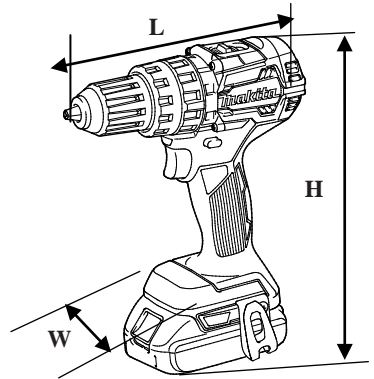


TECHNICAL INFORMATION

Model No. ▶ DHP484

Description ▶ Cordless Hammer Driver Drill



CONCEPT AND MAIN APPLICATIONS

Model DHP484 is a Cordless Hammer Driver Drill powered by 18V Li-ion battery and developed based on the current model DHP480.

The main features and benefits are:

- Aluminum gear housing creates the impression of rigidity of the machine.
- More compact
- Higher speed

Dimensions: mm (")	
Length (L)	182 (7-1/8)
Width (W)	79 (3-1/8)
Height (H)	244 (9-5/8)*1
	261 (10-1/4)*2

▶ Specifications

*1 With Battery BL1815N, BL1820/B

*2 With Battery BL1830(B), BL1840(B), BL1850(B), BL1860B

Specifications		Model	DHP484
Battery	Voltage: V		18
	Capacity: Ah		1.5, 2.0, 3.0, 4.0, 5.0, 6.0
	Energy capacity: Wh		27, 36, 54, 72, 90, 108
	Cell		Li-ion
	Charging time (approx): min		15, 24, 22, 36, 45, 55 with DC18RC
Max output (W)			450
No load speed : min ⁻¹ = rpm	High		0 - 2,000
	Low		0 - 500
Impacts per minute: min ⁻¹ = ipm	High		0 - 30,000
	Low		0 - 7,500
Capacity of drill chuck: mm (")			1.5 (1/16) -13 (1/2)
Capacity	Masonry		13 (1/2)
	Steel		13 (1/2)
	Wood		38 (1-1/2)
Torque setting			21 stage + drill mode
Clutch torque: N·m (in·lbs)			1.0 - 5.0 (9 - 44)
Max lock torque: N·m (in·lbs)			60 (530)
Max tightening torque: N·m (in·lbs)	Hard joint		54 (480)
	Soft joint		30 (270)
Electric brake			Yes
Mechanical speed control			Yes (2 stage)
Variable speed control by trigger			Yes
Reverse switch			Yes
LED job light			Twin
Vibration level			8.0 m/s ²
Weight according to EPTA-Procedure 01/ ver.2.1: kg (lbs)			1.6 (3.5)*1 or 1.8 (4.0)*2

▶ Standard equipment

+ —Bit2- 45
Belt clip, Battery*3, Charger*3
Plastic carrying case*3
Battery cover*4

*3 Battery, charger and plastic carrying case are not supplied with “Z” model.

*4 Supplied with the same quantity of extra Battery.

Note: The standard equipment may vary by country or model variation.

▶ Optional accessories

Drill bits for masonry	Battery protectors
Drill bits for steel	Li-ion Battery BL1815N
Drill bits for wood	Li-ion Battery BL1820(B)
Driver bits	Li-ion Battery BL1830(B)
Bit holder	Li-ion Battery BL1840(B)
Bit piece	Li-ion Battery BL1850(B)
Belt clip	Li-ion Battery BL1860B

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2 CAUTION

Repair the machine in accordance with “Instruction manual” or “Safety instructions”.

Follow the instructions described below in advance before repairing:

- Wear gloves.
- In order to avoid wrong reassembly, draw or write down where and how the parts are assembled, and what are the parts.
It is also recommended to have boxes ready to keep disassembled parts by group.
- Handle the disassembled parts carefully. Clean and wash them properly.

3 NECESSARY REPAIRING TOOLS

Code No.	Description	Use for
1R016	Hex head bit H5-150	Removing Rotor
1R263	Bearing extractor	Removing Rotor
1R298	Hex bar 10 with Square socket	Removing / Drill chuck
1R359	Chuck removing tool	Removing Drill chuck
1R402-A	Digital tester	Diagnosing Controller
	Hex wrench 10	Removing / assembling Drill chuck

4 FASTENING TORQUE

	Portion	Part description	Fastening torque (N·m)
1	Gear assembly ↔ Housing R,L	Tapping screw 3x20	0.8 - 1.2
2	Controller unit ↔ Stator	Flat head screw M3x6	0.4 – 0.6
3	Controller print board ↔ Stator	Tapping screw PT 2x6	0.40 – 0.55

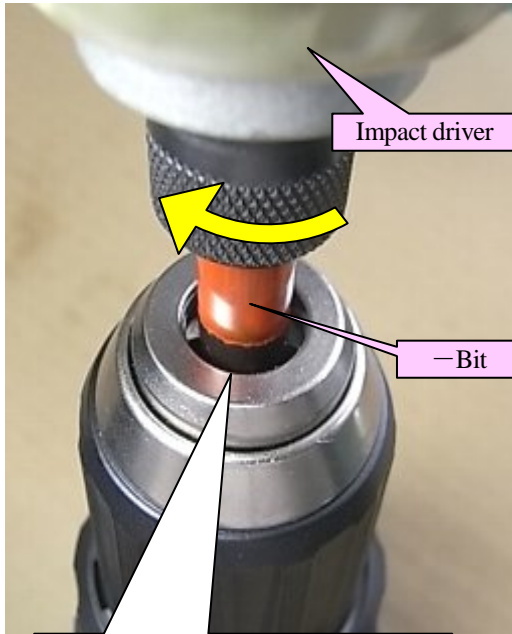
5 REPAIR

5-1 Drill chuck

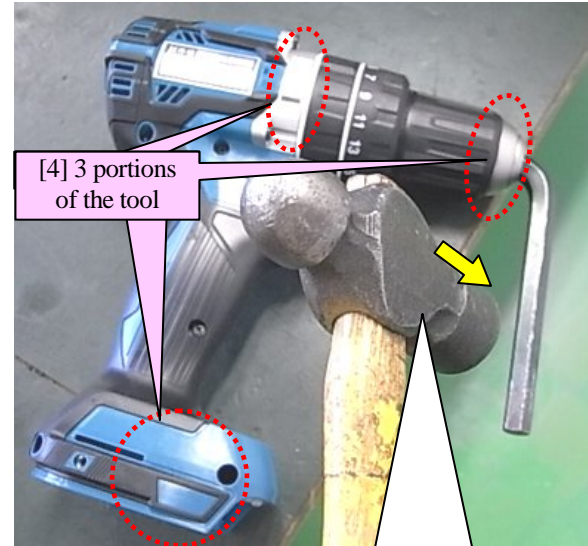
5-1-1 Disassembling

Fig. 5-1-1-1

- [1] Remove M6x22(-) Flat head screw by turning it clockwise with Impact driver.
- [2] Set Speed change lever to low speed mode designated with 1.
- [3] Fix the shorter leg of Hex wrench 10 in the jaws of Drill chuck.
- [4] In order not to break Spindle, be sure to put the three circled portions of the tool on a workbench.



If you tighten claws of Drill chuck with a round-bit in advance, stable operation is available.



[5] Hit the other end of Hex wrench 10 with a Plastic hammer to remove Drill chuck while pushing above 3 portions.



Fig. 5-1-1-2

- [6] If it is difficult to remove Chuck, follow the steps below.
- [7] Fix 1R298 in Drill chuck.
- [8] Insert 1R298 into DTW450.
- [9] Hold the machine body of DHP484 firmly.
- [10] Push the upside of Switch to turn 1R298 Counterclockwise.

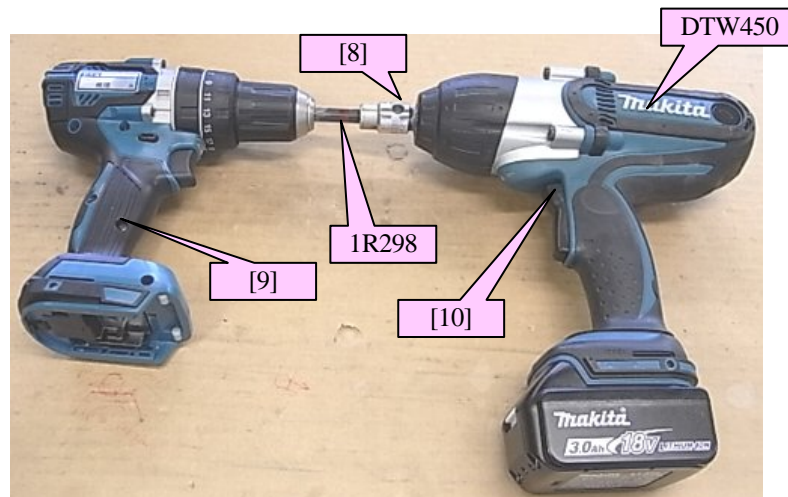
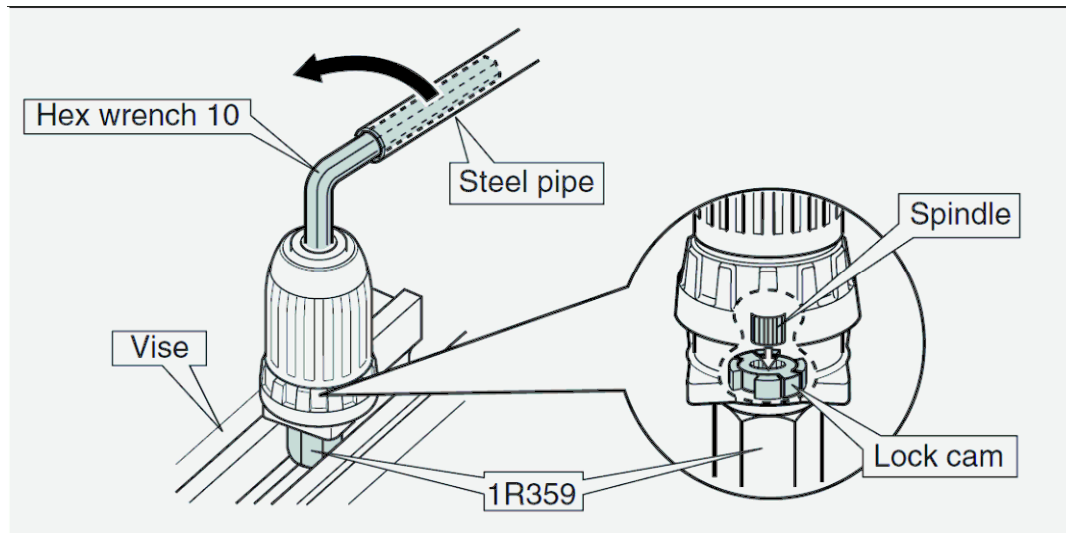


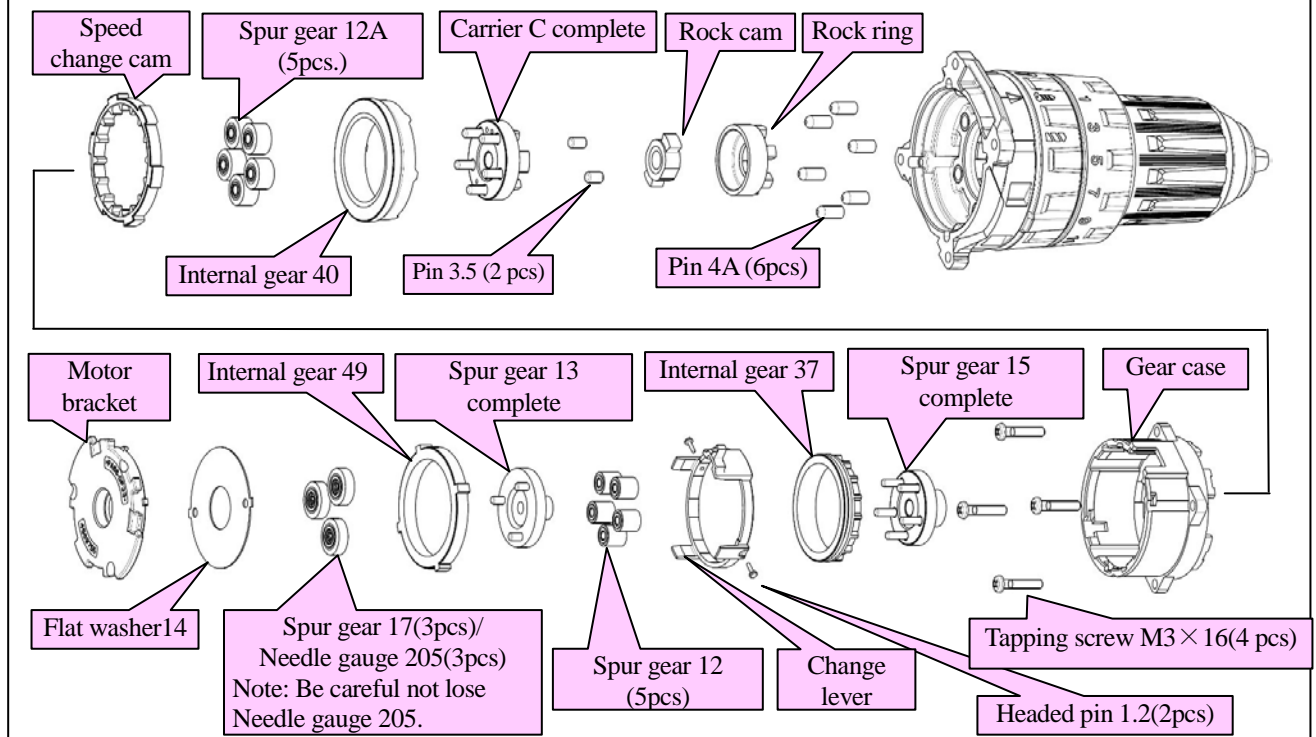
Fig. 5-1-1-3

[11] Use 1R359 to remove Keyless drill chuck if it cannot be removed in the previous step.



[12] The components of Gear assembly are as follows.

[13] Apply a small amount of Makita grease FA No.2 when you dismantle Gear assembly, if needed.



5-1-2 **Assembling**

Fig. 5-1-2-1

[1] Tighten four M3X16 Tapping screw by using DF010D with Clutch position No.4.

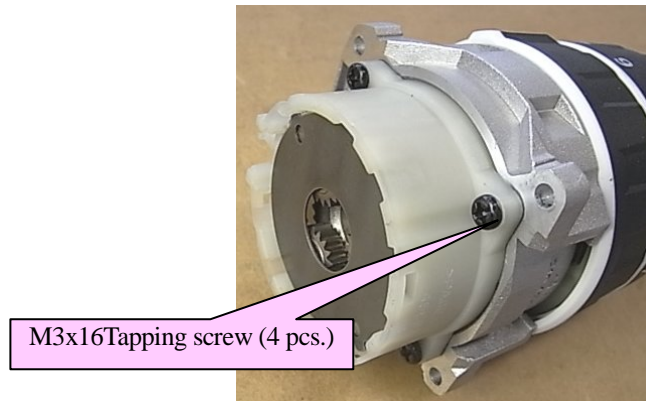
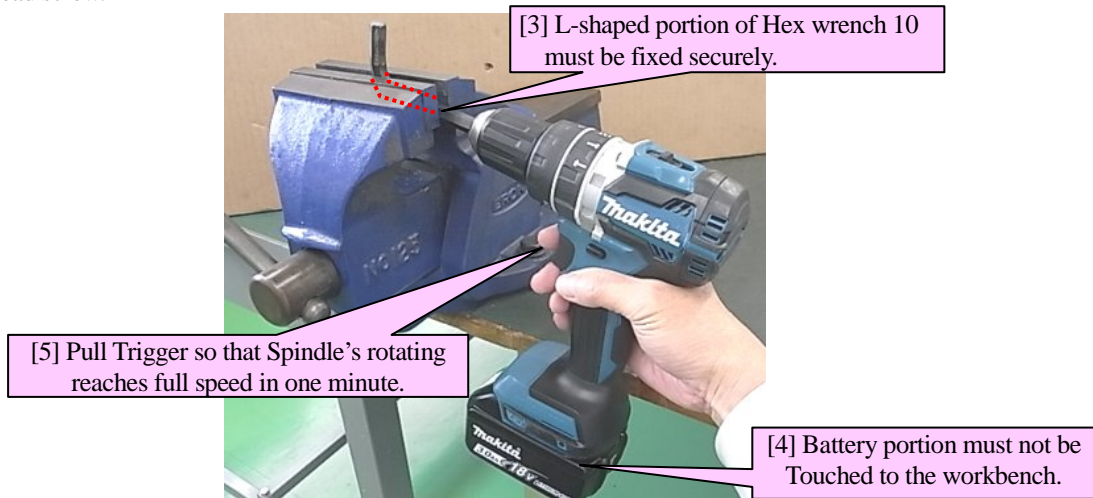


Fig. 5-1-2-2

- [2] Turn Drill chuck clockwise until it seats on the end of the threaded portion of Spindle.
- [3] Fix Hex wrench 10 as shown below.
- [4] Housing R must be touched on the side surface of workbench.
- [5] Pull Switch trigger slowly with Drill mode/Speed change 1/Forward clockwise until Spindle is locked.
- [6] Apply adhesive (Loctite 272) to the threaded portion when re-using the removed M6x22 Flat head screw.



5-2 Gear Assembly, Motor, Switch, Controller, Stator

5-2-1 Disassembling

Fig. 5-2-1-1

- [1] Disassemble Keyless drill chuck according to process 5-1-1 beforehand.
- [2] Loosen two 3x16 Tapping screws and pull out Rotor from Rear cover by hand.

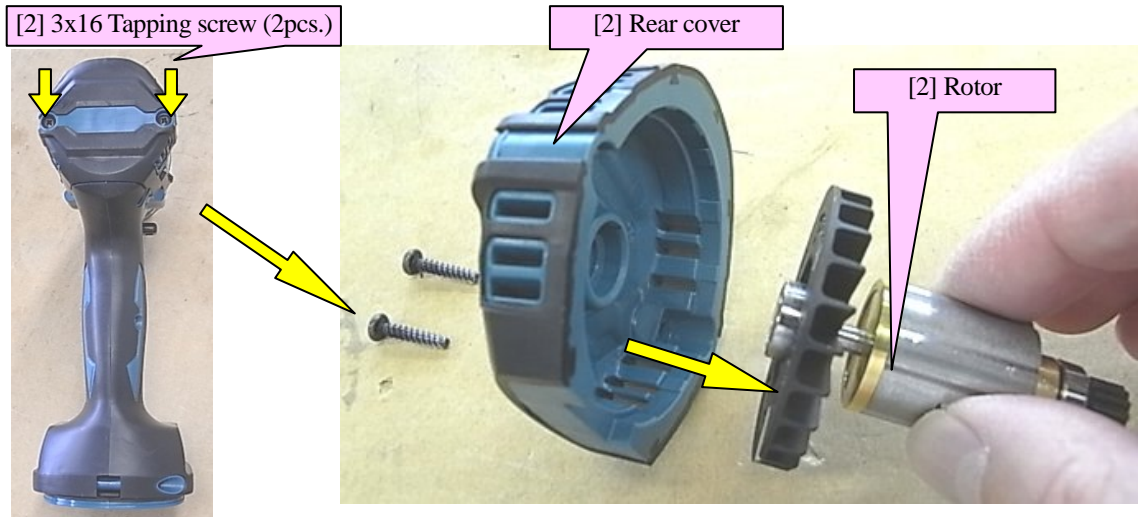


Fig. 5-2-1-2

- [3] If it is difficult to pull out by hand, fix 1R016-A to Drill chuck and hold it by a vice.
- [4] Levering up Rotor with two 1R263 pry Rotor off with two 1R263 to pull out.



Fig. 5-2-1-3

- [5] Remove 1R016-A and remove Housing R by loosening seven 3x16 Tapping screws and four 3x20 Tapping screws.
- [6] Now Switch, Controller and Stator can be repaired.

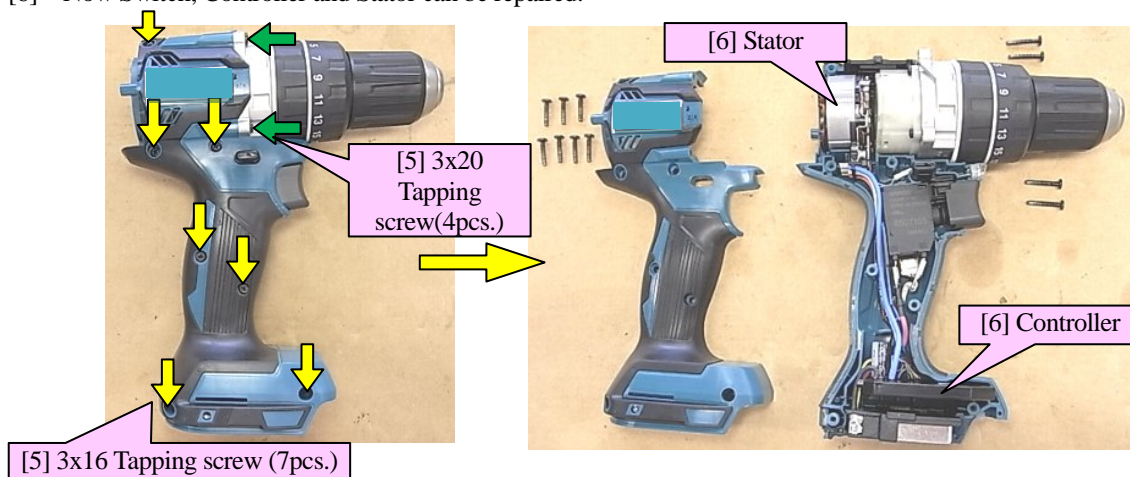


Fig. 5-2-1-4

[7] Remove Gear assembly, Speed change lever from Housing L at the same time.

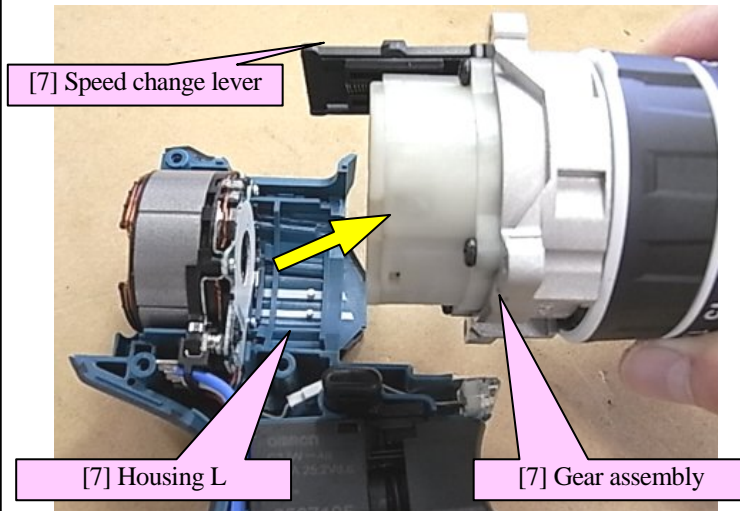
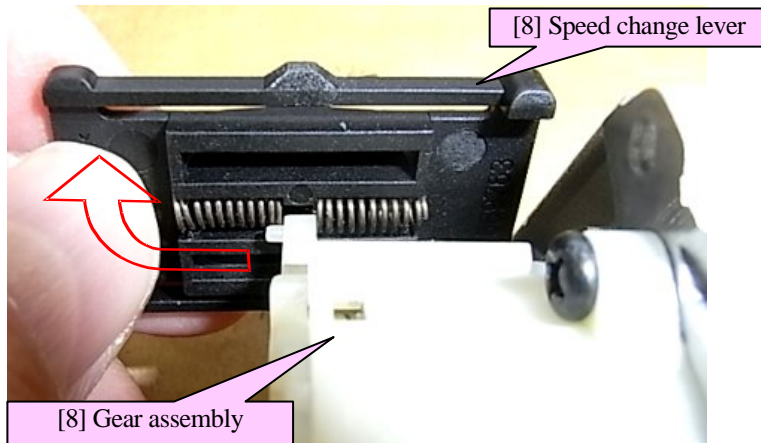


Fig. 5-2-1-5

[8] Remove Speed change lever from Gear assembly.

Note:



5-2-2 **Assembling**

Fig. 5-2-2-1

- [1] Mount Stator to Housing L by fitting the notch of Stator to the projected portion of Housing set L.

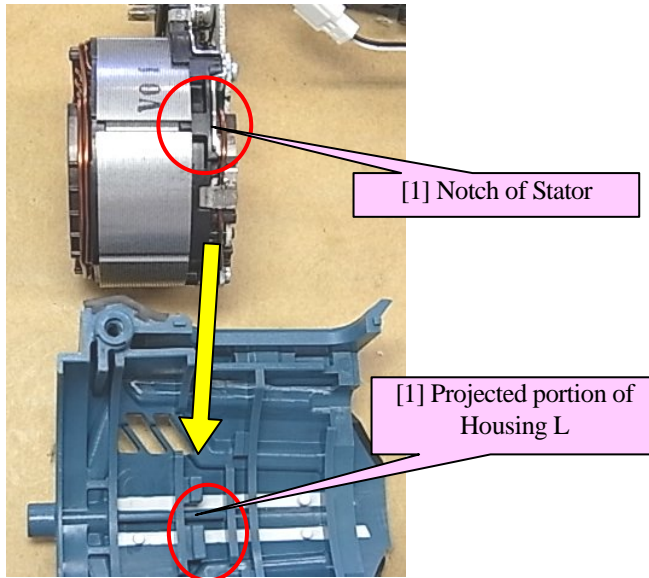


Fig. 5-2-2-2

- [2] Make sure that the side surface of Stator is fitted in the inside of Housing set L's rib
- [3] Assemble Speed change lever by referring **Fig. 5-2-3-1 of page 12/16**
- [4] Fit the protruded portion of Gear assembly to the concave portion of Housing L.

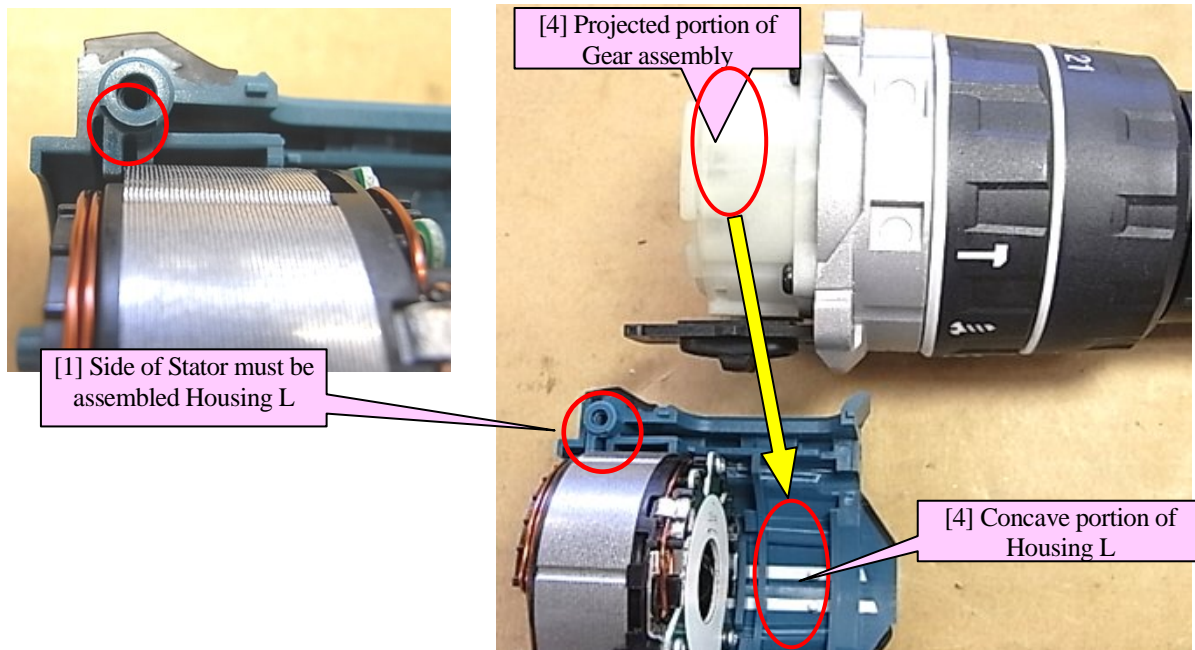


Fig. 5-2-2-3

- [5] Fit the concave portion of F/R change lever to the projection of Switch..
- [6] Fasten Housing R with seven 3x16 Tapping screw as shown below.

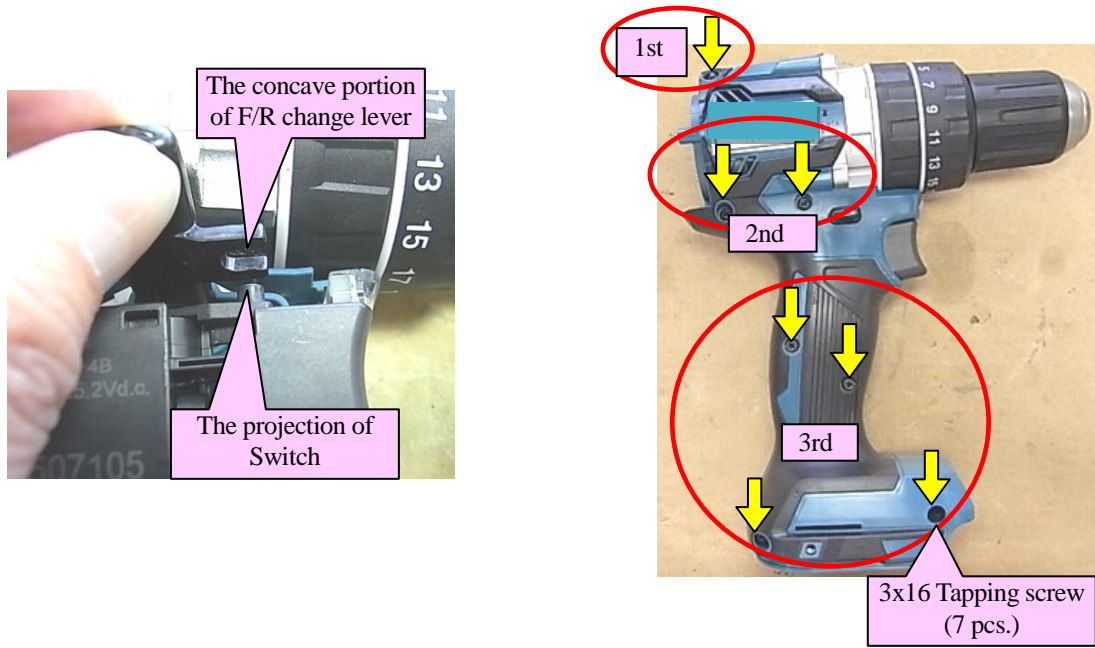


Fig. 5-2-2-4

- [7] Caution for Handling of Rotor
When handling or storing multiple Rotors, be sure to keep a proper distance between Rotors.
Because Rotor has strong magnetic force, failure to follow this instruction could result in:
 - Finger injury caused by pinching between Rotors pulling each other
 - Magnetic loss of Rotors or damage on the magnet portion of Rotor



Fig. 5-2-2-5

- [8] Inserting Rotor into Stator
Note:
 - Be careful not to pinch your fingers between Fan and Housing because Rotor has strong magnetic force.
 - Once Rotor has been inserted, do not force it into Stator any further or you will break Controller print board.

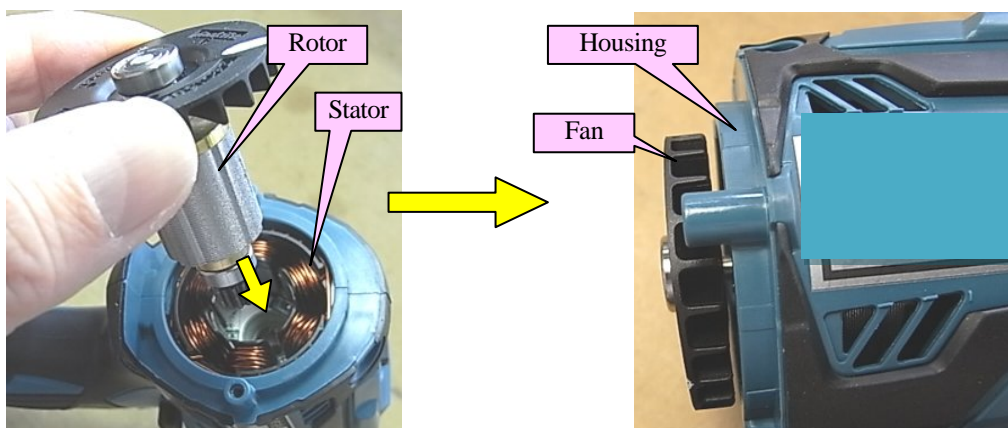


Fig. 5-2-2-6

[9] Assemble Rear cover to Housing with two 3x16 Tapping screws.

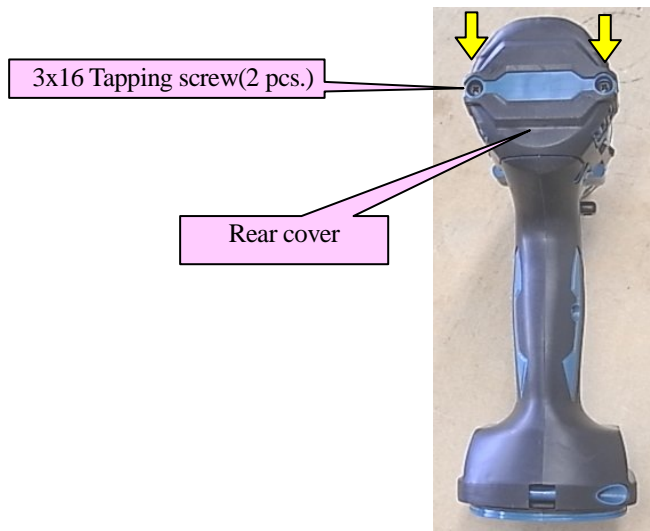
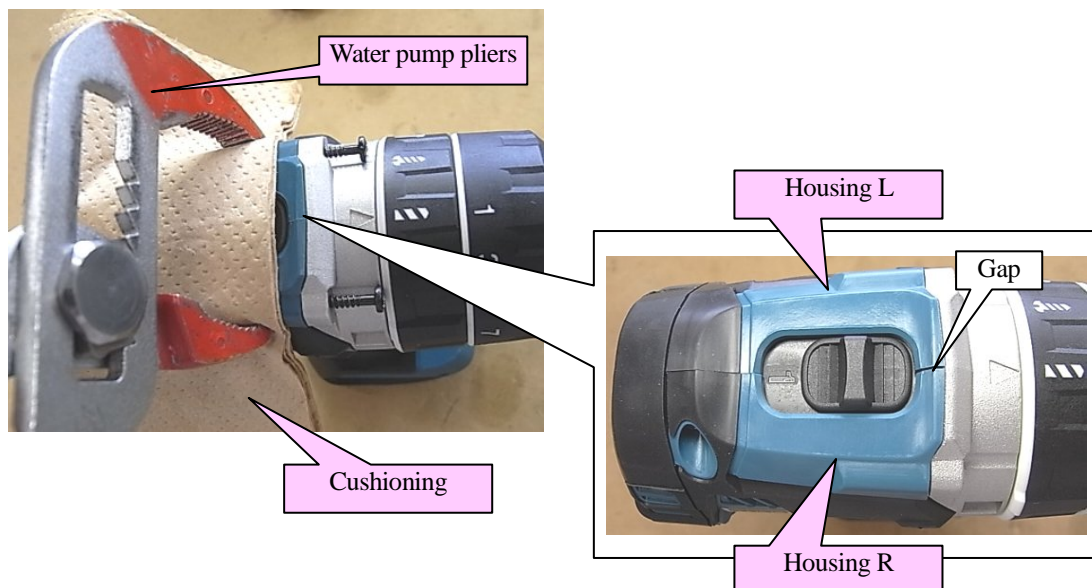


Fig. 5-2-2-7

[10] Fasten Motor housing portion and Gear assembly with four 3x20 Tapping screws by gripping. Housing L and Housing R firmly with Water pump pliers etc.

Note: Be careful not to damage Housing and not to make a gap between Housing R and L.



5-3 Change lever assembly

5-3-1 Assembling

Fig. 5-3-1-1

- [1] Make sure that two Compression spring 4 are securely mounted as shown below.
Hook one roll of each Spring to the notch of Speed change lever.

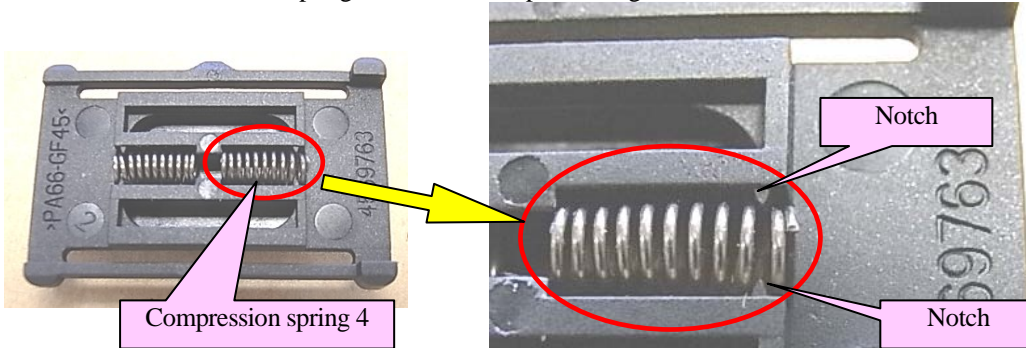
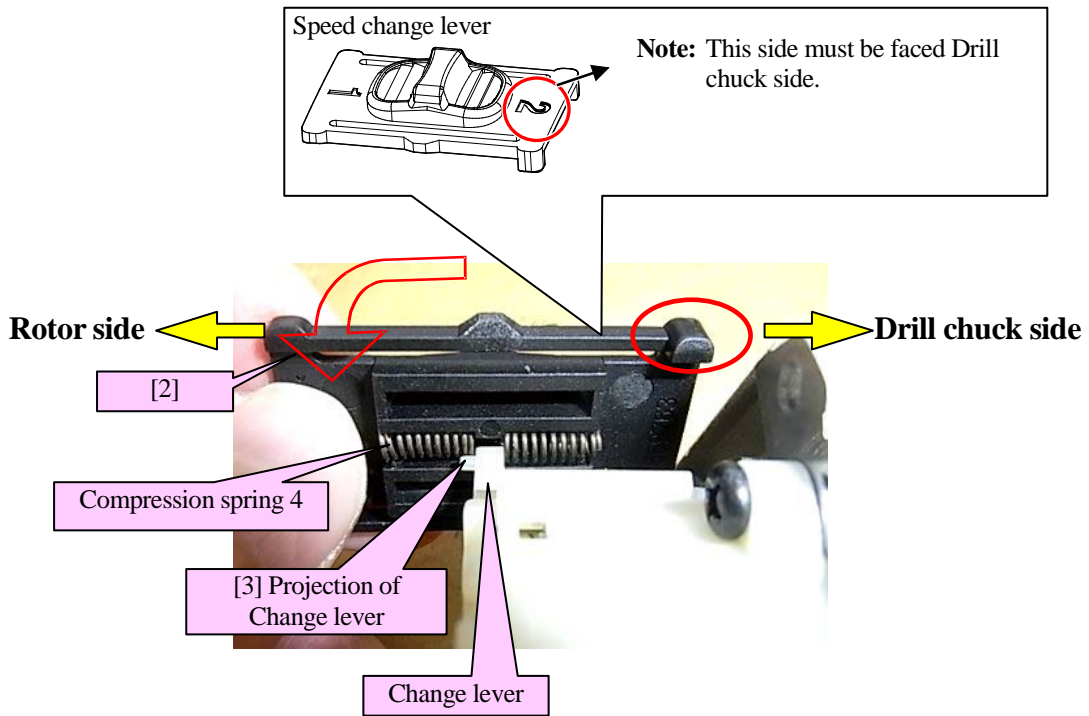
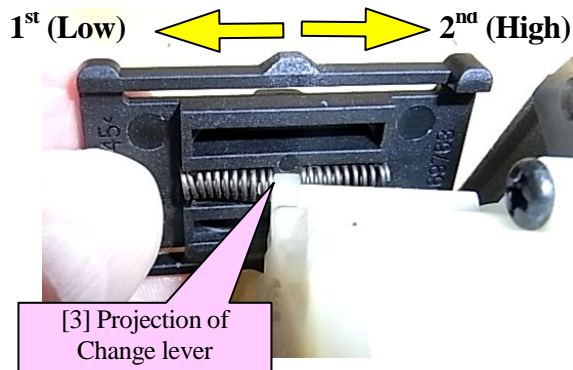


Fig. 5-3-1-2

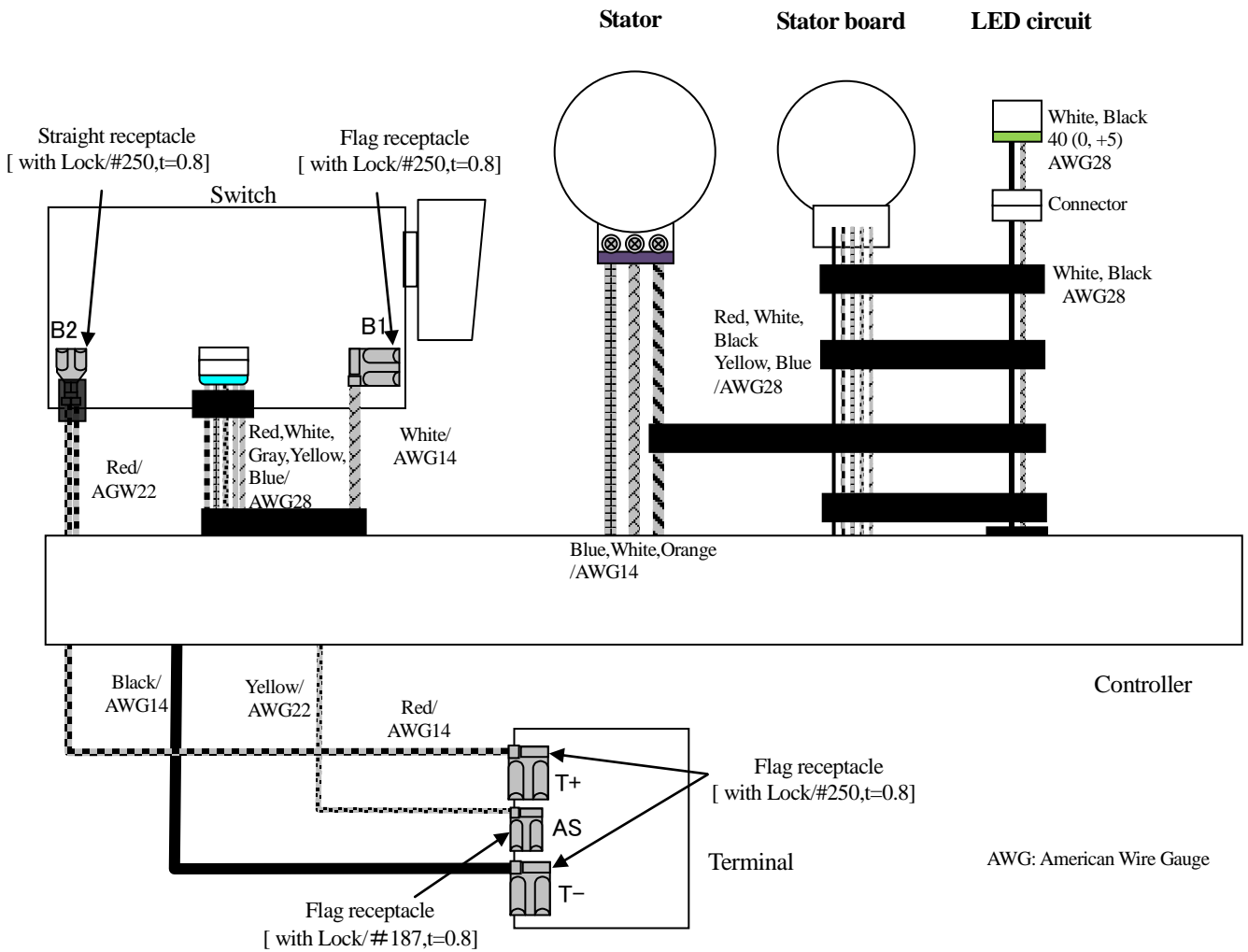
- [2] Push Compression spring 4 to Drill chuck side.
- [3] Push Speed change lever to Rotor side, and insert the projection of Change lever into Compression spring 4.



- [4] Shift Speed change lever in either direction.



6 Circuit diagram



- [1] Remove Sensor board from Stator by removing three PT 2x6 Tapping screws with No.1 Phillips screwdriver.

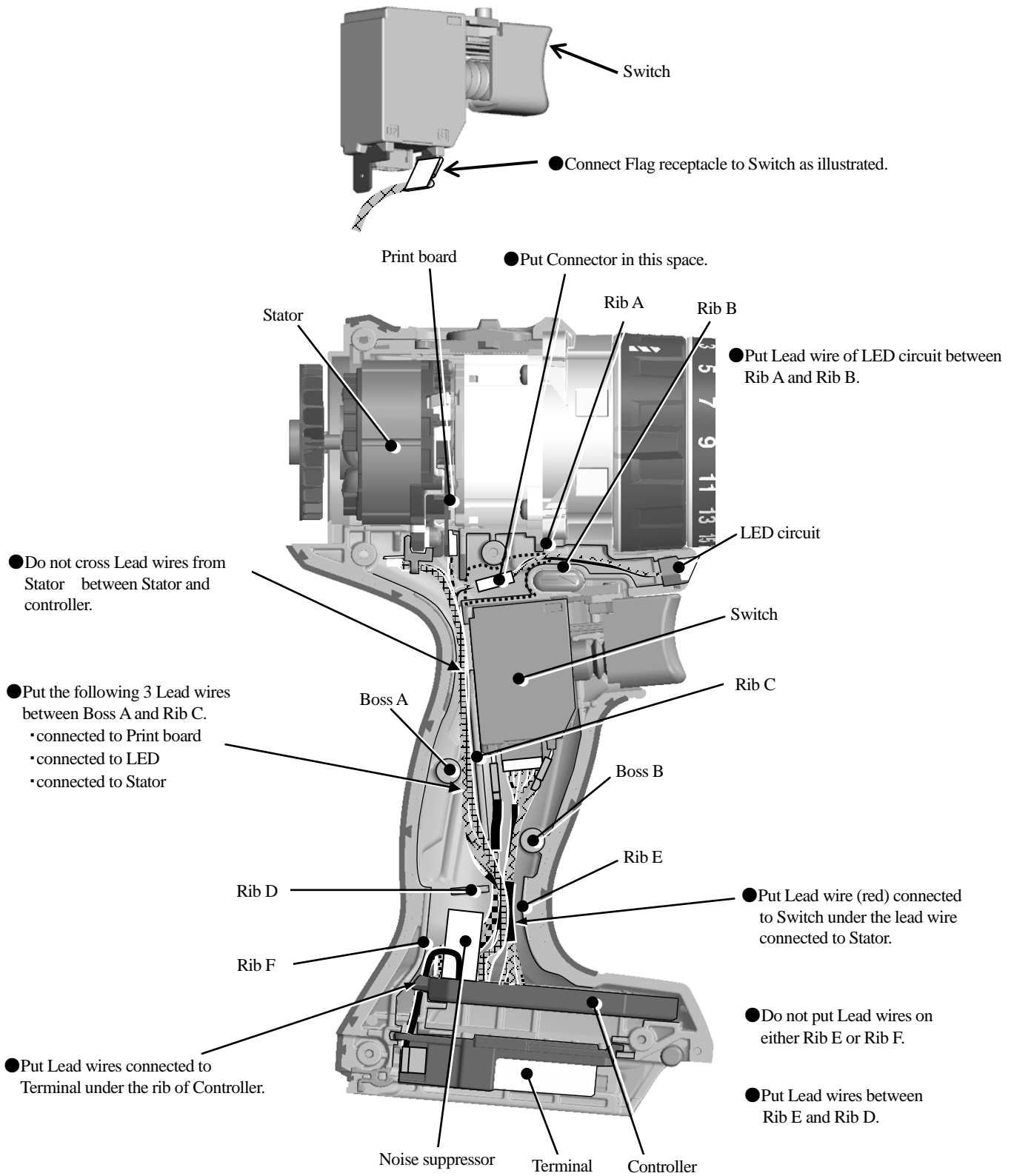
PT 2x6 Tapping screw (3 pcs.)

Sensor board
- [2] Remove three M3x6 Flat head screws with No.1 Phillips screwdriver.

M3x6 Flat head screw (3 pcs.)
- [3] Remove Terminal unit with a slotted screwdriver by releasing the hook.

Terminal unit

7 Wiring diagram



8 Troubleshooting

Whenever you find any trouble in your machine, first, refer to this list to check the machine for solution.

8-1 Note in Repairing

- (1) Use the full charged battery which has the star mark.
- (2) When Housing is disassembled, check the conditions of the electrical parts (Connectors, Lead wires, Switches, etc.), Rotor, Stator, Gear section, etc.
- (3) Do the running test in Soft mode (when the trigger is being pulled just a little) to check the following functions by repeating 10 times;
 - F/R change lever • Switch plate • Variable speed control trigger

8-2 Test for recognizing the short-circuit of FET (Field Effect Transistor) on controller

Trouble on Controller can be checked with Tester as follows.

Fig. 8-2-1

- [1] Set Digital tester (1R402-A) in the Diode mode.



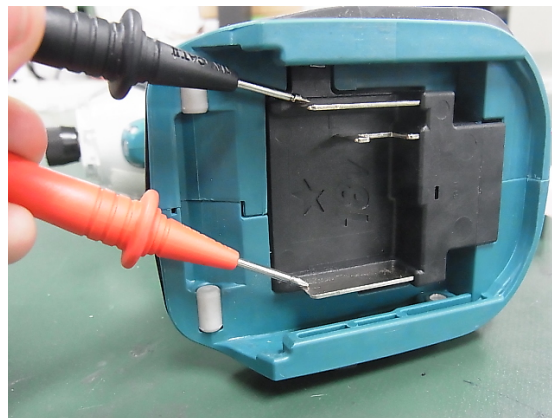
Fig. 8-2-2

- [2] Remove the battery, and pull Switch trigger and hold it at "ON position" with tape or the like.



Fig. 8-2-3

- [3] Contact Black probe (a) with (+) Terminal (b).
Contact Red probe (c) with (-) Terminal (d).
Wait until the figure on Tester gets stable.
Note: Be careful not to reverse them. The reversed contacts could spoil the test.



- [4] Controller is in order if Tester indicates 0.7V ~ 0.9V. If Tester indicates 0 V~0.4 V approx., Controller is broken. Replace it with a new one.

8-3 Flowchart of Troubleshooting

☐ Check the items from the top of the following list. (Description of the item is referred to Circuit diagram in Fig. 6-1.)
After corrective action, return to the start of Troubleshooting and re-check again.

