

MODELS

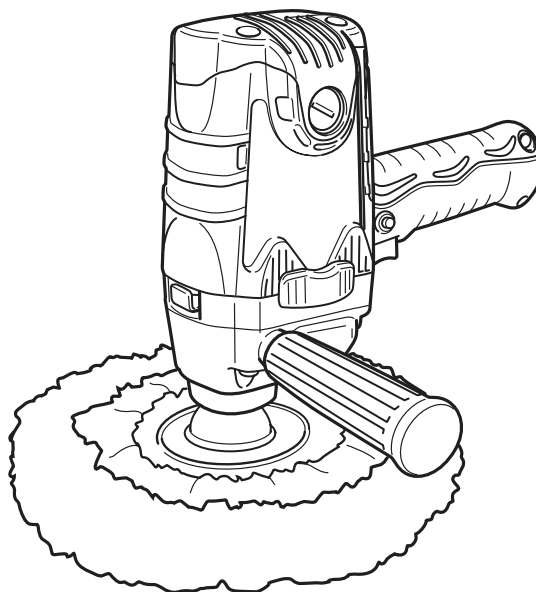
SP 18VB

SP 18SB

Hitachi Power Tools

**POLISHER
SP 18VB
SP 18SB**

**TECHNICAL DATA
AND
SERVICE MANUAL**



LIST Nos. SP 18VB: 0358
SP 18SB: 0357

Feb. 2006

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1. PRODUCT NAME

Hitachi Electronic Polisher, Model SP 18VB [180 mm (7")]

Hitachi Polisher, Model SP 18SB [180 mm (7")]

2. MARKETING OBJECTIVE

The conventional Models SP 18 and SP 18SA have obtained high evaluation as sturdy and durable polishers since they were released. However, recent East Asian market is fiercely competitive due to a price war and various sophisticated vertical polishers that are lightweight and provided with electronically controlled stepless variable speed functions are posing a challenge to Hitachi's share.

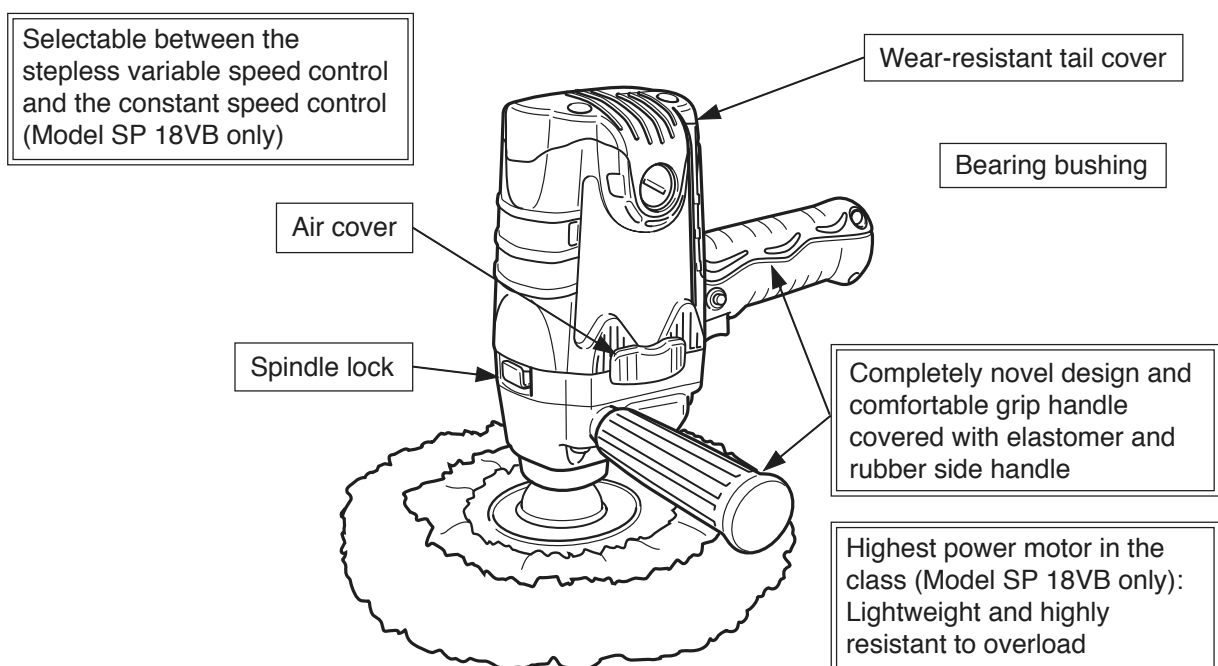
To address the severe situation, we have developed the newly-designed polishers Model SP 18VB (with the electronically controlled stepless variable speed function) and Model SP 18SB.

Please expand the sales of the new Models SP 18VB and SP 18SB. Owing to the sales start of these models, the sales of the conventional Models SP 18 and SP 18SA are discontinued.

3. APPLICATIONS

Applications	Optional accessories required
Finishing and polishing painted metallic surfaces of motor vehicles, rolling stocks, elevators, refrigerators, sewing machines, washing machines, medical instruments, and so on	Polishing paper Sanding paper Knit buff Wool bonnet
Polishing lacquered surfaces on wooden products such as furniture	Wool buff Cotton buff
Polishing synthetic resin and ebonite products	Compound buff
Preparatory sanding metallic surfaces prior to painting	

4. SELLING POINTS



4-1. Selectable between the Stepless Variable Speed Control and the Constant Speed Control (Model SP 18VB only)

The Model SP 18VB is equipped with a stepless variable speed dial and can change the number of revolutions according to a use. See the table below for the dial setting.

Dial number	Number of revolutions/min.
1	600
2	800
3	1,150
4	1,500
5	1,850
6	2,000

Fig. 1

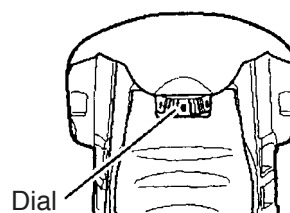


Fig. 2

* The above table is provided as a rough guide for speed setting. The actual speed may vary slightly.

The Model SP 18VB is also equipped with a constant speed control function and can operate stably with minimum speed reduction even if a load is applied.

4-2. Completely Novel Design and Comfortable Grip Handle Covered with Elastomer and Rubber Side Handle

The Models SP 18VB and SP 18SB are of a completely novel design. In addition, the grip handle is covered with elastomer and the side handle is made of rubber. These handles are not only comfortable but also nonslip and easy to operate.

Item	HITACHI		C
	SP 18VB/SP 18SB	SP 18/SP 18SA	
Grip handle	Soft (Elastomer)	Hard (Aluminum/resin)	Hard (Resin)
Side handle	Soft (Rubber)	Hard (Resin)	Hard (Resin)

Fig. 3

4-3. Highest Power Motor in the Class and Highly Resistant to Overload (Model SP 18VB only)

The Model SP 18VB is highly resistant to overload and offers high power output up to 1,200 W thanks to the high-power motor. The cooling efficiency is improved by the adoption of the Hitachi's original two-part coil in the stator and the fan newly developed from 3D digital analysis technologies in the armature. The Model SP 18VB is highly resistant to overload while it offers high-power performance.

Following table shows the overload durability obtained by measuring the grinding torque when the temperature rise of the stator coil is 200 (K) as a guide. It is evident that the Model SP 18VB is superior to C in both the maximum output and the overload durability.

Item	Maker-Model	HITACHI	C
		SP 18VB	
Maximum output (W) {hp}		1,200 {1.61}	1,000 {1.34}
Overload durability (N·m) {ft·lbf}		7.15 {5.27}	5.19 {3.82}
Overload durability ratio (Compared with C)		1.38	1.00

The above data was measured when setting the dial scale to the maximum.

Fig. 4

4-4. Bearing Bushing

Thanks to the adoption of the bearing bushing, the ball bearing chamber of the commutator side is durable.

Item \ Maker-Model	HITACHI		C
	SP 18VB/SP 18SB	SP 18SA	
Bearing bushing	Provided	Not provided	Not provided

(Model SP 18VB: Aluminum housing)

Fig. 5

4-5. Spindle Lock

Thanks to the adoption of the spindle lock, the tools can be easily replaced.

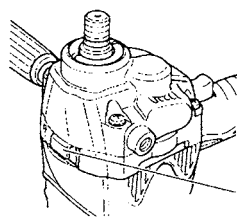


Fig. 6

Item \ Maker-Model	HITACHI		C
	SP 18VB/SP 18SB	SP 18SA	
Spindle lock	Provided	Not provided/Provided	Not provided

Fig. 7

4-6. Air Cover

The air cover made of elastomer is attached to the vent hole on the side where the side handle is installed to prevent discharging the motor cooling air toward the operator for comfortable operation. The soft air cover can be easily attached and detached by hand or a flat-blade screwdriver.

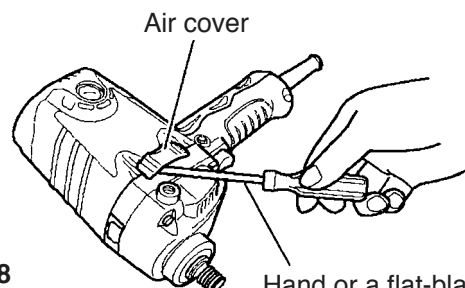


Fig. 8

Item \ Maker-Model	HITACHI		C
	SP 18VB/SP 18SB	SP 18/SP 18SA	
Air cover	Provided (An elastomer air cover is attached to the vent hole.)	Not provided	Provided (A plastic plate is secured to the base of the side handle with screws.)

Fig. 9

4-7. Wear-resistant Tail Cover

The CB holder is completely covered with the round-edge tail cover. Thanks to the new shape, the tail cover is wear-resistant even if making a three-point rest at the side handle, handle and the tail portion.

5. SPECIFICATIONS

Item \ Model			SP 18VB		SP 18SB						
Capacity			180 mm (7")								
Screw diameter of the spindle			M16 x 2		U. S. A., Canada: 5/8-11 UNC Europe: M14 x 2 Other countries: M16 x 2						
Insulation method			Double insulation								
Power source			AC single phase 50 or 60 Hz								
Type of motor			Single-phase series commutator motor								
Type of switch			Trigger switch								
Voltage, current and power input			Voltage (V)			Current (A)			Power input (W)		
			110			9.7			1,010		
			120			6.2			705		
			220			3.3					
			230			3.2					
240			3.1								
No-load rotation speed			Dial No.			Rotation speed (/min.)			2,000/min.		
			1			600					
			2			800					
			3			1,150					
			4			1,500					
			5			1,850					
			6			2,000					
Maximum output			1,200 W		900 W						
Enclosure			Workpiece: Housing Glassfiber reinforced polyamide resin (black) Handle cover Glassfiber reinforced polyamide resin (black) Grip cover Glassfiber reinforced polycarbonate resin (black) and elastomer resin (green) Tail cover Glassfiber reinforced polyamide resin (green) Gear cover and Inner cover Aluminum alloy die casting Painting: Gear cover and Inner cover Gunmetallic color								
Weight	Catalog	Net*	2.2 kg (4.9 lbs.)		2.1 kg (4.6 lbs.)						
	Actual	Net*	2.36 kg (5.2 lbs.)		2.25 kg (5.0 lbs.)						
		Gross	3.7 kg (8.2 lbs.)		3.6 kg (7.9 lbs.)						
Packaging			Corrugated cardboard box								
Standard accessories			• Rubber pad 180 mm (7") 1 • Side handle 1 • Wrench 1 • Washer nut 1 • Wool bonnet (It is not a standard accessory in some areas.) 1 • Air cover 1								

* Weight excludes cord, rubber pad, wool bonnet, washer nut and side handle.

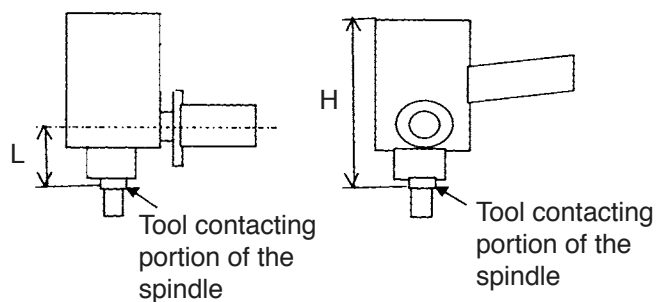
6. COMPARISONS WITH SIMILAR PRODUCTS

6-1. Specification Comparisons

○ Model SP 18VB

Maker		HITACHI	C
Model		SP 18VB	
Capacity (mm)		180 (7")	
Electronic control		Stepless variable speed control with dial/constant speed control	
Power input (W)		1,010	900
Max. power output (W)		1,200 {1.61 hp}	1,000 {1.34 hp}
No-load speed (/min)	Dial 1	600	600
	Dial 2	800	800
	Dial 3	1,150	1,300
	Dial 4	1,500	1,800
	Dial 5	1,850	2,000
	Dial 6	2,000	
No-load noise level (dB)		80	80
Spindle lock		Provided	Not provided
Bearing bushing		Provided	Not provided
Material of grip handle		Elastomer	Resin
Material of side handle		Rubber	Resin
Weight *	Catalog (kg)	2.2 (4.9 lbs.)	2.0 (4.4 lbs.)
	Actual (kg)	2.36 (5.2 lbs.)	2.08 (4.6 lbs.)
Dimensions	H (mm)	194 (7-41/64")	190 (7-31/64")
	L (mm)	44 (1-47/64")	39 (1-35/64")

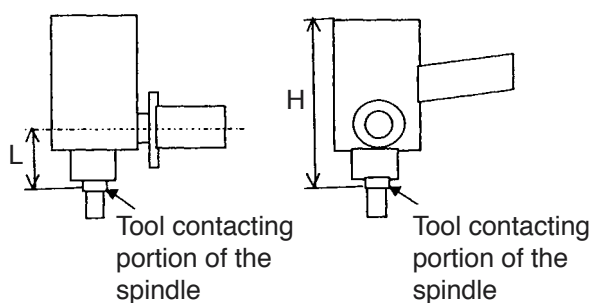
*: Weight without cord, side handle, rubber pad, washer nut and wool bonnet



○ Model SP 18SB

Maker		HITACHI		
Model		SP 18SB	SP 18SA	SP 18
Capacity (mm)		180 (7")		
Insulation type		Double insulation		Single insulation
Power input (W)		705	680	530
Max. power output (W)		900	910/760	605
No-load speed (/min.)		2,000	2,000	1,500
No-load noise level (dB)		81	84	83
Spindle lock		Provided	Provided	Not provided
Bearing bushing		Provided	Not provided	Not provided
Air cover		Provided	Not provided	Not provided
Material of housing		Resin	Resin	Aluminum
Material of grip handle		Elastomer	Resin	Aluminum
Material of side handle		Rubber	Resin	Resin
Weight *	Catalog (kg)	2.1 (4.6 lbs.)	2.9 (6.4 lbs.)	3.8 (8.4 lbs.)
	Actual (kg)	2.25 (5.0 lbs.)	3.10 (6.8 lbs.)	2.70 (6.0 lbs.)
Dimensions	H (mm)	194 (7-41/64")	208 (8-3/16")	185 (7-9/32")
	L (mm)	44 (1-47/64")	86 (3-25/64")	45 (1-49/64")

*: Weight without cord, side handle, rubber pad, washer nut and wool bonnet



7. PRECAUTIONS IN SALES PROMOTION

In the interest of promoting the safest and most efficient use of the Models SP 18VB and SP 18SB Polishers by all of our customers, it is very important that at the time of sale, the salesperson carefully ensures that the buyer seriously recognizes the importance of the contents of the Handling Instructions, and fully understands the meaning of the precautions listed on the Name Plate attached to each tool.

7-1. Handling Instructions

Although every effort is made in each step of design, manufacture and inspection to provide protection against safety hazards, the dangers inherent in the use of any electric power tool cannot be completely eliminated. Accordingly, general precautions and suggestions for the use of the polisher is listed in the Handling Instructions to enhance the safe and efficient use of the tool by the customer. Salespersons must be thoroughly familiar with the contents of the Handling Instructions to be able to offer appropriate guidance to the customer during sales promotion.

7-2. Caution on Name Plate

The following basic precautions are listed on the Name Plate attached to the main body of each tool.

(1) For Taiwan

注意

● 使用前請詳讀使用說明書 ● 禁止在雨中使用

(2) For the U. S. A. and Canada

– WARNING –

To reduce the risk of injury, user must read and understand instruction manual.

AVERTISSEMENT

Afin de réduire le risque de blessures, l'utilisateur doit lire et bien comprendre le mode d'emploi.

(3) For European countries



(4) For China

注意

: 使用前请仔细阅读使用说明书

7-3. Precautions on Usage

Never press the lock lever while the spindle is rotating:

If the lock lever is pressed while the spindle is rotating, the spindle will stop immediately.

In such a case, there is a danger that the wheel washer may be loosened so that the rubber pad and wool bonnet fly off unexpectedly to cause possible serious injury.

8. PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY

The **[Bold]** numbers in the descriptions below correspond to the numbers in the Parts List and the exploded assembly diagram for the Model SP 18VB, and the **<Bold>** numbers to those in the Parts List and the exploded assembly diagram for the Model SP 18SB.

8-1. Disassembly

(1) Replacement of the armature and the lock lever

1. Remove the Brush Cap **[33]** **<35>** and remove the Carbon Brush **[32]** **[41]** **<36>** from the Brush Holder **[31]** **<37>**.
2. Remove the Tapping Screw (W/Flange) D5 x 55 (Black) **[7]** **<7>** and the Tapping Screw (W/Flange) D5 x 35 (Black) **[18]** **<18>**. Remove the Armature **[15]** **<15>** from the Housing Ass'y **[27]** **<26>** together with the Gear Cover Ass'y **[8]** **<8>** and the Inner Cover **[12]** **<12>**.
3. Remove the Gear Cover Ass'y **[8]** **<8>** and the Second Pinion and Gear Set **[10]** **<10>** from the Inner Cover **[12]** **<12>** together with the Washer **[11]** **<11>**.
4. As shown in Fig. 10, remove the Armature **[15]** **<15>** and the Lock Lever **[14]** **<14>** from the Inner Cover **[12]** **<12>** using the J-130-2 Sleeve (Code No. 970908) and the J-131-2 Plate (Code No. 970910).
5. If the Ball Bearing 6000DDCMPS2L **[13]** **<13>** and the Lock Lever **[14]** **<14>** are remained in the Armature **[15]** **<15>**, remove the Ball Bearing 6000DDCMPS2L **[13]** **<13>** from the Armature **[15]** **<15>** using the J-30 Bearing Puller (Code No. 970804) and then remove the Lock Lever **[14]** **<14>**.
6. For the Model SP 18VB, remove the Magnet **[26]** screwed in the rear end of Armature (A) **[15]** with the wrench. At this time, be careful that the Magnet **[26]** has a left-hand thread.

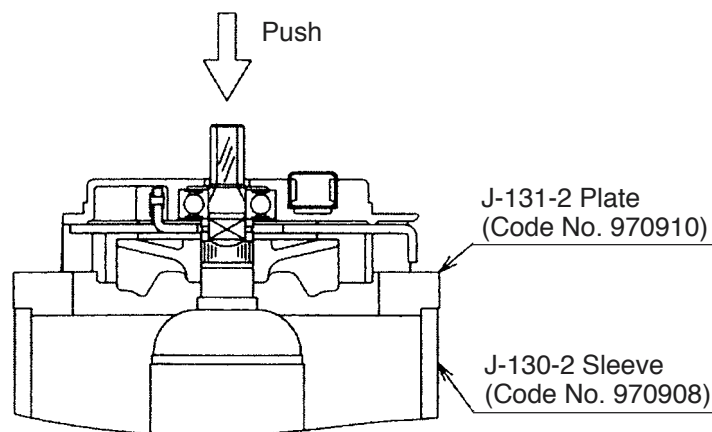


Fig. 10

(2) Replacement of the dust seal

1. Insert the hooks of the J-204 Bearing Puller (Code No. 970982) into the clearances between the Ball Bearing 608VVC2PS2L **[9]** **<9>** and the Dust Seal **[25]** **<25>** at both ends and fix it with the bolt. At this time, be careful not to insert the hooks excessively.
2. As shown in Fig. 11, put the J-204 Bearing Puller (Code No. 970982) on the J-130-2 Sleeve (Code No. 970908) and push the armature shaft with a hand press to pull out the Ball Bearing 608VVC2PS2L **[9]** **<9>**.

3. Pull out the Dust Seal [25] <25> from the armature shaft.

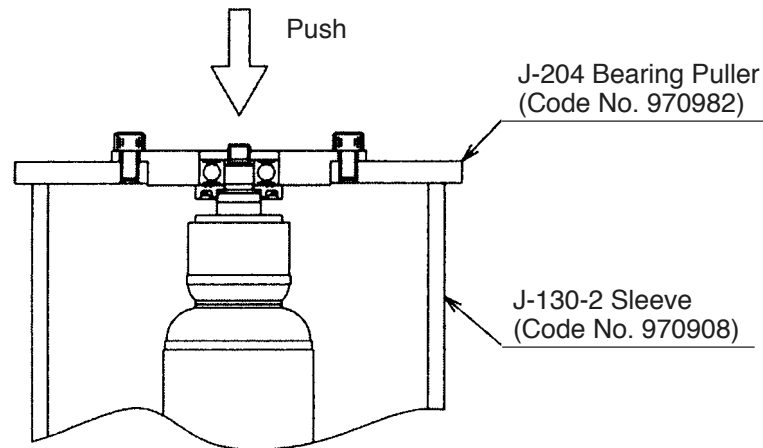


Fig. 11

(3) Replacement of the Stator Ass'y [23] <23>

○ Model SP 18VB:

1. Pull out Armature (A) [15], then pull out the Fan Guide [16] from the Housing Ass'y [27].
2. Loosen the Tapping Screw (W/Flange) D4 x 20 (Black) [52] and remove the Tail Cover [51], Grip Cover [53] and Handle Cover [35].
3. Loosen the Machine Screw (W/Washer) M3.5 x 6 [36] and remove the blue Terminal [38] connected to Switch (A) [40].
4. Cut the internal wire connected to the blue Terminal [38] and the internal wires connected to the two Connectors [39] with nippers.
5. Remove the Controller [30] from the Housing Ass'y [27].
6. Remove the Brush Terminal [24] from the Brush Holder [31].
7. Remove the Hex. Hd. Tapping Screw D5 x 45 [22] and remove Stator Ass'y (A) [23] from the Housing Ass'y [27]. If it is difficult to remove Stator Ass'y (A) [23] from the Housing Ass'y [27], heat the Housing Ass'y [27] to about 60°C to make the removal work easier.

○ Model SP 18SB:

1. Pull out the Armature <15>, then pull out the Fan Guide <16> from the Housing Ass'y <26>.
2. Loosen the Tapping Screw (W/Flange) D4 x 20 (Black) <50> and remove the Tail Cover <49>, Grip Cover <51> and Handle Cover <30>.
3. Loosen the Machine Screw (W/Washer) M3.5 x 6 <31> and remove the Terminal <28> connected to Switch (A) <34>.
4. Cut the internal wire connected to the Connector <33> with nippers or loosen the screw of the Pillar Terminal <41> and disconnect the internal wire of Stator Ass'y (C) <23> from the Pillar Terminal <41>.
5. Remove the Brush Terminal <24> from the Brush Holder <37>.
6. Remove the Hex. Hd. Tapping Screw D5 x 45 <22> and remove Stator Ass'y (C) <23> from the Housing Ass'y <26>. If it is difficult to remove Stator Ass'y (C) <23> from the Housing Ass'y <26>, heat the Housing Ass'y <26> to about 60°C to make the removal work easier.

(4) Replacement of the Final Gear [20] <20> and the Ball Bearing 6201DDCMPS2L [5] <5>

1. Remove the Gear Cover Ass'y [8] <8> from the Inner Cover [12] <12> then remove the Second Pinion and Gear Set [10] <10> and the Washer [11] <11>.
2. Fix the Gear Cover Ass'y [8] <8> to the vise and remove the Bearing Cap [3] <3> with the J-21 Wrench or a flat-blade screwdriver and a hammer. At this time, be careful that the Bearing Cap [3] <3> has a left-hand thread.
3. As shown in Fig. 12, support the end surface of the Gear Cover Ass'y [8] <8> with an appropriate cylindrical jig (with about 35 mm inside dia.). Push the end surface of Spindle (A) [4] <4> with a hand press to remove the Final Gear [20] <20>.
4. Remove the Retaining Ring for D12 Shaft [6] <6> from Spindle (A) [4] <4>.
5. Remove the Ball Bearing 6201DDCMPS2L [5] <5> from Spindle (A) [4] <4> using the J-30 Bearing Puller (Code No. 970804).

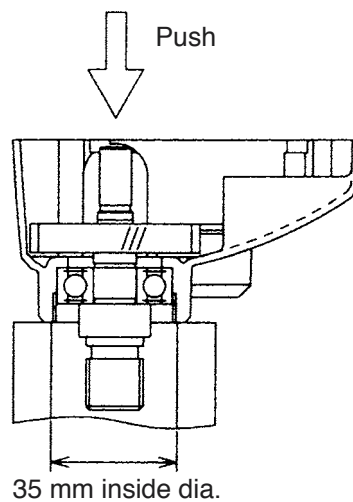


Fig. 12

8-2. Wiring Diagram

○ Wiring diagram

© Model SP 18VB

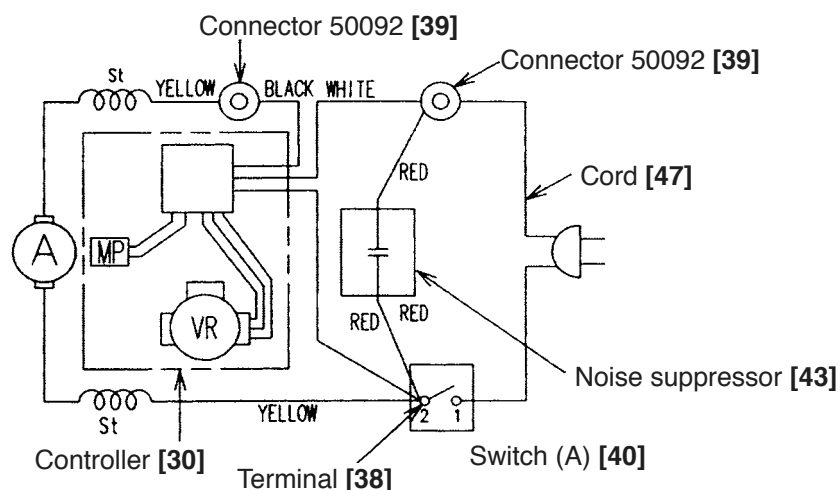


Fig. 13

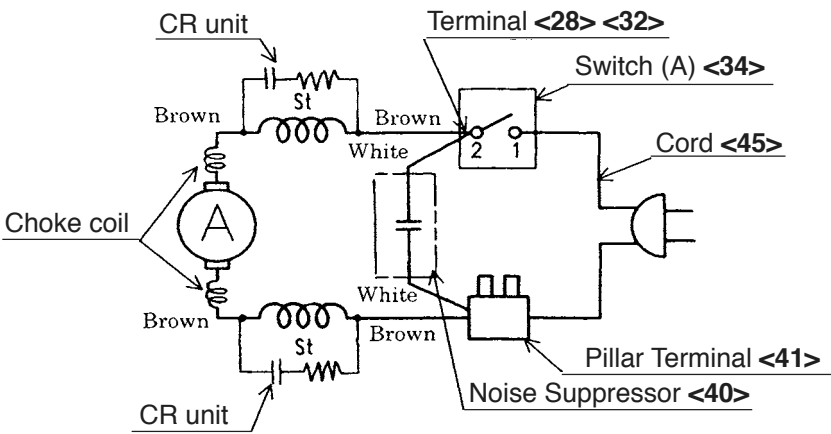


Fig. 14

For Malaysia

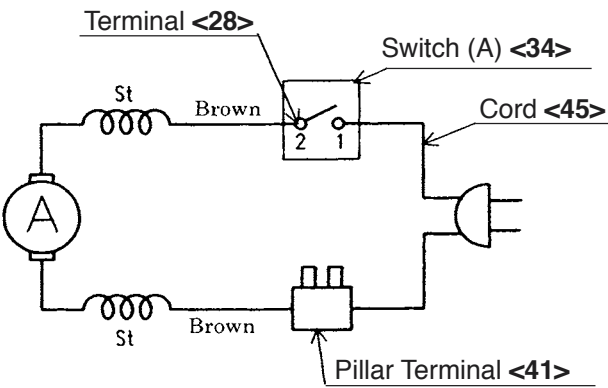


Fig. 15

For other countries

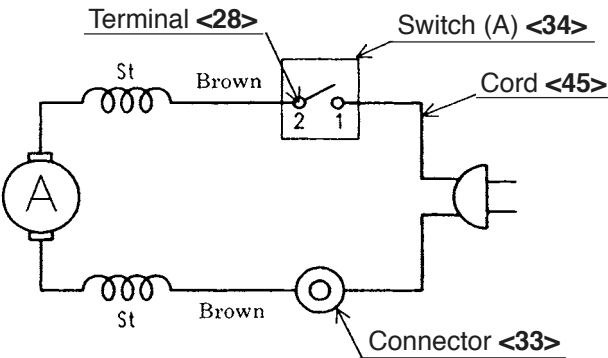


Fig. 16

- Wiring diagram
- Model SP 18VB

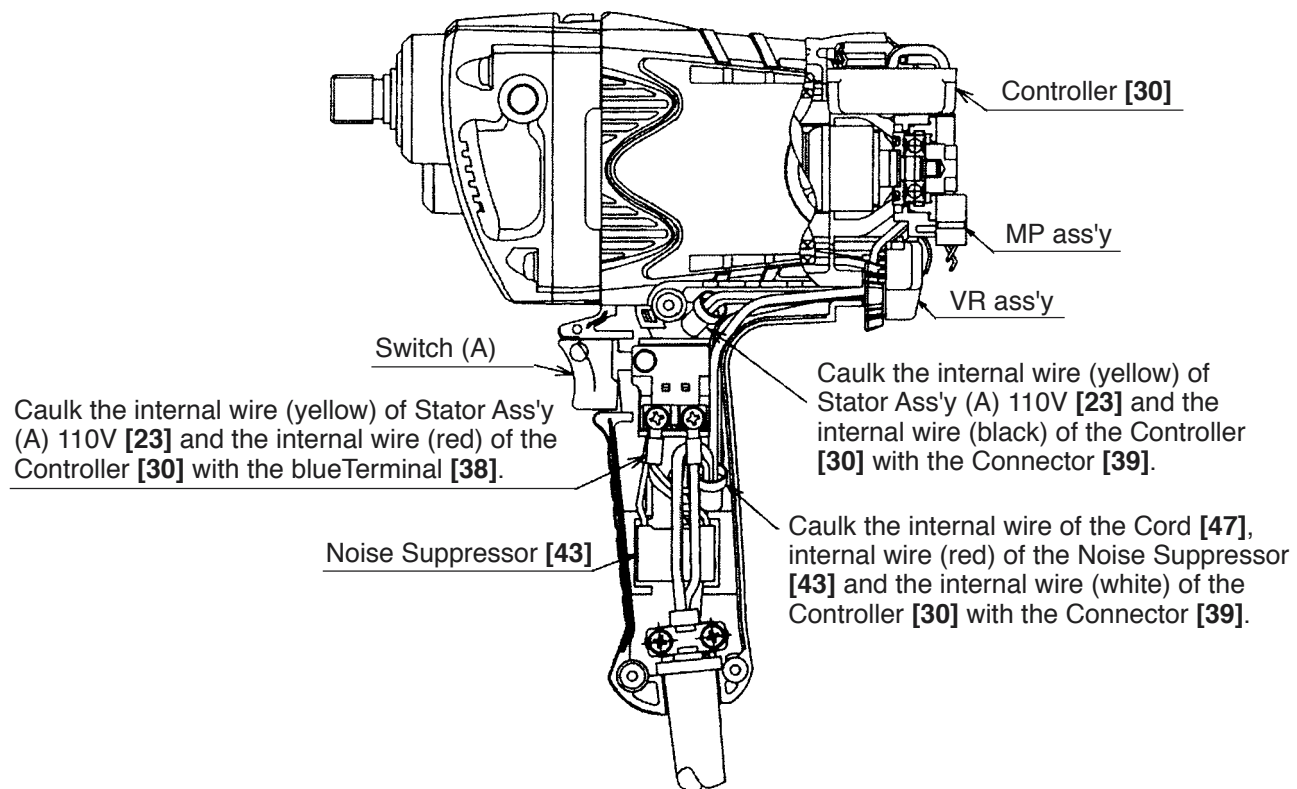


Fig. 17

Insert the internal wire (red) of the Controller [30] over the internal wires of the MP ass'y and the VR ass'y.

Insert the internal wires of the MP ass'y, VR ass'y and Controller [30] into the grooves securely.

Push the MP ass'y and the VR ass'y in the Housing Ass'y [27] as far as they will go.

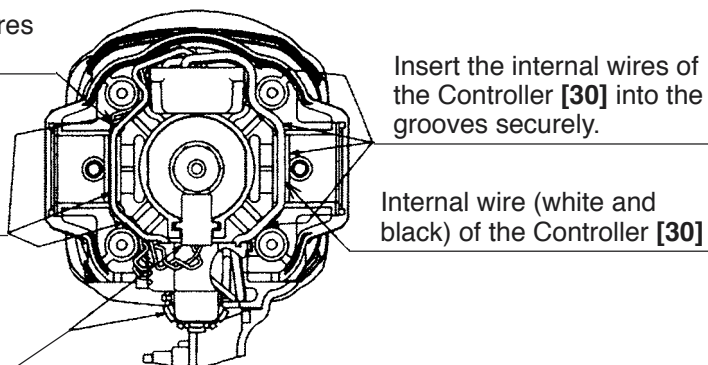


Fig. 18

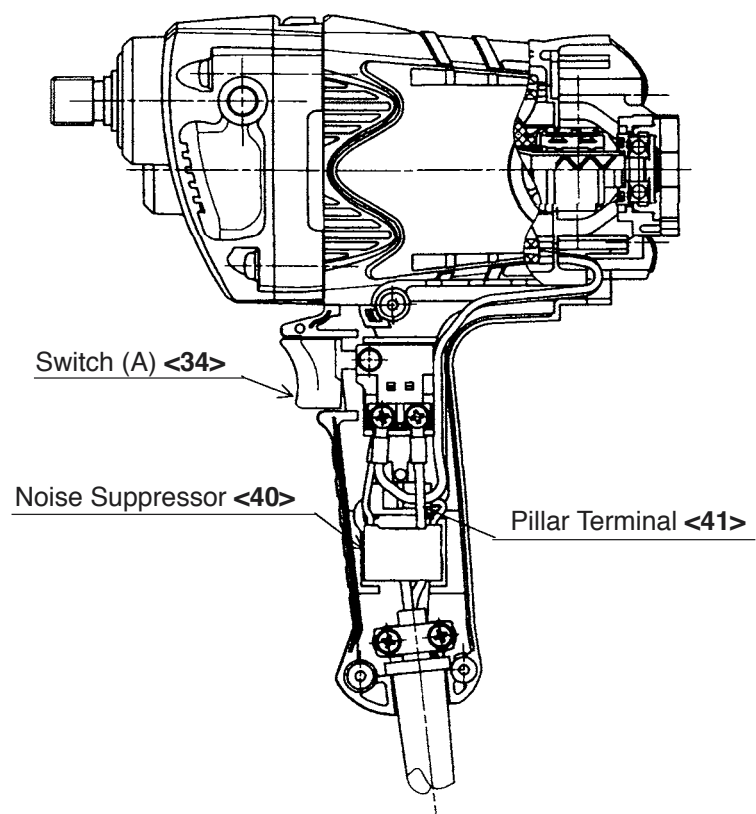


Fig. 19

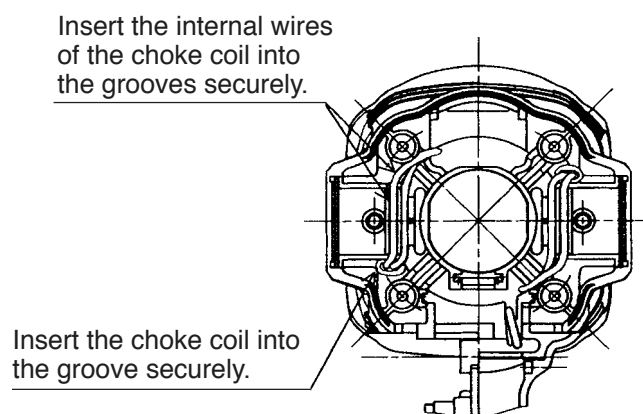


Fig. 20

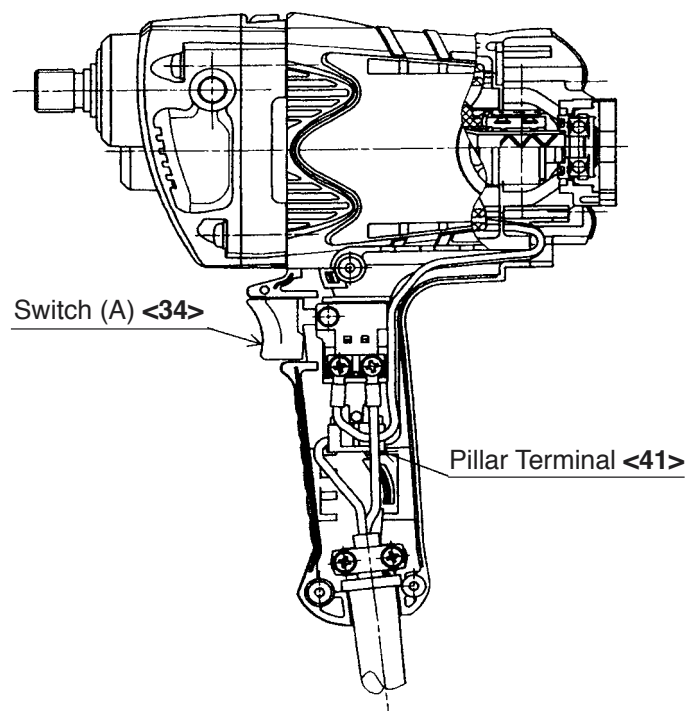


Fig. 21

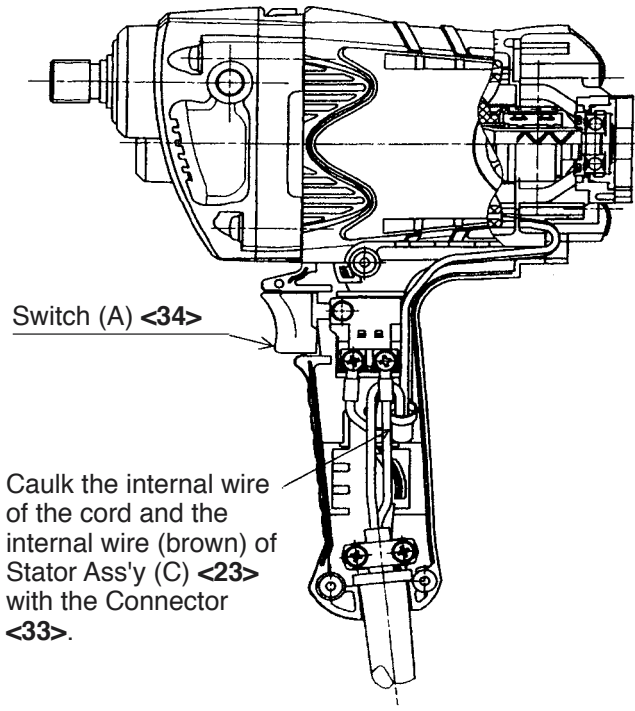


Fig. 22

8-3. Reassembly

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

- (1) Check that the internal wires are wired and arranged properly as shown in Fig. 17 to Fig. 22.
- (2) Insert each internal wire into the grooves of the Housing Ass'y [27] <26> securely and be careful not to pinch the internal wires when mounting the Handle Cover [35] <30> and the Tail Cover [51] <49>.
- (3) If degradation is found on the grease inside the Gear Cover Ass'y [8] <8> at reassembly, remove the grease and apply 30 g of new grease to the inside of the Gear Cover Ass'y [8] <8>. Applicable grease is Nippeco JF-375 (Code No. 930036). Apply it to the Second Pinion and Gear Set [10] <10>, tooth portion of the Armature [15] <15>, needle bearing of the Inner Cover [12] <12> and the inner circumference of the metal.
- (4) When replacing the Dust Seal [25] <25> and the Ball Bearing 608VVC2PS2L [9] <9>, be careful of the mounting direction of the Dust Seal [25] <25> so that the convex side faces the ball bearing and the concave side faces the commutator. When press-fitting the Ball Bearing 608VVC2PS2L [9] <9>, be careful of the press-fitting load. After press-fitting, check that the Ball Bearing 608VVC2PS2L [9] <9> rotates smoothly. The Dust Seal [25] <25> is an important element to protect the Ball Bearing 608VVC2PS2L [9] <9> from dust. Be sure to mount the new Ball Bearing 608VVC2PS2L [9] <9> after disassembly.

8-4. Tightening Torque

Tapping Screws (W/Flange) D4 [44] [52] <42> <50>	1.5 to 2.5 N·m (15 to 25 kgf·cm)
Tapping Screw D5 [7] [18] [22] <7> <18> <22>	2.4 to 3.4 N·m (25 to 35 kgf·cm)
Machine Screw (W/Washer) M3.5 x 6 [36] <31>	0.45 to 0.75 N·m (4.5 to 7.5 kgf·cm)

8-5. 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 2,500 V for 1 minute, with no abnormalities 110 V — 127 V
AC 4,000 V for 1 minute, with no abnormalities 220 V — 240 V

8-6. No-load Current Values

After no-load operation for 30 minutes, the no-load current values should be as follows.

○ Model SP 18VB

Voltage (V)	110
Current (A) max.	5.1

○ Model SP 18SB

Voltage (V)	120	220	230	240
Current (A) max.	3.5	1.8	1.8	1.7

9. STANDARD REPAIR TIME (UNIT) SCHEDULES

MODEL	Variable		10	20	30	40	50	60 min.
	Fixed							
SP 18VB		Work Flow						
SP 18SB								
		Switch Cord						
	General Assembly							

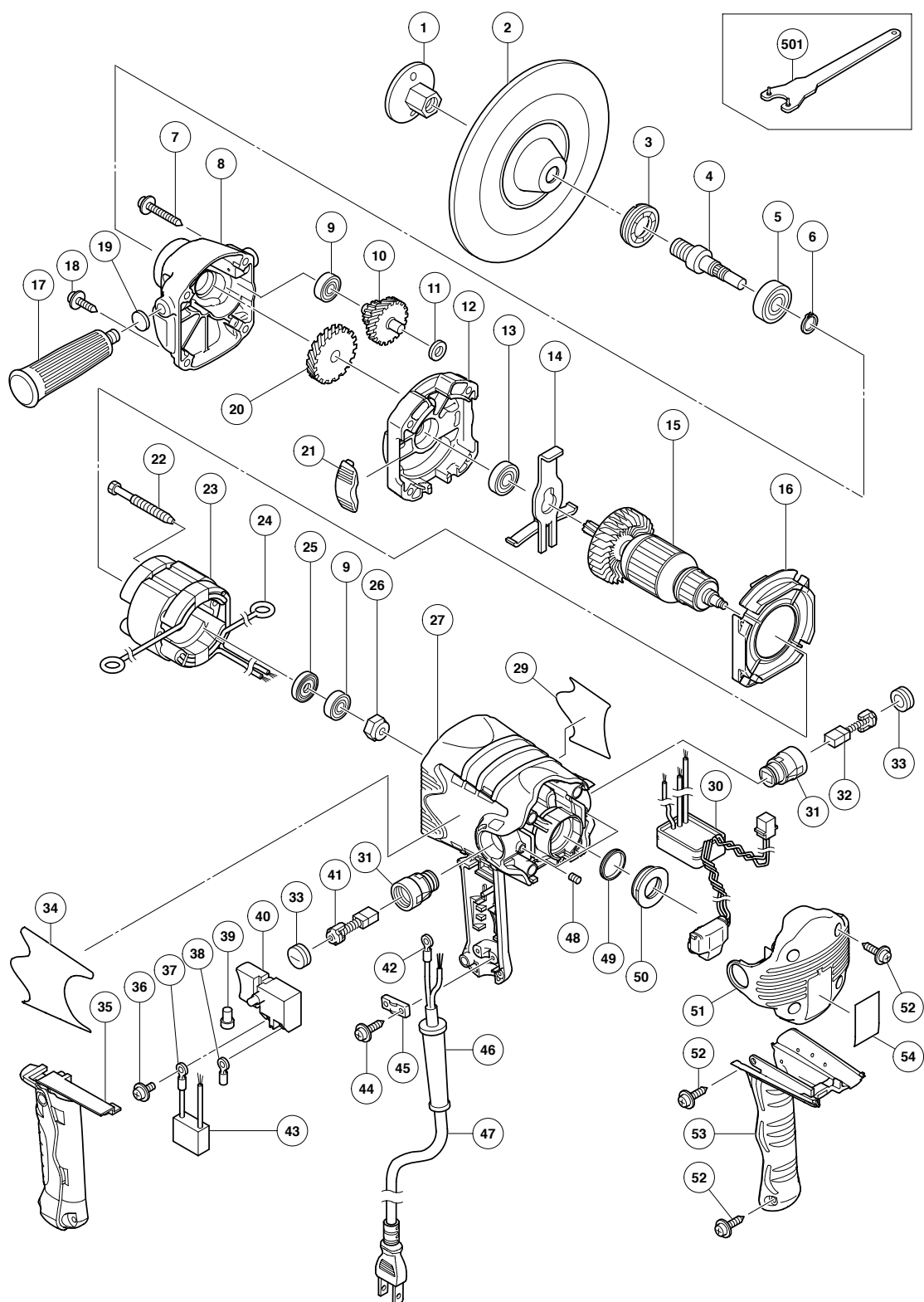
ELECTRIC TOOL PARTS LIST

■ **POLISHER**

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Model SP 18VB

(E1)



PARTS

SP 18VB

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	953-381	WASHER NUT	1		
2	953-255	RUBBER PAD (D16 HOLE)	1		
3	325-857	BEARING CAP	1		
4	325-485	SPINDLE (A)	1		
5	620-1DD	BALL BEARING 6201DDCMPS2L	1		
6	939-542	RETAINING RING FOR D12 SHAFT (10 PCS.)	1		
7	309-778	TAPPING SCREW (W/FLANGE) D5X55 (BLACK)	2		
8	325-478	GEAR COVER ASS'Y	1	INCLUD. 9, 19	
9	608-VVM	BALL BEARING 608VVC2PS2L	2		
10	325-479	SECOND PINION AND GEAR SET	1		
11	317-906	WASHER	1		
12	325-476	INNER COVER	1		
13	600-0DD	BALL BEARING 6000DDCMPS2L	1		
14	325-477	LOCK LEVER	1		
15	360-755C	ARMATURE (A) 110V	1		
16	325-474	FAN GUIDE	1		
17	937-089	SIDE HANDLE	1		
18	323-209	TAPPING SCREW (W/FLANGE) D5X35 (BLACK)	2		
19	937-033	FELT WASHER	2		
20	325-480	FINAL GEAR	1		
21	328-483	AIR COVER	1		
22	992-509	HEX. HD. TAPPING SCREW D5X45	2		
23	340-653C	STATOR ASS'Y (A) 110V	1	INCLUD. 24	
24	930-703	BRUSH TERMINAL	2		
25	315-877	DUST SEAL	1		
26	325-475	MAGNET	1		
27	325-482	HOUSING ASS'Y	1	INCLUD. 31, 48-50	
29		NAME PLATE	1		
30	325-484	CONTROLLER	1		
31	958-900	BRUSH HOLDER	2		
32	999-073	CARBON BRUSH (AUTO STOP TYPE) (1 PAIR)	1		
33	945-161	BRUSH CAP	2		
34		HITACHI LABEL	1		
35	325-481	HANDLE COVER	1		
36	305-499	MACHINE SCREW (W/WASHER) M3.5X6	2		
37	980-063	TERMINAL	1		
38	311-741	TERMINAL	1		
39	959-141	CONNECTOR 50092 (10 PCS.)	2		
40	305-409	SWITCH (A) (1P PLUG IN TYPE) W/O LOCK	1	INCLUD. 36	
41	999-043	CARBON BRUSH (1 PAIR)	1		
42	980-063	TERMINAL	1		
43	311-935	NOISE SUPPRESSOR	1		
44	984-750	TAPPING SCREW (W/FLANGE) D4X16	2		
45	937-631	CORD CLIP	1		
46	938-051	CORD ARMOR D10.1	1		
47	323-974	CORD	1		
48	938-477	HEX. SOCKET SET SCREW M5X8	2		
49	995-662	RUBBER RING	1		
50	320-946	BEARING BUSHING	1		
51	325-489	TAIL COVER	1		
52	301-653	TAPPING SCREW (W/FLANGE) D4X20 (BLACK)	7		

PARTS

SP 18VB

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STANDARD ACCESSORIES

SP 18VB

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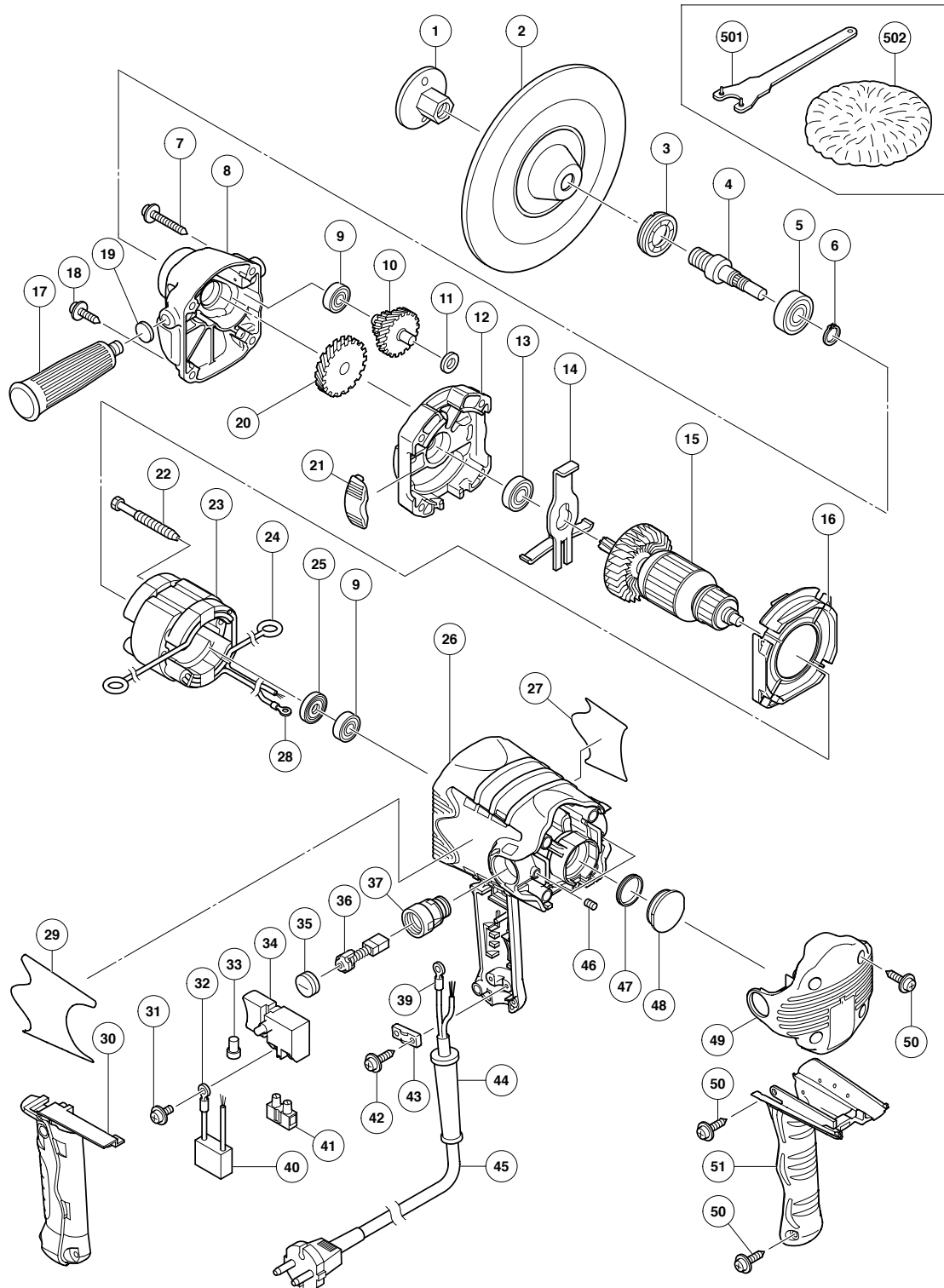
ELECTRIC TOOL PARTS LIST

■ **POLISHER**

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Model SP 18SB

(E1)



PARTS

SP 18SB

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
*	1	953-381	WASHER NUT	1	
*	1	953-246Z	WASHER NUT M14	1	FOR EUROPE
*	1	953-254P	WASHER NUT 5/8"-11UNC	1	FOR USA, CAN
*	2	953-255	RUBBER PAD (D16 HOLE)	1	
*	2	953-247Z	RUBBER PAD (D14 HOLE)	1	FOR EUROPE
	3	325-857	BEARING CAP	1	
*	4	325-485	SPINDLE (A)	1	
*	4	325-493	SPINDLE (A)	1	FOR EUROPE
*	4	325-495	SPINDLE (A)	1	FOR USA, CAN
	5	620-1DD	BALL BEARING 6201DDCMPS2L	1	
	6	939-542	RETAINING RING FOR D12 SHAFT (10 PCS.)	1	
	7	309-778	TAPPING SCREW (W/FLANGE) D5X55 (BLACK)	2	
	8	325-478	GEAR COVER ASS'Y	1	INCLUD. 9, 19
	9	608-VVM	BALL BEARING 608VVC2PS2L	2	
	10	325-479	SECOND PINION AND GEAR SET	1	
	11	317-906	WASHER	1	
	12	325-476	INNER COVER	1	
	13	600-0DD	BALL BEARING 6000DDCMPS2L	1	
	14	325-477	LOCK LEVER	1	
*	15	360-757U	ARMATURE ASS'Y (C) 120V	1	INCLUD. 9, 13, 25
*	15	360-757E	ARMATURE (C) 220V-230V	1	
*	15	360-757F	ARMATURE (C) 240V	1	
	16	325-474	FAN GUIDE	1	
	17	937-089	SIDE HANDLE	1	
	18	323-209	TAPPING SCREW (W/FLANGE) D5X35 (BLACK)	2	
	19	937-033	FELT WASHER	2	
	20	325-480	FINAL GEAR	1	
	21	328-483	AIR COVER	1	
	22	992-509	HEX. HD. TAPPING SCREW D5X45	2	
*	23	340-655C	STATOR ASS'Y (C) 120V	1	INCLUD. 24, 28
*	23	340-655E	STATOR ASS'Y (C) 220V-230V	1	INCLUD. 24, 28
*	23	340-655G	STATOR ASS'Y (C) 220V-230V	1	INCLUD. 24, 28 FOR CHN, EUROPE
*	23	340-655F	STATOR ASS'Y (C) 240V	1	INCLUD. 24, 28
	24	930-703	BRUSH TERMINAL	2	
	25	315-877	DUST SEAL	1	
	26	325-492	HOUSING ASS'Y	1	INCLUD. 37, 46-48
	27		NAME PLATE	1	
	28	980-063	TERMINAL	1	
	29		HITACHI LABEL	1	
	30	325-481	HANDLE COVER	1	
	31	305-499	MACHINE SCREW (W/WASHER) M3.5X6	2	
*	32	980-063	TERMINAL	1	FOR NOISE SUPPRESSOR
*	33	959-140	CONNECTOR 50091 (10 PCS.)	1	FOR INA, SIN, USA, CAN
	34	305-409	SWITCH (A) (1P PLUG IN TYPE) W/O LOCK	1	INCLUD. 31
	35	945-161	BRUSH CAP	2	
	36	999-043	CARBON BRUSH (1 PAIR)	2	
	37	958-900	BRUSH HOLDER	2	
	39	980-063	TERMINAL	1	FOR CORD
*	40	930-039	NOISE SUPPRESSOR	1	FOR EUROPE, CHN
*	41	938-307	PILLAR TERMINAL	1	FOR MAL, EUROPE, CHN
	42	984-750	TAPPING SCREW (W/FLANGE) D4X16	2	

SP 18SB

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STANDARD ACCESSORIES

SP 18SB

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