

Hitachi Power Tools

SERVICE MANUAL

LIST No.
SV 12SG: 0353
Jun. 2004

PRODUCT NAME

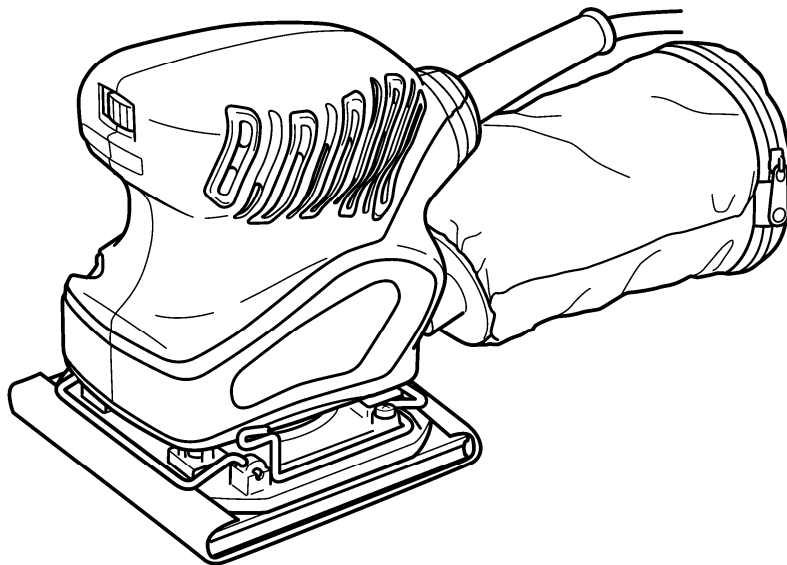
Hitachi Orbital Sander

Model SV 12SG

CONTENTS

Page

PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY	1
1. Disassembly	1
2. Reassembly	1
3. Tightening Torque	2
4. Wiring Diagram	3
5. Insulation Tests	3
6. No-load Current Value	3
STANDARD REPAIR TIME (UNIT) SCHEDULES	4



S

HITACHI

 **Hitachi Koki Co., Ltd.**
International Sales Division

1. PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY

The **[Bold]** numbers in the descriptions below correspond to the item numbers in the Parts List and exploded assembly diagram.

1-1. Disassembly

(1) Removal of the Armature [25] and the Stator [22]

- ① Remove the four Machine Screws M4 x 10 [18], and remove the surrounding parts such as the Pad [17], Base [16] and Felt [34].
- ② Remove the two Tapping Screws (W/Flange) D4 x 16 [33], and remove the Fan Guide [32].
- ③ Keeping a screwdriver inserted into the clearance of the Balance Fan [27], remove the Seal Lock Flat Hd. Screw M4 x 12 [31]. Remove the Washer [30], Ball Bearing 6001DDCMPS2L [29], Dust Washer [28] and Balance Fan [27].
- ④ Remove the four Tapping Screws (W/Flange) D4 x 20 (Black) [2], and remove Housing (A).(B) Set [3].
- ⑤ Remove the Carbon Brush [13] together with the Brush Holder [12]. Lift the Stator [22] and pull out the Armature [25].
- ⑥ After pulling out the Armature [25], disconnect the Internal Wire (Brown) [5], Internal Wire (Blue) [24], Tab Terminal (Blue) [6] and Tab Terminal (Brown) [23] from the terminals of the Stator [22]. Then pull out the Stator [22].

1-2. Reassembly

Reassembly can be accomplished by following the disassembly procedures in reverse. However, special attention should be given to the following items.

(1) Assembly of the Dust Washer [28]

Be sure to mount the Dust Washer [28] in correct direction as shown in Fig. 1. Otherwise, the Ball Bearing 6001DDCMPS2L [29] can be damaged at an early stage.

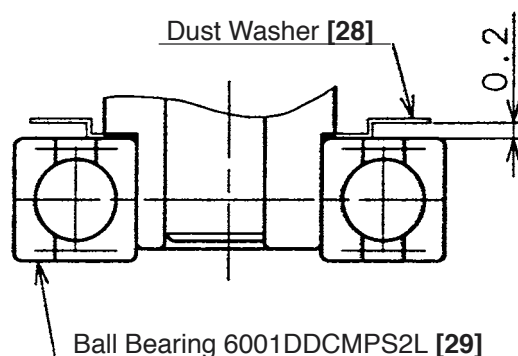


Fig. 1

(2) Wiring the Stator [22]

When wiring the Stator [22], be sure to insert each terminal in correct direction as shown in Fig. 2. At this time, securely insert each terminal as far as it will go.

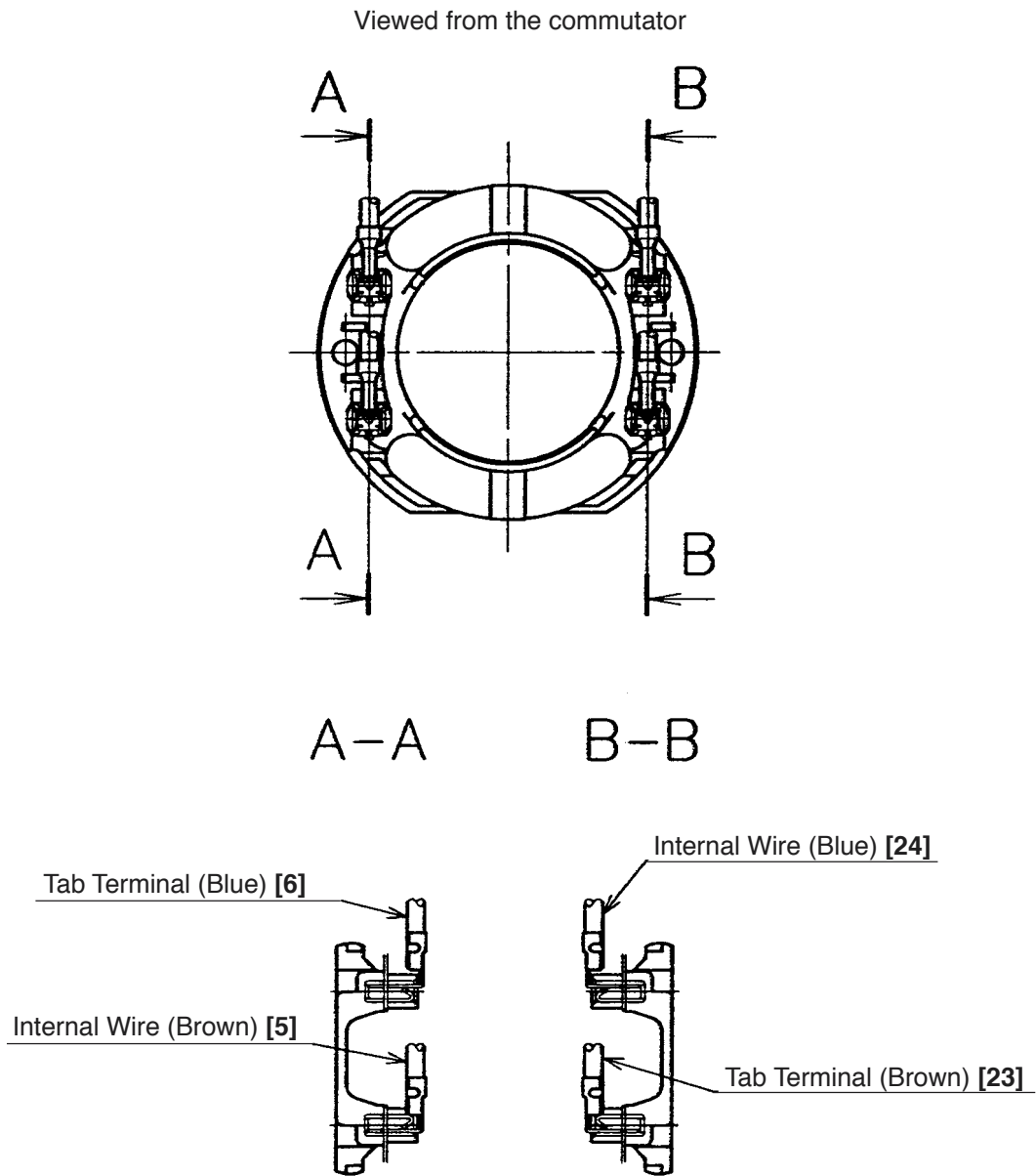


Fig. 2

1-3. Tightening Torques

- | | |
|---|--|
| (1) Tapping Screw (W/Flange) D4 x 20 (Black) [2] | 2.0 ± 0.5 N·m (20 ± 5 kgf·cm, 1.5 ± 0.4 ft-lbs.) |
| (2) Tapping Screws (W/Flange) D4 x 16 [7] [33] | 2.0 ± 0.5 N·m (20 ± 5 kgf·cm, 1.5 ± 0.4 ft-lbs.) |
| (3) Tapping Screw (W/Flange) D4 x 10 (Black) [15] | 2.0 ± 0.5 N·m (20 ± 5 kgf·cm, 1.5 ± 0.4 ft-lbs.) |
| (4) Machine Screw M4 x 10 [18] | 1.8 ± 0.4 N·m (18 ± 4 kgf·cm, 1.3 ± 0.3 ft-lbs.) |
| (5) Seal Lock Flat Hd. Screw M4 x 12 [31] | 1.8 ± 0.4 N·m (18 ± 4 kgf·cm, 1.3 ± 0.3 ft-lbs.) |

1-4. Wiring Diagram

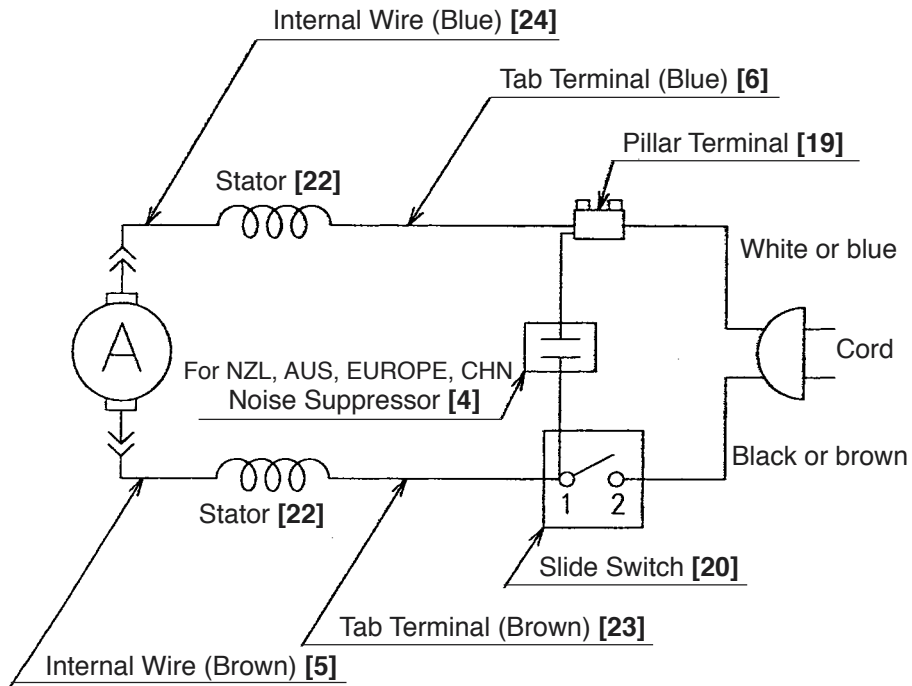


Fig. 3

1-5. Insulation Tests

On completion of disassembly and repair, measure the insulation resistance and conduct the dielectric strength test.

Insulation resistance: 7 M Ω or more with DC 500 V megohm tester

Dielectric strength: AC 4,000 V/1 minute, with no abnormalities 220 V – 240 V
 AC 2,500 V/1 minute, with no abnormalities 110 V – 127 V

1-6. No-load Current Value

After no-load operation for 30 minutes, the no-load current value should be as follows:

Voltage (V)	110 V	120 V	220 V	230 V	240 V
Current (A) max.	1.50	1.45	0.75		

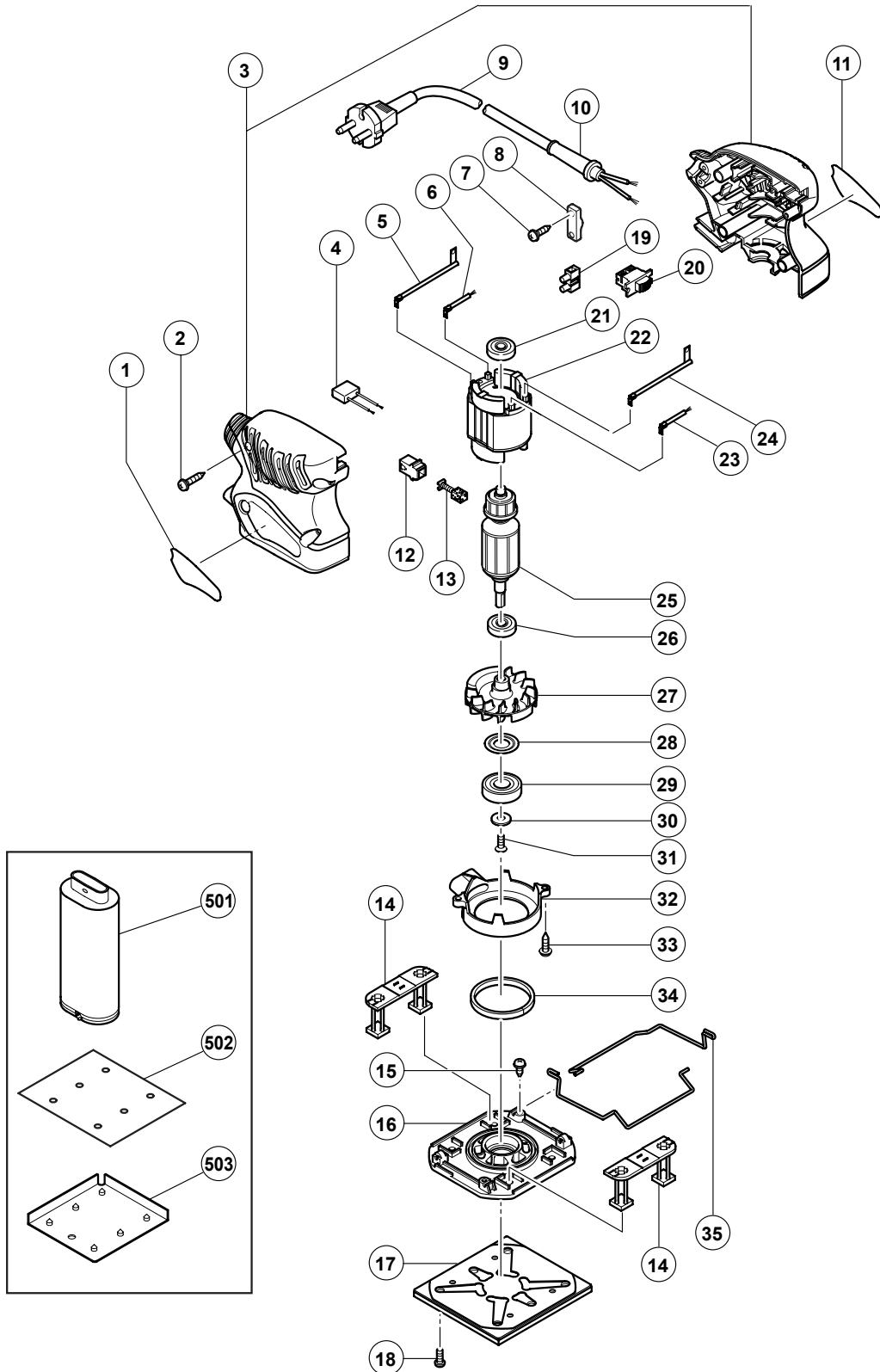
2. STANDARD REPAIR TIME (UNIT) SCHEDULES

MODEL	Variable		10	20	30	40	50	60 min.
	Fixed							
SV 12SG		Work Flow						
	General Assembly			Slide Switch Cord Cord Armor				
				Housing (A).(B) Set Stator				
				Ball Bearing 626VV Ball Bearing 629VV Balance Fan Fan Guide	Armature			
				Leg x 2				
		Paper Clip x 2		Base Ball Bearing 6001DD				

ELECTRIC TOOL PARTS LIST

■ ORBITAL SANDER
Model SV 12SG

2004 · 3 · 30
(E1)



PARTS

SV 12SG

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
1		NAME PLATE	1	
2	301-653	TAPPING SCREW (W/FLANGE) D4X20 (BLACK)	4	
3	322-766	HOUSING (A).(B) SET	1	
* 4	930-039	NOISE SUPPRESSOR	1	FOR NZL, AUS, GBR, EUROPE, NOR, SUI, CHN
5	322-764	INTERNAL WIRE (BROWN)	1	
6	322-761	TAB TERMINAL (BLUE)	1	
7	984-750	TAPPING SCREW (W/FLANGE) D4X16	2	
8	937-631	CORD CLIP	1	
* 9	500-409Z	CORD	1	(CORD ARMOR D8.8)
* 9	500-439Z	CORD	1	(CORD ARMOR D8.8) FOR NZL, AUS
* 9	500-423Z	CORD	1	(CORD ARMOR D8.8) FOR SIN
* 9	500-240Z	CORD	1	(CORD ARMOR D8.8) FOR USA, CAN
* 9	500-435Z	CORD	1	(CORD ARMOR D8.8) FOR HKG, GBR (230V)
* 9	500-461Z	CORD	1	(CORD ARMOR D8.8) FOR GBR (110V)
* 9	500-447Z	CORD	1	(CORD ARMOR D8.8) FOR SUI
* 9	500-468Z	CORD	1	(CORD ARMOR D8.8) FOR CHN
10	953-327	CORD ARMOR D8.8	1	
11		HITACHI LABEL	1	
12	930-483	BRUSH HOLDER	2	
13	999-041	CARBON BRUSH (1 PAIR)	2	
14	322-756	LEG	2	
15	311-945	TAPPING SCREW (W/FLANGE) D4X10 (BLACK)	2	
16	322-759	BASE	1	
* 17	310-354	FELT PAD (PERFORATED)	1	
* 17	310-355	PAD (PRESSURE SENSITIVE TYPE, PERFORATED)	1	FOR FRA, BEL, SUI
* 17	311-978	PAD (QUICK STICK TYPE, PERFORATED)	1	FOR USA, CAN
18	949-216	MACHINE SCREW M4X10 (10 PCS.)	4	
19	938-307	PILLAR TERMINAL	1	
20	311-948	SLIDE SWITCH (1P SCREW TYPE)	1	
21	626-VVM	BALL BEARING 626VVC2PS2L	1	
* 22	340-578C	STATOR 110V	1	
* 22	340-578D	STATOR 120V	1	
* 22	340-578E	STATOR 220V-230V	1	
* 22	340-578F	STATOR 240V	1	
23	322-762	TAB TERMINAL (BROWN)	1	
24	322-763	INTERNAL WIRE (BLUE)	1	
* 25	360-637C	ARMATURE 110V	1	
* 25	360-637U	ARMATURE ASS'Y 120V	1	INCLUD. 21, 26
* 25	360-637E	ARMATURE 220V-230V	1	
* 25	360-637F	ARMATURE 240V	1	
26	629-VVM	BALL BEARING 629VVC2PS2L	1	
27	322-757	BALANCE FAN	1	
28	993-052	DUST WASHER	1	
29	600-1DD	BALL BEARING 6001DDCMPS2L	1	
30	987-169	WASHER	1	
31	993-244	SEAL LOCK FLAT HD. SCREW M4X12	1	
32	322-758	FAN GUIDE	1	
33	984-750	TAPPING SCREW (W/FLANGE) D4X16	2	
34	311-946	FELT	1	
35	322-760	PAPER CLIP	2	

