SERVICE MANUAL

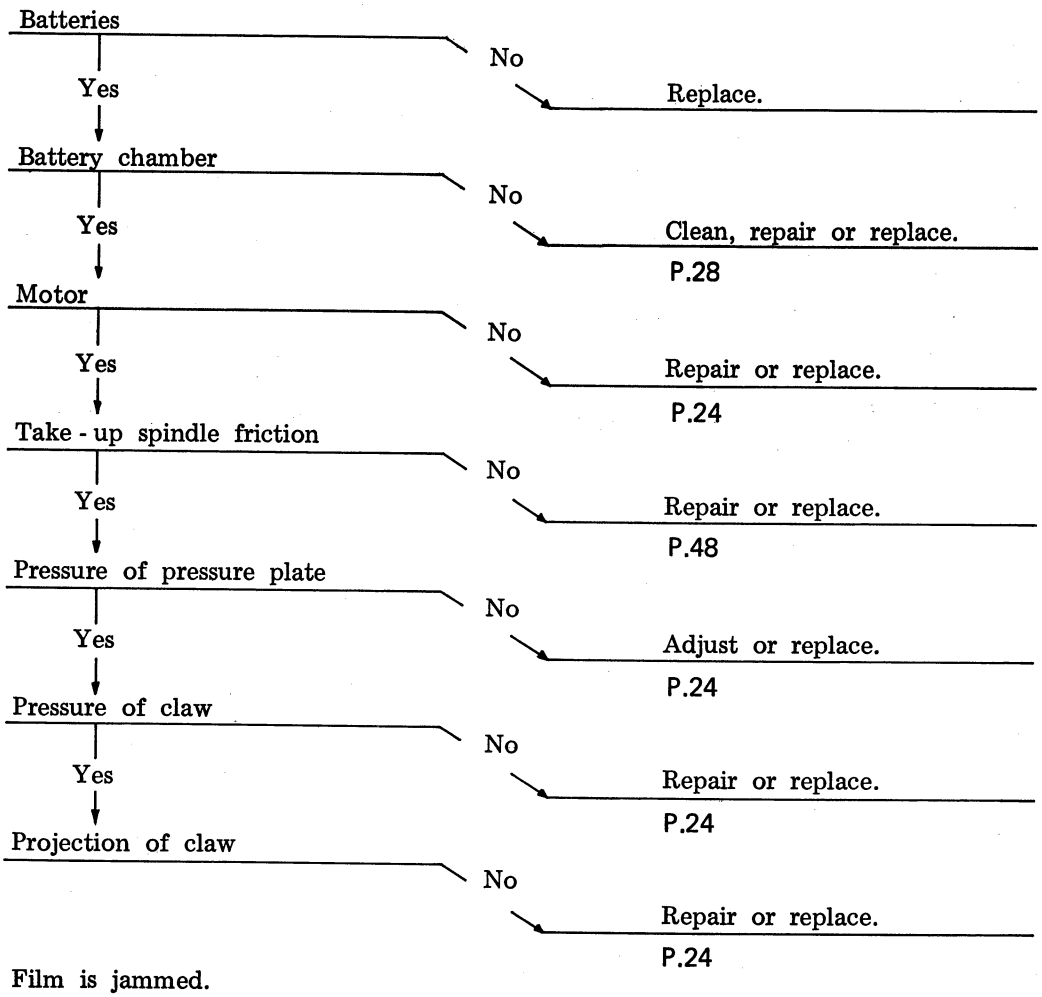
Fujica P-2 Single-8 Movie Camera

CONTENTS

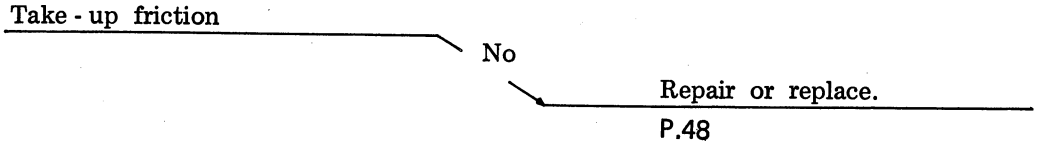
I TROUBLESHOOTING

1. Film is not transported correctly

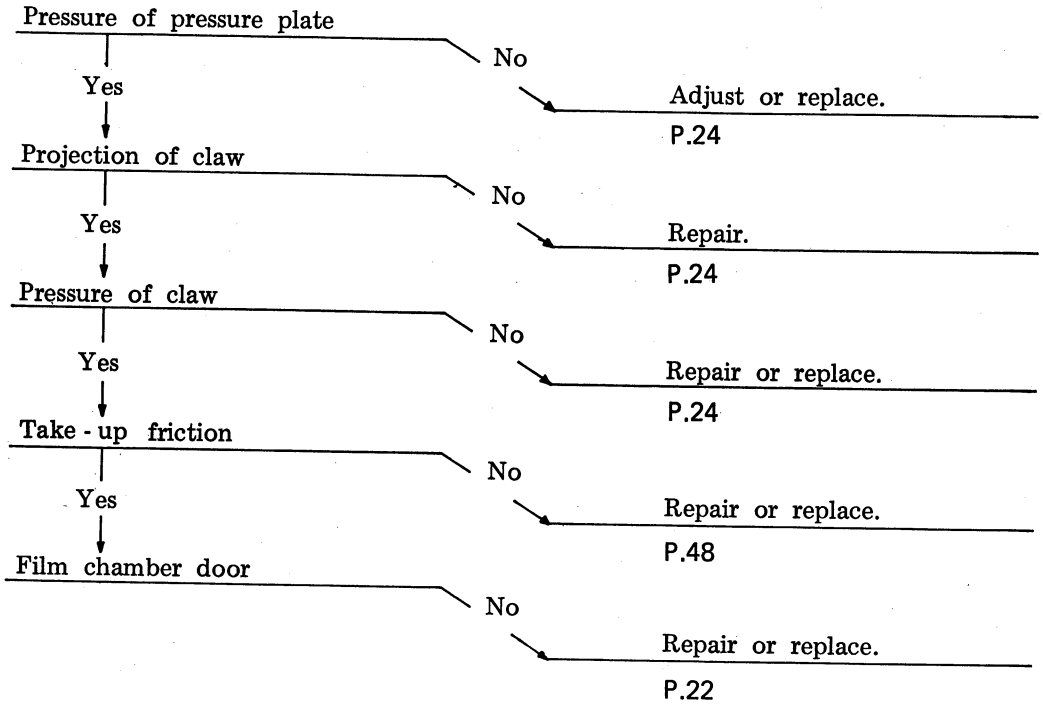
1 - 1 Film is not transported



1 - 2 Film is jammed.

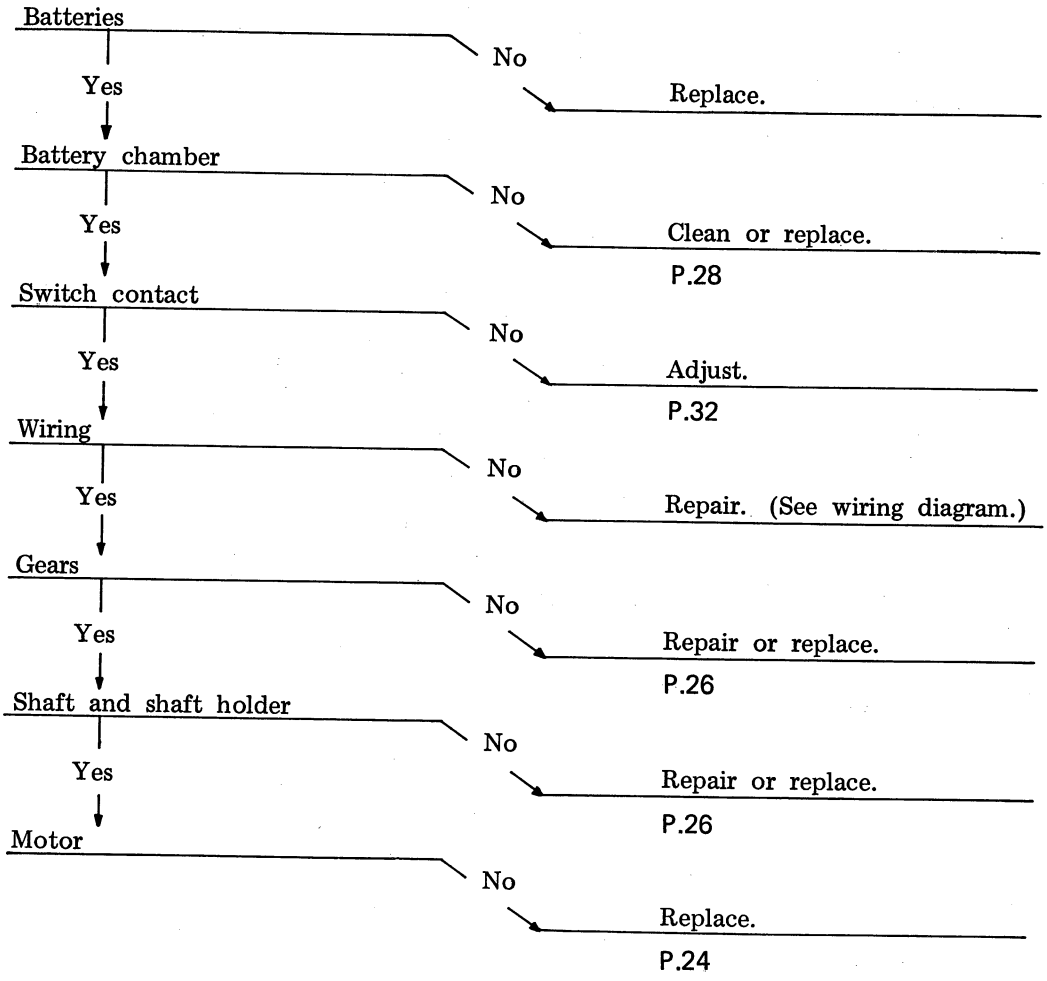


1 - 3 Duplicate exposure

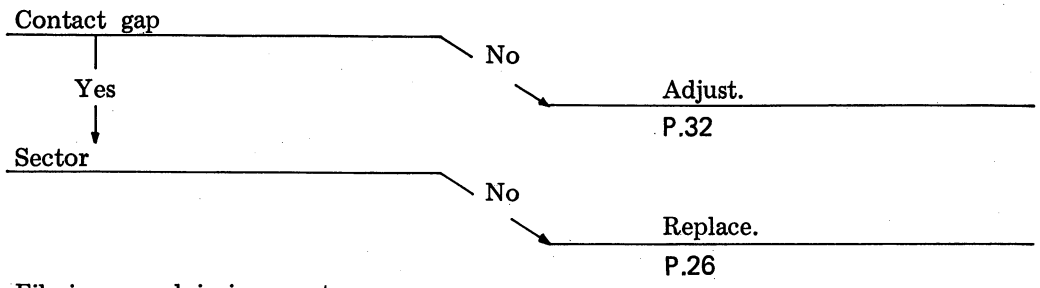


2. Motor and filming system do not work correctly

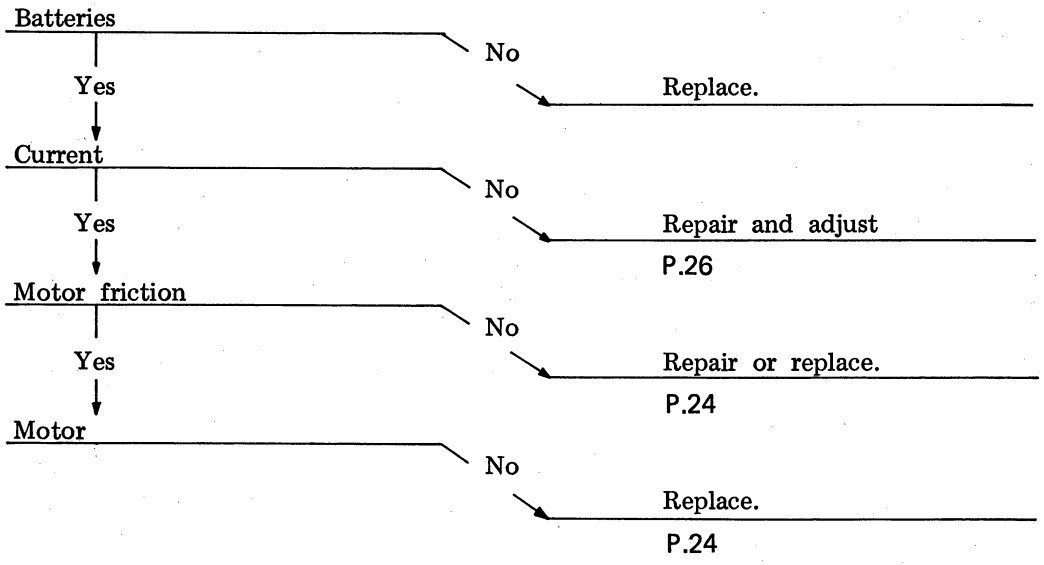
2 - 1 Motor does not work.



2 - 2 Sector does not open or close correctly.

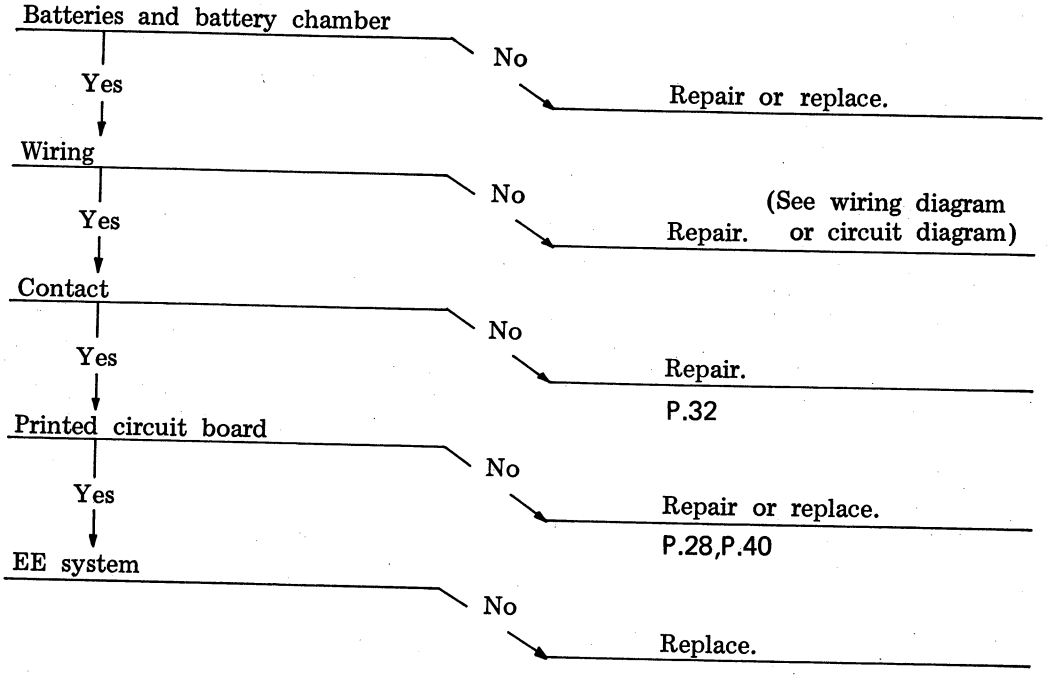


2 - 3 Filming speed is incorrect.

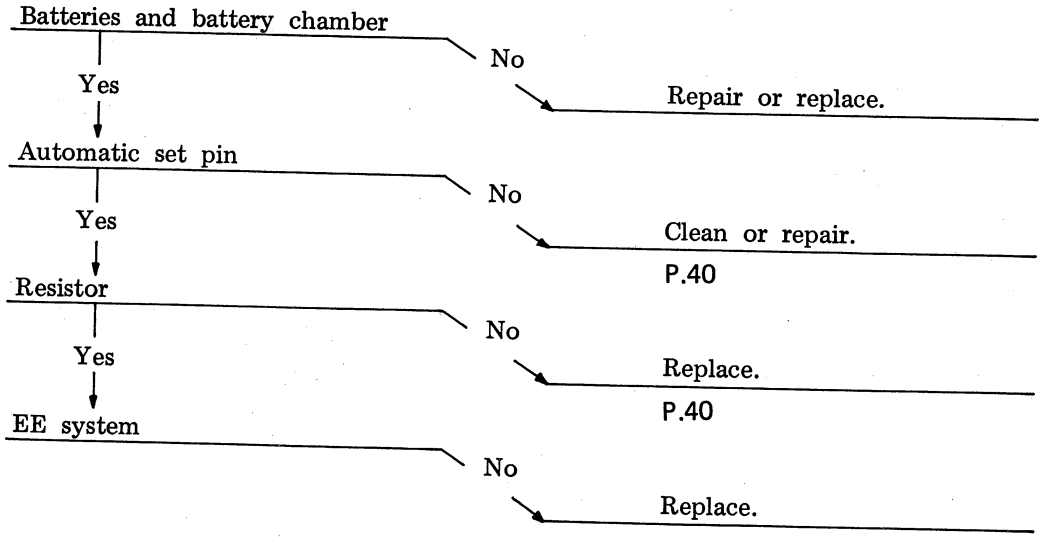


3. Automatic exposure control system

3 - 1 EE system does not work.



3 - 2 Exposure is not regulated.



Ⅱ DISASSEMBLY

1. Front cover assembly (1 - 26)

1 - 1 Remove the set screw (1 - 37).

1 - 2 Remove two set screws (1 - 39), and remove the seat plate (1 - 38). The front cover assembly (1 - 26) can then be removed.

2. Mechanism chassis assembly (1 - 19)

2 - 1 Remove five set screws (1 - 41).

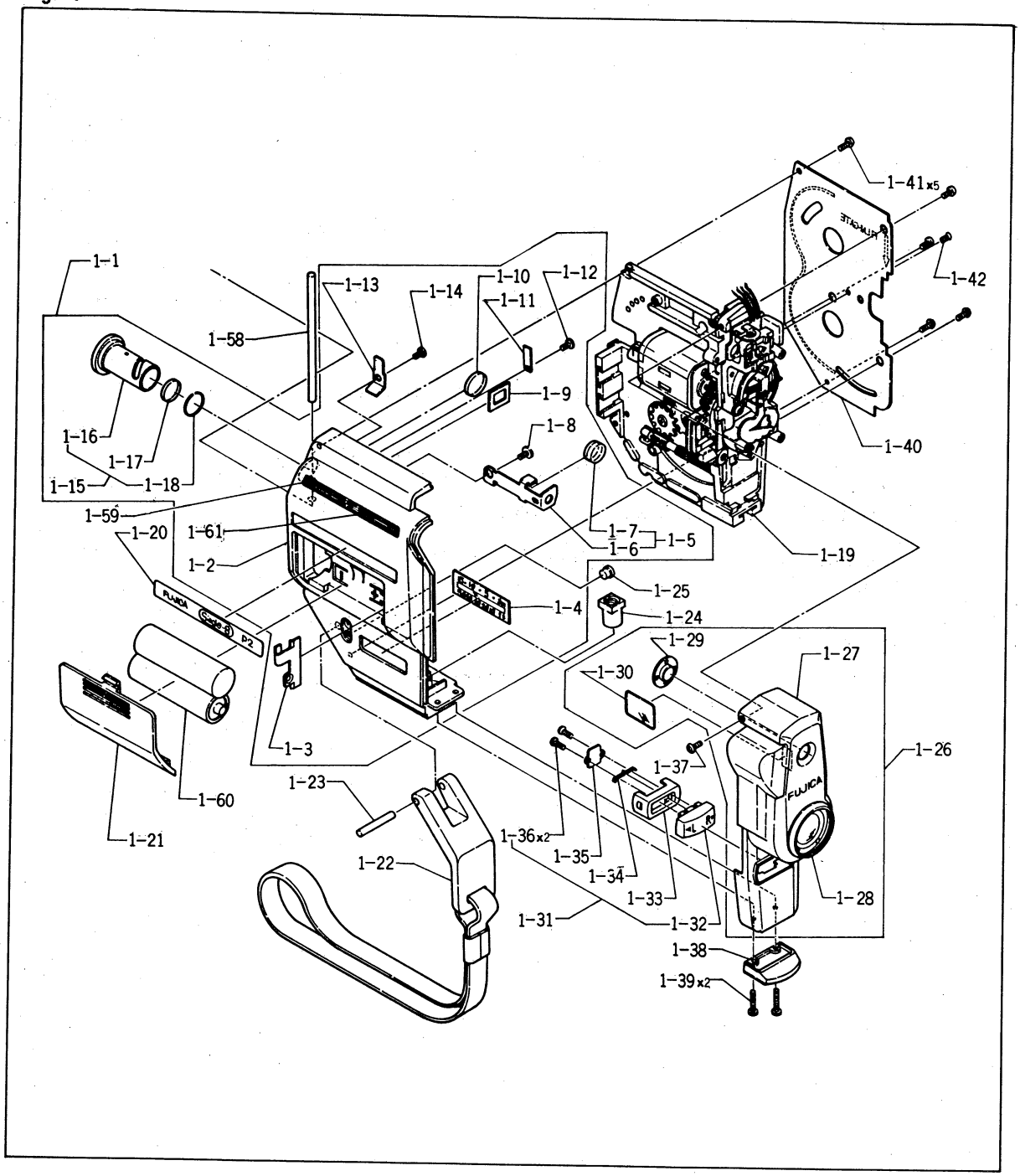
2 - 2 Remove the mechanism chassis assembly (1 - 19) from the main body (1 - 2).

NOTE: When separating the mechanism chassis assembly from the main body, be careful not to allow the contact piece (3 - 22) being hooked on the main body.

3. Plate (1 - 40)

Remove the screw (1 - 42). The plate (1 - 40) can then be removed from the mechanism chassis assembly.

Fig. 1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4. Viewfinder assembly (2 - 20)

Remove three set screws (2 - 32). The viewfinder assembly (2 - 20) can then be removed.

5. EE assembly (2 - 1)

5 - 1 Disconnect the lead wires W6, W7 and W8 extended from the EE assembly (2 - 1) at the printed circuit board (3 - 26).

5 - 2 Disconnect the lead wire W9 extended from the EE assembly at the contact piece (2 - 39).

5 - 3 Remove three set screws (2 - 10). The EE assembly (2 - 1) can then be removed.

6. Master lens assembly (2 - 11)

6 - 1 Remove the set screw (2 - 9), and remove the leaf spring (2 - 8) and eccentric pin (2 - 7).

6 - 2 Pull out the master lens assembly (2 - 11) from the EE assembly.

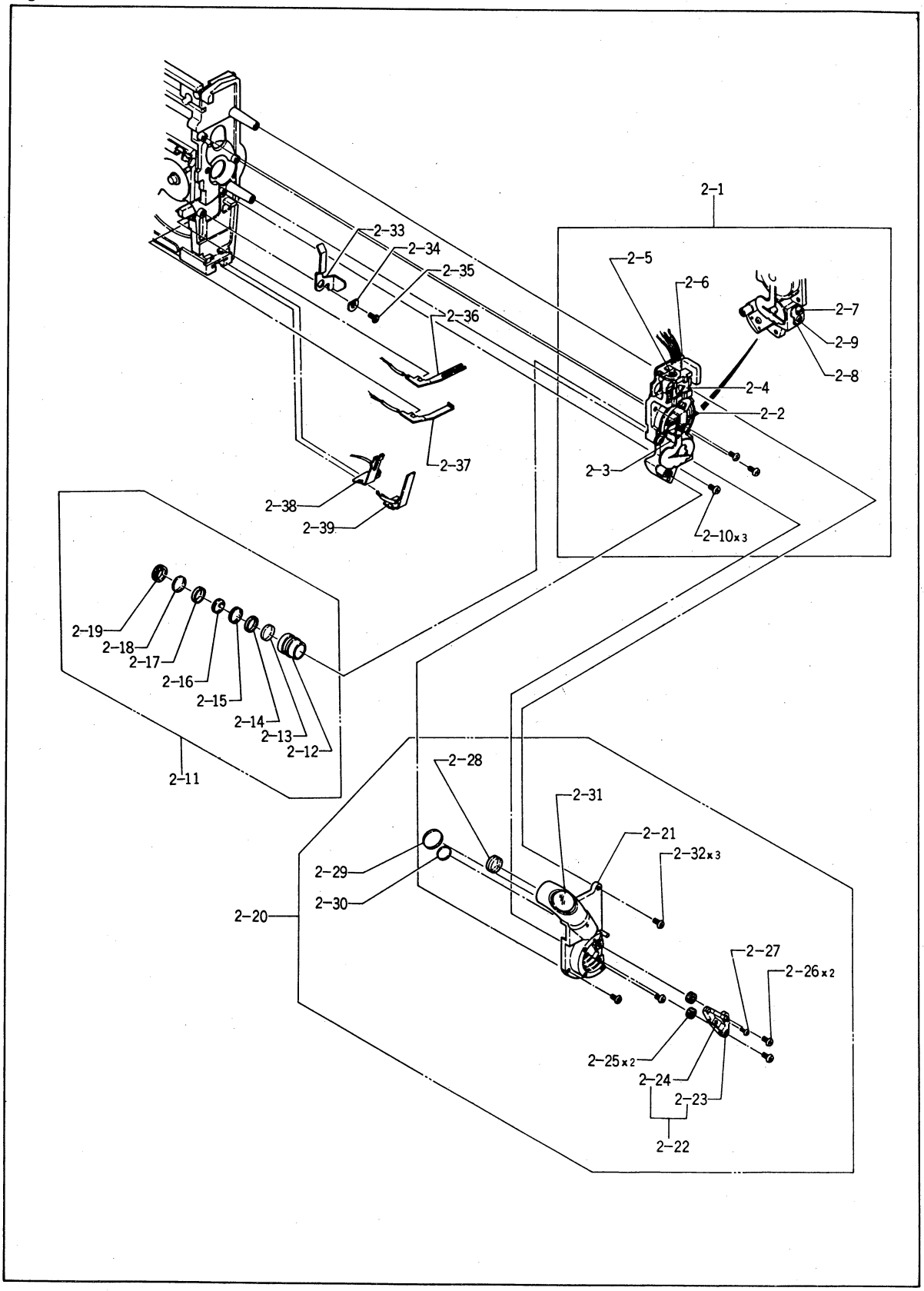
7. Contact pieces (2 - 36 through 2 - 39) and shutter lever (2 - 33)

7 - 1 Disconnect lead wires W1, W2 and W11 from the contact pieces (2 - 36 through 2 - 39).

7 - 2 The contact pieces are simply fitted into the main body. Pull them out.

7 - 3 Remove the set screw (2 - 35). The shutter lever (2 - 33) can then be removed.

Fig. 2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8. Film gate/drive assembly (3 - 41)

8 - 1 Disconnect the lead wire W10 extended from the motor at the printed circuit board (3 - 26), and disconnect the lead wire W11 at the contact piece (2 - 36).

8 - 2 Remove the set screw (3 - 18), and remove the shaft holder (3 - 17).

8 - 3 Remove two set screws (3 - 65) and two set screws (3 - 55), and remove the film gate/drive assembly (3 - 41) by sliding it.

NOTE: Remove the film gate/drive assembly carefully. The shaft head of the sector assembly (3 - 71) is fitted into the shaft holder (3 - 2) and the worm gear (3 - 72) is intermeshed with the gear (3 - 10).

8 - 4 Remove the sector assembly (3 - 71) and worm gear (3 - 72) from the film gate/drive assembly.

8 - 5 To separate the gate assembly (3 - 42) from the motor assembly (3 - 66), remove two set screws (3 - 49).

9. Automatic film speed setting assembly (3 - 25)

9 - 1 When the EE assembly (2 - 1) has not been removed, disconnect lead wires W6, W7 and W8 from the printed circuit board (3 - 26).

9 - 2 When the motor has not been removed, disconnect the lead wire W10 from the printed circuit board.

9 - 3 Disconnect lead wires W3, W4 and W5 and contact piece (3 - 24) from the printed circuit board.

9 - 4 Remove two set screws (3 - 39), and remove the automatic film speed setting assembly (3 - 25).

NOTE: Remove all four auto set pins (3 - 40) also.

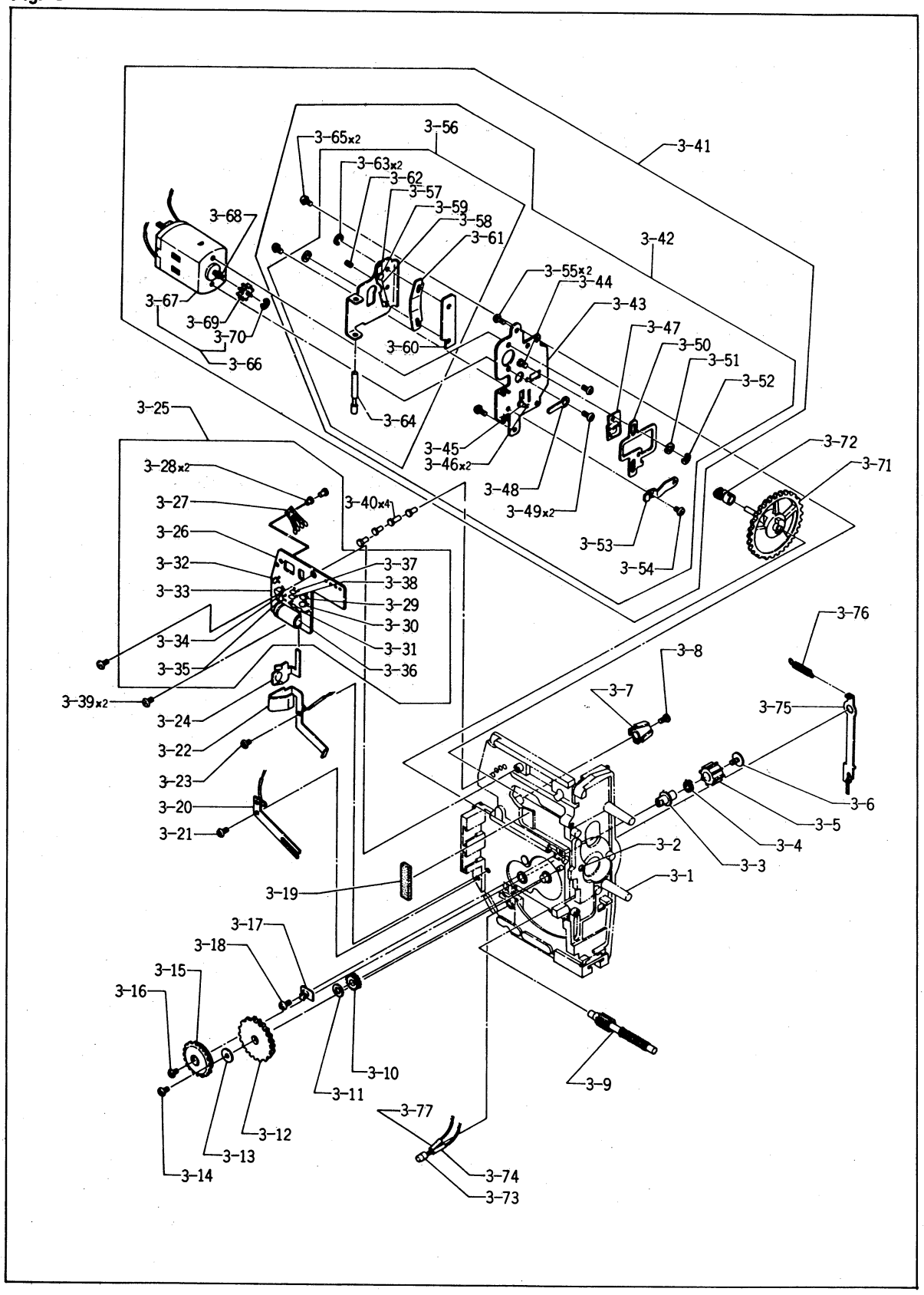
10. Contact pieces (3 - 20, 3 - 22 and 3 - 24)

10 - 1 Remove the screw (3 - 21), and remove the contact piece (3 - 20).

10 - 2 Remove the screw (3 - 23), and pull out the contact piece (3 - 22). (This contact piece is tightly fitted.)

10 - 3 Pull out the contact piece (3 - 24). (This contact piece is not secured with screw but fitted tightly.)

Fig. 3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11. Film chamber door assembly (1 - 43)

Pull out the hinge shaft (1 - 58). The film chamber door assembly (1 - 43) can then be removed.

12. Disassembling the film chamber door assembly

12 - 1 Remove two set screws (1 - 46), and remove the spring (1 - 45).

12 - 2 Remove the set screw (1 - 54). The lock lever (1 - 52), spring (1 - 53) and cover lock (1 - 55) can then be removed.

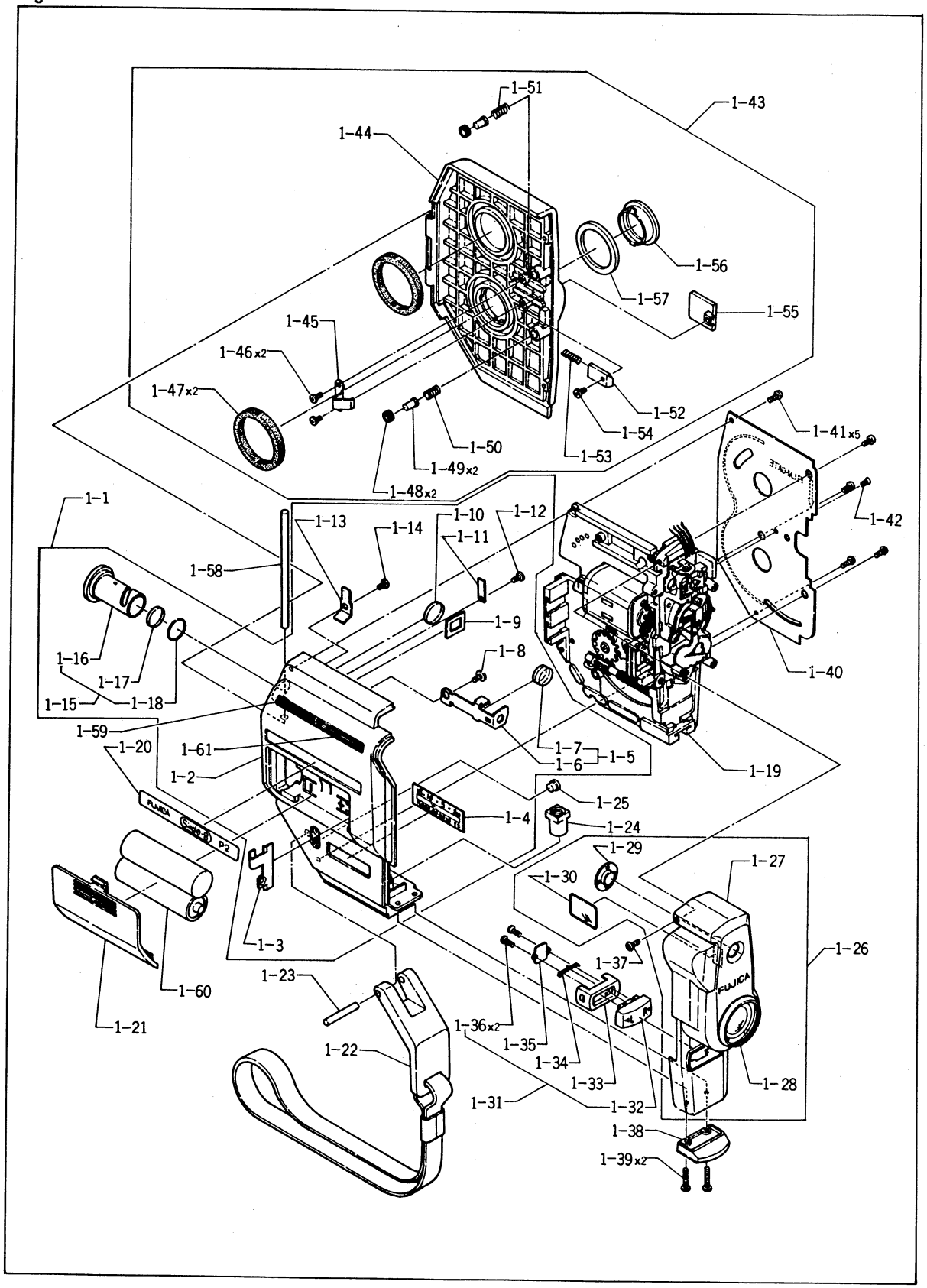
12 - 3 Turn the film confirmation window (1 - 56) counterclockwise. (Recommend a piece of rubber be used to ease the removing.) The film confirmation window (1 - 56) can then be removed together with frame ring (1 - 57).

12 - 4 The Hamaprene rings (1 - 47) are secured with Pliobond. Thoroughly clean them with solvent after removing it.

13. Grip assembly (1 - 22)

Pull out the shaft (1 - 23). The grip assembly (1 - 22) can then be removed.

Fig. 4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14. Disassembling the main body assembly (1 - 1)

14 - 1 Remove the set screw (1 - 14), and remove the holder (1 - 13). The eyepiece assembly (1 - 15) can then be pulled out backward.

14 - 2 Remove the set screw (1 - 8). The lens assembly (1 - 5) can then be removed.

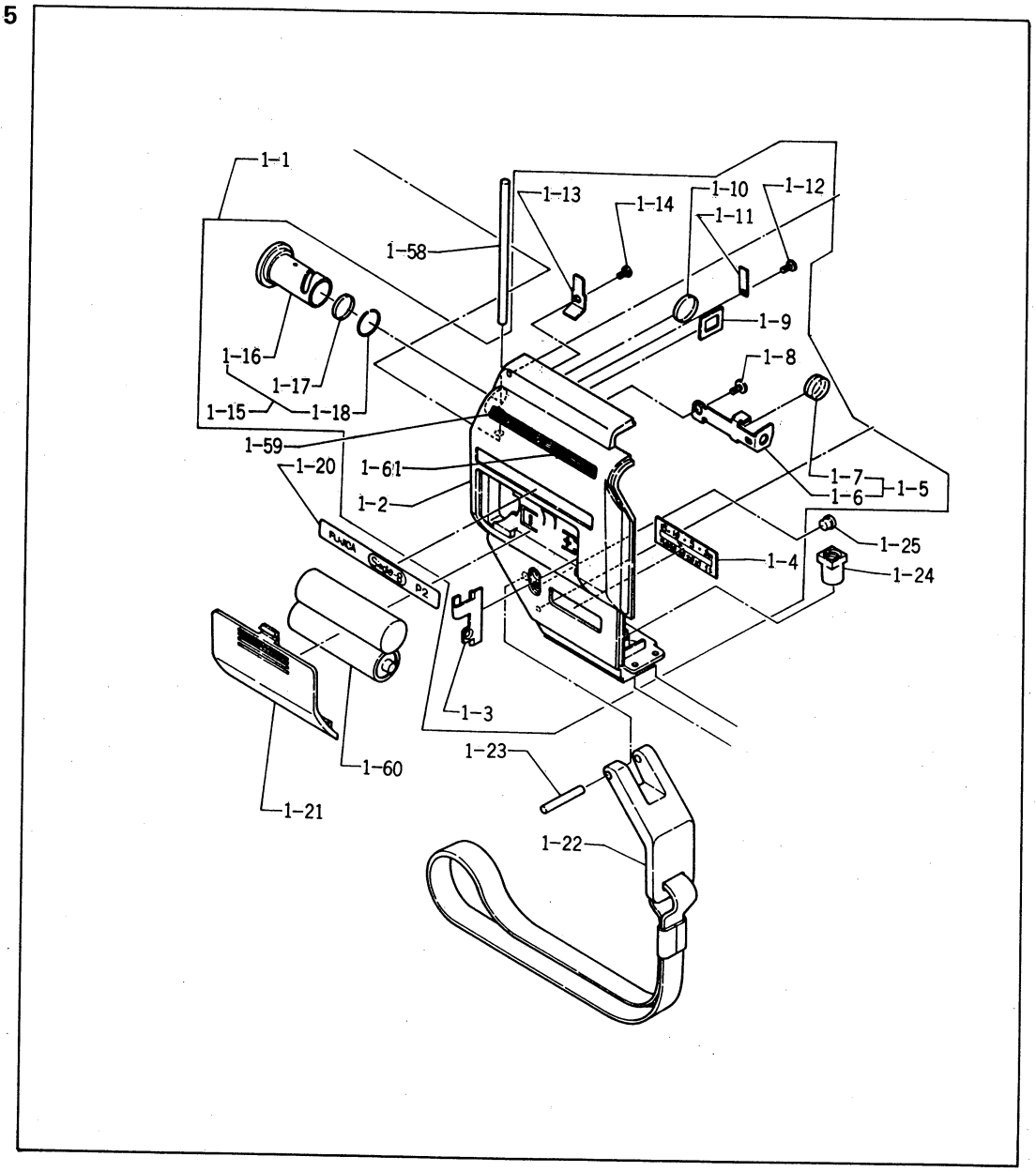
14 - 3 Remove the set screw (1 - 12). The lens (1 - 10) can then be removed.

14 - 4 Pull out the frame (1 - 9) as it has simply been adhered.

14 - 5 Pull out the contact piece (1 - 3) as it has simply been fitted.

14 - 6 Remove the battery check button (1 - 25) and tripod socket (1 - 24). They are just fitted. When installing the mechanism assembly, reinstall the battery check button and tripod socket without fail.

Fig. 5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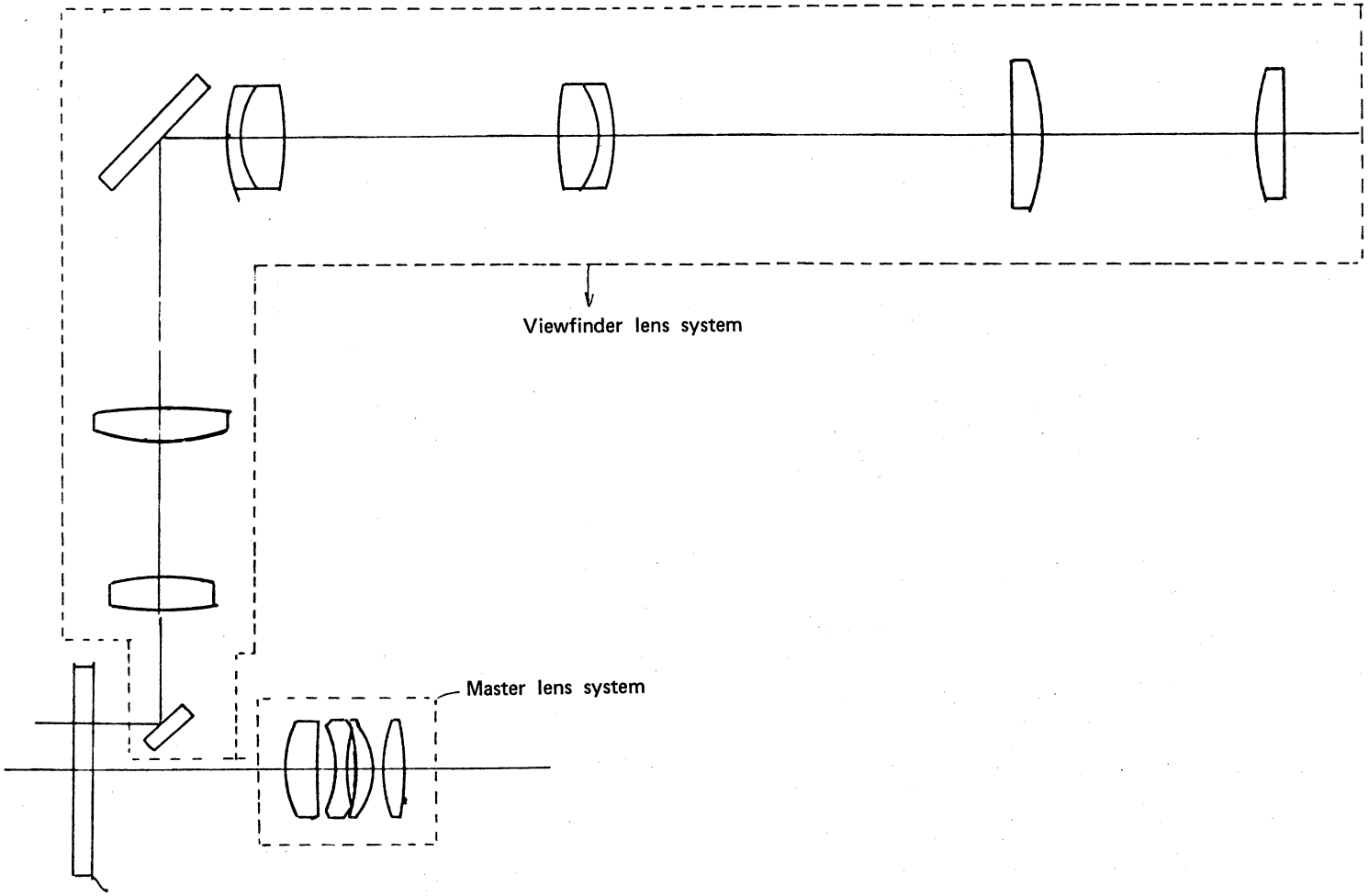
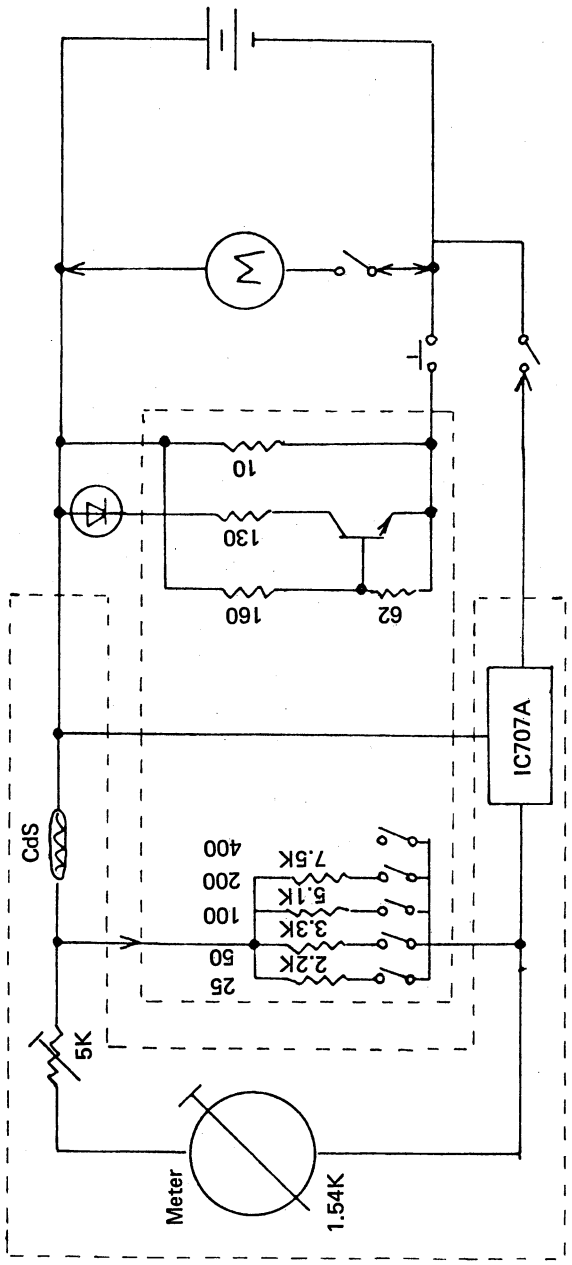
OPTICAL SYSTEM PARTS LAYOUT



CIRCUIT DIAGRAM



Ⅲ REASSEMBLY, REPAIR AND ADJUSTMENT

1. Main body assembly (1 - 1)

1 - 1 Lens assembly (1 - 5)

a. Install the lens (1 - 7) carefully and correctly. When the lens is placed reversely, floated or tilted, objects will not be seen correctly.

b. Properly bend the lens frame (1 - 6) to provide it with a proper spring effect. When the lens frame has no spring effect, parallax will be changed after adjusting the parallax.

1 - 2 Lens (1 - 10)

Install the lens (1 - 10) carefully so that it is directed correctly.

1 - 3 Eyepiece assembly (1 - 15)

a. Install the lens (1 - 17) carefully so that it is directed correctly.

b. After inserting the clip (1 - 18), secure it with Pliobond. When the clip is not secured, the lens will not be positioned correctly.

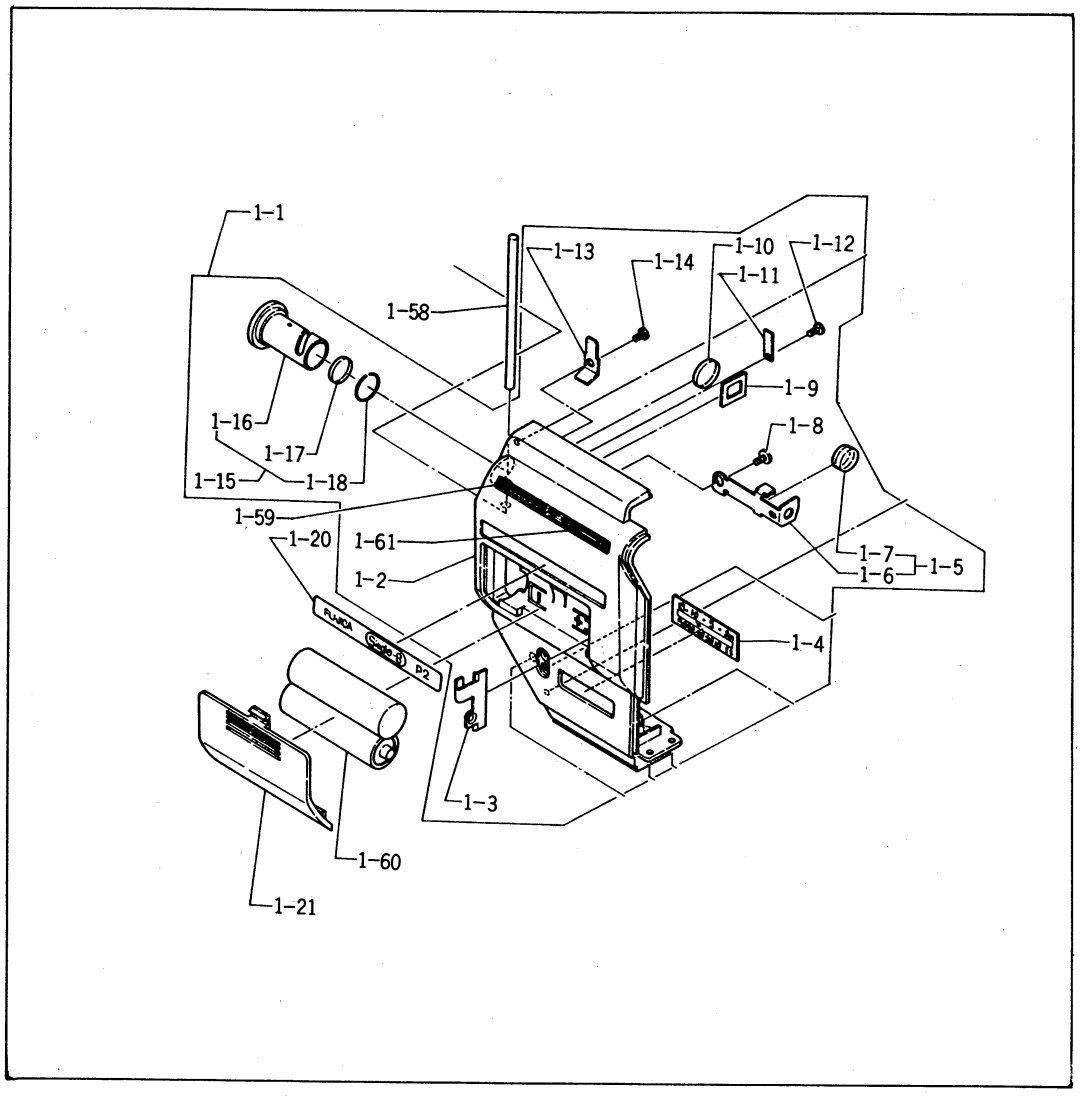
c. When inserting the eyepiece assembly (1 - 15) into the main body (1 - 2), be sure to fit the projection on the main body into the cam groove of eyepiece correctly.

d. Check the holder (1 - 13) for deformation. When the holder is deformed, turning friction of the eyepiece is adversely affected.

e. Apply Helicolube slightly to the cam groove and circumference of the eyepiece.

f. Check the eyepiece to insure that it turns smoothly with a proper friction.

Fig. 6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1 - 4 Contact piece (1 - 3)

a. Check the contact piece for deformation of the fitting edge. When the fitting edge is deformed, the contact piece will not be fitted securely.

b. Check the contact surface to insure that it is clean and not corroded.

c. Fit the contact piece fully into the main body until it stops.

1 - 5 Name plate (1 - 20) and leather (1 - 59)

a. Install the name plate (1 - 20) correctly with Pliobond at its entire area. None of its portion should be floated.

b. Install the leather (1 - 59) in the same manner as name plate after completing adjustment of parallax.

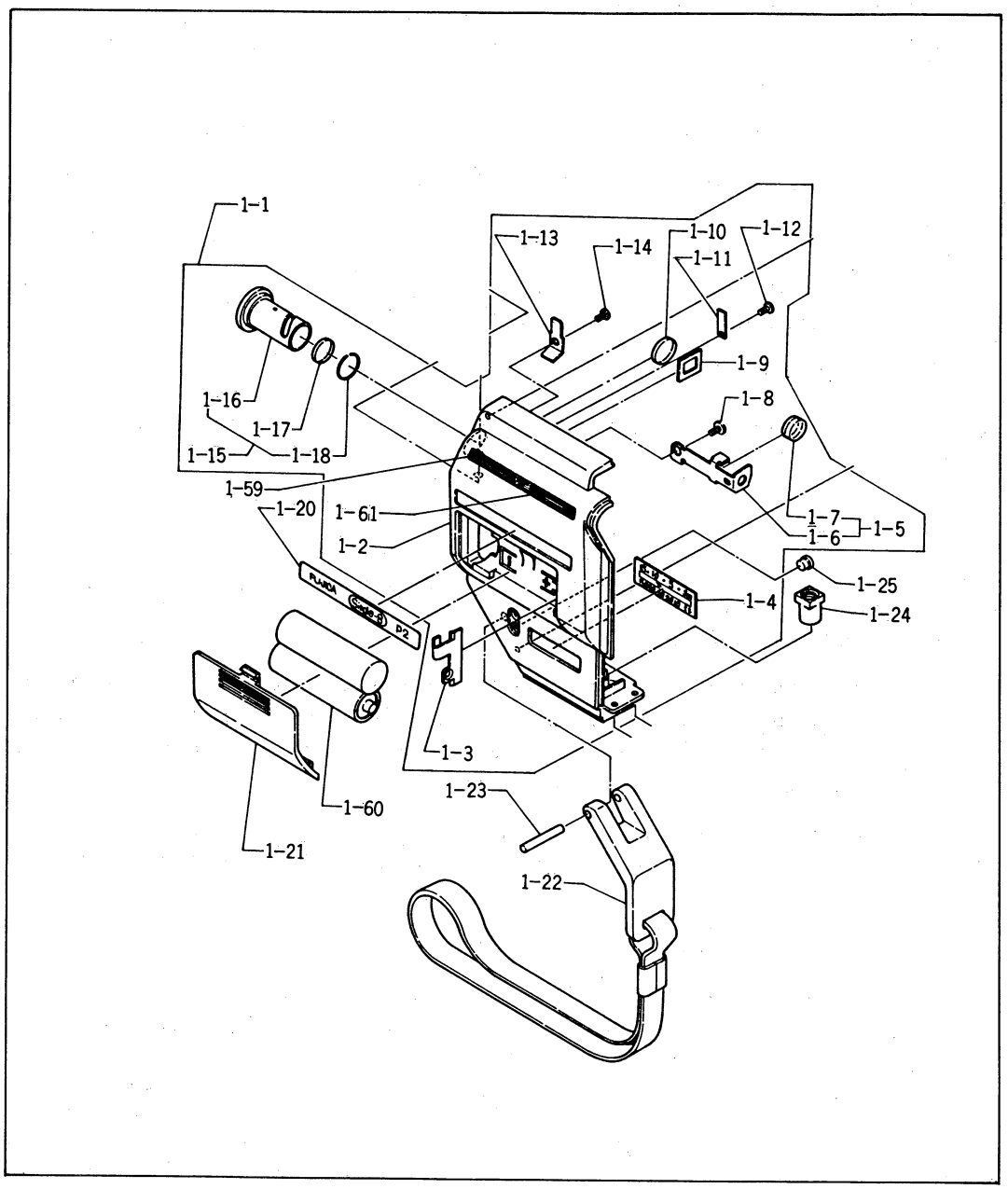
2. Grip assembly (1 - 22)

a. Note that the grip is fitted to the main body tightly so as to provide it with a proper friction.

b. Match the grip to the main body, and insert the shaft (1 - 23).

c. After installing the grip on the main body, make sure that the grip operates smoothly with a proper friction.

Fig. 7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3. Film chamber door assembly (1 - 43)

3 - 1 Pin (1 - 49)

a. Check two pins (1 - 49) to insure that both of them operate smoothly without any dragging.

b. Make sure that the pins are not tilted.

c. Make sure that the spring (1 - 51) is weaker than the spring (1 - 50).

d. Note that when the pins do not operate correctly, flicker of picture, duplicate exposure and other trouble may occur.

3 - 2 Cover lock (1 - 55)

a. Check the cover lock (1 - 55) to insure that it operates smoothly without any dragging.

b. Make sure that the cover lock is returned to the original position correctly by the spring (1 - 53).

c. Apply Helicolube slightly to the sliding portion of the lock lever (1 - 52).

3 - 3 Spring (1 - 45)

a. When the film chamber door is closed, the spring (1 - 45) pushes the pressure plate. When this spring is deformed, the pressure plate is not pushed completely and improper film transporting, incorrect focusing or other trouble may result.

b. Contrarily, when the pressure plate is pushed too early, the pressure plate closes before the pins (1 - 49) come into contact with film, causing the film not to be transported correctly.

3 - 4 Film confirmation window (1 - 56)

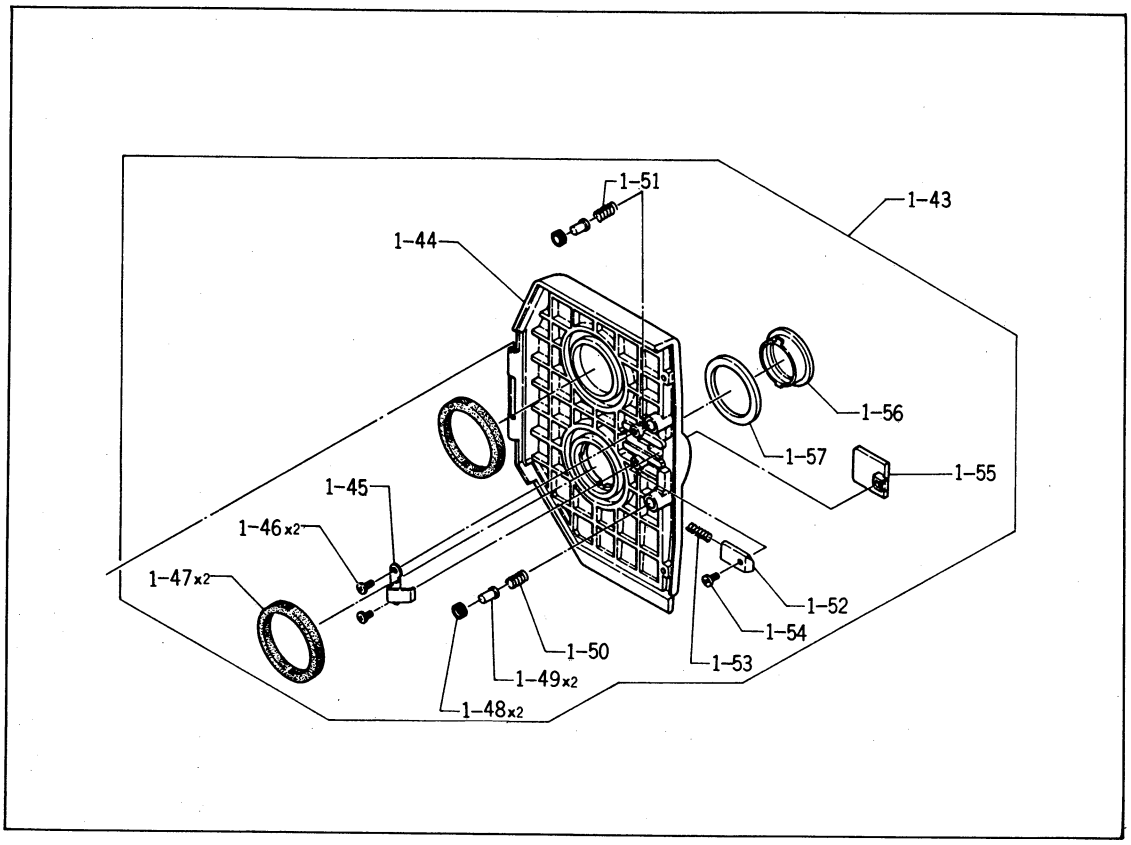
a. Make sure that the film confirmation window (1 - 56) is not scarred, dirty or frosted, and that the frame ring (1 - 57) is not scarred or pitted but finished evenly.

b. Place the frame ring, fit the projections of the film confirmation window into the notches on the film chamber door (1 - 44), and turn the film confirmation window to the right. Tighten it securely so that it will not drop off.

3 - 5 Hamaprene ring (1 - 47)

This ring is used to shield light. Install it correctly with Pliobond.

Fig. 8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4. Film gate/drive assembly (3 - 41)

4 - 1 Film drawing resistance

a. The rated film drawing resistance is 55±5 grams. Properly adjust the adjust screw (3 - 62).

b. When film drawing resistance cannot be adjusted to the rated resistance with the adjust screw, bend, open or replace the leaf spring (3 - 61). When the leaf spring is bent, resistance increases and reduces when opened.

c. Note that when film drawing resistance is too high, motor load (current) increases, filming speed adversely changes and consequently film is not transported correctly causing a flicker. Contrarily, when film drawing resistance is too low, focusing is adversely affected or a flicker occurs.

d. When film drawing resistance is adjusted completely, lock the adjust screw (3 - 62) with screw locking agent.

4 - 2 Claw (3 - 50)

a. When the pressure plate assembly (3 - 56) is opened, the claw edge should not be projected above the gate plane. (This requirement applies for completely assembled camera also.)

b. When the pressure plate assembly (3 - 56) is closed, the claw edge must be projected 0.4±0.1 mm from the gate plane. (The projection height can be measured with the pressure plate assembly completely opened.)

c. When the requirements described in a and b above are not satisfied, film will not be loaded or transported correctly. To adjust claw edge projection, properly bend the leaf spring (3 - 58).

d. The rated claw pressure is 10±2 grams. When adjustment is needed, properly bend the leaf spring (3 - 53).

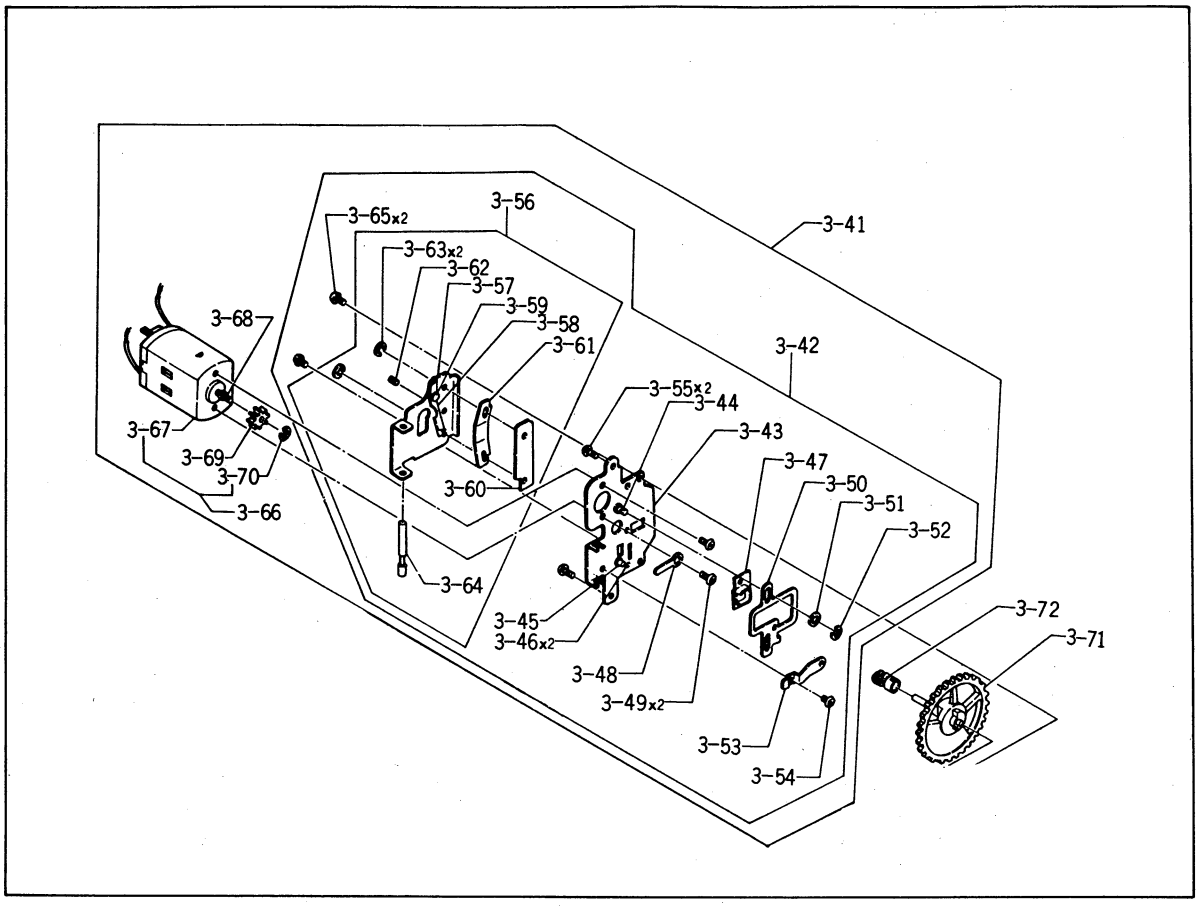
4 - 3 Motor assembly (3 - 66)

a. Note that friction current must be 2A or more. When friction current is less than 2A, film will not be transported correctly.

b. When friction current is too low, replace the friction ring (3 - 68) with a new one.

c. When hamming of the motor is too high, replace the motor with a new one.

Fig. 9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3-46x2
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5. Assembling film gate/drive assembly

5 - 1 Assembling

a. Apply Helicolube to both ends of the shaft and cam portion of the sector (3 - 71).

b. Apply Helicolube to the guide groove and square opening of the claw (3 - 50) into which the sector (3 - 71) is fitted.

c. Install the worm gear (3 - 72) to the sector, and install them on the film gate assembly.

d. Install the film gate/drive assembly on the mechanism assembly (3 - 1) with two screws (3 - 55) and two screws (3 - 65).

e. Adjust the shaft holder (3 - 17) properly so that the sector has no thrust play and the current is minimum.

f. Secure the intermeshing of the gear (3 - 69) with the sector gear with the screw (3 - 49) at a position where the current and driving sound are minimum.

5 - 2 Abnormal driving sound

a. When driving sound is abnormal, check each gear for intermeshing and the turning, sliding and fitting parts for lubrications.

b. Check each gear for excessive wear or damaging.

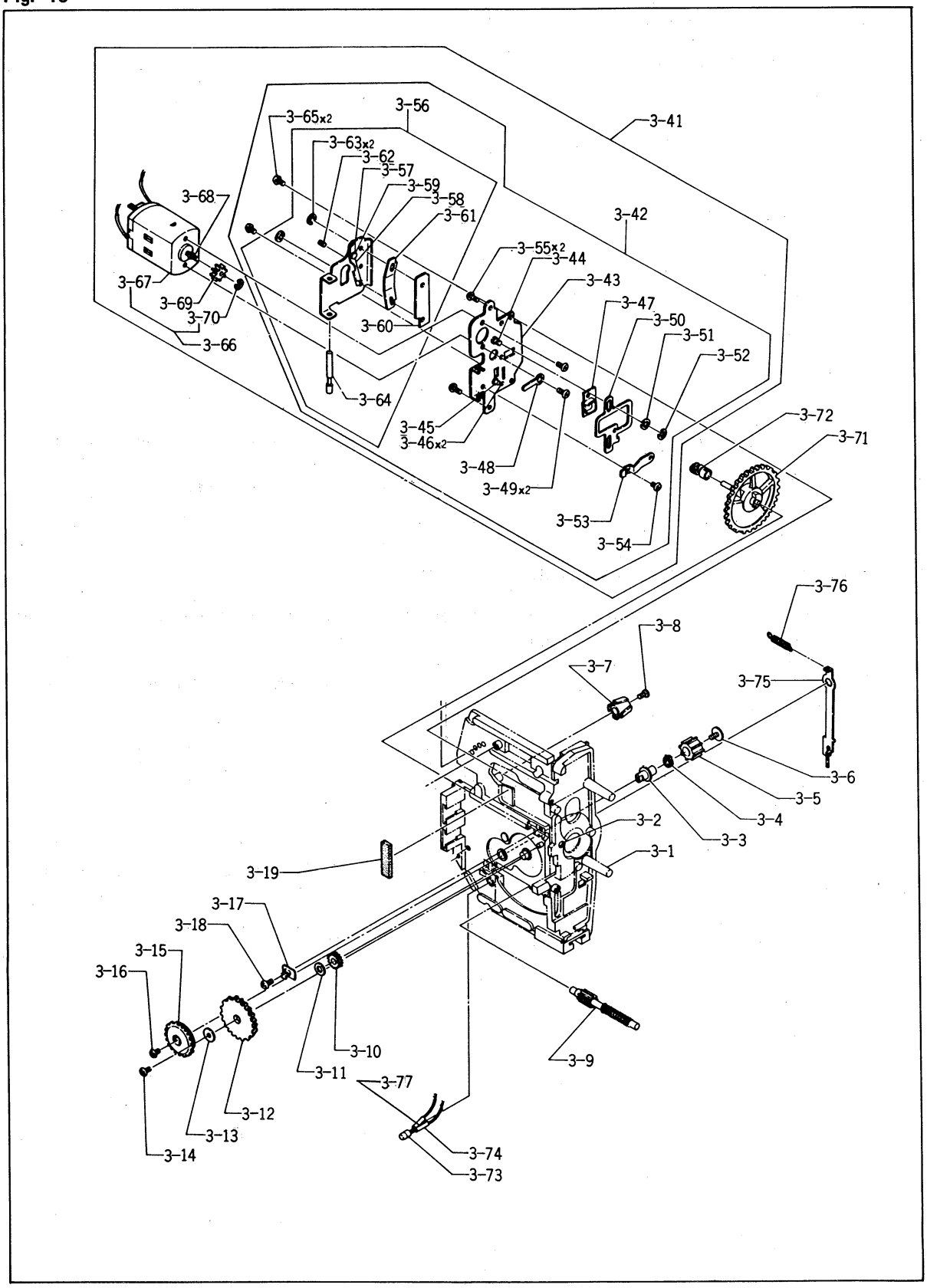
c. Check each parts for thrust or radial play.

d. Check the motor alone for operating sound.

e. As the results of above checking, when an abnormal condition is detected, replace the parts or apply grease.

NOTE: The moquette (3 - 19) is used to prevent vibration sound of the motor. When the motor is installed, make sure that the motor is in contact with the moquette.

Fig. 10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6. Installing contact pieces (3 - 20, 3 - 22 and 3 - 24)

6 - 1 Contact piece (3 - 24)

a. Check the contact piece (3 - 24) to insure that it is not deformed or dirty.

b. Fit the contact piece completely into the bottom of the groove on the mechanism assembly (3 - 1). No floating is permited.

6 - 2 Contact piece (3 - 22)

a. Check the contact piece (3 - 22) to insure that it is not deformed or dirty.

b. Fit the contact piece completely into the bottom of the groove on the mechanism assembly. No floating is permitted.

c. Secure the contact piece with the screw (3 - 23).

6 - 3 Contact piece (3 - 20)

a. Check the contact piece (3 - 20) to insure that it is not deformed or dirty.

b. Fit the contact piece into the positioning boss on the mechanism assembly, and secure it with the screw (3 - 21).

7. Installing automatic film speed setting assembly

a. Check the contact piece (3 - 27) of the automatic film speed setting assembly (3 - 25) to insure that it is not deformed.

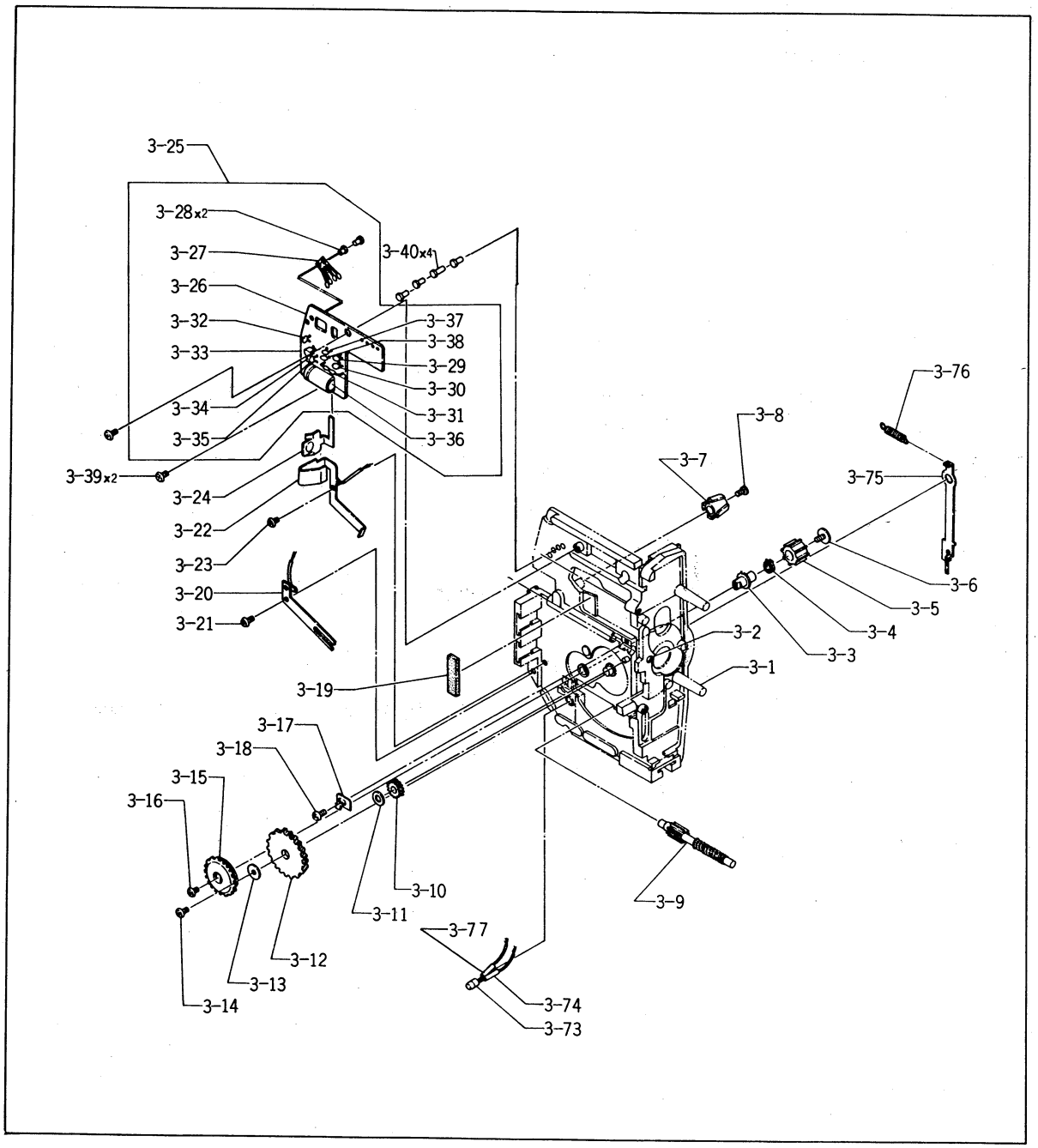
b. Check the portion of the printed circuit board (3 - 26) where the contact piece comes into contact to insure that the portion is clean.

c. When installing the automatic film speed setting assembly, be sure to install the four auto set pins (3 - 40) without fail. To install the automatic film speed setting assembly, two set screws (3 - 39) are used.

d. Push the auto set pins, and make sure that current flows through.
Release the auto set pins from the depression, and make sure that the pins return to their original positions correctly.

e. Install the contact piece (3 - 24) on the printed circuit board by soldering.

Fig. 11


3-25
3-28x2
3-27
3-40x4
3-26
3-32
3-37
3-33
3-38
3-29
3-30
3-34
3-31
3-35
3-36
3-39x2
3-24
3-22
3-23
3-20
3-21
3-19
3-17
3-18
3-15
3-16
3-10
3-11
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3-8
3-7
3-75
3-6
3-5
3-4
3-3
3-2
3-1

8. Installing shutter lever (2 - 33) and contact pieces (2 - 36 through 2 - 39)

8 - 1 Shutter lever (2 - 33)

a. Apply Helicolube slightly to the head of the shutter lever (stopper portion of the sector).

b. Install the shutter lever with washer (2 - 34) and screw (2 - 35).

c. Make sure that the shutter lever operates lightly.

8 - 2 Contact pieces (2 - 36 and 2 - 37)

a. Check the contact pieces (2 - 36 and 2 - 37) to insure that they are not dirty or deformed.

b. Fit the contact pieces into the grooves on the mechanism assembly completely into the bottom of the groove.

c. After fitting the contact pieces, make sure that they are not in contact with the shutter lever and mechanism assembly.

d. Secure the fitted portions of the contact pieces with Pliobond.

e. Make sure that the shutter lever is caused by the contact pieces to return to the original position.

8 - 3 Contact pieces (2 - 38 and 2 - 39)

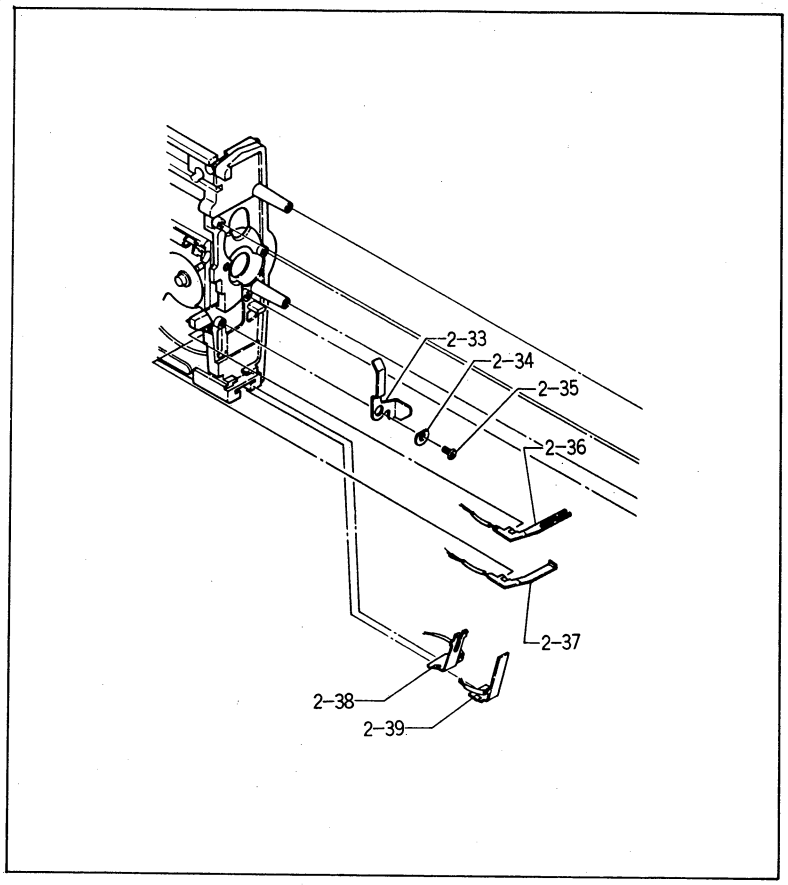
a. Check the contact pieces (2 - 38 and 2 - 39) to insure that they are clean and not deformed.

b. Fit the contact pieces into the grooves on the mechanism assembly.

c. Fit the contact piece (2 - 38) first, and then, fit the contact piece (2 - 39) onto the mechanism assembly.

d. For both contact pieces, be sure to fit them completely into the bottom of groove.

Fig. 12



9. Installing EE assembly and viewfinder assembly

9 - 1 EE assembly (2 - 1)

a. Thoroughtly clean the master lens assembly (2 - 11), and insert it into the EE assembly (2 - 1).

b. When inserting the master lens assembly into the EE assembly, match the groove on the master lens assembly (2 - 11) with the eccentric pin (2 - 7), and install the leaf spring (2 - 8) with the screw (2 - 9).

c. Install the EE assembly on the mechanism assembly with three screws (2 - 10).

d. Referring to the wiring diagram, connect the lead wires by soldering.

e. Apply power, operate the shutter lever (2 - 33), and make sure that the motor works correctly. Further make sure that the motor stops when the lever is released to the correct position.

f. When gap between contact pieces (2 - 36) and (2 - 37) is too narrow, the switch will not be turned off even if the shutter lever is released. Contrarily, when this gap is too wide, the switch does not make but is continuously opened. To adjust gap between contact pieces (2 - 36) and (2 - 37), properly bend the contact piece (2 - 36).

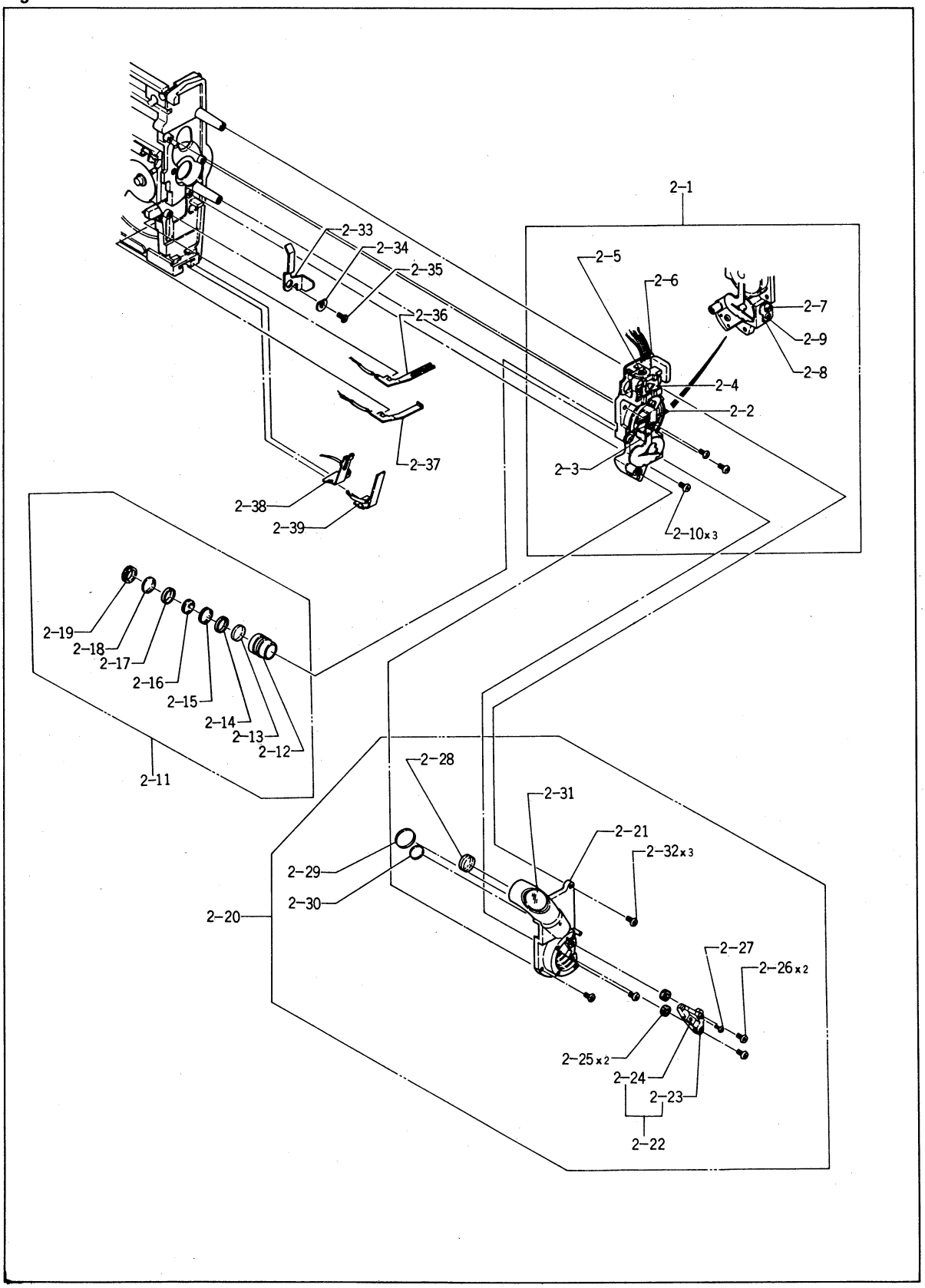
g. Make sure that the EE assembly is actuated when the contact piece (2 - 38) is in contact with the contact piece (2 - 39). Break the contact, and make sure that the EE assembly stops working.

9 - 2 Viewfinder assembly (2 - 20)

a. The optical axis of the mirror assembly (2 - 22) has been correctly aligned. Do not touch the adjust screws (2 - 26 and 2 - 27).

b. Install the viewfinder assembly (2 - 20) securely on the mechanism assembly with three screws (2 - 32).

Fig. 13


2-1
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2-36
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2-8
2-4
2-2
2-3
2-10x3
2-19
2-18
2-17
2-16
2-15
2-14
2-13
2-12
2-11
2-28
2-31
2-21
2-32x3
2-29
2-30
2-20
2-27
2-26x2
2-25x2
2-24
2-23
2-22

10. Installing mechanism assembly

a. Insert the battery check button (1 - 25) and tripod socket (1 - 24) into the main body assembly.

b. Install the mechanism chassis assembly (1 - 19) on the main body assembly.

NOTE: Be careful not to hold lead wires W2 and W9 between the mechanism assembly and main body.

c. Secure the mechanism chassis assembly with three screws (1 - 41 - a) first.

d. Set the needle (3 - 75), and hook the spring.

e. Place the plate (1 - 40), and secure it with two screws (1 - 41 - b) and screw (1 - 42).

NOTE: The plate may be installed on the mechanism chassis assembly without installing the mechanism chassis assembly on the main body assembly. In this case, place the plate after installing the needle, and secure the plate with the screw (1 - 42).

11. Checking footage counter operations

11 - 1 Advancing

a. Make sure that the footage counter advances smoothly from S to 15m without any dragging.

b. When any teeth on the worm gear (3 - 9) are damaged or excessively worn, or the needle is barred, the footage counter needle (3 - 75) is not advanced. In this case, replace defective parts with new ones.

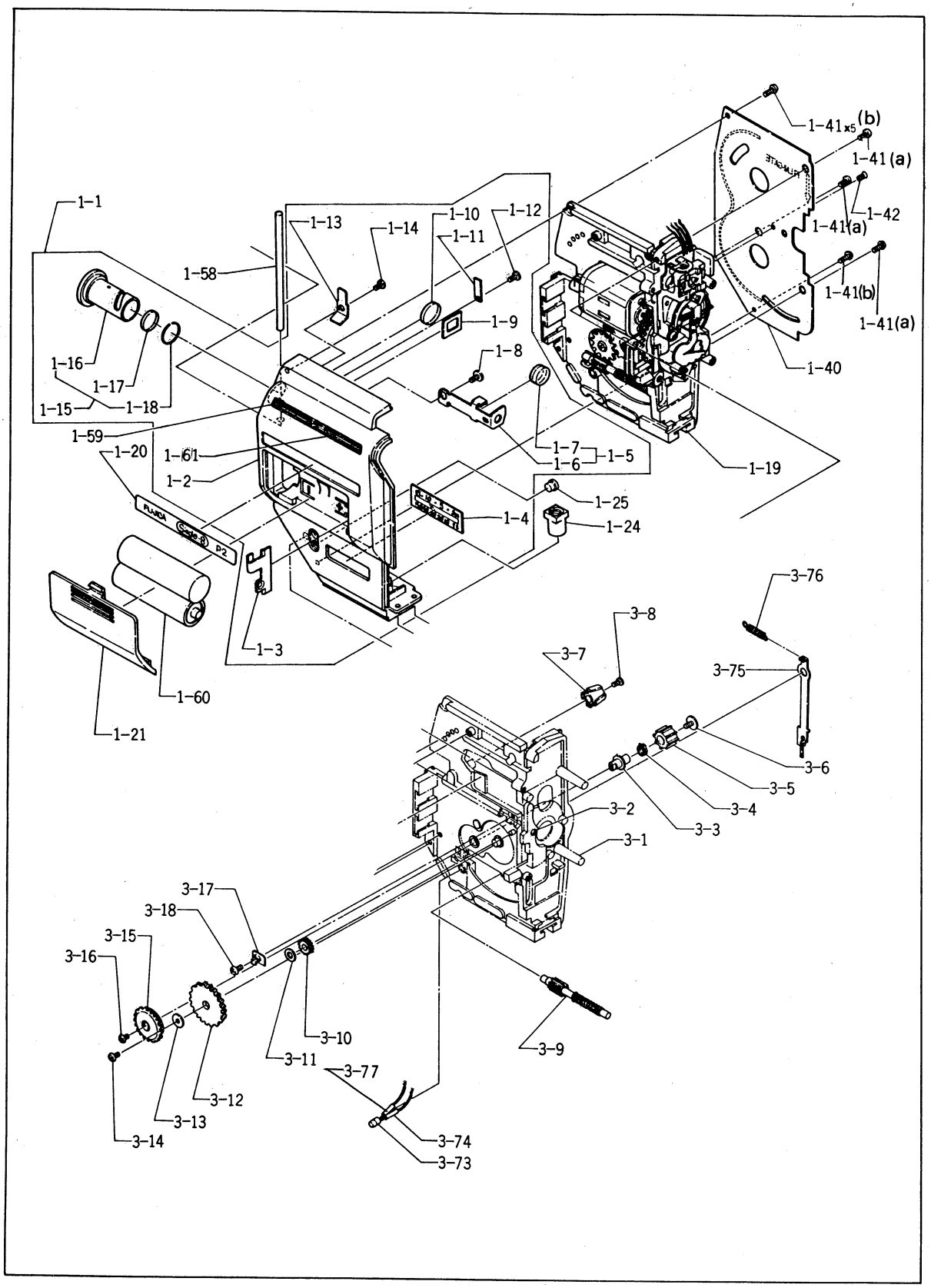
11 - 2 Returning

a. Make sure that the footage counter needle returns to "S" from any position.

b. When the needle is not engaged with the gear teeth correctly, it will not disengage with gear tooth when necessary, causing the needle not to return to "S". Properly bend the needle to correct the engagement.

NOTE: Do not bend the needle excessively. The needle will not be advanced correctly.

Fig. 14


1-41x5 (b)
1-41 (a)
1-42
1-41(a)
1-41(b)
1-41(a)
1-40
1-1
1-13
1-14
1-10
1-12
1-11
1-58
1-9
1-8
1-16
1-17
1-15
1-18
1-59
1-20
1-61
1-2
1-7
1-6
1-5
1-19
1-25
1-4
1-24
1-3
1-60
1-21
3-76
3-8
3-7
3-75
3-6
3-5
3-4
3-3
3-2
3-1
3-17
3-18
3-15
3-16
3-10
3-11
3-77
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3-13
3-14
3-9
3-74
3-73

12. Battery checking system

a. Apply positive (+) and negative (—) DC voltages respectively to the contact pieces (3 - 24) and (3 - 22), depress the battery check button (1 - 25), and make sure that the LED (3 - 73) lights with DC 2.5V or higher. Further, make sure that the LED does not light when voltage is 2.0V or below.

b. Depress the battery check button (1 - 25), and make sure that voltage across lead wires (W4 and W5) is equal to the sourve voltage (voltage of batteries).

c. Depress the battery check button, and make sure that voltage across lead wires (W4 and W3) is approximately 1.5V.

d. Make sure that approximately 300mA flows at 3V when the battery check button is depressed.

f. For paragraph 12 - a above, replace the LED with a new one, and for paragraphs 12 - b, c and d above, replace the printed circuit board with a new one, when condition is abnormal.

NOTE: 1. The checking methods described above apply with the camera assembled completely except for the plate (1 - 40).

2. The battery checking system can be inspected on the mechanism chassis assembly (1 - 19) alone. In this case, depress the contact piece (3 - 20) in stead of the battery check button.

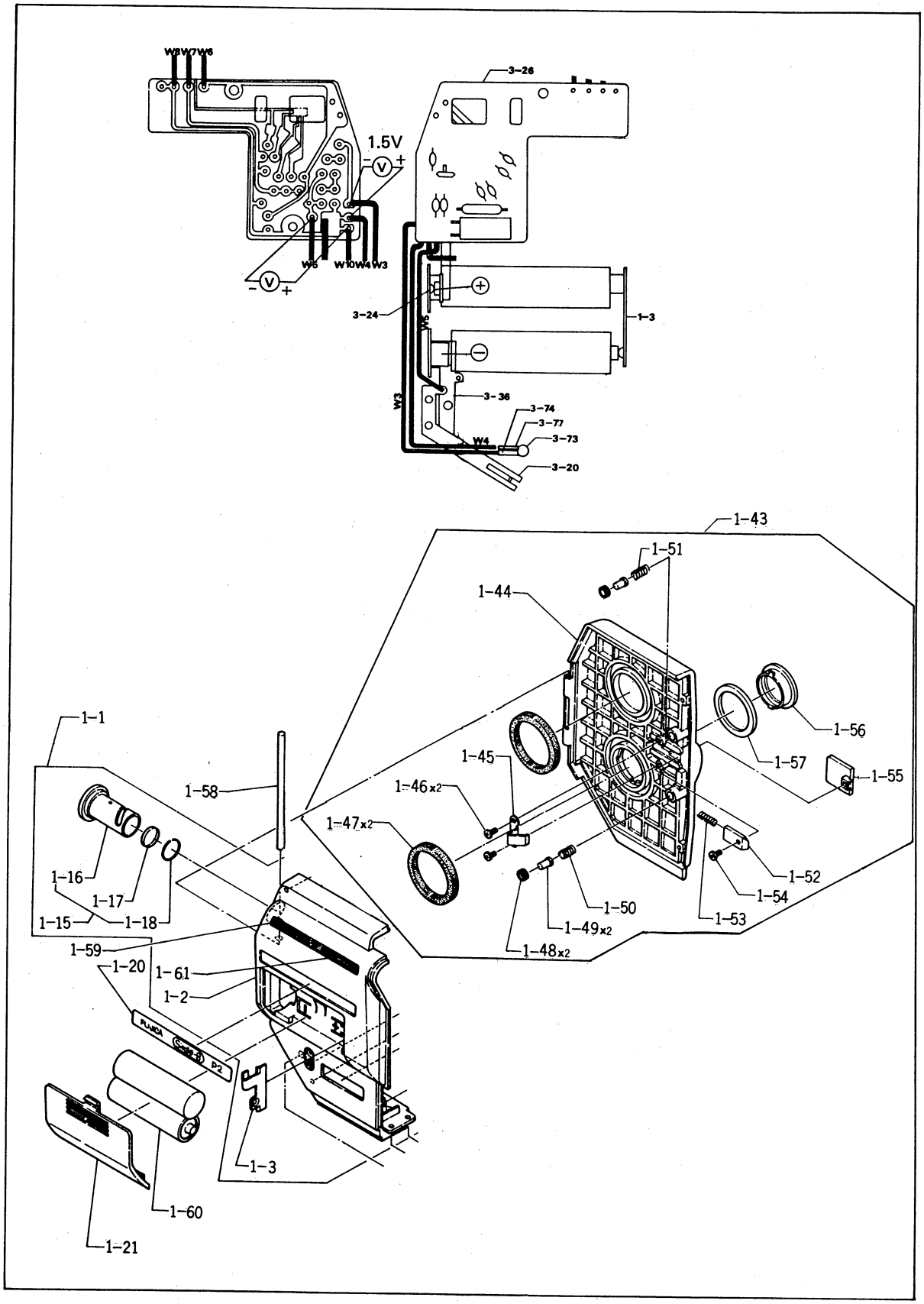
13. Installing film chamber door assembly

a. Match the film chamber door assembly (1 - 43) with the camera body, and fit the hinge shaft (1 - 58).

b. Make sure that film chamber door can be opened and closed smoothly and lightly without any hardness.

c. Close the film chamber door, and make sure that the door is locked correctly and securely. Make sure that the door does not open even if a minor shock is given to the camera body or film chamber door.

Fig. 15


W2W7W6
1.5V
3-26
W5
W10W4W3
3-24
1-3
W5
W3
3-36
3-74
3-77
3-73
W4
3-20
1-43
1-51
1-44
1-56
1-57
1-55
1-45
1-46x2
1-47x2
1-52
1-54
1-50
1-53
1-49x2
1-48x2
1-1
1-58
1-16
1-17
1-15
1-18
1-59
1-20
1-61
1-2
1-3
1-60
1-21

14. EE assembly

14 - 1 Adjustment of exposure

a. Check the batteries to insure that they provide 2.5V or more voltage.

b. Adjust the variable resistor (2 - 5) and CdS adjust plate (2 - 4) so that the values shown in the following table are satisfied.

ASA	Light source			Standard exposure value	
25	Low luminosity	649 rlx	Equivalent to F:2.8	4.3 ~ 10.8 lx	±2/3EV
	Medium luminosity	2,596 rlx	Equivalent to F:5.6	4.3 ~ 10.8 lx	±2/3EV
	High luminosity	10,385 rlx	Equivalent to F:11	4.3 ~ 10.8 lx	±2/3EV
200	Low luminosity	81 rlx	Equivalent to F:2.8	0.53 ~ 1.35 lx	±2/3EV
	Medium luminosity	324 rlx	Equivalent to F:5.6	0.53 ~ 1.35 lx	±2/3EV
	High luminosity	1,298 rlx	Equivalent to F:11	0.53 ~ 1.35 lx	±2/3EV

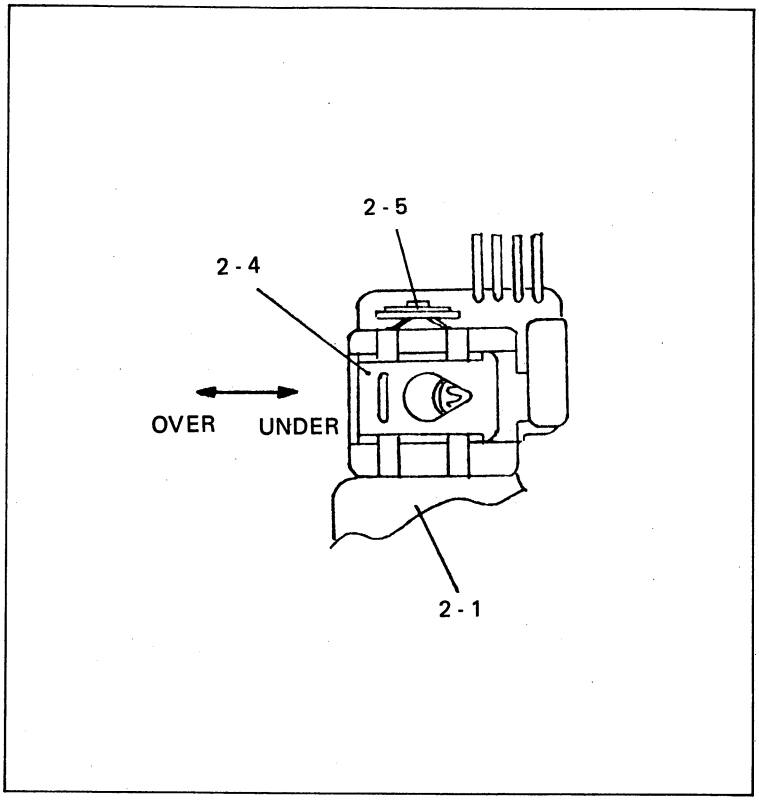
c. When actual exposure value is not within the standard range for low luminosity, move the CdS adjust plate (2 - 4).

When over: Reduce exposure area of a CdS.

When under: Increase exposure area of the CdS.

d. When actual exposure value is not within the standard range for high luminosity, adjust the variable resistor (2 - 5).

Fig. 16



14 - 2 Film speed changeover

Changeover film speeds at 649 rlx, and make sure the exposure value for each film speed is within the following standard range.

ASA	Standard exposure value		
25	4.3 ~ 10.8 lx	±2/3EV	Equivalent to F:2.8
50	2.1 ~ 5.4 lx	±2/3EV	Equivalent to F:4
100	1.06 ~ 2.7 lx	±2/3EV	Equivalent to F:5.6
200	0.53 ~ 1.35 lx	±2/3EV	Equivalent to F:8
400	0.27 ~ 0.68 lx	±2/3EV	Equivalent to F:11

14 - 3 Checking film speed changeover resistances

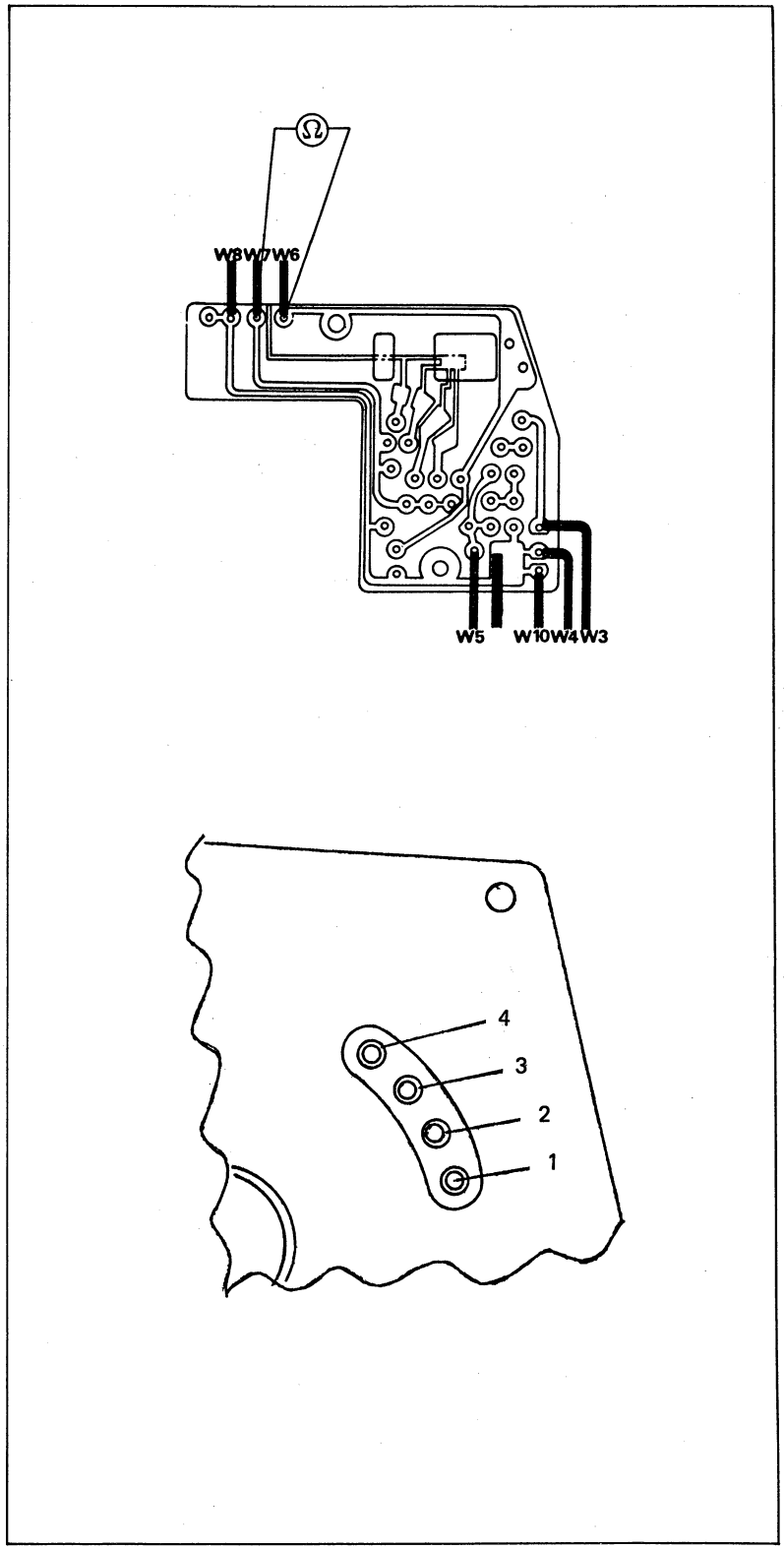
a. Remove the plate (1 - 40).

b. Disconnect the lead wires (W6 and W7) from the printed circuit board (3 - 26).

c. Connect an ohm - meter to the terminals from where the lead wires (W6 and W7) have been disconnected, push the auto set pins (3 - 40), and make sure the measured resistances are within the following resistance range.

ASA	Resistance	ASA Auto set pins			
		1	2	3	4
25	0.83 KΩ ~ 1.01 KΩ	ON	ON	ON	ON
50	1.4 KΩ ~ 1.73 KΩ	ON	ON	ON	OFF
100	2.7 KΩ ~ 3.3 KΩ	ON	ON	OFF	OFF
200	6.7 KΩ ~ 8.2 KΩ	ON	OFF	OFF	OFF
400	∞	OFF	OFF	OFF	OFF

Fig. 17



14 - 4 Checking meter

a. Apply positive (+) and negative (—) DC voltages (2.5 to 3V) respectively to the lead wires W8 and W9, change light value applied to the CdS, and make sure the meter operates accordingly.

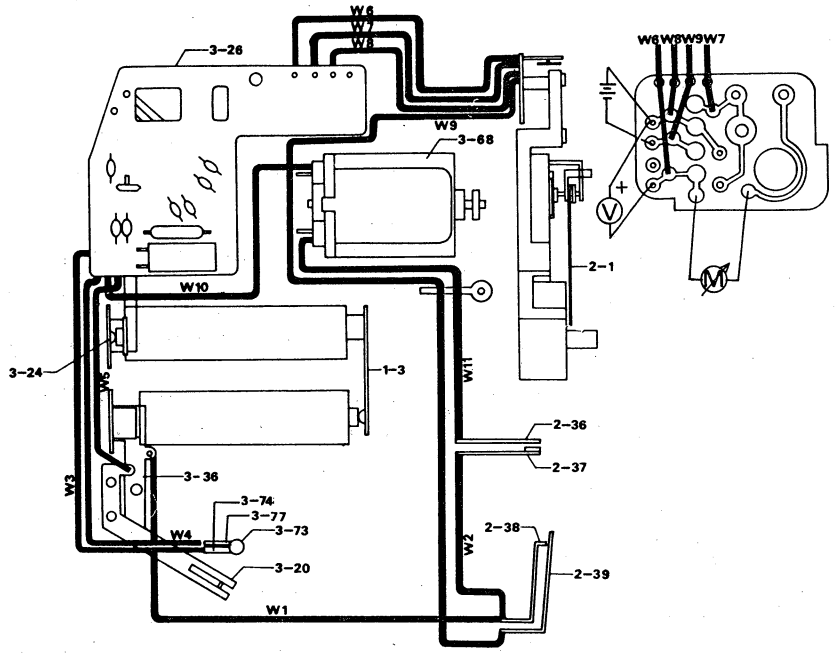
b. Change film speed changeover resistance, and make sure that shape of the meter aperture changes accordingly.

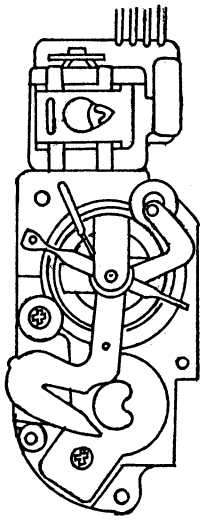
c. Apply DC2.5 to 3V to the lead wires W8 and W9, and make sure that voltage across the lead wires W8 and W6 is DC 1.32±0.05V.

d. Make sure that internal resistance of the meter is 1.54KΩ±130Ω.

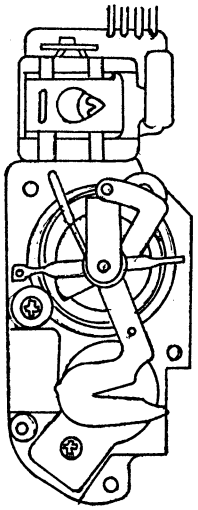
e. Make sure the positions of the meter stopper are as shown in the next page at both the fully opened and stopped down sides.

Fig. 18

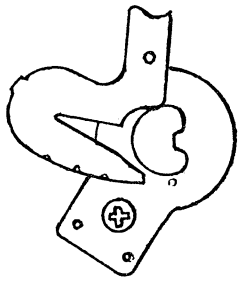




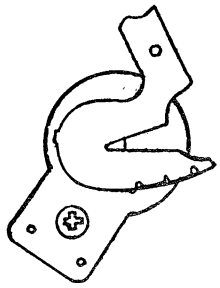
Fully opened



Stopped down to the minimum



Fully opened



Stopped down to the minimum

14 - 5 Checking meter circuit

Load batteries, connect a voltmeter to the lead wires W8 and W9, and make sure the measured voltage is zero. Next, depress the shutter release, and make sure the voltmeter indicates voltage of the batteries.

14 - 6 Adjustment of underexposure signal

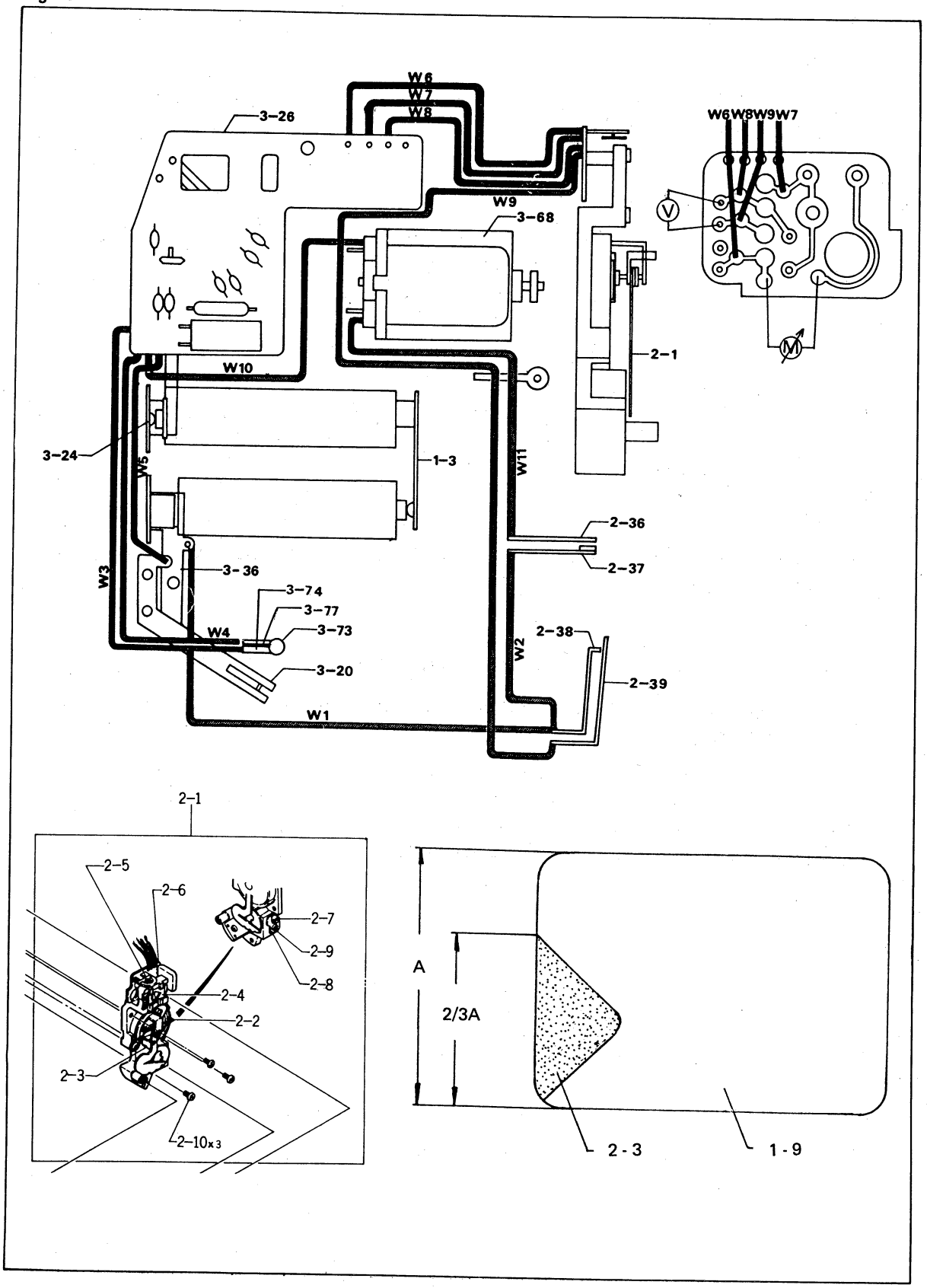
a. Look through the viewfinder, and properly bend the red filter (2 - 3) so that underexposure signal appears in the field of view frame (1 - 9) as shown in the next page.

NOTE: The illustration shows the maximum limit. Underexposure signal may be slightly smaller than this.

b. Check the underexposure signal to insure that it is not scarred or dirty.

c. Make sure that the underexposure signal goes out as soon as the EE switch turns on. (Be sure to face the camera to a bright object.)

Fig. 19


W6
W7
W8
3-26
W6W8W9W7
W9
3-68
V
2-1
M
W10
3-24
W5
1-3
W11
2-36
2-37
W3
3-36
3-74
3-77
3-73
W4
2-38
W2
3-20
2-39
W1
2-1
2-5
2-6
2-7
2-9
2-8
2-4
2-2
2-3
2-10x3
A
2/3A
2 - 3
1 - 9

15. Adjustment of focusing

a. Load a film cartridge.

b. Hold a thin insulation material (lens tissue may be used) between the contact pieces (2 - 38) and (2 - 39) to fully open the aperture.

c. Set a collimater (Gokosha Model, f = 193mm) to —7.5 scale, and install the camera on the collimater.

d. Operating the camera to transport the film, properly turn the eccentric pin (2 - 7) with a screw driver to adjust focusing.

e. Make sure the focused position is within —7.5±5 scale.

f. After completing the adjustment, recheck the focusing.

16. Installing front cover assembly

a. Check the window glasses (1 - 29) and (1 - 30) of the front cover assembly (1 - 26) to insure that they are clean, not frosted and no dust on them.

b. Apply antistatic agent to the interior of the window glass (1 - 30) to prevent the needle being attracted by the window glass due to static electricity.

c. Fit the shutter release assembly (1 - 31) to the front cover assembly, and install the front cover assembly on the main body.

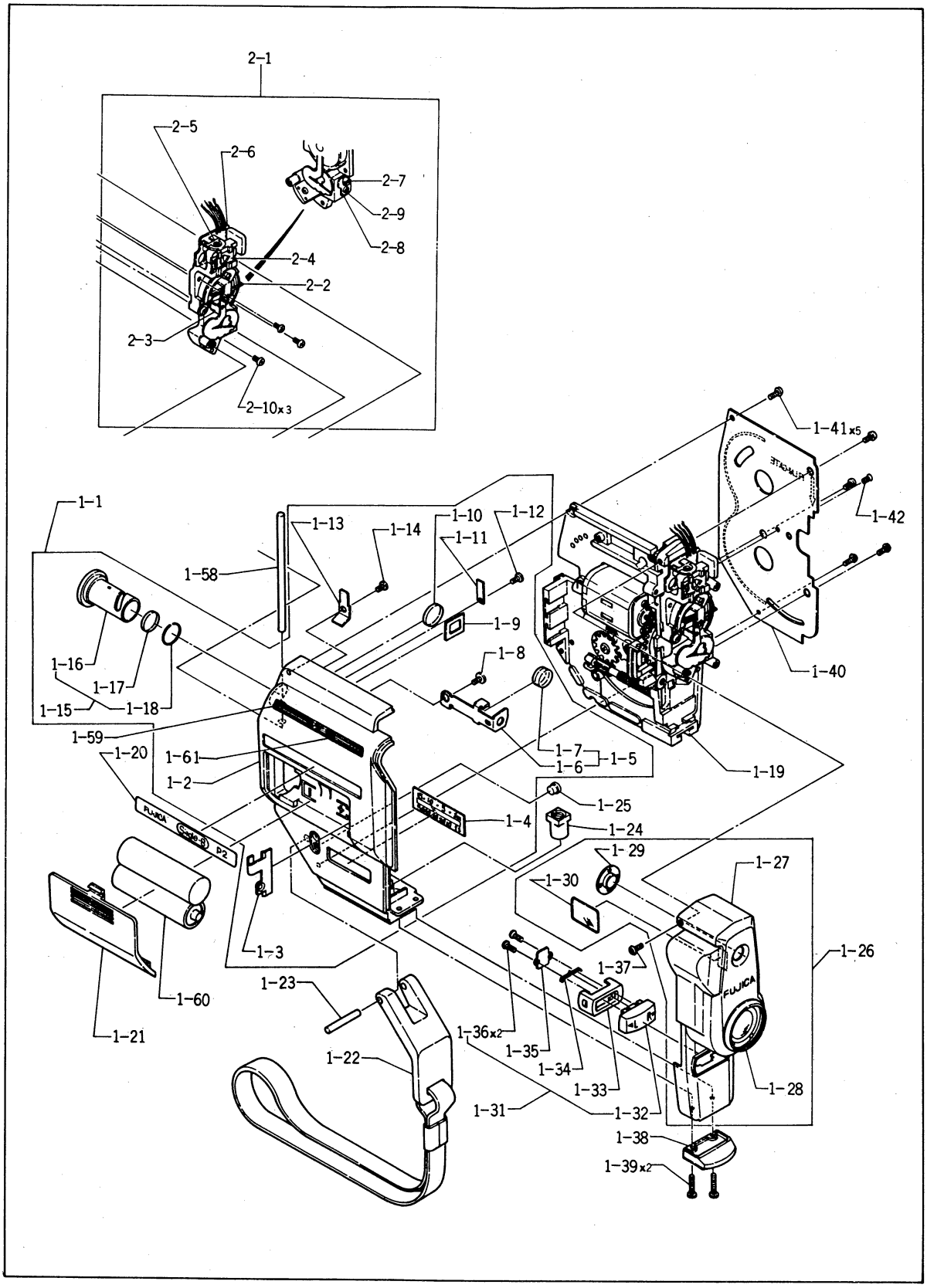
d. Securely tighten the screw (1 - 37).

e. Install the seat plate (1 - 38) with two screws (1 - 39).

f. Check the run - lock button (1 - 32) to insure it moves smoothly and clicks at each position correctly.

g. Depress the shutter release slowly and gradually, and make sure that the EE switch turns on (meter starts to operate) when it reaches the first step (further, make sure that there is a feeling that tells you the shutter release has reached the first step). Depress the shutter release further, and make sure that the motor starts to operate.

Fig. 20


2-1
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2-10x3
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1-31
1-32
1-38
1-39x2
FUJICA

17. Adjustment of parallax

a. Install the camera on a parallax adjuster.

b. Look into the viewfinder, and see if the chart of the parallax adjuster is matched with the fielf of view frame. When the field of view frame is deviated from the chart vertically, adjust position of the lens assembly (1 - 5) accordingly.

c. When the field of view frame is deviated from the chart horizontally, properly turn the adjust screw (1 - 61).

d. After completing the above adjustments, look at an outdoor scene through the viewfinder, and insure that no remarkable image tilting is seen.
(The rated tilting is within 1° 30'.)

e. When looking objects through the viewfinder, insure that the objects can be seen clearly.

f. As the results of checkings 17 - d and e above, when image tilting is excessive or objects cannot be seen clearly, replace the lens assembly (1 - 5) or viewfinder assembly (2 - 20) with a new one.

18. Film take - up torque

a. The rated film take - up torque is 45±10 gr - cm. When it deviates the rating, replace the spring (3 - 4).

b. Make sure that the shaft (3 - 3) and spring (3 - 4) turn smoothly on the mechanism chassis assembly.

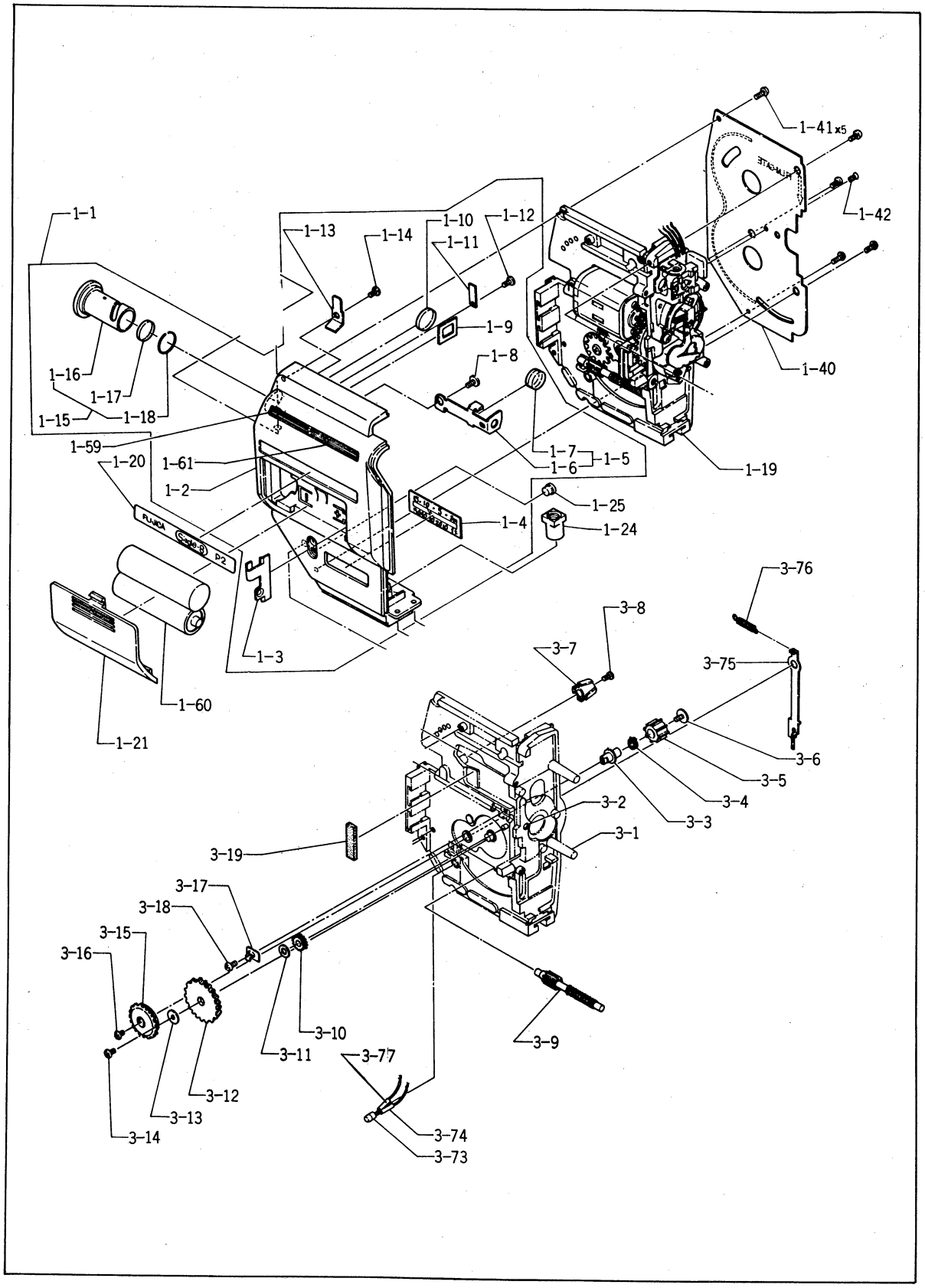
19. Installing battery chamber cover

a. Close the battery chamber cover (1 - 21), and make sure the battery chamber cover is locked correctly.

b. Remove the battery chamber cover to insure that it can be removed without any difficulty.

c. Make sure the battery chamber cover can be locked correctly and removed without any difficulty regardless of batteries loaded or not.

Fig. 21


1-1
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1-20
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3-1
3-2
3-3
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Ⅳ INSPECTION

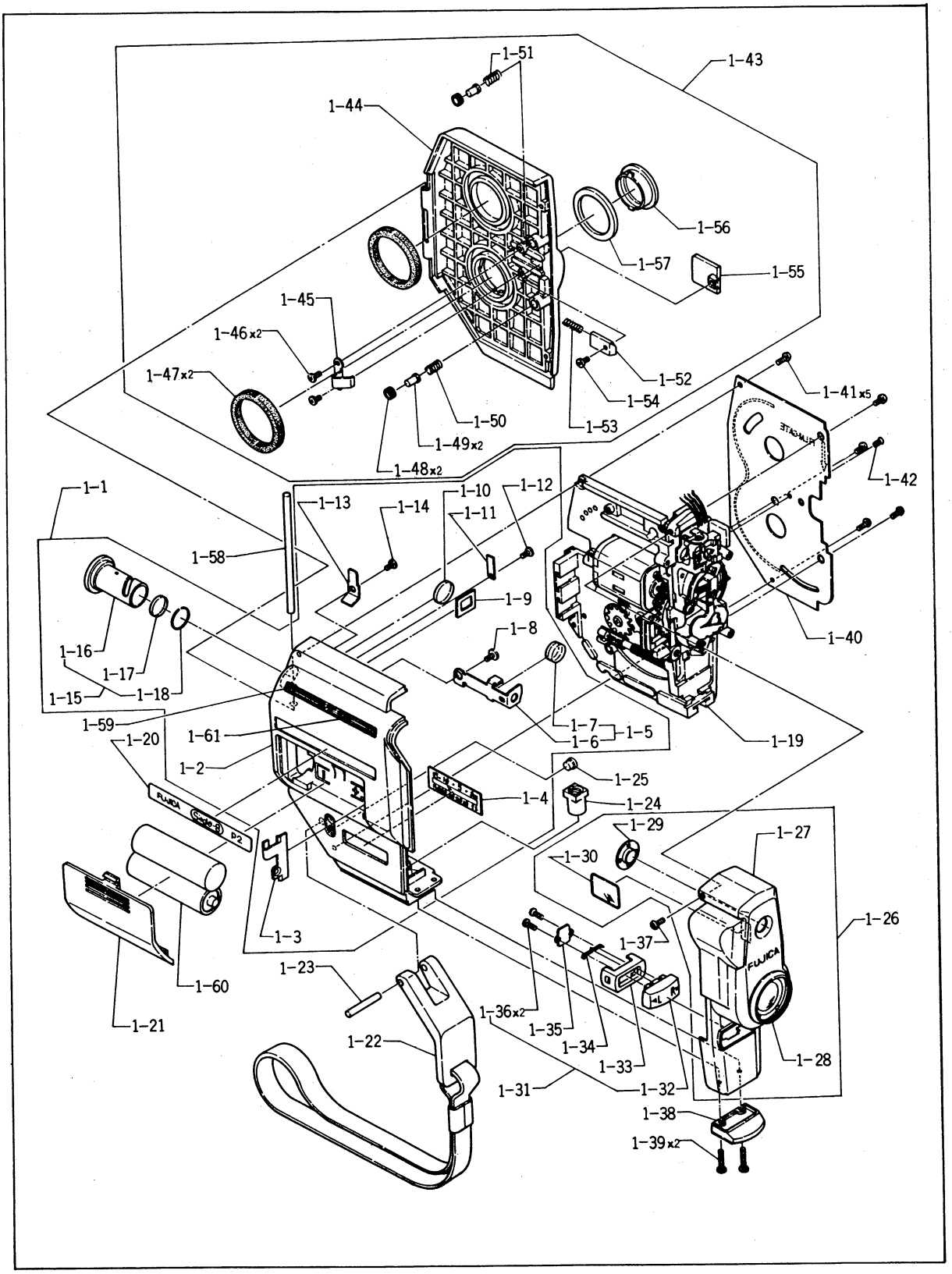
INSPECTED ITEM	METHOS OF INSPECTION	REMARKS
1. EE system 1 - 1 Movement of underexposure signal	After insuring that the batteries supply the rated voltage, depress the shutter release in a half way (to the first step so that the EE system is turned on), cover up the CdS window with your hand, and make sure the under - exposure signal apperars in the viewfinder. Move your hand away from the CdS window, and make sure the underexposure signal disapperars. (Perform this inspection at a bright place.)	
1 - 2 Aperture indicator	Without loading film cartridge, depress the shutter release in a half way, cover up the CdS window with your hand and move your hand away from the window repeatedly, and make sure the aperture indicator needle moves smoothly without any dragging.	
2. Film transporting system 2 - 1 Motor	Depress the shutter release, and make sure the motor turns without any abnormal operating sound.	
2 - 2 Film transporting	(1) With the motor driven, hold the take - up spindle between your fingers to stop it, and make sure the core of spindle (screw head) continues to turn. (2) Load a film cartridge, depress the shutter release to advance the film, and make sure the film is transported normally. (Watch the film being transported through the film confirmation window for about one meter.)	

INSPECTED ITEM	METHOD OF INSPECTION	REMARKS
3. Footage counter	(1) Load a film cartridge, and by watching the footage counter, transport the film. (a) Make sure the needle moves smoothly to 5m. (b) Open the film chamber door, take out the film cartridge, and make sure the needle returns to "S". (2) In the rate of one out 20 to 30 cameras, transport film to the full footage counter range (15m), making sure the needle moves smoothly, and open the film chamber door to insure that the needle returns to "S".	
4. Other items 4 - 1 Grip	Make sure the grip can be folded and raised with a proper friction.	
4 - 2 Shutter lock	Set the run - lock button to "L", and make sure the shutter release cannot be depressed.	
4 - 3 Visibility adjustment	Turn the eyepiece, and make sure it turns smoothly.	
4 - 4 Battery check button	Load new batteries, depress the battery check button, and make sure the battery check lamp lights.	
4 - 5 Film chamber door	Slide the door lock, and make sure the film chamber door opens easily. Close the film chamber door, and make sure it is locked correctly.	
5. Appearance	Check the camera body, film chamber door and front cover to insure that no scar, scratch, and dirt exists on them. Look into the viewfinder, and make sure no dust is seen in the viewfinder.	
6. Setting after completing the inspection	Before placing the camera into a box, set the controls as shown below: (1) Battery: Unloaded (2) Run - Lock button: "R" (3) Eyepiece: To the deepest position (4) Footage counter needle: "S" (5) Grip: Folded	

V

PARTS LIST

Fig. 1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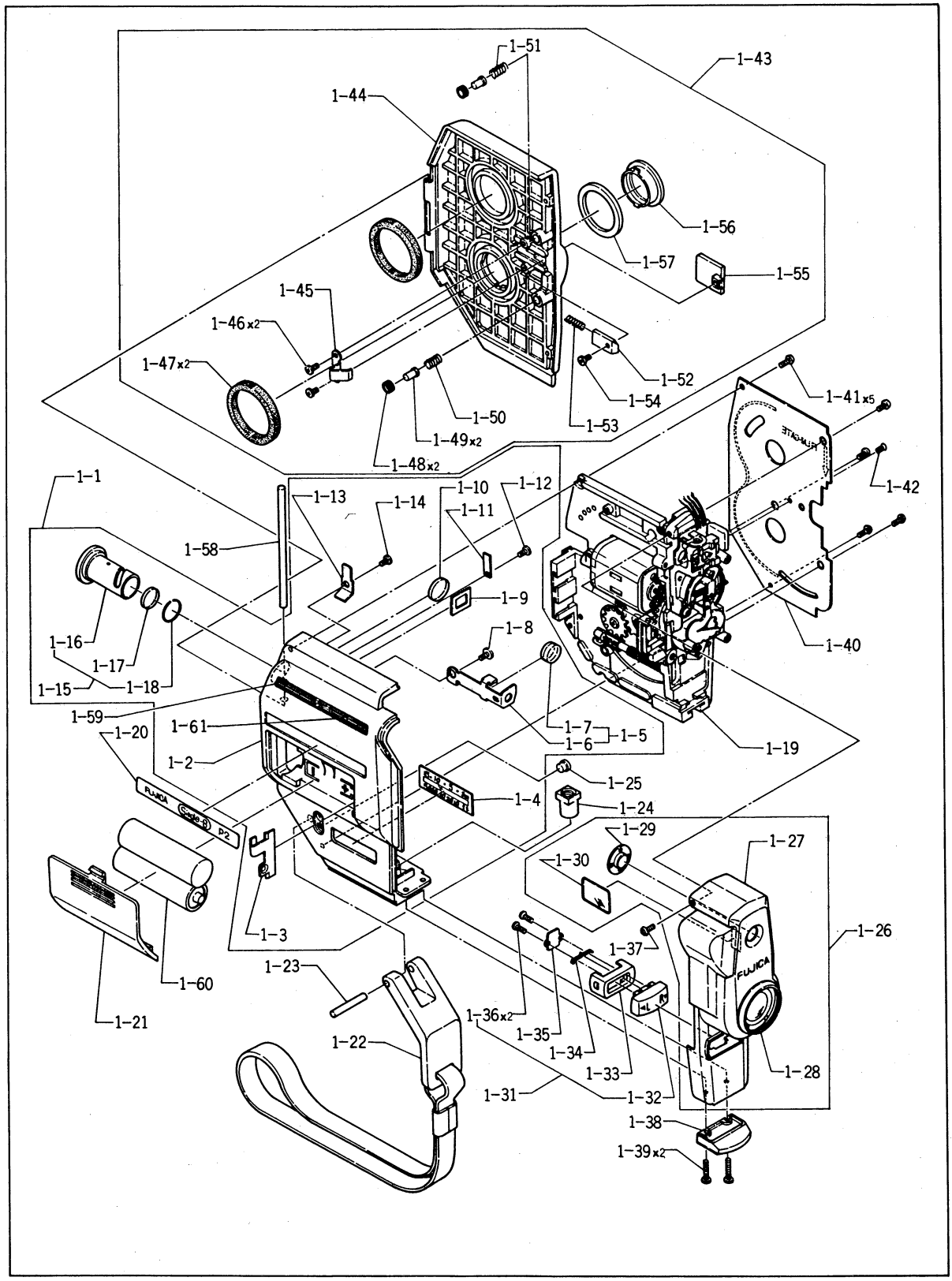
Ref. No.	Part No.	Part Name	Q'ty	Commonly used with
1 - 1	10A2197820	Main body assembly	1	
1 - 2	10B2198000	Main body	1	
1 - 3	109B2198020	Contact piece	1	
1 - 4	58B2198040	Footage counter scale	1	
1 - 5	20A2197800	Lens assembly	1	
1 - 8	53B1274210	Set screw	1	PX300
1 - 9	20B2198090	Frame	1	
1 - 10	1B2206590	Lens	1	
1 - 11	85B1274220	Holder	1	PX300
1 - 12	113M200301S	Set screw	1	
1 - 13	85B1274062	Holder	1	PX300
1 - 14	113M200301S	Set screw	1	
1 - 15	23A2197810	Eyepiece assembly	1	
1 - 16	23B2198110	Eyepiece	1	
1 - 17	1B2206590	Lens	1	
1 - 18	50B1078410	Clip	1	PX300
1 - 20	58B2198130	Name plate	1	
1 - 21	11B2198010	Battery chamber cover	1	
1 - 22	150A2197840	Grip assembly	1	
1 - 23	19B2198070	Shaft	1	
1 - 24	53B2198030	Tripod socket	1	
1 - 25	16B26703	Battery check button	1	PX300
1 - 26	11A2198800	Front cover assembly	1	
1 - 30	6B2198970	Window glass	1	
1 - 31	16A2198850	Shutter release assembly	1	
1 - 32	16B2199010	Run - lock button	1	
1 - 33	16B2199000	Shutter release	1	
1 - 34	50B69900	Click spring	1	PX300
1 - 35	86B2199020	Holder	1	
1 - 36	113M170501S	Set screw	2	
1 - 37	114M200551G	Set screw	1	
1 - 38	81B2199032	Seat plate	1	

Fig. 1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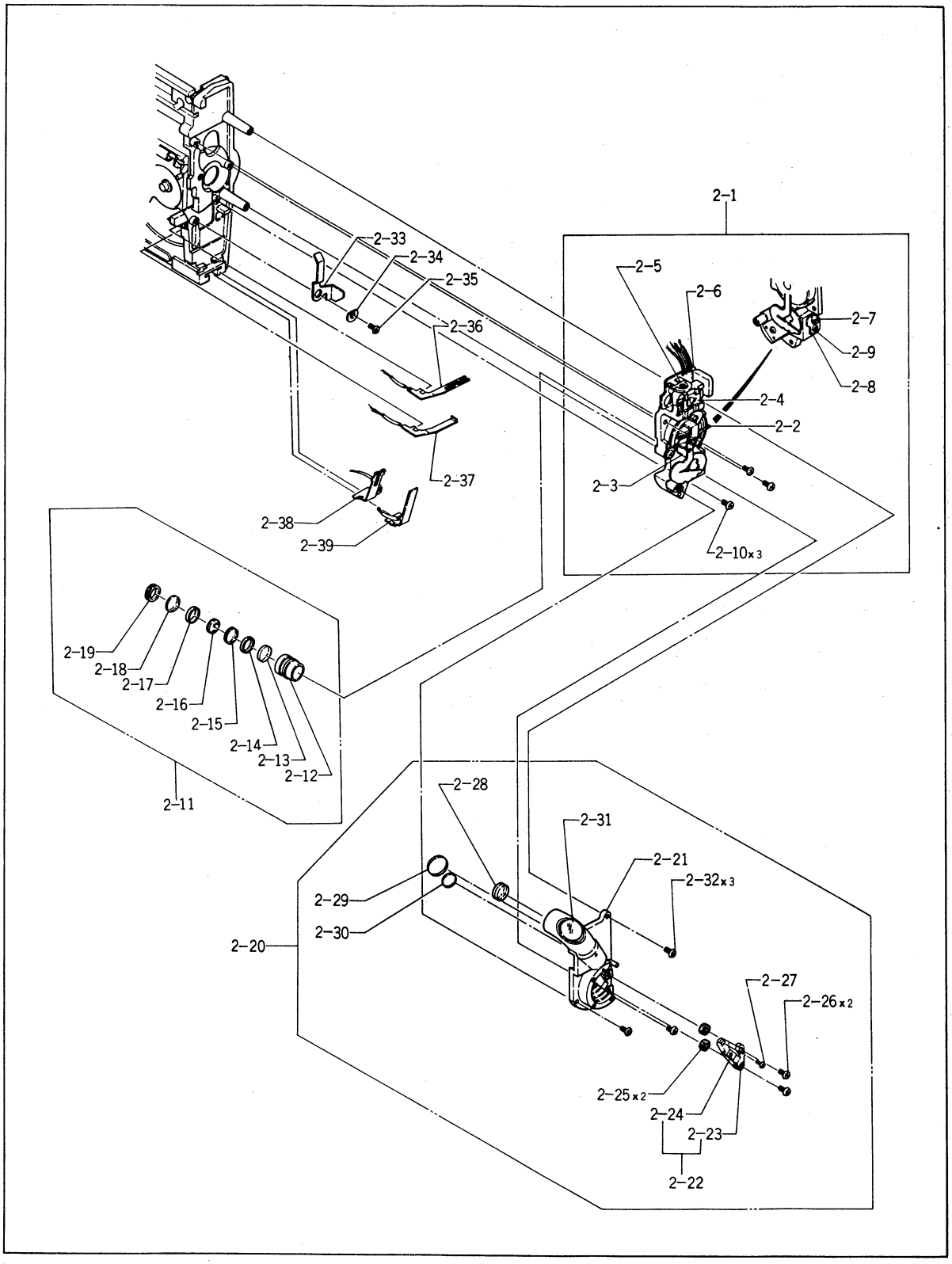
Ref. No.	Part No.	Part Name	Q'ty	Commonly used with
1 - 39	113M200803S	Set screw	2	
1 - 40	58B2198080	Plate	1	
1 - 41	113M200553S	Set screw	5	
1 - 42	114M170301S	Set screw	1	
1 - 43	11A2200600	Film chamber door assembly	1	
1 - 45	50B44730	Spring	1	ZXM300
1 - 46	113M200351S	Set screw	2	
1 - 47	27B1276140	Hamaprene ring	2	PX300
1 - 52	47B1276030	Lock lever	1	PX300
1 - 53	50B1276060	Spring	1	PX300
1 - 54	113M200501S	Set screw	1	
1 - 55	16B2200830	Cover lock	1	
1 - 56	1B2200820	Film confirmation window	1	
1 - 57	84B2200810	Frame ring	1	
1 - 58	19B2198050	Hinge shaft	1	
1 - 59	59B2198120	Leather	1	
1 - 60		Battery	2	
1 - 61	120M200223S	Adjust screw	1	

Fig. 2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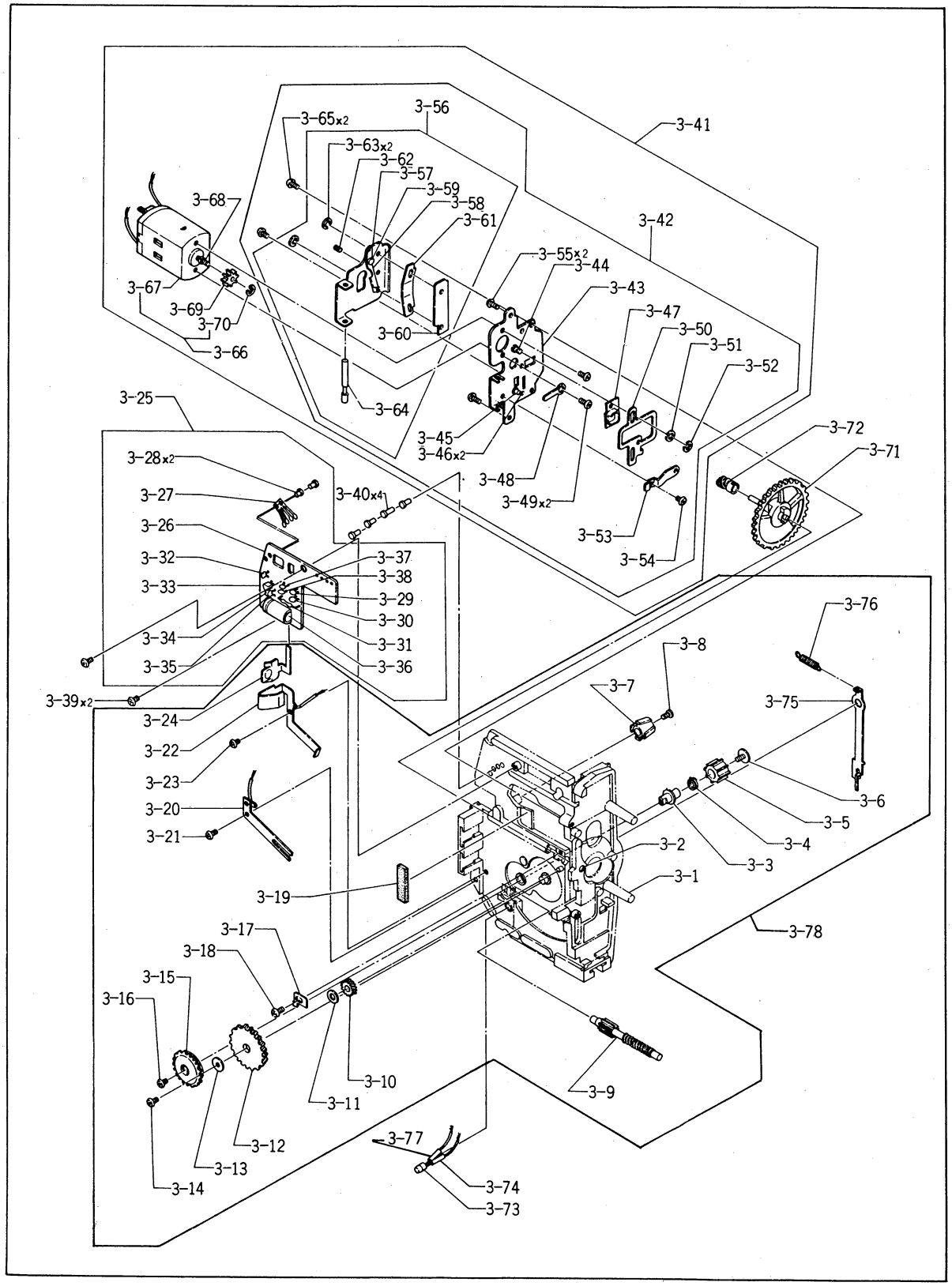
Ref. No.	Part No.	Part Name	Q'ty	Commonly used with
2 - 1	317A2203400	EE assembly	1	
2 - 7	32B2203560	Eccentric pin	1	
2 - 8	50B2203570	Leaf spring	1	
2 - 9	113M200501S	Set screw	1	
2 - 10	113M200701S	Set screw	3	
2 - 11	21A2203000	Master lens assembly	1	
2 - 20	10A2203800	Viewfinder assembly	1	
2 - 32	113M200701S	Set screw	3	
2 - 33	47B2199710	Shutter lever	1	
2 - 34	55B2199860	Washer	1	
2 - 35	114M200401G	Set screw	1	
2 - 36	109B2199730	Contact piece	1	
2 - 37	109B2199720	Contact piece	1	
2 - 38	109B2199752	Contact piece	1	
2 - 39	109B2199741	Contact piece	1	

Fig. 3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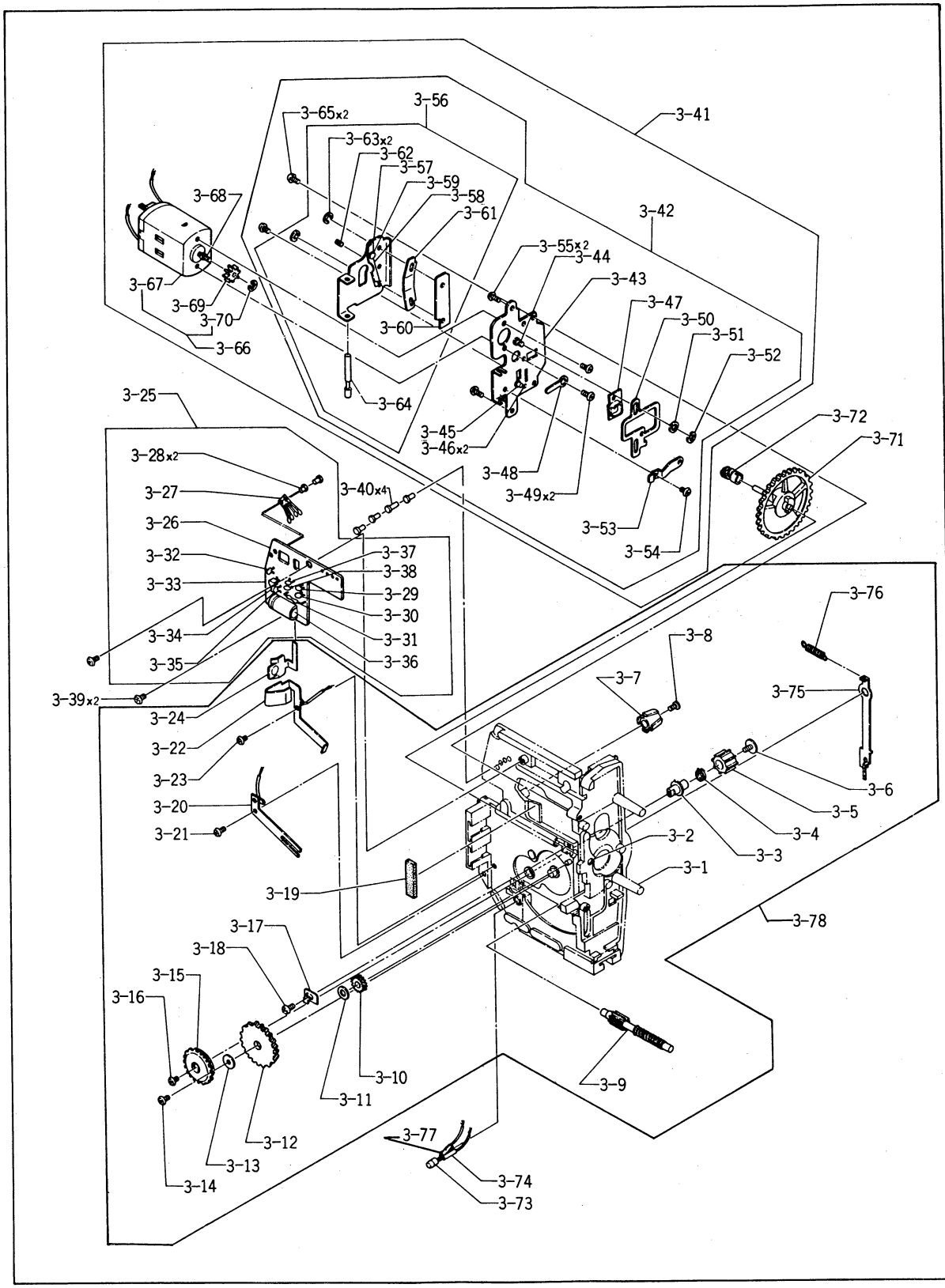
Ref. No.	Part No.	Part Name	Q'ty	Commonly used with
3 - 3	32B2199810	Shaft	1	
3 - 4	50B655110	Friction spring	1	PX300
3 - 5	37B655150	Film take - up spindle	1	PX300
3 - 6	53B11560	Set screw	1	PX300
3 - 7	32B1295810	Film feed spindle	1	PX300
3 - 8	53B560020	Set screw	1	PX300
3 - 9	34B1276560	Worm gear	1	PX300
3 - 12	34B2199790	Helical gear	1	
3 - 13	55B27340	Washer	1	
3 - 14	113M170251S	Set screw	1	
3 - 15	34B2199800	Gear	1	
3 - 16	53B560020	Set screw	1	
3 - 17	31B2199770	Shaft holder	1	
3 - 18	113M200251S	Set screw	1	
3 - 19	27B2199870	Moquette	1	
3 - 20	109B2199830	Contact piece	1	
3 - 21	113M200251S	Set screw	1	
3 - 22	109B2199840	Contact piece	1	
3 - 23	113M200251S	Set screw	1	
3 - 24	109B2199850	Contact piece	1	
3 - 25	318A2202400	Automatic film speed setting assembly	1	
3 - 39	113M200501S	Set screw	2	
3 - 40	17B1277530	Auto set pin	4	PX300
3 - 42	315A2201630	Gate assembly	1	
3 - 47	27B2202111	Light shield	1	
3 - 48	111B24300	Lug	1	
3 - 49	110M200251N	Set screw	2	ZXM300 ZXM500
3 - 50	45B2202070	Claw	1	
3 - 51	55B561940	Washer	1	
3 - 52	191M012T	E - clip	1	
3 - 53	50B2202060	Leaf spring	1	
3 - 54	110M200251N	Set screw	1	

Fig. 3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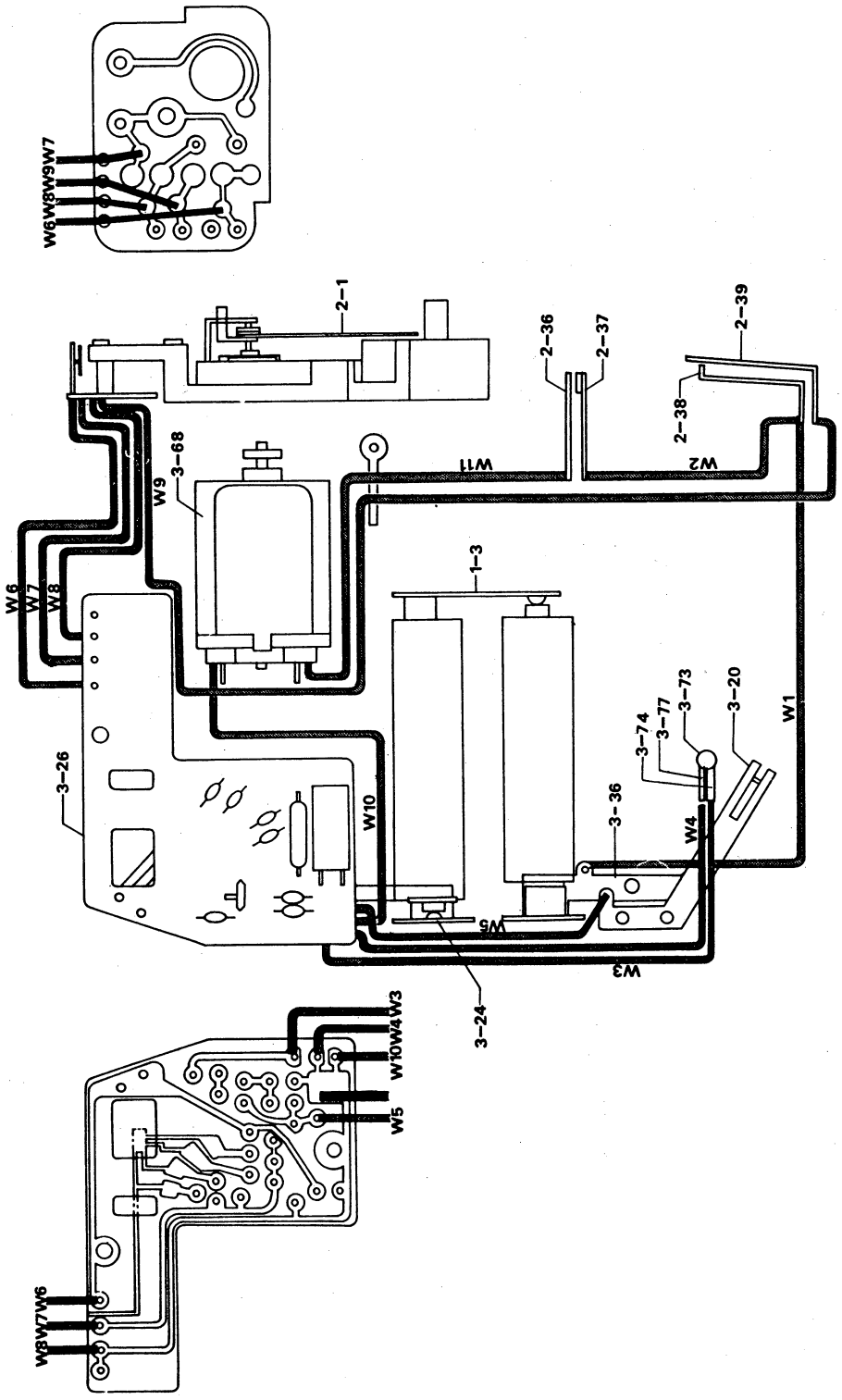
Ref. No.	Part No.	Part Name	Q'ty	Commonly used with
3 - 55	113M200501S	Set screw	2	
3 - 60	44A1270260	Pressure plate assembly	1	PX300
3 - 61	50B656070	Leaf spring	1	PX300
3 - 62	120M200223S	Adjust screw	1	
3 - 63	191M015T	E - clip	2	
3 - 64	32B2202040	Shaft	1	
3 - 65	113M200501S	Set screw	2	
3 - 66	101A2201610	Motor assembly	1	
3 - 67	101B2202100	Motor	1	
3 - 68	50B1275740	Friction ring	1	PX300
3 - 69	34B1275730	Gear	1	PX300
3 - 70	191M015T	E - clip	1	
3 - 71	34A2201620	Sector assembly	1	
3 - 72	34B2199760	Worm gear	1	
3 - 73	106K227850	LED	1	PX300
3 - 74	115B2199880	Tube	1	
3 - 75	81B2199820	Needle	1	
3 - 76	50B1276600	Spring	1	PX300
3 - 77	240M010010B	Tube	1	
3 - 78	10A2199410	Mechanism assembly	1	

Fig. 4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W5
W8W7W6

Ref. No.	Part No.	Part Name	Q'ty	Commonly used with
W 1	111B2202680	Lead wire (Blue)	1	
W 2	111B2202650	Lead wire (Blue)	1	
W 3	111B2202670	Lead wire (Brown)	1	
W 4	111B2202640	Lead wire (Red)	1	
W 5	111B2202660	Lead wire (White)	1	

Ⅵ TOOL LIST

Parallax adjuster J527