

TECHNICAL INFORMATION

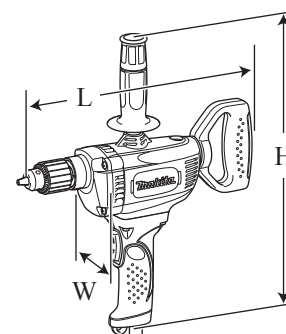


PRODUCT

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Model No. ▶ DS4010, DS4011/ DS5000

Description ▶ Drills 13mm (1/2")/ 16mm (5/8")



CONCEPT AND MAIN APPLICATIONS

These three drills are redesigned version of models 6013B, 6013BR, 6016BR with the same high performance as the current models.

Their main features and benefits are:

- Non-skid elastomer covering main handle area for good looking impression and sure and comfortable grip
- Full 360 degree rotatable D-handle with 24 positive stops for multi-position operation

Switch type is the main notable specification difference between these three models:

DS4010

Trigger type, without reverse function, with variable speed control

DS4011, DS5000

Rocker type, with reverse function, without variable speed control

DS4010 is also available without Drill chuck as model DS4010M.

Dimensions: mm (")			
Model No.	DS4010	DS4011	DS5000
Length (L)	340 (13-3/8)		348 (13-3/4)
Width (W)	83 (3-1/4)		
Height (H)	391 (15-3/8)	401 (15-3/4)	

Specification

DS4010

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output (W)
			Input	Output	
110	7.2	50/ 60	750	380	540
120	6.5	50/ 60	---	380	650
220	3.6	50/ 60	750	380	650
230	3.4	50/ 60	750	380	650
240	3.3	50/ 60	750	380	650

DS4011, DS5000

110	7.2	50/ 60	750	350	550
120	6.5	50/ 60	---	350	550
220	3.6	50/ 60	750	350	550
230	3.4	50/ 60	750	350	550
240	3.3	50/ 60	750	350	550

Specification	Model No.	DS4010	DS4011	DS5000
No load speed: min-1= rpm		0 - 600	600	600
Drill chuck type		Keyed	Keyed	Keyed
Chuck capacity: mm (")		2 - 13 (1/16 - 1/2)	2 - 13 (1/16 - 1/2)	3 - 16 (1/8 - 5/8)
Capacities: mm (")	Steel	13 (1/2)	13 (1/2)	16 (5/8)
	Wood	36 (1-7/16)	36 (1-7/16)	36 (1-7/16)
Reverse function		No	Yes	Yes
Variable speed control by trigger		Yes	No	No
Double insulation		Yes	Yes	Yes
Power supply cord*1: m (ft)		2.5 (8.2)	2.5 (8.2)	2.5 (8.2)
Net weight*2: kg (lbs)		2.8 (6.2)	2.8 (6.3)	3.0 (6.6)

*1 2.0m (6.6ft) for Brazil, Australia *2 Weight according to EPTA-Procedure 01/2003, with Side grip

Standard equipment

Chuck key S-13 1 (for DS4010, DS4011) Side grip 1

Chuck key S-16 1 (for DS5000) Plastic carrying case 1 (for DS4011, if requested)

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

Optional accessories

Depth gauge

Keyless Drill chuck set (for DS4010, DS4011)

Keyed drill chuck set (for DS4010, DS4011)

Bits

Hole saws

Wrench 9 (for Hole saw)

Angle attachment

Wrench 17 (for Angle attachment)

► Repair

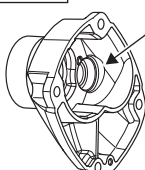
CAUTION: Repair the machine in accordance with “Instruction manual” or “Safety instructions”.

[1] NECESSARY REPAIRING TOOLS

Code No.	Description	Use for
1R139	Drill chuck extractor	Removing / Assembling Drill chuck
1R223	Torque wrench shaft 20-90 N.m	Removing / Assembling Drill chuck
1R224	Ratchet head 12.7	Attaching to 1R223 Torque wrench shaft 20-90 N.m
1R269	Bearing extractor	Removing Ball bearings
1R291	Retaining ring S and R pliers	Removing / Assembling Retaining rings
1R298	Hex. bar 10 with square socket	Removing / Assembling Drill chuck
1R340	Bearing retainer wrench	Removing / Assembling Bearing retainer
781024-2	Wrench 43	Removing broken Drill chuck for DS4010 and DS4011
781007-2	Wrench 14	Removing broken Drill chuck for DS5000

[2] LUBRICATIONS

Apply the following lubricant to the portion to protect parts and product from unusual abrasion.

Fig. 1	Item No.	Description	Portion to lubricate	Lubricant	Amount
	⑧	Gear housing complete	Gear room where Spur gear 47 and Gear complete 7-41 engage with Armature' gear (Refer to Fig. 8.)	Makita grease N No.2	10g

[3] DISASSEMBLY/ASSEMBLY

[3]-1. Armature

DISASSEMBLING

- (1) Remove Armature ass'y as illustrated in Fig. 2.
- (2) Disassemble Armature ass'y as illustrated in Fig. 3.

Fig. 2

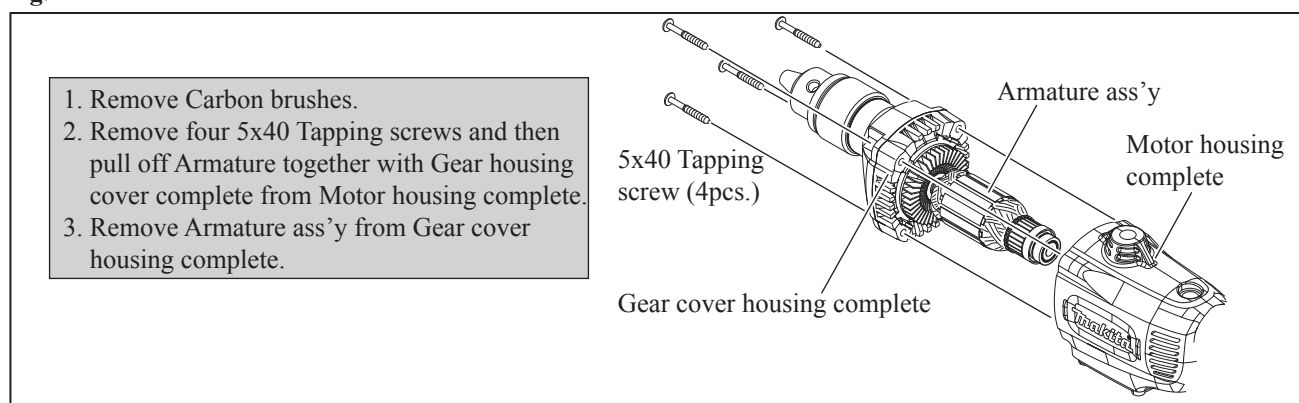
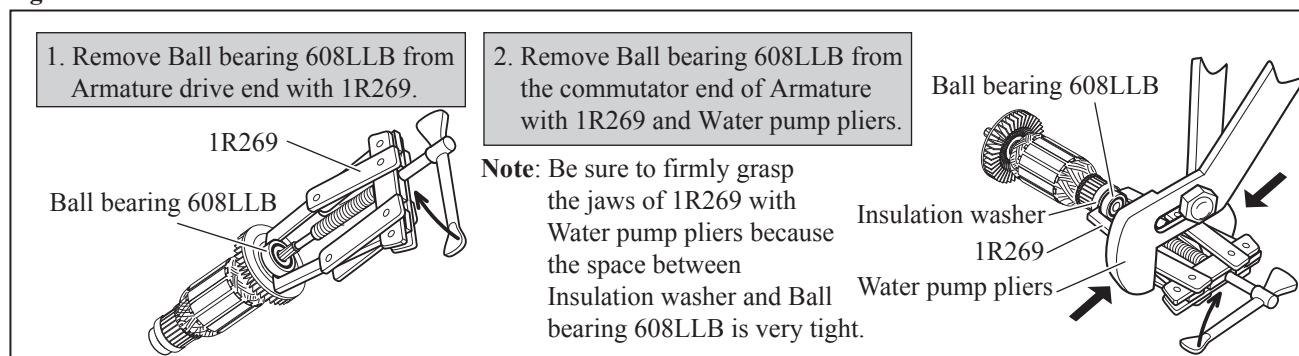


Fig. 3



ASSEMBLING

Take the disassembling step in reverse.

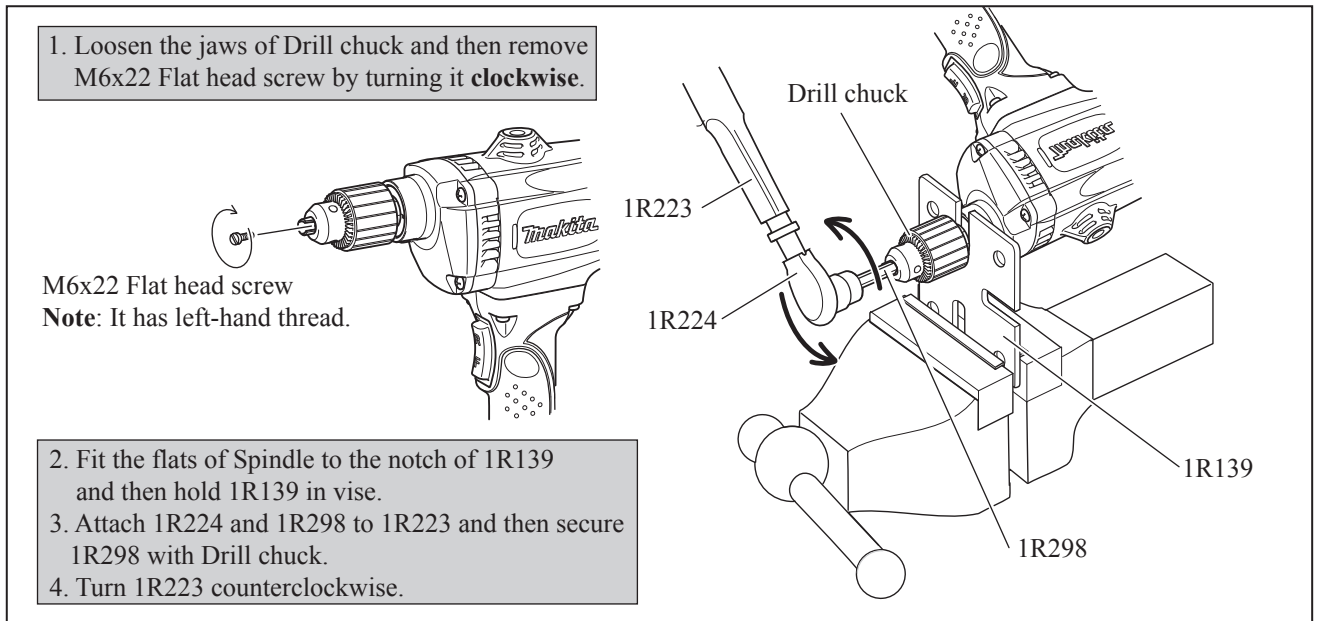
► **Repair**

[3]-2. Drill chuck, Gear, Spindle

DISASSEMBLING

(1) Remove Drill chuck as illustrated in **Fig. 4**.

Fig. 4



(1A) When Drill chuck is broken, 1R298 can not be secured with the Drill chuck.
Therefore, separate the drill chuck from Spindle as illustrated in **Fig. 5 or 6** after removing M6x22 Flat head screw.

Fig. 5

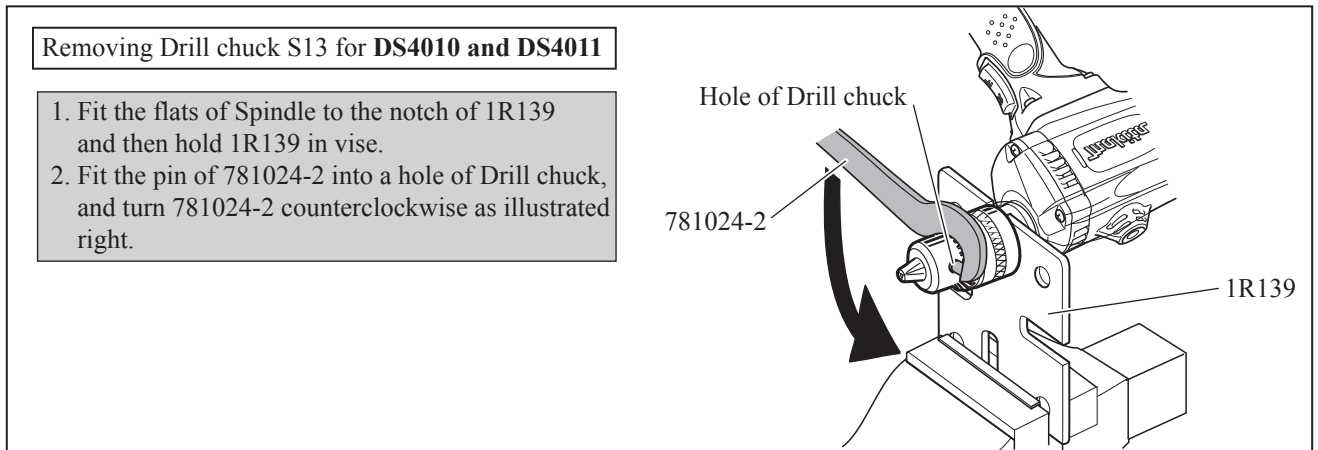
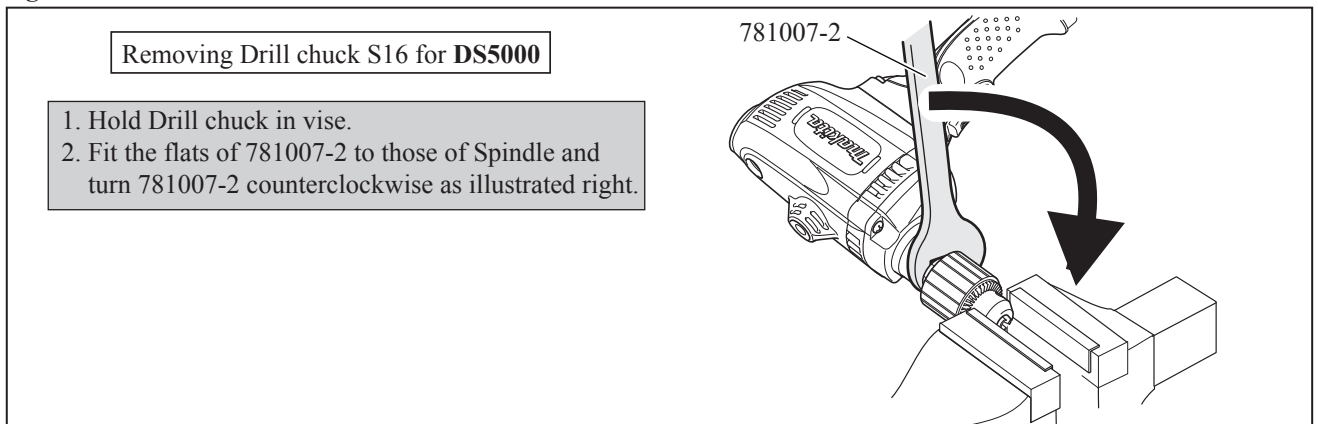


Fig. 6



► **Repair**

[3] DISASSEMBLY/ASSEMBLY

[3]-2. Drill chuck, Gear, Spindle

DISASSEMBLING

(2) Gears can be removed as illustrated in **Figs. 7 and 8**.

Fig. 7

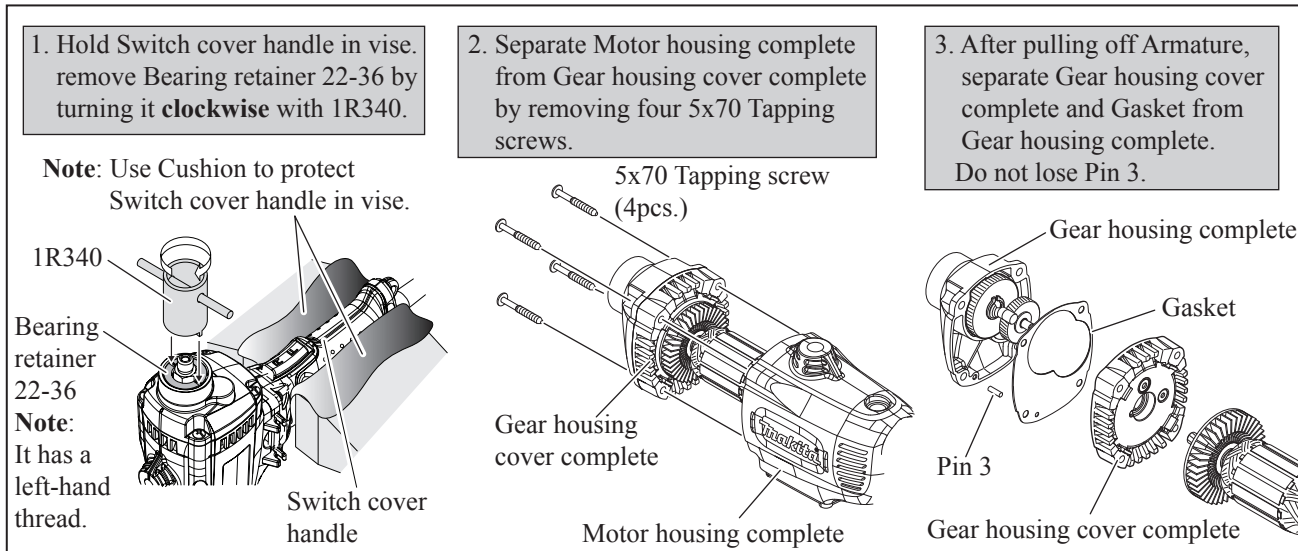
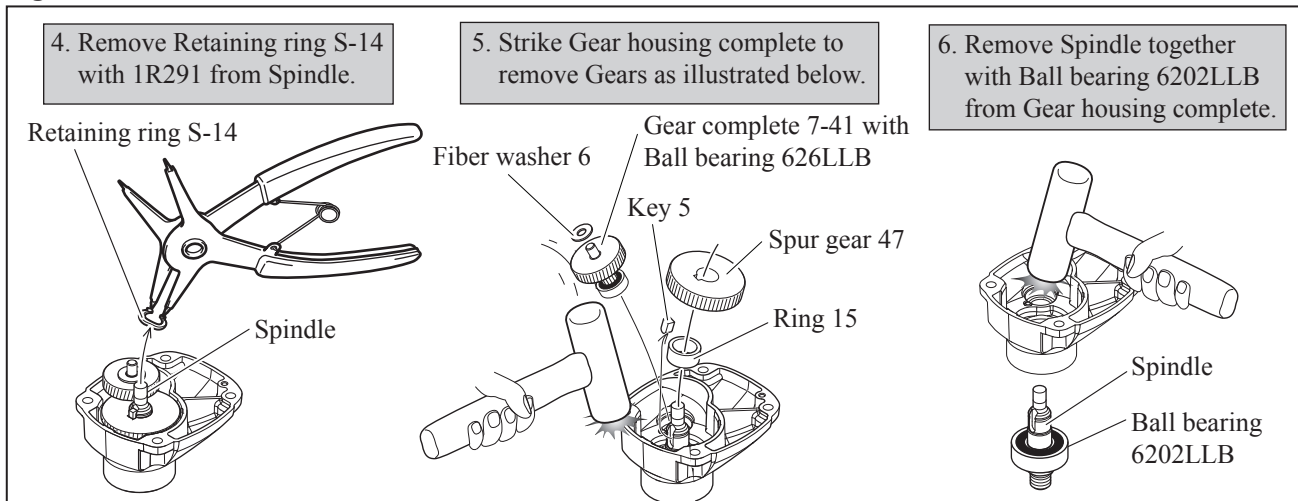
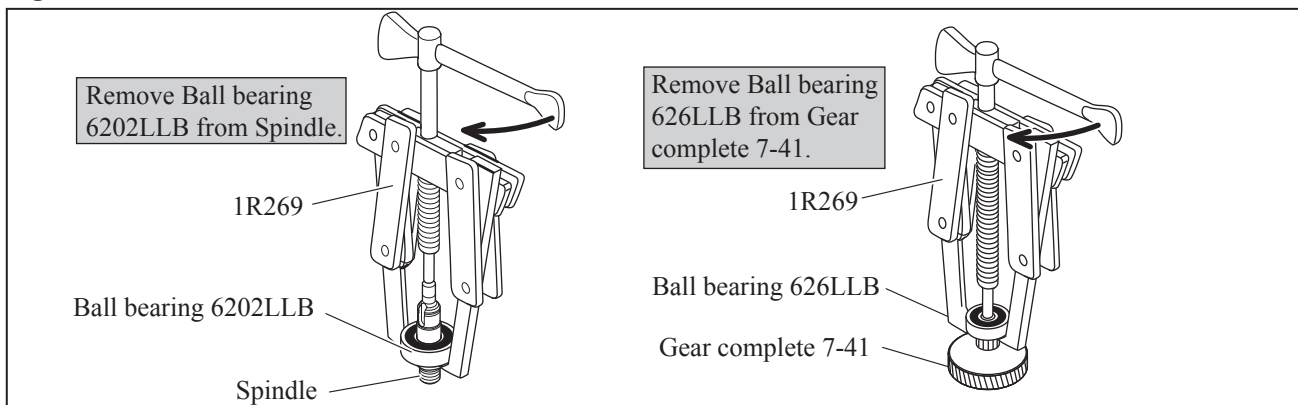


Fig. 8



(3) Remove Ball bearings on Spindle and Gear complete 7-41 with 1R269 as illustrated in **Fig. 9**.

Fig. 9



► Repair

[3] DISASSEMBLY/ASSEMBLY

[3]-2. Gear, Spindle

(1) Assemble Gear section as illustrated in **Figs. 10 and 11**.

Fig. 10

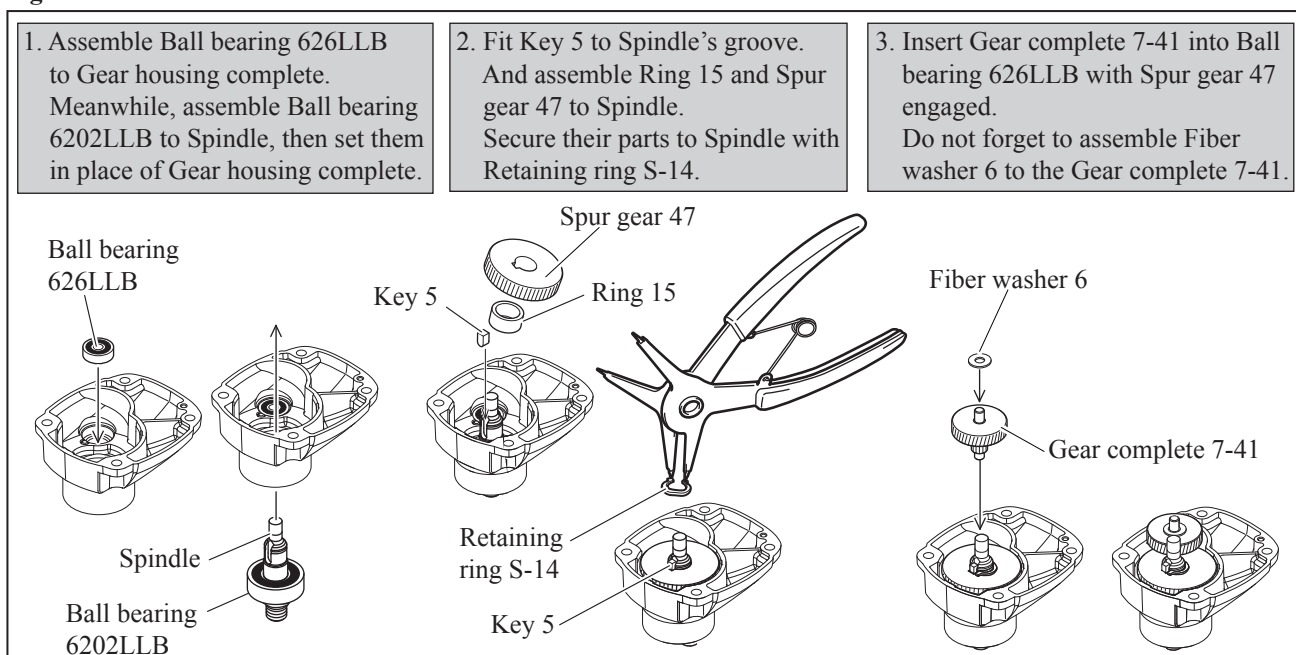
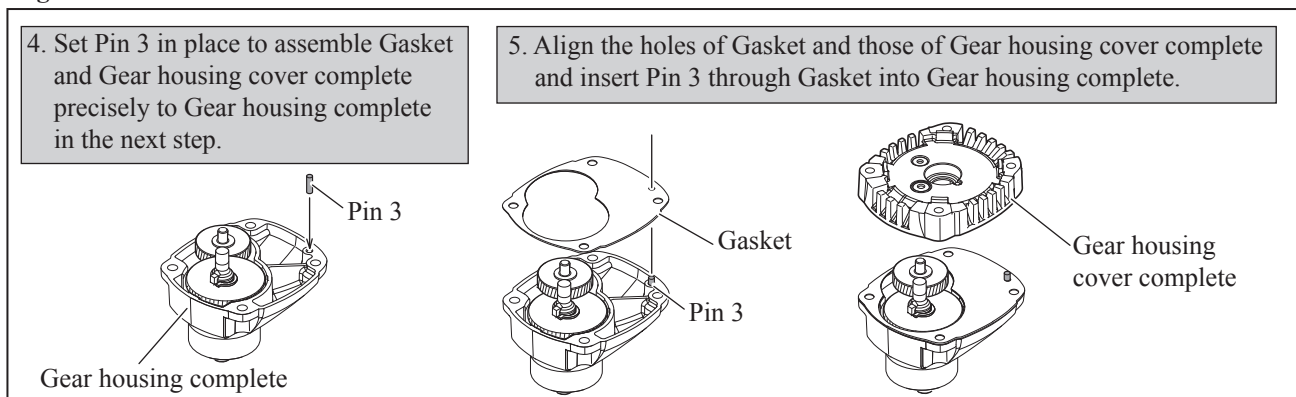


Fig. 9



(3) Take the disassembling step in reverse. Refer to **Figs. 5 and 4**.

Note: 1. Turn 1R340 **counterclockwise** for setting Bearing retainer 22-36 in place.

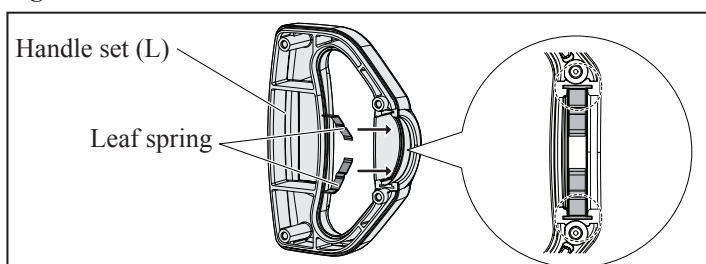
2. Preset the fastening torque of 1R223 to **68.6 - 78.4 N.m (700 - 800 Kgf.cm)** and turn Drill chuck **clockwise** to Spindle using 1R223 with 1R224, 1R139, 1R298 and vise.

[3]-3. Leaf spring

ASSEMBLING

Two Leaf springs have to be set in place of Handle set (L) without dropping. See **Fig. 10**.

Fig. 10



► **Circuit diagram**

Fig.D-1

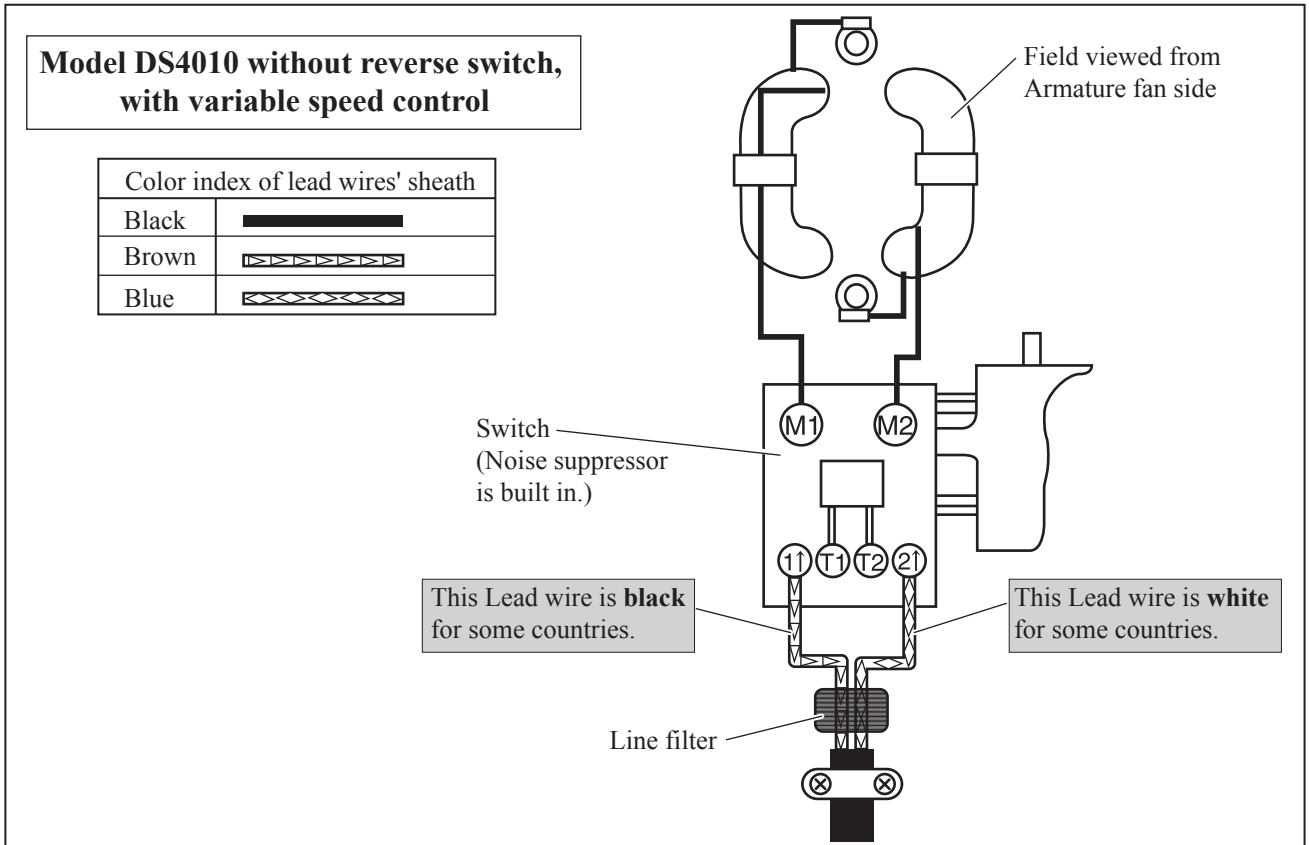
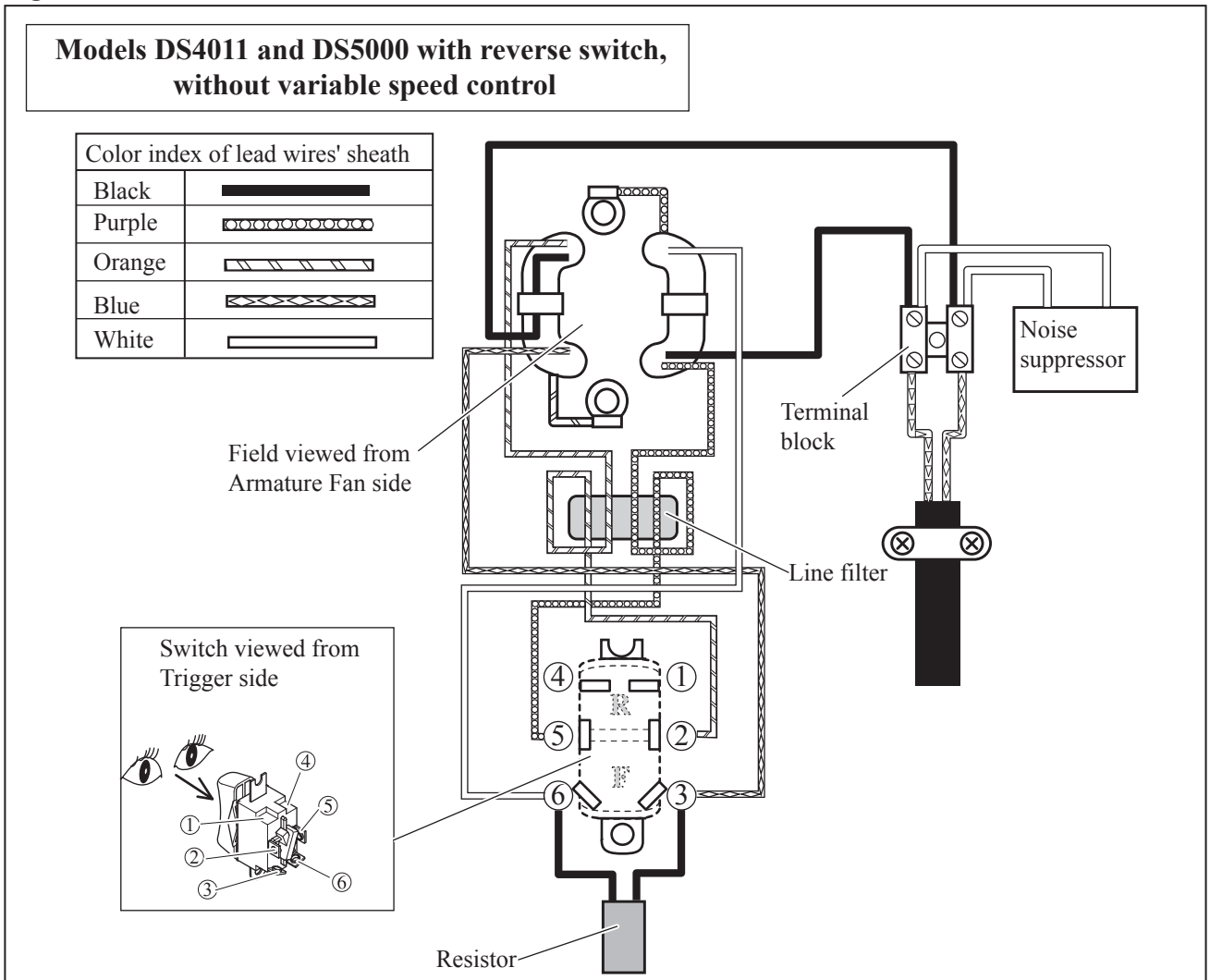


Fig.D-1A



▶ Wiring diagram

Fig.D-2

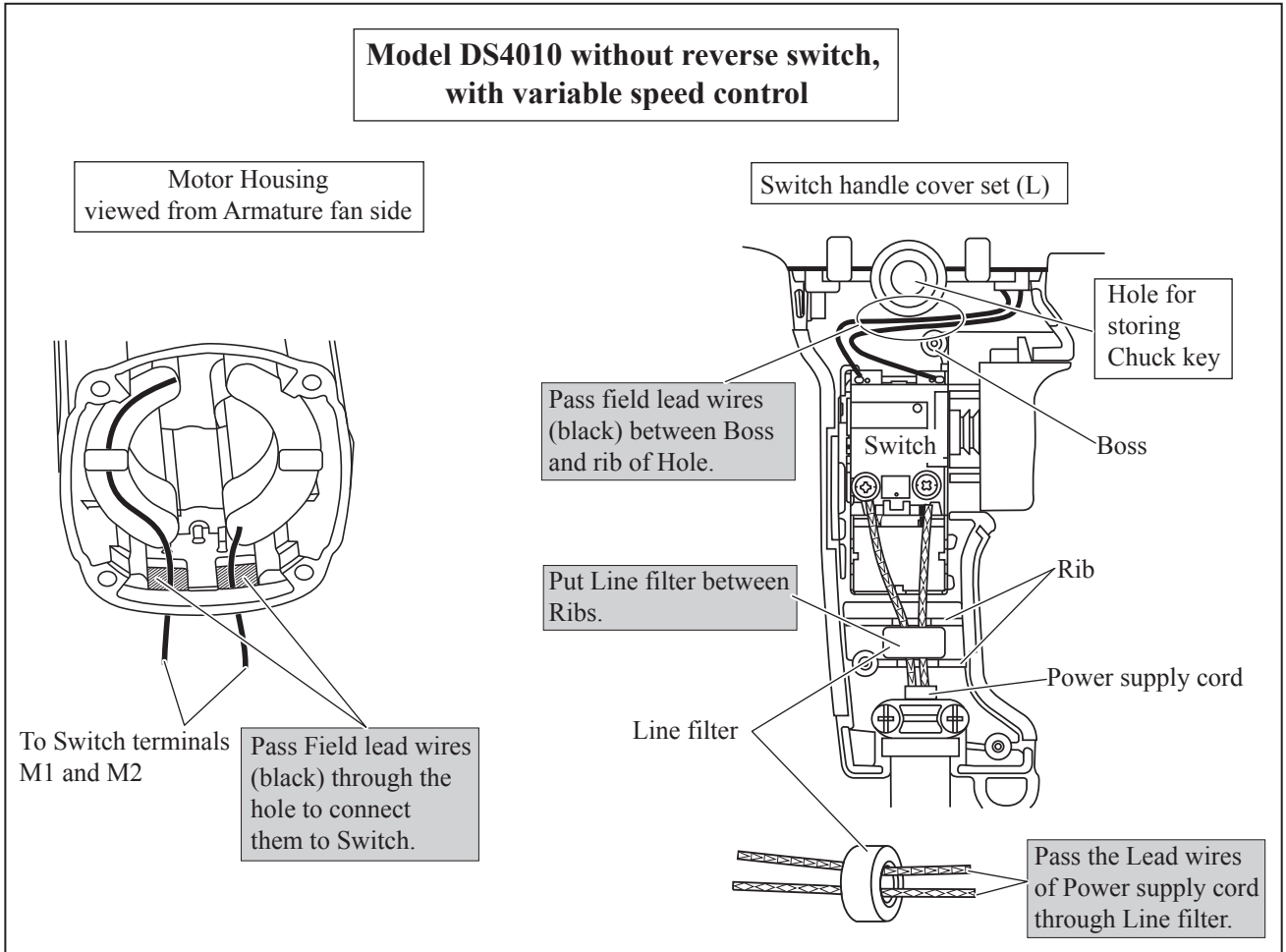
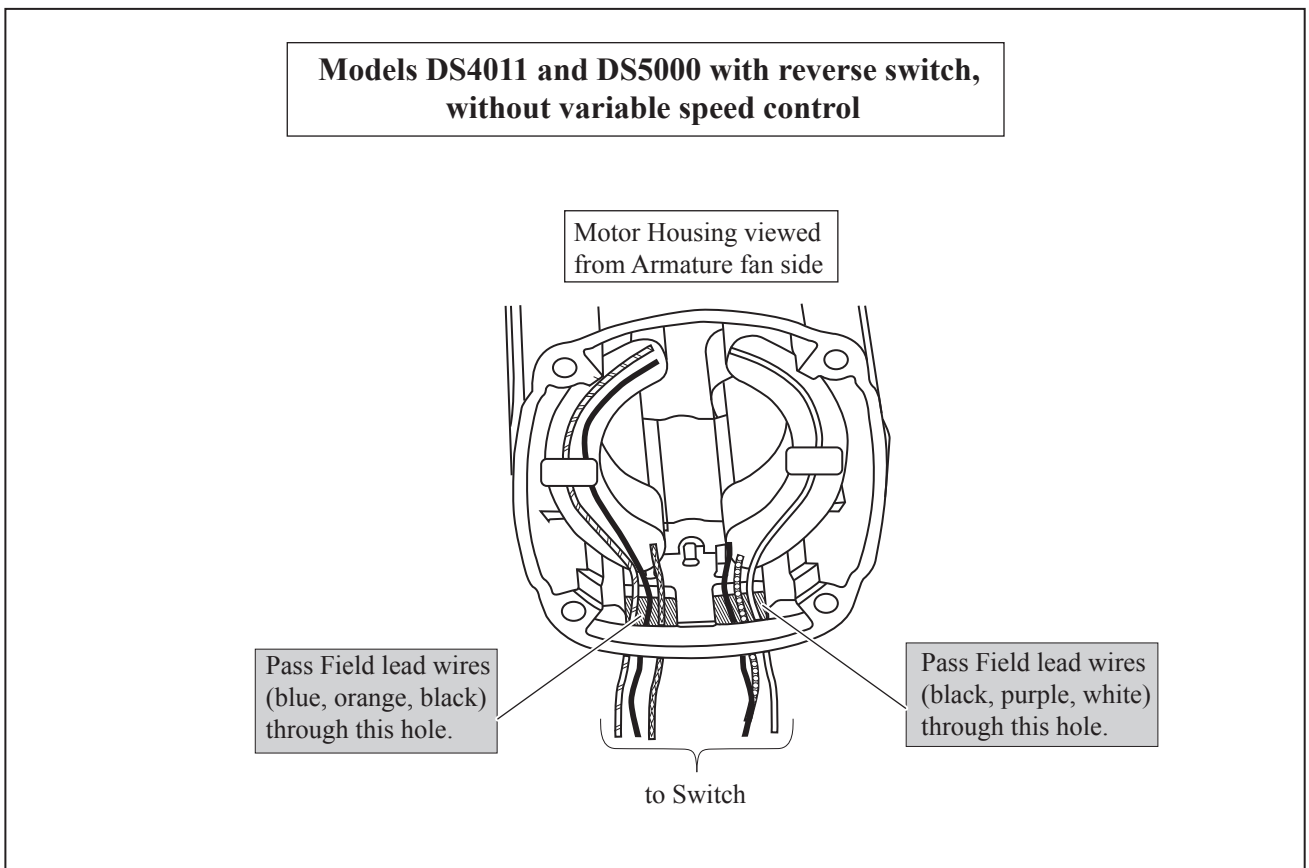


Fig.D-2A



► **Wiring diagram (cont.)**

Fig.D-3A

