

## MODELS

G 18SCY, G 18UAY, G 18SEY, G 18UBY,  
G 23SCY, G 23UAY, G 23SEY, G 23UBY

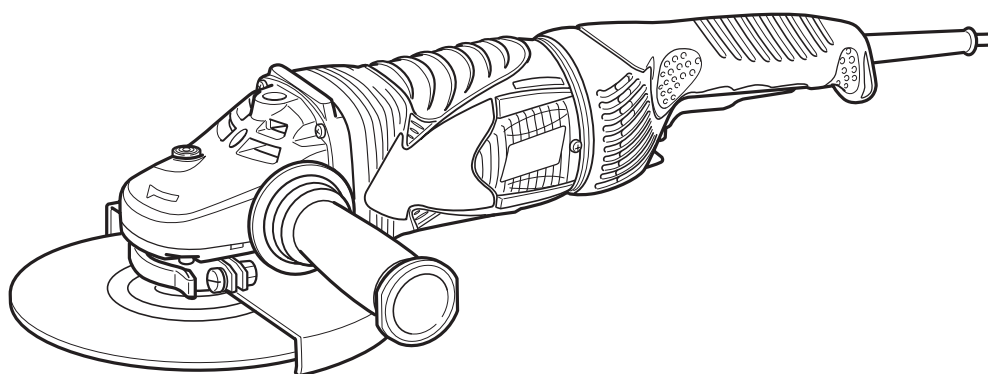
# Hitachi Power Tools

## DISC GRINDER

G 18SCY, G 18UAY, G 18SEY, G 18UBY,  
G 23SCY, G 23UAY, G 23SEY, G 23UBY

## TECHNICAL DATA AND SERVICE MANUAL

G



LIST Nos. G 18SCY: E283, G 18UAY: E285, Oct. 2006  
G 18SEY: E284, G 18UBY: E286,  
G 23SCY: E279, G 23UAY: E281,  
G 23SEY: E280, G 23UBY: E282

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:

Symbols Utilized	Competitors	
	Company Name	Model Name
B	BOSCH	GWS24-180JBV, GWS24-230JBV, GWS26-180JBV, GWS26-230JBV



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## **1. PRODUCT NAME**

- 1) Hitachi 180 mm (7") Disc Grinder, Model G 18SCY
- 2) Hitachi 180 mm (7") Disc Grinder, Model G 18UAY (With soft start)
- 3) Hitachi 180 mm (7") Disc Grinder, Model G 18SEY
- 4) Hitachi 180 mm (7") Disc Grinder, Model G 18UBY (With soft start)
- 5) Hitachi 230 mm (9") Disc Grinder, Model G 23SCY
- 6) Hitachi 230 mm (9") Disc Grinder, Model G 23UAY (With soft start)
- 7) Hitachi 230 mm (9") Disc Grinder, Model G 23SEY
- 8) Hitachi 230 mm (9") Disc Grinder, Model G 23UBY (With soft start)

## **2. MARKETING OBJECTIVE**

There is an increasing demand for a disc grinder equipped with a vibration absorbing mechanism to comply with the EU Physical Agents (Vibration) Directive (enforced in July 2005) in European markets. To meet the demand, we introduce the new 180/230 mm disc grinders Models G 18SCY, G 18SEY, G 23SCY and G 23SEY. They are low-vibration disc grinders thanks to the vibration-absorbing side handle and main handle (switch handle). In addition, we introduce the new 180/230 mm disc grinders Models G 18UAY, G 18UBY, G 23UAY and G 23UBY equipped with the soft-start function.

The key features of the new G 23SCY series are as follows (comparison with the current G 23SC3 series):

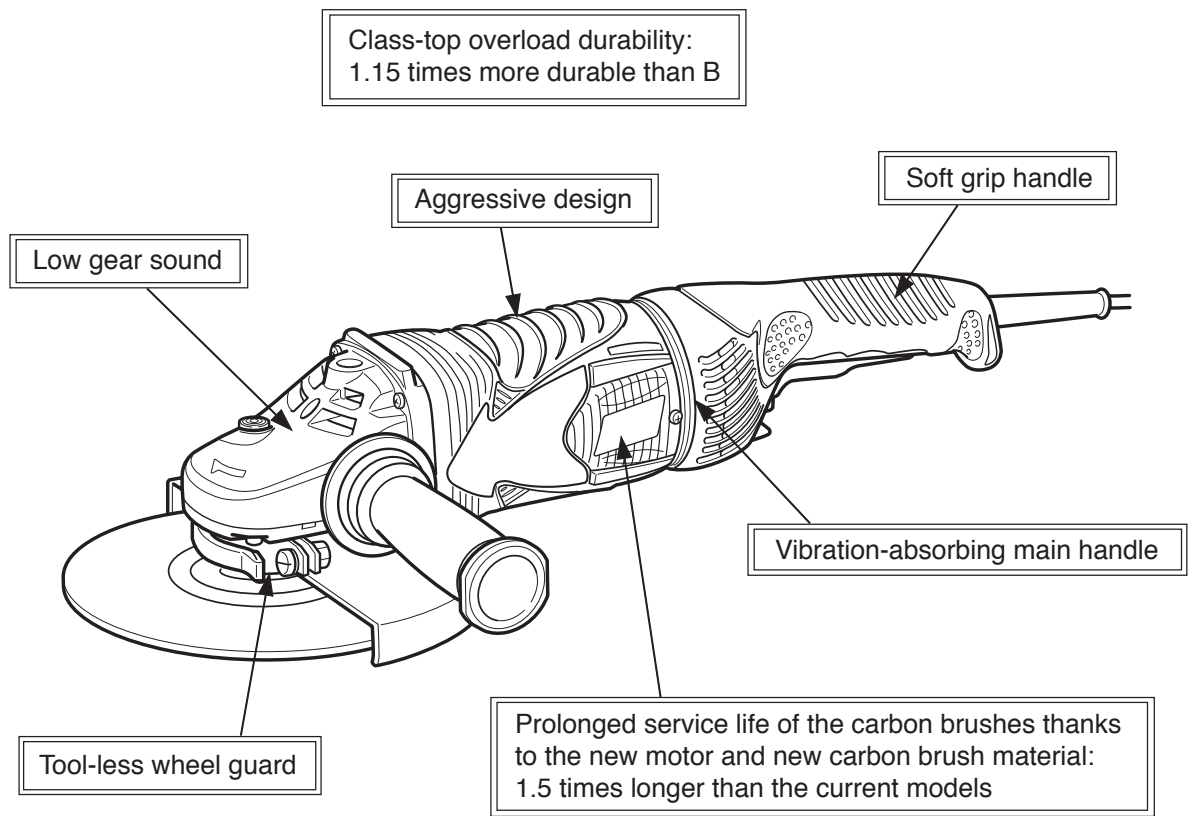
- 1) Vibration absorbing main handle and side handle
- 2) Prolonged service life of the carbon brushes
- 3) Class-top overload durability
- 4) Low gear sound
- 5) Aggressive design

Vigorous sales promotion of Hitachi disc grinders is anticipated with the introduction of the new G 23SCY series.

## **3. APPLICATIONS**

- Deburring diecast products and finishing iron, bronze, aluminum and diecast products
- Finishing welds and torch-cut surfaces
- Cutting soft steel materials
- Grooving and cutting concrete and other stone materials

4. SELLING POINTS



4-1. Vibration-absorbing Main Handle and Side Handle

The G 23SCY series are equipped with the vibration-absorbing side handle in the same manner as the conventional models. In addition, the housing is coupled to the main handle (switch handle) through the moving joint mechanism, and handle dampers are provided between them. As a result, the vibration level of the switch handle is 30% lower than the current G 23SC3 series. The G 23SCY series are more user-friendly and able to reduce the operator's burden caused by vibration. Figure 1 (a) shows the result of vibration test performed according to EN-50144 (Single axis vibration).

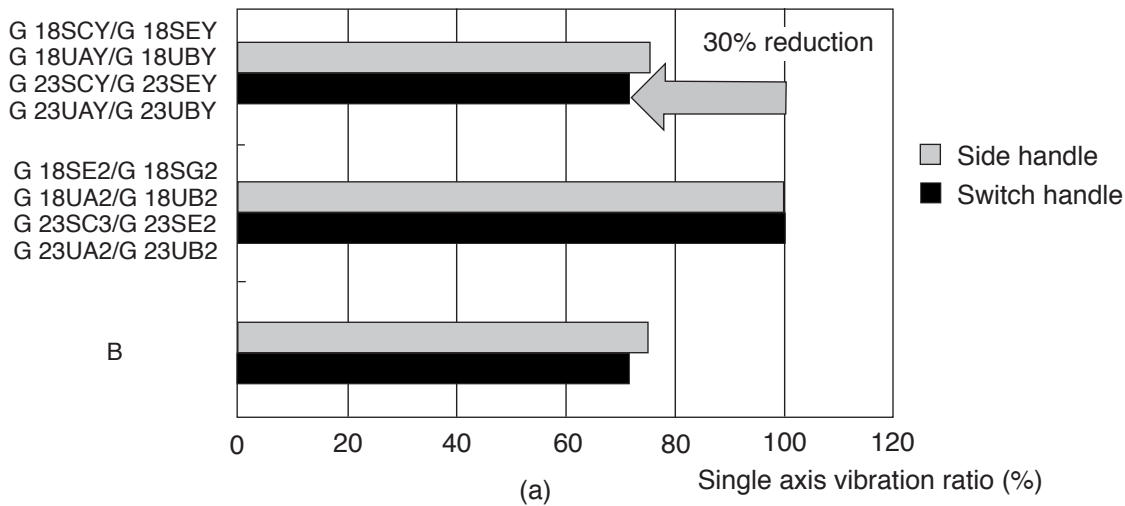
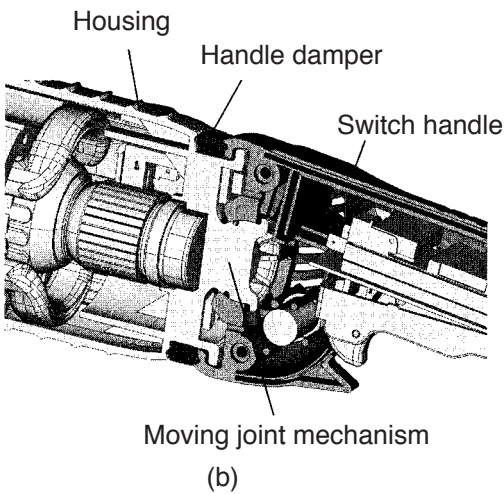


Fig. 1

Figure 2 shows the result of vibration test performed according to EN-60745 (Tri-axial vibration).

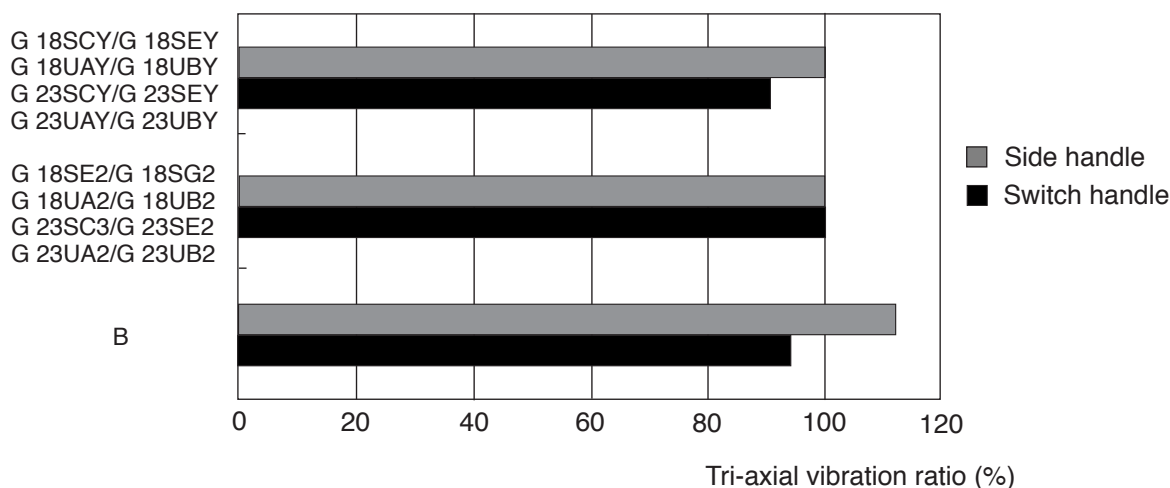


Fig. 2

#### 4-2. Prolonged Service Life of the Carbon Brushes thanks to the New Construction

The service life of the carbon brushes is 1.5 times longer than the competitors thanks to the new material and the suitable motor specifications. The service life of the carbon brushes is 1.5 times longer than the G 23SC3 series and competitor B.

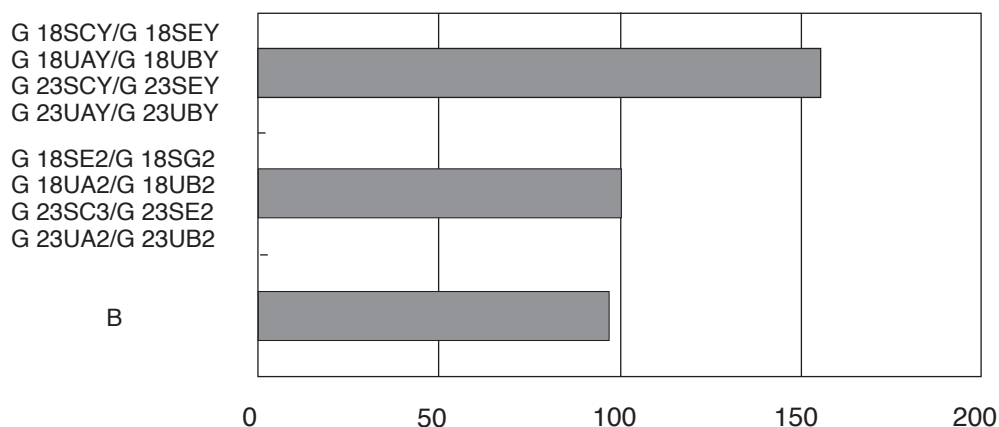


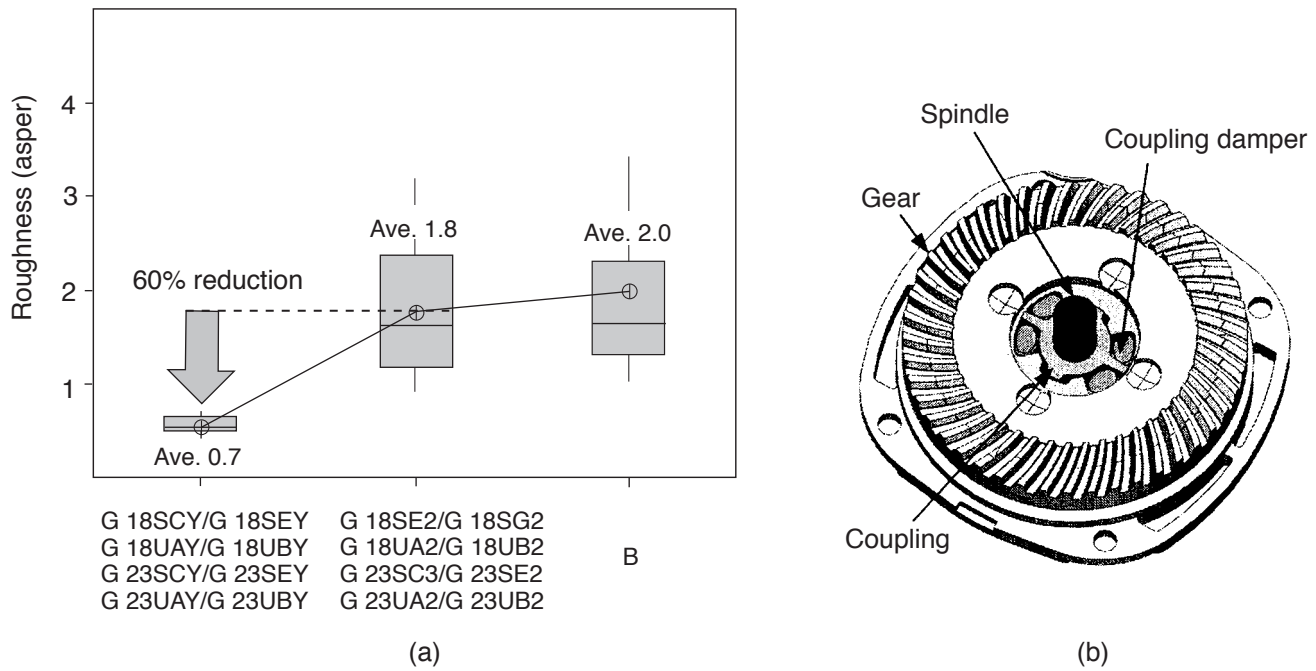
Fig. 3

#### 4-3. Low Gear Sound (Roughness)

In addition to the method of expressing loudness of the sound generated from a tool by a sound pressure level or a power level, loudness of the sound can be expressed by the following four parameters to quantitatively represent how the operator feels the sound psychologically. In the gear structure of the G 23SCY series, the coupling damper absorbs the impact sound generated by meshing between the gear and the pinion. Thanks to this new structure, the impact sound of the gear is reduced and the harsh gear sound during no-load operation is 60% lower than the current G 23SC3 series (average roughness comparison) to reduce the operator's psychological burden.

<Tone parameters>

- ① Loudness: Quantity to evaluate loudness of sound when a human being hears.
- ② Sharpness: Quantity to evaluate sharpness of sound.
- ③ Fluctuation: Quantity to evaluate the feeling when sound fluctuates slowly.
- ④ Roughness: Quantity to evaluate the feeling when sound fluctuates quickly. It is evaluated as an index to express the gear sound quantitatively (unit: asper).

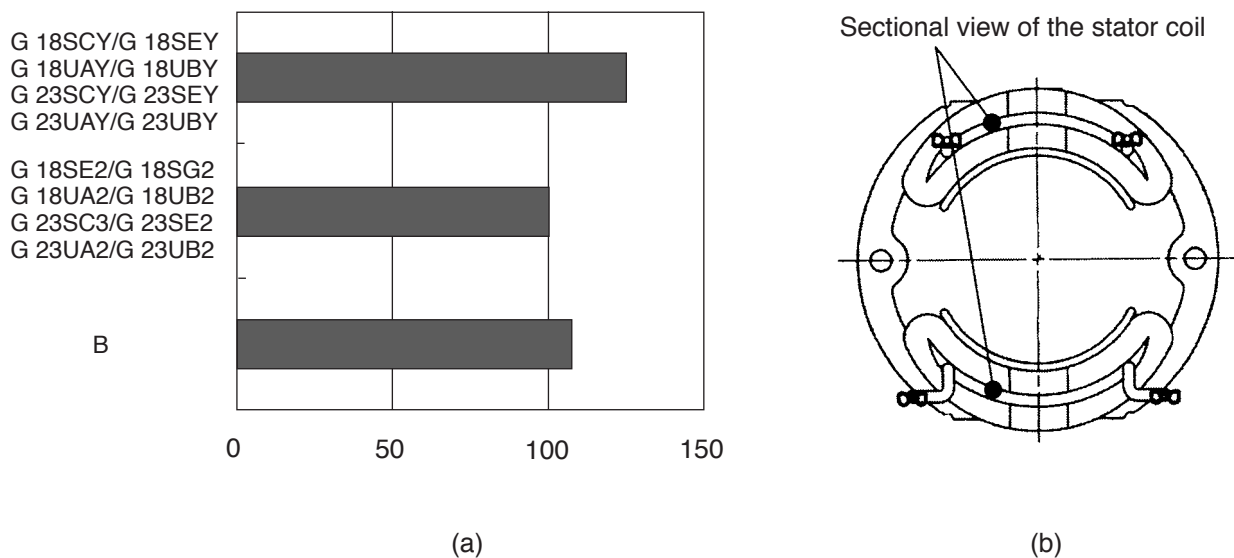


**Fig. 4**

#### 4-4. Class-top Overload Durability

The stator coil of the G 23SCY series is divided into two parts in order to make the surface area of the the stator coil 1.5 times larger than the conventional models for better cooling efficiency. Thus the temperature rise of the stator coil during overload operation is 25% lower than the current G 23SC3 series. It is the greatest overload durability in the class. Figure 5 shows the comparison of overload durability when the stator coil temperature rise is 200° K using the Model G 23SCY as a reference.

As is evident form this, the G 23SCY series are superior to the competitors in overload durability.



**Fig. 5**

#### 4-5. Soft Grip Handle

The double-layer molded handle consists of a nylon resin base covered with a soft plastic layer to ensure a soft touch and firm, non-slip grip of the handles.

#### 4-6. Dust-proof Ball Bearing Thanks to the Labyrinth Construction

The ball bearing retainers at both sides of the armature have a labyrinth construction to make the ball bearings dust-proof.

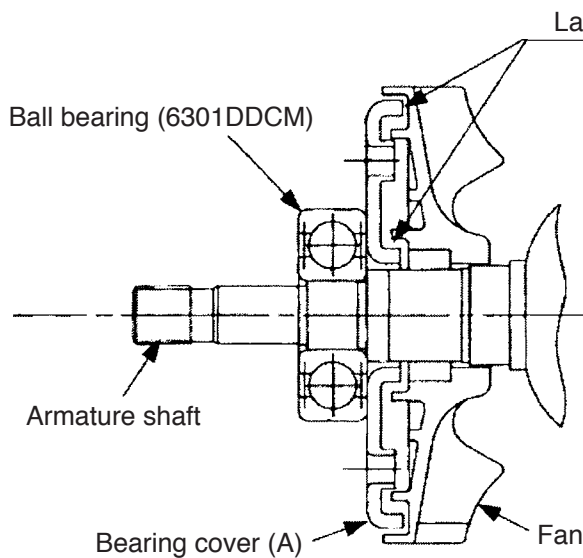


Fig. 6

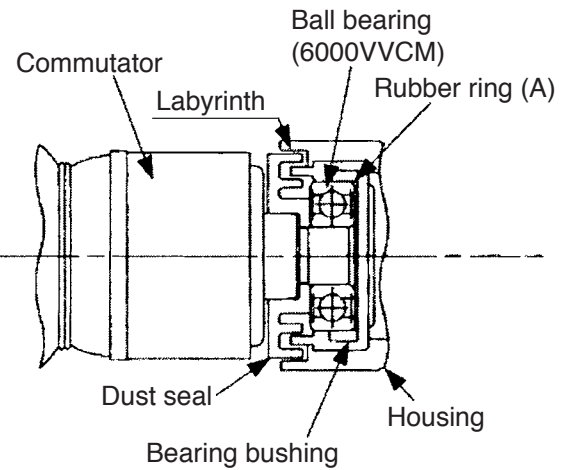


Fig. 7

#### 4-7. Wheel Guard Angle-Adjustable without Using a Tool

By following the procedure described below, the newly developed tool-less wheel guard can be adjusted to a desired angle without using any tool.

##### [Installation and adjustment of the wheel guard]

Set the Wheel Guard Ass'y [40] <40> on the Packing Gland [31] <31>.

With the Lever [35] <35> closed, tighten the Bolt M8 x 22 [36] <36> until the wheel guard is locked in position. Open the Lever [35] <35> for angle adjustment of the wheel guard. (If the wheel guard is difficult to turn, loosen the Bolt M8 x 22 [36] <36> and readjust the wheel guard.)

Be sure to close the Lever [35] <35> after finishing adjustment before starting operation.

When the Lever [35] <35> becomes dull in motion, lubricate the sliding area between the Set Piece [38] <38> and the Lever [35] <35>.

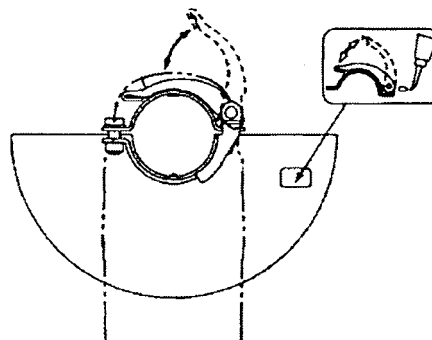


Fig. 8



## 5. SPECIFICATIONS

Item \ Model		G 18SCY/G 18UAY	G 23SCY/G 23UAY																		
Depressed-center wheels	Dimensions	O.D. 180 mm (7") x Thickness 6 mm (1/4") x I.D. 22.2 mm (7/8")	O.D. 230 mm (9") x Thickness 6 mm (1/4") x I.D. 22.2 mm (7/8")																		
	Max. practical peripheral speed	80 m/s (15,800 ft/min)																			
	Type	A, 24, R, B																			
	Spindle thread	M14 x 2 <sup>*1</sup>																			
Power source		AC single phase 50 or 60 Hz																			
Voltage and power input <sup>*2</sup>		<table><tr><th>Voltage (V)</th><th>Current (A)</th><th>Power input (W)</th></tr><tr><td>110</td><td>21.8</td><td>2,400</td></tr><tr><td>120</td><td>15.0</td><td>1,700</td></tr><tr><td>220</td><td>12.6</td><td>2,400</td></tr><tr><td>230</td><td>11.0</td><td>2,400</td></tr><tr><td>240</td><td>10.0</td><td>2,400</td></tr></table>		Voltage (V)	Current (A)	Power input (W)	110	21.8	2,400	120	15.0	1,700	220	12.6	2,400	230	11.0	2,400	240	10.0	2,400
Voltage (V)	Current (A)	Power input (W)																			
110	21.8	2,400																			
120	15.0	1,700																			
220	12.6	2,400																			
230	11.0	2,400																			
240	10.0	2,400																			
No-load speed		8,500/min <sup>*3</sup>	6,600/min <sup>*3</sup>																		
Type of motor		AC single phase commutator motor																			
Enclosure		Housing (Green) } Handle (Black) } ..... Polyamide resin with glassfiber Gear cover, packing gland ..... Aluminum alloy diecasting																			
Type of switch		Trigger switch																			
Net weight <sup>*4</sup> (Main body)		5.1 kg (11.2 lbs.)																			
Gross weight		8.3 kg (18.3 lbs.)																			
Type of packing		Corrugated cardboard box																			
Standard accessories		Depressed-center wheel 180 mm (7") (Code No. 316824) ..... 1 <sup>*5</sup> Side handle (Code No. 937981) .. 1 Wrench (Code No. 987913Z) ..... 1	Depressed-center wheel 230 mm (9") (Code No. 316825) ..... 1 <sup>*5</sup> Side handle (Code No. 937981) .. 1 Wrench (Code No. 937913Z) ..... 1 Wheet nut (B) (Code No. 937917Z) ..... 1 <sup>*5</sup>																		

<sup>\*1</sup> : For the U.S.A.: 5/8-11 UNC

<sup>\*2</sup> : Be sure to check the nameplate on product as it is subject to change by areas.

<sup>\*3</sup> : For the U.S.A.: 6,000/min.

<sup>\*4</sup> : Net weight excludes cord, side handle, depressed-center wheel, wheel nut, wheel washer and wheel guard.

<sup>\*5</sup> : Standard accessories may vary depending on market areas.

Item \ Model		G 18SEY/G 18UBY	G 23SEY/G 23UBY													
Depressed-center wheels	Dimensions	O.D. 180 mm (7") x Thickness 6 mm (1/4") x I.D. 22.2 mm (7/8")	O.D. 230 mm (9") x Thickness 6 mm (1/4") x I.D. 22.2 mm (7/8")													
	Max. practical peripheral speed	80 m/s (15,800 ft/min)														
	Type	A, 24, R, B														
	Spindle thread	M14 x 2														
Power source		AC single phase 50 or 60 Hz														
Voltage and power input <sup>*1</sup>		<table><tr><td>Voltage (V)</td><td>Current (A)</td><td>Power input (W)</td></tr><tr><td>110</td><td>21.8</td><td>2,400</td></tr><tr><td>230</td><td>12.0</td><td>2,600</td></tr><tr><td>240</td><td>10.0</td><td>2,400</td></tr></table>			Voltage (V)	Current (A)	Power input (W)	110	21.8	2,400	230	12.0	2,600	240	10.0	2,400
Voltage (V)	Current (A)	Power input (W)														
110	21.8	2,400														
230	12.0	2,600														
240	10.0	2,400														
No-load speed		8,500/min	6,600/min													
Type of motor		AC single phase commutator motor														
Enclosure		Housing (Black) } ..... Polyamide resin with glassfiber Handle (Green) } Gear cover, packing gland ..... Aluminum alloy diecasting														
Type of switch		Trigger switch														
Net weight <sup>*2</sup> (Main body)		5.1 kg (11.2 lbs.)														
Gross weight		8.3 kg (18.3 lbs.)														
Type of packing		Corrugated cardboard box														
Standard accessories		Depressed-center wheel 180 mm (7") (Code No. 316824) ..... 1 <sup>*3</sup> Side handle (Code No. 937981) .. 1 Wrench (Code No. 987913Z) ..... 1	Depressed-center wheel 230 mm (9") (Code No. 316825) ..... 1 <sup>*3</sup> Side handle (Code No. 937981) .. 1 Wrench (Code No. 937913Z) ..... 1 Wheet nut (B) (Code No. 937917Z) ..... 1 <sup>*3</sup>													

<sup>\*1</sup>: Be sure to check the nameplate on product as it is subject to change by areas.

<sup>\*2</sup>: Net weight excludes cord, side handle, depressed-center wheel, wheel nut, wheel washer and wheel guard.

<sup>\*3</sup>: Standard accessories may vary depending on market areas.

## 6. COMPARISONS WITH SIMILAR PRODUCTS

### 6-1. Specification Comparisons

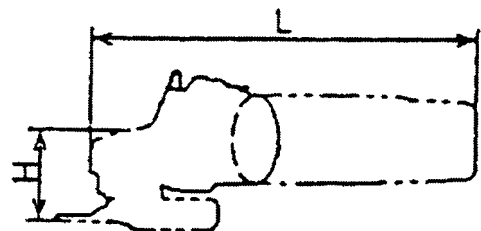
Maker	HITACHI		B
Model name	G 18SCY	G 18SE3	
	G 18UAY	G 18UA2	
Capacity:	180	180	180
Depressed-center wheel dia. (mm)	(7")	(7")	(7")
Power input *1 (W)	2,400	2,300	2,400
Power output *1 (W)	1,550	1,500	1,420
Max. power output *1 (W)	4,600	4,600	4,200
No-load speed (/min)	8,500	8,500	8,500
No-load sound pressure level (dB (A))	89	89	92
Service life of carbon brushes *2 (hr)	250	175	160
Weight *3 (kg)	5.1 (11.2 lbs.)	5.0 (11.0 lbs.)	5.1 (11.0 lbs.)
(Actual weight) (kg)	5.2 (11.5 lbs.)	5.2 (11.5 lbs.)	5.2 (11.5 lbs.)
Dimensions L mm (inch)	500 (19-11/16)	478 (18-13/16)	510 (20-5/64)
	H mm (inch)	83 (3-9/32)	92 (3-5/8)

Maker	HITACHI		B
Model name	G 23SCY	G 23SC3	
	G 23UAY	G 23UA2	
Capacity:	230	230	230
Depressed-center wheel dia. (mm)	(9")	(9")	(9")
Power input *1 (W)	2,400	2,300	2,400
Power output *1 (W)	1,550	1,500	1,420
Max. power output *1 (W)	4,600	4,600	4,200
No-load speed (/min)	6,600	6,600	6,500
No-load sound pressure level (dB (A))	89	89	92
Service life of carbon brushes *2 (hr)	250	175	160
Weight *3 (kg)	5.1 (11.2 lbs.)	5.0 (11.0 lbs.)	5.1 (11.0 lbs.)
(Actual weight) (kg)	5.2 (11.5 lbs.)	5.2 (11.5 lbs.)	5.2 (11.5 lbs.)
Dimensions L mm (inch)	500 (19-11/16)	478 (18-13/16)	510 (20-5/64)
	H mm (inch)	83 (3-9/32)	92 (3-5/8)

\*1 : Depends on market

\*2 : Service life of carbon brushes in the continuous rated load test

\*3 : Weight without cord, side handle, depressed-center wheel, wheel nut, wheel washer and wheel guard



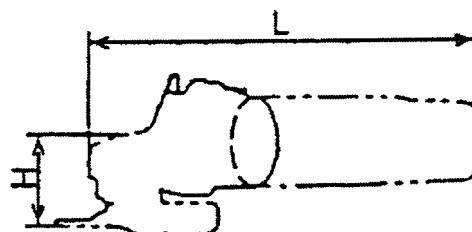
Maker	HITACHI		B
Model name	G 18SEY	G 18SG2	
	G 18UBY	G 18UB2	
Capacity:	180	180	180
Depressed-center wheel dia. (mm)	(7")	(7")	(7")
Power input * <sup>1</sup> (W)	2,600	2,500	2,600
Power output * <sup>1</sup> (W)	1,710	1,680	1,600
Max. power output * <sup>1</sup> (W)	4,600	4,600	4,100
No-load speed (/min)	8,500	8,500	8,500
No-load sound pressure level (dB (A))	89	89	92
Service life of carbon brushes * <sup>2</sup> (hr)	250	165	160
Weight * <sup>3</sup> (kg)	5.1 (11.2 lbs.)	5.0 (11.0 lbs.)	5.1 (11.0 lbs.)
(Actual weight) (kg)	5.2 (11.5 lbs.)	5.2 (11.5 lbs.)	5.2 (11.5 lbs.)
Dimensions L mm (inch)	500 (19-11/16)	478 (18-13/16)	510 (20-5/64)
H mm (inch)	83 (3-9/32)	83 (3-9/32)	92 (3-5/8)

Maker	HITACHI		B
Model name	G 23SEY	G 23SE2	
	G 23UBY	G 23UB2	
Capacity:	230	230	230
Depressed-center wheel dia. (mm)	(9")	(9")	(9")
Power input * <sup>1</sup> (W)	2,600	2,500	2,600
Power output * <sup>1</sup> (W)	1,710	1,680	1,600
Max. power output * <sup>1</sup> (W)	4,600	4,600	4,100
No-load speed (/min)	6,600	6,600	6,500
No-load sound pressure level (dB (A))	89	89	92
Service life of carbon brushes * <sup>2</sup> (hr)	250	165	160
Weight * <sup>3</sup> (kg)	5.1 (11.2 lbs.)	5.0 (11.0 lbs.)	5.1 (11.0 lbs.)
(Actual weight) (kg)	5.2 (11.5 lbs.)	5.2 (11.5 lbs.)	5.2 (11.5 lbs.)
Dimensions L mm (inch)	500 (19-11/16)	478 (18-13/16)	510 (20-5/64)
H mm (inch)	83 (3-9/32)	83 (3-9/32)	92 (3-5/8)

\*<sup>1</sup> : Depends on market

\*<sup>2</sup> : Service life of carbon brushes in the continuous rated load test

\*<sup>3</sup> : Weight without cord, side handle, depressed-center wheel, wheel nut, wheel washer and wheel guard



## 6-2. Practical Test Data

Comparison of temperature rise of stator coil section:

The graph below shows the relationship between load and temperature rise of the stator coil. The temperature rise of the Model G 23SCY is the lowest among the competitive models. This means that the resistance to overload usage of the Model G 23SCY is superior to other maker's models.

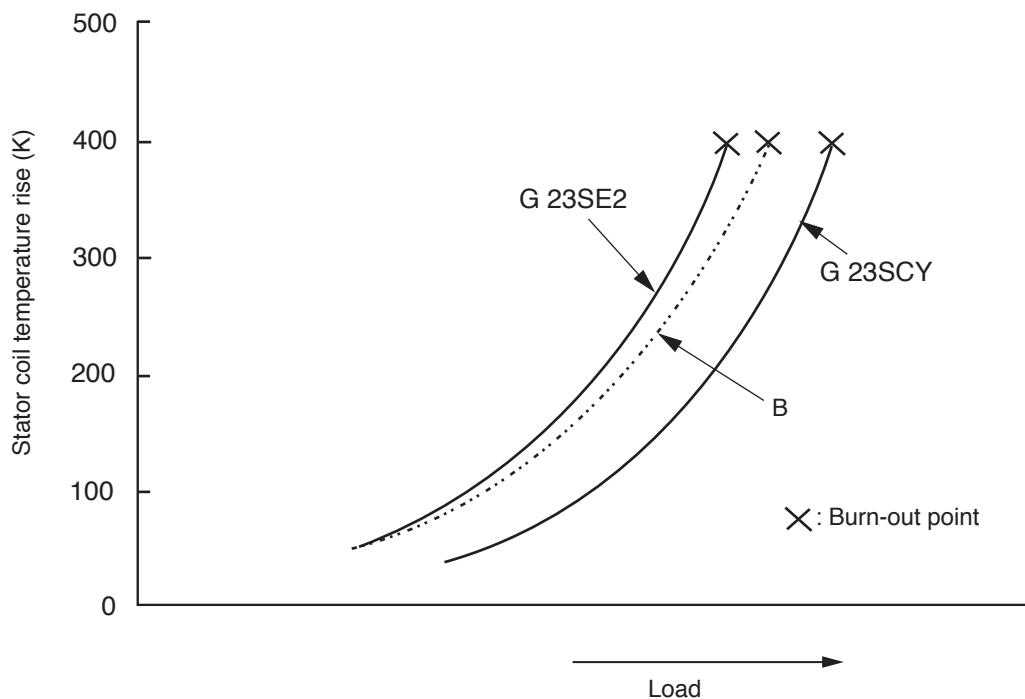


Fig. 9

## 7. PRECAUTIONS IN SALES PROMOTION

In the interest of promoting the safest and most efficient use of the Models G 18SCY, G 18UAY, G 18SEY, G 18UBY, G 23SCY, G 23UAY, G 23SEY and G 23UBY 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 contents of the Handling Instructions, and fully understands the meaning of the precautions listed on the Name Plate.

### 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 U.K., Germany, Belgium, France, Netherlands, Austria, Spain, Italy, Finland, Norway and Switzerland



- (2) For Australia and New Zealand

#### **CAUTION**

Read thoroughly HANDLING INSTRUCTIONS before use.

- (3) For the U.S.A. and Canada

#### **WARNING**

To reduce the risk 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 le risque de blessures, 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 visière.

N'utilisez que des accessoires prévus pour au moins \* /min.

\*G 23SCY For the U.S.A.: 6,600

For CAN: 6,600

\*G 18SCY For the U.S.A.: 6,600

For CAN: 6,600

- (4) For Taiwan

**使用前請詳讀使用說明書**  
**禁止在雨中使用**

### 7-3. Precautions on Usage

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.

### 7-4. Measures taken when the wheel nut cannot be removed

If the grinder is left without removing the wheel for a long time after operation, the threaded portions of the wheel nut and the spindle may rust and the wheel nut cannot be removed. In such case, do not apply great force to the wheel nut by turning with the attached wrench while pressing the spindle lock button. Otherwise, the spindle and the gear may slip each other and the nut cannot be loosened. Hold the "A" portion of the spindle with a wrench so that the spindle cannot be moved then loosen the wheel nut with the attached wrench (Fig. 10).

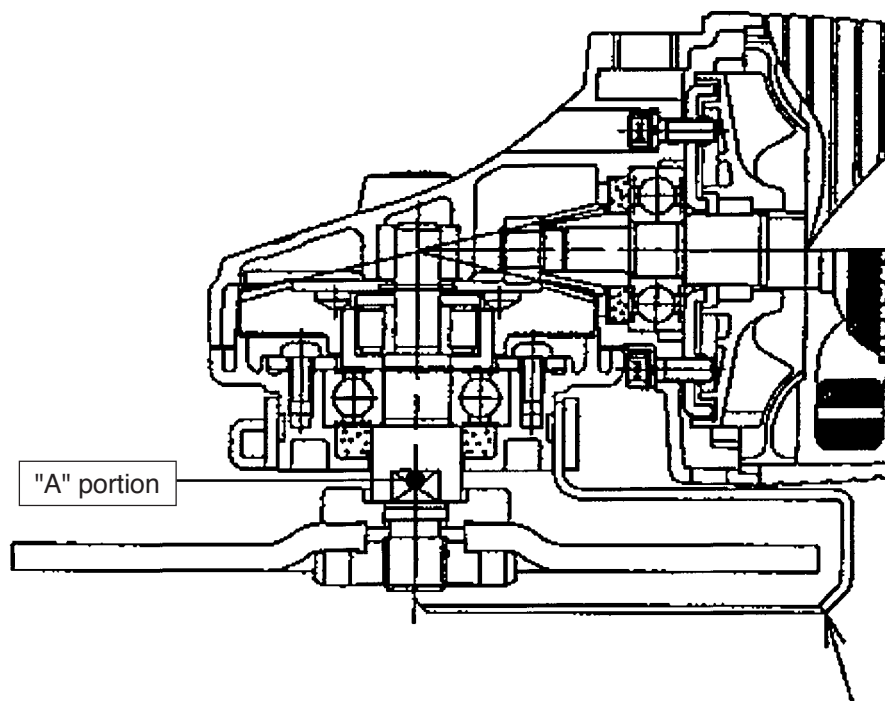


Fig. 10

## 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 Models G 23SCY, G 23SEY, G 18SCY AND G 18SEY, and the **<Bold>** numbers to those in the Parts List and the exploded assembly diagram for the Models G 23UAY, G 18UAY, G 18UBY and G 23UBY.

### 8-1. Disassembly

#### (1) Removal of the Armature **[12] <12>**

1. Open the Lever **[35] <35>**, loosen the Bolt M8 x 22 **[36] <36>** and remove the Wheel Guard Ass'y **[40] <40>**.
2. Loosen the Tapping Screw (W/Flange) D4 x 16 (Black) **[50] <50>**, and remove the Brush Cover **[53] <53>**.
3. Remove the two Carbon Brushes **[51] <51>** from the Brush Holder Set **[52] <52>**.
4. Remove the four Tapping Screws (W/Flange) D5 x 35 (Black) **[2] <2>**. The Armature **[12] <12>** can then be taken out simultaneously with the Gear Cover Ass'y **[5] <5>**, Packing Gland **[31] <31>** and related parts.
5. Remove the four Hex. Socket Hd. Bolts (W/Flange) M5 x 16 **[32] <32>**.
6. After removing the two Seal Lock Hex. Socket Hd. Bolts M5 x 14 **[1] <1>**, the Armature **[12] <12>** can be extracted together with Bearing Cover (A) **[11] <11>** and the related parts.
7. Carefully wrap the Armature **[12] <12>** with a soft, clean rag to protect it from being damaged, and clamp it securely in a vise. Then, remove the Special Nut M10 **[6] <6>** and extract the Gear and Pinion Set **[20] <20>**.
8. For the models indicated in Fig. 11, the Ball Bearing 6301DDCMPS2L **[9] <9>** can be removed from the Armature **[12] <12>** by utilizing a J-204 bearing puller (special repair tool, Code No. 970982) as illustrated below. After the ball bearing has been removed, Bearing Cover (A) **[11] <11>** can be easily taken off.

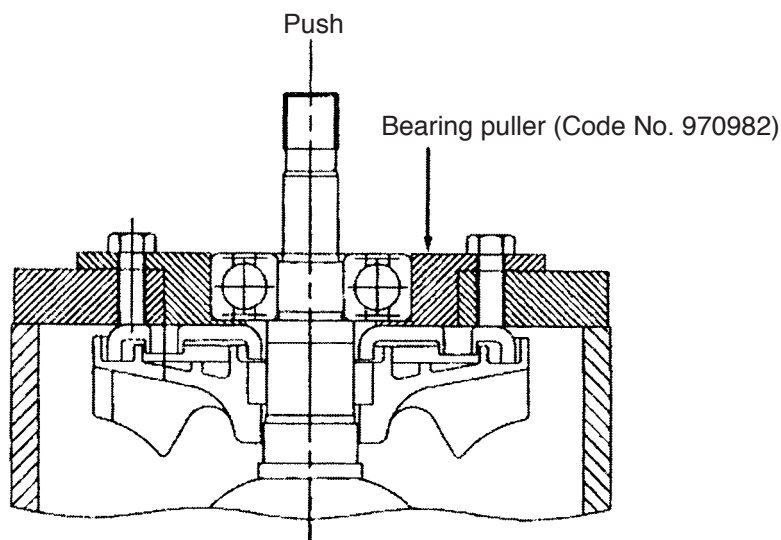


Fig. 11



(2) Removal of the Dust Seal [44] <44>

1. Insert the hooks of the J-204 bearing puller between the commutator and the Dust Seal [44] <44> from both sides, and fix the hooks with the wing bolts.
2. Place the J-204 bearing puller on a supporting jig and push down on the armature shaft with a hand press to remove the Dust Seal [44] <44> together with the Ball Bearing 6000VVCMP2L [45] <45>. Replace the Dust Seal [44] <44> with new one because it is damaged by the removal of the Ball Bearing 6000VVCMP2L [45] <45>.

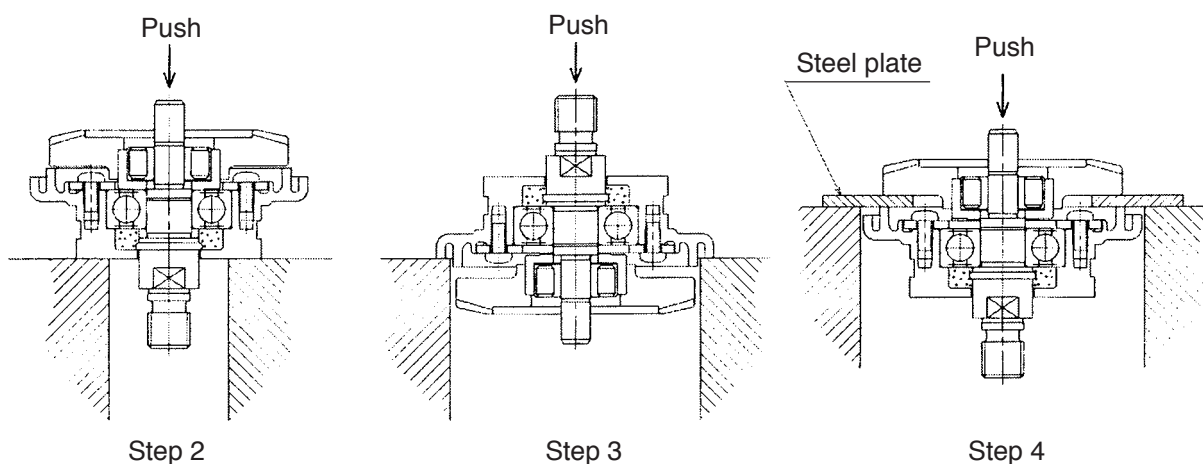
(3) Removal of the Stator [15] <15>

1. After removing the Armature [12] <12>, disconnect the internal wires connected to the Brush Holder Set [52] <52> and the Switch (2P Pillar Type) W/Safety Lock [58] <59>.
2. Loosen the two Hex. Hd. Tapping Screws D5 x 75 [14] <14> and remove the Stator [15] <15> from the Housing Ass'y [47] <47>. If the Stator [15] <15> cannot be easily removed from the Housing Ass'y [47] <47>, disassembly can be facilitated by heating the Housing Ass'y [47] <47> to a temperature of approximately 60°C (140°F) with an appropriate heating device.

(4) Disassembly of the gear (Fig. 6)

1. Loosen the four Hex. Socket Hd. Bolts (W/Flange) M5 x 16 [32] <32> fixing the Packing Gland [31] <31>, and remove the Packing Gland [31] <31> from the Gear Cover Ass'y [5] <5>.
2. Remove the Retaining Ring for D10 Shaft [21] <21> and the Coupling Cover [22] <22> from the Spindle [29] <29>.
3. Hold the bottom of the Packing Gland [31] <31> with a sleeve jig whose outer diameter is slightly larger than that of the Spindle [29] <29>. Push down the top of the Spindle [29] <29> until the groove on the Spindle [29] <29> for fixing the Retaining Ring for D10 Shaft [21] <21> reaches the top of the Coupling [24] <24> and the Spindle [29] <29> cannot be pushed down any more. (Step 2)
4. Turn the Packing Gland [31] <31> upside down and fix it, then push down the Spindle [29] <29>. (Step 3)
5. Insert the steel plate between the Gear and Pinion Set [20] <20> and the Packing Gland [31] <31>, and push down the Spindle [29] <29> with a hand press to remove it. (Step 4)

Replace the Ball Bearing 6302VVCMP2L [27] <27> with new one every time should the gear be disassembled because the stress while pulling out the gear is applied to the Ball Bearing 6302VVCMP2L [27] <27>.



## 8-2. Reassembly

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

(1) Generously lubricate the teeth of the Gear and Pinion Set [20] <20> with grease. Rub grease onto the teeth with your fingers so that the grease reaches each tooth bottom. Note that under-lubricated Gear and Pinion Set [20] <20> may wear at a faster rate.

(2) When replacing the Armature [12] <12> and the Ball Bearing 6000VVCMP2L [45] <45> on the commutator side, press inward on the Dust Seal [44] <44> while taking care of its direction until the end face of the Dust Seal [44] <44> hits against the butting surface of the Armature [12] <12> and make sure that the Dust Seal [44] <44> cannot turn freely. (See Fig. 12.)

The Dust Seal [44] <44> is an important element for improved dust protection of the Ball Bearing 6000VVCMP2L [45] <45>. Be sure to use a new one at every disassembly work of the Ball Bearing 6000VVCMP2L [45] <45>.

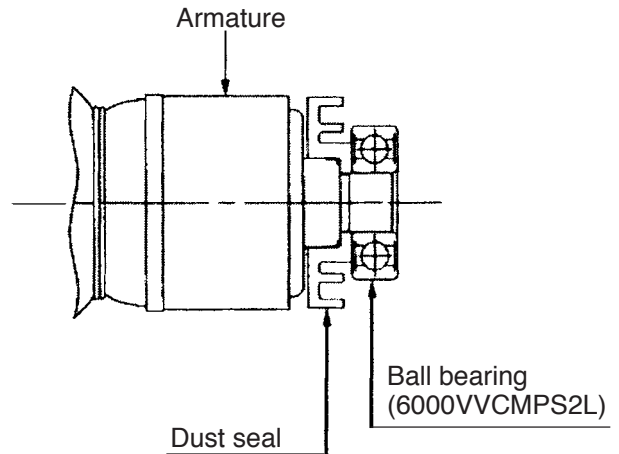


Fig. 13

(3) Apply Three Bond TB 1406 Screw Locking Agent to the following screws.

Two Seal Lock Hex. Socket Hd. Bolts M5 x 14 [1] <1> fixing Bearing Cover (A) [11] <11> in place.

Four Hex. Socket Hd. Bolts (W/Flange) M5 x 16 [32] <32> fixing the Packing Gland [31] <31> in place.

(4) Check that the spring end does not hold the terminal when mounting the carbon brush. Do not catch the terminal in the brush cover when mounting the brush cover.

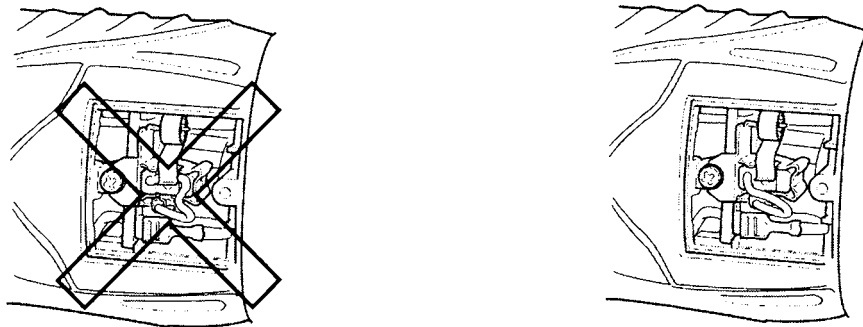
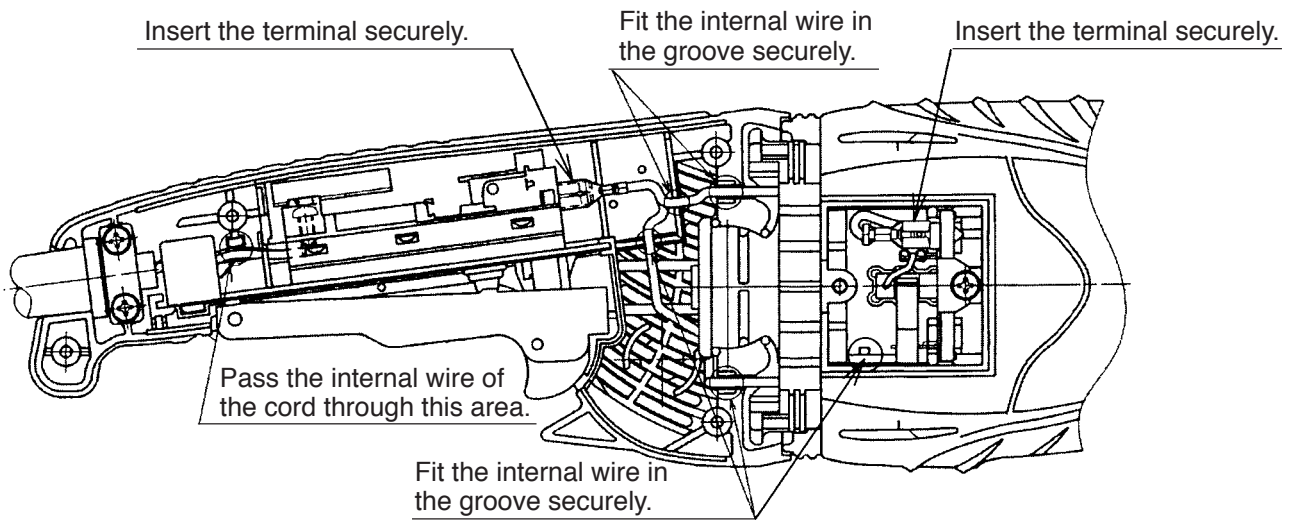
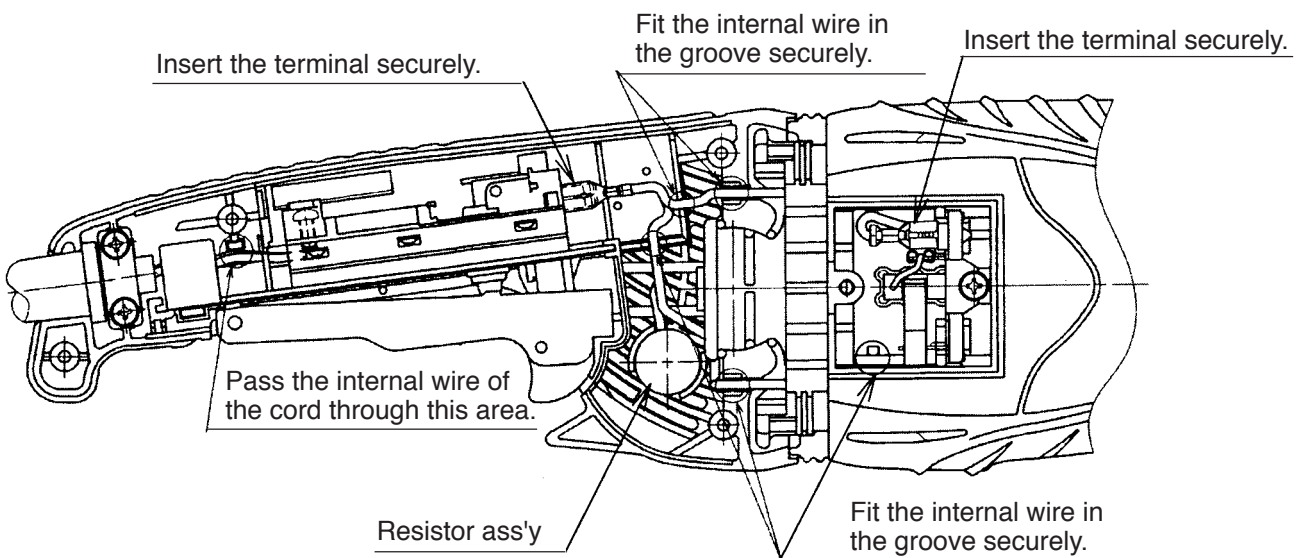


Fig. 14

- (5) Arrange the internal wires as shown in Figs. 15 and 16 being careful not to connect in wrong direction or position and not to get the internal wires caught in parts.

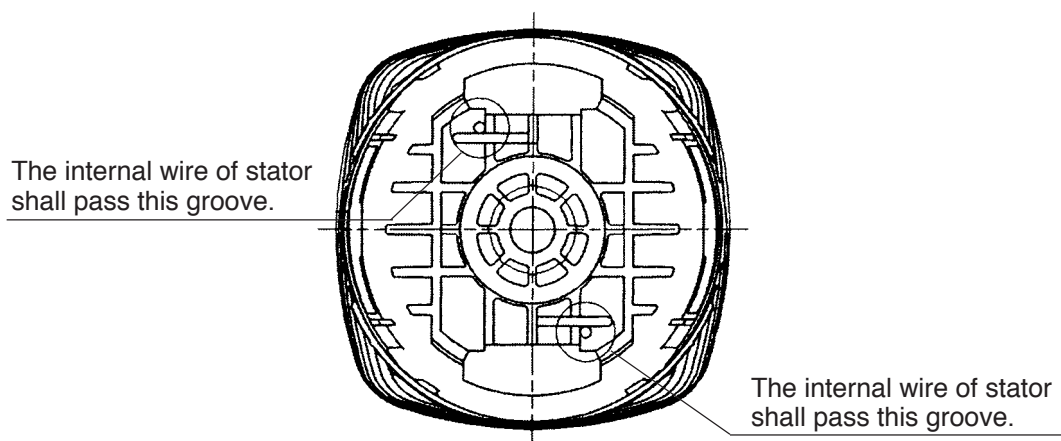


(a) Models G 18SCY/G 23SCY/G 18SEY/G 23SEY



(b) Models G 18UAY/G 23UAY/G 18UBY/G 23UBY

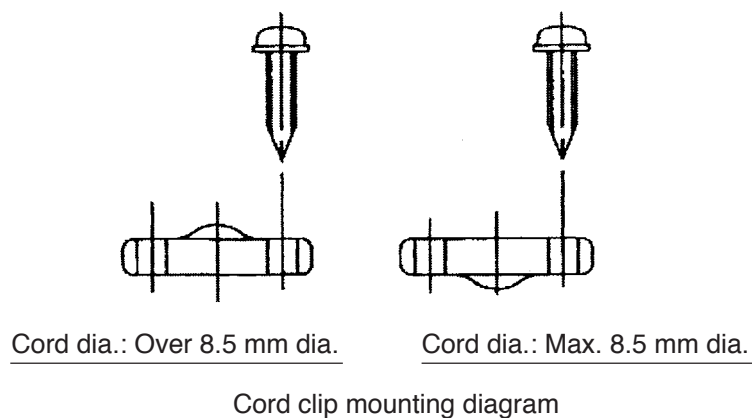
Fig. 15



**Fig. 16**

(6) Mount the cord clip as shown in Fig. 17 being careful of the direction.

The internal wire with tube of stator shall pass this groove.



**Fig. 17**

### 8-3. Lubrication Points and Types of Lubricant

Pinion chamber of the Gear Cover Ass'y [5] <5> .....ALVANIA grease EP (LF) O 35 g

Generously rub grease onto the gear, pinion and inner circumference of metal.

### 8-4. Tightening Torque

Tapping Screws (W/Flange) D4 x 16

[50] <50> [61] <62> ..... 2.0 ± 0.5 N·m (20 ± 5 kgf·cm, 1.5 ± 0.4 ft-lbs.)

Seal Lock Hex. Socket Hd. Bolt M5 x 14 [1] <1> ..... 2.9 ± 0.5 N·m (30 ± 5 kgf·cm, 2.2 ± 0.4 ft-lbs.)

Tapping Screw (W/Flange) D5 x 35 (Black) [2] <2> ..... 3.4 ± 0.7 N·m (35 ± 7 kgf·cm, 2.5 ± 0.5 ft-lbs.)

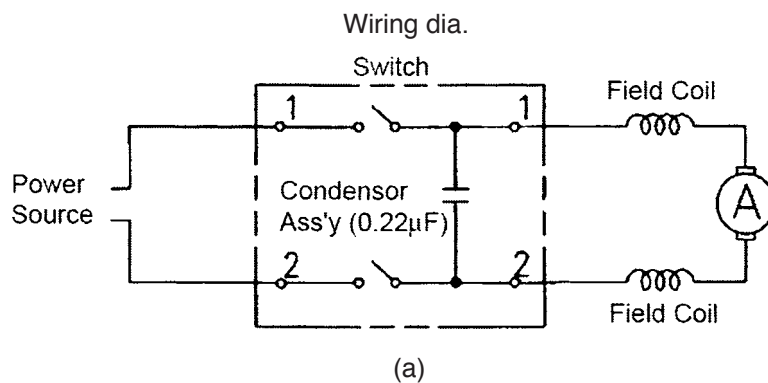
Hex. Socket Hd. Bolt (W/Flange) M5 x 16 [32] <32> ..... 7.8 ± 1.5 N·m (80 ± 15 kgf·cm, 5.8 ± 1.1 ft-lbs.)

Special Nut M10 [6] <6> ..... 15.3 ± 35 N·m (150 ± 30 kgf·cm, 10.8 ± 2.2 ft-lbs.)

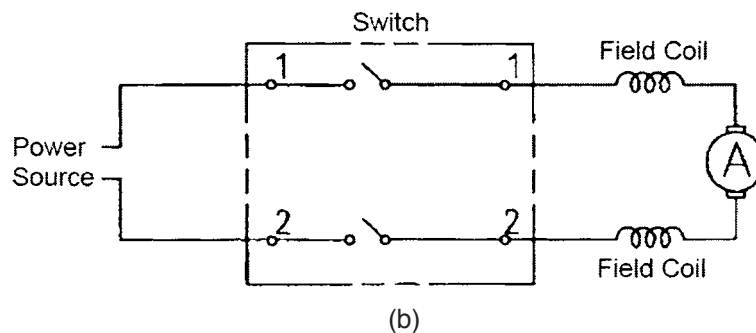
Machine Screw M5 x 10 [25] <25> ..... 5.9 ± 1.5 N·m (60 ± 15 kgf·cm, 4.3 ± 5.1 ft-lbs.)

## 8-5. Wiring Diagram

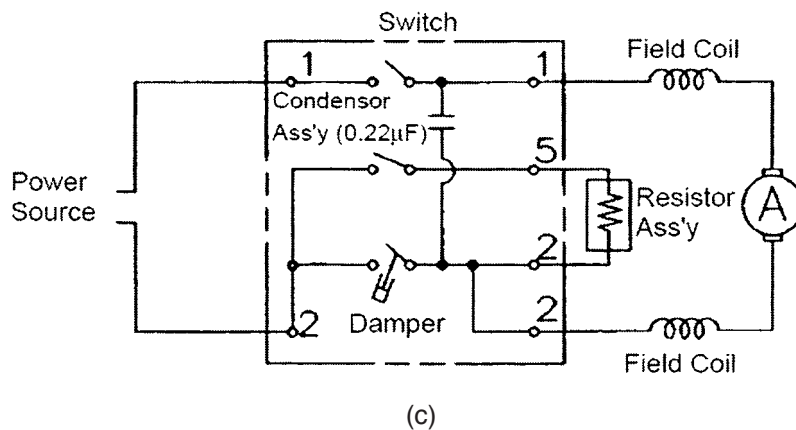
(1) Models G 18SCY/G 23SCY/G 18SEY/G 23SEY



<For the U.S.A.>



(2) Models G 18UAY/G 23UAY/G 18UBY/G 23UBY



**Fig. 18**

## 8-6. Insulation Tests

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

Insulation resistance: 7 M  $\Omega$  or more with DC 500 V 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	120	220	230	240
Current (A) max.	6.3	6.8	3.6	3.8	3.7

## 9. STANDARD REPAIR TIME (UNIT) SCHEDULES

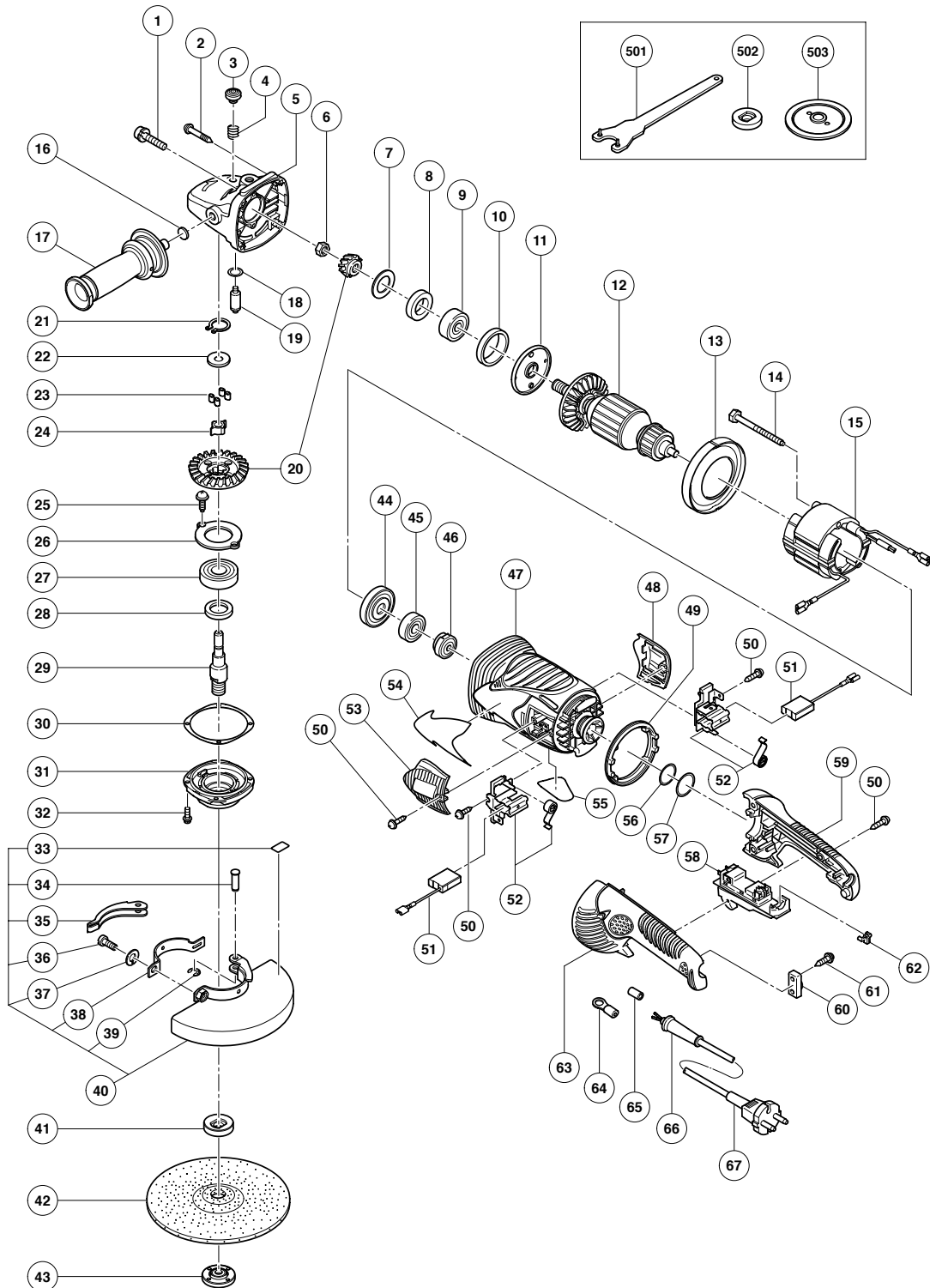
MODEL	Variable		10	20	30	40	50	60 min.
	Fixed							
<div>G 18SCY</div> <div>G 18UAY</div> <div>G 18SEY</div> <div>G 18UBY</div> <div>G 23SCY</div> <div>G 23UAY</div> <div>G 23SEY</div> <div>G 23UBY</div>	<div>General Assembly</div>	<div>Work Flow</div>						
		<div>Wheel Guard Ass'y</div>						
						<div>Housing Stator</div>		
			<div>Gear Cover Ass'y</div>	<div>Pinion Armature</div> <div>Ball Bearing (6301VV)</div> <div>Ball Bearing (6000VV)</div> <div>Seal Washer</div> <div>Felt Packing</div> <div>Bearing Cover (A)</div> <div>Dust Seal</div>				
			<div>Seal Plate</div>	<div>Retaining Ring</div> <div>Coupling Cover</div> <div>Gear</div>	<div>Bearing Cover (B)</div> <div>Ball Bearing (6302VV)</div> <div>Felt Packing (B)</div> <div>Packing Gland</div> <div>Spindle</div> <div>Gear and Pinion Ass'y</div>			
		<div>Handle (B)</div> <div>Cord Armor</div>	<div>Handle (A)</div> <div>Switch</div> <div>Cord</div> <div>Handle Damper</div>					

## ELECTRIC TOOL PARTS LIST

### DISC GRINDER Model G 18SCY

2006 · 10 · 19

(E1)



# PARTS

G 18SCY

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	984-509	SEAL LOCK HEX. SOCKET HD. BOLT M5X14	2		
2	323-209	TAPPING SCREW (W/FLANGE) D5X35 (BLACK)	4		
3	306-888	PUSHING BUTTON	1		
4	320-219	SPRING	1		
5	326-717	GEAR COVER ASS'Y	1	INCLUD. 3, 4, 16, 18, 19	
6	320-226	SPECIAL NUT M10	1		
7	320-221	SEAL WASHER	1		
8	320-222	FELT PACKING	1		
9	630-1VV	BALL BEARING 6301VVCMP2L	1		
10	994-208	RUBBER RING (B)	1		
11	320-220	BEARING COVER (A)	1		
* 12	360-594U	ARMATURE ASS'Y 110V-120V	1	INCLUD. 8, 9, 44, 45	
* 12	360-777E	ARMATURE 220V-230V	1		
* 12	360-594F	ARMATURE 240V	1		
13	320-215	FAN GUIDE	1		
14	984-271	HEX. HD. TAPPING SCREW D5X75	2		
* 15	340-682C	STATOR 110V-120V	1		
* 15	340-682E	STATOR 220V-240V	1		
16	937-033	FELT WASHER	1		
17	322-411	SIDE HANDLE	1		
18	320-218	O-RING	1		
19	306-890	LOCK PIN	1		
* 20	326-719	GEAR AND PINION SET	1		
* 20	326-718	GEAR AND PINION SET	1	FOR USA, CAN	
21	939-540	RETAINING RING FOR D10 SHAFT (10 PCS.)	1		
22	326-722	COUPLING COVER	1		
23	326-721	COUPLING DAMPER	4		
24	326-720	COUPLING	1		
25	949-236	MACHINE SCREW M5X10 (10 PCS.)	2		
26	326-723	BEARING COVER (B)	1		
27	630-2VV	BALL BEARING 6302VVCMP2L	1		
28	990-852	FELT PACKING (B)	1		
* 29	326-727	SPINDLE	1		
* 29	326-728	SPINDLE	1	FOR USA, CAN	
30	320-228	SEAL PLATE	1		
31	320-227	PACKING GLAND	1		
32	994-192	HEX. SOCKET HD. BOLT (W/FLANGE) M5X16	4		
33	311-492	LABEL	1		
34	321-546	SET PIN	1		
35	321-545	LEVER	1		
36	306-887	BOLT M8X22	1		
37	949-457	SPRING WASHER M8 (10 PCS.)	1		
38	321-544	SET PIECE	1		
39	673-489	RETAINING RING (E-TYPE) FOR D5 SHAFT	1		
* 40	321-543	WHEEL GUARD ASS'Y	1	INCLUD. 33-39	
* 40	324-266	WHEEL GUARD ASS'Y	1	INCLUD. 33-39 FOR USA, CAN	
* 41	937-907Z	WHEEL WASHER (A)	1		
* 41	937-922P	WHEEL WASHER (B) FOR D5/8" HOLE	1	FOR USA, CAN	
* 41	937-908Z	WHEEL WASHER (B)	1	FOR AUS	
* 42	316-824	D. C. WHEELS 180MM A24R (25 PCS.)	1	EXCEPT FOR GBR, HOL, ESP, SWE, AUT, USA, CAN	
* 43	937-909Z	WHEEL NUT M14X2	1		



**G 18SCY**

- 3 -

## STANDARD ACCESSORIES

**G 18SCY**

[illegible]

## OPTIONAL ACCESSORIES

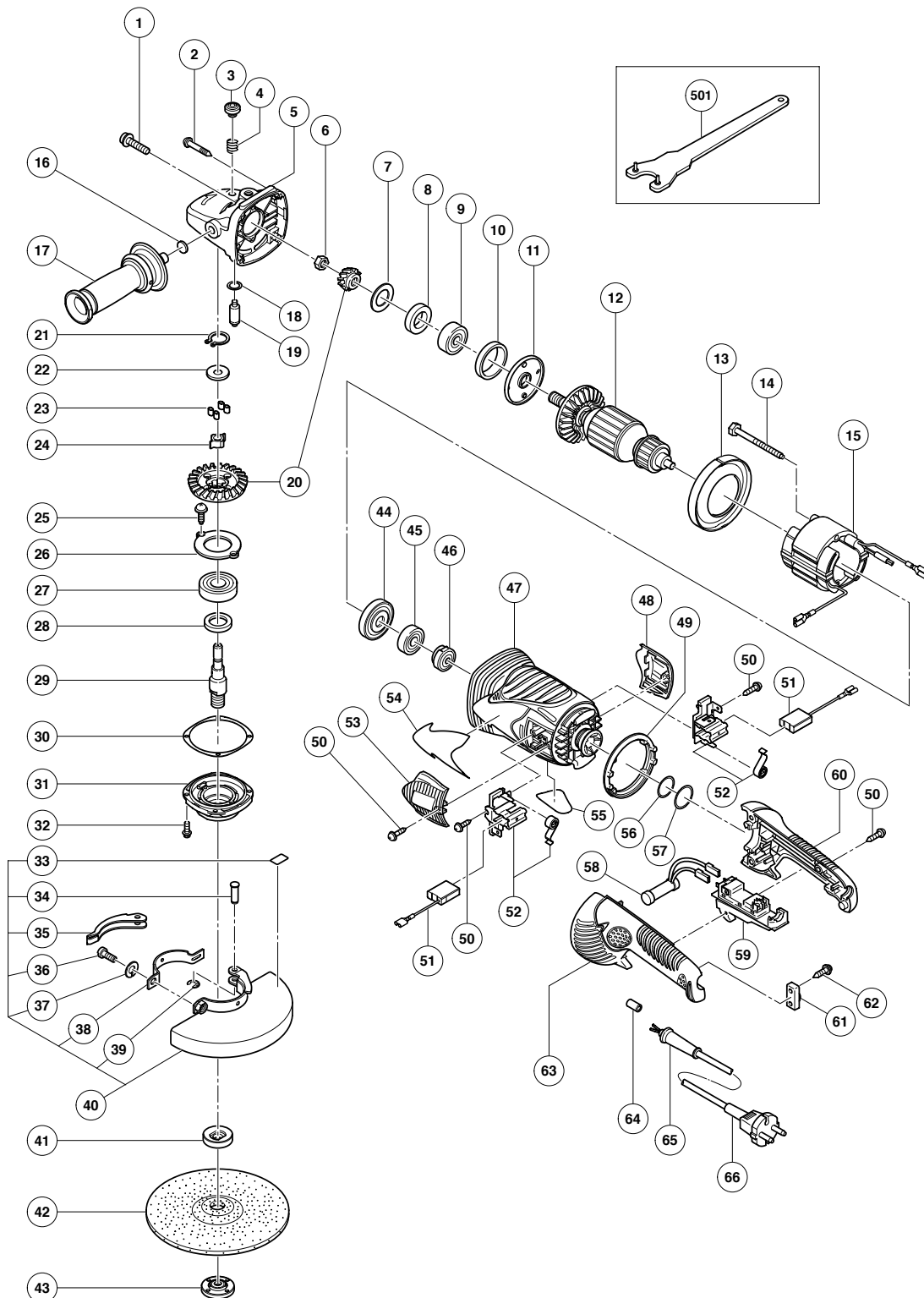
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## ELECTRIC TOOL PARTS LIST

**DISC GRINDER**  
**Model G 18UAY**

2006 · 10 · 19

(E1)



# PARTS

G 18UAY

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	984-509	SEAL LOCK HEX. SOCKET HD. BOLT M5X14	2		
2	323-209	TAPPING SCREW (W/FLANGE) D5X35 (BLACK)	4		
3	306-888	PUSHING BUTTON	1		
4	320-219	SPRING	1		
5	326-717	GEAR COVER ASS'Y	1	INCLUD. 3, 4, 16, 18, 19	
6	320-226	SPECIAL NUT M10	1		
7	320-221	SEAL WASHER	1		
8	320-222	FELT PACKING	1		
9	630-1VV	BALL BEARING 6301VVCMP2L	1		
10	994-208	RUBBER RING (B)	1		
11	320-220	BEARING COVER (A)	1		
12	360-777E	ARMATURE 220V-230V	1		
13	320-215	FAN GUIDE	1		
14	984-271	HEX. HD. TAPPING SCREW D5X75	2		
15	340-682E	STATOR 220V-240V	1		
16	937-033	FELT WASHER	1		
17	322-411	SIDE HANDLE	1		
18	320-218	O-RING	1		
19	306-890	LOCK PIN	1		
20	326-719	GEAR AND PINION SET	1		
21	939-540	RETAINING RING FOR D10 SHAFT (10 PCS.)	1		
22	326-722	COUPLING COVER	1		
23	326-721	COUPLING DAMPER	4		
24	326-720	COUPLING	1		
25	949-236	MACHINE SCREW M5X10 (10 PCS.)	2		
26	326-723	BEARING COVER (B)	1		
27	630-2VV	BALL BEARING 6302VVCMP2L	1		
28	990-852	FELT PACKING (B)	1		
29	326-727	SPINDLE	1		
30	320-228	SEAL PLATE	1		
31	320-227	PACKING GLAND	1		
32	994-192	HEX. SOCKET HD. BOLT (W/FLANGE) M5X16	4		
33	311-492	LABEL	1		
34	321-546	SET PIN	1		
35	321-545	LEVER	1		
36	306-887	BOLT M8X22	1		
37	949-457	SPRING WASHER M8 (10 PCS.)	1		
38	321-544	SET PIECE	1		
39	673-489	RETAINING RING (E-TYPE) FOR D5 SHAFT	1		
40	321-543	WHEEL GUARD ASS'Y	1	INCLUD. 33-39	
41	937-907Z	WHEEL WASHER (A)	1		
42	316-824	D. C. WHEELS 180MM A24R (25 PCS.)	1	EXCEPT FOR FRG, AUT	
43	937-909Z	WHEEL NUT M14X2	1		
44	320-216	DUST SEAL	1		
45	600-0VV	BALL BEARING 6000VVCMP2L	1		
46	321-536	BEARING BUSHING	1		
47	326-712	HOUSING ASS'Y	1	INCLUD. 46	
48	326-715	BRUSH COVER	1		
49	326-726	HANDLE DAMPER	1		
50	305-812	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	6		
51	999-061	CARBON BRUSH 7X17X22.5 (1 PAIR)	1		

\*

**G 18UAY**

10 - 06 \* ALTERNATIVE PARTS -3-

## STANDARD ACCESSORIES

**G 18UAY**

[illegible]

## OPTIONAL ACCESSORIES

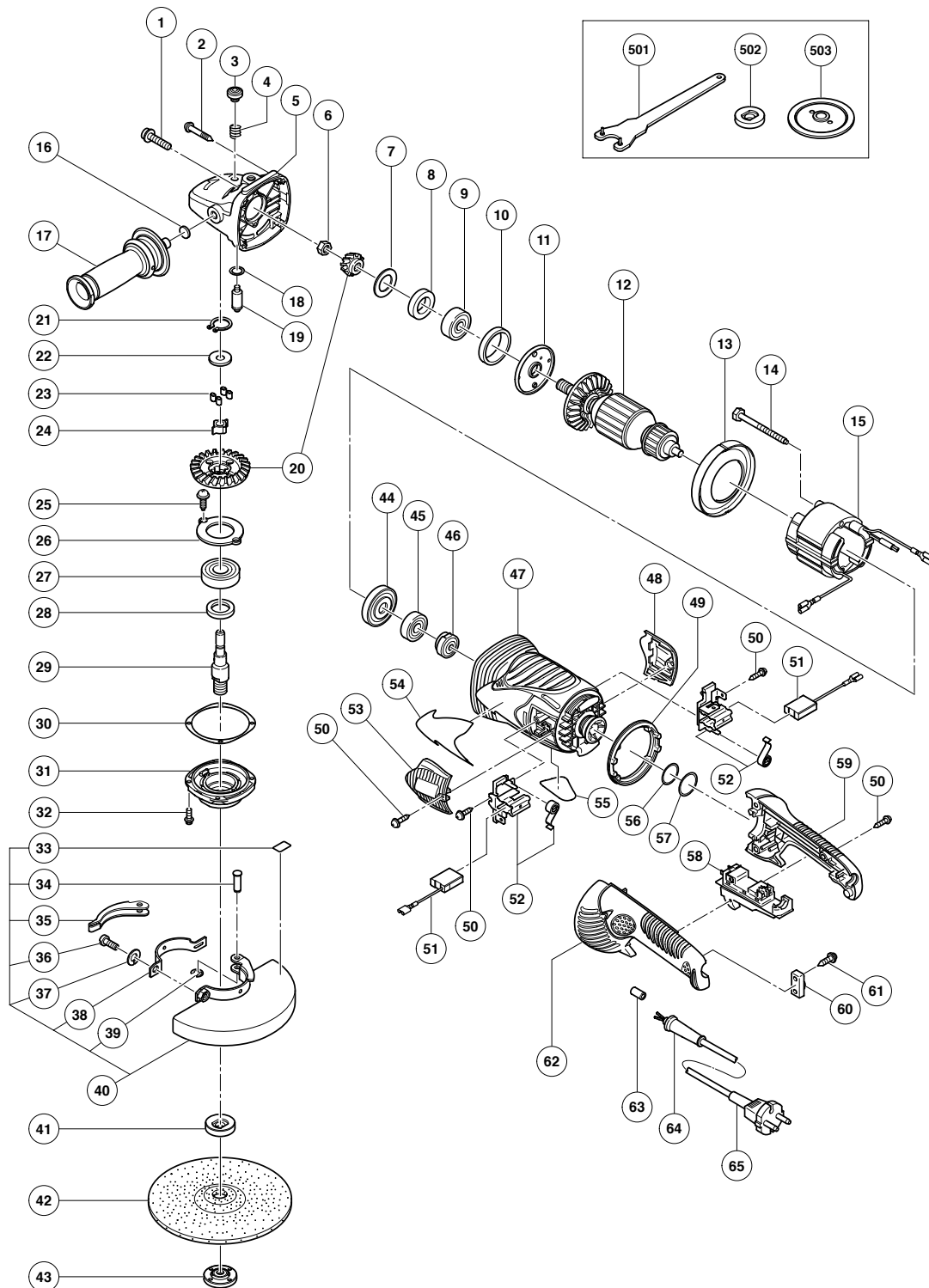
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## ELECTRIC TOOL PARTS LIST

**DISC GRINDER**  
**Model G 18SEY**

2006 · 10 · 19

(E1)



# PARTS

G 18SEY

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	984-509	SEAL LOCK HEX. SOCKET HD. BOLT M5X14	2		
2	323-209	TAPPING SCREW (W/FLANGE) D5X35 (BLACK)	4		
3	306-888	PUSHING BUTTON	1		
4	320-219	SPRING	1		
5	326-717	GEAR COVER ASS'Y	1	INCLUD. 3, 4, 16, 18, 19	
6	320-226	SPECIAL NUT M10	1		
7	320-221	SEAL WASHER	1		
8	320-222	FELT PACKING	1		
9	630-1VV	BALL BEARING 6301VVCMP2L	1		
10	994-208	RUBBER RING (B)	1		
11	320-220	BEARING COVER (A)	1		
12	360-777E	ARMATURE 220V-230V	1		
13	320-215	FAN GUIDE	1		
14	984-271	HEX. HD. TAPPING SCREW D5X75	2		
15	340-682E	STATOR 220V-240V	1		
16	937-033	FELT WASHER	1		
17	322-411	SIDE HANDLE	1		
18	320-218	O-RING	1		
19	306-890	LOCK PIN	1		
20	326-719	GEAR AND PINION SET	1		
21	939-540	RETAINING RING FOR D10 SHAFT (10 PCS.)	1		
22	326-722	COUPLING COVER	1		
23	326-721	COUPLING DAMPER	4		
24	326-720	COUPLING	1		
25	949-236	MACHINE SCREW M5X10 (10 PCS.)	2		
26	326-723	BEARING COVER (B)	1		
27	630-2VV	BALL BEARING 6302VVCMP2L	1		
28	990-852	FELT PACKING (B)	1		
29	326-727	SPINDLE	1		
30	320-228	SEAL PLATE	1		
31	320-227	PACKING GLAND	1		
32	994-192	HEX. SOCKET HD. BOLT (W/FLANGE) M5X16	4		
33	311-492	LABEL	1		
34	321-546	SET PIN	1		
35	321-545	LEVER	1		
36	306-887	BOLT M8X22	1		
37	949-457	SPRING WASHER M8 (10 PCS.)	1		
38	321-544	SET PIECE	1		
39	673-489	RETAINING RING (E-TYPE) FOR D5 SHAFT	1		
40	321-543	WHEEL GUARD ASS'Y	1	INCLUD. 33-39	
* 41	937-907Z	WHEEL WASHER (A)	1		
* 41	937-908Z	WHEEL WASHER (B)	1	FOR NZL	
* 42	316-824	D. C. WHEELS 180MM A24R (25 PCS.)	1	EXCEPT FOR HOL, ESP, AUT	
* 43	937-909Z	WHEEL NUT M14X2	1		
* 43	937-917Z	WHEEL NUT (B)	1	FOR NZL	
44	320-216	DUST SEAL	1		
45	600-0VV	BALL BEARING 6000VVCMP2L	1		
46	321-536	BEARING BUSHING	1		
47	326-712	HOUSING ASS'Y	1	INCLUD. 46	
48	326-715	BRUSH COVER	1		
49	326-726	HANDLE DAMPER	1		



**G 18SEY**

*	58	320-238	SWITCH (2P PILLAR TYPE) W/SAFETY LOCK	1	OFF/LOCK	
	58	320-239	SWITCH (2P PILLAR TYPE) W/SAFETY LOCK	1	W/LOCK	
	59	326-714	HANDLE (B)	1		
	60	960-266	CORD CLIP	1		
	61	984-750	TAPPING SCREW (W/FLANGE) D4X16	2		
	62	326-713	HANDLE (A)	1		
*	63	981-373	TUBE (D)	1	FOR CORD	
	64	940-778	CORD ARMOR D10.7	1		
*	64	958-049	CORD ARMOR D8.2	1	FOR NZL	
*	65	321-537	CORD	1	(CORD ARMOR D10.7)	
*	65	500-408Z	CORD	1	(CORD ARMOR D8.2) FOR NZL	

## STANDARD ACCESSORIES

**G 18SEY**

[illegible]

## OPTIONAL ACCESSORIES

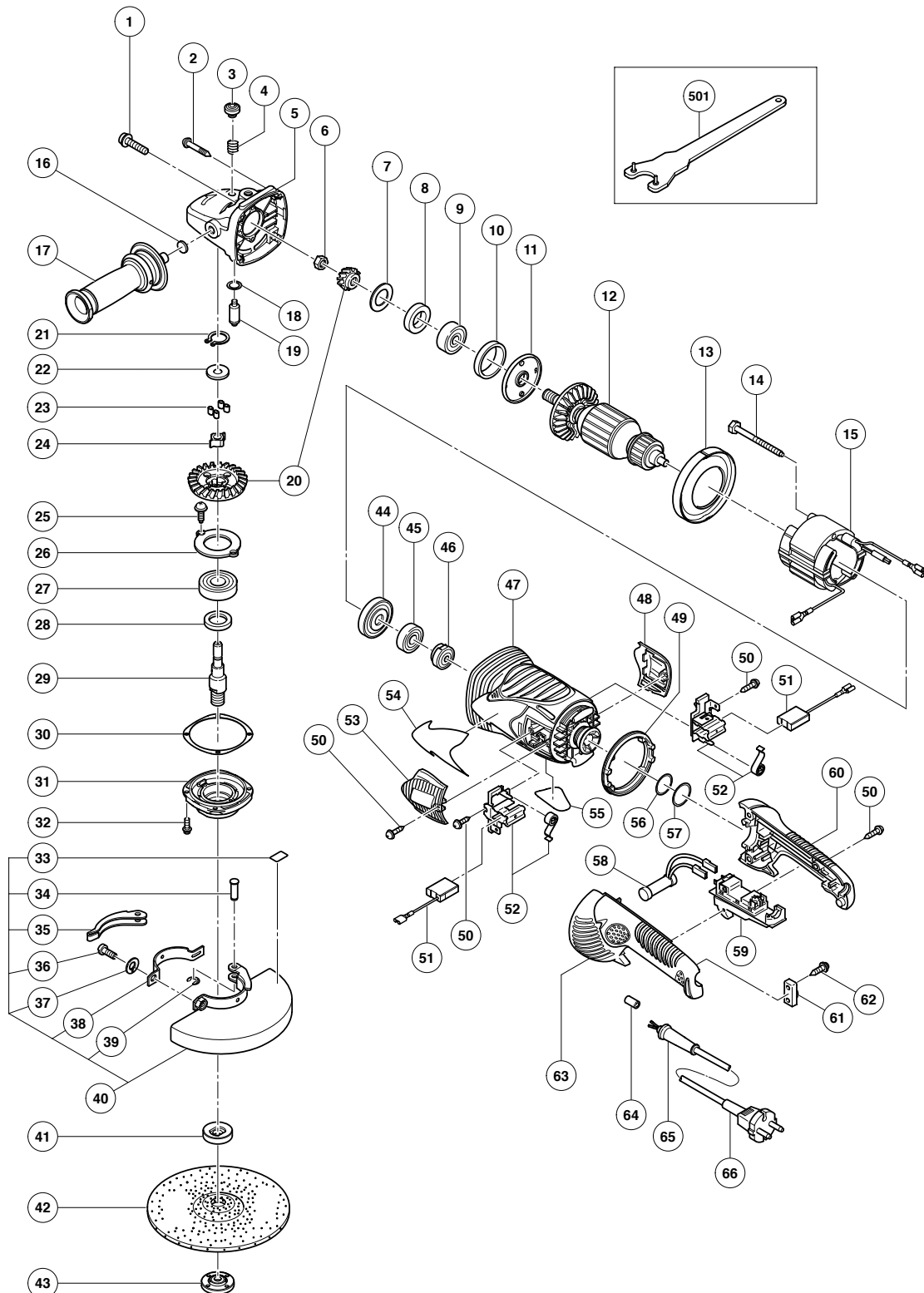
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## ELECTRIC TOOL PARTS LIST

**DISC GRINDER**  
**Model G 18UBY**

2006 · 10 · 19

(E1)



# PARTS

G 18UBY

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	984-509	SEAL LOCK HEX. SOCKET HD. BOLT M5X14	2		
2	323-209	TAPPING SCREW (W/FLANGE) D5X35 (BLACK)	4		
3	306-888	PUSHING BUTTON	1		
4	320-219	SPRING	1		
5	326-717	GEAR COVER ASS'Y	1	INCLUD. 3, 4, 16, 18, 19	
6	320-226	SPECIAL NUT M10	1		
7	320-221	SEAL WASHER	1		
8	320-222	FELT PACKING	1		
9	630-1VV	BALL BEARING 6301VVCMP2L	1		
10	994-208	RUBBER RING (B)	1		
11	320-220	BEARING COVER (A)	1		
12	360-777E	ARMATURE 220V-230V	1		
13	320-215	FAN GUIDE	1		
14	984-271	HEX. HD. TAPPING SCREW D5X75	2		
15	340-682E	STATOR 220V-240V	1		
16	937-033	FELT WASHER	1		
17	322-411	SIDE HANDLE	1		
18	320-218	O-RING	1		
19	306-890	LOCK PIN	1		
20	326-719	GEAR AND PINION SET	1		
21	939-540	RETAINING RING FOR D10 SHAFT (10 PCS.)	1		
22	326-722	COUPLING COVER	1		
23	326-721	COUPLING DAMPER	4		
24	326-720	COUPLING	1		
25	949-236	MACHINE SCREW M5X10 (10 PCS.)	2		
26	326-723	BEARING COVER (B)	1		
27	630-2VV	BALL BEARING 6302VVCMP2L	1		
28	990-852	FELT PACKING (B)	1		
29	326-727	SPINDLE	1		
30	320-228	SEAL PLATE	1		
31	320-227	PACKING GLAND	1		
32	994-192	HEX. SOCKET HD. BOLT (W/FLANGE) M5X16	4		
33	311-492	LABEL	1		
34	321-546	SET PIN	1		
35	321-545	LEVER	1		
36	306-887	BOLT M8X22	1		
37	949-457	SPRING WASHER M8 (10 PCS.)	1		
38	321-544	SET PIECE	1		
39	673-489	RETAINING RING (E-TYPE) FOR D5 SHAFT	1		
40	321-543	WHEEL GUARD ASS'Y	1	INCLUD. 33-39	
41	937-907Z	WHEEL WASHER (A)	1		
* 42	316-824	D. C. WHEELS 180MM A24R (25 PCS.)	1	EXCEPT FOR FRG, HOL, AUT	
43	937-909Z	WHEEL NUT M14X2	1		
44	320-216	DUST SEAL	1		
45	600-0VV	BALL BEARING 6000VVCMP2L	1		
46	321-536	BEARING BUSHING	1		
47	326-712	HOUSING ASS'Y	1	INCLUD. 46	
48	326-715	BRUSH COVER	1		
49	326-726	HANDLE DAMPER	1		
50	305-812	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	6		
51	999-061	CARBON BRUSH 7X17X22.5 (1 PAIR)	1		

## PARTS

**G 18UBY**

[illegible]

## STANDARD ACCESSORIES

**G 18UBY**

[illegible]

## OPTIONAL ACCESSORIES

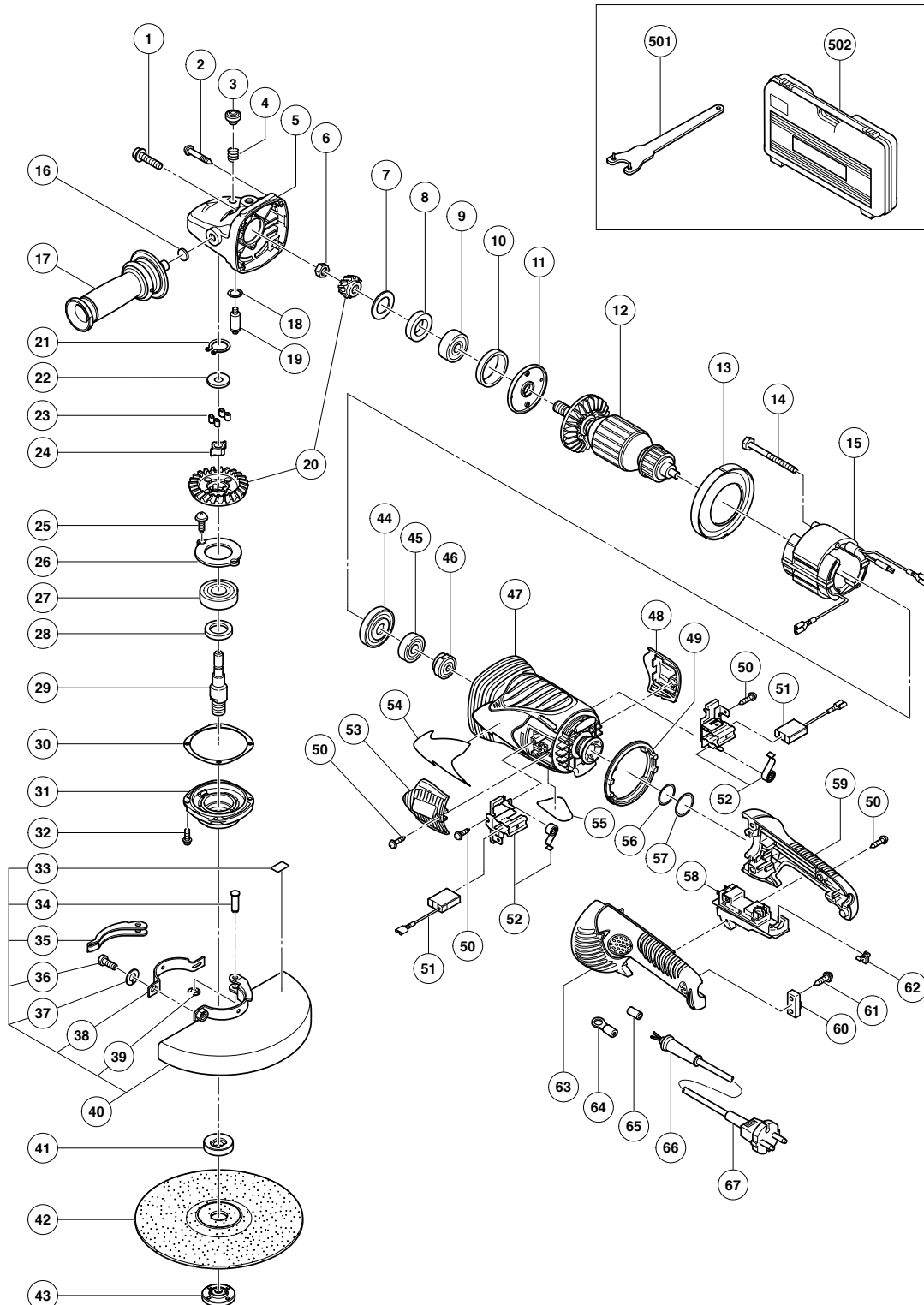
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## ELECTRIC TOOL PARTS LIST

### DISC GRINDER Model G 23SCY

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(E1)



# PARTS

G 23SCY

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	984-509	SEAL LOCK HEX. SOCKET HD. BOLT M5X14	2		
2	323-209	TAPPING SCREW (W/FLANGE) D5X35 (BLACK)	4		
3	306-888	PUSHING BUTTON	1		
4	320-219	SPRING	1		
5	326-717	GEAR COVER ASS'Y	1	INCLUD. 3, 4, 16, 18, 19	
6	320-226	SPECIAL NUT M10	1		
7	320-221	SEAL WASHER	1		
8	320-222	FELT PACKING	1		
9	630-1DD	BALL BEARING 6301DDCMPS2L	1		
10	994-208	RUBBER RING (B)	1		
11	320-220	BEARING COVER (A)	1		
* 12	360-594U	ARMATURE ASS'Y 110V-120V	1	INCLUD. 8, 9, 44, 45	
* 12	360-777E	ARMATURE 220V-230V	1		
13	320-215	FAN GUIDE	1		
14	984-271	HEX. HD. TAPPING SCREW D5X75	2		
* 15	340-682C	STATOR 110V-120V	1		
* 15	340-682E	STATOR 220V-240V	1		
16	937-033	FELT WASHER	1		
17	322-411	SIDE HANDLE	1		
18	320-218	O-RING	1		
19	306-890	LOCK PIN	1		
20	326-718	GEAR AND PINION SET	1		
21	939-540	RETAINING RING FOR D10 SHAFT (10 PCS.)	1		
22	326-722	COUPLING COVER	1		
23	326-721	COUPLING DAMPER	4		
24	326-720	COUPLING	1		
25	949-236	MACHINE SCREW M5X10 (10 PCS.)	2		
26	326-723	BEARING COVER (B)	1		
27	630-2VV	BALL BEARING 6302VVCMP2L	1		
28	990-852	FELT PACKING (B)	1		
* 29	326-727	SPINDLE	1		
* 29	326-728	SPINDLE	1	FOR USA, CAN	
30	320-228	SEAL PLATE	1		
31	320-227	PACKING GLAND	1		
32	994-192	HEX. SOCKET HD. BOLT (W/FLANGE) M5X16	4		
33	311-492	LABEL	1		
34	321-546	SET PIN	1		
35	321-545	LEVER	1		
36	306-887	BOLT M8X22	1		
37	949-457	SPRING WASHER M8 (10 PCS.)	1		
38	321-544	SET PIECE	1		
39	673-489	RETAINING RING (E-TYPE) FOR D5 SHAFT	1		
* 40	321-547	WHEEL GUARD ASS'Y	1	INCLUD. 33-39	
* 40	324-267	WHEEL GUARD ASS'Y	1	INCLUD. 33-39 FOR USA, CAN	
* 41	937-907Z	WHEEL WASHER (A)	1		
* 41	310-337	SUPER WASHER	1	FOR BEL	
* 41	937-922P	WHEEL WASHER (B) FOR D5/8" HOLE	1	FOR USA, CAN	
* 42	316-825	D. C. WHEELS 230MM A24R (25 PCS.)	1	FOR VEN, SYR, SIN	
* 43	937-909Z	WHEEL NUT M14X2	1		
* 43	937-923P	WHEEL NUT 5/8"-11UNC	1	FOR USA, CAN	
44	320-216	DUST SEAL	1		



**G 23SCY**

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## STANDARD ACCESSORIES

**G 23SCY**

[illegible]

## OPTIONAL ACCESSORIES

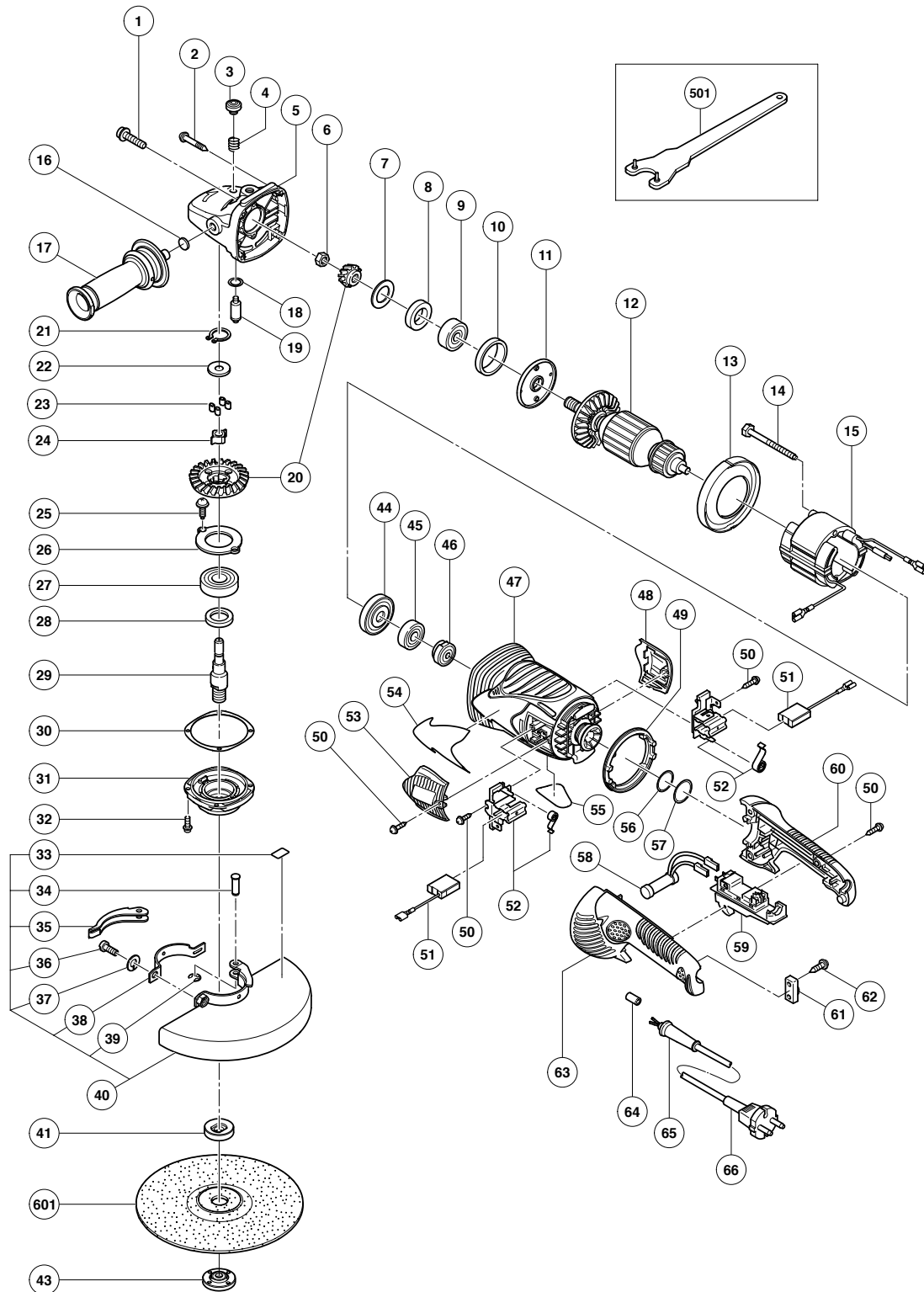
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## ELECTRIC TOOL PARTS LIST

### DISC GRINDER Model G 23UAY

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## PARTS

G 23UAY

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	984-509	SEAL LOCK HEX. SOCKET HD. BOLT M5X14	2		
2	323-209	TAPPING SCREW (W/FLANGE) D5X35 (BLACK)	4		
3	306-888	PUSHING BUTTON	1		
4	320-219	SPRING	1		
5	326-717	GEAR COVER ASS'Y	1	INCLUD. 3, 4, 16, 18, 19	
6	320-226	SPECIAL NUT M10	1		
7	320-221	SEAL WASHER	1		
8	320-222	FELT PACKING	1		
9	630-1DD	BALL BEARING 6301DDCMPS2L	1		
10	994-208	RUBBER RING (B)	1		
11	320-220	BEARING COVER (A)	1		
12	360-777E	ARMATURE 220V-230V	1		
13	320-215	FAN GUIDE	1		
14	984-271	HEX. HD. TAPPING SCREW D5X75	2		
15	340-682E	STATOR 220V-240V	1		
16	937-033	FELT WASHER	1		
17	322-411	SIDE HANDLE	1		
18	320-218	O-RING	1		
19	306-890	LOCK PIN	1		
20	326-718	GEAR AND PINION SET	1		
21	939-540	RETAINING RING FOR D10 SHAFT (10 PCS.)	1		
22	326-722	COUPLING COVER	1		
23	326-721	COUPLING DAMPER	4		
24	326-720	COUPLING	1		
25	949-236	MACHINE SCREW M5X10 (10 PCS.)	2		
26	326-723	BEARING COVER (B)	1		
27	630-2VV	BALL BEARING 6302VVCMP2L	1		
28	990-852	FELT PACKING (B)	1		
29	326-727	SPINDLE	1		
30	320-228	SEAL PLATE	1		
31	320-227	PACKING GLAND	1		
32	994-192	HEX. SOCKET HD. BOLT (W/FLANGE) M5X16	4		
33	311-492	LABEL	1		
34	321-546	SET PIN	1		
35	321-545	LEVER	1		
36	306-887	BOLT M8X22	1		
37	949-457	SPRING WASHER M8 (10 PCS.)	1		
38	321-544	SET PIECE	1		
39	673-489	RETAINING RING (E-TYPE) FOR D5 SHAFT	1		
40	321-547	WHEEL GUARD ASS'Y	1	INCLUD. 33-39	
41	937-907Z	WHEEL WASHER (A)	1		
43	937-909Z	WHEEL NUT M14X2	1		
44	320-216	DUST SEAL	1		
45	600-0VV	BALL BEARING 6000VVCMP2L	1		
46	321-536	BEARING BUSHING	1		
47	326-712	HOUSING ASS'Y	1	INCLUD. 46	
48	326-715	BRUSH COVER	1		
49	326-726	HANDLE DAMPER	1		
50	305-812	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	8		
51	999-061	CARBON BRUSH 7X17X22.5 (1 PAIR)	1		
51	999-089	CARBON BRUSH (AUTO STOP TYPE) (1 PAIR)	1		

**G 23UAY**

*	59	320-371	SWITCH (2P PILLAR TYPE) W/SAFETY LOCK	1		
*	59	320-235	SWITCH (2P PILLAR TYPE) W/SAFETY LOCK	1	FOR AUT, FRG, ESP	

## STANDARD ACCESSORIES

**G 23UAY**

[illegible]

## OPTIONAL ACCESSORIES

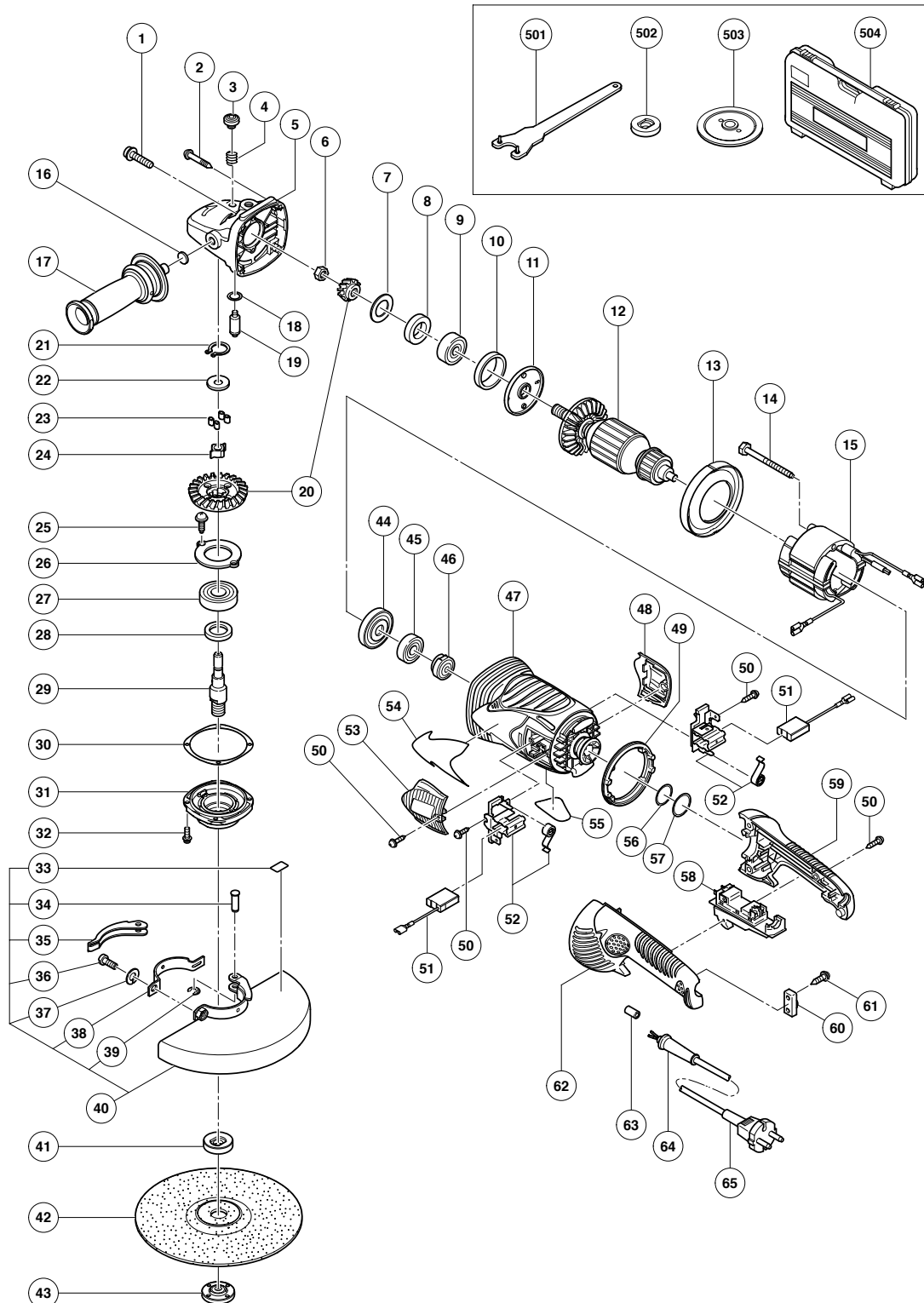
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## ELECTRIC TOOL PARTS LIST

### DISC GRINDER Model G 23SEY

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(E1)



# PARTS

G 23SEY

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	984-509	SEAL LOCK HEX. SOCKET HD. BOLT M5X14	2		
2	323-209	TAPPING SCREW (W/FLANGE) D5X35 (BLACK)	4		
3	306-888	PUSHING BUTTON	1		
4	320-219	SPRING	1		
5	326-717	GEAR COVER ASS'Y	1	INCLUD. 3, 4, 16, 18, 19	
6	320-226	SPECIAL NUT M10	1		
7	320-221	SEAL WASHER	1		
8	320-222	FELT PACKING	1		
9	630-1DD	BALL BEARING 6301DDCMPS2L	1		
10	994-208	RUBBER RING (B)	1		
11	320-220	BEARING COVER (A)	1		
* 12	360-777E	ARMATURE 220V-230V	1		
* 12	360-594F	ARMATURE 240V	1		
13	320-215	FAN GUIDE	1		
14	984-271	HEX. HD. TAPPING SCREW D5X75	2		
15	340-682E	STATOR 220V-240V	1		
16	937-033	FELT WASHER	1		
17	322-411	SIDE HANDLE	1		
18	320-218	O-RING	1		
19	306-890	LOCK PIN	1		
20	326-718	GEAR AND PINION SET	1		
21	939-540	RETAINING RING FOR D10 SHAFT (10 PCS.)	1		
22	326-722	COUPLING COVER	1		
23	326-721	COUPLING DAMPER	4		
24	326-720	COUPLING	1		
25	949-236	MACHINE SCREW M5X10 (10 PCS.)	2		
26	326-723	BEARING COVER (B)	1		
27	630-2VV	BALL BEARING 6302VVCMP2L	1		
28	990-852	FELT PACKING (B)	1		
29	326-727	SPINDLE	1		
30	320-228	SEAL PLATE	1		
31	320-227	PACKING GLAND	1		
32	994-192	HEX. SOCKET HD. BOLT (W/FLANGE) M5X16	4		
33	311-492	LABEL	1		
34	321-546	SET PIN	1		
35	321-545	LEVER	1		
36	306-887	BOLT M8X22	1		
37	949-457	SPRING WASHER M8 (10 PCS.)	1		
38	321-544	SET PIECE	1		
39	673-489	RETAINING RING (E-TYPE) FOR D5 SHAFT	1		
40	321-547	WHEEL GUARD ASS'Y	1	INCLUD. 33-39	
* 41	937-907Z	WHEEL WASHER (A)	1		
* 41	937-908Z	WHEEL WASHER (B)	1	FOR AUS, NZL	
* 42	316-825	D. C. WHEELS 230MM A24R (25 PCS.)	1	FOR AUS, NZL, SAF	
43	937-909Z	WHEEL NUT M14X2	1		
44	320-216	DUST SEAL	1		
45	600-0VV	BALL BEARING 6000VVCMP2L	1		
46	321-536	BEARING BUSHING	1		
47	326-712	HOUSING ASS'Y	1	INCLUD. 46	
48	326-715	BRUSH COVER	1		
49	326-726	HANDLE DAMPER	1		



**G 23SEY**

9 - 06 \* ALTERNATIVE PARTS -3-

## STANDARD ACCESSORIES

**G 23SEY**

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## OPTIONAL ACCESSORIES

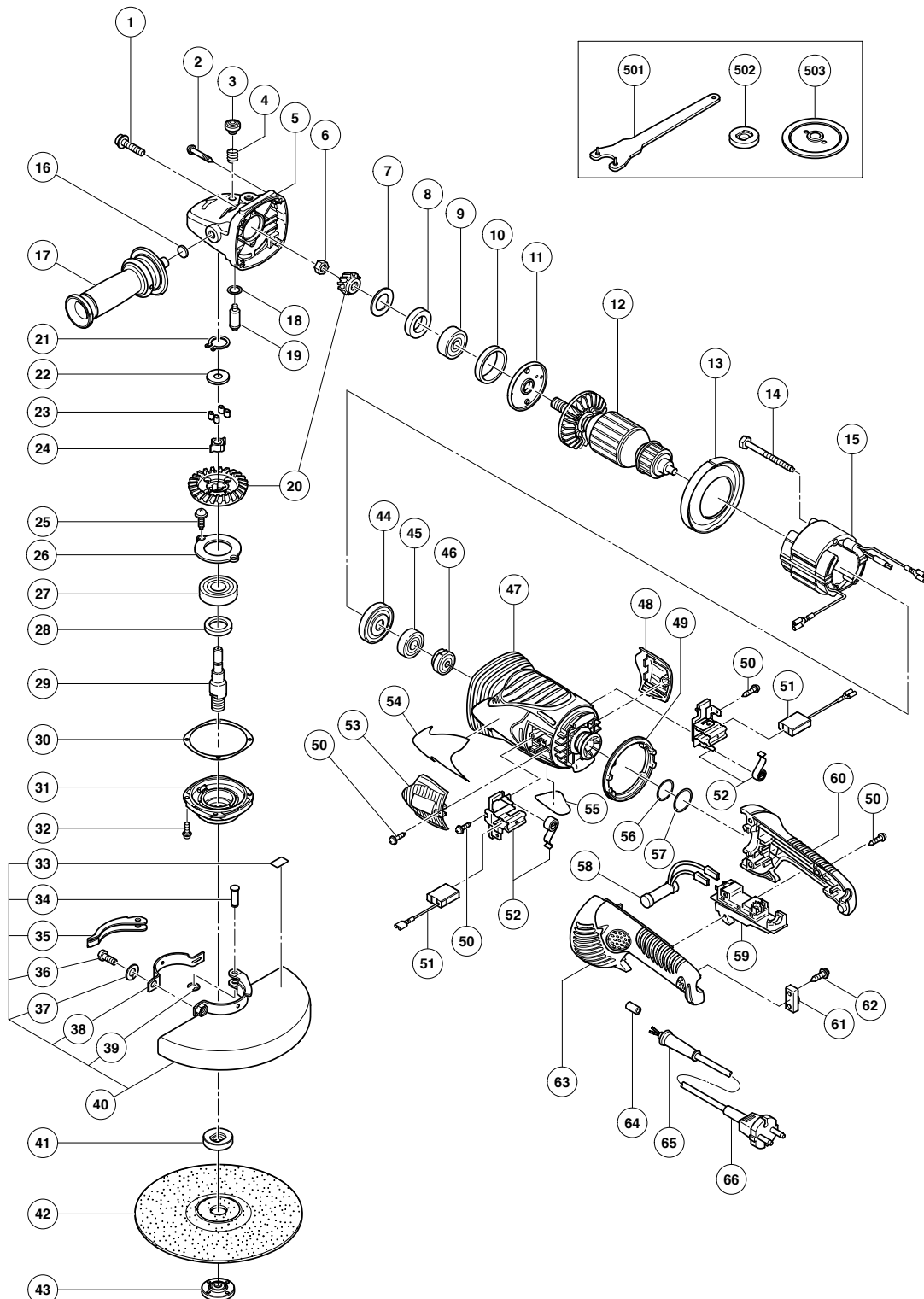
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## ELECTRIC TOOL PARTS LIST

### DISC GRINDER Model G 23UBY

2006 · 9 · 29

(E1)



# PARTS

G 23UBY

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	984-509	SEAL LOCK HEX. SOCKET HD. BOLT M5X14	2		
2	323-209	TAPPING SCREW (W/FLANGE) D5X35 (BLACK)	4		
3	306-888	PUSHING BUTTON	1		
4	320-219	SPRING	1		
5	326-717	GEAR COVER ASS'Y	1	INCLUD. 3, 4, 16, 18, 19	
6	320-226	SPECIAL NUT M10	1		
7	320-221	SEAL WASHER	1		
8	320-222	FELT PACKING	1		
9	630-1DD	BALL BEARING 6301DDCMPS2L	1		
10	994-208	RUBBER RING (B)	1		
11	320-220	BEARING COVER (A)	1		
* 12	360-594U	ARMATURE ASS'Y 110V-120V	1	INCLUD. 8, 9, 44, 45	
* 12	360-777E	ARMATURE 220V-230V	1		
* 12	360-594F	ARMATURE 240V	1		
13	320-215	FAN GUIDE	1		
14	984-271	HEX. HD. TAPPING SCREW D5X75	2		
* 15	340-682C	STATOR 110V-120V	1		
* 15	340-682E	STATOR 220V-240V	1		
16	937-033	FELT WASHER	1		
17	322-411	SIDE HANDLE	1		
18	320-218	O-RING	1		
19	306-890	LOCK PIN	1		
20	326-718	GEAR AND PINION SET	1		
21	939-540	RETAINING RING FOR D10 SHAFT (10 PCS.)	1		
22	326-722	COUPLING COVER	1		
23	326-721	COUPLING DAMPER	4		
24	326-720	COUPLING	1		
25	949-236	MACHINE SCREW M5X10 (10 PCS.)	2		
26	326-723	BEARING COVER (B)	1		
27	620-2VV	BALL BEARING 6202VVCMP2L	1		
28	990-852	FELT PACKING (B)	1		
29	326-727	SPINDLE	1		
30	320-228	SEAL PLATE	1		
31	320-227	PACKING GLAND	1		
32	994-192	HEX. SOCKET HD. BOLT (W/FLANGE) M5X16	4		
33	311-492	LABEL	1		
34	321-546	SET PIN	1		
35	321-545	LEVER	1		
36	306-887	BOLT M8X22	1		
37	949-457	SPRING WASHER M8 (10 PCS.)	1		
38	321-544	SET PIECE	1		
39	673-489	RETAINING RING (E-TYPE) FOR D5 SHAFT	1		
40	321-547	WHEEL GUARD ASS'Y	1	INCLUD. 33-39	
* 41	937-907Z	WHEEL WASHER (A)	1		
* 41	937-908Z	WHEEL WASHER (B)	1	FOR AUS	
* 42	316-825	D. C. WHEELS 230MM A24R (25 PCS.)	1	FOR AUS	
43	937-909Z	WHEEL NUT M14X2	1		
44	320-216	DUST SEAL	1		
45	600-0VV	BALL BEARING 6000VVCMP2L	1		
46	321-536	BEARING BUSHING	1		
47	326-712	HOUSING ASS'Y	1	INCLUD. 46	

**G 23UBY**

- 3 -

## STANDARD ACCESSORIES

**G 23UBY**

[illegible]

## OPTIONAL ACCESSORIES

[illegible]

