

TECHNICAL INFORMATION



PRODUCT

P 1 / 27

Model No. ▶ RP2300FC, RP2301FC

Description ▶ Router

CONCEPT AND MAIN APPLICATIONS

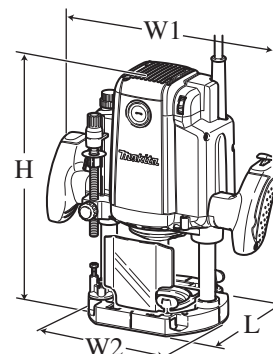
Models RP2300FC and RP2301FC are upgraded sister tools of our current plunge-type electronic router Model 3612C. Their main benefits are:

- Linear ball bearing for super-smooth plunge action
 - Ergonomically contoured knob style handles
- Powerful cutting with the continuous rating input higher than Model 3612C;
 RP2300FC: 2,300W, RP2301FC: 2,100W

RP2301FC additionally feature electric brake.

These products are available in the following variations.

| Model No. | Electric brake | Twin LED job lights | Straight guide |
|------------------|----------------|---------------------|--|
| RP2300FC | No | Yes | Standard type (Straight guide + Guide holder assembly) |
| RP2301FC | Yes | | High-precision type with fine adjustment function (Fine adjusting straight guide) |
| RP2300FCX | No | | |
| RP2301FCX | Yes | | |



| Dimensions: mm (") | |
|--------------------|---------------|
| Length (L) | 155 (6-1/8) |
| Width (W1) | 294 (11-5/8) |
| Height (H) | 312 (12-1/4) |
| Width of base (W2) | 170 (6-11/16) |

► Specification

RP2300FC

| Voltage (V) | Current (A) | Cycle (Hz) | Continuous Rating (W) | | Max. Output (W) |
|-------------|-------------|------------|-----------------------|--------|-----------------|
| | | | Input | Output | |
| 110 | 15 | 50/60 | 1,650 | 650 | 2,600 |
| 120 | 15 | 50/60 | --- | 650 | 2,600 |
| 220 | 11 | 50/60 | 2,300 | 1,200 | 3,400 |
| 230 | 11 | 50/60 | 2,300 | 1,200 | 3,400 |
| 240 | 11 | 50/60 | 2,300 | 1,200 | 3,400 |

RP2301FC

| Voltage (V) | Current (A) | Cycle (Hz) | Continuous Rating (W) | | Max. Output (W) |
|-------------|-------------|------------|-----------------------|--------|-----------------|
| | | | Input | Output | |
| 110 | 15 | 50/60 | 1,650 | 650 | 2,600 |
| 120 | 15 | 50/60 | --- | 650 | 2,600 |
| 220 | 10 | 50/60 | 2,100 | 1,000 | 3,400 |
| 230 | 10 | 50/60 | 2,100 | 1,000 | 3,400 |
| 240 | 10 | 50/60 | 2,100 | 1,000 | 3,400 |

| Model No. | RP2300FC | RP2301FC |
|---------------------------|---|----------|
| No load speed: min-1=rpm | 9,000 - 22,000 | |
| Collet capacity: mm (") | 12.0 or 12.7 (1/2) | |
| Plunge capacity: mm (") | 0 - 70 (0 - 2-3/4) | |
| Electronic control | Constant speed control | Yes |
| | Soft start | Yes |
| | Variable speed control by dial | Yes |
| Electric brake | No | Yes |
| LED job light | Yes*1 | |
| Double insulation | Yes | |
| Power supply cord: m (ft) | Europe: 4.0 (13.1), Brazil: 2.0 (6.6), Other countries: 2.5 (8.2) | |
| Net weight*2: kg (lbs) | 6.1 (13.4) | |

*1: Twin LED job lights with afterglow function

*2 Weight according to EPTA-Procedure 01/2003, including Dust nozzle

(See next page for Standard equipment and Optional accessories.)

► Standard equipment

For all countries:

| | | | |
|---|------|--------------------------------|------|
| Straight guide (Standard type or High-precision type) | 1 pc | Collet cone 12mm or 1/2" | 1 pc |
| + Pan head screw M6x135 (for adjusting cutting depth) | 1 pc | Wrench 24 | 1 pc |

The standard equipment for the tool shown below may vary by country:

| | | | | | |
|------------------------------|------|--------------------------|------|---|------|
| Dust nozzle assembly | 1 pc | Collet sleeve 6mm | 1 pc | Collet sleeve (for inch chuck) 10mm | 1 pc |
| Knob 55 complete | 1 pc | Collet sleeve 8mm | 1 pc | | |
| Trimmer guide assembly | 1 pc | Collet sleeve 1/4" | 1 pc | | |
| Templet guide 16 | 1 pc | Collet sleeve 3/8" | 1 pc | | |

► Optional accessories

| | | |
|-------------------------------|--------------------------|----------------|
| Fine adjusting straight guide | Templet guide 25 | Collet sleeves |
| Guide rail adapter set | Templet guide adapter 30 | Router bits |
| Trimmer guide assembly | Nut M30 | |
| Templet guides | Dust nozzle assembly | |

► **Repair**

CAUTION: Remove the bit from the machine for safety before repair/ maintenance in accordance with the instruction manual!

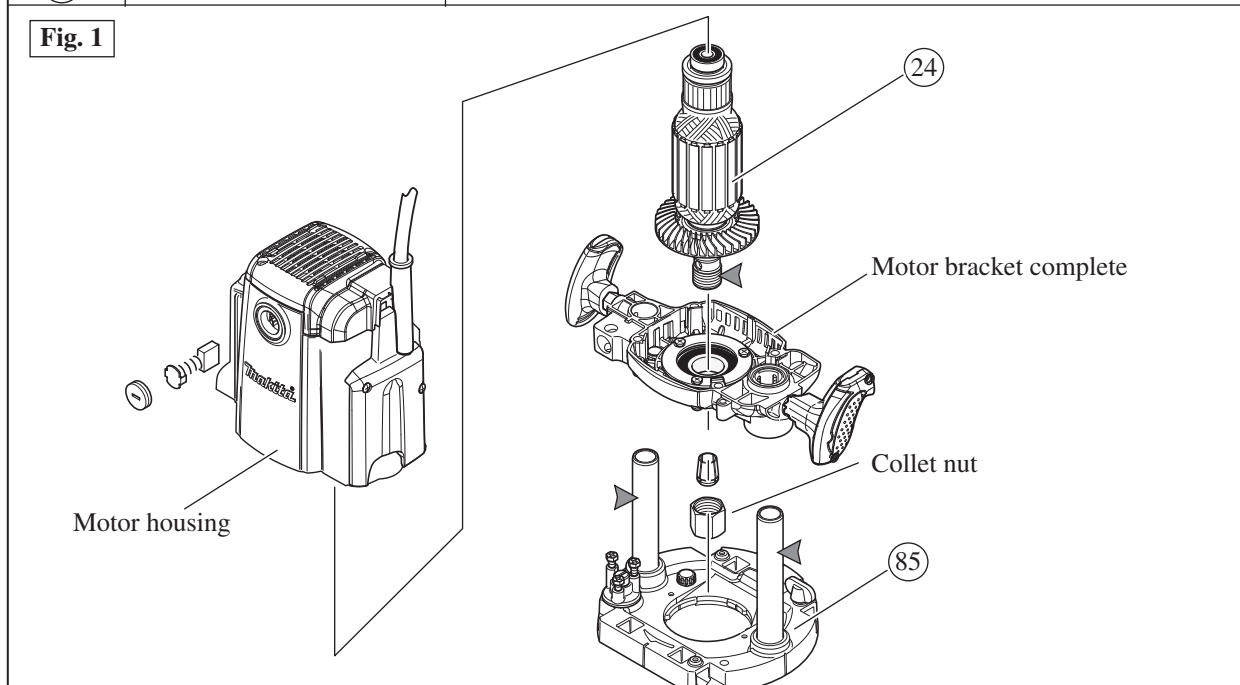
[1] NECESSARY REPAIRING TOOLS

| Code No. | Description | Use for |
|----------|------------------------------|---|
| 1R030 | Bearing setting pipe 25-17.2 | Supporting Pin 6 when assembling shaft lock mechanism |
| 1R041 | Vise plate | Protecting Armature when holding in vise |
| 1R268 | Spring pin extractor 3 | Removing Pin 6 of shaft lock mechanism |
| 1R269 | Bearing extractor | Removing Ball bearing 629DDW |

[2] LUBRICATIONS

Apply lubricant “VG100” to the following portions designated with the gray triangle to protect parts and product from unusual abrasion.

| Item No. | Description | Portion to lubricate |
|----------|---------------|---|
| ②④ | Armature | Threaded portion for removing Collet nut smoothly |
| ⑧⑤ | Base complete | Pipe 20 for making plunging action smooth |



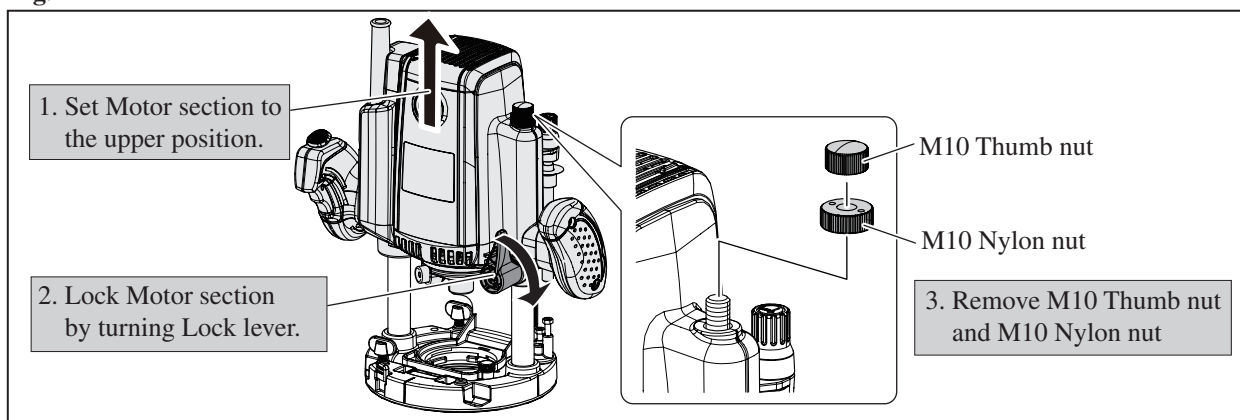
[3] DISASSEMBLY/ASSEMBLY

[3]-1. Base complete

DISASSEMBLING

(1) Separate Base section from Motor section as illustrated in **Figs. 2 and 3**.

Fig. 2



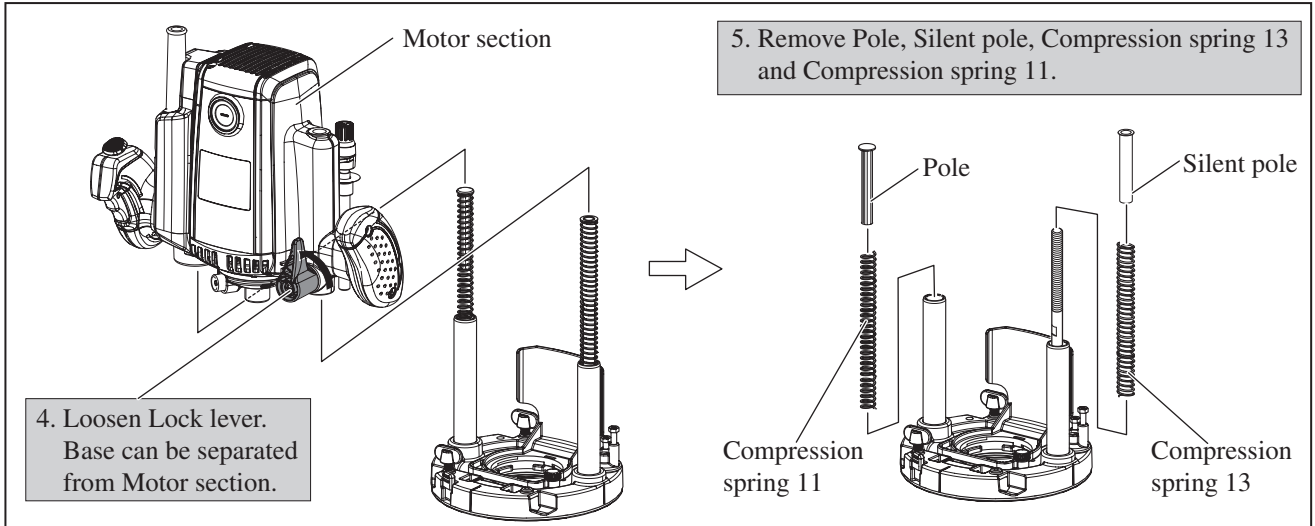
► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-1. Base complete (cont.)

DISASSEMBLING

Fig. 3



(2) Remove Base plate, Lock plate, Compression spring 4 and other component parts. Refer to **Figs. 4 and 5.**

Fig. 4

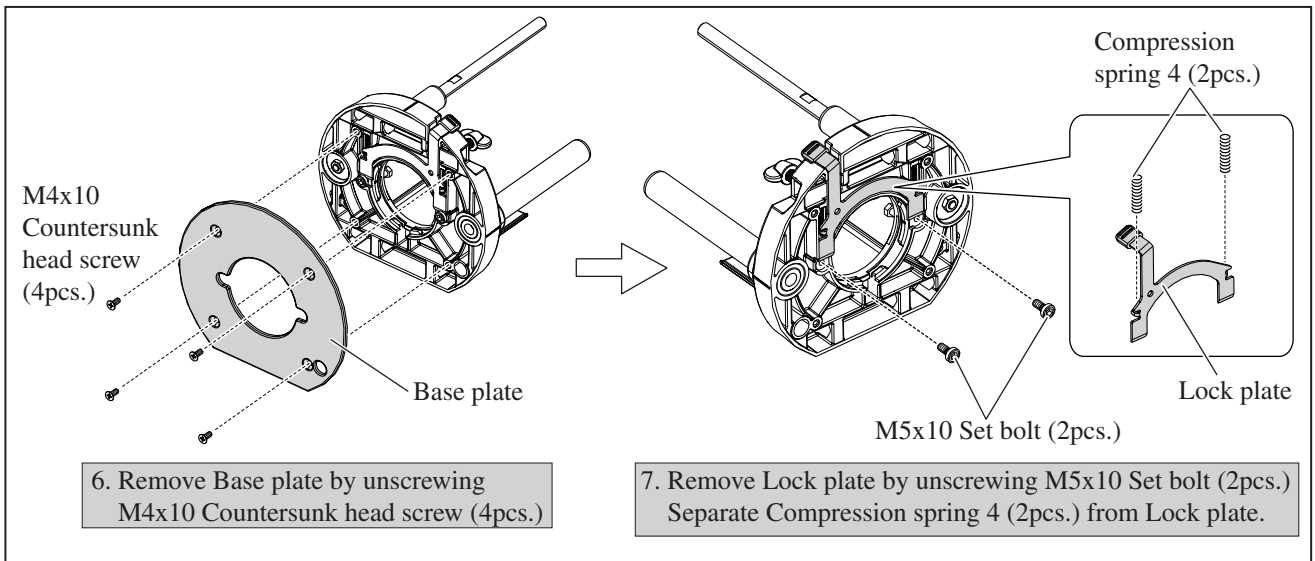
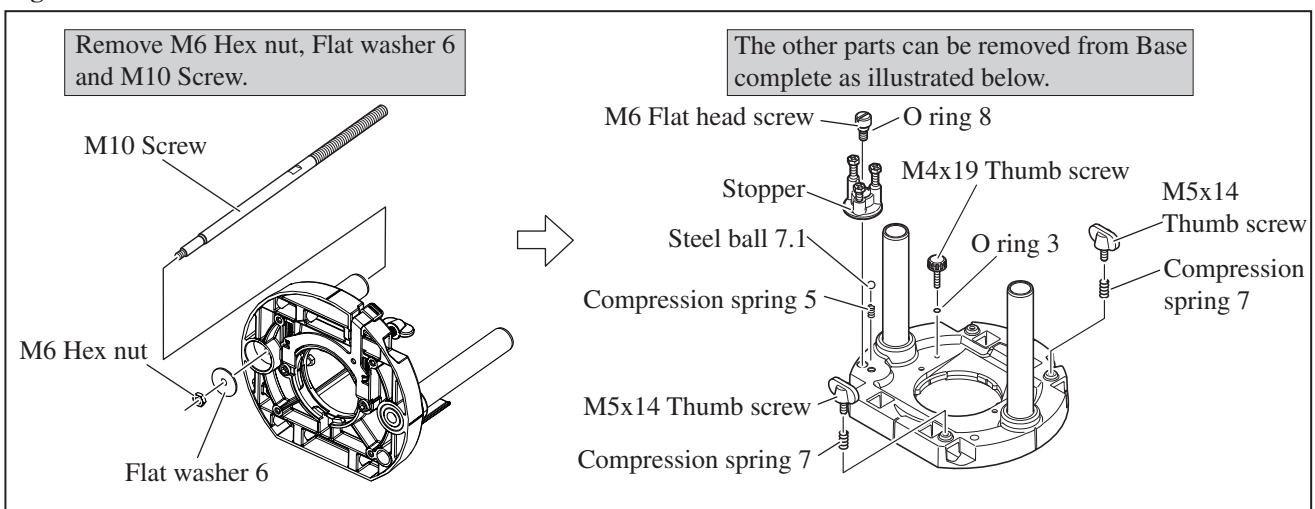


Fig. 5



► Repair

[3] DISASSEMBLY/ASSEMBLY

[3]-1. Base complete

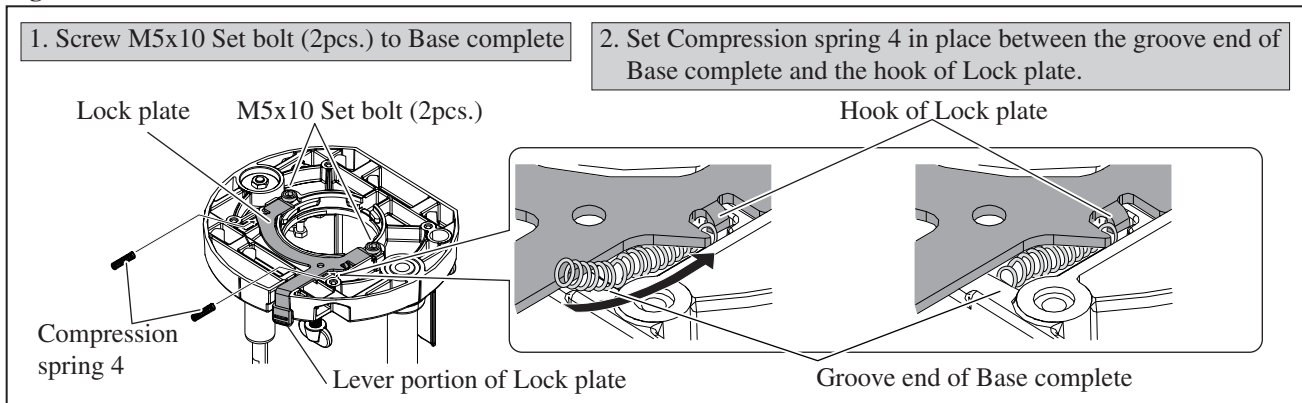
ASSEMBLING

Take the disassembling step in reverse.

Note: • Set Compression spring 4 (2pcs.) in the groove on Base complete as illustrated in **Fig. 6**

- M6 - Flat head screw is thread-locker type. When removing it, be sure to apply adhesive (ThreeBond 1321/ 1342 or Loctite 242) to the thread before reusing.
- Assemble Compression spring 11, Compression spring 13, Pole and Silent pole as illustrated in **Fig. 3**.
- Check that two Compression springs 4 work properly by pulling the lever portion of Lock plate after assembling Base plate to Base. Refer to **Figs. 6 and 4**.

Fig. 6



[3]-2. Armature, Motor bracket complete

DISASSEMBLING

- (1) Separate Base section from Motor section as illustrated in **Figs. 2 and 3**.
- (2) Disassemble Armature as illustrated in **Figs. 7, 8, 9, 10, 11, 12 and 13**.

Fig. 7

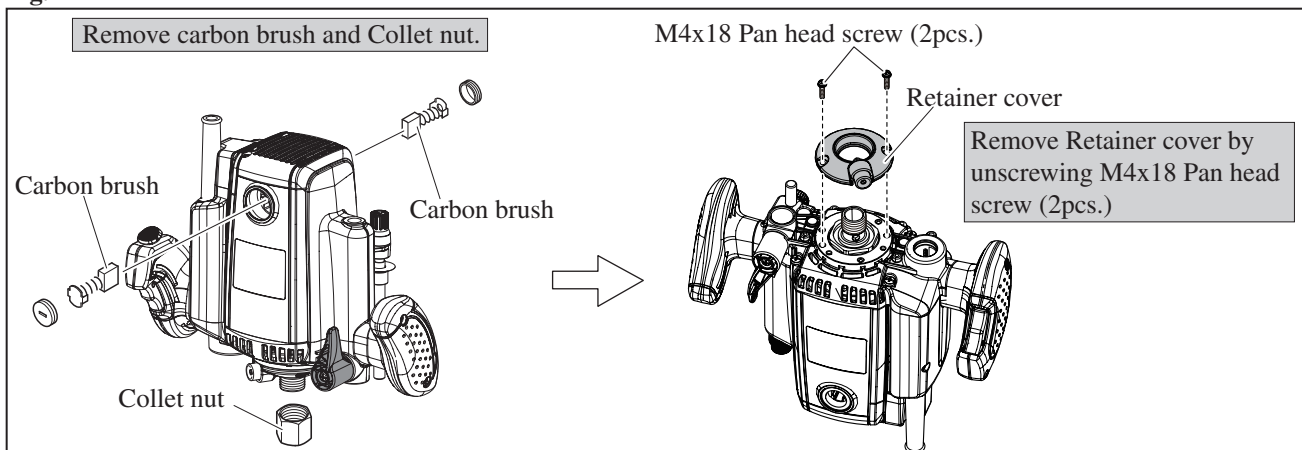
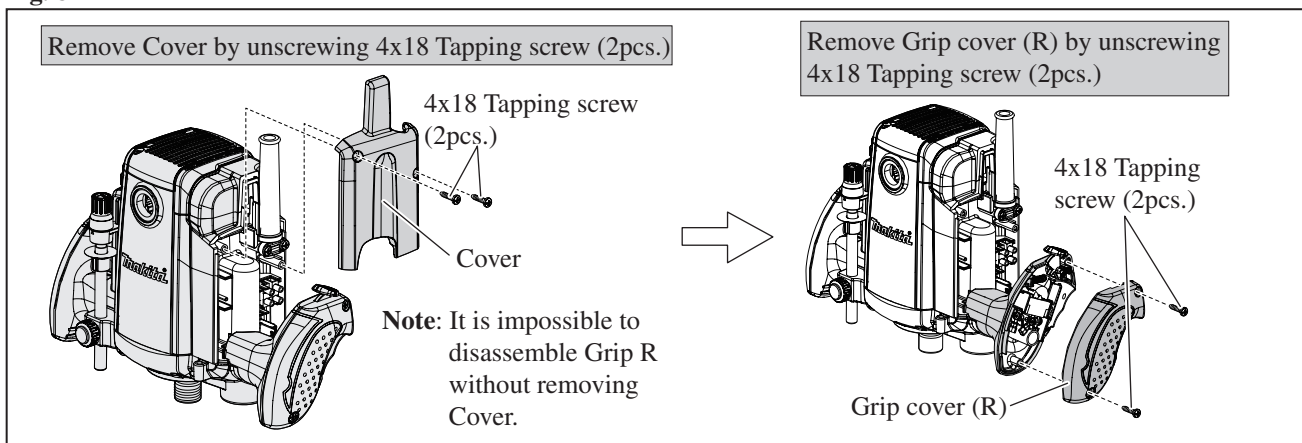


Fig. 8



► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-2. Armature, Motor bracket complete (cont.)

DISASSEMBLING

Fig. 9

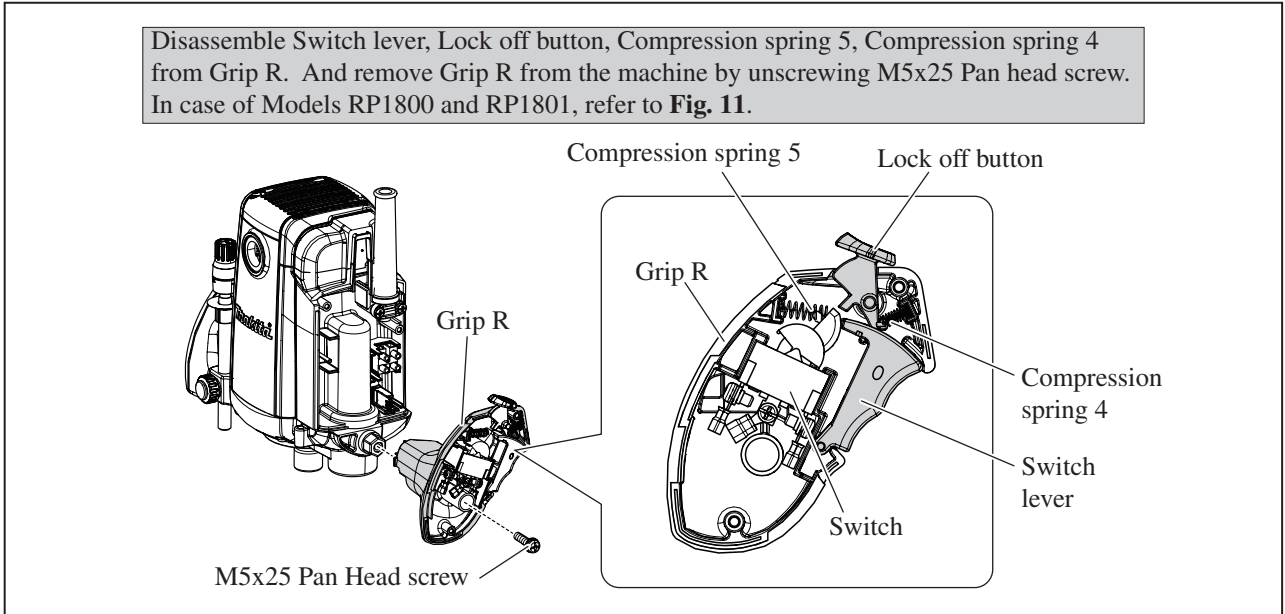


Fig. 10

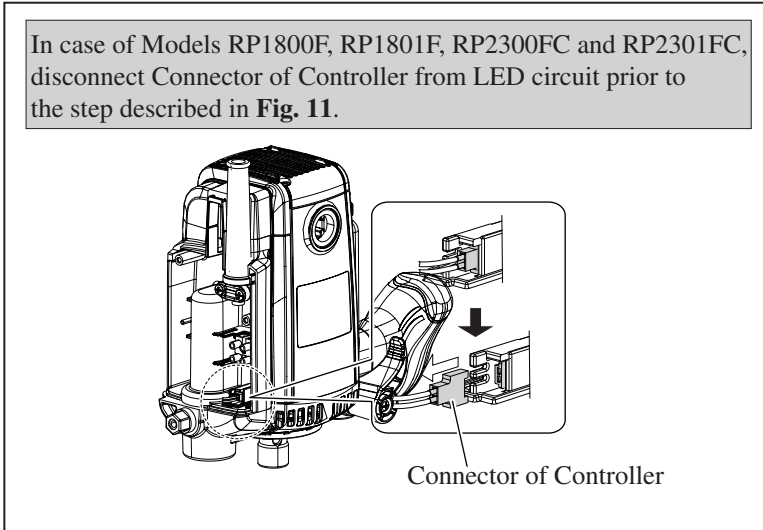


Fig. 11

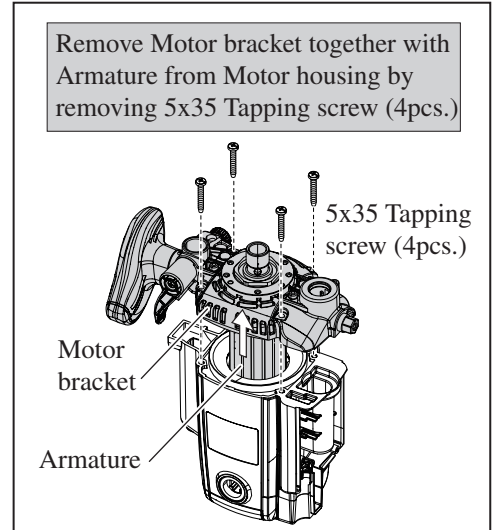
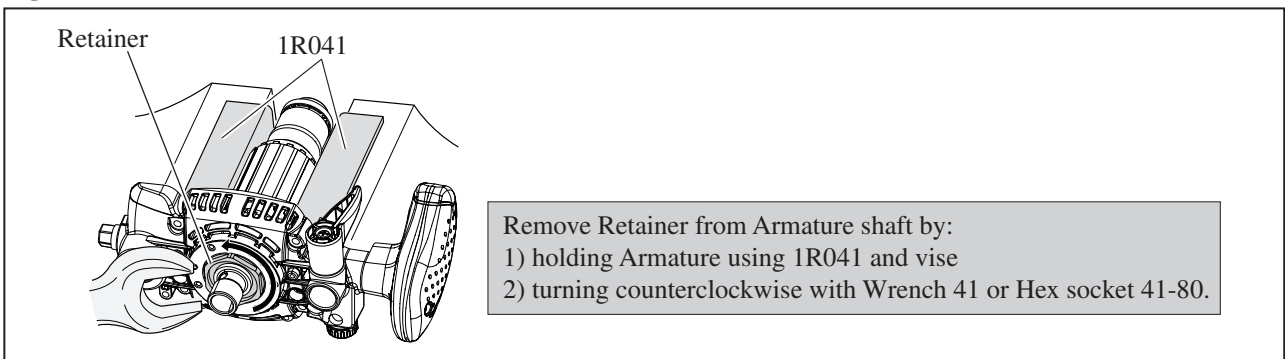


Fig. 12



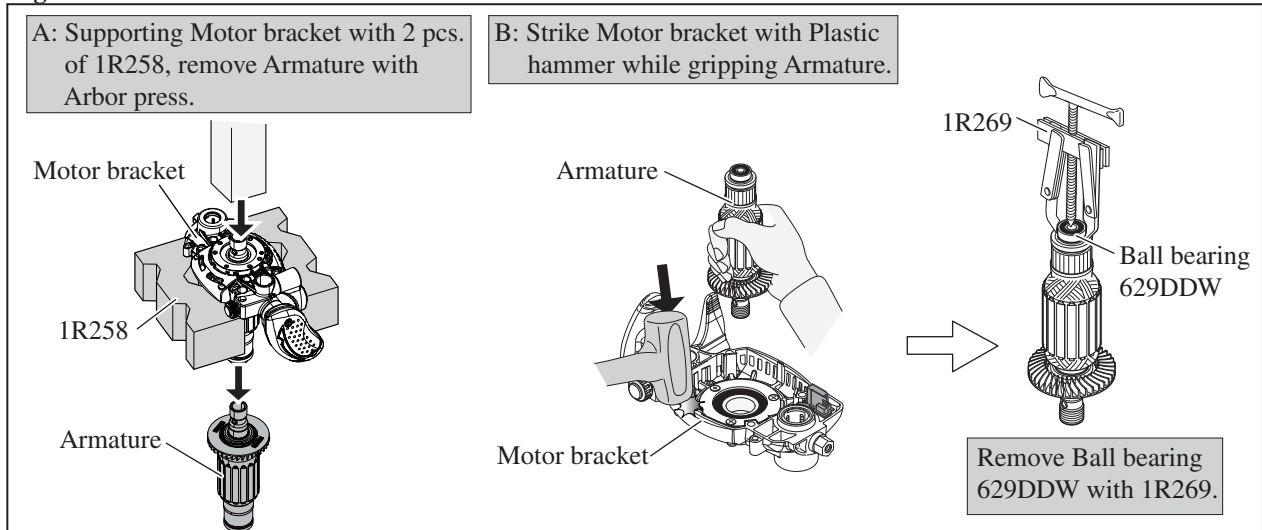
► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-2. Armature, Motor bracket complete (cont.)

DISASSEMBLING

(3) Armature can be removed in the manner A or B shown in **Fig. 13**. Remove Ball bearing 629DDW from Armature.
Fig. 13



(4) Disassemble the Motor bracket as illustrated in **Figs. 14 and 15**.

Fig. 14

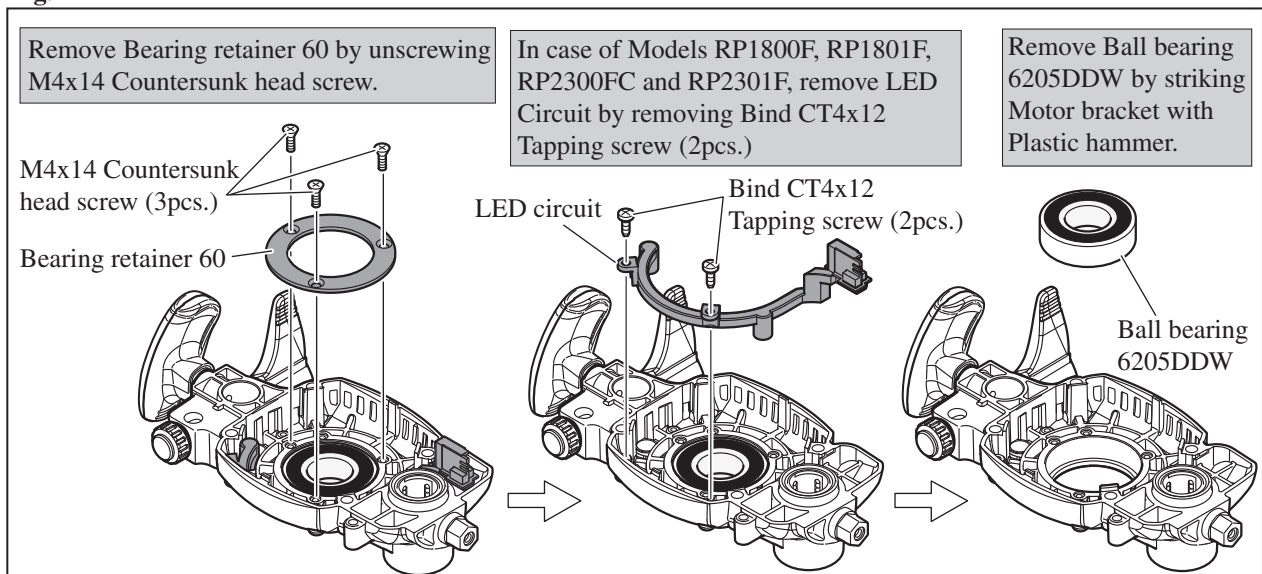
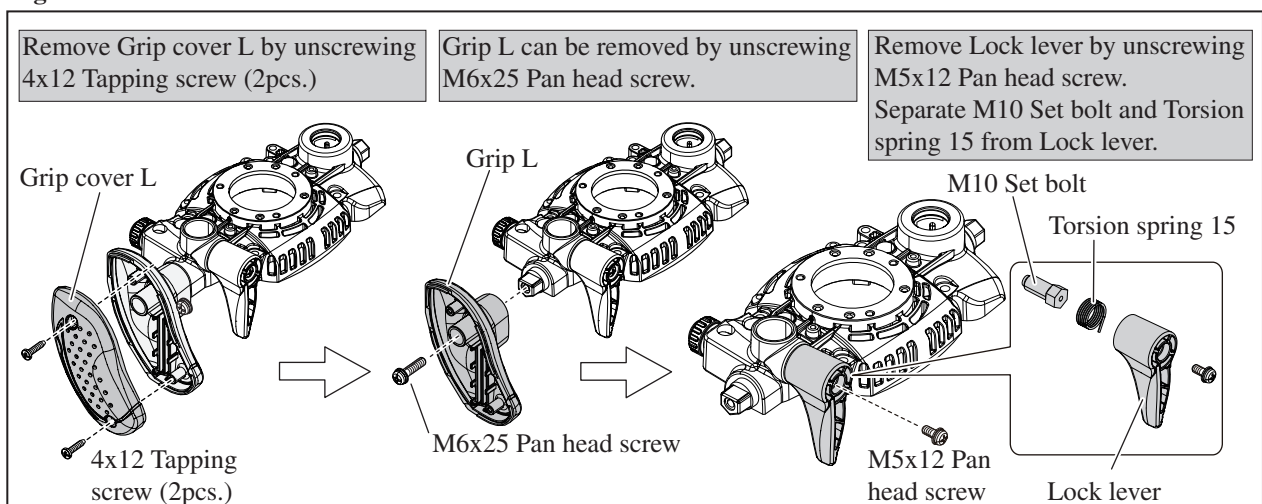


Fig. 15



► Repair

[3] DISASSEMBLY/ASSEMBLY

[3]-2. Armature, Motor bracket complete

ASSEMBLING

- (1) Assemble Ball bearing 6205DDW to Motor bracket. Refer to **the right illustration in Fig. 14.**
 - (2) In case of RP1800F, RP1801F, RP2300FC and RP2301FC, secure LED circuit with 4x12 Tapping screw (2pcs.). Refer to **the center illustration in Fig. 14.**
 - (3) Tighten Bearing retainer 60 with M4x14 Countersunk head screw (3pcs.) to secure Ball bearing 6205DDW. Refer to **the left illustration in Fig. 14.**
- Note:** Apply adhesive ThreeBond 1321 / 1342 or Loctite 242 to the threaded portion of M4x14 Countersunk head screw (3pcs.)
- (4) Assemble Lock lever to Motor bracket as illustrated in **Figs. 16, 17 and 18.**

Fig. 16

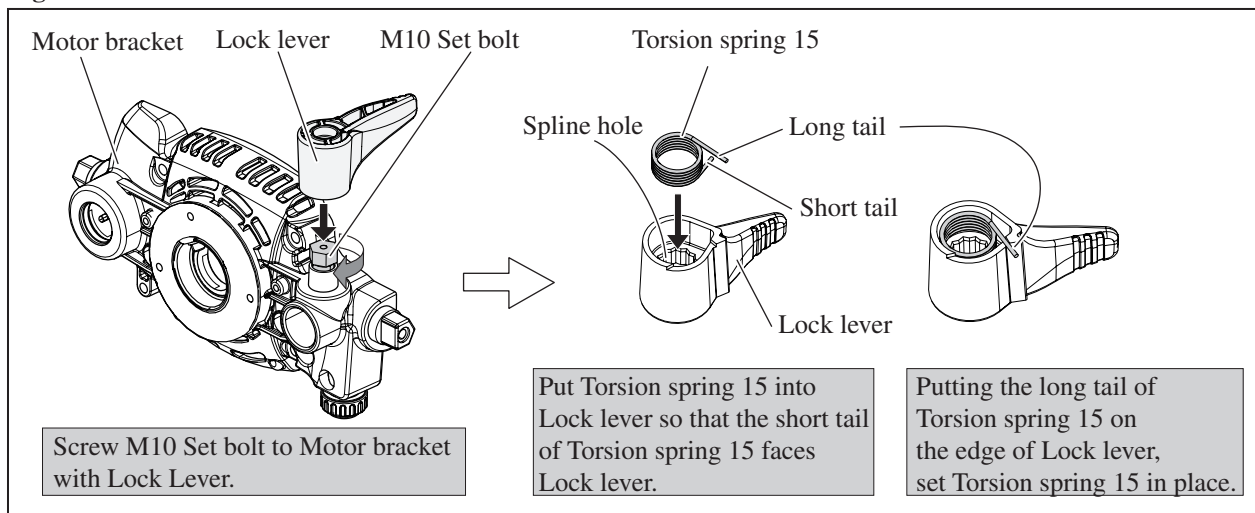


Fig. 17

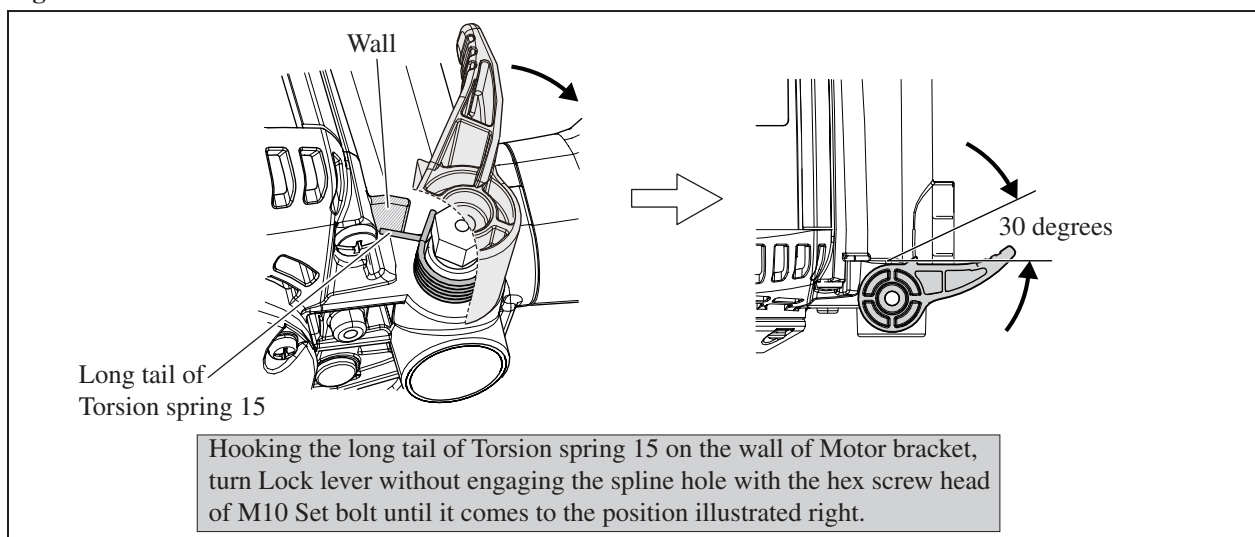
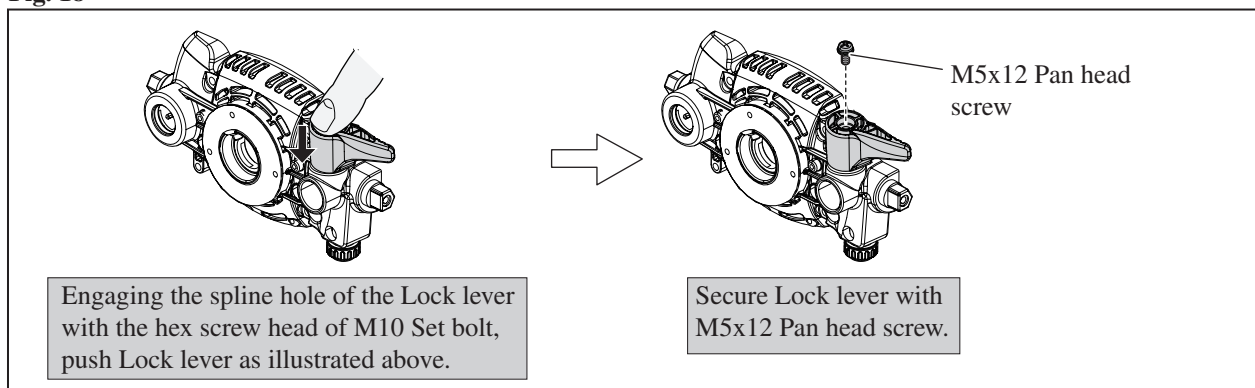


Fig. 18



► Repair

[3] DISASSEMBLY/ASSEMBLY

[3]-2. Armature, Motor bracket complete (cont.)

ASSEMBLING

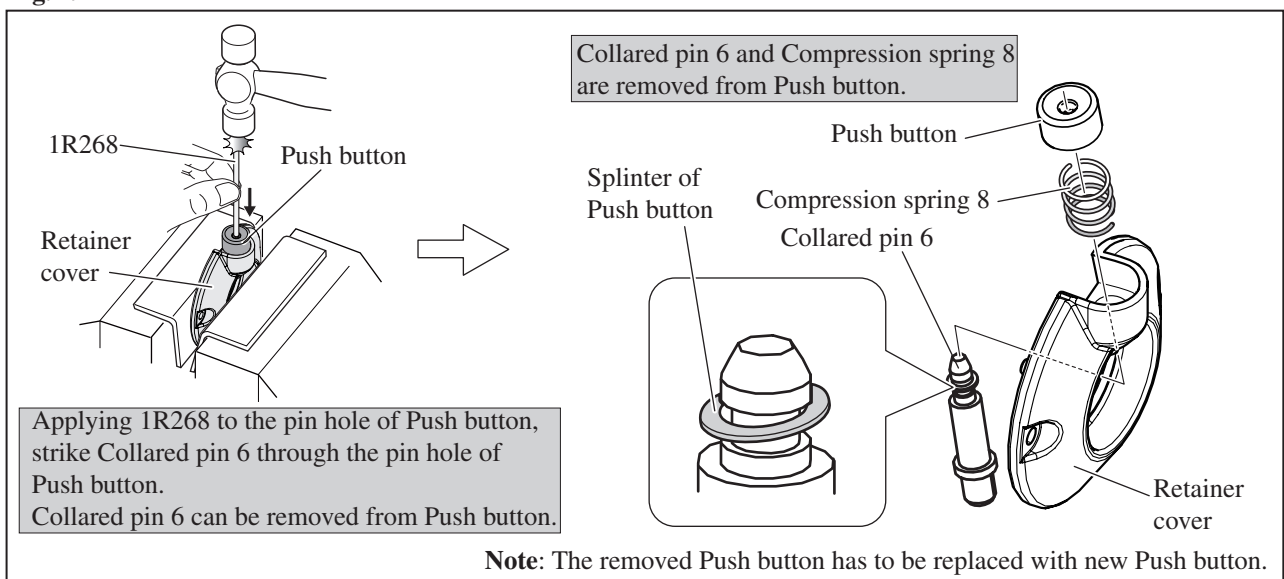
- (5) Assemble Grip L to Motor bracket on Lock lever side and secure it with M6x25 Pan head screw. Refer to **Fig. 15**.
Assemble Grip cover L to Grip L by screwing two 4x12 Tapping screws. Refer to **Fig. 15**.
- (6) Assemble Armature to Motor bracket. Refer to **Fig. 13**
- (7) Assemble Retainer to Armature shaft by turning with Wrench 41 or Hex socket 41-80 clockwise. Refer to **Fig. 12**.
- (8) Assemble Motor bracket to Motor housing. Refer to **Fig. 11**.
- (8) In case of Models RP1800F, RP1801F, RP2300F, RP2301FC, connect LED circuit. Refer to **Fig. 10**.
- (9) Assemble Grip R section to Motor bracket. Refer to **Fig. 9**.
- (10) Secure Grip cover (R) with two 4x18 Tapping screws to the Grip R. Refer to **right** illustration in **Fig. 8**.
And assemble Cover to Motor housing. Refer to **left** illustration in **Fig. 8**.
- (11) Mount Retainer cover to Motor bracket. Refer to **right** illustration in **Fig. 7**. And assemble Carbon brushes and Collet nut. Refer to **left** illustration in **Fig. 7**.

[3]-3. Shaft Lock

DISASSEMBLING

- (1) Separate Base section from Motor section as illustrated in **Figs. 2, 3**.
- (2) Remove Retainer cover by unscrewing two M4x18 Pan head screws as the **right** illustration in **Fig. 7**.
- (3) Shaft lock mechanism can be disassembled as illustrated in **Fig. 19**.

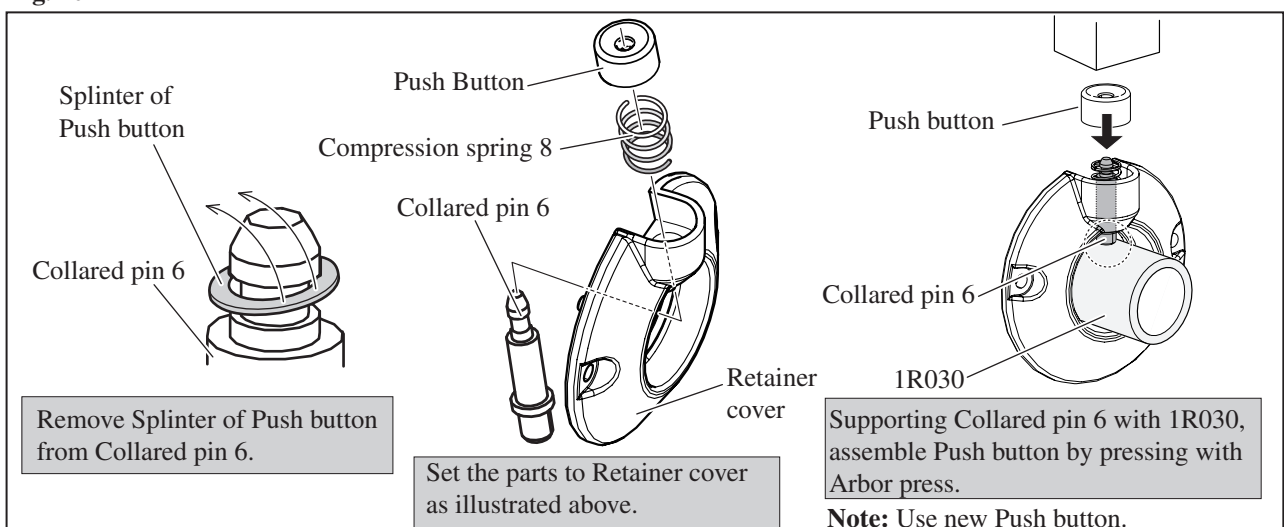
Fig. 19



ASSEMBLING

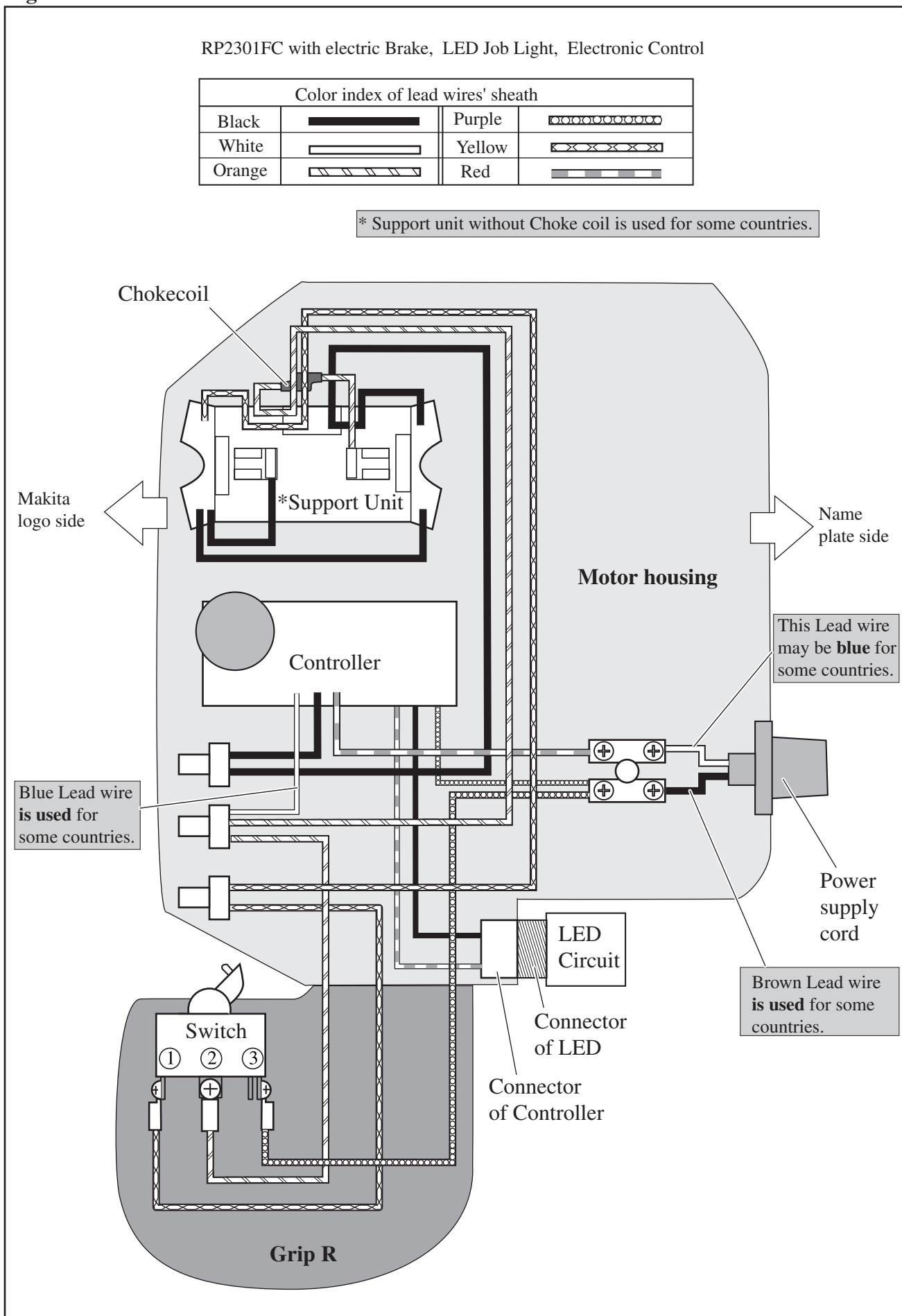
Shaft lock section can be assembled as illustrated in **Fig. 20**.

Fig. 20



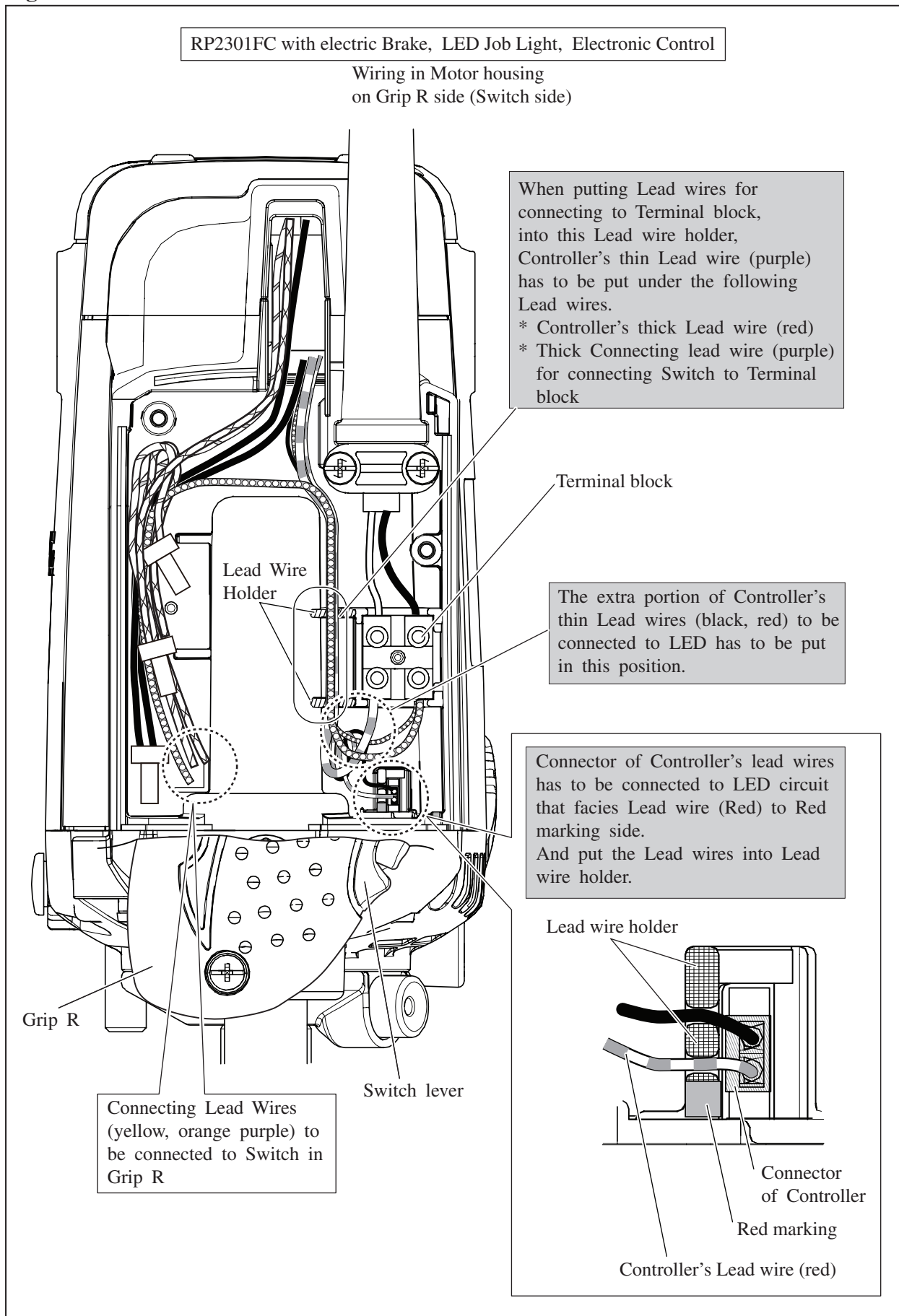
► **Circuit diagram**

Fig. D-1A



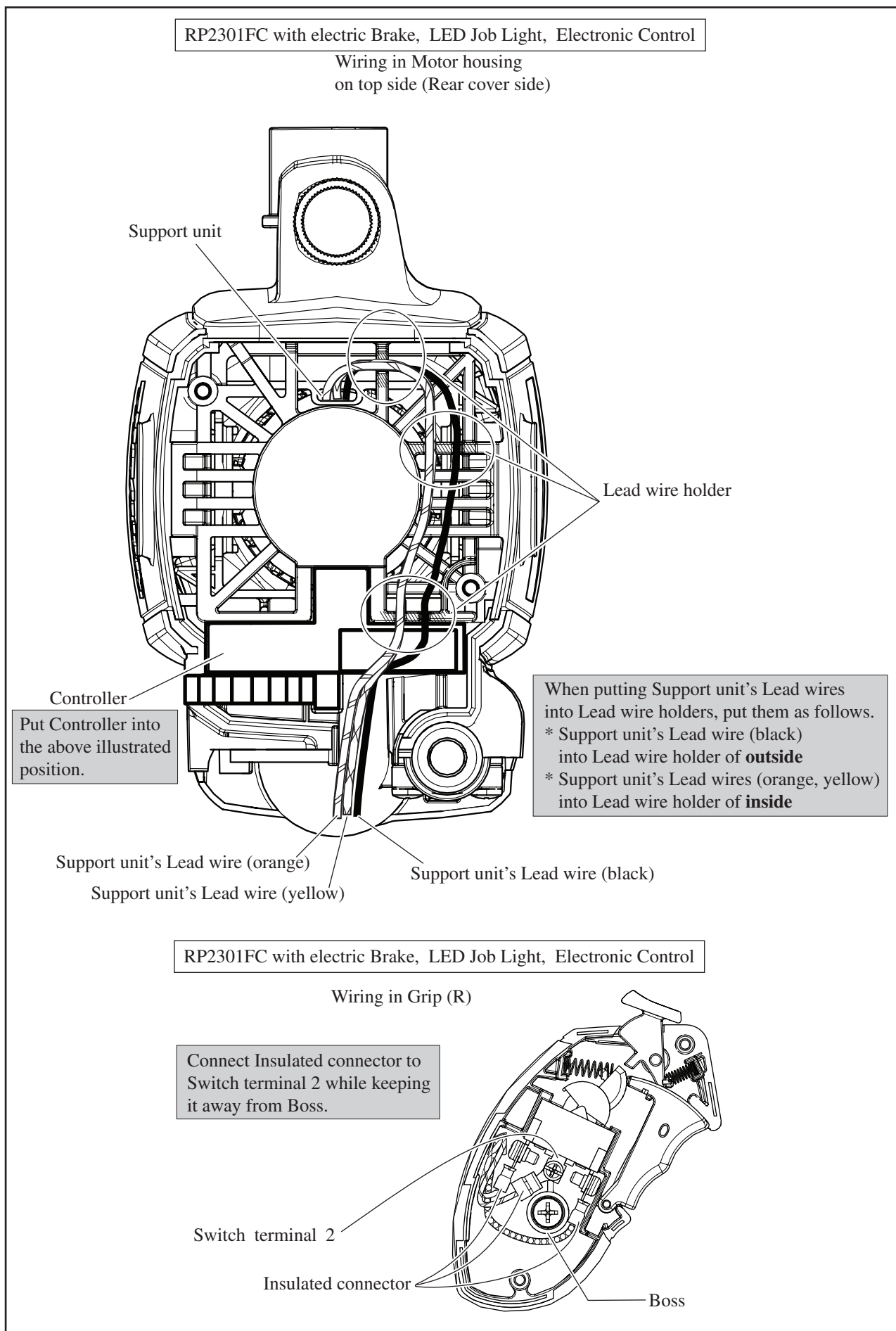
► **Wiring diagram**

Fig. D-2A



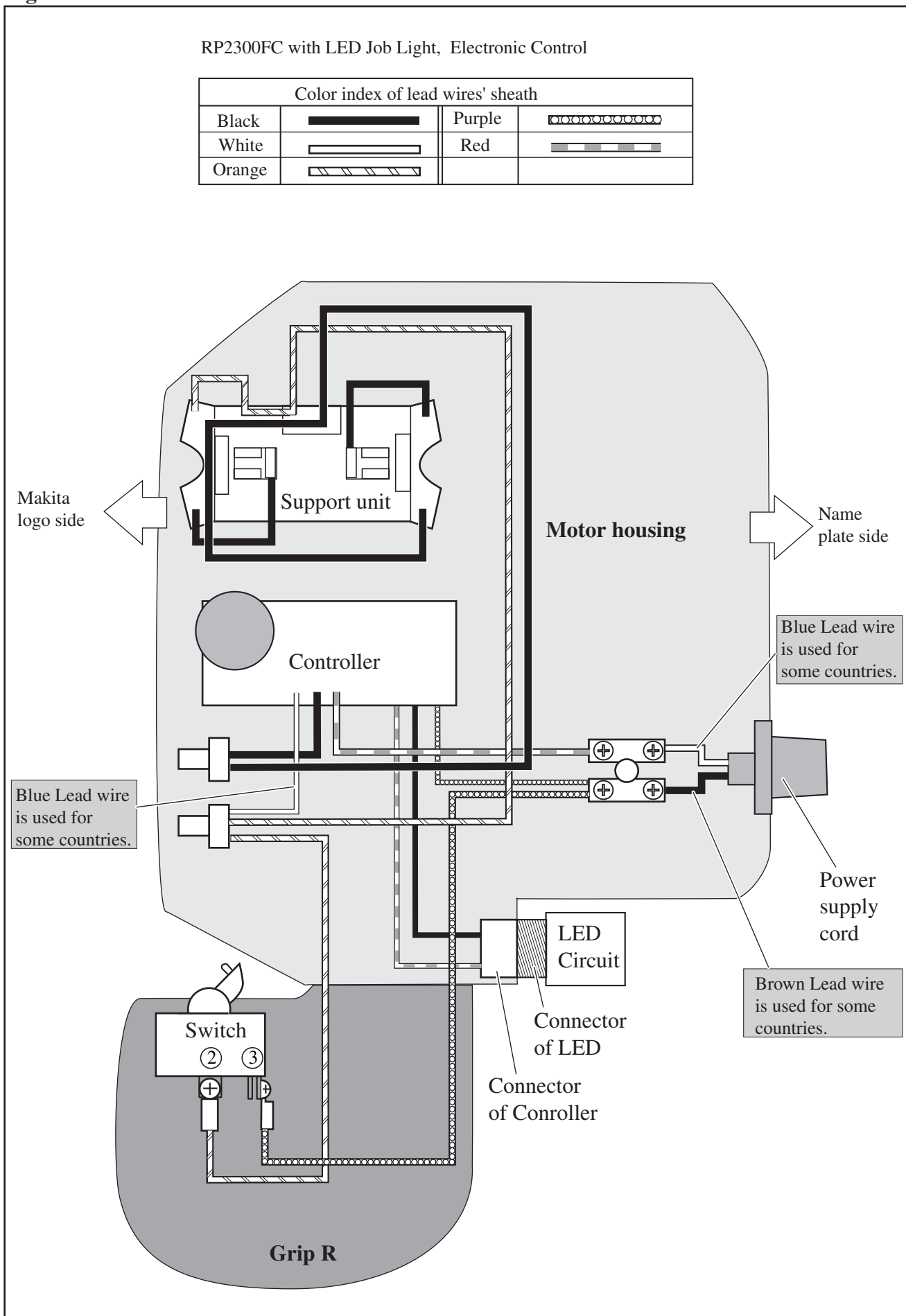
► **Wiring diagram**

Fig. D-3A



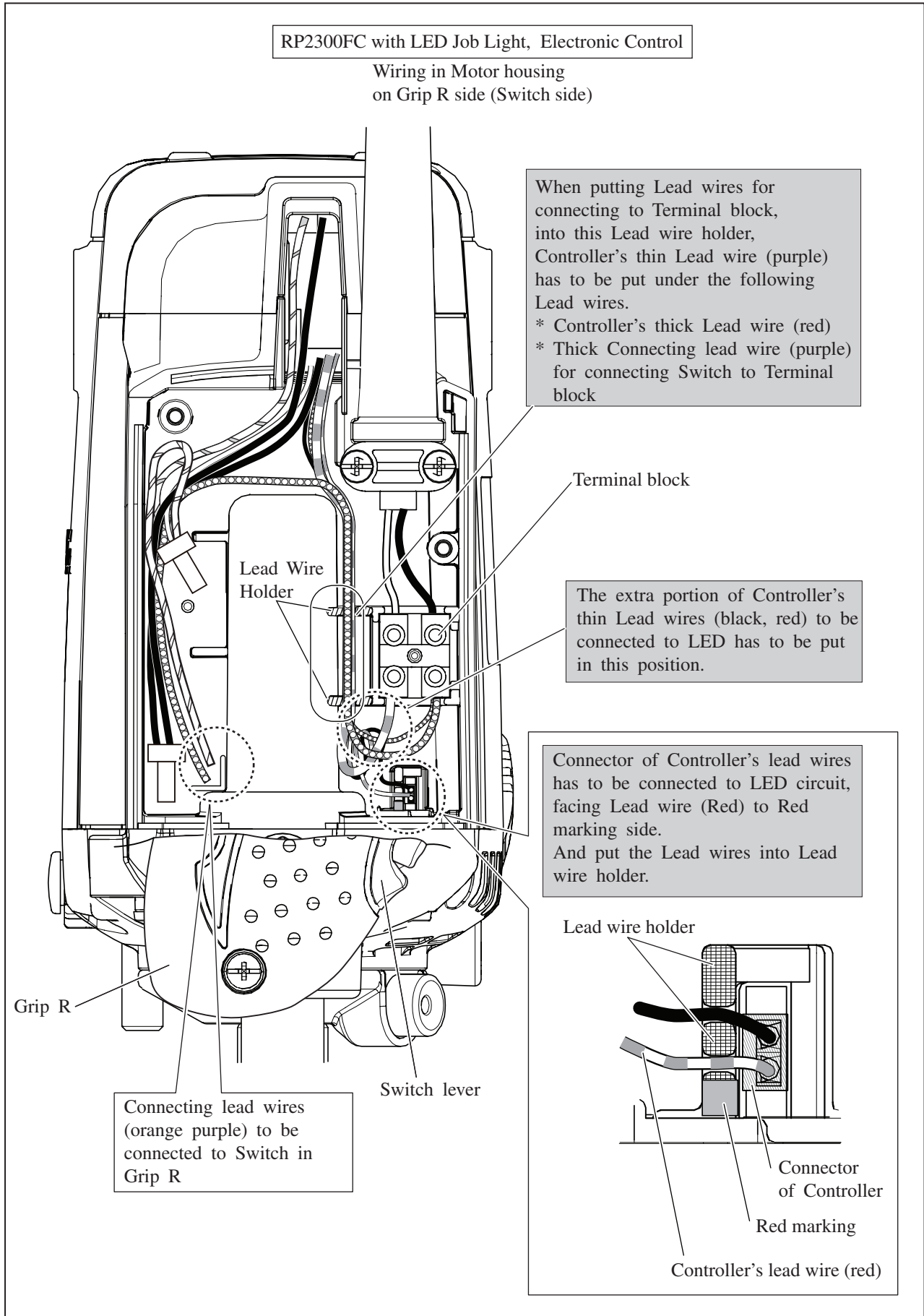
► **Circuit diagram**

Fig. D-1B



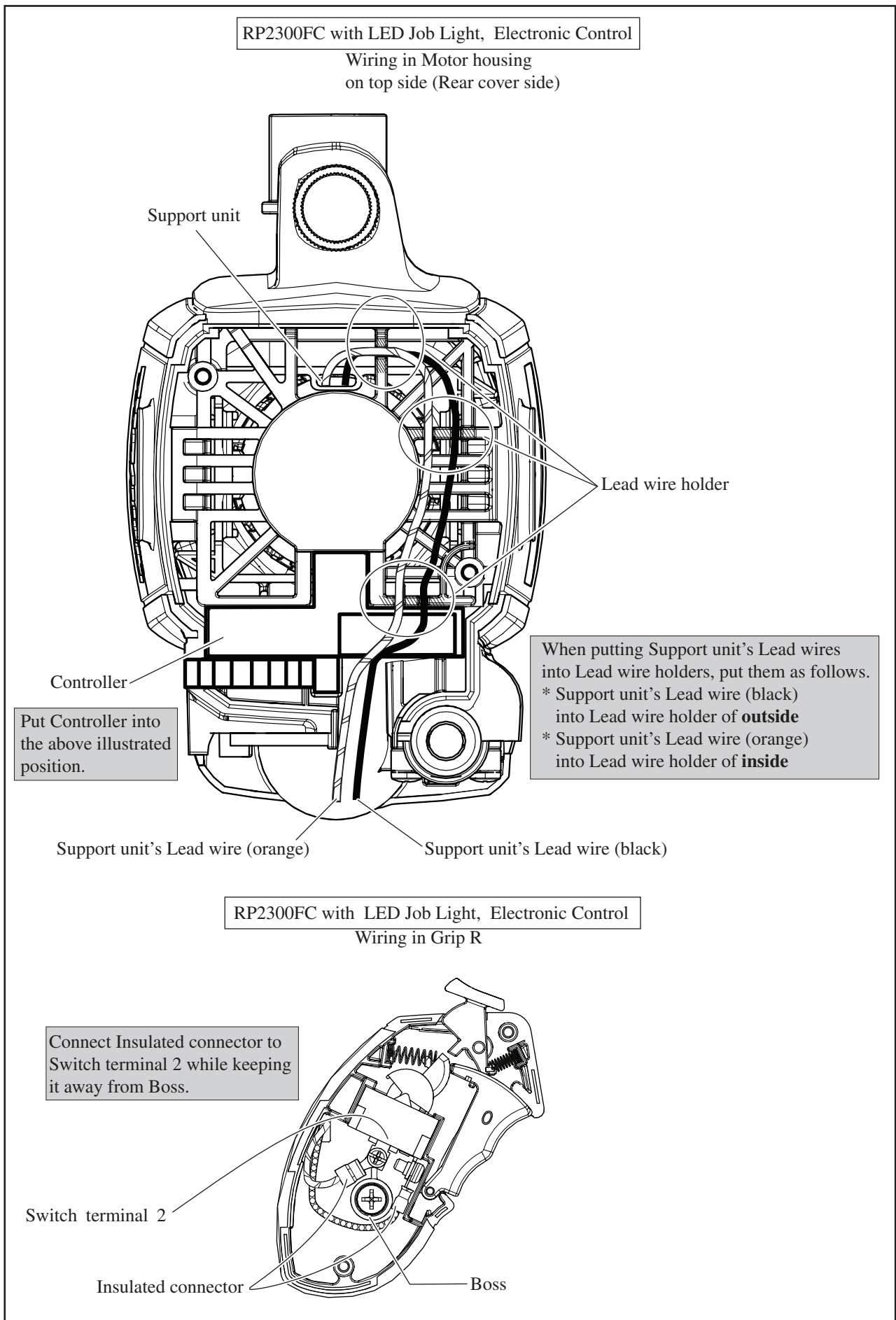
► **Wiring diagram**

Fig. D-2B



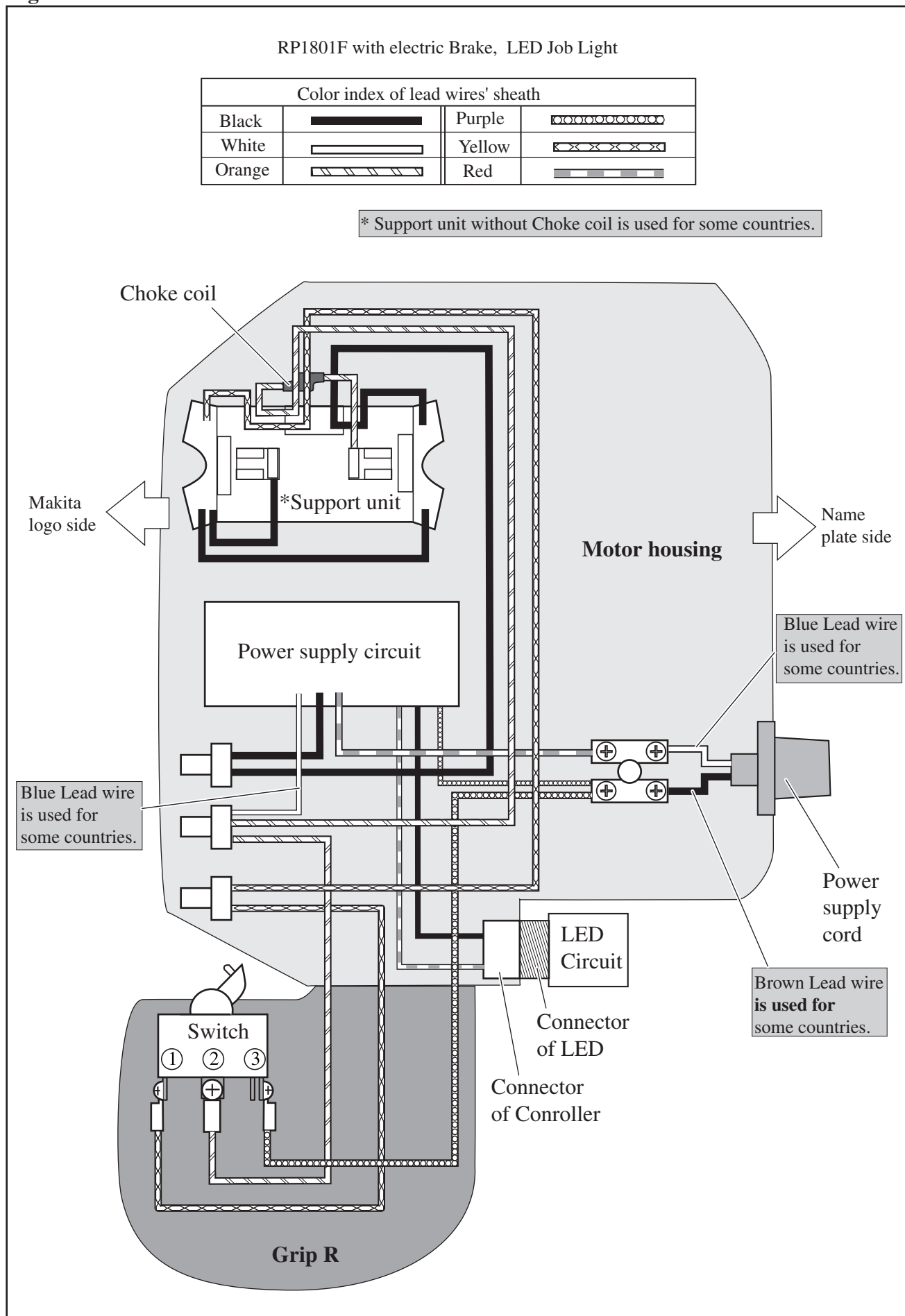
► **Wiring diagram**

Fig. D-3B



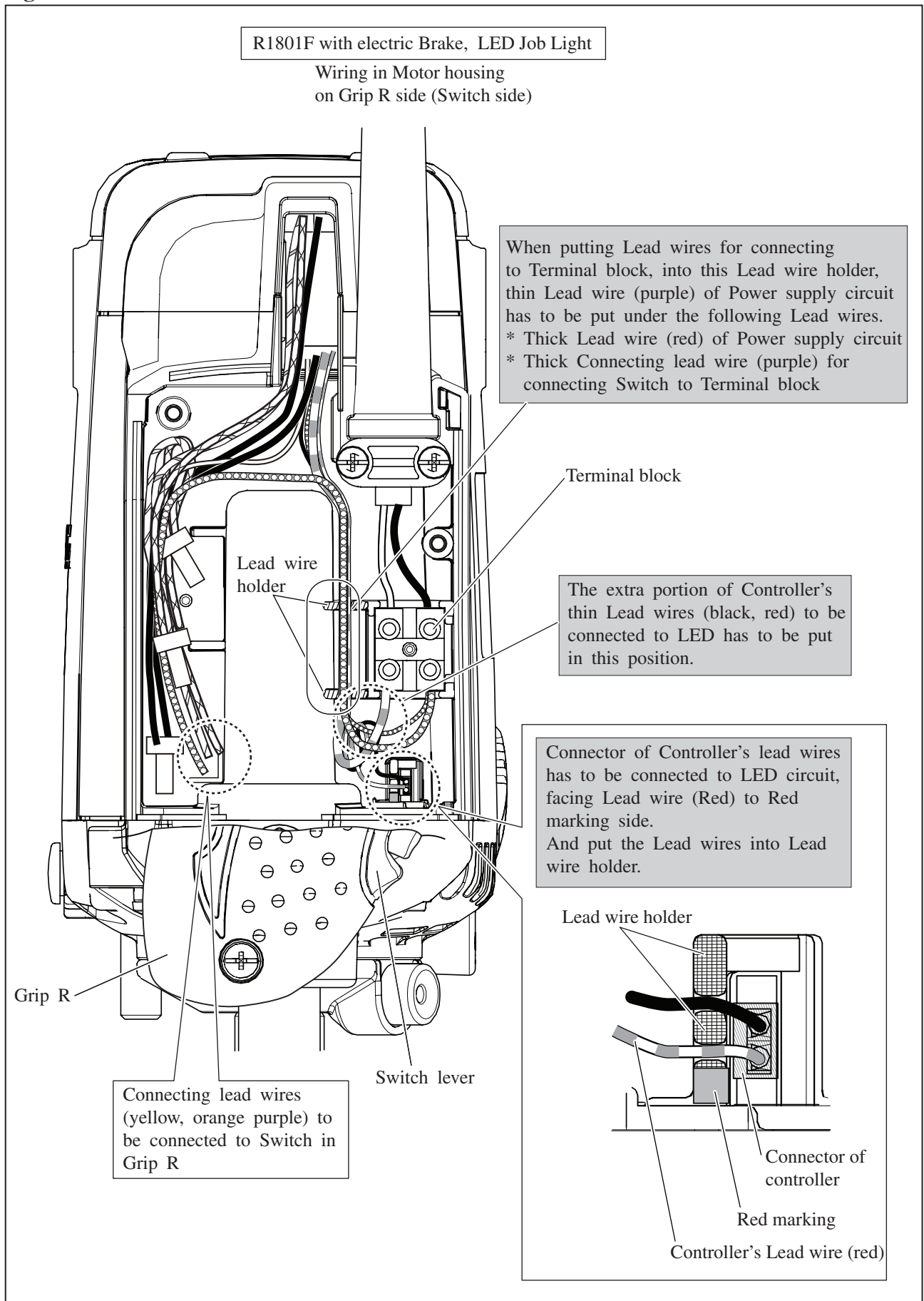
► **Circuit diagram**

Fig. D-1C



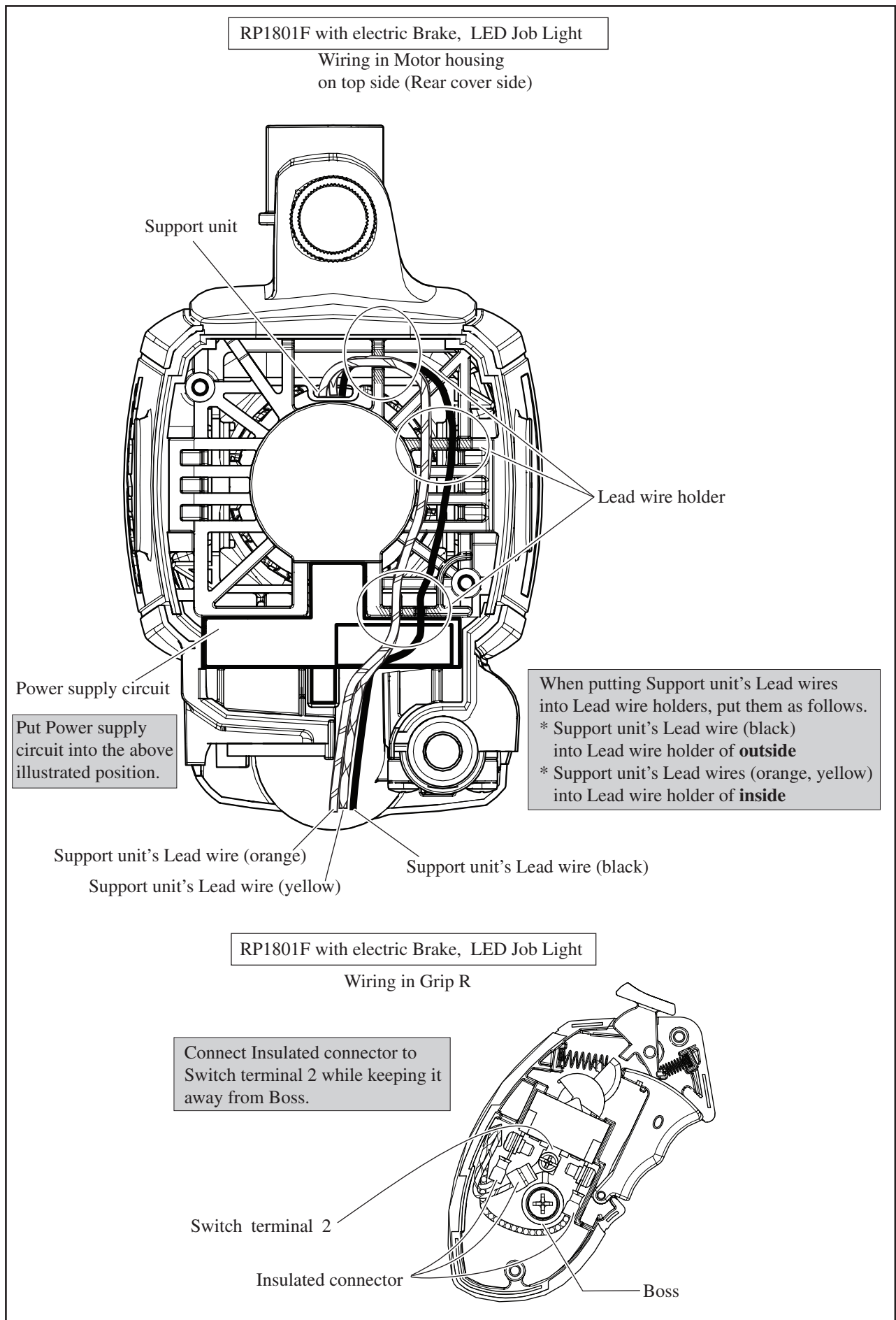
► **Wiring diagram**

Fig. D-2C



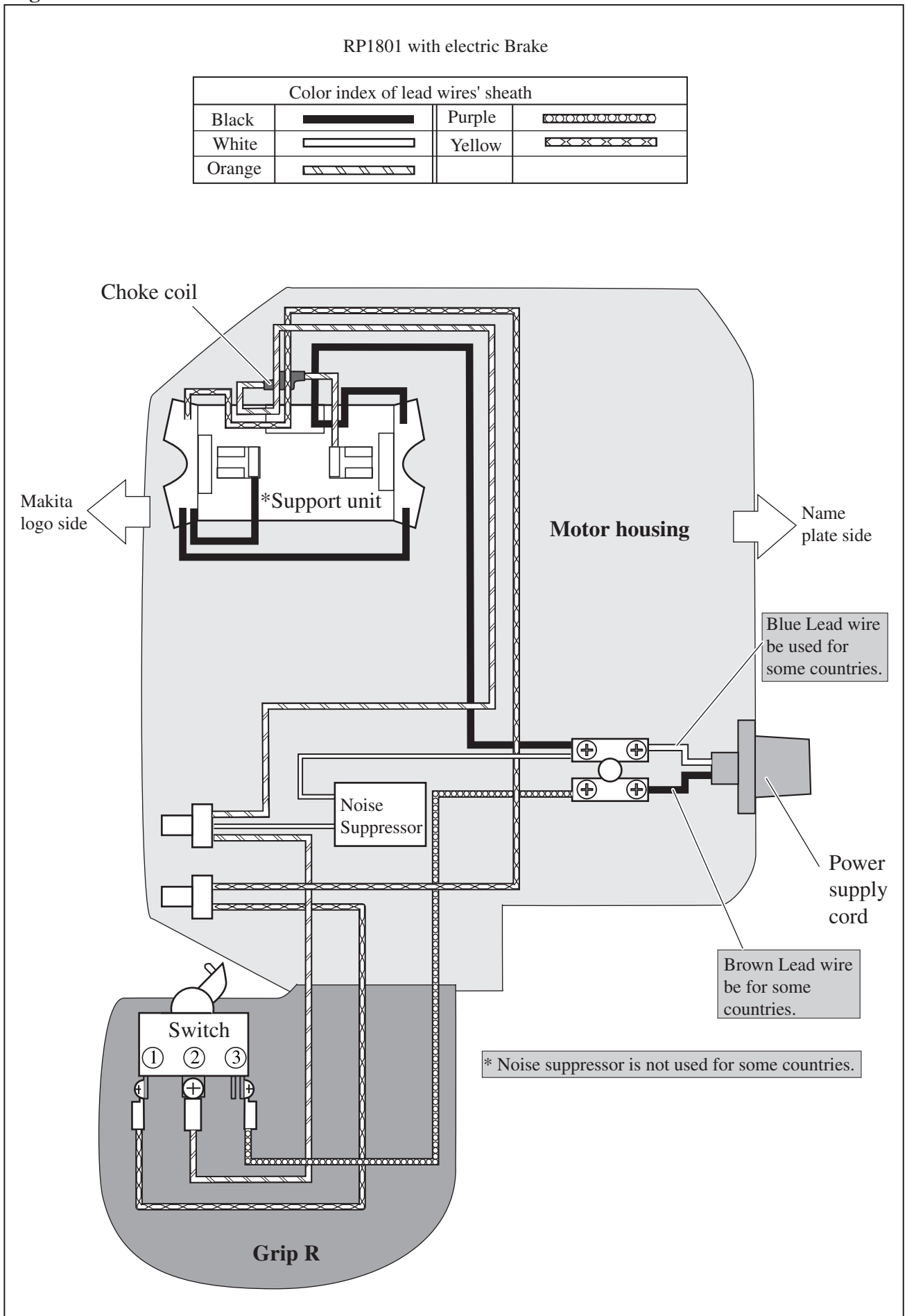
► **Wiring diagram**

Fig. D-3C



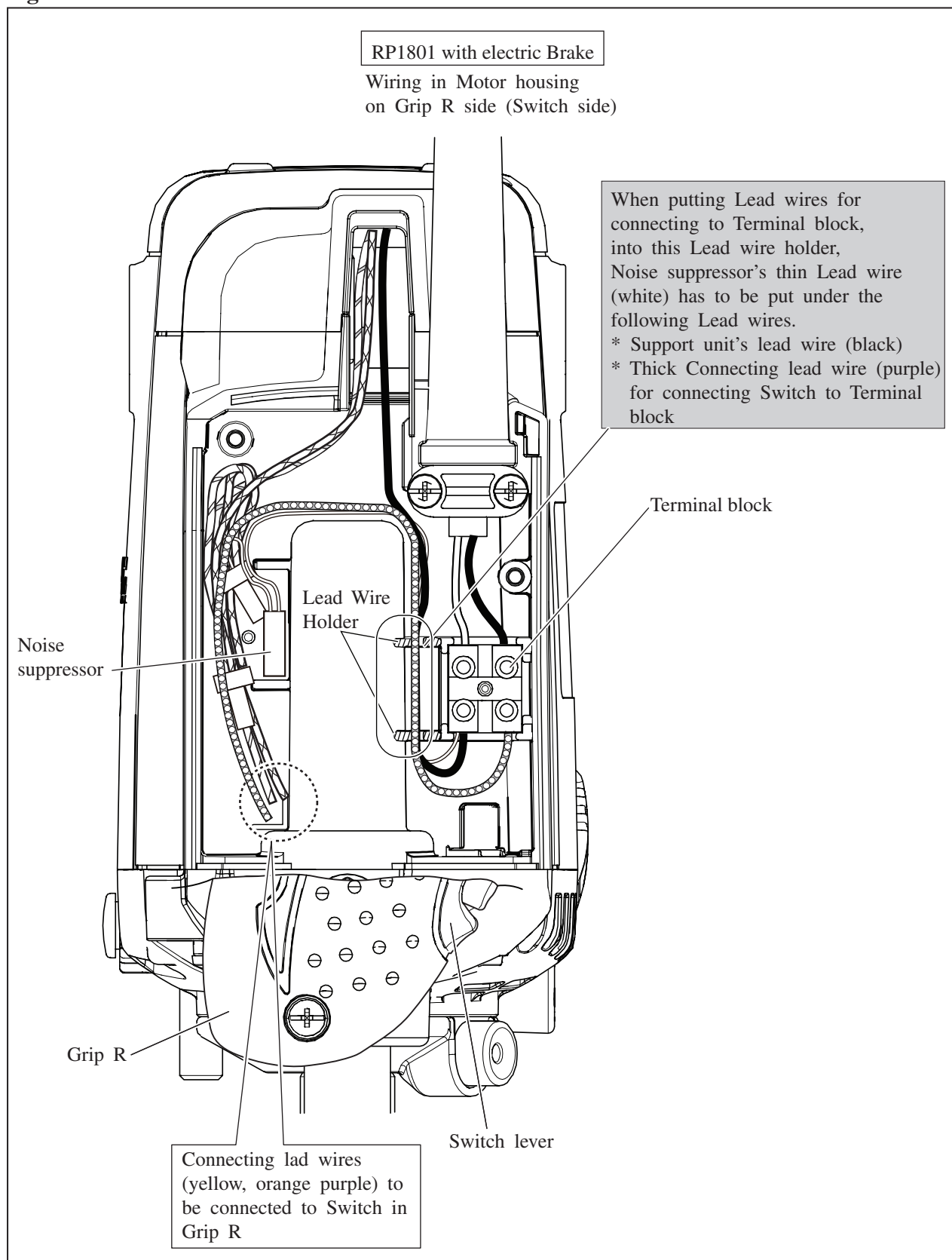
► **Circuit diagram**

Fig. D-1D



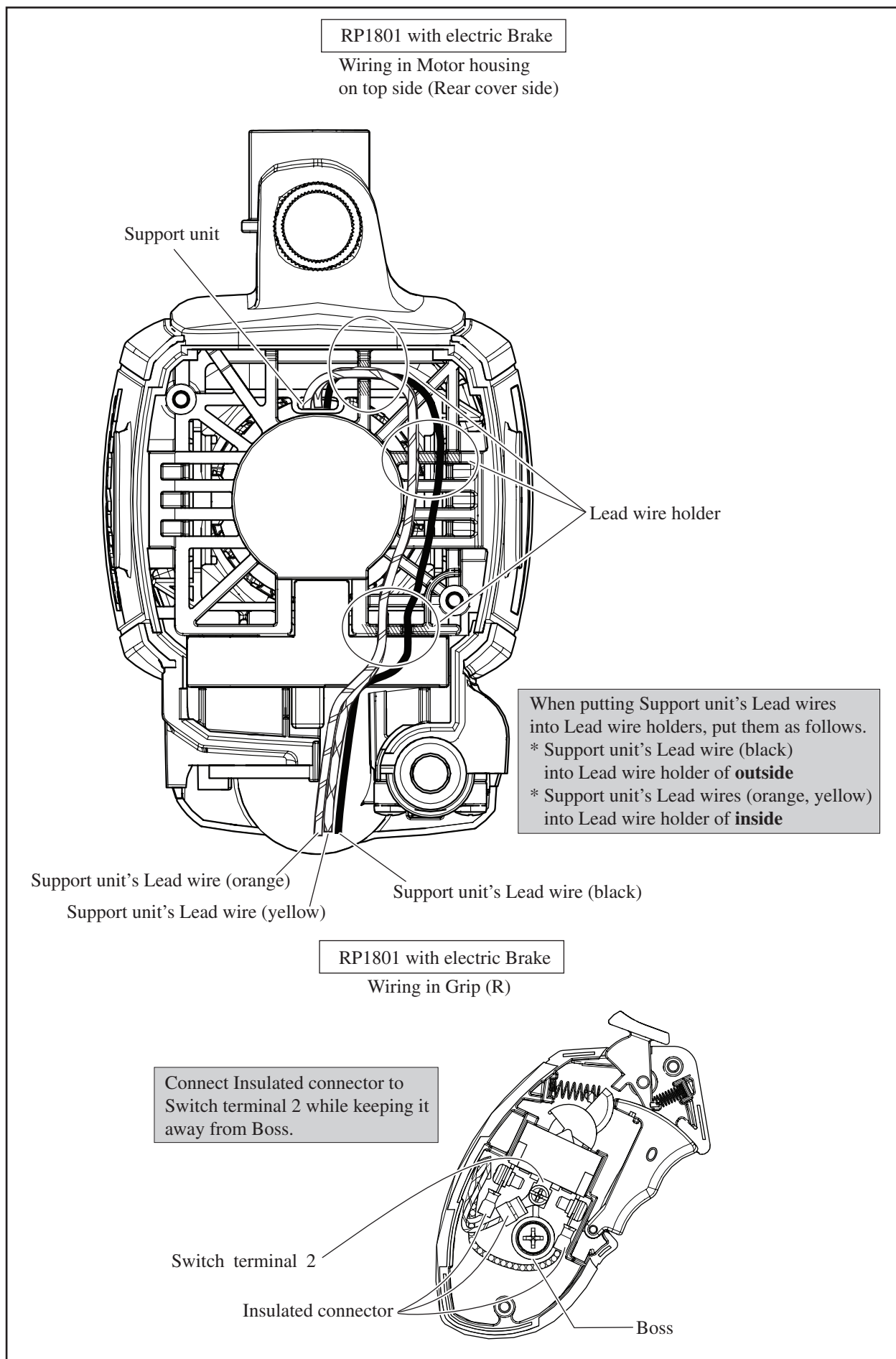
► **Wiring diagram**

Fig. D-2D



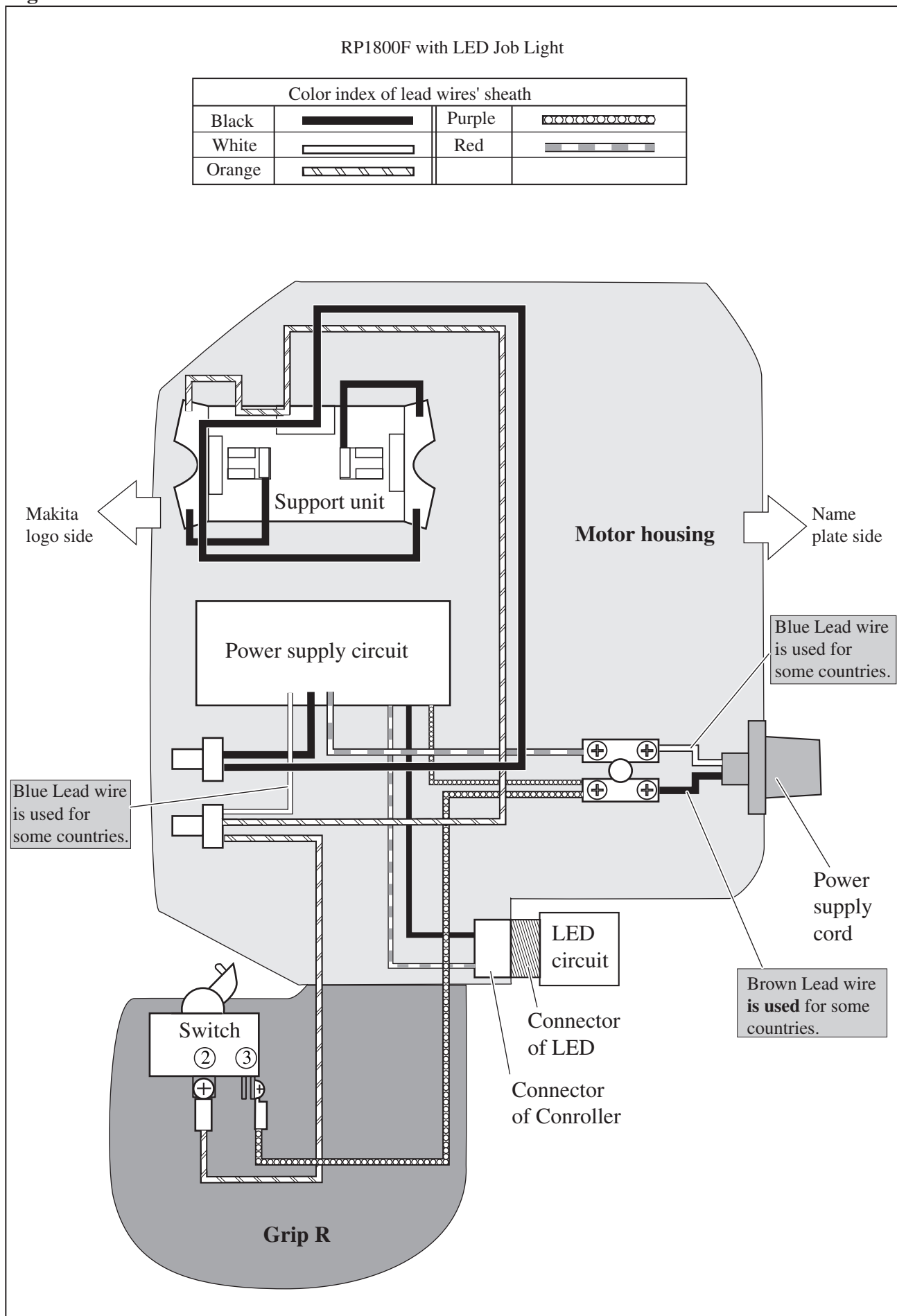
► **Wiring diagram**

Fig. D-3D



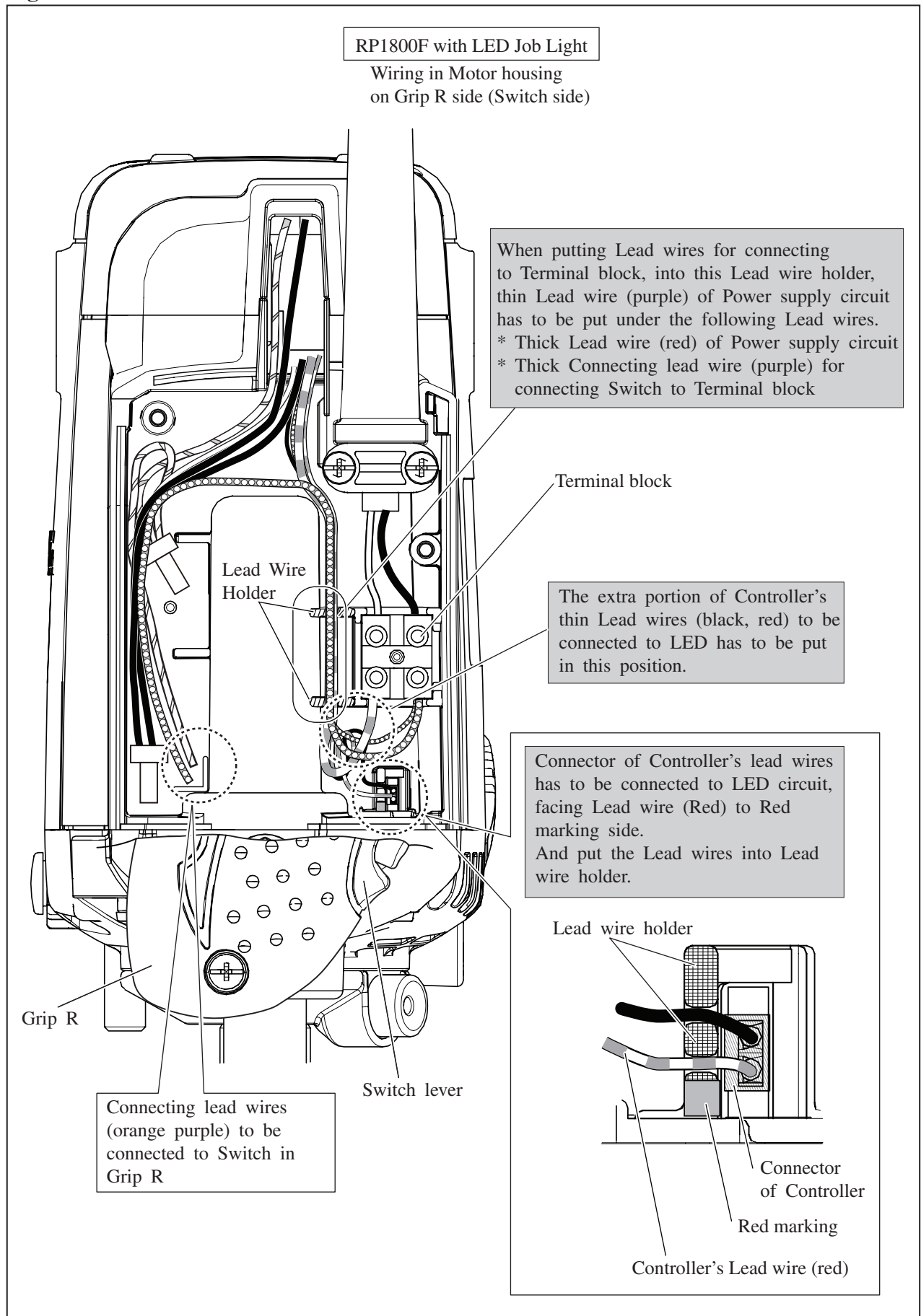
► **Circuit diagram**

Fig. D-1E



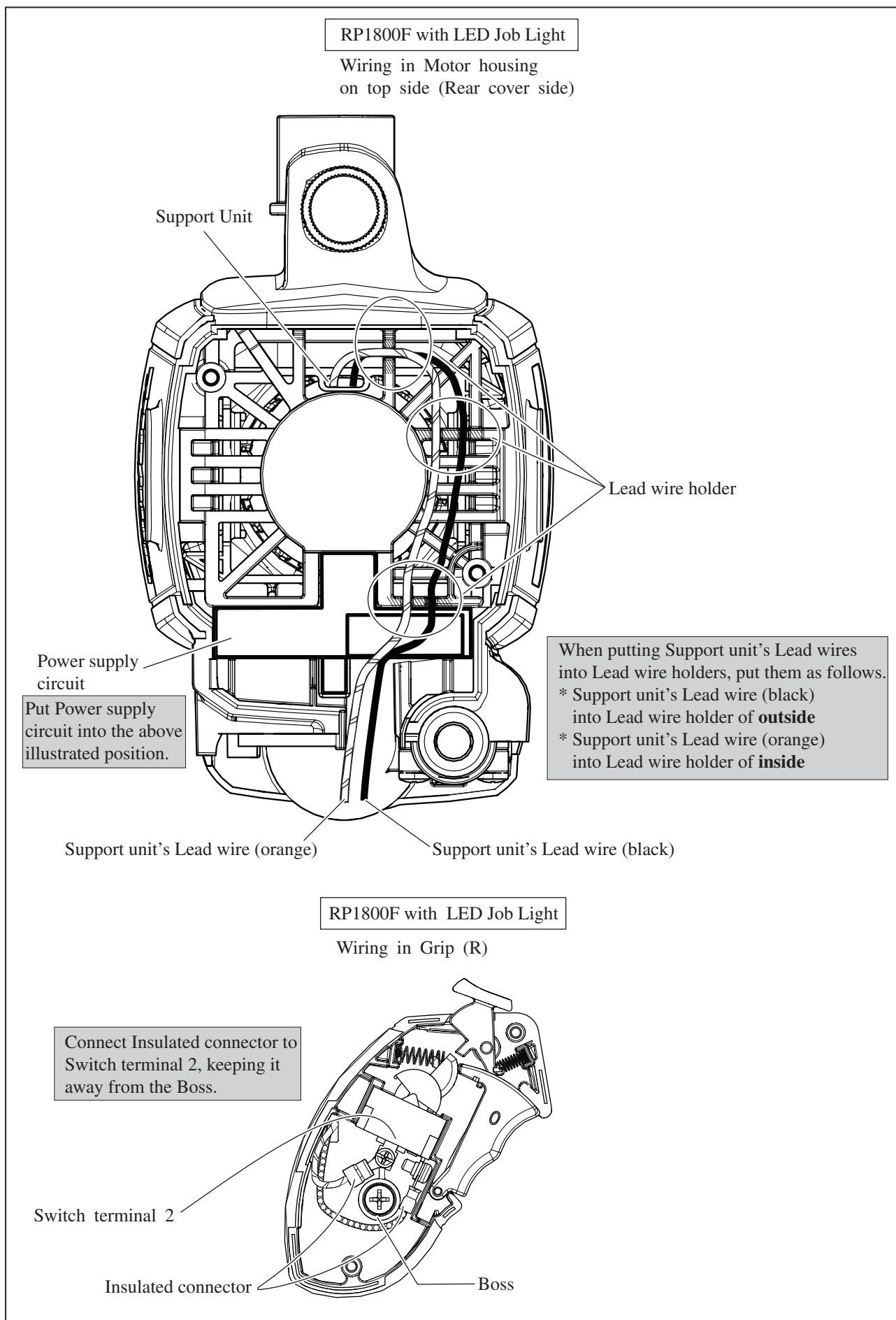
► **Wiring diagram**

Fig. D-2E



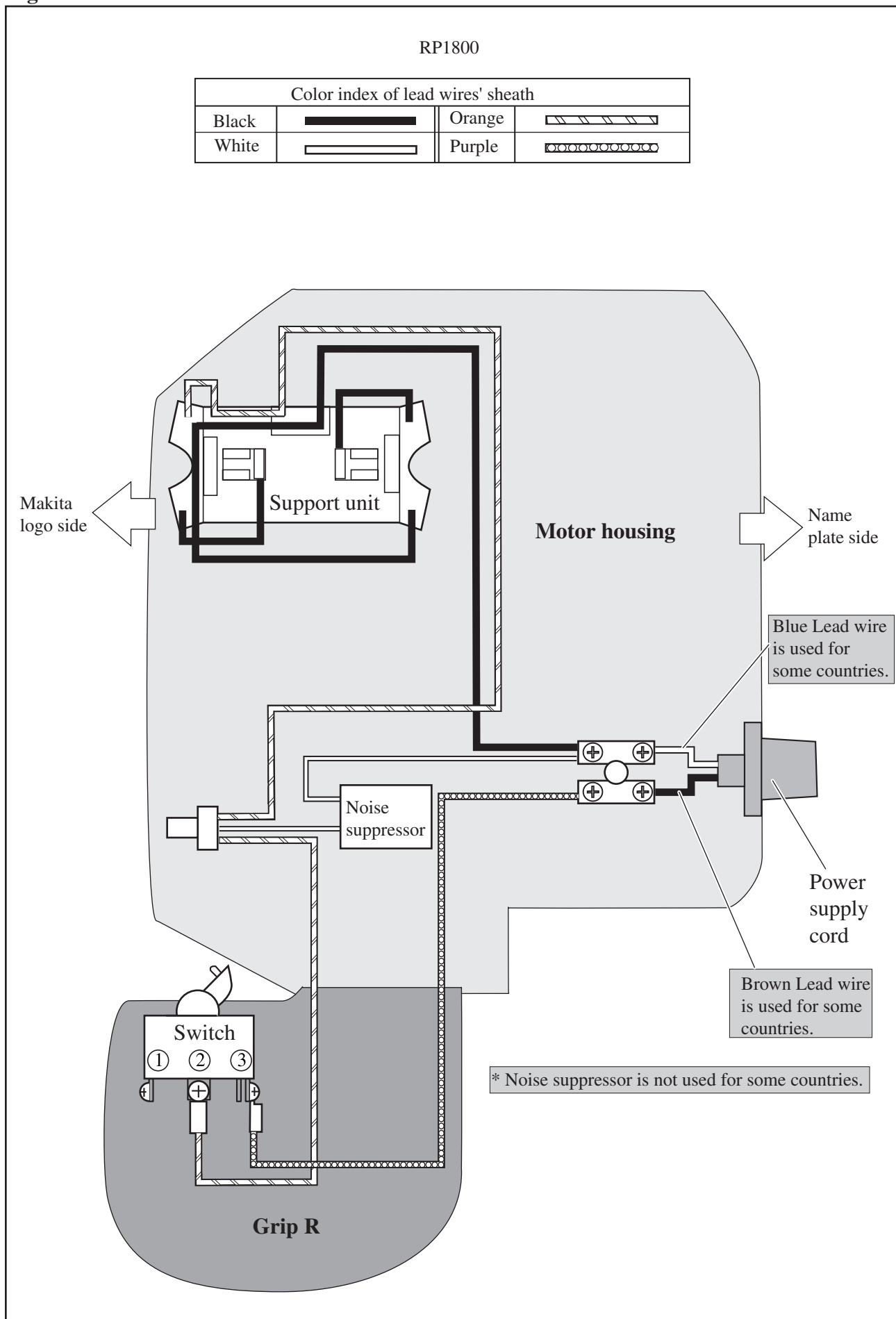
► **Wiring diagram**

Fig. D-3E



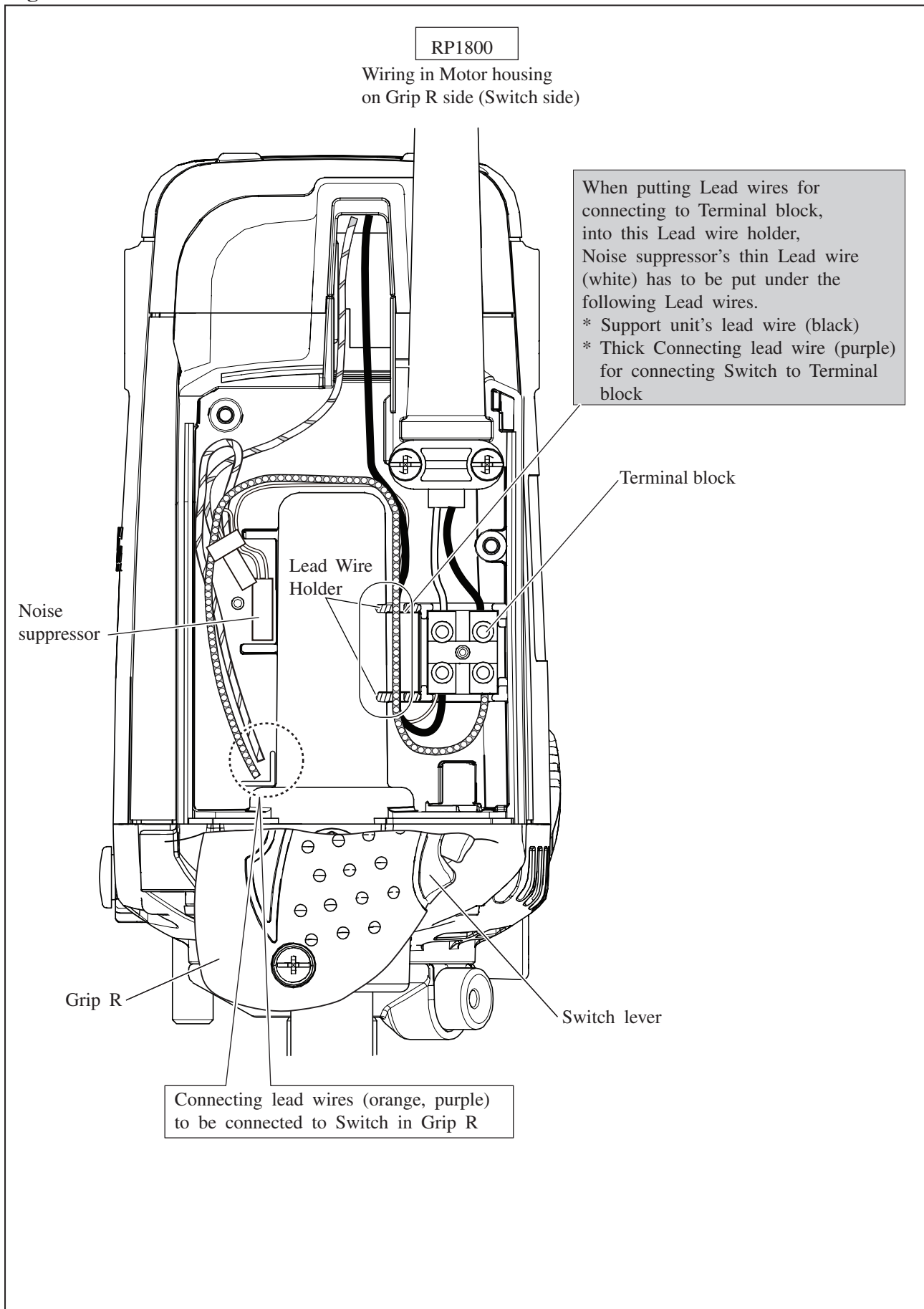
► **Circuit diagram**

Fig. D-1F



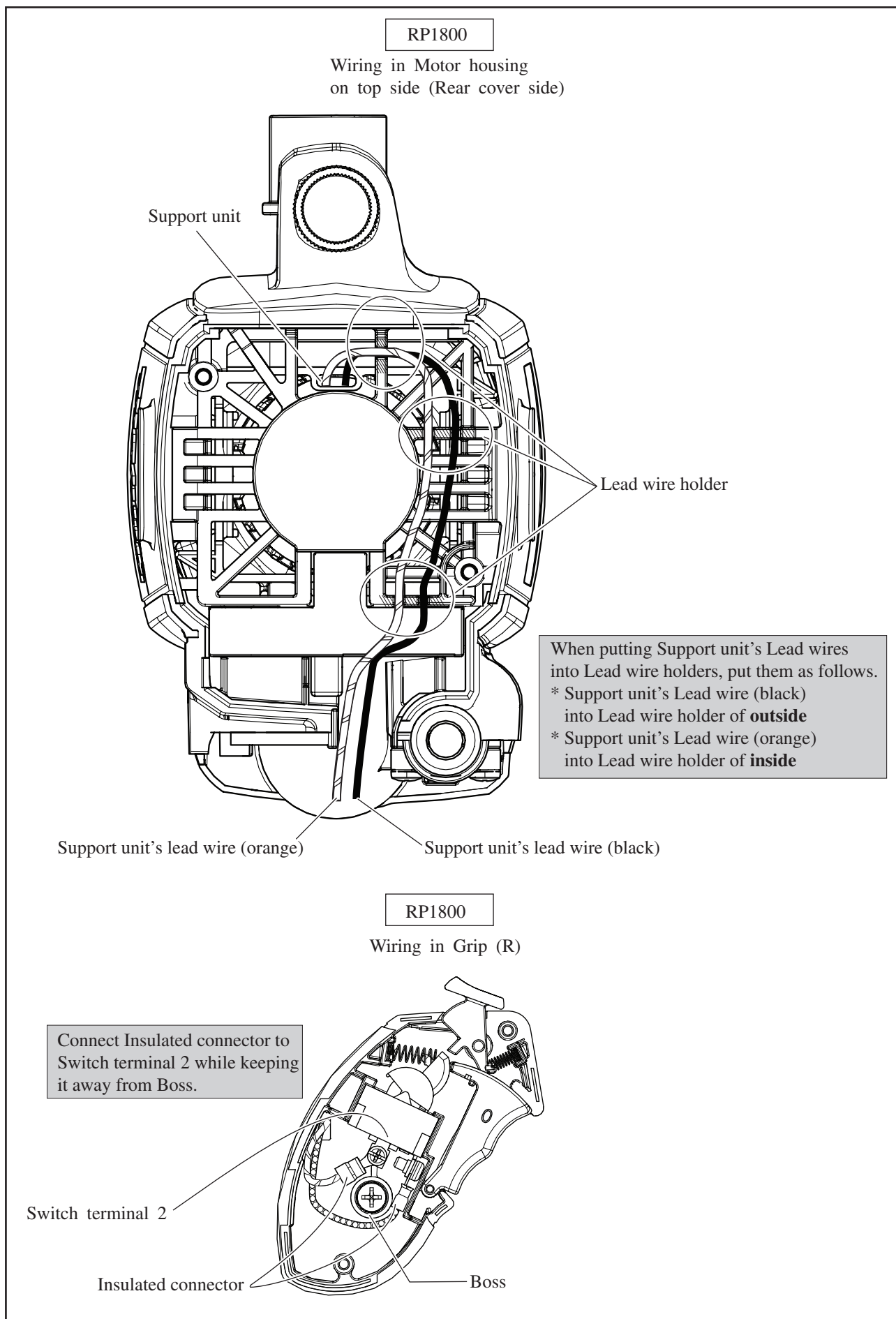
► **Wiring diagram**

Fig. D-2F



► **Wiring diagram**

Fig. D-3F



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