

# MODEL

# H 41SA

## 1. REPAIR GUIDE:

### 1-1. Precautions and Suggestions for Disassembly and Reassembly of the Main Body:

The circled numbers in the descriptions below correspond to the item numbers in the parts List and exploded assembly diagrams.

#### 1-1-1. Disassembly:

##### \* Piston and Striker O-Rings:

Remove the four Nylock Bolts (W/Flange) M6 x 25 [16] from the Cylinder Case Ass'y [14], and disassemble the Cylinder Case Ass'y [14] from the Crank Case [35]. As the Piston [22] remains in the Crank Case side, only the Connecting Rod [24] need be removed from the Crank Shaft [28]. The Striker [19] can be removed by tapping the Cylinder Case Ass'y lightly with a plastic hammer. If it does not come out easily, push the reassembled Connecting Rod and Piston back into the Cylinder, and pull them apart again quickly. The Striker should come out at the same time.

##### \* First Gear Disassembly:

Remove the grease from the First Gear [39] side of the Crank Case [35]. Then, use a Bearing Puller (Special Repair Tool J30, Code No. 970804), to remove the First Gear. (See Fig. 9)

Be particularly careful during disassembly. The Ball Bearing [32] of the Crank Shaft [28] is secured by a C-Type Retaining Ring [30]. If removal is attempted by applying pressure on the end surface of the Crank Shaft [28] with a hand press, as is commonly done with conventional hammers, the C-Type Retaining Ring will be damaged.

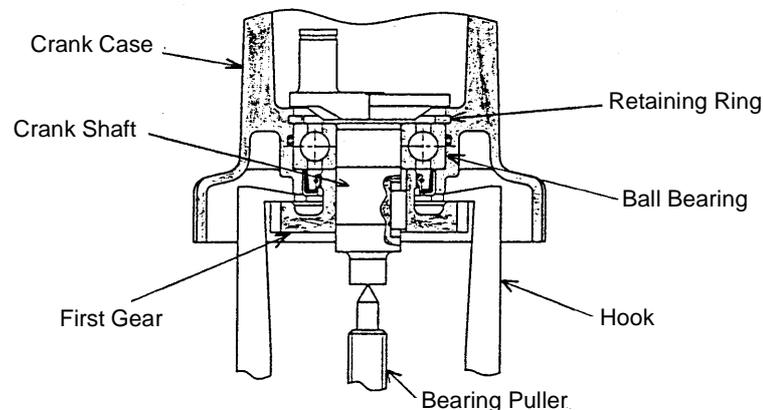
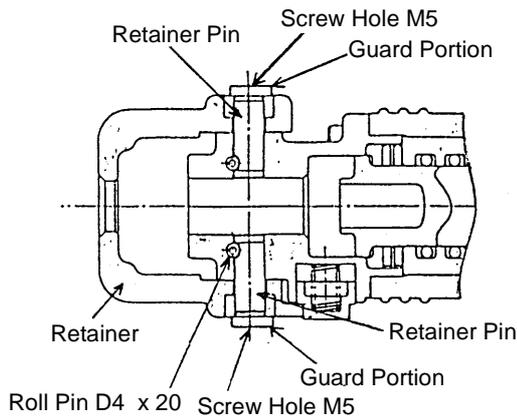


Fig. 9

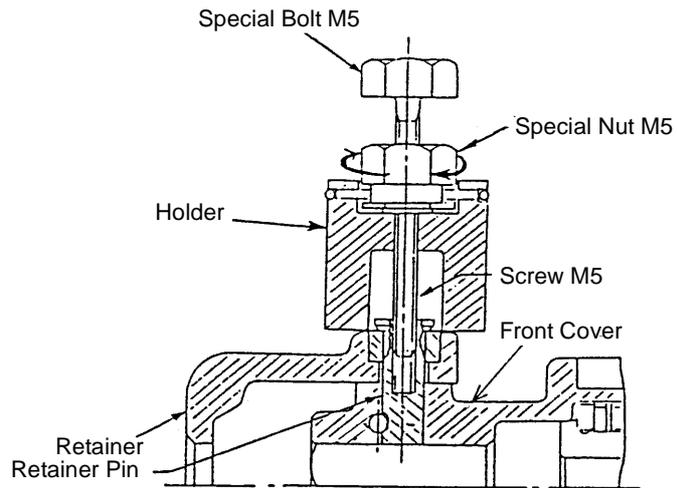
##### \* Retainer Disassembly: (See Figs. 10 and Fig. 11)

First, extract the two Roll Pin D4 x 20 [7]. Next, turn the Holder (Special Repair Tool J212, Code No. 970992) so that the Special Bolt M5 (Special Repair Tool J213, Code No. 970993) is inserted into the screw hole of the Retainer Pin [8] perpendicularly, and the bottom surface [8] of the Holder (J212) is in contact with the flat surface of the Retainer [6]. Then, turn the Special Nut M5 (Special Repair Tool J211, Code No. 970991) in the clockwise direction with a wrench while holding the M5 Special Bolt (J213) with another wrench to prevent it from turning.

Finally, extract the other Retainer Pin [8] from the hole opened in the Front Cover [12] by pushing it out with an 8mm steel rod.



**Fig. 10**



**Fig. 11**

**1-1-2. Reassembly:**

Reassembly can be accomplished by following the disassembly procedures in reverse.

However, special attention should be given to the following items.

**\* Lubrication:**

Apply special grease (grease for electric impact drills) to the inner portion of the Connecting Rod [24], The O-Rings [20] of the Striker [19] and Piston [22] O-Ring (A) [15] of the Cylinder Case Ass'y [14], and the Oil Seal [33]. Seal 37g of special grease inside the Crank Case [35] (Connecting Rod [24] side).

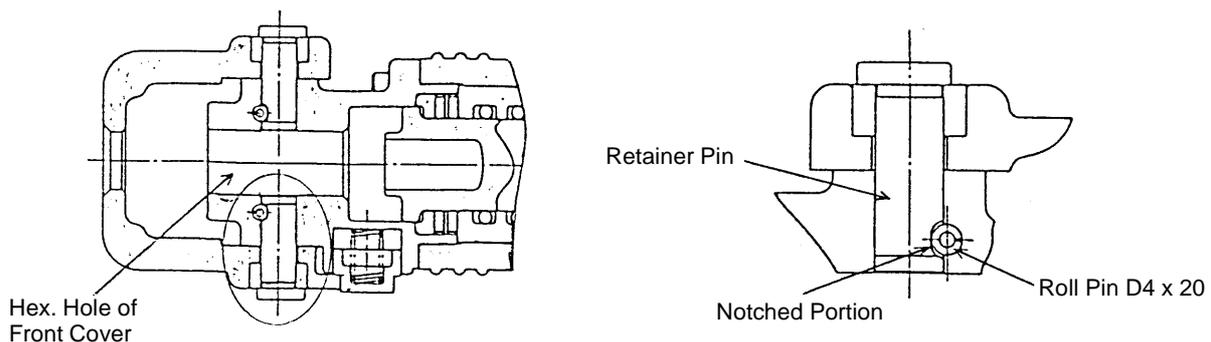
Apply Hitachi Motor Grease (SEP-3A) to the Needle Bearing (M661) [41] and the pinion portion of the Armature. Insert 20g of Hitachi Motor Grease (SEP-3A) into the Crank Case (First Gear [39] side).

**\* Oil Seals:**

Be very careful not to damage the Crank Cover O-Ring [27], the Piston and Striker O-Rings [20], Crank Case Oil Seal [33], the Cylinder Case Ass'y O-Ring [18], and O-Ring (A) [15].

**\* Reassembly of the Retainer:**

When reassembling the Retainer Pins [8], ensure that their grooved portions are properly aligned with the mounting holes for the Roll Pins D4 x 20 [7]. Also, ensure that the Retainer Pins do not protrude into the hex. port on the Front Cover Ass'y [5] (this can be easily confirmed by inserting a hex. shank bull point).



**Fig. 12**

### 1-1-3. Screw Locking Agent TB1401:

Apply screw locking agent TB1401 to all Hex.socket Hd. Bolts M4 and M5. (As the Hex. Socket Hd. Bolts for M7 that secure the Front Cover and Hex. Socket Hd. Bolts M6 that secure the Cylinder Case are special bolts, use service parts only.)

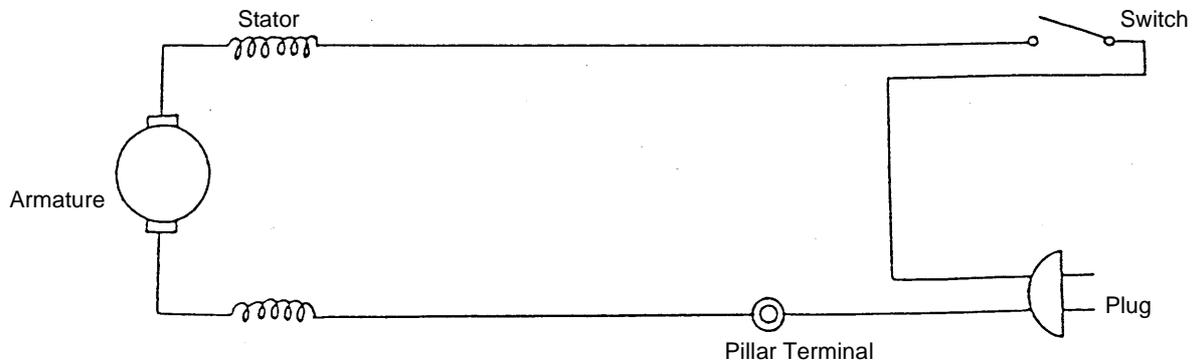
Note: If bolts are loosened by vibration, it could cause damage to the hammer. Ensure without fail that screw locking agent is applied to threaded portions prior to assembly.

### 1-1-4. Tightening Torques:

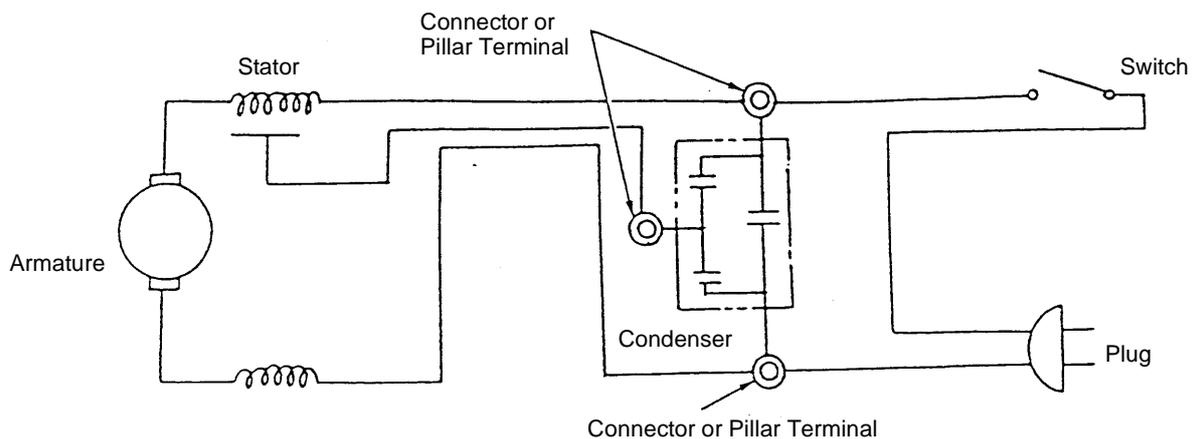
(1) Hex. Socket Hd. Bolts M4	$4.41 \pm 0.49$ Nm( $45 \pm 5$ kgfcm)
(2) Hex. Socket Hd. Bolts M5	$4.9 \begin{smallmatrix} +1.96 \\ 0 \end{smallmatrix}$ Nm( $50 \begin{smallmatrix} +20 \\ 0 \end{smallmatrix}$ kgfcm)
(3) Tapping Screws D4	$1.96 \pm 0.49$ Nm( $20 \pm 5$ kgfcm)
(4) Tapping Screws D5	$2.94 \pm 0.49$ Nm( $30 \pm 5$ kgfcm)
(5) Hex. Socket Hd. Bolts (W/Flange) M5	$3.43 \begin{smallmatrix} +1.47 \\ 0 \end{smallmatrix}$ Nm( $35 \begin{smallmatrix} +15 \\ 0 \end{smallmatrix}$ kgfcm)
(6) Attached Bolts of Front Cover (Hex. Socket Hd. Bolts M7 x 25)	$19.6 \begin{smallmatrix} +0.98 \\ 0 \end{smallmatrix}$ Nm( $200 \begin{smallmatrix} +10 \\ 0 \end{smallmatrix}$ kgfcm)
(7) Attached Bolts of cylinder Case (Hex. Socket Hd. Bolts M6 x 25)	$9.8 \begin{smallmatrix} +1.96 \\ 0 \end{smallmatrix}$ Nm( $100 \begin{smallmatrix} +20 \\ 0 \end{smallmatrix}$ kgfcm)

### 1-1-5. Wiring Diagrams:

\* For products without condenser:



\* For products with condenser:



**Fig. 13**

**1-1-6. Insulation Tests:**

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

Insulation Resistance: 7 M $\Omega$  or more with DC500V Megohm Tester.

Dielectric Strength: AC4000V/1minute, with no abnormalities.....220V - 240V  
(and 110V for U.K. products)

AC2500V/1minute, with no abnormalities.....110V - 127V  
(except U.K. products)

**1-1-7. No-Load Current Value:**

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

Voltage	110V	115V	120V	127V	220V	230V	240V
Current (A) Max.	4.5A	4.3A	4.2A	3.9A	2.3A	2.2A	2.1A

## 2. STANDARD REPAIR TIME (UNIT) SCHEDULES

Model	Variable		10	20	30	40	50	60 min.
	Fixed							
H41SA		Flow of works						
				Switch Cord Ass'y				Housing Stator Ass'y
	General Assembly Fixed Costs Switch Stop Lever Knob Band Rubber Cover Front Cover : 0 minute Cord Ass'y : 10 minutes Others : 20 minutes				Handle Handle Rubber x 2		Gear Cover Needle Bearing	
		Stop Lever Knob Band Rubber Cover	Front Cover Second Hammer Damper Damper Washer U-Ring Hammer Holder O-Ring x 2				Armature Ass'y BB (608VV) BB (6202VV)	
					Connecting Rod Ass'y Needle Bearing Piston O-Ring x 2 Striker		Cylinder Case Ass'y	