

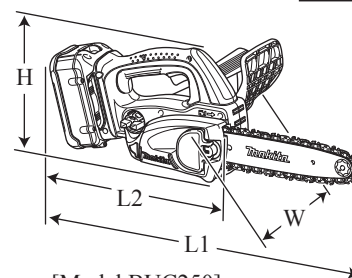
TECHNICAL INFORMATION



PRODUCT

P 1 / 9

- Model No.** ▶ BUC250, BUC250C
- Description** ▶ Cordless Chain Saw 250mm (9-7/8")



[Model BUC250]

CONCEPT AND MAIN APPLICATIONS

Models BUC250 and BUC250C are cordless chain saw powered by 36V/ 2.6Ah Li-ion battery.

Their main benefits are:

- Environment-friendly with zero gas emission and extremely low noise
- Reduced running cost with rechargeable Li-ion battery
- More work amount on a single battery charge obtained by using 36V Li-ion battery
- Increased cutting speed with more powerful motor
- Kickback brake and Electric chain brake
- Retractable metal hook
- Tool-less change and tension adjustment of saw chain
- Automatic chain oiling

BUC250 is equipped with sprocket nose guide bar.

BUC250C is equipped with carving guide bar.

These products are available in the following variations:

Dimensions: mm (")		
	BUC250	BUC250C
Length (L1)	576 (22-3/4)	589 (23-1/4)
Length (L2)	331 (13)	
Width (W)	200 (7-7/8)	
Height (H)	239 (9-3/8)	

L1: Length with guide bar
L2: Length without guide bar

Model No.		Battery		Battery cover	Charger
		type	quantity		
BUC250Z	BUC250CZ	No	No	No	No
BUC250RD	BUC250CRD	BL3626	1	No	DC36RA
BUC250RDE	BUC250CRDE	BL3626	2	1	DC36RA

All models also include the accessories listed below in "Standard equipment".

Note: Do not operate the chain saw in a tree. Operation of the chain saw while up in a tree may result in personal injury.

► Specification

Specification		Model	BUC250	BUC250C
Battery	Cell		Li-ion	
	Voltage: V		36V	
	Capacity: Ah		2.6	
	Charging time (approx.): min.		22 with DC36RA	
Max output (W)			700	
Guide bar length: mm (")			250 (9-7/8)	
Chain speed: m/s (m/min.)			8.3 (500)	
Guide bar type			Sprocket nose	Carving
Saw chain	Type		91VG-40E	25AP-60E
	Pitch		3/8"	1/4"
Chain brake			Yes (Electric brake)	
Kickback brake			Yes	
Weight according to EPTA-Procedure 01/2003*: kg (lbs)			4.5 (9.9)	

* with battery, guide bar, saw chain, chain oil

► Standard equipment

- Round file 1
- Oil supply (containing 100ml of chain oil) 1
- Guide bar case 1

Also see the product variation list above.

Note: The standard equipment for the tool shown above may vary by country.

► Optional accessories

- Saw chain 91VG-40E (for sprocket nose guide bar)
- Saw chain 25AP-60E (for carving guide bar)
- Tool bag
- Arm band complete set
- Battery BL3626
- Fast charger DC36RA
- Battery adaptor BAP36N

► **Repair**

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

[1] NECESSARY REPAIRING TOOLS

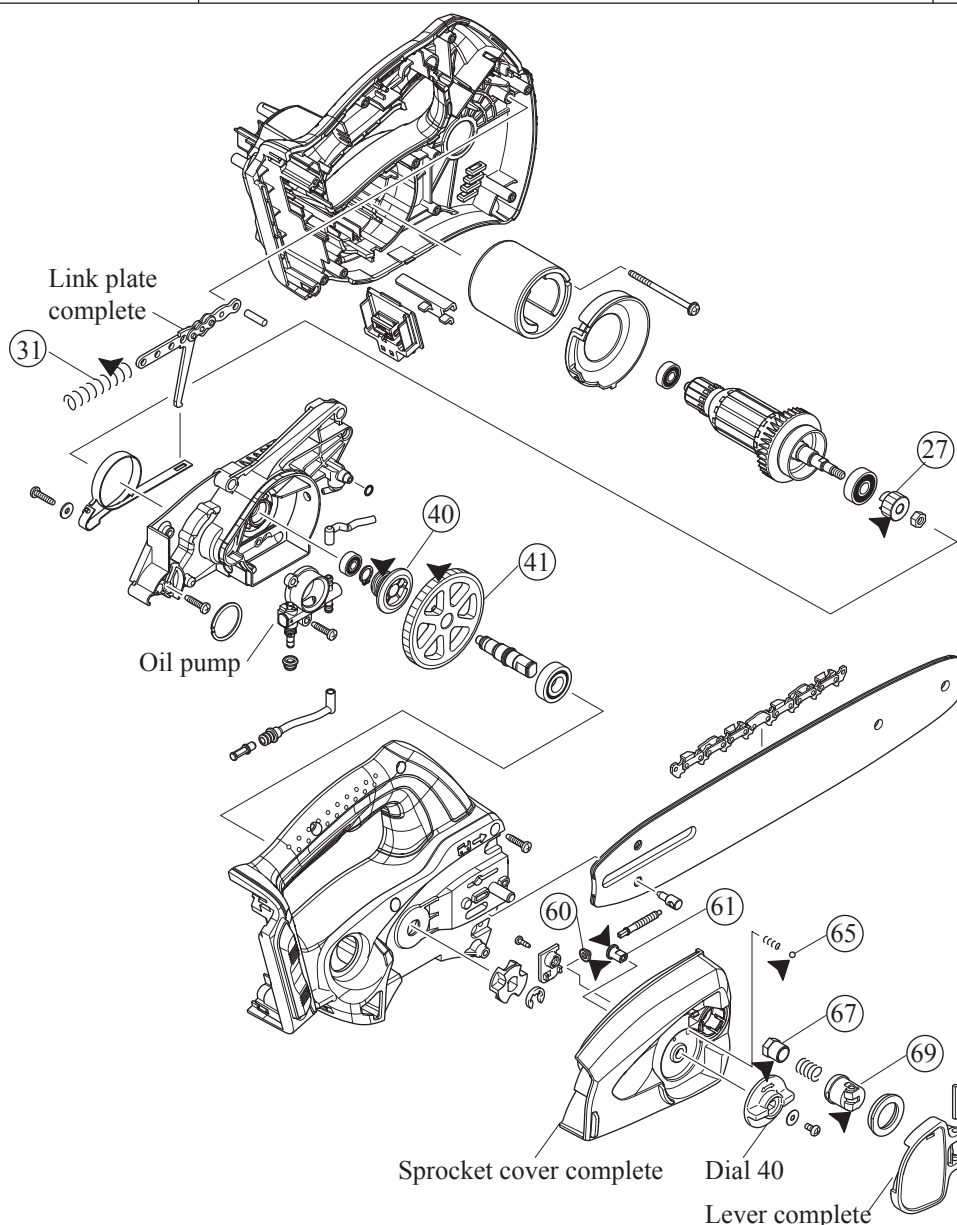
Code No.	Description	Use for
1R035	Bearing setting plate 15.2	Removing Helical gear 40 from Crank shaft
1R269	Bearing extractor	Removing Ball bearings 607ZZ and 629DDW from Armature shaft
1R291	Retaining ring S and R pliers	Blocking Switch knob when disassembling Switch lever

[2] LUBRICATIONS

Apply the following lubricant to the specific portions to protect the parts and product from unusual abrasion.

Item No.	Description	Portion to lubricate	Lubricant	Amount
②7	Spur gear 16	Gear teeth	Makita grease N No.2 ▼	5g in total
④1	Spur gear 73	Put the grease while turning Spur gear 73		
③1	Compression spring 9	Inside where Link plate complete contacts		a little
④0	Worm gear	Gear teeth to engage with those of Oil pump		
⑥0	Spiral bevel gear 14	Gear teeth		
⑥1	Spiral bevel gear 14	Note: ⑥0 is different from ⑥1. See their shapes.		
⑥5	Steep ball 4	Whole portions to attach Sprocket cover complete/ Dial 40		
⑥7	M8-13 Hex nut	Drum portion where Sprocket cover complete contacts		
⑥9	Lever holder	Around pin insertion holes where Sprocket cover complete contacts		

Fig. 1



► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-1. Spur gear 73

DISASSEMBLING

- 1) Remove Stop ring E-8 and Sprocket from Spindle. (Fig. 2)
- 2) Remove 4x35 Tapping screw from Front handle, then remove eight 4x18 Tapping screws and Housing R from Housing L. (Fig. 3)

Note: A) It is not necessary to loosen 4x18 Tapping screw of the lowest position designated in Fig. 3.

B) O ring 6 on the emboss of Bearing housing complete may be removed together. Be careful not to lose it in this step. (Fig. 7)

C) 4x35 Tapping screw is in the deep hole of Front housing complete. Use a long size Phillips screwdriver.

- 3) Tap the emboss of Housing L carefully with plastic hammer as illustrated in Fig. 4.

Note: Do not tap the fragile portions.

- 4) Remove Ball bearings 6001DDW and 607ZZ from Spindle using 1R269.

- 5) Remove Retaining ring S-10 from Spindle. Worm gear 73 can be removed.

- 6) Receive Spur gear 73 using 1R035 and push out Spindle from Spur gear 73 using arbor press. (Fig. 5)

Fig. 2

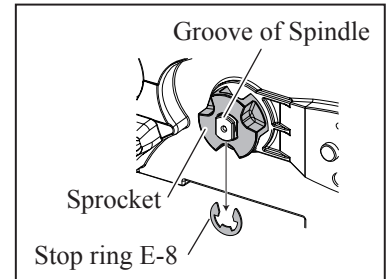


Fig. 3

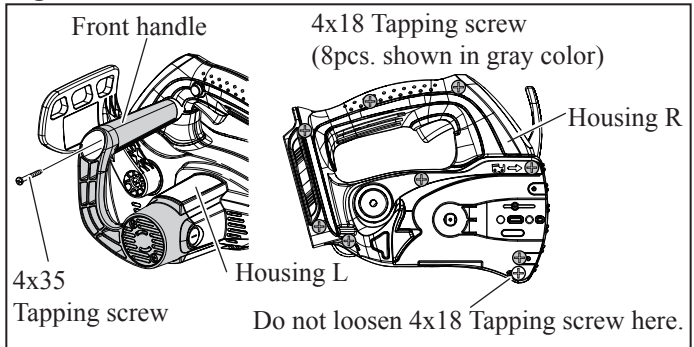


Fig. 4

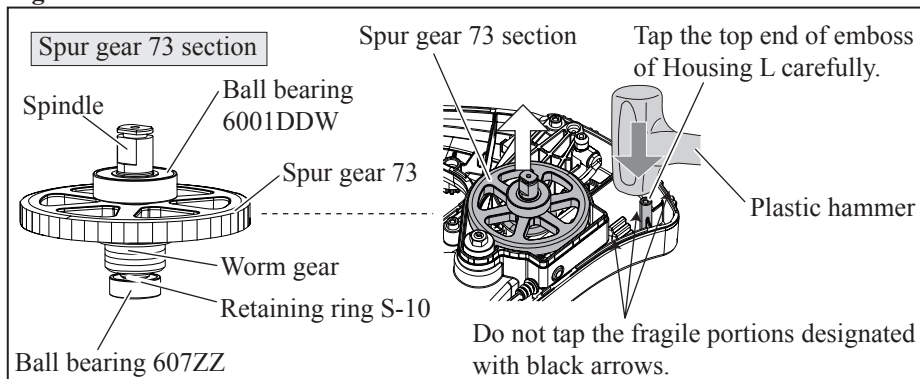
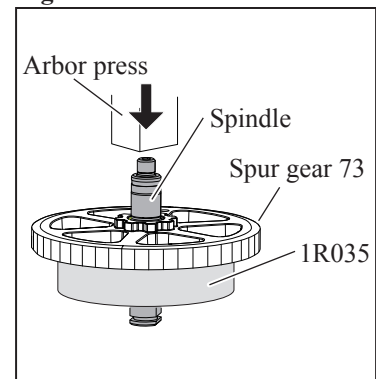


Fig. 5



ASSEMBLING

Take the disassembling step in reverse.

Note: A) Spur gear 73 section is directional. Assemble the components so that the protruded side of Spur gear 73 faces Worm gear as illustrated in Fig. 6.

B) Be sure to attach O ring 6 onto the emboss of Bearing housing complete, and then assemble Housing R to Bearing housing complete. (Fig. 7)

Fig. 6

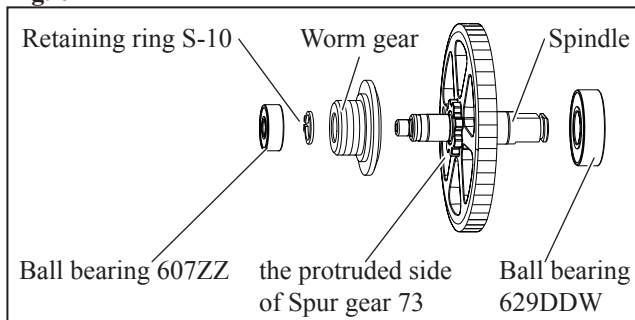
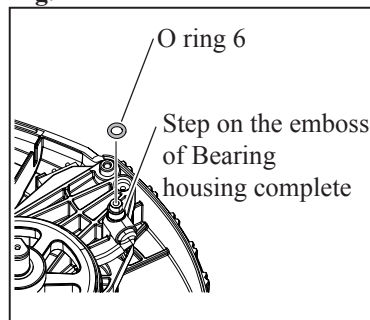


Fig. 7



► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-2. Oil pump

DISASSEMBLING

- (1) Remove Spur gear 73 section. See the previous page.
- (2) Remove two 4x18 Tapping screws (**Fig. 8**) and pull out two kinds of Connectors.
Oil pump can be separated from Bearing housing complete as illustrated in **Fig. 9**.

Fig. 8

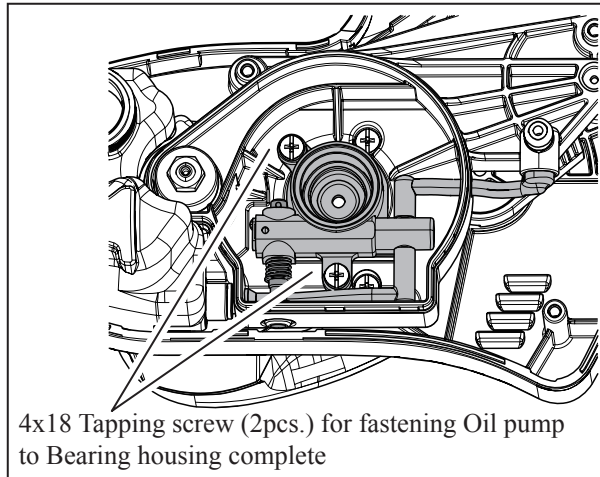
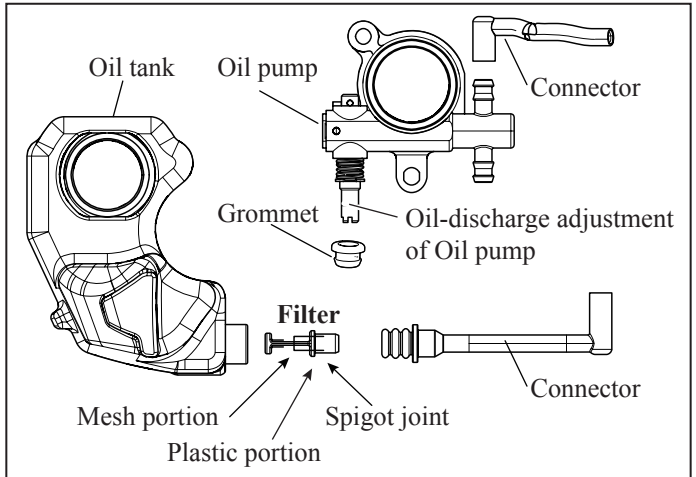


Fig. 9



ASSEMBLING

Take the disassembling step in reverse.

Note: A) Grab the plastic portion of Filter and insert the spigot joint into Connector.

Do not grab the mesh portion of Filter. (**Fig. 9**)

After assembling Filter to Connector, insert Connector into Oil tank firmly. (**Fig. 10**) The other ends of Connectors have to be inserted firmly into the pipes of Oil pump and Bearing housing complete. (**Fig. 9**)

- B) Insert the oil-discharge adjustment of Oil pump into Grommet and then fit the grommet into the hole of Bearing housing. (**Figs. 9 and 11**)
- C) Connector between Oil pump and Oil tank has to be placed under the oil-discharge adjustment of Oil pump. (**Fig. 11**)

Fig. 10

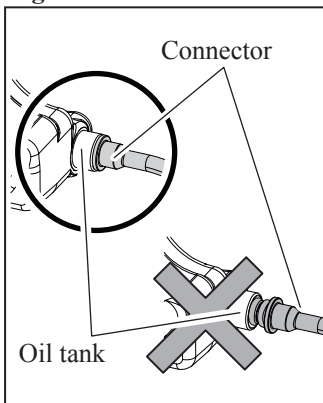
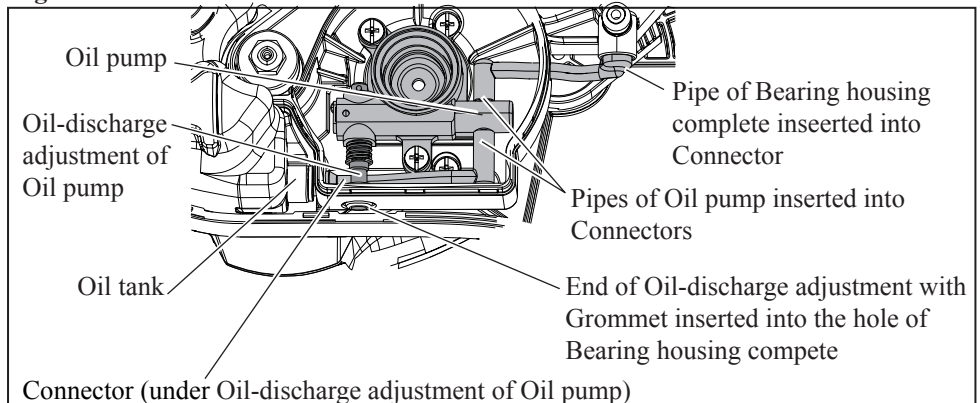


Fig. 11



► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-3. Chain brake section

DISASSEMBLING

- (1) Remove Carbon brushes.
- (2) Remove Spur gear 73 section.
- (3) Push Front hand guard complete forward so that Chain brake comes into play.
- (4) Remove four 4x18 Tapping screws that fastens Bearing housing complete with Housing L. **(Fig. 12)** Tap the top end of emboss of Housing L carefully with Chain brake engaged. **(Fig. 13)** Bearing housing complete can be removed together with Armature.

Note: Do not tap the fragile portions.

- (5) Make Link plate complete straight as illustrated in **Fig. 14** to release Chain brake. And then pull out Armature from Bearing housing complete.
- (6) Loosen 4x18 Tapping screw and Flat washer 4 that secure Brake band in place. **(Fig. 15)**

Fig. 12

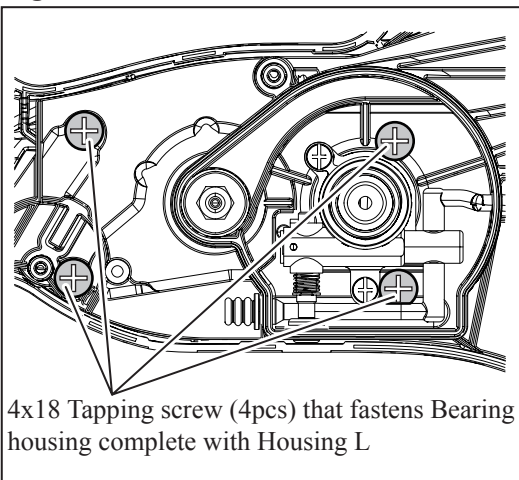


Fig. 13

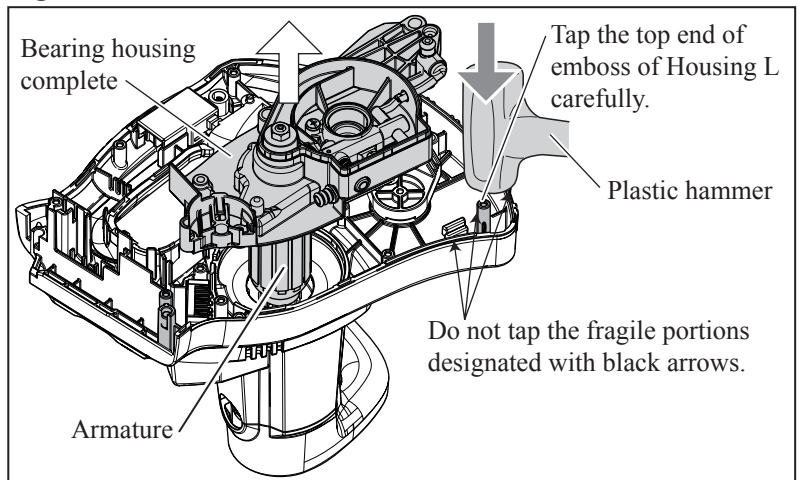


Fig. 14

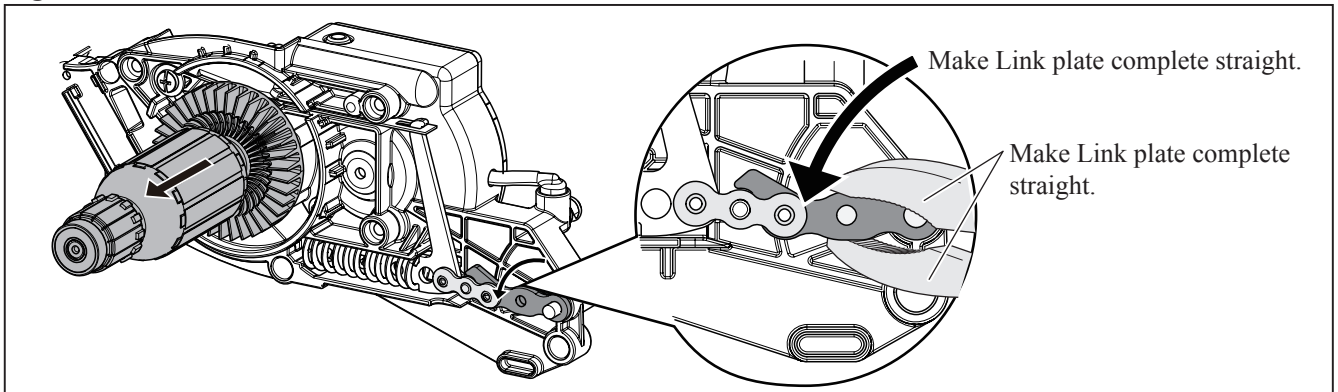
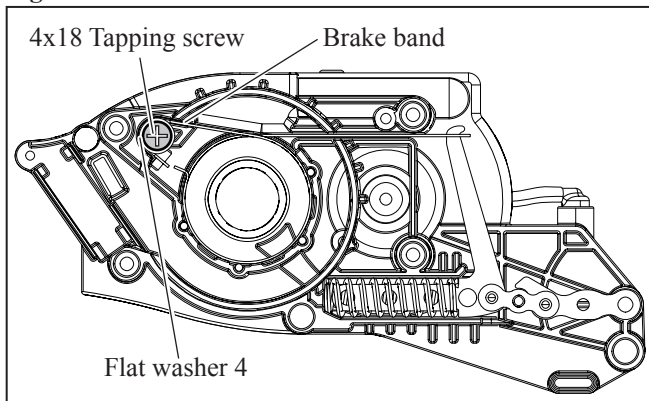


Fig. 15



► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-3. Chain brake section (cont.)

DISASSEMBLING

(7) Bend Link plate complete as illustrated in **Fig. 16** so that Chain brake comes into play again.

Link plate complete becomes free of the engagement for Chain brake. Therefore, Brake band and the relevant parts can be removed. (**Fig. 17**)

Fig. 16

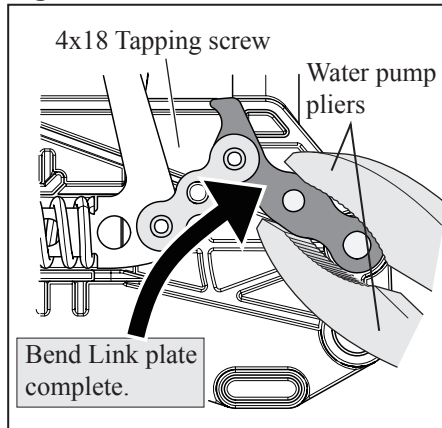
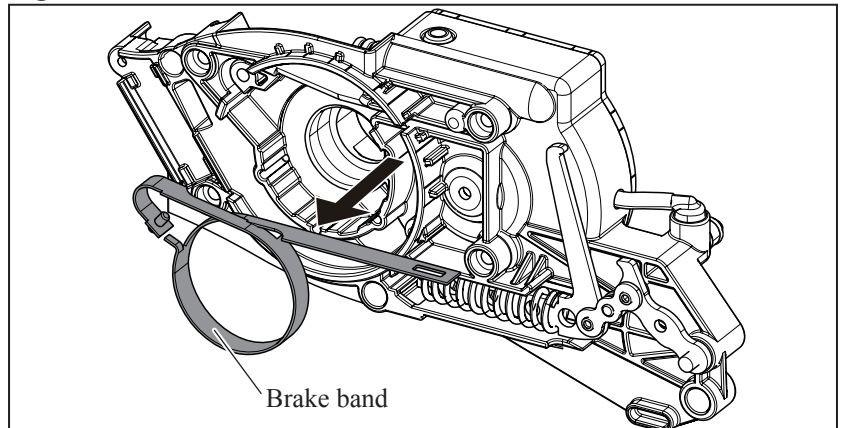


Fig. 17



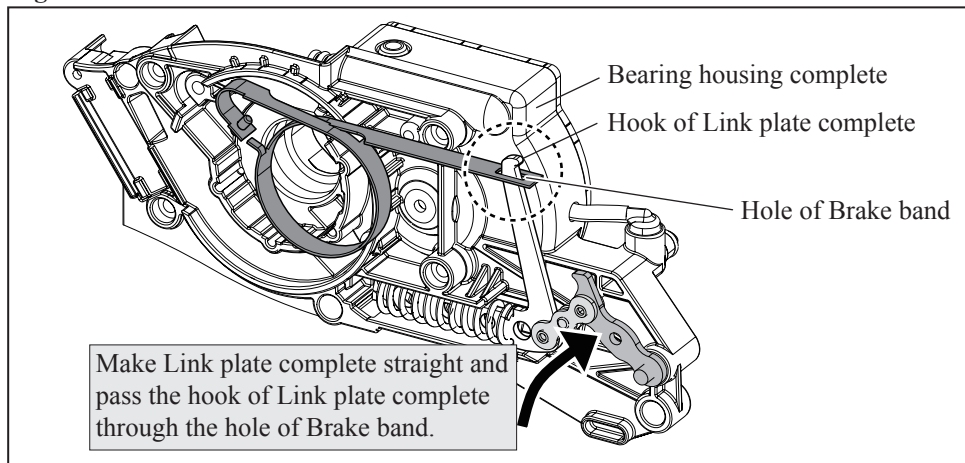
ASSEMBLING

Take the disassembling step in reverse.

(1) Bend and set Link plate complete in place, and then pass the hook of Link plate complete through the hole of Brake band with Chain brake engaged. (**Fig. 18**)

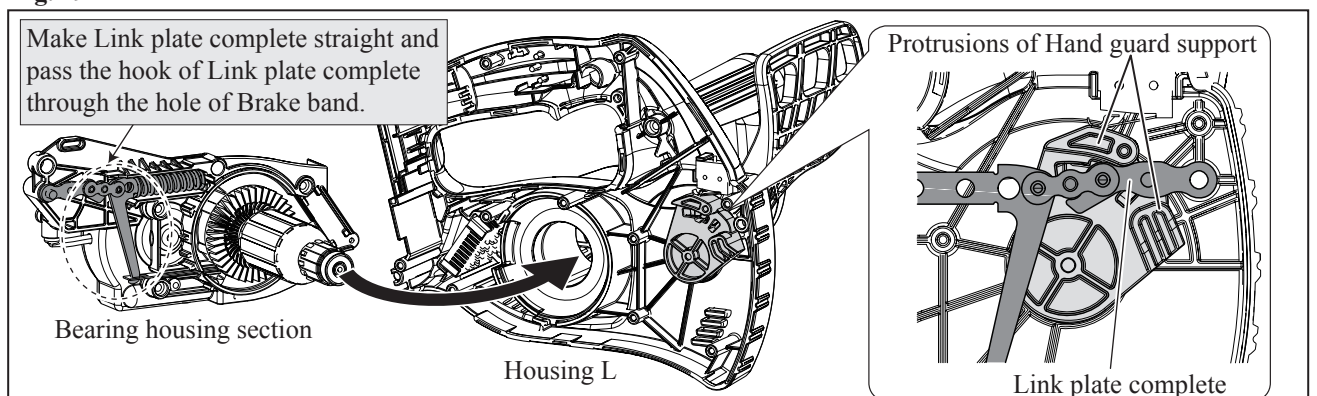
(2) Make link plate complete straight to release Chain brake. (**Fig. 14**) And fit Brake band into Bearing housing complete, then tighten 4x18 Tapping screw with Flat washer 4 to hold Brake band. (**Fig. 15**)

Fig. 18



(3) When Bearing housing complete is assembled to Housing L, Link plate complete has to be put between the protrusions of Hand hand guard support with Chain brake disengaged. Therefore, push Front guard hand complete forward to release Chain brake and fix the components of Bearing housing section to Housing L. (**Fig. 19**)

Fig. 19



► Repair

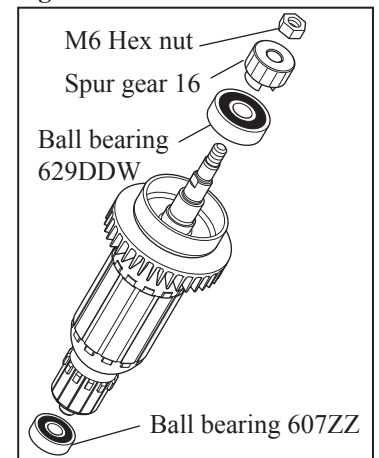
[3] DISASSEMBLY/ASSEMBLY

[3]-4. Motor section

DISASSEMBLING

- (1) According to the clause of [[3]-3. Chain brake section, remove Armature.
- (2) Remove M6 Hex nut using 10mm flats width wrench, then separate Spur gear 16 from Armature shaft. (**Fig. 20**)
Ball bearings 607ZZ and 629DDW can be removed from Armature shaft using 1R269.
- (3) When replacing Yoke unit, remove two 4x65 Tapping screws on it from Housing L.

Fig. 20

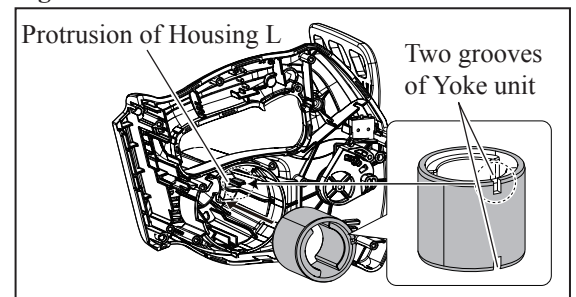


ASSEMBLING

Take the disassembling step in reverse.

Note: Fit the protrusion of Housing L into the groove of Yoke unit. Either of the two grooves can be fit into the groove because Yoke unit is not directional. (**Fig. 21**)

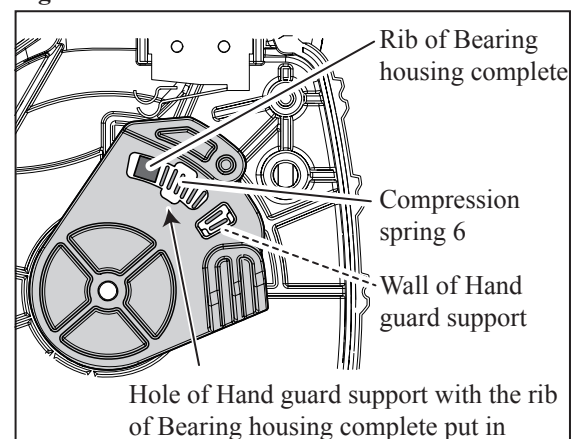
Fig. 21



[3]-5. Assembling Hand guard support to Housing L

Put the rib of Housing L into the hole of Hand guard support. Compression spring 6 has to be set between the rib and Housing L and the wall of Hand guard support. Refer to **Fig. 22**.

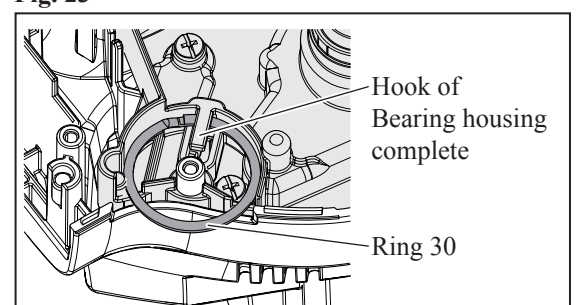
Fig. 22



[3]-6. Assembling Ring 30 to Hook of Bearing housing complete

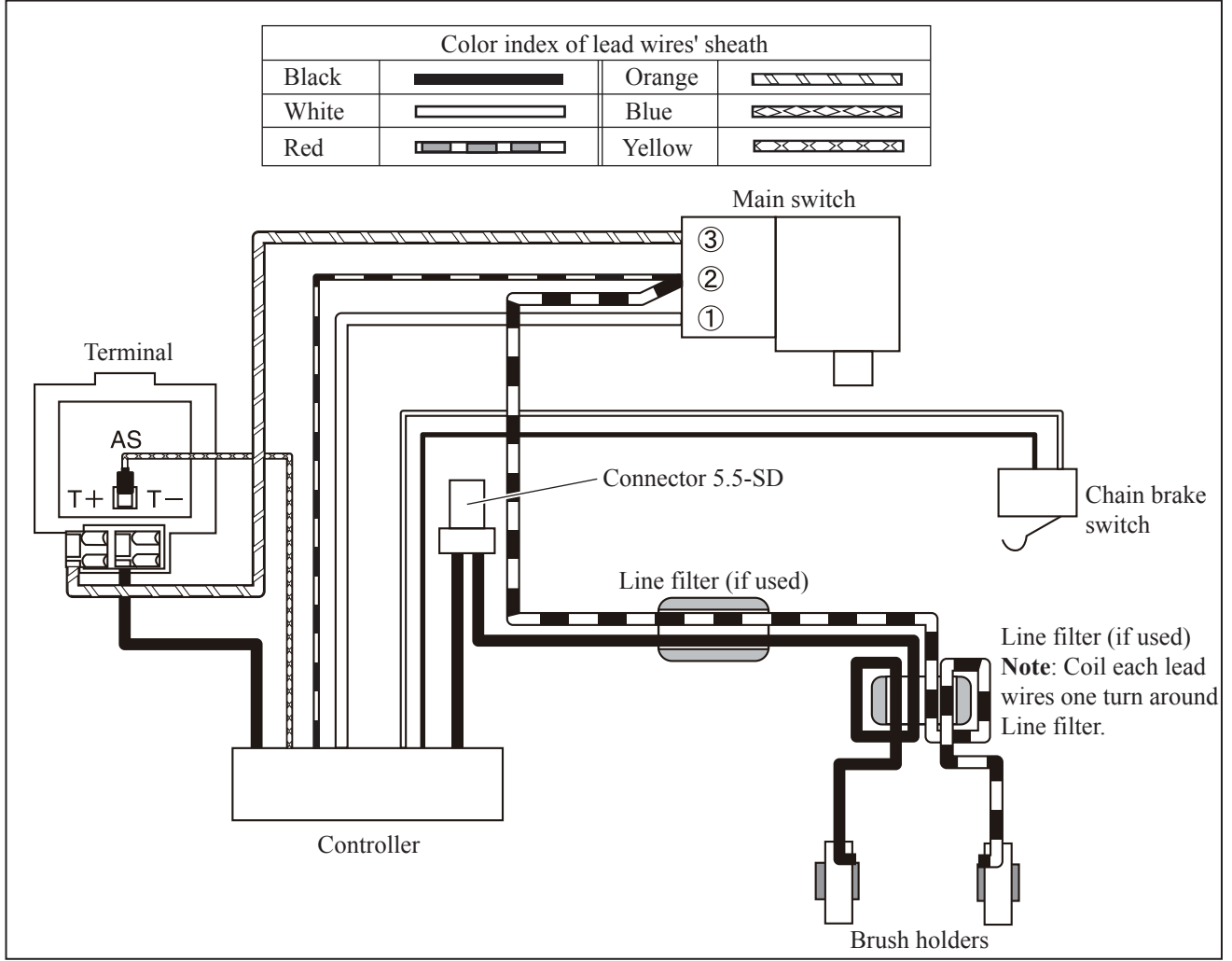
Insert Ring 30 under the hook of Bearing housing complete **Fig. 23**.

Fig. 23



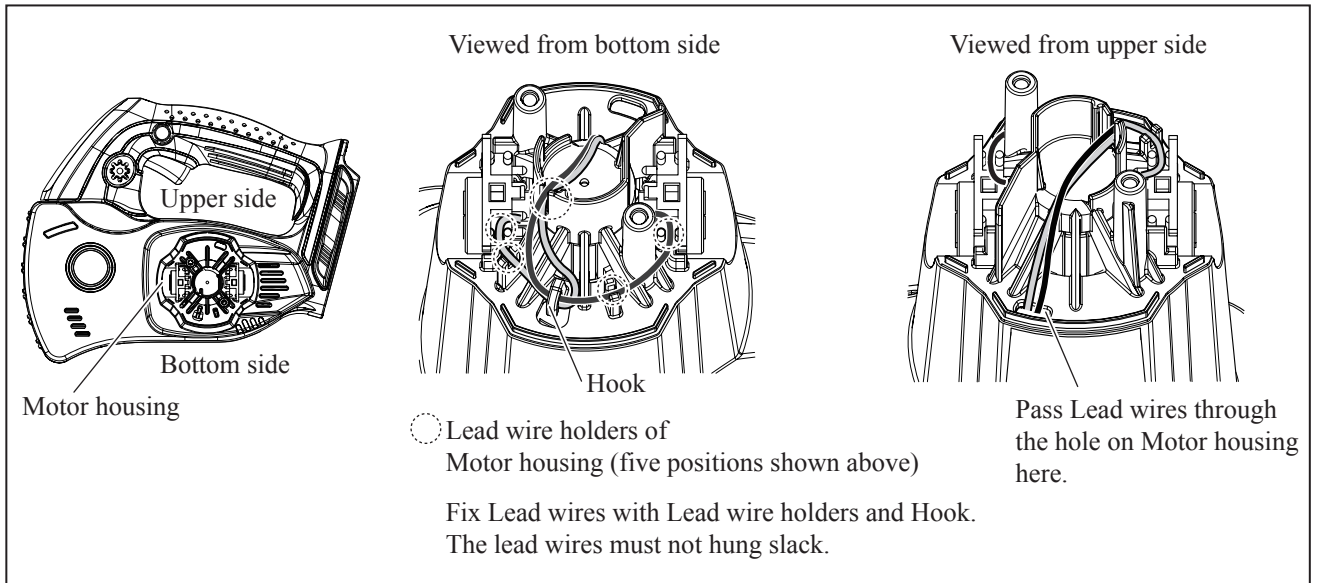
▶ **Circuit diagram**

Fig. D-1



▶ **Wiring diagram**

Fig. D-1



► **Wiring diagram (cont.)**

Fig. D-2

The diagram shows a cross-section of a motor housing with a line filter. Labels include Rib A, Rib B, Rib C, and a Protrusion. On the left, a lead wire is correctly routed between Rib C and the Protrusion. In the middle, a lead wire is correctly routed between Rib C and the Protrusion. On the right, a lead wire is incorrectly routed behind Rib C, which is crossed out with a large 'X'.

- Put Line filter on the top space of Motor housing as illustrated above.
- Two lead wires to Brush holders have to be coiled around Line filter one turn. The one-turned Lead wires have to be routed between Rib C and Protrusion.
- Do not put Lead wires on any Ribs and Protrusions.

Correct: One-turned Lead wires are between Rib C and Protrusion.

Wrong: One-turned Lead wires are behind Rib C.

Fig. D-3

The diagram shows a detailed view of the motor housing with various components and lead wire routing instructions. Labels include Rib D, Terminal, Flag receptacle, Connector 5.5-SD, Line filter (if used), Rib E, Controller, Rib F, Main switch, Chain brake switch, and Chain brake switch. Annotations specify where lead wires should be fixed, where they should not be hung, and how they should be routed through notches and holders.

- Lead wires have to be routed between Rib D and wall of Housing L.
- Lead wires have to be fixed with Lead wire holders.
- Lead wires must not put ribs around here.
- Lead wires for Chain brake switch have to be routed to the notches of Housing L.
- Lead wires must not hung slack around here.
- Lead wires for Chain brake switch have to be fixed with three Lead wire holders.
- Lead wires to Brush holders have to be routed to the notch of Housing L.
- Do not put Lead wires and Connector 5.5-SD on Rib E, Rib F and Controller.

Note: When replacing Chain brake switch, use the specific Connectors to complete the wiring, and then put their connectors into spaces near Lead wires without pinching.