



# PARTS CATALOGUE/TECHNICAL GUIDE

Cal. 7D46A, 7D48A

## 【SPECIFICATIONS】

Item \ Cal. No.		7D46A, 7D48A
Movement		 
Movement size	Outside diameter	φ 32.0 mm
	Casing diameter	φ 30. 0 mm
	Height	6.1 mm
Time indication (Movement intervals)		3 hands (Hour and minute hands: 5-second interval movement, Second hand: 1-second interval movement), 24-hour hand Calendar Year indication: Indication disk for year (7D48A), Year indication hand (7D46A) Month indication: :Month indicator Date indication: Big calendar
Driving system		Step motor: 2 pieces ・ Piezoelectric motor (for calendar)
Additional mechanism		Automatic generating system Energy depletion forewarning function Overcharge prevention function Electronic circuit reset switch Train wheel setting device Instant setting device for date calendar Automatic power save function Time relay function Perpetual calendar (Year • Month • Date) up to February 28, 2100
Loss/gain		Monthly rate at normal temperature range: less than 15 seconds
Regulation system		Nil
Measuring gate by quartz tester		Use 10-second gate.
Power supply	Power generator	Automatic generating system
	Electricity storage Unit (E.S. Unit)	Titanium lithium ion rechargeable battery
Operating voltage range		0.45 v ~ 2.5 v
Continuous operating time		Operable time of time relay function: approximately 4 years if fully charged
Jewels		16 jewels

SEIKO WATCH CORPORATION

## REMARKS ON REPAIRING CAL. 7D46A, 7D48A

Cal. 7D\*\* is an Automatic Generating System analog quartz watch equipped with piezoelectric motor, featuring the perpetual calendar and automatic adjustment function. Although Cal.7D\*\* features new functions, the experience of repairing the existing KINETIC series watches will be helpful.

In repairing Cal. 7D\*\*, you are requested to have the full knowledge of its functions and strictly observe the repairing and checking instructions provided in this guide so that the watch will be repaired correctly.

### FEATURES OF CAL. 7D46A, 7D48A

Cal. 7D\*\* features the power save function that automatically stops the hands from moving if the watch is left untouched for a certain period of time. Even if the watch is in this state, the perpetual calendar continues to count the date until the stored electrical energy is depleted. When you decide to use it again, swinging the watch several times will activate the time relay function, which starts the hands moving quickly to indicate the correct time and resume the normal operation. Cal. 7D\*\* is an innovative KINETIC model; it conserves the stored electrical energy by stopping the hands while it is not in use, and, at the same time, it completely eliminates the cumbersome time setting procedure when it is used again.

#### 1. POWER SAVE FUNCTION

- While the watch is not in use, the hands stop automatically to minimize the electrical energy consumed. This is called “the power save function”. Though the hands stop, the built-in IC continues to compute the time, keeping the watch ready for the next use.

<The automatic power save function>

If the watch is left untouched for approximately 24 hours, the power save function is automatically activated.

#### 2. TIME RELAY FUNCTION

- While the power saving function is working, the built-in IC continues to compute the time though the hands stop. As the watch detects a certain amount of electricity generated by swinging it, the hands are automatically adjusted to the time retained inside the watch, resuming the normal operation. This is called the “time relay function”. As it is activated, the hour and minute hands are adjusted first, then, followed by the second hand.
- By only swinging the watch for 2 to 3 seconds, the time relay function will be activated.

#### (Caution)

- ◆ It may take approximately up to 64 seconds (32 seconds on average) to activate the time relay function.
- ◆ The accuracy of the time computation by the built-in IC is equivalent to that of conventional quartz watches. Especially when the watch has been left untouched for a long time before the time relay function is activated, the time indicated by the hands may include a certain amount of time loss or gain within the range of the accuracy of the watch ( $\pm 15$  seconds per month) that has accumulated during that time.

#### 3. CONTINUOUS OPERATING TIME

The continuous operating time varies depending on the stored electrical energy inside the watch. In the case that the fully charged watch enters the power save mode,

the time relay function of the watch remains operable for approximately four years.

**(Caution)**

If the stored electrical energy is completely depleted while the watch is in the power save mode, swinging the watch may not activate the time relay function. Instead, the second hand starts moving at two-second intervals.

#### **4. PERPETUAL CALENDAR**

The perpetual calendar automatically adjusts the date up to February 28, 2100. Even if the watch is in the power save mode, the calendar continues to function as normal.

**(Caution)**

- ◆ The date changes between 23:30 and 0:30.
- ◆ Normally it takes approximately 2 seconds for the watch to change the date. However it may take up to 2 minutes especially during the wintertime or when the stored electrical energy is being depleted.
- ◆ Even though the watch is reactivated after the stored electrical energy has become extremely low, the calendar can be easily adjusted manually.
- ◆ When the watch is in power save mode, and the date does not change correctly (or shows the wrong date), the electrical power stored in the rechargeable battery is being depleted. Before starting to wear the watch, recharge the watch until the second hand no longer moves at two-second intervals and then reset the time and calendar.

#### **5. TIME AND CALENDAR SETTING**

It is recommended that you adjust the time and/or calendar during the time between 1:00 and 23:00.

If you adjust the time and/or calendar around 0:00, the date may become incorrect, but this is not a malfunction.

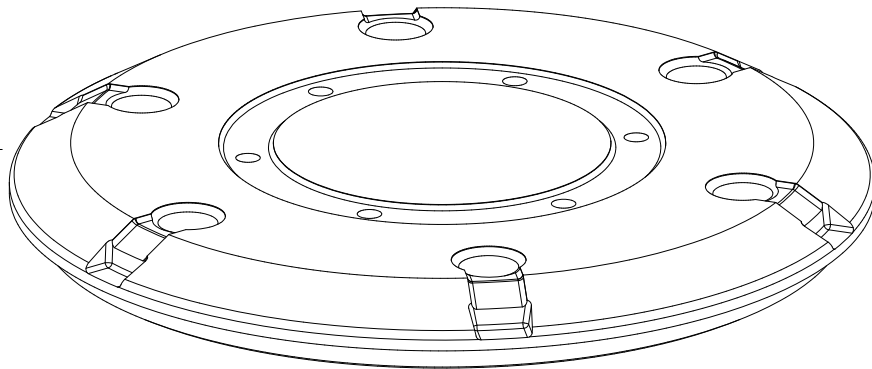
When the watch moves at two-second intervals, the date stops changing.

When the watch no longer moves at two-second intervals after it is recharged, reset the calendar.

When the date is set to a non-existing date, such as February 30, the calendar automatically correct the date. (When the date is set to February 30, the calendar automatically shows March 1).

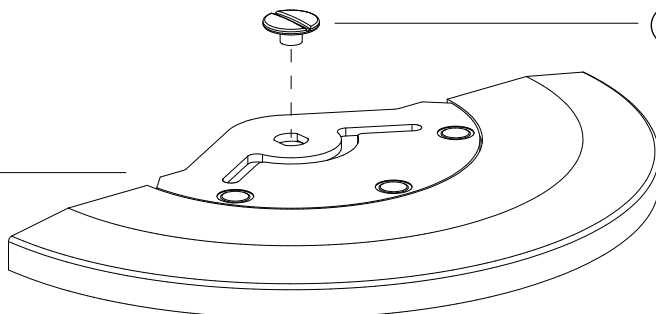
When the stored electrical energy is completely depleted, and the watch is stopped, recharge the watch until it no longer moves at 2-second intervals and reset the time and calendar.

Case back

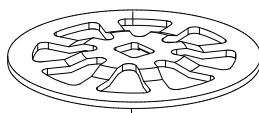


① Oscillating weight screw  
0022 490

② Oscillating weight  
0500 531

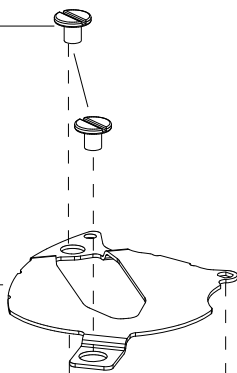


③ Oscillating weight wheel  
1002 504

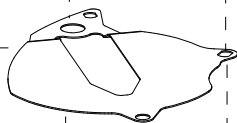


④ Rechargeable battery clamp screw  
0012 354

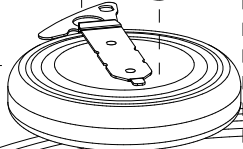
⑤ Rechargeable battery clamp  
4225 542



⑥ Insulator for rechargeable battery  
4216 541

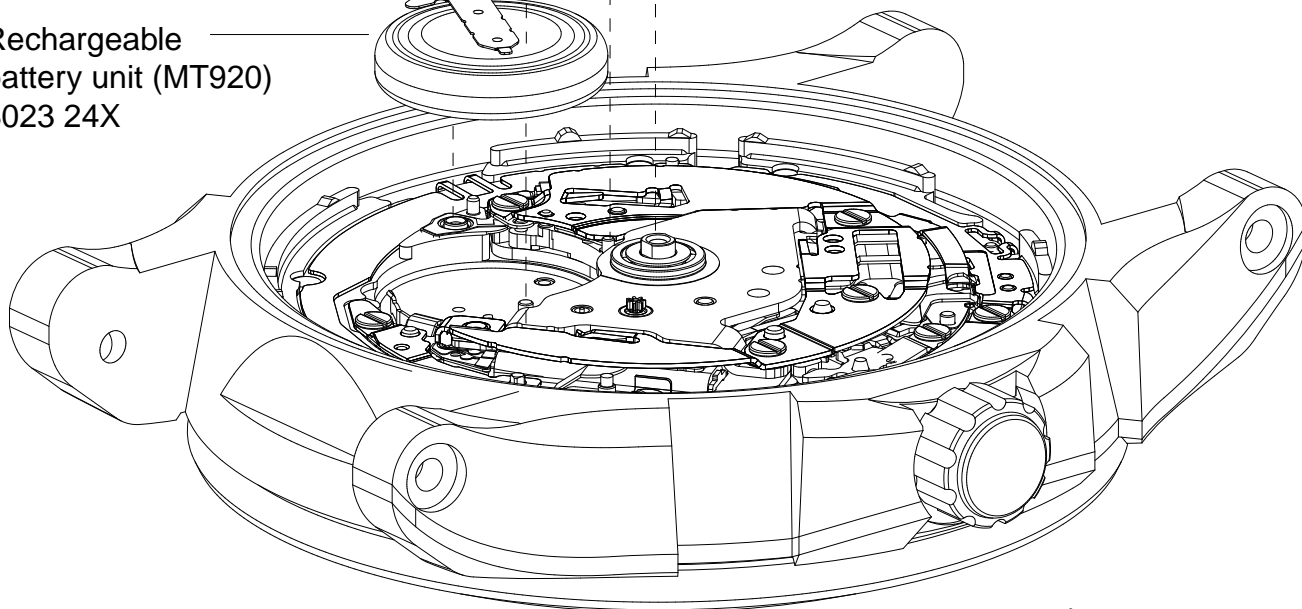


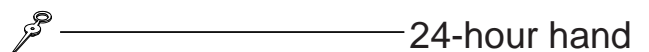
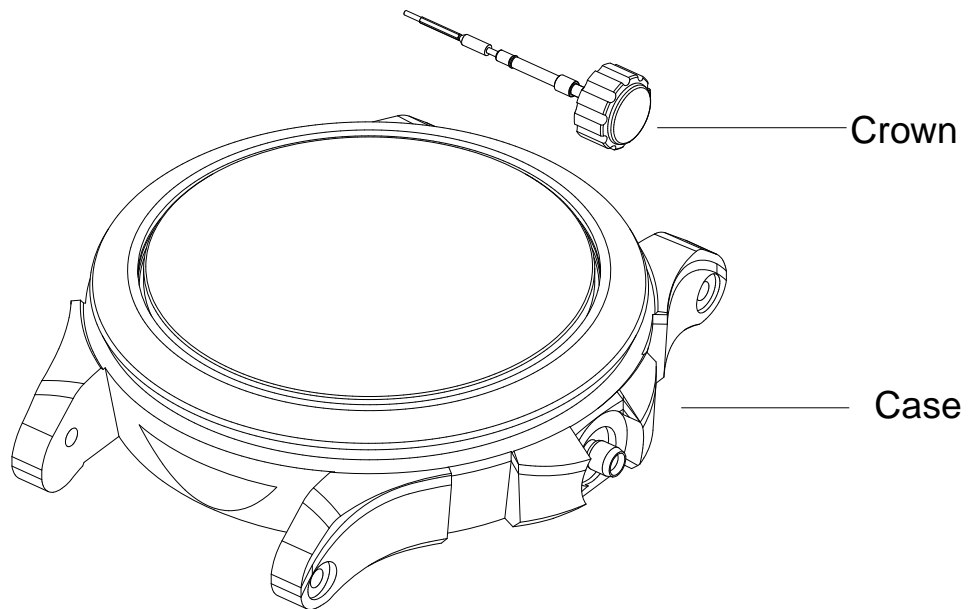
⑦ Rechargeable battery unit (MT920)  
3023 24X



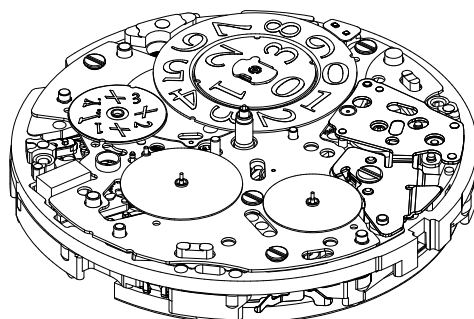
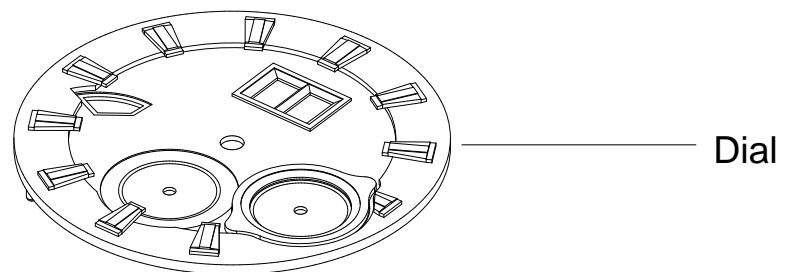
#### Remarks on removing the winding stem

To remove the winding stem when taking out the movement from the case or while disassembling the parts during repair work, be sure to pull out the crown to the first click, and then, remove the winding stem while pushing the setting lever.

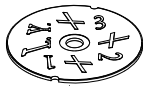




Year indicator hand  
for cal.7D46A



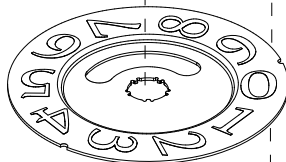
⑧ Indication disk  
for year  
1023 560 (for Cal.7D48A)



⑨ Date dial holder  
for trans wheel  
for units digit  
0839 506



⑩ Date dial  
for ten's digit  
(0878 A84)



⑪ Date dial  
for units digit  
(0878 A85)



⑫ Jumper  
for units digit  
1024 500

⑬ Jumper for year  
1024 503



※1.Positioning pin for spring  
for intermediate wheel  
for month indicator  
To be removed while assembling  
2.This is the repairing tool.  
(7D48A-JP)



※1.Supporting pin for alignment  
To be removed while assembling

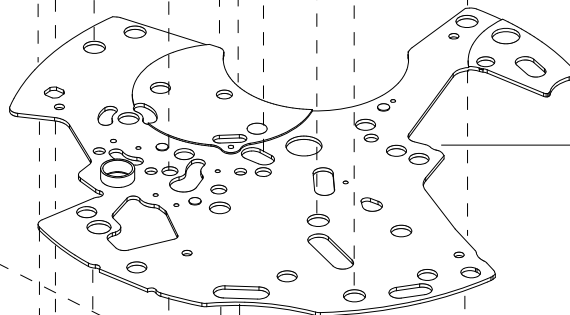


2.This is the repairing tool.  
(7D48A-JP)  
Please look at the Watch  
Repairing Tool Catalogue.



Please look at the Watch  
Repairing Tool Catalogue.

⑭ Train wheel bridge  
for calendar screw  
0012 354



⑮ Train wheel bridge  
for calendar  
0125 508

