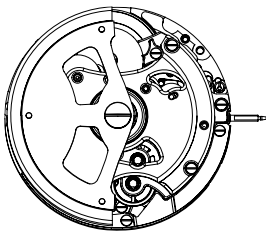
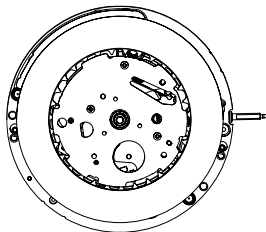


SERVICE GUIDE CAL.5R64A, 5R65A

SPECIFICATIONS

Cal. No.		5R64A	5R65A
Item			
Movement			
Movement size	Outside diameter	ϕ 30.0 mm	
	Casing diameter	_____	
	Height	5.1 mm	
Time indication		2 hands (hour, minute) and small second hand Date calendar	3 hands (hour, minute and second hands) Date calendar
Driving system		Mainspring (Self-winding with manual-winding function)	
Additional functions		• Self-winding mechanism with manual-winding function • Power reserve indicator • Energy depletion forewarning function • Electronic circuit reset function • Second hand stop function • Date correction function	
Loss/gain		Monthly rate: less than 15 seconds (worn on the wrist at temperature range between 5 to 35°C)	
Regulation system		Pattern cutting, logical regulation system (± 1 step, 0.264 second/step)	
Measuring gate by quartz tester		Use 10-second gate	
Continuous operating time		72 hours (approximately 3 days) since the power reserve indicator shows that the mainspring is fully wound	
Number of jewels		32 jewels	30 jewels
After-Sales servicing system		• Movement service (repair and overhaul) All to be sent to CS Dept. of SWC, Japan (no movement parts will be supplied) • Exterior repair By national service centers (Casing parts are supplied)	

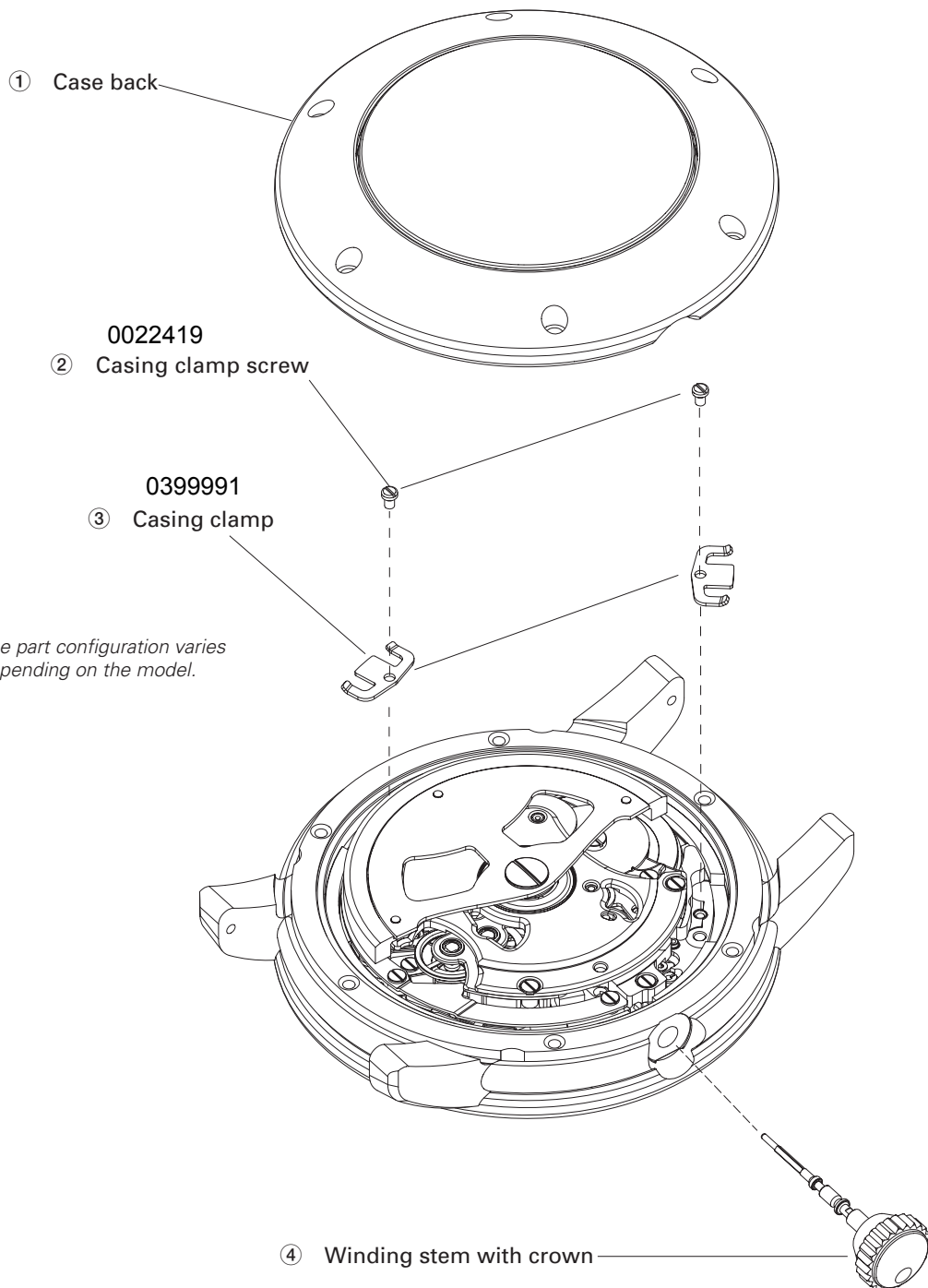
* Watches with Cal.5R66, 5R67 can be serviced using the same procedures.

SEIKO WATCH CORPORATION

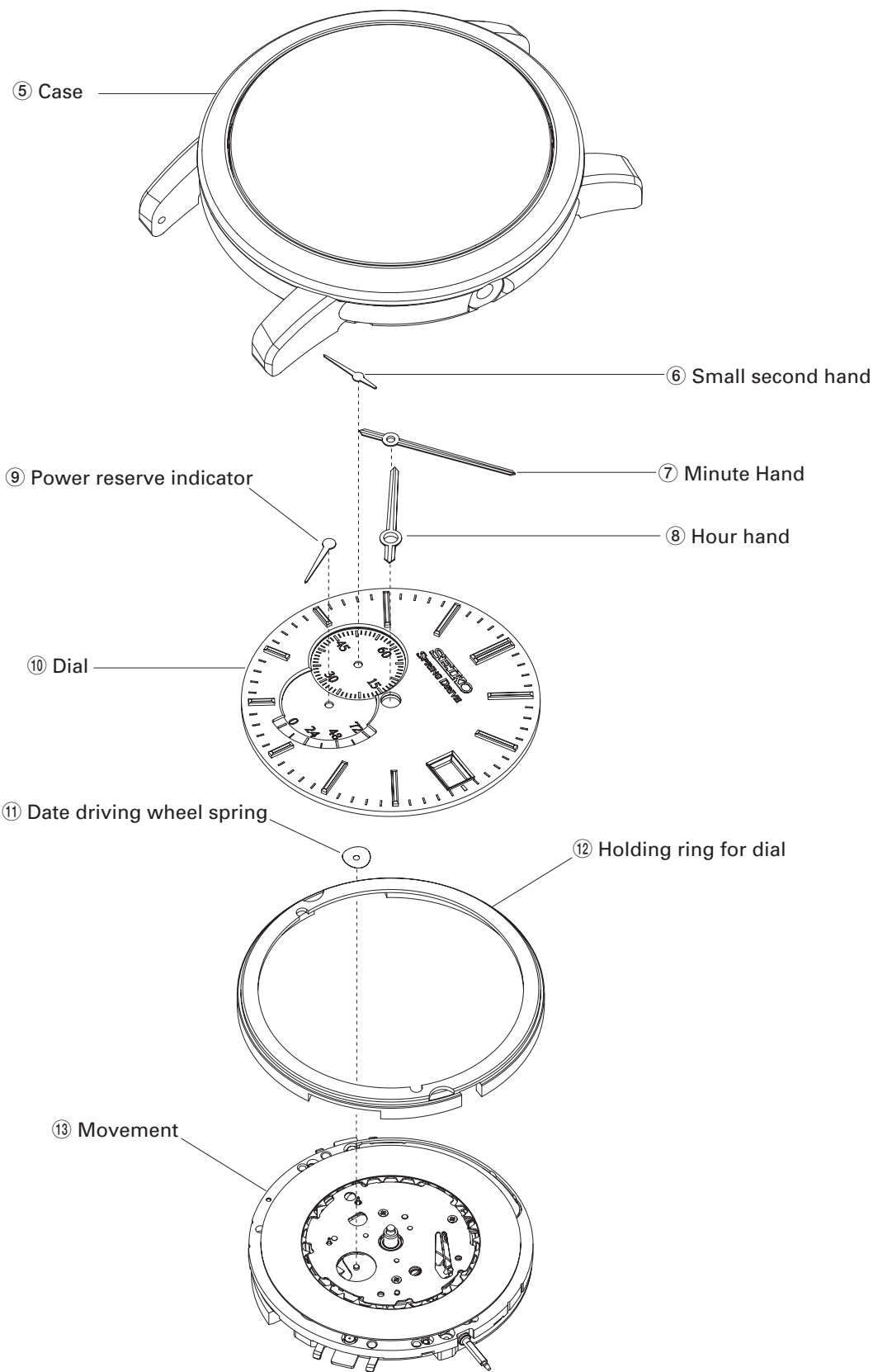
Cal. 5R64A & 5R65A

Disassembling procedures Figs.: ① → ⑬

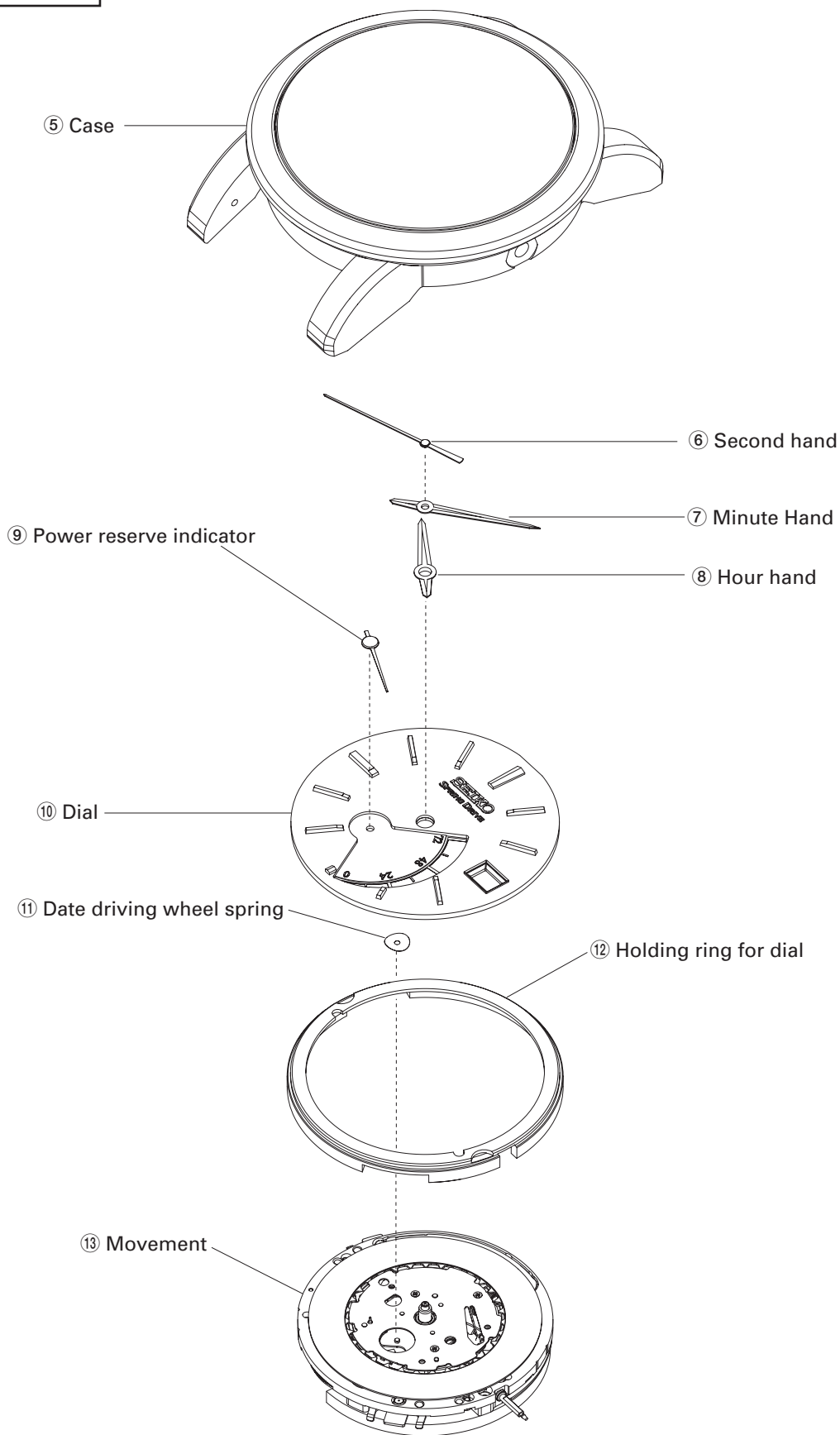
Reassembling procedures Figs.: ⑬ → ①



Cal. 5R64A



Cal.5R65A



I. REMARKS ON DISASSEMBLING AND REASSEMBLING

Unlike the other quartz or KINETIC movements which work with an electrical power supply; SPRING DRIVE requires greater precision in assembling and is much more sensitive to dust, dirt and small particles. Therefore, please pay utmost attention and make every possible effort to eliminate them and to keep your work place in a clean condition when you repair the SPRING DRIVE watches.

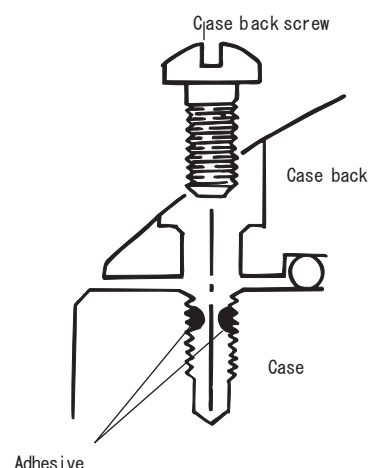
① Case back

- There are two types of case backs; a case back which can be fitted without using any screws and a case back which can be fastened by using case back screws, depending on the models.
- For the models using the case back screws, use the adhesive "LOCTITE 241" to prevent them from loosening.

Notes:

Never use an adhesive other than "LOCTITE 241" for fixing the case back screws.

- ★ LOCTITE is the Trade Mark of Henkel Corporation in the USA and elsewhere.



● How to fix the case back with the case back screws and the adhesive

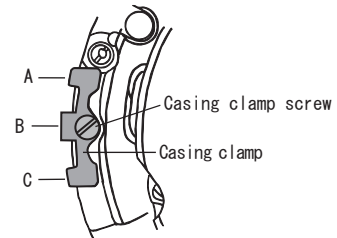
1. Wipe any adhesive, oil, dust or dirt off the screws and the holes for screws on the case with alcohol.
2. Before setting the case back to the case, apply a proper amount of the adhesive to the holes for screws as shown in the illustration above.
3. Set the case back to the case and then, tighten the case back screws firmly.
 - * Tighten the screws one by one in diagonal direction.
 - * After tightening the case back screws once, screw them in once again to fix them securely.
4. Leave the watch untouched at room temperature for about one day until the adhesive is completely hardened.

Notes:

- Apply only a necessary amount of adhesive to the hole lest it should come out on the case.
- Take care so as not to allow the adhesive to get inside of the case.

② Casing clamp screw ③ Casing clamp

(Movement of Spring Drive is fixed to the case by special constructions using ② Casing clamp screw & ③ Casing clamp)



● How to remove

- Loosen the casing clamp screws at the 4 and 9 o'clock positions and remove the casing clamps.

● How to install

- Set the casing clamps at the 4 and 9 o'clock positions as shown in the illustration at the right, and tighten the casing clamp screws securely.
- The movement is fixed to the case by fitting "A," "B" and "C" portions of the casing clamps securely in the groove of the case. When setting the casing clamps to the movement, therefore, check that "A," "B" and "C" portions are equally protruded from the movement edge, and then, tighten the casing clamp screws firmly.

Notes:

- These calibers have a unique design which shows the movement of wheels through the uncovered sixth wheel & pinion and MG rotor. Thus train wheels can easily catch such dust and small particles.

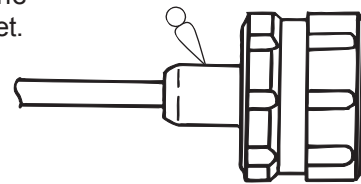
Therefore, please make sure to remove all dust, dirt and foreign particles from the case and the case back before fitting the movement into the case and keep it clean until you close the case back completely. Especially, as the movement can be seen through the case back, please also pay attention to any scratch and dirt on it.

- When installing the movement into the case, set the winding stem first to position the movement properly before fixing the movement with the casing clamps.

⑤ Winding stem with the crown

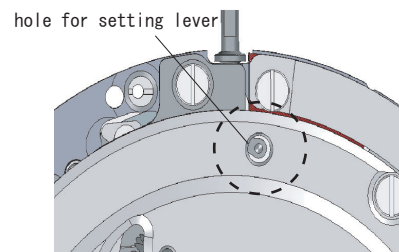
● How to install

- The crown gasket is attached inside the stem pipe of the case.
- Apply the silicone oil to the portion of the crown as indicated in the illustration at the right. Insert the winding stem with the crown into the stem pipe, and turn the crown so that the silicone oil is spread thoroughly over the crown & stem gasket.



● How to remove

- With the crown at the normal position, push the setting lever through the hole indicated in the illustration at the right.
- Be careful so as not to damage the oscillating weight.
- Do not push the setting lever too hard, which may deform the date dial.



- ⑧ Hour hand ⑦ Minute hand ⑥ Second hand/Small second hand

● How to install

In order for the date to change at the exact time, install the hands following the procedure below:

1. Pull out the stem to the 2nd click.
2. Slowly turn the crown counterclockwise.
3. Stop turning the crown when the date has changed.
4. Install the hour and minute hands so that they point exactly to the 12 o'clock position.

Notes:

- Check clearance among the hands lest they should touch one another at any position.

● How to remove

- Make sure to gently hold the dial down when removing the hands.

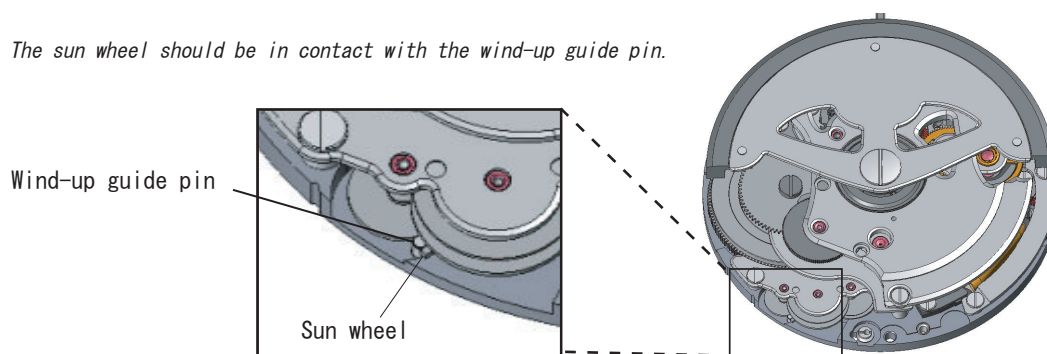
⑨ Power reserve indicator

(Spring Drive 5R6 series have a unique Retrograde Power Reserve Indicator)

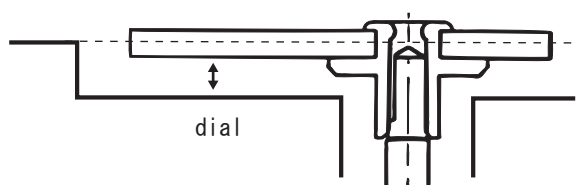
● How to install

- Ensure that the mainspring is fully wound. (Refer to the illustration below.)

* The sun wheel should be in contact with the wind-up guide pin.



- Ensure to leave the sufficient clearance to avoid friction with dial. (Refer to the illustration below)



⑩ Dial

The dial is fitted with the two dial legs fastened with the dial fixing pins at 3 and 9 o'clock positions.

● How to remove

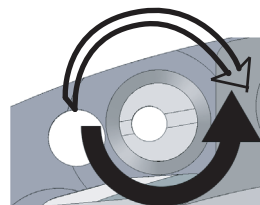
- Turn the dial fixing pins clockwise to release the dial legs, and remove the dial.

● How to install

- Position the dial without allowing any clearance and turn the dial fixing pins counterclockwise to fix the two dial legs.
- Ensure that the dial is securely mounted.

<Magnified view of the dial fixing pin>

(to release)



(to fix)

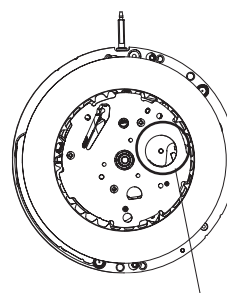
Note:

- Be aware that an excessive rotation torque may cause deformation of the dial and the main plate.
- Rotating dial fixing pins to assemble/disassemble the dial may create some small particles. Then, once again, please make sure to remove all these loose particles.

⑪ Date driving wheel spring

● Setting position

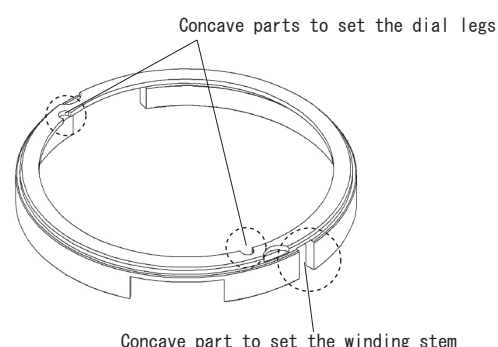
- Be aware that the date driving wheel spring may come off when mounting the dial.



Position to set the Date driving wheel spring

⑫ Holding ring for dial

- Set the winding stem properly to the center of the concave part of the holding ring for dial so that the welded part of the dial should not protrude.



Concave part to set the winding stem

II. FUNCTION CHECK

All the following inspections should be carried out whenever the case back has been opened in addition to the usual check-ups, such as appearance, operation and water resistance checks.

<Rotation movement of the oscillating weight>

- Swing the watch to check if the oscillating weight rotates smoothly.

<Winding-up performance and Automatic start-up mechanism>

- Wind the mainspring manually to check if the power reserve indicator correctly shows the winding status and the second hand starts running (gliding).

<Second hand movement >

- Place the watch on a flat surface with the dial up, and keep observing the second hand movement for 1 minute or longer.
- Check if the second hand smoothly moves with a glide motion but without any irregular movement.

<Motor performance>

- Fully wind the mainspring manually.
- Change the watch to the accuracy measurement mode (see below).
- Leave the watch for 5 minutes.
- Check if the watch continues operating in the accuracy measurement mode and indicates the time 10 minutes after.

<Accuracy>

- Fully wind the mainspring manually.
- Change the watch to the accuracy measurement mode (see below).
- Measure the accuracy in the accuracy measurement mode to check if it is within $\pm$ second/day.

How to change the watch to the accuracy measurement mode
Within 3 seconds, quickly pull out and push back the crown as below.

Crown position: Normal $\rightarrow$ 2nd $\rightarrow$ Normal $\rightarrow$ 2nd $\rightarrow$ Normal

└──────────────────┘
Within 3 seconds

** While the watch is in the accuracy measurement mode, the second hand moves twice as fast as normal.*

How to cancel the accuracy measurement mode

Pull out the crown from the normal position to the 2nd click, and then push it back to the normal position.

** If the watch is left untouched while in the accuracy measurement mode, it will automatically return to the normal mode in approximately 85 minutes.*

<Continuous operating time and Power reserve indicator performance>

- Fully wind the mainspring.
- Leave the watch for 78 hours or longer and check if the watch has stopped operation and if the continuous operating time of the watch from start to stop is at least 72 hours up to 78 hours.
- Also, check the status of the power reserve indicator if it points at the "0" position.