



**Seiko 5420A Movement Parts (1)**

*Compiled by EmmyWatch - <https://www.emmywatch.com>*

**SEIKO**

**QUARTZ**

**Cal. 5420A**

**EMMYWATCH**  
VINTAGE RESTORATIONS

**PARTS**  
**CATALOGUE**

# Cal. 5420A



125 705



221 715



231 705



238 715



261 705



271 705



☆ 354 705



391 715



491 546



711 705



4001 705



4002 705



4146 705



4239 705



4270 705



4271 716



4408 715



4450 715



4457 705



☆ Maxell SR621SW



022 484

2/1

# Cal. 5420A

## Characteristics

Casing diameter : 13.0 × 15.1 mm  
 Maximum height : 2.6 mm without battery  
 Jewels : 2 j  
 Frequency of quartz crystal oscillator : 32,768 Hz (Hz=Hertz . . . . Cycles per second)  
 Driving system : Step motor (2 poles)  
 Regulation system : Regulating switch lever

PART NO.	PART NAME	PART NO.	PART NAME
125 705	Train wheel bridge		
221 715	Center wheel & pinion		
231 705	Third wheel & pinion		
238 715	Guide pipe for winding stem		
261 705	Minute wheel		
271 705	Hour wheel		
☆354 705	Winding stem (10.4 mm)		
☆354 706	Winding stem (5.8 mm)		
391 715	Train wheel setting lever		
491 546	Dial washer		
711 705	Guide plate for winding stem		
4001 705	Circuit block		
4002 705	Coil block		
4146 705	Step rotor		
4239 705	Rotor stator		
4270 705	Battery connection (-)		
4271 716	Battery connection (+)		
4408 715	Circuit block spacer		
4450 715	Regulating switch lever		
4457 705	Circuit block cover		
011 542	Upper hole jewel for step rotor		
011 542	Lower hole jewel for step rotor		
022 484	Train wheel bridge screw		
022 484	Battery connection (+) screw		
022 484	Coil block screw		
022 484	Regulating switch lever screw		
☆027 101	Tube for train wheel bridge		
☆027 102	Tube for battery connection (+) screw (A)		
☆027 103	Tube for battery connection (+) screw (B)		
☆027 104	Tube for regulating switch lever screw		
☆027 105	Tube for coil block screw		
☆027 721	Train wheel setting lever adjusting pin		
☆027 722	Hooking pin for train wheel setting lever		
☆027 723	Banking pin for train wheel setting lever		
027 724	Reset pin		
☆Maxell SR621SW } ☆Toshiba SR621SW } ☆SEIKO TR621SW } ☆SEIKO SB-DG }	Silver oxide battery		
	Silver (II) oxide battery		

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

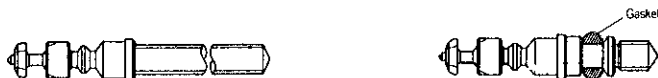
# Cal. 5420A

## Remarks :

**Winding stem**.....There are two types of winding stem. Select a suitable one by referring to the design of the case.

☆354 705.....The gasket is fixed to the crown.

☆354 706.....The gasket is fixed to the winding stem.



☆354 705

☆354 706

**Tube for train wheel bridge, Tube for battery connection (+) screw (A), Tube for battery connection (+) screw (B), Tube for coil block screw, Train wheel setting lever adjusting pin.**

- ☆027 101
- ☆027 102
- ☆027 103
- ☆027 104
- ☆027 105
- ☆027 721
- ☆027 722
- ☆027 723

Refer to the illustration below for the position of Tube for train wheel bridge, Tube for battery connection (+) screw (A), Tube for battery connection (+) screw (B), Tube for coil block screw and Train wheel setting lever adjusting pin.

027 103

Tube for battery connection (+) screw (B)

027 722

Hooking pin for train wheel setting lever

027 723

Banking pin for train wheel setting lever

027 104

Tube for regulating switch lever screw

027 101

Tube for train wheel bridge

027 721

Train wheel setting lever adjusting pin

027 102

Tube for battery connection (+) screw (A)

027 105

Tube for coil block screw

## Battery

- ☆Maxell SR621SW
- ☆Tosiba SR621SW
- ☆SEIKO TR621SW
- ☆SEIKO SB-DG

The substitutive battery might be added to the applied battery in the future. In that case, please refer to separate "**BATTERY LIST FOR SEIKO QUARTZ WATCHES**".

Note that SEIKO battery is marked with "SEIZAIKEN" on its (+) side.

# TECHNICAL GUIDE

**SEIKO**

QUARTZ

CAL.5420A

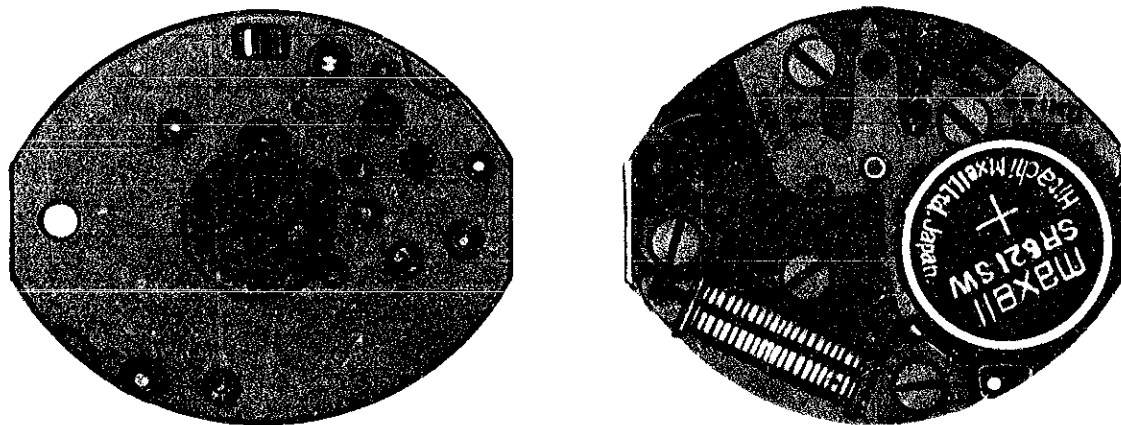
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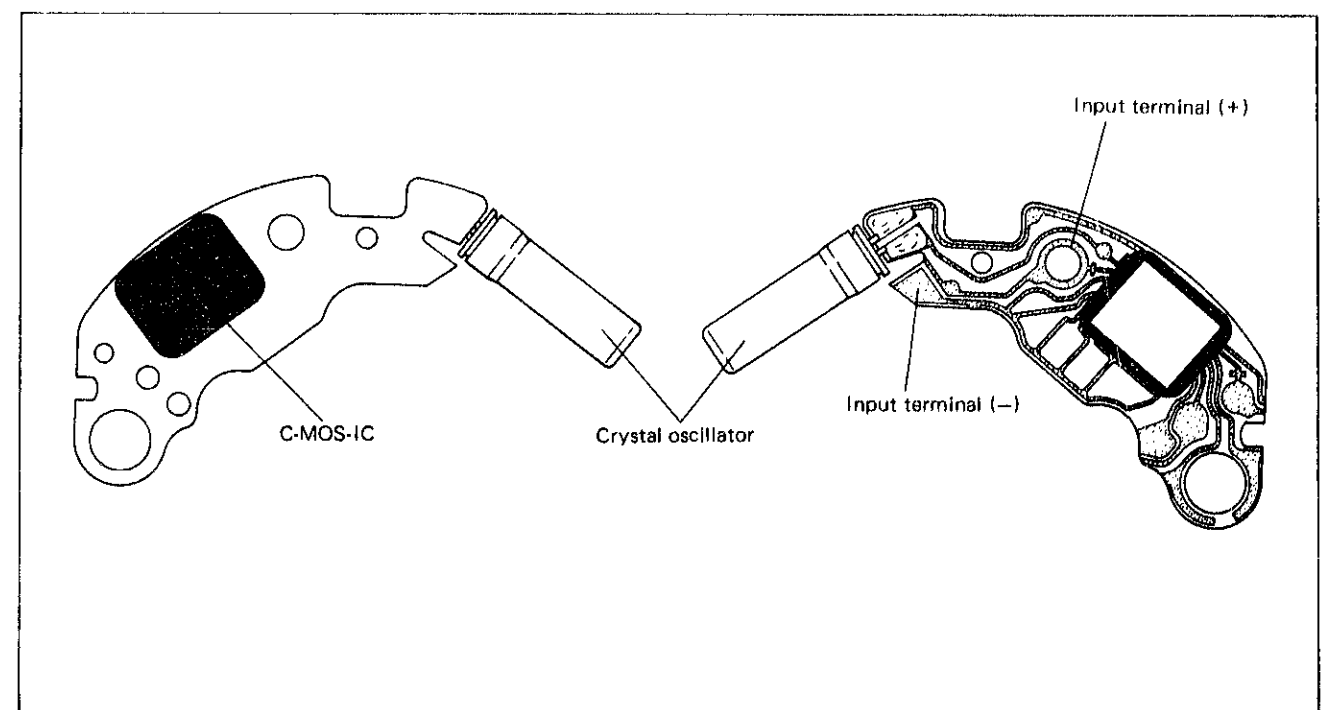
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## I. SPECIFICATIONS

Item	Cal. No.	5420A
Display system		Two hands
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)
Outside diameter		13.0 mm between 3 o'clock and 9 o'clock side; 15.5 mm between 6 o'clock and 12 o'clock side.
Movement size		13.0 mm between 3 o'clock and 9 o'clock side; 15.1 mm between 6 o'clock and 12 o'clock side.
Height		2.6 mm without battery
Regulation system		Regulating switch lever
Measuring gate by Quartz Tester		Use the gate of 10 seconds.
Battery		Maxell SR621SW TOSHIBA SR621SW SEIKO (SEIZAIKEN) TR621SW Battery life is approximately 3 years. Voltage: 1.55V
Jewels		2 jewels

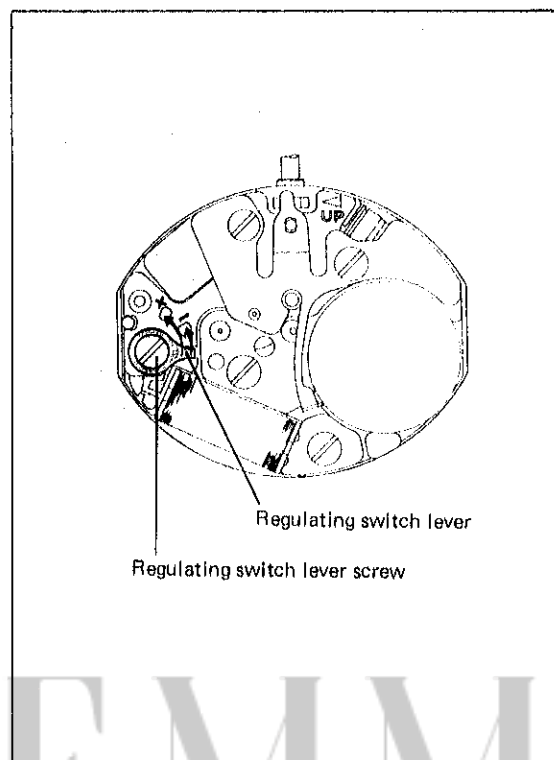
## II. STRUCTURE OF THE CIRCUIT BLOCK



### III. TIME ACCURACY ADJUSTING

Cal. 5420A has a regulating switch lever for time accuracy adjusting. Follow the procedures below to adjust time accuracy.

- 1) Disassemble the regulating switch lever screw.
- 2) Disassemble the regulating switch lever.
- 3) To gain time, put the tip of the regulation switch lever in the hole marked plus (+) and to lose time, put it in the hole marked minus (-).  
It's possible to adjust approx. 0.5 second/day loss or gain.
- 4) Reassemble and fasten the regulation switch lever screw.



### IV. DISASSEMBLING, REASSEMBLING AND LUBRICATING

- Disassembling and Reassembling

Disassembling procedures Figs.: ① ~ ②⑤

Reassembling procedures Figs.: ②⑤ ~ ①

- Lubricating

Type of oil

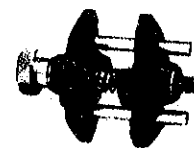
● Moebius A

○ SEIKO watch oil S-6

Oil quantity

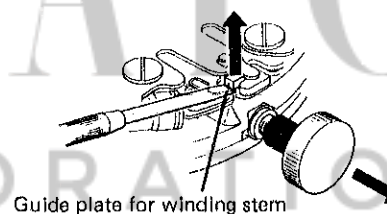
○ Normal quantity

- Use the universal movement holder



#### 1. Indicating mechanism

- How to disassemble the winding stem

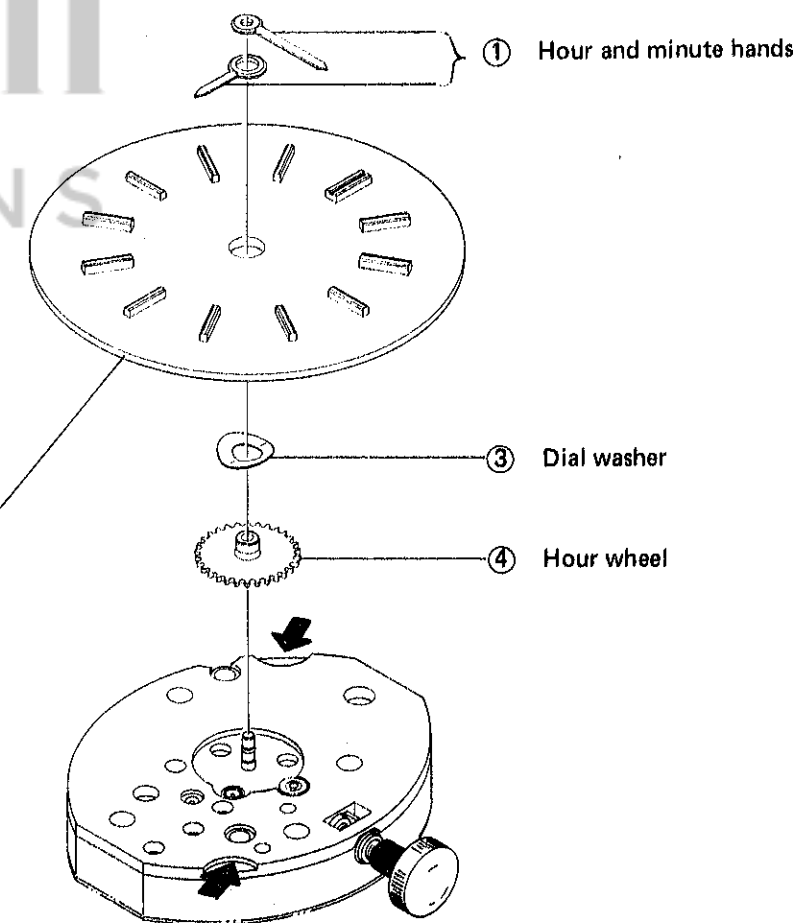


Disassemble the winding stem by prying up the guide plate for winding stem with the tip of the driver as shown in the illustration above. If it is difficult to push in the winding stem, do it by turning the crown.

② Dial

- Remarks for disassembling and reassembling

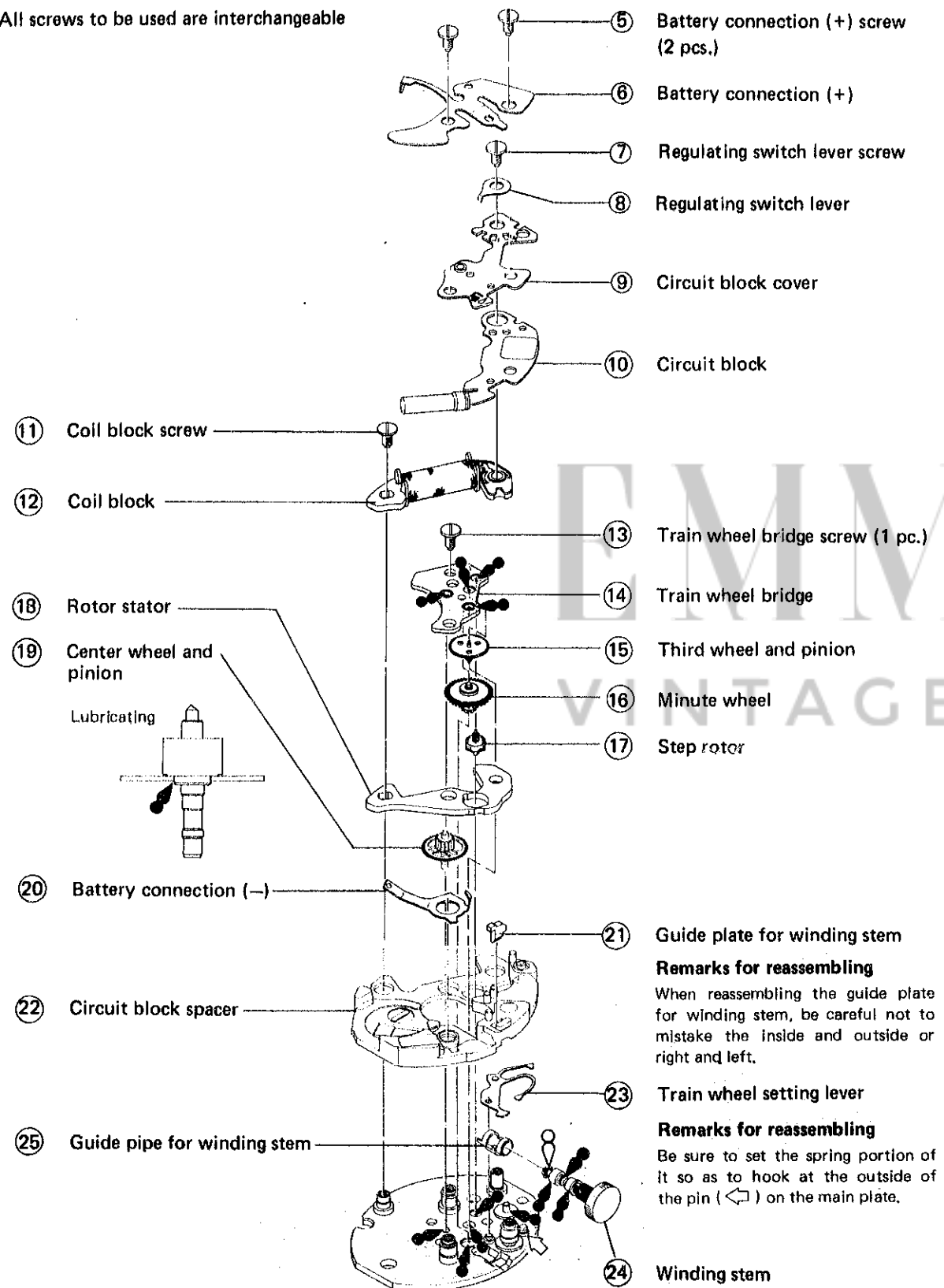
Dial screw is not used for this calibre. When disassembling the dial, put the tip of screwdriver in the clearances between the dial and main plate (arrow marked portion in the illustration) and pry up gently.





## 2. Circuit block, coil block and gear train mechanism

\* All screws to be used are interchangeable



## V. CHECKING AND ADJUSTMENT

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

Procedure	
<b>CHECK OUTPUT SIGNAL</b>	<b>Result:</b> Blinking at 10-second intervals: Normal No blinking at 10-second intervals: Defective
<b>CHECK HANDS CONDITION</b>	
<b>CHECK BATTERY VOLTAGE</b>	<b>Result:</b> More than 1.5V: Normal Less than 1.5V: Defective
<b>CHECK BATTERY CONDUCTIVITY</b>	
<b>CHECK CIRCUIT BLOCK CONDUCTIVITY</b>	
<b>CHECK COIL BLOCK</b>	<b>Result:</b> 1.5 ~ 2.5KΩ: Normal Less than 1.5KΩ — Defective More than 2.5KΩ — Defective
<b>CHECK RESET CONDITION</b>	<ol style="list-style-type: none"> <li>When the crown is completely pulled out, check to see if the step rotor stops immediately (check over 20 seconds) and starts again after 20 seconds when the crown is pushed in.</li> <li>Check setting condition of train wheel setting lever If the train wheel setting lever does not engage with the pinion gear of the step rotor completely, it does not function correctly.</li> </ol> <p>Check as follows;</p> <ol style="list-style-type: none"> <li>Pull out the crown and turn the hands.</li> <li>In this case, check to see if the step rotor rotates.</li> </ol>

**Procedure**

**Result:**

Does not rotate: Normal

Rotates : Defective

(Adjust the train wheel setting lever as it engage with the pinion gear of the step rotor.)

**CHECK TRAIN WHEEL MECHANISM**

**CHECK SETTING MECHANISM**

**CHECK ACCURACY**

Refer to TIME ACCURACY ADJUSTING (See page 2).

**CHECK CURRENT CONSUMPTION**

**Result:**

Less than 1.0 $\mu$ A: Normal

More than 1.0 $\mu$ A: Defective

**CHECK APPEARANCE AND FUNCTIONING**

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