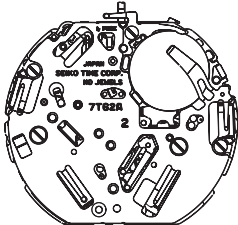
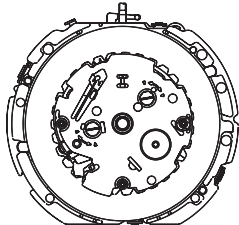


# PARTS CATALOGUE/TECHNICAL GUIDE

## Cal. 7T62A, 7T92A

### [SPECIFICATIONS]

Item		Cal. No.	7T62A	7T92A
Movement				
			The illustrations refer to Cal. 7T62A. <span style="float: right;">(x 1.0)</span>	
Movement size	Outside diameter		ø27.6 mm	
	Casing diameter		ø27.0 mm	
	Height		3.3 mm	
Time indication	Main time		Hour, minute and small second hands	
	Stopwatch		Minute hand 1/5-second hand (Moves at 0.2-second intervals.)	Hour and minute hands Second hand 1/20-second hand (Moves at 0.05-second intervals.)
	Alarm		Hour and minute hands (Minute hand moves at 1-minute intervals.)	—————
Driving system			Step motor (Load compensated driving pulse type, 4 pcs.)	
Additional mechanism			<ul style="list-style-type: none"> <li>• Electronic circuit reset switch</li> <li>• Train wheel setting device</li> <li>• Date calendar</li> <li>• Instant setting device for date calendar</li> <li>• Battery life indicator</li> </ul>	
			<ul style="list-style-type: none"> <li>• Stopwatch function               <ul style="list-style-type: none"> <li>· Measures up to 60 minutes in 1/5 second increments.</li> <li>· Accumulated elapsed time measurement</li> <li>· Split time measurement</li> </ul> </li> <li>• Single-time alarm function</li> </ul>	<ul style="list-style-type: none"> <li>• Stopwatch function               <ul style="list-style-type: none"> <li>· Measures up to 12 hours in 1/20 second increments.</li> <li>· Accumulated elapsed time measurement</li> <li>· Split time measurement</li> </ul> </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	Battery No.		SEIKO SR927W, SONY SR927W, Maxell SR927W, Matsushita SR927W	SEIKO SR927SW, SONY SR927SW, Maxell SR927SW, Matsushita SR927SW
	Voltage		1.55 V	
	Battery life		Approx. 3 years	
Jewels			0 jewels	

SEIKO WATCH CORPORATION

# REMARKS ON REPAIRING CAL. 7T62A AND 7T92A

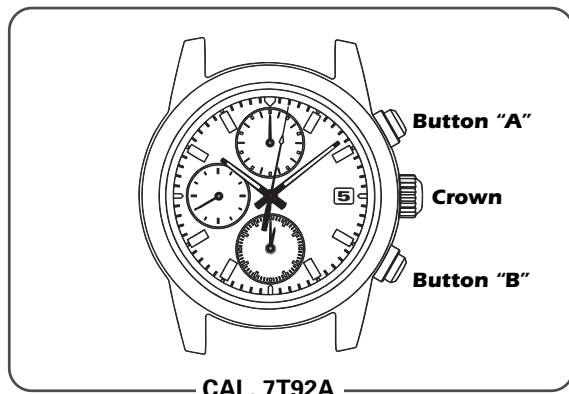
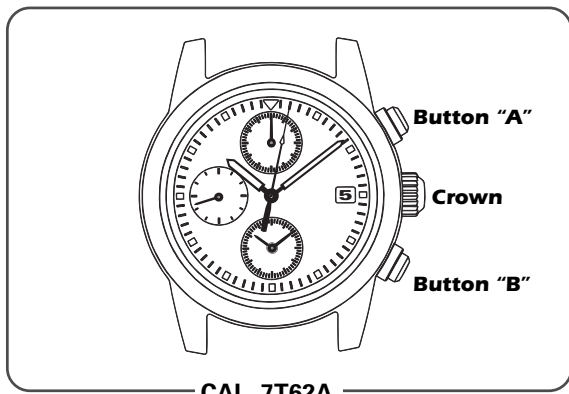
Unlike the other Cal. 7T Series watches, which have two crowns and three buttons, Cal. 7T62A and Cal. 7T92A have one crown and two buttons. But, their basic movement structure is similar in other respects, and the knowledge and technique you have gained in handling the previous Cal. 7T Series watches will come in handy when you repair Cal. 7T62A/7T92A.

When repairing, however, you are requested to have the full knowledge of the features characteristic of these watches and strictly observe the repairing and checking instructions provided in this guide so that the watches will be repaired correctly.

## FEATURES

As Cal. 7T62A/7T92A has fewer crowns and buttons, the operating procedures for alarm setting (for Cal. 7T62A only), time setting and stopwatch hand position adjustment differ from those of the other Cal.7T Series watches.

As a result of this structure change, the battery life of Cal. 7T62A/7T92A has increased by one year to 3 years as compared with that of the other Cal. 7T series watches.



### 1. STOPWATCH FUNCTION

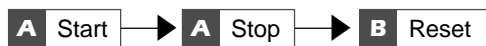
#### ● Measurement performance

Cal. 7T62A : Measures up to 60 minutes in 1/5 second increments.  
 Displays the elapsed time with the stopwatch minute and 1/5-second hands.

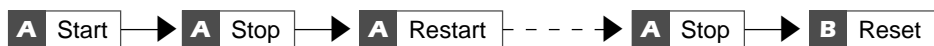
Cal. 7T92A : Measures up to 12 hours in 1/20 second increments.  
 Displays the elapsed time with the stopwatch hour, minute, second and 1/5-second hands.

#### ● Button operation

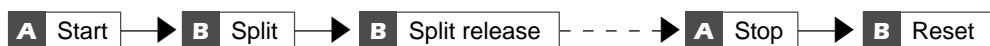
##### Standard Measurement



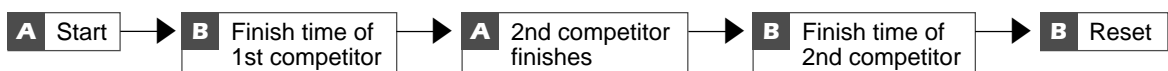
##### Accumulated Elapsed Time Measurement



##### Split Time Measurement



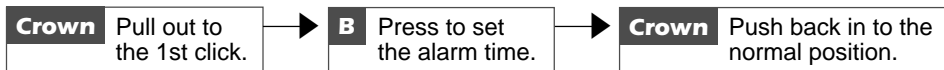
##### Measurement of Two Competitors



**2. ALARM FUNCTION (For Cal. 7T62A only)**

- Single-time alarm: Can be set to ring only once within the coming 12 hours.  
Alarm engaged with the crown at the normal position.

● Alarm setting operation



# PARTS CATALOGUE

Disassembling procedures Figs. : ① → ⑤⑤

Reassembling procedures Figs. : ⑤⑤ → ①

**Lubricating: Types of oil**

- Moebius A
- ▨ Moebius F
- SEIKO Watch Oil S-6

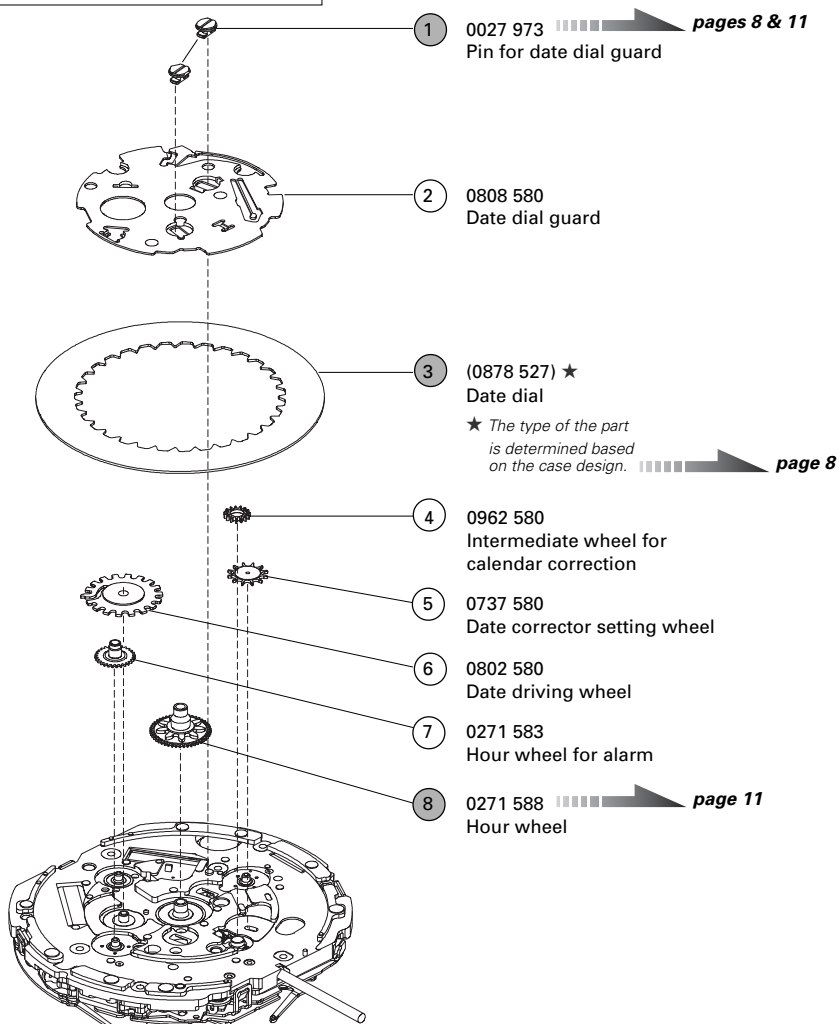
**Oil quantity**

- Normal quantity
- Liberal quantity



The illustration refers to both Cal. 7T62A and 7T92A.

**Remarks on removing the winding stem**

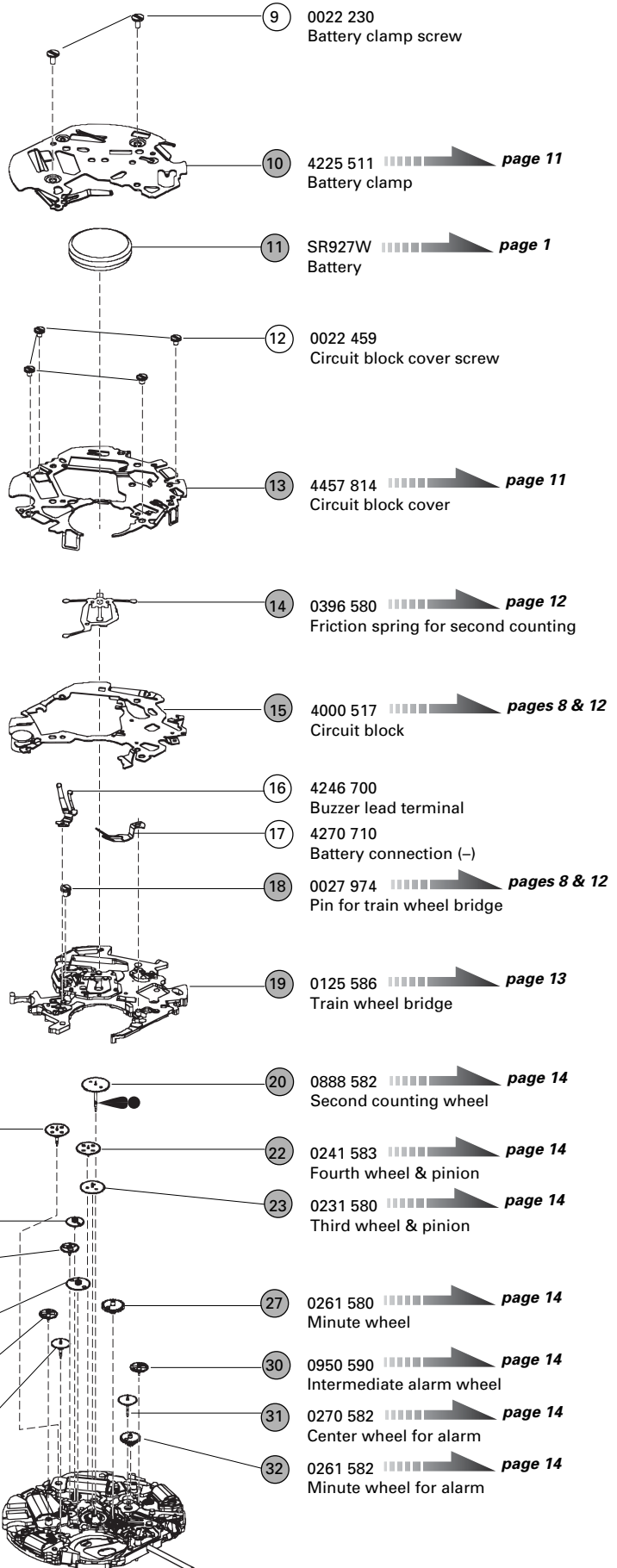
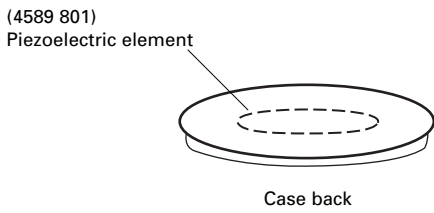
To remove the winding stem when taking out the movement from the case or while disassembling the parts during repair work, be sure to pull out the crown to the first click, and then, remove the winding stem while pushing the setting lever.

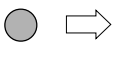


● → Please see the page shown after the part name.  
Lubricating of some parts is shown in "III. REMARKS ON DISASSEMBLING AND REASSEMBLING".

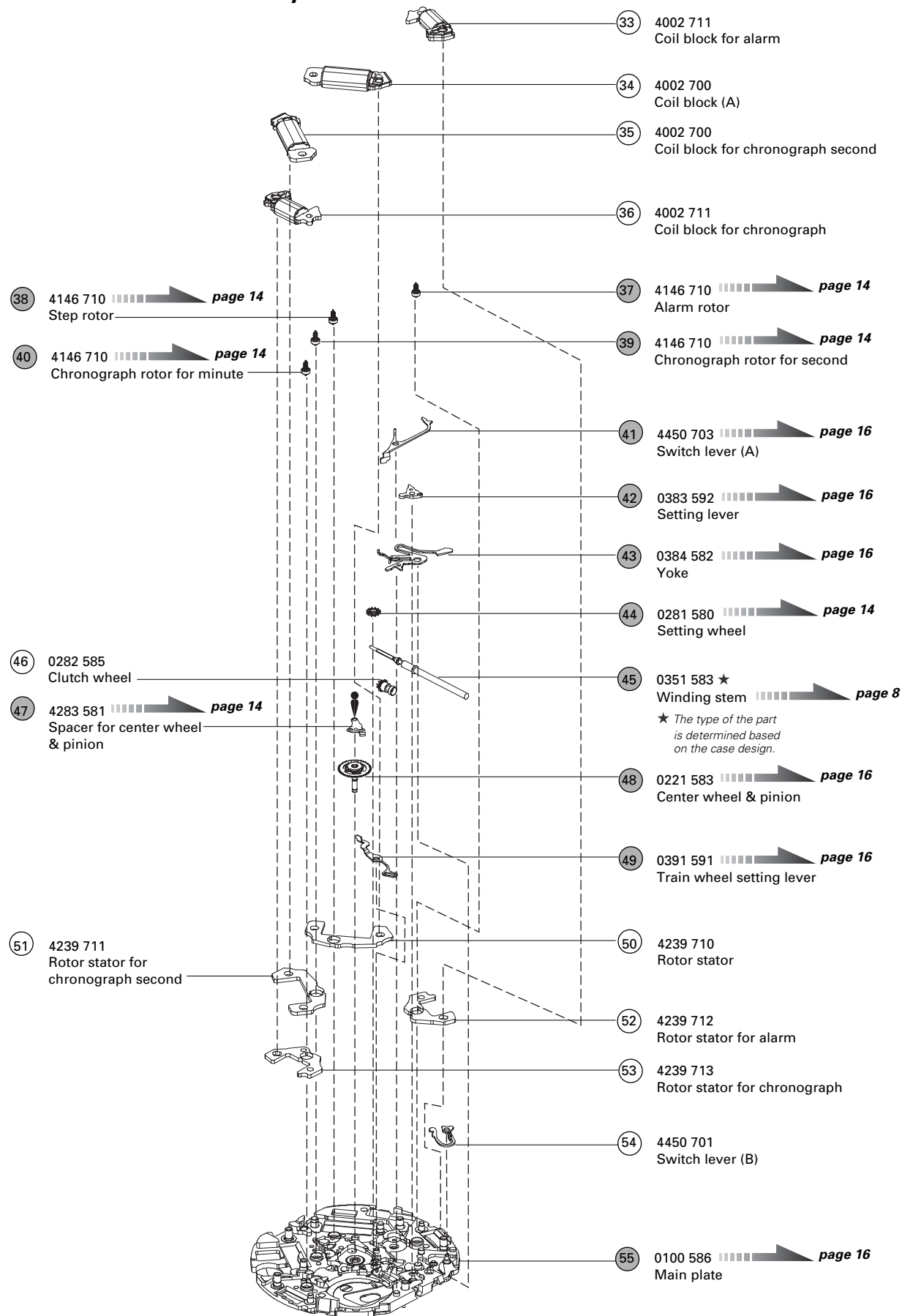
	0022 230 • Battery clamp screw (2 pcs.)
	0022 459 • Circuit block cover screw (4 pcs.)

The illustration refers only to Cal. 7T62A.

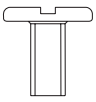



 Please see the page shown after the part name. Lubricating of some parts is shown in "III. REMARKS ON DISASSEMBLING AND REASSEMBLING".

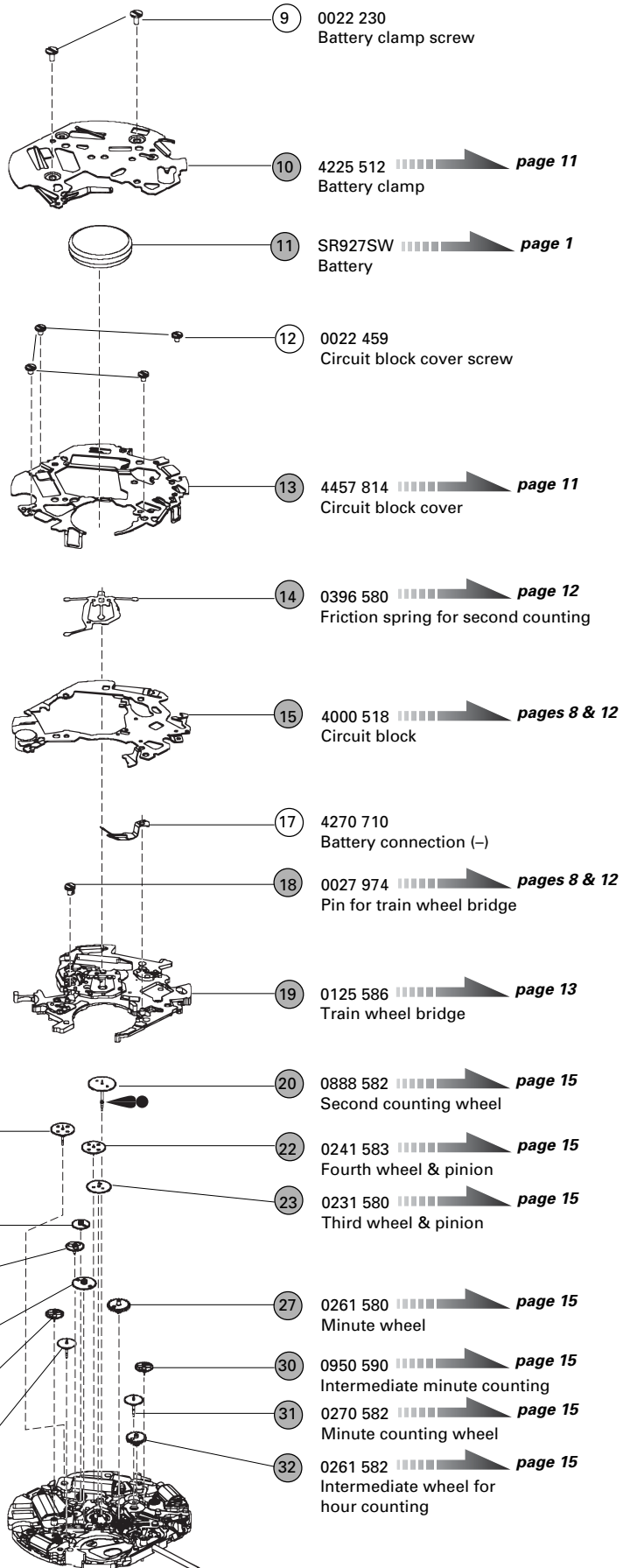
The illustration refers only to Cal. 7T62A.

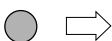


Please see the page shown after the part name.  
Lubricating of some parts is shown in "III. REMARKS ON DISASSEMBLING AND REASSEMBLING".

	0022 230 • Battery clamp screw (2 pcs.)
	0022 459 • Circuit block cover screw (4 pcs.)

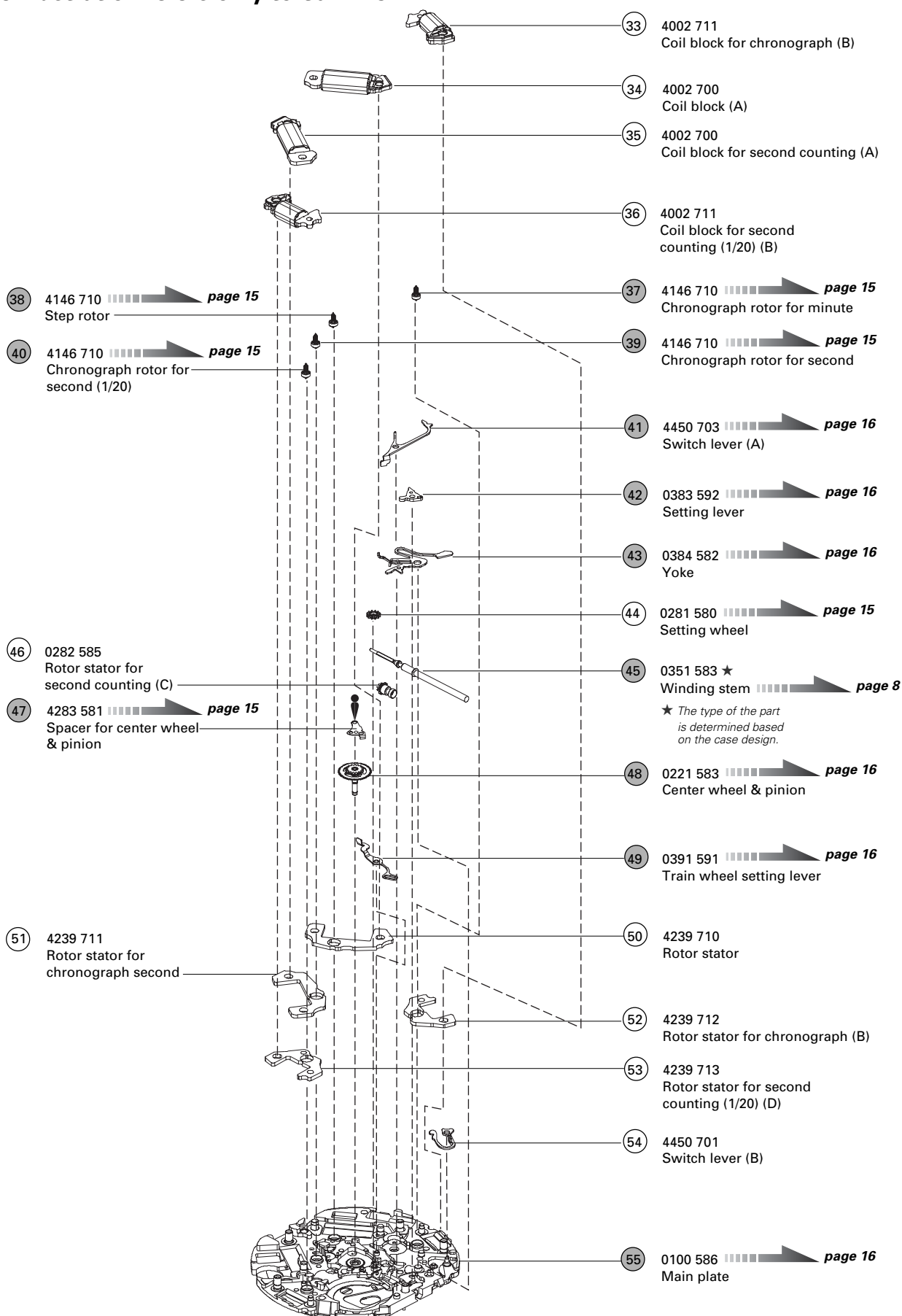
The illustration refers only to Cal. 7T92A.



 Please see the page shown after the part name.

Lubricating of some parts is shown in "III. REMARKS ON DISASSEMBLING AND REASSEMBLING".

The illustration refers only to Cal. 7T92A.



➡ Please see the page shown after the part name.  
 Lubricating of some parts is shown in "III. REMARKS ON DISASSEMBLING AND REASSEMBLING".

**Remarks:**

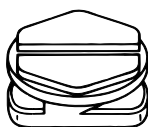
- Holding ring for dial 0866 650
- ③ Date dial 0878 527
- ④⑤ Winding stem 0351 583

The types of the parts are determined based on the design of cases. Check the case number, and refer to "Casing Parts Catalogue" to choose corresponding parts.

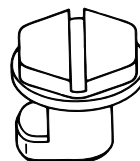
- ① Pin for date dial guard 0027 973
- ⑱ Pin for train wheel bridge 0027 974

• **Point of distinction**

[Pin for date dial guard]



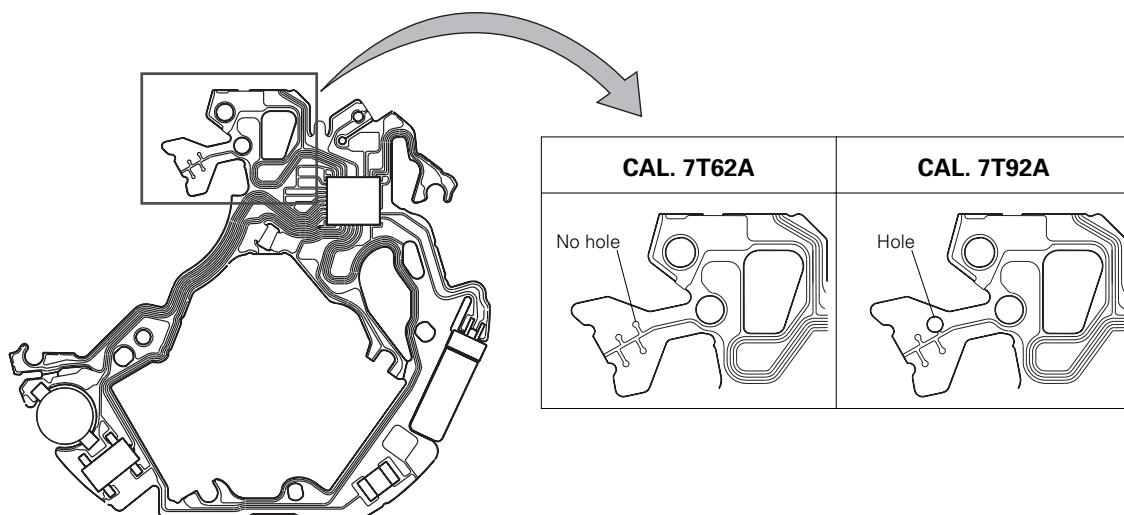
[Pin for train wheel bridge]



- ⑮ Circuit block

The circuit blocks of Cal. 7T62A and 7T92A have a hole for discrimination as shown in the illustrations below.

\* The holes for discrimination are intended to discriminate between the circuit blocks for Cal. 7T62A and Cal. 7T92A only.

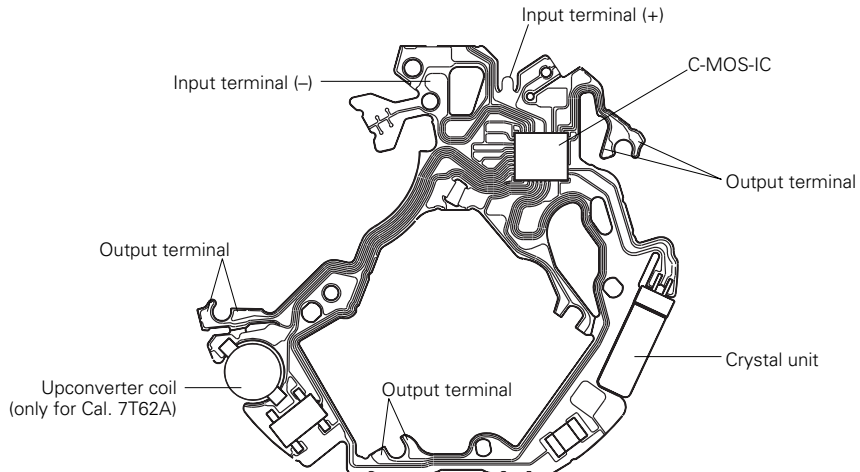




# TECHNICAL GUIDE

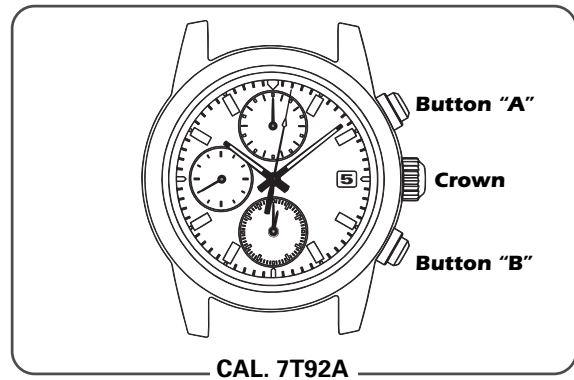
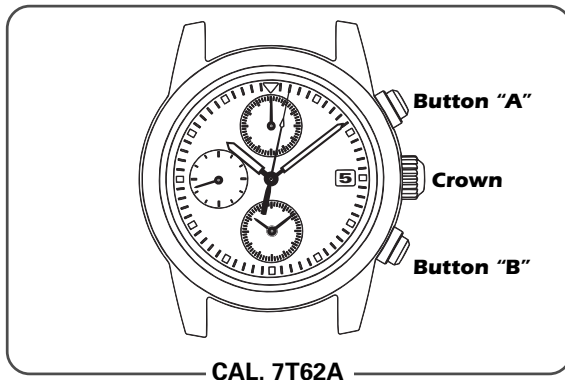
- The explanation here is only for the particular points of Cal. 7T62A and 7T92A.
- For the repairing, checking and measuring procedures, refer to the "TECHNICAL GUIDE, GENERAL INSTRUCTIONS".

## I. STRUCTURE OF THE CIRCUIT BLOCK



## II. NECESSARY PROCEDURE AFTER BATTERY CHANGE

After installing the battery, **set the time and reset the stopwatch hands to the "0" position** following the procedure below.



**Crown** Pull out to the 2nd click when the small second hand is at the 12 o'clock position.

**Crown** Turn to set the time hands to the current time.  
\* Check that AM/PM is correctly set.

**CAL. 7T62A**

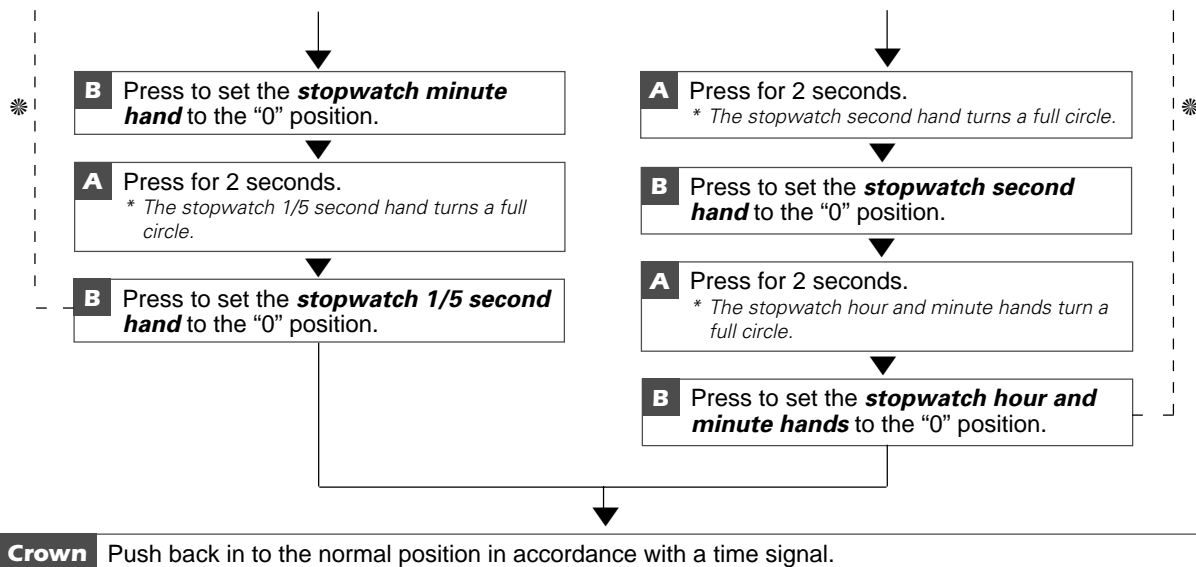
**B** Press to set the **alarm hands** to the current time.

**A** Press for 2 seconds.  
\* The stopwatch minute hand turns a full circle.

**CAL. 7T92A**

**A** Press for 2 seconds.  
\* The stopwatch 1/20 second hand turns a full circle.

**B** Press to set the **stopwatch 1/20 second hand** to the "0" position.



\* Pressing Button "A" for 2 seconds can resume the procedure again as indicated by the arrow if necessary.

### III. REMARKS ON DISASSEMBLING AND REASSEMBLING

● Hands

● **Caution for disassembling**

The hour wheel is made of engineering plastics. When pulling out the hour hand, take care not to damage the hour wheel.

● **How to install**

- 1) Pull out the crown with winding stem to the second click. Then, turn the crown clockwise to turn the time hands also clockwise.
- 2) Stop turning the hands when the date changes to the next.
- 3) Install the small second, hour and minute hands so that they point exactly to the 12 o'clock position.
- 4) Install the stopwatch hands so that they point exactly to the "0" position of the stopwatch scale.
  - \* After installing the hands, be sure to check that they move smoothly without interfering with one another.

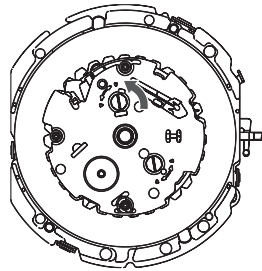
● Dial

● **Caution for disassembling**

When disassembling the dial, take care not to bend the dial leg. Raise the portions around the dial leg by turns gradually to remove the dial.

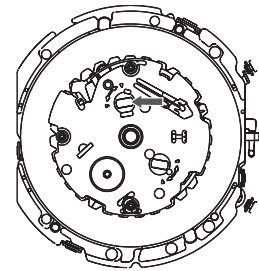
① Pin for date dial guard

• How to remove



Turn the pin 90° counterclockwise to loosen the pin.

• How to install



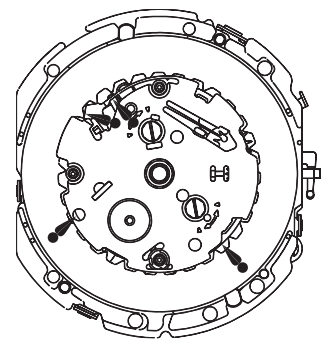
Set the pin securely into the groove. Then, turn it 90° clockwise to fix the pin.

**Notes:**

- \* Do not turn the pin more than 90° in either direction.
- \* Do not turn the pin forcibly.

• Lubricating

Lubricate the wheel edge of both the date driving wheel and date dial.



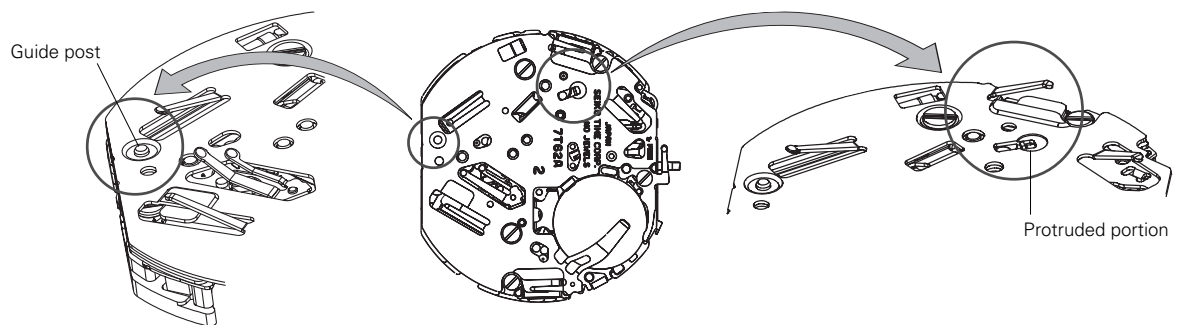
Moebius A

⑧ Hour wheel

When installing the hour wheel, check that it engages with the pinion of the minute wheel.

⑩ Battery clamp

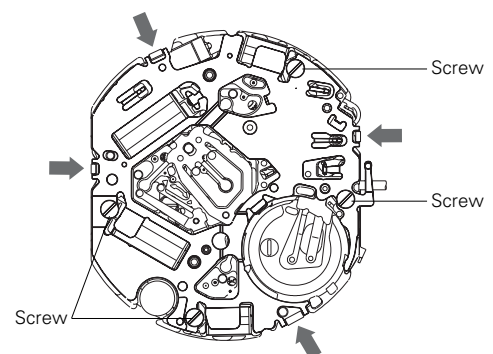
When installing the battery clamp, set it securely to the two hooking portions of the movement.



⑬ Circuit block cover

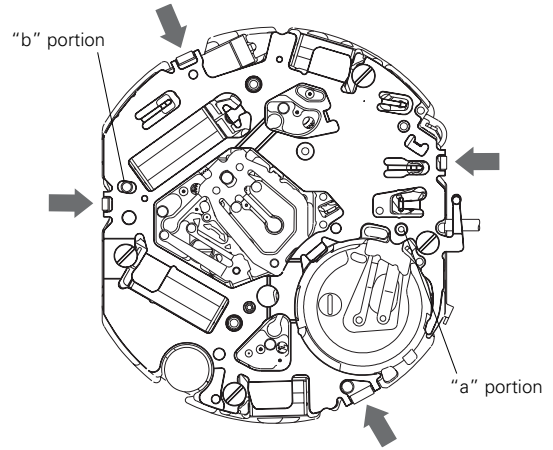
• How to remove

- 1) Loosen the four circuit block cover screws.
- 2) Release the four hooking portions of the circuit block cover. (Indicated by the arrows in the illustration at right)



• **How to install**

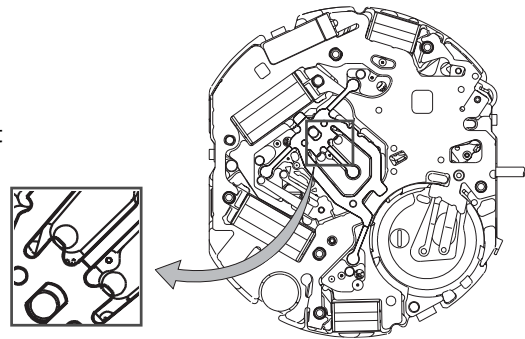
- 1) Have the four hooking portions of the circuit block cover (indicated by the arrows in the illustration at right) catch the movement securely. In doing so, check if the circuit block is set properly to guide posts "a" and "b", and reset it in position if necessary.
- 2) Tighten the four circuit block cover screws. When tightening the screws, take care not to cut the coil.



14 Friction spring for second counting

• **Setting position**

To set the friction spring for second counting, slip it into the gap under the train wheel bridge.



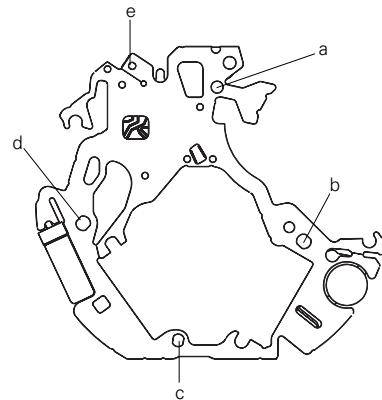
15 Circuit block

• **Caution for disassembling**

The circuit block is fixed to the train wheel bridge with the guide pins ("a", "b", "c", "d" and "e" in the illustration shown at right). When removing the circuit block from the guide pins, take care not to damage the circuit block.

• **How to install**

Have the guide holes of the circuit block ("a", "b", "c", "d" and "e" portions in the illustration) securely caught by the guide pins of the train wheel bridge and the guide tubes of the main plate.



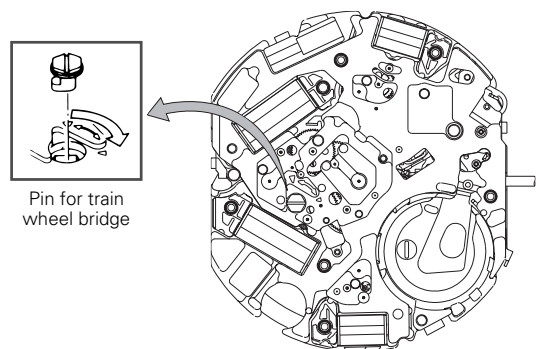
18 Pin for train wheel bridge

• **How to remove**

Turn the pin 90° counterclockwise with a screwdriver to loosen the pin.

• **How to install**

Set the pin in the direction as shown at right. Then, turn it 90° clockwise with a screwdriver to fix the pin.



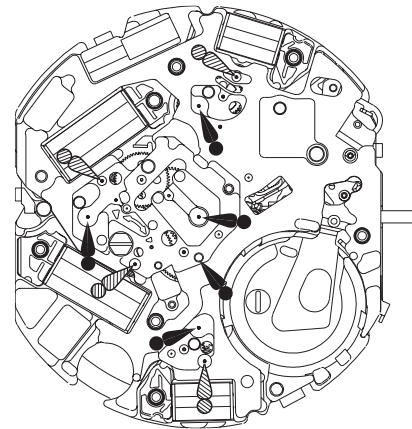
• **Lubricating**

After installing the pin, lubricate the upper pivot of the following parts:

- Chronograph rotor for second, chronograph rotor for minute, alarm rotor and step rotor (for Cal. 7T62A)

Chronograph rotor for second (1/20), chronograph rotor for second, chronograph rotor for minute and step rotor (for Cal. 7T92A)

- Minute wheel
- Small second wheel
- Minute counting wheel (for Cal. 7T62A)
- Second counting wheel (1/20) (for Cal. 7T92A)
- Minute wheel for alarm (for Cal. 7T62A)
- Minute counting wheel (1/20) (for Cal. 7T92A)



● Moebius A  
 Moebius F

①9 Train wheel bridge

• **How to install**

Before installing the train wheel bridge, carefully check the setting positions of the wheels and rotors. Be sure to check that each rotor has a lower pivot attached securely.

**If the wheels and rotors are all set in position with the winding stem with crown at the first click, the train wheel bridge can be installed smoothly. There is no need to press down the train wheel bridge.**

If the train wheel bridge will not be seated in position smoothly, the other parts must be set in the wrong position. Check their setting positions.

● **Wheels and pinions**

**Notes:**

- \* Intermediate minute counting wheel and intermediate alarm wheel can be used interchangeably.
- \* The following four rotors for each calibre can be used interchangeably:

**CAL. 7T62A**

- Chronograph rotor for second
- Chronograph rotor for minute
- Alarm rotor and
- Step rotor

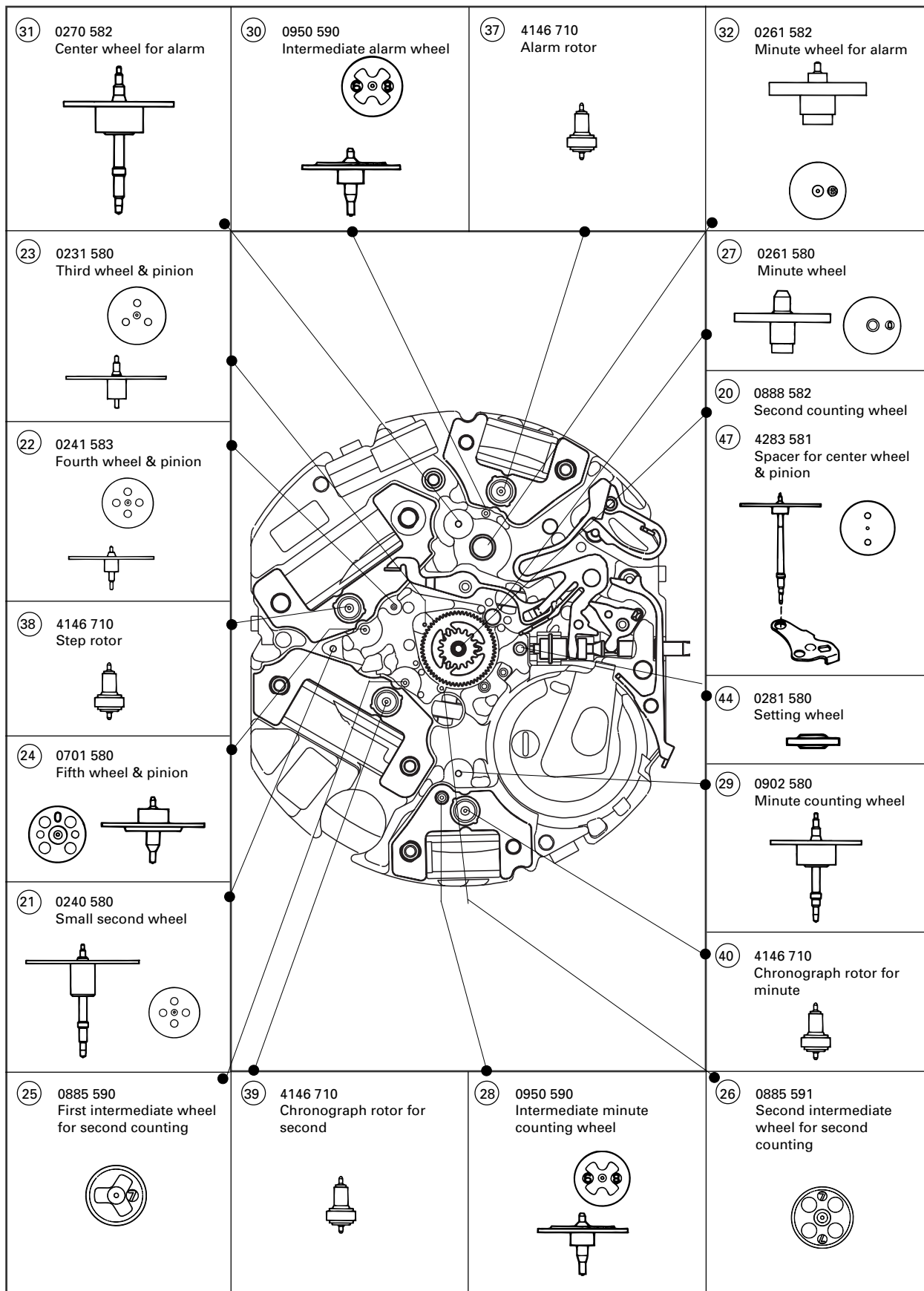
**CAL. 7T92A**

- Chronograph rotor for second (1/20)
- Chronograph rotor for second
- Chronograph rotor for minute and
- Step rotor

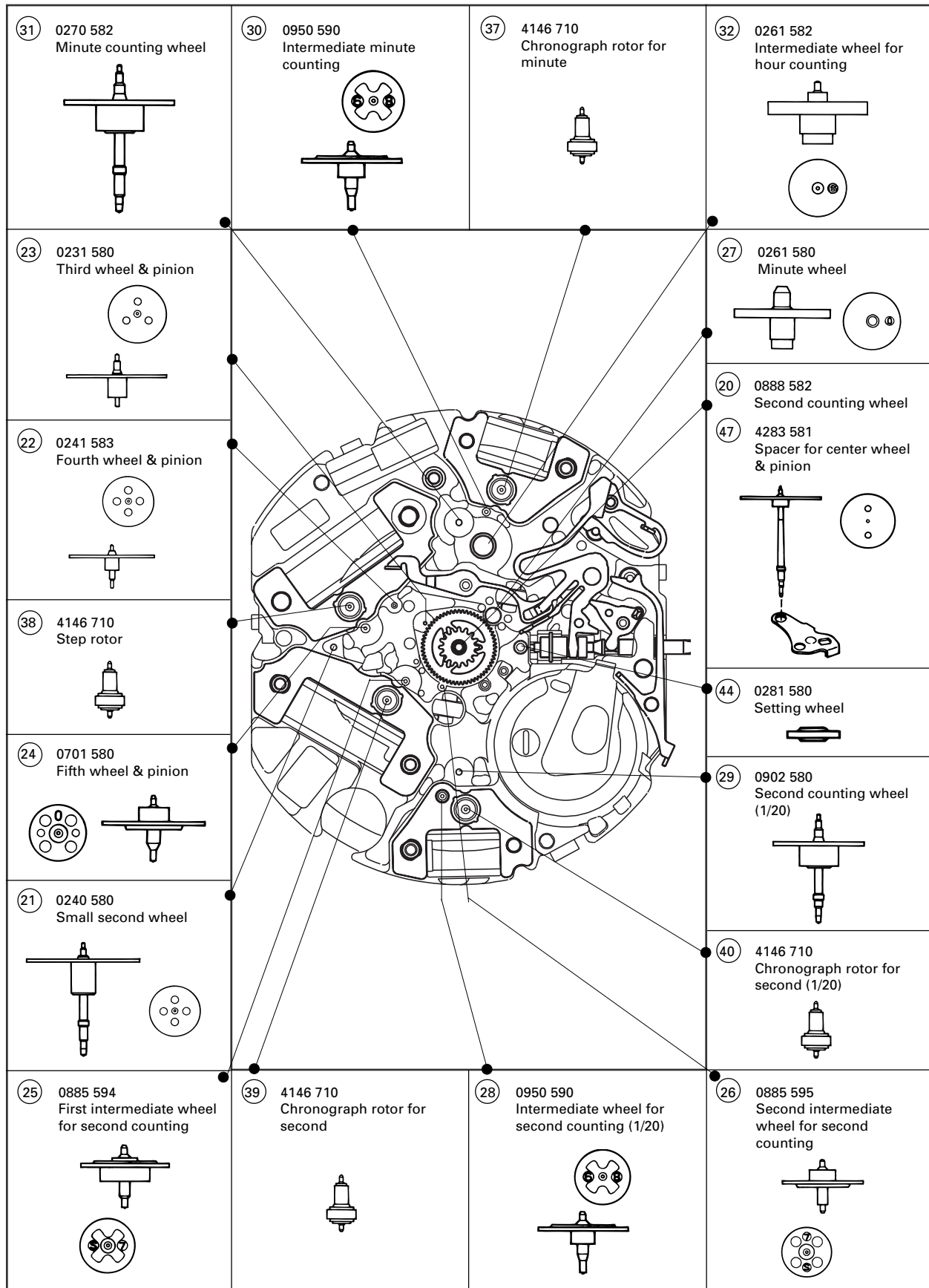
• **Setting position**

See the illustration on the next page.

The illustrations refer only to Cal. 7T62A.

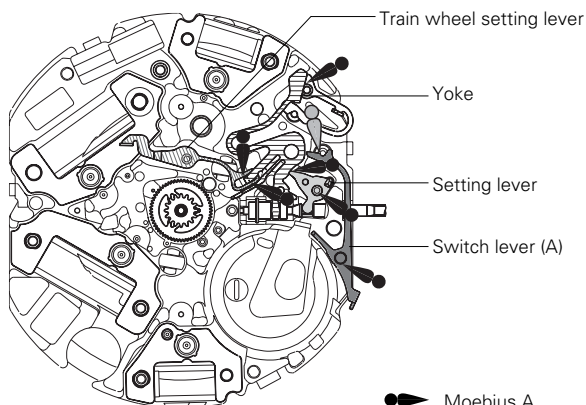
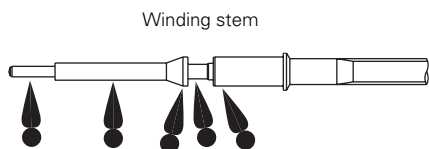


The illustrations refer only to Cal. 7T92A.



- ④1 Switch lever (A)
- ④2 Setting lever
- ④3 Yoke
- ④9 Train wheel setting lever

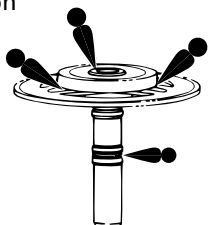
• **Setting position and lubricating**



- Moebius A
- SEIKO Watch Oil S-6

- ④8 Center wheel and pinion

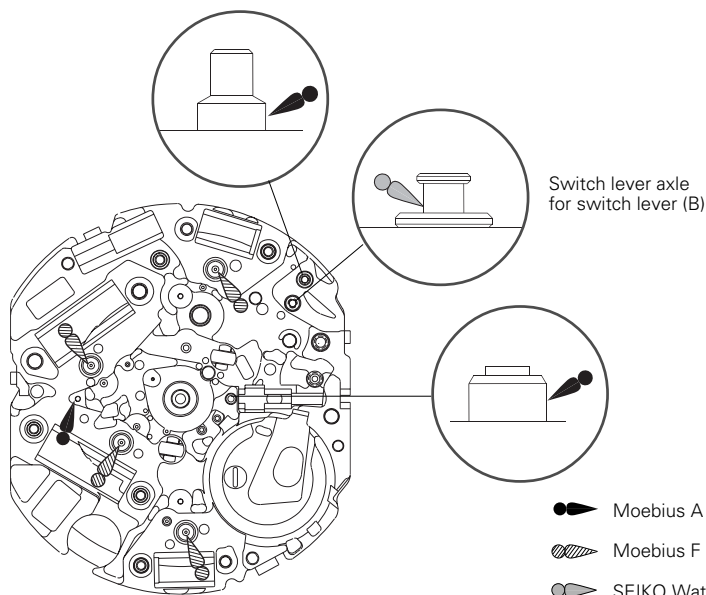
• **Lubricating**



- Moebius A

- ⑤5 Main plate

• **Lubricating**



- Moebius A
- Moebius F
- SEIKO Watch Oil S-6

## IV. VALUE CHECKING

● **Coil block resistance**

Coil block (A)	1.70 K $\Omega$ ~ 2.60 K $\Omega$
Coil block for chronograph second	1.70 K $\Omega$ ~ 2.60 K $\Omega$
Coil block for chronograph minute (Cal. 7T62A) Coil block for second counting (1/20) (Cal. 7T92A)	1.80 K $\Omega$ ~ 2.40 K $\Omega$
Coil block for alarm (Cal. 7T62A) Coil block for chronograph (Cal. 7T92A)	1.80 K $\Omega$ ~ 2.40 K $\Omega$

● **Upconverter coil resistance** : 150  $\Omega$  ~ 180  $\Omega$



### ● Current consumption

For the whole movement	Less than 1.10 $\mu\text{A}$ (with 1.55 V supplied from a battery) (when the stopwatch is not used)
For the circuit block alone	Less than 0.20 $\mu\text{A}$ (with 1.55 V supplied from a battery)

When measuring the current consumption with SEIKO Multi-Tester S-860, select the measurement range as follows:

For the whole movement	Use the range of 40 $\mu\text{A}$ of SUPPLY V (= 1.55 V) & GATE TIME (2 S)
For the circuit block alone	Use the range of 4 $\mu\text{A}$ of SUPPLY V (= 1.55 V) & GATE TIME (2 S)

## V. FUNCTION CHECKING

### ● TIME SETTING AND STOPWATCH HAND POSITION ADJUSTMENT

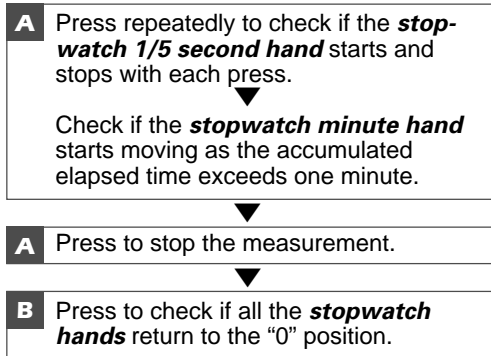
Follow the procedure in "II. NECESSARY PROCEDURE AFTER BATTERY CHANGE" to set the time hands and reset the stopwatch hands to the "0" position.

### ● STOPWATCH FUNCTION

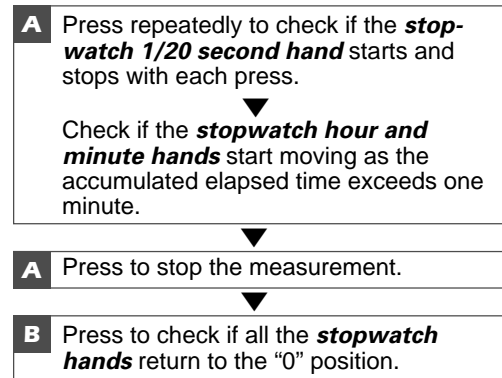
- \* Before checking the stopwatch function, reset the stopwatch hands to the "0" position following the procedure in "II. NECESSARY PROCEDURE AFTER BATTERY CHANGE".
- \* Check that the crown is at the normal position. Otherwise, the stopwatch operation cannot be made.

#### 1. Checking for Standard Measurement / Accumulated Elapsed Time Measurement

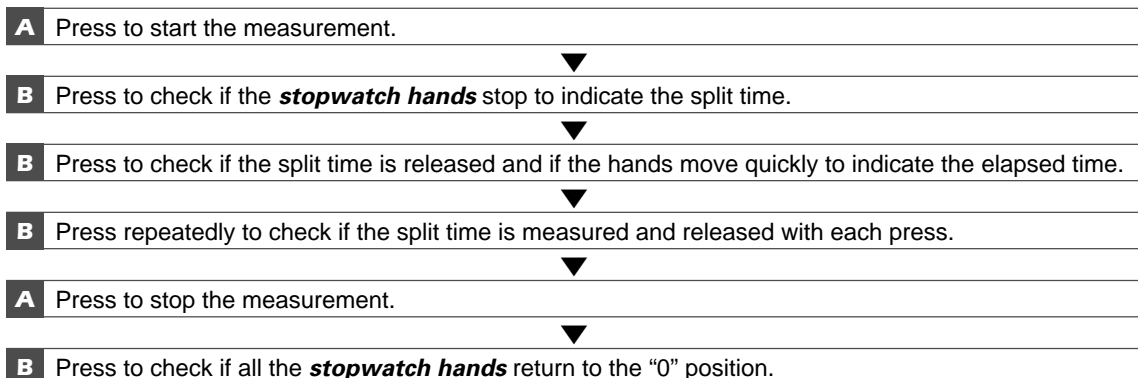
##### CAL. 7T62A



##### CAL. 7T92A



#### 2. Checking for Split Time Measurement



**Note for the stopwatch 1/20 second hand for Cal. 7T92A:**

\* After the stopwatch is started, the stopwatch 1/20-second hand automatically stops and stays at the "0" position if the measurement exceeds 10 minutes. When the measurement is stopped or split time is measured, it moves to indicate the elapsed 1/20 seconds.

Also, after the stopwatch is restarted or split time is released, the stopwatch 1/20-second hand automatically stops and stays at the "0" position if the measurement exceeds 10 minutes.

● **ALARM FUNCTION (Only for Cal. 7T62A)**

\* Before checking the alarm function, set the time and alarm hands to the current time following the procedure in "II. NECESSARY PROCEDURE AFTER BATTERY CHANGE".

**1. Alarm Time Setting**

**Crown** Pull out to the 1st click.



**B** Press repeatedly to set the **alarm hands**.  
 \* With each press, they move one minute. They move quickly if the button is kept pressed. They stop as they reach the current time. Release and press the button, and the hands will start moving again.



**2. Alarm Engagement**

**Crown** Push back in to the normal position.  
 \* At the designated alarm time the alarm rings for 20 seconds and stops. To stop it manually, press button "A" or "B".  
 \* After the alarm rings, the alarm minute hand starts moving at one-minute intervals as the alarm hands indicate the current time.



**3. To Cancel or Readjust the Designated Alarm Time**

**Crown** Pull out to the 1st click.



**B** **To cancel:** Press repeatedly to set the **alarm hands** to the desired alarm time.  
**To readjust:** Press repeatedly to set the **alarm hands** to the desired alarm time.



**Crown** Push back in to the normal position.



