MODEL

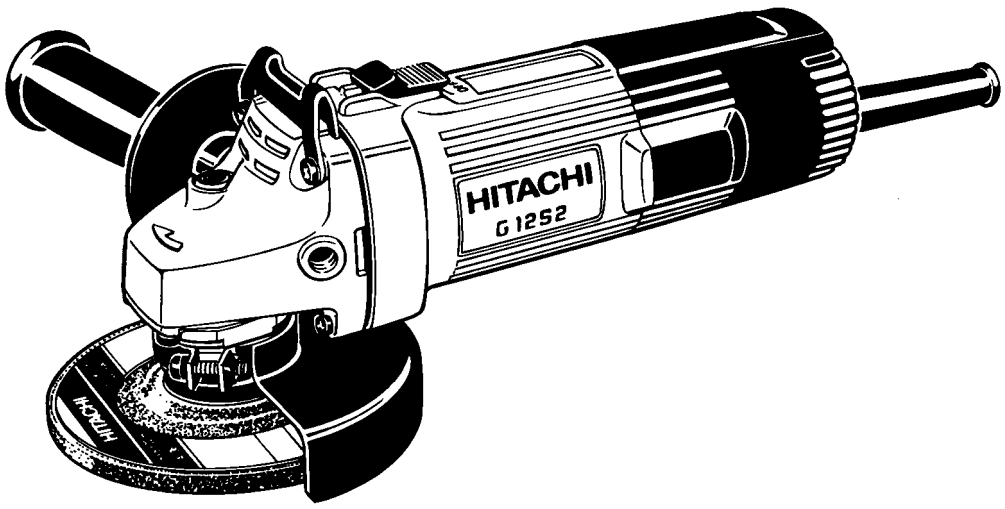
G 10SD2, G 12S2,
G 13SD

HITACHI
POWER TOOLS

G

DISC GRINDERS
G 10SD2, G 12S2, G 13SD

TECHNICAL DATA
AND
SERVICE MANUAL



LIST Nos. G 10SD2: E234
G 12S2: E235
G 13SD: E236

Sep. 2001

REVISED

REMARK:

Throughout this TECHNICAL DATA AND SERVICE MANUAL, a symbol(s) is(are) used in the place of company name(s) and model name(s) of our competitor(s). The symbol(s) utilized here is(are) as follows:

G 10SD1

Symbol Utilized	Competitor	
	Company Name	Model Name
C	MAKITA	9526NB

G 12S2

Symbols Utilized	Competitors	
	Company Name	Model Name
B	BOSCH	GWS7-115
C	MAKITA	9527NB

G 13SD

Symbol Utilized	Competitor	
	Company Name	Model Name
C	MAKITA	9528NB

CONTENTS

1. PRODUCT NAME

Hitachi Disc Grinders, Models G 10SD2 [100 mm (4")]
G 12S2 [115 mm (4-1/2")]
G 13SD [125 mm (5")]

2. MARKETING OBJECTIVE

We sell Models G 10SD1 and G 12S1 in the international market, where they have been favorably accepted. However, to maintain leadership in the marketplace and promote greater sales, more powerful models with superior dust-proof construction are demanded. To address this need, the Models G 10SD2 and G 12S2 incorporate many significant upgrades over current Models G 10SD1 and G 12S1.

In addition to these models, the Model G 13SD [125 mm (5 ")] is introduced with outstanding working efficiency and wear resistance.

These Models are extensions of the HITACHI compact-body disc grinder series and are intended to boost sales, and draw attention to the whole line.

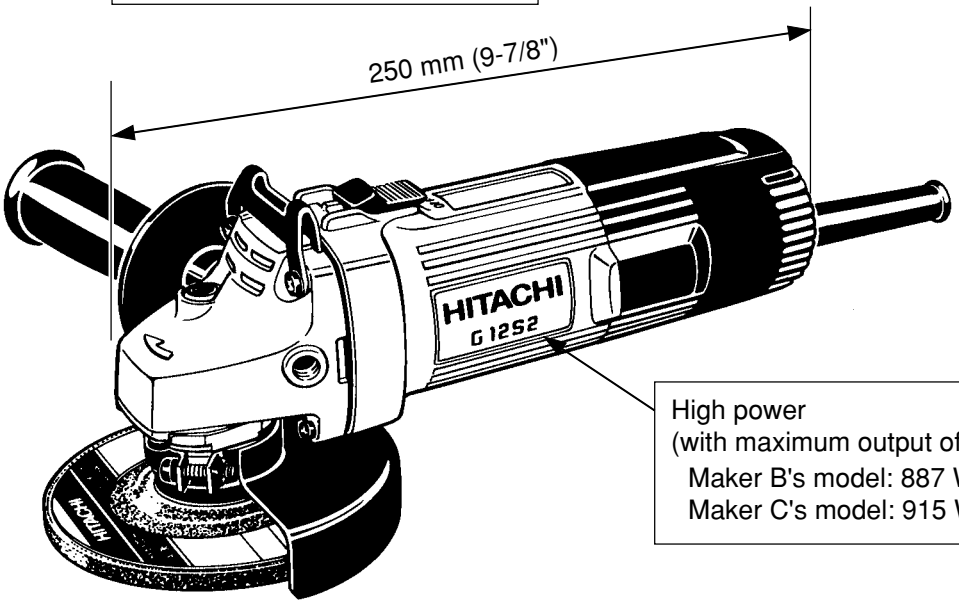
3. APPLICATIONS

- Removal of casting fin and finishing of various types of steel, bronze, aluminum and various other metallic materials
- Grinding of welds, or sections cut by means of a cutting torch
- Grinding of synthetic resins, slate, brick, marble etc.

4. SELLING POINTS

Wear resistance of armature coil:
3.3 times higher compared to maker B's model
2.5 times higher compared to maker C's model

Compact body: 250 mm (9-7/8")
Maker B's model: 286 (11-9/32")
Maker C's model: 257 (10-1/8")



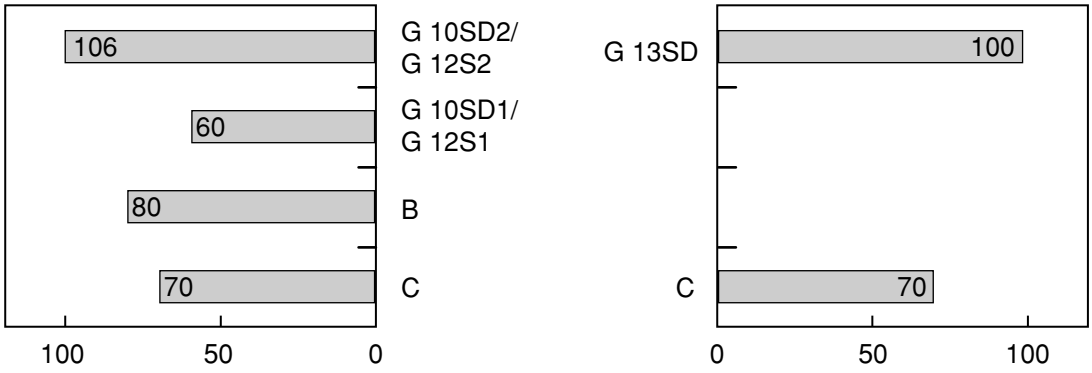
High power
(with maximum output of 1,000 W)
Maker B's model: 887 W
Maker C's model: 915 W

Excellent overload durability:
1.25 times higher compared to maker B's model
1.43 times higher compared to maker C's model

- **Excellent overload durability**

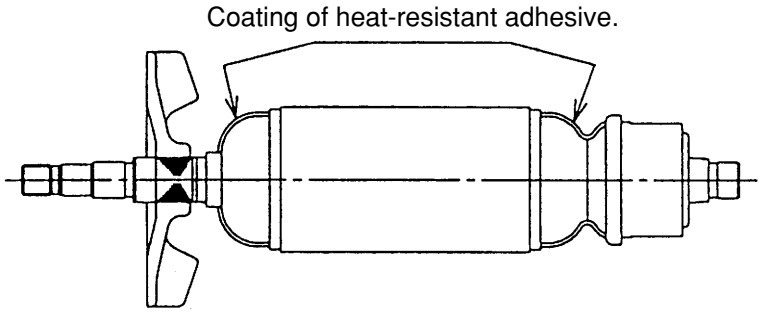
The Models G 10SD2, G 12S2 and G 13SD provide excellent overload durability thanks an improved cooling mechanism and a high-power motor.

Practical test data: Comparison of torque when the stator coil temperature rise is 200 ˚K

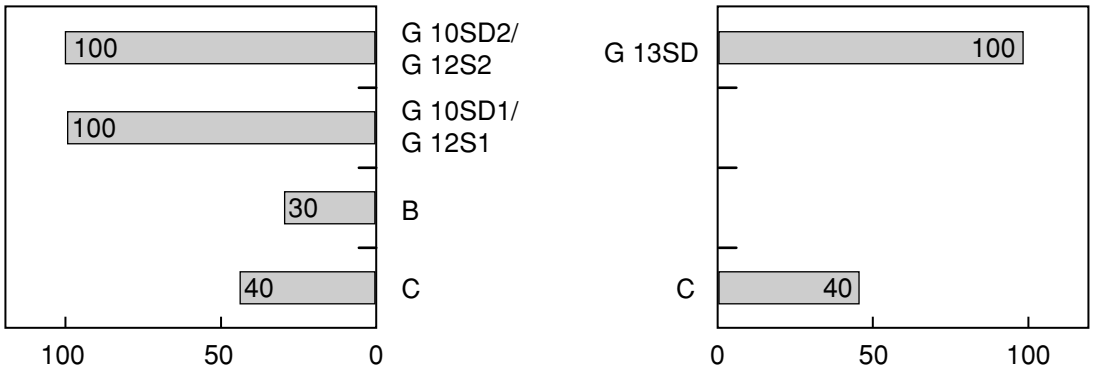


- **Wear resistance of armature coil**

Both ends of the armature coil are sealed with heat-resistant adhesive in addition to varnish treatment to minimize wear of the armature coil caused by dust.



Comparison of wear resistance of armature coils when dust and fine gravel are sucked into the machines



5. SPECIFICATIONS

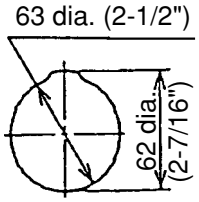
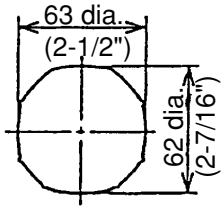
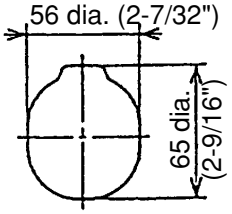
<table>
<tr><th colspan="2">Item \ Model</th><th>G 10SD2</th><th>G 12S2</th><th>G 13SD</th></tr>
<tr><td rowspan="3">Depressed center wheel</td><td>Dimensions</td><td>O.D. 100 mm (4")
x Thickness 4 mm (5/32")
x I.D. 16 mm (5/8")</td><td>O.D. 115 mm (4-1/2")
x Thickness 6 mm (1/4")
x I.D. 22 mm (7/8")</td><td>O.D. 125 mm (5")
x Thickness 6 mm (1/4")
x I.D. 22 mm (7/8")</td></tr>
<tr><td>Max. prectical peripheral speed</td><td>4,300 m/min
(14,100 ft/min, 72 m/s)</td><td colspan="2">4,800 m/min
(15,756 ft/min, 80 m/s)</td></tr>
<tr><td>Type</td><td colspan="3">A, 36, Q, BF</td></tr>
<tr><td colspan="2">Power source</td><td colspan="3">AC single phase 50 or 60 Hz</td></tr>
<tr><td colspan="2">Voltage, current and power input</td><td colspan="3"><table><tr><th>Voltage (V)</th><th>Current (A)</th><th>Power input (W)</th></tr><tr><td>110</td><td>7.3</td><td rowspan="2">760</td></tr><tr><td>115</td><td>7.0</td></tr><tr><td>220</td><td>3.8</td><td rowspan="2">800</td></tr><tr><td>*1 230</td><td>3.7</td></tr><tr><td>240</td><td>3.4</td><td>760</td></tr></table></td></tr>
<tr><td colspan="2">No-load speed</td><td colspan="2">11,000 /min</td><td>10,000 /min</td></tr>
<tr><td colspan="2">Type of motor</td><td colspan="3">AC single phase commutator motor</td></tr>
<tr><td colspan="2">Type of switch</td><td colspan="3">Slide switch</td></tr>
<tr><td colspan="2">Enclosure</td><td colspan="3">Material: Housing, Tail cover ····· Glassfiber reinforced polyamide resin (green)
Gear cover, Packing gland ····· Aluminum alloy die casting
Painting: Gear cover, Packing gland ····· Metallic silver</td></tr>
<tr><td rowspan="2">Weight</td><td>Net*2</td><td colspan="3">1.6 kg (3.5 lbs)</td></tr>
<tr><td>Gross</td><td>2.6 kg (5.7 lbs)</td><td>2.8 kg (6.2 lbs)</td><td>2.9 kg (6.4 lbs)</td></tr>
<tr><td colspan="2">Packaging</td><td colspan="3">Corrugated cardboard box</td></tr>
<tr><td colspan="2">Standard accessories</td><td>Depressed center wheel 100 mm (4") ····· 1
Side handle ····· 1
Wrench ····· 1</td><td>Depressed center wheel 115 mm (4-1/2") ····· 1
Side handle ····· 1
Wrench ····· 1</td><td>Depressed center wheel 125 mm (5") ····· 1
Side handle ····· 1
Wrench ····· 1</td></tr>
</table>

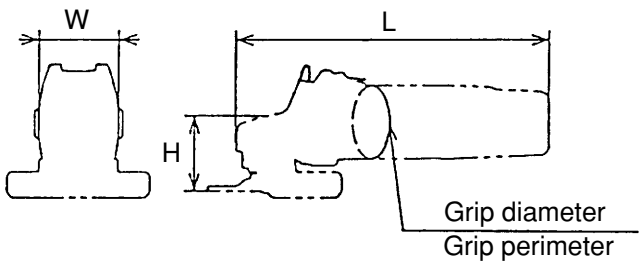
*1 For some destinations: 230 (V), 3.5 (A), 760 (W)

*2 Net weight excludes cord, side handle, depressed center wheel, wheel nut, wheel washer and wheel guard.

6. COMPARISONS WITH SIMILAR PRODUCTS

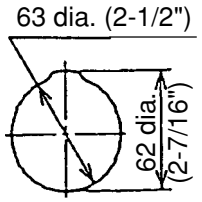
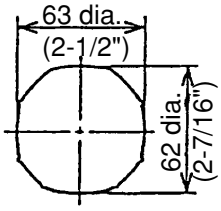
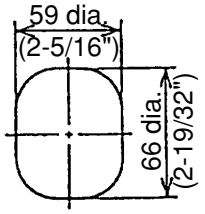
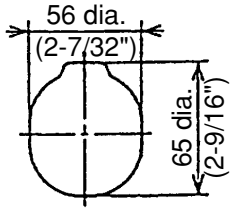
6-1. Specification Comparisons

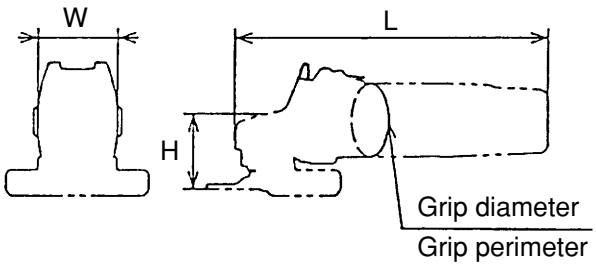
Maker			HITACHI		C
Model			G 10SD2	G 10SD1	
Wheel diameter		mm	100 (4")	100 (4")	100 (4")
Power input*1		W	800	550	750
Output*1		W	530	360	435
Max. output*1		W	1,000	800	915
No-load speed		/min	11,000	11,000	11,000
Grip diameter		mm			
Grip perimeter		mm	207 (8-9/64")	207 (8-9/64")	195 (7-43/64")
Dimensions	L	mm	250 (9-7/8")	261 (10-1/4")	257 (10-1/8")
	H	mm	63 (2-1/2")	60 (2-3/8")	70 (2-3/4")
	W	mm	72 (2-53/64")	67 (2-5/8")	81 (3-3/16")
Weight*2		kg	1.6 (3.5 lbs.)	1.6 (3.5 lbs.)	1.5 (3.3 lbs.)
(Actual weight)			(1.65) (3.6 lbs.)	(1.6) (3.5 lbs.)	(1.5) (3.3 lbs.)



*1 Depends on market.

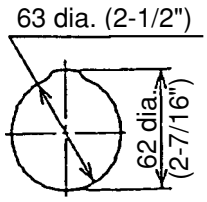
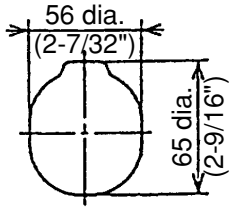
*2 Weight excludes cord, side handle, depressed center wheel, wheel nut, wheel washer and wheel guard.

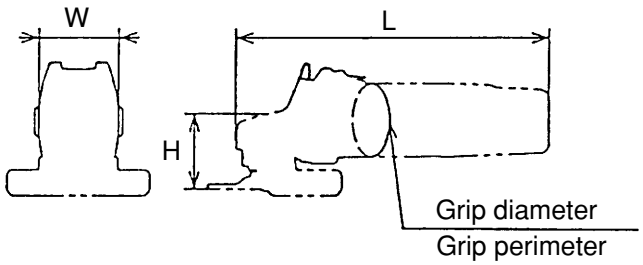
Maker			HITACHI		B	C
Model			G 12S2	G 12S1		
Wheel diameter		mm	115 (4-1/2")	115 (4-1/2")	115 (4-1/2")	115 (4-1/2")
Power input*1		W	800	550	750	750
Output*1		W	530	360	455	435
Max. output*1		W	1,000	800	887	915
No-load speed		/min	11,000	11,000	11,000	11,000
Grip diameter		mm				
Grip perimeter		mm	207 (8-9/64")	207 (8-9/64")	206 (8-1/8")	195 (7-43/64")
Dimensions	L	mm	250 (9-7/8")	261 (10-1/4")	286 (11-9/32")	257 (10-1/8")
	H	mm	63 (2-1/2")	60 (2-3/8")	73 (2-7/8")	70 (2-3/4")
	W	mm	72 (2-53/64")	67 (2-5/8")	76 (3")	81 (3-3/16")
Weight*2		kg	1.6 (3.5 lbs.)	1.6 (3.5 lbs.)	1.55 (3.4 lbs.)	1.5 (3.3 lbs.)
(Actual weight)			(1.65) (3.6 lbs.)	(1.6) (3.5 lbs.)	(1.55) (3.4 lbs.)	(1.5) (3.3 lbs.)



*1 Depends on market.

*2 Weight excludes cord, side handle, depressed center wheel, wheel nut, wheel washer and wheel guard.

Maker			HITACHI	C
Model			G 13SD	
Wheel diameter		mm	125 (5")	125 (5")
Power input*1		W	800	750
Output*1		W	530	435
Max. output*1		W	1,000	915
No-load speed		/min	10,000	11,000
Grip diameter		mm		
Grip perimeter		mm	207 (8-9/64")	195 (7-43/64")
Dimensions	L	mm	250 (9-7/8")	257 (10-1/8")
	H	mm	63 (2-1/2")	70 (2-3/4")
	W	mm	72 (2-53/64")	81 (3-3/16")
Weight*2		kg	1.6 (3.5 lbs.)	1.5 (3.3 lbs.)
(Actual weight)			(1.67) (3.7 lbs.)	(1.5) (3.3 lbs.)



*1 Depends on market.

*2 Weight excludes cord, side handle, depressed center wheel, wheel nut, wheel washer and wheel guard.

6-2. Comparisons in Torque vs. Rotation Speed and Stator Coil Temperature Rise

Fig. 1 and Fig. 2 show comparisons of the rotation speed and the stator coil temperature rise between some competitive models with respect to torque. Torque represents the magnitude of load, i.e., the amount of pressing force, cutting depth and forward force in actual cutting jobs. This shows that a powerful motor is less likely to burn out because it has both a minimum drop of rotation speed even with a higher torque and a lower stator coil temperature rise at the same torque.

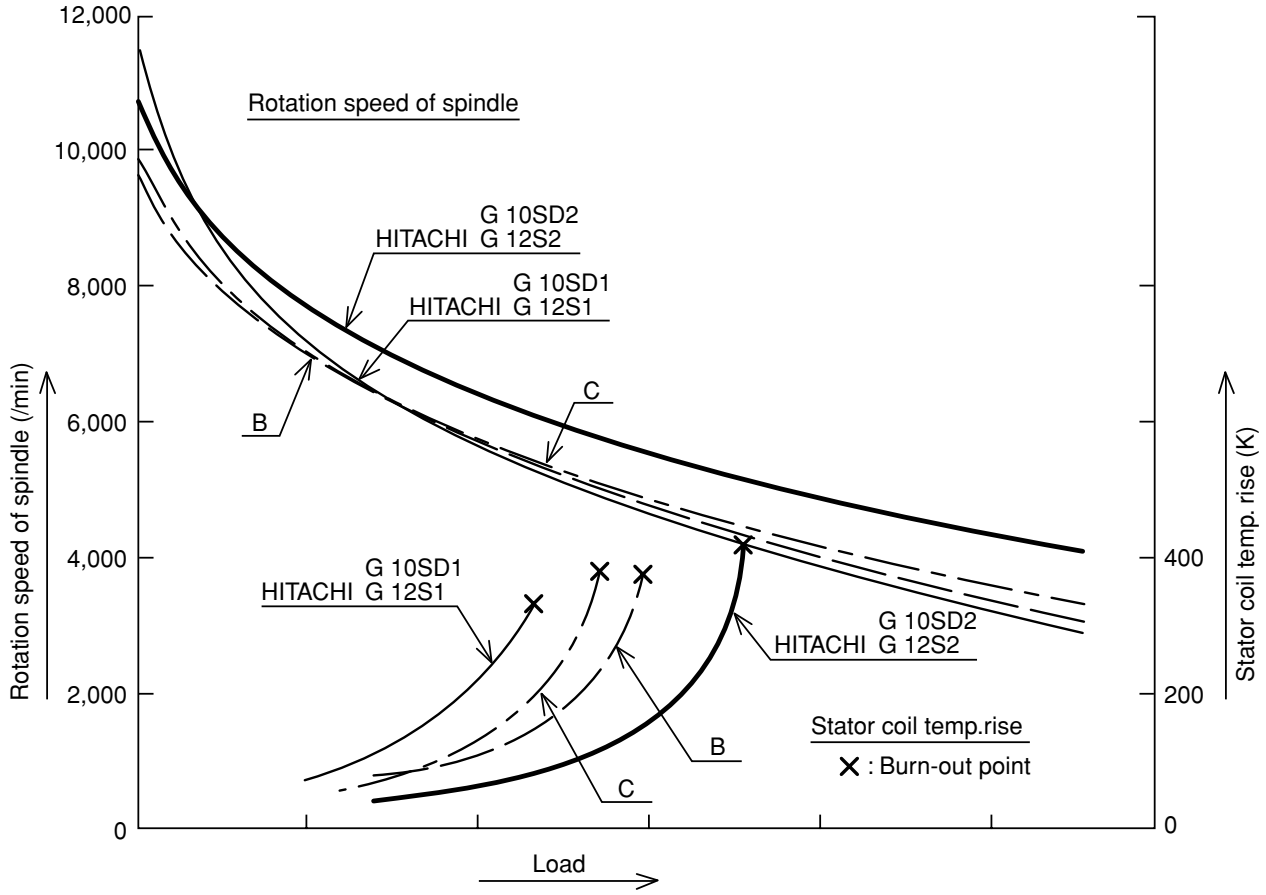


Fig. 1 Comparison in torque vs. rotation speed and stator coil temperature rise (G 10SD2 and G 12S2)

Fig. 1 indicates:

(1) The Models G 10SD2 and G 12S2 are equipped with high-power motors and improved cooling mechanisms, and are superior to the Models G 10SD1, G 12S1, B and C in the rotation speed and the stator coil temperature rise at the same torque.

(2) The motor speed of the Models G 10SD2 and G 12S2 is about 10 % higher than that of B and C at the same torque. This means that the working efficiency of the Models G 10SD2 and G 12S2 is superior to the other maker's models.

(3) The stator coil temperature rise of the Models G 10SD2 and G 12S2 is lower than that of B and C at the same torque, and the torque when the motor is burnt out is about 1.3 times higher compared to B and C. This means that the overload durability of the Models G 10SD2 and G 12S2 is superior to the other maker's models.

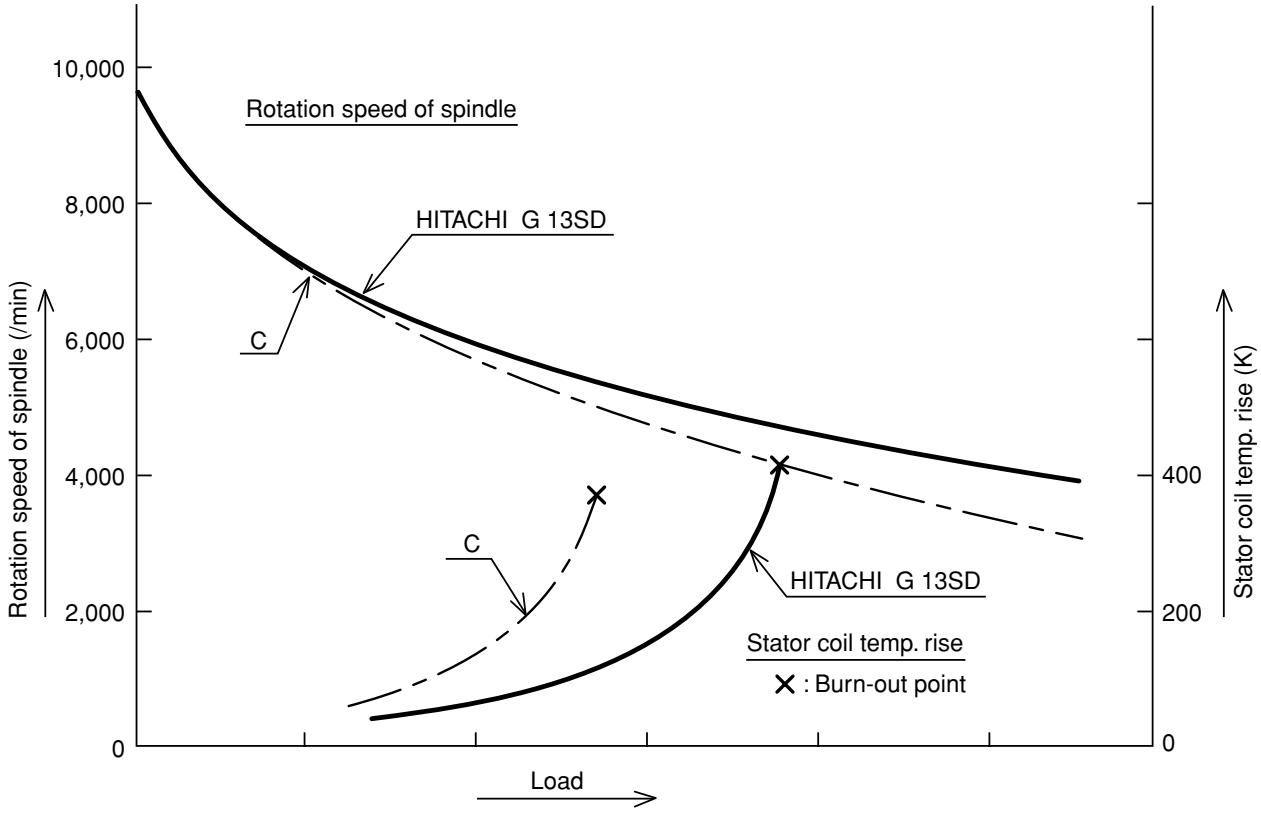


Fig. 2 Comparison in torque vs. rotation speed and stator coil temperature rise (G 13SD)

Fig. 2 indicates:

(1) The Model G 13SD is equipped with a high-power motor and improved cooling mechanism. As a result, it is superior to C in both rotation speed and stator coil temperature rise at the same torque.

(2) The Model G 13SD has a tenacious motor with less rotation speed drop than C at the same torque. This means that the working efficiency of the Model G 13SD is superior to C in heavy-duty work.

(3) The stator coil temperature rise of the Model G 13SD is lower than that of C at the same torque, and the torque when the motor burns out is about 1.4 times higher compared to C. This means that the overload durability of the Model G 13SD is superior to C.

7. PRECAUTIONS IN SALES PROMOTION

In the interest of promoting the safest and most efficient use of the Models G 10SD2, G 12S2 and G 13SD Disc Grinders 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 constants of the Handling Instructions, and fully understands the meaning of the precautions listed on the Name Plate or Caution 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 electric power tools, and specific precautions and suggestions for the use of the disc grinders are 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

Each tool is provided with a Name Plate which contains the following basic safety precautions in the use of the tool.

(1) For Australia, New Zealand and China

CAUTION
Read thoroughly HANDLING INSTRUCTIONS before use.

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

WARNING
To reduce the risc of injury, user must read and understand instruction manual.
Always use proper guards when grinding and wear eye protection.
Use only accessories rated at least *____/min.
AVERTISSEMENT
Afin de réduire les resques de blessure, l'utilisateur doit lire et bien comprendre le mode d'emploi.
Utilisez toujours un outil muni d'un protecteur adéquat et portez des lunettes ou une visiére.
N'utilisez que des accessoires prévus pour au moins *____/min.

* G 12S2: 13,300

7-3. Precautions on Usage

(1) The wheel guard must be aligned in relation to the side handle mounting position.

As illustrated in Figs. 3 and 4, the customer should be instructed that the wheel guard mounting angle must be aligned and fixed in accordance with the side handle mounting position so that the operator's hand will not contact the depressed center wheel.

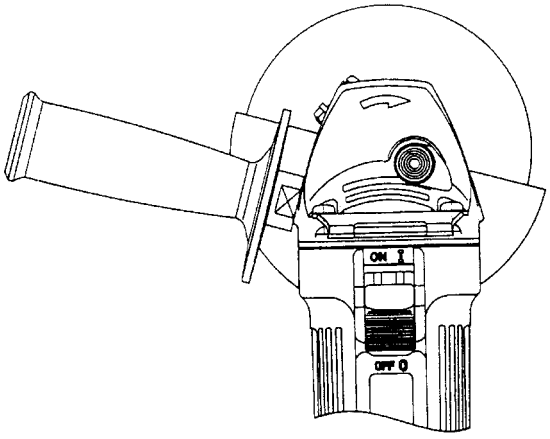


Fig. 3

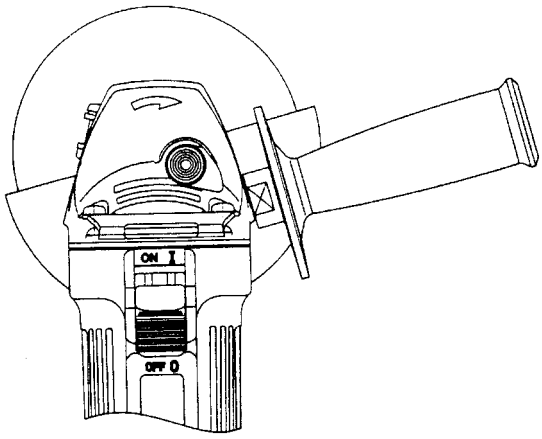


Fig. 4

(2) Never press the pushing button while the depressed center wheel is rotating.

If the pushing button is pressed while the depressed center wheel is rotating, the spindle will stop immediately. In such a case, there is a danger that the wheel nut may be loosened so that the depressed center wheel flies 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 G 10SD2 and G 12S2, and the **<Bold>** numbers to those in the Parts List and the exploded assembly diagram for G 13SD.

8-1. Disassembly

(1) Disassembly of the Armature

1) Loosen the Tapping Screw D4 x 16 **[51] <52>** to pull out the Tail Cover **[50] <51>**.
2) Remove the two Carbon Brushes **[39] <40>** from the Brush Holders **[40] <41>**.
3) Loosen the four Tapping Screws D5 x 25 **[1] <1>** which fix the Gear Cover Ass'y **[4] <4>** to remove the Armature **[9] <9>** from the Housing **[35] <36>** together with the Bearing Holder **[8] <8>**.
4) Loosen the Special Nut M7 **[5] <5>** which fixes the Pinion **[6] <6>** to remove the Pinion **[6] <6>**.
5) Insert the hooks of the J-204 bearing puller between the Ball Bearing **[7] <7>** and the Bearing Holder **[8] <8>** from both sides and fix the hooks with the wing bolts.
6) Place the J204 bearing puller on a supporting jig and push down on the tip of the armature shaft with a hand press to remove the Ball Bearing **[7] <7>**. Then remove the Bearing Holder **[8] <8>.**

(2) Disassembly of the Dust Seal

1) Insert the hooks of the J-204 bearing puller between the commutator and the Dust Seal **[13] <13>** from both sides, and fix the hooks with the wing bolts.
2) Place the J204 bearing puller on a supporting jig and push down on the armature shaft with a hand press to remove the Dust Seal **[13] <13>** together with the Ball Bearing **[14] <14>**. Replace the Dust Seal **[13] <13>** with new one because it is damaged by the removal of the Ball Bearing **[14] <14>**.

(3) Disassembly of the Stator Ass'y

1) Remove the Armature **[9] <9>** and then pull out the two Brush Holders **[40] <41>** from the Housing **[35] <36>**.
2) Disconnect the internal wires of the Stator (A) **[12] <12>** from the Brush Holders **[40] <41>**.
3) Loosen the set screw of the Slide Switch **[44] <45>** and disconnect the two internal wires coming from the Stator (A) **[12] <12>**.
4) Remove the Fan Guide **[10] <10>** from the Housing **[35] <35>**.
5) Loosen the two Hex. Hd. Tapping Screws D4 x 70 **[11] <11>** to remove the Stator (A) **[12] <12>** from the Housing **[35] <35>**. If the Stator (A) **[12] <12>** cannot be removed easily, heat the Housing **[35] <35>** to about 60 ˚C. Then the Stator (A) **[12] <12>** can be removed.

(4) Disassembly of the Slide Knob

1) Loosen the Tapping Screw D4 x 16 **[51] <52>** to pull out the Tail Cover **[50] <51>**.
2) Hold the Housing **[35] <35>** and raise the Slide Bar **[42] <43>** until the Slide Knob **[34] <35>** moves to the "ON" position.
3) Check that the Slide Knob **[34] <35>** has not moved to the "ON-LOCK" position, and push down the Slide Knob **[34] <35>** until it clicks while keeping the Slide Bar **[42] <43>** raised.
4) Raise the Slide Knob **[34] <35>** straight up and remove it keeping the Slide Bar **[42] <43>** raised.

(5) Disassembly of the gear (Fig. 5)

① Loosen the four Seal Lock Screws M4 x 12 **[23] <23>** fixing the Packing Gland **[22] <22>**, and remove the Packing Gland **[22] <22>** from the Gear Cover Ass'y **[4] <4>**.

② Support the bottom of the Packing Gland **[22] <22>** with a jig, and push down on the upper portion of the Spindle **[25] <25>** with a hand press until the end surface of the Woodruff Key **[24] <24>** contacts the Ball Bearing **[20] <20>** and the Spindle **[25] <25>** cannot be pushed down any more. Be careful not to deform the Finger **[26] <26>**.

③ Turn the Packing Gland **[22] <22>** upside down and fix it, then push down the Spindle **[25] <25>**.

④ Insert the J-128 gear puller (use of a steel plate is permitted as a substitute) between the Gear **[17] <17>** and the Packing Gland **[22] <22>**, and push down the Spindle **[25] <25>** with a hand press to remove it.

- Replace the Ball Bearing **[20] <20>** with new one every time should the gear be disassembled because the stress while pulling out the gear is applied to the Ball Bearing **[20] <20>**.

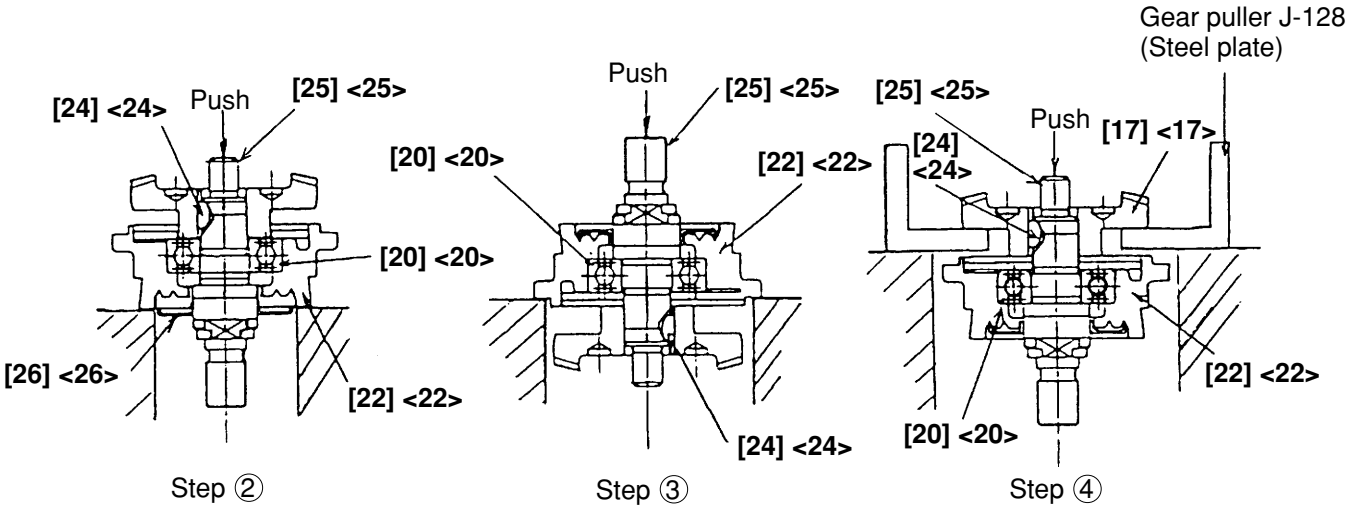


Fig. 5

8-2. Reassembly

Push the parts together in the reverse order of disassembly, with the precautions given below.

(1) Generously lubricate the teeth of Gear **[17] <17>** and Pinion **[6] <6>** with grease. Rub grease onto the teeth with your fingers so that the grease reaches each tooth bottom. Note that the Gear **[17] <17>** and Pinion **[6] <6>** if under-lubricated may wear at an faster rate.

(2) Be sure to soak the inner diameter of the Felt Packing **[21] <21>** with machine oil. Otherwise, its dust-sealing function will fail to work properly, resulting in an earlier damage of the Ball Bearing **[20] <20>**.

(3) When replacing the Armature **[9] <9>** and the Ball Bearing **[14] <14>** on the commutator side, press inward on the Dust Seal **[13] <13>** while taking care of its direction until the end face of the Dust Seal **[13] <13>** hits against the butting surface of the Armature **[9] <9>** and make sure that Dust Seal **[13] <13>** cannot turn freely. (See Fig. 6)

The Dust Seal **[13] <13>** is an important element for improved dust protection of the Ball Bearing **[14] <14>**. Be sure to use a new one at every disassembly work of the Ball Bearing **[14] <14>**.

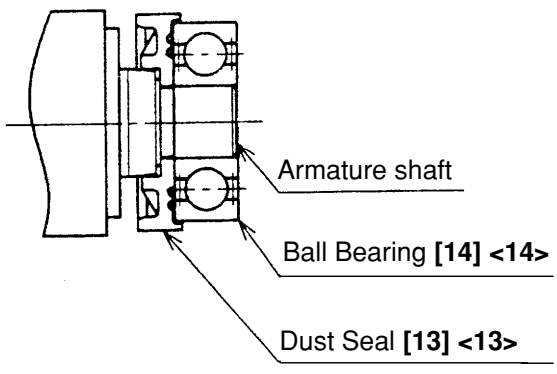


Fig. 6

(4) Connect the four internal wires of Stator (A) **[12] <12>** with the parts indicated in Fig. 7.

Connect the internal wires correctly as shown in Fig. 8.

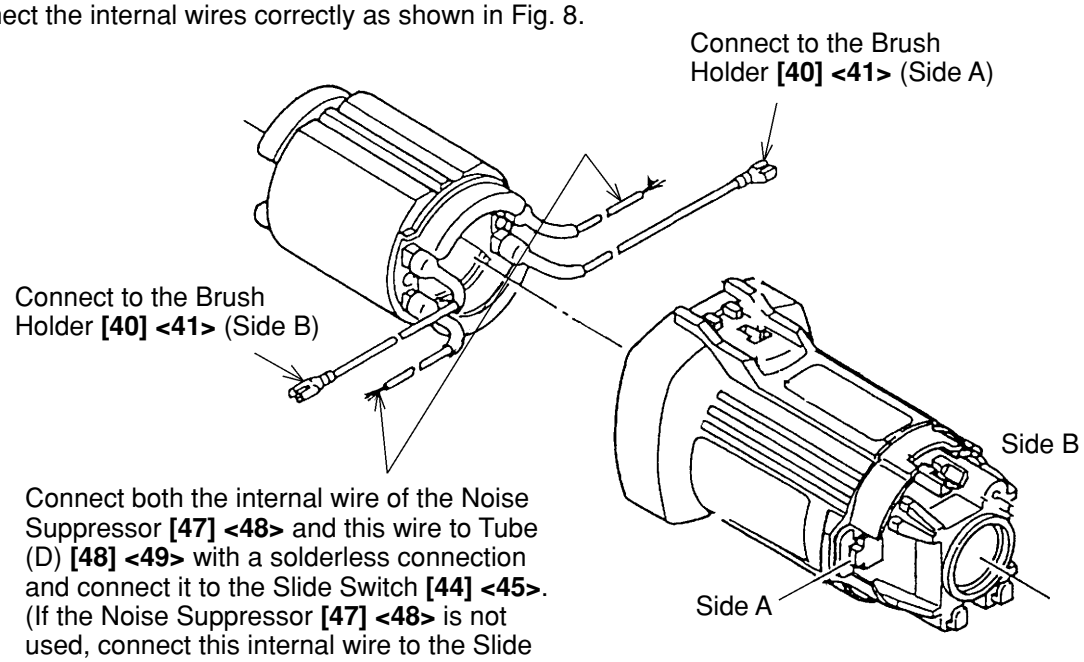
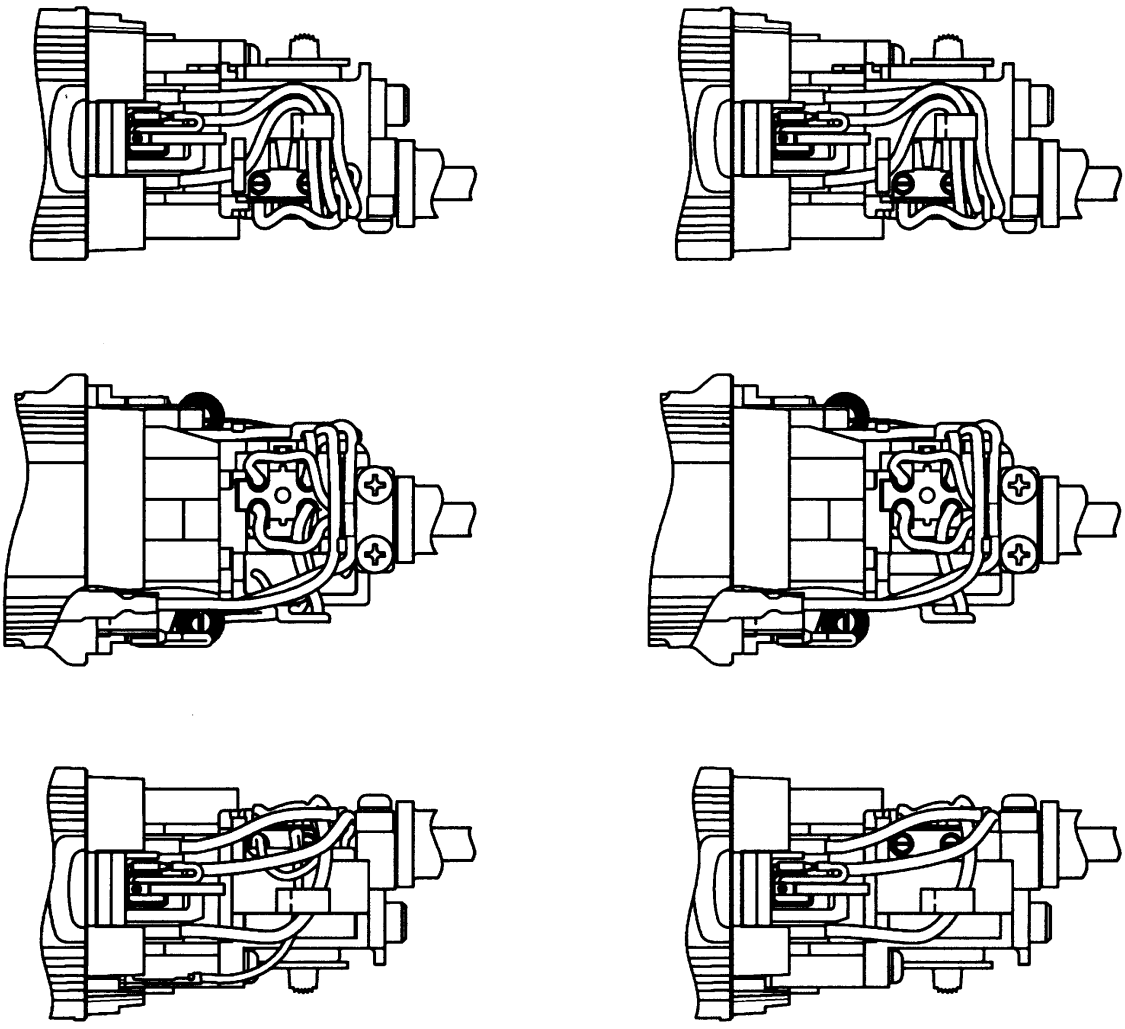


Fig. 7



a. Noise suppressor provided

b. Noise suppressor not provided

Fig. 8

(5) When connecting the Earth Terminal **[46] <47>** to the internal wire (the middle wire among three) of the Noise Suppressor **[47] <48>**, strip the insulation sheath on the internal wire by about 6 mm and press connect it together with the Earth Terminal **[46] <47>** with a clamping tool available on the market.

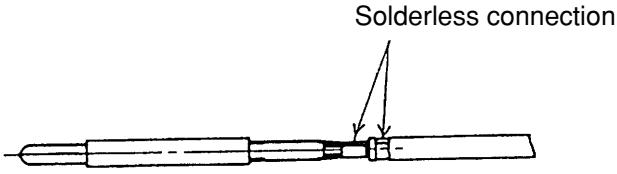


Fig. 9

(6) Check that the spring end does not hold the pigtail when mounting the carbon brush. Do not catch the pigtail in the tail cover when mounting the tail cover.

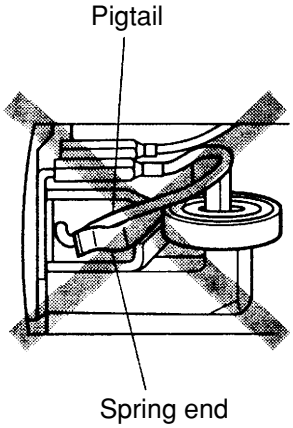


Fig. 10

(7) When replacing the Gear Cover Ass'y **[4] <4>**, lubricate the metal part with mixed oil.
Mixed oil: Mixture of Hitachi power tool grease No. 2 (Unilube No. 00) and tubine oil

- Mixture ratio...1:1 (weight ratio)
- Volume... 0.5 cc

8-3. Lubrication Points and Types of Lubricant

- Pinion chamber of Gear Cover Ass'y **[4] <4>** ·····Nippeko grease (SEP-3A) 5g

  Generously rub grease onto the gear and pinion.
- Metal ·····Mixed oil 0.5 cc

  Mixed oil: Mixture of Hitachi power tool grease No.2 (Unilube No. 00) and turbine oil

  Mixture ratio 1:1 (weight ratio)

8-4. Tightening Torque

D4 Tapping Screws **[11] <11> [45] <46> [51] <52>** ····· 2.0 ± 0.5 N·m (20 ± 5 kgf·cm, 1.5 ± 0.4 ft-lbs)

M4 Seal Lock Screws (W/SP. Washer) **[18] <18> [23] <23>** ··· 1.8 ± 0.5 N·m (18 ± 4 kgf·cm, 1.3 ± 0.3 ft-lbs)

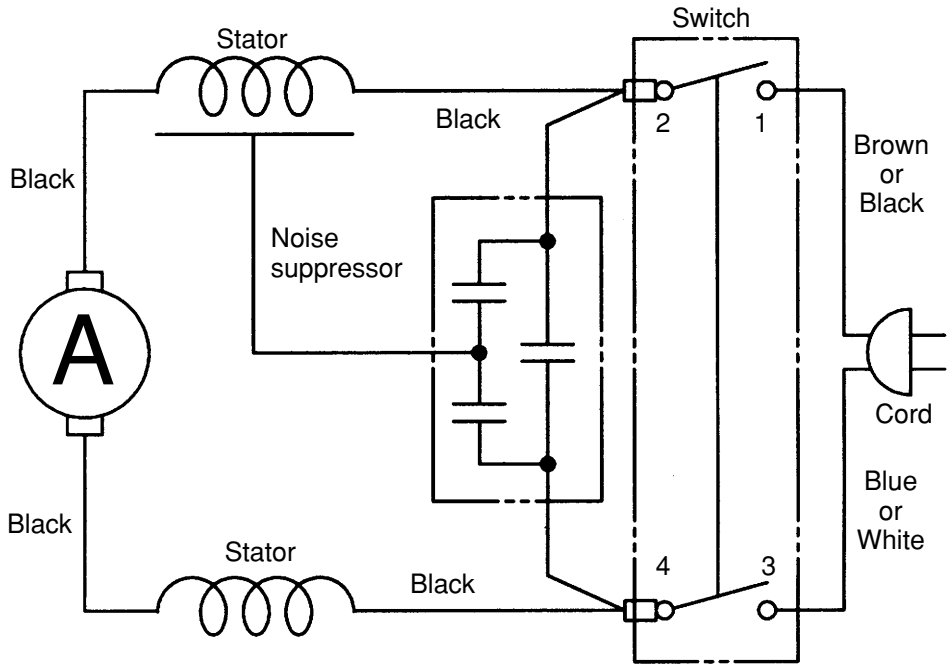
D5 Tapping Screw **[1] <1>** ····· 2.9 ± 0.5 N·m (30 ± 5 kgf·cm, 2.2 ± 0.4 ft-lbs)

M5 Machine Screw (W/SP. Washer) **[27] <27>** ····· 1.6 ± 0.4 N·m (16 ± 4 kgf·cm, 1.2 ± 0.3 ft-lbs)

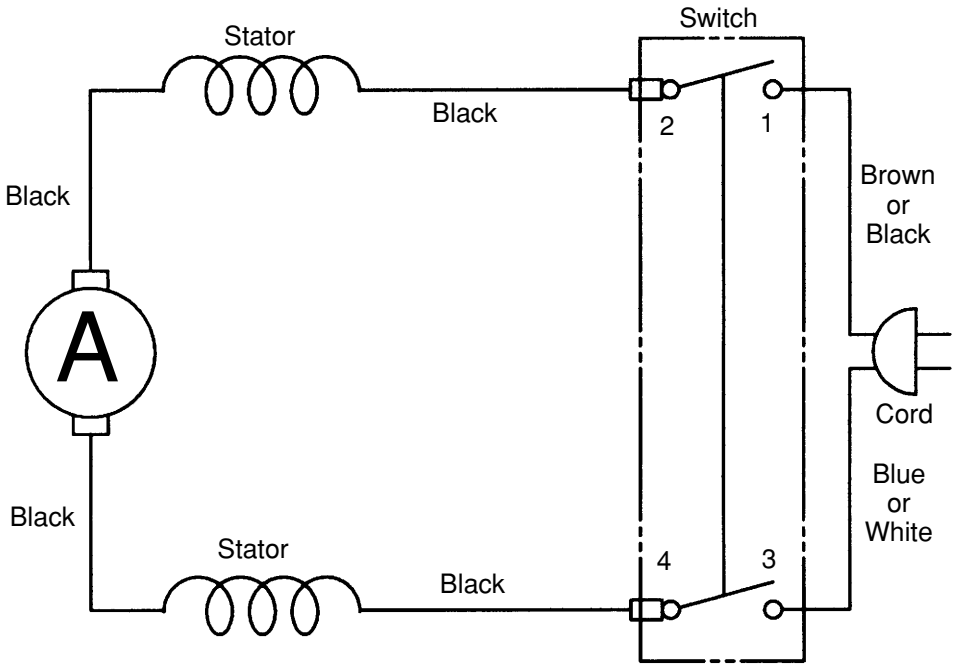
Special Nut M7 **[5]** ····· 6.4 ± 1.0 N·m (65 ± 10 kgf·cm, 4.7 ± 0.7 ft-lbs)

8-5. Wiring Diagrams

(1) For European countries, Australia, New Zealand, South Africa and China



(2) For other countries



8-6. Insulation Tests

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

Insulation resistance: 7 MΩ or more with DC 500V Megohm Tester

Dielectric strength test: AC 4,000 V/1 minute, with no abnormalities ····· 220 V – 240 V products

AC 2,500 V/1 minute, with no abnormalities ····· 110 V – 127 V products

8-7. No-Load Current Value

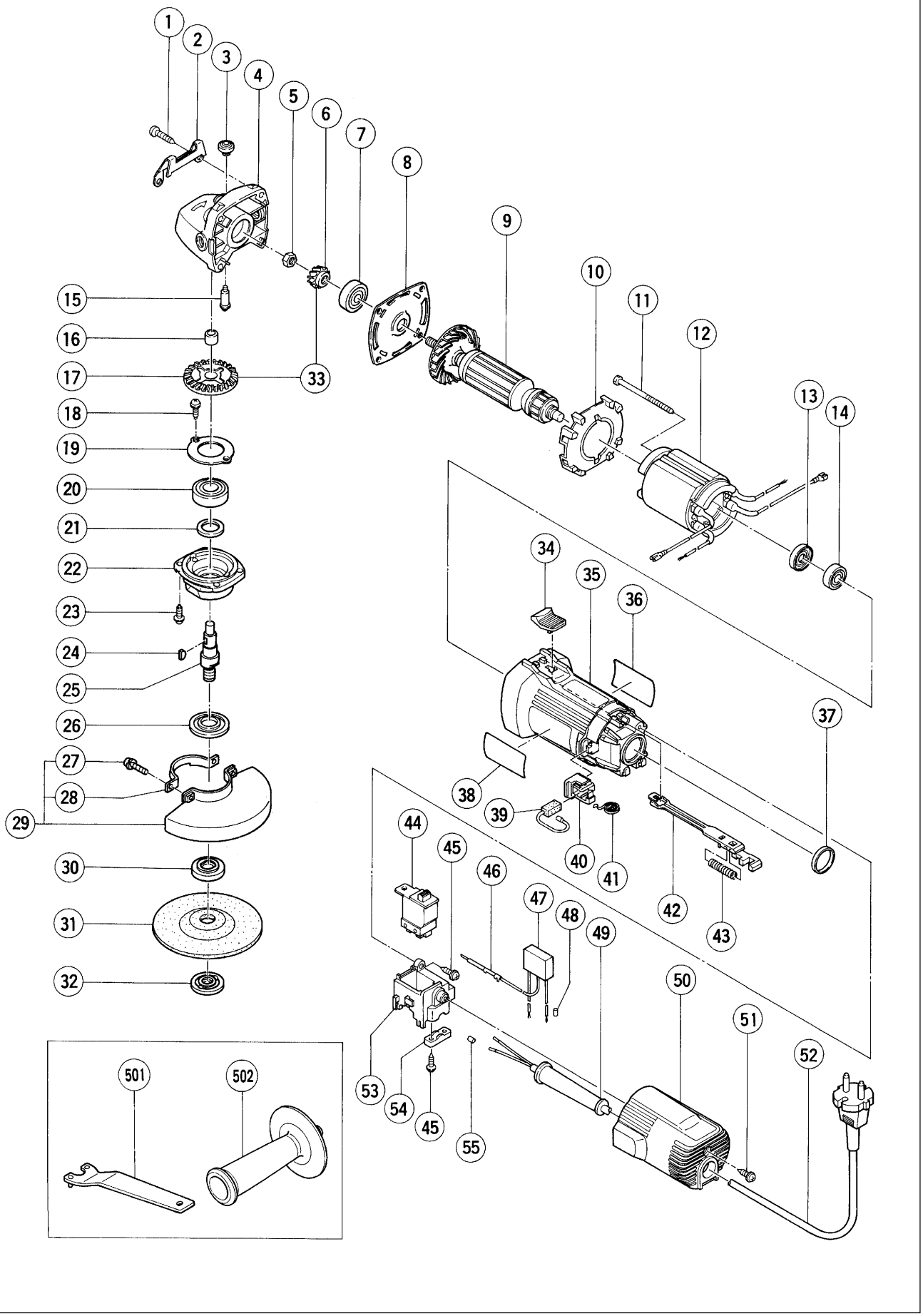
After no-load operation for 30 minutes, the no-load current value should be as follows.

Voltage (V)	110	115	220	230	240
Current (A) max.	3.2	3.0	1.7	1.7	1.6

9. STANDARD REPAIR TIME (UNIT) SCHEDULES

MODEL	Variable / Fixed	10	20	30	40	50	60 min.
G 10SD2 G 12S2 G 13SD	General Assembly	Work Flow Slide Switch Cord Tail Cover Carbon Brush x 2 Wheel Guard Ass'y	Pinion Ball Bearing (628 VV) Bearing Holder Armature Ball Bearing (608 VV) Pushing Button Gear Cover Ass'y Lock Pin Gear Needle Bearing	Housing Startor (A) Slide Bar Bearing Cover Ball Bearing (6201 DD) Felt Packing Packing Gland Spindle Fringer			

Assembly Diagram for G 10SD2



	ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
	1	937-807	TAPPING SCREW D5X25	4		
	2	317-807	GUARD PLATE	1		
	3	301-944	PUSHING BUTTON	1		
	4	316-484	GEAR COVER ASS'Y	1	INCLUD.3,15,16	
	5	301-941	SPECIAL NUT M7	1		
	6	317-820	PINION	1		
	7	628-VVC	BALL BEARING 628VVC2PS2-L	1		
	8	316-480	BEARING HOLDER	1		
*	9	360-497C	ARMATURE 110V	1		
*	9	360-497E	ARMATURE 220V	1		
*	9	360-497F	ARMATURE 230V-240V	1		
	10	316-479	FAN GUIDE	1		
	11	982-021	HEX. HD. TAPPING SCREW D4X70	2		
*	12	340-441C	STATOR (A) 110V	1		
*	12	340-441E	STATOR (A) 220V-230V	1		
*	12	340-441F	STATOR (A) 240V	1		
	13	315-877	DUST SEAL	1		
	14	608-VVM	BALL BEARING 608VVMC2EPS2L	1		
	15	301-943	LOCK PIN	1		
	16	673-422	NEEDLE BEARING (HK0709)	1		
	17	317-821	GEAR	1		
	18	997-263	SEAL LOCK SCREW (W/SP. WASHER) M4X10	2		
	19	316-490	BEARING COVER	1		
	20	620-1DD	BALL BEARING 6201DDUCMAV2S	1		
	21	301-946	FELT PACKING	1		
	22	316-489	PACKING GLAND	1		
	23	307-127	SEAL LOCK SCREW (W/SP. WASHER) M4X12	4		
	24	302-047	WOODRUFF KEY	1		
	25	317-822	SPINDLE	1		
	26	301-945	FRINGER	1		
	27	308-386	MACHINE SCREW (W/SP. WASHER) M5X16(BLACK)	2		
	28	301-949	SET PLATE	1		
	29	301-948	WHEEL GUARD ASS'Y	1	INCLUD.27,28	
	30	310-787	WHEEL WASHER	1		
	31	316-820	D. C. WHEELS 100MM A36Q (25 PCS.)	1		
	32	314-437	WHEEL NUT (C)	1		
	33	317-819	GEAR ASS'Y	1	INCLUD.6,17	
	34	314-428	SLIDE KNOB	1		
	35	317-802	HOUSING	1		
	36		NAME PLATE	1		
	37	995-662	RUBBER RING	1		
	38		HITACHI LABEL	1		
	39	999-088	CARBON BRUSH (1 PAIR)	2		
	40	317-810	BRUSH HOLDER	2		
	41	308-536	SPRING	2		
	42	317-806	SLIDE BAR	1		
	43	314-429	SPRING	1		
	44	980-778	SLIDE SWITCH (2P PILLAR TYPE)	1		
	45	984-750	TAPPING SCREW (W/FLANGE) D4X16	3		
*	46	314-854	EARTH TERMINAL	1	FOR NOISE SUPPRESSOR	
*	47	994-273	NOISE SUPPRESSOR	1	FOR NZL,AUS,GBR,CHN	

* : ALTERNATIVE PARTS

	ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
*	48	981-373	TUBE (D)	2	FOR NOISE SUPPRESSOR	
	49	953-327	CORD ARMOR D8.8	1		
	50	317-808	TAIL COVER	1		
	51	307-811	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	1		
*	52	500-455Z	CORD	1	(CORD ARMOR D8.8)	
*	52	500-409Z	CORD	1	(CORD ARMOR D8.8) FOR INA	
*	52	500-237Z	CORD	1	(CORD ARMOR D8.8) FOR HKG,GBR	
*	52	500-439Z	CORD	1	(CORD ARMOR D8.8) FOR NZL,AUS	
*	52	500-423Z	CORD	1	(CORD ARMOR D8.8) FOR SIN	
	53	317-811	SWITCH HOLDER	1		
	54	937-631	CORD CLIP	1		
	55	981-373	TUBE (D)	2	FOR CORD	

* : ALTERNATIVE PARTS

STANDARD ACCESSORIES

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
501	313-933	WRENCH	1		
502	302-142	SIDE HANDLE	1		

OPTIONAL ACCESSORIES

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
601	936-558Z	RUBBER PAD	1		
602	935-513	WASHER NUT M10XP1.5	1		
603	936-548	WASHER	1		
604	314-051	SANDING DISCS 100MM C-P16 (10 PCS.)	1		
605	314-052	SANDING DISCS 100MM C-P20 (10 PCS.)	1		
606	314-053	SANDING DISCS 100MM C-P24 (10 PCS.)	1		
607	314-054	SANDING DISCS 100MM C-P30 (10 PCS.)	1		
608	314-055	SANDING DISCS 100MM C-P36 (10 PCS.)	1		
609	314-056	SANDING DISCS 100MM C-P40 (10 PCS.)	1		
610	314-057	SANDING DISCS 100MM C-P50 (10 PCS.)	1		
611	314-058	SANDING DISCS 100MM C-P60 (10 PCS.)	1		
612	314-059	SANDING DISCS 100MM C-P80 (10 PCS.)	1		
613	314-060	SANDING DISCS 100MM C-P100 (10 PCS.)	1		
614	314-061	SANDING DISCS 100MM C-P120 (10 PCS.)	1		
615	302-098	GUIDE BASE	1		
616	986-381	DUST COLLECTOR (FOR DISC GRINDER)	1		

Printed in Japan 3 -- 99
(990325 N)

★ : ALTERNATIVE PARTS

HITACHI

LIST NO. E235

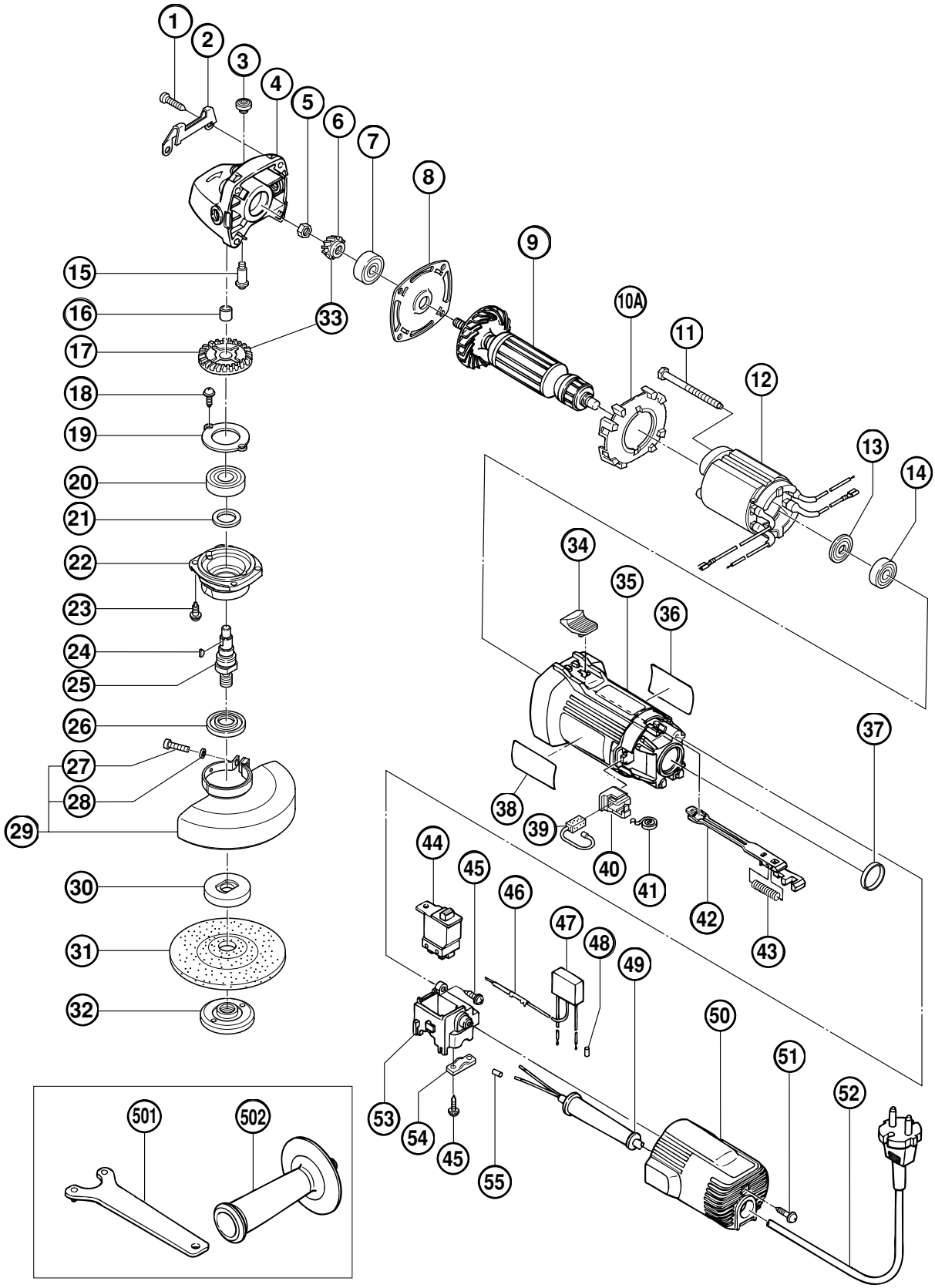
ELECTRIC TOOL PARTS LIST

■ DISC GRINDER

2001· 8 ·22

Model G 12S2

(E2)



	ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
	1	937-807	TAPPING SCREW D5X25	4		
	2	317-807	GUARD PLATE	1		
	3	301-944	PUSHING BUTTON	1		
	4	316-484	GEAR COVER ASS'Y	1	INCLUD.3,15,16	
	5	301-941	SPECIAL NUT M7	1		
	6	317-820	PINION	1		
	7	628-VVC	BALL BEARING 628VVC2PS2L	1		
	8	316-480	BEARING HOLDER	1		
*	9	360-497C	ARMATURE 110V	1		
*	9	360-497E	ARMATURE 220V	1		
*	9	360-497F	ARMATURE 230V-240V	1		
*	9	360-497U	ARMATURE ASS'Y 110V-115V	1	INCLUD.7,13,14 FOR USA,CAN	
	10A	319-898	FAN GUIDE	1		
	11	982-021	HEX. HD. TAPPING SCREW D4X70	2		
*	12	340-441C	STATOR (A) 110V-115V	1		
*	12	340-441E	STATOR (A) 220V-230V	1		
*	12	340-441F	STATOR (A) 240V	1		
	13	315-877	DUST SEAL	1		
	14	608-VVM	BALL BEARING 608VVC2PS2L	1		
	15	301-943	LOCK PIN	1		
	16	673-422	NEEDLE BEARING (HK0709)	1		
	17	317-821	GEAR	1		
	18	997-263	SEAL LOCK SCREW (W/SP. WASHER) M4X10	2		
	19	316-490	BEARING COVER	1		
	20	620-1DD	BALL BEARING 6201DDCMPS2L	1		
	21	301-946	FELT PACKING	1		
	22	317-823	PACKING GLAND	1		
	23	307-127	SEAL LOCK SCREW (W/SP. WASHER) M4X12	4		
	24	302-047	WOODRUFF KEY	1		
*	25	317-804	SPINDLE	1		
*	25	319-655	SPINDLE 5/8"-11UNC	1	FOR USA,CAN	
	26	301-945	FRINGER	1		
	27	949-241	MACHINE SCREW M5X20 (10 PCS.)	1		
	28	949-454	SPRING WASHER M5 (10 PCS.)	1		
	29	319-656	WHEEL GUARD ASS'Y	1	INCLUD.27,28	
*	30	937-817Z	WHEEL WASHER	1		
*	30	937-928Z	WHEEL WASHER (A) FOR D16 HOLE	1	FOR USA,CAN	
	31	316-821	D. C. WHEELS 115MM A36Q (25 PCS.)	1		
*	32	994-324	WHEEL NUT M14	1		
*	32	937-923P	WHEEL NUT 5/8"-11UNC	1	FOR USA,CAN	
	33	317-819	GEAR ASS'Y	1	INCLUD.6,17	
	34	314-428	SLIDE KNOB	1		
	35	317-802	HOUSING	1		
	36		NAME PLATE	1		
	37	995-662	RUBBER RING	1		
	38		HITACHI LABEL	1		
	39	999-088	CARBON BRUSH (1 PAIR)	2		
	40	317-810	BRUSH HOLDER	2		
	41	308-536	SPRING	2		
	42	317-806	SLIDE BAR	1		
	43	314-429	SPRING	1		

	ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
	44	980-778	SLIDE SWITCH (2P PILLAR TYPE)	1		
	45	984-750	TAPPING SCREW (W/FLANGE) D4X16	3		
*	46	314-854	EARTH TERMINAL	1	FOR NOISE SUPPRESSOR	
*	47	994-273	NOISE SUPPRESSOR	1	EXCEPT FOR SYR,USA,CAN	
*	48	981-373	TUBE (D)	2	FOR NOISE SUPPRESSOR	
	49	953-327	CORD ARMOR D8.8	1		
	50	317-808	TAIL COVER	1		
	51	307-811	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	1		
*	52	500-409Z	CORD	1	(CORD ARMOR D8.8)	
*	52	500-237Z	CORD	1	(CORD ARMOR D8.8) FOR GBR	
*	52	500-439Z	CORD	1	(CORD ARMOR D8.8) FOR AUS	
*	52	500-447Z	CORD	1	(CORD ARMOR D8.8) FOR SYR,SUI	
*	52	500-240Z	CORD	1	(CORD ARMOR D8.8) FOR USA,CAN	
	53	317-811	SWITCH HOLDER	1		
	54	937-631	CORD CLIP	1		
	55	981-373	TUBE (D)	2	FOR CORD	

STANDARD ACCESSORIES

G 12S2

	ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
	501	938-332Z	WRENCH	1		
*	502	302-142	SIDE HANDLE	1		
*	502	302-739	SIDE HANDLE (C)	1	FOR USA,CAN	

OPTIONAL ACCESSORIES

	ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
*	601	937-825Z	RUBBER PAD	1		
*	601	938-317	RUBBER PAD	1	FOR USA,CAN	
*	602	937-826Z	WASHER NUT	1		
*	602	938-318	WASHER NUT	1	FOR USA,CAN	
*	603	310-338	SUPER WASHER	1	EXCEPT FOR USA,CAN	
	604	314-095	SANDING DISCS 115MM C-P16 (10 PCS.)	1		
	605	314-096	SANDING DISCS 115MM C-P20 (10 PCS.)	1		
	606	314-097	SANDING DISCS 115MM C-P24 (10 PCS.)	1		
	607	314-098	SANDING DISCS 115MM C-P30 (10 PCS.)	1		
	608	314-099	SANDING DISCS 115MM C-P36 (10 PCS.)	1		
	609	314-100	SANDING DISCS 115MM C-P40 (10 PCS.)	1		
	610	314-101	SANDING DISCS 115MM C-P50 (10 PCS.)	1		
	611	314-102	SANDING DISCS 115MM C-P60 (10 PCS.)	1		
	612	314-103	SANDING DISCS 115MM C-P80 (10 PCS.)	1		
	613	314-104	SANDING DISCS 115MM C-P100 (10 PCS.)	1		
	614	314-105	SANDING DISCS 115MM C-P120 (10 PCS.)	1		
*	615	994-312	WHEEL WASHER (C) FOR D20 HOLE	1	FOR USA,CAN	

* ALTERNATIVE PARTS

Printed in Japan 8 – 01
(010822N)

HITACHI

LIST NO. E236

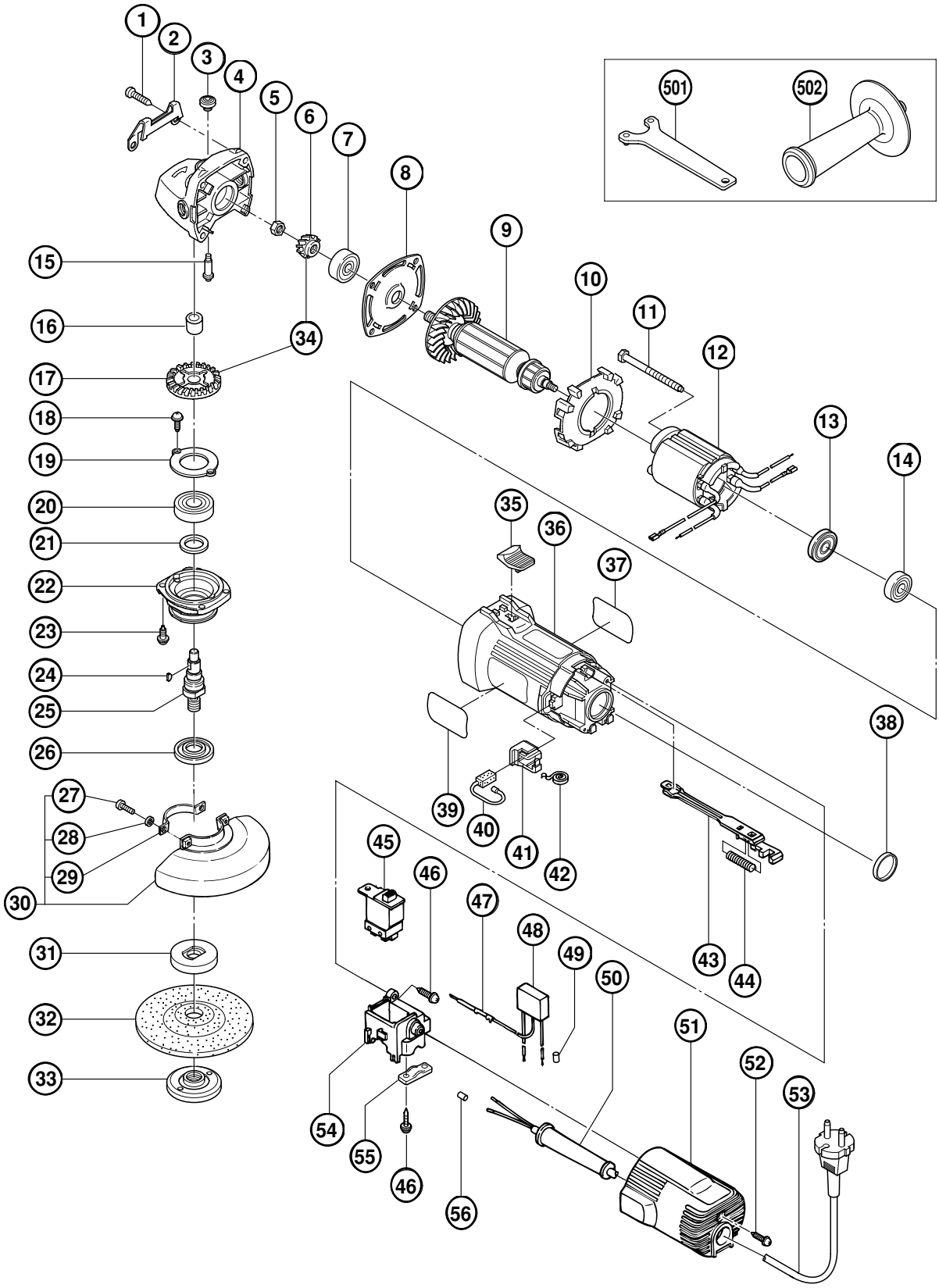
ELECTRIC TOOL PARTS LIST

■ DISC GRINDER

2001· 3 ·30

Model G 13SD

(E2)



	ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
	1	937-807	TAPPING SCREW D5X25	4		
	2	317-807	GUARD PLATE	1		
	3	301-944	PUSHING BUTTON	1		
	4	316-484	GEAR COVER ASS'Y	1	INCLUD.3,15,16	
	5	301-941	SPECIAL NUT M7	1		
	6	316-437	PINION	1		
	7	628-VVC	BALL BEARING 628VVC2PS2L	1		
	8	316-480	BEARING HOLDER	1		
*	9	360-497C	ARMATURE 110V	1		
*	9	360-497E	ARMATURE 220V	1		
*	9	360-497F	ARMATURE 230V-240V	1		
	10	316-479	FAN GUIDE	1		
	11	982-021	HEX. HD. TAPPING SCREW D4X70	2		
*	12	340-441C	STATOR (A) 110V-115V	1		
*	12	340-441E	STATOR (A) 220V-230V	1		
*	12	340-441F	STATOR (A) 240V	1		
	13	315-877	DUST SEAL	1		
	14	608-VVM	BALL BEARING 608VVC2PS2L	1		
	15	301-943	LOCK PIN	1		
	16	673-422	NEEDLE BEARING (HK0709)	1		
	17	316-438	GEAR	1		
	18	997-263	SEAL LOCK SCREW (W/SP. WASHER) M4X10	2		
	19	316-490	BEARING COVER	1		
	20	620-1DD	BALL BEARING 6201DDCMPS2L	1		
	21	301-946	FELT PACKING	1		
	22	316-489	PACKING GLAND	1		
	23	307-127	SEAL LOCK SCREW (W/SP. WASHER) M4X12	4		
	24	302-047	WOODRUFF KEY	1		
	25	317-804	SPINDLE	1		
	26	301-945	FRINGER	1		
	27	949-241	MACHINE SCREW M5X20 (10 PCS.)	2		
	28	949-454	SPRING WASHER M5 (10 PCS.)	2		
	29	938-302Z	SET PLATE (A)	1		
	30	994-321	WHEEL GUARD ASS'Y	1	INCLUD.27-29	
	31	937-817Z	WHEEL WASHER	1		
	32	316-822	D. C. WHEELS 125MM A36Q (25 PCS.)	1		
	33	994-324	WHEEL NUT M14	1		
	34	316-436	GEAR ASS'Y	1	INCLUD.6,17	
	35	314-428	SLIDE KNOB	1		
	36	317-802	HOUSING	1		
	37		NAME PLATE	1		
	38	995-662	RUBBER RING	1		
	39		HITACHI LABEL	1		
	40	999-088	CARBON BRUSH (1 PAIR)	2		
	41	317-810	BRUSH HOLDER	2		
	42	308-536	SPRING	2		
	43	317-806	SLIDE BAR	1		
	44	314-429	SPRING	1		
	45	980-778	SLIDE SWITCH (2P PILLAR TYPE)	1		
	46	984-750	TAPPING SCREW (W/FLANGE) D4X16	3		
*	47	314-854	EARTH TERMINAL	1	FOR NOISE SUPPRESSOR	

	ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
*	48	994-273	NOISE SUPPRESSOR	1	EXCEPT FOR INA,HKG	
	49	981-373	TUBE (D)	2	FOR NOISE SUPPRESSOR	
	50	953-327	CORD ARMOR D8.8	1		
	51	317-808	TAIL COVER	1		
	52	307-811	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	1		
*	53	500-409Z	CORD	1	(CORD ARMOR D8.8)	
*	53	500-237Z	CORD	1	(CORD ARMOR D8.8) FOR HKG,GBR	
*	53	500-439Z	CORD	1	(CORD ARMOR D8.8) FOR AUS	
*	53	500-455Z	CORD	1	(CORD ARMOR D8.8) FOR CHN	
*	53	500-447Z	CORD	1	(CORD ARMOR D8.8) FOR SUI	
	54	317-811	SWITCH HOLDER	1		
	55	937-631	CORD CLIP	1		
*	56	981-373	TUBE (D)	2	FOR CORD	

STANDARD ACCESSORIES

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
501	938-332Z	WRENCH	1		
502	302-142	SIDE HANDLE	1		

OPTIONAL ACCESSORIES

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
601	310-338	SUPER WASHER	1		
602	994-309	HANDLE JOINT	1		

* ALTERNATIVE PARTS

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