

# NEW MODEL INFORMATION



PRODUCT

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**Models No.** ▶ DA4000LR

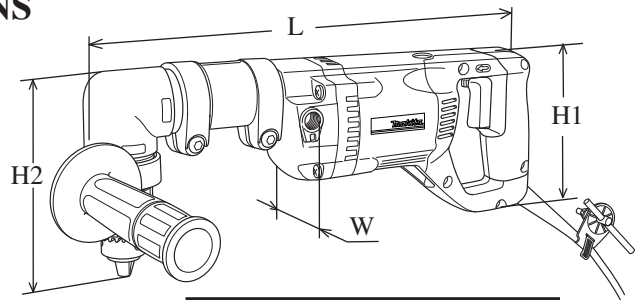
**Description** ▶ 13mm (1/2") Angle Drill

## CONCEPTION AND MAIN APPLICATIONS

This model is the higher power version of the existing Model 6300LR.

Its brief benefits and features are

1. Easier upsetting angle attachment for change of working mode (high / low speed) thanks to the new formed drill chuck.
2. More durable gears in the angle attachment.
3. Light weight and easy to operate.
4. D - formed handle for easy gripping.



| Dimensions : mm ( " ) |              |
|-----------------------|--------------|
| Length (L)            | 413 (16-1/4) |
| Height (H1)           | 153 (6)      |
| Height (H2)           | 144 (5-5/8)  |
| Width (W)             | 83 (3-1/4)   |

## ► Specification

| Voltage (V) | Current (A) | Cycle (Hz) | Continuous Rating (W) |        | Max. Output(W) |
|-------------|-------------|------------|-----------------------|--------|----------------|
|             |             |            | Input                 | Output |                |
| 120         | 7.5         | 50 / 60    | 850                   | 440    | 600            |
| 220         | 3.4         | 50 / 60    | 710                   | 300    | 600            |
| 230         | 3.2         | 50 / 60    | 710                   | 300    | 600            |

|                                  |          |                               |                                  |                           |                        |
|----------------------------------|----------|-------------------------------|----------------------------------|---------------------------|------------------------|
| No load speed<br>: (min -) = rpm | (High)   | 0 - 900 with angle attachment | 0 - 600 without angle attachment |                           |                        |
|                                  | (Low)    | 0 - 400 with angle attachment |                                  |                           |                        |
| Chuck ability : mm ( " )         |          | 2- 13 (1/16 - 1/2)            |                                  |                           |                        |
| Drilling<br>capacity : mm ( " )  | in Steel |                               | 13 (1/2)                         |                           |                        |
|                                  | in Wood  | (High)                        | Auger bit : 38 (1-1/2)           | Selfeed bit : 65 (2-9/16) | Hole saw : 114 (4-1/2) |
|                                  |          | (Low)                         | Auger bit : 38 (1-1/2)           | Selfeed bit: 118 (4-5/8)  | Hole saw : 152 (6)     |
| Reverse switch                   |          | Yes                           |                                  |                           |                        |
| Variable switch                  |          | Yes                           |                                  |                           |                        |
| Protection from electric shock   |          | by double insulation          |                                  |                           |                        |
| Cord length : m ( ft )           |          | 2.5 (8.2)                     |                                  |                           |                        |
| Net weight :Kg (lbs )            |          | 3.7 (8.1)                     |                                  |                           |                        |

## ► Standard equipment

- \* Side grip for DA4000LR ..... 1 pc.
- \* Side grip for angle attachment ..... 1 pc.
- \* Chuck key ..... 1 pc.
- \* Hex wrench ..... 1 pc.
- \* Plastic carrying case ..... 1 pc.

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

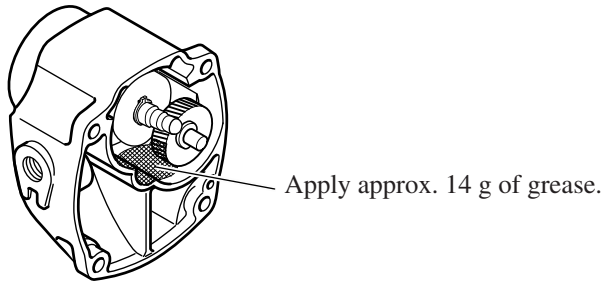
## ► Optional accessories

- \* Angle attachment
- \* Extension attachment
- \* Depth guide assembly
- \* Side grip (for DA4000LR)
- \* Side grip (for Angle attachment)
- \* Drill chuck
- \* Chuck key

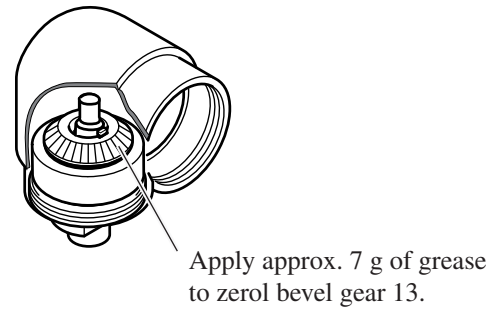
## < 1 > Lubrication

Apply MAKITA grease N No.1 to the parts illustrated below.

### A. Gear housing



### B. Angle attachment

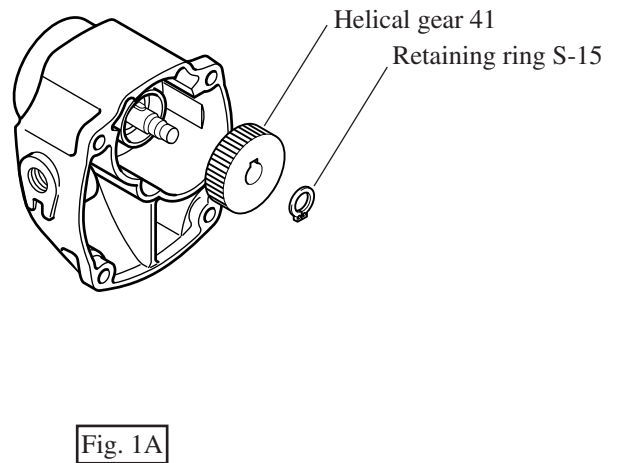
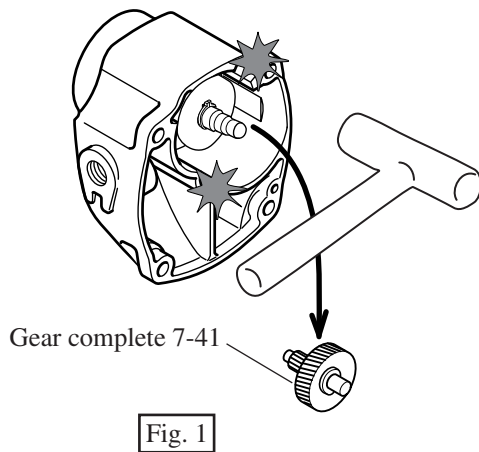


## < 2 > Assembling and disassembling

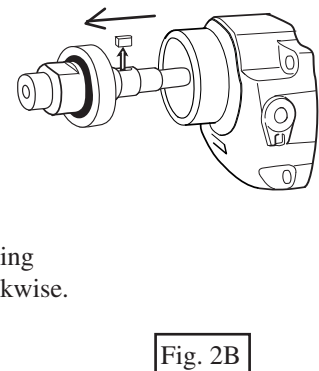
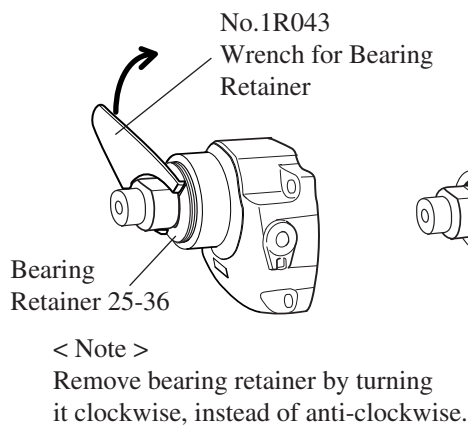
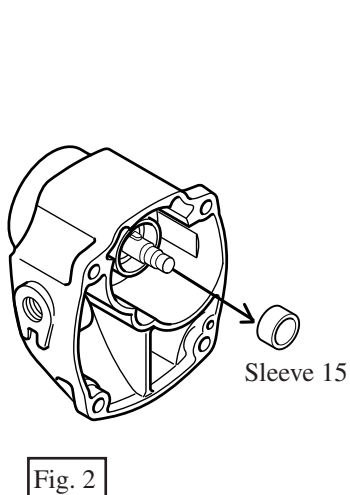
### ( 1 ) Disassembling gear housing

Hit the marked portion of gear housing with plastic hammer as illustrated in Fig. 1. So gear complete 7-41 can be disassembled from gear housing.

Remove retaining ring S-15 with retaining ring plier. Then, helical gear 41 can be disassembled from gear housing as illustrated in Fig. 1A.

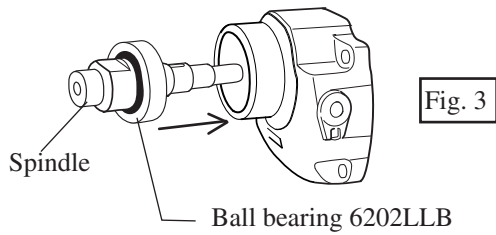


When further disassembling spindle, remove sleeve 15 as illustrated in Fig. 2, and then, detach bearing retainer 25-36 with No.1R043 "Wrench for Bearing Retainer" as illustrated in Fig. 2A. Spindle can be separated from gear housing as illustrated in Fig. 2B.

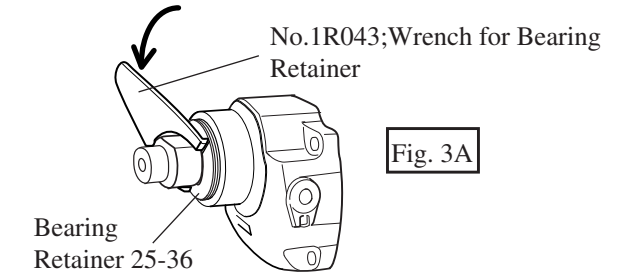


(2) Assembling gear housing  
Assemble gear housing as per the following order.

1. Assemble spindle with ball bearing 6202LLB into gear housing.

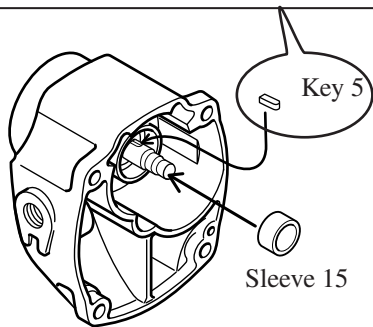
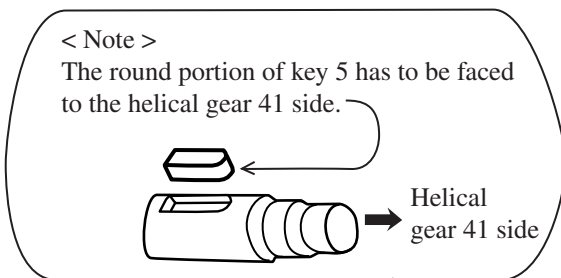


2. Assemble bearing retainer 25-36 by turning it anti-clockwise.

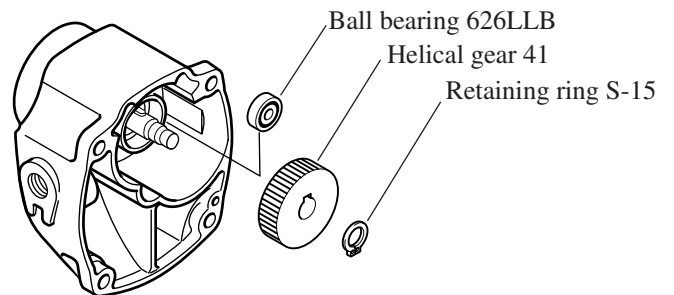


< Note >  
The fastening torque for it is 12 - 16 N.m.

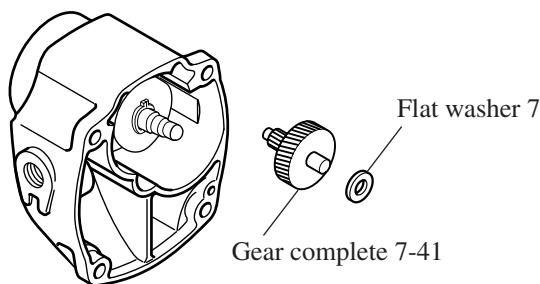
3. After assembling sleeve 15, attach key 5.



4. Assemble ball bearing 626LLB for easy mounting gear complete 7-41, And then, assemble helical gear 41 to spindle. Fix it with retaining ring S-15.



5. Assemble gear complete 7-41 and flat washer 7.



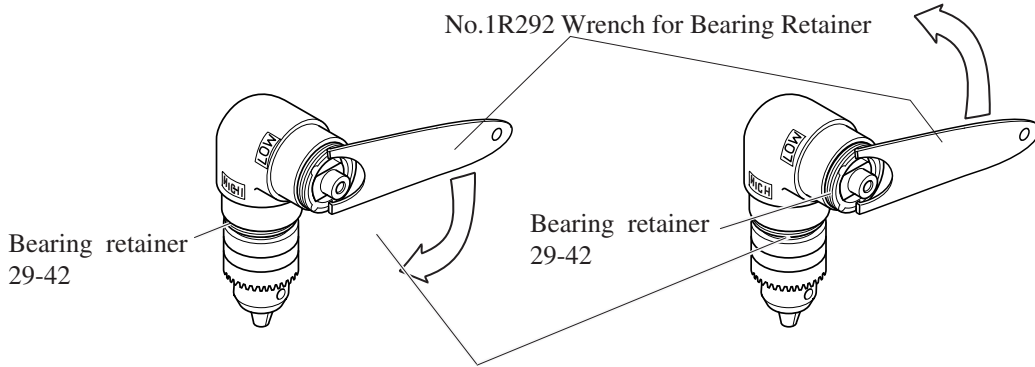
< 2 > Disassembling and assembling angle attachment  
 (Standard equipment for DA4000IR, optional accessory for 6304LR)

( 1 ) Disassembling bearing retainer 29-42

Bearing retainer 29-42 can be disassembled by turning it with No.1R292 "Wrench for Bearing Retainer" clockwise, instead of anti-clockwise as illustrated in Fig. 4.

( 2 ) Assembling bearing retainer 29-42

Bearing retainer 29-42 can be assembled by turning it with No.1R292 "Wrench for Bearing Retainer" anti-clockwise as illustrated in Fig. 4A. The fastening torque for bearing retainer 29-42 is 21 - 16 N.m (120 - 160 Kgf.cm).



The same bearing retainer has been assembled on this side. Take the above mentioned step, when assembling and disassembling.

Fig. 4

Fig. 4A

( 3 ) Disassembling gear section

After removing bearing retainer 29-42 hit the marked portion of angle housing with plastic hammer as illustrated in Fig. 5 and Fig. 5A. So, zerol bevel gears come out from high speed mode side and low speed mode side respectively.

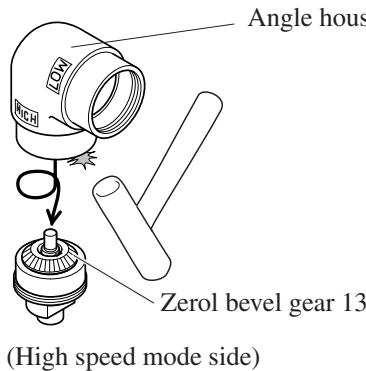


Fig. 5

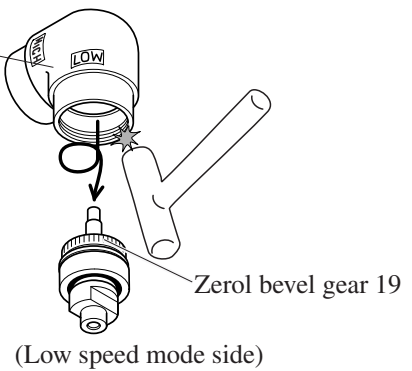


Fig. 5A

( 4 ) Disassembling gear section

Put the gear assembly on the turn base of arbor press, and press gear shaft with arbor press. So, zerol bevel gears can be separated from gear shafts. See Fig. 6 and Fig 6A.

**Whenever zerol bevel gears are replaced, ball bearings 6203DDW have to be replaced with fresh ones.**

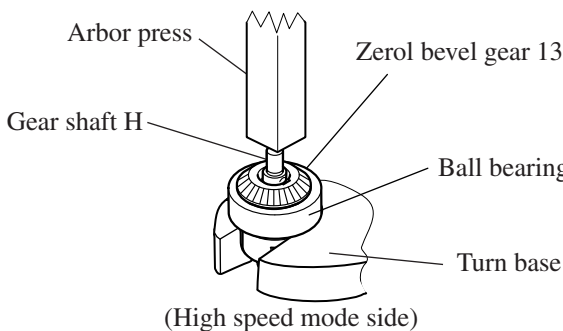


Fig. 6

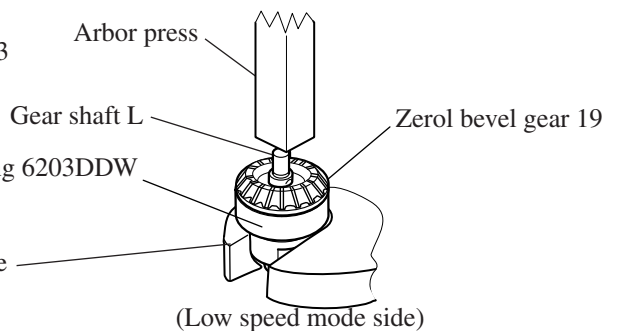
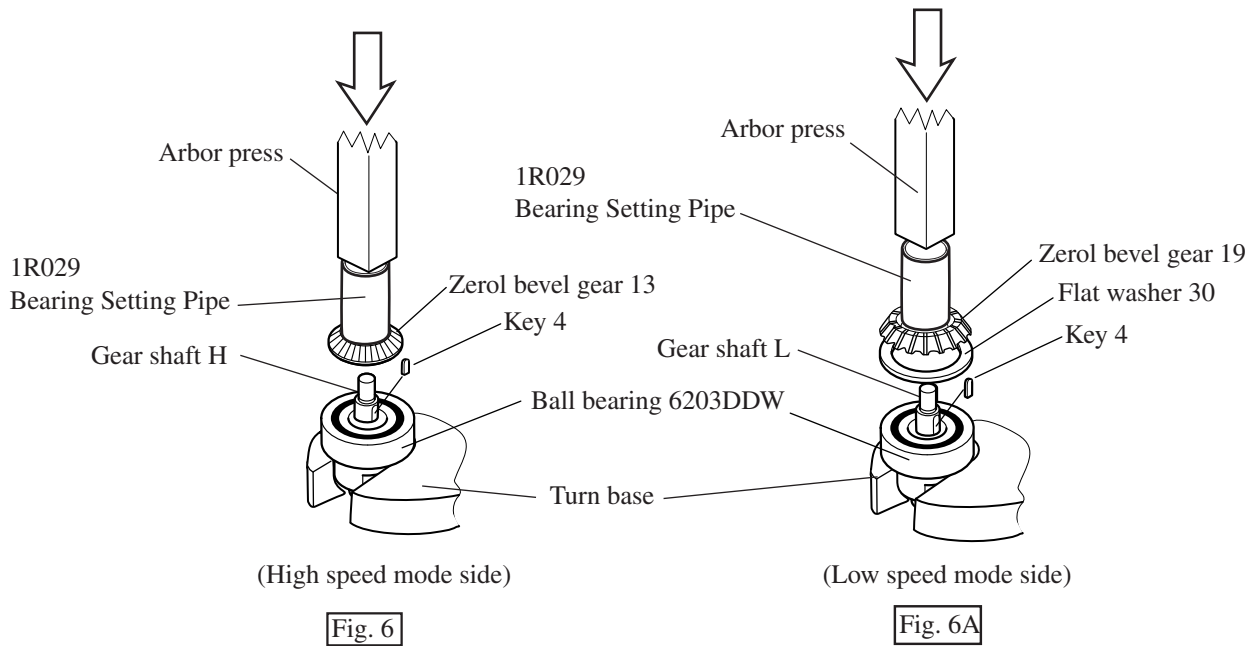


Fig. 6A

( 5 ) Assembling gear section

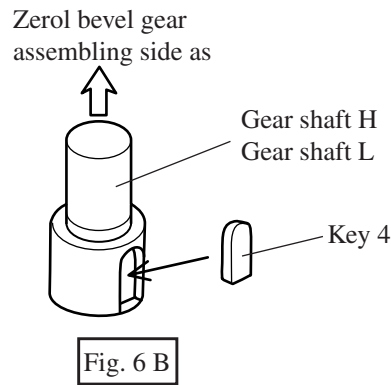
After assembling ball bearings 6203DDW to gear shafts by pressing them, assemble zerol bevel gears to gear shafts by pressing them with arbor press. See Fig. 7 and Fig 7A.



< Note in assembling >

A. Use No. 1R029 "Bearing Setting Pipe" as illustrated in Fig. 6 and Fig. 6 C, when assembling zerol bevel gears.

B. The round portion of key 4 has to be faced to the zerol bevel gear assembling side as illustrated in Fig. 6 B.



C. Do not forget to assemble flat washer 30 between zerol bevel gear 19 and ball bearing 6203DDW as illustrated in Fig. 6 A.

< 3 > Disassembling and assembling drill chuck S-13

( 1 ) Disassembling

Open the jaws of drill chuck. Pressing the end of hex socket head bolt M6 x 25 with your finger, unscrew it anti-clockwise with hex wrench as illustrated in Fig. 7.

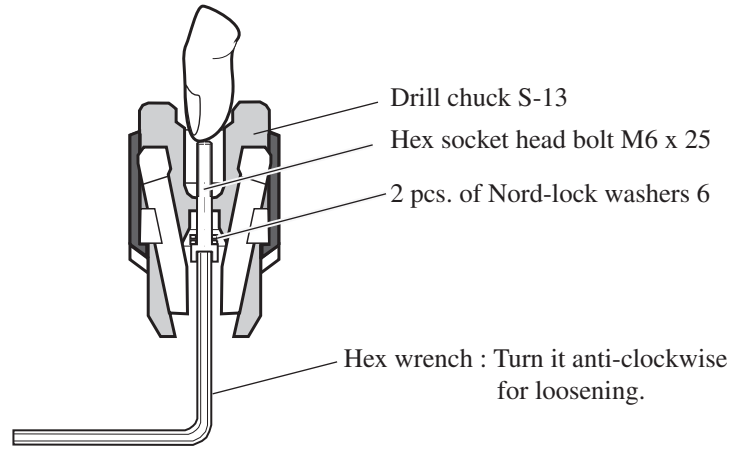


Fig. 7

( 2 ) Assembling

Put 2 pcs. of nord-lock washers 6 on the neck of hex socket head bolt M6 x 25 as illustrated in Fig. 7A. And screw the hex socket head bolt together with nord-lock washer into drill chuck as illustrated in the above Fig. 7.

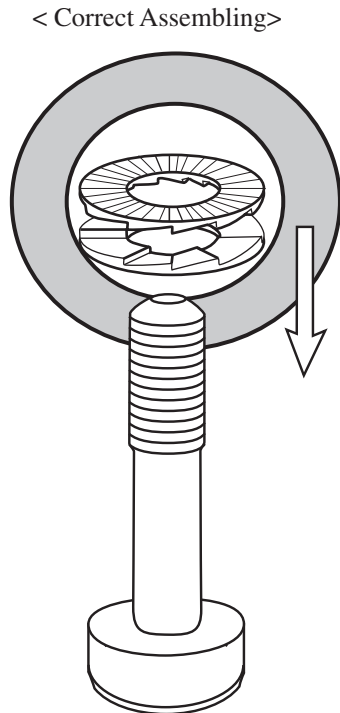


Fig. 7 A

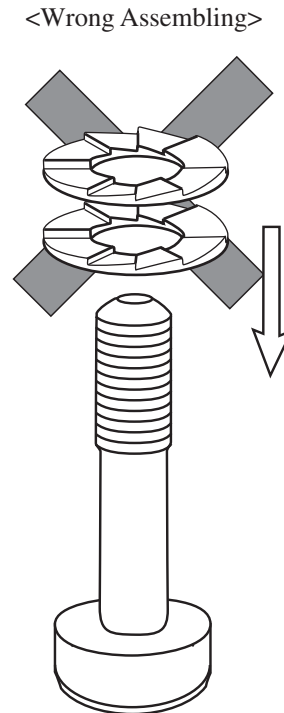
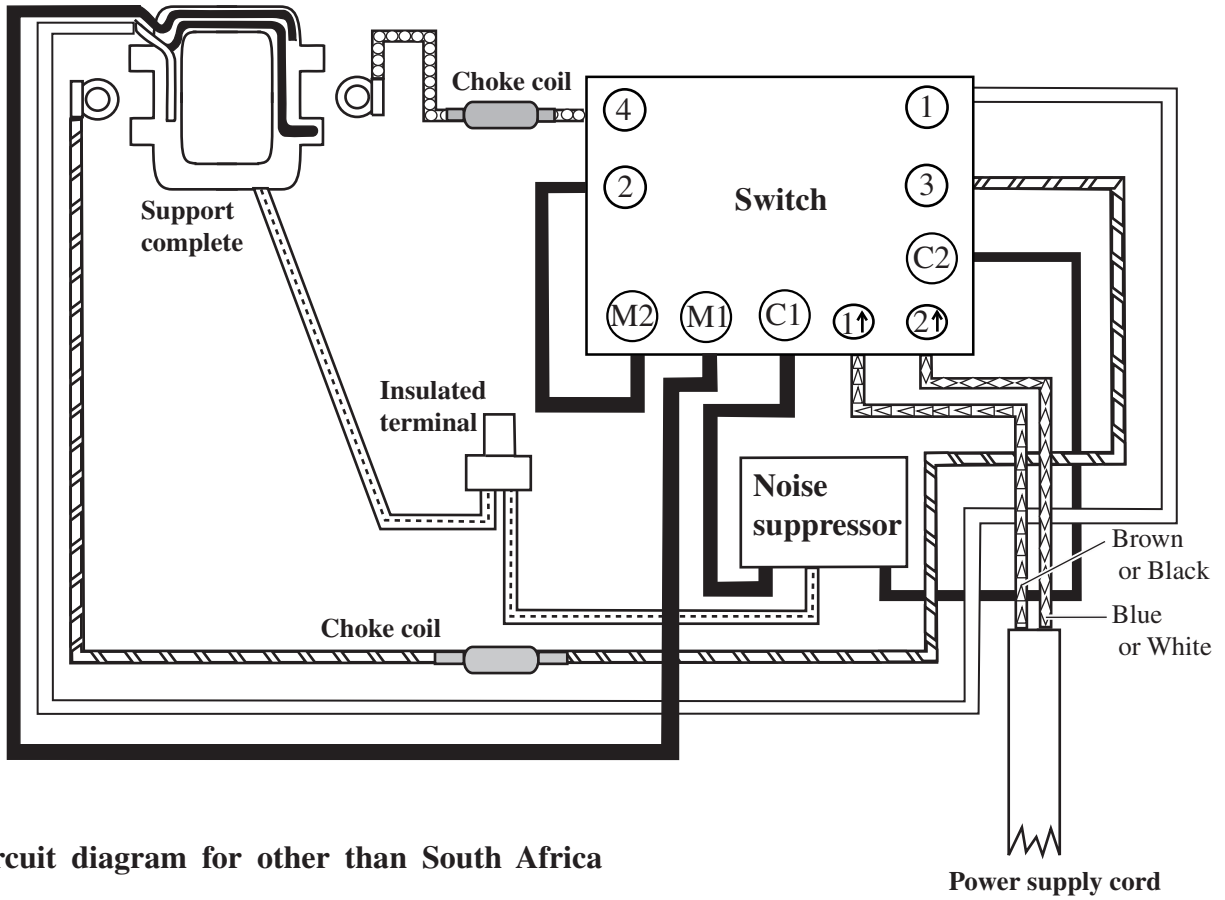


Fig. 7 B

< Note in assembling nord-lock washer >  
The wave formed portions of nord-lock washers have to be faced each other as illustrated in Fig. 7A.

► **Circuit diagram for South Africa**

| Color index of lead wires |  |             |  |
|---------------------------|--|-------------|--|
| Black                     |  | Purple      |  |
| White                     |  | Brown       |  |
| Orange                    |  | Transparent |  |
| Blue                      |  |             |  |



► **Circuit diagram for other than South Africa**

