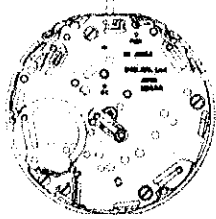



PARTS CATALOGUE/TECHNICAL GUIDE

Cal. N944A
Cal. N945A

[SPECIFICATIONS]

Cal. No.		N944A	N945A
Item			
Movement		The illustrations refer to Cal. N944A. (x 1.0)	
Movement size	Outside diameter	ø27.0 mm 26.0 mm between 3 o'clock and 9 o'clock sides	
	Casing diameter	ø26.0 mm	
	Height	3.62 mm	
Time indication		2 hands, date indicator (moves along the date numeral printed on the lower half of the dial) and mode indicator	2 hands, date indicator (turns a full circle) and mode indicator
		Stopwatch 1/10 second hand, 24-hour hand and dual time hand	
Driving system		Step motor, 2 pieces	
Additional mechanism		<ul style="list-style-type: none"> • Alarm (24-hour indication system) • Countdown timer (Up to 60 minutes) • Stopwatch (Up to 12 hours in 1/10 seconds) • Dual time (24-hour indication system) • Hands 0-reset adjustment function • Alarm test system 	
Loss/gain		Monthly rate at normal temperature range: less than 20 seconds	
Regulation system		Nil	
Measuring gate by quartz tester		Use 30- or 60-second gate.	
Battery		SEIKO SR927W, Maxell SR927W, SONY SR927W, EVEREADY 399 Battery life is approximately 2 years. Voltage: 1.55V	
Jewels		0 jewel	





PARTS CATALOGUE

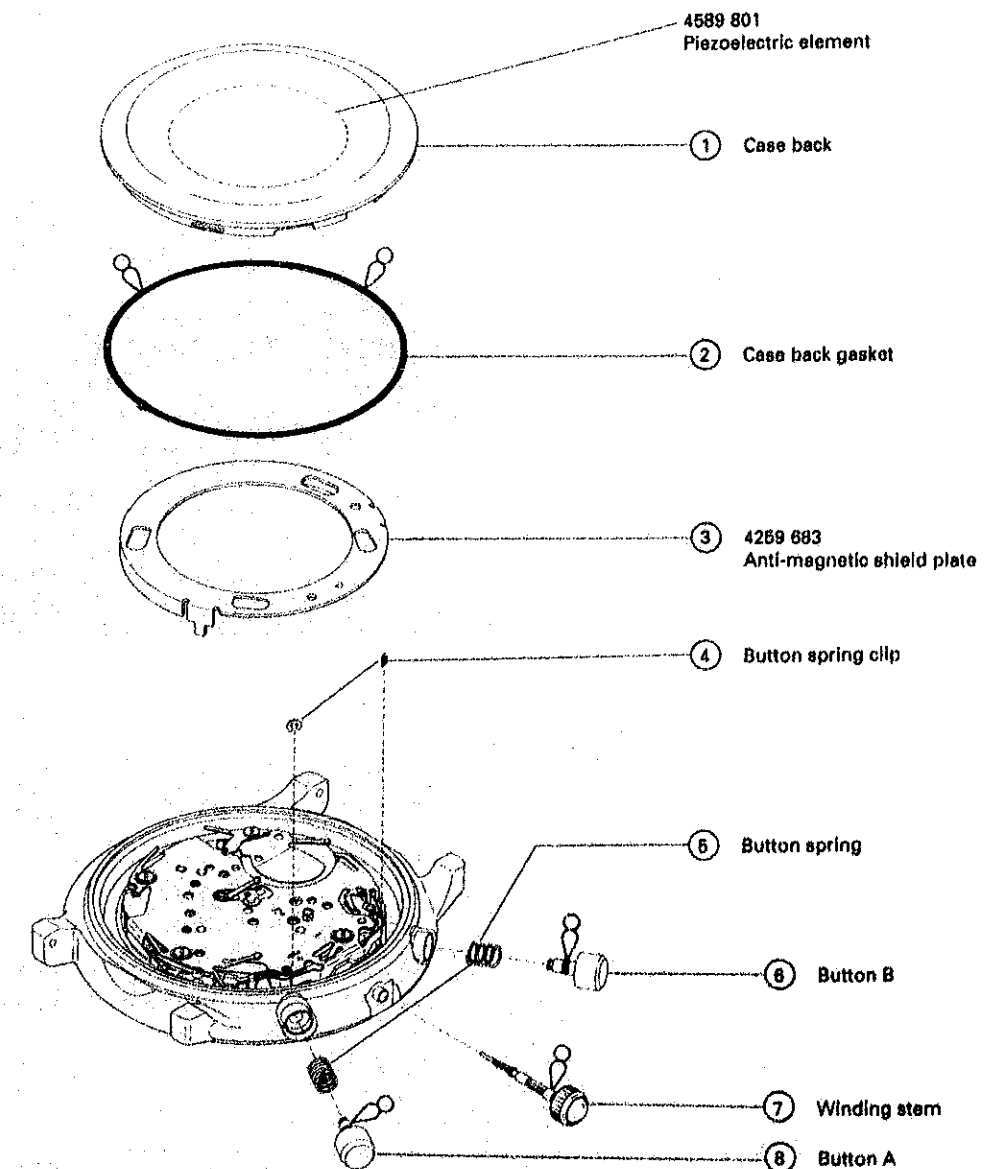
Cal. N944A, N945A

Disassembling procedure Figs. : ① → ⑥⑨

Reassembling procedure Figs. : ⑥⑨ → ①

Lubricating: Types of oil Oil quantity

 Moebius A  Normal quantity
 Silicone Oil 500,000 c.s.  Extremely small

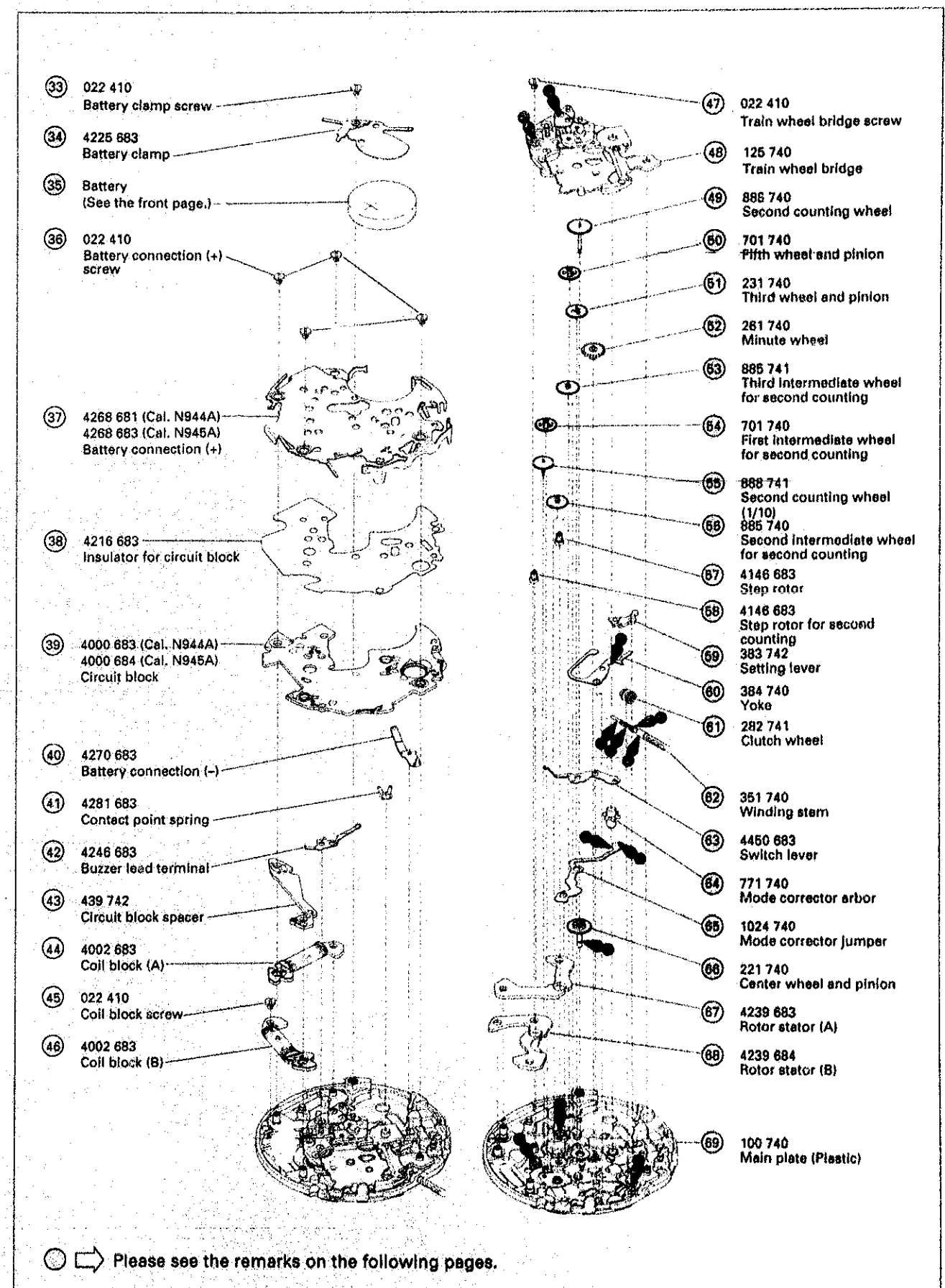
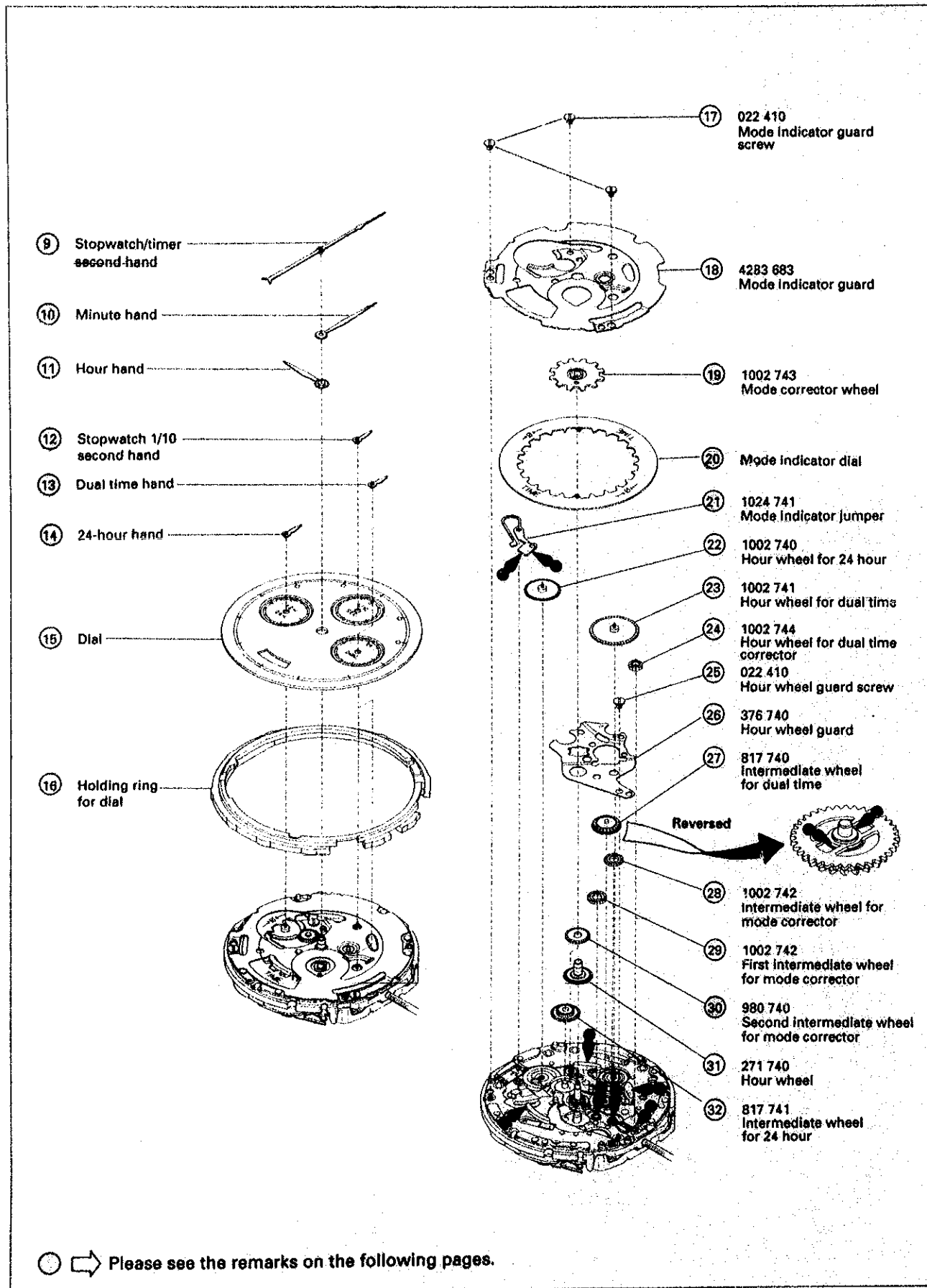


PARTS CATALOGUE

Cal. N944A, N945A

PARTS CATALOGUE

Cal. N944A, N945A

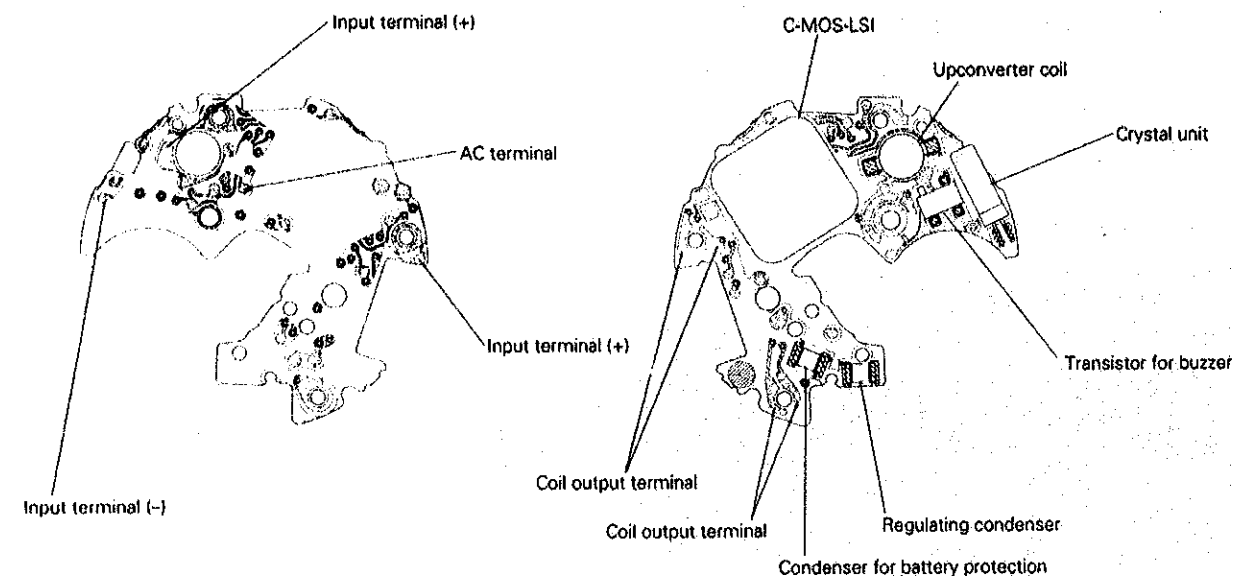


TECHNICAL GUIDE

Cal. N944A, N945A

- The explanation here is only for the particular points of Cal. N944A and N945A.
- For the repairing, checking and measuring procedures, refer to the "TECHNICAL GUIDE, GENERAL INSTRUCTIONS".

I. STRUCTURE OF THE CIRCUIT BLOCK



II. REMARKS ON DISASSEMBLING AND REASSEMBLING

- ⑨ Stopwatch/timer second hand
- ⑩ Minute hand
- ⑪ Hour hand
- ⑫ Stopwatch 1/10 second hand
- ⑬ Dual time hand
- ⑭ 24-hour hand

• How to install

- 1) Turn the crown to set the mode indicator to "TIME".
- 2) Pull out the crown to the second click.

TECHNICAL GUIDE

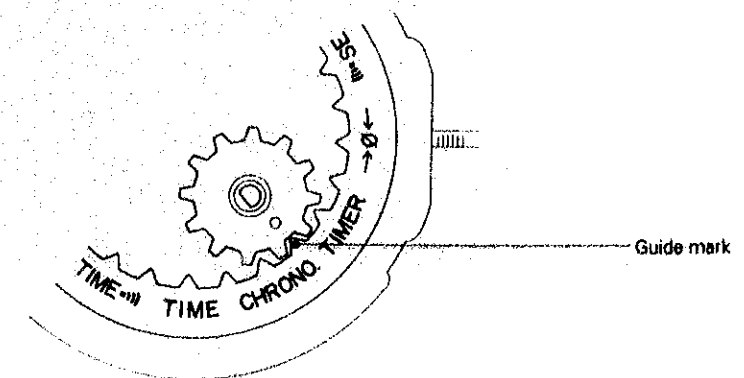
Cal. N944A, N945A

- 3) Install the hands below in the following order.
 1. 24-hour hand
 2. Dual time hand
 3. Hour hand
 4. Minute hand
 5. Stopwatch/timer second hand
- 4) Move the hour and minute hands away from the 12 o'clock position.
- 5) Push the crown back in to the first click.
- 6) Move the stopwatch/timer second hand away from the 12 o'clock position.
- 7) Push the crown back in to the normal position.
- 8) Reset the circuit. (See "③⑤ Battery" below.)
- 9) Install the stopwatch 1/10 second hand.

⑲ Mode corrector wheel

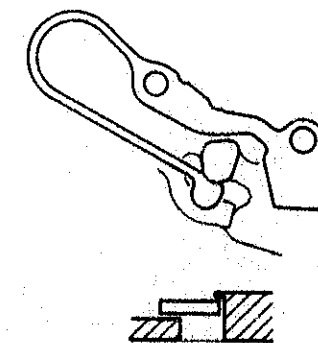
⑳ Mode indicator dial

Set the mode corrector wheel to the mode indicator dial so that the guide mark on the mode indicator dial and the hole on the mode corrector wheel align with each other. In doing so, make sure that "TIME" on the mode indicator dial is at the 6 o'clock position.



㉑ Mode indicator jumper

Securely set the tip of the mode indicator jumper to the main plate.

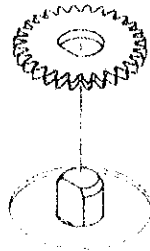


TECHNICAL GUIDE

Cal. N944A, N945A

30 Second intermediate wheel for mode corrector

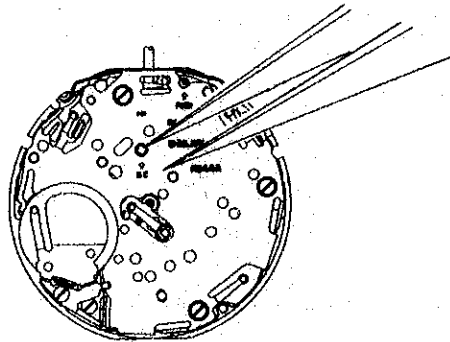
Set the second intermediate wheel for mode corrector to the mode corrector arbor so that the wheel fits in with the notched part of the mode corrector arbor.



34 Battery clamp

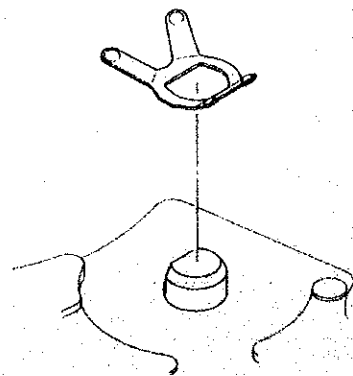
35 Battery

After installing the battery and tightening the battery clamp screw, be sure to short-circuit the AC terminal of the circuit block and the battery connection (+) with conductive tweezers to reset the circuit as shown in the illustration below.



41 Contact point spring

Set the contact point spring to the mode corrector arbor so that the spring fits in with the notched part of the mode corrector arbor.



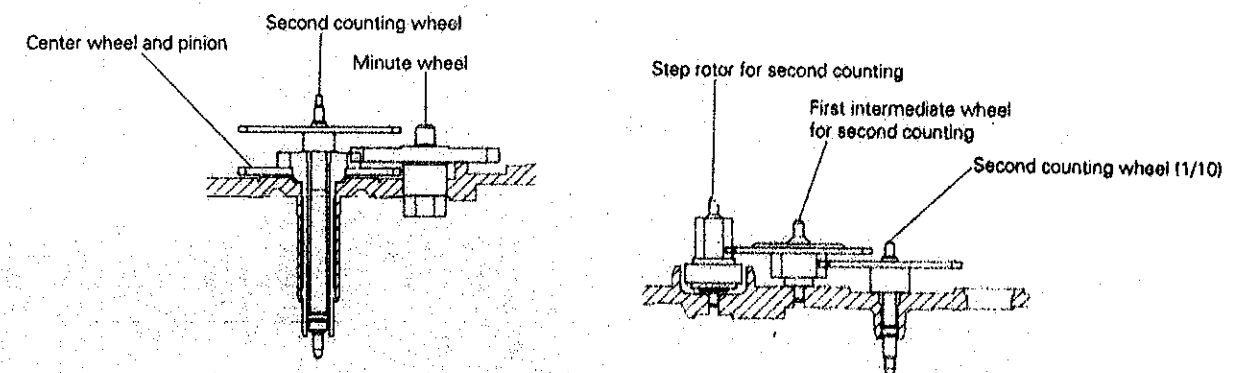
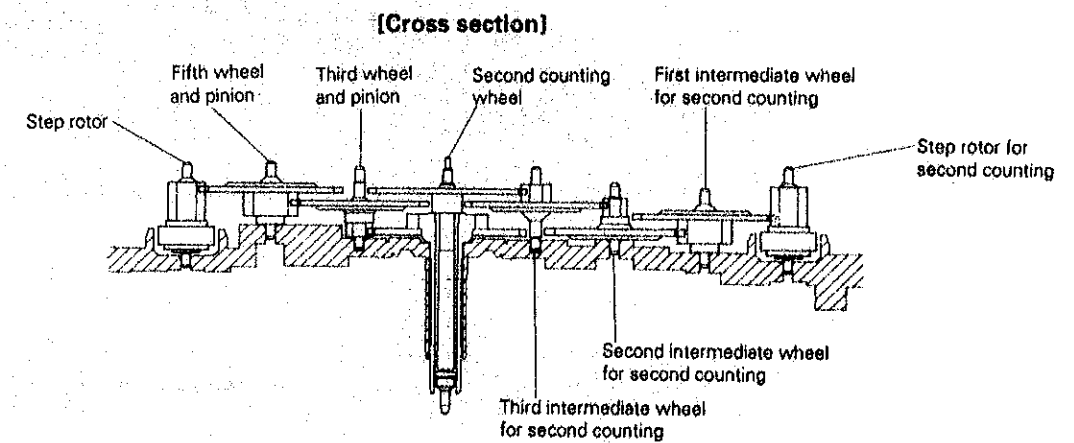
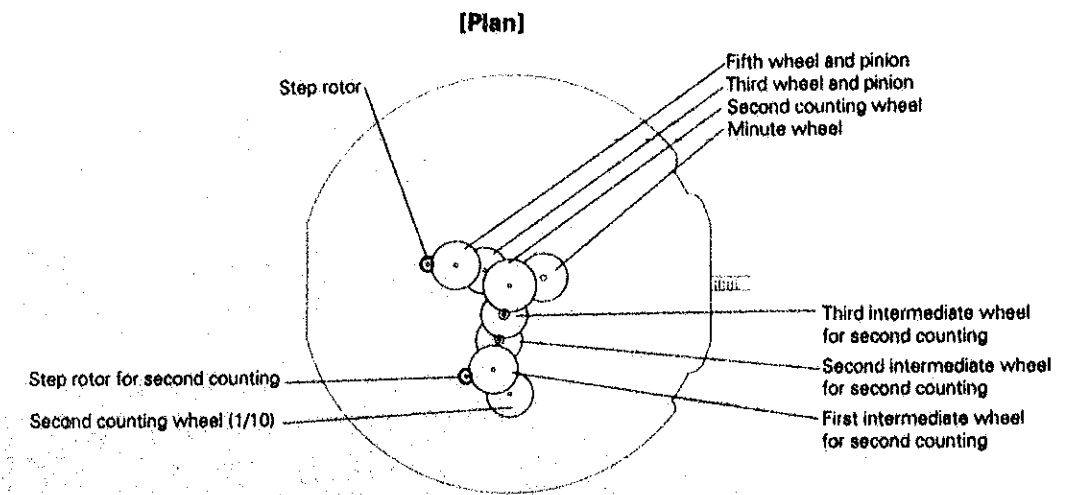
TECHNICAL GUIDE

Cal. N944A, N945A

49 Second counting wheel ~ 58 Step rotor for second counting

66 Center wheel and pinion


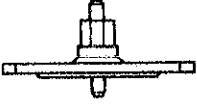
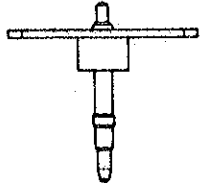
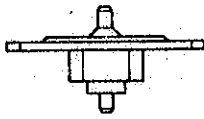
• Setting position

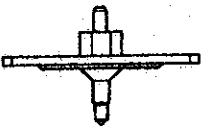
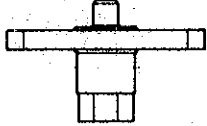
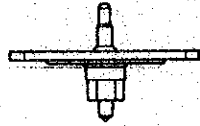
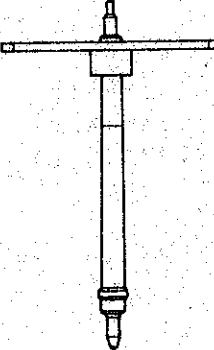


TECHNICAL GUIDE

Cal. N944A, N945A

• Distinction of wheels

Name	Step rotor Step rotor for second counting	Second intermediate wheel for second counting	Second counting wheel (1/10 second)	First intermediate wheel for second counting Fifth wheel and pinion
Shape				
	4146 683	885 740	888 741	701 740
Distinctive feature		White color With an identifica- tion mark	Material: Metal	White color With an identifica- tion mark

Name	Third intermediate wheel for second counting	Minute wheel	Third wheel and pinion	Second counting wheel
Shape				
	885 741	261 740	231 740	888 740
Distinctive feature	White color With no identifi- cation mark	White color	Natural color With an identifi- cation mark	Material: Metal

TECHNICAL GUIDE

Cal. N944A, N945A

59 Setting lever

60 Yoke

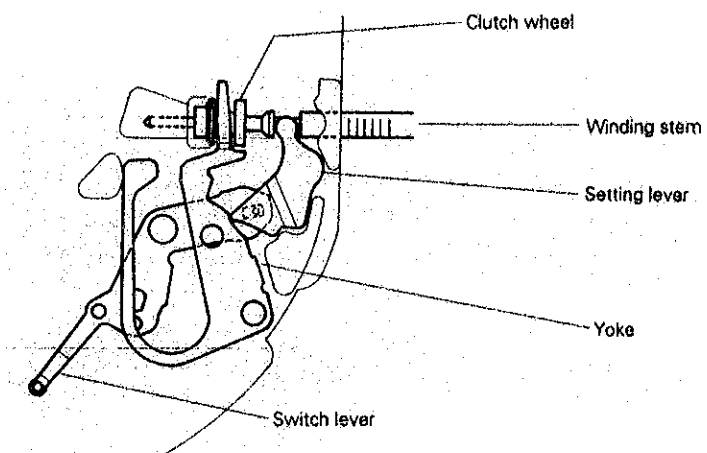
61 Clutch wheel

62 Winding stem

63 Switch lever

• Setting position

Set the protrusion of the setting lever into the hole of the switch lever.

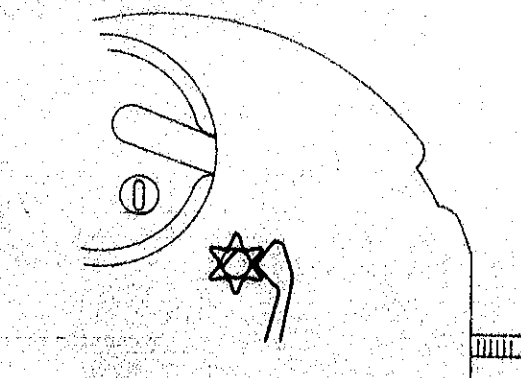


64 Mode corrector arbor

65 Mode corrector jumper

• How to install

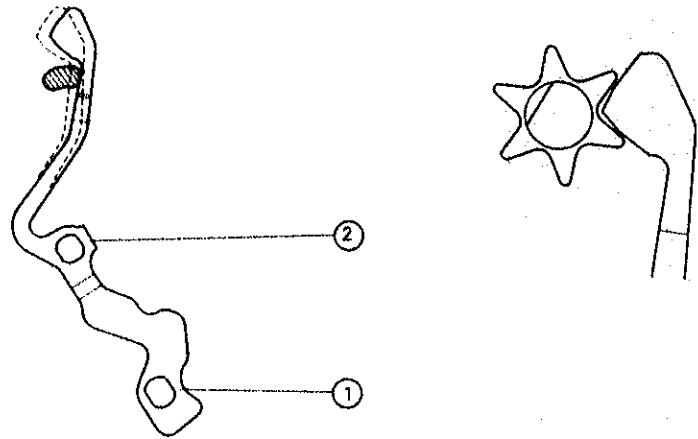
• Set the mode corrector arbor to the main plate so that the notched part of the mode corrector arbor faces the battery portion of the main plate.



TECHNICAL GUIDE

Cal. N944A, N945A

- Set the holes ① and ② of the mode corrector jumper to the corresponding pins in the above order, then set the tip of the mode corrector jumper to the gear portion of the mode corrector arbor.



- **Lubricating**

Lubricate the gear portion of the mode corrector arbor.

III. VALUE CHECKING

- **Coil block resistance**

1.2K Ω ~ 1.8K Ω

- **Upconverter coil resistance**

110 Ω ~ 140 Ω

- **Current consumption**

For the whole of the movement:	less than 1.2 μ A
For the circuit block alone :	less than 0.9 μ A

* When measuring the current consumption for the whole of the movement, make sure that the mode indicator is set at "TIME".
After the power is supplied from the external power source, be sure to reset the circuit while keeping the probes applied.