

5106A (Seikomatic Weekdater)

1) Specifications

- Casing diameter 25.60 mm
- Height 4.98 mm
- Vibrations per hour 19,800
- Automatic winding (with auxiliary hand winding)
- Calendar (day and date)
- Instant day and date changing
- Second-setting device

Assembly plan (case back side) ... (Fig. 1)

Assembly plan (dial side)..... (Fig. 2)

2) Automatic winding mechanism

2)-1 Exploded view of automatic winding mechanism (Fig. 3)

(Enlarged section diagram of automatic winding mechanism.) (Fig. 4)

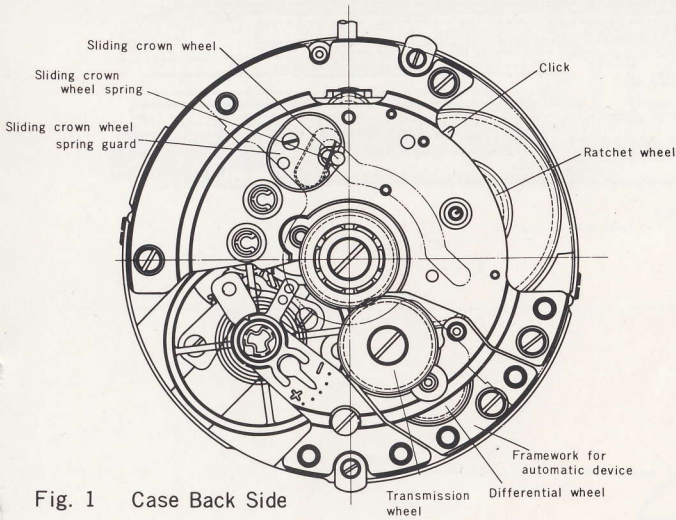


Fig. 1 Case Back Side

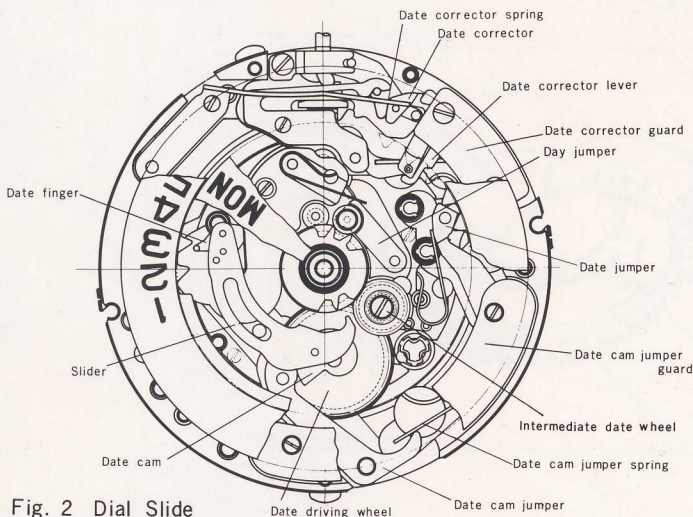


Fig. 2 Dial Side

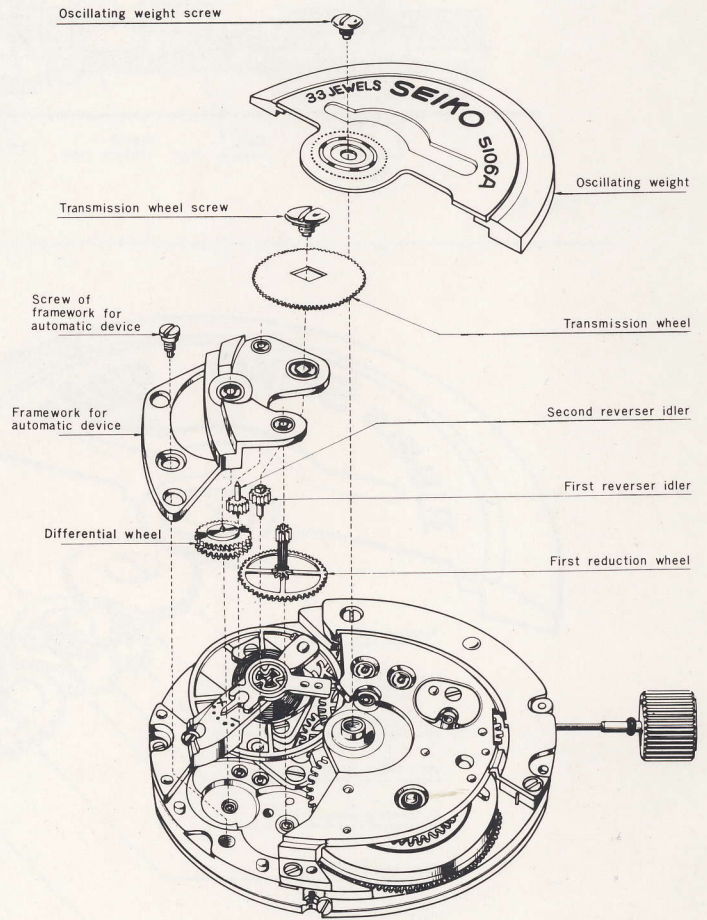


Fig. 3

2)-2 *Transmission of force in automatic winding mechanism*

(Fig. 5)

Right and left rotation of the oscillating weight becomes a one-directional power by action of the differential wheel, this power being transmitted to the ratchet wheel.

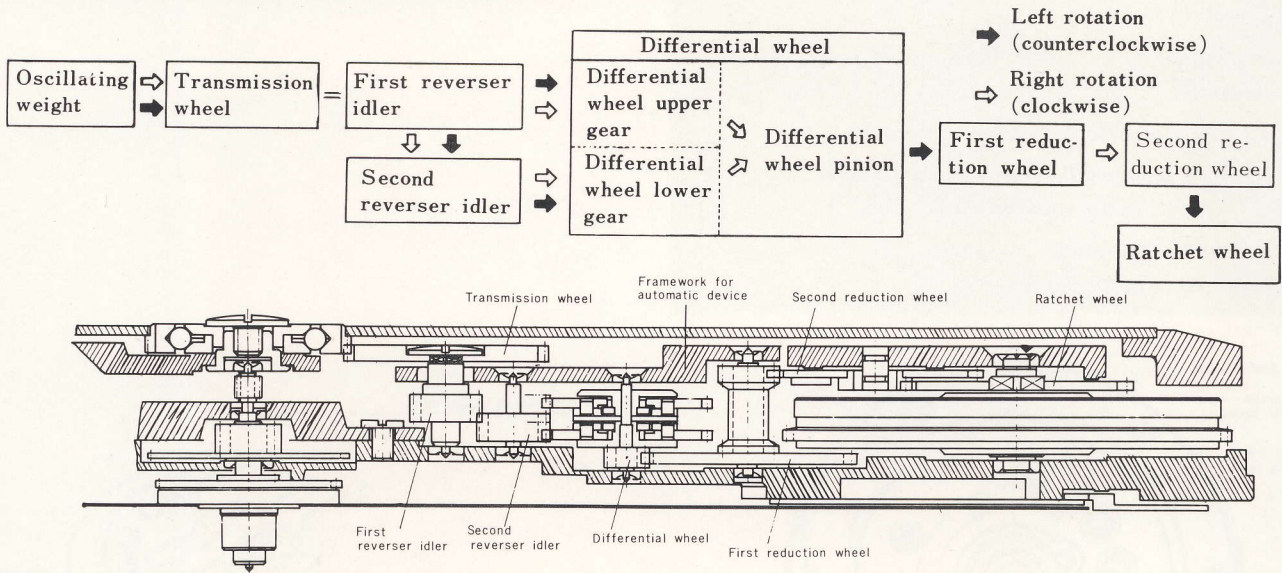


Fig. 4

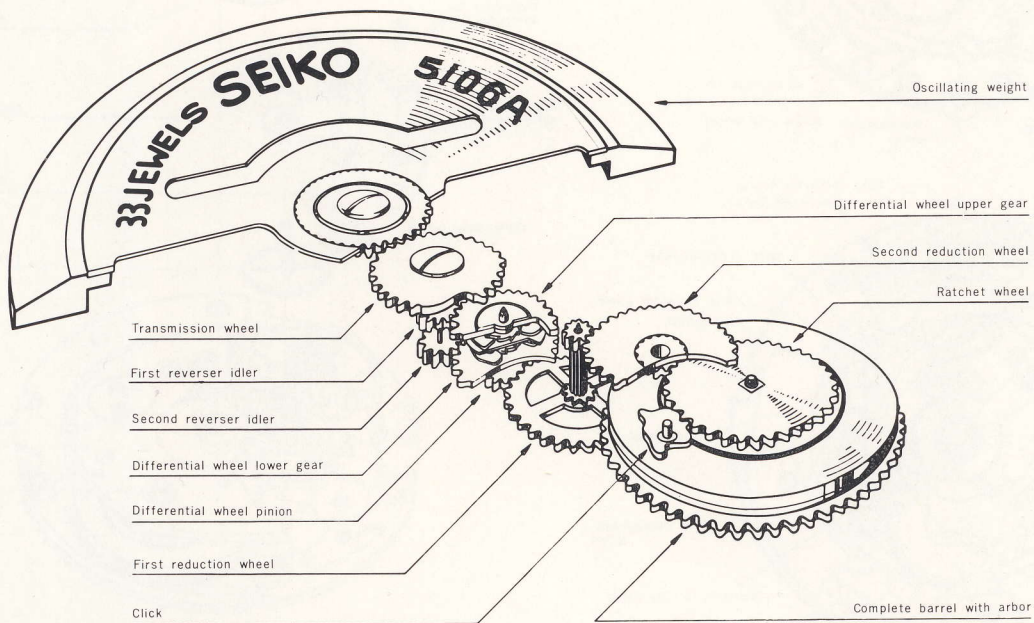


Fig. 5

3) Calendar mechanism

3)-1 Exploded view of calendar device (Fig. 6)

3)-2 Instant day and date changing

Assembled on the date driving wheel which makes one rotation during 24 hours is a date cam; on the date cam is a slider. A date cam jumper is always pressed against the date cam by a spring. When the date driving wheel is rotated, the date cam assembled on it is also turned, and the date cam jumper which contacts with the cam ascends the outer circumference of the date cam; thus, the date cam jumper spring is bent. When the date cam jumper reaches the highest point of the outer circumference of the cam and passes the top of the cam, the cam is rotated by force of the date cam jumper spring. At this moment, the cam drives the slider. Since this action is performed instantaneously, the date finger installed on one end of the slider rotates the date dial for one day, and a beak-type portion provided on the other end of the slider also rotates the day star with dial disk one day at the same time.

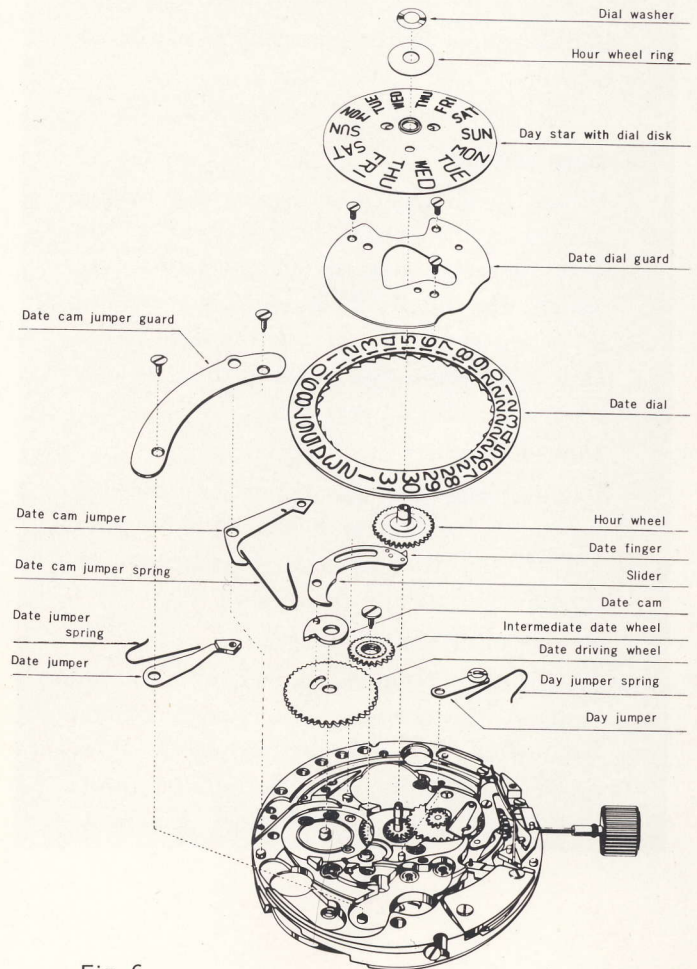


Fig. 6

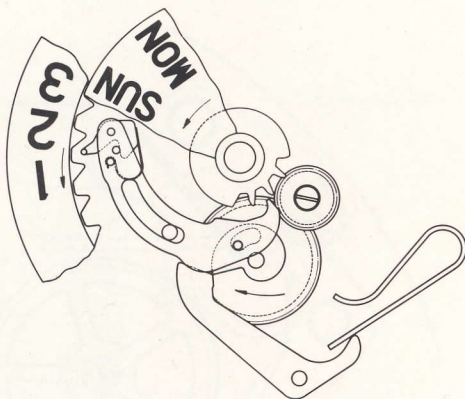


Fig. 7
Immediately prior to starting day and date driving

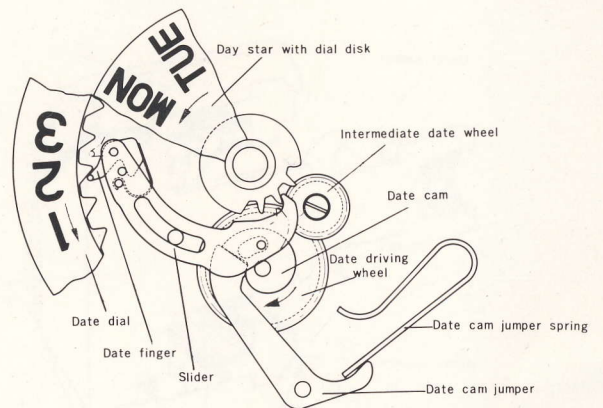


Fig. 8

Immediately after finishing day and date driving (The perforated double chain line on the date finger and slider indicates the position just prior to operation)

3)-3 Correction of day and date

A hexagonal date corrector button is built in the center of the specially constructed crown.

Crown and button section diagram (Fig. 9)

Date setting

When depressing the hexagonal button located in the center of the crown, the date corrector and date corrector lever which are interlocking with the setting lever are actuated, driving the date dial. Date correction can be performed at any time (Fig. 10, 11 and 12).

Date setting

Pull out and turn the crown. By moving the hands forward and backward between 8 P.M. and 12 midnight, the day can be driven in order.

4) Second-setting device

When the crown is pulled out to the hand-setting position, the sweep second hand stops as the second-setting lever interlocking with the yoke (clutch lever) locks the sweep second wheel (Fig. 13)

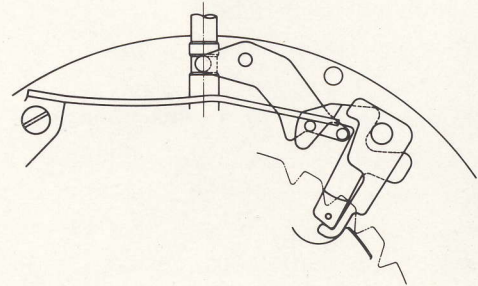


Fig. 10 Normal condition

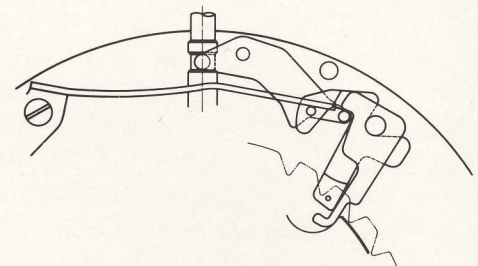


Fig. 11 Starting the date correction

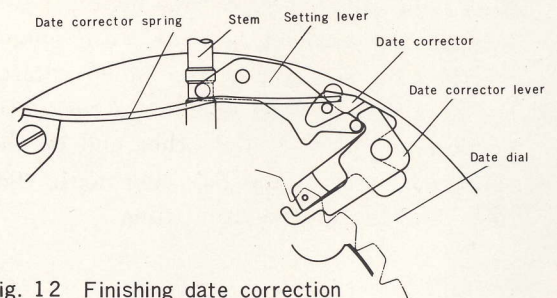


Fig. 12 Finishing date correction

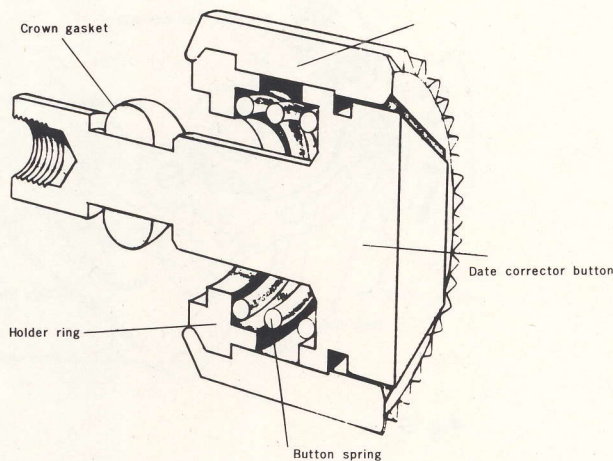


Fig. 9 Crown and button section diagram

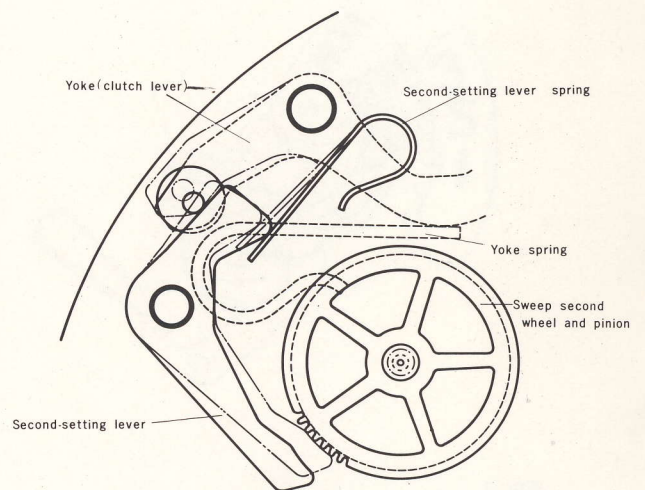


Fig. 13-Operation of second-setting lever

5) Basic movement

5)-1 Exploded view of basic movement (Fig. 14, 15)

5)-2 Sliding crown wheel, click operation diagram (Fig. 16)

6) Disassembly and assembly

Refer to p. 5106A-7~p. 5106A-16.

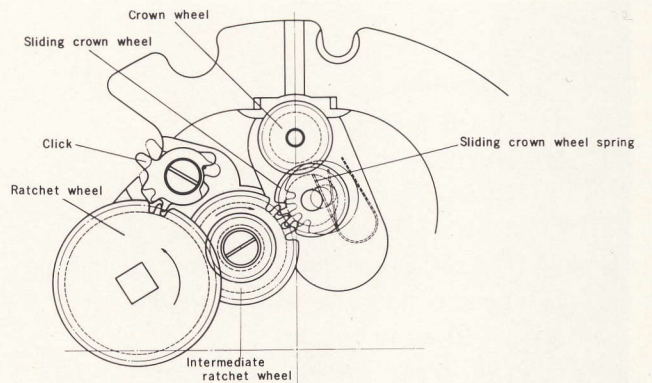


Fig. 16 Operation diagram of sliding crown wheel click viewed from the back side of barrel and train wheel bridge.

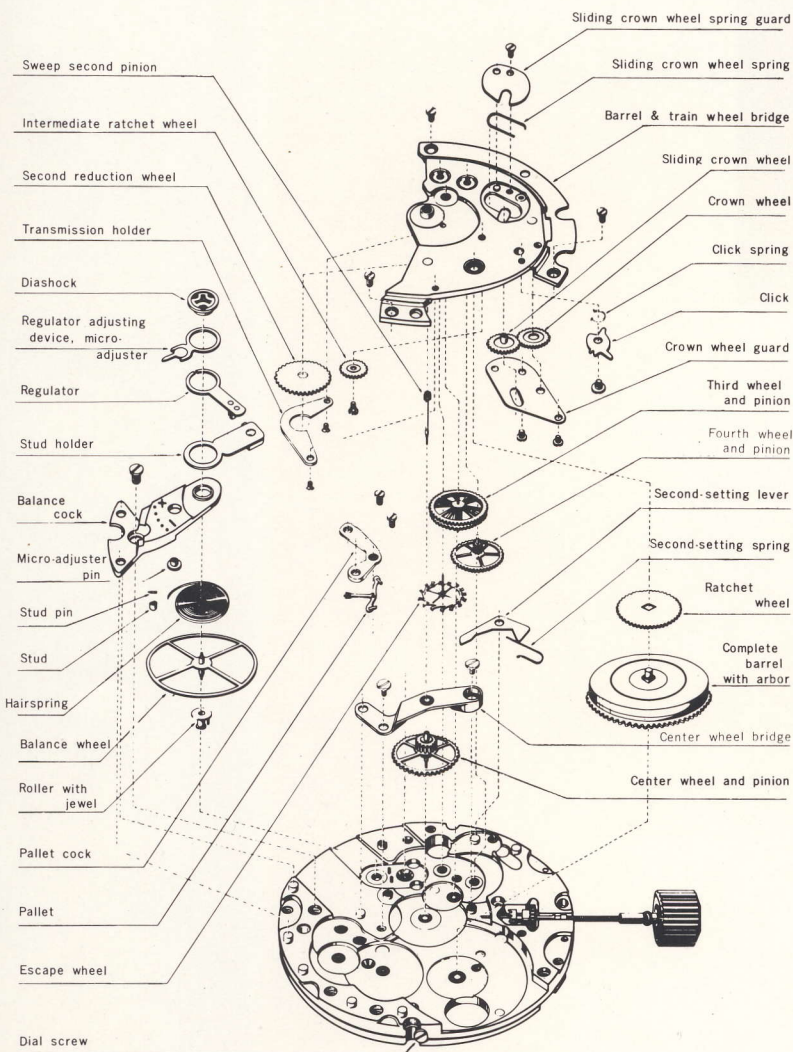


Fig. 14

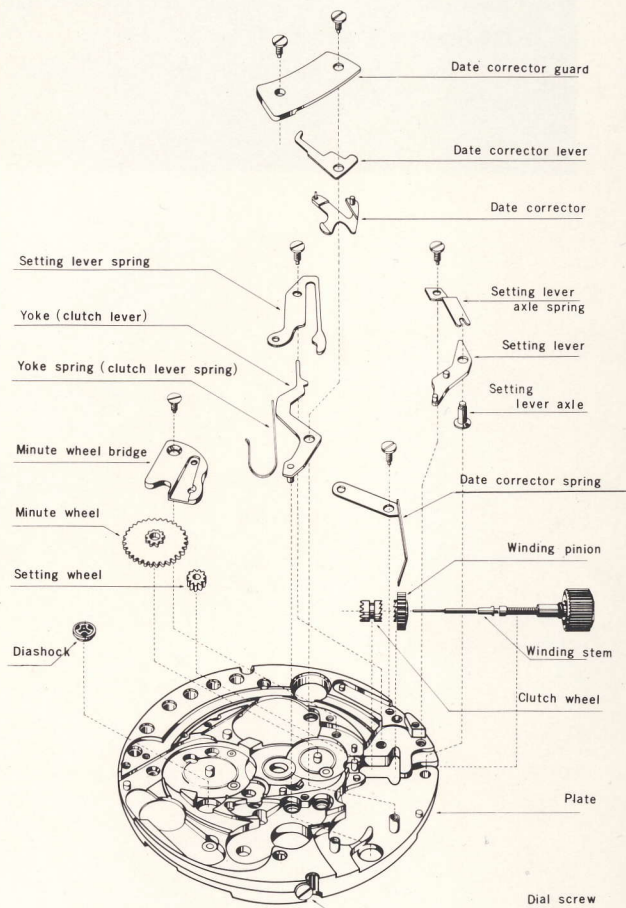


Fig. 15

7) **Checking**

1. Space between hands
2. Rotation of hands
3. Position of hour and minute hands at 12 o'clock
4. Operation of the date corrector button
5. Instant day and date changing
6. Hand winding
7. Quick day setting
8. Waterproof tests

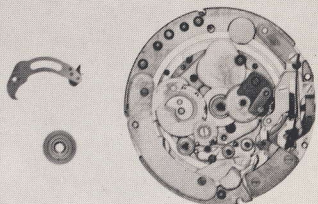
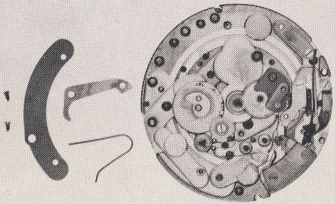
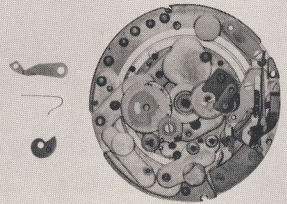
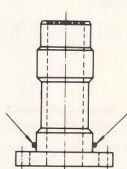
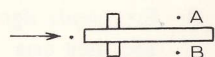
In general, because the mainspring of 5106A has a self-greasing coating, never disassemble and wash the barrel of this caliber. However, if the barrel has been disassembled by mistake or when certain circumstances necessitate disassembling and washing, use **SEIKO automatic winding mainspring oil S-3**.

For the oiling method, refer to Diaflex.

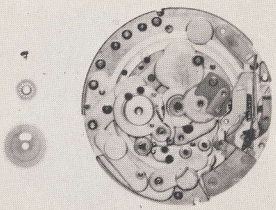
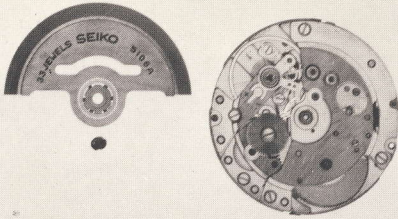
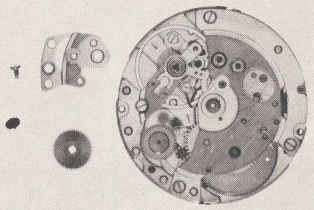
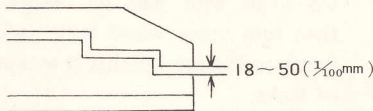
5106A Disassembly and assembly—continued

	1	2	3
Disassembly	DAY STAR WITH DIAL DISK	DATE DIAL	DAY JUMPER
	Method 1) Remove case screws and casing clamps 2) Remove case ring 3) Remove dial screw and dial 4) Remove holding ring for dial 5) Remove dial washer 6) Remove hour wheel ring 7) Remove day star with dial disk	1) Remove date dial guard screws (3 pcs.) 2) Remove date dial guard 3) Remove date dial	1) Remove day jumper spring 2) Remove day jumper
	Remark	When removing date dial, pay attention to date jumper spring and day jumper spring which are apt to jump out.	
Photo			
Assembly	29	28	27
	DAY STAR WITH DIAL DISK	DATE DIAL	DAY JUMPER
Method	1) Set day star with dial disk 2) Check condition of day and date driving 3) Check date correcting condition Confirm that day and date change instantaneously, and that date correction is performed smoothly One of the following will cause defect in instant shifting of day and date	1) Set date dial 2) Set date dial guard 3) Fasten date dial guard screws	1) Lubricate day jumper pin (Moebius Synt-A-Lube) 2) Lubricate day jumper (roller surface) (Moebius Synt-A-Lube) 3) Set day jumper 4) Set day jumper spring
Remark	1) Oil on setting face of date jumper spreads to plate and date dial 2) Excessively tight fit of slider and date cam 3) Oil spread between date driving wheel and date cam, or date cam and slider	Position heads of date dial guard screws no higher than upper surface of date dial guard.	Use small quantity for lubricating day jumper. Do not oil these surfaces. <div style="text-align: center;"> </div>

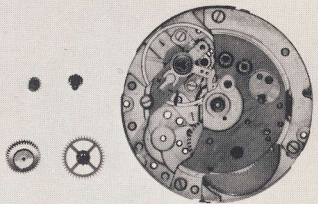
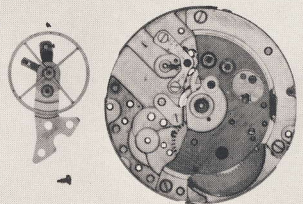
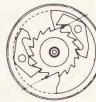
5106A Disassembly and assembly—continued

	4 HOUR WHEEL · SLIDER	5 DATE CAM JUMPER	6 DATE JUMPER DATE CAM
Disassembly	<p>Method</p> <ol style="list-style-type: none"> 1) Remove hour wheel 2) Remove slider 	<p>Method</p> <ol style="list-style-type: none"> 1) Remove date cam jumper guard screws (2 pcs.) 2) Remove date cam jumper guard 3) Remove date cam jumper spring 4) Remove date cam jumper 	<p>Method</p> <ol style="list-style-type: none"> 1) Remove date jumper spring 2) Remove date jumper 3) Remove date cam
Remark			
Photo			
Assembly	<p>Method</p> <ol style="list-style-type: none"> 1) Set slider 2) Lubricate cannon pinion (watch oil S-4) 3) Set hour wheel 	<p>Method</p> <ol style="list-style-type: none"> 1) Set date cam jumper 2) Set date cam jumper spring 3) Set date cam jumper guard 4) Fasten date cam jumper guard screw 5) Set date jumper spring 	<p>Method</p> <ol style="list-style-type: none"> 1) Oil side face of date cam (watch oil S-4 or Moebius grease "Remontoires") 2) Set date cam 3) Set date jumper 4) Oil setting face of date jumper (Moebius Synt-A-Lube) <p>Oil carefully; do not spread the oil on setting face of date jumper to plate</p> <p>Never oil surface A, B of date cam, only the side face</p>
Remark	<p>Watch oil S-4</p> <div style="text-align: center;">  </div>	<p>Oil either setting face of date cam jumper or the side face of date cam.</p>	<div style="text-align: center;">  </div> <p>Oiling upper and lower surfaces A, B causes defect of instantaneous shifting of date.</p>

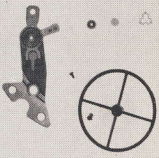
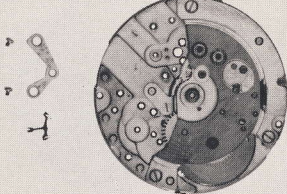
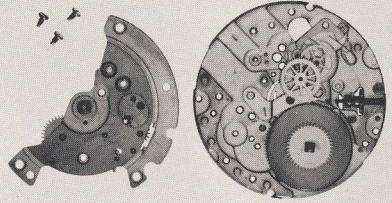
5106A Disassembly and assembly—continued

Disassembly	7	INTERMEDIATE DATE WHEEL · DATE DRIVING WHEEL	8	OSCILLATING WEIGHT	9	FRAMEWORK FOR AUTOMATIC DEVICE
	1) Remove intermediate date wheel screw (1 pce.) 2) Remove intermediate date wheel 3) Remove date driving wheel		1) Remove oscillating weight screw 2) Remove oscillating weight		1) Remove transmission wheel screw 2) Remove transmission wheel 3) Remove framework screw for automatic device (1 pce.) 4) Remove framework for automatic device	
	Loosen the intermediate date wheel screw slowly					
Photo						
Assembly	23	DATE DRIVING WHEEL · INTERMEDIATE DATE WHEEL	22	OSCILLATING WEIGHT	21	FRAMEWORK FOR AUTOMATIC DEVICE
	1) Apply small quantity of oil to plate pins (date cam jumper pin, slider long hole pin, date driving wheel axle, and intermediate date wheel axle (Moebius Synt-A-Lube)) 2) Set date driving wheel 3) Set intermediate date wheel 4) Fasten intermediate date wheel screw (1 pce.)		1) Lubricate balls of bearing unit (Moebius Synt-A-Lube) 2) Set oscillating weight 3) Set oscillating weight screw 4) Check turning and winding conditions of oscillating weight 5) Check manual winding condition		1) Assemble first reverser idler and transmission wheel separately on framework for automatic device. Check and correct rotating condition 2) Set framework for automatic device with first reverser idler and transmission wheel 3) Fasten screw of framework for automatic device 4) Lubricate differential wheel pivot and first reduction wheel upper pivot (watch oil S-4 or Moebius grease "Remontoires") 5) Lubricate third wheel and pinion lower pivot, first reduction wheel lower pivot, first and second reverser idler lower pivots, and differential wheel lower pivot (watch oil S-4 or Moebius grease "Remontoires") Never tighten transmission wheel screw excessively	
			Proper clearance between oscillating weight and bridge is : 			

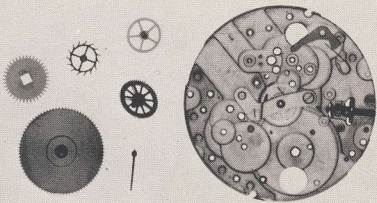
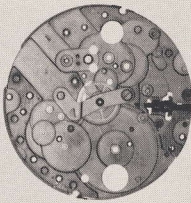
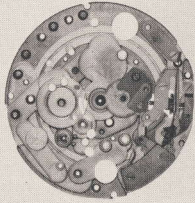
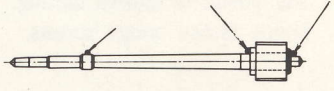
5106A Disassembly and assembly—continued

	10 AUTOMATIC WINDING TRAIN WHEELS	11 UNWINDING MAINSRING	12 BALANCE COCK
Disassembly	<p>Method</p> <ol style="list-style-type: none"> 1) Remove first reverser idler, second reverser idler, differential wheel, and first reduction wheel 	<p>Method</p>	<p>Method</p> <ol style="list-style-type: none"> 1) Remove balance cock screw (1 pce.) 2) Remove balance cock
Remark		<p>When unwinding, utilize only force of mainspring to unwind. Do not rotate mainspring by adding force to driver.</p>	<p>When removing the balance cock handle it carefully to prevent bending the hairspring.</p>
Photo			
Assembly	<p>Method</p> <ol style="list-style-type: none"> 1) Set first reduction wheel 2) Lubricate upper pivot of second reverser idler (Moebius grease "Remontoires" or watch oil S-4) and set it 3) Oil locking pawl of differential wheel (Moebius Synt-A-Lube) 4) Set differential wheel <div style="text-align: center; margin-top: 10px;">  </div> <p>Oil tiny quantity at one point of upper and lower differential wheels as in figure.</p>	<p>Method</p>	<p>Method</p> <ol style="list-style-type: none"> 1) Set balance cock 2) Fasten balance cock screw 3) Check end shake of balance with hairspring 4) Check height of stud 5) Correct out of truth in the flat and horizontarity of hairspring 6) Perform hairspring clearance (unbiased hairspring clearance) 7) Check condition of roller jewel and lever-notch, roller jewel and horns 8) Fully wind mainspring and check second-setting condition
Remark		<p>Check differential wheel for escaping and locking conditions before assembling. Hold pivot of differential wheel with pair of tweezers, then turn upper wheel with index finger to confirm whether it escapes or locks.</p>	<p>Adjust hairspring play between regulator pin and regulator key when balance is resting (unbiased hairspring play).</p>

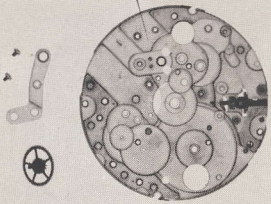
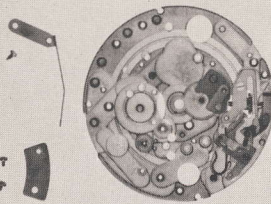
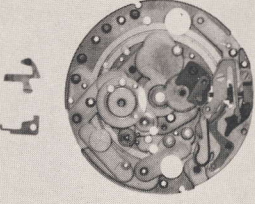
5106A Disassembly and assembly—continued

	13	14	15
Disassembly	BALANCE COCK	PALLET COCK	BARREL AND TRAIN WHEEL BRIDGE
Method	<ol style="list-style-type: none"> 1) Remove stud screw (1 pce.) 2) Remove balance wheel complete with stud) 3) Remove Diashock spring 4) Remove Diashock cap jewel 5) Remove Diashock hole jewel with frame 	<ol style="list-style-type: none"> 1) Remove pallet cock screws (2 pcs.) 2) Remove pallet cock 3) Remove pallet 	<ol style="list-style-type: none"> 1) Remove barrel and train wheel bridge screws (3 pcs.) 2) Remove barrel and train wheel bridge
Remark			
Photo			
Assembly	18	17	16
Method	<ol style="list-style-type: none"> 1) Place cap jewel with flat surface upward. 2) Put drop of oil on its center, holding cap jewel with tweezers. 3) Set Diashock hole jewel with frame directly over oiled cap jewel. 4) Set Diashock frames in the balance cock. 5) Set Diashock spring 6) Place balance on balance cock and insert stud into hole of stud holder 7) Fasten stud screw 8) Insert hairspring between regulator key and regulator pin 9) Turn regulator key 	<ol style="list-style-type: none"> 1) Lubricate pallet jewel 2) Set jewelled pallet fork and staff 3) Set pallet cock 4) Fasten pallet cock screw 5) Check end shake of pallet 6) Check operating condition of pallet (wind half of mainspring) 7) Check torque of winding stem on time setting 	<ol style="list-style-type: none"> 1) Set barrel and train wheel bridge 2) Fasten barrel and train wheel bridge screws (3 pcs.) 3) Check end shake of each wheel 4) Oil upper pivot of third wheel and pinion (watch oil S-4) 5) Check free running of gear train 6) Check operation condition of sliding crown wheel
Remark	<p>Concerning Diashock assembly, refer to DIASHOCK, as a common item. Be careful not to bend balance wheel to prevent deflection, as arm of balance is thin. (Moebius Synt-A-Lube).</p>		<p>Beginning with pivots of fourth wheel and pinion and then escape wheel and pinion facilitates setting. Firmly fasten bridge screws.</p>

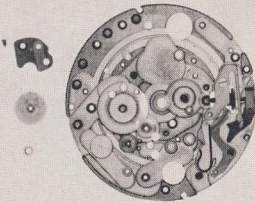
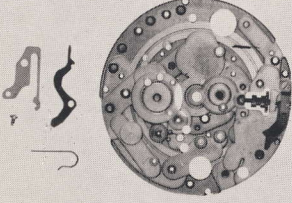
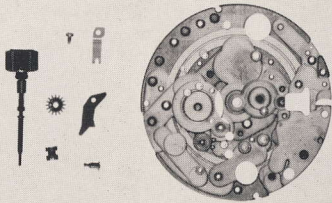
5106A Disassembly and assembly—continued

	16 FRONT TRAIN WHEELS	17 SECOND-SETTING LEVER	18 CANNON PINION
Disassembly	Method 1) Remove ratchet wheel 2) Remove barrel complete 3) Remove sweep second pinion 4) Remove third wheel and pinion 5) Remove fourth wheel and pinion 6) Remove escape wheel	Method 1) Remove second-setting spring 2) Remove second-setting lever	Method 1) Remove cannon pinion
Remark			
Photo			
Assembly	Method 1) Set complete barrel with arbor after oiling its upper and lower pivots (watch oil S-4 or Moebius grease "Remontoires") 2) Set ratchet wheel 3) Set escape wheel 4) Set fourth wheel and pinion 5) Set third wheel and pinion 6) Oil and set sweep second pinion (Moebius Synt-A-Lube)	Method 1) Set second-setting lever 2) Set second-setting spring	Method 1) Oil lower hole jewel for center wheel and lower stem for wheel (watch oil S-4 or Moebius grease "Remontoires") 2) Set cannon pinion
Remark	Moebius Synt-A-Lube 	Insert second-setting spring correctly into guide	

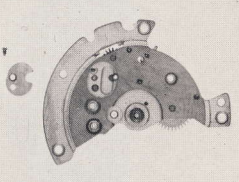
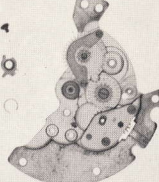
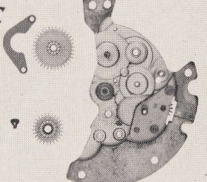
5106A Disassembly and assembly—continued

	19	20	21
Disassembly	CENTER WHEEL BRIDGE	DATE CORRECTOR SPRING	DATE CORRECTOR LEVER - DATE CORRECTOR
Method	<ol style="list-style-type: none"> 1) Remove center wheel bridge screws (2 pcs.) 2) Remove center wheel bridge 3) Remove center wheel and pinion 	<ol style="list-style-type: none"> 1) Remove date corrector spring screw 2) Remove date corrector spring 3) Remove date corrector guard screw 4) Remove date corrector guard 	<ol style="list-style-type: none"> 1) Remove date corrector lever 2) Remove date corrector
Remark			
Photo			
Assembly	12	11	10
Method	<ol style="list-style-type: none"> 1) Set center wheel and pinion and oil upper pivot (watch oil S-4 or Moebius Synt-A-Lube) 2) Set center wheel bridge 3) Fasten center wheel bridge screw 4) Check end shake of center wheel and pinion 	<ol style="list-style-type: none"> 1) Set date corrector guard 2) Fasten date corrector guard screw 3) Set date corrector spring 4) Fasten date corrector spring screw 5) Hook date corrector spring on date corrector dowel 6) Lubricate date corrector dowel (contacting point with spring), contacting point of date corrector lever, and contacting point of setting lever with date corrects (watch oil S-4 or Moebius grease "Remontoires") 7) Check action of date correction by depressing date corrector button 	<ol style="list-style-type: none"> 1) Oil date corrector pin (watch oil S-4 or Moebius grease "Remontoires") 2) Set date corrector 3) Set date corrector lever
Remark	Never excessively fasten center wheel bridge screws.	Gently hook date corrector spring, using tweezers.	

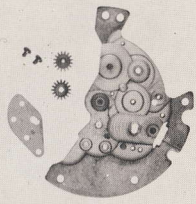
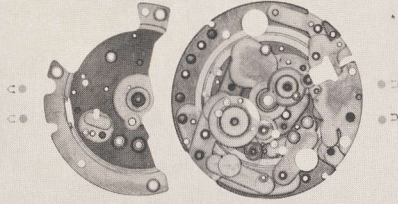
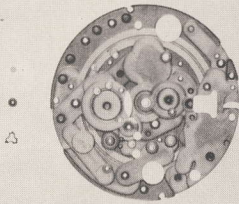
5106A Disassembly and assembly—continued

Disassembly		Assembly	
Method	Remark	Method	Remark
<p>22 MINUTE WHEEL SETTING WHEEL</p> <ol style="list-style-type: none"> 1) Remove minute wheel bridge screw 2) Remove minute wheel bridge 3) Remove minute wheel 4) Remove setting wheel 		<p>9 SETTING WHEEL MINUTE WHEEL</p> <ol style="list-style-type: none"> 1) Lubricate setting wheel pin and minute wheel pin (watch oil S-4 or Moebius grease "Remontoires") 2) Set setting wheel 3) Set minute wheel 4) Set minute wheel bridge 5) Fasten minute wheel bridge screw 6) Check the pull-out condition of winding stem and rotation condition of wheels of winding and setting-mechanism 	
<p>23 YOKE (CLUTCH LEVER)</p> <ol style="list-style-type: none"> 1) Remove setting lever spring screw (1 pce.) 2) Remove setting lever spring 3) Remove yoke spring (clutch lever spring) 4) Remove yoke (clutch lever) 		<p>8 YOKE (CLUTCH LEVER)</p> <ol style="list-style-type: none"> 1) Lubricate yoke (clutch lever) pin (watch oil S-4 or Moebius grease "Remontoires") 2) Set yoke (clutch lever) 3) Set yoke spring (clutch lever spring) 4) Set setting lever spring 5) Fasten setting lever spring screw 	
<p>24 SETTING LEVER-WINDING STEM CLUTCH WHEEL WINDING WHEEL</p> <ol style="list-style-type: none"> 1) Remove setting lever axle spring screw (1 pce.) 2) Remove setting lever axle spring 3) Remove setting lever 4) Remove setting lever axle 5) Take out winding stem and remove clutch wheel and winding wheel 		<p>7 WINDING WHEEL CLUTCH WHEEL-WINDING STEM SETTING LEVER</p> <ol style="list-style-type: none"> 1) Set setting lever axle 2) Set winding wheel and clutch wheel, then insert winding stem after lubricating it (watch oil S-4 or Moebius grease "Remontoires") 3) Set setting lever 4) Set setting lever axle spring 5) Fasten setting lever axle spring screw 6) Apply small quantity of oil to yoke (clutch lever) pin, setting lever dowels, clutch wheel groove, teeth, and tip of winding wheel teeth (watch oil S-4 or Moebius grease "Remontoires") 	
			

5106A Disassembly and assembly—continued

Disassembly	25	SLIDING CROWN WHEEL SPRING	26
		<ol style="list-style-type: none"> 1) Remove sliding crown wheel spring guard screw (1 pce.) 2) Remove sliding crown wheel spring guard 3) Remove sliding crown wheel spring 	CLICK
			<ol style="list-style-type: none"> 1) Remove click screw (1 pce.) 2) Remove click 3) Remove click spring
			27
			SECOND REDUCTION WHEEL INTERMEDIATE RATCHET WHEEL
			<ol style="list-style-type: none"> 1) Remove transmission holder screws (2 pcs.) 2) Remove transmission holder 3) Remove second reduction wheel 4) Remove intermediate ratchet wheel screw (1 pce.) 5) Remove intermediate ratchet wheel
	Remark		
	Photo		
			
Assembly	6	SLIDING CROWN WHEEL SPRING	5
		<ol style="list-style-type: none"> 1) Set sliding crown wheel spring 2) Set sliding crown wheel spring guard 3) Fasten sliding crown wheel spring guard screw 4) Check rotation condition of each wheel 	CLICK
			<ol style="list-style-type: none"> 1) Set click spring 2) Set click 3) Fasten click screw
			4
			INTERMEDIATE RATCHET WHEEL SECOND REDUCTION WHEEL
			<ol style="list-style-type: none"> 1) Set intermediate ratchet wheel 2) Lubricate intermediate ratchet wheel hole (watch oil S-4 or Moebius grease "Remontoires") 3) Fasten intermediate ratchet wheel screw 4) Lubricate second reduction wheel pin (watch oil S-4 or Moebius grease "Remontoires") 5) Set second reduction wheel 6) Set transmission holder 7) Fasten transmission holder screw
	Remark		

5106A Disassembly and assembly—continued

	28	29	30
Disassembly	SLIDING CROWN WHEEL CROWN WHEEL	DIAFIX	DIASHOCK
Method	<ol style="list-style-type: none"> 1) Remove crown wheel guard screws (2 pcs.) 2) Remove crown wheel guard 3) Remove sliding crown wheel 4) Remove crown wheel 	<ol style="list-style-type: none"> 1) Remove Diafix spring of plate 2) Remove Diafix cap jewel 3) Remove Diafix spring of barrel and train wheel bridge 4) Remove Diafix cap jewel 	<ol style="list-style-type: none"> 1) Remove Diashock spring of plate 2) Remove Diashock cap jewel 3) Remove Diashock hole jewel with frame
Remark			For the disassembling method, refer to DIASHOCK, as a common item.
Photo			
Assembly	3	2	1
Method	<ol style="list-style-type: none"> 1) Oil crown wheel pin (watch oil S-4 or Moebius grease "Remontoires") 2) Set crown wheel 3) Oil sliding crown wheel shaft (watch oil S-4 or Moebius grease "Remontoires") 4) Set sliding crown wheel 5) Set crown wheel guard 6) Fasten crown wheel guard screws (2 pcs.) 	<ol style="list-style-type: none"> 1) Set Diafix cap jewel on plate and barrel & train wheel bridge 2) Set Diafix spring 3) Oil Diafix 	<ol style="list-style-type: none"> 1) Place cap jewel with flat surface upward 2) Put drop of oil on its center, holding cap jewel with tweezers 3) Set Diashock hole jewel with frame directly over oiled cap jewel 4) Set Diashock spring
Remark		Concerning Diafix assembling method, refer to DIAFIX, as a common item.	Concerning oiling method of Diashock and assembling method to the plate, refer to DIASHOCK, as a common item.