

# TECHNICAL INFORMATION



PRODUCT

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**Models No.** ▶ LS1216, LS1216L

**Description** ▶ Slide Compound Saw 305mm (12")

## CONCEPT AND MAIN APPLICATIONS

LS1216 and LS1216L are upgraded sister tools of LS1214 series models, featuring DXT (Deep eXact cutting Technology) achieved by our consistent pursuit of cutting larger size workpiece but with higher accuracy. The features and benefits of DXT are:

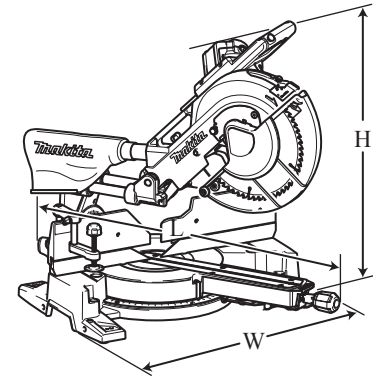
### Deep cutting

3-Stage reduction gear unit and Movable rear blade guard provide larger capacities of cutting 203mm (8") Crown molding leaning against fence and Baseboard (Skirt board) which are typical workpieces of slide compound saws.

### eXact cutting

Precise and exact cutting obtained by employing:

- Double sliding mechanism
- Double sliding guide fence
- Quick and accurate miter angle lock, etc



Dimensions: mm (")	
Length (L)	806 (31-3/4)
Width (W)	640 (25-1/4)
Height (H)	721 (28-3/8)

LS1216L additionally features laser marker for easy cut line alignment.

## ► Specification

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output (W)
			Input	Output	
110	15	50/60	1,650	800	2,700
120	15	50/60	---	800	2,700
220	7.9	50/60	1,650	900	2,400
230	7.6	50/60	1,650	900	2,400
240	7.2	50/60	1,650	900	2,400

Specification	Model No.	LS1216	LS1216L
Continuous rating input: W		1,650	
Rated amperage for North America: A		15	
No load speed: min <sup>-1</sup> = rpm		3,200	
Saw blade: mm (")	Diameter	305 (12)	
	Hole diameter	European countries: 30, Other countries: 25.4 (1)	
Electric brake		Yes	
Electronic control	Soft start	Yes	
	Constant speed	Yes	
Laser marker		No	Yes
Lock-off switch		Yes	
Protection against electric shock		Double insulation	
Power supply cord: m (ft)		Chile, Brazil, Australia: 2.0 (6.6), Other countries: 2.5 (8.2)	
Net weight*1: kg (lbs)		26.3 (58.0)	26.4 (58.2)
Net weight*2: kg (lbs)		26.5 (58.4)	26.6 (58.6)

\*1 Weight according to EPTA-Procedure 01/2003, with TCT saw blade without "Blocking mechanism at the rest position"

\*2 Weight according to EPTA-Procedure 01/2003, with TCT saw blade with "Blocking mechanism at the rest position"

See next page for the cutting capacities.

## ► Specification (cont.)

### Cutting capacities [Height x Width in mm (")]

#### All countries except European countries

Miter angle \ Bevel angle	45 degrees left	0 degree	45 degrees right
0 degree	61 x 382 (2-3/8 x 15) 71 x 363 (2-13/16 x 14-1/4)	92 x 382 (3-5/8 x 15) 107 x 363 (4-1/4 x 14-1/4)	44 x 382 (1-3/4 x 15) 54 x 363 (2-1/8 x 14-1/4)
	with 20 x 38 (13/16 x 1-1/2) auxiliary wood fence 78 x 325 (3-1/16 x 12-3/4) 80 x 292 (3-1/8 x 11-1/2)	115 x 325 (4-1/2 x 12-3/4) 120 x 292 (4-3/4 x 11-1/2)	61 x 325 (2-3/8 x 12-3/4)
45 degrees left & right	61 x 268 (2-3/8 x 10-1/2) 71 x 255 (2-13/16 x 10)	92 x 268 (3-5/8 x 10-1/2) 107 x 255 (4-1/4 x 10)	44 x 268 (1-3/4 x 10-1/2) 54 x 255 (2-1/8 x 10)
	with 15 x 25 (9/16 x 1) auxiliary wood fence	115 x 227 (4-1/2 x 8-15/16) 120 x 212 (4-3/4 x 8-3/8)	_____
52 degrees left & right	_____	92 x 233 (3-5/8 x 9-1/8) 107 x 220 (4-1/4 x 8-5/8)	_____
	with 15 x 25 (9/16 x 1) auxiliary wood fence	115 x 197 (4-1/2 x 7-3/4) 120 x 180 (4-3/4 x 7-1/8)	_____
60 degrees right	_____	92 x 185 (3-5/8 x 7-1/4) 107 x 178 (4-1/4 x 7)	_____
	with 15 x 25 (9/16 x 1) auxiliary wood fence	115 x 155 (4-1/2 x 6-1/8) 120 x 140 (4-3/4 x 5-1/2)	_____

### Cutting capacities [Height x Width in mm (")]

#### European countries

Miter angle \ Bevel angle	45 degrees left	0 degree	45 degrees right
0 degree	59 x 382 (2-5/16 x 15) 69 x 363 (2-3/4 x 14-1/4)	87 x 382 (3-7/16 x 15) 102 x 363 (4 x 14-1/4)	44 x 382 (1-3/4 x 15) 54 x 363 (2-1/8 x 14-1/4)
	with 35 x 60 (1-3/8 x 2-3/8) auxiliary wood fence 78 x 290 (3-1/16 x 11-3/8)	115 x 300 (4-1/2 x 11-3/4) 120 x 250 (4-3/4 x 9-7/8)	61 x 290 (2-3/8 x 11-3/8)
45 degrees left & right	59 x 268 (2-5/16 x 10-1/2) 69 x 255 (2-3/4 x 10)	87 x 268 (3-7/16 x 10-1/2) 102 x 255 (4 x 10)	44 x 268 (1-3/4 x 10-1/2) 54 x 255 (2-1/8 x 10)
	with 30 x 45 (1-3/16 x 1-3/4) auxiliary wood fence	115 x 202 (4-1/2 x 8) 120 x 172 (4-3/4 x 6-3/4)	_____
52 degrees left & right	_____	87 x 233 (3-7/16 x 9-1/8) 102 x 220 (4 x 8-5/8)	_____
	with 25 x 35 (1 x 1-3/8) auxiliary wood fence	115 x 178 (4-1/2 x 7) 120 x 155 (4-3/4 x 6-1/8)	_____
60 degrees right	_____	87 x 185 (3-7/16 x 7-1/4) 102 x 178 (4 x 7)	_____
	with 25 x 35 (1 x 1-3/8) auxiliary wood fence	115 x 140 (4-1/2 x 5-1/2) 120 x 122 (4-3/4 x 4-13/16)	_____

### Capacities of cutting Crown molding and Baseboard (Skirt board)

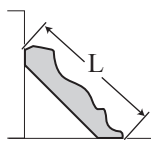
#### All countries

Workpiece	How to cut	Capacity: mm (")
Crown molding, 45 degree type	Diagonal cut*1	203 (8)*2
	Horizontal cut	320 (12-5/8)
Baseboard (Skirt board)	Vertical cut	165 (6-1/2)
	Horizontal cut	416 (16-3/8)*3

\*1 Diagonal cut is to cut a crown molding that is held tilted against the guide fence using Crown molding stopper.

\*2 The capacity of crown molding diagonal cut is the length L shown in the drawing on right.

\*3 No need for setting auxiliary wood facing on the turn base



## ► Standard equipment

Vertical vise .....	1	Socket wrench 13 .....	1	Holder set .....	2 (all countries except North America)
TCT saw blade .....	1	Triangular rule .....	1	Hex wrench .....	1 (LS1216L only)
Dust bag assembly .....	1	Lock-off button .....	1		

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

## ► Optional accessories

TCT saw blades, Holder set, Stand, Horizontal vise, Crown molding stopper set, Dust box set

## ► Repair

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

### [1] NECESSARY REPAIRING TOOLS

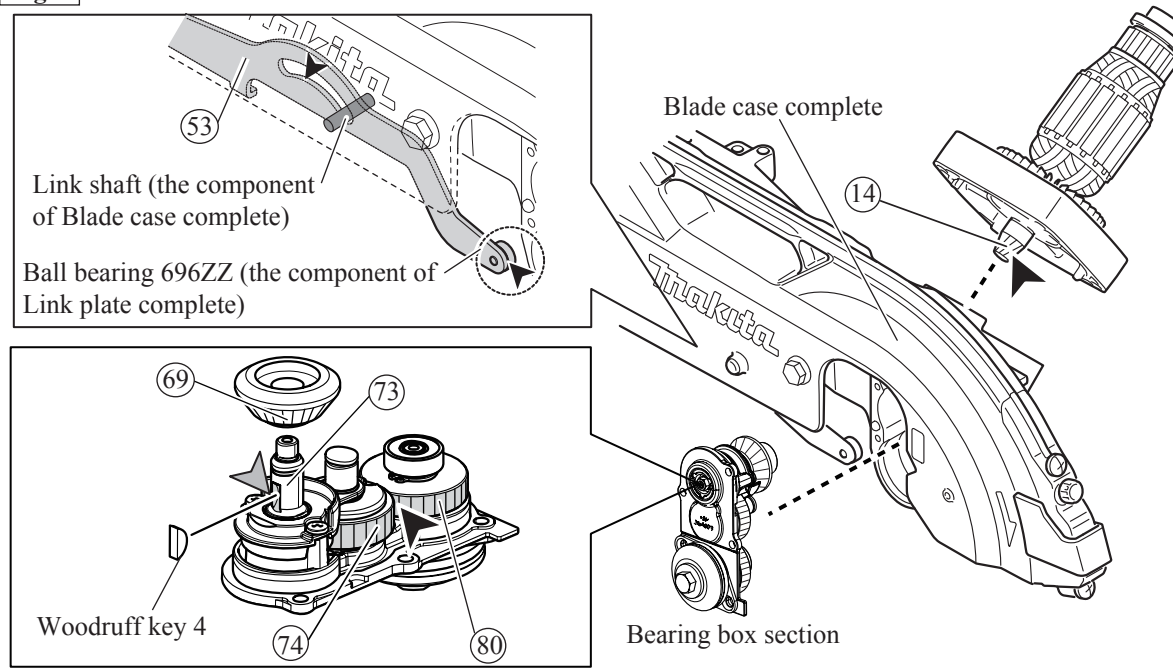
Code No.	Description	Use for
1R028	Bearing setting pipe 20-12.2	assembling Retaining ring S-12
1R031	Bearing setting pipe 28-20.2	assembling Helical gear 27
1R034	Bearing setting plate 12.2	
1R036	Bearing setting plate 17.2	assembling Helical gear 28
1R045	Bearing extractor (large)	assembling /removing Helical gear 14
1R207	45 degrees set square	adjusting the bevel angle of Saw blade to 45 degree
1R208	90 degrees set square	adjusting the bevel angle of Saw blade to 90 degree
1R217	Ring 22	removing Helical gear 27
1R220	Ratchet head 9.5	attachment for 1R254
1R222	Socket adapter	attachment for 1R254
1R232	Pipe 30	assembling Helical gear 28
1R254	Torque wrench shaft 2 - 6 N.m	tightening M10-17 Hex lock nut
1R269	Bearing extractor (small)	removing Ball bearings
1R291	Retaining ring S and R pliers	removing Retaining ring in Gear section
1R315	Laser beam positioning jig	adjusting Laser beam
1R346	Center attachment	attachment for 1R045
1R361	Bearing retainer wrench 14-23	assembling /Removing Bearing retainer 14-23
134829-3	Socket 17-38 assembly	attachment for 1R254
782223-9	Socket wrench 10	removing Rod 16
253771-0	Flat washer 16	use with 1R315
-----	Socket bit for M5 Hex nut	removing M5 Hex nut (8mm distance across flats)

### [2] LUBRICANT

Apply **the following lubricants** to protect the parts and product from unusual abrasion.

Item No.	Description	Portion to lubricate	Lubricant	Amount
⑭	Armature	Gear teeth	Makita grease SG No.0 ▼	16g in total
⑹	Spiral bevel gear 32			
⑦③	Helical gear 14	Groove of its shaft portion for Woodruff key 4	Makita grease FA No.2 ▼	a little
⑦④	Helical gear 27	Gear teeth	Makita grease SG No.0 ▼	8g in total
⑧①	Helical gear 28			
⑤③	Link plate complete	Outer periphery of Ball bearing 696ZZ	Makita grease SG No.0 ▼	a little
		Groove to slide Link shaft of Blade case complete		

**Fig. 1**

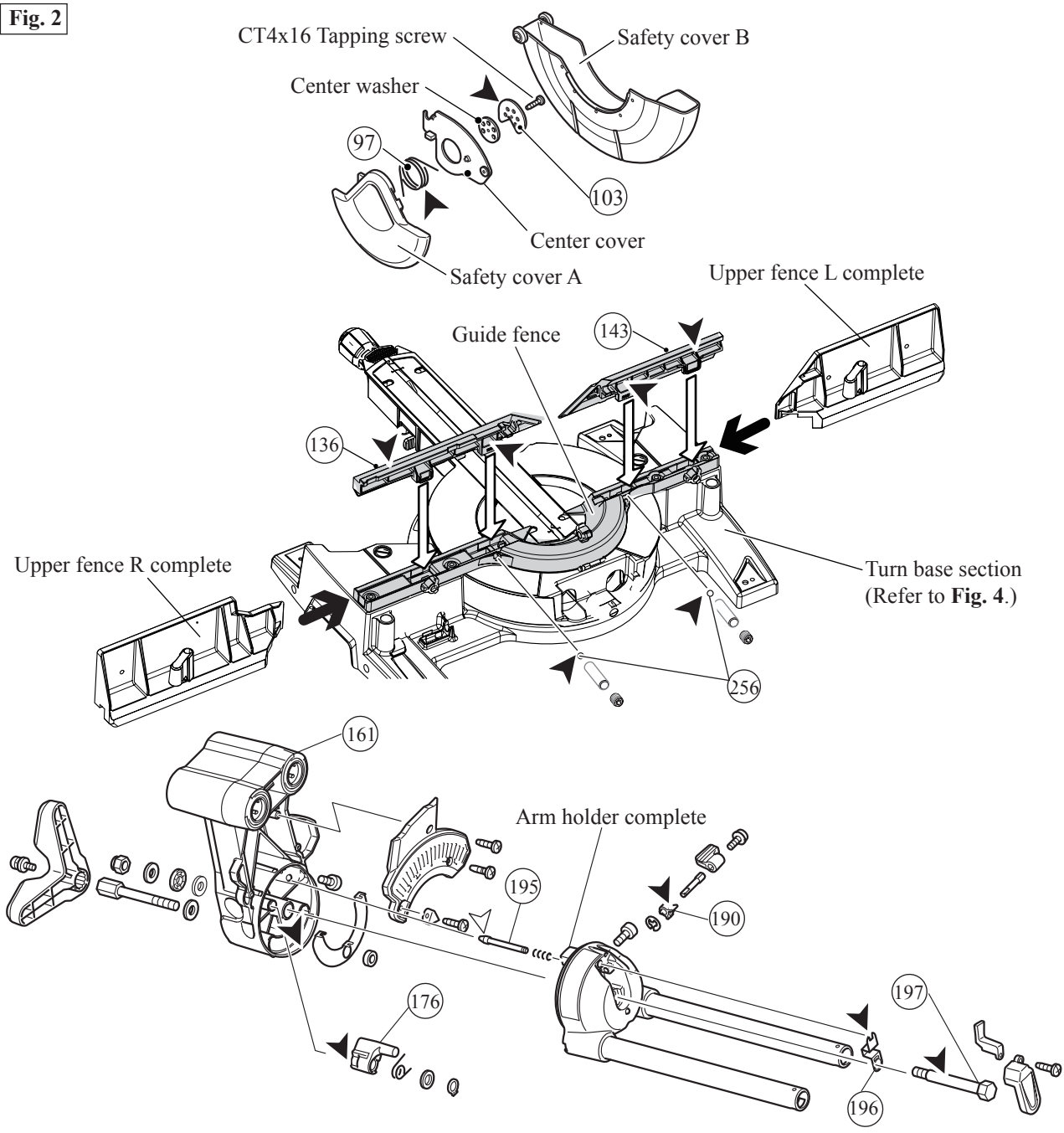


► Repair

[2] LUBRICANT (cont.)

Item No.	Description	Portion to lubricate	Lubricant	Amount
(97)	Torsion spring 45	Spring roll on which Safety cover A is mounted	Makita grease SG No.0 ▼	a little
(103)	Center plate	Portion where Center cover contacts		
(136)	Lower fence R	Portion where Upper fence R complete contacts		
		Portion where Guide fence contacts		
(143)	Lower fence L	Portion where Upper fence L complete contacts		
		Portion where Guide fence contacts		
(161)	Arm complete	Matching surface with Arm holder complete		
(176)	Stopper	Inside of hole where Rod of Arm complete contacts		
(190)	Cam	Portion where (196) Leaf spring contacts		
(195)	Lock pin 8	Inserted portion to (161) Arm complete	Lubricating oil VG100 ▽	
(196)	Leaf spring	Notch with which (195) Lock pin 8 is hooked	Makita grease SG No.0 ▼	
(197)	Center shaft	Portion where Arm holder complete contacts		
(256)	Steel ball 4 (2pcs.)	Whole portion		

Fig. 2

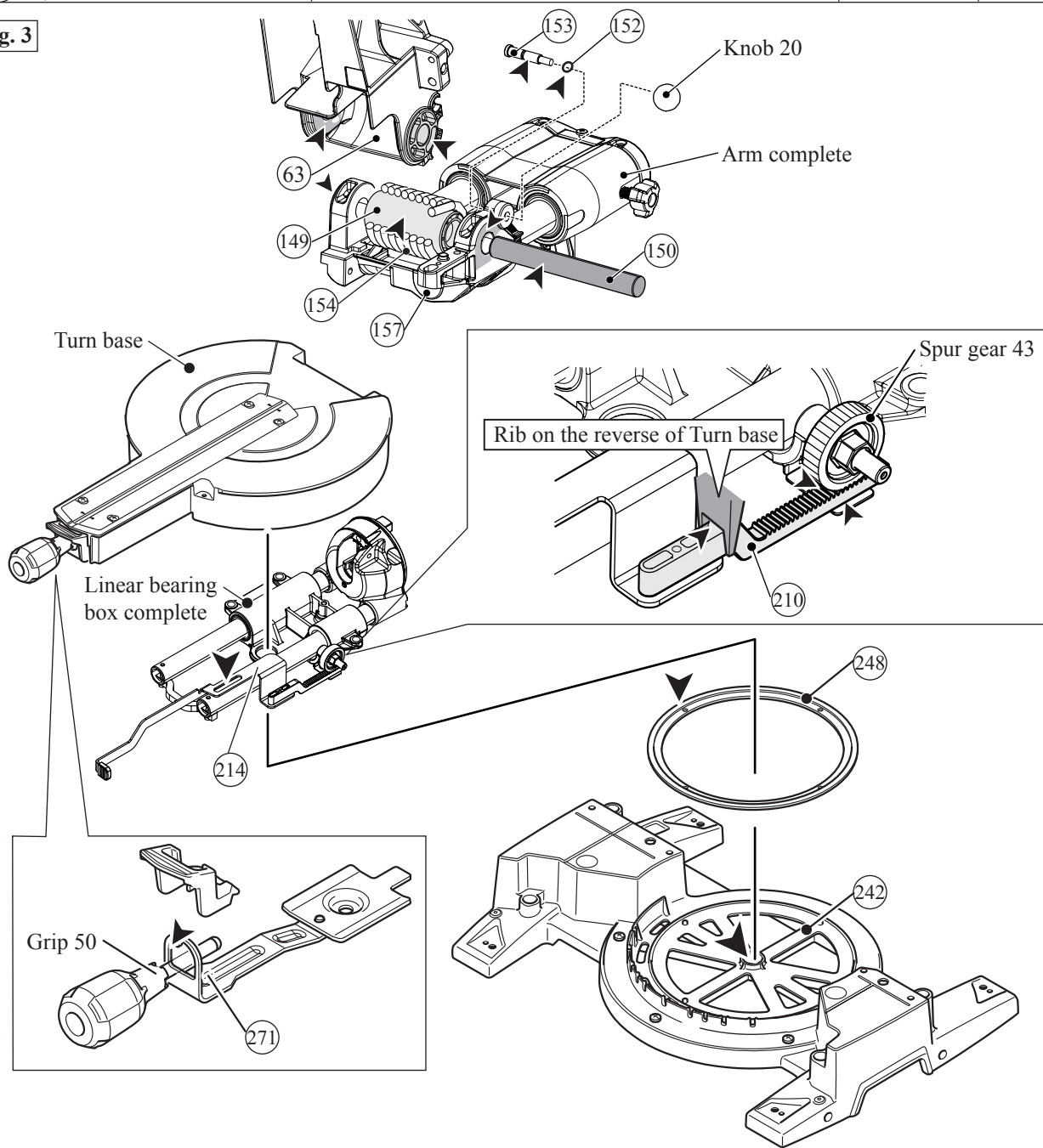


► **Repair**

**[2] LUBRICANT (cont.)**

Item No.	Description	Portion to lubricate	Lubricant	Amount
(63)	Blade case complete	Hinge portion	Makita grease SG No.0 ▼	a little
(149)	Sleeve 17	Outer periphery where (154) Torsion spring 40 contacts		
(150)	Rod 16	Whole portion		
(152)	O ring 7	Whole portion		
(153)	Stopper pin	Portion where (157) Front arm complete contacts		
(154)	Torsion spring 40	Spring roll ends where Front arm complete contacts		
(157)	Front arm complete	Portion where (63) Blade case complete contacts		
(210)	Rack block	Portion where Rib on the reverse of Turn base contacts Racks where Spur gear 43 engages ----- Portion where the reverse of Rack contacts		
(214)	Slide lock plate	Long length hole		
(242)	Base complete	Inside of center rib for receiving axis of Turn base		
(248)	Slide plate	Portion where Turn base contacts		
(271)	Miter lock plate B complete	Hole where Grip 50 contacts		

**Fig. 3**



## ► Repair

**Note:** Remove Saw blade and Safety cover section before disassembling.

### [3] DISASSEMBLY/ASSEMBLY

#### [3]-1. Blade case section, Motor section

##### DISASSEMBLING

- 1) Push Knob 20 to hook Stopper pin with Blade case complete kept in its upper dead point. (Fig. 4)
- 2) Loosen two Bind CT4x12 Tapping screws, then remove Strain relief. (Fig. 4)
- 3) Remove M6x20 Hex socket head bolt.  
Link plate can be removed from Front arm complete. (Fig. 5)
- 4) Remove M5x18 Hex socket head bolt and Sleeve 6. (Fig. 6)  
**Note:** Press Sleeve 6 against the rib of Blade case complete to keep their contact as drawn in Fig. 6 when tightening M5x18 Hex socket head bolt in reassembling step.
- 5) While holding Blade case complete with hand against spring force, pull Knob 20 and move Blade case complete slowly and carefully to vertical position to Turn base. (Fig. 7)
- 6) Push Knob 20 to hook Stopper pin with Blade case complete at the vertical position. (Fig. 7)
- 7) Loosen M6x16 H. S. set screw (flat point) slightly to remove Rod 16 in the next step.  
Loosen M6x20 Hex socket head bolt to make the spring force of Torsion spring 40 ineffective.  
**Note:** Do not remove M6x20 Hex socket head bolt completely.

Fig. 4

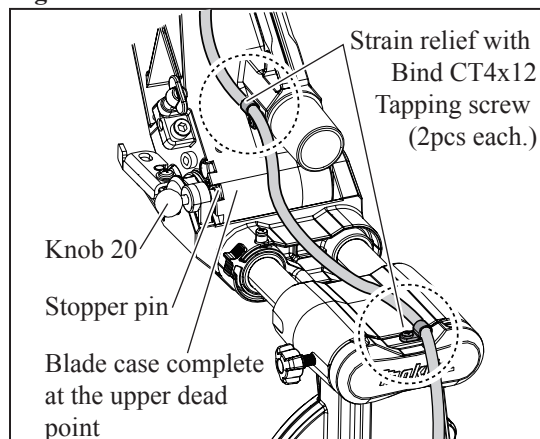


Fig. 5

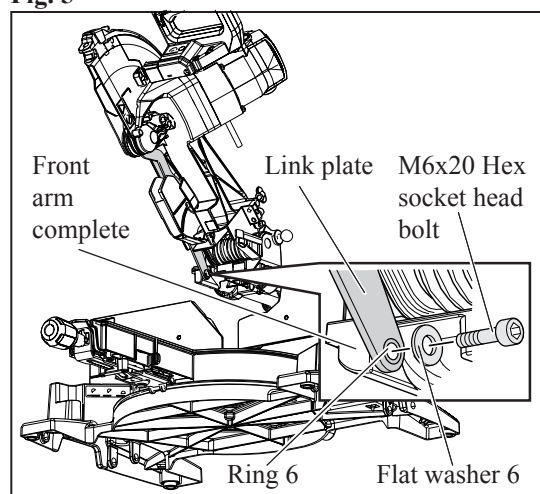


Fig. 6

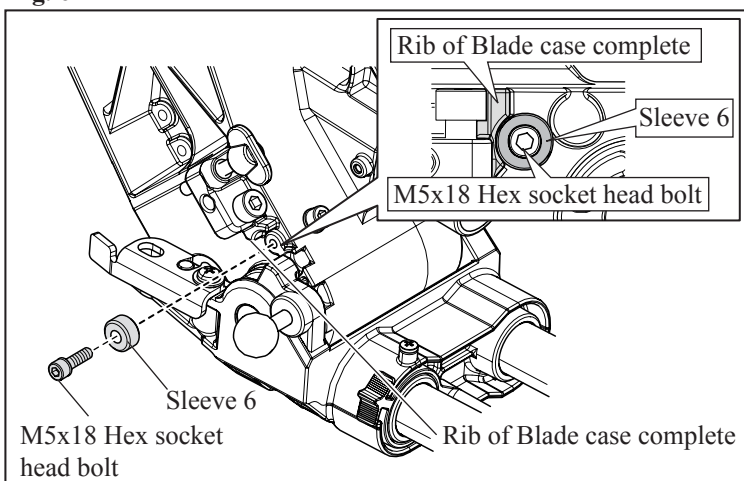


Fig. 7

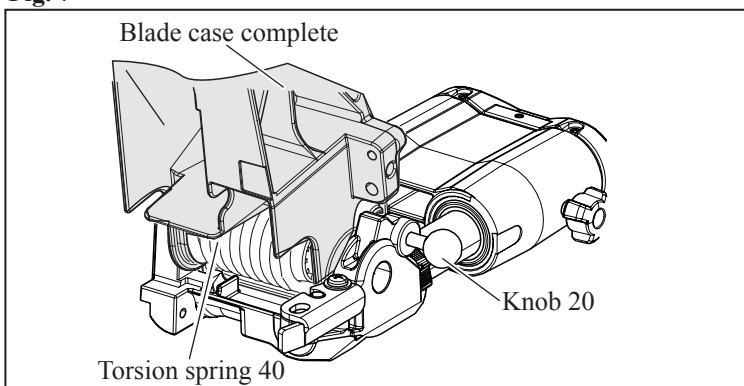
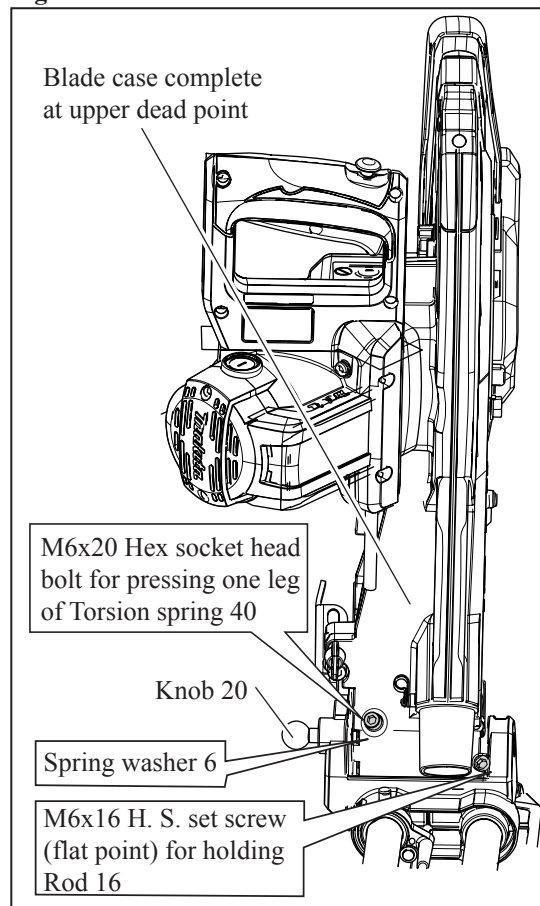


Fig. 8



► **Repair**

**[3] DISASSEMBLY/ASSEMBLY**

**[3]-1. Blade case section, Motor section (cont.)**

**DISASSEMBLING**

(8) Loosen M6x16 H. S. set screw (flat point) slightly to remove Rod 16 in the next step.  
Loosen M6x20 Hex socket head bolt to make the spring force of Torsion spring 40 ineffective. (**Fig. 9**)

(9) After Spring force becomes ineffective, strike Rod 16 from Knob 20 side as drawn in **Fig. 10**.

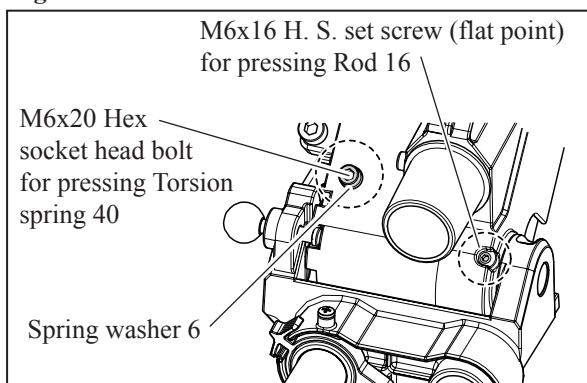
**Note:** Do not strike Rod 15 from the opposite of Knob 20 side. The way increases the possibility that the scratched spot by M6x16 H. S. set screw get caught in the hinge portion. Rod 16 can be removed from the hinge portion.

(10) Pull Knob 20 to unlock Blade case complete and remove Blade case section from Front arm complete. (**Fig. 11**)

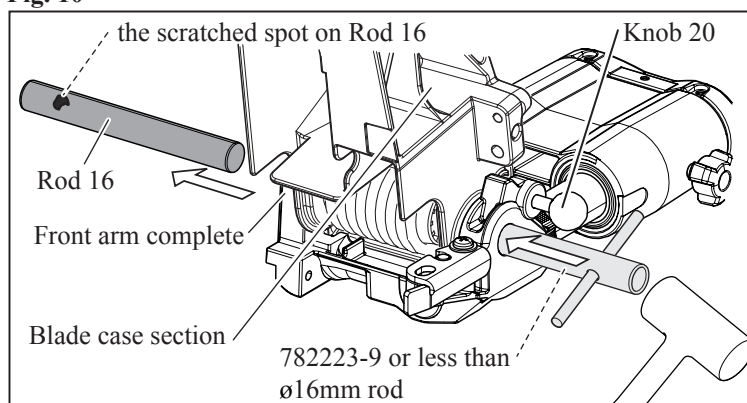
(11) Loosen two M4x10 Pan head screws. Guard section can be removed. (**Fig. 12**)

(12) Remove Stop ring E-5 from Link shaft (that is a component of Blade case complete). Link plate and Ring 6 can be removed. (**Fig. 13**)

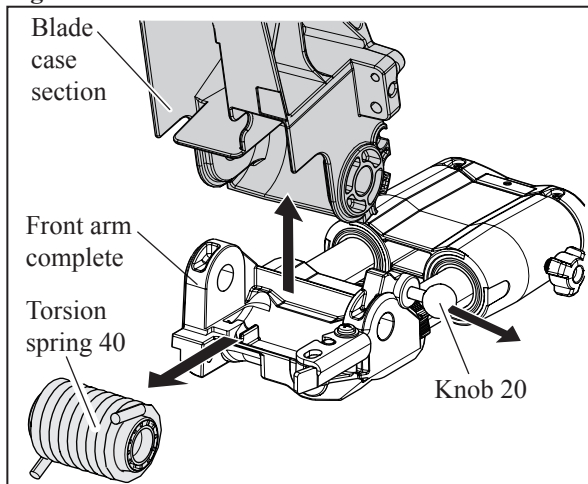
**Fig. 9**



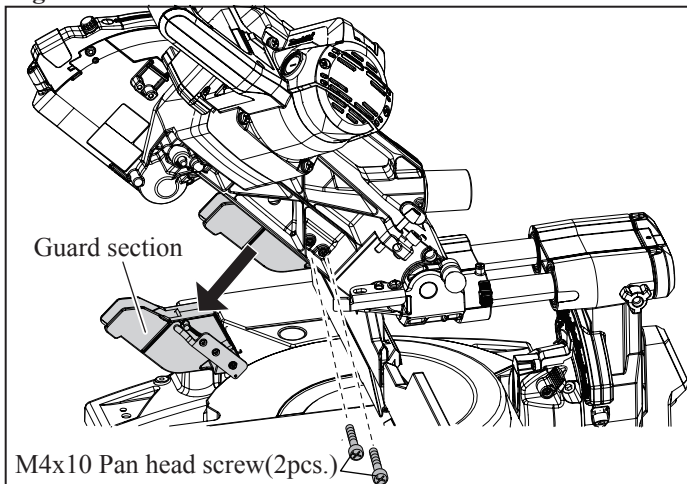
**Fig. 10**



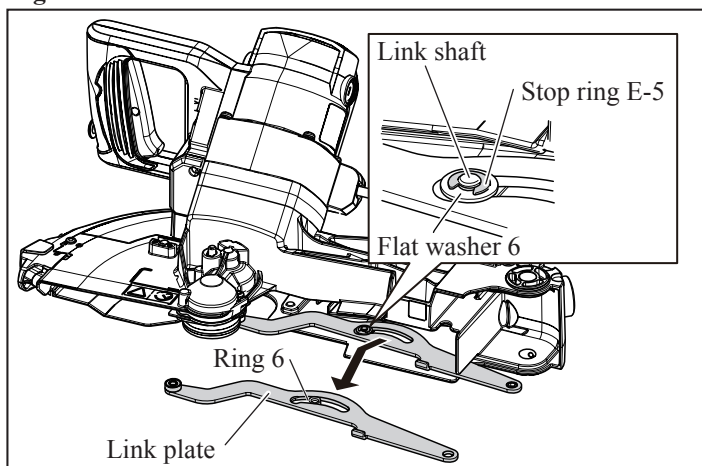
**Fig. 11**



**Fig. 12**



**Fig. 13**



## ► Repair

### [3] DISASSEMBLY/ASSEMBLY

#### [3]-1. Blade case section, Motor section (cont.)

##### DISASSEMBLING

13) To remove Motor section from Blade case section, remove Carbon brushes first.

14) Regarding LS1216L only, remove Lead cover holder and 4x18 Tapping screw then disconnect Connectors for Laser circuit. (Fig. 14)

16) Remove four M6x80 Pan head screws using Cordless impact driver with Phillips bit No.3.

Motor section, Motor bracket and Handle section can be removed from Blade case section. (Fig. 15)

Handle cover can be removed by loosening six 4x18 Tapping screws.

Fig. 14

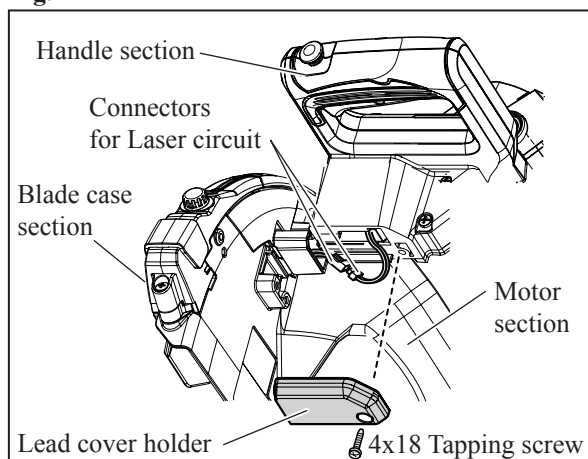
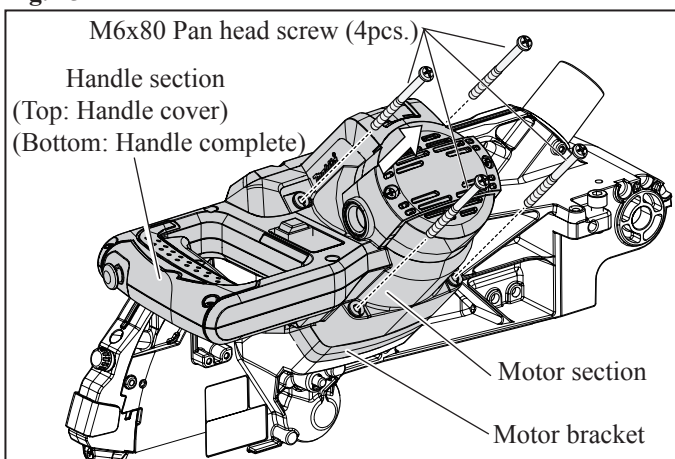


Fig. 15



##### ASSEMBLING

Take the disassembling step in reverse. Be sure to apply grease to the specific portions in advance. (Fig. 3)

**Note:** • File off any burrs on Rod 16.

- When Rod 16 is assembled to Blade case complete;
  1. Move Blade case complete to the lowest position and lock it by pushing Knob 20, then insert the end of Rod 16 to inner surface of Blade case complete. (Fig. 16)
  2. Pull Knob 20 to unlock Blade case complete then stand Blade case complete vertically and lock it by pushing Knob 20. (Fig. 17)
  3. Assemble Sleeve 17 to Torsion spring 40 (Fig. 17) and put one end of Torsion spring 40 into the groove of Front arm complete.
  4. Insert the assembled parts into Blade case complete, then install the end of Rod 16 to the outer surface of Front arm complete through Sleeve 17. (Fig. 18)

Fig. 16

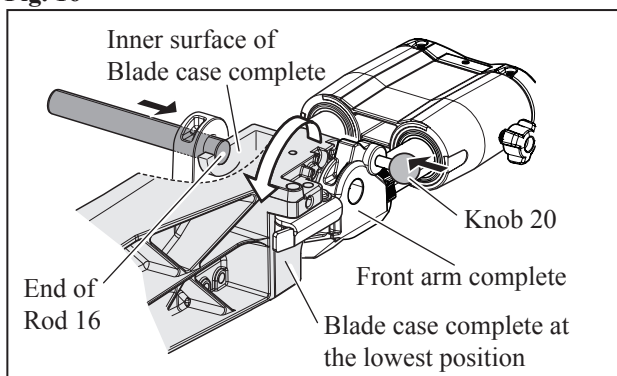


Fig. 17

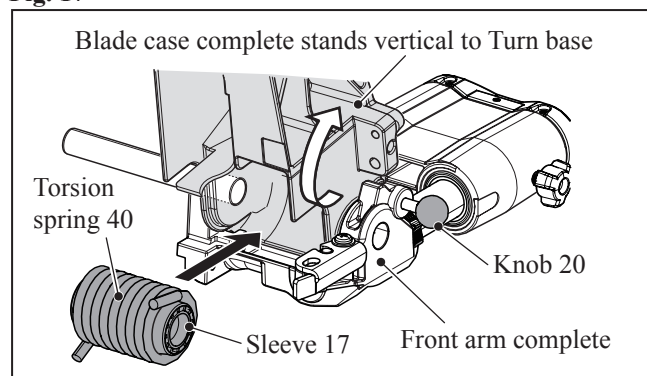
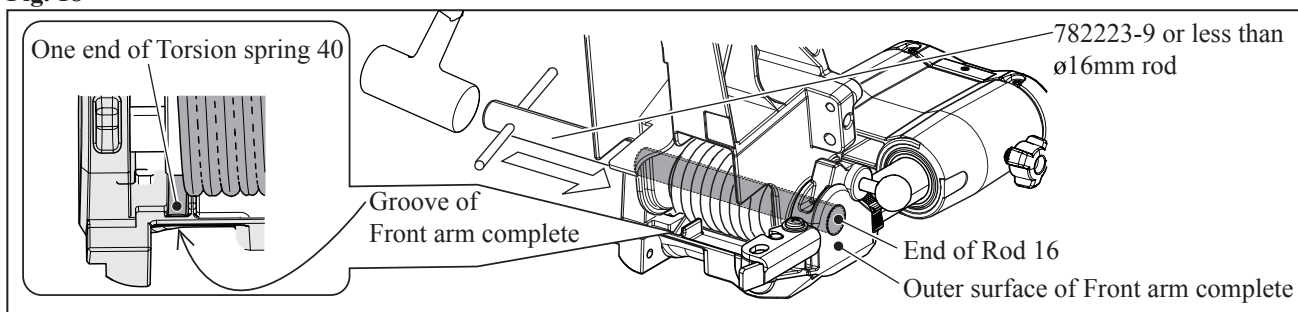


Fig. 18





► **Repair**

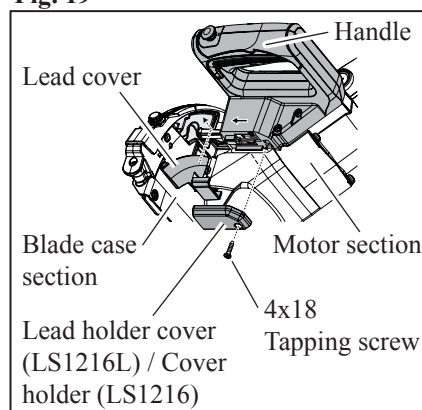
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-1. Blade case section, Motor section (cont.)**

**ASSEMBLING**

- Note:**
- Tighten M6x20 Hex socket head bolt for pressing the end side of Torsion spring 40 until the bolt is firmly seated on Blade case complete. (**Fig. 8**)
  - While pushing Handle to the ribs of Blade case complete as drawn in **Fig. 19**, assemble Motor section to Blade case section with four M6x8 Pan head screws. (**Fig. 15**)
  - While pushing Lead cover holder/ Cover holder to Lead cover, assemble Lead cover holder with 4x18 Tapping screw. (**Fig. 14**)

**Fig. 19**



**[3]-2. Spiral bevel gear 32, Helical gears 14, Helical gears 27, Helical gears 28**

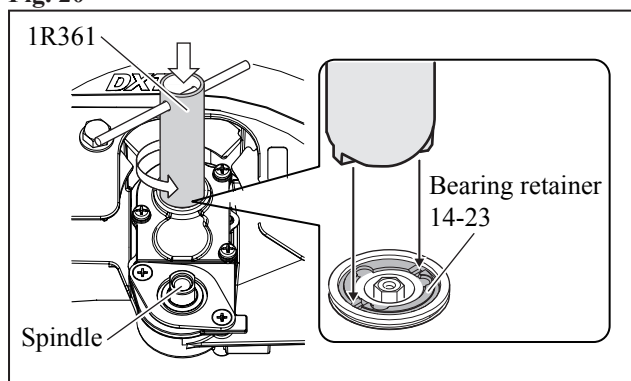
**DISASSEMBLING**

**Note:** Without removing Guard, Link plate and Motor section, disassembling the subject parts is impossible. Therefore, remove them in accordance with **the clause [3]-1**.

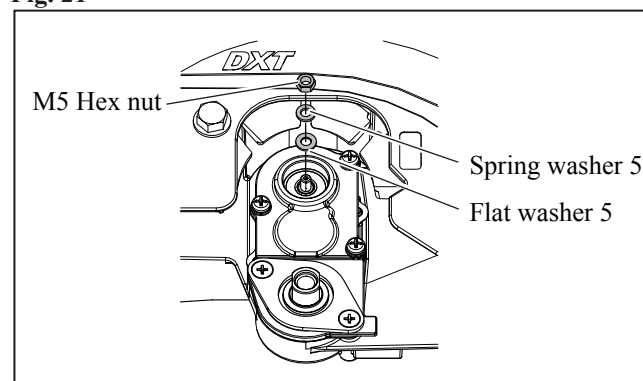
However, removing Blade case section from Front arm complete is not required.

- 1) Tilt Blade case section to 45° right bevel angle to prevent Gear section from dropping off.  
Turn Bearing retainer 14-23 counterclockwise using 1R361. (**Fig. 20**)
- 2) While pressing Shaft lock, remove M5 Hex nut using socket bit.  
Spring washer 5 and Flat washer 5 can be removed together. (**Fig. 21**)
- 3) Remove three M5x16 Pan head screws from Bearing box complete.  
Remove two M5x16 Countersunk head screws and Bearing retainer 51. (**Fig.22**)
- 4) Lever up Bearing box using two slotted screwdrivers. (**Fig. 23**) Gear section drawn in **Fig. 24** can be removed.

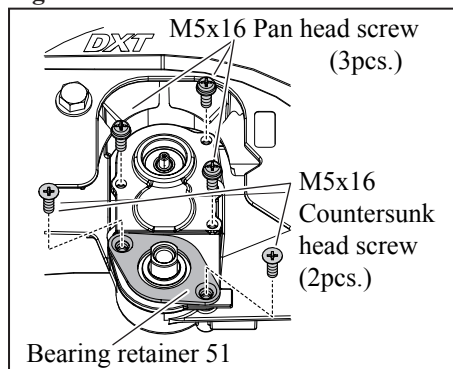
**Fig. 20**



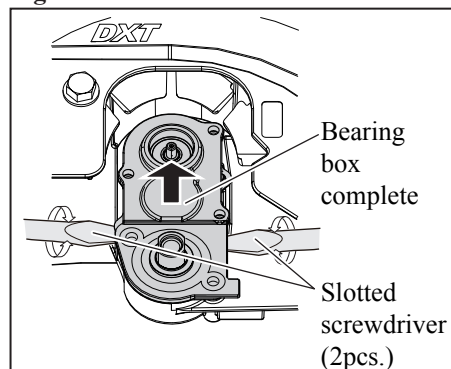
**Fig. 21**



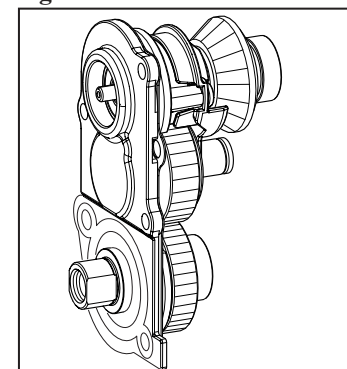
**Fig. 22**



**Fig. 23**



**Fig. 24**



► **Repair**

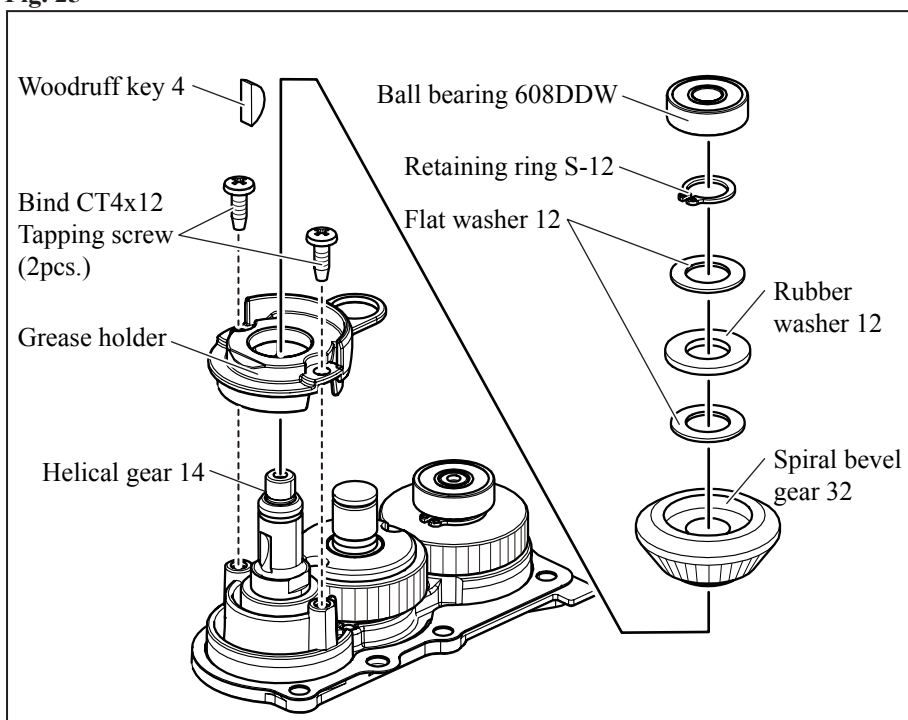
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-2. Spiral bevel gear 32, Helical gears 14, Helical gears 27, Helical gears 28 (cont.)**

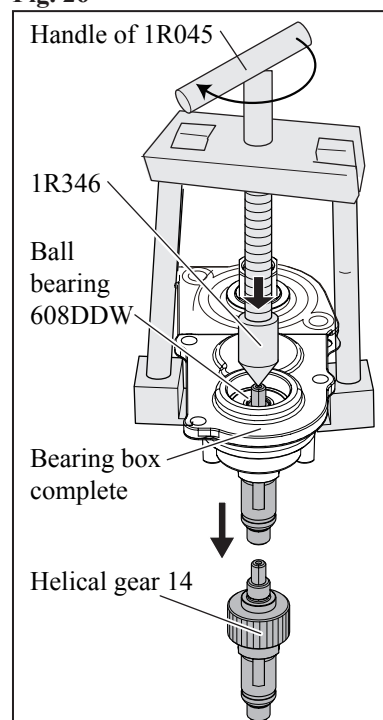
**DISASSEMBLING**

- (5) Remove Ball bearing 608DDW from Helical gear 14 using 1R269.  
Remove Retaining ring S-12 from Helical gear 14 using 1R291. If it is difficult to remove the ring in this way, remove the ring while pushing Retaining ring S-12 with 1R291.  
Two Flat washer 12, Rubber washer 12, Spiral bevel gear 32 and Woodruff key 4 can be removed. **(Fig. 25)**
- (6) Separate Grease holder from Gear section by removing two Bind CT4x12 Tapping screws. **(Fig. 25)**
- (7) Hook 1R045 and 1R346 with Bearing box complete, and then push out Helical gear 14 from Bearing box complete by turning the handle of 1R045. **(Fig. 26)**
- (8) Remove Ball bearing 608DDW from Bearing box complete. **(Fig. 26)**

**Fig. 25**

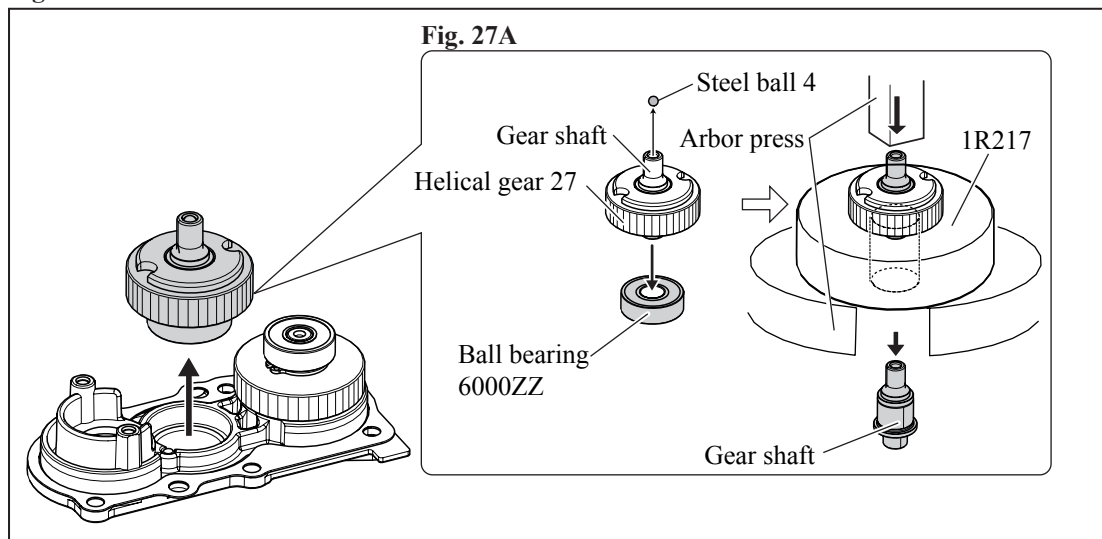


**Fig. 26**



- (9) Remove Helical gear 27 with Steel ball 4, Gear shaft and Ball bearing 6000ZZ from Bearing box complete. **(Fig. 27)**
- (10) After removing Steel ball 4 and Ball bearing 6000ZZ from Gear shaft, press down Gear shaft using 1R217 and arbor press. **(Fig. 27A)**

**Fig. 27**



► **Repair**

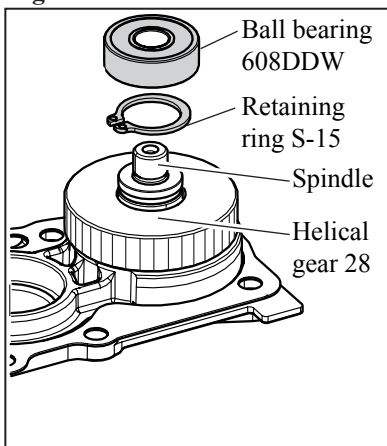
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-2. Spiral bevel gear 32, Helical gear 14, Helical gear 27, Helical gear 28 (cont.)**

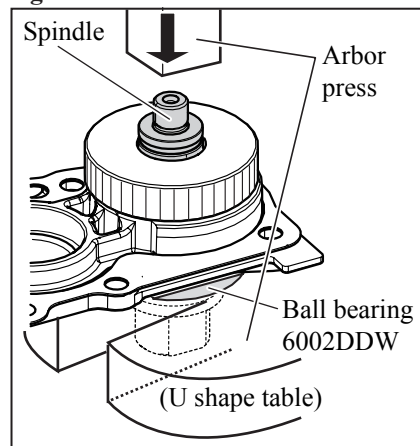
**DISASSEMBLING**

- (11) Remove Ball bearing 608DDW from Spindle using 1R269. and then remove Retaining ring S-15 using 1R291. (**Fig. 28**)
- (12) Receive Ball bearing 6002DDW with U-shape table of Arbor press, and press down Spindle as illustrated in **Fig. 29**. Helical gear 28 can be removed. (**Fig. 30**)

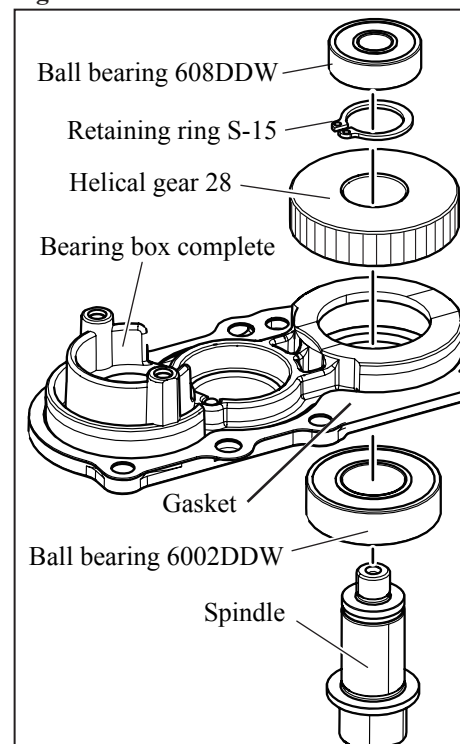
**Fig. 28**



**Fig. 29**



**Fig. 30**



**ASSEMBLING**

**Note:** Do not forget to apply Lubricants and put Gasket on Bearing box complete.

- (1) Assemble Ball bearing 6002DDW to Bearing box, and pressfit Spindle into Ball bearing 6002DDW.
- (2) While receiving the step of Spindle with 1R036, and pressfit Helical gear 28 using Arbor press and 1R232. (**Fig. 31**)

**Note:** Be careful that the protrusion of Helical gear 28 faces Ball bearing 6002DDW.

- (3) Snap Retaining ring S-15 into the groove of Spindle using 1R291. Press down Ball bearing 608DDW to Spindle using Arbor press. See **Fig. 30**.

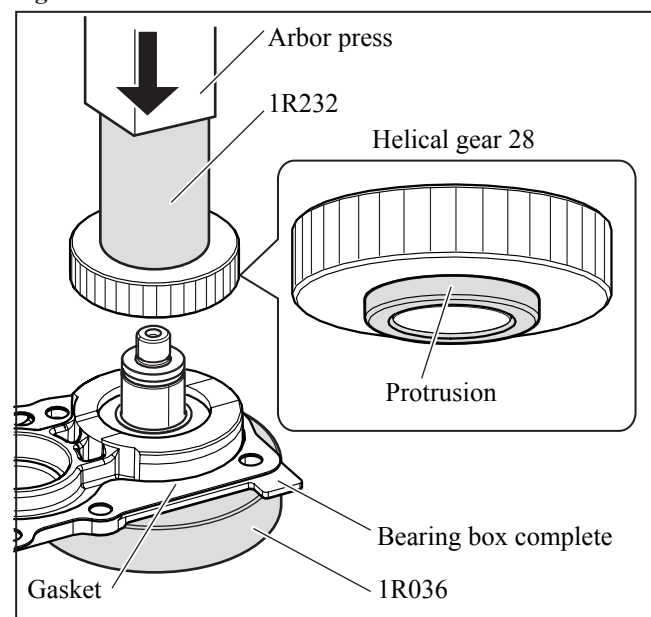
- (4) Receive the step of Spindle with the lip of hole in 1R034, and pressfit Spindle to Helical gear 27 using Arbor press and 1R031. (**Fig. 32**)

**Note:** Be careful that the protrusion of Helical gear 27 faces 1R031.

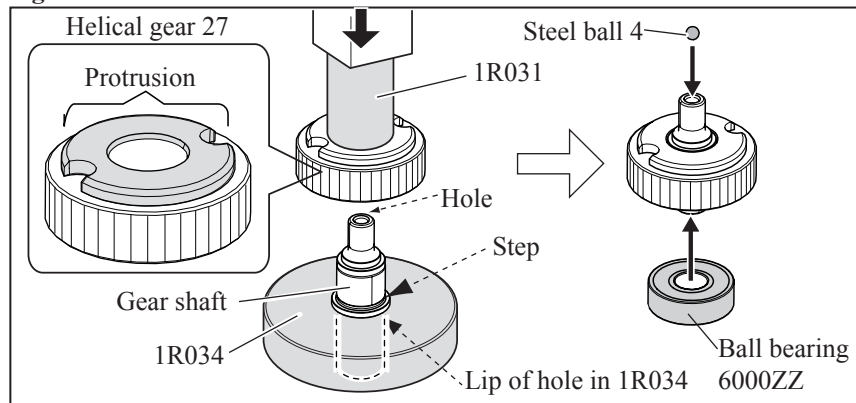
Pressift Spindle into Ball bearing 6000ZZ.  
Put Steel ball 4 into the hole in Gear shaft.

- (5) Fit the assembled part shown in **Fig. 32** into Bearing box complete. (**Fig. 33**)

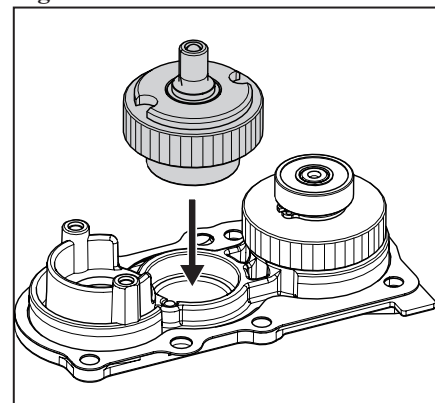
**Fig. 31**



**Fig. 32**



**Fig. 33**



## ► Repair

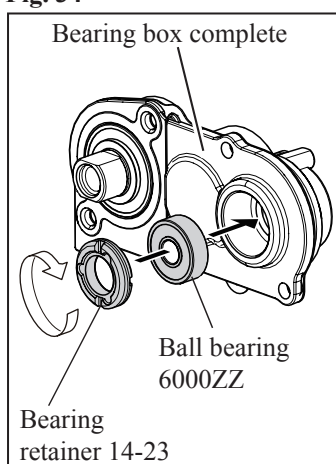
### [3] DISASSEMBLY/ASSEMBLY

#### [3]-2. Spiral bevel gear 32, Helical gear 14, Helical gear 27, Helical gear 28 (cont.)

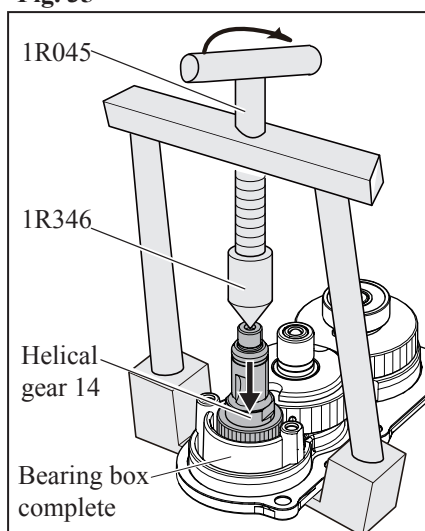
##### ASSEMBLING

- 6) Pressfit Ball bearing 608DDW into Bearing box complete and then Bearing retainer 14-23 in place **temporarily** using 1R261. (**Fig. 34**)
- 7) Pressfit Helical gear 14 into Ball bearing 6000ZZ using 1R045 and 1R346 as illustrated in **Fig. 35**.
- 8) Secure Grease holder to Bearing box complete with two Bind CT4x12 Tapping screws.  
Apply Makita grease FA No. 2 to the groove of Helical gear 14 and then insert Woodruff key 4 into the groove.  
While holding woodruff key 4 with finger, secure Spiral bevel gear 32 with Woodruff key 4 in the shaft portion of Helical gear 14. (**Figs. 25 and 36**)
- 9) Hold Rubber washer 12 between two Flat washers 12, then pass the shaft portion of Helical gear 14 through their washers. Snap Retaining ring S-12 into the groove of the shaft portion of Helical gear 14.  
**Note:** While pressing Retaining ring S-12 using 1R028 and 1R036 to compress Rubber washer 12, set Retaining ring S-12 in place. (**Figs. 25 and 37**) Check Retaining ring S-12 is fit into the shaft portion of Helical gear 14 properly.

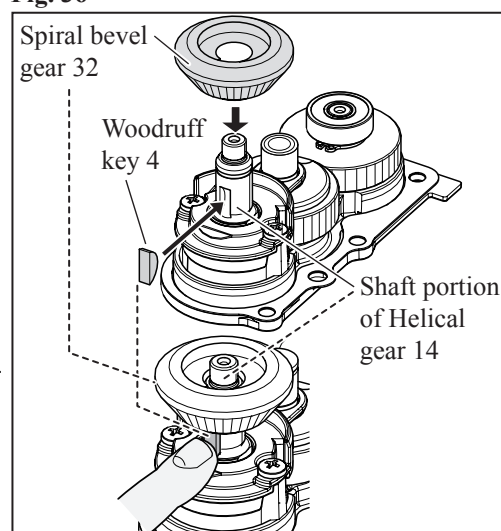
**Fig. 34**



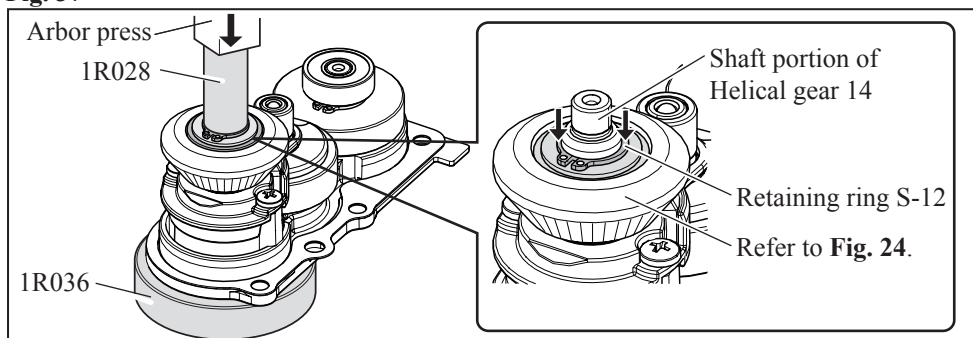
**Fig. 35**



**Fig. 36**



**Fig. 37**



- 10) Pressfit Ball bearing 608DDW to the shaft portion of Helical gear 14.

- 11) Take the disassembling step of **Figs. 23, 22, 21 and 20** in reverse.

**Note:** Tighten Bearing retainer 14-23 clockwise with appropriate torque. Reverse the step shown in **Fig. 23**.

Bearing box section has to be assembled to the sections in the following order.

1. Gear section
2. Motor housing section
3. Link plate section
4. Guard section

► **Repair**

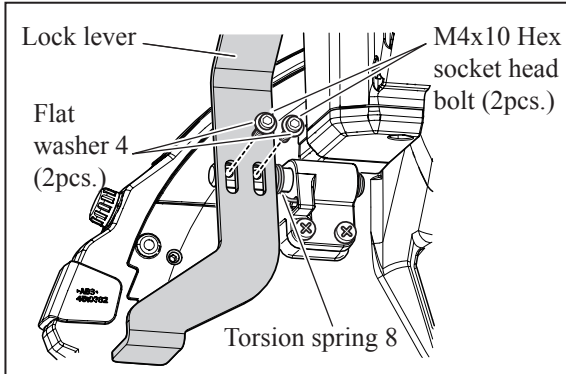
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-3. Lock Lever Section (exclusively for the specifications with Locking mechanism of Blade case complete at the upper dead point)**

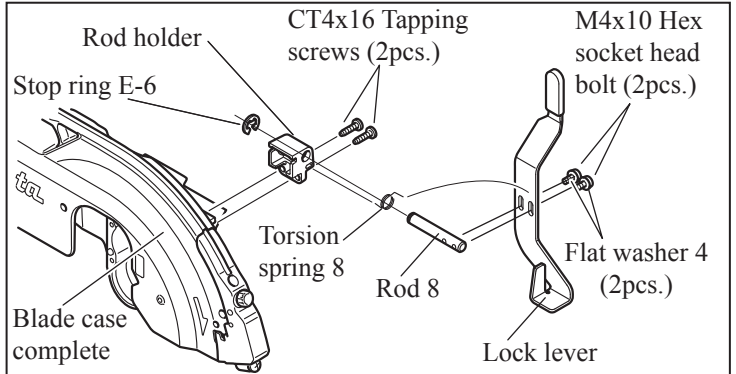
**DISASSEMBLING**

- 1) Remove two M4x10 Hex socket head bolts and two Flat washers 4, then remove Lock lever and Torsion spring 8. (**Fig. 38**)
- 2) Remove two CT4x16 Tapping screws and separate Rod 8 from Rod holder. (**Fig. 39**)

**Fig. 38**



**Fig. 39**

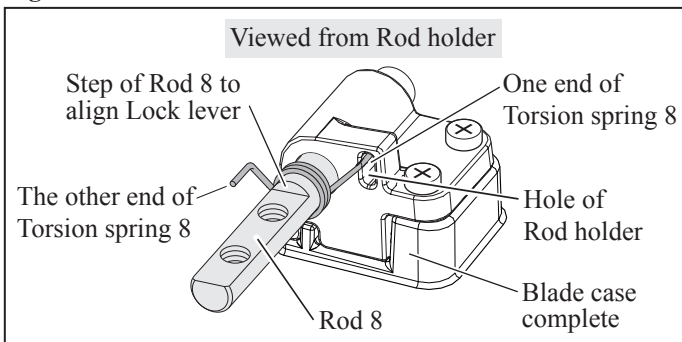


**ASSEMBLING**

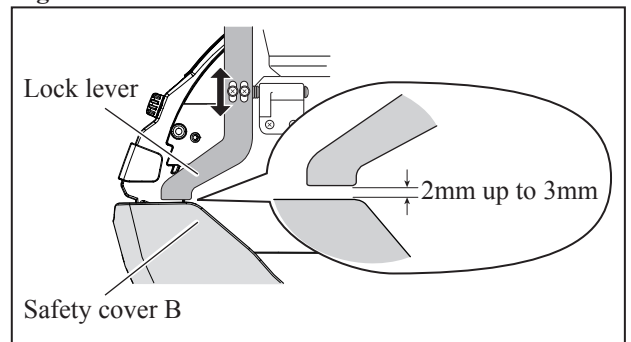
Take the reverse step of disassembling.

- (1) Press Rod holder against the rib of Blade case complete and secure Rod holder by tightening two CT4x16 Tapping screws.
- (2) When assembling Lock lever to Rod 8;
  - Pass Rod 8 through Torsion spring 8 and insert the one end of Torsion spring 8 into the hole of Rod holder.
  - Hook the other end of Torsion spring 8 with the reverse of Lock lever and align Lock lever with the step of Rod 8 by tightening two M4x10 Hex socket head bolts and CT4x16 Tapping screws (2pcs.). (**Figs. 39, 40**)
  - Adjust the clearance between Lock lever and Safety cover B to 2mm up to 3mm height by sliding Lock lever. (**Fig. 41**)

**Fig. 40**



**Fig. 41**



► **Repair**

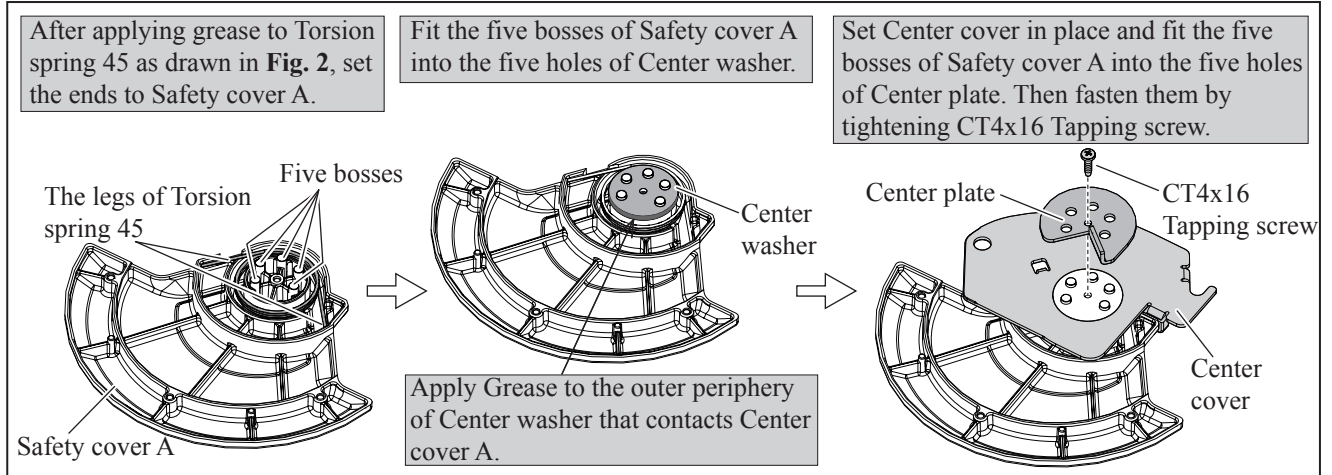
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-4. Safety cover A**

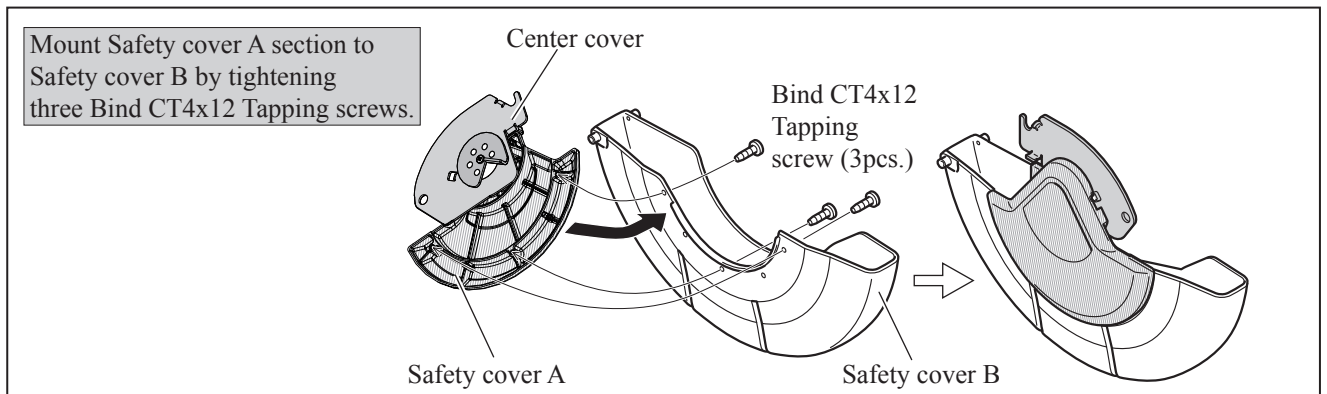
**ASSEMBLING**

- (1) Assemble Safety cover A section. (**Fig. 42**) And then mount the Safety cover A section to Safety cover B. (**Fig. 43**)
- (2) Mount the Safety cover section to Blade case complete as illustrated in **Fig. 44**.

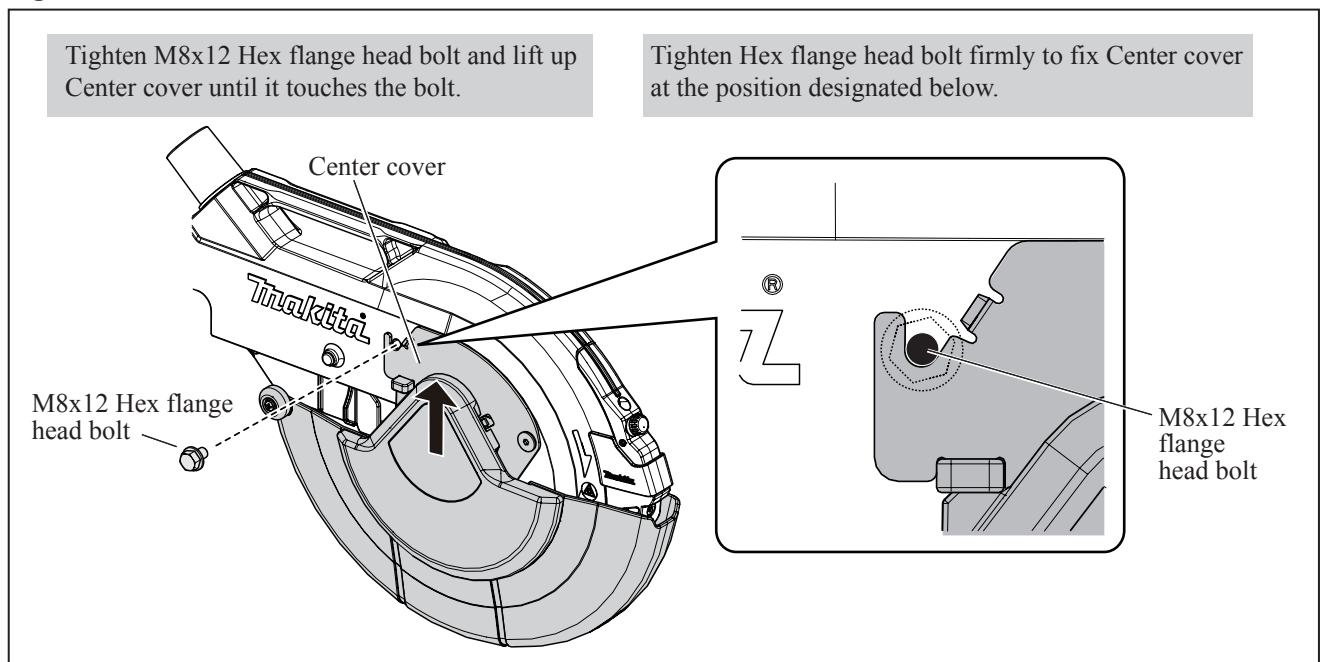
**Fig. 42**



**Fig. 43**



**Fig. 44**



► **Repair**

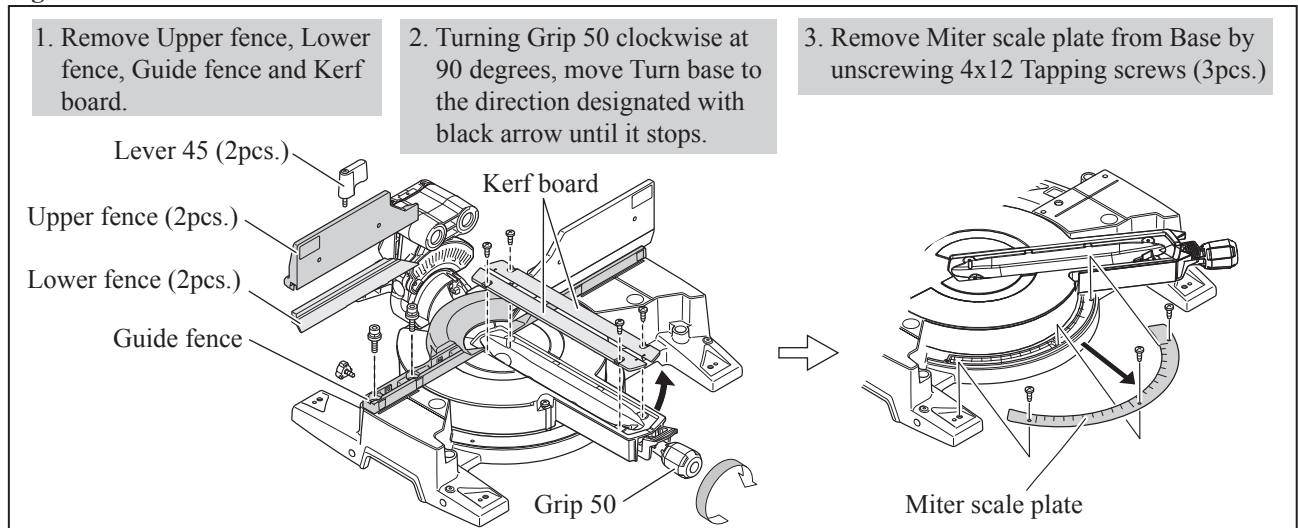
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-5. Turn Base, Base**

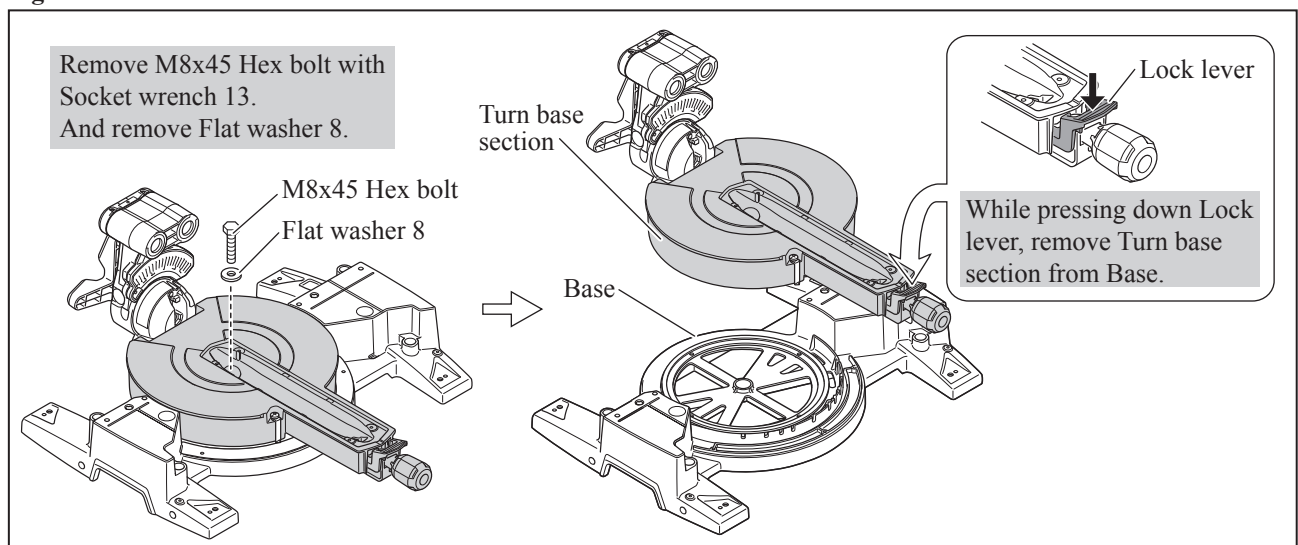
**DISASSEMBLING**

- (1) Remove Fence section, Kerf board and Miter scale plate from Turn base and Base. (Fig. 45)
- (2) Remove Turn base section from Base. (Fig. 46)

**Fig. 45**



**Fig. 46**



**ASSEMBLING**

Take the disassembling step in reverse. (Figs. 46 and 45)

- Note:**
- Apply Grease to Slide plate and the center hole of Base before assembling Turn base section. (Refer to Fig. 3.)
  - Tighten M8x45 Hex bolt so that Turn base section can turns smoothly without wobbling.

► **Repair**

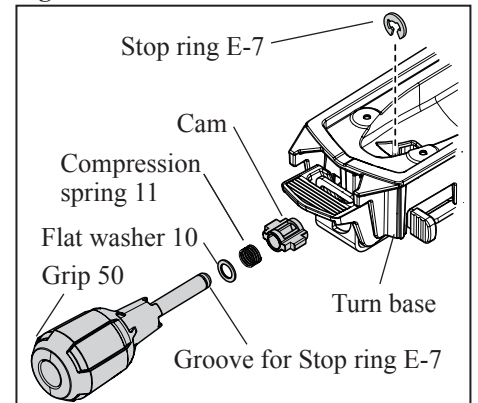
**[3] DISASSEMBLY/ASSEMBLY**

**[3]-6. Positive lock mechanism of Turn base**

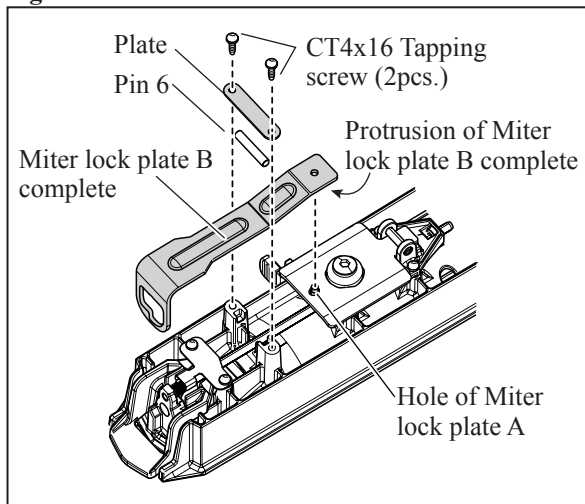
**DISASSEMBLING**

- (1) Remove Stop ring E-7. (**Fig. 47**)  
Grip 50, Compression spring 11, Flat washer 10 and Cam can be removed.
- (2) Remove two CT4x16 Tapping screws and Plate from Turn base complete. Miter lock plate B complete and Pin 6 are removed. (**Fig. 48**)
- (3) Remove M6x14 H.S.Binding head screw then remove Miter lock plate in the direction designated with black arrow. (**Fig. 49**)
- (4) Remove CT4x16 Tapping screw (2pcs.) and Lock lever plate. (**Fig. 50**)
- (5) While pushing Lock pin 6 in the direction of black arrow to remove the ends of Pin 3 from the inner hooks of Lock lever, pick up Lock lever in the direction of gray arrow shown in **Fig. 51**.
- (6) Remove Pin 3 from Lock pin 6, then pull out Lock pin 6 from Lock lever side.

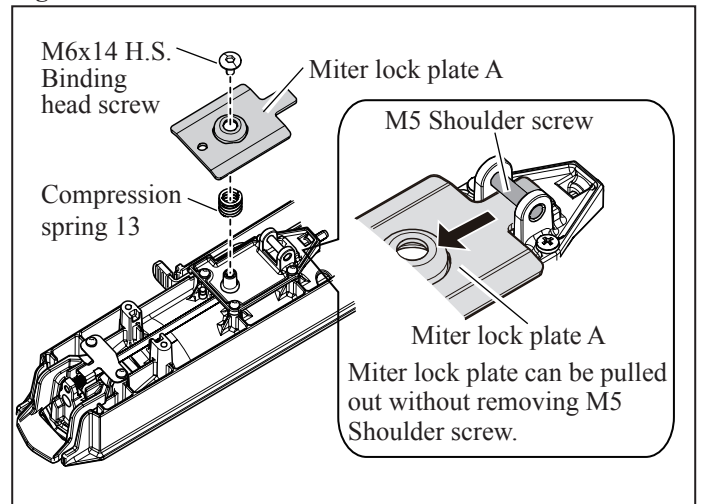
**Fig. 47**



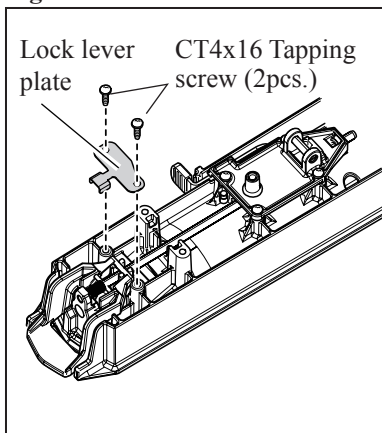
**Fig. 48**



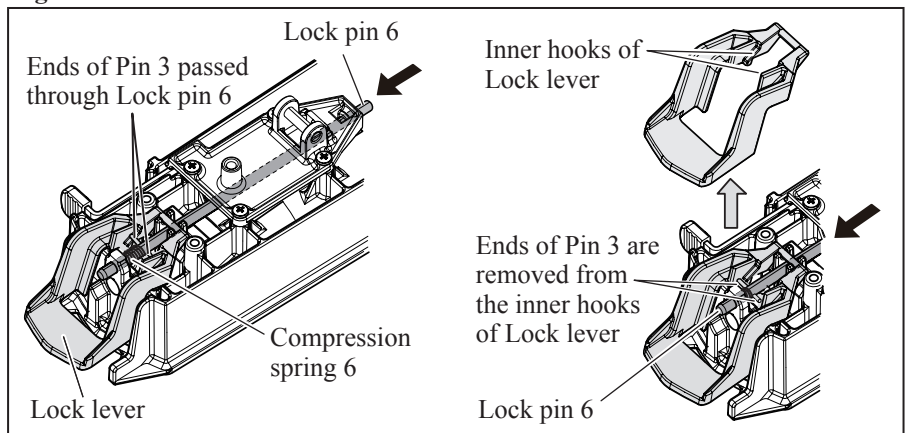
**Fig. 49**



**Fig. 50**



**Fig. 51**



**ASSEMBLING**

Take the disassembling step in reverse.



## ► Repair

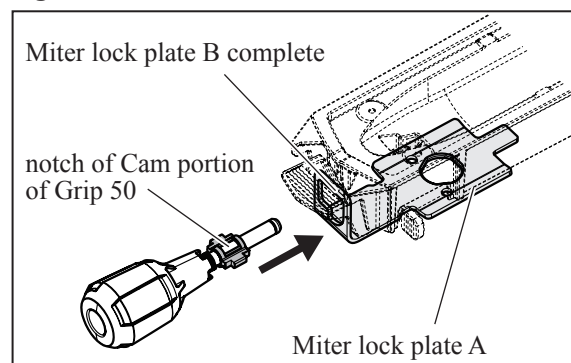
### [3] DISASSEMBLY/ASSEMBLY

#### [3]-6. Positive lock mechanism of Turn base (cont.)

##### ASSEMBLING

**Note:** Assemble Grip 50 to Miter lock plate B complete (Fig. 52) so that the notch of Cam portion faces the upper side.

Fig. 52

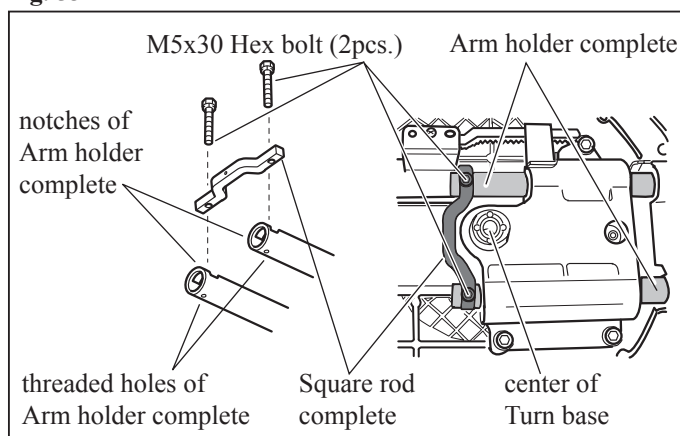


#### [3]-7. Assembling of Square rod complete

Match both ends of Square rod complete with the notches of Arm holder complete on condition that the notches are on the closest position to the center of Turn base, and tighten two M5x30 Hex bolts. (Fig. 53)

**Note:** Face the concave of Square rod complete to the center of Turn base as drawn in Fig. 53.

Fig. 53



#### [3]-8. Stopper pin

##### DISASSEMBLING

(1) Push Knob 20 to lock Blade case at highest elevation angle.

Then remove M6x20 Hex socket head bolt for securing Link plate. (Fig. 54)

(2) Lower Blade case slightly to hold Stopper pin, turn Knob 20 counterclockwise a little.

**Note:** Do not remove Knob 20, or Stopper pin will not be pulled.

(3) Remove Blade case section according to the step shown in the clause [3]-1.

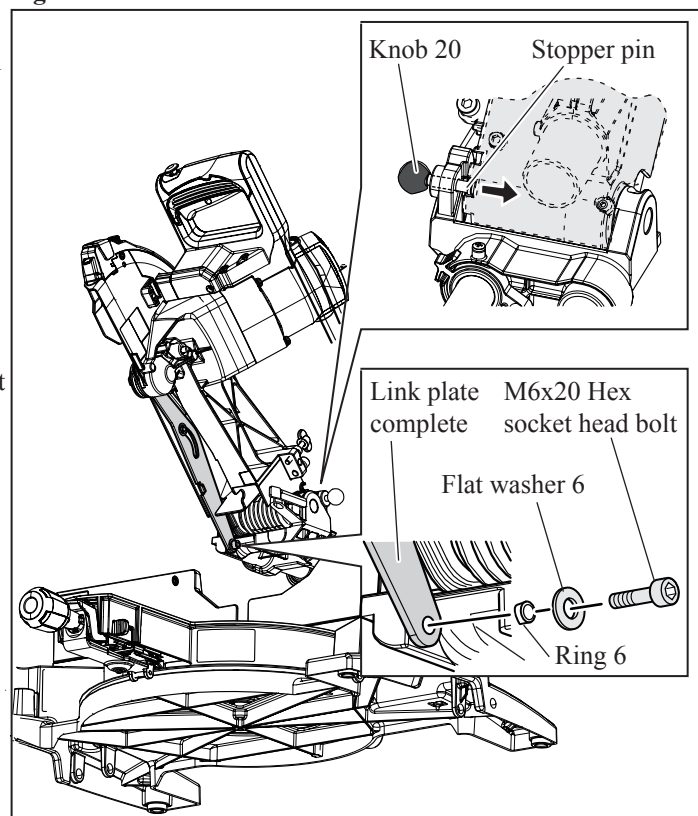
(4) Remove Knob 20 from Stopper pin, and then pull out Stopper pin in the direction designated with black arrow in Fig. 54.

##### ASSEMBLING

Take the disassembling step in reverse.

**Note:** Apply Makita grease SG No.00 to O ring 7 that is fit into Stopper pin. Refer to Fig. 3.

Fig. 54



► **Repair**

**[3] DISASSEMBLY/ASSEMBLY**

**[3]-9. Front arm section**

**DISASSEMBLING**

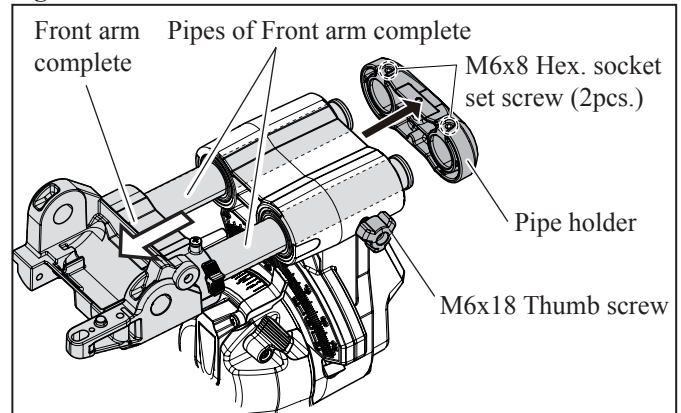
Refer to **Fig. 55**.

- 1) Loosen M6x8 Hex. socket set screw (2pcs.) on Pipe holder and remove Pipe holder.
- 2) Loosen M6x18 Thumb screw and pull out Front arm complete straightly in the direction designated with white arrow to prevent the pipes from being stuck.

**ASSEMBLING**

Take the disassembling step in reverse.

**Fig. 55**

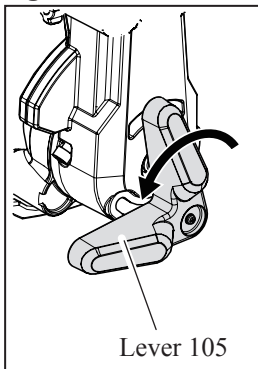


**[3]-10. Arm complete, Arm holder**

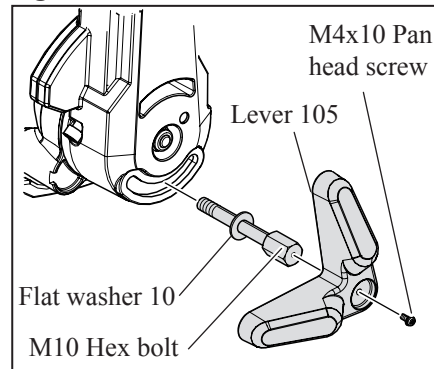
**DISASSEMBLING**

- 1) Loosen Lever 105 by turning counterclockwise. (**Fig. 56**)
- 2) Remove M4x10 Pan head screw and then remove Lever 105. (**Fig. 57**)
- 3) Remove M10 Hex bolt and Flat washer 10. (**Fig. 57**)
- 4) Remove M10-17 Hex lock nut using Box wrench 17.  
Flat washer 10 (2pcs.) and Thrust needle cage 1024 can be removed as drawn in **Fig. 58**.
- 5) Remove Arm section from Arm holder complete. (**Fig. 59**)
- 6) Remove Retaining ring S-12 from the groove on Arm using 1R291.  
Stopper, Flat washer 12 and Torsion spring 14 can be removed. (**Fig. 60**)  
Remove CT 4x16 Tapping screw (3pcs.) Pointer and Arm cover. (**Fig. 60**)

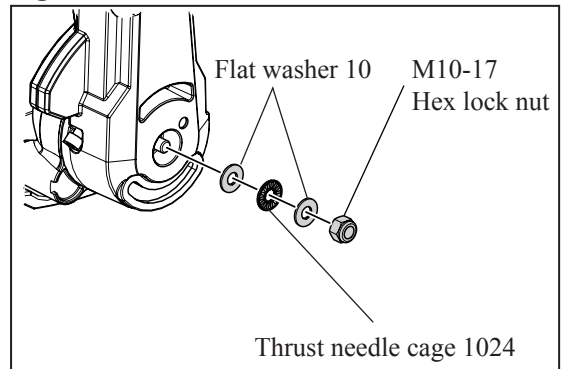
**Fig. 56**



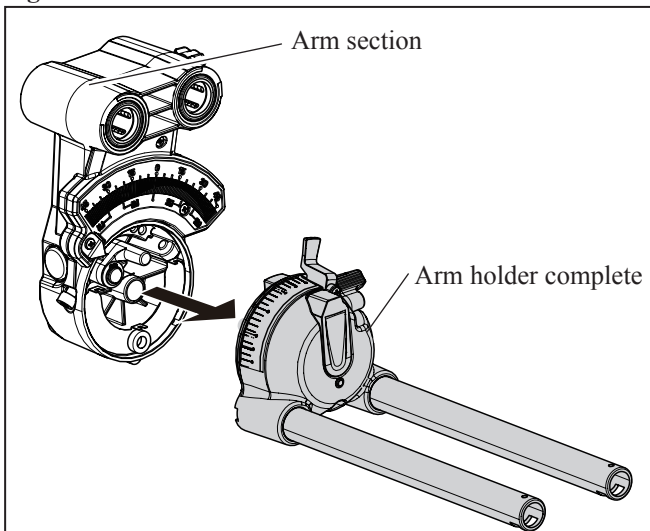
**Fig. 57**



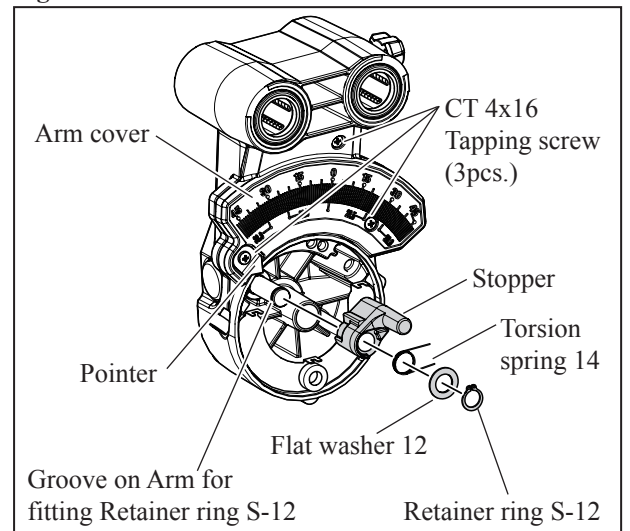
**Fig. 58**



**Fig. 59**



**Fig. 60**



## ► Repair

### [3] DISASSEMBLY/ASSEMBLY

#### [3]-10. Arm complete, Arm holder (cont.)

##### DISASSEMBLING

(7) Remove CT 4x16 Tapping screw.

Arm holder cover and Position plate can be removed. (Fig. 61)

(8) Pull out Center shaft while pushing Leaf spring as drawn in Fig. 62.

(9) After removing Leaf spring from Lock pin 8, pull out Lock pin 8 and

Compression spring 6 in the direction with black arrow. (Fig. 63)

(10) Attach a thin slotted screwdriver to Stop ring E-4, and strike the head of the screwdriver by hand. (Fig. 64)

Stop ring E-4, Cam and Lever 22 section can be removed.

(11) Lever 22 section can be separated by removing M4x10 Pan head screw. (Fig. 65)

Fig. 61

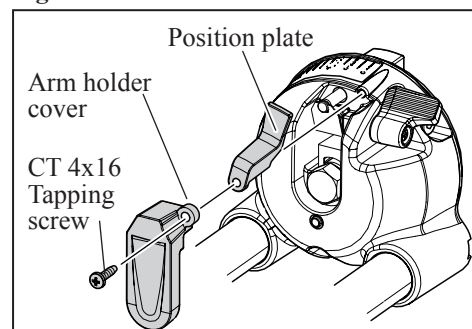


Fig. 62

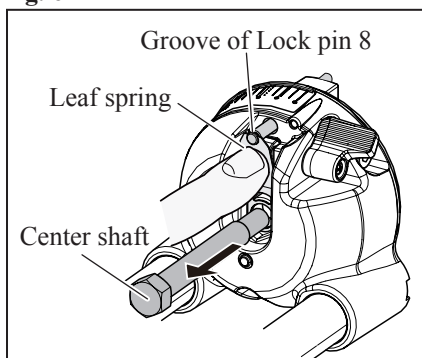


Fig. 63

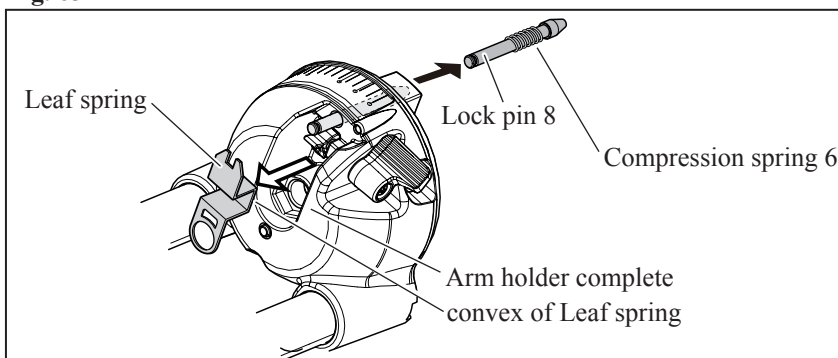


Fig. 64

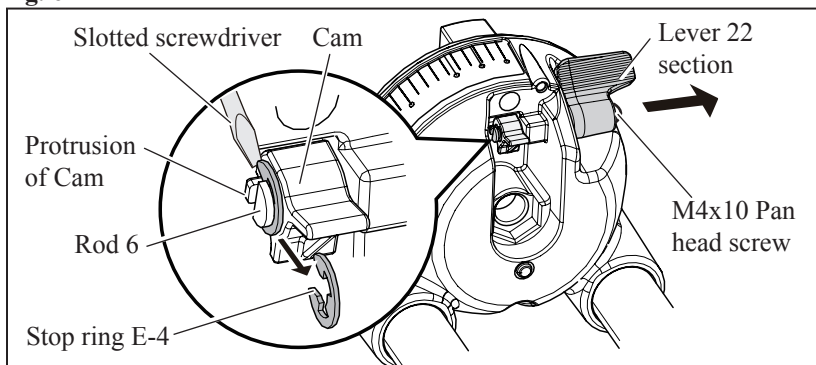
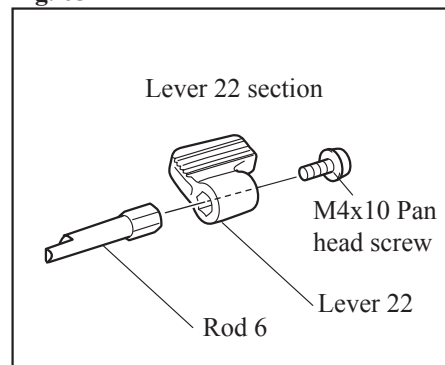


Fig. 65



##### ASSEMBLING

Take the disassembling step in reverse.

**Note:** (1) Leaf spring has to be hooked with the groove of Lock pin 8. (Fig. 62)

(2) Do not face the convex of Leaf spring to the opposite of Arm holder complete. (Fig. 63)

(3) Pay attention to the direction of Rod 6. (Figs. 64 and 65) Tabs on the ends of Stop ring E-4 have to be fit between the protrusion of Cam and the flat portion of Rod 6. Tab on the center of Stop ring E-4 has to be fit into the groove of Cam.

(4) M10-17 Hex lock nut (Fig. 58) has to be tightened to 3.5 up to 4.0N.m. using 1R254, 1R220, 1R222 and Socket assembly 17-38. When Lever 105 is set in place and Handle is held by hand, Motor section has to be smoothly tilted without wobbling. Therefore, do fine adjustment of M10-17 Hex lock nut.

(5) One end of Torsion spring 14 has to be hooked with Stopper. The other of Torsion spring 14 has to be hooked with the center of Arm holder complete. (Fig. 66)

(6) Lever 105 has to be secured at 0 up to 30 degrees tilted counter-clockwise (drawn in light gray color) from the axial-symmetry position (drawn in dark gray color). (Fig. 67)

Fig. 66

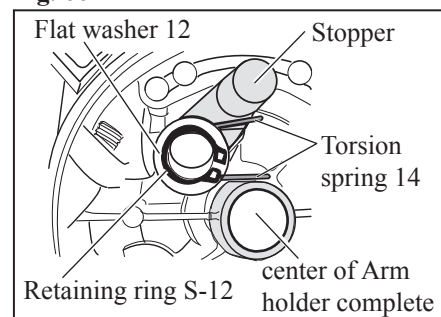
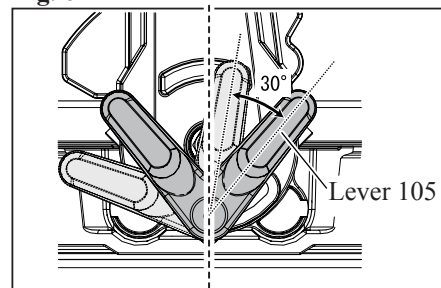


Fig. 67



► **Repair**

**[3] DISASSEMBLY/ASSEMBLY**

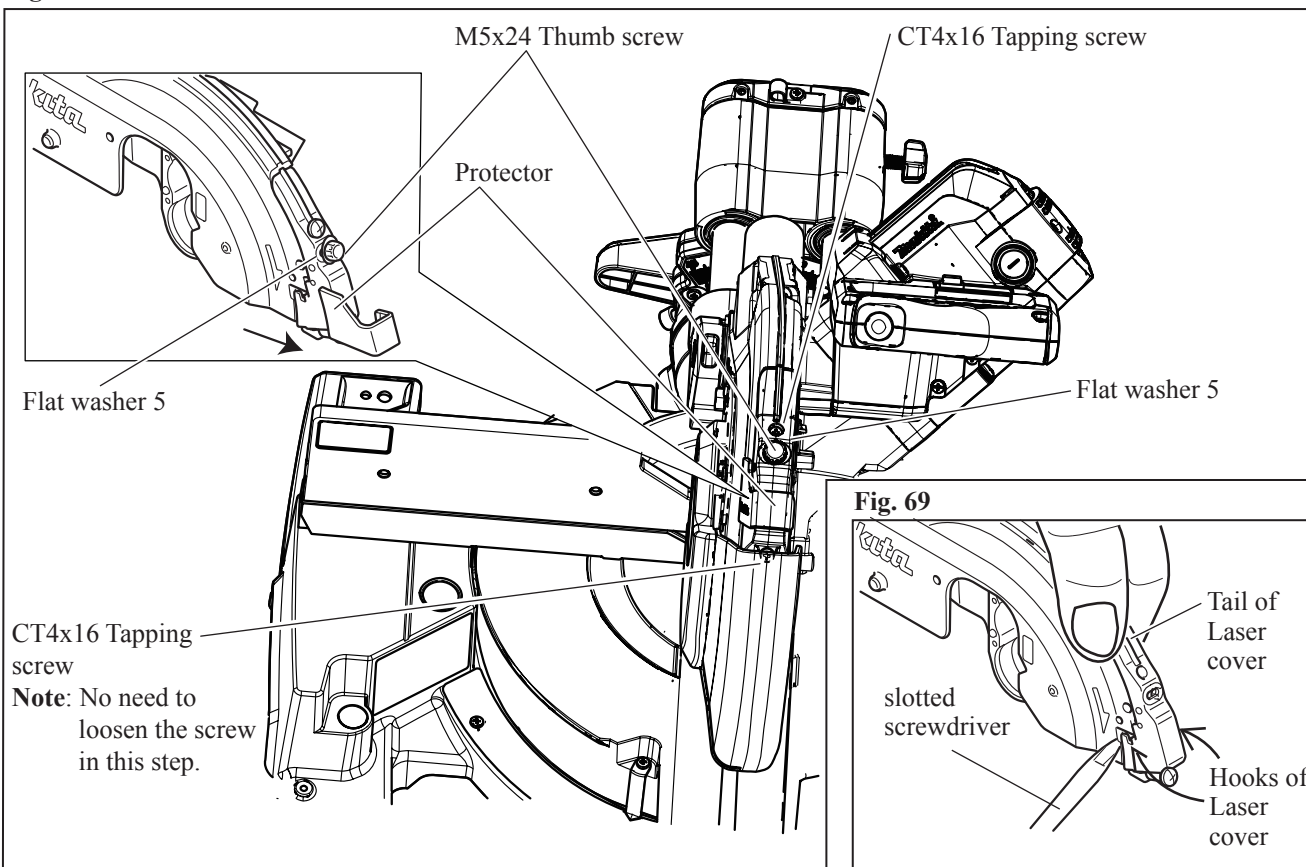
**[3]-11. Laser Mechanism (for LS1216L only)**

**DISASSEMBLING**

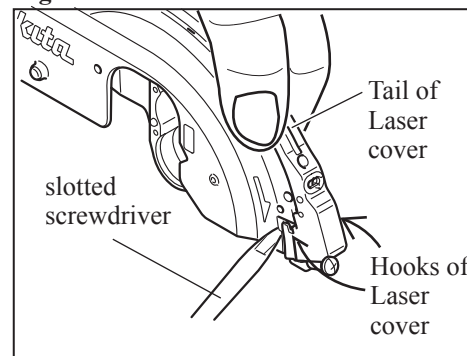
**Note:** Makita-operated or authorized repair shops do the maintenance of Laser mechanism.

- (1) As shown in **Fig. 18**, remove 4x18 Tapping screw and Lead cover holder.  
Then disconnect Connectors of Laser circuit from that of Power supply cord, and remove Lead cover.
- (2) Remove Protector, M5x24 Thumb screw and Flat washer 5. (**Fig. 68**)
- (3) Remove one of two CT4x16 Tapping screw on Laser cover. While expanding Laser cover using Slotted screwdriver to remove two hooks of Laser cover from Blade case, pick up the tail of Laser cover. (**Fig. 69**)
- (4) Remove M5 Shoulder screw using thin slotted screwdriver. Laser mechanism can be pulled up. (**Fig. 70**)
- (5) Remove Compression spring 6 from Laser mechanism. (**Fig. 71**)
- (6) Remove M3x6 Pan head screw A and separate Torsion spring 9 (A). Remove M3x6 Pan head screw B and separate Torsion spring B. (**Fig. 72**)

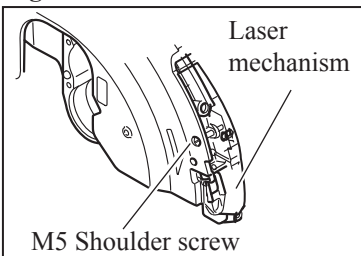
**Fig. 68**



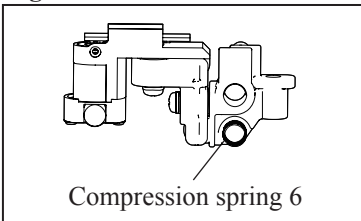
**Fig. 69**



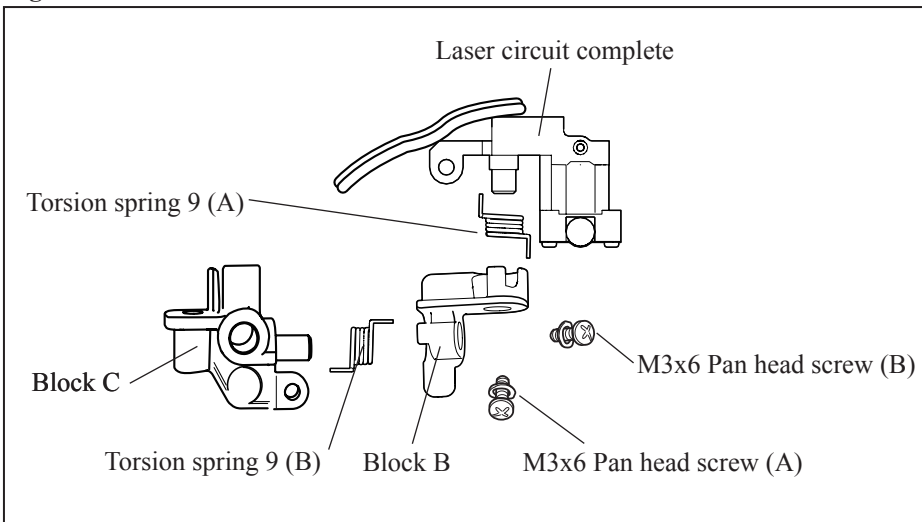
**Fig. 70**



**Fig. 71**



**Fig. 72**



## ► Repair

### [3] DISASSEMBLY/ASSEMBLY

#### [3]-11. Laser Mechanism (for LS1216L only: cont.)

##### ASSEMBLING

Take the disassembling step in reverse.

**Note:** 1) Hook one end of Torsion springs 9(A) to the groove of Laser circuit complete, and hook the other end to the groove of Block B. Meanwhile, hook one end of Torsion springs 9(B) to the groove of Block C, and hook the other end to the groove of Block B as drawn in **Fig. 73**. Be careful each end of the Torsion springs. After tightening M3x6 Pan head screws (A) and (B), check if both Blocks B and C can be smoothly pivoted due to the reaction force of Torsion springs 9(A) and 9(B).

2) Align the top of M4x6 Hex socket set screw with the surface of Laser circuit complete. Align the top of the other M4x6 Hex socket set screw with the surface of Block C. (**Fig. 73**)

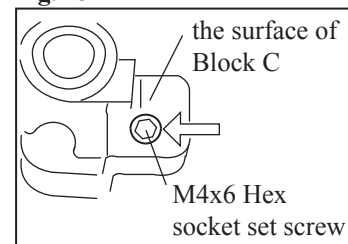
This way makes the fine adjustment of Laser easy.

3) Do not touch the lens of Laser circuit complete, or Laser may be unclear because of dust, dirt and fingerprint.

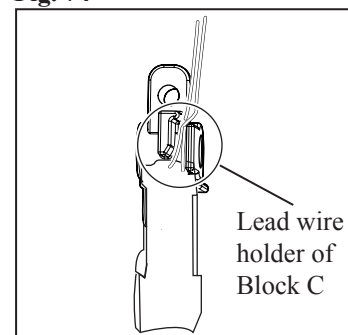
Dust, dirt and fingerprint have to be wiped off using a cotton swab.

4) When assembling Laser mechanism to Blade case complete, put Lead wires into Lead wire holder of Block C. (**Fig. 74**)

**Fig. 73**



**Fig. 74**



### [4] ADJUSTMENT

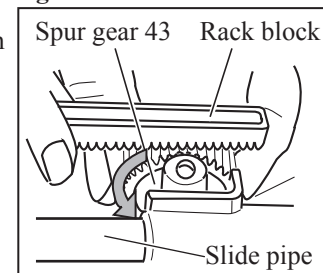
#### [4]-1. Lower-slide lock mechanism

(1) Lift up Rack block to disengage with Spur gear 43 and turn Spur gear 43 in the direction designated with gray arrow. (**Fig. 75**) Spur gear 43 can be secured to Slide pipe.

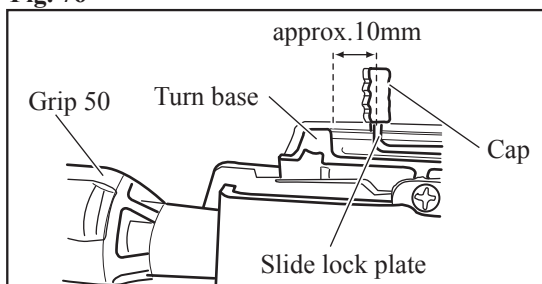
**Note:** Tighten Spur gear 43 to the equivalent torque as M6x18 Thumb screw to Lower fence R.

(2) On condition that the clearance between Turn base and Slide lock plate is approximate 10mm as drawn in **Fig. 76**, secure Leaf spring on Turn base by tightening Bind CT4x12 Tapping screw. (**Fig. 77**)

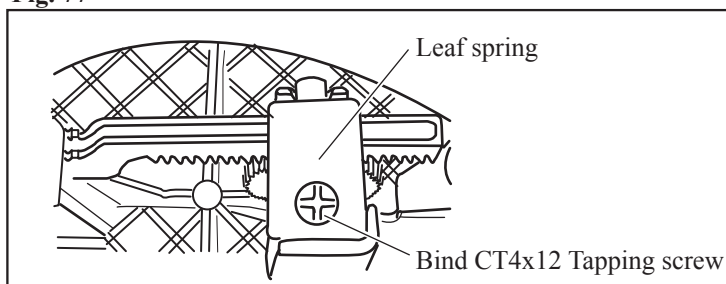
**Fig. 75**



**Fig. 76**



**Fig. 77**



#### [4]-2. Lower fence and Upper fence

(1) Put Lower fence R on Guide fence.

Install Upper fence R complete to Lower fence R and then fasten them by turning Lever 45. (**Fig. 78**)

**Note:** Check the following points at this time.

1) Upper fence R complete and Lower fence R can be moved smoothly when M5x6 Hex. socket set screw is loosened.

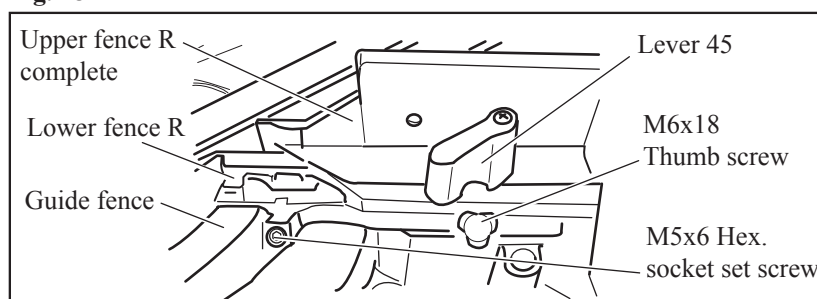
2) Upper fence R complete and Lower fence R can not be moved when M5x6 Hex. socket set screw is tightened.

(2) After check shown above, secure Lower fence R to Guide fence by tightening M6x18 Thumb screw.

**Note:** Move the outside end of Lower fence to the farthest possible position from Base at this time, and then fasten Lower fence R to Guide fence.

3) In the same way, set Lower fence L and Upper fence L complete in place.

**Fig. 78**



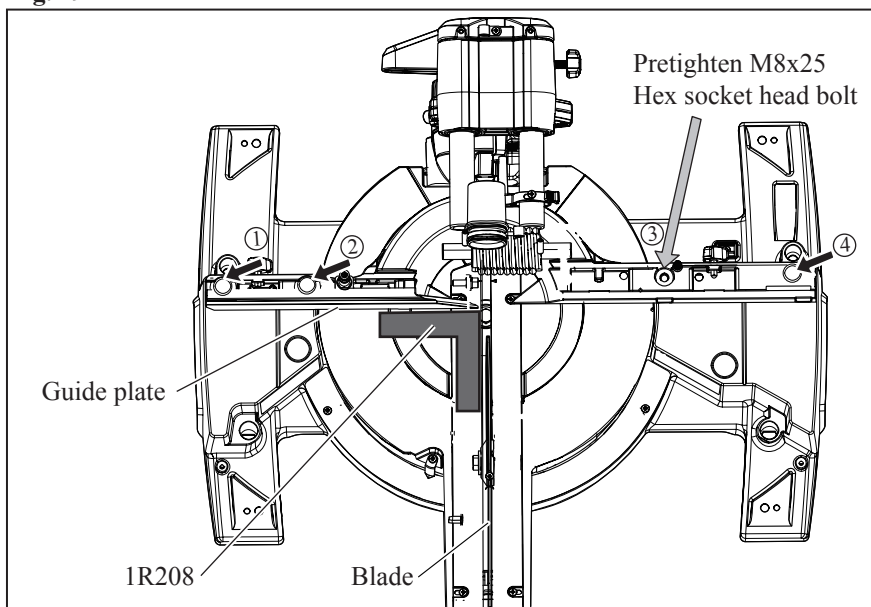
## ► Repair

### [4] ADJUSTMENT

#### [4]-3. Guide fence

- 1) Pretighten M8x25 Hex socket head bolt (with flat washer and spring washer) at the threaded hole designated with gray arrow. The round shape around the thread hole is smaller than the others (designated with black arrow) for M8x25 Hex socket head bolts.
- 2) Do fine adjustment of the right angle between Blade and Guide fence using 1R208.
- 3) Tighten M8x25 Hex socket head bolt (4pcs.) in order ①, ②, ③, and ④ without moving any parts. (**Fig. 79**)

**Fig. 79**



#### [4]-4. Blade

- Use 1R208 and M8x20 Hex socket head bolt on Arm holder complete to adjust 90 degree angle between Blade and Turn base. (**Fig. 80**)
- Use 1R207 and M8x20 Hex socket head bolts on the right side and the left side of Arm complete to adjust 45 degree angle between Blade and Turn base. (**Fig. 81**)

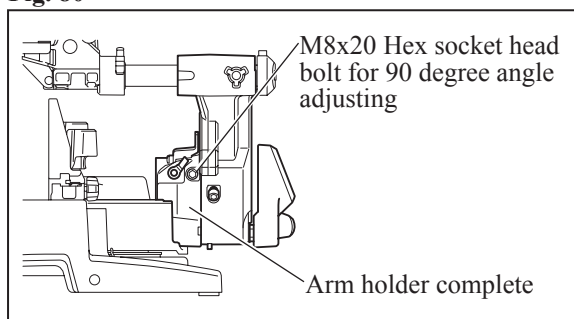
**Note:** When tilting the carriage to the right, tilt the carriage to the left slightly after loosening the lever and press Release button. Tilting the carriage to the left can be done without pushing Release button.

To adjust Maximum cutting depth;

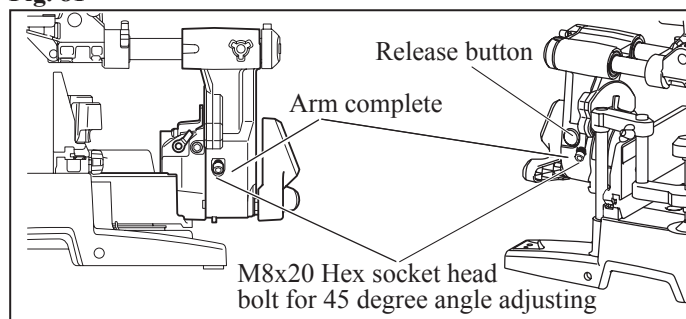
- (1) Turn Stopper lever and then pull and lower the carriage to Grip 50 side as drawn in **Fig. 82**.
- (2) Turn M8x20 Hex socket head bolt with the hex end of 782232-8 until Blade comes to the following position:
  - The periphery of Blade reaches slightly below the top surface of Turn base.
  - The closest Blade tip to Kerf board is in alignment with the triangle mark. (**Fig. 83**)

**Note:** Make sure that Blade does not touch Kerf boards and Turn base.

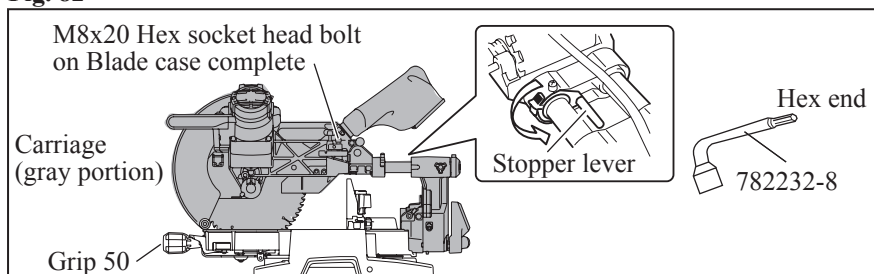
**Fig. 80**



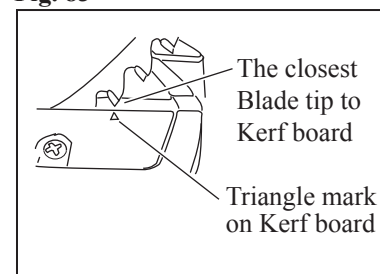
**Fig. 81**



**Fig. 82**



**Fig. 83**



## ► Repair

### [4] ADJUSTMENT

#### [4]-5. Laser (for LS1216L only)

- (1) Remove M10x20 Hex flange head bolt, Outer flange, Inner flange and Blade.  
Then separate Safety cover section from Blade case complete. (Fig. 84)
- (2) Remove Protector. (Fig. 85)
- (3) Place Flat washer 16 on Spindle (Fig. 86) and fasten 1R315 and Flat washer 16 by gently tightening M10x20 Hex flange head bolt as illustrated in Fig. 87.
- (4) Plug the tool to turn on the laser beam.  
**WARNING:** Do not touch Operation switch. (Fig. 88)
- (5) Press the upper position (I) of Switch for Laser. (Fig. 88)
- (6) Slide the position of M5x24 Thumb screw to the center of Laser cover so that a laser beam can be moved as widely as possible to right or left. (Fig. 89)
- (7) Move 1R315 to low side and align the laser beam with 1R315 by adjusting M4x6 Hex socket set screw A as drawn in Fig. 90.
- (8) Move 1R315 to high side and align the laser beam with 1R315 by adjusting M4x6 Hex socket set screw B as drawn in Fig. 91.

Fig. 84

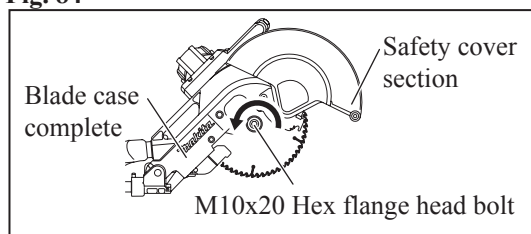


Fig. 85

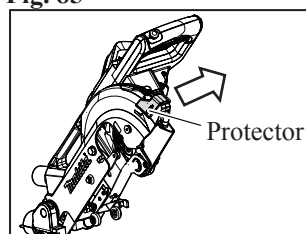


Fig. 86

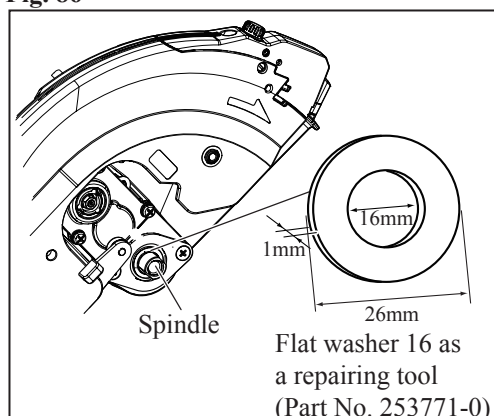


Fig. 87

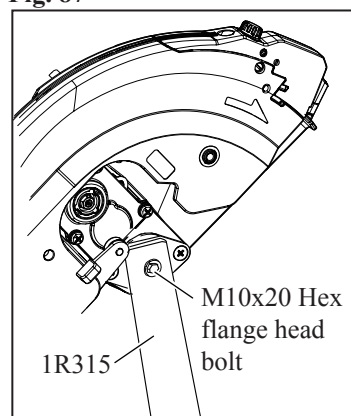


Fig. 88

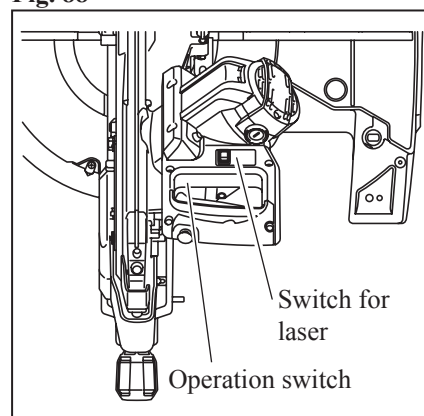


Fig. 89

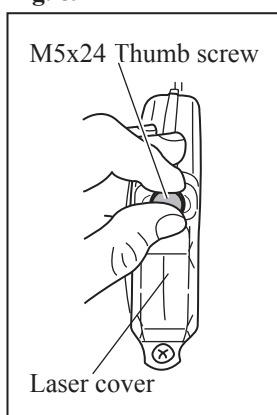


Fig. 90

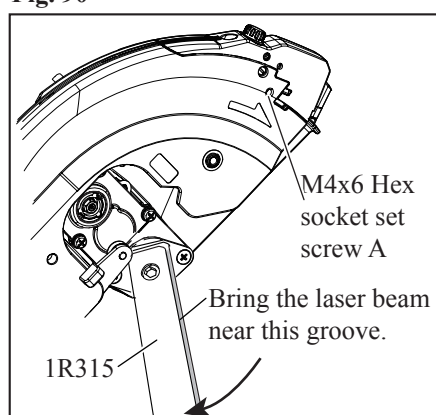
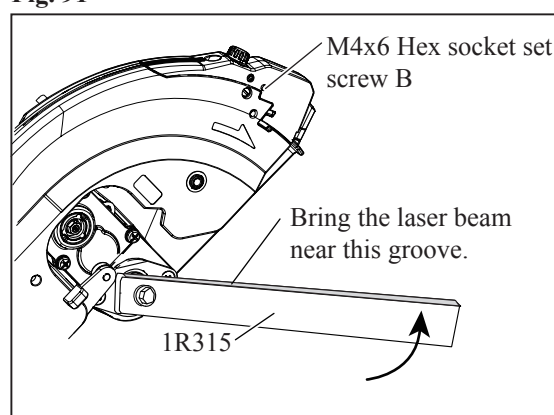


Fig. 91



- (9) Slide the position of M5x24 Thumb screw either right or left to align the laser beam and the groove of 1R315.  
And tighten M5x24 Thumb screw.
- (10) Move 1R315 to low side and align the laser beam and the groove of 1R315 by adjusting M4x6 Hex socket set screw A (Fig. 90)
- (11) Move 1R315 to high side and align the laser beam and the groove of 1R315 by adjusting M4x6 Hex socket set screw B (Fig. 91)
- (12) Do fine adjustment by repeating the process (9), (10) and (11).

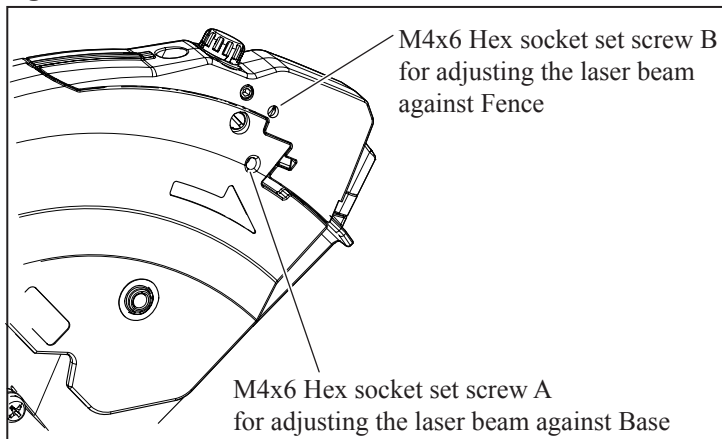
## ► Repair

### [4] ADJUSTMENT

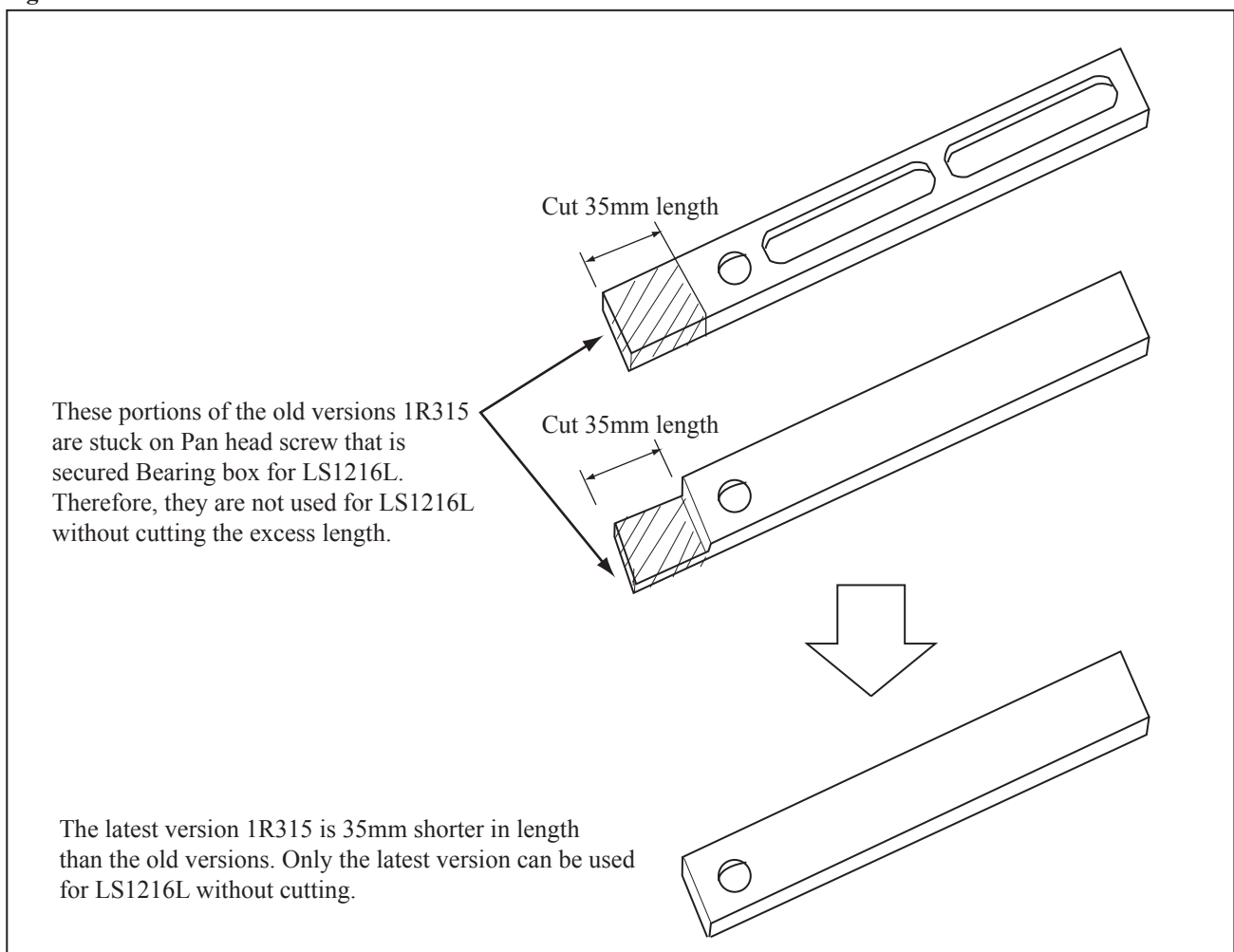
#### [4]-5. Laser (for LS1216L only: Cont.)

- Note:** 1) In the process (10) and (11), backlash of M4x6 Hex socket set screw A or B may be happened. Therefore, turn each M4x6 Hex socket set screw clockwise carefully to prevent backlash.
- 2) Be sure to distinguish the role of M4x6 Hex socket set screw A and M4x6 Hex socket set screw B. Refer to **Fig. 92**.
- 3) Repairing tool No. 1R315 has three different versions due to the production period. The latest version can be used. When using the old versions to adjust LS1216L, be sure to cut the excess length as illustrated in **Fig. 92**.

**Fig. 92**



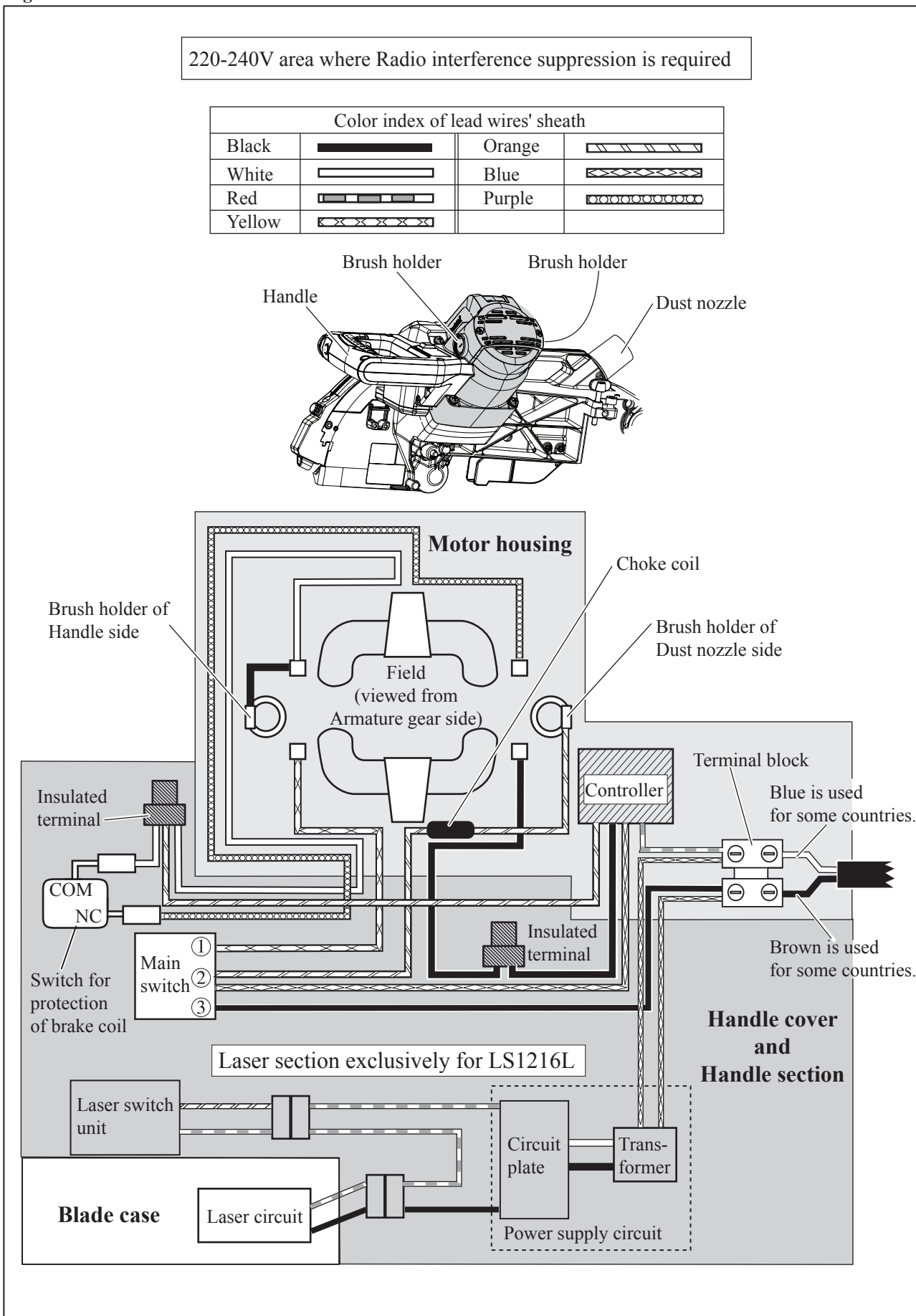
**Fig. 93**





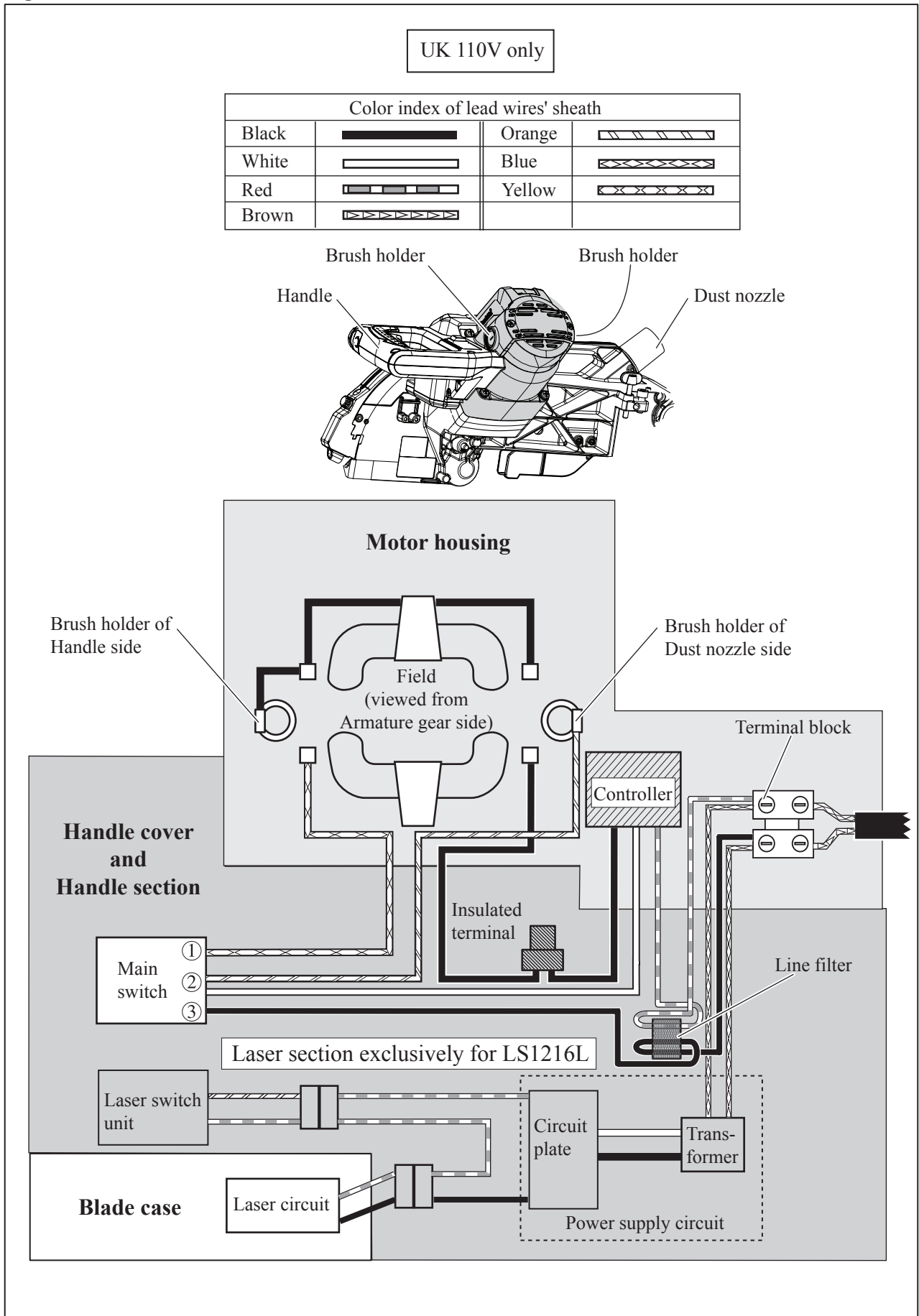
► **Circuit diagram**

**Fig. D-1**



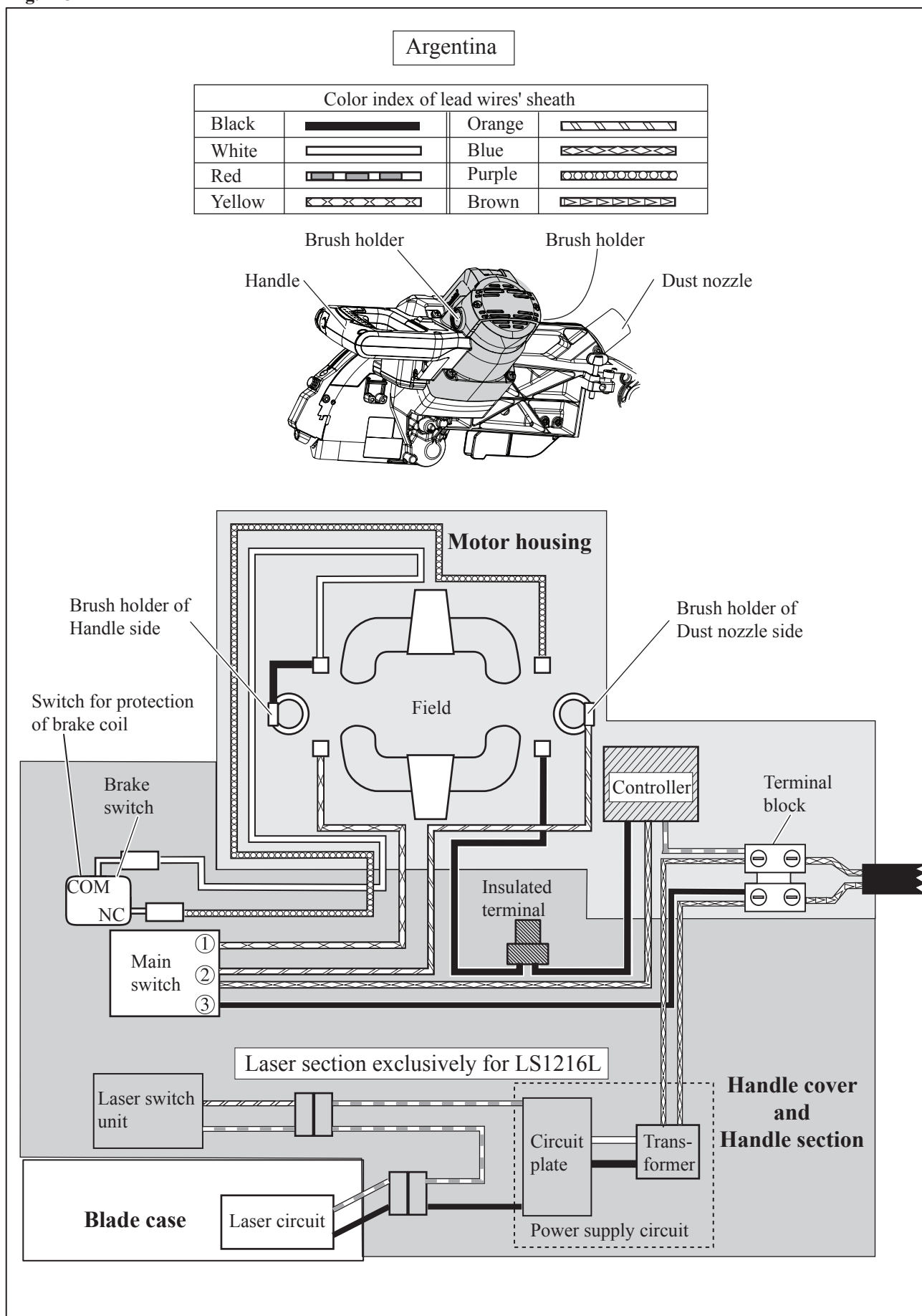
► **Circuit diagram**

Fig. D-2



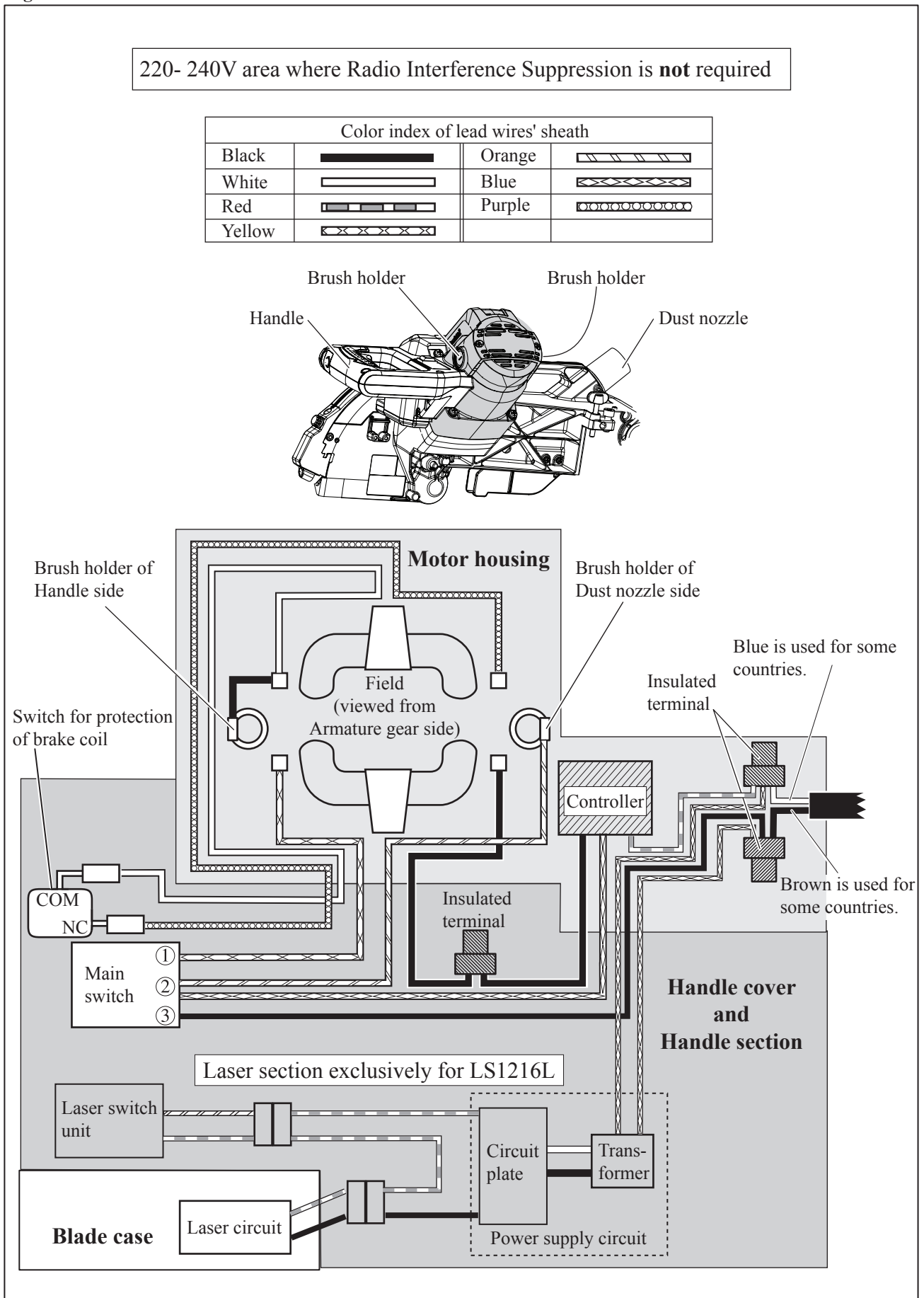
► **Circuit diagram**

**Fig. D-3**



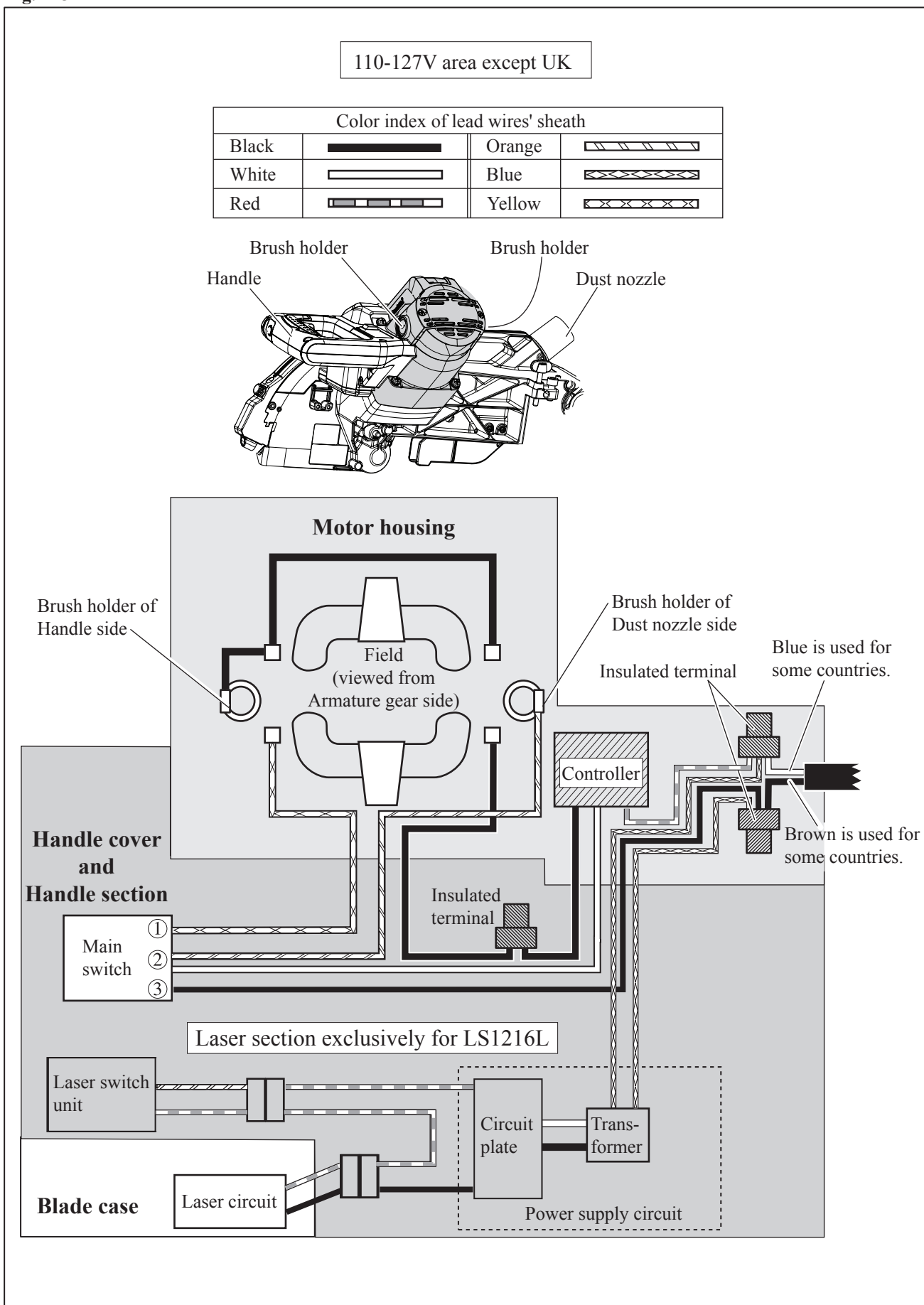
► **Circuit diagram**

Fig. D-4



► **Circuit diagram**

Fig. D-5



► **Wiring diagram**

Wiring around Case of LS1216L

Fig. D-6

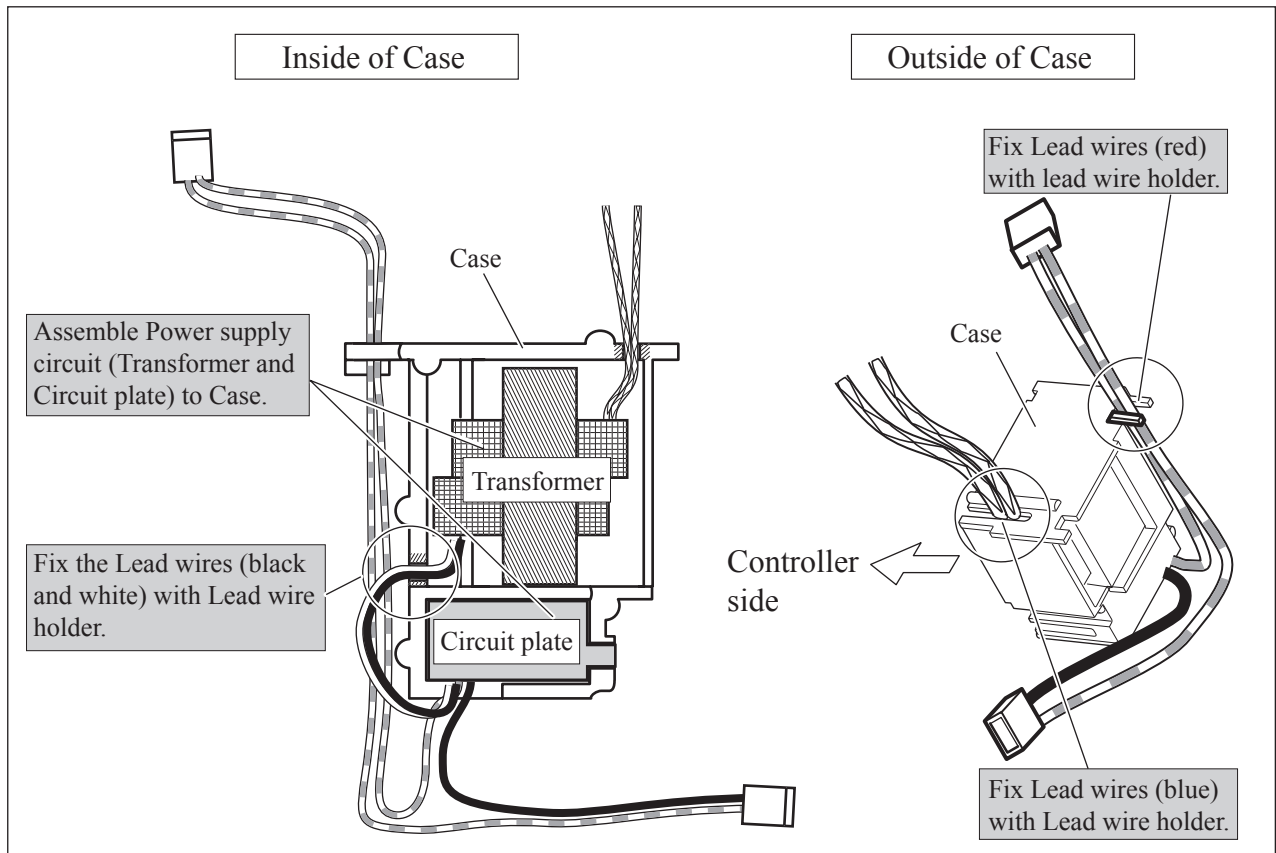
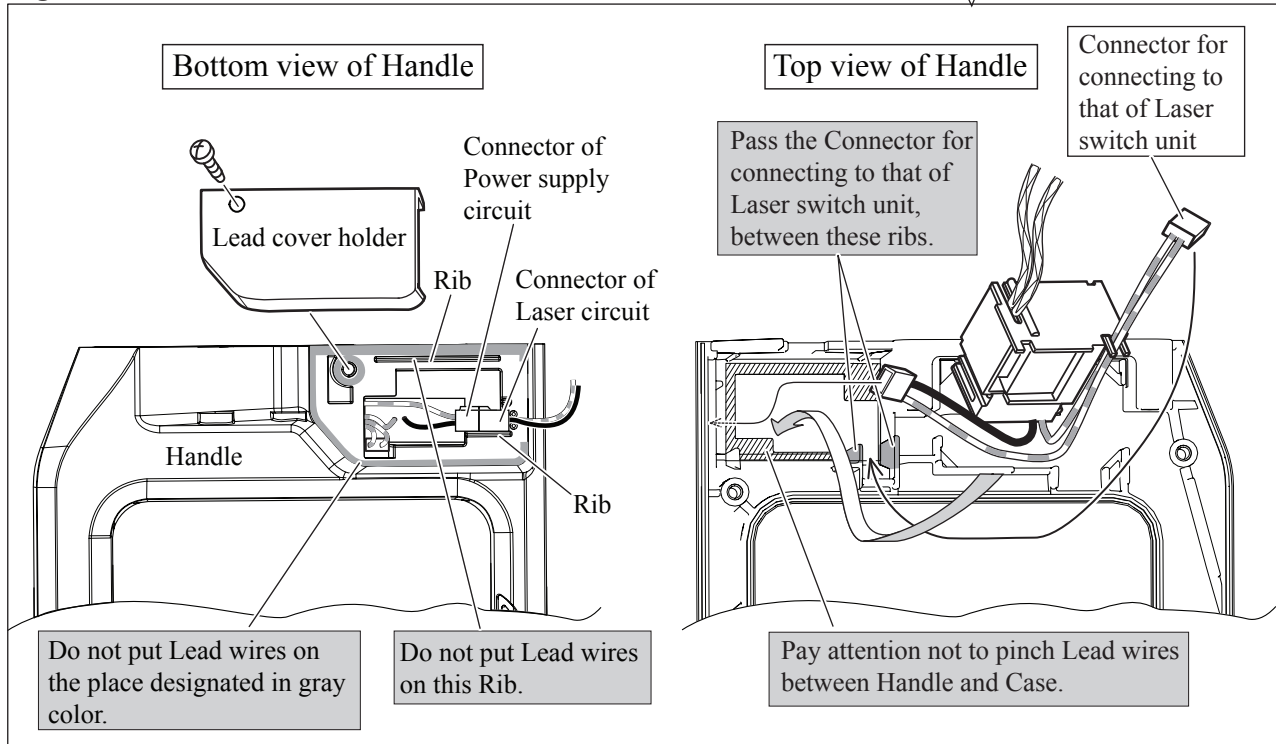


Fig. D-7



► **Wiring diagram**

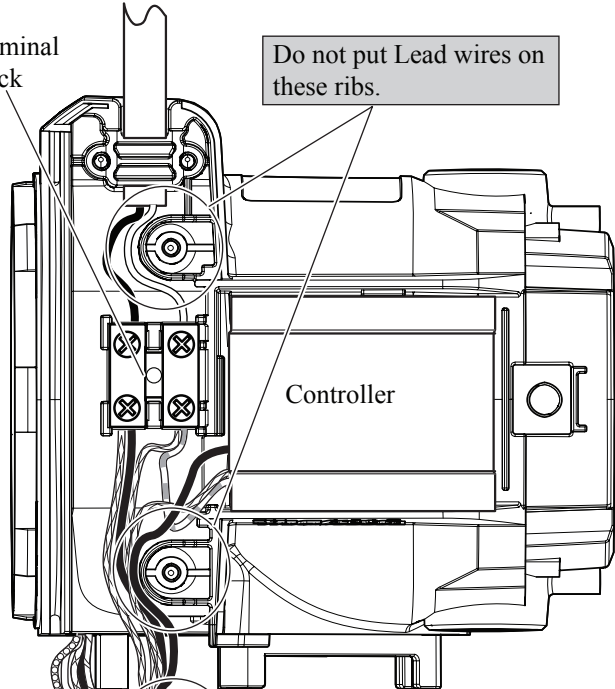
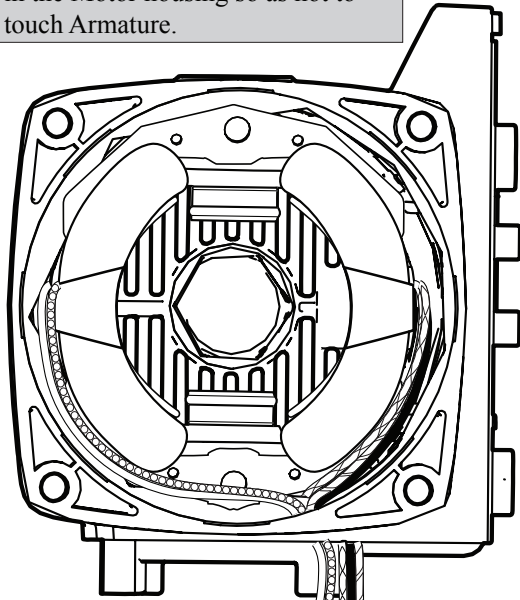
Fig. D-8

Wiring in Motor housing and Handle for Argentina and 220 - 240V area where Radio interference suppression is required.

Field lead wires have to be tightened in the Motor housing so as not to touch Armature.

Terminal block

Do not put Lead wires on these ribs.



Controller

Field lead wire (white)

Field lead wire (purple)

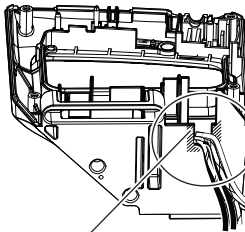
Field lead wires

\* (orange)

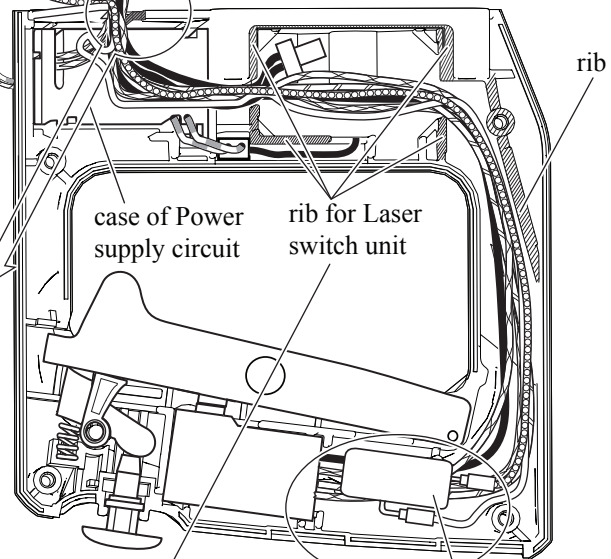
\* (black)

\* (yellow)

Do not route Field lead wires (white and purple) between Armature and Baffle plate.



Pass the Lead wires from Motor housing through this notch of Handle.



case of Power supply circuit

rib for Laser switch unit

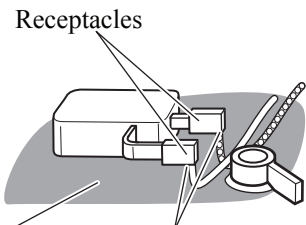
rib

Pass Lead wires through ribs as illustrated. Do not put Lead wires on ribs.

Switch for protection of brake coil

Connection of Receptacles

The Receptacles have to be connected so that their wire connecting portions face the bottom of Handle.

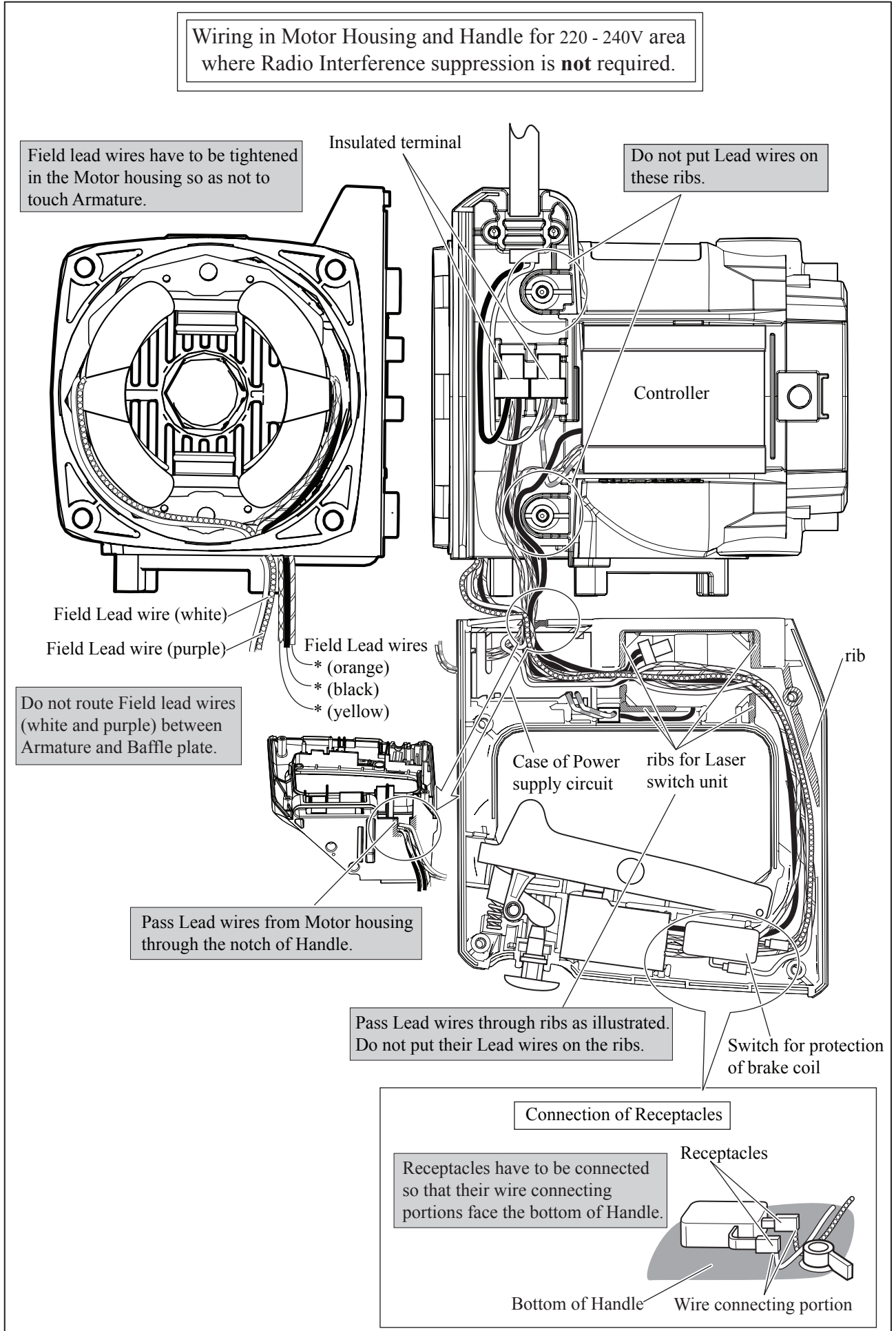


Bottom of Handle

Wire connecting portion

► **Wiring diagram**

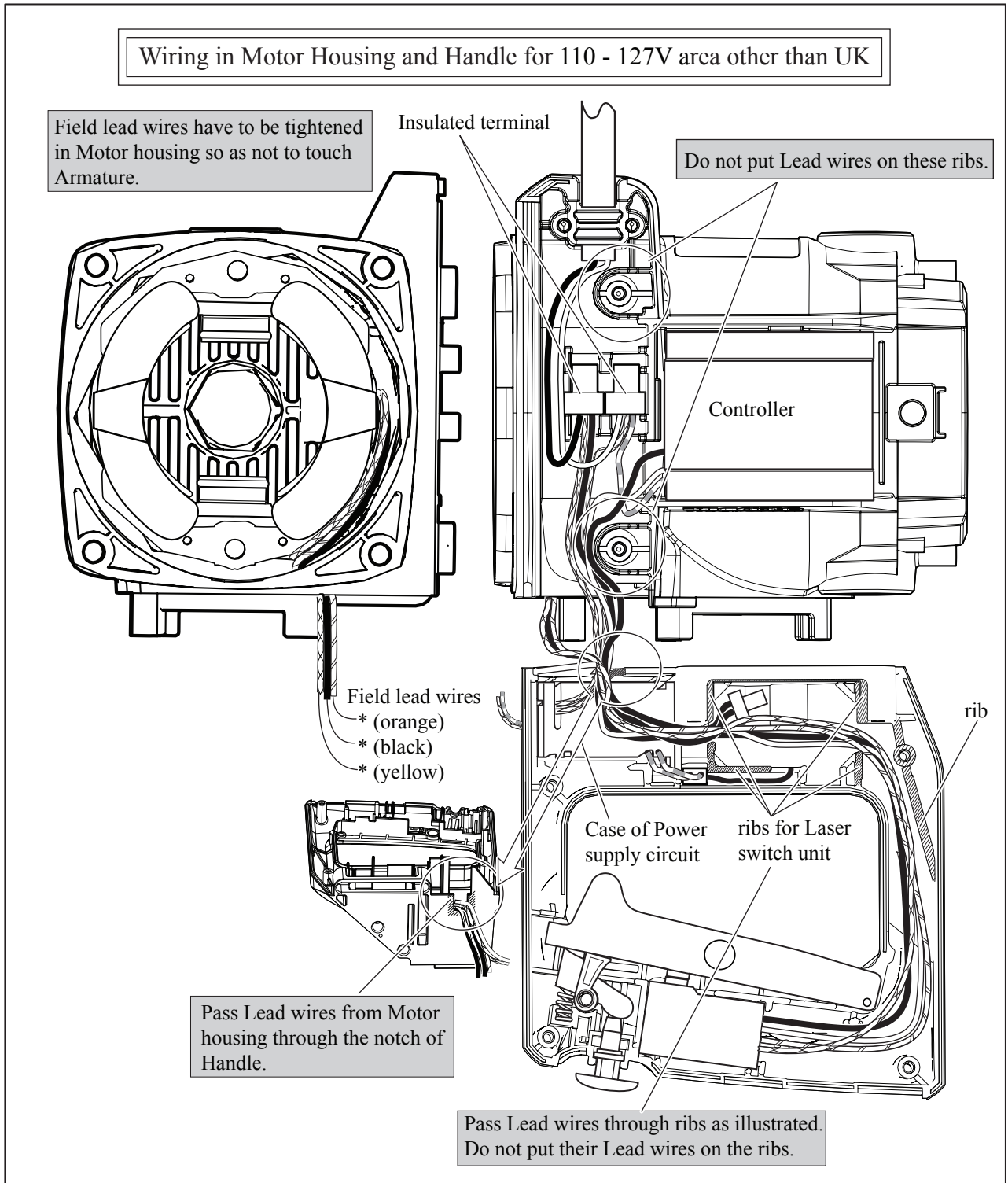
Fig. D-9





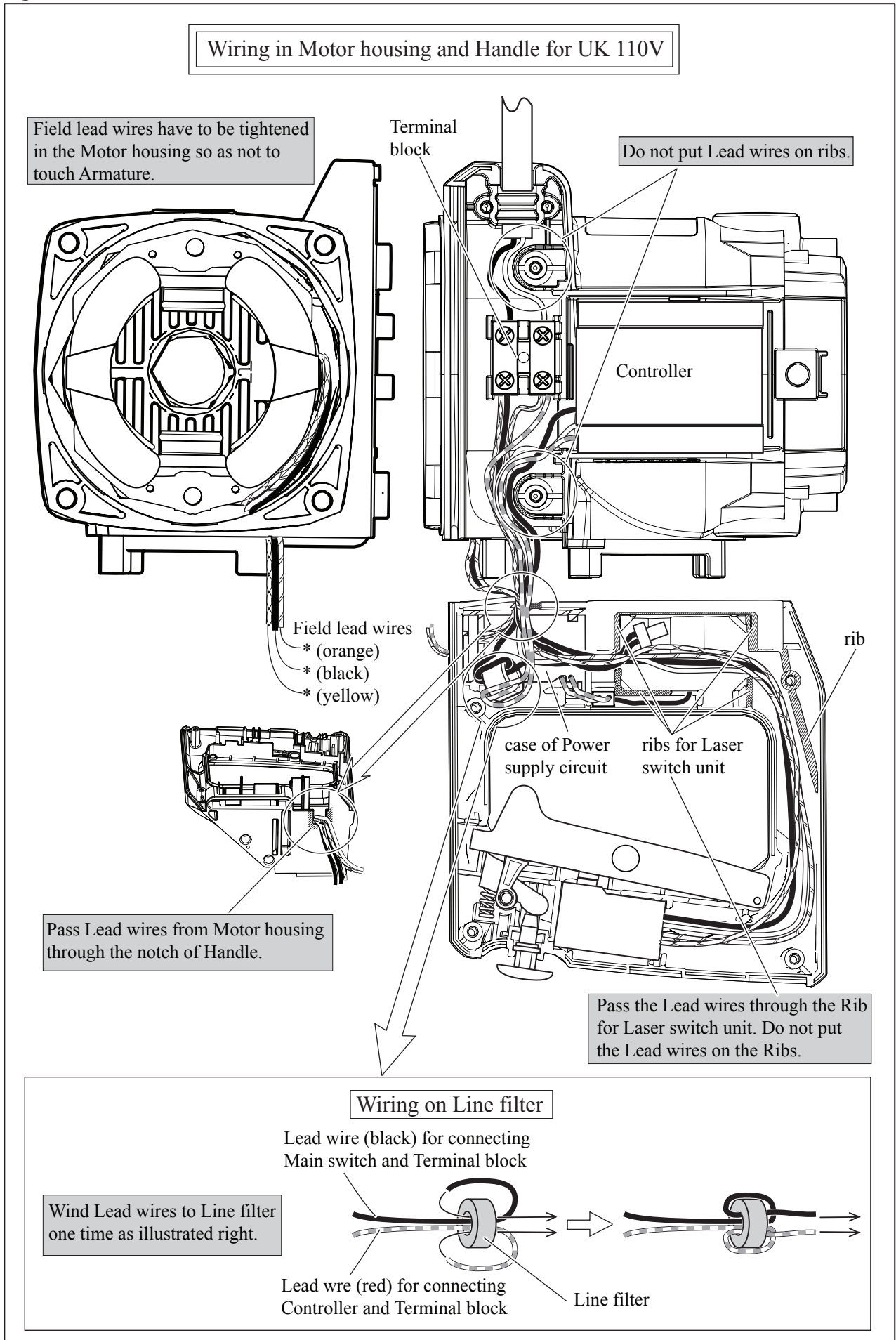
► **Wiring diagram**

Fig. D-10



# ▶ Wiring diagram

Fig. D-11



► **Wiring diagram**

Fig. D-12

