TIME MODULE

02062022

TECHNICAL GUIDE

&

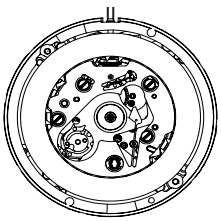
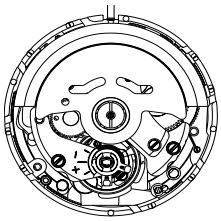
PARTS CATALOGUE

Cal.NH3 Series
(NH34A/35A/36A/37A/38A/39A)

AUTOMATIC MECHANICAL

SPECIFICATION

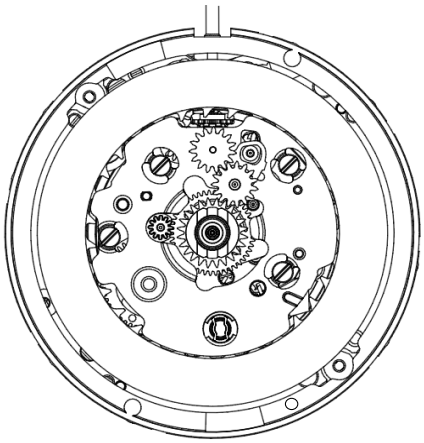
Version-03
Cal.NH3 Series
（NH34A/35A/36A/37A/38A/39A）

Item / Cal. No.	NH35A
Movement	  ***Refer to page 2 for other Cal. No. specifications.**

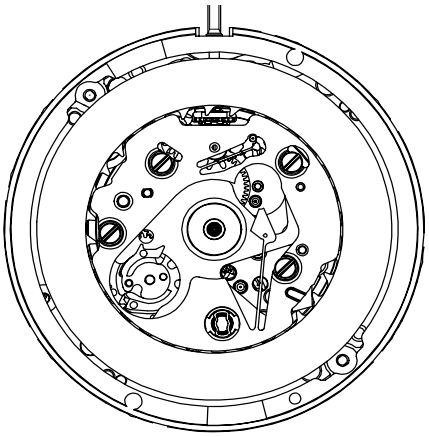
Movement size	Outside diameter	Φ27.40 mm
	Casing diameter	Φ29.36 mm (with dial holding spacer)
	Total height	5.32 mm

Cal. No.		NH34A	NH35A	NH36A	NH37A	NH38A	NH39A
Time indication	3 Hands (hour, minute, second)	○	○	○	○	○	○
	Date calendar	○	○	○	○	-	-
	Day calendar	-	-	○	-	-	-
	24 hour hand	○	-	-	○	-	○
Basic function	Manual winding	○	○	○	○	○	○
	Automatic winding with ball bearing	○	○	○	○	○	○
	Stop-second device	○	○	○	○	○	○
	Quick date correction	○	○	-	○	-	-
	Quick day-date correction	-	-	○	-	-	-
	Second time zone setting	○	-	-	-	-	-
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 of 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		<< Movements >> ・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					
Crown position	Normal position	Counterclockwise	Free	Free	Free	Free	Free	Free
		Clockwise	Manual winding	Manual winding	Manual winding	Manual winding	Manual winding	Manual winding
	First click	Counterclockwise	Date setting	Date setting	Date setting	Date setting	Time setting	Time setting
		Clockwise	Second time zone setting	Free	Day setting	Free		
	Second click		Time setting	Time setting	Time setting	Time setting	-	-

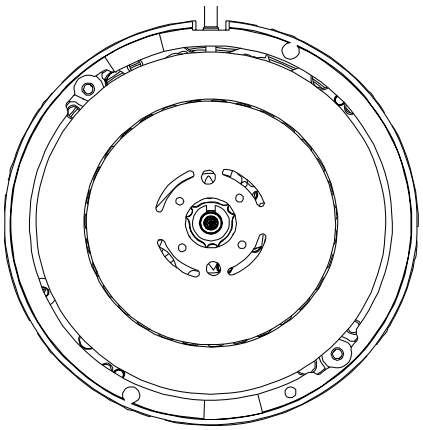
NH34A



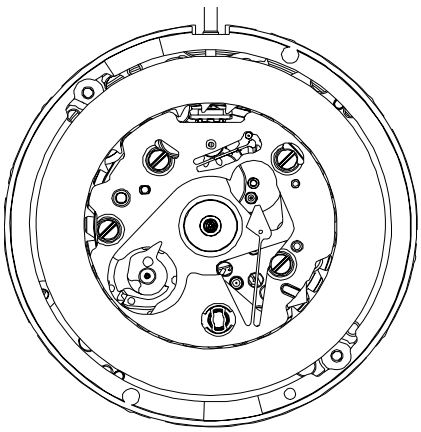
NH35A



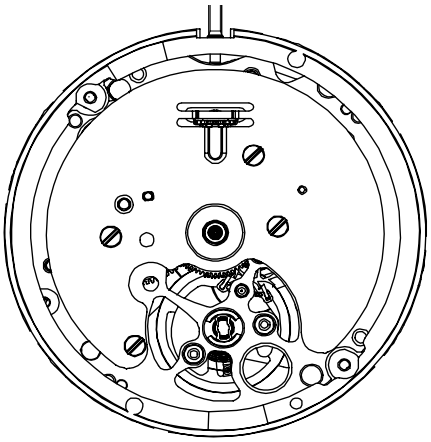
NH36A



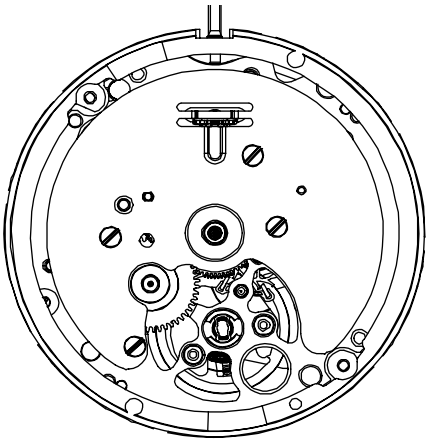
NH37A



NH38A

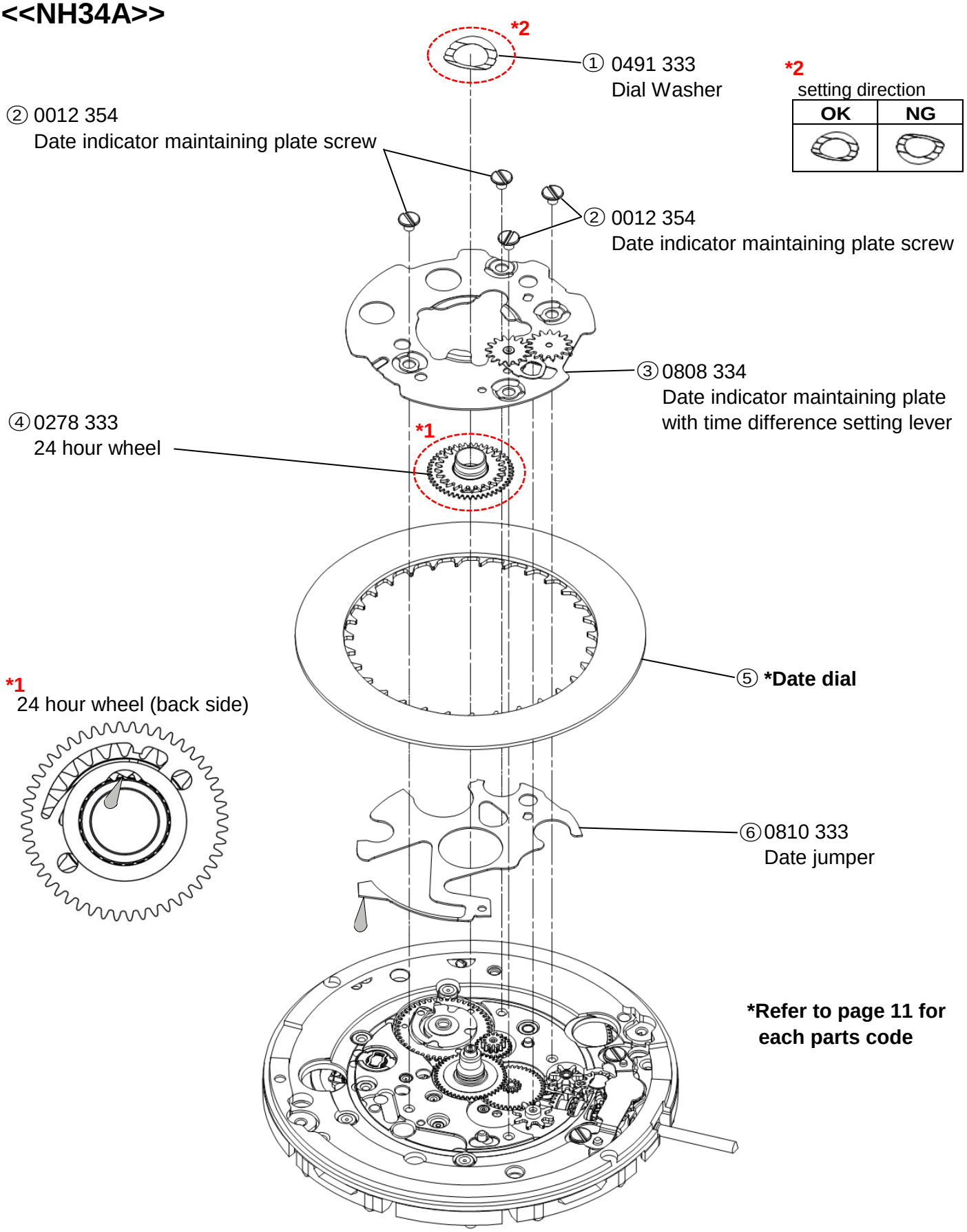


NH39A



Disassembling procedures Figs. ① → ㊽ Reassembling procedures Figs. ㊽ → ①	**Type of oil** Moebius 9010 A9a (S-6) A9a (S-4) **Oil quantity mark** Normal quantity Sufficient quantity

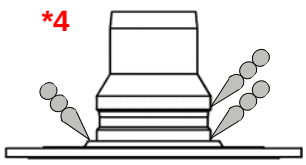
<<NH34A>>



*Refer to page 11 for each parts code

Disassembling procedures Figs. ① → 58 Reassembling procedures Figs. 58 → ①	**Type of oil** Moebius 9010 A9a (S-4) A9a (S-6) **Oil quantity mark** Normal quantity Sufficient quantity

<<NH34A>>



⑦ 0962 025
Day-date corrector setting transmission wheel (E)

⑧ 0012 485
Guard for day-date corrector setting transmission wheel screw

⑨ 0836 183
Guard for day-date corrector setting transmission wheel

⑩ 0962 185
Day-date corrector setting transmission wheel (C)

⑪ 0962 023
Day-date corrector setting transmission wheel (B)

⑫ 0737 333
Date corrector wheel

⑬ 0273 333
Hour wheel

⑭ 0261 190
Minute wheel and pinion

⑮ 0817 333
Intermediate date driving wheel and pinion

⑯ 0802 333
Date indicator driving wheel

⑰ 1225 333
Cannon pinion

⑱ 4408 172
Dial holding spacer

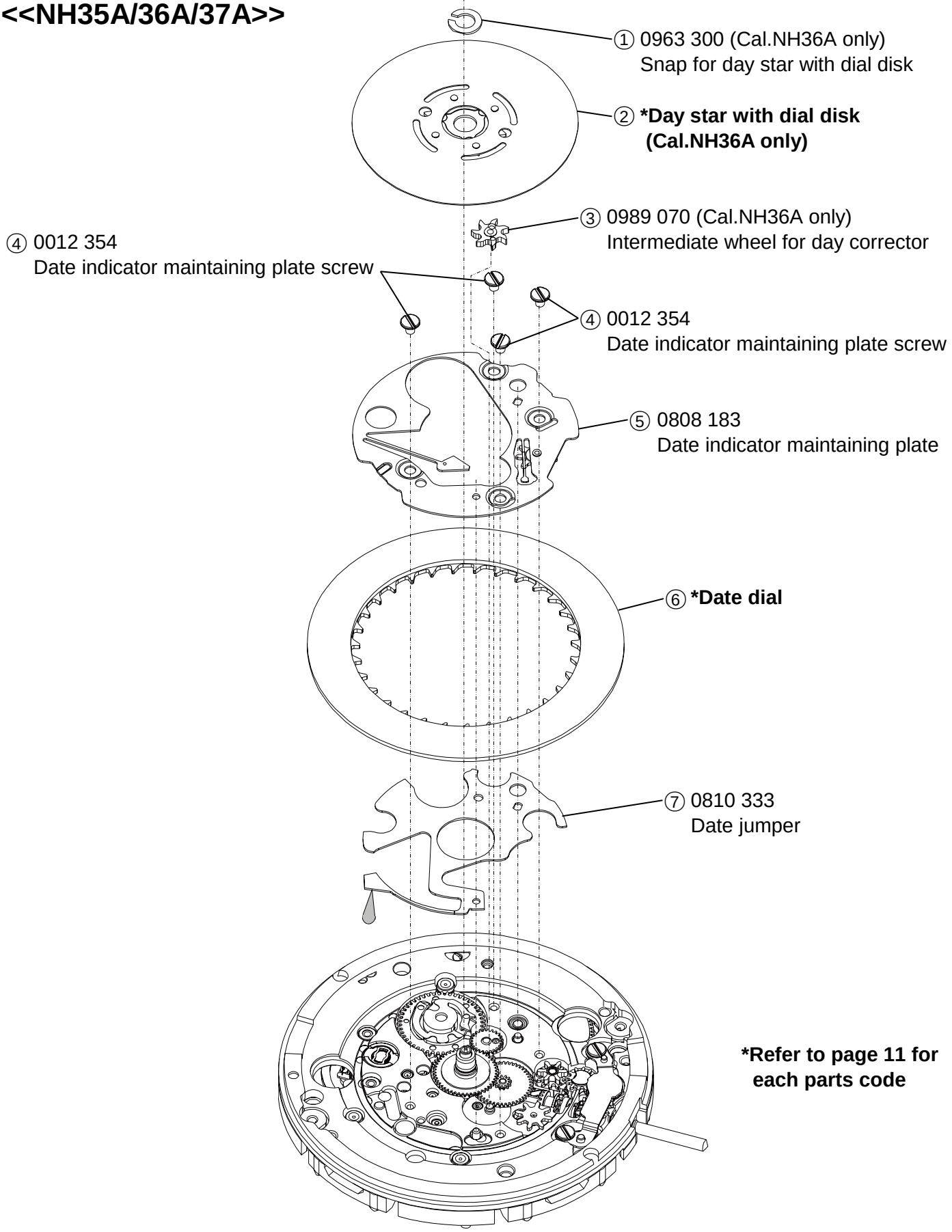
*1 ⑲ Lower shock absorbing spring

⑳ Lower shock absorbing cap jewel

㉑ Lower hole jewel frame for shock-absorber

Disassembling procedures Figs. ① → ㊽ Reassembling procedures Figs. ㊽ → ①	**Type of oil** Moebius 9010 A9a (S-6) A9a (S-4)
	Oil quantity mark Normal quantity Sufficient quantity

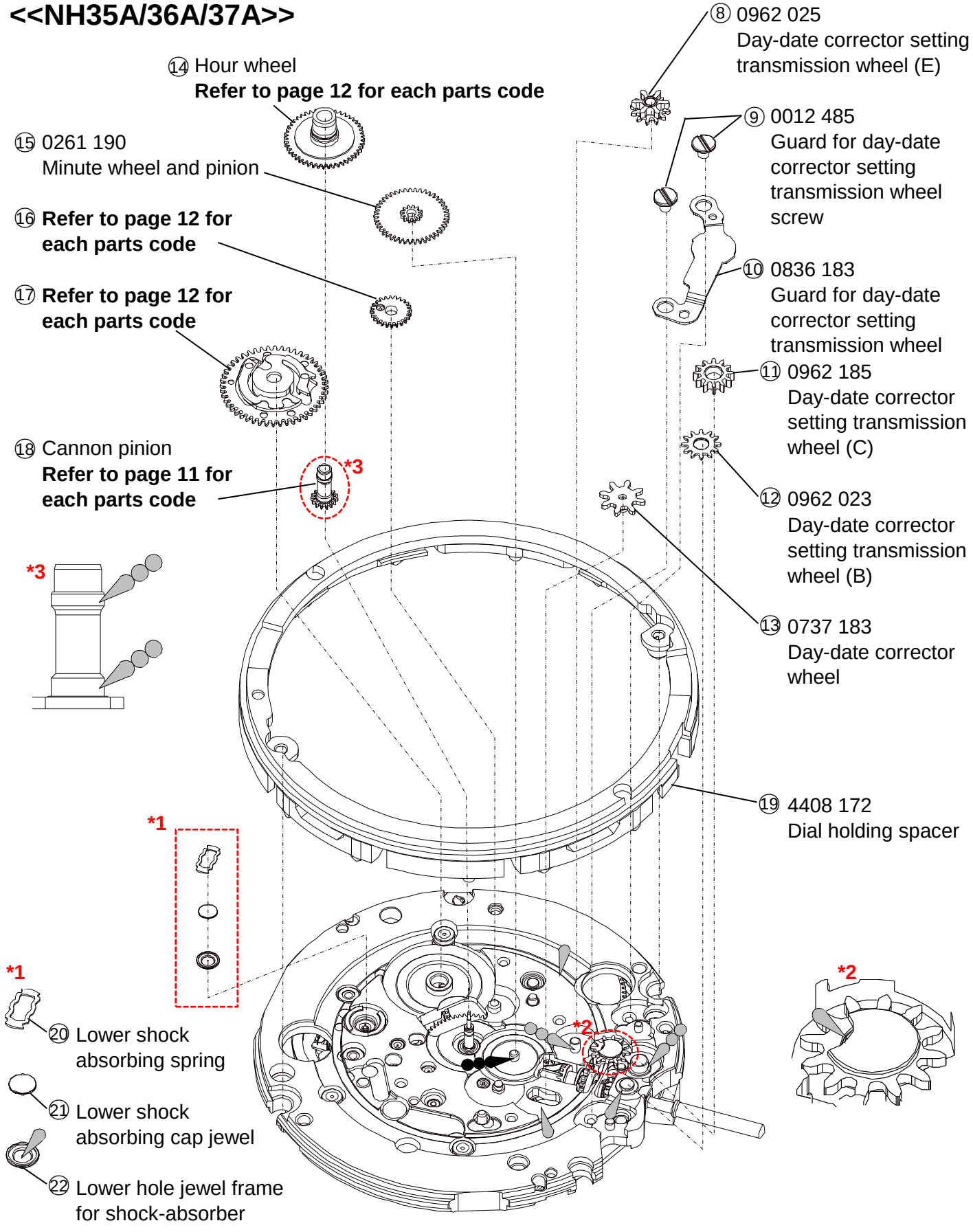
<<NH35A/36A/37A>>



*Refer to page 11 for each parts code

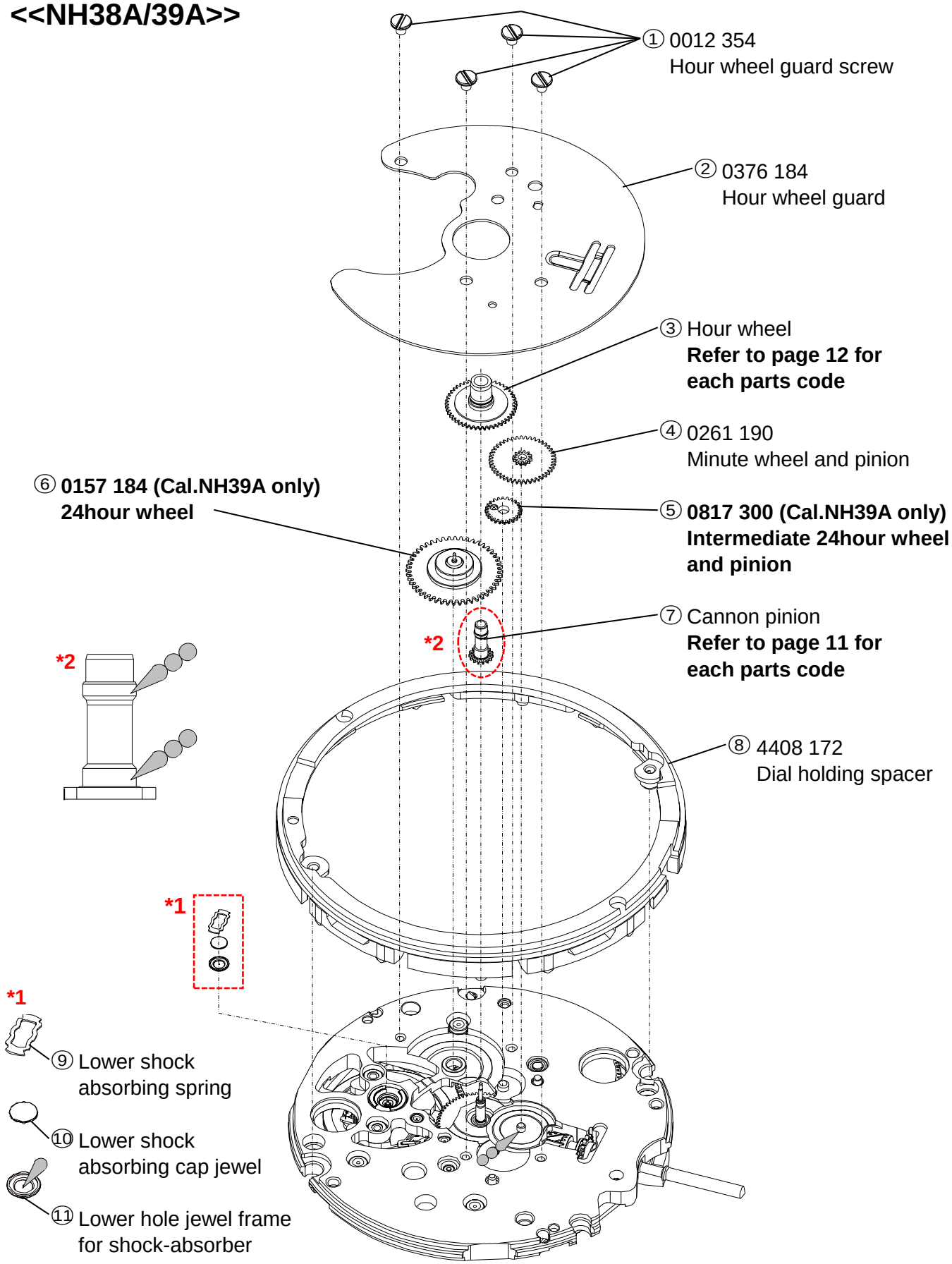
Disassembling procedures Figs. ① → ㊽ Reassembling procedures Figs. ㊽ → ①	**Type of oil** Moebius 9010 / A9a (S-4) / A9a (S-6) **Oil quantity mark** Normal quantity / Sufficient quantity

<<NH35A/36A/37A>>

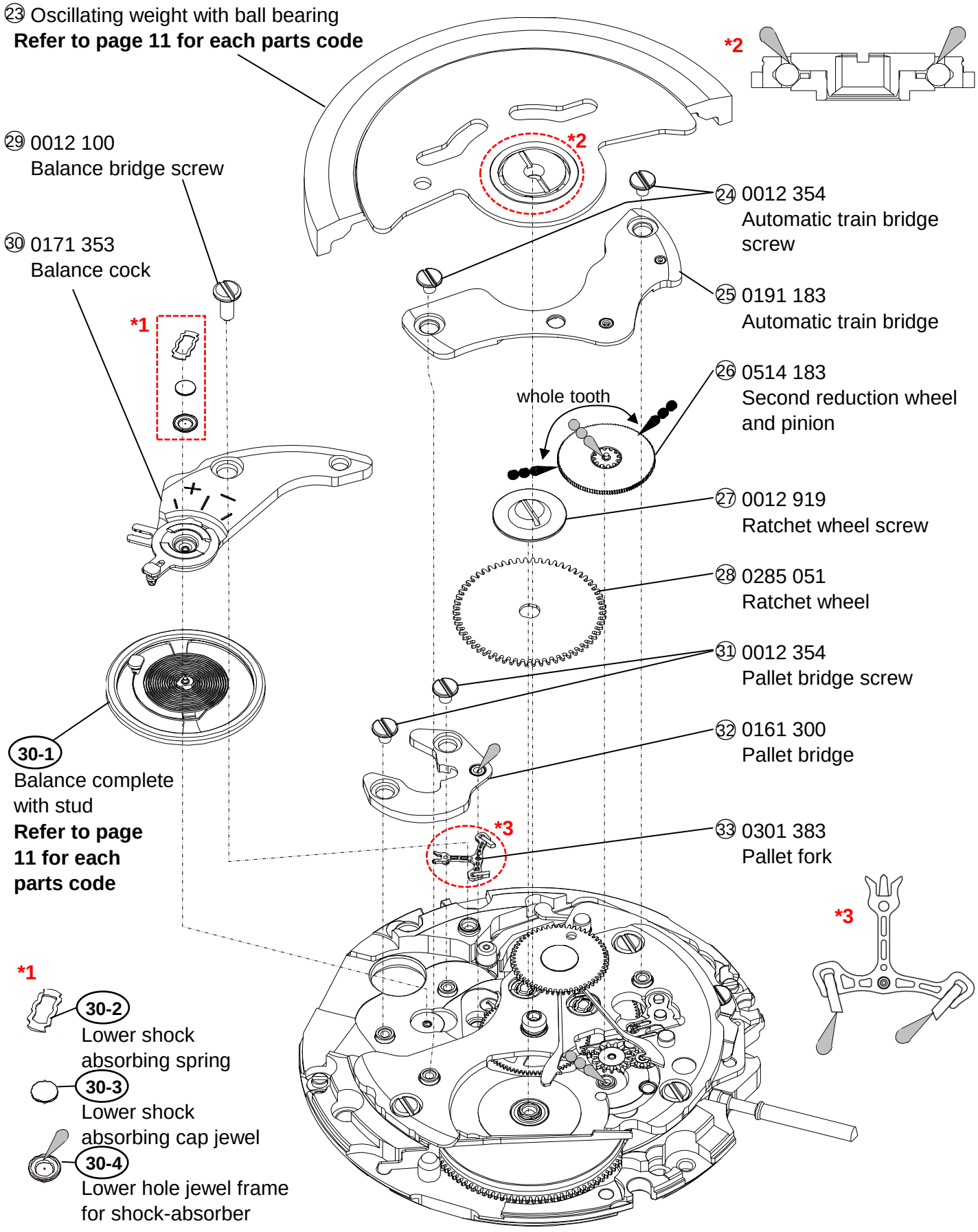


Disassembling procedures Figs. ① → 58 Reassembling procedures Figs. 58 → ①	**Type of oil** Moebius 9010 A9a (S-6) A9a (S-4) **Oil quantity mark** Normal quantity Sufficient quantity

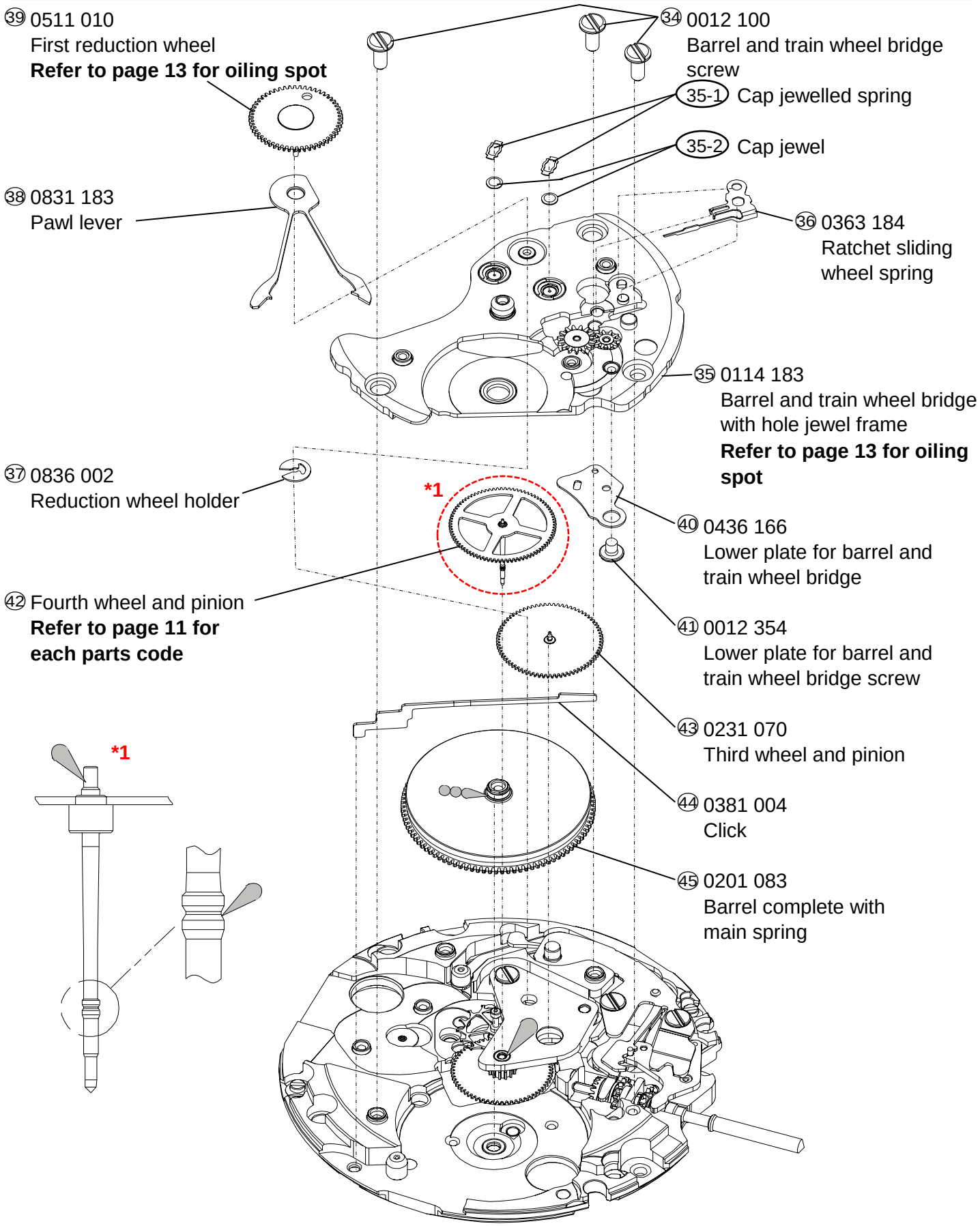
<<NH38A/39A>>



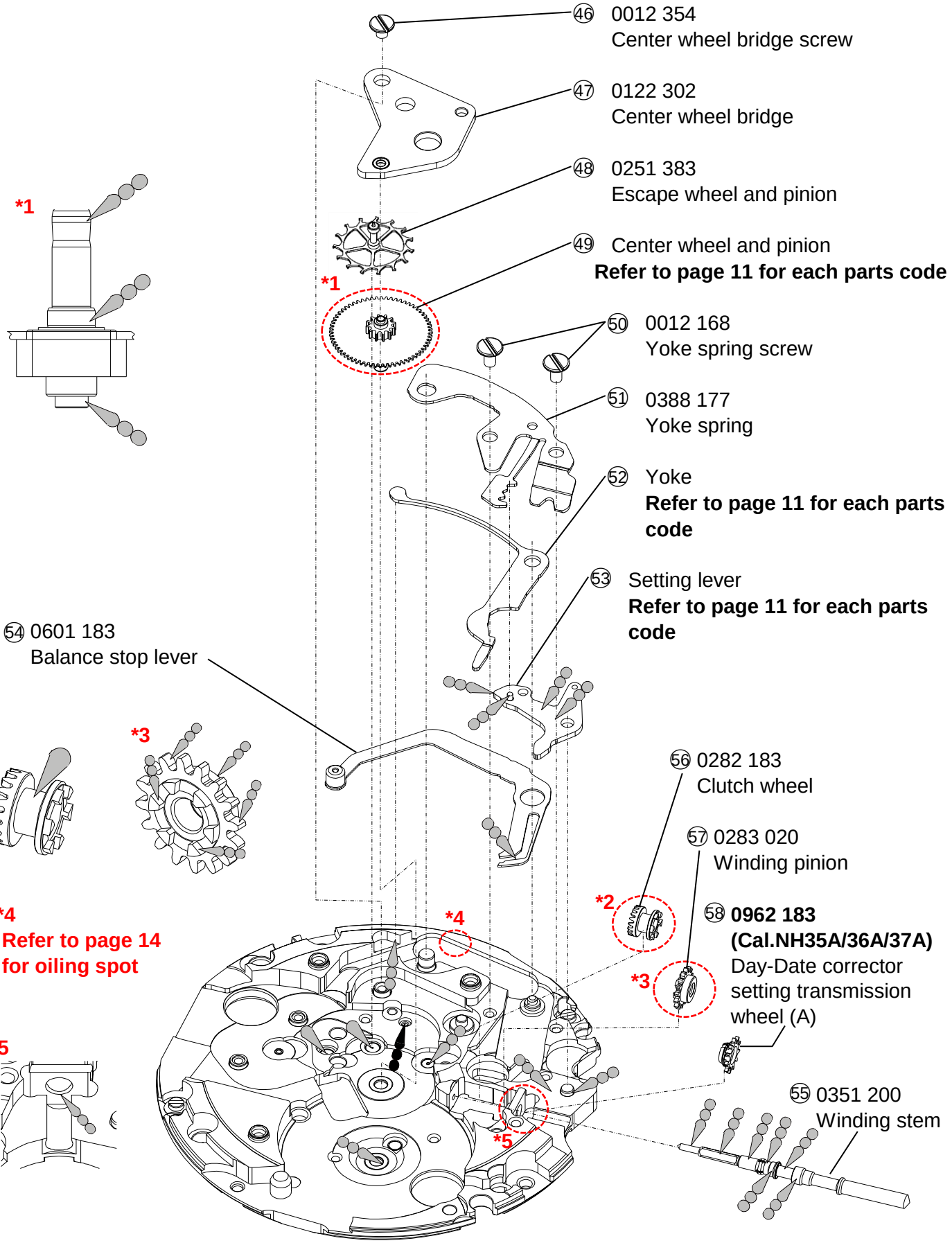
Disassembling procedures Figs. ① → 58 Reassembling procedures Figs. 58 → ①	**Type of oil** Moebius 9010 A9a (S-6) A9a (S-4) **Oil quantity mark** Normal quantity Sufficient quantity



Disassembling procedures Figs. ① → 58 Reassembling procedures Figs. 58 → ①	**Type of oil** Moebius 9010 — A9a (S-6) A9a (S-4) **Oil quantity mark** Normal quantity — Sufficient quantity



Disassembling procedures Figs. ① → ㊽ Reassembling procedures Figs. ㊽ → ①	**Type of oil** Moebius 9010 — A9a (S-6) A9a (S-4) **Oil quantity mark** Normal quantity — Sufficient quantity



② **Day star with dial disk (Cal.NH36A only : Page 5)**

Parts code	Position of crown	Position of day frame	Color of letters	Color of background	Language
0160 495	3H	3H	MON～FRI : Black SAT : Blue SUN : Red	White	English & Spanish

Date dial

Page	No	Cal.	Parts code	Position of crown	Position of day frame	Color of letters	Color of background
3	⑤	NH34	0878 208	3H	3H	Black	White
5	⑥	NH35 NH37					
		NH36	0878 206	3H	3H	Black	White

⑱ **Cannon pinion (Page 6)**

Cal.	Parts code	Cal.	Parts code
NH35 NH36	0225 425	NH37	0225 426

⑦ **Cannon pinion (Page 7)**

Cal.	Parts code	Cal.	Parts code
NH38	0225 425	NH39	0225 426

㉓ **Oscillating weight with ball bearing (Page 8)**

Cal.	Parts code	Marking
NH34	1509 257	Japan mark
	1509 258	Malaysia mark
NH35	0509 467	Japan mark
	0509 468	Malaysia mark
NH36	0509 463	Japan mark
	0509 464	Malaysia mark

Cal.	Parts code	Marking
NH37	0509 470	Japan mark
	0509 471	Malaysia mark
NH38	0509 476	Japan mark
	0509 477	Malaysia mark
NH39	0509 473	Japan mark
	0509 474	Malaysia mark

㉚-① **Balance complete with stud (Page 8)**

Cal.	Parts code	Cal.	Parts code
NH34 NH35 NH36 NH37	0310 183	NH38 NH39	0310 184

㊷ **Fourth wheel and pinion (Page 9)**

Cal.	Parts code	Cal.	Parts code
NH35 NH36 NH38	0144 184	NH34 NH37 NH39	0144 185

㊾ **Center wheel and pinion (Page 10)**

Cal.	Parts code	Cal.	Parts code
NH35 NH36 NH38	0221 183	NH34 NH37 NH39	0221 185

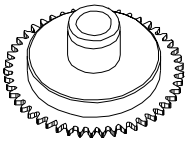
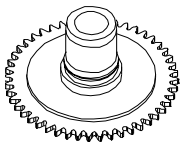
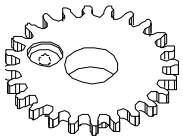
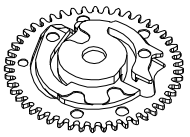
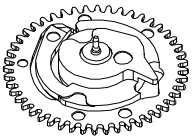
㊷ **Yoke (Page 10)**

Cal.	Parts code	Cal.	Parts code
NH34 NH35 NH36 NH37	0384 183	NH38 NH39	0384 184

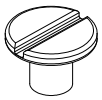
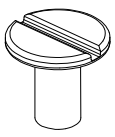
㊸ **Setting lever (Page 10)**

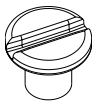
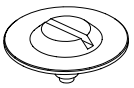
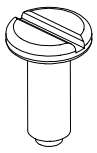
Cal.	Parts code	Cal.	Parts code
NH34 NH35 NH36 NH37	0383 185	NH38 NH39	0383 186

■ **Remarks : Different parts for each CAL.**

Page	No	Cal. NH35	NH36	NH37	NH38	NH39	Parts code	Parts name	Parts form
6	⑭	○	-	-	-	-	0273 182	Hour wheel 0273 182 & 0273 184 (Height difference)	
		-	○	-	-	-	0273 183		
		-	-	○	-	-	0273 184		
7	③	-	-	-	○	-	0273 183	Hour wheel 0273 183 & 0273 185 (Height difference)	
		-	-	-	-	○	0273 185		
6	⑯	○	○	-	-	-	0817 300	Intermediate date driving wheel and pinion	
		-	-	○	-	○		Intermediate 24hour wheel and pinion	
6	⑰	○	○	-	-	-	0802 183	Date indicator driving wheel	
		-	-	○	-	-	0157 182	24hour wheel	

■ **List of screw**

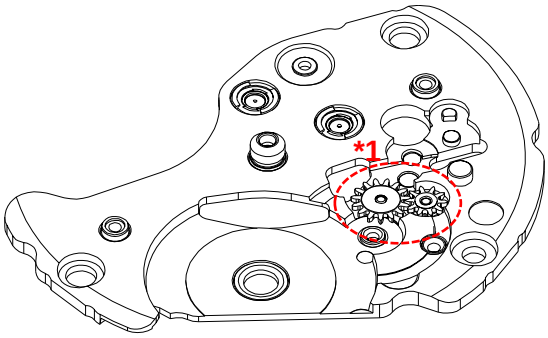
Page	No	Parts code	Parts name	Parts form
3	②	0012 354	Date indicator maintaining plate screw (x4)	
5	④			
7	①		Hour wheel guard screw (x4)	
8	㉔		Automatic train bridge screw (x2)	
	㉛		Pallet bridge screw (x2)	
9	㊶		Lower plate for barrel and train wheel bridge screw	
10	㊻		Center wheel bridge screw	
10	㊿	0012 168	Yoke spring screw (x2)	

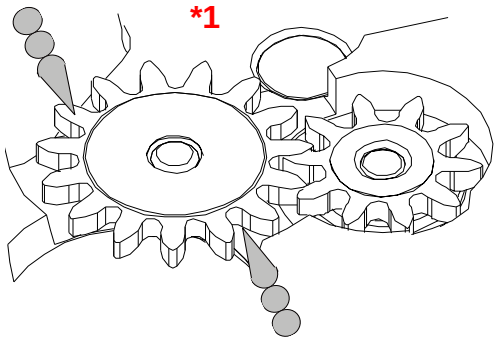
Page	No	Parts code	Parts name	Parts form
4	⑧	0012 485	Guard for day-date corrector setting transmission wheel screw (x2)	
6	⑨			
8	㉗	0012 919	Ratchet wheel screw	
8	㉙	0012 100	Balance bridge screw	
9	㉞		Barrel and train wheel bridge screw (x3)	

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

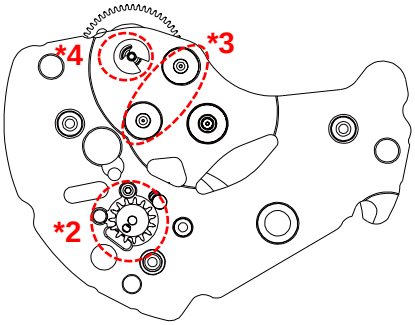
1.Oiling spot

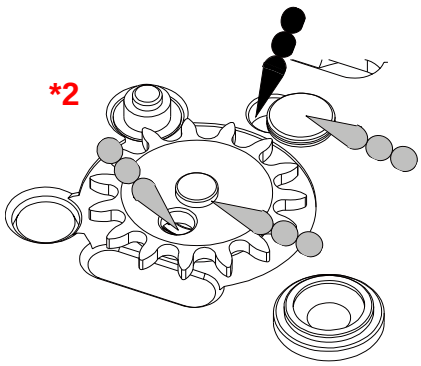
㉟ Barrel and train wheel bridge with hole jewel frame

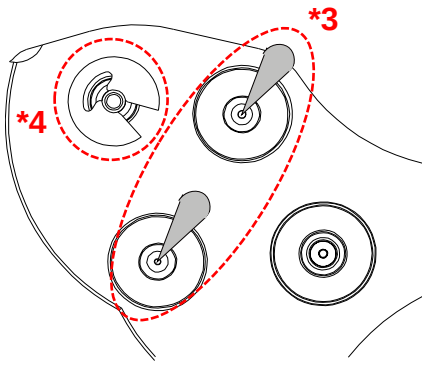




Barrel and train wheel bridge with hole jewel frame (back side)

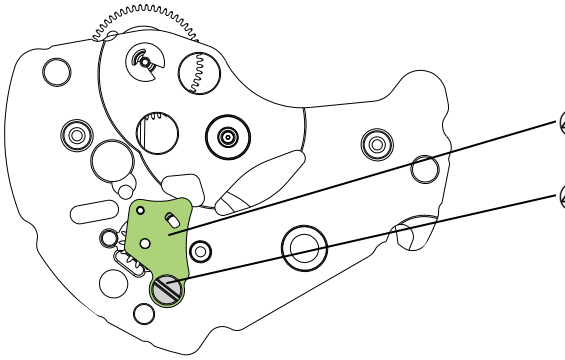






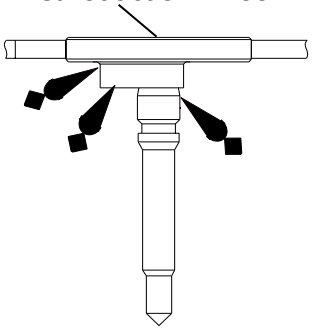
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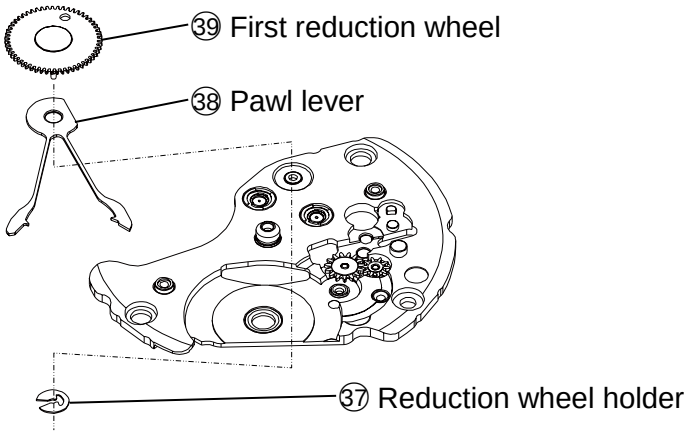
***2** After oiling, set lower plate for barrel and train wheel bridge & screw.

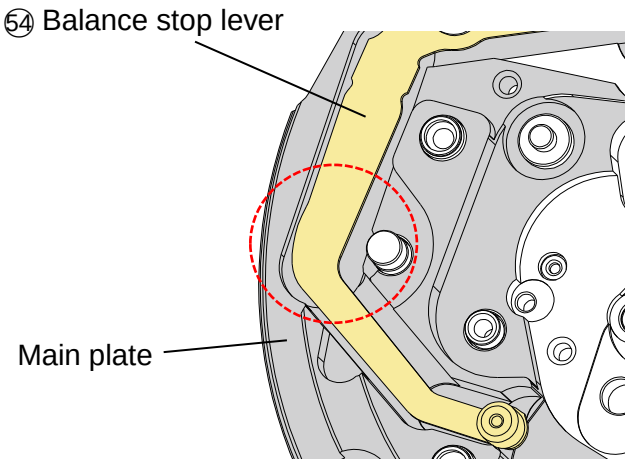


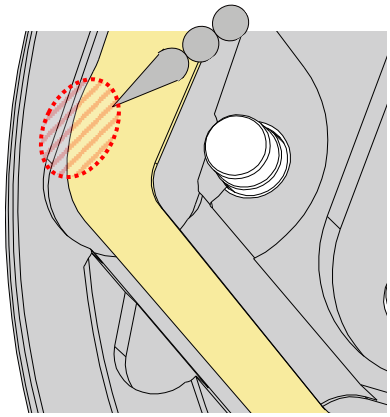
***4** After oiling, set <u>first reduction wheel</u> & <u>pawl lever</u> & <u>reduction wheel holder.</u>

㊴ First reduction wheel







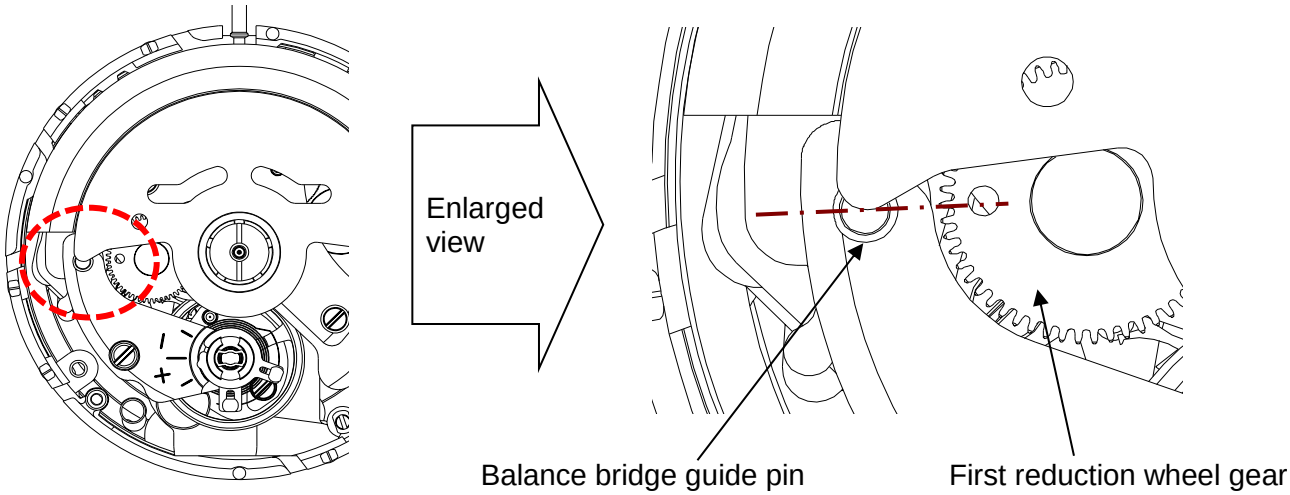


Contact part of main plate and balance stop lever

2.Setting position of oscillating weight

・Before assembling oscillating weight

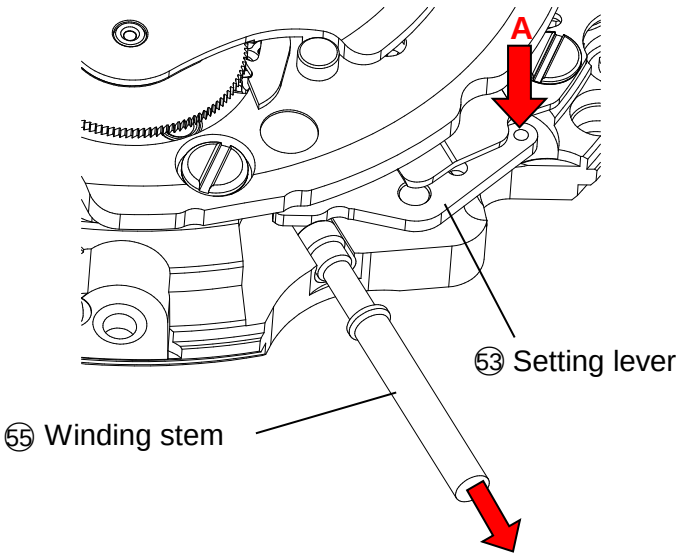
Match the center of the oscillating weight and winding stem. Set the hole of first reduction wheel gear on the imaginary line toward the balance bridge guide pin.



3.To remove the winding stem

1) Set the winding stem to normal position

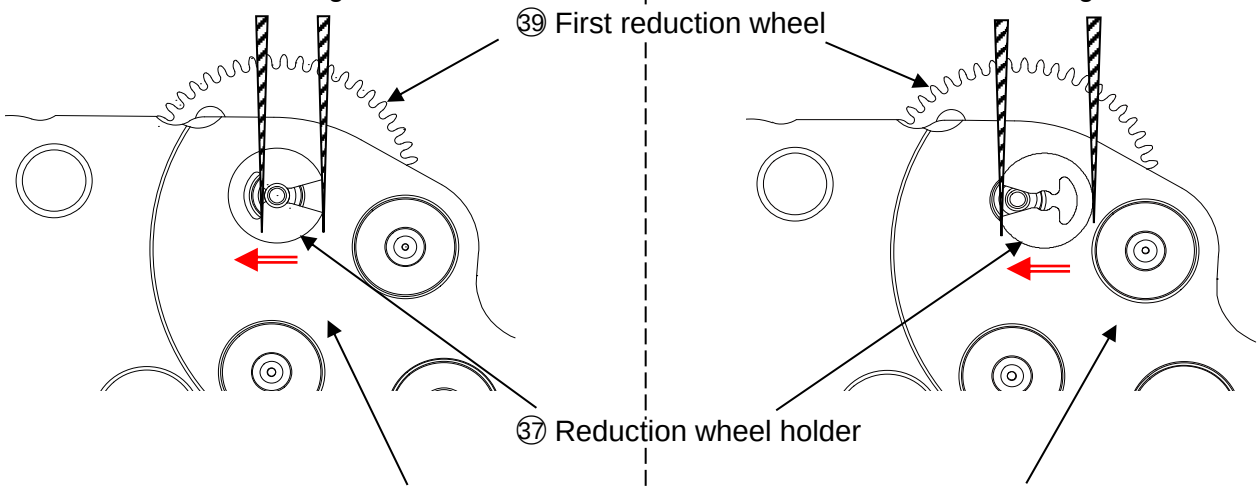
2) Pull out the winding stem, while pushing "**A**"



4.Disassembling / assembling of the First reduction wheel

<< Disassembling >>

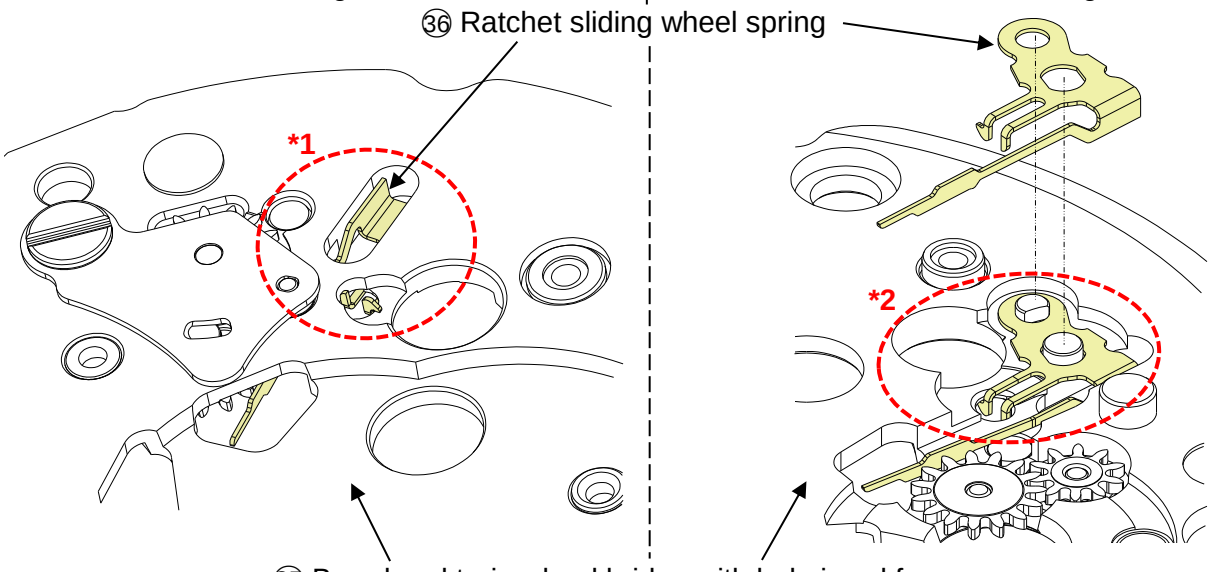
<< Assembling >>

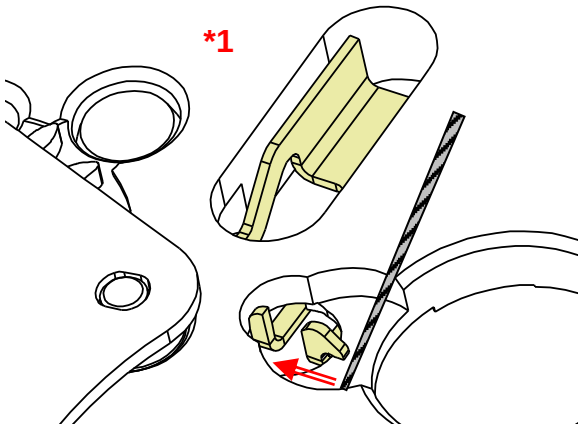


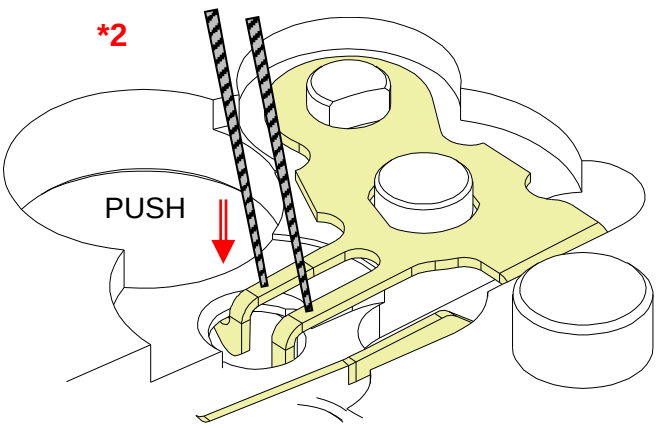
5.Disassembling / assembling of the Ratchet sliding wheel spring

<< Disassembling >>

<< Assembling >>



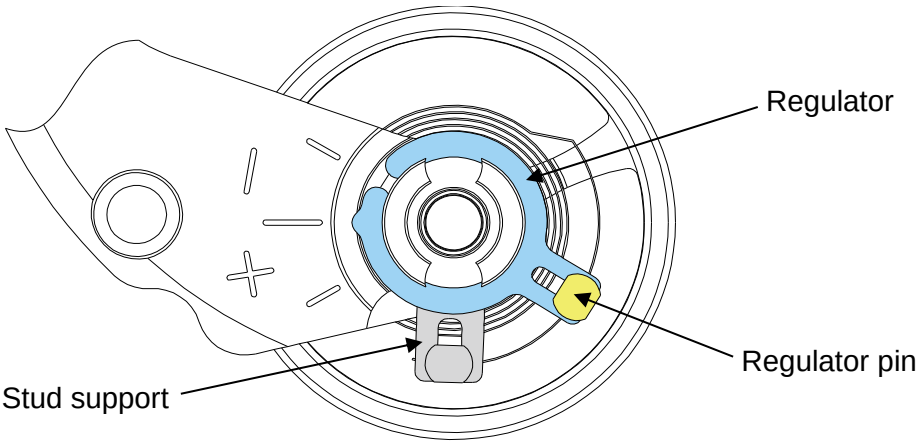




Remove the hook of the ratchet sliding wheel spring from barrel and train wheel bridge with hole jewel frame.

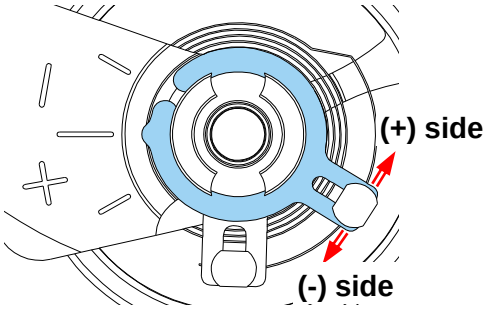
The hooks of ratchet sliding wheel spring are hung up on barrel and train wheel bridge with hole jewel frame.

6.Accuracy adjustment

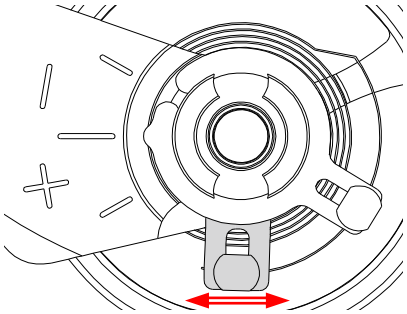


Note:

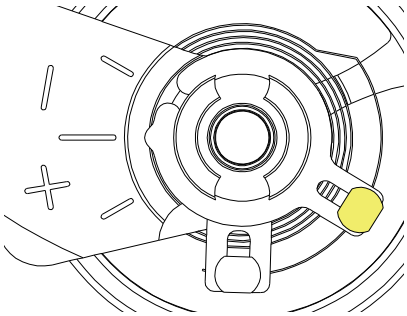
・Regulator (Time adjustment)



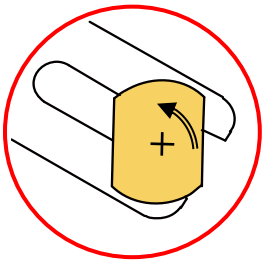
・Stud support (Beat error adjustment)



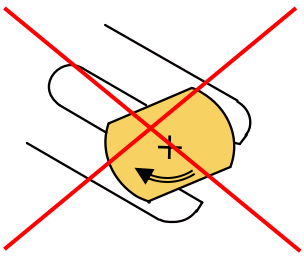
・Regulator pin (Gap adjustment of balance spring and regulator pin)



Anticlockwise rotation



No clockwise rotation



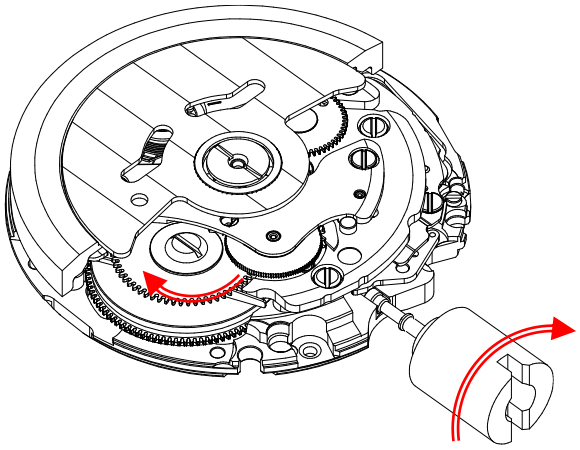
7.To wind up the mainspring

<<Movement>>

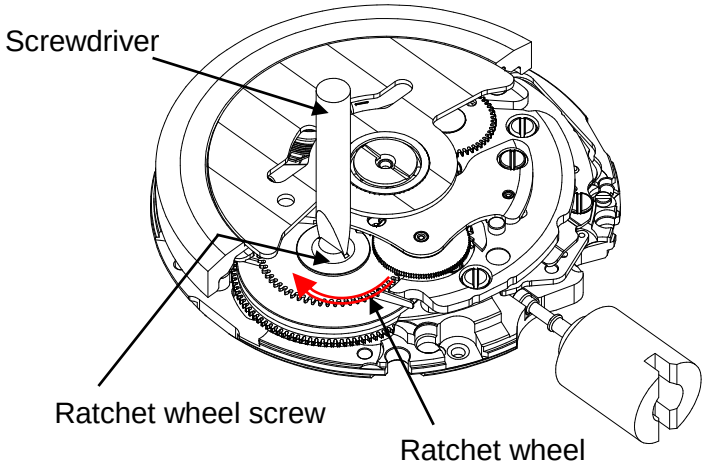
・Manual winding (Fully wound up by turning the crown minimum 55 times)

・Screwdriver winding (Fully wound up by turning the ratchet wheel screw 8 times)

[Manual winding]



[Screwdriver winding]



8.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.

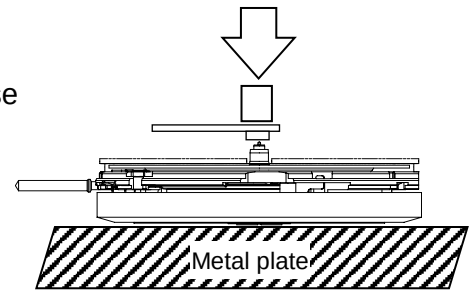
For hands attachment, please use a special equipment.

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

***Install the 24hour hand (Cal.NH37A/39A)**

Pull out the crown to the second click position and rotation it clockwise to install 24hour hand.

Static weighting



9.Accuracy measurement condition

Static Accuracy : - 20 ~ + 40 seconds per day

Measurement Conditions

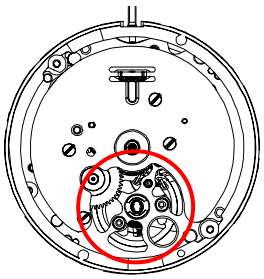
1) Measurement should be done within 10 ~ 60 minutes after fully wound up.
2) Lift angle : 53 deg
3) Measurement position : (1) Dial up (2) 9 o'clock up (3) 6 o'clock up
4) Minimum measurement Time : 20 seconds
5) Stabilizing Time :

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

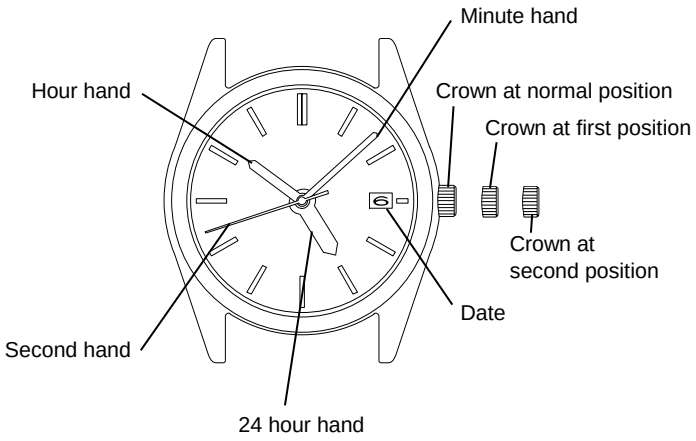
10.About the handling (Cal.NH38A/39A)

○ Part is processed as a mirror surface. It is damaged when touching with tweezers.

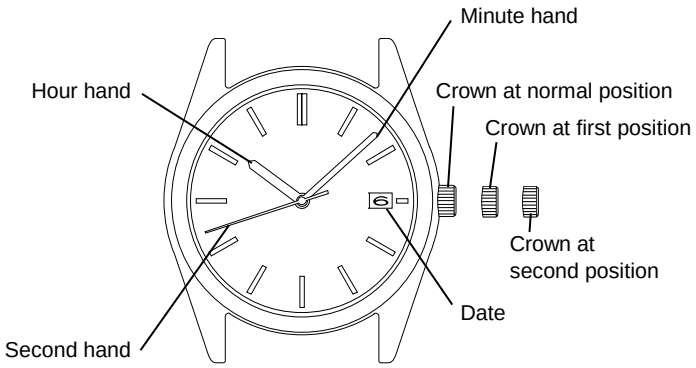
Please be careful about the handling.



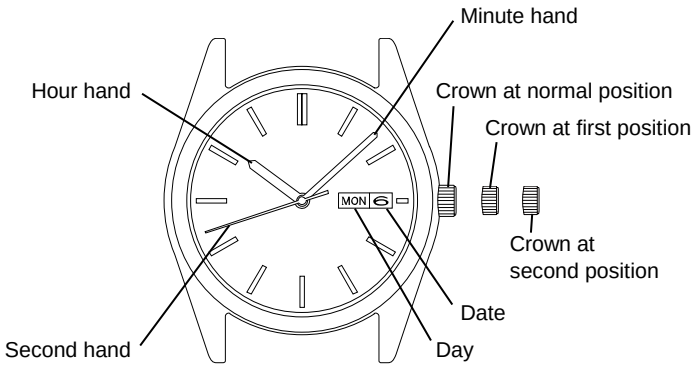
NH34A



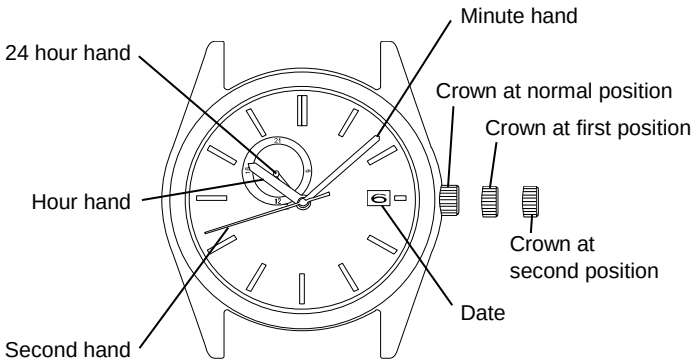
NH35A



NH36A



NH37A



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.

2.How to set the Date & Time difference

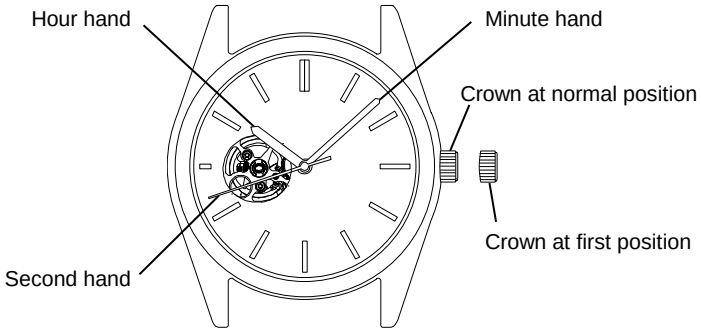
1) Pull out the crown to the first click position.
2) Turn the crown to left for date setting.
3) Turn the crown to right for day setting. (Cal.NH36A only)
   *Do not set the date between 9:00 P.M. and 4:00 A.M. as this will cause a malfunction.
4) Turn the crown to right for 24 hour hand setting. (Cal.NH34A only)
5) Push the crown back into the normal position.

3.To wind up the mainspring

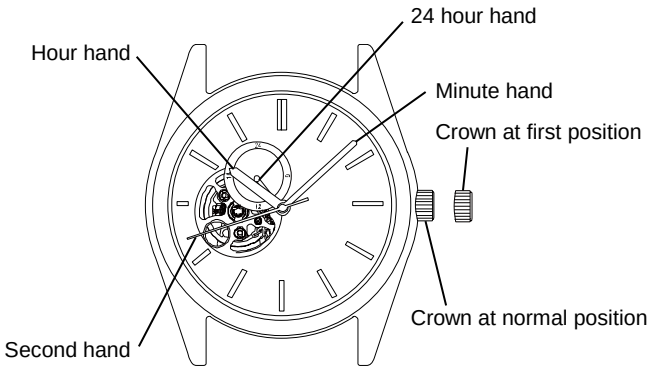
a) Manual winding (Rotate the crown clockwise at normal position)
   Fully wound up by turning the crown minimum 55 times. It will start to move naturally after shaking slightly.

b) To wind up with winding machine.
   Full wind up conditions (Reference information)
   ・Rotary speed : 30 rpm
   ・Operating time : 60 minutes

NH38A



NH39A



1.How to set the time

1) Pull out the crown to the first 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.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