



MODEL P 20DA

1. MAINTENANCE GUIDE

As suggestions for the use and general maintenance of the planer are covered in the Handling Instructions, only special suggestions relative to planer blade adjustment, disassembly, reassembly and repair are described here. Thorough attention in handling should be exercised at all times to carefully maintain the flatness and alignment between the front and rear surfaces of the bases, and to avoid possible injury when installing, adjusting or handling the planer blades. In addition, ensure without fail that the battery is removed from the main body prior to carrying out maintenance, cleaning, blade replacement, etc. The **[Bold]** numbers in the descriptions below and the circled numbers in the following figures correspond to the item numbers in the Parts List and exploded assembly diagram.

1-1. Planer Blade Height Adjustment

A. Double edged type (See Figs. 1 and 2.)

- (1) Loosen the two machine screws holding the blade, set plate (A) and set plate (B).
- (2) Make the bent surface of set plate (A) flush with wall surface (b) after contacting the blade tip with wall surface (a) of set gauge. Then, tighten them with the two screws.

B. Resharpenable type (optional accessory) (See Figs. 1 and 3.)

- (1) Loosen the two machine screws holding the blade and set plate (A).
- (2) Adjust the planer blade height in the same procedure as the above.

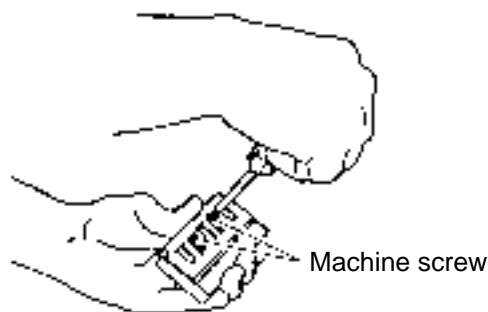


Fig. 1

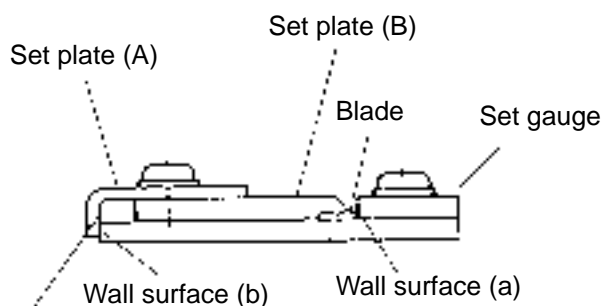


Fig. 2

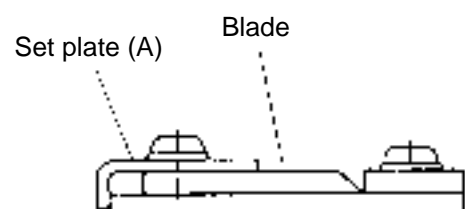


Fig. 3

2. REPAIR GUIDE

2-1. Disassembly

Before disassembly, be sure to remove the planer blades for safety and to protect the blades' tips.

2-1-1. Removal of the Motor with Fan [32], the Cutter Block Ass'y [18] and the End Bracket [29] (See Fig. 4.)

- (a) Remove the ten Tapping Screws D4 x 25 [16] which fix the End Bracket [29] and the Handle [43] to the Housing [33], then remove the Handle [43].
- (b) Remove the two Machine Screws M 3.5 x 6 [34], then remove the Internal Wires [39] [36] coming out of the motor from the Switch [38].
- (c) Remove the two Flat Hd. Tapping Screws D4 x 12 [13] and the Bearing Cover [12]. Put the handle of a box wrench against the end of the spindle of the Cutter Block Ass'y [18] and slightly tap the handle of the box wrench with a wooden hammer. The End Bracket [29] can then be removed together with the Motor with Fan [32] and the Cutter Block Ass'y [18].

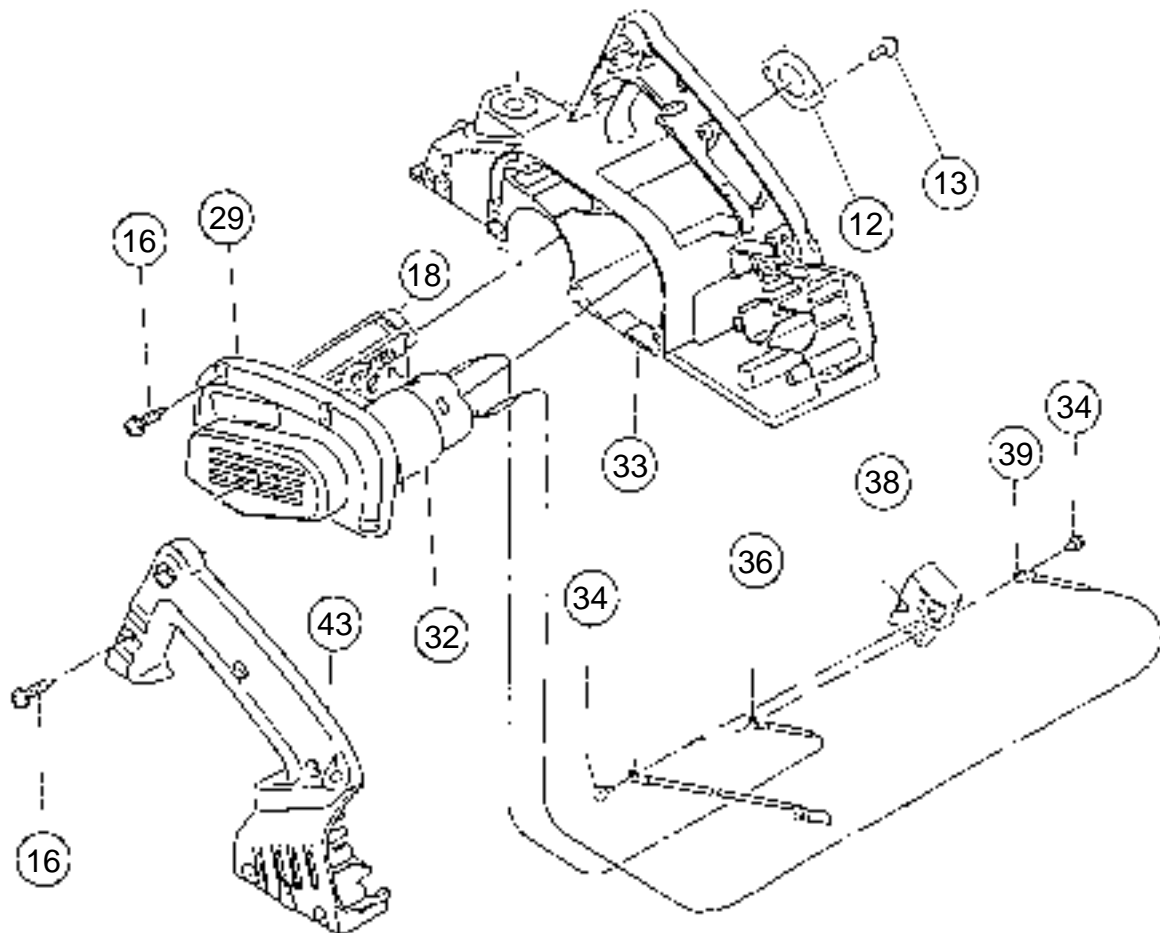


Fig. 4

2-1-2. Removal of Pulley (A) [28] and Pulley (B) [15] (See Fig. 5.)

- (a) Remove the one Tapping Screw D4 x 25 [16] which fixes Belt Cover (B) [26] to the End Bracket [29], then remove Belt Cover (B) [26].
- (b) Pulley (A) [28] (left-hand threaded) and Pulley (B) [15] (right-hand threaded) are screwed onto the motor shaft and the cutter spindle respectively. To remove Pulley (A) [28], fit a wrench to Pulley (A) [28] and put the blade of a flatblade screwdriver into the groove at the tip of the motor shaft, then turn the screwdriver counterclockwise.
- (c) To remove Pulley (B) [15], fix the Cutter Block Ass'y [18] securely in a vise and fit a wrench to Pulley (B) [15], then turn the wrench counterclockwise. It is recommended to wrap the Cutter Block Ass'y with a thick cloth to prevent injury to fingers.

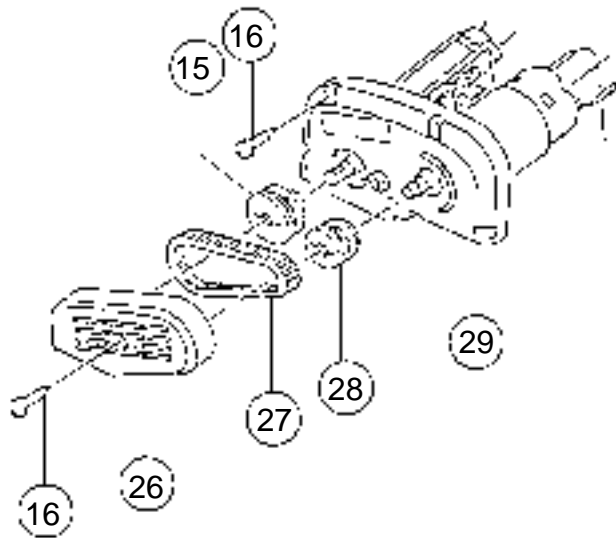


Fig. 5

2-1-3. Removal of the Cutter Block Ass'y [18] and the Motor with Fan [32] from the End Bracket [29] (See Fig. 6.)

- (a) After removal of Pulley (B) [15], tap the end of the spindle of the Cutter Block Ass'y [18] with a wooden hammer. Then the Cutter Block Ass'y [18] can be removed.
- (b) After removal of Pulley (A) [28], tap the end of the motor shaft slightly with a wooden hammer. Then the Motor with Fan [32] can be removed.

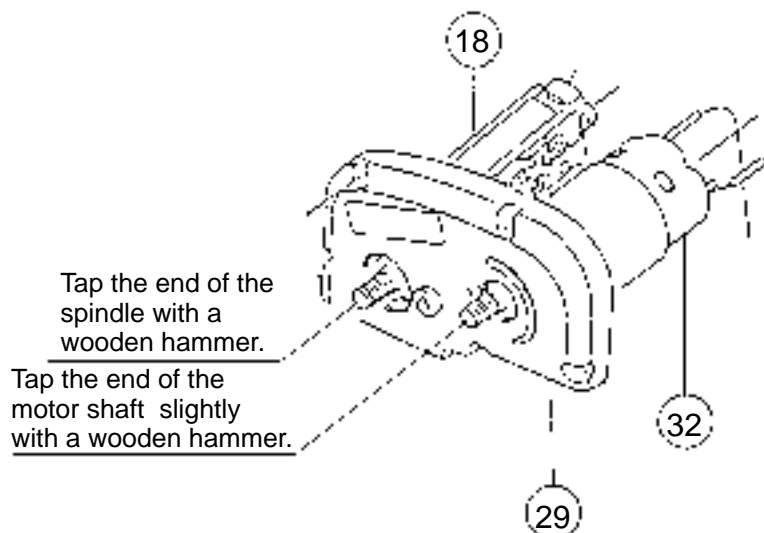


Fig. 6

2-1-4. Removal of the Front Base [3] and the Rear Base [47] (See Fig. 7.)

- (a) Turn the Knob Ass'y [7] counterclockwise, then the Front Base [3] can be removed.
- (b) Remove the four Tapping Screws D4 x 16 [5] which fix the Rear Base [47] to the Housing [33], then the Rear Base [47] can be removed.

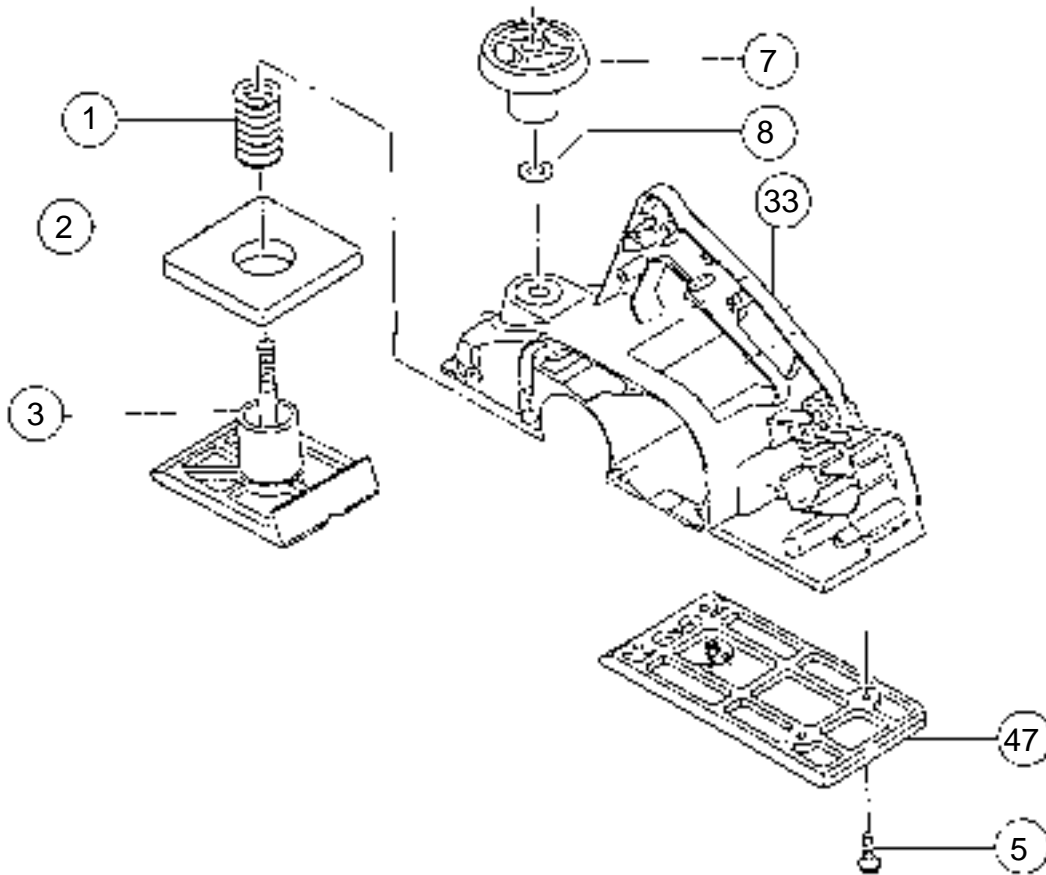


Fig. 7

2-2. Reassembly

Perform reassembly in the reverse order of disassembly procedures, observing the special directions given below.

2-2-1. Reassembly of Wiring Ass'y

- (a) Be sure to perform wiring according to the wiring diagram (Fig. 11).
- (b) Connect the Internal Wire [39] (red) to the plus terminal of the motor and the Internal Wire [36] (black) to the minus terminal of the motor with solder. Refer to Fig. 9 for the plus and the minus terminals of the motor.

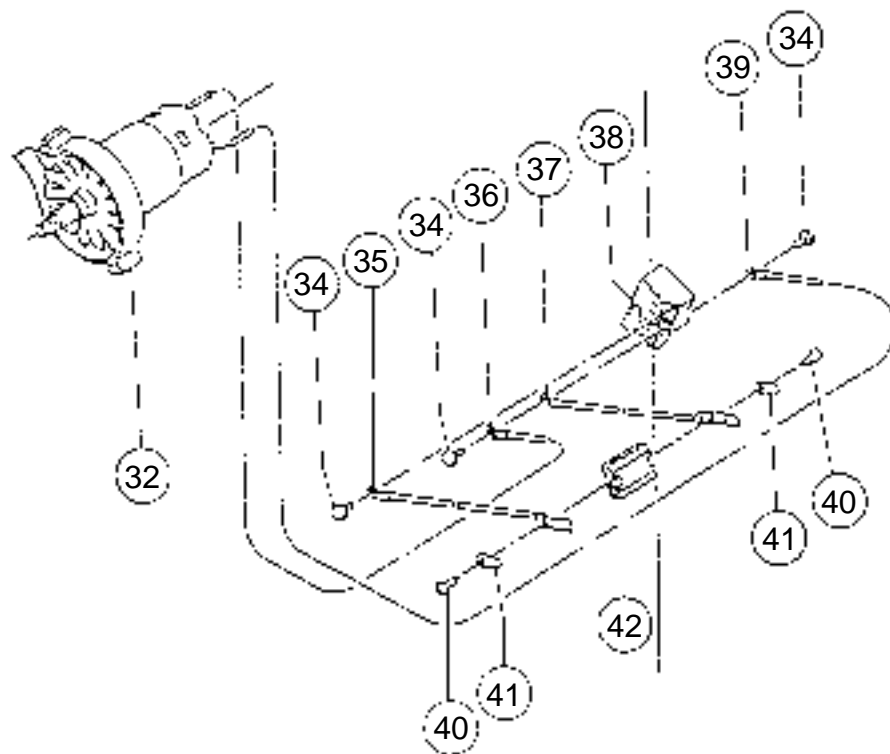


Fig. 8

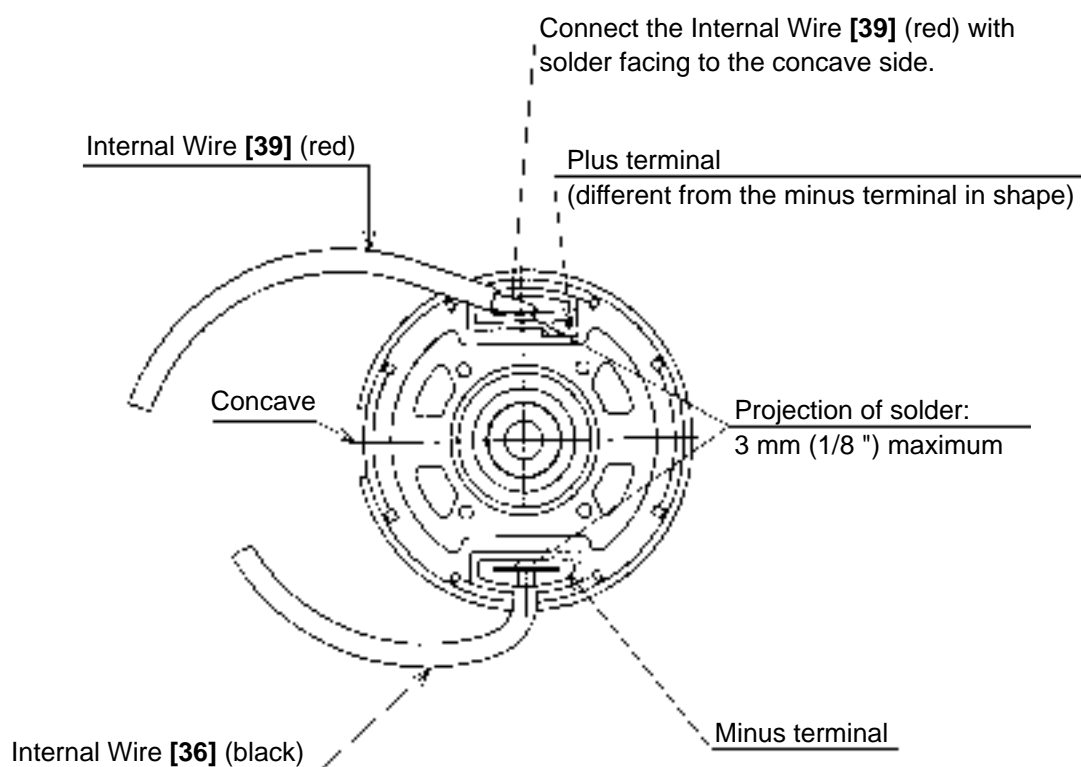


Fig. 9

(c) Inserting positions of each internal wire are shown in Fig. 10. Be careful not to raise or catch the internal wires.

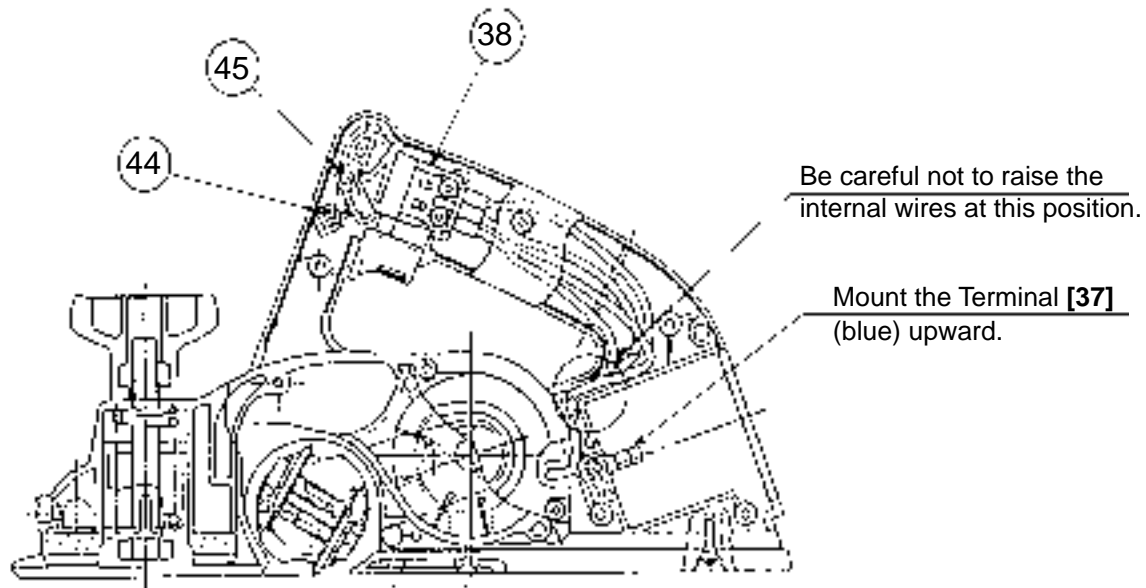


Fig. 10

(d) Be sure to mount the Knob [45] and Spring (F) [44].

2-2-2. Checking after Reassembly

Check the following items after reassembly.

- (a) Check that the Knob [45] works smoothly and the trigger of the Switch [38] can be securely locked and released.
- (b) Check that the brake is applied when turning the switch off.
- (c) Check that the flatness of the base is ± 0.15 mm maximum (middle concave).

2-3. Wiring Diagram

Perform wiring correctly as shown below. Be careful to avoid improper wiring which could cause faulty rotation, reverse rotation or faulty braking.

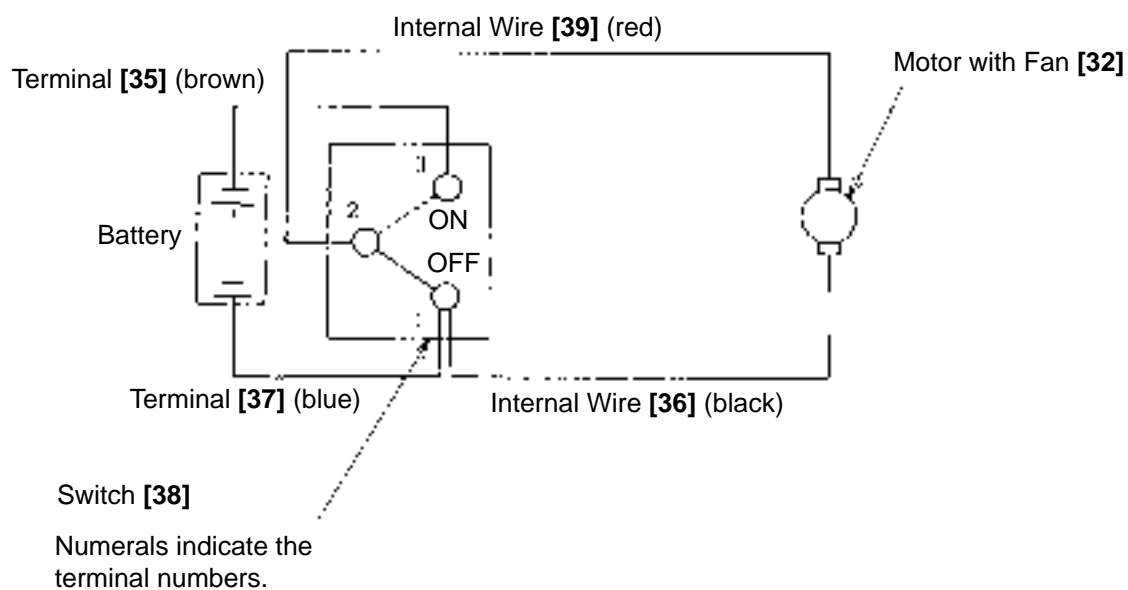


Fig. 11

2-4. Screw Tightening Torque

Machine Screw M3.5 x 6 [34]	6 ± 1.5 kg·cm
Tapping Screw D4 x 10 [40]	20 ± 5 kg·cm
Tapping Screw D4 x 16 [5]	20 ± 5 kg·cm
Tapping Screw D4 x 25 [16]	20 ± 5 kg·cm
Flat Hd. Tapping Screw D4 x 12 [13]	20 ± 5 kg·cm
Tapping Screw D4 x 12 [31]	20 ± 5 kg·cm
Machine Screw M4 x 5 [23]	18 ± 4 kg·cm
Bolt M 6 x 18 [25]	100 — 150 kg·cm
Pulley (A) [28]	40 ± 5 kg·cm
Pulley (B) [15]	80 ± 10 kg·cm

2-5. Precautions in Disassembly and Reassembly of Battery Charger

Refer to the TECHNICAL DATA AND SERVICE MANUAL for precautions in disassembly and reassembly of the Model UC 14YF or UC 14YF2 Battery Charger.

3. STANDARD REPAIR TIME (UNIT) SCHEDULES

MODEL	Variable		10	20	30	40	50	60 min.
	Fixed							
P 20DA	General Assembly	Work Flow						
			Front Base Knob Spring Rubber Packing Screw Plate					
			Rear Base					
			Belt Pulley (A) Pulley (B)	End Bracket Motor with Fan Cutter Block Ass'y Ball Bearing (6200VV) x 2 Ball Bearing (6000VV)				
					Housing			
			Switch Terminal x 2					
			Blade Holder Bolt Planer Blades Back Blade					