TECHNICAL INFORMATION

CITIZEN QUARTZ

Cal. No. 10※※
Cal. No. 11※※
Cal. No. 9630

CITIZEN

ENGLISH

Contents

§1. OUTLINE

CAL. 10※※
- This caliber is a thin analog quartz watch for ladies.

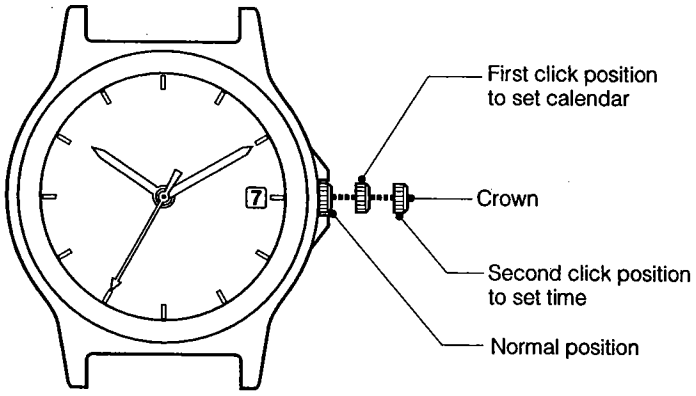
CAL. 11※※
- This caliber is a thin analog quartz watch for men.

CAL. 9630
- This caliber is a analog quartz watch based on CAL. 1030 and thinner than the latter.

§2. SPECIFICATIONS

Caliber NO.		1000	1010	1011	1020	1030	1100	1110	1111	9630
Type		Analog quartz watch								
Mevement size (mm)		ø18.1 x 17.8 x 16.1			ø15.3 x 17.8 x 18.1		ø23.3 x 22.6 x 22.6		ø18.1 x 17.8 x 16.1	ø15.3 x 17.8 x 18.1
		2.9t	2.7t	2.5t	2.1t	2.2t	2.9t	2.7t	2.5t	1.9t
Accuracy (at normal temperature)		±20 sec/month (5°C/41°F ~ 35°C/95°F)								
Oscillation frequency		32.768Hz								
IC		C/MOS-LSI, 1 unit								
Operating temperature range		–10°C ~ +60°C (14°F ~ 140°F)								
Converter		2-pole step motor								
Time adjustment		D.F.C. (No adjustment terminals for market use)								
Measuring gate		10 sec								
Additional functions	Date (With quick setting mechanism)	Installed	Installed	Installed	Not Installed	Not Installed	Installed	Installed	Installed	Not Installed
	Day of week (With quick setting mechanism)	Installed	Not Installed	Not Installed	Not Installed	Not Installed	Installed	Not Installed	Not Installed	Not Installed
	Second hand stopping mechanism	Installed	Installedt	Installed	Not Installed	Installed	Installed	Installed	Installed	Installed
	Power saving switch	Installed	Installedt	Installed	Installed	Installed	Installed	Installed	Installed	Installed
Battery	Part NO.	280-34		280-73		280-34			280-73	
	Battery code	SR621SW		SW616SW		SR621SW			SW616SW	
	Life	Approx. 3 years		Approx. 2 years	Approx. 5 years	Approx. 3 years			Approx. 2 years	

§3. HOW TO SET TIME AND CALENDAR



Setting the time

1. Pull out the crown to the second click position so that the second hands will stop at 0 second.
   * If the calendar is not installed, pull the crown to the first click position.
2. Turn the crown to set the time.
3. Return the crown to the normal position to a time signal.

Setting the calendar

* When the calendar is installed

1. Pull out the crown to the first click position.
2. Turn the crown to the left to set the calendar.
   * If the function to indicate the day of the week is installed, turn the crown to the right to set the day of the week.

- After setting the calendar, return the crown to the normal position.

* Do not set the calendar during the following period.

- Watch with function to indicate date .....9:00 PM ~ 1:00 AM
- Watch with function to indicate date and day of the week.....9:00 PM ~ 4:30 AM

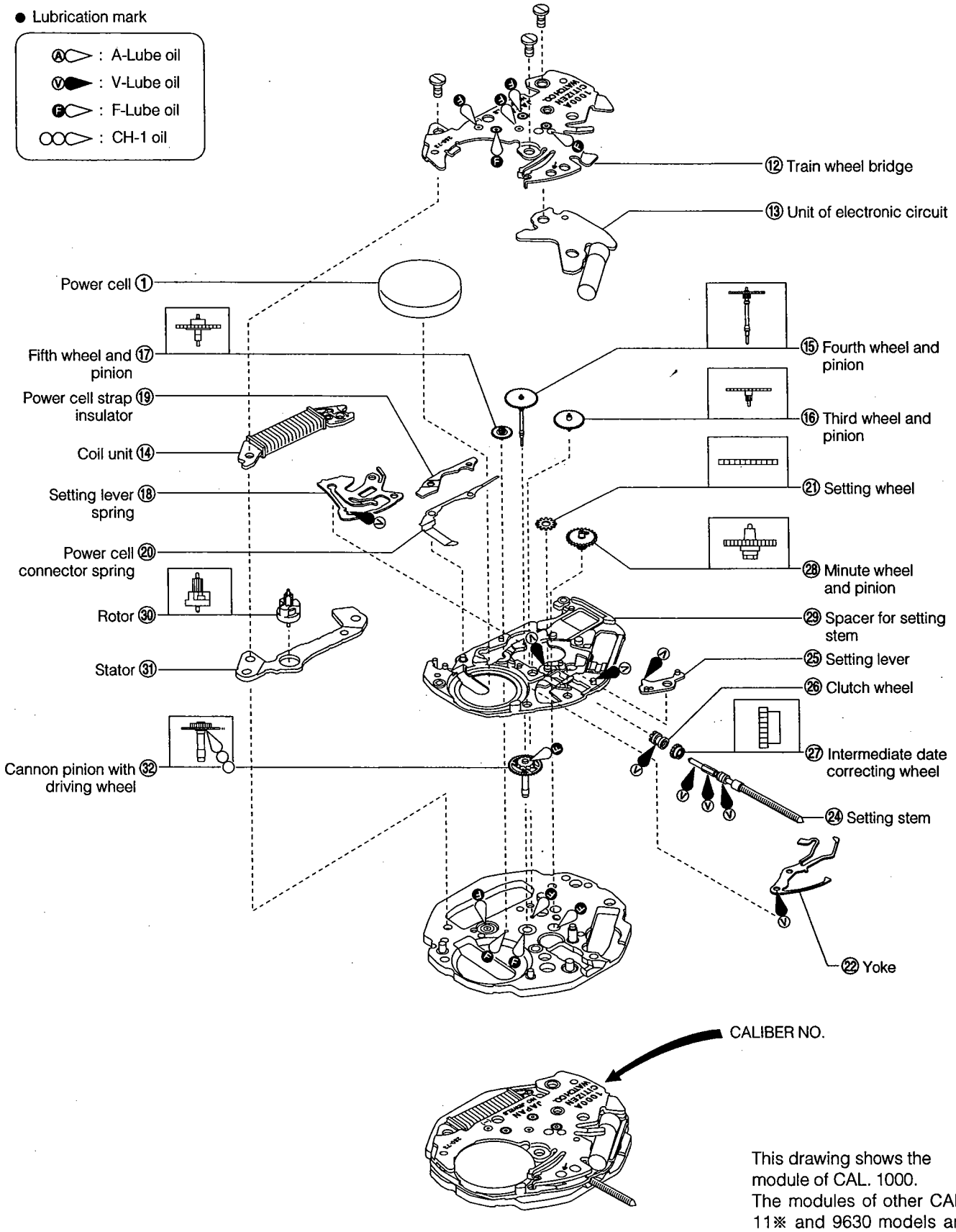
If the calendar is set in this period, it may not change on the next day. If it is required to set the calendar in this period, move the hands out of this period temporarily and set the calendar, then set the time again.

§4. DISASSEMBLY AND ASSEMBLY OF MODULE

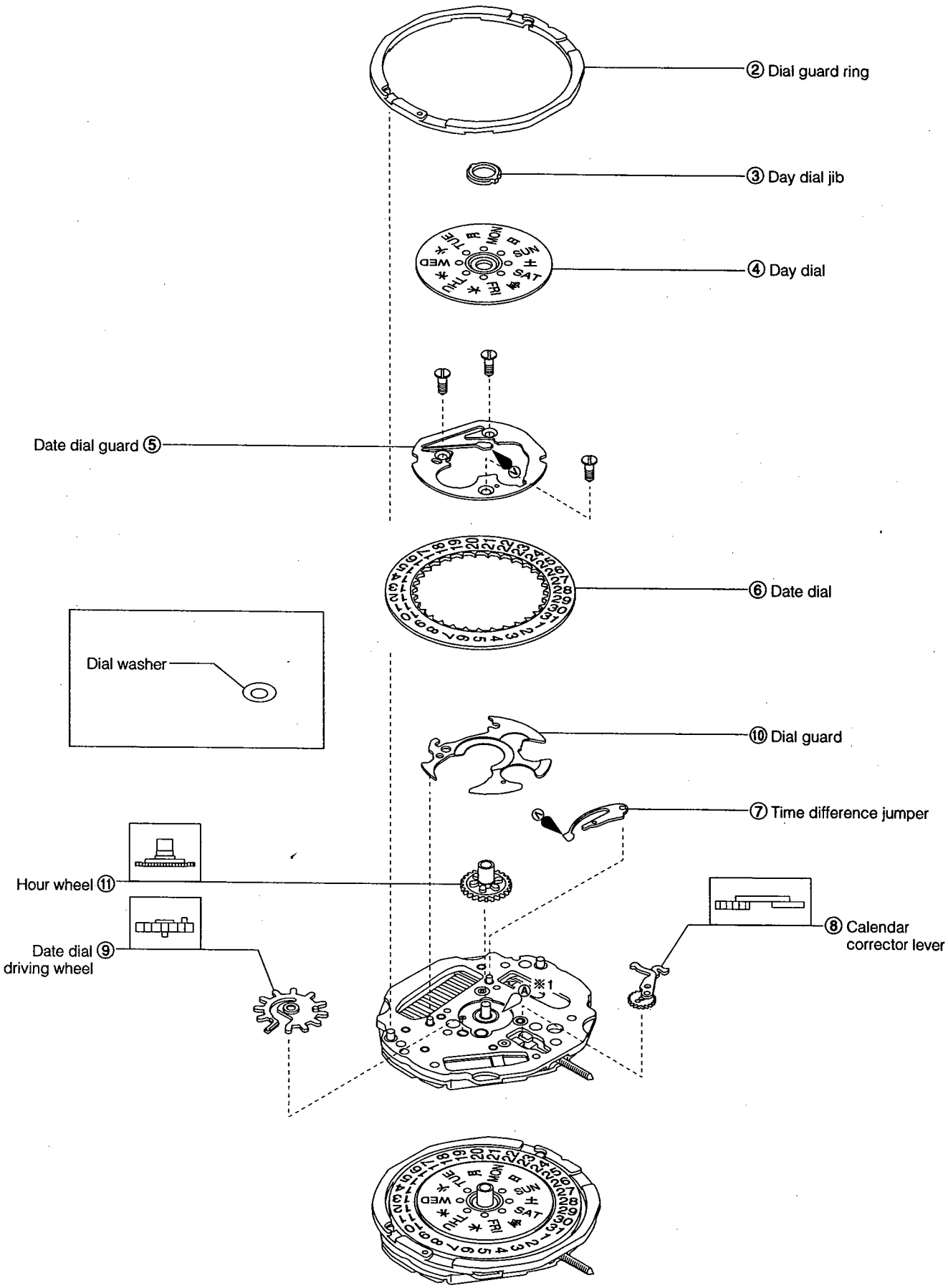
Disassembly procedure: ① → ㉜
Assembly procedure: ㉜ → ①

● Lubrication mark

Ⓐ : A-Lube oil
Ⓥ : V-Lube oil
Ⓕ : F-Lube oil
CH-1 oil

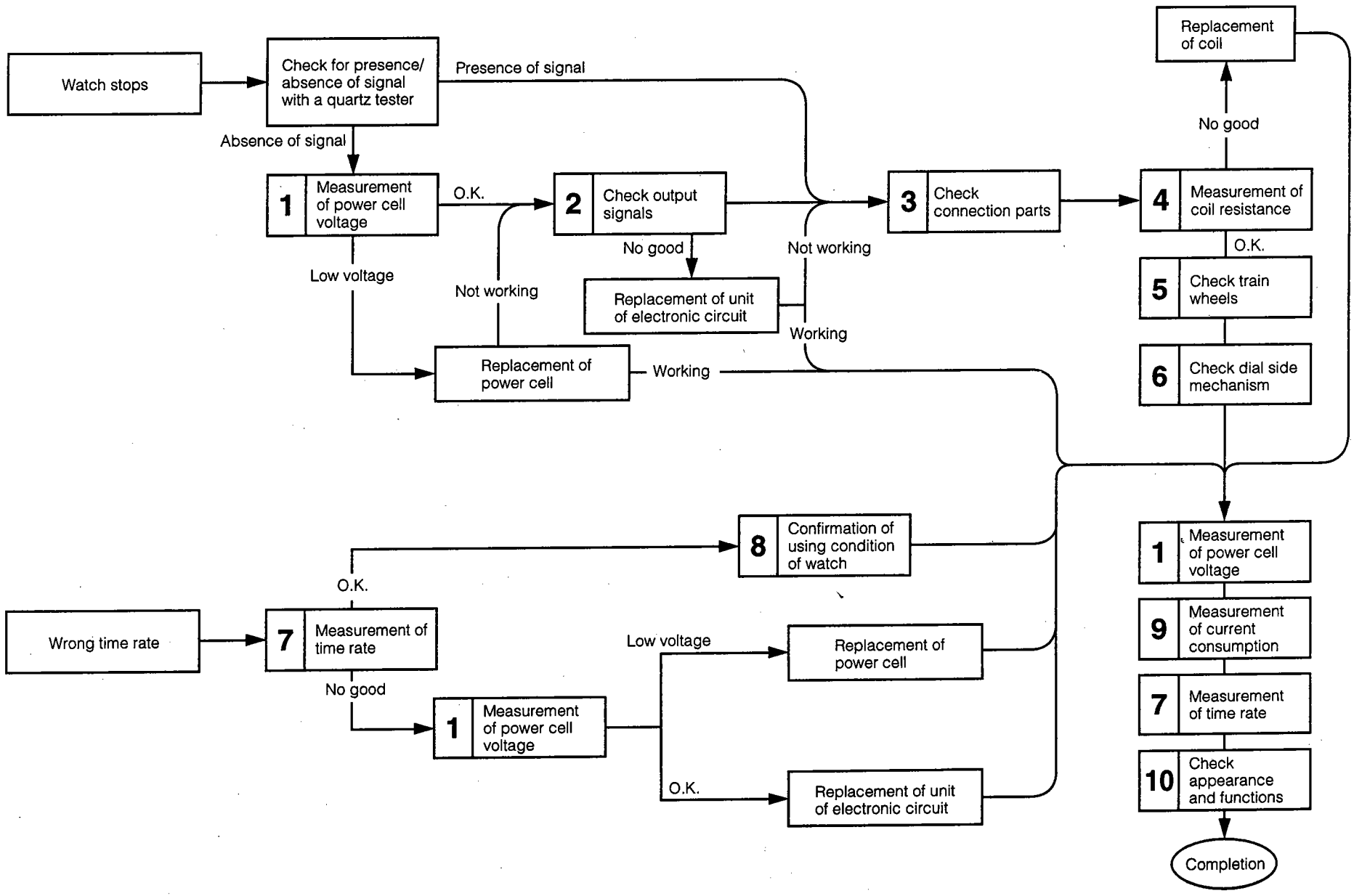


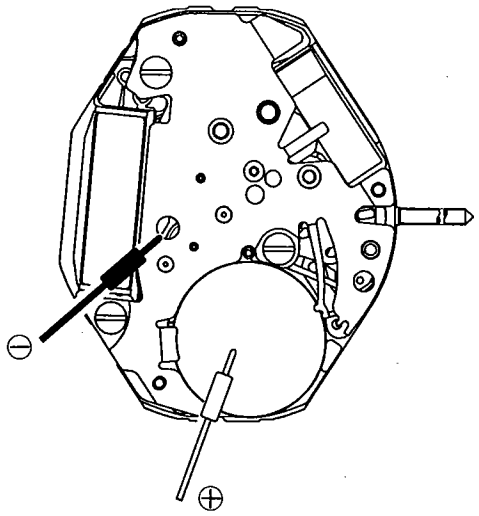
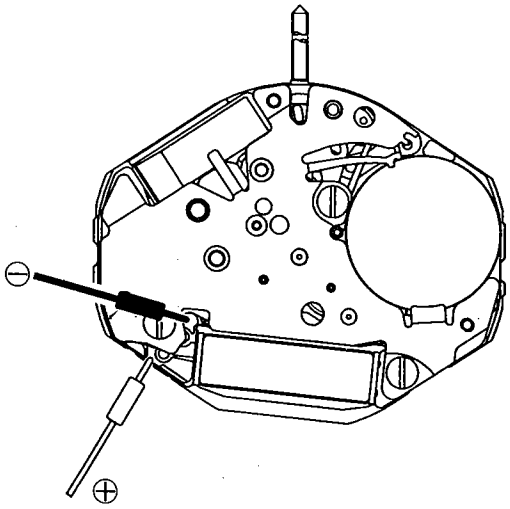
This drawing shows the module of CAL. 1000. The modules of other CAL. 11※ and 9630 models are basically the same as this.

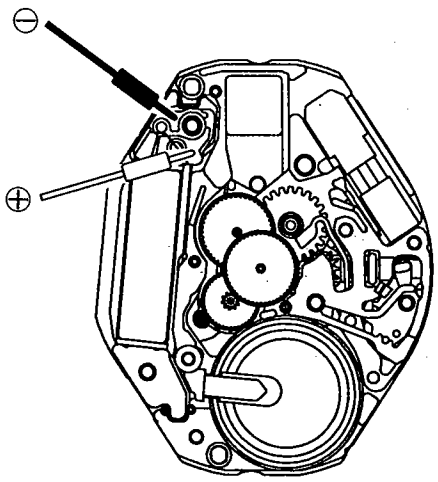


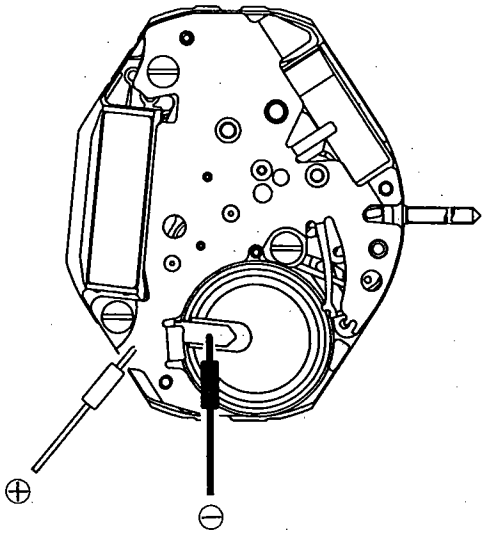
※1 If the movement has a calendar, supply a little amount of A-lube (lubricating oil) below the hour wheel so that the hands will move stably.

§5. TROUBLESHOOTING AND ADJUSTMENT



Check Points	How to Check	Results and Treatments
❶ Measurement of power cell voltage	* Refer to Technical Manual, Basic Course: II-1-a for the setting procedure of the tester. <Tester range: D.C. 3V>  	Measure the voltage on the complete module. • **Over 1.5V** → Non-defective • **Under 1.5V** → Measure the power cell separately Measurement of the separate power cell. • **Over 1.5V** → Check the connection parts • **Under 1.5V** → Replace the power cell
❷ Check output signal	* Refer to Technical Manual, Basic Course: II-1-b for the setting procedure of the tester. <Tester range: D.C. 0.3V>  (The tester lead pins have no polarity)	The tester pointer swings over 0V at interval of 1 sec. → Non-detective (In case of CAL. 102※, the tester pointer swings every 2.5 seconds.) The tester pointer does not swing. → Check the connection parts. The connections are normal. → Replace the unit of electronic circuit.
❸ Check connection parts	* Refer to Technical Manual, Basic Course: II-2-a. Check for looseness of screws, dust, dirt, etc. a) If the fixing screw of the unit of electronic circuit is loosened, the drive signals may not be transferred. b) if dust or dirt stick to the pattern of the coil of electronic circuit unit, the current may not flow sufficiently.	

Check Points	How to Check	Results and Treatments
❹ Measurement of coil resistance	* Refer to Technical Manual, Basic Course: II-1-c for the setting procedure of the tester. <Tester range: R x 10Ω> • Remove the unit of electronic circuit when measuring the coil resistance.  (The tester lead pins have no polarity.)	**1.4 kΩ ~ 2.0 kΩ** → Non-defective Outside range of **1.4 kΩ ~ 2.0 kΩ** → Replace the coil unit
❺ Check train wheel	* Refer to Technical Manual, Basic Course: II-2-b. • Check the appropriate clearance of each wheel and rotor for dust.	
❻ Check dial side mechanism	* Refer to Technical Manual, Basic Course: II-2-c. • Confirm that all parts are not deformed and oil is supplied correctly. If the dial washer is deformed or scratched, the watch may move slowly or stop.	Hand is heavy → Supply oil (F-Lube) to the cannon pinion with driving wheel Deformed → Replace
❼ Measurement of time rate	* Refer to Technical Manual, Basic Course: II-2-d. Since this watch uses D.F.C. and has no control terminal, the time rate cannot be adjusted in the field. (Measurement is made in a 10 second-range.)	• The watch loses or gains substantial time. → Replace the unit of electronic circuit.
❽ Confirmation of using conditions of watch	* Refer to Technical Manual, Basic Course: II-2-e.	

Check Points	How to Check	Results and Treatments
❾ Measurement of current consumption	* Refer to Technical Manual, Basic Course: II-1-f for the setting procedure of the tester. <Tester range: DC 12μA>  **Influence of light** Avoid measuring current consumption under an incandescent lamp or the direct rays of the sun, because it may cause the current value to increase. The light of a fluorescent lamp has no influence on the current value.	• Current consumption of the module **Under 0.9μA** (**Under 0.4μA** for CAL. 102※) → Non-defective **Over 0.9μA** (**Over 0.4μA** for CAL. 102※) → Measure the electronic circuit unit separately. • Measurement of the separate electronic circuit unit **Under 0.3μA** → Non-defective **Over 0.3μA** → Replace the electronic circuit unit. When the current consumption of the module shows a high value, but that of the separate electronic circuit unit is normal. Æ There may be a problem somewhere outside the circuit. Therefore, inspect the watch for stains, lubrication conditions and deformed parts, and remove the cause of the high load.
❿ Check appearance and functions	* Refer to Technical Manual, Basic Course: II-2-f.	