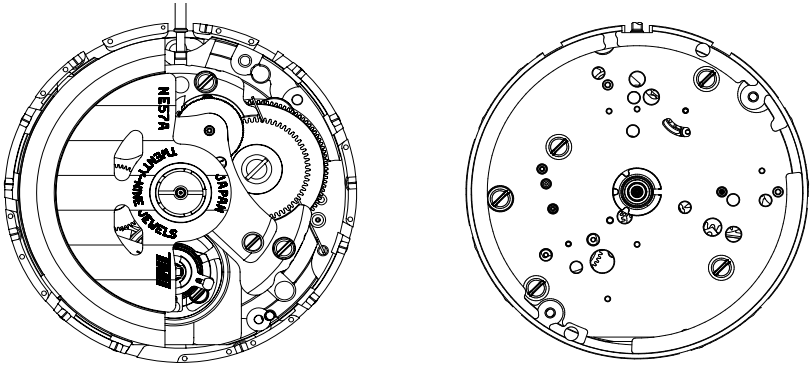








**TECHNICAL GUIDE
&
PARTS CATALOGUE**

CaI.NE57A

AUTOMATIC MECHANICAL

	Cal. No.	NE57A	
Item			
Movement size	Outside diameter	Φ27.4 mm	
	Casing diameter	Φ29.36 mm (with dial holding spacer)	
	Total height	6.63 mm	
Time indication		3 Hands (Hour, Minute, Second) Day calendar hands Power reserve hand (Center position)	
Basic function		Manual winding Automatic winding with ball bearing Stop-second device Quick date correction	
Frequency		21,600 vibrations per hour	
Accuracy	Static accuracy	- 20 ~ + 40 seconds per day * Measurement should be done within 10 ~ 60 minutes after fully wound up. * All measurements are made without the calendar in function.	
	Measurement position	Direction of 3 positions (1) Dial up (2) 9 o'clock up (3) 6 o'clock up	
	Lift angle	53 deg	
	Measurement time	20 seconds * Equipment to be used : Witschi WATCH EXPERT	
	Posture difference	Difference is under 60 seconds within maximum value and minimum value. * Measurement should be done within 10 ~ 60 minutes after fully wound up. * Direction of 4 positions. (1) 12 o'clock up (2) 9 o'clock up (3) 6 o'clock up (4) 3 o'clock up	
	Isochronisms (24h-0h)	- 20 ~ + 40 seconds per day * Direction position : Dial up * Difference of static accuracy of 24 h and 0 h	
Duration time		More than 41 hours (Mainspring after fully wound up) * Posture to confirmation : Dial up	
Winding the mainspring		<< Movement >> • Fully wound up by turning the crown minimum 55 times. • Fully wound up by turning the ratchet wheel screw 8 times. << Complete Watch >> A winding machine is needed to wind up the mainspring. * Full wind up conditions (Reference information) (1) Rotary speed : 30 rpm (2) Operating time : 60 minutes	
Jewels		29 jewels	
Crown position		Counterclockwise	Clockwise
	Normal position	Free	Manual winding
	First click	Date setting	Free
	Second click	Time setting	Time setting

Disassembling procedures Figs. ① → ⑥③ Reassembling procedures Figs. ⑥③ → ①	Type of oil  Moebius 9010  A9a (S-4)	 A9a (S-6)  A8a (S-6)
	Oil quantity mark  Normal quantity  Sufficient quantity	

① 0439 190
Dial spacer

② 4408 245
Dial holding spacer

③ 0012 201
Auxiliary train wheel
bridge screw

④ 0126 196
Auxiliary train wheel bridge

⑤ 0817 047
Intermediate power reserve wheel

⑪ 1019 190
Center power reserve wheel

⑫ 0817 190
Intermediate center power reserve wheel

⑬ 0491 190
Dial washer

⑥ 0538 001
Barrel arbor pinion

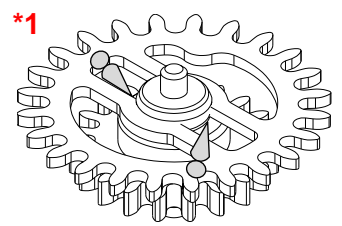
⑦ 1026 002
Planetary reduction wheel

⑧ 1009 004
Second sun wheel

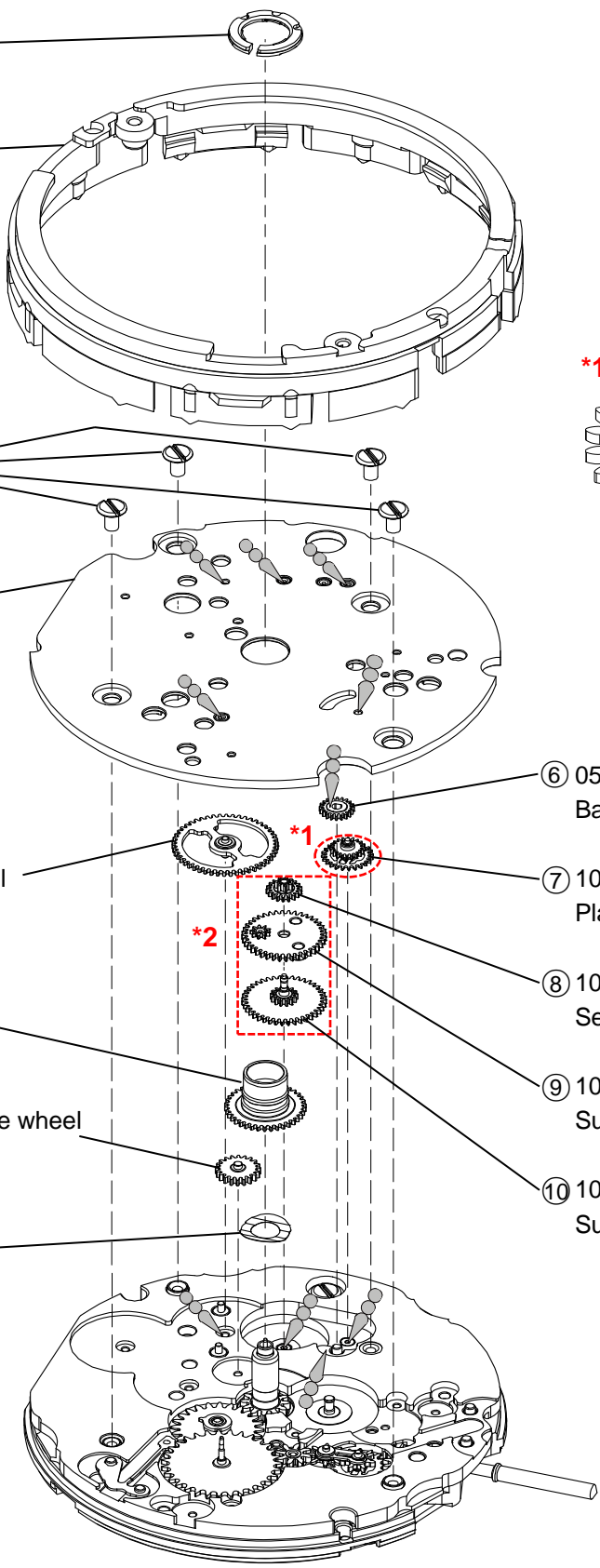
⑨ 1001 025
Sun and planet unit

⑩ 1009 003
Sun wheel

(Back side)



***2**
Refer to page 9
for oiling spot



Disassembling procedures Figs.


① → 63


Reassembling procedures Figs.


63 → ①

Type of oil


 Moebius 9010


 A9a (S-4)

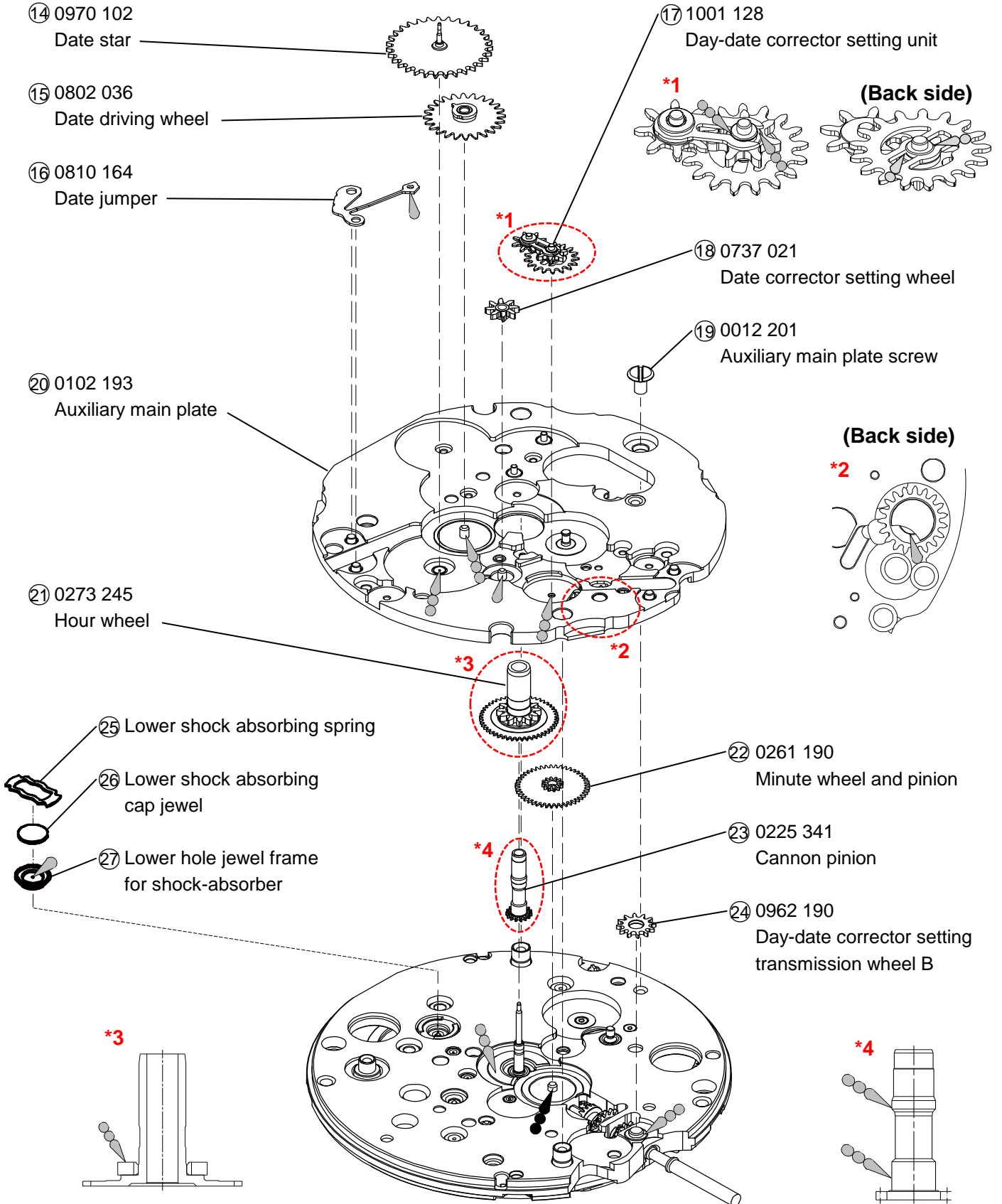
 A9a (S-6)

 A8a (S-6)

Oil quantity mark

 Normal quantity

 Sufficient quantity



Disassembling procedures Figs.

① → 63

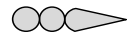
Reassembling procedures Figs.

63 → ①

Type of oil


 Moebius 9010

 A9a (S-4)

 A9a (S-6)

 A8a (S-6)

Oil quantity mark

 Normal quantity

 Sufficient quantity

28 Oscillating weight with ball bearing

Refer to page 7 for each parts code

*Refer to the page 11 for assembling position

34 0012 100

Balance bridge screw

35 0171 354

Balance cock

*2

35-1

0310 186

Balance complete with stud

*2

35-2

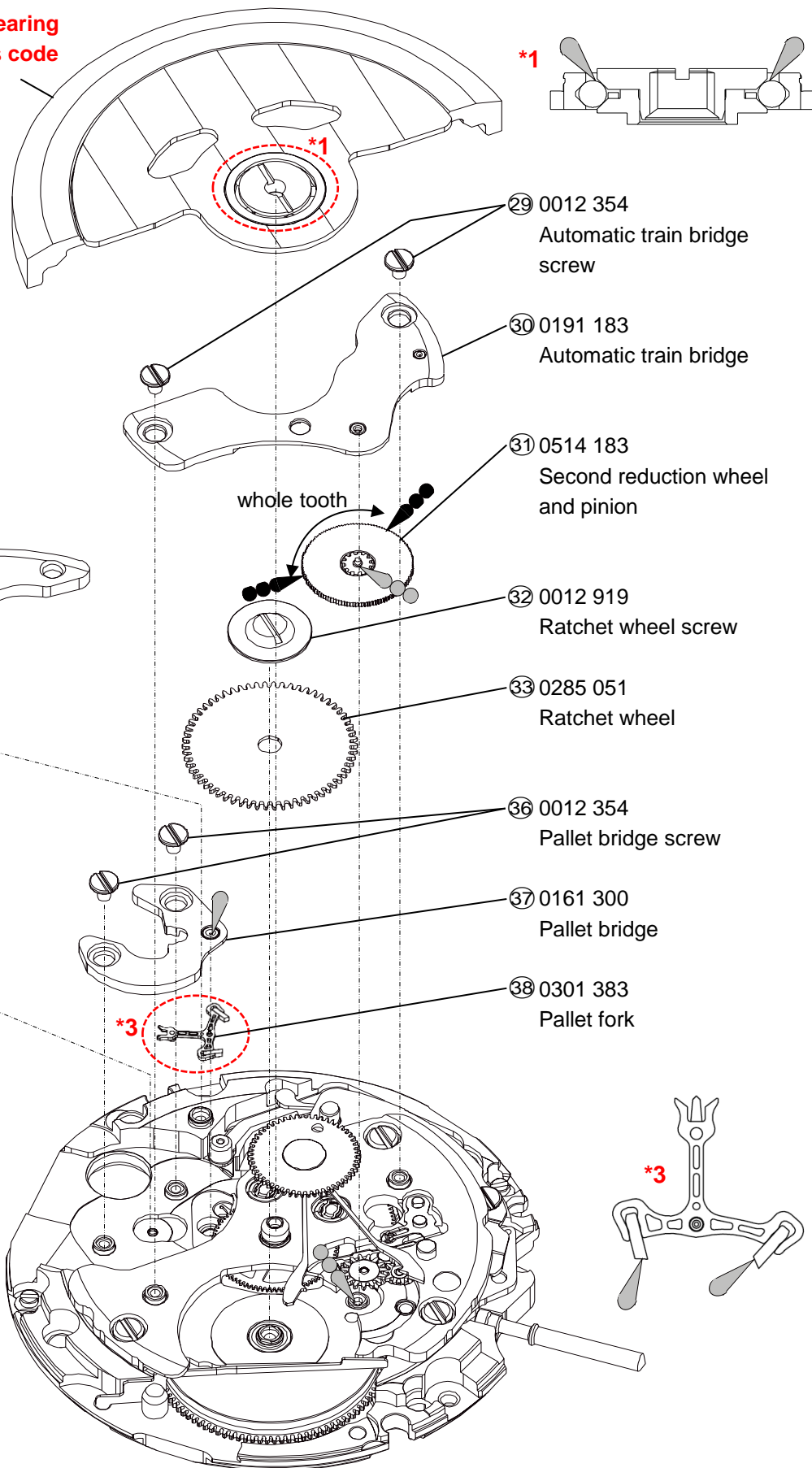
Upper shock absorbing spring

35-3

Upper shock absorbing cap jewel

35-4

Upper hole jewel frame for shock-absorber



*1

29 0012 354

Automatic train bridge screw

30 0191 183

Automatic train bridge

31 0514 183

Second reduction wheel and pinion

32 0012 919

Ratchet wheel screw

33 0285 051

Ratchet wheel

36 0012 354

Pallet bridge screw

37 0161 300

Pallet bridge

38 0301 383

Pallet fork

*3

Disassembling procedures Figs.

① → ⑥③

Reassembling procedures Figs.

⑥③ → ①

Type of oil

Moebius 9010

A9a (S-4)

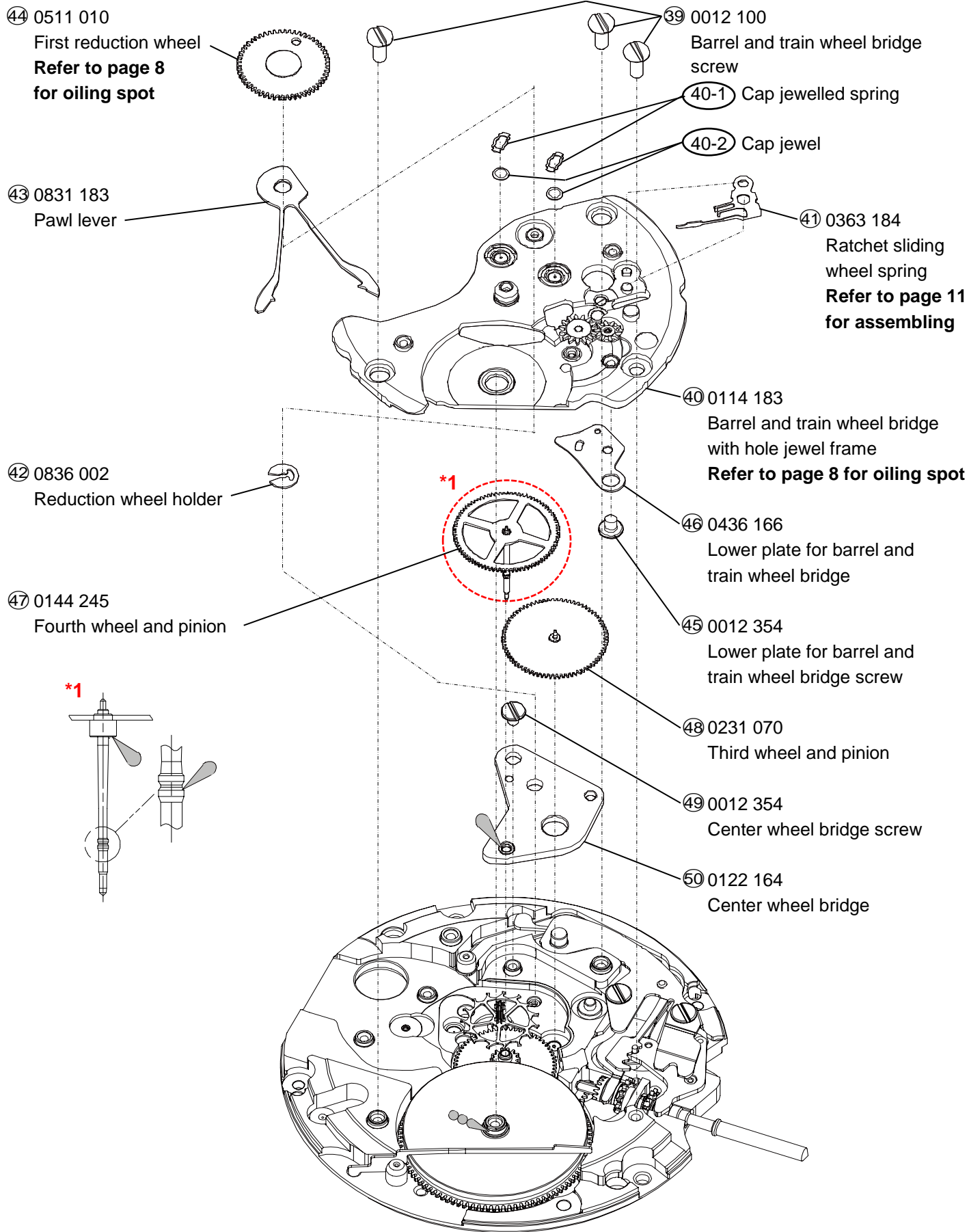
A9a (S-6)

A8a (S-6)

Oil quantity mark

Normal quantity

Sufficient quantity



Disassembling procedures Figs.

① → ⑥③

Reassembling procedures Figs.

⑥③ → ①

Type of oil

Moebius 9010

A9a (S-4)

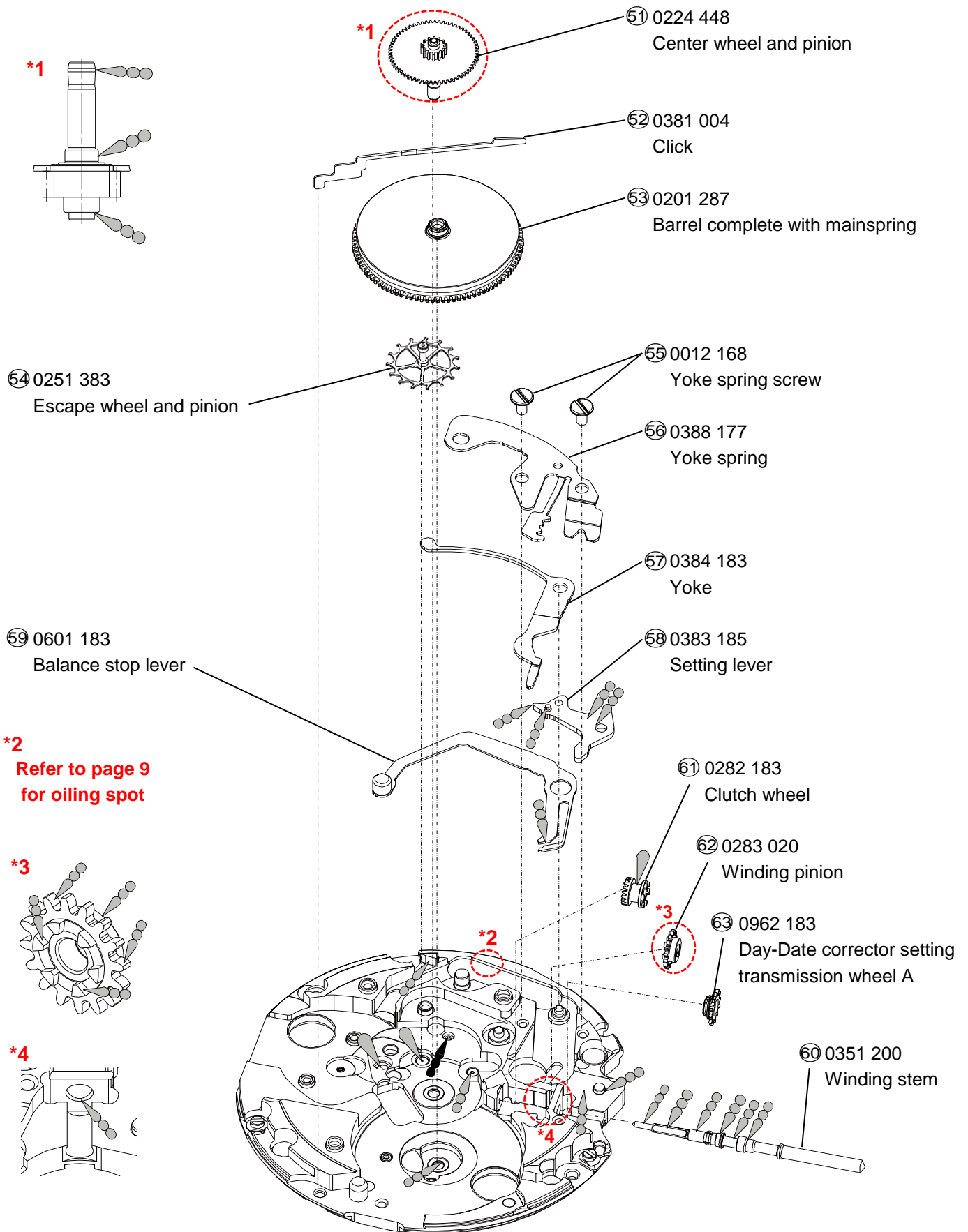
A9a (S-6)

A8a (S-6)

Oil quantity mark

Normal quantity

Sufficient quantity

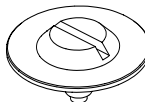

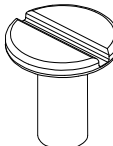
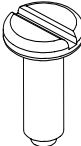
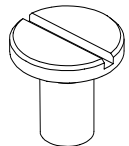


Remarks

⑳ Oscillating weight with ball bearing (Page 4)

Parts code	Marking
1509 324	Japan mark
1509 325	Malaysia mark

● List of screws

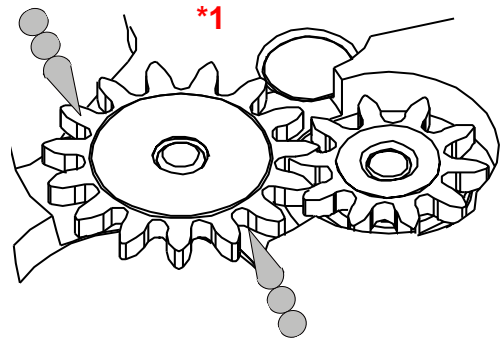
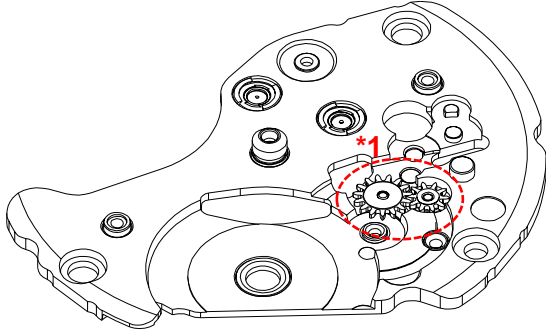
Parts No	Name	Parts No	Name
0012 919 	⑳ Ratchet wheel screw	0012 354 	④⑨ Center wheel bridge screw
0012 168 	⑤⑤ Yoke spring screw (x2)		③⑥ Pallet bridge screw (x2)
0012 100 	③⑨ Barrel and train wheel bridge screw (x3)		④⑤ Lower plate for barrel and train wheel bridge screw
	③④ Balance bridge screw	0012 201 	②⑨ Automatic train bridge screw (x2)
			①⑨ Auxiliary main plate screw
			③ Auxiliary train wheel bridge screw (x4)

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

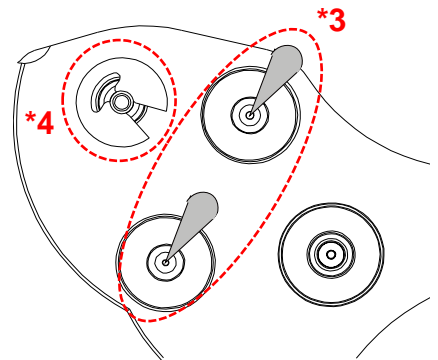
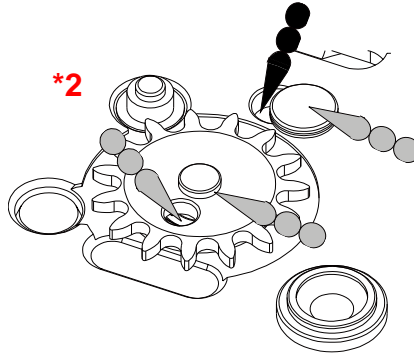
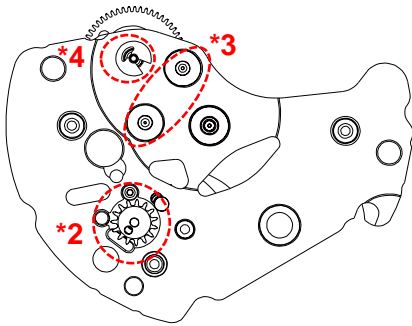
Type of oil			
	Moebius 9010		A9a (S-6)
	A9a (S-4)		A8a (S-6)
Oil quantity mark			
	Normal quantity		Sufficient quantity

1. Oiling spot

(1) ④ Barrel and train wheel bridge with hole jewel frame

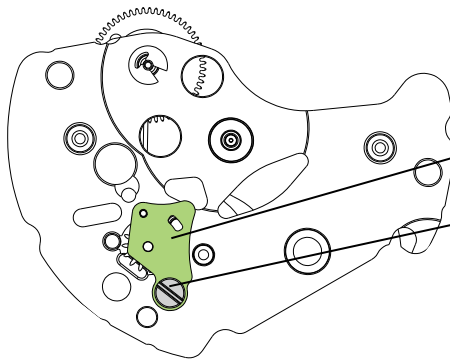


Barrel and train wheel bridge with hole jewel frame (back side)



Note

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

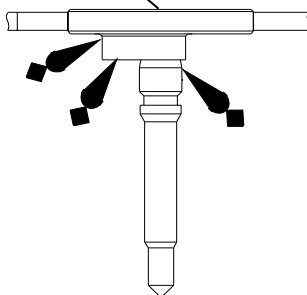


④6 Lower plate for barrel and train wheel bridge

④5 Lower plate for barrel and train wheel bridge screw

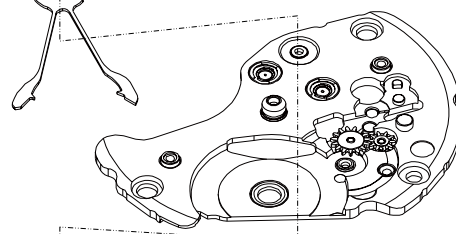
***4** After oiling, set first reduction wheel & pawl lever & reduction wheel holder.

④4 First reduction wheel









④4 First reduction wheel

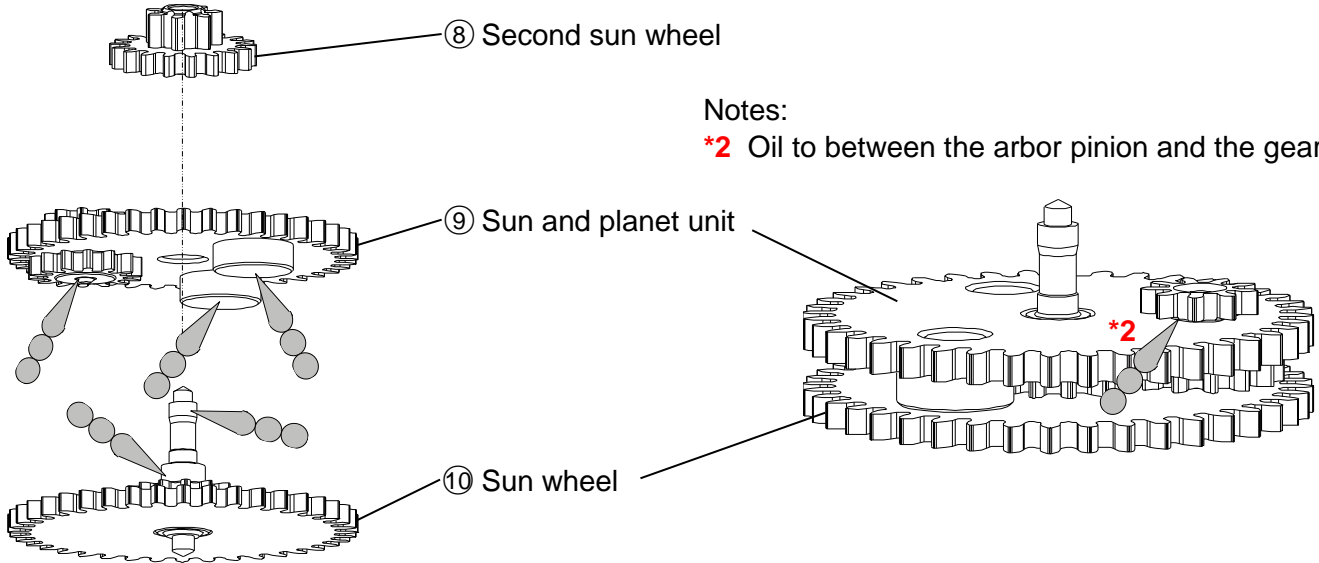
④3 Pawl lever



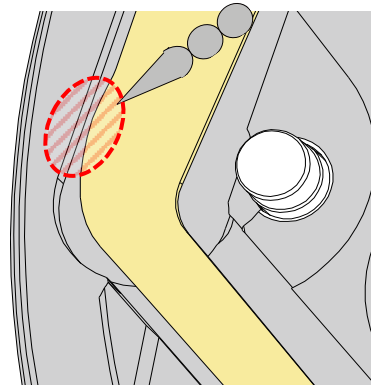
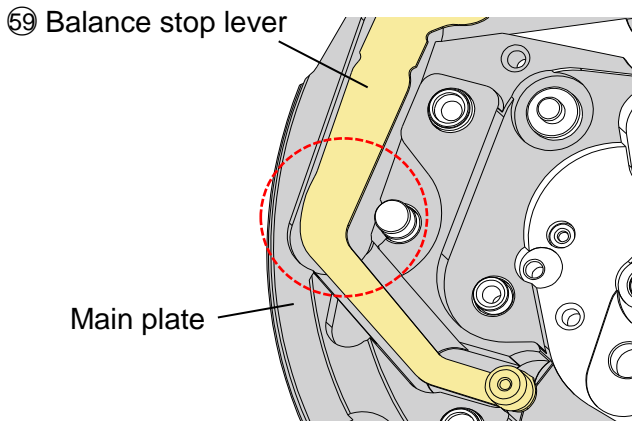
④2 Reduction wheel holder

Type of oil			
	Moebius 9010		A9a (S-6)
	A9a (S-4)		A8a (S-6)
Oil quantity mark			
	Normal quantity		Sufficient quantity

(2) Planet unit



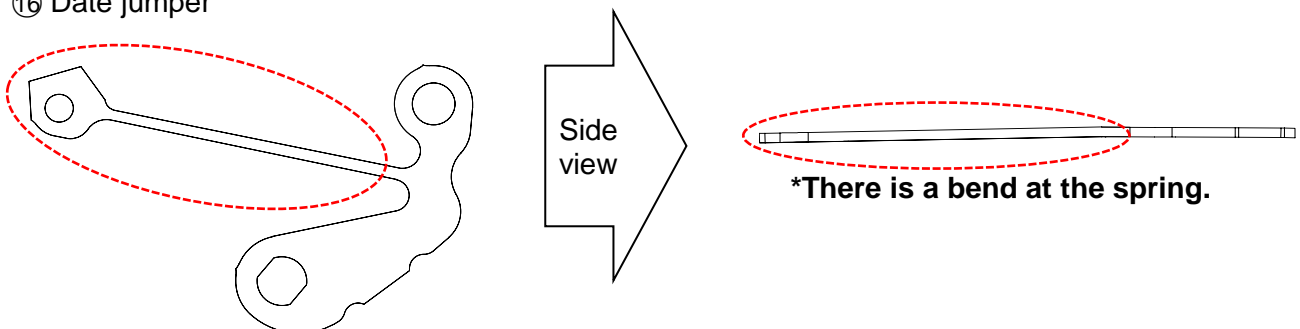
(3) Balance stop lever



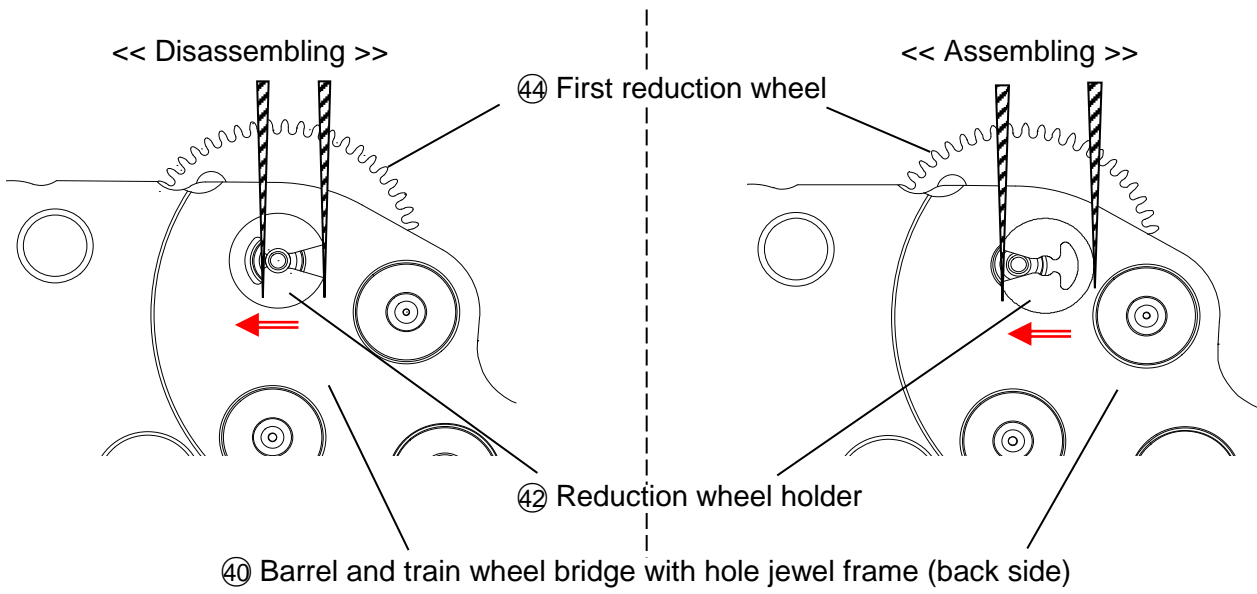
Contact part of main plate and balance stop lever

2.Method of identifying date jumper

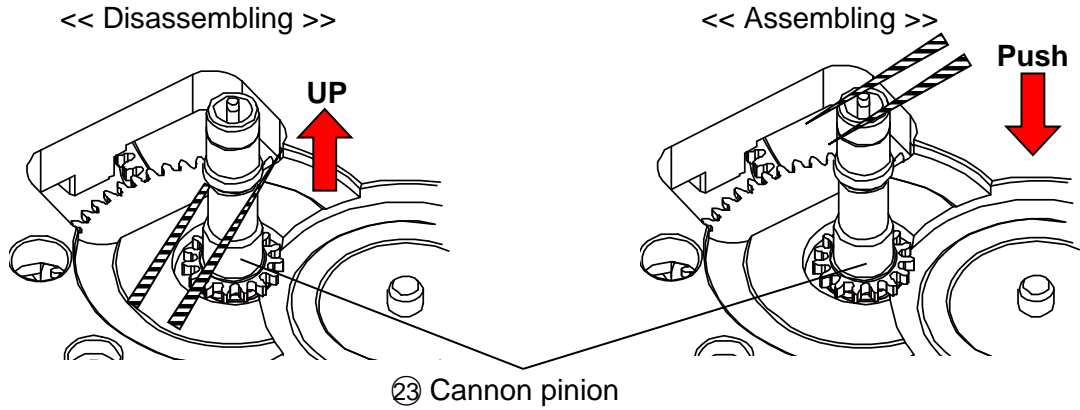
16 Date jumper



3. Disassembling / assembling of the First reduction wheel



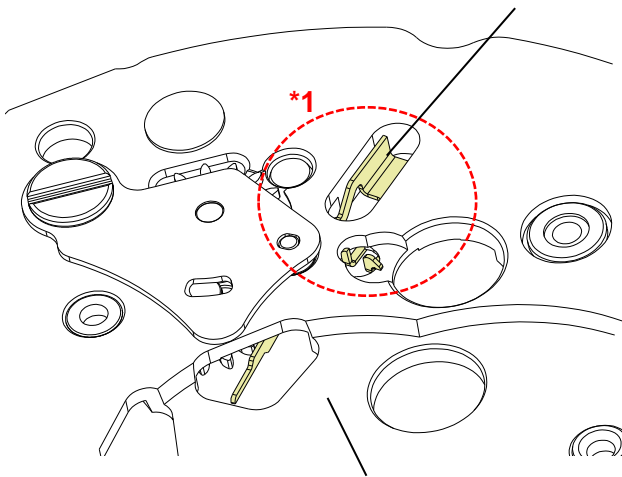
4. Disassembling / assembling of the cannon pinion



5. Disassembling / assembling of the Ratchet sliding wheel spring

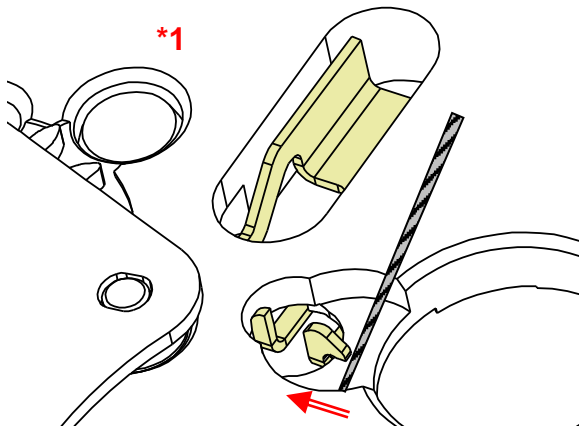
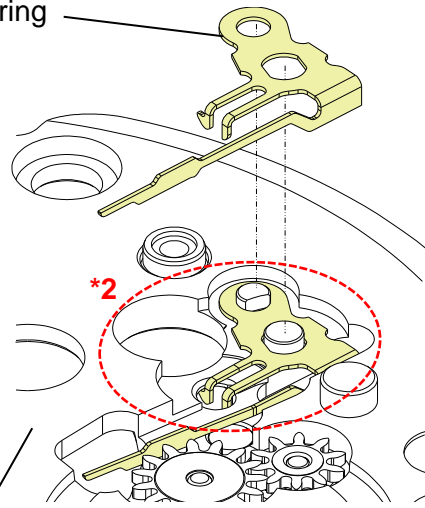
<< Disassembling >>

④1 Ratchet sliding wheel spring

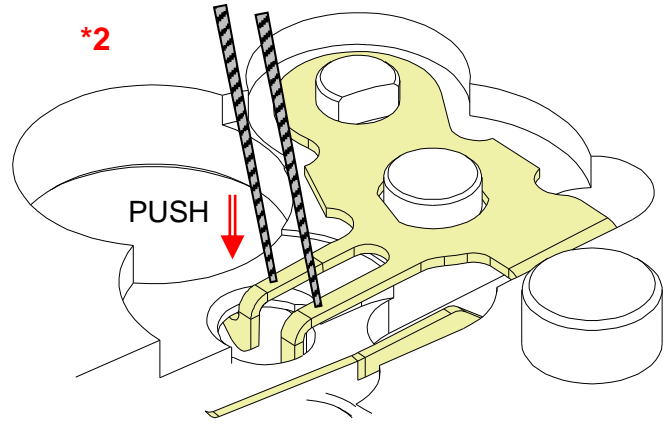


④0 Barrel and train wheel bridge with hole jewel frame

<< Assembling >>



Remove the hook of the ratchet sliding wheel spring from barrel and train wheel bridge with hole jewel frame.

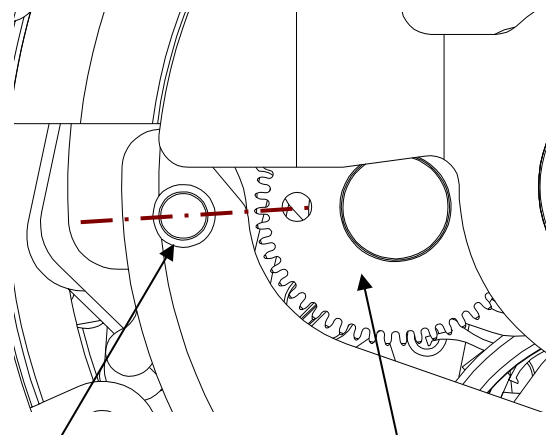
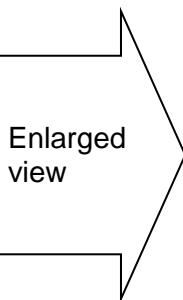
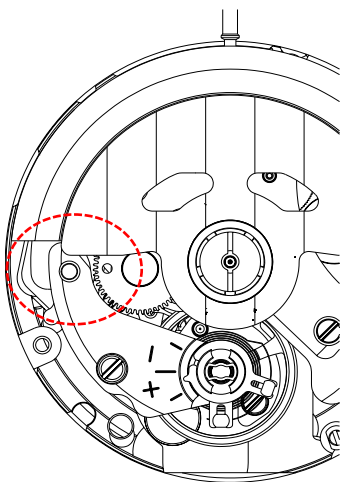


The hooks of ratchet sliding wheel spring are hung up on barrel and train wheel bridge with hole jewel frame.

6. Setting position of oscillating weight

- Before assembling oscillating weight

Match the center of the oscillating weight and winding stem. Set the hole of first reduction wheel gear on the imaginary line toward the balance bridge guide pin.

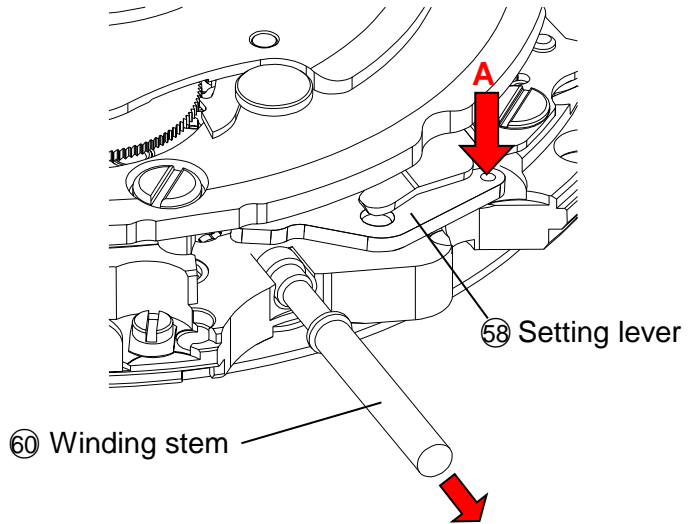


Balance bridge guide pin

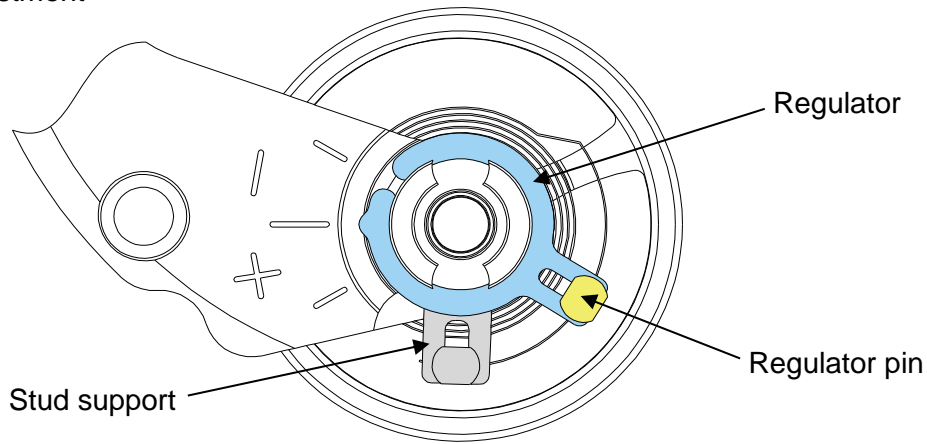
First reduction wheel gear

7. To remove the winding stem

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



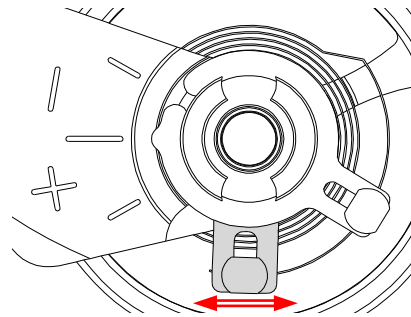
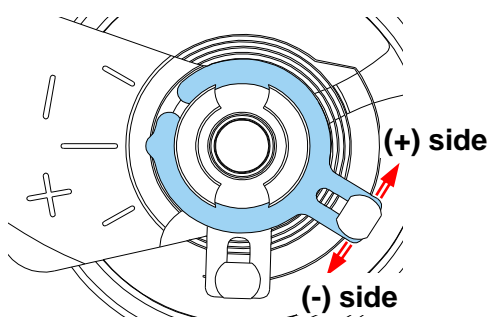
8. Accuracy adjustment



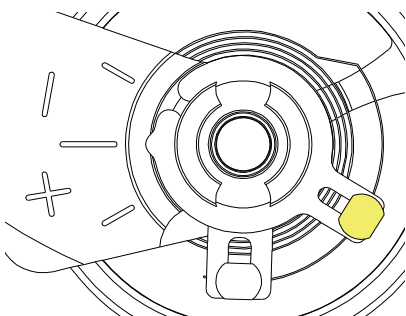
Note:

• Regulator (Time adjustment)

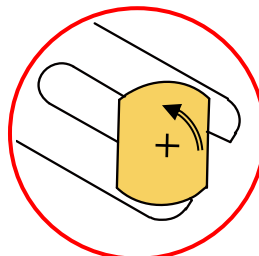
• Stud support (Beat error adjustment)



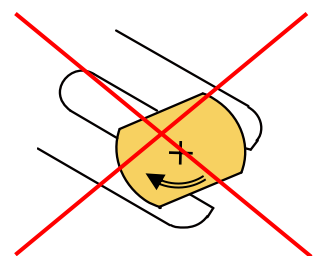
• Regulator pin (Gap adjustment of balance spring and regulator pin)



Anticlockwise rotation



No clockwise rotation

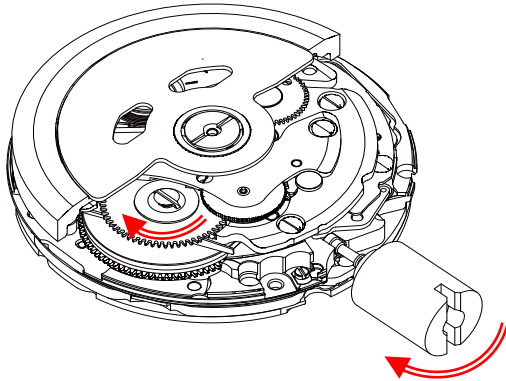


9.To wind up the mainspring

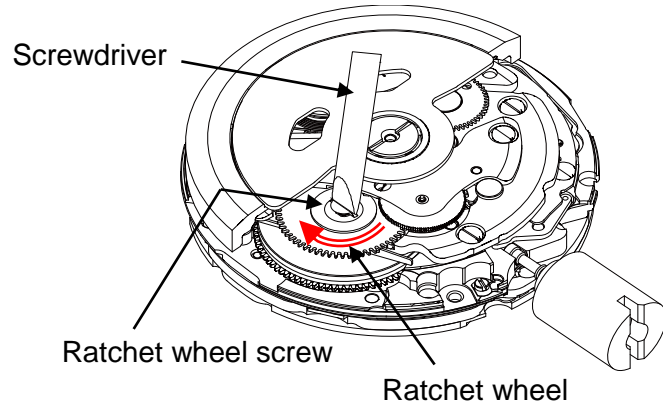
<<Movement>>

- Manual winding (Fully wound up by turning the crown minimum 55 times)
- Screwdriver winding (Fully wound up by turning the ratchet wheel screw 8 times)

[Manual winding]



[Screwdriver winding]



10.How to install hands

Place the movement directly on a flat metal plate or something similar to install the hands.

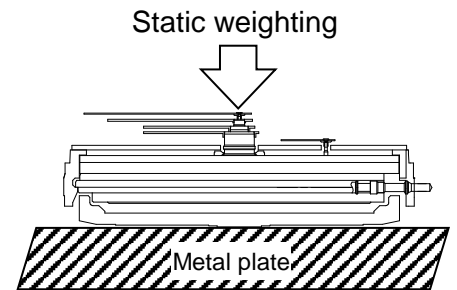
We recommend the use of movement holder to install hands.

For hands attachment, please use a special equipment.

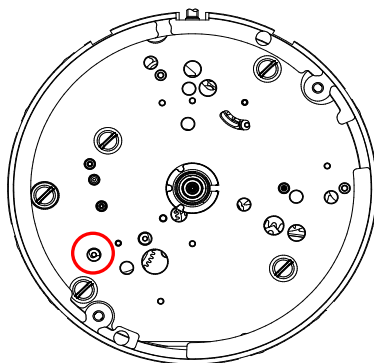
When the movement receives a strong shock, it may be damaged.

<<Note : Power reserve hand setting>>

- (1) The mainspring should be fully wound up before setting power reserve hand.
- (2) Set power reserve hand at the fully wound up position of the dial graduation.

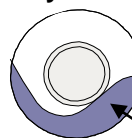


[How to Check]



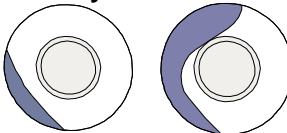
Enlarged view

Fully wound state

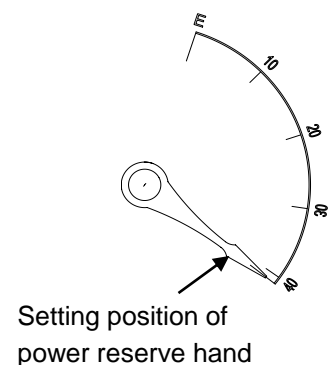


Intermediate power reserve wheel

Not fully wound state



[Hand setting position]



11.Accuracy measurement condition

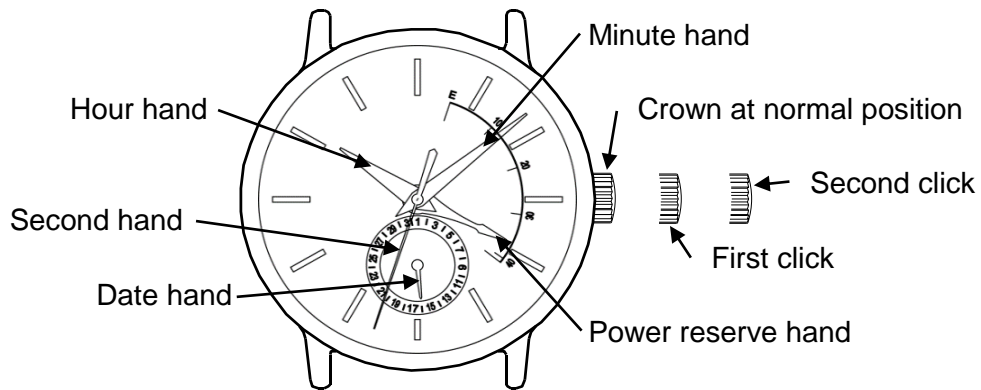
Static Accuracy : - 20 ~ + 40 seconds per day

Measurement Conditions

- 1) Measurement should be done within 10 ~ 60 minutes after fully wound up.
- 2) Lift angle : 53 deg
- 3) Measurement position : (1) Dial up (2) 9 o'clock up (3) 6 o'clock up
- 4) Minimum measurement Time : 20 seconds
- 5) Stabilizing Time :

Leave the watch for at least 20 seconds to stabilize after you change its measurement position.

[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 that AM/PM is set correctly)
 - 3) Push the crown back into the normal position.
- *When time setting is performed in counterclockwise, date hands reverses.
Please reset by date correction.

2.How to set the Date hands

- 1) Pull out the crown to the first click position.
- 2) Turn the crown to left for date setting.
* Do not set the calendar between 9:00 P.M. and 2:00 A.M. If the setting of the calendar is made during this period, the date will not change to the next date.
Please set the calendar after changing the time other than the above period.
- 3) Push the crown back into the normal position.

3.To wind up the mainspring

- a) Manual winding (Rotate the crown clockwise at normal position)
Fully wound up by turning the crown minimum 55 times. It will start to move naturally after shaking slightly.
- b) To wind up with winding machine.
Full wind up conditions (Reference information)
 - Rotary speed : 30 rpm
 - Operating time : 60 minutes