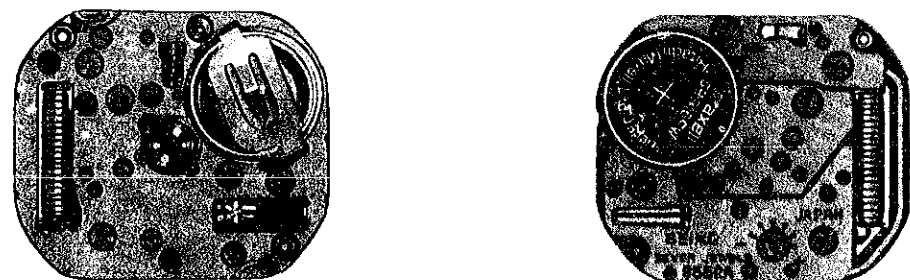


TECHNICAL GUIDE

SEIKO LASSALE

QUARTZ

CAL. 9550A
CAL. 9559A



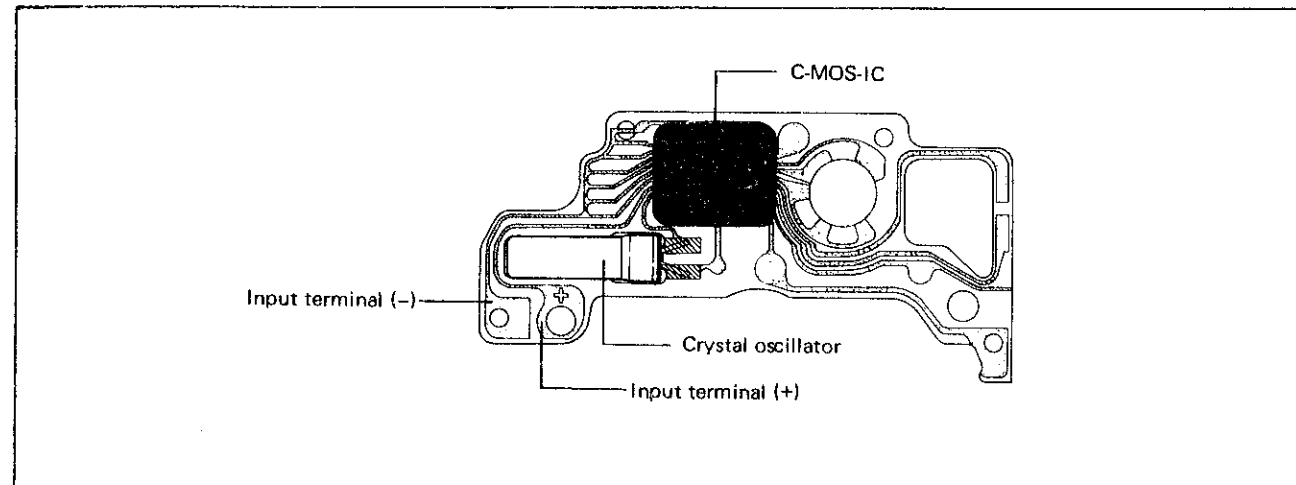
CONTENTS

I. SPECIFICATIONS	1
II. STRUCTURE OF CIRCUIT BLOCK	1
III. DISASSEMBLING, REASSEMBLING AND LUBRICATING	2
IV. CHECKING AND ADJUSTMENT	5
• Check output signal	5
• Check hand setting condition	5
• Check battery voltage	5
• Check battery conductivity	5
• Check circuit block conductivity	5
• Check coil block	5
• Check reset and train wheel setting conditions	6
• Check gear train mechanism	6
• Check setting mechanism	6
• Check accuracy	6
• Check current consumption	7
• Check water resistance	7
• Check conductivity of switch components	7
• Check appearance and functioning	7

I. SPECIFICATIONS

Item	Cal.	9550A	9559A
Time indication		2 hands	
Driving system		Step motor system (Load-compensative driving pulse system)	
Additional mechanism		—	Date
		—	Instant date setting device
		Electronic circuit reset switch	
		Train wheel setting device	
Loss/gain		Monthly rate at normal temperature range: less than 15 seconds	
Movement size	Outside diameter	$\phi 24.0\text{mm}$ (22.0mm between 6 o'clock and 12 o'clock 19.0mm between 3 o'clock and 9 o'clock)	$\phi 21.6\text{mm}$ (22.0mm between 6 o'clock and 12 o'clock 21.0mm between 3 o'clock and 9 o'clock)
	Casing diameter	$\phi 23.3\text{mm}$ (21.0mm between 6 o'clock and 12 o'clock) (19.0mm between 3 o'clock and 9 o'clock)	
	Height	1.6mm without battery	1.9mm without battery
Regulation system		Rotary step switch	
Measuring gate by quartz tester		Use the gate of 10 seconds.	
Battery		SEIKO (SEIZAIKEN) TR916SW, Maxell SR916SW Battery life is approximately 3 years Voltage 1.55V	
Jewels		7 jewels	

II. STRUCTURE OF CIRCUIT BLOCK





III. DISASSEMBLING, REASSEMBLING AND LUBRICATING

Types of oil

- Moebius A
- SEIKO Watch Oil S-6

List of screws used

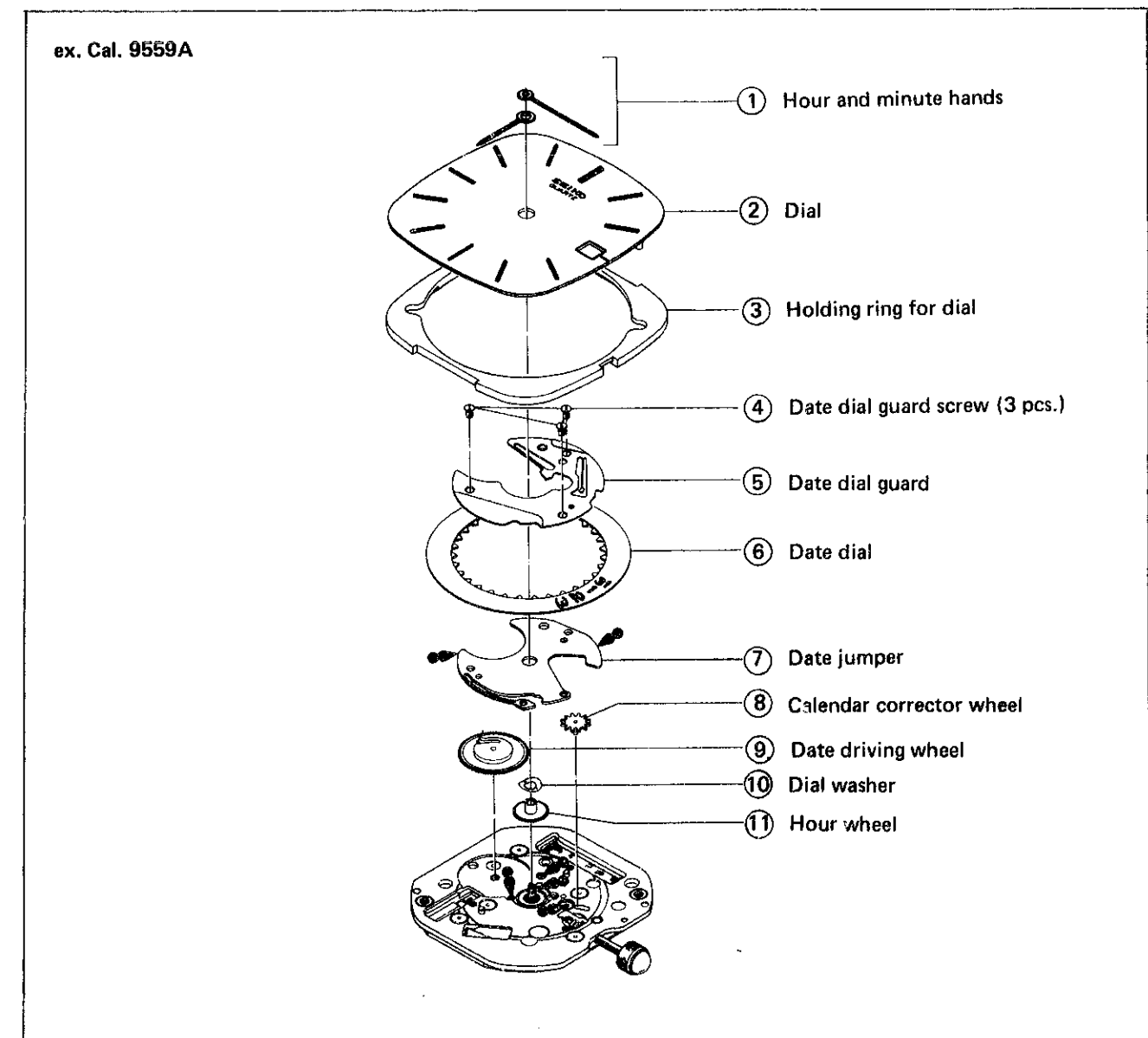
Shape	Part No.	Part Name	Shape	Part No.	Part Name
	022436	Train wheel bridge screw (2 pcs.) Circuit bridge plate screw (2 pcs.) Setting wheel plate complete screw (2 pcs.)		022754	Date dial guard screw (3 pcs.)

Disassembling procedures ① → ④③

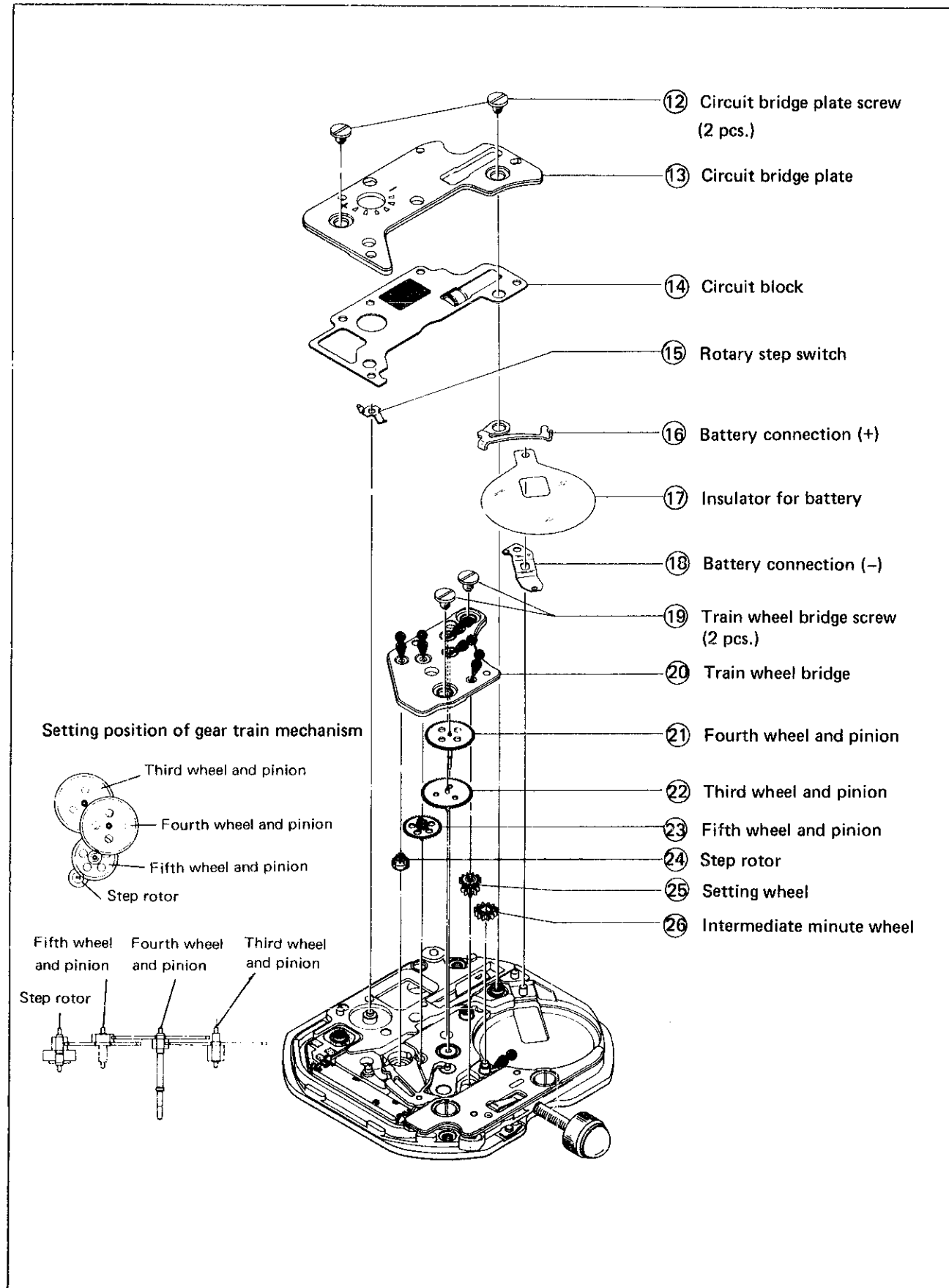
● Use the universal movement holder for disassembling and reassembling.

Reassembling procedures ④③ → ①

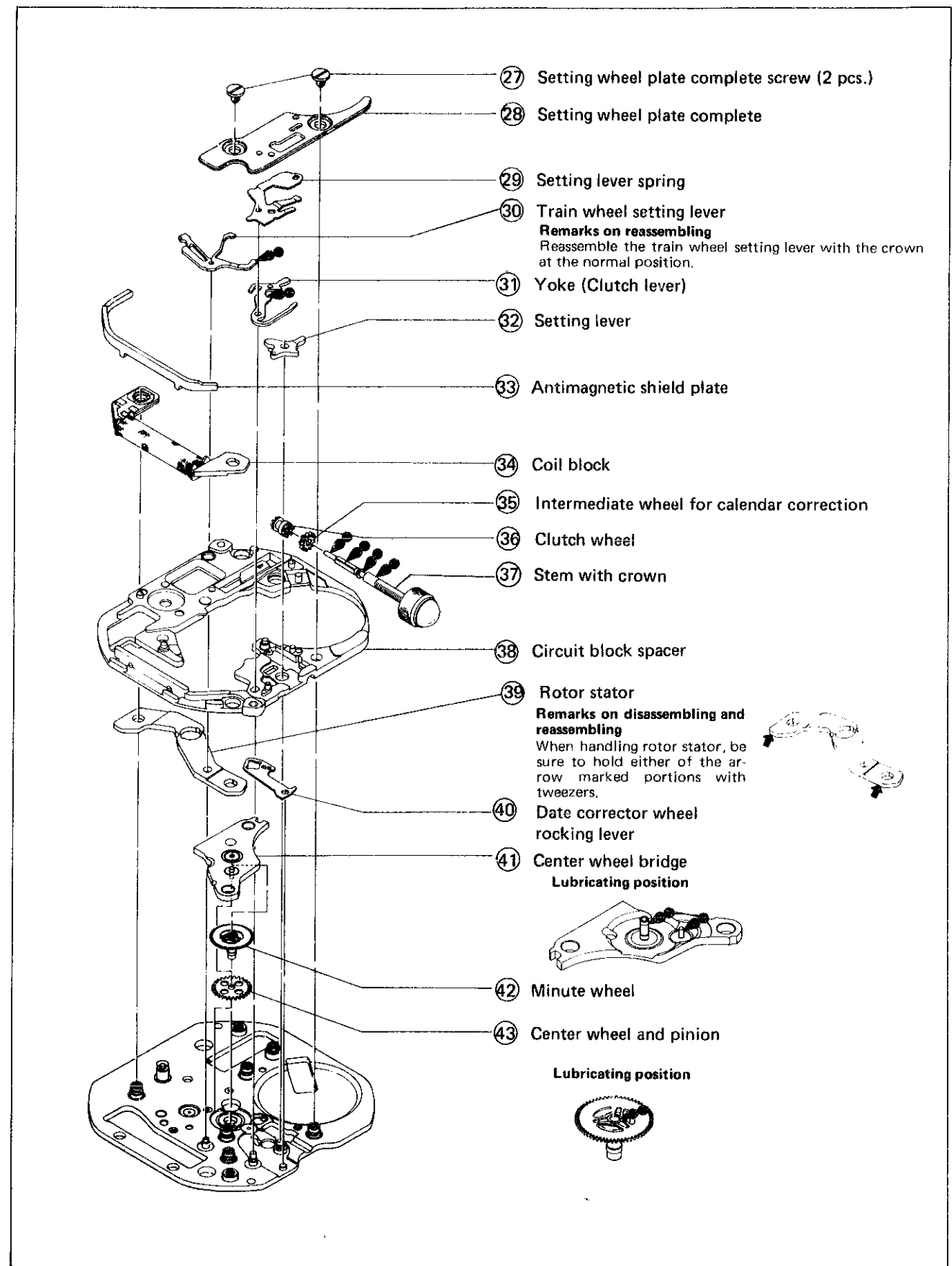
1. Hour and minute hands ~ hour wheel



2. Circuit bridge plate screw ~ Intermediate minute wheel



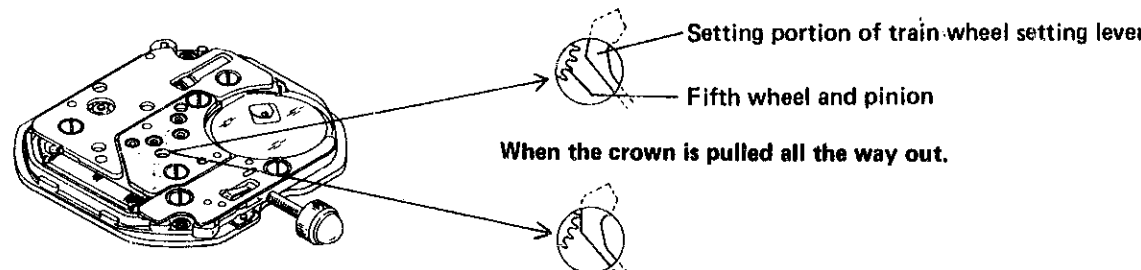
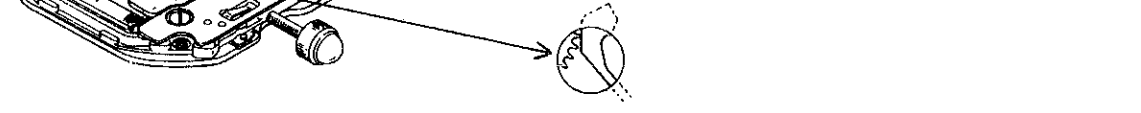
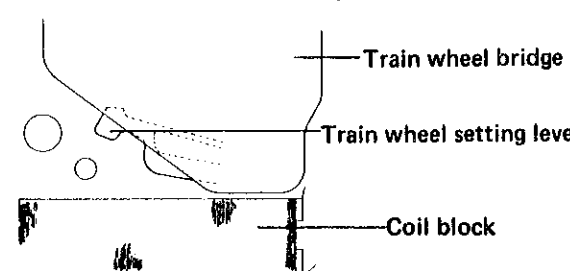
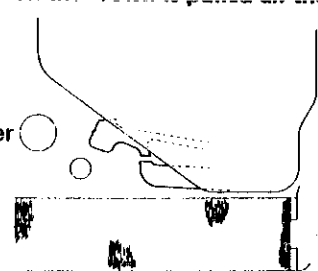
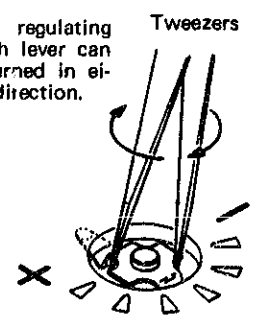
3. Setting wheel plate complete screw ~ center wheel and pinion



IV. CHECKING AND ADJUSTMENT

• The explanation here is only for the particular points of Cal. 9550A and 9559A. Refer to the "TECHNICAL GUIDE, GENERAL INSTRUCTION" for SEIKO Analogue Quartz for details.

Procedure	
CHECK OUTPUT SIGNAL	
Use the quartz tester. Range to be used: 10-second gate	Result: Normal : Input indicator blinks every 1 second. Defective: Input indicator does not blink every 1 second.
CHECK HAND SETTING CONDITION	
CHECK BATTERY VOLTAGE	
Set up the volt-ohm-meter Range to be used: DC 3V	Result: Normal : More than 1.5V Defective: Less than 1.5V
CHECK BATTERY CONDUCTIVITY	
CHECK CIRCUIT BLOCK CONDUCTIVITY	
CHECK COIL BLOCK	
Set up the volt-ohm-meter Range to be used: OHMS x 100	Result: Normal : $2.7K\Omega \sim 3.4K\Omega$ Defective- $\left\{ \begin{array}{l} \text{Less than } 2.7K\Omega \\ \text{(Short circuit)} \\ \text{More than } 3.4K\Omega \\ \text{(Broken wire)} \end{array} \right.$

Procedure
CHECK RESET AND TRAIN WHEEL SETTING CONDITIONS
<ol style="list-style-type: none"> 1. Check to see if the step rotor stops promptly when the crown is pulled all the way out and if it starts 1 second after the crown is pushed back to the normal position by using a microscope. 2. Check the clearance between train wheel setting lever and fifth wheel and pinion by looking through the hole of train wheel bridge. <div style="text-align: right;"> <p>When the crown is pushed back to the normal position.</p>  </div> <div style="text-align: right;"> <p>When the crown is pulled all the way out.</p>  </div> 3. Check the position of train wheel setting lever after disassembling the circuit block. <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>When the crown is pushed back to normal position.</p>  </div> <div style="text-align: center;"> <p>When the crown is pulled all the way out.</p>  </div> </div>
CHECK GEAR TRAIN MECHANISM
CHECK SETTING MECHANISM
CHECK ACCURACY
<p>Measuring time accuracy</p> <ul style="list-style-type: none"> • Use the 10-second gate of the quartz tester. • Be sure to protect the C-MOS-IC from light with case back or black paper, etc. while measuring. • Do not measure accuracy under an incandescent lamp, since strong light adversely affects time accuracy. <p>Adjusting time accuracy</p> <ul style="list-style-type: none"> • When adjusting time accuracy, turn the rotary step switch by tweezers and correspond either end of rotary step switch with a mark on circuit bridge plate. • The range to be regulated by the regulating switch lever is $\pm 0.26 \text{ sec./day}$. <div style="text-align: right;"> <p>The regulating switch lever can be turned in either direction.</p>  </div>

Procedure

CHECK CURRENT CONSUMPTION

- Be sure to protect the C-MOS-IC from light with black paper, etc. while measuring.
Do not check current consumption under an incandescent lamp, since strong light causes a watch to consume excess current.

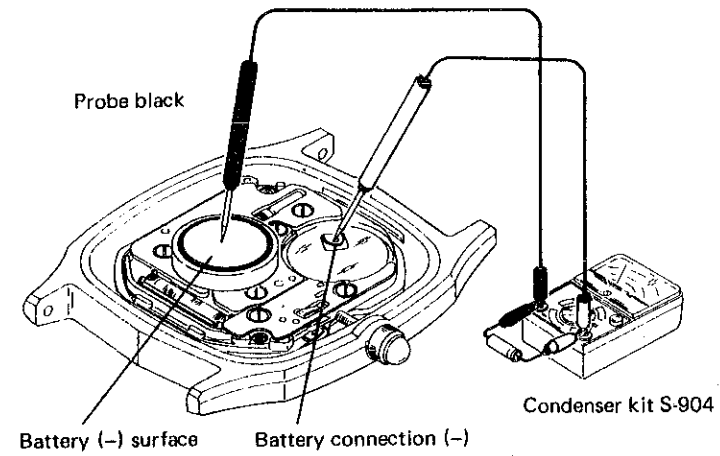
Set up the volt-ohm-meter

Range to be used: DC 12 μ A

Result:

Normal : Less than 0.9 μ A

Defective: More than 0.9 μ A



CHECK WATER RESISTANCE

CHECK CONDUCTIVITY OF SWITCH COMPONENTS

CHECK APPEARANCE AND FUNCTIONING

All procedures of Disassembling, Reassembling, Lubricating, Checking and Adjustment are completed.