



SERVICE MANUAL

**FUJI GW690-II
(PROFESSIONAL)**

**FUJI GSW690-II
(PROFESSIONAL)**



FUJI PHOTO FILM CO., LTD.

CONTENTS

I.	SPECIFICATIONS	1
II.	DESCRIPTION FOR FILM ADVANCING/SHUTTER CHARGING AND RELEASING MECHANISM	2
III.	TROUBLESHOOTING	10
1.	Film cannot be advanced.....	10
2.	The shutter cannot be released.....	10
3.	Focusing cannot be made correctly.....	11
4.	The range finder and viewfinder frame do not operate correctly.....	11
5.	Continuity for synchronization is poor.....	11
IV.	DISASSEMBLY	12
1.	Removing the top cover assembly (3-1)	12
2.	Removing the range/viewfinder assembly (5-1) and film take-up mechanism assembly (4-1)	12
3.	Removing the lens barrel assembly (7-23)	12
4.	Disassembling the lens barrel assembly (7-23)	14
5.	Disassembling the helicoid assembly (7-62)	14
6.	Disassembling the film take-up mechanism assembly (4-1)	16
V.	REASSEMBLY AND ADJUSTMENT	18
1.	Reassembling the lens barrel assembly (7-23)	18
2.	Assembling the film take-up mechanism assembly (4-1)	26
3.	Assembling the chassis assembly (2-1)	30
VI.	WIRING DIAGRAM FOR SYNCHRO CIRCUIT	49
VII.	INSPECTION	50
1.	Film advancing/Shutter charging/Exposure counter advancing/Shutter releasing	50
2.	Range/viewfinder	52
3.	Synchro-insulation and continuity	54
4.	Shutter release lock and shutter actuation counter	54
5.	Other parts	54
6.	Shutter speed standards	56

VIII. SPECIAL TOOL LIST 57

IX. PARTS LIST

Fuji GW 690-III (PROFESSIONAL) 59

Fuji GSW 690-III (PROFESSIONAL) 99

I. SPECIFICATIONS

Picture size	6 x 9cm (6 x 8cm) format; Actual picture size 56 x 82.6mm (56 x 76mm)
Film	120 roll film; 220 roll film
Film advance	Lever on camera top, 2-stroke advance (first stroke 138°, second stroke depends on film roll diameter); self-cocking shutter; double exposure prevention
Exposure counter	Automatic reset, additive
Shutter	No. 0 interlens shutter; T 1 ~ 1/500 sec.; X-contact sync; shutter release lock
	Provided with both hotshoe and sync contact
Lens	EBC Fujinon 90mm, F3.5, 5 components, 5 elements, non-interchangeable; 1m nearest focusing distance; F32 minimum aperture; screw-in filter (70mm outer diameter, 67mm inner diameter, 0.75mm thread pitch); 58° (55°) covering power, equivalent to f=39mm (42mm) on 35mm camera. Built-in retractable lens hood.
Rangefinder and viewfinder	Double-imate, coupled range-viewfinder; 0.75X magnification; field of view at 1m, 92% at infinity; 59mm base line length (44.3mm effective base line length)
Dimensions & weight	119mm H x 201mm W x 129mm D; 1.460 grams
Others	Provided with shutter actuation counter and level

II. DESCRIPTIONS FOR FILM ADVANCING / SHUTTER CHARGING AND RELEASING MECHANISM

1. When the camera is loaded with a film and camera back is closed, the return lever (4-39) is pushed by the back cover, causing the rotary plate assembly (4-77) to turn. Then, the gear (4-79) engages with the gear assembly (4-78). At this time, the head A of the lever assembly (4-88) is slightly separated from the disc (4-99). Therefore, the pawl (4-36) disengages with the pawl wheel (4-20) allowing the film advance lever to be wound up.

At the same time, the lock lever assembly (4-51) and lock lever assembly (2-26) turn, causing the lock pin (2-25) to enter the space under the release lever (7-99), prohibiting the shutter releasing.

NOTE:

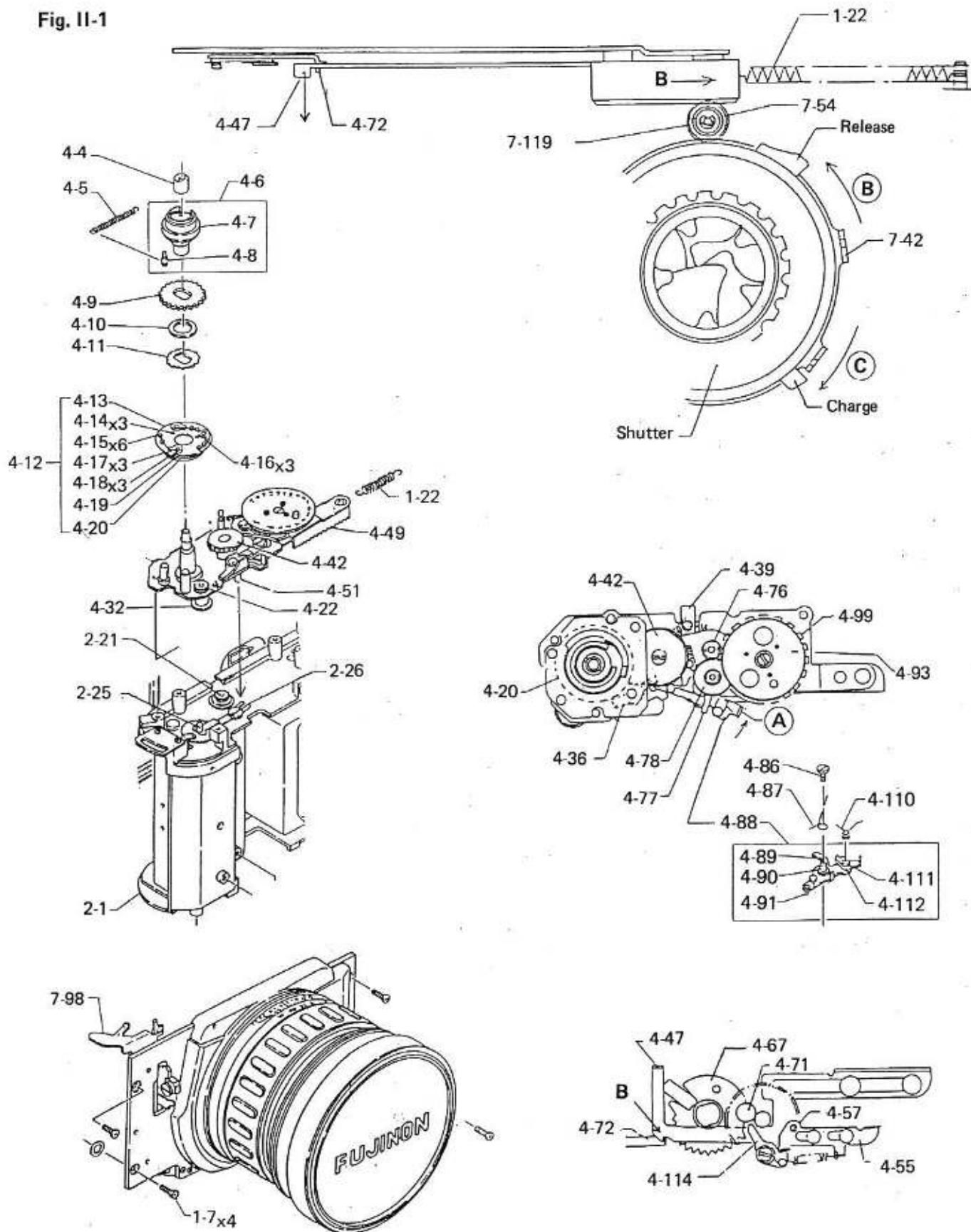
When these two lock levers (4-51 and 2-26) do no operate correctly (due to unhooked spring, existence of dust, etc.), the shutter is not locked, allowing the shutter to be released before the film is taken up one frame completely.

2. When the film advance lever is wound up, the gear (4-9) which turns simultaneously with the sleeve assembly (4-6) causes the disc assembly (4-12) to turn through the pawl (4-18), and the energy is transferred to the gear (4-22) and gear assembly (4-32) causing the film to be advanced. At the same time, as the gear (4-42) turns, the rack assembly (4-47) is pulled up by the shaft (4-71) of the ratchet wheel assembly (4-66) at the first wind up, the gear (7-119) is turned by the teeth of the rack, and with the gear of set plate (7-42), the shutter is charged through the gear (7-54). [Arrow C in Fig. II-1]

Then, the hook B of the rack assembly (4-47) hooks on the hook (4-72), and its head enters the space beneath the release lever.

At the same time, the lever assembly (4-114) which has been hooked on the ratchet is kicked by the last projection of the ratchet, the lever assembly (4-55) enters the hook, the pawl disengages with the ratchet, the interlock pin (4-57) moves away from the lever assembly (4-88), the head A of the lever assembly (4-88) rides on the disc (4-99), the head A of the lever assembly (4-88) further drops into the recess, and thus, the shutter is allowed to be released.

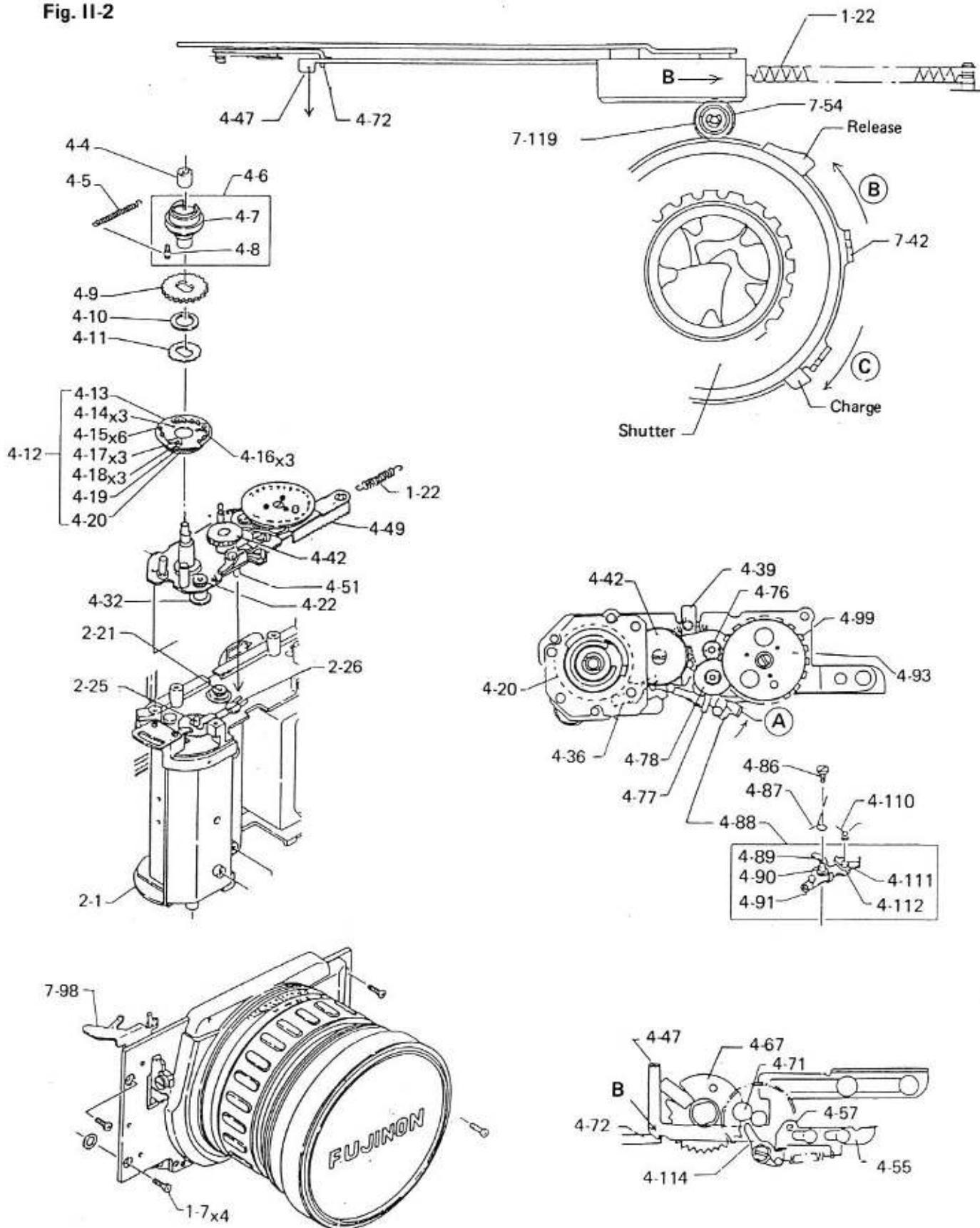
Fig. II-1



3. When the film is wound up further continuously, the exposure counter drum assembly (2-3) which is turned by friction of the film and take-up gear (2-19) turn, causing the gear assembly (4-60), gear (4-76) and gear (4-78) to turn. Thus, the exposure counter advances from "S" to "1", the head A of the lever assembly (4-88) drops into the recess on the disc (4-99), the pawl (4-36) which is interlocked with the lever assembly engages with the pawl wheel (4-20), and thus, the winding up stops.

At the same time, the lock lever assembly (4-51) pushed by the head A of the lever assembly (4-88) causes the lock lever assembly (2-24) to turn. Then the lock pin (2-25) moves away from the release lever, allowing the shutter to be released.

Fig. II-2



4. When the shutter release is depressed with the lock lever (1-29) so set that the red mark can be seen (unlocked), the release lever assembly (7-98) is pushed by the shutter release shaft (1-20), it further pushes the head of the rack (4-47) down, and thus, it is unhooked with the hook (4-72).

The rack (4-47) pulled by the spring (1-22) moves rapidly, and causing the gear (7-119) to turn reversely, the rack kicks the lever assembly (4-55), unhooking the lever assembly (4-114). The rack further moves rapidly, turns the gear (7-54) causing the set plate (7-42) to turn, and thus, the shutter is released.

5. As soon as the shutter is released, the lever (7-102) pushes the pawl (4-36), the pawl (4-36) moves away from the ratchet, and the head A of the lever assembly (4-88) is pulled out from the recess on the disc (4-99).

At the same time, the pin (4-57) on the lever assembly (4-55) kicked by the rack supports the lever assembly (4-88).

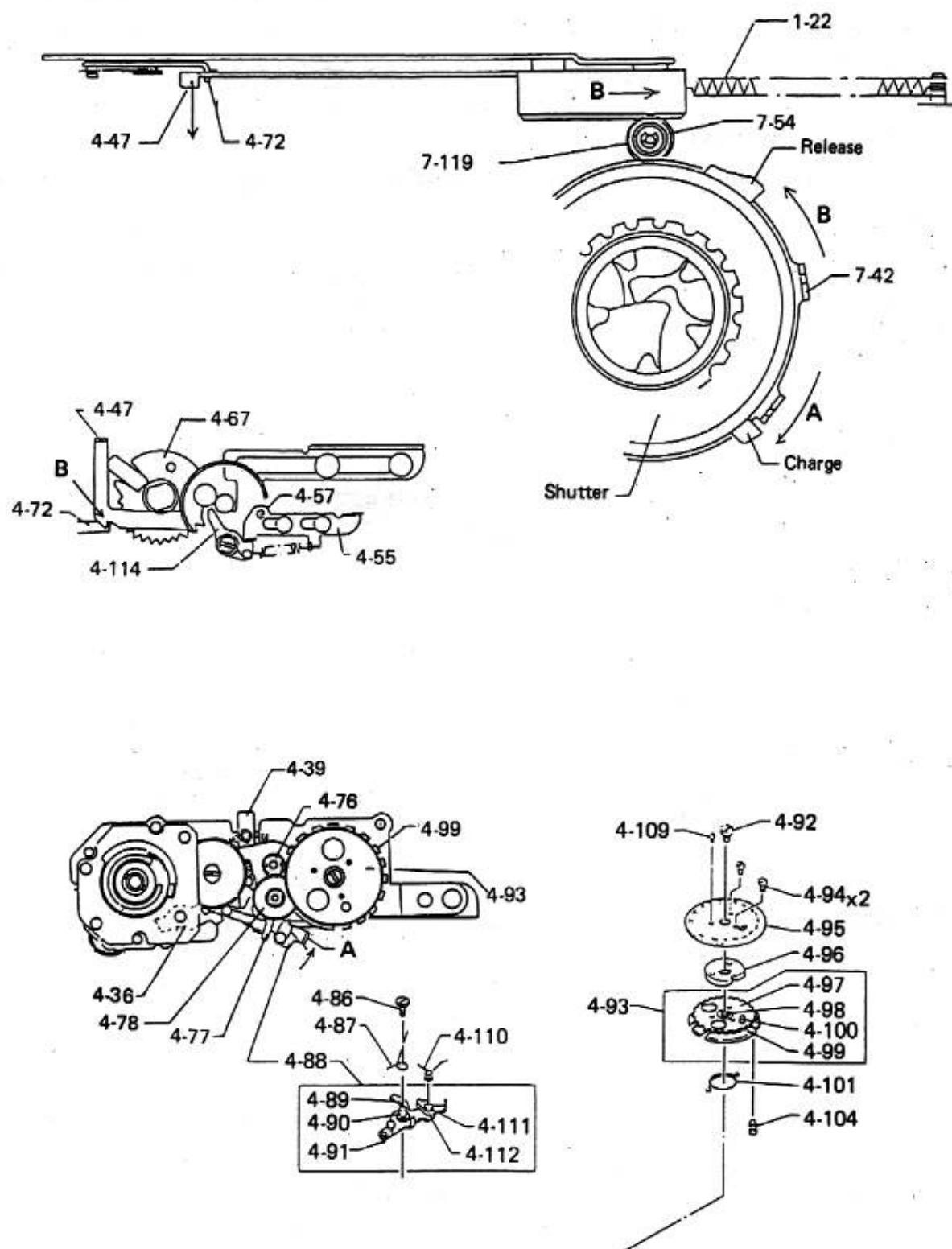
Further, the lock levers (4-51 and 2-37) turn toward the locking direction, and when the shutter release shaft returns as the shutter release is freed from the depression, the lock pin (2-25) enters the space beneath the release lever, and thus, the shutter release is locked.

The lever assembly (4-114) is released, hooked on the ratchet wheel (4-66), and thus, the lever assembly (4-114) functions to prevent reverse turn.

6. The lever assembly (4-114) functions to prevent reverse turn of the shutter charging mechanism until the shutter is charged completely. Without this function, the shutter is not charged but the film is advanced when the film advance lever is wound up gradually, and as the exposure counter advances, the shutter is allowed to be released before it is charged completely in a middle between frames, or the shutter cannot be released and the film is not wound up.

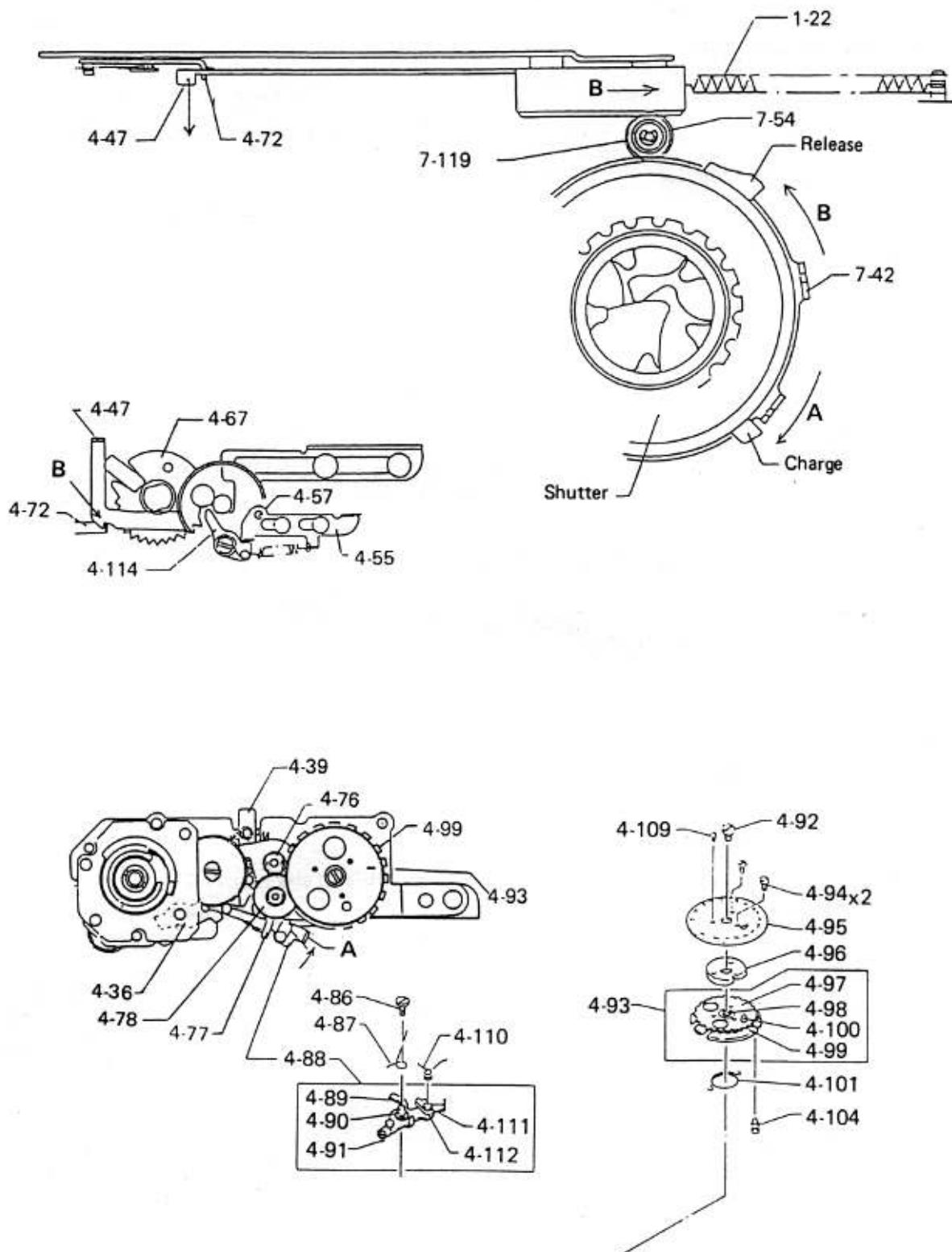
Note that the lever assembly (4-114) is important. If this lever assembly does not operate smoothly, the camera does not operate correctly.

Fig. II-3



7. When all frames are exposed and the film reaches the end, the exposure counter drum assembly (2-3) no longer turns. Then, the shutter is locked prohibiting the releasing.
When the camera back is opened, the return lever (4-39) returns, the rotary plate assembly (4-77) turns, the counter gear (4-97) disengages with the gear assembly (4-78), the exposure counter returns to "S", and the camera returns to the condition before loading a film.
8. The series of operations from film loading to the end of photographing through film advancement, exposure counter advancement, shutter charging and shutter releasing were described above.
When repairing, disassembling and reassembling the camera, the series of operations must be fully understood so that each function of the camera can be fully displayed.

Fig. II-4



III. TROUBLESHOOTING

1. Film cannot be advanced.

1-1 Pawl (4-36) does not disengage with pawl wheel (4-20).

Check the pawl (4-36), lever assembly (4-88), spring (4-87) and spring (4-110), and repair as required.

1-2 Damaged film take-up mechanism assembly (4-1) and/or existence of foreign matters in the assembly

Check and repair or replace.

1-3 Lock lever assembly (2-24) does not come out from the space under the release lever assembly (7-98) causing the shutter not to be released. Further, the film cannot be taken up to the next frame.

Check the lock lever assembly (2-24) and lock lever assembly (4-51) for deform.

Check the relative springs for installation. Repair as required.

1-4 Exposure counter dial (4-95) is not advanced causing the shutter release to be locked. Then, the shutter cannot be released and film cannot be taken up to the next frame.

Check the exposure counter drum (2-3) for smooth operation.

Check the rotary plate assembly (4-77) for installation of the spring and deformed spring.

Check the gears (4-78 and 4-99) for correct intermeshing. Repair as required.

2. The shutter cannot be released.

2-1 The shutter cannot be set due to incorrect intermeshing of the gear (7-119) with the rack assembly (4-47).

Check the gear for combination, and repair as required.

2-2 Check the set plate (7-42) for adjustment and deformed set plate.

Remove the front lens assembly (7-4) and shutter speed selector ring (7-13), and adjust the release ring.

2-3 Check the lever assembly (4-114) for installation of the spring and stucked foreign matter.

Clean, repair or replace.

2-4 Deformed or unhooked spring (1-22)

Check and repair.

3. Focusing cannot be made correctly.

3-1 The focusing ring (I) (7-63) is not positioned correctly due to loosen set screw (7-65).

Adjust focusing and retighten the set screw (7-65).

3-2 Loosen front lens assembly (7-4) and/or rear lens frame assembly (7-55).

Retighten.

3-3 The range/viewfinder (5-1) does not work correctly. (Unmatching especially at 1.2 meters)

Adkist. Adjust the matching at 1.2m particularly accurately.

4. The range finder and viewfinder frame do not operate correctly.

4-1 The interlock rod assembly (7-121) is not operating correctly.

Check the assembly for lubrication (grease), loosen screw of the positioning plate assembly (7-113), etc., and repair as required.

4-2 The spring (5-33) is not installed correctly on the linkage assembly (5-43) or the spring is deformed.

Repair.

4-3 Unhooked spring (5-62) or interlock lever (5-63) is not engaged with the interlock lever assembly (5-47) correctly.

Proper bend the lever head to adjust the engagement.

4-4 Intrusion of dust or foreign matter.

Clean.

5. Continuity for synchronization is poor.

5-1 Unsatisfactory continuity of shoe seat assembly (3-16), contact (3-24) and/or contact (3-26).

Remove the top cover, and check the lead wires for correct connection (soldering) or breakdown, check the contacts for deformation, poor contact, etc., and repair as required.

5-2 Unsatisfactory continuity or poor contact of synchrosocket assembly (7-37).

Remove the bottom cover and lens assembly, and check lead wires (7-36, 7-215, 7-216 and 7-217) for connection (soldering) and breakdown. Further, check the synchrosocket for damaging. Repair as required.

5-3 Unsatisfactory continuity of both shoe seat assembly and synchrosocket assembly.

Remove the front lens assembly (7-4), and check the lead wire of the shutter assembly (7-17) for connection (soldering) and synchro switch within the shutter for contact and continuity. Repair as required.

IV. DISASSEMBLY

1. Removing the top cover assembly (3-1)

1-1 Apply a piece of rubber sheet to the shutter release assembly (1-13) and turn it to remove, and pull out the film advance lever (1-18), stopper (1-19), shutter release shaft (1-20).

1-2 Remove four screw (1-1), and remove the top cover assembly.

1-3 Unsolder and disconnect the lead wires (3-36 and 3-38) from the individual contacts by using a soldering iron. (Refer to Wiring diagram for flash circuit)

NOTE:

When removing the top cover, recommend the shutter be charged.

2. Removing the range/viewfinder assembly (5-1) and film take-up mechanism assembly (4-1)

2-1 Set the helicoid assembly (7-62) to the close-up distance, remove three screws (1-3), disconnect the lead wire, and remove the range/viewfinder assembly (5-1).

2-2 Detach the spring (1-22) from the screw (2-54), remove four screws (1-4), set screw (1-21) and washer (1-34), and remove the film take-up mechanism assembly (4-1).

3. Removing the lens barrel assembly (7-23)

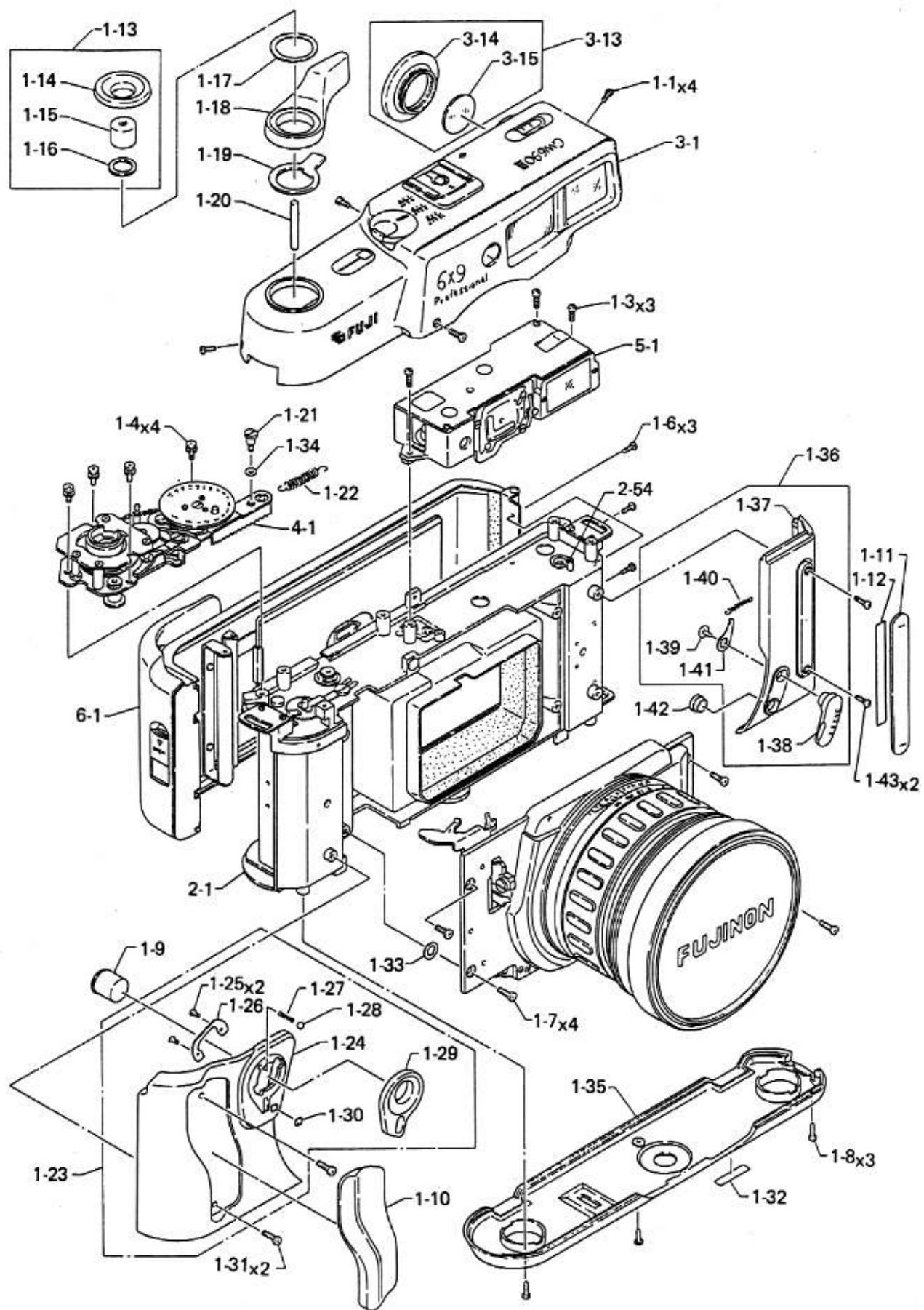
3-1 Remove three screws (1-8), and remove the bottom cover (1-35).

3-2 Peel off the rubber grip (1-10) carefully so as not to damage it, remove two screws (1-31), and remove the front left grip assembly (1-23) and shutter release (1-9).

3-3 Peel off the leather (1-11) carefully so as not to damage it, remove two screws (1-43), and remove the front right grip assembly (1-36) and cylinder (1-42).

3-4 Remove four screws (1-7) and remove the lens barrel assembly from the camera body.

Fig. IV-1



4. Disassembling the lens barrel assembly (7-23)

- 4-1 Using a special lens removing tool, turn the front lens assembly (7-4) counterclockwise and remove it. Next, remove three screws (7-16) and remove the shutter speed selector ring.
- 4-2 Pull out the interlock rod (7-123), remove two screws (7-120), and remove the positioning plate assembly (7-113) together with the gear (7-119). Next, unsolder and disconnect four lead wires from the PCB (7-30), remove three screws (7-112), and remove the light shielding mask (7-111).
- 4-3 Remove four screws (7-97), and separate the front mask assembly (7-84) from the helicoid assembly (7-62).
- 4-4 Using a special lens removing tool, remove the rear lens frame assembly (7-55), remove the hold ring (7-125) with a pin face spanner, and remove the shutter assembly (I) (7-17).
- 4-5 Remove the screw (7-27), remove two screws (7-207), and remove the aperture selector ring (7-26), protecting ring (7-201), hood (7-203) and stopper ring (7-206).
- 4-6 Remove the knurled ring (7-66), turn the focusing ring (II) (7-61) to the left to remove it, remove three screws (7-46) (a), and remove the index ring (7-24).

NOTE:

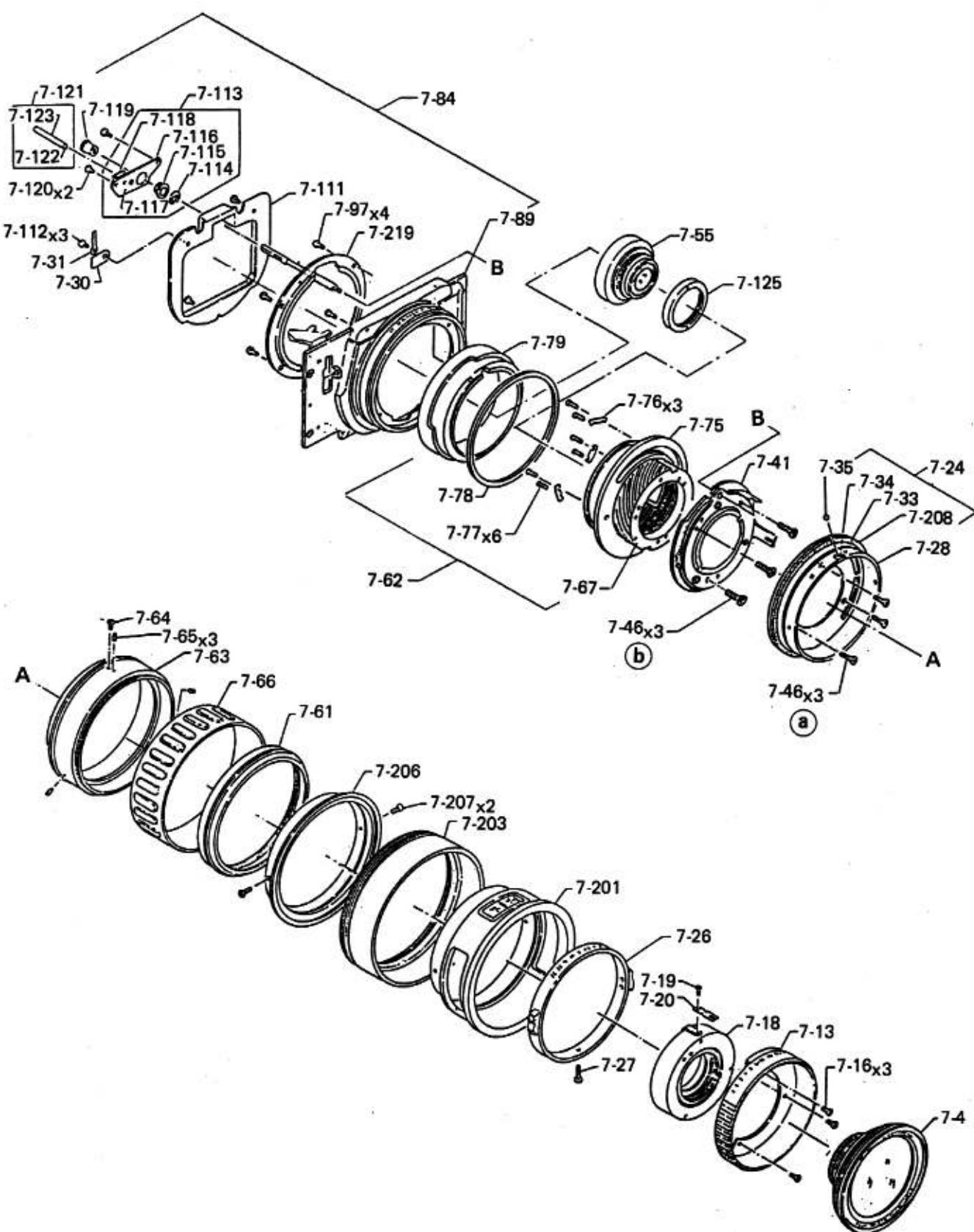
The steel ball (7-35) will come down. Be careful not to lose it.

- 4-7 Remove the screw (7-64) and three set screws (7-65), and remove the focusing ring (7-63). Next, remove three screws (7-46) (b), and take out the shutter frame assembly (7-41).

5. Disassembling the helicoid assembly (7-62)

- 5-1 Mark the male and female threads by means of a pen or scribe first. The combining positions of the male helicoid (7-67) and female helicoid (helicoid ring assembly (7-75)) have been set up.
Further, pull out the lead wires penerated through the lens barrel.
- 5-2 Feed the helicoid out toward the close-up distance side to remove the male helicoid (7-67). Handle the helicoid carefully so as not to damage threads.
- 5-3 Remove three thrust plates (7-76), and remove the hold ring (7-79), helicoid ring assembly (7-75) and ring (7-78).

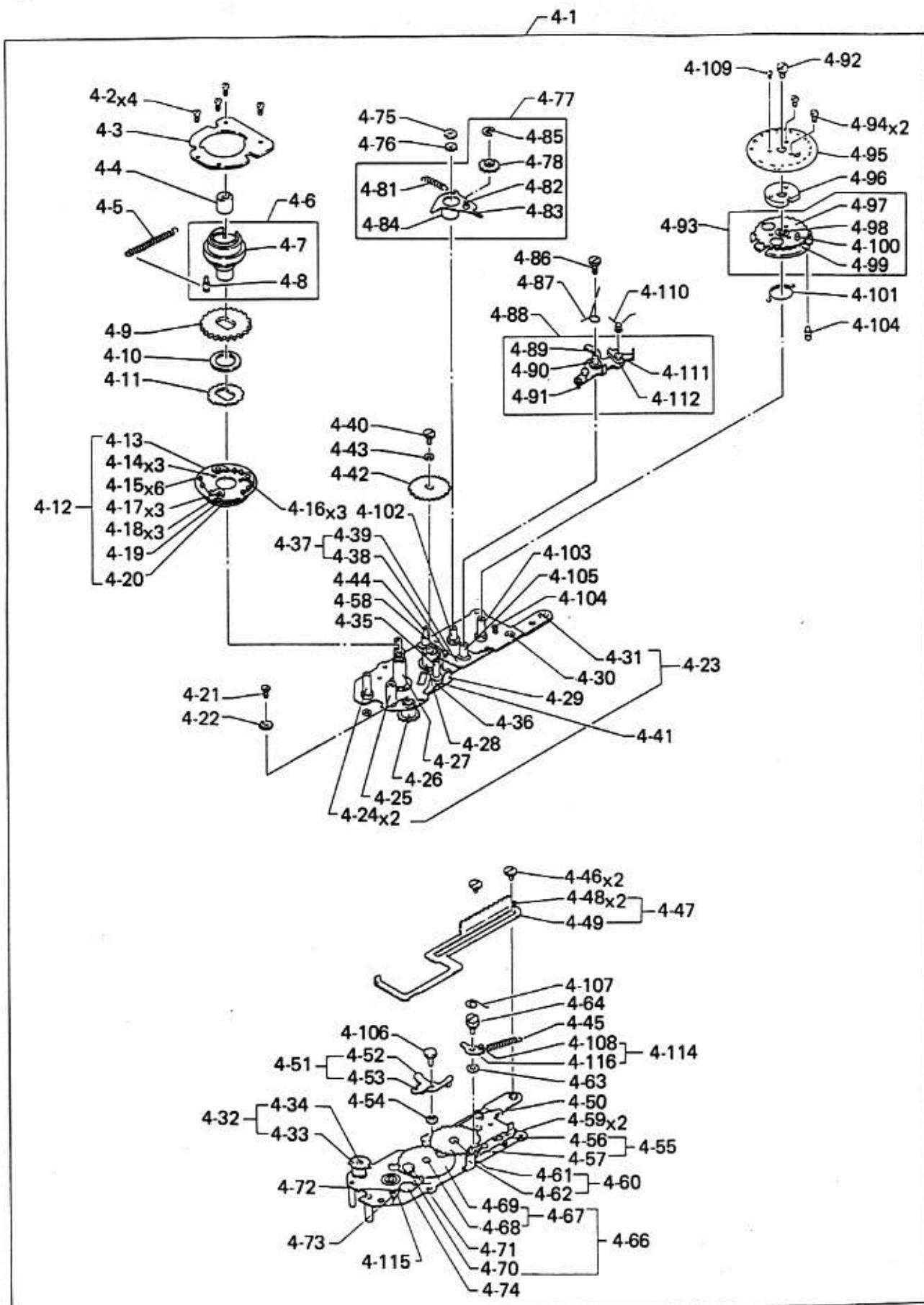
Fig. IV-2



6. Disassembling the film take-up mechanism assembly (4-1)

- 6-1 Remove two screws (4-94) and screw (4-109), remove the dial (4-95) and spacer (4-96), and unhook the springs (4-81 and 4-5) from the guide shaft (4-44).
- 6-2 Remove the screw (4-92), nut (4-75) (left hand thread) and gear (4-76) (left hand thread), pull out the dial assembly (4-93) and rotary plate assembly (4-77), unhook the spring (4-101) from the stopper pin (4-104), pull out the gear assembly (4-60), remove the spring (4-87) and screw (4-86), and remove the lever assembly (4-88).
- 6-3 Remove two screws (4-46), remove the rack assembly (4-47) and spring (4-50), remove the screw (4-40), and remove the ratchet wheel assembly (4-66).
- 6-4 Remove four screws (4-2), remove the base plate (4-3), and pull out the gear assembly (sleeve assembly (4-6), gear (4-9), washer (4-10), ratchet wheel (4-11), and disc assembly (4-12)). Next, remove the screw (4-21), and pull out the gear assembly (4-32).

Fig. IV-3



V. REASSEMBLY AND ADJUSTMENT

1. Reassembling the lens barrel assembly (7-23)

1-1 Reassembling the male and female helicoids

When the helicoid assembly is reassembled with dust existed on the threads and/or sliding portions, the helicoid will not operate smoothly. Before reassembling the lens barrel assembly, thoroughly clean the threads and sliding portions and apply the designated grease properly.

1-2 Apply the ring (7-78) to the helicoid ring (7-75), apply grease (FHA-027 Squirrel Grease) to the sliding portions (against the hold ring (7-79)), fit the hold ring (7-79), and install three thrust plates (7-76) with six screws (7-77).

NOTE:

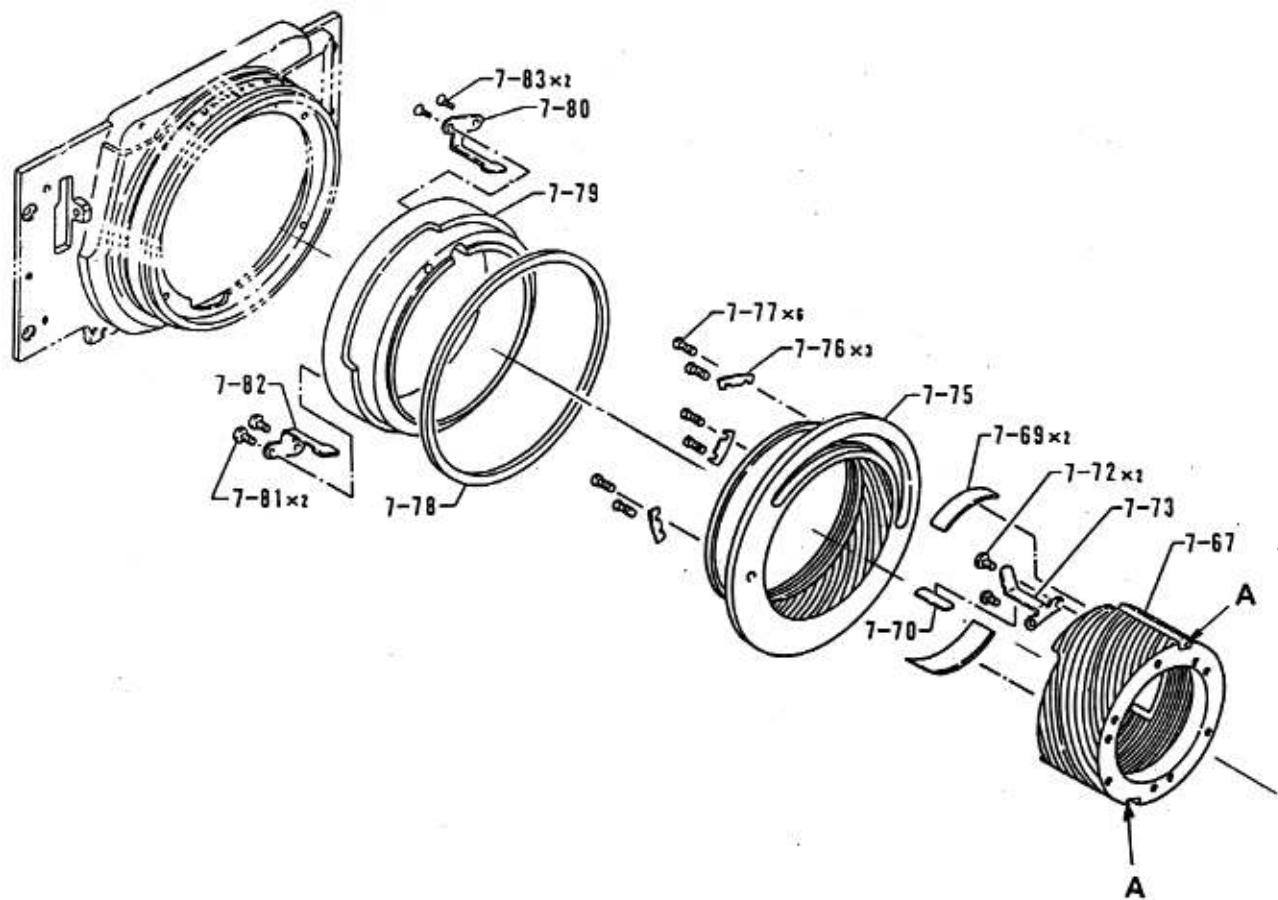
When installing the thrust plates, be sure to face the rough surface of the thrust plates upward.

Turn the helicoid and insure that it operates smoothly and lightly.

1-3 Apply grease (FHD-100 Losoid Grease 83410) to the threads of the helicoid properly, screw the male helicoid (7-67) into the helicoid ring, insert the helicoid guide (I) (7-80) and helicoid guide (II) (7-82) to the groove (A) on the male helicoid (7-67), and secure the helicoid guide (I) (7-80) and helicoid guide (II) (7-82) respectively with two screws (7-81) and two screws (7-83). Be sure to lock the screws with screw locking agent.

When the helicoid does not operate smoothly, disassemble it again, and check it for existence of dust and/or scar, tilted guide, bending and other defectiveness.

Fig. V-1



1-4 Installing the shutter frame assembly (7-41)

- a. Match the hole (B) of the shutter frame assembly (7-41) with the groove (C) of the hold ring (7-79), and install the shutter frame assembly (7-41) on the helicoid assembly with three screws (7-46), (a) .
- b. Apply the gear shaft (7-124) to the groove (C) of the hold ring (7-79) in the posture shown in the figure, apply the gear (7-54) to the gear shaft, insert the shaft head into the hole (B) of the holder (7-51), apply the washer (7-52), and secure it with the E-clip (7-53).

1-5 Installing the focusing ring (I) (7-63) and index ring assembly (7-24)

- a. Set the helicoid to its infinite position, fit the focusing ring with the ∞ mark faced upward, and install the screw (7-64) (b) . Next install the focusing ring with three set screws (7-65) temporarily, set it in the position where the stopper stops at the infinite and close-up distance.

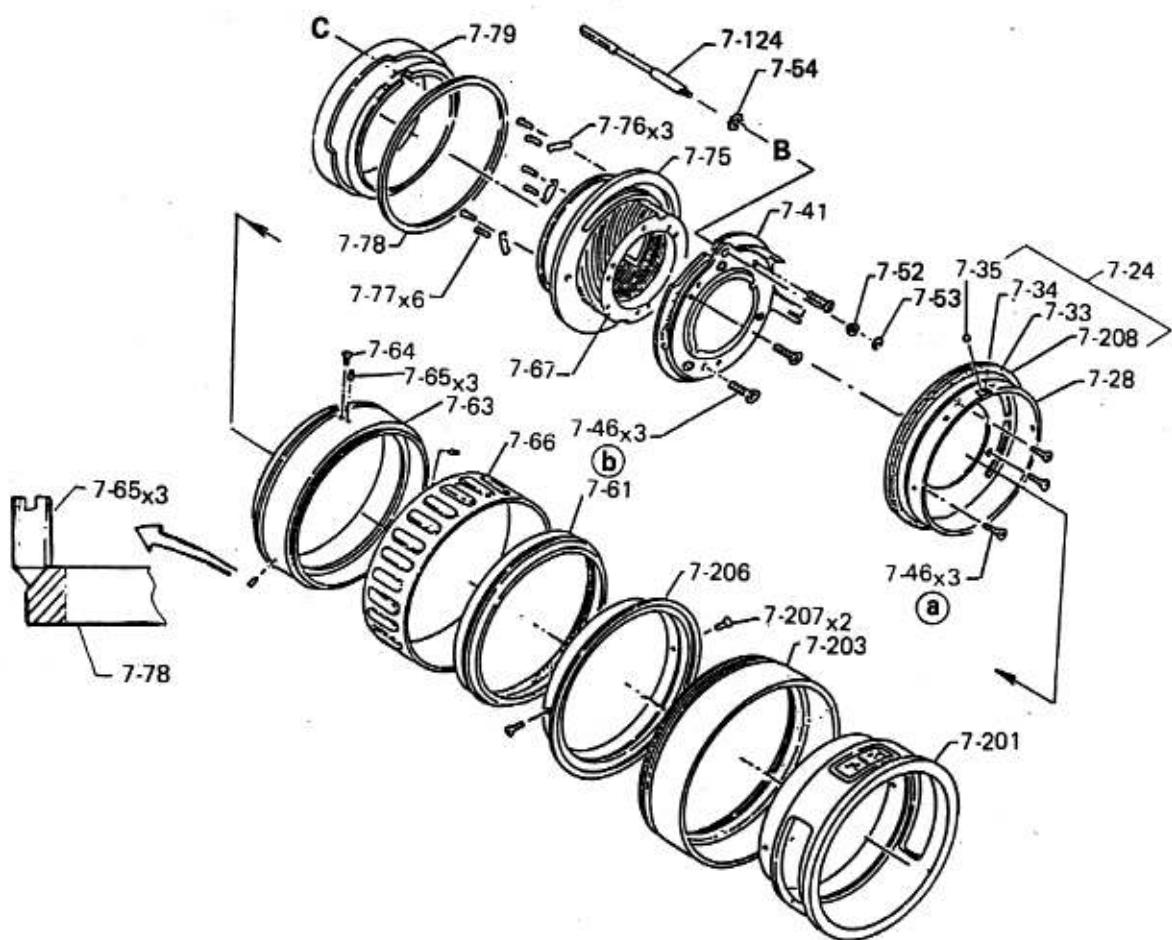
NOTE:

Head of the set screw (7-65) must come into contact with the slope on the ring (7-78). See Fig. D.

- b. Install the index ring assembly (7-24) with three screws (7-46), make sure that the moquette (7-208) is not damaged and installed on the index ring correctly, and then, screw the focusing ring (II) (7-61) into the focusing ring (I) (7-63).
- c. Fit the hood (7-203) to the protector ring (7-201), and with the index window (7-202) faced upward, install them with two screws (7-207) together with the stopper ring (7-206)

Make sure that the hood comes in and out smoothly.

Fig. V-2



1-6 Installing the aperture selector ring (7-26)

- a. Fit the steel ball (7-35) to the index ring (7-28), apply grease (FHA-100) to the steel ball and surroundings (sliding portion against the aperture selector ring), apply grease to the click (i) portion of the aperture selector ring (7-26) slightly, fit the aperture selector ring to the index ring, install two knobs (7-14) on the aperture selector ring with two screws (7-15), turn the aperture selector ring, and make sure that it turns smoothly and it clicks at each aperture effectively.
- b. Install the screw (7-27) on the aperture selector ring through the long groove (b) of the index ring. Pass through the lead wires (7-216 and 7-217) through the hole, and hold the lead wire ends on the PCB (7-30).

1-7 Installing the shutter

- a. With the shutter set lever set, fit two positioning pins on the back of the shutter to the shutter positioning groove (E) of the shutter frame (7-48), and after checking the position, tighten it with the hold ring (7-125).

NOTE:

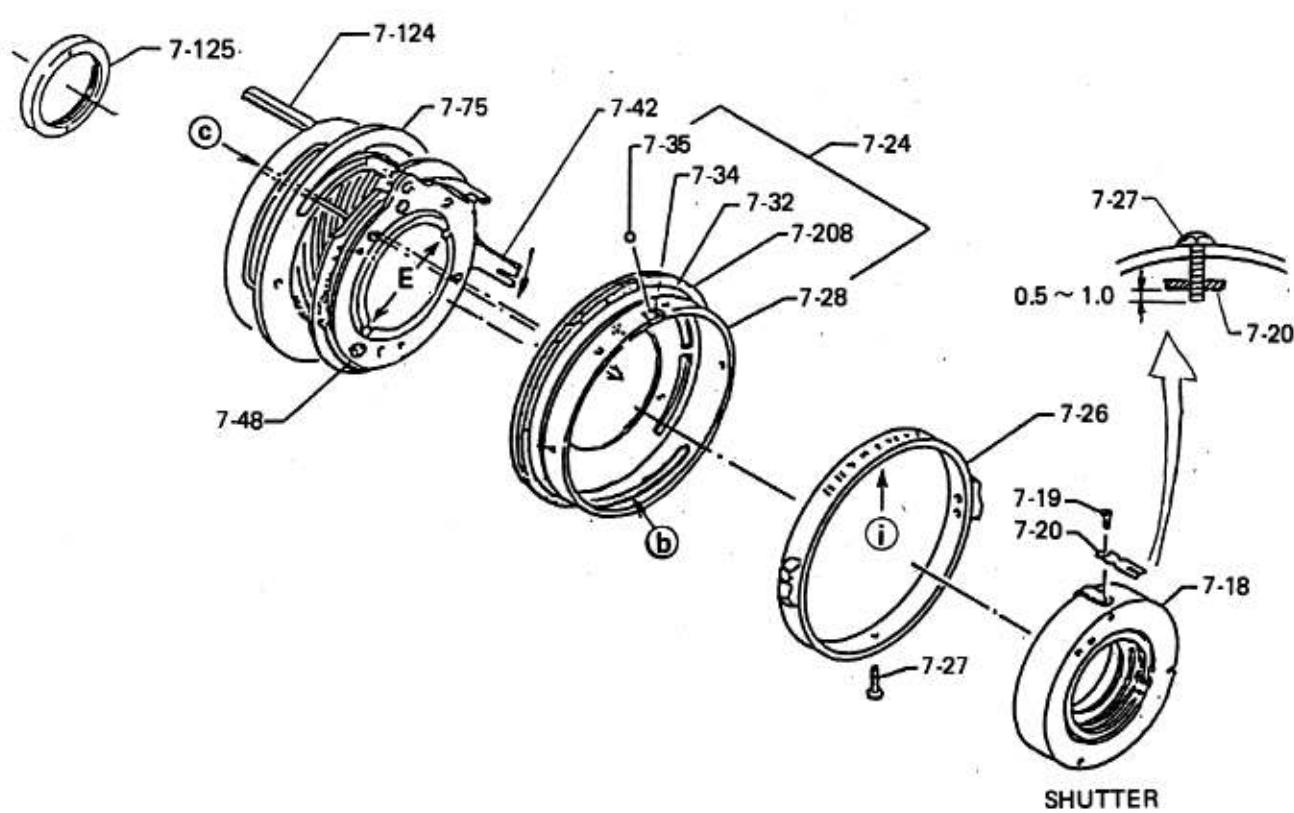
Be careful not to hold the lead wires between the parts.

Insert the screw (7-27) into the groove of the aperture lever (7-20), and make sure that the screw head is projected 0.5 to 1mm.

- b. Turn the gear shaft (7-124), and make sure that the shutter can be charged and released respectively when the gear shaft is turned to the right and left.

When adjustments of shutter charge and release are required, properly open or close of the set plate (7-42). The adjustment procedure will be described later.

Fig. V-3



1-8 Assembling the front mask assembly (7-84)

- a. Apply the pin (7-100) of the release lever assembly (7-98) beneath the portion (K) of the lever (7-110), and install the guide shaft (7-109) and guide shaft (7-106) respectively to the upper and lower sides with the screw (7-107). Make sure that the release lever assembly (7-98) operates by its own weight.

Apply the spring (7-108) to the pin (7-101) and guide shaft (7-109).

- b. Install the shutter actuation counter assembly (7-93) on the front mask assembly (7-84) with two screws (7-90).

NOTE;

Be careful not to deform the claw (7-105).

Adjust the head of the claw (7-105) so that the ratchet wheel (7-95) advances one tooth when the shutter release is depressed once and the last one digit of the exposure counter advances one number when the shutter release is depressed ten times.

1-9 Combining the front mask assembly (7-84) with the helicoid assembly (7-62)

- a. Place the front mask assembly (7-84) on the helicoid assembly (7-62), apply the lead wire through the hole (M) of the cover plate (7-219), and install the cover plate (7-219) with four screws (7-97) together with the front mask assembly (7-84). Tighten the screws securely. (Tightening torque: About 7kg-cm)

Install the interlock plate (7-73) on the male helicoid (7-67) with two screws (7-72).

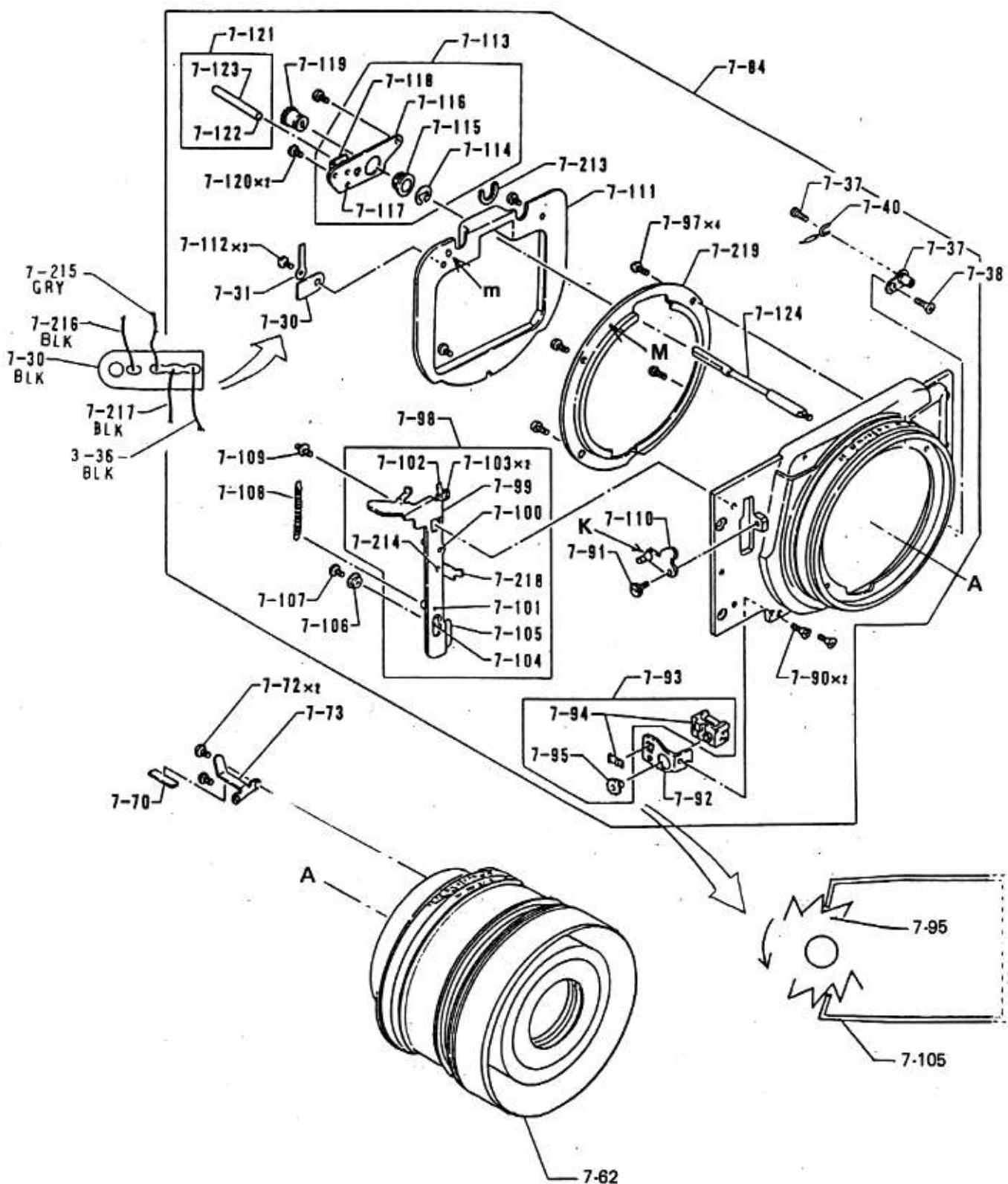
- b. Pass the lead wire through the hole (m) of the light shielding mask (7-111), apply the PCB (7-30) and lug (7-31), and tighten three screws (7-112).

Connect the lead wires to the PCB (7-30) by means of a soldering as shown in Fig. O. Hold and arrange loose portion of the lead wire with lug.

- c. Install the moquette (7-213) to cover up the gap between the front mask assembly (7-84) and light shielding mask (7-111) with adhesive. Now, insert the gear shaft (7-124) into the hole of the gear (7-119) of the positioning plate assembly (7-113), and install the positioning plate assembly (7-113) with two screws (7-120).

Connect the lead wire (7-215) to the PCB (7-30) and synchrocontact (7-39) by the use of a soldering iron, and after passing the lead wire through the space between the front mask assembly (7-84) and light shielding mask (7-111), secure the lead wire with a piece of tape at the middle.

Fig. V-4



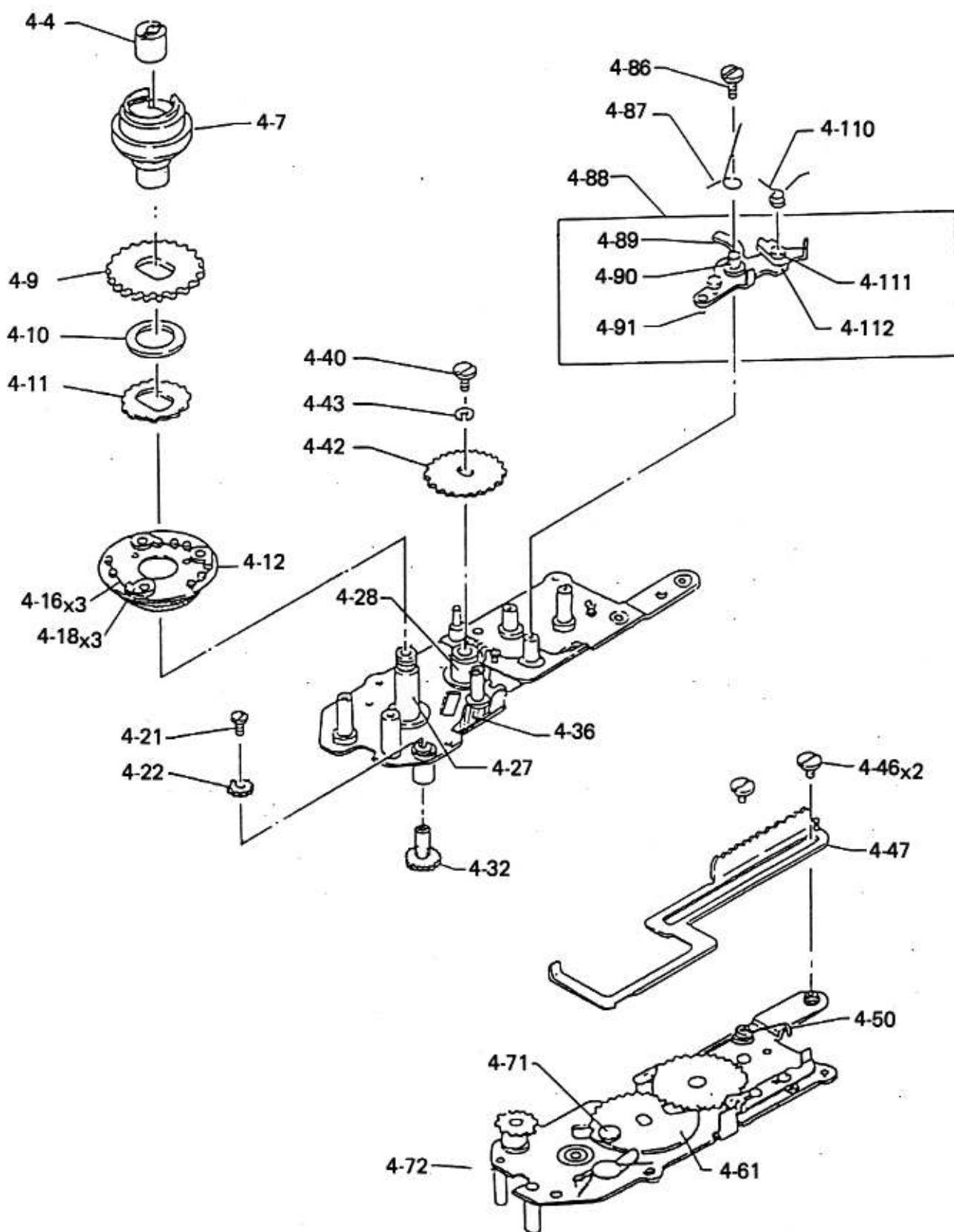
2. Assembling the film take-up mechanism assembly (4-1)

The film take-up mechanism assembly has been greased (FHA-054) and no additional greasing may be required when reassembling it. However, make sure that each gear is free from dust and foreign matter. In the event that a gear is dropped onto the floor or other dusty place, thoroughly clean it with cleaning agent, and apply grease (FHA-054) sufficiently before assembling the film take-up mechanism assembly.

2-1 Assembling the film take-up gear train

- a. Remove three springs (4-16) from the disc assembly (4-12), and with three pawls (4-18) spreaded and with the gear (4-9), washer (4-10) and ratchet wheel (4-11) applied to the sleeve (4-7), install them on the disc assembly (4-12).
- b. Hook three springs (4-16) to the arbors, and apply the longer end of the spring to the groove on the back of the pawl.
Turn the sleeve clockwise, and make sure that the springs are effective, the ratchet sounds correctly and it does not turn reversely.
- c. Fit the gear assembly (4-32) to the sleeve (4-26) from the bottom, apply the gear (4-22) from the top, and tighten the screw (4-21). [Tightening torque: 3.5kg-cm]
- d. Fit the disc assembly (4-12) to the sleeve (4-27), and secure it with the nut (4-4).
Make sure that the disc assembly and gear assembly turn smoothly.
- e. Fit the ratchet wheel assembly (4-67) to the sleeve (4-28) from the bottom of the base plate, fit the rack (4-49) to the shafts (4-31) and spring (4-50) at the position where the shaft (4-71) enters inside of the rack (4-49), and tighten two screws (4-46).
Make sure that the rack (4-49) operates smoothly.
- f. Fitting the interlock pin (4-91) of the lever assembly (4-88) to the groove on the pawl (4-36), fit the lever assembly (4-88) to the lver shaft (4-105), and tighten the screw (4-86).
- g. Apply the spring (4-87) from the top of the screw, and hook one end and the other end of the spring (4-87) to the shaft (4-111) and pin (4-38).

Fig. V-5



2-2 Assembling the exposure counter assembly

- a. Apply the gear (4-80) to the gear shaft (4-82) of the rotary plate assembly (4-77), and secure it with the E-clip (4-85).
- b. Apply the spring (4-101) to two stopper pins (4-104), insert the rotary plate assembly (4-77) in between the counter gear (4-97) of the dial assembly (4-93) and disc (4-99), apply both of them to the shaft holder (4-102) and shaft (4-103), and push them into the deepest position with the return lever (4-39) fully pushed in.
Thus, the rotary plate, lever assembly (4-88) and return lever (4-39) can be correctly positioned. (See Fig. Y.)
- c. Wind up the spring (4-101) one turn, and secure the dial assembly (4-93) with the screw (4-92).

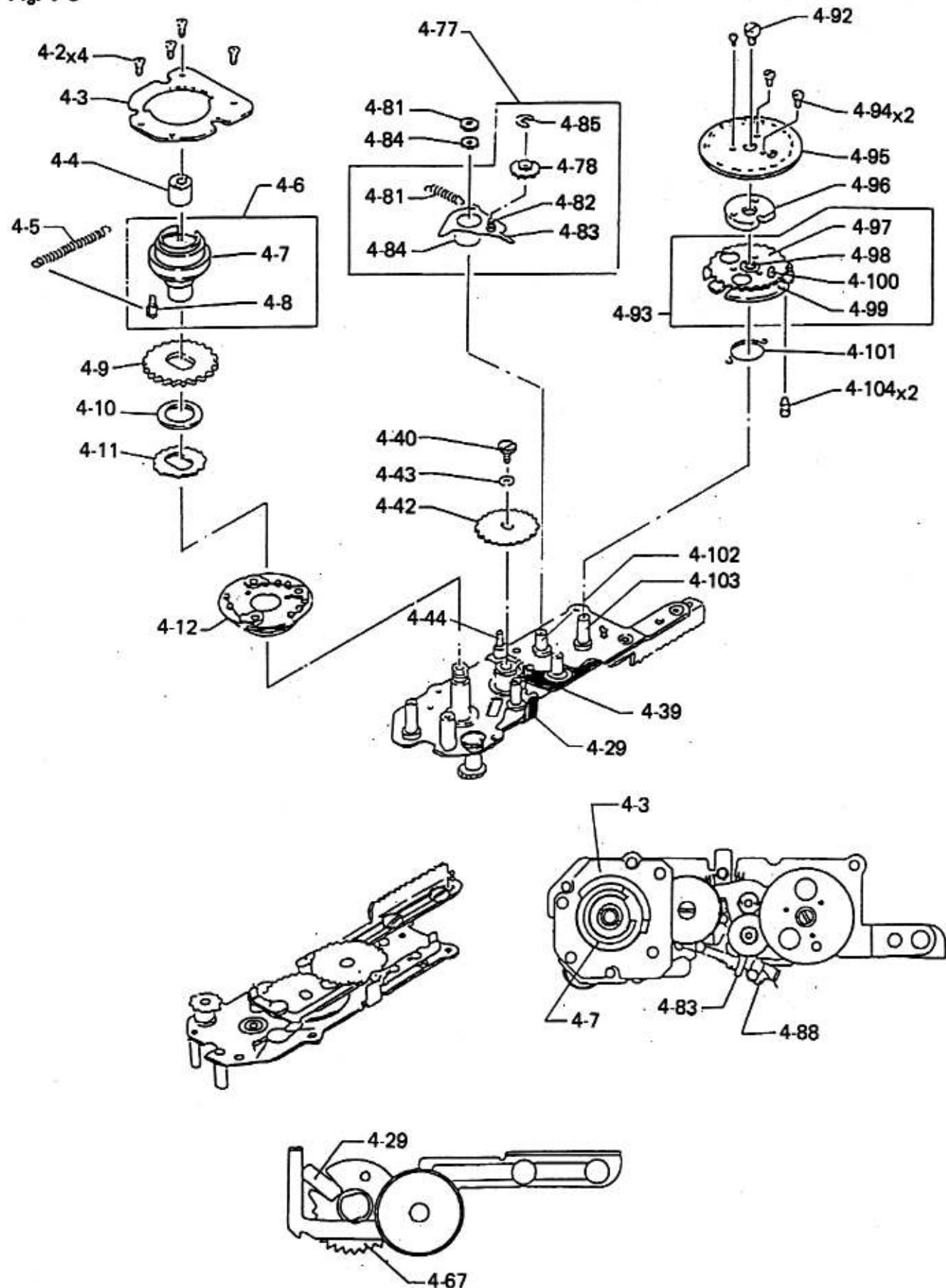
Next, apply the gear assembly (4-60) to the shaft holder (4-102) from the bottom, and install the gear (4-76) and nut (4-75). Now, lock the nut on the shaft with screw locking agent.

Apply the smaller hook and larger hook of the spring (4-81) respectively to the hole on the lever and guide shaft (4-44).

2-3 Combining the ratchet wheel assembly (4-67) with the film take-up gear train

- a. Apply the spring (4-5) to the pin (4-8) of the sleeve (4-7), and passing through the inside of the column (4-24), apply the other end of the spring (4-5) to the guide shaft (4-44).
- b. Place the base plate (4-3) in its position, turn the sleeve (4-7) toward the film taking up direction, and tighten four screws (4-2) when the projection on the sleeve enters the square portion of the base plate (4-3). (See Fig. Y.)
- c. Match the cut portion of the ratchet (for charging the shutter) with the square hole of the arm (4-29) accurately (evenly), fit the gear (4-42) to the shaft (4-68) without deviating the above matching, and after applying the washer (4-43) to the screw (4-40), install the gear (4-42) with the screw (4-40). (See Fig. Z.)
- d. Install the dial (4-95) on the gear with two screws (4-94) and screw (4-109). Make sure that each gear operates smoothly, each lever operates smoothly, each spring is installed correctly, each lever is not deformed, and that each screw is tightened securely.

Fig. V-6



3. Assembling the chassis assembly (2-1)

3-1 Installing the lens barrel assembly (7-23) on the chassis

- a. Insert the interlock rod assembly (7-121) into the hole on the positioning plate assembly (7-113), apply grease (FHA-054) to the steel ball (7-122) slightly, fit the lens barrel assembly (7-23) to the chassis, and secure it tightly with four screws (1-7).
(Rated tightening torque: 4.5kg-cm)

- b. Checking the flange for flatness

Remove the front lens assembly (7-4), screw a jig into the lens threads taking place of the front lens assembly, turn the chassis up side down, and measure four corners of the rail plane with a dial gauge to insure that the difference among four measured values is within 0.05mm.

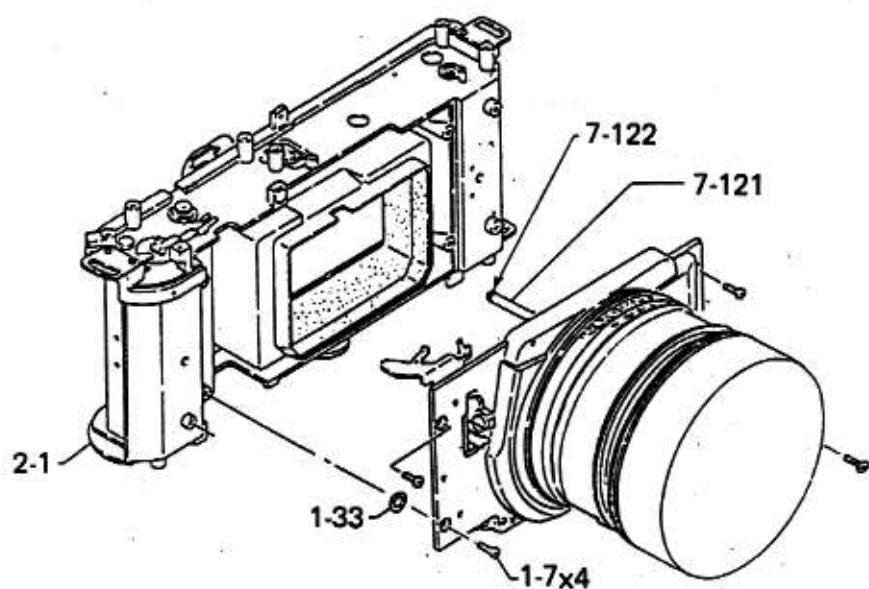
When the difference exceeds 0.05mm, apply a washer or tin foil to the lens barrel installing plane to adjust the difference so that it is within 0.05mm.

Out of four positions, one position must not use washer or tin foil (highest position).

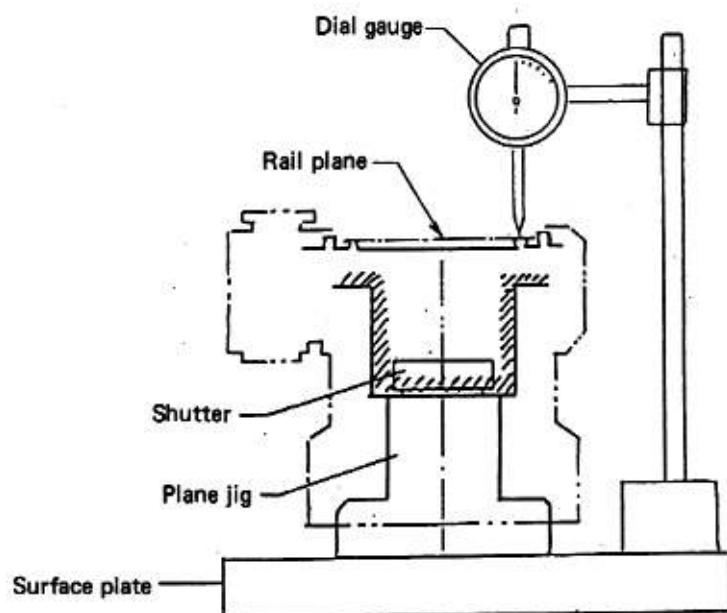
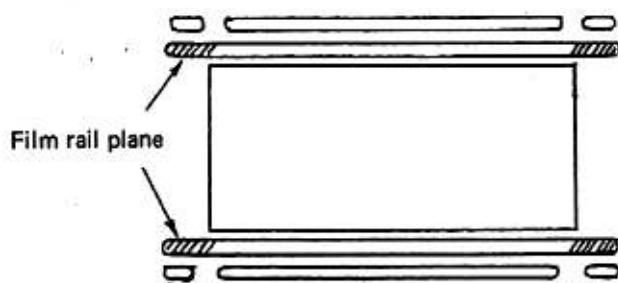
NOTE:

To check flange plane, an optical type parallelism checker may be used.

Fig. V-7



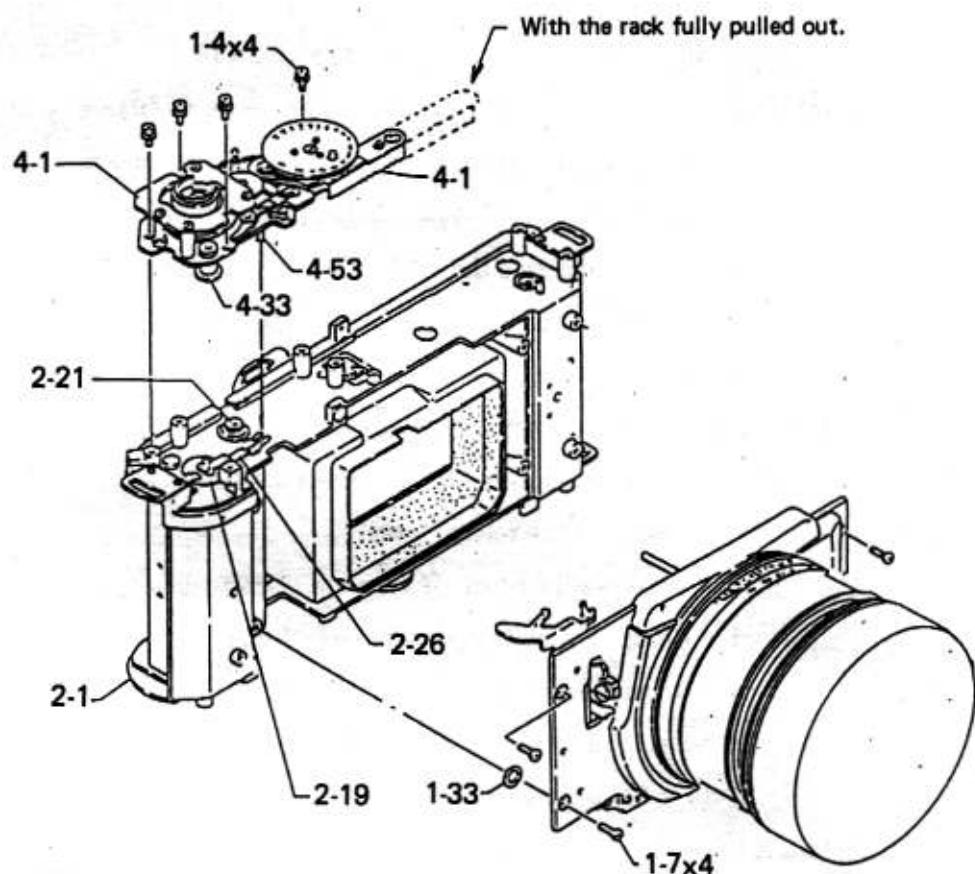
Oblique-lined portion: Point to be measured on the rail plane



3-2 Installing the film take-up mechanism assembly (4-1)

- a. Apply grease (FHA-054) to the teeth of the take-up gear (2-19), exposure counter drive wheel (2-21), rack (4-47) and gear shaft (4-62) properly, and observing the conditions indicated below, fit them to the chassis. Next, secure them temporarily with four screws (1-4).
 - 1) Leave the rack in its fully drawn out position. (Figure shows the rack not drawn out.)
 - 2) The interlock pin (4-53) enters the groove of the lock lever (2-26).
 - 3) The exposure counter drive wheel (2-21), gear shaft (4-62), sleeve (4-26), gear (4-33) and gear (2-19) are intermeshed.

Fig. V-8



b. Adjustment of the shutter for charging and releasing

Install the film advance lever (1-18) temporarily, wind up the film advance lever fully to draw in the rack (4-49) fully, and turn the gear (7-119) fully toward the shutter charging direction. Now, combine the rack (4-49) with the gear (7-119), and secure them temporarily with the set screw (1-21) and washer (1-34).

Hook the spring (1-22) on the screw (2-54) and pin (4-48).

- c. Move the rack head vertically, adjust play of the rack (4-49) and gear (7-119) by the use of a washer (1-34) so that the play is about 0.05mm, and then, tighten the set screw (1-21) and four screws (1-4) securely. (Rated tightening torque: 3kg-cm)
Repeat charging and releasing the shutter, and make sure that the shutter is charged and released smoothly and correctly.

When adjusting the shutter for the charging and releasing operations, remove the front lens and shutter speed selector ring, and checking positions of the set plate (7-42) and set/release levers of the shutter, combine the rack (4-49) and gear (7-119) properly and adjust the fork space of the release lever.

Fig. V-9 a = Release adjust fork of set plate (7-42)

b = Charge adjust fork of set plate (7-42)

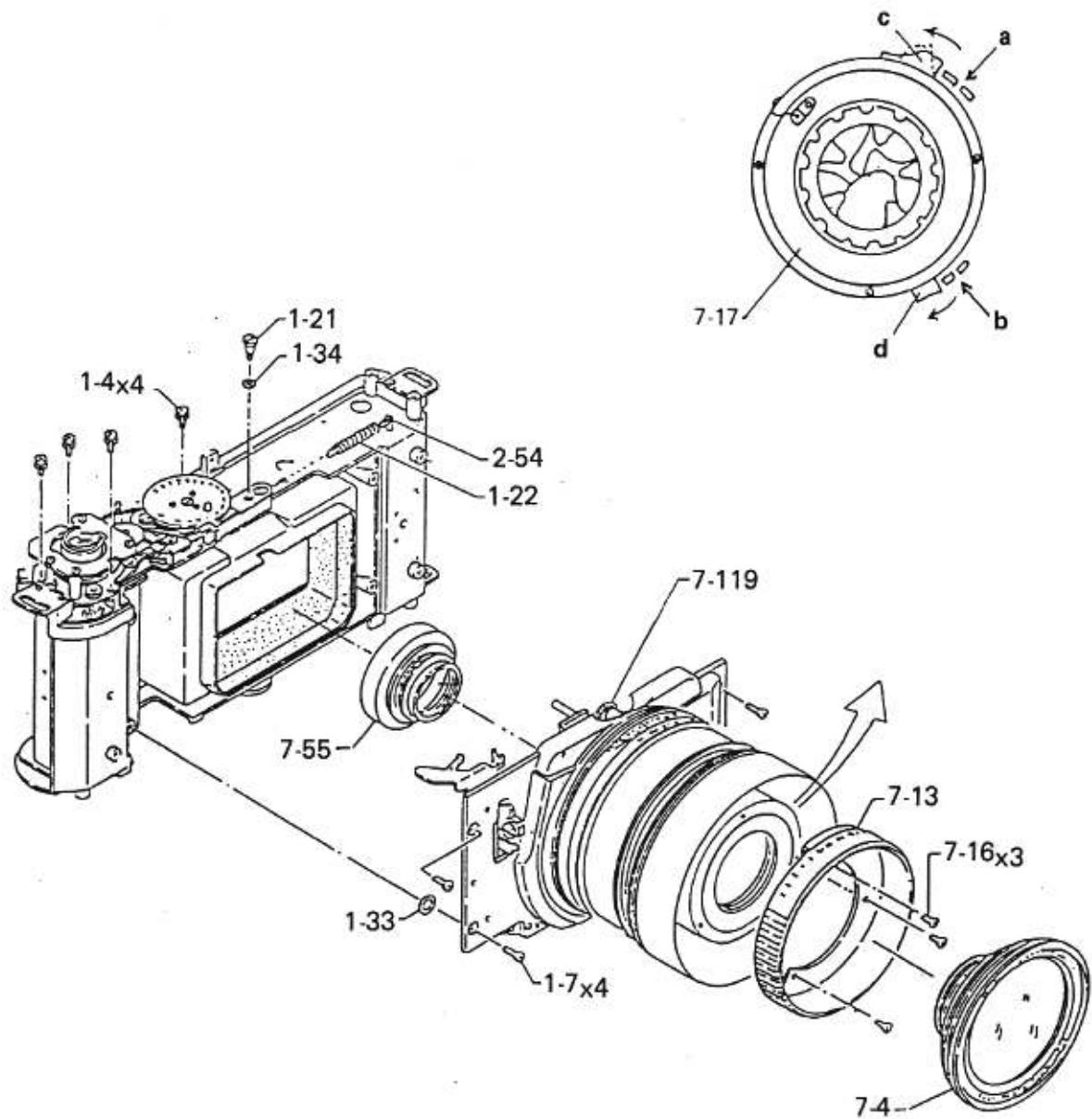
c = Release lever

d = Set lever

7-17 = Shutter assembly (I)

- d. Installing the shutter speed selector ring (7-13), front lens assembly (7-4) and rear lens frame assembly (7-55)

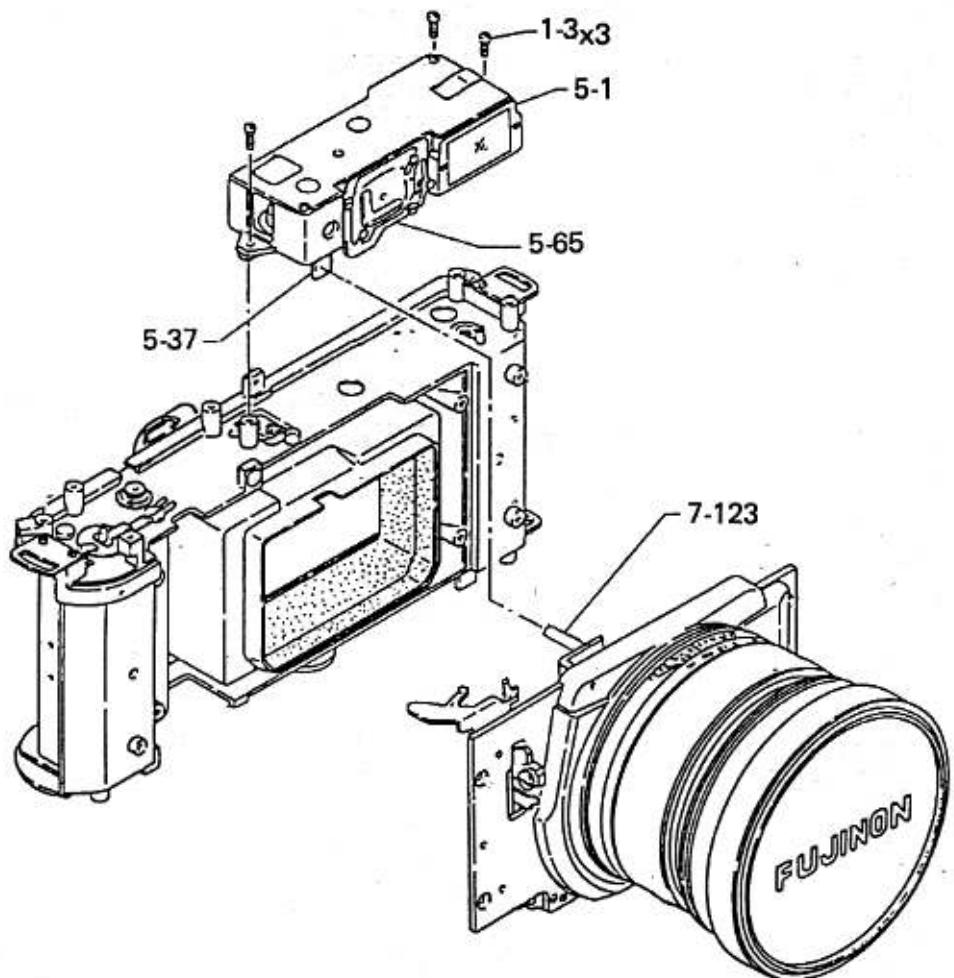
Install the shutter speed selector ring (7-13) on the shutter with three screws (7-16), clean the interior of the front lens assembly, and after applying screw locking agent slightly to the threads, screw the front lens assembly securely.



3-3 Installing the range/viewfinder assembly (5-1)

- a. After checking the linkage (5-37) to insure that it is not deformed or tilted, set the range scale to 1m, and wind up the film advance lever.
Check the springs (5-33 and 5-62) also to insure they are not deformed and they are installed correctly.
- b. Push to move the interlock rod (7-123) to the lens barrel side, apply the face of the linkage (5-37) to the interlock rod (7-123), fit the range/viewfinder assembly (5-1) to the chassis, and secure it with three screws (1-3).
- c. Move the focusing ring, and make sure that the moving viewfinder frame (5-65) operate smoothly.

Fig. V-10



3-4 Adjustment of focusing position

- a. Set the shutter speed selector ring to "T", wind up the film advance lever, and thus, fully open the shutter (Shutter: Bulb; Aperture: Fully opened).
- b. Set the camera on a collimator, turn the focusing ring from the close-up distance to the infinity several times. When the focusing ring stops at the stopper in the infinite position, set the position at 0.03mm toward the lens side from the rail plane, and assuming this position as zero, adjust the position within ± 0.01 . Now, tighten three set screws (7-65) evenly.
- c. After adjusting the focusing position, turn the focusing ring from the middle range to the infinity several times, and make sure again that the focusing position is correct.
Rated focusing position: 0.03 ± 0.01 toward the lens side from the rail plane

NOTE:

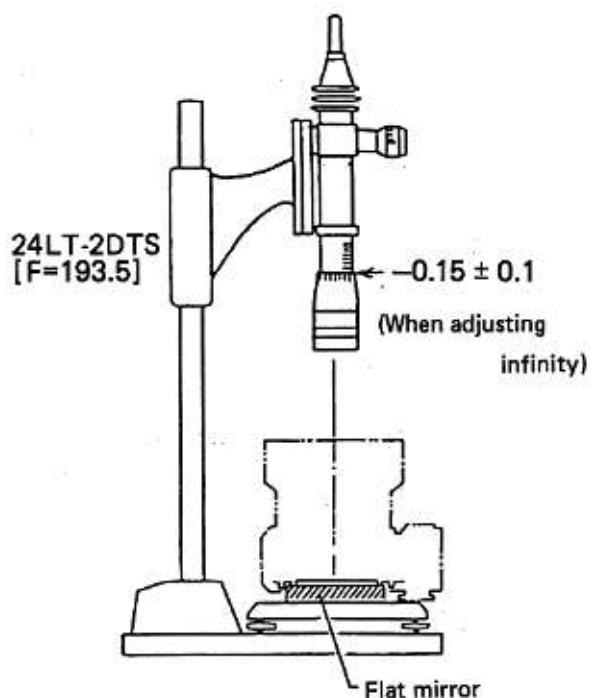
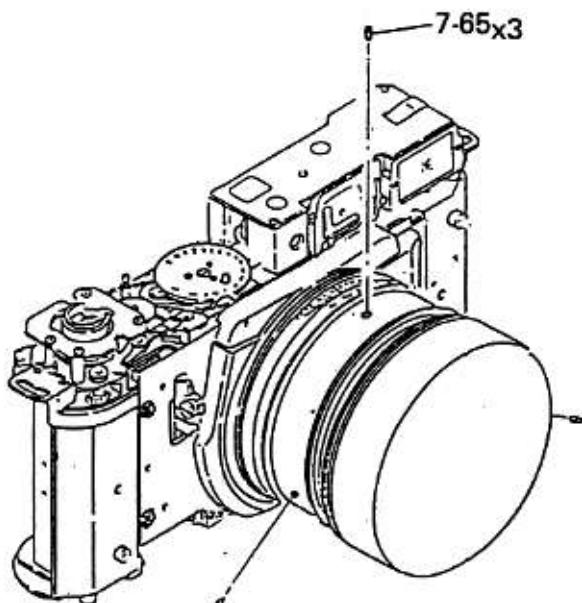
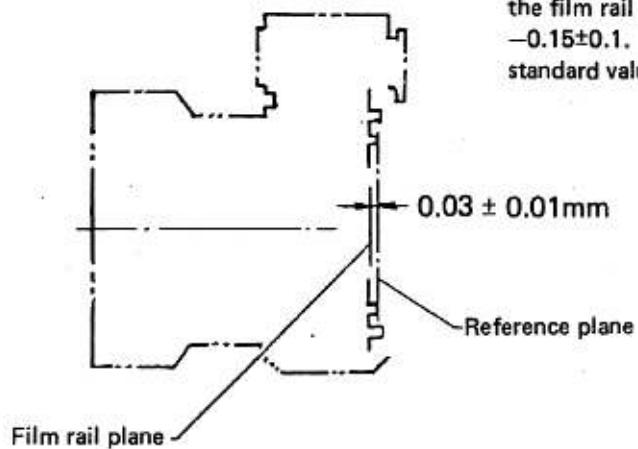
Before performing the above adjustment, thoroughly clean the mirror (focusing position adjusting base) and rail plane of the camera.

Fig. V-11

NOTE:

For the collimator, use one with an objective lens the focal length of which is as longest as possible.

When only 24LT-2D-TS ($F=193.5$) is available, apply a flat mirror to the film rail plane as shown below, and check the objective lens scale at -0.15 ± 0.1 . In this case, however, the value must be fitted to the standard value accurately because there is almost no permissible range.



3-5 Adjustment of the range finder (At infinity and 1.2m)

- a. Fix the camera on a tripod, look at an image in infinite distance (500 meters or farther, or infinity of the collimator), and make adjustment by properly turning the eccentric pin (5-18) so that the moving image in the range finder matches with the stationary image.

Now, turn the focusing ring a few times from the middle range to the infinity, and make sure that the moving and stationary images are matched.

- b. Set the shutter to bulb, fully open the aperture, and face the camera forward against a chart located in the position 1.2m from the rail plane of the camera, (In this case, the rail plane must be in parallel to the chart plane. Further, apply a sheet of frosted glass on the rail plane and match the chart center with the lens center.)

Next, set the focusing ring to 1.2m, and make sure that the image is focused correctly.

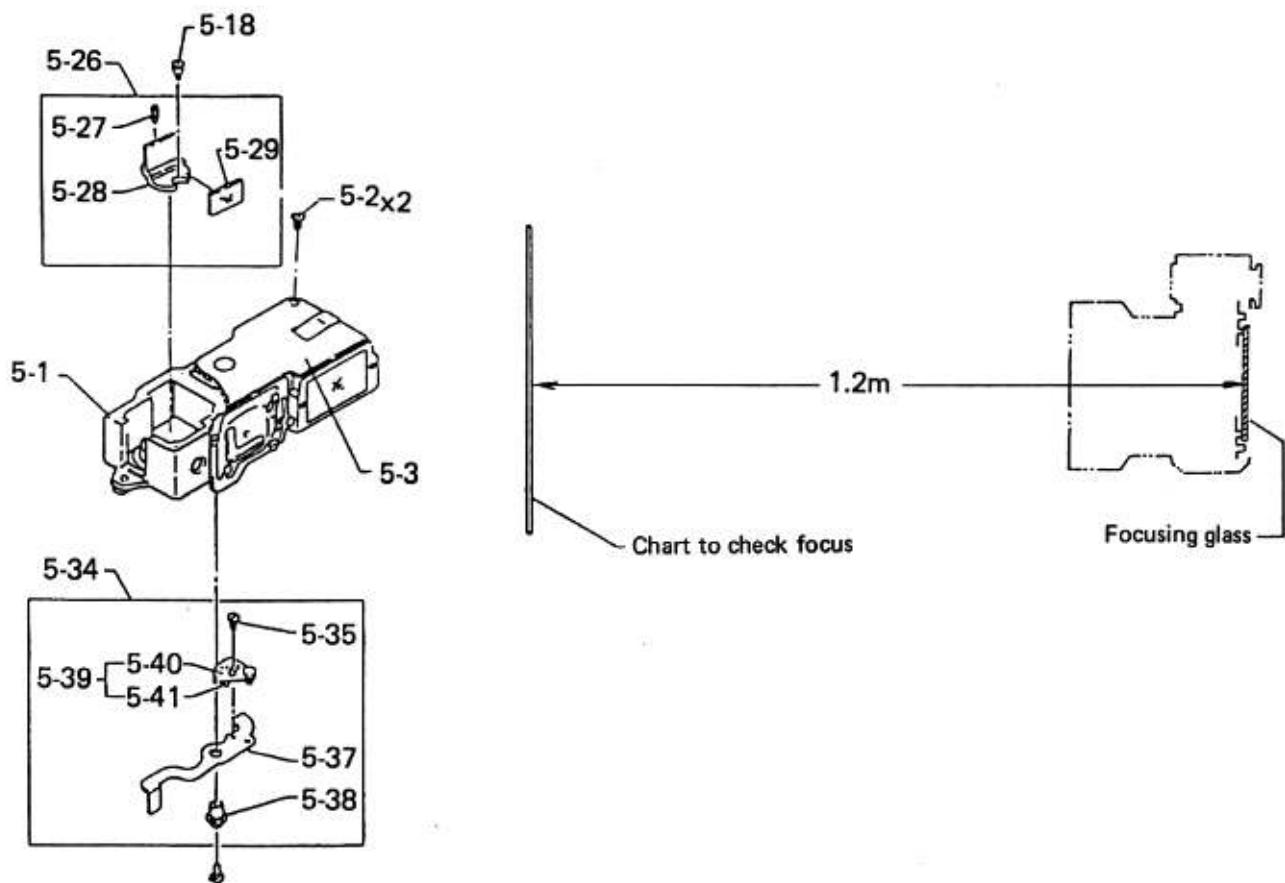
- c. Looking into the range finder, loosen the screw (5-35) slightly, move the adjust lever (5-39) by pushing it forward and backward with a screw driver or other proper tool, and thus, match the images in the range finder.

Retighten the screw (5-35) securely without fail.

- d. Now, make sure that images in the range finder agree at both the infinity and 1.2m, and that the focusing position is 0 ± 0.05 from the rail plane at the 1.2m distance. It is very rare to success in making this adjustment at one time. Perform repeatedly.

Further, the focusing position at 1.2m may not necessarily agree with the index position of the focusing ring completely. In this case, the agreement between the focusing position and range finder should be prefered.

Fig. V-12



3-6 Adjustment of parallax

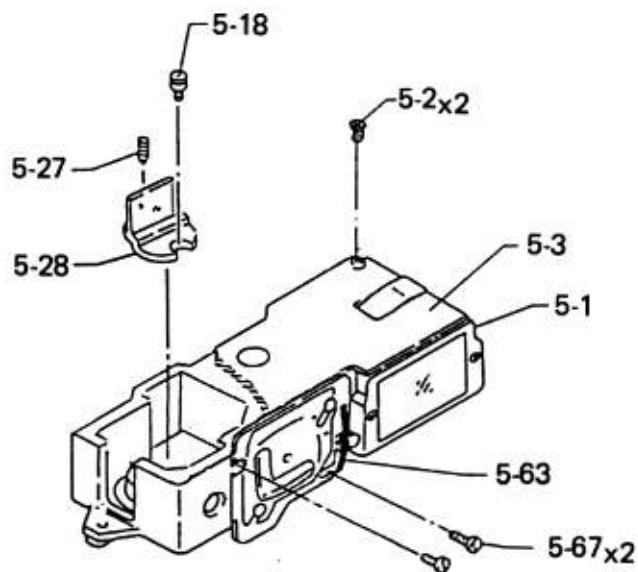
- a. After adjusting the range finder, check the left, right, top and bottom positions of the picture projected on the focused plane, and then, look into the viewfinder to insure that the image seen in the viewfinder frame agrees with the checked positions. When adjustment is required, loosen two screws (5-67) and change position of the viewfinder frame adequately. Or, it may be adjusted by slightly bending the interlock lever (5-63).

Adjst deviation between the viewfinder frame and actual picture size within range *1 below.

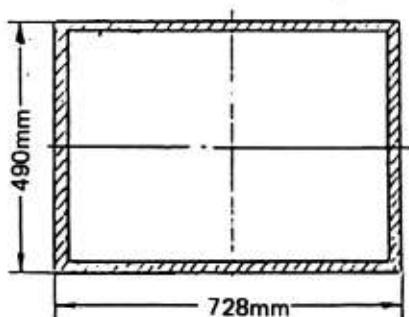
- b. After adjusting the viewfinder frame, make sure that the viewfinder frame operates smoothly and that the viewfinder frame is not tilted.

Then, finally, check the range finder once again for the infinite position, and make sure that the left, right, top and bottom position are not deviated. If deviated, adjust it with the eccentric pin (5-18) [For left or right] and adjust screw (5-27) [For top and bottom], and then, install the cover (5-3) with two screws (5-2).

Fig. V-13



Size of chart



Line width: 5mm



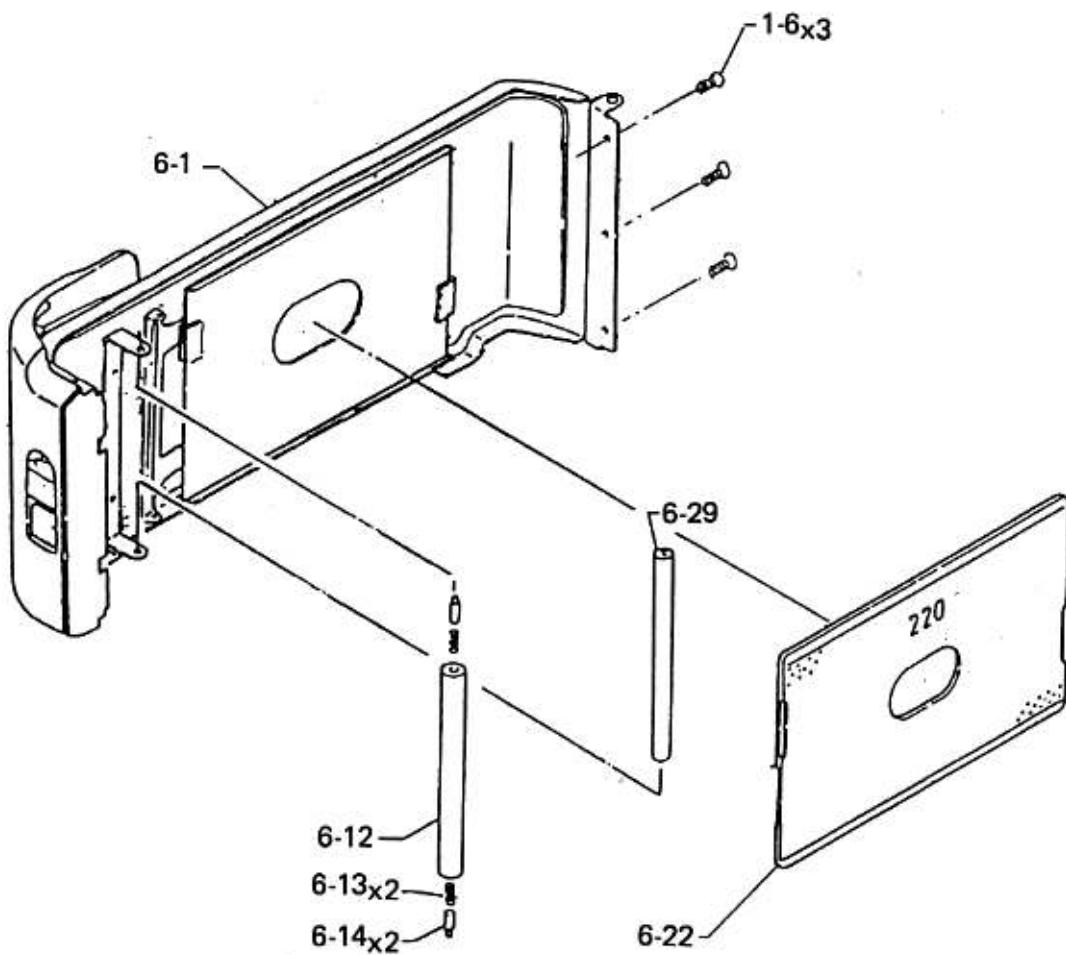
- *1 The viewfinder frame should not come out of the outer line of the chart.
- *2 Prepare a chart by marking lines with a sign pen on a white paper.

3-7 Installing the camera back assembly (6-1)

Make sure that the pressure plate (6-22) and rollers (6-23 and 6-25) are installed correctly and they operate normally, and then, install the camera back assembly (6-1) with three screws (1-6).

After installing the camera back assembly, open and close it two to three times and make sure that the camera back can be opened and closed smoothly and that the camera back is locked and unlocked correctly.

Fig. V-14



3-8 Installing the top cover assembly (4-1) and adjusting the exposure counter

a. Install the top cover assembly (4-1) temporarily, load the camera with a film, set the film selector (3-3) to "4EXP", wind up the film advance lever, and make sure that the exposure counter indicates "1". Now, depress the shutter release, and make sure that the shutter is released and the exposure counter advances accordingly. Further, make sure that the exposure counter no longer advances when the exposure counter indicates "4".

b. Next, reload the camera with a film, advance the film, and make sure that:

- 1) The shutter cannot be released when the exposure counter is in between "S" and "1".
- 2) The shutter cannot be released when the exposure counter is in between "1" and "2", "2" and "3", and "3" and "4".

[The shutter can be released only when the exposure counter indicates a certain number after advancing the film one frame completely.]

Make the above check with the film selector set to "8EXP" and "16EXP" also.

c. Remove the top cover assembly, remove one screw (1-4), and reinstall the screw after applying the cord clamp (1-44).

Connect the black lead wire (3-38) to the cord clamp (3-39) and the contact (3-34) by the use of a soldering iron.

Next, connect the red lead wire (3-36) to the contact (3-26) by the use of a soldering iron.

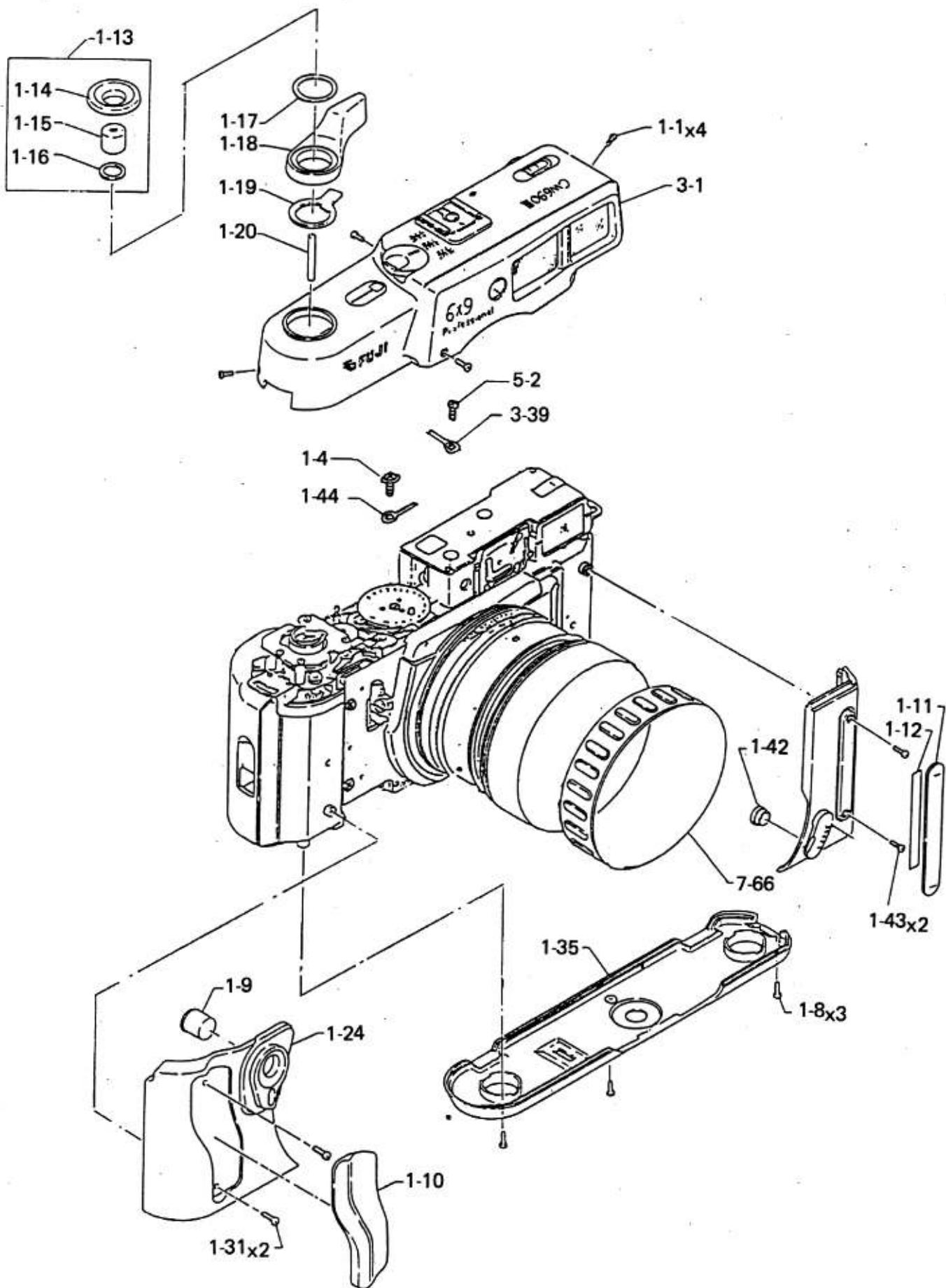
Apply lug to the front right side of the screw (5-2), protect the lead wires with a tube, and combine the lead wires the the cord clamp (3-39) to eliminate slackness.

d. Thoroughly clean the lens of the range finder, viewfinder fame and other windows on the top cover, blow out dust from the inside, and install the top cover assembly (3-1) on the chassis with four screws (1-1).

e. Place the shutter release shaft (1-20), stopper (1-19), film advance lever (1-18) and spring washer (1-17) in their positions, and secure them with the shutter release assembly (1-13).

When tightening the shutter release assembly (1-13), recommend a piece of thin rubber sheet be used.

Fig. V-15



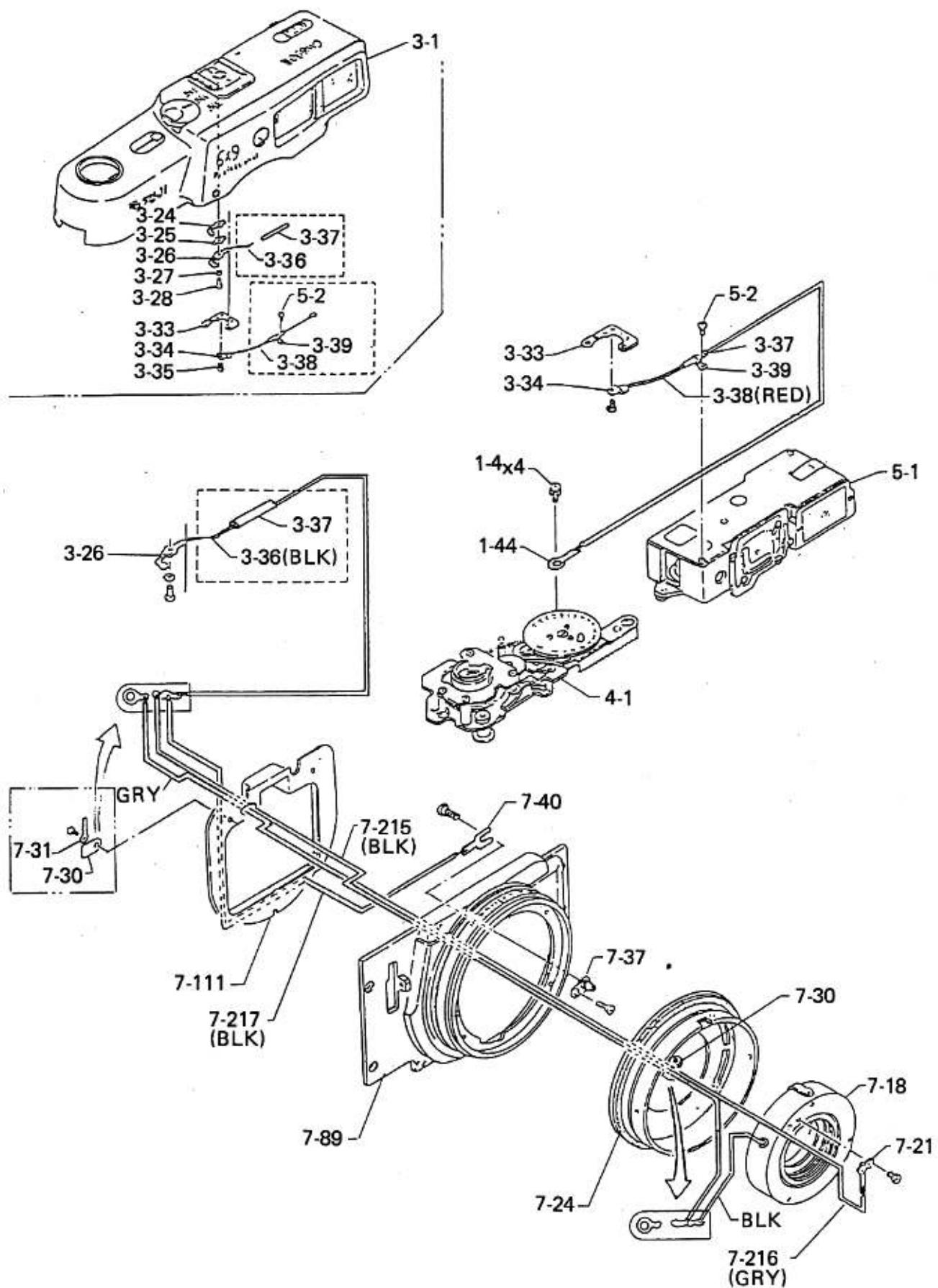
3-9 Installing the exterior parts

- a. After insuring that the shutter actuation counter assembly (7-93) operates correctly, install the bottom cover (1-35) on the chassis with three screws (1-8) completely.
- b. Apply the shutter release (1-9) into the opening of the front left grip assembly (1-23) and install the front left grip assembly (1-23) on the chassis with two screws (1-31).
- c. Fit the cylinder (1-42) to the synchrosocket assembly (7-37), and install the front right grip assembly (1-36) on the chassis with two screws (1-43).
- d. Install the leather (1-11) on the recess of the front right grip with a piece of adhesive tape (1-12). Next, install the rubber grip (1-10) on the recess of the front left grip with adhesive.

Be careful not to allow adhesive to come out of the rubber grip.

- e. Apply adhesive slightly to three positions on the circumference of the focusing ring (I) (7-63), and install the knurled ring (7-66) correctly without bending or tilting.
When all the above reassembling work ends, check each part and make sure that the camera operates correctly and has a clean and neat appearance.

VI. WIRING DIAGRAM FOR SYNCHRO CIRCUIT



VII. INSPECTION

1. Film advancing/Shutter charging/Exposure counter advancing/Shutter releasing

1-1 Film loading

With the shutter released, load a 220 film, close the camera back and make sure that:

- 1) The camera back is locked securely.
- 2) The exposure counter indicates "S".

1-2 Film advancing/Shutter charging

Wind up the film advance lever slowly, leave the film advance lever from the winding up in a half way before it is completely wound up, and make sure that the film advance lever does not return.

Continue to wind up the film advance lever, and make sure that the film advancing stops when the exposure counter advances from "S" to "1".

1-3 Shutter releasing

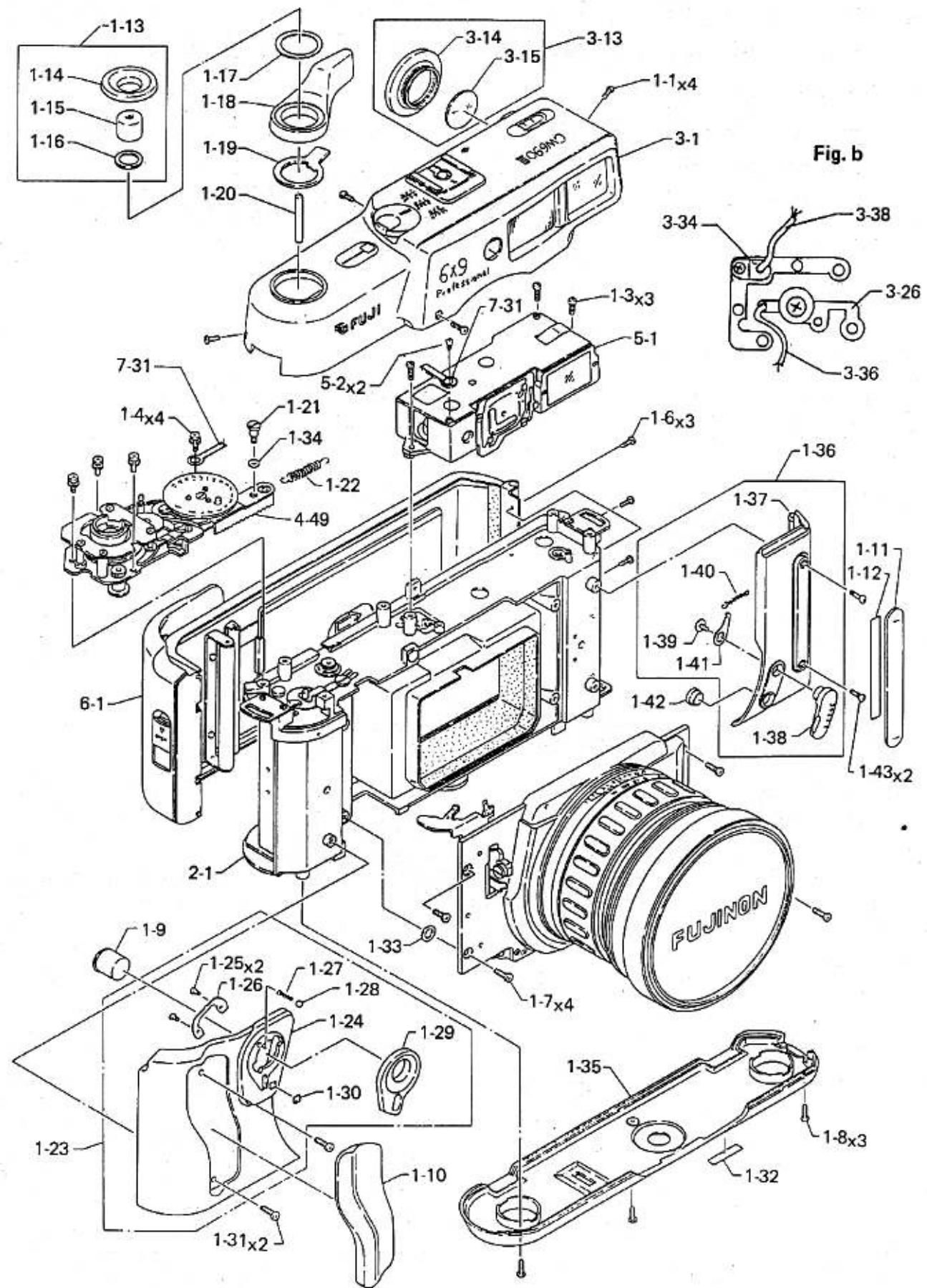
Set the shutter lock lever to the position where the red mark can be seen (shutter releasing is allowed), depress the top shutter release, and make sure that the shutter is released and shutter blades open and close correctly.

1-4 Film selector

Set the film selector to "4EXP", advance the film by checking as described in 1-2 and 1-3 above and make sure that the exposure counter stops at "4".

Next, set the film selector to "8", perform the same inspections, and make sure that both the film and exposure counter are advanced to the last frame. Open the camera back, and make sure that the film is taken up correctly without slackness and that the exposure counter indicates "S".

Fig. VII-1



2. Range/Viewfinder

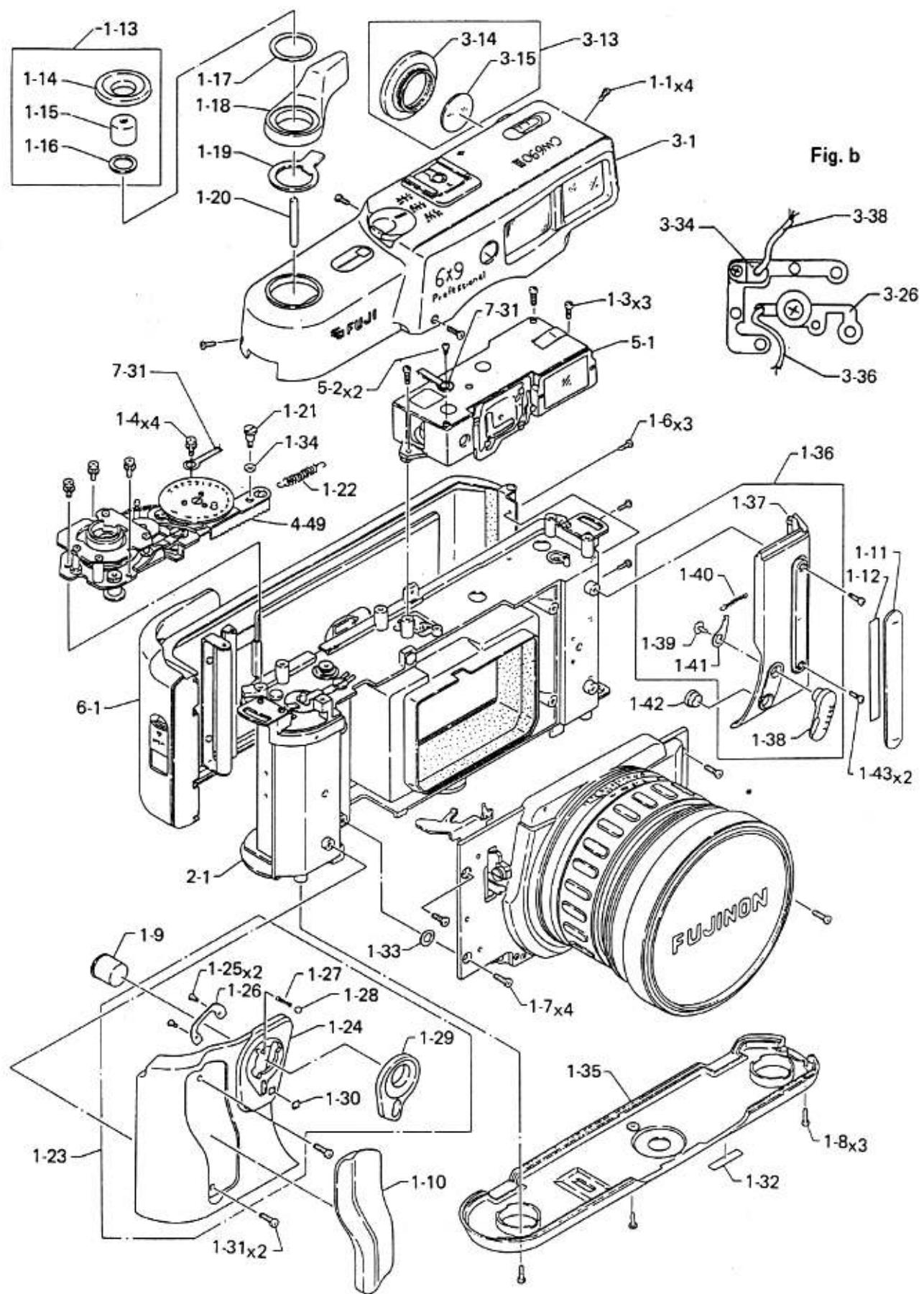
Watching an object in a long distance (A bar distance 500 meters or longer from the camera) through the viewfinder, turn the focusing ring from the middle range to the infinity two to three times, and make sure that the double images in the viewfinder correctly match when the focusing ring is set to the infinity.

Turn the focusing ring from the close-up distance to the infinity two to three times slowly, and make sure that the moving images of the viewfinder frame and range finder move smoothly without any dragging.

Further, make sure that the helicoid operates smoothly and lightly.

Make sure that images can be seen clearly, no dust exists in the viewfinder and viewfinder lenses are clean.

Fig. VII-2



3. Synchro-insulation and continuity

Apply a tester to the positive (+) and negative (-) terminals of the synchro-terminal and hot shoe, release the shutter, and make sure that the correct continuity exists. Further, make sure that no continuity exists when the shutter is not opened or closed.

4. Shutter release lock and shutter actuation counter

- 4-1 Set the shutter lock button to "L", and make sure that both the top and front shutter releases are locked and that the shutter cannot be released. Further, make sure that the lever operates smoothly and clicks at each position correctly.
- 4-2 Through the above inspections, make sure that number of shutter releasings is memorized and the actuation counter advances one number per 10 shutter releasings.

5. Other parts

5-1 Shutter speed selector ring

Check the shutter speed selector ring to insure that it turns smoothly and lightly, it clicks at each shutter speed, shutter speed changes as the indicated number changes, and that the shutter speed matches with the index.

5-2 Aperture selector ring

Check the aperture selector ring to insure that it turns smoothly, it clicks at each aperture value, the aperture diameter changes accordingly, and that the aperture number matches with the index.

5-3 Rollers

Check two rollers on the camera back and rollers on the rail plane to insure that they turn smoothly. Further, check two rollers for the film holder to insure that they operate smoothly.

5-4 pressure plate on the camera back

Push the pressure plate toward the arrow to remove it, and make sure that the pressure plate can be removed and installed without any problem.

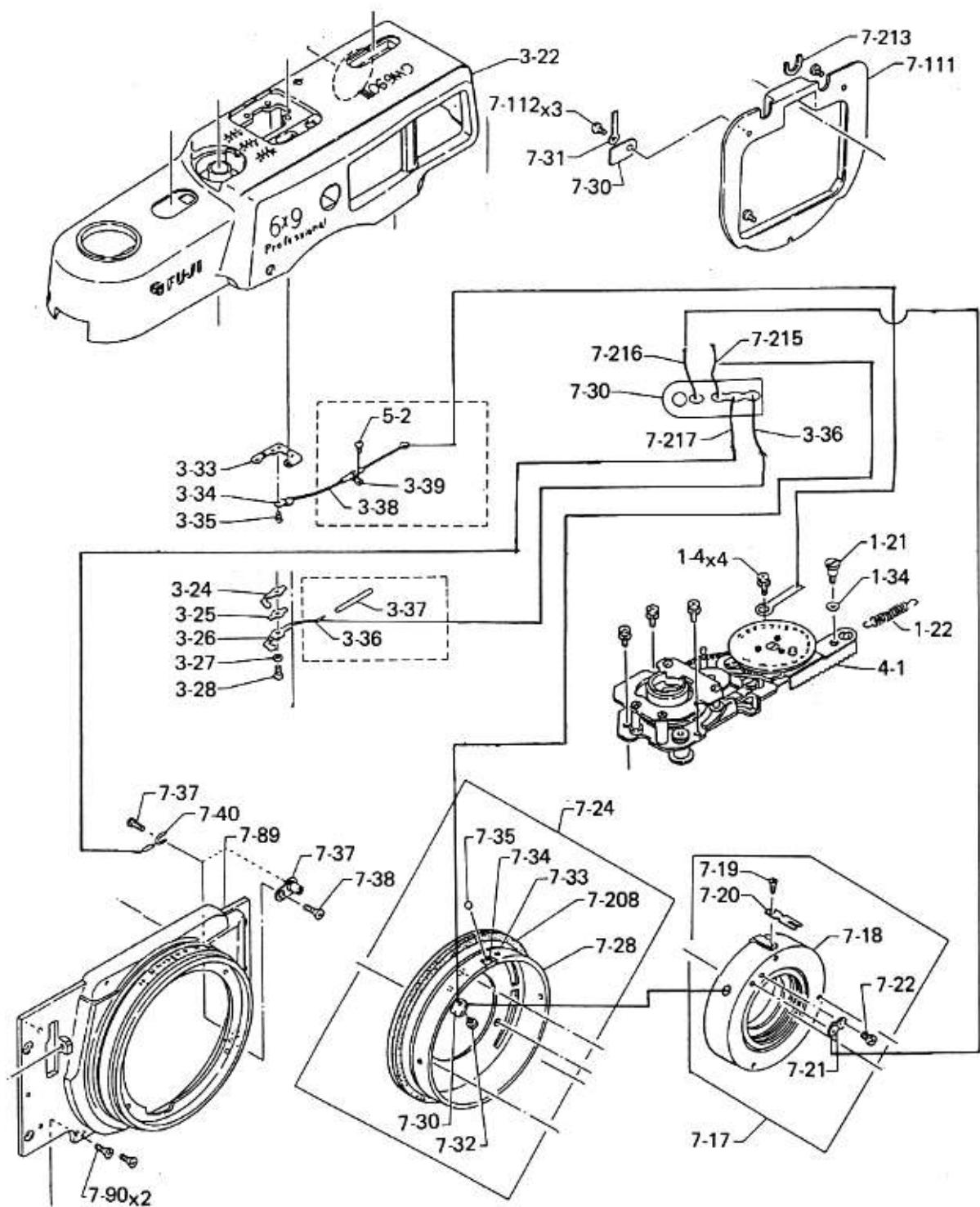
5-5 Others

Make sure that the camera appearance is satisfactory. No remarkable scar, uncleanliness, peeled off character, etc. are not permitted.

Shake the camera to insure that no foreign matter exists inside the cemara.

Finally, check the camera to insure that all the parts are installed correctly.

Fig. VII-3



6. Shutter speed standards

Shutter speed (sec.)	Standards						
	EV value	-	Standard value (ms)			+	
1/500	±0.75	1.16	~	1.95	~	3.28	
1/250	±0.75	2.33	~	3.91	~	6.58	
1/125	±0.75	4.64	~	7.81	~	13.13	
1/60	±0.5	11.0	~	15.6	~	22.1	
1/30	±0.5	22.1	~	31.2	~	44.1	
1/15	±0.5	44.2	~	62.5	~	88.4	
1/8	±0.5	88.4	~	125.0	~	177.0	
1/4	±0.5	177.0	~	250.0	~	354.0	
1/2	±0.5	354.0	~	500.0	~	707.0	
1	±0.5	707.0	~	1000.0	~	1414.0	
Synchro time lag	-0.5 ~ +0.1						Indicating function + : X - : M
Contact efficiency	50% or more						

VIII. SPECIAL TOOL LIST

No.	Tool	Application
J1153		Rear lens assembly (GSW 690-III) Used commonly with GSW 690
J1154		Rear lens assembly (GSW 690-III) Used commonly with GSW 690
J1155		Shutter assembly Used commonly with G690
J1156		Focus adjust stand
J1220		Front lens assembly
JB1144		Focusing glass

Used grease

No.	Grease name	Application
FHA054	Helicolube	Take-up mechanism assembly and others
022	Photolub Grease	Rack
FHD100	Losoid 88410	Helicoid

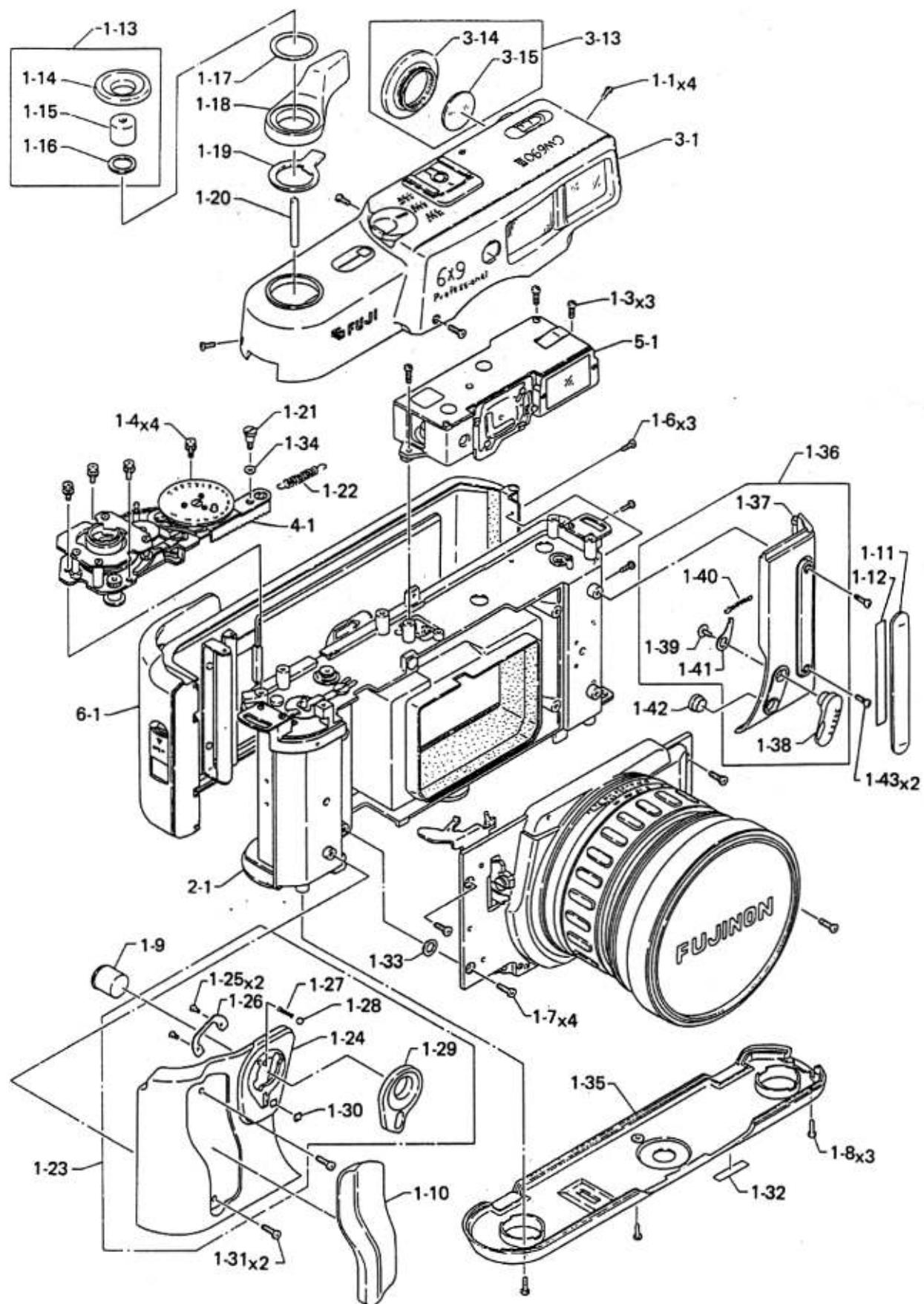
IX. PARTS LIST

**FUJI GW690-III
(PROFESSIONAL)**

Q937

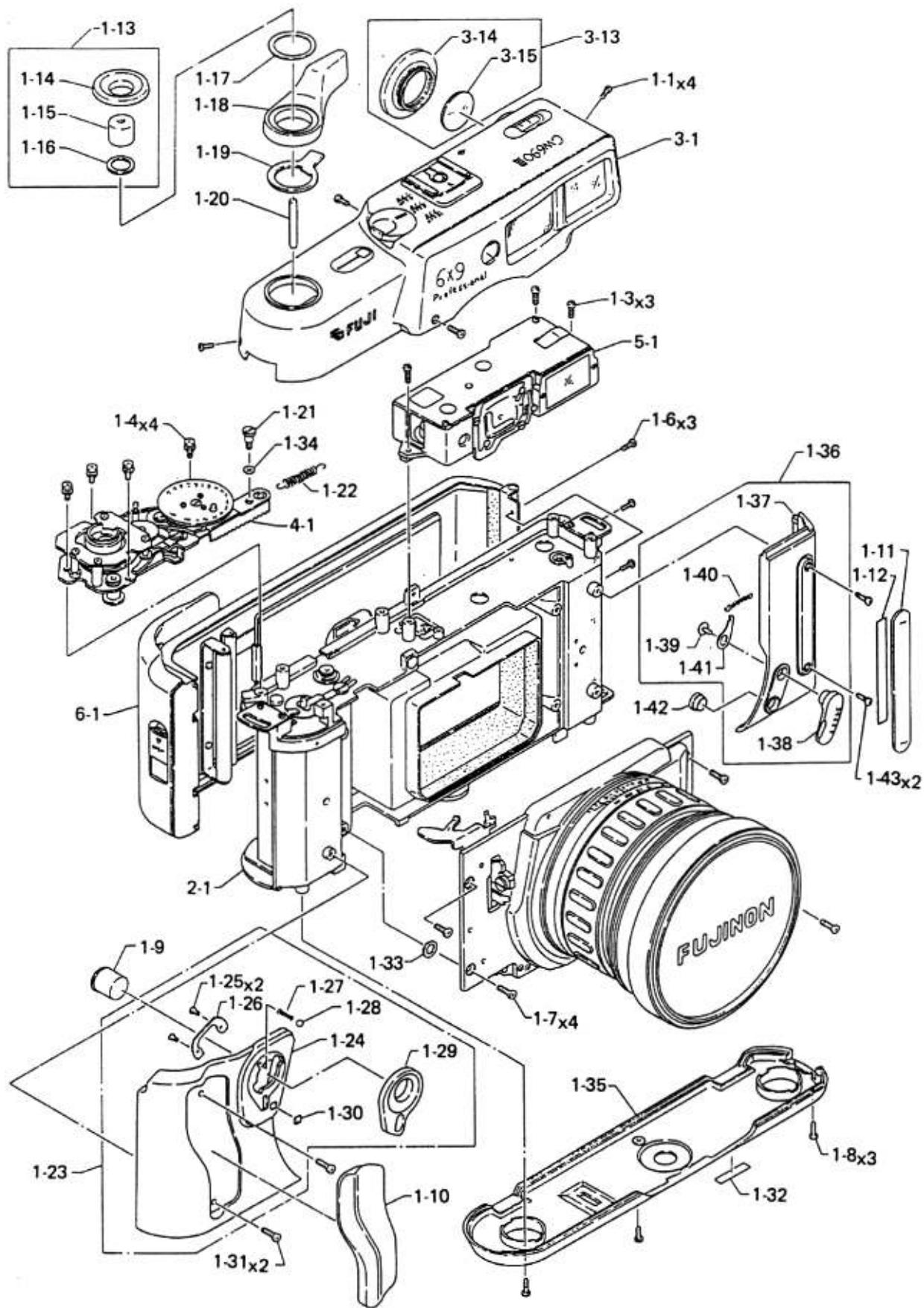
* Commonly used with GW690-II.

Fig. 1



Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
1- 1	110M 200403J	Screw	4	○		
1- 3	110M 200603S	Screw	3	○	*	
1- 4	280M 20503K	Screw	4	○		
1- 6	110M 170402S	Screw	3	○		
1- 7	110M 260503S	Screw	4	○		
1- 8	110M 200503J	Screw	3	○		
1- 9	16B 6764880	Shutter release	1	○		
1- 10	81B 6764930	Rubber grip	1	○		
1- 11	81B 6765000	Leather	1	○		
1- 12	187B 6764870	Adhesive tape	1	○		
1- 13	84A 6764620	Shutter release assembly	1	○		
1- 14	84B 6764820	Button seat	1	X		
1- 15	16B 6764830	Shutter release	1	X		
1- 16	55B 29680	Washer	1	X	*	
1- 17	50B 29400	Spring washer	1	○	*	
1- 18	47B 6764810	Film advance lever	1	○		
1- 19	85B 6764890	Stopper	1	○		
1- 20	32B 2189010	Shutter release shaft	1	○	*	
1- 21	53B 2189060	Set screw	1	○	*	
1- 22	50B 2191320	Spring	1	○	*	
1- 23	11A 6764640	Front left grip assembly	1	○		
1- 24	11B 6764910	Front left grip	1	X		
1- 25	110M 170301S	Screw	2	○		
1- 26	86B 4389600	Holding plate	1	○		
1- 27	50B 4389620	Spring	1	○		
1- 28	200M 24	Steel ball	1	○		
1- 29	47B 6764920	Lock lever	1	○		
1- 30	85B 6764940	Name plate	1	○		
1- 31	110M 200502S	Screw	2	○		
1- 32	58B 29520	Number plate	1	○	*	
1- 33	55B 3660920	Washer	1	○		
1- 34	55B 2189110	Washer	1	○		

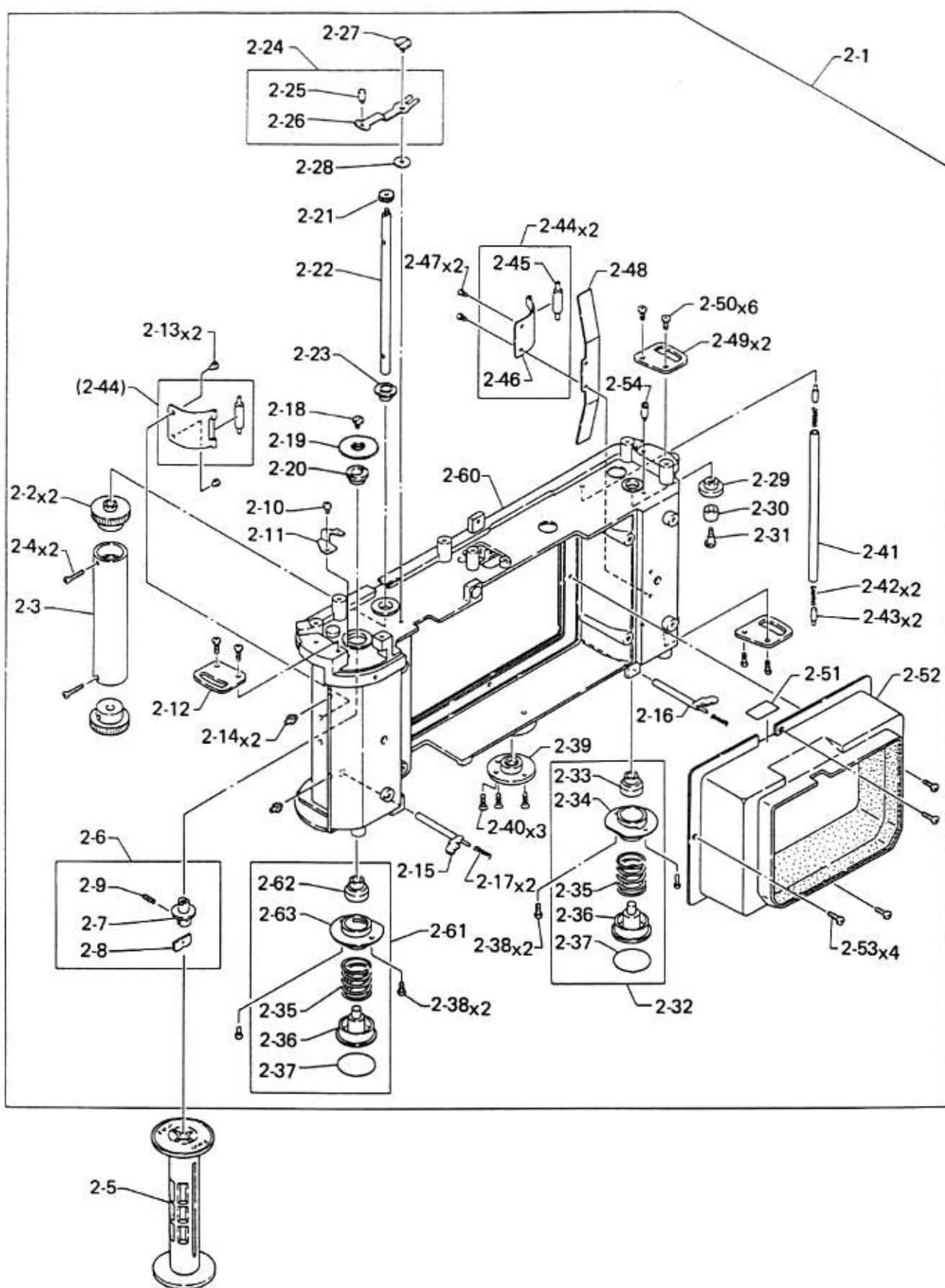
Fig. 1



Q937

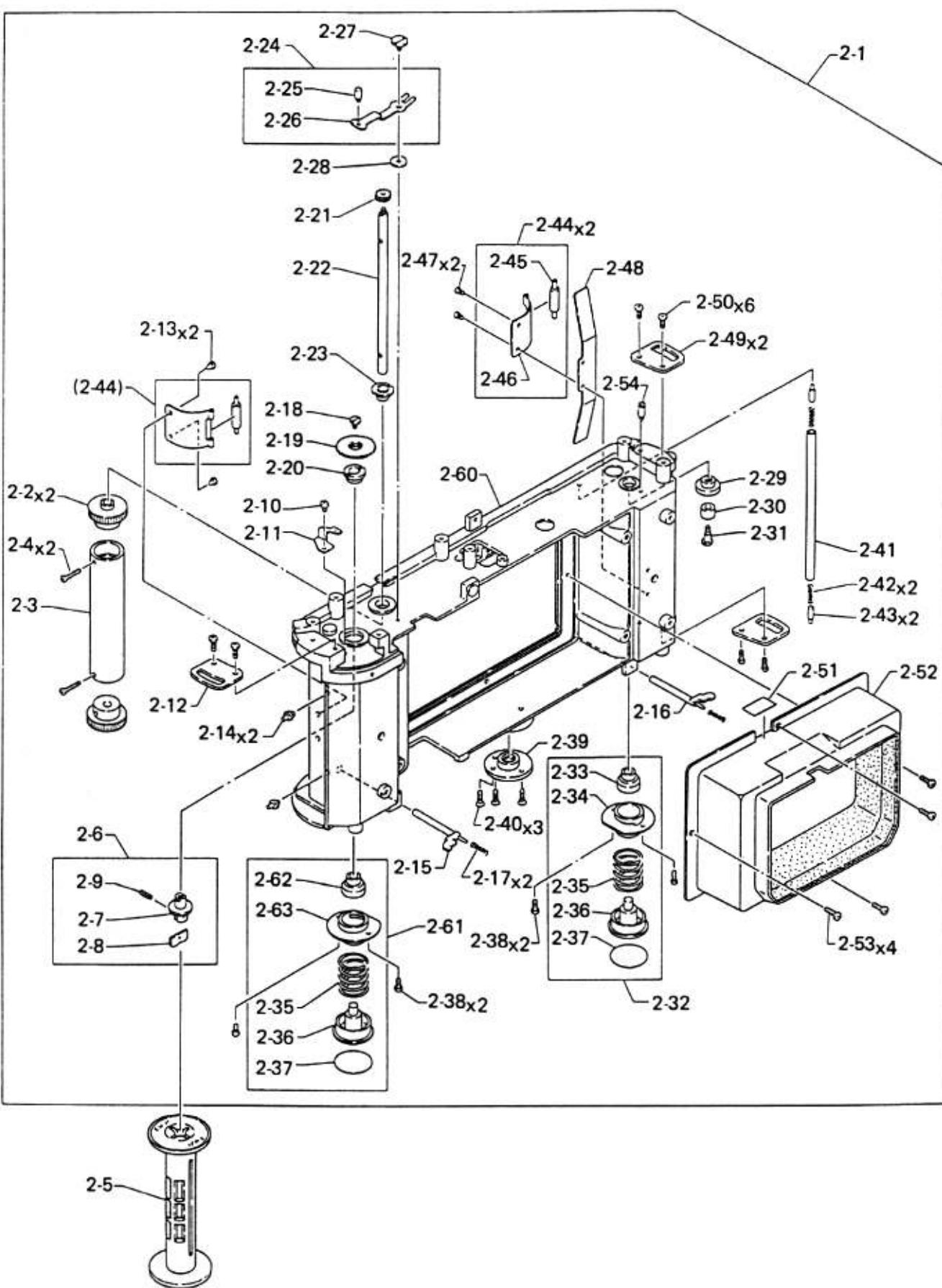
Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
1- 35	11B 6764800	Bottom cover	1	○		
1- 36	11A 6764630	Front right grip assembly	1	○		
1- 37	11B 6764960	Front right grip	1	○		
1- 38	11B 6764970	Synchro-cover	1	○		
1- 39	53B 3315040	Set screw	1	○		
1- 40	50B 6764990	Spring	1	○		
1- 41	47B 6764980	Lever	1	○		
1- 42	24B 4390130	Cylinder	1	○	*	
1- 43	110M 200502S	Screw	2	○		

Fig. 2



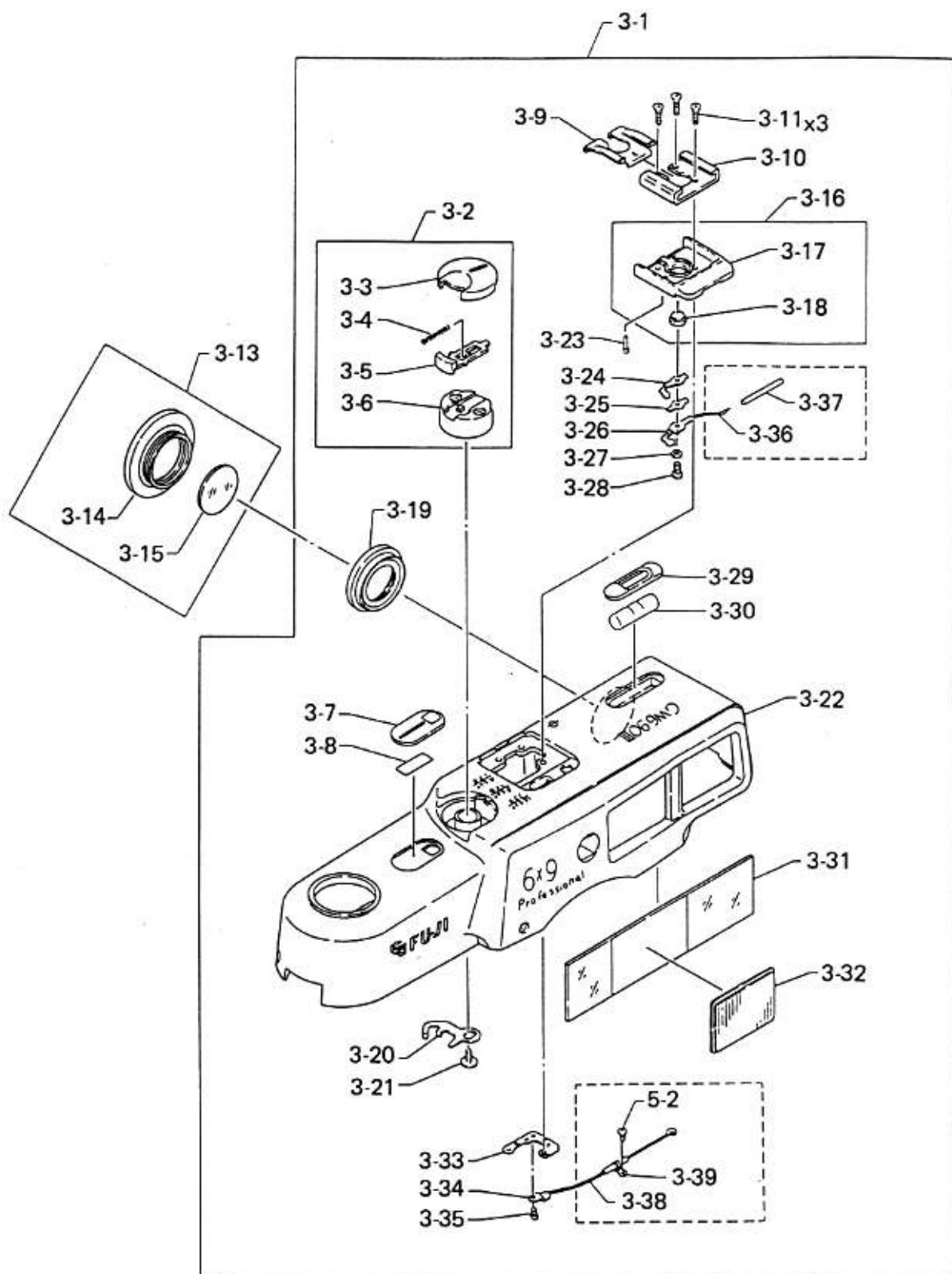
Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
2- 1	301A 6765200	Chassis assembly	1	○		
2- 2	36B 486732	Collar	2	○	*	
2- 3	36B 486724	Drum	1	○	*	
2- 4	111M 140701S	Screw	2	○	*	
2- 5	37B 29490	Spool	1	○	*	
2- 6	32A 6765500	Take-up shaft assembly	1	○		
2- 7	32B 6765780	Take-up shaft	1	×		
2- 8	85B 30040	Take-up claw	1	×		
2- 9	182M 120401H	Spring pin	1	×		
2- 10	110M 200203S	Screw	1	○		
2- 11	50B 6765620	Friction spring	1	○		
2- 12	41B 6765750	Bracket (left)	1	○		
2- 13	170M 15018C	Rivet	2	○	*	
2- 14	17B 3281190	Lock pin	2	×		
2- 15	82B 6765770	Pin	1	○		
2- 16	82B 6765761	Pin	1	○		
2- 17	50B 3281180	Spring	2	○		
2- 18	53B 30721	Screw	1	○	*	
2- 19	34B 2190101	Take-up gear	1	○	*	
2- 20	31B 30700	Take-up shaft holder	1	○	*	
2- 21	34B 2190090	Exposure counter drive wheel	1	○	*	
2- 22	32B 486752	Exposure counter drum shaft	1	○	*	
2- 23	31B 30221	Shaft holder	1	○	*	
2- 24	47A 2190950	Lock lever assembly	1	○	*	
2- 25	17B 2190130	Lock pin	1	×	*	
2- 26	47B 2190121	Lock lever	1	×	*	
2- 27	53B 2190150	Screw	1	○	*	
2- 28	55B 2190140	Washer	1	○	*	
2- 29	32B 3771170	Shaft holder	1	○		
2- 30	30B 3771150	Roller	1	○		
2- 31	31B 3771160	Shaft	1	○		
2- 32	23A 3281080	Guide ring assembly	1	○		

Fig. 2



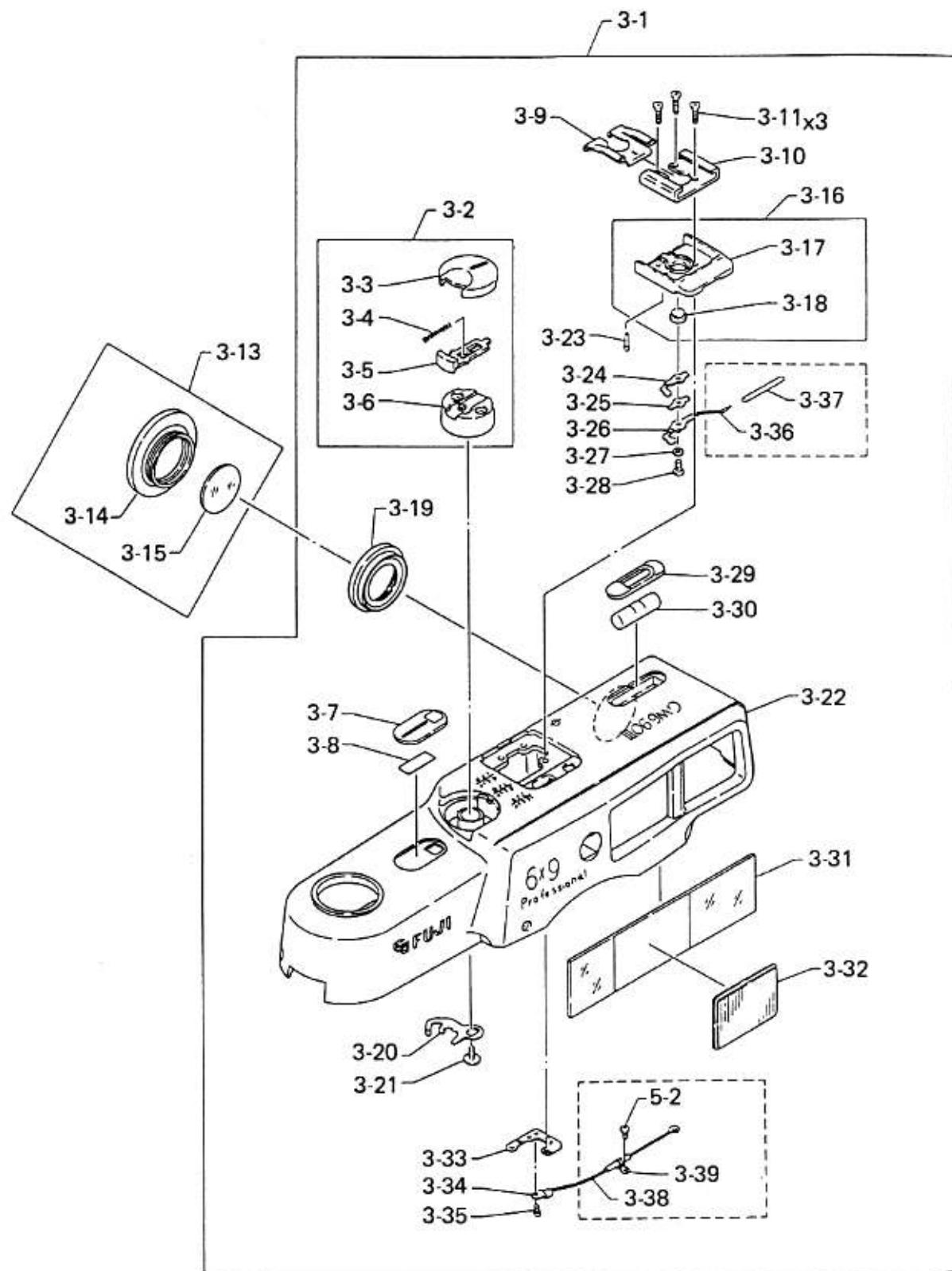
Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
2- 33	32B 3281140	Spool shaft holder	1	X		
2- 34	23B 3281121	Guide ring	1	X		
2- 35	50B 3281170	Spring	2	X		
2- 36	16B 3281130	Knob	2	X		
2- 37	11B 3280740	Tape	1	O		
2- 38	110M 200351S	Screw	4	O		
2- 39	53B 6765610	Tripod screw	1	O		
2- 40	111M 200503S	Screw	3	O		
2- 41	30B 30151	Film guide roller	1	O	*	
2- 42	50B 30170	Spring	2	O	*	
2- 43	17B 30160	Pin	2	O	*	
2- 44	50A 720000	Leaf spring assembly	2	O	*	
2- 45	37B 486980	Roller	2	X	*	
2- 46	50B 486970	Leaf spring	2	X	*	
2- 47	110M 140201N	Screw	2	O	*	
2- 48	50B 486960	Pressure spring	1	O	*	
2- 49	41B 6765740	Bracket	2	O		
2- 50	110M 200402S	Screw	4	O		
2- 51	27B 2190230	Seal	1	O	*	
2- 52	27B 2190010	Hood	1	O	*	
2- 53	110M 170353S	Screw	4	O	*	
2- 54	53B 2190110	Screw	1	O	*	
2- 60	10B 6765600	Chassis	1	O		
2- 61	23A 6765510	Guide ring assembly	1	O		
2- 62	32B 6765790	Spool shaft	1	X		
2- 63	23B 6765800	Guide ring	1	X		

Fig. 3



Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
3- 1	303A 67666501	Top cover assembly	1	O		
3- 2	29A 67666600	Film selector assembly	1	O		
3- 3	16B 6766630	Film selector	1	X		
3- 4	50B 6766640	Spring	1	O		
3- 5	47B 6766620	Lock plate	1	O		
3- 6	29B 6766610	Selector base	1	X		
3- 7	6B 6766700	Exposure counter window	1	O		
3- 8	187B 6190342	Adhesive tape	1	O		
3- 9	11B 3288380	Shoe cover	1	O	*	
3- 10	41B 2252410	Accessory shoe	1	O	*	
3- 11	111M 170501N	Screw	3	O	*	
3- 13	23A 6764600	Eyepiece assembly	1	O		
3- 14	23A 6764610	Eyepiece assembly	1	X		
3- 15	23B 95580	Viewfinder window	1	X	*	
3- 16	41A 6766650	Shoe seat assembly	1	O		
3- 17	41B 6766660	Shoe seat	1	X		
3- 18	109B 3286130	Contact	1	X		
3- 19	23B 2192580	Eyepiece	1	X		
3- 20	47B 2192560	Limit lever	1	O	*	
3- 21	53B 3315041	Set screw	1	O	*	
3- 22	11B 67666590	Top cover	1	X		
3- 23	17B 3288370	Pin	1	O	*	
3- 24	112B 2050650	Contact	1	O	*	
3- 25	115B 2050700	Insulator	1	O	*	
3- 26	112B 2050661	Contact	1	O	*	
3- 27	55B 2050671	Washer	1	O	*	
3- 28	53B 93480	Set screw	1	O	*	
3- 29	82B 6766690	Level cap	1	O		
3- 30	164B 6766680	Level	1	O		
3- 31	6B 2192590	Window glass	1	O		
3- 32	6B 2192600	Viewfinder frame	1	O	*	
3- 33	85B 6766712	Seat plate	1	O		

Fig. 3

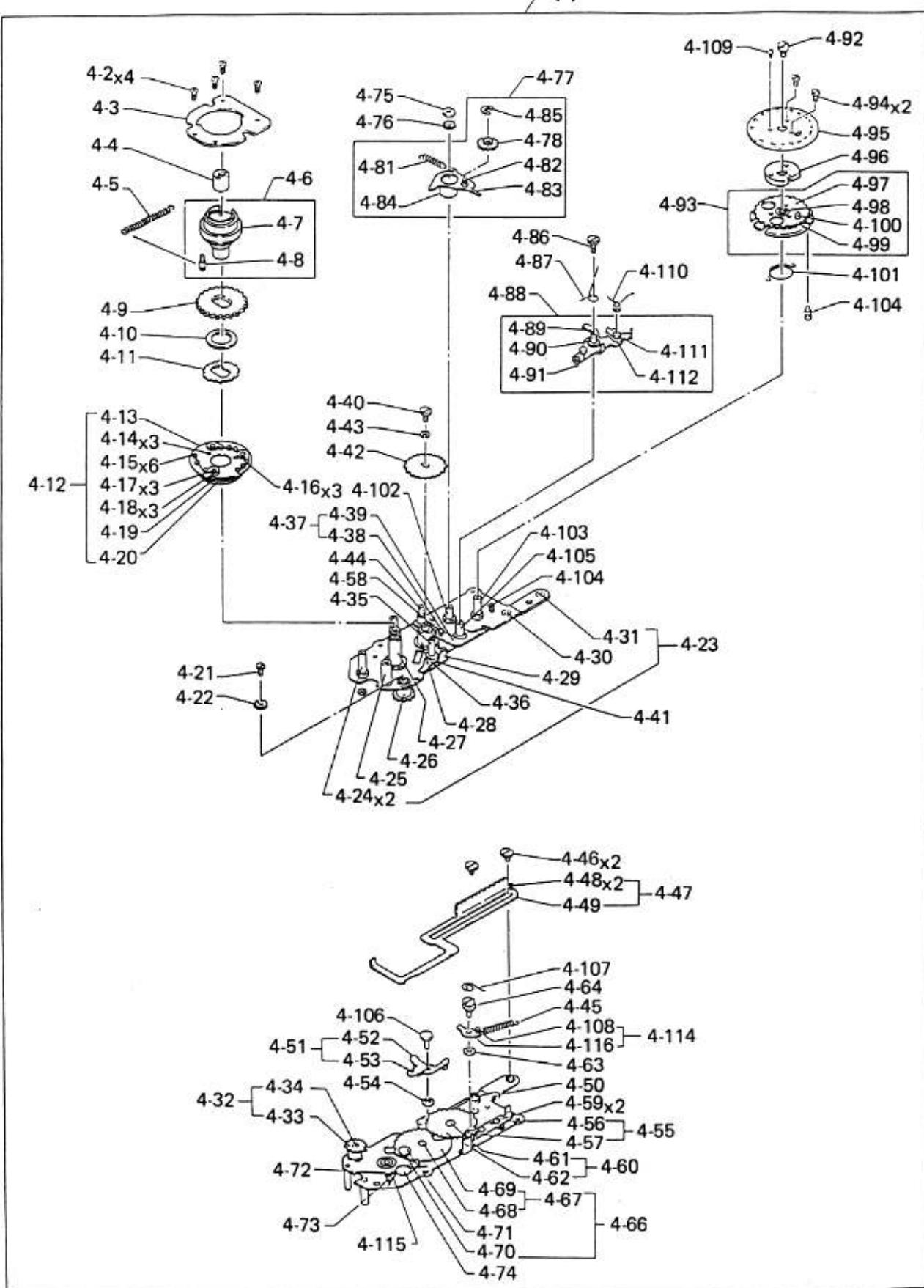


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Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
3- 34	109B 35871	Contact	1	<input type="radio"/>	*	
3- 35	110M 140121N	Screw	1	<input type="radio"/>	*	
3- 36	111B 4387860	Lead wire (red)	1	<input type="radio"/>	*	
3- 37	115B 4387900	Tube	1	<input type="radio"/>		
3- 38	111B 4387890	Lead wire (black)	1	<input type="radio"/>	*	
3- 39	111B 385490	Cord clamp	1	<input type="radio"/>	*	

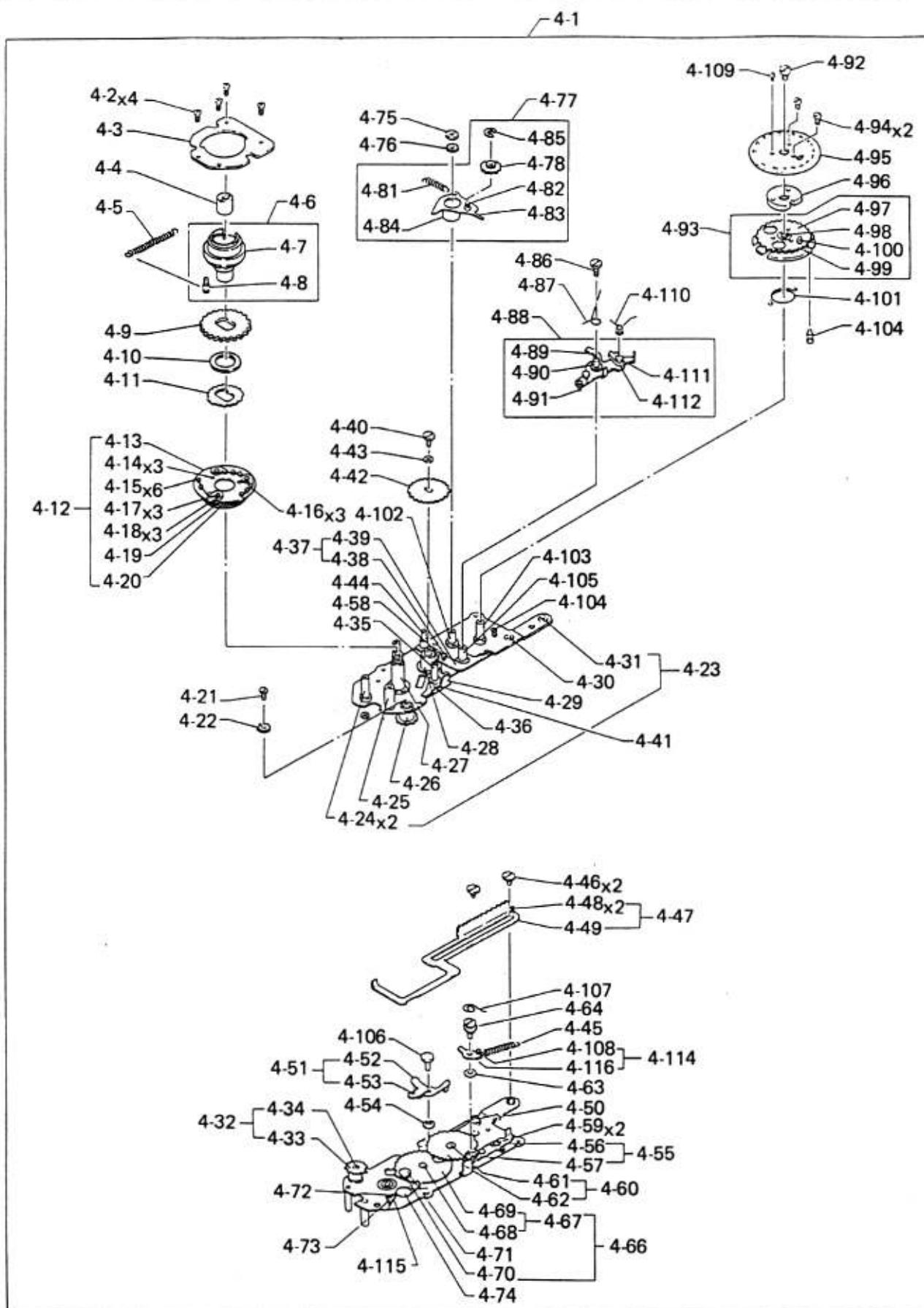
Fig. 4

4-1



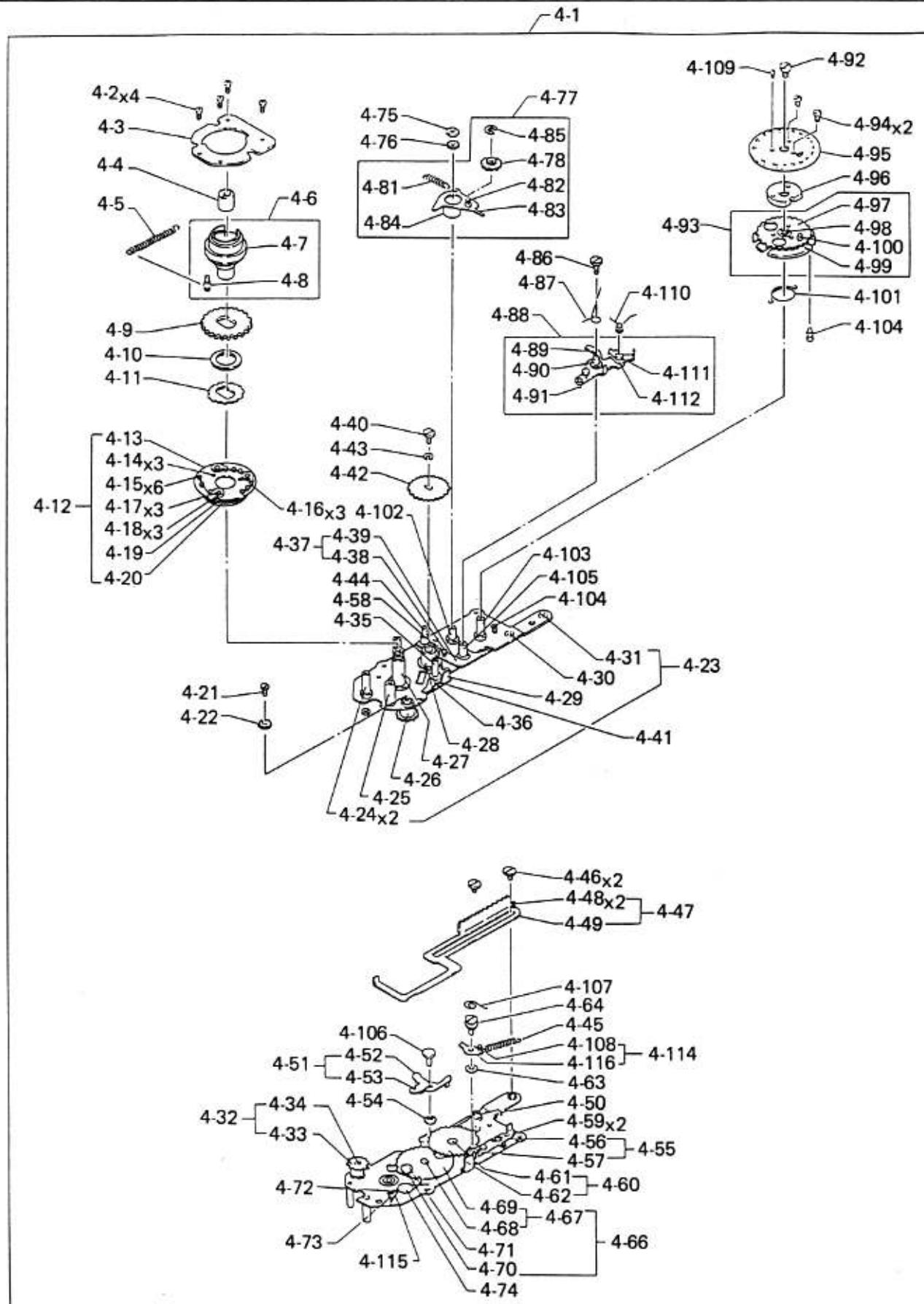
Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
4- 1	310A 6766010	Film take-up mechanism assembly	1	○		
4- 2	110M 170351S	Screw	4	○	*	
4- 3	46B 6766210	Base plate	1	○		
4- 4	54B 29360	Nut	1	○	*	
4- 5	50B 29380	Spring	1	○	*	
4- 6	42A 6766020	Sleeve assembly	1	○		
4- 7	42B 6766180	Sleeve	1	X		
4- 8	17B 29340	Pin	1	X	*	
4- 9	34B 2191020	Gear	1	○	*	
4- 10	55B 2191450	Washer	1	○	*	
4- 11	34B 29350	Ratchet wheel	1	○	*	
4- 12	34A 719520	Disc assembly	1	○	*	
4- 13	85B 29272	Disc	1	X	*	
4- 14	17B 489560	Rivet	3	X	*	
4- 15	17B 29290	Pin	6	X	*	
4- 16	50B 29310	Spring	3	○	*	
4- 17	17B 489570	Claw shaft	3	X	*	
4- 18	85B 489580	Pawl	3	X	*	
4- 19	34B 489550	Gear	1	X	*	
4- 20	34B 489541	Pawl wheel	1	X	*	
4- 21	53B 29190	Screw	1	○	*	
4- 22	34B 489620	Gear	1	○	*	
4- 23	46A 2192010	Base plate assembly	1	X	*	
4- 24	54B 29160	Column	2	X	*	
4- 25	54B 29090	Column	1	X	*	
4- 26	42B 489680	Sleeve	1	X	*	
4- 27	32B 29240	Main shaft	1	X	*	
4- 28	31B 489591	Sleeve	1	X	*	
4- 29	46B 2191000	Arm	1	X	*	
4- 30	32B 2191301	Shaft	1	X	*	
4- 31	32B 2191291	Shaft	1	X	*	
4- 32	34A 2192050	Gear assembly	1	○	*	

Fig. 4



Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
4- 33	34B 2191070	Gear	1	X	*	
4- 34	32B 489611	Shaft	1	X	*	
4- 35	54B 29440	Column	1	X	*	
4- 36	45B 29482	Pawl	1	X	*	
4- 37	47A 2192140	Return lever assembly	1	X	*	
4- 38	17B 2191400	Pin	1	X	*	
4- 39	47B 2191380	Return lever	1	X	*	
4- 40	53B 29220	Screw	1	O	*	
4- 41	55B 29230	Washer	1	O	*	
4- 42	34B 2191080	Gear	1	O	*	
4- 43	165M 232H	Washer	1	O	*	
4- 44	17B 2191410	Guide shaft	1	X	*	
4- 45	50B 29870	Spring	1	O	*	
4- 46	53B 2191310	Screw	2	O	*	
4- 47	34A 2192110	Rack assembly	1	O	*	
4- 48	17B 28910	Pin	1	X	*	
4- 49	34B 2191280	Rack	1	X	*	
4- 50	50B 2191440	Spring	1	O	*	
4- 51	47A 2192150	Lock lever assembly	1	X	*	
4- 52	47B 2191420	Lock lever	1	X	*	
4- 53	17B 28830	Interlock pin	1	X	*	
4- 54	32B 28871	Rotary base	1	X	*	
4- 55	47A 2192130	Lever assembly	1	X	*	
4- 56	47B 2191361	Lever	1	X	*	
4- 57	17B 4388920	Interlock pin	1	X	*	
4- 58	50B 2191390	Spring	1	O	*	
4- 59	17B 2191370	Guide pin	2	X	*	
4- 60	34A 2192090	Gear assembly	1	O	*	
4- 61	34B 2191230	Gear	1	X	*	
4- 62	32B 2191220	Gear shaft	1	X	*	
4- 63	55B 2191141	Washer	1	X	*	
4- 64	17B 2191152	Shaft	1	X	*	

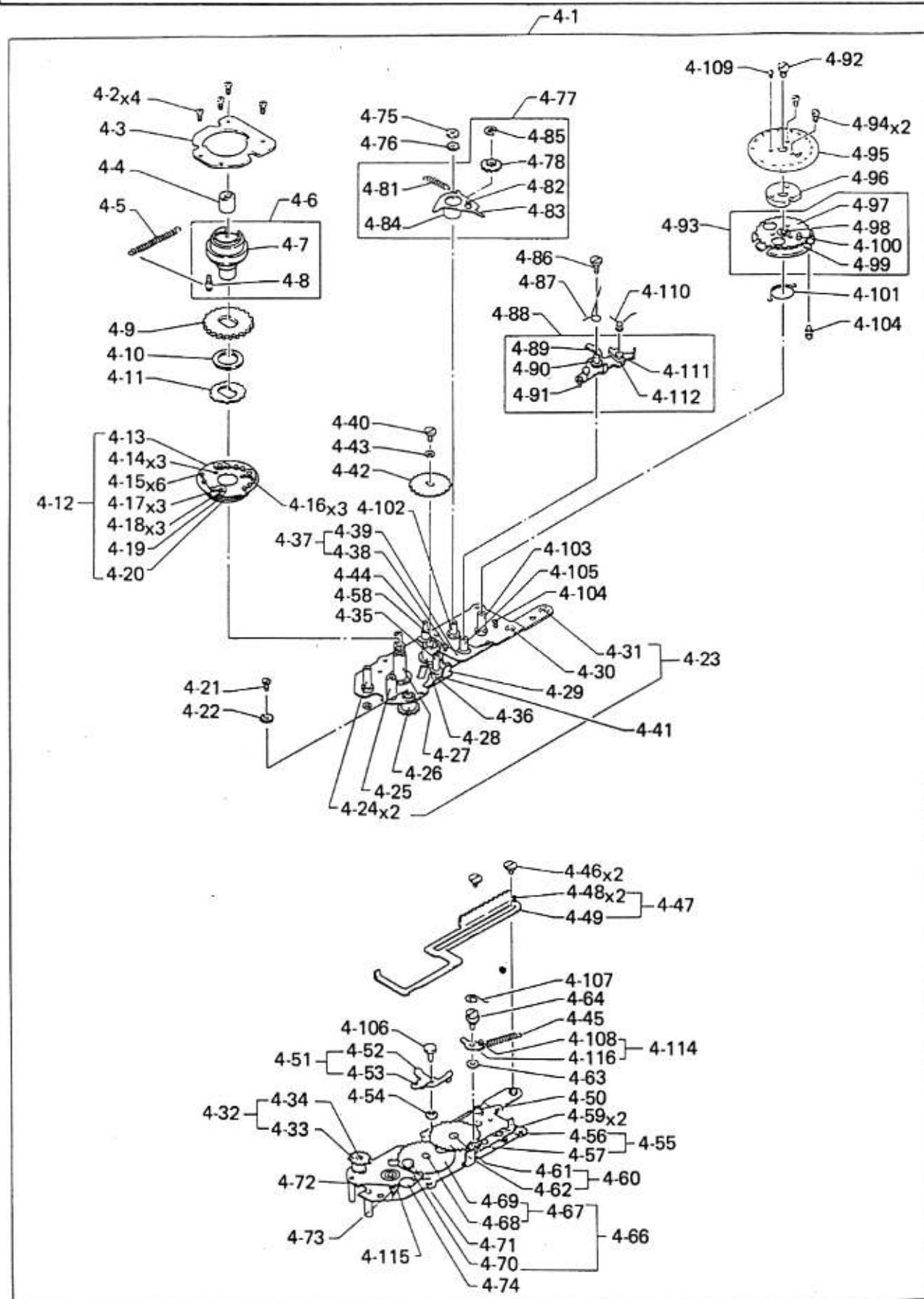
Fig. 4



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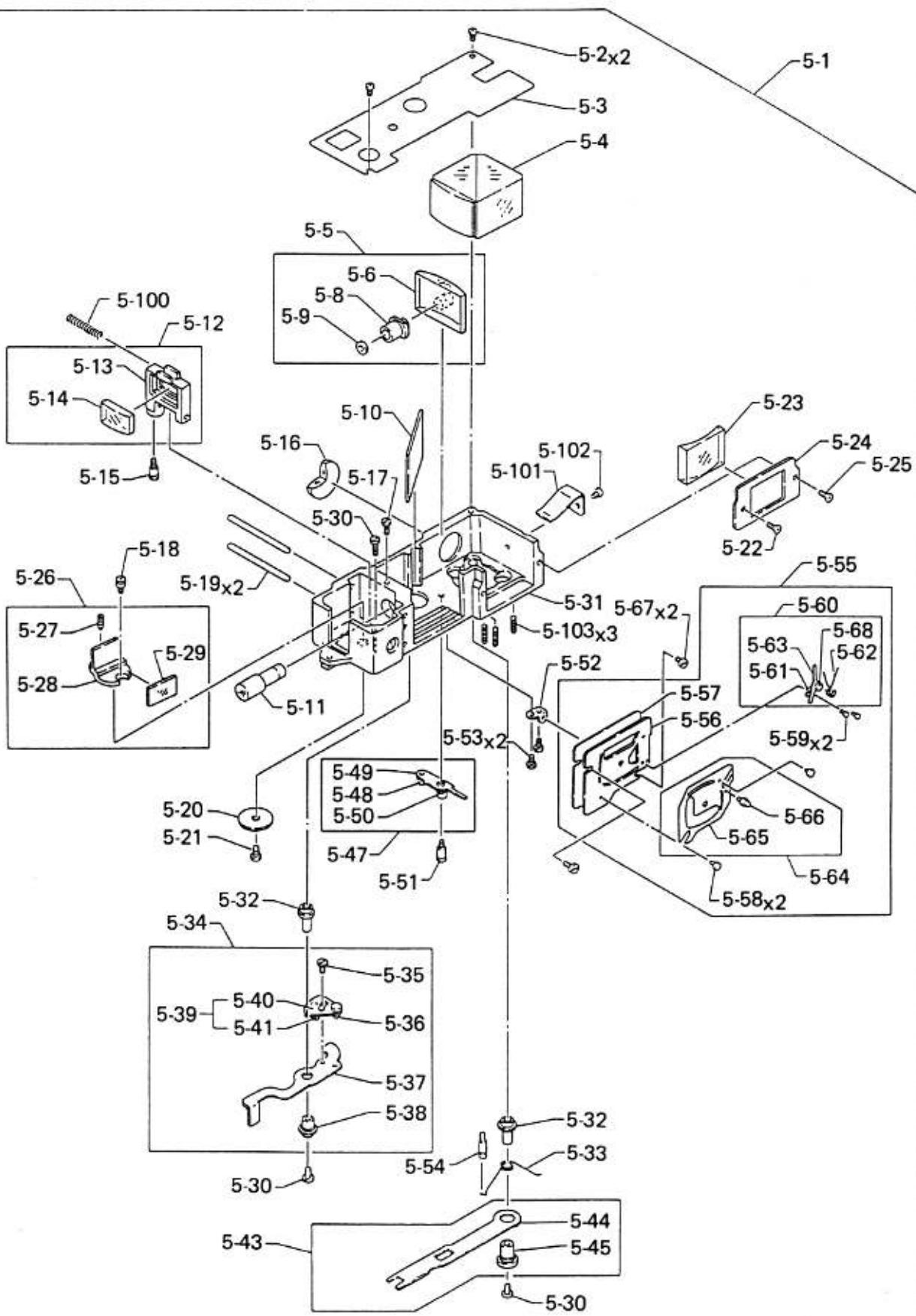
Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
4- 66	34A 2192040	Ratchet wheel assembly	1	O	*	
4- 67	34A 2192030	Ratchet wheel assembly	1	X	*	
4- 68	32B 2191040	Shaft	1	X	*	
4- 69	34B 2191030	Ratchet wheel	1	X	*	
4- 70	30B 2191060	Roller	1	X	*	
4- 71	32B 2191050	Shaft	1	X	*	
4- 72	47B 2191112	Hook	1	X	*	
4- 73	17B 28910	Pin	1	X	*	
4- 74	17B 2191101	Shaft	1	X	*	
4- 75	54B 494060	Nut	1	O	*	
4- 76	34B 494050	Gear	1	O	*	
4- 77	85A 2192080	Rotary plate assembly	1	O	*	
4- 78	34B 6766200	Gear	1	O	*	
4- 81	50B 494110	Spring	1	O	*	
4- 82	32B 2191180	Gear shaft	1	X	*	
4- 83	85B 2191160	Rotary plate	1	X	*	
4- 84	29B 2191170	Rotary barrel	1	X	*	
4- 85	191M 012T	E-clip	1	O	*	
4- 86	53B 2191470	Screw	1	O	*	
4- 87	50B 2191463	Spring	1	O	*	
4- 88	47A 2192120	Lever assembly	1	O	*	
4- 89	47B 2191355	Lever	1	X	*	
4- 90	42B 2191340	Bushing	1	X	*	
4- 91	17B 28830	Interlock pin	1	X	*	
4- 92	53B 28730	Screw	1	O	*	
4- 93	34A 2192101	Dial assembly	1	O	*	
4- 94	53B 721100	Screw	2	O	*	
4- 95	58B 494193	Dial	1	O	*	
4- 96	24B 494181	Spacer	1	O	*	
4- 97	34B 494170	Counter gear	1	X	*	
4- 98	29B 2191250	Sleeve	1	X	*	
4- 99	34B 494140	Disc	1	X	*	

Fig. 4



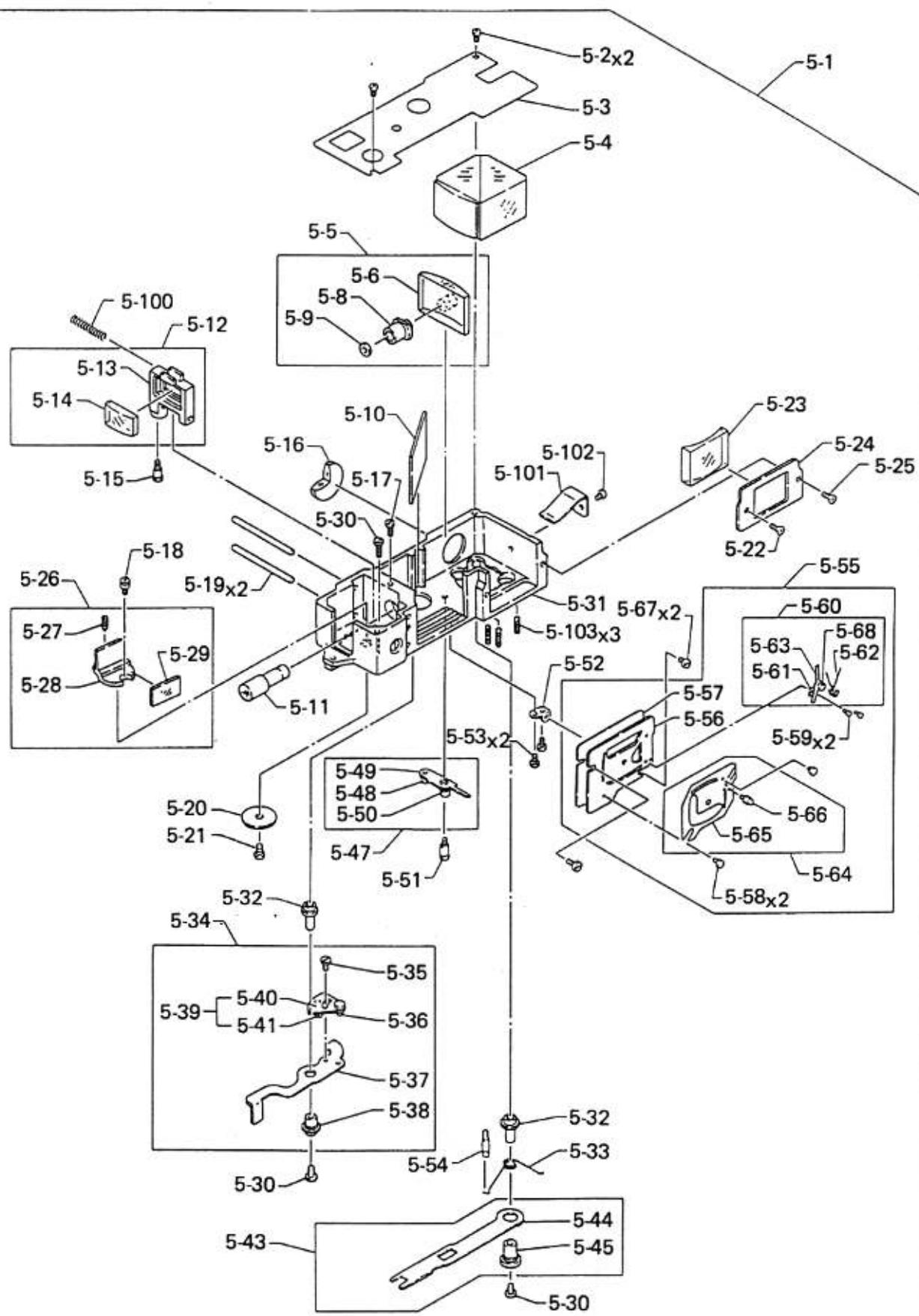
Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
4-100	17B 2191260	Connecting pin	1	X	*	
4-101	50B 28720	Spring	1	O	*	
4-102	29B 2191210	Shaft holder	1	X	*	
4-103	32B 2191240	Shaft	1	X	*	
4-104	17B 2191270	Stopper pin	2	X	*	
4-105	32B 2191330	Lever shaft	1	X	*	
4-106	17B 2191430	Lever shaft	1	X	*	
4-107	50B 2191490	Spring	1	O	*	
4-108	17B 2191480	Pin	1	X	*	
4-109	111M 140501S	Screw	1	O	*	
4-110	50B 4388911	Spring	1	O	*	
4-111	32B 4388900	Shaft	2	X	*	
4-112	82B 4388890	Lever	1	X	*	
4-114	47A 2192160	Lever assembly	1	X	*	
4-115	50B 2191120	Spring	1	O	*	
4-116	47B 2191130	Ratchet pawl	1	X	*	

Fig. 5



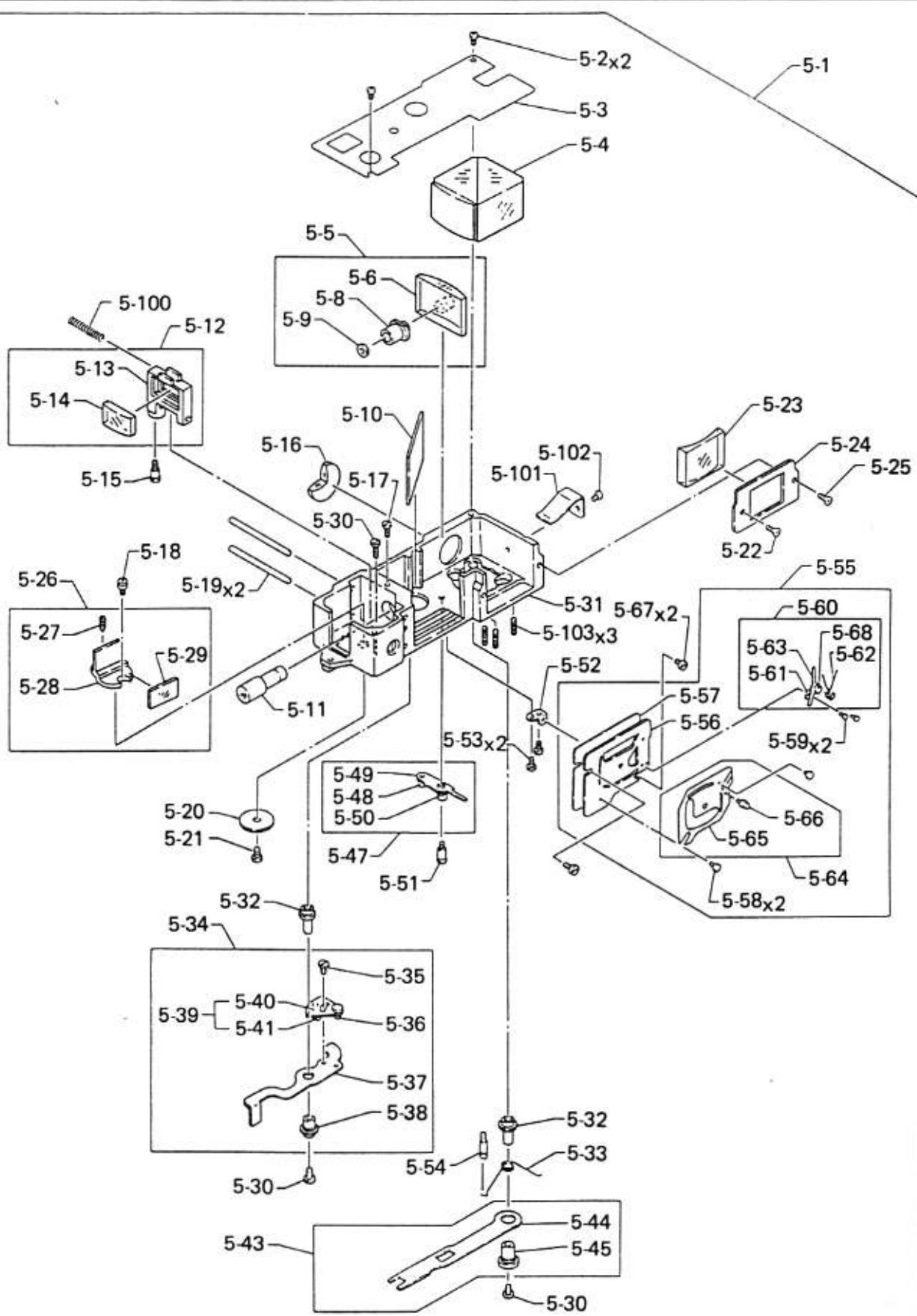
Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
5- 1	99A 932A05	Range/viewfinder assembly	1	O	*	
5- 2	110M 170252S	Screw	2	O	*	
5- 3	11B 2193454	Cover	1	O	*	
5- 4	2A 2167030	Prism	1	X	*	
5- 5	1A 2193740	Aperture barrel assembly	1	X	*	
5- 6	1B 2167070	Lens	1	X	*	
5- 8	21B 2193460	Aperture barrel	1	X	*	
5- 9	26B 450260	Aperture	1	X	*	
5- 10	3B 2167080	Reflector	1	X	*	
5- 11	2A 2167040	Prism	1	X	*	
5- 12	21A 2193710	Moving frame assembly	1	X	*	
5- 13	21B 2193340	Moving frame	1	X	*	
5- 14	1B 2167110	Lens	1	X	*	
5- 15	17B 2193350	Pin	1	X	*	
5- 16	1B 2167050	Lens	1	X	*	
5- 17	120M 200303F	Set screw	1	O	*	
5- 18	17B 32470	Eccentric pin	1	X	*	
5- 19	30B 2193360	Guide rail	2	X	*	
5- 20	50B 32480	Leaf spring	1	O	*	
5- 21	53B 32490	Set screw	1	O	*	
5- 22	111M 140251S	Screw	1	O	*	
5- 23	1B 2167060	Lens	1	X	*	
5- 24	11B 2193220	Mask	1	X	*	
5- 25	111M 170251S	Screw	1	O	*	
5- 26	10A 2193720	Mirror base assembly	1	X	*	
5- 27	53B 32460	Adjust screw	1	O	*	
5- 28	10B 2193240	Mirror base	1	X	*	
5- 29	3B 2167120	Reflector	1	X	*	
5- 30	53B 32580	Screw	3	O	*	
5- 31	10B 2193210	Viewfinder case	1	X	*	
5- 32	32B 32590	Shaft	2	X	*	
5- 33	50B 2193330	Spring	1	O	*	

Fig. 5



Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
5- 34	47A 2193770	Linkage assembly (I)	1	O	*	
5- 35	53B 32770	Screw	1	O	*	
5- 36	32B 32760	Shaft	1	X	*	
5- 37	47B 2193270	Linkage (I)	1	X	*	
5- 38	42B 2193280	Bushing	1	X	*	
5- 39	47A 2193760	Adjust lever assembly	1	X	*	
5- 40	47B 2193290	Adjust lever	1	X	*	
5- 41	17B 32740	Pin	1	X	*	
5- 43	47A 2193750	Linkage assembly (II)	1	O	*	
5- 44	47B 2193310	Linkage (II)	1	X	*	
5- 45	42B 2193320	Busing	1	X	*	
5- 47	47A 2193810	Interlock lever assembly	1	O	*	
5- 48	17B 2193300	Pin	1	X	*	
5- 49	47B 450331	Interlock lever	1	X	*	
5- 50	42B 450340	Bushing	1	X	*	
5- 51	53B 450361	Screw	1	O	*	
5- 52	41B 2193250	Angle	1	X	*	
5- 53	110M 170252S	Screw	2	O	*	
5- 54	17B 2193260	Pin	1	X	*	
5- 55	29A 2193800	Viewfinder frame assembly	1	O	*	
5- 56	29B 2193370	Base plate	1	X	*	
5- 57	5B 2193380	Stationary viewfinder frame	1	X	*	
5- 58	17B 2193400	Guide pin	2	X	*	
5- 59	170M 10012B	Pin	2	X	*	
5- 60	41A 2193780	Angle assembly	1	X	*	
5- 61	41B 2193410	Angle	1	X	*	
5- 62	50B 450312	Spring	1	O	*	
5- 63	47B 2193420	Interlock lever	1	X	*	
5- 64	5A 2193790	Moving viewfinder assembly	1	X	*	
5- 65	5B 2193390	Moving viewfinder frame	1	X	*	
5- 66	17B 450281	Pin	1	X	*	
5- 67	53B 2193440	Screw	2	O	*	

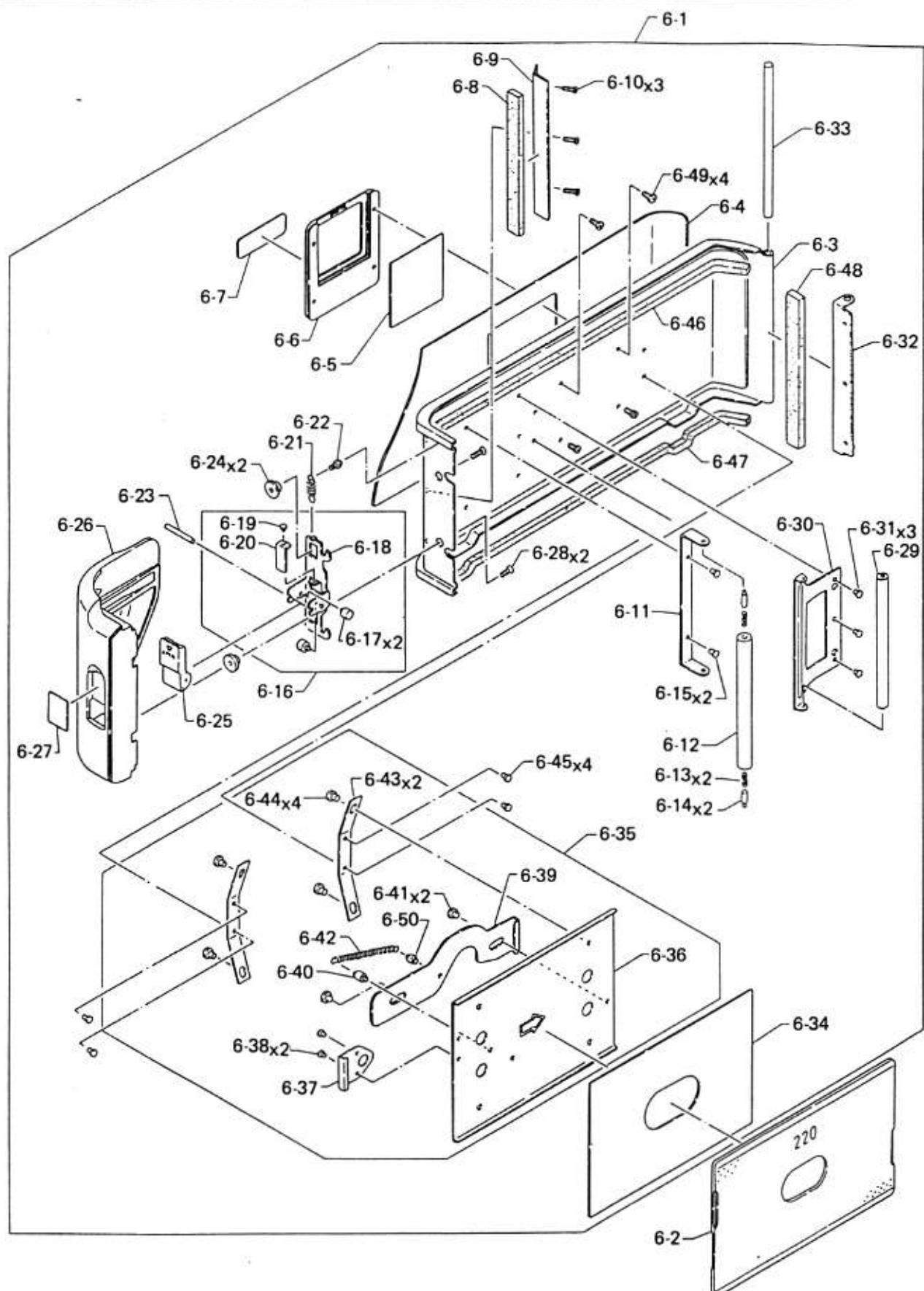
Fig. 5



Q937

Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
5- 68	17B 2193430	Shaft	1	X	*	
5-100	50B 4390430	Spring	1	O	*	
5-101	50B 4656190	Leaf spring	1	O	*	
5-102	110M 170203M	Screw	1	O	*	
5-103	53B 32460	Adjust screw	3	O	*	

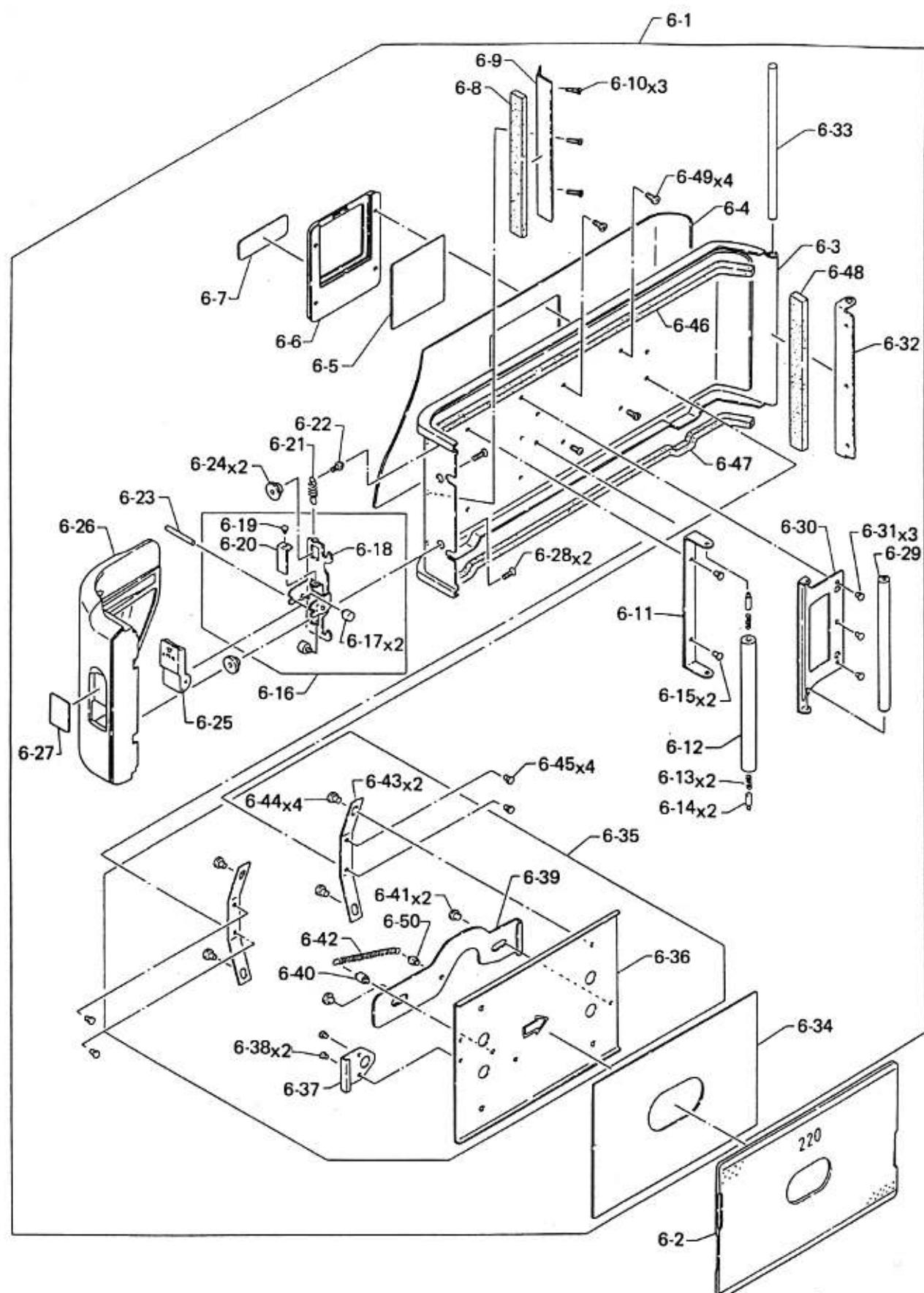
Fig. 6



Q937

Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
6- 1	302A 6767002	Camera back assembly	1	O		
6- 2	44B 492610	Pressure plate	1	O	*	
6- 3	11B 6767100	Camera back	1	X		
6- 4	59B 6767230	Leather	1	O		
6- 5	58B 3287212	Cover plate	1	O	*	
6- 6	12B 4389430	Pocket	1	O	*	
6- 7	58B 3772352	Name plate	1	O	*	
6- 8	27B 6767250	Moquette	1	O		
6- 9	27B 6767130	Light shielding plate	1	O		
6- 10	113M 200501S	Screw	3	O	*	
6- 11	85B 6767140	Roller frame	1	X		
6- 12	37B 492630	Roller	1	O	*	
6- 13	50B 30170	Spring	2	O	*	
6- 14	17B 30161	Pin	2	O	*	
6- 15	170M 15022B	Rivet	2	X	*	
6- 16	45A 6767030	Lock assembly	1	O		
6- 17	17B 6767190	Stopper pin	2	X		
6- 18	45B 6767170	Lock lever	1	X		
6- 19	170M 15016B	Rivet	1	X	*	
6- 20	50B 6767180	Leaf spring	1	X		
6- 21	50B 3287390	Spring	1	O	*	
6- 22	17B 3282380	Pin	1	X	*	
6- 23	17B 6767210	Shaft	1	O		
6- 24	17B 3287360	Guide pin	2	X	*	
6- 25	16B 6767202	Lock button	1	O		
6- 26	11B 6767221	Grip	1	O		
6- 27	85B 6767280	Blind	1	O		
6- 28	114M 200501S	Screw	2	O		
6- 29	37B 492660	Roller	1	O	*	
6- 30	50B 31730	Leaf spring	1	X	*	
6- 31	170M 15014B	Rivet	3	X	*	
6- 32	19B 6767110	Hinge	1	O		

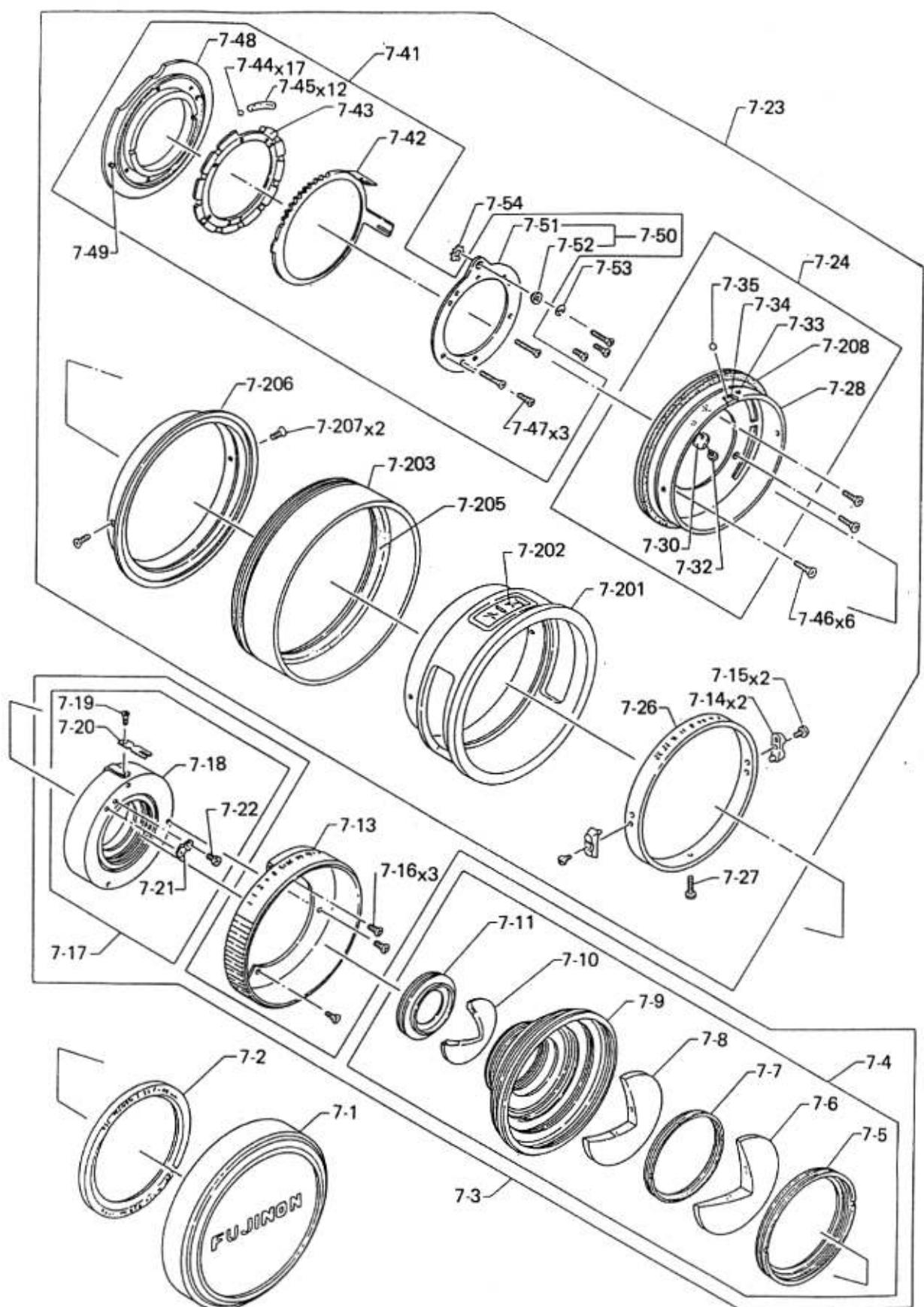
Fig. 6



Q937

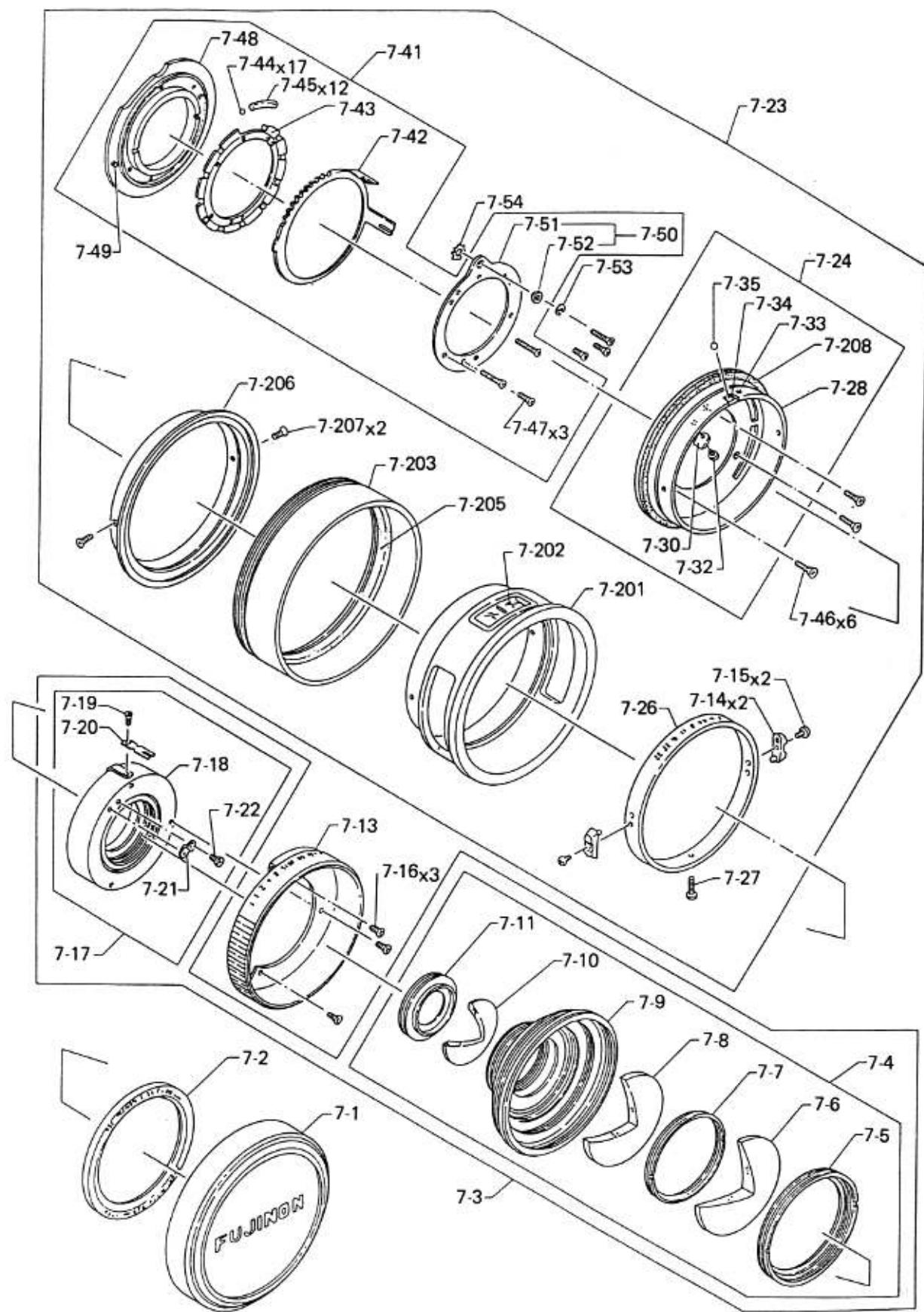
Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
6- 33	32B 6767120	Hinge shaft	1	O		
6- 34	51B 492600	Light shielding sheet	1	O	*	
6- 35	11A 6767010	Pressure plate base assembly	1	X		
6- 36	11B 492530	Pressure plate base	1	X	*	
6- 37	44B 492540	Fixture	1	X	*	
6- 38	170M 20016B	Rivet	2	X	*	
6- 39	44B 492560	Fixture	1	X	*	
6- 40	17B 492550	Pin	1	X	*	
6- 41	17B 492580	Rivet	2	X	*	
6- 42	50B 94640	Spring	1	O	*	
6- 43	50B 31660	Leaf spring	2	X	*	
6- 44	17B 31700	Rivet	4	X	*	
6- 45	170M 15014B	Rivet	4	X	*	
6- 46	27B 6767260	Moquette	1	O		
6- 47	27B 6767272	Moquette	1	O		
6- 48	27B 6767240	Moquette	1	O		
6- 49	113M 170221S	Screw	4	O	*	
6- 50	17B 492570	Pin	1	X	*	

Fig. 7-1



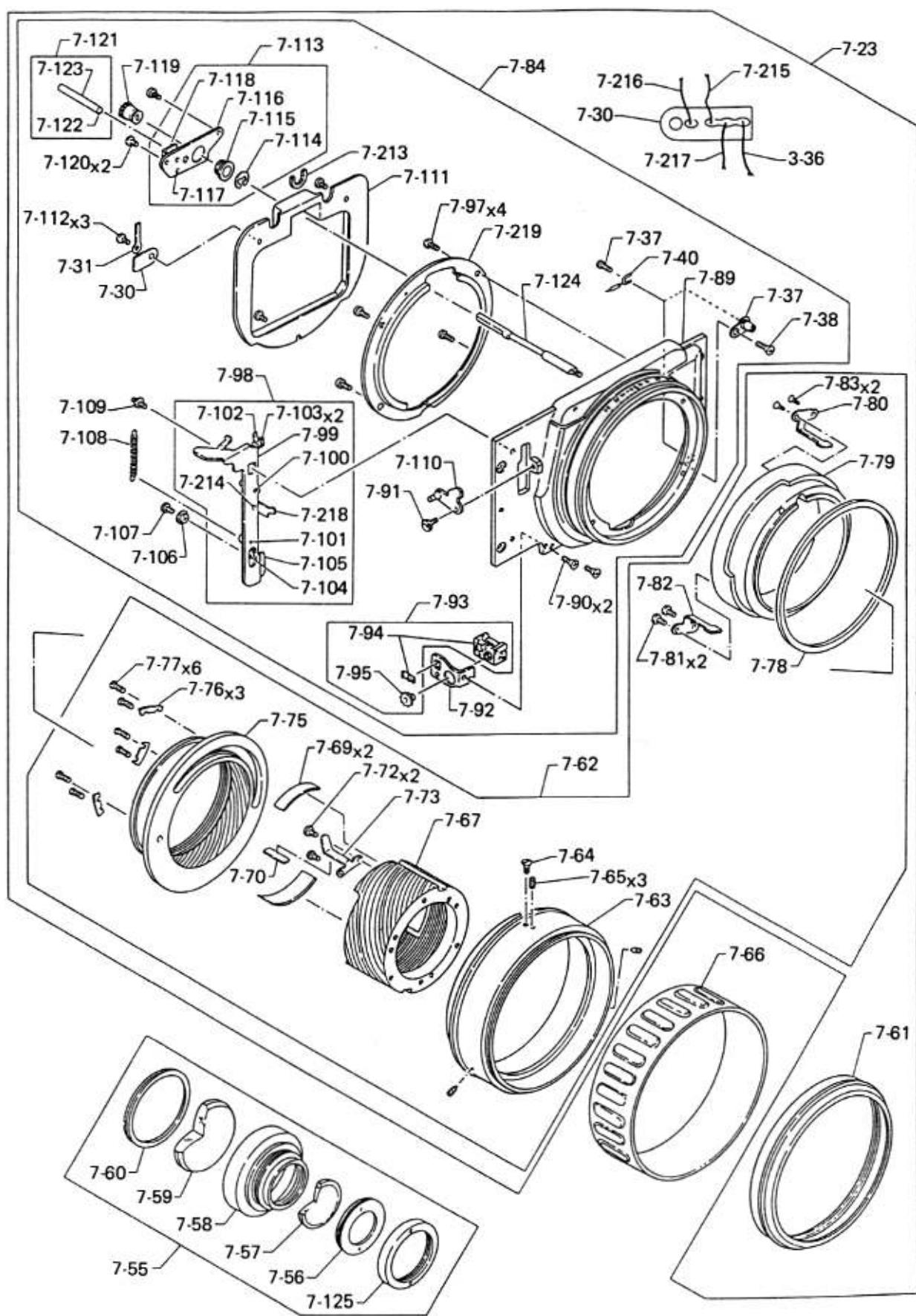
Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
7- 1	57B 4387840	Lens cap	1	O	*	
7- 2	23B 2351180	Name ring	1	O	*	
7- 3	38A 2351201	Shutter assembly (II)	1	X	*	
7- 4	21A 2351210	Front lens assembly	1	O	*	
7- 5	23B 2351140	Hold ring	1	X	*	
7- 6	1B 2349990	Lens (G1)	1	X	*	
7- 7	23B 2351130	Hold ring	1	X	*	
7- 8	1B 2350000	Lens (G2)	1	X	*	
7- 9	21B 2351110	Front lens frame	1	X	*	
7- 10	1B 2350010	Lens (G3)	1	X	*	
7- 11	23B 2351120	Hold ring	1	X	*	
7- 13	23B 4390060	Shutter speed selector ring	1	O	*	
7- 14	16B 4390040	Knob	2	O	*	
7- 15	53B 4387850	Screw	2	O	*	
7- 16	110M 170303S	Screw	3	O	*	
7- 17	37A 2351230	Shutter assembly (I)	1	X	*	
7- 18	38B 2188090	#O shutter	1	O	*	
7- 19	101M 120143N	Screw	1	O	*	
7- 20	47B 1349040	Aperture lever	1	O	*	
7- 21	109B 35870	Contact	1	O	*	
7- 22	110M 140121N	Screw	1	O	*	
7- 23	324A 6767511	Lens barrel assembly	1	O		
7- 24	23A 4389940	Index ring assembly	1	O	*	
7- 26	23B 4390050	Aperture selector ring	1	O	*	
7- 27	110M 200651S	Screw	1	O	*	
7- 28	23B 4390070	Index ring	1	X	*	
7- 30	110B 4389700	PCB	2	O	*	
7- 31	111B 385490	Lug	1	O	*	
7- 32	110M 170181S	Screw	1	O	*	
7- 33	170M 15018F	Rivet	1	X	*	
7- 34	50B 2188550	Leaf spring	1	X	*	
7- 35	200M 24	Steel ball	1	O	*	

Fig. 7-1



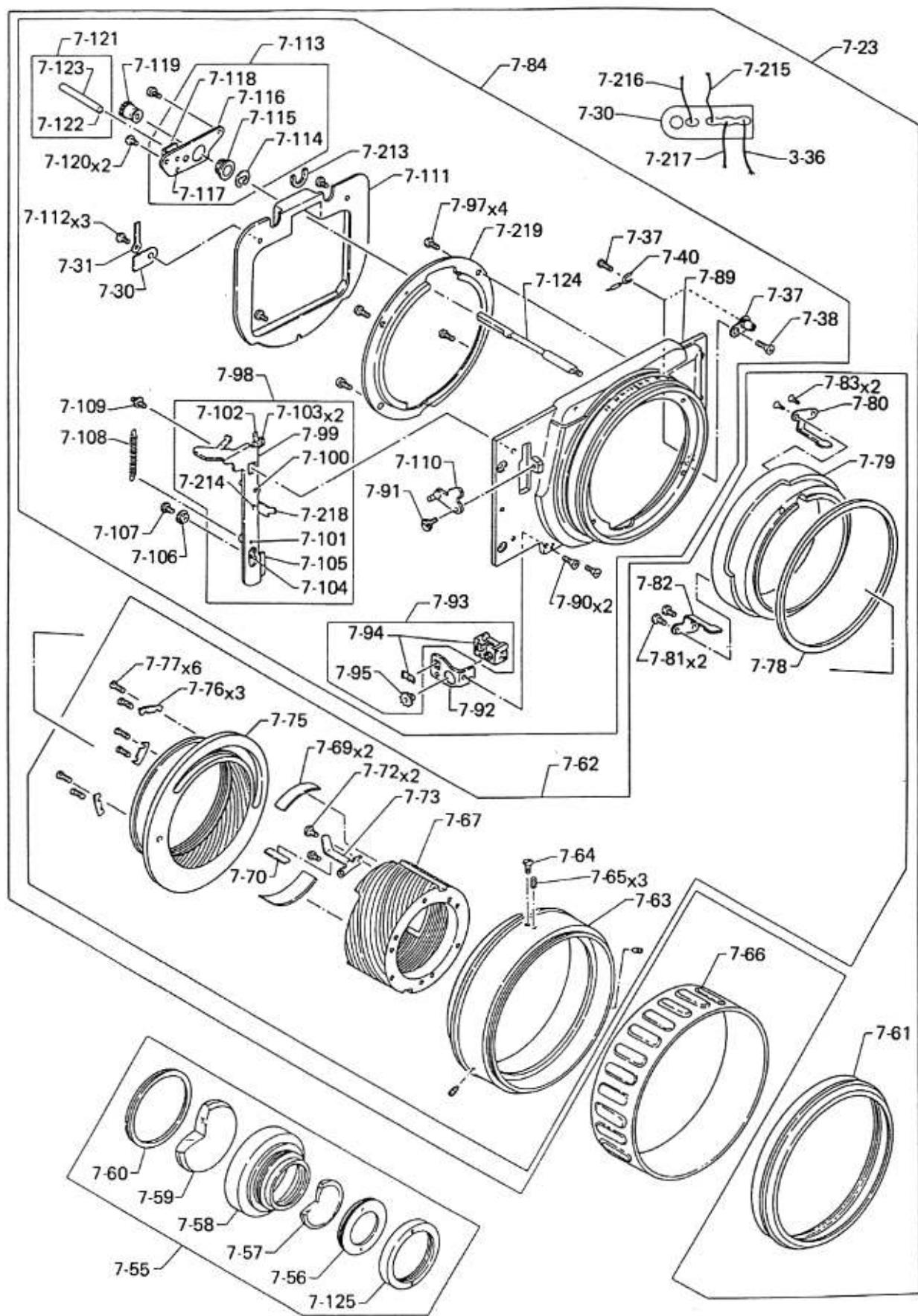
Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
7- 37	112A 4570060	Synchrosocket assembly	1	O	*	
7- 38	111M 170251N	Screw	1	O	*	
7- 40	108B 3281790	Lug	1	O	*	
7- 41	23A 4389930	Shutter frame assembly	1	O	*	
7- 42	34B 2188520	Set plate	1	X	*	
7- 43	23B 2188740	Ring	1	X	*	
7- 44	200M 20	Steel ball	12	X	*	
7- 45	24B 2188510	Spacer	12	X	*	
7- 46	111M 200901S	Screw	6	O	*	
7- 47	111M 170451S	Screw	3	O	*	
7- 48	23B 4389640	Shutter frame	1	X	*	
7- 49	17B 2188500	Stopper pin	1	X	*	
7- 50	47A 2188920	Holder assembly	1	X	*	
7- 51	47B 2188530	Holder	1	X	*	
7- 52	42B 99361	Shaft holder	1	X	*	
7- 53	191M 012T	E-clip	1	O	*	
7- 54	34B 2188380	Gear	1	O	*	
7- 55	21A 2351220	Rear lens frame assembly	1	O	*	
7- 56	23B 2351160	Hold ring	1	X	*	
7- 57	1B 2350020	Lens (G4)	1	X	*	
7- 58	21B 2351151	Rear lens frame	1	X	*	
7- 59	1B 2350030	Lens (G5)	1	X	*	
7- 60	23B 2351170	Hold ring	1	X	*	
7- 61	23B 2188660	Focusing ring (II)	1	O	*	
7- 62	21A 4389920	Helicoid assembly	1	O	*	
7- 63	23B 2188640	Focusing ring (I)	1	O	*	
7- 64	53B 2188810	Screw	1	O	*	
7- 65	120M 200301S	Set screw	3	O	*	
7- 66	59B 6764840	Knurled ring	1	O		
7- 67	21B 2188440	Male helicoid	1	X	*	
7- 69	27B 4390120	Plate (II)	2	O	*	
7- 70	27B 4390110	Plate (I)	1	O	*	

Fig. 7-2



Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
7- 72	110M 140353S	Screw	2	O	*	
7- 73	47B 2188670	Interlock plate	1	X	*	
7- 75	23B 4389650	Helicoid ring	1	X	*	
7- 76	47B 2188450	Thrust plate	3	X	*	
7- 77	53B 2188460	Set screw	6	O	*	
7- 78	23B 2188420	Ring	1	X	*	
7- 79	23B 4389660	Hold ring	1	X	*	
7- 80	30B 2188470	Helicoid guide (I)	1	X	*	
7- 81	110M 200503S	Screw	2	O	*	
7- 82	30B 2188480	Helicoid guide (II)	1	X	*	
7- 83	111M 200503S	Screw	2	O	*	
7- 84	46A 6767540	Front mask assembly	1	O		
7- 89	46B 6767750	Front mask	1	X		
7- 90	111M 170351S	Screw	2	O	*	
7- 91	32B 2188220	Shaft	1	O	*	
7- 92	41B 2188760	Angle	1	O	*	
7- 93	322A 6767521	Shutter actuation counter assembly	1	O	*	
7- 94	322B 2188980	Shutter actuation counter	1	X	*	
7- 95	34B 2188770	Ratchet wheel	1	X	*	
7- 97	110M 260603S	Screw	4	O	*	
7- 98	47A 6767560	Release lever assembly	1	O		
7- 99	47B 4389690	Release lever	1	X	*	
7-100	17B 2188270	Pin	1	X	*	
7-101	17B 2188280	Pin	1	X	*	
7-102	85B 2188830	Lever	1	X	*	
7-103	170M 12020F	Rivet	2	X	*	
7-104	170M 12018F	Rivet	2	X	*	
7-105	45B 2188750	Claw	1	X	*	
7-106	32B 488080	Guide shaft	1	O	*	
7-107	110M 200403S	Screw	1	O	*	
7-108	50B 2188300	Spring	1	O	*	
7-109	32B 2188290	Guide shaft	1	O	*	

Fig. 7-2



Q937

Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
7-110	47B 2188210	Lever	1	O	*	
7-111	27B 4389670	Light shielding mask	1	O	*	
7-112	110M 170353N	Screw	3	O	*	
7-113	46A 2188880	Position plate assembly	1	O	*	
7-114	191M 050T	E-clip	1	O	*	
7-115	32B 2188340	Bushing	1	X	*	
7-116	46B 2188310	Positioning plate	1	X	*	
7-117	170M 15025F	Rivet	2	X	*	
7-118	46B 2188320	Shaft holding plate	1	X	*	
7-119	34B 2188350	Gear	1	O	*	
7-120	110M 200403S	Screw	2	O	*	
7-121	17A 2189150	Interlock rod assembly	1	O	*	
7-122	200M 24	Steel ball	1	X	*	
7-123	17B 2189140	Interlock rod	1	X	*	
7-124	32B 2188370	Gear shaft	1	O	*	
7-125	23B 402810	Hold ring	1	X	*	
7-201	23B 4390000	Protector ring	1	O	*	
7-202	81B 4390031	Index window	1	O	*	
7-203	23B 6767770	Hood	1	O		
7-205	51B 6767780	Velveteen	1	O		
7-206	23B 4390100	Stopper ring	1	O	*	
7-207	53B 4387850	Screw	2	O	*	
7-208	27B 2188820	Moquette	1	O	*	
7-213	27B 2189710	Moquette	1	O	*	
7-214	170M 15025F	Rivet	1	X	*	
7-215	111B 4387880	Lead wire (black)	1	O	*	
7-216	111B 4387910	Lead wire (gray)	1	O	*	
7-217	111B 4387870	Lead wire (black)	1	O	*	
7-218	85B 6767760	Stopper	1	X		
7-219	12B 4389680	Cover plate	1	O	*	

IX. PARTS LIST

**FUJI GSW690-III
(PROFESSIONAL)**

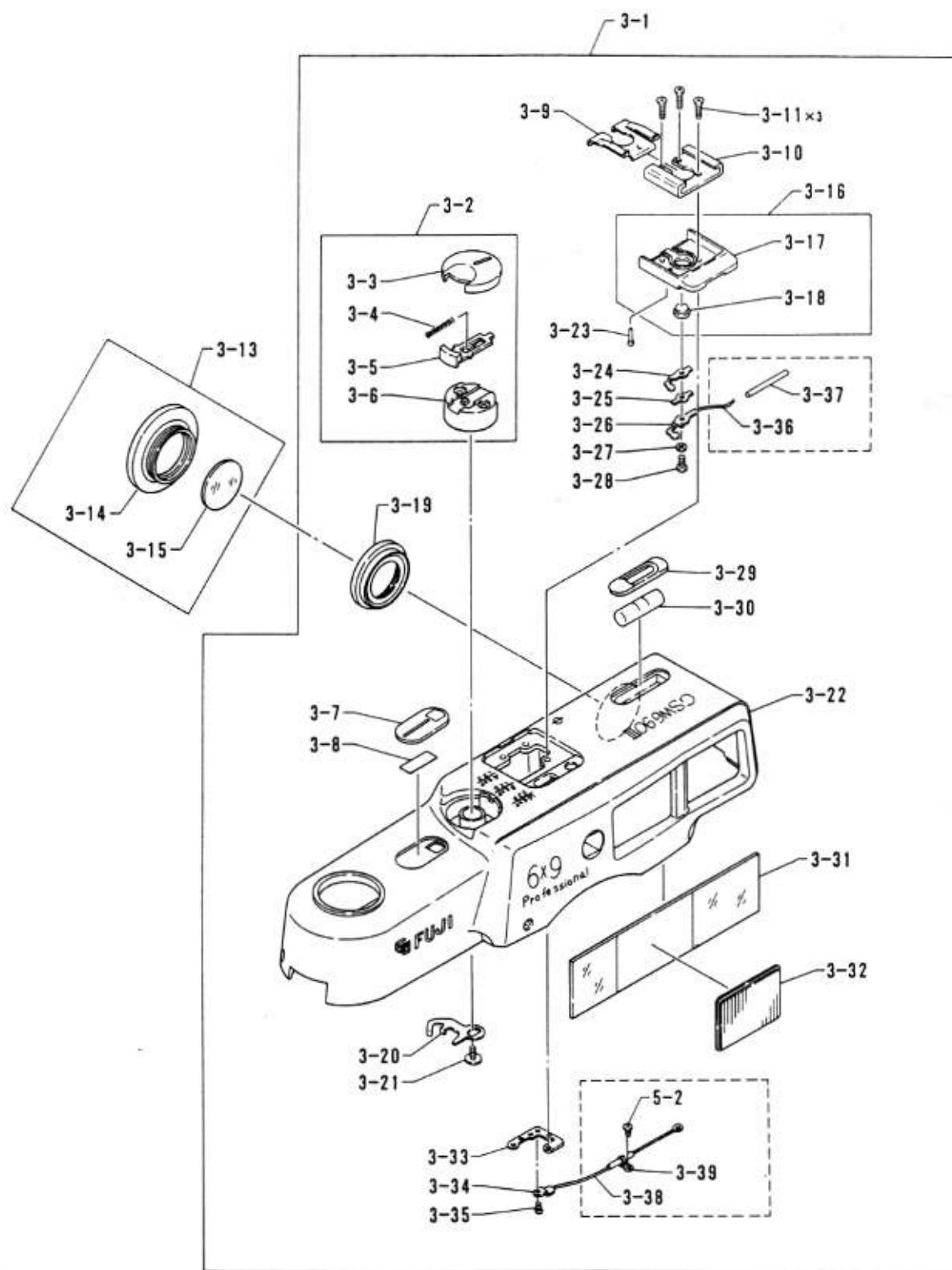
Q938

All other parts are same as

FUJI GW690-III (PROFESSIONAL).

* Commonly used with GSW690-II.

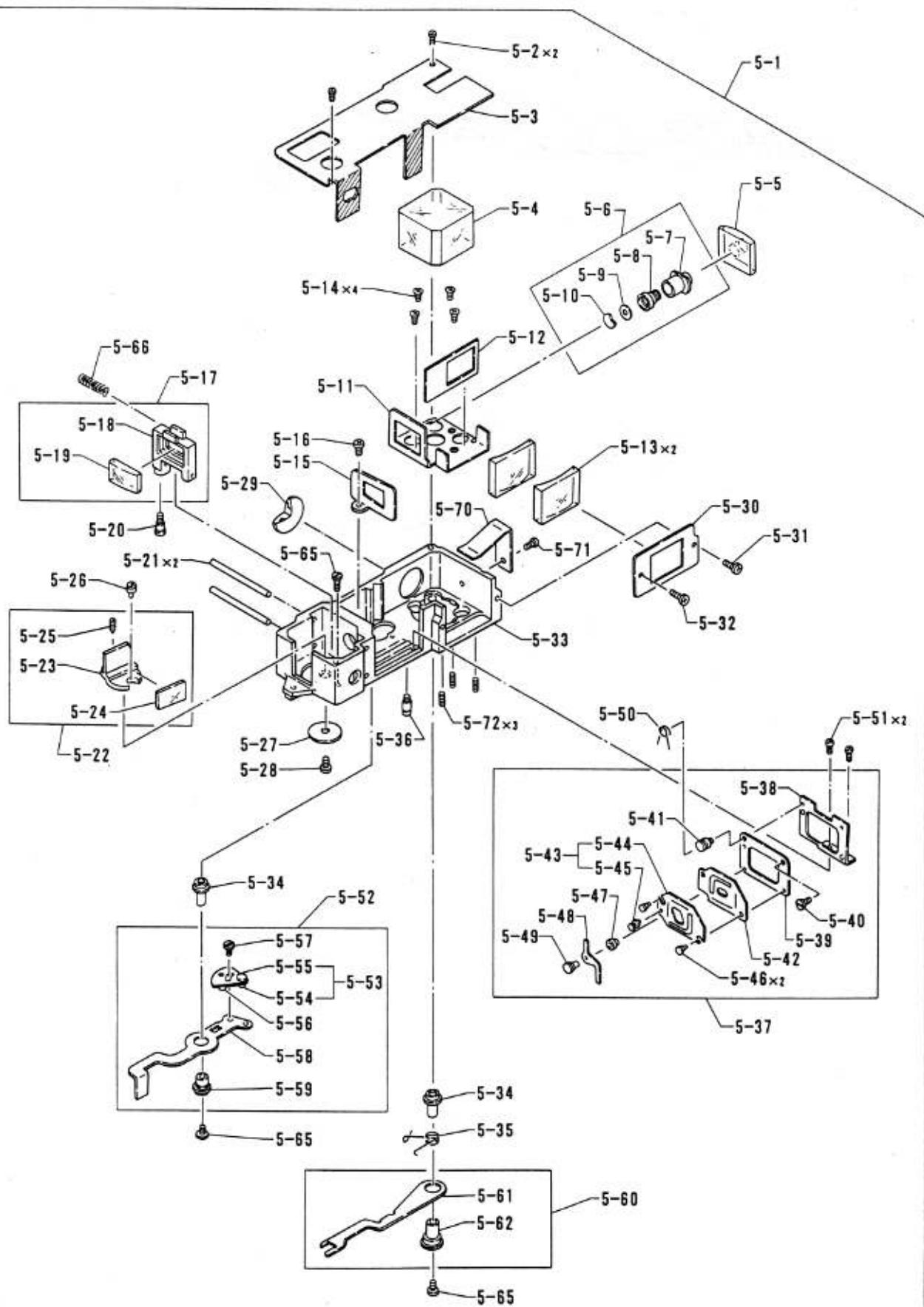
Fig. 3



Q938

Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
3- 1	303A 6766900	Top cover assembly	1	○		
3- 22	11B 6766910	Top cover	1	X		

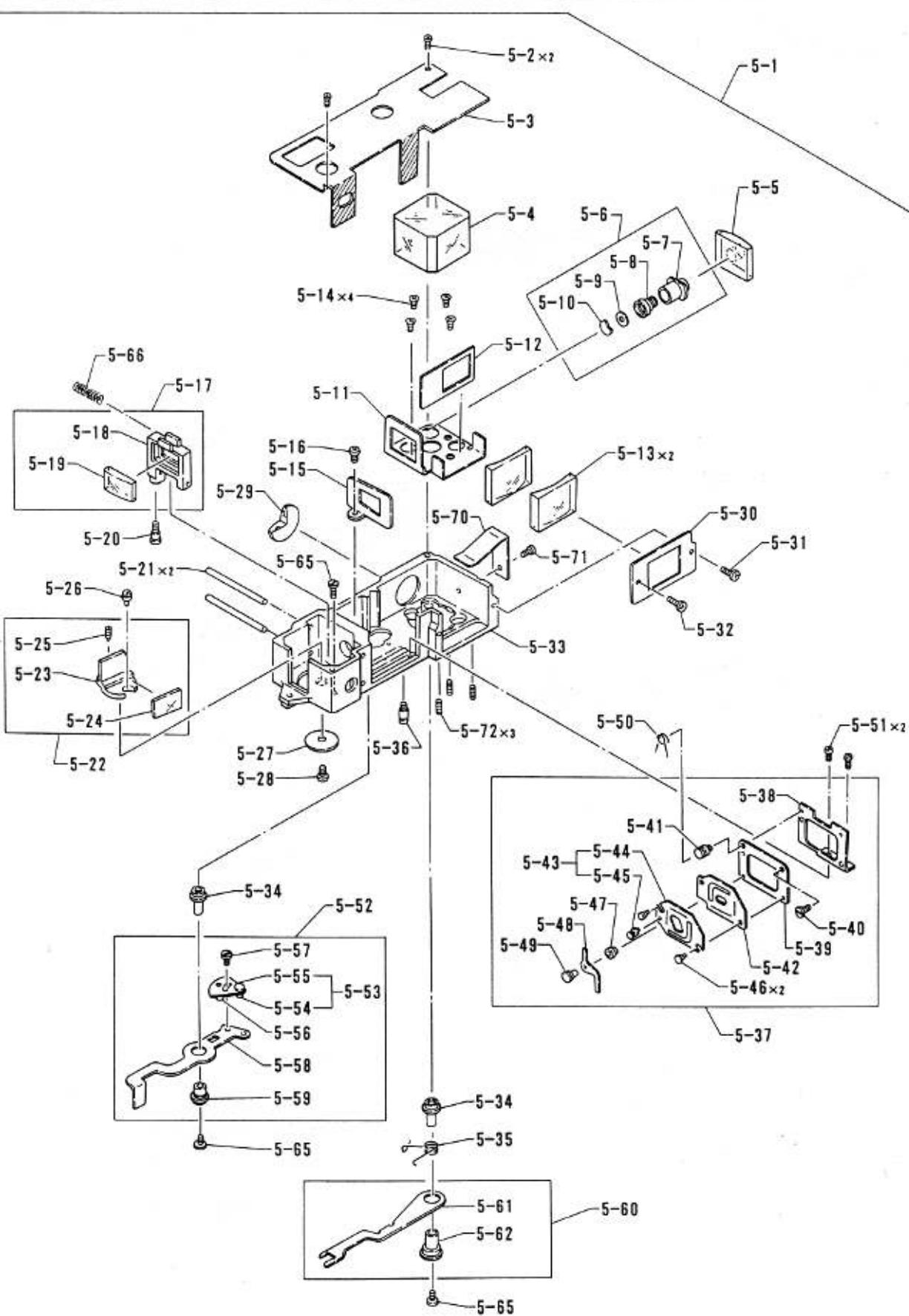
Fig. 5



Q938

Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
5- 1	99A51153A00	Range/viewfinder assembly	1	O	*	
5- 2	110M 170252S	Screw	2	O	*	
5- 3	11B 2906950	Cover	1	O	*	
5- 4	2A 2886990	Prism	1	X	*	
5- 5	1B 2887040	Aperture barrel assembly	1	X	*	
5- 6	21A 2906700	Lens holder assembly	1	X	*	
5- 7	21B 2906960	Lens holder	1	X	*	
5- 8	21B 2906790	Lens frame	1	X	*	
5- 9	55B 2906990	Washer	1	X	*	
5- 10	1B 2887050	Lens (G6)	1	X	*	
5- 11	85B 2906820	Base plate	1	X	*	
5- 12	11B 2906980	Mask	1	X	*	
5- 13	1B 2887000	Lens (G1)	2	X	*	
5- 14	111M 170301S	Screw	4	X	*	
5- 15	3B 2906970	Reflection plate	1	X	*	
5- 16	110M 170301S	Screw	1	X	*	
5- 17	21A 2193710	Moving frame assembly	1	X	*	
5- 18	21B 2193340	Moving frame	1	X	*	
5- 19	1B 2167110	Lens	1	X	*	
5- 20	17B 2193350	Pin	1	X	*	
5- 21	30B 2193360	Guide rail	2	X	*	
5- 22	10A 2193720	Mirror base assembly	1	X	*	
5- 23	10B 2193240	Mirror base	1	X	*	
5- 24	3B 2167120	Reflector	1	X	*	
5- 25	53B 32460	Adjust screw	1	X	*	
5- 26	17B 32471	Eccentric pin	1	X	*	
5- 27	50B 32480	Leaf spring	1	X	*	
5- 28	53B 32490	Screw	1	X	*	
5- 29	1B 2887030	Lens (G4)	1	X	*	
5- 30	11B 2906810	Mask	1	X	*	
5- 31	110M 170251S	Screw	1	X	*	
5- 32	111M 140253S	Screw	1	X	*	

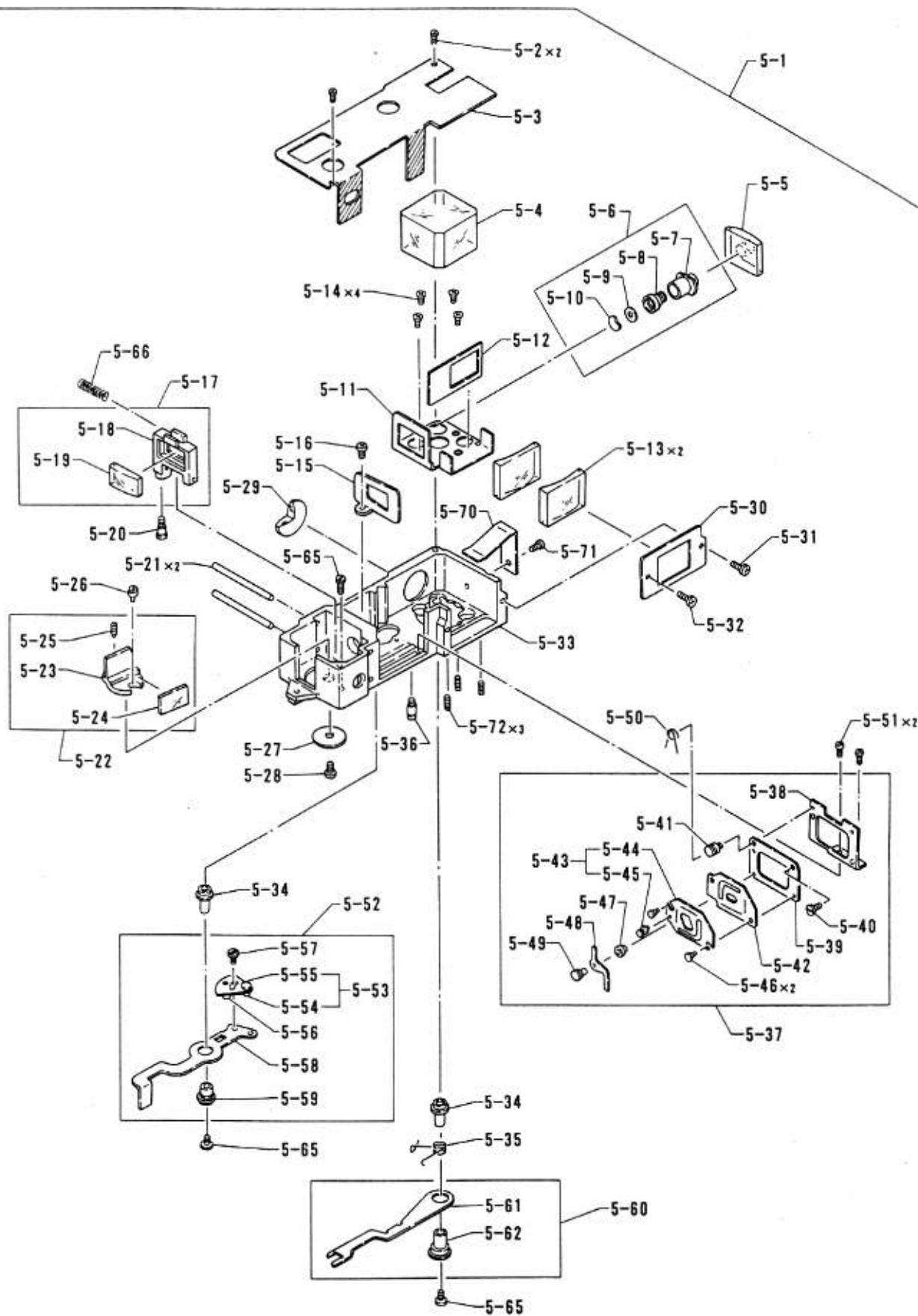
Fig. 5



Q938

Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
5- 33	10B 2906800	S1 case	1	X	*	
5- 34	32B 32590	Shaft	2	X	*	
5- 35	50B 2103300	Spring	1	O	*	
5- 36	17B 2193260	Pin	1	X	*	
5- 37	41A 2906740	Viewfinder frame assembly	1	O	*	
5- 38	41B 2906880	Viewfinder frame	1	X	*	
5- 39	29B 2906850	Base plate	1	X		
5- 40	53B 2193440	Screw	1	X	*	
5- 41	53B 2906850	Screw	1	X	*	
5- 42	5B 2906860	Stationary viewfinder frame	1	X	*	
5- 43	5A 2906730	Moving viewfinder assembly	1	X	*	
5- 44	5B 2906870	Moving viewfinder frame	1	X	*	
5- 45	17B 2906920	Pin	1	X	*	
5- 46	17B 2193400	Guide pin	2	X	*	
5- 47	42B 2906910	Collar	1	X	*	
5- 48	47B 2906890	Interlock lever	1	X	*	
5- 49	17B 2906900	Screw	1	X	*	
5- 50	50B 2906940	Spring	1	O	*	
5- 51	110M 170301S	Screw	2	O	*	
5- 52	47A 2906720	Linkage assembly (I)	1	O	*	
5- 53	47A 2193760	Adjust lever	1	X	*	
5- 54	47B 2193290	Adjust lever	1	X	*	
5- 55	17B 32740	Pin	1	X	*	
5- 56	32B 32760	Shaft	1	X	*	
5- 57	53B 32770	Screw	1	X	*	
5- 58	47B 2906830	Linkage (I)	1	X	*	
5- 59	42B 2193280	Bushing	1	X	*	
5- 60	47A 2906710	Linkage assembly (II)	1	O	*	
5- 61	47B 2906840	Linkage (II)	1	X	*	
5- 62	42B 2193320	Bushing	1	X	*	
5- 65	53B 32580	Screw	3	O	*	
5- 66	50B 4390430	Spring	1	O	*	

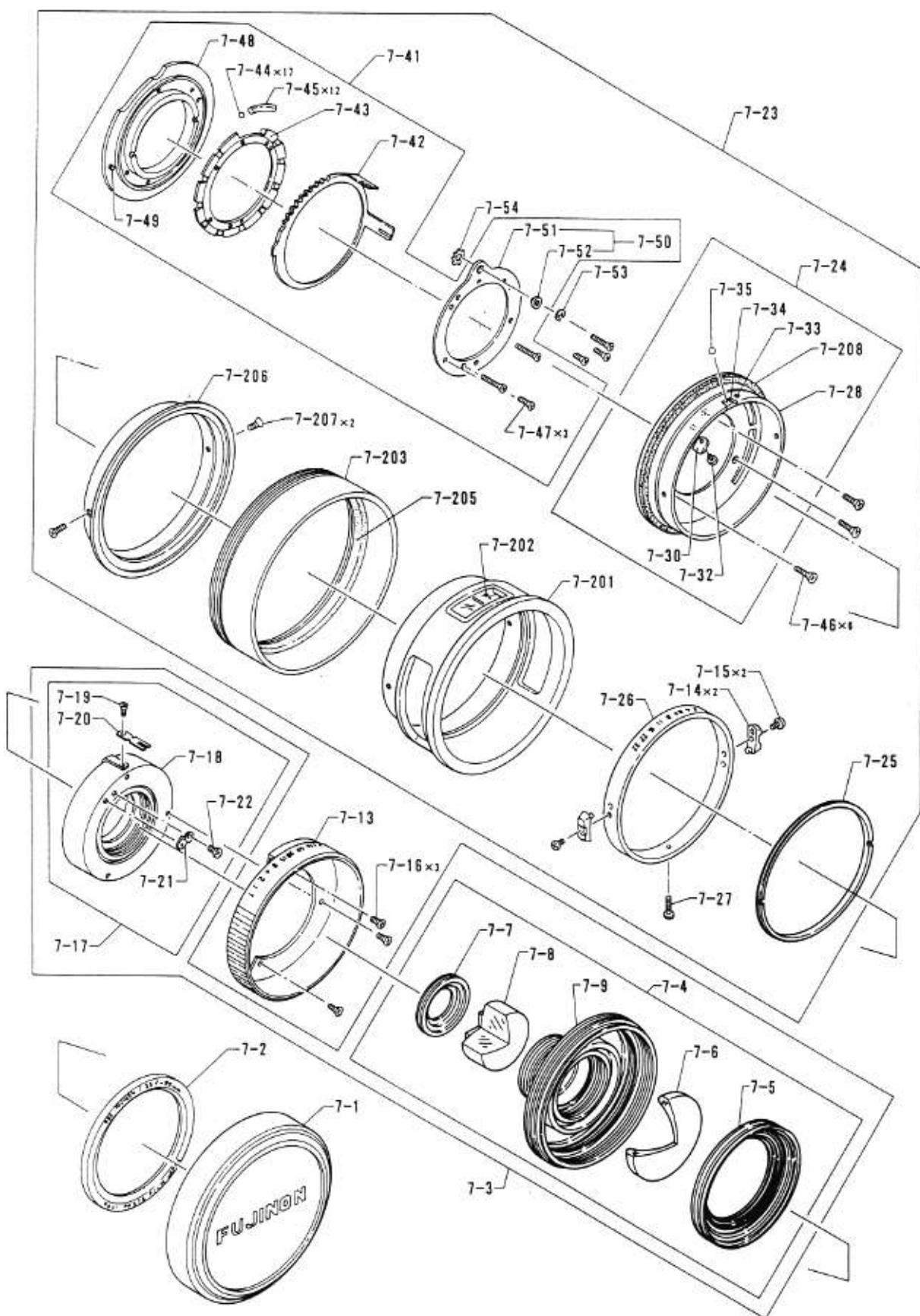
Fig. 5



Q938

Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
5- 70	50B 4656190	Leaf spring	1	<input type="radio"/>	*	
5- 71	110M 170203M	Screw	1	<input type="radio"/>	*	
5- 72	53B 32460	Adjust screw	3	<input type="radio"/>	*	

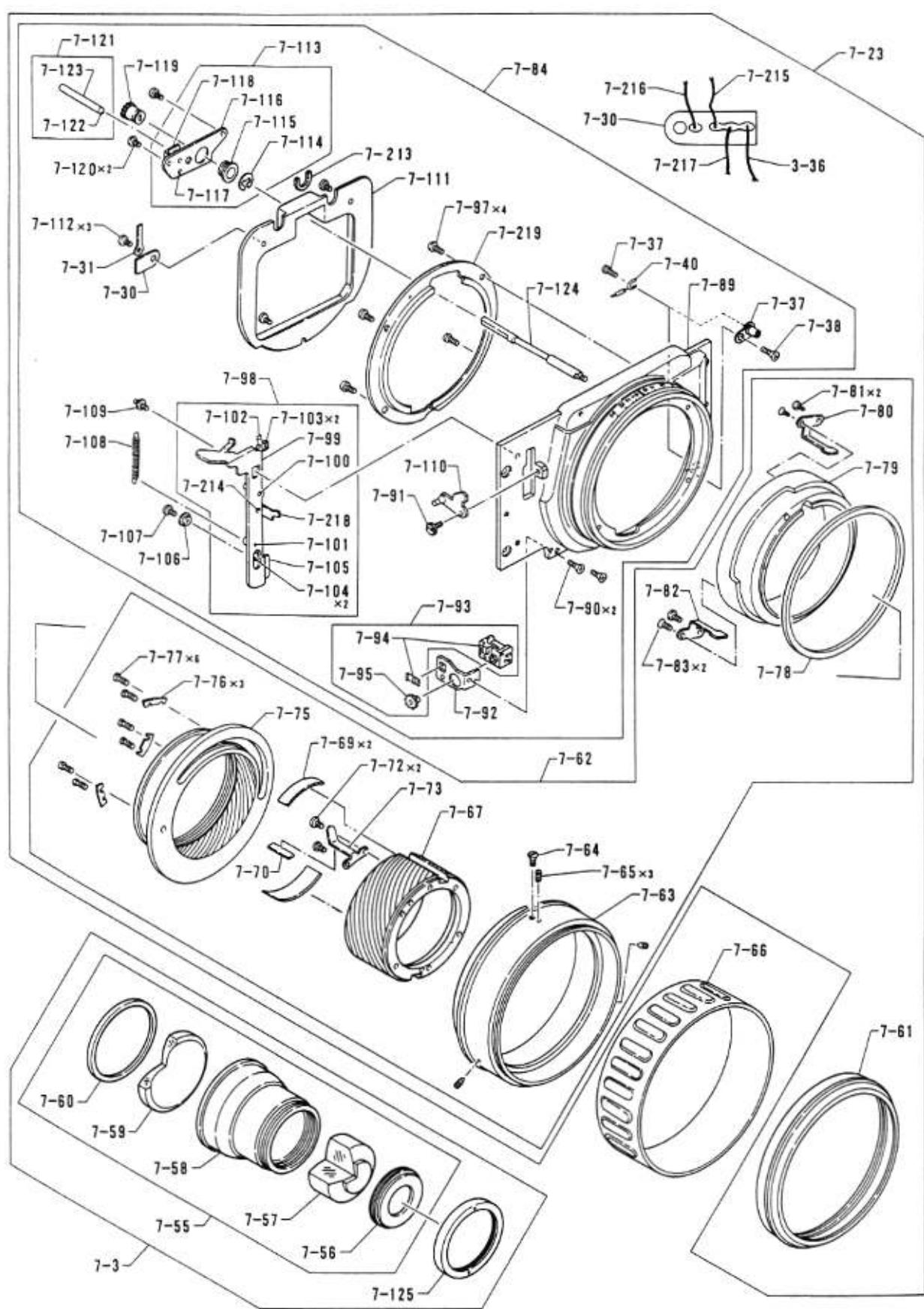
Fig. 7-1



Q938

Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
7- 3	38A 4391950	Shutter assembly (II)	1	X	*	
7- 4	21A 2907010	Front lens assembly	1	O	*	
7- 6	1B 2900600	Lens (G1)	1	X	*	
7- 8	1A 2900580	Lens (G2+G3)	1	X	*	
7- 17	38A 4391960	Shutter assembly (I)	1	X	*	
7- 18	38B 2907090	#O shutter	1	O	*	
7- 23	324A 6767880	Lens barrel assembly	1	O		
7- 24	23A 4392570	Index ring assembly	1	O	*	
7- 25	23B 2188620	Hold ring	1	O		
7- 26	23B 4392650	Aperture selector ring	1	O	*	
7- 27	110M 200601S	Screw	1	O	*	
7- 28	23B 4392630	Index ring	1	X	*	

Fig. 7-2



Q938

Ref No.	Part No.	Part Name	Q'ty	Can be supplied or not	Remarks	
7- 55	21A 2907020	Rear lens frame assembly	1	O	*	
7- 57	1A 2900590	Lens (G4+G5)	1	X	*	
7- 59	1B 2900650	Lens (G6)	1	X	*	
7- 62	21A 4392560	Helicoid assembly	1	O	*	
7- 75	23B 4392610	Helicoid ring	1	X	*	
7- 79	23B 4392600	Hold ring	1	X	*	
7- 84	46A 6767890	Front mask assembly	1	O		
7- 89	46B 6767910	Front mask	1	X		
7-121	17A 2188990	Interlock rod assembly	1	O	*	
7-203	23B 6767960	Hood	1	O		