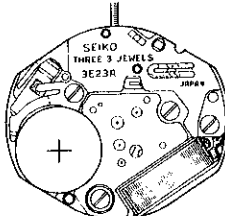
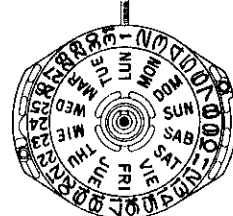


PARTS CATALOGUE/ TECHNICAL GUIDE

Cal. 3E22A, 3E23A, 3E29A

Cal. 3E32A, 3E39A

[SPECIFICATIONS]

Item		Cal. No.	3E22A	3E23A	3E29A	3E32A	3E39A	
Movement								
			The illustrations refer to Cal. 3E23A.				(x 1.0)	
Movement size	Outside diameter		ϕ 17.6 mm 15.3 mm between 3 o'clock and 9 o'clock sides			ϕ 19.8 mm 17.1 mm between 3 o'clock and 9 o'clock sides		
	Casing diameter		ϕ 17.1 mm 15.3 mm between 3 o'clock and 9 o'clock sides			ϕ 19.3 mm 17.1 mm between 3 o'clock and 9 o'clock sides		
	Height		2.5 mm	2.8 mm	2.5 mm			
Time indication			3 hands		2 hands	3 hands	2 hands	
Driving system			Step motor (Load compensated driving pulse type)					
Additional mechanism	Day		—	✓	—	—	—	
	Date		✓	✓	✓	✓	✓	
	Instant calendar setting device		✓	✓	✓	✓	✓	
	Train wheel setting device		✓	✓	✓	✓	✓	
	Electronic circuit reset switch		✓	✓	✓	✓	✓	
	Battery life indicator		✓	✓	—	✓	—	
Loss/gain			Monthly rate at normal temperature range: less than 15 seconds					
Regulation system			Nil					
Measuring gate by quartz tester			Use 10-second gate.					
Battery			Maxell SR621SW, SONY EVEREADY 364 Battery life is approximately 3 years. Voltage: 1.55V					
Jewels			3 jewels					

HATTORI SEIKO CO., LTD.

PARTS CATALOGUE

Cal. 3E22A, 3E23A, 3E29A
3E32A, 3E39A

Disassembling procedures Figs. : ① → ③⑧

Reassembling procedures Figs. : ③⑧ → ①

Lubricating: Types of oil

● Moebius A

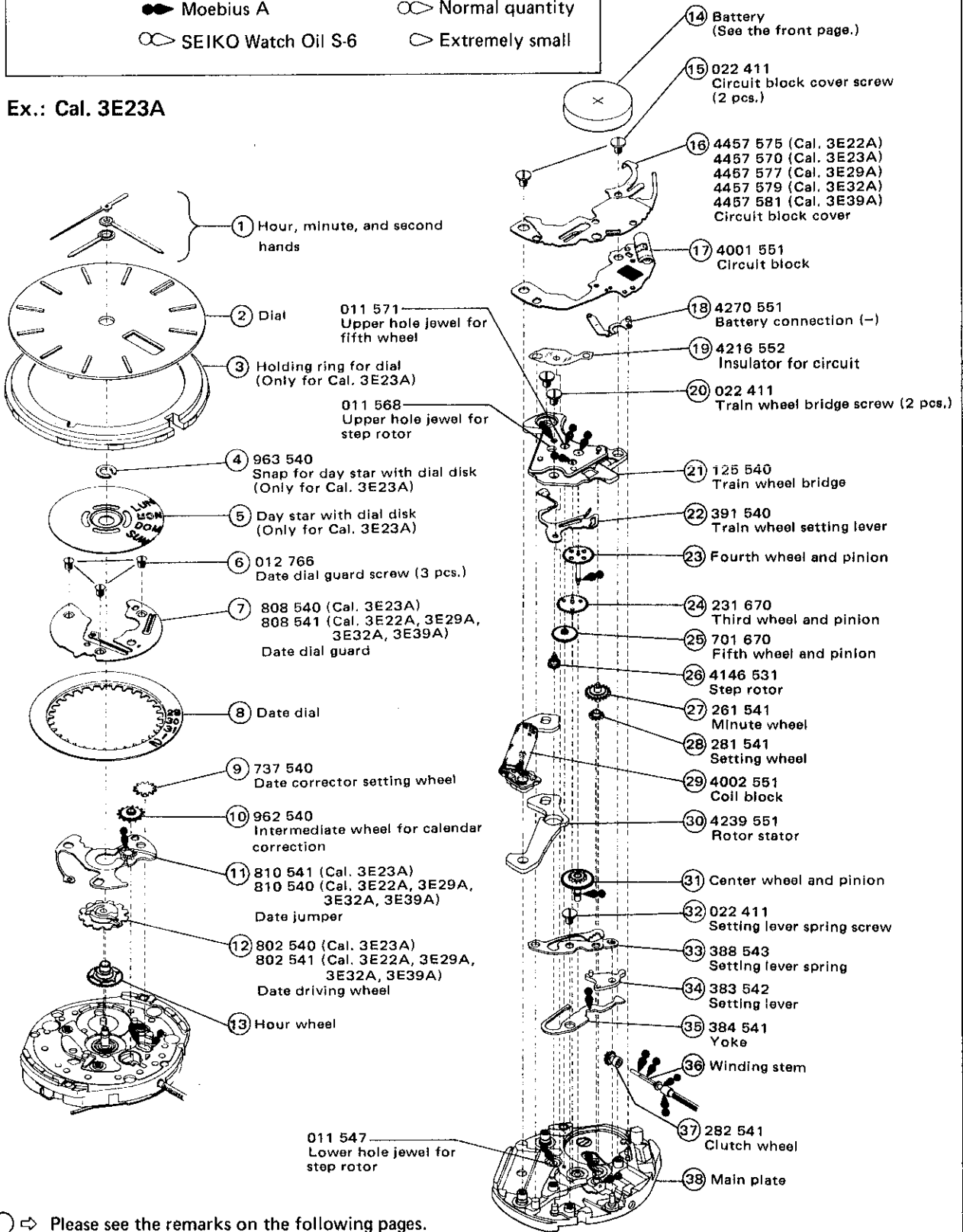
○ SEIKO Watch Oil S-6

Oil quantity

○ Normal quantity

○ Extremely small

Ex.: Cal. 3E23A



○ ⇨ Please see the remarks on the following pages.

PARTS CATALOGUE

Cal. 3E22A, 3E23A, 3E29A
3E32A, 3E39A

Remarks:

③ Holding ring for dial 866 553 (Only for Cal. 3E23A)

③⑥ Winding stem 351 546

The types of these parts depend on the design of each model.
Refer to "SEIKO Casing Parts Catalogue" to choose corresponding parts.

⑤ Day star with dial disk (Only for Cal. 3E23A)

Part code	Position of crown & calendar	Language	Color of figure	Color of background
470 919	3 o'clock	English ↔ Spanish	Black	White
470 924	3 o'clock	English ↔ Japanese	Black	White

If any other type of day star with dial disk is required, please specify the number inscribed on the disk.

⑧ Date dial

Cal. No.	Part code	Position of crown & calendar	Color of figure	Color of background
3E22A 3E29A	801 754	3 o'clock	Black	White
3E23A	801 725	3 o'clock	Black	White
3E32A 3E39A	801 809	Crown: 3 o'clock Calendar: 12 o'clock	Gold	Blue

If any other type of date dial is required, please specify ① Cal. No., ② the crown position, ③ the calendar frame position, and ④ Dial No.


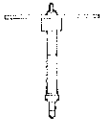


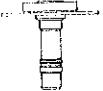
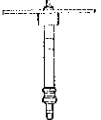
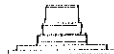

PARTS CATALOGUE

Cal. 3E22A, 3E23A, 3E29A
3E32A, 3E39A


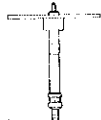



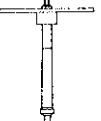

- ⑬ Hour wheel
- ⑳ Fourth wheel and pinion
- ㉑ Center wheel and pinion

Combination:


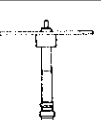


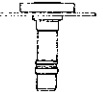
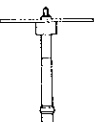


Cal. 3E22A, 3E32A

Type	Center wheel and pinion	Fourth wheel and pinion	Hour wheel	Main plate (Center part)	Cal. No.
a	 221 549	 241 549	 271 552	 101 547 (3E22A) 101 548 (3E32A)	3E22A 3E32A
b	 221 541	 241 553	 271 553	 101 540 (3E22A) 101 543 (3E32A)	

Cal. 3E23A

Type	Center wheel and pinion	Fourth wheel and pinion	Hour wheel	Main plate (Center part)	Cal. No.
a	 221 541	 241 553	 271 553	 101 540	3E23A
b	 221 542	 241 542	 271 551		

Cal. 3E29A, 3E39A

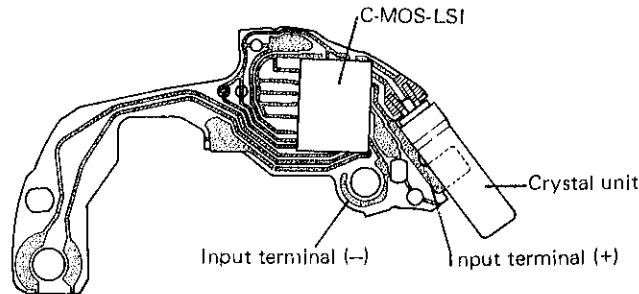
Type	Center wheel and pinion	Fourth wheel and pinion	Hour wheel	Main plate (Center part)	Cal. No.	
a	 221 549	 241 551	 271 552	 101 547 (3E29A) 101 548 (3E39A)	3E29A	3E39A
b	 221 541	 241 552	 271 553	 101 543		

TECHNICAL GUIDE

Cal. 3E22A, 3E23A, 3E29A
3E32A, 3E39A

- The explanation here is only for the particular points of Cal. 3E22A, 3E23A, 3E29A, 3E32A, and 3E39A.
- For the repairing, checking and measuring procedures, refer to the "TECHNICAL GUIDE, GENERAL INSTRUCTION".

I. STRUCTURE OF THE CIRCUIT BLOCK

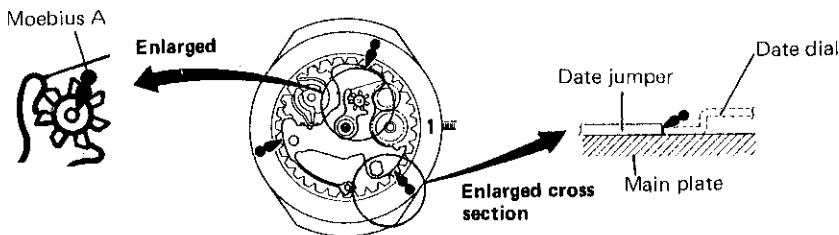


II. REMARKS ON DISASSEMBLING AND REASSEMBLING

Use the universal movement holder for disassembling and reassembling.

⑪ Date jumper

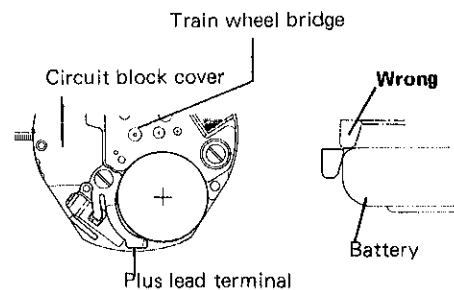
- **Lubricating**



⑭ Battery

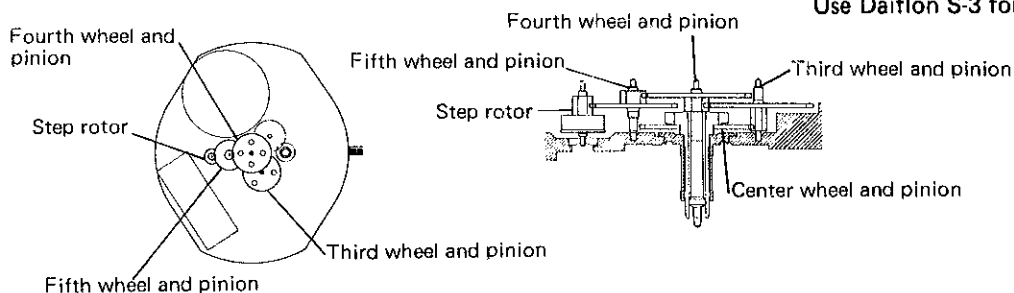
- **Setting position**

The plus lead terminal portion of the circuit block cover touches the side surface of the battery.



⑳ Train wheel bridge

- **Setting position**



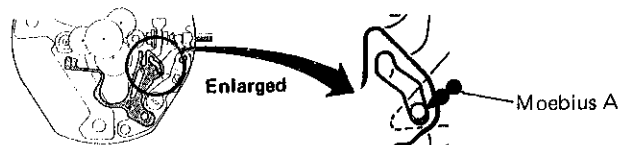
- **Cleaning**

Use Daiflon S-3 for cleaning.

②② Train wheel setting lever

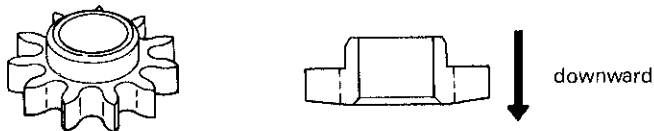
- Setting position

- Lubricating



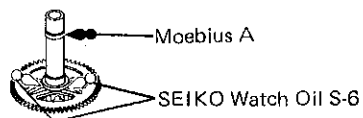
②⑧ Setting wheel

- Installing



③① Center wheel and pinion

- Lubricating



III. VALUE CHECKING

- Coil block resistance

3.4K Ω ~ 4.1K Ω

- Current consumption

For the whole of the movement : less than 0.9 μ A

For the circuit block alone : less than 0.4 μ A

Remarks:

When the current consumption exceeds the standard value for the whole of the movement but is less than the standard value for the circuit block alone, overhaul and clean the movement parts and then measure current consumption for the whole of the movement again. The driving pulse generated to compensate a heavy load that may apply on the gear train, etc. is considered to cause excessive current consumption for the whole of the movement.