

TECHNICAL INFORMATION



PRODUCT

P 1 / 16

Models No. ▶ GN900

Description ▶ Cordless Clipped Head Framing Nailer

CONCEPT AND MAIN APPLICATIONS

Model GN900 is a cordless clipped head nailer developed for a wide range of framing applications. The main features are as follows:

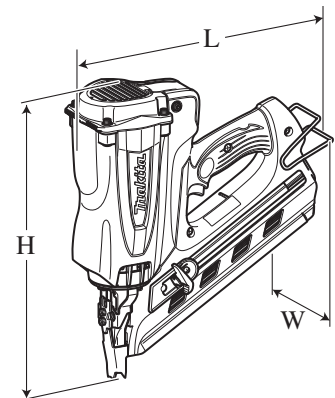
- Using fuel gas as the power source to provide freedom from hoses and compressors
- Equipped with LED indication lamp with battery power warning and trouble detection functions for convenience of operation and repair

This product is available in the following variations.

Model No.	Battery*1		Charger
	type	quantity	
GN900SE	BL7010	2	DC07SA
GN900S	(Li-ion 1.0Ah)	1	
GN900ZK	No	No	No

The model also includes the accessories listed below in "Standard equipment".

*1 Battery is used as the power source for ignition spark, gas mixing, air intake/exhaust and supply of cooling air.



Dimensions: mm (")	
Length*2 (L)	321 (12-5/8)
Width*2 (W)	108 (4-1/4)
Height (H)	368 (14-1/2)

*2 with Hook

► Specification

Battery	Cell	Li-ion
	Voltage: V	7.2
	Capacity: Ah	1.0
	Charging time (approx.): min.	30 with DC07SA/DC10WA
Nail	Head type	Clipped-head
	Gauge (Shank diameter): mm (")	2.9 - 3.3 (0.113 - 0.131)
	Length: mm (")	50 - 90 (2 - 3-1/2)
	Nail collation angle	34 degree
Magazine capacity		44 nails (1 strip)
Motor*3		Coreless DC motor
Battery life*4		4,000 nails (approx.)
Fuel cell life*5		1,200 nails (approx.)
Anti-dry-fire mechanism		Yes
Net weight: kg (lbs)	without Battery and Fuel cell	3.2 (7.0)
	with Battery and Fuel cell	3.4 (7.5)

*3 The motor is used for gas mixing, air intake/exhaust, supply of cooling air.

*4 Battery life: the number of nails on a single full battery charge

*5 Fuel cell life: the number of nails per Fuel cell

► Standard equipment

- Safety goggles 1
- Hex wrench 4 1
- Plastic carrying case 1

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

► Optional accessories

- Nail fuel pack
- Fuel cell
- Cleaner kit (contains the following accessories in a special Tool bag: Cleaner/ 1, Lubricating oil/ 1, Hex wrench 4/ 1, Brush/ 1, Cotton waste/ 1)
- Charger DC07SA
- Charger DC10WA
- Battery BL7010

► **Repair**

CAUTION: 1) Remove Battery, Fuel cell, Nail from the machine for safety before repair/ maintenance in accordance with the instruction manual!

2) Loosen Hex socket head bolts with L-shape wrench in advance before removing them using cordless impact driver with 1R228/ 1R229, or the top of 1R228/ 229 will damage.

[1] NECESSARY REPAIRING TOOLS

Code No.	Description	Use for
1R005	Retaining ring pliers RT-2N	Disassembling / Assembling Retaining ring R-58
1R228	1/4" Hex shank bit for M4	Disassembling / Assembling M4 Hex socket head bolt
1R229	1/4" Hex shank bit for M5	Disassembling / Assembling M5 Hex socket head bolt
1R268	Spring pin extractor 3	Disassembling / Assembling Spring pin 3-32
1R291	Retaining ring S and R pliers	Disassembling / Assembling Retaining ring R-24

[2] LUBRICATIONS AND ADHESIVES

Apply a little amount of Lubricant and Adhesives illustrated in **Fig. 1**.

Fig. 1

Item No.	Description	Portion to lubricate	Lubrication
②③	Cylinder	a: Inside with which Driver complete contacts	◀ Lubrication oil VG100
		b: Outside with which Chamber contacts	◀ Molybdenum disulfide
②④	Cylinder ring	Whole portion	◀ Molybdenum disulfide
④②	O ring 60	Whole portion	◀ Lubrication oil VG100

Item No.	Description	Portion to glue	Adhesive
②③	Cylinder	c: Rib portion on which Exhaust plate is attached	◀ ThreeBond 1215
⑨	M5x35 Hex socket head bolt	Thread	ThreeBond 1342 or Loctite 272
⑰	M5x16 Hex socket head bolt		
⑥⑦	M5x10 Hex socket head bolt		
⑨⑦	M5x10 Hex socket head bolt		

► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-1. Driver, Front cushion

DISASSEMBLING

(1) Disassemble Driver complete as illustrated in **Figs. 2 and 3**.

Fig. 2

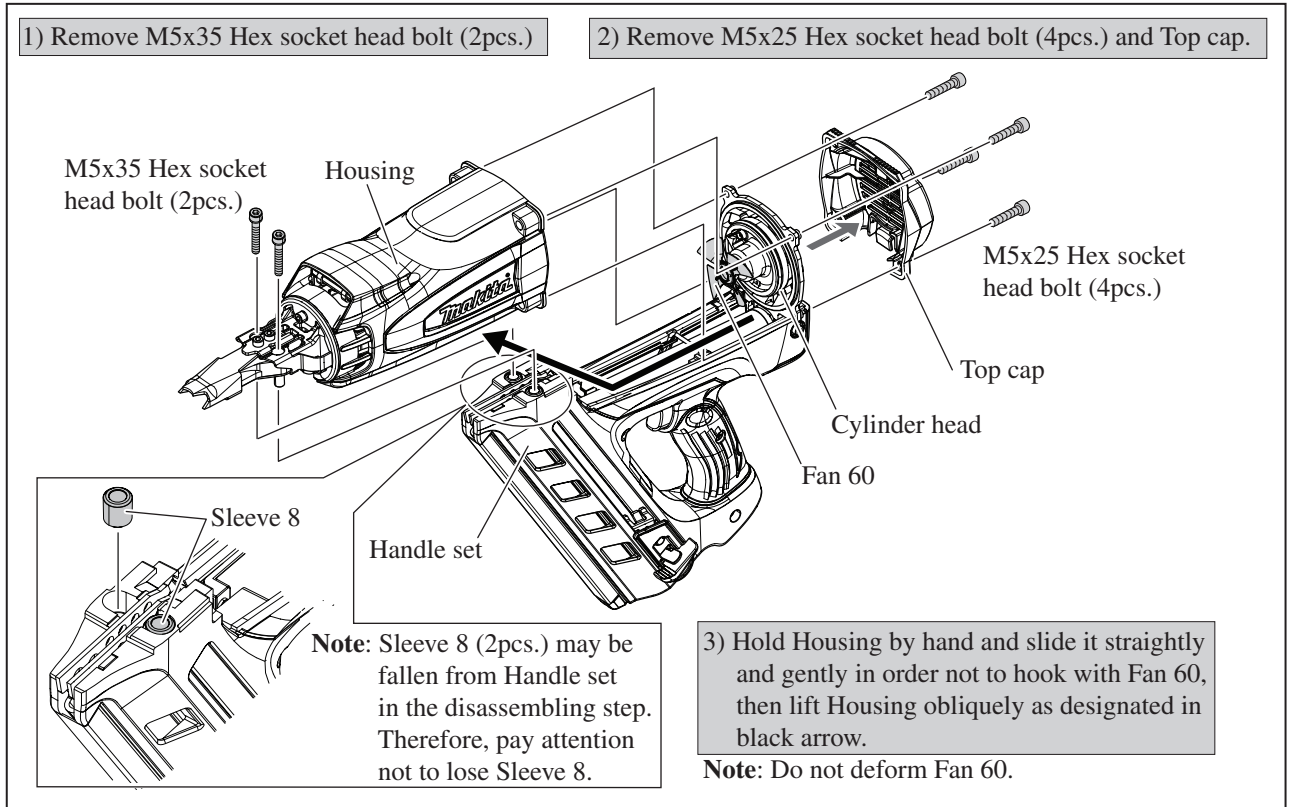
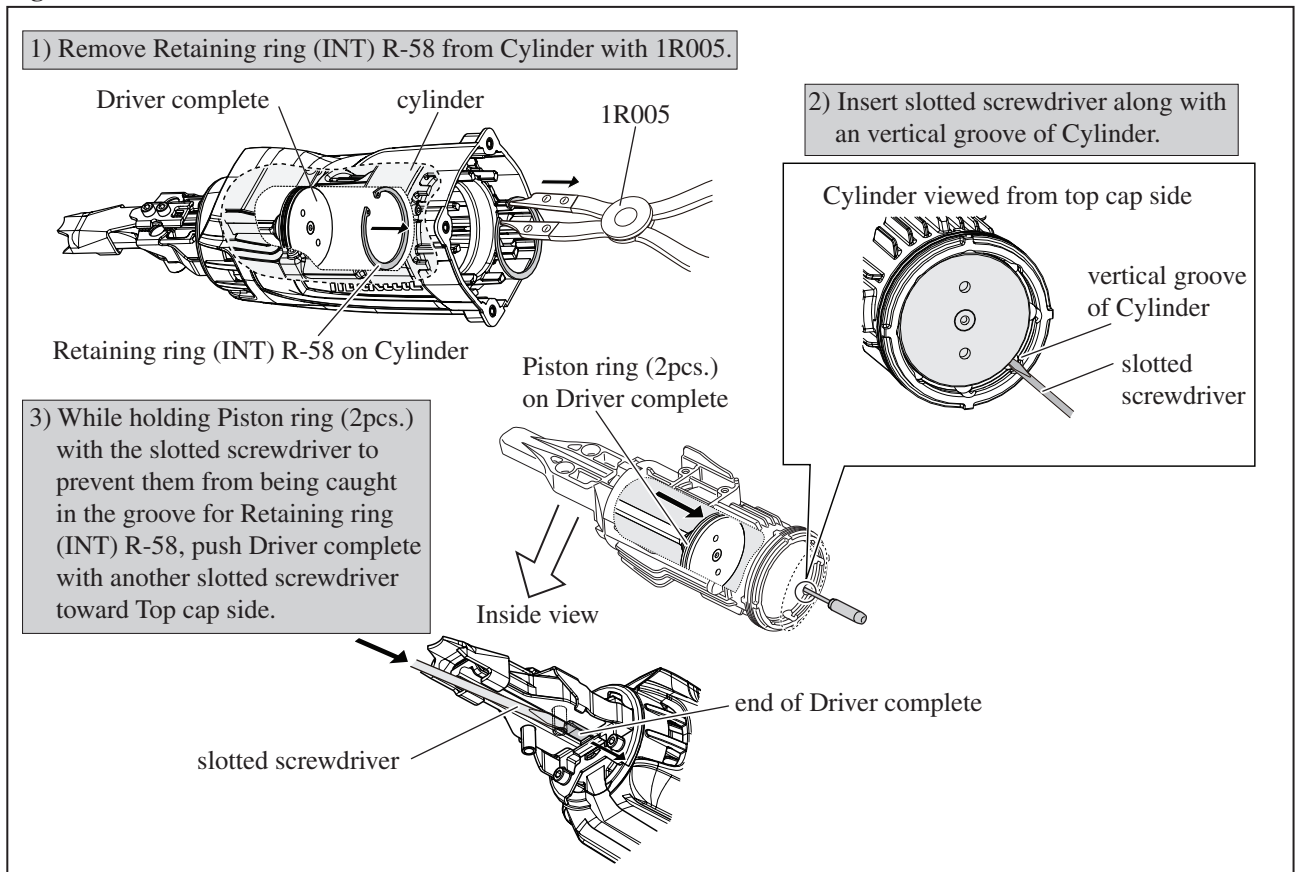


Fig. 3



► **Repair**

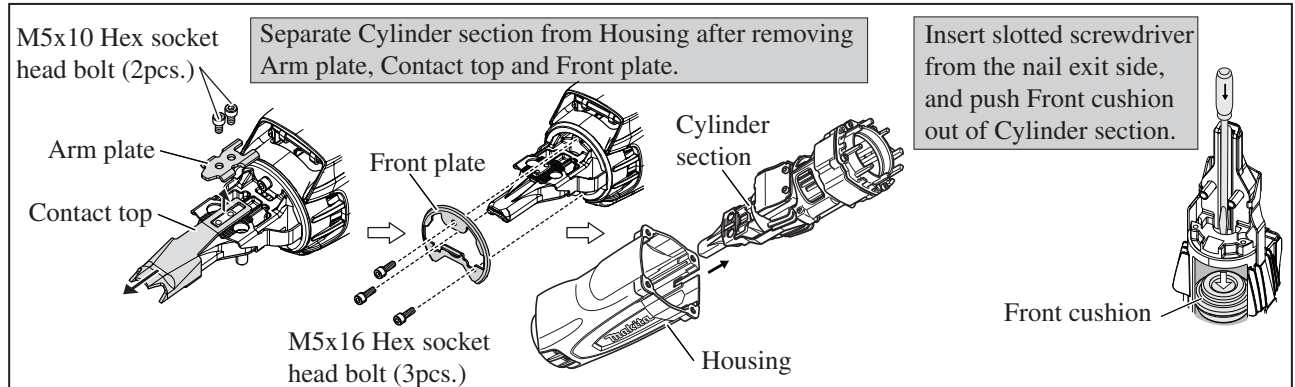
[3] DISASSEMBLY/ASSEMBLY

[3]-1. Driver, Front cushion (cont.)

DISASSEMBLING

(2) Separate Cylinder section from Housing. And then disassemble Front cushion. (Fig. 4)

Fig. 4



ASSEMBLING

(1) Assemble Front cushion to Cylinder as illustrated in Fig. 5.

(2) Mount two Piston rings to Driver complete. (Fig. 6)

Fig. 5

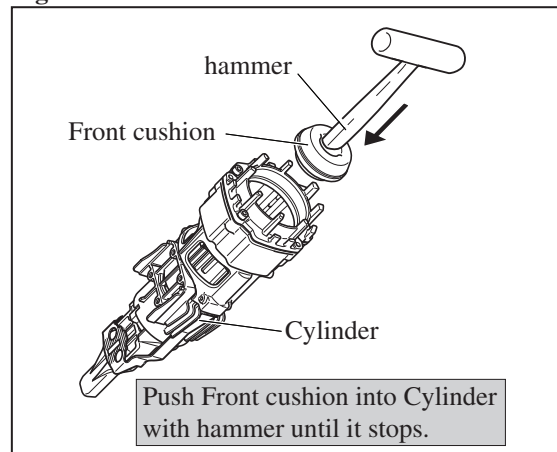
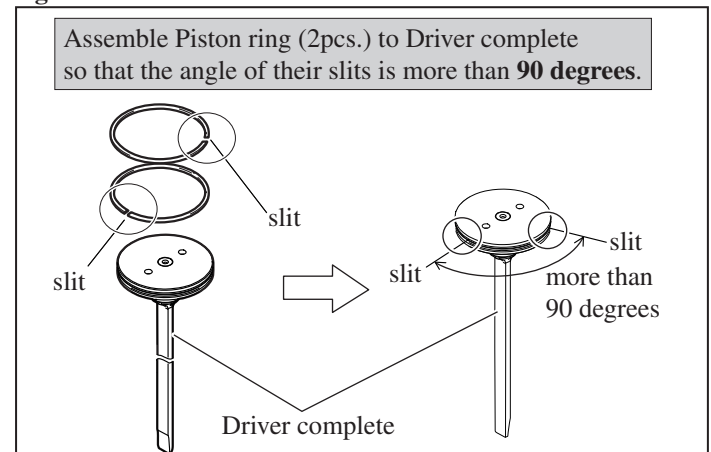
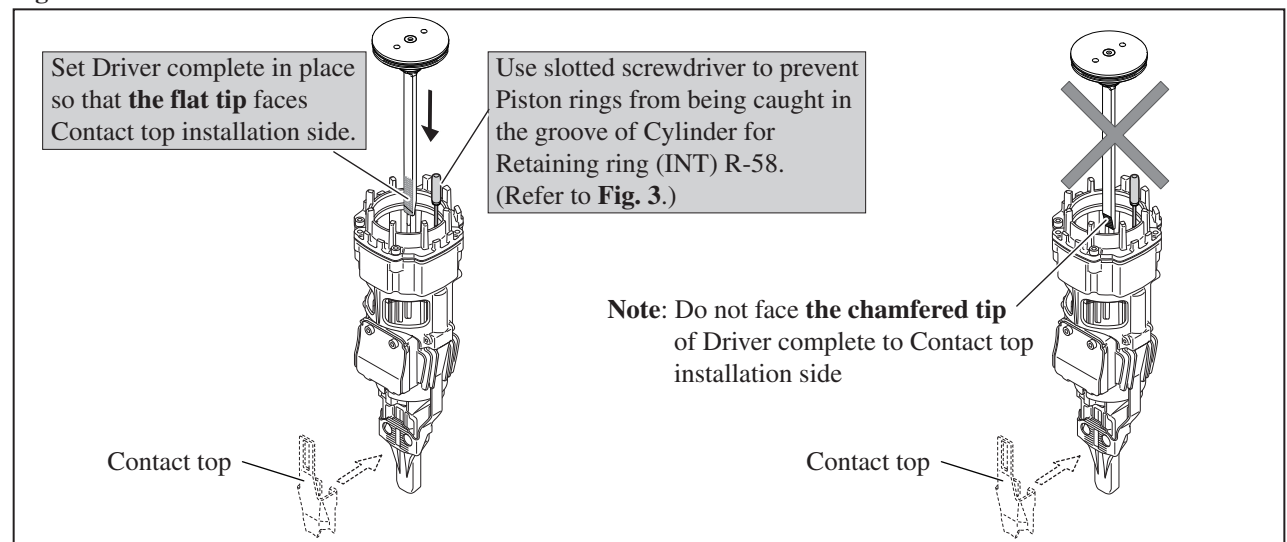


Fig. 6



(3) Insert Driver complete into Cylinder as illustrated in Fig. 7.

Fig. 7



(4) Inserting Cylinder section into Housing, tighten Front plate with M5x16 Hex socket head bolt (3pcs.).

Assemble Contact top and Arm plate. (Fig. 4)

(5) Assemble Retaining ring (INT) R-58 to the groove in Cylinder. (Fig. 3)

(6) Assemble Handle set to Housing. (Fig. 2)

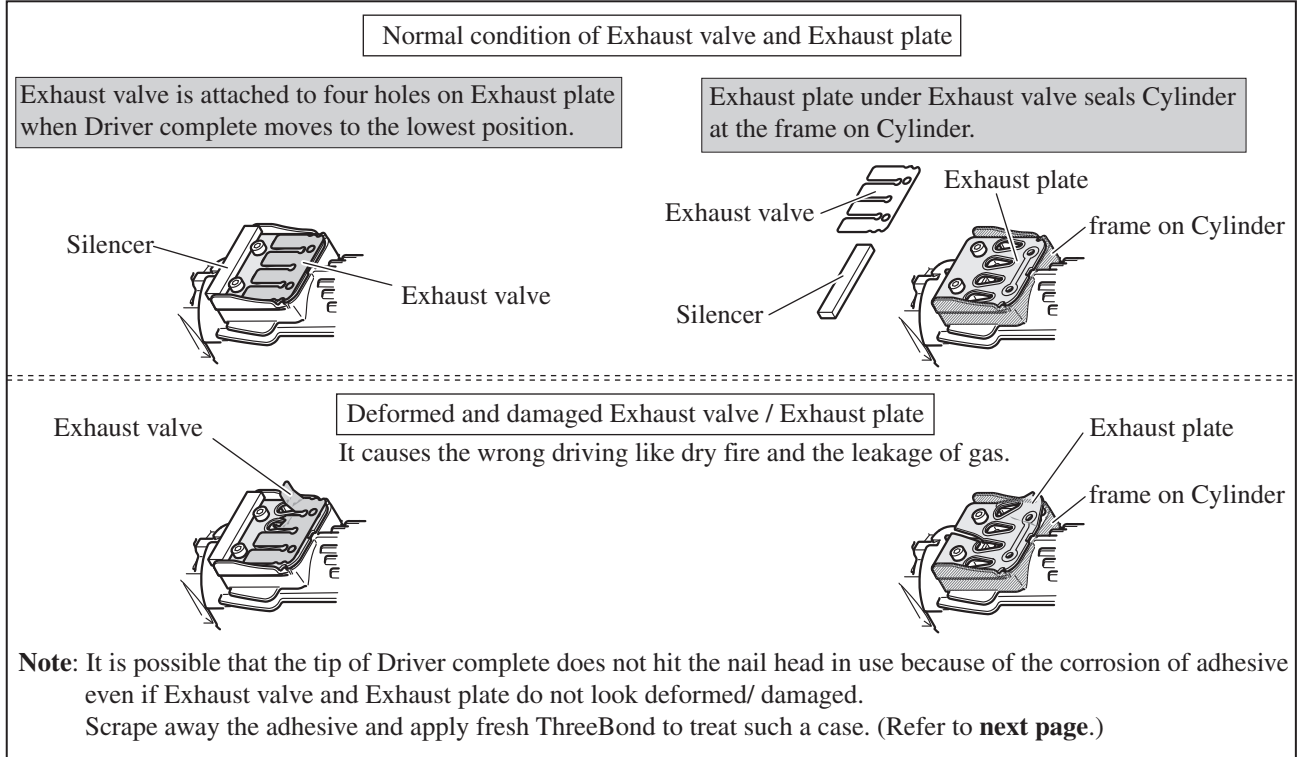
► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-2. Exhaust valve section

When the tip of Driver complete does not hit the nail head in use, disassemble exhaust valve section to check malfunctions as illustrated in **Fig. 8**.

Fig. 8



DISASSEMBLING

- (1) Disassemble Handle set from Housing. (**Fig. 2**.)
- (2) Remove Contact top, Arm plate and Front plate from Cylinder. And separate Cylinder section from Housing. (**Fig.4**)
- (3) Disassemble Exhaust mechanism as illustrated in **Figs. 9 and 10**.

Fig. 9

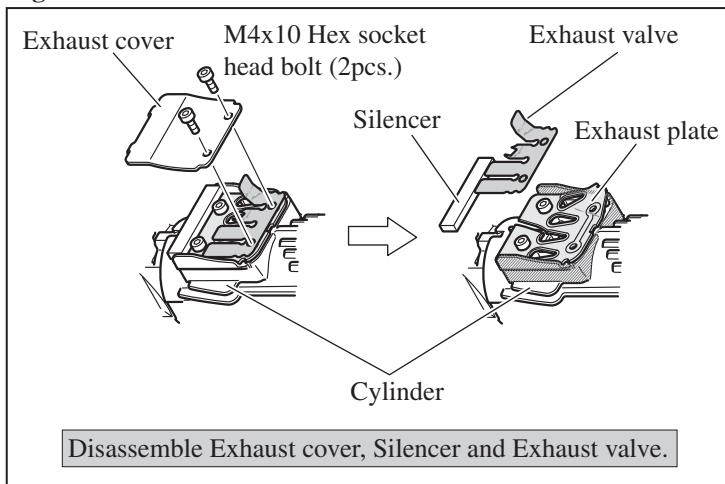
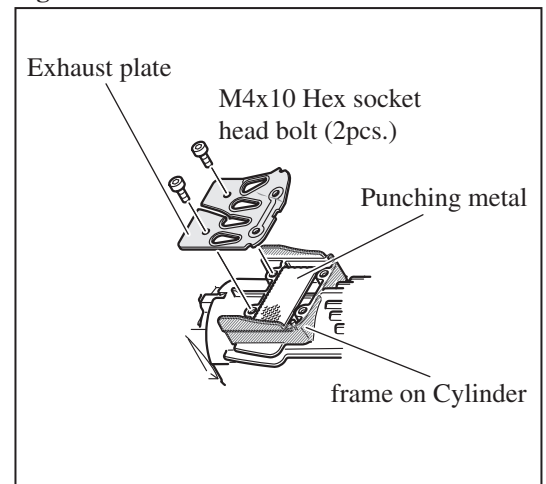


Fig. 10



► Repair

[3] DISASSEMBLY/ASSEMBLY

[3]-2. Exhaust valve section (cont.)

ASSEMBLING

(1) Use slotted screwdriver to scrape away adhesive left on the frame on Cylinder.

Note: The incomplete scraping causes the leakage of gas.

(2) Take the assembling step as illustrated in **Figs. 11** and **12**.

Fig. 11

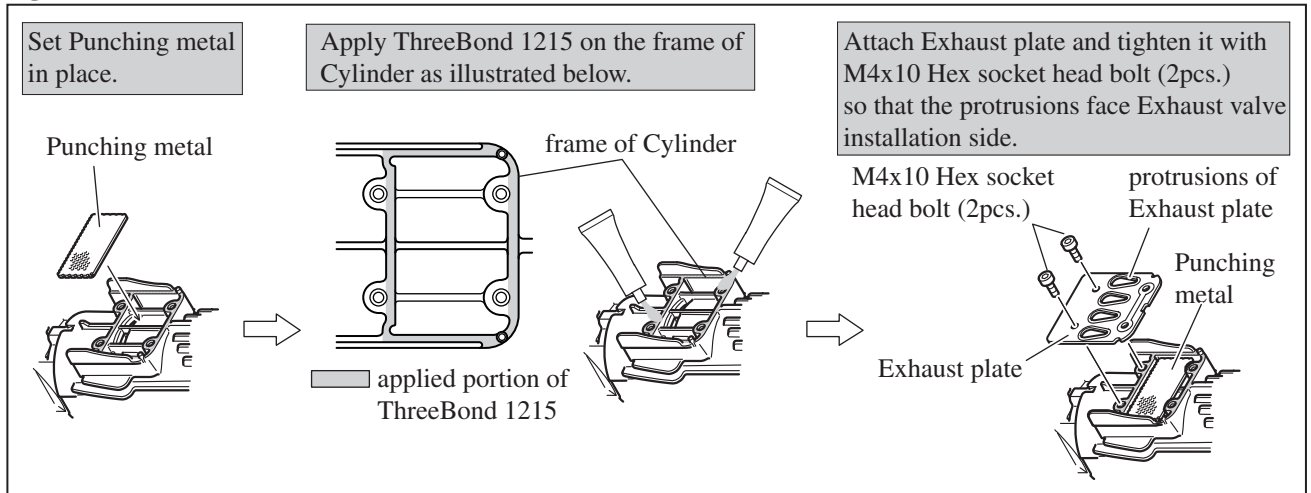
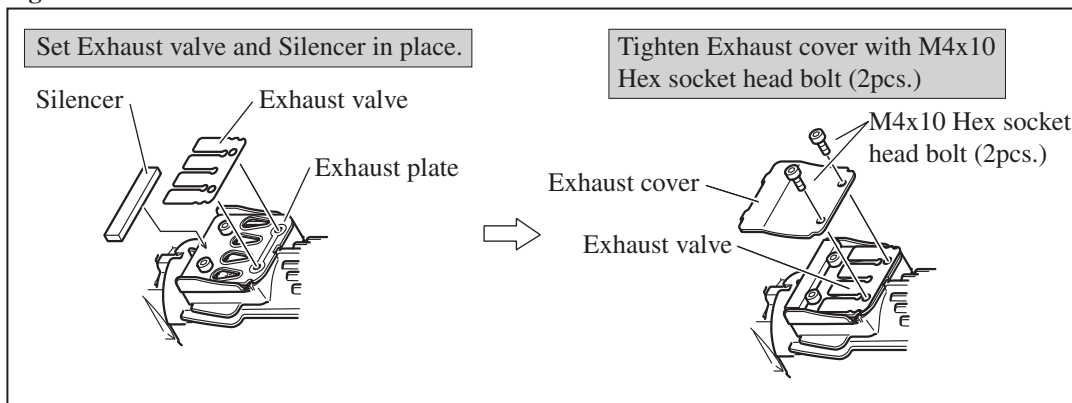


Fig. 12



(3) Insert Cylinder section to Housing and assemble Front plate.

Assemble Contact top and Arm plate to the Driver guide section of Cylinder. Refer to **Fig. 4**.

(4) Assemble Handle set to Housing as illustrated in **Fig. 2**.

Note: Wait until ThreeBond 1215 dries at least **three hours**, and then try nailing before actual work.

Incomplete drying causes the leakage of gas.

► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-3. Chamber

DISASSEMBLING

- (1) Disassemble Handle set from Housing as illustrated in **Fig. 2**.
- (2) Remove Contact top, Arm plate and Front plate from Cylinder.
Separate Cylinder section from Housing as illustrated in **Fig. 4**.
- (3) The removed Cylinder section can be disassembled as illustrated in **Figs. 13 and 14**.

Fig. 13

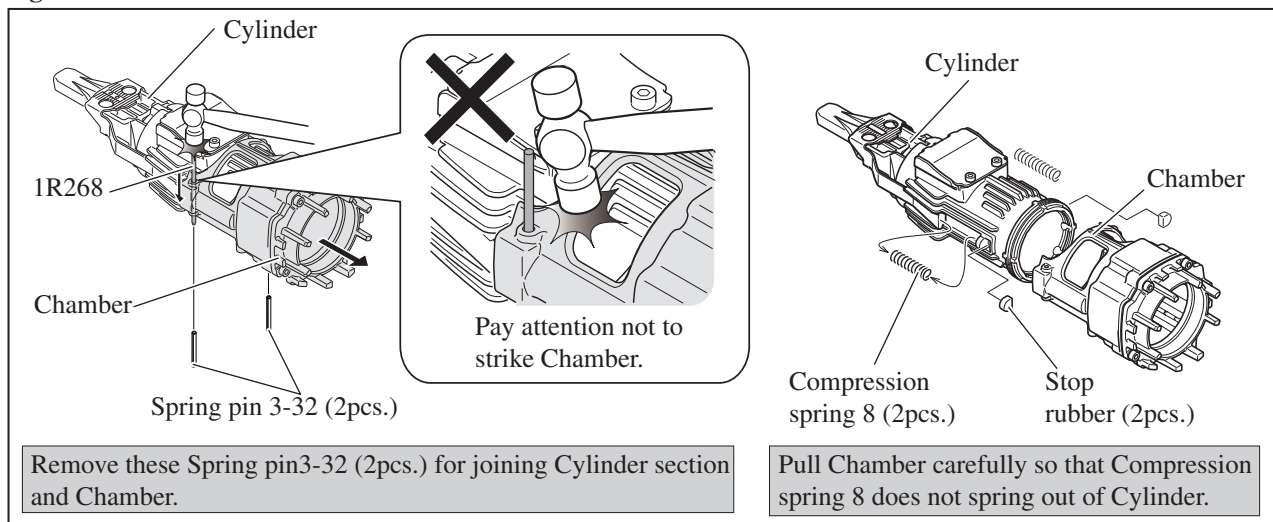
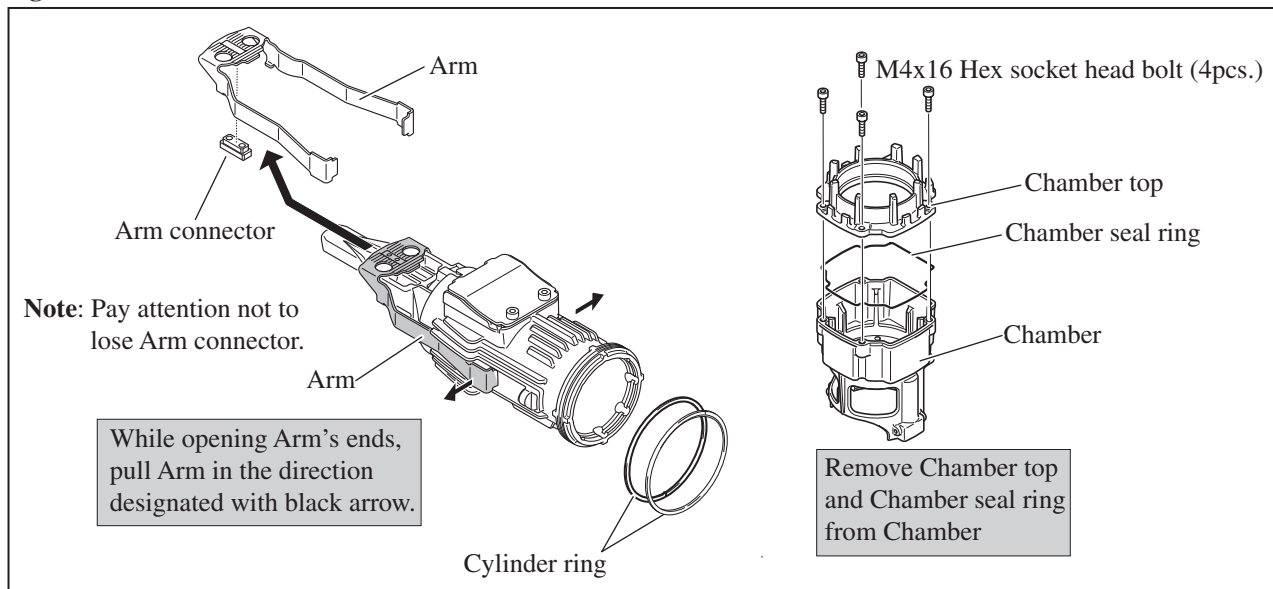


Fig. 14



► Repair

[3] DISASSEMBLY/ASSEMBLY

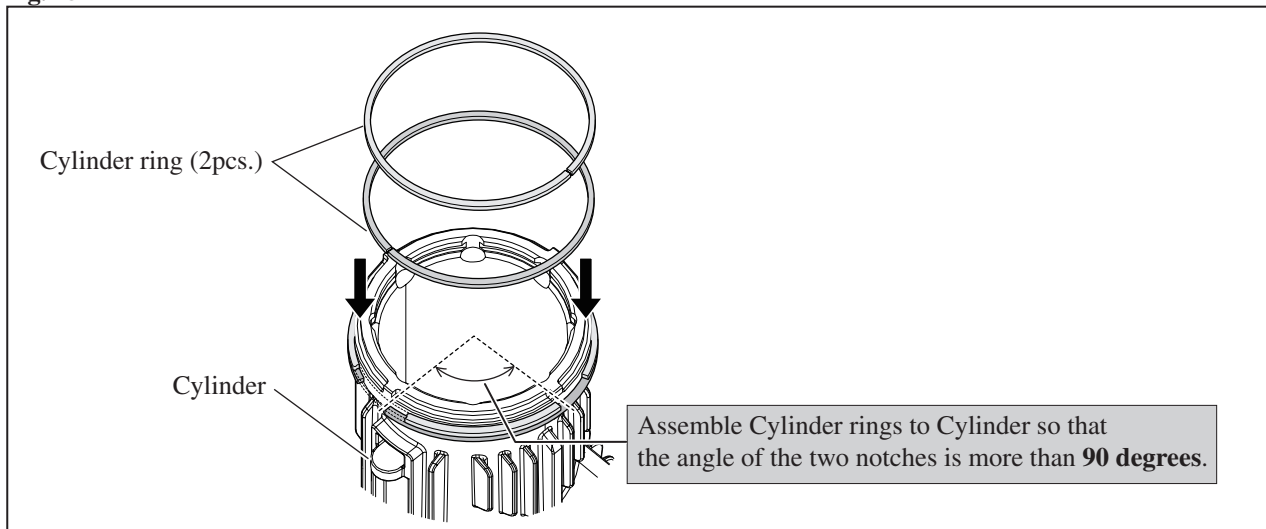
[3]-3. Chamber (cont.)

ASSEMBLING

(1) Assemble Cylinder rings to Cylinder as illustrated in **Fig. 15**.

Note: Apply the specific lubricants in accordance with the instruction shown in **Fig. 1**.

Fig. 15



(2) Put Chamber seal ring on the edge of Chamber, and assemble Chamber top to Chamber by fastening with M4x16 Hex socket head bolt (4pcs.). Refer to **the right illustration in Fig. 14**.

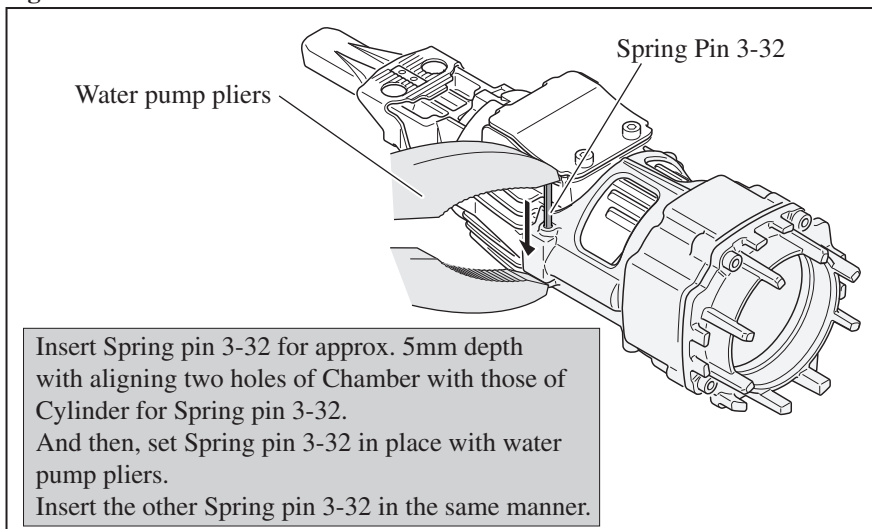
(3) Setting Arm connector to Arm, assemble them to Cylinder. Refer to **the left illustration in Fig. 14**.

(4) Assemble Stop rubber and Compression spring 8 to Cylinder. Refer to **the right illustration in Fig. 13**.

(5) Applying Molybdenum disulphide lubricant to the outside of Cylinder (**Fig. 1**), insert it into Chamber. Refer to **right illustration in Fig. 13**.

(6) Connect Cylinder with Chamber as illustrated in **Fig. 16**.

Fig. 16



(7) Inserting Cylinder section into Housing, tighten Front plate with M5x16 Hex socket head bolt (3pcs.). Refer to **Fig. 4**.

(8) Assemble Contact top and Arm plate. Refer to **Fig. 4**.

(9) Assemble Handle set to Housing. Refer to **Fig. 2**.

► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-4. Pusher, Handle section

DISASSEMBLING

- (1) Separate Handle set from Housing as illustrated in Fig. 2.
- (2) Handle set (L) can be separated from Handle set (R) as illustrated in Fig. 17. And remove Lock bar and Compression spring 4 as illustrated in Fig. 18.

Fig. 17

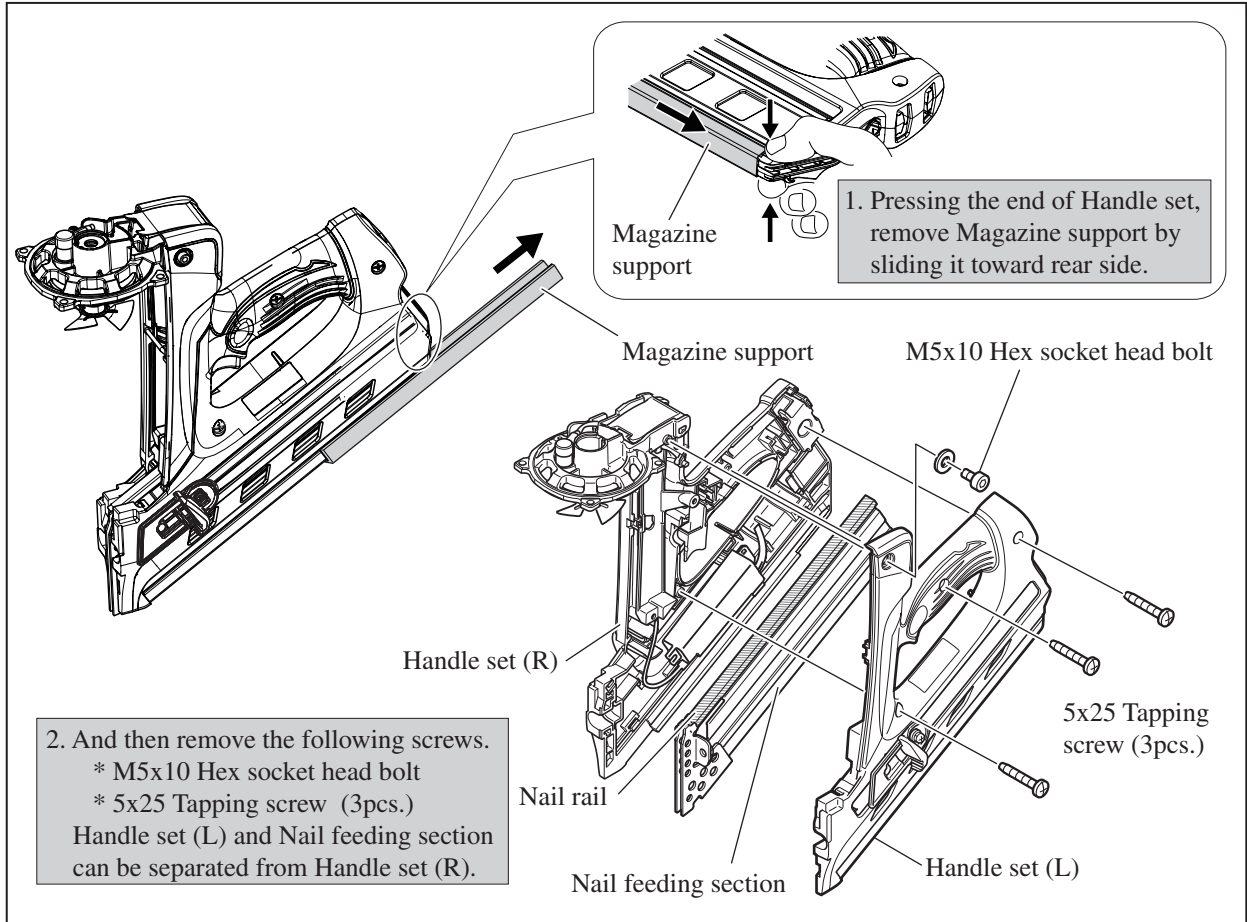
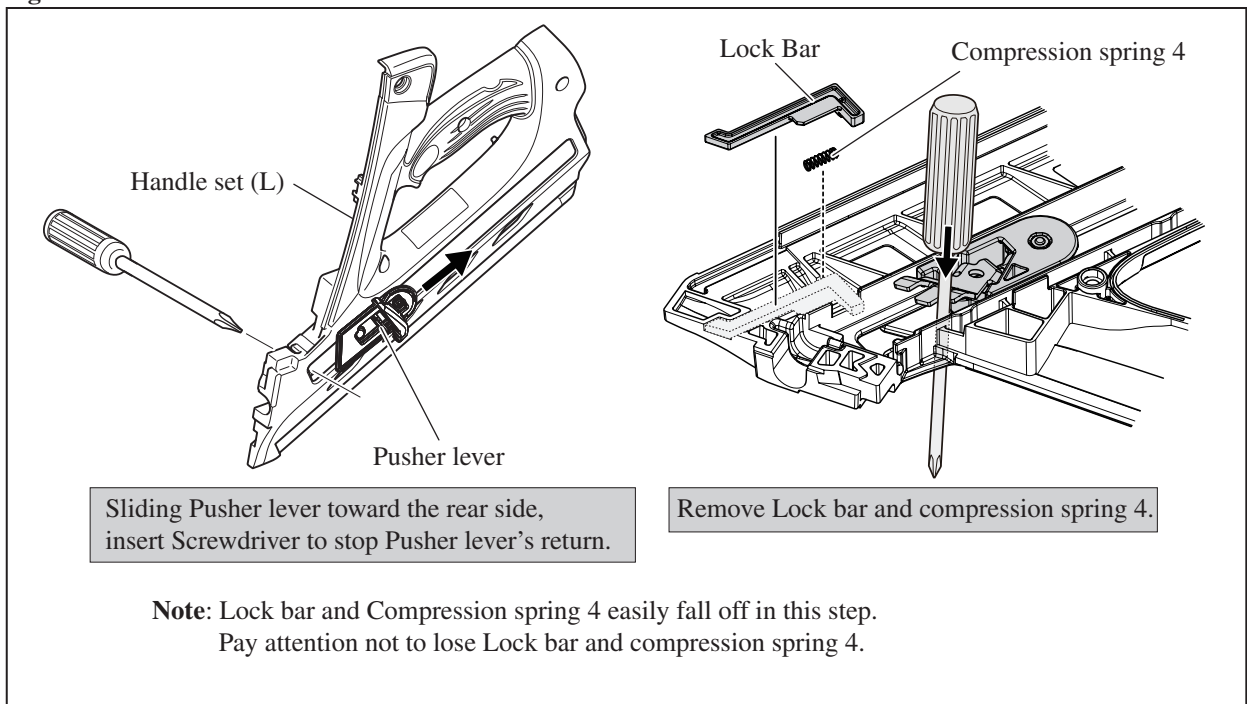


Fig. 18



► Repair

[3] DISASSEMBLY/ASSEMBLY

[3]-4. Pusher, Handle Section (cont.)

DISASSEMBLING

(3) Pusher section can be disassembled from Handle set (L) as illustrated in **Fig. 19**.

(4) The other parts in Handle set can be disassembled as illustrated in **Fig. 20**.

Fig. 19

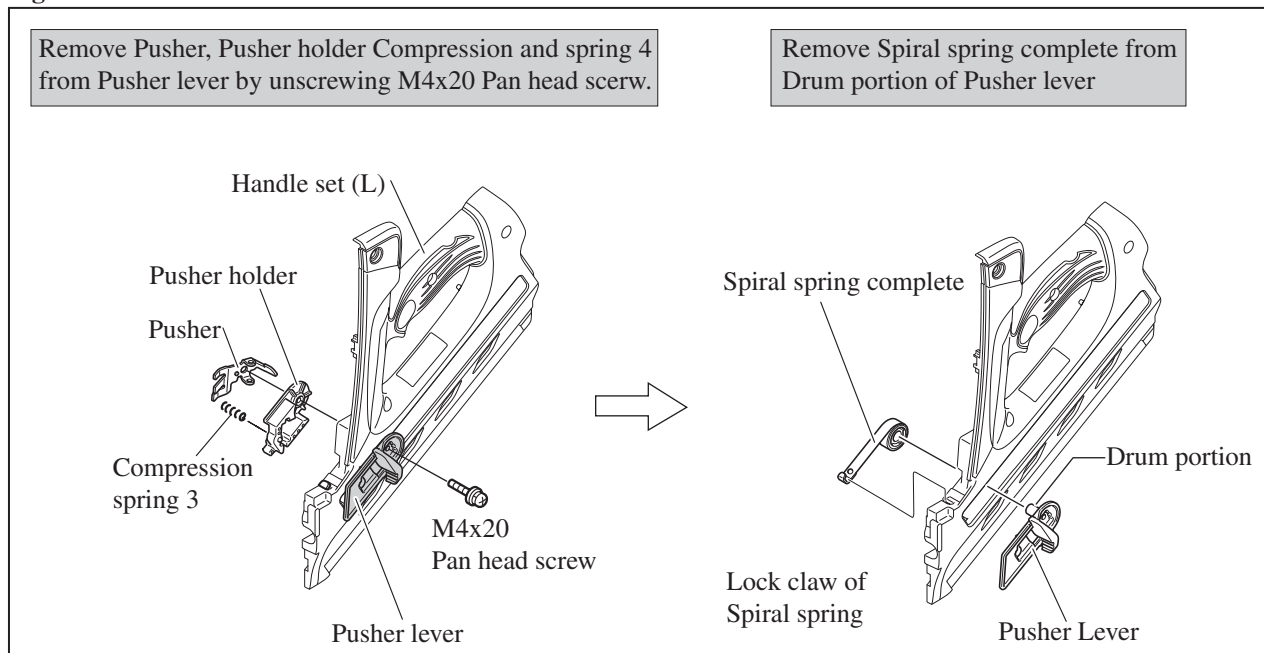
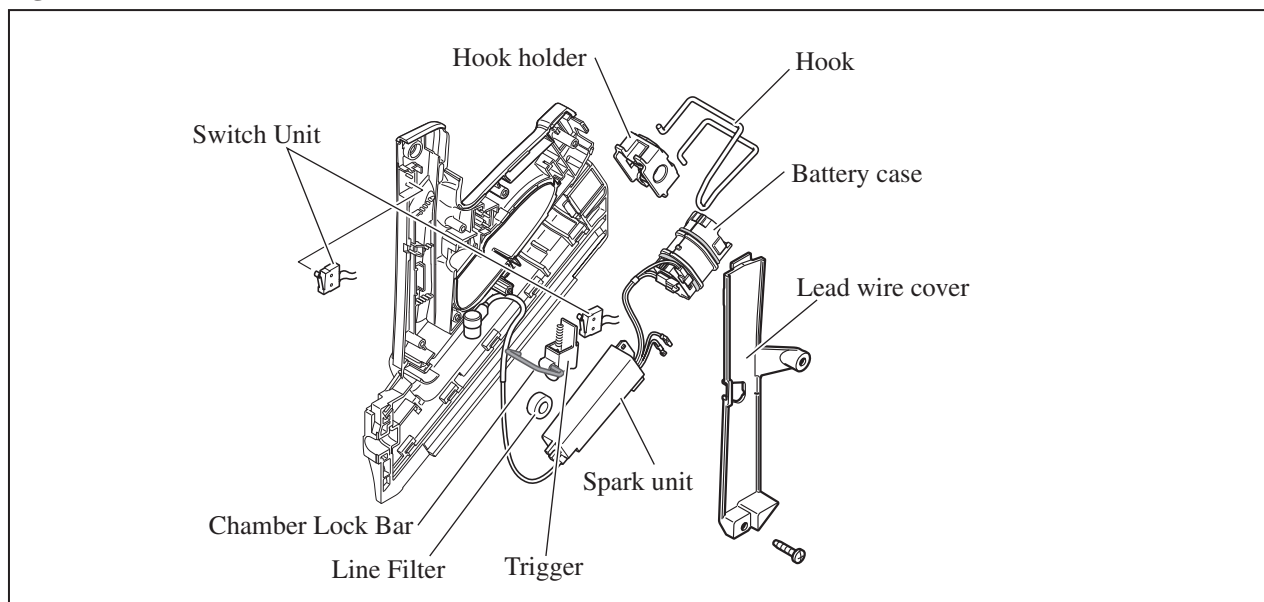


Fig. 20



► Repair

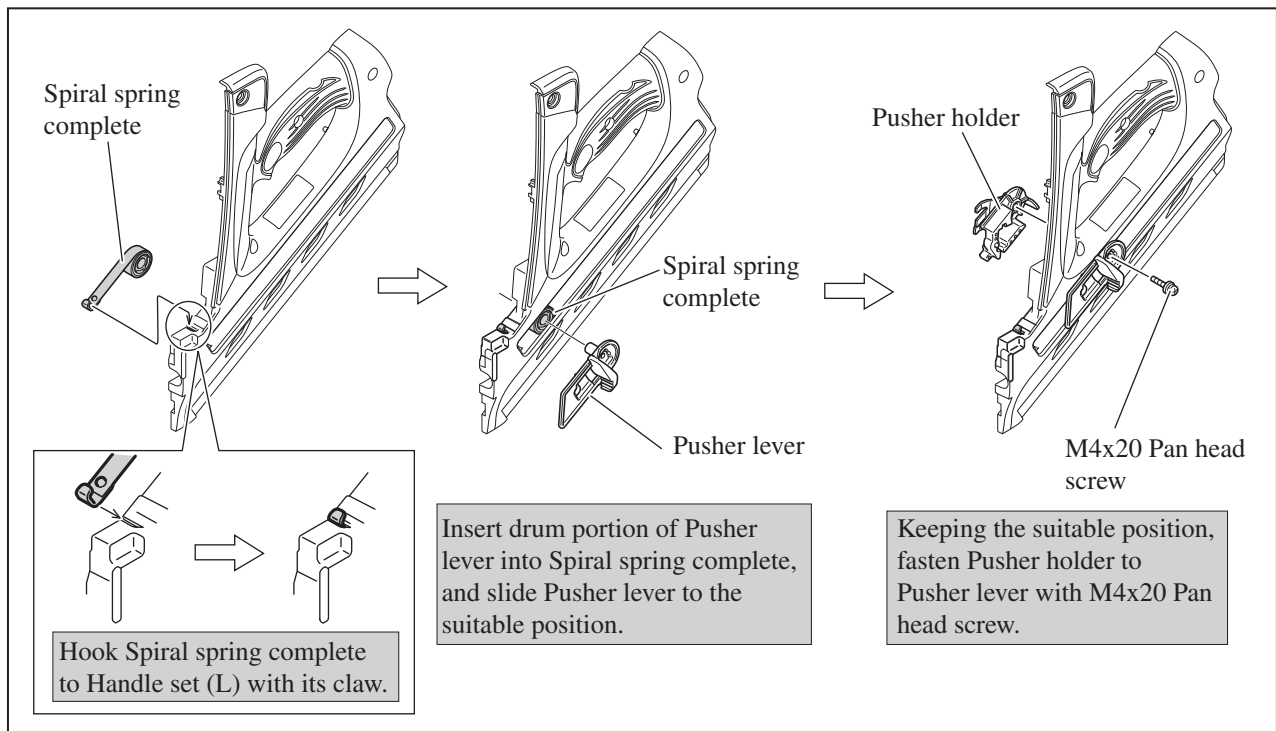
[3] DISASSEMBLY/ASSEMBLY

[3]-4. Pusher, Handle section (cont.)

ASSEMBLING

(1) Assemble Pusher section as illustrated in **Fig. 21**.

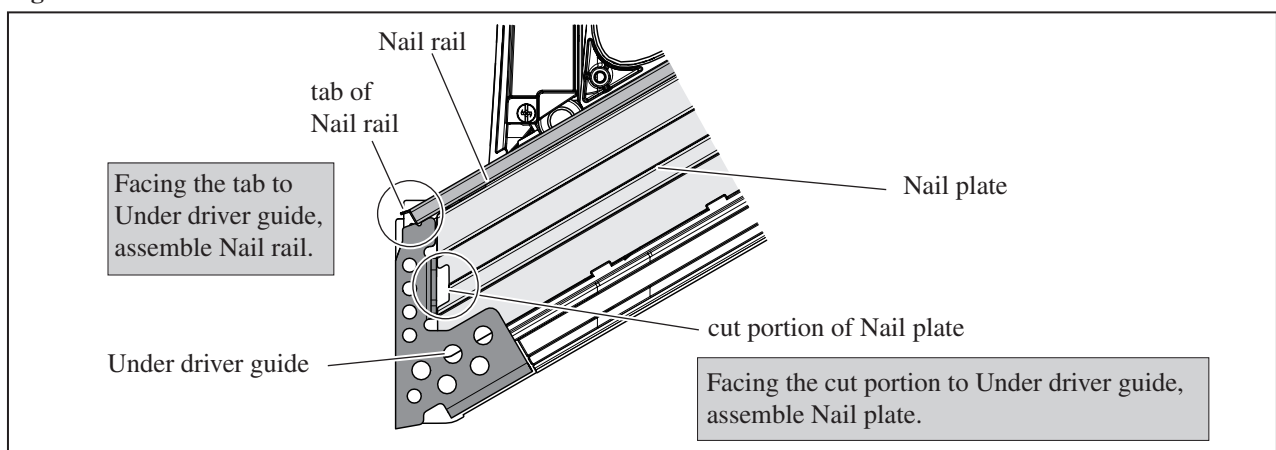
Fig. 21



(2) Referring to **Fig. 18**, assemble Lock bar and Compression spring 4 to Handle set (L).

(3) Assemble Nail feeding section as illustrated in **Fig. 22**.

Fig. 22



(4) Referring to **Fig. 20**, assemble the necessary parts to Handle set (R).

(5) Referring to **Fig. 19**, assemble Nail feeding section, and fasten Handle set (L) to Handle set (R) with 5x25 Tapping screws (3pcs.) and M5x10 Hex socket head bolt. Assemble Magazine support.

(6) Assemble Handle set to Housing as illustrated in **Fig. 2**.

► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-5. DC motor and Spark plug

DISASSEMBLING

- (1) Separate Handle set from Housing as illustrated in **Fig. 2**.
- (2) Disconnect Spark plug and DC motor from Spark unit and Terminal as illustrated in **Fig. 23**.
- (3) DC motor can be removed from Cylinder head as illustrated in **Figs. 24 and 25**.

Fig. 23

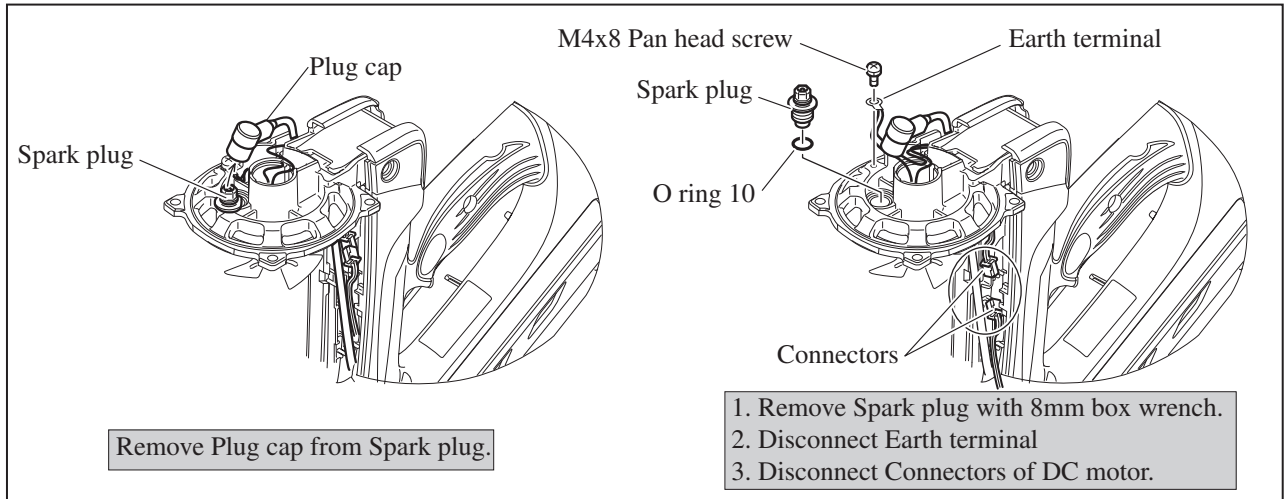


Fig. 24

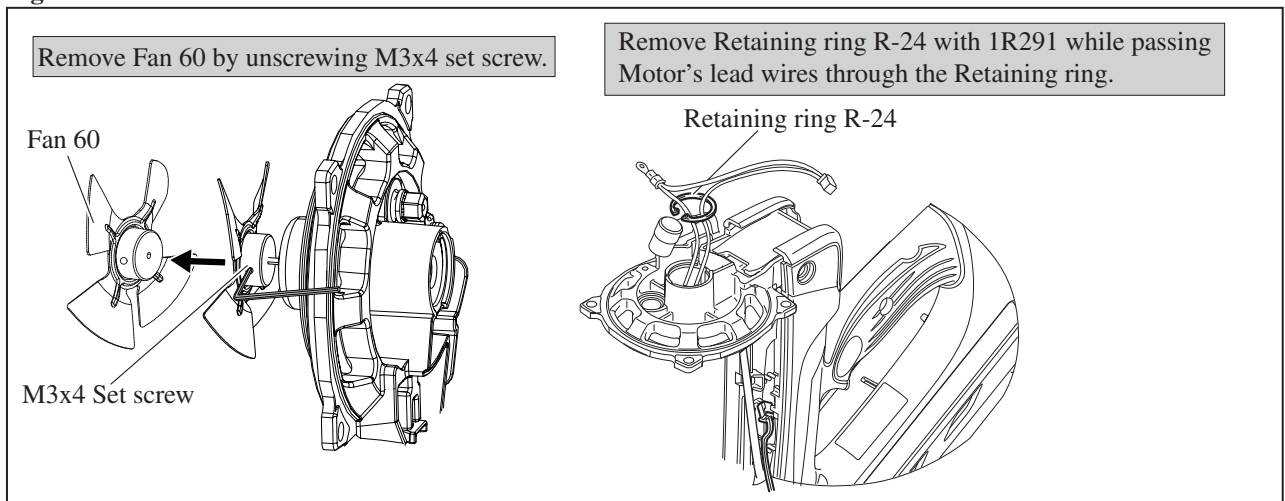
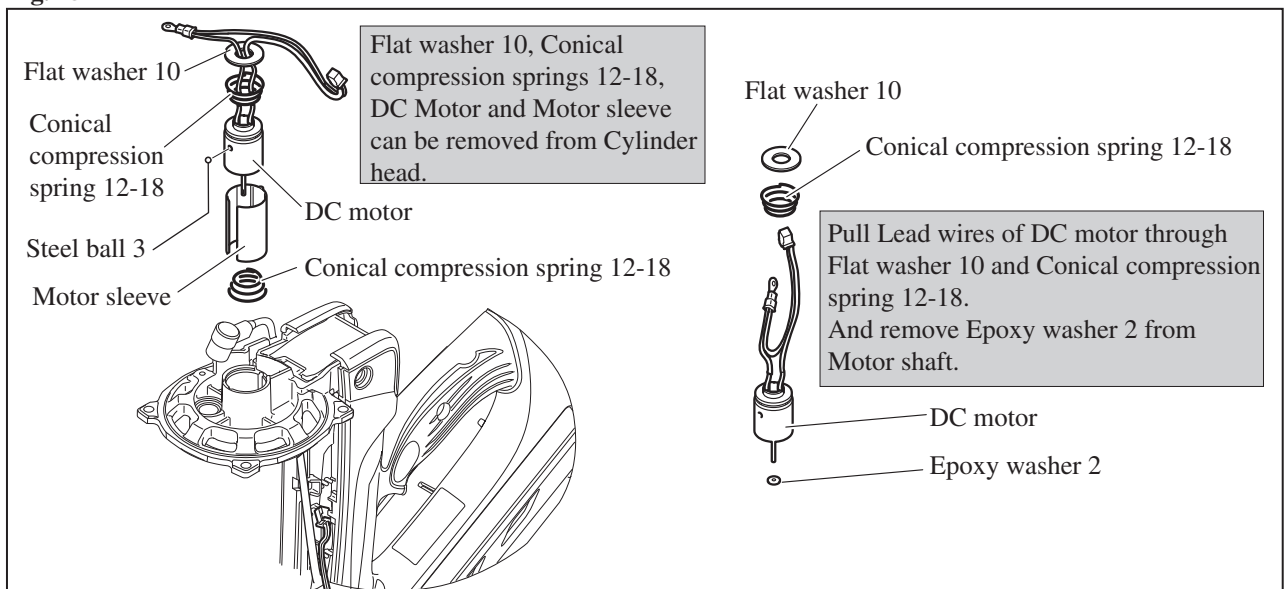


Fig. 25



► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-5. DC motor and Spark plug (cont.)

ASSEMBLING

(1) Assemble DC Motor to Cylinder head as illustrated in **Figs. 26, 27 and 27A**.

Fig. 26

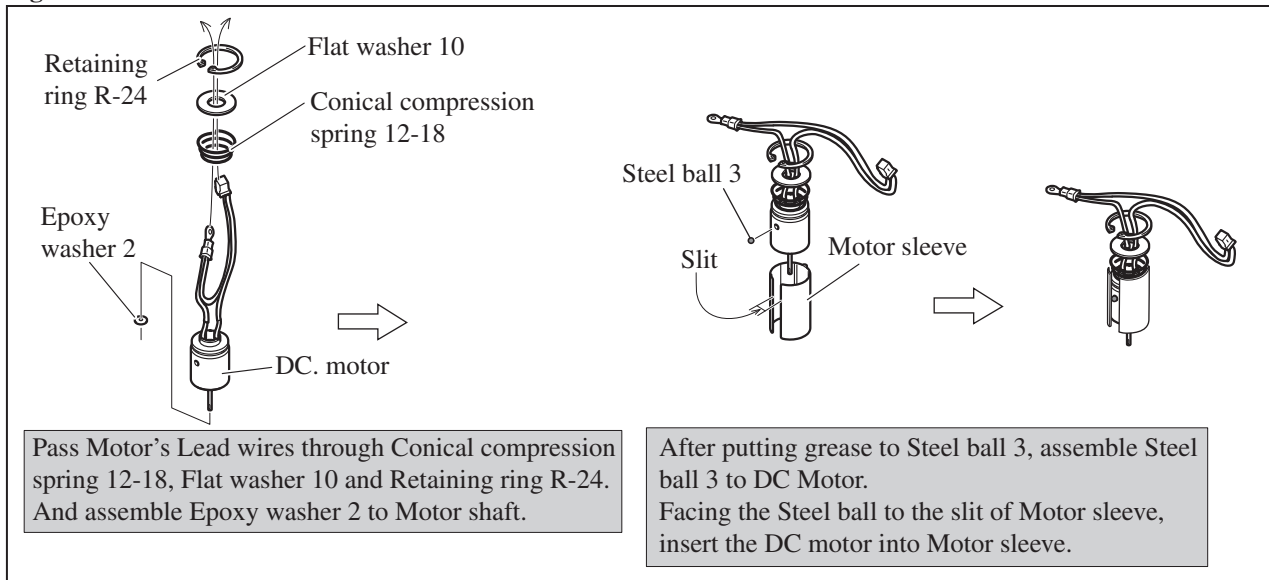


Fig. 27

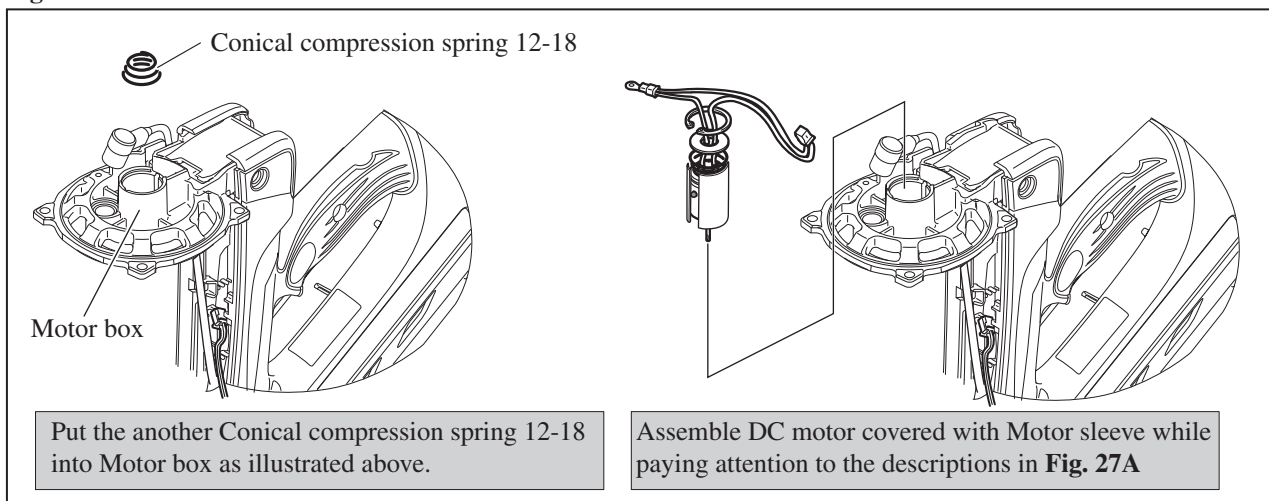
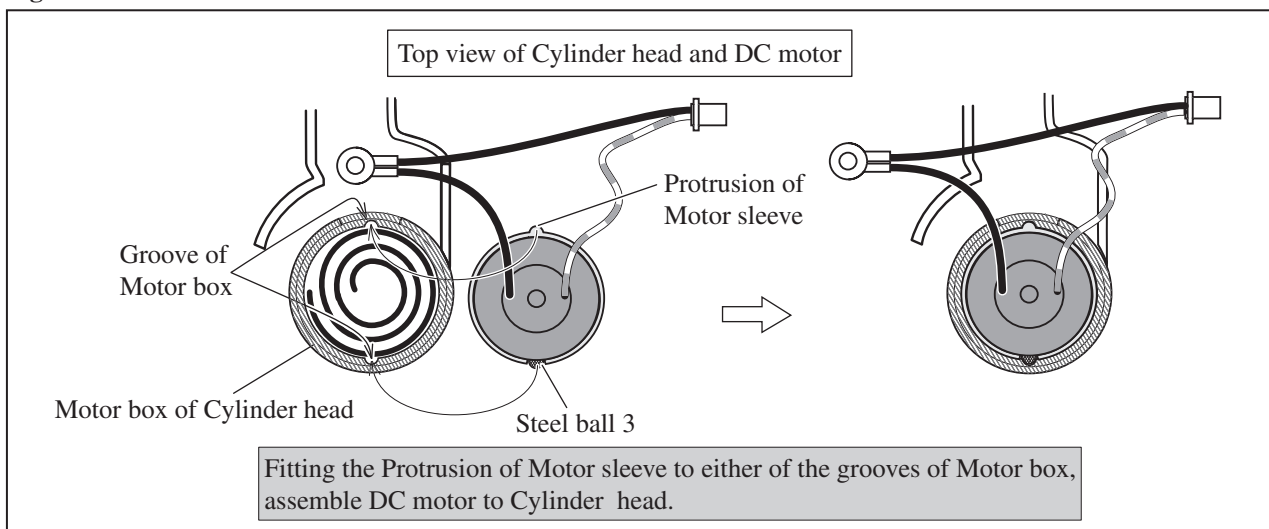


Fig. 27A



► Repair

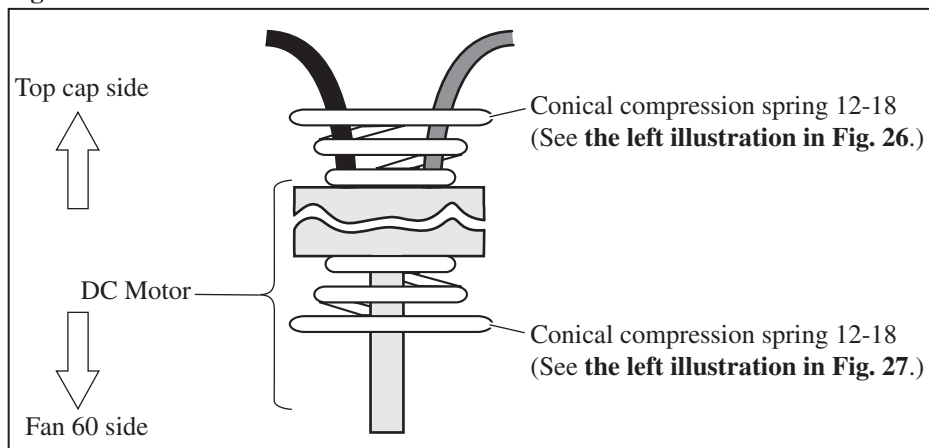
[3] DISASSEMBLY/ASSEMBLY

[3]-5. DC motor and Spark plug (cont.)

ASSEMBLING

Note: Conical compression springs 12-18 have to be assembled as mentioned below and shown in **Fig. 28**.

Fig. 28

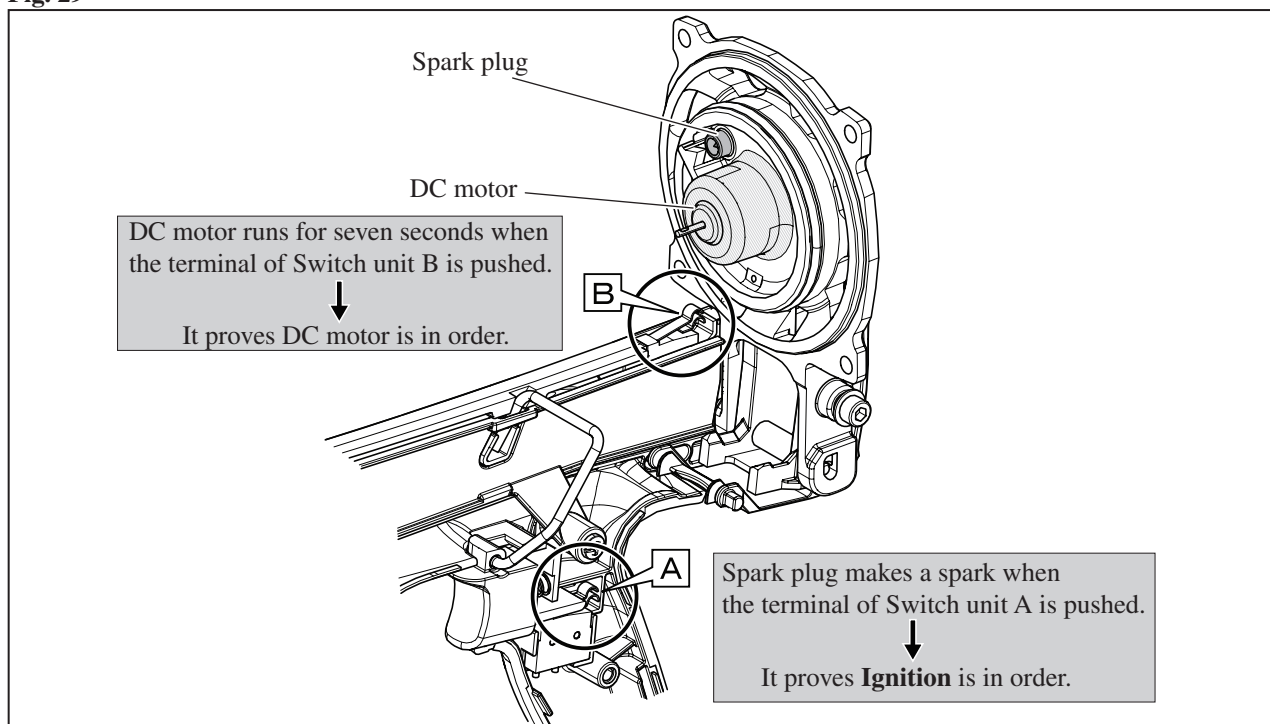


- (2) In order to fix DC Motor, assemble Retaining ring R-24 with 1R291, while pressing down the upper Conical compression spring 12-18. Refer to **the right illustration in Fig. 24**.
- (3) Assemble Fan 60. Refer to **the left illustration in Fig. 24**.
- (4) Connect the connectors of DC Motor in the Handle set. Refer to **the right illustration in Fig. 23**.
- (5) Connect Body earth terminal to Cylinder head. Assemble O ring 10 and Spark plug to Cylinder head. Refer to **the right illustration in Fig. 23**.
- (6) Connect plug cap to Spark plug. Refer to **the left illustration in Fig. 23**.
- (7) Assemble Handle set to Housing. Refer to **Fig. 2**.

[4] How to check of Spark and DC motor

- (1) Separate Handle set from Housing as illustrated in **Fig. 2**. And Disassemble Handle set (L) as illustrated in **Fig. 17**.
- (2) Remove Fan 60 from DC Motor as illustrated in **Fig. 24**.
Note: Be sure to remove Fan 60 for safe maintenance.
- (3) Setting Battery to the machine, start the following tests.
 - * **Ignition** by pushing the terminal of Switch unit A See **Fig. 29**.
 - * **DC Motor** by pushing the terminal of Switch unit B See **Fig. 29**.

Fig. 29



► Repair

[5] Diagnosis by Indication lamp

Color of the indication lamp means the followings.

Blinking green: Normal status

Blinking red: Need to recharge the battery cartridge

Lighting-up-red: Recharge the battery cartridge. Nailing can not be performed due to no remaining battery capacity.

Blinking orange after blinking green and red alternately

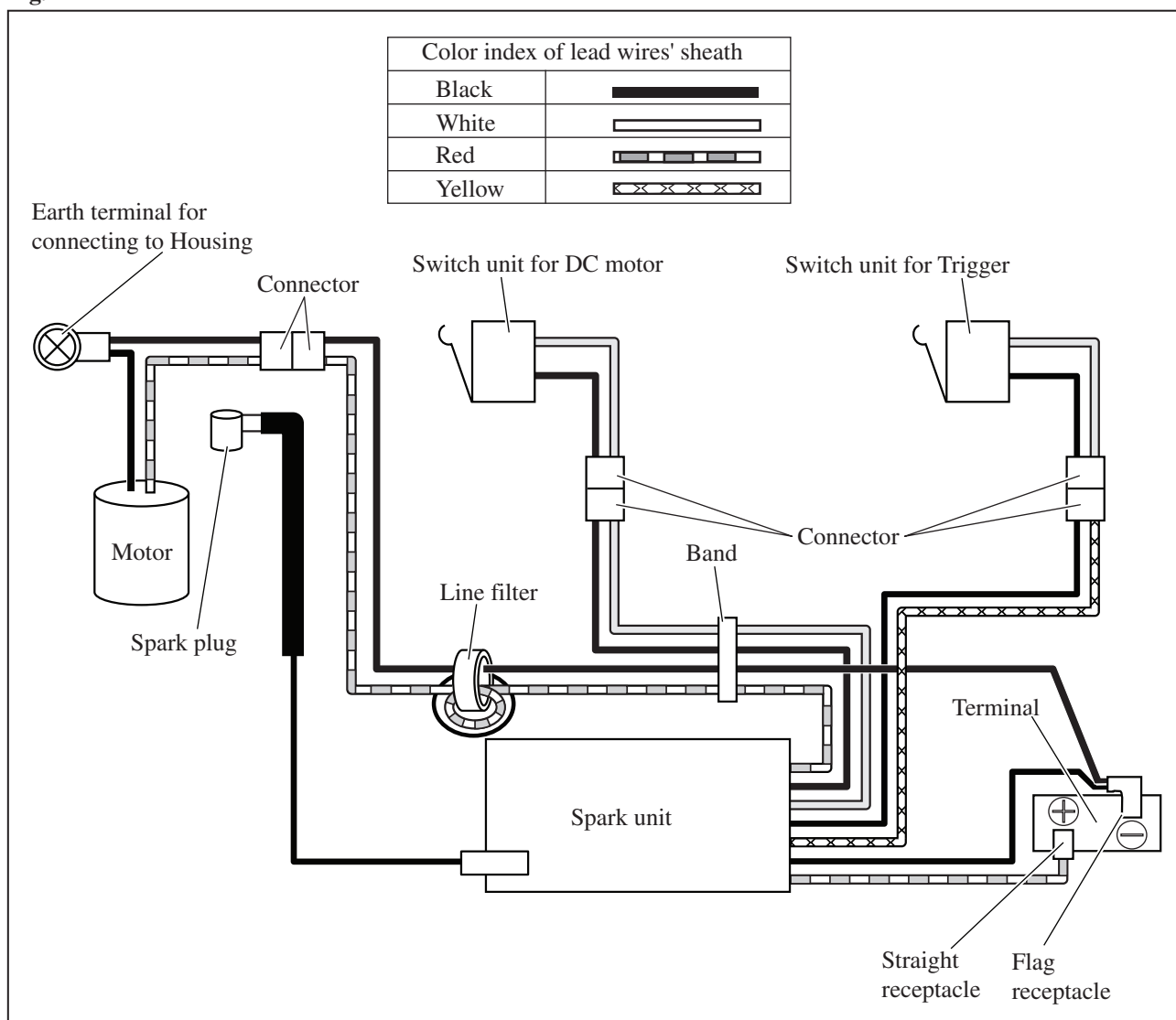
for 10 seconds: Fault detection is running. Remove and reinsert the battery cartridge to reset. If fault detection is running again, it is malfunction condition as shown in **Fig. 30**.

Fig. 30

Number of blinking orange	Possible electrical-malfunction	Possible mechanical-malfunction
1	Melting a part of Switch in Contact arm / Disconnection of Trigger switch	Returning Contact arm incompletely
2	Melting a part of Switch in Contact arm / Melting a part of Trigger switch	Returning Trigger incompletely
3	Melting a part of Switch in Contact arm	Returning Contact arm incompletely
4	Melting a part of Trigger switch	
5	Disconnection of DC motor	
6	Malfunction on Spark unit	

► Circuit diagram

Fig. D-1



► **Wiring diagram**

Fig. D-2

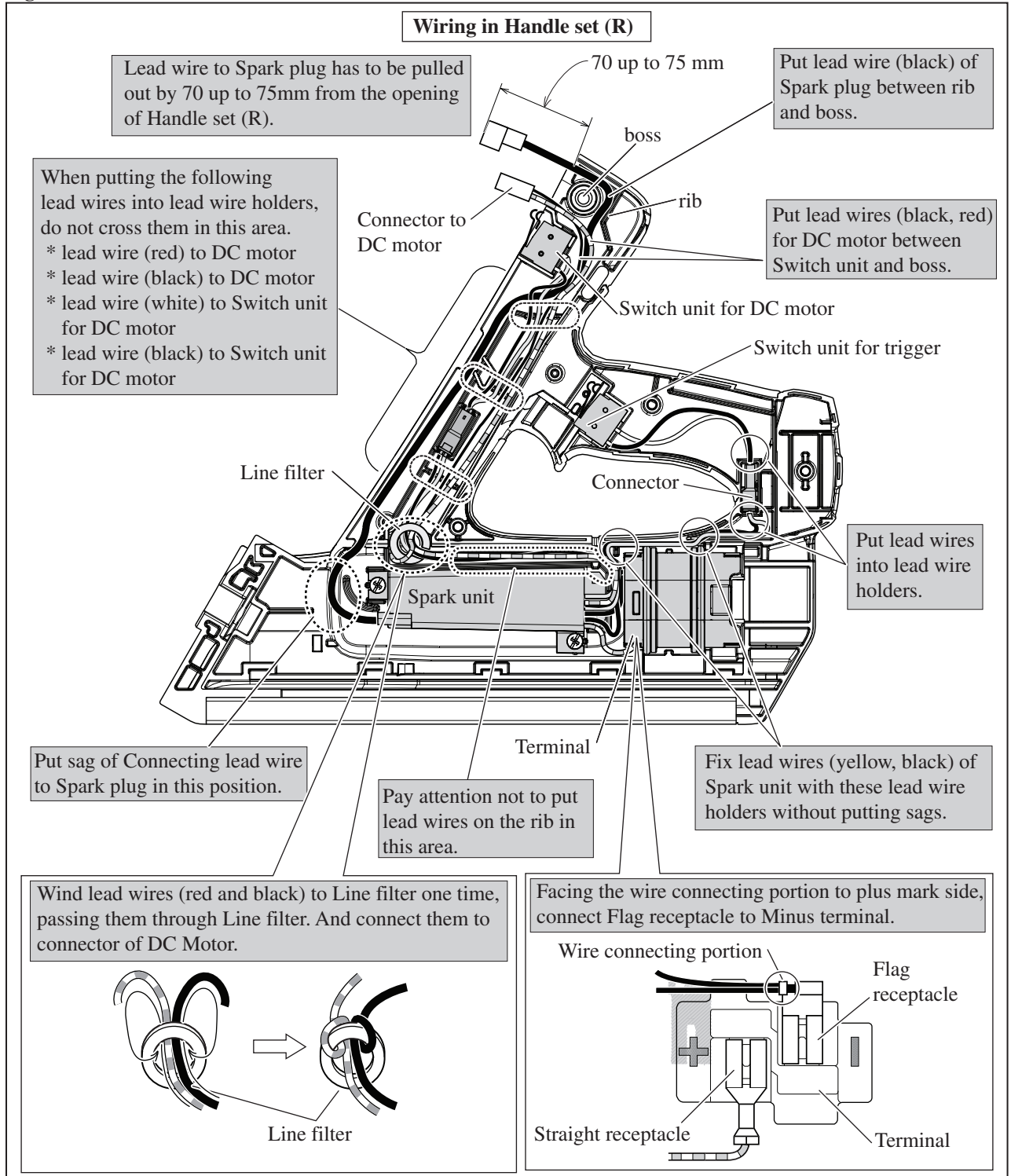


Fig. D-3

