


PARTS CATALOGUE/TECHNICAL GUIDE

Cal. 8M37A

[SPECIFICATIONS]

Item		Cal. No.	8M37A
Movement			 <p>(x 1.0)</p>
Movement size	Outside diameter		24.0mm between 6 o'clock and 12 o'clock sides 24.0mm between 3 o'clock and 9 o'clock sides
	Casing diameter		φ25.5mm
	Height		2.6mm
Time indication			2 hands and mode indicator
Driving system			Step motor (Fixed-width pulse system, 2 pcs.)
Additional mechanism			<ul style="list-style-type: none"> • Electronic circuit reset switch • Hands 0-reset adjustment function • 5-minute preset countdown timer • 10-minute preset countdown timer • 15-minute preset countdown timer • Adjustable countdown timer (Up to 30 minutes in minutes)
Loss/gain			Monthly rate at normal temperature range: less than 15 seconds
Regulation system			Trimmer condenser
Measuring gate by quartz tester			Use 60-second gate.
Battery			SEIKO SR920W, Maxell SR920W, SONY SR920W Battery life is approximately 2.5 years. Voltage: 1.55V
Jewels			4 jewels

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Disassembling procedures Figs. : ① → ③⑦

Reassembling procedures Figs. : ③⑦ → ①

Lubricating: Types of oil

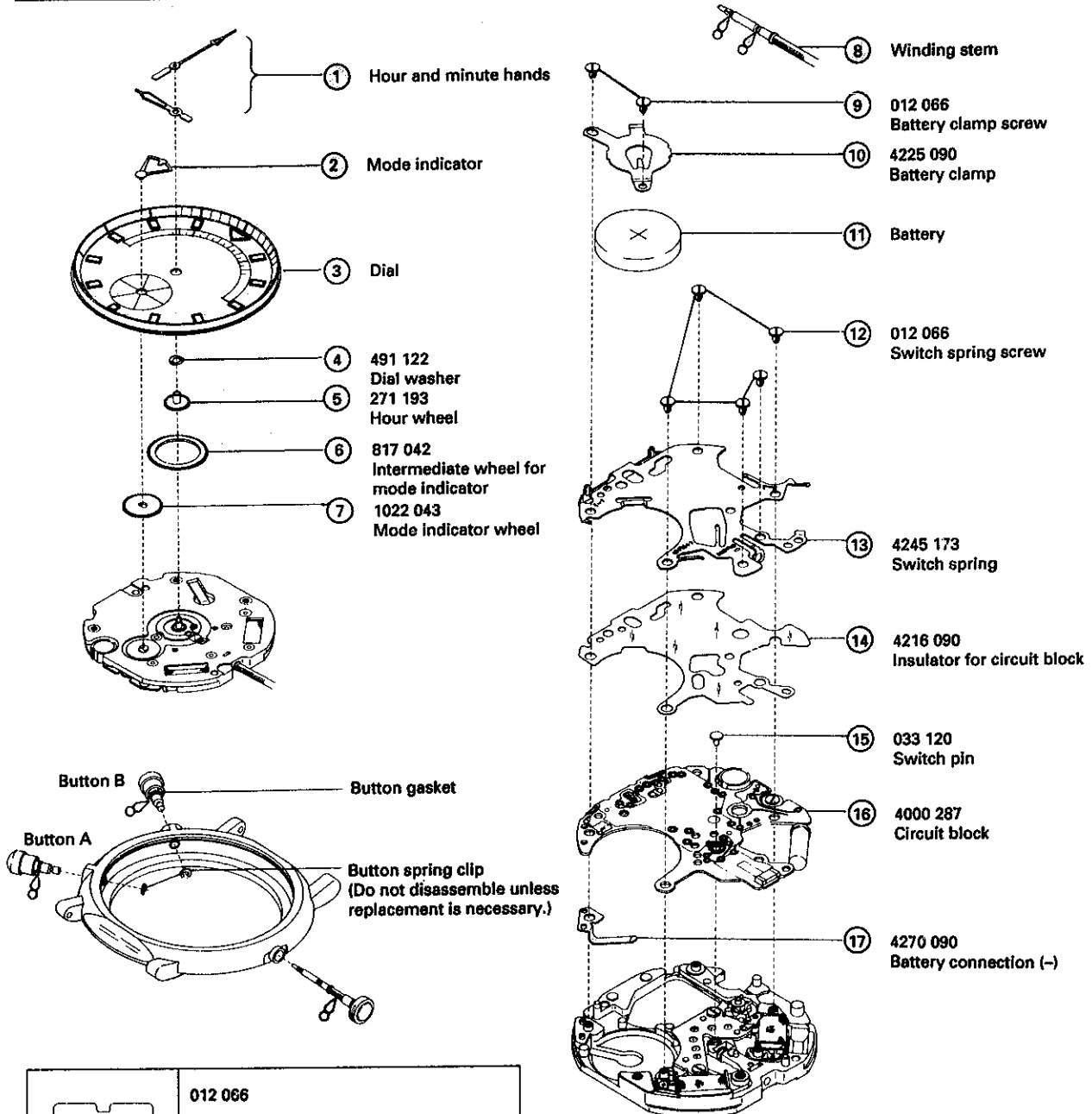
∞ Silicone oil 500,000 c.s.

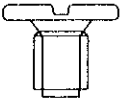
● Moebius A

∞ SEIKO Watch Oil S-6

Oil quantity

∞ Normal quantity

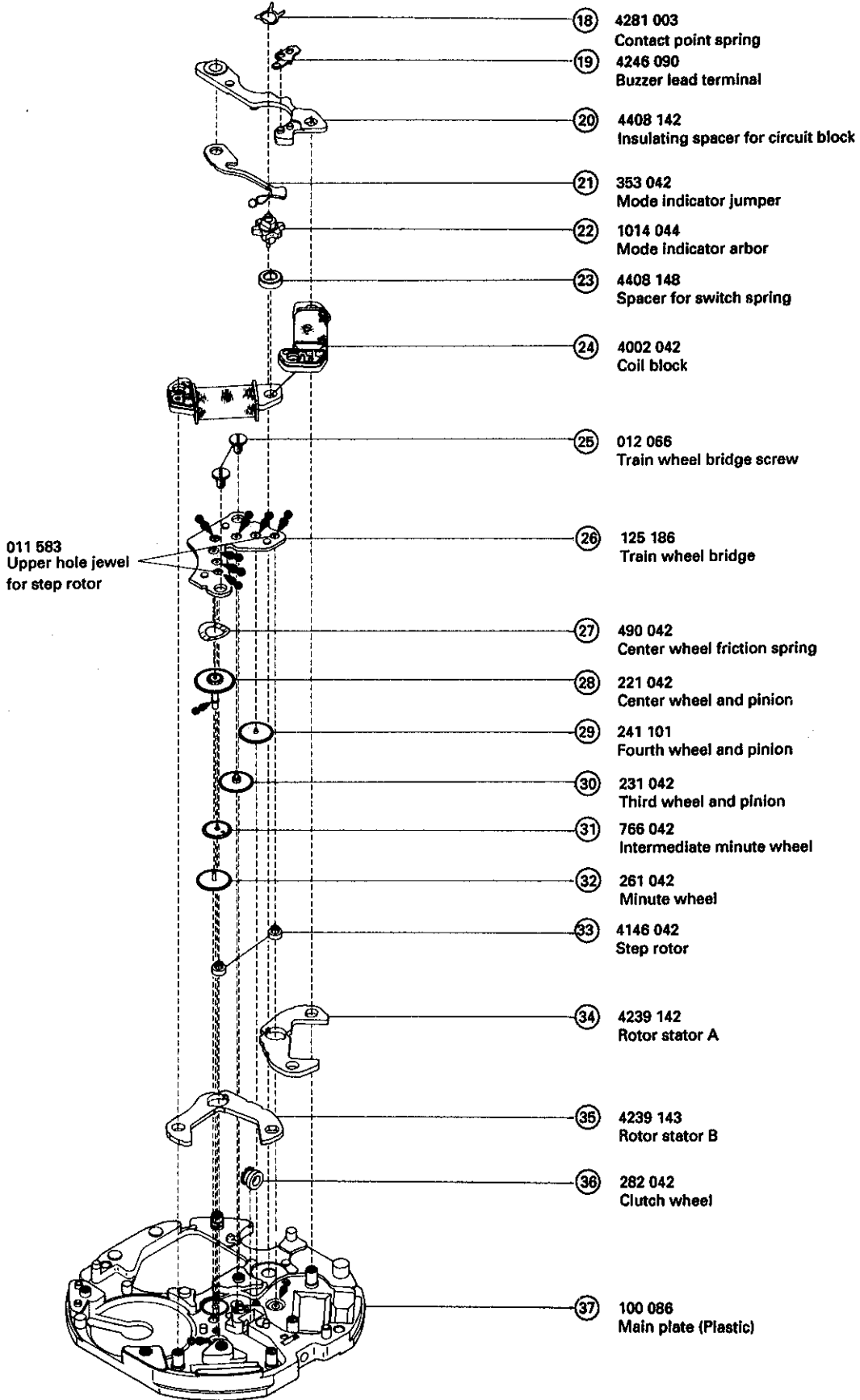


	012 066	
	• Battery clamp screw	(2 pcs.)
	• Switch spring screw	(5 pcs.)
	• Train wheel bridge screw	(2 pcs.)

➡ Please see the remarks on the following pages.

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Remarks:

- ⑧ Winding stem 351 148, 351 163

The type of winding stem is determined based on the design of case.
Check the case number and refer to "SEIKO Casing Parts Catalogue" to choose a corresponding winding stem.

- Other parts

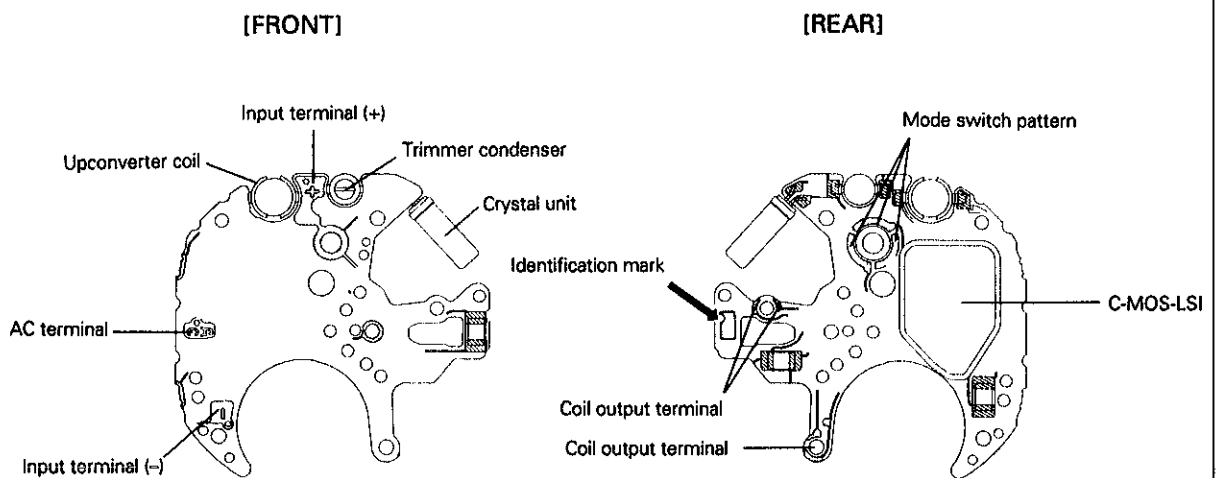
Piezoelectric element 4589 650

TECHNICAL GUIDE

Cal. 8M37A

- The explanation here is only for the particular points of Cal. 8M37A.
 - For repairing, checking and measuring procedures, refer to the "TECHNICAL GUIDE, GENERAL INSTRUCTIONS".
- *For other information, refer to the "PARTS CATALOGUE/TECHNICAL GUIDE Cal. 8M15A/8M18A".

I. STRUCTURE OF THE CIRCUIT BLOCK



Note:

Circuit blocks for Cal. 8M Series have the same appearance, and a mark is printed at the position indicated in the illustration to identify the circuit blocks for respective calibres. For the identification marks, please refer to the table below.

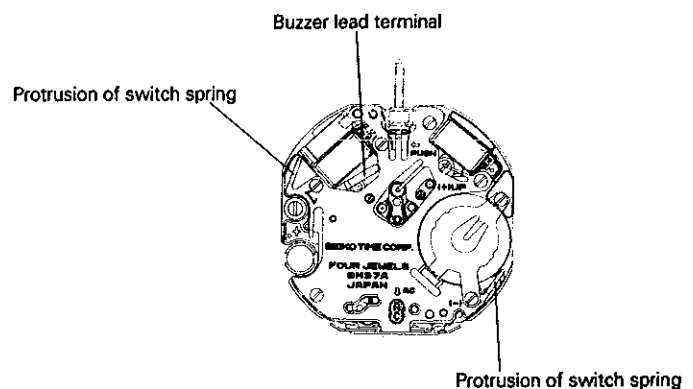
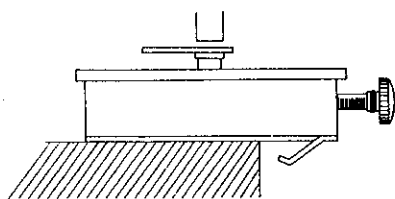
Calibre	Part No.	Identification mark	Calibre	Part No.	Identification mark
8M11	4000 282	A	8M32	4000 285	D
8M15	4000 283	B	8M35	4000 286	E
8M18	4000 383	C	8M37	4000 287	F
8M25, 8M26	4000 497	No mark			

II. REMARKS ON DISASSEMBLING AND REASSEMBLING

① Hands

Since a plastic main plate is used, place the movement on a flat metal plate or the like, and then install the hands at the 12 o'clock position.

In doing so, check that the buzzer lead terminal and the two protrusions of the switch spring are not pressed down as they protrude toward the case back side.

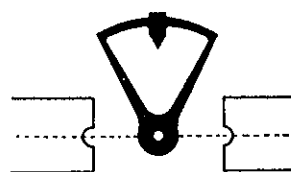


② Mode indicator

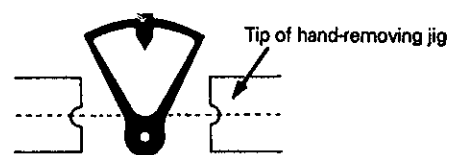
- **How to remove** (Applicable to the fan-shaped mode indicator)

Set a hand-removing jig at the center of the mode indicator to remove it.

In doing so, check that the hand-removing jig is set right at the center of the mode indicator. Otherwise, the mode indicator may be deformed.



[Correct]

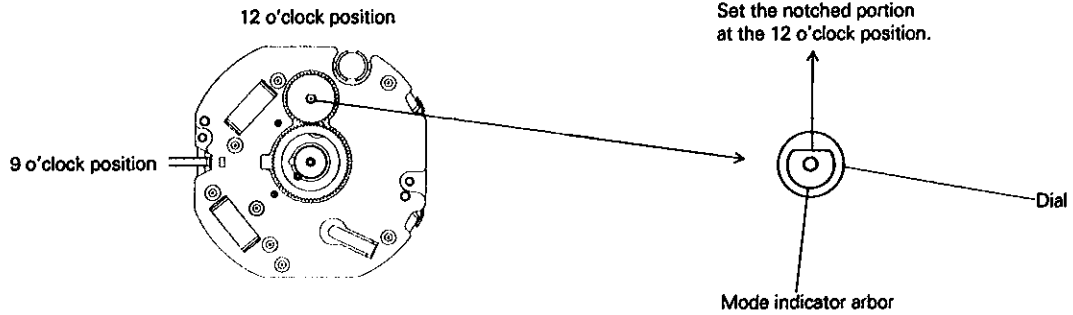


[Incorrect]

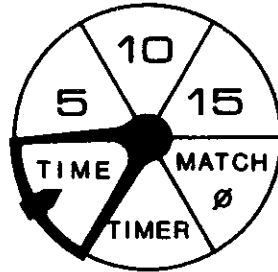
• **How to install**

Make sure that the mode indicator and the mode indicator arbor are set as shown below.

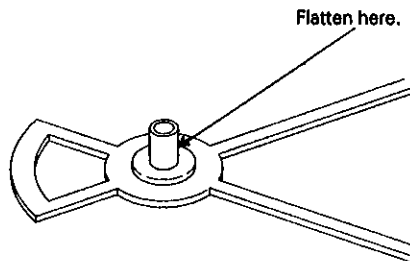
- (1) Turn the crown to set the notched portion of the mode indicator arbor at the 12 o'clock position. Note that the crown is located at the 9 o'clock position.



- (2) Install the mode indicator so that it points to "TIME". Refer to the illustration below, as the shape of the mode indicator and dial differ depending on the models.



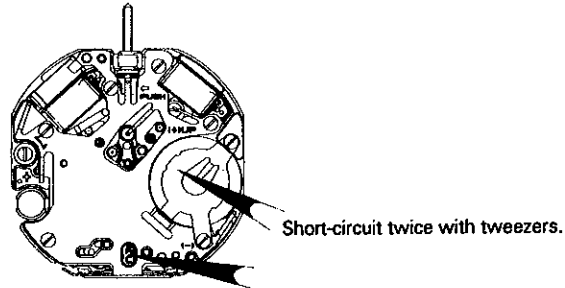
- (3) After installing the mode indicator, give it three full turns by turning the crown to check if it stops exactly at the respective mode positions. If the mode indicator arbor is loose in the contact with the mode indicator's pipe, the mode indicator will stop out of the proper positions. In that case, slightly flatten the mode indicator's pipe at the part indicated in the illustration, and then install the mode indicator to the mode-indicator arbor again.



11 Battery

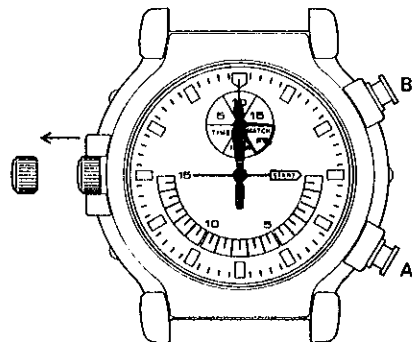
• A necessary step after installing the battery

After the battery is replaced with a new one, or after the battery is removed and re-installed following the repairing procedures, be sure to short-circuit the AC terminal of the circuit block and the battery clamp twice with conductive tweezers to reset the circuit. (When checking the current consumption, short-circuit with the power supplied from external source.)



* The circuit can be reset with a complete watch. Follow the procedure below.

- [1] Turn the crown to set the mode indicator to "Ø MATCH".
- [2] Pull out the crown to the first click.
- [3] Keep buttons "A" and "B" pressed at the same time for approximately 3 seconds. When the buttons are released, a beep sounds and the hour and minute hands start moving counterclockwise and clockwise, respectively.
- [4] Press button "A" or "B" once to stop the hands.
- [5] Press button "A" and "B" repeatedly but separately to reset the minute and hour hands respectively to the "0" position (12 o'clock position).
- [6] Turn the crown to set the mode indicator to "TIME". Then, pull out the crown to the first click, and press button "A" and "B" repeatedly but separately to set the minute and hour hands respectively to the desired time.



III. VALUE CHECKING

- Coil block resistance

1.2K Ω ~ 1.6K Ω

- Upconverter coil resistance

120 Ω ~ 180 Ω

- Measuring time accuracy

Turn the crown to set the mode indicator to "TIME".

Since the minute hand moves at 12-second intervals, use 60-second gate of the quartz tester to measure accuracy.

- * Time accuracy can also be measured with the mode indicator set at "TIMER". In this case, any gate of the quartz tester can be used to measure the daily rate.

- Current consumption

For the whole of the movement :	less than 2.5 μ A
For the circuit block alone :	less than 1.6 μ A

Note:

Before measuring current consumption, it is necessary to reset the circuit with the power supplied from an external source. Therefore, follow the procedures below to measure the current consumption.

- Measure the current consumption for the whole of the movement.
(Make sure that the battery clamp screw is securely tightened.)

[1] Install the dial and mode indicator, and turn the crown to set the mode indicator to "TIME".

[2] Short-circuit the "AC" pattern of the circuit block and the switch spring twice to reset the circuit.

[3] Press button "A" or "B" once.

[4] The minute hand start moving at 12-second intervals. Read the maximum value of the current consumption, and calculate the current consumption per second.

Note that measurement obtained while the hands are not moving corresponds to the current consumption for the circuit block alone.

(For details, refer to Chapter 5 "MEASUREMENT" of the "TECHNICAL GUIDE, GENERAL INSTRUCTIONS".)