

TECHNICAL GUIDE AND PARTS LIST

CAL. V252A

ANALOGUE QUARTZ



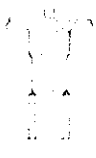


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I. SPECIFICATIONS

Item	Cal. No.	V252A
Indication system		Three hands (Hour, minute and small second hand)
Driving system		Step motor
Additional mechanism		Electronic reset switch Second setting device
Loss/gain		Monthly rate: less than 20 seconds at normal temperature range
Movement size	Size of main plate	φ18.4 mm (6H - 12H), 15.3 mm (3H - 9H)
	Casing diameter	φ18.1 mm
	Height	2.9 mm
Regulation system		—
Quartz Tester measuring gate		10-second gate
Battery	Battery	SEIKO (SEIZAIKEN) TR621SW, Maxell SR621SW, SONY EVEREADY 364
	Voltage	1.55V
	Battery life	Approx: 2 years for SEIKO (SEIZAIKEN) TR621SW, Approx: 1.5 years for MAXELL SR621SW and SONY EVEREADY 364
Jewels		0 jewel

II. LIST OF SCREWS USED

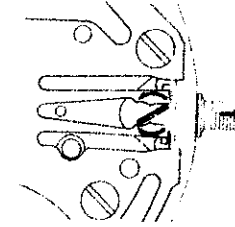
Shape	Part No.	Name	Shape	Part No.	Name
	012 057	Circuit block screw (1 pce.)		*012 060	Battery clamp screw (1 pce.)
	012 058	Train wheel bridge screw (2 pcs.)		012 708	Screw for battery connection (+) (2 pcs.)
	012 315	Screw for additional train wheel bridge (2 pcs.)	* The battery clamp screw is not used in some models.		

III. DISASSEMBLING, REASSEMBLING AND LUBRICATING

Disassembling procedures: Figs ① ~ ⑳
Reassembling procedures: Figs ㉑ ~ ㉓





㉔ ~ ㉕
㉖ ~ ㉗

- Hands ~ Hour wheel
- * How to remove the winding stem



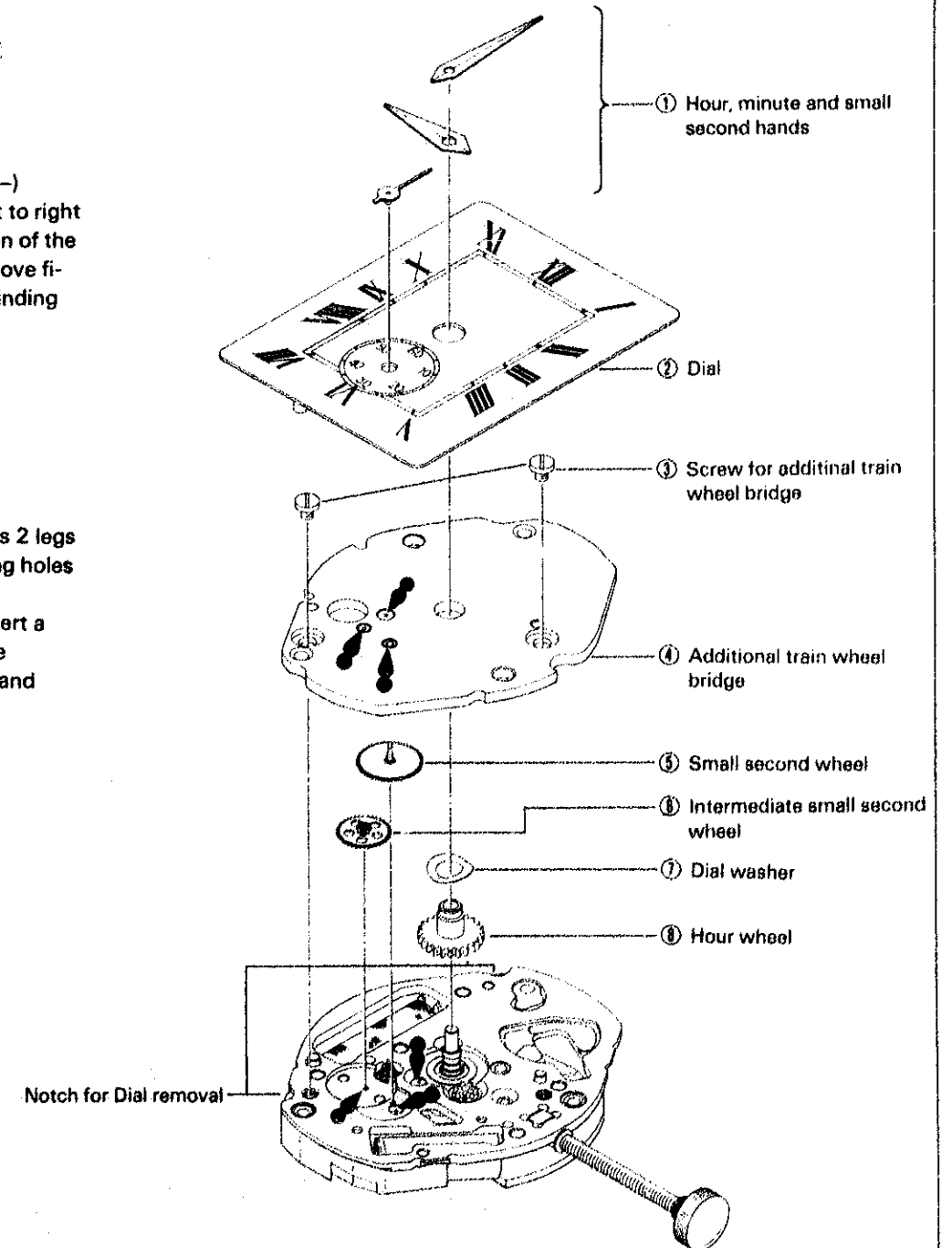
Insert a little bit large (-) screwdriver and turn it to right and left (in the direction of the arrow shown in the above figure) to remove the winding stem.

Lubricating:

Types of oil	Oil quantity
Moebius A 	Standard 
Seiko watch oil S-6 	Small 

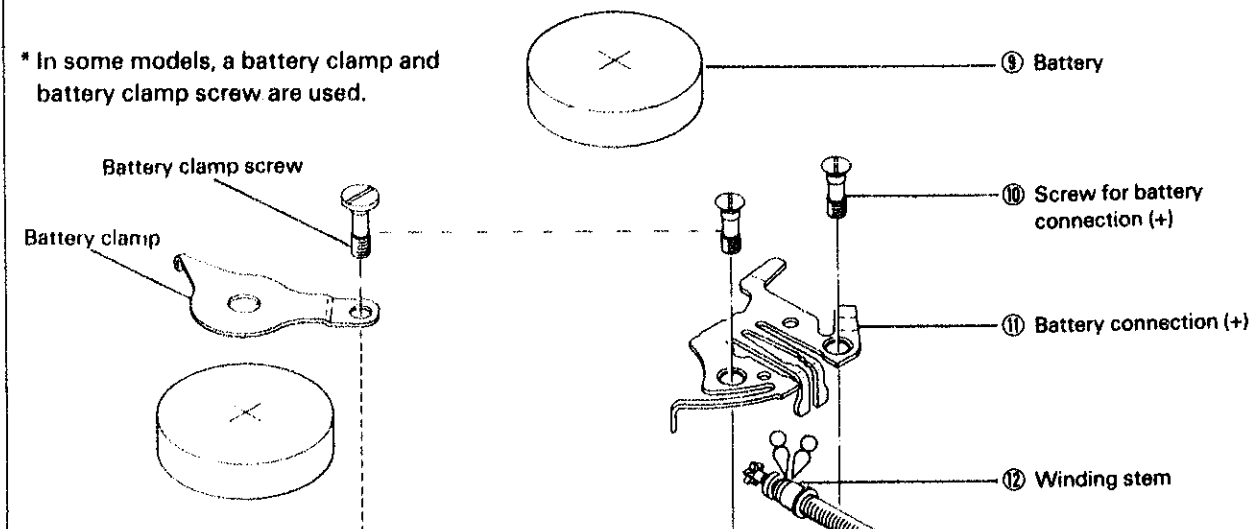
② Dial

The dial is fixed with its 2 legs inserted into the dial leg holes in the dial spacer ㉔.
To remove the dial, insert a (-) screwdriver into the notch for dial removal and pry out the dial.

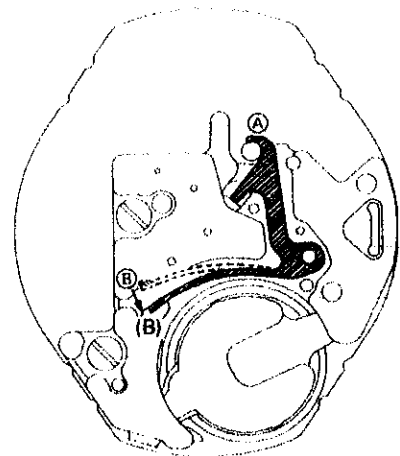


● Battery ~ Train wheel bridge

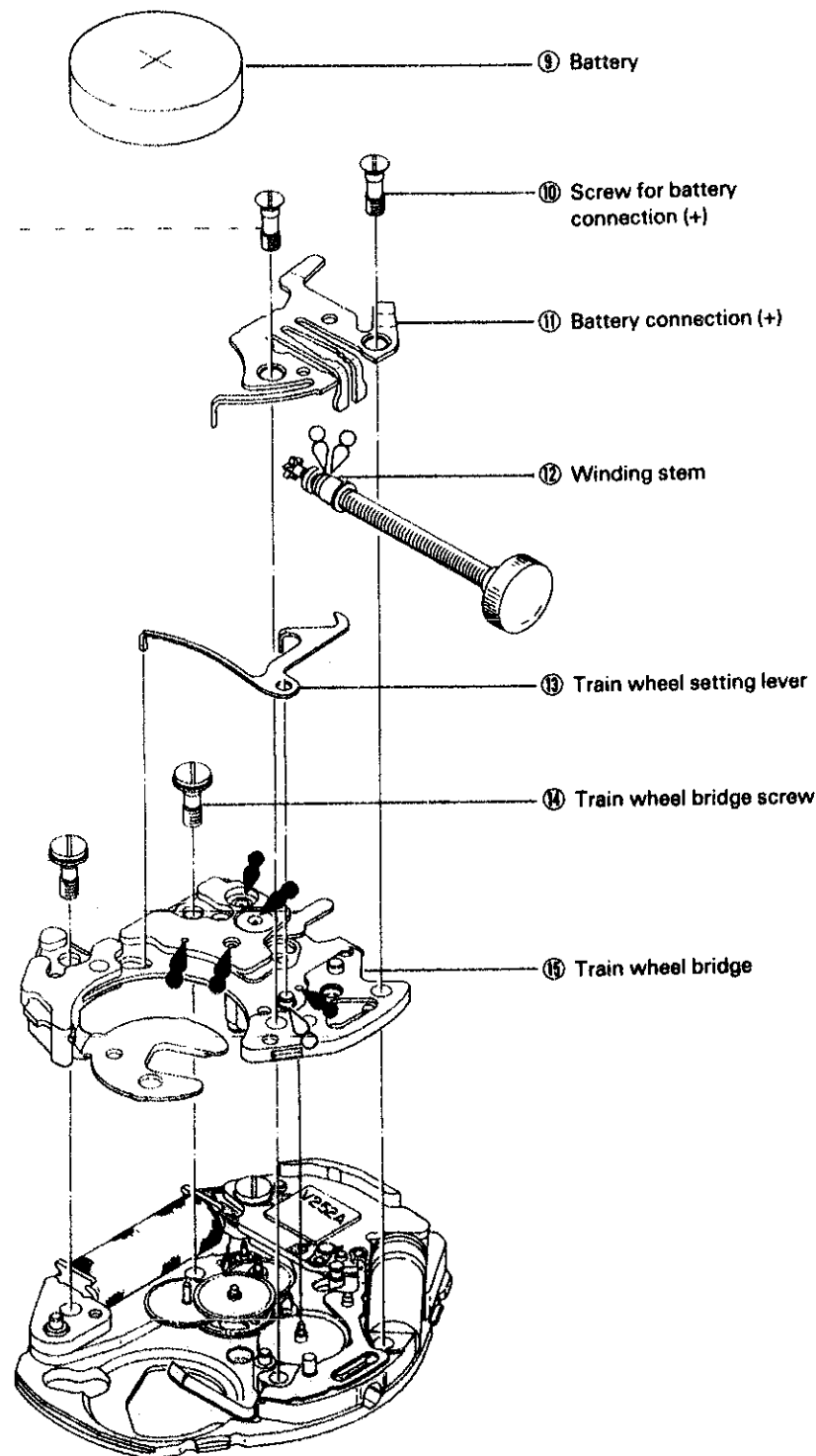
* In some models, a battery clamp and battery clamp screw are used.



● Setting of the Train wheel setting lever (13)

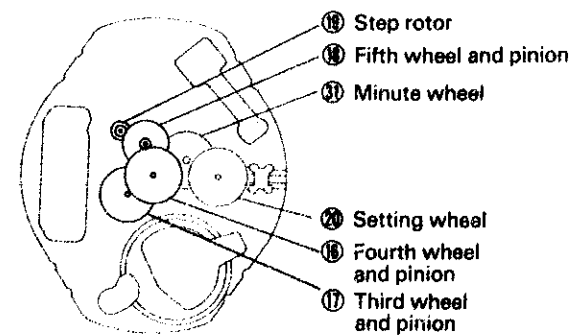


Set portion A first, and then insert B into the slot in the train wheel bridge (15).
When setting portion A, take care not to override on to the fourth wheel and pinion (16).

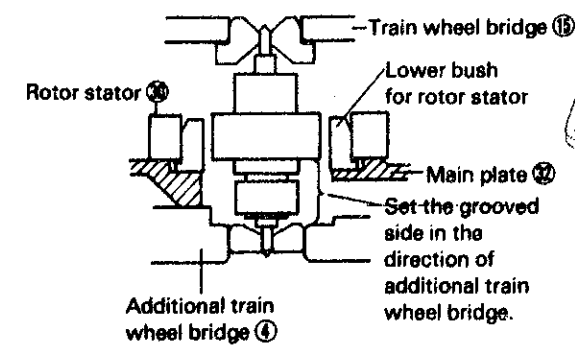


● Fourth wheel and pinion ~ Main plate

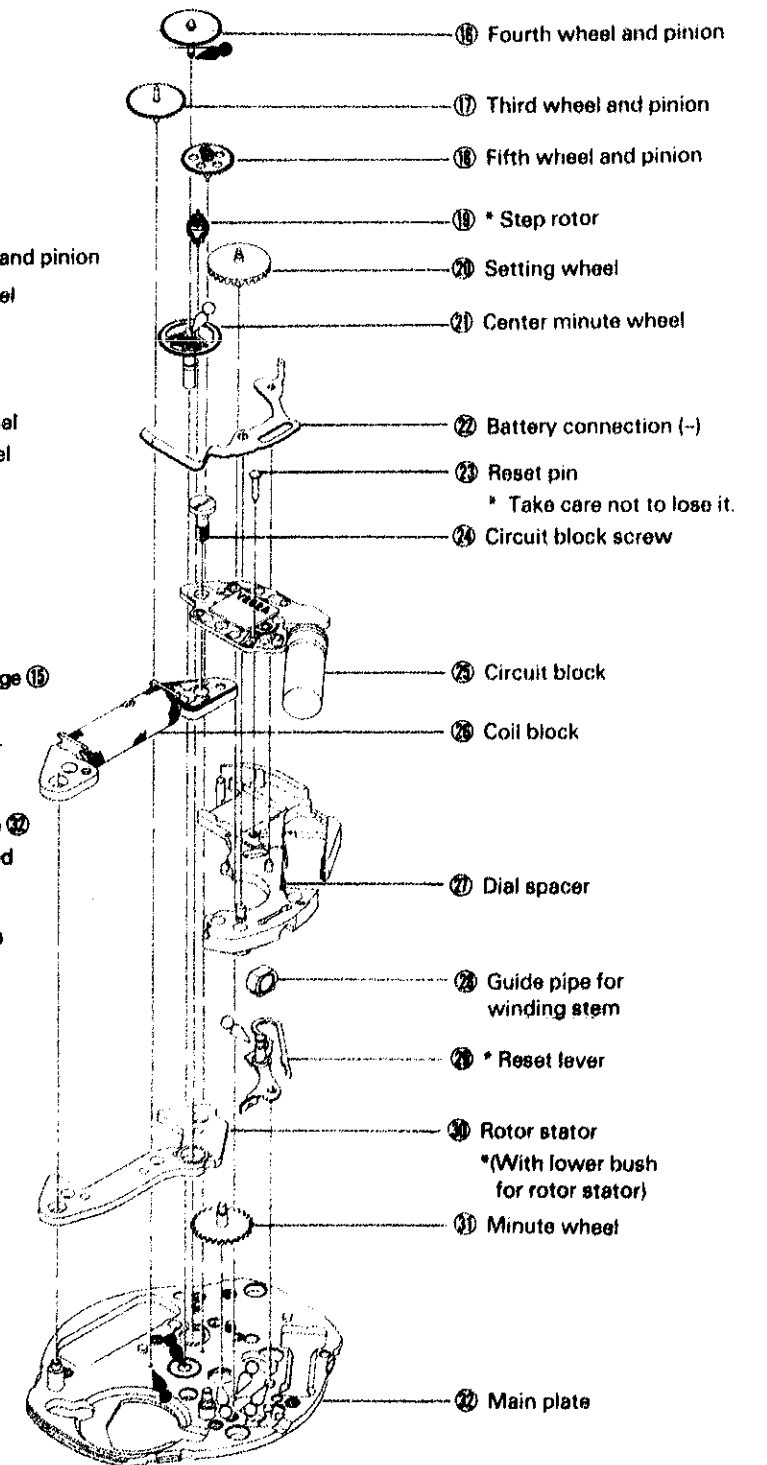
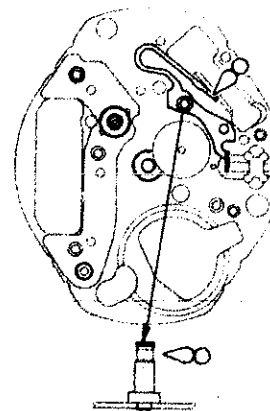
● Position of Train wheel



* Position of step rotor (19)

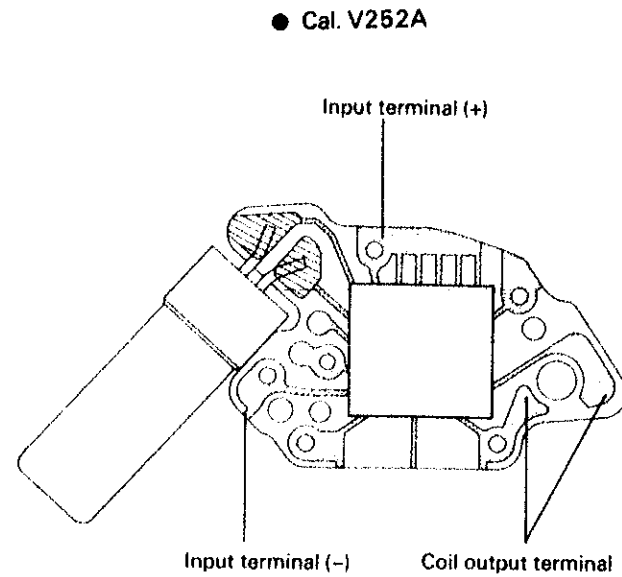


* Position of reset lever (24)



IV. CHECKING AND ADJUSTMENT

1. Structure of circuit block



2. Procedure for checking and adjustment

- This section only gives the checking and adjustment procedure which is exclusive for this watch.
For the normal checking and adjustment, refer to the "TECHNICAL GUIDE GENERAL INSTRUCTION, Analogue Quartz".
- The page numbers in the item correspond to those in the "TECHNICAL GUIDE GENERAL INSTRUCTION, Analogue Quartz".

OUTPUT SIGNAL

1. Use the Quartz Tester.
2. Turn the measuring gate selection to "10-second" gate.

Result:
Output signal: Normal
No output signal: Defective

BATTERY VOLTAGE

Use the SEIKO Digital Multi Tester S-840A
Range to be used: DC V

Result:
1.57V or more: Normal
Less than 1.57V: Defective
Replace the battery.

COIL BLOCK

Check the coil block for broken wire and short circuit using the SEIKO Digital Multi Tester S-840A.
Range to be used: Ω

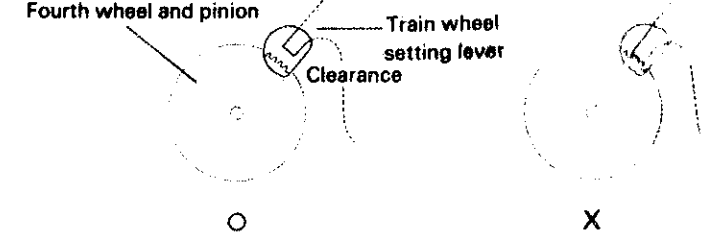
Result:
2.3 ~ 2.7 k Ω : Normal
Less than 2.3 k Ω (short circuit):
Defective
More than 2.7 k Ω (broken wire):
Defective

RESET CONDITION

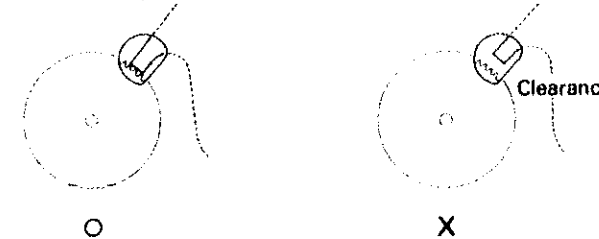
Check that the reset condition is correct.

1. Check through the access window at the center of the train wheel bridge.

- (1) Crown at normal position



- (2) Crown at first click position



2. Check the output signal with the battery installed.

- (1) Crown at normal position

Result:
There is clearance: Normal
No clearance: Defective
Replace the train wheel setting lever or check the position of reset lever and train wheel setting lever.

Result:
No clearance: Normal
There is clearance: Defective
Replace the train wheel setting lever or check the position of reset lever and train wheel setting lever.

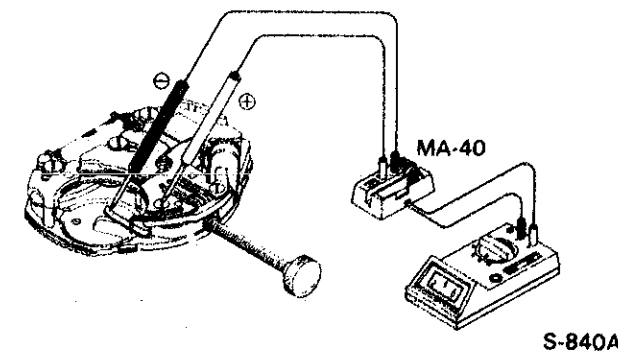
Result:
Output signal: Normal
No output signal: Defective
Replace the reset lever

Result:
No output signal: Normal
Output signal: Defective
Replace the reset lever

CURRENT CONSUMPTION

Use the SEIKO Digital Multi-Tester S-840A (with Multi Adaptor MA-40)
Mode to be used: μA

Red probe: Battery connection (+)
Black probe: Battery connection (-)



Result:
Less than 1.3 μA : Normal
More than 1.3 μA : Defective
* When measuring, cover the MOS-IC with a black sheet.

V. PARTS LIST

Cal. V252 A	
PARTS NO.	PARTS NAME
125 023	Train wheel bridge
126 004	Additional train wheel bridge
231 033	Third wheel & pinion
238 233	Guide pipe for winding stem
240 008	Small second wheel
241 063	Fourth wheel & pinion
261 237	Minute wheel
*270 064	Center minute wheel
*270 065	Center minute wheel
*271 073	Hour wheel
*271 074	Hour wheel
281 237	Setting wheel
317 004	Intermediate small second wheel
*351 131	Winding stem
*351 132	Winding stem
391 233	Train wheel setting lever
491 141	Dial washer
701 010	Fifth wheel & pinion
4000 085	Circuit block
4002 239	Coil block
4146 012	Step rotor
4225 237	Battery clamp
4239 028	Rotor stator
4270 237	Battery connection (-)
4271 243	Battery connection (+)
4408 240	Dial spacer
4455 237	Reset lever
012 057	Circuit block screw
012 058	Train wheel bridge screw
012 060	Battery clamp screw
012 315	Screw for additional train wheel bridge
012 708	Screw for battery connection (+)
017 521	Reset pin
● SEIKO (SEIZAIKEN) TR621SW	Battery
● MAXELL SR621SW	
● SONY EVEREADY 364	

Remarks:

* Centr minute wheel, Hour wheel

There are two different types as specified below.

Combination:

*Type	Center minute wheel	Hour wheel
M	270 064	271 073
L	270 065	271 074

*Abbreviation M...Standard type
(Movement type) L....Long type

* Winding stem

The type of winding stem is determined based on the design of case.
Please refer to "Casing Parts Catalogue."