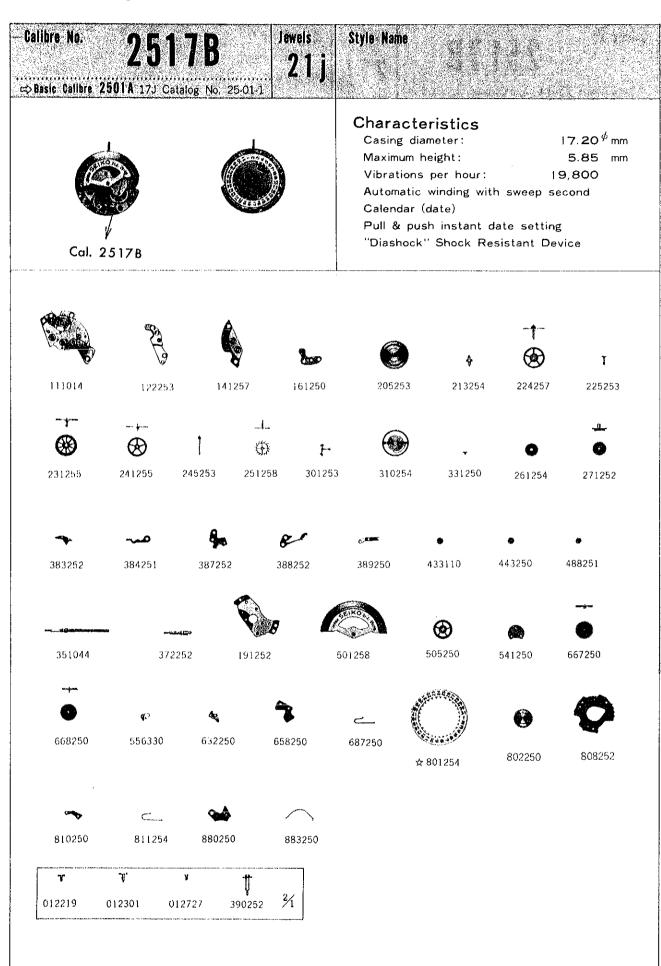
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☆⇔Please see remarks on the reverse page

As for all other parts not shown here, please refer to the basic calibre (Cat. No. 2501 A 17J Catalog No. 25-01-1 Red page),

Catalog Z o

N

5-17

Calibre No. lewels Style Name 21 i ⇔ Basic Calibre 2501 A 17J Catalog No. 25-01-1 LIST OF MATERIALS PART NO. LIST OF MATERIALS PART NO. 111014 Barrel bridge 011212 Diashock cap jewel 122253 Center wheel bridge 014417 Diashock spring Fourth wheel bridge 141257 501258 Oscillating weight with pinion 161250 Pallet cock 505250 Transmission wheel Balance cock Oscillating weight axle 171250 541250 Framework for automatic device 191252 545030 Oscillating weight fork 205253 Complete barrel with arbor 667250 First locking wheel 213254 Barrel arbor 668250 Second locking wheel 224257 Center wheel & pinion with cannon 556330 Date finger 632250 pinion Date corrector finger 225253 Date corrector guard Cannon pinion 658250 231255 Third wheel & pinion 687250 Date corrector finger spring Fourth wheel & pinion 241255 ☆ 801254 Date dial Sweep second pinion 245253 802250 Date driving wheel 251258 Escape wheel & pinion 808252 Date dial guard 261254 Minute wheel 810250 Date jumper 271252 Hour wheel 811254 Date jumper spring 281250 Setting wheel 880250 Date corrector Clutch wheel 282250 883250 Date corrector spring 283250 Winding pinion 012118 Barrel bridge screw, short 284250 Crown wheel 012118 Fourth wheel bridge screw 285250 Ratchet wheel 012118 Balance cock screw Jewelled pallet fork & staff 301253 012118 Setting lever axle spring screw 310254 Balance complete with stud 012120 Dial screw 315250 Balance staff 012121 Stud screw Roller with jewel 331250 012204 Pallet cock screw 341250 Regulator 012219 Center wheel hridge screw Stud holder 345250 012241 Framework screw for automatic device 351044 Winding stem Barrel bridge screw, long 012252 372252 Joint stem (movement portion) 012301 Date corrector spring screw Joint stem (case portion) 373250 012407 Case screw Click 381030 012501 Crown wheel screw Click spring 382030 012642 Click screw 383252 Setting lever 012711 Screw for oscillating weight axle 384251 Yoke (Clutch lever) 012727 Minute wheel bridge screw 385250 Yoke spring (Clutch lever spring) 012727 Date dial guard screw 387252 Minute wheel bridge 012727 Date corrector guard screw 388252 Setting lever spring 012744 Screw for oscillating weight fork 389250 Setting lever axle spring 011521 Upper hole jewel for center wheel 390252 Setting lever axle 011153 Lower hole jewel for center wheel Mainspring with slipping attachment 401030 011423 Lower hole jewel for 3rd wheel (self-greasing) 011423 Lower hole jewel for 4th wheel 433110 Upper hole jewel with frame for Lower hole jewel for sweep second pinion 011713 escape wheel 011528 Lower hole jewel for escape wheel 443250 Upper hole jewel with frame for 3rd 011505 Upper hole jewel for pallet wheel 011505 Lower hole lewel for pallet 443250 Upper hole jewel with frame for 4th 011157 Upper hole jewel for transmission wheel wheel 011157 Lower hole jewel for transmission wheel 481250 Crown wheel ring 013106 Tube for minute wheel bridge screw 488251 Upper hole jewel with frame for (Cylinder type) sweep second pinion 013113 Tube for bridge screvi, short 491180 Dial washer Tube for minute wheel bridge screw 013175 014413 Diashock upper frame (Recessed type) 014414 Diashock lower frame 013176 Tube for bridge screw, long 014415 Diashock hole jewel with frame Remarks :

Date dial

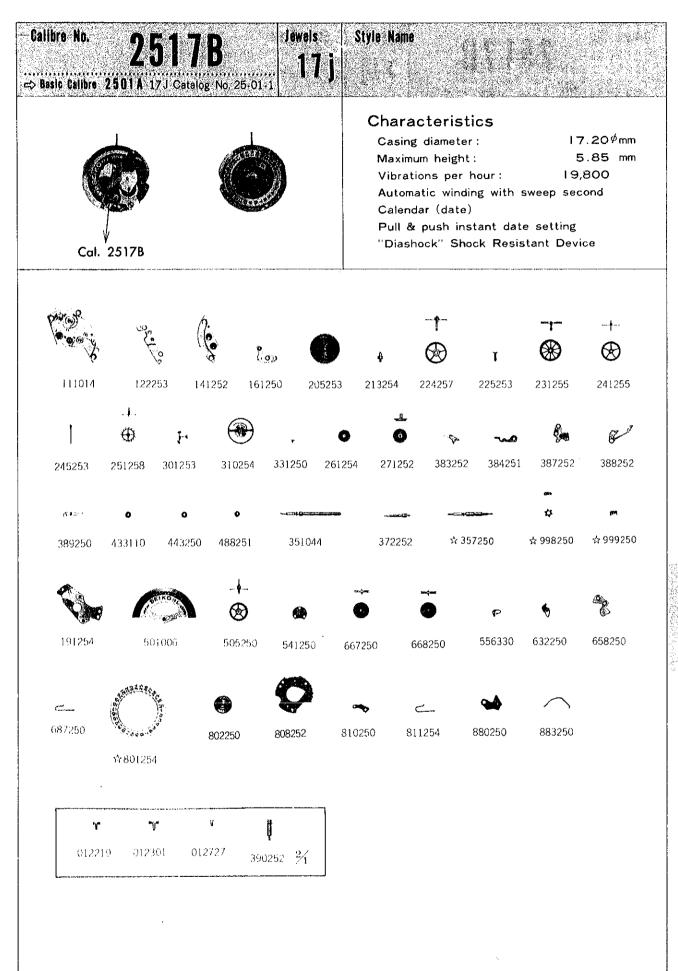
^{☆ 801254 ·······}Used when both the crown and the date frame are located at 3 o'clock.

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

^{☆ ⇒} Please see remarks.

Items in light letters are not shown in photos; those parts are interchangeable with the basic calibre

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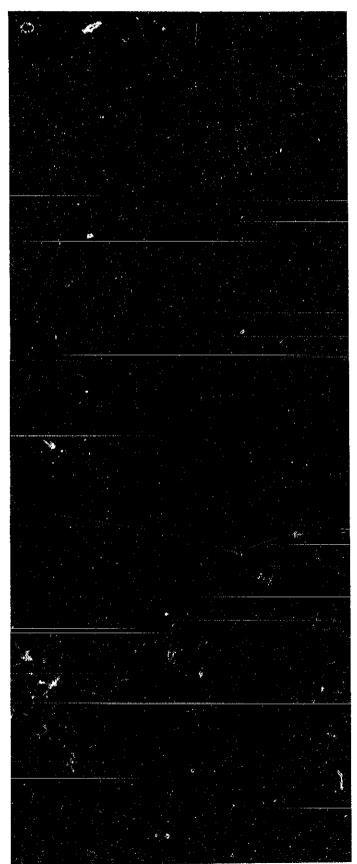
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Calibre No.	0 F 4 T B	Jewels	Style Name			
	2517B	17:				
		17 j				
⇒ Basic Calibre	2501A 17 J Catalog No. 25-01-1	<u> </u>	<u> </u>			
PART NO.	. LIST OF MATERIALS		PART NO.	LIST OF MATERIALS		
111014	Barrel bridge		014415	Diashock hole jewel with frame		
122253	Center wheel bridge		011212	Diashock cap jewel Diashock opring		
141252 161250	Fourth wheel bridge Pallet cock		014417 501006	Oscillating weight with pinion		
171250	Balance cock		505250	Transmission wheel		
191254	Framework for automatic o		541250	Oscillating weight axle		
205253	Complete barrel with arbor		545030 667250	Oscillating weight fork First locking wheel		
213254 224257	Barrel arbor Center wheel & pinion with	cannon	668250	Second locking wheel		
	pinion		556330	Date finger		
225253	Cannon pinion		632250	Date corrector finger		
231255	Third wheel & pinion		658250 687250	Date corrector guard Date corrector finger spring		
241255 245253	Fourth wheel & pinion Sweep second pinion		801254 ☆	Date corrector ringer spring		
251258	Escape wheel & pinion		802250	Date driving wheel		
261254	Minute wheel		808252	Date dial guard		
271252 281250	Hour wheel Setting wheel		810250 811254	Date jumper Date jumper spring		
282250	Clutch wheel		880250	Date corrector		
283250	Winding pinion		883250	Date corrector spring		
284250	Crown wheel		012118	Barrel bridge screw, short		
285250 301253	Ratchet wheel Jewelled pallet fork & sta	ff	012118 012118	Fourth wheel bridge screw Balance cock screw		
310254	Balance complete with stu-		012118	Setting lever axle spring screw		
315250	Balance staff		012120	Dial screw		
331250	Roller with jewel		012121	Stud screw		
3 41250 3 45250	Regulator Stud holder		012204 012219	Pallet cock screw Center wheel bridge screw		
351044)			012241	Framework screw for automatic device		
357250	Winding stem		012252	Barrel bridge screw, long		
372252	Joint stem (movement port	ion)	012301	Date corrector spring screw		
373250 381030	Joint stem (case portion) Click		012407 012501	Case screw Crown wheel screw		
382030	Click spring		012642	Click screw		
383252	Setting lever		012711	Screw for oscillating weight axle		
384251	Yoke (Clutch lever)	,	012727	Minute wheel bridge screw		
385250 387252	Yoke spring (Clutch lever spring Minute wheel bridge	,	012727	Date dial guard screw Date corrector guard screw		
388252	Setting lever spring		012744	Screw for oscillating weight fork		
389250	Setting lever axle spring		011521	Upper hole jewel for center wheel		
390252	Setting lever axle	ant	011153	Lower hole jewel for center wheel		
401030	Mainspring with slipping attachm (self-greasing)	ent	011423 011713	Lower hole jewel for 3rd wheel Lower hole jewel for sweep second pinion		
433110	Upper hole jewel with fram	e for	011528	Lower hole jewel for escape wheel		
	escape wheel		011505	Upper hole jewel for pallet		
443250	Upper hole jewel with fram	e for	011505	Lower hole jewel for pallet Tube for minute wheel bridge screw		
481250	3rd wheel Crown wheel ring		013106	(Cylinder type)		
488251	Upper hole jewel with fram	ne for	013113	Tube for bridge screw, short		
<u>, -</u>	sweep second pinion		013175	Tube for minute wheel bridge screw		
491180	Dial washer Indicator wheel		012174	(Recessed type)		
☆ 998250 ☆ 999250	Indicator wheel spring		013176	Tube for bridge screw, long		
014413	Diashock upper frame					
014414	Diashock lower frame		<u> </u>			
Remarks :	☆357250 (Winding stem) ☆998250 (Indicator wheel) ☆999250 (Indicator wheel spr	. !	e parts are availabl	e only for watches with rotating dial ring.		
	\$801254 (Date dial) ········	·· Used when	both the crown ar	nd the date frame are located at 3o'clock.		
	If the date dial is require ③ the date frame positi) Cal. No. ② the crown position		

As for all other parts not shown here, please refer to the basic calibre (Cal. No. 2501 A 17 J Catalog No. 25-01-1 Red page).

Items in light letters are not shown in photos; those parts are interchangeable with the basic calibre

⁽Cal. No. 2501 A 17 J Catalog No. 25-01-1 Red page).



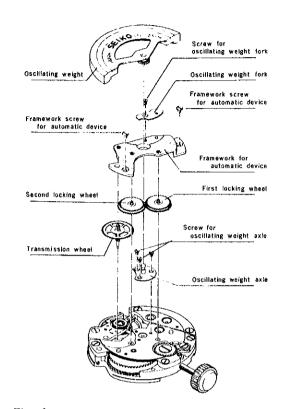


Fig. 1

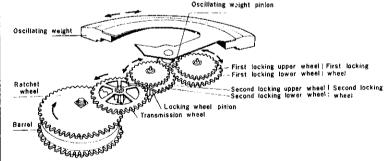
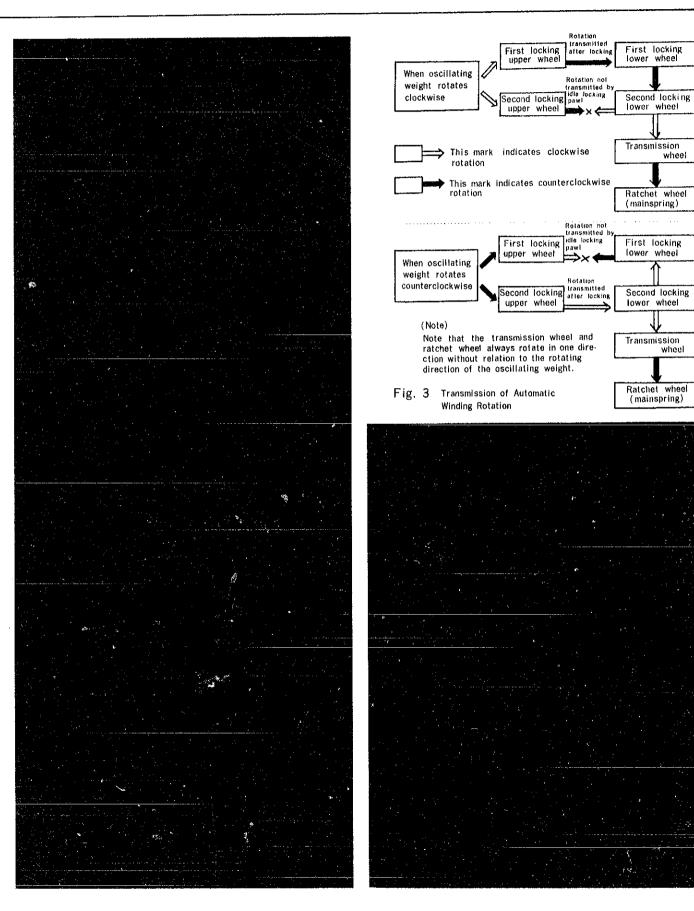
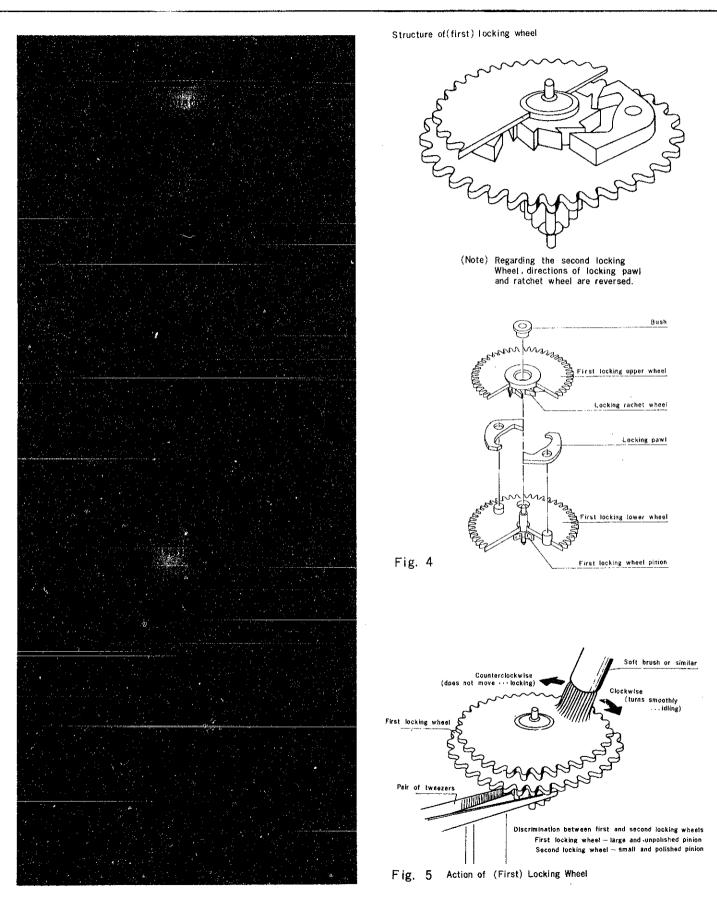
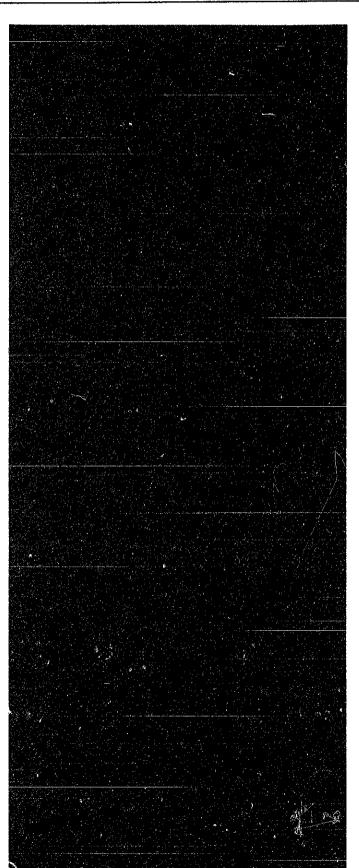


Fig. 2 Structure of Automatic Winding Gear Train







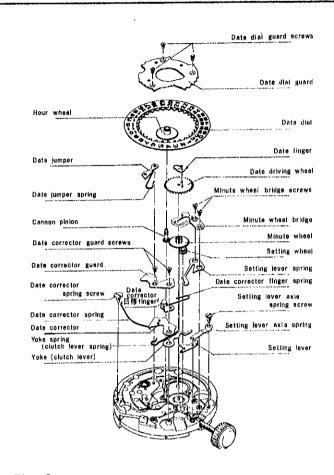


Fig. 6

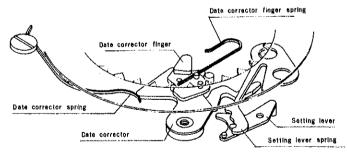
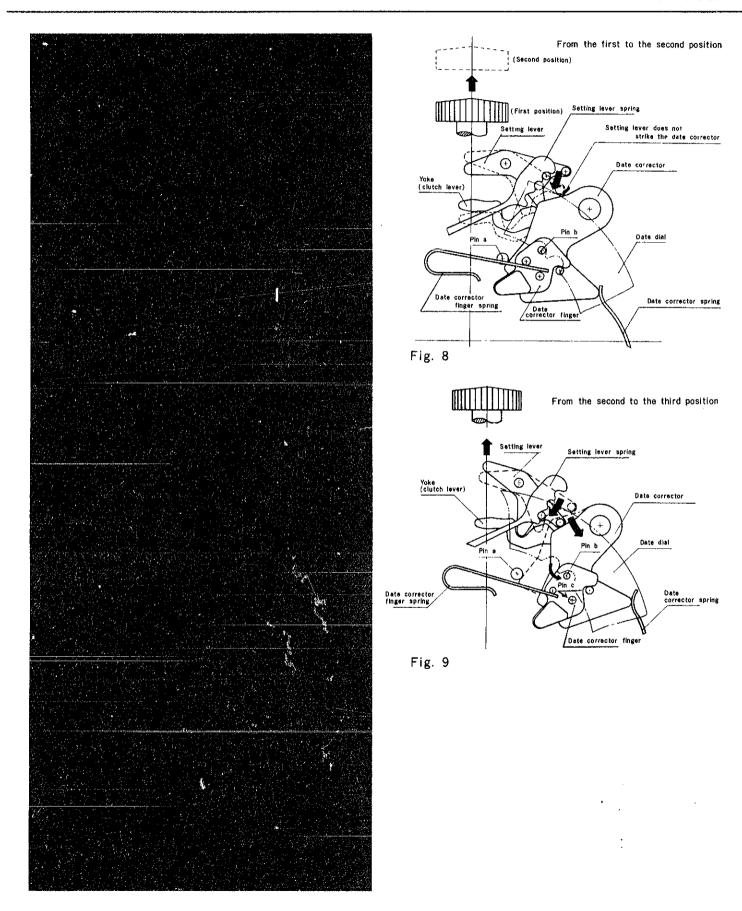
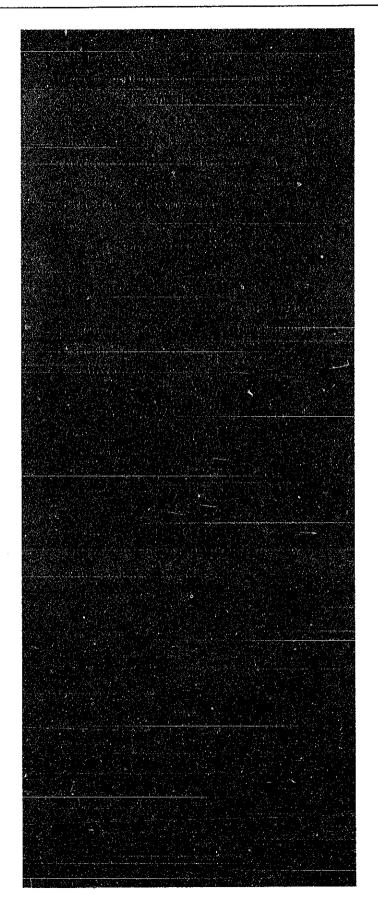
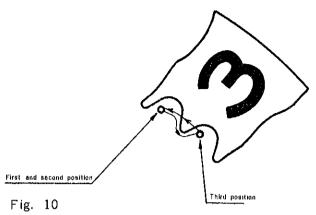


Fig. 7







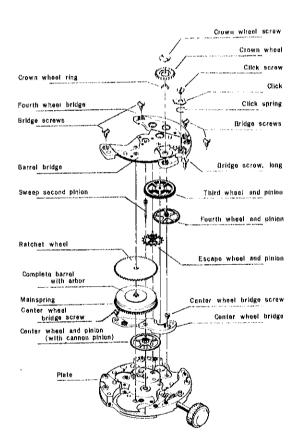
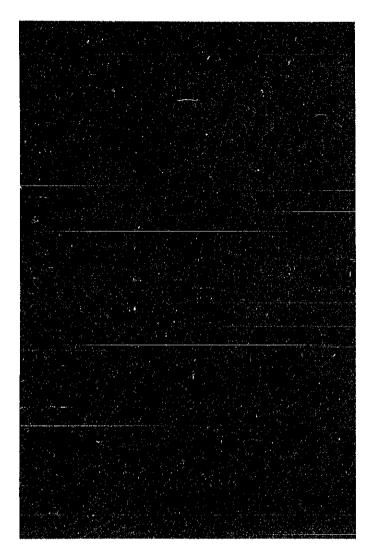


Fig. 11 Force Transmission Mechanism



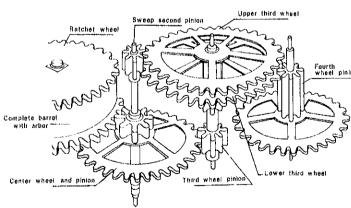
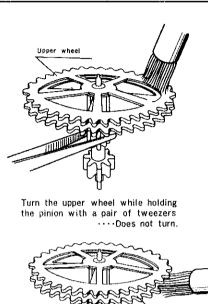
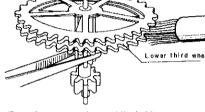


Fig. 12





Turn the lower wheel while holding the pinion with a pair of tweezers Turns smoothly.

Fig. 13

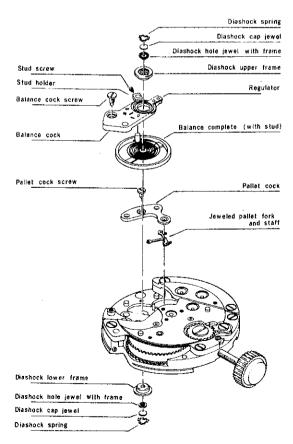


Fig. 14

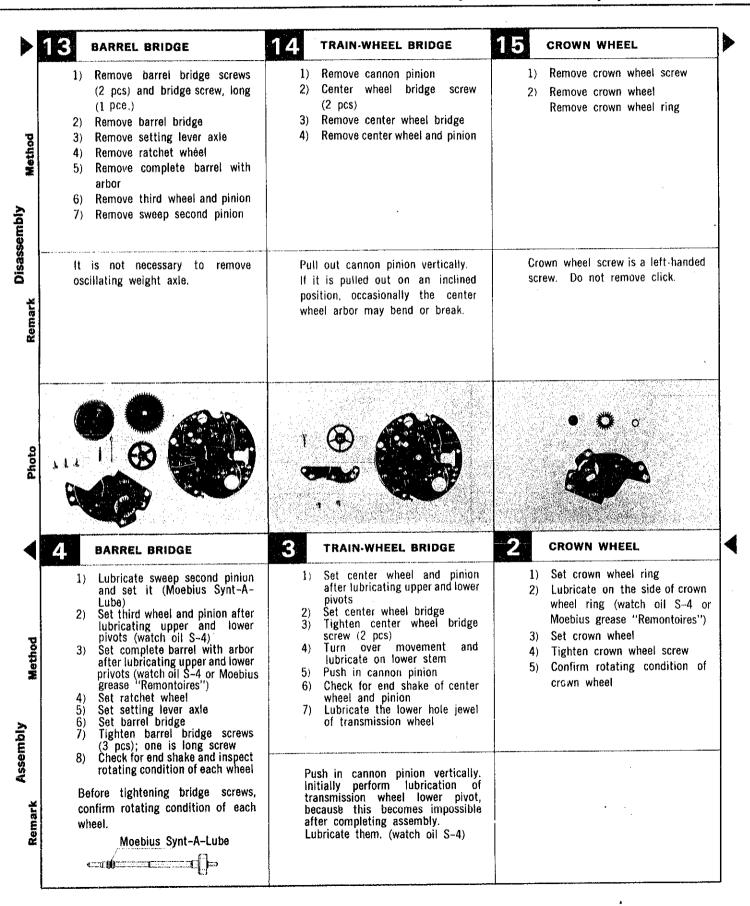
FRAMEWORK FOR AUTOMATIC DEVICE OSCILLATING WEIGHT Remove framework screws for 1) Remove screw for oscillating automatic device (2 pcs) weight fork 2) Remove oscillating weight fork 2) Remove framework 3) Remove oscillating weight Check height of oscillating weight Disassembly from surface of plate before removing it and confirm that oscillating weight does not touch the plate or case back. When removing oscillating weight in a condition that force of mainspring is left applied, sometimes the lewel may be broken. Disassembly should be started after teeth of the click and crown wheel are interlocked. CONFIRMATION OF OSCILLATING WEIGHT ROTATING CONDITION 1) Wind crown slowly after placing movement horizontally, facing oscillating weight upward Then, confirm whether or not oscillating weight rotates (escape checking); if it rotates, then escaping is defective. When mainspring is considerably wound, turn the oscillating weight by approximately 90 FRAMEWORK FOR OSCILLATING WEIGHT several times with a finger, AUTOMATIC DEVICE then release oscillating weight Set framework for automatic and check reversing angle Lubricate oscillating weight (lock checking). axle (watch oil S-4 or Moebius device 4) Fully wind and place movement grease "Remontoires") 2) Fasten framework screws for vertically; rotate the movement Set oscillating weight automatic device (2 pcs) slowly to check whether or not Lubricate a portion of oscillating Check end shakes of first and oscillating weight rotates weight fork where it contacts together with movement. the oscillating weight (watch oil second locking wheel (following rotation check) S-4 or Moebius grease "Remon-4) Lubricate upper pivot of transtoires'') mission wheel (watch oil S-4) Set oscillating weight fork on framework for automatic device and fasten its screw 5) Fasten screw for oscillating When oscillating weight rotates in Assembly case above, this indicates defective 6) Check for end shake and height escaping of locking wheel, requiring of oscillating weight When tightening framework screws cleaning. Reversely rotating over for automatic device, do so after 90 indicates defective locking of Height of oscillating weight is confirming correct interlock of lockthe locking wheel, requiring satisfactorily positioned when the ing wheel and locking wheel pivot. clearance with framework is between replacing. Correctly lubricate upper pivot with If oscillating weight rotates together minimum 0.2mm and maximum only a small quantity of oil. with movement, check escapement 0.4mm. of locking wheel, and height and end shake of oscillating weight.

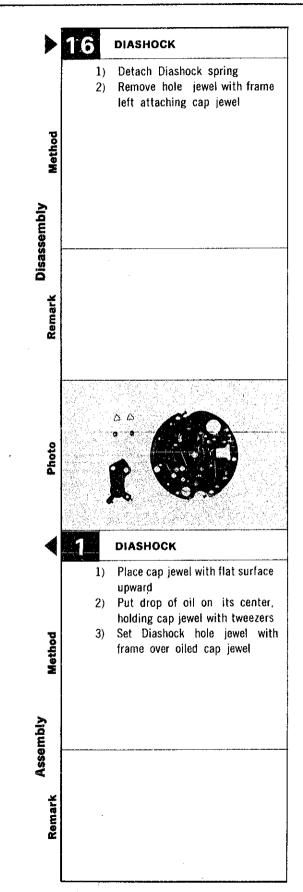
	3 LOCKING WHEEL AND TRANSMISSION WHEEL],
q	Remove second locking wheel Remove first locking wheel Remove transmission wheel			
noiy Method				
Disassemoly Remark	Discriminating features of differential wheels are— Outer diameter of pinion is large and teeth are thinFirst locking wheel Outer diameter of pinion is small and teeth are thickSecond locking wheel			3
Photo				
4	16 LOCKING WHEEL AND TRANSMISSION WHEEL	15 CHECK OF LOCKING WHEEL	14. LUBRICATION	1
Method	Set transmission wheel Lubricate upper and lower pivots of first and second locking wheels (Moebius Synt-A-Lube) Set first locking wheel Set second locking wheel	Check escaping and locking conditions of locking wheel by turning it with a very soft paint brush while holding the locking wheel pinion with tweezers.	Refer to p. 2517—14	
Assembly Remark	Set second locking wheel on the nearer portion to transmission wheel.	As shown in above photo, when checking escape of locking wheel, turn locking upper wheel in escape direction with a small paint brush while holding pinion with tweezers. If rotation is sluggish, escape is defective. Concerning the direction of escape, first locking wheel is right rotation (clockwise) and second locking wheel is left rotation (counterclockwise). (For the locking test, turn locking wheel in reverse direction. If it turns reversely above 45°, this is defective locking.)		

2	DATE DIAL GUARD DATE JUMPER	DATE DRIVING WHEEL (WITH DATE FINGER & SPRING)	6 BALANCE COCK
Method	 Remove date dial guard screws (3 pcs) Remove date dial guard Remove date jumper Remove date dial Remove date jumper spring 	Remove date finger Remove date driving wheel Detach date corrector finger spring Remove date corrector finger	 Unwind mainspring Remove balance cock screw Remove balance cock
Kemark	When removing date dial, pay attention to date jumper spring because it easily leaps off.	When detaching date finger spring, pay attention to avoid bending the spring welded portion while holding it up. Also handle the date corrector finger spring carefully because it springs up easily. Since the date jumper spring and date corrector finger spring are similar size and shaped, previously confirm their shapes.	Before removing balance cock, confirm state of playing of hair-spring between regulator key stud and pin portion to be realized while assembling. When removing the balance cock with balance, be careful not to deform shape of hairspring.
93011	DATE DIAL GUARD		
	1) Set date jumper spring 2) Set date dial 3) Set date jumper 4) Set date jumper 4) Set date dial guard 5) Fasten date dial guard screws (3 pcs) 6) Lubricate on the side cannon pinion (watch oil S-4 or Moebius grease "Remontoires") 7) Set hour wheel 8) Make test run of date dial (5 rotations) 9) Check for date driving and date correcting conditions	12 DATE DRIVING WHEEL DATE CORRECTOR FINGER 1) Set date corrector finger 2) Set date corrector finger spring 3) Lubricate tube for date driving wheel screw (Moebius Synt-A-Lube) 4) Set date driving wheel 5) Set date finger	1) Set balance cock with baiance 2) Fasten balance cock screw 3) Check for proper end shake of balance 4) Check for state of hairspring and action of escapement 5) Adjust height of stud head
Kemark	Inspect for dust on date dial guard and date dial guide portion of plate. When change of date dial is defective, apply a small quantity of Moebius Synt-A-Lube to contacting side surface of date jumper. Never allow height of date dial guard screw to project above date dial guard.	Correctly insert date corrector finger spring into recessed portion of minute wheel bridge; further, make sure not to confuse with date jumper spring. Carefully assemble date finger to prevent deforming it.	Do not change the condition of hairspring and shape of hairspring.

7	BALANCE	8	JEWELED PALLET FORK & STAFF	9	DATE CORRECTOR
	Remove stud after loosening stud screw Remove balance by turning regulator key with driver	1) 2) 3)	Remove pallet cock screw Remove pallet cock Remove pallet	2) 3)	screws (2 pcs)
	Pay attention not to deform shape of hairspring.			1	o not remove date corrector spring d date corrector spring screw.
10	BALANCE	9	JEWELLED PALLET FORK & STAFF	8	DATE CORRECTOR
	 Check shape of hairspring Place balance on balance cock Insert hairspring between regulator key and regulator pin, and insert stud into stud holder Turn regulator key Fasten stud screw 		Lubricate jeweled pallet fork (Moebius Synt-A-Lube) Set pallet and cock Fasten pallet cock screw Lubricate pallet upper and lower pivots Confirm engaging degree of pallet jewel	1) 2) 3) 4)	Set date corrector guard
	When inserting stud into stud holder and inserting hairspring between regulator key and regulator pin, make sure not to deform shape of hairpring.	sho for 1/2	gagement of jeweled pallet fork buld be 1/4-1/5 of jewel width the first lock and approximately of the first lock quantity for second lock.	tive	nen date corrector shows defec- e action, sometimes it is due to proper lubrication of setting lever, carefully check it.

YOKE (CLUTCH LEVER) AND MINUTE WHEEL	11	WINDING STEM AND SETTING LEVER	12	FOURTH WHEEL BRIDGE
1) Remove minute wheel bridge screw (2 pcs) 2) Remove minute wheel bridge 3) Remove setting lever spring 4) Remove minute wheel and setting wheel 5) Remove yoke spring (clutch lever spring) and yoke (clutch lever)	1) 2) 3) 4) 5)	Remove setting lever axle spring screw Remove setting lever axle spring Remove setting lever Remove winding stem Remove clutch wheel and winding wheel	1) 2) 3) 4)	Remove fourth wheel bridge screws (2 pcs) Remove fourth wheel bridge Remove fourth wheel and pinion Remove escape wheel and pinion
Be careful not to deform yoke spring.				
			~	
YOKE (CLUTCH LEVER) AND MINUTE WHEEL	6	WINDING STEM AND SETTING LEVER	5	FOURTH WHEEL BRIDGE
Set yoke, clutch lever spring Set setting wheel and minute wheel Set setting lever spring Set minute wheel bridge Fasten minute wheel bridge screw (2 pcs) Check for end shake of minute wheel and conditions of crown extracting and depressing	1) 2) 3) 4) 5) 6)	Set winding wheel and clutch wheel Set winding stem after lubricating it (watch oil S-4 or Moebius grease "Remontoires") Set setting lever Set setting lever axle spring Fasten setting lever axle spring screw Lubricate tube for yoke, setting lever, winding wheel, clutch wheel, setting wheel,		after lubricating upper and lower pivots (Moebius Synt- A-Lube)
7) Check for conditions of free running and hand setting		and tube for minute wheel pin (watch oil S-4 or Moebius grease "Remontoires")		Total Ing Control of Such Miles





Identification of locking wheel and lubrication method

There are three types of I, II and III locking wheels used in the 25-series automatic watch, the lubrication method different for each type.

When repairing watches, the type must be correctly identified to perform appropriate lubrication.

to bettoti	n appropriate ruo		
Type Item	I	П	Ш
	Moebius Synt-A-Lube	Moebius Synt-A-Lube	
Rear-view Shape	Vienna de la companya della companya della companya de la companya della companya	VAN ON A STATE OF THE STATE OF	
	○Tip of pawl visible through viewing hole	OTip of pawl visible through viewing hole	OPawi not visible through viewing hole
	⊖Pivot diameter smaller than type ∏ locking wheel	OPivot diameter larger than type I locking wheel	
Lubrication method	l carting an ciling st	locking wheel by in- ick through pawl Il quantity of Moebius	Lubrication unnecessary
	Pawl	Locking ratchet	- <u>-</u> -
Parts num- ber of	First locking wheel, 667031	First locking wheel, 667032	First locking wheel, 667250
Locking wheel correspond	Second locking wheel, 668031	Second locking wheel, 668032	Second locking wheel, 668250

Table 1 Identification of Locking Wheel and Lubrication Method