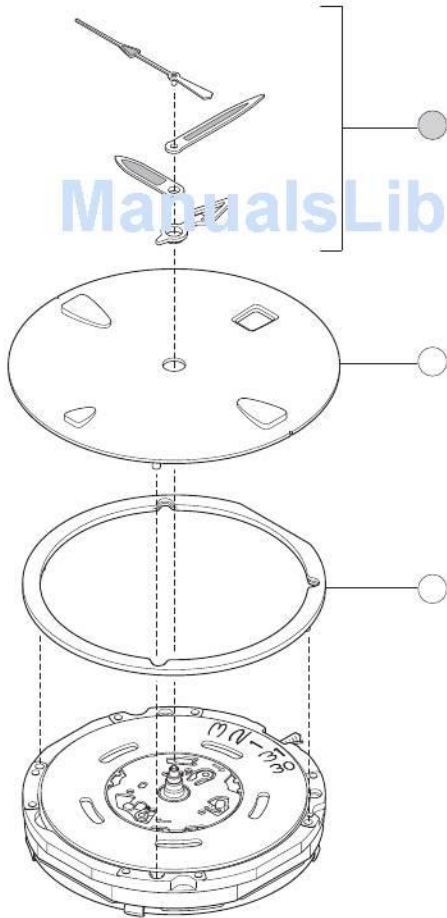
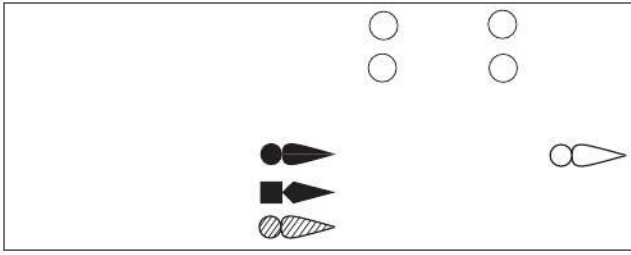
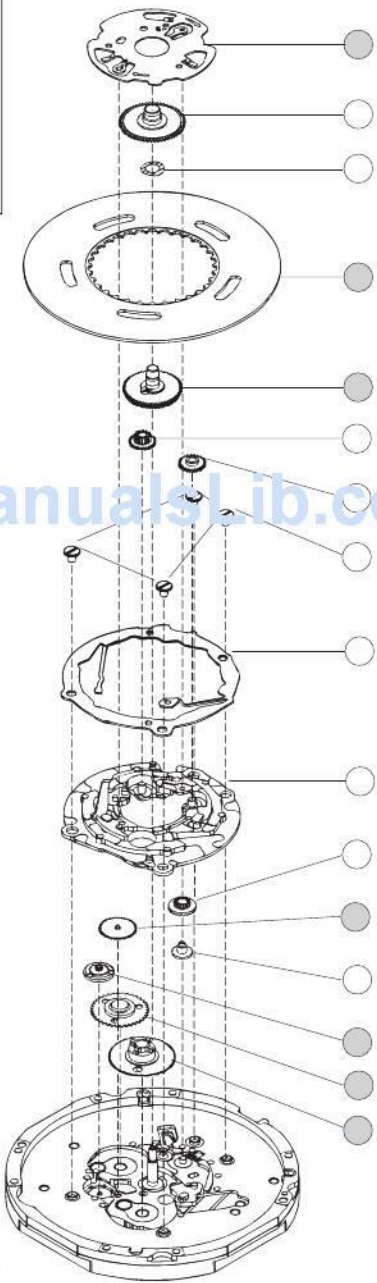
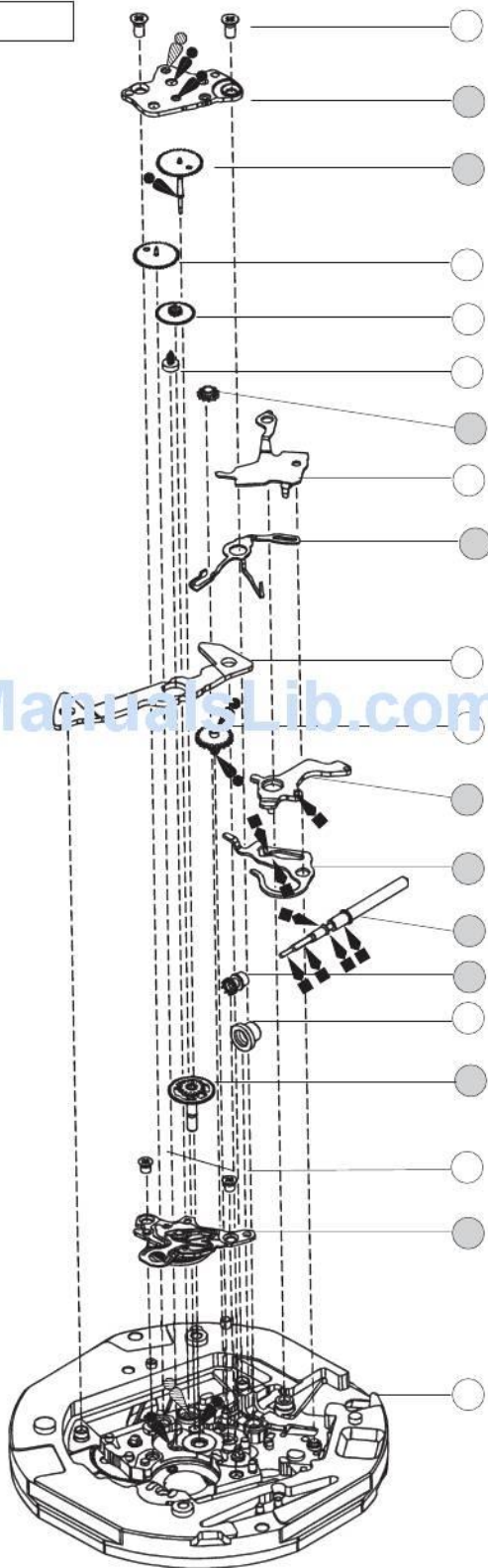
		
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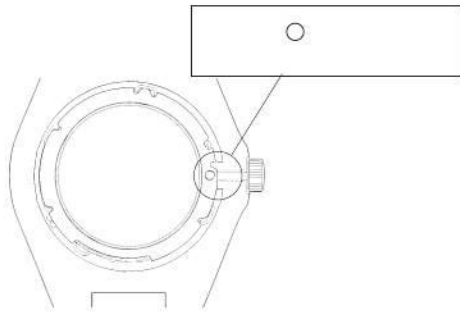
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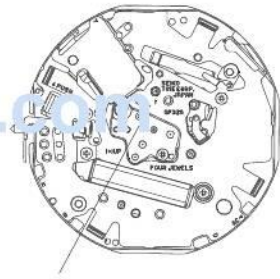




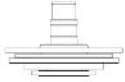
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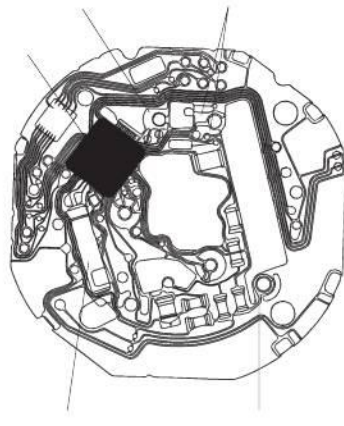
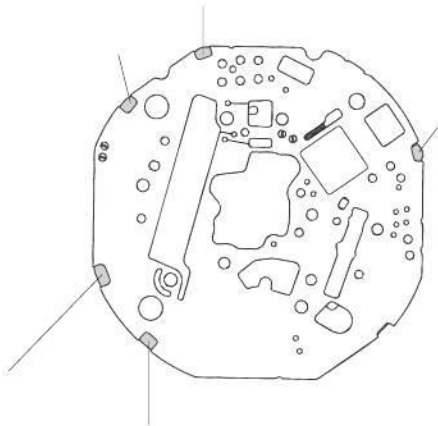
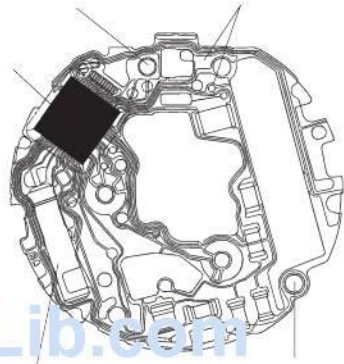
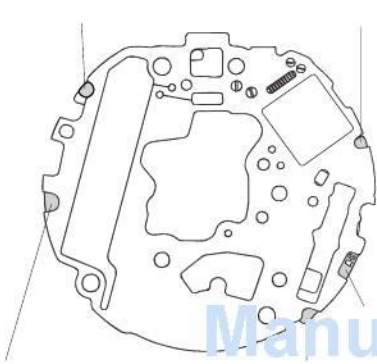


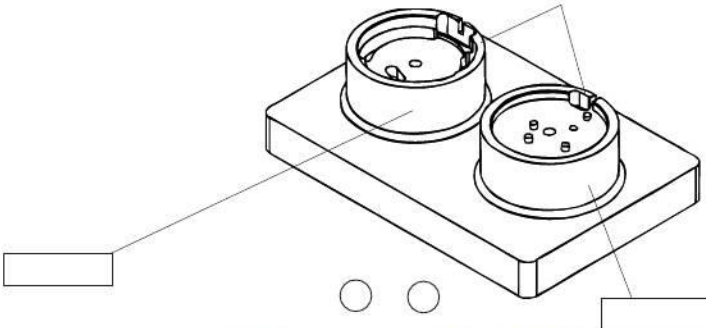
				

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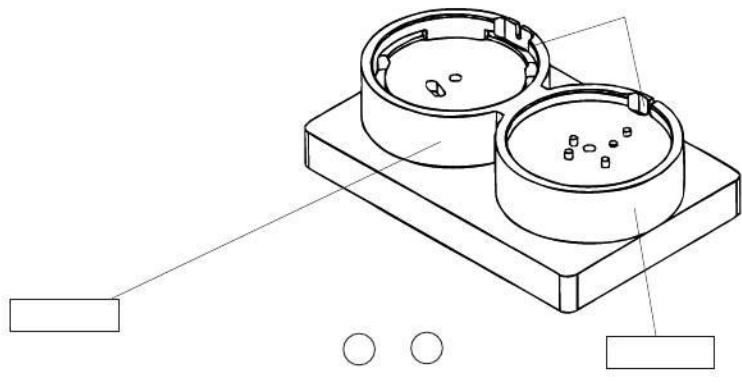
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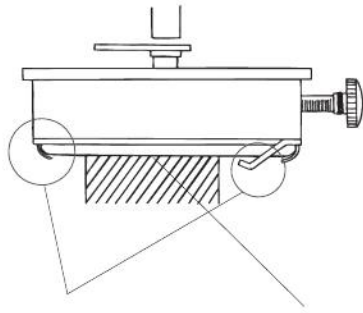
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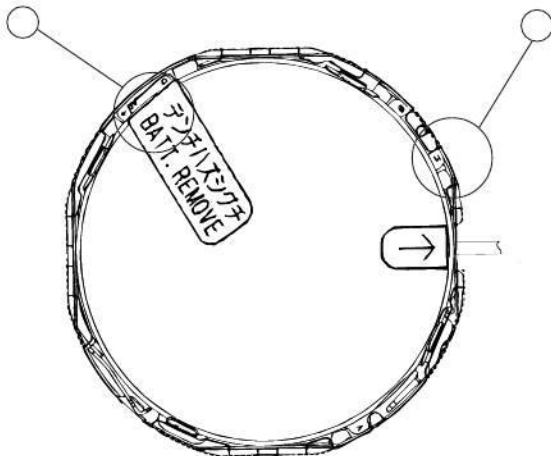
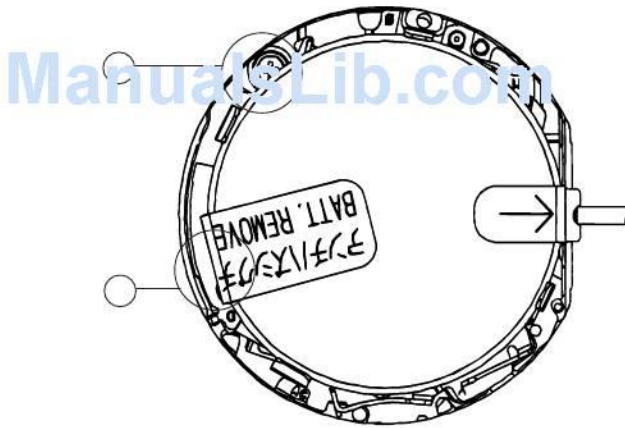


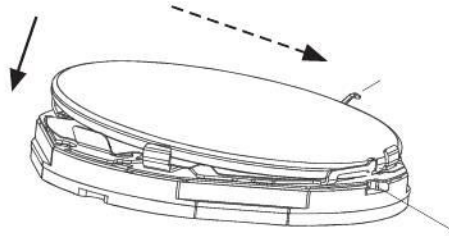
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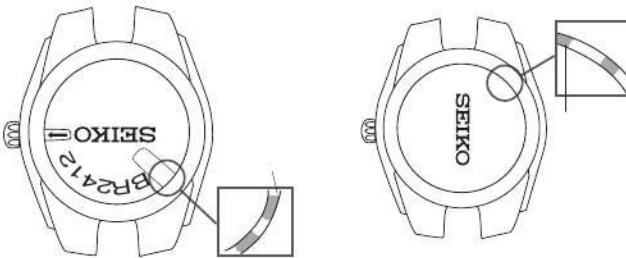
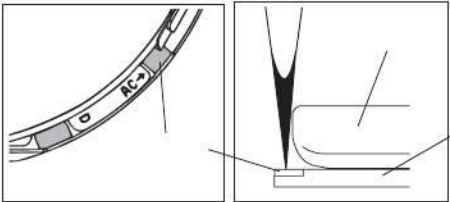


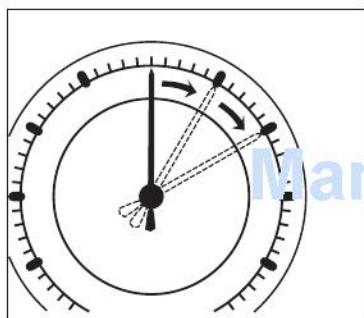
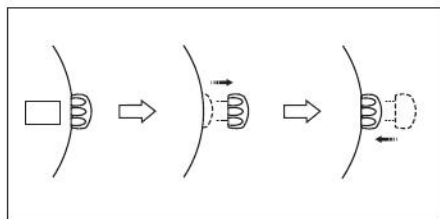
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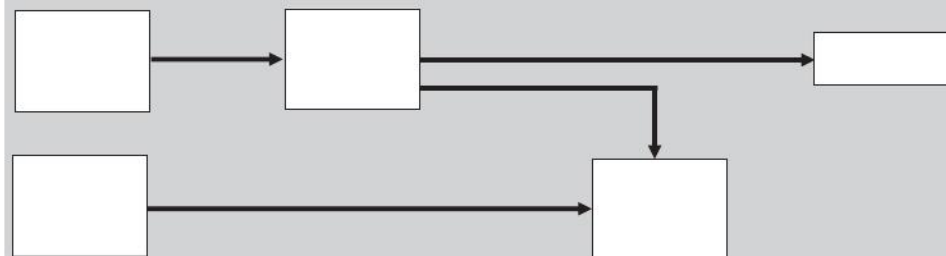


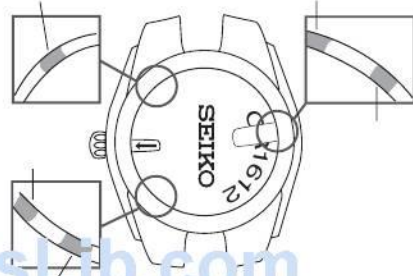
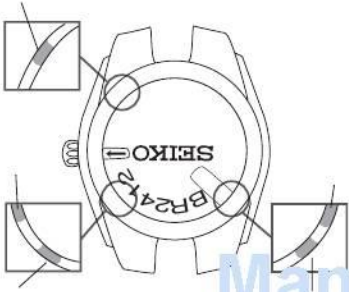
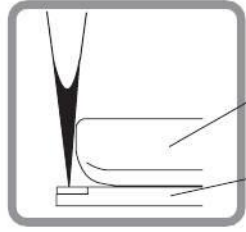
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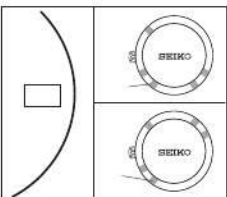
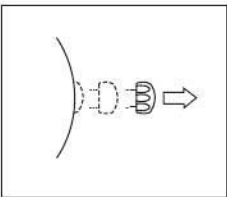


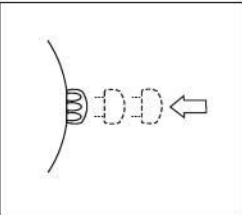
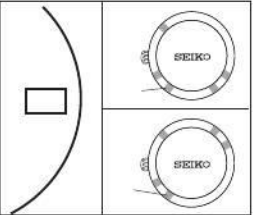
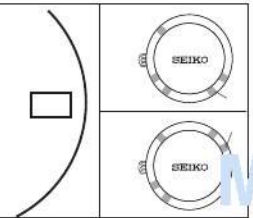
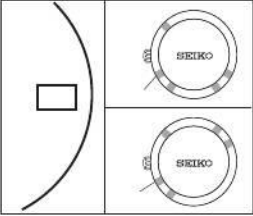
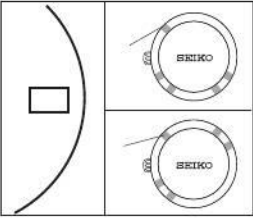
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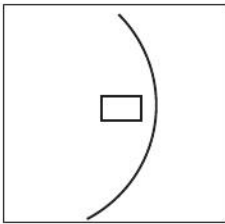
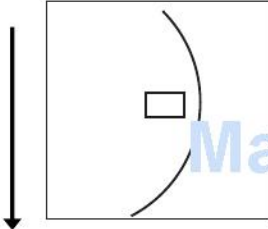
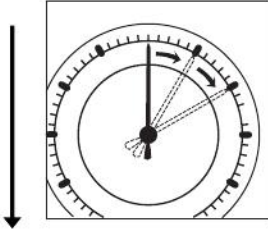


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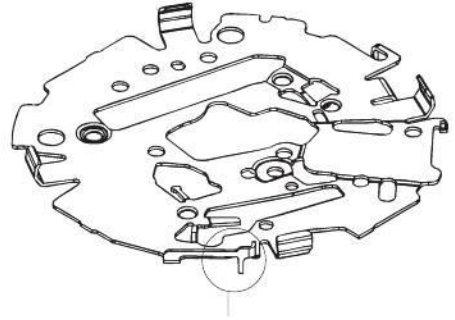
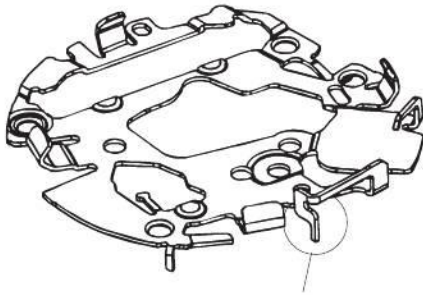


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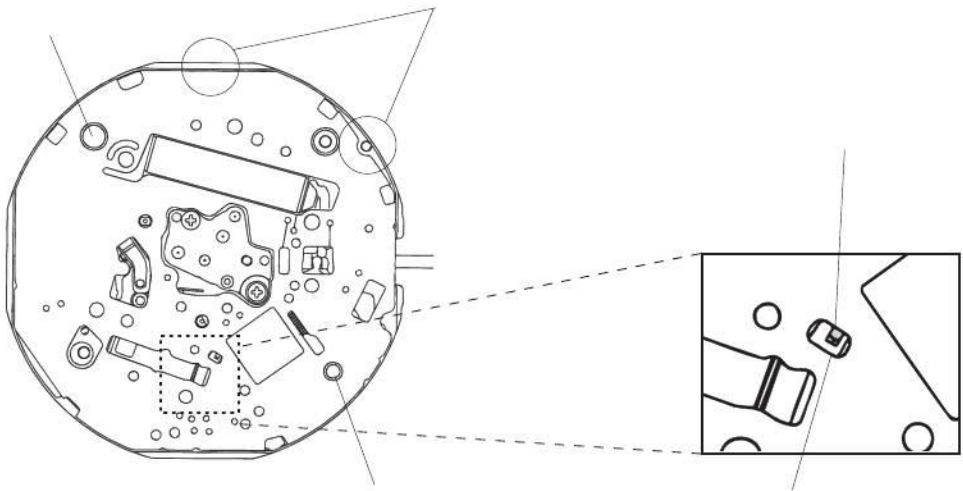


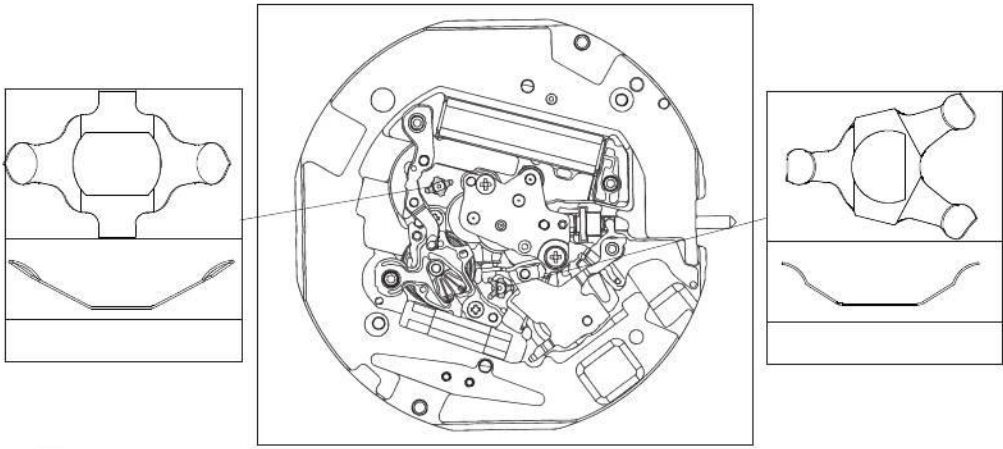
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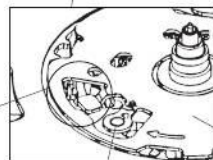
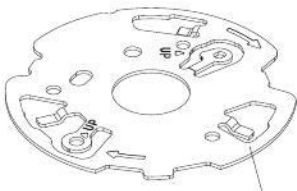
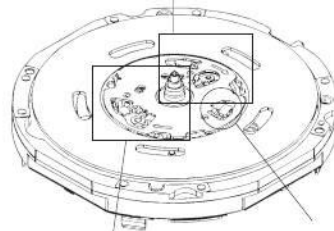
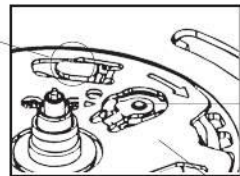


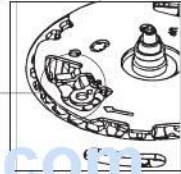
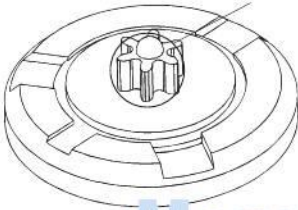
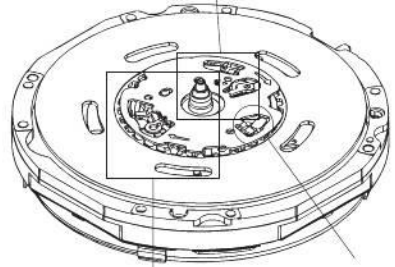
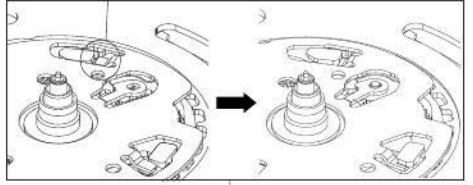
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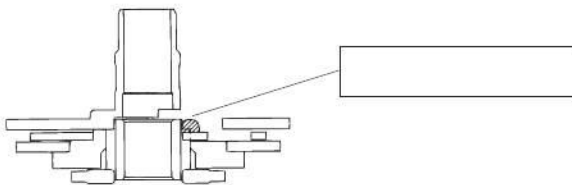
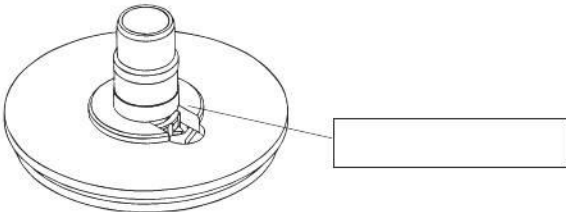
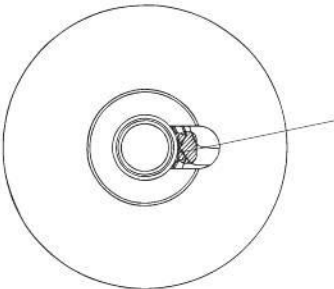


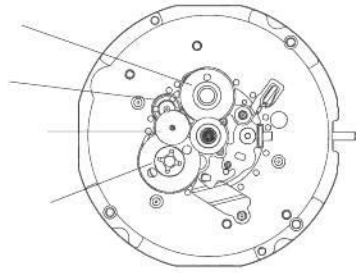
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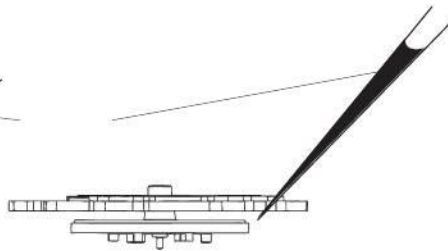
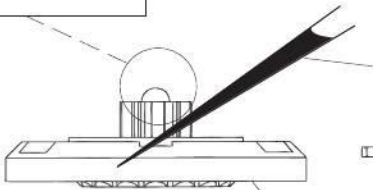
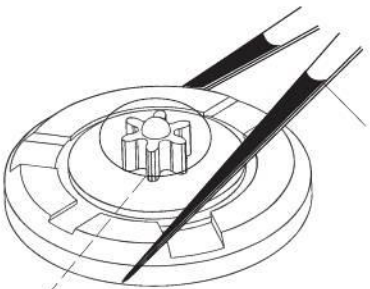


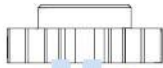
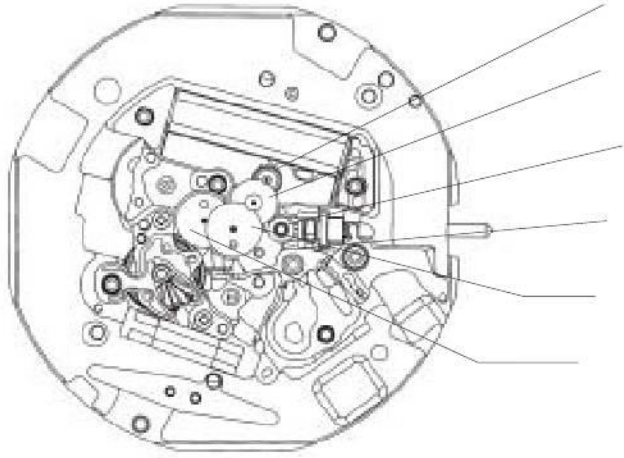
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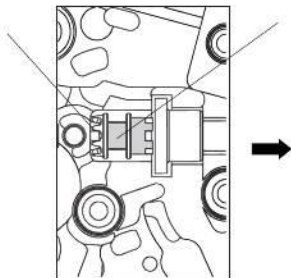
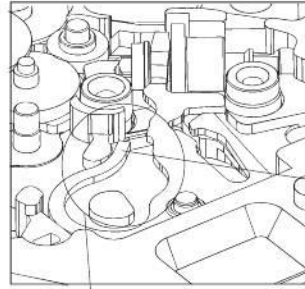
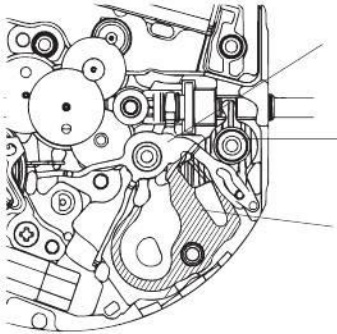


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TECHNICAL GUIDE

Cal.

● Time accuracy

- The time accuracy measurement should be made in an environment with the temperature at the range of $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and humidity between 50% and 60%.

Normal loss/gain at a normal temperature (23°C): $+0.020 \sim +0.140 \text{ sec./day}$

- [A] Check the loss/gain of the watch with the case back closed following the procedure below, and determine the method of adjustment and repair.

Measuring procedure	Measured loss/gain (-/+)	Method of adjustment/repair
<ol style="list-style-type: none"> ① Set the gate of the quartz tester to "10". ② Pull the crown to the second click to stop the second hand. ③ Place the watch on the microphone with its 3 o'clock side up, and read the loss/gain. 	<p>Normal : $+0.020 \sim +0.140$</p> <p>Defective : $-0.012 \sim +0.019$ $+0.141 \sim +0.204$</p> <p>Defective : -0.013 or smaller $+0.205$ or greater</p>	<p>➔ Time accuracy adjustment is not necessary.</p> <p>➔ Adjust the time accuracy.</p> <p>➔ Replace the circuit block with a new one.</p> <p>Check the time accuracy. ↓ (Then, adjust the time accuracy.)</p>

Notes:

- The loss/gain indicated by the tester varies slightly from measurement to measurement. Therefore, make several measurements to get an average loss/gain.
- When measuring time accuracy, leave the watch untouched for 30 minutes after it is placed on the microphone. Then, start the measurement.

[B] Time accuracy adjustment by pattern cutting

Cut and remove the overhanging pattern with tweezers to adjust the time accuracy.

Notes:

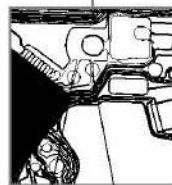
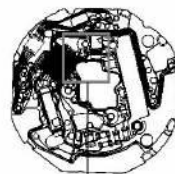
- After cutting the pattern, check that it is completely detached.
- Take care not to let the cut pattern get inside the movement.

Pattern cutting combination and adjustment range

By cutting one or both of the patterns P1 and P2, the loss/gain of the watch can be adjusted by an amount between -0.064 and $+0.032 \text{ sec./day}$.

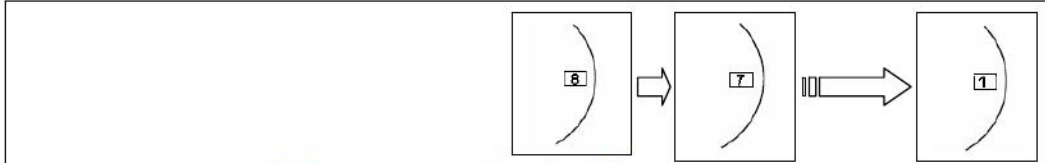
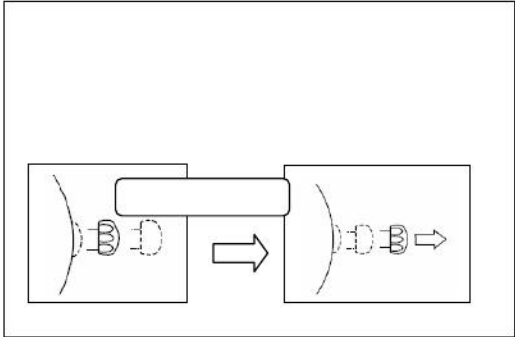
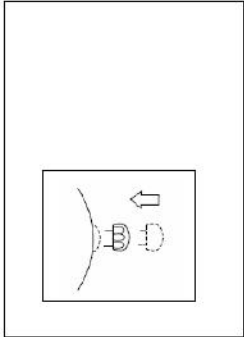
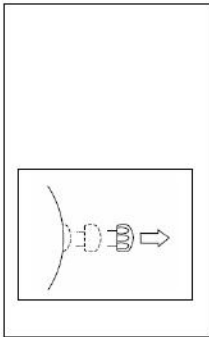
Pattern		Amount of loss/gain from base accuracy
P2	P1	
X	○	-0.064
○	X	-0.032
X	X	$+0.032$

X : Cut
○ : Connected



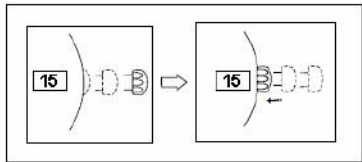
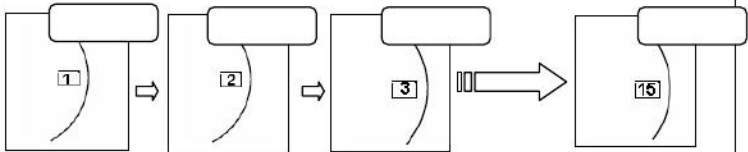
P1 P2

Note: Once the patterns are cut off, reconnecting them by soldering may not adjust the loss/gain by the amount specified in the table above and may also change the temperature characteristics of the watch. Adjust the loss/gain, therefore, only by cutting the patterns.



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Date	Adjustable seconds
1	0.056
2	0.048
3	0.04
4	0.032
5	0.024
6	0.016
7	0.008
8	0
9	-0.008
10	-0.016
11	-0.024
12	-0.032
13	-0.04
14	-0.048
15	-0.056



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