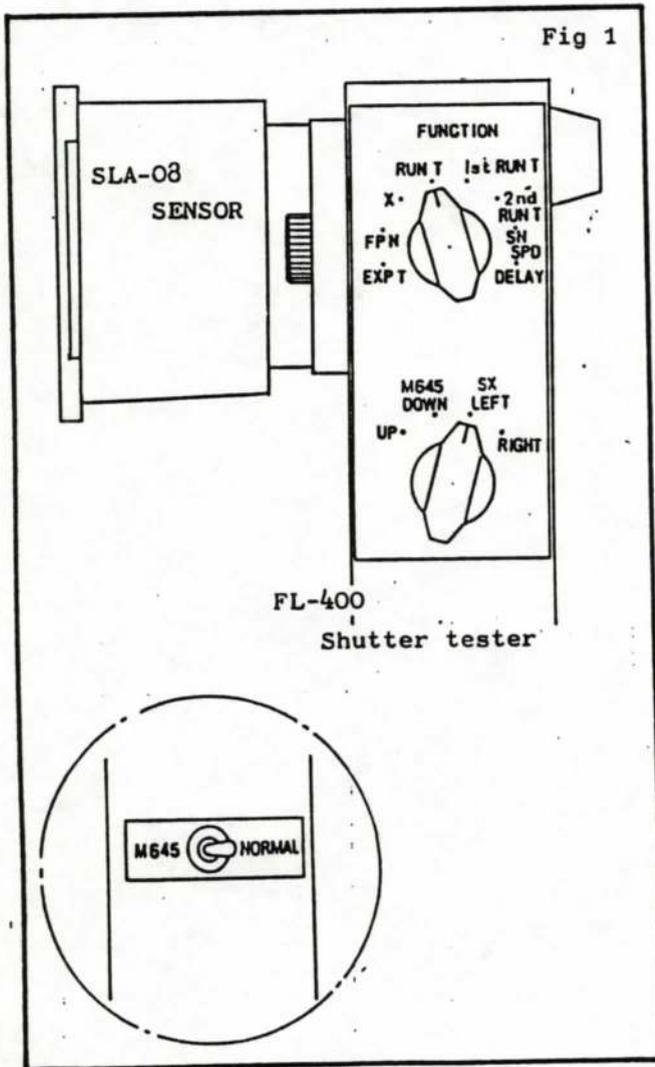
Modification Date : Since 1987 March production.





When using SLA-08 SENSOR for FL-400 shutter tester, following check and adjustment should be made.

A. Type I



1) Attach SLA-08 SENSOR to FL-400 and the set the selector switches as shown in Fig.1.

- A : RUN T
- B : SX LEFT
- C : NORMAL

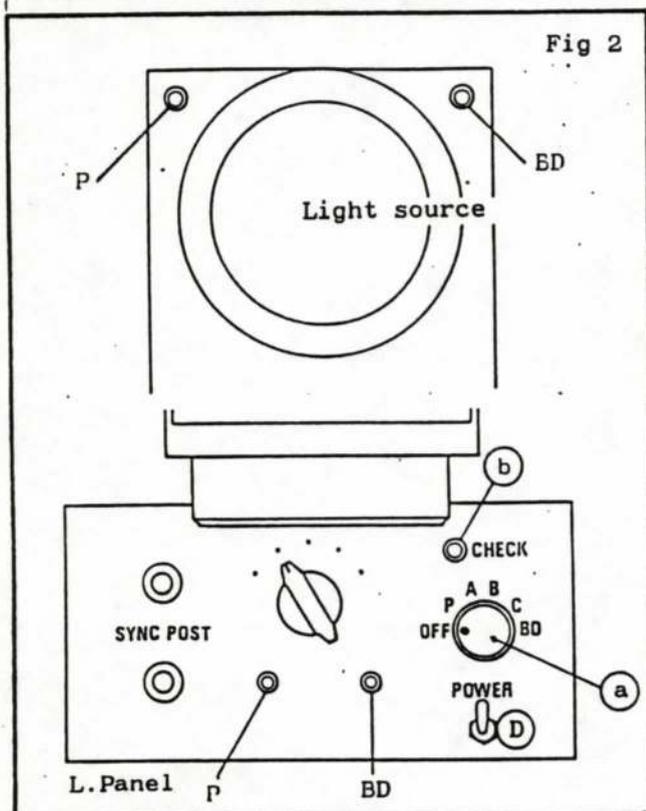
SLA-08 SENSOR FOR FL-400 SHUTTER TESTER

2/4

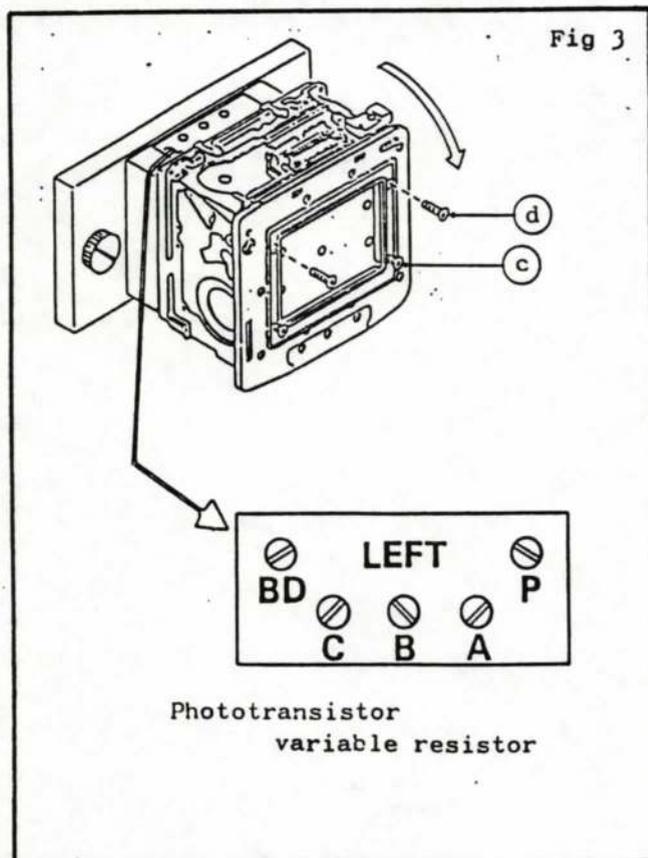
76

6

OUR REF.NO 032



- 2) Set the power switch D "ON" Then, LEDs P and BD on both sides of Light source and L.panel light up.
- 3) Next, while switching the selector on P, A, B, C and BD, CHECK LED b light up at each setting position. The LED P and BD on both sides of Light source and L. panel also light up.

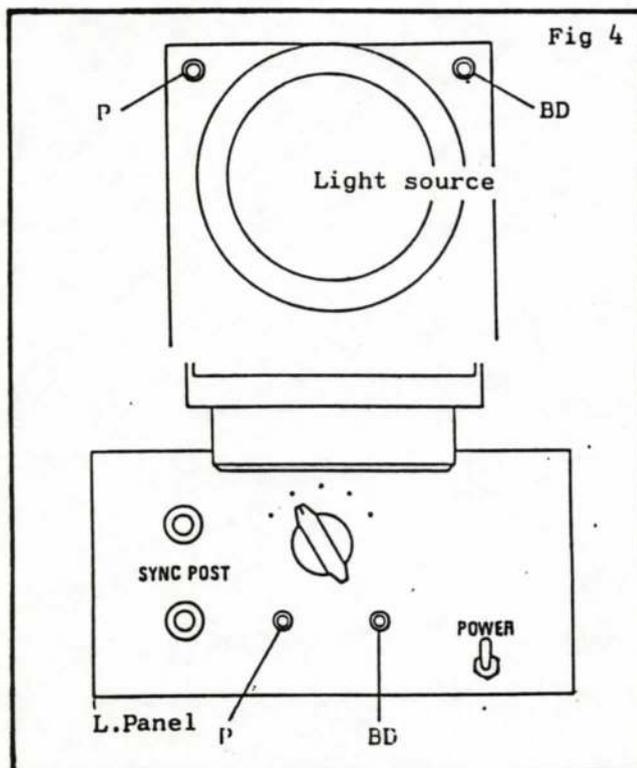
ADJUSTMENT

- 1) Loosen the screw c of SLA-08 SENSOR and remove the screw d, Move the main body of the SENSOR toward arrow direction so that the variable resistor BD and P may easily be adjusted.
- 2) Set the selector a (Fig.2) at the position P and turn the variable resistor P and light up LEDs P on both sides of Light source and L. panel, and also light up CHECK LED b.
- 3) In the same manner as step 2), set the selector a at the position A, B, C, and BD, and adjust each variable resistor.

After adjusting, set the selector a at "OFF" position, and use.

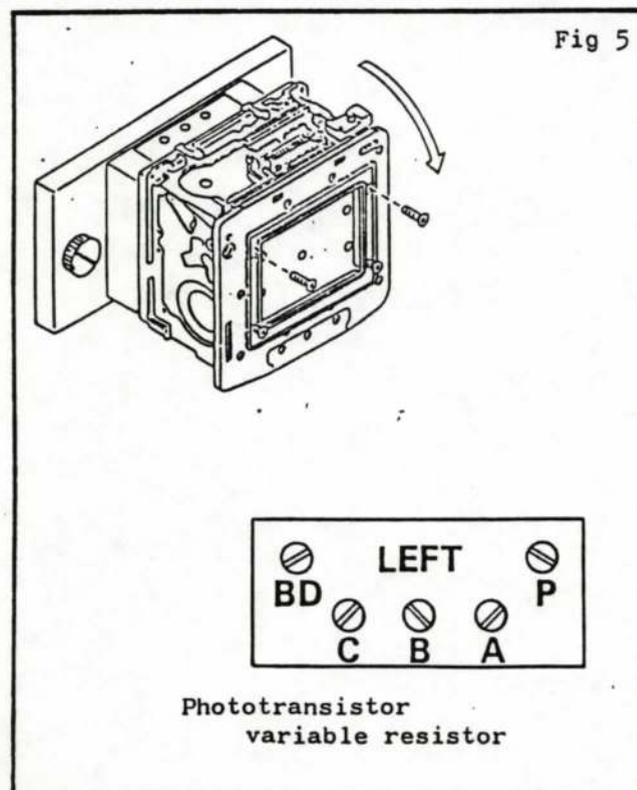
Remarks

28 JAN 87

CHECK

## B. Type II

- 1) Attach SLA-08 SENSOR to FL-400 as in the same manner as Tye I, step 1).
- 2) Set the power switch D "ON" LEDs P and BD on both sides of Light source and L.panel light up.(Fig.4)

ADJUSTMENT

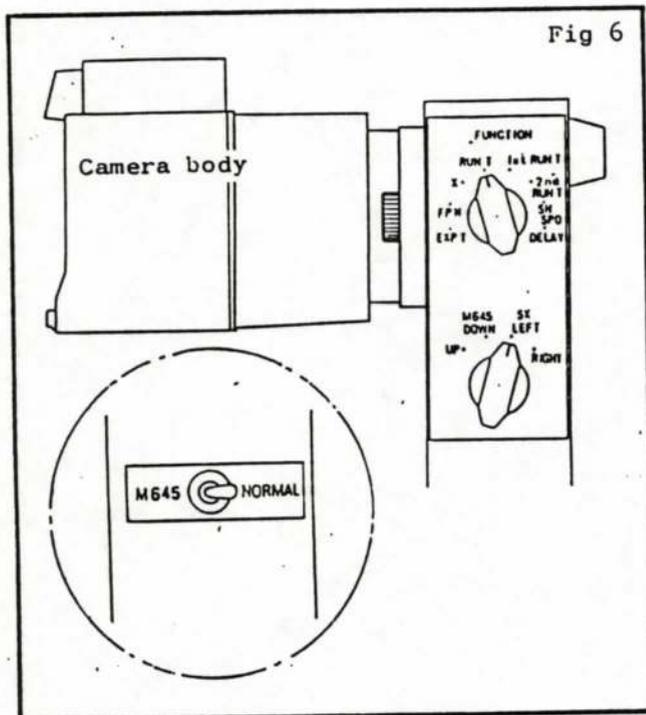
- 1) In the same manner as Type I, step 1) and 2), turn the variable resistors P and BD, and let the LEDs P and BD light up on both sides of Light source and L.panel.(Fig.5)

SLA-08 SENSOR FOR FL-400 SHUTTER TESTER

4/4

76 6

OUR REF.NO 032.



REPAIR FOR MIRROR LOCKED UP

1/2

76

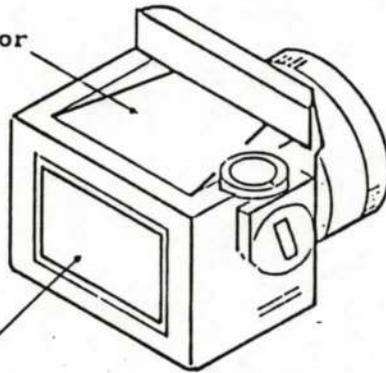
5

OUR REF.NO. 025

Phenomenon :

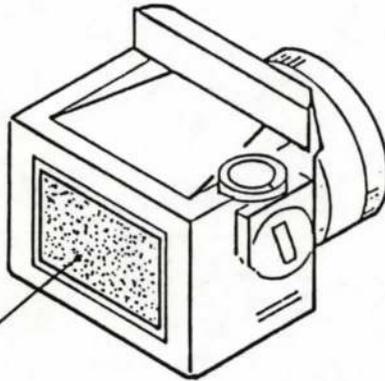
A When wound up, mirror does not return and stays at risen position.

Mirror



Shutter curtain is kept open.

A' As same as above A



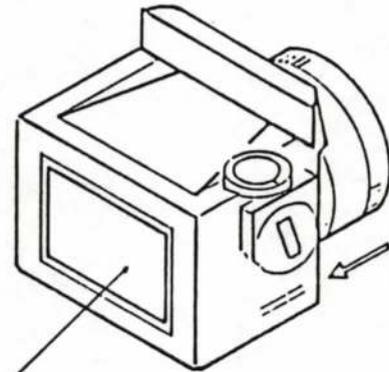
Shutter curtain (2nd) is closed.

Cause :

1) Improper adjustment of the mirror release lever.

Phenomenon :

B After released, mirror does not return and stays risen position.



Release

Shutter curtain is kept open.

Cause :

- 1) Shutter curtain ribbon was teard off.
  - \* If the second shutter curtain of the mechanical shutter release does not function, the cause should be that the shutter curtain ribbon is off.
- 2) Dirty spring of the trigger switch and improper contact pressure. ( proper contact pressure : 30g)

Remarks

26 NOV 86

## Repair Steps : A &amp; A'

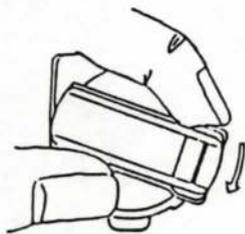


Fig. 1

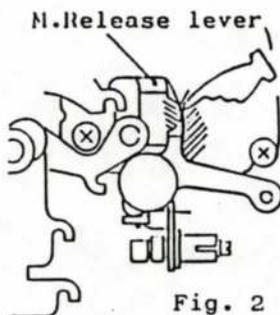


Fig. 2

- 1) Wind up the crank and stop it just before setting, and hold. (Fig. 1 )  
Up till the position that the mirror release lever overlaps the base plate (Fig. 2 )

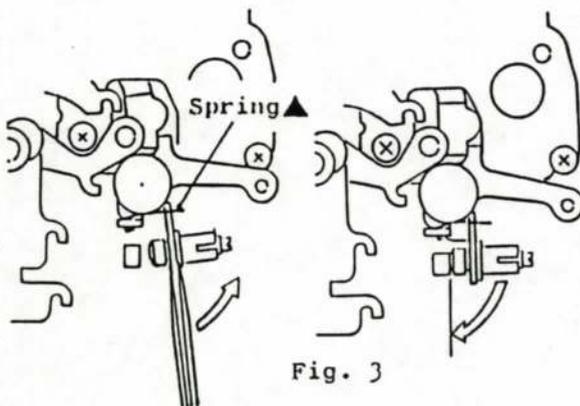


Fig. 3

- 2) With a pair of tweezers move the mirror release lever toward the arrow direction. Check and confirm that the lever returns to the specified position when it is released gently.
- 3) If it does not return to the specified position, replace the spring with a new one, or check if the mirror release lever and the lever B move smoothly.
- 4) Readjust. ▲

## Repair Steps : B

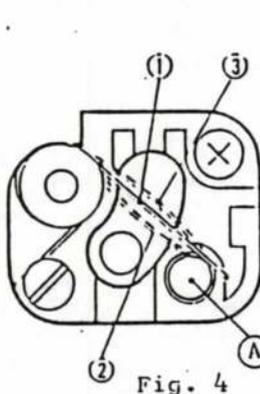


Fig. 4

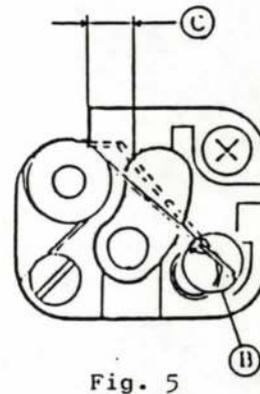


Fig. 5

- 1) Clean the trigger spring (1) and the trigger pin (A) with ether. (Fig. 4 )
- 2) Check the trigger spring (1) bended for adjusting, and if it is the state of (3), readjust the spring by bending it within the range of (C). (Fig 5 )

Contact pressure (B) of the trigger pin (A) to the trigger spring (1) is to be adjusted to 30g.

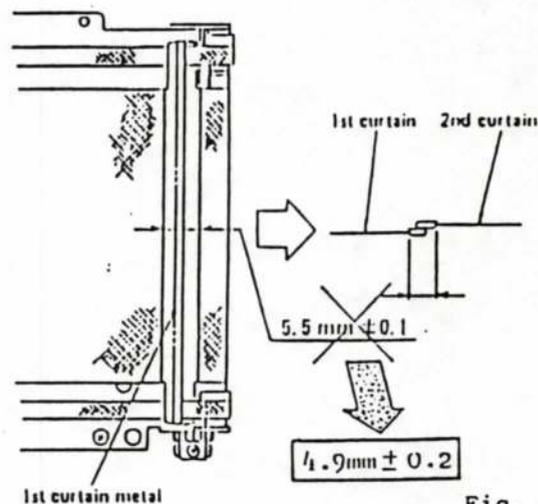
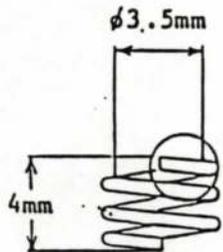


Fig. 6

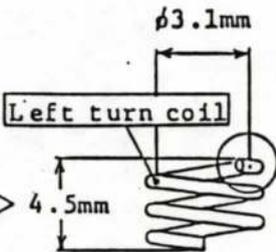
- 3) In case that the bended direction of the trigger spring is (2), the shutter curtain overlapping is to be adjusted 4.9mm ± 0.2.
- 4) Then, adjust according to the step 2) above.

# REVISED

OLD



NEW



1. PURPOSE

: To facilitate adjustment of 1st curtain bounce the spring has been changed as shown in the drawing.

2. ADJUSTMENT OF 1st CURTAIN BOUNS

: Quite same step with repair manual page 36

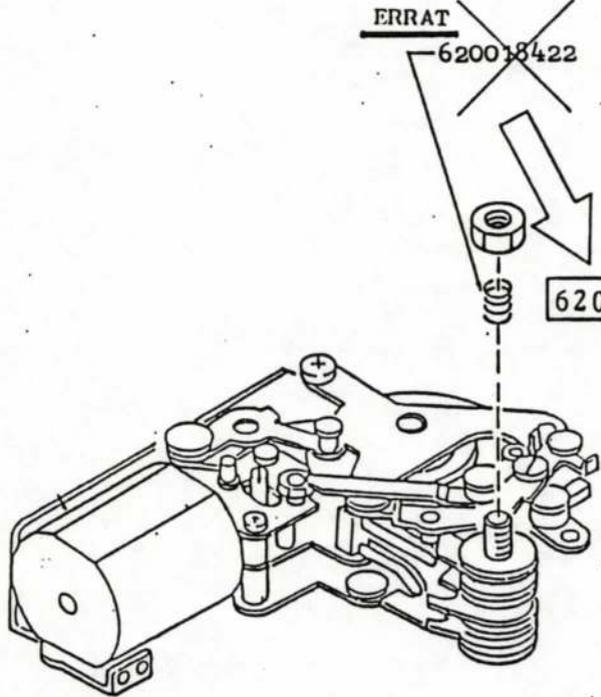
3. MODIFICATION DATE

: From August, 1986.

ERRAT

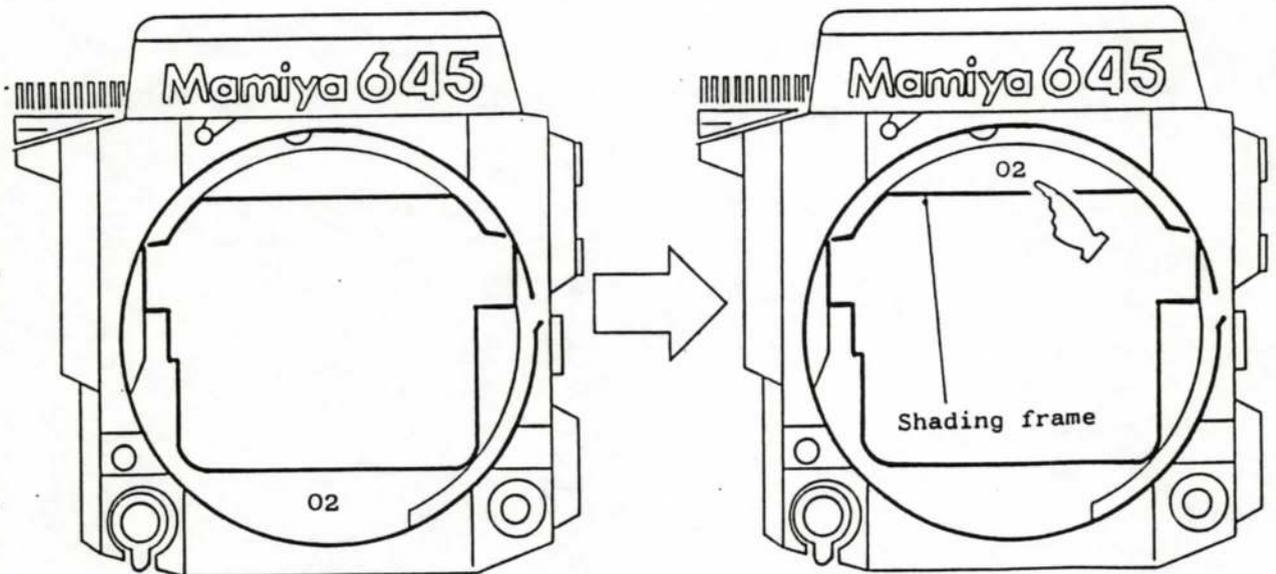
~~620018422~~

620018442



| ERRATUM   | AMEND TO READ |
|-----------|---------------|
| 620018422 | → 620018442   |

1. DISCRIMINATION : Modified body is still marked with "02" stamp.  
"02" stamped on the upper part of body front shown in to drawing below.
2. MODIFICATION DATE : From middle of October, 1986.



Remarks

▲ P.ID-02 : Parts Identification NO.

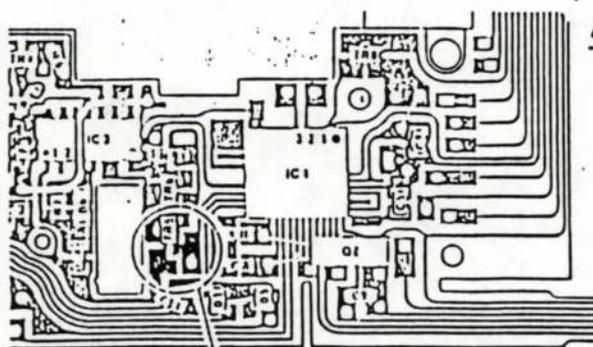
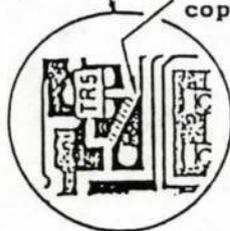


Fig.1

Peel off the  
copper coating



#### 4. REPAIR STEP

- 1) Remove right side cover, bottom cover and bottom base plate referring to the repair manual page 21.
- 2) Carefully peel off the copper-coated pattern at the shaded portion of TR5 circuit, as shown in the left, by a cutter knife to disconnect the continuity. (Fig.1)

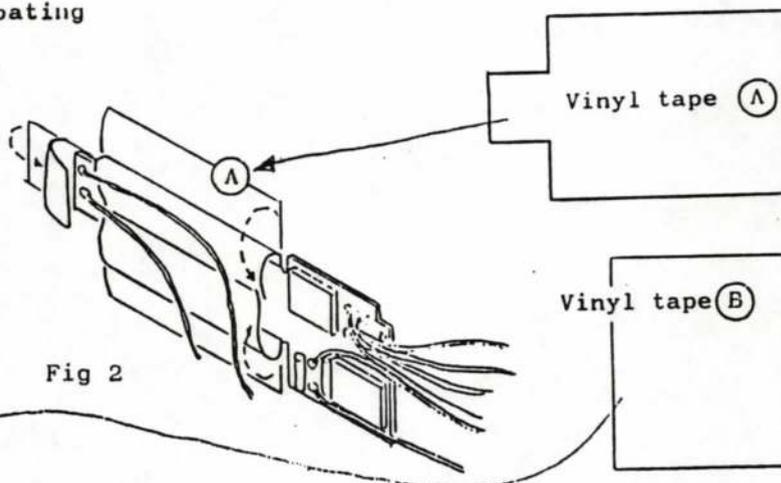


Fig 2

- 3) Put adequate length vinyl taPe on the shaded portions of sub-F.P.C.board to isolate the board from camera body. (Fig.2)

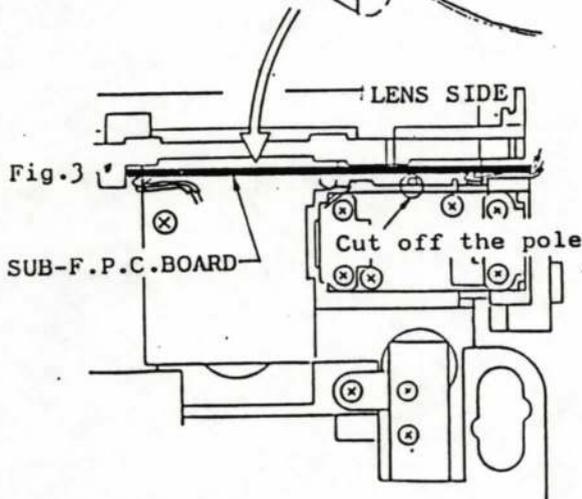


Fig.3

SUB-F.P.C.BOARD

LENS SIDE

Cut off the pole

- 4) Cut off the pole and insert Sub F.P.C board between the lens mount and the battery case. (Fig.3)
- 5) Solder each leadwire to Main F.P.C. board by referring to the attached wiring diagram.

# REVISED

M645 SUPER

2 CAMERA BODY

7 TECHNICAL BULLETIN

NEW SUBIDIARY F.P.C.BOARD TYPE 2

1/2

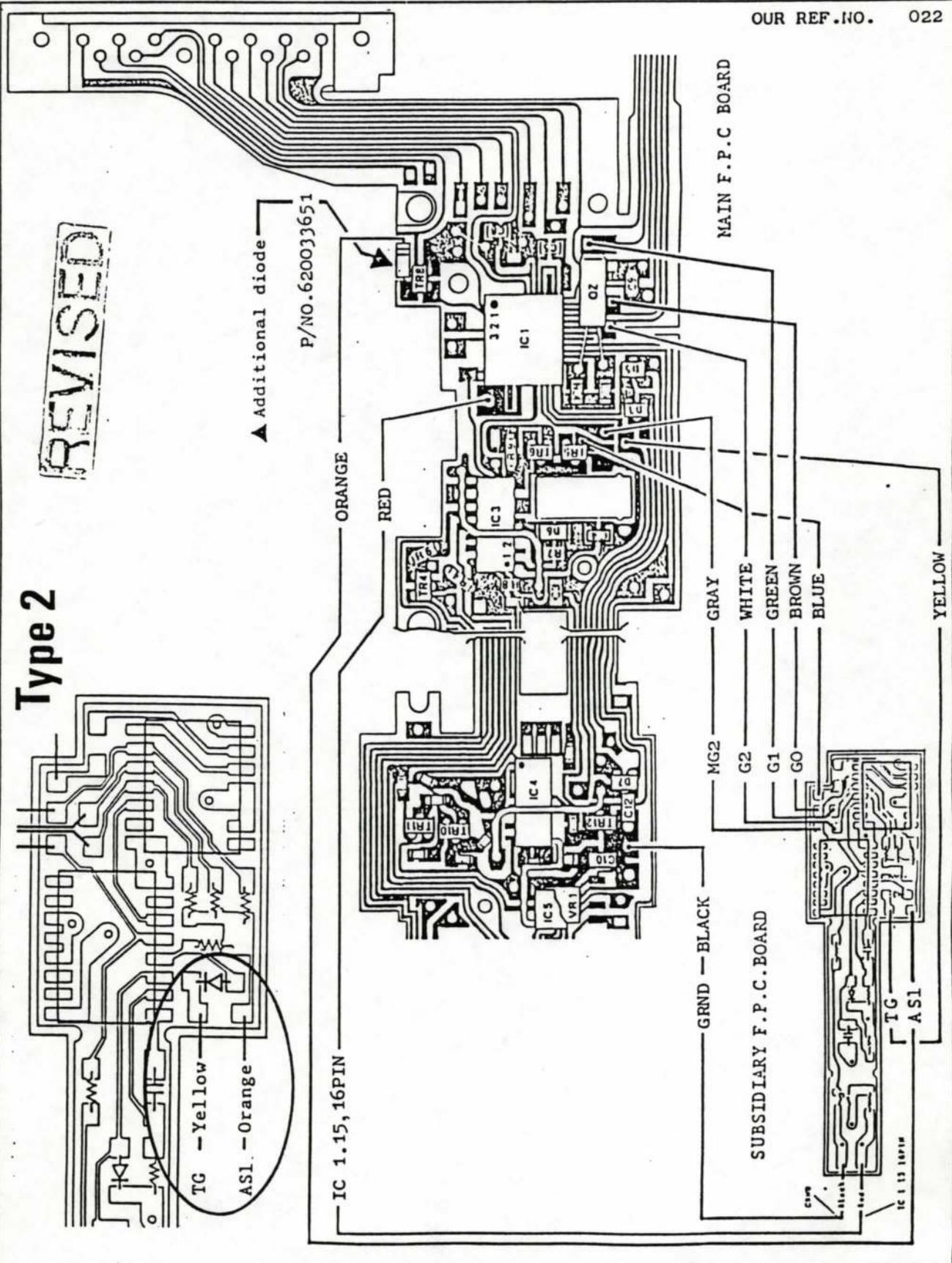
76

2

OUR REF.NO. 022

REVISED

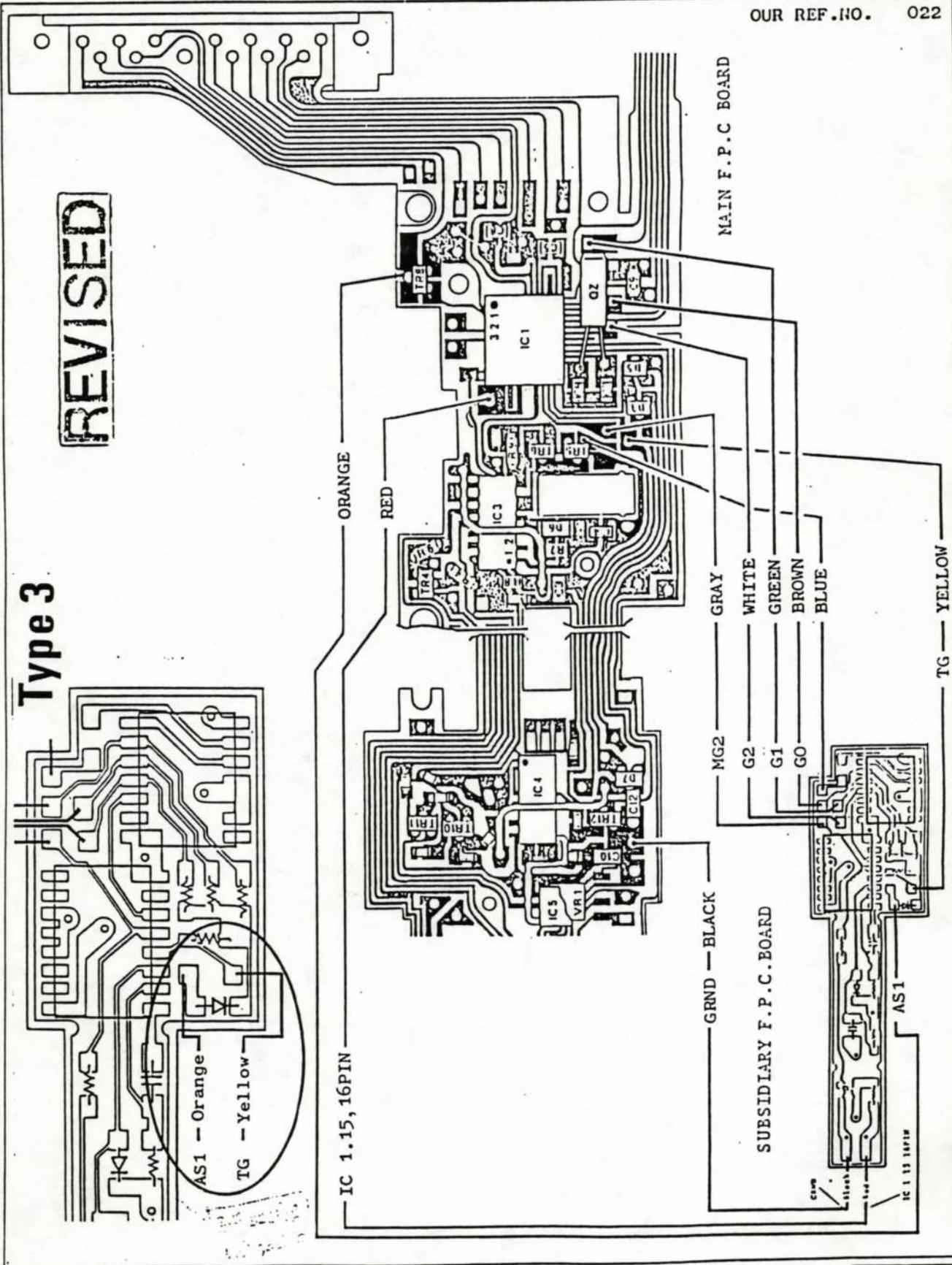
Type 2



Remarks

86

10



Remarks

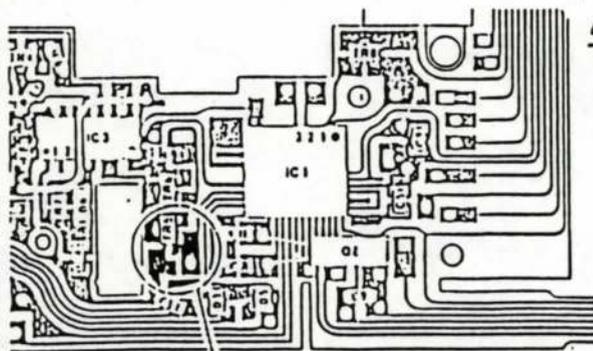
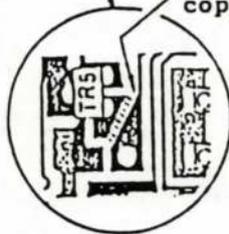


Fig. 1

Peel off the  
copper coating



## 4. REPAIR STEP

- 1) Remove right side cover, bottom cover and bottom base plate referring to the repair manual page 21.
- 2) Carefully peel off the copper-coated pattern at the shaded portion of TR5 circuit, as shown in the left, by a cutter knife to disconnect the continuity. (Fig.1)

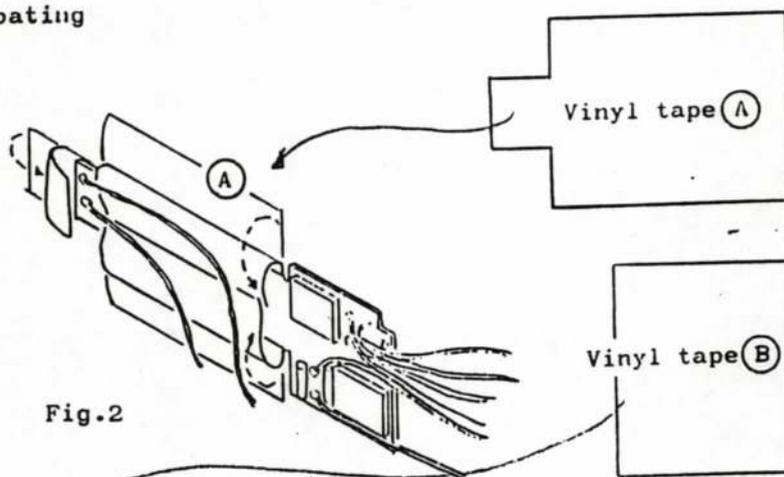


Fig. 2

- 3) Put adequate length vinyl tape on the shaded portions of sub-F.P.C. board to isolate the board from camera body. (Fig.2)

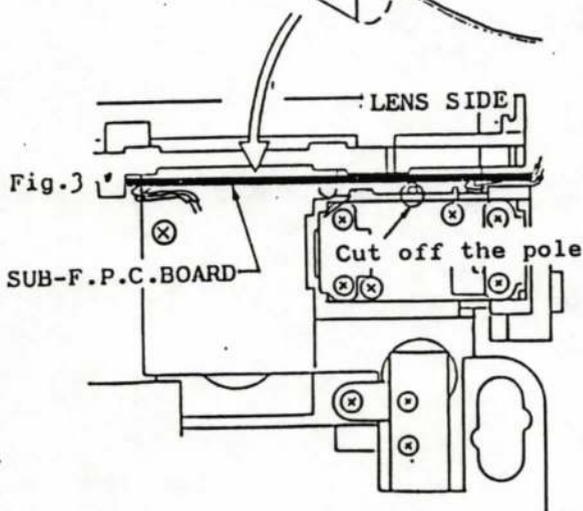
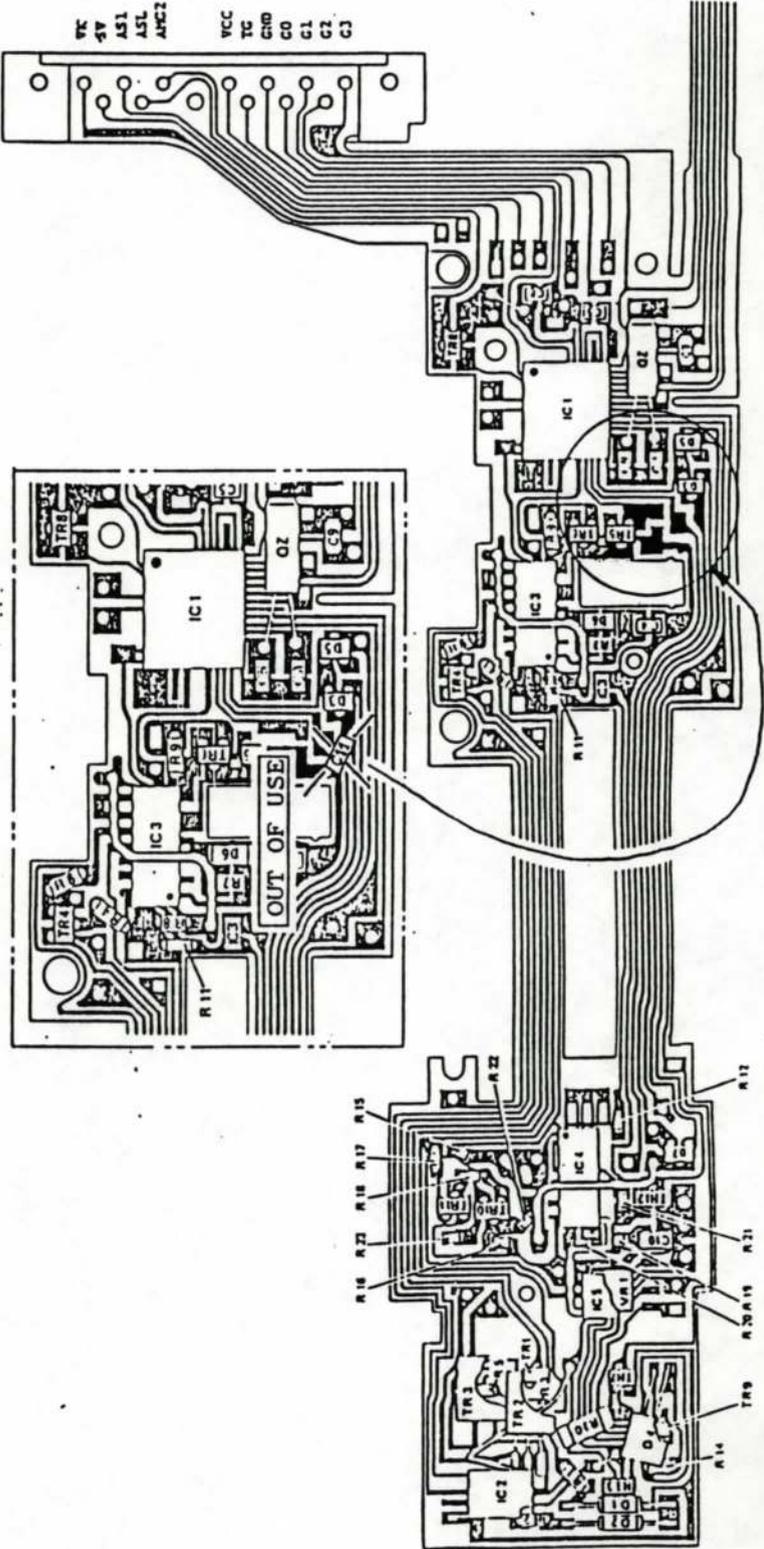


Fig. 3

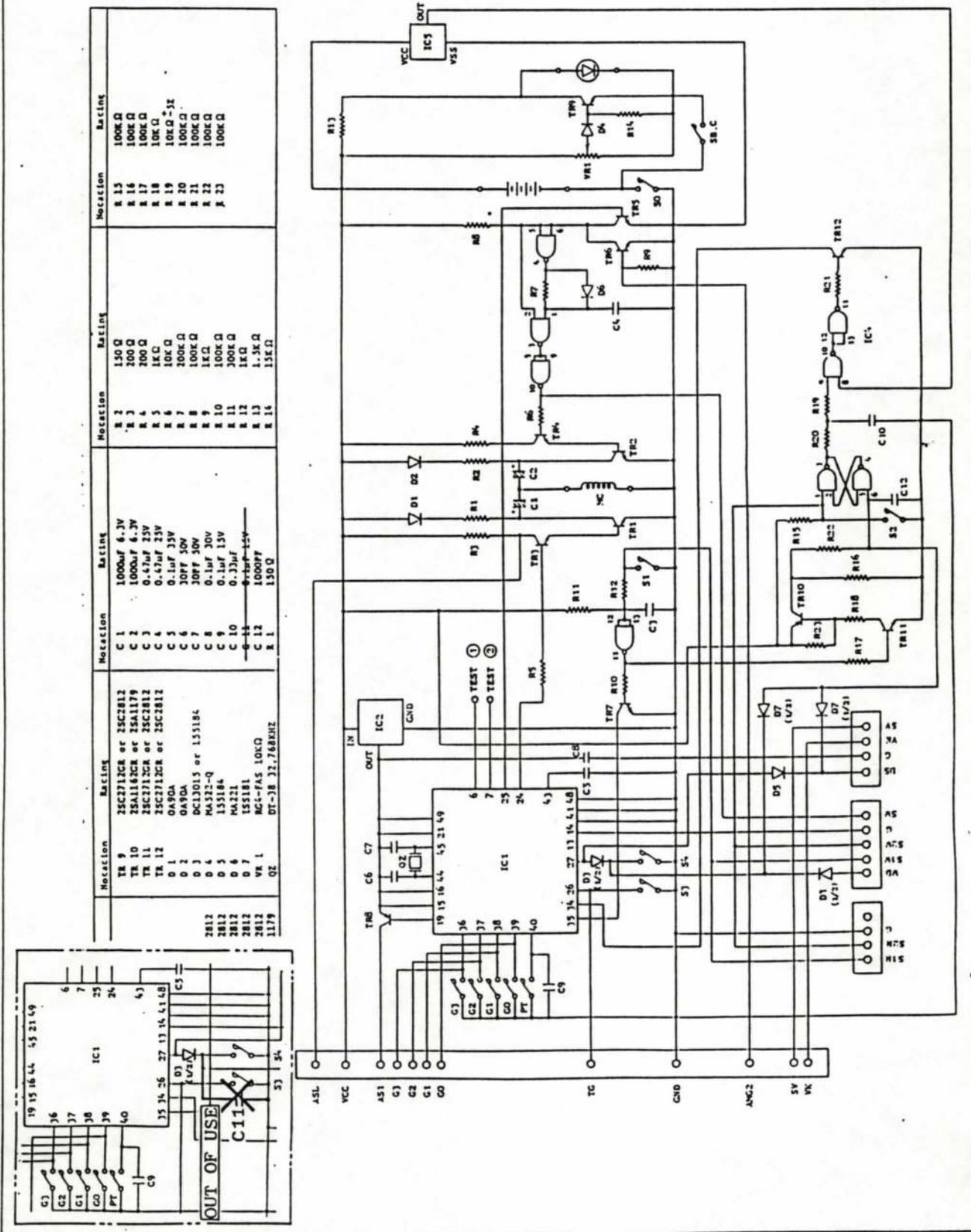
- 4) Cut off the pole and insert sub F.P.C board between the lens mount and the battery case. (Fig.3)
- 5) Solder each leadwire to Main F.P.C. board by referring to the attached wiring diagram.

**REVISED**

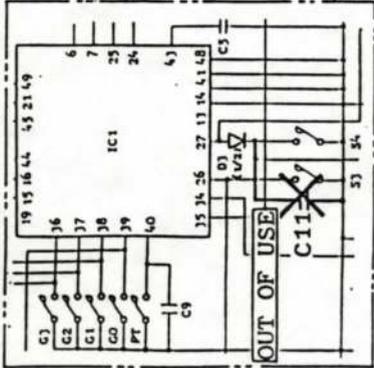
- 1. PHENOMENON : After completion of winding up with power drive, again move the selector lever of power drive to start position sometimes release shutter dose not work.
- 2. MODIFICATION : Take off C11(0.1μF 15v) condenser from Main F.P.C board.
- 3. MODIFICATION DATE : From May, 1986.



Remarks



| Notation | Rating               | Notation | Rating |
|----------|----------------------|----------|--------|
| TR 9     | 2SC2712CR or 2SC2812 | R 2      | 150 Ω  |
| TR 10    | 2SA1162CR or 2SA1179 | R 3      | 200 Ω  |
| TR 11    | 2SC2712CR or 2SC2812 | R 4      | 200 Ω  |
| TR 12    | 2SC2712CR or 2SC2812 | R 5      | 10K Ω  |
| D 1      | 0A90A                | R 6      | 10K Ω  |
| D 2      | 0A90A                | R 7      | 100K Ω |
| D 3      | DC13015 or 1S5184    | R 8      | 100K Ω |
| D 4      | MA325-Q              | R 9      | 1K Ω   |
| D 5      | 1S5184               | R 10     | 100K Ω |
| D 6      | MA221                | R 11     | 300K Ω |
| D 7      | 1S5181               | R 12     | 1K Ω   |
| VR 1     | MG4-FAS 10K Ω        | R 13     | 1-5K Ω |
| QZ       | DT-38 32.768KHZ      | R 14     | 15K Ω  |



Remarks

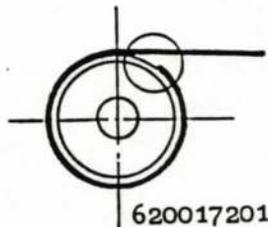
PHENOMENON : The curtain ribbon was teard off.

MODIFICATION : A longer curtain ribbon is used to increase the bonding area and adhesive strength.

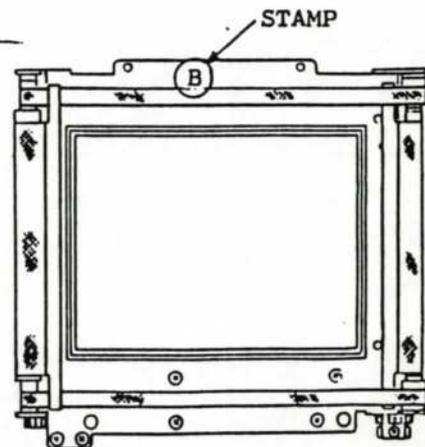
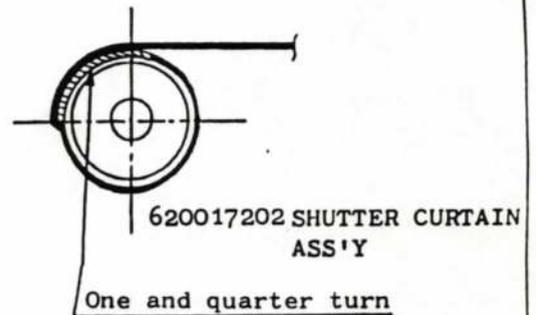
MODIFICATION DATE : From October,1986.

Modification mark of shutter curtain : "B" stamp on the shutter base plate.

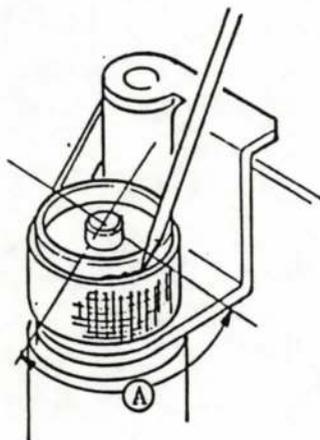
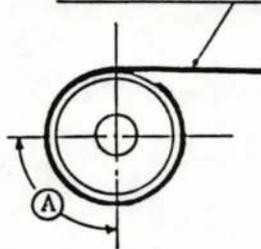
OLD TYPE



NEW TYPE



## SHUTTER CURTAIN RIBBON

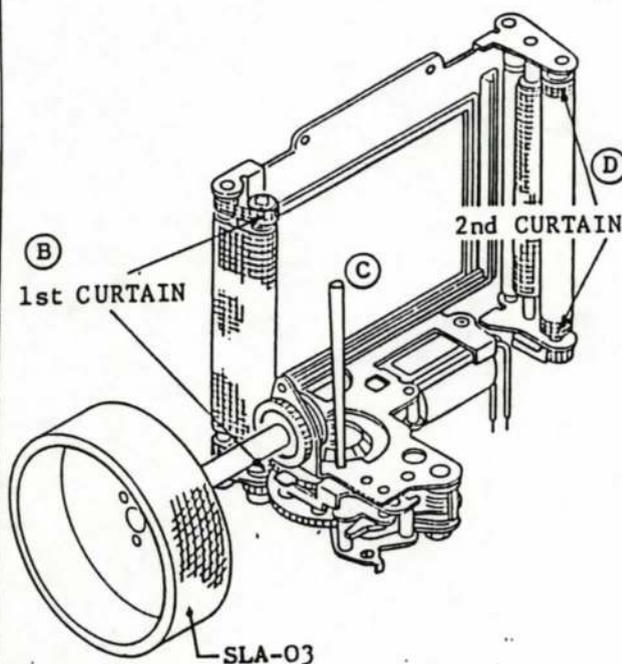


If the shutter assembly is removed for repair, take the following steps.

1. Steps

- 1) Apply a small amount of quick bond to two points of Section (A) to bond 1st curtain drum (B) to curtain ribbon.
- 2) Using the tool SLA-03, wind the shutter curtain. Insert a toothpick into slit (C) to stop the winding of the shutter curtain.
- 3) As in Step 1, apply a quick bond to part (D).
- 4) Leave the bonded parts (in the wound state) for 24 hours.

NOTE : Use a commercially available quick bond.



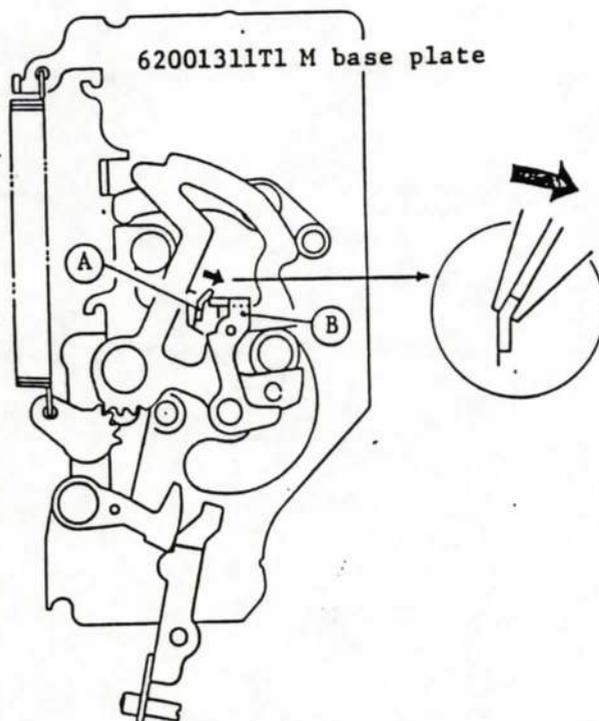
MIRROR NOT RETURN

1/1

76

4

OUR REF.NO. 010

1. PHENOMENON

: MIRROR does not return even if 2nd curtain closes completely.

2. CAUSE

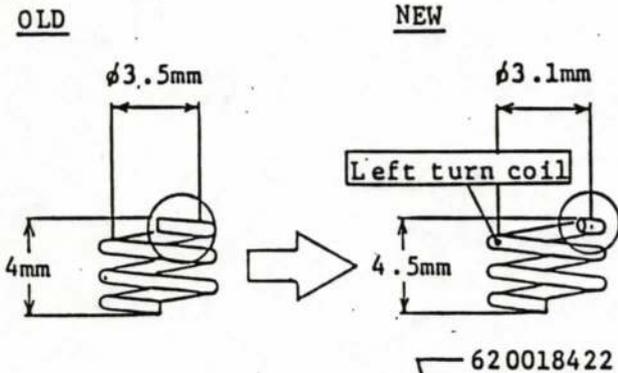
- : (A) mirror release lever does not kick
- : (B) mirror-up lever properly

3. REPAIR STEP

: Carefully bend the tip of (A) lever.

Remarks

OUR REF.NO. 009



1. PURPOSE

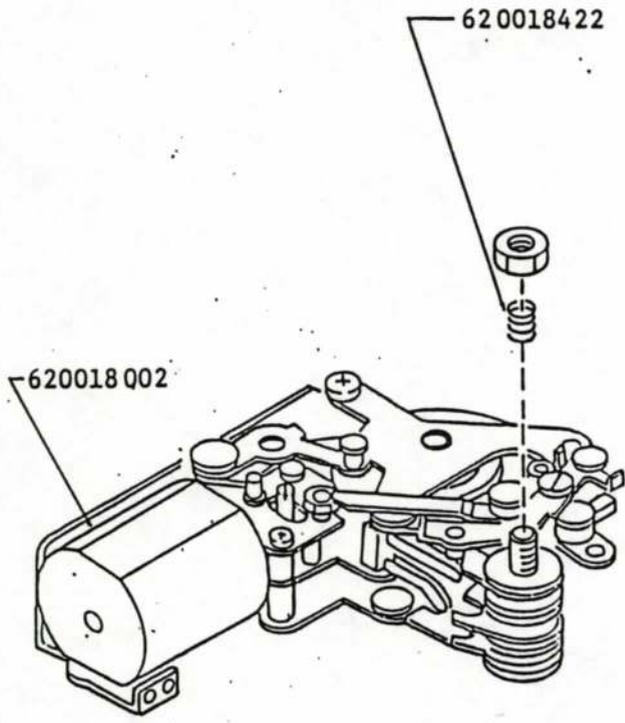
: To facilitate adjustment of 1st curtain bounce the spring has been changed as shown in the drawing.

2. ADJUSTMENT OF 1st CURTAIN BOUNS

: Quite same step with repair manual page 36

3. MODIFICATION DATE

: From August, 1986



Remarks

NEW SPRING FOR SHUTTER RELEASE LEVER

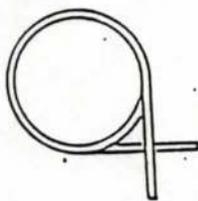
1/1

76

2

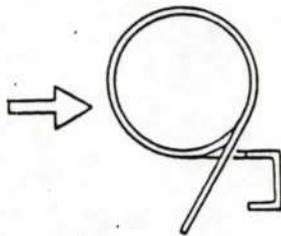
OUR REF NO. 008

OLD



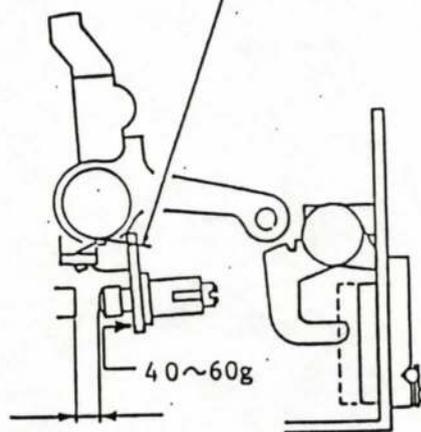
620013431

NEW



620013432

Spring



NEW 0.2~0.3mm

OLD 0.1~0.2mm

A

1. PHENOMENON

: The mirror does not return and stays at risen position.

2. CAUSE

: 2nd curtain does not run because 620013431 spring of S-lever does not work adequately.

3. MODIFICATION

: Shape of spring 620013431 → 620013432

4. REPAIR STEP

: Replace the spring with new one.

Note) After replacement of the spring adjustment of shutter release lever is required by referring Repair manual page 40- (A).

please note that the tolerance of adjustment was changed as shown in the drawing.

5. MODIFICATION DATE

: From July, 1986

Remarks

86

08

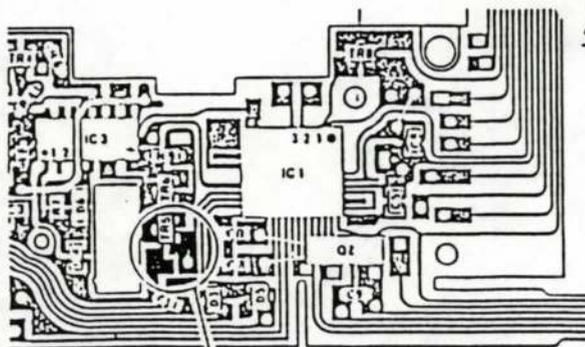
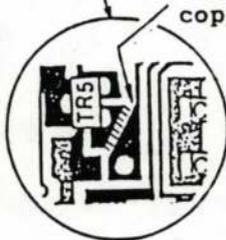


Fig. 1

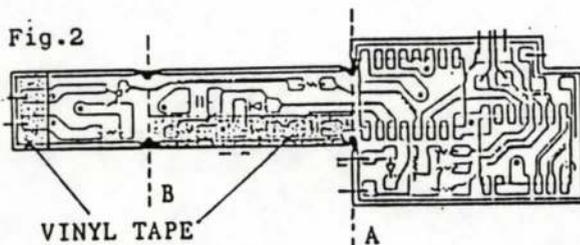
Peel off the  
copper coating



#### 4. REPAIR STEP

- 1) Remove right side cover, bottom cover and bottom base plate referring to the repair manual page 21.
- 2) Carefully peel off the copper-coated pattern at the shaded portion of TR5 circuit, as shown in the left, by a cutter knife to disconnect the continuity. (Fig.1)

Fig. 2



- 3) Put adequate length vinyl tapes on the shaded portions of sub-F.P.C. board to isolate the board from camera body. (Fig. 2)

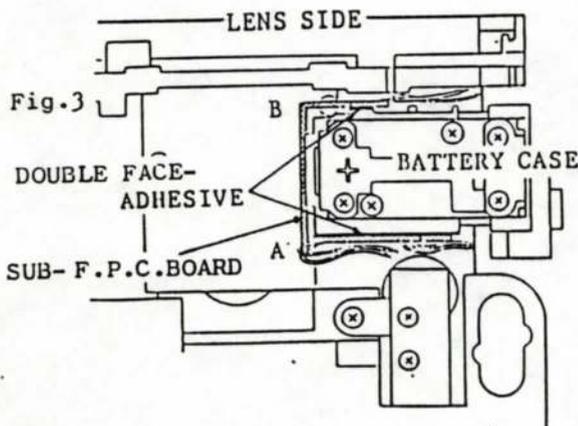


Fig. 3

- 4) Put a double face-adhesive tape on outside wall of battery case. (Fig. 3)
- 5) Fold F.P.C. board at line A and B to stay the board around the battery case. (Fig. 2 & 3)
- 6) Solder each leadwire to Main F.P.C. board by referring to the attached wiring diagram.

1. PHENOMENON

: If the flash duration of an electronic flash is longer than 1/1000sec, vignetting may be caused on the exposed flash when shutter is released at 1/60 sec.

2. STEP

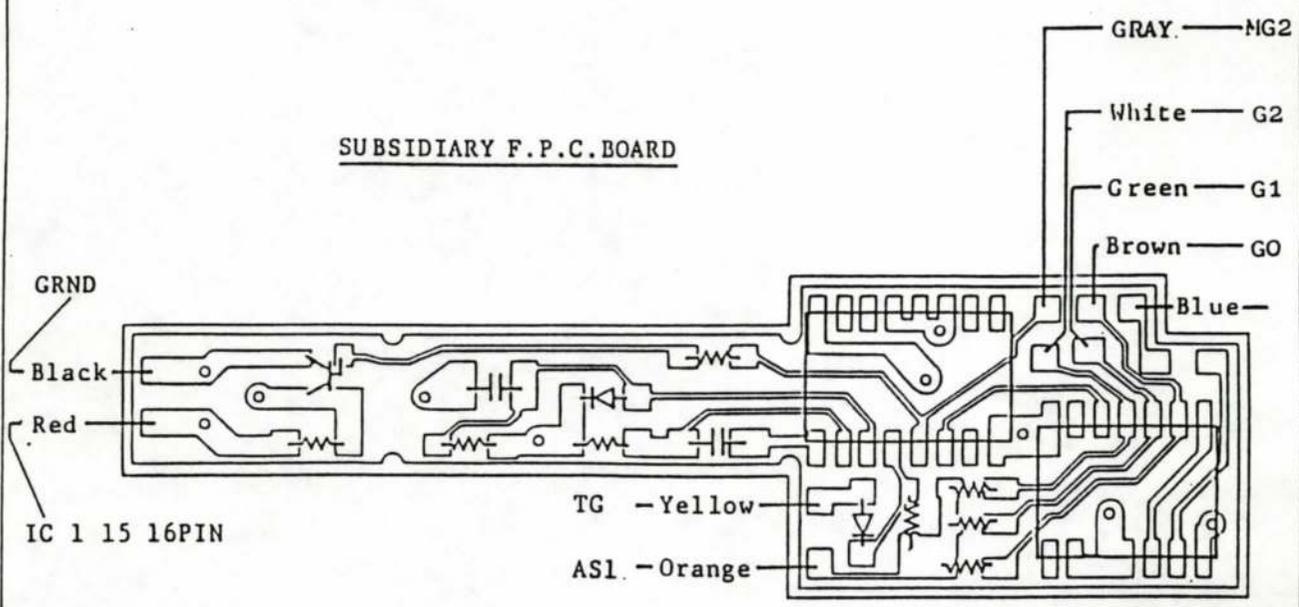
: Install 620033261 sub-F.P.C.board into the main F.P.C.board.

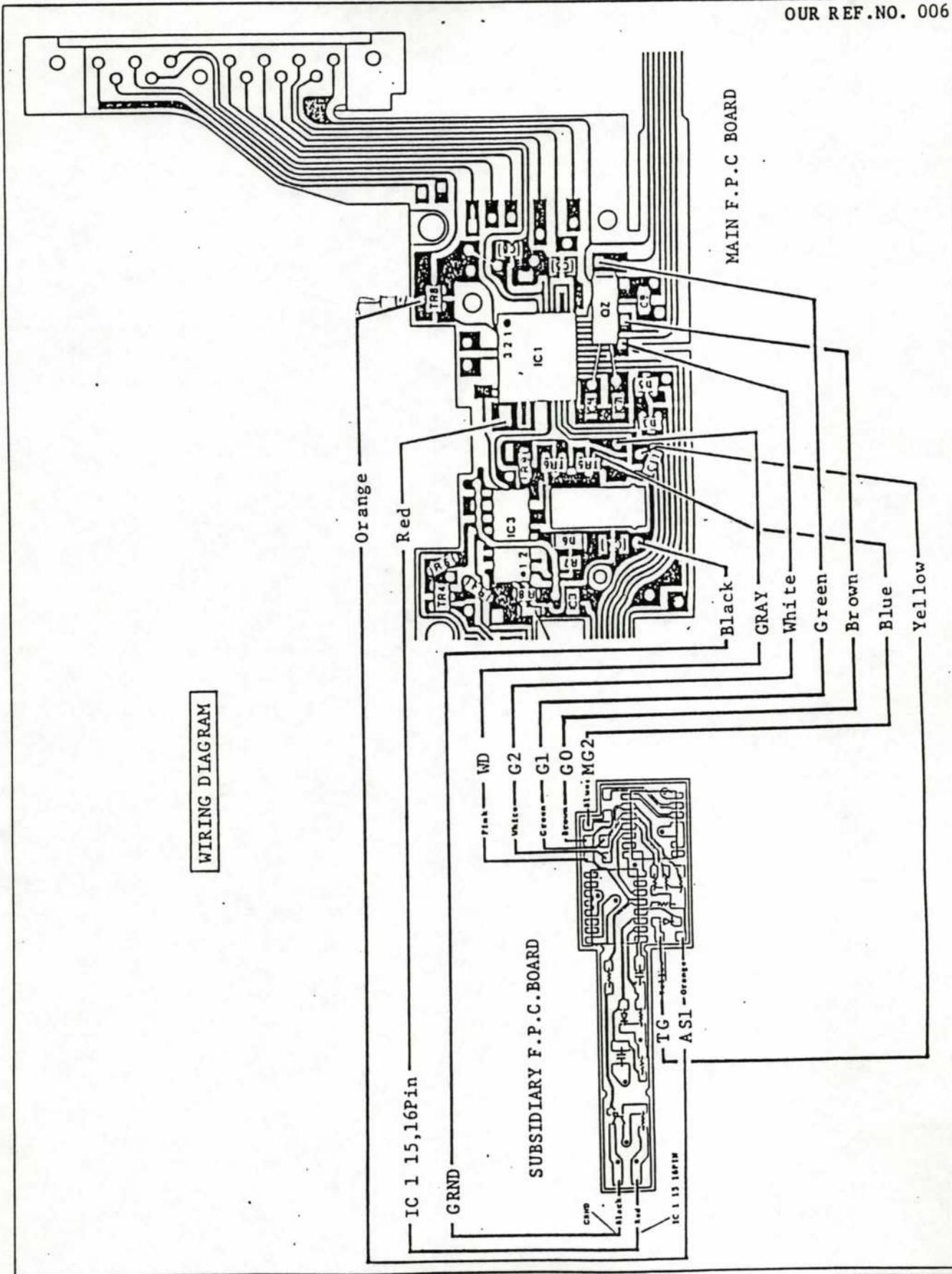
3. MODIFICATION DATE

: From October production 1986.

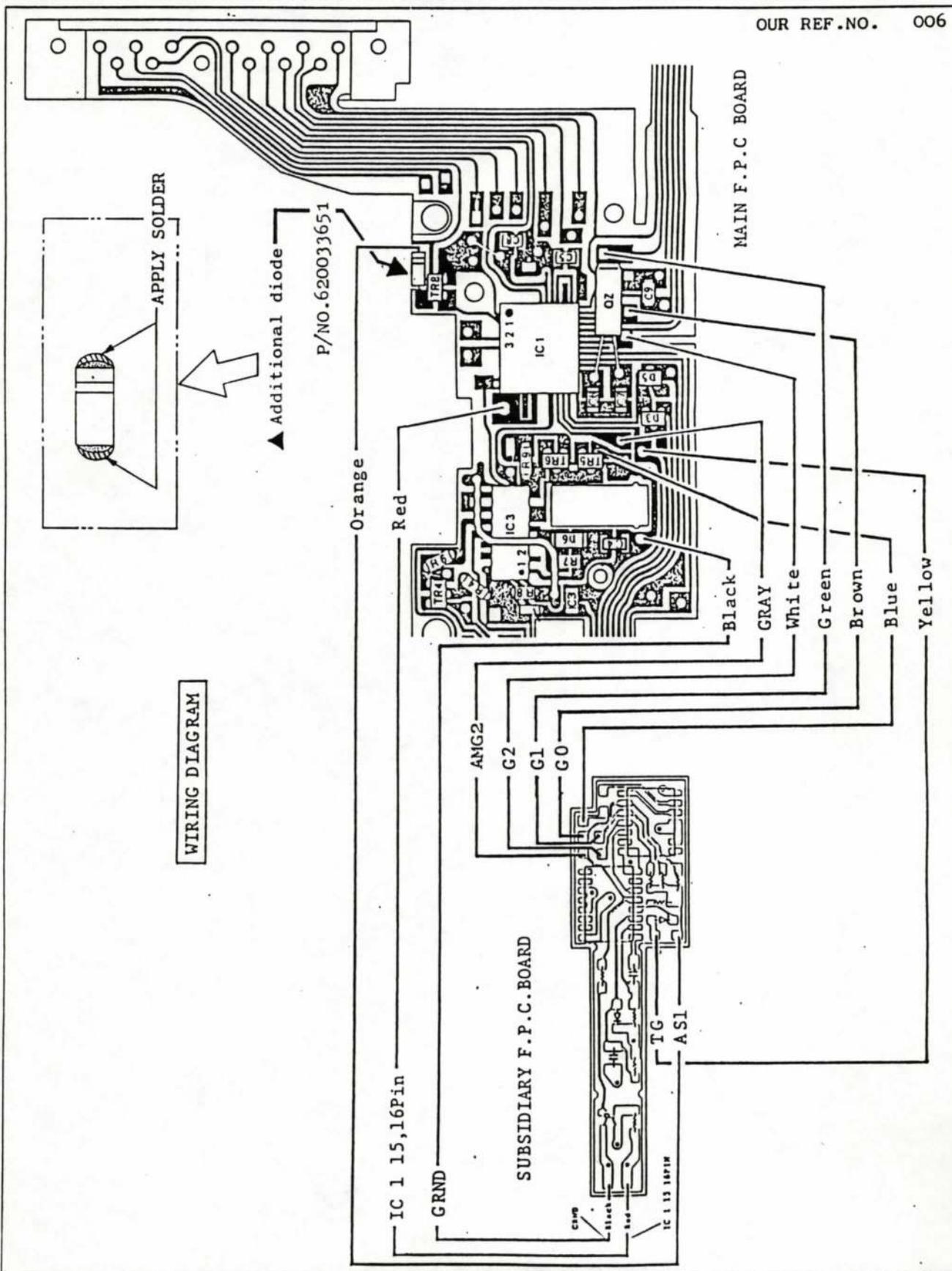
: P/NO.620033261 Sub-F.P.C.board will be supplied to you in October from our service department.

1-340-





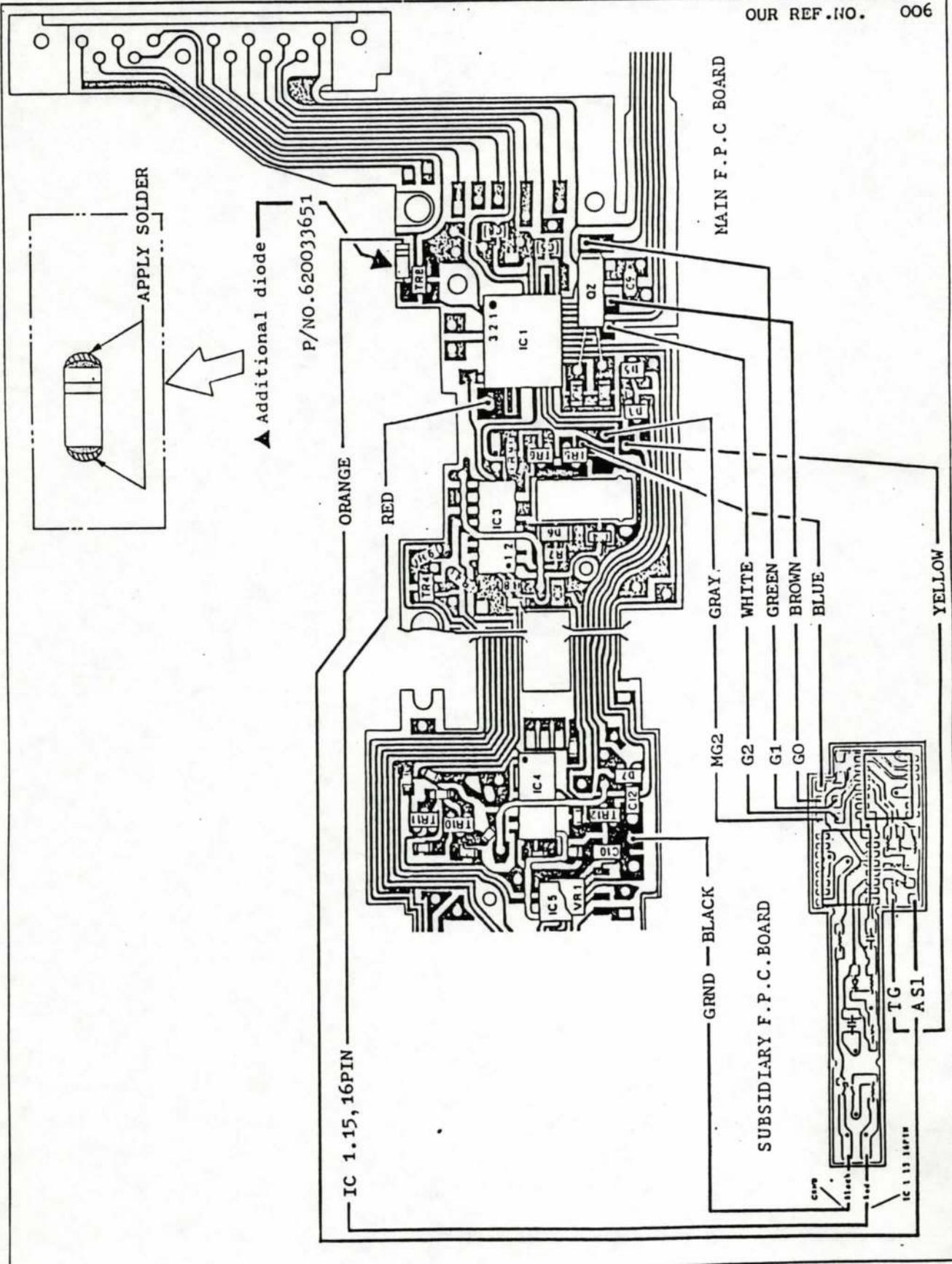
Remarks



WIRING DIAGRAM

Remarks

OUR REF.NO. 006



Remarks