

SEIKO

QUARTZ

**3003
(Cal.0843A)**

PARTS LIST

Calibre No.

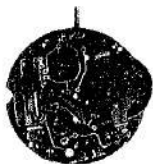
0843A

Jewels

9j

Style Name

QUARTZ 3003



Characteristics

Casing diameter : ϕ 24.0 mm
 Maximum height : 4.8 mm
 Frequency of quartz crystal oscillator : 32,768 Hz
 (Hz = Hertz Cycles per second)
 Driving system : Step motor system
 Regulation system : Trimmer condenser
 Second-setting device
 Calendar (day & date)
 Instant setting device for day & date calendar
 Bilingual change-over system for day of week



131 055



155 001



231 023



241 026



241 029



261 012



270 002



270 007



271 021



271 025



281 008



282 011



354 034



361 006



383 020



384 011



385 006



388 009



391 008



☆397 014



499 240



556 240



604 001



701 003



760 001



☆801 034



802 013



809 002



810 007



811 006



817 008



868 007



☆870 273



873 010



☆884 042



963 004



4001 025



4002 002



4006 002



4052 003



4106 132



4146 002



☆4225 011



☆4242 022



4270 005



4408 003



4408 005



4450 001



013 975



015 371



015 391



015 393



017 910



U.C.C.301



012 287



012 377



012 378



012 379



012 380



012 382



012 383



012 384



012 385



012 386



012 387



012 399



012 694



012 696



012 736



012 767



3/4

| Calibre No. | | Jewels | Style Name | |
|--------------|--|---------------|--|--|
| 0843A | | 9j | QUARTZ 3003 | |
| PART NO. | PART NAME | PART NO. | PART NAME | |
| 131 055 | Third wheel bridge | 011 527 | Upper hole jewel for fifth wheel | |
| 155 001 | Lower cock for fifth wheel | 011 527 | Lower hole jewel for fifth wheel | |
| 231 023 | Third wheel & pinion | 011 527 | Lower hole jewel for third wheel | |
| 241 026 | Fourth wheel & pinion (5.89mm) | 011 537 | Upper hole jewel for third wheel | |
| 241 029 | Fourth wheel & pinion (6.59mm) | 011 537 | Upper hole jewel for fourth wheel | |
| 261 012 | Minute wheel | 012 287 | Second jumper screw | |
| 270 002 | Center minute wheel (3.59mm) | 012 377 | Coil block screw | |
| 270 007 | Center minute wheel (4.29mm) | 012 378 | Rotor stator screw | |
| 271 021 | Hour wheel (2.72mm) | 012 379 | Third wheel bridge screw | |
| 271 025 | Hour wheel (3.42mm) | 012 380 | Lead terminal screw | |
| 281 008 | Setting wheel | 012 380 | Temperature compensation condenser screw | |
| 281 008 | Setting wheel for calendar correction | 012 382 | Second-setting lever screw | |
| 282 011 | Clutch wheel | 012 383 | Setting wheel plate complete screw | |
| 354 034 | Winding stem | 012 384 | Yoke holder screw | |
| 361 006 | Second-setting lever spring | 012 385 | Lower cock screw for fifth wheel | |
| 383 020 | Setting lever | 012 386 | Case screw | |
| 384 011 | Yoke (Clutch lever) | 012 387 | Screw for holding spring for battery (A) | |
| 385 006 | Yoke spring (Clutch lever spring) | 012 387 | Plus terminal screw of battery connection | |
| 388 009 | Yoke spring holder | 012 399 | Screw for holding spring for battery (B) | |
| 391 008 | Second-setting lever | 012 694 | Circuit block screw (A) | |
| ☆397 014 | Lever for unlocking stem | 012 696 | Circuit block screw (B) | |
| 499 240 | Day finger ring | 012 736 | Date jumper guard screw | |
| 556 240 | Date finger | 012 736 | Day jumper screw | |
| 604 001 | Setting wheel plate complete | 012 767 | Date driving wheel screw | |
| 701 003 | Fifth wheel & pinion | 013 975 | Eccentric dial pin | |
| 760 001 | Second jumper | 015 371 | Diafix upper hole jewel with frame for rotor | |
| ☆801 034 | Date dial | 015 391 | Diafix lower hole jewel with frame for rotor | |
| 802 013 | Date driving wheel | 015 393 | Diafix upper spring for step rotor | |
| 809 002 | Date jumper guard | 015 393 | Diafix lower spring for step rotor | |
| 810 007 | Date jumper | 017 016 | Lower bridge tube for step rotor | |
| 811 006 | Date jumper spring | 017 017 | Tube for yoke (Tube for clutch lever) | |
| 817 008 | Intermediate date wheel | ☆017 018 | Tube for circuit block (A, D) | |
| 868 007 | Day finger | 017 019 | Switch pin | |
| ☆870 273 | Day star with dial disk (English-Spanish) | ☆017 020 | Tube for circuit block (B) | |
| ☆870 274 | Day star with dial disk (English-French) | 017 021 | Tube for third wheel bridge screw | |
| ☆870 275 | Day star with dial disk (English-German) | ☆017 022 | Tube for circuit block (C) | |
| ☆870 276 | Day star with dial disk (English-Italian) | 017 027 | Second-setting lever pin | |
| ☆870 277 | Day star with dial disk (English-Chinese) | 017 028 | Lower cock tube for fifth wheel | |
| ☆870 278 | Day star with dial disk (English-Portuguese) | ☆017 082 | Tube for circuit block (D) | |
| 873 010 | Day jumper | 017 910 | Holding pin for second-setting lever | |
| ☆884 042 | Holding ring for dial | U.C.C.301 | Silver oxide battery | |
| 963 004 | Snap for day star with dial disk | Maxell SR43SW | | |
| 4001 025 | Circuit block | | | |
| 4002 002 | Coil block | | | |
| 4006 002 | Motor block | | | |
| 4052 003 | Upper plate for step rotor | | | |
| 4106 132 | Temperature compensation condenser | | | |
| 4146 002 | Step rotor | | | |
| ☆4225 011 | Holding spring for battery | | | |
| ☆4242 022 | Plus terminal of battery connection | | | |
| 4270 005 | Battery connection | | | |
| 4408 003 | Insulator | | | |
| 4408 005 | Insulating spacer for circuit block | | | |
| 4450 001 | Switch lever | | | |
| 011 221 | Diafix upper cap jewel for step rotor | | | |
| 011 221 | Diafix lower cap jewel for step rotor | | | |

☆⇨ Please see remarks on the reverse page.
Part numbers in light letters are not shown in photos.

Calibre No.

0843A

Jewels
9j

Style Name

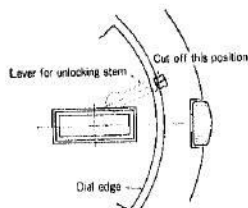
QUARTZ 3003

Remarks :

Lever for unlocking stem

- ☆397 014.....Used for the one-piece or square type water-resistant case. Adjust the length of the unlocking stem lever by cutting the tail on the position marked arrow, which should be exposed on the case face, as shown in the illustration.

Movement in the case dial upside



Date dial

- ☆801 034.....Used when both the crown and the calendar frame are located at 3 o'clock position. If any other type of date dial is required, specify ① Cal. No. ② the crown position ③ the date frame position and ④ Dial No.

Day star with dial disk

- ☆870 273~278.....Used when both the crown and the calendar frame are located at 3 o'clock position. If any other type of day star with dial disk is required, specify the number printed on the disk.

Holding ring for dial

- ☆884 042.....Used except for one-piece type case. The type of a holding ring for dial to be used is determined based on the design of cases and dials. Check the case number and refer to "SEIKO Quartz Watch Casing Parts List" to choose an appropriate holding ring for dial. Specify the part number of the holding ring for dial assigned on the above parts list when you place the order.

Holding spring for battery

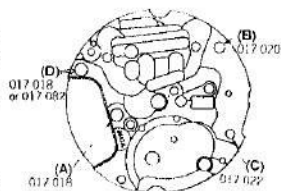
- ☆425 011.....Used only for case without battery hatch.

Plus terminal of battery connection

- ☆4242 022.....Used only for case with battery hatch.

Tube for circuit block (A, B, C, D)

- ☆017 018(A,D) } There are available four types of Tube for circuit block.
- ☆017 020(B) } They are used as illustrated on the right. Tube for circuit block (D) is also subclassified into two types, 017 018 and 017 082.
- ☆017 022(C) } For the replacement of Tube for circuit block (D), select a proper part as instructed below.
- ☆017 082(D) }
 - Where the main plate for the tube (D) has a through hole: 017 018
 - Where the main plate for the tube (D) has no through hole: 017 082



Battery

- ☆U.C.C.301.....The applied battery for this calibre might be added the substitutive in the future. In that case, please refer to separate "BATTERIES FOR SEIKO QUARTZ WATCHES".

TECHNICAL GUIDE

SEIKO
QUARTZ

CAL.0843A



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SEIKO Quartz Calibre 0843A

The SEIKO Quartz Cal. 0843A is a thin and compact crystal oscillator watch providing easy after-servicing, that has been made possible through SEIKO's advanced manufacturing techniques and the possible complete electronic system available today.

Calibre 0843A



Movement

SPECIFICATIONS AND FEATURES

1. Specifications

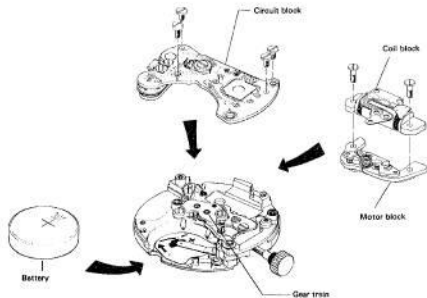
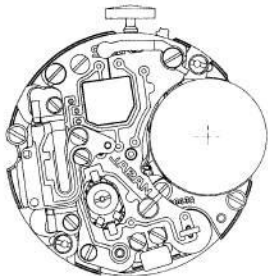
| Item | Calibre | Cal. 0843A |
|-------------------------------|---------|---|
| Additional mechanism | | Calendar (day & date) Bilingual change over system for the day of the week Instant day and date setting Second setting device Electronic circuit reset switch |
| Crystal oscillator | | 32,768 Hz (Hz = Hertz . . . cycles per second) |
| Loss/gain | | Loss/gain at normal temperature Monthly rate: less than 10 seconds (Annual rate: less than 2 minutes) |
| Casing diameter | | φ 24.0 mm |
| Height | | 4.84 mm |
| Operational temperature range | | -10°C ~ +60°C (14°F ~ 140°F) |
| Driving system | | Step motor system (bipolar) |
| Regulation system | | Trimmer condenser |
| Battery power | | Battery life is over one year Silver oxide battery (U.C.C. 301) Voltage 1.5 V Capacity 100mAh Size φ11.6mm X 4.2mm |
| Jewel | | 9 jewels |

2. Features

- The crystal oscillator is the ultrasonic tuning fork type and generates a stabilized oscillation of 32,768 Hz.
- One-second hand operation by the step motor system with high stability and durability.
- Second setting device
The second hand stops precisely on every second mark.
- The movement consists of the mechanical portion (gear train), electronic circuit block and motor block. These enable easy checking and adjustment.
- The bilingual change-over system for the day of the week, and instant day and date setting device.
- The compact movement (casing diameter—φ 24.00 mm) makes a smartly designed watch possible.
- A battery life is over one year.

3. Movement structure

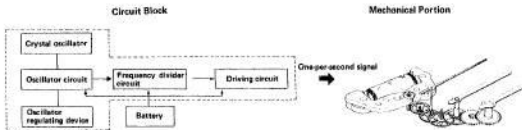
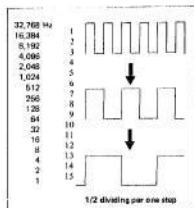
The circular movement consists of the circuit block, motor block, coil block, the battery and the mechanical portion of which the main component is a gear train. Since each portion is a separate unit, easy checking and adjustment is possible.



4. Outline of functioning

- (1) The crystal oscillator by supplying voltage oscillates accurately at 32,768 Hz.
- (2) The electronic circuit receives the 32,768 Hz oscillations (electric signals) and converts them into impulses at the rate of one per second, i.e. $1/2$ (16,384 Hz), $1/2$ (8,192 Hz), ...
- (3) The one-per-second signals are transmitted to the coil block, causing the step motor to rotate once every second in 180° increments.

- (4) This rotation is transmitted to the gear train thus moving the hands.



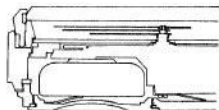
5. Case

• Anti-magnetic construction

The SEIKO Quartz case is made of special anti-magnetic metal which completely shields the watch from external magnetic fields.

• Current flow

The current flows from the battery through a case to the movement.



6. Hand setting and calendar setting

Date and day changes as follows:

- Date 00:00 (22:30 ~ 24:00)
- Day 2:55 (0:30 ~ 2:55)

Crown position

- Normal position ... Free
- First click ...
 - Change of day and date
 - Date change ... counterclockwise
 - Day change ... clockwise
- Second click ... Hand setting, reset switch and second setting

(1) Hand setting

Pull out the crown to the second click and the second hand stops precisely on the second mark.

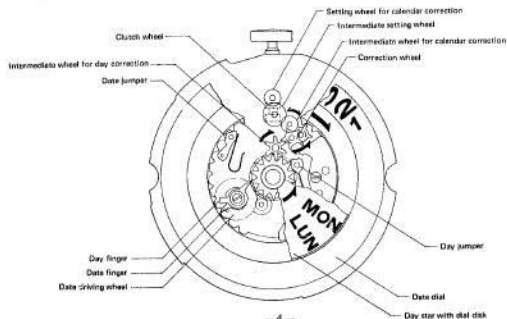
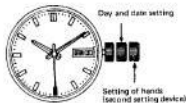
Procedures

- (1) Pull the crown out to the second click.
- (2) Turn the crown and set the time of the hour hand and the minute hand.
 - First turn the hands past the 12:00 o'clock position to see if the day changes, then set the time correctly.
 - As the torque of the gear train is transmitted reversely, the time is set accurately by turning the hands between 5 and 10 minutes ahead and then turning it back to the desired time.

- (3) To synchronize with a time signal, push the crown in.
Push the crown in to the innermost position to start the watch. Then the hour, minute and second hand can be set exactly.

(2) Calendar setting

- (1) Pull the crown out to the first click.
Turn the crown counterclockwise and the date will change.
- (2) Turn the crown clockwise and the day of the week will change.
Select the desired language as two languages appear alternately when setting the day of the week.
If the setting of the calendar is made when the hour hand is pointing to the time between 9:00 p.m. and 3:00 a.m., sometimes the calendar will not change the next day. Please reset the calendar before or after this time period.



7. After servicing instruments and materials

For after-servicing of the SEIKO Quartz watch, the following after-servicing instruments and materials are necessary.

1. Quartz Tester

Used to check time accuracy and the flow of current from the circuit block to the coil block.



2. Tester

Used for checking battery voltage, measuring resistance and testing conductivity.



3. Movement holder

Used for disassembling and reassembling the movement.



4. Holding spring for battery

Used for securing the battery when the movement is removed from the case or when the case back is removed.

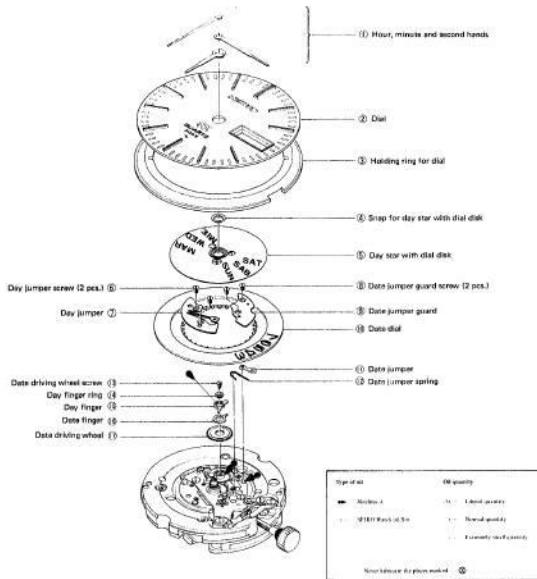
5. Others

- (1) Anti-magnetic tweezers for handling the magnetized step rotor, etc.
- (2) Nonmetallic tweezers for handling the battery.

Disassembling procedures: Fig. 1 ~ 37

Reassembling procedures: Fig. 37 ~ 1

1. Calendar mechanism



REMARKS:

As for the watch with a battery latch, first remove the battery and the movement.

How to remove the hands and the dial

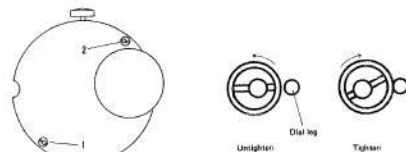
Removing and mounting the hands ①

Remove and mount the hands after pulling the crown out to the second click.

Removing and replacing the dial ②

After turning the eccentric dial pin between 90° and 150° in the arrow marked direction removing and replacing the dial is possible.

When replacing the dial, tighten the eccentric dial pin according to the figures shown in the following diagram.



How to remove the snap for the day star with dial disk ④

Put the tip of a screw driver between the two ends of the snap for day star with dial disk and pull the screw driver up to remove the snap for day star with dial disk.

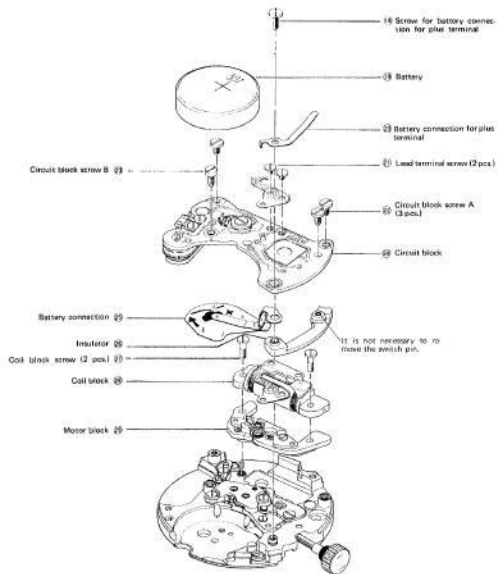


How to fix the date finger and the day finger ⑬ ⑭ ⑮ ⑯



1. Place the date finger as shown in the above diagram.
2. Put on the day finger and lubricate it a little.
3. Now put on the day finger ring.
4. Tighten the date driving wheel screw.

2. Electronic circuit mechanism



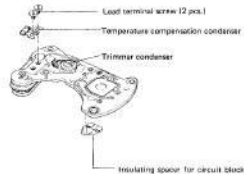
REMARKS:

Replacing the battery 15

- (1) Check for a battery voltage reading of over 1.5 V before placing it in the case.
- (2) Wipe off any foreign matter with a dry cloth.
- (3) Use battery U.C.C. 301



Circuit Block 11



- It is not necessary to remove the insulating spacer for circuit block under normal disassembling conditions.
- Time accuracy is adjusted by turning the trimmer condenser. But, do not remove the temperature compensation condenser.

Hold the coil block 12

Hold the coil block as shown in a photo.



Correct

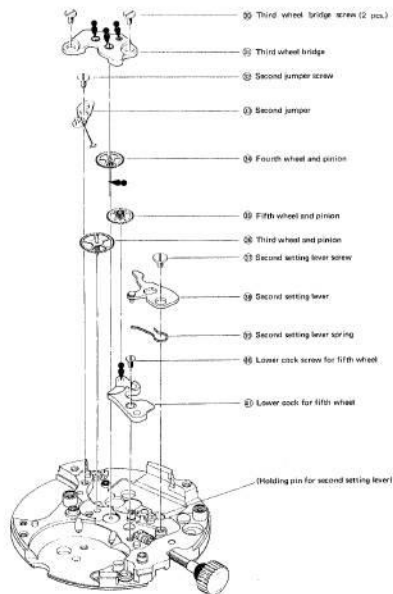


Incorrect

Motor block 5

It is not necessary to disassemble except when foreign matter is found inside.

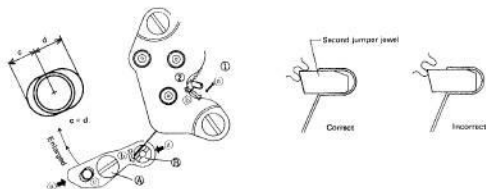
3. Gear train mechanism



REMARKS:

Reassembling procedures for the second jumper ⑬

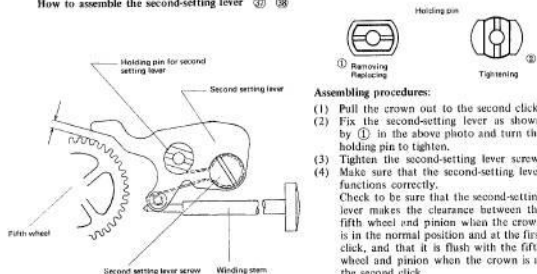
Determine the second jumper position after assembling the motor block and coil block.



Reassembling procedures:

- (1) Fix the second jumper so that a pin of the main plate ⑬ can be placed in the center of the oval hole of the second jumper.
- (2) Loosen the ⑬ screw a little and adjust the second jumper in the arrow marked direction ⑭ and then tighten it.
- (3) Turn the ⑮ pin and adjust the second jumper spring in the arrow marked direction ⑯.
- (4) Be sure that no pressure is put on the fourth wheel and pinion by the second jumper jewel. Also make sure that the fourth wheel cog meet exactly with the second jumper jewel. Be careful second jumper jewel not to bend the second jumper spring.

How to assemble the second-setting lever ⑰ ⑱

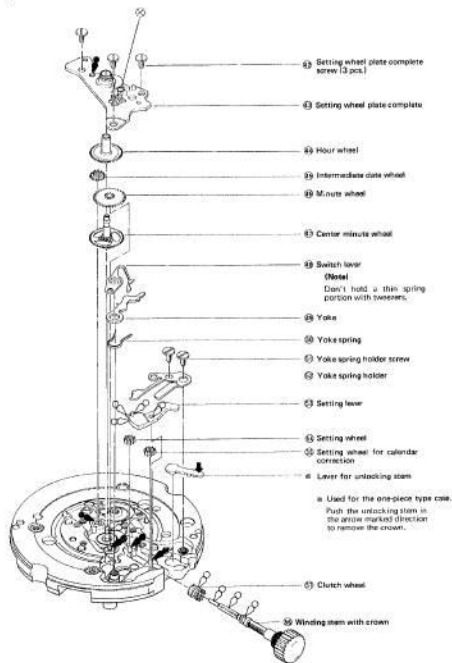


Assembling procedures:

- (1) Pull the crown out to the second click.
- (2) Fix the second-setting lever as shown by ⑰ in the above photo and turn the holding pin to tighten.
- (3) Tighten the second-setting lever screw.
- (4) Make sure that the second-setting lever functions correctly.

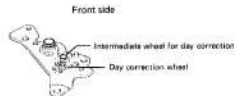
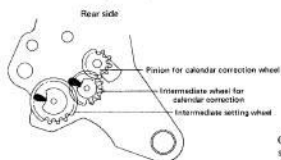
Check to be sure that the second-setting lever makes the clearance between the fifth wheel and pinion when the crown is in the normal position and at the first click, and that it is flush with the fifth wheel and pinion when the crown is at the second click.

4. Setting mechanism



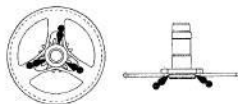
REMARKS:

Lubrication of setting wheel plate complete ④⑤



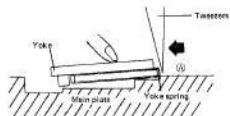
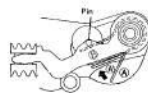
Check to see if the correction wheel moves smoothly and if it does not move smoothly, clean it again.

Lubrication of center minute wheel ④⑦



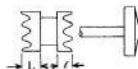
Don't disassemble the cannon pinion and center minute wheel.

How to assemble the yoke and yoke spring ④⑧⑨



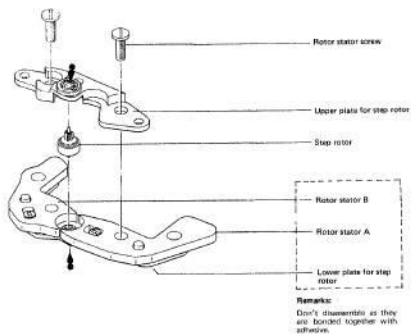
- (1) Put the fork of the yoke spring on the ③ side of the main plate as shown in the diagram.
- (2) Put the fork of the yoke spring on the ② side as shown in the diagram.
- (3) Hold the yoke with a finger as shown in the above illustration and push the yoke spring from ① to ④ position in the arrow marked direction.

Clutch wheel ⑤⑩



Face the clutch wheel with the L side (long side) facing the center minute wheel and the T side (short side) facing the crown.

5. Motor block








REMARKS:

- (1) Don't disassemble the lower plate for step rotor and rotor stators (A,B) as they are bonded together with adhesive after adjustment.
- (2) Use adhesive tape or RODIKO to remove the filing and lint from the step rotor.

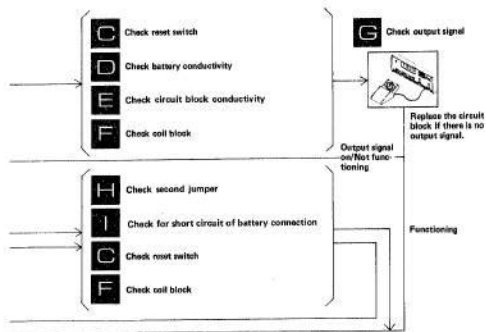
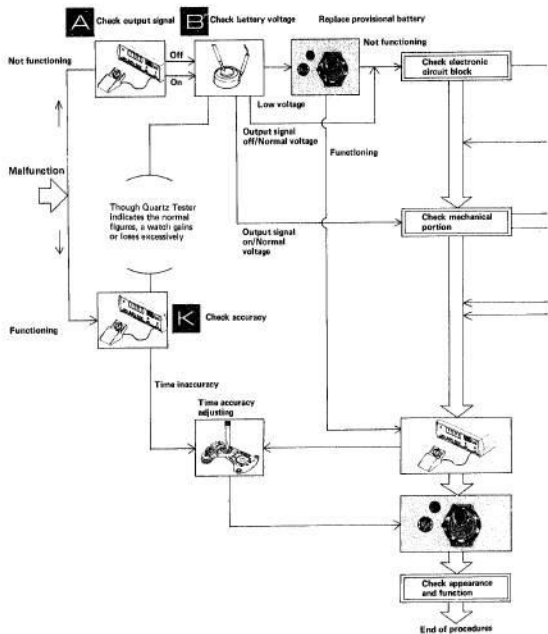
6. Cleaning

Since several special parts (electronic, plastic, etc.) are used in the SEIKO Quartz Cal. 0843A, use the following cleaning methods when cleaning.

| Name of Parts | Cleaning | Drying | Solution | Remarks |
|---|--|------------------------|------------------------------|--|
| Circuit block  Coil block  | DO NOT CLEAN | | | Conducting portion ONLY may be cleaned with a cloth moistened with benzine or alcohol. Dry in COOL air. |
| Rotor stator (with lower plate)  Step rotor  Second jumper  | Rinse or gently scrub with brush | Cool air drying | Benzine | <ul style="list-style-type: none"> Don't disassemble the lower plate and rotor stator as they are bonded. Don't use trichloroethylene and alcohol. Use a clean solution as the step rotor has a magnet. Be careful not to bend the spring or remove a jewel of the second jumper. |
| Plastic parts | Rinse or gently scrub with brush | Cool air drying | Alcohol or benzine | |
| Parts other than the above | Clean with cleaner, rinse or gently scrub with brush | Cool or hot air drying | Benzine or trichloroethylene | |

CHECKING AND ADJUSTMENT

1. Guide for Checking and Adjustment

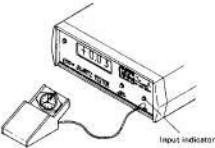






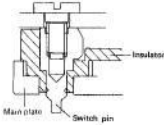
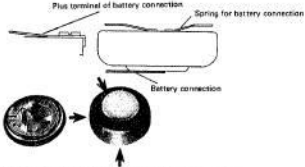
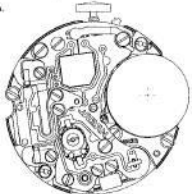
K Check accuracy

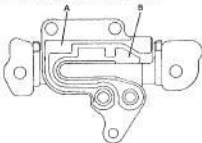
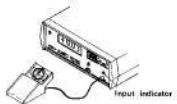
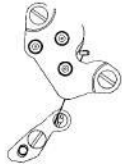
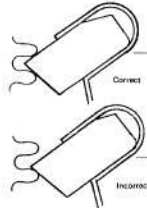
Replace the battery

In cases where a frequent battery change is required a current consumption test is recommended (see page 26 for measurement).

2. Procedures for Checking and Adjustment

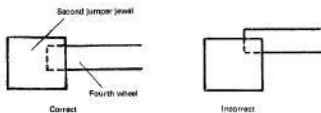
| | Procedures | Results | Adjustment and Repair |
|-----------------------|--|---|---|
| CHECK OUTPUT SIGNAL | <p>A</p> <p>Check for output signal.</p> <p>1. Set up the Quartz Tester</p>  <p>2. Checking Check for an output signal.</p> | <p>One second blinking</p> <p>No one-second blinking</p> <p>(Including the cases where it is lit continuously or does not blink once per second)</p> | <p>Proceed to B</p> |
| CHECK BATTERY VOLTAGE | <p>B</p> <p>Use the following procedures to check battery voltage.</p> <p>1. Set up the tester Range to be used DC 3V</p>  <p>2. Measuring</p> <ul style="list-style-type: none"> Probe Red (+) Battery surface (+) Probe Black (-) Battery surface (-) <p>[Note] When handling the battery, use non-metallic tweezers or a fingernail.</p> | <p>More than a 1.5 V reading indicates</p> <p>Less than a 1.5 V reading indicates</p>  | <p>In procedure A if one-second blinking is found, check the Mechanical Portion</p> <p>In procedure A if one-second blinking is NOT found, check the Electronic Circuit Block</p> <p>Replace with a provisional battery</p> <p>If a watch operates after battery replacement, proceed to K</p> <p>If a watch does not operate, check the Electronic Circuit Block</p> |
| CHECK RESET SWITCH | <p>C</p> <p>Check for a short circuit of the switch pin and main plate when the crown is at the normal position and when it is pulled out to the first click.</p> <p>Remove the circuit block.</p> <p>Set up the tester Range to be used CHMS R x 1</p> <p>C First check</p> <p>Check for a short circuit of the switch pin and main plate. Touch the red and black probes to the main plate and switch pin when the crown is at the normal position and pulled out to the first click. (There is no difference between the red and black probes).</p>  <p>C Second check</p> <p>Check to see if there is clearance between the switch lever and switch pin when the crown is at the normal position and when it is pulled out to the first click.</p>  | <p>When the needle of the tester does not move</p> <p>When the needle of the tester moves</p> <p>Clearance</p> <p>No clearance</p> | <p>Proceed to D</p> <p>Proceed to C₂</p> <p>Proceed to C₃</p> <p>Replace the switch lever</p> |

| | Procedures | Results | Adjustment and Repair |
|---|--|--|--|
| <p>C</p> <p>CHECK RESET SWITCH</p> | <p>C Third check</p> <p>Check for foreign matter on the insulator between the switch pin and the main plate.</p>  | <p>No foreign matter, uncontaminated →</p> <p>Foreign matter, contaminated →</p> | <p>Proceed to D</p> <p>Wipe off carefully.</p> |
| <p>D</p> <p>CHECK BATTERY CONDUCTIVITY</p> | <p>Use the following procedures to check to see if the battery current flow to the circuit is normal.</p> <p>1. First check</p> <p>Check for any foreign matter on the connecting point of the battery, spring for battery connection, the battery connection and the plus terminal of the battery connection.</p>  <p>2. Second check</p> <p>Make sure that the plus terminal screw of the battery connection is tightened firmly.</p> | <p>Uncontaminated →</p> <p>Contaminated →</p> <p>No loosened screw →</p> <p>Loosened screw →</p> | <p>Proceed to D</p> <p>Wipe off carefully.</p> <p>Proceed to E</p> <p>Tighten screws</p> |
| <p>E</p> <p>CHECK CIRCUIT BLOCK CONDUCTIVITY</p> | <p>Check for short circuit and defective contact of the circuit block conducting portions.</p> <p>Check the eight (8) screws in the diagram below for looseness.</p>  | <p>No loosened screw →</p> <p>Loosened screw →</p> | <p>Proceed to F</p> <p>Tighten screws. Be careful not to tighten them excessively.</p> |

| | Procedures | Results | Adjustment and Repair |
|---------------------|--|---|---|
| CHECK COIL BLOCK | <p>Remove the circuit block and check for broken coil wire and short circuit of the coil block.</p> <p>1. Set up the tester Range to be used OHMS R x 100</p> <p>2. Checking method Touch the probe of the tester to the two terminals (A and B) of coil respectively.</p>  | <p>3.0 KΩ ~ 6.0 KΩ</p> <p>More than 5.0 KΩ (Broken wire)</p> <p>Less than 3.0 KΩ (Short circuit)</p> | <p>Proceed to G</p> <p>• Replace the coil block</p> |
| CHECK OUTPUT SIGNAL | <p>Check the output signal.</p> <p>1. Set up the Quartz Tester</p> <p>2. Checking method Check for output signal (Blinking input indication light)</p>  | <p>One blink per second → Watch functioning</p> <p>Not functioning</p> <p>No blinking</p> | <p>Proceed to J</p> <p>• Check the Mechanical block</p> <p>• Replace the circuit block.</p> |
| CHECK SECOND JUMPER | <p>H₁ Check to see if the second jumper jewel goes with the fourth wheel and pinion exactly.</p>  |  <p>Correct</p> <p>Incorrect</p> | <p>Proceed to H₂</p> <p>Adjust the second jumper</p> |

Procedures

H. Check to see if the second jumper jewel is at the proper height.

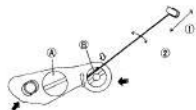


Results

More than the thickness of the fourth wheel

Less than the thickness of the fourth wheel

Adjustment and Repair



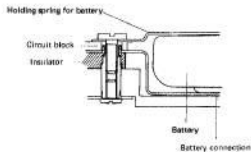
1. After loosening the screw (A), adjust second jumper (C) by pushing in the arrowmarked direction (1-2).
Retighten the screw (A) after adjustment.
2. Adjust in the direction of (2) by turning the pin (D) (1-2).

Proceed to



Adjust the foot of the pin (D) with a pair of tweezers. (See the above diagram)

Check for short circuit of the main plate and the battery connection.



Check for short circuit of the battery connection, holding spring for battery, battery and the main plate by filings, etc.

Normal condition

Short circuit

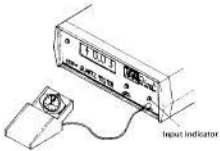

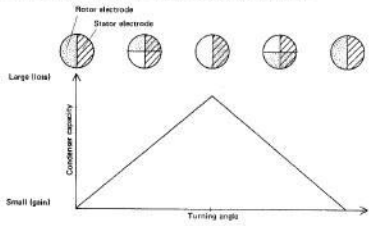
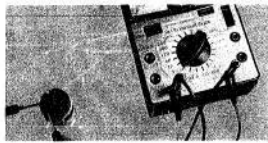
Proceed to



If not functioning, check



• Wipe off the foreign matter.

| | Procedures | Results | Adjustment and Repair |
|--|------------|--|---|
| <p style="writing-mode: vertical-rl; transform: rotate(180deg);">CHECK ACCURACY</p> <p>Check gain and loss of time.</p> <ul style="list-style-type: none"> Set up the Quartz Tester  | | <p>Normal</p> <p>Defective</p> | <p>Adjustment and Repair</p> <p>Check the appearance and Function</p> <p>Adjust time accuracy</p> |
| <p style="writing-mode: vertical-rl; transform: rotate(180deg);">TIME ACCURACY ADJUSTING METHOD</p> <p>Time accuracy is adjusted by turning the trimmer condenser.</p>  <ul style="list-style-type: none"> Adjustment should be made after ascertaining by the Quartz Tester whether the watch tends to gain or lose. Note for handling of Trimmer Condenser <ol style="list-style-type: none"> Avoid excessive depressing. Avoid turning the Trimmer Condenser unnecessarily. | | <ul style="list-style-type: none"> Capacity of Trimmer Condenser <p>The capacity is changed by turning the Trimmer Condenser as shown in the diagram below.</p>  | |
| <p style="writing-mode: vertical-rl; transform: rotate(180deg);">MEASURING CURRENT CONSUMPTION</p> <p>In cases where a frequent battery change is required, a current consumption test is recommended. Use the following procedures:</p>  <p>Procedures:</p> <ol style="list-style-type: none"> Set up the Tester <ul style="list-style-type: none"> Range to be used DC 0.02mA Set up the condenser of 200 ~ 500 μF as shown in a photo. | | <ol style="list-style-type: none"> Measurement <ul style="list-style-type: none"> Probe Red (+) Battery surface (+) Probe Black (-) Circuit block <p>Check the current consumption when the crown is at the normal position and when it is pulled out to the first click. When the current consumption is more than 10 μA, follow</p> <p>procedures F and I</p> | |