



MODEL DH 20V

1 ASSEMBLY/DISASSEMBLY GUIDE;

The circled numbers in the descriptions, below correspond to the item numbers in the exploded assembly diagram on page 17.

1-1. Disassembly:

A. Piston and Striker:

Take out the Setscrew (16) from the Cylinder Case (19) and remove the Cylinder Case from the Crank Case (53). As the Piston (7) remains in the Crank Case side, only the Connecting Rod Ass'y (9) need to be removed from the Crank Shaft (54). The Striker (4) can be removed by tapping the Cylinder Case Ass'y lightly with a plastic hammer. If it cannot be easily removed, push the reassembled Connecting Rod and Piston back into the Cylinder Case and pull them apart again quickly. The Striker should come out at the same time.

B. Retainer Section Disassembly:

First, mount a J-103 Front Cap Puller on the chuck, and secure it with a vise. Next, pull out the Cap Cover (27) by hand. Then, pull the Slide Grip (33) back, fit a 24mm Wrench to the provided flat surfaces on the Front Cap (30), and loosen it by tapping the Wrench with a hammer. Note that the cap is right-hand threaded.

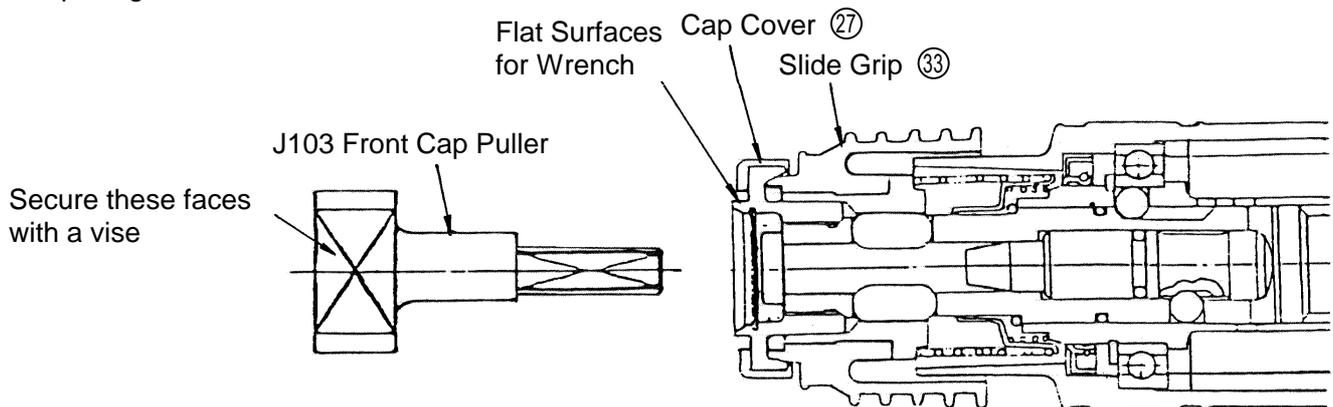


Fig. 10-1

C. Cylinder Ass'y Disassembly:

Remove the Cylinder Case from the Crank Case, and disassemble the Retainer Section. Then pull the Pipe (26) and Cylinder (3) to the Crank Case side. At this time, be sure to take out the Oil Seal (22) as straightly as possible as to avoid damaging it. The Oil Seal is fitted into the Cylinder Case. Next, remove the C-Type Retaining Ring (23). Then remove the 6906 Ball Bearing (24) with a hand press. The Retainer Sleeve (35) and second Hammer (38) can then be removed. At this time, be very careful not to lose the two sets of three Steel Balls (2) - total of six.

D. Disassembly of the Gears and the Crank Shaft inside the Crank Case:

The Clutch portion can be removed from the Gear Cover side by tapping the end surface of the Crank Case lightly with a plastic hammer.

For the Clutch section, first remove the C-Type Retaining Ring (52) and Ball Bearing (51). Then, use a hand press to remove the pressure fitted Bushing (50) from the Third Pinion (41).

To remove the First Gear (58), press in Clutch Shaft (61) to the Crank Shaft edge using a bar with a flat edge and lift up the First Gear. The Clutch Shaft, Spring (60) and D4.76 Steel Balls (55) are installed in the Crank Shaft chamber.

E. Disassembly of the Change-lever inside the gear cover.

Insert a \ominus screwdriver between the Gear Cover (64) and Stopper Spring (63) and pry out the Stopper Spring.

1-2. Assembly:

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

A. Lubrication:

Apply special grease to the inner surface of the Cylinder (3), the Striker (4), the external diameter of the Piston (7) and its attached O-Ring (5), and the lip portions of the Oil Seal (22) except when installing an O-ring other than the above, apply No. 29 Electric Tool Grease. Insert 30 g (1.05 oz.) of special grease in to the Cylinder Case, and 7 g (0.25 oz.) into the Crank Case. Insert 60 g (2.1 oz.) of No. 29 Electric Tool Grease into the Gear Cover.

B. To make reassembly easier, apply No. 29 Electric Tool Grease to the two sets of Steel Balls (2) and (34).

C. First gear installation

Insert the Spring (60) and Clutch Shaft (61) (throat portion first) into the chamber in the Crank Shaft (54). Apply No. 29 Electric Tool Grease to the side hole in the Crank Shaft and insert the D4.76 Steel Balls. Set the First Gear onto the 10 mm dia. bar with a flat edge, press in the Clutch Shaft edge so that it is flush with the Crank Shaft edge, and press in the First Gear with the First Gear groove aligned with the Steel Balls.

1-3. Application of SCREW LOCKING AGENT TB1406

All Hexagon Socket Hd. Bolts

M5 x 25 \oplus Hd. Machine Screws (100)

1-4. Application of SCREW LOCKING AGENT SUPER 1305:

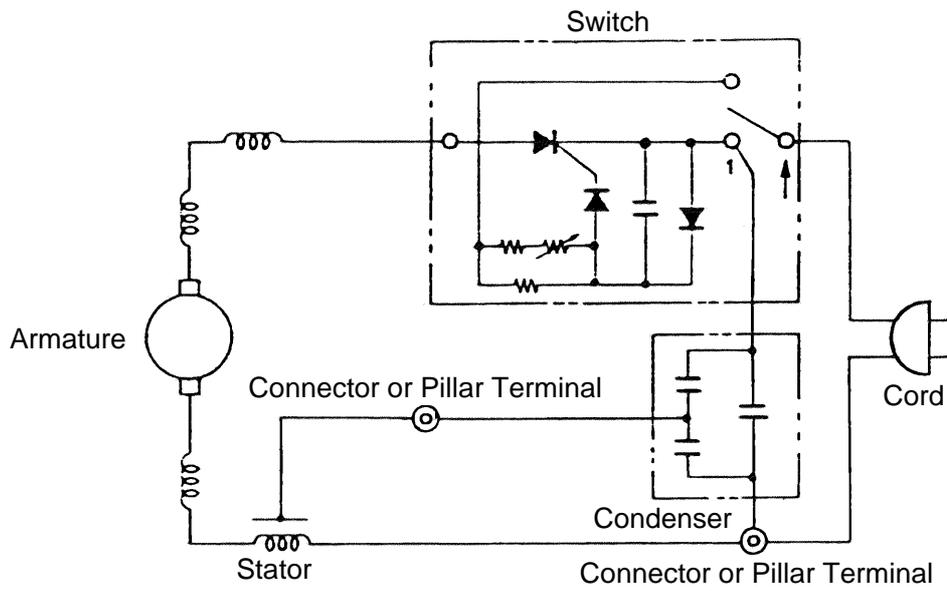
Apply to the female thread of the Front Cap (30).

After thoroughly removing any grease from the female threaded portion of the Front Cap Ass'y, apply the adhesive to the first 3 to 5 threads from the end surface, and screw in the male thread of the Retainer Sleeve (35).

1-5. Tightening Torque

M5 Hex. Socket bolt (16)	50^{+20}_0 kgf-cm	$(43.5^{+17.4}_0$ in-lb)
M5 Hex. Socket bolt (74)	35^{+15}_0 kgf-cm	$(30.5^{+13.0}_0$ in-lb)
M5 \oplus Hd. Screw (100)	30 ± 5 kgf-cm	$(26 \pm 4.3$ in-lb)
D4 \oplus Hd. Tapping Screw	20 - 25 kgf-cm	(17.4 - 21.7 in-lb)
D5 \oplus Hd. Tapping Screw	25 - 35 kgf-cm	(21.7 - 30.5 in-lb)
Oil Cap (12)	30 ± 5 kgf-cm	$(26.0 \pm 4.3$ in-lb)
Front Cap (30)	400^{+50}_0 kgf-cm	$(348^{+43.5}_0$ in-lb)

1-6. Wiring Diagram



1-7. Insulation Tests:

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