TIME MODULE

Revised on : 19. May. 2010

TECHNICAL GUIDE

&

PARTS CATALOGUE

Cal.NE15

AUTOMATIC MECHANICAL

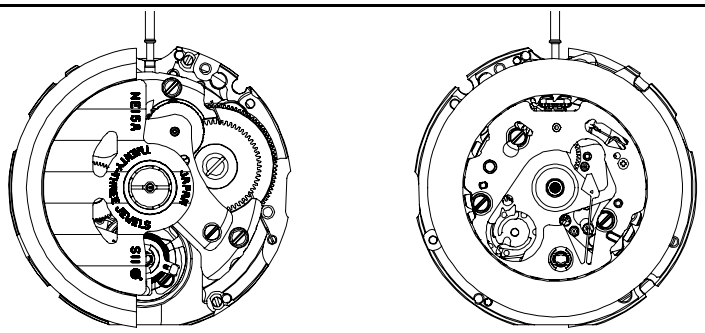
SII Products

PARTS CATALOGUE / TECHNICAL GUIDE
Cal.NE15

TIME MODULE

[SPECIFICATION]

Version-01

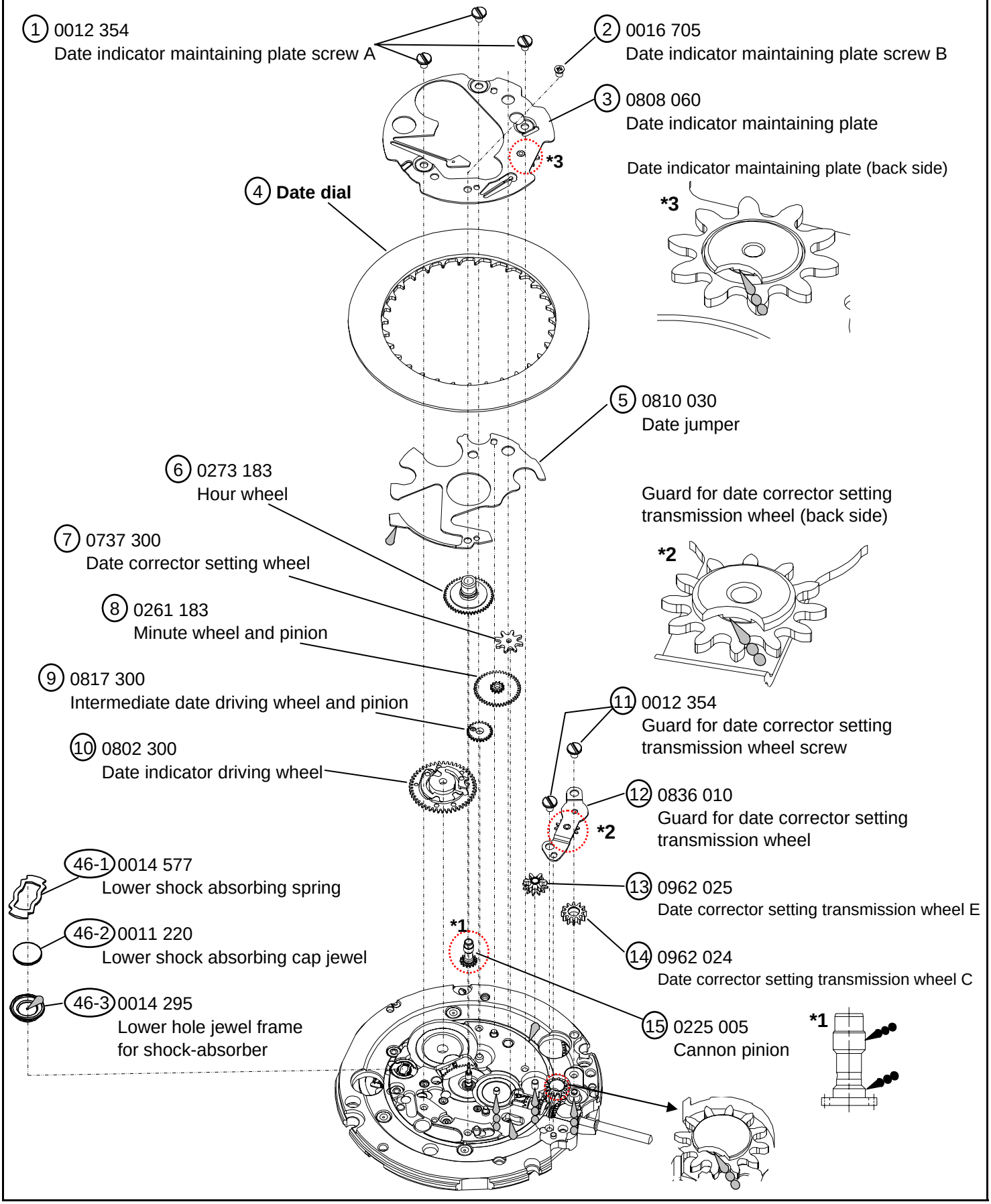
Item \ Cal. No.		NE15	
Movement			
Movement size	Outside diameter	Φ27.40mm	
	Casing diameter	Φ27.00mm	
	Total height	5.32 mm	
Time indication		3 Hands (Hour , Minute , Second) Date Calendar	
Basic function		Manual winding Automatic winding with ball bearing Stop second device Date display with quick date correction	
Frequency		21,600 vibrations per hour	
Accuracy	Static accuracy	-15~+25 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 45 seconds within max value and min 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)	-10~+20 seconds per day. * Direction of position. : Dial up * Difference of static accuracy of 24h and 0h	
Duration time		More than 50 hours … Mainspring after fully wound up. * Posture to confirmation : Dial up	
Winding the mainspring		<< Movements >> ・Fully wounded up by turning the crown min 55 times. ・Fully wounded 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 ・Rotary speed : 30 rpm ・Operating time: 60 minutes	
Jewels		23 jewels	
Crown position		Left rotation	Right rotation
	Normal position	Free	Manual winding
	First click	Date setting	Free
	Second click	Hand setting	Hand setting

Disassembling procedures Figs. (1) → (46)

Reassembling procedures Figs. (46) → (1)

Type of oil
- Moebius 9010
- MO-4
- MO-3

Oil quantity mark
- NORMAL QUANTITY
- SUFFICIENT QUANTITY



Type of oil
Moebius 9010
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Oil quantity mark
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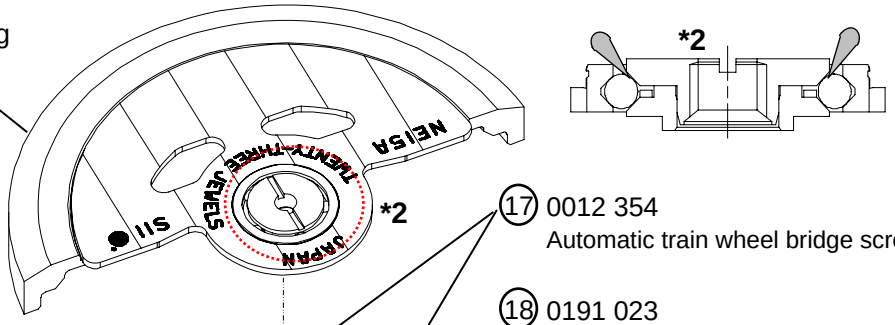
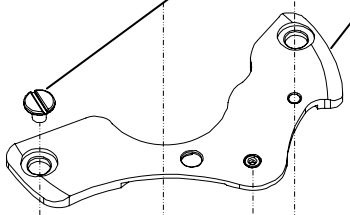


16 0509 364
Oscillating weight with ball bearing
***Refer to the page8 for assembling position**

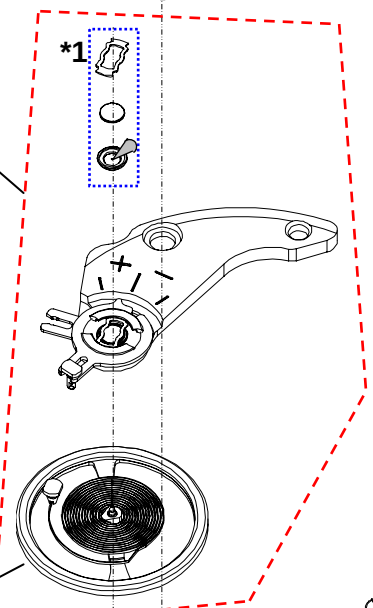
17 0012 354
Automatic train wheel bridge screw

18 0191 023
Automatic train wheel bridge

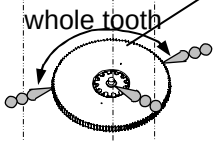
22 0012 420
Balance bridge screw



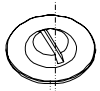
23 0171 118
Balance cock



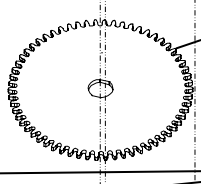
19 0514 010
Second reduction wheel and pinion



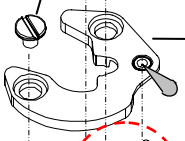
20 0012 919
Ratchet wheel screw



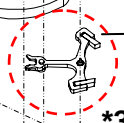
21 0285 051
Ratchet wheel



24 0012 354
Pallet bridge screw

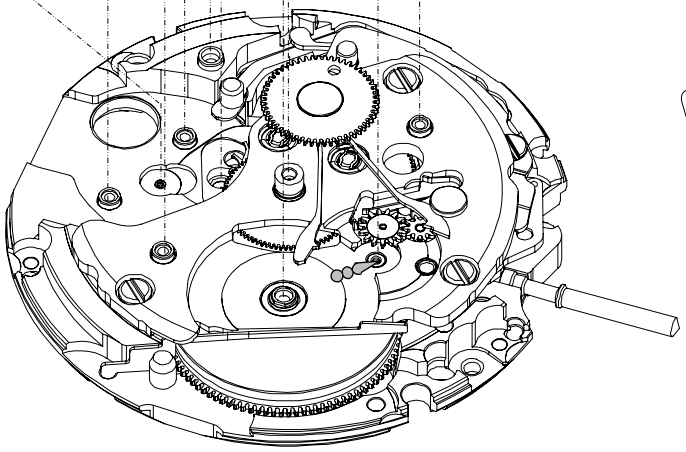


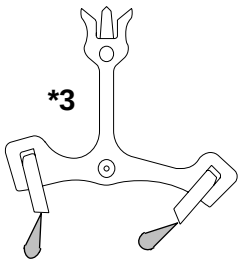
25 0161 300
Pallet bridge



26 0301 009
Pallet fork

23-1 0311 050
Balance complete with stud





***1**

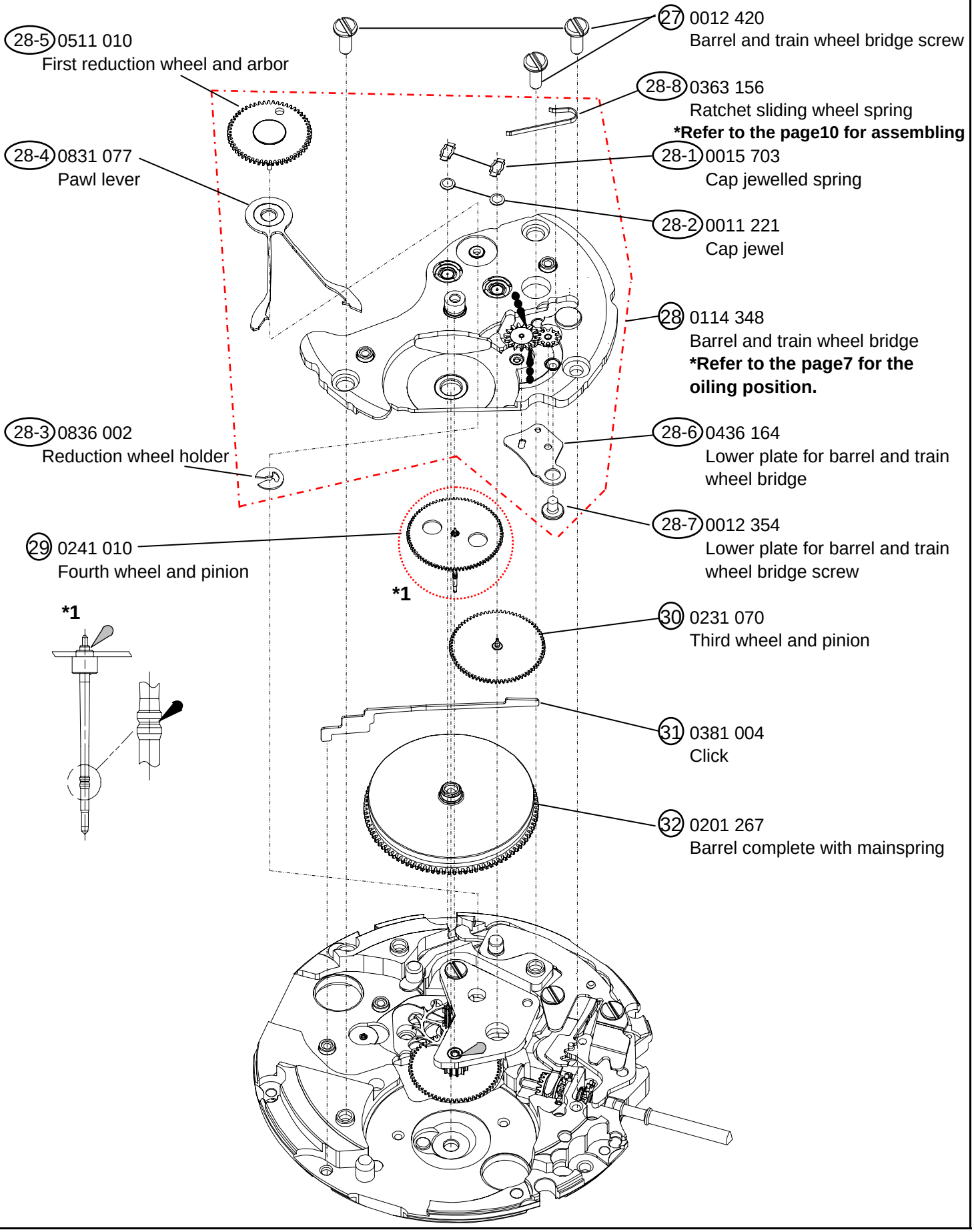
23-2 0014 577
Upper shock absorbing spring

23-3 0011 220
Upper shock absorbing cap jewel

23-4 0014 295
Upper hole jewel frame for shock-absorber

Type of oil
Moebius 9010
MO-4
MO-3

Oil quantity mark
NORMAL QUANTITY
SUFFICIENT QUANTITY



(28-5) 0511 010
First reduction wheel and arbor

(28-4) 0831 077
Pawl lever

(28-3) 0836 002
Reduction wheel holder

(29) 0241 010
Fourth wheel and pinion

*1

(27) 0012 420
Barrel and train wheel bridge screw

(28-8) 0363 156
Ratchet sliding wheel spring
***Refer to the page10 for assembling**

(28-1) 0015 703
Cap jewelled spring

(28-2) 0011 221
Cap jewel

(28) 0114 348
Barrel and train wheel bridge
***Refer to the page7 for the oiling position.**

(28-6) 0436 164
Lower plate for barrel and train wheel bridge

(28-7) 0012 354
Lower plate for barrel and train wheel bridge screw

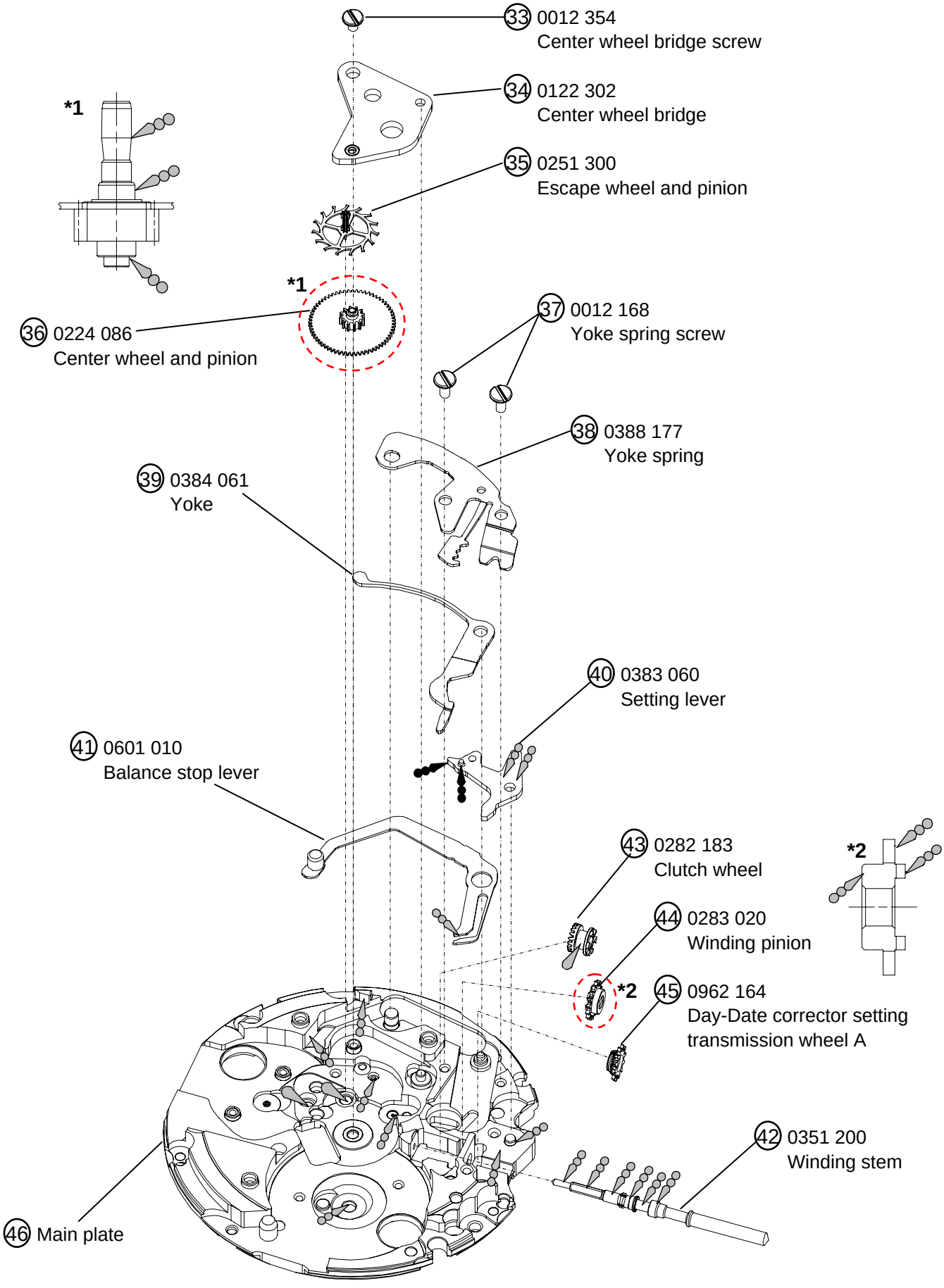
(30) 0231 070
Third wheel and pinion

(31) 0381 004
Click

(32) 0201 267
Barrel complete with mainspring

Type of oil
Moebius 9010
MO-4
MO-3

Oil quantity mark
NORMAL QUANTITY
SUFFICIENT QUANTITY

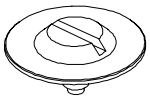
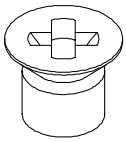
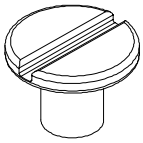
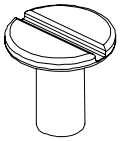
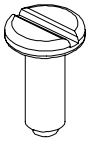


Remarks

④ Date dial

Cal. code	Parts code	Position of crown	Position of date frame	Color of numbers	Color of background
NE15	0878 080	3H	3H	Black	White

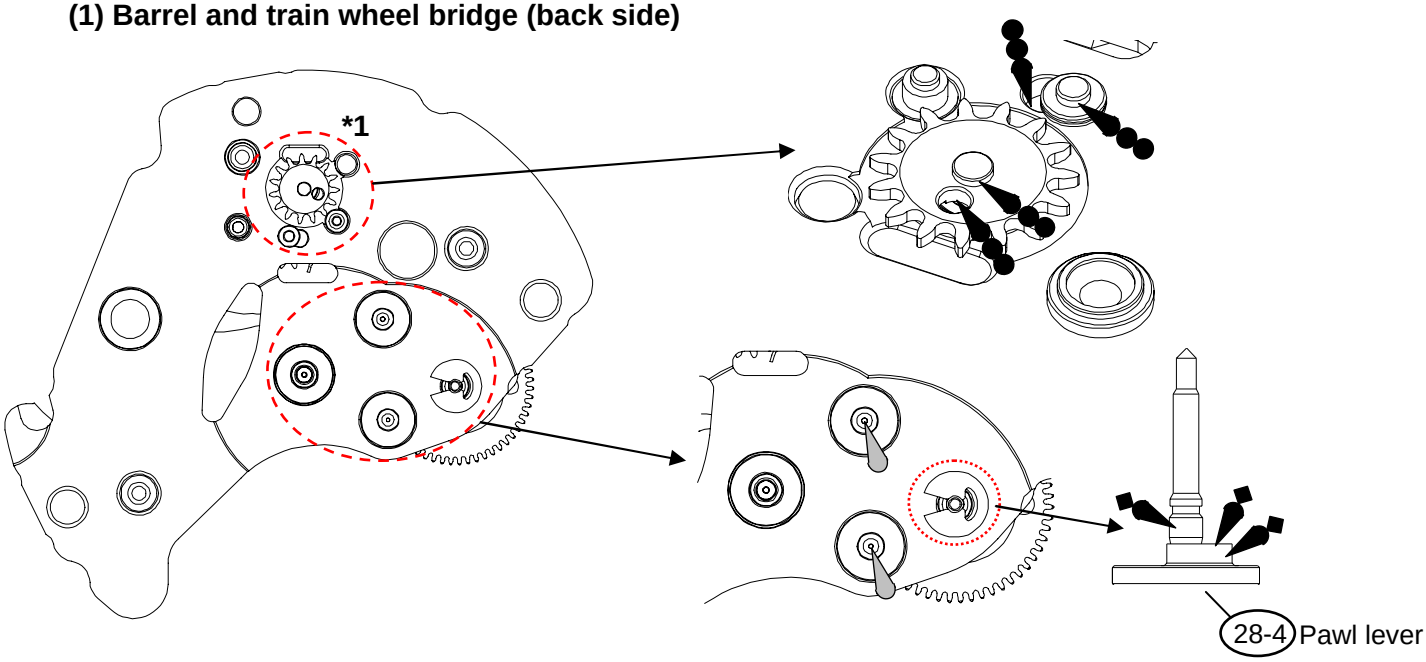
● **List of screws**

Parts No	Name	Parts No	Name	Parts No	Name
0012 919 	⑳ Ratchet wheel screw	**0016 705** 	② Date indictor maintaining plate screw (B)	**0012 354** 	㉝ Center wheel bridge screw
					① Date indicator maintaining plate screw (A) (×3)
0012 168 	㊲ Yoke spring screw (×2)	**0012 420** 	㉗ Barrel and train wheel bridge screw (×3)		⑪ Guard for date corrector setting transmission wheel screw (×2)
			㉒ Balance bridge screw		㉔ Pallet bridge screw (×2)
					㉘-⑦ Lower plate for barrel and train wheel bridge screw
					⑰ Automatic train wheel bridge screw (×2)

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

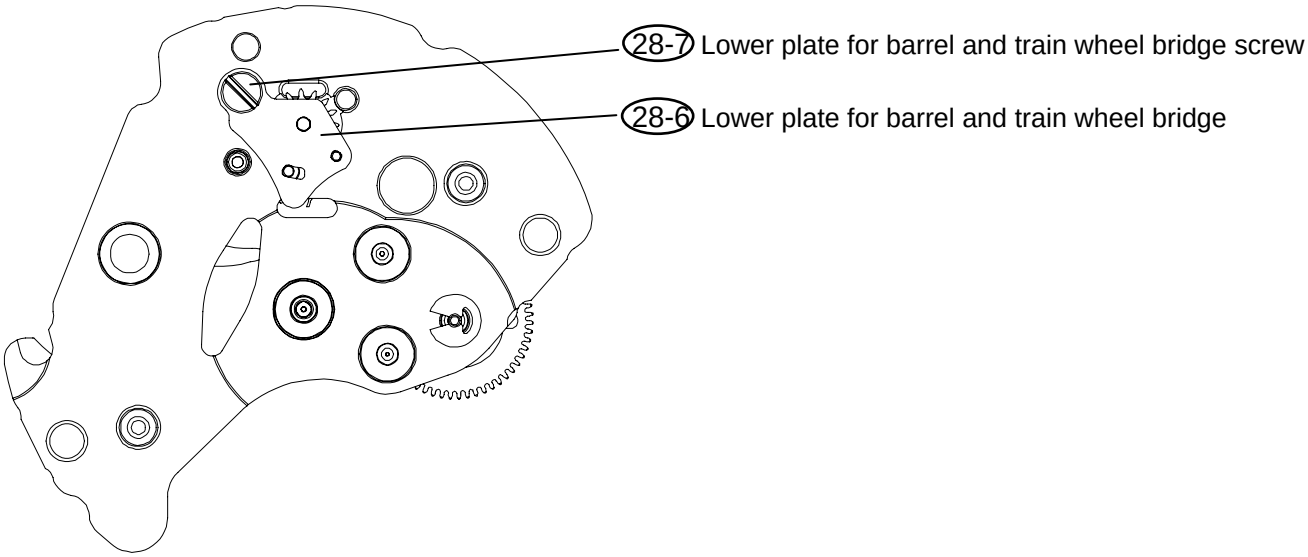
● **Oiling position**

(1) Barrel and train wheel bridge (back side)

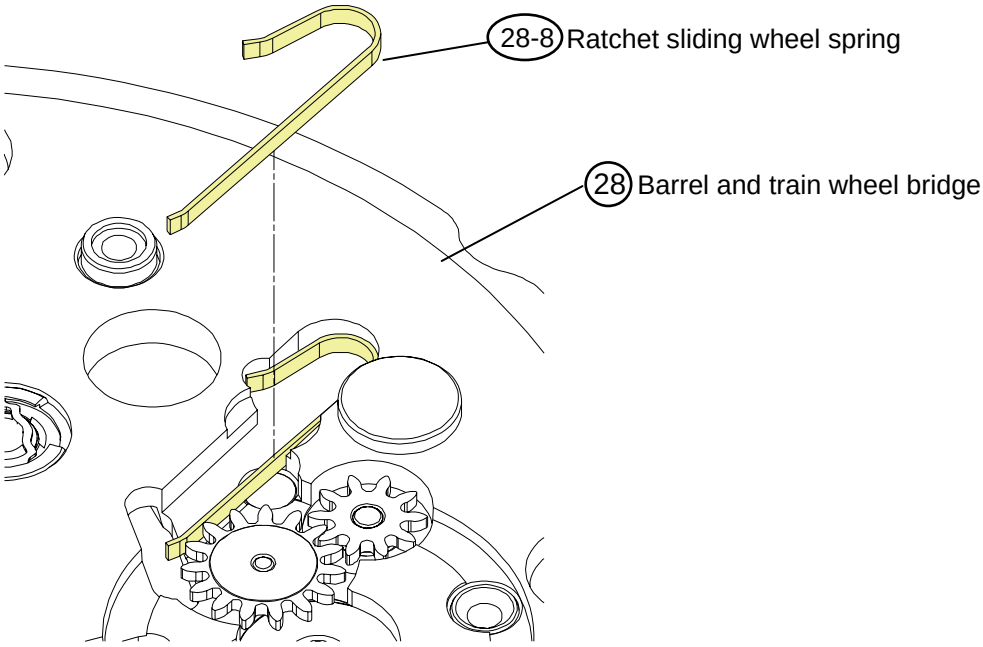


Notes:

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

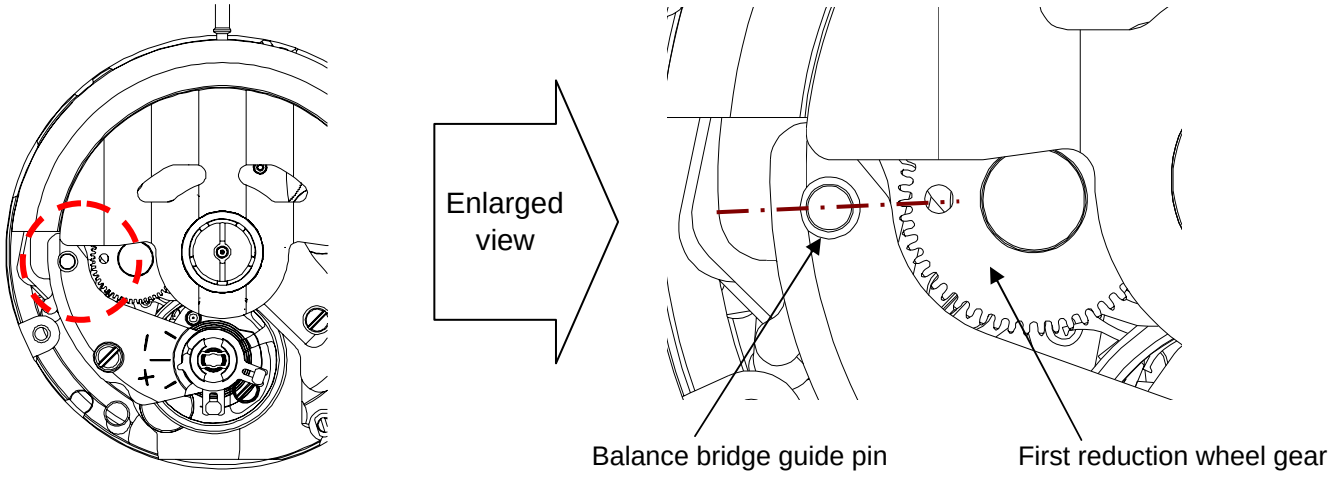


1.Rachet sliding wheel spring setting



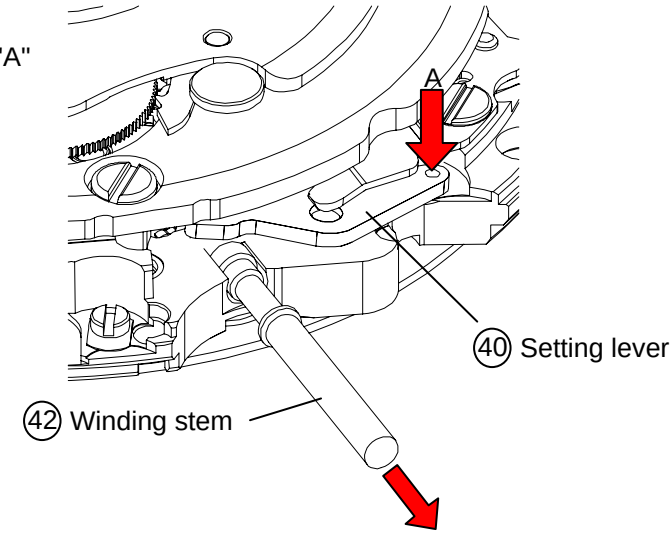
2.Setting position of oscillating weight

・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.



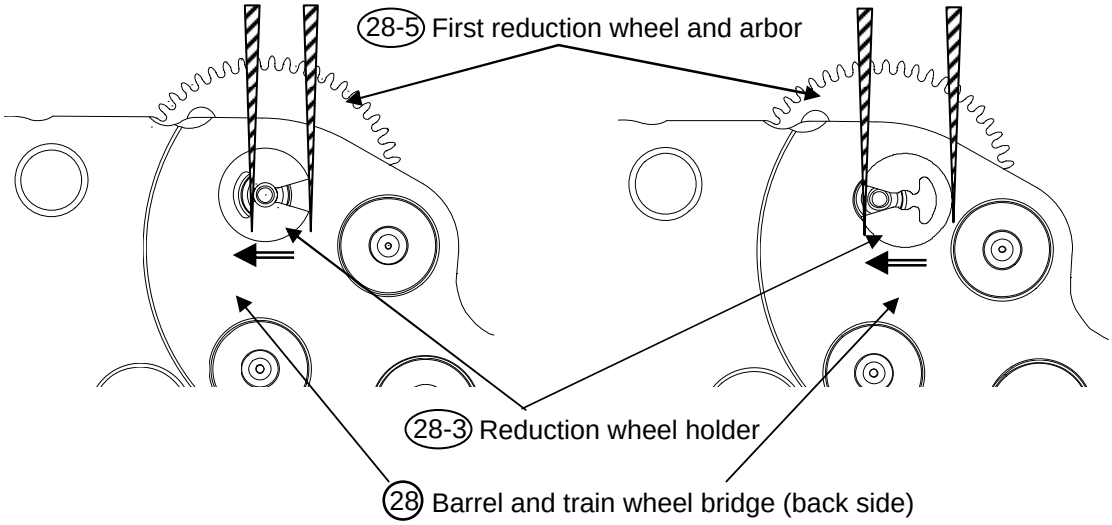
3.To remove the winding stem

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



4.Disassembling / assembling of the First reduction wheel

<< Disassembling >> **<< Assembling >>**

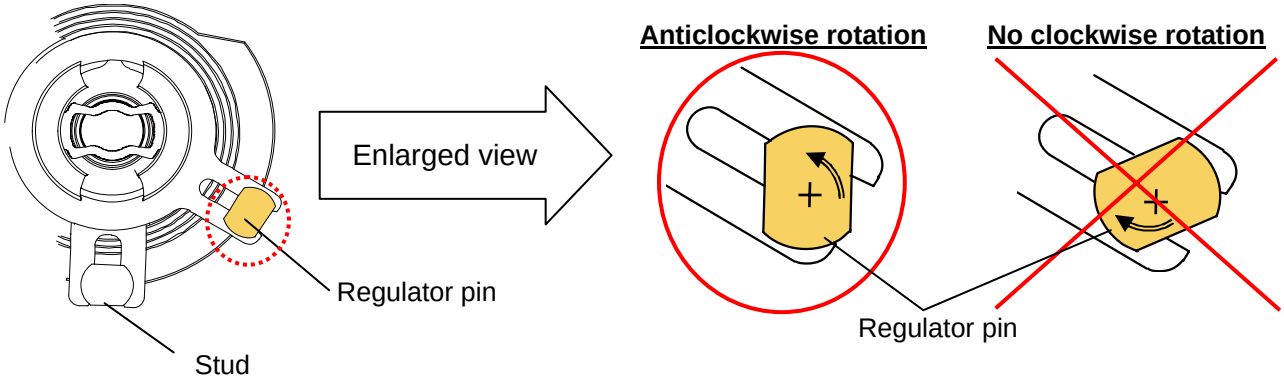


5.Rotative direction of regulator pin

・Rotative direction of regulator pin : Anticlockwise only
・Hair spring can be damaged by clockwise rotation.

〈Note〉

Please do the following when a movement's accuracy is out of the guaranteed range, or after disassembly.



6.To wind up the mainspring

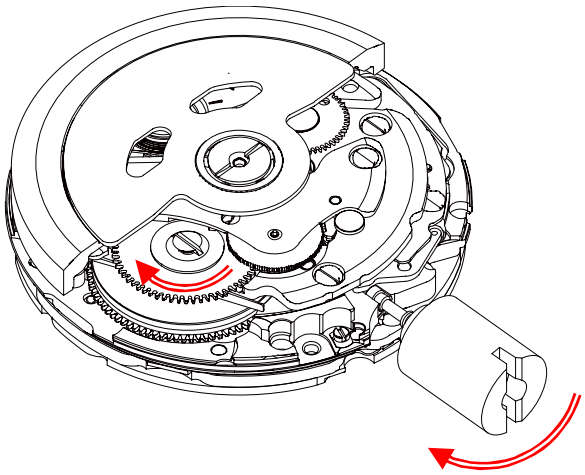
<<Movement>>

The mainspring would be fully wounded up by turning the ratchet wheel screw 8 times clockwise. (Manual winding or Screwdriver)

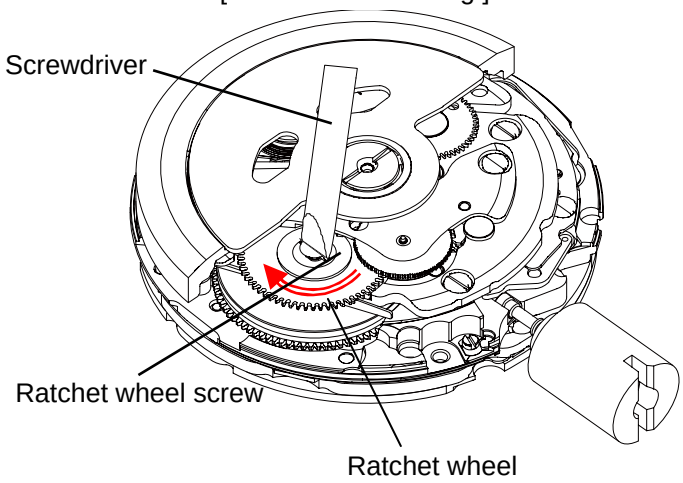
Manual winding … Rotate crown clockwise at normal position by min 55 times. (Equal to ratchet wheel screw 8 times)

Screwdriver winding … Turn the ratchet wheel screw 8 times clockwise.

[Manual winding]



[Screwdriver winding]



7.How to attach hands

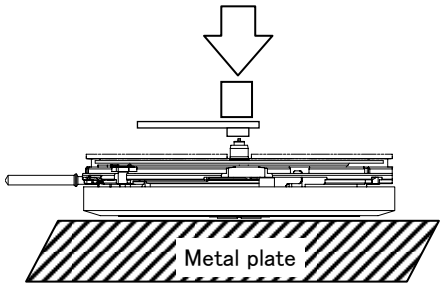
Place the movement directly on a flat metal plate or something similar to attach the hands.

We recommend the use of movement holder to attach hands.

For hands attachment, please use a special equipment.

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

Static weighting



8.Accuracy measurement condition

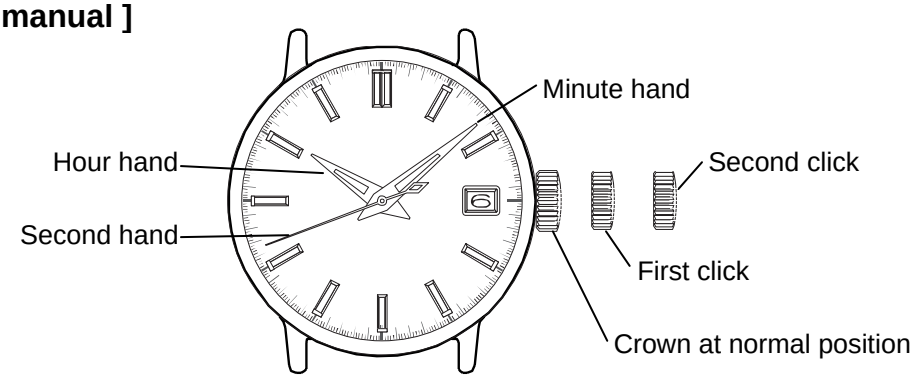
Static Accuracy : -15~+25 seconds per day

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.

[NE15 operation manual]



1.Time setting

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.

2.Date setting

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 10:00 P.M. and 1:00 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.
Wind turning the ratchet wheel screw 8 times. It will start to move naturally after shaking slightly.
b) To wind up with winding machine.
Full wind up conditions
・Rotary speed : 30 rpm
・Operating time : 60 minutes