



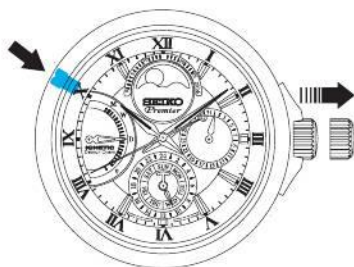
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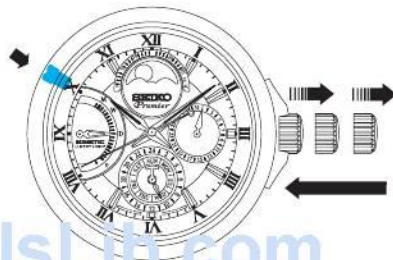


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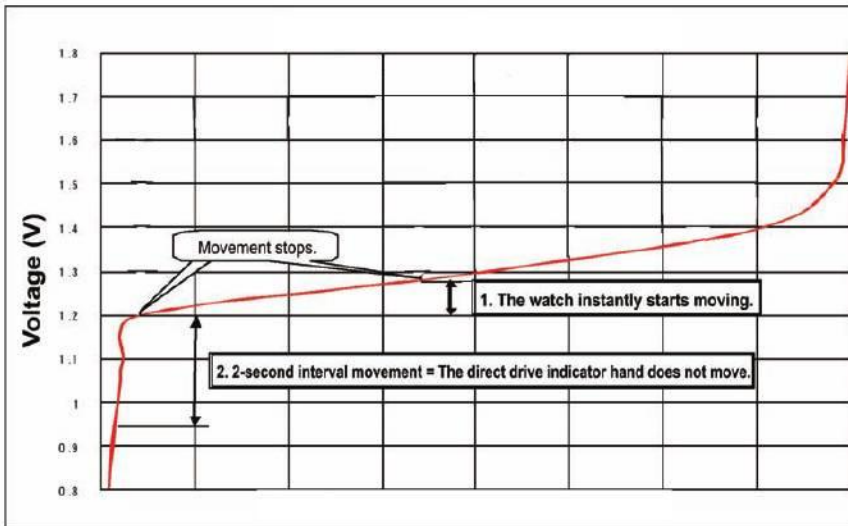
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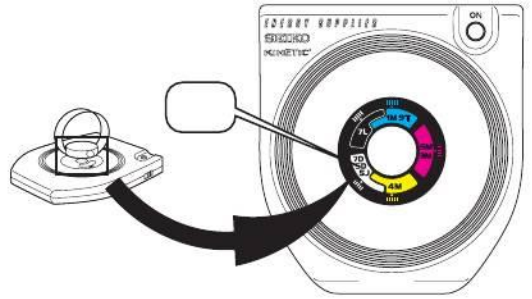
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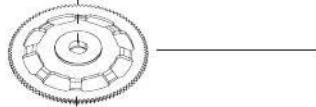
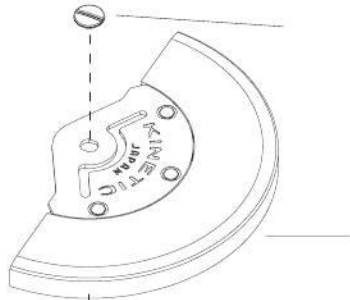
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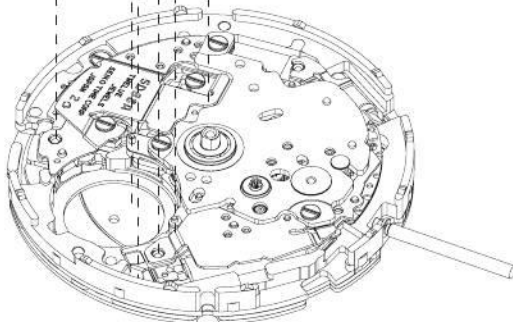
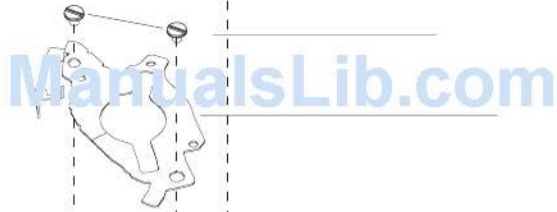


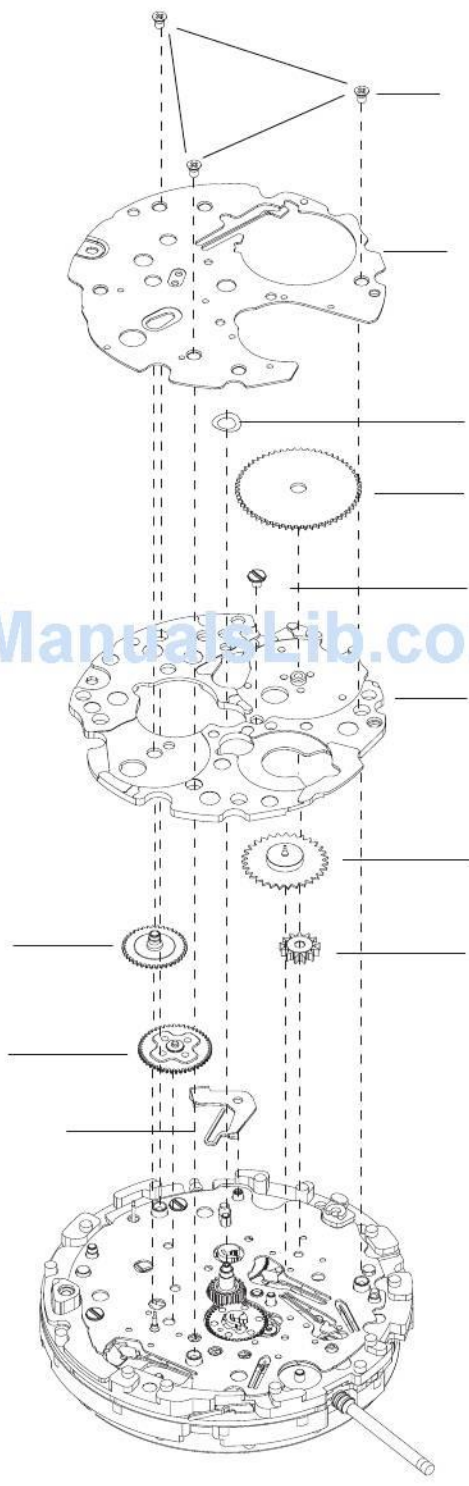


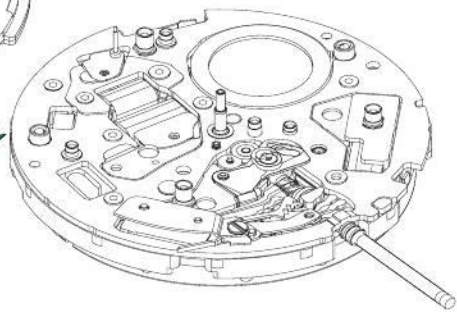
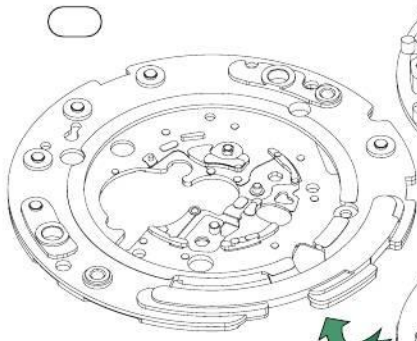
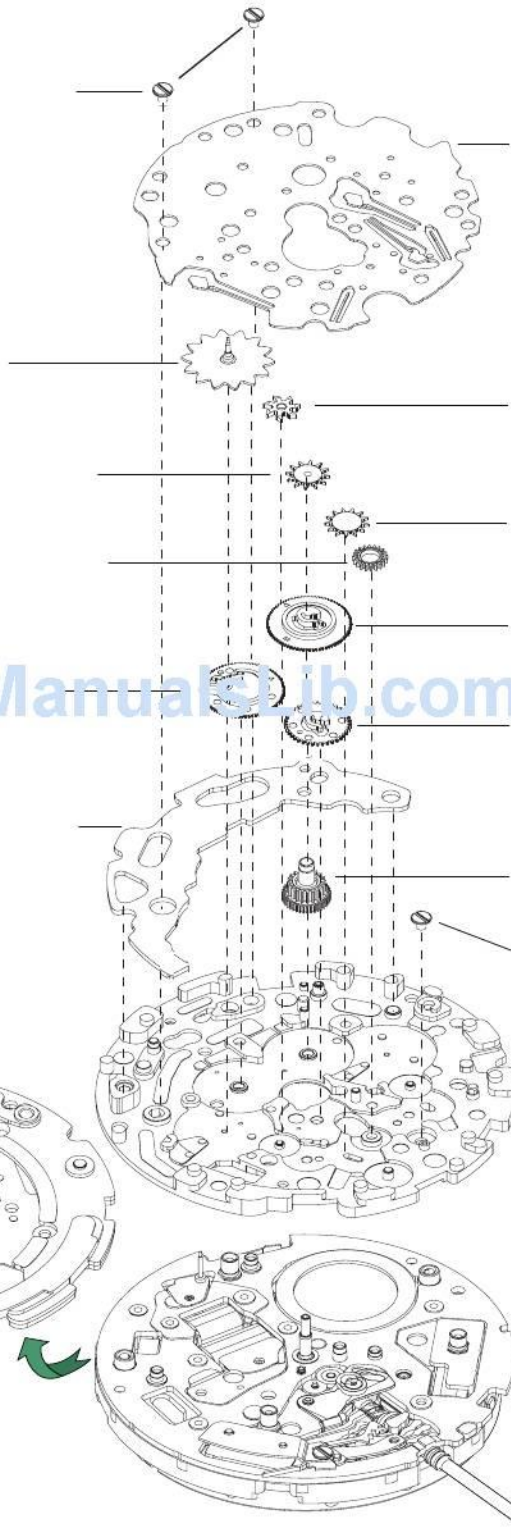
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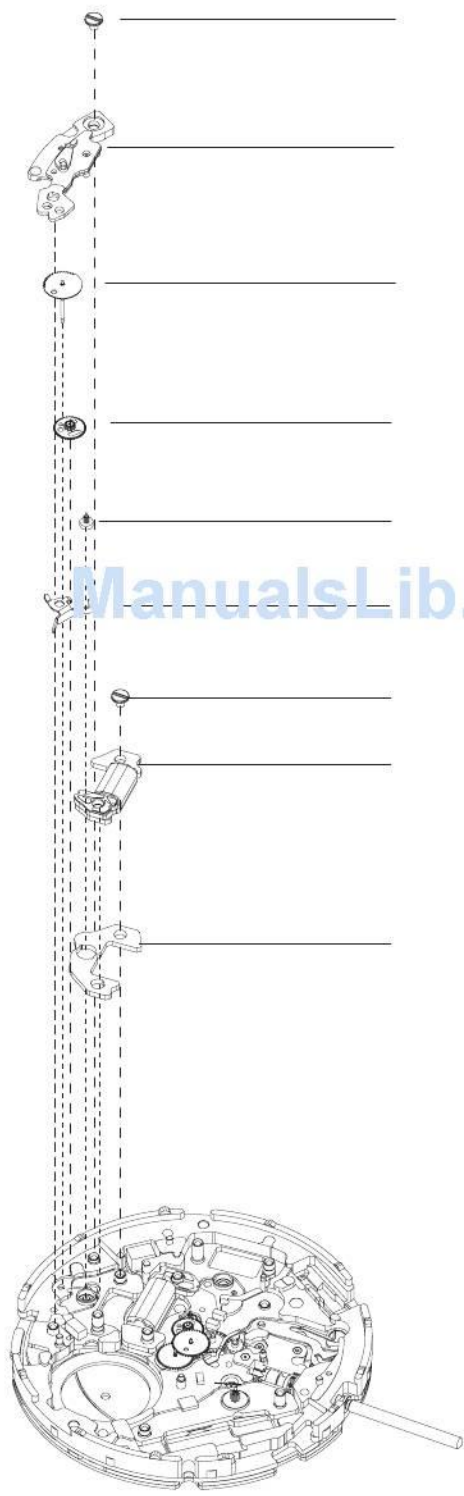


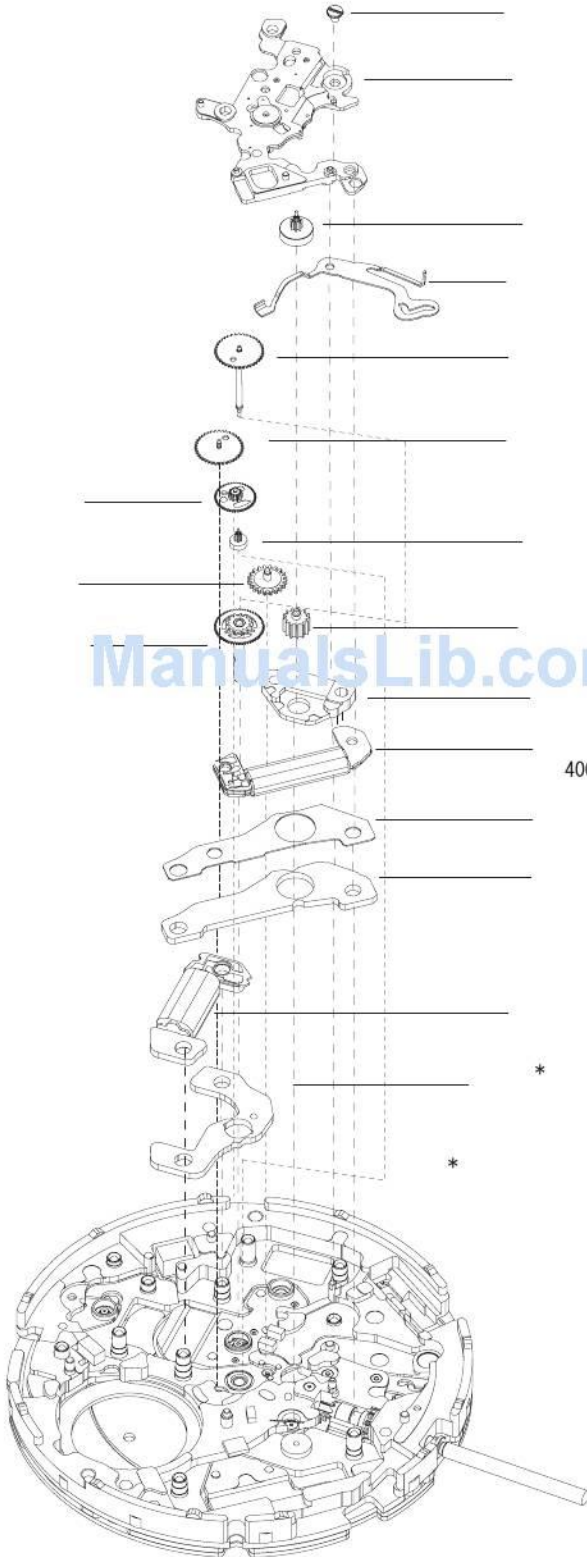
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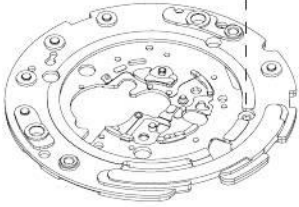




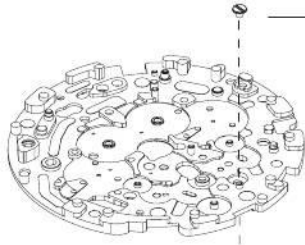


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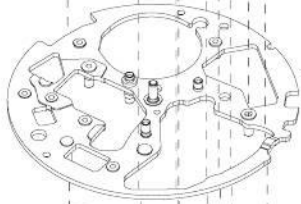
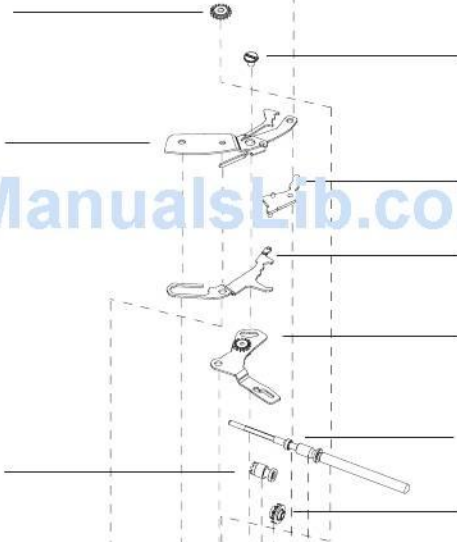


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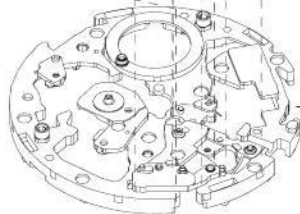


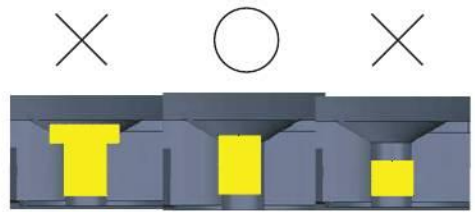
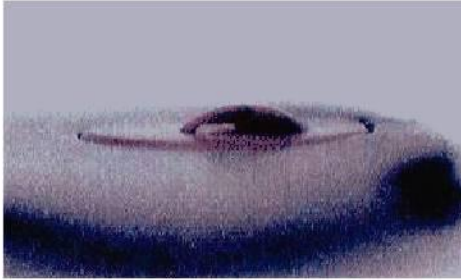
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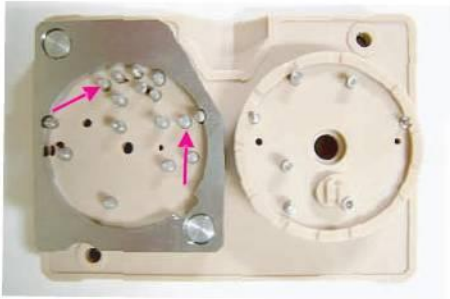
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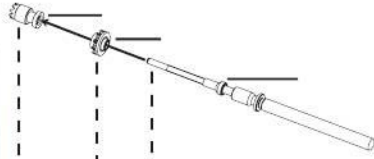
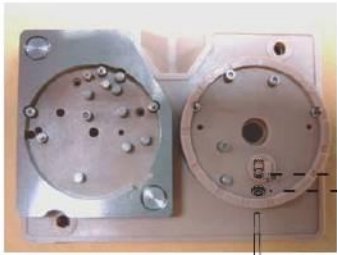




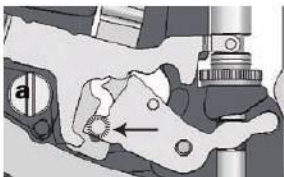


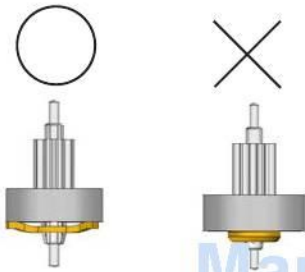
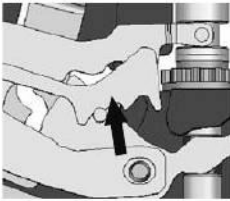
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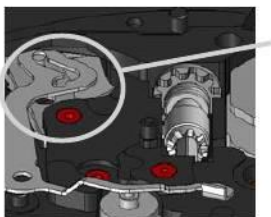
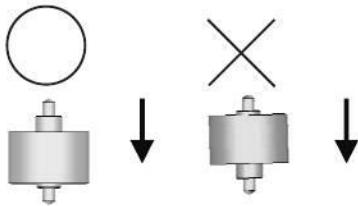


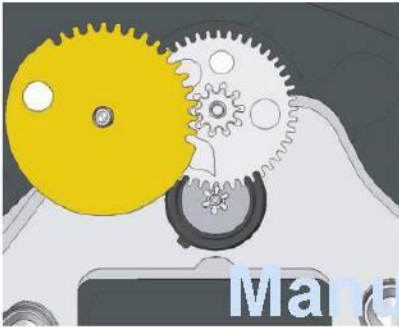
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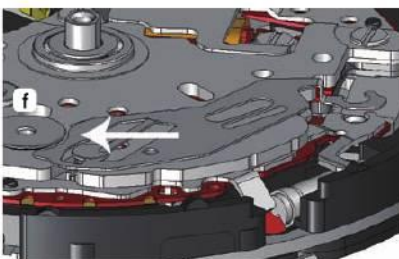
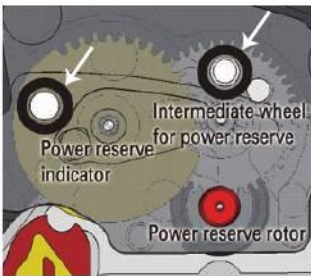


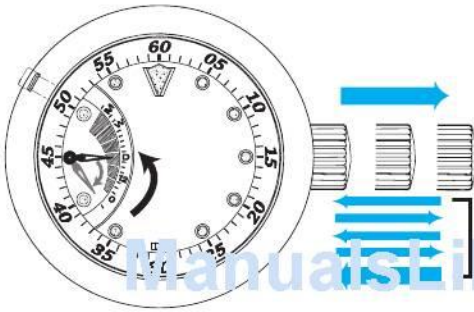
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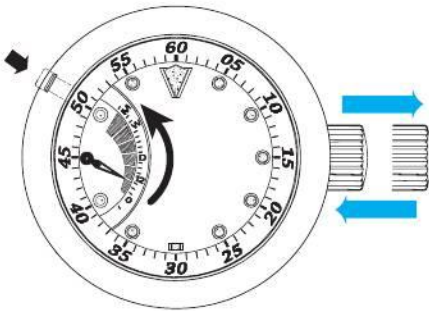
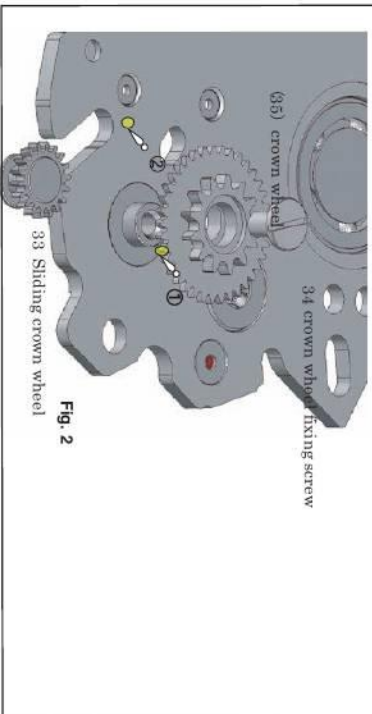
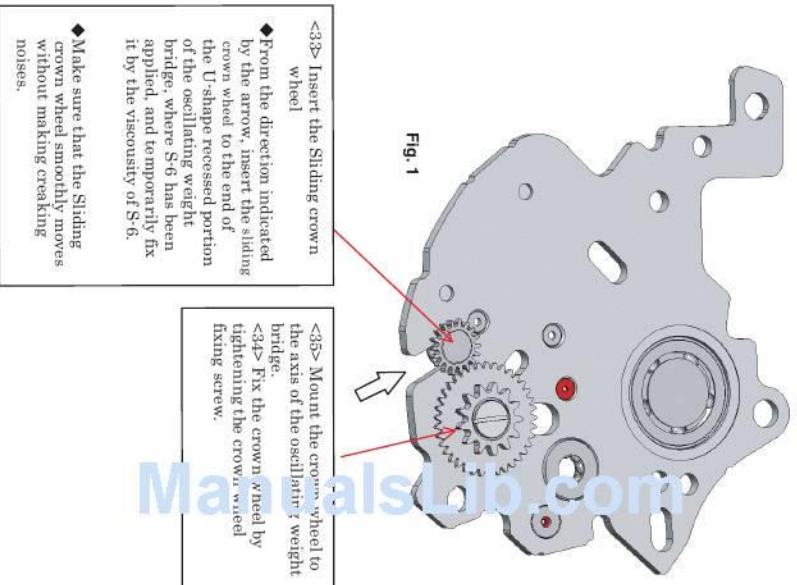


ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS	
	D) Assembling wheels to the oscillating bridge	
	Lubricate the oscillating weight bridge. Refer to the Fig. 2.	<p>Lubricate the oscillating weight bridge as indicated in the Fig. 2 below.</p> <ol style="list-style-type: none"> ① Axis for the crown wheel ② End of the U-shape recessed portion <p>◆ Type of oil: S-6</p> <p>◆ Make sure that the crown wheel and sliding crown wheel turn smoothly;</p>
35	Mount the crown wheel to the axis of the oscillating weight bridge.	 <p>34 crown wheel fixing screw</p> <p>34 crown wheel</p> <p>33 Sliding crown wheel</p> <p>Fig. 2</p>
34	Fix the crown wheel by tightening the crown wheel fixing screw.	
33	Insert the sliding crown wheel.	
(44)	Lubricate the switching wheel. Refer to the Fig. 3.	<p>(44) Lubricate the switching wheel as indicated in the Fig. 3 below.</p> <ol style="list-style-type: none"> ① Side surface of the axis ◆ Type of oil: AO-3 <p>Note: Lubricate the same location twice.</p> <ol style="list-style-type: none"> ◆ Apply the lubricant to the clearance underneath the teeth so that the lubricant is thoroughly applied to the side surface of the axis. ② Top of the lug ◆ Type of oil: AO-3 ③ Axis of the lug ◆ Type of oil: AO-3 ◆ Apply the lubricant to the clearance around the axis so that the lubricant is applied to the entire surface of the axis. ◆ Ensure that an appropriate amount of oil is applied to the lower part of the axis, as excessive lubrication may cause malfunctions of the axis.



<33> Insert the Sliding crown wheel

◆ From the direction indicated by the arrow, insert the sliding crown wheel to the end of the U-shape recessed portion of the oscillating weight bridge, where S-6 has been applied, and temporarily fix it by the viscosity of S-6.

◆ Make sure that the Sliding crown wheel smoothly moves without making creaking noises.

<35> Mount the crown wheel to the axis of the oscillating weight bridge.

<34> Fix the crown wheel by tightening the crown wheel fixing screw.



(44) Lubricate the switching wheel as indicated in the Fig. 3 below.

- ① Side surface of the axis
- ◆ Type of oil: AO-3

Note: Lubricate the same location twice.

- ◆ Apply the lubricant to the clearance underneath the teeth so that the lubricant is thoroughly applied to the side surface of the axis.
- ② Top of the lug
- ◆ Type of oil: AO-3
- ③ Axis of the lug
- ◆ Type of oil: AO-3
- ◆ Apply the lubricant to the clearance around the axis so that the lubricant is applied to the entire surface of the axis.
- ◆ Ensure that an appropriate amount of oil is applied to the lower part of the axis, as excessive lubrication may cause malfunctions of the axis.

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
	II) Assembling the dial side of the movement (1)
	Put the Main plate A on the A part of the movement holder for Cal.5D series.
87 & 86	(Refer to the photo) And then, mount the Main plate B to the Main plate A
	↓
(85)	Lubricate the winding pinion. Refer to Figs. 6 & 7.
	↓
(83)	Lubricate the winding stem. Refer to Fig. 8.
	↓
85, 84 & 83	Install the winding stem to the Main plate B with winding pinion and clutch wheel.
	Lubricate the switching lever. Refer to the Fig. 9 & 10.
82	Mount the switching lever. (Check the clearance.) Refer to the Fig. 5.
	↓
81	Mount the yoke, and securely hook its spring.

<82> Mount the switching lever with setting wheel
 Intermediate wheel for calendar corrector
 ◆ Two wheels are attached to the switching lever as illustrated at right. Check if the switching lever has appropriate clearances with the intermediate wheel for calendar corrector and with the setting wheel so that they turn smoothly without making creaking noise.

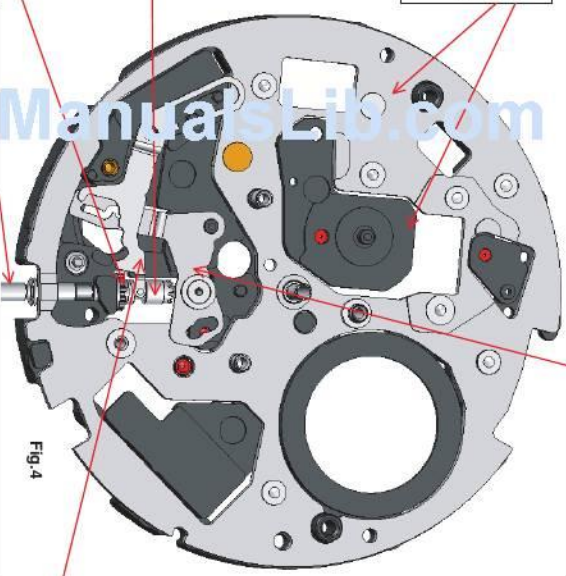


<87 & 86> Put the circuit bridge on the A part of the movement holder for Cal. 5D series. (Refer to the photo below). And then, mount the main plate B to the circuit bridge.



< 85, 84 & 83> Install the winding stem to the main plate with winding pinion and clutch wheel.

(85) Lubricate the winding pinion as illustrated below.
 ◆ Type of oil: S-6



(83) Lubricate the winding stem
 ◆ Type of oil: AO-3
 Lubricate the entire profile of the winding stem.
 Lubricate the entire profile of the winding stem.

Area to be lubricated

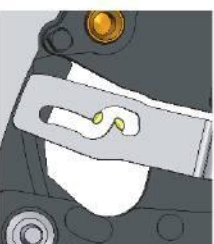
◆ Securely install the winding stem, giving it gentle rotations so that the flat face of the winding stem will be engaged with the hole of the clutch wheel.



Lubricate the switching lever.
 (1) Lubricate the axis for the intermediate wheel for calendar corrector.
 ◆ Type of oil: AO-3
 ◆ Apply the lubricant to the clearance around the axis so that the lubricant is thoroughly applied to the entire surface of the axis.



(2) Lubricate the areas of the guiding slit as illustrated below.
 ◆ Type of oil: S-6



<81> Mount the yoke, and securely hook its spring.
 ◆ Securely set the arm of the yoke inside the pin of the main plate, taking care so as not to deform the arm of the yoke.



Fig. 11

ILLUSTRATIONS AND SPECIAL INSTRUCTIONS ETC.


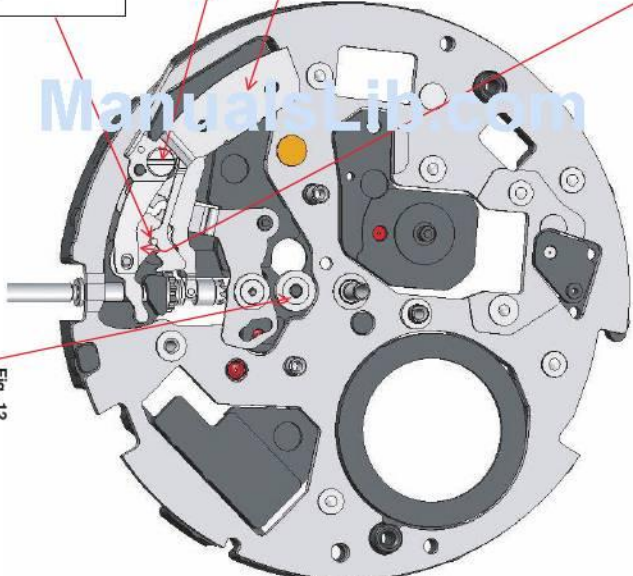

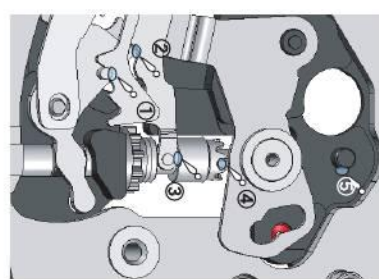
No.	PROCESS
80	<p>Mount the setting lever. Refer to the Fig.13.</p> <p>↓</p> <p><80> Mount the setting lever. ◆ Securely engage the pin on the backside of the setting lever (indicated by ● in the Fig.13 below) with the guiding slit of the switching lever. Sliding the switching lever towards the "a" portion in the Fig. 13 will make this easier.</p>  <p>Fig. 13</p>
79	<p>Place the setting lever jumper Refer to the Fig.12</p> <p>↓</p> <p><79> Place the setting lever jumper</p> <p><78> Fix the setting lever jumper by tightening the setting lever jumper screw.</p>  <p>Fig. 12</p>
77	<p>Mount the 1st Intermediate wheel for minute wheel Refer to the Fig.12</p> <p>↓</p> <p>Lubricate the yoke, setting lever and wheels. Refer to the Fig. 15.</p> <p>◆ Hook the arm of the setting lever. ◆ Do not push the setting lever excessively, as doing so may deform the arm of the setting lever.</p>  <p>Fig. 14</p> <p><77> Mount the 1st Intermediate wheel for minute wheel * This part is reversible</p> <p>◆Type of oil:O-3</p>  <p>Fig. 15</p> <p>1 Point of engagement between the yoke and setting lever spring 2 Point of contact between the yoke and setting lever 3 Point of contact between the yoke and clutch wheel 4 Tips of the teeth of the clutch wheel point of engagement between the clutch wheel and setting wheel 5 Axis for the first intermediate wheel for minute wheel of the Main plate B</p>

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
	<p>III) Assembling the case back side of the movement</p>
	<p>Put the main plate upside down onto the B part of the movement holder. Refer to the photo.</p>
(68)	<p>Lubricate the lower pivots of the wheels from "a" to "r" portions as shown in the Fig. 17.</p>
	<p>Lubricate the center wheel and pinion. Refer to the Fig. 18.</p>



Movement holder



Fig. 17

Lubricate the lower pivots of the wheels from "a" to "r" shown in the Fig. 18 at left.

- ◆ Type of oil for "a" and "r": AO-2
- ◆ Type of oil from "e" to "r": AO-3

(68)

Lubricate the center wheel as shown in the Fig. 18 at right.

- ◆ Type of oil: AO-3

Fig. 18

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
74	Mount the rotor stator. ↓
68	Mount the Center wheel. ↓
67	Mount the Second Intermediate wheel for minute wheel. Refer to Fig.21. ↓
66	Mount the minute wheel. ↓
65	Mount the rotor. Refer to the Fig. 20. ↓
64	Mount the fifth wheel and pinion. ↓
63	Mount the third wheel and pinion. ↓

<74> Mount the rotor stator.
◆ When mounting the rotor stator, take care so as not to distort or deform it, as it may cause deterioration of the motor.

<63> Mount the third wheel and pinion.

<68> Mount the center wheel.

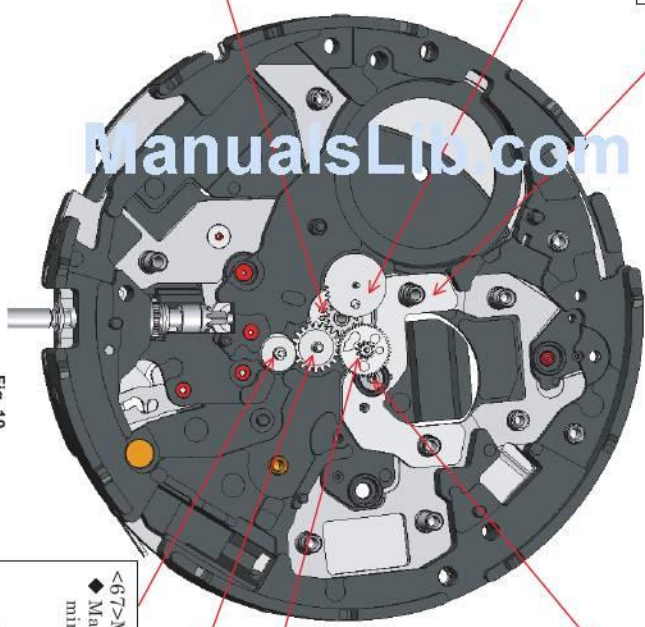




Fig. 19

<65> Mount the rotor.

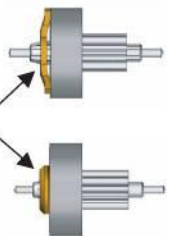
◆ Do not mount the power reserve rotor by mistake. To discriminate the rotor from the power reserve rotor, see the difference in the shapes of their rotor bridges.



(65 Rotor)



(63 Power reserve rotor)



rotor bridge
Fig. 20

<64> Mount the fifth wheel and pinion.

<66> Mount the minute wheel.

<67> Mount the second intermediate minute wheel.
◆ Make sure to mount the second intermediate minute wheel in the correct direction.

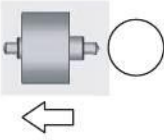


Fig. 21

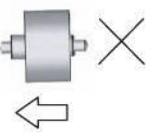


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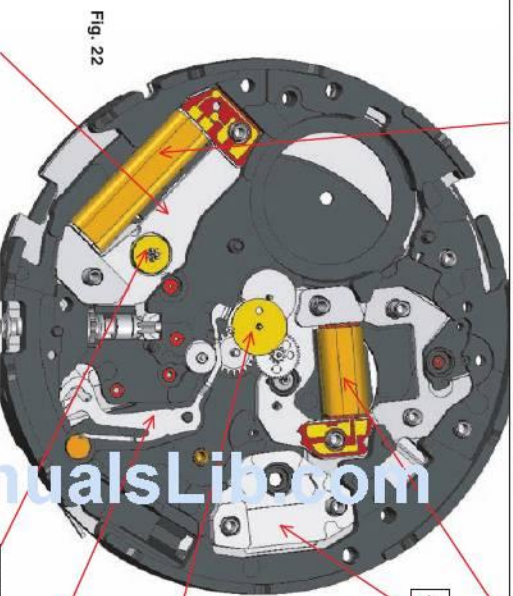
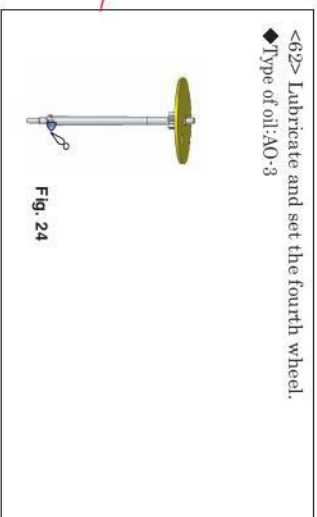
No.	PROCESS
73	Mount the coil block. ↓
72	Mount the spacer for generating stator ↓
71	Mount the generating stator. Refer to the Fig.23. ↓
70	Mount the generating coil block. ↓
69	Mount the Spacer for coil block rotor ↓
62	Lubricate and set the fourth wheel. Refer to the Fig.24
61	Mount the train wheel setting lever. Refer to the Fig.25. ↓
60	Mount the generating rotor.

<70> Mount the generating coil block.
◆ When mounting the generating coil block, take care so as not to distort or deform the coil block core as it may cause deterioration of the motor.
* Coil block resistance between 585Ω and 645Ω (as reference value)

<73> Mount the coil block.
◆ When mounting the coil block, take care so as not to distort or deform the coil block core as it may cause deterioration of the motor.
* Coil block resistance between 1.9KΩ and 2.15KΩ (as reference value)

<69> Mount the spacer for coil block rotor.

<62> Lubricate and set the fourth wheel.
◆ Type of oil:AO-3

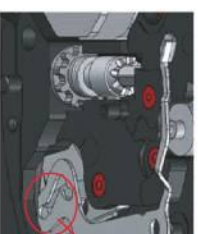


<72> Mount the spacer for generating stator.

<71> Mount the generating stator.
◆ When mounting the spacer for generating stator and generating stator, take care so as not to distort or deform the coil block core as it may cause deterioration of the motor.

<60> Mount the generating rotor.

<61> Mount the train wheel setting lever.
◆ Insert the tail portion of the train wheel setting lever with the guiding slit at an angle into the gap of the circuit bridge, and securely set the guiding slit to the dowel pin of the setting lever.



dowel pin of the setting lever

Fig. 25

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
59	<p>Mount the train wheel bridge and check the pivot hole.</p> <p>↓</p>
69	<p>Fix the train wheel bridge to the spacer for coil block rotor by tightening the train wheel bridge SCREW.</p>

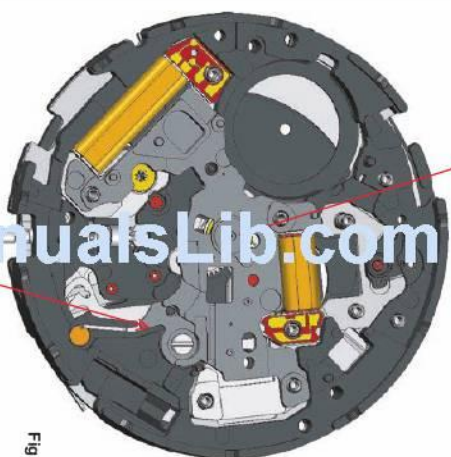


Fig. 26

<59> Mount the train wheel bridge and check the pivot hole.

<69> Fix the train wheel bridge to the spacer for coil block rotor by tightening the train wheel bridge screw.

* Do not overtighten the train wheel bridge screw as doing so may cause sinking of the train wheel bridge applying pressure on other parts underneath it, which may result in deterioration of the motor.

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
54	Mount the rechargeable battery connection (+).
57	Mount the power reserve stator.
53	Mount the power reserve rotor. Refer to the Fig. 28 for the alignment of the power reserve rotor.
52	Mount the intermediate wheel for power reserve. Refer to the Figs.29 & 30 for the alignment of the intermediate wheel for power reserve.
51	Mount the power reserve indicator wheel. Refer to the Figs.29 & 30 for the alignment of the power reserve indicator wheel.

<54> Mount the rechargeable battery connection (+).

<57>Mount the power reserve stator.

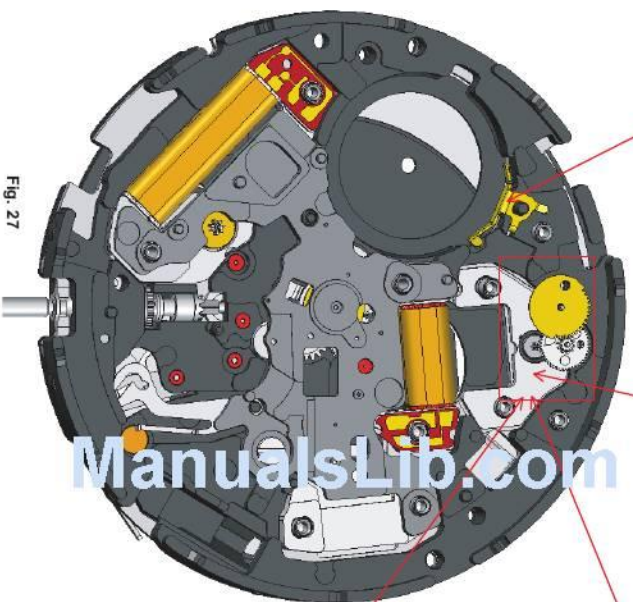


Fig. 27

<53>Mount the power reserve rotor.
◆ Make sure that the magnetic polarities (positive and negative) of the power reserve rotor are aligned as illustrated below.
* The built-in magnets of the movement holder will magnetically correct the alignment of the power reserve rotor.

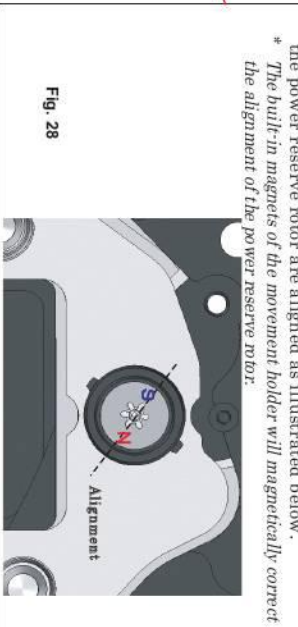


Fig. 28

<52>Mount the intermediate wheel for power reserve. (Alignment check)
◆ Set the aligning holes (indicated by ○ in the illustration below) on the surface of the wheels to the positions corresponding to the aligning pins on the movement holder. (Refer to the Fig. 29 below.)

◆ After setting the intermediate wheel for power reserve, tilt the power reserve rotor towards the intermediate wheel for power reserve. Make sure that the gear tooth pointed by the mark on the intermediate wheel for power reserve is securely engaged with a gear tooth of the pinion of the power reserve rotor. (Refer to the Fig. 30 below.)

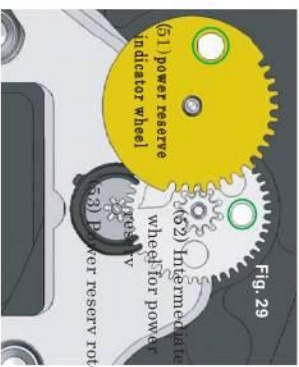


Fig. 29

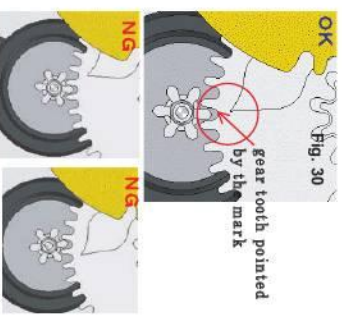


Fig. 30

gear tooth pointed by the mark

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
	Change the movement holder to an universal holder (S-682).
56	Mount the power reserve coil block. ↓
	Fix the power reserve coil block by tightening the power reserve coil block screw. ↓
50	Mount the power reserve train wheel bridge and check the pivot hole. ↓
49	Fix the power reserve train wheel bridge by tightening the power reserve train wheel bridge screw. ↓
	Lubricate the upper pivots of the wheels ("a", "b", "c" and "d" portions) Refer to the Fig. 31. ↓
	Lubricate the guiding slit of the setting lever. Refer to the Fig. 33. ↓
	Check the alignment of the power reserve indicator (42) and the intermediate wheel for power reserve (43) through the holes of the train wheel bridge (41). (41).

<56> Mount the power reserve coil block.
◆ When mounting the power reserve coil block, take care so as not to distort or deform the coil block core as it may cause deterioration of the motor.
(Coil block resistance: 1.25kΩ - 1.5kΩ (as reference value))

<50> Mount the power reserve train wheel bridge and check the pivot hole.

<49> Fix the power reserve train wheel bridge by tightening the power reserve train wheel bridge screw.

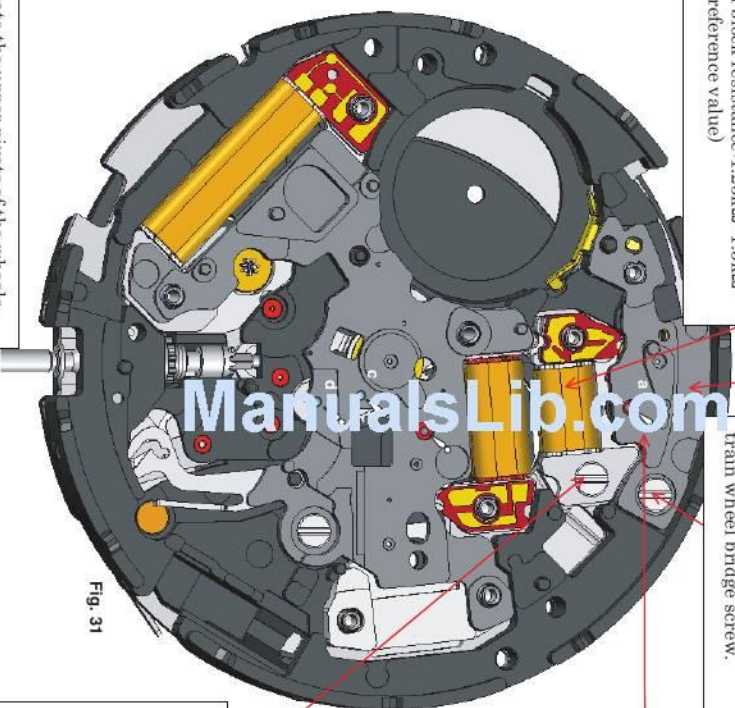


Fig. 31

Lubricate the upper pivots of the wheels:
① "a" and "b" portions ◆ Type of oil:AO-2
② "c" and "d" portions ◆ Type of oil:AO-3

Check the alignment of the power reserve indicator (42) and the intermediate wheel for power reserve (43) through the holes of the train wheel bridge (41).

Make sure that the positions of the holes on the power reserve train wheel bridge (indicated by ○ in the illustration below) are strictly corresponded to the positions of the holes on the intermediate wheel for power reserve and power reserve indicator wheel.

Bad example:
The intermediate wheel for power reserve and the power reserve rotor are not correctly engaged.



Fig. 32

<55> Fix the power reserve coil block by tightening the power reserve coil block screw.

Lubricate the guiding slit of the setting lever: refer to the Fig. 33 below.
◆ Type of oil:AO-3



Fig. 33

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No. PROCESS

48	Mount the first intermediate wheel for manual winding.
45	Mount the circuit block.
44	Mount the switching wheel.
47	Mount the third intermediate wheel for manual winding.
46	Mount the second intermediate wheel for manual winding.

<44> Mount the switching wheel.

<45>Mount the circuit block.
 ♦Firmly press down the points of engagements (six points from “a” to “f” indicated by ○ in the Fig. 34.

<46>Mount the second intermediate wheel for manual winding.

<47>Mount the third intermediate wheel for manual winding.

<48>Mount the first intermediate wheel for manual winding.

Fig. 34

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
43	Mount the circuit block cover C. ↓
42	Mount the circuit block cover A. ↓
41	Mount the circuit block cover B. ↓
36	Mount the oscillating weight bridge in process I and check the pivot hole. Refer to the Fig. 37. ↓
39 & 40	Fix the oscillating weight bridge and circuit block cover B by tightening the screws from "a" to "e". Refer to the Fig. 36. ↓
	Check if there is an adequate clearance to allow vertical movement of the wheels underneath the oscillating weight bridge.

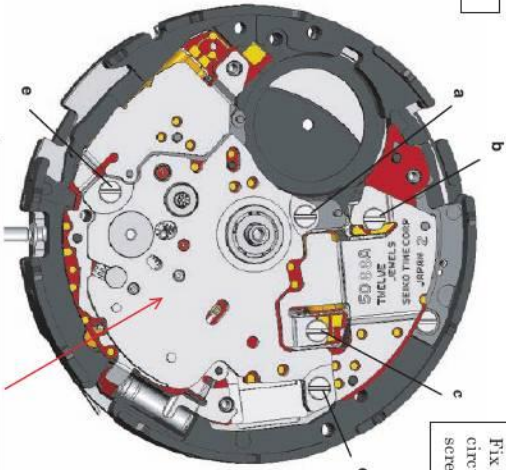
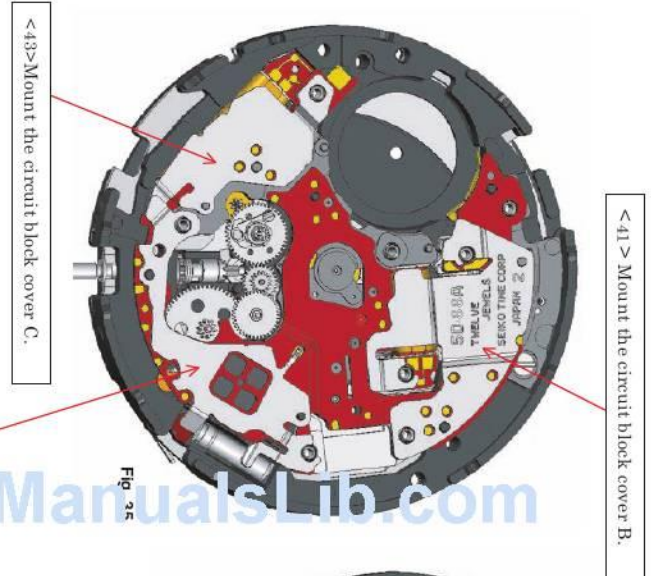
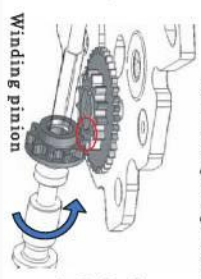


Fig. 36

<36> Mount the oscillating weight bridge in process I and check the pivot hole.
 ◆ When setting the oscillating weight bridge, make sure that the crown wheel and winding pinion are securely engaged, as the crown wheel is likely to override the winding pinion when it goes out of mesh. Adjust the mesh by turning the winding stem clockwise. Check if the winding stem turns smoothly.



Turn the winding stem clockwise to securely engage the crown wheel and winding pinion.

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
	Lubricate the upper pivots of the wheels for the wheels for manual winding mechanism at the "a" to "e" portions as shown in the Fig. 39
	Lubricate the bearings of the wheels as shown in the Fig. 39
38	Insert the friction spring for sliding wheel beneath the "f" portion shown in the Fig. 40.
37	Fix the circuit block cover A (42) and the friction spring for sliding wheel (38) by tightening the circuit block cover A screw.
	Check the current consumption after setting the rechargeable battery unit temporarily. Refer to the page 30.

Lubricate the upper pivots of the wheels for manual winding mechanism at the "a" to "e" portions as shown in the Fig. 40.
 ◆Type of oil:A0-3



Fig. 39

Lubricate the bearings of the wheels as shown in the Fig. 39 above.
 ◆Type of oil:A0-3

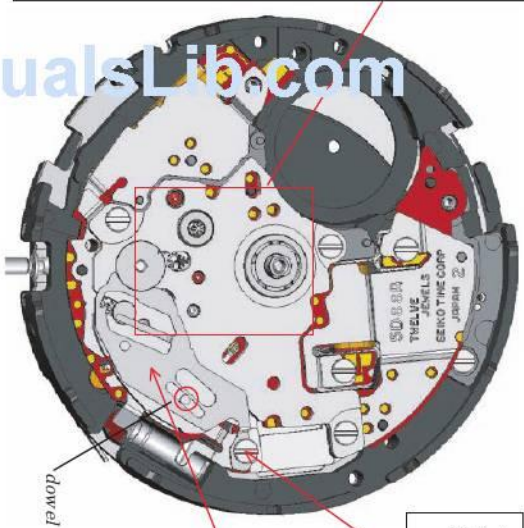



Fig. 38

<37> Fix the circuit block cover A (42) and the friction spring for sliding wheel (38) by tightening circuit block cover A screw.

<38> Insert the friction spring for sliding wheel beneath the "f" portion shown in the Fig. 40 below.
 ◆ Firmly press the  down to securely engage it with the dowel indicated in the Fig. 38 at left, so that it is mounted without any clearance between the friction spring for sliding wheel and the oscillating weight bridge.

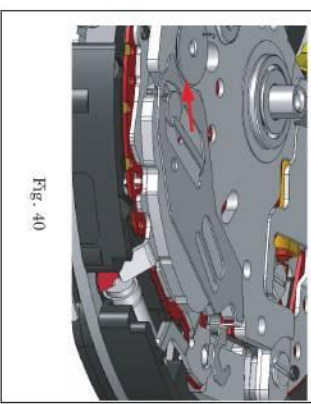


Fig. 40

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ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
	<p>Set the movement upside down on the Universal movement holder.</p>
31	<p>Release the Calendar plate screw.</p>
32-T	<p>Remove the Dummy plate.</p>
32	<p>Mount the Calendar plate by tightening the Calendar plate screw.</p>

<32-T> Remove the Dummy plate.
 After assembling the Oscillating weight bridge, turn over the movement and disassemble the dummy plate before starting to assemble the calendar side of the movement.

<32> After removing the Dummy plate, mount the Calendar Plate.
 ♦ Firmly press down the points of engagement (217#, 68#)



<31> Release the Calendar Plate screw.

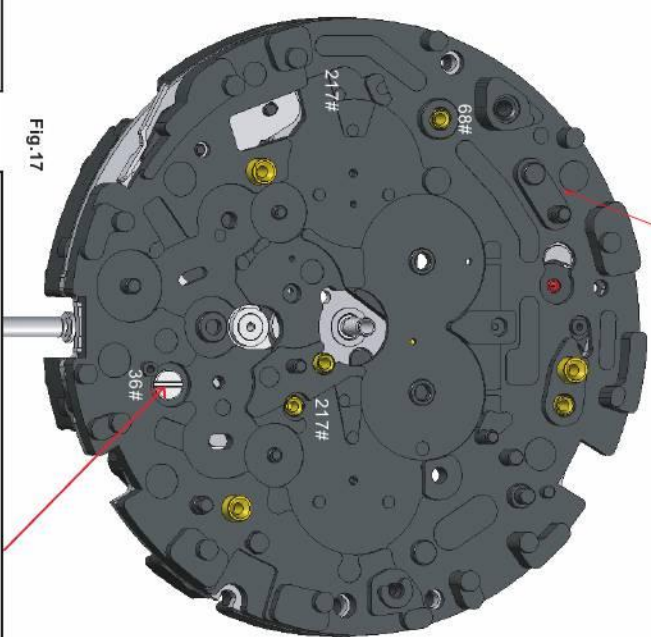


Fig.17

<31> Fix the Calendar Plate by tightening Calendar Plate screw (36#).
 Target value)
 Tightening torque: lower than 350gcm

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ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
	Assembling the Calendar mechanism
	Set the movement upside down on the Universal movement holder.
	Pull out the winding stem to the 2nd click position.
	Lubricating
30	Mount the Hour wheel.
29	Mount the Anti-magnetic shield plate (Fig.43).
28	Mount the Date driving wheel Alignment check.
27	Mount the Day driving wheel. Alignment check
26	Mount the Moon phase indicator driving wheel. Alignment check

Lubricating

- ① Lubricate the pipe of the Center wheel as indicated in Fig.44 below.
- ② Lubricate the point of contact between the main plate and the Hour wheel.

- ◆ Type of oil: AO-3 (Reducing the resistance by friction)



Fig.44

<29> Mount the Anti-magnetic shield plate.

<30> Mount the Hour wheel.

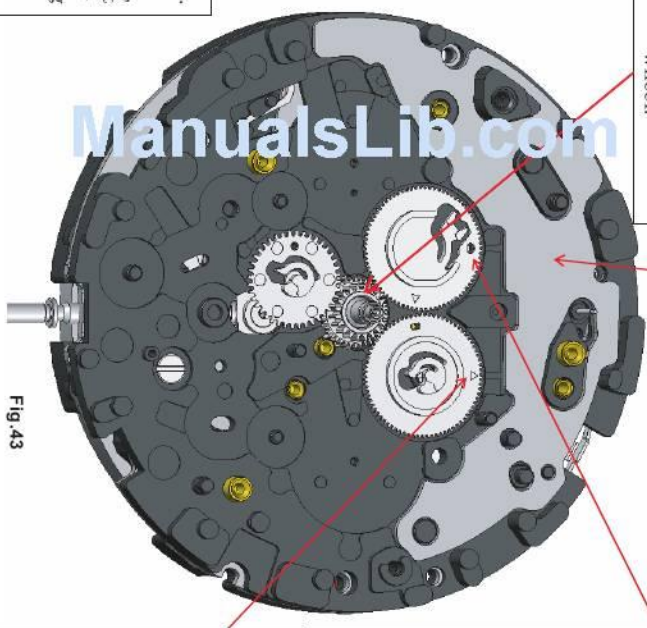



Fig.43

<28>Mount the Date driving wheel. Alignment check

- ◆ After setting the Date driving wheel, place the hole on the marked point on the calendar plate (indicated by  in the Fig. 45 below) by turning the winding stem clockwise.

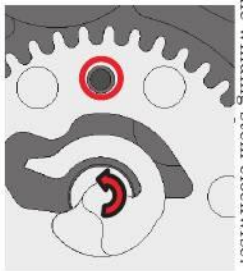


Fig.45

<27>Mount the Day driving wheel. Alignment check

- ◆ The peak of the mark on the Day driving wheel should be set and aligned within the marked area on the Calendar plate as indicated in Fig.46

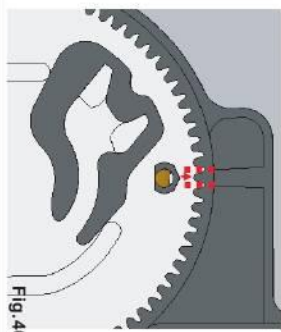


Fig.46

<26>Mount the Moon phase indicator driving wheel. Alignment check

- ◆ The top of the triangle mark on the Moon phase indicator driving wheel should be set and aligned within the marked area on the Calendar plate as indicated in Fig.47

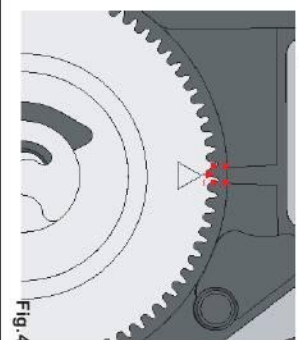


Fig.47

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
25	Mount the 2nd intermediate wheel for calendar corrector.
24	Mount the 3rd intermediate wheel for calendar corrector.
23	Mount the 1st intermediate wheel for day corrector.
22	Mount the 2nd intermediate wheel for day corrector.
21	Mount the Day star wheel.

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<21> Mount the Day star wheel.

<22> Mount the 2nd intermediate wheel for day corrector.
 ◆ Correct direction is as shown Fig.49 below.

Fig.49

<23> Mount the 1st intermediate wheel for day corrector.

<24>Mount the 3rd intermediate wheel for day corrector.
 ◆ To discriminate the 3rd Intermediate wheel for calendar corrector from the 1st Intermediate wheel for day corrector, see the difference in the shapes of each wheel. Fig. 50

*3rd Intermediate wheel for calendar corrector

*1st Intermediate wheel for day corrector

Fig.49

<25>Mount the 2nd Intermediate wheel for calendar corrector.
 * This part is reversible.

Fig.48

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
20	Mount the Date jumper.
19	Fix the Date jumper to the calendar plate by tightening the Date jumper screw.
21	Set and hook the date jumper to the day star wheel.
	Lubricate the Day star wheel.
	Check the clearance between the wheels under the Date jumper.

<20> Mount the Date jumper.
 ◆ Firmly press down the points of engagement to securely set it in position. (455#, 456#)

<19> Fix the Date jumper to the calendar plate by tightening the Date jumper screw. (68#, 101#)
 Target value)
 Tightening torque: lower than 350gcm

Set and hook the date jumper to the day star wheel.

◆ Take care so as not to deform the date jumper.

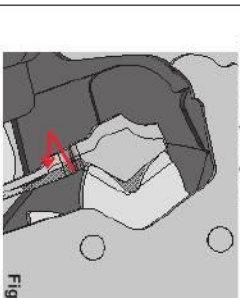


Fig.52

Lubricate the Day star wheel.

◆ Apply the lubricant as shown Fig.53 below.

◆ Type of oil: AO-3 (Reducing the resistance by friction)

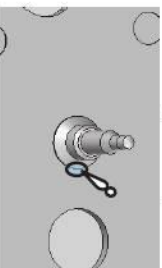


Fig.53

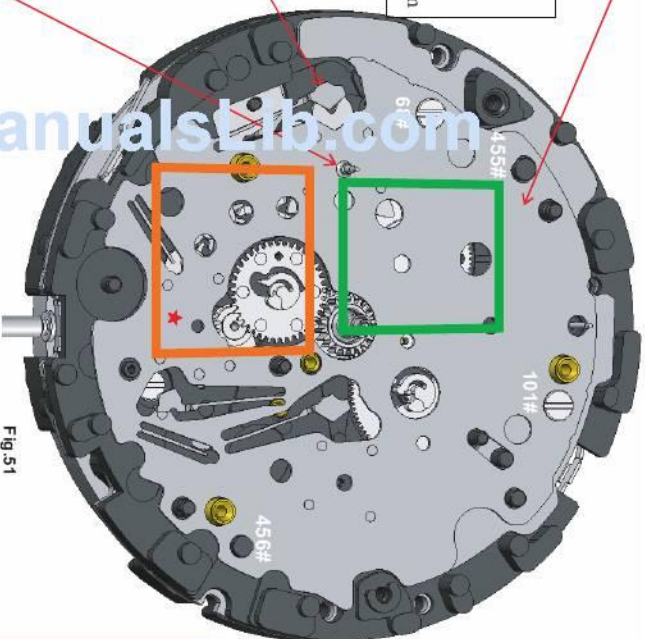


Fig.51



Check the clearance between wheels.

- | | | | | |
|-------------------------------------------------|-------------------------------------------------|--------------------------------------------|--------------------------------------------|---------------------|
| ① 2nd Intermediate wheel for calendar corrector | ② 3rd Intermediate wheel for calendar corrector | ③ 1st Intermediate wheel for day corrector | ④ 2nd Intermediate wheel for day corrector | ⑤ Day driving wheel |
|-------------------------------------------------|-------------------------------------------------|--------------------------------------------|--------------------------------------------|---------------------|

◆ When checking, the Date jumper should be mounted without clearance (hold the ★ point lightly.)

◆ The points of checking are shown in the above illustrations.

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

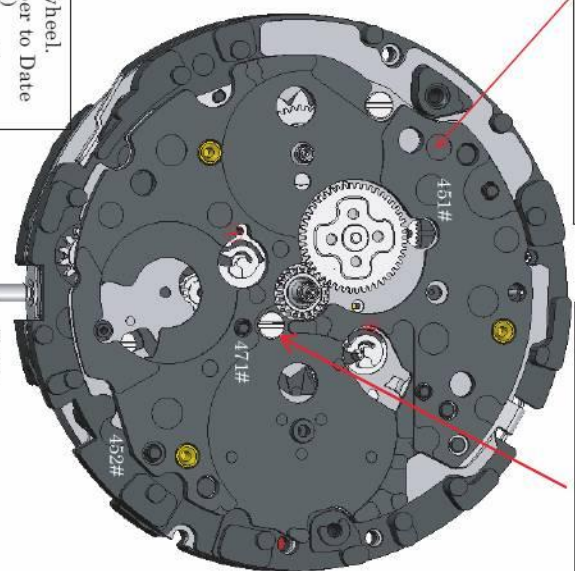
No.	PROCESS
17	Mount the Intermediate wheel for 24 Hour indicator.
16	Mount the 24 Hour indicator wheel.
15	Mount the Date corrector wheel.
14	Mount the Date star wheel. Set and hook the jumper to Date star wheel.
13	Mount the Calendar train bridge.
12	Fix the Calendar train bridge by tightening the Calendar train bridge screw.
	Check the clearance between the wheels under the Calendar train bridge.

<17> Mount the Intermediate wheel for 24 Hour indicator.

<16> Mount the 24 Hour indicator wheel.

<13> Mount the Calendar train bridge.
◆ Firmly press down the points of engagement. (451#, 452#)

<12> Fix the Calendar train bridge by tightening the Calendar train bridge screw. (471#)
Target value)
Tightening torque: lower than 350gcm



<14> Mount the Date star wheel.
Set and hook the jumper to Date star wheel. (See Fig.60)
◆ Take care so as not to deform the jumper.
◆ Securely engage the Date star wheel and the Date corrector wheel (indicated by ● in the upper left diagram.)

<15> Mount the Date corrector wheel.
* This part is reversible.

Check the clearance between the wheels.

- ① Date driving wheels
- ② Moon phase Indicator wheel

◆ Checking points are indicated in Fig.59.

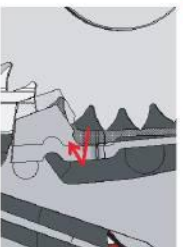


ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
11	Mount the Moon phase indicator wheel.
10	Mount the Dial washer.
9	Mount the calendar train cover. Set and hook the jumper to the Moon phase indicator wheel.
8	Fix the calendar train cover by tightening the calendar train bridge screw.
	Lubricate the jumpers.

<11> Mount the Moon phase indicator wheel.
 ◆ When handling the Moon phase indicator wheel, take care so as not to damage the printed surface of the Moon phase indicator.



Fig.61

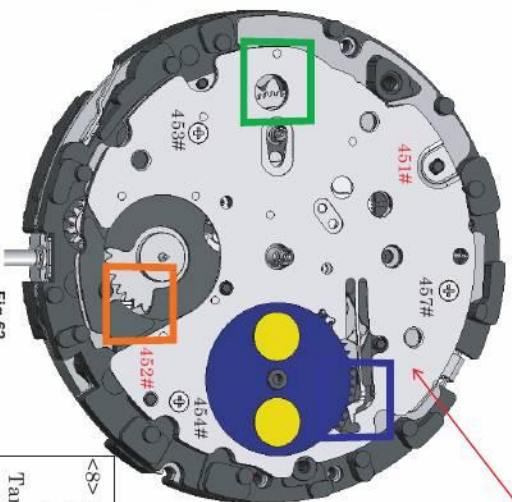


Fig.62

<9>Mount the calendar train cover.
 <How to set and hook the jumper of the Moon phase indicator wheel>
 ◆ Firmly press down the point of engagement 451# first. Hook the jumper before pressing down the engagement 452#. Then, press down the point of engagement 457#. Take care so as not to deform the jumper of the Calendar train wheel.

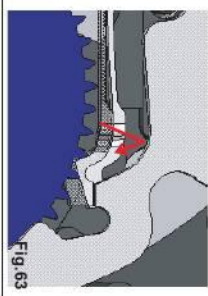


Fig.63

<8> Fix the Calendar train cover by tightening the Calendar train bridge screw (453#, 454#, 457#.)
 Target value)
 Tightening torque: lower than 200gcm

<10> Mount the Dial washer.
 ◆ Make sure the dial washer is put in the correct direction. (See the Fig.63 below.)



Fig.63

◆ When mounting the dial washer, handle it with care so as not to bend or deform it.

- Lubricate the jumpers.
- ◆ ① Lubricate the jumper of the Date driving wheel (See Fig.64 shown as right)
 ◆ Type of oil: AO-3
 (For preventing the abrasion of the parts)
 - ◆ ② Lubricate the jumper of the Day driving wheel (See Fig.65 shown as right)
 ◆ Type of oil: AO-3
 (For preventing the abrasion of the parts)
 - ◆ ③ Lubricate the jumper of the Moon phase indicator driving wheel (See Fig.66 shown as right)
 ◆ Type of oil: S-6



Fig.64

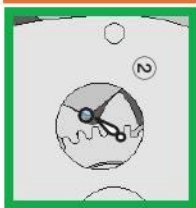


Fig.65



Fig.66

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
7	Mount the rechargeable battery unit. ↓
6	Mount the insulator for rechargeable battery ↓
5	Mount the rechargeable battery guard. ↓
4	Fix the insulator for rechargeable battery and rechargeable battery guard by tightening the rechargeable battery guard screws "b" and "f"
	Reset the built in IC. Refer to the Fig.70.

- < 7 > Mount the secondary battery unit.
- ◆ Hook the arm of the secondary battery unit to the "a" portion in the Fig.69 below.
- ◆ Take care so as not to deform the minus terminal when removing the secondary battery unit.



Fig.69

- < 6 > Mount the insulator for secondary battery.
- ◆ Firmly press down the hole of the insulator for secondary battery to the guide tube of the main plate ("e"), then press down the point of engagement "d" until insulator for secondary battery is securely set in position.

- < 5 > Mount the secondary battery guard.
- ◆ Firmly press down the points of engagement to securely set it in position.
- ◆ Positioning guide tube: "g"
- ◆ Points of engagement: "c" and "d"



Fig.68

- < 4 > Fix the insulator for secondary battery and secondary battery guard by tightening the secondary battery guard screws "b" and "f".

- Reset the built in IC.
- ◆ Short-circuit the built-in IC by connecting the reset pattern on the circuit block and the circuit block cover A using a pair of tweezers for approximately 2 seconds.

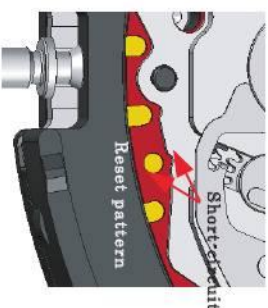


Fig.70

ILLUSTRATION AND SPECIAL INSTRUCTIONS ETC.

No.	PROCESS
3	Lubricate and set the oscillating weight wheel. Refer to the Fig.72.
2	Mount the oscillating weight. ↓
1	Fix the oscillating weight by tightening the oscillating weight screw. ↓
	Check the power generating performance. ↓
	Check the movement of the oscillating weight. ↓
	Check the movement of the crown. ↓

< 3 > Lubricate and set the oscillating weight wheel as shown in the Fig.72.

① Spring portion

◆ Type of oil: A-O-3

◆ Apply the Lubricant to the clearance around the tip of the spring so that the Lubricant is applied to the entire surface.

② Axis/oscillating portion of the wheel

◆ Type of oil: A-O-3

◆ Apply the lubricant to the clearance around the indentation so that the lubricant is applied entirely to the inside surface of the axis.



Fig.72

< 2 > Mount the oscillating weight.
< 1 > Fix the oscillating weight by tightening the oscillating weight screw.

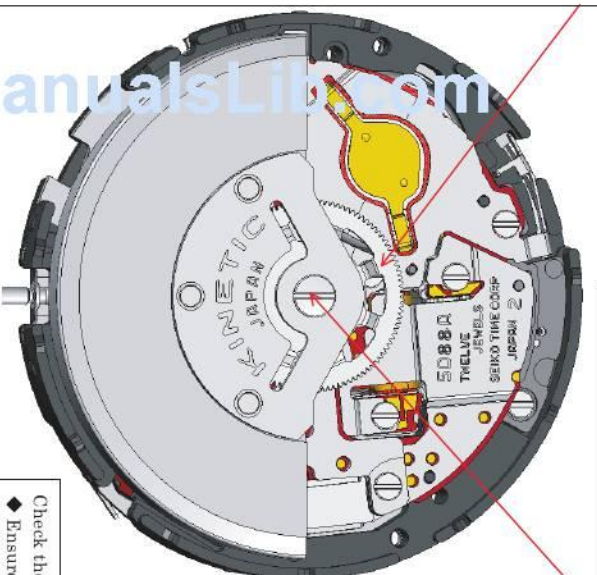


Fig.71

Check the movement of the oscillating weight.

◆ Ensure that the oscillating weight rotates smoothly without any friction or resistance.

Check the movement of the crown by winding it clockwise at its normal position.

◆ Make sure that the crown does not run idle and that it rotates smoothly without any resistance.

◆ The crown should rotate without making creaking noises.

* If the generating rotor is not appropriately lubricated, you will hear the creaking (high-pitch sound).

Check the power generating performance.

① Check if the power is generated while the oscillating weight is rotating.


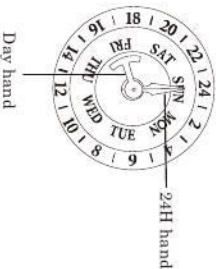

◆ Range of the initial voltage: between 1.30V and 1.55V

◆ The increase in voltage after spinning the oscillating weight should not be less than 50 mV.

② Check if the power is generated while the winding stem is rotating.

◆ The increase in voltage after rotating the winding stem weight should not be less than 50 mV.

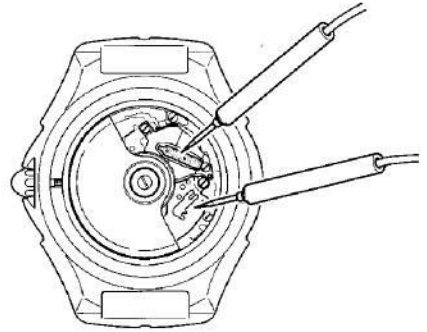
PROCESS	SPECIFICATIONS (QUALITY SPECIFICATIONS, HANDLING METHODS ETC.)
<p>V) Function checks and installation of the exterior parts</p> <p>Check the movement of the winding stem and connected wheels.</p>	<ul style="list-style-type: none"> ◆ Ensure that the winding stem works smoothly without being dragged at any position. <ul style="list-style-type: none"> • Pull out the winding stem to the first and second click position and vice versa. • Turn the crown clockwise and counterclockwise at each position.
<p>Check the movement of the hands by winding the stem with crown at the second click position.</p>	<ul style="list-style-type: none"> ◆ The hands should move smoothly without dropping off or being dragged while rotating or without any friction.
<p>Check if the date and day are corrected when the crown is at the first click position.</p>	<ul style="list-style-type: none"> ◆ Ensure that the calendar is corrected smoothly without any friction or resistance. ◆ Check full rotation of both the date star wheel and day star wheel.
<p>Check if the date and day change correctly when the crown is at the second click position.</p>	<ul style="list-style-type: none"> ◆ Ensure that the date, day and Moon phase correctly change without any friction or resistance. ◆ The date and day should change instantly without being dragged. ◆ When the date changes, make sure that it does not advance for two days at one time. ◆ Make sure that the day changes correctly and instantly from the 7th day to the 1st.
<p>Check if the Moon phase indicator wheel move correctly when the Moon phase corrector lever is pushed.</p>	<ul style="list-style-type: none"> ◆ Ensure that the Moon phase indicator wheel moves correctly and smoothly.

No.	PROCESS	SPECIFICATIONS (QUALITY SPECIFICATIONS, HANDLING METHODS ETC.)	ILLUSTRATIONS AND SPECIAL INSTRUCTIONS ETC.
	Mount the direct drive indicator hand.	The direct drive indicator hand should indicate the "0" position as illustrated at right. Push-in force: push it in with a force less than 2 kg.	 <p>Direct drive indicator hand</p>  <p>Day hand 24H hand</p>  <p>Date hand</p>
	Mount the date hand.	Set the date hand to the appropriate date scale.	
	Mount the 24H hand.	Make sure that the date hand moves properly when turning the crown at the second click position. Then mount the 24H hand to the 24H position.	
	Mount the day hand.		
	Mount the minute hand.		
	Mount the second hand.		
	Check the hand installation height.	Make sure that the hands turn a full circle without having any friction with other hands or markings on the dial or the surface of the dial.	
	Check the movement of the hands.		
	Check if the date and day change correctly.		
	Remove the winding stem.		
	Set the movement in to the case.	Ensure that the case is firmly mounted without any clearance.	
	Set the winding stem with the crown.		
	Close the case back.		

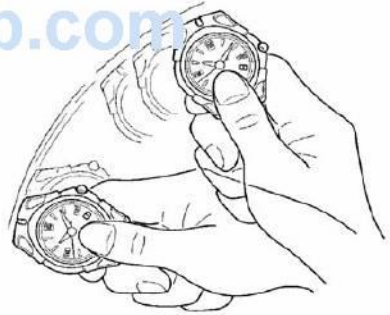
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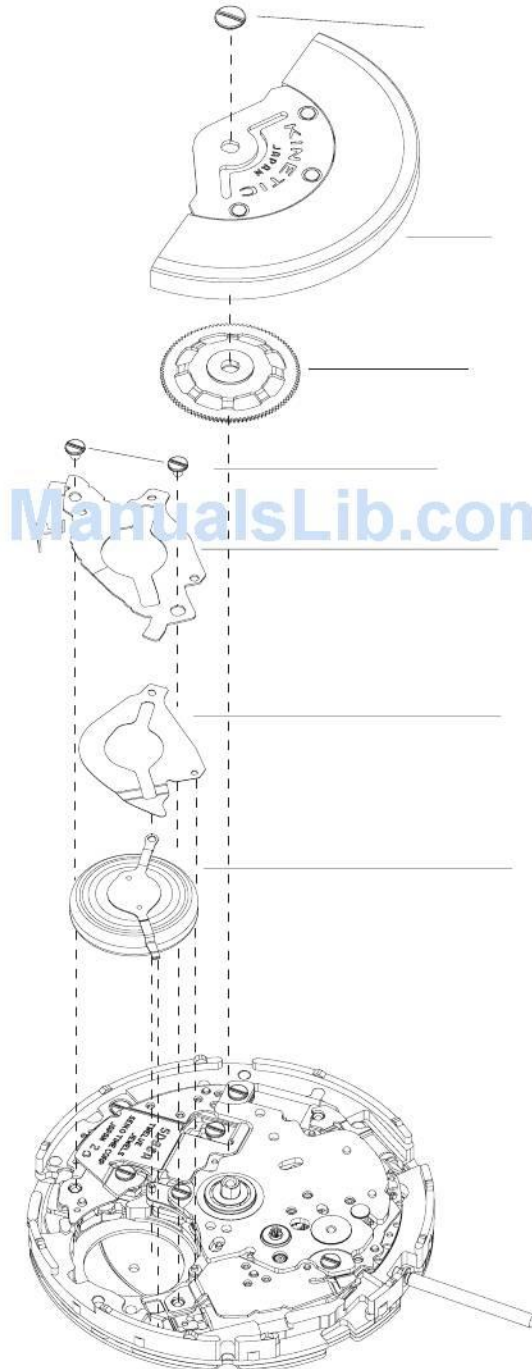
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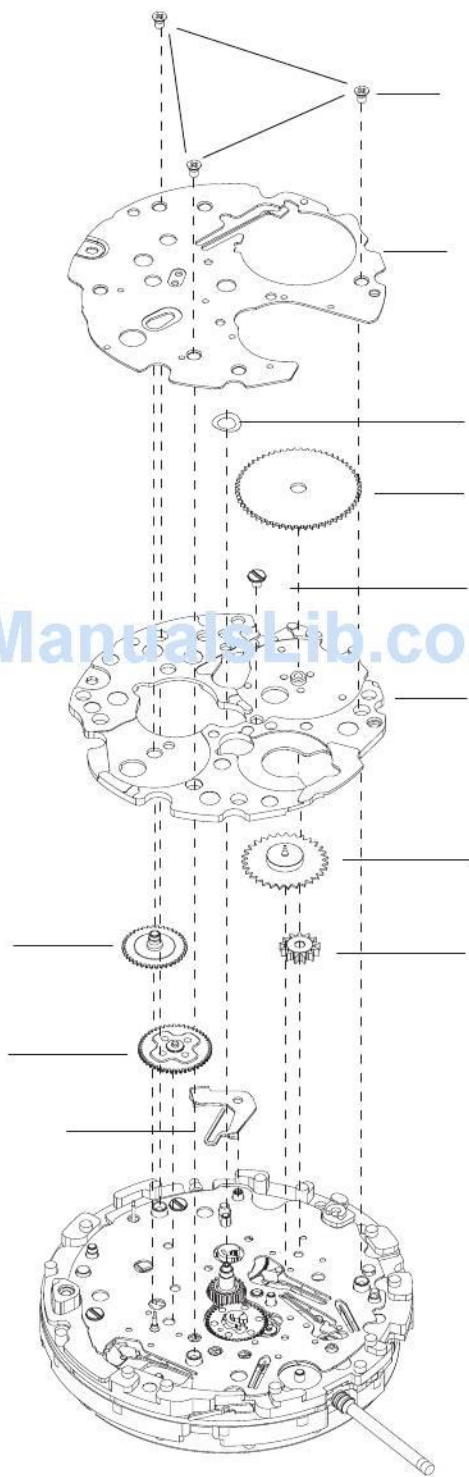


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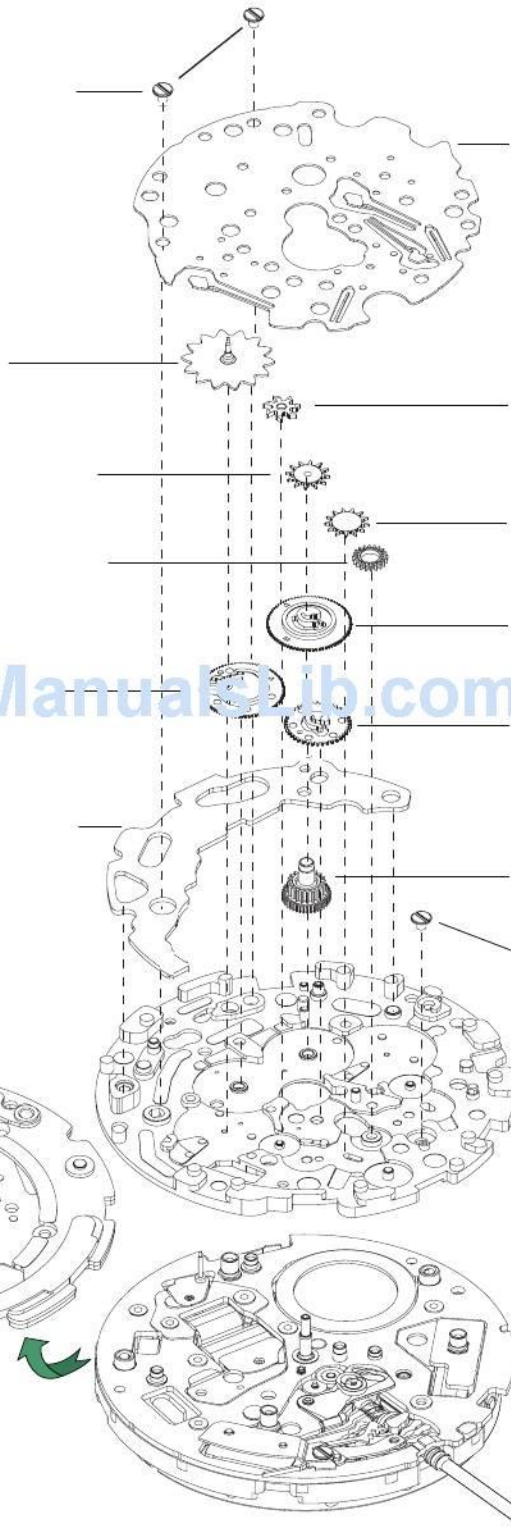
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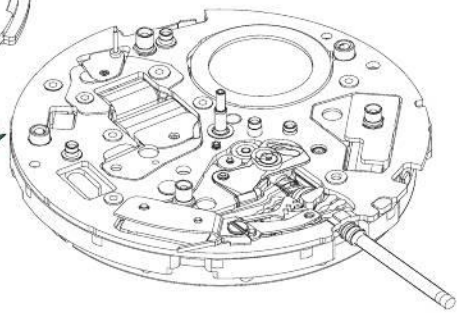
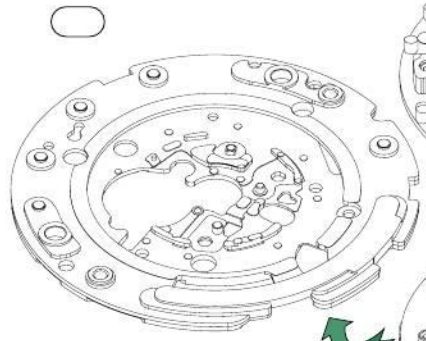


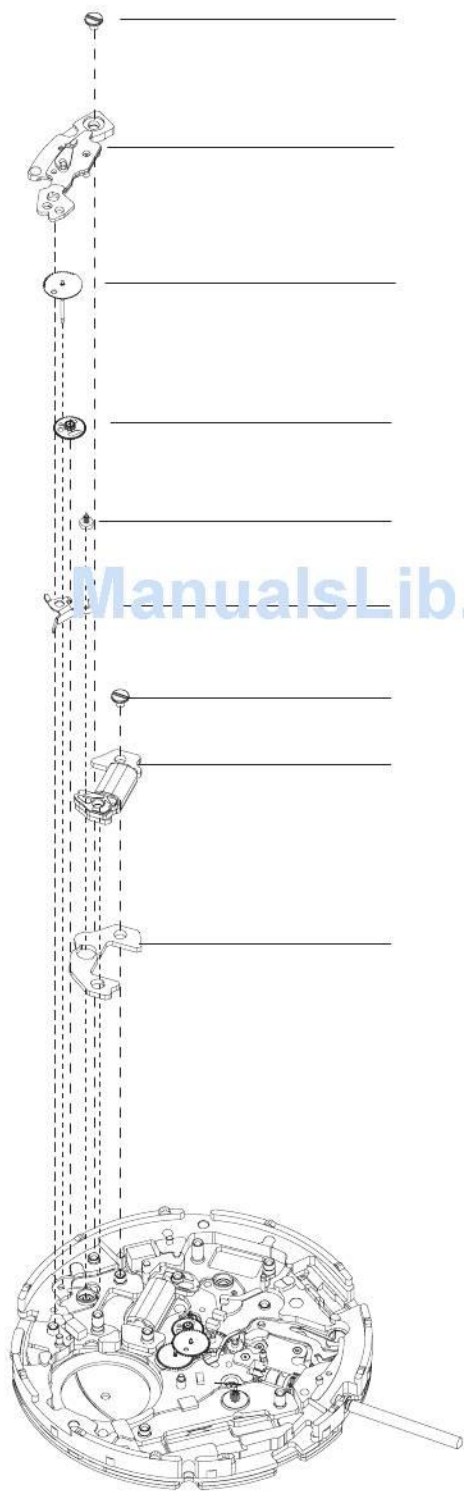


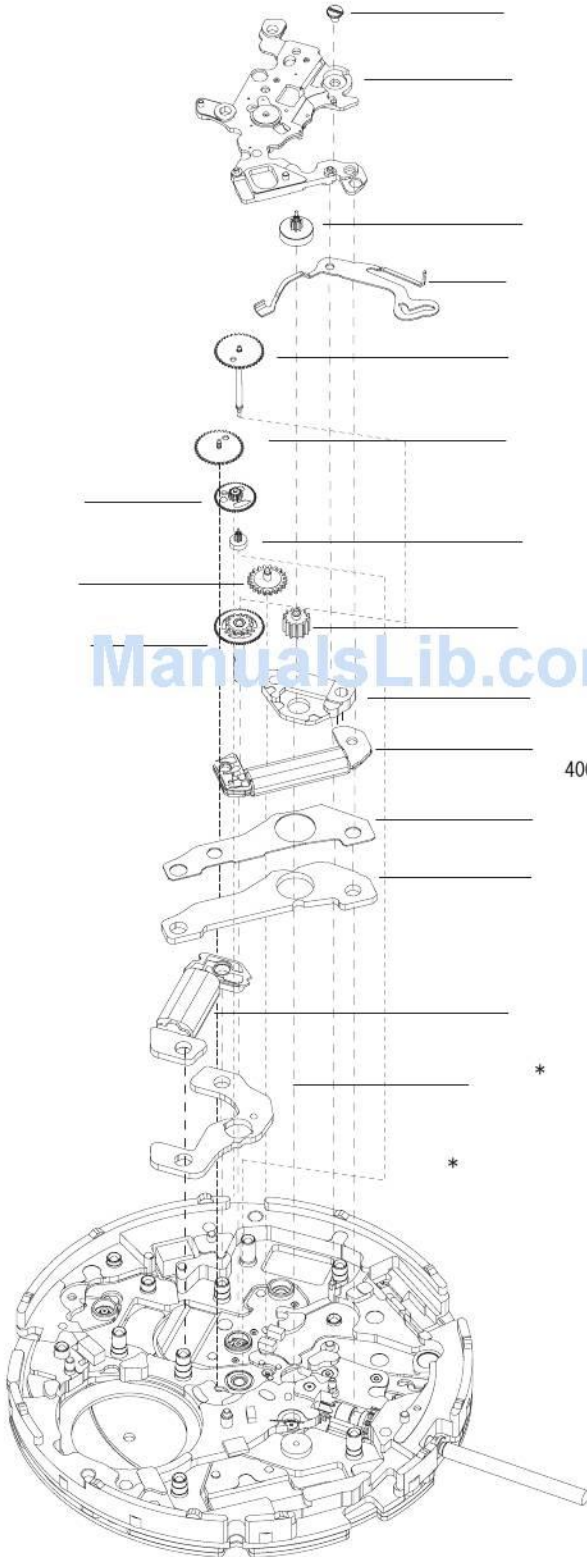
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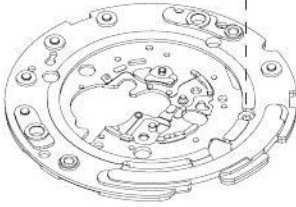






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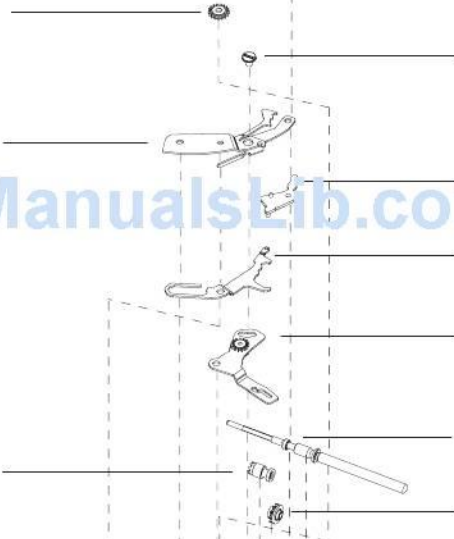
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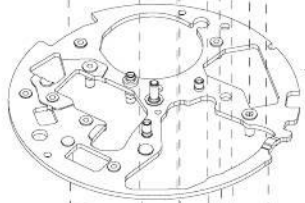
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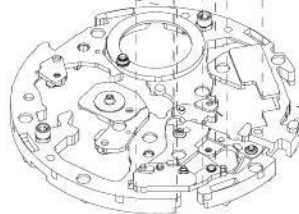
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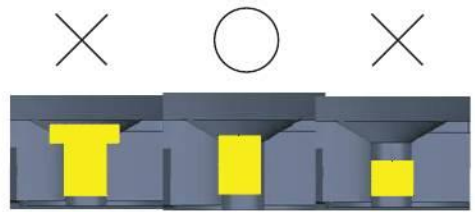
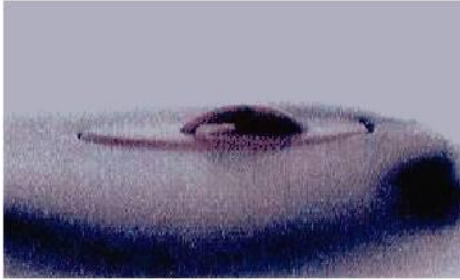


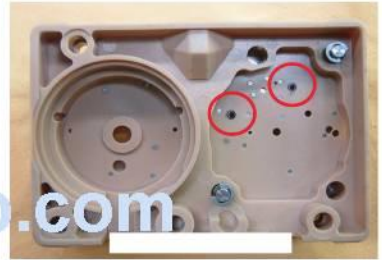
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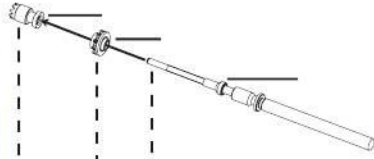
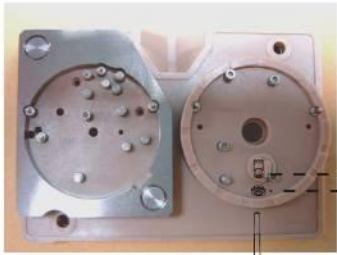




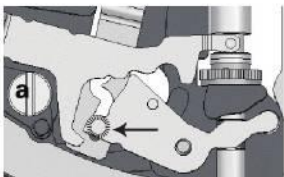


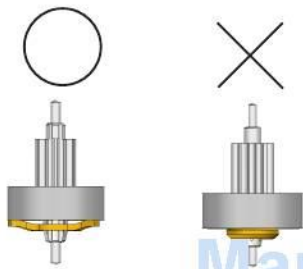
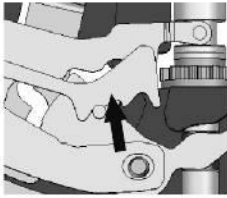
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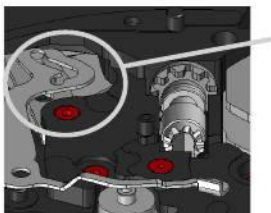
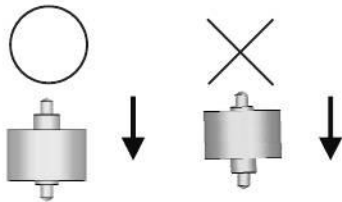


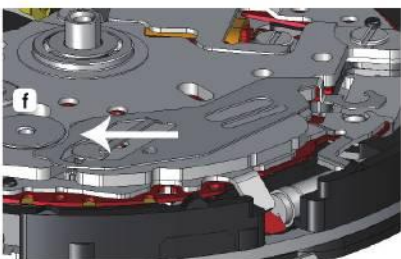
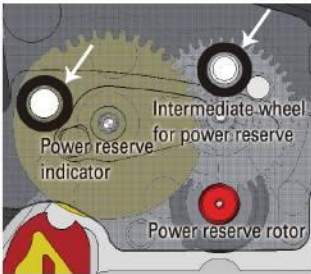
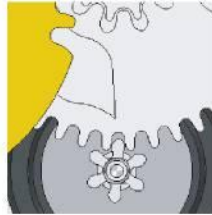
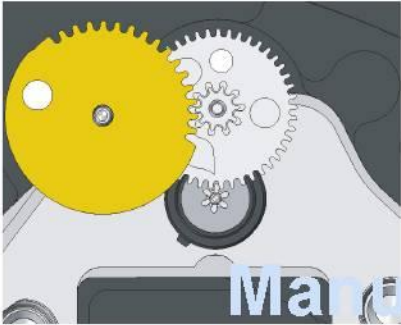
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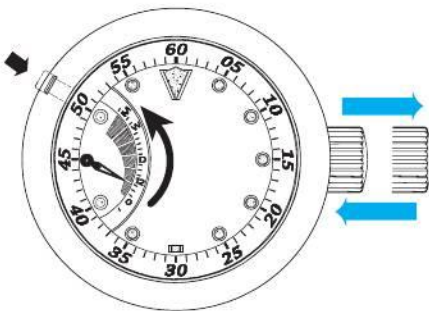
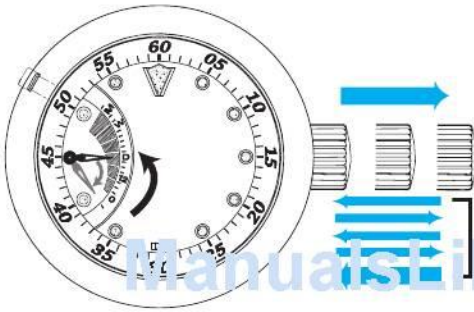




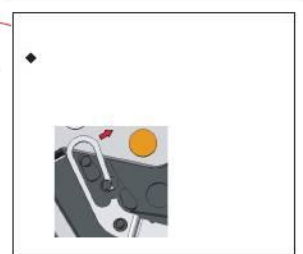
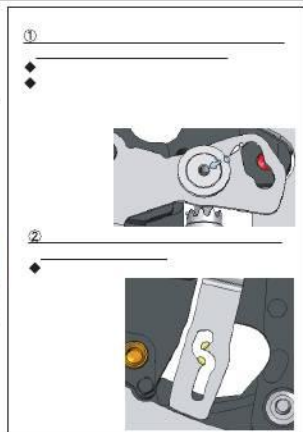
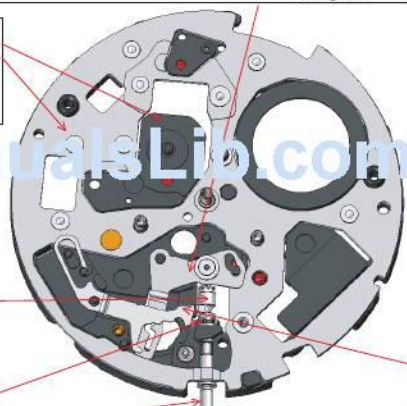
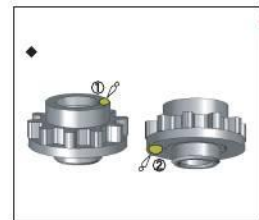
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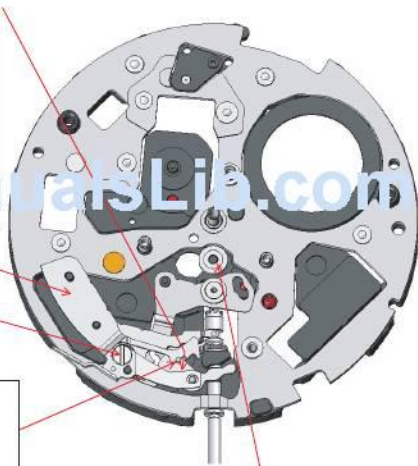
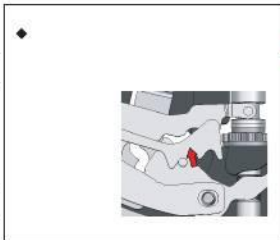
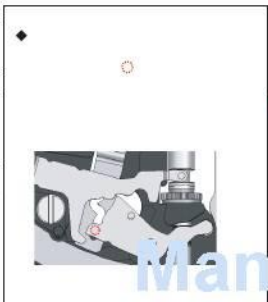






II) Assembling
the dial side of
the movement
(1)





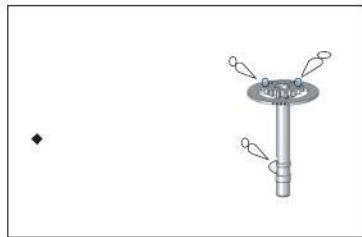
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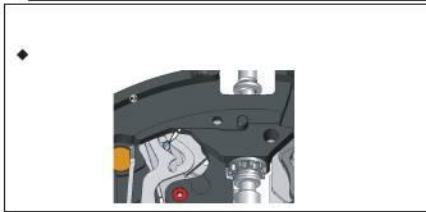
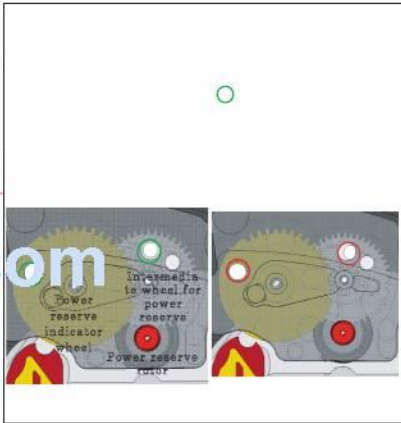
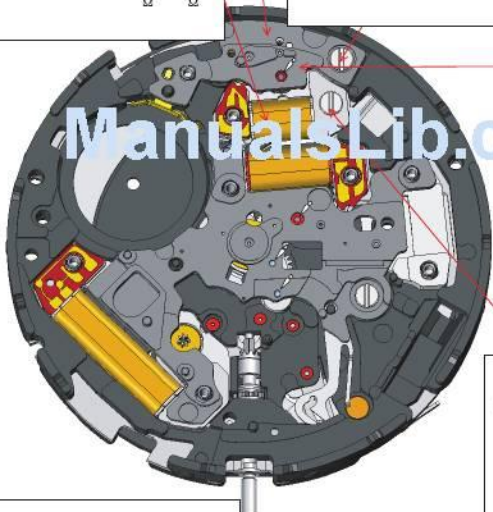
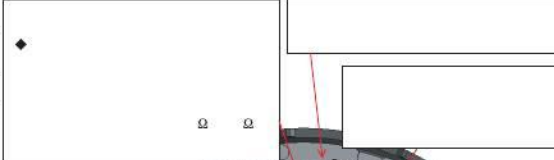
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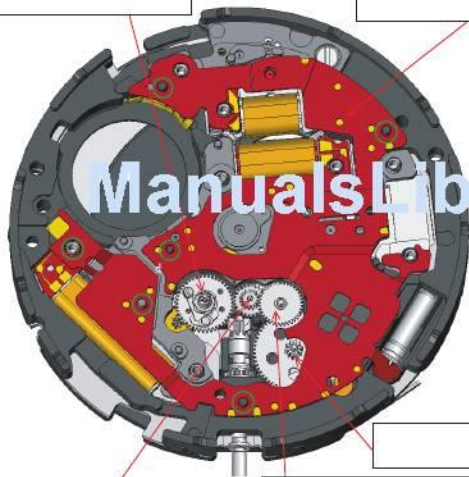


III) Assembling
the case back
side of the
movement

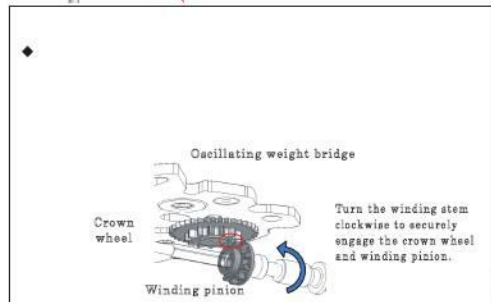
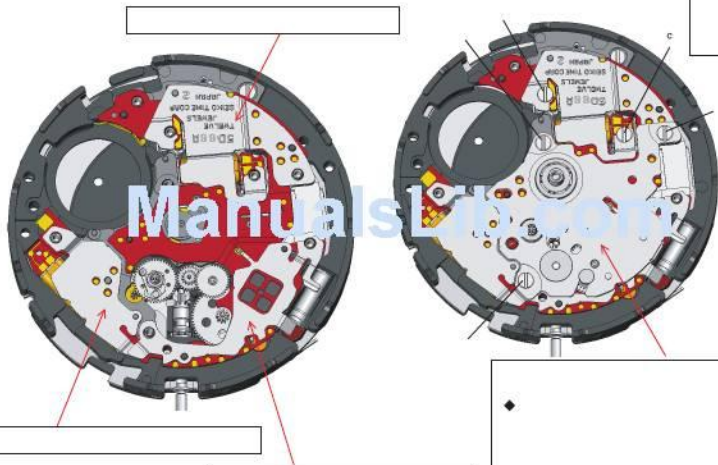


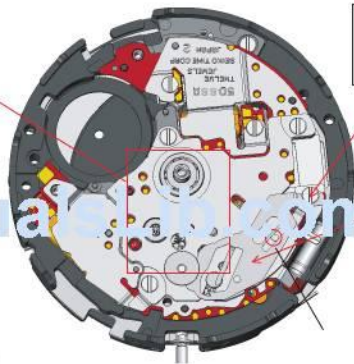


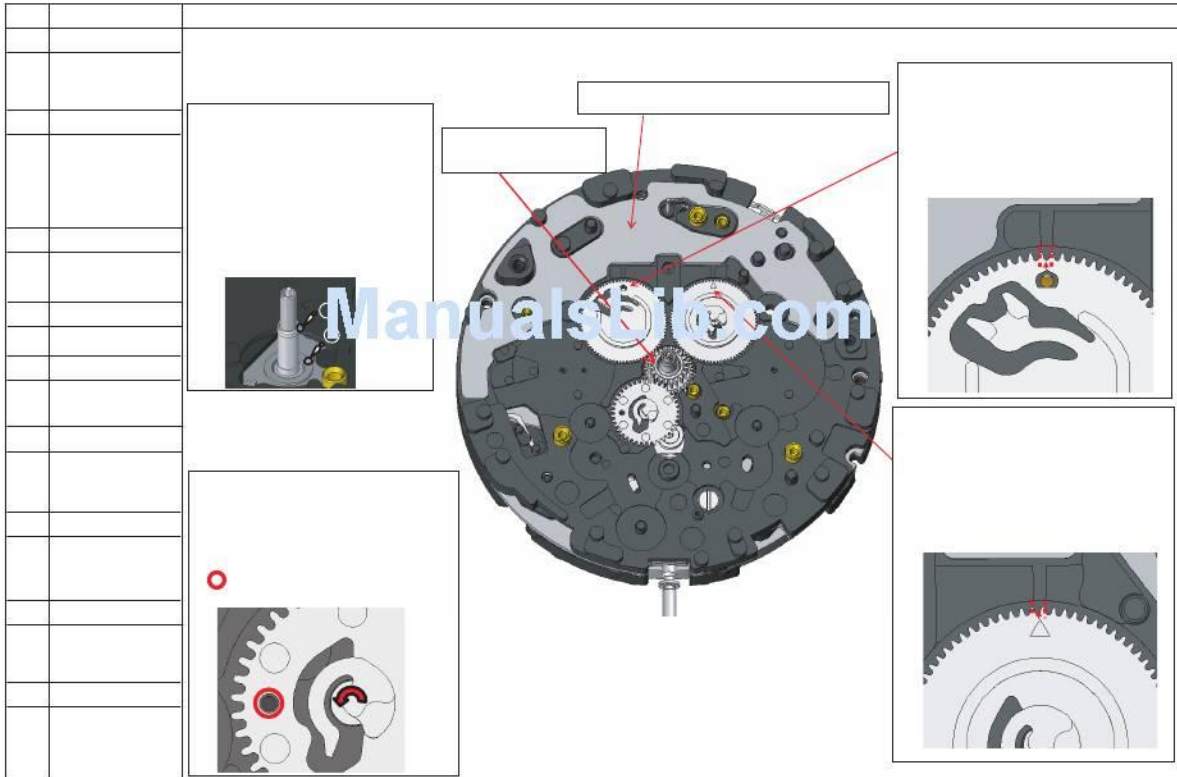
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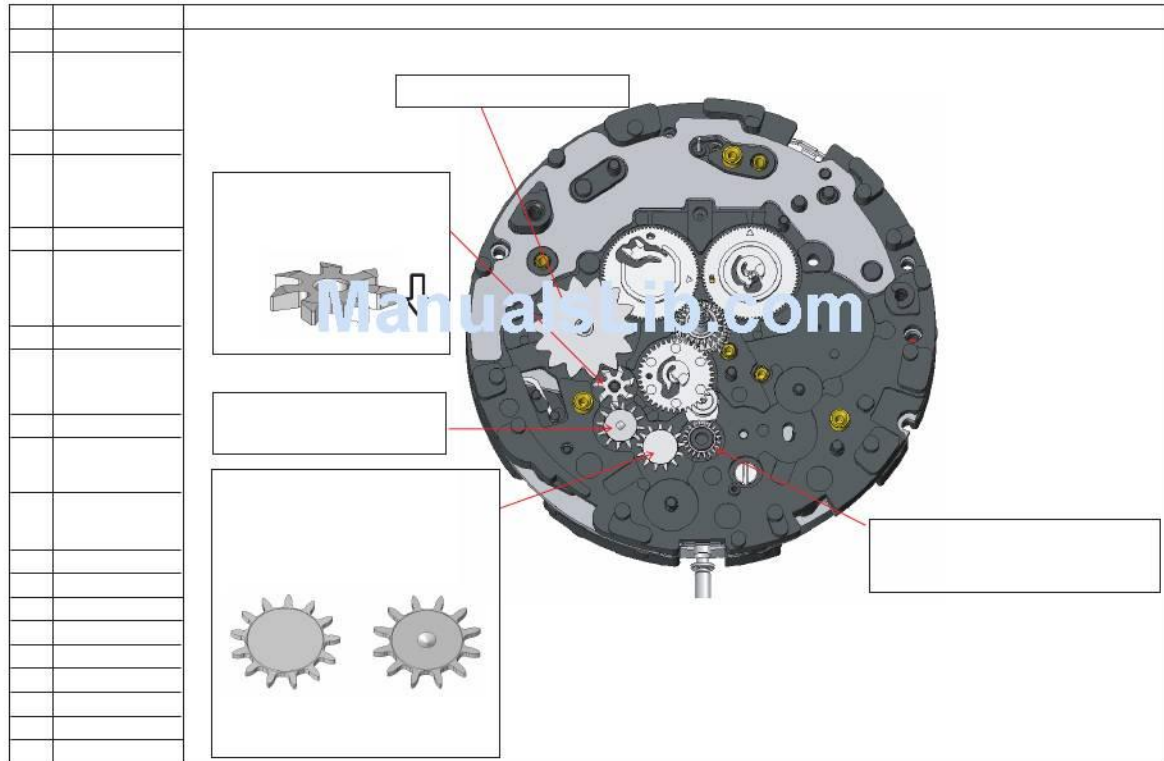


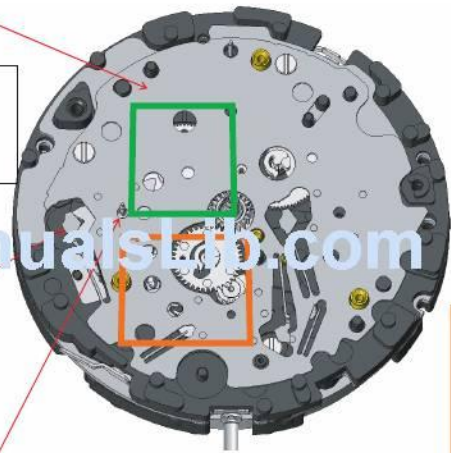
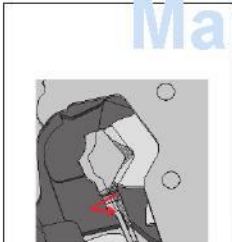
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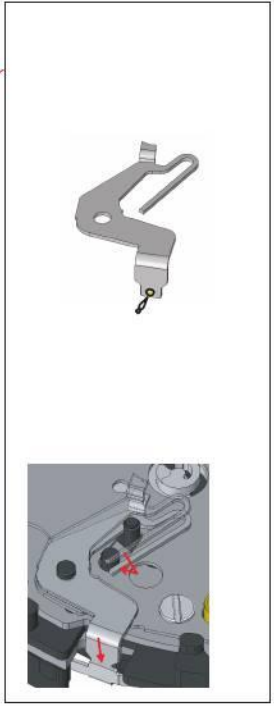
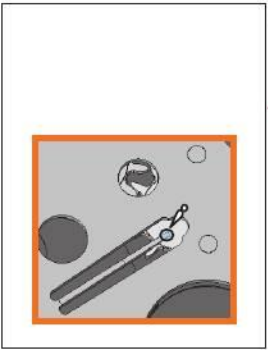


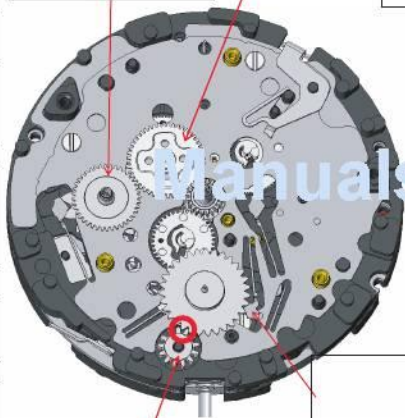


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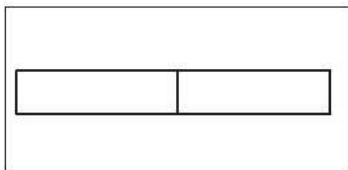


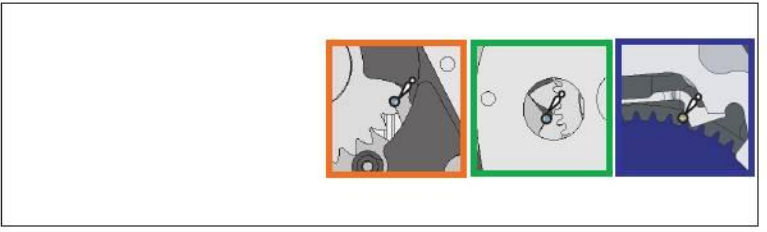
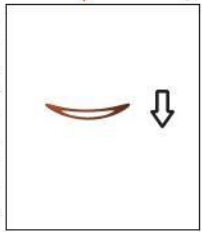
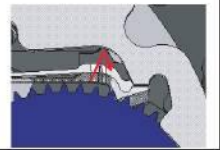
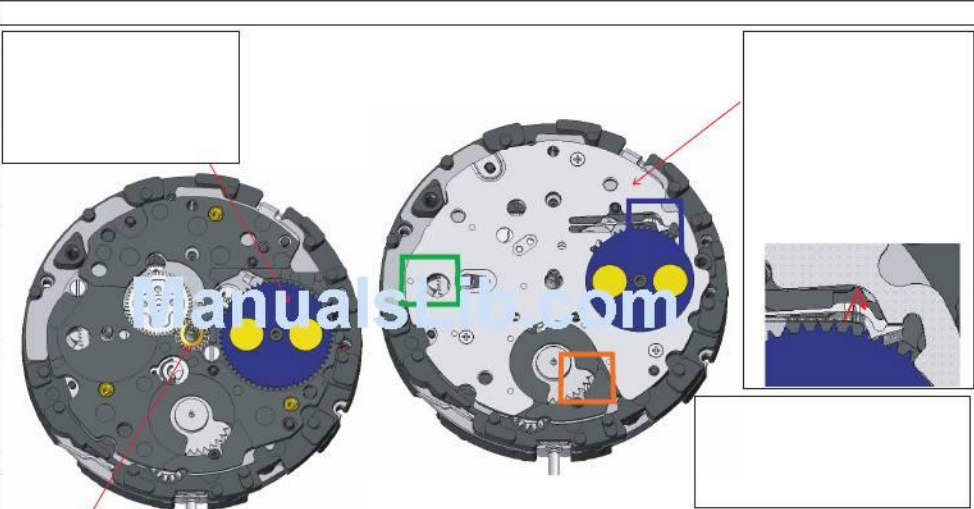
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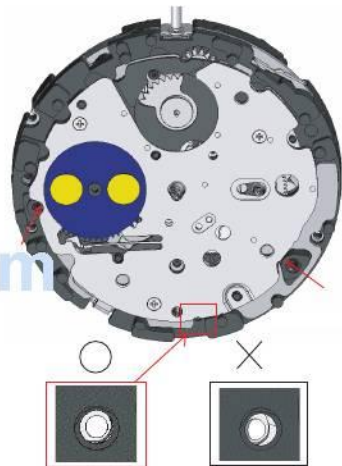




V) Function checks and installation of the exterior parts	
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	◆
	◆ ◆
	◆ ◆ ◆ ◆
○	◆

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Preparation for mounting the direct drive indicator hand

<How to install the direct drive indicator hand after resetting the built-in IC>



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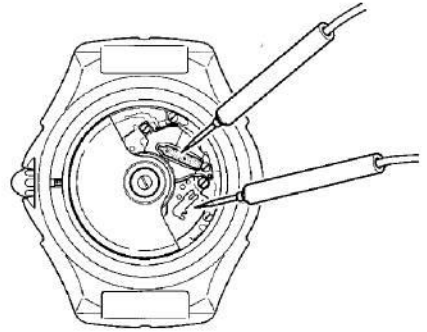
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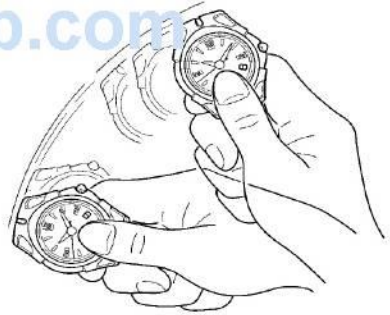
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