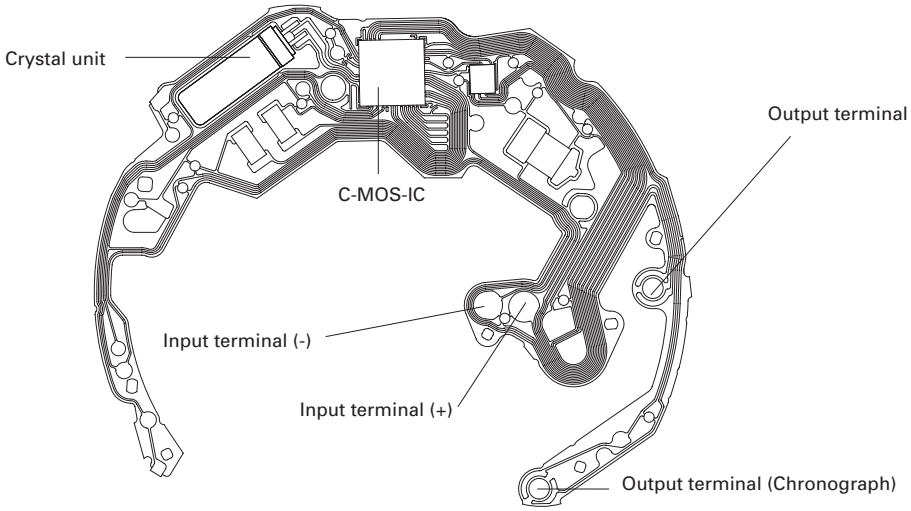
- The explanation here is only for the particular points of the Cal. 7L22A.
- For preparing, checking and measuring procedures, refer to the "TECHNICAL GUIDE, GENERAL INSTRUCTIONS".

I. STRUCTURE OF THE CIRCUIT BLOCK



II. REMARKS ON DISASSEMBLING AND REASSEMBLING

For the lubricating instructions on the following pages, refer to the icons below to identify the type and quantity of the oil required.

Lubricating : Types of oil	Oil quantity
Moebius A	Normal quantity
Moebius F	Large quantity
SEIKO Watch Oil S-6	

❖ **Exclusive movement holder for 7L22A**

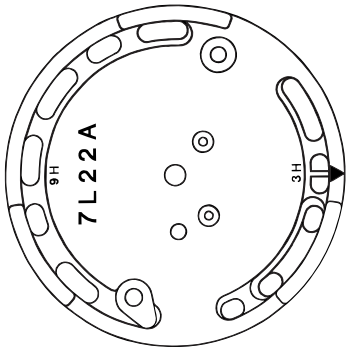
The Cal.7L22A has such a special structure that it will make it difficult for you to perform repairs with ordinary movement holders. Therefore, it is highly recommended you use the exclusive movement holder for the Cal. 7L22A for disassembling, reassembling and especially when installing the hands. The use of other movement holders could damage the movement of the Cal. 7L22A.

<How to use the exclusive movement holder>

◆ When using the exclusive movement holder during repairs on the calendar side or installation of the hands (for disassembling/reassembling procedures④ to⑳).

Use the top side of the exclusive movement holder. (Refer to the illustration to identify the top and bottom sides.)

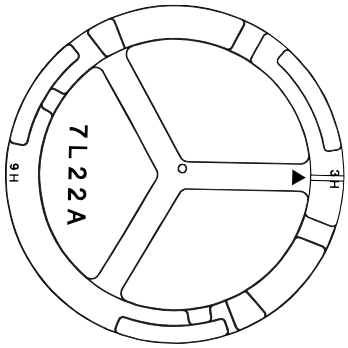
Remove① Oscillating weight screw,② Oscillating weight,③ Oscillating weight wheel from the movement, then set the movement in the movement holder with its calendar side facing up.



◆ When using the exclusive movement holder during repairs on the wheels (Automatic generator) side (for disassembling/reassembling procedures ㉑ to ㊽).

Use the bottom side of the exclusive movement holder. (Refer to the illustration to identify the top and bottom sides.)

Set the movement in the movement holder with its main plate side facing down.



① Oscillating weight screw

◆ Use a screwdriver of an appropriate size for the width of the oscillating weight screw for disassembling and/or reassembling.

◆ Tighten the oscillating weight screw firmly, applying more force than usual.

④ Stopwatch 1/5 second hand - ⑧ Hour hand

<Disassembling>

◆ When removing the hands, exercise care not to deform the hands or scratch the dial.
◆ Use a hand remover (HR-01) as needed.

<How to install the hands>

1. Pull out the crown to the second click and rotate it counterclockwise to turn the hour and minute hands clockwise, observing the movement of the date numeral in the calendar frame.
2. As the date numeral moves gradually, slow down the turning of the hands. When the date numeral jumps to the next day, stop turning the hands.
3. Install the small second hands, hour hand and minute hands exactly to the 12 o'clock position.
4. In order to reset the hands, press down the transmission lever (at the button B position).
5. Install the stopwatch minute hand exactly to the 0 minute position.
6. Install the stopwatch 1/5 second hand exactly to the 0 second position.

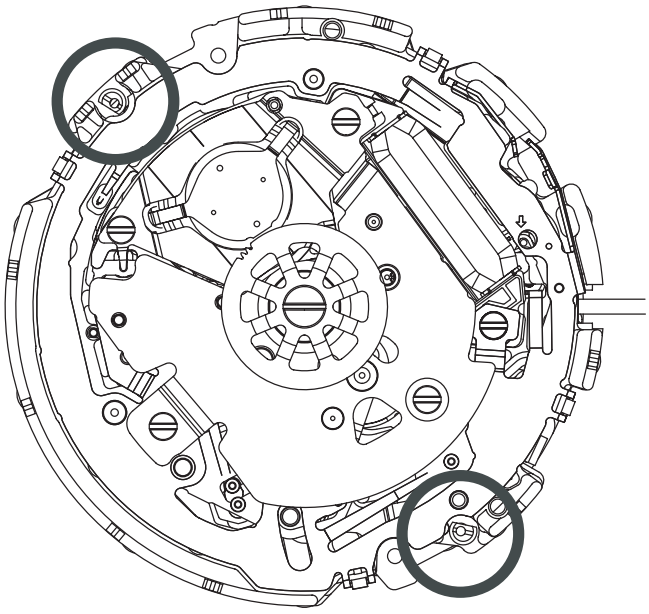
* Always install a new stopwatch minute hand and stopwatch 1/5 second hand. Used hands may drop off at an impulse of resetting.
* After completed the installation of the hands, make sure that there is no interference of the hands.

⑨ Dial

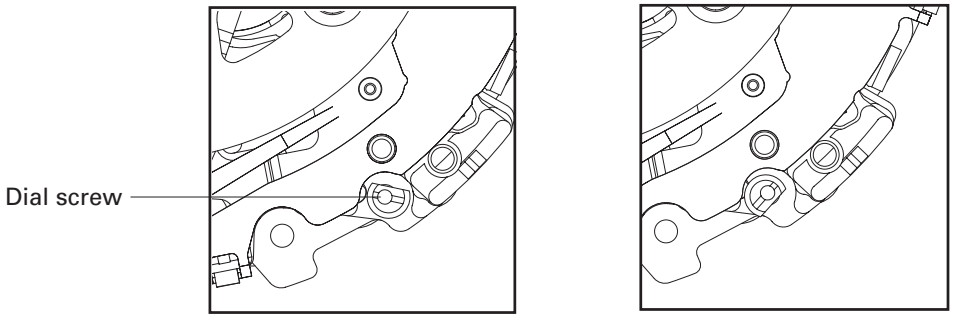
The dial is fastened by the dial screws engaged in the legs of the dial. Therefore, before removing the dial, disengage the dial screws using a screwdriver. (Refer to the illustration below.) Failing to do so could cause damages to the dial.

- The legs of the dial are firmly engaged to the circuit block spacer. Apply force to remove or install the dial.
- To remove the dial, gradually lift up the leg areas indicated in the illustration below.
- To install the dial, gently press down the leg areas indicated in the illustration below little by little alternately.
- Make sure that the dial is securely set with no gap between the dial and the date dial guide spacer.

<How to handle the dial screw>



* Never overturn the dial screws.
Be careful not to damage other parts.



Not engaged **Engaged**

⑩ Pin for date dial guard

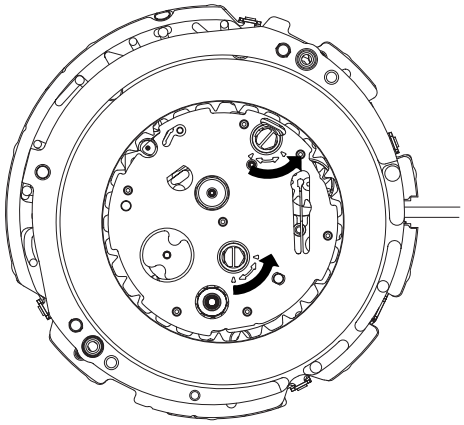
<Disassembling>

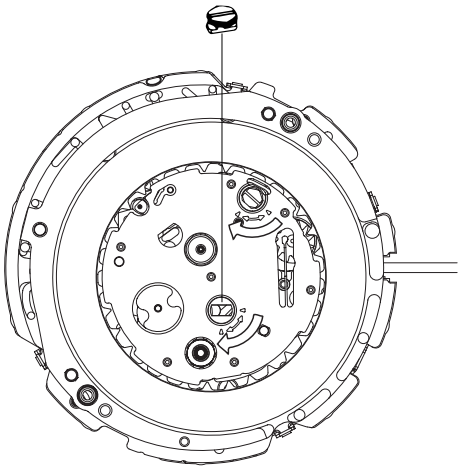
Turn the pins 90° counterclockwise to loosen them using a screwdriver.

<Reassembling>

Make sure that the pins are securely set in the hinge.

Using a screwdriver, turn the pins 90° clockwise to fix them.



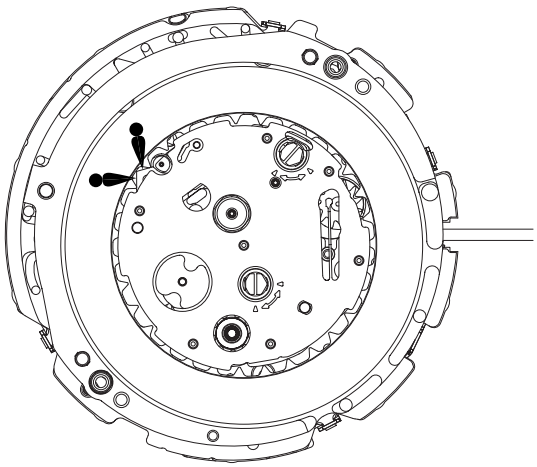


Notes:

- Never turn the pins more than 90° clockwise or counterclockwise.
- Never apply excessive force to the pins when turning them using a screwdriver.

<Lubricating>

Lubricate the joint of the teeth of the date jumper and date dial.



⑰ Hour wheel

Before installing the hour wheel, make sure that the hour wheel is firmly engaged in the pinion of the minute wheel.

⑱ Anti magnetic shield plate

The anti magnetic shield plate is engaged with the tubes of the date dial guard spacer.

Usually it is not necessary to remove the anti magnetic shield plate from the date dial guard spacer during disassembling.

*Refer to " ⑲ Date dial guide spacer " .

⑲ Date dial guide spacer

<Disassembling>

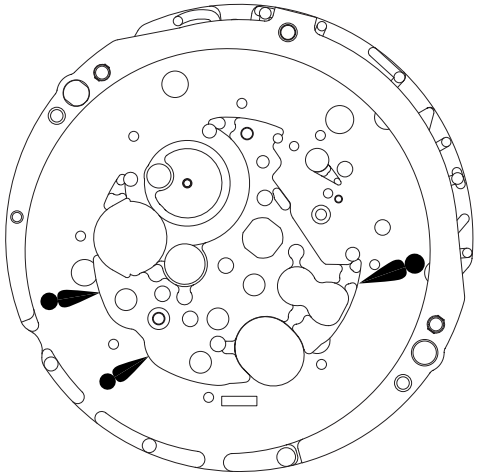
Take care not to deform the date dial guide spacer in an attempt to remove it, with attention to the two tubes engaged in the date dial guide spacer.

<Reassembling>

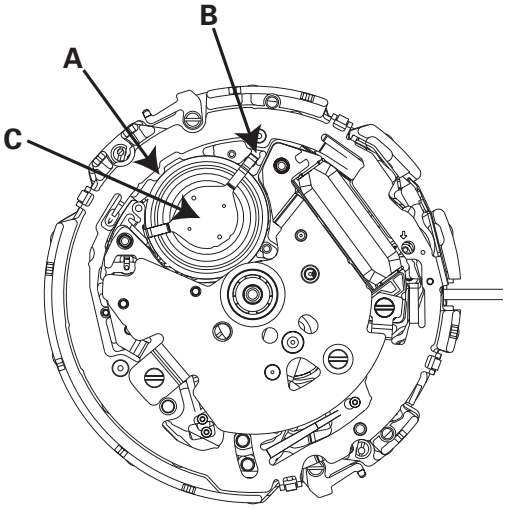
Gently pressing down around the two tubes to securely set the date dial guide spacer to the dial.

<Lubricating>

Lubricate the contact surface between the date dial guide spacer and date dial.



㉔ Rechargeable battery unit



<Disassembling>

Insert the tip of tweezers into the gap at the "A" portion shown in the illustration at right, then gently pry up the rechargeable battery unit to remove.

<Reassembling>

Set the minus lead terminal to the guide post "B" in the illustration at right, press the"C" portion down vertically until the rechargeable battery unit is firmly secured.

Notes:

◆ Take utmost care not to short-circuit the (+) and (-) terminals, as this will deteriorate the battery unit.

◆ Never wash the rechargeable battery unit in water as it contains sensitive electronic parts.

㉕ Oscillating weight bridge screw
㉖ Oscillating weight bridge
㉗ Intermediate wheel for generating rotor
㉘ Generating rotor

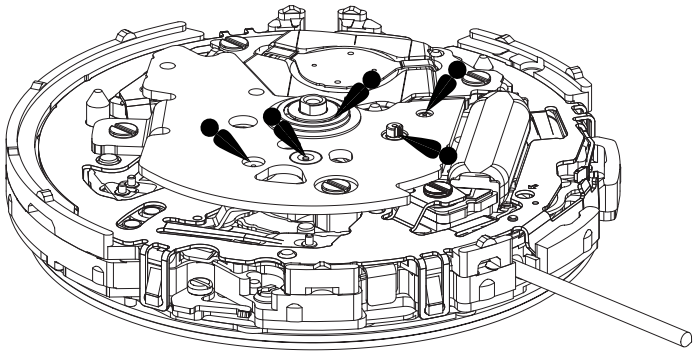
<Disassembling>

When removing the oscillating weight bridge, pay particular attention that the shaft of the pinion of the intermediate wheel for generating rotor penetrates the hole of the oscillating weight bridge.

<Reassembling>

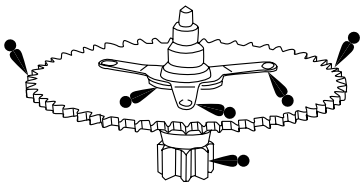
Before screwing in the oscillating weight bridge screws (2 pieces), make sure that the oscillating weight bridge is properly set, with the shaft of the pinion of the intermediate wheel for generating rotor penetrating the hole*, the upper pivots of the generating rotor, minute counting wheel, 1st intermediate wheel for minute counting being secured.

* The hammer guard may tend to bend slightly upwards. In such a case, make sure that the pivots are secured, and then gently hold down the oscillating weight bridge while screwing in the oscillating weight bridge screw.



<Lubricating>

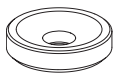
- Lubricate the upper pivots and bearings of the generating stator, minute counting wheel and 1st intermediate wheel for minute counting. (Refer to the illustration above.)
- Refer to the illustration at right for the lubricating positions of the intermediate wheel for generating rotor.



㉙ Hammer guide spacer

<Disassembling>

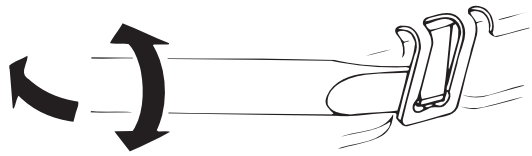
The hammer guide spacer is a small part. Be careful not to loose it.



<Reassembling>

Identify the top side of the hammer guide spacer by a dent illustrated at right. Set the hammer guide spacer only on top of the minute counting wheel.

㉛ Hammer guard



<How to remove>

1. Remove the hammer guard screw.
2. Unhook the four hooks.

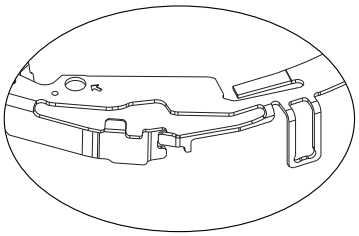
* For the position of the hooks (“a” to “d”), refer to the illusration at the bottom.

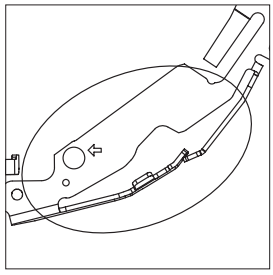
The illustration at right shows how to unhook the four hooks.

<How to install >

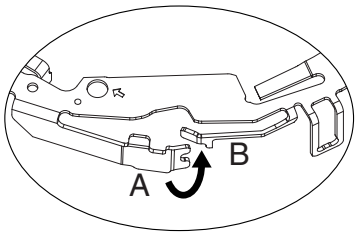
1. Before installing the hammer guard, make sure that the springs of the reset switch are in the correct relationship to each other as shown in the illustration below. If the position of the arms has been altered during disassembling or cleaning the parts, reposition them as directed below.

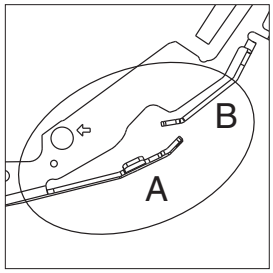
[Correct]





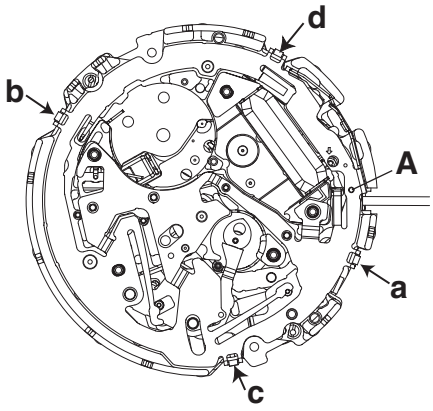
[Incorrect]



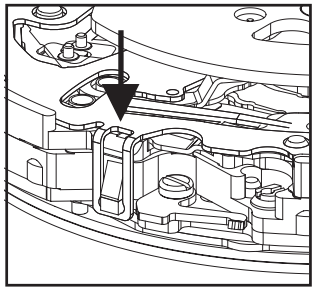


* Gently push the A arm behind the B arm in the direction shown above. While doing this, be careful not to apply pressures on the B arm with tweezers.

2. Firmly set the pin at the “A” position, and then securely hook the four hooks in alphabetical order from “a” to “d”.

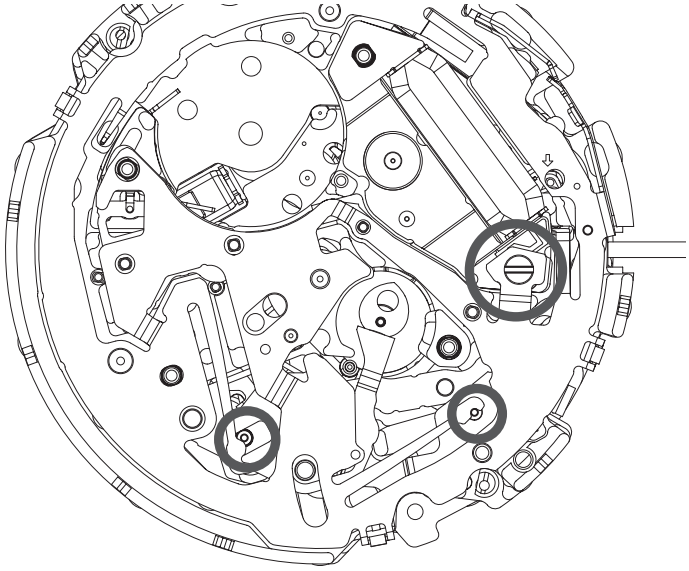


[Positions of the hooks: a, b, c and d]



* To secure the four hooks from “a” to “d”, firmly press each hook downward from above.

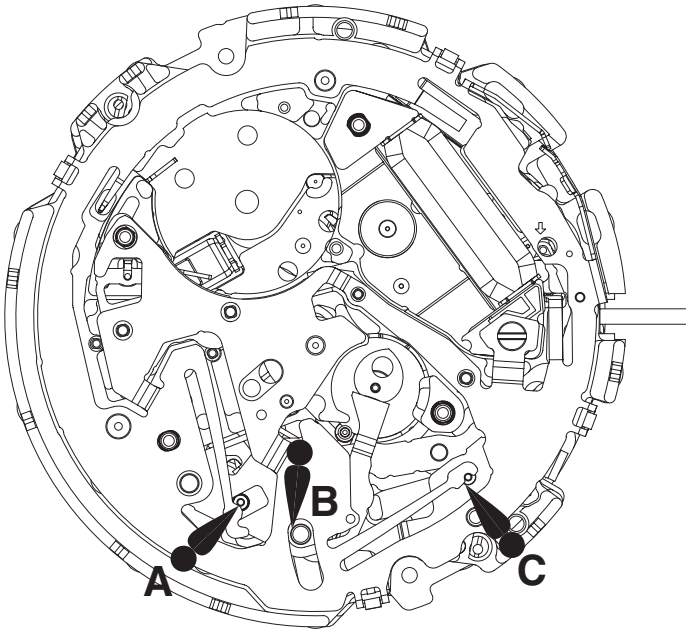
3. Set the hammer guard springs (2 pieces). (Refer to the illustration below.) Be careful not to deform the springs.



4. Screw in the hammer guard screw. Be careful not to break the wire of generating coil block.

<Lubricating>

Lubricate the “A”, “B” and “C” portions shown in the illustration below.



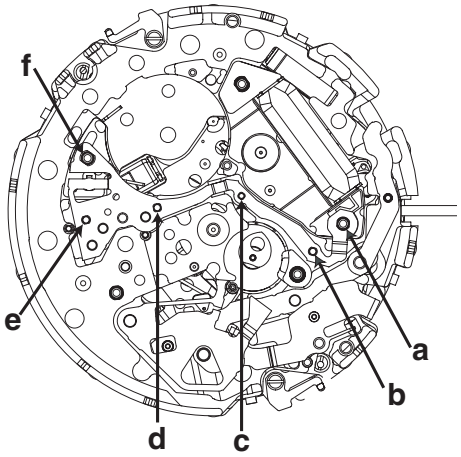
㉜ Generating lead board

<Disassembling>

The six tubes are engaged to the generating lead board. Be careful not to damage the generating lead board in an attempt to remove it, paying attention to the tubes engaged to it.

<Reassembling>

Set the generating lead board to the position where it can be fit into the generating coil block with the six tubes at the “a” to “f” positions securely engaged.



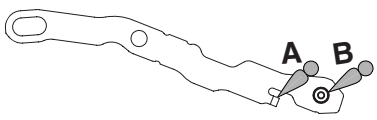
㉝ Generating lead contact spring

- Handle with care not to deform the generating lead contact springs.
- The generating lead contact spring is a small part. Be careful not to loose them.
- The four pieces are the same parts.
- Carefully pick up the edge of the part using tweezers.

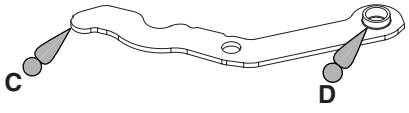
㊳ Transmission lever
㊴ Hammer
㊵ Operating lever
㊶ Transmission lever for hammer

<Lubricating>

Lubricate the “A”, “B” , “C” and “D” portions shown in the illustration below.

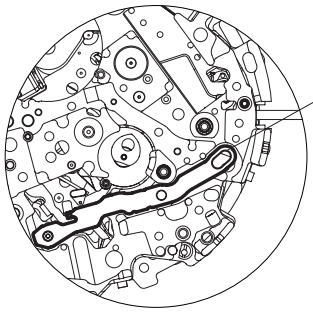


Transmission lever for hammer

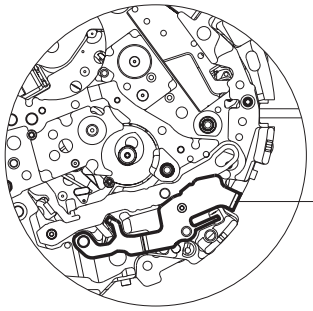


Transmission lever

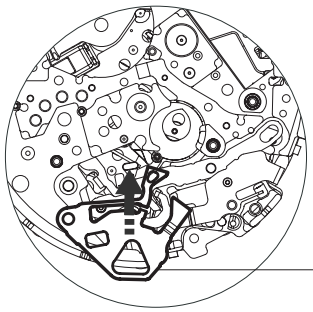
<Order of reassembling>



[Transmission lever for hammer]



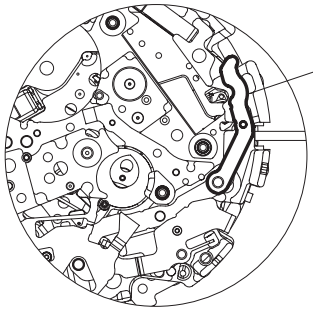
[Operating lever]



[Hammer]

* When installing the hammer, insert the hammer for the second counting wheel under the circuit block plate.

* The installation of the hammer should be completed as illustrated at left.



[Transmission lever]

㊷ Circuit block plate

<Disassembling>

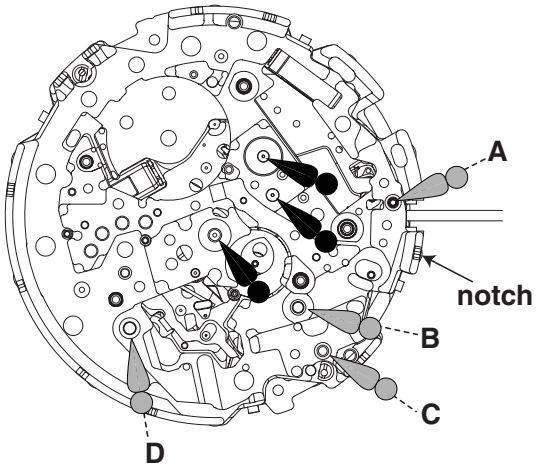
The circuit block plate has a notch on the outer edge for wasy removal from the circuit block spacer. Never apply exessive force when removing the circuit lock plate.

<Reassembling>

Before mounting the circuit block plate, ensure that the upper pivots of the second counting wheel and 1st intermediate wheel for second counting are firmly secured.

<Lubricating>

Lubricate the upper jewel hole of second counting wheel, the lower jewel holes of generating rotor and intermediate wheel for generating rotor, and the “A”,”B”,”C” and “D” portions.



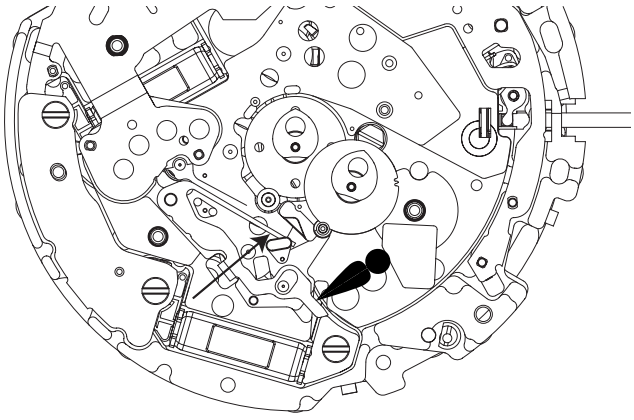
㊸ Chronograph wheel setting lever

<Reassembling>

The chronograph wheel setting lever should be installed before mounting the circuit block plate. After completed the installation of the chronograph wheel setting lever, securely hook the arm of the chronograph wheel setting lever over the circuit block plate.

<Lubricating>

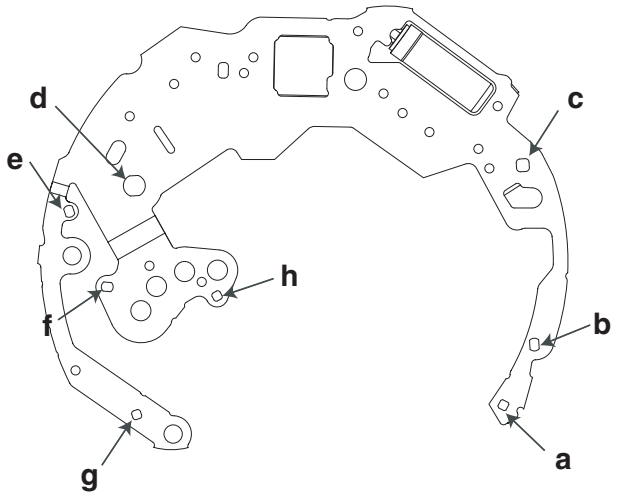
Lubricate the joints with the operating lever. (Refer to the illustration below.)



㊻ Circuit block

<Disassembling>

The tubes of the train wheel bridge are engaged to the circuit block at the "a" to "h" positions illustrated below. Take care not to damage the circuit clock in an attempt to disengage it from the tubes.



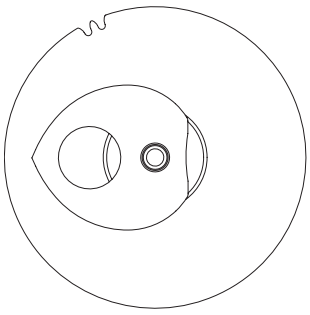
<Reassembling>

Securely set the guide holes of the circuit block at the "a" to "h" positions to the corresponding tubesand pins.

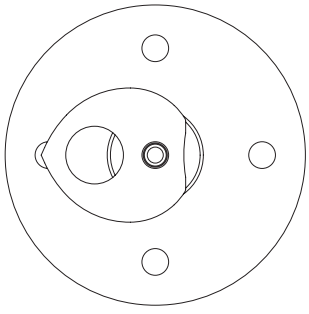
㊼ Minute counting wheel
㊽ Minute counting wheel washer
㊾ Second counting wheel
㊿ Second countng wheel washer

Note:

The minute counting wheel and second counting wheel are similar as both of which are the wheels with a heart cam. Be sure to mount each wheel correctly.



Minute counting wheel



Second coounting wheel

* The second counting wheel has four holes for discrimination.