

TECHNICAL INFORMATION



PRODUCT

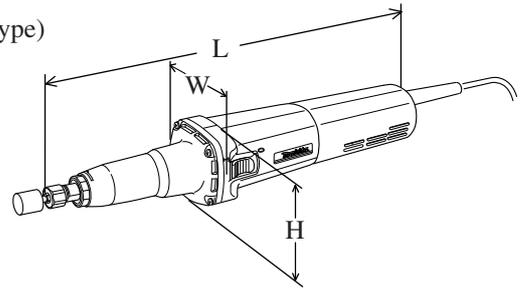
P 1 / 11

Models No. ▶ GD0800C / GD0810C

Description ▶ Die Grinder (High speed type / Low speed type)

CONCEPTION AND MAIN APPLICATIONS

Ideal for professional's heavy duty work.
Rugged, but slim aluminum gear housing is convenient especially for debarring difficult-to-reach spots of material. Thanks to dial speed control, an optimum speed can be set for grinding/cutting hard/soft materials, and the speed is maintained under load. Also features our new "Super Joint System-SJS" for more durability of collet and coupling. Model GD0800C features High-speed, and Model GD0810C features Low-speed.



Dimensions : mm (")		
Model No.	GD0800C	GD0810C
Width (W)	75 (2-15/16)	75 (2-15/16)
Height (H)	75 (2-15/16)	75 (2-15/16)
Length (L)	371 (14-5/8)	371 (14-5/8)

▶ Specification

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output(W)
			Input	Output	
110	7.2	50 / 60	750	480	900
120	6.6	50 / 60	750	480	900
220	3.6	50 / 60	750	480	900
230	3.4	50 / 60	750	480	900
240	3.3	50 / 60	750	480	900

	GD0800C	GD0810C
Continuous rating Input (W)	750	750
No load speed (min-1= rpm)	7,000 -28,000	1,800 - 7,000
Collet size	3mm 6mm 8mm 1/8" 1/4"	
Max. diameter of wheel point	55mm (for Europe)	2" (for USA. Canada, Mexico)
Dial speed control	Yes	Yes
Electronic features for	Constant speed	Yes
	Soft start	Yes
Cord length : m (ft)	2.5 (8.2)	2.5 (8.2)
Net weight (kg)	1.6 (3.5lbs)	1.7 (3.7lbs)

▶ Standard equipment

- * Wrench 13 1 pc.
- * Wrench 19 1 pc.
- * Collet cone 6 or Collet cone 1/4"..... 1 pc.

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

▶ Optional accessories

- * Vise holder set
- * Side grip
- * Collet cone 3
- * Collet cone 1/4"
- * Collet cone 6
- * Collet cone 1/8"
- * Collet cone 8

► **Features and benefits**

Newly developed Super Joint System, (SJS) unique mechanism - spindle and armature are joined with a Lock Spring - provides shock absorbing effect and ensures high durability of collet and coupling.

New powerful motor ;
The most powerful at 750W in its class, but slim enough to allow palm-fitly designed motor housing.
Zig-zag and powdered varnish coating on armature and field assures high durability and protect from grinding dust.

Max. collet size 8mm
Collet of Ø6mm is equipped as a standard accessory.
For optional accessories, the following collets can be used with this machine.
* Ø 3mm * Ø 1/4"
* Ø 8mm * Ø 1/8"

Highly durable cord guard

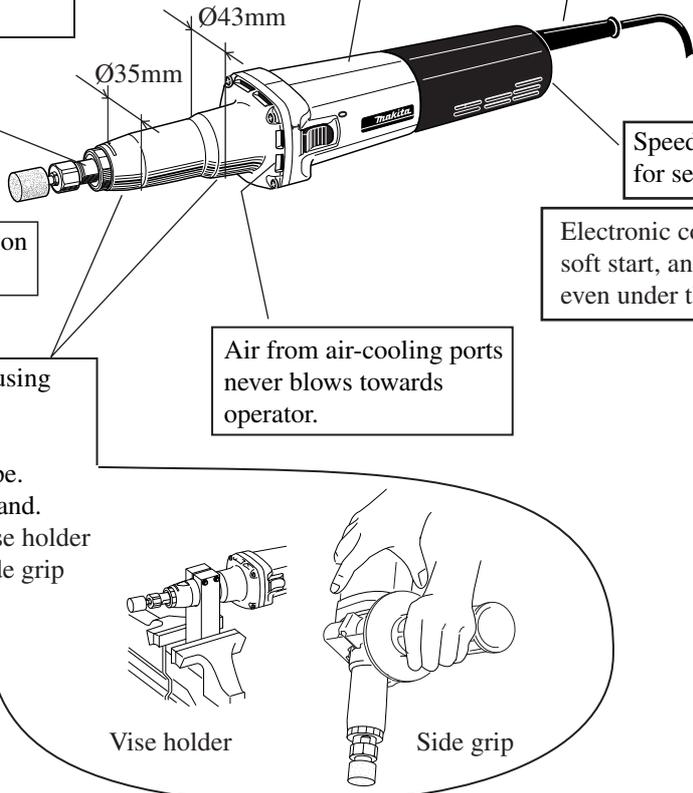
Speed control dial for setting an ideal speed

Electronic control system for soft start, and constant speed even under the loaded condition

Improved dust-proof construction for front bearing

Air from air-cooling ports never blows towards operator.

Rugged, aluminum gear housing with great accessibility to difficult-to-reach spots thanks to its streamline shape.
Ideal size for vise or drill stand.
* Ø35mm for attaching vise holder
* Ø43mm for attaching side grip



Vise holder

Side grip

► **Comparison of products**
High speed type

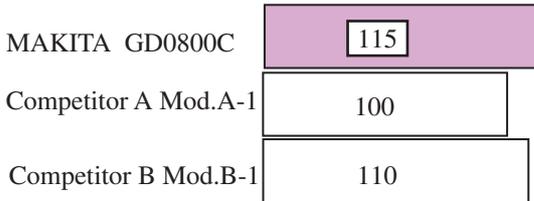
Manufacturer		MAKITA	Competitor A	Competitor B
Model No.		GD0800C	Model A-1	Model B-1
Continuous rating	Input (W)	750	600	710
	Current under 120V (A)	6.6	4.6	6.4
Equipped motor		S60-45	58 - 42	58 - 47
No load speed : (min -1= rpm)		7,000 - 28,000	12,000 - 27,000	7,000 - 27,000
Max.collet size : Ø mm		8	8	8
Side grip		Yes (Optional acc.)	No	Yes (Optional acc.)
Gear housing	Diameter: mm (")	Double neck 35 / 43 (1-3/8 / 1-11/16)	35 (1-3/8)	Double neck 35 / 43 (1-3/8 / 1-11/16)
	Material	Aluminum	Aluminum	Aluminum + Steel
Speed control dial		Yes	Yes	Yes
Electronic feature for	Constant speed	Yes	No	No
	Soft start	Yes	Yes	Yes
Net weight : Kg (lbs)		1.6 (3.5)	1.6 (3.5)	1.8 (4.0)
Standard equipments		* Ø 6mm collet ... 1 pc. or Ø 1/4" collet ... 1 pc. * Wrench 2 pcs.	* Ø 6mm collet ... 1 pc. * Wrench 2 pcs. * Wheel point 1 pc.	* Ø 6mm collet ... 1 pc. * Wrench 1 pc.

Comparison of products
Low speed type

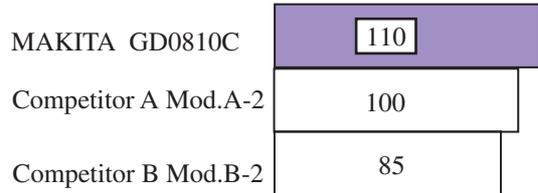
Manufacturer		MAKITA	Competitor A	Competitor B
Model No.		GD0810C	Model A-2	Model B-2
Continuous rating	Input (W)	750	600	710
	Current under 120V (A)	6.6	4.6	6.4
Equipped motor		S60-45	58-42	58 - 47
No load speed : (min - max rpm)		1,800 - 7,000	3,100 - 7,000	2,000 - 5,500
Max.collet size : Ø mm		8	8	8
Side grip		Yes (Optional acc.)	No	Yes (Standard acc.)
Gear housing	Diameter: mm (")	Double neck 35 / 43 (1-3/8 / 1-11/16)	35 (1-3/8)	Double neck 35 / 43 (1-3/8 / 1-11/16)
	Material	Aluminum	Aluminum	Aluminum + Steel
Speed control dial		Yes	Yes	Yes
Electronic feature for	Constant speed	Yes	No	No
	Soft start	Yes	Yes	Yes
Net weight : Kg (lbs)		1.7 (3.7)	1.6 (3.5)	2.0 (4.4)
Standard equipments		* Ø 6mm collet ... 1 pc. or Ø 1/4" collet ... 1 pc. * Wrench 2 pcs.	* Ø 6mm collet ... 1 pc. * Wrench 2 pcs. * Wheel point 1 pc.	* Ø 6mm collet ... 1 pc. * Wrench 2 pcs. * Flap wheel..... 1 pc. * Side grip 1 pc.

Comparison of grinding rate

- (1)Conditions for test of high speed type
- * Numbers in chart below are relative values when setting Competitor A's capacity as 100.
 - * Testing accessory : Ø 60mm wheel point
 - * Test piece : Steel (S45C)
 - * Operating time : 5 minutes
 - * Testing speed : Set in highest stage



- (2)Conditions for test of low speed type
- * Numbers in chart below are relative values when setting Competitor A's capacity as 100.
 - * Testing accessory : Ø 75 x 45 Combination flap brush manufactured by 3M
 - * Test piece : Colored zinc plate
 - * Operating time : 5 minutes
 - * Testing speed : Set in highest stage



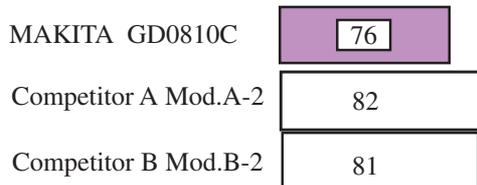
Comparison of noise level

- Conditions for test
- * Testing speed : Set in highest stage
 - * Operation : No loaded
 - * Figures in chart below : dB

High speed type



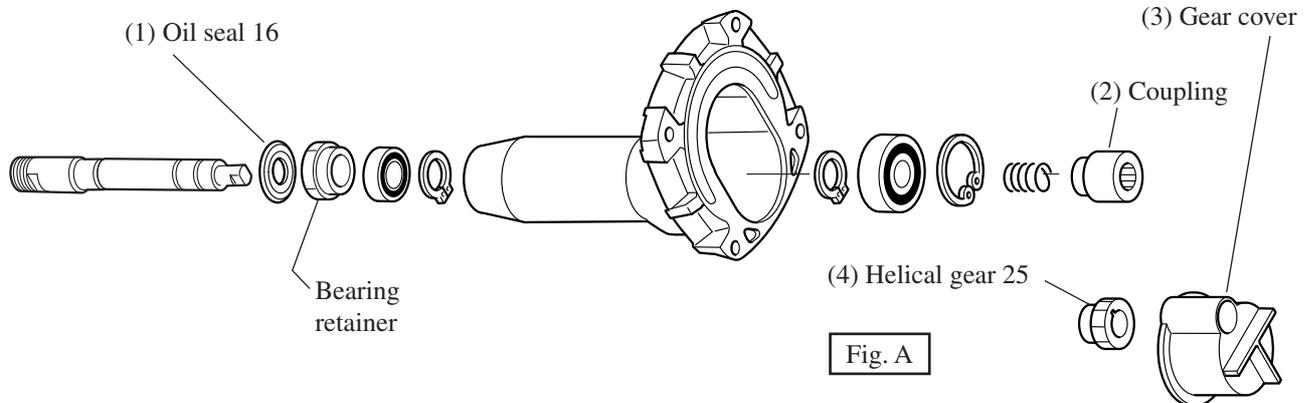
Low speed type



< 1 > Lubrication

MAKITA grease N. No.2 (0420054) has to be used for maintenance of Model GD0800C and GD0810C.
Apply the grease to the following parts.

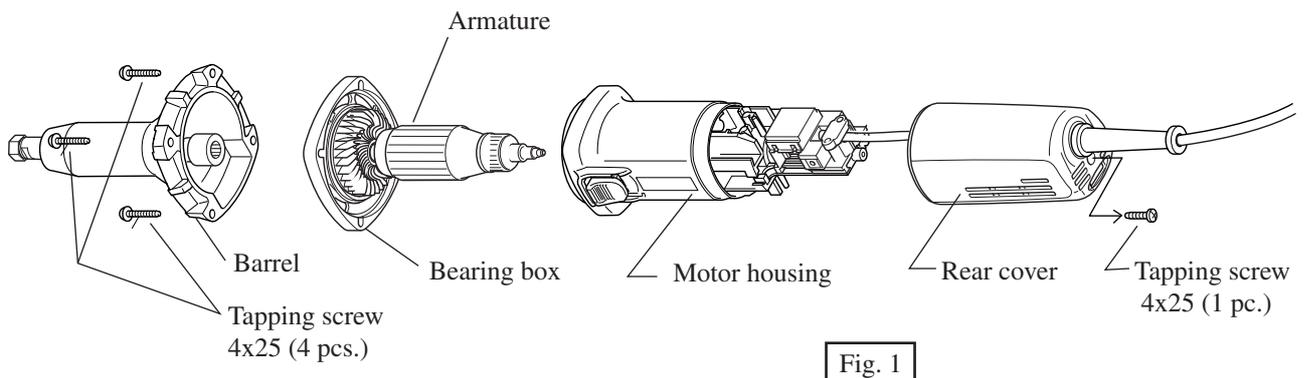
- (1) The lip of oil seal 16 to be assembled to the inner part of bearing retainer.
- (2) Teeth part inside of coupling: approx. by 1 g. (only for Model GD0800C)
- (3) Inner part of gear cover : approx. by 5 g. (only for Model GD0810C)
- (4) Helical gear 25 (only for Model GD0810C)



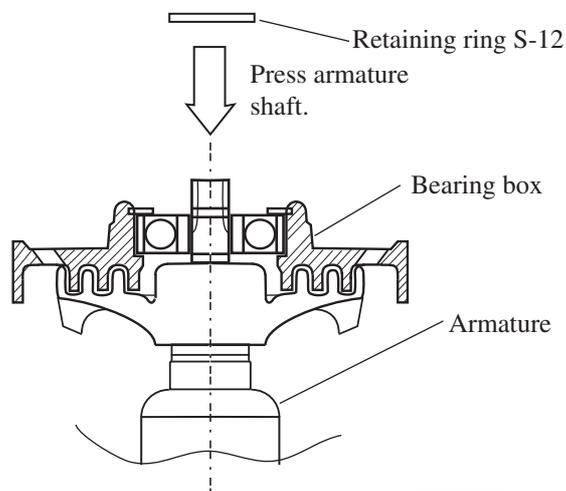
< 2 > Repairing armature

<2-1> Removing

- (1) Remove rear cover by unscrewing tapping screw 4x25 (1 pc.). And then, take off carbon brushes.
- (2) Remove barrel from motor housing by unscrewing tapping screw 4x25 (4 pcs.).
And then, take off armature together with bearing box.



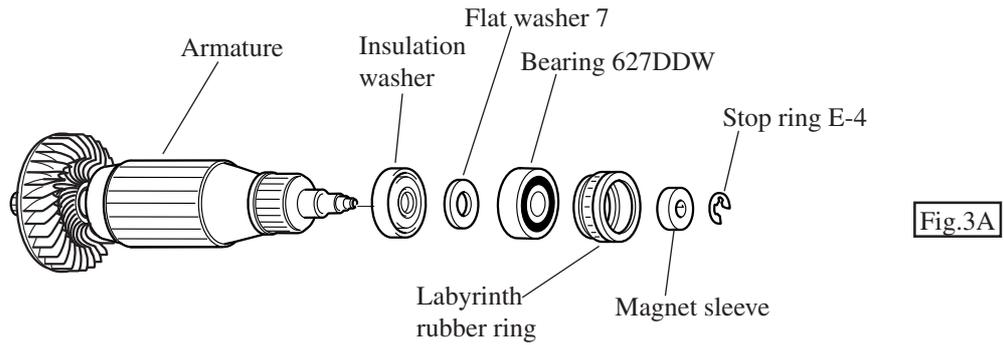
- (3) Take off retaining ring S-12 from armature shaft. And then, remove armature from bearing box by pressing.



Repair

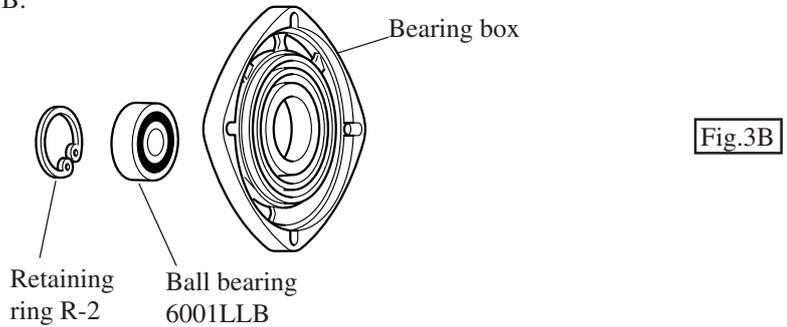
<2-2> Assembling

- (1) Assemble insulation washer, flat washer 7, ball bearing 627DDW, labyrinth rubber ring, magnet sleeve and stop ring E-4 to armature shaft on commutator side. See Fig.3A.



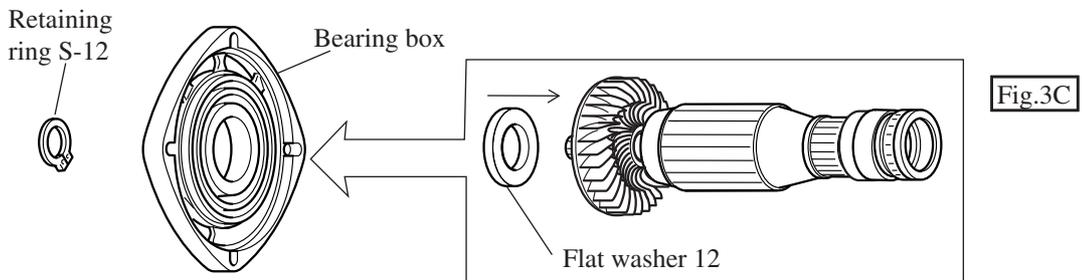
< Note > Do not use the removed stop ring E-4 again. Replace with new one, when it is necessary to be removed.

- (2) Set ball bearing 6001LLB into bearing box. And then, install retaining ring R-28 to bearing box to hold the ball bearing. See Fig.3B.



- (3) Install flat washer 12 to armature shaft. And then, install the armature to bearing box, by pressing. See Fig.3C.

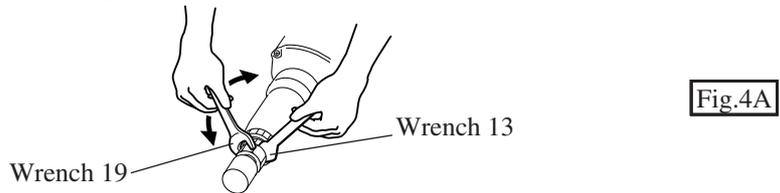
- (4) Install retaining ring S-12 to armature shaft. See Fig.3C.



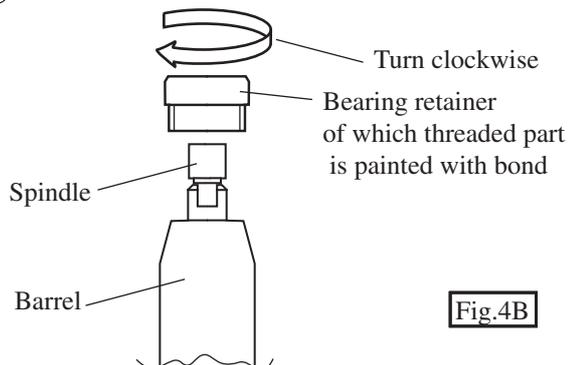
< 3 > Repairing barrel

<3-1> Removing

- (1) Remove collet nut with wrench 19 locking spindle with wrench 13.



- (2) Hold barrel with vise, and remove bearing retainer of which threaded part is painted with bond. Turn the bearing retainer clockwise for removing it, in stead of anti-clockwise.



(3) Hold the flat part on spindle with wrench 13 and unscrew pan head screw M4x8 which is installed in the inner part of coupling.
< Note > The bond is applied on the threaded part of pan head screw M4x8.

(4) Screw hex bolt M4x50 into the same hole on spindle where the above pan head screw M4x8 is used. And then, remove the spindle by pressing with arbor press. So spindle will be removed together with ball bearing 6901LLB, from barrel.

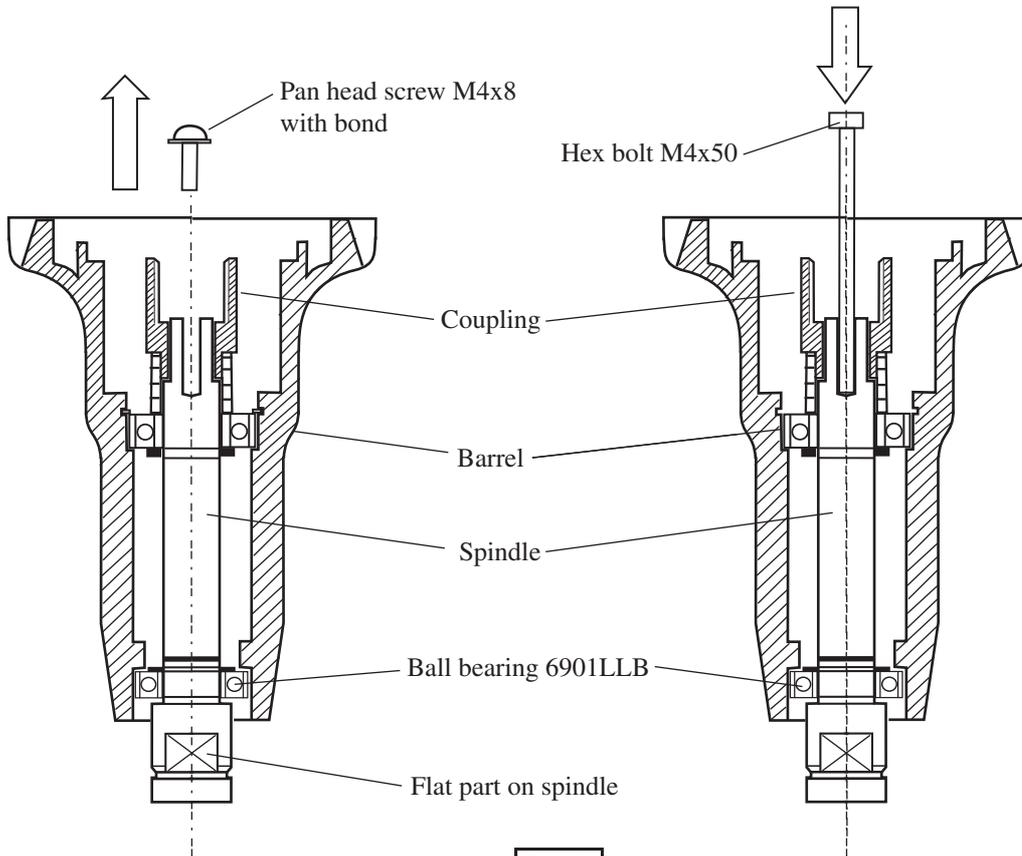


Fig. 5

<3-2> Assembling

(1) Assemble ball bearing 6901LLB and 2 pcs. of retaining S -12 to spindle as illustrated in Fig. 6.

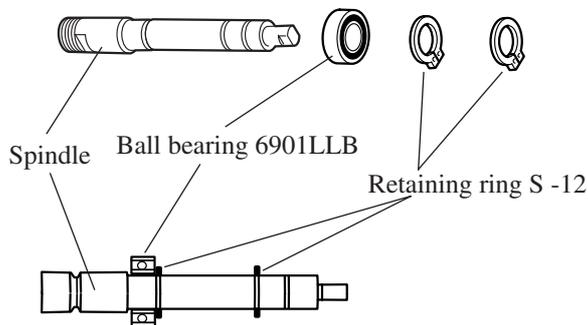


Fig. 6

(2) Put ball bearing 6001LLB and retaining R -28 into barrel as illustrated in Fig. 7.

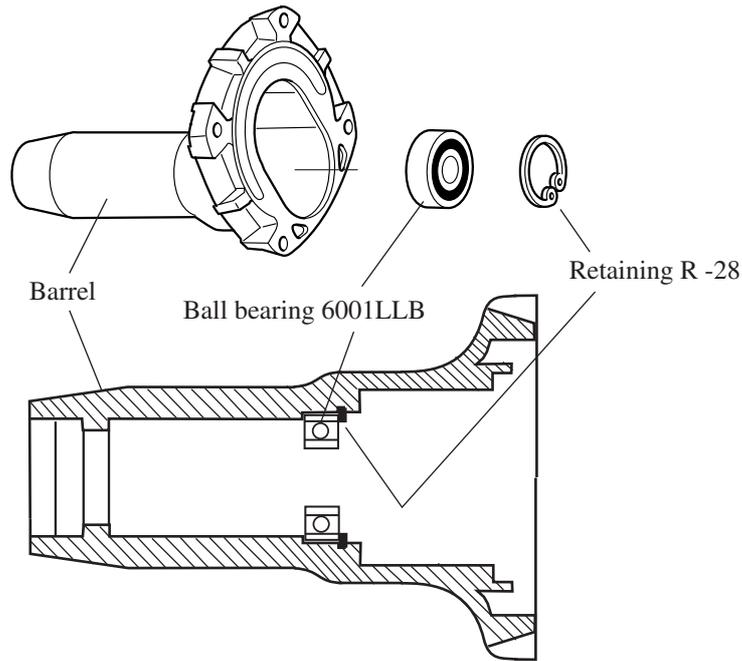


Fig. 7

(3) Supporting the inner ring of ball bearing 6001LLB with a cylindric jig, install spindle by pressing through ball bearing 6001LLB as illustrated in Fig. 8.

And then, install bearing retainer on barrel as illustrated in Fig. 8A. The fastening torque for bearing retainer is 11.8Nm - 15.7Nm (120Kgf.cm - 160Kgf.cm)

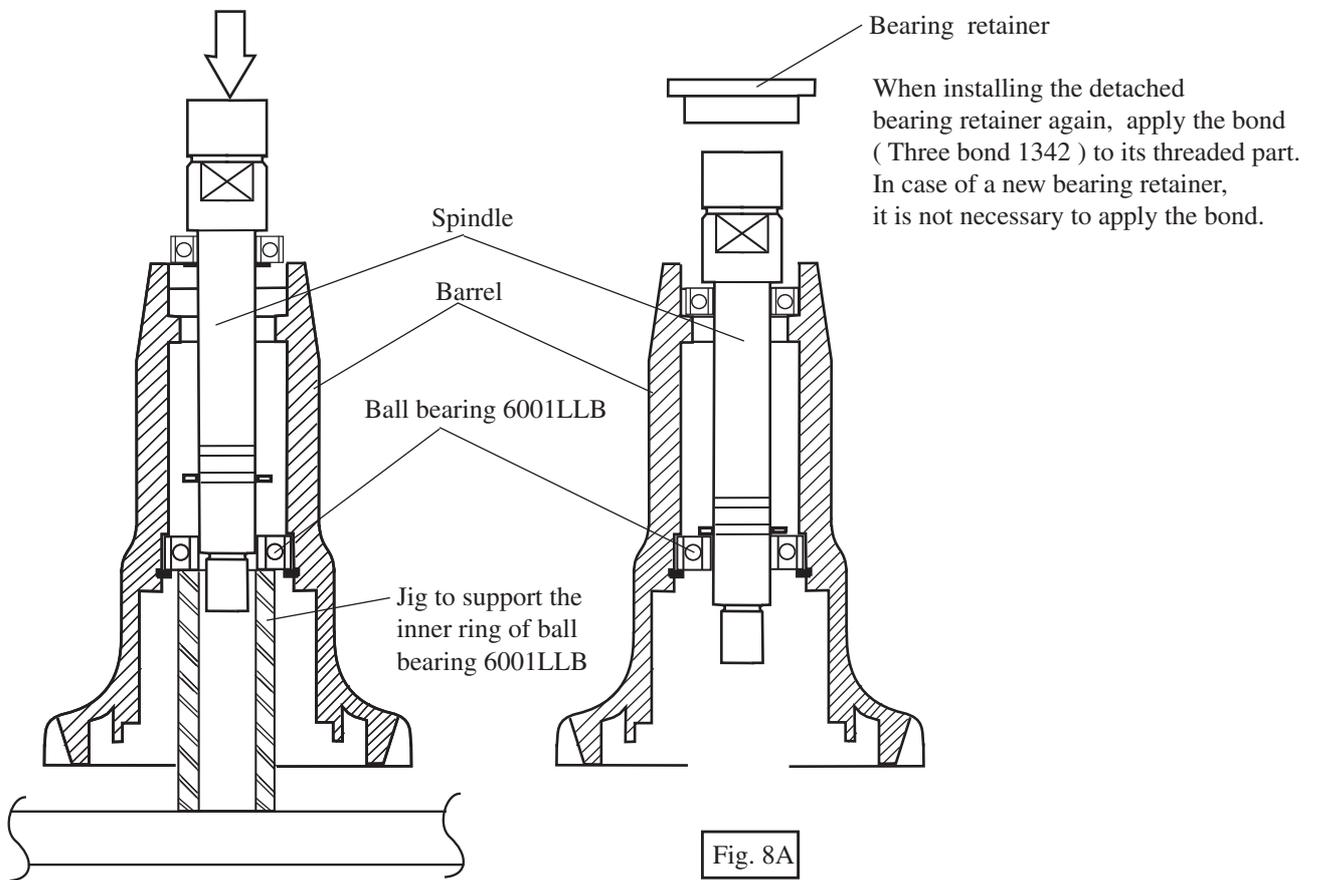


Fig. 8

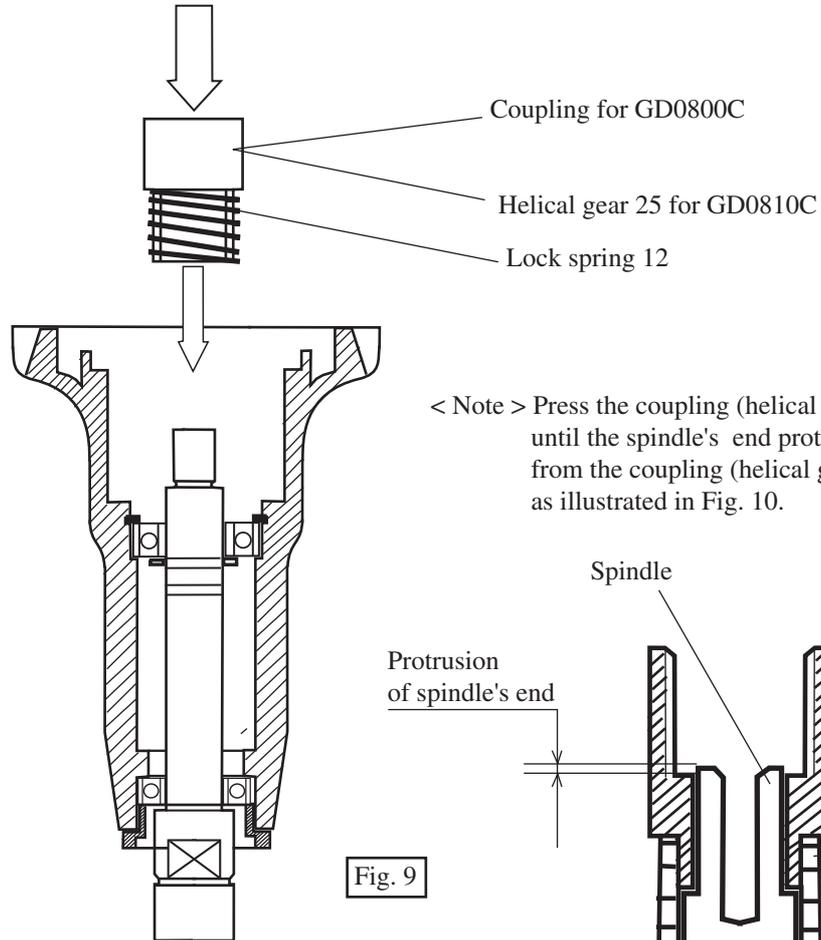
Fig. 8A

(4) Model GD0800C

Install lock spring 12 on coupling. And then, attach the coupling to spindle by pressing with arbor press as illustrated in Fig. 9.

(4A) Model GD0810C

Install lock spring 12 on helical gear 25. And then, attach the helical gear 25 to spindle by pressing with arbor press as illustrated in Fig. 9.



< Note > Press the coupling (helical gear 25) until the spindle's end protrudes a little bit from the coupling (helical gear) as illustrated in Fig. 10.

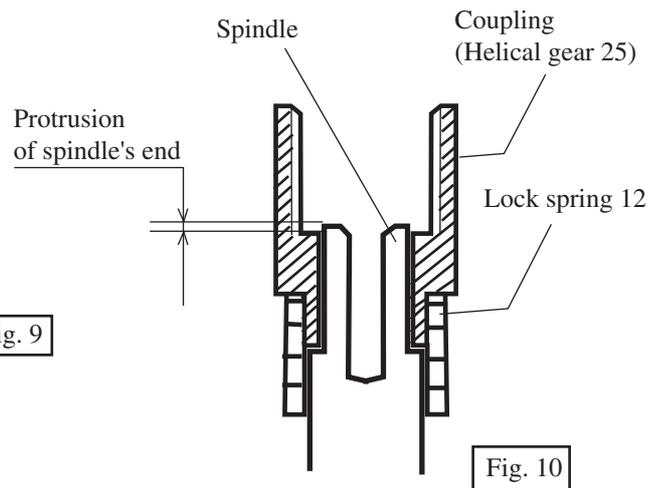


Fig. 9

Fig. 10

(5) And then, fix spindle and coupling (helical gear 25) with pan head screw M4x8 (265082-1) of which threaded part is coated with bond.

< Note > Do not use pan head screw M4x8 other than No.265082-1.

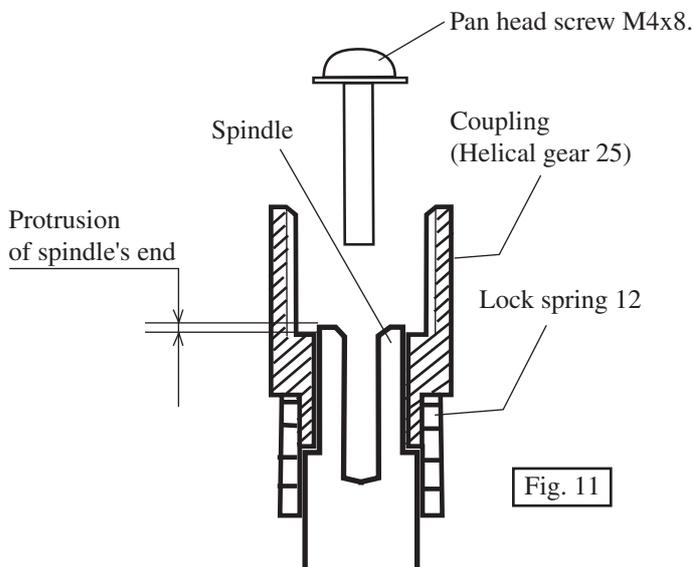
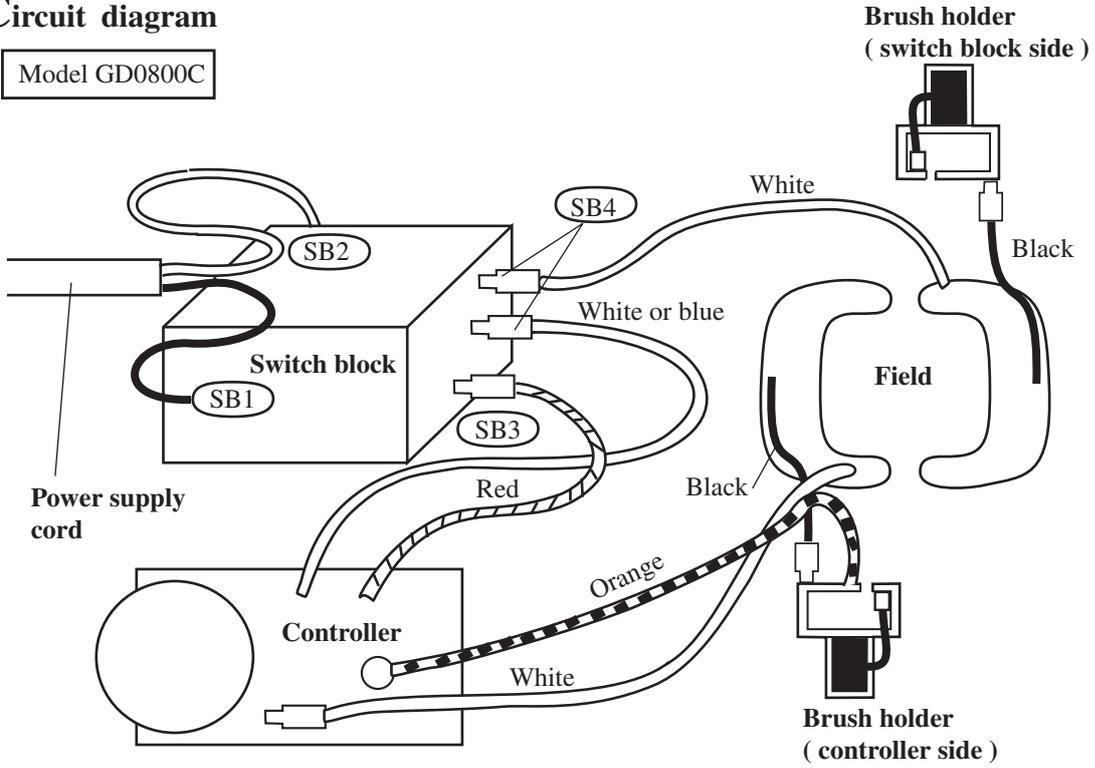


Fig. 11

▶ **Circuit diagram**

Model GD0800C

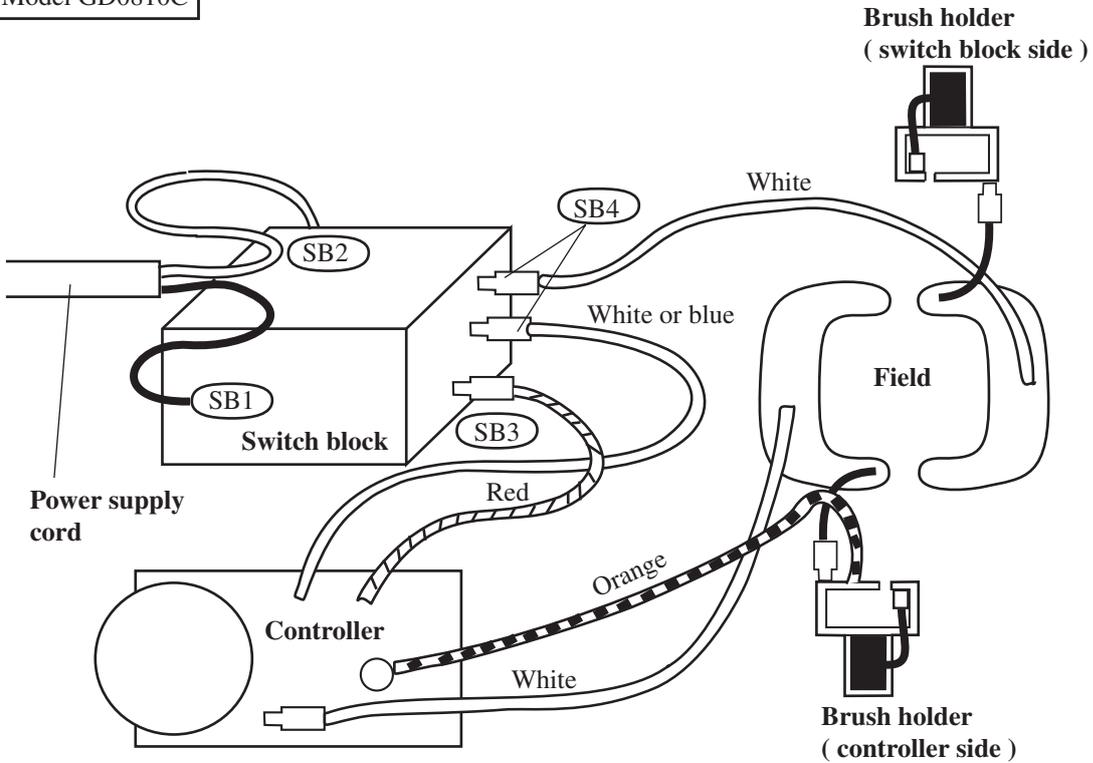


< Note > The orange wire connecting controller with brush holder is not used in some country.

* The numbers, SB1, SB2, SB3 and SB4 are indicated on the switch block.

Fig. 11

Model GD0810C



< Note > The orange wire connecting controller with brush holder is not used in some country.

* The numbers, SB1, SB2, SB3 and SB4 are indicated on the switch block.

Fig. 12

▶ Wiring diagram

For Model GD0800C and GD08710C

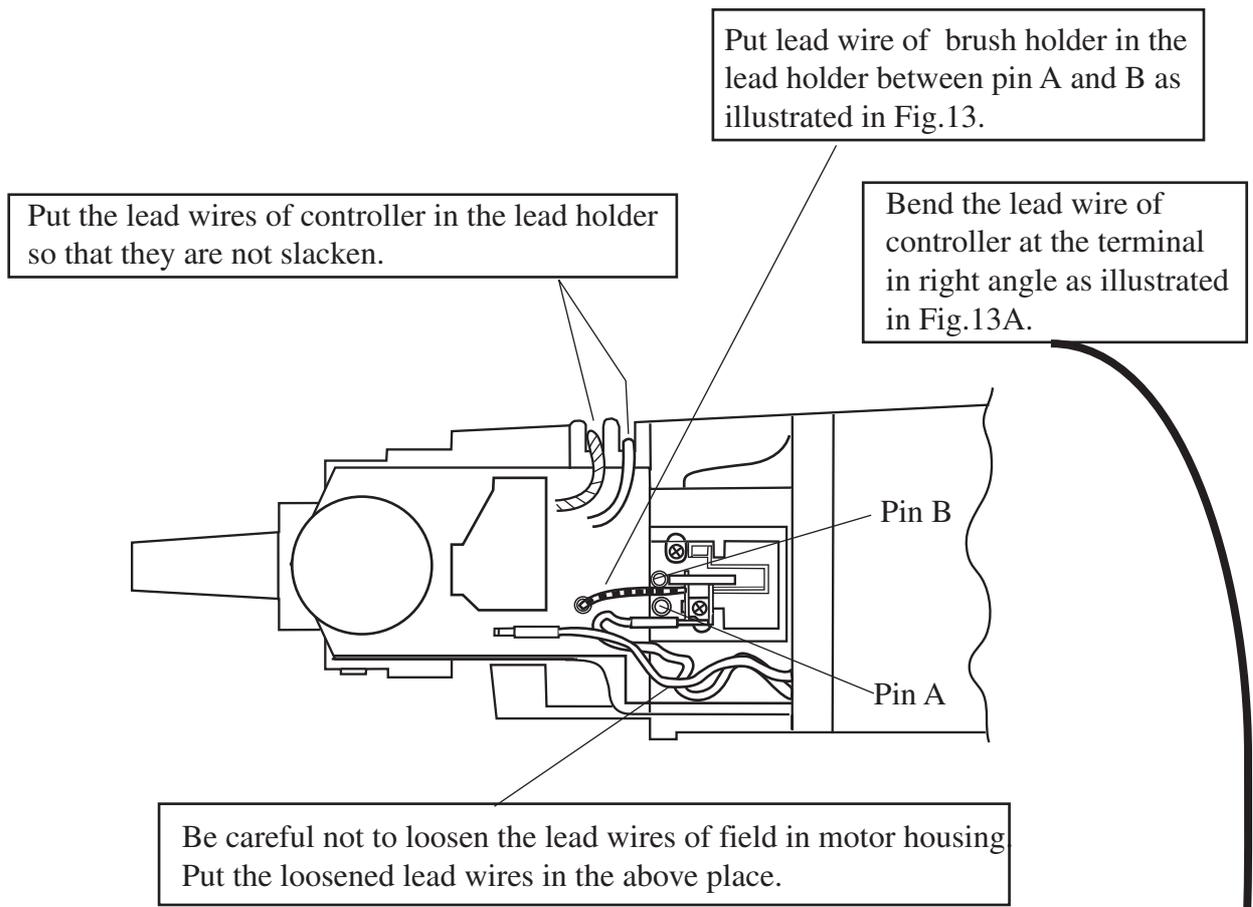
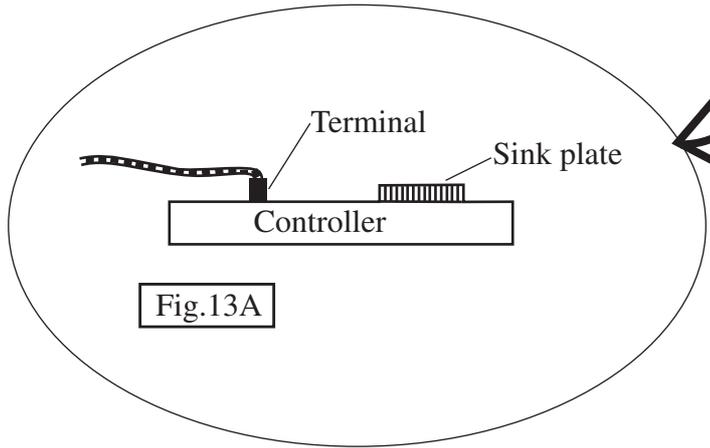


Fig.13



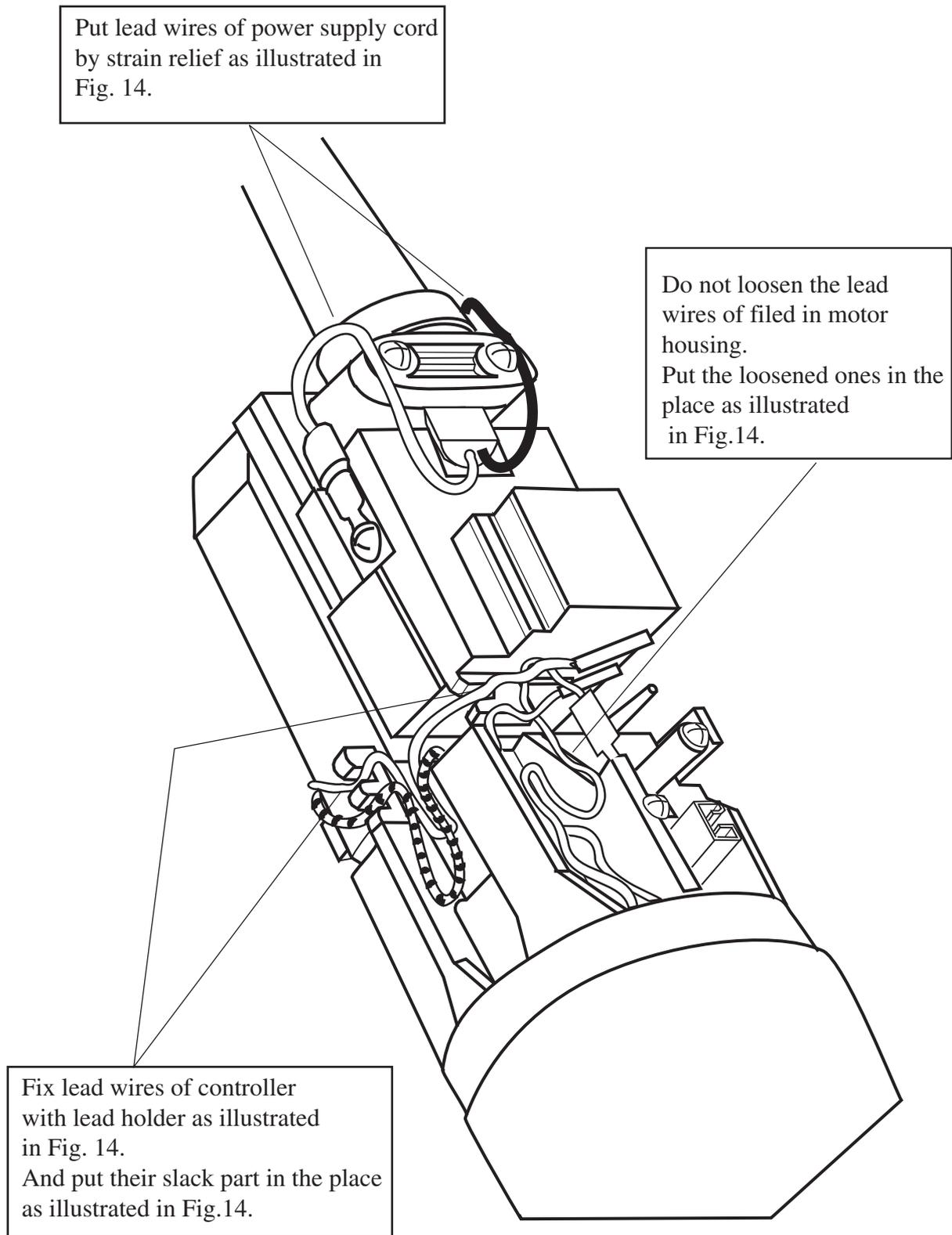


Fig.14