

MODEL

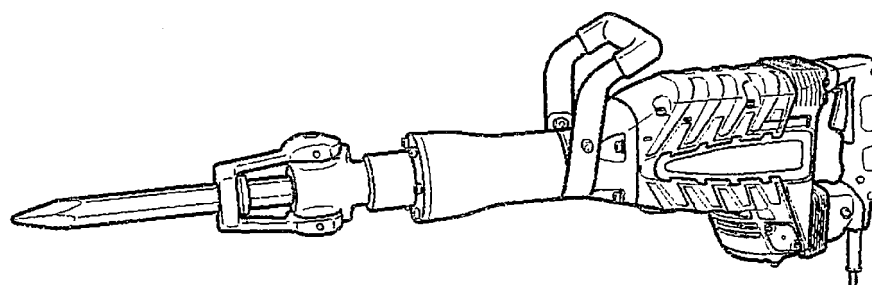
H 65SD2

Hitachi Power Tools

**DEMOLITION HAMMER
H 65SD2**

**TECHNICAL DATA
AND
SERVICE MANUAL**

H



LIST No. E487

May 2005

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
C-1	MAKITA	HM1304B
C-2	MAKITA	HM1500B



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1. PRODUCT NAME

Hitachi Demolition Hammer, Model H 65SD2

2. MARKETING OBJECTIVE

The Model H 65SD2 is a grease-sealed and double-insulated demolition hammer. It has a tool retainer to permit the use of 28.5 mm (1-1/8") air tool shank tools, standard hexagonal shank tools (combo type), and retaining groove tools without collar. The Model H 65SD2 has been developed based on the current Model H 65SB2, which features the use of Hitachi 30 mm hexagonal and round shank tools.

The outstanding features are as follows:

- (1) Strongest demolition power and lowest noise and vibration level in this class
- (2) More rigid and durable housing than that of the current model thanks to the analysis technology
- (3) Soft-touch switch handle comfortably fits in the palm of a hand
- (4) Unique design

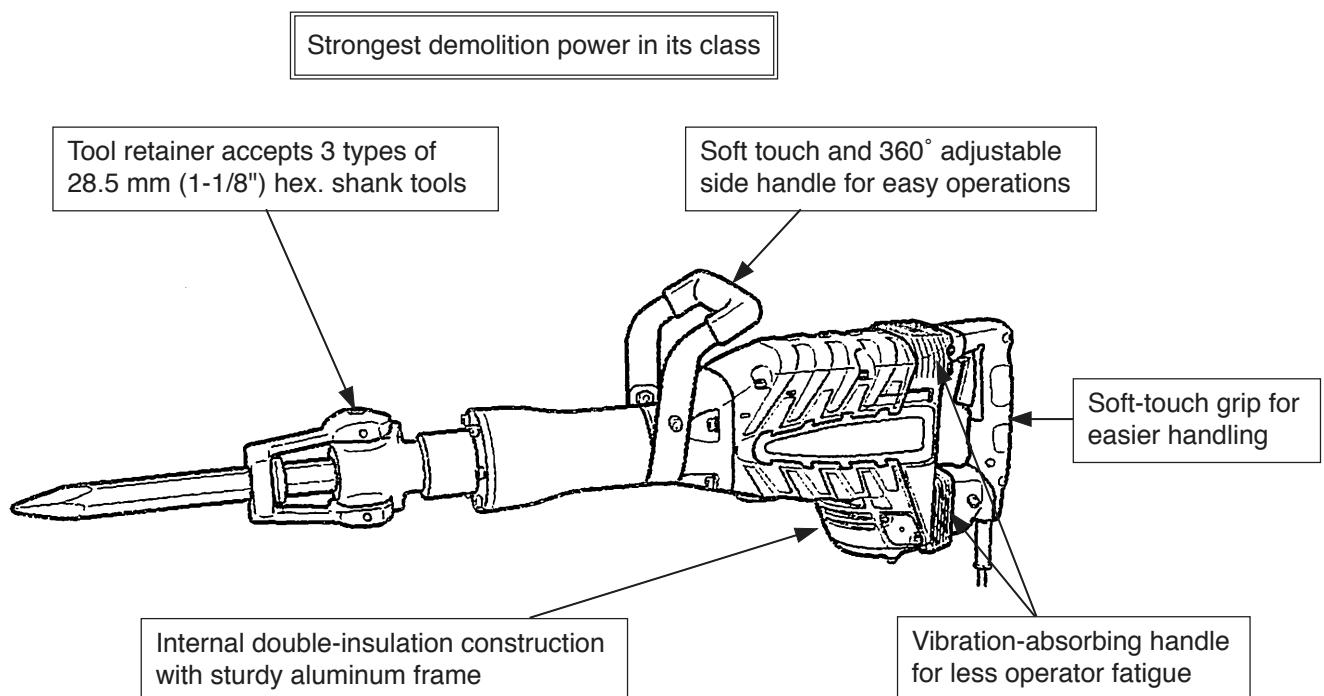
3. APPLICATIONS

- Demolishing of concrete and similar materials
- Groove and channel digging in concrete
- Groove and channel digging in asphalt and gravel roads
- Tamping/compacting of asphalt and graveled roads
- Cutting of asphalt

[Typical Applications]

Construction work, piping/wiring work, water supply/drain work, etc.

4. SELLING POINTS



4-1. Selling Point Descriptions

4-1-1. Strongest demolition power in this class

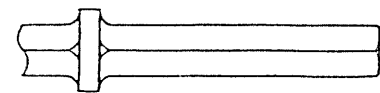
The powerful impact force of each blow ensures efficient and easy demolishing concrete.

The demolition performance is 1.0 – 1.4 times more powerful than that of similar products.

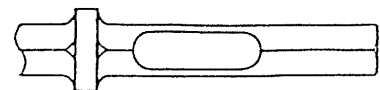
Maker · Model		Ratio of demolished weight (%)
HITACHI	H 65SD2	100
HITACHI	H 65SB2	100
HITACHI	H 65SD	89
C-1		71
C-2		80

4-1-2. Tool retainer accepts 3 types of 28.5 mm (1-1/8") hex. shank tools

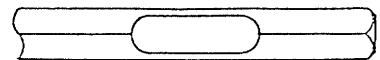
Three types of shank tools (Fig. 1) can be used in the Model H 65SD2 by turning the tool retainer in the following two methods.



Air tool shank tool



Standard hex. shank tool (combo type)



Retaining groove tool without collar

Fig. 1

(1) Mounting air tool shank tools and standard hex. shank tools (combo type)

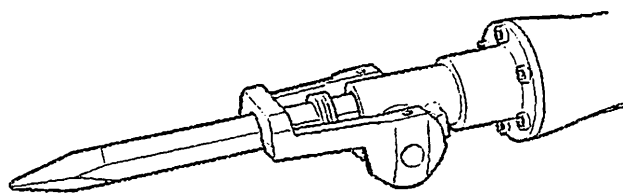


Fig. 2

(2) Mounting standard hex. shank tools (combo type) and retaining groove tools without collars

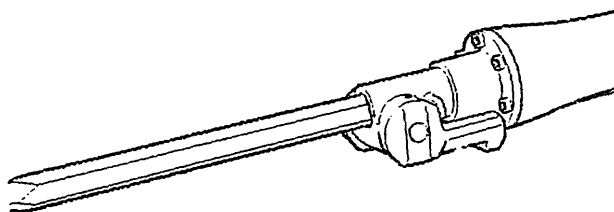


Fig. 3

4-1-3. Vibration-absorbing handle for less operator fatigue

There are two vibration-absorbing rubber pads, illustrated below, designed to efficiently absorb the vibration from the main body of the tool and minimize its transmission to the arms of the operator. One is mounted between the handle and the gear cover; the other is mounted between the handle and the housing.

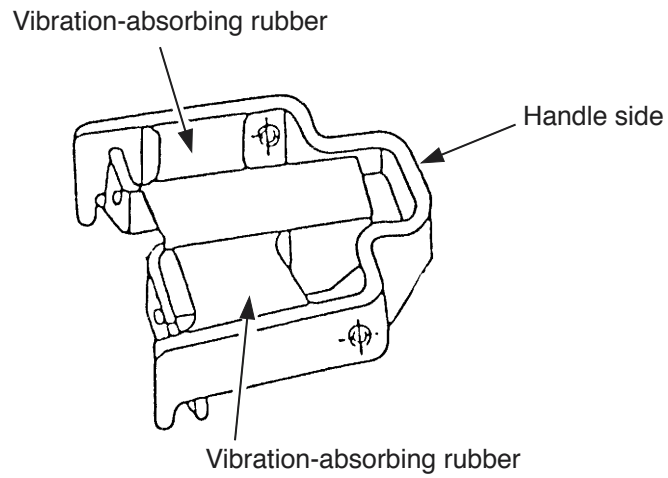


Fig. 4

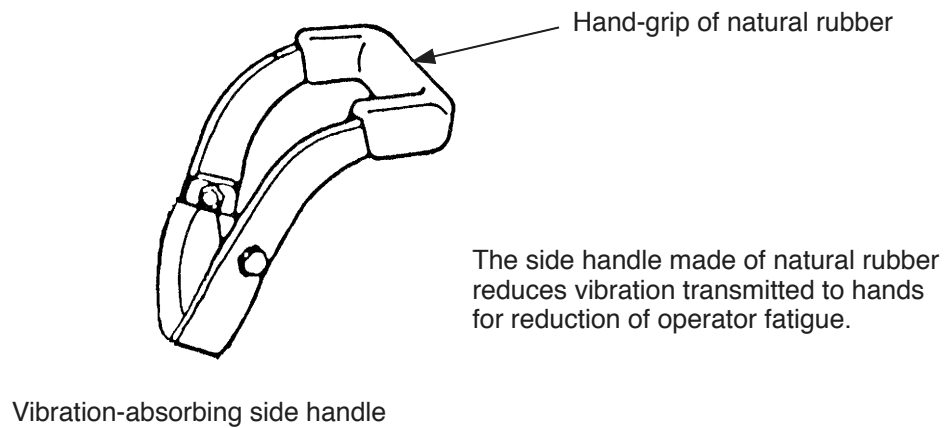


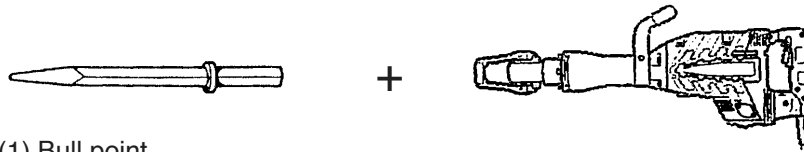
Fig. 5

5. SPECIFICATIONS

Item		H 65SD2
Power source		Single-phase AC 50/60 Hz
Voltage (V)		110, 120, 230, 240
Motor type		AC single-phase series commutator motor
Insulation structure		Double insulation
Enclosure		Materials: Aluminum alloy die casting Cast aluminum alloy Nylon resin (Handle, back cover) Paint: Silver green metallic and black
Switch		Trigger switch (with stopper)
Type of handles		D-shaped handle and side handle
Full-load current		12.8 A (110 V), 10.8 A (120 V), 6.1 A (230 V), 5.9 A (240 V)
Power input		1,340 W (1,240 W for the U.S.A. only)
Striking speed	No-load	1,800 BPM
	Full-load	1,400 BPM
Weight		Product: 18.5 kg (40.8 lbs); excluding cord Packed: 26.0 kg (57.3 lbs)
Packaging		Corrugated cardboard box with steel tool case
Standard accessories		<ul style="list-style-type: none"> • Hex. bar wrench (for M4) 1 • Hex. bar wrench (for M8) 1 • Steel tool case 1 • Side handle 1

5-1. Optional Accessories

1. Demolition work



(1) Bull point

Overall length	Code No.
410 mm (16-9/64")	996372

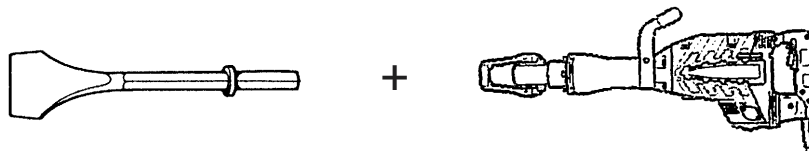
2. Grooving and chiseling work



(1) Cold chisel

Overall length	Code No.
410 mm (16-9/64")	996373
520 mm (20-15/32")	985231

3. Cutting and stripping work (asphalt cutting, etc.)



(1) Cutter

Width	Overall length	Code No.
75 mm (3")	410 mm (16-9/64")	996374
75 mm (3")	520 mm (20-15/32")	985232

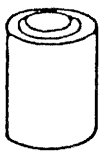
4. Digging (substitute pick-ax)



(1) Scoop

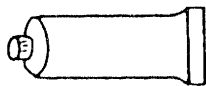
Overall length	Code No.
546 mm (21-1/2")	985233

5. Grease for impact drill



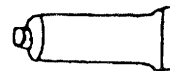
500 g (1.1 lbs) Can

Code No. 980927



70 g (2.5 oz) Tube

Code No. 308471



30 g (1 oz) Tube

Code No. 981840

NOTE: Code numbers listed above are subject to change. Please refer to periodic Technical News Bulletins.

6. COMPARISONS WITH SIMILAR PRODUCTS

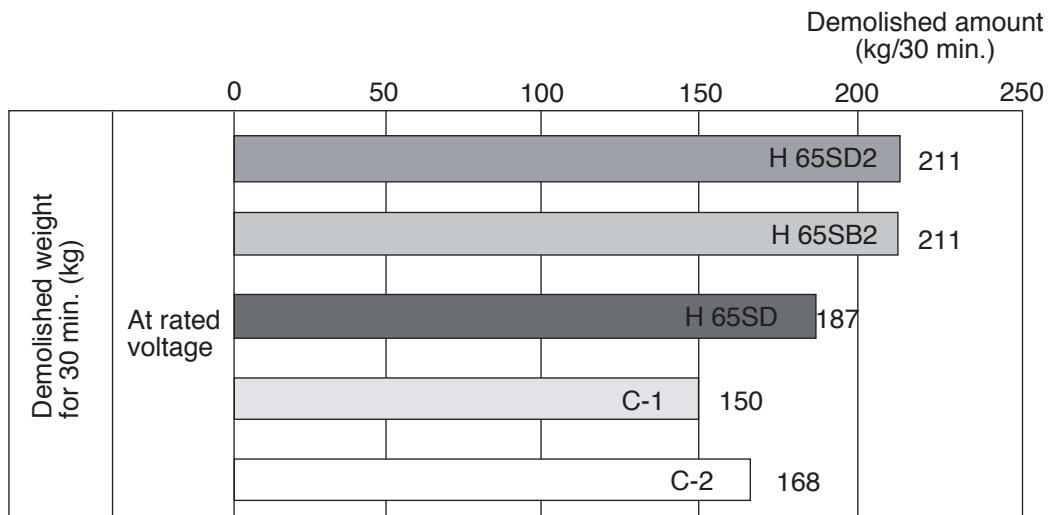
6-1. Specification Comparisons

Maker			HITACHI			C-1	C-2
Model name			H 65SD2	H 65SB2	H 65SD		
Power input		W	1,340*	1,340	1,240	1,500	1,430
Full-load impact rate		BPM	1,400	1,400	1,400	1,450	1,300
Dimensions	Length	mm	823 (32-13/32")	726 (28-37/64")	823 (32-13/32")	—	807 (31-49/64")
	Height	mm	246 (9-11/16")	246 (9-11/16")	235 (9-1/4")	—	215 (8-15/32")
	Width	mm	118 (4-41/64")	118 (4-41/64")	120 (4-23/32")	—	—
Striking energy per stroke		J	42.0	42.0	42.0	27.5	25
Insulation structure		—	Double insulation	Double insulation	Double insulation	Double insulation	Double insulation
Full-load noise level		dB(A)	104	103	108	103	108
Weight (without cord)		kg	18.5 (40.8 lbs)	16.5 (36.4 lbs)	18.0 (39.7 lbs)	16.0 (35.3 lbs)	19.0 (41.9 lbs)

* 1,240 W for the U.S.A. only

6-2. Demolition Performance Comparisons

The data shown in Fig. 6 are obtained in actual factory tests, and are for reference only. The demolished amount may vary in accordance with operating conditions, operator skill, etc.



NOTE: The values above are for reference only. Demolition amount may vary in accordance with operating conditions, operator skill, etc.

Fig. 6

7. PRECAUTIONS IN SALES PROMOTION

In the interest of promoting the safest and most efficient use of the Model H 65SD2 Demolition Hammer 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 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 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 Demolition Hammer are listed in the Handling Instructions to enhance the safe, 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 Plate

The Model H 65SD2 unit is provided with a Caution Plate (illustrated below) which lists basic safety precautions in its use. Carefully ensure that the customer fully understands and follows these precautions before using the tool.

For the U.S.A. and Canada

Hitachi Koki MADE IN JAPAN

- WARNING - • To reduce the risk of injury, user must read and understand instruction manual.
- AVERTISSEMENT • Afin de réduire le risque de blessures, l'utilisateur doit lire et bien comprendre le mode d'emploi.

Caution Plate on the back of tool case lid

CAUTION

- The grease should be exchanged once every six months after the machine is purchased. The authorized HITACHI power tool repair shop or the shop from where the tool was bought should be instructed when it is time to exchange the grease.
- Before working on walls, floors, etc., check for buried or hidden electrical wires and water or gas pipes.

7-3. Grease Replacement

Different kinds of grease are used in the electro-pneumatic hammering section and the speed-change gear section. It is not necessary to replenish the grease between 6-month (approx.) change intervals unless the tool is disassembled or there is grease leakage due to a damage or worn seal.

To ensure the smooth reciprocating of the striker and the second hammer, special grease (Part No. 980927 or 981840 or 308471 for impact drill) is used in the hammering section. If the hammering section [inside the cylinder case and housing (crank shaft side)] is disassembled, thoroughly wipe away all old grease from all parts, and apply 40 g (1.4 oz) of new grease within the cylinder case and 40 g (1.4 oz) of new grease within the housing (crank shaft side). Do not exceed the designated amounts of grease. If there is excessive grease, it may flow between the striker and piston and cause reduced hammering efficiency and/or increased recoil force.

N.P.C. SEP-3A (Part No. 930035) is used in the speed-change gear section (inside the gear cover). The proper supply amount is 80 g (2.8 oz). Never use the hammering section special grease in the speed-change section. The special soft grease would leak into the motor section and cause serious problems.

7-4. O-Ring Replacement

The O-ring mounted on the piston is extremely important to ensure adequate sealing of the air pressure. Although the O-ring is made of special rubber to ensure a long service life, it does nonetheless become worn and should be replaced periodically depending on the frequency of tool use. With average use, it is recommended that the O-ring should be replaced every six months to ensure maximum effectiveness.

8. REFERENCE INFORMATION

8-1. Sealed and Dustproof Construction

The cylinder case section and housing (crank case side) are sealed by six (6) O-rings and a seal ring. These seals serve to prevent leakage of the grease, as well as to prevent dust and dirt from entering the mechanism.

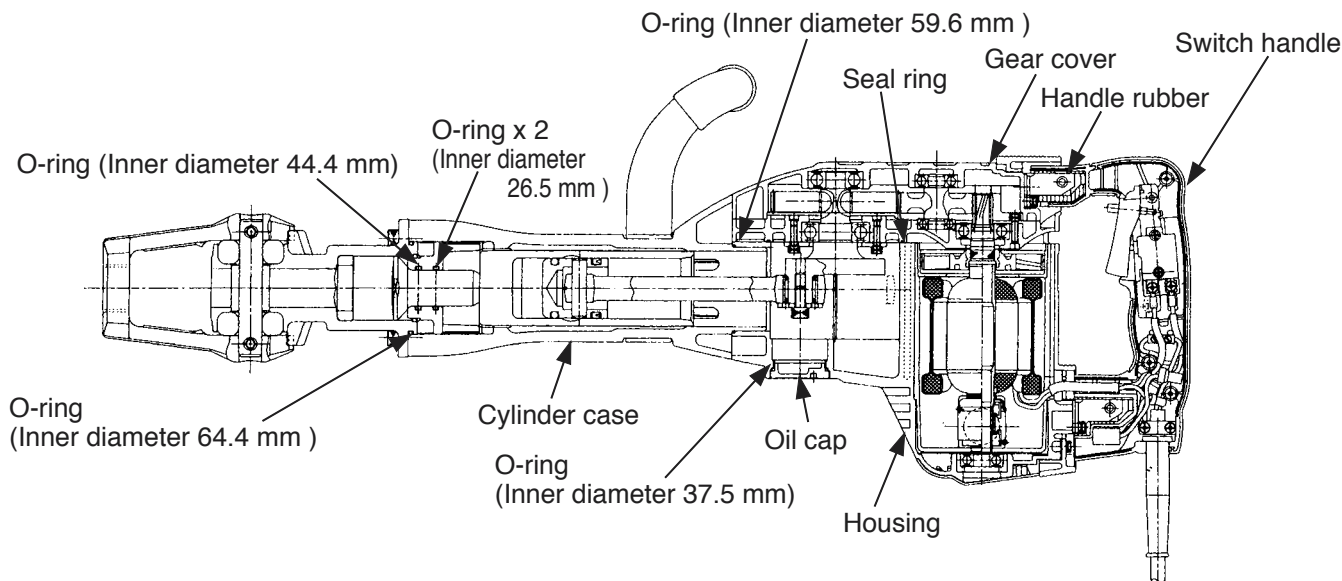


Fig. 7

8-2. Vibration-Absorbing Construction

There are vibration-absorbing cushions (handle rubbers) provided between the switch handle and the crank case and motor housing which allow significantly less vibration to transfer from the tool to the arm of the operator than conventional type hammers.

Vibration-absorbing rubber

As shown in Fig. 8, the main unit and handle are coupled only by the vibration-absorbing rubber. As vibration is absorbed by the shearing type vibration-absorbing construction, the vibration-absorbing effect is high.

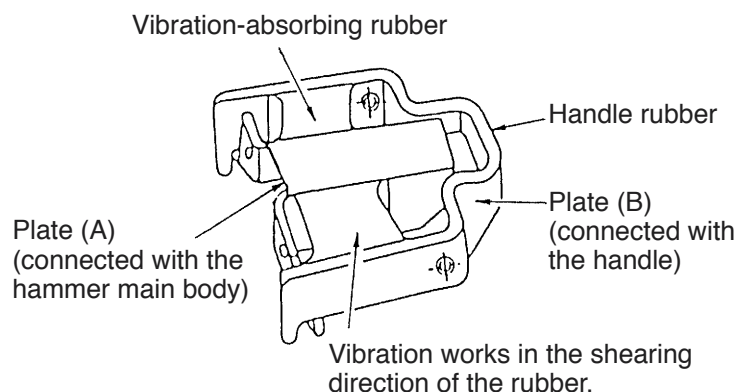


Fig. 8

8-3. Tool Retainer

Three types of shank tools (Fig. 1) can be mounted to the Model H 65SD2 by turning the saddle-shaped retainer.

- (1) Mounting air tool shank tool and standard hex. shank tool

Raise the retainer in (A) direction and insert the tool shank into the hexagonal hole of the front cover as far as it will go (Fig. 9). Put the retainer back in position to fix the tool shank (Fig. 10).

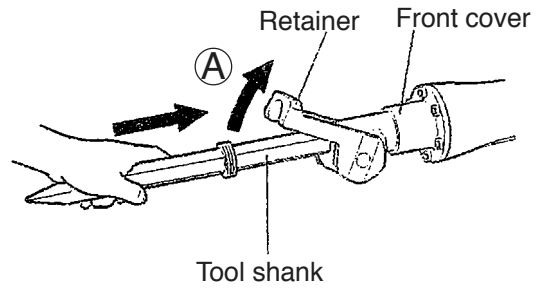


Fig. 9

- (2) Mounting standard hex. shank tool and retaining groove tool without collar

Lower the retainer in (B) direction and insert the tool shank into the hexagonal hole of the front cover as far as it will go facing the recessed portion of the tool shank to the retainer (Fig. 11). Turn the retainer in (C) direction to fix the tool shank (Fig. 12).

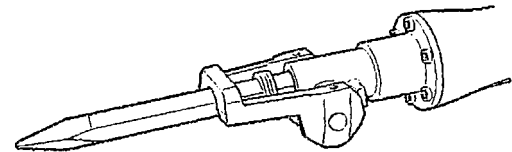


Fig. 10

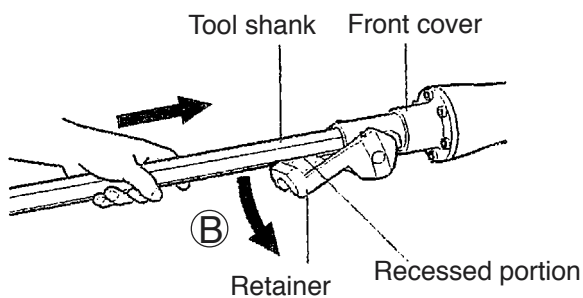


Fig. 11

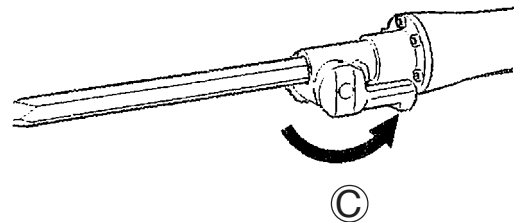


Fig. 12

9. PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY

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

9-1. Disassembly

NOTE: If it is difficult to loosen and remove the fixing bolts, use an appropriate heating device to heat them to approximately 80 °C (176 °F).

(1) Disassembly of the Armature Ass'y [72]

- A. Loosen the four Seal Lock Hex. Socket Hd. Bolts M4 x 8 [51], remove the Cap Covers [52], Cap Rubbers [53] and Brush Caps [54], and take out the Carbon Brushes (Auto Stop Type) (1 Pair) [55]. At this time, be very careful not to lose the disassembled parts.
- B. Loosen the four Nylock Hex. Socket Hd. Bolts M8 x 35 [23], and remove the Cylinder Case [19]. Next, after loosening the Seal Lock Hex. Socket Hd. Bolt M8 x 16 [31], the Connecting Rod Ass'y [28] and Crank Washer [30] can be disassembled. Leave the Striker [21] and the Piston [27] as they are.
- C. Remove the four Seal Lock Hex. Socket Hd. Bolts M5 x 16 [60] and three Tapping Screws (W/Flange) D4 x 25 (Black) [93]. Remove Handle (A) [82], Handle (B) [84], four Nylock Bolts (W/Flange) M5 x 12 [102] and Back Cover [79]. Remove the six Seal Lock Hex. Socket Hd. Bolts M6 x 45 [57], Gear Cover [35] and Counter Gear [62]. Insert a flat-blade screwdriver or a similar tool into the air vent of the Inner Cover [39] and raise the Inner Cover [39]. Then the Inner Cover [39], Armature Ass'y [72] and Crank Shaft [44] can be removed as a single unit. At this time, be very careful not to damage the Fan [71].
- D. As illustrated in Fig. 13, support the Inner Cover [39] with an appropriate tubular jig, and push down on the end surface of the armature shaft with a hand press to separate the Armature Ass'y [72] from the Inner Cover [39].

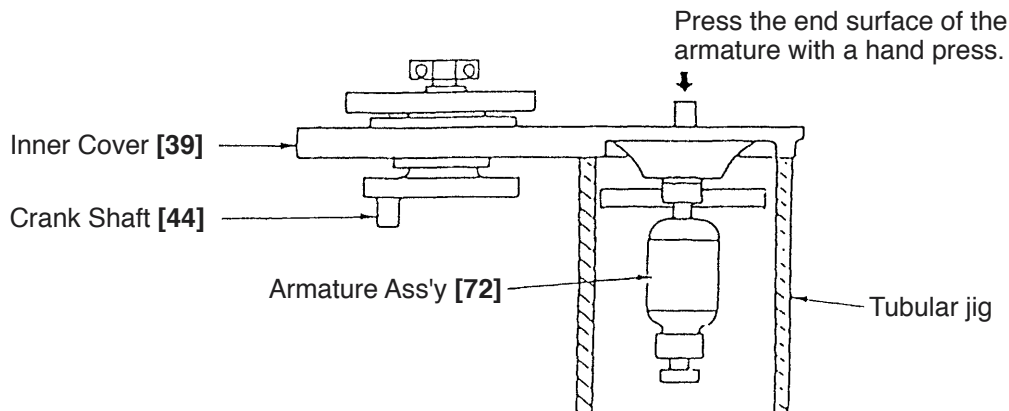


Fig. 13

(2) Disassembly of the Crank Shaft [44] section

First, remove the four Seal Lock Hex. Socket Hd. Bolts M5 x 16 [43] which fix the Bearing Cover [42]. Then, as illustrated in Fig. 14, support the lower surface of the Inner Cover [39] with an appropriate tubular jig, align an appropriate steel rod with the end surface of the Crank Shaft [44], and press down on the steel rod with a hand press. The Ball Bearing 6205DDCMPS2L [41], Distance Ring (B) [38], Final Gear [37], two Woodruff Keys 4 x 16 [68], and Crank Shaft [44] can then be disassembled from the Inner Cover [39].

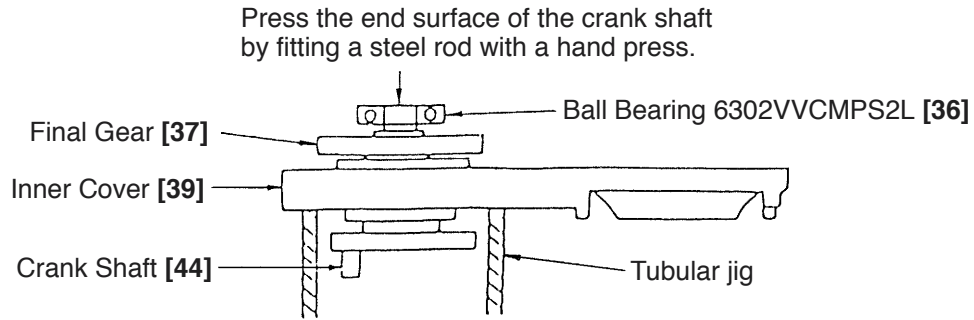


Fig. 14

(3) Disassembly of remaining parts from the Inner Cover [39]

Loosen the three Seal Lock Hex. Socket Hd. Bolts M5 x 16 [43], and take out Bearing Cover (A) [64] and the Ball Bearing 6203DDCMPS2L [65].

(4) Disassembly of the Mouth [14] and related parts

First, remove the six Nylock Hex. Socket Hd. Bolts M8 x 30 [4], and separate the Front Cover [5] from the Cylinder Case [19]. The Second Hammer [7], Shank Sleeve [13], Damper (A) [11], Mouth [14], Mouth Cover [15], Mouth Washer [16], and Urethane Ring [17] can then be taken out.

(5) Removal of the O-Ring (I.D 26.5) [12]

As the O-Ring (I.D 26.5) [12] is installed in the inner portion of the Shank Sleeve [13], it may be difficult to remove. As illustrated in Fig. 15, pry the O-Ring upward gently with a small flat-blade screwdriver, being very careful not to damage the surface of the O-ring.

(6) Removal of the Striker [21] and related parts

Remove the four Nylock Hex. Socket Hd. Bolts M8 x 35 [23], and separate the Cylinder Case [19] from the Housing Ass'y [46]. From the Cylinder Case [19], take out the Striker [21], Piston [27], and Connecting Rod Ass'y [28] in a single body. Holding the Striker [21] firmly in one hand, grasp the Connecting Rod Ass'y [28] in the other hand and pull it forcefully to separate it from the striker. Finally, extract the Piston Pin [26] from the Piston [27], and separate the piston from the Connecting Rod Ass'y [28].

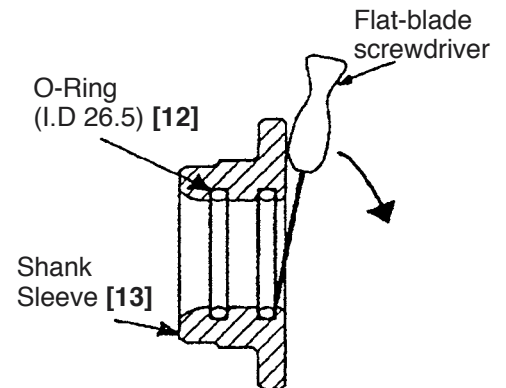


Fig. 15

(7) Disassembly of the Retainer [1] section

Remove the two Roll Pins D6 x 55 [8] from the 6 mm dia. holes of the Retainer [1] and remove the Lever Pin [2]. The Retainer [1] and two Retainer Dampers [3] can then be removed from the Front Cover [5] (Fig. 16).

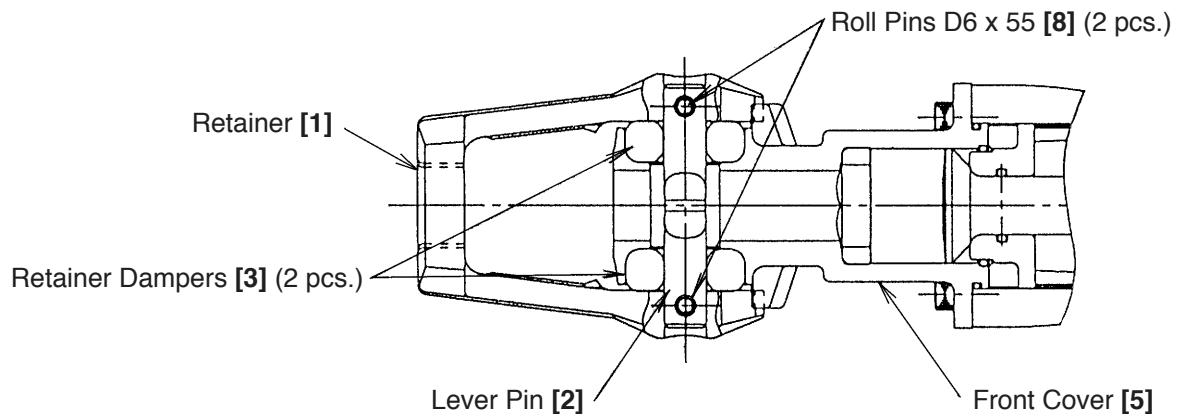


Fig. 16

9-2. Reassembly

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

(1) Reassembly of the Crank Shaft [44] section

Press-fit the Ball Bearing 6205DDCMPS2L [41] into the Inner Cover [39], and fasten the Bearing Cover [42] onto the Inner Cover [39] with the four Seal Lock Hex. Socket Hd. Bolts M5 x 16 [43]. Support the inner race of the Ball Bearing 6205DDCMPS2L [41] with an appropriate jig, and press-fit the Crank Shaft [44] into the ball bearing. Next, insert Distance Ring (B) [38] and two Woodruff Keys 4 x 16 [68] into the Crank Shaft [44], and press-fit the Final Gear [37] and the Ball Bearing 6302VVCMP2L [36] with a hand press.

(2) Reassembly of the Armature Ass'y [72]

Press-fit the Ball Bearing 6203DDCMPS2L [65] into the Inner Cover [39], and fasten Bearing Cover (A) [64] onto the inner cover with the three Seal Lock Hex. Socket Hd. Bolts M5 x 16 [43].

(3) Reassembly of the Striker [21] (Two possible methods)

A. After the Connecting Rod Ass'y [28] has been assembled into the Housing Ass'y [46], mount the Piston [27] and press it into the Striker [21].

B. Mount the Piston [27] onto the Connecting Rod Ass'y [28], and push down on the Connecting Rod Ass'y [28] to press the Piston [27] into the Striker [21].

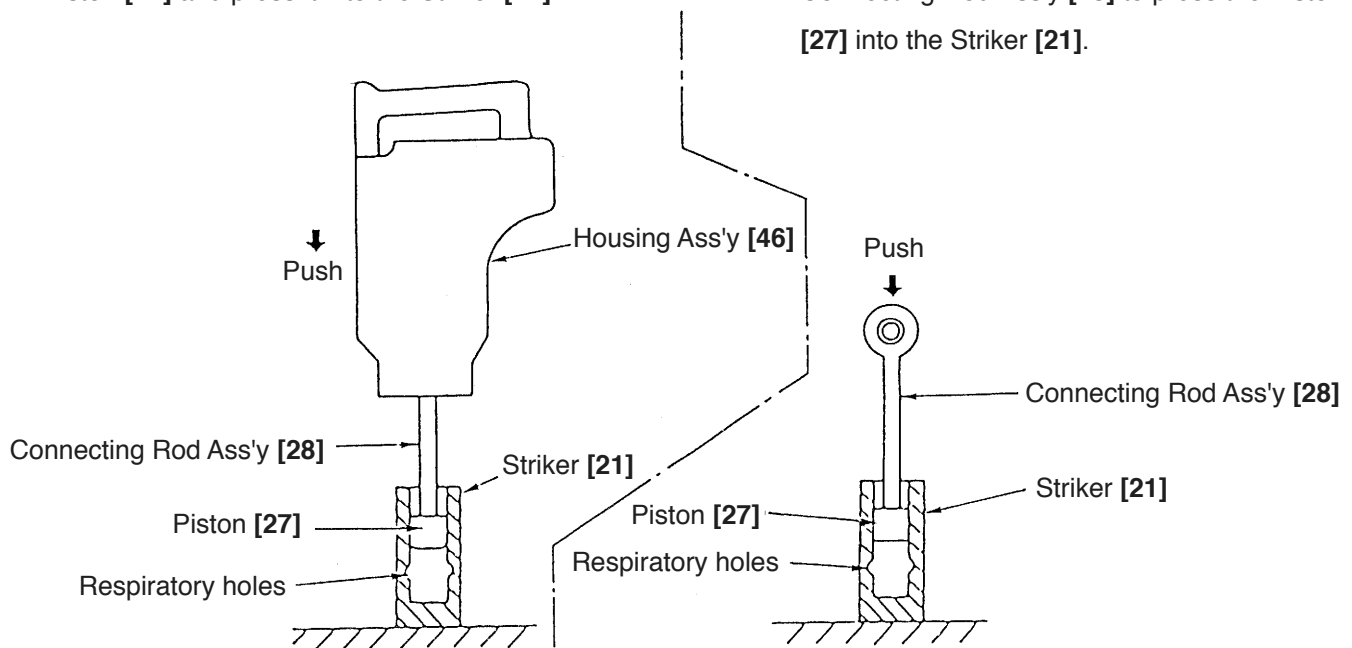


Fig. 17

Either of the two methods described above requires a pressing force of more than 30 kg. When a "hissing" sound is heard, the piston is properly inserted in the striker. (The "hissing" is the sound of the compressed air escaping from the striker when the piston reaches the respiratory chambers within the striker.)

(4) Mounting of Oil Seal (A) [25]

When mounting Oil Seal (A) [25] on the Piston [27], ensure that the lip portion of the oil seal is directed toward the rear surface of the piston, as illustrated in Fig. 18. Prior to reassembly, thoroughly coat Oil Seal (A) [25] and O-Ring (A) [22] with grease (Grease for Impact Drill, Part No. 980927 or 981840 or 308471 is recommended), and carefully ensure they are not damaged.

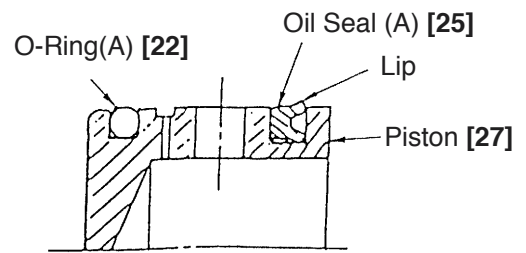


Fig. 18

(5) Reassembly of the Retainer [1] section

Before reassembly, apply grease (Doubrex #251 Part No. 980757) to the sliding portion between the Retainer [1] and the Retainer Damper [3] of the Front Cover [5], and Lever Pin [2]. Mount the two Retainer Dampers [3] to the Front Cover [5] and then mount the Retainer [1]. Insert the Lever Pin [2] into the 17.5 mm dia. hole of the Retainer [1] facing the recessed portion of the Lever Pin [2] to the hexagonal hole of the Front Cover [5]. At this time, align the 6.5 mm dia. hole of the Retainer [1] with the 7 mm dia. hole of the Lever Pin [2]. Drive the Roll Pin D6 x 55 [8] into the 6.5 mm dia. hole of the Retainer [1] approximately 5 mm under the end surface of the Retainer [1] (Fig. 19).

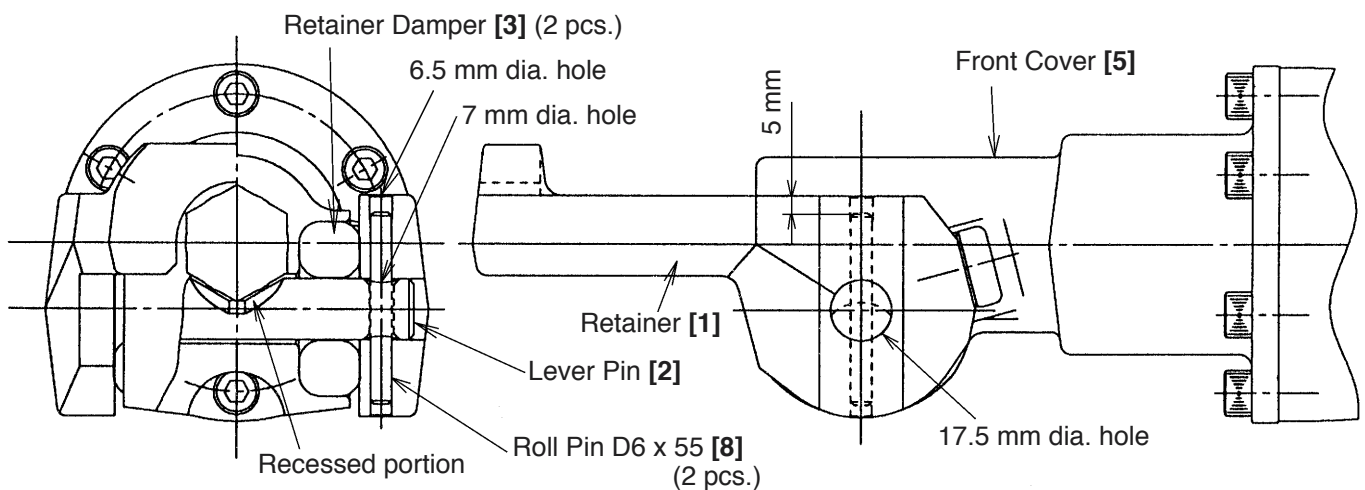


Fig. 19

9-3. Screw Locking Agent TB1401

- (1) Prior to reassembly, all M5, M6 hexagon socket hd. bolts and machine screws must be coated with screw locking agent TB1401.
- (2) The following parts must be replaced with new Hitachi genuine parts if they are loosened once.
 - Front cover fixing bolts: M8 x 30 [4]
 - Cylinder case fixing bolts: M8 x 35 [23]
 - Fixing bolt on the Connecting Rod Ass'y [28]: M8 x 16 [31]

CAUTION: If fastening bolts come loose from vibration, it could cause serious damage to the machine.

Ensure without fail that TB1401 screw locking agent is applied as directed above prior to reassembly. Before applying the TB1401, carefully clean any grease or other foreign matter from the male and female threads with gasoline, thinner or similar cleaning solvents.

9-4. Tightening Torque

(1) M5 hexagon socket flanged bolts	$3.92^{+0.49}_{-0} \text{ N}\cdot\text{m}$ ($40^{\pm 5} \text{ kgf}\cdot\text{cm}$, $34.8^{\pm 4.3} \text{ in}\cdot\text{lbs}$)
(2) M4 hexagon socket hd. bolts	$4.41^{+0.49}_{-0} \text{ N}\cdot\text{m}$ ($45^{\pm 5} \text{ kgf}\cdot\text{cm}$, $39.1^{\pm 4.3} \text{ in}\cdot\text{lbs}$)
(3) M5 hexagon socket hd. bolts	$7.84^{+1.96}_{-0} \text{ N}\cdot\text{m}$ ($80^{+20}_{-0} \text{ kgf}\cdot\text{cm}$, $69.5^{+12.4}_{-0} \text{ in}\cdot\text{lbs}$)
(4) M6 hexagon socket hd. bolts	$9.80^{+1.96}_{-0} \text{ N}\cdot\text{m}$ ($100^{+20}_{-0} \text{ kgf}\cdot\text{cm}$, $86.9^{+17.4}_{-0} \text{ in}\cdot\text{lbs}$)
(5) M8 hexagon socket hd. bolts	$29.4^{+1.96}_{-0} \text{ N}\cdot\text{m}$ ($300^{+20}_{-0} \text{ kgf}\cdot\text{cm}$, $260^{+17.4}_{-0} \text{ in}\cdot\text{lbs}$)
(6) D4 tapping screw	$1.96^{+0.49}_{-0} \text{ N}\cdot\text{m}$ ($20^{\pm 0.5} \text{ kgf}\cdot\text{cm}$, $17.4^{+4.3}_{-0} \text{ in}\cdot\text{lbs}$)

NOTE: If above bolts are tightened more than the designated values, it may cause breakage.

Without fail, tighten the bolts and screws according to the above specified values.

9-5. Internal Wiring

- Wiring diagram of products with noise suppressor

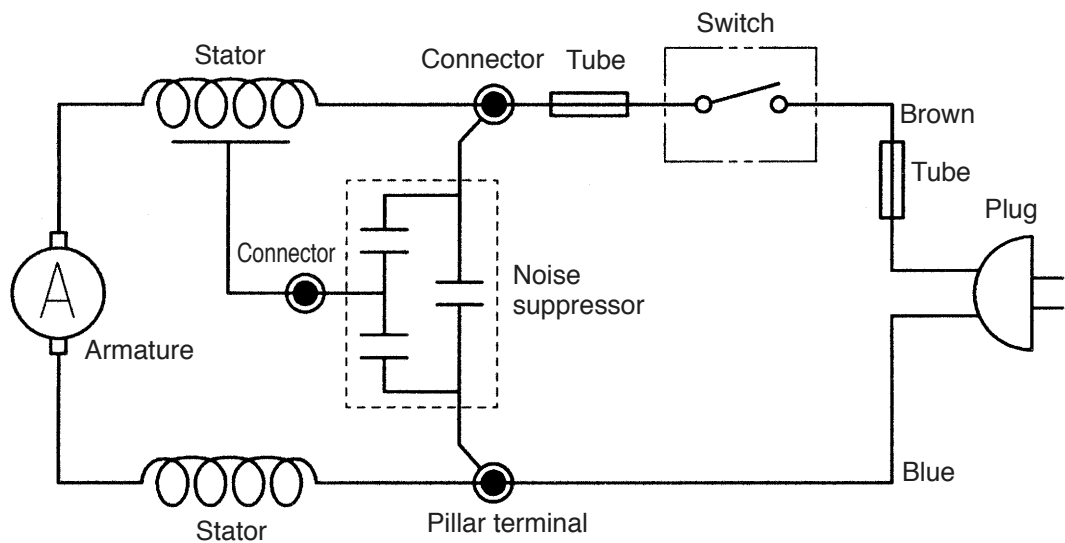


Fig. 20

- Wiring diagram of products without noise suppressor

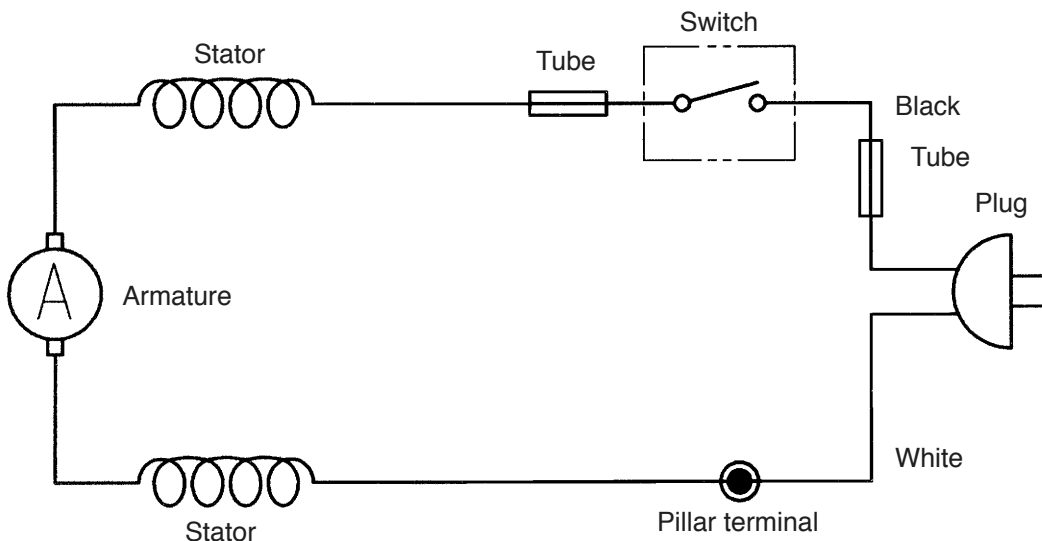


Fig. 21

- Safety precautions in wiring work (Fig. 22)

Switch (B) [100] is flexibly supported by the Support [101] to protect it from damage from vibration which could lead to possible electrical shock. Ensure without fail that the Support [101] is properly mounted. Also, ensure that the leadwires are properly covered by Vinyl Tube (A) [97], and that the leadwires of the Stator Ass'y [75] and the grounding leadwire are properly supported by the Internal Vinyl Tube [76].

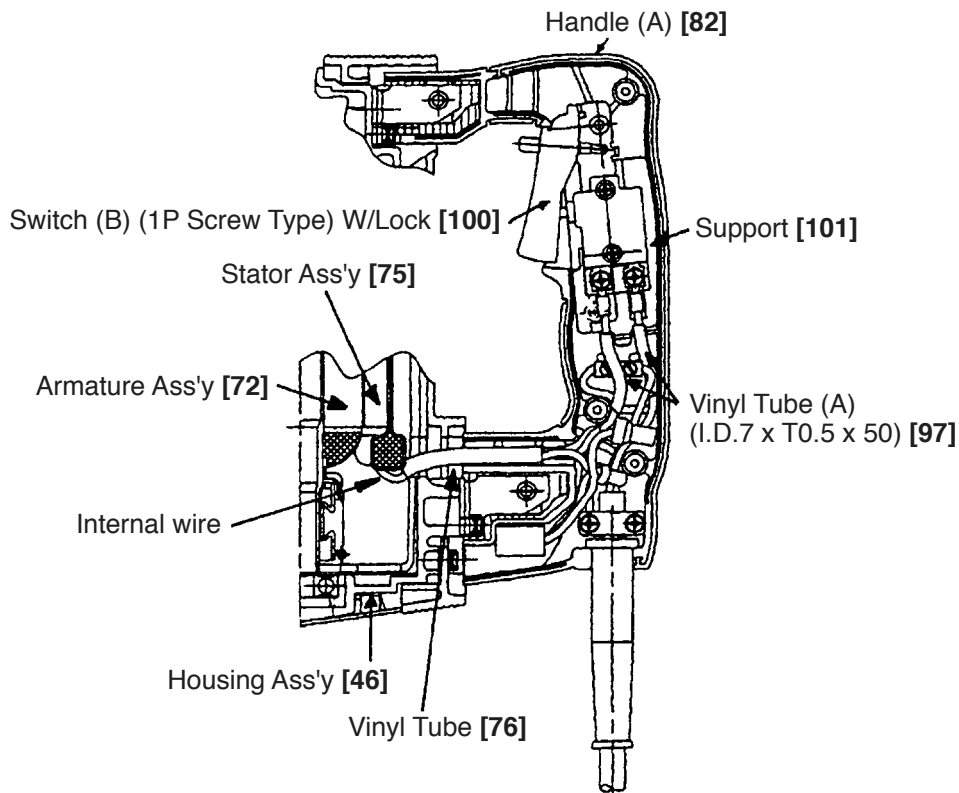


Fig. 22

9-6. Insulation Tests

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

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

Dielectric strength: AC 4000 V/1 minute, with no abnormalities ... 220 V – 240 V

(and 110 V for U.K. products)

AC 2500 V/1 minute, with no abnormalities ... 110 V – 127 V

(except U.K. products)

9-7. No-Load Current Value

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

Voltage (V)	110	115	120	127	220	230	240
Current (A) max.	5.9	5.7	5.4	5.2	3.0	2.8	2.7

10. STANDARD REPAIR TIME (UNIT) SCHEDULES

[illegible]

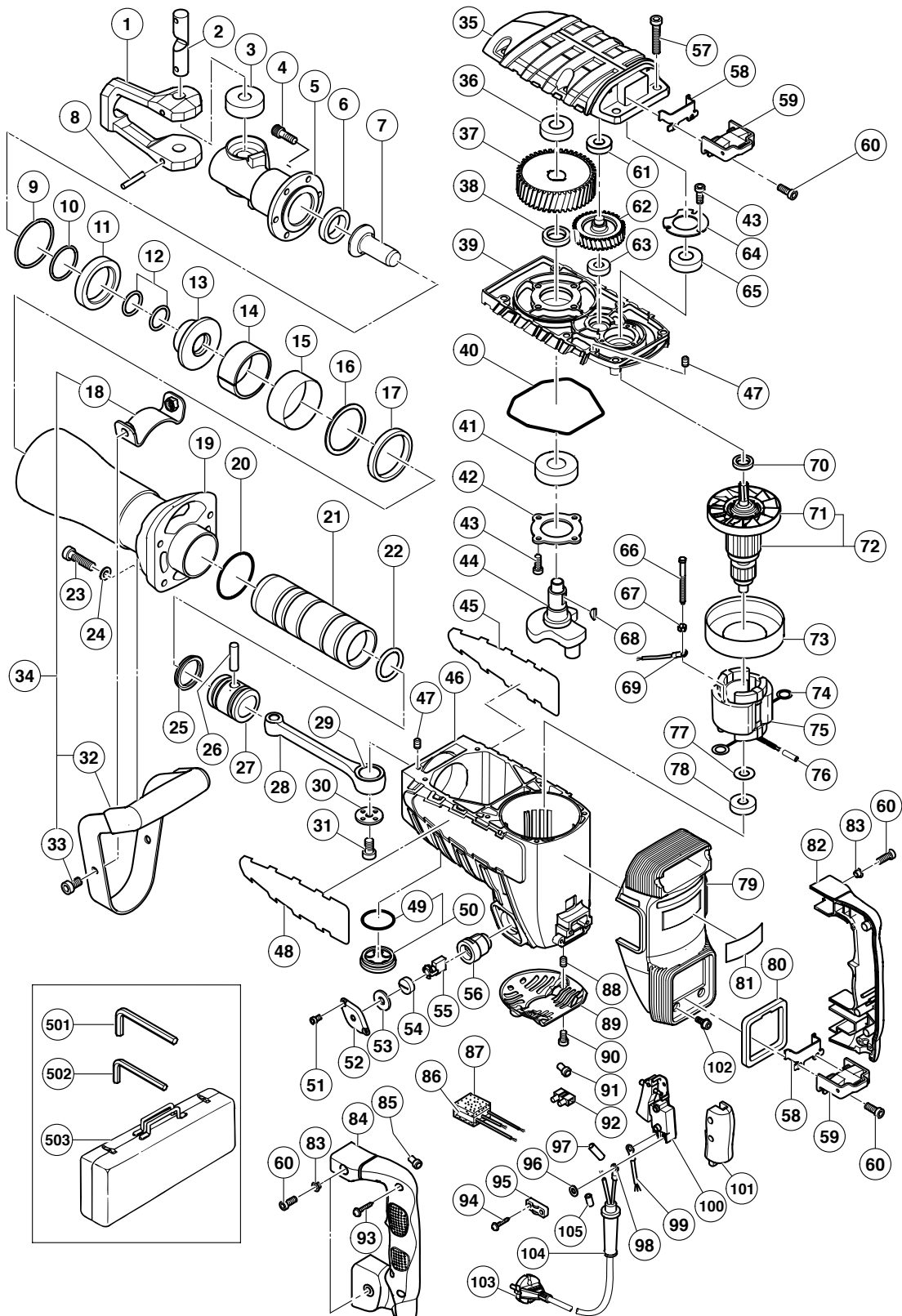
ELECTRIC TOOL PARTS LIST

DEMOLITION HAMMER

2005 · 5 · 10

Model H 65SD2

(E1)



PARTS

H 65SD2

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	318-221	RETAINER	1		
2	318-222	LEVER PIN	1		
3	305-621	RETAINER DAMPER	2		
4	306-437	NYLOCK HEX. SOCKET HD. BOLT M8X30	6		
5	318-223	FRONT COVER	1		
6	996-369	DAMPER (B)	1		
7	324-601	SECOND HAMMER	1		
8	994-416	ROLL PIN D6X55	2		
9	998-428	O-RING (C)	1		
10	998-427	O-RING (B)	1		
11	998-433	DAMPER (A)	1		
12	323-731	O-RING (I.D 26.5)	2		
13	323-730	SHANK SLEEVE	1		
14	956-963	MOUTH	1		
15	956-962	MOUTH COVER	1		
16	323-729	MOUTH WASHER	1		
17	956-960	URETHANE RING	1		
18	320-374	HANDLE STAY (W/NUT)	1		
19	323-728	CYLINDER CASE	1		
20	956-996	O-RING (1AS-60)	1		
21	323-724	STRIKER	1		
22	998-414	O-RING (A)	1		
23	306-163	NYLOCK HEX. SOCKET HD. BOLT M8X35	4		
24	323-212	BOLT WASHER M8 (BLACK)	4		
25	998-415	OIL SEAL (A)	1		
26	944-928	PISTON PIN	1		
27	998-413	PISTON	1		
28	998-434	CONNECTING ROD ASS'Y	1	INCLUD. 29	
29	944-921	NEEDLE BEARING (NTN 8E-NK 18/20 RDO)	1		
30	956-955	CRANK WASHER	1		
31	996-364	SEAL LOCK HEX. SOCKET HD. BOLT M8X16	1		
32	306-166	GRIP	1		
33	320-375	NYLOCK HEX. SOCKET HD. BOLT M8X16	2		
34	306-165	SIDE HANDLE ASS'Y	1	INCLUD. 18, 32, 33	
35	323-723	GEAR COVER	1		
36	630-2VV	BALL BEARING 6302VVCMP2L	1		
37	944-916	FINAL GEAR	1		
38	944-915	DISTANCE RING (B)	1		
39	323-722	INNER COVER	1		
40	323-725	SEAL RING	1		
41	620-5DD	BALL BEARING 6205DDCMPS2L	1		
42	956-949	BEARING COVER	1		
43	990-079	SEAL LOCK HEX. SOCKET HD. BOLT M5X16	7		
44	998-430	CRANK SHAFT	1		
45		HITACHI LABEL	1		
46	323-721	HOUSING ASS'Y	1	INCLUD. 56, 88	
47	944-918	PIN D5X15.8	2		
48		HITACHI LABEL	1		
49	980-717	O-RING (S-38)	1		
50	990-945	OIL CAP ASS'Y	1	INCLUD. 49	
51	877-838	SEAL LOCK HEX. SOCKET HD. BOLT M4X8	4		

PARTS

H 65SD2

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS		
52	323-727	CAP COVER	2			
53	944-960	CAP RUBBER	2			
54	940-540	BRUSH CAP	2			
55	999-086	CARBON BRUSH (AUTO STOP TYPE) (1 PAIR)	2			
56	956-984	BRUSH HOLDER	2			
57	986-940	SEAL LOCK HEX. SOCKET HD. BOLT M6X45	6			
58	980-750	GUIDE PLATE	2			
59	980-727	HANDLE RUBBER	2			
60	990-079	SEAL LOCK HEX. SOCKET HD. BOLT M5X16	8			
61	620-1VV	BALL BEARING 6201VVCMP2L	1			
62	956-948	COUNTER GEAR	1			
63	600-1VV	BALL BEARING 6001VVCMP2L	1			
64	944-911	BEARING COVER (A)	1			
65	620-3DD	BALL BEARING 6203DDCMP2L	1			
66	960-251	HEX. HD. TAPPING SCREW D5X65	2			
67	956-764	SPECIAL WASHER	2			
68	956-850	WOODRUFF KEY 4X16	2			
*	69	994-190	INTERNAL WIRE	1	EXCEPT FOR USA, CAN	
	70	944-907	DISTANCE RING (A)	1		
	71	996-370	FAN	1		
*	72	360-286U	ARMATURE ASS'Y 110V-120V	1	INCLUD. 65, 71, 77, 78	
*	72	360-286E	ARMATURE ASS'Y 220V-230V	1	INCLUD. 71	
	73	306-098	FAN GUIDE	1		
	74	945-932	BRUSH TERMINAL	2		
*	75	340-259J	STATOR ASS'Y 110V	1	INCLUD. 74	
*	75	340-259G	STATOR ASS'Y 115V-120V	1	INCLUD. 74	
*	75	340-259K	STATOR ASS'Y 230V	1	INCLUD. 74	
	76	322-530	VINYL TUBE	1		
	77	944-954	BEARING WASHER	1		
	78	620-1DD	BALL BEARING 6201DDCMP2L	1		
	79	323-740	BACK COVER	1		
	80	323-741	HANDLE PACKING	1		
	81		NAME PLATE	1		
	82	323-743	HANDLE (A)	1		
	83	991-711	DISTANCE PIECE (B)	4		
	84	323-744	HANDLE (B)	1		
*	85	959-141	CONNECTOR 50092 (10 PCS.)	1	EXCEPT FOR USA, CAN	
*	86	994-273	NOISE SUPPRESSOR	1	EXCEPT FOR USA, CAN	
*	87	930-153	SUPPORT (B)	1	EXCEPT FOR USA, CAN	
	88	938-477	HEX. SOCKET SET SCREW M5X8	2		
	89	323-726	TAIL COVER	1		
	90	991-690	SEAL LOCK HEX. SOCKET HD. BOLT M5X12	2		
*	91	959-140	CONNECTOR 50091 (10 PCS.)	1	EXCEPT FOR USA, CAN	
	92	938-307	PILLAR TERMINAL	1		
	93	307-028	TAPPING SCREW (W/FLANGE) D4X25 (BLACK)	3		
	94	984-750	TAPPING SCREW (W/FLANGE) D4X16	2		
*	95	960-266	CORD CLIP	1		
*	95	981-987Z	CORD CLIP	1	FOR SUI	
*	96	949-423	WASHER M4 (10 PCS.)	1	EXCEPT FOR USA, CAN	
	97	996-438	VINYL TUBE (A) (I.D.7XT0.5X50)	2		
*	98	980-063	TERMINAL	1	FOR CORD	

PARTS

H 65SD2

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
* 98	930-804	TERMINAL M4.0 (10 PCS.)	1	FOR CORD	
* 99	981-974	INTERNAL WIRE	1	EXCEPT FOR GBR, USA, CAN	
* 99	306-681	INTERNAL WIRE	1	FOR GBR	
100	306-143	SWITCH (B) (1P SCREW TYPE) W/LOCK	1		
101	323-742	SUPPORT	1		
102	322-142	NYLOCK BOLT (W/FLANGE) M5X12	4		
* 103	500-390Z	CORD	1	(CORD ARMOR D10.7)	
* 103	500-453Z	CORD	1	(CORD ARMOR D10.7) FOR USA, CAN	
* 103	500-391Z	CORD	1	(CORD ARMOR D10.7) FOR SUI	
* 103	500-466Z	CORD	1	(CORD ARMOR D10.7) FOR GBR (110V)	
* 103	500-450Z	CORD	1	(CORD ARMOR D10.7) FOR GBR (230V)	
104	940-778	CORD ARMOR D10.7	1		
* 105	981-373	TUBE (D)	2	FOR CORD	

STANDARD ACCESSORIES

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
501	872-422	HEX. BAR WRENCH 6MM	1		
502	943-277	HEX. BAR WRENCH 3MM	1		
503	314-179	CASE (STEEL)	1		

OPTIONAL ACCESSORIES

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
601	985-231	COLD CHISEL 520MM (HEX. SHANK TYPE)	1		
602	985-232	CUTTER W75X520MM (HEX. SHANK TYPE)	1		
603	985-233	SCOOP 546L (HEX. SHANK TYPE)	1		
604	996-372	BULL POINT 410MM (HEX. SHANK TYPE)	1		
605	996-373	COLD CHISEL 410MM (HEX. SHANK TYPE)	1		
606	996-374	CUTTER W75X410MM (HEX. SHANK TYPE)	1		
607	980-927	GREASE FOR HAMMER. HAMMER DRILL (500G)	1		
608	981-840	GREASE (A) FOR HAMMER. HAMMER DRILL (30G)	1		
609	308-471	GREASE FOR HAMMER. HAMMER DRILL (70G)	1		

