



REPAIR GUIDE

P R E F A C E

This Repair Guide is issued as a part of the Service Manual for the Canon AL-1. Its purpose is to insure the continued high quality of the camera through correct repair procedures.

The Tools List is also included on this microfiche, which is titled the Repair Instructions. Separate microfiche titled Parts Catalog and General complete the Service Manual. The main sheet number for all sheets is C-054. This and the General microfiche also have a suffix number -1E. The 1 indicates the first sheet of a possible series and the E indicates that the language is English.

Any comments or suggestions will be appreciated.

First Edition: March, 1982

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INTRODUCTION

1. Special Repair Instructions

1.1. Exposure and Winding adjustments are identical to the AV-1. Normally they would not have been included, but they have been.

1.2. Instructions concerning the Focus adjustments.

A. DO NOT REVERSE THE POLARITY ON THE D.C.-D.C. CONVERTOR when attaching a power supply. If polarity is reversed the capacitor in the converter will explode.

B. To determine if the camera focusing is defective or the subject is not suitable, check the camera by focusing on a chart.

C. A D.C. power supply to power the chart illumination is very helpful, and the chart should not be lit by an A.C. light source.

D. As with the AF 514XL-S and AF 35 M, the best distance for test is 2.5 to 3 meters.

2. Glossary of Terms

Terms new to Canon service literature are listed below.

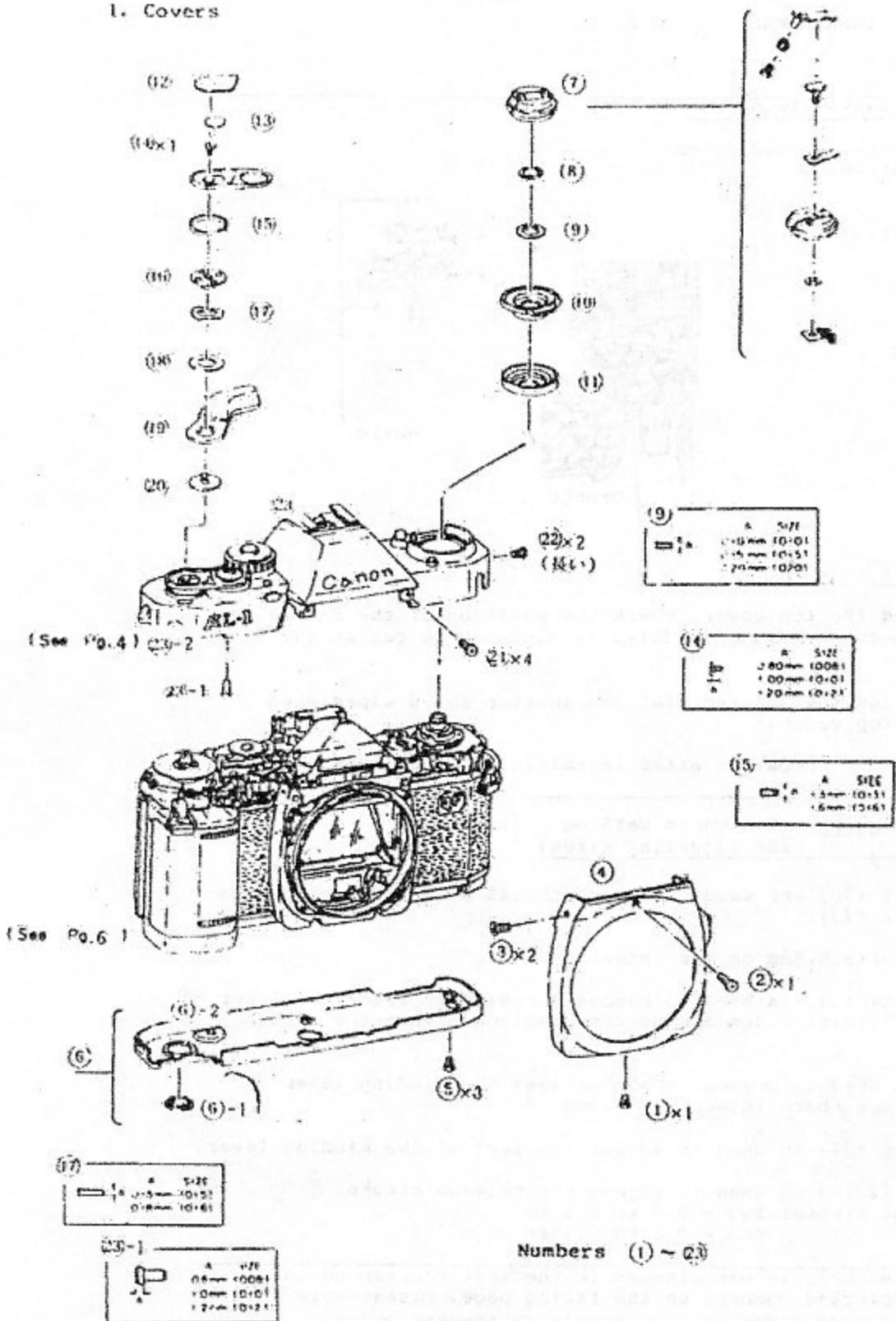
JUST FOCUS: The signal, indicator, and conditions which cause the center, green focus indicator to light. This indicates that the lens is correctly focused.

FRONT FOCUS: The signal, indicator, and conditions which cause the right, red focus indicator to light. This indicates that the lens is focused in front of the subject.

REAR FOCUS : The signal, indicator, and conditions which cause the left, red focus indicator to light. This indicates that the lens is focused behind the subject.

I. ASSEMBLY and DISASSEMBLY

1. Covers



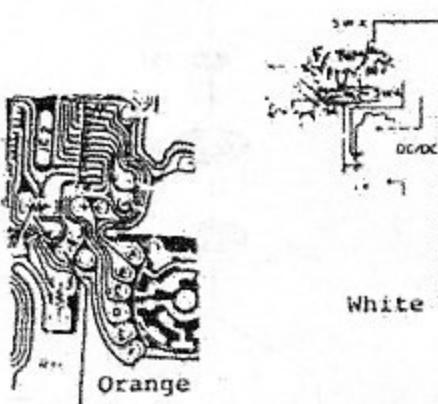
Numbers (1) ~ (23)

1. ASSEMBLY and DISASSEMBLY

1. Covers

Assembly and Disassembly Notes

1. Be careful with the top cover leads to the hot shoe.
2. Don't loose the Shutter Release Rod (23)-1.



Adjustment Notes

1. When removing the top cover, check the position of the S-L lever [shown dotted between (14) and (15)]. It must not be set at the S position.
2. Correctly align the shutter dial and shutter speed wiper when installing the top cover.
3. Check self timer operation after installing the top cover.

Adjustment Tolerances (See parts catalog for adjusting sizes)

1. Washers (9) & (10) are used to remove thrust play and wobble from the shutter dial (11).

Tolerance limit: 0.5mm on circumference

2. Shoulder screw (14) is used to remove thrust play from the finger rest. Tolerance limit: 0.3mm, and no scraping sound when the winding lever is moved

3. Ring (15) is used to prevent space between the winding lever and S-L lever. Maximum space tolerance: 0.3mm

4. Spring washer (17) is used to adjust the feel of the winding lever.

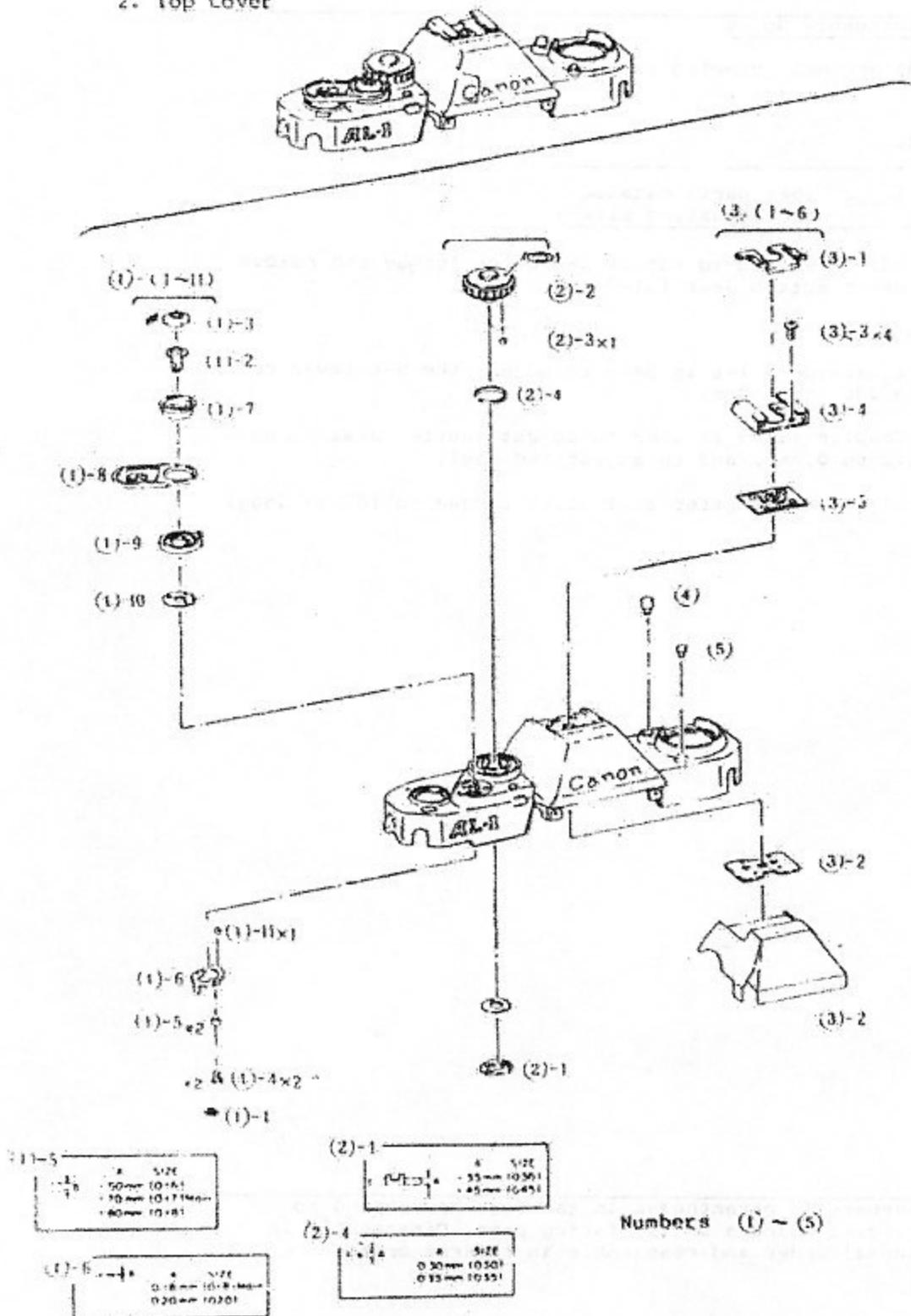
5. Release pin (23)-1 is used to adjust the release stroke.

Release Stroke:
SW1 = 0.1 to 0.5 mm
SW2 = 0.6 to 0.10mm

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

I. ASSEMBLY and DISASSEMBLY

2. Top Cover



1. ASSEMBLY and DISASSEMBLY

2. Top Cover

Assembly and Disassembly Notes

Buttons (4) & (5) are heat riveted in place.

Adjustment Notes

Adjustment Tolerances (See parts catalog for adjusting sizes)

1. Click Collar (1)-5 is used to adjust S-L click torque and remove play from the Shutter Button Seat (1)-7.

Tolerance limit: 0.3mm

2. Self-timer Activacator (1)-6 is used to adjust the S-L lever click torque to between 200 and 350 g.

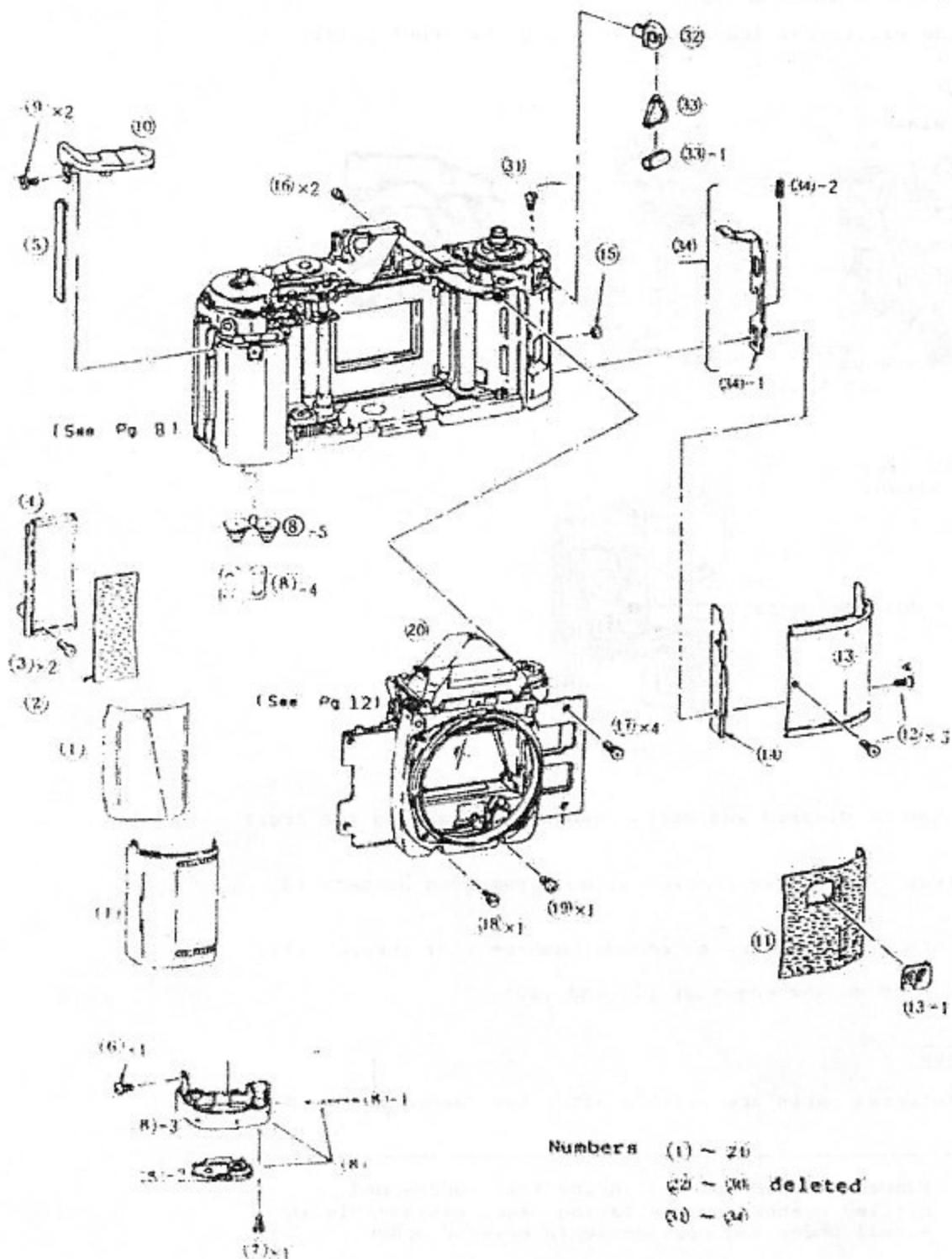
3. Shutter Dial Coupler (2)-1 is used to adjust shutter dial thrust play to within 0.2 to 0.3mm, and to adjust the feel.

4. Washer (2)-4 adjust the shutter dial click torque to 300 +/- 150g.

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

I. ASSEMBLY and DISASSEMBLY

3. Front Panel Removal

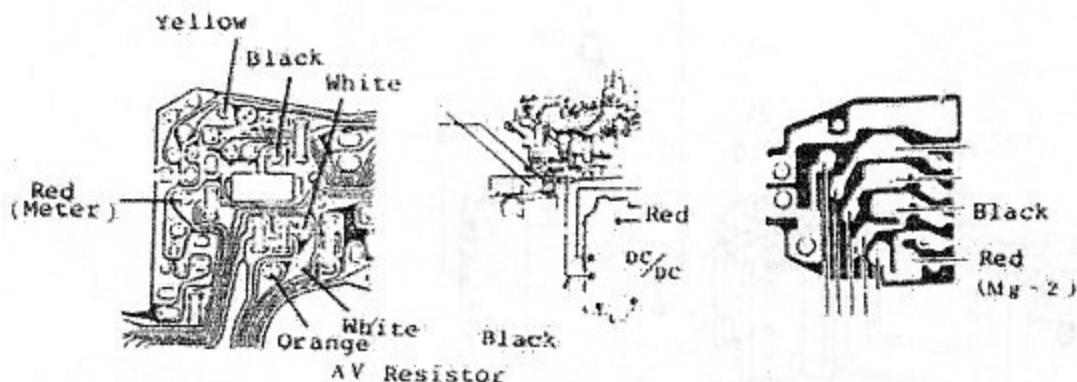


ASSEMBLY and DISASSEMBLY

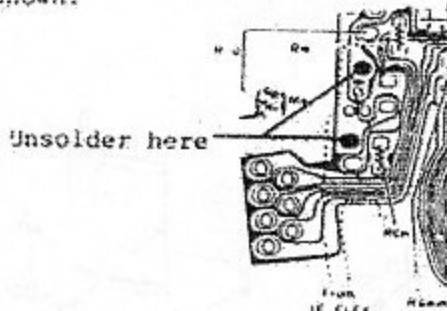
3. Front Panel Removal

Assembly and Disassembly Notes

1. Unsolder the electrical leads when removing the front panel.



2. Unsolder the flex at the points shown.



3. The finder can be cleaned and parts changed by removing the front panel (20).

4. The neck strap lugs can be removed without removing numbers (1) through (21).

5. It is not normally necessary to remove numbers (31) through (34).

6. Plyobond is used on the edges of (1) and (10).

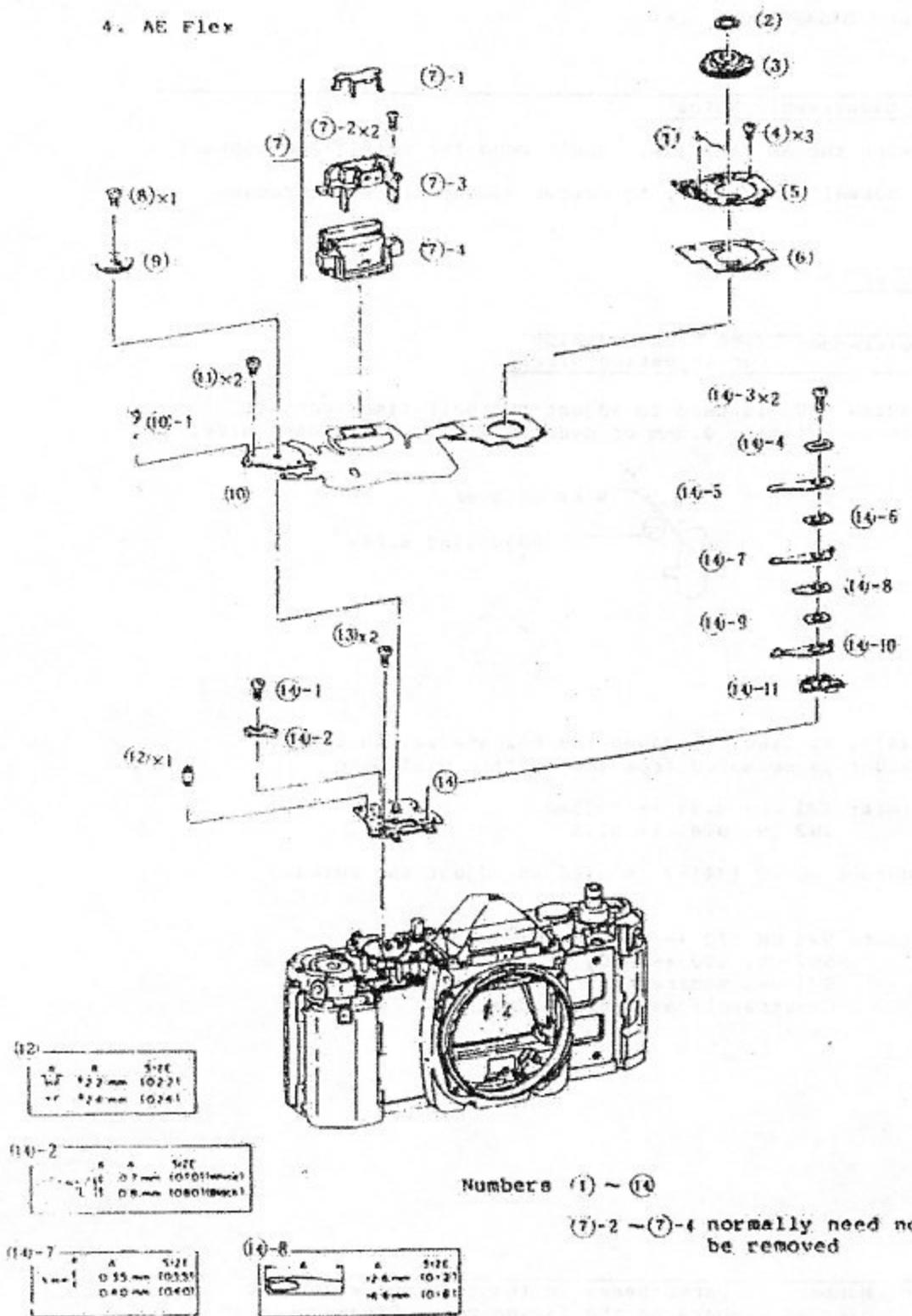
Adjustment Notes

Make sure no internal parts are visible after the camera has been assembled.

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

1. ASSEMBLY and DISASSEMBLY

4. AE Flex



I. ASSEMBLY and DISASSEMBLY

4. AE Flex

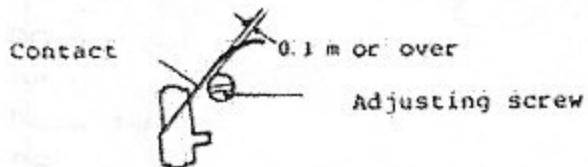
Assembly and Disassembly Notes

- When removing the AF flex (10), don't bend the self-timer contact.
- It is not normally necessary to remove numbers (7)-2 through (7)-4.

Adjustment Notes

Adjustment Tolerances (See parts catalog for adjusting sizes)

- Shoulder screw (10) is used to adjust the self-timer contact spacing. Tolerance limit: 0.1mm or over (SIZE 022 is standard size)



- Stopper (14)-2 is used to adjust the release switch contact height. The height is measured from the shutter dial base.

Tolerance limit: SW1 ON: 1.35 ± 0.15mm
SW2 ON: 0.85 ± 0.15

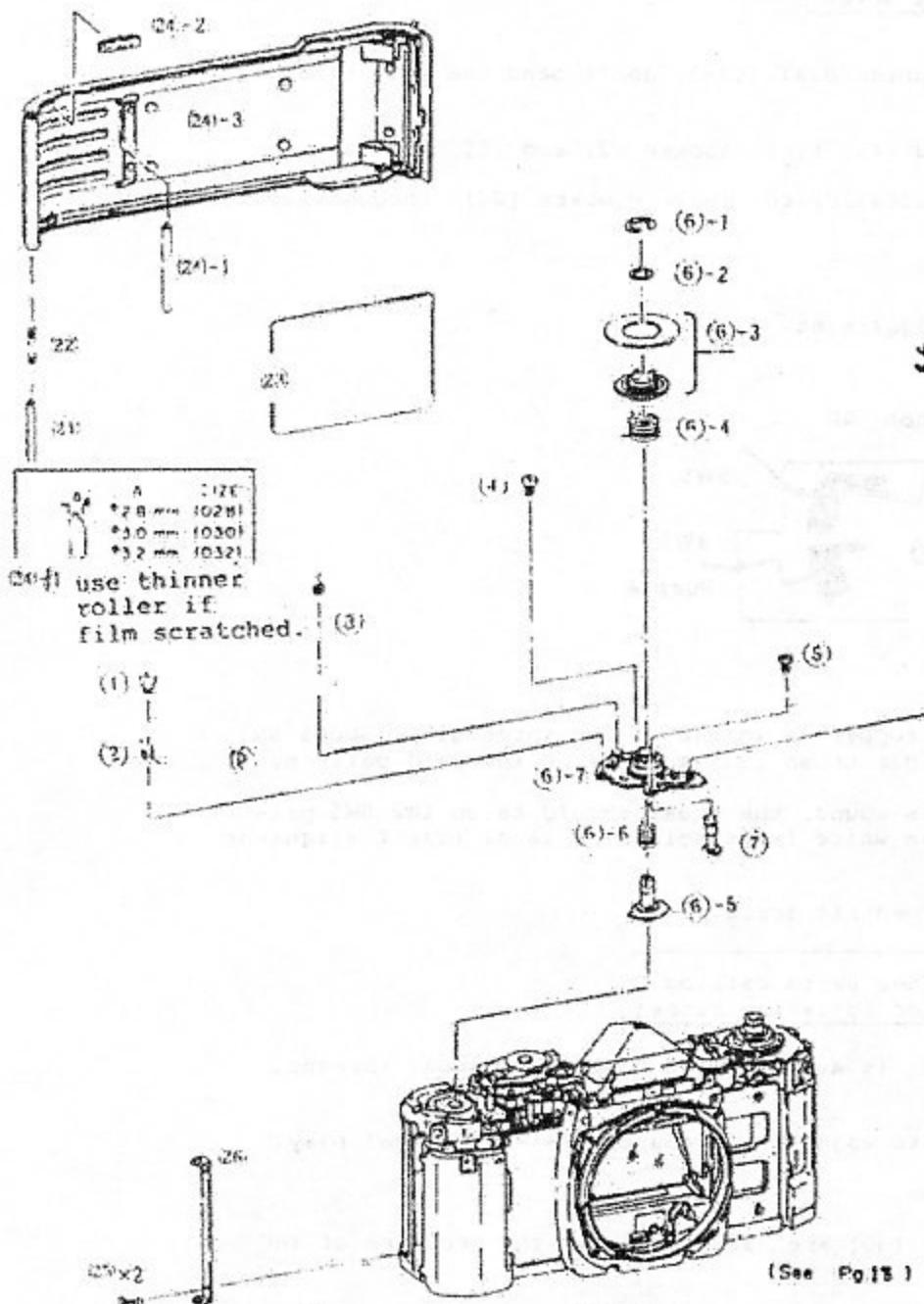
- Release Contact No. 2 (14)-7 is used to adjust the release pressure.

Tolerance limit: SW1 ON: 70 ± 20g
SW2 ON: 600 ± 100g
SW1-SW2 separation: at least 0.2mm
Overtravel: at least 0.3mm

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

I. ASSEMBLY and DISASSEMBLY

5. Back Cover, Winding Base



(See Page 13.)

(1)		SIZE
	1.5-1.6	M2 (1020)
	1.6-1.8	M2.3 (1023)
		(oversize)

(9)		A	SIZE
		2.2 mm	10901
		2.4 mm	11201

(10)		A	SIZE
		0.1 mm	10011
		0.2 mm	10021
		0.3 mm	10031

Numbers

(1) ~ (11)

(21) ~ (26) normally need hot
be removed. If necessary
remove top and bottom
covers.

1. ASSEMBLY and DISASSEMBLY

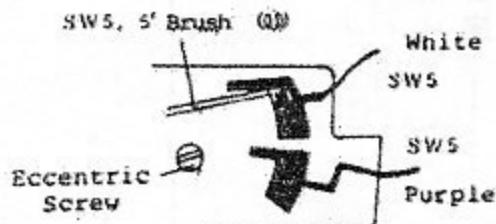
5. Back Cover, Winding Base

Assembly and Disassembly Notes

1. When removing the counter dial (6)-3, don't bend the self-timer contact.
2. When removing (1) and (4), first loosen (2) and (3).
3. It is not normally necessary to remove numbers (21) through (26).

Adjustment Notes

SW5-S' Brush Position Adjustment



1. When the winding stopper is in one of the three blank spots on the winding gear, the wiper brush (11) must be on the SW5 pattern.
2. When the shutter is wound, the brush should be on the SW5 pattern and aligned with the white leads soldering land. (Exact alignment is not critical).
3. Adjust with the eccentric screw.

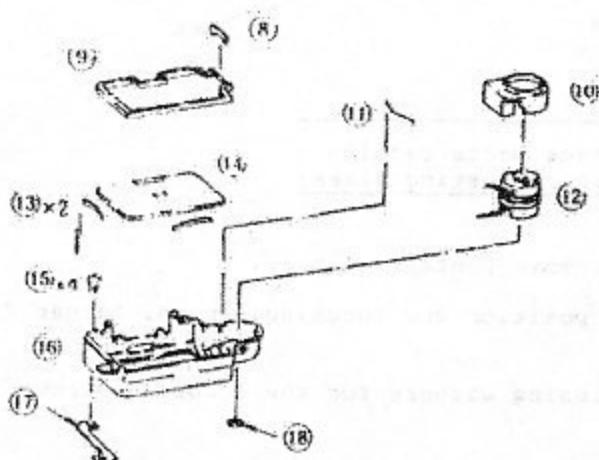
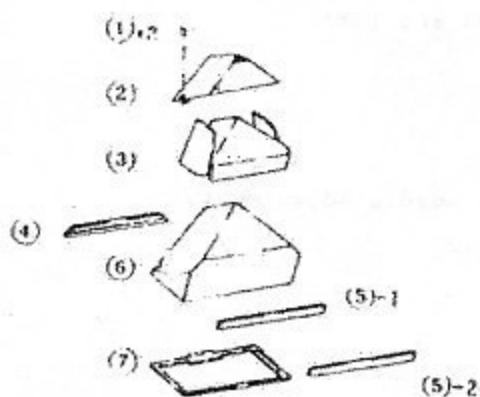
Adjustment Tolerances (See parts catalog for adjusting sizes)

1. An oversized screw (1) is available in case of stripped threads.
2. Washer (6)-2 is used to adjust film counter (6)-3 vertical play.
Tolerance limit: 0.5mm
3. Spring (9) and washer (10) are used to adjust the pressure of the SW5-S' pattern brush(1).

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

I. ASSEMBLY and DISASSEMBLY

6. Finder Optics, Meter



(5)-2

$t = \frac{1}{4}$	a	SIZE
0.15mm	0.5mm	10151
0.25mm	0.5mm	10251

(5)-1

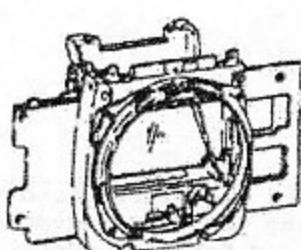
$t = \frac{1}{4}$	a	SIZE
0.15mm	0.3mm	10301
0.25mm	0.5mm	10501

(13)

$t = \frac{1}{4}$	a	SIZE
0.05mm	0.05mm	10051
0.10mm	0.10mm	10101

(7) (18)

$t = \frac{1}{4}$	a	SIZE
0.05mm	0.05mm	10051
0.10mm	0.10mm	10101
0.15mm	0.15mm	10151
0.20mm	0.20mm	10201
0.25mm	0.25mm	10251
0.30mm	0.30mm	10301
0.35mm	0.35mm	10351
0.40mm	0.40mm	10401



Numbers (1) ~ (18)

6. Finder Optics, Meter

Assembly and Disassembly Notes

1. Don't loose the focus washers (17) and (18).
2. Don't bend the meter needle.

Adjustment Notes

1. See section II.2.5 for meter (12) needle adjustment.
2. Apply dust gard tape to (6) and (16).
3. Install the focusing screen springs (13) in the order shown.

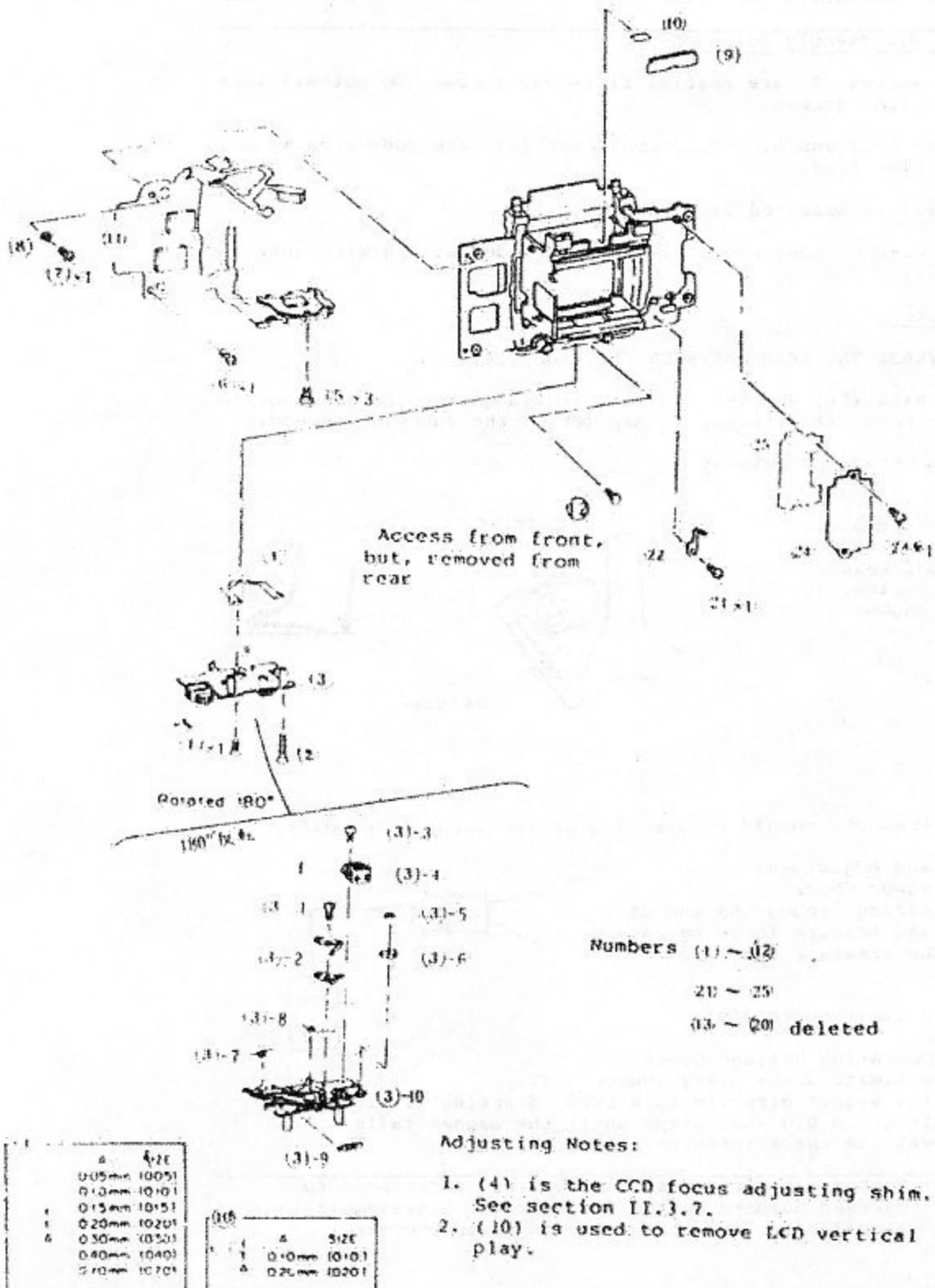
Adjustment Tolerances (See parts catalog for adjusting sizes)

1. (5)-1,2 are used to remove pentaprism play.
2. (13) x 2 are used to position the focusing screen. Larger "Sizes" are stronger.
3. (17) and (18) are focusing washers for the focusing screen.

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

I. ASSEMBLY and DISASSEMBLY

7. IF Flex, Automatic Diaphragm Unit



1. ASSEMBLY and DISASSEMBLY

7. IF Flex, Automatic Diaphragm Unit

Assembly and Disassembly Notes

1. The three screws (5) are special flat-head screws. Do not mix them with standard type screws.
2. The IF flex (12) and D.C.-D.C. convertor (24) are connected by a yellow and a blue lead.
3. Contact (22) is soldered directly to (24).
4. Certain D.C.-D.C. convertors (24) are grounded with a wire instead of contact (22).

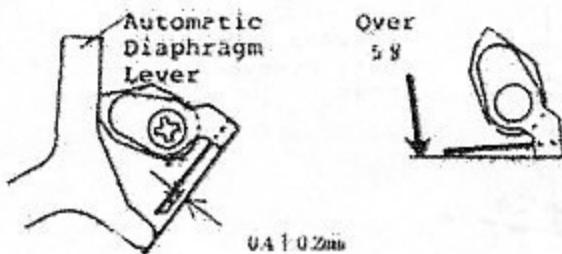
Adjustment Notes

1. DO NOT REVERSE THE LEADS BETWEEN (11) and (24)

2. When rebonding (11) and the LED with liquid gasket, be sure not to use excessive bond. If it runs, it may get on the focusing screen.

3. Indicator Contact Adjustment

- 3.1. With the automatic diaphragm lever in the start position, measure the contact spacing. It should be as shown below.



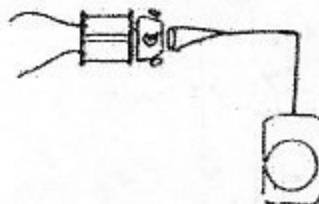
- 3.2. Contact Pressure should be over 5 g at the separation point.

4. Ag2 Check and Adjustment

4.1. Holding Power Check

Place a string around the end of the armature and measure force necessary to separate the armature from the magnet.

Tolerance limit: Over 150 g



4.2. Minimum Operating Voltage Check

Tolerance limit: 1.4 - 1.6 V (Under 1.7V)

Connect the magnet directly to a LVPS. Starting at 1.8V, reduce the voltage in 0.1 volt steps until the magnet fails to operate. Repeat the check three or four times.

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

I. ASSEMBLY and DISASSEMBLY

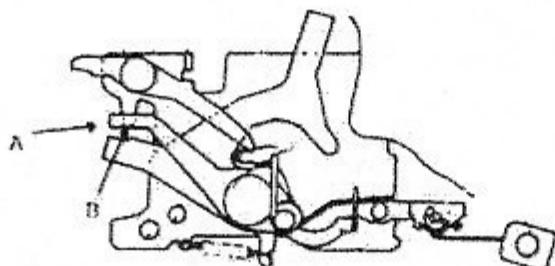
7. IF Flex, Automatic Diaphragm Unit (cont.)

Assembly and Disassembly Notes

4.3. Armature Spring Tension

Tolerance limit: 80 to 120 g

Press in the arrow marked direction (A) with a tension gage.
Measure the tension when the edge of the lever is just even with the
point (B) on the protrusion from the base.

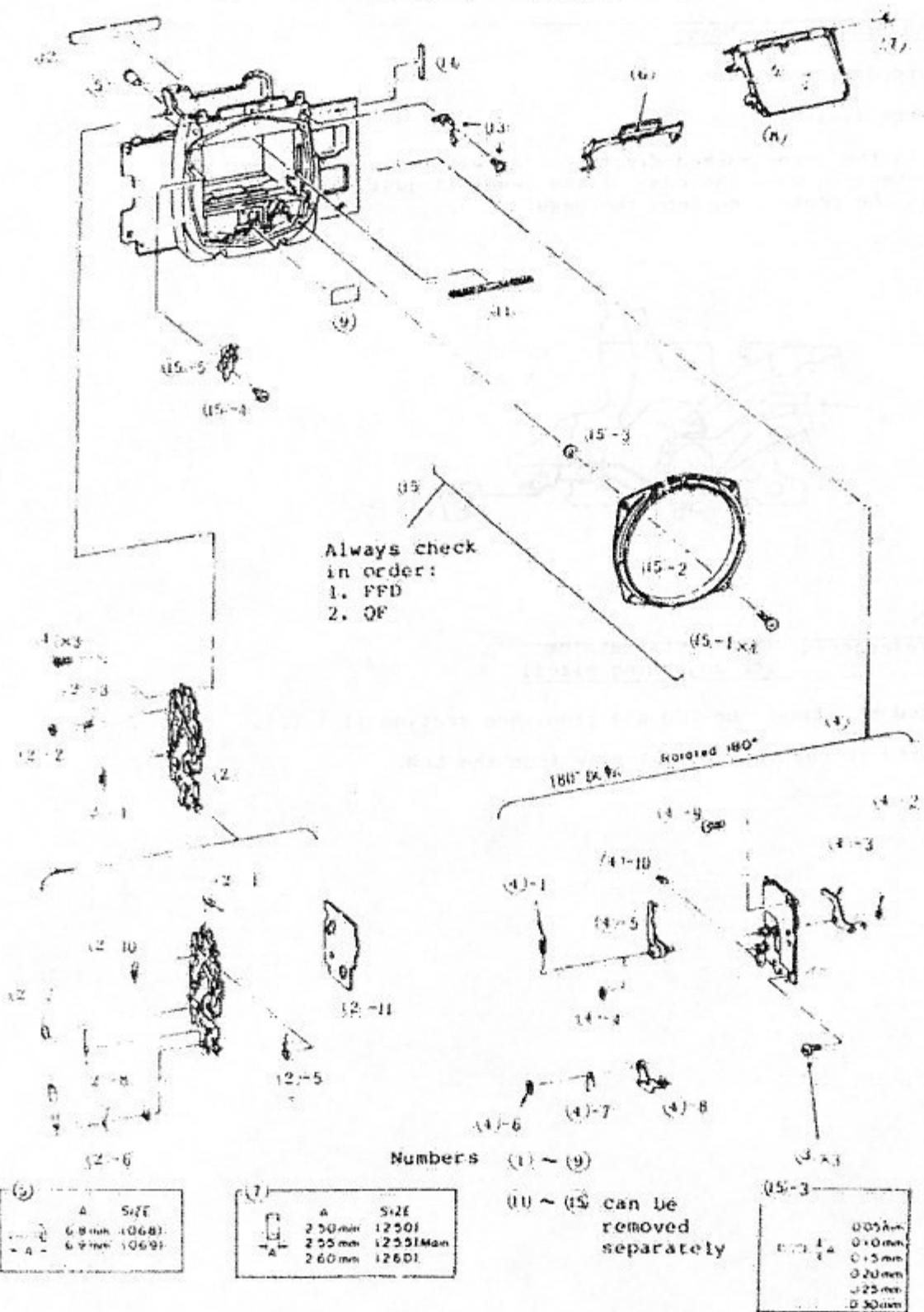


Adjustment Tolerances (See parts catalog for adjusting sizes)

1. (4) is used to adjust the CCD position. See section II.3.7.3.
2. (10) is used to remove vertical play from the LED.

I. ASSEMBLY and DISASSEMBLY

B. MIRROR, MIRROR MECHANISM & AV RESISTOR



1. ASSEMBLY and DISASSEMBLY

8. Mirror, Mirror Mechanism & AV Resistor

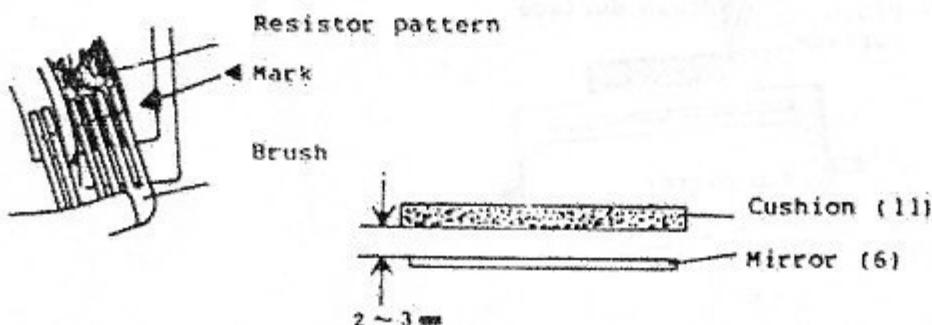
Adjustment Notes

1. AV Resistor Unit (4) Installation

1.1. The AV Resistor Unit is the same unit as is used in the AV-1 but improvements in individual parts tolerances have made adjustments unnecessary. (This is also true of present AV-1's.) But if either (4)-8 or (4)-10 is changed or moved, perform the following checks.

1.2. Check

The contact point of the brush (4)-8 should align with the triangular mark (part of the printed pattern) to the right of the resistor pattern. Adjust with screw (4)-10.



2. Main Mirror

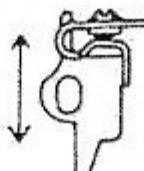
2.1. The fully up position of the main mirror should be at 0 +0.2 mm with respect to the lower edge of the shock absorbing cushion (11). (In other words, it should compress the cushion slightly). If this is not properly adjusted, the mirror may not return properly or there may be a light leak.

2.2. Curtain Release Point

The 1st curtain release should be released when the mirror is at a point two to three mm below the lower edge of the foam cushion (11).

2.3. Mirror Light Shield Closing

When looking through the film aperture, the light shield should be completely closed at least 0.1mm before the main mirror reaches the top of its travel. You can tell when the light shield is completely closed when you can no longer see reflections of the main mirror through the slit between the main and light shield. Adjust with (8) and (9).



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

8. Mirror, Mirror Mechanism & AV Resistor (cont.)

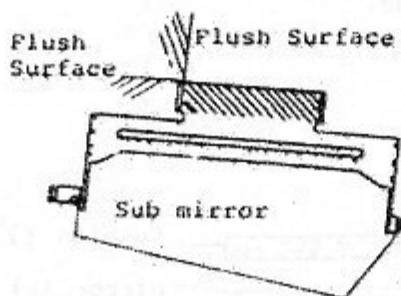
Adjustment Notes

2.3. Main Mirror Positioning

The main mirror must be positioned exactly. This requires special tools. The mirror unit only will be stocked until further notice.

2.4. Sub Mirror Positioning

Attach the mirror flush with the edges shown with double-stick tape.



2.5. Mirror Angle Adjustment

	X Axis	Y Axis
Main Mirror	0+-3°	0+-8°
Sub Mirror	0+-3° (Vert.)	0+-8° (Horiz.)

2.6. Maximum Aperture Pin Height

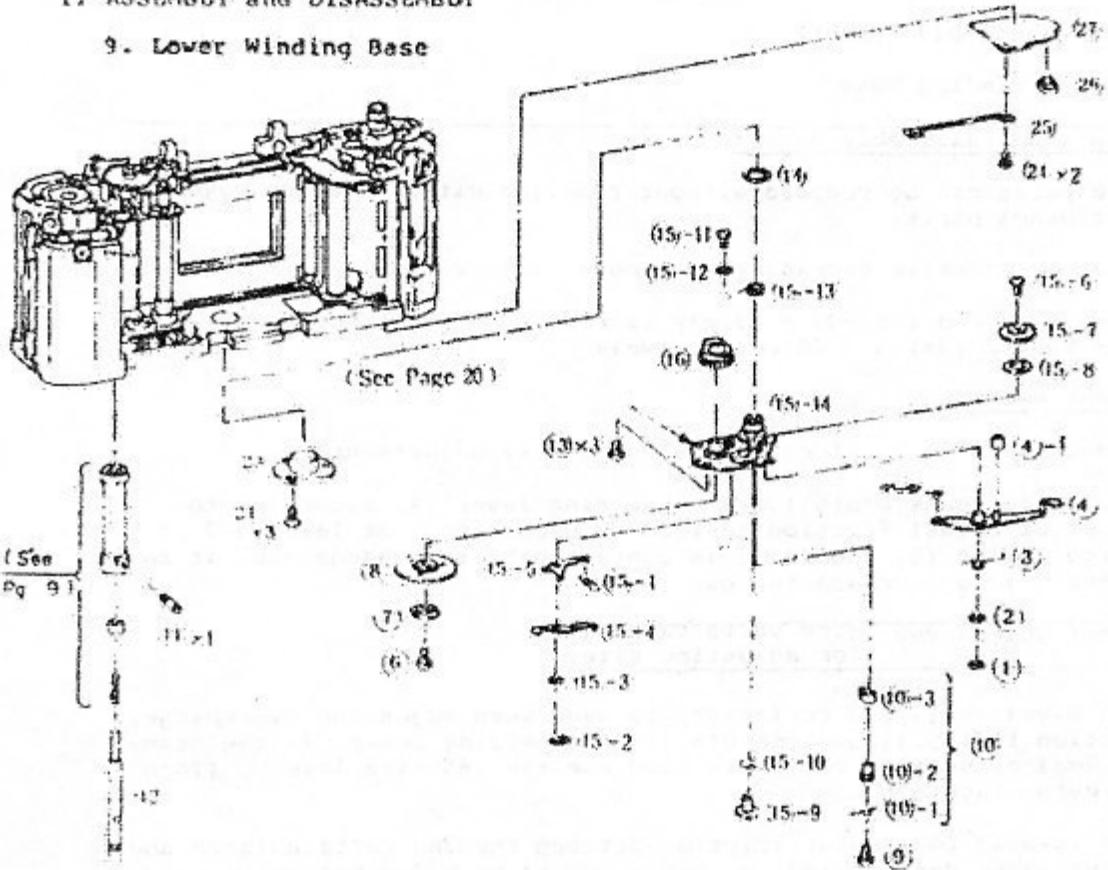
The height of the maximum aperture signal pin should be
 $+0.05$
 $-6.9-0.2$ mm from the mount surface.

Adjustment Tolerances: (See parts catalog
for adjusting sizes)

1. (7) is used to adjust main mirror play and action.

1. ASSEMBLY and DISASSEMBLY

9. Lower Winding Base



B = PUNCH MARK
C = 47 mm
A =
B = 12.40 mm C = 16.8 mm SIZE 10491
A = 7.69 mm B = 12.60 mm C = 13.0 mm SIZE 10691

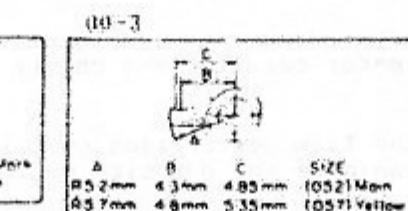
4-1 CAI-3572

A	512F
B	*2.6 mm
C	10251 Other
D	*2.2 mm
E	10291 MFR
F	*3.2 mm
G	10321 Block

B	SIZE
730-11	10301
732-11	10321
733-11	10331
734-11	10341
735-11	10351
736-11	10361
737-11	10371Mop
738-11	10381
739-11	10401

CG-2-2565-000

A SIZE SCREW
0° (010) Blech
3.45 (0501)



15-3 XDI-1163-120 ***

NSR CA1-1246

Number of Y = 05

71

(16) ~ (20) deleted

~~normal~~ need not
be removed.

⑩-11 ~ ⑩-13 can be removed without
removing ⑩-1 ~ ⑩-10

⑩-10 can be removed without removing the ⑩-5.

I. ASSEMBLY and DISASSEMBLY

9. Lower Winding Base

Assembly and Disassembly Notes

1. These parts can be removed without removing either the top cover or front panel parts.
2. It is not normally necessary to remove (22)-(27).
3. (15)-6 - 10 and (15)-11 - 13 may be removed without regard to (15)-1 - 6, and (15)-1 - 10 respectively

Adjustment Notes

1. See section II.4.2. for lower winding base adjustments.
2. Match charge cams[p/q(8)] and connecting lever (4) according to the amount of mutual friction surface between them. At least 1/2 of the charge collar (5) should be in contact with the charge cam. If not use washer (3) to increase th. overlap.

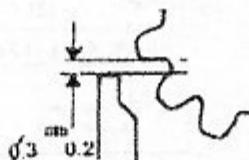
Adjustment Tolerances (See parts catalog for adjusting sizes)

1. If an oversize (3.8mm or larger) is used when adjusting overcharge, (See section II.4.5.), use the 049 size connecting lever. If the standard (3.7mm) or smaller collar is used use the 065 size lever. (This is to prevent backlash.)
2. (4)-1 is used to prevent friction between the 2nd curtain latch and connecting lever during winding. There should be 0.2mm between them. With the shutter wound, there should be space between the 2nd curtain charge spring and the lever collar (4)-1.
3. Collar (5) is for overcharge adjustment (See section II.4.5.). A 0.2mm change in collar diameter results in a change of 0.32mm in the overcharge.
4. Charge Gear (7) affects the film perforation position. (See section II.4.1) Note: Black screws indicate the 010 size gear.
5. Pawl (10)-3 is used to prevent backlash. Use the size which gives the correct distance between the gear and pawl.

Wind and hold at the fully wound position.

The pawl should not reach next tooth.

Check the charge cam at all three positions.



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

I. ASSEMBLY and DISASSEMBLY

9. Lower Winding Base (cont.)

Assembly and Disassembly Notes

6. Use the washer (15)-8 which gives the smoothest operation of gear (15)-7. Standard: $t=0.2\text{mm}$

7. Spring (15)-13 is used to adjust the anti-backlash torque.
Check: Measure the torque at the circumference of gear (15)-7

Standard:

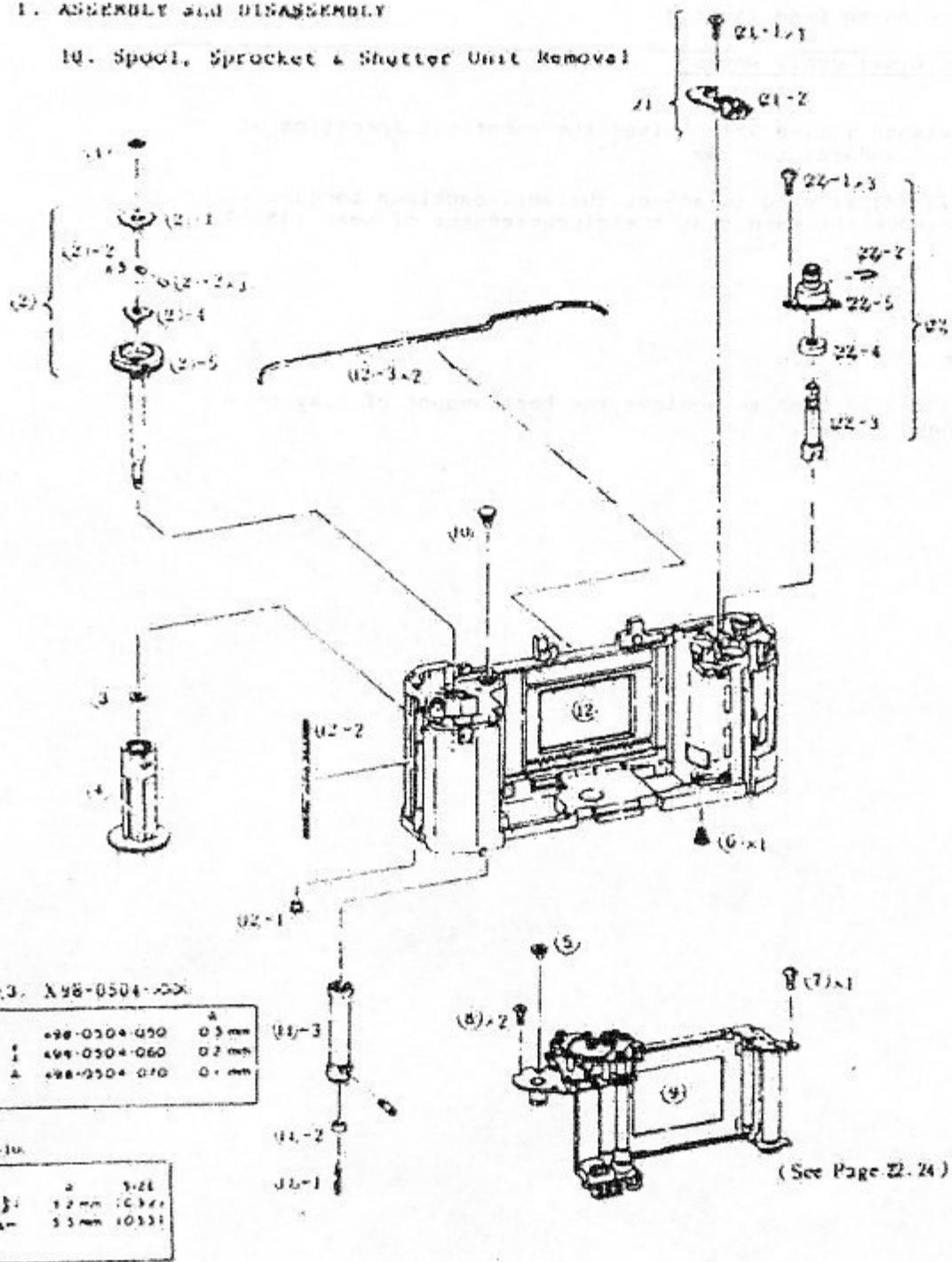
Forward : 25 - 45 g

Reverse : 80 - 130g

8. Washer (15)-3 is used to achieve the best amount of play between (15)-4 and (15)-5.

I. ASSEMBLY AND DISASSEMBLY

10. Spool, Sprocket & Shutter Unit Removal



Numbers ⑩~⑯

can be removed after removing 1 - 6
in Sections I.1 and I.5.

⑭ ⑮ can be removed after removing 1 - 6
in Sections I.1, I.4 and I.5.

I. ASSEMBLY and DISASSEMBLY

10. Spool, Sprocket & Shutter Unit Removal

Assembly and Disassembly Notes

1. A special tool is available for removing (10). See the tools list.

Adjustment Notes

1. Winding Shaft (2)
DO NOT lubricate (2)-2, 3, 4 or the inside of (2)-5. This clutch does not require grease.

2. Be careful not to strip the threads of sprocket spindle (10) when tightening it.

3. Spool Torque
Standard: 110 - 250 gcm (Spool Diameter : 13mm)

Adjustment: Change Spool Gear Unit (15) in section I - 9.

Adjustment Tolerances (See parts catalog for adjusting sizes)

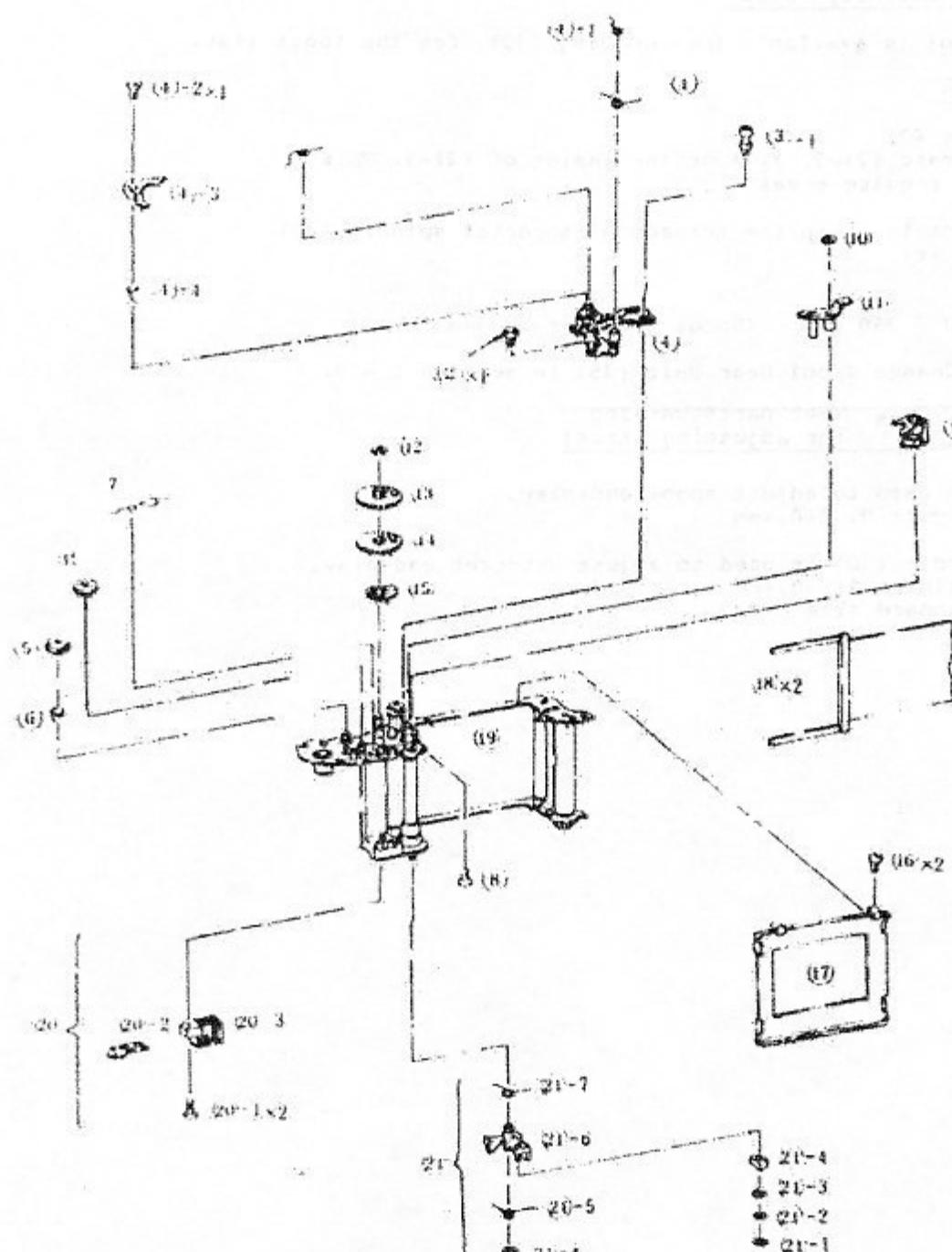
1. Washer (3) is used to adjust spool end-play.
Tolerance limit: 0.15-0.4mm

2. Sprocket spindle (10) is used to adjust sprocket end-play.
Tolerance limit: 0.1-0.4mm
Spindle standard size : 032

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

I. ASSEMBLY and DISASSEMBLY

11. Shutter Unit Disassembly (Part 1)



94 CA1-1636

A SIZE
900 mm 10101
915 mm 10201Mm

Numbers (1) ~ 20

I. ASSEMBLY and DISASSEMBLY

II. Shutter Unit (Part 1)

Adjustment Notes

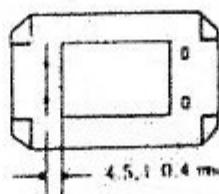
1. Shutter Curtains

Because of the increased use of plastic (pinion gear etc.) the best method for installing shutter curtains is different than older conventional shutters.

1.1. Second Curtain(Order: 1. ribbons , 2. curtain end)

1. Make sure the curtain is parallel with the aperture at both ends and the center and attach the ribbons.
2. Attach the curtain end following the same precautions.
3. Adjust the position of the curtain bar with the pinion gear mesh.
4. After adjustment, stake the pinion gear with Aron-tite.
5. Tension the spring drum.

Adjust the final position of the curtain bar to 4.7 ± 0.4 mm from the body aperture edge. Measured on light shield (17), the distance is 4.5 ± 0.4 mm and there are punch marks at the 4.5 mm position.



1.2. First Curtain (Order: 1. curtain end, 2. ribbons)

1. Check that the curtain bar is parallel with the aperture and the 2nd curtain bar and attach the curtain end.
2. Attach the ribbons, making sure everything is kept parallel.
3. Adjust the 1st and 2nd curtain overlap with the pinion gear mesh. Overlap should be 1.5 to 3.0 at both edges and the middle of the aperture. (At the end of travel, the overlap 3.5mm).
4. After adjustment, stake the pinion gear with Aron-tite.
5. Tension the spring drum.

2. Second Curtain Magnet

See section II.4.4. for holding power check.

3. SW4 (7)

Use only fronsolve or alcohol type cleaners.

SW4 OFF position: SW4 must turn off just as the master gear starts to turn when the first curtain is released.

Standard: 1st Curtain release must take place at SW4 OFF ± 0.1 mm. This adjustment helps insure even exposure.

Reason: The 1st curtain start lever has a governor to slow the start of the 1st curtain release lever.

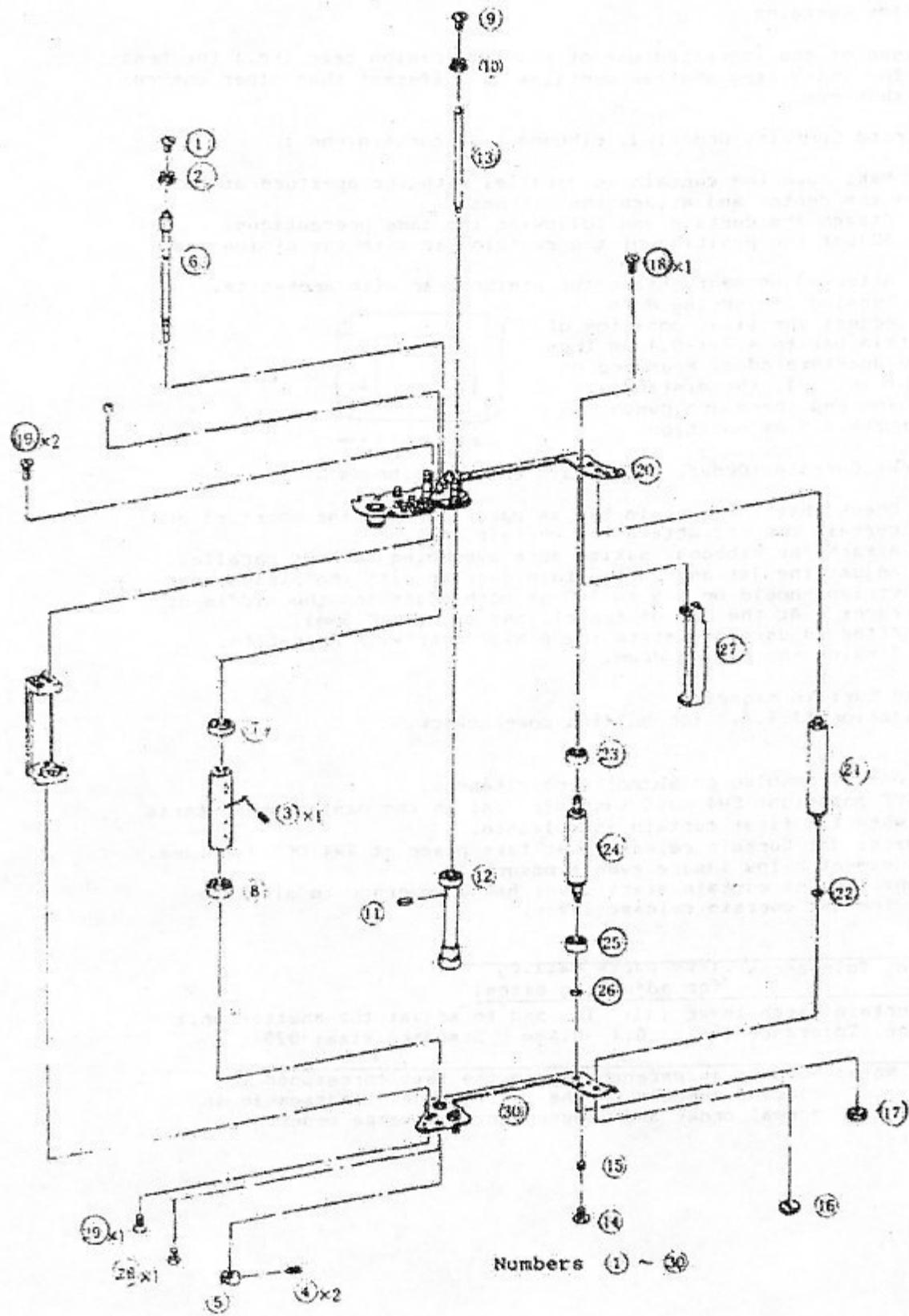
Adjustment Tolerances (See parts catalog for adjusting sizes)

1. 1st Curtain latch lever (11) is used to adjust the shutter unit overcharge. Tolerance limit: 0.4 -0.8mm Standard size: 020

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

I. ASSEMBLY and DISASSEMBLY

12. Shutter Unit Disassembly (Part 2)



1. ASSEMBLY and DISASSEMBLY

12. Shutter Unit (Part 2)

Adjustment Notes

1. Curtain latch cam (5) must be adjusted. (See section II.4.3.)

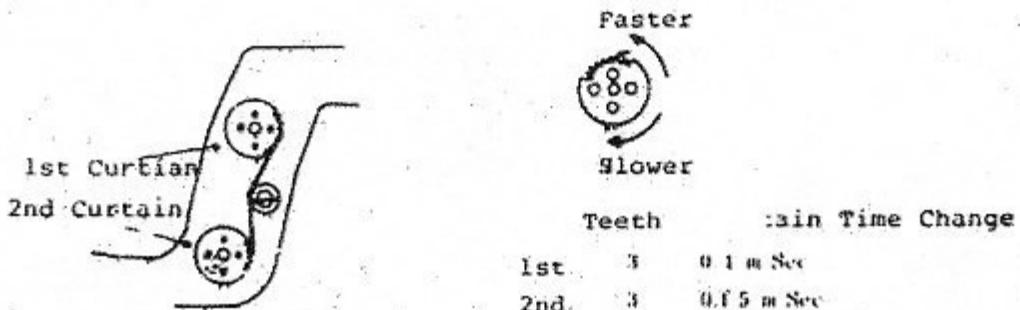
Note: Numbers in parentheses in the text correspond to circled numbers on the facing page. Disassemble in normal order and reassemble in reverse order.

1. Shutter Adjustments

1.1. Curtain Travel Time

1. Tolerance $10.5 \pm 0.3 \text{ mS}$ (34mm slit separation)

2. Adjustment



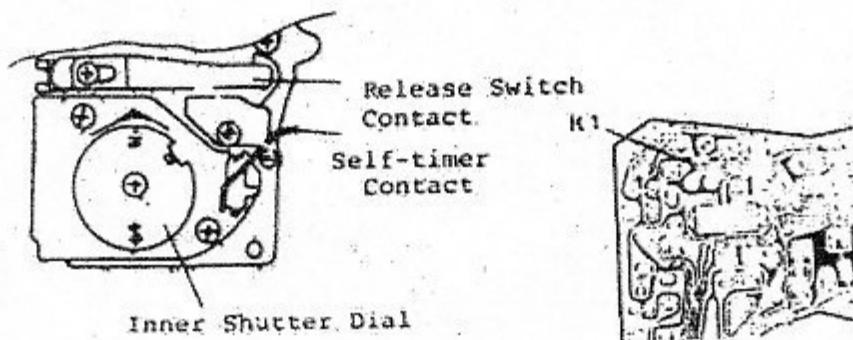
- A. Set the shutter speed to 1/1000
- B. Check the curtain travel time.
- C. Only "normal unevenness" is allowed.
("Normal" unevenness means that the 1st curtain is faster than the 2nd curtain).

1.2. Shutter Speeds

1. Tolerance limit at 1/1000 : 1.1 mS (0.8 - 1.4 mS)

2. Adjustment.

Set the shutter dial to the manual 1/1000 position. (With the top cover removed, set the *10 to the index as shown below.)



Install a 200 KOhm variable resistor in place of the existing RTC and adjust until the speed is within tolerance with 3V applied. Remove and measure the variable and install the nearest fixed resistor.

(If a variable resistor is not available, change fixed resistors until the correct value is found. A 1 Kohm increase in resistance slows the shutter speed about 0.1mS).

2.1. ADJUSTMENTS

2.1.1. ADJUSTMENT

2.1.1.1. Offset
(Only necessary if IC 3 is replaced)

In bypassing one end of resistor R7P,

1. Short pin 12 of IC1 (NOS 741) to
pin 10 (ZP).

2. Measure the voltage from pin 10 (ZP) to ground. Record as V_L .

3. Measure the voltage from pin 11 (NOS 741) to ground. Record as V_L .

4. If $V_L - V_2 = 0$ to low, adjustment
will be necessary. Remove the
short and re-solder IC1's pins with
helicon E.

5. If the voltage is not correct
proceed with the adjustment.

6. Remove R 301L and resistor connected
to either R 301L 1 or R 301L 2 and
install a 200 M Ω variable at the R 301L 2 pad.

7. Adjust the variable until V_1 and V_2 are within limits.
Disconnect and measure the variable.

8. Install the shortest possible fixed resistor.

9. Measure the voltage after installing the new resistor.

10. After the adjustment is finished, remove the short, resolder
the R301 resistor and re-solder the IC pins with Helicon E.

2.1.2. Reference Voltage (V_R)

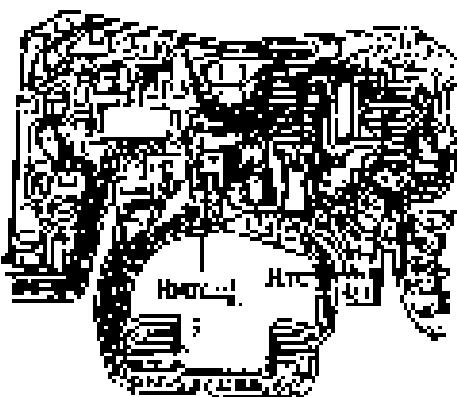
The reference voltage (V_R) is used as the base for all following
adjustments. Check it carefully.

1. Reference Voltage (V_R) : 1.300 mV

2. Check:

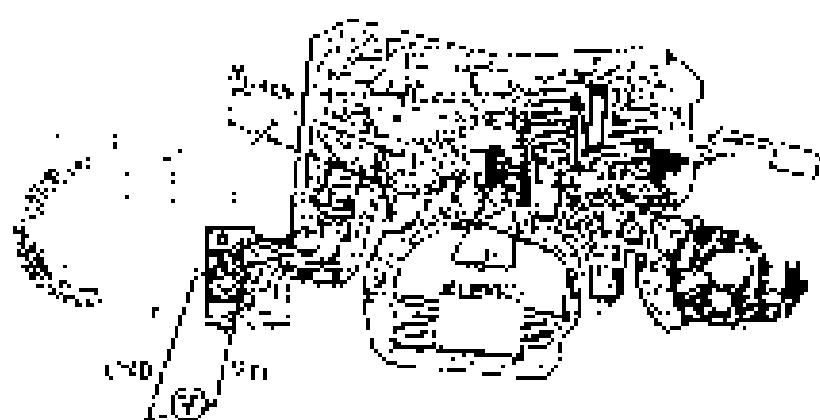
a. Apply +9V power to the circuit.

b. Connect the voltage from V_L to Grid at IC2 with S61 on.
Record as reference voltage for the following adjustments.



II. ALIGNMENT

2. ADJUSTMENT



2.5. GAIN

That adjustment is to connect 100 ohms 6V to ground to minimize variations between the various RF levels.

1. Standard difference between 609 and 6235 is 650 +/- 0.2%

2. Adjustment

A. Remove the gun structure and insert a 300 ohm variable.

B. Adjust the beam source to 6V (6-12.5, 4035) and

C. Put the auxiliary extraction lens (at extraction level) in position(s) on the gun and set the aperture to 6mm, and the objective dial to "A" (use the next top cover),

D. Touch SH1 gas.

E. Calibrate the source gain voltage as follows:

$$\frac{V_C}{R} = d + V_{\text{bias}}$$

F. Measure the voltage at 9.15 with a 10M (9p1).

G. Set the target source to 6V and repeat the previous (V_C).

$$2V_C = 9.15 - \frac{V_C}{R} = d + 10\mu\text{v}$$

H. Adjust the variable so with the above condition, disconnect and remove the variable.

I. Adjust the source sensitivity fixed resistance.

1.4. METER ADJUSTMENT

1.4.1. DC Adjustment

1.4.1.1. Level

Adjust to correspond to ± 2 degrees.

i. Standards $\pm 0.1\%$

1.4.1.2. Adjustment

a. Adjust the light source to 50° 12' (6 = 1.5, 5 = 0.5) and repeat until level within the given limits.

1.4.1.3. Turn SW 1 on.

1.4.1.4. Calculate the level voltage (TV).

$$TV = \frac{11.7 \cdot V_R}{5}$$

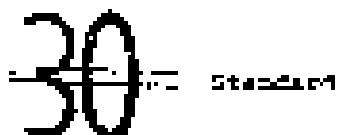
b. Measuring the TV voltage at the point shown on the preceding sketch; it should be the same as the calculated value.

Note: Unless otherwise noted all measurements are to body ground. Only marked points should be used because points of the body are plastic.

c. If the voltage is not correct remove the fixed resistor and use a variable to find the necessary resistance.

1.4.2. Meter Needle

1.4.2.1. Standard and tolerance limit:



2. Adjustment

a. Adjust the light source to 50° 9' ($6 = 0.5$, $5 = 0.5$) with the service standard lens (the Registration lens if available) on the camera and set the aperture to t/4.0, and the shutter dial to "A".

2.1. Turn SW1 on.

c. Adjust the needle so that it cuts the center of the "0" (or "1") on the shutter speed scale.

2.6 Readjustments

2.6.1 EC Adjustments

2.6.2 Scale Deflection Angle

The scale deflection angle is adjusted so that it is within the given tolerance limit of $5V15$ (+/-0.9°), $6/5.61$ and $5V27$ (+/-5, $\pm 0.4^\circ$).

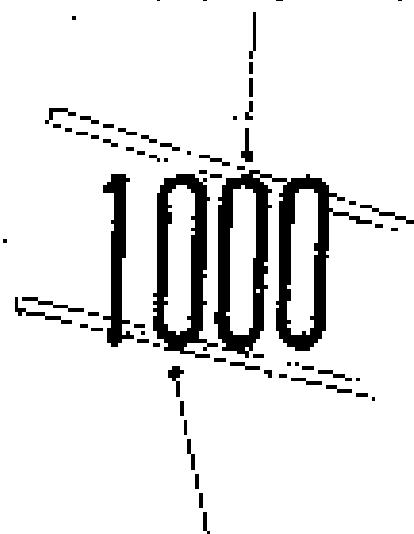
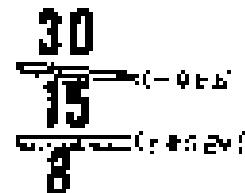
1. Standard:

$$EV15 \pm 1/1000 \approx 0.5\%$$

$$EV9 \pm 4/15 \approx 0.4\%$$

EV1500 limits:
 +/-0.5%: lower edge of
 needle aligned with inner
 edge of middle margin.

EV15 limits



EV900: Upper edge of middle
 division with inner edge of
 [left scale].

2. Readjustments

a. Readjust the (Section 11, 12, 13)

$$\frac{V_{E15}}{4,33} \times 104 = 292 \text{ steps} = Y \text{ steps}$$

b. Select the adjusting ring gear closest to the "Y" value and install it in place of the current one.

c. Check the precise reading position at $EV9$ and $EV15$.

II. ADJUSTMENTS

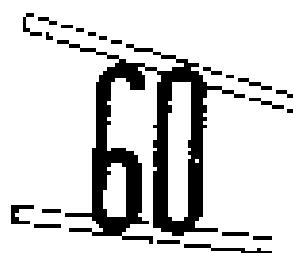
A. AE Adjustments

2.7. Flash Shutter Speed

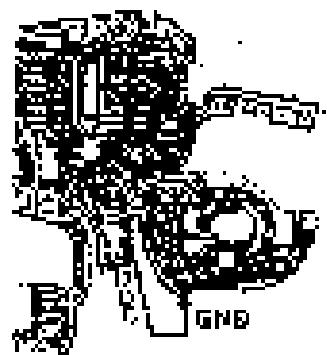
C. Standards:

- a. the meter needle should align at 1/50 or 0.4EV when the camera is in the electronic flash mode.

+0.4EV (needle should align with inner edge of scale.)



+0.4EV (needle should align with inner edge of scale.)



D. The day shutter tested:

- a. Normal: 0.5 to 0.6
- b. Normal: 1.9 to 0.0

2. Flash and adjustment:

- a. Set the shutter dial to 1/50
- b. Ground the CCC pad of the circuit. The needle should point to 0.4EV.
- c. It is done not touch the previous meter adjustments.
- d. Adjust the shutter by changing the contact spacing.

3. Meter dialer:

- a. Standard: With a +0.3V input, the needle should be centered on the "T" in "TT". (See drawing in "Meter Needle Adjustment")

12. ADJUSTMENTS

1. AF Adjustments

2. Adjustment

A. Connect the regulated low voltage power supply (LVPS) to the camera and set it to minimum output.

B. While pushing the checker button, gradually increase the voltage until the needle meets the "0" in "10".

C. Read the voltage.

- If it is greater than 2.1V, install the next Power RCM.
- If it is less than 1.9V, install the next Signal RCM.

D. Check meter deflection at 24V and FVg.

- If it falls to reach +0.5EV limit, install the next larger RM.

- If it exceeds the -0.5EV limit, install the next smaller RM.

E. Recheck the battery checker.

3. Current Consumption

1. Load current

A. Standard: Under 10 mA

2. Check

Connect the LVPS to the camera and read the meter.

2. Operational Checks

A. Standard: Under 230mA

B. Check

1. Connect the LVPS and an adapter to the camera.

2. Focus on the test chart so the green LED is light (Sg/1.4).

3. Load the anodes.

4. Set the shutter dial at "B" and wind the shutter.

5. Press and hold the shutter button.

6. Read the shutter.

II. ADJUSTMENTS

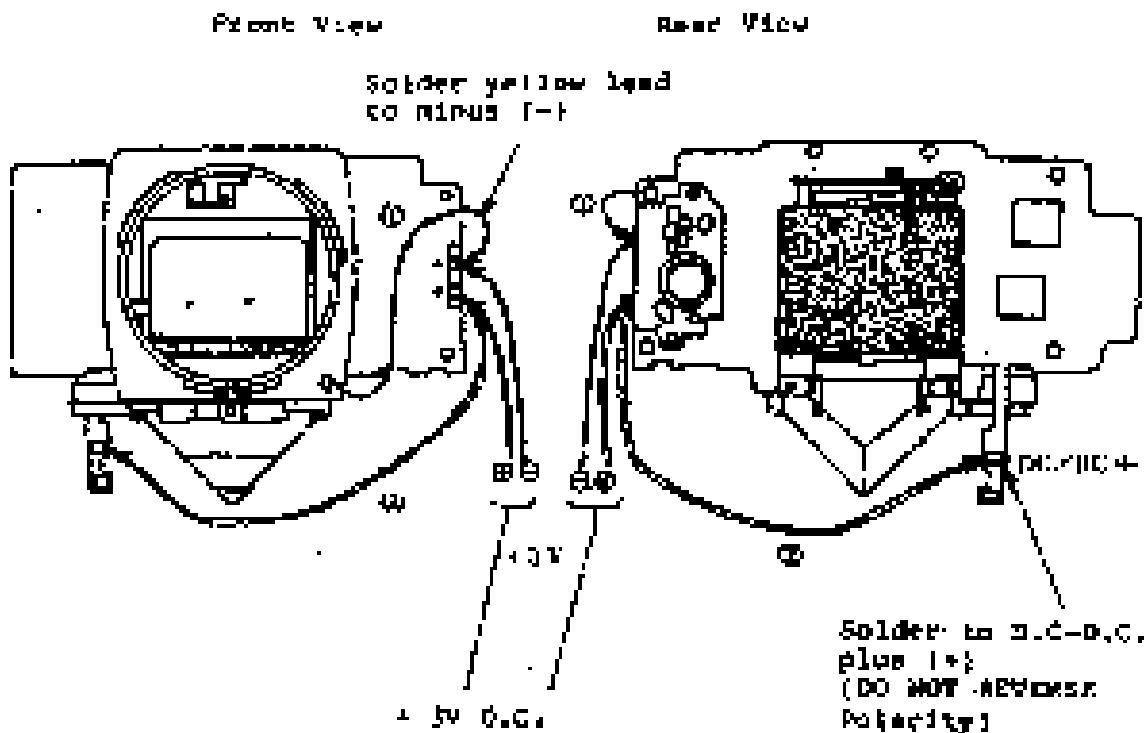
3. QF Adjustments

3.1 Preparation for Electronic Focus (QF) Adjustments

1. Camera Setting

All electronic focus adjustments are made to the front panel while attached to the QF Test Adapter (QY# 8050-000). The front panel mounts in the adapter upside-down.

1.1



Connect the yellow lead to Pin #1 and the orange cord from the plus (+) to the plus (+) contact on the tougue which connects to the AC line. Connect +3VDC to the front panel connection.

CARE:

Do not reverse polarity. If power is applied with the plus and minus leads reversed, the D.C.-D.C. converter capacitor will explode. Always check polarity before applying power.

1.2. Cover the film objective with black plastic foam, and make a black tape to cover the entire rear of the front panel.

1. OF Adjustments

1.3. Oscilloscope Connections

It is advisable to solder leads to the IF (Focus/Def.) flex prior to making adjustments.

Oscilloscope:

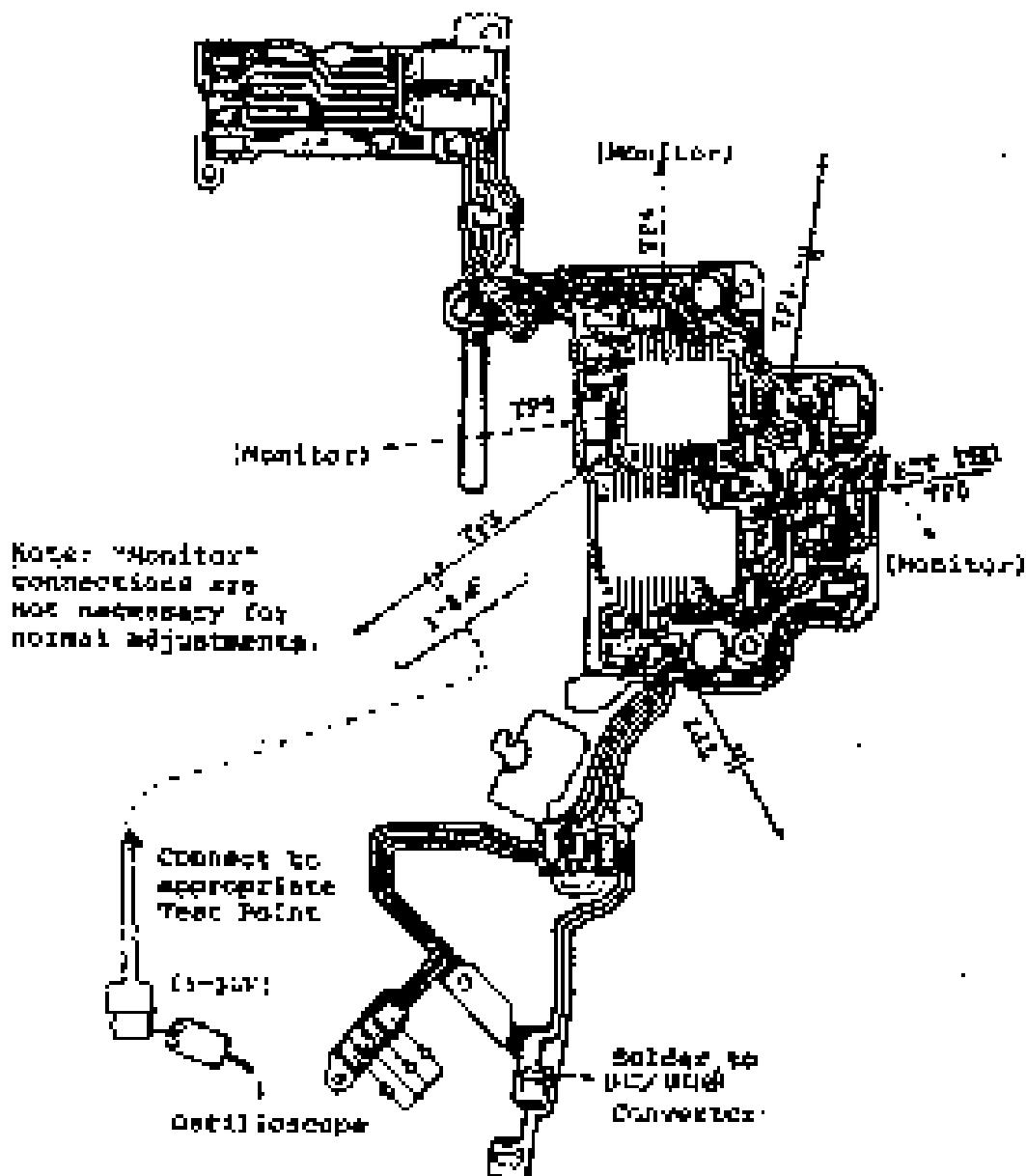
Trigger: External - Connect to TPD

Probe: 1:1 with 1 to 3 uF capacitor*

*To set the signals at TP1, Y_s, and Z a coupling capacitor

1:1 to 3 uF is necessary. Because of the capacitor,

it is necessary to wait 10 sec. to 1 minute [discharge time].



TT - ADJUSTMENTS

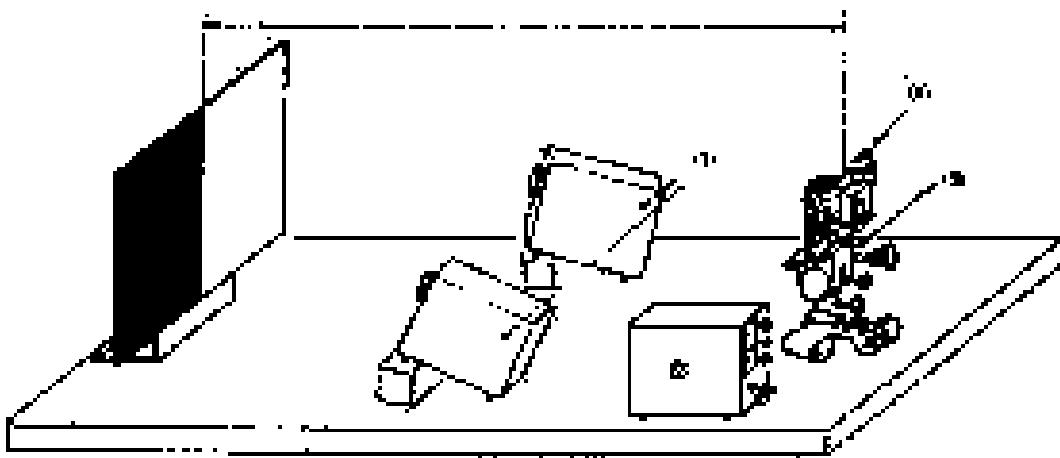
5. GR Adjustments

5-4. IRST Setups

There are two possible test set-ups possible to adjust the GR mechanism, one using best objects at a finite distance and one using a collimator with charts optically at infinity.

5. Finite Distance Setup

Chart to Front Panel
1.9M to 1.0M



5. Light Sources (1)

Light sources which can provide a constant, consistent illumination over over the central 20cm of the chart is necessary. We have found that modified 35mm manual slide projectors are best, and that two projectors give much more even illumination than a single unit. If a single unit is used, it should be located as close as possible to the optical axis as possible to avoid uneven illumination.

5-5. Lighted Table Adjustment very difficult. Each projector should be modified to take a 0.6. E2V 24W bulb. The fan should be electrically connected to the bulb power supply.

5. U.C. Power Supply (3)

You a power supply capability of powering the light source lamp(s).

5. After cutting the toothed jaws, mount the front panel in the GR Adjustment Stand (CY9-1050-0004, c).

5. Tripod Pan Head (4)

A large, smooth ball pan head is recommended. If not available, a stand which allows small angular movements is recommended.

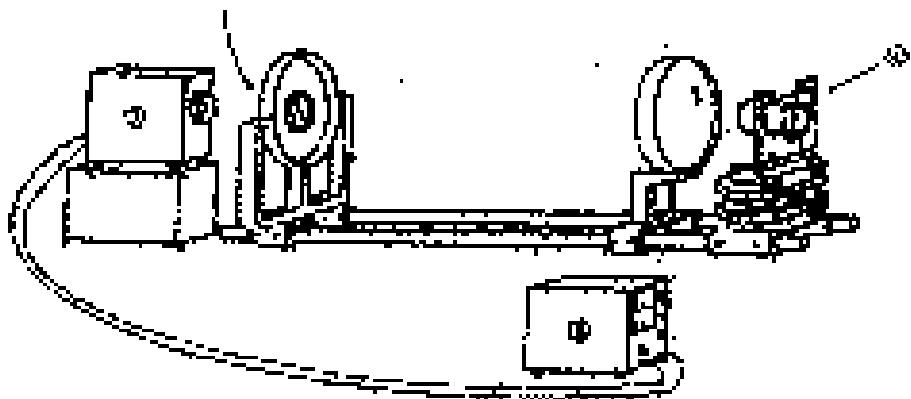
II. ADJUSTMENTS

1. GF Adjustments

2. Oscillating Set-up

Type: Diffuser

(1) Cover to block owl steady light



A. Modified Projector (1)

The modified projector as explained in *Final Assembly set-up*.

Place a diffuser between projector lamp and projection chart.

Light the chart evenly with an illumination of about 270.

B. D.C. Power Supply (2)

Use a power supply capable of powering the light source (lamp).

C. After making the connections, mount the front panel in the GF Adjustment Stand (Cf3~1040~000). (4)

D. Tripod Pan Head

A large, smooth tripod pan head is recommended. If not available, a stand which allows small angular movements is recommended.

E. Chair

The chair should be adjusted to an easy position.

II. ADJUSTMENTS

1. OR Adjustments

1.1 OR Test Standard Lens

A. Lens extension

To accurately measure the lens extension, a piece of graph paper should be typed around the lens on the focusing eyepiece. Since the front panel is upside-down, the most convenient position is one at the normal index, as a new index is also desirable.

NOM Fu 30mm 111.4

The lens extension for one complete revolution is 12.5mm or 0.0347mm per degree. This is equivalent to 0.0818mm lens extension per millimeter of revolution on the circumference of the focusing ring (1.0mm thick-neck graph paper).

PD 6mm 111.4

The lens extension for one complete revolution is 12.7mm or 0.0353mm per degree. This is equivalent to 0.0590mm lens extension per millimeter of revolution on the circumference of the focusing ring with 0.2mm thick-neck graph paper.

2. Minimizing Distances (2 Meter) Lens Selection

It is necessary to establish the exact position for correct focus at 2 meters on the test standard lens if the distance method is used.

The calculated extension for 2 meter focus is 1.0mm, but because of variations between individual lenses, the following procedure is recommended.

- A. Select a known-good camera body (no coverage of neutral in either), and remove the front panel.
- B. Select a 30mm/111.4 lens that is accurately adjusted for infinity focus.
- C. Prepare the front panel and lens as outlined in section (II, 3, T).
- D. Adjust the lens so that VBL & VBL at TPS. Mark the extension of the lens at this point. This is the "just focus" correct 2 meter point for the test standard lens.

In some cameras the jack at 2 meters, the Japanese word "just focus" will be used to indicate the correct "in focus" signal or condition of the circuit.

11. AUTOMATICS

1. QF AutoFocus

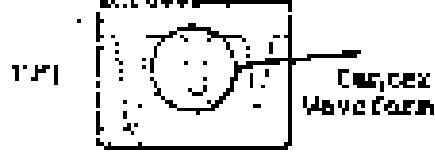
1.3 Typical Oscilloscope Waveforms

Throughout this section references are made to **front focus**, **middle focus** or **rear focus**. The oscilloscope waveforms for best middle (front focus) are shown below. For front focus, the waveforms on the left would be an ellipse and for rear focus the waveforms on the right would be an ellipse.

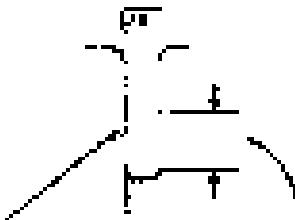
One Bar Chase



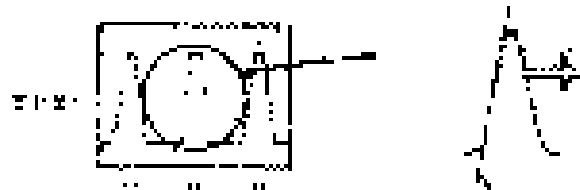
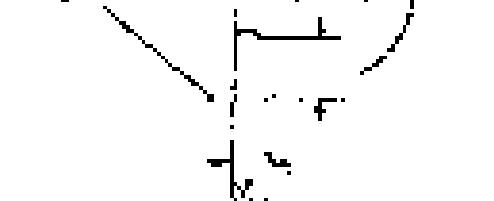
Defocus



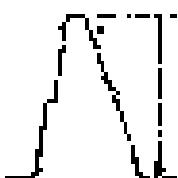
Jump Focus



Slope Focus



Max. Defocus



1.1. EQUIPMENT

1.1.1. ADJUSTMENTS

1.1.2. POST IC REPLACEMENT ADJUSTMENT TASK LIST

When any of the IC's are changed, perform the adjustments in the order listed.

Replaced IC

Adjustment	CDS	SFP	CPU
1. Mirror Angle (5°)	1	1	1
2. Parallel	2	2	X
3. Level	3	2	X
4. Semic Parallel	4	4	X
5. Alignment Check	5	5	3
6. QF Focus (Coarse)	6	6	X
7. QF Focus (Fine)	7	7	4
8. R-SG	8	8	3

* : Adjustments marked "X" are not mandatory.

1.1. Instruments:

a) 3D Adjustments

3.2. Substrates Adjustment

- Components:
1. Universal 90° Collimator
2. Complicated 90° Collimator
3. Reference Mount
4. Spacers

Standards:

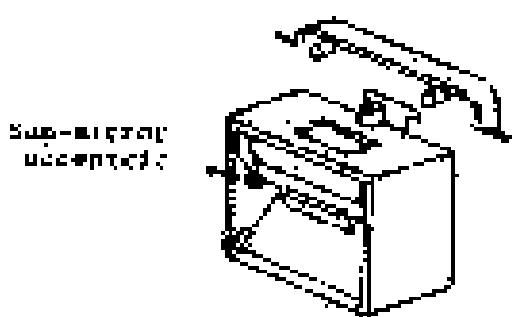
Substrates: Horizontal +/- 6°
Vertically +/- 6°

Adhesive: Horizontal +/- 10°
Vertically +/- 10°

Adjustment : Substrate mounting

Method:

Adjust substrate angle within error angle to within tolerance.

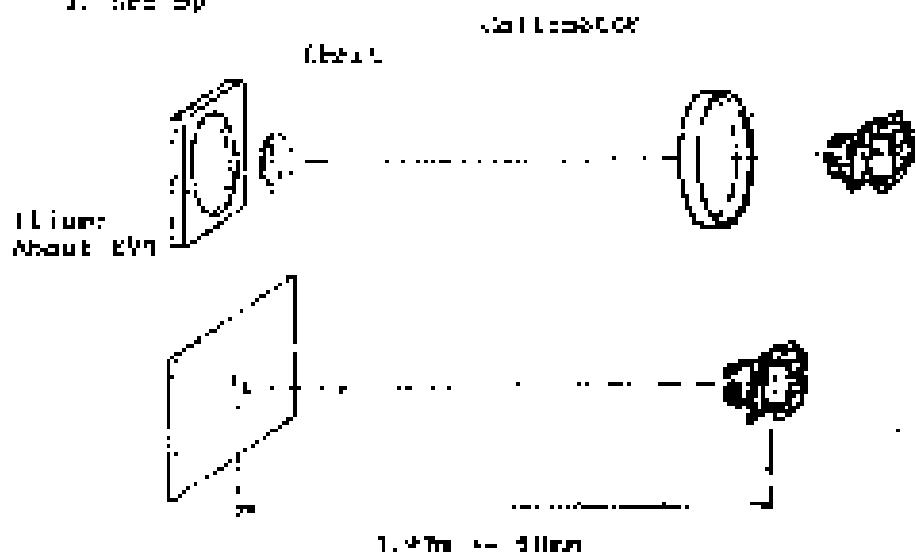


III. ADJUSTMENT:

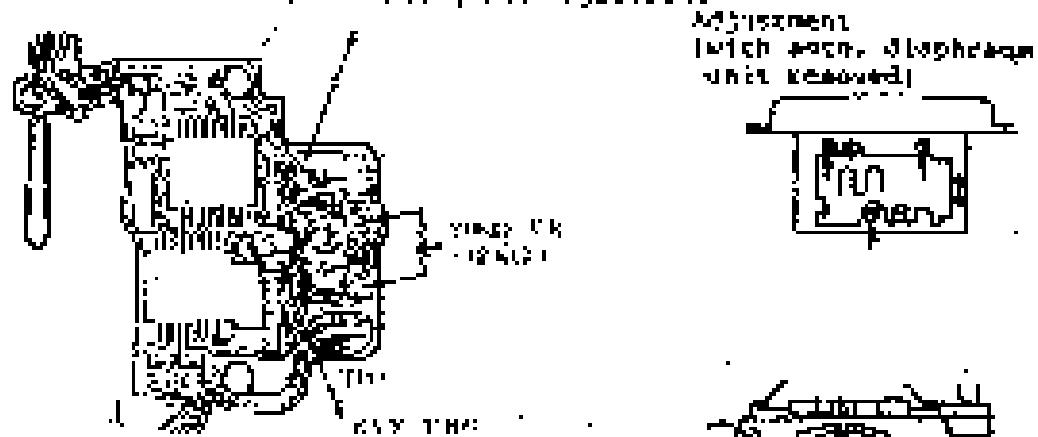
1. OF Magnification

A. Cell Resultant Adjustment

i. See by



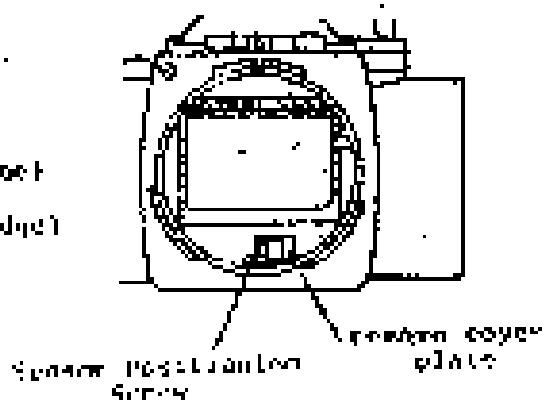
ii. Microscope Compacting and Adjustment



Microscope

Compacting : D.L.
Channel : 50mV/div. 100 μsec
Time Base : 250μsec
Triggers : KODAK intensifying edge

Setting of Compacting
Compacting will about
30 seconds for 0.01
level to steady line.



4.1. ADJUSTMENTS:

4.1.1. DR Alignment

4.1.1.1. Parallel Adjustment

Tool: Alignment: Adjustment

Symbol: L DR base adjustment screw



1. DR base variable resistor set to about 17 KOhm
2. L or file of Tantalum capacitor (on probe)

4.1.1.2. OCV Longitudinal Position

Method:

1. Loosen the OCV positioning screw (previous page)
2. If the Y file is now there will be no resistors mounted at the 200, 100 and 00 positions. In this case move the Y file variable to the 100 position. (At least one of the three must be installed to make this adjustment). Turn the variable to about 17 KOhm.
3. Adjust the tool panel position so the probe is aligned with the focus mark as shown.



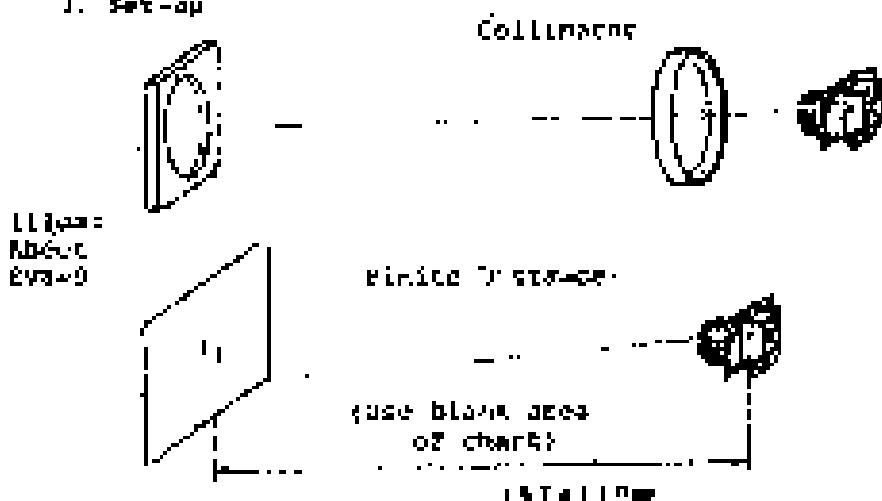
4. Adjust the rear middle focus screw (see) (See SECTION 3.1.1.3.) between three sensor screws and adjust the longitudinal (front-back) position of the probe.
5. Adjust so that, in the longitudinal direction, it is 2 mm beyond the sensors.
6. Remove the long and tighten the bearing positioning screw until it just touches the sensor unit.
7. Lower the 20 KOhm resistor to position. It is used in the base adjustment.



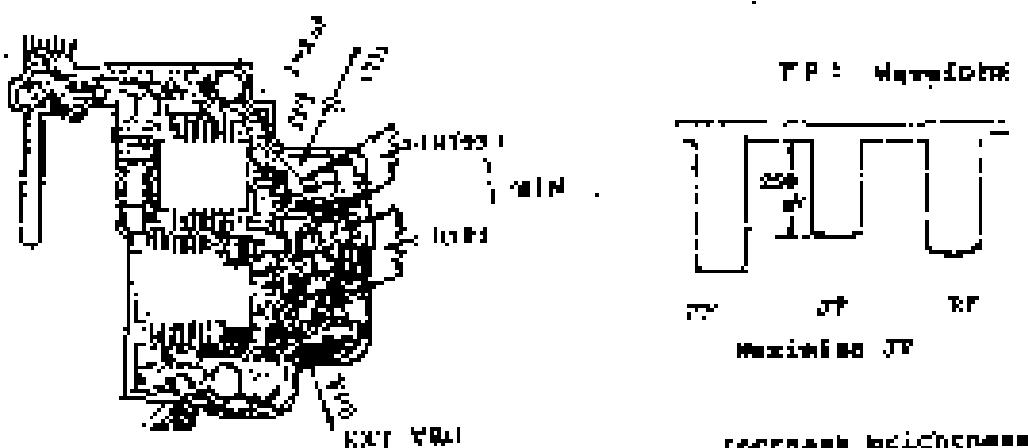
3.2. OE influences

3.4. Gain adjustment

J. **Fit** = ∂u



3. Data Integration, Configuration, and Deployment



Geschäftsbericht

Counting & D.C.

Channel 1: S0m3/d1v (1:1 pccbes)

文件页数：3页/份

League: European (Training edge)

Account of Construction

compiling, what about

由上可知 BaS_2

is next to negligible.

research techniques



Check change of
balance

1. OV Adjustments

1.1. Adjustment

Test Equipment: Oscilloscope

- Tools:
1. OV Test Standard (this)
 2. 2k Ω Variable Resistor (set to about 12 kilohms)
 3. 1 - 1 μ F film or tantalum capacitor (on probe)

4.  CRT

Standards:

OP1 Output: 250mV \pm 10mV

Adjustment: R102 or R103 (min; max)

Method:

1. Mount a 10 kOhm variable resistor adjusted to about 12 kilohms in the R102 position.
2. Matching the waveform at OP1 adjust the variable for a minimum. Normally, the middle waveform will be the easiest of the three. If the rear waveform is smaller than the front waveform, change R103 to the R103 position and proceed. (This is a short circuit in both positions).
3. Set the illumination for about 25% and adjust the gain set OP1 to 250mV. Then adjust the variable until the decreases suddenly and sharply. (NCC Threshold)
4. At this point gradually raise the illumination level and adjust the variable so the output at OP1 is 250mV \pm 10mV.

If OP1 is greater than 250mV - Decrease Resistance
If OP1 is smaller than 250mV - Increase Resistance

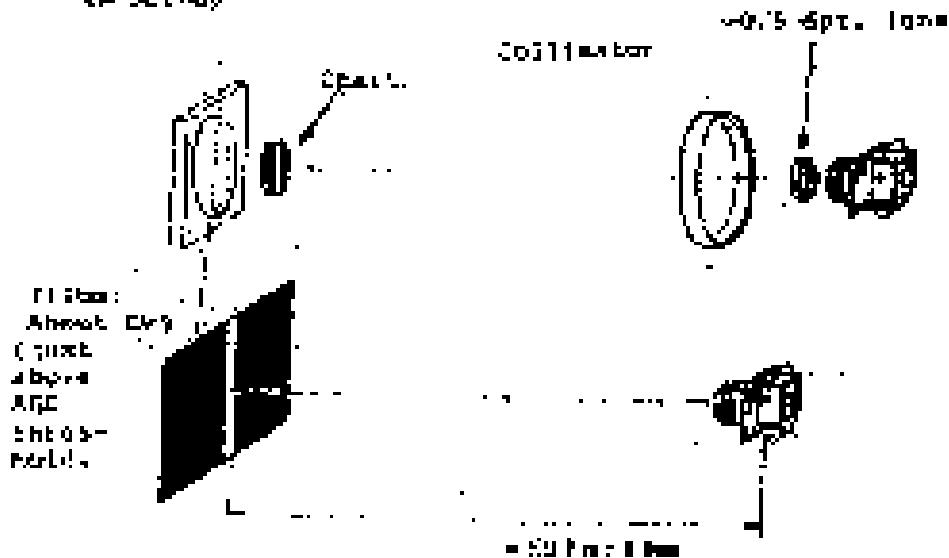
5. Connect a fixed resistor of the same resistance as the variable resistor.

1.2. EQUIPMENT

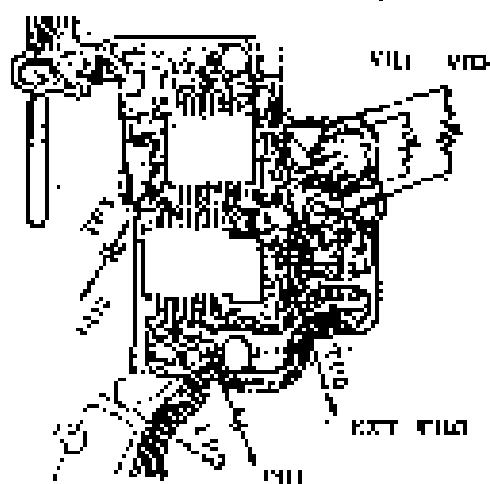
1.2.1. Measurements

1.2.1.1. Source Distance Adjustment

4-90 cm



1.2.1.2. Backscattered Scattering and Adjustment



Oscilloscope
Coupling: d.c.
Channel 1: 100mV/div (P.L. probe)
Channel 2: 10-20mV/div
Time Base: 2ns/div
Trigger: External (trailing edge)

Selection of capacitance
coupling, wait about
30 seconds for d.c.
level to stabilize

II. ADJUSTMENTS

3. OF ADJUSTMENTS

1. ADJUSTMENT

Test Equipment: Oscilloscope

Tools: 1. OF Test Standard Beam

2. Choke .

3. Two ways, 10 MHz Variable Resistor (set to about 10 kOhm)
4. 1 - 3 uF film of tantalum capacitor (un bypassed)

Standard:

Comparative height of front, middle, and rear waveforms

Front and rear waves should be within 2% of the height of the middle waveform.

Adjustment : R101 , R103 (at R101, R102)
(Depends on section 1-4)

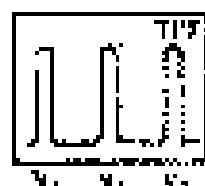
Method:

This method is written assuming the resistor selected in section 1, is R102. If it was R103, substitute R103 for R102.

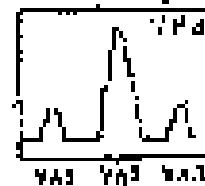
1. Mount a 10 MHz variable resistor adjusted to about 10 kOhms in the R101 and R103 position's.

2. Check the waveform at TPS on Channels 1, adjust for "jump focus" and record the middle waveform voltage as V2.

3. Adjust for best front focus and adjust the variable resistance so that V1 = V2. Repeat the process (or two focus). (Course Adjustment 08)



4. Monitor (mg IR) on Channel 2, carefully adjust the lens until the VAD signal is maximum, (if an A.C. light source is used, this adjustment is practically impossible because of instability of the waveform).



5. Adjust the illuminator just above the AOC threshold (where VAD changes suddenly). Then adjust the oscilloscope variable gain control so VAD is about seven divisions on the screen.

6. As in step 3, adjust for best front focus and adjust V1 so V1 = V2. Adjust for best rear focus and repeat using V3 until V3 = V2.

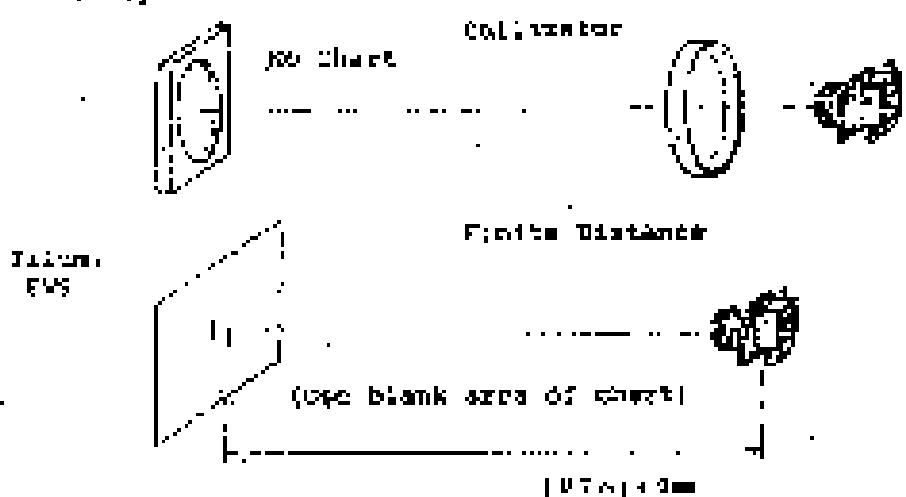
7. Remove and measure the variable resistors and replace each with fixed resistors of the same value.

II. ADJUSTMENTS

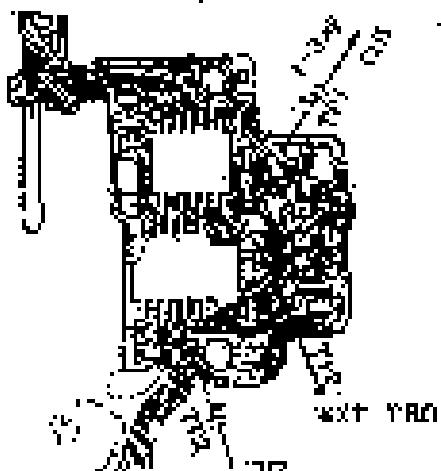
1. Of Inductances

3.6. Resonator Checks

1. Set-up



2. Oscilloscope-Coupling and Adjustment



Oscilloscope

coupling: R.C.
Channel 1: 50mV/div (±10 percent)
Channel 2: ±0.1-0.2mV/div
Time Base: 2ns/div.
Trigger: External [rising edge]

Directions of capacitance coupling. Wait about 30 seconds for R.C. level to stabilize.

II. ADJUSTMENTS

A. OF Adjustment

1. Adjustment

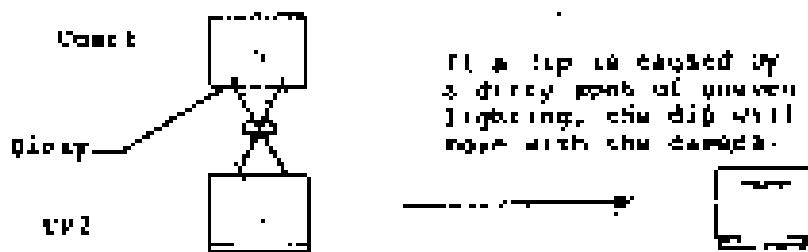
Test Equipment: Oscilloscope

Options: 1. OF Test Standard Lamp

2.  Diode

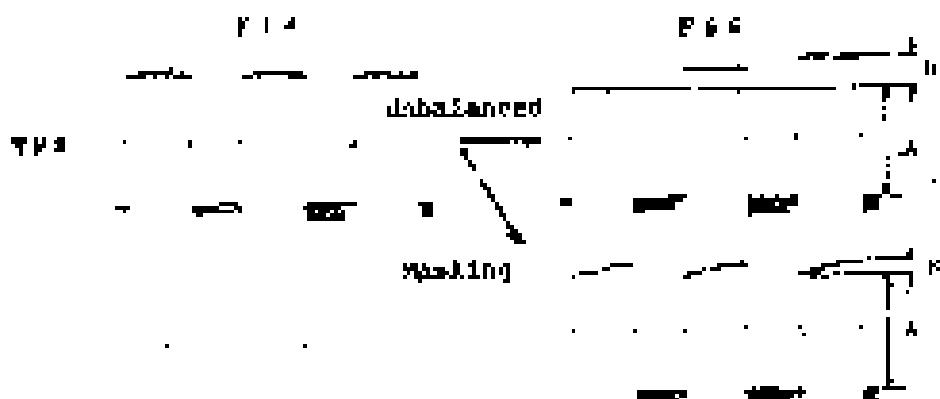
3. 1 - 2 ohm film or tantalum capacitor (on paper)

Note: If light from lamp source passes through the lens
besides the ODU, the balance will appear to be bad.
Also, if the ODU lamp assembly lit or is dirty, the
ODU output will appear yellow.
In either case the following checks will not be accurate.



B. Masking Check (72-2 Signal)

Standard: When the lamp is stepped down from 1/2 full to 1/8 full, the balance should change no more than 5%.



1. ALIGNMENTS

1. 1st Adjustment

(1) masking occurs which is very easily perceived as follows:

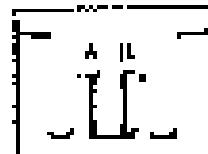
- The main mirror light should not cause masking. If it does, move the CCD slightly to the left and right.



b. With the beam set-up as used in 1.1.1.3 (parallel), move the camera vertically so $\lambda=0$. At this point the focus figure should be centered on the chart.

2. Beam, Lens and Beam Splitter System Checks

- Sharp dips in the signal waveform



Caused:
TIP
1. Foreign matter between beam splitter and CCD.

2. Foreign matter in the CCD.

- Loosen the two screws and remove the particles.
- For bad cases over 2% RMS level, replace the CCD.
- Shallowing wider dips



Cause:
TIP
1. dirty IR Filter

2. Foreign matter between IR filter and beam splitter.

- Clean the IR filter from within the filter box.
- Change the beam splitter filter.

3. XING-SHENG:

3. GP Adjustment

3. 270 Support Level Imbalance



Maintenance Limit: 8/8 20%

There is no cure for this problem. If the fault is due to
imbalanced torque, change it.

Note: These types of problems do not have much effect on large
aperture lenses, but can cause fatal alignment with small
aperture lenses.

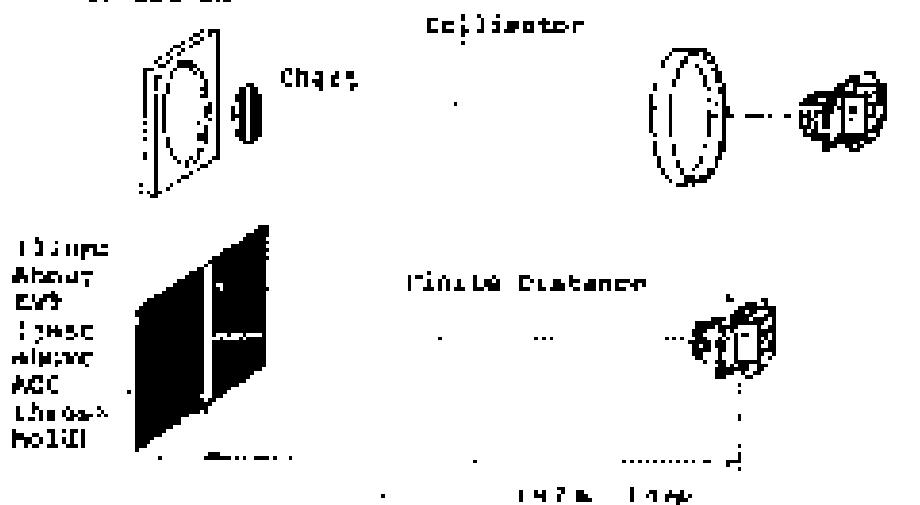
1.1. iris adjustment

51

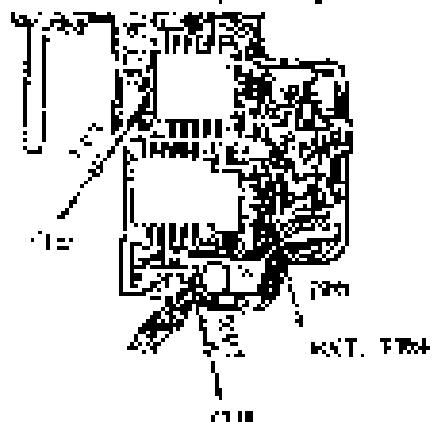
1.1.1. iris adjustment

1.2. CV Focus course adjustment

2. Set-up



2. CV Focus coupling and adjustment



Focus coupling
Coupling : D.C.
Channel 1: 100mV/div. 1:100 ratio
Channel 2: 10-20mV/div.
Time Base: 2ns/div.
Trigger: Reference triggering edge.

Method of calibration:
coupling, wait about
30 seconds for D.C.
level to stabilize.

2.1. CV focus ratio

The focal extension for one complete revolution is 12.5mm or 0.0367mm per degree. This is equivalent to 0.0100mm being determined per millimeter of revolution on the circumference of the focusing ring with 0.2mm increments on graph paper.

2.2. CV focus ratio

The focal extension for one complete revolution is 17.0mm or 0.0481mm per degree. This is equivalent to 0.0190mm being determined per millimeter of revolution on the circumference of the focusing ring with 0.2mm increments on graph paper.

III. APPARATUS

A. OF Reliability

1. Indicators

Two Pneumatic Variables

Tools: 1. OF Test Standard Lens (with graph paper scale)
(See section II-3, 1, 2).

2. Chart

3. 1 - 5 μ F (1000 ohm Tantalum capacitor can probe)

Standards:

On-Glass

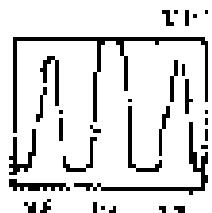
Adjustments & Adjustability Checks
(See Parts Catalog for adjustment checkouts.)

Method:

A. Collimator Method

1. Check the waveform of VM on Channel 2. Carefully adjust the "just focus" so that VM = VAI.

Note: Adjust the focussing until VAI and VM are approximately 6 to 7 divisions on the scales. VM may be off scale. This is OK.



2. Carefully remove the lens assembly from infinity and select a washer to bring the focus to within 0.05mm.

3. Loosen the three sensor mounting screws, install the washer and tighten the screws while pressing the sensor toward the lens mount.

B. Focal Distance Method

1. Same as A. 1 above.

2. Carefully measure the lens separation from 3 meters and select a washer to bring the focus to within 0.05mm.

3. Loosen the three sensor mounting screws, install the washer and tighten the screws while pressing the sensor toward the lens mount.

III. APPARATUS

1. OF Apparatus

1.1 OF basic components

1.1.1 OF

Calculator

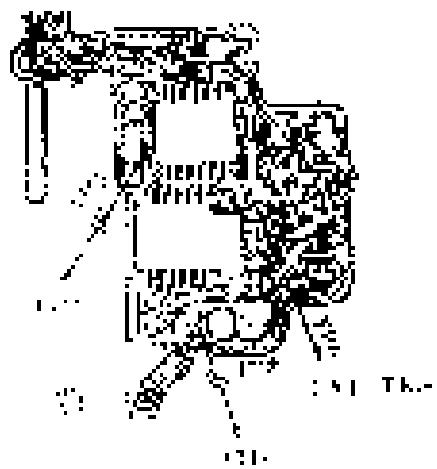


1.1.2 OF:
Keyboard
Monitor
CPU
Memory
Processor
Motherboard

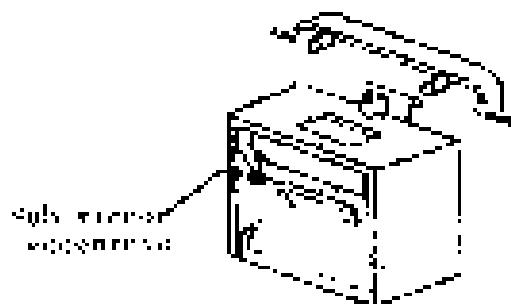


1.1.3 OF

2. Used of OF components and of parts



2.1 OF



2.2 OF

2.2.1 OF:
CPU
Memory
Motherboard
Processor
Time Server
Processor External Processing unit

2.2.2 OF: OF components

- 1. OF
- 2. OF
- 3. OF

III. ADJUSTMENTS

A. 0° Adjustments

A. 0° Horizontal

Test Setting C: Oscilloscope

Horizontal: 1000th standard, Expanded, graph paper scale.
(See section II.C.3.)

...  Scale

Vertical: 100th standard, Expanded, graph paper scale.

Procedure:

- 1. Set V_{B1} to infinity for 0° linear matching
Set B_1 to unity distance record.

Adjustment:

Horizontal alignment

Results:

A. Calibration Record

Set the time to infinity. Check the waveform of 100 on Channel 2.
Carefully adjust the sub-micron
calibrator so that $V_{A2} = V_{A3}$ exactly.

B. Vertical Distance Record

Set V_{B1} to infinity, 1000 Hz, 10, and carefully adjust the sub-micron so that $V_A1 = V_A2$.

Set the time to infinity, trap current set to 1000, no focusing, slowly move the lens off of infinity until the beam focus indicator goes out. The infinity mark should be aligned with the 1/4 - 1/5.6 area of the horizontal fine scale.

Note: The WF focus adjustment cannot be overadjusted since there are two positions and a rest.

If the sub-micron is adjusted to $V_{A1} \approx 6$,
the focus has been adjusted with either a 1.6-1
or 1.6-10 stop.

If both adjustments are set out, the lens adjustment
will focus becoming unuseful.

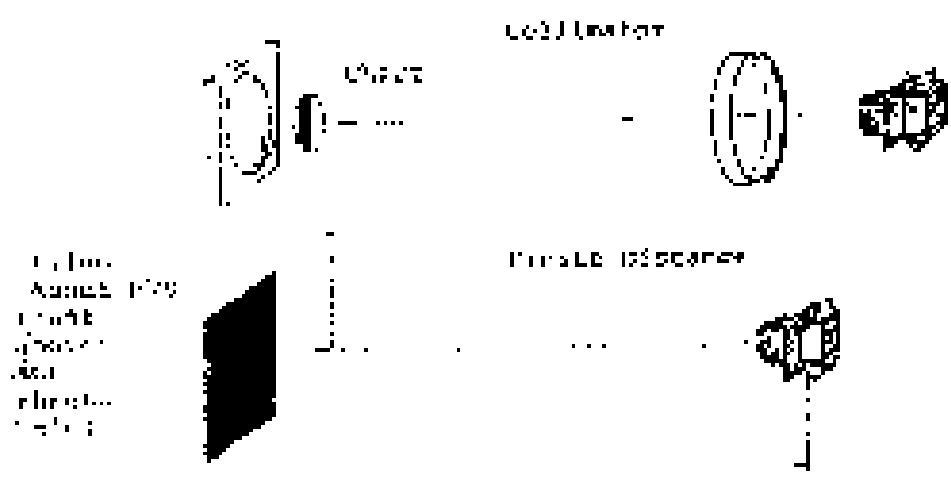
That is, the beam focus will not.

III. MIRRORS/LENS

1. *Object*

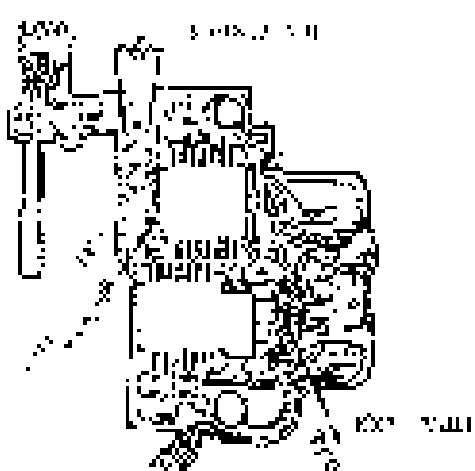
object = *the subject* = *background*

2. *Setup*



3. *Image*

4. *Composition and Adjustment*



camera
Shutter speed: 1/25
Aperture: 1.8-2.8
Film Speed: 100-200-400-800
ISO: 100-200-400-800

(if camera does not have
delay, use 1/8-1/10-1/12-
1/15-1/20-1/30)

<i>Background</i>	<i>Composition</i>
Smooth, soft, subtle	16 seconds (for P.M.)
.../... for studio (1 sec)	

II. ADJUSTMENTS

A. OF AMPLIFIERS

1. Adjustment

Three adjustments: Gain, Lowpass

Tools: 1. DC Test Standard connected graph paper scale.
(See section II-1-1).

2.  Check

3. 500 KOM Variable Resistor (See 500 KOM)

4. 100 KOM Variable Capacitor (See 100 KOM).

Standard 1:

Given: ADC Threshold = 0.1 VDC Output

$$V_{IN} = 1.0 \text{ mV} \cdot 10^{-3} = 0.001 \text{ mV}$$



Procedure:

1. Adjust the variable resistors until both channels are at the same level.
2. Adjust the gain (when condition 1 is met), increase the lowpass point by the ADC threshold and read VAS at this point. Adjust the variable resistor until VAS is correct.

Higher resistance = Longer VAS
lower resistance = Shorter VAS

3. Remove the variable resistors and replace it with a fixed resistor of the same value.

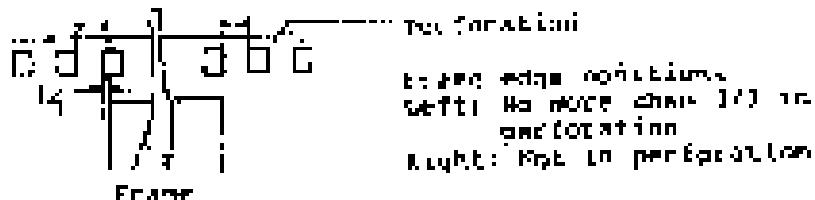
Note: This standard is for a 90% / 20 reflection phase. If the phase is varied, the resistance will be different. Parallel the correct VAS with a Kindt's-ground body.

III. MACHINING

A. Standard Adjustments

A. 1. Horizontal Adjustment

A. 1.1. Standard:

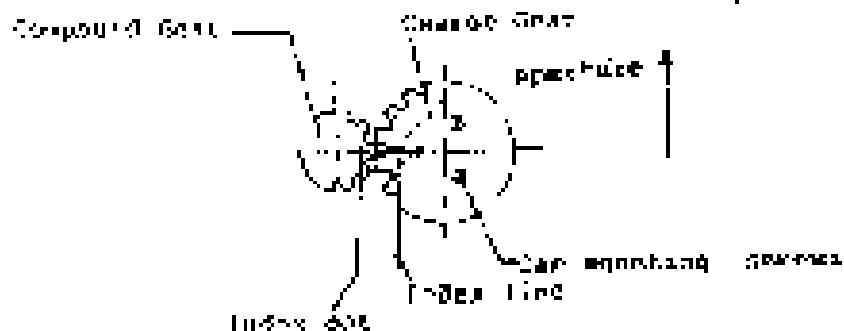


Set up a length of G00, insert the leader and wind several frames. Apply back tension and start the perforation rotation.

A. 1.2. Adjustment:

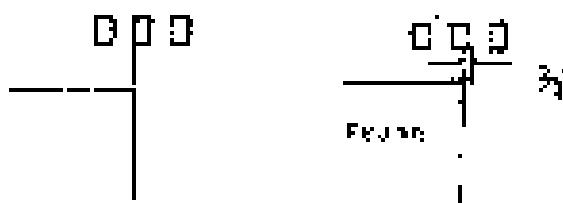
If the position is not correct, adjust as follows. There are two choices: move and the work can be changed so there are different possibilities.

1. Always start with the G00 charge value: 0.50 mm/min - choose 0.0 mm/min back
2. With the negotiation would match the work in which



3. If the results are as shown below, leave the G00 charge value in place and change the work one tooth.

Example 1: Right edge of frame on perforation



III. ADDITIONALS

A. Standard Adjustments

Example 2: Left edge of frame aligned with zero elevation ridge

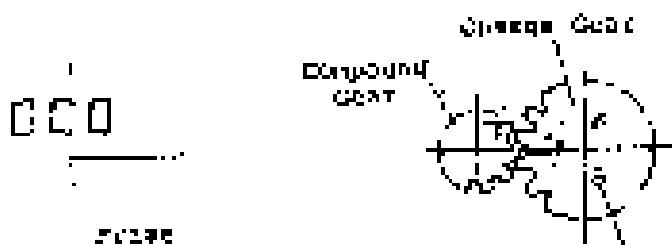


Fig. 2

Cam Raising
Screws

3. If the results are as shown below in step 1, change to the 0 to change gear and align the compound gear and cheese gear indices.

Example: Left edge of aperture in right 2/3 of frame alignment.

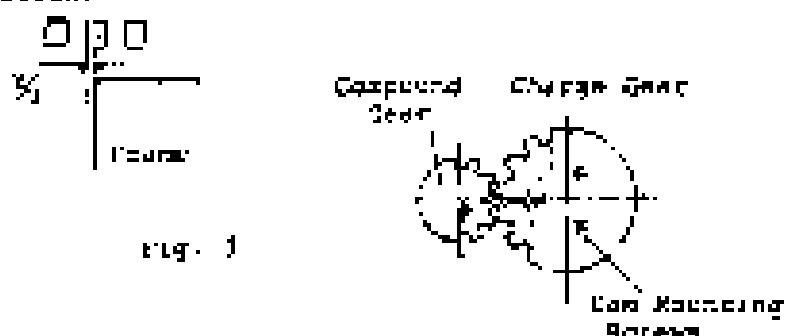


Fig. 3

Cam Raising
Screws

4. If the results are as shown below in step 1, change to the 0 to change gear and align the compound gear and cheese gear indices one check.

Example: Right edge of aperture in right 1/2 of factoration.



Fig. 4

4. ALIGNMENTS

A. Mainring Adjustment

Step 1: Both edges of mainring aligned with inlets
 $\frac{1}{2}$ " to $\frac{1}{2}$ " off centerline.

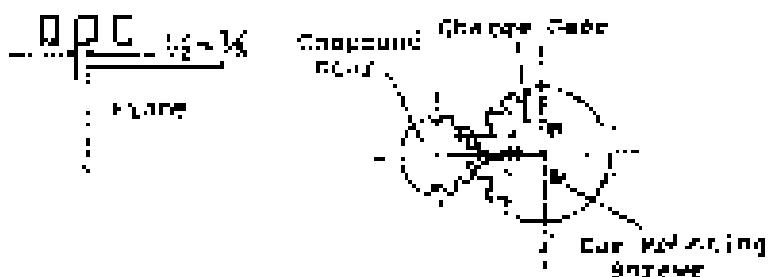
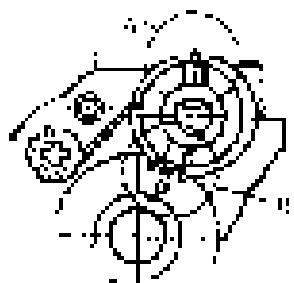


Fig. 4

B. Clutch side (Boxer)

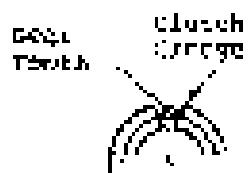
1. Assemble the separate clutch gear so the clutch groove align with the gear teeth as shown (A). There are 3 points where they mesh correctly.



2. Now align this point with the index point on the large compound gear (B).

3. Insert the small compound gear on the flatted shaft on the reverse side of the base.

4. Apply clutch grease at (A) and check that one of the four marks on the small compound gear align with the index on the base. (C).



III. ADJUSTMENT.

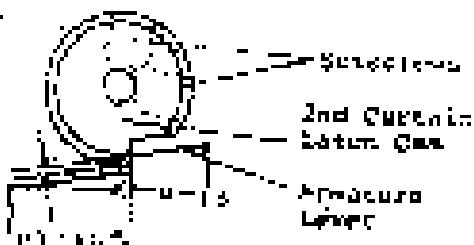
A. Setting Adjustments

1. Znd Curtin Latch Position

1. Set knobs: Main lever (0.6 - 0.15g) Head 0.1 - 0.25g

B. Adjustment

1. Clean the magnet.
2. Apply the charge current measured.
3. Recheck the main.
4. Check with 2nd curtain magnet switch off.
5. If the magnet is too sensitive, adjust and reweight the structure.
6. Apply power to the magnet and check again in the sound position.
7. Check in the sound position.



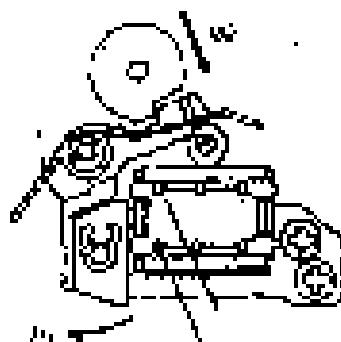
1. 2nd Curtin Release

A. Setting Power

1. Adjusted to 0.0 g for use.

B. Check

1. Magnet off the structure.
2. Apply power to magnet (current power of measured: 0V, Head (if not))
3. Press with a current of 1A, and measure the force required to separate the armature from the yoke.
4. If it is too low, change the magnet.



3. INSPECTION

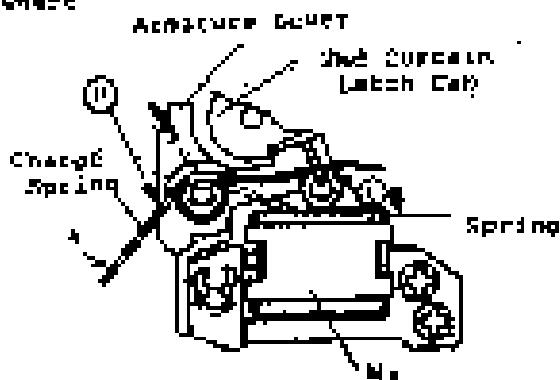
4. ADJUSTING ADJUSTMENTS

3. AND CHECK THE REACTION SPRING POSITION

A. Standard: 140 - 170g

B. Check

1. Apply the correct angular load to the end of the spring (A).
2. Check the reaction point where the spring starts (B).



5. AND CHECK THE REACTION SPRINGS POSITION

A. Standard: More than 120 (less than 140)

B. Check

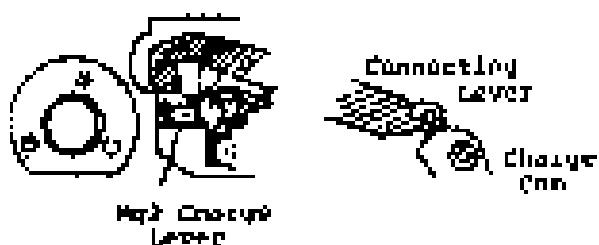
1. Measure at (A).
2. Set the reaction spring to the yoke.
3. Keeping the spring return, measure the tension when the connecting lever and yoke part.

4. OVERCHARGE

A. Standard: 0.5 - 0.9g

B. Adjustment

Check from the connecting lever; at the maximum lift of the charge cap. The overcharge of No.2 Charge Lever should be between 0.5 & 0.9g. Return by changing the size of the connecting lever surface. (The check method is identical to No. 3A-3).



SI - ATTACHMENTS

V. Lubrication and Bearing

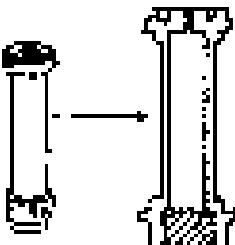
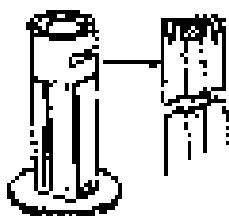
This division is divided into four sections, 1. Body, 2. Top Cover, 3. Frame Panel, and 4. Shutter Unit. For each subsection, the information is listed numerically, 1. Part Name, 2. Lubricant/ Bond, and 3. Specific Instructions.

Expendable Order numbers
(Current as of January, 1982)

Part	Expendable	Locality	Expendable
Plastic	CY9-1001-000	Axle 1	CY9-1012-000
Ringband	CY9-3002-000	UTM 10	CY9-3035-000
Acrylic Lube Cap/Cap-C-0008-000	CY9-8011-000	CY9-8011-000	
CYL Retainer	CY9-7209-000	CYL 10	CY9-8017-000
Cap-LH	CY9-3051-000	PL 15	CY9-3070-000

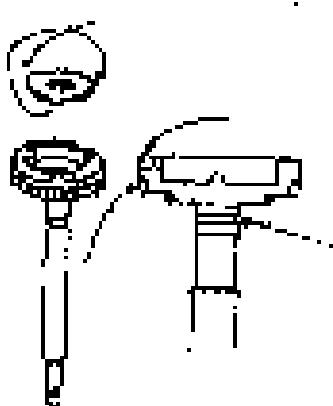
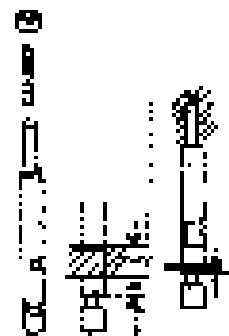
I. Body Section

- | | |
|---------------------------|---------------------------|
| A. 1. Spec
2. PL 15 | D. 1. Spec
2. PL 15 |
| 3. Apply to hatched areas | 4. Apply to hatched areas |



- C. 1. Spec
2. CY-511
3. Apply to hatched areas

- D. 1. Housing Shaft Dust Plug
2. Spec
3. Apply to arrow-marked points
E. 1. Housing Shaft Gear
2. Spec
3. Apply to arrow-marked points

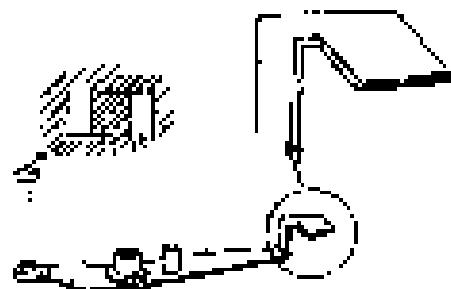
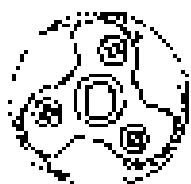


III. ADJUSTMENTS

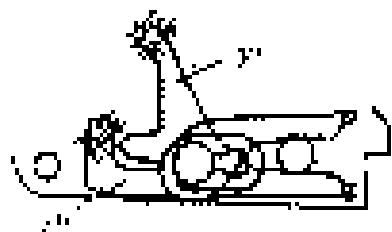
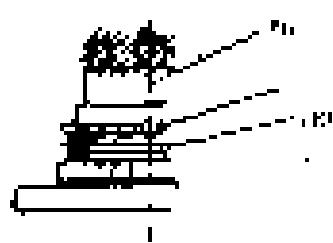
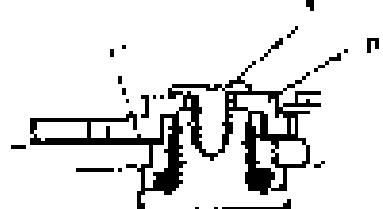
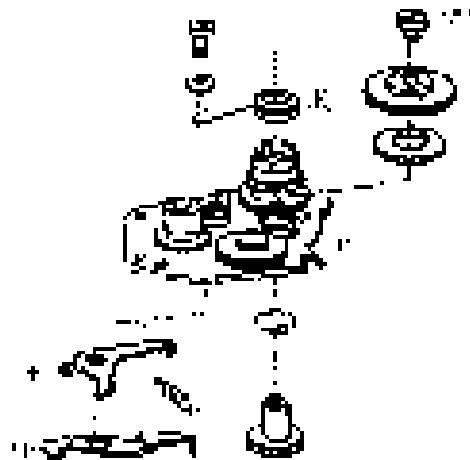
A. Calibration and Setting

- III. A
 1. Adjusting Gear
 2. Adjusted Setting
 3. Apply to specified areas

- IV. B
 1. Connecting Tensioner
 2. Adjusting
 3. Loadable Areas
 4. HJ surfaces
 5. L
 6. Connect(s)
 7. Level
 8. Tension
 9. Apply to
 areas (marked area)

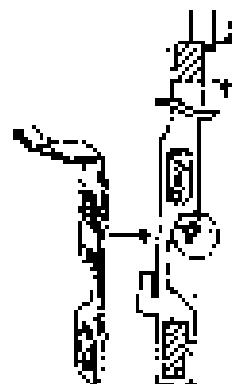


- V. C
 1. Lower Working Part
 2. Boxcar Body
 3. Apply to deck-hull(s) area
 4. Horizontal Hull Area
 5. Apply to specified areas

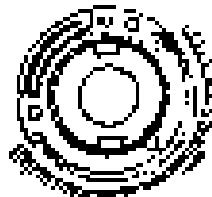


A. Lubrication and Binding

- I. 1. Back Cover Area
2. LT-SII
3. Apply to hatched area



- J. 1. AAA Contact
2. Electrolyte 24-8
3. Apply to hatched area



- K. 1. Rewind Shaft Housing
2. Electrolyte 24-8
3. Apply to hatched area



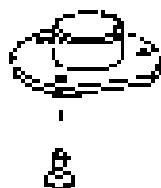
- L. 1. Binding Areas
2. LT-SII
3. Apply to uncoated points

- M. 1. Back Cover Area
2. Arancito L'Stuc Cap
3. Apply to threads



- N. 1. Binding Complete Areas
2. Arancito L'Stuc Cap
3. Apply to threads

- O. 1. Taped Surface Areas
2. Arancito L'Stuc Cap
3. Apply to threads



7. Detachment and Removal

-
1. Lower Landing Gear Wheel
 2. Plywood
 3. Apply the cracked case oil film
 4. Remove wheel
 5. Apply to the damaged points



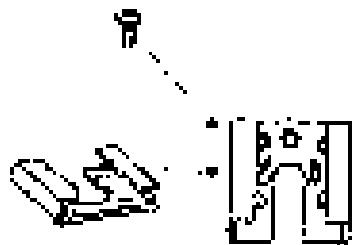
II. EQUIPMENT

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III. Inspection and Cleaning

A. 1. GUN-47

- 1. Accurately clean
- 2. Dry clean
- 3. Apply to cleaned gun

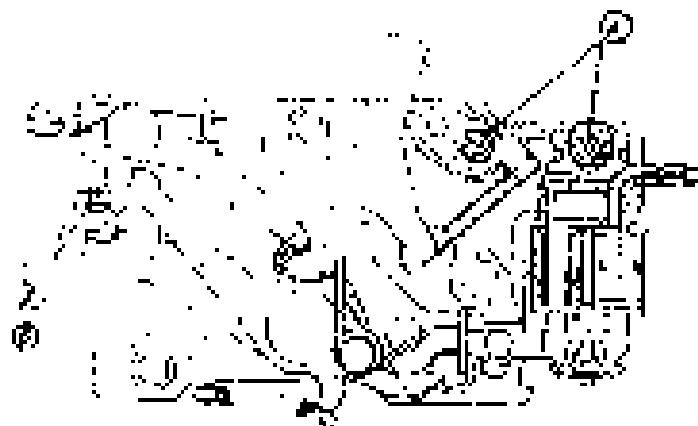


- 1. Smoker jacket, 4-42
- 2. Rubber balls
- 3. PE-15
- 4. Seal binding
- 5. Cleaning
- 6. Lubricate at gun

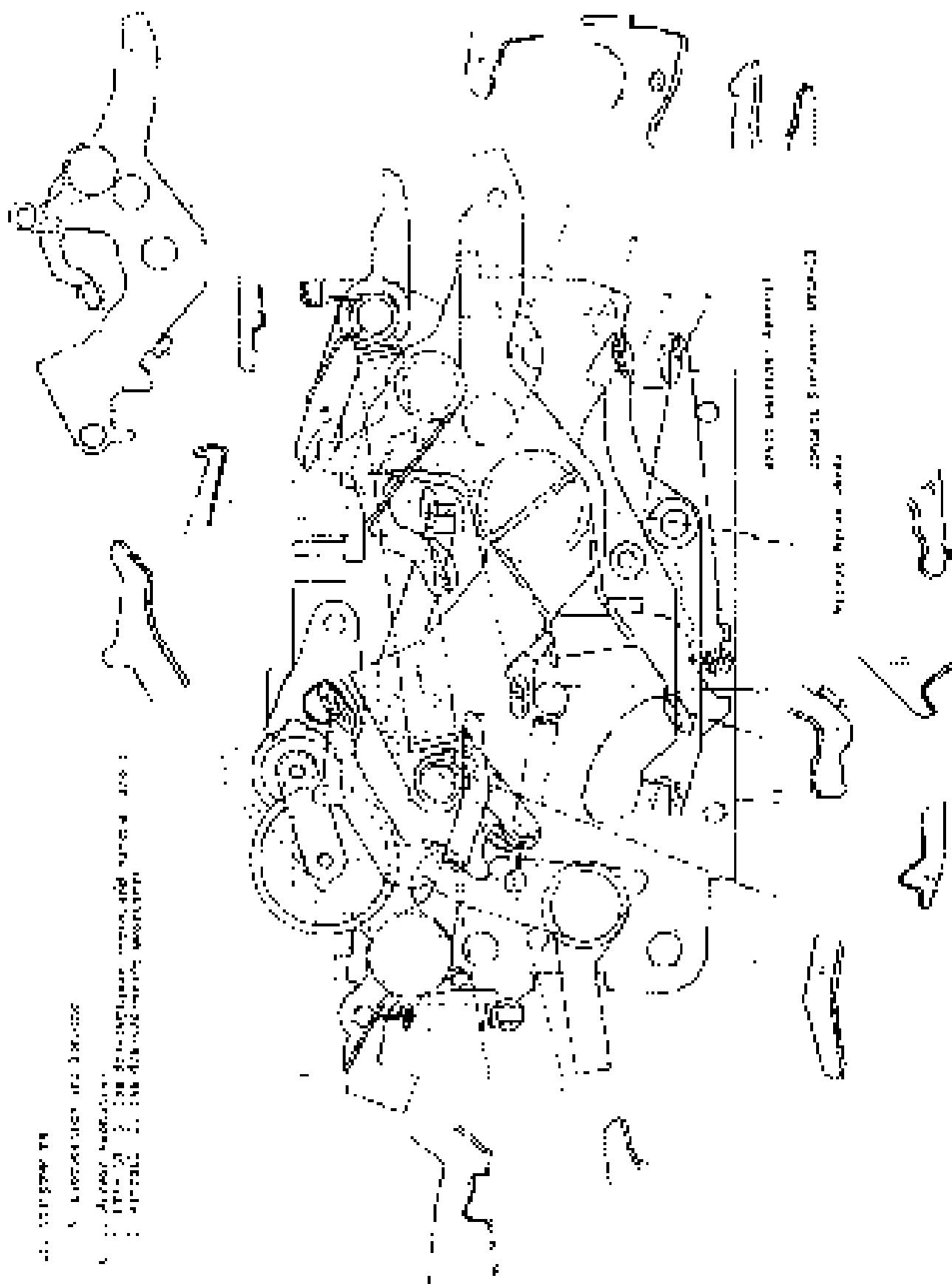


B. Front Gun

- 1. Apply Disinfectant juice
- 2. Scrub
- 3. Apply air pressure surface 100
- 4. Gun JU
- 5. Apply air pressure surface 100



- 1. Or 10-5 FPC, 3000
- 2. Manual
- 3. Apply to gun

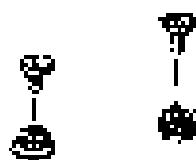


1.1.1. Assembly steps

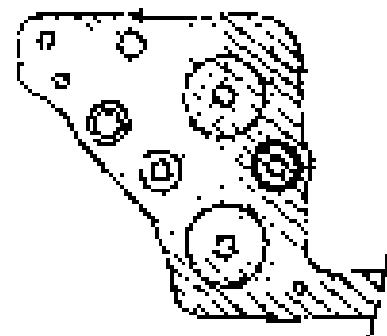
1.1.1.1. Lubrication and Immersion

1. Starter Link

- A. 1. Remove Head Screws
2. Alignate L.
3. Apply Loctite 263



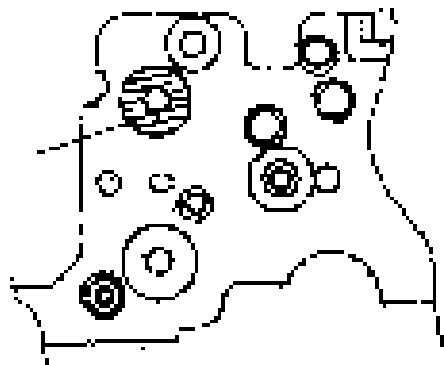
- B. 1. Spotsolve upper Pinset
2. Oil Retardant GEM-16
3. Apply to hinged area



- C. 1. Dow Corning Thread Sealer
2. Alignate L
3. Apply Loctite 263



- D. 1. Shutter Lever Method
2. Alignate
3. Apply Loctite 263



- E. 1. Dow Corning Thread Sealant
2. Oil Retardant
3. Apply to all surfaces



- F. 1. Master Gage
2. Alignate
3. Apply Loctite 263, holding surfaces.



(CINCH SERVICE TOOLS 115)

CINCH AL-5

(REF. NO. C12-1821, 1822)

TEST EQUIPMENT

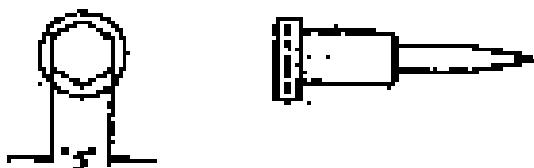
TEST EQUIPMENT	LIST OF TEST EQUIPMENT
1. Shutter	Shutter Tester (Model) 7J-18C1 or PA-1, Transistorized Shutter Tester or Simplified Shutter Tester.
2. Exposure Meter	2-1 Canon Light Source 2-2 D.C. Voltage Tester (not Model VOMC 77 or VOMC 78) (measuring meter accuracy, units, limit) 2-3 Chamber 2-4 Standard Brightness Checkers (Odo) or Canon Luminance Meter (G.P.C.) 2-5 Oscilloscope (General electrical circuit check)
3. Range Viewfinder	3-1 Universal Range-viewfinder Collim- ator or Universal Rangefinder collimator 3-2 Focusing Chart (1:1 scale) 3-3 Oscilloscope 3-4 D.C. Power Supply (Max voltage 200) 3-5 Service Standard 20 50mm 1:1.4 lens
4. Mirror Angle (45°)	4-1 Universal Type 90° Collimator 4-2 AB-1 Inverted Mirror 4-3 Twisting Microscope 4-4 Illuminated 90° Collimator (if 4-1 is not available)
5. Field of View	Universal Range-viewfinder or Universal Parallel Collimator
6. VFD	42 14 Dial Gauge
7. Adjustment	7-1 St. J2-7 Torque Gauge (2.0-7.0Kgm) clockwise (Common to Motor Drive) 7-2 St. J2-CF-1401-15 Torque Gauge Head (Common to AB-1) 7-3 Retaining Ring Pliers (Local Purchase) (Common to AB-1) 7-4 Depth Micrometer (Check max. Aperture Contraction Pin height) (Local Purchase)
8. CR Adjustment Stand (for front panel) (front panel mounted in inverted position)	

SPECIAL SCREW DRIVERS

(U-2)

Tightening Sprocket Shaft

CT9-6113-010
(TB39-CM1-4918-15)
(Common to AB-1)

**Tightening Winding Lever**

CT9-6108-010
(TB39-CM1-4918-15)
(Common to AB-1 and AV-1)

**Mirror Angle (45°) Adjusting Spacers**

CT9-6026-010
(TB39-CM1-4918-15)
(Common to AB-1 and AV-1)



COMMON AE-1 PROGRAM SERVICE PARTS POLICY

1. THE POSSESS OF CAMERA SERVICE, TOKYO, IS TO STOCK ALL PARTS NECESSARY TO EFFECT EFFICIENT

REPAIR(MATERIAL). SHAVVKE. IT IS INFORMATION NECESSARY NUMBER INDIVIDUALLY FEASIBLE TO STOCK SEPARATELY EVERY PART THAT GOES INTO EACH PRODUCT.

IN ADDITION TO KEEPING THE SERVICE PARTS LIST, WE COMPUTED & REPAIR DIFFICULTY, LABOR COST, SPECIAL TOOL REQUIREMENTS AND INDIVIDUAL PARTS VS ASSEMBLED UNIT COST TO DETERMINE IN WHICH FORM PARTS WILL BE STOCKED.

2. DIFFERENT REVIEW HAS SHOWN THAT IT IS MORE ECONOMICAL, FROM ADVANTAGEOUS TO THE CUSTOMER THE SERVICE FACILITY AND US TO STOCK INDIVIDUAL PARTS UNITS WHERE THERE IS AN OVERREACHING REASON FOR STOCKING THEM AS ASSEMBLED UNITS.

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

C5A-2504-000	1st SPRING, 1/2 UNIT
C1H-2504-000	WINDING LEVER
C09-2504-000	WINDING, 1/2 UNIT(BL)
C1H-2501-000	OID GEAR, CHARGE UNIT

CTI-1043-000	CURTAIN
CV1-1044-000	DRUM, 2 nd CURTAIN
CTI-1043-000	ROLLER
CV1-1044-000	SPRING DRUM, 2 nd CURTAIN

IN ADDITION TO ITEM ABOVE, WHICH ARE STOCKED UP TO 1/4 AS UNITS, SOME INDIVIDUAL PARTS ARE STOCKED FOR THE FOLLOWING UNITS IN ADDITION TO THE UNIT.

CTI-0034-000	MIRROR UNIT
C01-0011-000	COVER, BACK
C01-0135-000	MIRROR MTR(HANDSH)
C01-0156-000	ELECTRIC TABLET UNIT
C01-0119-000	AUTO EXPOSURE UNIT
C01-0110-000	SHUTTER UNIT
CTI-0344-000	AF UNIT
CX1-2108-000	REWIND CHARGE UNIT
C01-2410-000	ELECTRICAL PARTS UNIT
C01-2415-000	SHOOT COVER

CV1-1116-000	FRONT COVER (BL)
CGD-2619-000	BATTERY CONTACT UNIT
CV1-2104-000	REWIND CRANK 1/2 UNIT(BL)
CTI-1040-000	1 st CURTAIN BRAKE UNIT
CV1-1041-000	2 nd CURTAIN BRAKE UNIT
CV1-1042-000	SUSP CONTACT UNIT
CV1-1103-000	TOP COVER UNIT
CV1-1104-000	TOP COVER UNIT(BL)
CV1-1105-000	COVER BATTERY
CV1-1105-000	ELECTRICAL PARTS UNIT

1. INDIVIDUAL ELECTRICAL COMPONETS WHICH MAY BE USED AS REPLACEMENT ARE STOCKED. OTHERS ARE LISTED ON THE SCHEMATIC WITH THEIR SPECIFICATIONS.
2. THE SERVICE PARTS LIST IS ADJUSTED PERIODICALLY TO INSURE THE NECESSARY PARTS ARE ALWAYS AVAILABLE, AND UNNECESSARY PARTS ARE REMOVED FROM THE STOCK LIST.
3. ASSEMBLIES SHOWN WITH THE "N.S." MARK ARE SHOWN FOR CLARITY ONLY. THEY ARE NOT STOCKED IN THE FORM SHOWN.
4. THE PARTS STOKED AS SERVICE PARTS ARE NOT ALWAYS EXACTLY THE SAME PART USED ON THE ASSEMBLY LINE, BUT THEY ARE MOSTLY INTERCHANGABLE (SCREWS, WASHERS, LEAD WIRE, ETC.)

キヤノン AL-1 サービス部品について

サービス部品は量産上必要な部品、工具、テスト、機器の販売用販路、請。の専用を基準とし、検定している。
特に、コンサート部品の標準基準の中、旋轉速度の早いものは、サービス部品とはしない。
キヤノン社にて扱いもの、取扱う必要無視とする。

販売部品ユニットのみをモード部品とする。

CG9-2534-300 (160) スズヘルギヤユニット	CY3-1671-540	マットラー
CG9-2544-499 基本ギヤバー	CY3-1644-019	マットラー
CG9-2542-099 基本ギヤバー(BL)	CY3-1642-999	先端タロ
CG9-2622-300 (910) フラッシュモーター	CY3-1646-018	先端アブラングドライバ
CG9-2622-099 (950) フラッシュモーター	CY3-1647-000	先端アブラングドライバ

FU部品ユニット及び使用頻度が高いと考えられる部品をサービス部品とする。

CG1-0331-006 モーター	CG3-2613-000	エプロンストレート
CG1-5032-000 齧歯ミット	CG3-2614-000	エプロンストレート(BL)
CG1-0153-000 フラッシュモーター	CG3-2619-000	電動振子ロード
CG1-3156-000 齧歯輪組ユニット	CY3-1640-540	先端ギヤーキャビネット
CG1-3159-000 回転匣ユニット	CY3-1641-010	回転フレイタユニット
CG1-0164-000 フラッシュモーター	CY3-1642-010	SWIドライバ
CG1-1651-000 ハリ振子ユニット	CY3-1653-010	上面カバーユニット
CG1-3155-300 フロントアダプター	CY3-1724-000	上面カバーユニット(BL)
CG1-3151-500 齧歯ヘッドユニット(BL)	CY3-1165-010	電動頭
CG4-2610-010 フロントアダプター	CY3-1166-010	可動部品ユニット

電動部品リードのもの以外は、サービス部品としての販売用のチェックが出来るよう記載を明示している。

既、確認、サービス部品並みの機能で検査済み、サービス部品として販売するところである。

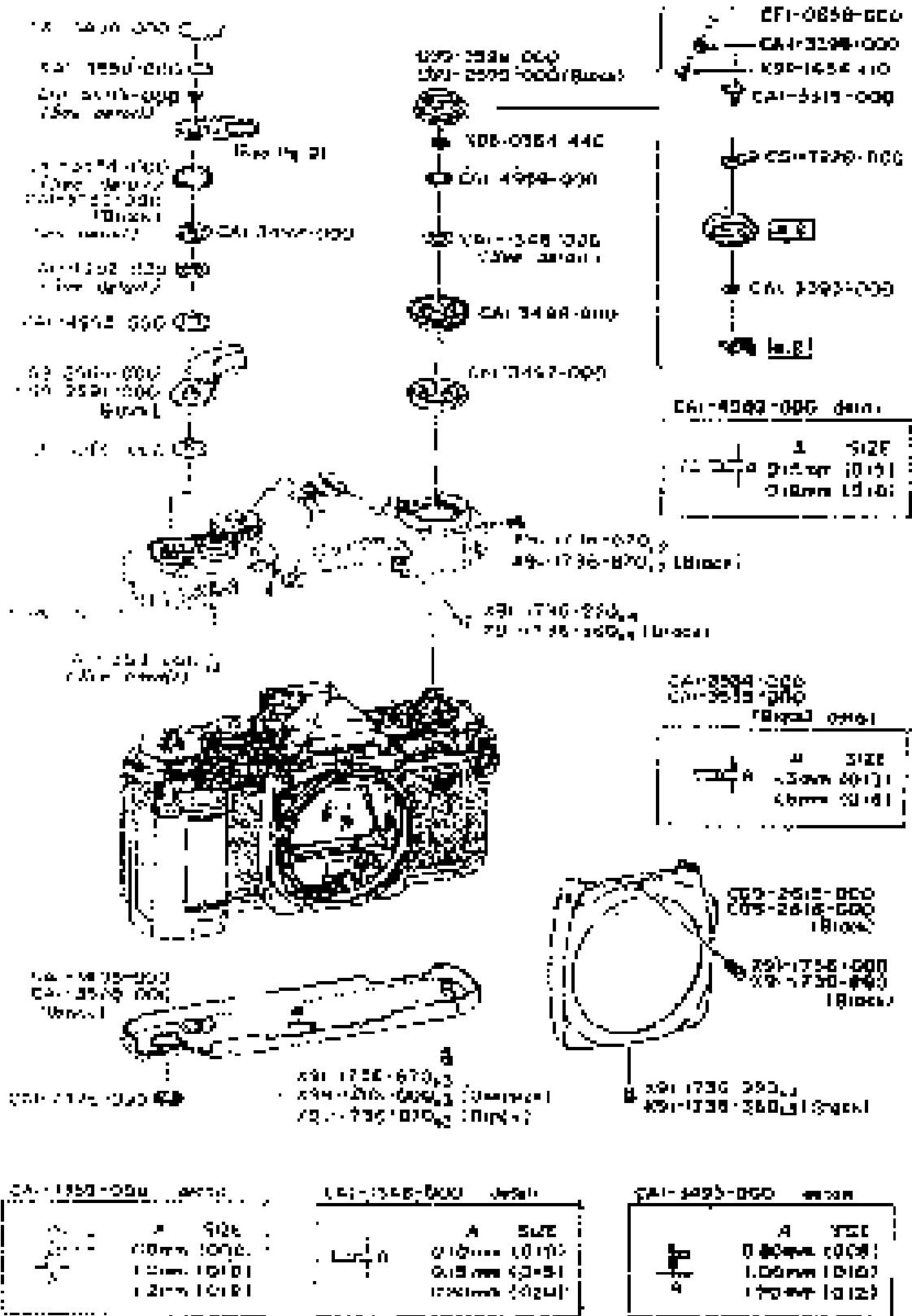
尚、リードの一部で、サービス部品としないもの等[以下]マークをつけてある。

卷之三

CHIPS 4L-3, 24.875 (10.2)

CONTENUTI		VALOARE	VALORESS
ALUMINIU LEVIER & MATERIALE SIMILARE	.....	1	1.641
BOB. CAVALE	.....	2	0-4,70
COTON	.....	3	0-83,12
ELASTIC COTTON & ELECTRICAL PARTS UNIT	.....	4	4-63,18
ELASTIC COTTON & ELECTRICAL PARTS	.....	5	0-1,7
ELASTIC PARTS	.....	6	0-3,1
CHIUSURA MATERIALE	.....	7	0-1,8
MATERIALE DURE	.....	8	0-2,8
INTERFERENZA MATERIALE	.....	9	0-0,10
RODURI & SPINERET	.....	10	0-13,12
SPINERET COTTON	.....	11	0-13,12
SPINNING PARTS	.....	12	0-0,12
ELECTRICAL PARTS UNIT 1)F,4,1,2,2)	.....	13	0-3,4
ELECTRICAL PARTS UNIT 1)E,4,1,2,2)	.....	14	0-3,4
PISTONI DI MOTORE	150 PZPC		
ELECTRICAL PARTS UNIT 1)C,4,1,2,2)	.....	15	0-3,4
PISTONI DI MOTORE	200 PZPC		
ELECTRICAL PARTS UNIT 1)B,4,1,2,2)	.....	16	0-6,60
PISTONI DI MOTORE	300 PZPC		
CONTENUTO UNITATI LEGHE	.....	17,50	0-31,12
ELECTRICAL PARTS UNIT	.....	18,20	0-83,12
PISTONI DI MOTORE MATERIALE	.....	21,-	0-1,-

CANON AL-I, BLACK AL-I



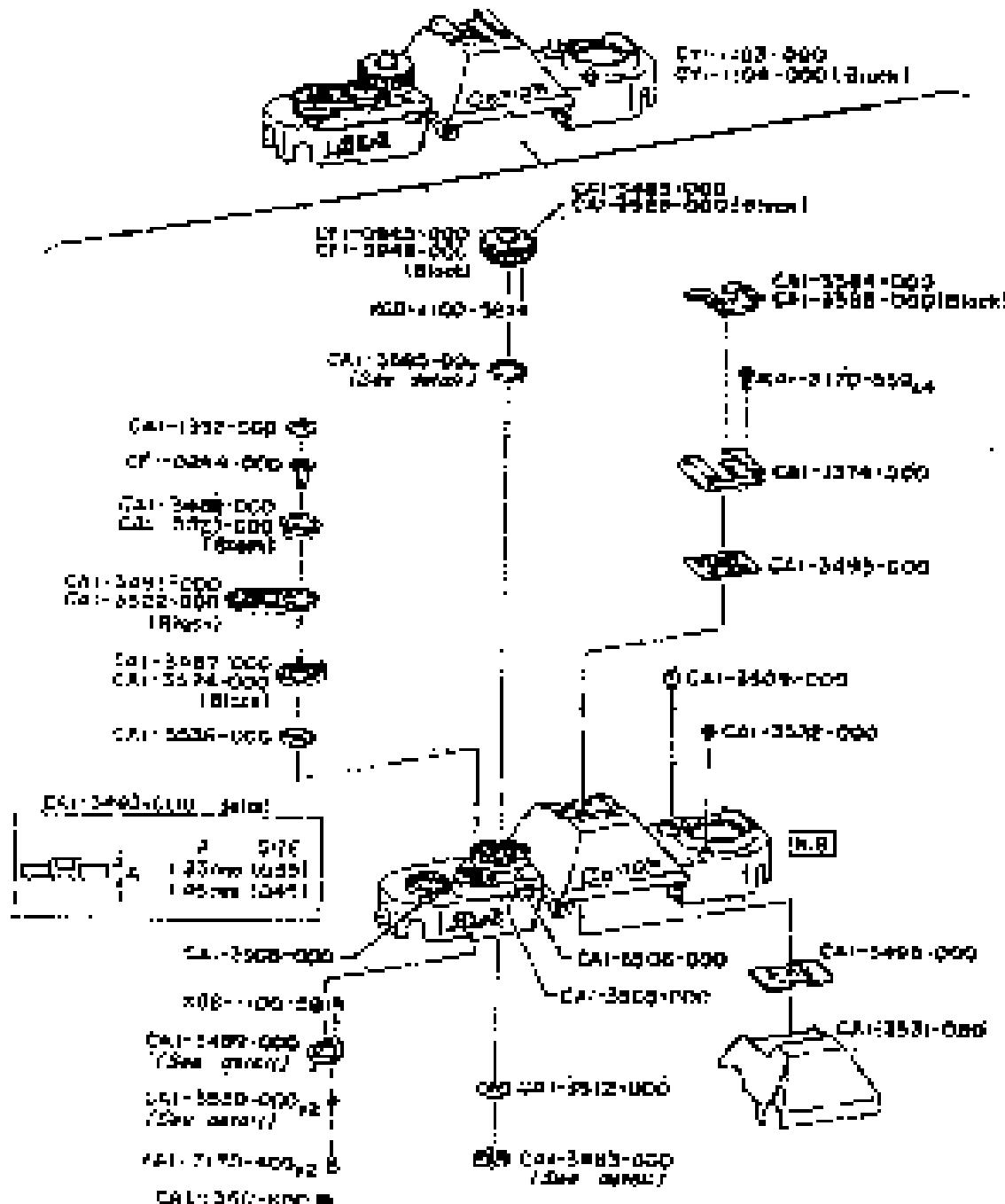
REF. NO. 013-1401,4

SEARCHED

SEARCHED BY [REDACTED]

SEARCHED	INDEXED	SERIALIZED	FILED
CAL-174-070	R	T	SEARCHED, INDEXED, SERIALIZED, FILED [REDACTED] STATEMENT SHELD ST (SHELD STATEMENT), SEE 06451,)
CAL-1750-000	R	T	SEARCHED, RELEASED [REDACTED] STATEMENT
CAL-1751-000	R	T	SEARCHED, INDEXED, SERIALIZED, FILED, RELEASED, INDEXED
CAL-1755-000	R	T	SEARCHED, INDEXED
CAL-1759-000	R	T	SEARCHED, INDEXED, SERIALIZED, RELEASED, INDEXED
CAL-1765-000	R	T	SEARCHED, INDEXED, RELEASED, INDEXED
CAL-1766-000	R	T	SEARCHED, INDEXED, RELEASED, INDEXED
CAL-1768-000	R	T	SEARCHED, INDEXED, RELEASED, INDEXED
CAL-1770-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06473,)
CAL-1771-000	R	T	SEARCHED
CAL-1772-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1773-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1774-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1775-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1776-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1777-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1778-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1779-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1780-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1781-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1782-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1783-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1784-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1785-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1786-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1787-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1788-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1789-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1790-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1791-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1792-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1793-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1794-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)
CAL-1795-000	R	T	SEARCHED, INDEXED [REDACTED] STATEMENT, SEE 06474,)

CANON AL-1, BLACK AL-1



CANON 35mm f/1.8 black	
----A	A 50mm
0.50mm (0.019in)	0.50mm (0.020in)
0.60mm (0.024in)	0.60mm (0.025in)

CANON 35mm f/1.8 black	
----A	A 50mm
0.50mm (0.019in)	0.50mm (0.020in)
0.60mm (0.024in)	0.60mm (0.025in)

CANON 35mm f/1.8 black	
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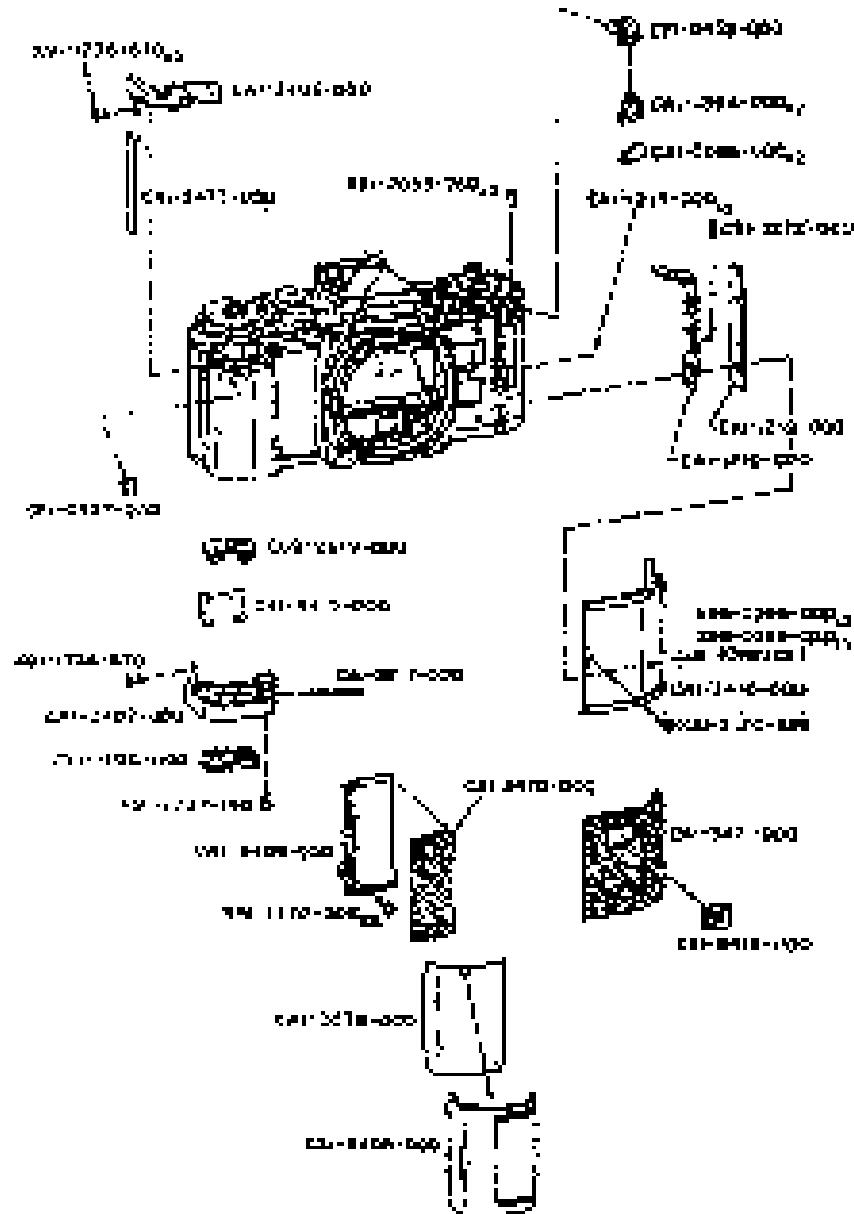
AFM 3400-1000-10

PARTS LIST

ITEM NUMBER

ITEM NO.	CLASS	QTY	DESCRIPTION
CAL-1312-000	B	1	DETACHABLE, THIN PLATE
CAL-1700-000	B	1	RELATION
CAL-1714-000	B	1	SPOOL, ACCESSORIES
CAL-1724-000	B	1	PIVOT, PLATE
CAL-3203-000	B	1	SPRING, RELEASE (CAL)
CAL-3400-000			
FINGER, LEFT, WITH MACHINING, SEE DETAIL			
CAL-3403-000	B	1	DETACHABLE
CAL-3404-000	B	1	RIGHT, THIN PLATE
CAL-3405-000	B	1	RIGHT, THIN PLATE
CAL-3406-000	B	1	SPRING, SHUTTER RELEASE
CAL-3407-000	B	1	SCREWS, SELF-TAPPING
TOPPER, SIDE, WITH MACHINING, SEE DETAIL			
CAL-3408-000	B	1	RIGHT, FINGER
CAL-3409-000	B	1	LEFT, RELEASE SIDE
CAL-3410-000	B	2	PLATE, MACHINED
CAL-3411-000	B	1	SCREWS, SIDE-RELEASE
CAL-3412-000	B	1	SCREW, SIDE-RELEASE
CAL-3500-000			
FINGER, LEFT, WITH MACHINING, SEE DETAIL			
CAL-3501-000	B	1	DETACHABLE
CAL-3502-000	B	1	RIGHT, FINGER
CAL-3503-000	B	1	RIGHT, RELEASE SIDE
CAL-3504-000	B	1	SCREW, SHUTTER RELEASE (CAL)
CAL-3600-000			
FINGER, LEFT, WITH MACHINING, SEE DETAIL			
CAL-3601-000	B	1	DETACHABLE
CAL-3602-000	B	1	RIGHT, FINGER
CAL-3603-000	B	1	RIGHT, RELEASE SIDE
CAL-3604-000	B	1	SCREW, SHUTTER RELEASE (CAL)
CAL-3700-000			
FINGER, LEFT, WITH MACHINING, SEE DETAIL			
CAL-3701-000	B	1	DETACHABLE
CAL-3702-000	B	1	RIGHT, FINGER
CAL-3703-000	B	1	RIGHT, RELEASE SIDE
CAL-3704-000	B	1	SCREW, SHUTTER RELEASE (CAL)
CAL-3800-000			
FINGER, LEFT, WITH MACHINING, SEE DETAIL			
CAL-3801-000	B	1	DETACHABLE
CAL-3802-000	B	1	RIGHT, FINGER
CAL-3803-000	B	1	RIGHT, RELEASE SIDE
CAL-3804-000	B	1	SCREW, SHUTTER RELEASE (CAL)

CIRCUIT AL-1, B737 AQC AL-1



ACF. 48. 210-3451, 2

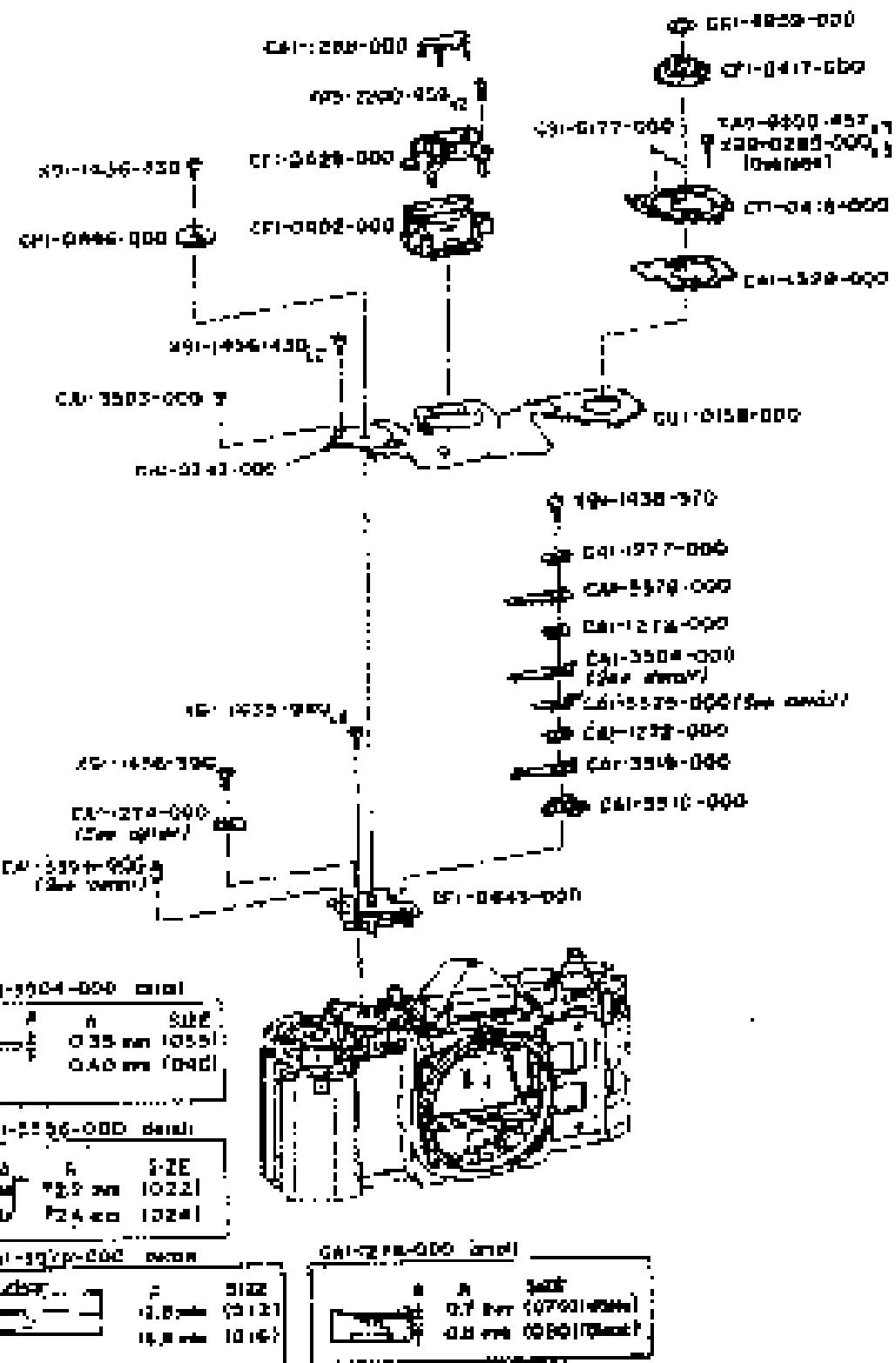
EXHIBIT 2157

CONTENTS

ACF#	Model No.	Class	Dir	Description
CAL-3111-200	1	1	WOOD	
CAL-3112-200	2	1	WOOD	
CAL-3113-200	3	1	WOOD, DARK	
CAL-3114-200	4	1	WOOD, DARK STAIN	
CAL-3115-200	5	1	WOOD, DARK	
CAL-3116-200	6	1	WOOD, DARK	
CAL-3117-200	7	1	WOOD, DARK	
CAL-3118-200	8	1	WOOD, DARK	
CAL-3119-200	9	1	WOOD, DARK	
CAL-3120-200	10	1	WOOD, DARK	
CAL-3121-200	11	1	WOOD, DARK	
CAL-3122-200	12	1	WOOD, DARK	
CAL-3123-200	13	1	WOOD, DARK	
CAL-3124-200	14	1	WOOD, DARK	
CAL-3125-200	15	1	WOOD, DARK	
CAL-3126-200	16	1	WOOD, DARK	
CAL-3127-200	17	1	WOOD, DARK	
CAL-3128-200	18	1	WOOD, DARK	
CAL-3129-200	19	1	WOOD, DARK	
CAL-3130-200	20	1	WOOD, DARK	
CAL-3131-200	21	1	WOOD, DARK	
CAL-3132-200	22	1	WOOD, DARK	
CAL-3133-200	23	1	WOOD, DARK	
CAL-3134-200	24	1	WOOD, DARK	
CAL-3135-200	25	1	WOOD, DARK	
CAL-3136-200	26	1	WOOD, DARK	
CAL-3137-200	27	1	WOOD, DARK	
CAL-3138-200	28	1	WOOD, DARK	
CAL-3139-200	29	1	WOOD, DARK	
CAL-3140-200	30	1	WOOD, DARK	
CAL-3141-200	31	1	WOOD, DARK	
CAL-3142-200	32	1	WOOD, DARK	
CAL-3143-200	33	1	WOOD, DARK	
CAL-3144-200	34	1	WOOD, DARK	
CAL-3145-200	35	1	WOOD, DARK	
CAL-3146-200	36	1	WOOD, DARK	
CAL-3147-200	37	1	WOOD, DARK	
CAL-3148-200	38	1	WOOD, DARK	
CAL-3149-200	39	1	WOOD, DARK	
CAL-3150-200	40	1	WOOD, DARK	
CAL-3151-200	41	1	WOOD, DARK	
CAL-3152-200	42	1	WOOD, DARK	
CAL-3153-200	43	1	WOOD, DARK	
CAL-3154-200	44	1	WOOD, DARK	
CAL-3155-200	45	1	WOOD, DARK	
CAL-3156-200	46	1	WOOD, DARK	
CAL-3157-200	47	1	WOOD, DARK	
CAL-3158-200	48	1	WOOD, DARK	
CAL-3159-200	49	1	WOOD, DARK	
CAL-3160-200	50	1	WOOD, DARK	
CAL-3161-200	51	1	WOOD, DARK	
CAL-3162-200	52	1	WOOD, DARK	
CAL-3163-200	53	1	WOOD, DARK	
CAL-3164-200	54	1	WOOD, DARK	
CAL-3165-200	55	1	WOOD, DARK	
CAL-3166-200	56	1	WOOD, DARK	
CAL-3167-200	57	1	WOOD, DARK	
CAL-3168-200	58	1	WOOD, DARK	
CAL-3169-200	59	1	WOOD, DARK	
CAL-3170-200	60	1	WOOD, DARK	
CAL-3171-200	61	1	WOOD, DARK	
CAL-3172-200	62	1	WOOD, DARK	
CAL-3173-200	63	1	WOOD, DARK	
CAL-3174-200	64	1	WOOD, DARK	
CAL-3175-200	65	1	WOOD, DARK	
CAL-3176-200	66	1	WOOD, DARK	
CAL-3177-200	67	1	WOOD, DARK	
CAL-3178-200	68	1	WOOD, DARK	
CAL-3179-200	69	1	WOOD, DARK	
CAL-3180-200	70	1	WOOD, DARK	
CAL-3181-200	71	1	WOOD, DARK	
CAL-3182-200	72	1	WOOD, DARK	
CAL-3183-200	73	1	WOOD, DARK	
CAL-3184-200	74	1	WOOD, DARK	
CAL-3185-200	75	1	WOOD, DARK	
CAL-3186-200	76	1	WOOD, DARK	
CAL-3187-200	77	1	WOOD, DARK	
CAL-3188-200	78	1	WOOD, DARK	
CAL-3189-200	79	1	WOOD, DARK	
CAL-3190-200	80	1	WOOD, DARK	
CAL-3191-200	81	1	WOOD, DARK	
CAL-3192-200	82	1	WOOD, DARK	
CAL-3193-200	83	1	WOOD, DARK	
CAL-3194-200	84	1	WOOD, DARK	
CAL-3195-200	85	1	WOOD, DARK	
CAL-3196-200	86	1	WOOD, DARK	
CAL-3197-200	87	1	WOOD, DARK	
CAL-3198-200	88	1	WOOD, DARK	
CAL-3199-200	89	1	WOOD, DARK	
CAL-3200-200	90	1	WOOD, DARK	

4

CANON AL-1, BLACK AL-1



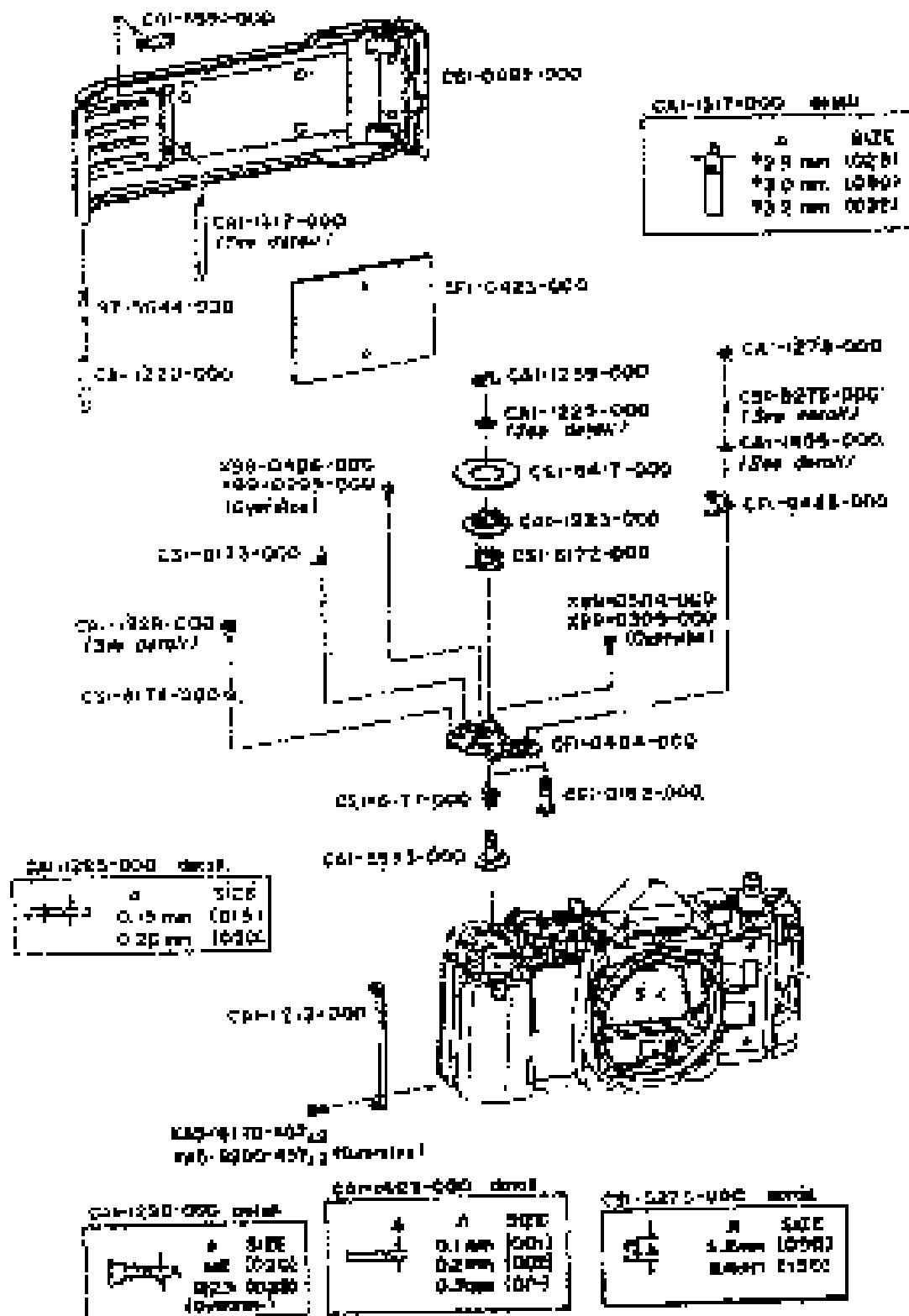
MAY 19 1974 BY SPK/AM

FBI-HQ C-251

RIGHTS OWNERS & RELEASED AGENTS INDEX

AGEN	RIGHTS NO.	CLASS	RPT	DISCRETE/CONTINUOUS
CPL-1372-220	E	?	RELEASED	
CPL-1374-220	E	?	RELEASED	
(CPL-1374-220 RIGHTS OWNERS INDEX) SEE CPL-1374-220			RELEASED	
CPL-1377-220	E	?	RELEASED	
CPL-1383-220	E	?	RELEASED, SPC	
CPL-1384-220	E	?	RELEASED, INFORMATION	
(CPL-1385-220 RIGHTS OWNERS INDEX) SEE CPL-1385-220	E	?	RELEASED, IMAGE	
CPL-1386-220	E	?	RELEASED, CONTACT	
(CPL-1386-220 RIGHTS OWNERS INDEX) SEE CPL-1386-220	E	?	RELEASED, CONTACT	
CPL-1387-220	E	?	RELEASED, SPC	
CPL-1388-220	E	?	RELEASED, CONTACT	
(CPL-1388-220 RIGHTS OWNERS INDEX) SEE CPL-1388-220	E	?	RELEASED, CONTACT	
CPL-1389-220	E	?	RELEASED, SPC	
CPL-1390-220	E	?	RELEASED, CONTACT	
(CPL-1390-220 RIGHTS OWNERS INDEX) SEE CPL-1390-220	E	?	RELEASED, IMAGE	
CPL-1391-220	E	?	RELEASED, SPC	
(CPL-1391-220 RIGHTS OWNERS INDEX) SEE CPL-1391-220	E	?	RELEASED, CONTACT	
CPL-1392-220	E	?	RELEASED, SPC	
CPL-1393-220	E	?	RELEASED, CONTACT	
(CPL-1393-220 RIGHTS OWNERS INDEX) SEE CPL-1393-220	E	?	RELEASED, IMAGE	
CPL-1394-220	E	?	RELEASED, SPC	
CPL-1395-220	E	?	RELEASED, CONTACT	
(CPL-1395-220 RIGHTS OWNERS INDEX) SEE CPL-1395-220	E	?	RELEASED, IMAGE	
CPL-1396-220	E	?	RELEASED, SPC	
CPL-1397-220	E	?	RELEASED, CONTACT	
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CPL-1398-220	E	?	RELEASED, SPC	
CPL-1399-220	E	?	RELEASED, CONTACT	
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CPL-1400-220	E	?	RELEASED, SPC	
CPL-1401-220	E	?	RELEASED, CONTACT	
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CPL-1402-220	E	?	RELEASED, SPC	
CPL-1403-220	E	?	RELEASED, CONTACT	
(CPL-1403-220 RIGHTS OWNERS INDEX) SEE CPL-1403-220	E	?	RELEASED, IMAGE	
CPL-1404-220	E	?	RELEASED, SPC	
CPL-1405-220	E	?	RELEASED, CONTACT	
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CPL-1406-220	E	?	RELEASED, SPC	
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CPL-1408-220	E	?	RELEASED, SPC	
CPL-1409-220	E	?	RELEASED, CONTACT	
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CANON AL-1, BLACK AL-1



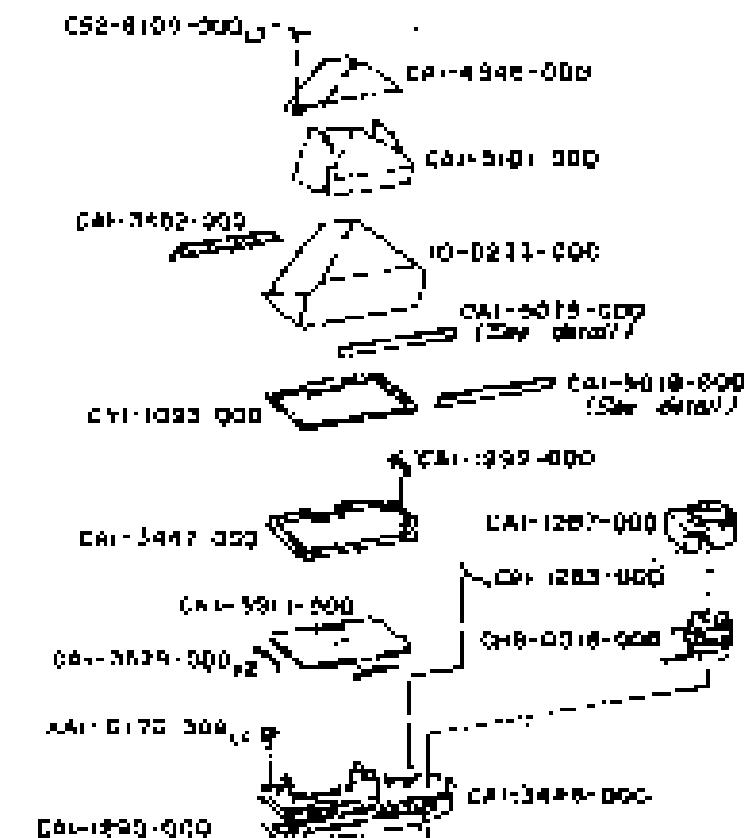
117,450,610-1121,2

PAGES 1-111

NAME, CITY OR ADDRESS NUMBER

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241-1315-500	C			HORN
241-3200-100	C			WILLI, HORN
241-3210-000	C			EDEN, FRED COHEN
241-3220-000	C			EDEN
				(NUMBER SAME WITH PREVIOUS SEE 0671101)
241-4220-000	C			EDEN
241-4300-000	C			EDEN
241-4700-000	C			EDEN
241-5217-000	C			EDEN
				(NUMBER SAME WITH PREVIOUS SEE 0671101)
241-5400-000	C			EDEN
				(NUMBER SAME WITH PREVIOUS SEE 0671101)
241-6310-000	C			EDEN
241-7301-000	C			EDEN 2ND 100
241-7400-000	C			EDEN 2ND 100
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CANON AI-T BLACK AL-1

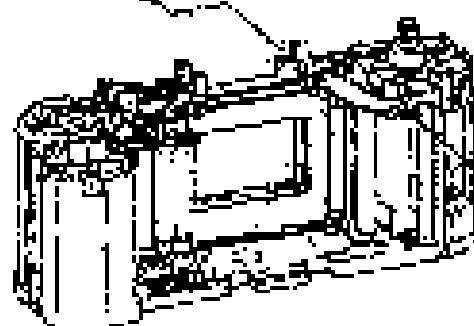


CAI-1296-000 (Body cap)	
*	920E
Ø	Ø 25mm (0.984)
Ø	Ø 1.0 mm (0.039)
Ø	Ø 1.5 mm (0.059)
Ø	Ø 20mm (0.787)
Ø	Ø 25mm (0.984)
Ø	Ø 30mm (1.181)
Ø	Ø 35mm (1.378)
Ø	Ø 36mm (1.417)
Ø	Ø 40mm (1.575)

CAI-3979-000 (Body cap)	
A	912E
Ø	Ø 5 mm (0.197)
Ø	Ø 5.4 mm (0.214)

CAI-5019-000 (Body cap)	
A	912E
Ø	Ø 1.0 mm (0.039)
Ø	Ø 25 mm (0.984)

KA1-1101-020	Ø 25 mm
KA1-1267-021	Ø 1.0 mm
KA1-1282-022	Ø 1.5 mm
KA1-1101-022	Ø 2.0 mm
KA1-1101-023	Ø 25 mm
KA1-1101-024	Ø 30 mm
KA1-1101-025	Ø 35 mm
KA1-1101-026	Ø 40 mm
KA1-1101-027	Ø 45 mm
KA1-1101-028	Ø 50 mm



15mm Pg. 51



KA9-0301-000₁₄
KA9-0300-000₁₄
(Bumper)

KA1-6201-020₁₄
CP-1394-000

35.40.111-171.1

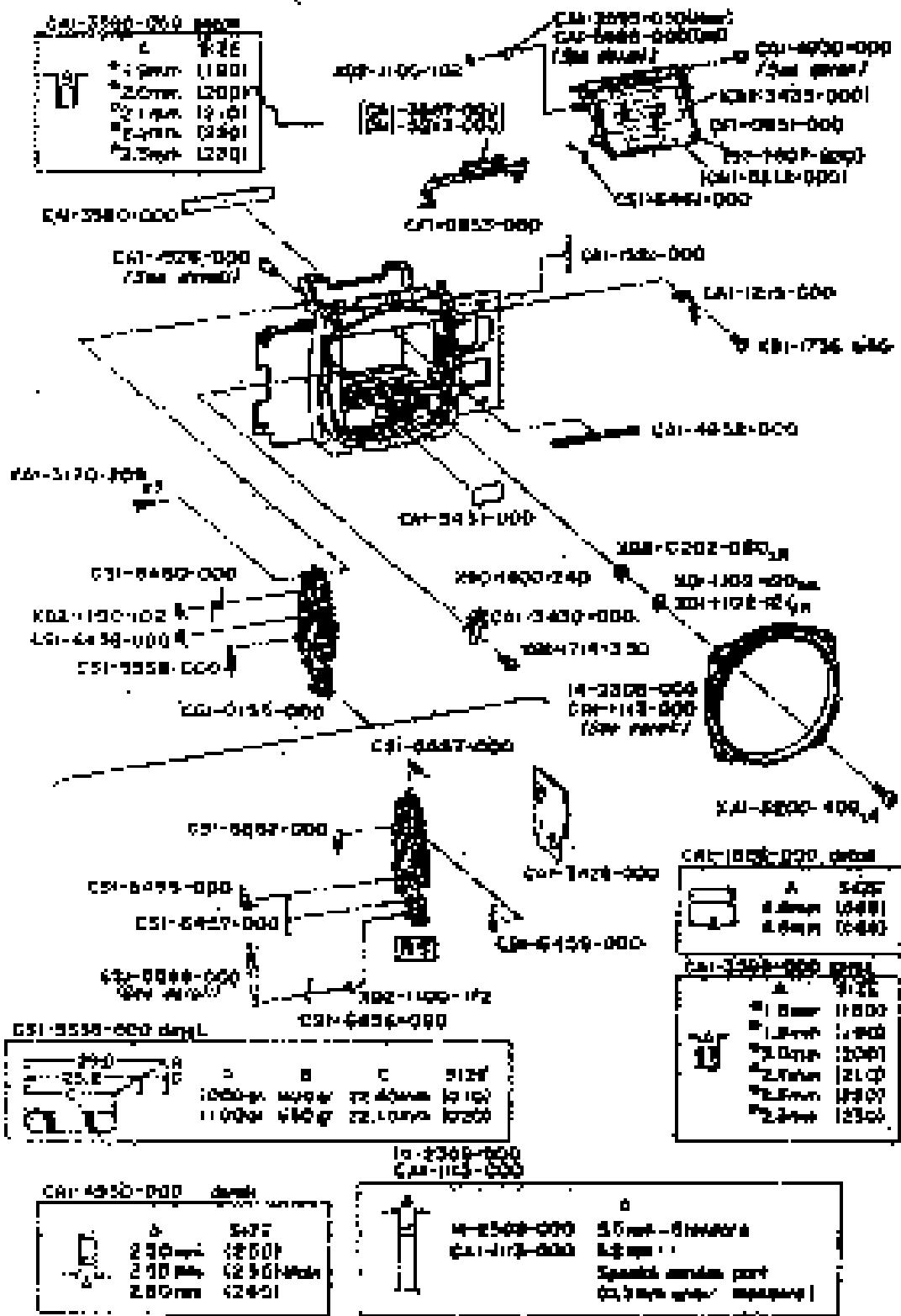
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REF ID: NO. C421481,2

7

CARBON AL-1, BLACK AL-1



REF. NO. CII-3621.3

PARTS LIST

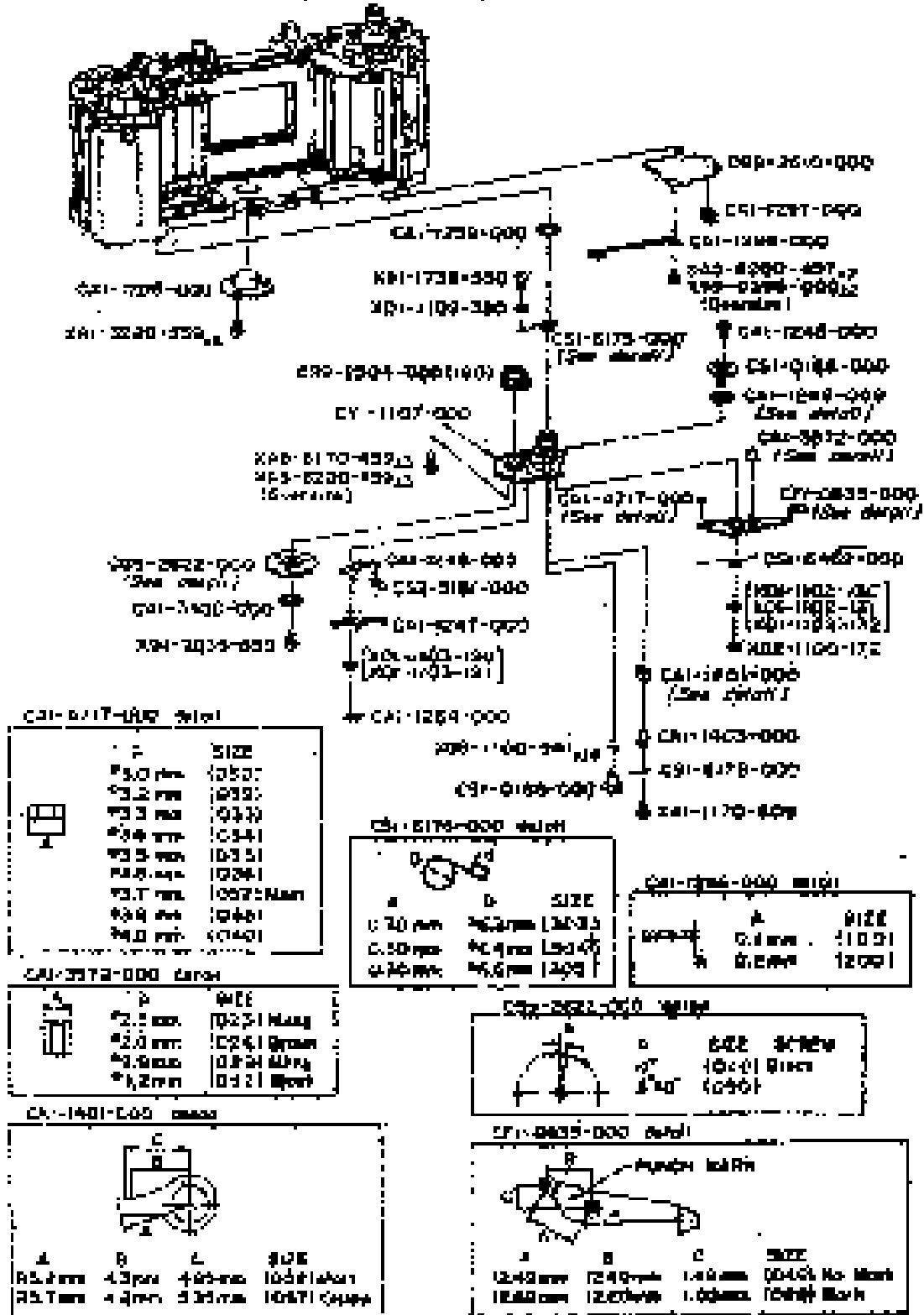
1 [ITEM NUMBER]

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	11-7504-000	3	100% HOLE
	11-7505-000	5	100% HOLES
	11-7507-000	5	100% HOLES
	611-1111-000	5	100% HOLES
	100% 1111A 100% HOLE	5	100% HOLES
	CII-3220-000	5	100%
	CII-3221-000	5	100%, PRINTED CIRCUIT
	CII-3224-000	5	100% NOC, STANDARD CONNECTION
	(CII-3224-000 NOC 100%) 500	500	100%
	610-3100-000	4	100% NOC
	720-3100-000	4	100%, 100% NOC
	611-3101-000	4	100%, CIRCUT
	CII-3100-000	5	100%, NOC
	CII-3147-000	5	100%, 100%-HOLE
	611-3300-000	4	100% NOC
	600-3300-000	4	100%
	(CII-3300-000 100% NOC 100%) 500	500	100%
	611-3301-000	5	100%
	(CII-3301-000 100% NOC 100%) 500	500	100%
	CII-4700-000	5	100%
	(CII-4700-000 100% NOC 100%) 500	500	100%
	611-4700-000	5	100%
	611-5001-000	4	100% NOC
	611-5001-L-000	4	100% NOC LAYER
	611-5002-000	5	100% NOC LAYER
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	611-5176-000	5	100% NOC
	611-5177-000	5	100% NOC
	611-5178-000	5	100% NOC
	611-5179-000	5	100% NOC
	611-5180-000	5	100% NOC
	611-5181-000	5	100% NOC
	611-5182-000	5	100% NOC
	611-5183-000	5	100% NOC
	611-5184-000	5	100% NOC
	611-5185-000	5	100% NOC
	611-5186-000	5	100% NOC
	611-5187-000	5	100% NOC
	611-5188-000	5	100% NOC
	611-5189-000	5	100% NOC
	611-5190-000	5	100% NOC
	611-5191-000	5	100% NOC
	611-5192-000	5	100% NOC
	611-5193-000	5	100% NOC
	611-5194-000	5	100% NOC
	611-5195-000	5	100% NOC
	611-5196-000	5	100% NOC
	611-5197-000	5	100% NOC
	611-5198-000	5	100% NOC
	611-5199-000	5	100% NOC
	611-5200-000	5	100% NOC

REF. NO. G12-1921,2

9

CANON AL-1, BLACK AL-1

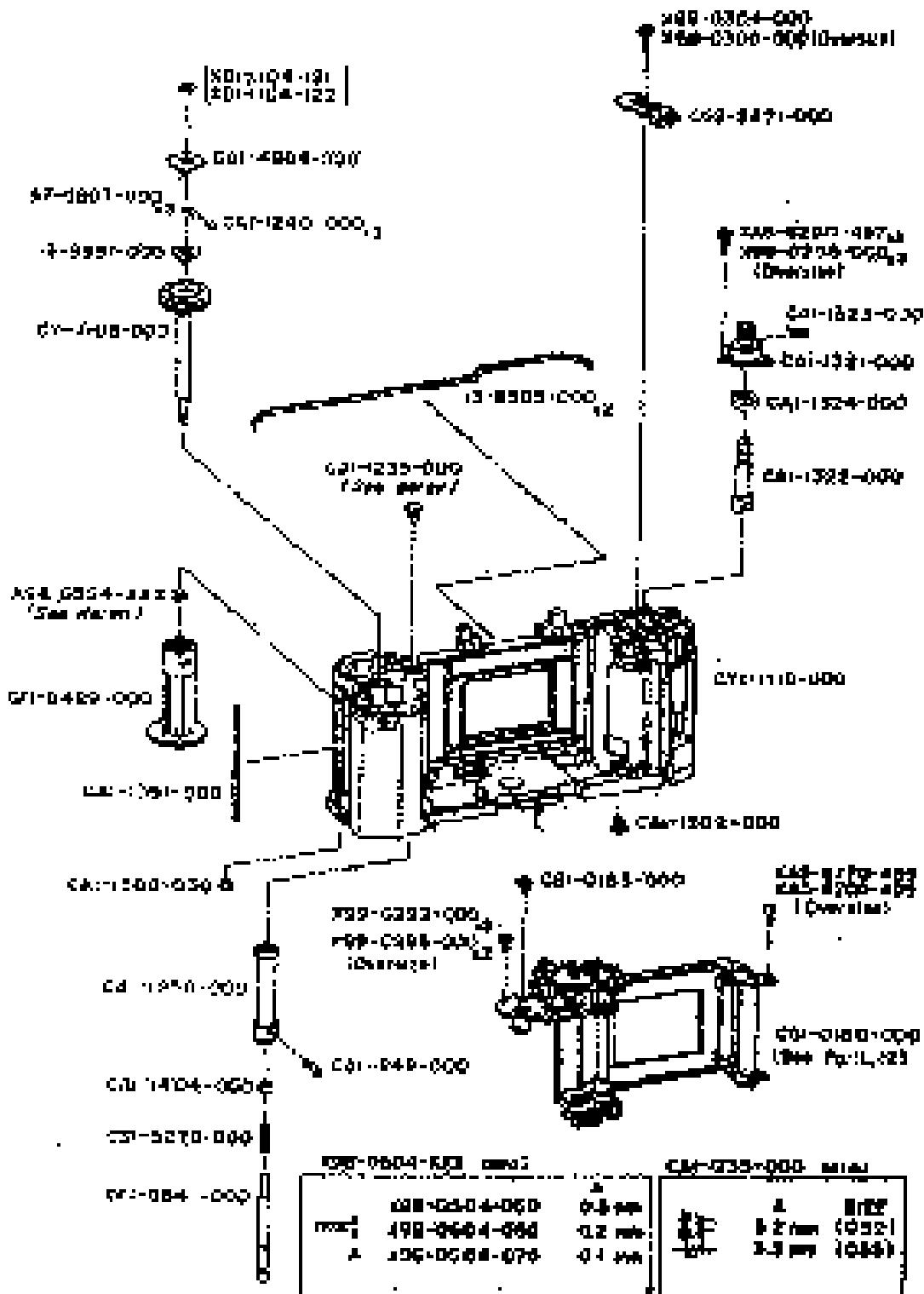


• 15.512-176 •

פָּזְבִּין לְגַת

בנין, טכנולוגיות

CANON AL-1, BLACK AL-1



REF. NO. 520-1401, 1

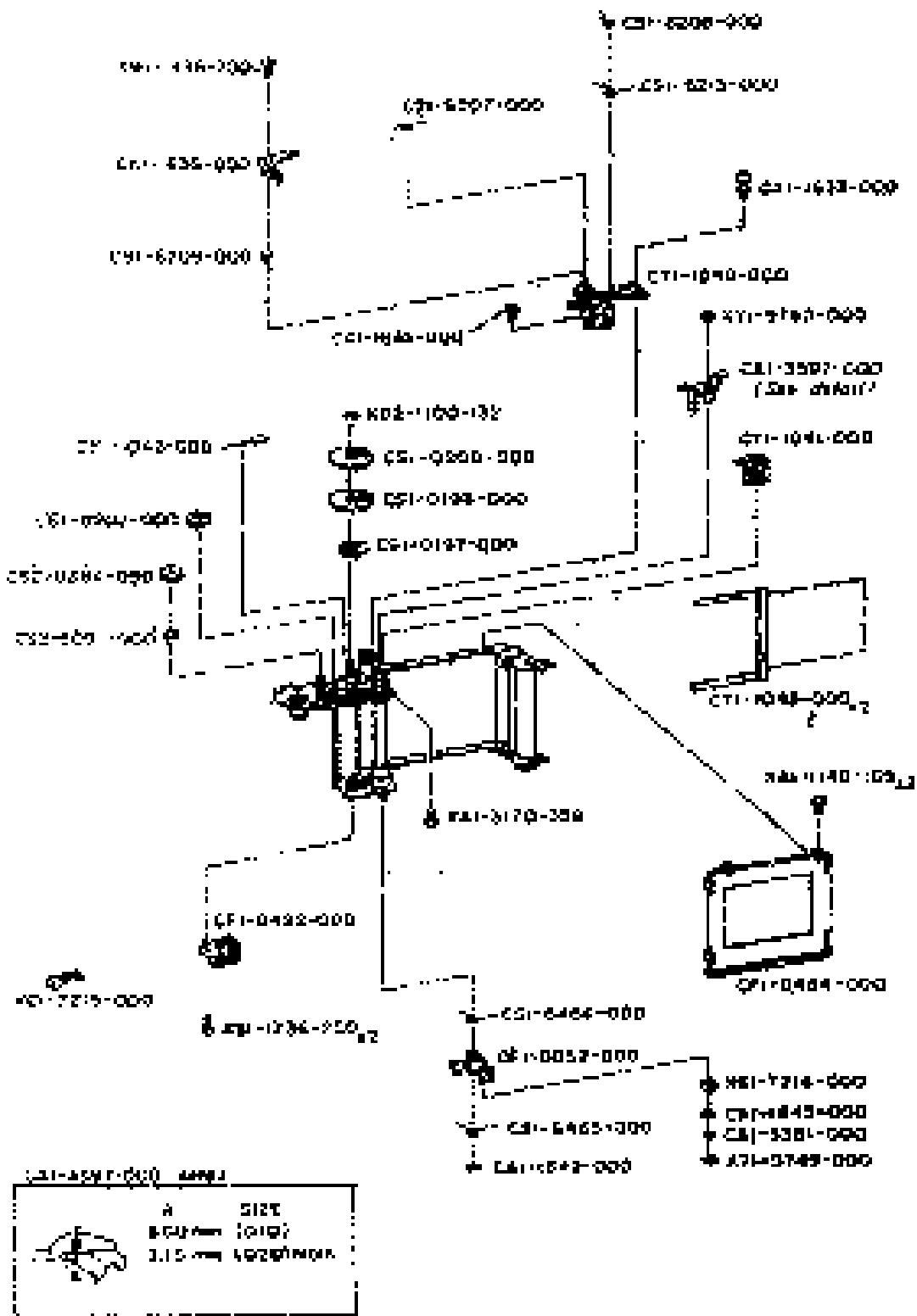
14

NAME LIST

SIGHT & SPOTTER

NAME	CLASS NO.	CLASS	TYPE	DESCRIPTION
C3-9993-000	1	2	LIGHT SPOTTER	
C3-9991-000	2	2	HEAVY SPOTTER	
C3-9992-000	3	2	HEAVY SPOTTER	
C3-1232-000	4	1	SPOTTER, SOURCE SPOTTER	
C3-1233-000	5	1	SPOTTER	
INTERIOR SIDE WITH APPROXIMATE, NOT ACTUAL				
C4-1234-000	6	2	SPOTTER	
C4-1235-000	7	2	SPOTTER	
C4-1236-000	8	2	SPOTTER	
C4-1237-000	9	2	SPOTTER	
C4-1238-000	10	2	SPOTTER, SOURCE SPOTTER	
C4-1239-000	11	2	SPOTTER	
INTERIOR SIDE WITH APPROXIMATE, NOT ACTUAL				
C5-1230-000	12	1	SPOTTER	
C5-1231-000	13	1	SPOTTER	
C5-1232-000	14	1	SPOTTER, SOURCE SPOTTER	
C5-1233-000	15	1	SPOTTER	
INTERIOR SIDE WITH APPROXIMATE, NOT ACTUAL				
C6-1234-000	16	1	SPOTTER, SOURCE SPOTTER	
C6-1235-000	17	1	SPOTTER	
C6-1236-000	18	1	SPOTTER, SOURCE SPOTTER	
C6-1237-000	19	1	SPOTTER	
C6-1238-000	20	1	SPOTTER	
C6-1239-000	21	1	SPOTTER	
INTERIOR SIDE WITH APPROXIMATE, NOT ACTUAL				
C7-1230-000	22	1	SPOTTER, SOURCE SPOTTER	
C7-1231-000	23	1	SPOTTER	
C7-1232-000	24	1	SPOTTER, SOURCE SPOTTER	
C7-1233-000	25	1	SPOTTER	
C7-1234-000	26	1	SPOTTER, SOURCE SPOTTER	
C7-1235-000	27	1	SPOTTER	
INTERIOR SIDE WITH APPROXIMATE, NOT ACTUAL				
C8-1230-000	28	1	SPOTTER, SOURCE SPOTTER	
C8-1231-000	29	1	SPOTTER	
C8-1232-000	30	1	SPOTTER, SOURCE SPOTTER	
C8-1233-000	31	1	SPOTTER	
C8-1234-000	32	1	SPOTTER	
C8-1235-000	33	1	SPOTTER	
INTERIOR SIDE WITH APPROXIMATE, NOT ACTUAL				
C9-1230-000	34	1	SPOTTER, SOURCE SPOTTER	
C9-1231-000	35	1	SPOTTER	
C9-1232-000	36	1	SPOTTER, SOURCE SPOTTER	
C9-1233-000	37	1	SPOTTER	
C9-1234-000	38	1	SPOTTER	
C9-1235-000	39	1	SPOTTER	
INTERIOR SIDE WITH APPROXIMATE, NOT ACTUAL				

CANON AL-1, BLACK AL-1



MAY 140, 1968 - LDT1, S

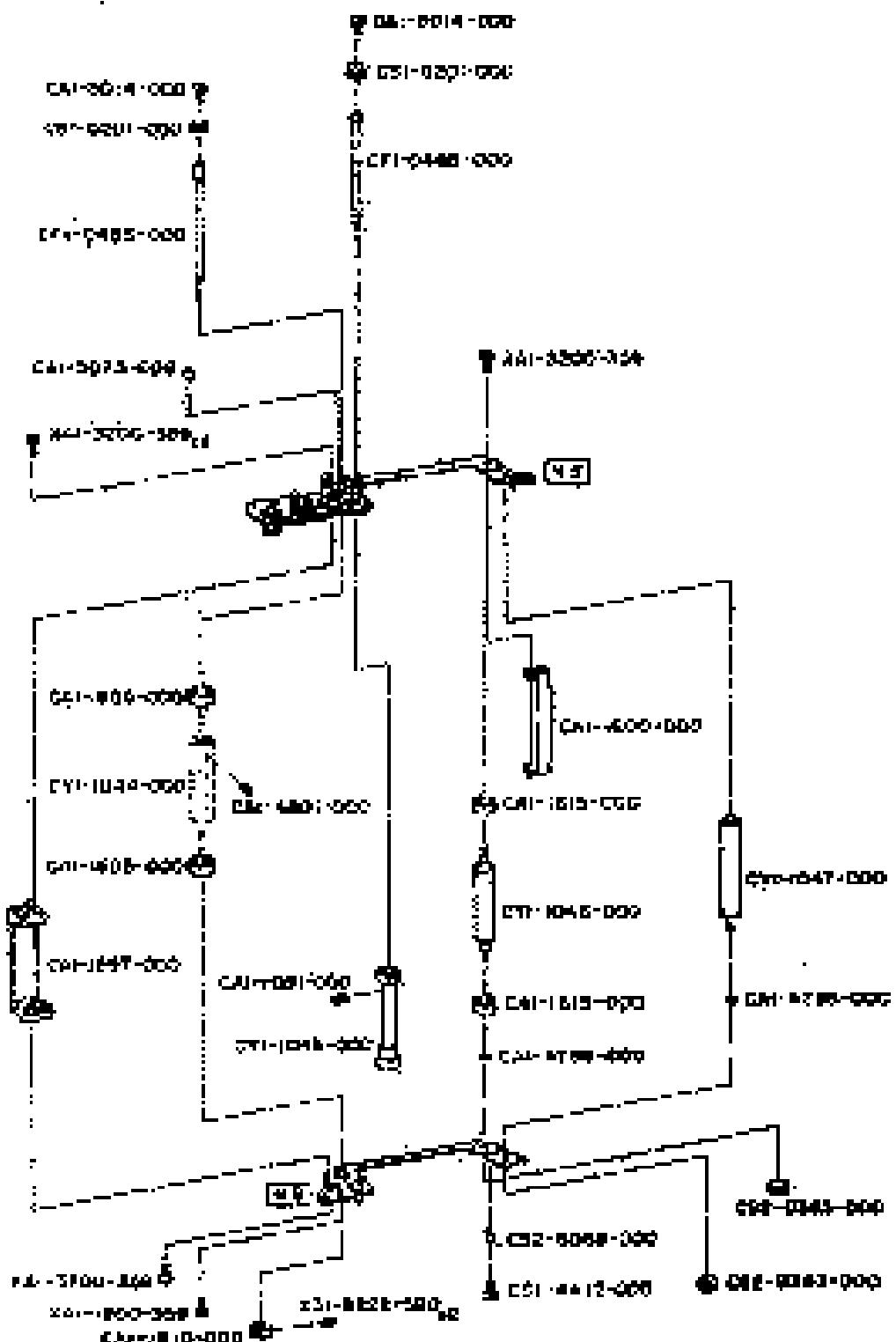
20

SEARCHED

SEARCHED BY:

NAME	SEARCHED	INDEXED	FILED	SEARCHED BY
CBI-1433-000	S			1100 PHOTO, 2000'N, 0000'W
CBI-1433-001	S			1100
CBI-1433-002	S			1100
CBI-1433-003	S			1100
CBI-1433-004	S			1100
CBI-1433-005	S			1100
CBI-1433-006	S			1100
CBI-1433-007	S			1100 - 1st CONTACT LETTER
CBI-1433-008	S			1100
CBI-1433-009	S			1100, LIGHT
CBI-1433-010	S			1100, SHALLOW
CBI-1433-011	S			1100, DEEP
CBI-1433-012	S			1100
CBI-1433-013	S			1100
CBI-1433-014	S			1100, DEEP
CBI-1433-015	S			1100
CBI-1433-016	S			1100
CBI-1433-017	S			1100
CBI-1433-018	S			1100, 1000'
CBI-1433-019	S			1100
CBI-1433-020	S			1100
CBI-1433-021	S			1100
CBI-1433-022	S			1100
CBI-1433-023	S			1100
CBI-1433-024	S			1100
CBI-1433-025	S			1100
CBI-1433-026	S			1100
CBI-1433-027	S			1100
CBI-1433-028	S			1100
CBI-1433-029	S			1100
CBI-1433-030	S			1100
CBI-1433-031	S			1100
CBI-1433-032	S			1100
CBI-1433-033	S			1100
CBI-1433-034	S			1100
CBI-1433-035	S			1100
CBI-1433-036	S			1100
CBI-1433-037	S			1100
CBI-1433-038	S			1100
CBI-1433-039	S			1100
CBI-1433-040	S			1100
CBI-1433-041	S			1100
CBI-1433-042	S			1100
CBI-1433-043	S			1100, 1000', PH
CBI-1433-044	S			1100, 1000', 2000', PH
CBI-1433-045	S			1100, 2000', 3000', PH
CBI-1433-046	S			1100
CBI-1433-047	S			1100, DEEP
CBI-1433-048	S			1100
CBI-1433-049	S			1100, 1000', PH
CBI-1433-050	S			1100, 1000', 2000', PH

CANON AL-1, BLACK AL-1



000-000-000-0000

12

PRINT LIST

SEARCH TERM:

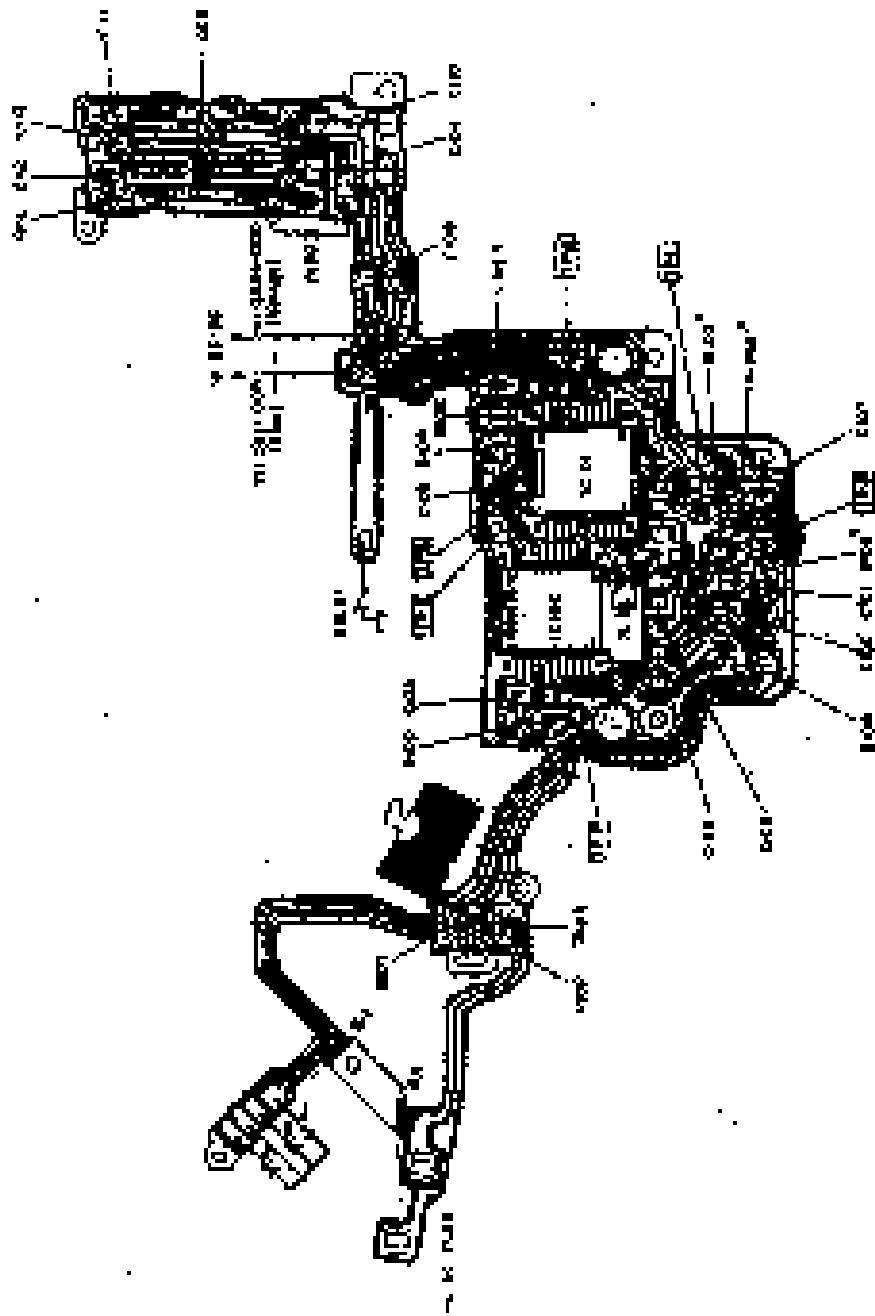
FILE	FILE NO.	CLASS	DT	DESCRIPTION
CAL-1000-000		A		PLA, SIGHTS
CAL-1001-000		A		HOLD, TELEGRAM
CAL-1002-000		A		MEMOR, TELEGRAPH
CAL-1003-000		A		PLATE
CAL-1004-000		A		CH, TELEGRAPH
CAL-1005-000		A		PURCHASE
CAL-1006-000		A		WASHIN
CAL-1007-000		A		SCHILL, ALDENHORN FOM
CAL-1008-000		A		SCHEM
CAL-1009-000		A		WORKS INSPECTION
CAL-1010-000		A		SHIPS, 1000 MILES
CAL-1011-000		A		SHIPS, 2000 MILES
CAL-1012-000		A		SHIPS, 3000 MILES
CAL-1013-000		A		SHIPS
CAL-1014-000		A		SHIP
CAL-1015-000		A		SHIPS
CAL-1016-000		A		SHIPS, THE CANTON
CAL-1017-000		A		SHIPS, 1000 MILES
CAL-1018-000		A		SHIPS 1000, 10000 TONS
CAL-1019-000		A		SHIPS 10000 TONS, 20000 TONS
CAL-1020-000		A		SHIPS 20000 TONS, 20000 DWT
CAL-1021-000		A		SHIPS, 10000-20000 TONS, 20000 TONS
CAL-1022-000		A		SHIPS, 10000-20000 TONS, 20000 TONS
CAL-1023-000		A		SHIPS, 10000-20000 TONS, 20000 TONS

תפקידים

פונקציית

לען

106



הנעה הילך וווער

סבון אַלְמָנָה אַלְמָנָה

לען מילויים

1/2

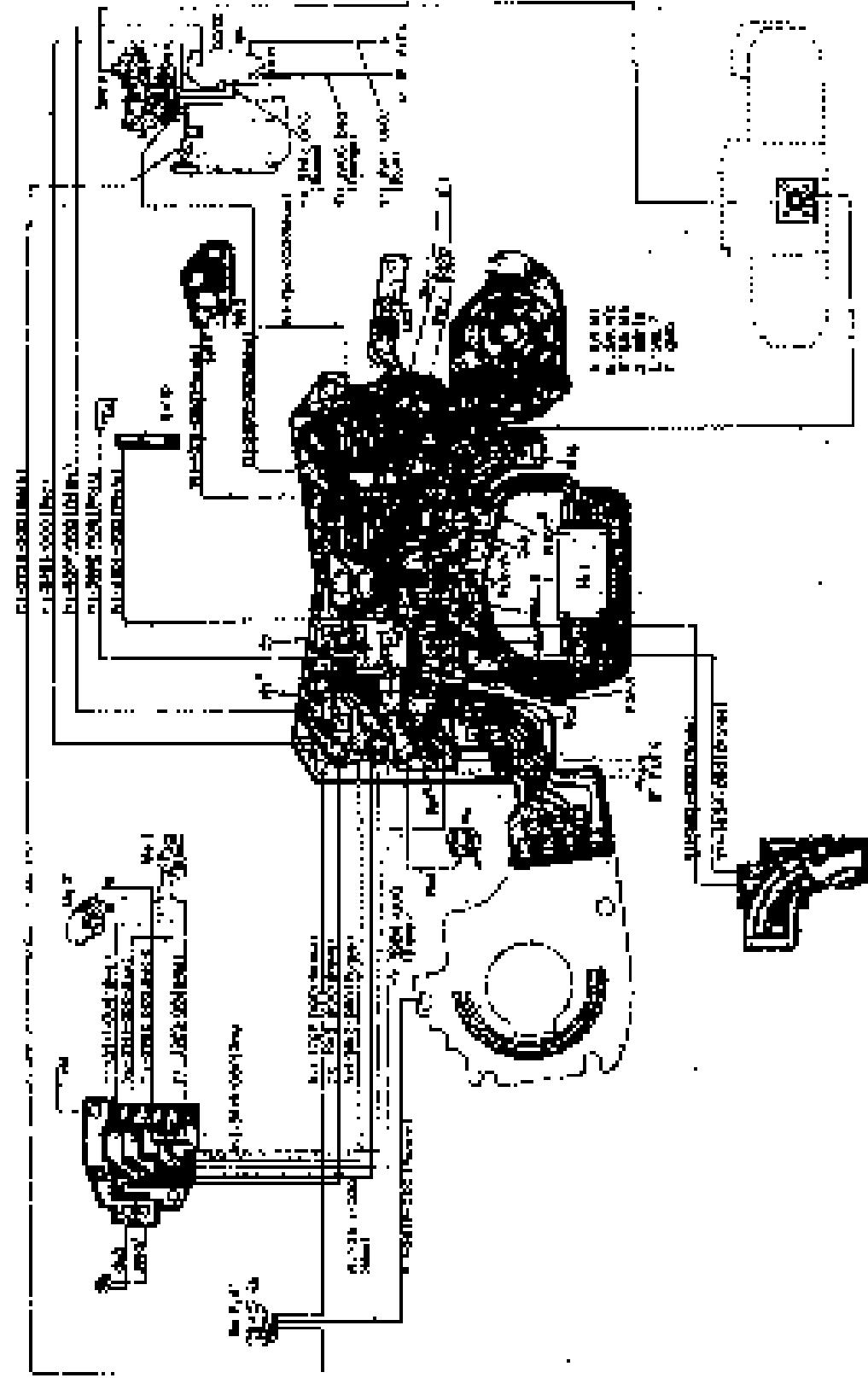
• 240V 15A

• 240V 15A

• 240V 15A
AC Fuses 15A Type I

• CIRCUIT BREAKER

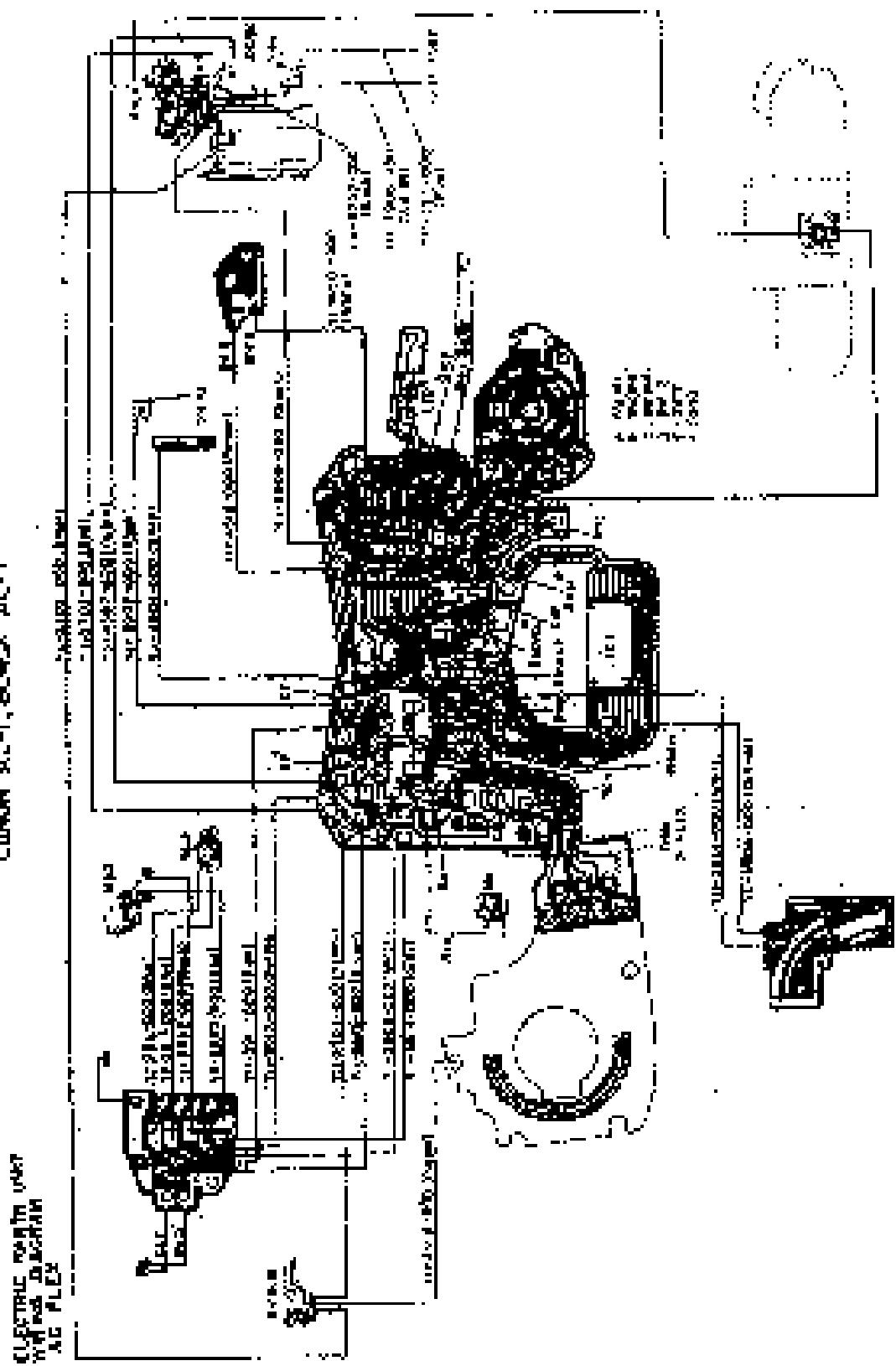
• 240V 15A



תְּמִימָנָה

בְּשֵׁם יְהוָה

לְזַהֲרָה



תְּמִימָנָה בְּשֵׁם לְזַהֲרָה

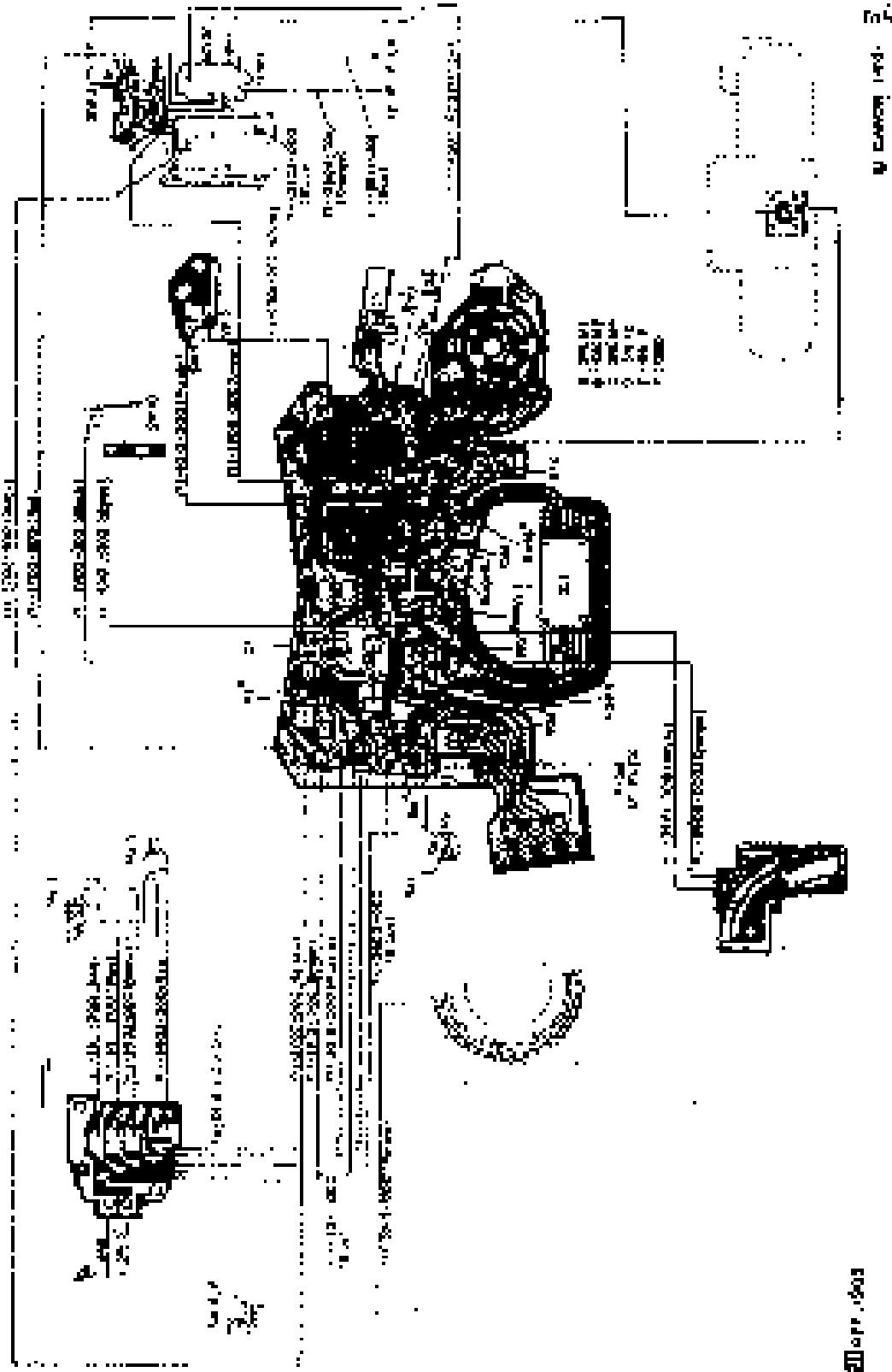
בְּשֵׁם יְהוָה

2009-08

Exterior unit
of PLR-061 (top)

Cooler unit block (left)

Hot gas bypass



Exterior unit

1

1

卷之三

Digitized by srujanika@gmail.com

Digitized by srujanika@gmail.com

Z
102
488

PHOTOGRAPHIC PLATES

70005 1000

ELEMENTS PLATES & LENSES

PLATE	EXPT. NO.	DATE	EXPOSURE	FOCUS
409-1-100-000	4		40500000	2.00 1000
409-1-100-001	1		40500000	2.00 1000
409-1-100-002	2		40500000	2.00 1000
409-1-100-003	3		40500000	2.00 1000
409-1-100-004	4		40500000	2.00 1000
409-1-100-005	5		40500000	2.00 1000
409-1-100-006	6		40500000	2.00 1000
409-1-100-007	7		40500000	2.00 1000
409-1-100-008	8		40500000	2.00 1000
409-1-100-009	9		40500000	2.00 1000
409-1-100-010	10		40500000	2.00 1000
409-1-100-011	11		40500000	2.00 1000
409-1-100-012	12		40500000	2.00 1000
409-1-100-013	13		40500000	2.00 1000
409-1-100-014	14		40500000	2.00 1000
409-1-100-015	15		40500000	2.00 1000
409-1-100-016	16		40500000	2.00 1000
409-1-100-017	17		40500000	2.00 1000
409-1-100-018	18		40500000	2.00 1000
409-1-100-019	19		40500000	2.00 1000
409-1-100-020	20		40500000	2.00 1000
409-1-100-021	21		40500000	2.00 1000
409-1-100-022	22		40500000	2.00 1000
409-1-100-023	23		40500000	2.00 1000
409-1-100-024	24		40500000	2.00 1000
409-1-100-025	25		40500000	2.00 1000
409-1-100-026	26		40500000	2.00 1000
409-1-100-027	27		40500000	2.00 1000
409-1-100-028	28		40500000	2.00 1000
409-1-100-029	29		40500000	2.00 1000
409-1-100-030	30		40500000	2.00 1000
409-1-100-031	31		40500000	2.00 1000
409-1-100-032	32		40500000	2.00 1000
409-1-100-033	33		40500000	2.00 1000
409-1-100-034	34		40500000	2.00 1000
409-1-100-035	35		40500000	2.00 1000
409-1-100-036	36		40500000	2.00 1000
409-1-100-037	37		40500000	2.00 1000
409-1-100-038	38		40500000	2.00 1000
409-1-100-039	39		40500000	2.00 1000
409-1-100-040	40		40500000	2.00 1000
409-1-100-041	41		40500000	2.00 1000
409-1-100-042	42		40500000	2.00 1000
409-1-100-043	43		40500000	2.00 1000
409-1-100-044	44		40500000	2.00 1000
409-1-100-045	45		40500000	2.00 1000
409-1-100-046	46		40500000	2.00 1000
409-1-100-047	47		40500000	2.00 1000
409-1-100-048	48		40500000	2.00 1000
409-1-100-049	49		40500000	2.00 1000
409-1-100-050	50		40500000	2.00 1000
409-1-100-051	51		40500000	2.00 1000
409-1-100-052	52		40500000	2.00 1000
409-1-100-053	53		40500000	2.00 1000
409-1-100-054	54		40500000	2.00 1000
409-1-100-055	55		40500000	2.00 1000
409-1-100-056	56		40500000	2.00 1000
409-1-100-057	57		40500000	2.00 1000
409-1-100-058	58		40500000	2.00 1000
409-1-100-059	59		40500000	2.00 1000
409-1-100-060	60		40500000	2.00 1000
409-1-100-061	61		40500000	2.00 1000
409-1-100-062	62		40500000	2.00 1000
409-1-100-063	63		40500000	2.00 1000
409-1-100-064	64		40500000	2.00 1000
409-1-100-065	65		40500000	2.00 1000
409-1-100-066	66		40500000	2.00 1000
409-1-100-067	67		40500000	2.00 1000
409-1-100-068	68		40500000	2.00 1000
409-1-100-069	69		40500000	2.00 1000
409-1-100-070	70		40500000	2.00 1000
409-1-100-071	71		40500000	2.00 1000
409-1-100-072	72		40500000	2.00 1000
409-1-100-073	73		40500000	2.00 1000
409-1-100-074	74		40500000	2.00 1000
409-1-100-075	75		40500000	2.00 1000
409-1-100-076	76		40500000	2.00 1000
409-1-100-077	77		40500000	2.00 1000
409-1-100-078	78		40500000	2.00 1000
409-1-100-079	79		40500000	2.00 1000
409-1-100-080	80		40500000	2.00 1000
409-1-100-081	81		40500000	2.00 1000
409-1-100-082	82		40500000	2.00 1000
409-1-100-083	83		40500000	2.00 1000
409-1-100-084	84		40500000	2.00 1000
409-1-100-085	85		40500000	2.00 1000
409-1-100-086	86		40500000	2.00 1000
409-1-100-087	87		40500000	2.00 1000
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409-1-100-090	90		40500000	2.00 1000
409-1-100-091	91		40500000	2.00 1000
409-1-100-092	92		40500000	2.00 1000
409-1-100-093	93		40500000	2.00 1000
409-1-100-094	94		40500000	2.00 1000
409-1-100-095	95		40500000	2.00 1000
409-1-100-096	96		40500000	2.00 1000
409-1-100-097	97		40500000	2.00 1000
409-1-100-098	98		40500000	2.00 1000
409-1-100-099	99		40500000	2.00 1000
409-1-100-100	100		40500000	2.00 1000

SST NO. 001-487-02

PMS 07-1971

SUBSTRATE PARTS & LAYERS

ITEM#	ITEM #0.	ITEM #	DESCRIPTION	ITEM #0.
410	100-1111-000	-	AC515100	3.10 40000
420	100-1120-000	-	AC515100	3.20 40000
430	100-1130-000	-	AC515100	3.30 40000
440	100-1140-000	-	AC515100	3.40 40000
450	100-1150-000	-	AC515100	3.50 40000
460	100-1160-000	-	AC515100	3.60 40000
470	100-1170-000	-	AC515100	3.70 40000
480	100-1180-000	-	AC515100	3.80 40000
490	100-1190-000	-	AC515100	3.90 40000
500	100-1200-000	-	AC515100	3.10 40000
510	100-1210-000	-	AC515100	3.20 40000
520	100-1220-000	-	AC515100	3.30 40000
530	100-1230-000	-	AC515100	3.40 40000
540	100-1240-000	-	AC515100	3.50 40000
550	100-1250-000	-	AC515100	3.60 40000
560	100-1260-000	-	AC515100	3.70 40000
570	100-1270-000	-	AC515100	3.80 40000
580	100-1280-000	-	AC515100	3.90 40000
590	100-1290-000	-	AC515100	3.10 40000
600	100-1300-000	-	AC515100	3.20 40000
610	100-1310-000	-	AC515100	3.30 40000
620	100-1320-000	-	AC515100	3.40 40000
630	100-1330-000	-	AC515100	3.50 40000
640	100-1340-000	-	AC515100	3.60 40000
650	100-1350-000	-	AC515100	3.70 40000
660	100-1360-000	-	AC515100	3.80 40000
670	100-1370-000	-	AC515100	3.90 40000
680	100-1380-000	-	AC515100	3.10 40000
690	100-1390-000	-	AC515100	3.20 40000
700	100-1400-000	-	AC515100	3.30 40000
710	100-1410-000	-	AC515100	3.40 40000
720	100-1420-000	-	AC515100	3.50 40000
730	100-1430-000	-	AC515100	3.60 40000
740	100-1440-000	-	AC515100	3.70 40000
750	100-1450-000	-	AC515100	3.80 40000
760	100-1460-000	-	AC515100	3.90 40000
770	100-1470-000	-	AC515100	3.10 40000
780	100-1480-000	-	AC515100	3.20 40000
790	100-1490-000	-	AC515100	3.30 40000
800	100-1500-000	-	AC515100	3.40 40000
810	100-1510-000	-	AC515100	3.50 40000
820	100-1520-000	-	AC515100	3.60 40000
830	100-1530-000	-	AC515100	3.70 40000
840	100-1540-000	-	AC515100	3.80 40000
850	100-1550-000	-	AC515100	3.90 40000
860	100-1560-000	-	AC515100	3.10 40000
870	100-1570-000	-	AC515100	3.20 40000
880	100-1580-000	-	AC515100	3.30 40000
890	100-1590-000	-	AC515100	3.40 40000
900	100-1600-000	-	AC515100	3.50 40000
910	100-1610-000	-	AC515100	3.60 40000
920	100-1620-000	-	AC515100	3.70 40000
930	100-1630-000	-	AC515100	3.80 40000
940	100-1640-000	-	AC515100	3.90 40000
950	100-1650-000	-	AC515100	3.10 40000
960	100-1660-000	-	AC515100	3.20 40000
970	100-1670-000	-	AC515100	3.30 40000
980	100-1680-000	-	AC515100	3.40 40000
990	100-1690-000	-	AC515100	3.50 40000
1000	100-1700-000	-	AC515100	3.60 40000
1010	100-1710-000	-	AC515100	3.70 40000
1020	100-1720-000	-	AC515100	3.80 40000
1030	100-1730-000	-	AC515100	3.90 40000
1040	100-1740-000	-	AC515100	3.10 40000
1050	100-1750-000	-	AC515100	3.20 40000
1060	100-1760-000	-	AC515100	3.30 40000
1070	100-1770-000	-	AC515100	3.40 40000
1080	100-1780-000	-	AC515100	3.50 40000
1090	100-1790-000	-	AC515100	3.60 40000
1100	100-1800-000	-	AC515100	3.70 40000
1110	100-1810-000	-	AC515100	3.80 40000
1120	100-1820-000	-	AC515100	3.90 40000
1130	100-1830-000	-	AC515100	3.10 40000
1140	100-1840-000	-	AC515100	3.20 40000
1150	100-1850-000	-	AC515100	3.30 40000
1160	100-1860-000	-	AC515100	3.40 40000
1170	100-1870-000	-	AC515100	3.50 40000
1180	100-1880-000	-	AC515100	3.60 40000
1190	100-1890-000	-	AC515100	3.70 40000
1200	100-1900-000	-	AC515100	3.80 40000
1210	100-1910-000	-	AC515100	3.90 40000
1220	100-1920-000	-	AC515100	3.10 40000
1230	100-1930-000	-	AC515100	3.20 40000
1240	100-1940-000	-	AC515100	3.30 40000
1250	100-1950-000	-	AC515100	3.40 40000
1260	100-1960-000	-	AC515100	3.50 40000
1270	100-1970-000	-	AC515100	3.60 40000
1280	100-1980-000	-	AC515100	3.70 40000
1290	100-1990-000	-	AC515100	3.80 40000
1300	100-2000-000	-	AC515100	3.90 40000

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2005-08-017-49202

PART 2.2.1

0046-001 2005-08-017-49202

STATION	PORT NO	TYPE	DESCRIPTIVE	REMARKS
4242	162-4333-000	0	4242(000)	140' long,
4246	162-4342-000	0	4246(000)	140'
4253	162-4353-000	0	4253(000)	140'
4255	162-4355-000	0	4255(000)	140'
4258	162-4358-000	0	4258(000)	140'
4262	162-4362-000	0	4262(000)	140'
4265	162-4365-000	0	4265(000)	140'
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4737	162-4837-000	0	4737(000)	140'
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4803	162-4903-000	0	4803(000)	140'
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4809	162-4909-000	0	4809(000)	140'
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4818	162-4918-000	0	4818(000)	140'
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4836	162-4936-000	0		

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CAL-1421-000	10	8-1,2		CAL-1421-000	10		8-1,22
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				MO-1-1007-000	10	10	10
				MO-1-1008-000	10	10	10
				MO-1-1009-000	10	10	10
				MO-1-1010-000	10	10	10
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				MO-1-1012-000	10	10	10
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				MO-1-1034-000	10	10	10
				MO-1-1035-000	10	10	10
				MO-1-1036-000	10	10	10
				MO-1-1037-000	10	10	10
				MO-1-1038-000	10	10	10
				MO-1-1039-000	10	10	10
				MO-1-1040-000	10	10	10
				MO-1-1041-000	10	10	10
				MO-1-1042-000	10	10	10
				MO-1-1043-000	10	10	10
				MO-1-1044-000	10	10	10
				MO-1-1045-000	10	10	10
				MO-1-1046-000	10	10	10
				MO-1-1047-000	10	10	10
				MO-1-1048-000	10	10	10
				MO-1-1049-000	10	10	10
				MO-1-1050-000	10	10	10
				MO-1-1051-000	10	10	10
				MO-1-1052-000	10	10	10
				MO-1-1053-000	10	10	10
				MO-1-1054-000	10	10	10
				MO-1-1055-000	10	10	10
				MO-1-1056-000	10	10	10
				MO-1-1057-000	10	10	10
				MO-1-1058-000	10	10	10
				MO-1-1059-000	10	10	10
				MO-1-1060-000	10	10	10
				MO-1-1061-000	10	10	10
				MO-1-1062-000	10	10	10
				MO-1-1063-000	10	10	10
				MO-1-1064-000	10	10	10
				MO-1-1065-000	10	10	10
				MO-1-1066-000	10	10	10
				MO-1-1067-000	10	10	10
				MO-1-1068-000	10	10	10
				MO-1-1069-000	10	10	10
				MO-1-1070-000	10	10	10
				MO-1-1071-000	10	10	10

Stack of Human Relations

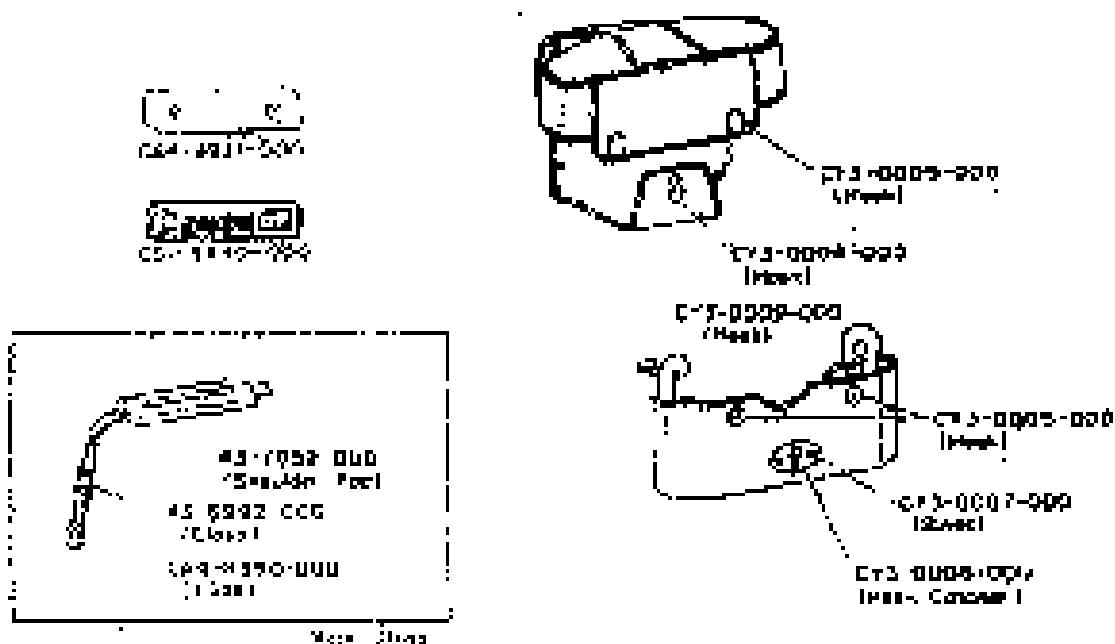
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Digitized by srujanika@gmail.com

CANON CASE FOR AN-1

REF NO 106-115-7



REF. NO. 106-115-7

CASE PARTS LIST

#	Part No	Stock	Qty	Description
1	43-0002-000	D	1	Outer
2	43-0002-000	D	1	Inner, Side Panel
3	43-0002-000	D	1	Inner
4	43-0001-000	E	1	Inner, Middle Part
5	43-0010-000	E	1	Inner, Middle Part
6	43-0006-000	D	1	Outer, Middle Part
7	43-0005-000	D	1	Outer
8	43-0004-000	D	1	Outer, Catcher
9	43-0007-000	D	1	Outer
10	43-0008-000	D	1	Outer