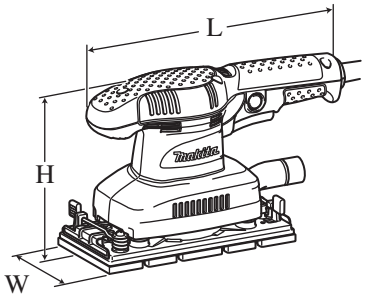
TECHNICAL INFORMATION

PRODUCT

Model No. ► BO3710, BO3711

Description ► Finishing Sander



Dimensions: mm (")	
Length (L)	253 (10)
Width (W)	92 (3-5/8)
Height (H)	154 (6-1/16)

CONCEPT AND MAIN APPLICATIONS

Models BO3710 and BO3711 have been developed as the successor models of BO3700.
Additionally to the same lightweight design as BO3700, BO3710 and BO3711 feature the following conveniences:

- Lower total height from the base to the top of the grip for easier handling and higher maneuverability
- Ergonomic tool body for sure grip and easy handling whether in single- or double-handed operation
- Easy-to-operate paper clamp with rolled clamper's edges

The specification difference between BO3710 and BO3711 is;
BO3710: Single speed model
BO3711: Variable speed model

► Specification

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output (W)
			Input	Output	
110	1.8	50/60	190	70	80
120	1.7	50/60	---	70	80
220	0.95	50/60	190	70	80
230	0.85	50/60	190	70	80
240	0.85	50/60	190	70	80

Specification \ Model No.		**BO3710**	**BO3711**
Abrasive paper size: mm (")		93 x 228 (3-5/8 x 9)	
Pad size: mm (")		93 x 185 (3-5/8 x 7-1/4)	
Orbits per minute: min.$^{-1}$= opm		11,000	4,000 - 11,000
Strokes per minute: min.$^{-1}$= spm		22,000	8,000 - 22,000
Paper fastening system	Hook & loop	Yes*1	
	Clamp	Yes	
Variable speed control by dial		No	Yes
Double insulation		Yes	
Power supply cord: m (ft)		2.0 (6.6)	
Net weight*2: kg (lbs)		1.6 (3.5)	1.6 (3.5)

***1** Optional pad complete (Hook & loop type) is required.
***2** Weight according to EPTA-Procedure 01/2003

► Standard equipment

Abrasive paper 93-120 1
Punch plate 1
Dust bag or Dust box 1

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

► Optional accessories

Abrasive papers 93-60, 93-80, 93-120, 93-180, 93-240 (Clamp type)
Abrasive papers 93-60, 93-80, 93-120, 93-180, 93-240 (Hook & loop type)
Punch plate
Hose complete 28-1.5
Pad complete (Clamp type)
Pad complete (Hook & loop type)
Filter set (including 5 non-woven cloth filters)

Features and benefits

Compact and lightweight design for easy handling and high maneuverability

Total height from the base to the top of the grip is 154mm (6-1/16"); 4mm (5/32") lower than BO3700, enabling BO3710/ BO3711 to have a lower center of gravity for easier handling and higher maneuverability.

Ergonomic tool body

fits user's hand perfectly, providing sure grip and easy handling whether in single- or double-handed operation.

Powerful heavy-duty motor featuring increased power input obtained by redesigned cooling system

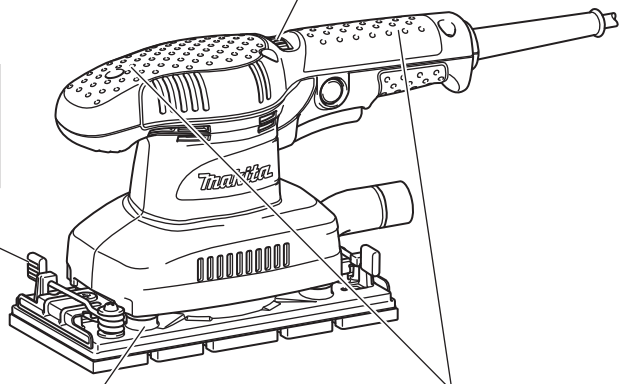
Continuous rating input: 190W
(Rated amperage for North America: 1.7A)

Variable speed control by dial (**BO3711** only)

Sanding speed is variably adjustable to suit workpiece.

Easy-to-operate paper clamp

ensures easy installation/removal of paper with rolled clamper's edges.



Rigid aluminum foot with sponge sleeve *

provides high durability and effective vibration-absorbing performance.

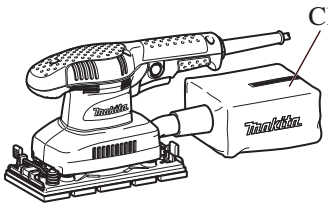
Rubberized soft grip

provides more comfort and better control while minimizing hand fatigue and pain.

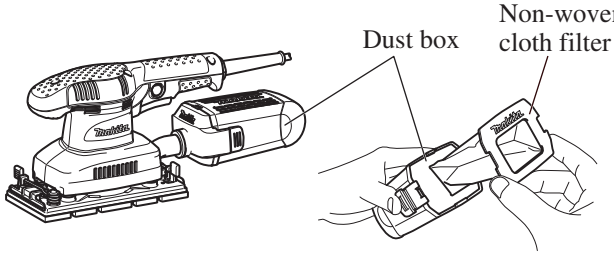
(The image above is Model BO3711.)

Available with Dust bag or Dust box
(Also connectable to Makita vacuum cleaners)

Dust bag



Dust box + Non-woven cloth filter (disposable)



*The same advantages as Model BO3700

Specification Comparison

Specification \ Model	Makita		BOSCH		metabo	Hitachi
	BO3710 / BO3711	BO3700	GSS23AE	PSS200A	SR10-23 Intec	FSV10SA
Continuous rating input: W	**190**	180	190	200	200	180
Rated amperage for North America: A	**1.7**	1.6	---	---	---	---
Orbits per minute: opm= min-1	**11,000/ 4,000-11,000**	10,000	7,000-12,000	12,000	10,850	10,000
Amount of eccentricity: mm (")	**Diameter 2.0 (1/16)**	Diameter 2.0 (1/16)	Diameter 2.0 (1/16)	Diameter 2.0 (1/16)	Diameter 2.5 (3/32)	Diameter 2.0 (1/16)
Paper fastening system	**Clamp*1**	Clamp*1	Hook & loop/ Clamp	Hook & loop	Clamp	Clamp
Abrasive paper size: mm (")	**93 x 228 (3-5/8 x 9)**	93 x 228 (3-5/8 x 9)	93 x 185/ 93 x 230 (3-5/8 x 7-1/4/ 3-5/8 x 9)	93 x 185 (3-5/8 x 7-1/4)	unknown	93 x 228 (3-5/8 x 9)
Pad size: mm (")	**93 x 185 (3-5/8 x 7-1/4)**	93 x 185 (3-5/8 x 7-1/4)	93 x 182 (3-5/8 x 7-1/8)	93 x 182 (3-5/8 x 7-1/8)	93 x 183 (3-5/8 x 7-1/4)	92 x 185 (3-5/8 x 7-1/4)
Material of Base	**Aluminum diecast**	Aluminum diecast	Aluminum diecast	Plastic	Aluminum diecast	Plastic
Variable speed control by dial	**No/ Yes**	No	Yes	No	No	No
Built-in dust extraction	**Yes**	Yes	Yes	Yes	Yes	Yes
Dust box	**Yes*2**	No (Cloth dust bag only)	Yes	Yes	Yes	No (Cloth dust bag only)
Filter for dust box	**Non-woven cloth filter**		Micro filter	Micro filter	Intec filter	
Rubberized soft grip	**Yes**	No	Yes	Yes	No	Yes
Double insulation	**Yes**	Yes	Yes	Yes	Yes	Yes
Power supply cord: m (ft)	**2.0 (6.6)**	2.0 (6.6)	4.0 (13)	2.0 (6.6)	2.5 (8.2)	1.8 (5.9)
Dimensions: mm (") Length	**253 (10)**	254 (10)	250 (9-7/8)	245 (9-5/8)	273 (10-3/4)	247 (9-3/4)
Dimensions: mm (") Width	**92 (3-5/8)**	92 (3-5/8)	93 (3-5/8)	93 (3-5/8)	93 (3-5/8)	92 (3-5/8)
Dimensions: mm (") Height	**154 (6-1/16)**	158 (6-1/4)	158 (6-1/4)	167 (6-9/16)	161 (6-3/8)	148 (5-7/8)
Net weight*3: kg (lbs)	**1.6 (3.5)**	1.5 (3.3)	1.6 (3.5)	unknown	1.7 (3.8)	1.4 (3.1)

***1** Optional pad complete (Hook & loop type) is available for Hook & loop fastening system.
***2** Cloth dust bag for some countries
***3** Weight according to EPTA-Procedure 01/2003

Comparison of products

Performance comparison

1) Sanding Efficiency

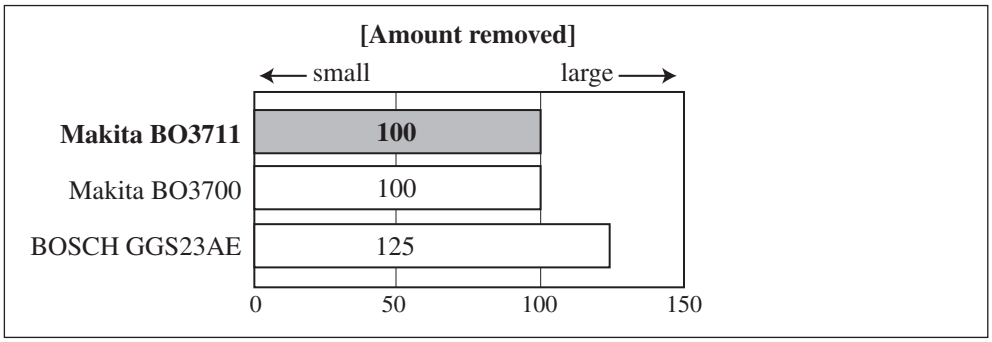
Models tested: Makita BO3711, BO3700, BOSCH GGS23AE

Test conditions:

Each model was tested by sanding SPF timber continuously for 15 minutes. and measured the amount removed.

Note: 1. Numbers in the chart below are relative values when the capacity of Makita BO3700 is indexed at 100.

2. The test results depend to a great extent on the hardness of the material, etc.

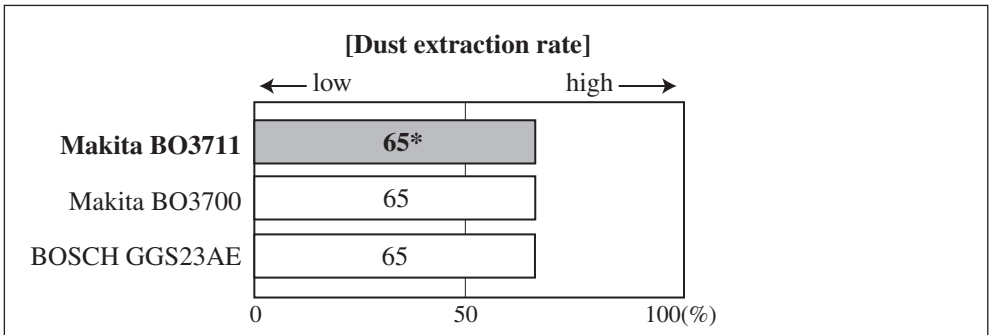


2) Dust Extraction Rate

Test conditions:

Sanded SPF timber under the same conditions as in 1) Sanding Efficiency,
and measured the ratio of dust amount extracted (into dust bag) to total dust produced.

Note: The test results depend to a great extent on the hardness of the material, etc.



* The rate was 60% when using dust box.

► Repair

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

[1] NECESSARY REPAIRING TOOLS

Code No.	Description	Use for
1R027	Bearing setting pipe 18-10.2	Removing Armature
1R029	Bearing setting pipe 23-15.2	Removing Balancer from Base
1R258	V block	Holding Ball bearing 6202DDW when removing Balancer
1R269	Bearing extractor	Removing Ball bearings from Armature
1R286	Round bar for Arbor 12-50	Removing Ball bearing 6202DDW from Balancer
1R350	Ring 60	Holding Base when removing Balancer and Ball bearing 6202DDW

[2] LUBRICATIONS

No lubrication is required.

[3] DISASSEMBLY/ASSEMBLY

[3]-1. Armature

DISASSEMBLING

1) Remove Top cover by unscrewing five 4x18 Tapping screws. Then remove Brush holders with Carbon brushes and Lead wires. Switch, Noise suppressor and Power supply cord can be replaced. (**Fig. 1**)
2) Remove Pad complete by unscrewing four M4x10 Pan head screws. O ring 53 may be attached to Pad complete. Do not lose O ring 53. (**Fig. 2**)
3) Insert Slotted screwdriver between a rib of Base and Balancer to stop moving of Balancer and remove M5x16 Countersunk head screw. (**Fig. 3**)
4) Remove Base together with Balancer and Ball bearing 6202DDW. (**Fig. 4**)
5) Remove Fan guide, Flat washer 8 and Fan 68 by unscrewing two 4x18 Tapping screws. (**Fig. 5**)
6) After removing four 4x18 Tapping screws, tap Motor housing with Plastic hammer as illustrated in **Fig. 6**. Armature can be removed together with Bearing box.

Fig. 1

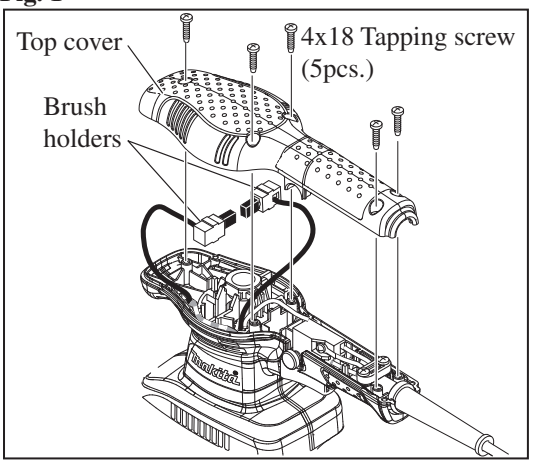


Fig. 2

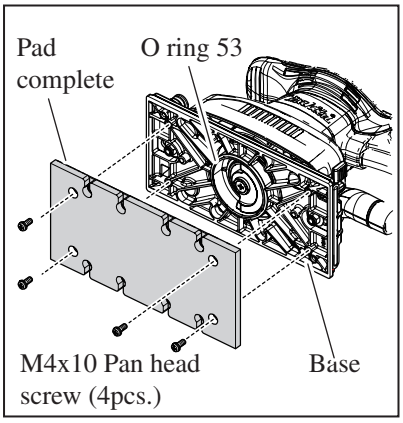


Fig. 3

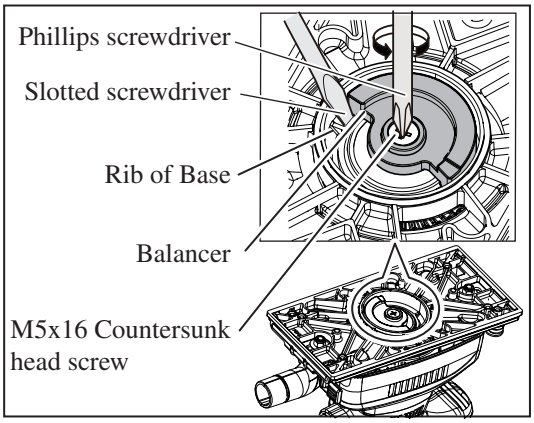


Fig. 4

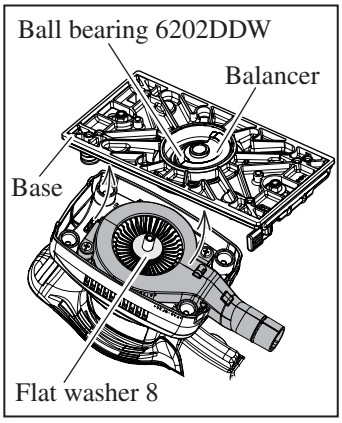


Fig. 5

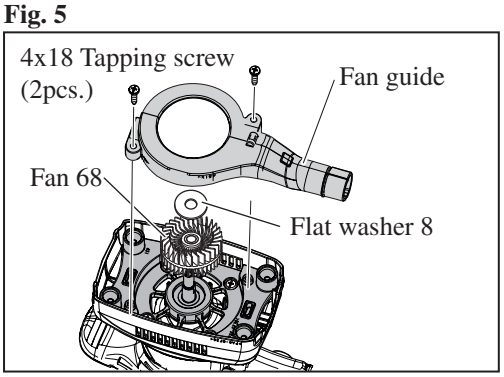
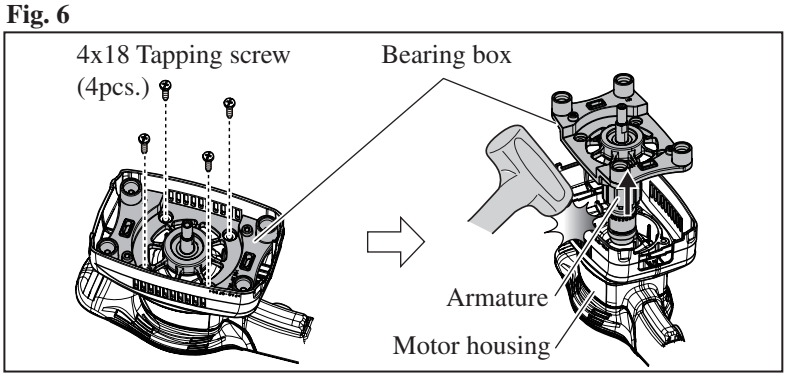


Fig. 6



► Repair

[3] DISASSEMBLY/ASSEMBLY

[3]-1. Armature (cont.)

DISASSEMBLING

7) Armature can be removed from Bearing box by tapping the shaft with plastic hammer. (**Fig. 7A**)
Note: When it is difficult to remove Armature in the above manner, put 1R027 on Ball bearing 6200DDW and press down 1R027 as illustrated in **Fig. 7B**.

8) Apply 1R269 to the clearance between Insulation washer and Ball bearing 607ZZ, and set the legs of 1R269 to Arbor press to prevent the jaws of 1R269 from being slipped off. Ball bearing 607ZZ can be removed with vise and 1R269. (**Fig. 8**)

9) Install M5x16 Countersunk head screw temporarily to the Armature shaft, and then remove Ball bearing 6200DDW without damage to the thread of Armature shaft. (**Fig. 9**) Flat washer 10 can be removed.

Fig. 7A

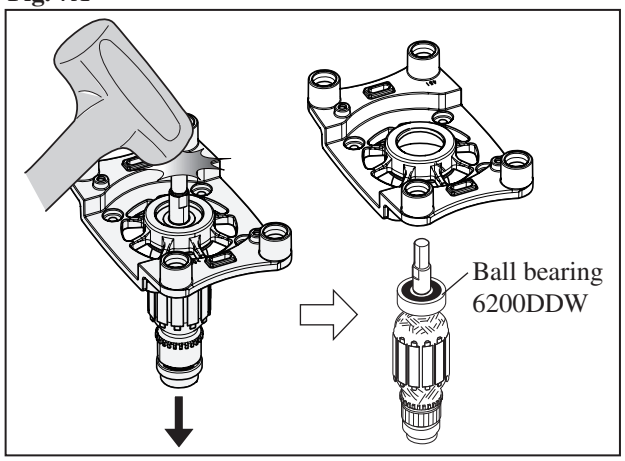


Fig. 7B

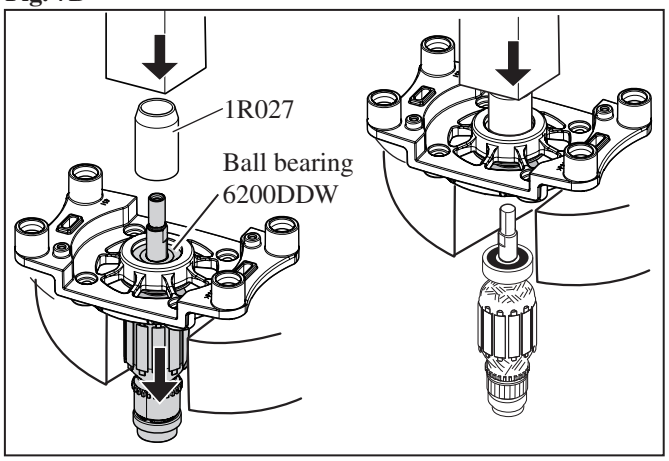


Fig. 8

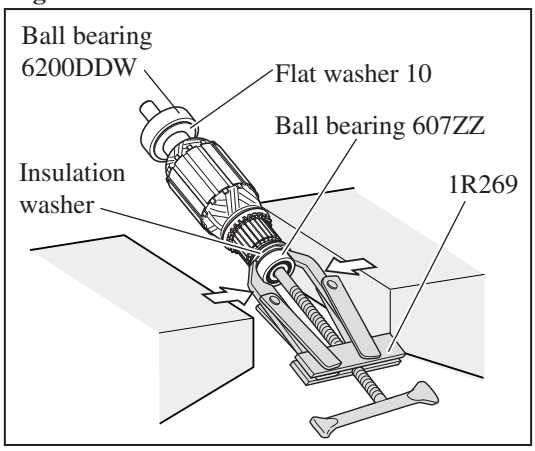
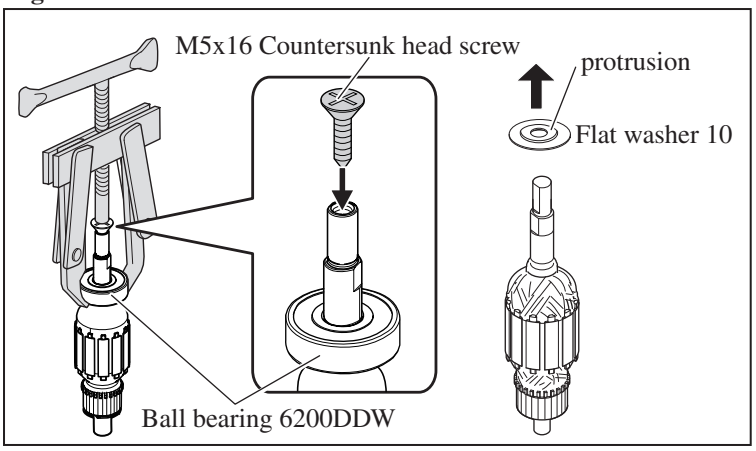


Fig. 9



ASSEMBLING

Take the disassembling step in reverse.

Note: 1) Do not fail to set Flat washer 10 on the drive end of Armature shaft before pressfit Ball bearing 6200DDW in place. (Figs. **Figs. 9 and 8**) Face the protrusion of Flat washer 10 to Ball bearing 6200DDW.

2) Be sure to install O ring 53 into Base. (**Fig. 2**)

3) Flat washer 8 has to be put between Ball bearing 6202DDW and Fan 68. (**Fig. 4**)

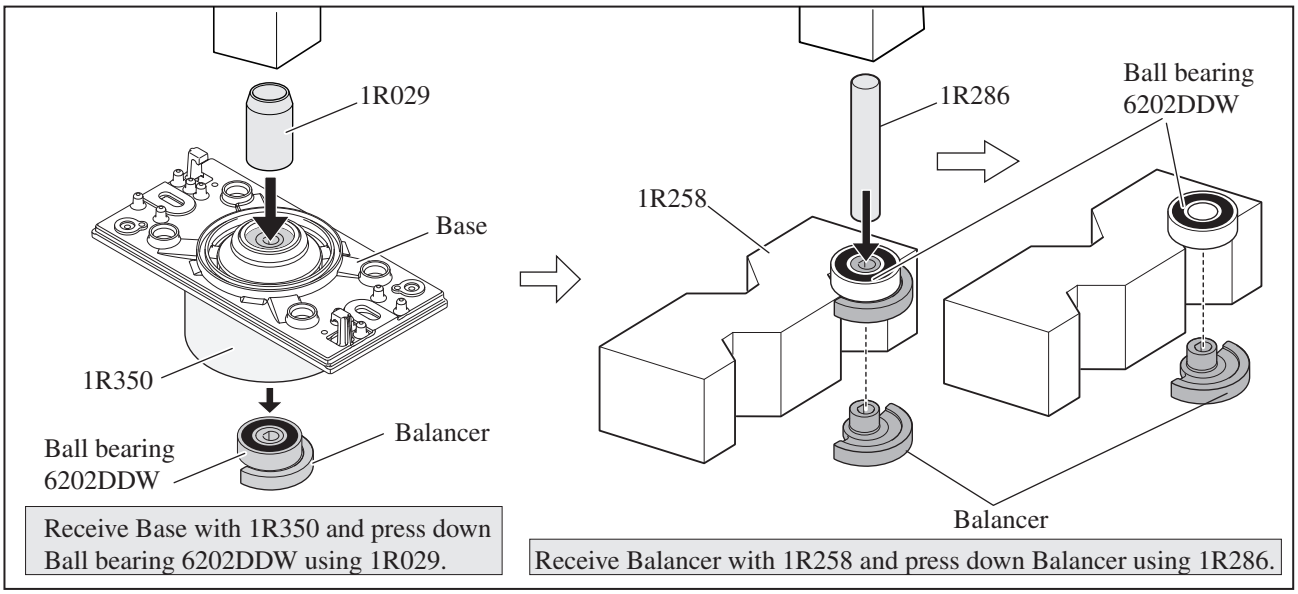
Repair

[3]-2. Ball bearing 6202DDW, Balancer

DISASSEMBLING

1) Remove Pad complete by unscrewing four M4x10 Pan head screws.
   Note: It is not necessary to remove Top cap.
2) Remove Base section from the machine by unscrewing M5x16 Countersunk head screw.
3) Disassemble Base section as illustrated in **Fig. 10**.

Fig. 10



ASSEMBLING

Take the disassembling step in reverse.

[3] DISASSEMBLY/ASSEMBLY
[3]-3. Field

DISASSEMBLING

1) After removing Armature in accordance with the clause of [3]-1, remove two 4x40 Tapping screws. (Fig. 11)
2) Tap Motor housing against work table as illustrated in **Fig. 12**.

Field can be disassembled from Gear housing.

Note: Cover the work table with something soft to avoid the damage to Gear housing before disassembling.

Fig. 11

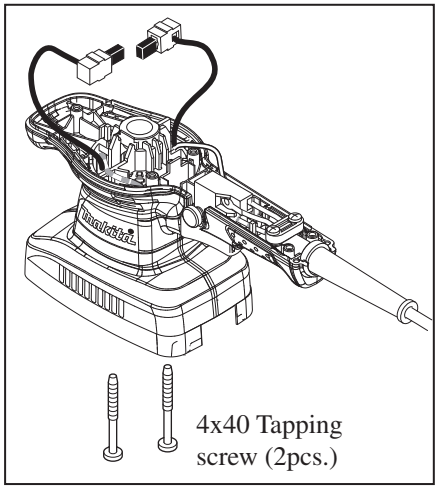
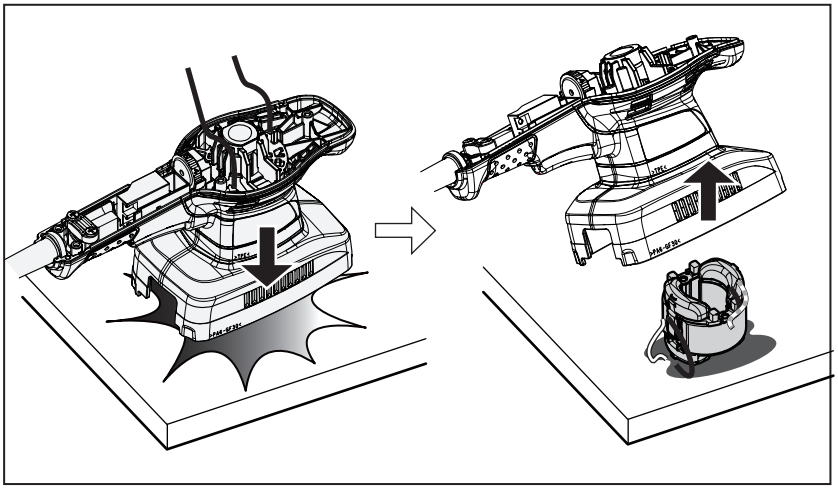


Fig. 12



ASSEMBLING

Take the disassembling step in reverse.

Repair

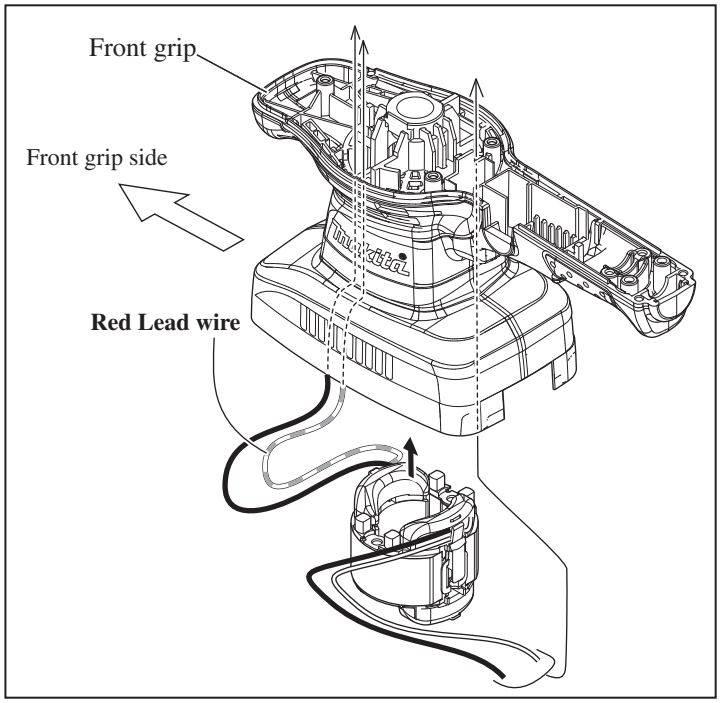
[3] DISASSEMBLY/ASSEMBLY

[3]-3. Field

ASSEMBLING

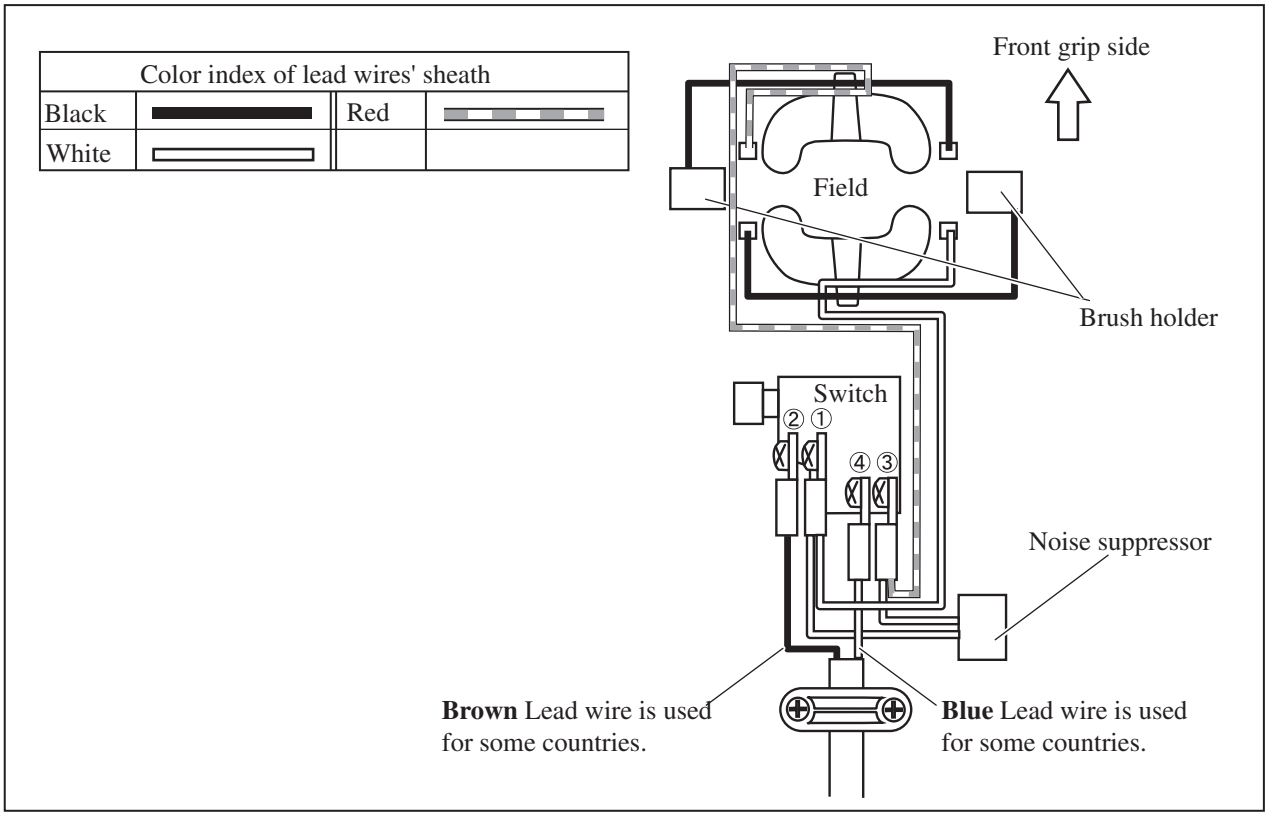
1) Facing the red lead wire side to Front grip side, assemble Field as illustrated in **Fig. 13**.
2) As for the further step, take the reverse step of Disassembly.

Fig. 11



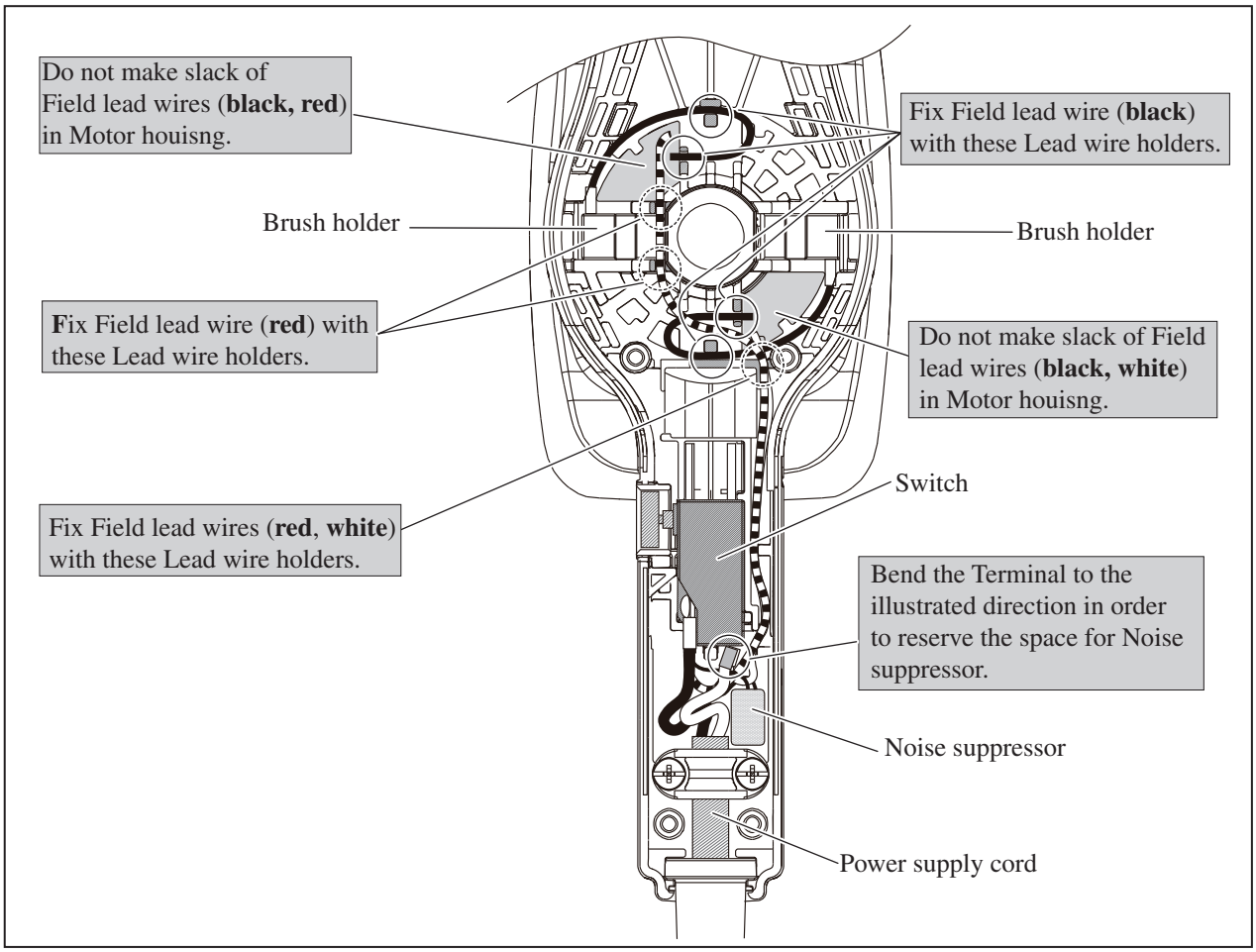
Circuit diagram (BO3710 without pre-set Dial for Speed Control)

Fig. D-1



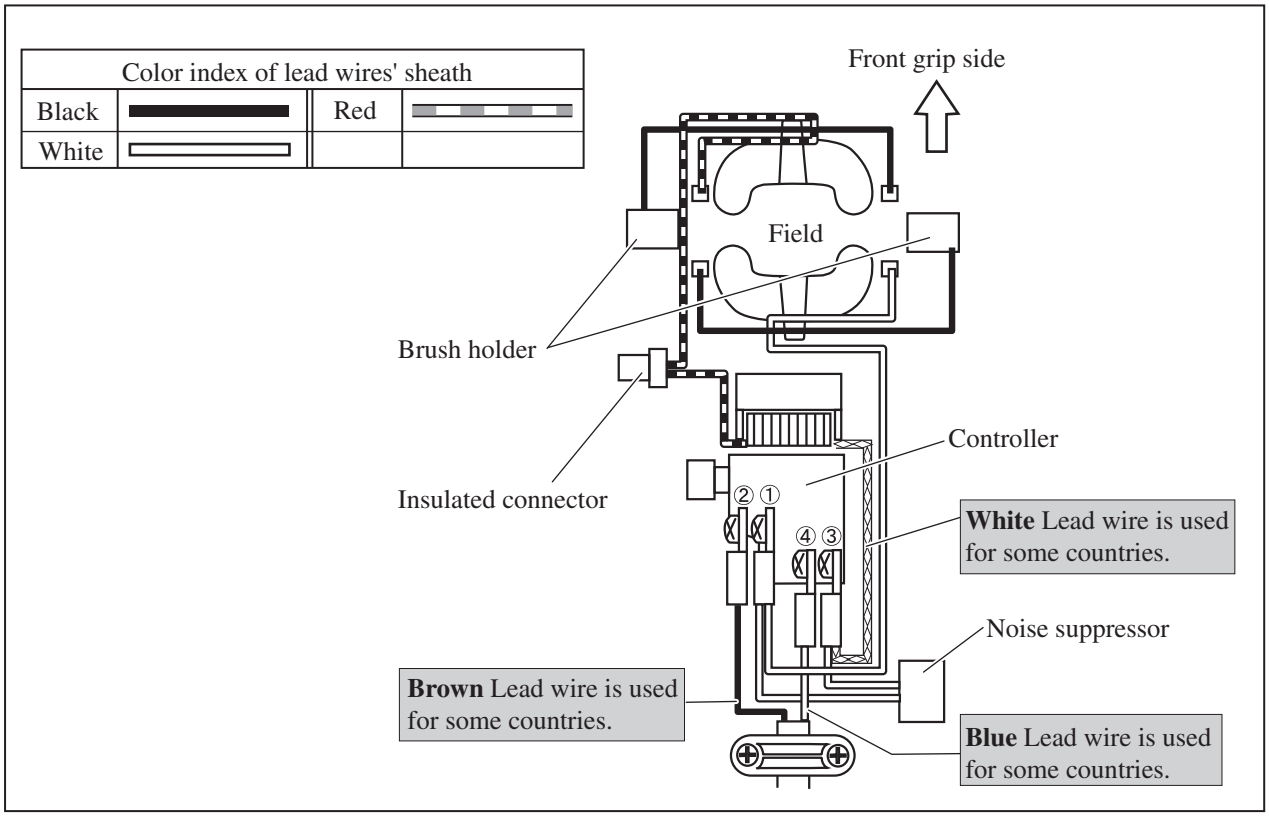
Wiring diagram (BO3710 without pre-set Dial for Speed Control)

Fig. D-2



Circuit diagram (BO3711 with pre-set Dial for Speed Control)

Fig. D-3



Wiring diagram (BO3711 with pre-set Dial for Speed Control)

Fig. D-4