

T ECHNICAL INFORMATION



PRODUCT

P 1 / 29

Models No. ▶ LS1214, LS1214F

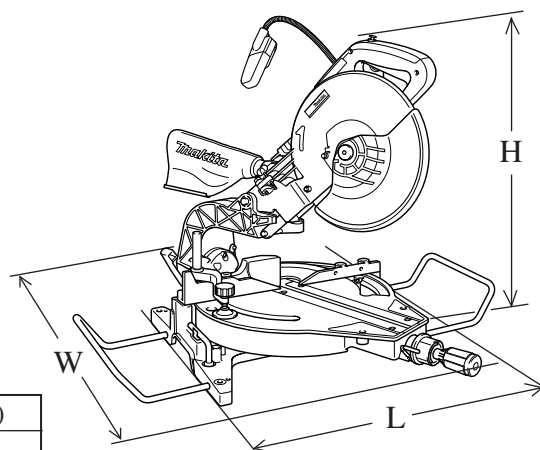
Description ▶ Slide Compound Saw 305mm (12")

CONCEPT AND MAIN APPLICATIONS

Models LS1214 and LS1214F are new sister tools to LS1212, providing the following main advantages;

- *Smooth miter angle adjustment with the same large turn base as used for LS1013.
- *Big cutting capacity with 305mm saw blade

LS1214F is equipped with a fluorescent light for clear view of ink line.



Dimensions : mm (")	
Length (L)	520 (20-1/2)
Width (W)	723 (28-1/2)
Height (H)	696 (27-1/2)

► Specification

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output(W)
			Input	Output	
110	15	50 / 60	1,650	800	2,300
120	15	50 / 60	—	800	2,300
220	7.9	50 / 60	1,650	1,000	2,300
230	7.5	50 / 60	1,650	1,000	2,300
240	7.2	50 / 60	1,650	1,000	2,300

Model No.	LS1214	LS1214F
No load speed: min-1 = rpm.	3,200	
Saw blade	Diameter: mm (")	
	305 (12)	
Saw blade	Hole diameter: mm (")	
	25.4 (1)	30.0 (for European countries)
Protection against electric shock	Double insulation	
Electric brake	Yes	
Soft start	Yes	
Electronic Speed control	Yes	
Fluorescent light	No	Yes
Lock off switch	Yes	
Cord length: m (ft)	2.5 (8.2)	
Net weight: kg (lbs)	23.0 (50.7)	

Cutting capacity with 305mm (12") saw blade

Miter angle \ Bevel angle	45° Left		0°	45° Right
	0°	66mm x 305mm (2-5/8" x 12")		115mm x 308mm (4-1/2" x 12-1/8")
45° Left and Right	Left	66mm x 170mm (2-5/8" x 6-11/16")	115mm x 218mm (4-1/2" x 8-5/8")	45mm x 215mm (1-3/4" x 8-1/2")
	Right	66mm x 215mm (2-5/8" x 8-1/2")		
52° Right			115mm x 185mm (4-1/2" x 7-1/4")	

▶ Standard equipment

*Vertical vise	1 pc.	*Holder set	2 pcs.
*Sub fence R.....	1 pc.	*T.C.T. saw blade 305	1 pc.
*Dust bag	1 pc.	*Socket wrench 13	1 pc.
*Triangular rule	1 pc.	*Spare lock off button	2 pcs.

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

▶ Optional accessories

*Horizontal vise	*Kerf block	*Crown molding stopper set
*Various T.C.T. saw blades	*Elbow	*Portable stand

► **Repair**

CAUTION: First of all, detach the saw blade for your safe repair.

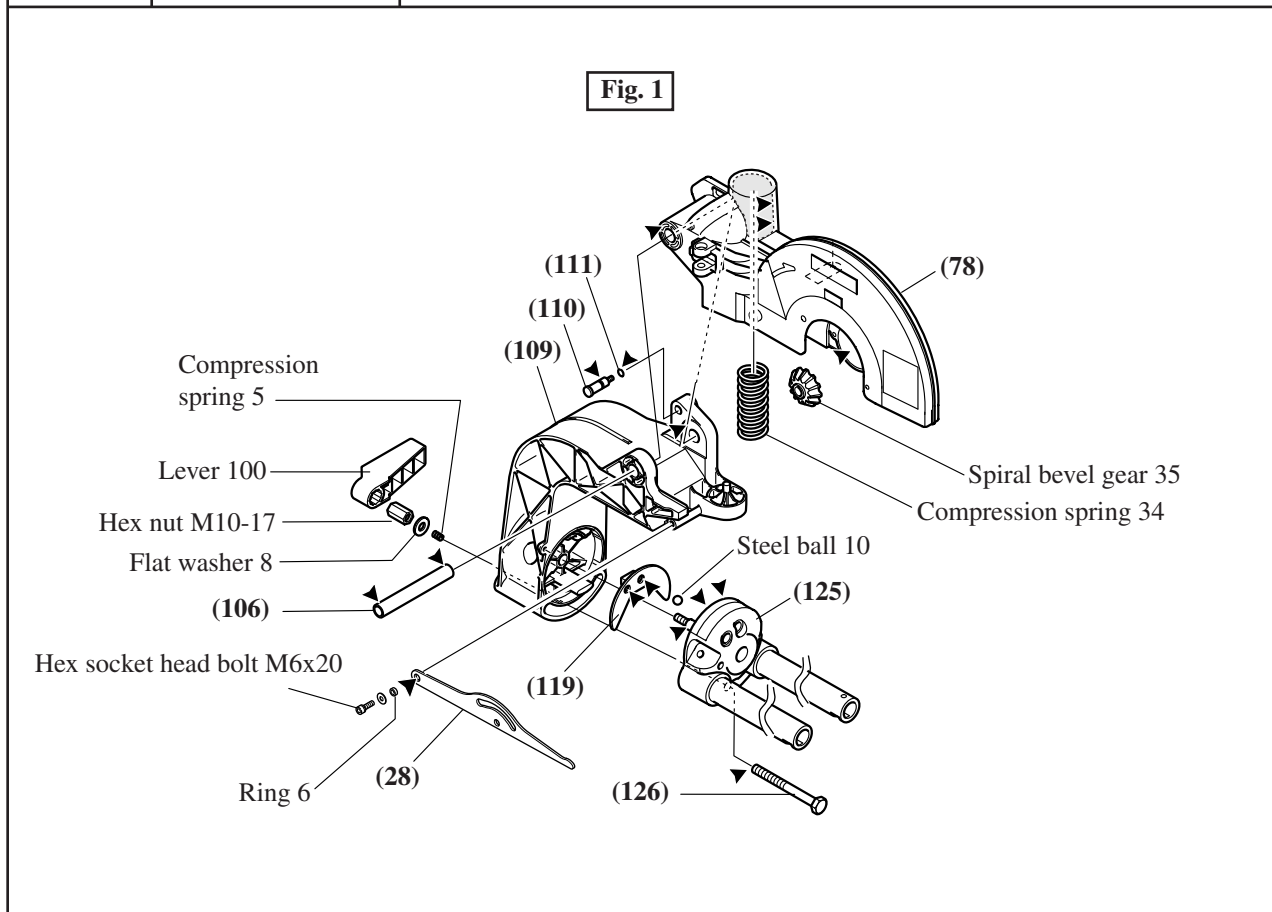
[1] LUBRICATION

Apply MAKITA grease SG. No.0 or N.No.2 to the following portions designated by black triangle to protect parts and product from unusual abrasion.

[1]- 1. Lubrication to Blade case, Arm and Arm holder complete

Item No.	Parts Name	Portion to be lubricated
(28)	Link plate	Hole for accepting ring 6
(78)	Blade case	Gear room where spiral bevel gear 35 rotates Apply approx. 20g grease.
		Pivot portion where (109) arm contacts
		Inside of hole for accepting compression spring 34
(106)	Pipe 16-113	Its both end where (78) blade case contacts.
(109)	Arm	Pivot portion where (78) blade case contacts
(110)	Stopper pin	Its surface for smooth sliding in the hole of (109) arm
(111)	O ring 7	Its whole portion
(119)	Guide plate	The side where steel ball 10 contacts.
(125)	Arm holder complete	Its edge around which (109) arm pivots.
		Shaft portion which is inserted into the accepting hole of (109) arm
(126)	Hex bolt M10-100	The end where hex nut M10-17 is mounted

Fig. 1

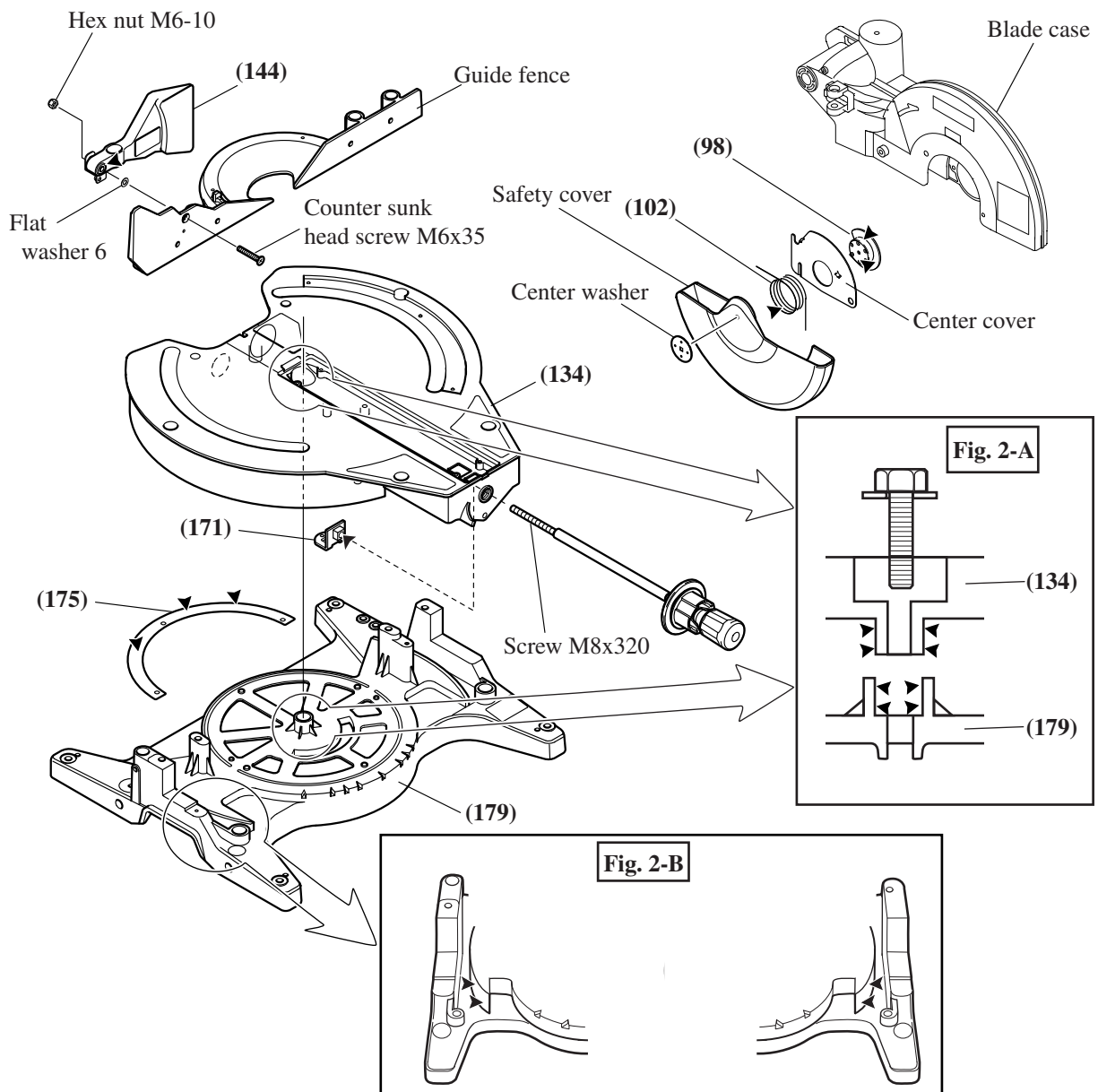


► Repair

[1]- 2. Lubrication to Base, Turn base and Safety cover

Item No.	Parts Name	Portion to be lubricated	
(98)	Center plate	Brim portion where center cover contacts	
		Cylindrical portion where (102) torsion spring 45 contacts	
(102)	Torsion spring 45	Its whole portion	
(134)	Turn base	Surface of the cylindrical portion which is inserted into the accepting hole of (179) base complete, See Fig. 2-A	
(144)	Sub fence	Its pivot portion which contacts guide fence	
(171)	Stopper holder	Its threaded portion which accepts screw M8x320	
(175)	Slide plate	Surface where (134) turn base contacts	
(179)	Base complete	Inside of accepting hole for (134) turn base, See Fig. 2-A	
		Left and right side of the projection for turn base moving, See Fig. 2B	

Fig. 2



► Repair

[2] DISASSEMBLING/ASSEMBLING

[2]- 1. Disassembling/Assembling Safety Lock Mechanism

Note: LS1214 and LS1214F for Europe, South Africa and China are equipped with the safety lock mechanism. When disassembling/assembling, follow the procedures described below and on next page.

DISASSEMBLING

- 1) Remove 2 pcs. of pan head screw M4x10, and then, remove lock plate and torsion spring 8 from rod 8. (**Fig. 3**)
- 2) Remove 2 pcs. of tapping screw CT4x16. (**Fig. 4**) Now rod holder can be removed from rod 8. (**Fig. 5**)
- 3) Remove lock lever with rod 8 as illustrated in **Fig. 6**.
(By passing the cap side of lock lever through the loop of handle, it is possible to remove lock lever with rod 8.)

Fig. 3

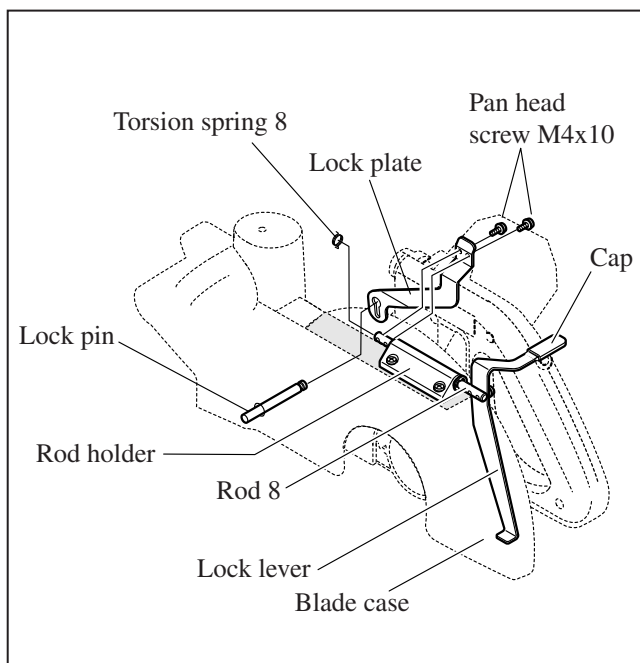


Fig. 4

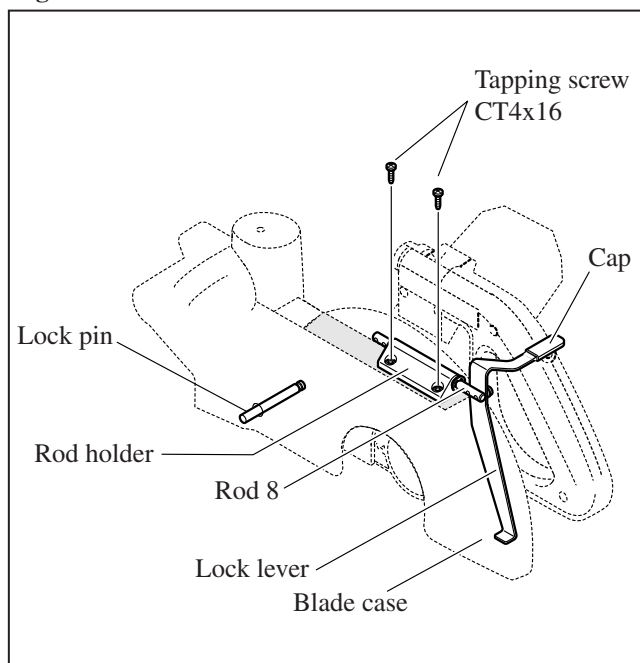


Fig. 5

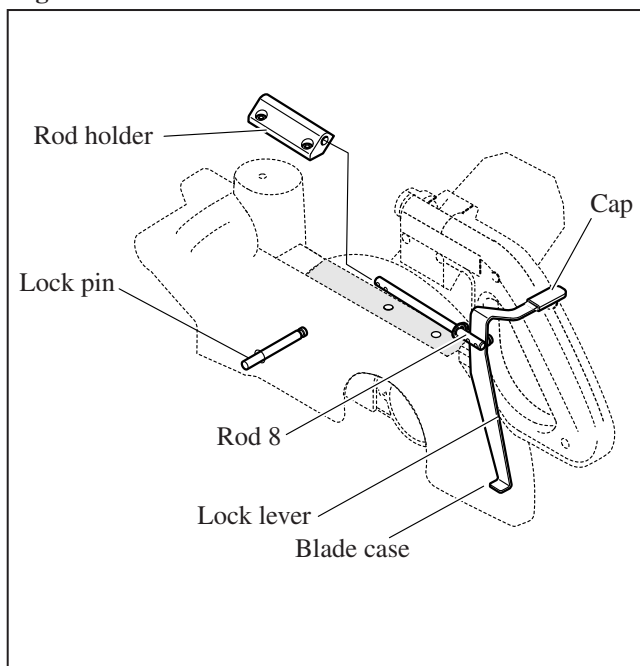
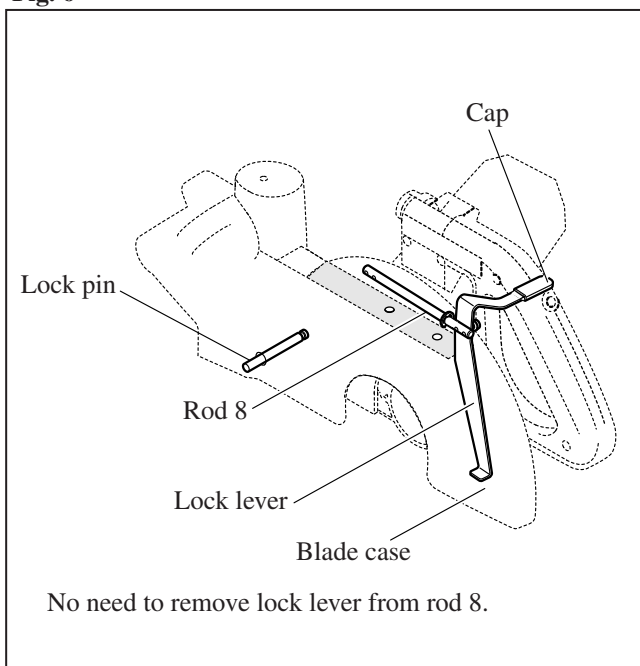


Fig. 6



► Repair

[2]- 1. Disassembling/Assembling Safety Lock Mechanism (cont.)

ASSEMBLING

- 1) Install lock lever on rod 8 as illustrated in **Fig. 7**.
- 2) Place the lock lever as follows (**Fig. 8**);
 - *Rod 8: between blade case and handle
 - *Cap of lock lever: in the loop of handle, near the switch trigger

Fig. 7

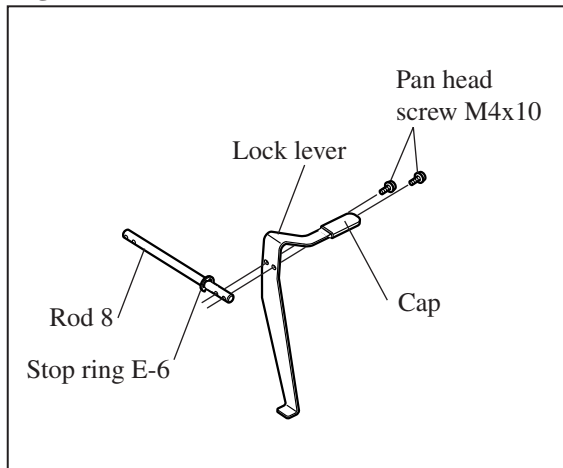
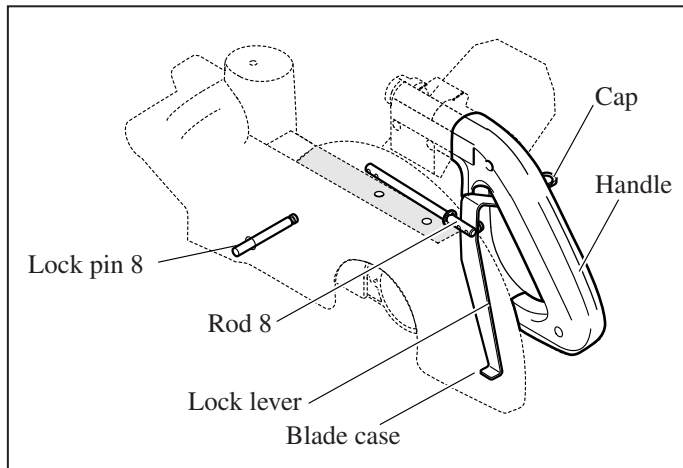
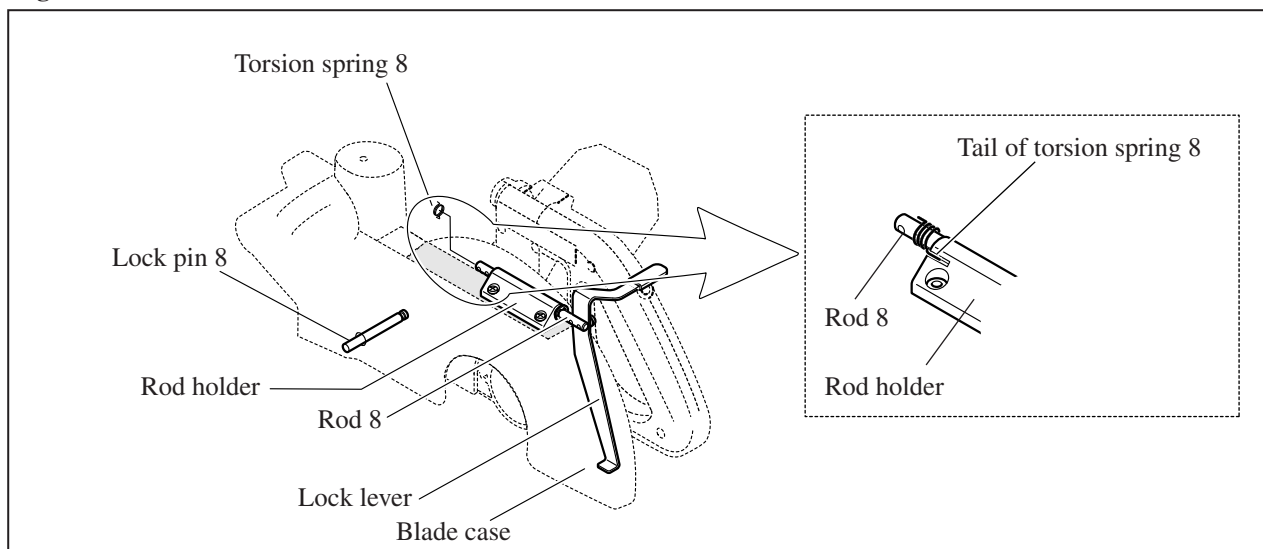


Fig. 8



- 3) Mount rod holder to rod 8 by first doing as illustrated in **Fig. 5** and then in **Fig. 4**.
- 4) Mount torsion spring 8 to rod 8 and hold the tail of the torsion spring on rod holder. (**Fig. 9**)

Fig. 9



► **Repair**

[2]- 1. Disassembling/Assembling Safety Lock Mechanism (cont.)

ASSEMBLING

5) Mount lock plate for linking the action of lock lever with the same of lock pin 8 which locks saw unit at the rest position, in the following order.

1. After passing lock pin 8 through the large hole of lock plate, lift up lock plate in order to link it with lock pin 8 at the elliptic hole of lock plate. (Fig. 4-4)
2. While keeping the linkage of lock plate with lock pin 8, secure lock plate to rod 8 with 2 pcs. of pan head screw M4x10. Do not forget to hold the another tail of torsion spring 8 with fin of lock plate, in this step. But be careful, not to pinch torsion spring 8 itself between rod 8 and lock plate. (Fig. 4-5)

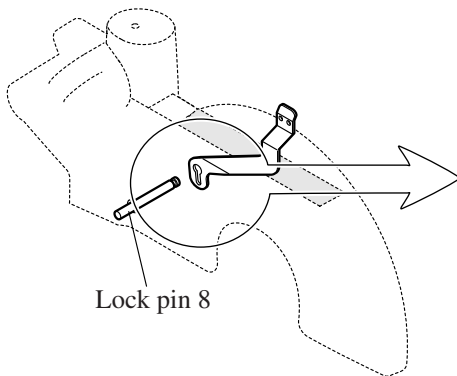


Fig. 4-4

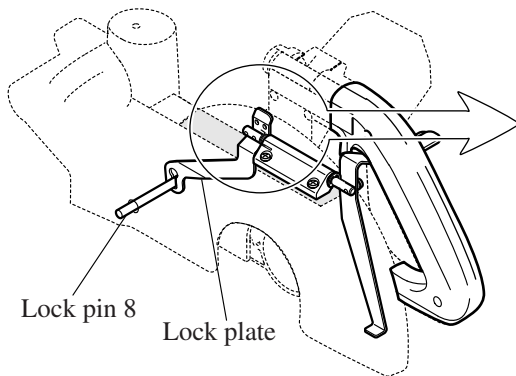
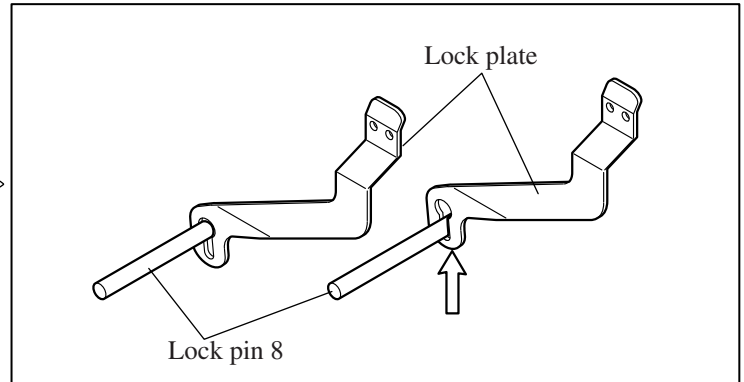
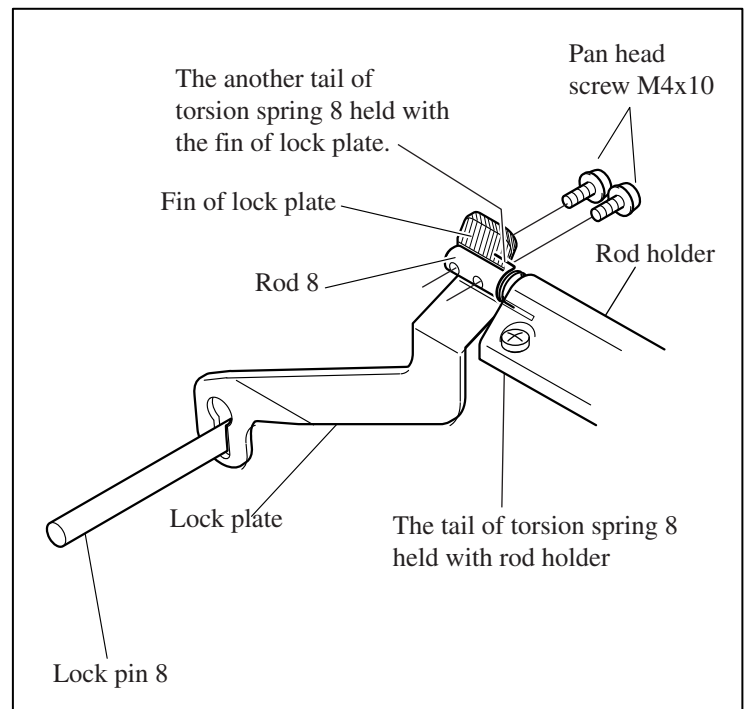


Fig. 4-5

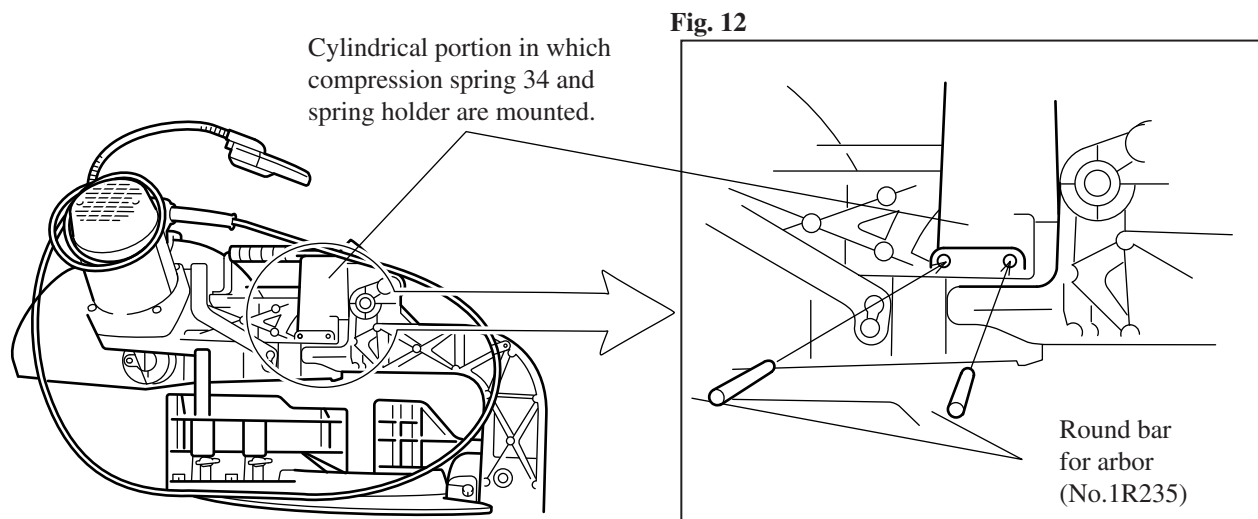


► Repair

[2]- 2. Removal/Installation of Blade Case and Compression Spring 34

REMOVAL

- 1) While keeping the saw unit at the lowest position, insert two Round bars for arbor (No.1R235) into the side holes of cylindrical portion of blade case. (**Fig. 12**) Now the Round bars stop the saw unit to return to the rest position by keeping the compression spring 34 in the pressed condition.

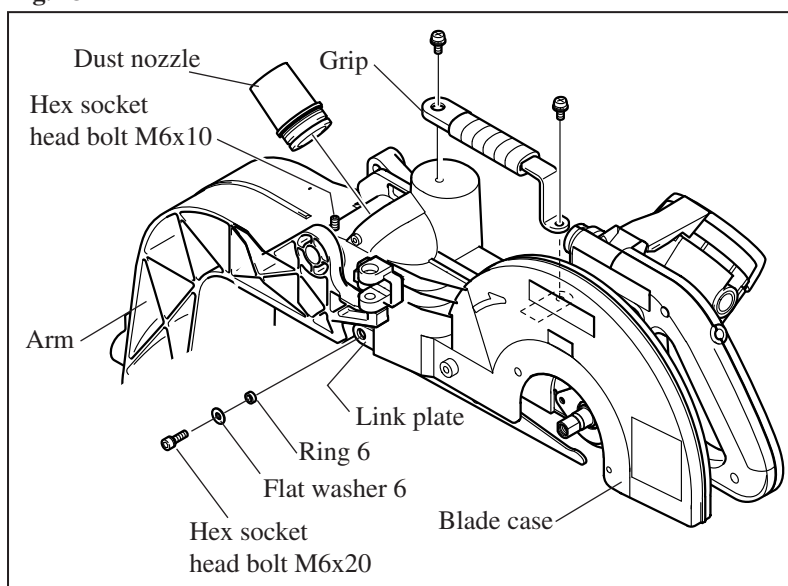


- 2) After removing grip, remove hex socket head bolt M6x20, flat washer 6 and ring 6 in order to disconnect the linkage of arm and blade case which are linked with link plate. And loosen hex socket head bolt M6x10, after removing dust nozzle. (**Fig. 13**)

Note:

No need to remove hex socket head bolt M6x10.

Fig. 13



- 3) Remove pipe 16-113 from arm. And separate saw unit (blade case and motor housing) from arm. (**Fig. 14**) When removing pipe 16-113, apply the following round bar to the pipe, and push out the pipe 16-113 by striking the applied round bar.

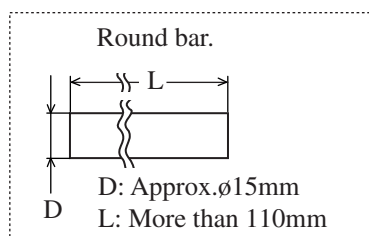
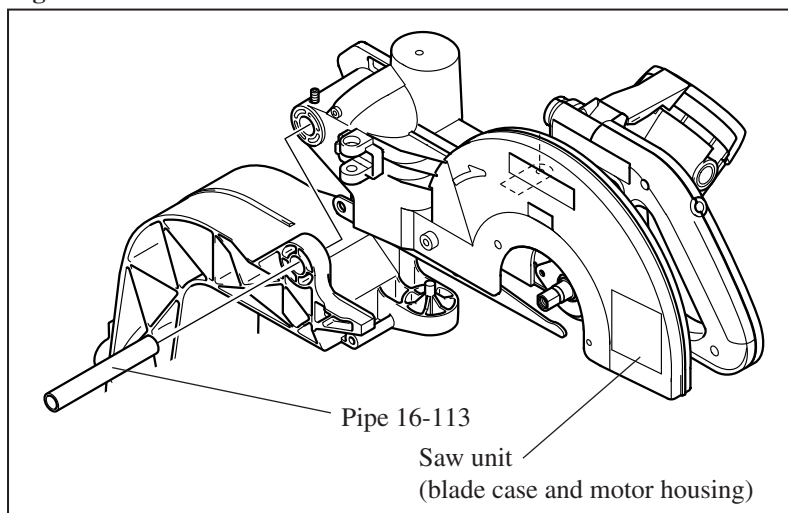


Fig. 14



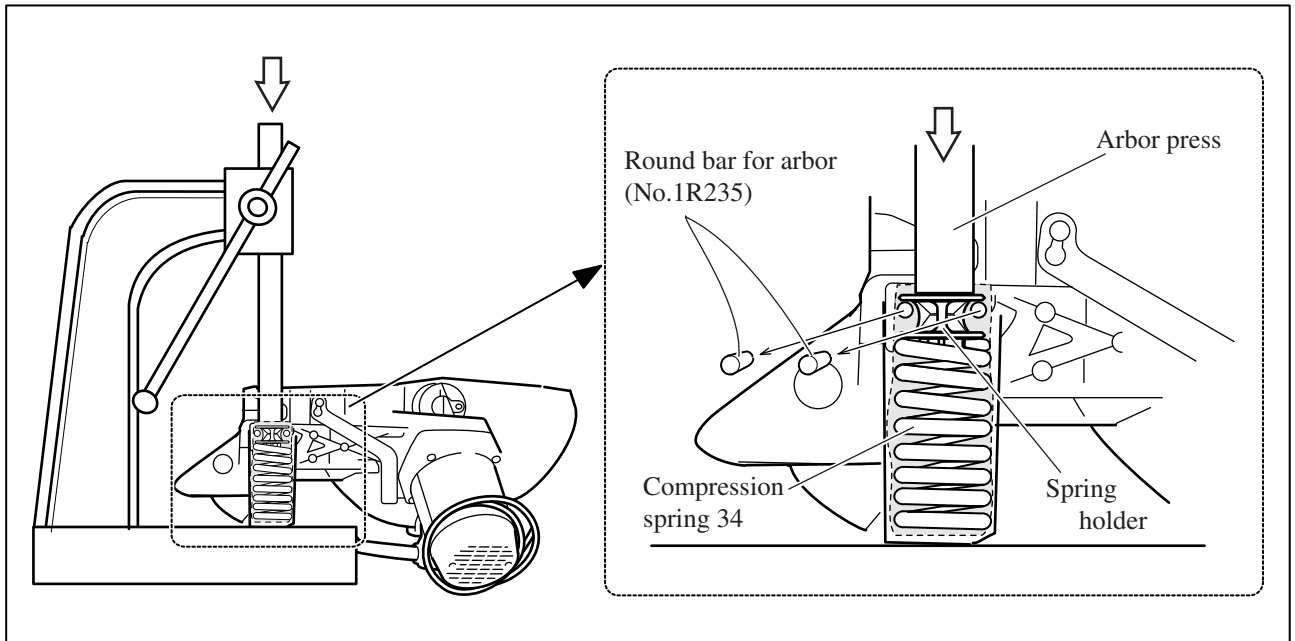
► Repair

[2]- 2. Removal/Installation of Blade Case and Compression Spring 34 (cont.)

REMOVAL

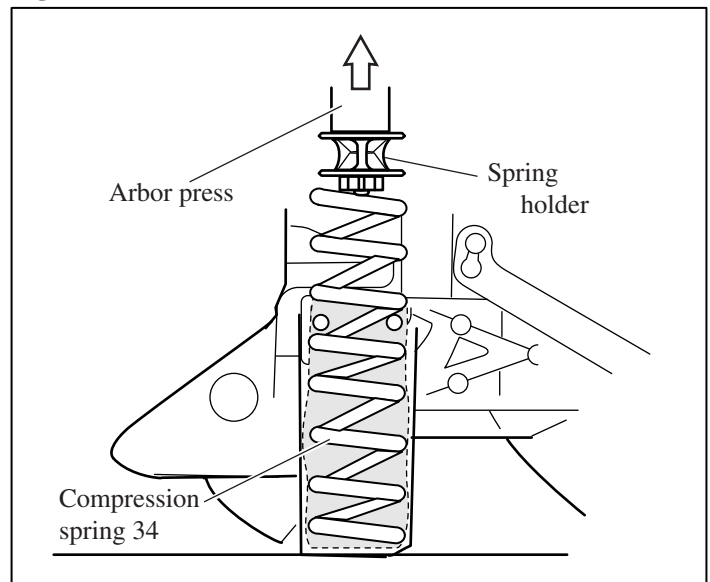
- 4) Set the removed saw unit (blade case and motor housing) on the arbor press as illustrated to left in **Fig. 15**.
And press spring holder with arbor press.
Pull off two Round bars while keeping spring holder pressed as illustrated to right in **Fig. 15**.

Fig. 15



- 5) Remove the pressure of arbor press gradually until compression spring 34 is stretched to its initial length.
Now spring holder and the compression spring can be removed from saw unit. (**Fig. 16**)

Fig. 16



INSTALLATION

Do the reverse of the removing procedures as follows;

- 1) Set the saw unit (blade case and motor housing) on the arbor press.
And press compression spring 34 and spring holder with arbor press. (**Fig. 15**)
- 2) Insert two Round bars (1R235) while pressing spring holder with arbor press. (**Fig. 15**)
- 3) Mount the saw unit to arm and pass pipe 16-113 through arm and blade case. (**Fig. 14**)
- 4) Secure the pipe 16-113 with hex socket head bolt M6x10. At this time, do not forget to install link plate on arm with hex socket head bolt M6x20. (**Fig. 13**)
- 5) While keeping the saw unit at the lowest position, pull off the inserted Round bars. (**Fig. 12**)

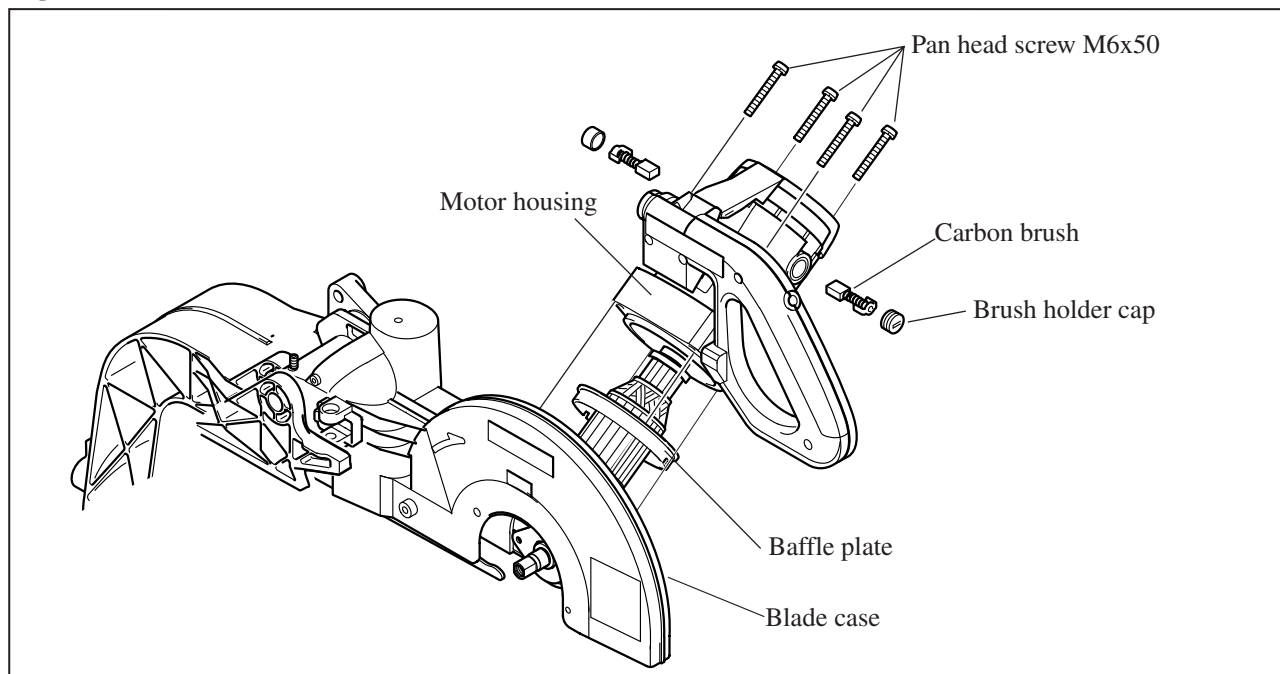
► Repair

[2]- 3. Disassembling/Assembling Gear Section

DISASSEMBLING

- 1) After removing brush holder cap and carbon brush, remove motor housing from blade case by removing four M6x50 pan head screws. And then remove baffle plate. (Fig. 17)

Fig. 17



- 2) Remove two M5x16 pan head screws. Then armature can be removed from blade case as illustrated in Fig. 18.
- 3) Remove two M5x16 pan head screws and bearing retainer 66. Now the gear section can be separated from blade case. (Fig. 19)

Fig. 18

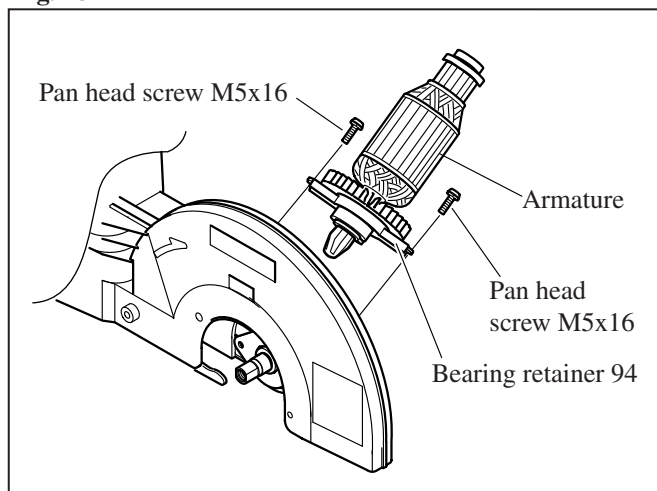
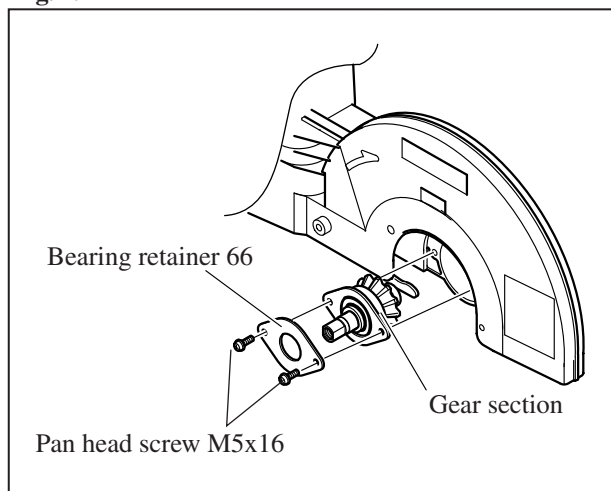
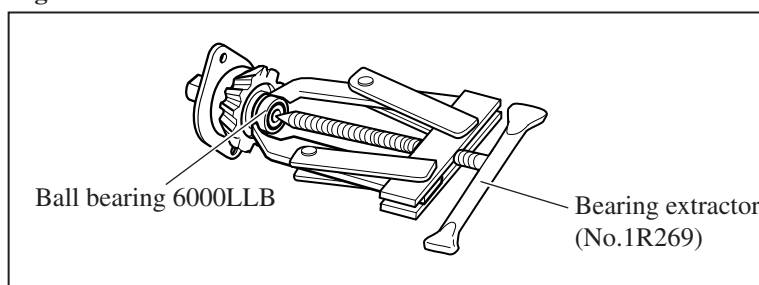


Fig. 19



- 4) Remove ball bearing 6000LLB using Bearing extractor (No.1R269). (Fig. 20)

Fig. 20



► Repair

[2]- 3. Disassembling/Assembling Gear Section (cont.)

DISASSEMBLING

- Remove retaining ring S-14 from spindle using Retaining Ring S and R Pliers (No.1R269).

Note: You may find some difficulty in removal of retaining ring S-14. This is because the spiral bevel gear is being pushed toward retaining ring S-14 by the elastic force of rubber ring 20. (**Fig. 21**) In this case, set the gear section in a vise as illustrated in **Fig. 22**, and press spiral bevel gear 35 to counterbalance the elastic force of rubber ring 20. Now retaining ring S-14 will be removed easily using the Retaining ring pliers.

- Remove spiral bevel gear 35 and woodruff key 4 from spindle. And then, remove flat washer 14 and rubber ring 20. (**Fig. 23**)

Fig. 21

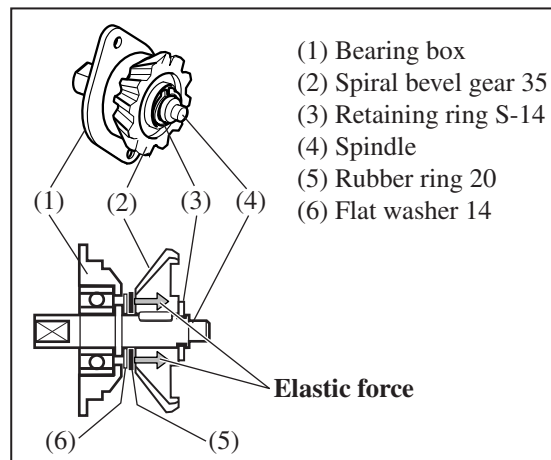


Fig. 22

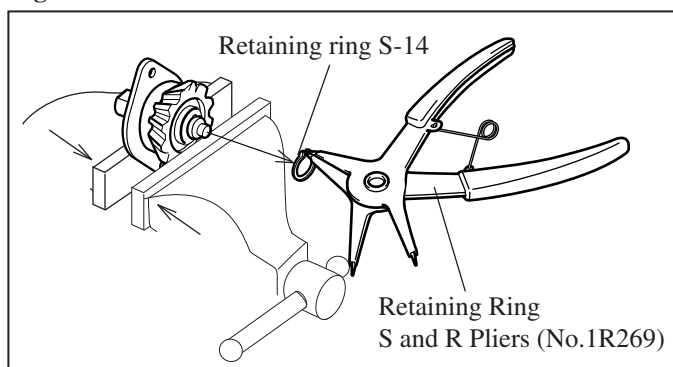
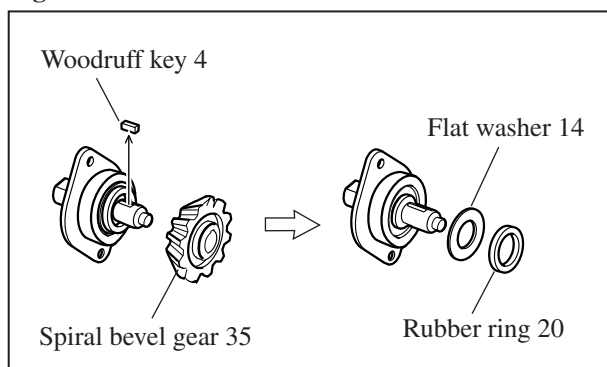


Fig. 23



ASSEMBLING

- Install rubber ring 20 on spiral bevel gear 35. (**Fig. 24**)
- Install flat washer 14 and woodruff key 4 on spindle. And then install spiral bevel gear 35 with rubber ring 20 on spindle.

Fig. 24

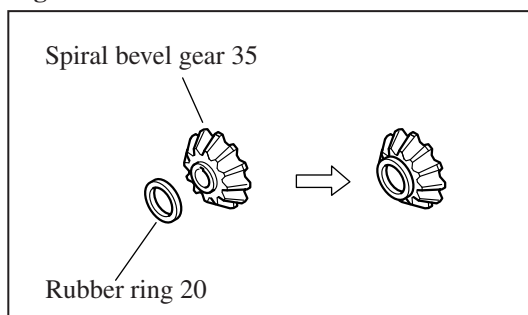
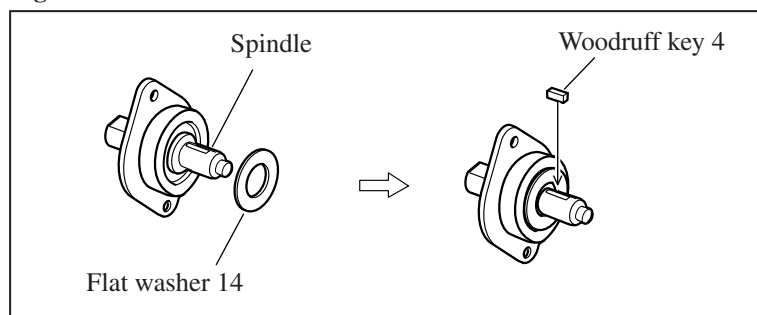


Fig. 25

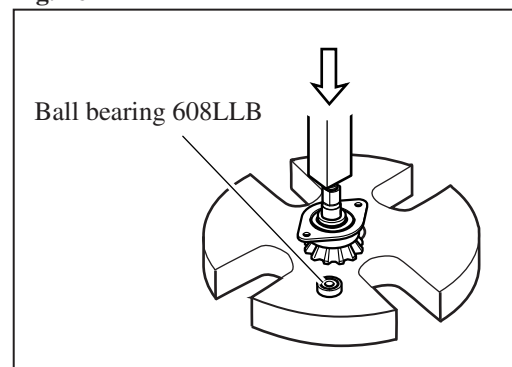


- Install retaining ring S-14 on spindle while pressing spiral bevel gear 35 toward bearing box using vise. (**Fig. 22**)

Make sure that retaining ring S-14 is securely put in the groove of spindle by turning the ring using retaining ring S and R pliers. If the ring turns in the groove on spindle smoothly, it is installed securely.

- Install ball bearing 608LLB on spindle using arbor press. (**Fig. 26**) Now assembling of gear section has been completed.
- Install assembled gear section on blade case by doing the reverse of disassembling procedure.

Fig. 26



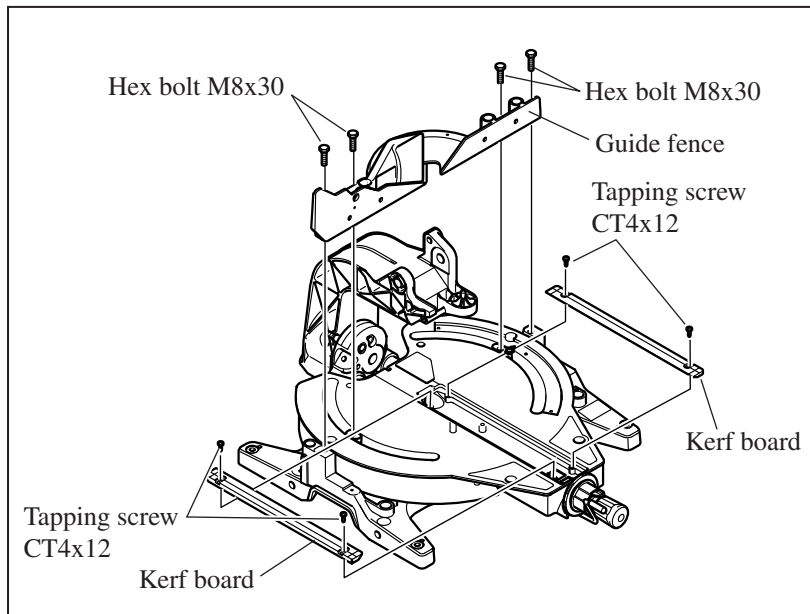
► Repair

[2]- 4. Disassembling/Assembling Base Section

DISASSEMBLING

- 1) Separate guide fence from base section by removing four M8x30 hex bolts. And remove a pair of kerf boards by removing four CT4x12 tapping screws. (Fig. 27)

Fig. 27



- 2) Separate turn base from base by removing hex bolt M8x40 with 13mm socket wrench. (Fig. 28)
Remove turn base while pushing down lock lever in the direction of the arrow. (Fig. 29)

Fig. 28

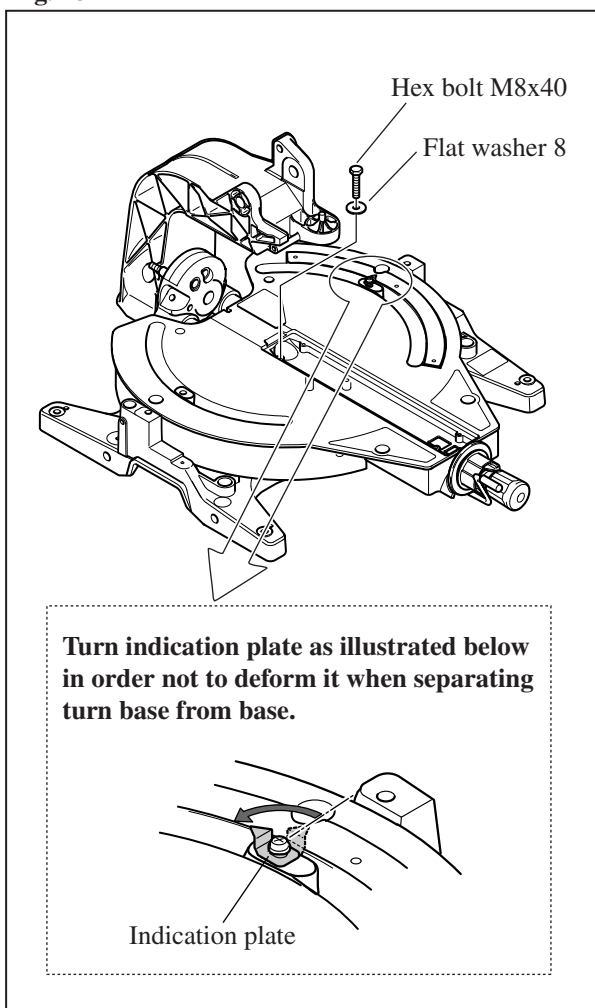
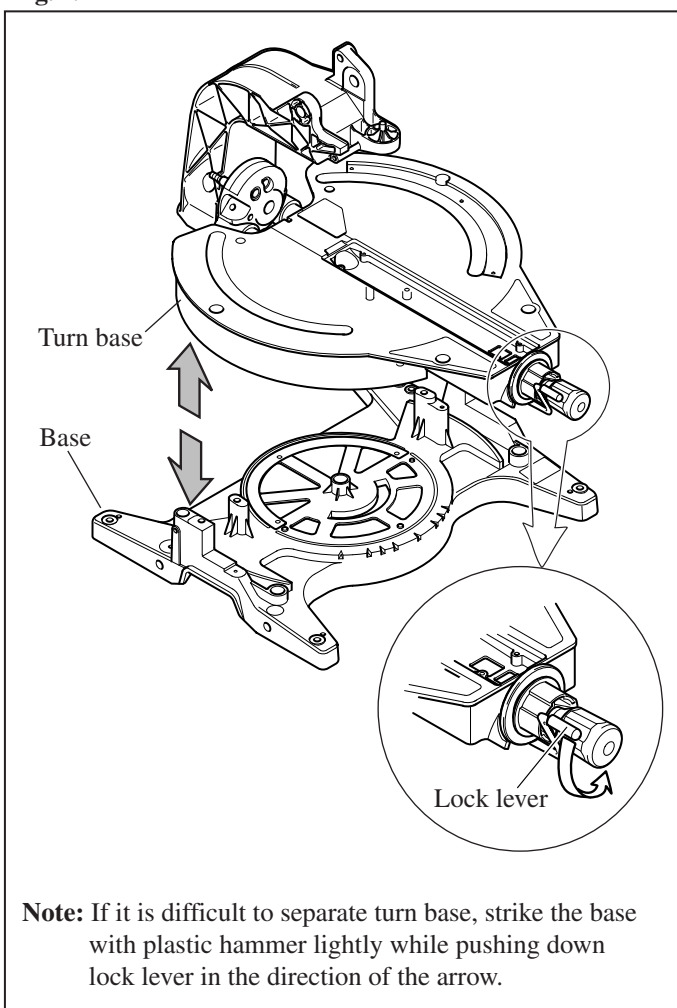


Fig. 29



Note: If it is difficult to separate turn base, strike the base with plastic hammer lightly while pushing down lock lever in the direction of the arrow.

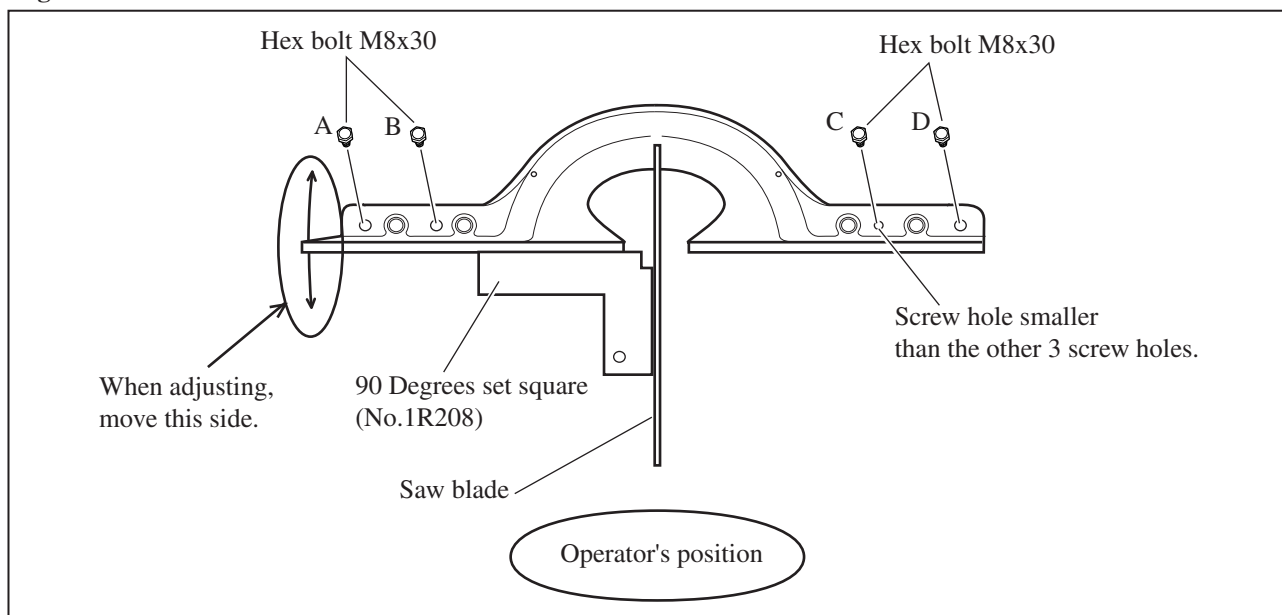
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[2]- 4. Disassembling/Assembling Base Section (cont.)

ASSEMBLING

- 1) Before starting assembly, be sure to apply grease to base, slide plate and turn base as illustrated in **Fig. 2**.
After the lubrication, install turn base on base as illustrated in **Fig. 29**.
- 2) Tighten hex bolt M8x40 with 13mm socket wrench. (**Fig. 28**)
Note: Be sure to tighten Hex bolt M8x40 so that turn base can move smoothly without wobbling.
- 3) Install kerf board onto turn base. (**Fig. 27**)
And then, following the procedures listed below, install guide fence while doing squaring adjustment. (**Fig. 30**);
 1. Provisionally tighten M8x30 hex bolt (C) into the smaller screw hole on the right side of guide fence when viewed from operator's position.
 2. While checking the angle of guide rule to saw blade using 90 Degrees set square (No.1R208), pivot the guide fence by moving its left end until the angle is 90 degrees.
 3. After completion of squaring adjustment, securely tighten four M8x30 hex bolts; first A and D, then B and C.

Fig. 30



[2]- 5. Installation of Bearing Box (B) Complete

- 1) Provisionally fasten bearing box (B) complete to turn base with two M8x30 hex socket head bolts. (**Fig. 31**)
- 2) Install arm holder complete on turn base, and push it until it stops. And then securely fasten bearing box (B) complete to turn base by tighten the M8x30 hex socket head bolts firmly. (**Fig. 32**)

Fig. 31

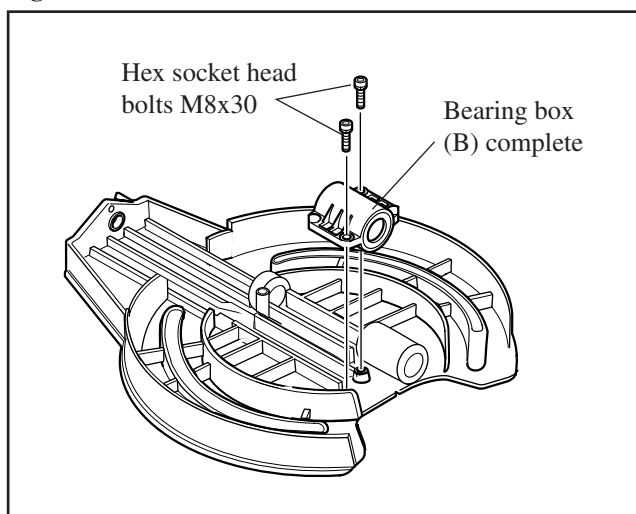
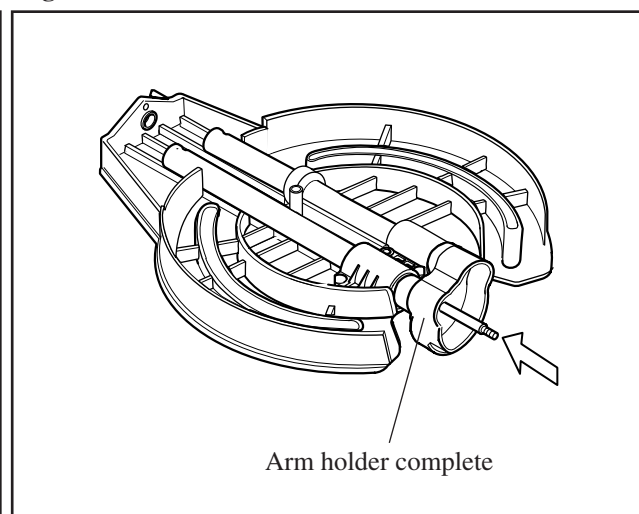


Fig. 32



► **Repair**

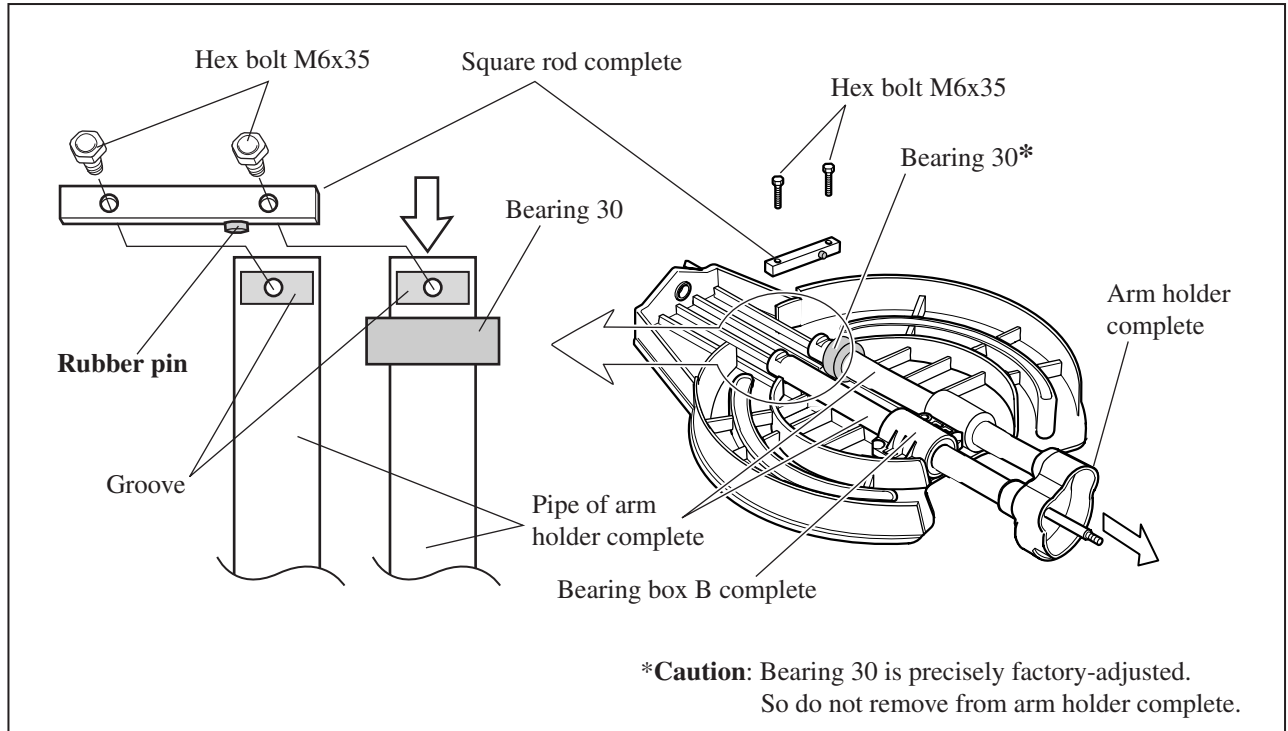
[2]- 6. Installation of Square Rod

- 1) Slide arm holder complete so that the grooves on the pipe of square rod complete are positioned closest to bearing 30 (Fig. 33)
- 2) Fasten square rod complete to arm holder complete with two M6x35 hex bolts. (Fig. 33)

Note: Be sure that square rod complete is not reversible when installed on arm holder complete.

Install so that the rubber pin of square rod complete faces bearing 30 as illustrated to left in Fig. 33.

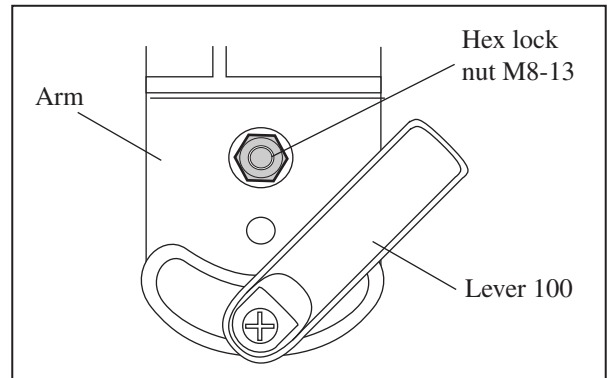
Fig. 33



[2]- 7. Installation of Arm

When installing arm, remember to adjust hex lock nut M8-13 so that the arm can tilt smooth without wobbling (Fig. 34)

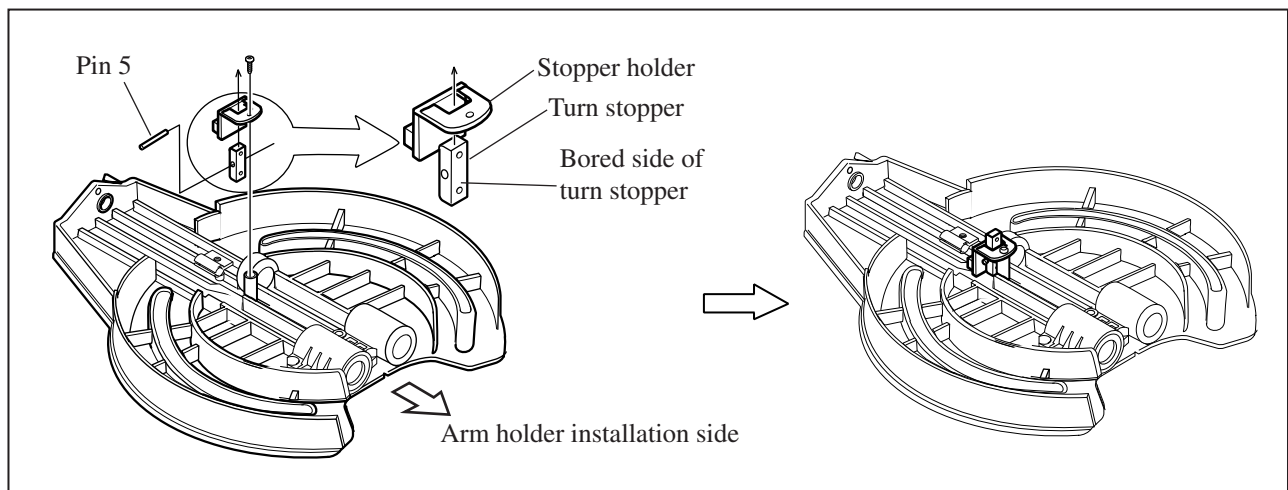
Fig. 34



[2]- 8. Installation of Turn Stopper

Turn stopper is not reversible when installed. Assemble to stopper holder so that the side having distinctive holes faces the arm holder installation side. (Fig. 35)

Fig. 35



► **Repair**

[2]- 9. Installation of Pin Holder

- 1) Mount pin holder and lock pin, flat washer 6, compression spring 6 and stop ring E5 as illustrated in **Fig. 36**.
- 2) Remember to adjust CT4x16 tapping so that screw lock pin can turn smoothly. (**Fig. 37**)

Fig. 36

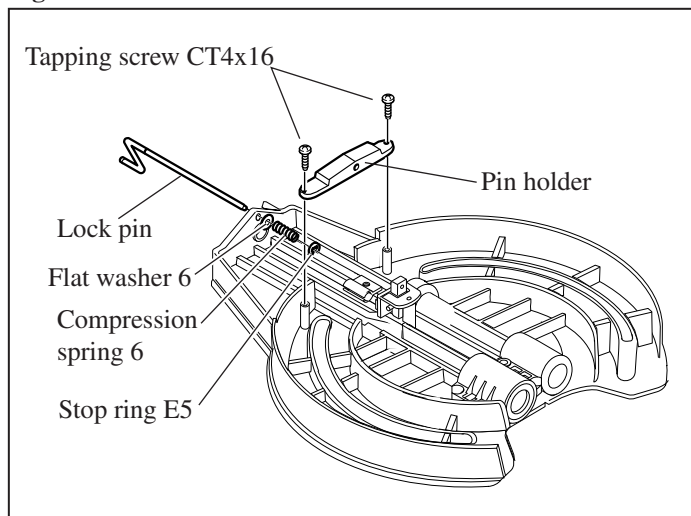
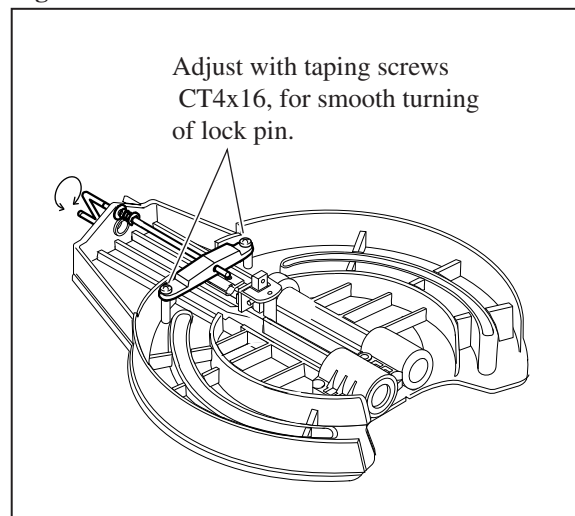


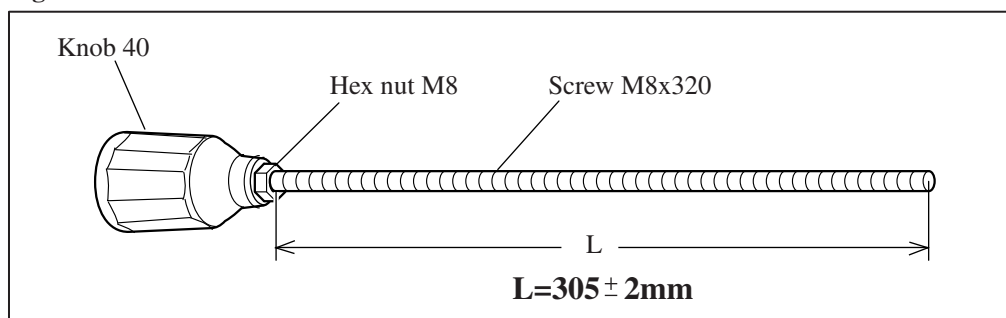
Fig. 37



[2]- 10. Assembling Screw M8x320 to Knob 40

- After inserting screw M8x320 into knob 40, adjust the length of screw M8x320 to 305+2mm. And then tighten hex nut M8 to fastening torque of 100kg.cm or more. (**Fig. 38**)

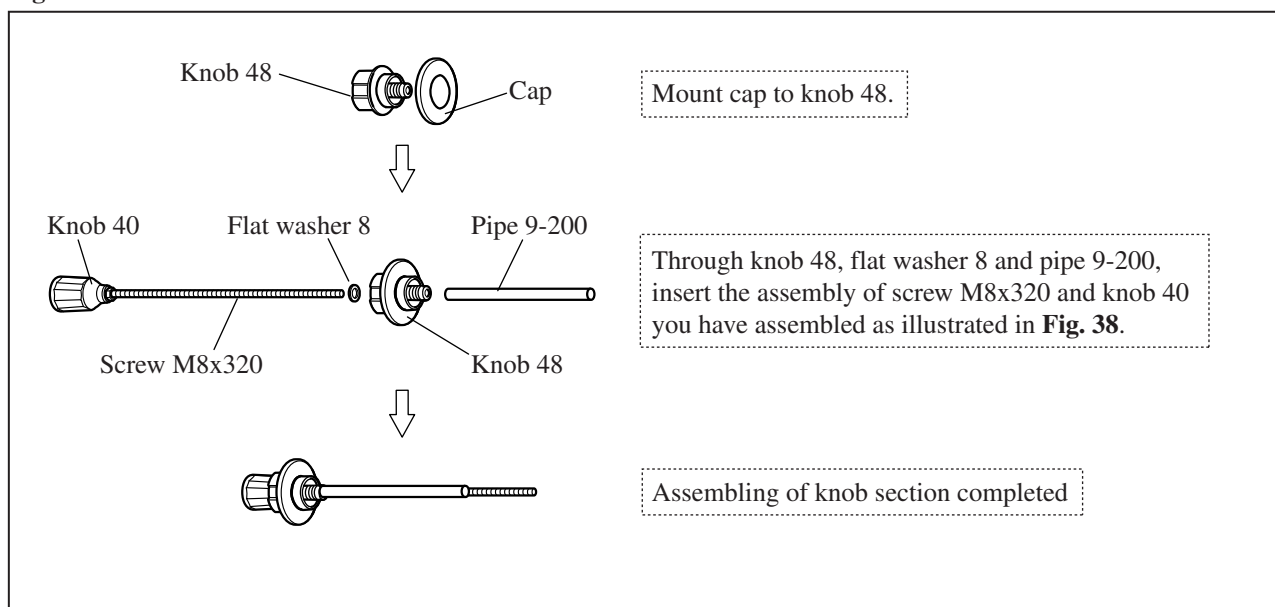
Fig. 38



[2]- 11. Assembling Knob Section to Turn Base

- 1) Assemble knob section as illustrated in **Fig. 39**.

Fig. 39



► Repair

[2]- 11. Assembling Knob Section to Turn Base (cont.)

- 2) Insert the assembled knob section through the hole in turn base, and insert screw M8x320 through slide stopper. And then secure screw M8x320 to stopper holder by turning knob 40. (Fig. 40)
- 3) Turn knob 48 in order to secure the knob section to turn base. (Fig. 41)

Fig. 40

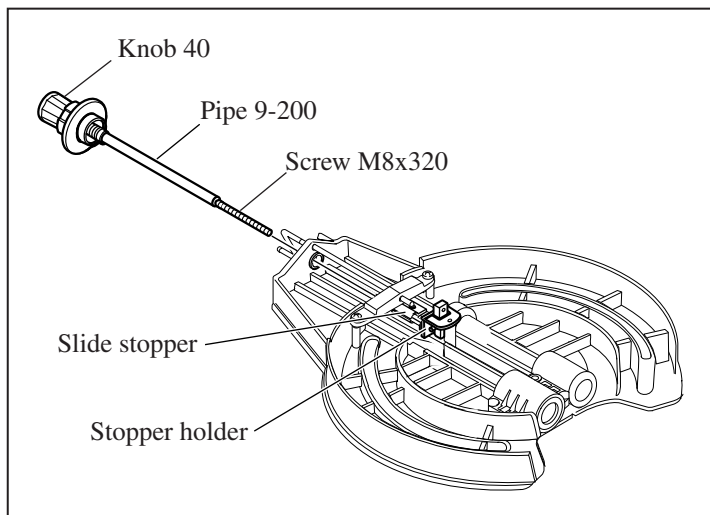
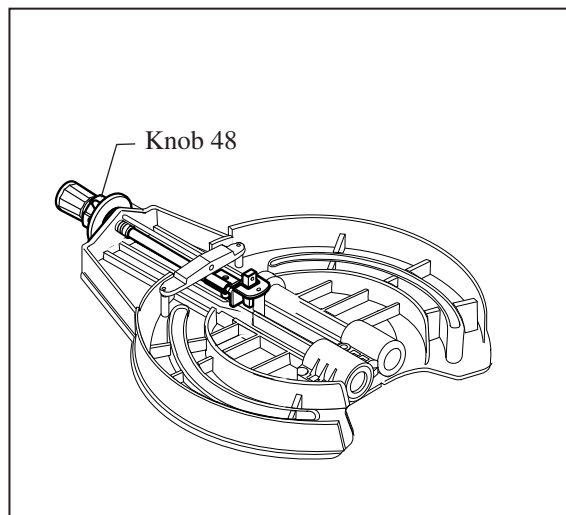


Fig. 41



Note:

If you remove only knob 40 from turn base by mistake, screw M8x320 will be pulled together, and consequently pipe 9-200 will fall off turn base.

In this case, following the procedure described above, install pipe 9-200 in place.

[3] ADJUSTMENT

[3]- 1. Angle Adjustment of Saw Blade

CAUTION: Make sure that the machine is unplugged before adjusting saw blade.

- 1) For adjusting the miter angle of saw blade to 0 degrees; use 90 degrees set square (No.1R208) as illustrated in Fig. 30.
- 2) For adjusting the bevel angle of saw blade to 0 degrees; use 90 degrees set square (No.1R208) as illustrated in Fig. 42.
For adjusting the bevel angle of saw blade to 45 degrees; first adjust the bevel angle of saw blade to 0 degrees, and then adjust to 45 degrees using 45 degrees set square (No.1R207) as illustrated in Fig. 43.

Fig. 42

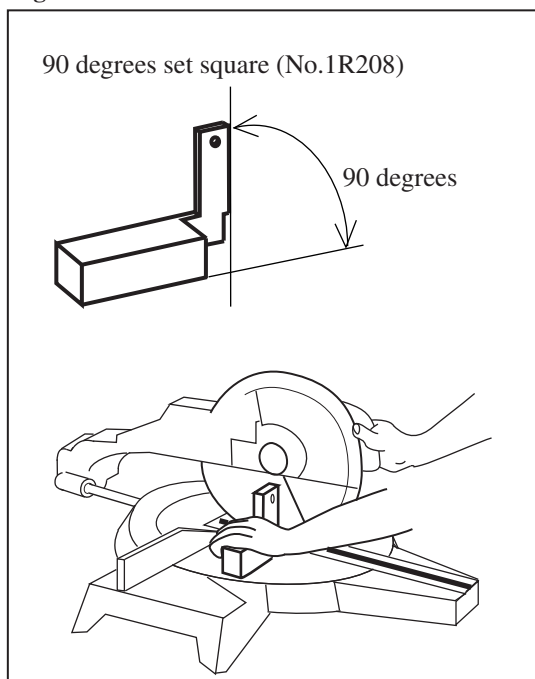
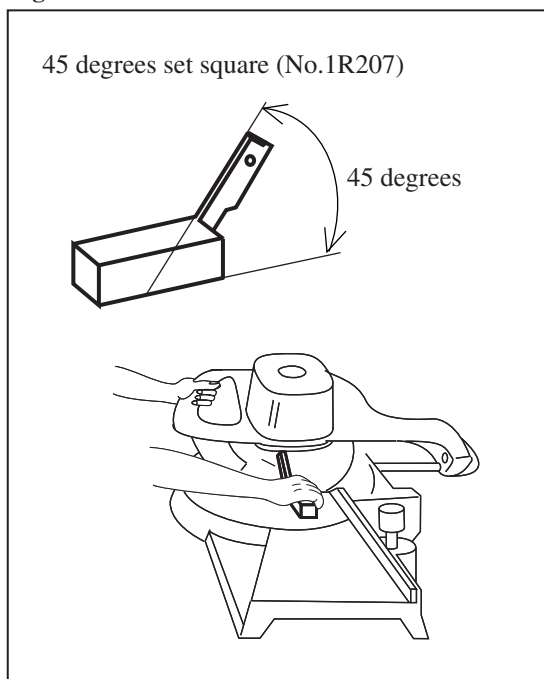


Fig. 43



► Repair

[3]- 1. Angle Adjustment of Saw Blade (cont.)

3) For Adjusting to the max. cutting depth of 115mm;

Put a timber of 115mm height between blade case and turn base, and lower the saw head until the blade case contacts the timber. (Fig. 44)

While keeping the saw head at the height, tighten hex bolt M8x45. (Fig. 45)

Fig. 44

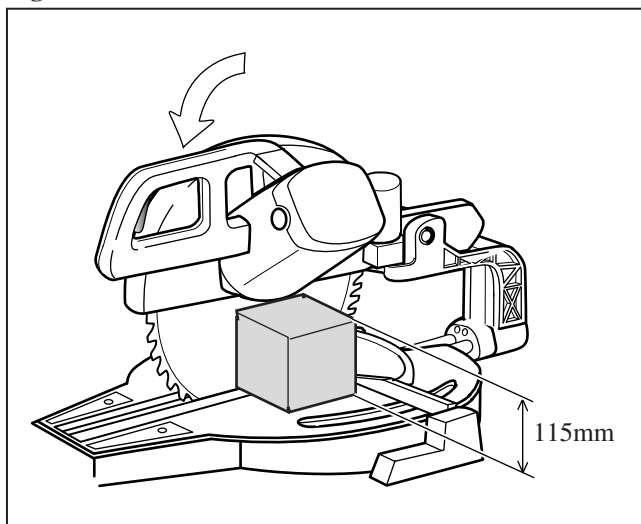
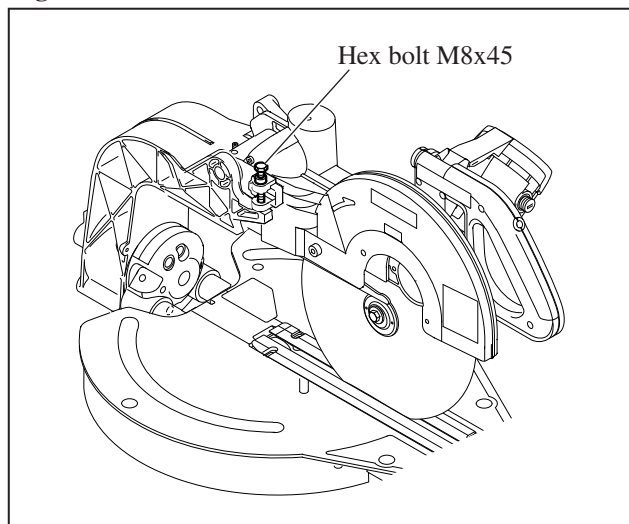


Fig. 45



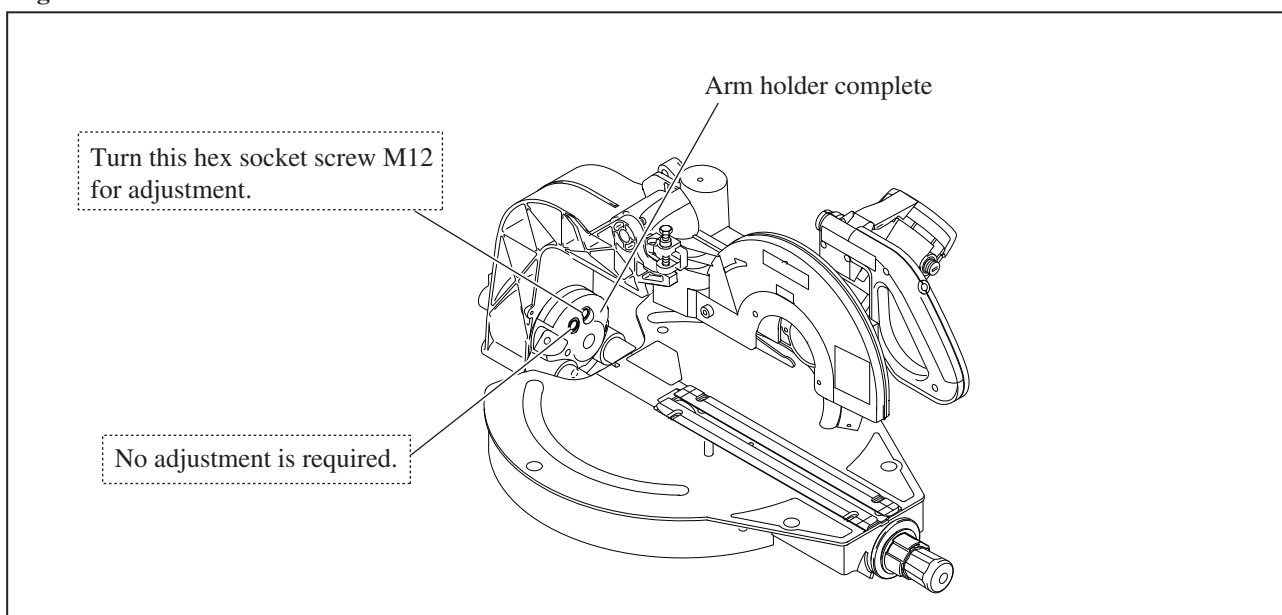
[3]- 2. Adjustment for Smooth Locking Action of Positive Stop at 0 Degrees Bevel

Two steel balls and compression springs are used for positive stop locking of the saw head at 0 degrees bevel.

If the locking action of positive stop is tight or loose, do adjustment for *proper locking action by turning the hex socket screw M12 located on the vertical centerline of arm holder complete. (Fig. 46)

*Proper locking action: If adjusted properly, the foot of base will not be lifted up at the moment when the saw head is released from the two ball bearings.

Fig. 46



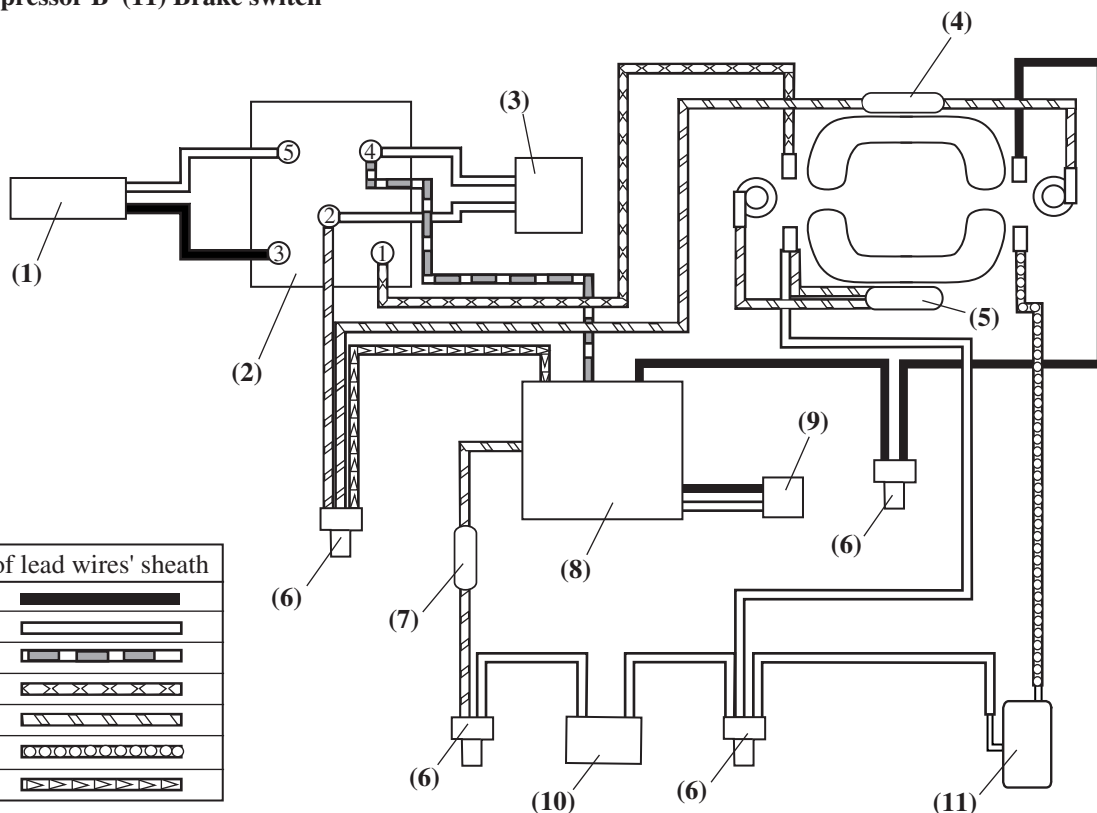
► **Circuit diagram**

[1] LS1214 for High Voltage Countries

With noise suppressors and choke coils for conforming to radio interference suppression

- (1) Power supply cord (2) Main switch (ON/OFF switch) (3) Noise suppressor A (4) Choke coil A
 (5) Choke coil B (6) Insulated connector (7) Choke coil C (8) Controller (9) Pick up coil
 (10) Noise suppressor B (11) Brake switch

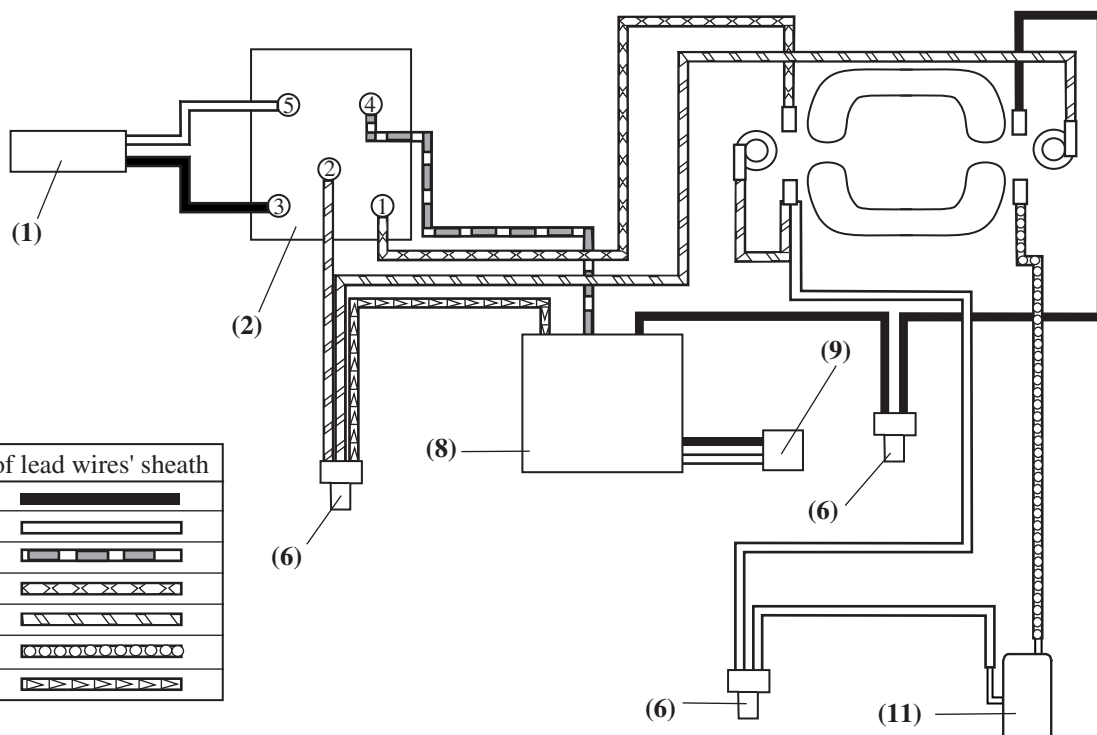
Color index of lead wires' sheath	
Black	
White	
Red	
Yellow	
Orange	
Purple	
Brown	



Without noise suppressor and choke coil

- (1) Power supply cord (2) Main switch (ON/OFF switch) (6) Insulated connector
 (8) Controller (9) Pick up coil (11) Brake switch

Color index of lead wires' sheath	
Black	
White	
Red	
Yellow	
Orange	
Purple	
Brown	

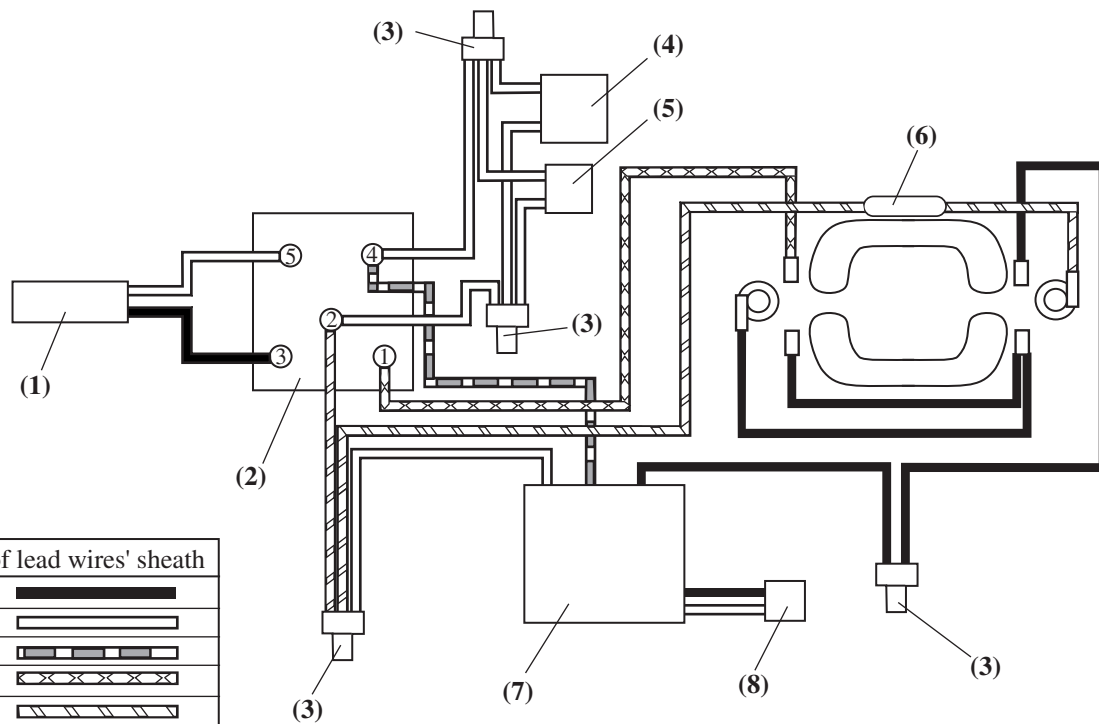


► **Circuit diagram**

[2] LS1214 for Low Voltage Countries

With noise suppressors and choke coils for conforming to radio interference suppression

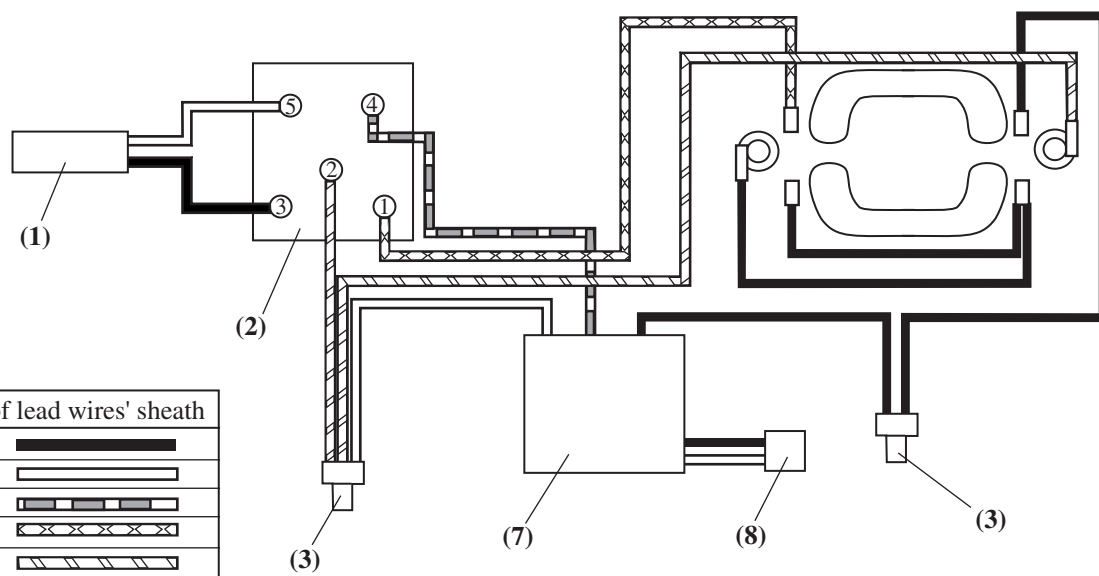
- (1) Power supply cord (2) Main switch (ON/OFF switch) (3) Insulated connector (4) Noise suppressor A
 (5) Noise suppressor B (6) Choke coil (7) Controller (8) Pick up coil



Color index of lead wires' sheath	
Black	
White	
Red	
Yellow	
Orange	

Without noise suppressor and choke coil

- (1) Power supply cord (2) Main switch (ON/OFF switch) (3) Insulated terminal
 (7) Controller (8) Pick up coil



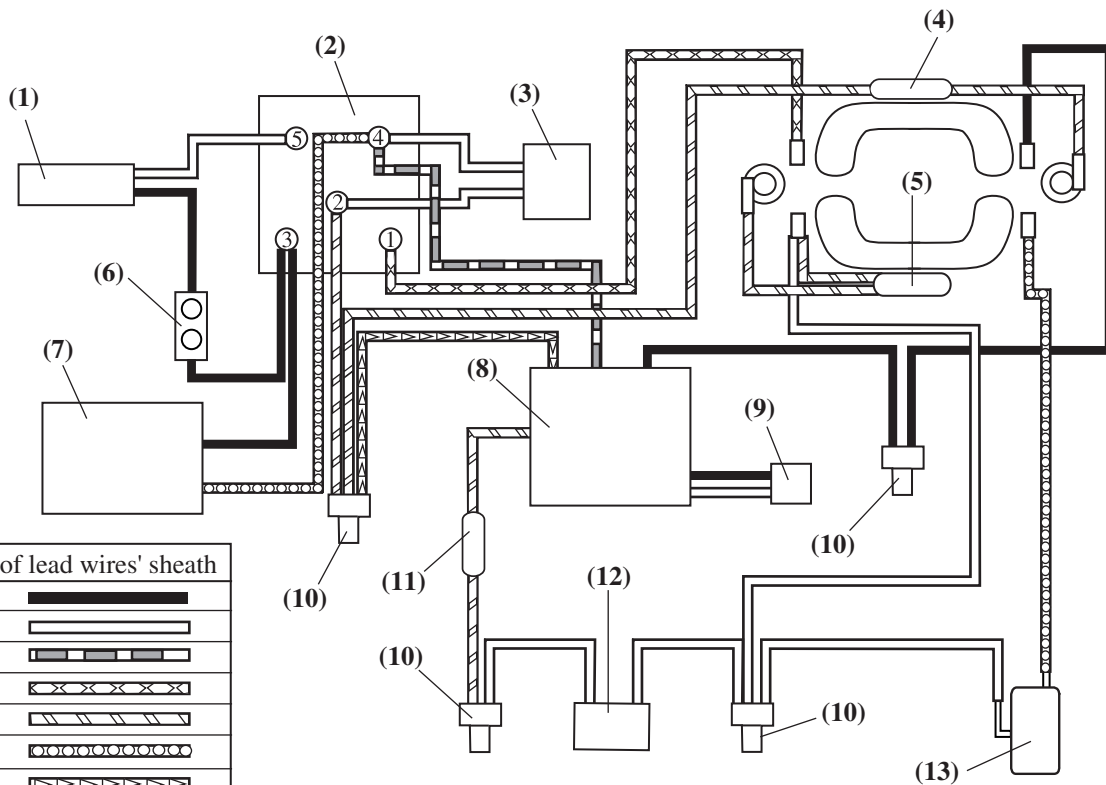
Color index of lead wires' sheath	
Black	
White	
Red	
Yellow	
Orange	

► **Circuit diagram**

[3] LS1214F for High Voltage Countries

With noise suppressors and choke coils for conforming to radio interference suppression

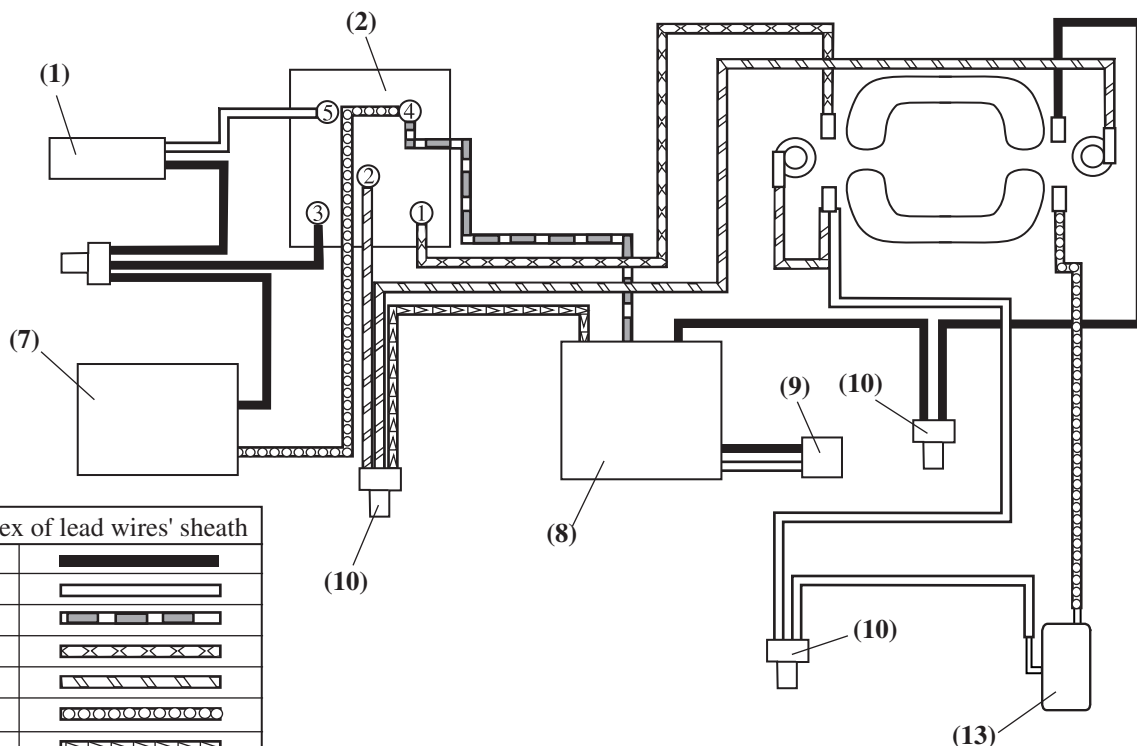
- (1) Power supply cord (2) Main switch (ON/OFF switch) (3) Noise suppressor A (4) Choke coil A
 (5) Choke coil B (6) Terminal block (7) Light assembly (8) Controller (9) Pick up coil
 (10) Insulated connector (11) Choke coil C (12) Noise suppressor B (13) Brake switch



Color index of lead wires' sheath	
Black	
White	
Red	
Yellow	
Orange	
Purple	
Brown	

Without noise suppressor and choke coil

- (1) Power supply cord (2) Main switch (ON/OFF switch) (7) Light assembly
 (8) Controller (9) Pick up coil (11) Brake switch



Color index of lead wires' sheath	
Black	
White	
Red	
Yellow	
Orange	
Purple	
Brown	

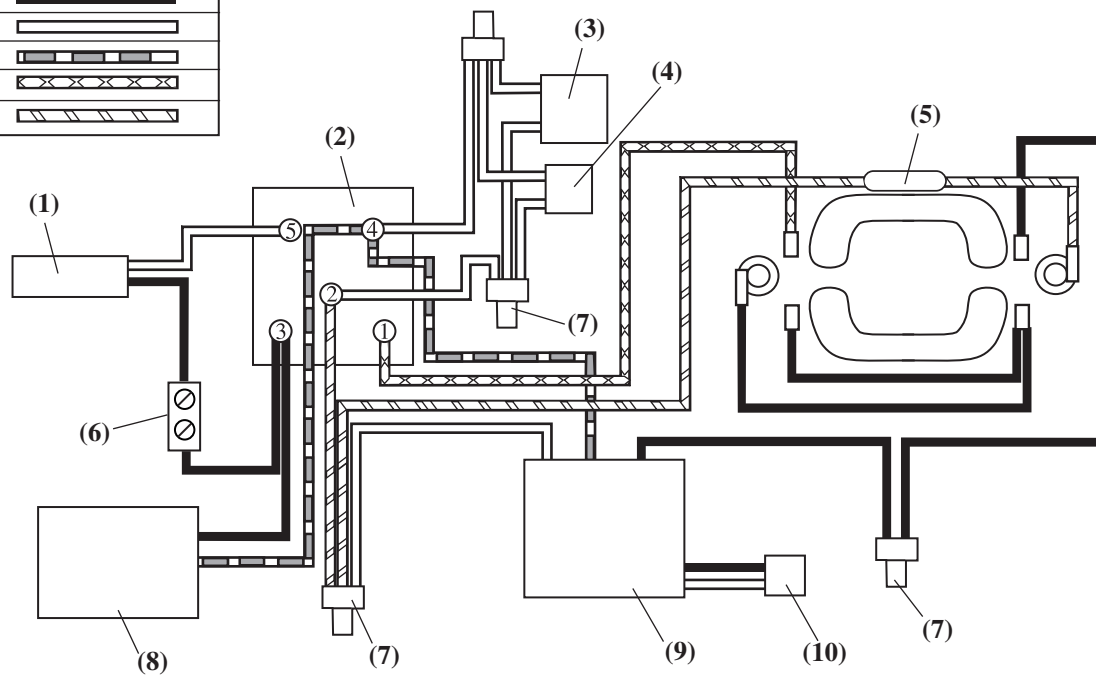
► **Circuit diagram**

[4] LS1214F for Low Voltage Countries

With noise suppressors and choke coils for conforming to radio interference suppression

- (1) Power supply cord (2) Main switch (ON/OFF switch) (3) Noise suppressor A (4) Noise suppressor B
 (5) Choke coil (6) Terminal block (7) Insulated connector (8) Light assembly (9) Controller

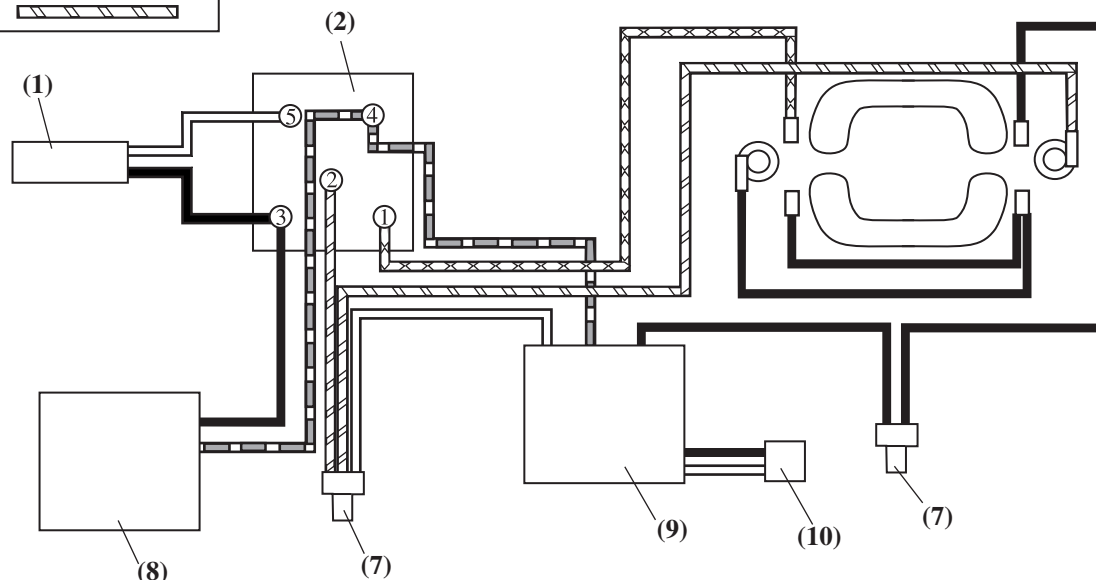
Color index of lead wires' sheath	
Black	
White	
Red	
Yellow	
Orange	



Without noise suppressor and choke coil

- (1) Power supply cord (2) Main switch (ON/OFF switch) (7) Insulated terminal
 (8) Light assembly (9) Controller (10) Pick up coil

Color index of lead wires' sheath	
Black	
White	
Red	
Yellow	
Orange	



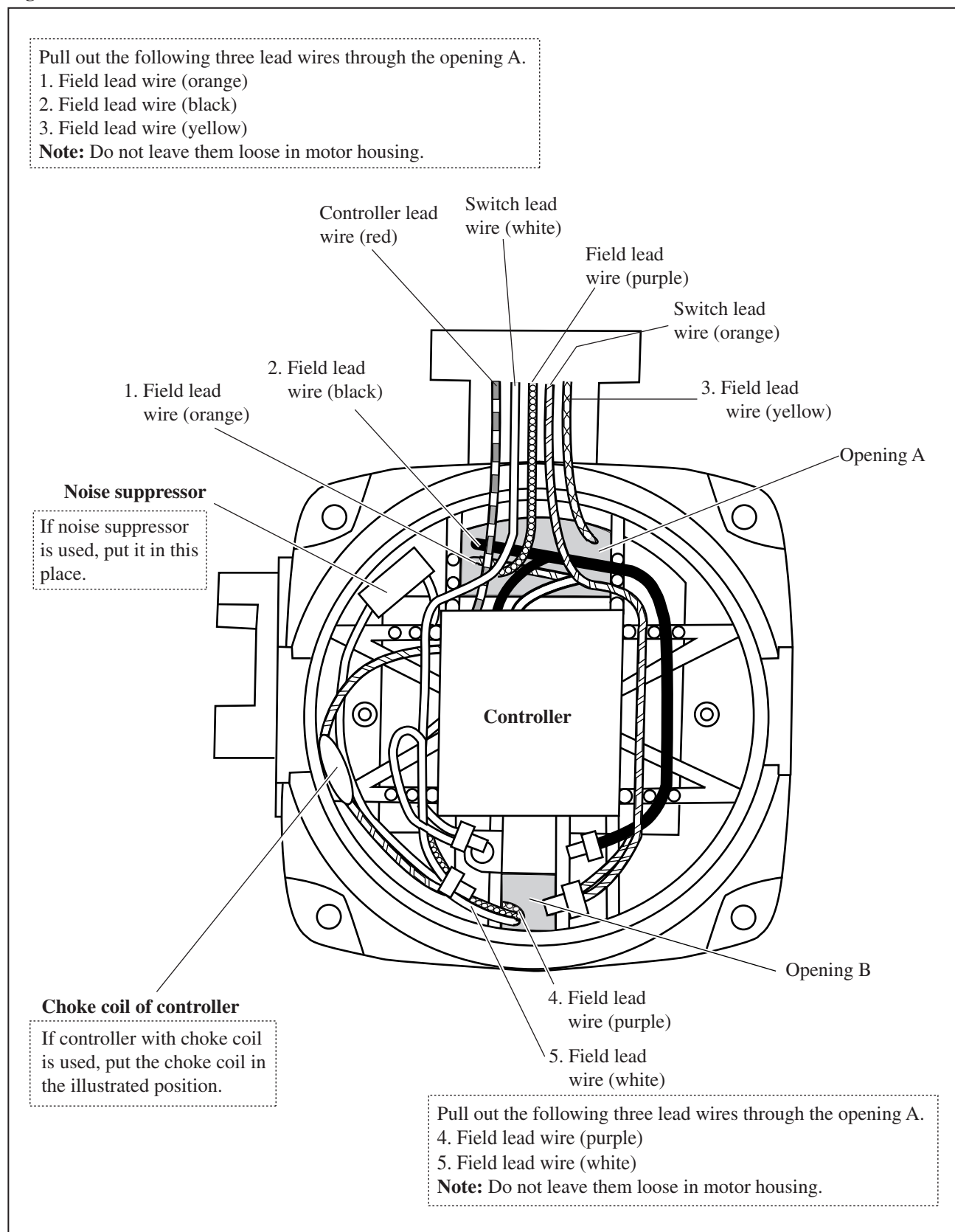
► **Wiring diagram**

[1] LS1214 for High Voltage Countries

1) Wiring in Motor Housing (On the Rear Cover Side)

Put the lead wires as illustrated in Fig. 47.

Fig. 47



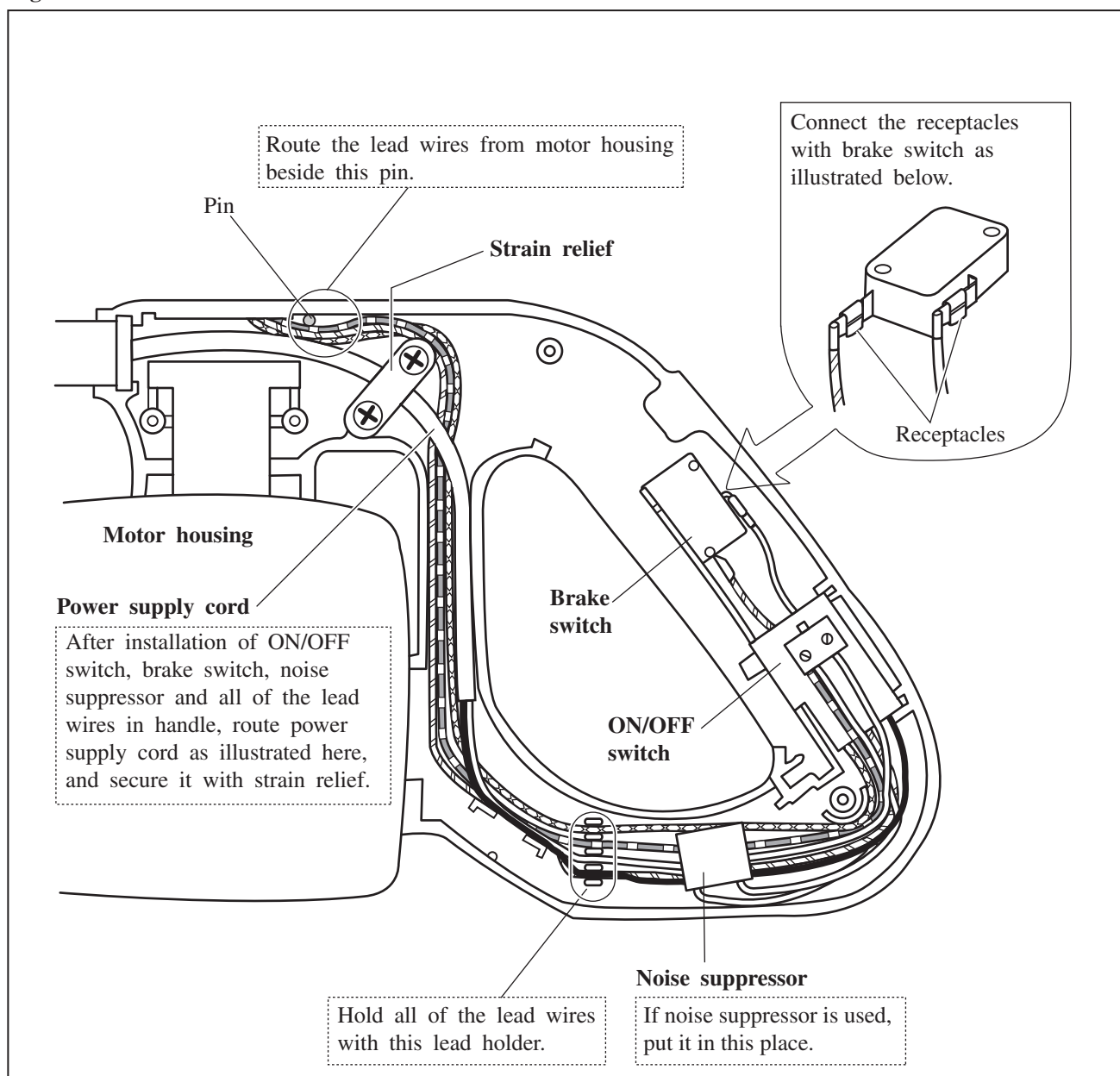
► **Wiring diagram**

[1] **LS1214 for High Voltage Countries**

2) **Wiring in Handle**

Put the lead wires as illustrated in **Fig. 48**.

Fig. 48



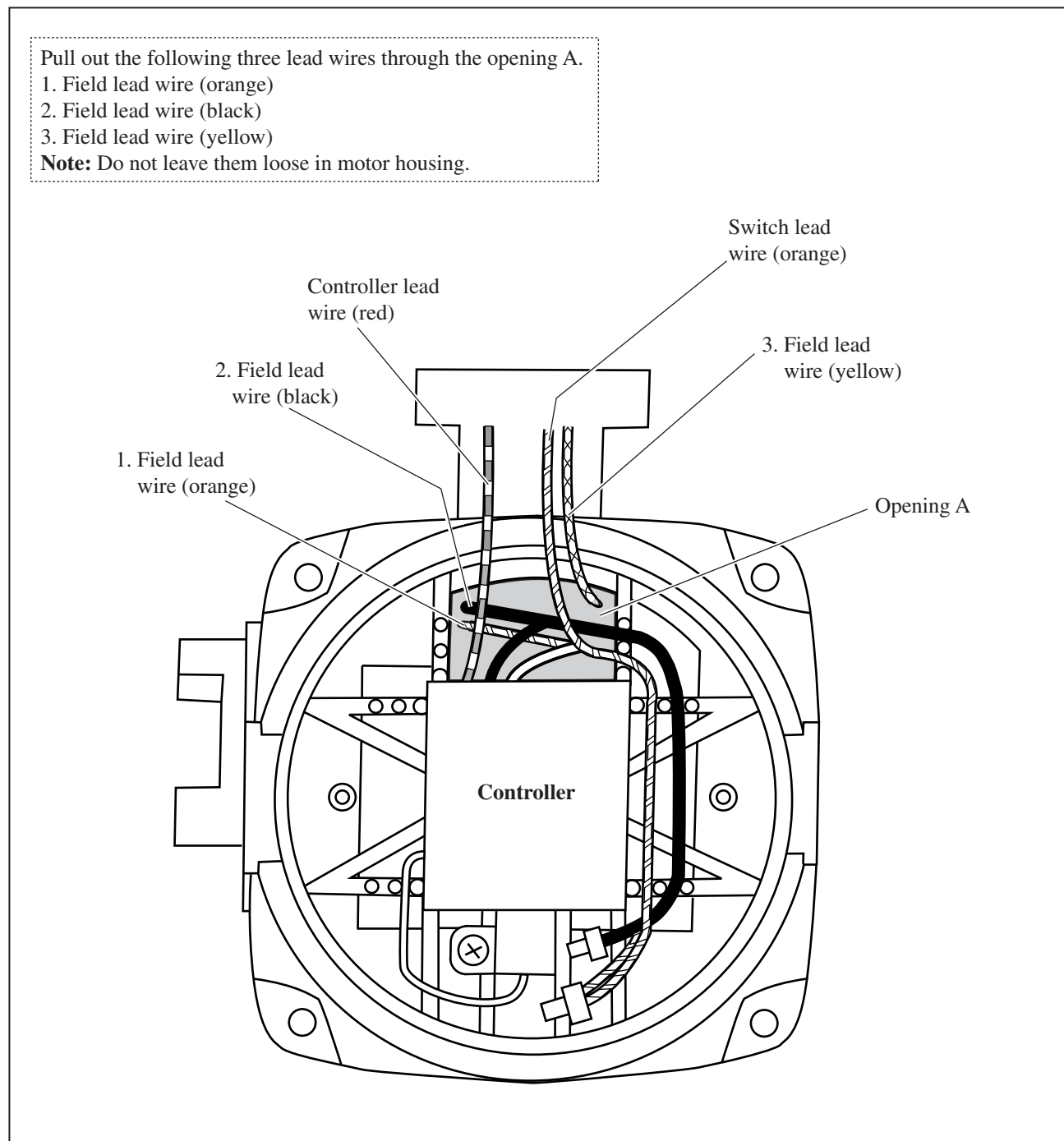
► Wiring diagram

[2] LS1214 for Low Voltage Countries

1) Wiring in Motor Housing (On the Rear Cover Side)

Put the lead wires as illustrated in Fig. 49.

Fig. 49



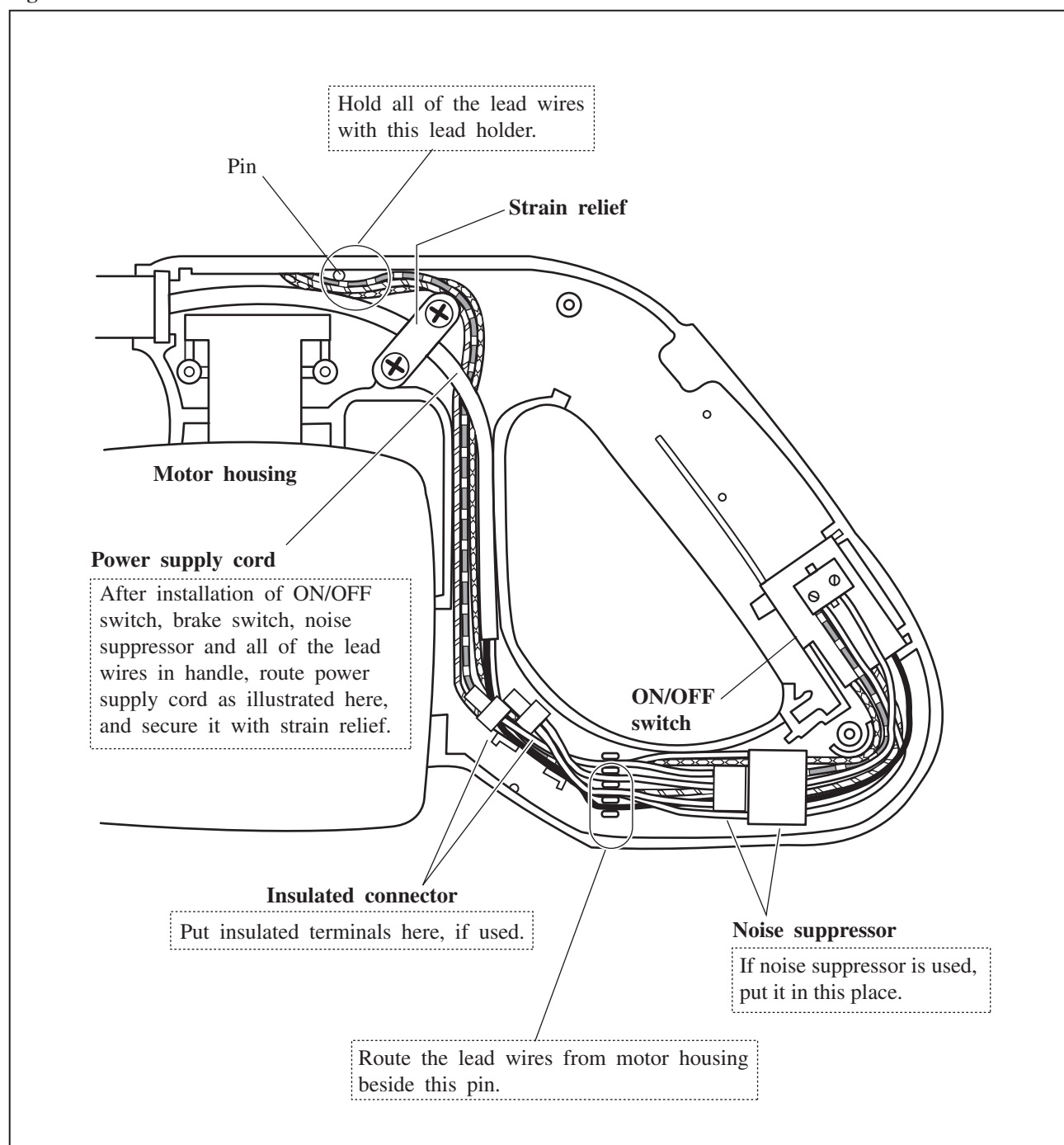
► Wiring diagram

[2] LS1214 for Low Voltage Countries

2) Wiring in Handle

Put the lead wires as illustrated in **Fig. 50**.

Fig. 50



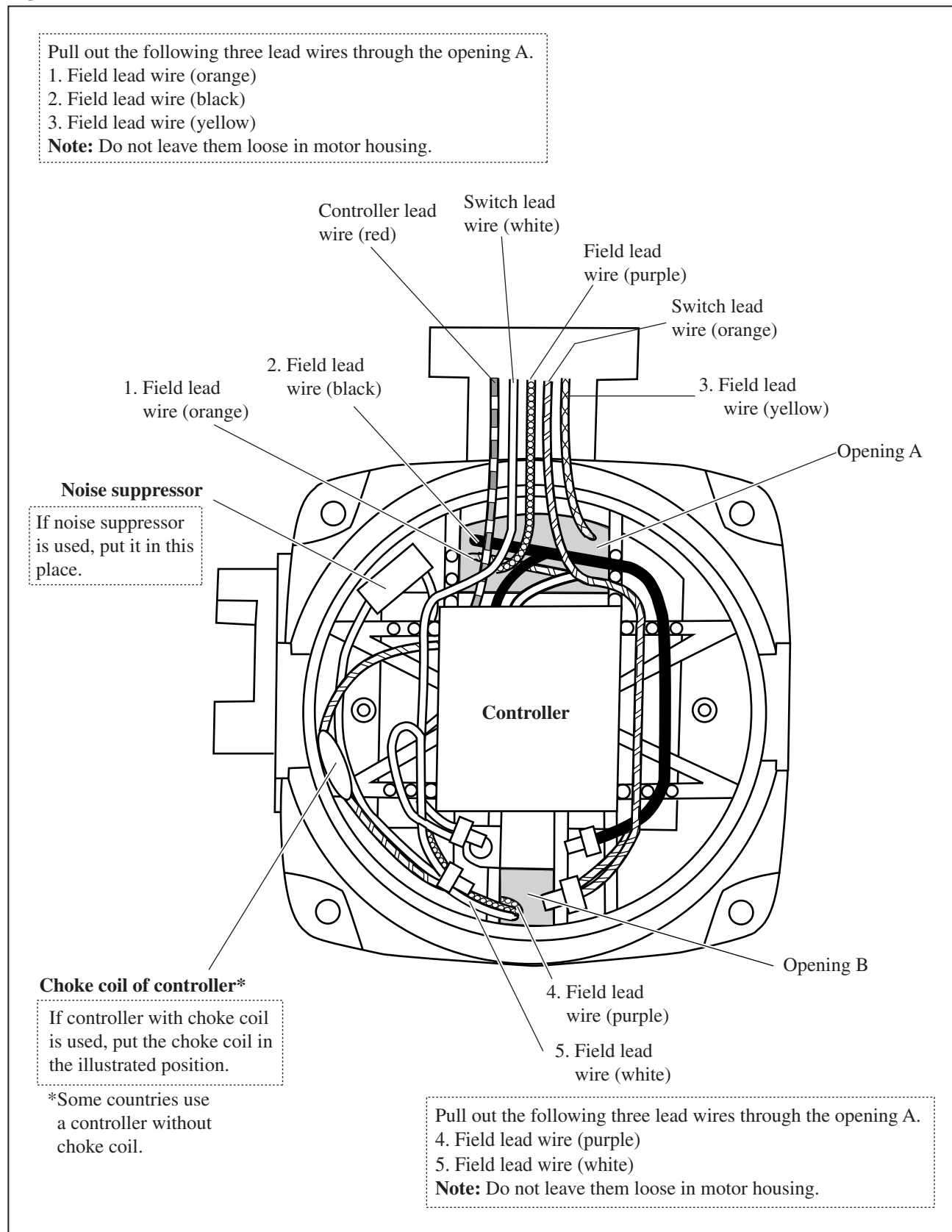
► **Wiring diagram**

[3] LS1214F for High Voltage Countries

1) Wiring in Motor Housing (On the Rear Cover Side)

Put the lead wires as illustrated in Fig. 51.

Fig. 51



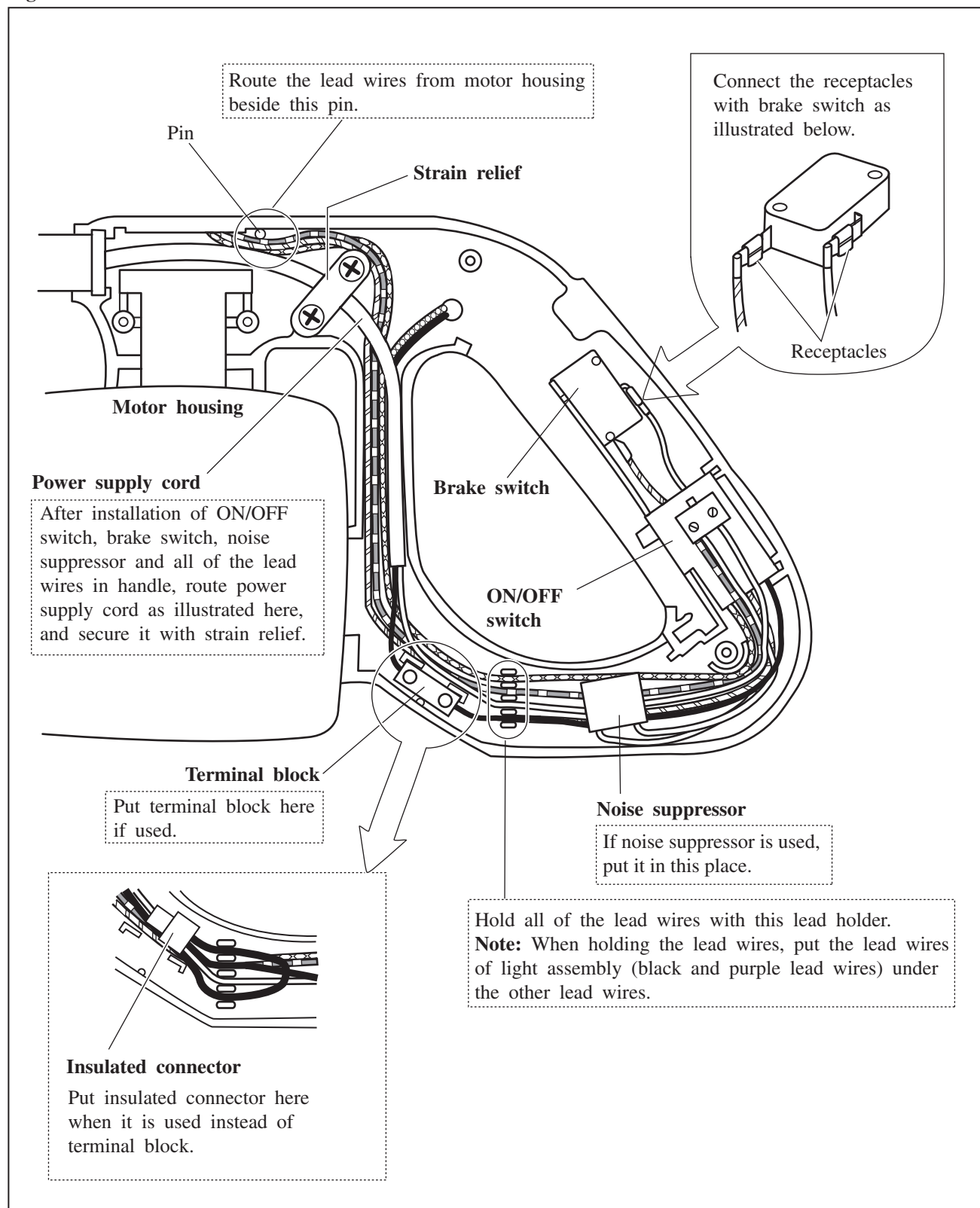
► **Wiring diagram**

[3] LS1214F for High Voltage Countries

2) Wiring in Handle

Put the lead wires as illustrated in **Fig. 52**.

Fig. 52



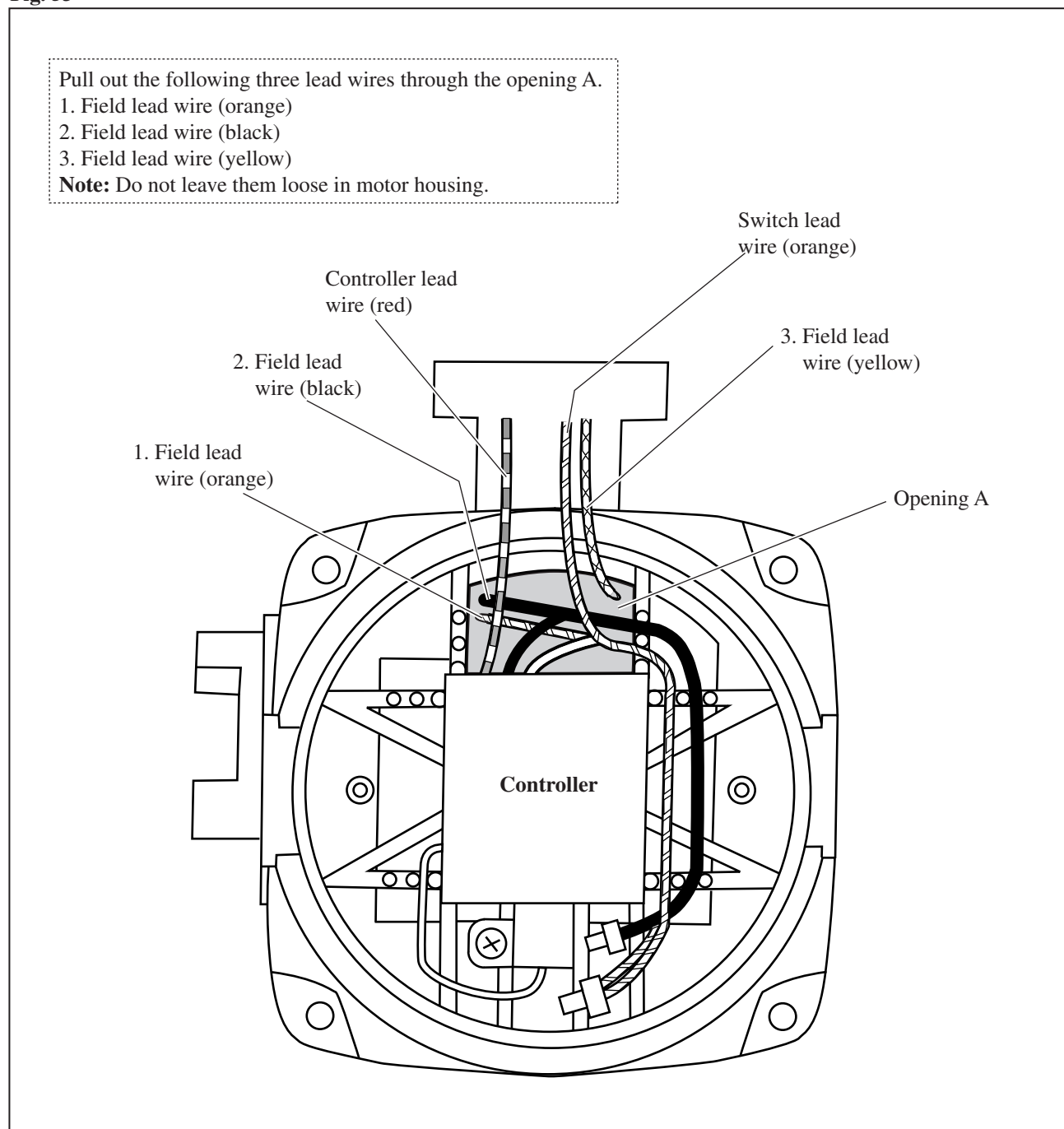
► Wiring diagram

[4] LS1214 for Low Voltage Countries

1) Wiring in Motor Housing (On the Rear Cover Side)

Put the lead wires as illustrated in Fig. 53.

Fig. 53



► **Wiring diagram**

[4] LS1214F for Low Voltage Countries

2) Wiring in Handle

Put the lead wires as illustrated in **Fig. 54**.

Fig. 54

