



MODELS P 20SA/P 20V

1-1. Disassembly:

1-1-1. Armature, Cutter Block, and End Bracket Disassembly:

(See Fig. 21 and 22)

- (1) Loosen the two D4 x 16 (+) -Hd. Tapping Screws (16) (16), and remove the Tail Cover (15) (15).
- (2) Remove the Carbon Brush (8) (8) and the Brush Holder (9) (9) by slightly prying the brush holder upward. Then, loosen the two D4 x 14 (+) -Hd. Machine Screws (11) (11) and remove the Cover (10) (10) and Blade Cover (13) (13) together.
- (3) Loosen the single D4 x 25 (+) -Hd. Tapping Screw (30) (28) and remove the Belt Cover (31) (29). Next, loosen the four D4 x 25 (+) -Hd. Tapping Screw (30) (28) that secure the End Bracket (35) (33) to the Housing (7) (7). Finally, tap the end bracket side of the housing gently with a wooden hammer, and the End Bracket (35) (33), Armature (19) (19), and Cutter Block (55, 73) (60, 78) should come off together.

(Note) When disassembling the End Bracket (33) on the Model P20V, be very careful not to damage the leadwires of the Magnet Pick-Up (see Fig. 22).

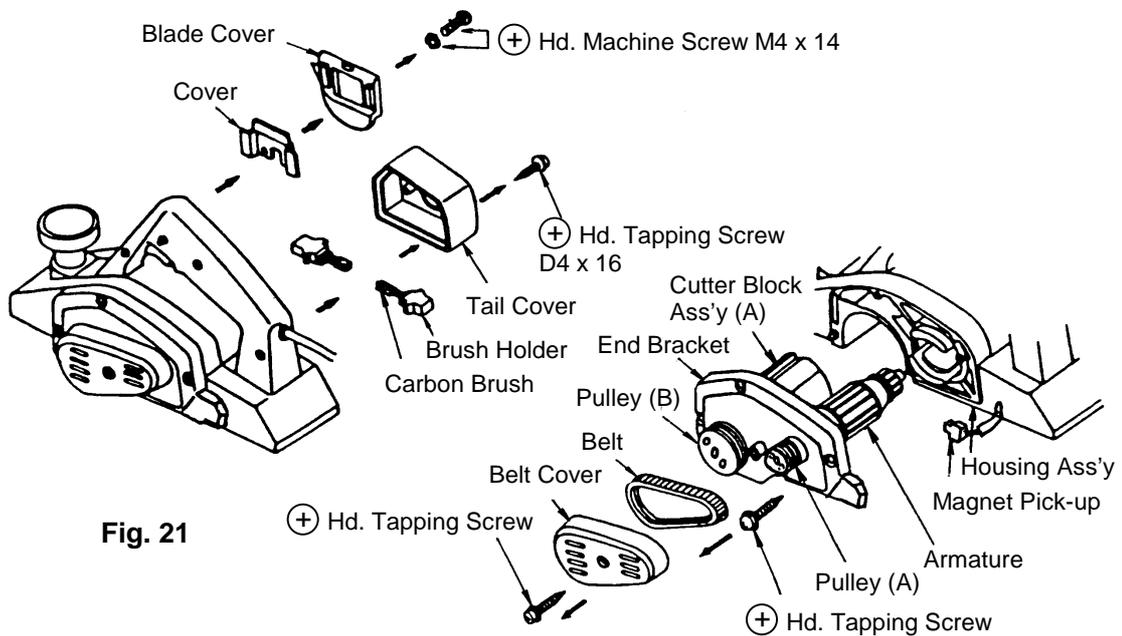


Fig. 21

Fig. 22

1-1-2. Pulley (A) and Pulley (B) Disassembly: (See Fig. 23, 24)

- (1) Slightly loosen the Belt (32) (30), and remove it from the pulleys by rotating them manually.
- (2) Pulley (A) (34) (32) (right-hand threaded) and Pulley (B) (33) (31) (lefthand threaded) are screwed onto the armature shaft and the cutter spindle respectively. To remove Pulley (A), fix the Armature (19) (19) firmly in a vise, and unscrew the pulley in a clockwise direction with a wrench.
- (3) To remove Pulley (B), fix the cutter block firmly in a vise, and unscrew the pulley in a counter-clockwise direction with the wrench. It is recommended that gloves or a thick rag should be used to prevent injury to fingers and hands.

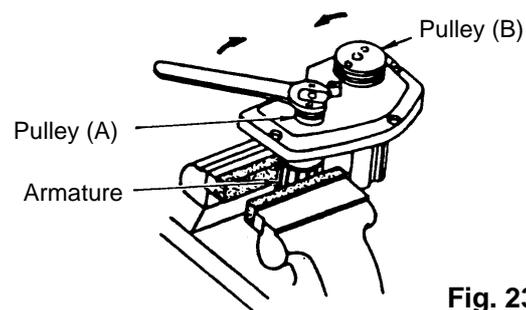


Fig. 23

1-1-3. Front Base Disassembly: (See Fig. 24)

Rotate the Knob ⑤ (⑤) counter-clockwise, and the Front Base ③ (③), Rubber Packing ② (②), and Spring ① (①) can then be disassembled.

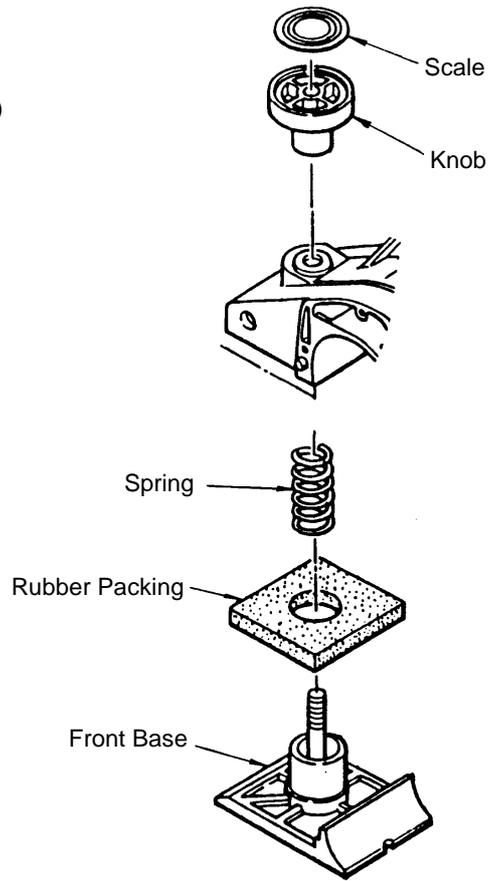


Fig. 24

1-1-4. Stator Ass'y Disassembly for Model P20SA:

(See Figs. 25 and 26)

- (1) After the Armature has been removed, loosen the three M4 x 25 (+) - Hd. tapping Screws ③⑩ and remove the Handle Cover ④⑩.
- (2) Loosen the two M4 x 65 (+) - Hd. Machine Screws ②⑩ which retain the two stator lead wires on the Switch ④② and disconnect the lead wires. Then, loosen the four D4 x 16 (+) - Hd. Tapping Screws ③⑨ which secure the Rear Base ③⑧ and remove the Rear Base ③⑧ and the Plate ③⑦. Finally, pull the two stator lead wires out from the handle section of the housing to permit easy removal of the stator.
- (3) After removing the stator Brush Terminal ②⑤ from the Brush Holder ⑨, loosen the two M4 x 65 (+) - Hd. Machine Screws ②⑩ that secure the Stator Ass'y ②④ to the Housing ⑦. Next, turn the end bracket connection side of the housing downward. Then, by lightly tapping the side surface with a wooden hammer while pushing the lead wires into the housing, the Stator Ass'y ②④ will slide easily out of the Housing ⑦.

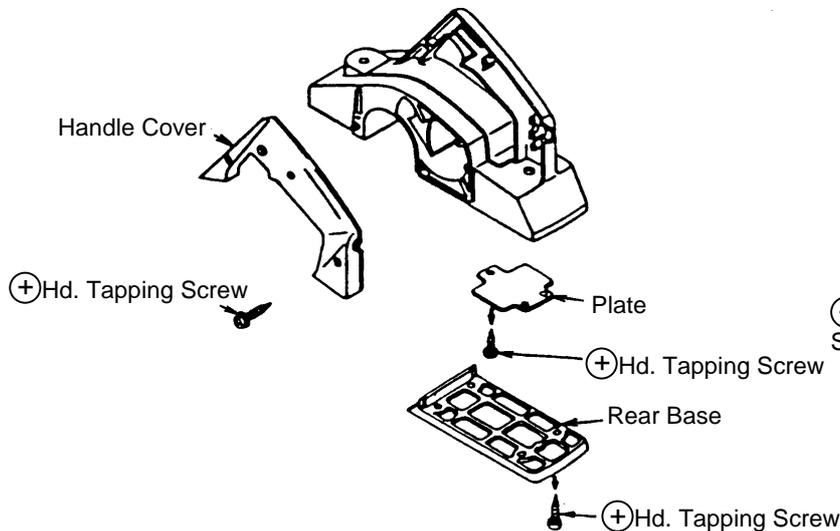


Fig. 25

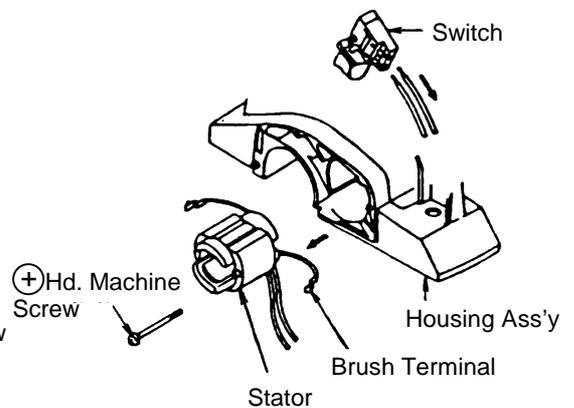


Fig. 26

1-1-5. Stator Ass'y and Control Circuit Ass'y Disassembly for the Model P20V:

(See Figs. 27, 28, and 29)

- (1) Loosen the four D4 x 16 (+) -Hd. Tapping Screws (44), and remove the Rear Base (43). Then, loosen the D4 x 16 (+) - Hd. Tapping Screws (16), and remove the Insulation Plate (42).
- (2) Cut off the three Connectors (40) as closely to the Connectors as possible so that the leadwires are not excessively shortened.

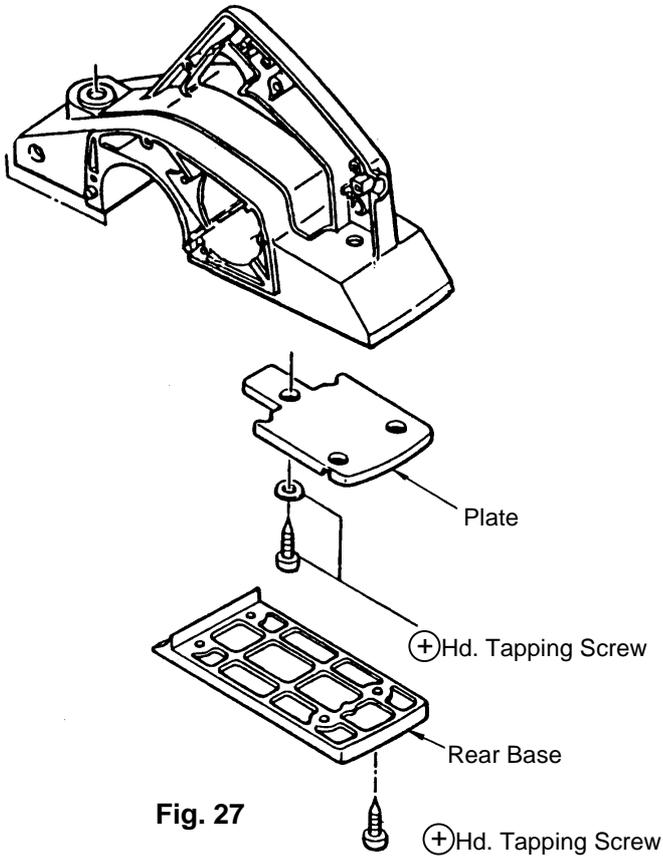


Fig. 27

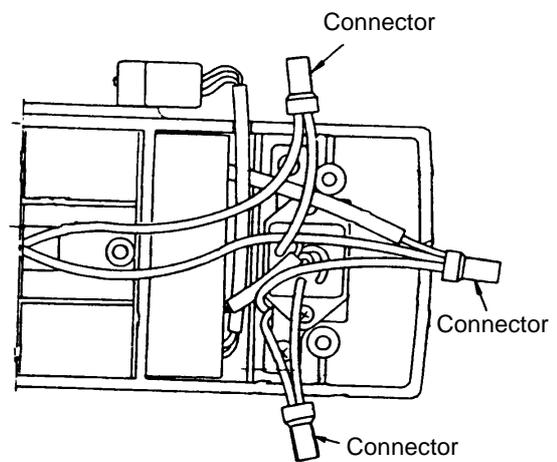


Fig. 28

- (3) Loosen the two M4 x 65 (+) - Hd. Machine Screws (20), and take out the Stator Ass'y (24).
- (4) Loosen the two D4 x 10 (+) - Hd. Tapping Screws (38), and take out the Control Circuit Ass'y (39).

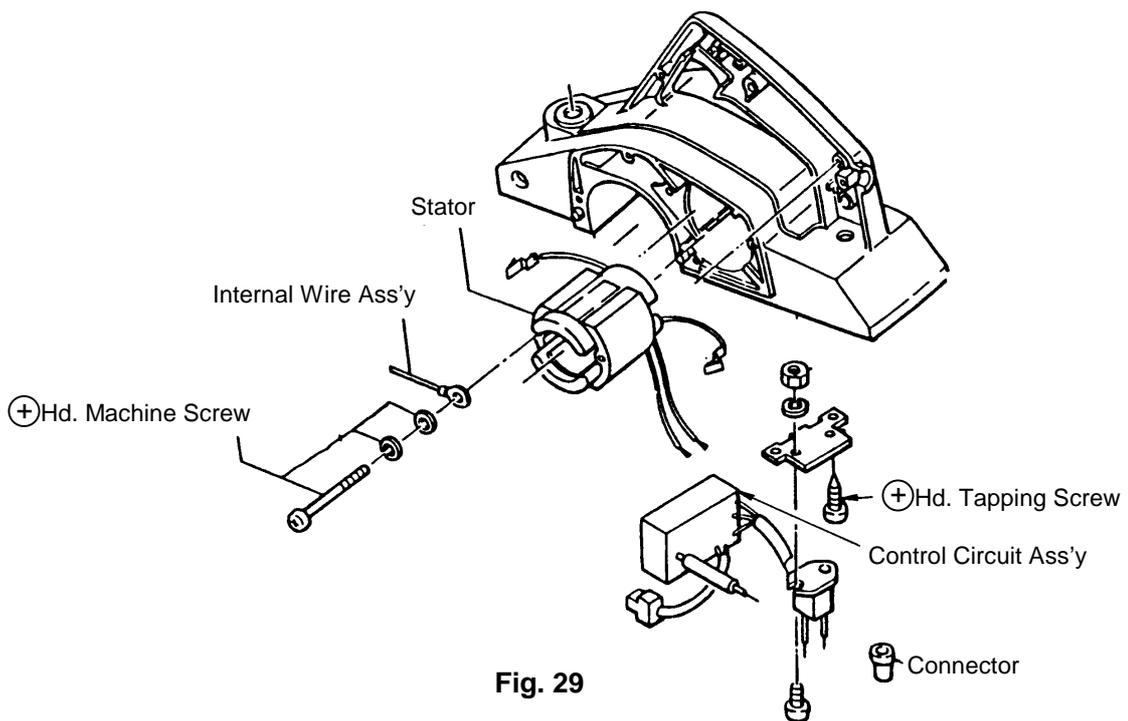


Fig. 29

1-2. Reassembly:

Reassembly can be accomplished by following the disassembly procedures in reverse. When a new (spare) Front Base is mounted, it is necessary to apply lubrication oil (Shell Machine Oil No. 68 is recommended) to the fitting portion where the Front Base fits the housing.

1-3. Insulation Test:

On completion of repair (in disassembled state), measure the insulation resistance and conduct dielectric strength test (Dielectric Strength Test).