

# T ECHNICAL INFORMATION



PRODUCT

P 1 / 8

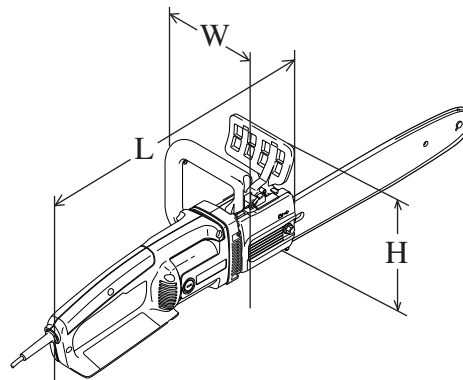
**Models No.** ▶ UC3003A, UC3503A, UC4003A, UC4503A

**Description** ▶ Chain saws 300mm, 350mm, 400mm, 450mm

## CONCEPT AND MAIN APPLICATIONS

For European market, the above models have been developed as upgraded chain saws of the current UC3001A series models. The new UC3003A series models feature continuous rating input of 2000W while the UC3001A series 1800W.

Additionally, the new series includes Model UC4503A, 450mm (18") chain saw which is not in the lineup of UC3001A series.



Dimensions: mm ( " )	
Length ( L )	470 (18-1/2)
Width ( W )	179 (7)
Height ( H )	215 (8-1/2)

## ► Specification

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output (W)
			Input	Output	
230 - 240	8.8	50 / 60	2,000	1,100	2,200

Model No.		UC3003A	UC3503A	UC4003A	UC4503A
Chain blade	Chain type	91VG			
	Pitch	3/8" 46 drive links	3/8" 52 drive links	3/8" 56 drive links	3/8" 62 drive links
	Gauge	0.050"			
No load chain speed: m/s		13.3			
Guide bar length: mm (")		300 (12)	350 (14)	400 (16)	450 (18)
Electric brake		Yes			
Clutch		Yes			

## ► Standard equipment

- \* Guide bar scabbard ..... 1 pc.
- \* Wrench ..... 1 pc.

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

## ► Optional accessories

- \* Chain blade
- \* Guide bar

## ► Repair

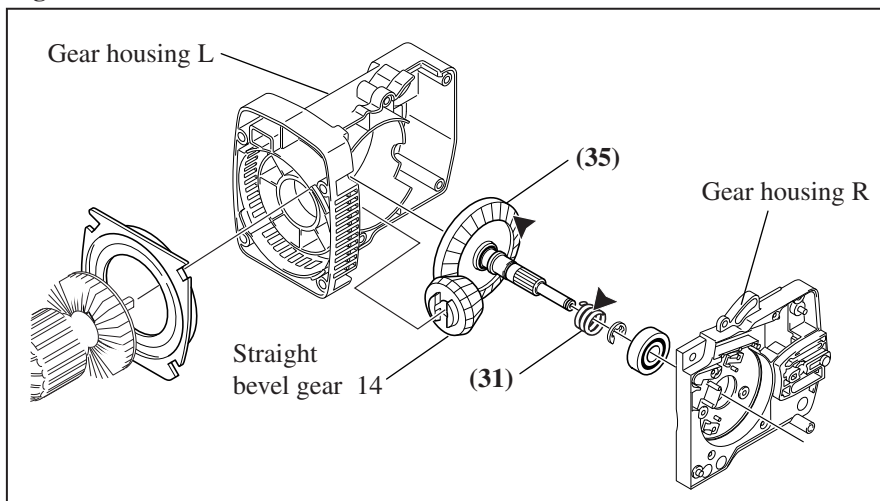
### CAUTION:

**First of all, remove the chain blade for your safe repair and maintenance.**

### < 1 > Lubrication

Apply Makita grease N. No.1 to the following portions designated by black triangle to protect parts and product from unusual abrasion. (Fig. 1)

**Fig. 1**



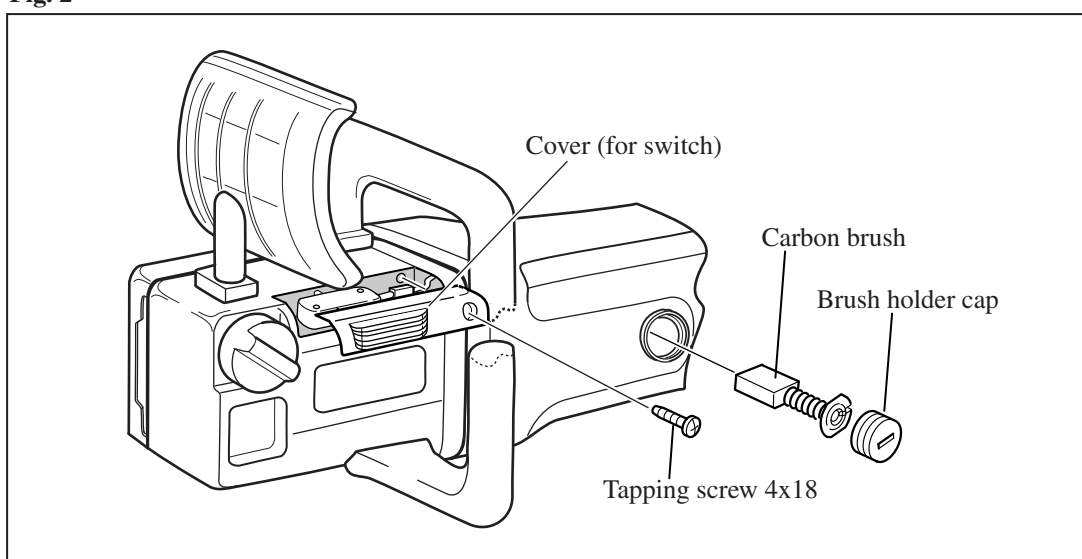
Item No.	Part Name	Portion to be lubricated	Amount: g
(31)	Worm gear	Whole part	approx. 1.0
(35)	Straight bevel gear 43	Whole part	approx. 3.0

### < 2 > Removing Gear Housing from Motor Housing for Replacement of Armature Assembly

1. After removing brush holder caps, remove carbon brushes.

Remove a 4x18 tapping screw. Now cover (for switch) can be removed from gear housing L. (Fig. 2)

**Fig. 2**



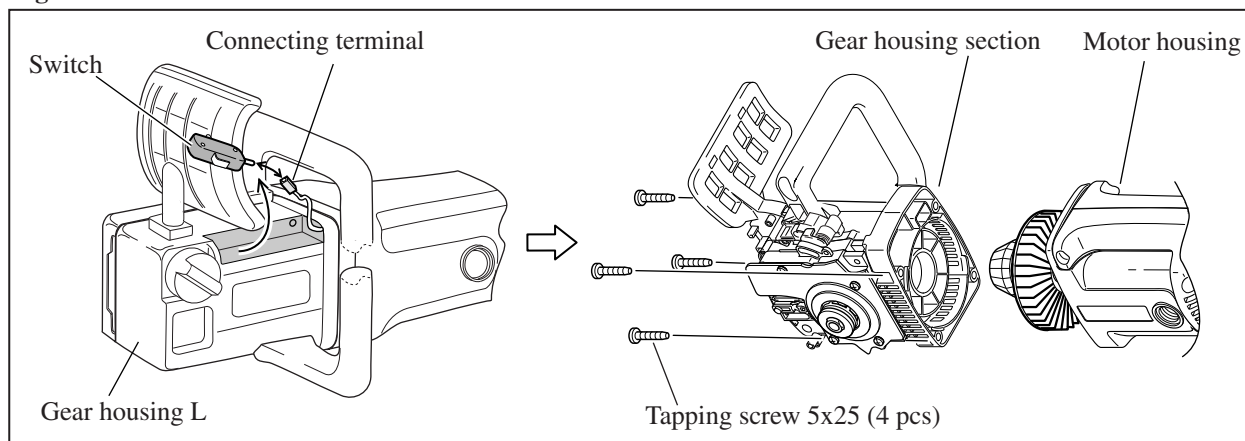
(to be continued to next page)

## ► Repair

### < 2 > Removing Gear Housing from Motor Housing for Replacement of Armature Assembly (cont.)

2. Take switch out of gear housing L, and then disconnect the connecting terminal from switch as illustrated to left in **Fig. 3**.
3. Remove four 5x25 tapping screws as illustrated to right in **Fig. 3**.  
Now motor housing can be separated from gear housing section.

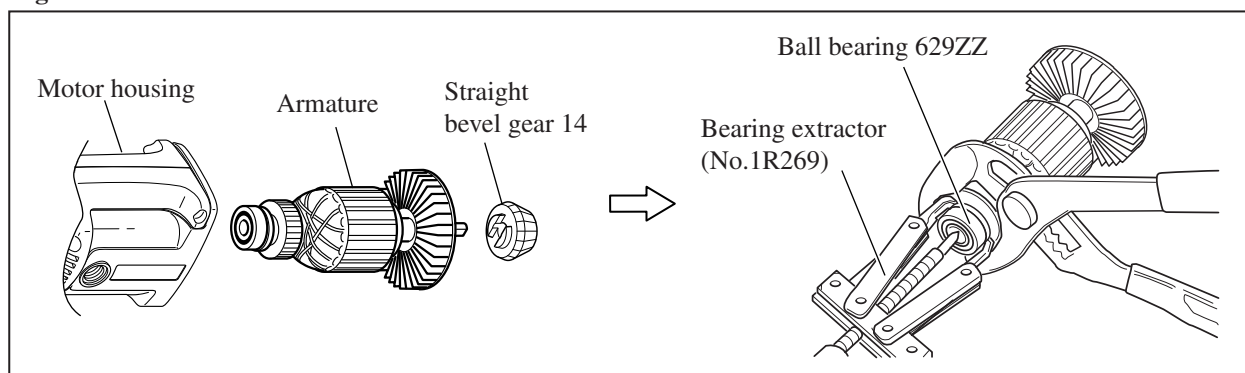
**Fig. 3**



4. Replace armature assembly as described below (**Fig. 4**):

- 1) After removing motor housing from gear housing, take armature assembly out of motor housing.
- 2) Remove straight bevel gear 14 from the armature. This gear can be removed by hand.
- 3) Remove ball bearing 629ZZ on the commutator end of armature assembly using Bearing extractor (No.1R269) and pliers as illustrated to right in **Fig. 4**.  
Ball bearing 6301LLB on the drive end of armature assembly can be removed in the same way.

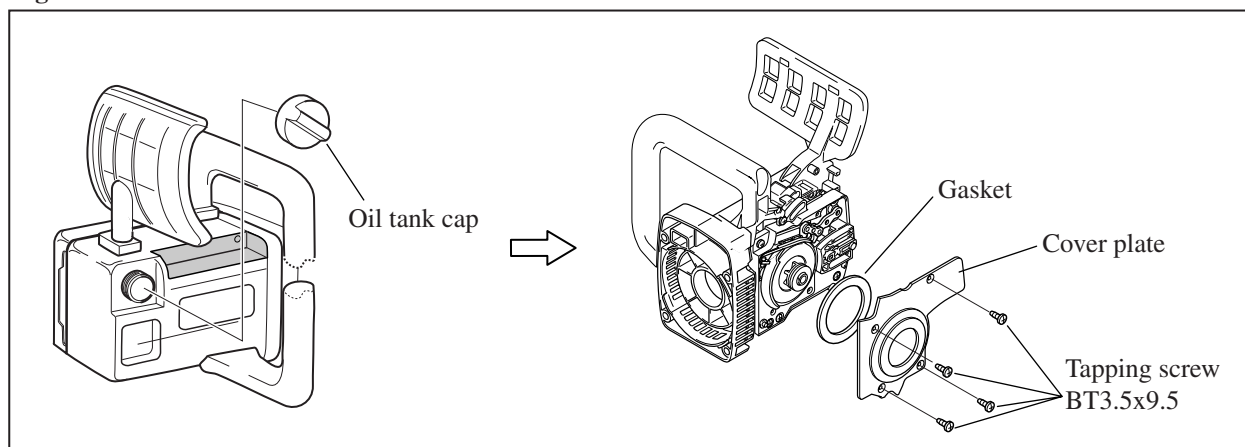
**Fig. 4**



### < 3 > Disassembling Gear Housing

1. Remove oil tank cap, and remove chain oil from oil tank as illustrated to left in **Fig. 5**.
2. Separate cover plate from gear housing R by removing four BT3.5x9.5 tapping screws as illustrated to right in **Fig. 5**.

**Fig. 5**



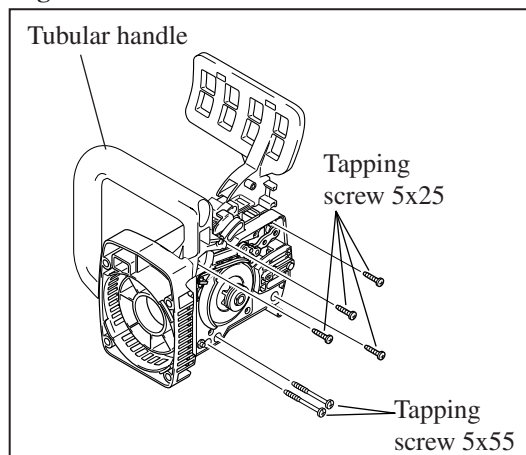
(to be continued to next page)

## ► Repair

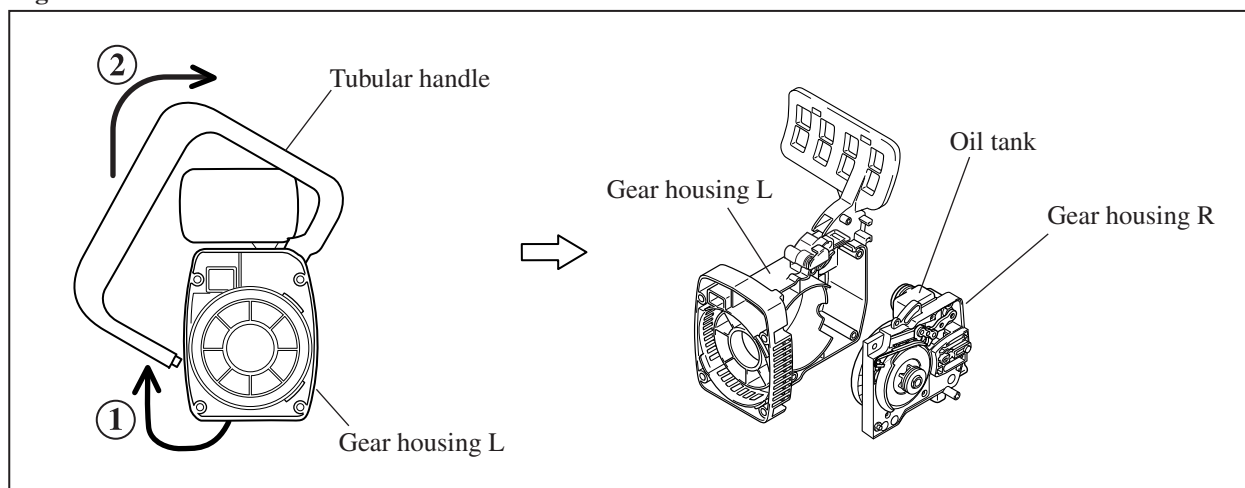
### < 3 > Disassembling Gear Housing (cont.)

3. Remove four 5x25 tapping screws and two 5x55 tapping screws as illustrated in **Fig. 6**.  
Removal of the screws will release tubular handle from gear housing.
4. Remove tubular handle from the bottom side of gear housing L as illustrated to left in **Fig. 7**.
5. Remove gear housing R from gear housing L as illustrated to right in **Fig. 7**.

**Fig. 6**



**Fig. 7**

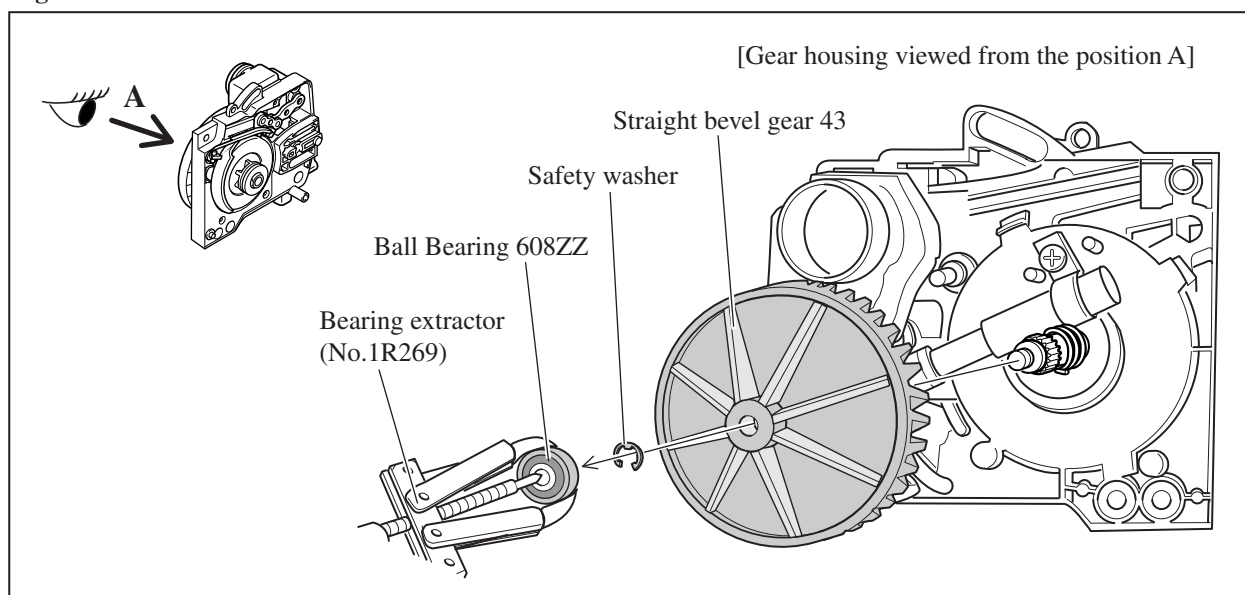


### < 4 > Replacement of Straight Bevel Gear 43 and Oil Pump Complete

1. Remove gear housing R from gear housing L as described in "<3> Disassembling Gear Housing". (**Fig. 5, 6, 7**)
2. Remove ball bearing 608ZZ using Bearing extractor (No.1R269) (**Fig. 8**)
3. Remove safety washer from spindle. And now straight bevel gear 43 can be removed from spindle. (**Fig. 8**)

**Note:** Before installing a brand-new straight bevel gear 43, be sure to apply 3g of Makita grease N No.1 to its gear teeth.

**Fig. 8**



(to be continued to next page)

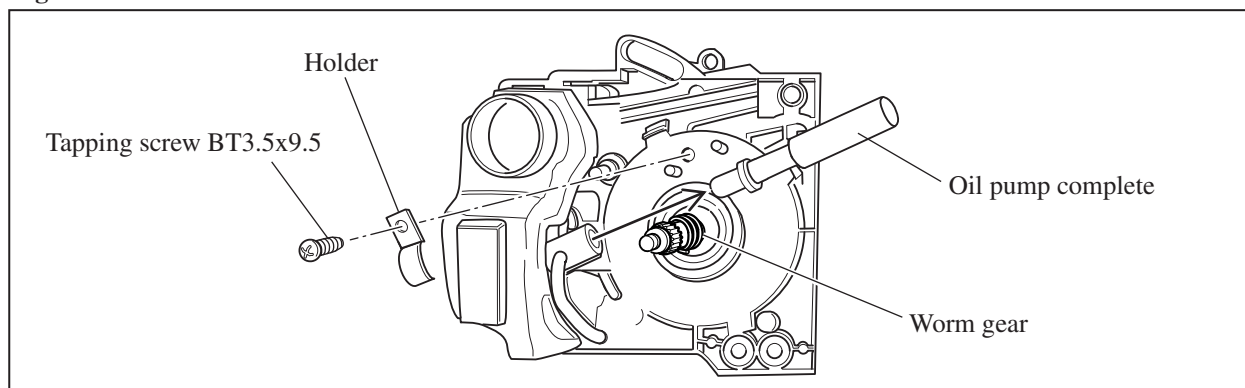
## ► Repair

### < 4 > Replacement of Straight Bevel Gear 43 and Oil Pump Complete (cont.)

4. Remove Holder by removing BT3.5x9.5. Oil pump complete can now be removed from Gear housing (R). (**Fig. 9**)

**Note:** When installing new Oil pump complete, apply 1g of Makita grease N. No.1 to Worm gear.

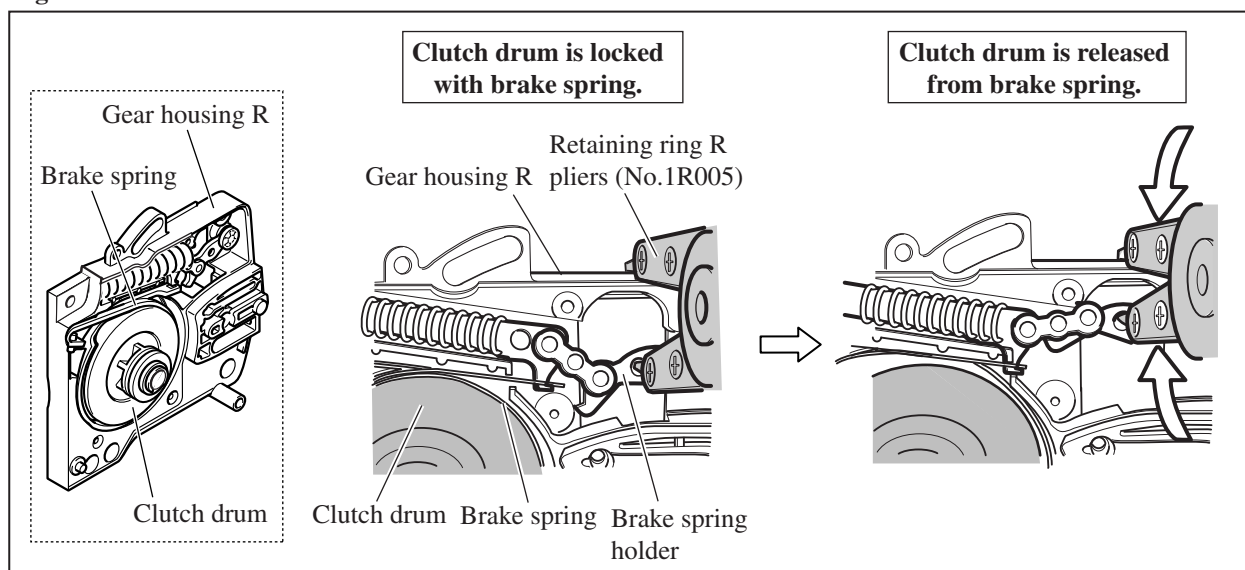
**Fig. 9**



### < 5 > Replacement of Clutch Drum and Brake Spring

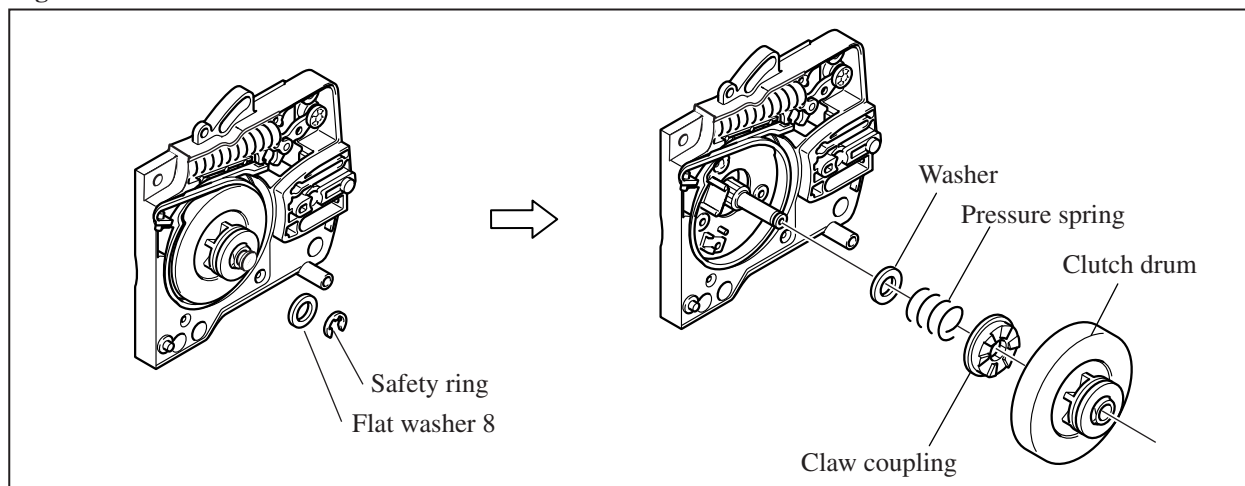
1. First release Clutch drum from Brake spring using Retaining ring R pliers (No.1R005) as described below. Insert one jaw of the pliers into the hole of Brake spring holder, and then put the other jaw on the edge of Gear housing R as illustrated to left in **Fig. 10**. Close the pliers until Brake spring holder is locked in the position as illustrated to right in **Fig. 10**. Now clutch drum is released from Brake spring.

**Fig. 10**



2. By removing Safety ring and Flat washer 8, Clutch drum can be removed from Gear housing R. (**Fig. 11**)

**Fig. 11**



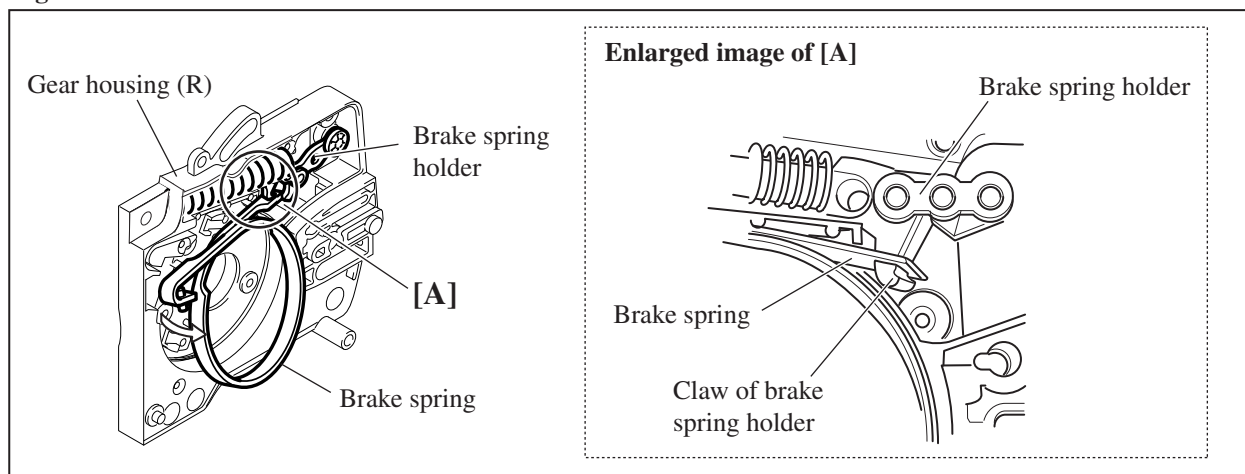
(to be continued to next page)

## ► Repair

### < 5 > Replacement of Clutch Drum and Brake Spring (cont.)

3. Take Brake spring out of Gear housing (R), then remove Brake spring from the claw of Brake spring holder. (**Fig. 12**)

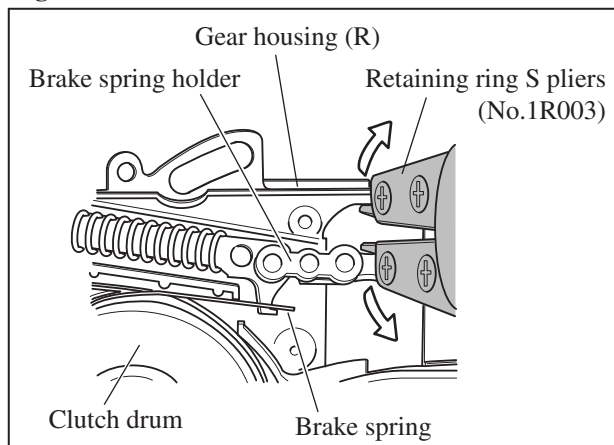
**Fig. 12**



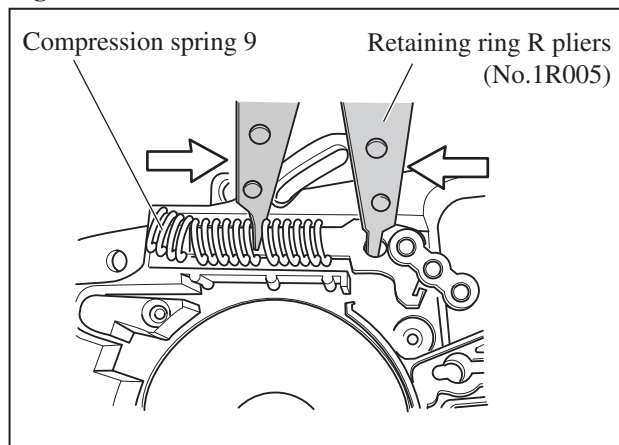
### < 6 > Replacement of Brake Spring Holder

1. First lock Clutch drum with Brake spring using Retaining ring S pliers (1R003) as described below.  
Place the jaws of the pliers as illustrated in **Fig. 13**.  
Open the pliers until Brake spring holder is locked in the position as illustrated in **Fig. 13**.  
Now clutch drum is locked with Brake spring.
2. Inert one jaw of Retaining ring R pliers (No.1R005) into the hole of Brake spring holder, and the other jaw into Compression spring 9 as illustrated in **Fig. 14**.  
By closing the pliers, Compression spring 9 can be removed from Gear housing (R).

**Fig. 13**

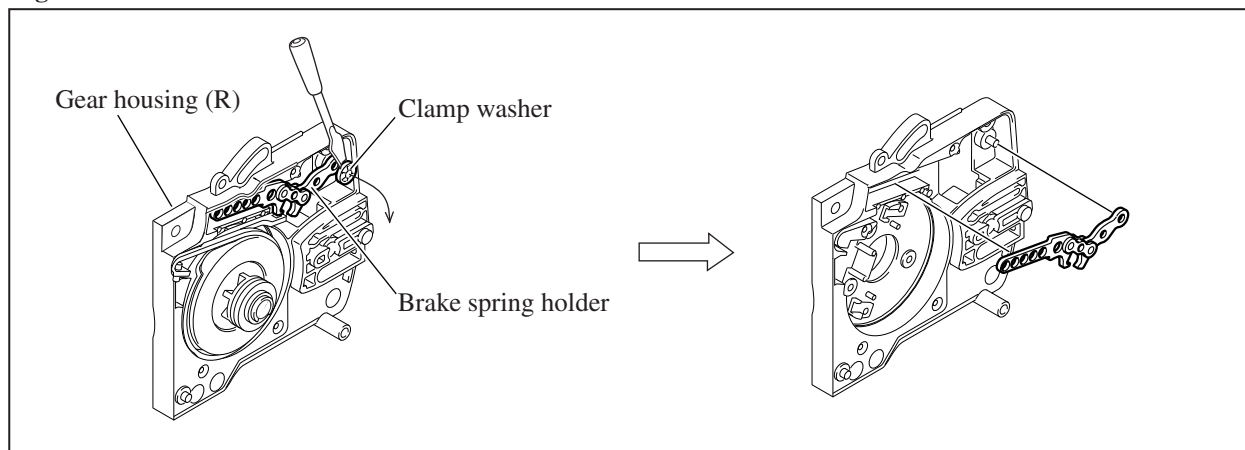


**Fig. 14**



3. By removing Clamp washer using a slotted screwdriver or the like, Brake spring holder can be replaced. (**Fig. 15**)  
**Note:** Do not reuse a Clamp washer removed from Gear housing (R). Always use brand-new one.

**Fig. 15**

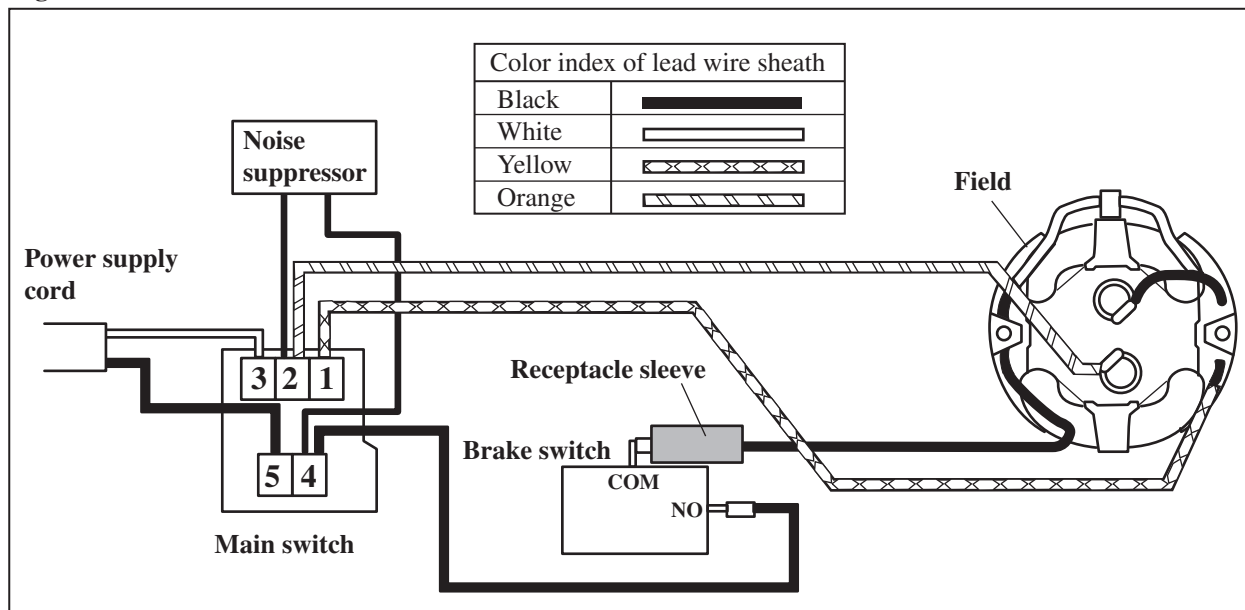


(to be continued to next page)



## ► Circuit diagram

Fig. 16



## ► Wiring diagram- (1) Outside and Inside Motor Housing

- Pull the Field lead wires out of the commutator end of Motor housing as illustrated to left in Fig. 17. Be sure to fix the Field lead wire (yellow) with lead wire holders as illustrated to right in Fig. 17.

Fig. 17

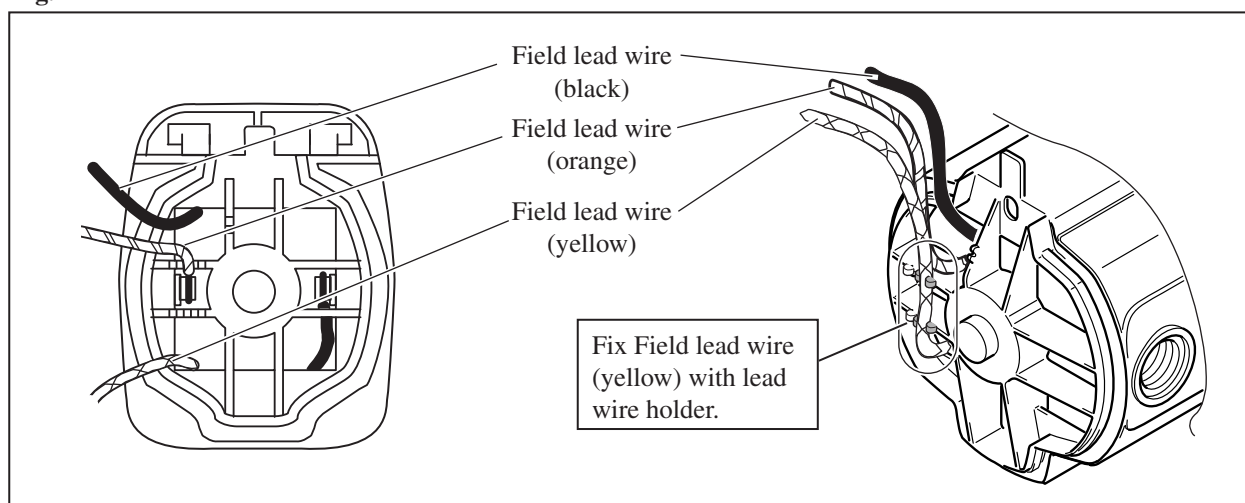
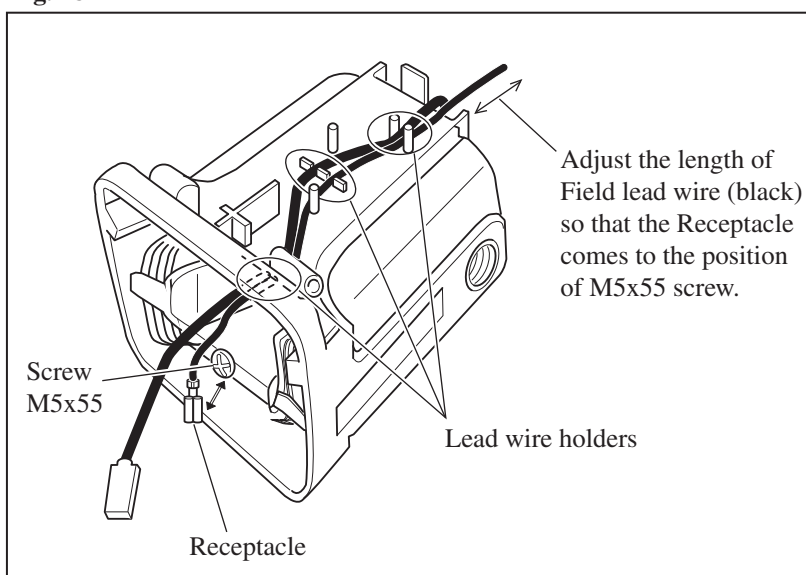


Fig. 18

- Adjust the length of Field lead wire (black) so that the Receptacle comes to the position of M5x55 screw, the field screw. Be sure to fix the lead wire with lead wire holders. (Fig. 18)



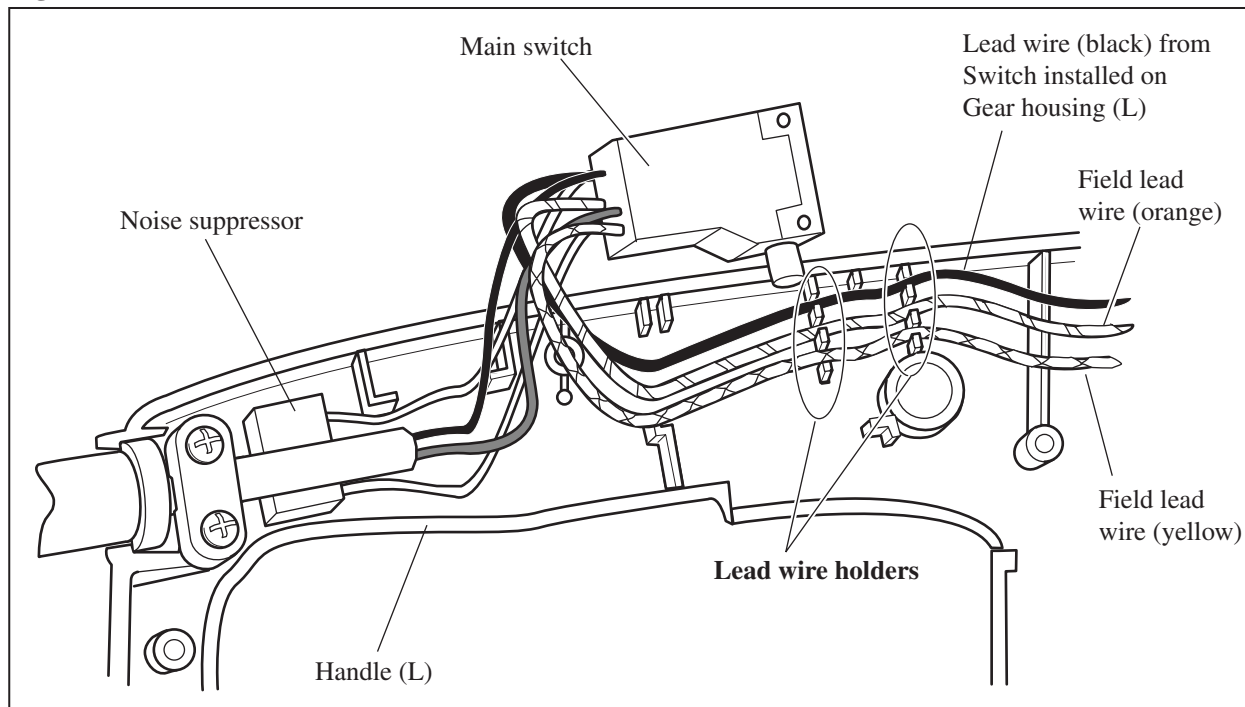
(to be continued to next page)

## ► Wiring diagram- (2) Inside Handle (L)

1. Before installing Main switch onto Handle (L), fix the following lead wires with lead wire holders as illustrated in **Fig. 19**.

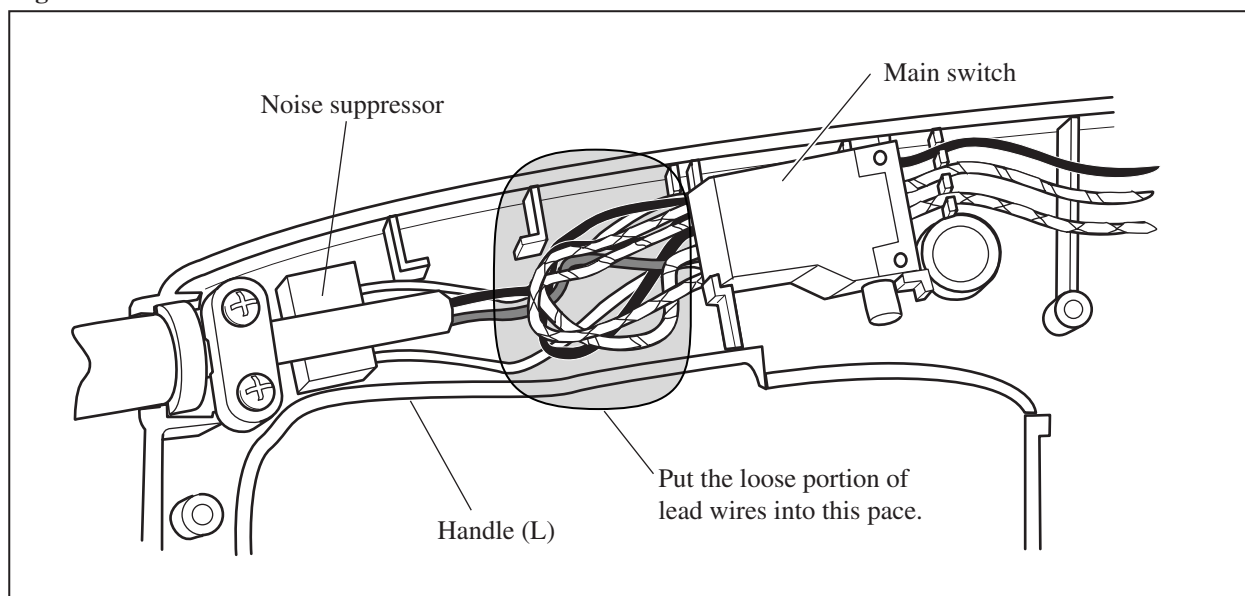
- \* Field lead wire (orange)
- \* Field lead wire (yellow)
- \* Lead wire (black) from switch installed on Gear housing (L)

**Fig. 19**



2. After installation of Main switch, put the loose portion of the Lead wires into the space illustrated in **Fig. 20**.

**Fig. 20**



[end of repair manual]