


PARTS CATALOGUE / TECHNICAL GUIDE

Cal. 6R15B

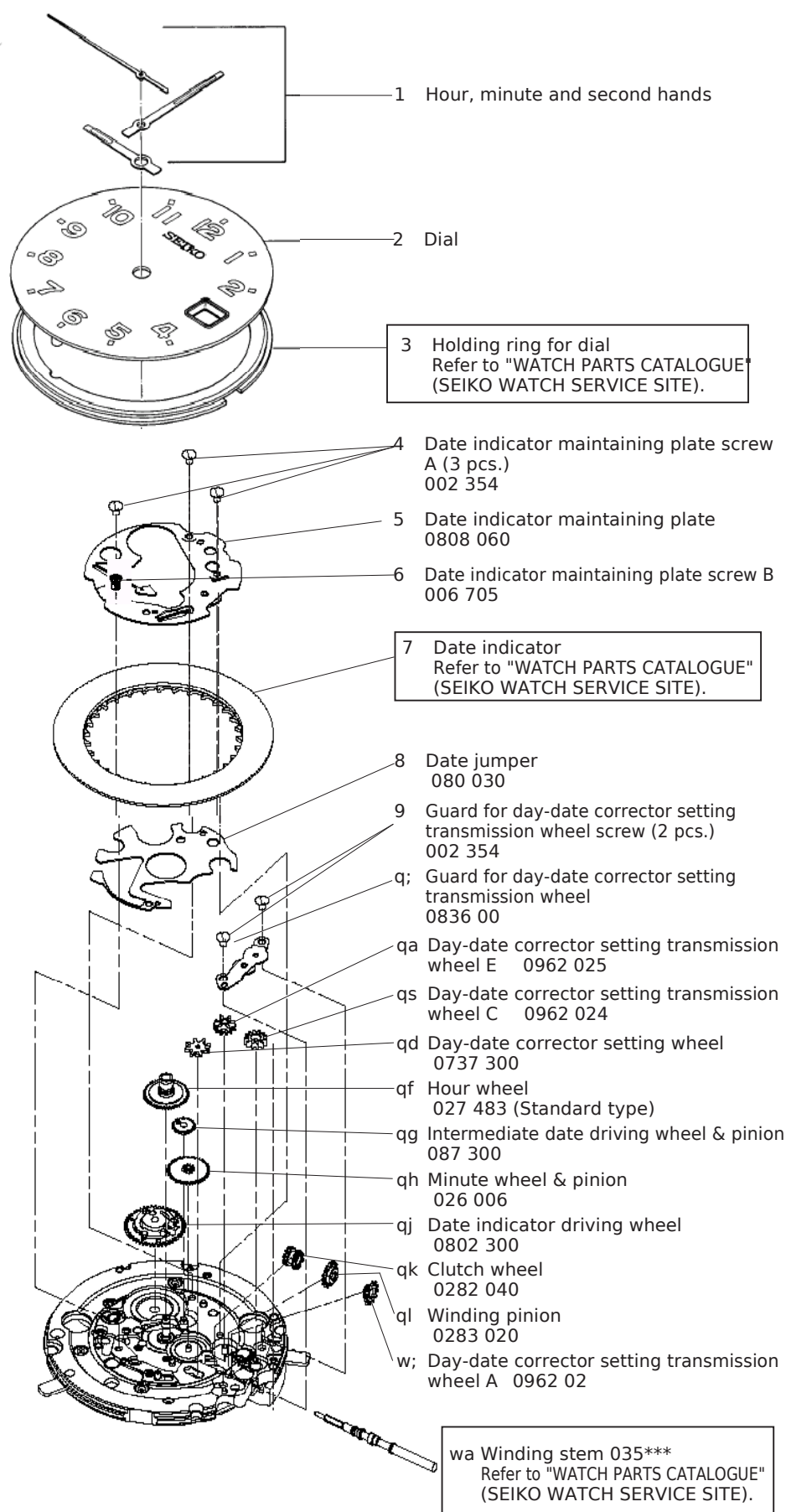
[SPECIFICATIONS]

Item		Cal. No.	6R15B
Movement		 (x .0)	
Movement size	Outside diameter	Ø 27.4 mm	
	Casing diameter	Ø 27.0 mm	
	Height	5.25 mm	
Time indication		3 hands (Hour, minute and second hands)	
Vibration per hour		2,600 (6 beats per hour)	
Basic mechanism		<ul style="list-style-type: none"> I Mechanical watch I 3 hands I Automatic winding with auxiliary hand winding mechanism 	
Additional mechanisms		<ul style="list-style-type: none"> I Date calendar I Instant date setting device I Second setting device 	
Crown operation	Original	Manual winding (turn clockwise)	
	First click	Date correction (turn counterclockwise)	
	Second click	Time setting (turn clockwise to move forward and counterclockwise to move back) Second hand stops on the spot	
Loss/gain		Between -5 seconds and +25 seconds per day	
Number of Jewels		23 jewels	

SEIKO WATCH CORPORATION

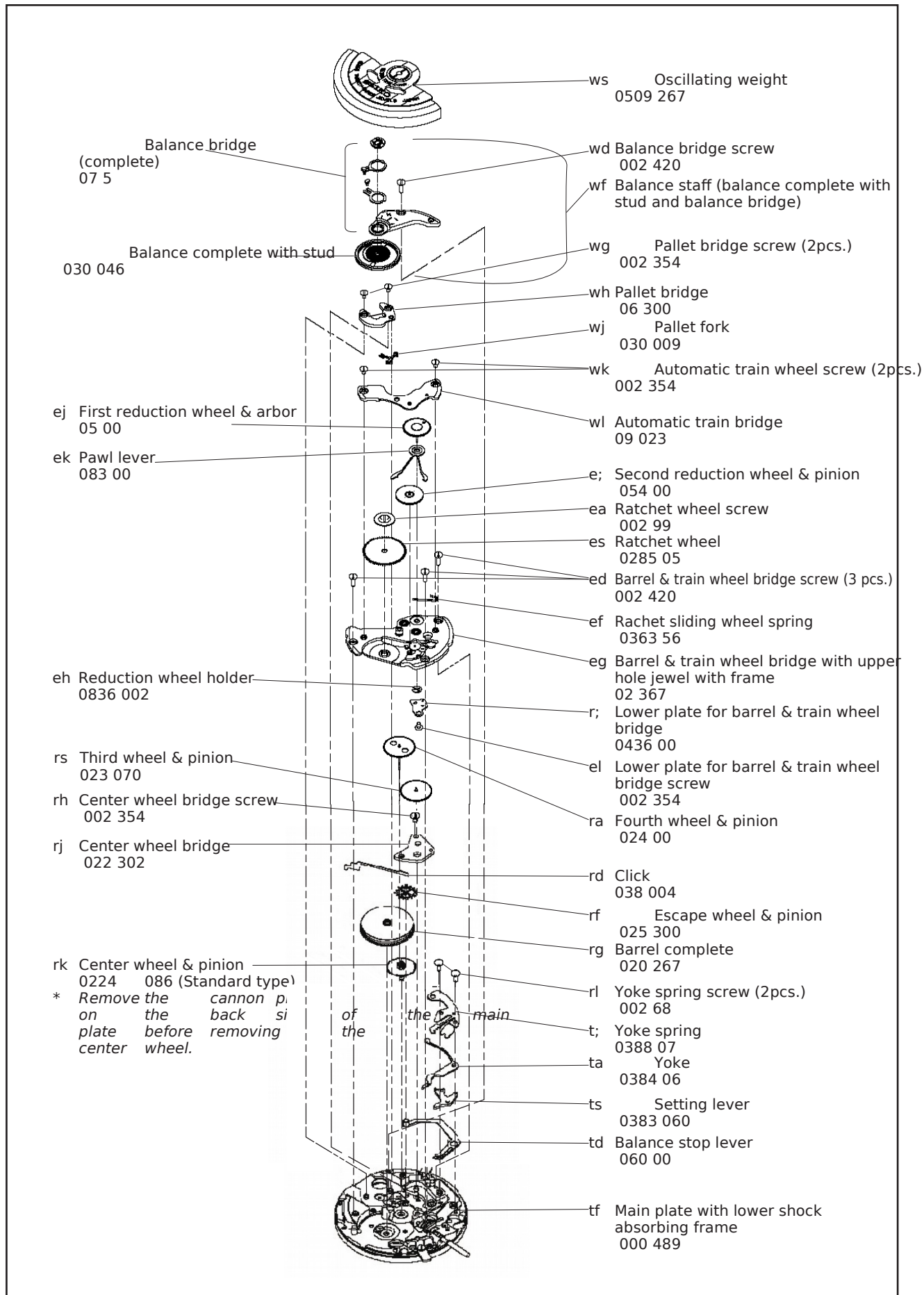
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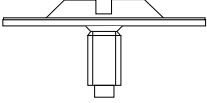
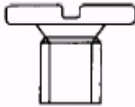
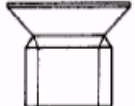
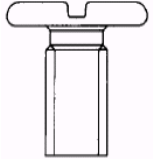

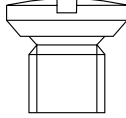
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CROSS-SECTION VIEW OF THE SCREW PARTS

Parts code	Parts name
 002 99	Ratchet wheel screw
 002 354	Lower plate barrel & train wheel bridge screw Center wheel bridge screw Pallet bridge screw (2pcs.) Automatic train wheel screw (2pcs.) Date indicator maintaining plate screw A (3 pcs.)
 006 705	Date indicator maintaining plate screw B
 002 68	Yoke spring screw (2pcs.)
 002 420	Barrel & train wheel bridge screw (3 pcs.) Balance bridge screw
 002 067	Casing clamp screw (2 pcs.)

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OTHERS

Location	Parts names	Parts codes
Above the third wheel & pinion	Upper cap jewel	00 22
	Cap jewelled spring	005 703
Above the escape wheel & pinion	Upper cap jewel	00 22
	Cap jewelled spring	005 703
Above the balance	Upper hole jewel frame for shock-absorber	004 295
	Upper shock-absorbing cap jewel	00 220
	Upper shock-absorbing spring	004 577
Below the balance	Lower hole jewel frame for shock-absorber	004 295
	Lower shock-absorbing cap jewel	00 220
	Lower shock-absorbing spring	004 577

LOCATION OF THE JEWELS

	Upper		Lower	
	Cap Jewel	Hole Jewel	Cap Jewel	Hole Jewel
Center wheel & pinion	—	○	—	○
Forth wheel & pinion	—	○	—	—
Third wheel & pinion	○	○	—	○
Escape wheel & pinion	○	○	—	○
Pallet fork	—	○	—	○
Balance	○	○	○	○
Crown wheel	—	○	—	—
First reduction wheel & arbor	—	○	—	○
Second reduction wheel & pinion	—	○	—	○
Pallet fork (entry pallet)	○			
Pallet fork (exit pallet)	○			
Balance (roller jewel)	○			
Total	23 jewels			

Remarks

The correct parts for the following are determined based on the design of the cases.
Refer to "SEIKO Watch Parts Catalogue (SEIKO WATCH SERVICE SITE)" to choose corresponding parts.

- I Holding ring for dial
- I Date indicator

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1 LUBRICATE THE MAIN PLATE

Make sure to lubricate the exact lubrication points with an adequate amount of the correct type of oil.

●● Normal quantity

- Lubricate the lower shock-absorbing cap jewel as illustrated, and set it to the lower hole jewel with frame for shock-absorber. Then, mount the lower hole jewel with frame for shock-absorber (with the cap jewel attached) to the lower shock-absorbing frame, and hook the lower shock-absorbing spring over it.

Type of oil: AO-3 (Moebius A) ●●

- Lubricate the lower hole jewel for the pallet fork as illustrated.

Type of oil: AO-3 (Moebius A) ●●

- Lubricate the lower hole jewel for the escape wheel & pinion as illustrated.

Type of oil: AO-3 (Moebius A) ●●

- Lubricate the contact point between the tail portion of the yoke and the frame of the main plate as illustrated.

Type of oil: S-6 ●

- Lubricate the lower hole jewel for the first reduction wheel & arbor as illustrated.

Type of oil: S-6 ●

- Lubricate the lower hole jewel for the third wheel & pinion as illustrated.

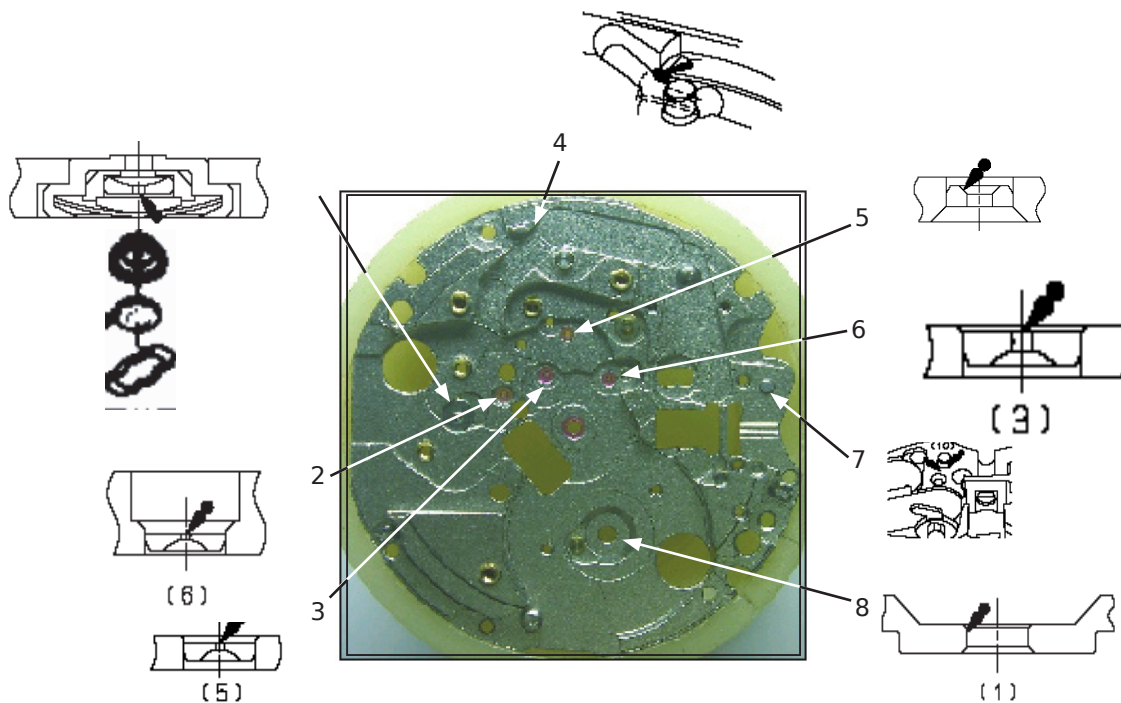
Type of oil: AO-3 (Moebius A) ●●

- Lubricate the pin of the setting lever as illustrated.

Type of oil: S-6 ●

- Lubricate the lower dent of the barrel complete as illustrated.

Type of oil: S-6 ●



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2 REASSEMBLE THE WHEELS (1)

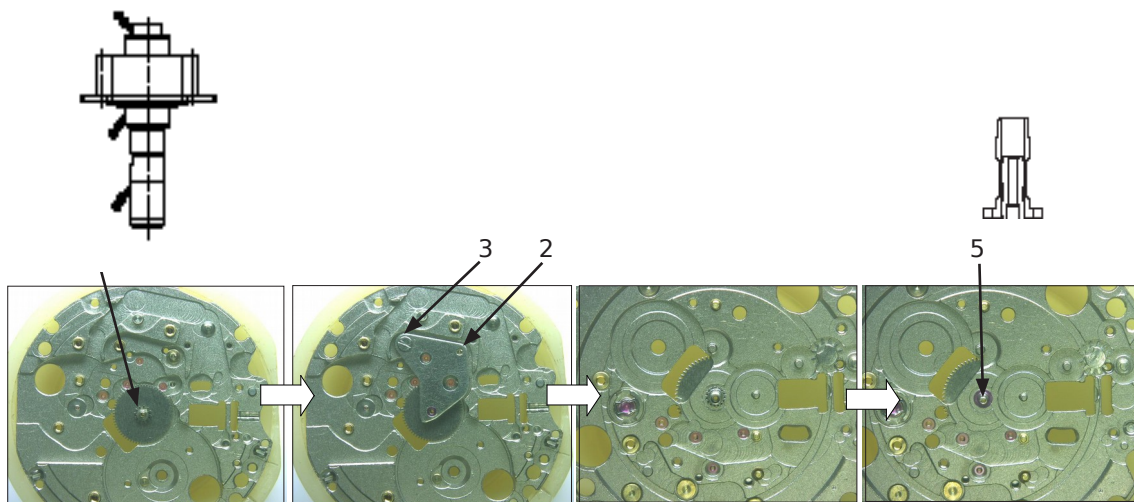
Install the parts in the order shown in the illustration below, paying attention to the following:
mounting positions
direction of mounting
type of oil, lubrication point(s) and amount of lubrication ● Normal quantity

- Lubricate the upper and lower pivots of the center wheel & pinion, and the point of contact between the center wheel and the cannon pinion as illustrated.

Install the center wheel & pinion.

Type of oil: S-6 ●

2. Set the center wheel bridge.
3. Tighten the center wheel bridge screw.
4. Turn the main plate upside down.
5. Set the cannon pinion to the center wheel & pinion.



- 4 Turn the main plate upside down.

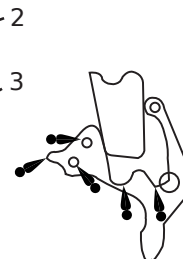
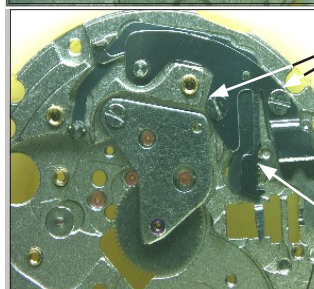
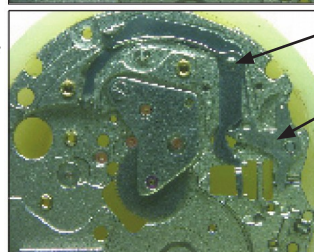
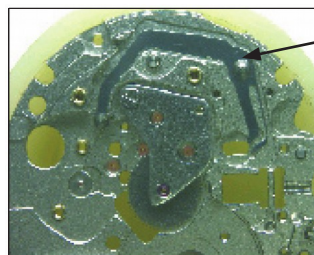
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3 REASSEMBLE THE SWITCHING MECHANISM (FRONT SIDE)

Install the parts in the order shown in the illustration below, paying attention to the following:
mounting positions
direction of mounting
type of oil, lubrication point(s) and amount of lubrication ●▶ Normal quantity

1. Set the balance stop lever.
2. Set the yoke.
3. Lubricate the upper and lower places of the setting lever and the point of contact between the setting lever and yoke as illustrated.
Type of oil: S-6 ●▶
4. Set the yoke spring.
5. Tighten the yoke spring screws. (2 pcs.)
6. Hook the setting lever over the spring portion of the yoke.



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4 REASSEMBLE THE WHEELS (2)

Install the parts in the order shown in the illustration below, paying attention to the following:

mounting positions

direction of mounting

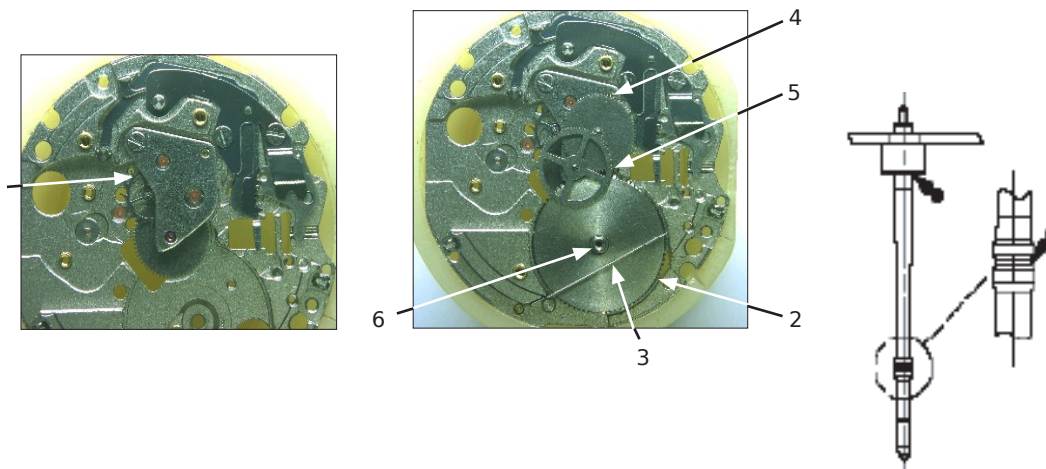
type of oil, lubrication point(s) and amount of lubrication ● Normal quantity

1. Set the escape wheel & pinion.
2. Set the barrel complete.
3. Set the click.
4. Set the third wheel & pinion.
5. Lubricate the lower pinion and the convex part of the fourth wheel & pinion as illustrated, and set it.

Type of oil: AO-3 (Moebius A) ●

6. Lubricate the upper pivot of the barrel complete .

Type of oil: S-6 ○



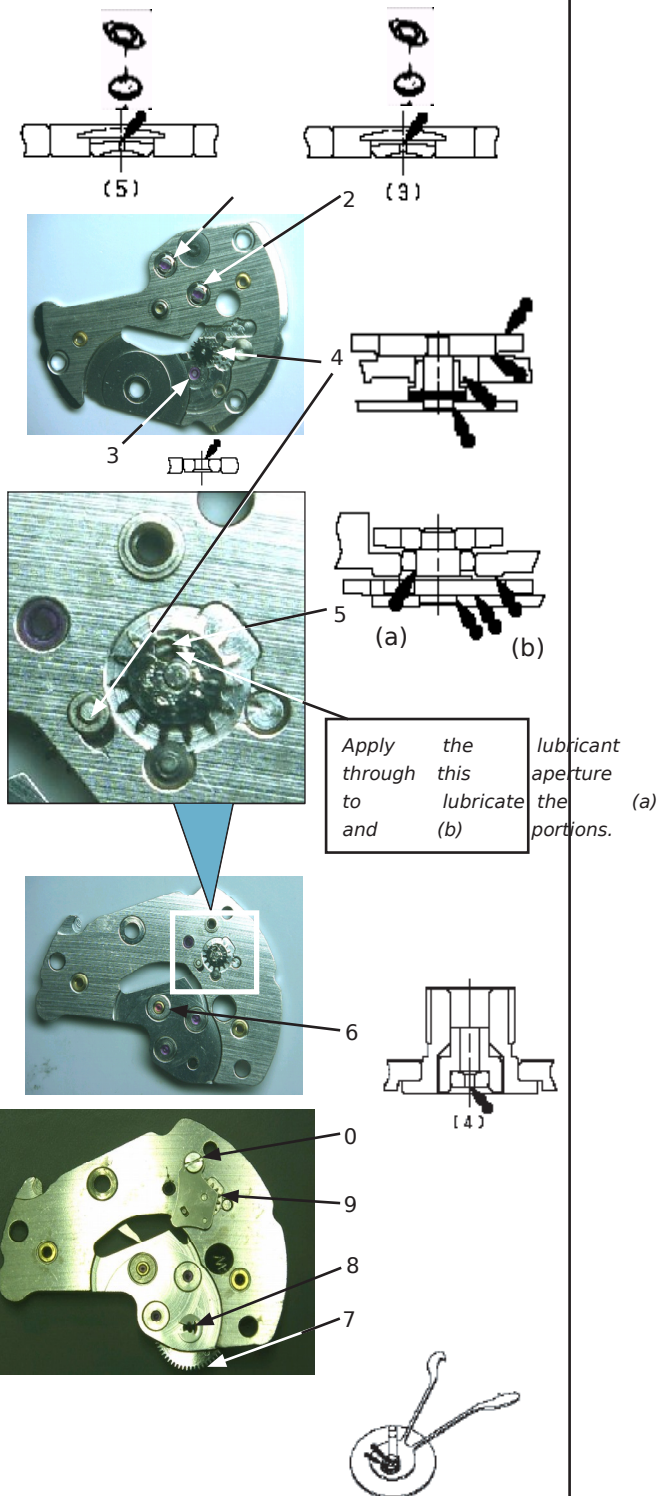
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5 REASSEMBLE THE WHEELS (BARREL & TRAIN WHEEL BRIDGE)

Install the parts in the order shown in the illustration below, paying attention to the following:
 mounting positions
 direction of mounting
 type of oil, lubrication point(s) and amount of lubrication ●▶ Normal quantity

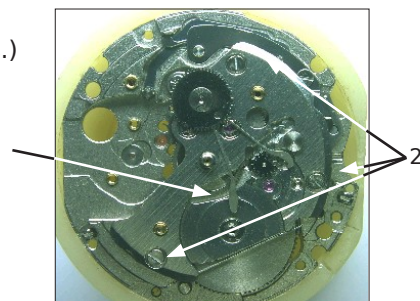
1. Lubricate the upper cap jewel of the escape wheel & pinion as illustrated, and set the cap jewel and friction spring for the escape wheel.
 Type of oil: AO-3 (Moebius A) ●▶
2. Lubricate the upper cap jewel of the third wheel & pinion as illustrated, and set the cap jewel and friction spring for the third wheel.
 Type of oil: AO-3 (Moebius A) ●▶
3. Lubricate the lower hole jewel for the second reduction wheel as illustrated.
 Type of oil: S-6 ●▶
4. Lubricate the axle, under surface, teeth surface and lower pivot of the sliding crown wheel as illustrated.
 Type of oil: S-6 ●▶
5. Lubricate the shaft, both upper and lower surfaces and teeth surface of the crown wheel as illustrated.
 Type of oil: S-6 ●▶
6. Lubricate the hole jewel for the fourth wheel & pinion as illustrated.
 Type of oil: AO-3 (Moebius A) ●▶
7. Lubricate the eccentric shaft of the first reduction wheel as illustrated. Set the pawl lever.
 Lubricate the upper pivot of the first reduction wheel.
 Type of oil: S-4 ◻▶
8. Set the first reduction wheel with the pawl lever to the barrel & train wheel bridge, and fix it with the reduction wheel holder.
9. Set the lower plate for barrel & train wheel bridge.
10. Tighten the screws for lower plate for barrel & train wheel bridge.



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- . Set the barrel & train wheel bridge.
- 12. Tighten the pins for barrel & train wheel bridge screws (3pcs.)



6 REASSEMBLE THE WHEELS ON THE BACK SIDE (1)

Install the parts in the order shown in the illustration below, paying attention to the following:
 mounting positions
 direction of mounting
 type of oil, lubrication point(s) and amount of lubrication ●▶ Normal quantity

* Turn the main plate upside down, so that the bottom surface is now the top.

- . Lubricate the pin of the day-date corrector setting transmission wheel B as illustrated.

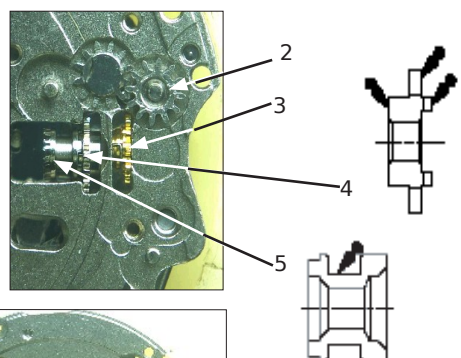
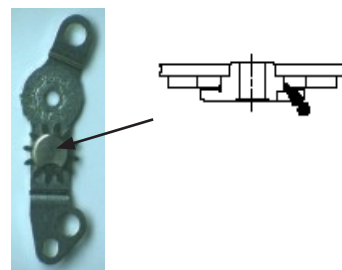
Type of oil: S-6 ●▶

- 2. Set the day-date corrector setting transmission wheel C.
- 3. Set the day-date corrector setting transmission wheel A.
- 4. Lubricate and set the winding pinion as illustrated.

Type of oil: S-6 ●▶

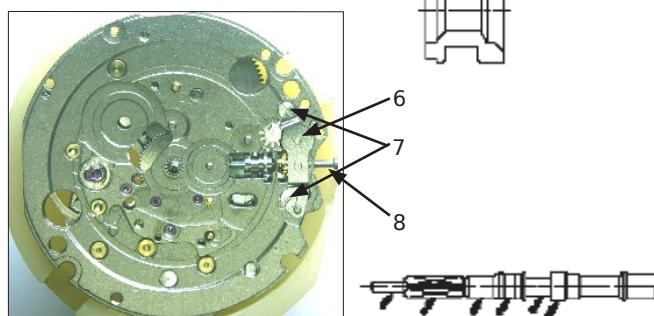
- 5. Lubricate and set the clutch wheel as illustrated.

Type of oil: S-6 ●▶



- 6. Set the guard for day-date corrector setting transmission wheel.
- 7. Tighten the guard for day-date corrector setting transmission wheel screws. (2 pcs.)
- 8. Lubricate the winding stem as illustrated and set it.

Type of oil: S-6 ●▶



v Try pulling out the winding stem to the first second click positions in order to check that it can be done smoothly.

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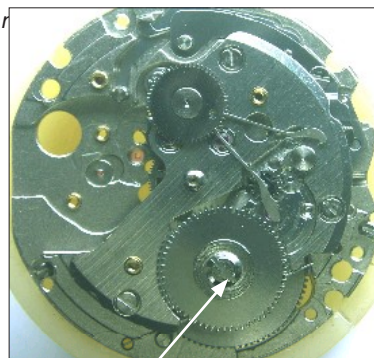
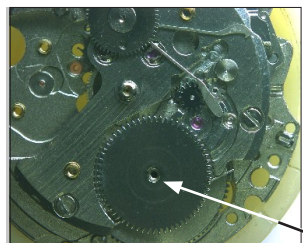
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7 REASSEMBLE THE WHEELS (RATCHET WHEEL)

1. Slide the pawl lever aside to make the ratchet wheel setting easier.
Set the ratchet wheel correctly.
2. Tighten the ratchet wheel screw.

v Remarks

Do not tighten the ratchet wheel screw too hard
tightening torque to become too large.
(Standard tightening torque: 250g-cm)



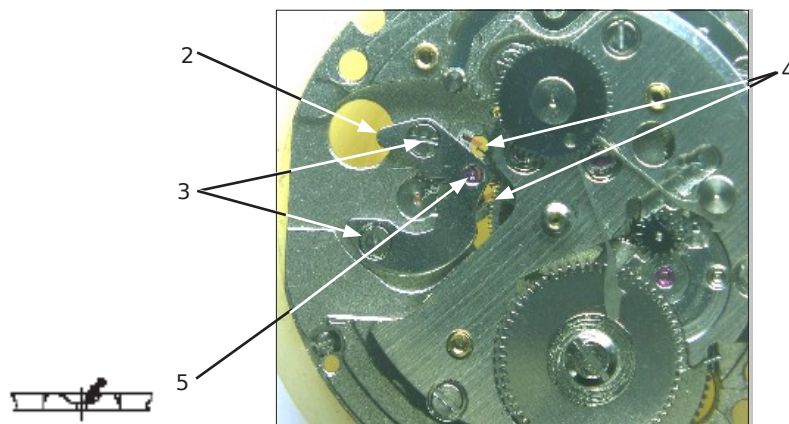
2

cause the

8 REASSEMBLE THE ESCAPEMENT.

Install the parts in the number order shown in the illustration below, paying attention to the followings:
mounting positions
direction of mounting
type of oil, lubrication point(s) and amount of lubrication ●▶ Normal quantity

1. Set the pallet fork.
2. Set the pallet bridge.
3. Tighten the pallet bridge screws.
4. Lubricate the arms of the pallet fork as illustrated.
Type of oil: AO-3 (Moebius A) ●▶
5. Lubricate the upper hole jewel for the pallet fork as illustrated.
Type of oil: AO-3 (Moebius A) ●▶



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9 REASSEMBLE THE BALANCE STAFF

Install the parts in the order shown in the illustration below, paying attention to the following:

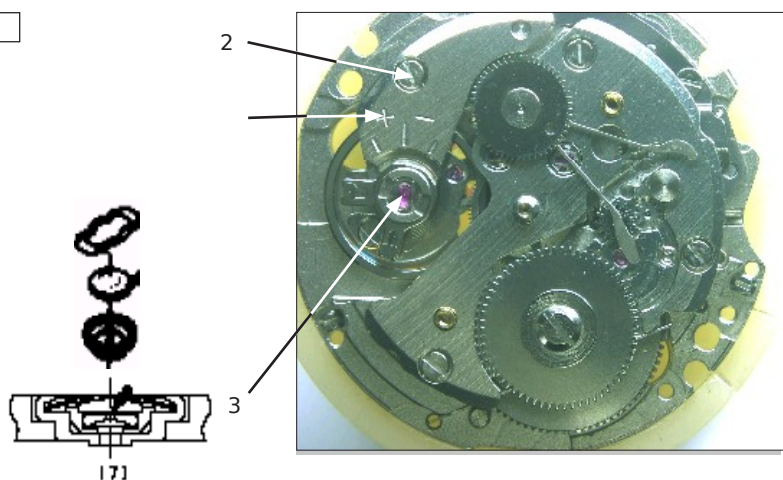
mounting positions

direction of mounting

type of oil, lubrication point(s) and amount of lubrication ●●▶ Normal quantity

- . Set the balance complete with stud and balance bridge.
2. Tighten the balance bridge screw.
3. Lubricate the upper shock-absorbing cap jewel as illustrated, and set it to the upper hole jewel with frame for shock-absorber. Then, mount the upper hole jewel with frame for shock-absorber (with the cap jewel attached) to the upper shock-absorbing frame, and hook the upper shock-absorbing spring over it.

Type of oil: AO-3 (Moebius A) ●●▶



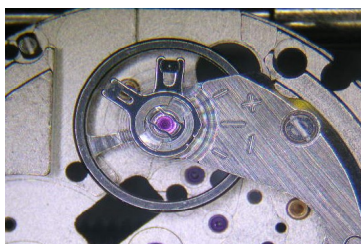
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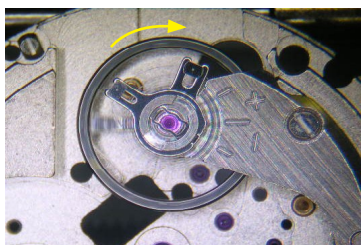
10 hOW TO REMOVe AND INSTALL ThE BALANCE STAFF

how to remove

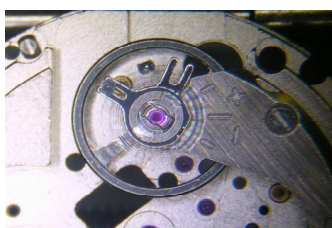
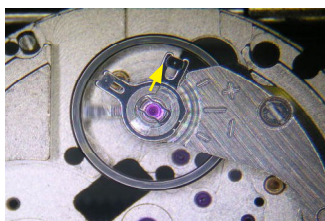
- Initial phase
Set the balance complete with stud and balance bridge to the main plate.



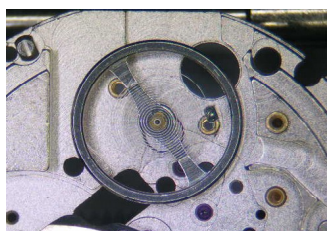
- Move the stud support toward the balance bridge until it is attached to the balance bridge.
* When doing so, make sure that the outer end of the hairspring is not removed from the regulator arm.



- Using sturdy tweezers, push the stud outward from the direction of the arrow shown in the illustration until it is removed from the stud support.

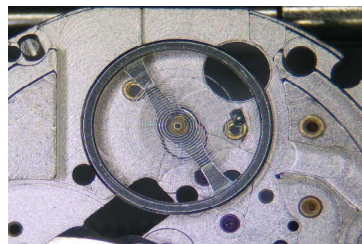


- Remove the balance bridge and replace the balance complete with stud with a new one.

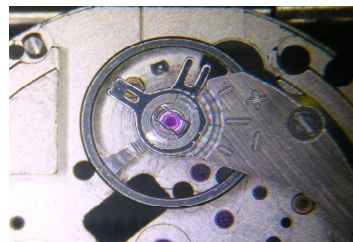


how to install

- Initial phase
Set a new balance complete with stud to the main plate.

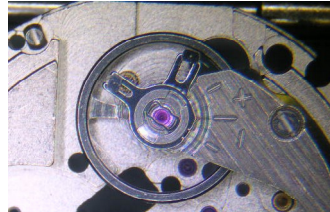


- Set the balance bridge and tighten the balance bridge screw.



- Temporarily set the stud to the stud support.
Make sure that the hairspring passes outside the pin of the regulator arm.

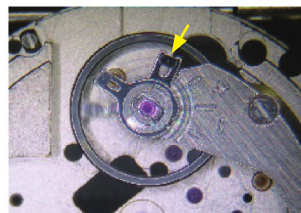
* Be careful so as not to damage the hairspring.



- Using sturdy tweezers, set the stud to the stud support and press it down.

Make sure that the outer end of the hairspring passes through the regulator slot of the regulator arm.

* Be careful so as not to damage the hairspring.



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11 hOW TO AdjUST ThE hAIRSPRING

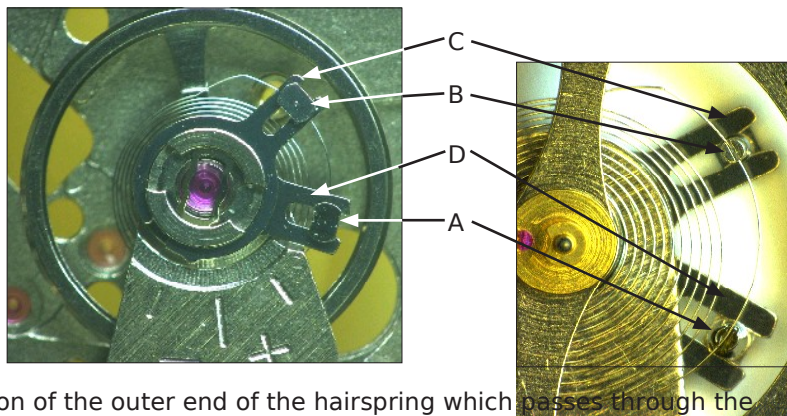
Names of the parts

A: Stud

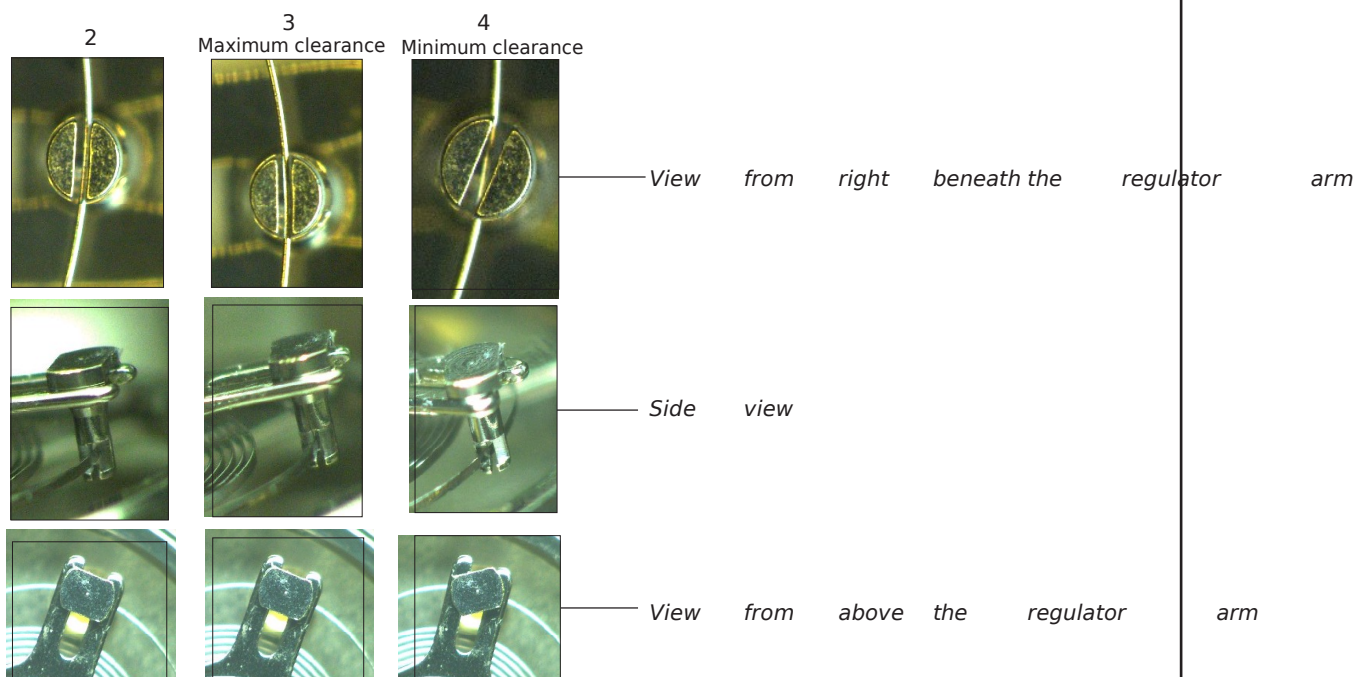
B: Regulatorpin

C: Regulatorarm

D: Stud support



2. Rotate B to fine-tune the position of the outer end of the hairspring which passes through the regulator slot so that the hairspring makes the longest diameter.
3. Rotate A to fine-tune the position of the outer end of the hairspring so that the hairspring passes through the center of the regulator slot.
4. Rotate B to fine-tune the effective length of the hairspring which passes through the regulator slot to define adequate clearance.



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12 REASSEMBLE THE WHEELS (BARREL & TRAIN WHEEL BRIDGE)

Install the parts in the order shown in the illustration below, paying attention to the following:
 mounting positions
 direction of mounting
 type of oil, lubrication point(s) and amount of lubrication

Normal quantity

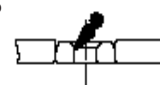
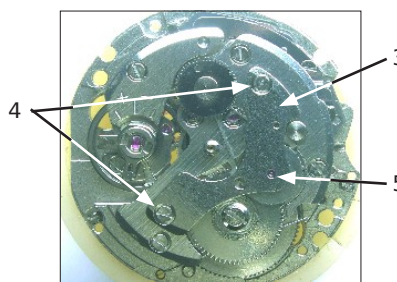
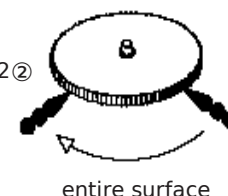
Large quantity

1. Set the ratchet sliding wheel spring.
2. Lubricate the teeth surface of the second reduction wheel as illustrated, and then set it. Engage the pawl lever with the second reduction wheel.

Type of oil: S-6

3. Set the automatic train bridge.
4. Tighten the automatic train wheel screws. (2 pcs.)
5. Lubricate the upper hole jewel for the second reduction wheel guide as illustrated.

Type of oil: S-6



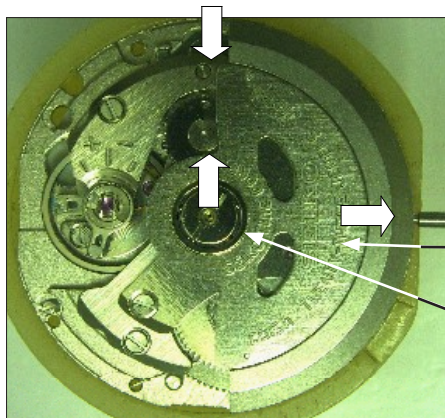
13 REASSEMBLE THE OSCILLATING WEIGHT

Install the parts in the order shown in the illustration below, paying attention to the following:
 mounting positions
 direction of mounting
 type of oil, lubrication point(s) and amount of lubrication

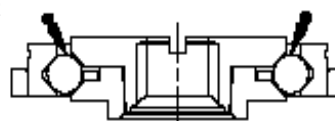
Normal quantity

1. Set the oscillating weight and tighten the screw in the center using a large screwdriver. *Make sure that the oscillating weight is correctly positioned.*
2. Lubricate the bearing of the oscillating weight.

Type of oil: AO-3 (Moebius A)



Put the center of the winding stem, and the oscillating weight in the hole of the balance.



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14 REASSEMBLE THE TRANSMISSION WHEEL ON THE BACK (LUBRICATE THE MAIN PLATE)

Install the parts in the order shown in the illustration below, paying attention to the following:

mounting positions

direction of mounting

type of oil, lubrication point(s) and amount of lubrication ● Normal quantity

1. Lubricate the pin for the day-date corrector setting transmission wheel C as illustrated.

Type of oil: S-6 ●

2. Lubricate the pin for the day-date corrector setting transmission wheel D as illustrated.

Type of oil: S-6 ●

3. Lubricate the pin for the day-date corrector setting transmission wheel E as illustrated.

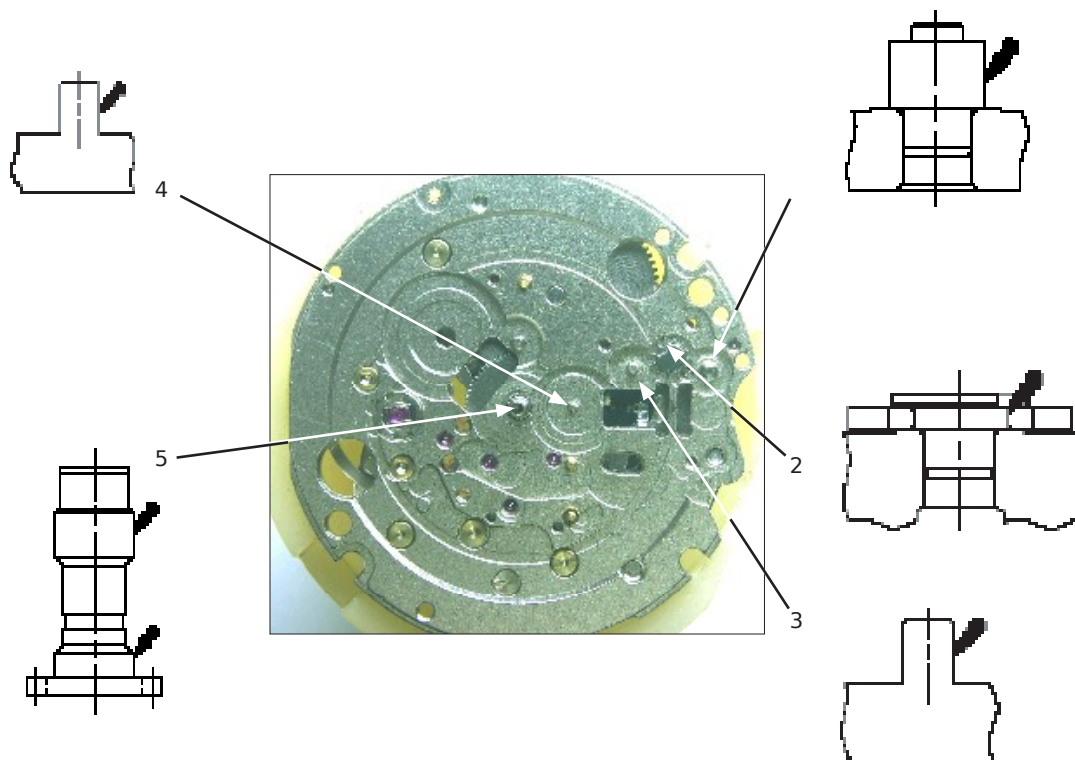
Type of oil: S-6 ●

4. Lubricate the pin for the minute wheel & pinion as illustrated.

Type of oil: S-6 ●

5. Lubricate the lateral surface of the cannon pinion as illustrated.

Type of oil: S-6 ●



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15 REASSEMBLE THE WHEELS ON THE BACK (2)

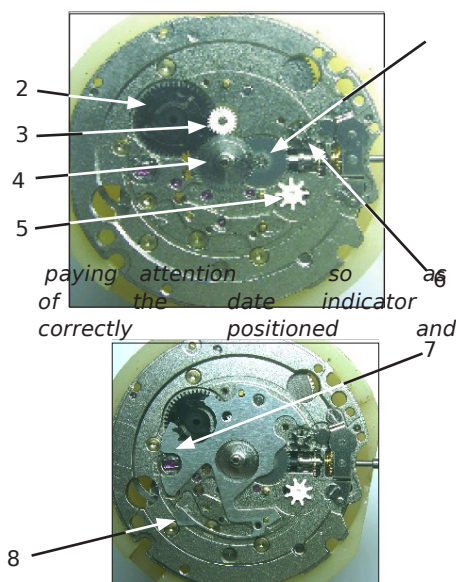
Install the parts in the number order shown in the illustration below, paying attention to the followings:
 mounting positions
 direction of mounting
 type of oil, lubrication point(s) and amount of lubrication ●▶ Normal quantity

1. Set the minute wheel & pinion.
2. Set the date indicator driving wheel.
3. Set the intermediate date driving wheel & pinion.
4. Set the hour wheel.
5. Set the day-date corrector setting wheel.
6. Set the day-date corrector setting transmission wheel E.
7. Set the date jumper.

Slide in the date jumper from the side, paying attention so as not to scratch it against the date driving tab of the date indicator wheel. Make sure that the date jumper is correctly positioned and then set it.

8. Lubricate the spring portion of the date jumper as illustrated.

Type of oil: S-6 ●▶



not driving

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16 REASSEMBLE THE WHEELS ON THE BACK (3)

Install the parts in the number order shown in the illustration below, paying attention to the followings:
 mounting positions
 direction of mounting
 type of oil, lubrication point(s) and amount of lubrication ●▶ Normal quantity

- 1. Lubricate the pin for the day-date corrector setting transmission wheel F as illustrated.

Type of oil: S-6 ●▶

2. Set the date indicator.
3. Set the date indicator maintaining plate.
4. Tighten the date indicator maintaining plate screws A. (3 pcs.)
5. Tighten the date indicator maintaining plate screw B.

