

# PARTS CATALOGUE/ TECHNICAL GUIDE

## Cal. 7T42A

### [SPECIFICATIONS]

Cal. No.		7T42A			
Item					
Movement					
		(x 1.0)			
Movement size	Outside diameter	$\phi$ 27.6mm 24.0mm between 3 o'clock and 9 o'clock sides			
	Casing diameter	$\phi$ 27.0mm 24.0mm between 3 o'clock and 9 o'clock sides			
	Height	3.1mm (3.2mm including the battery portion)			
Time indication		Main time	Stopwatch function	Alarm function	Timer function
		Hour, minute and small second hands	Minute and 1/5-second hands	Small hour and minute hands	Minute and second hands (Stopwatch 1/5-second and minute hands)
Driving system		Step motor, 4 pieces			
Additional mechanism		<ul style="list-style-type: none"> <li>• Electronic circuit reset switch</li> <li>• Train wheel setting device</li> <li>• Battery life indicator</li> <li>• Date calendar</li> <li>• Instant setting device for date calendar</li> <li>• Stopwatch function (Up to 30 minutes in 1/5 seconds)                             <ul style="list-style-type: none"> <li>• Accumulated elapsed time measurement</li> <li>• Split time measurement</li> </ul> </li> <li>• Timer function (Up to 60 minutes in minutes)</li> <li>• Alarm function (12-hour indication system)</li> <li>• Alarm test system</li> </ul>			
Loss/gain		Monthly rate at normal temperature range: less than 15 seconds			
Regulation system		Nil			
Measuring gate by quartz tester		Use 10-second gate.			
Battery		SEIKO SR927W, Maxell SR927W, SONY SR927W, EVEREADY 399 Battery life is approximately 2 years. Voltage: 1.55V			
Jewels		0 jewel			

HATTORI SEIKO CO., LTD.

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Disassembling procedures Figs.: ① ~ ⑦⑧

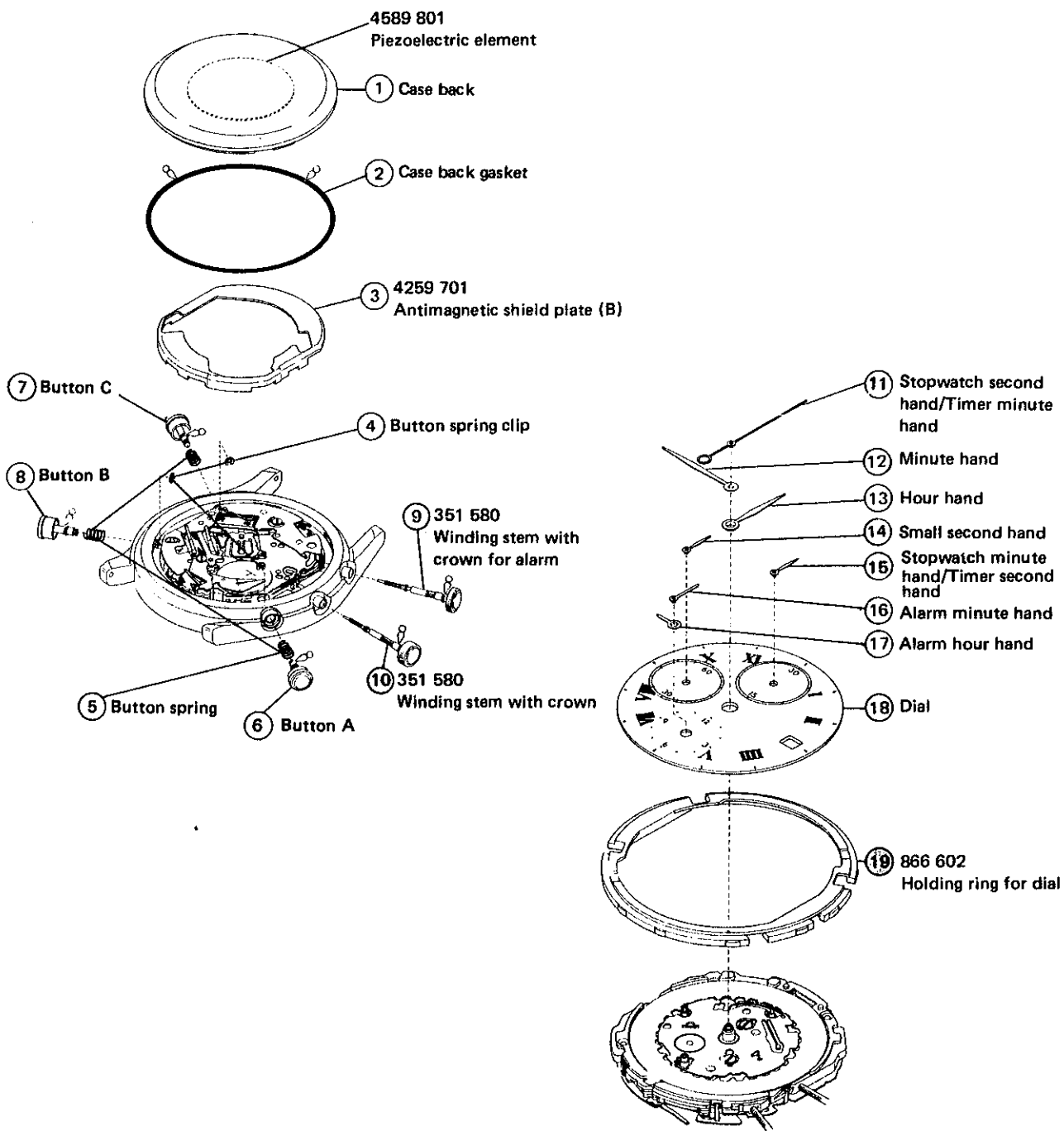
Reassembling procedures Figs.: ⑦⑧ ~ ①

**Lubricating: Types of oil**      **Oil quantity**

● Moebius A      ○ Normal quantity

○ SEIKO Watch Oil S-6      ○ Extremely small

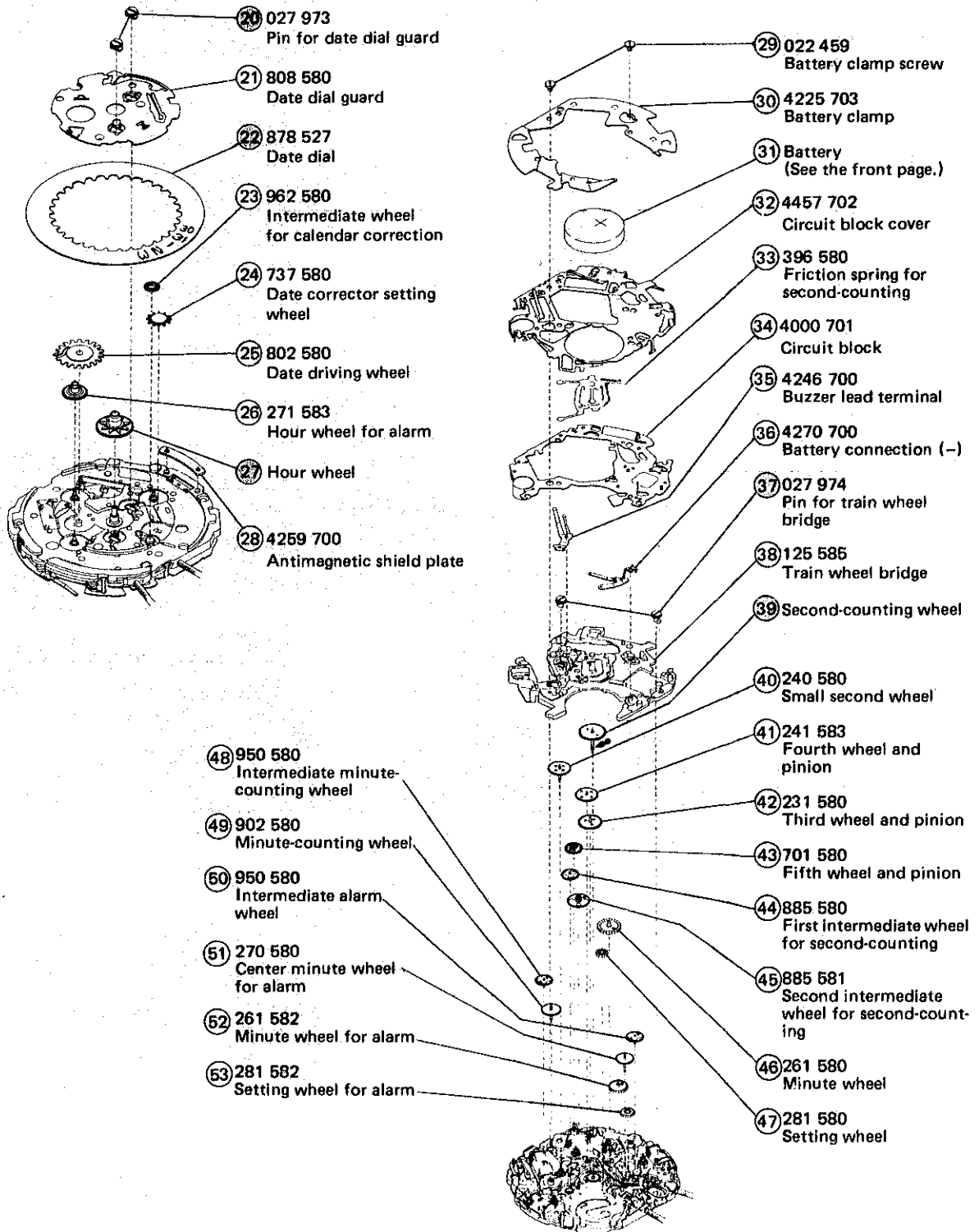
○ Silicone oil 500,000 c.s.



○ → Please see the remarks on the following pages.

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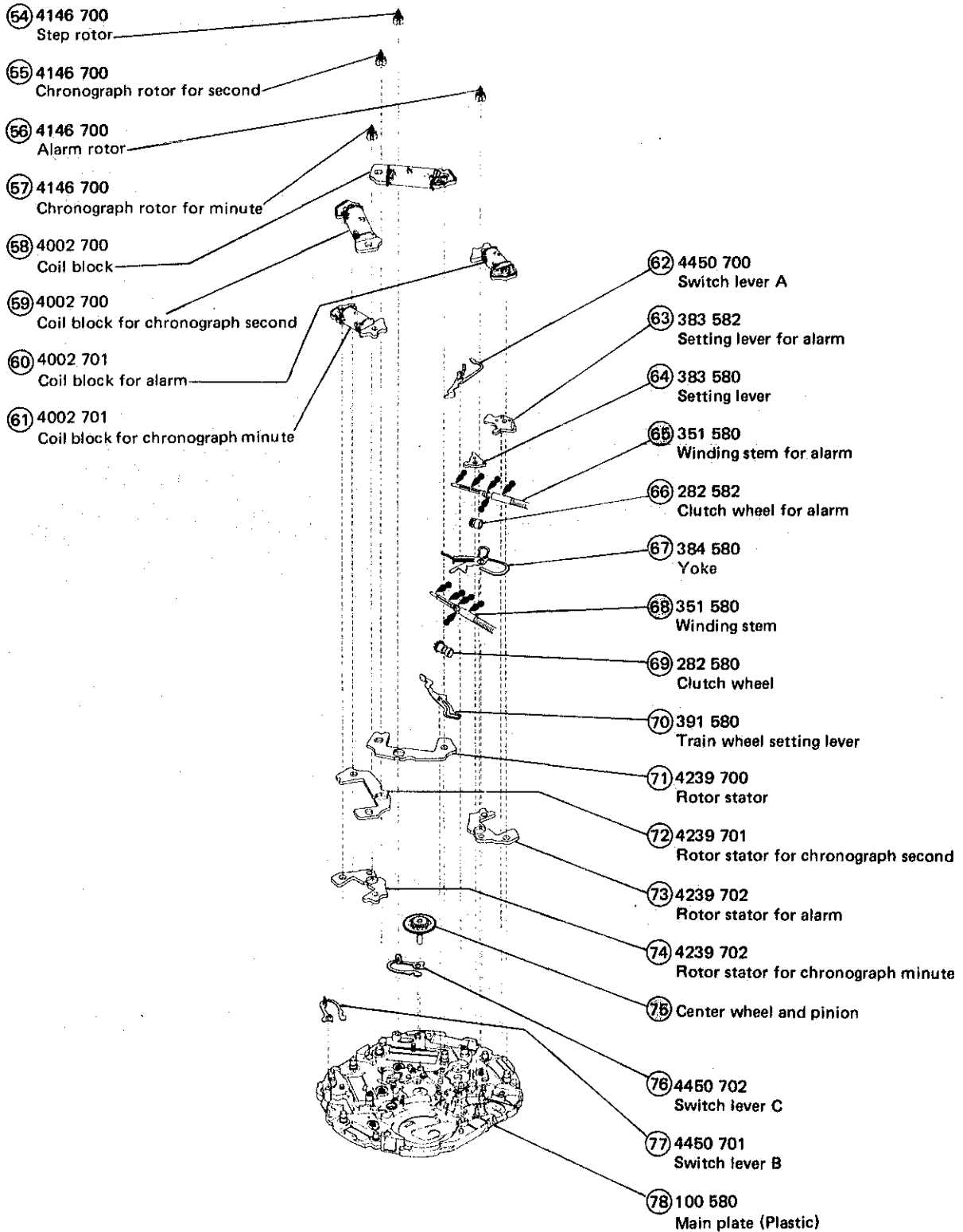
Cal. 7T42A



Please see the remarks on the following pages.

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➡ Please see the remarks on the following pages.

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Cal. 7T42A

**Remarks:**

①⑨ Holding ring for dial 866 602

The type of holding ring for dial is determined based on the design of cases.

Check the case number and refer to "SEIKO Casing Parts Catalogue" to choose a corresponding holding ring for dial.

②② Date dial 878 527 (black figures on white background)

Used when the crown and calendar frame are located at the 3 o'clock position.

The type of date dial is determined based on the design of cases.



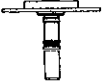

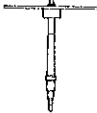
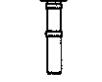
If any other type of date dial is required, check the case number and refer to "SEIKO Casing Parts Catalogue" or "List of Date Dial" to choose a corresponding date dial.

②⑦ Hour wheel

③⑨ Second-counting wheel

⑦⑤ Center wheel and pinion

**Combination**

Parts name Type*	Hour wheel	Second-counting wheel	Center wheel and pinion
M	 271 580	 888 580	 221 580
L	 271 588	 888 582	 221 583

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

⑥⑤ Winding stem for alarm 351 580

⑥⑧ Winding stem 351 580

The type of winding stem for alarm and winding stem are determined based on the design of cases.

Check the case number and refer to "SEIKO Casing Parts Catalogue" to choose a corresponding winding stem.

②⑩ Pin for date dial guard

③⑦ Pin for train wheel bridge

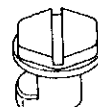
For distinction between the pins, see the illustration below.

[Pin for date dial guard]



027 973

[Pin for train wheel bridge]



027 974

- The explanation here is only for the particular points of Cal. 7T42A.
- For the repairing, checking and measuring procedures, refer to the "PARTS CATALOGUE/TECHNICAL GUIDE for Cal. 7T32A" and the "TECHNICAL GUIDE, GENERAL INSTRUCTIONS".

## I. POINTS OF DIFFERENCE BETWEEN Cal. 7T32A AND Cal. 7T42A

- Specifications of the CPU-IC have been changed and Cal. 7T42A is equipped with a timer function.

- **Difference in parts**

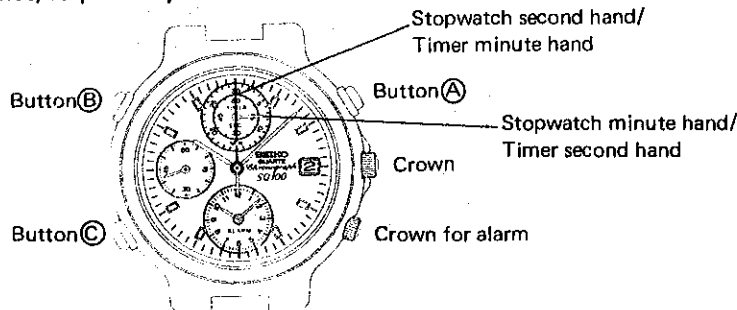
- Parts newly added for Cal. 7T42A

Antimagnetic shield plate (B) 4259 701  
 Antimagnetic shield plate 4259 700

- Parts with different part No.

	Cal. 7T32A	Cal. 7T42A	Difference
Circuit block cover	4457 700	4457 702	Marking has been changed.
Circuit block	4000 700	4000 701	Specifications of IC have been changed.

- When using the timer, the stopwatch second and stopwatch minute hands functions as the timer minute and timer second hands, respectively.



## II. CHECKING OF THE FUNCTIONS OF Cal. 7T42A

The following checking procedure should be carried out in addition to those for Cal. 7T32A.

- **Checking of the timer function**

- 1) Pull out the crown for alarm to the first click. The warning beep may sound. In that case, press "A", "B" or "C" to stop it.
- 2) Press "B" twice to set the timer minute hand (stopwatch second hand) for "2 minutes".
- 3) Press "A" to check if the timer starts counting down.  
 As "A" is pressed, the timer minute hand (stopwatch second hand) moves back one minute and the timer second hand (stopwatch minute hand) starts moving counterclockwise.
- 4) Check if, from one minute before the set time is up, the timer second hand stops and the timer minute hand moves counterclockwise at one-second intervals.
- 5) Check if the warning beep sounds once every second for 3 seconds before the set time is up.

## III. VALUE CHECKING

### ● Coil block resistance

Coil block for alarm	:	1.8K $\Omega$ ~ 2.4K $\Omega$
Coil block for chronograph minute	:	1.8K $\Omega$ ~ 2.4K $\Omega$
Coil block for chronograph second	:	2.0K $\Omega$ ~ 2.6K $\Omega$
Coil block	:	2.0K $\Omega$ ~ 2.6K $\Omega$

### ● Upconverter coil resistance : 45 $\Omega$ ~ 60 $\Omega$

### ● Current consumption

Before measuring current consumption, be sure to reset the circuit.

\* Refer to "A necessary step after installing the battery".

For the whole of the movement

Time mode	:	less than 2.5 $\mu$ A
Stopwatch mode	:	less than 9.5 $\mu$ A

For the circuit block alone

Time mode	:	less than 1.8 $\mu$ A
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### ● Time accuracy

When measuring the accuracy, make sure that the crown for alarm (at the 4 o'clock side) is at the first or second click position.