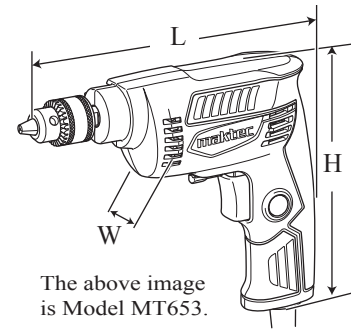


**Model No.** ▶ MT652, MT653

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



The above image is Model MT653.

## CONCEPT AND MAIN APPLICATIONS

Models MT652 and MT653 have been developed as the cosmetic change models of **maktec** 6.5mm (1/4") high speed drills MT650/ MT651.

Their main features are:

- Industrial performance and durability at less expense
- Ergonomically designed handle with elastomer

Dimensions: mm ( " )		
	<b>MT652</b>	<b>MT653</b>
Length (L)	200 (7-7/8)	203 (8)
Width (W)	63 (2-1/2)	
Height (H)	164 (6-1/2)	171 (6-3/4)

## ► Specification

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output (W)
			Input	Output	
110	2.2	50/60	230	100	175
120	2	50/60	---	100	175
220	1.1	50/60	230	100	175
230	1.1	50/60	230	100	175
240	1	50/60	230	100	175

Specification	Model No.	<b>MT652</b>	<b>MT653</b>
Chuck type		Keyed	
No load speed: min. <sup>-1</sup> =rpm		4,500	0 - 4,500
Chuck capacity: mm (")		0.5 - 6.5 (1/32 - 1/4)	
Capacities: mm (")	Steel	6.5 (1/4)	
	Wood	9 (11/32)	
Variable speed control by trigger		No	Yes
Reverse switch		No	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)		0.92 (2.0)	0.95 (2.1)

## ► Standard equipment

- Chuck key ..... 1
- Key holder ..... 1
- Depth gauge set ..... 1 (for some countries only)
- Cap ..... 1 (for some countries 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

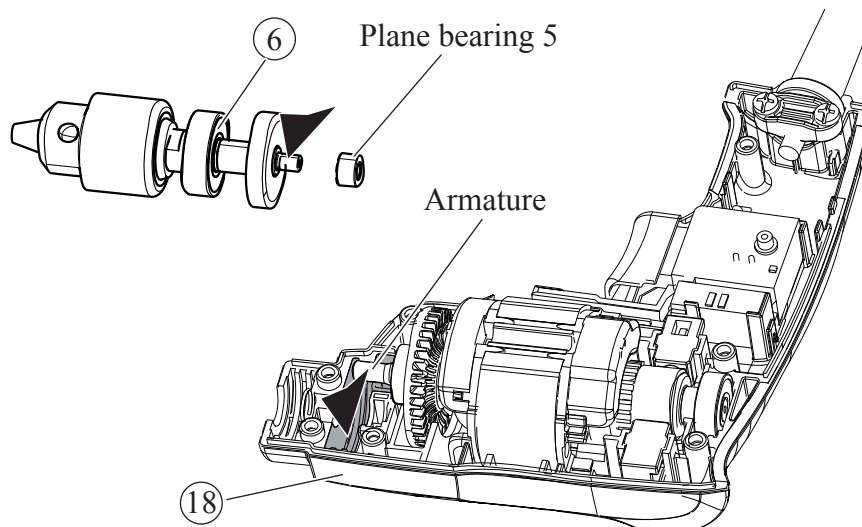
Code No.	Description	Use for	
1R219	Torque wrench shaft 7-23N·m	removing / mounting Drill chuck	for removing/ mounting Drill chuck
1R220	Ratchet head 9.5	attaching to 1R219 Torque wrench shaft 7-23N·m	
1R222	Socket adapter	attaching to 1R220 Ratchet head 9.5	
1R231	1/4" Hex. shank bit for M8	fitting to Drill chuck	

### [2] LUBRICATION

Apply **Makita grease N No.1** 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 complete	Spindle portion which is inserted into Plane bearing 5	a little
⑱	Housing set (L)	Gear room where Gear complete engages with Armature's gear	approx. 1.2 g

**Fig. 1**



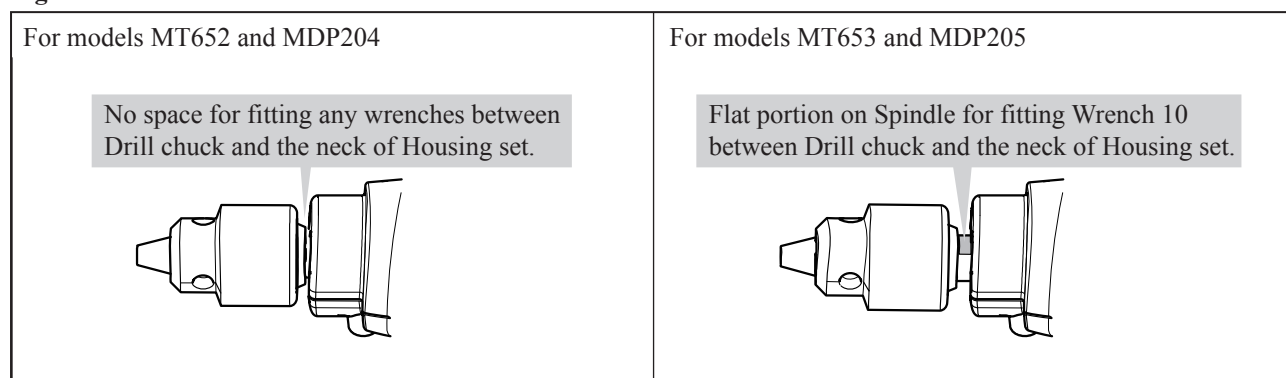
### [3] DISASSEMBLY/ASSEMBLY

#### [3] -1. Drill chuck

##### DISASSEMBLING

The Drill chuck portion of Models MT652 and MDP204 is different from that of Models MT653 and MDP205 as drawn in **Fig. 2**. Consequently, there is difference among the above models in removing Drill chuck.

**Fig. 2**



► **Repair**

**[3] DISASSEMBLY/ASSEMBLY**  
**[3] -1A. Drill Chuck of MT652 and MDP204**

DISASSEMBLING

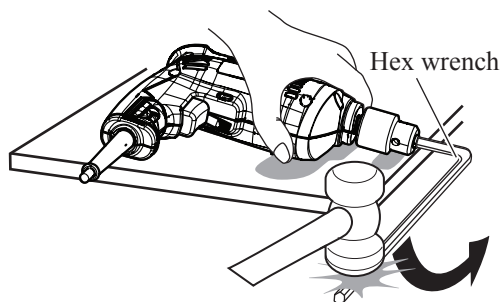
Remove drill chuck from models MT652/ MDP204 as drawn in **Fig. 3A**.

**Fig. 3A**

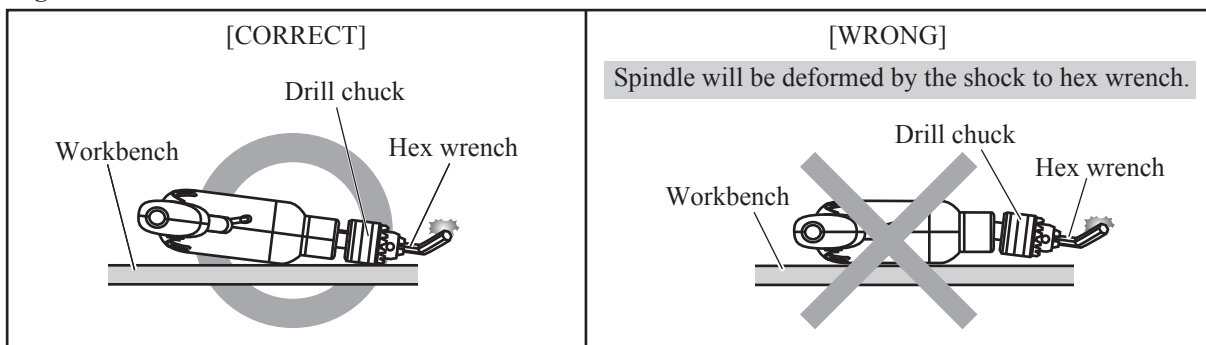
1. Grip Hex wrench on its short end with Drill chuck.

2. While holding the machine firmly on workbench, as drawn in **Fig. 2-A**, turn Hex wrench counterclockwise by tapping it with Plastic hammer.

**Note:** Place the tool on Workbench so that Drill chuck touches Workbench as drawn to left in **Fig. 2-A**. Failure to follow this instruction can result in deformation of Spindle.



**Fig. 2-A**



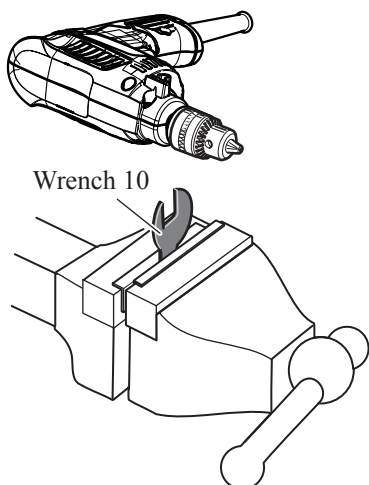
**[3] -1B. Drill Chuck of MT653 and MDP205**

DISASSEMBLING

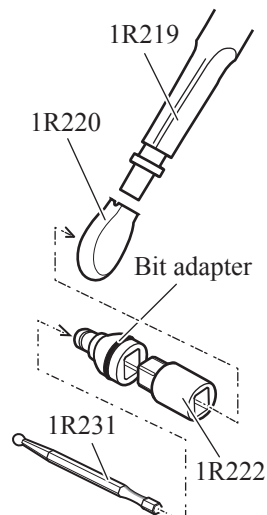
Remove drill chuck from models MT653/ MDP205 as drawn in **Fig. 3B**.

**Fig. 3B**

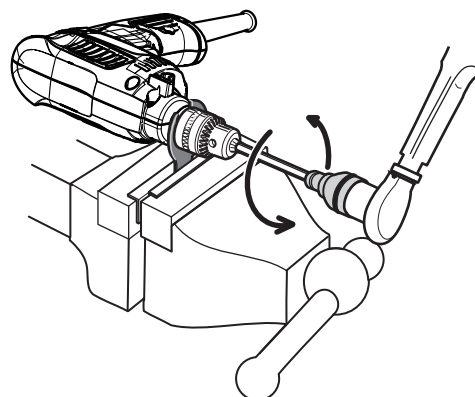
1. Clamp Wrench 10 in vise. And fit the flat portion of Spindle to Wrench 10. (See the **right** in **Fig. 2**.)



2. Set the repairing tools as drawn below.



3. Hold 1R231 with Drill chuck firmly and turn it counterclockwise to remove the chuck.



## ► Repair

### [3] DISASSEMBLY/ASSEMBLY

#### [3] -1A. Drill Chuck of MT652 and MDP204 (cont.)

##### ASSEMBLING

Assemble Drill chuck by reversing the disassembly procedure. (Refer to **Fig. 3A**)

**Note:** Grip Hex wrench on its short end with Drill chuck and tap it with Plastic hammer to turn Drill chuck **clockwise**.

#### [3] -1B. Drill Chuck of MT653 and MDP205 (cont.)

##### ASSEMBLING

Assemble Drill chuck by reversing the disassembly procedure. (Refer to **Fig. 3B**)

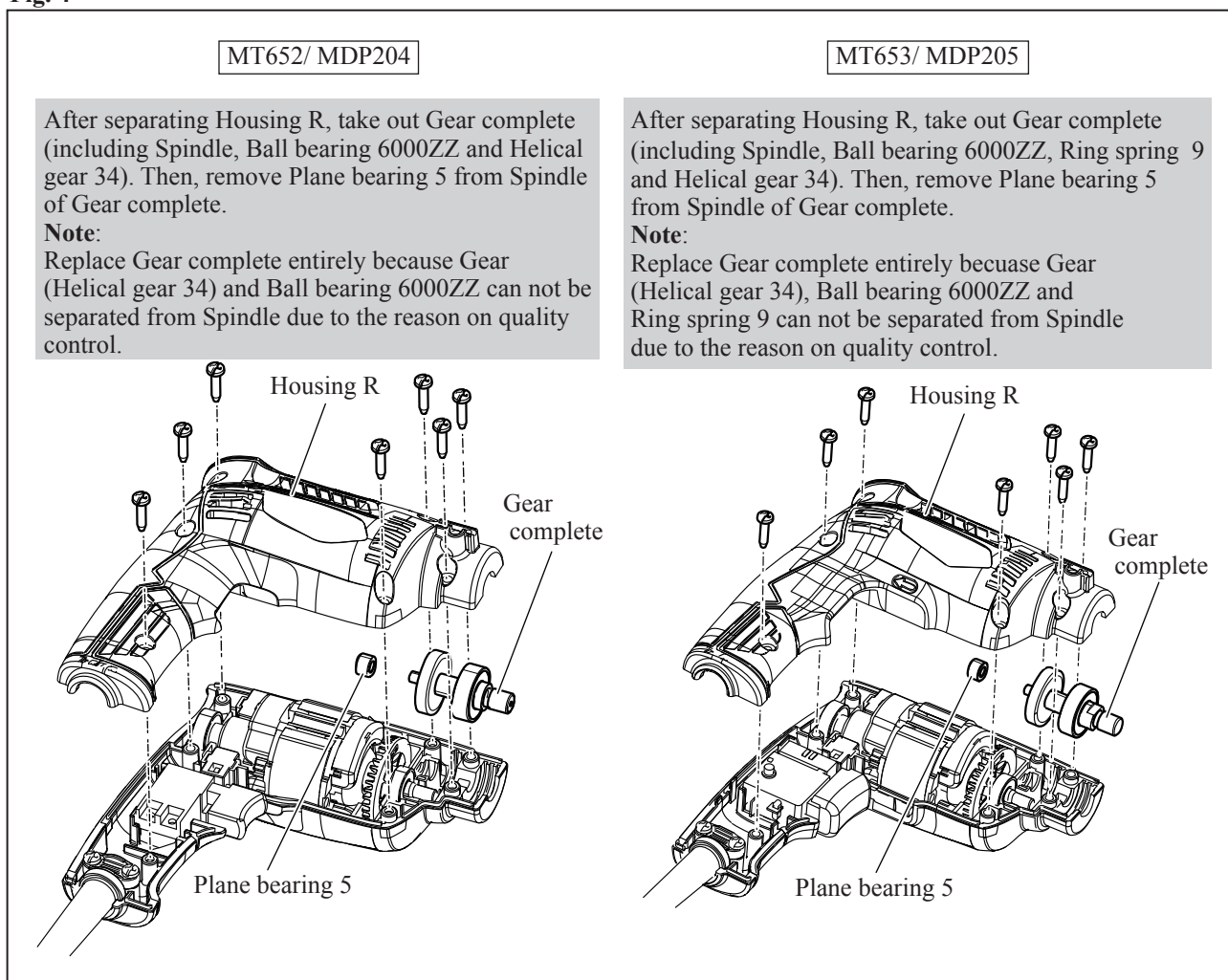
**Note:** Set the fastening torque of 1R219 to **9.8-14.7N·m (100-150kgf·cm)** and turn Drill chuck **clockwise** with 1R219.

### [3] -2. Gear complete

##### DISASSEMBLING

- (1) Remove Drill chuck. (See **Fig. 3A** or **Fig. 3B**.)
- (2) Disassemble Gear complete as drawn in **Fig. 4**.

**Fig. 4**

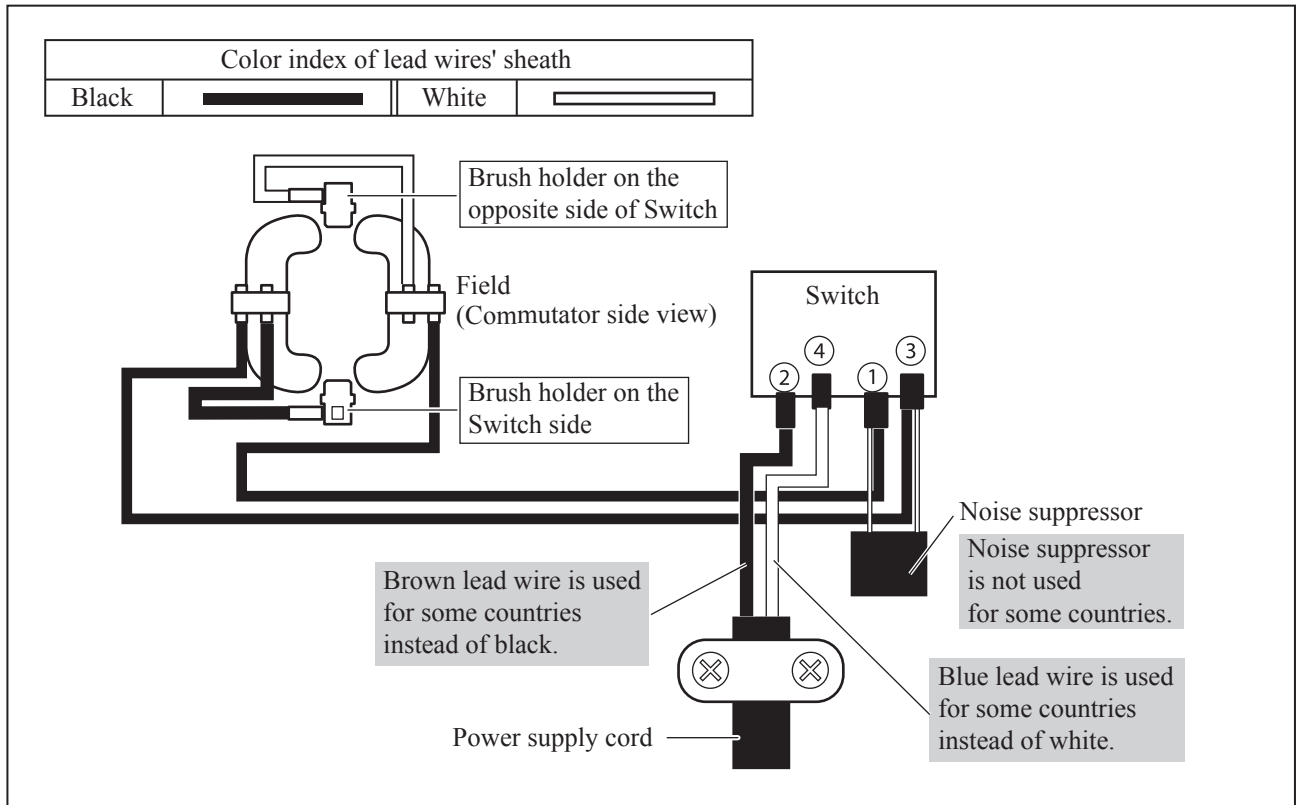


##### ASSEMBLING

- (1) Mount Plane bearing 5 to the **new** Gear complete. (Refer to **Fig. 4**)
- (2) Assemble Housing R to Housing L with seven 4x18 Tapping screws. (Refer to **Fig. 4**)
- (3) Assemble Drill chuck by reversing the disassembly procedure. (Refer to **Figs. 3A** or **3B**)

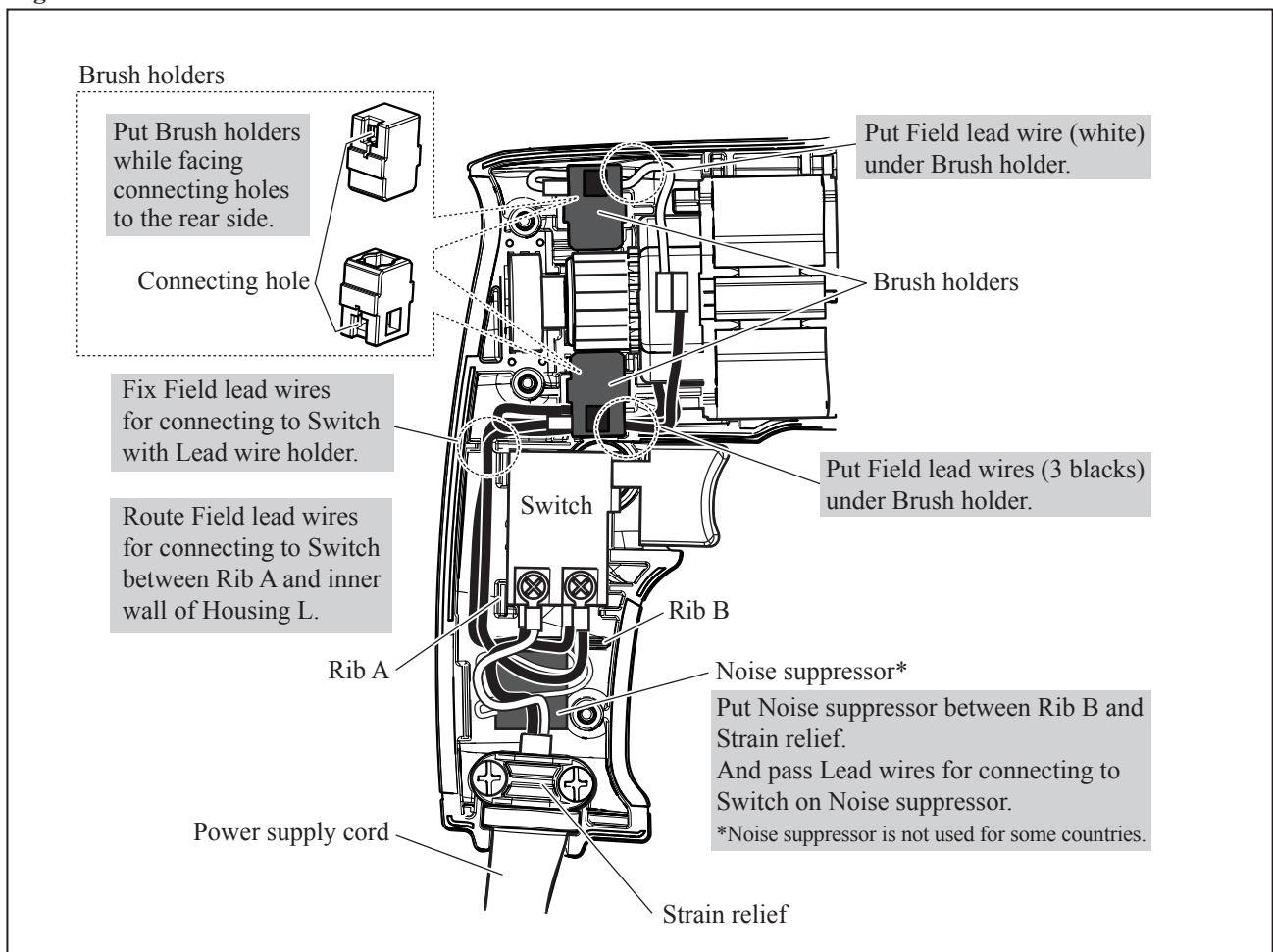
► **Circuit diagram of Models MT652/ MDP204**

Fig. D-1



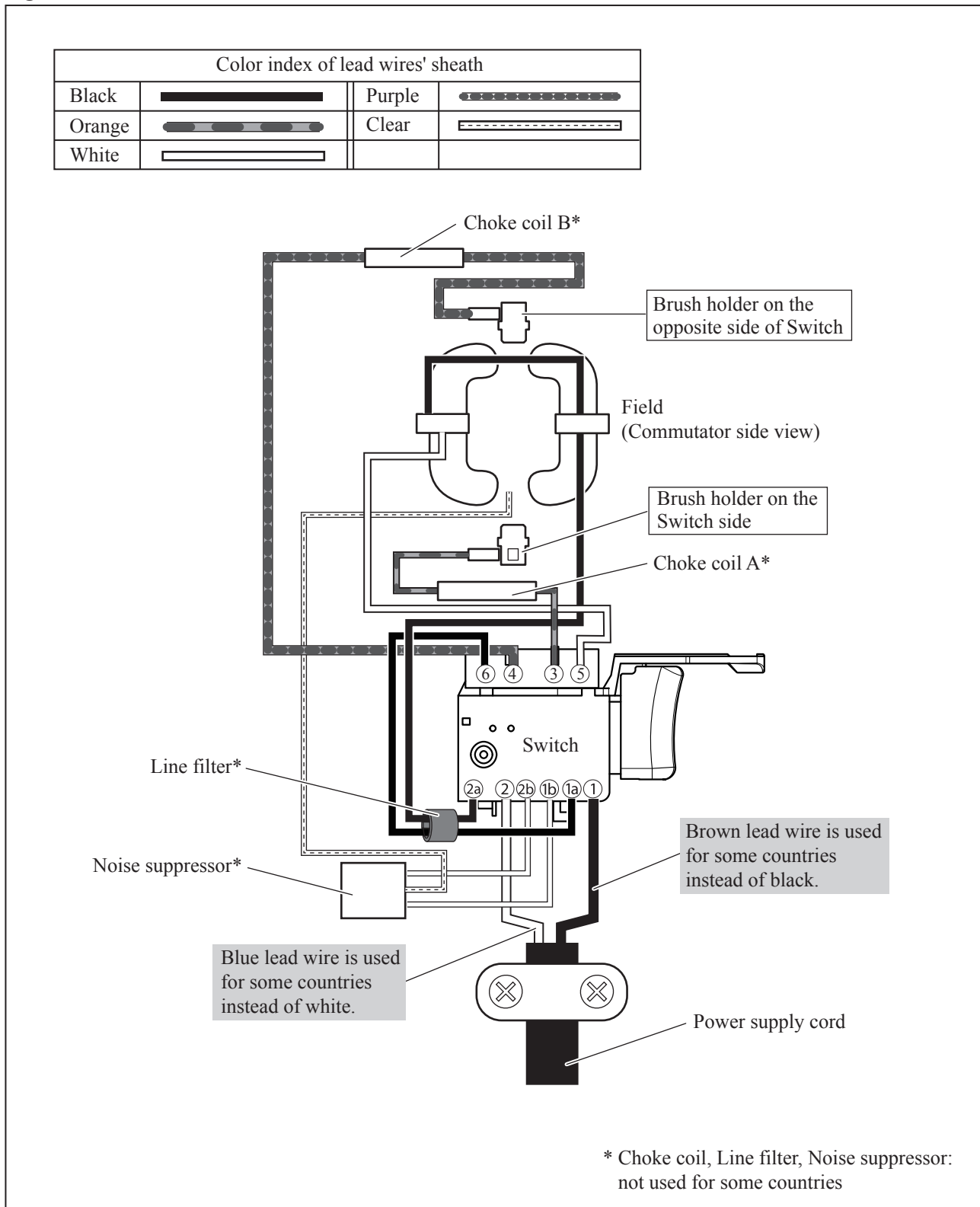
► **Wiring diagram of Models MT652/ MDP204**

Fig. D-2



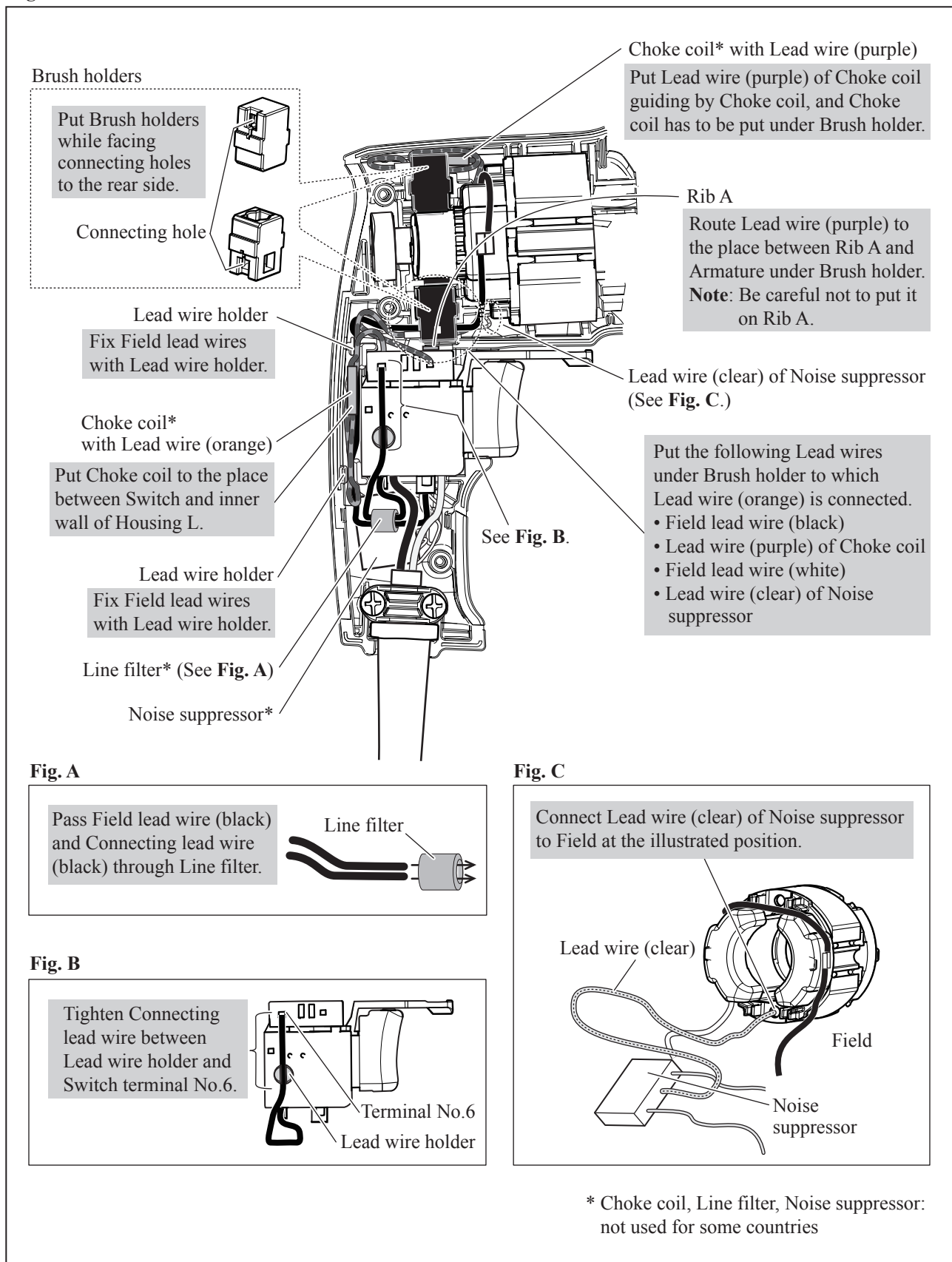
▶ **Circuit diagram of Models MT653/ MDP205**

Fig. D-1A

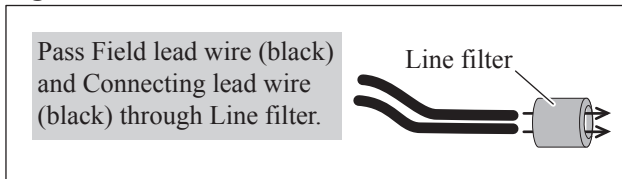


► **Wiring diagram of Models MT653/ MDP205**

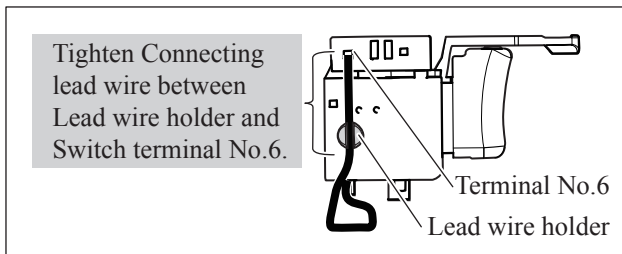
**Fig. D-2A**



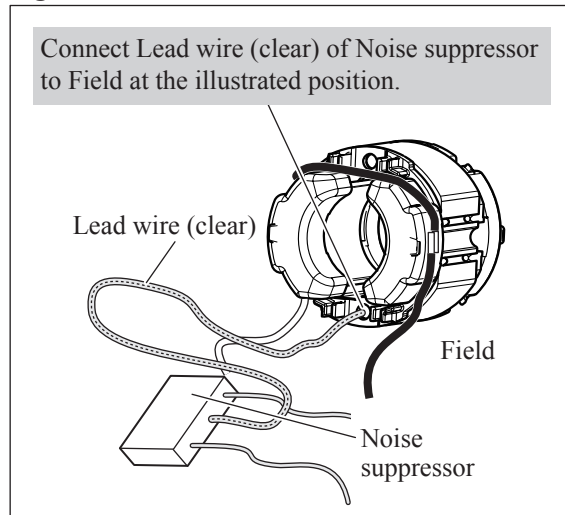
**Fig. A**



**Fig. B**



**Fig. C**



\* Choke coil, Line filter, Noise suppressor: not used for some countries