



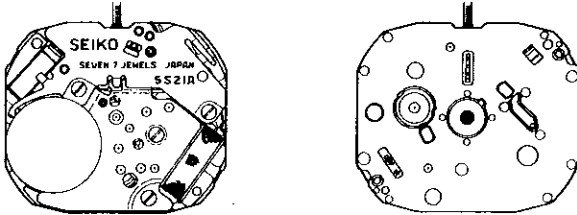
Seiko 5S21A Movement Parts (1)

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

PARTS CATALOGUE/ TECHNICAL GUIDE

Cal. 5S21A

[SPECIFICATIONS]

Item		Cal. No.	5S21A
Movement		 <p>(x 1.0)</p>	
Movement size	Outside diameter	$\phi 24.0$ mm 19.0 mm between 3 o'clock and 9 o'clock sides 22.0 mm between 6 o'clock and 12 o'clock sides	
	Casing diameter	$\phi 23.3$ mm 19.0 mm between 3 o'clock and 9 o'clock sides 22.0 mm between 6 o'clock and 12 o'clock sides	
	Height	2.2 mm 2.3 mm (including the battery portion)	
Time indication		3 hands	
Driving system		1/4 second step motor (Load compensated driving pulse type)	
Second hand movement system		Sweep movement	
Conversion system		Spiral spring; Viscous regulator system	
Additional mechanism		<ul style="list-style-type: none"> • Train wheel setting device • Electronic circuit reset switch 	
Loss/gain		Monthly rate at normal range: less than 20 seconds	
Regulation system		Nil	
Measuring gate by quartz tester		Use 10-second gate.	
Battery		SEIKO SR920SW, Maxell SR920SW, SONY SR920SW, Matsushita SR920SW, EVEREADY 371 Battery life is approximately 2 years. Voltage: 1.55V	
Jewels		7 jewels	

PARTS CATALOGUE

Cal. 5S21A

Disassembling procedures Figs.: ① → ③③

Reassembling procedures Figs.: ③③ → ①

Lubricating: Types of oil

● Moebius A

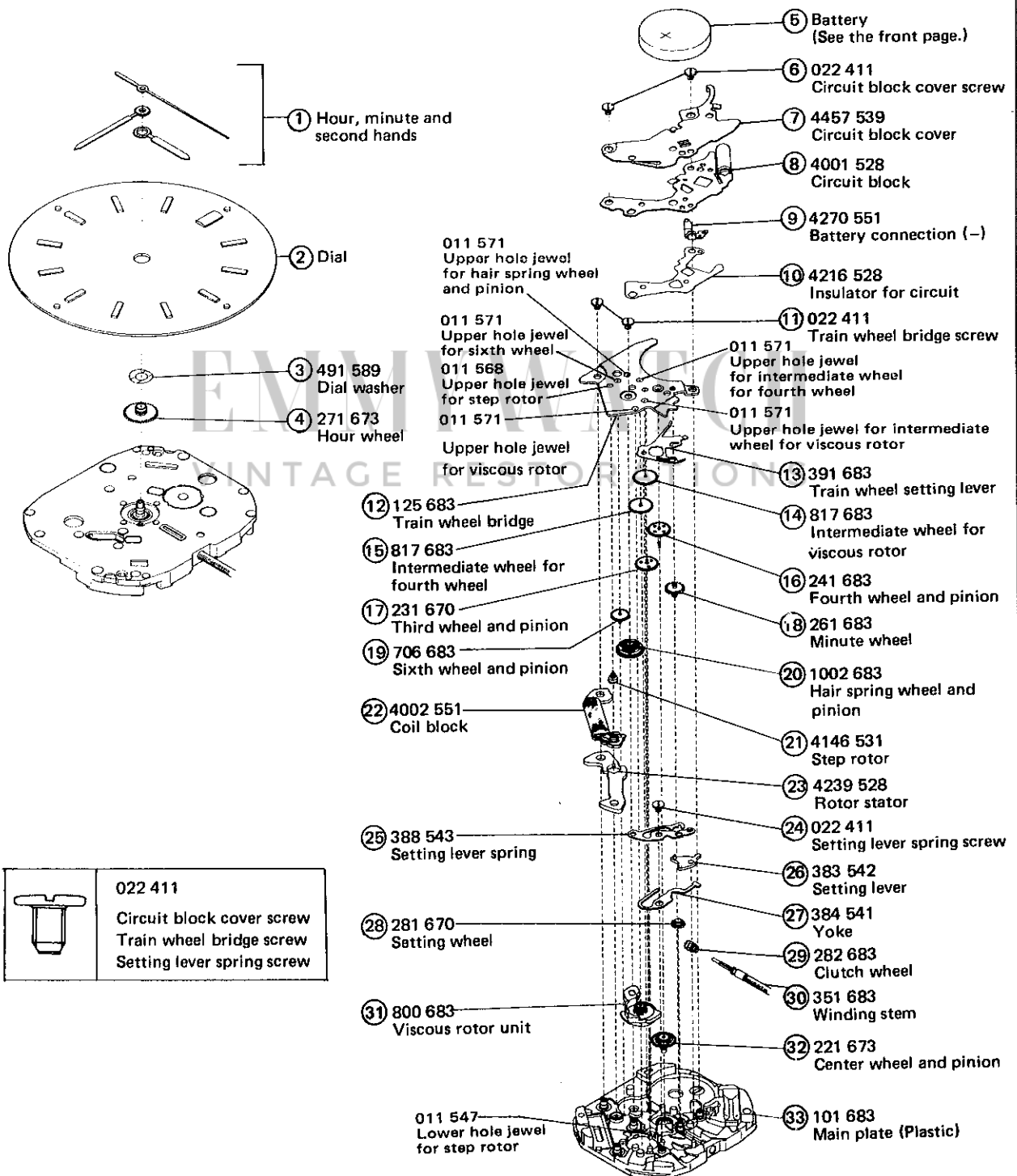
○ SEIKO Watch Oil S-6


Oil quantity

○ Normal quantity

◁ Extremely small

* For the lubricating positions of the parts, please see the corresponding remarks in the "TECHNICAL GUIDE".



	022 411 Circuit block cover screw Train wheel bridge screw Setting lever spring screw
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○ → Please see the remarks on the following pages.

Remarks:

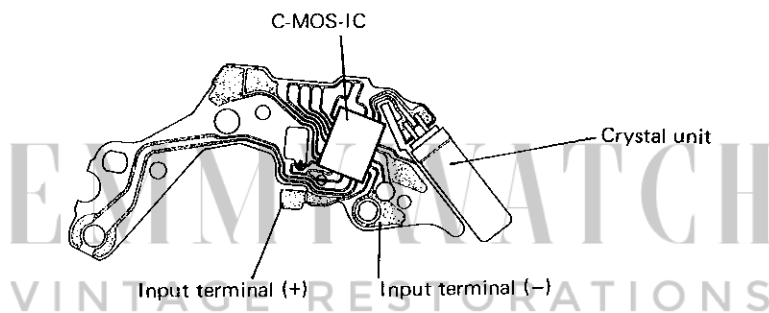
③ Winding stem

The type of winding stem is determined based on the design of cases.
Check the case number and refer to "SEIKO Casing Parts Catalogue" to choose a corresponding winding stem.

TECHNICAL GUIDE

- The explanation here is only for the particular points of Cal. 5S21A.
- For the repairing, checking and measuring procedures, refer to the "TECHNICAL GUIDE, GENERAL INSTRUCTIONS".

I. STRUCTURE OF THE CIRCUIT BLOCK



II. REMARKS ON INSTALLING THE BATTERY

During 20 seconds after the battery is replaced with a new one, or after it is re-installed following the repairing procedure, do not set the time, as the second hand will not move at the proper rate during that time period.

III. REMARKS ON DISASSEMBLING AND REASSEMBLING

Use the universal movement holder for disassembling and reassembling.

① Hands

• How to remove/install

- Before removing or installing the hands, be sure to pull out the crown to the second click position to stop the hands.
- When checking the hand installation while the hands are moving, do not turn the second hand more than 90° by force, as this will deform the hair spring of the hair spring wheel and pinion.

② Dial

- How to install

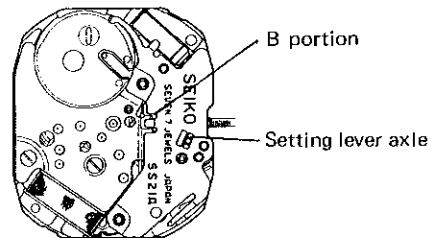
- When installing the dial, make sure that its center is securely set at the proper position so that the tip of the second hand will exactly trace the circle printed on the dial.

⑥ Circuit block cover screw

- After tightening the circuit block cover screw, pull out the crown to the second click position and check that the train wheel setting lever securely holds up the fourth wheel and pinion and contacts the circuit pattern.

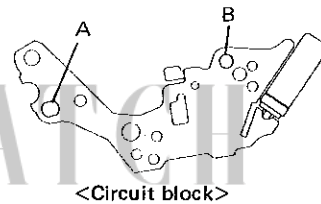
⑦ Circuit block cover

- Insert the setting lever axle into the groove of the circuit block cover as shown in the illustration.
- Check that "B" portion of the circuit block cover securely holds down the input terminal (+) of the circuit.



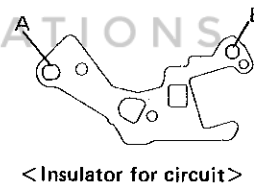
⑧ Circuit block

- The guide holes "A" and "B" are tight in the contacting portions with the circuit block. Therefore, make sure that it is securely set.



⑩ Insulator for circuit

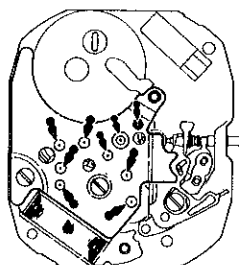
- The guide holes "A" and "B" are tight in the contacting portions with the insulator for circuit. Therefore, make sure that it is securely set.



⑪ Train wheel bridge screw

- Before tightening the screws, check that the axle of each wheel and pinion is correctly set in the axle hole.
- After tightening the screws, lubricate the axle of each wheel and pinion as shown in the illustration.

- Lubricating

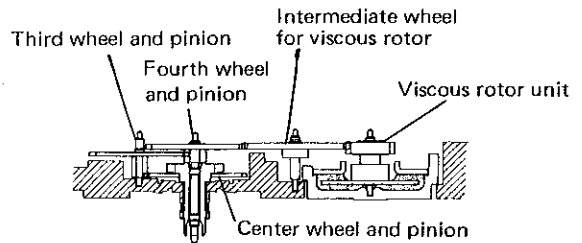
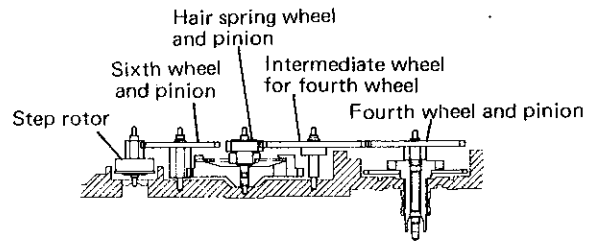
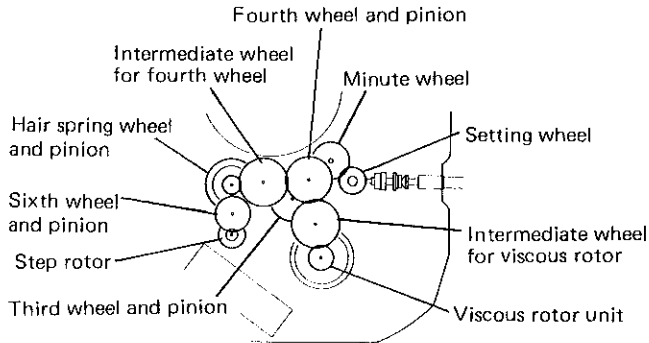


Moebius A



12 Train wheel bridge

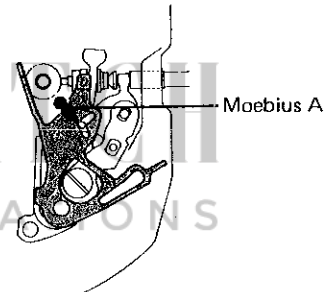
• Setting position



13 Train wheel setting lever

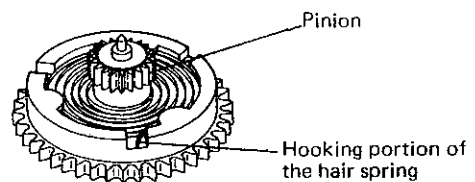
• Setting position and lubricating

- Set the train wheel setting lever as shown in the illustration and lubricate the part as indicated.



20 Hair spring wheel and pinion

- When installing or removing the hair spring wheel and pinion, hold its pinion lightly with tweezers so as not to scratch the plastic wheel.
- After installing the hair spring wheel and pinion, check that the hooking portion at the outer end of the hair spring is securely set in position.

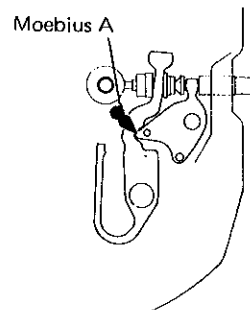


26 Setting lever

27 Yoke

• Setting position and lubricating

- When setting the setting lever, make sure that the crown is at the normal position.
- Lubricate the setting lever and yoke at the position indicated in the illustration.



30 Winding stem

• How to install

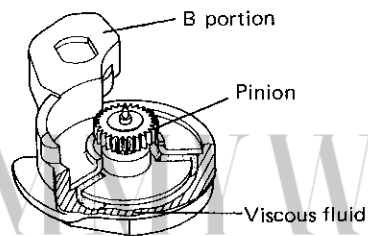
Insert the winding stem straight into the hole of the main plate for the winding stem.

• How to remove

Please remove the winding stem with crown at the normal position.

31 Viscous rotor unit

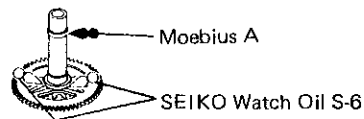
- When installing or removing the viscous rotor unit, hold the "B" portion with tweezers. Be careful not to hold the wheel and move it vertically or horizontally, as this may cause leakage of the viscous fluid inside the unit.
- Do not use any solvent to clean the viscous rotor unit. When it gets soiled, wipe it with a dry cloth.
- Make sure that viscous fluid is not sticking to the pinion or the lid of the viscous rotor unit.



32 Center wheel and pinion

• Lubricating

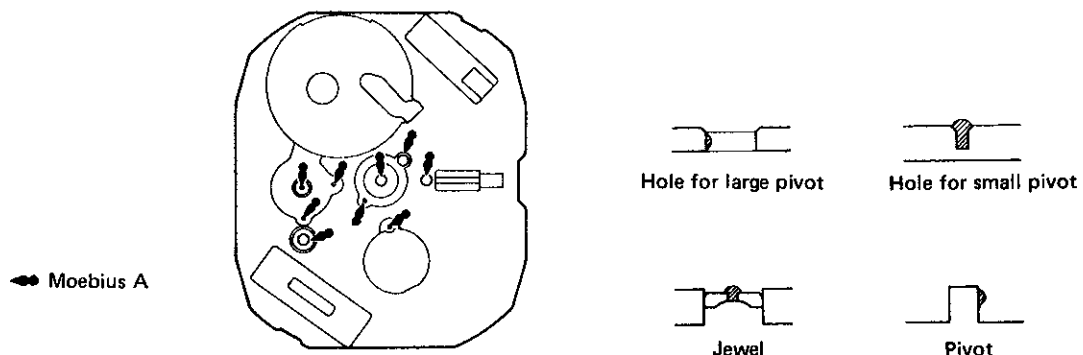
Refer to the illustration on the right.



33 Main plate

• Lubricating

Refer to the illustration below.



IV. VALUE CHECKING

- Second hand movement

Observe the movement of the second hand while it turns a full circle (60 seconds), and check if it moves smoothly.

- Coil block resistance

3.4K Ω ~ 4.1K Ω

- Current consumption

For the whole of the movement: less than 2.3 μ A

For the circuit block alone : less than 0.4 μ A

Remarks:

When the current consumption exceeds the standard value for the whole of the movement but is less than the standard value for the circuit block alone, overhaul and clean the movement parts and then measure current consumption for the whole of the movement again. The driving pulse generated to compensate a heavy load that may apply on the gear train, etc. is considered to cause excessive current consumption for the whole of the movement.

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