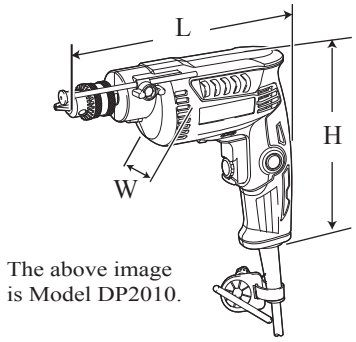
TECHNICAL INFORMATION

Model No. ► DP2010, DP2011

Description ► High Speed Drills 6.5mm (1/4")



The above image is Model DP2010.

Dimensions: mm (")		
	DP2010	**DP2011**
Length (L)	209 (8-1/4)	222 (8-3/4)
Width (W)	64 (2-1/2)	
Height (H)	175 (6-7/8)	

CONCEPT AND MAIN APPLICATIONS

Models DP2010 and DP2011 have been developed as successor models of 6.5mm (1/4") high speed drills 6501 and 6501X.
Their main features are:

- Compact yet high power 370W motor
- Ergonomically designed handle with elastomer for added extra maneuverability

DP2010 has a keyed chuck.
DP2011 has a keyless chuck.

► Specification

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output (W)
			Input	Output	
110	3.5	50/60	370	200	300
120	3.2	50/60	---	200	300
220	1.8	50/60	370	200	300
230	1.7	50/60	370	200	300
240	1.7	50/60	370	200	300

Specification \ Model No.		**DP2010**	**DP2011**
Chuck type		Keyed	Keyless
No load speed: $min.^{-1}$=rpm		0 - 4,200	
Chuck capacity: mm (")		0.5 - 6.5 (1/50 - 1/4)	0.8 - 6.5 (1/32 - 1/4)
Capacities: mm (")	Steel	6.5 (1/4)	
	Wood	15 (9/16)	
Variable speed control by dial		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)		1.0 (2.2)	1.1 (2.4)

► Standard equipment

Depth gauge ..... 1 (for some countries only)
Chuck key S10 ..... 1 (for DP2010 only)
Key holder 9 ..... 1 (for DP2010 only)

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

► Optional accessories

Drill bits for Steel
Drill bits for Wood
Type 43 Drill stand
Depth gauge set
Chuck key S10 (for DP2010 only)
Key holder 9 (for DP2010 only)

Repair

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

[1] NECESSARY REPAIRING TOOLS

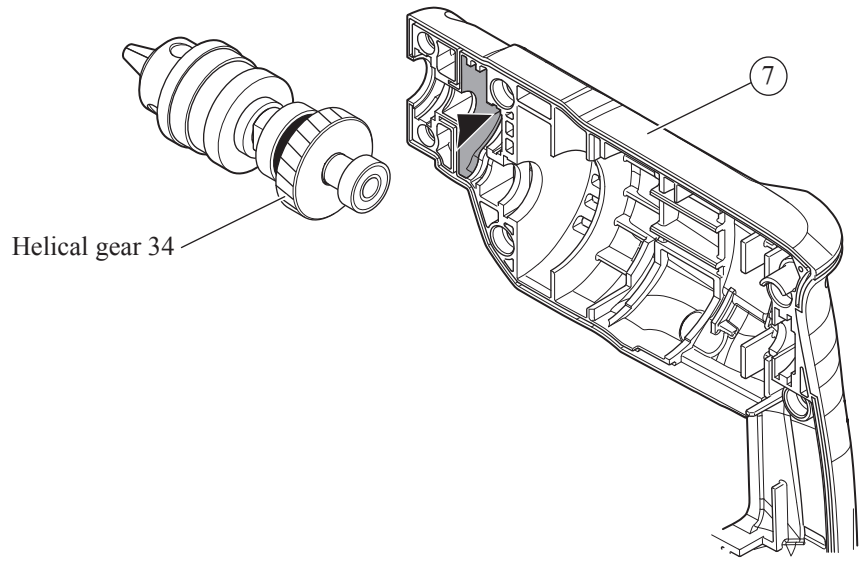
Code No.	Description	Use for
1R029	Bearing setting pipe 23-15.2	pressing Helical gear 34
1R033	Bearing setting plate 10.2	supporting Spindle when assembling Helical gear 34 to Spindle
1R139	Drill chuck extractor	locking Spindle when removing / mounting Drill chuck
1R219	Torque wrench shaft 7-23N·m	removing / mounting Drill chuck
1R220	Ratchet head 9.5 (for 1R219)	attachment for 1R219 when removing / mounting Drill chuck
1R222	Socket Adapter (for 1R219)	attachment for 1R220 when removing / mounting Drill chuck
	Bit adapter	attachment for 1R222 when removing / mounting Drill chuck
1R231	1/4" Hex. shank bit for M8	attachment for Bit adapter when removing / mounting Drill chuck
1R269	Bearing extractor	removing Ball bearings
1R291	Retaining ring S and R pliers	removing / mounting Retaining S-10

[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
⑦	Housing set	Gear room where Helical gear 34 rotates and engages with Armature's gear	1.5 g

Fig. 1



Repair

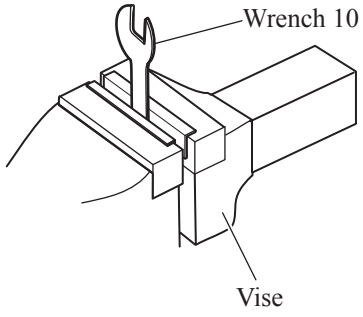
[3] DISASSEMBLY/ASSEMBLY
[3] -1. Drill Chuck

DISASSEMBLING

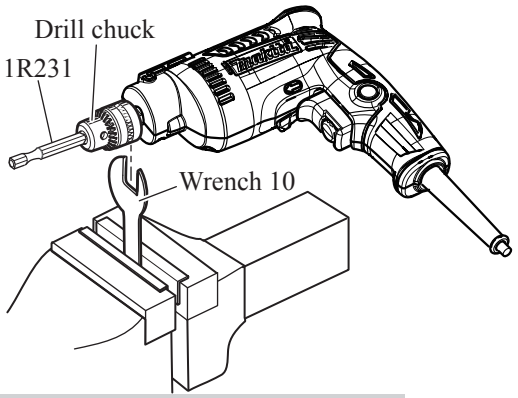
(1) Remove Drill chuck as drawn in **Fig. 2**.

Fig. 2

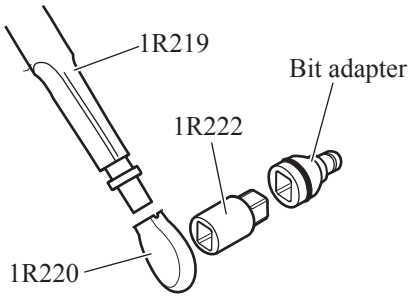
1. Fix Wrench 10 to Vise.



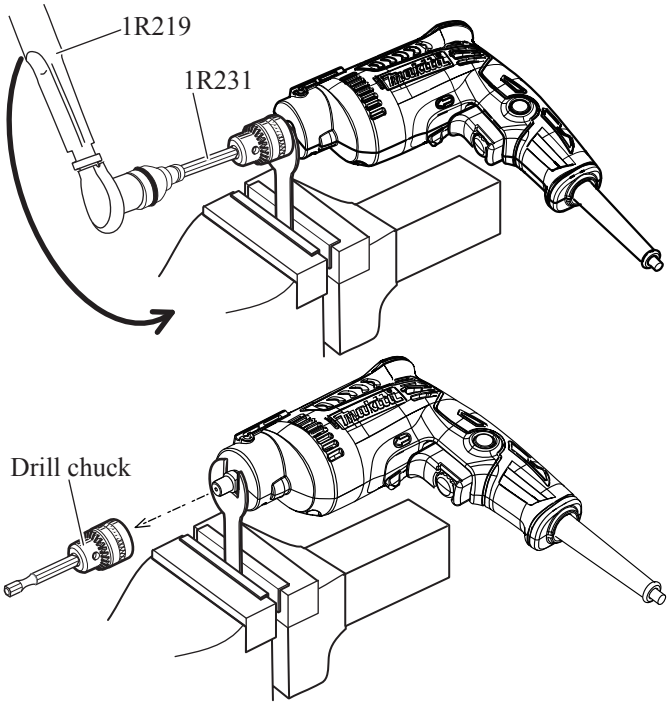
2. Insert 1R231 into Drill chuck and set Drill chuck to Wrench 10.



3. Attach 1R220, 1R222 and Bit adapter as follows:
(1) Attach 1R222 to 1R220.
(2) Attach 1R220 to 1R219.
(3) Attach Bit adapter to 1R222.



4. Turn 1R219 counterclockwise to remove Drill chuck.



ASSEMBLING

Assemble Drill chuck by reversing the disassembly procedure. (Refer to **Fig. 2**.)
Note: Set the fastening torque of 1R219 to **9.8 N·m to 14.7 N·m (100 Kgf·cm to 150 Kgf·cm)** and turn 1R219 clockwise.

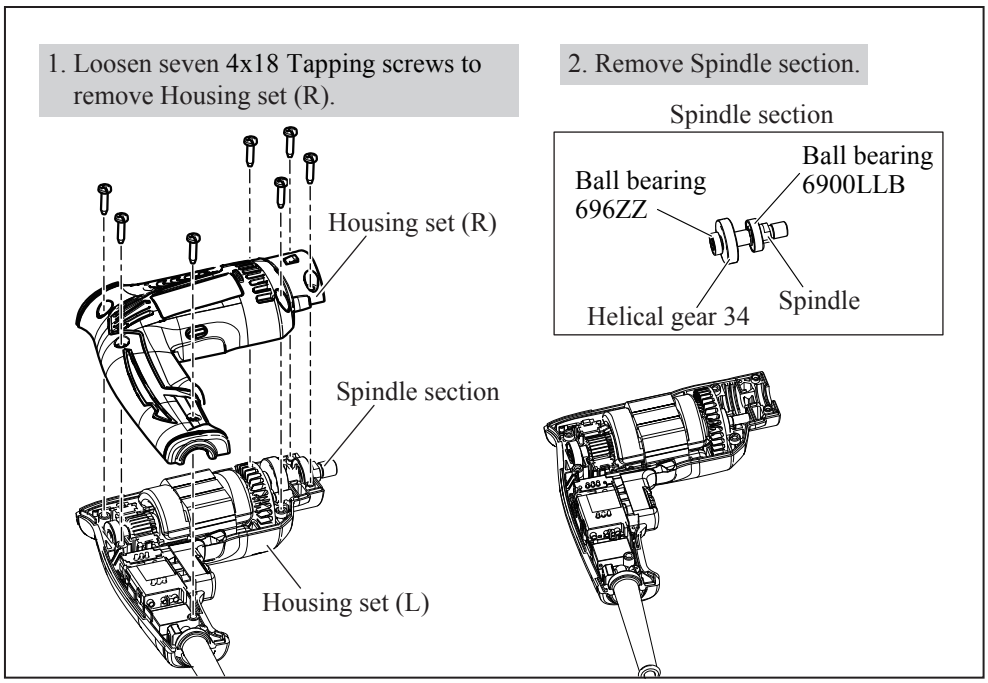
Repair

[3] DISASSEMBLY/ASSEMBLY
[3] -2. Spindle section

DISASSEMBLING

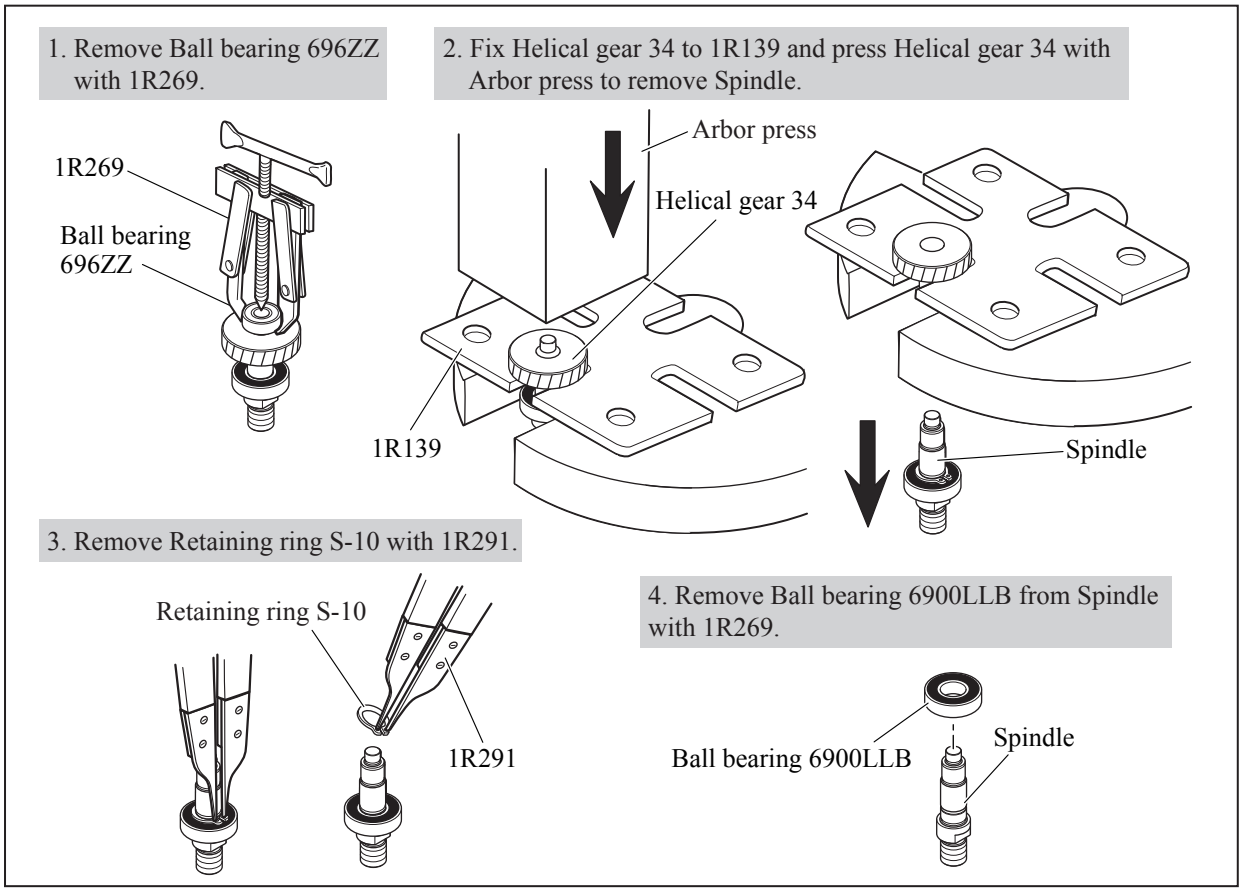
(1) Remove Drill chuck as drawn in **Fig. 2**.
(2) Separate Housing set (R) from Housing set (L) and take out Spindle section as drawn in **Fig. 3**.

Fig. 3



(3) Spindle section can be disassembled as drawn in **Fig. 4**.

Fig. 4



Repair

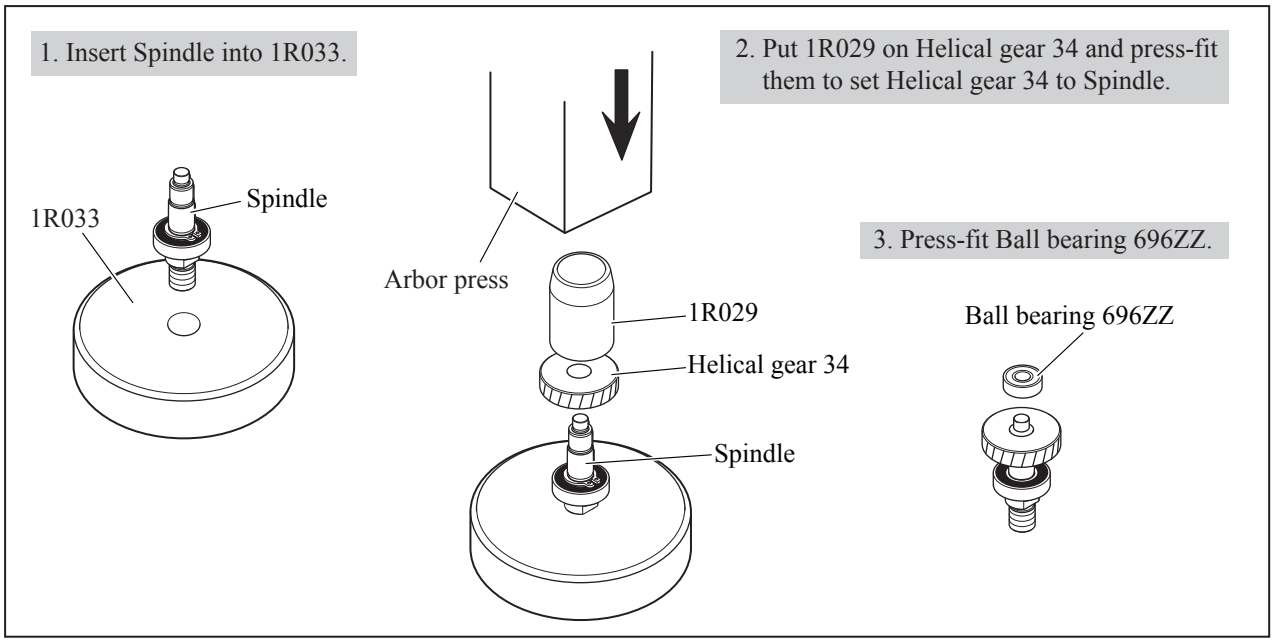
[3] DISASSEMBLY/ASSEMBLY

[3] -2. Spindle section (cont.)

ASSEMBLING

(1) Assemble Ball bearing 6900LLB to Spindle and secure the bearing with Retaining ring S-10.
Refer to the drawings on the **bottom** of **Fig. 4**.
(2) Assemble Helical gear 34 as drawn in **Fig. 5**.

Fig. 5



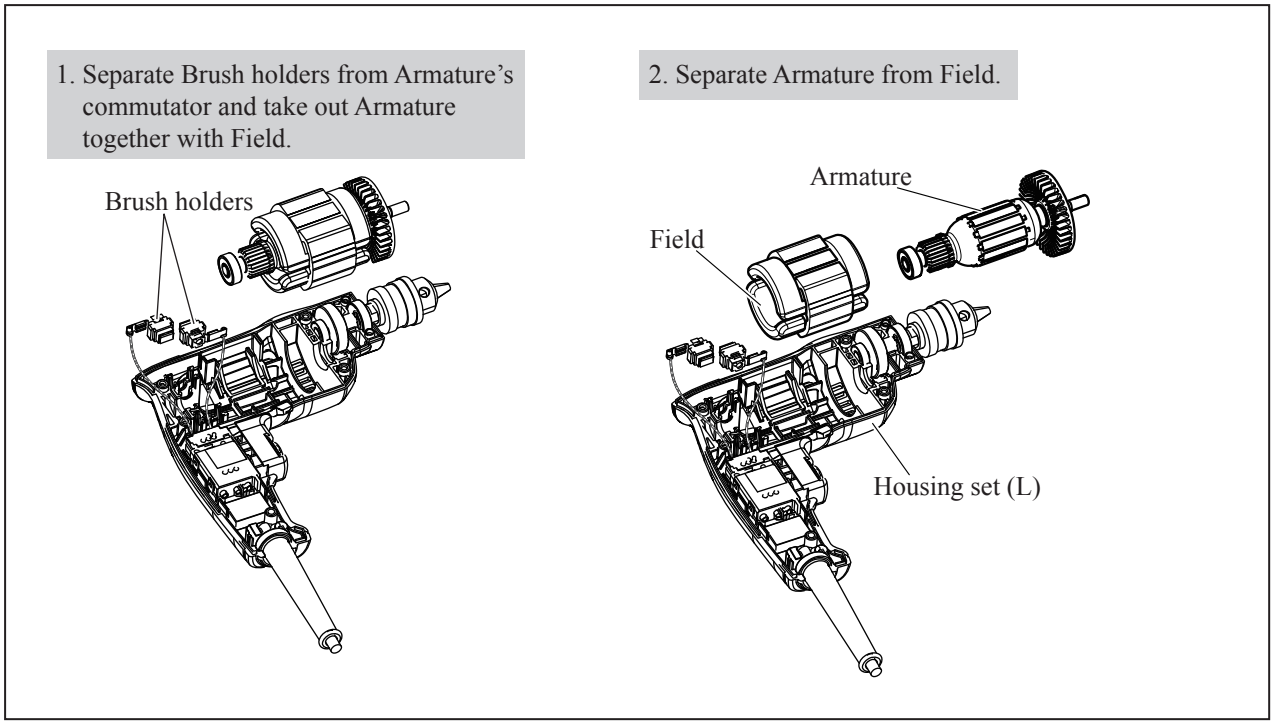
(3) Assemble the above Spindle section to Housing set (L). (Refer to **Fig. 3.**)

[3] -3. Armature

DISASSEMBLING

(1) Separate Housing set (R) from Housing set (L) by loosening seven 4x18 Tapping screws as drawn in **Fig. 3**.
(2) Disassemble Armature from Housing set (L). (Refer to **Fig. 6**.)

Fig. 6



Repair

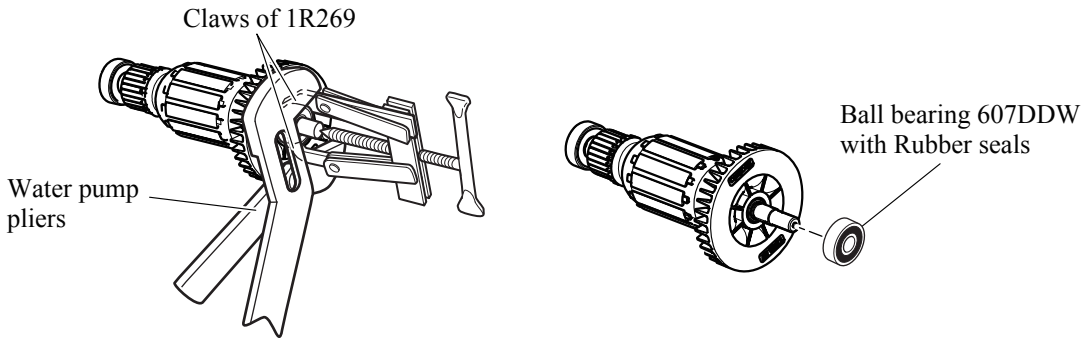
[3] DISASSEMBLY/ASSEMBLY
[3] -3. Armature (cont.)

DISASSEMBLING

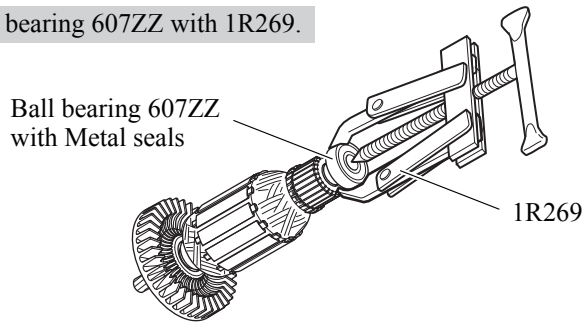
(3) Remove Ball bearings as drawn in **Fig. 7**.

Fig. 7

1. Use Water pump pliers to secure the claws of 1R269 firmly so that 1R269 cannot be opened. And remove Ball bearing 607DDW with 1R269.



2. Remove Ball bearing 607ZZ with 1R269.



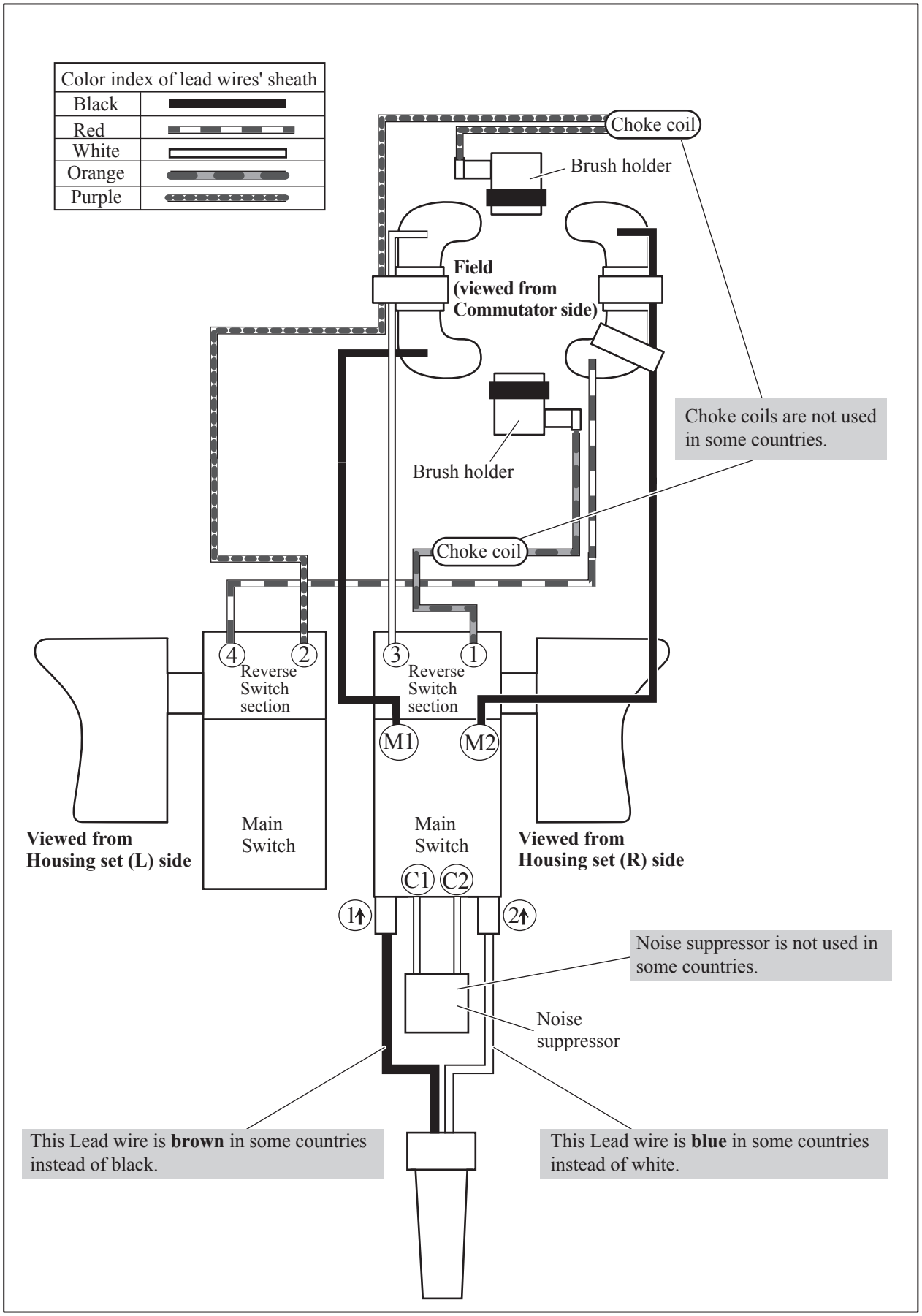
ASSEMBLING

When assembling Ball bearings to Armature, pay attention to the following.

- Ball bearing 607ZZ **with Metal seals** should be mounted on **Commutator** end.
- Ball bearing 607DDW **with Rubber seals** should be mounted on **Drive** end (Fan side).

Circuit diagram

Fig. D-1



Wiring diagram

Fig. D-2

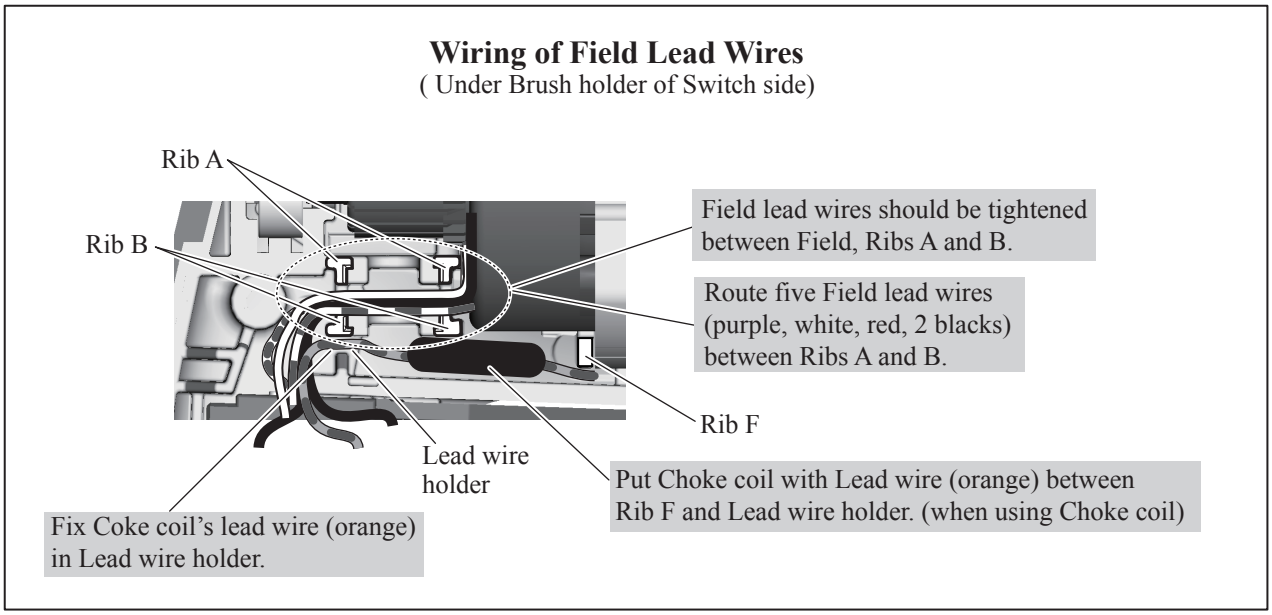
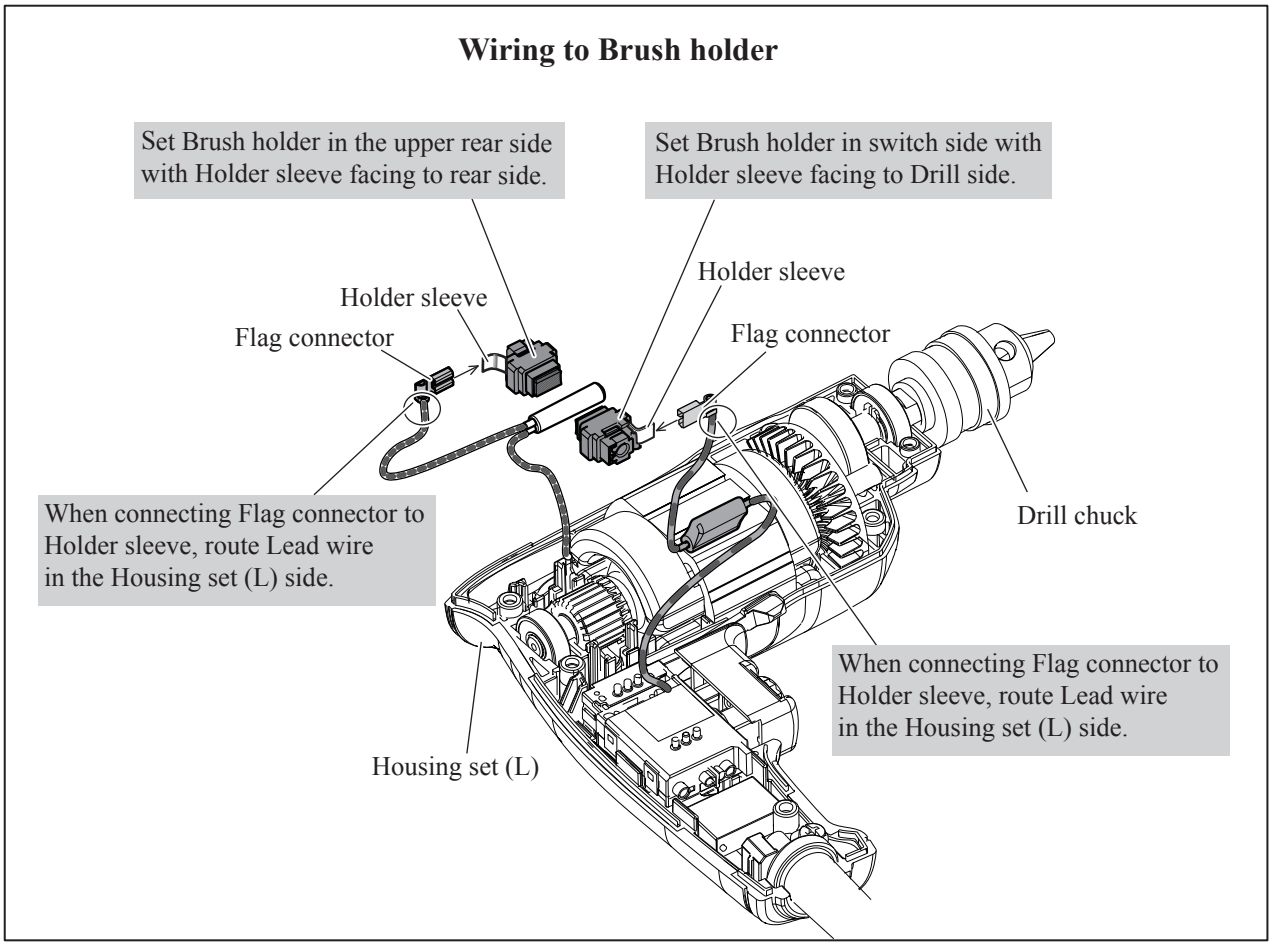


Fig. D-3



► Wiring diagram

Fig. D-4