

# TECHNICAL INFORMATION



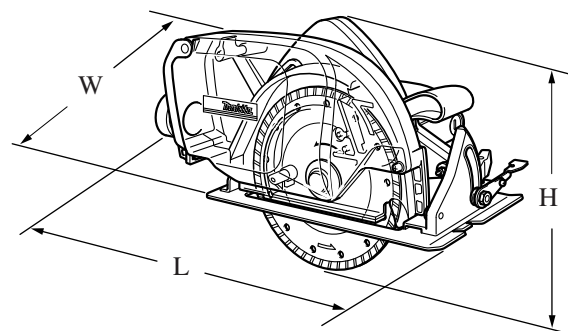
PRODUCT  
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**Models No.** ▶ 4157KB

**Description** ▶ Cutter with Dust Collection 180mm (7")

## CONCEPTION AND MAIN APPLICATIONS

Model 4157KB has been developed from Model 5057KB as an optimum machine for cutting bricks, refractory fiber-cement boards, etc; features environment-friendly dust extracting system for cleaner job-site and operator's better health.



Dimensions : mm (")	
Length (L)	354 (14)
Width (W)	250 (9-7/8)
Height (H)	238 (9-3/8)

## ► Specifications

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output(W)
			Input	Output	
110	13	50 / 60	1,400	750	1,950
230	6.4	50 / 60	1,400	750	1,950
240	6.1	50 / 60	1,400	750	1,950

No load speed : rpm.= min.-1		5,800
Diamond wheel	Diameter : mm (")	180 (7-1/8)
	Arbor : mm (")	22.23 (7/8)
Max. cutting capacities : mm (")	at 90°	58 (2-1/4)
	at 45°	29 (1-1/8)
	at 50°	
Electric brake		No
Protection from electric shock		by double insulation
Net weight : Kg (lbs.)		5.5 (12.1)
Cord length : m (ft)		4.0 (13.1)

## ► Standard equipment

- \* Hex Wrench 6 ..... 1 pc.
- \* Wrench holder ..... 1 pc.
- \* Diamond wheel 180 ..... 1 pc.

## ► Optional accessories

- \* Rip fence (Guide rule)
- \* Diamond wheel 180

### Anti-Dust Constructions

Dust-proof switch and ball bearings protect the motor from saw dust.

### See-through Dust Box

- \* For cleaner job site and operator's better health
- \* Tells you the time to dispose of sawdust because accumulating sawdust can be seen.

### Opening for connecting to vacuum cleaner

Can be connected with Wap vacuum cleaners (OEM machines).

### Bevel Cuts up to 45°

### Cutting Depth Adjustment

### Easy Replacement of Parts Around the Base

Removable screws are used to secure angular guide, depth guide, depth hinge, etc.

### Notch in Dust Box for Accurate Cuts

Through this notch, you can catch clear sight of blade edges and follow cutting line easily.

### Efficient Dust Extraction

Work pieces	With or Without Vacuum cleaner	Cutting depth	Suction rat ( % )
Fire brick	Without	Utmost cutt. depth, 58mm (2-1/4)	66
	With	Utmost cutt. depth, 58mm (2-1/4)	91
Concrete board	Without	20mm (13/16")	41
	With	20mm (13/16")	90
Fire brick	Without	20mm (13/16")	41

## Comparison of products

Specifications		Model No.	
		Makita	
Wheel/Saw	Kind	4157KB	5057KB (For your reference)
	Diameter : mm (")	180 (7-1/8)	185 (7-1/4)
	Arbor diameter : mm (")	22.23 (7/8)	15.88 (5/8)
Continuous rating input (W)		1,400	1,400
No load speed (min-1=rpm)		5,800	5,800
Cutting capacities : mm (")		at 90°	58 (2-1/4)
		at 45°	29 (1-1/8)
Vibration (loaded condition) : m/s <sup>2</sup>		1.44	—
Noise level (loaded condition) : dB(A)		97	—
Base		Steel	Aluminum
Protection from electric shock		by Double Insulation	by Double Insulation
Cord length : m (ft.)		4 (13.1)	5 (16.4)
Dimensions	Length : mm ( " )	354 (14)	354 (14)
	Width : mm ( " )	250 (9-7/8)	250 (9-7/8)
	Height : mm ( " )	238 (9-3/8)	247 (9-3/4)
Net weight without D. wheel: Kg (lbs)		5.5 (12.1)	5.3 (11.7)

<1> Lubrication

Apply MAKITA Grease N No.1 to the following parts illustrated in Fig. 1.

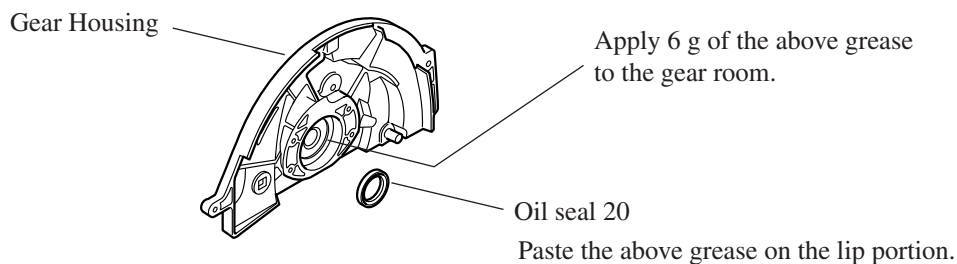


Fig. 1

<2> Disassembling base plate

Unscrew the following screws. Then base plate can be separated from the saw unit (motor section). see Fig. 2.

Counter sunk head crew M4 x 8 : 2pcs.

Counter sunk head crew M5 x 12 : 5pcs. When screwing, fasten these five screws with fastening torque, 2.9 - 5.9 N.m. (30 - 60kgf.cm)

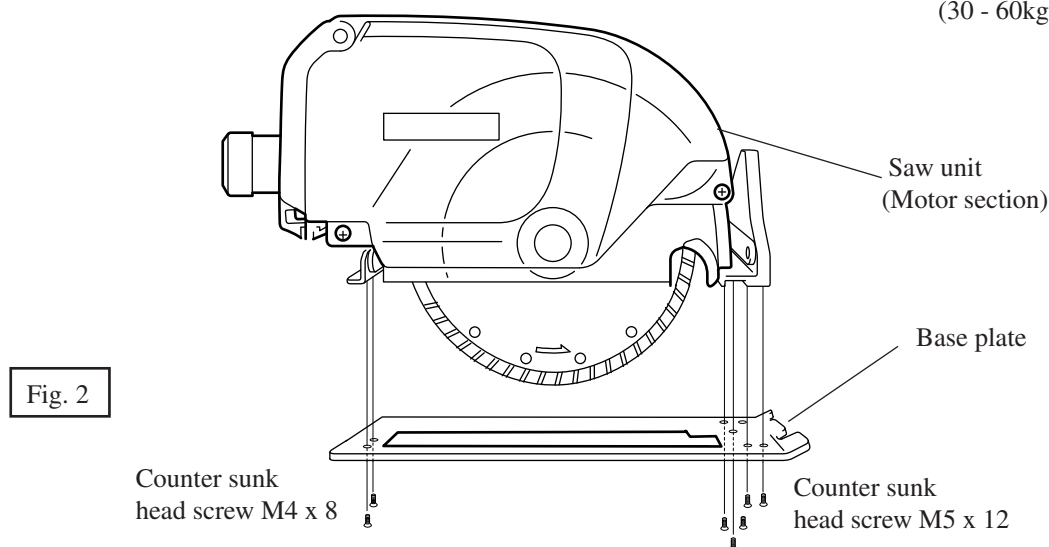


Fig. 2

<3> Disassembling gear housing section

1. Take off carbon brushes after unscrewing brush holder cap. See Fig. 3.

2. Unscrew 2 pcs. of counter sunk head screws M4 x 8 which fasten depth guide on base. See Fig. 3.

3. Unscrew 3 pcs. of pan head screws M5 x 50 which join motor housing with gear housing.

Then, gear housing section can be separated from motor housing together with armature. See Fig. 3.

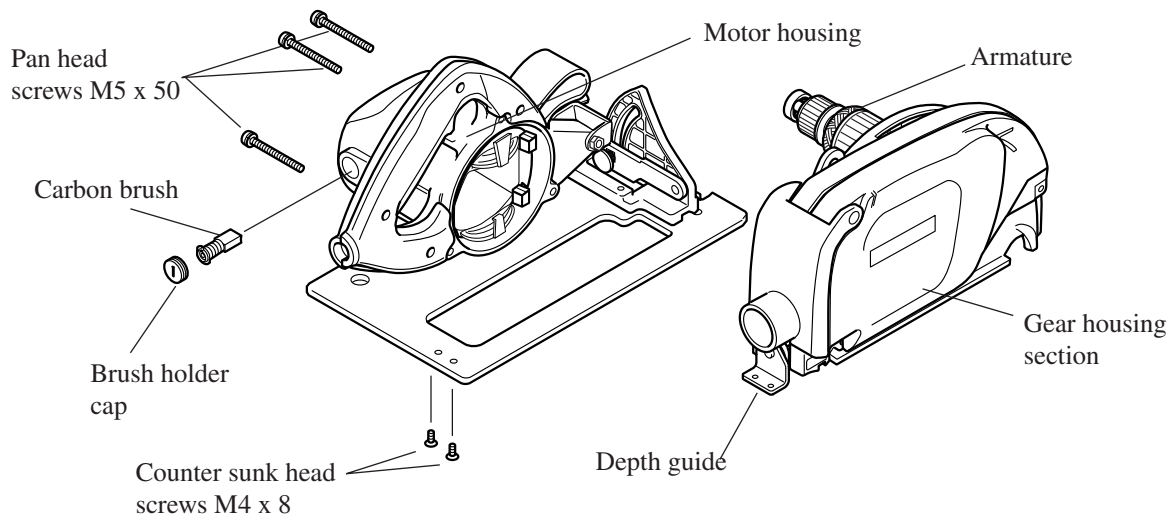


Fig. 3

## < 4 > Disassembling motor housing

1. Take off carbon brushes after unscrewing brush holder cap. See Fig. 4.
2. Take off pan head screw M5 from angular guide after unscrewing hex lock nut M5 - 8. See Fig. 4.  
In this process, the motor housing has been disjointed from base plate.
3. Unscrew 3 pcs. of pan head screws M5 x 50 which join motor housing with gear housing.  
Then, motor housing can be separated from gear housing section. See Fig. 4.

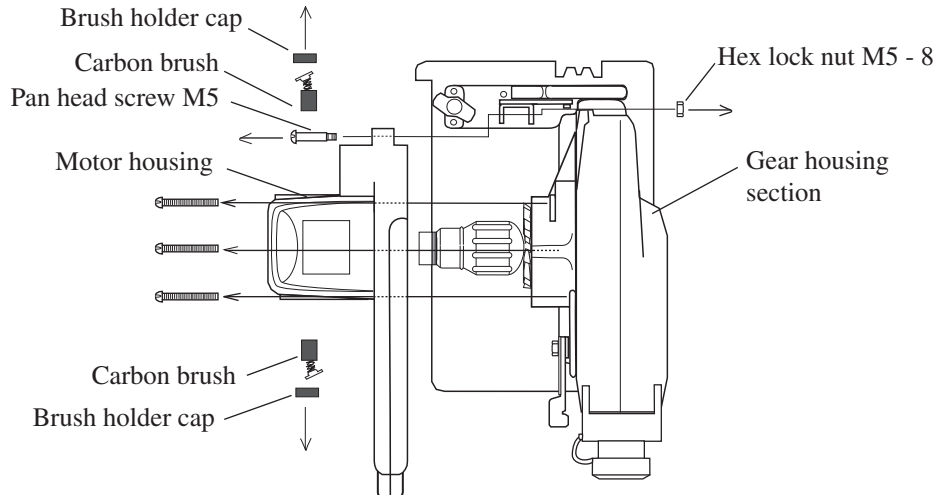
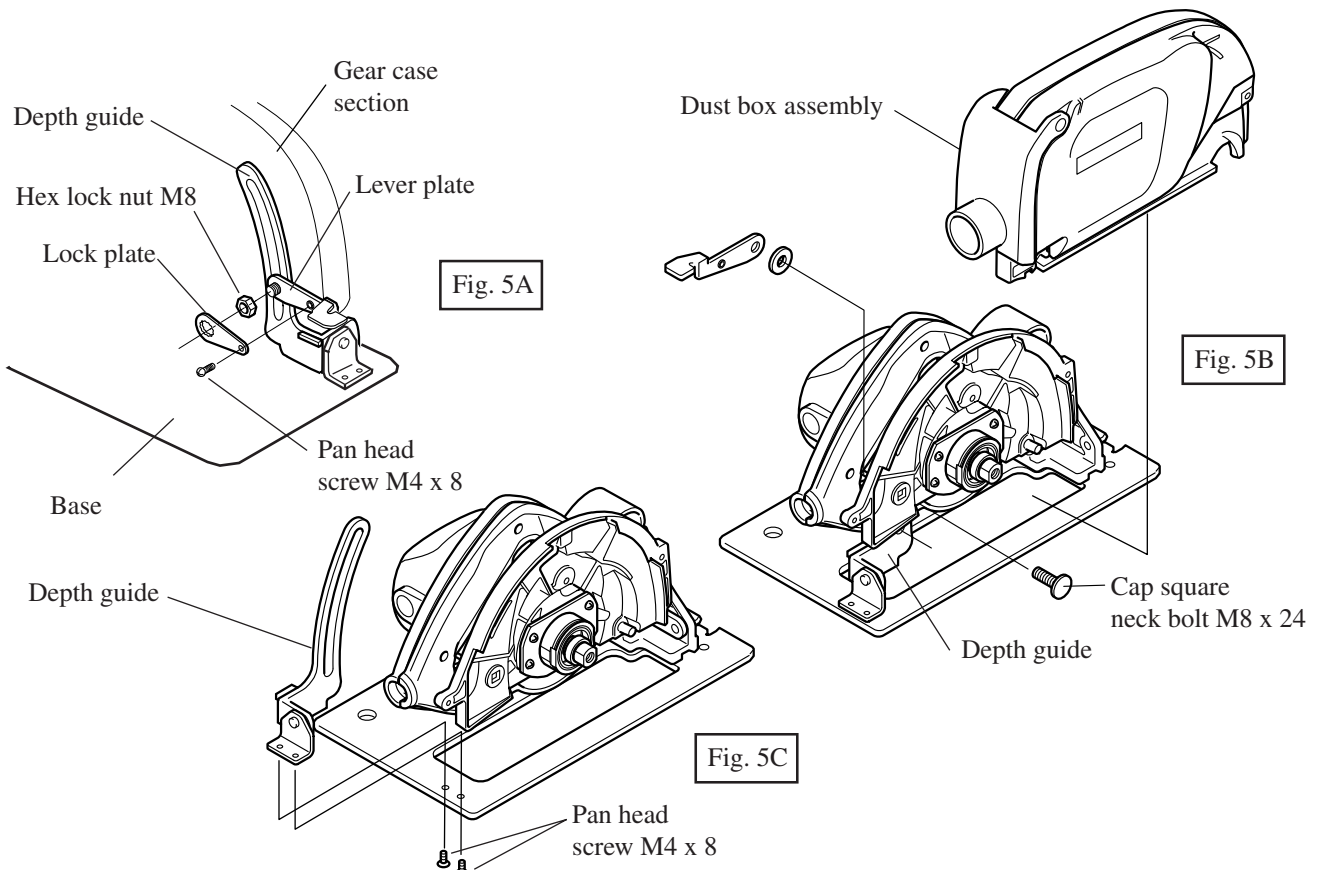


Fig. 4

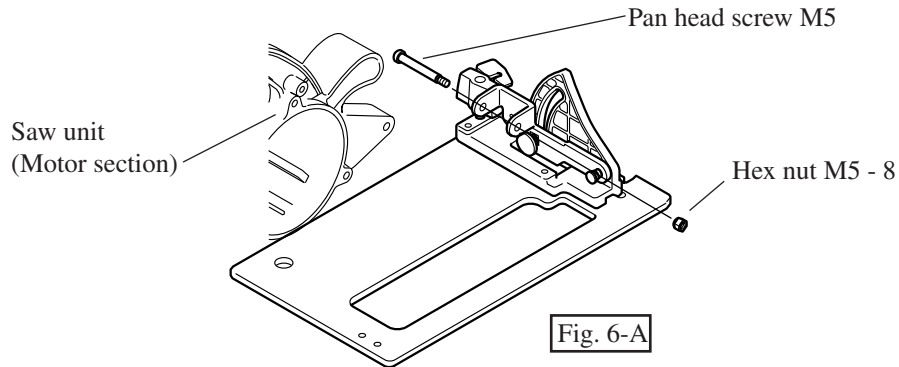
## < 5 > Disassembling depth guide

1. Take off pan head screw M4 x 8 and then, disassemble lock plate from lever plate. So, hex lock nut M8 can be unscrewed. See Fig. 5A.
2. After disassembling dust box assembly, separate lever plate, flat washer 8 and cap square neck bolt M8 x 24 from depth guide. In this process, depth guide has been disjointed from gear housing section. See Fig. 5B.
3. Unscrew 2 pcs. of counter sunk head crew M4 x 8 which fasten the depth guide on base plate.  
Then, depth guide can be separated from base plate. See Fig. 5C.

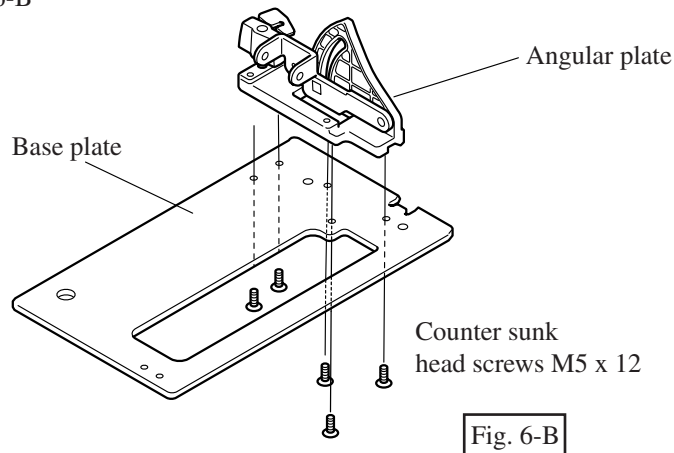


< 6 > Disassembling angular guide

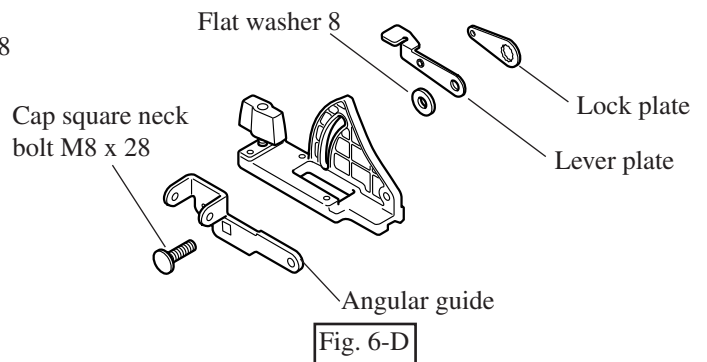
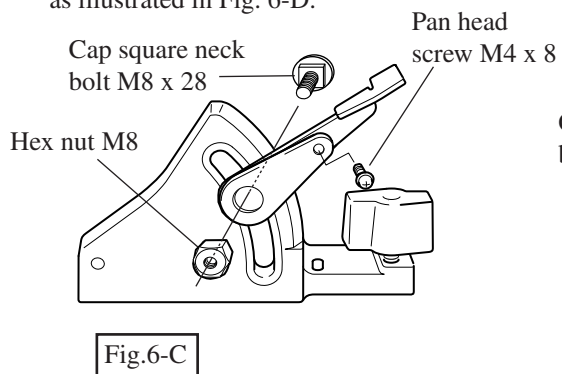
1. Unscrew hex nut M5 - 8, and take off pan head screw M5. So angular plate is disjointed from the saw unit (motor section). See Fig. 6-A



2. Unscrew 5 pcs. of counter sunk head screws M5 x 12. So the angular plate can be separated from base plate. See Fig. 6-B



3. Unscrew pan head screw M4 x 8. And then, unscrew hex nut M8 as illustrated in Fig.6-C. So, lock plate, lever plate, flat washer 8, cap square neck bolt M8 x 28 and angular guide can be separated from angular plate as illustrated in Fig. 6-D.



< 7 > Disassembling gear section

Unscrew 4 pcs. of pan head screw M4 x 16 as illustrated in Fig. 7A. And then, gear section can be disassembled from gear housing as illustrated in Fig. 7B.

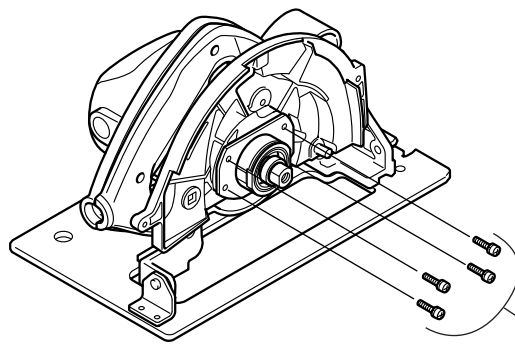


Fig. 7A

Pan head  
screws M4 x 16

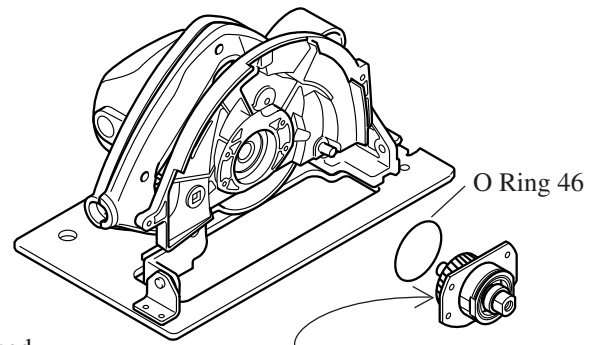


Fig. 7B

Gear section consisting of

- \* Helical gear 39
- \* Spindle
- \* Ring 15
- \* Retaining R-35
- \* Ball bearing 6202DDW
- \* Oil seal 20
- \* Labyrinth ring

Do not forget to attach O ring 46 into the groove of gear housing, when assembling the gear section.

< 8 > Adjusting for accuracy of 90° cut

Applying the triangular rule to base and diamond wheel, adjust by turning the adjusting screw with screw driver as illustrated in Fig. 8.

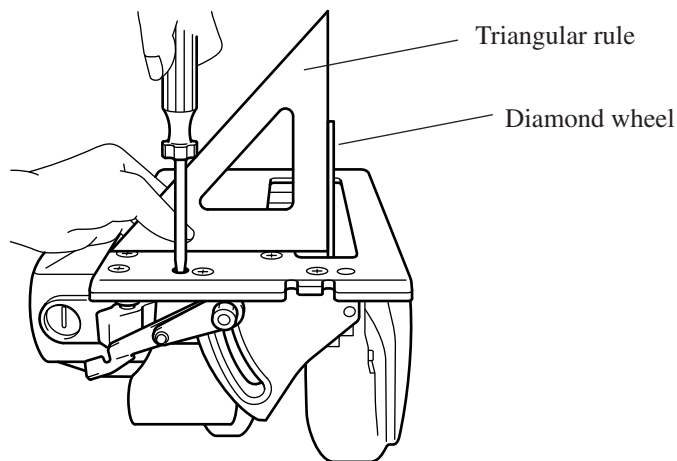
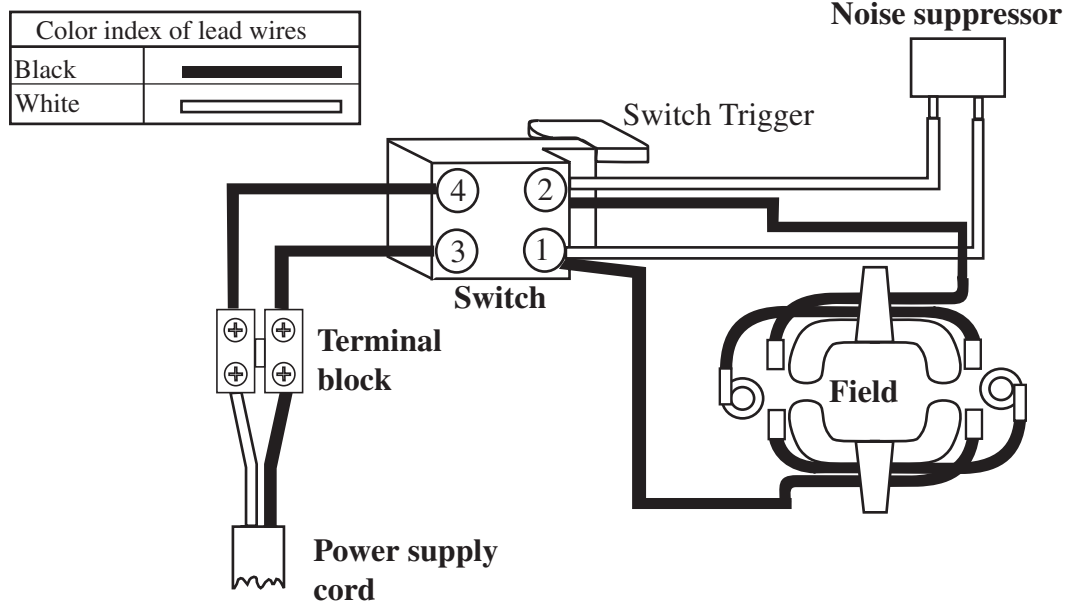


Fig. 8.

## ► Circuit diagram

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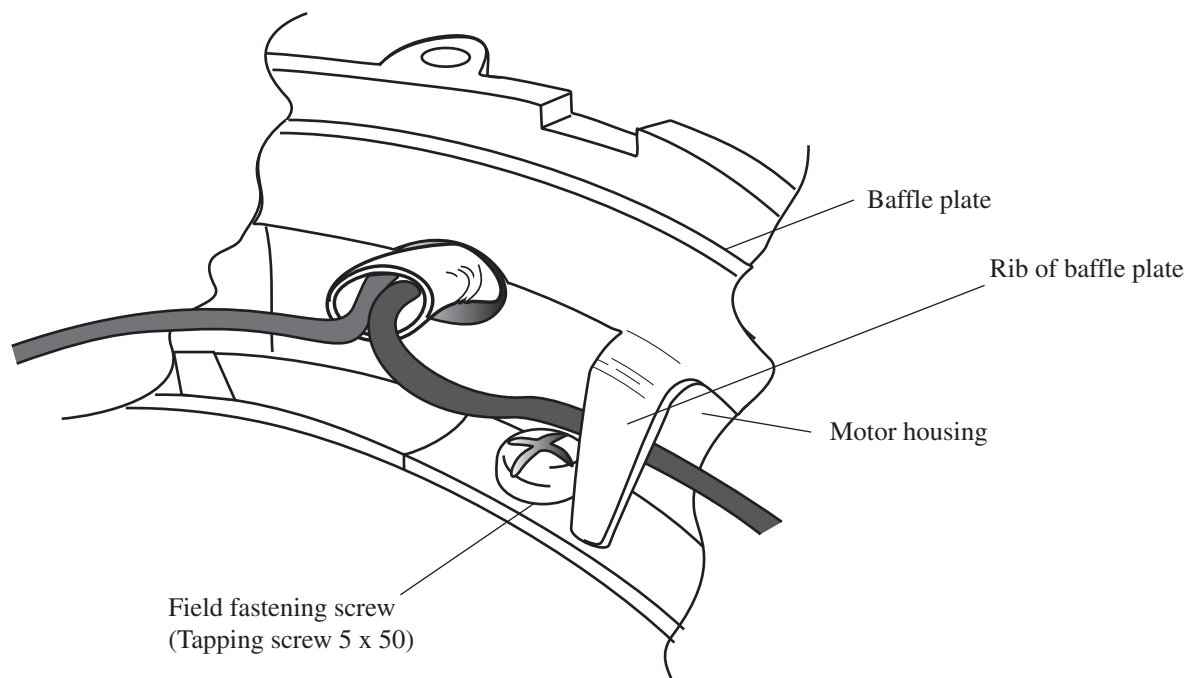


## ► Wiring diagram

< 1 > Wiring in motor housing

Pass the field lead wire on the field fastening screw side, between the rib of baffle plate and motor housing as illustrated below.

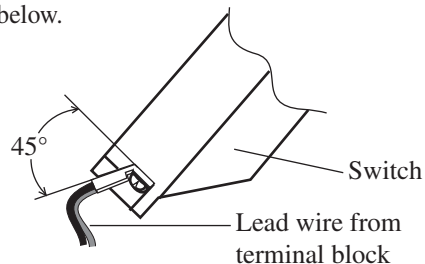
The above field lead wire is short one.



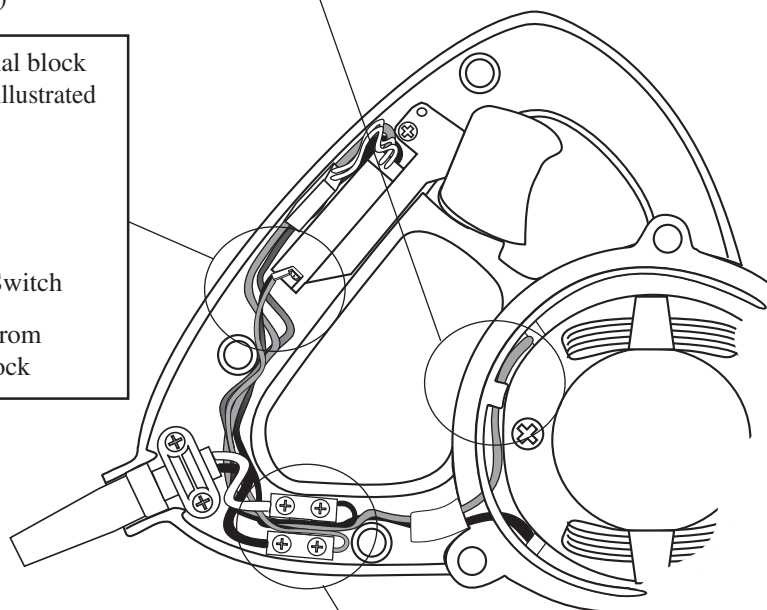
## ► Wiring diagram

### < 2 > Wiring in the handle (for low voltage in Great Britain)

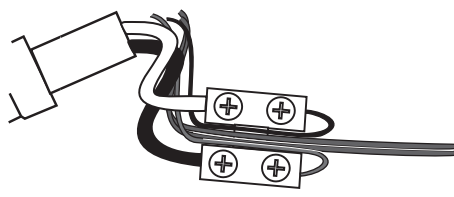
Terminal of lead wire from terminal block have to be bent approx. by 45° as illustrated below.



See page 7/8 in detail.

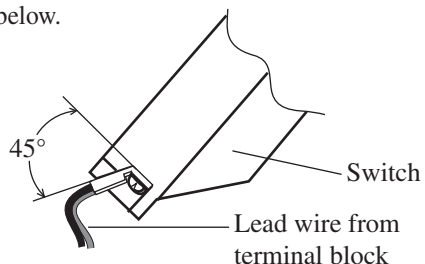


Place the lead wires between fastening screws of terminal block as illustrated below.



### < 2 > Wiring in the handle (for other countries)

Terminal of lead wire from terminal block have to be bent approx. by 45° as illustrated below.



See page 7/8 in detail.

