TECHNICAL INFORMATION

CITIZEN QUARTZ

Cal. No. 04※※※

CITIZEN

OUTLINE

CAL. 0410※ .....Men's thin three-hands analog quartz watch having a calendar.

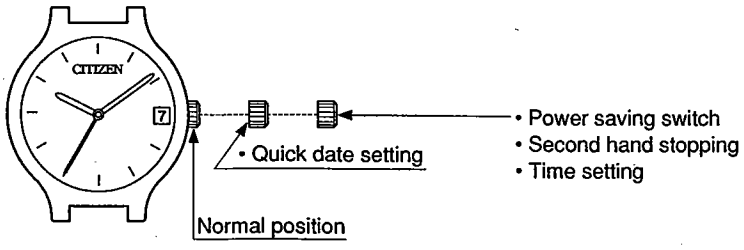
CAL. 0430※ .....Same as CAL. 0410※ but does not have a calendar.

SPECIFICATIONS

Caliber No.		**0410M-07**	**0430M-07**
Type		Three-hands analog quartz watch	
Module size (mm)		ø23.3 x 21.5 x 21.5 x 1.9^t	ø21.6 x 18.0 x 21.0 x 1.6^t
Accuracy (at normal temperature)		±15 sec/month	
Oscillation frequency		32,768Hz	
IC		C/MOS-LSI 1 unit	
Operating temperature range		–10°C ~ +60°C (14°F ~ 140°F)	
Converter		Bipolar step motor, 2 units	
Time adjustment		Impossible	
Measuring gate		10 sec	
Additional functions	Date (with a quick-setting device)	Installed	Not installed
	Day (with a quick-setting device)	Not installed	Not installed
	Second-hand stopping device	Installed	Installed
	Power saving switch	Installed	Installed
	Power cell life indicator	Installed	Installed
Power cell	Part No.	280-76	
	Power cell cord	SR914SW	
	Size (mm)	ø9.5 x 1.4^t	
	Nominal voltage	1.55 V	
	Nominal capacity	22mAH	
	Life	Approx. 3.5 years	

HANDLING METHOD

These watch can be used similarly to a common analog watch. Set the time and calendar, then push in the crown to the normal position.

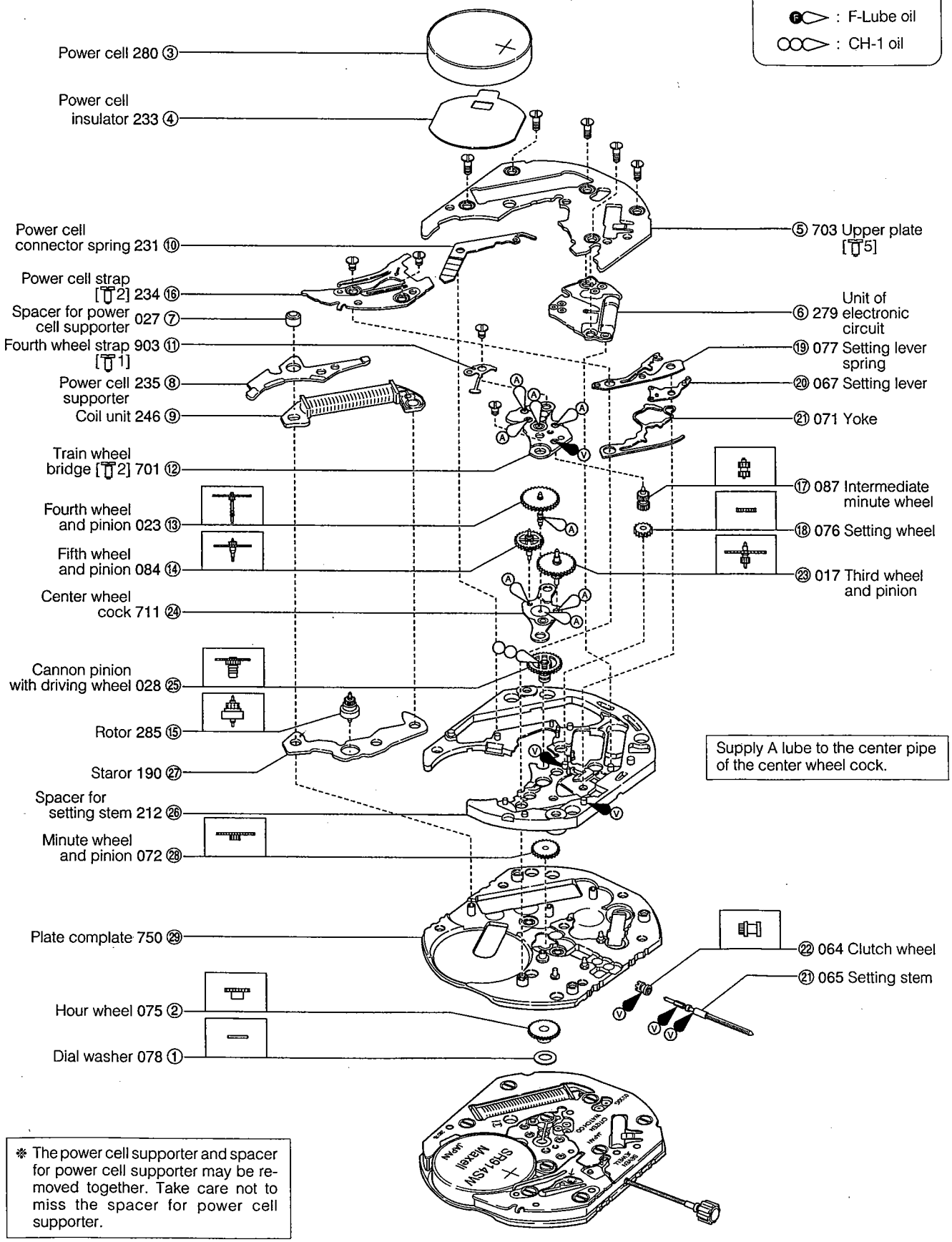


DISASSEMBLY AND ASSEMBLY OF MODULE

Disassemble procedure ① → ㉙
Assemble procedure ㉙ → ①

● Lubrication marks

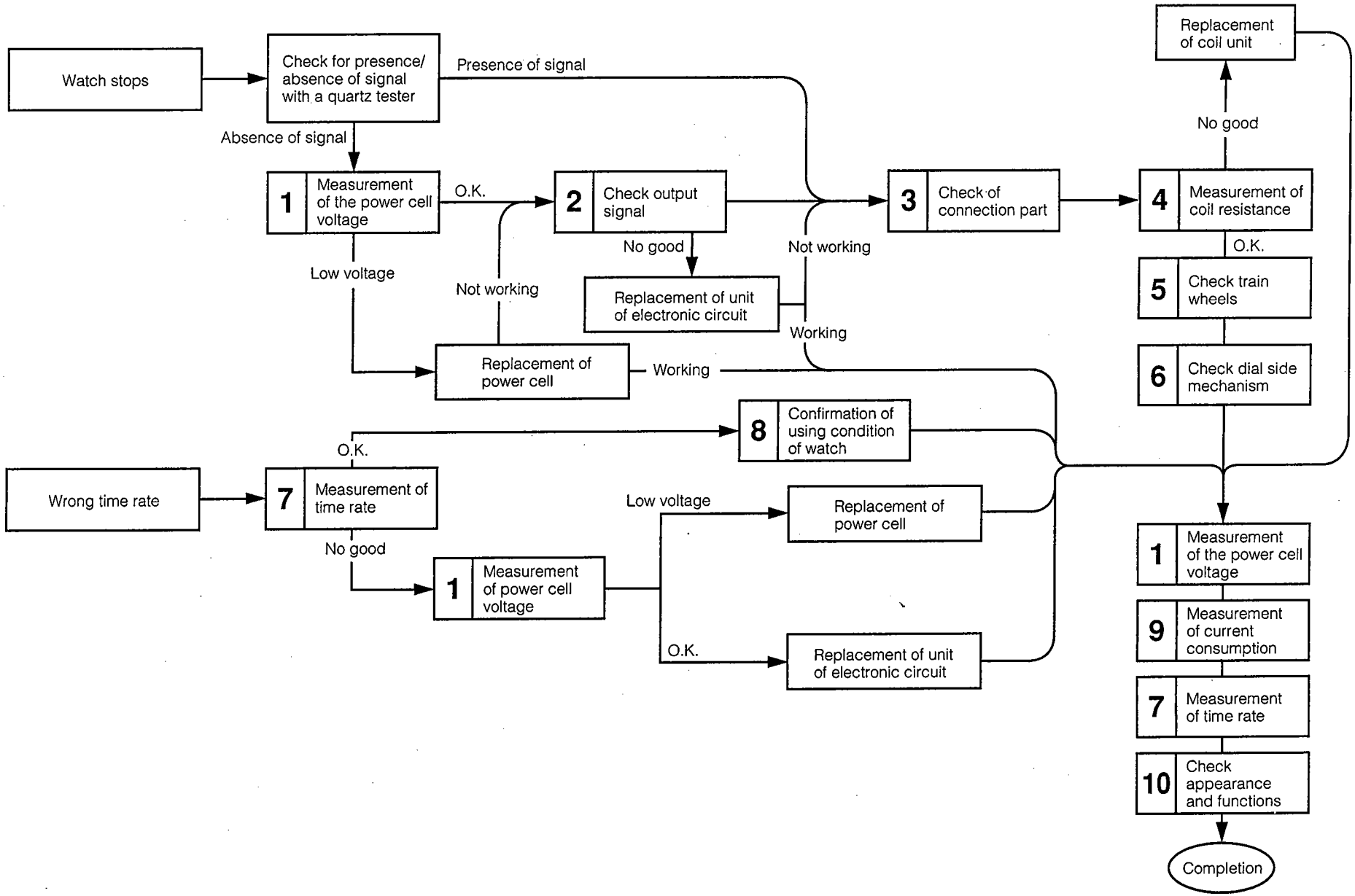
Ⓐ : A-Lube oil
Ⓥ : V-Lube oil
Ⓕ : F-Lube oil
CH-1 oil

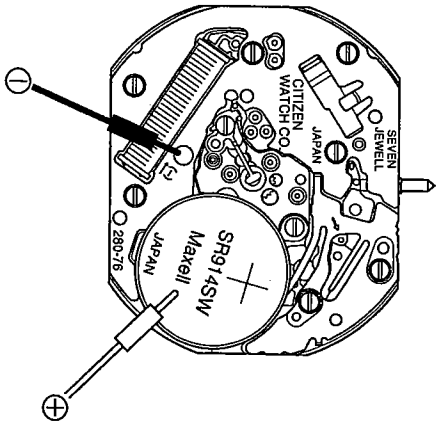
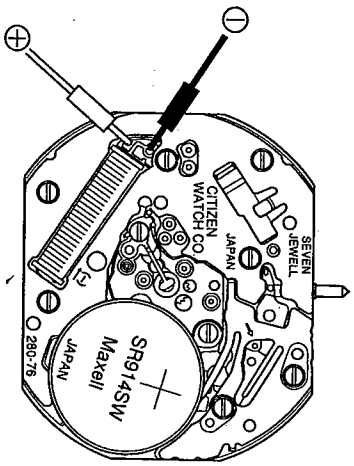


Supply A lube to the center pipe of the center wheel cock.

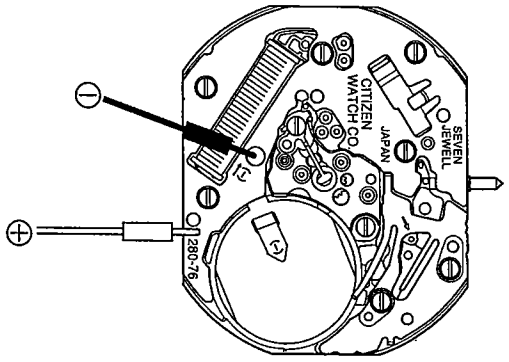
※ The power cell supporter and spacer for power cell supporter may be removed together. Take care not to miss the spacer for power cell supporter.

TROUBLESHOOTING AND ADJUSTMENT



Check Items	Check Method	Results and Repair Procedure
❶ Measurement of the power cell voltage	[Refer to Technical Manual, Basic Course II-1-a for the setting procedure of the tester] <Tester range: D.C. 3V>  	**Over 1.5 V** → Non-defective **Under 1.5 V** → 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 pointer swings every second → Non-defective The tester pointer does not swings → Check the connection parts The connections are normal → Replace the electronic circuit unit
❸ Check of connection part	[Refer to Technical Manual, Basic Course II-2-a] Confirm that there are no loose screws, dust or stains. a) If a screw in the electronic circuit unit is loose, the driving signals may not be transmitted. b) Dust or stains on the coil or electronic circuit unit may impair the functioning of the circuit.	

Check Items	Check Method	Results and Repair Procedure
❹ Measurement of coil resistance	[Refer to Technical Manual, Basic Course II-1-c for the tester] • Remove the electronic circuit unit when measuring resistance. <Tester range: R x 10Ω>	**2.2kΩ ~ 2.8kΩ** → Non-defective **Outside range of 2.2kΩ ~ 2.8kΩ** → Replace the coil unit
❺ Check train wheels	[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]	
❼ Measurement of time rate	[Refer to Technical Manual, Basic Course II-2-d]	
❽ Confirmation of using condition of watch	[Refer to Technical Manual, Basic Course II-2-e]	

Check Items	Check Method	Results and Repair Procedure
❾ Measurement of current consumption	[Refer to Technical Manual, Basic Course II-1-f for the setting procedure of the tester] <Tester range: D.C. 12μA> Set the power cell in the adapter.  	• Current value of the module **Under 0.7μA** → Non-defective **Over 0.7μA** → Measure the electronic circuit unit separately
	a) This watch has a load-compensating circuit. Since this circuit adjusts the driving output of the rotor, it operates for several seconds when the power cell is mounted, and may temporarily increase current consumption. In this case, wait until the tester pointer stops fluctuating and then remeasure the current. **Influence of light** **Avoid taking measurements under an incandescent lamp or direct sunshine, because this may cause the current value to increase.** **The light of a fluorescent lamp has no influence on current consumption.**	• Measurement of the separate electronic circuit unit **Under 0.2μA** → Non-defective **Over 0.2μA** → Replace the electronic circuit unit When the current value of the module is high, but that of the separate electronic circuit unit is normal. → The problem is somewhere outside the circuit. Therefore, inspect the watch for stains, lubrication conditions and deformations of parts, and remove the cause of the high load.
❿ Check appearance and functions	[Refer to Technical Manual, Basic Course II-2-f]	