
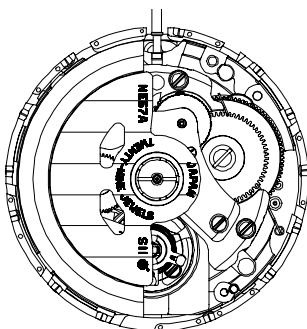
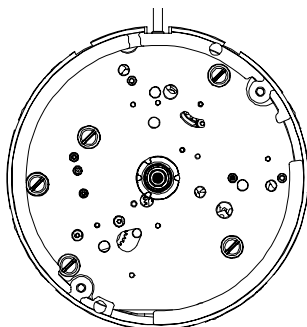


PARTS LIST / TECHNICAL GUIDE

Automatic Cal.4R57A

Cal. No.		4R57A				
Item						
						
<div>• 3 Hands (Hour, Minute, Second) • Date calendar Hand • Power reserve indicator</div>		<div>Movement Size • Outside diameter: $\Phi 29.36\text{mm}$ • Height : 6.63 mm</div>				
Driving system		Automatic winding with manual winding mechanism				
Additional function		• Date correction function • Second hand stop function				
Crown operation	Normal position	Manual winding (Clockwise only)				
	1st click	Date setting (Counterclockwise only)				
	2nd click	Time setting (Hour and minute)				
Vibration per hour		21,600 vibrations				
Loss/Gain	Daily Rate	Between +45 ~ -35 seconds (Between 5°C and 35°C)				
	Standard rate for measurement		Instantaneous rate at T0 (Fully wound condition)			Isochronous fault
		Testing positions	Dial upward	6 o'clock at the top	9 o'clock at the top	Dial upward
		Measurement (Daily rate in seconds: s/d)	+25 s/d -15 s/d	+35 s/d -25 s/d	+35 s/d -25 s/d	±30 s/d
Regulation system		ETACHRON system				
Lift angle of the escapement		53°				
Continuous operating time		From fully wound to stoppage : approximately 41 hours				
Jewels		29 jewels				
SEIKO WATCH CORPORATION						
1/14						

PARTS LIST

Cal.4R57A

Disassembling procedures Figs. ① → ⑥①

Reassembling procedures Figs. ⑥① → ①

Type of oil



AO-3 (Moebius A)

S-6

S-4

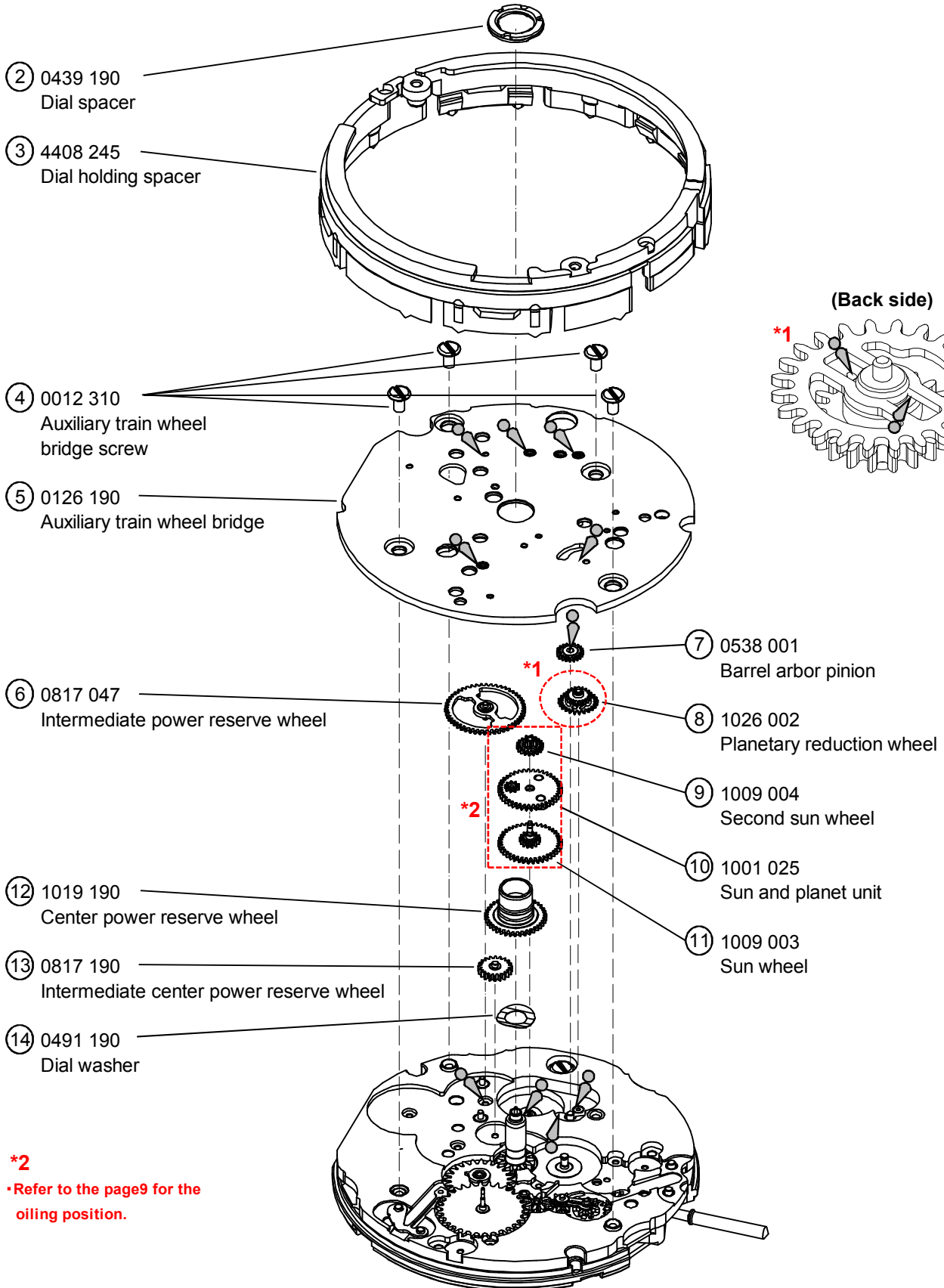
Oil quantity mark



NORMAL QUANTITY



SUFFICIENT QUANTITY



***2**

• Refer to the page9 for the oiling position.

SEIKO WATCH CORPORATION

PARTS LIST

Cal.4R57A

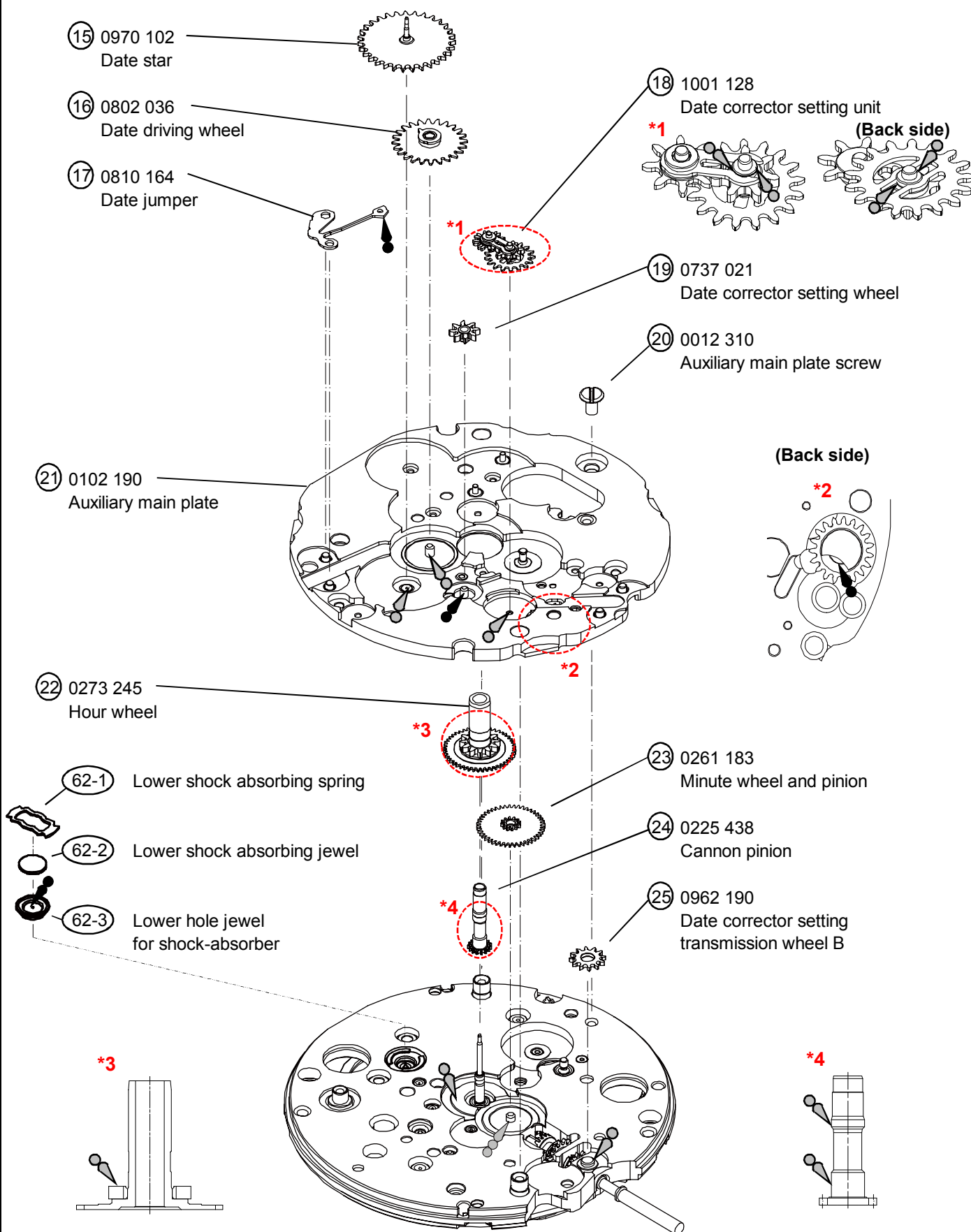
Type of oil

● AO-3 (Moebius A)

● S-6
□ S-4

Oil quantity mark

● NORMAL QUANTITY
● SUFFICIENT QUANTITY



SEIKO WATCH CORPORATION

PARTS LIST

Cal.4R57A

Type of oil

● AO-3 (Moebius A)

● S-6

□ S-4

Oil quantity mark

● NORMAL QUANTITY

● SUFFICIENT QUANTITY

① Oscillating weight

•Refer to page 7 for each parts code

•Refer to the page11 for assembling position

③① 0012 420

Balance cock screw

③② 0171 354

Balance cock

③②-① 0310 185

Balance complete with stud

*2 ③②-②

Upper shock absorbing spring

③②-③

Upper shock absorbing jewel

③②-④

Upper hole jewel for shock-absorber

②⑥ 0012 354

Automatic train bridge screw

②⑦ 0191 183

Automatic train bridge

②⑧ 0514 183

Second reduction wheel and pinion

②⑨ 0012 919

Ratchet wheel screw

③⑦ 0285 051

Ratchet wheel

③③ 0012 354

Pallet bridge screw

③④ 0161 300

Pallet bridge

③⑤ 0301 009

Pallet fork

SEIKO WATCH CORPORATION

PARTS LIST

Cal.4R57A

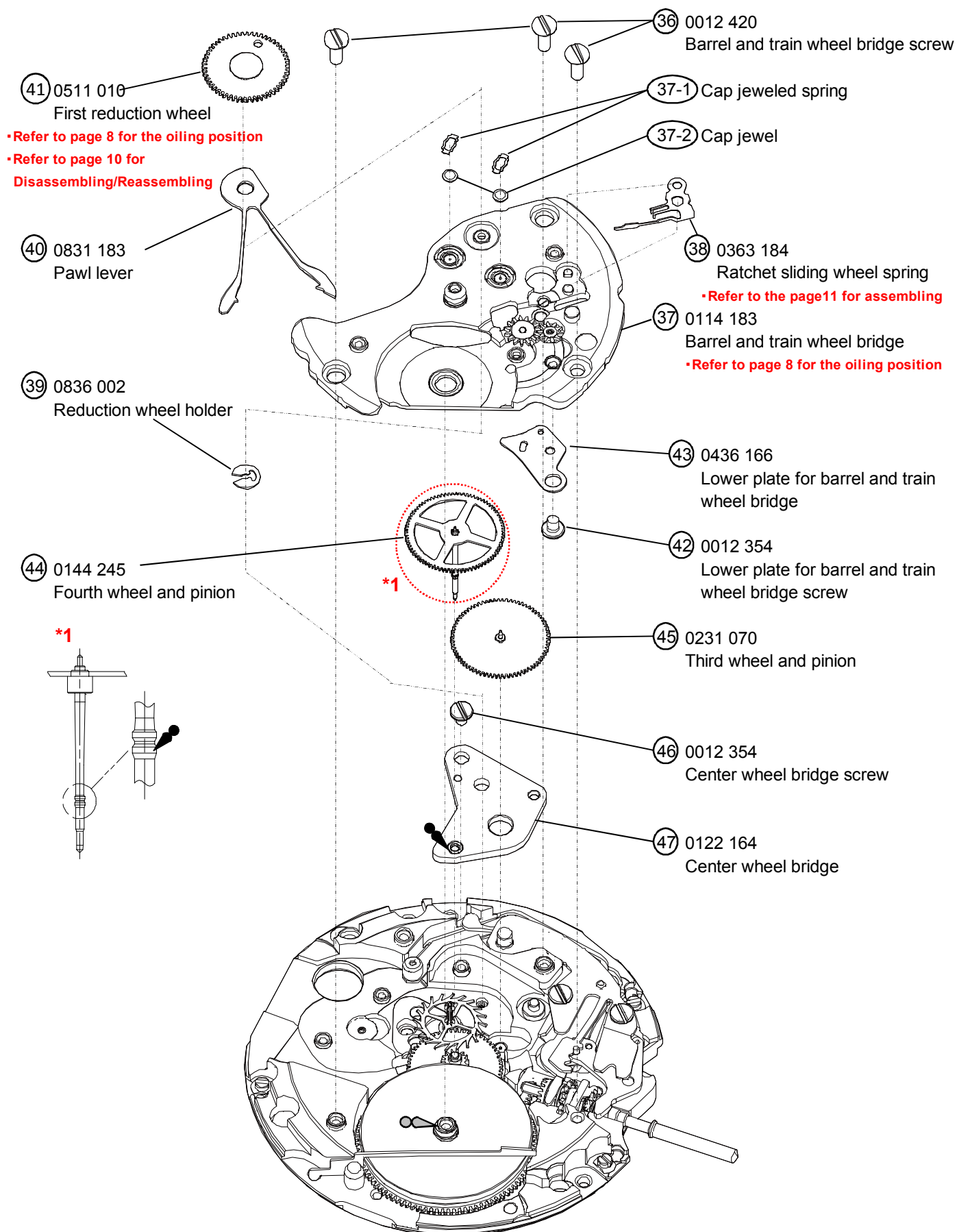
Type of oil

● AO-3 (Moebius A)

● S-6
□ S-4

Oil quantity mark

● NORMAL QUANTITY
● SUFFICIENT QUANTITY



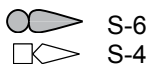
SEIKO WATCH CORPORATION

PARTS LIST

Cal.4R57A

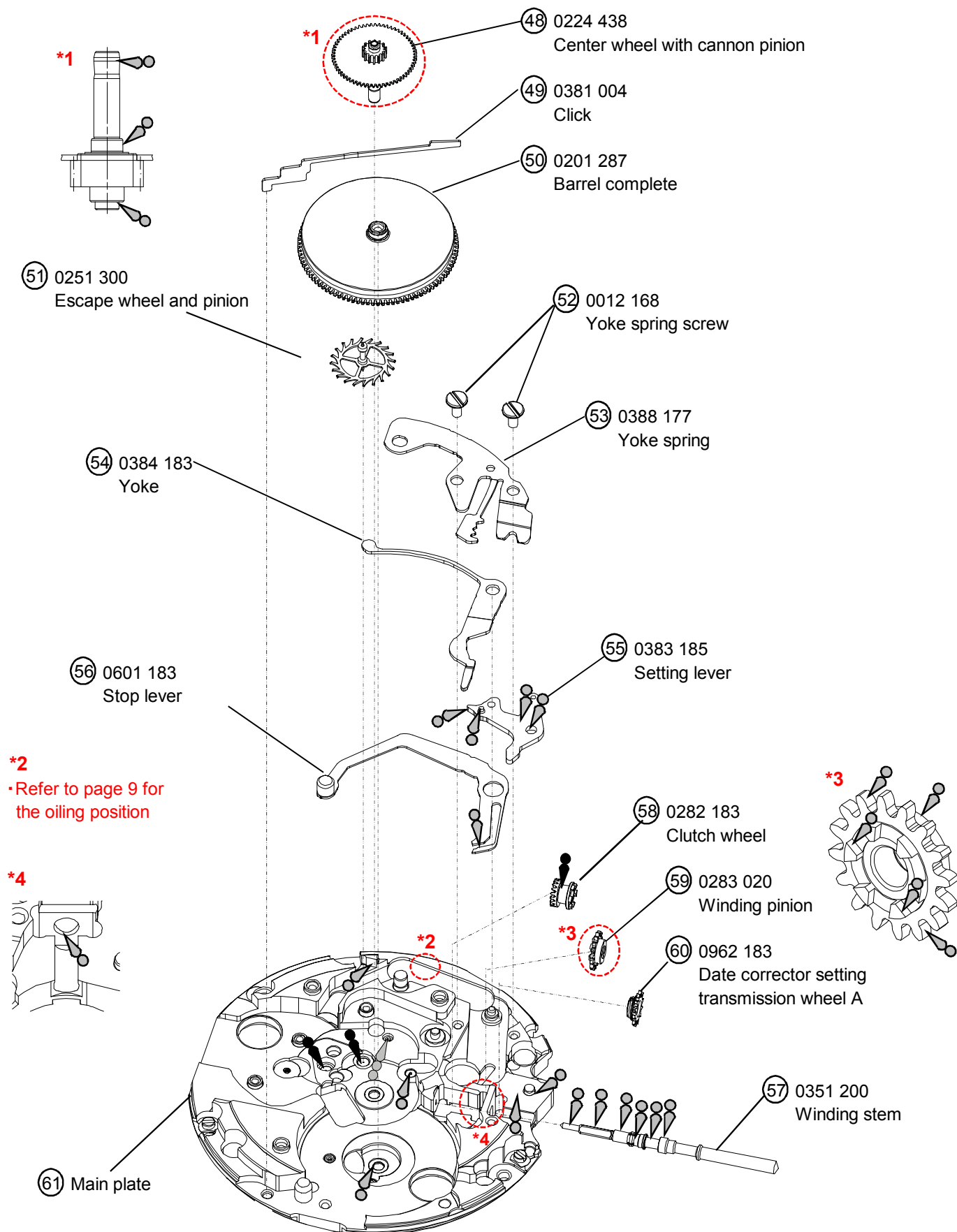
Type of oil

● AO-3 (Moebius A)



Oil quantity mark

● NORMAL QUANTITY
● SUFFICIENT QUANTITY



SEIKO WATCH CORPORATION

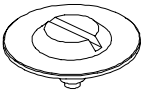
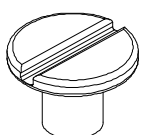
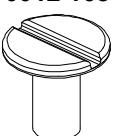
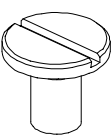
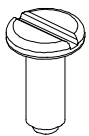
PARTS LIST

Cal.4R57A

25 Oscillating weight with ball bearing

Parts code	Marking
1509 193	Japan mark
1509 194	

● List of screws

Parts No	Name	Parts No	Name
0012 919 	29 Ratchet wheel screw	0012 354 	46 Center wheel bridge screw
			33 Pallet bridge screw (×2)
0012 168 	52 Yoke spring screw (×2)		42 Lower plate for barrel and train wheel bridge screw
		0012 310 	26 Automatic train bridge screw (×2)
0012 100 	36 Barrel and train wheel bridge screw (×3)		20 Auxiliary main plate screw
	31 Balance bridge screw		4 Auxiliary train wheel bridge screw (×4)

***All parts code are subject to change without notice.**

Type of oil



AO-3 (Moebius A)



S-6



S-4

Oil quantity mark



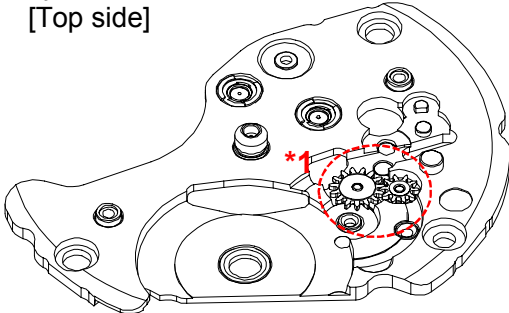
NORMAL QUANTITY



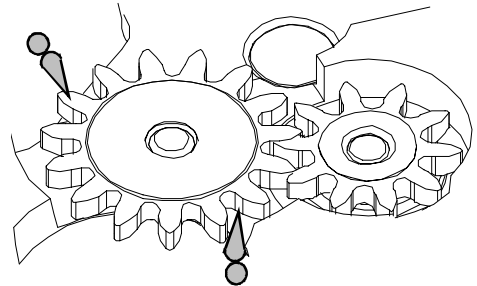
SUFFICIENT QUANTITY

1.Oiling spot

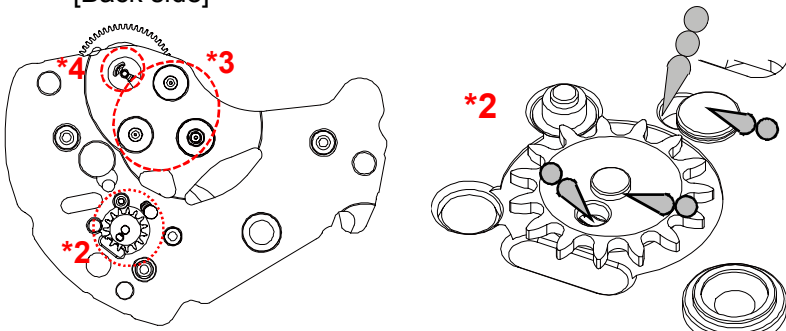
- (1) ③⑦ Barrel and train wheel bridge
[Top side]



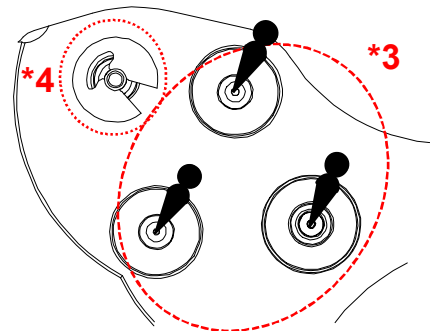
*1



[Back side]



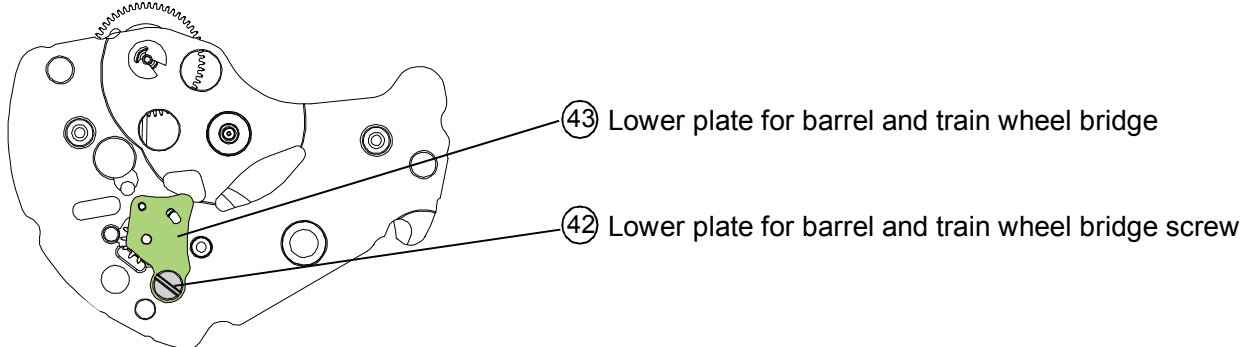
*2



*3

Note:

After oiling *2, set Lower plate for barrel and train wheel bridge & screw.

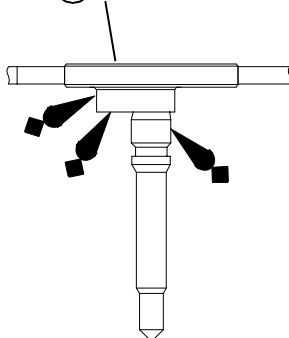


④③ Lower plate for barrel and train wheel bridge

④② Lower plate for barrel and train wheel bridge screw

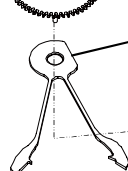
After oiling *4, set First reduction wheel & Pawl lever & Reduction wheel holder.

- ④① First reduction wheel

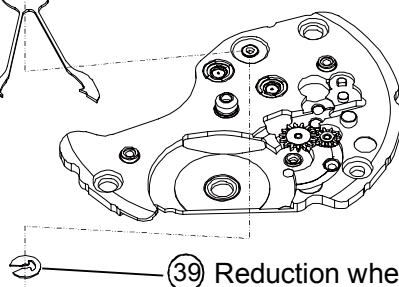


④① First reduction wheel

④④ Pawl lever



③⑨ Reduction wheel holder



Type of oil

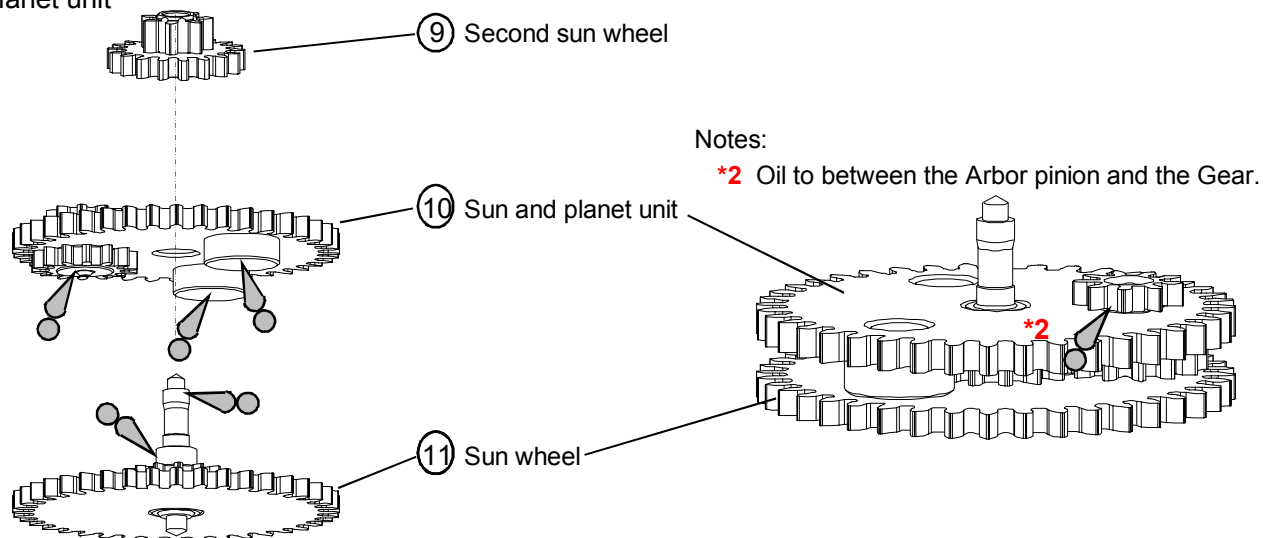
● AO-3 (Moebius A)

● S-6
□ S-4

Oil quantity mark

● NORMAL QUANTITY
● SUFFICIENT QUANTITY

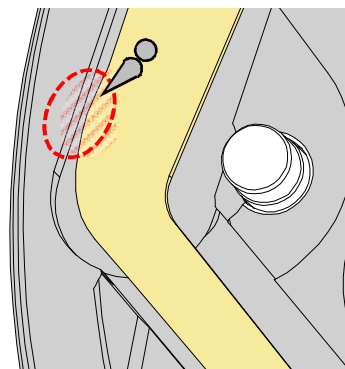
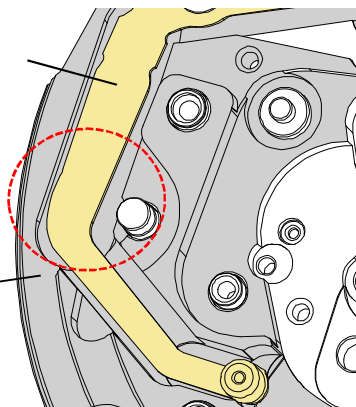
(2) Planet unit



(3) Stop lever

(56) Stop lever

(61) Main plate

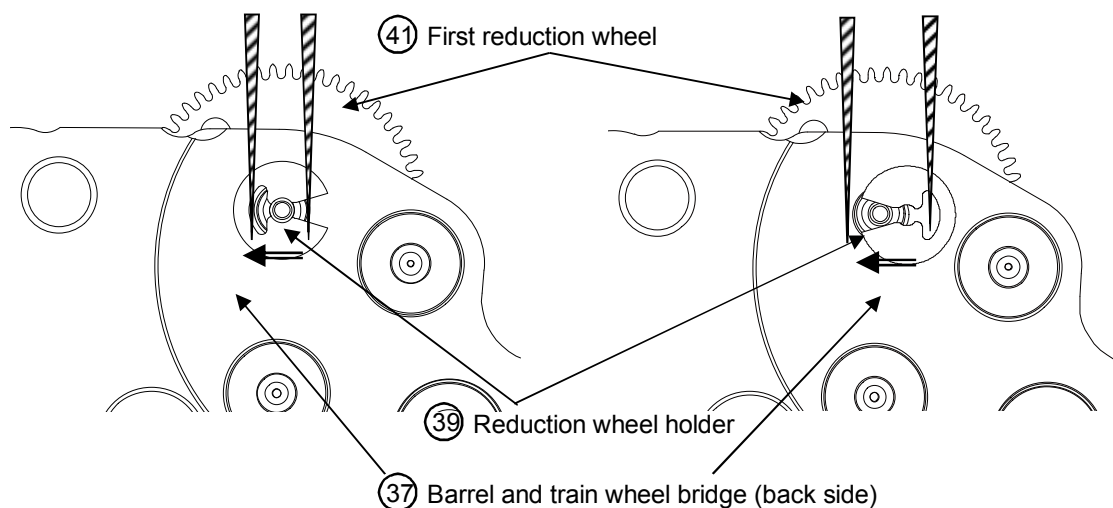


Contact part of Main plate and Stop lever

2. Disassembling / Reassembling of the First reduction wheel

<< Disassembling >>

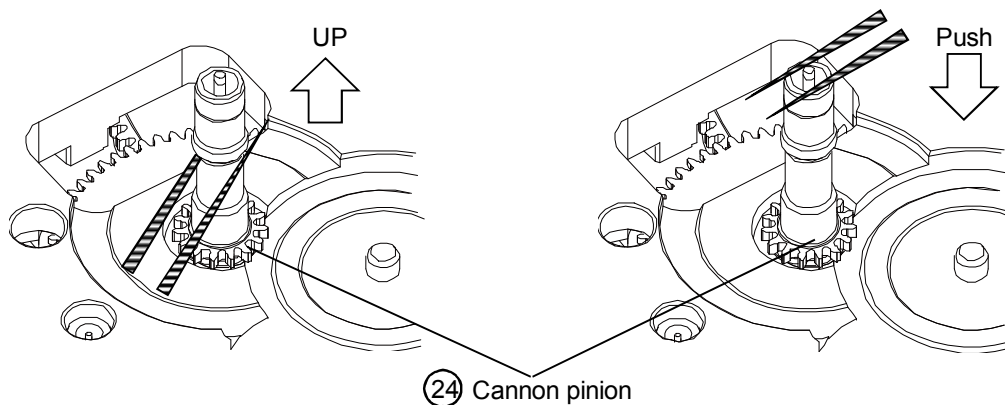
<< Reassembling >>



3. Disassembling / Reassembling of the Cannon pinion

<< Disassembling >>

<< Reassembling >>

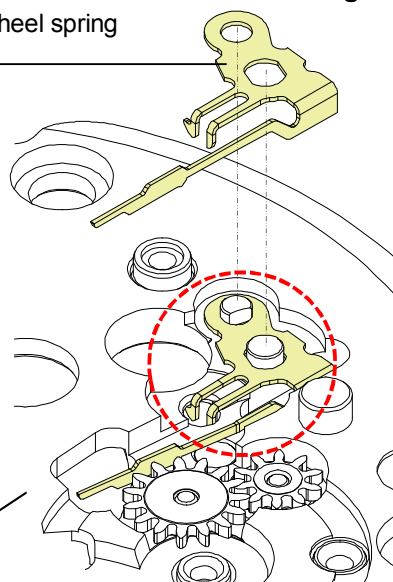
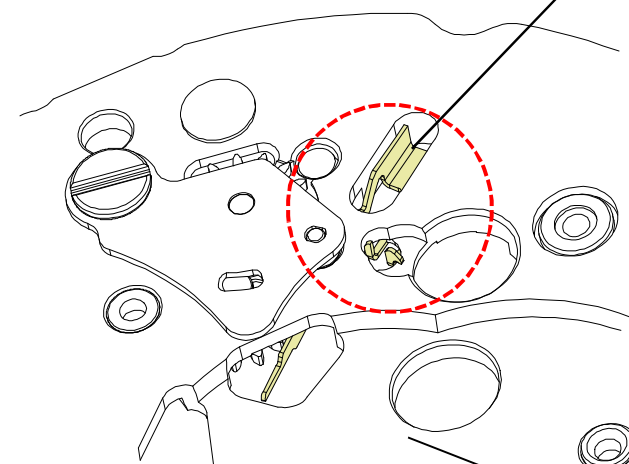


4. Disassembling / assembling of the Ratchet sliding wheel spring.

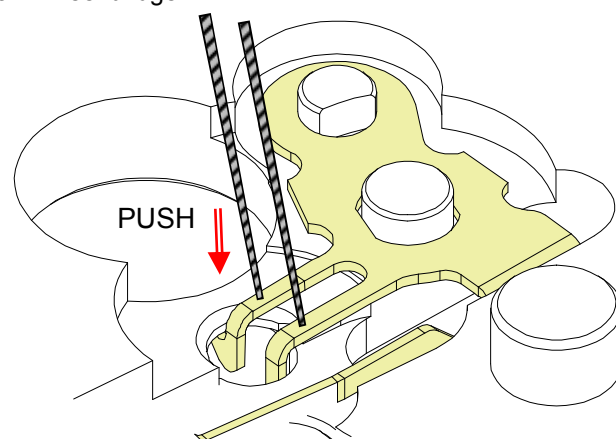
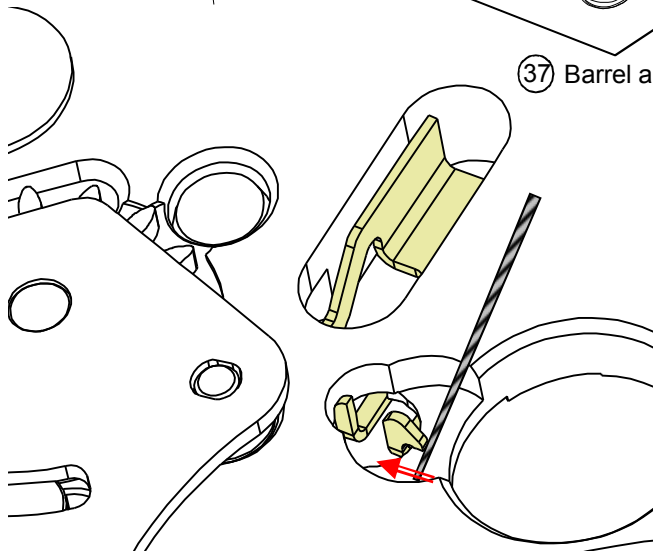
<< Disassembling >>

<< Reassembling >>

③⑧ Ratchet sliding wheel spring



③⑦ Barrel and train wheel bridge

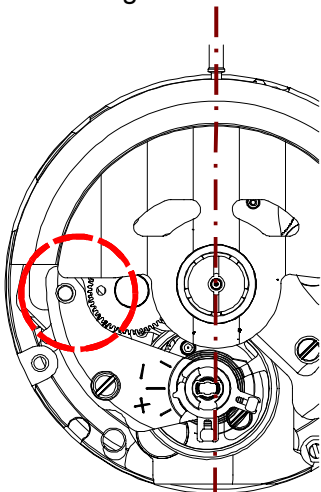


Remove the hook of the Ratchet sliding wheel spring from the Barrel and train wheel bridge.

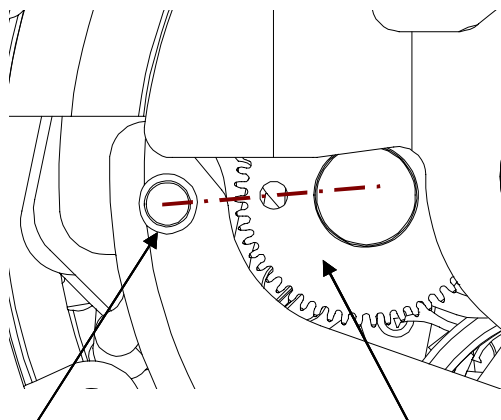
The hooks of the Ratchet sliding wheel spring are hung up on the Barrel and train wheel bridge.

5. Reassembling position of Oscillating weight

When fixing the Oscillating weight, an alignment with the First reduction wheel is necessary in order to wind the Mainspring most efficiently. Turn the First reduction wheel manually until its hole aligns with the gilt dot on the Balance cock and set the Oscillating weight vertically at the stem side, and then tighten the screw. Refer to the figure below.



Enlarged view

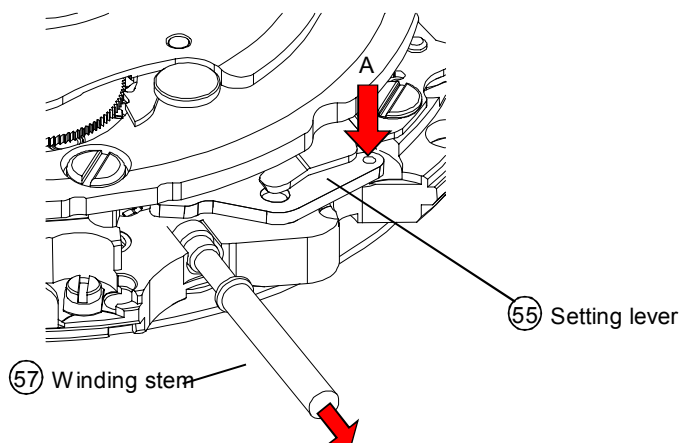


Balance cock guide pin

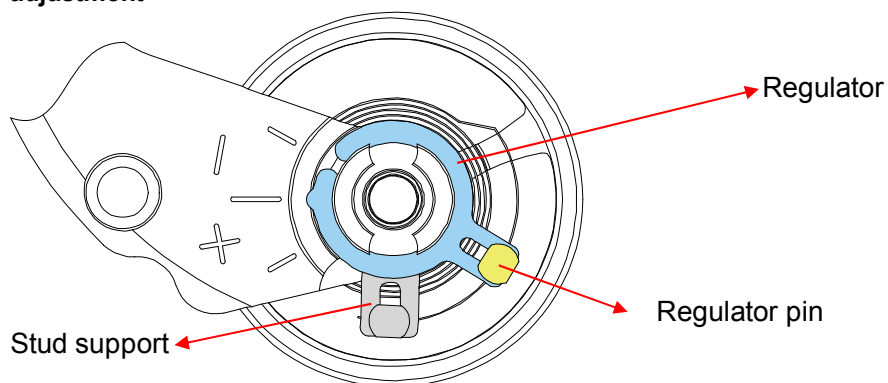
First reduction wheel gear

6. How to remove the Winding stem

- 1) Set the Winding stem to normal position.
- 2) Pull out the Winding stem, while pushing "A"

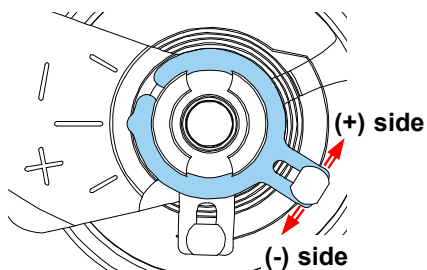


7. Accuracy adjustment

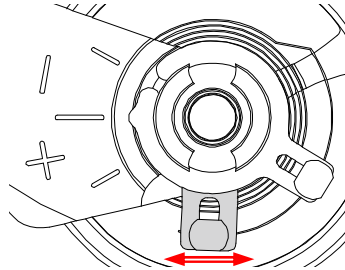


Note:

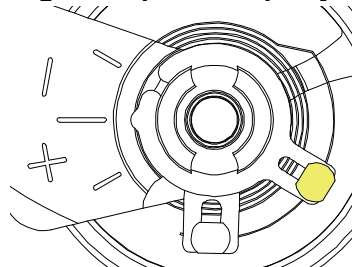
•Regulator ... Time adjustment



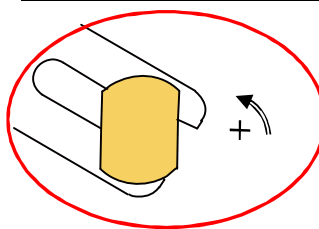
•Stud support ... Beat error adjustment



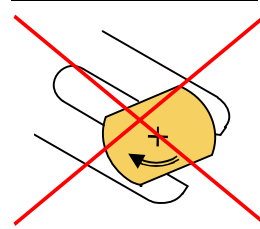
•Regulator pin ... Gap adjustment of Balance spring and Regulator pin



Counterclockwise rotation



No clockwise rotation

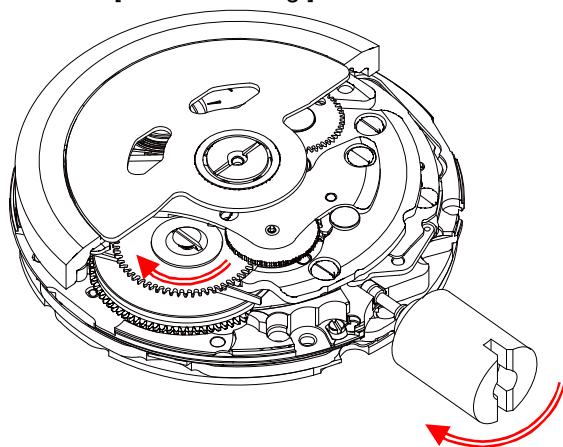


8. How to wind up the Mainspring

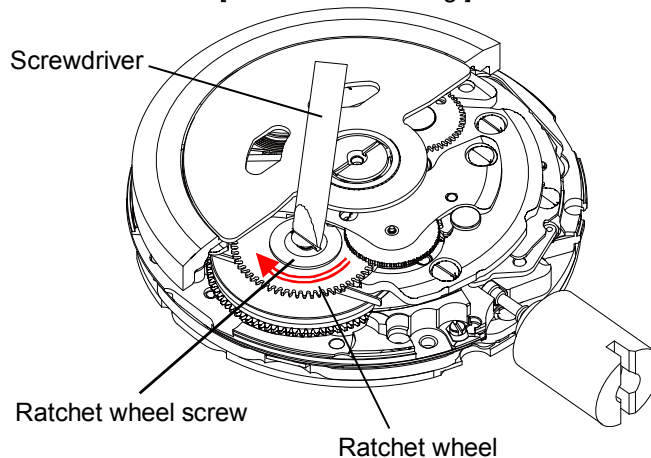
The Mainspring can be fully wound either by hand or with Screwdriver.

- Manual winding ... Turn the crown clockwise at least 55 times (equal to 8 turns of the Ratchet wheel screw)
- Screwdriver winding ... Turn the Ratchet wheel screw 8 times clockwise.

[Manual winding]



[Screwdriver winding]

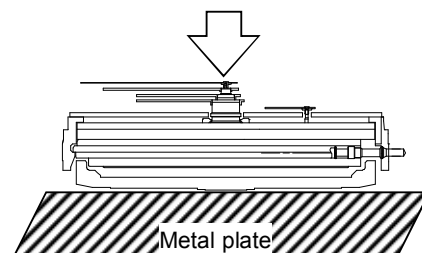


9. How to Install hands

Place the movement on a flat metal plate or something similar.

We recommend using "Universal Movement Holder" S-682.

Be careful not to apply strong pressure to the movement.

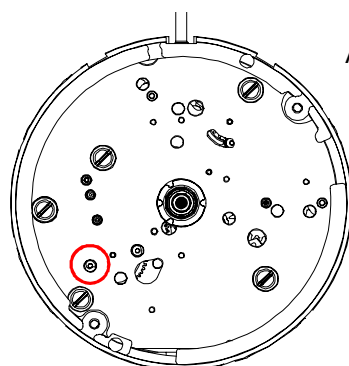


<<Note: Power reserve hand setting>>

(1) The Mainspring should be fully wound up before installing power reserve hand.

(2) Set Power reserve hand at "F" position on the Indicator

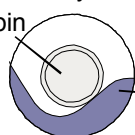
[HOW TO CHECK]



Auxiliary main plate pin

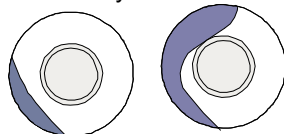
Enlarged view

• Fully wound status

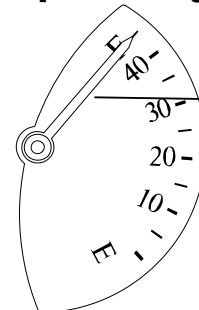


Intermediate power reserve wheel

• Not fully wound status

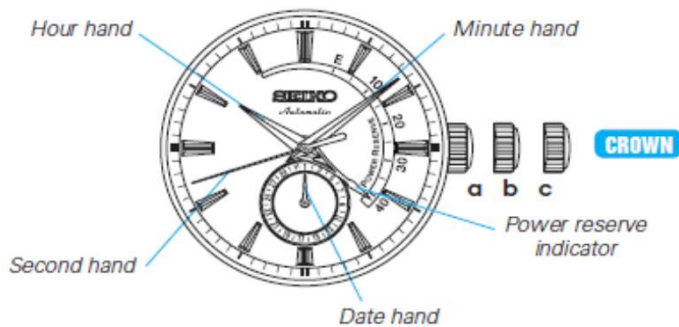


[Hand setting position]



Setting position of power reserve hand

【4R57A operation manual】



1. How to set the time

- 1) Pull out the crown to the second click position.
- 2) Turn the crown to set Hour and Minute hands.
(Check if AM/PM is set correctly.)
- 3) Push the crown back into the normal position.
*If the crown is turned counterclockwise, the Date hand reverses.
Please reset the Date hand.

2. How to set the Date hands

- 1) Pull out the crown to the first click position.
- 2) Turn the crown counterclockwise for date setting.
* Do not set the date between 9:00 P.M. and 1:30 A.M. If you do so, the date may not change properly or it may cause a malfunction.
- 3) Push the crown back into the normal position.

3. How to wind up the mainspring

- a) Manual winding ... Slowly turn the crown clockwise at normal position.
* If you wind by turning the ratchet wheel screw 8 times, it will start to move naturally after shaking slightly.
- b) Winding up with the winding machine.
Full wind up conditions are as follows:
 - Rotary speed : 30 rpm
 - Operating time : 60 minutes