

SEIKO LASSALE

QUARTZ

Cal. 8420A

PARTS LIST

Cal. 8420A



☆ 122 815



125 815



☆ 221 815



231 815



241 815



261 815



☆ 271 815



281 815



282 815



☆ 354 815



383 815



384 815



386 815



391 815



491 815



4001 815



4002 815



4146 815



4216 815



4219 815



4239 815



4270 815



4271 815



4408 815



4408 816



☆ Maxell SR616SW

			
022 242	022 754	022 780	2/1

Cal. 8420A

Characteristics

Casing diameter : ϕ 14.9 mm
 Maximum height : 1.7 mm without battery
 Jewels : 6 j
 Frequency of quartz crystal oscillator : 32,768 Hz (Hz=Hertz Cycles per second)
 Driving system : Step motor (2 poles)
 Regulation system : Rotary step switch type

PART NO.	PART NAME	PART NO.	PART NAME
☆122 815 } ☆122 816 }	Center wheel bridge		
125 815	Train wheel bridge		
☆221 815 } ☆221 816 }	Center wheel & pinion		
231 815	Third wheel & pinion		
241 815	Fourth wheel & pinion		
261 815	Minute wheel		
☆271 815 } ☆271 816 }	Hour wheel		
281 815	Setting wheel		
282 815	Clutch wheel		
☆354 815	Winding stem		
383 815	Setting lever		
384 815	Yoke (Clutch lever)		
386 815	Setting lever spring		
391 815	Train wheel setting lever		
491 815	Dial washer		
4001 815	Circuit block		
4002 815	Coil block		
4146 815	Step rotor		
4216 815	Insulator for battery		
4219 815	Battery connection insulator		
4239 815	Rotor stator		
4270 815	Battery connection (-)		
4271 815	Battery connection (+)		
4408 815	Crystal oscillator spacer		
4408 816	Train wheel setting lever spacer		
022 242	Train wheel bridge screw		
022 242	Battery connection (+) screw		
022 754	Setting lever spring screw		
022 780	Circuit block screw		
011 326	Lower hole jewel for third wheel		
011 552	Upper hole jewel for third wheel		
011 552	Upper hole jewel for fourth wheel		
011 552	Lower hole jewel for fourth wheel		
011 552	Upper hole jewel for step rotor		
011 552	Lower hole jewel for step rotor		
027 081	Tube for train wheel bridge		
☆027 082	Tube for circuit block screw A		
☆027 083	Tube for circuit block screw B		
027 084	Tube for battery connection (+) screw		
027 705	Setting lever pin		
027 706	Minute wheel pin		
Maxell SR616SW	Silver oxide battery		

☆ ⇨ Please see remarks on the reverse page.
 Part numbers in light letters are not shown in photos.

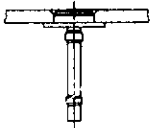
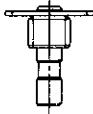

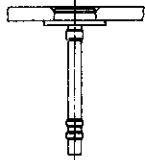
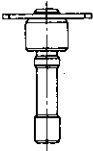
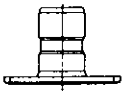
Cal. 8420A

Remarks :

Center wheel bridge, center wheel & pinion, hour wheel.

There are two different types as specified below.

Combination :

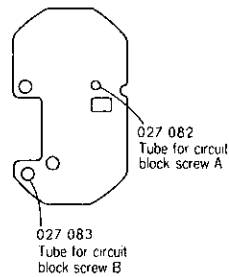
Type	Center wheel bridge	Center wheel & pinion	Hour wheel
a	 ☆122 815	 ☆221 815	 ☆271 815
b	 ☆122 816	 ☆221 816	 ☆271 816

Winding stem

☆354 815.....Refer to the photograph on the front page. If the combination of the winding stem and case is unknown, check the case number and refer to "SEIKO LASSALE Quartz Casing Parts List" to choose a corresponding winding stem.

Tube for circuit block screw A, B

☆027 082 }Refer to the illustration below for the position of tube for circuit block screw A, B.
 ☆027 083 }

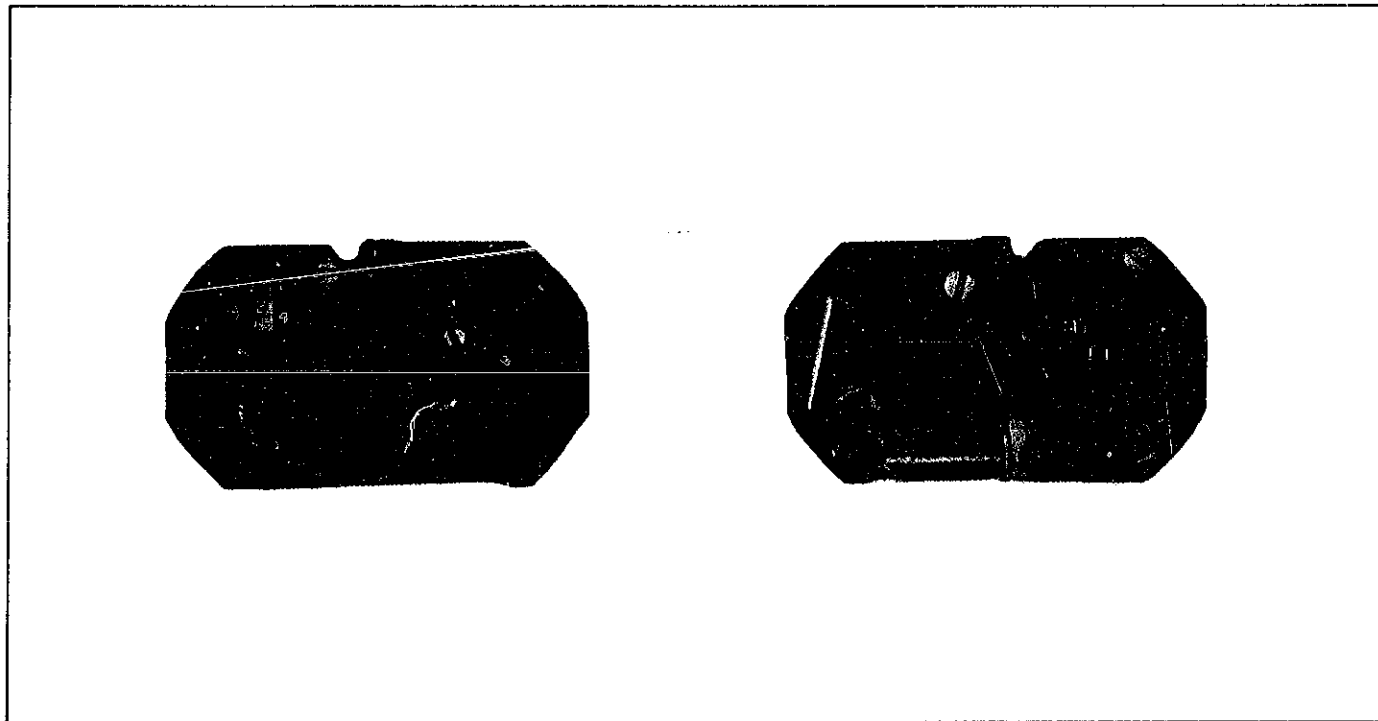


TECHNICAL GUIDE

**SEIKO
LASSALE**

QUARTZ

CAL. 8420A



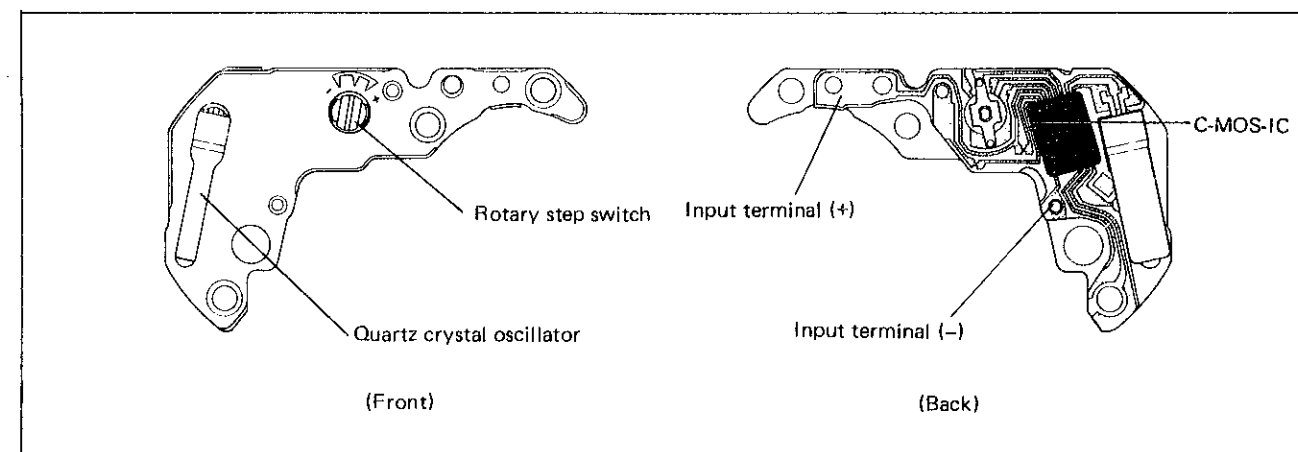
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I. SPECIFICATIONS

Cal. No.	8420A
Item	
Time indication	Two hand time indication
Additional mechanism	Electronic circuit reset switch
Loss/gain	Loss/gain at normal temperature range Monthly rate : less than 15 seconds (Annual rate : less than 3 minutes)
Movement size	15.5 mm between 6 o'clock and 12 o'clock sides. 9.0 mm between 3 o'clock and 9 o'clock sides.
Casing diameter	14.9 mm between 6 o'clock and 12 o'clock sides
Height	1.7 mm without battery
Regulation system	Rotary step switch
Measuring gate by Quartz Tester	The gate of 10 seconds is available.
Battery	Maxell SR616SW Battery life is approximately 2 years. Voltage: 1.55 V
Jewels	6 jewels

II. STRUCTURE OF THE CIRCUIT BLOCK



III. LIST OF SCREWS USED

Shape	Parts No.	Name	Shape	Parts No.	Name
	022 780	Circuit block screw (3 pcs.)		022 242	Train wheel bridge screw (1 pc.)
	022 754	Setting lever spring screw (2 pcs.)			Battery connection (+) screw (1 pc.)

IV. DISASSEMBLING, REASSEMBLING AND LUBRICATING

Disassembling procedures Figs. ① ~ ③①

Reassembling procedures Figs. ③① ~ ①

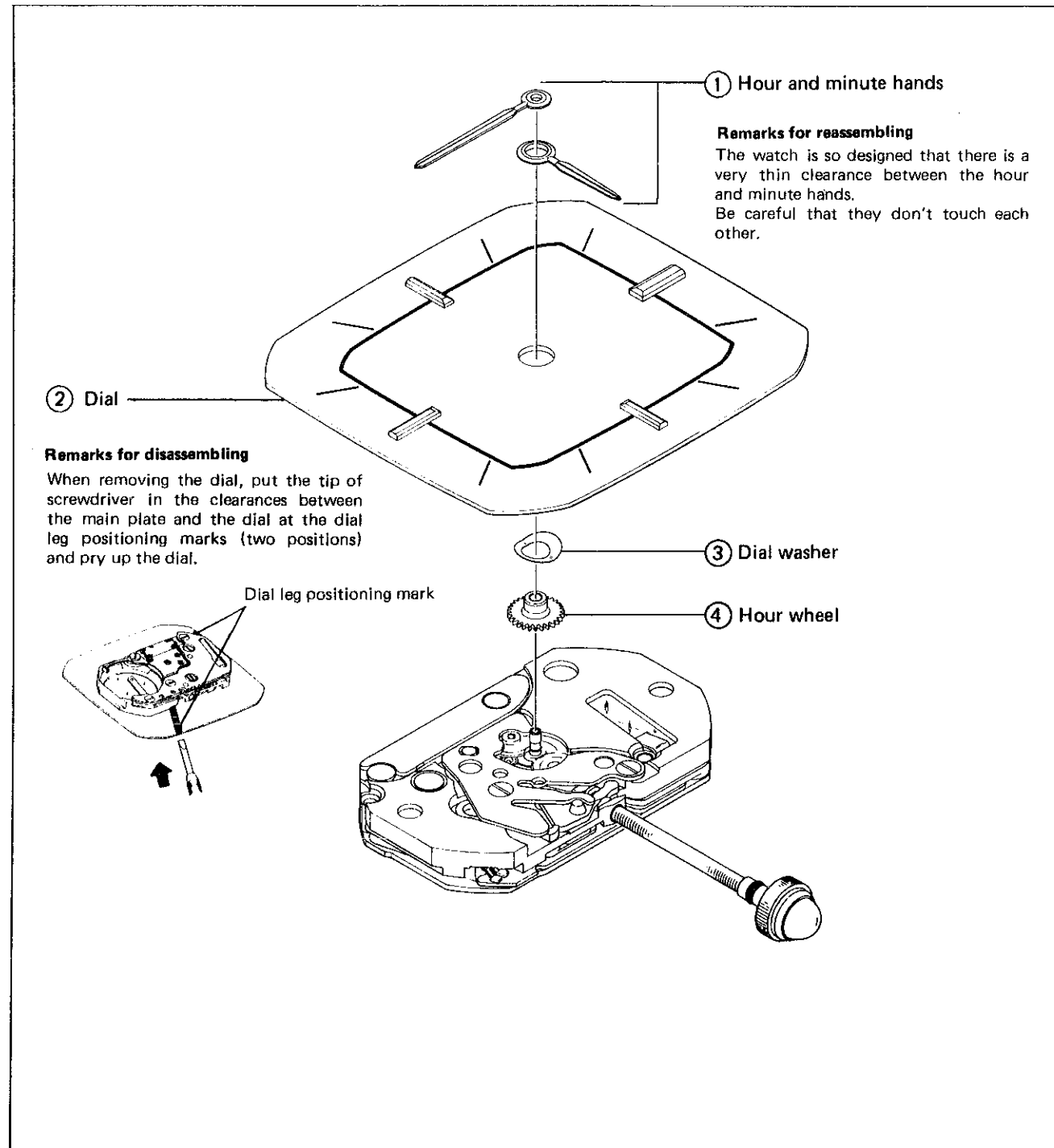
● Lubricating

Types of oil		Oil quantity
● Moebius A	○ Normal	
○ SEIKO Watch Oil S-6	○ Extremely small	

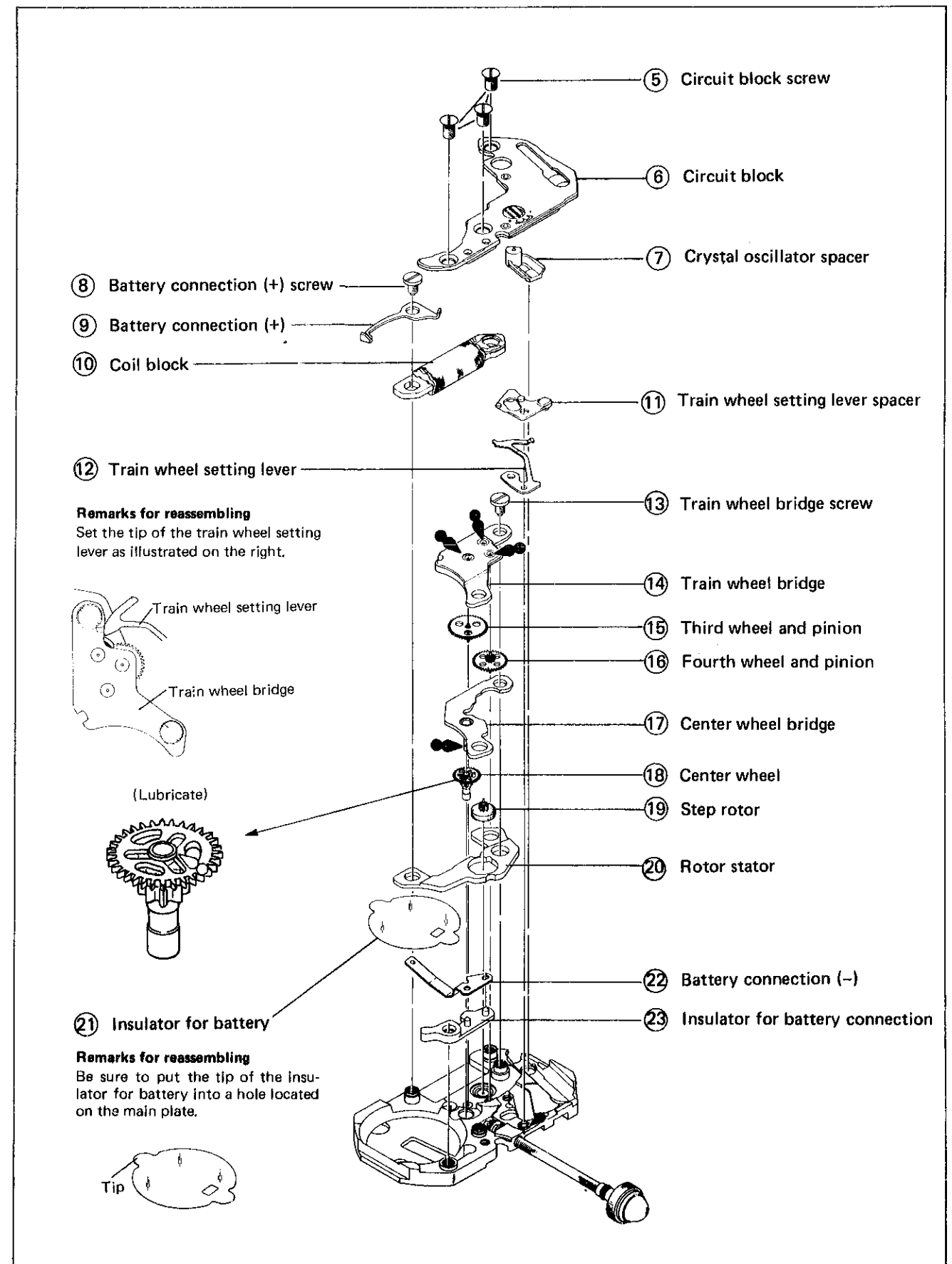
● Movement holder

Use the movement holder S-674.
(As the Cal. 8420A is an ultra thin watch, be sure to use the movement holder S-674 to avoid that the main plate and other parts are deformed.)

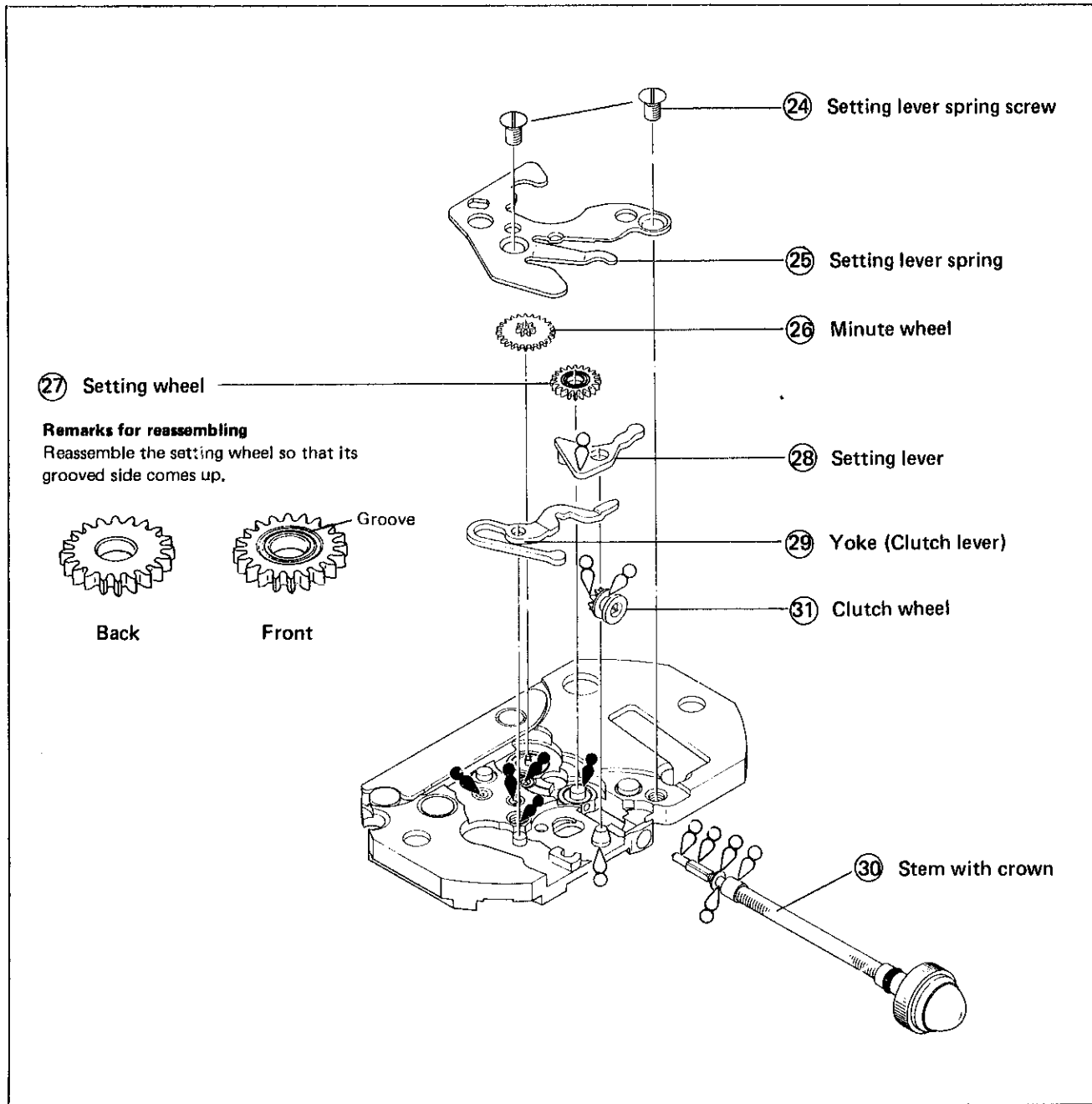
(1) Disassembling, reassembling and lubricating of the minute hand ~ hour wheel.



(2) Disassembling, reassembling of the circuit block, coil block and the gear train mechanism



(3) Disassembling, reassembling and lubricating of the setting mechanism



V. CHECKING AND ADJUSTMENT

● Refer to the "SEIKO QUARTZ TECHNICAL GUIDE, GENERAL INSTRUCTION" for analogue watches for details.

Procedures	
CHECK OUTPUT SIGNAL	<p>Result: Blinking 10 seconds intervals : Normal No blinking 10 seconds intervals: Defective</p>
CHECK HAND CONDITION	
CHECK BATTERY VOLTAGE	<p>Result: More than 1.5 V : Normal Less than 1.5 V : Defective</p>
CHECK BATTERY CONDUCTIVITY	
CHECK CIRCUIT BLOCK CONDUCTIVITY	
CHECK COIL BLOCK	<p>Result: 1.5 KΩ ~ 2.5 KΩ : Normal Less than 1.5 KΩ } Defective More than 2.5 KΩ }</p>
CHECK RESET CONDITION	<p>1. Check to see if the step rotor stops immediately when the crown is pulled out (check more than 20 seconds.) and if it starts moving exactly after 20 seconds when the crown is pushed back to the normal position.</p> <p>2. Check the reset condition of train wheel setting lever.</p> <p>If the train wheel setting lever does not gear with the pinion gear of step rotor completely, the train wheel setting lever does not set it. However, if they gear too tightly the step rotor turns and the minute hand moves unnecessarily when the crown is pushed back to the normal position.</p> <p>Be sure to check if the train wheel setting lever is at the correct position by following two checking procedures below.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Crown at the first click position</p> </div> <div style="text-align: center;"> <p>Crown at the second click position</p> </div> </div> <p>Check to see if there is a clearance between the edge of a hole for step rotor on the rotor stator and the tip of the train wheel setting lever after the train wheel setting lever is pushed in the arrow marked (➡) direction.</p> <p>Check to see if the pinion gear of step rotor gears with the tip of the train wheel setting lever correctly through the hole for the upper hole jewel for the step rotor on the train wheel bridge by a microscope.</p>

Procedures

CHECK GEAR TRAIN MECHANISM

CHECK SETTING MECHANISM

CHECK ACCURACY

CHECK CURRENT CONSUMPTION

Result:

Less than $0.5 \mu\text{A}$: Normal
More than $0.5 \mu\text{A}$: Defective

Note:

As the second hand moves 20-second intervals, be sure to measure the current consumption for 2 or 3 minutes to obtain the stable result.

CHECK APPEARANCE AND FUNCTIONING

All procedures of Disassembling, Reassembling, Checking and Adjustments are completed.