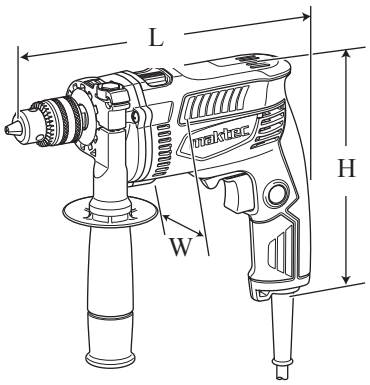
# TECHNICAL INFORMATION



**Model No.** ► MT817, MT818

**Description** ► Hammer Drills 13mm (1/2")




(The image above is MT817.)

| Dimensions: mm ( " ) | | |
|---|---|---|
| Model No. | **MT817** | **MT818** |
| Length (L) | 255 (10) | 258 (10-1/8) |
| Width (W) | 72 (2-13/16) | |
| Height (H) | 193 (7-5/8) | |

## CONCEPT AND MAIN APPLICATIONS

Models MT817 and MT818 have been developed as the cosmetic change of **maktec** hammer drills MT811 and MT812.
Their main features are:

- Industrial performance and durability at less expense
- Ergonomically designed handle with rubberized soft grip

The specification difference between these models are:
MT817/ 13mm (1/2") hammer drill with Keyed chuck
MT818/ 13mm (1/2") hammer drill with Keyless chuck

These models are also available with plastic carrying case as "K" models; MT817K, MT818K

## ► Specification

| Voltage (V) | Current (A) | Cycle (Hz) | Continuous Rating (W) | | Max. Output (W) |
|---|---|---|---|---|---|
| | | | Input | Output | |
| 110 | 4.1 | 50/60 | 430 | 220 | 340 |
| 120 | 3.8 | 50/60 | --- | 220 | 340 |
| 220 | 2.1 | 50/60 | 430 | 220 | 340 |
| 230 | 2.0 | 50/60 | 430 | 220 | 340 |
| 240 | 1.9 | 50/60 | 430 | 220 | 340 |

| Specification \ Model No. | | **MT817** | **MT818** |
|---|---|---|---|
| No load speed: min.$^{-1}$=rpm | | 0 - 2,800 | |
| Impacts per min.: min.$^{-1}$= ipm | | 0 - 30,800 | |
| Chuck type | | Keyed | Keyless |
| Chuck capacity: mm (") | | 1.5 - 13 (1/16 - 1/2) | |
| Capacities: mm (") | Steel | 13 (1/2) | |
| | Wood | 18 (11/16) | |
| | Concrete | 13 (1/2) | |
| Variable speed control by trigger | | Yes | |
| Reverse switch | | Yes | |
| Protection against electric shock | | Double insulation | |
| Power supply cord: m (ft) | | 2.0 (6.6) | |
| Weight according to EPTA-Procedure 01/2003*: kg (lbs) | | 1.8 (3.9) | 1.7 (3.7) |

* with Side grip

## ► Standard equipment

Chuck key S-13 ..... 1 (MT817 only)
Key holder 10 ..... 1 (MT817 only)
Side grip ..... 1
Depth gauge ..... 1 (for some countries)
Cap ..... 1 (for some countries)
Plastic carrying case ..... 1 ("K models" only)

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

## ► Optional accessories

No

# Repair

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

## [1] NECESSARY REPAIRING TOOLS

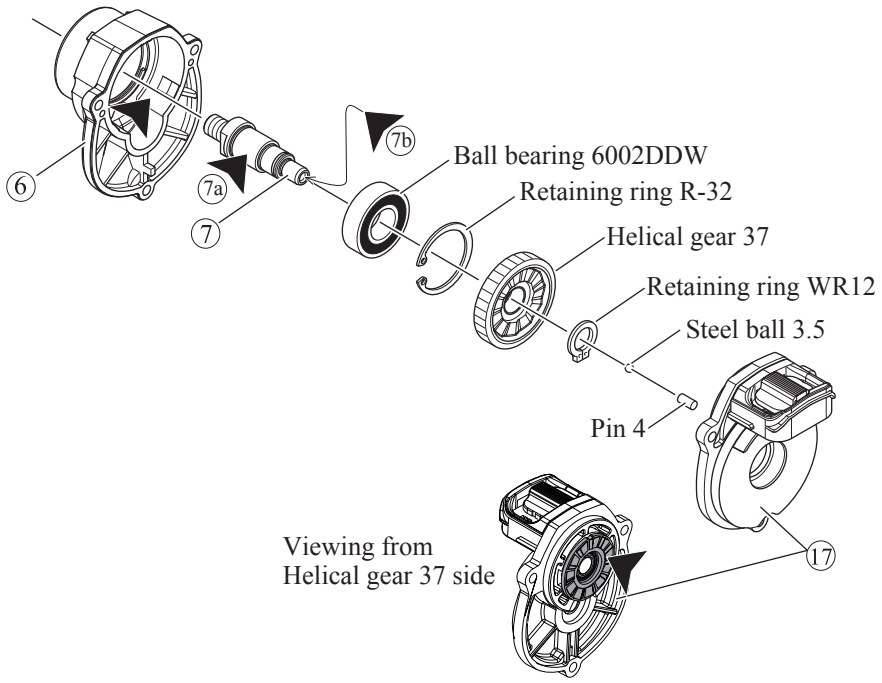
| Code No. | Description | Use for |
|---|---|---|
| 1R004 | Retaining ring pliers ST-2 | removing Retaining ring WR12 from Spindle |
| 1R005 | Retaining ring pliers RT-2N | removing Retaining ring R-32 from Gear housing |
| 1R026 | Bearing setting pipe 16-8.2 | removing Spindle from Helical gear 37 |
| 1R028 | Bearing setting pipe 20-12.2 | assembling Helical gear 37 and Cam |
| 1R035 | Bearing setting plate 15.2 | holding spindle when assembling Helical gear 37 |
| 1R037 | Bearing setting plate 20.2 | holding Gear housing when removing Spindle |
| 1R139 | Drill chuck extractor | fixing Spindle, when Drill Chuck removing |
| 1R223 | Torque wrench shaft 20-90N.m | removing / assembling Drill chuck |
| 1R224 | Ratchet head 12.7 (For 1R223) | |
| 1R298 | Hex bar 10 with square socket | |
| 1R258 | V block | holding Gear housing cover when assembling Cam |
| 1R269 | Bearing extractor | removing Ball bearings |
| 1R283 | Round bar for arbor 9-50 | removing Spindle from Helical gear 37 |

## [2] LUBRICATION

Apply **Makita grease N. No.2** to the following portions designated with the black triangle to protect parts and product from unusual abrasion.

| Item No. | Description | Portion to lubricate | Amount |
|---|---|---|---|
| ⑥ | Gear housing | Gear room where Helical gear 37 rotates | 4g |
| ⑦ | Spindle | ⑦a Where Ball bearing 6002DDW touches drum portion (when using in Hammer drill mode) | a little |
| | | ⑦b Hole where Steel ball 3.5 and Pin 4 are assembled | a little |
| ⑰ | Cam housing complete | Cam portion | a little |

**Fig. 1**



# Repair

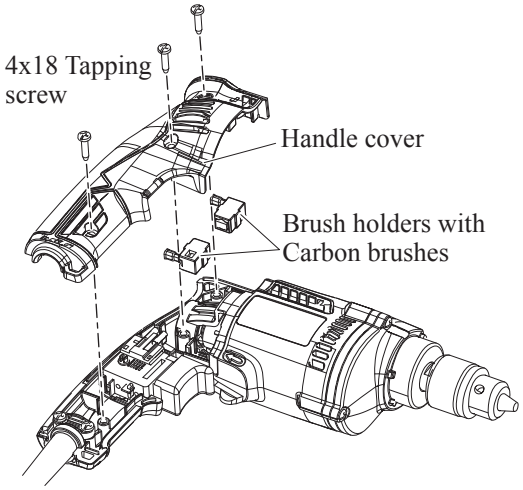
## [3] DISASSEMBLY/ASSEMBLY
## [3] -1. Armature

DISASSEMBLING

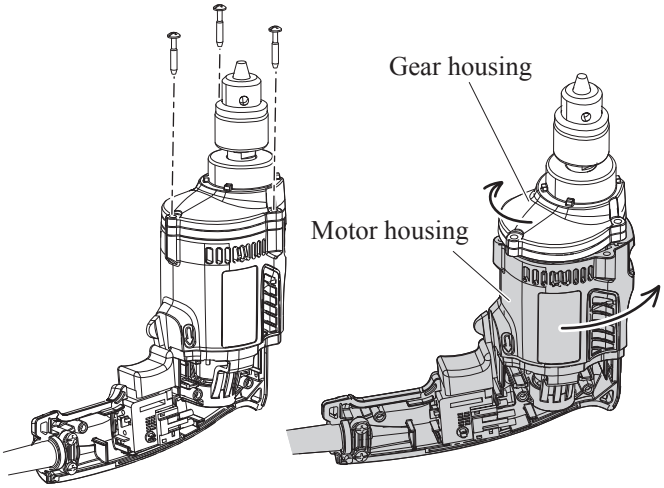
(1) Disassemble Armature from the machine as drawn in **Fig. 2**.

**Fig. 2**

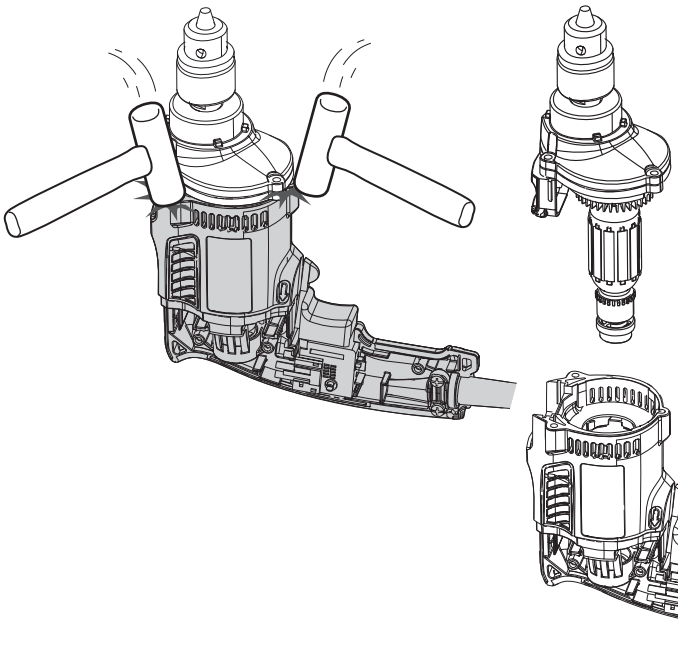
1. Remove Handle cover by loosening three 4x18 Tapping screws. And then, remove Carbon brushes together with Brush holders.



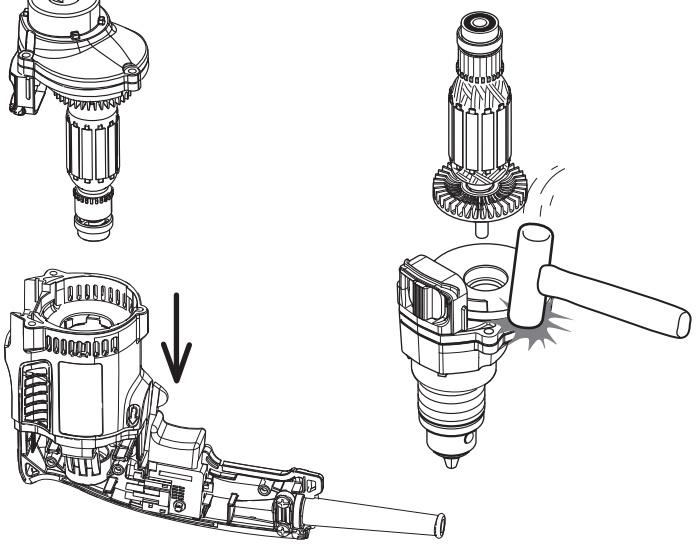

2. Remove three 5x25 Tapping screws. And then, twist Motor housing or Gear housing so that the edge of Motor housing can be tapped with plastic hammer to disassemble.




3. Separate Motor housing from Gear housing section by tapping its edge with plastic hammer.



4. Disassemble Armature from Cam housing complete by tapping its edge with plastic hammer.



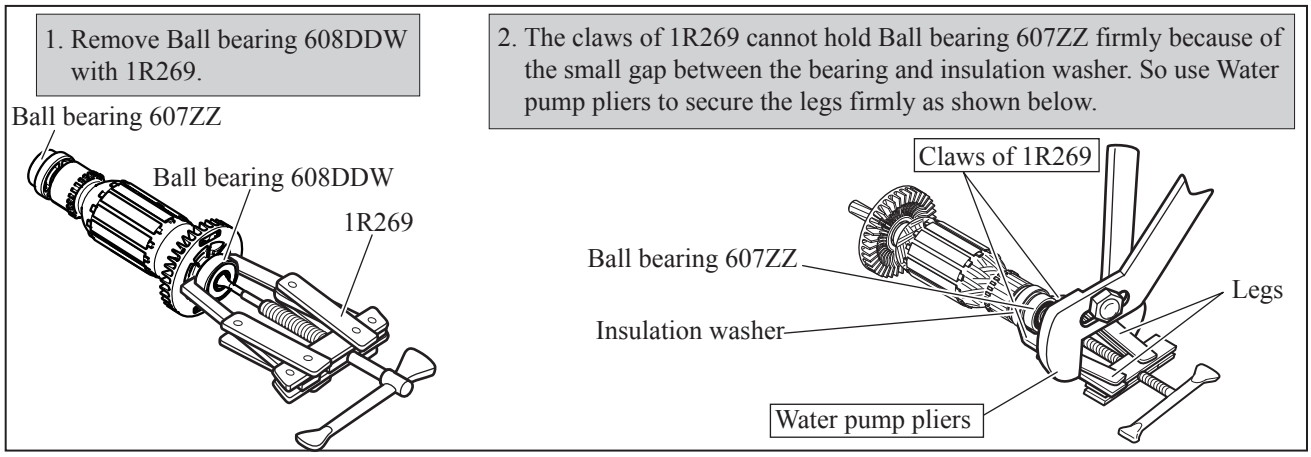
# Repair

## [3] DISASSEMBLY/ASSEMBLY
## [3] -1. Armature (cont.)

DISASSEMBLING

(2) Remove Ball bearings from Armature shaft as drawn in **Fig. 3**.

**Fig. 3**




ASSEMBLING

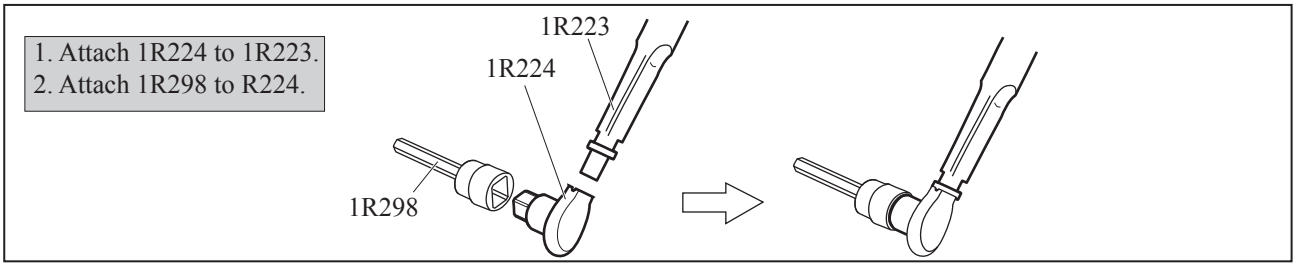
Assemble by reversing the disassembly procedure. Refer to **Figs. 3 and 2.**

## [3] -2. Drill Chuck

DISASSEMBLING

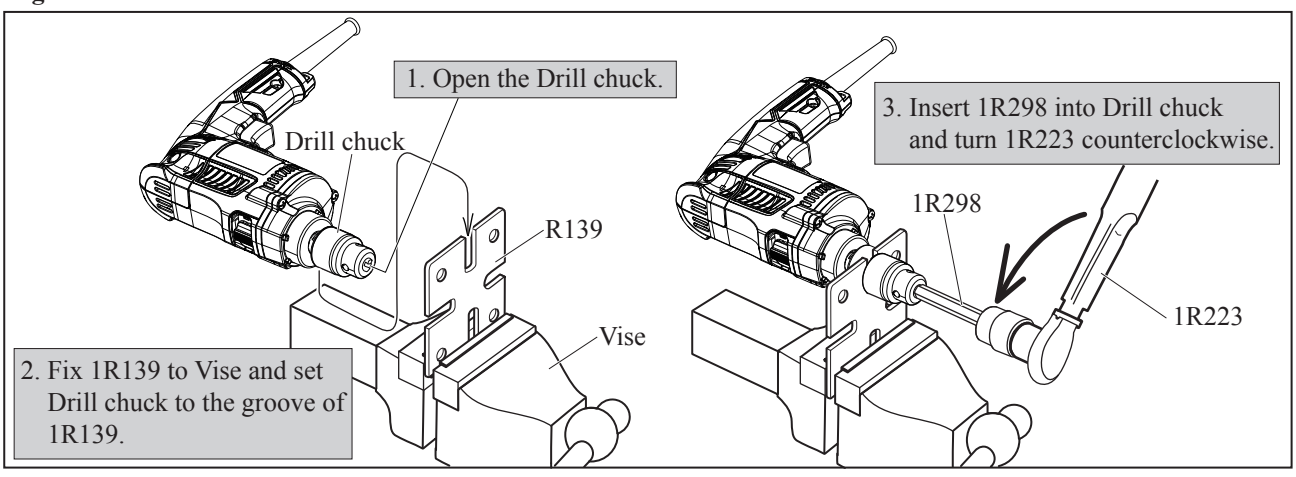
(1) Arrange the repairing tools as drawn in **Fig. 4.**

**Fig. 4**




(2) Remove 13 mm Drill chuck as drawn in **Fig. 5**.

**Fig. 5**




ASSEMBLING

Assemble by reversing the disassembly procedure. Refer to **Figs. 5 and 4**.
**Note**: Set the fastening torque of 1R223 to **26.0 N.m ~ 30.10 N.m (265 Kgfcm ~ 306 Kgfcm)** and turn 1R223 clockwise.

# Repair

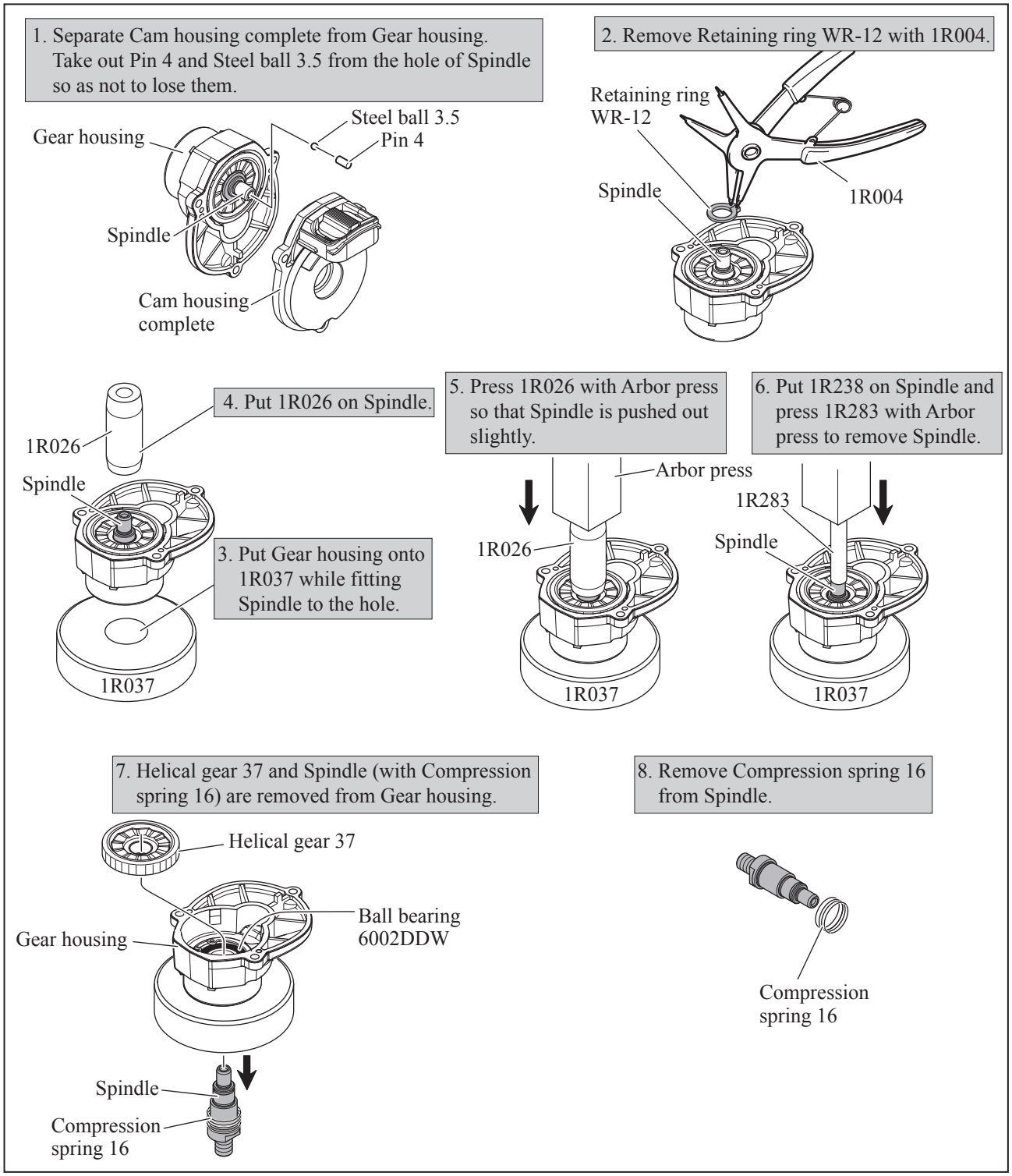
## [3] DISASSEMBLY/ASSEMBLY

## [3] -3. Helical Gear 37 and Ball bearing 6002DDW

DISASSEMBLING

(1) Remove Drill chuck as drawn in **Figs. 4 and 5**.
(2) Separate Gear housing from Motor housing. And remove Armature from Cam housing complete as drawn in **Fig. 2**.
(3) Disassemble Helical gear 37 as drawn in **Fig. 6**.

**Fig. 6**



# Repair

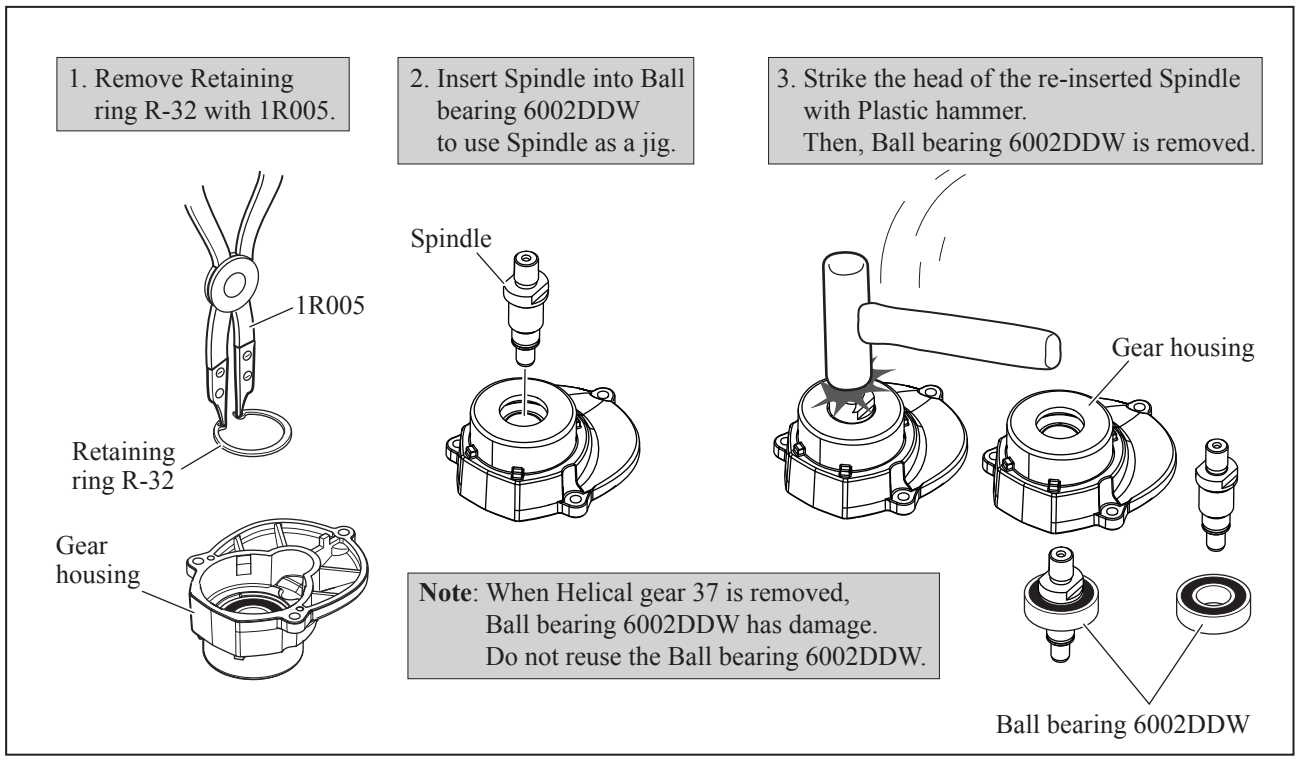
## [3] DISASSEMBLY/ASSEMBLY

## [3] -3. Helical Gear 37 and Ball bearing 6002DDW (cont.)

DISASSEMBLING

(4) Remove Ball bearing 6002DDW as drawn in **Fig. 7**.

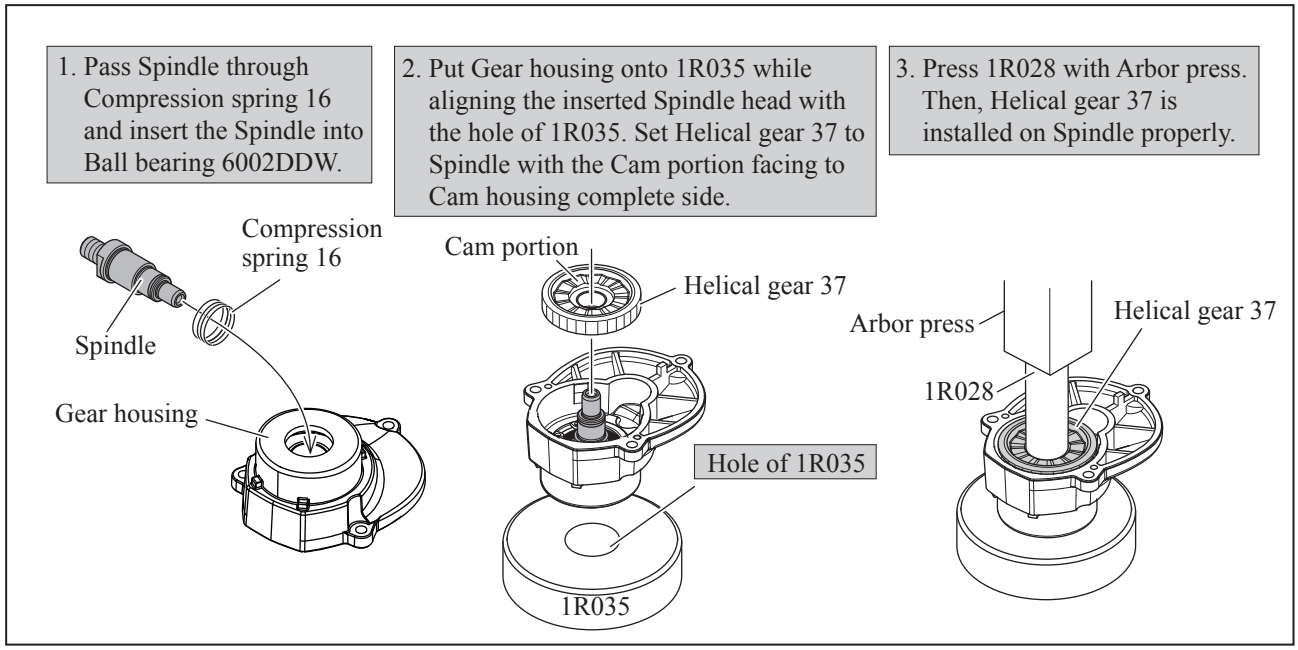
**Fig. 7**




ASSEMBLING

(1) Assemble Ball bearing 6002DDW to Gear housing. And then, secure it with Retaining ring R-32. Refer to **Fig. 7**.
(2) Assemble Spindle and Helical gear 37 as drawn in **Fig. 8**.

**Fig. 8**




(3) Assemble Retaining ring WR-12, Steel ball 3.5 and Pin 4 to Spindle. Refer to the drawing on the upper **left** and **right** in **Fig. 6**.

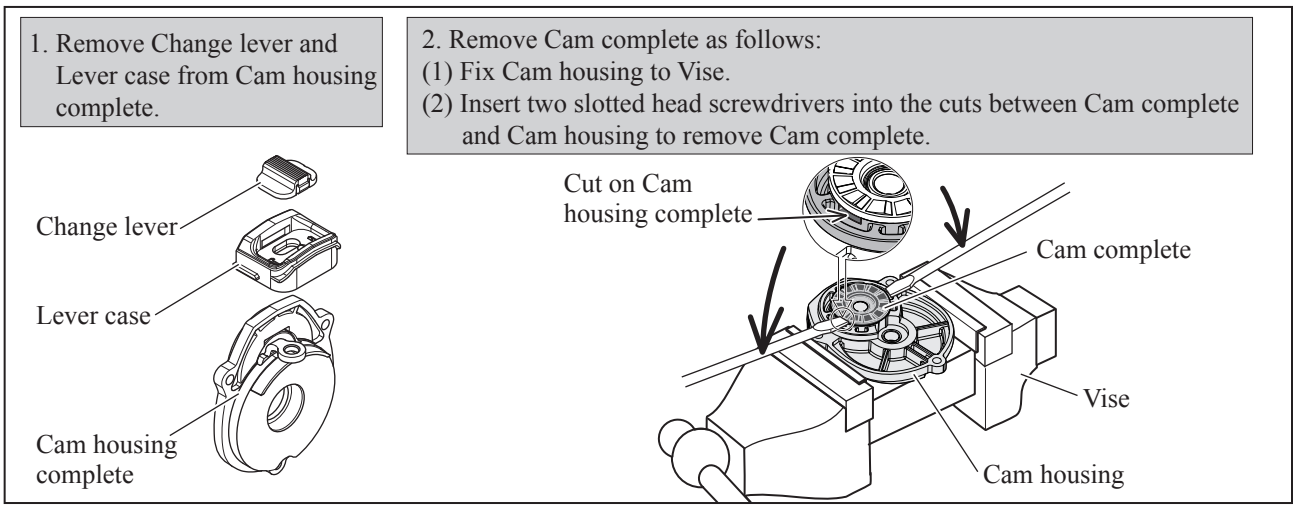
# Repair

## [3] DISASSEMBLY/ASSEMBLY
## [3] -4. Cam Housing Compete

DISASSEMBLING

(1) Remove Drill chuck as drawn in **Figs. 4 and 5**.
(2) Separate Gear housing from Motor housing. And remove Armature from Cam housing complete as drawn in **Fig. 2**.
(3) Separate Cam housing complete from Gear housing. See the drawing on the upper left in **Fig. 6**.
(4) Disassemble Cam complete as drawn in **Fig. 9**.

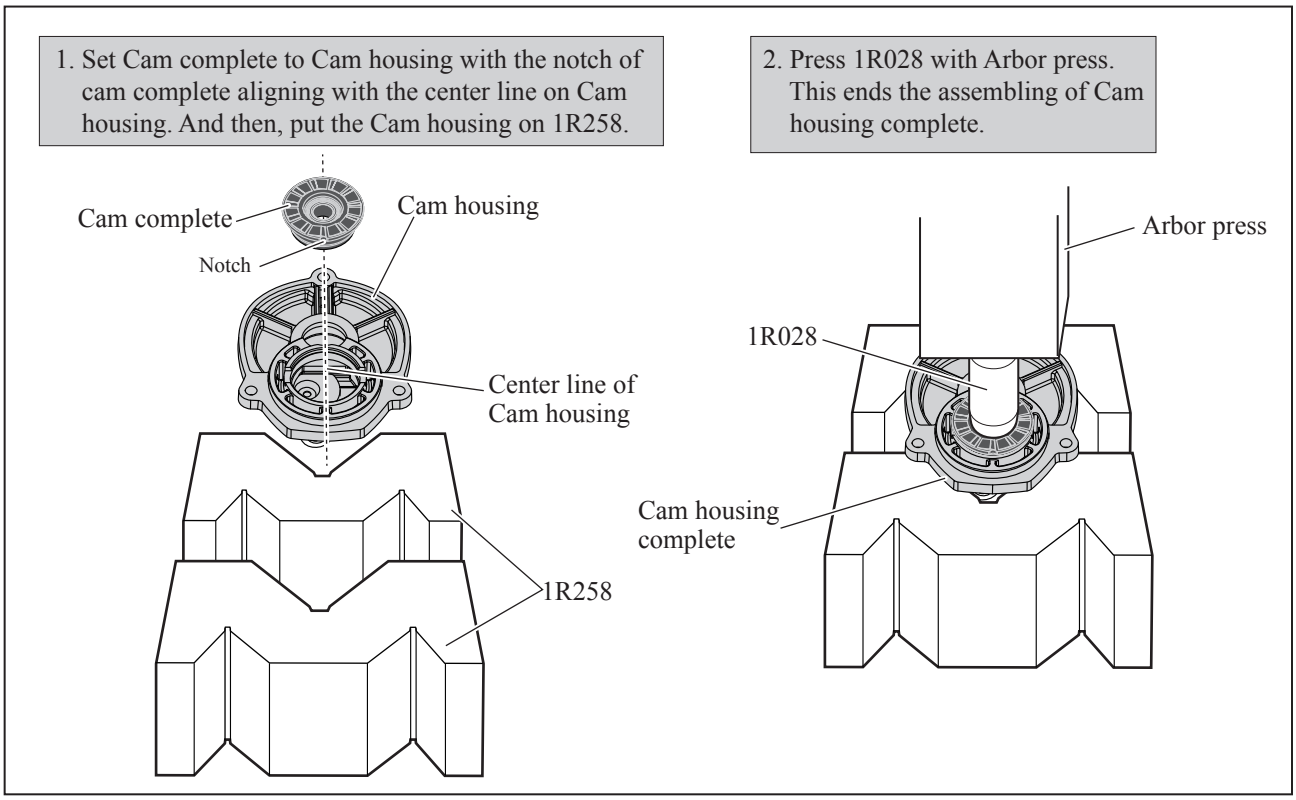
**Fig. 9**




ASSEMBLING

(1) Assemble Cam complete to Cam housing as drawn in **Fig. 10**.

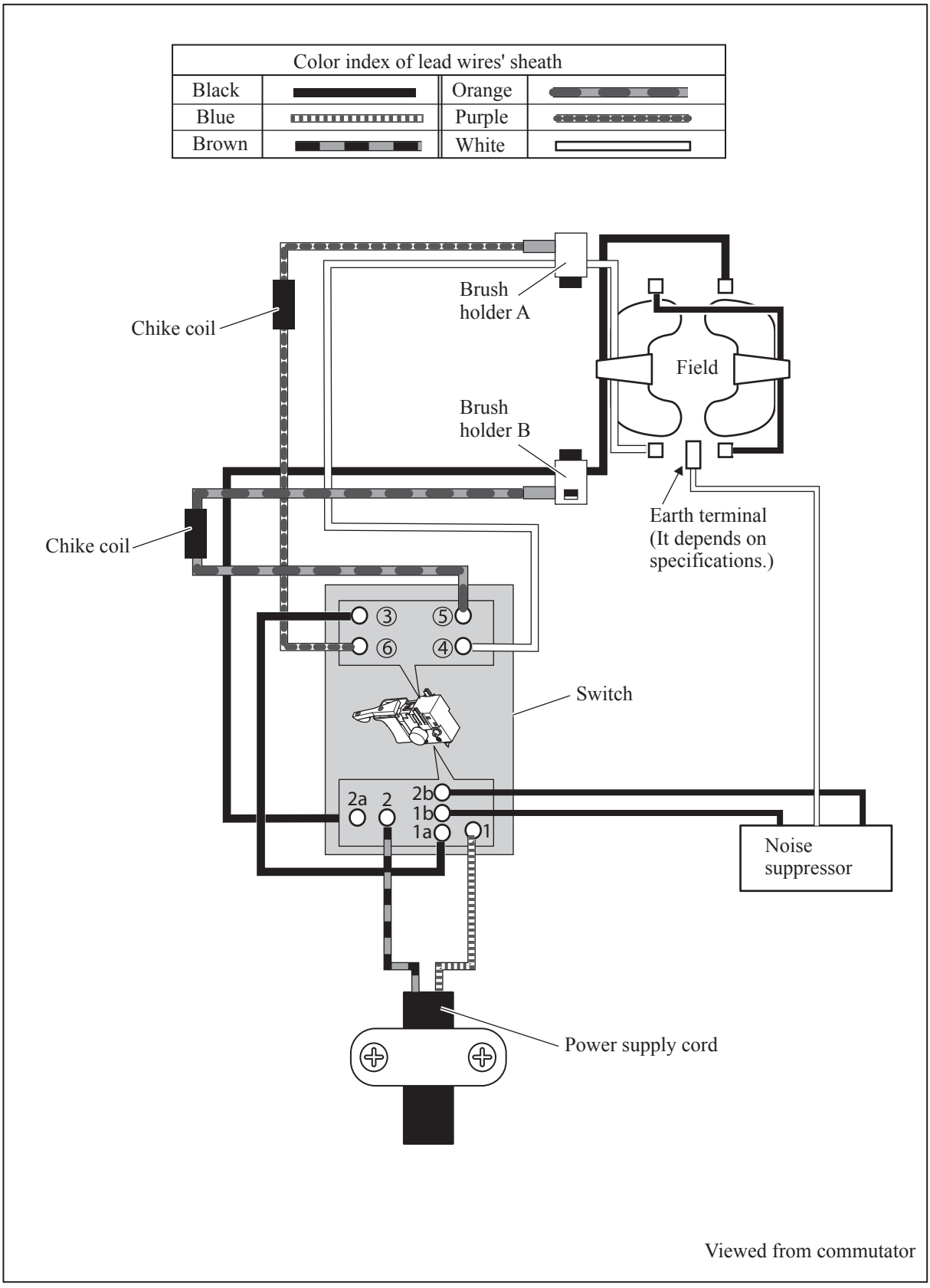
**Fig. 10**




(2) Assemble Lever case and Change lever. Refer to **Fig. 9**.

## ► Circuit diagram

**Fig. D-1**



## ► Wiring diagram

**Fig. D-2**

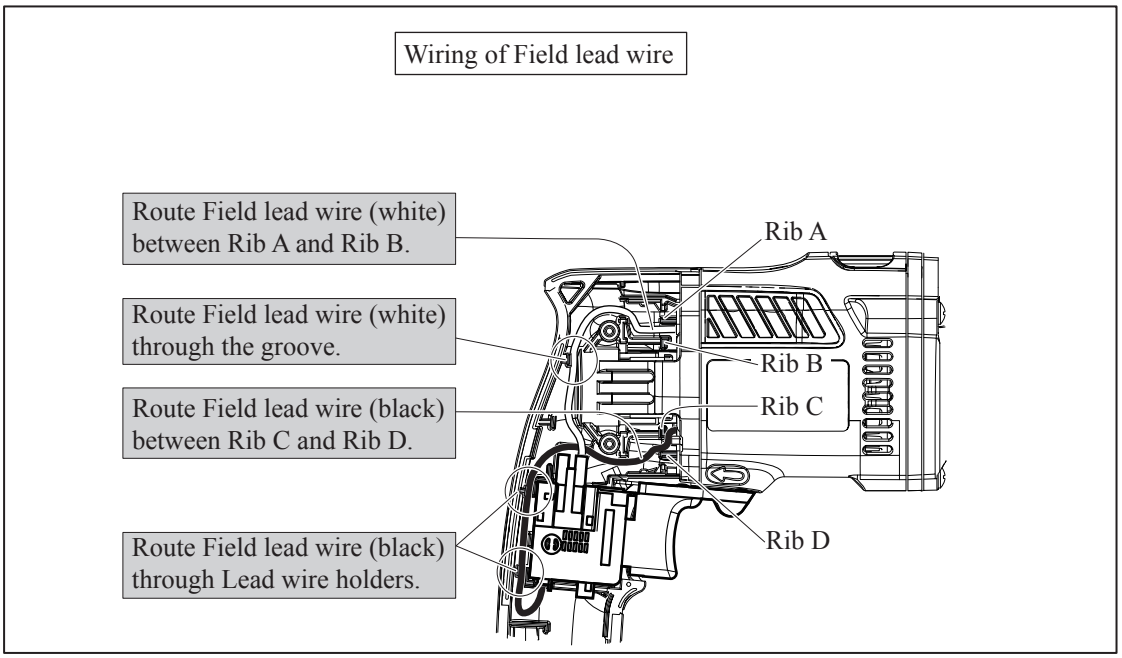
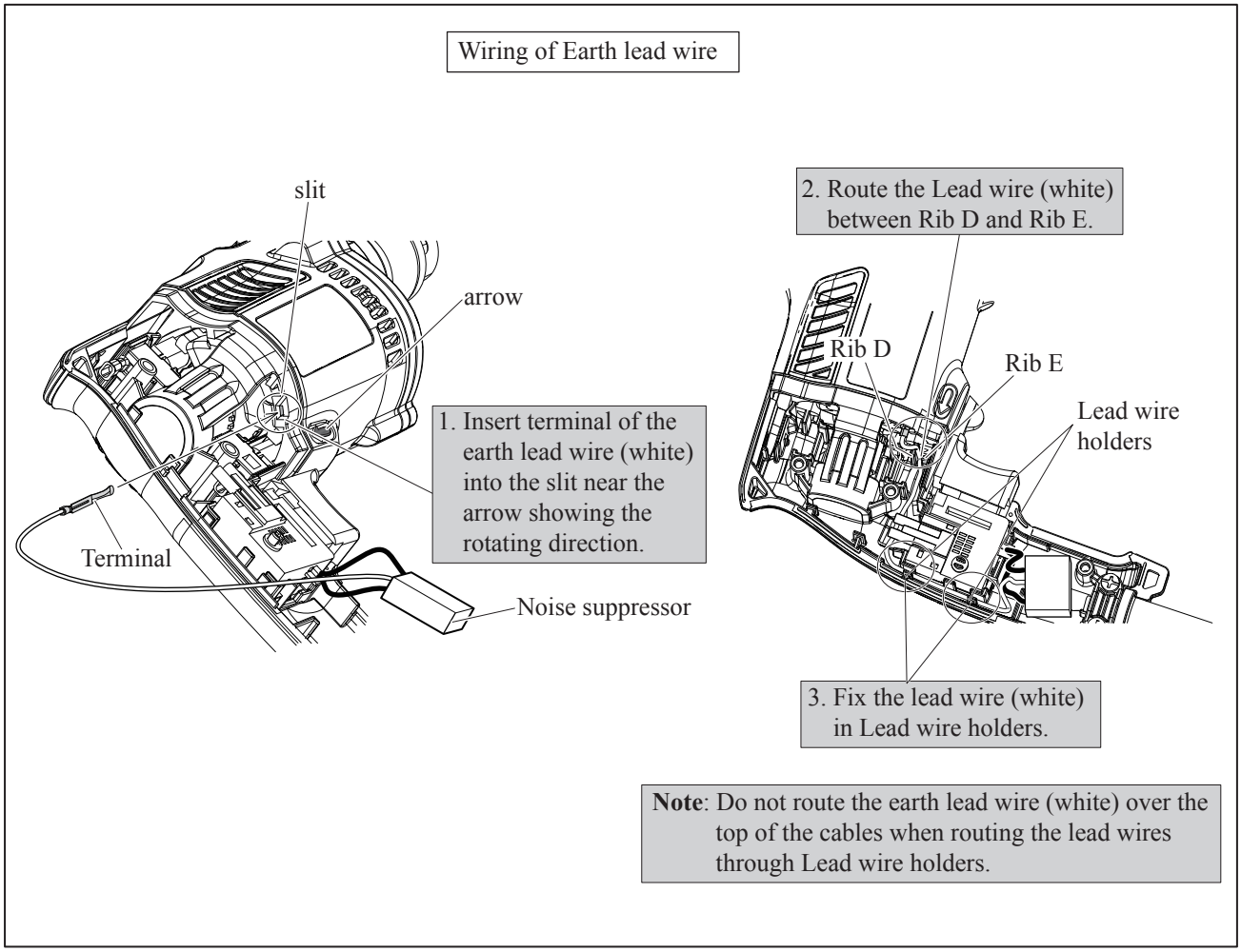



**Fig. D-3**



## Wiring diagram

**Fig. D-4**