

# TECHNICAL INFORMATION



NEW TOOL

P 1 / 10

<b>Models No.</b>	DP4000, DP4002 DP4001, DP4003
<b>Description</b>	13mm (1/2") Drill 13mm (1/2") Drill with Keyless drill chuck

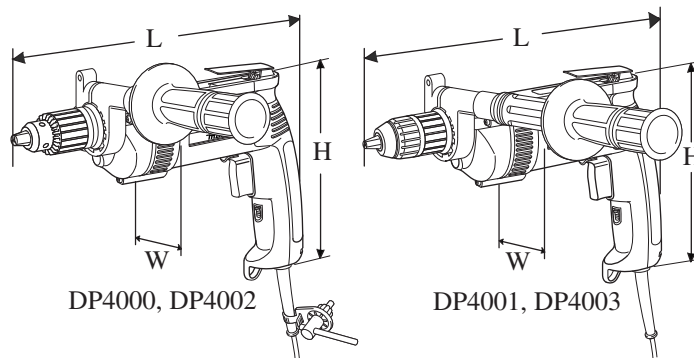
## CONCEPTION AND MAIN APPLICATIONS

The above models have been developed for heavy duty work of professional users.

Their brief features and benefits are

- \* Durable and robust aluminum gear housing
- \* High power and high torque

Dimensions : mm ( " )		
	DP4000, DP4002	DP4001, DP4003
Width ( W )	72 (2-13/16)	
Height ( H )	196 (7-3/4)	
Length ( L )	304 (12)	308 (12-1/8)



## Specification

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output(W)
			Input	Output	
100	7.5	50 / 60	710	350	650
110	7.2	50 / 60	750	350	650
120 (UL)	7.0	50 / 60	(800)	350	650
220	3.6	50 / 60	750	350	650
230	3.4	50 / 60	750	350	650
240	3.3	50 / 60	750	350	650

Model No.		DP4000	DP4000K	DP4002	DP4002K	DP4001	DP4001K	DP4003	DP4003K
No load speed : (min -1= rpm)		0 - 900		0 - 600		0 - 900		0 - 600	
Keyless chuck		No				Yes			
Chuck ability : mm ( " )		2 - 13 (1/16 - 1/2)				1.5 - 13 (1/16 - 1/2)			
Drilling capacity : mm ( " )	in Steel	13 (1/2)							
	in Wood	38 (1-1/2)							
Reverse switch		Yes							
Protection from electric shock		by double insulation							
Plastic carrying case		No	Yes	No	Yes	No	Yes	No	Yes
Cord length : m ( ft )		2.5 (8.2)							
Net weight :Kg (lbs )		2.2 (4.9)							

## Standard equipment

- \* Grip assembly ..... 1 set
- \* Chuck key 10 ..... 1 pc.
- \* Key holder ..... 1pc.

< Note > The standard equipment for the tool shown may differ from country to country.

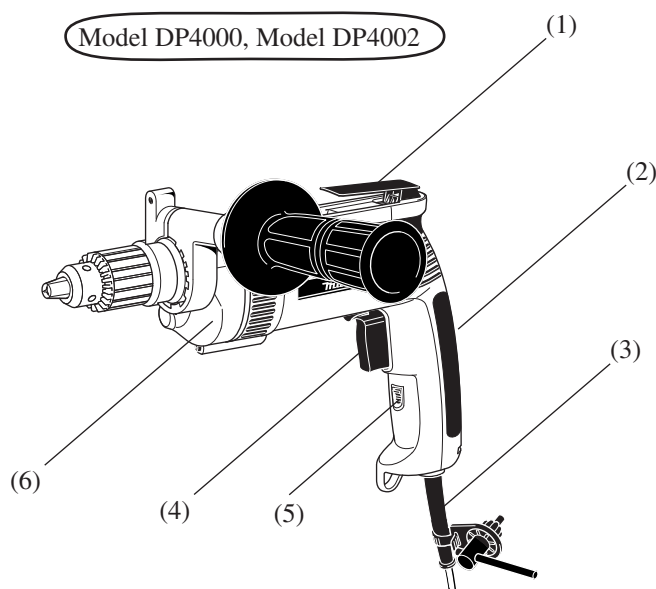
## Optional accessories

- Drill bit 1.5, 2, 3, 4, 5, 6
- Drill bit for wood 9, 12, 15
- Depth gauge (Stopper pole)

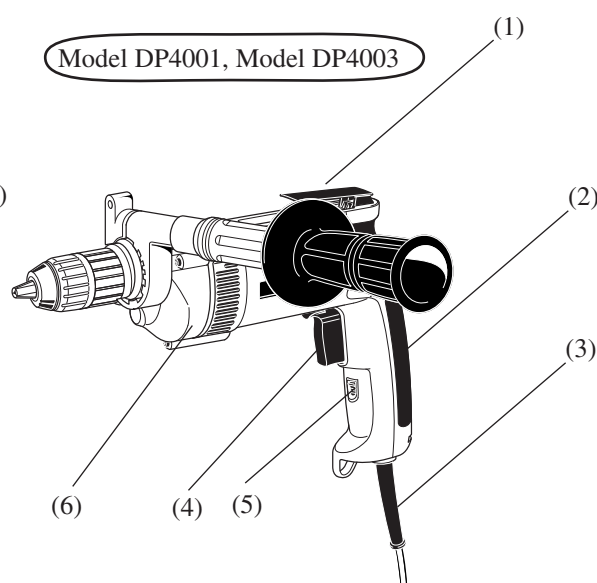
- Drill stand type 43
- Plastic carrying case (only for DP4000K, DP4001K, DP4002K and DP4003K)

Strong torque, 52N.m thanks to high power motor.

All ball and needle bearing



- (1) Retractable belt clip
- (2) Well designed soft grip for easy operation  
Ergonomically designed grip transmits the pressure power efficiently to the top of bits.
- (3) Tough cord guard excellent in flexibility to protect cable from disconnection



- (4) Newly developed variable speed control switch featuring
  - \* long life and toughness against dust
  - \* big trigger for easy operation
  - \* integrated reverse switch
- (5) Slide lever for Lock-ON to keep your favorite rpm.
- (6) Durable and robust aluminum gear housing

► Comparison of products


Model No.		MAKITA			Competitor A			Competitor B	
		DP4000	DP4001	6303H	A-1	A-2	A-3	B-1	B-2
Specifications									
Continuous Rating Input ( W )		750			570				
Rated current at 120V ( A )		7.0			6.5				
Equipped motor		N55-50			N55-40				
Drilling capacity : mm ( " )	in Steel	13 (1/2)			13 (1/2)				
	in Wood	38 (1-1/2)			36 (1-7/16)				
Keyless chuck		No	Yes	No	No	Yes	No	No	Yes
No load speed : (min - max rpm)		0 - 900			0 - 850				
Max. torque : (N.m)		52			41				
Variable speed control switch		Yes			Yes				
Reverse switch		Yes			Yes				
Material of gear housing		Aluminum			Aluminum				
Protection from electric shock		by double insulation			by double insulation	by grounding	by double insulation	by grounding	
Overall length : mm ( " )		304 (12)	308 (12-1/8)	285 (11-1/4)	316 (12-1/2)			294 (11-5/8)	257 (10-1/2)
Net weight :Kg (lbs )		2.2 (4.9)	2.0 (4.4)	2.0 (4.4)	2.0 (4.4)			1.9 (4.2)	2.15 (4.75) 2.2 (4.9)
Standard equipments		*Depth gauge *Chuck key *Key holder	*Depth gauge	*Depth gauge *Chuck key *Key holder	*Depth gauge *Chuck key *Key holder	*Depth gauge	*Depth gauge *Chuck key *Key holder	*Depth gauge *Chuck key *Key holder	*Depth gauge

Model No. Specifications	MAKITA			Competitor A		Competitor B
	DP4002	DP4003	6302H	A-4	A-5	B-3
Continuous Rating Input ( W )	750		570	—		—
Rated current at 120V ( A )	7.0		6.5	7.8		5.5
Equipped motor	N55-50		N55-40	59-40		62-35
Drilling capacity : mm ( " )	in Steel	13 (1/2)	13 (1/2)	18 (3/4)		13 (1/2)
	in Wood	38 (1-1/2)	36 (1-7/16)	38 (1-1/2)		—
Keyless chuck	No	Yes	No	No	Yes	No
No load speed : (min -1= rpm)	0 - 600		0 - 550	0 - 600		0 - 600
Max. torque	73		—	66		65
Variable speed control switch	Yes		Yes	Yes		Yes
Reverse switch	Yes		Yes	Yes		Yes
Material of gear housing	Aluminum		Aluminum	Aluminum		Aluminum
Protection from electric shock	by double insulation		by double insulation	by double insulation		by grounding
Overall length : mm ( " )	304 (12)	308 (12-1/8)	285 (11-1/4)	316 (12-1/2)		257 (10-1/2)
Net weight : Kg (lbs )	2.2 (4.9)	2.0 (4.4)	2.0 (4.4)	2.0 (4.4)		2.15 (4.75)
Standard equipments	*Depth gauge *Chuck key *Key holder	*Depth gauge	*Depth gauge *Chuck key *Key holder	*Depth gauge *Chuck key *Key holder	*Depth gauge	*Depth gauge *Chuck key *Key holder

### Comparison chart of working rate

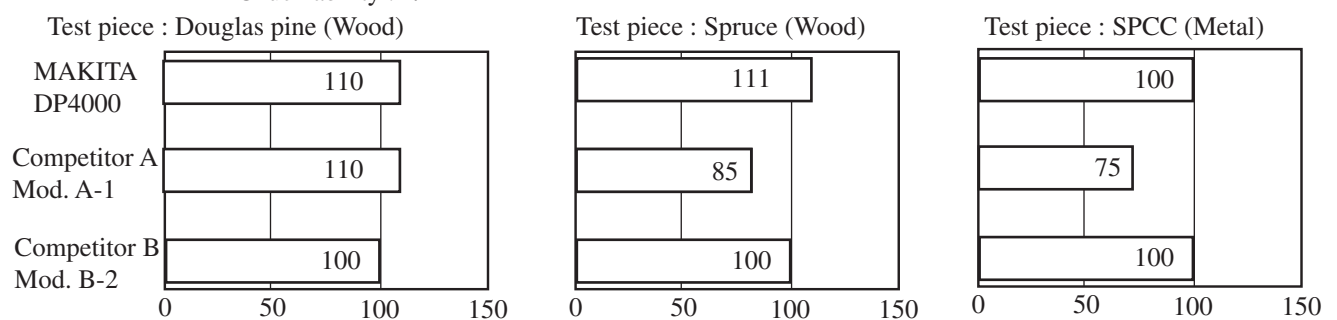
Numbers in chart below are relative values when setting competitor B's capacity as 100.

Drill bits for testing   
Auger bit Ø 24mm

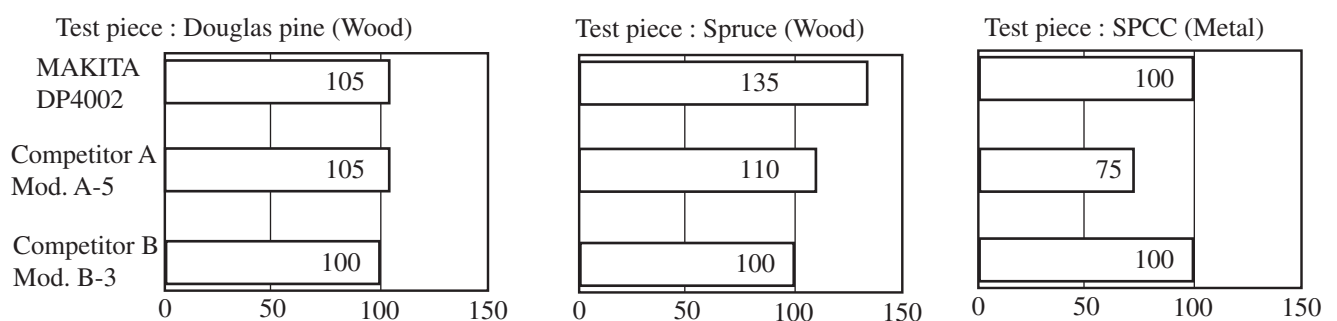
  
Spade bit Ø 1-1/2"

  
Metal drill bit Ø 13mm

Tested machine : No load speed: 0 - 900 rpm.  
Chuck ability : 1/2"



Tested machine : No load speed: 0 - 600 rpm.  
Chuck ability : 1/2"



## < 1 > Lubrication

Apply MAKITA Grease N No.1 to the portion illustrated in Fig. 1. Turn the gears in order to spread the grease into gear housing and on the gears, when applying.

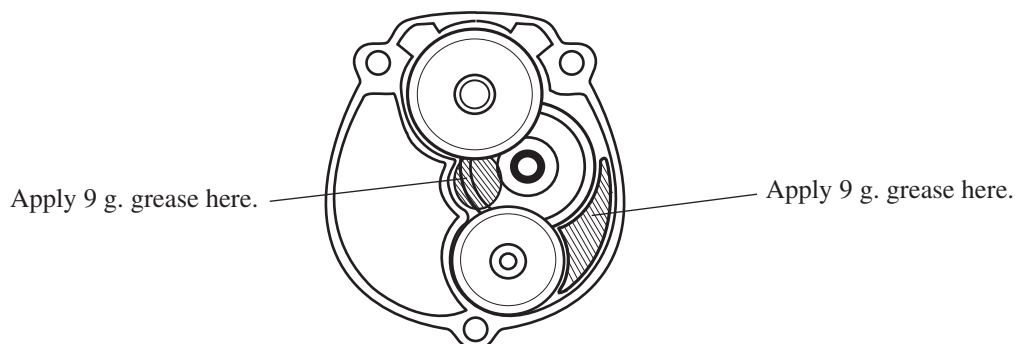


Fig. 1

## < 2 > Disassembling spindle section

### ( 1 ) Disassembling helical gear 26

Remove retaining ring S-11 from spindle. Then, helical gear 26 can be removed from spindle. See Fig. 2.

### ( 2 ) Disassembling spindle

Remove retaining ring S-15 from spindle. Then, spindle can be removed from gear housing. See Fig. 2.

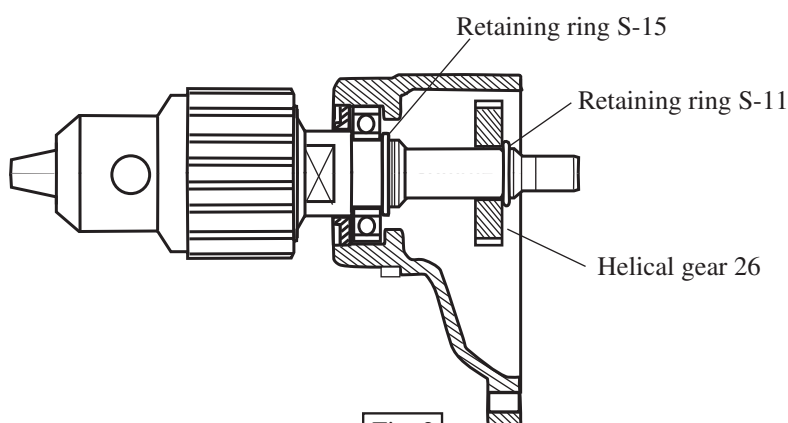


Fig. 2

## < 3 > Disassembling bearing retainer 22-36

### ( 1 ) Remodeling 1R043 "Wrench for bearing retainer"

The following repairing tool is not available for DP4000 series models without remodeling.

It has to be remodeled by changing the size A from 20 mm to 24 mm as illustrated in Fig. 3.

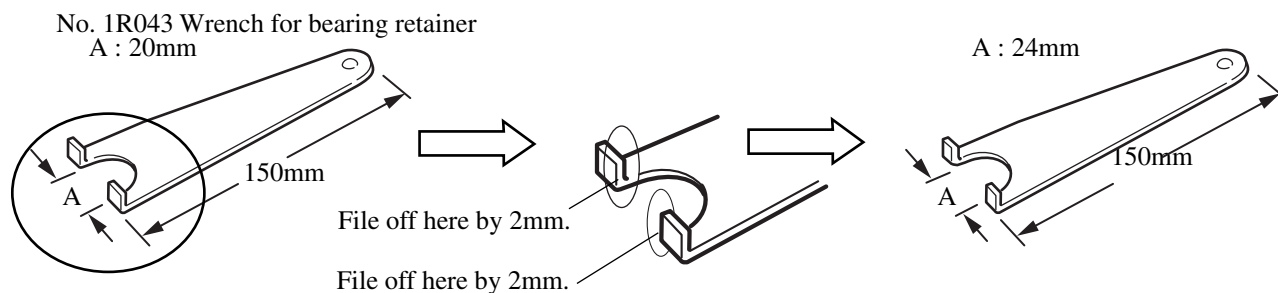


Fig. 3

( 2 ) Disassembling bearing retainer 22-36

Set the hook of remodeled "wrench for bearing retainer" in the groove of bearing retainer 22-36 and turn it with the remodeled wrench clockwise as illustrated in Fig. 4.

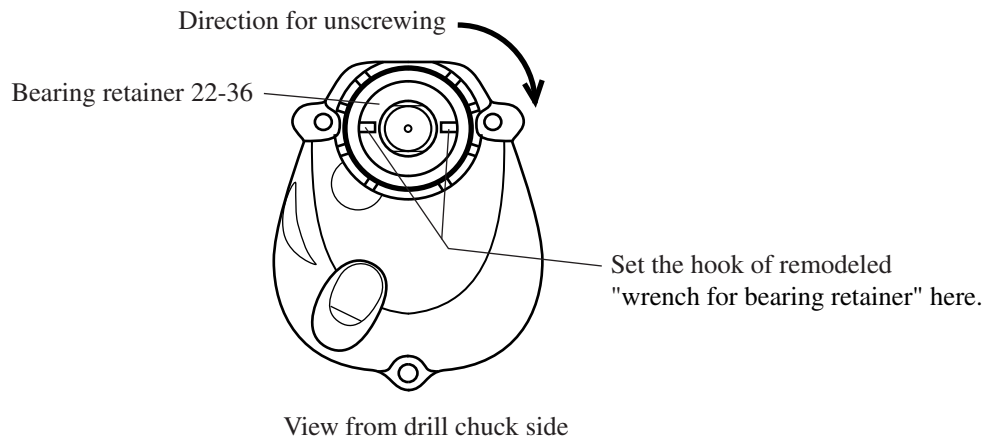


Fig. 4

< 4 > Disassembling ball bearing 607LLB and 606ZZ

Hit the portion illustrated in Fig. 4 with small plastic hammer. Then ball bearing 607LLB and 607ZZ come out from gear housing.

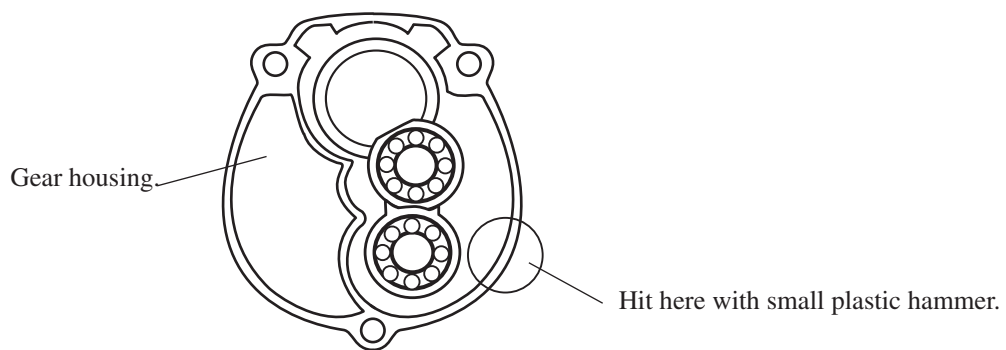


Fig. 5

< 5 > Assembling bearing retainer 22-36

Set the hook of remodeled "wrench for bearing retainer" in the groove of bearing retainer 22-36 and turn it with the remodeled wrench anti-clockwise as illustrated in Fig. 6.

The fastening torque for bearing retainer 22-36 is approx. 11.8 - 15.7 N.m (120 - 160 Kgf.cm).

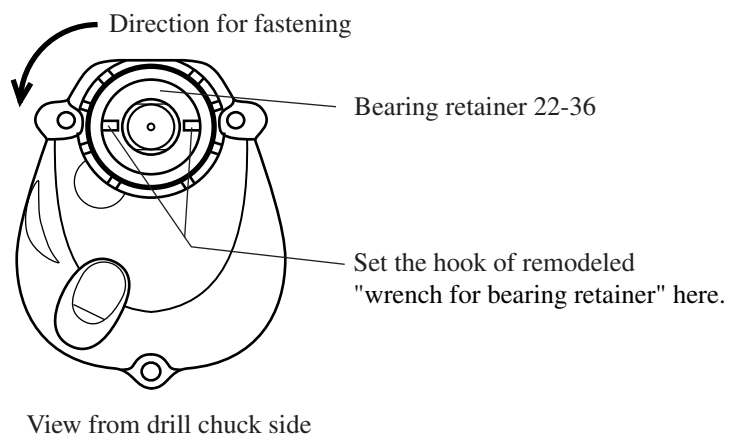


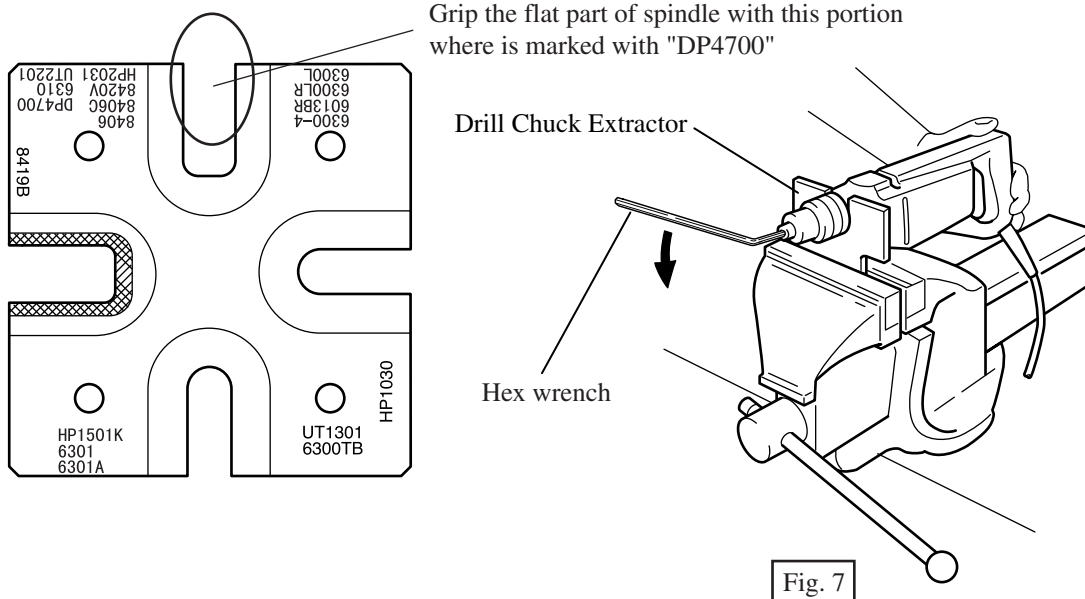
Fig. 6

## < 6 > Assembling drill chuck

Lock spindle by gripping the flat part of spindle with 1R139 "Drill chuck extractor".

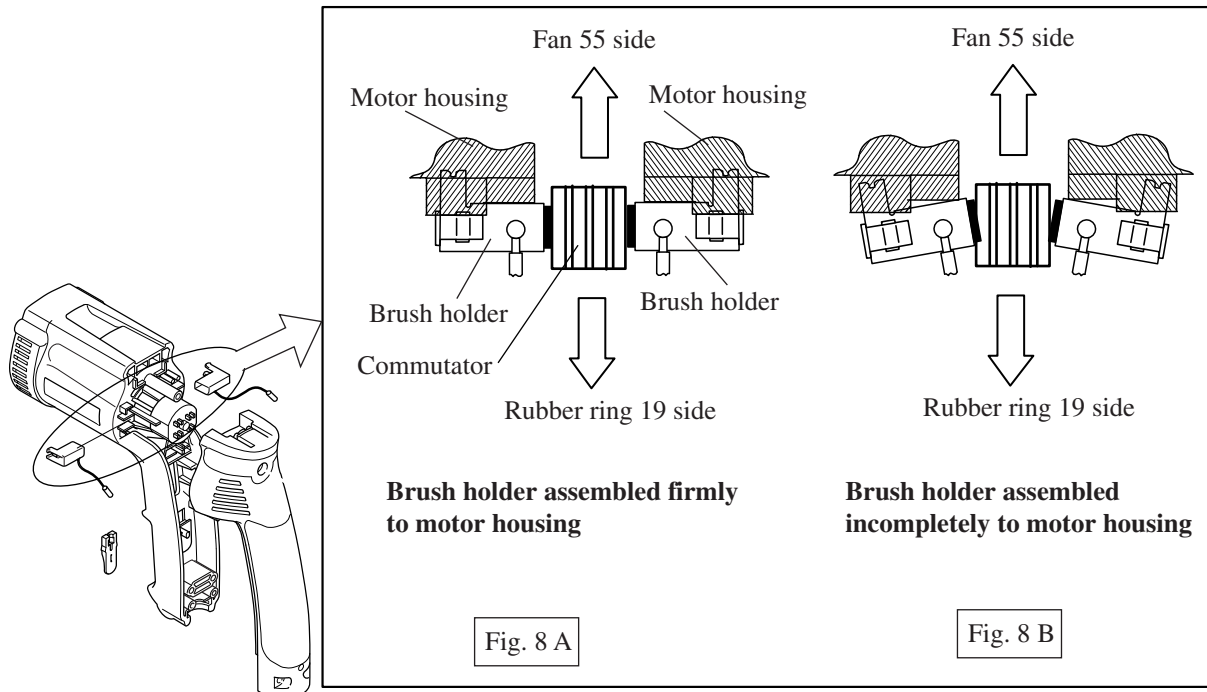
And gripping hex wrench with drill chuck firmly, fasten drill chuck by turning the gripped hex wrench as illustrated in Fig. 7. The fastening torque for drill chuck is approx. 117.6 - 127.4 N.m (1,200 - 1,300 Kgf.cm).

1R139 Drill chuck extractor



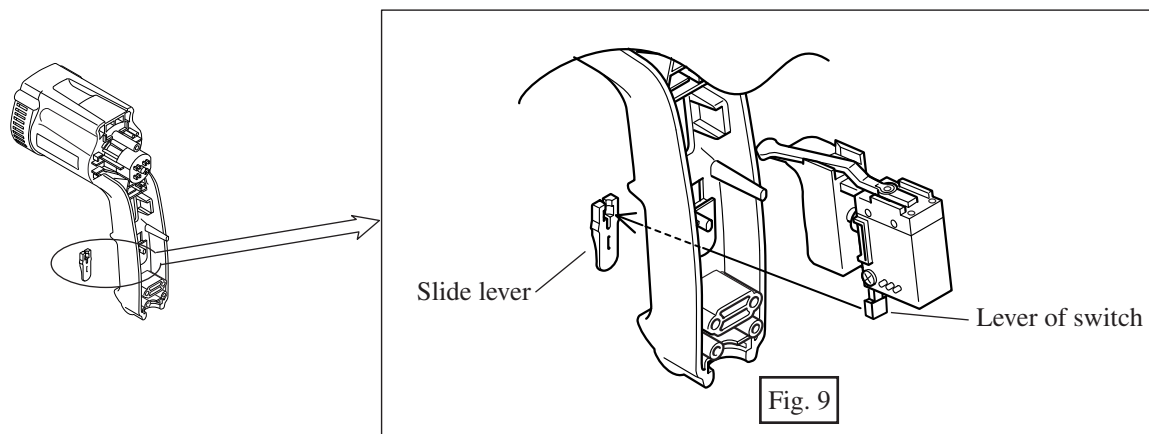
## < 7 > Assembling brush holder

Assemble brush holder to motor housing firmly as illustrated in Fig. 8A. Always make sure, whether the brush holder is assembled as illustrated in Fig8A, before mounting handle cover to the motor housing.



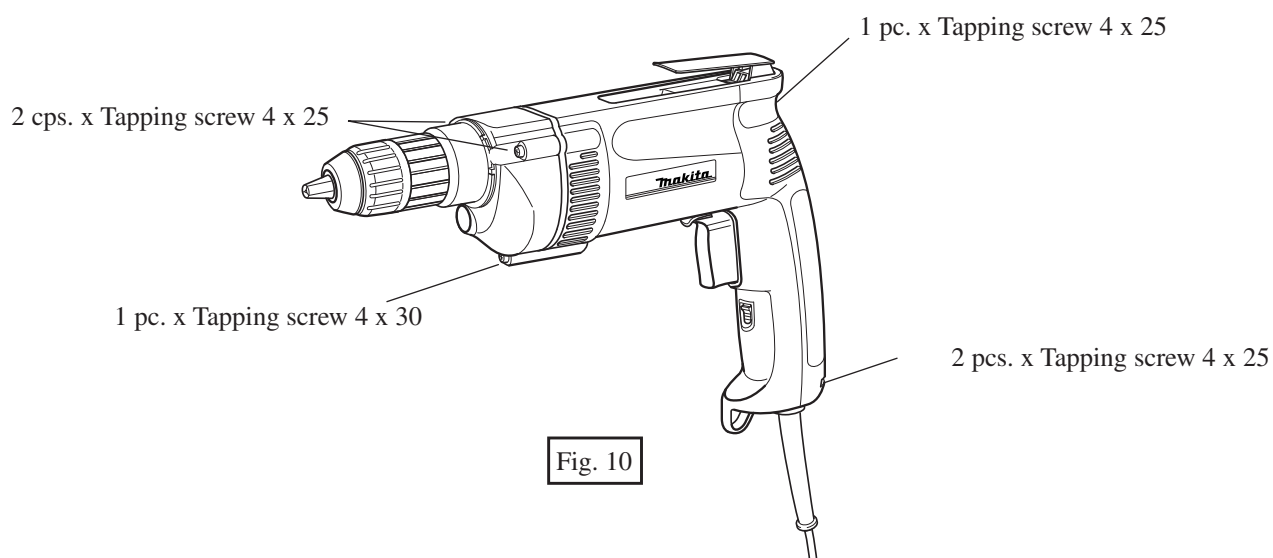
## < 8 > Assembling slide lever

- 1 ) Assemble switch, meeting its lever to the groove of slide lever as illustrated in Fig. 9.
- 2 ) Make sure that slide lever can slide smoothly after the following process.
  - \* Mounting switch, or putting lead wires in the grip
  - \* Mounting handle cover



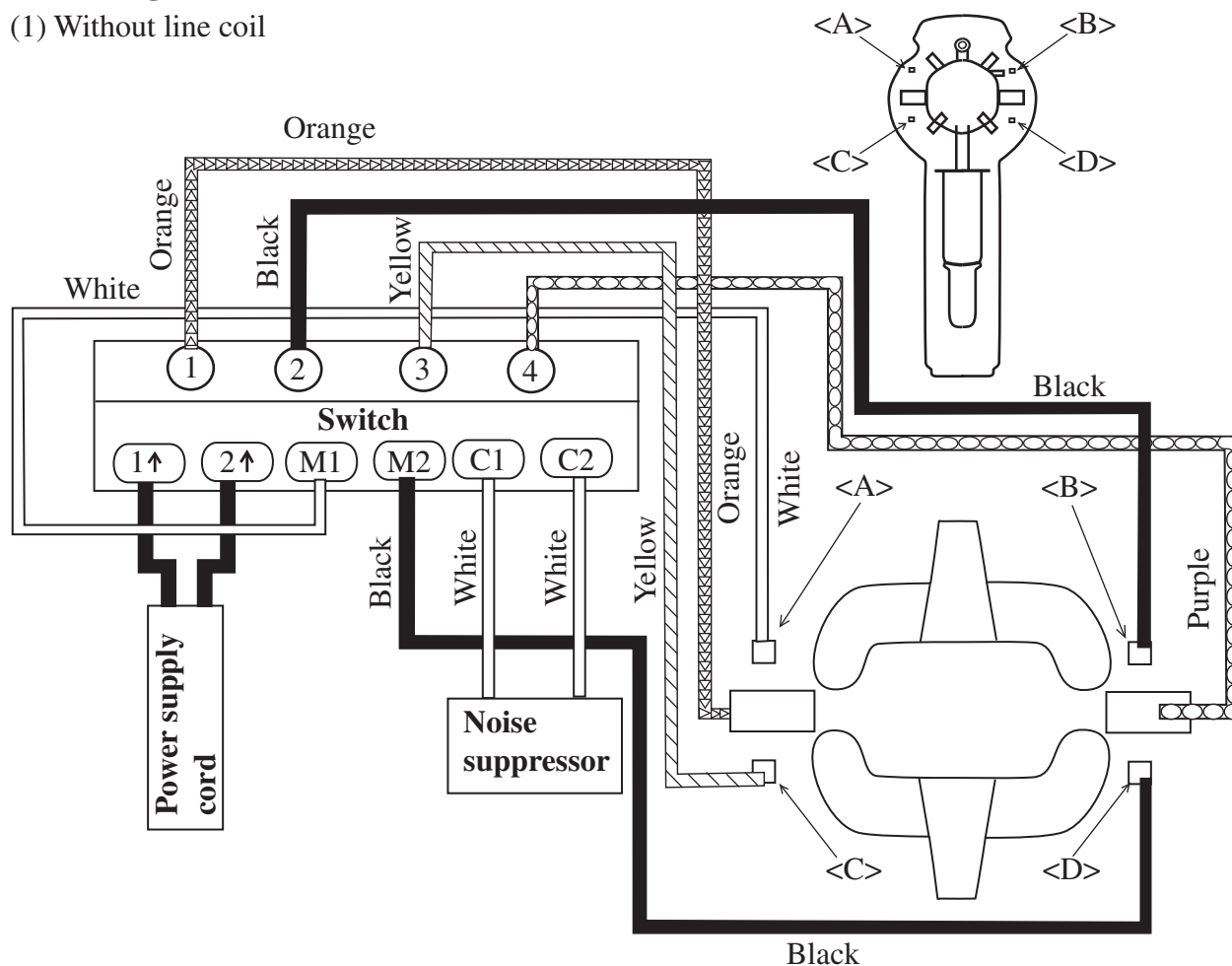
## < 8 > Screwing tapping screws

Fasten the tapping screws as illustrated in Fig. 10.



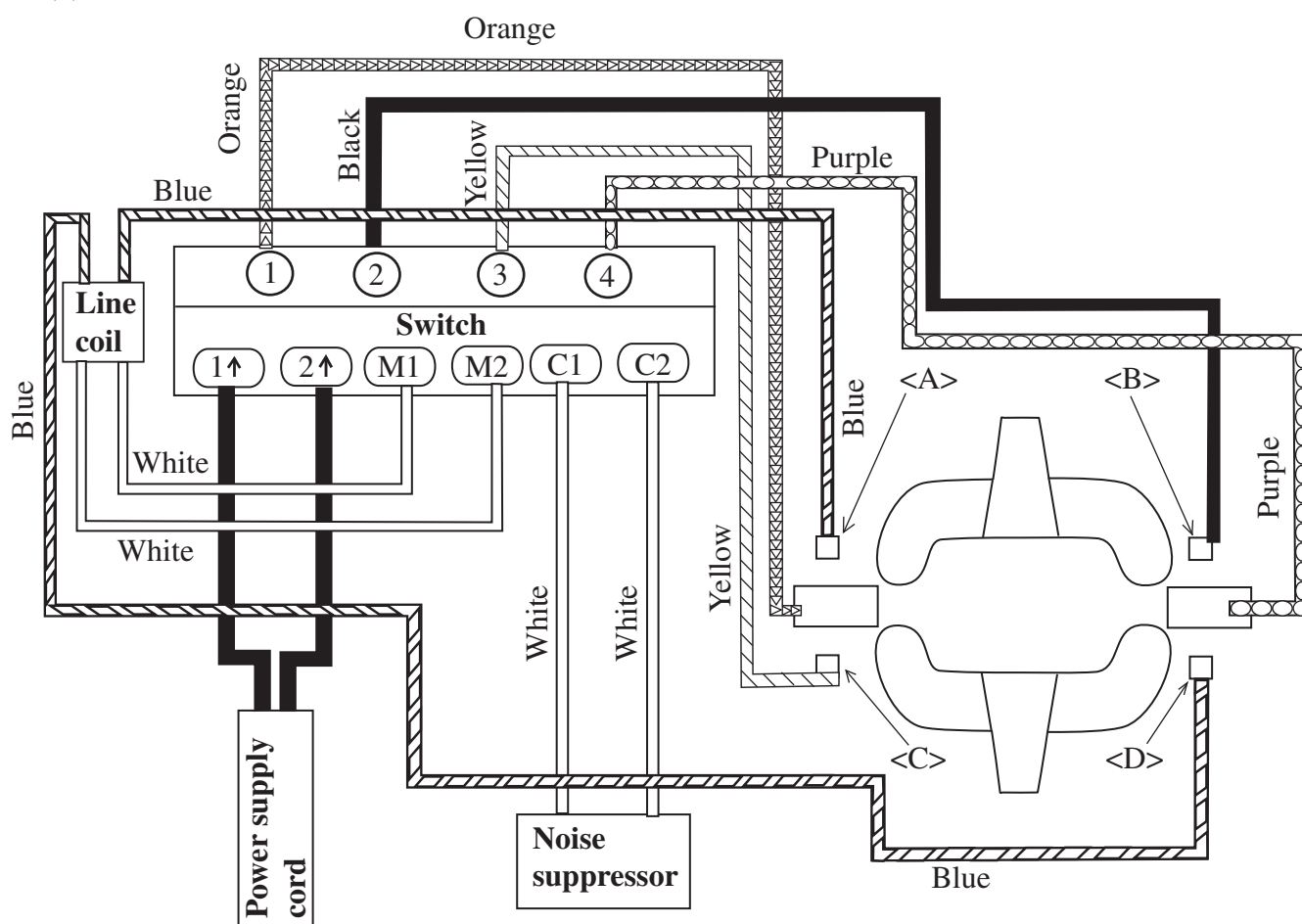
## ▶ **Circuit diagram**

### (1) Without line coil



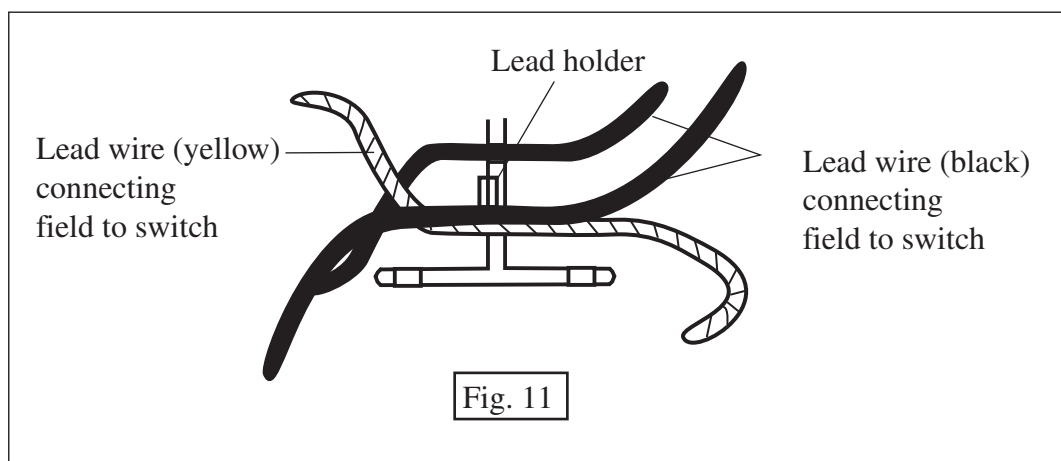
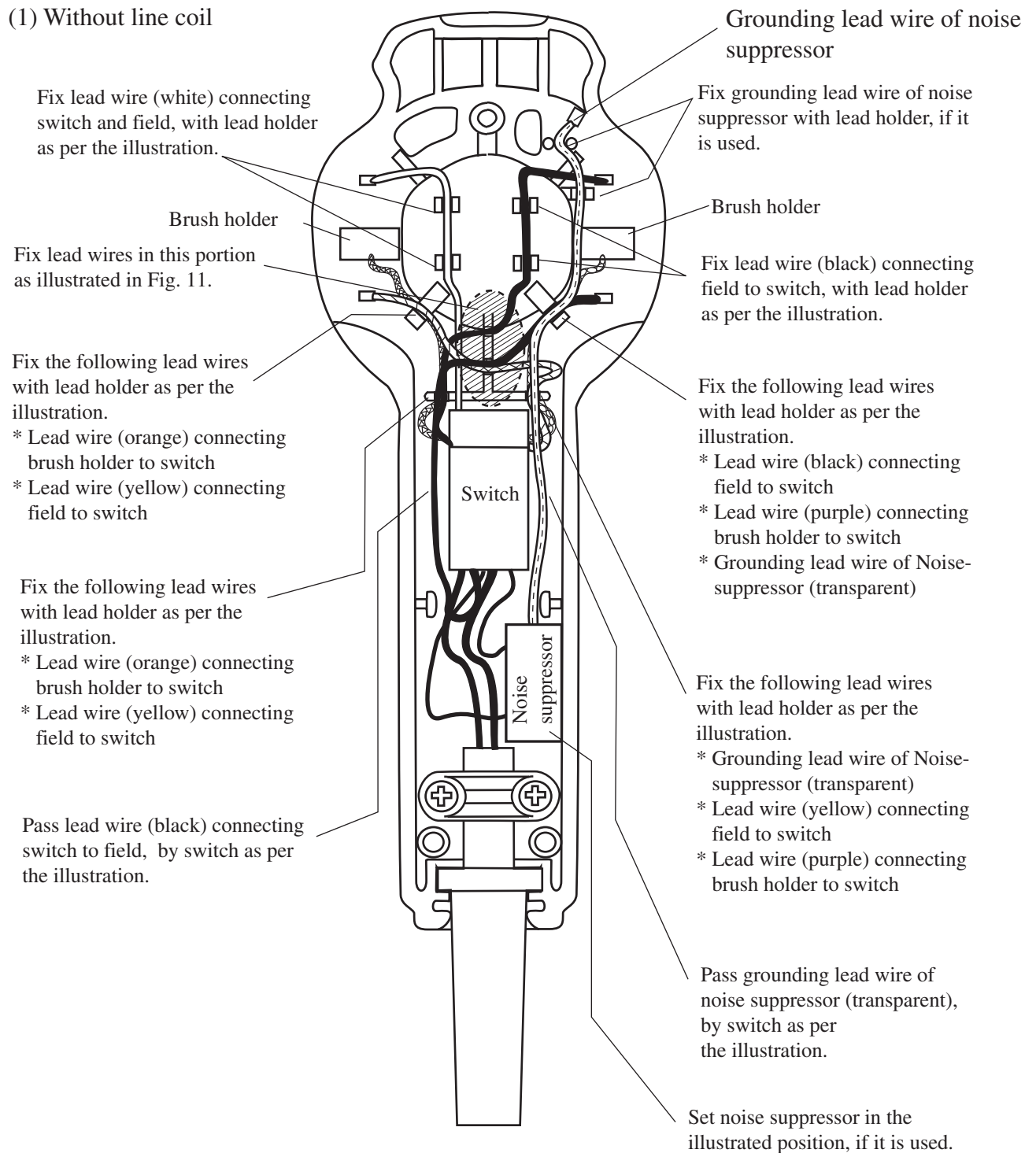
< Note > Noise suppressor is not used in some countries

### (2) With line coil





(1) Without line coil



(1) With line coil

