

**MODELS**

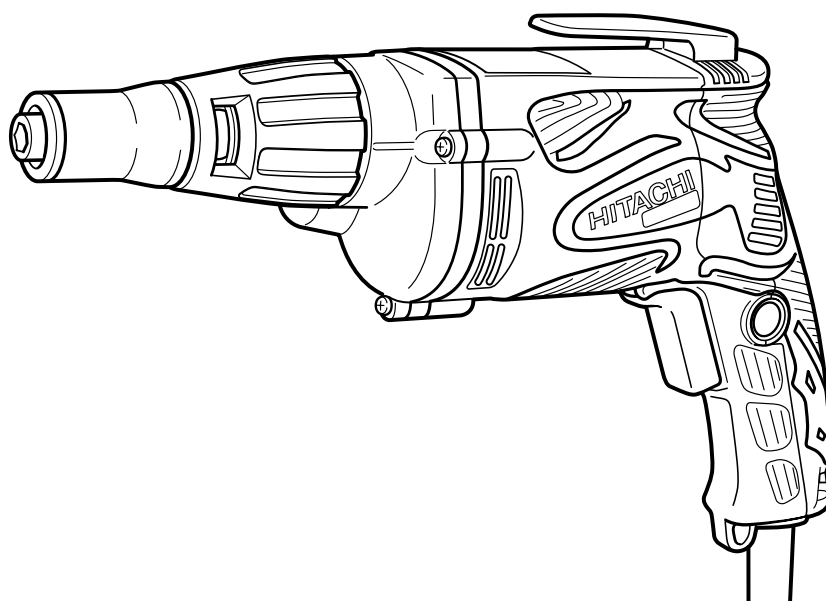
**W 6VB3**

**W 8VB2**

# **Hitachi** **Power Tools**

**SCREW DRIVER**  
**W 6VB3**  
**W 8VB2**

**TECHNICAL DATA**  
**AND**  
**SERVICE MANUAL**



LIST Nos. W 6VB3: 0797  
W 8VB2: 0799

Nov. 2004

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:

Model W 6VB3

Symbol Utilized	Competitor	
	Company Name	Model Name
C	MAKITA	6826
B	BOSCH	1422VSR

Model W 8VB2

Symbol Utilized	Competitor	
	Company Name	Model Name
P	DeWALT	DW264K

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## 1. PRODUCT NAME

Hitachi Screw Driver, Models W 6VB3  
W 8VB2

## 2. MARKETING OBJECTIVE

The Models W 6VB2 and W 8VB screw drivers have been on the market for 5 years. The new Models W 6VB3 and W 8VB2 are totally redesigned screw drivers with strong aluminum gear cover and inner cover and ergonomical housing and handle cover with soft grip. Our market share is expected to grow with the release of these new models which broaden our lineup of screw drivers.

## 3. APPLICATIONS

Hex. and Teks screws: Fastening metal onto metal, or metal onto wood

- Exterior construction
- Installation of siding on buildings
- Installation of galvanized iron sheet or corrugated sheet roofing
- Plate assembly
- Assembly and mounting of advertising billboards
- Assembly of metal frames for vinyl greenhouses
- Assembly and installation of automobile stamped sections
- Various other interior/exterior construction and plate assembly jobs

Drywall screws: Fastening metal studs and drywall

- Interior construction
- Installation of ceilings, paneling or partitions in offices, shops, supermarkets, apartment houses, schools, factories, etc.

Wood screws:

- Interior construction
- Assembly and installation of interior wood paneling,
- Installation of flooring in gymnasiums and similar buildings

## 4. SELLING POINTS

Ergonomical design for better operation

- Soft grip housing and handle cover
- Big switch trigger
- Soft protect cover on gear cover and inner cover
- One motion detachable locator

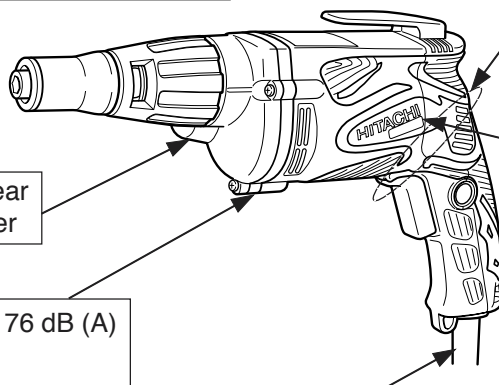
Class-top short length of grip portion 206 mm (8-1/8")  
C: 212 mm (8-11/32")  
B: 210 mm (8-1/4")  
P: 210 mm (8-1/4")

Robust aluminum gear cover and inner cover

Class-top low noise 76 dB (A)  
C: 79 dB (A)  
B: 81 dB (A)  
P: 79 dB (A)

High-power motor:  
Class-top power input  
• U.S.A., Canada: 750 W  
• Other countries: 620 W  
C: U.S.A., Canada: 710 W  
Other countries: 570 W  
B: 550 W  
P: 540 W

7.5 m (24.6 ft.) long cord  
(for U.S.A., Canada, Europe, Russia and Oceania)



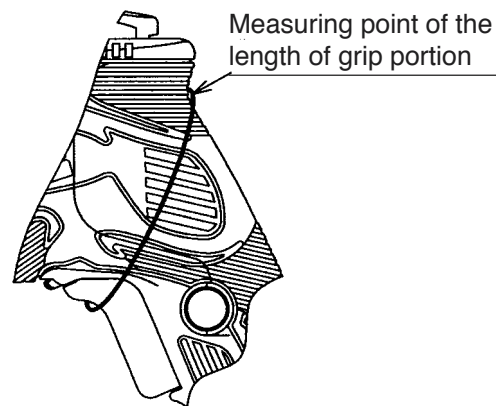
#### 4-1. Selling Point Descriptions

The new Models W 6VB3 and W 8VB2 are more comfortable and easier to operate than the current models and competitors. The outstanding selling points are as follows.

##### 1) Short length of grip portion

The Models W 6VB3 and W 8VB2 have a handle that is shaped in good weight balance according to the ergonomical design. In addition, the length of the grip portion is shortest in the class. The handle grip is very comfortable and it efficiently reduces operator fatigue. Table 1 shows a comparison of the length of grip portion.

(Measuring point of the length of grip portion)



**Table 1 Comparison of the length of grip portion**

Maker		HITACHI		C	B
Model		W 6VB3	W 6VB2		
The length of grip portion	mm	206 (8-1/8")	218 (8-19/32")	212 (8-11/32")	210 (8-1/4")

Maker		HITACHI		P
Model		W 8VB2	W 8VB	
The length of grip portion	mm	206 (8-1/8")	218 (8-19/32")	210 (8-1/4")

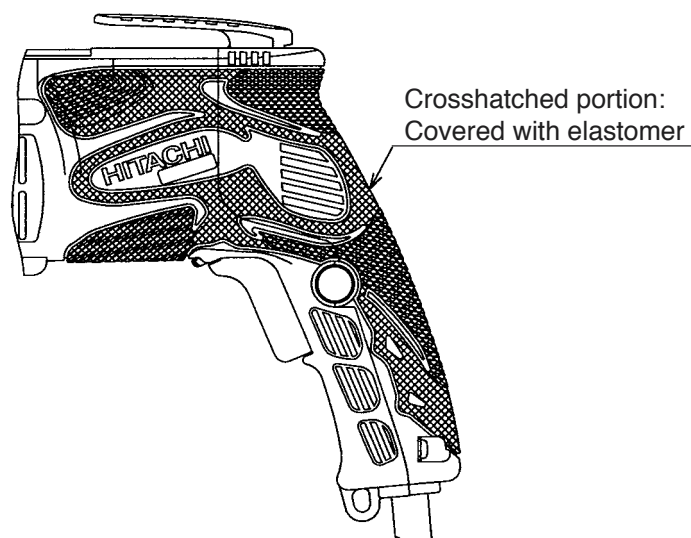
##### 2) Ergonomical design for better operation

The Models W 6VB3 and W 8VB2 are equipped with the following four parts as a result of pursuance of the ergonomical design.

###### ① Soft grip housing and handle cover

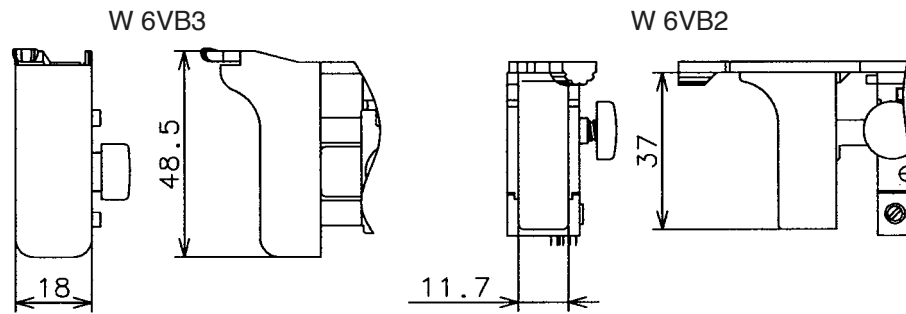
The entire body is covered with the uniquely designed elastomer and the grip portion is uneven and matte-finished to make it resistant to slipping. Thus the grip is very comfortable and it efficiently reduces operator fatigue.

(Range covered with elastomer)



## ② Big switch trigger

A new big switch trigger is adopted for easier switch operation. The switch trigger is rounded for better feel of triggering.

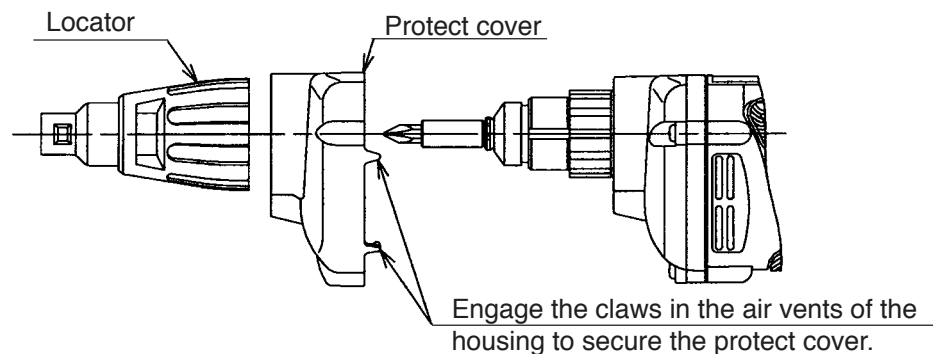


## ③ Soft protect cover on gear cover and inner cover

A transparent protect cover made of elastomer is added to cover the surfaces of the gear cover and the inner cover made of aluminum. It is easily detachable just by removing the locator. The protect cover has the following two features.

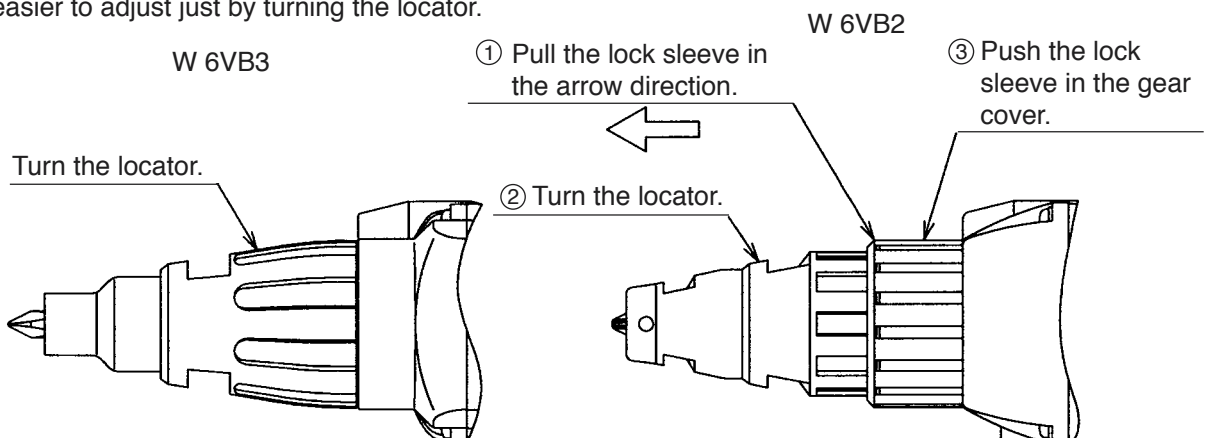
- The material of the protect cover has extremely lower thermal conductivity than aluminum. Therefore, the protect cover lessens feeling of coldness or hotness even if the gear cover is touched with bare hands under the severe temperature environment such as in the severely cold areas (Russia, Eastern Europe and Northern Europe) or the severely hot areas (Middle East and South-East Asia).
- The protect cover is soft because it is made of elastomer. In addition, the aluminum gear cover protects from damages even if the Models W 6VB3 and W 8VB2 are hit against wall materials.

(Mounting the protect cover)



## ④ One motion detachable locator

The locator is used for adjusting the screw head depth. The current Models W 6VB2 and W 8VB require the operator to pull the lock sleeve and turn the locator for adjustment. The Models W 6VB3 and W 8VB2 are easier to adjust just by turning the locator.



### 3) Low noise

A new fan developed by the 3-D digital analysis technology is adopted. Thanks to the optimized air passage, the noise level of the Models W 6VB3 and W 8VB2 is the lowest in the class. Table 2 shows a comparison of the no-load noise level.

**Table 2 Comparison of the no-load noise level**

Maker		HITACHI		C	B
Model		W 6VB3	W 6VB2		
No-load noise level*	dB (A)	76	79	79	81

Maker		HITACHI		P
Model		W 8VB2	W 8VB	
No-load noise level*	dB (A)	76	79	79

\*: Rotational direction is R.

### 4) Robust aluminum gear cover and inner cover

The Models W 6VB3 and W 8VB2 have the gear cover and the inner cover made of aluminum, while those of the current Models W 6VB2 and W 8VB are made of resin. This is to ensure the specified durability and strength of the Models W 6VB3 and W 8VB2 even under the severe environment. Table 3 shows a comparison of the material of gear cover and inner cover.

**Table 3 Comparison of the material of gear cover and inner cover**

Maker		HITACHI		C	B
Model		W 6VB3	W 6VB2		
Material of gear cover and inner cover		Aluminum	Plastic	Aluminum	Plastic

Maker		HITACHI		P
Model		W 8VB2	W 8VB	
Material of gear cover and inner cover		Aluminum	Plastic	Plastic

### 5) 7.5 m (24.6 ft.) long cord (for U.S.A., Canada, Europe, Russia and Oceania)

The 7.5 m (24.6 ft.) long cord of the Models W 6VB3 and W 8VB2 eliminates the inconvenience of connecting an extension cord or carrying a cord reel in the work site.

### 6) High power motor

The motor of the Models W 6VB3 and W 8VB2 is more powerful than the current Models W 6VB2 and W 8VB with the class-top power input. Table 4 shows a comparison of the power input.

**Table 4 Comparison of the power input**

Maker			HITACHI		C	B
Model			W 6VB3	W 6VB2		
Power input	U.S.A., Canada	W	750 (120 V, 6.6 A)	680 (115 V, 6.4 A)	710 (115 V, 6.5 A)	550 (120 V, 4.8 A)
	Other areas	W	620	600	570	—

Maker			HITACHI		P
Model			W 8VB2	W 8VB	
Power input	U.S.A., Canada	W	750 (120 V, 6.6 A)	680 (115 V, 6.4 A)	—
	Other areas	W	620	600	570


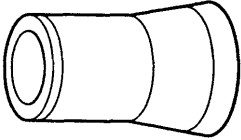
## 5. SPECIFICATIONS

### 5-1. Specifications



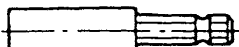
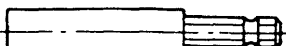
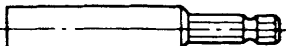




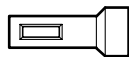



Model		W 6VB3	W 8VB2
Capacity	Drywall screw	6 mm (1/4")	
	Self-drilling screw	6 mm (1/4")	
	Wood screw	5.8 mm dia. x 50 mm ( 7/32" dia. x 2")	
Bit mounting size		6.35 mm (1/4")	
Power source		Single phase, AC 50 Hz or 60 Hz	
Type of motor		Single phase, AC commutator motor	
Full-load current	U.S.A., Canada	6.6 A (120 V)	
	Other areas	5.9 A (110 V)	2.9 A (220 V) 2.8 A (230 V) 2.7 A (240 V)
Power input	U.S.A., Canada	750 W	
	Other areas	620 W	
No-load speed		0 – 2,600 /min	0 – 1,700 /min
Enclosure		Housing and handle cover ..... Polyamide resin and thermo plastic elastomer Gear cover and inner cover ..... Aluminum alloy Protect cover ..... Thermo plastic elastomer Locator and hook ..... Polyamide resin	
Switch		Variable switch with reversing switch	
Handle		Pistol grip handle	
Weight		Net ..... 1.5 kg (without cord) Gross ..... 2.0 kg	
Packaging		Corrugated cardboard box	
Cord	Type	Two-core cabtire cable	
	Overall length	U.S.A., Canada, Europe, Russia, Oceania ..... 7.5 m (24.6 ft.) Asia, Africa and other areas ..... 2.5 m (8.2 ft.)	
Standard accessory		Magnetic hexagon socket ..... 1 Sub stopper ..... 1	

5-2. Optional Accessories

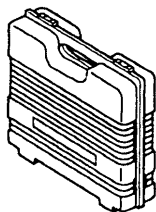
(1) For hex-head screws

Hex-socket		Sub-stopper (B)
		
Magnetic type	Non magnetic type	
H = 6.35 mm	H = 6.35 mm	
H = 7.94 mm	H = 7.94 mm	
H = 9.53 mm	H = 9.53 mm	
H = 10 mm	H = 10 mm	H 3/8
		H 5/16
		H 1/4

(2) For other screws

Screw head	Bit type		Bit holder	Sub-stopper
		No.1 No.2 No.3	 Magnetic bit holder (Short type)  Magnetic bit holder  Non-magnetic bit holder	 Sub-stopper (G)
		No.1 No.2		
		No.1 No.2 No.3		 Sub-stopper (F)
		No.1 No.2		
		B size 4 mm 5 mm		

(3) Plastic case



Optional accessories are subject to change without notice.

## 6. COMPARISONS WITH SIMILAR PRODUCTS

### 6-1. W 6VB3

Maker			HITACHI		C	B
Model			W 6VB3	W 6VB2		
Capacity	Drywall screw	mm	6 (1/4")	6 (1/4")	—	—
	Self-drilling screw	mm	6 (1/4")	6 (1/4")	6 (1/4")	—
	Wood screw	mm	5.8 dia. x 50 (7/32" dia. x 1-31/32")	5.8 dia. x 50 (7/32" dia. x 1-31/32")	—	—
Power input	U.S.A., Canada	W	750 (120 V, 6.6 A)	680 (115 V, 6.4 A)	710 (115 V, 6.5 A)	550 (120 V, 4.8 A)
	Other areas	W	620	600	570	—
No-load rotation		/min	0 — 2,600	0 — 2,600	0 — 2,500	0 — 2,500
No-load noise level *1		dB (A)	76	79	79	81
Overall length (with hex. socket)		mm	312 (12-19/64")	286 (11-19/64")	295 (11-19/32")	290 (11-13/32")
Cord length	U.S.A., Canada, Europe, Russia and Oceania	m	7.5 (24.6 ft.)	2.5 (8.2 ft.)	U.S.A.: 2.5 (8.2 ft.) Europe: 4.2 (13.8 ft.)	2.5 (8.2 ft.)
	Asia, Africa and other areas	m	2.5 (8.2 ft.)			
Weight *2		kg	1.5 (3.3 lbs.)	1.4 (3.1 lbs.)	1.5 (3.3 lbs.)	1.5 (3.3 lbs.)

\*1: Rotation direction is R.

\*2: Weight excludes cord and means actual weight.

### 6-2. W 8VB2

Maker			HITACHI		P
Model			W 8VB2	W 8VB	
Capacity	Drywall screw	mm	6 (1/4")	6 (1/4")	—
	Self-drilling screw	mm	8 (6/15")	8 (6/15")	—
	Wood screw	mm	6.2 dia. x 50 (1/4" dia. x 1-31/32")	6.2 dia. x 50 (1/4" dia. x 1-31/32")	—
Power input	U.S.A., Canada	W	750 (120 V, 6.6 A)	680 (115 V, 6.4 A)	—
	Other areas	W	620	600	540
No-load rotation		/min	0 — 1,700	0 — 1,700	0 — 2,000
No-load noise level *1		dB (A)	76	79	79
Overall length (with hex. socket)		mm	312 (12-19/64")	286 (11-19/64")	305 (12")
Cord length	Europe, Russia and Oceania	m	7.5 (24.6 ft.)	2.5 (8.2 ft.)	4.2 (13.8 ft.)
	Asia, Africa and other areas	m	2.5 (8.2 ft.)		
Weight *2		kg	1.5 (3.3 lbs.)	1.4 (3.1 lbs.)	1.6 (3.5 lbs.)

\*1: Rotation direction is R.

\*2: Weight excludes cord and means actual weight.

## 7. PRECAUTIONS IN SALES PROMOTION

In the interest of promoting the safest and most efficient use of the Models W 6VB3 and W 8VB2 electric screwdrivers by all of our customers, it is very important that at the time of sales 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 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 electric screwdriver 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 Plates

The following basic safety precautions are listed on the Name Plate attached to the main body of each tool. However, these precautions are not listed for European countries.

- For Asia and Oceania

#### **CAUTION**

- **Read thoroughly HANDLING INSTRUCTIONS before use.**

- For the U.S.A. and Canada

#### **WARNING**

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

#### **AVERTISSEMENT**

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

### 7-3. Screw Driving-depth Adjustment

Information and suggestions for screw driving-depth selection for applicable screws are described in the Handling Instructions. The salesperson must be thoroughly familiar with screw driving-depth adjustment procedures to be able to instruct the customer/user in performing adjustment so that the screw neither protrudes above nor sinks excessively below the surface of the workpiece into which the screw is driven.

Specific adjustment procedures are as follows.

(1) Head of screw protrudes above workpiece surface (Fig. 1).

If dimension A in Fig. 3 is excessively small, the head of the driven screw will protrude above the surface of the workpiece material as shown in Fig. 1. To adjust dimension A, rotate the locator clockwise as viewed from the screw mounting end (see Note below). Repeat adjustment as necessary until the head of the driven screw is properly aligned with the surface of the workpiece.

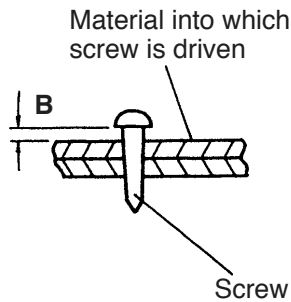


Fig. 1

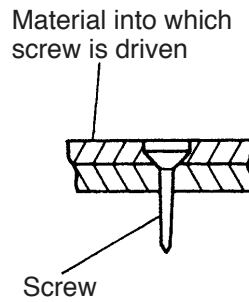


Fig. 2

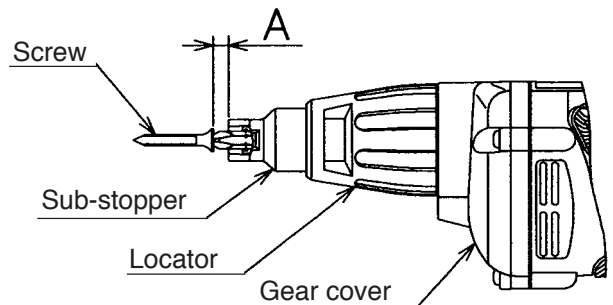


Fig. 3

(2) Head of screw sinks below workpiece (Fig. 2).

If dimension A in Fig. 3 is excessively large, the head of the driven screw will sink below the surface of the workpiece as shown in Fig. 2. To perform adjustment, follow the procedures described in item (1) above, but rotate the locator counter-clockwise.

Should Hex. and Teks screws be driven when dimension A is excessively large, both the screws and bits may be easily damaged. Instruct customers/users to perform adjustment correctly without fail.

**(NOTE)** By turning the locator clockwise or counter-clockwise, dimension A in Fig. 3 can be adjusted within a maximum dimension of 1.5 mm (0.059"). One complete rotation of the locator is divided into twelve settings, each setting permitting an adjustment of 0.125 mm (0.005"). Accordingly, if dimension B in Fig. 1 is 0.25 mm (0.010"), rotate the locator by two settings.

#### 7-4. Self-drilling Screws

Self-drilling screws are most suitable for joining wooden and metal materials, mounting metallic components onto iron sheets, or installing roofing materials. Self-drilling and self-tapping, they are commonly employed in the construction industry because:

- Separate drilling and tapping processes are not required when securing wooden materials to metal materials.
- Consequently, job costs and processes can be drastically reduced.

#### 7-5. Drywall Screws

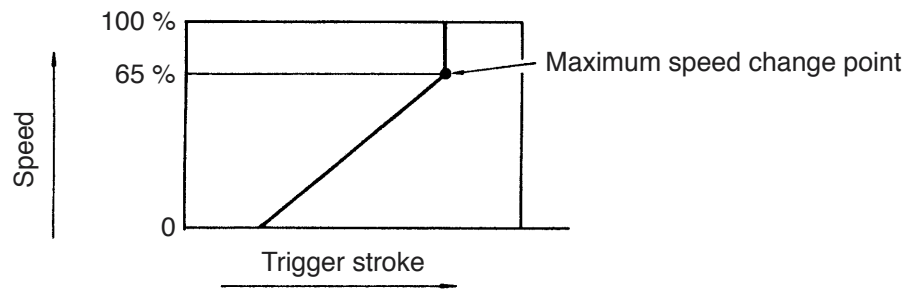
Drywall screws are most suitable for interior decorating and construction utilizing such materials as gypsum board and plastic board. Their main features are:

- Like Hex. and Teks screws, drywall screws are self-drilling, and can reduce work time.
- Wall panels can be mounted cleanly without cracks or chips.
- Drywall screws display far stronger holding power than conventional screws when applied to materials composed of powder or particles, such as gypsum board.

### 7-6. Variable-speed Switch

This switch is equipped with a variable speed control circuit. Through the control circuit, the speed can be controlled up to 65 % of maximum speed according to the degree at which the switch is depressed.

A disadvantage of this system is that if the bit becomes locked resulting in stoppage of the motor, the speed control circuit may be burnt out. In such a case, the switch should be released immediately or turned OFF. To avoid damage to the switch circuit, the customer should be advised to increase driving speed gradually until the screw is driven approximately halfway into the workpiece, then depress the trigger to obtain optimum speed.



**Fig. 4**

Switch characteristics (Approximately shown converted into the linear line)

## 8. PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY

The numbers in the descriptions below correspond to the item numbers in the Parts List and exploded assembly diagram. The **[BOLD]** numbers are for the Model W 6VB3, the **<Bold>** numbers for the Model W 8VB2.

### 8-1. Disassembly

#### A. Disassembly of the parts within the handle

##### (1) Removal of the Handle Cover [49] <47>

Loosen the three Tapping Screws (W/Flange) D4 x 20 (Black) [50] <48>, and remove the Handle Cover [49] <47>.

##### (2) Removal of the Carbon Brushes (Auto Stop Type) (1 Pair) [33] <33>

With a small flat-blade screwdriver, lift up on the spring, and pull the Carbon Brush (Auto Stop Type) (1 Pair) [33] <33> out from Brush Holder (A) [32] <32> slightly. Next, pull out the terminal portion of Carbon Brush (Auto Stop Type) (1 Pair) [33] <33> from the Brush Holder (A) [32] <32>. Remove the carbon brushes from both sides in the same manner.

##### (3) Removal of the Cord [41] <39>

After loosening the two speed control switch retaining screws, loosen the two Tapping Screws (W/Flange) D4 x 16 [43] <41> which retain the Cord Clip [42] <40>, and remove the Cord [41] <39> together with the Cord Armor D8.8 [40] <38>.

#### B. Removal of the armature and stator

##### (1) Removal of Armature (D) [24] <24>

Remove the three Tapping Screws D4 x 25 (Black) [7] <7> from Gear Cover Ass'y (B) [8] <8>, and remove Inner Cover Ass'y (A) [23] <23> with Armature (D) [24] <24> from the Housing [39] <37>. And as illustrated in Fig. 5, Inner Cover Ass'y (A) [23] <23> can be removed from Armature (D) [24] <24> by utilizing a J-130 sleeve (special repair tool, Code No. 970908) and a J-131 plate (special repair tool, Code No. 970909).

##### (2) Removal of the Stator [27] <27>

First, remove the Fan Guide [25] <25> from the inside of the housing. Then, loosen the two Hex. Hd. Tapping Screws D4 x 50 [26] <26>, and lightly tap the end surface of the Housing [39] <37> with a wooden hammer to loosen and remove the Stator [27] <27>.

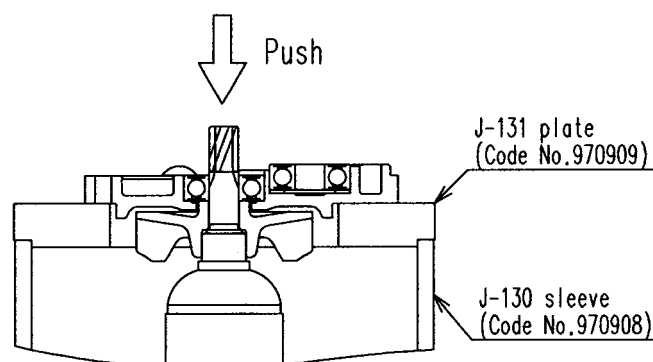


Fig. 5

### C. Removal of socket (B) ass'y, gear ass'y and second pinion ass'y

- (1) Remove Gear Cover Ass'y (B) [8] <8> and Inner Cover Ass'y (A) [23] <23>, then Socket (B) Ass'y [11] <11>, Gear Ass'y [13] <13> and Second Pinion Ass'y [16] <16> can be removed. If the Gear Ass'y [13] <13> is hard to remove, lightly tap the end surface of Inner Cover Ass'y (A) [23] <23> with a wood hammer. If the Second Pinion Ass'y [16] <16> is hard to remove, lightly tap the end surface of Gear Cover Ass'y (B) [8] <8> with a wood hammer. Be careful not to lose the Spring [12] <12> on the outer circumference of the Gear Shaft [14] <14> and Washer [18] <18> on the outer circumference of the Second Pinion Ass'y [16] <16>.

As shown in Fig. 5, insert two flat-blade screwdrivers between Inner Cover Ass'y (A) [23] <23> and Gear Ass'y [13] <13> at each side and remove the Gear Ass'y [13] <13>, Gear Shaft [14] <14> and Ball Bearing 608VVC2PS2L [15] <15> from Inner Cover Ass'y (A) [23] <23> as a single unit.

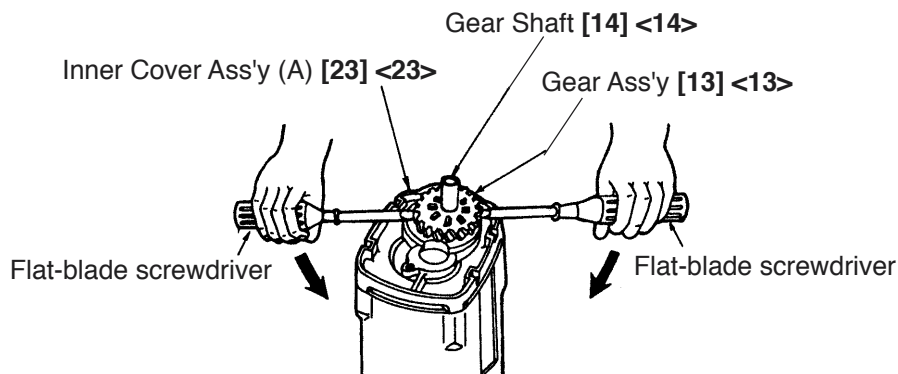


Fig. 6

### 8-2. Reassembly

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

- (1) Fan side Ball Bearing 608VVC2PS2L [19] <19> for Armature (D) [24] <24> in Inner Cover Ass'y (A) [23] <23> should be renewed in disassembling Armature (D) [24] <24>.
- (2) Lubrication  
Grease: Hitachi Motor Grease (Code No. 930035)  
Application:
  - (a) Fill a moderate amount of grease in Gear Cover Ass'y (B) [8] <8>. (If Gear Cover Ass'y (B) [8] <8> is new, fill it with 7 g of grease.)
  - (b) Outer circumference and clutch of Socket (B) Ass'y [11] <11>
  - (c) Teeth and clutch of the Gear Ass'y [13] <13>
  - (d) Outer circumference of the Gear Shaft [14] <14>
  - (e) Teeth and outer circumference of the Second Pinion Ass'y [16] <16>
  - (f) Teeth of the First Gear [17] <17>
  - (g) Pinion of Armature (D) [24] <24>

(3) Tightening torque

- Handle cover retaining screws ..... 1.5 – 2.5 N·m {15 – 25 kg·cm (13.0 – 21.7 lbs-in)}
- Cord clip retaining screws ..... 1.5 – 2.5 N·m {15 – 25 kg·cm (13.0 – 21.7 lbs-in)}
- Gear cover retaining screws ..... 1.5 – 2.5 N·m {15 – 25 kg·cm (13.0 – 21.7 lbs-in)}
- Stator retaining screws ..... 1.5 – 2.5 N·m {15 – 25 kg·cm (13.0 – 21.7 lbs-in)}
- Speed control switch retaining screws ..... 0.4 – 0.8 N·m {4 – 8 kg·cm (3.5 – 6.9 lbs-in)}
- Inner cover truss screws ..... 1.4 – 2.2 N·m {14 – 22 kg·cm (12.0 – 18.9 lbs-in)}

(1) Products with noise suppressor

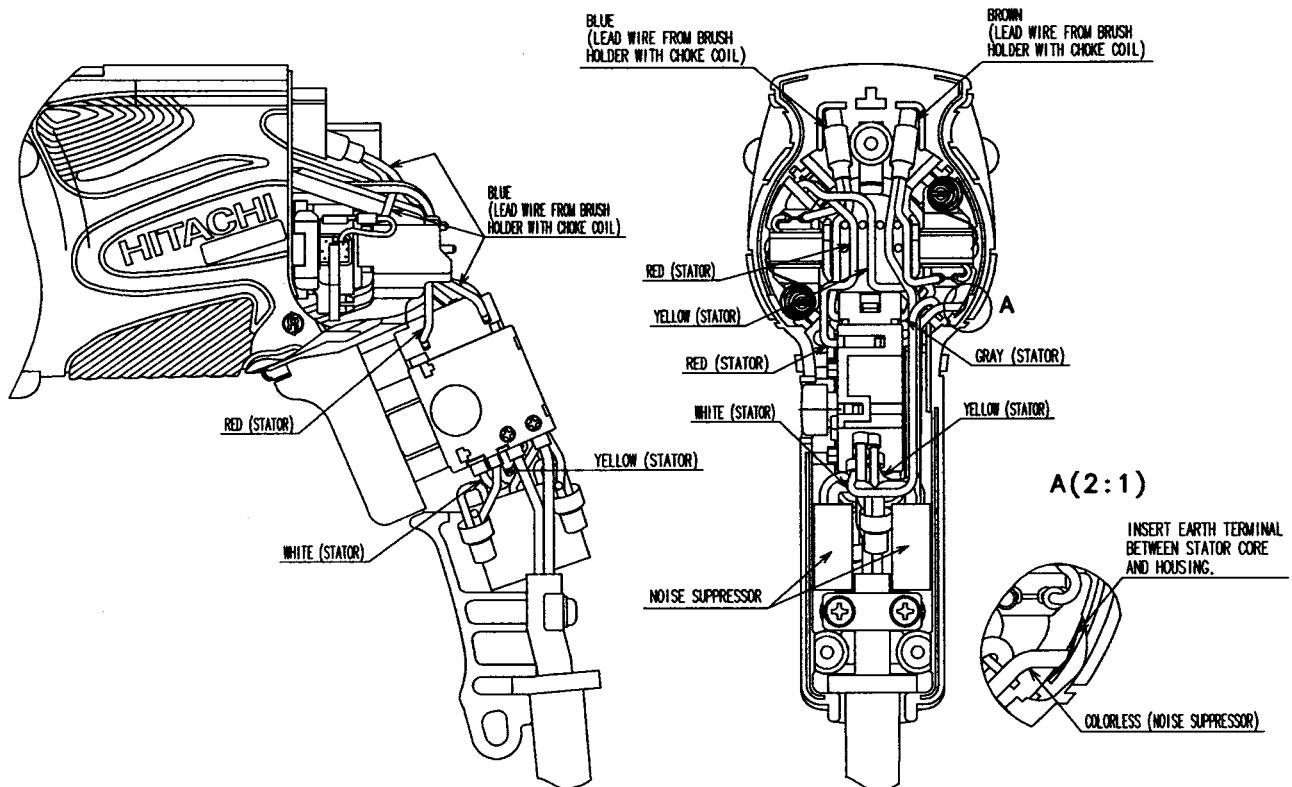


**Fig. 8**

## 8-4. Internal Wire Arrangement and Wiring Work

### A. Internal wire arrangement

#### (1) Products with noise suppressor



#### (2) Products without noise suppressor

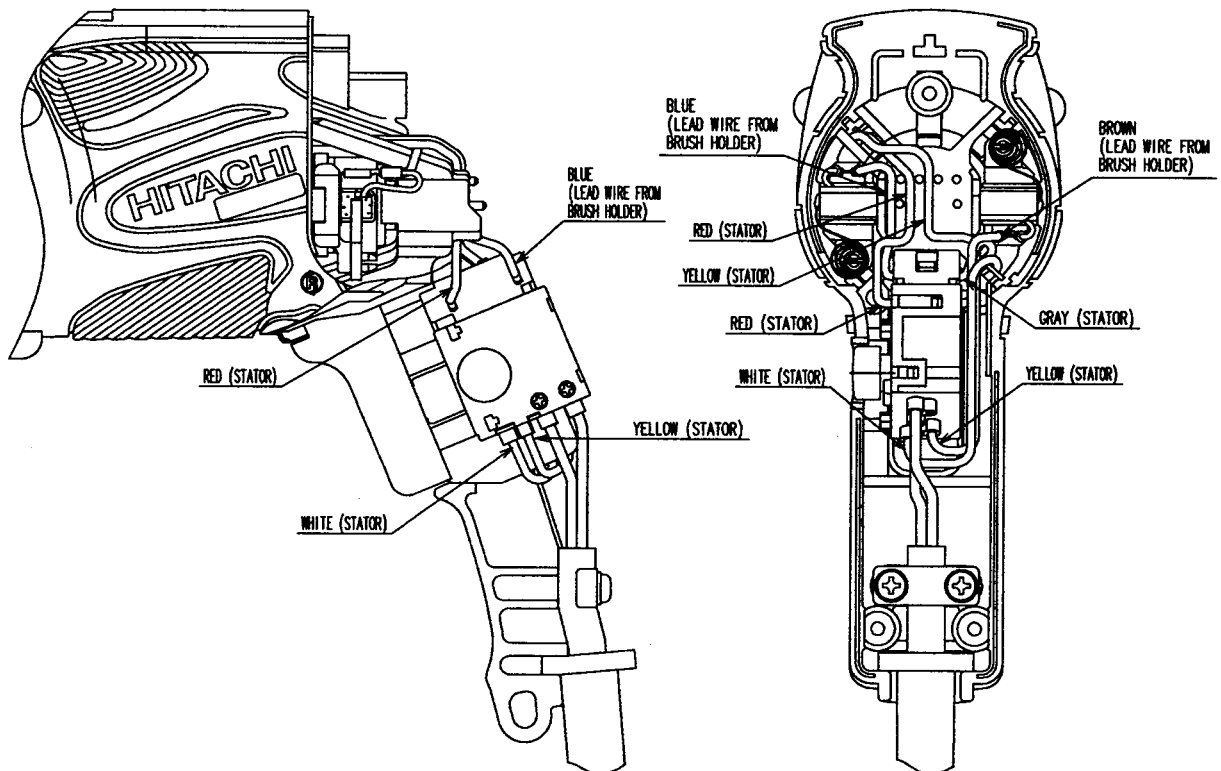


Fig. 9 Schematic diagram

## B. Additional wiring work

General internal wiring can be accomplished by referring to paragraph 8-3 and 8-4-A. The following are special instructions for switch connection.

### (1) Wiring of reversing switch

Insert the lead wire (brown) coming from the brush holder into the terminal (1) of the reversing switch, and the lead wire (blue) into the terminal (2) as shown in Fig. 10. Insert the lead wire (gray) coming from the stator into the terminal (3) and the lead wire (red) into the terminal (4). After insertion, pull each lead wire slightly to check that the lead wires do not come off. To disconnect the lead wires, insert a small flat-blade screwdriver into the slots near the terminals and pull out the lead wires.

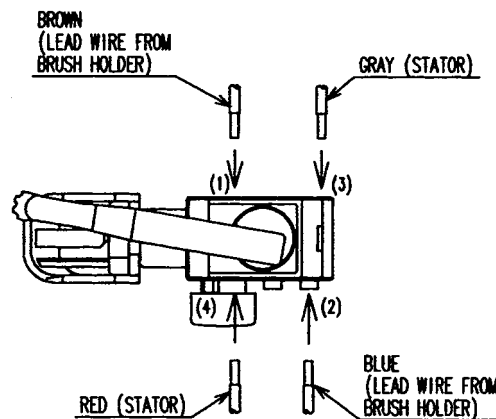


Fig. 10 Wiring of reversing switch

### (2) Wiring of variable speed control switch

Insert each cord into the terminal 1↓ and terminal 2↓ of the speed control switch as shown in Fig. 11, and tighten the screw [tightening torque:  $0.6 \pm 0.2$  N·m ( $6 \pm 2$  kgf·cm,  $5.2 \pm 1.7$  lbs-in)]. Insert the lead wire (yellow) coming from the stator into the terminal M1 and the lead wire (white) into the terminal M2. Insert each lead wire (white) coming from the noise suppressor into the terminal C1 and C2. After insertion, pull each lead wire slightly to check the lead wires do not come off. To disconnect the lead wires, insert a small flat-blade screwdriver into the slots near the terminals and pull out the lead wires.

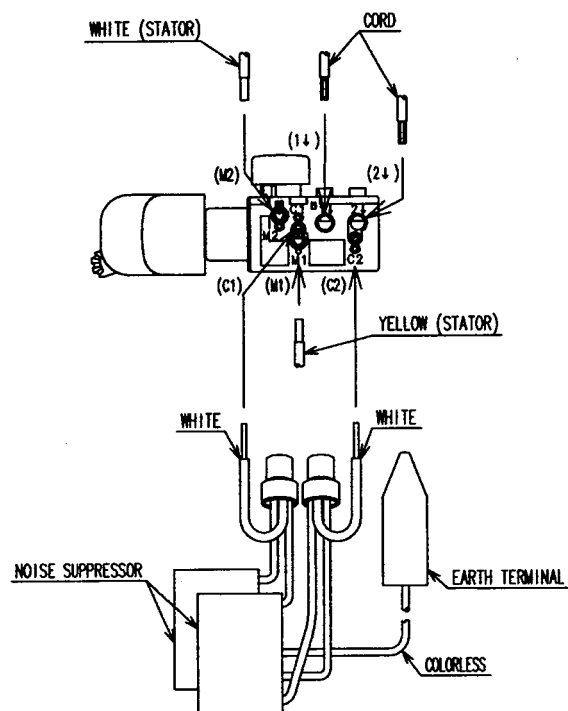


Fig. 11 Wiring of speed control switch

## 8-5. Insulation Tests

On completion of reassembly after 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: AC 4,000 V/1 minute, with no abnormalities ..... 220 V – 240 V (and 110 V for U.K. products)

AC 2,500 V/1 minute, with no abnormalities ..... 110 V – 127 V (except for U.K. products)

#### 8-6. No-load Current Values

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

Voltage (V)	110	115	120	220	230	240
Current (A) max.	2.5	2.5	2.5	1.2	1.2	1.1

## 9. STANDARD REPAIR TIME (UNIT) SCHEDULES

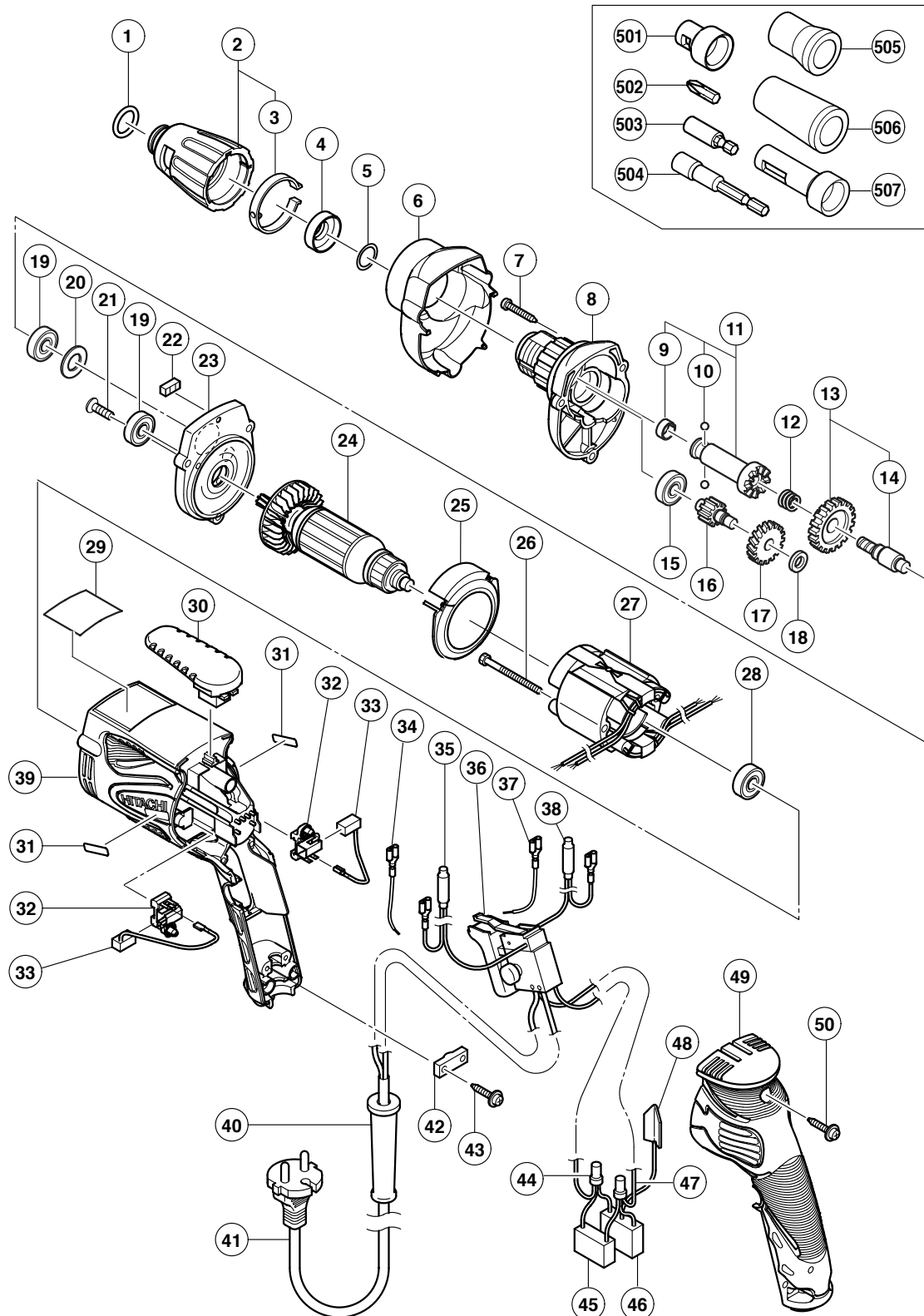
MODEL	Variable		10	20	30	40	50	60 min.
	Fixed							
<div>W 6VB3</div> <div>W 8VB2</div>	<div>General Assembly</div>	Work Flow						
		Switch	→					
		Cord						
		Cord Armor						
					Housing			
					Stator			
				Armature				
				Ball Bearing (608VV) x 2				
				Washer (A)				
				Inner Cover Ass'y (A)				
				Ball Bearing (608VV)				
				Gear Ass'y				
				Gear Shaft				
				Second Pinion Ass'y				
				First Gear				
				Gear Cover (B) Ass'y				
		Finger (A)	→	Socket (B) Ass'y				
		O-Ring (F)		Set Ring				
		Protect Cover (B)		Steel Ball x 2				
				Ball Bearing (608VV)				

## ELECTRIC TOOL PARTS LIST

### SCREW DRIVER Model W 6VB3

2004 · 8 · 25

(E1)



# PARTS

W 6VB3

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	876-031	O-RING (S-16)	1		
2	323-487	LOCATOR ASS'Y	1	INCLUD. 3	
3	323-488	CLICK SPRING	1		
4	971-468	FRINGER (A)	1		
5	317-662	O-RING (F)	1		
6	323-494	PROTECT COVER (B)	1		
7	321-057	TAPPING SCREW D4X25 (BLACK)	3		
8	323-498	GEAR COVER ASS'Y (B)	1	INCLUD. 5, 15	
9	872-573	SET RING	1		
10	959-148	STEEL BALL D3.175 (10 PCS.)	2		
11	317-664	SOCKET (B) ASS'Y	1	INCLUD. 9, 10	
12	306-024	SPRING	1		
13	317-771	GEAR ASS'Y	1	INCLUD. 14	
14	307-340	GEAR SHAFT	1		
15	608-VVM	BALL BEARING 608VVC2PS2L	1		
16	317-770	SECOND PINION ASS'Y	1	INCLUD. 17	
17	307-337	FIRST GEAR	1		
18	323-497	WASHER	1		
19	608-VVM	BALL BEARING 608VVC2PS2L	2		
20	933-545	WASHER (A)	1		
21	323-556	SLOTTED HD. SCREW (SEAL LOCK) M4X8	2		
22	323-557	FELT (A)	1		
23	323-493	INNER COVER ASS'Y (A)	1	INCLUD. 19-22	
* 24	360-674	ARMATURE (D) 110V	1		
* 24	360-675U	ARMATURE ASS'Y (D) 120V	1	INCLUD. 19, 28	
* 24	360-675E	ARMATURE (D) 220V-230V	1		
* 24	360-675F	ARMATURE (D) 240V	1		
25	323-472	FAN GUIDE	1		
26	961-672	HEX. HD. TAPPING SCREW D4X50	2		
* 27	340-599C	STATOR 110V-120V	1		
* 27	340-599E	STATOR 220V-240V	1		
28	608-VVM	BALL BEARING 608VVC2PS2L	1		
29		NAME PLATE	1		
30	323-471	HOOK	1		
31		HITACHI LABEL	2		
32	323-512	BRUSH HOLDER (A)	2		
33	999-091	CARBON BRUSH (AUTO STOP TYPE) (1 PAIR)	2		
* 34	323-567	INTERNAL WIRE (BROWN)	1	FOR SAU	
* 35	323-566	CHOKE COIL (W/INTERNAL WIRE) BROWN	1	EXCEPT FOR SAU	
36	323-479	SWITCH (1P PILLAR TYPE) W/LOCK	1		
* 37	323-569	INTERNAL WIRE (BLUE)	1	FOR SAU	
* 38	323-568	CHOKE COIL (W/INTERNAL WIRE) BLUE	1	EXCEPT FOR SAU	
39	323-483	HOUSING	1		
40	953-327	CORD ARMOR D8.8	1		
* 41	323-559	CORD (LENGTH 7.5M)	1	(CORD ARMOR D8.8)	
* 41	323-562	CORD (LENGTH 7.5M)	1	(CORD ARMOR D8.8) FOR GBR (110V)	
* 41	323-560	CORD (LENGTH 7.5M)	1	(CORD ARMOR D8.8) FOR GBR (230V)	
* 41	323-561	CORD (LENGTH 7.5M)	1	(CORD ARMOR D8.8) FOR AUS	
* 41	320-130	CORD (LENGTH 7.5M)	1	(CORD ARMOR D8.8) FOR USA, CAN	
* 41	500-409Z	CORD	1	(CORD ARMOR D8.8) FOR SAU	
42	937-631	CORD CLIP	1		

## PARTS

**W 6VB3**

[illegible]

## STANDARD ACCESSORIES

W 6VB3

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
* 501	323-352	SUB STOPPER (G)	1	FOR FRA, ITA, AUT, SAU	
* 502	971-511Z	+ DRIVER BIT (A) NO.2 25L	1	FOR FRA, ITA, AUT, SAU	
* 503	982-554Z	MAGNETIC BIT HOLDER (75L)	1	FOR FRG	
* 503	317-674	MAGNETIC BIT HOLDER ASS'Y (41L)	1	INCLUD. 502 FOR FRA, ITA, AUT, SAU	
* 504	985-322	MAGNETIC HEX. SOCKET 5/16"X65L	1	FOR FIN, AUS, GBR, USA, CAN	
* 504	985-321	MAGNETIC HEX. SOCKET 10MMX65L	1	FOR HOL	
* 505	317-671	SUB STOPPER (B) FOR H5/16 HEX. SOCKET	1		
* 505	317-670	SUB STOPPER (B) FOR H3/8, H10 HEX. SOCKET	1	FOR HOL	
* 506	317-899	SUB STOPPER (D) FOR HEX. SOCKET	1	FOR FRA	
* 507	323-351	SUB STOPPER (F)	1	FOR FRG	

## OPTIONAL ACCESSORIES

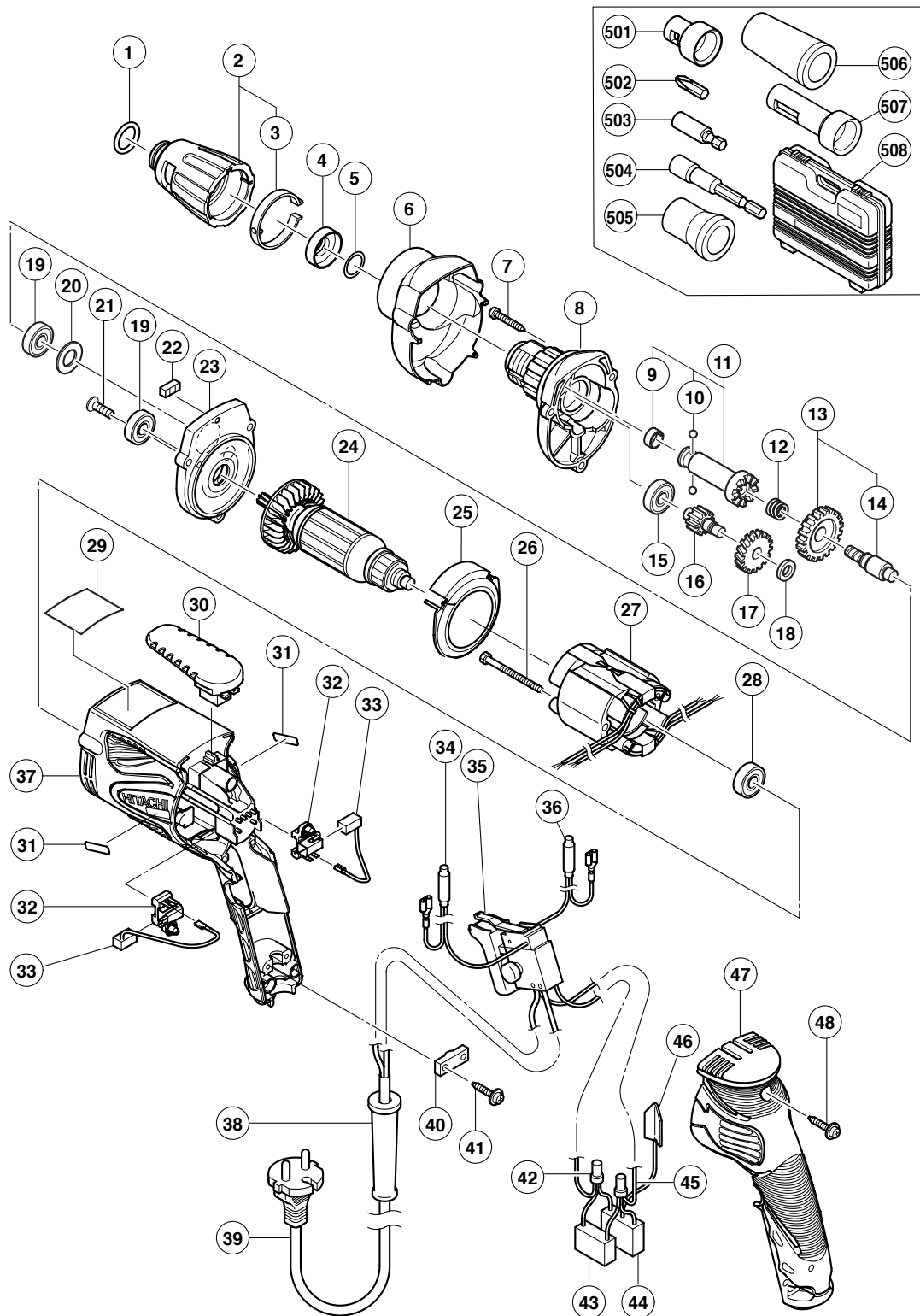
ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
601	317-827	SUB STOPPER (B) H1/4 HEX. SOCKET	1		
602	985-326	NON-MAGNETIC HEX. SOCKET 3/8" 65L	1		
603	985-327	NON-MAGNETIC HEX. SOCKET 5/16" 65L	1		
604	985-328	NON-MAGNETIC HEX. SOCKET 1/4" 65L	1		
605	985-329	NON-MAGNETIC HEX. SOCKET 10MM 65L	1		
606	982-563Z	NON-MAGNETIC BIT HOLDER	1		
607	982-554Z	MAGNETIC BIT HOLDER (75L)	1		
608	985-333	+ DRIVER BIT NO. 1 25L	1		
609	971-512Z	+ DRIVER BIT (A) NO. 3 25L	1		
610	985-334	+ DRIVER BIT NO. 1 25L W/STEPPED ROD	1		
611	985-335	+ DRIVER BIT NO. 2 25L W/STEPPED ROD	1		
612	985-336	- DRIVER BIT 4MMX25	1		
613	985-337	- DRIVER BIT 5MMX25	1		
614	985-338	- DRIVER BIT 6MMX25	1		
615	985-339	- DRIVER BIT 8MMX25	1		
616	985-340	- DRIVER BIT 4MMX25 (W/STEPPED ROD)	1		
617	985-341	- DRIVER BIT 5MMX25 (W/STEPPED ROD)	1		
618	985-342	HEX. BIT 4MMX25L	1		
619	985-343	HEX. BIT 5MMX25L	1		
620	985-344	HEX. BIT 6MMX25L	1		
621	985-330	MAGNETIC HEX. SOCKET 3/8"X65L	1		
622	985-332	MAGNETIC HEX. SOCKET 1/4"X65L	1		
623	310-904	CASE	1		

## ELECTRIC TOOL PARTS LIST

### ■ SCREW DRIVER Model W 8VB2

2004 · 8 · 25

(E1)



# PARTS

W 8VB2

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	876-031	O-RING (S-16)	1		
2	323-487	LOCATOR ASS'Y	1	INCLUD. 3	
3	323-488	CLICK SPRING	1		
4	971-468	FRINGER (A)	1		
5	317-662	O-RING (F)	1		
6	323-494	PROTECT COVER (B)	1		
7	321-057	TAPPING SCREW D4X25 (BLACK)	3		
8	323-498	GEAR COVER ASS'Y (B)	1	INCLUD. 5, 15	
9	872-573	SET RING	1		
10	959-148	STEEL BALL D3.175 (10 PCS.)	2		
11	317-664	SOCKET (B) ASS'Y	1	INCLUD. 9, 10	
12	306-024	SPRING	1		
13	307-339	GEAR ASS'Y	1	INCLUD. 14	
14	307-340	GEAR SHAFT	1		
15	608-VVM	BALL BEARING 608VVC2PS2L	1		
16	307-338	SECOND PINION ASS'Y	1	INCLUD. 17	
17	307-337	FIRST GEAR	1		
18	323-497	WASHER	1		
19	608-VVM	BALL BEARING 608VVC2PS2L	2		
20	933-545	WASHER (A)	1		
21	323-556	SLOTTED HD. SCREW (SEAL LOCK) M4X8	2		
22	323-557	FELT (A)	1		
23	323-493	INNER COVER ASS'Y (A)	1	INCLUD. 19-22	
* 24	360-674	ARMATURE (D) 110V	1		
* 24	360-675E	ARMATURE (D) 220V-230V	1		
* 24	360-675F	ARMATURE (D) 240V	1		
25	323-472	FAN GUIDE	1		
26	961-672	HEX. HD. TAPPING SCREW D4X50	2		
* 27	340-599C	STATOR 110V-120V	1		
* 27	340-599E	STATOR 220V-240V	1		
28	608-VVM	BALL BEARING 608VVC2PS2L	1		
29		NAME PLATE	1		
30	323-471	HOOK	1		
31		HITACHI LABEL	2		
32	323-512	BRUSH HOLDER (A)	2		
33	999-091	CARBON BRUSH (AUTO STOP TYPE) (1 PAIR)	2		
34	323-566	CHOKE COIL (W/INTERNAL WIRE) BROWN	1		
35	323-479	SWITCH (1P PILLAR TYPE) W/LOCK	1		
36	323-568	CHOKE COIL (W/INTERNAL WIRE) BLUE	1		
37	323-483	HOUSING	1		
38	953-327	CORD ARMOR D8.8	1		
* 39	323-559	CORD (LENGTH 7.5M)	1	(CORD ARMOR D8.8)	
* 39	323-560	CORD (LENGTH 7.5M)	1	(CORD ARMOR D8.8) FOR GBR (230V)	
* 39	323-562	CORD (LENGTH 7.5M)	1	(CORD ARMOR D8.8) FOR GBR (110V)	
* 39	323-563	CORD (LENGTH 7.5M)	1	(CORD ARMOR D8.8) FOR SUI	
* 39	323-561	CORD (LENGTH 7.5M)	1	(CORD ARMOR D8.8) FOR AUS	
40	937-631	CORD CLIP	1		
41	984-750	TAPPING SCREW (W/FLANGE) D4X16	2		
42	959-140	CONNECTOR 50091 (10 PCS.)	2		
43	930-039	NOISE SUPPRESSOR	1		
44	994-273	NOISE SUPPRESSOR	1		

## PARTS

**W 8VB2**

[illegible]

## STANDARD ACCESSORIES

W 8VB2

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
* 501	323-352	SUB STOPPER (G)	1	EXCEPT FOR GBR, AUS	
* 502	971-511Z	+ DRIVER BIT (A) NO. 2 25L	1	FOR FRA, BEL, FRG, AUT, SUI	
* 503	317-674	MAGNETIC BIT HOLDER ASS'Y (41L)	1	INCLUD. 502 FOR FRA, BEL, AUT, SUI	
* 503	982-554Z	MAGNETIC BIT HOLDER (75L)	1	FOR FRG	
* 504	985-322	MAGNETIC HEX. SOCKET 5/16"X65L	1	FOR GBR, AUS	
* 504	985-321	MAGNETIC HEX. SOCKET 10MMX65L	1	FOR HOL, ESP	
* 505	317-671	SUB STOPPER (B) FOR H5/16 HEX. SOCKET	1	FOR GBR, AUS	
* 505	317-670	SUB STOPPER (B) FOR H3/8, H10 HEX. SOCKET	1	FOR HOL, ESP	
* 506	317-899	SUB STOPPER (D) FOR HEX. SOCKET	1	FOR FRA	
* 507	323-351	SUB STOPPER (F)	1	FOR FRG	
* 508	310-904	CASE	1	FOR ESP	

## OPTIONAL ACCESSORIES

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
601	317-827	SUB STOPPER (B) H1/4 HEX. SOCKET	1		
602	985-326	NON-MAGNETIC HEX. SOCKET 3/8" 65L	1		
603	985-327	NON-MAGNETIC HEX. SOCKET 5/16" 65L	1		
604	985-328	NON-MAGNETIC HEX. SOCKET 1/4" 65L	1		
605	985-329	NON-MAGNETIC HEX. SOCKET 10MM 65L	1		
606	985-330	MAGNETIC HEX. SOCKET 3/8"X65L	1		
607	985-332	MAGNETIC HEX. SOCKET 1/4"X65L	1		
608	982-563Z	NON-MAGNETIC BIT HOLDER	1		
609	982-554Z	MAGNETIC BIT HOLDER (75L)	1		
610	985-333	+ DRIVER BIT NO. 1 25L	1		
611	971-511Z	+ DRIVER BIT (A) NO. 2 25L	1		
612	971-512Z	+ DRIVER BIT (A) NO. 3 25L	1		
613	985-334	+ DRIVER BIT NO. 1 25L W/STEPPED ROD	1		
614	985-335	+ DRIVER BIT NO. 2 25L W/STEPPED ROD	1		
615	985-336	- DRIVER BIT 4MMX25	1		
616	985-337	- DRIVER BIT 5MMX25	1		
617	985-338	- DRIVER BIT 6MMX25	1		
618	985-339	- DRIVER BIT 8MMX25	1		
619	985-340	- DRIVER BIT 4MMX25 (W/STEPPED ROD)	1		
620	985-341	- DRIVER BIT 5MMX25 (W/STEPPED ROD)	1		
621	985-342	HEX. BIT 4MMX25L	1		
622	985-343	HEX. BIT 5MMX25L	1		
623	985-344	HEX. BIT 6MMX25L	1		
624	310-904	CASE	1		

