

# T ECHNICAL INFORMATION



PRODUCT

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**Model No.** ▶ MDF320D/ MDF330D

**Description** ▶ Cordless driver drills 9.6V/ 12V

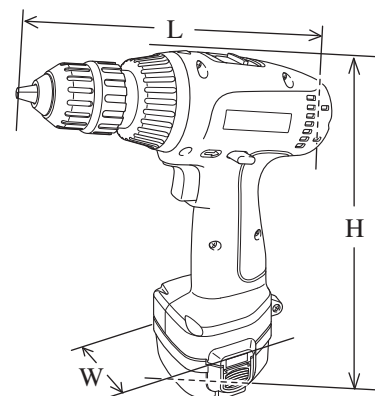
## CONCEPT AND MAIN APPLICATIONS

The above products have been added to the cordless tools of Makita SSP series.

Their brief benefits and features are;

- \* Industrial performance and durability at less expense
- \* 2-speed gear selection with variable speed in each range
- \* Easy to repair construction

Each model is available in the following specification as Model MDF320DWE/ MDF330DWE:



Model No.	Items included as a set	
MDF320DWE	Ni-Cd Battery 9050 x 2 pcs.	Charger DC1850
MDF330DWE	Ni-Cd Battery 1250 x 2 pcs.	Charger DC1850

Dimensions: mm (")		
Model No.	MDF320D	MDF330D
Length (L)	203 (8)	
Height (H)	243 (9-9/16)	
Width (W)	76 (3)	93 (3-5/8)

## ► Specification

Model No.		MDF320D	MDF330D
Battery	Voltage: V	9.6	12
	Capacity: Ah	1.3	
	Cell	Ni-Cd	
Max output: W		110	130
No load speed: min -1= rpm	Low	0 - 350	
	High	0 - 1,000	
Drill chuck type		Keyless	
Chuck capacity: mm (")		0.8 - 10 (1/32 - 3/8)	
Capacity: mm (")	Steel	10 (3/8)	10 (3/8)
	Wood	21 (13/16)	24 (15/16)
	Screw	5.1 x 38 (3/16 x 1-1/2)	5.1 x 63 (3/16 x 2-1/2)
Torque setting		19 stages + Drill mode	
Clutch torque setting: N.m [kgf.cm](in.lbs)		0.5 - 5.0 [5 - 50](4 - 44)	
Max. fastening torque: N.m [kgf.cm](in.lbs)	Hard joint	18 [184](160)	21 [214](186)
	Soft joint	13 [133](115)	14 [143](124)
Electric brake		Yes	
Mechanical speed control		Yes (2 speed)	
Variable speed control		Yes	
Reverse switch		Yes	
Net weight: kg (lbs)		1.3 (2.9)	1.4 (3.1)

## ► Standard equipment

- Battery cover ..... 2
- Plastic carrying case ..... 1

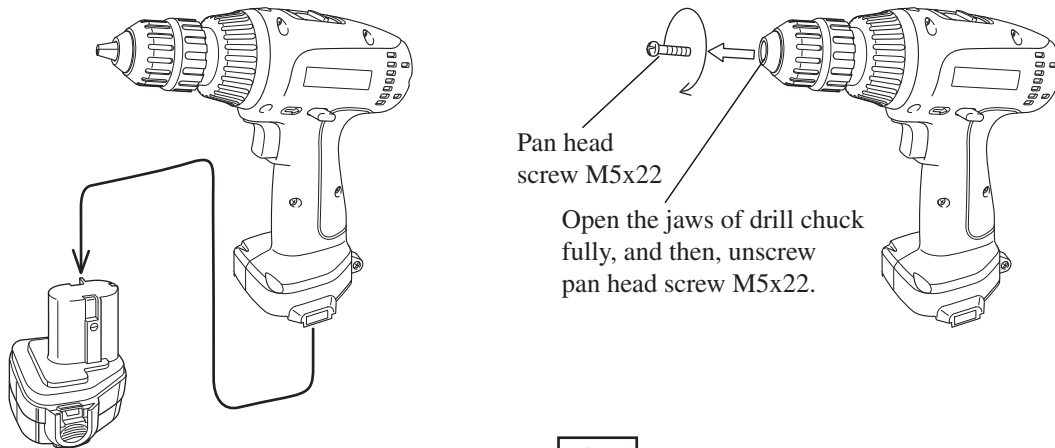
**Note:** The standard equipment for the tool shown may differ from country to country.

## ► Optional accessories

- Battery 9050 for MDF320D
- Battery 1250 for MDF330D
- Charger DC1850

< 1 > Removing drill chuck

- ( 1 ) After removing battery from the machine, unscrew pan head screw M5x22 by turning clockwise. See Fig. 1. Employ impact driver, if it is difficult to unscrew by hand.



- ( 2 ) Insert hex wrench into drill chuck, and grip the hex wrench with drill chuck firmly.

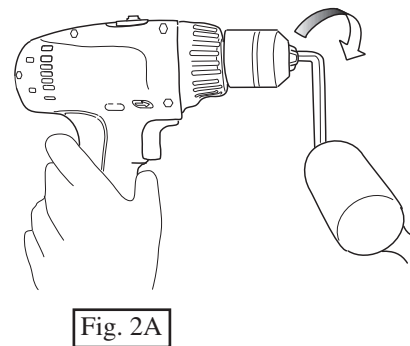
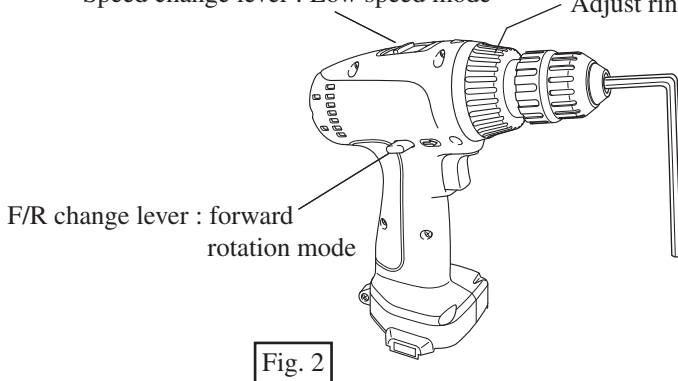
Set the machine as follows.

- \* Working mode : Drill mode
- \* Speed change lever : low speed rotation mode
- \* F/R change lever : forward rotation mode

See Fig. 2.

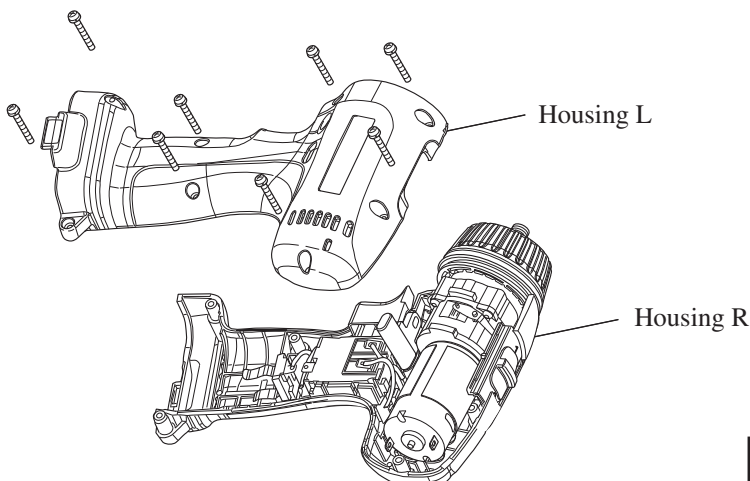
Hold the machine on the working table firmly, turn drill chuck counterclockwise by striking the inserted hex wrench with plastic hammer. see Fig. 2A. Then, drill chuck can be removed from the machine.

Speed change lever : Low speed mode      Adjust ring : Drill mode



< 2 > Disassembling gear assembly and DC motor

- ( 1 ) After removing drill chuck as illustrated in Fig. 1, Fig. 2 and Fig. 2A, separate housing L from housing R, by unscrewing 8 pcs. of pan head screws M5x22. See Fig. 3.



- (2) Separate gear assembly, DC motor and speed change lever from housing R together. See Fig. 4.  
 Be careful in this step, not to lose 2 pcs. of compression springs 4 in speed change lever.  
 Gear assembly can be separated from DC motor. See Fig. 4A.

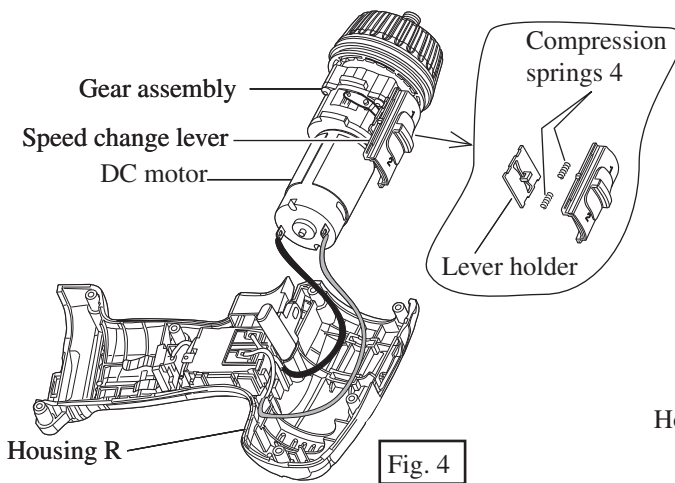


Fig. 4

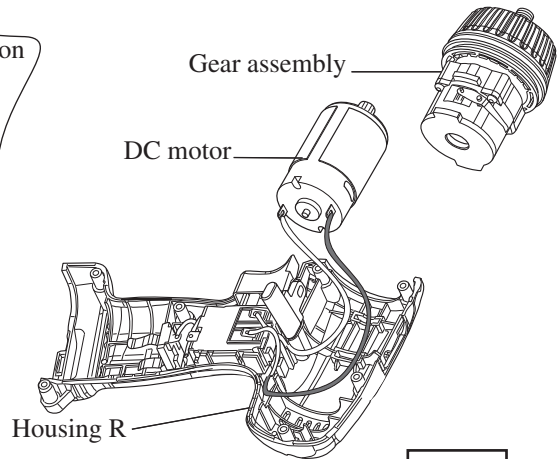


Fig. 4A

< 3 > Assembling the component parts to housing

- (1) Assemble the speed change lever section as follows.

- Put compression springs 4 to the both sides of the lever holder's bulge, and mount compression springs 4 together with lever holder, to speed change lever as illustrated in Fig. 5.  
 Assemble the speed change lever section to gear assembly by passing the lever through the lever holder's hole as illustrated in Fig. 5A.

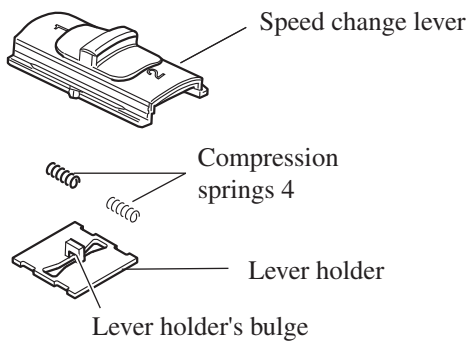


Fig. 5

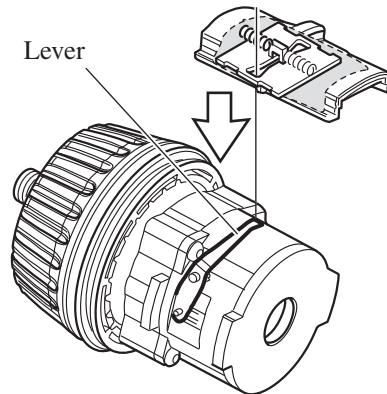
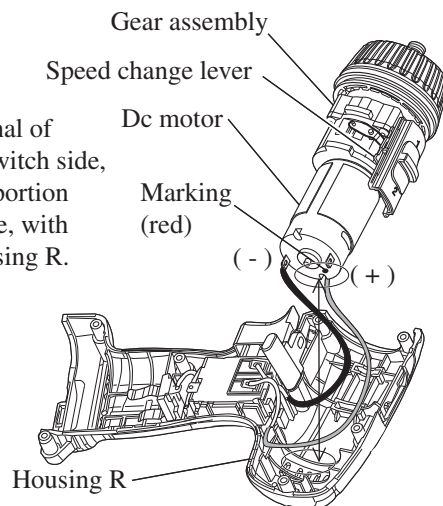


Fig. 5A

- (2) Mount gear assembly to DC motor. See Fig. 4A. Assemble gear assembly, speed change lever and DC motor to housing R together, paying attention to < Note 1 > and < Note 2 >. See Fig. 6.

< Note 1 >

Bringing (-) terminal of DC motor to the switch side, align the concave portion of red marking side, with the convex on housing R.



< Note 2 >

Align these convex portions with the concaves on housing R.

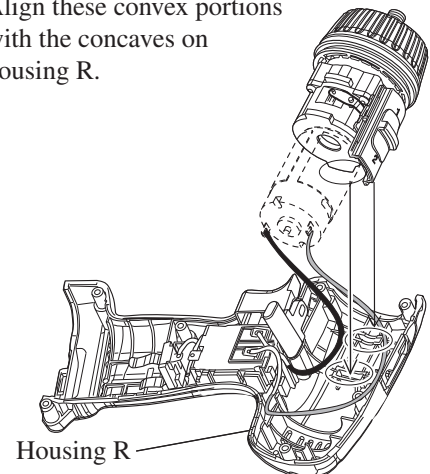
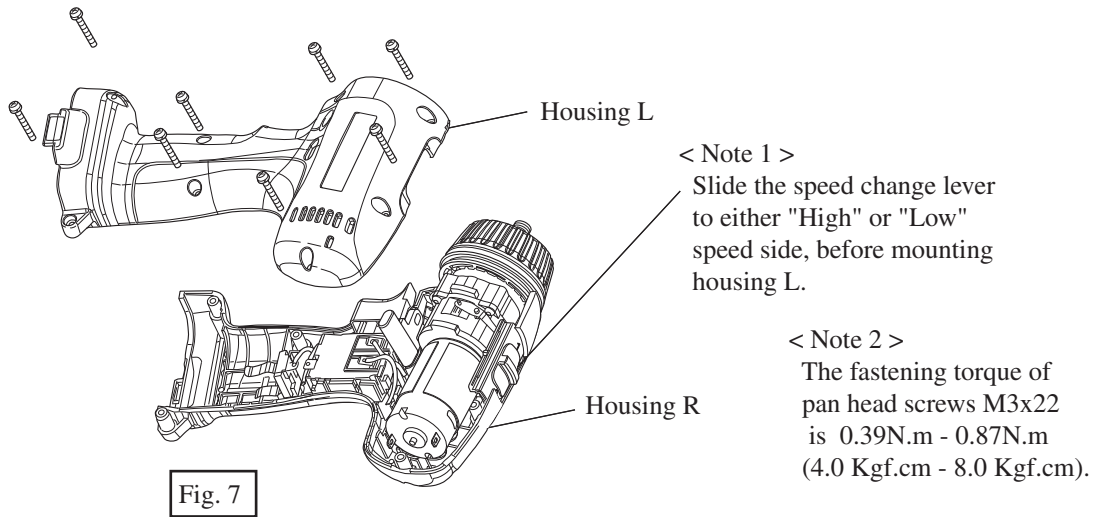


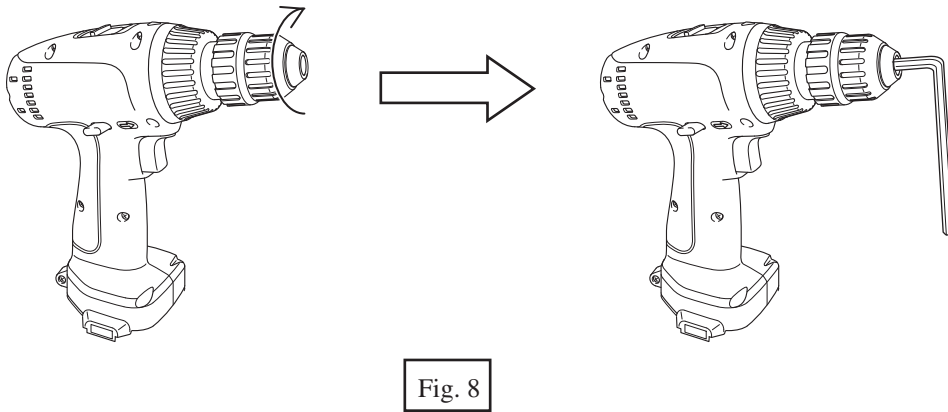
Fig. 6

(3) Mount housing L to the housing R by fastening with 8 pcs. of pan head screw M3x22. See Fig. 7.



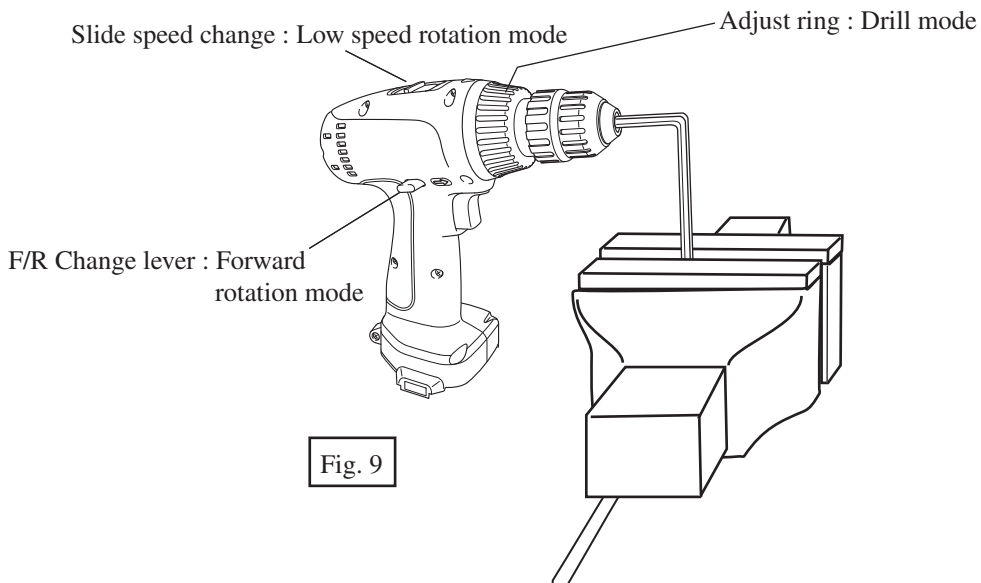
< 4 > Assembling drill chuck

(1) Mount drill chuck to spindle portion of gear assembly by screwing it clockwise. And then, grip hex wrench with the drill chuck firmly. See Fig. 8.

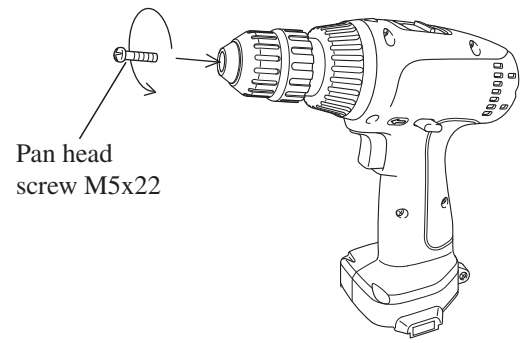
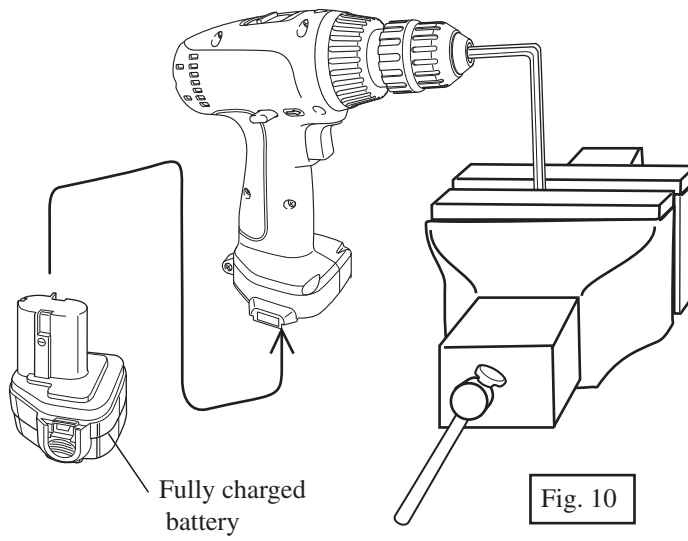


(2) Hold the machine with vise, and set the machine as follows.



- \* Adjust ring : Drill mode
  - \* Speed change lever : Low speed rotation mode
  - \* Change lever : Forward rotation mode
- See Fig. 9.



- ( 3 ) Attach the fully charged battery to the machine. And holding the machine with your hand firmly, rotate the machine by pulling the trigger fully for approx. 1 second to fasten drill chuck to the spindle firmly. See Fig. 10.
- ( 4 ) Screw pan head screw M5x22 counter clockwise to secure the drill chuck. See Fig. 11.



► **Circuit diagram**

Color index of lead wires	
Black	
Red	

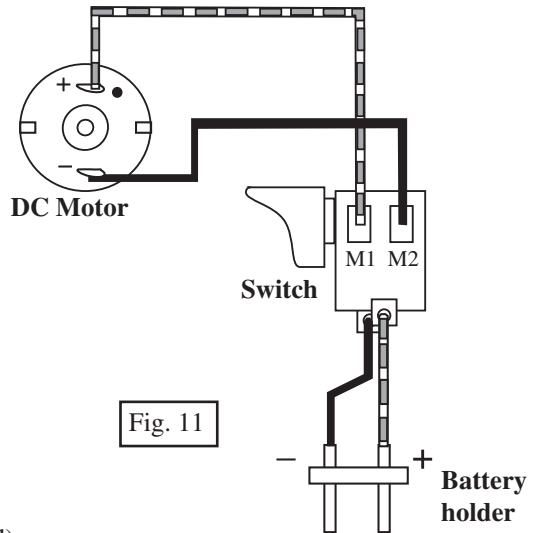


Fig. 11

► **Wiring diagram**

Connect the lead wire (red) to the terminal of the red marking side as illustrated in Fig. 12.

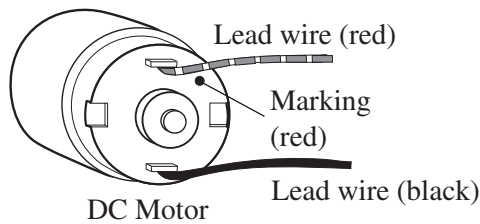


Fig. 12

Put DC motor into housing R with referring to "< 3 > Assembling the component parts to housing" at page 4.

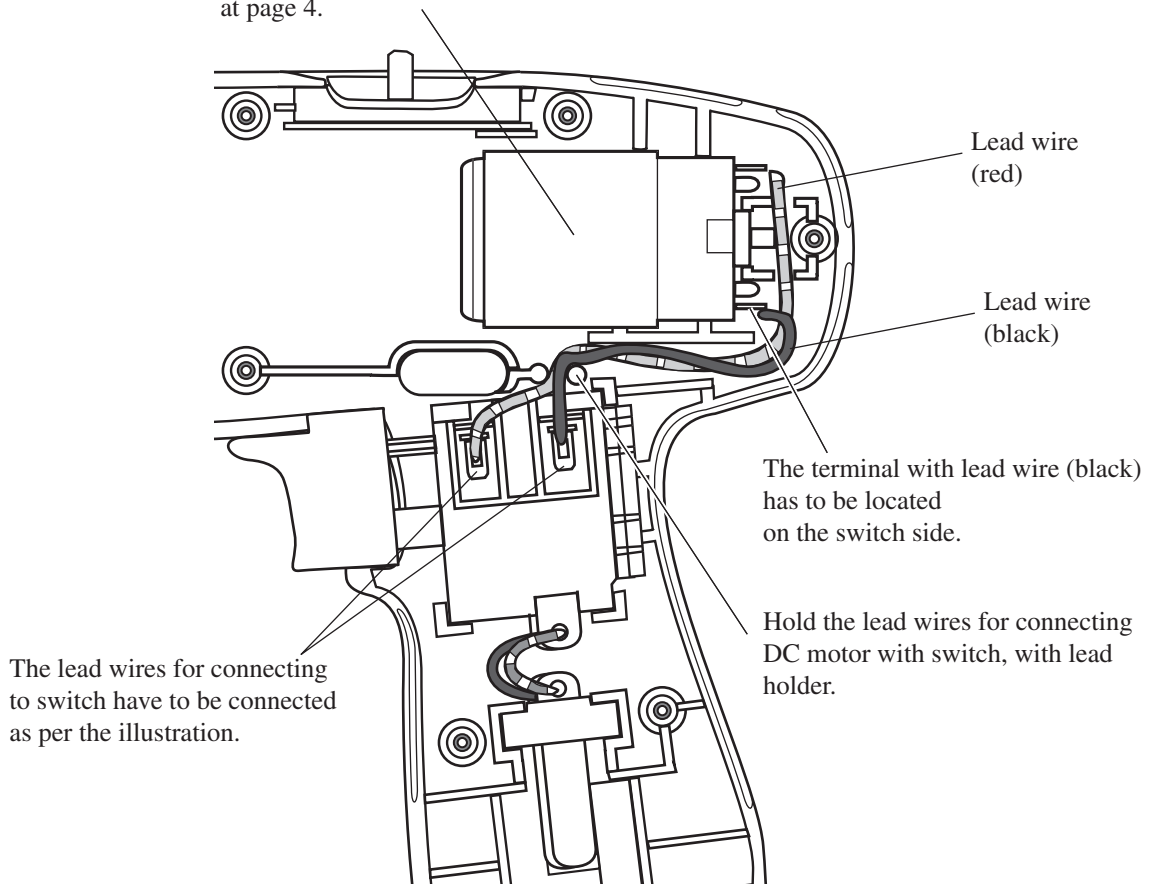


Fig. 13