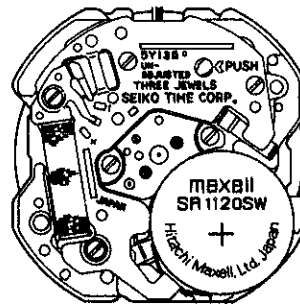
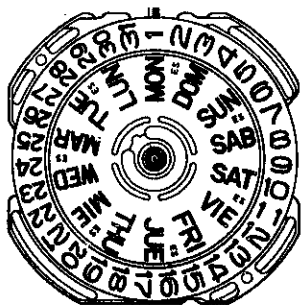


TECHNICAL GUIDE

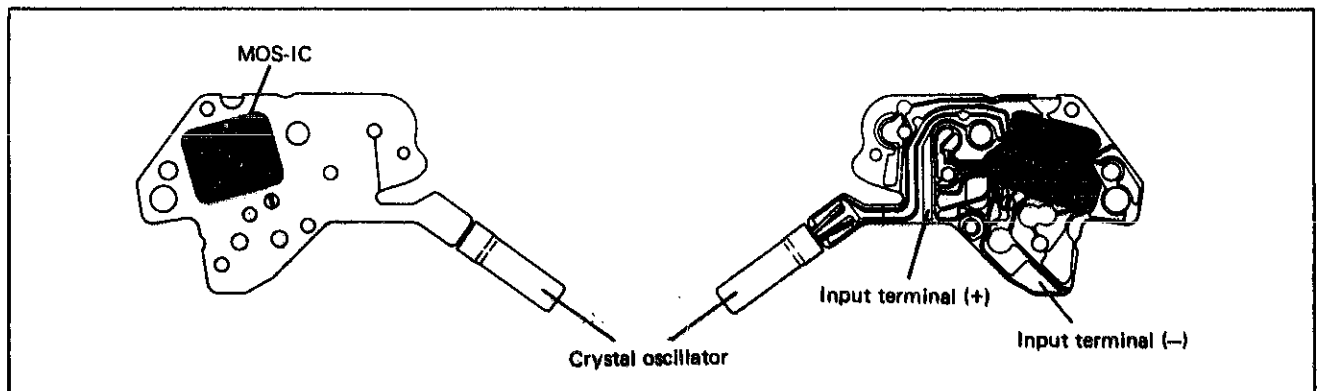
CAL. 5Y01A
CAL. 5Y02A
CAL. 5Y13A



I. SPECIFICATIONS

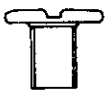
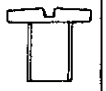
Cal. No.		5Y01A	5Y02A	5Y13A
Item				
Time indication	3 hands			
Driving system	Step motor (Load compensated driving pulse type)			
Additional mechanism		--	--	Day
		--	Date	
		--	Instant day and/or date setting device	
	Train wheel setting device			
	Electronic circuit reset switch			
Loss/gain	Monthly rate at normal temperature range: less than 15 seconds			
Movement size	Outside diameter	ϕ 24.0 mm 21.0 mm between 6 o'clock and 12 o'clock sides 19.0 mm between 3 o'clock and 9 o'clock sides		ϕ 26.4 mm 23.5 mm between 6 o'clock and 12 o'clock sides and between 3 o'clock and 9 o'clock sides
	Casing diameter	ϕ 23.3 mm		ϕ 25.6 mm
	Height	2.3 mm without battery	2.7 mm without battery	2.9 mm without battery
Regulation system	Rotary step switch			
Measuring gate by quartz tester	Use the 10-second gate.			
Battery	SEIKO (SEIZAIKEN) TR920SW, Maxell SR920SW, SONY EVEREADY 371		SEIKO (SEIZAIKEN) TR1120SW, Maxell SR1120SW, U.C.C. 381, SONY EVEREADY 381	
	Battery life is approximately 3 years.		Battery life is approximately 5 years.	
	Voltage: 1.55V			
Jewels	3 jewels			

II. STRUCTURE OF THE CIRCUIT BLOCK



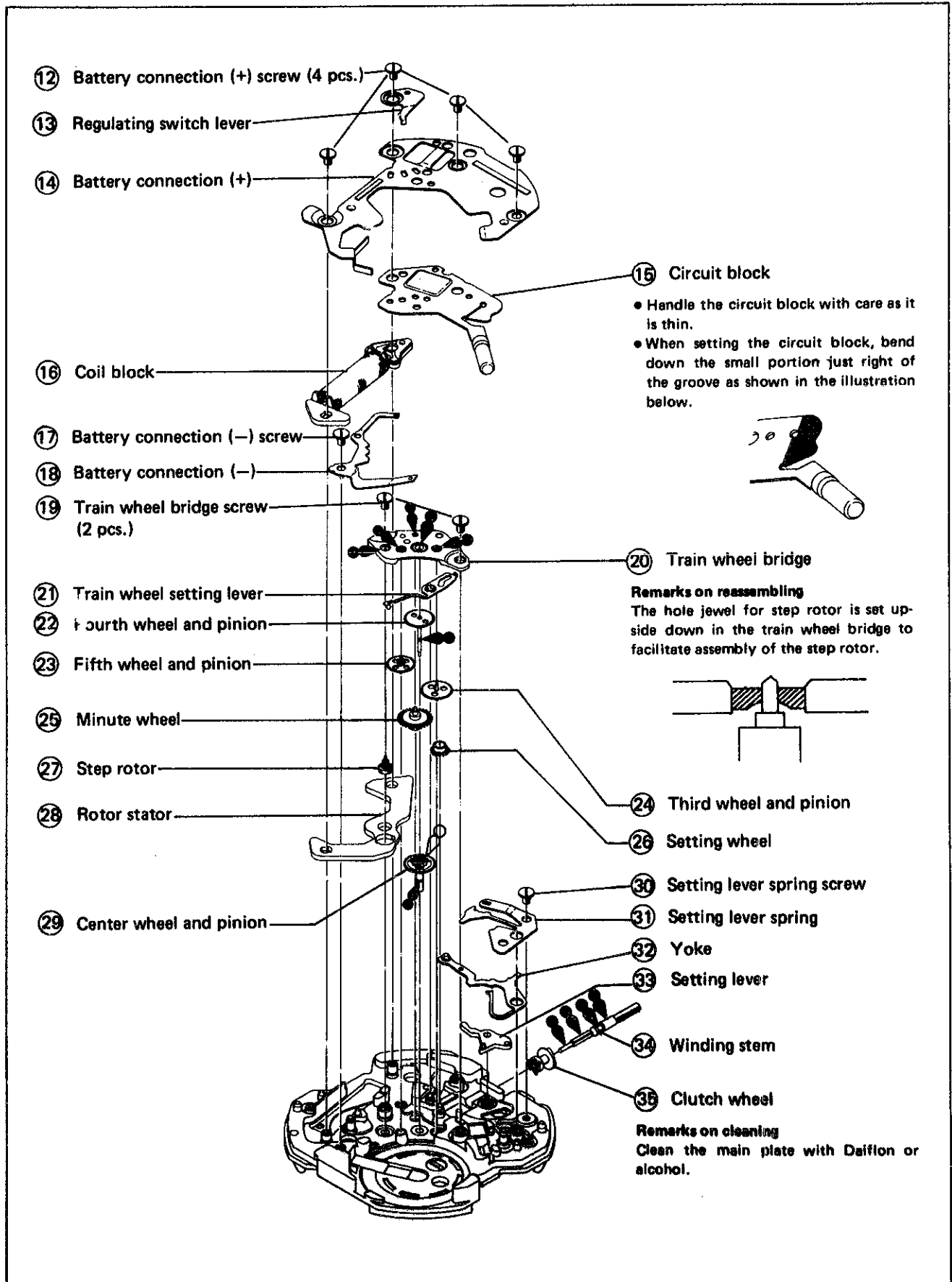
III. DISASSEMBLING, REASSEMBLING, AND LUBRICATING

List of the screws used

Shape	Part No.	Part Name	Shape	Part No.	Part Name
	022 247	Train wheel bridge screw 2 pcs. Battery connection (+) screw 4 pcs. Battery connection (-) screw 1 pc. Setting lever spring screw 1 pc.		022 248	Date dial guard screw 3 pcs.

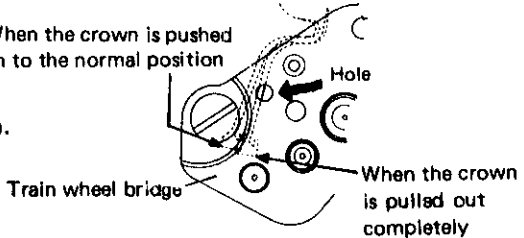
Cal. No.	Disassembling/Reassembling procedures																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
5Y01A	①	—	②	—	③	—	④	—	⑤	—	⑥	—	⑦	—	⑧	—	⑨	—	⑩	—	⑪	—	⑫	through	⑬	—	⑭	—	⑮	—	⑯	—	⑰	—	⑱	—	⑲	—	⑳	—	㉑	—	㉒	—	㉓	—	㉔	—	㉕	—	㉖	—	㉗	—	㉘	—	㉙	—	㉚	—	㉛	—	㉜	—	㉝	—	㉞	—	㉟	—	㊱	—	㊲	—	㊳	—	㊴	—	㊵	—	㊶	—	㊷	—	㊸	—	㊹	—	㊺	—	㊻	—	㊼	—	㊽	—	㊾	—	㊿	—	1	—	2	—	3	—	4	—	5	—	6	—	7	—	8	—	9	—	10	—	11	—	12	through	13	—	14	—	15	—	16	—	17	—	18	—	19	—	20	—	21	—	22	—	23	—	24	—	25	—	26	—	27	—	28	—	29	—	30	—	31	—	32	—	33	—	34	—	35	—	36	—	37	—	38	—	39	—	40	—	41	—	42	—	43	—	44	—	45	—	46	—	47	—	48	—	49	—	50	—	51	—	52	—	53	—	54	—	55	—	56	—	57	—	58	—	59	—	60	—	61	—	62	—	63	—	64	—	65	—	66	—	67	—	68	—	69	—	70	—	71	—	72	—	73	—	74	—	75	—	76	—	77	—	78	—	79	—	80	—	81	—	82	—	83	—	84	—	85	—	86	—	87	—	88	—	89	—	90	—	91	—	92	—	93	—	94	—	95	—	96	—	97	—	98	—	99	—	100	—	101	—	102	—	103	—	104	—	105	—	106	—	107	—	108	—	109	—	110	—	111	—	112	—	113	—	114	—	115	—	116	—	117	—	118	—	119	—	120	—	121	—	122	—	123	—	124	—	125	—	126	—	127	—	128	—	129	—	130	—	131	—	132	—	133	—	134	—	135	—	136	—	137	—	138	—	139	—	140	—	141	—	142	—	143	—	144	—	145	—	146	—	147	—	148	—	149	—	150	—	151	—	152	—	153	—	154	—	155	—	156	—	157	—	158	—	159	—	160	—	161	—	162	—	163	—	164	—	165	—	166	—	167	—	168	—	169	—	170	—	171	—	172	—	173	—	174	—	175	—	176	—	177	—	178	—	179	—	180	—	181	—	182	—	183	—	184	—	185	—	186	—	187	—	188	—	189	—	190	—	191	—	192	—	193	—	194	—	195	—	196	—	197	—	198	—	199	—	200	—	201	—	202	—	203	—	204	—	205	—	206	—	207	—	208	—	209	—	210	—	211	—	212	—	213	—	214	—	215	—	216	—	217	—	218	—	219	—	220	—	221	—	222	—	223	—	224	—	225	—	226	—	227	—	228	—	229	—	230	—	231	—	232	—	233	—	234	—	235	—	236	—	237	—	238	—	239	—	240	—	241	—	242	—	243	—	244	—	245	—	246	—	247	—	248	—	249	—	250	—	251	—	252	—	253	—	254	—	255	—	256	—	257	—	258	—	259	—	260	—	261	—	262	—	263	—	264	—	265	—	266	—	267	—	268	—	269	—	270	—	271	—	272	—	273	—	274	—	275	—	276	—	277	—	278	—	279	—	280	—	281	—	282	—	283	—	284	—	285	—	286	—	287	—	288	—	289	—	290	—	291	—	292	—	293	—	294	—	295	—	296	—	297	—	298	—	299	—	300	—	301	—	302	—	303	—	304	—	305	—	306	—	307	—	308	—	309	—	310	—	311	—	312	—	313	—	314	—	315	—	316	—	317	—	318	—	319	—	320	—	321	—	322	—	323	—	324	—	325	—	326	—	327	—	328	—	329	—	330	—	331	—	332	—	333	—	334	—	335	—	336	—	337	—	338	—	339	—	340	—	341	—	342	—	343	—	344	—	345	—	346	—	347	—	348	—	349	—	350	—	351	—	352	—	353	—	354	—	355	—	356	—	357	—	358	—	359	—	360	—	361	—	362	—	363	—	364	—	365	—	366	—	367	—	368	—	369	—	370	—	371	—	372	—	373	—	374	—	375	—	376	—	377	—	378	—	379	—	380	—	381	—	382	—	383	—	384	—	385	—	386	—	387	—	388	—	389	—	390	—	391	—	392	—	393	—	394	—	395	—	396	—	397	—	398	—	399	—	400	—	401	—	402	—	403	—	404	—	405	—	406	—	407	—	408	—	409	—	410	—	411	—	412	—	413	—	414	—	415	—	416	—	417	—	418	—	419	—	420	—	421	—	422	—	423	—	424	—	425	—	426	—	427	—	428	—	429	—	430	—	431	—	432	—	433	—	434	—	435	—	436	—	437	—	438	—	439	—	440	—	441	—	442	—	443	—	444	—	445	—	446	—	447	—	448	—	449	—	450	—	451	—	452	—	453	—	454	—	455	—	456	—	457	—	458	—	459	—	460	—	461	—	462	—	463	—	464	—	465	—	466	—	467	—	468	—	469	—	470	—	471	—	472	—	473	—	474	—	475	—	476	—	477	—	478	—	479	—	480	—	481	—	482	—	483	—	484	—	485	—	486	—	487	—	488	—	489	—	490	—	491	—	492	—	493	—	494	—	495	—	496	—	497	—	498	—	499	—	500	—	501	—	502	—	503	—	504	—	505	—	506	—	507	—	508	—	509	—	510	—	511	—	512	—	513	—	514	—	515	—	516	—	517	—	518	—	519	—	520	—	521	—	522	—	523	—	524	—	525	—	526	—	527	—	528	—	529	—	530	—	531	—	532	—	533	—	534	—	535	—	536	—	537	—	538	—	539	—	540	—	541	—	542	—	543	—	544	—	545	—	546	—	547	—	548	—	549	—	550	—	551	—	552	—	553	—	554	—	555	—	556	—	557	—	558	—	559	—	560	—	561	—	562	—	563	—	564	—	565	—	566	—	567	—	568	—	569	—	570	—	571	—	572	—	573	—	574	—	575	—	576	—	577	—	578	—	579	—	580	—	581	—	582	—	583	—	584	—	585	—	586	—	587	—	588	—	589	—	590	—	591	—	592	—	593	—	594	—	595	—	596	—	597	—	598	—	599	—	600	—	601	—	602	—	603	—	604	—	605	—	606	—	607	—	608	—	609	—	610	—	611	—	612	—	613	—	614	—	615	—	616	—	617	—	618	—	619	—	620	—	621	—	622	—	623	—	624	—	625	—	626	—	627	—	628	—	629	—	630	—	631	—	632	—	633	—	634	—	635	—	636	—	637	—	638	—	639	—	640	—	641	—	642	—	643	—	644	—	645	—	646	—	647	—	648	—	649	—	650	—	651	—	652	—	653	—	654	—	655	—	656	—	657	—	658	—	659	—	660	—	661	—	662	—	663	—	664	—	665	—	666	—	667	—	668	—	669	—	670	—	671	—	672	—	673	—	674	—	675	—	676	—	677	—	678	—	679	—	680	—	681	—	682	—	683	—	684	—	685	—	686	—	687	—	688	—	689	—	690	—	691	—	692	—	693	—	694	—	695	—	696	—	697	—	698	—	699	—	700	—	701	—	702	—	703	—	704	—	705	—	706	—	707	—	708	—	709	—	710	—	711	—	712	—	713	—	714	—	715	—	716	—	717	—	718	—	719	—	720	—	721	—	722	—	723	—	724	—	725	—	726	—	727	—	728	—	729	—	730	—	731	—	732	—	733	—	734	—	735	—	736	—	737	—	738	—	739	—	740	—	741	—	742	—	743	—	744	—	745	—	746	—	747	—	748	—	749	—	750	—	751	—	752	—	753	—	754	—	755	—	756	—	757	—	758	—	759	—	760	—	761	—	762	—	763	—	764	—	765	—	766	—	767	—	768	—	769	—	770	—	771	—	772	—	773	—	774	—	775	—	776	—	777	—	778	—	779	—	780	—	781	—	782	—	783	—	784	—	785	—	786	—	787	—	788	—	789	—	790	—	791	—	792	—	793	—	794	—	795	—	796	—	797	—	798	—	799	—	800	—	801	—	802	—	803	—	804	—	805	—	806	—	807	—	808	—	809	—	810	—	811

2. Battery connection (+) screw ~ Clutch wheel



IV. CHECKING AND ADJUSTMENT

- The explanation here is only for the particular points of Cals. 5Y01A, 5Y02A, and 5Y13A.
Refer to the "TECHNICAL GUIDE, GENERAL INSTRUCTION" for SEIKO Analogue Quartz for details.

Procedure	
CHECK OUTPUT SIGNAL	
<p>Use the quartz tester. Any gate of the quartz tester can be used.</p>	<p>Result: Normal : Input indicator blinks every second. Defective : Input indicator does not blink every second.</p>
CHECK BATTERY VOLTAGE	
<p>Use the Digital Multi-Tester S-840A. Range to be used: DC V</p>	<p>Result: Normal : More than 1.57V Defective : Less than 1.57V</p>
CHECK COIL BLOCK	
<p>Use the Digital Multi-Tester S-840A. Range to be used: Ω</p>	<p>Result: Normal : $2.3K\Omega \sim 2.8K\Omega$ Defective — { Less than $2.3K\Omega$ (Short circuit) More than $2.8K\Omega$ (Broken wire)</p>
CHECK RESET AND TRAIN WHEEL SETTING CONDITION	
<ol style="list-style-type: none"> Check to see if the second hand stops promptly when the crown is pulled out completely and if it starts promptly one second after the crown is pushed in back to the normal position. Check the position of the train wheel setting lever by looking through the hole of train wheel bridge. <ul style="list-style-type: none"> With the crown pulled out completely The spring portion of train wheel setting lever can be seen. When the crown is pushed in to the normal position With the crown pushed in to the normal position The spring portion of train wheel setting lever cannot be seen. 	
	
<ol style="list-style-type: none"> With the crown pulled out completely, check the output signal with the quartz tester. 	
<p>Result: Normal : Input indicator blinks. Defective : Input indicator does not blink.</p>	

Procedure

CHECK ACCURACY

- Use the 10-second gate of the quartz tester.
- The rotary step switch regulates 0.52 sec./day/step.

CHECK CURRENT CONSUMPTION

Use the Digital Multi-Tester S-840A.

Range to be used: μA

Result:

Normal : Less than $1.3\mu\text{A}$

Defective : More than $1.3\mu\text{A}$

- Be sure to protect the movement from light with black paper while measuring.
Do not check current consumption under an incandescent lamp since strong light may cause a watch to consume excess current.
- Repeat resetting the circuit by pulling out the crown more than 3 times while keeping the probes applied to the battery and the battery connection (—), since it is necessary to check current consumption with the hands moving normally (the load compensated driving pulse system working normally).