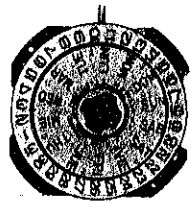
SEIKO

QUARTZ

Cal. 65 series

PARTS CATALOGUE

Cal. 65 series



〔Cal. 6533A〕

125 775

221 ***

231 755

241 ***

261 755

271 ***

281 755

282 ***

354 765

383 755

384 755

388 765

391 755

399 755

☆470 632

491 ***

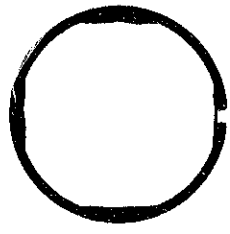
701 755

719 755

☆801 ***

802 ***

808 ***



☆884 ***

963 781

4001 756

4002 755

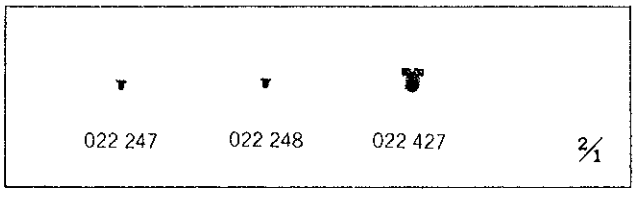
4146 755

4239 755

4270 755

4271 ***

4450 775



☆Maxell SR920SW

Cal. 65 series

Characteristics

	6530A	6531A	6532A	6532B	6533A	6539A
Casing diameter	ϕ23.3 mm					
Maximum height (without battery)	2.3 mm		2.7 mm	2.9 mm		2.7 mm
Jewels	5 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					
Train wheel setting	○	○	○	○	○	○
Calendar	—	—	Date	Date	Day/Date	Date
Instant setting device	—	—	Date	Date	Day/Date	Date
Battery life indicator	—	○	○	○	○	—

PART NO.	PART NAME
125 775	Train wheel bridge
221 ***	Center wheel & pinion
231 755	Third wheel & pinion
241 ***	Fourth wheel & pinion
261 755	Minute wheel
271 ***	Hour wheel
281 755	Setting wheel
282 ***	Clutch wheel
354 765	Winding stem
383 755	Setting lever
384 755	Yoke
388 765	Setting lever spring
391 755	Train wheel setting lever
399 755	Casing clamp
☆**470 632**	Day star with dial disk (for cal. 6533A)
491 ***	Dial washer
701 755	Fifth wheel & pinion
719 755	Day corrector (for cal. 6533A)
☆**801 *****	Date dial
802 ***	Date driving wheel
808 ***	Date dial guard
☆**884 *****	Holding ring for dial
963 781	Snap for day star with dial disk (for cal. 6533A)
4001 756	Circuit block
4002 755	Coil block
4146 755	Step rotor
4239 755	Rotor stator
4270 755	Battery connection (−)
4271 ***	Battery connection (+)
4450 775	Regulating switch lever
011 325	Upper hole jewel for fourth wheel
011 542	Upper hole jewel for third wheel
011 542	Upper hole jewel for fifth wheel
011 547	Lower hole jewel for step rotor
011 568	Upper hole jewel for step rotor
022 247	Train wheel bridge screw
022 247	Battery connection (−) screw
022 247	Battery connection (+) screw
022 247	Setting lever spring screw
022 ***	Date dial guard screw
022 427	Casing clamp screw
☆027 112	Tube for train wheel bridge (A)
☆027 113	Tube for train wheel bridge (B)
☆027 114	Tube for battery connection (+) screw (A)
☆027 115	Tube for battery connection (+) screw (B)
☆027 116	Tube for battery connection (+) screw (C)
☆027 117	Tube for battery connection (+) screw (D)
027 118	Tube for setting lever spring screw
027 ***	Tube for date dial guard screw
027 120	Tube for battery connection (−) screw
027 121	Tube for casing clamp screw
027 739	Setting lever pin
027 740	Day corrector pin (for cal. 6533A)
☆Maxell SR920SW	Silver oxide battery

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

Cal. 65 series

Remarks :

Refer to the Parts with "＊＊＊" mark in the parts No. at the page of Parts List.
Select a suitable one by refferring to the combination chart below.

Parts No. / Parts name / Cal	6530A	6531A	6532A	6532B	6533A	6539A
221 *** Center wheel & pinion	221 778	221 776	221 775	221 756	221 756	221 777
241 *** Fourth wheel & pinion	241 769	241 776	241 775	241 766	241 766	241 769
271 *** Hour wheel	271 776	271 776	271 775	271 766	271 766	271 775
282 *** Clutch wheel	282 765	282 765	282 763	282 763	282 761	282 763
491 *** Dial washer	491 589	491 589	···			
801 *** Date dial	···		801 540	801 539	801 539	801 540
802 *** Date driving wheel	···		802 756	802 756	802 755	802 756
808 *** Date dial guard	···		808 756	808 756	808 755	808 756
884 *** Holding ring for dial	···		884 967	884 967	884 967	884 967
4271 *** Battery connection (+)	4271 800	4271 796	4271 794	4271 792	4271 790	4271 798
022 *** Date dial guard screw	···		022 248	022 248	022 248	022 248
027 *** Tube for date dial guard screw	···		027 119	027 119	027 119	027 119

Day star with dial disk (Cal. 6533A)

☆470 632(English-Spanish, black figures on white background)
·····Used when both the crown and the calendar frame are located at **3** o'clock position.
If any other type of day star with dial disk is required, specify the number printed on the disk.

Holding ring for dial (Cal. 6532A, 6532B, 6533A, 6939A)

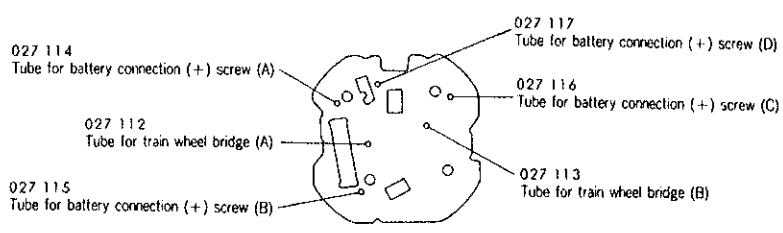
☆884 967·····The type of a holding ring for dial is determined based on the design of cases.
If the shape of holding ring for dial is different from the photograph, check the case number and refer to **"SEIKO Quartz Casing Part Catalogue"** to choose a corresponding holding ring for dial.

Date dial

☆801 539(Black figures on white background) (Cal. 6532B)
☆801 540(Black figures on white background) (Cal. 6532A, 6539A)
☆801 622(Black figures on white background) (Cal. 6533A)
·····Used when both the crown and the calendar frame are located at **3** o'clock position.
If any other type of date dial is required, specify ① Cal. No. ② The crown position ③ The calendar frame position and ④ Dial No.

Tube for train wheel bridge (A), Tube for train wheel bridge (B), Tube for battery connection (+) screw (A), Tube for battery connection (+) screw (B), Tube for battery connection (+) screw (C), Tube for battery connection (+) screw (D).

☆027 112
☆027 113
☆027 114
☆027 115
☆027 116
☆027 117
·····Refer to the illustration below for the position of the above parts.



Battery

☆Maxell SR920SW·····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".**

82. 11 Printed in Japan

TECHNICAL GUIDE

SEIKO

QUARTZ

CAL. 6530A CAL. 6531A
CAL. 6532A CAL. 6532B
CAL. 6533A CAL. 6539A

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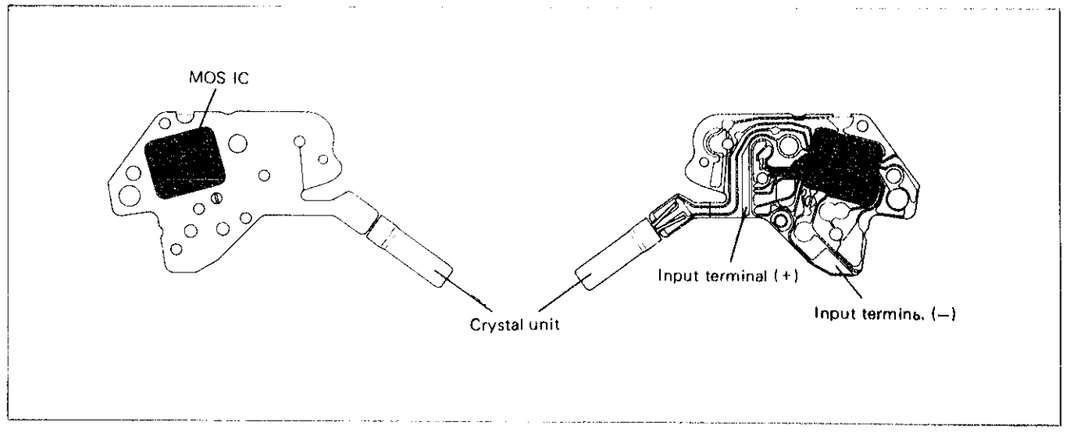
I. SPECIFICATIONS

Item		Cal. No. 6530A	6531A	6539A	6532A	6532B	6533A
Time indication		2 hands	3 hands	2 hands	3 hands		
Additional mechanism	Day						V
	Date			V	V	V	V
	Train wheel setting device	V	V	V	V	V	V
	Electronic reset switch	V	V	V	V	V	V
	Battery life indicator		V		V	V	V
Movement size	Loss/gain	Monthly rate at normal temperature range: Less than 15 seconds					
	Outside diameter	φ24.0mm (21.0mm between 6 o'clock and 12 o'clock side: 19.00mm between 3 o'clock and 9 o'clock sides)				φ25.3mm (22.5mm between 6 o'clock and 12 o'clock sides; 21.5mm between 3 o'clock and 9 o'clock sides)	
	Casing diameter	φ23.3mm		(21.0mm between 6 o'clock and 12 o'clock sides 19.0mm between 3 o'clock and 9 o'clock sides)			
	Height	2.3mm without battery		2.7mm without battery		2.9mm without battery	
Regulation system		Regulating switch lever					
Measuring gate by quartz tester		Use the gate of 10 seconds.					
Battery		Maxell SR920SW and U.C.C. 371 Battery life is approximately 3 years. Voltage 1.55 V					
Jewels		5 jewels					

II. STRUCTURE OF CIRCUIT BLOCK



III. DISASSEMBLING, REASSEMBLING AND LUBRICATING

Cal. 6533A is taken as an example to describe the disassembling, reassembling, and lubricating procedures of the movement.

List of screws used

Shape	Part No.	Part Name	Shape	Part No.	Part Name
	022 247	Train wheel bridge screw 2 pcs. Battery connection (+) screw 4 pcs. Battery connection (–) screw 1 pc. Setting lever spring screw 1 pc.		022 248	Date dial guard screw 3 pcs.

Disassembling procedures: Figs. ① ~ ㉟

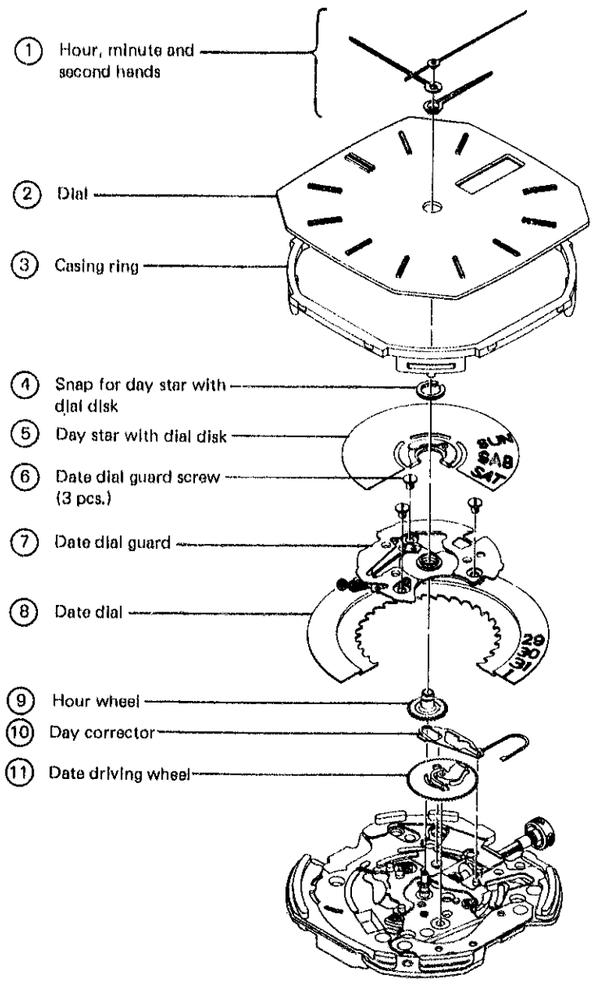
Reassembling procedures: Figs. ㉟ ~ ①

Lubricating:

Moebius A

- Use the universal movement holder.

① Hour, minute and second hands ~ ⑪ Date driving wheel

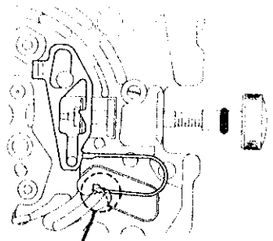


* The dial washer is provided in Cal. 6530A and Cal. 6531A.

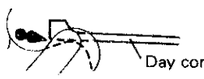
⑩ Day corrector

Notes on reassembly

When installing the day corrector, place the tip of the spring portion beneath the main plate as shown in the illustration below.

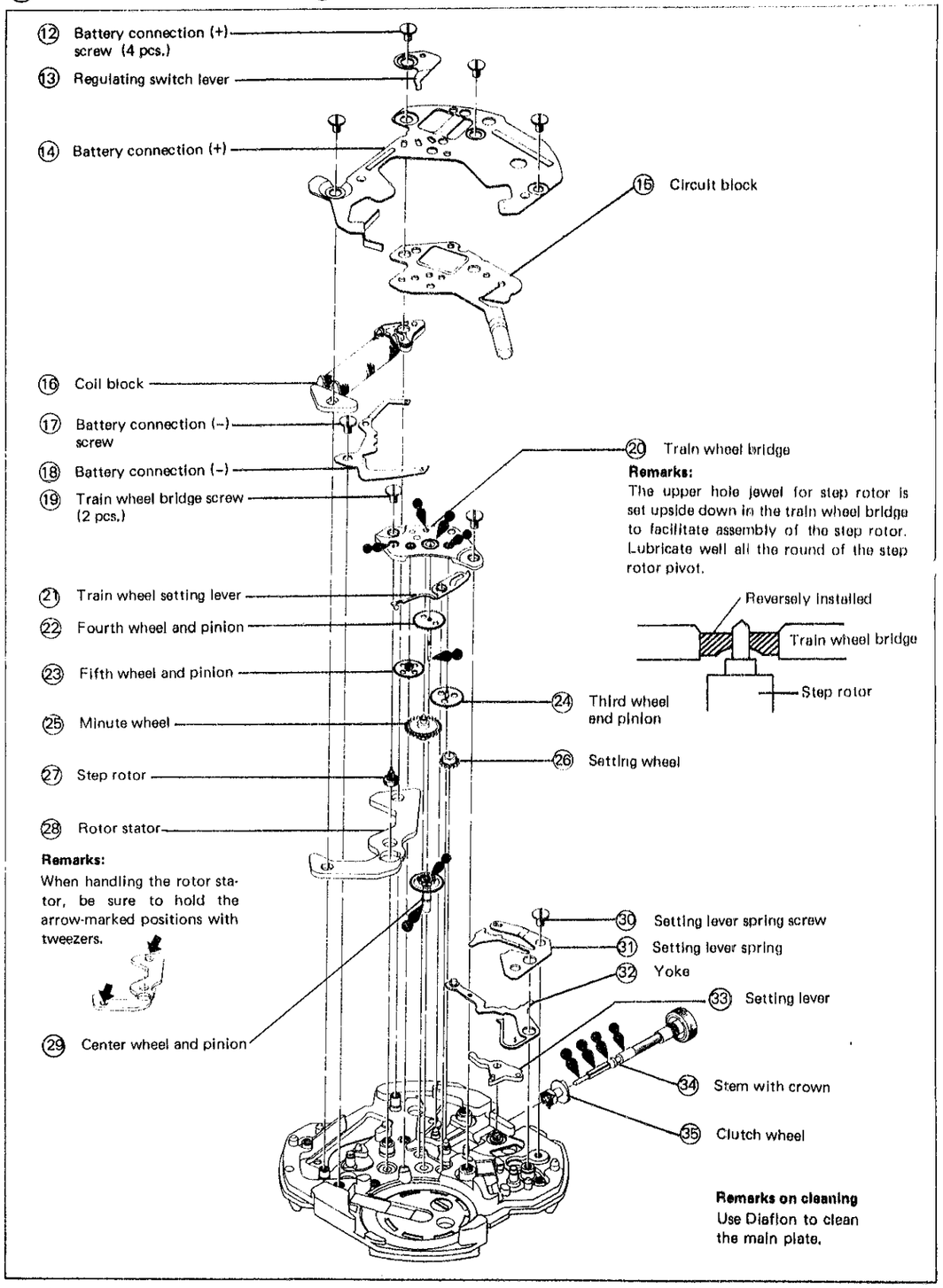


Enlarged view



Place the tip of the spring against the level beneath the plastic portion of the main plate shown in the illustration.

⑫ Battery connection (+) screw ~ ㉟ Clutch wheel



Remarks:

When handling the rotor stator, be sure to hold the arrow-marked positions with tweezers.

Remarks:

The upper hole jewel for step rotor is set upside down in the train wheel bridge to facilitate assembly of the step rotor. Lubricate well all the round of the step rotor pivot.

Remarks on cleaning

Use Diaflon to clean the main plate.

IV. CHECKING AND ADJUSTMENT

- The explanation here is only for the particular points of the Calibres this booklet deals with.
  Refer to the "TECHNICAL GUIDE GENERAL INSTRUCTION" for SEIKO Analogue Quartz for details.

Procedure

CHECK OUTPUT SIGNAL

Use the Quartz Tester.
Range to be used: 2-second gate

Result:
Normal: Input indicator blinks every second.
Defective: Input indicator does not blink every second.

CHECK HAND SETTING CONDITION

CHECK BATTERY VOLTAGE

Set up the Volt-ohm-meter.
Range to be used: DC 3V

Result:
Normal: More than 1.5V
Defective: Less than 1.5V

CHECK BATTERY CONDUCTIVITY

CHECK CIRCUIT BLOCK CONDUCTIVITY

CHECK COIL BLOCK

Set up the Volt-ohm-meter.
Range to be used: OHMS x 100

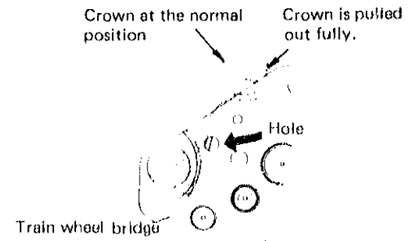
Result:
Normal: 2.3kΩ ~ 2.8kΩ
Defective: Less than 2.3kΩ (Short circuit)
Defective: More than 2.8kΩ (Broken wire)

CHECK GEAR TRAIN MECHANISM

Procedure

CHECH RESET AND TRAIN WHEEL SETTING CONDITION

1. Check to see if second hand stops immediately after the crown is pulled out fully and it starts promptly after one second when the crown is pushed in to the normal position.
2. Look at the train wheel setting lever through the hole on the train wheel bridge to check if it functions correctly.
   - When the crown is fully pulled out, the spring portion of the train wheel setting lever can be seen through the hole on the train wheel bridge.
   - When the crown is pushed in to the normal position, the train wheel setting lever cannot be seen through the hole.
3. When the crown is fully pulled out, check to see if the output signal is transmitted.



Result:
Normal: The output signal is not transmitted.
Defective: The output signal is transmitted.

CHECK ACCURACY

Use the 10-second gate of the Quartz Tester.

- Be sure to protect the C-MOS-LSI from light with case back or black paper, etc. while measuring.
  Do not check current consumption under an incandescent lamp, since strong light adversely affects time accuracy.

Adjusting time accuracy

1. Unscrew the screw which holds the regulating switch lever in place.
2. Remove the regulating switch lever.
3. To gain time, turn the regulating switch lever to engage its tip with the hole marked with "+", and to lose time, turn the regulating switch lever to engage its tip with the hole marked with "–".
4. Set and tighten the screw.

* The range to be regulated by the above manner is approximately ±0.5 sec./day.

CHECK CURRENT CONSUMPTION

Use the Volt-ohm-meter
Range to be used: DC 12μA

Result:
Normal: Less than 1.3μA
Defective: More than 1.3μA

- Be sure to protect the C-MOS-LSI from light with case back or black paper, etc. while measuring.
  Do not check current consumption under an incandescent lamp, since strong light causes a watch to consume excess current.
- Since the circuit which adopts the load-compensated driving pulse system is used in this watch, measure the current consumption when the watch is not loaded.
  While applying the probes to the battery, pull out the crown 2 ~ 3 times to make the watch in reset condition, and then check current consumption.

CHECK CONDUCTIVITY OF SWITCH COMPONENTS

CHECK WATER RESISTANCE

All procedures of Disassembling, Reassembling, Lubricating, Checking and Adjustment are completed.