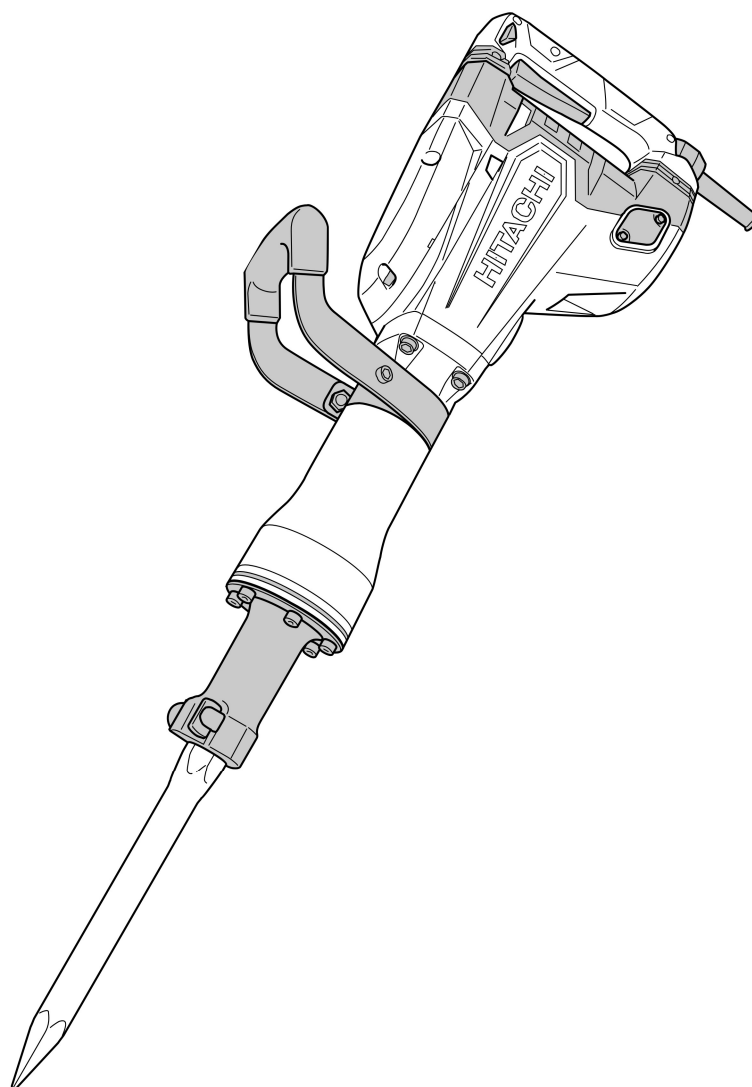


PRODUCT NAME

Hitachi Demolition Hammer

Model H 65SB3

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REPAIR GUIDE

WARNING: Be sure to disconnect the power cord plug from the power supply before conducting repair. Otherwise, the motor may suddenly turn on, posing a very dangerous situation.

1. Precautions on disassembly and reassembly

[Bold] numbers in the description below correspond to the item numbers in the parts list and exploded assembly diagram for the Model H 65SB3.

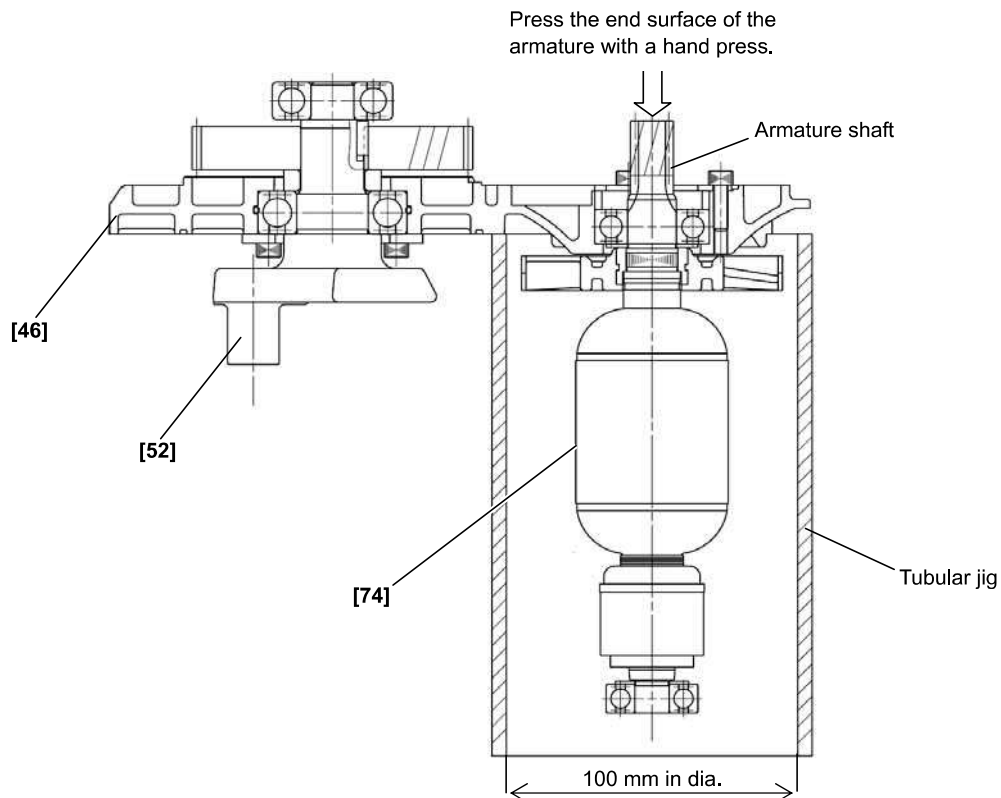
Disassembly

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

1. Disassembly of the armature ass'y

- (1) Loosen the four Bolts M4 x 8 **[85]**, remove the Cap Cover **[86]**, Cap Rubber **[87]**, Brush Cap **[88]** and Carbon Brush **[89]**. Be careful not to lose any removed parts.
- (2) Loosen the four Bolts M8 x 40 **[27]**, and remove the Cylinder Case **[23]**. Next, loosen the Bolt M8 x 16 **[35]** and then remove the Connecting Rod Ass'y **[32]** and the Crank Washer **[34]**. Leave the Striker **[25]** and the Piston **[30]** as they are.

Fig. 1 • Disassembly of the armature ass'y

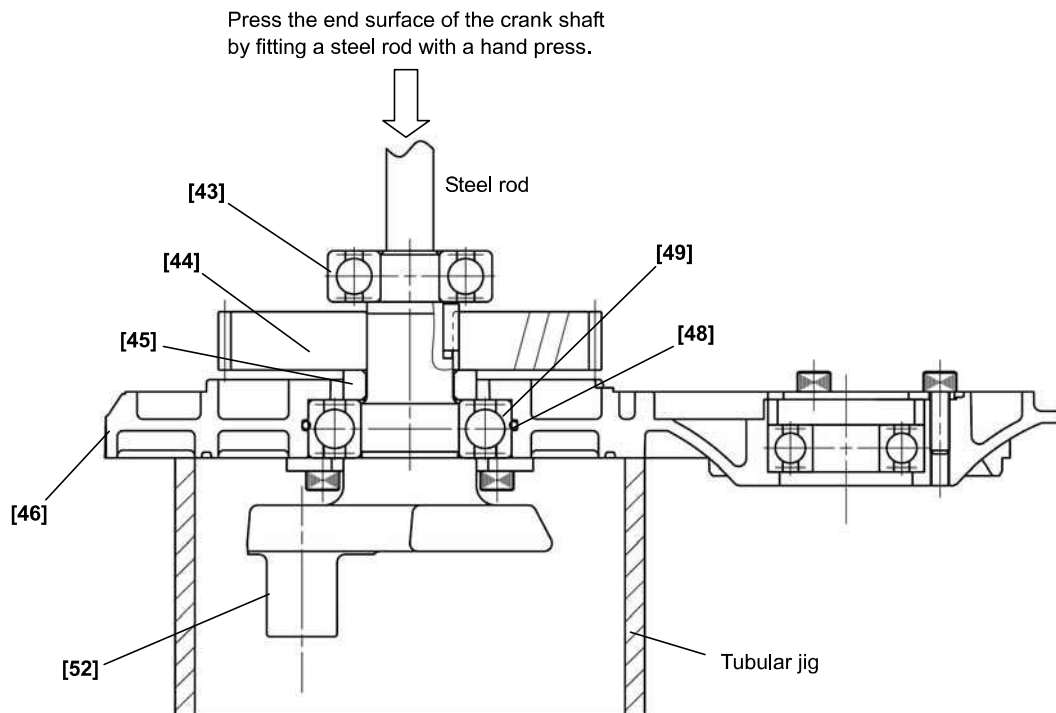


- (3) Remove the two Bolts M5 x 16 [63] and five Screws D4 x 25 [94]. Remove handles (A) and (B) of Handle (A). (B) Set [115], four Bolts M5 [109] and Back Cover [82]. Remove the six Bolts M6 x 40 [58], Gear Cover [42], and Counter Gear [67]. At this time, be very careful not to damage the mating surfaces of the Gear Cover [42] and Inner Cover [46]. Insert a flat-blade screwdriver or a similar tool into the air vent of the Inner Cover [46] and raise the Inner Cover [46]. Then the Inner Cover [46], Armature Ass'y [74] and Crank Shaft [52] can be removed as a single unit. At this time, be very careful not to damage the Fan [73].
- (4) As illustrated in Fig. 1, support the Inner Cover [46] 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 [74] from the Inner Cover [46].

2. Disassembly of the crank shaft section

- (1) Remove the four Bolts M5 x 16 [51] which fix the Bearing Cover [50]. Then, as illustrated in Fig. 2, support the lower surface of the Inner Cover [46] with an appropriate tubular jig, align an appropriate steel rod with the end surface of the Crank Shaft [52], and press down on the steel rod with a hand press.
- (2) Remove the Ball Bearing 6302VV [43], Distance Ring (B) [45], Final Gear [44], Feather Key 4 x 4 x 12 [55], and Crank Shaft [52] from the Inner Cover [46].
- (3) Loosen three Bolts M5 x 16 [51], then take out Bearing Cover (A) [69] and Ball Bearing 6203DD [71].

Fig. 2 • Disassembly of the crank shaft section



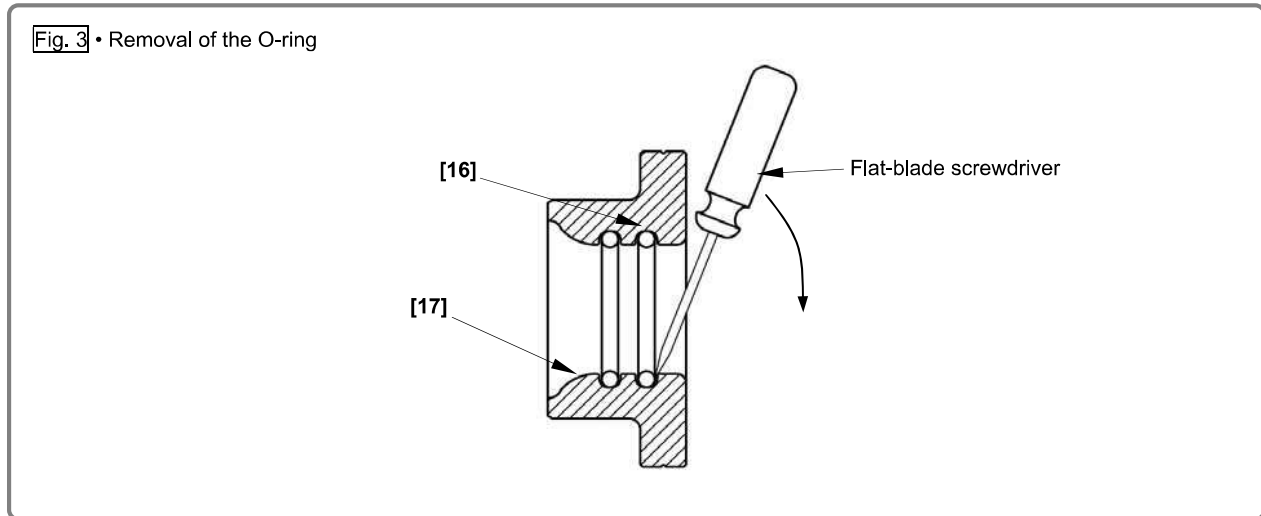
3. Removal of the mouth

- (1) Remove six Bolts M8 x 30 [1].
- (2) Remove the Collar [3], Damper Plate [2], two Front Dampers [4], and Front Cover [9] from the Cylinder Case [23].
- (3) Remove the Second Hammer [10], Shank Sleeve [17], Damper (A) [15], Mouth [18], Mouth Cover [19], Mouth Washer (A) [20], and Urethane Ring (A) [21] as a single unit.

NOTE: When the Mouth [18] needs to be replaced with new one, use the new Mouth [18] painted white.

4. Removal of the O-rings

Because the two O-rings [16] are installed inside the Shank Sleeve [17], it may be difficult to remove. Gently pry the O-rings [16] upward with a small flat-blade screwdriver, while being very careful not to damage the O-ring surface as illustrated in Fig. 3.



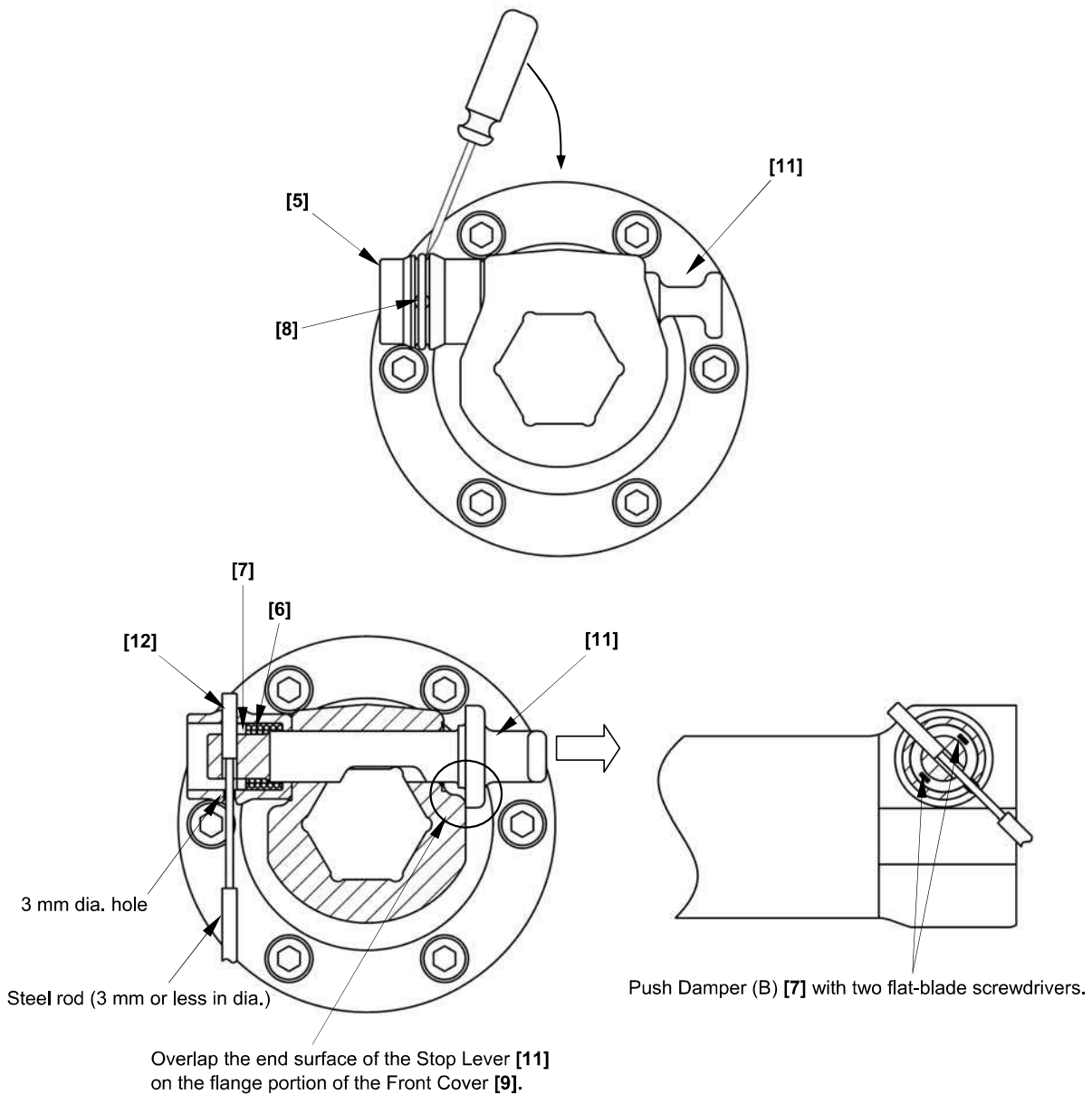
5. Disassembly of the striker section

- (1) Remove the four Bolts M8 x 40 [27], and separate the Cylinder Case [23] from the Housing Ass'y [53].
- (2) Take out the Striker [25], Piston [30], and Connecting Rod Ass'y [32] in a single body from the Cylinder Case [23].
- (3) Holding the Striker [25] firmly in one hand, grasp the Connecting Rod Ass'y [32] in the other hand and pull it forcefully to separate it from the Striker [25].
- (4) Extract the Piston Pin [29] from the Piston [30] and separate the Piston Pin [29] from the Connecting Rod Ass'y [32].

6. Removal of the stop lever

- (1) Remove the ring mounted around the Spring Case [5] with a flat-blade screwdriver as shown in Fig. 4.
- (2) Pull the Stop Lever [11] outward in the direction indicated by the arrow, and turn it slightly so that its end surface comes to rest on the flange portion of the Front Cover [9].
- (3) Turn the Spring Case [5] so that the holes of the Spring Case [5] are aligned with the Needle Roller [12].
- (4) Push in Damper (B) [7] with two flat-blade screwdrivers to compress the Lever Spring [6]. While keeping the Lever Spring [6] compressed, fit a steel rod 3 mm or less in diameter into the hole of the Spring Case [5] and push out the Needle Roller [12]. The Stop Lever [11], Damper (B) [7], and the Lever Spring [6] can then be taken out.

Fig. 4 • Disassembly of the stop lever



Reassembly

Reassembly can generally be conducted by reversing the disassembly procedure. However, special attention should be given to the following items.

1. TB1401 screw locking agent

- (1) Before reassembly, all M5 and M6 hexagon socket hd. bolts and machine screws must be coated with TB1401 screw locking agent.
- (2) The following parts must be replaced with new Hitachi genuine parts after being loosened once.
Front Cover [9] fixing bolt: Nylock Hex. Socket Hd. Bolt M8 x 40 [1]
Cylinder Case [23] fixing bolt: Nylock Hex. Socket Hd. Bolt M8 x 40 [27]
Connecting Rod Ass'y [32] fixing bolt: Seal Lock Hex. Socket Hd. Bolt M8 x 16 [35]

CAUTION: Fastening bolts that become loose from vibration could cause serious damage to the machine. Therefore, be sure to apply TB1401 screw locking agent as directed above prior to reassembly. Before applying TB1401, carefully clean off any grease or other foreign matter from the male and female threads with gasoline, thinner or similar cleaning solvents.

2. Reassembly of the crank shaft section

- (1) Press-fit the Ball Bearing 6205DD [49] into the Inner Cover [46], and fasten the Bearing Cover [50] onto the Inner Cover [46] with the four Bolts M5 x 16 [51].
- (2) Use a proper jig to hold the inner race of the Ball Bearing 6205DD [49] and then press-fit the Crank Shaft [52] into the ball bearing.
- (3) Insert Distance Ring (B) [45] and Feather Key 4 x 4 x 12 [55] into the Crank Shaft [52]. Press-fit the Final Gear [44] and Ball Bearing 6302VV [43] with a hand press.

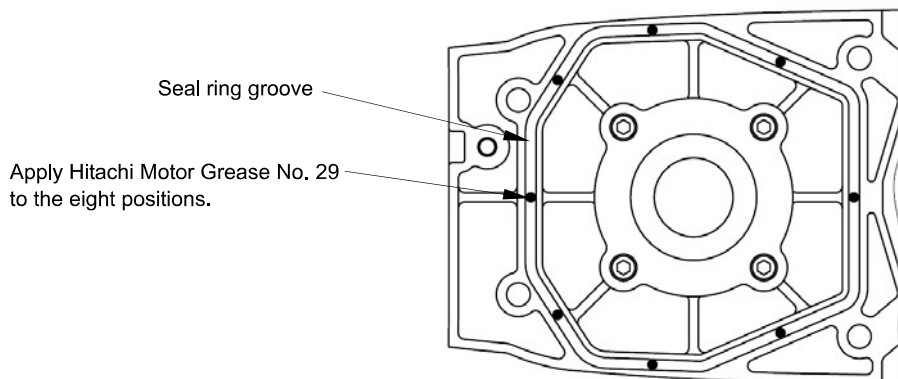
3. Reassembly of the armature ass'y

Press fit the Ball Bearing 6203DD [71] into the Inner Cover [46], and fasten Bearing Cover (A) [69] onto the Inner Cover [46] with three Bolts M5 x 16 [51].

4. Mounting the inner cover to the housing ass'y

Use a syringe to apply Hitachi Motor Grease No. 29 to the seal ring groove in eight positions as shown in Fig. 5 and then secure the Seal Ring [47] to prevent grease leakage due to misalignment of the Seal Ring [47] at reassembly. Then mount the Inner Cover [46] to the Housing Ass'y [53].

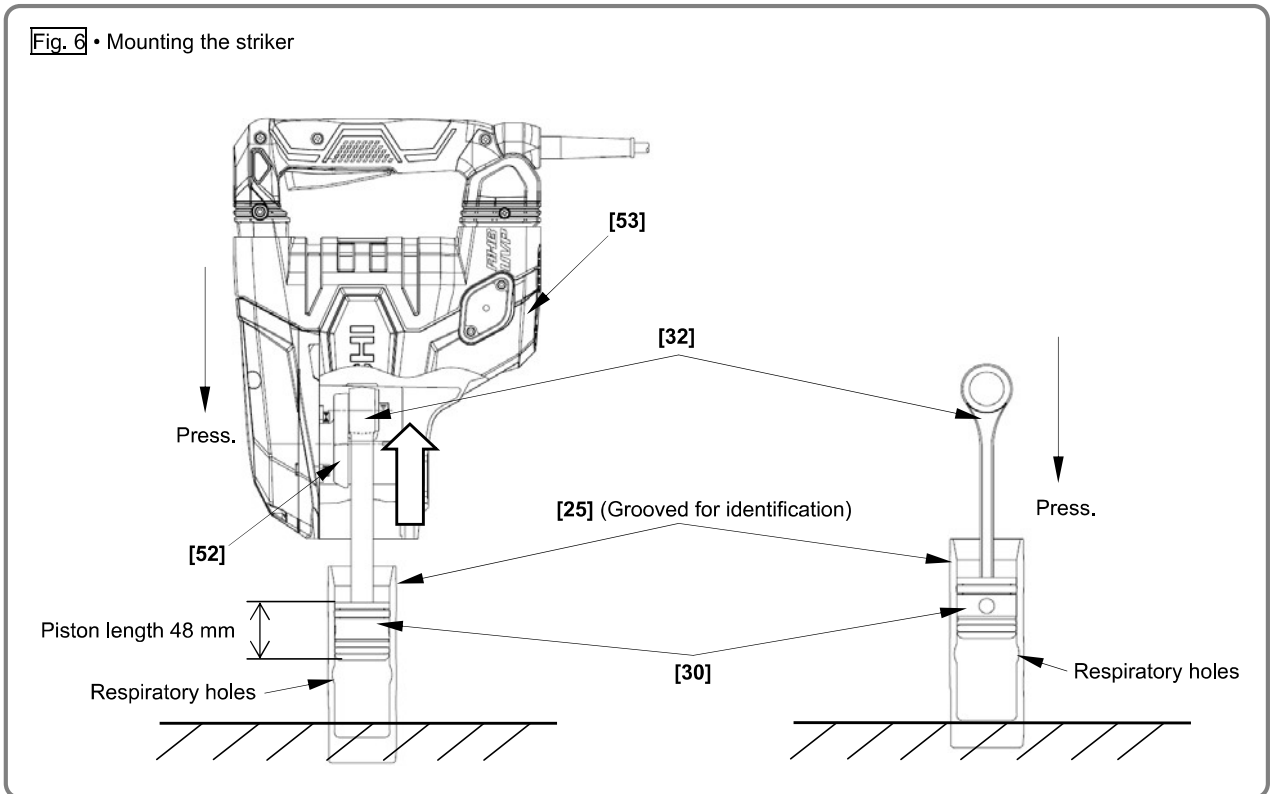
Fig. 5 • Grease application positions on the inner cover



5. Mounting the striker

The striker can be mounted in either of the following two ways.

- Mount the Connecting Rod Ass'y [32] to the Crank Shaft [52] inside the Housing Ass'y [53]. Mount the Piston [30] and apply grease for hammer. hammer drill (Code No. 980927) to the inside and outside of the Striker [25]. Turn the Crank Shaft [52] and move the Connecting Rod Ass'y [32] all the way inside the Housing Ass'y [53]. Then mount the Striker [25].
- Mount the Piston [30] onto the Connecting Rod Ass'y [32]. Apply grease for hammer. hammer drill (Code No. 980927) to the inside and outside of the Striker [25]. Then mount the Striker [25].



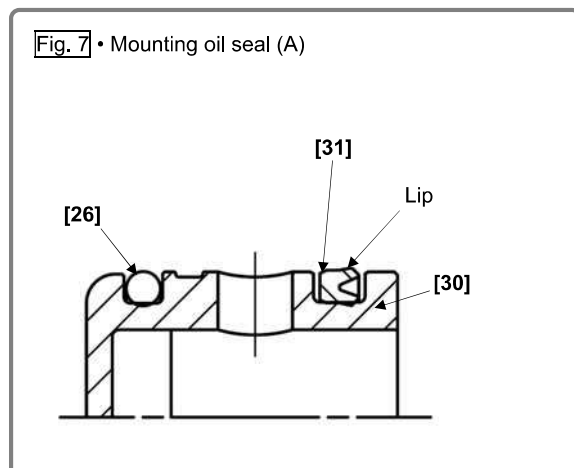
Either of the above two ways requires a pressing force of more than 30 kg.

When a "hissing" sound is heard, the Piston [30] is properly inserted in the Striker [25].

(The "hissing" is the sound of the compressed air escaping from the Striker [25] when the Piston [30] reaches the respiratory holes in the Striker [25].)

6. Mounting oil seal (A)

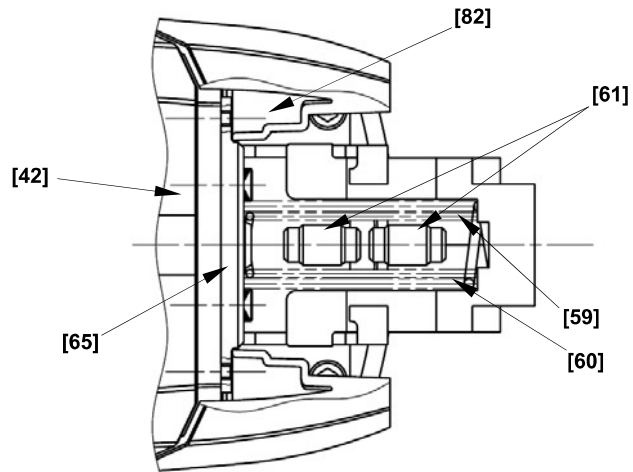
When mounting Oil Seal (A) [31] on the Piston [30], ensure that the lip portion of Oil Seal (A) [31] is directed toward the rear surface of the Piston [30] as illustrated in Fig. 7. Before mounting, thoroughly coat Oil Seal (A) [31] and O-ring (A) [26] with grease for hammer. hammer drill (Code No. 980927) and carefully ensure they are not damaged.



7. Mounting the handle

Mount the Handle Stopper [65] to the Gear Cover [42] and secure it with the Back Cover [82]. Be sure to put the two Handle Dampers [61] in Handle Spring (A) [60] and Handle Spring (B) [59] to prevent abnormal noise.

Fig. 8 • Mounting the handle - 1

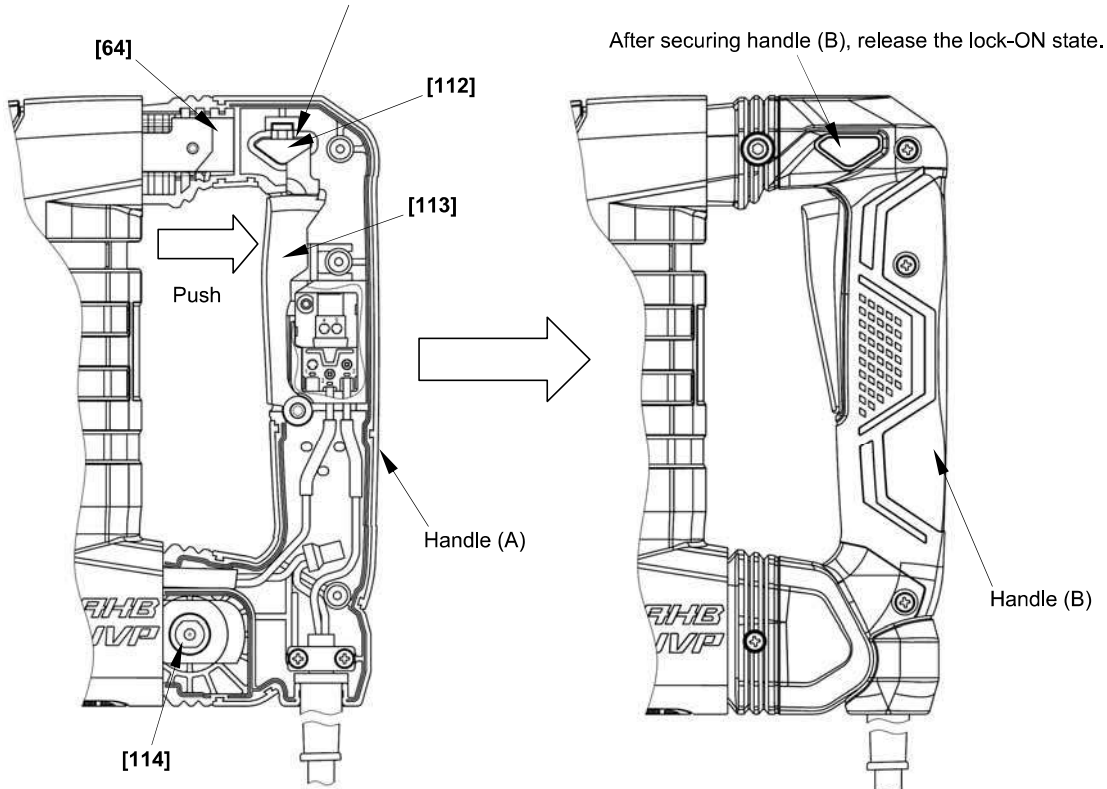


Secure handle (A) of Handle (A).(B) Set [115] to the Handle Weight [64] and Handle Shaft [114]. After wiring, put the switch lever into the lock-ON state and secure handle (B).

NOTE: It is impossible to mount handle (B) without putting the switch lever into the lock-ON state.

Fig. 9 • Mounting the handle - 2

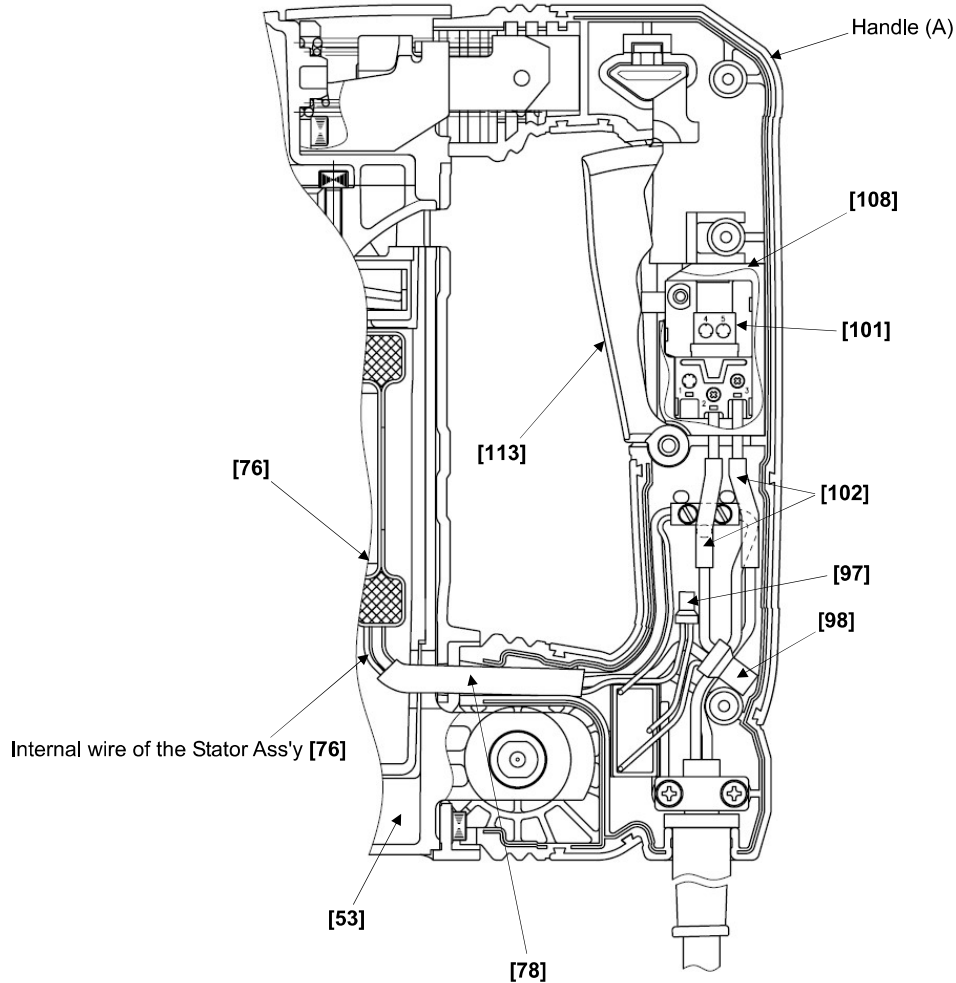
While pulling the Switch Lever [113] all the way, push the pushing button to put into lock-ON state.



8. Safety precautions on wiring work

To prevent breakage and electric shock due to vibration of the Switch [101], the Support [108] elastically holds the Switch [101] in place. Vinyl Tube (A) (I.D. 7 x T0.5 x 50) [102] covers the internal wire, and the Vinyl Tube L55 [78] covers the internal wire of the Stator Ass'y [76]. These tubes are provided to protect the internal wires, therefore, do not forget to attach them.

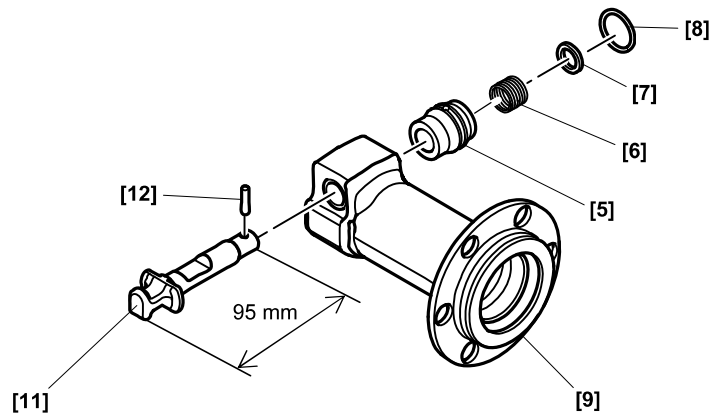
Fig. 10 • Safety precautions on wiring work



9. Mounting the stop lever

- (1) Before mounting, thoroughly apply grease for hammer. hammer drill (Code No. 980927) to the sliding portion of the Stop Lever [11].
- (2) Place the end surface of the Stop Lever [11] on the flange portion of the Front Cover [9] as illustrated in Fig. 11, and compress the Lever Spring [6] by pressing Damper (B) [7] with two slender flat-blade screwdrivers.
- (3) Align the hole of the Stop Lever [11] with the hole of the Spring Case [5], and insert the Needle Roller [12].
- (4) Mount the Ring [8] so that the hole on the groove of the Spring Case [5] is covered in order to prevent the Needle Roller [12] from coming out.

Fig. 11 • Mounting the stop lever



Lubrication points and types of lubricant

Fill specified grease (grease for hammer, hammer drill) to the following parts.

- Fill 41 g of specified grease in the Housing Ass'y [53] on the Crank Shaft [52].
- Fill 41 g of specified grease inside the Cylinder Case [23] (on the machined surface).

Apply specified grease (grease for hammer, hammer drill) to the following parts.

- Apply specified grease to the inside and outside of the Striker [25], sliding portion of the Piston [30], outside of the Piston Pin [29], O-ring (A) [26] of the Piston [30], and Oil Seal (A) [31].
- Apply specified grease to the inside of the needle bearing in the Connecting Rod Ass'y [32].
- Apply specified grease to the sliding portion of the Second Hammer [10], O-ring (C) [13] of the Front Cover [9], and hexagonal hole of the Front Cover [9].

Fill Nippeco SEP-3A grease in the following parts.

- Fill 78 g of Nippeco SEP-3A grease in the Gear Cover [42] so that the gears are greased.

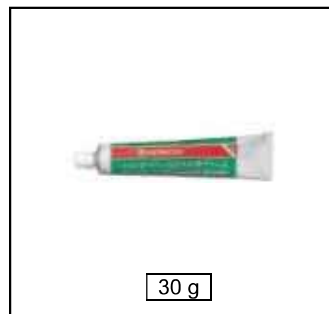
Fig. 12 • Gear cover filled with Nippeco SEP-3A grease



Apply Nippeco SEP-3A grease to the following parts.

- Apply Nippeco SEP-3A grease to the pinion of the Armature Ass'y [74] (including the ball bearing), tooth surface of the Counter Gear [67], tooth surface of the Final Gear [44], and O-ring [48] inside the ball bearing chamber on the Crank Shaft [52] side of the Inner Cover [46].
- Apply Nippeco SEP-3A grease to the two O-rings [16] inside the Shank Sleeve [17].

Fig. 13 • Specified grease (grease for hammer, hammer drill)



Net weight	Code No.
500 g	980927
70 g	308471
30 g	981840

Connecting diagram

Fig. 14 • Connecting diagram of the product equipped with a noise suppressor

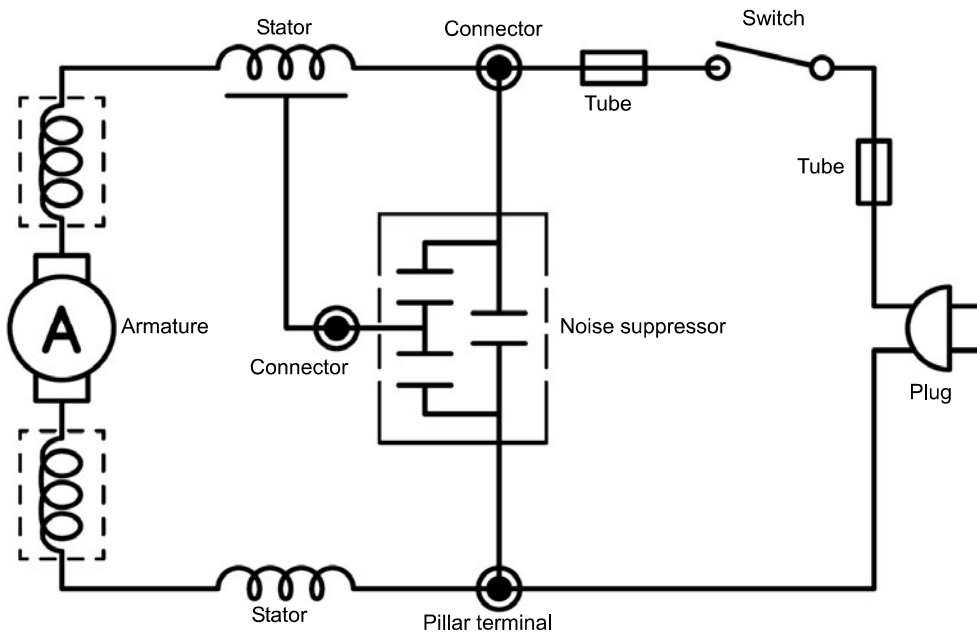
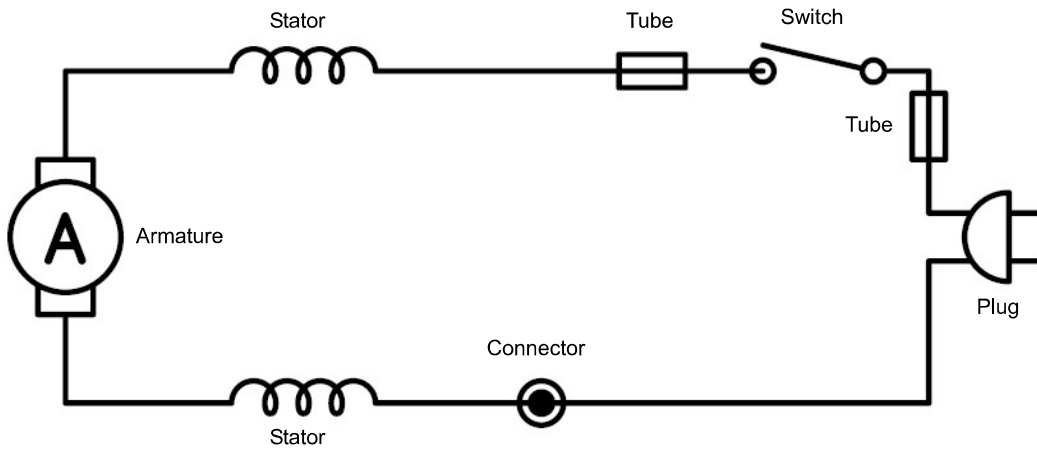


Fig. 15 • Connecting diagram of the product not equipped with a noise suppressor



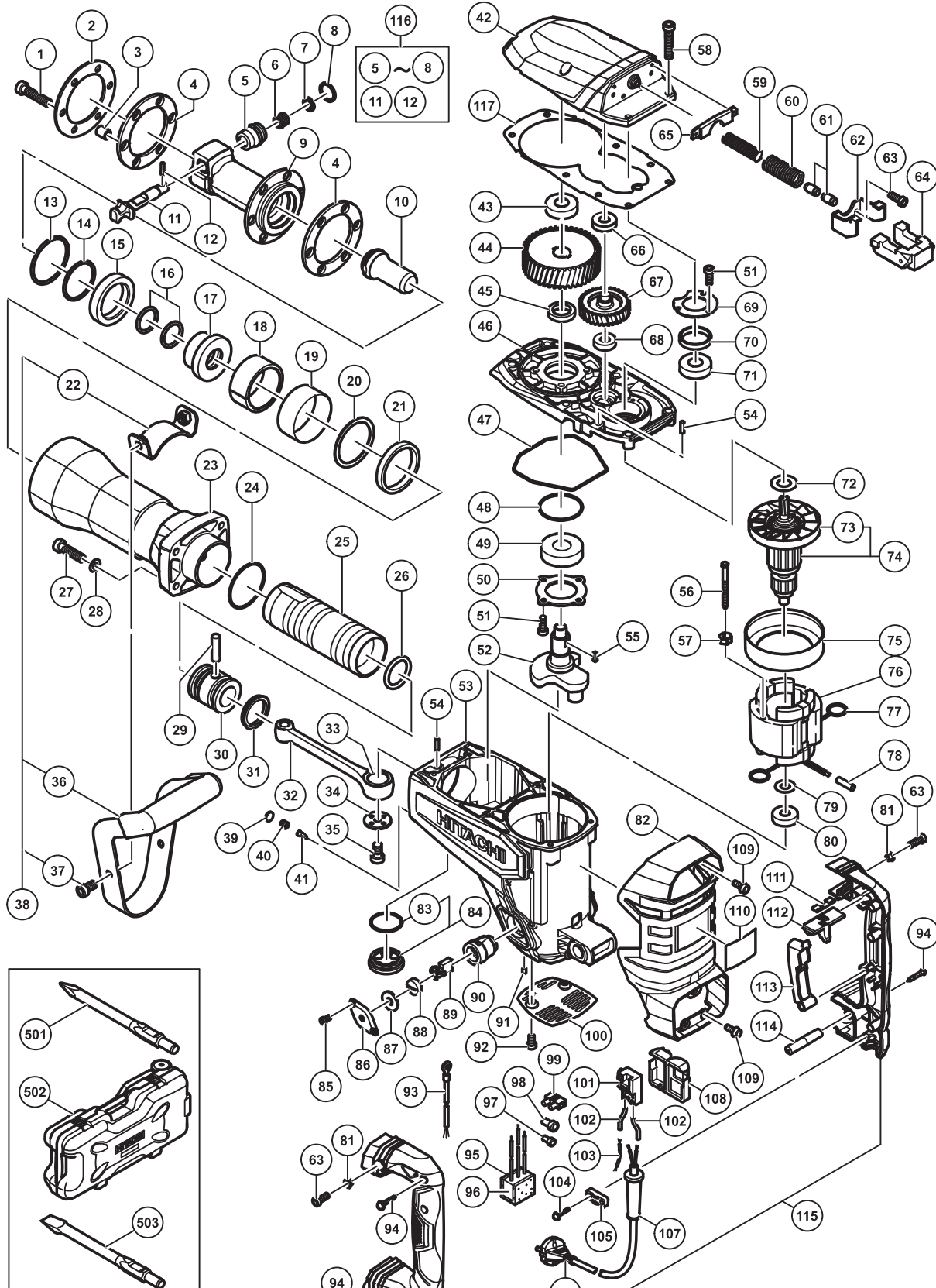
ELECTRIC TOOL PARTS LIST

DEMOLITION HAMMER

2016-8-19

Model H 65SB3

(E1)



PARTS

H 65SB3

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
1	323734	NYLOCK HEX. SOCKET HD. BOLT M8 X 40	6	
2	339686	DAMPER PLATE	1	
3	323737	COLLAR	6	
4	339685	FRONT DAMPER	2	
5	339688	SPRING CASE	1	
6	956975	LEVER SPRING	1	
7	998425	DAMPER (B)	1	
8	339689	RING	1	
9	339683	FRONT COVER	1	
10	339682	SECOND HAMMER	1	
11	339687	STOP LEVER	1	
12	998426	NEEDLE ROLLER	1	
13	998428	O-RING (C)	1	
14	339684	O-RING (B)	1	
15	998433	DAMPER (A)	1	
16	339681	O-RING	2	
17	339680	SHANK SLEEVE	1	
18	339679	MOUTH	1	
19	956962	MOUTH COVER	1	
20	370894	MOUTH WASHER (A)	1	
21	370893	URETHANE RING (A)	1	
22	320374	HANDLE STAY (W/NUT)	1	
23	339678	CYLINDER CASE	1	
24	956996	O-RING (1AS-60)	1	
25	339677	STRIKER	1	
26	998414	O-RING (A)	1	
27	323734	NYLOCK HEX. SOCKET HD. BOLT M8 X 40	4	
28	323212	BOLT WASHER M8 (BLACK)	4	
29	944928	PISTON PIN	1	
30	339676	PISTON	1	
31	998415	OIL SEAL (A)	1	
32	998434	CONNECTING ROD ASS'Y	1	INCLUD.33
33	944921	NEEDLE BEARING (NTN 8E-NK 18/20 RDO)	1	
34	956955	CRANK WASHER	1	
35	996364	SEAL LOCK HEX. SOCKET HD. BOLT M8 X 16	1	
36	306166	GRIP	1	
37	320375	NYLOCK HEX. SOCKET HD. BOLT M8 X 16	2	
38	306165	SIDE HANDLE ASS'Y	1	INCLUD.22,36,37
39	324544	FELT PACKING (B)	1	
40	338313	CAP SCREW	1	
41	995396	VALVE	1	
42	339674	GEAR COVER	1	
43	6302VV	BALL BEARING 6302VVCMP2L	1	
44	339672	FINAL GEAR	1	
45	944915	DISTANCE RING (B)	1	
46	339669	INNER COVER	1	
47	323725	SEAL RING	1	
48	331244	O-RING	1	
49	6205DD	BALL BEARING 6205DDCMP2L	1	
50	956949	BEARING COVER	1	

PARTS

H 65SB3

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
51	990079	SEAL LOCK HEX. SOCKET HD. BOLT M5 X 16	7	
52	339671	CRANK SHAFT	1	
53	339665	HOUSING ASS'Y	1	INCLUD.90,91
54	944918	PIN D5 X 15.8	2	
55	931008	FEATHER KEY 4 X 4 X 12	1	
56	960251	HEX. HD. TAPPING SCREW D5 X 65	2	
57	956764	SPECIAL WASHER	2	
58	322494	SEAL LOCK HEX. SOCKET HD. BOLT M6 X 40	6	
59	339697	HANDLE SPRING (B)	1	
60	339696	HANDLE SPRING (A)	1	
61	310124	HANDLE DAMPER	2	
62	339695	HANDLE GUIDE	1	
63	990079	SEAL LOCK HEX. SOCKET HD. BOLT M5 X 16	4	
64	339698	HANDLE WEIGHT	1	
65	339694	HANDLE STOPPER	1	
66	6201VV	BALL BEARING 6201VV	1	
67	339673	COUNTER GEAR	1	
68	6001VV	BALL BEARING 6001VV	1	
69	944911	BEARING COVER (A)	1	
70	339670	DISTANCE RING (A)	1	
71	6203DD	BALL BEARING 6203DDCMPS2L	1	
72	333222	BEARING WASHER	1	
73	333196	FAN	1	
* 74	361024C	ARMATURE ASS'Y 110V	1	INCLUD.73
* 74	361024E	ARMATURE ASS'Y 220V-230V	1	INCLUD.73
* 74	361024F	ARMATURE ASS'Y 240V	1	INCLUD.73
75	339668	FAN GUIDE	1	
* 76	340928C	STATOR ASS'Y 110V	1	INCLUD.77
* 76	340928E	STATOR ASS'Y 220V-230V	1	INCLUD.77
* 76	340928H	STATOR ASS'Y 220V-230V	1	INCLUD.77 FOR THA,INA,SIN,UAE,IND
* 76	340928F	STATOR ASS'Y 240V	1	INCLUD.77
* 76	340928J	STATOR ASS'Y 240V	1	INCLUD.77 FOR MAL
77	945932	BRUSH TERMINAL	2	
78	322530	VINYL TUBE L55	1	
79	944954	BEARING WASHER	1	
80	6201DD	BALL BEARING 6201DDCMPS2L	1	
81	991711	DISTANCE PIECE (B)	2	
82	339692	BACK COVER	1	
83	980717	O-RING (S-38)	1	
84	990945	OIL CAP ASS'Y	1	INCLUD.83
85	877838	SEAL LOCK HEX. SOCKET HD. BOLT M4 X 8	4	
86	323727	CAP COVER	2	
87	944960	CAP RUBBER	2	
88	940540	BRUSH CAP	2	
89	999086	CARBON BRUSH (AUTO STOP TYPE) (1 PAIR)	2	
90	956984	BRUSH HOLDER	2	
91	938477	HEX. SOCKET SET SCREW M5 X 8	2	
92	991690	SEAL LOCK HEX. SOCKET HD. BOLT M5 X 12	2	
* 93	994190	INTERNAL WIRE	1	FOR EUROPE,AUS,NZL,GBR,SAF,RUS,CHN
94	307028	TAPPING SCREW (W/FLANGE) D4 X 25 (BLACK)	5	

