

TECHNICAL INFORMATION



PRODUCT

P 1/12

Model No. ▶ BO4555, BO4556, BO4565, BO4566

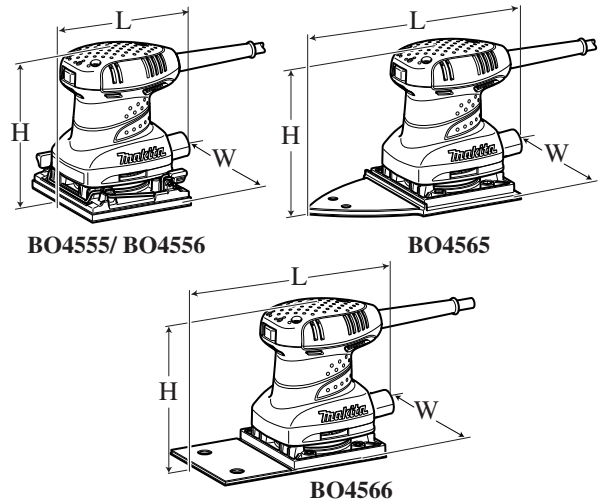
Description ▶ Finishing Sander

CONCEPT AND MAIN APPLICATIONS

These four Finishing sanders have been developed as the successor models of BO4552 series models, featuring ergonomically contoured grip with non-skid elastomer coated surface.

Models BO4565 and BO4566 feature extended pad optimum for corner sanding.

See page 3 for detailed information on benefits.



	Dimensions: mm (")			
	BO4555	BO4556	BO4565	BO4566
Length (L)	131 (5-1/8)		219 (8-5/8)	197 (7-3/4)
Width (W)		112 (4-3/8)		100 (3-15/16)
Height (H)	142 (5-5/8)	141 (5-9/16)	139 (5-1/2)	137 (5-3/8)

► Specification

BO4555/ BO4556

Voltage (V)	Current (A)	Cycle (Hz)	Continuous Rating (W)		Max. Output (W)
			Input	Output	
110	1.9	50/60	200	60	90
120	2.0	50/60	---	60	90
220	1.0	50/60	200	60	90
230	1.0	50/60	200	60	90
240	0.9	50/60	200	60	90

BO4565/ BO4566

220	1.0	50/60	200	60	90
230	1.0	50/60	200	60	90
240	0.9	50/60	200	60	90

Specification		Model	BO4555	BO4556	BO4565	BO4566
Orbits per minute: opm= min-1			14,000			
Sanding strokes: spm= min-1			28,000			
Paper fastening system	Hook & loop		Yes	No	Yes	
	Clamp		Yes	Yes	No	
Pad	Shape		Standard		Extended, Triangular	Extended, Rectangular
	Size: mm (")		112 x 102 (4-3/8 x 4)		112 x 190 (4-3/8 x 7-1/2)	100 x 164 (3-15/16 x 6-1/2)
Abrasive paper size: mm (")			Hook & loop system: 114 x 102 (4-1/2 x 4) Clamp system: 114 x 140 (4-1/2 x 5-1/2)		Triangle paper: 96 (3-3/4) Square paper: 114 x 102 (4-1/2 x 4)	102 x 166 (4 x 6-1/2) 102 x 240 (4 x 9-1/2)
Double insulation			Yes			
Power supply cord: m (ft)			2.0 (6.6)			
Net weight: kg (lbs)			1.1 (2.4)			

See next page for "Standard equipment" and "Optional accessories".

► Standard equipment

BO4555

[When using Hook & loop system]

Abrasive paper 60	1
Abrasive paper 100	1
Abrasive paper 150	1
Paper bag + Paper dust bag holder or Dust bag assembly	1
Punch plate	1
Plastic carrying case	1

BO4556

Abrasive paper 114-60	1
Abrasive paper 114-100	1
Abrasive paper 114-150	1
Paper bag + Paper dust bag holder or Dust bag assembly	1
Punch plate	1
Plastic carrying case	1

BO4566

Paper bag + Paper dust bag holder or Dust bag assembly	1
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Note: The standard equipment for the tool shown above may differ by country.

► Optional accessories

BO4555/ BO4556

Abrasive paper 40, 60, 100, 150, 240
Abrasive paper 114-60, 114-80, 114-100, 114-150

BO4565

Abrasive paper 96-40, 96-60, 96-100, 96-150, 96-240
Abrasive paper 40, 60, 100, 150, 240

BO4555

[When using Clamp system]

Abrasive paper 114-60	1
Abrasive paper 114-100	1
Abrasive paper 114-150	1
Paper bag + Paper dust bag holder or Dust bag assembly	1
Punch plate	1
Plastic carrying case	1

BO4565

Abrasive paper 60	1
Abrasive paper 100	1
Abrasive paper 150	1
Abrasive paper 96-60	1
Abrasive paper 96-100	1
Abrasive paper 96-150	1
Paper bag + Paper dust bag holder or Dust bag assembly	1
Plastic carrying case	1

► **Features and benefits**

Main Specification Differences Among BO4555 Series Models

Model No. \ Pad	Paper fastening system	Shape
BO4555	Hook & loop or Clamp	Standard
BO4556	Clamp	Standard
BO4565	Hook & loop	Extended, Triangular
BO4566	Hook & loop	Extended, Rectangular

Ergonomically Contoured Grip with Non-Skid Elastomer Covered Surface
 Fits your palm perfectly to provide maximum comfort and control.

Powerful 200W* Motor
 BO4555 series models: 200W
 BO4552 series models: 160W

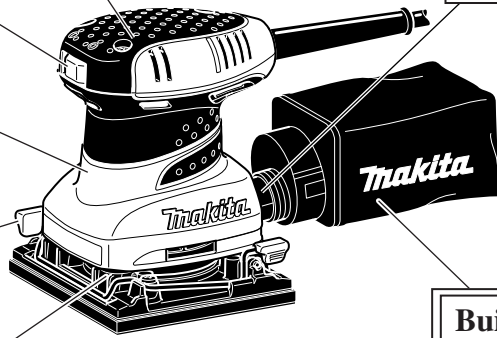
(*200W= continuous rating input)

Rubber Switch Cover prevents ingress of dust.

Connectable to Makita Vacuum cleaners

Low Vibration, Low Noise
 (See the comparison chart on page 6.)

Easy-to-Operate Paper Clamp (BO4555 and BO5556)
 Easy installation/removal of paper with rolled clamber's edges



Built-in Dust Extraction **

Enhanced Foot
 Rigid aluminum foot with dust-proof sponge for longer tool life

(The image above is Model BO4555.)

High Dust Extraction Rate
 (See the comparison chart in page 6.)

**The same advantages as Model BO4552

► Comparison of products

Specification Comparison

[Models with Standard Pad]

Specification	Makita		Dewalt	BOSCH	HITACHI
	BO4555	BO4556			
Model	BO4552*/BO4553		DW411	1297DK*/GSS140A	SV12SG
Continuous rating input: W	200	160	170	180	200
Rated amperage for North America: A	2.0	1.6	2.0	2.0	1.7
Orbits per minute: opm= min-1	14,000	14,000	13,500	12,000	14,000
Sanding strokes: spm= min-1	28,000	28,000	27,000	24,000	28,000
Amount of eccentricity: mm (")	1.5 (1/16)	1.5 (1/16)	1.5 (1/16)	1.5 (1/16)	1.5 (1/16)
Paper fastening system	Hook & loop	No	No	Yes**	Yes**
	Clamp	Yes	Yes	Yes**	Yes**
Pad	Shape	Standard	Standard	Standard	Standard
	Size: mm (")	112 x 102 (4-3/8 x 4)	116 x 104/112 x 100 (4-9/16 x 4-1/8/4-3/8 x 3-15/16)	114 x 108 (4-1/2 x 4-1/4)	113 x 105 (4-7/16 x 4-1/8)
Abrasive paper size: mm (")	Hook & loop system:	114 x 140 (4-1/2 x 5-1/2)	114 x 140 (4-1/2 x 5-1/2)	Hook & loop system:	Hook & loop system:
	Clamp system:	114 x 102 (4-1/2 x 4)	114 x 102 (4-1/2 x 4)	115 x 107 (4-1/2 x 4-1/4)	110 x 100 (4-5/16 x 3-15/16)
Built-in dust extraction	Yes	Yes	Yes	Yes	Yes
Dust bag	Cloth or Paper**	Cloth or Paper**	Cloth	Plastic	Cloth
Double insulation	Yes	Yes	Yes	Yes	Yes
Power supply cord: m (ft)	2.0 (6.6)	2.0 (6.6)	2.5 (8.2)	2.3 (7.5)	2.5 (8.2)
Dimensions: mm (")	Length	131 (5-1/8)	110 (4-5/16)	135 (5-5/16)	134 (5-1/4)
	Width	112 (4-3/8)	116 (4-9/16)	112 (4-3/8)	108 (4-1/4)
	Height	142 (5-5/8)	136/137 (5-3/8/5-3/8)	129 (5-1/8)	147 (5-3/4)
Net weight: kg (lbs)	1.1 (2.4)	0.95 (2.1)	1.0 (2.3)	1.4 (3.0)	1.1 (2.4)

*Model for North America

**The material of Dust bag may differ by country.

► Comparison of products

Specification Comparison

[Models with Extended Pad]

Model	Makita			HITACHI
	BO4565	BO4566	BO4561	
Specification				
Continuous rating input: W	200		160	200
Rated amperage for North America: A	2.0		1.6	1.7
Orbits per minute: opm= min-1	14,000		14,000	14,000
Sanding strokes: spm= min-1	28,000		28,000	28,000
Amount of eccentricity: mm (")	1.5 (1/16)		1.5 (1/16)	1.5 (1/16)
Paper fastening system	Yes		Yes	Yes
Clamp	No		No	No
Shape	Extended, Triangular	Extended, Rectangular	Extended, Triangular	Extended, Rectangular
Size: mm (")	112 x 190 (4-3/8 x 7-1/2)	100 x 164 (3-15/16 x 6-1/2)	112 x 190 (4-3/8 x 7-1/2)	100 x 164 (3-15/16 x 6-1/2)
Abrasive paper size: mm (")	Triangle paper: 96 x 96 x 96 (3-3/4 x 3-3/4 x 3-3/4) Square paper: 114 x 102 (4-1/2 x 4)	Square paper: 102 x 166 (4 x 6-1/2) 102 x 240 (4 x 9-1/2)	Triangle paper: 96 x 96 x 96 (3-3/4 x 3-3/4 x 3-3/4) Square paper: 114 x 102 (4-1/2 x 4)	Triangle paper: 96 x 96 x 96 (3-3/4 x 3-3/4 x 3-3/4) Square paper: 110 x 100 (4-5/16 x 3-15/16)
Built-in dust extraction	Yes		Yes	Yes
Dust bag	Cloth or Paper*		Cloth or Paper*	Cloth
Double insulation	Yes		Yes	Yes
Power supply cord: m (ft)	2.0 (6.6)		2.0 (6.6)	2.5 (8.2)
Dimensions: mm (")	Length	197 (7-3/4)	209 (8-1/4)	N/A
	Width	100 (3-15/16)	112 (4-3/8)	N/A
	Height	137 (5-3/8)	135 (5-5/16)	133 (5-1/4)
Net weight: kg (lbs)	1.1 (2.4)		0.95 (2.1)	1.0 (2.2)

*The material of Dust bag may differ by country.

► **Comparison of products**

Performance Comparison

Models tested: Makita BO4556, BO4552, BOSCH GSS140A, HITACHI SV12SG, PorterCable 340K

1) Sanding Efficiency

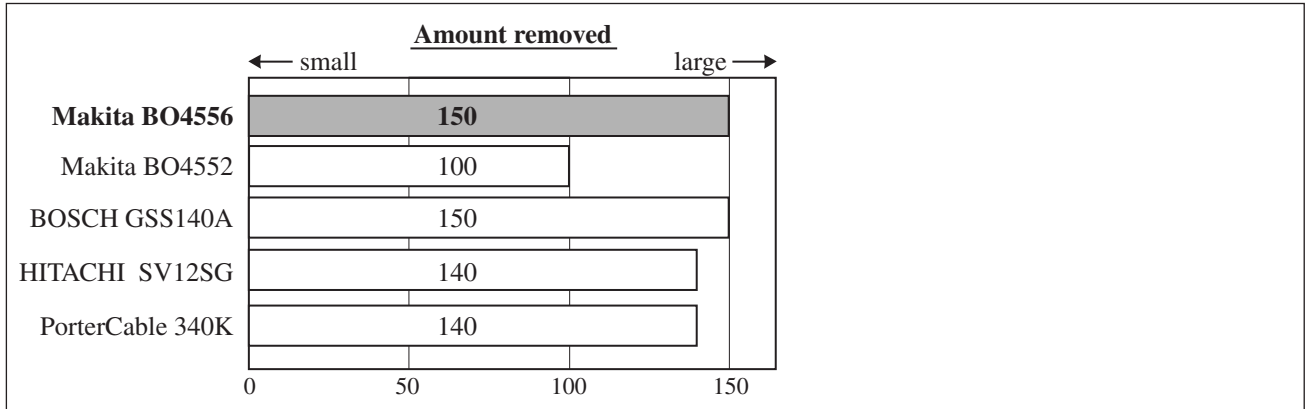
Note: 1) Numbers in the chart below are relative values when the capacity of Makita BO4552 is indexed at 100.
 2) The test results depend to a great extent on the hardness of the material, etc.

Test conditions:

Each model was tested by sanding SPF timber continuously for 15 minutes under the following conditions:

- Loaded with a 3kg weight
- Using the same #60 abrasive paper

And measured the amount removed.

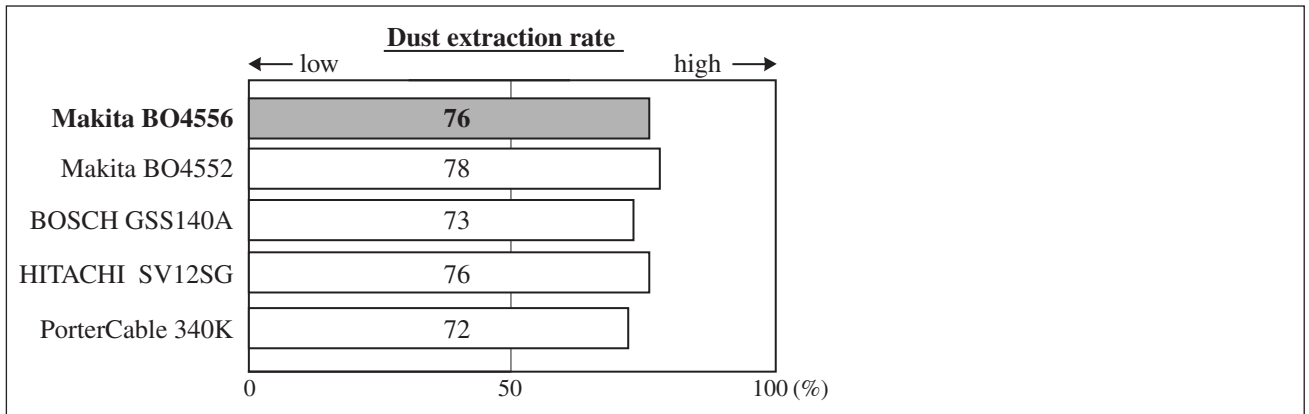


2) Dust Extraction Rate

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.



► **Comparison of products**

Performance Comparison

3) Vibration and Noise

[Model with standard pad]

		Makita			BOSCH	HITACHI	PorterCable
		BO4555	BO4556	BO4552	GSS140A	SV12SG	340K
Vibration: m/s ²	No-load	3.4	3.5	11.1	7.0	7.5	7.1
	Loaded	2.5	3.1	9.1	9.8	5.7	7.7
Noise: dB	No-load	80	82	83	83	86	83
	Loaded	79	81	83	83	84	82

[Model with extended, triangular pad]

		Makita		HITACHI
		BO4565	BO4561	SV12SH
Vibration: m/s ²	No-load	2.6	3.7	6.2
	Loaded	4.3	7.5	7.9
Noise: dB	No-load	81	83	83
	Loaded	80	81	82

[Model with extended, rectangular pad]

		Makita	
		BO4566	BO4563
Vibration: m/s ²	No-load	3.7	9.7
	Loaded	6.7	11.0
Noise: dB	No-load	81	84
	Loaded	80	80

► Repair

CAUTION: Unplug the machine for safety before repair/ maintenance, in accordance with the instruction manual!

[1] NECESSARY REPAIRING TOOLS

Code No.	Description	Use for
1R027	Bearing setting pipe 18-10.2	Removing Armature from Bearing box
1R269	Bearing extractor	Removing Ball bearings from Armature

[2] LUBRICATION

Lubrication is not required for this product because no gear is used for transmission.

[3] DISASSEMBLY/ASSEMBLY

DISASSEMBLING

- 1) Remove Top cover from Motor housing by unscrewing three 4x18 Tapping screws, then disconnect Flag terminal from each Brush holder. (**Fig. 1**)
- 2) Carbon brush can be removed from Motor housing together with Brush holder as described in **Fig. 2**.

Fig. 1

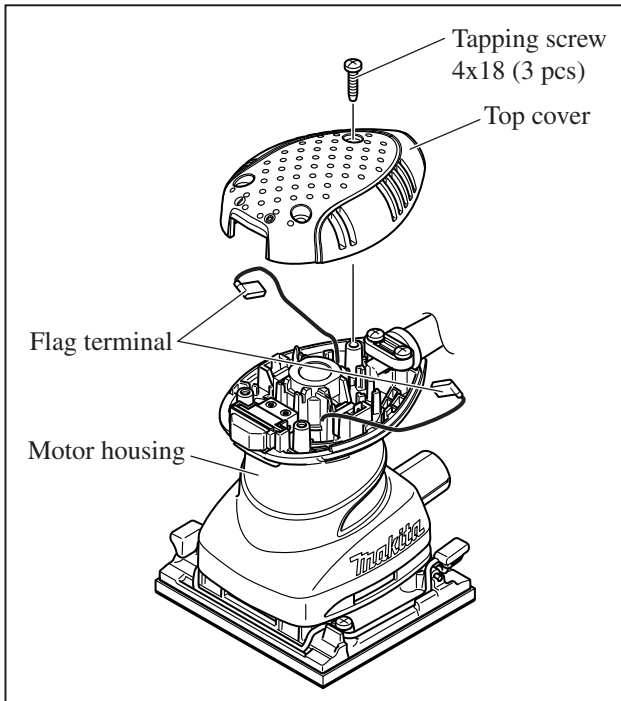
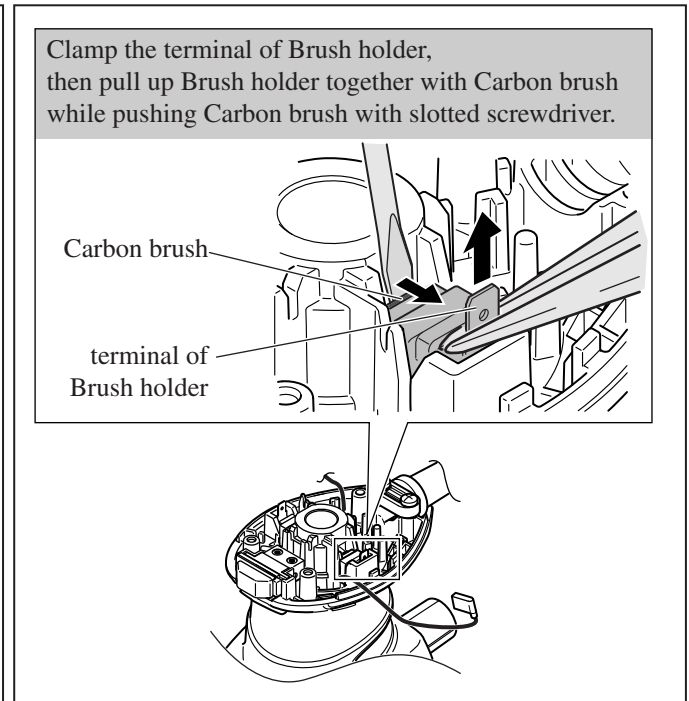


Fig. 2



- 3) Remove Pad complete from Base by unscrewing four 4x12 Tapping screws. (**Fig. 3**)
- 4) Lock Armature shaft by inserting screwdriver from the discharge nozzle of Fan guide between the lower Fan blades of Fan 63 as illustrated in **Fig. 4**. Balancer can now be removed by removing Countersunk head screw M4x12 from Armature shaft.

Fig. 3

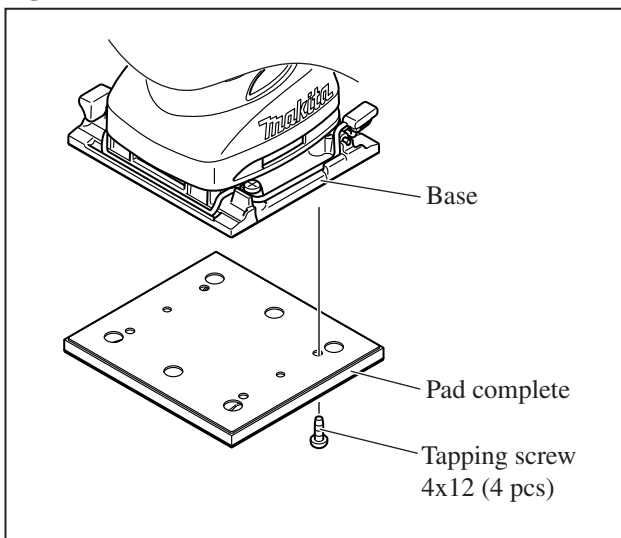
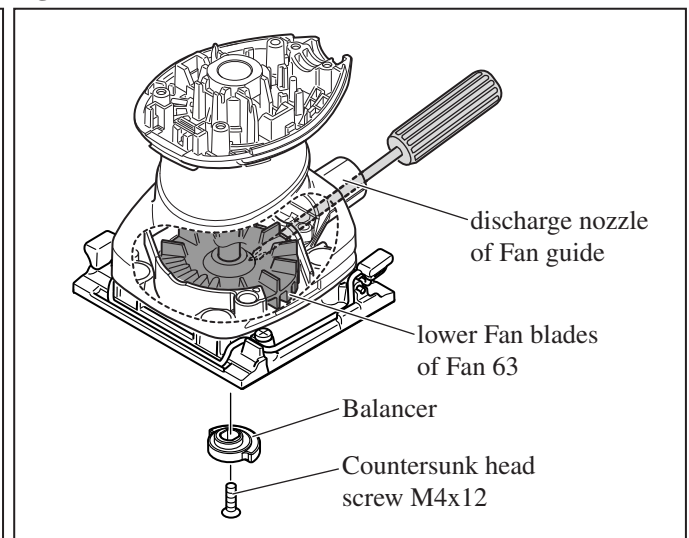


Fig. 4



► **Repair**

[3] DISASSEMBLY/ASSEMBLY

DISASSEMBLING

- 5) Remove Base from Motor housing. Some adjacent parts can be also removed in this step as illustrated in **Fig. 5**.
- 6) Remove Fan guide from Motor housing by unscrewing two 4x12 Tapping screws. (**Fig. 6**)
- 7) Remove Fan 63, then remove four 4x18 Tapping screws. (**Fig. 7**)

Fig. 5

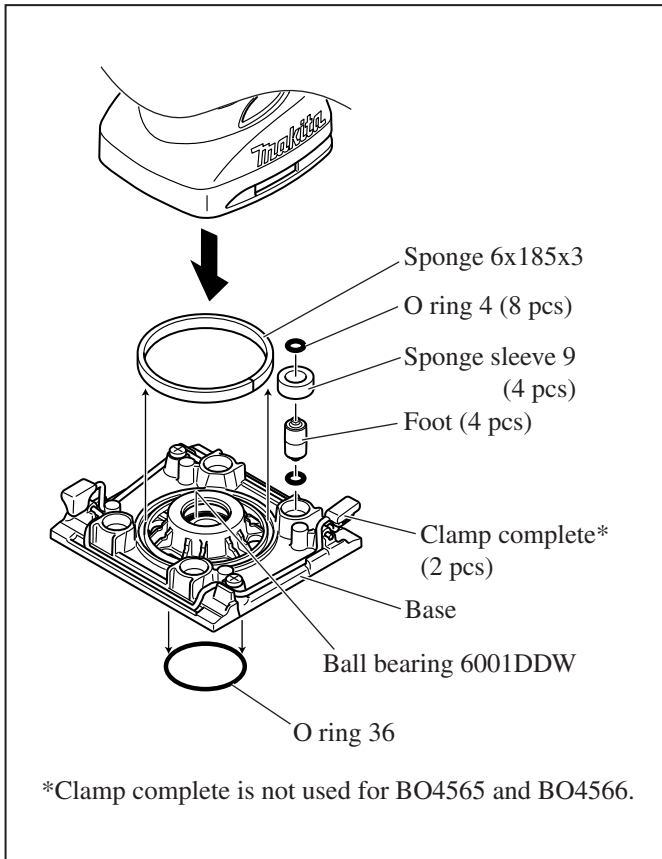


Fig. 6

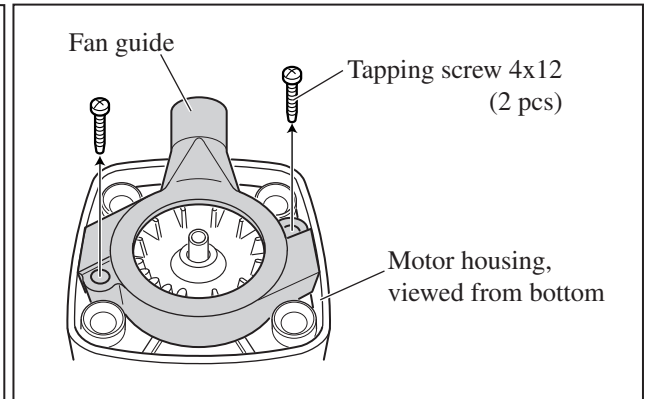
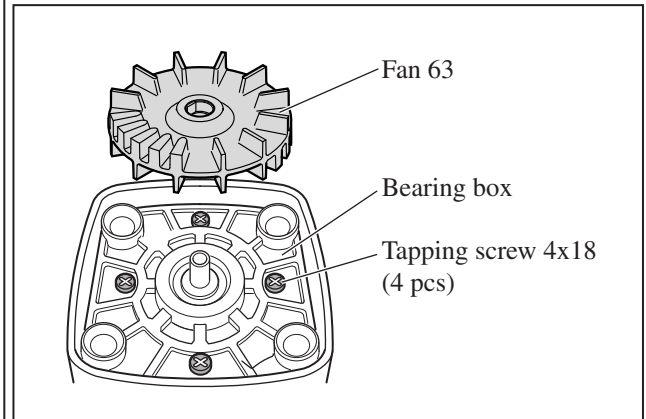


Fig. 7



- 8) Bearing box and Armature can now be removed as an assembly by tapping the end surface of Motor housing with plastic hammer. (**Fig. 8**)
- 9) Remove Armature from Bearing box using 1R027 and arbor press. (**Fig. 9**)

Fig. 8

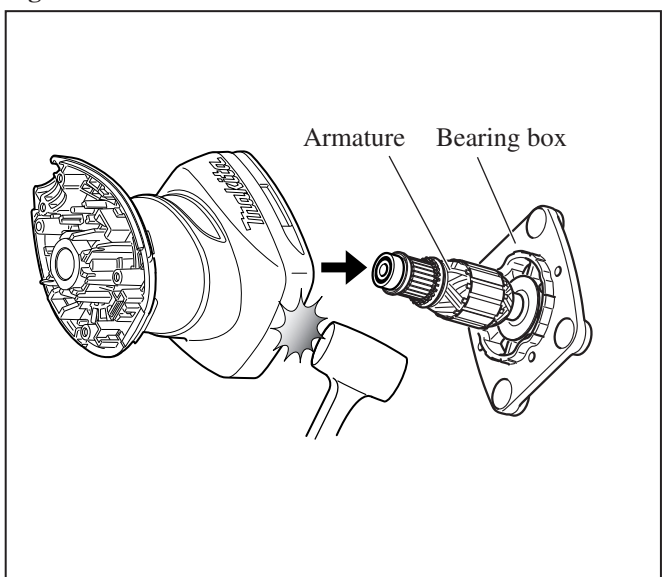
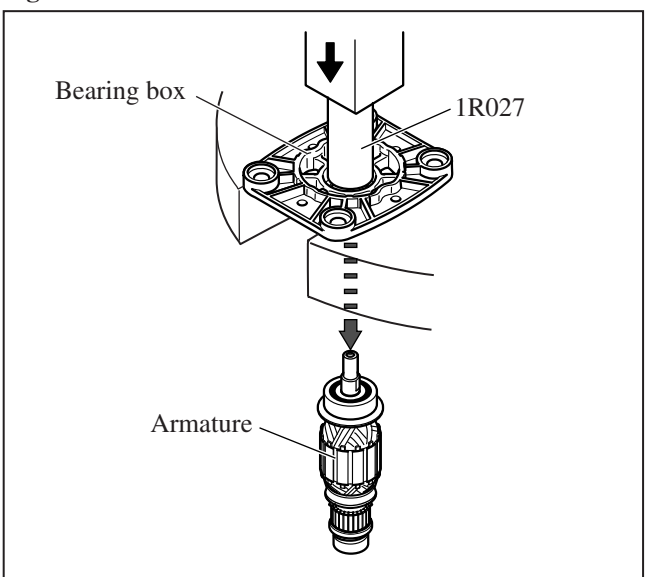


Fig. 9



► Repair

[3] DISASSEMBLY/ASSEMBLY

DISASSEMBLING

- 10) Remove Ball bearing 607LLB from the commutator-end of Armature shaft using 1R269 and adjustable pliers (**Fig. 10**),
Note: Be sure to firmly grasp the claws of 1R269 with adjustable pliers because the space between Insulation washer and Ball bearing 607LLB is so tight that Ball bearing 607LLB cannot be securely grasped with the claws of 1R269.
- 11) Remove Ball bearing 629DDW from the drive-end of Armature shaft using 1R269 and adjustable pliers in the same way as described above in 10). (**Fig. 11**)
Important: Before attaching 1R269 to Ball bearing 629DDW, be sure to fasten Countersunk head screw M4x12 to the drive-end of Armature shaft in order not to damage to the threads inside Armature shaft.

Fig. 10

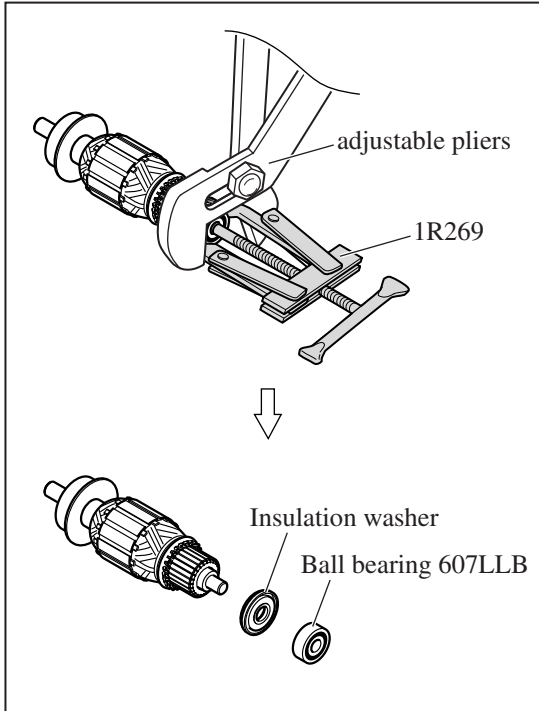
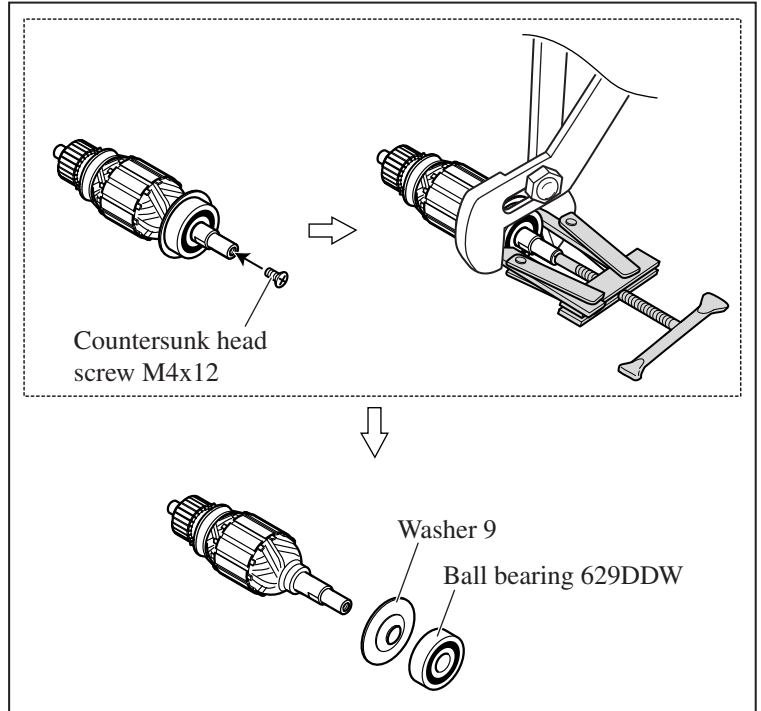


Fig. 11



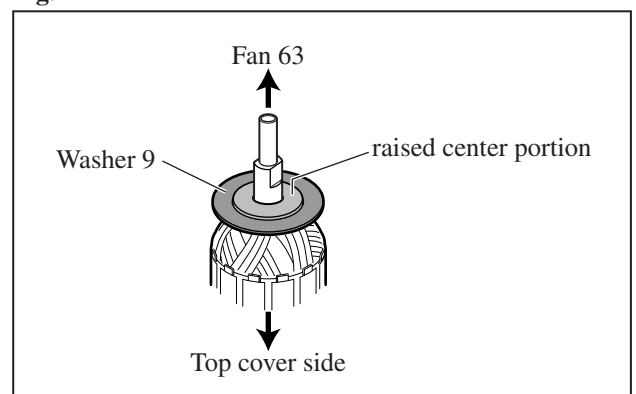
ASSEMBLING

Do the reverse of the disassembling steps.

Note:

Flat washer 9 is not reversible when assembled to Armature. The side with the raised center portion must face towards Fan 63 as illustrated in **Fig. 12**.

Fig. 12



► Repair

[3] DISASSEMBLY/ASSEMBLY

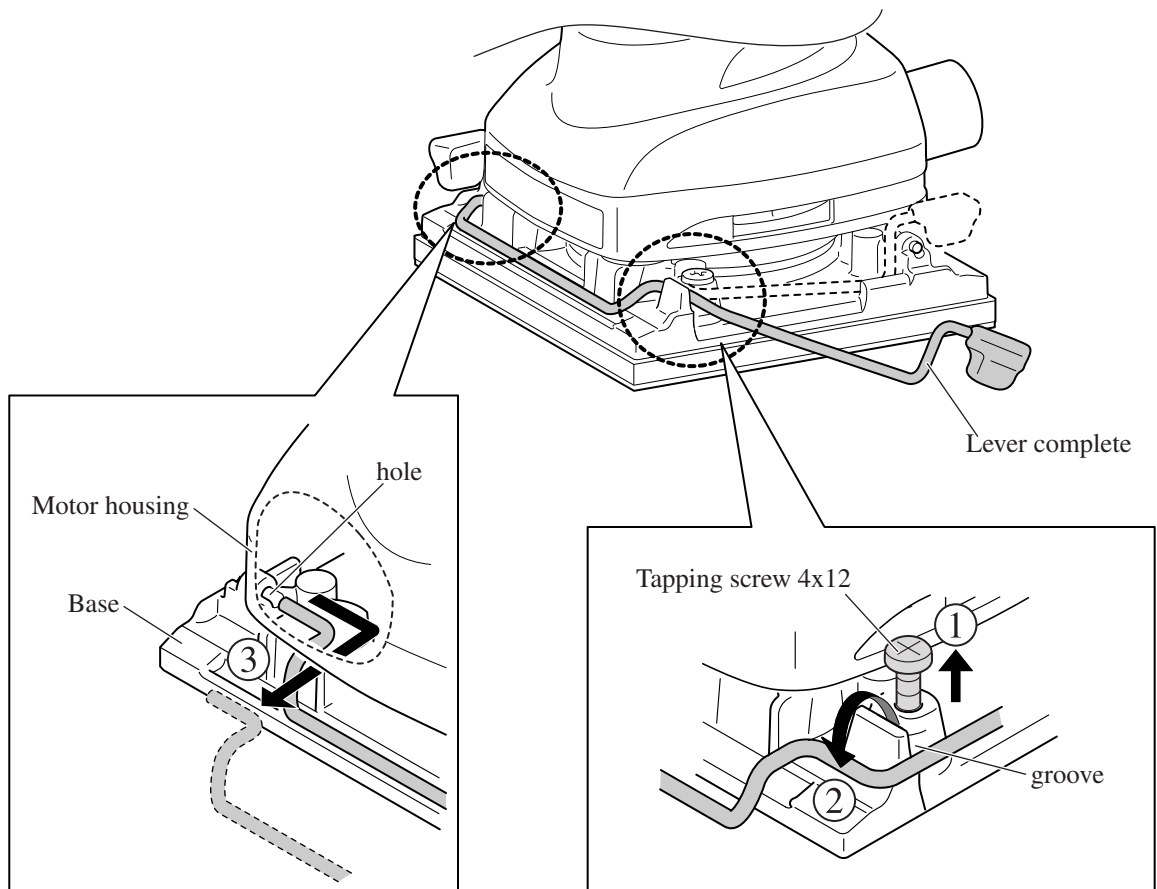
REPLACING LEVER COMPLETE (BO4555 and BO4556 only)

Lever complete (=paper clamp) can be replaced without removing Base from the machine as described in **Fig. 13**.

Fig. 13

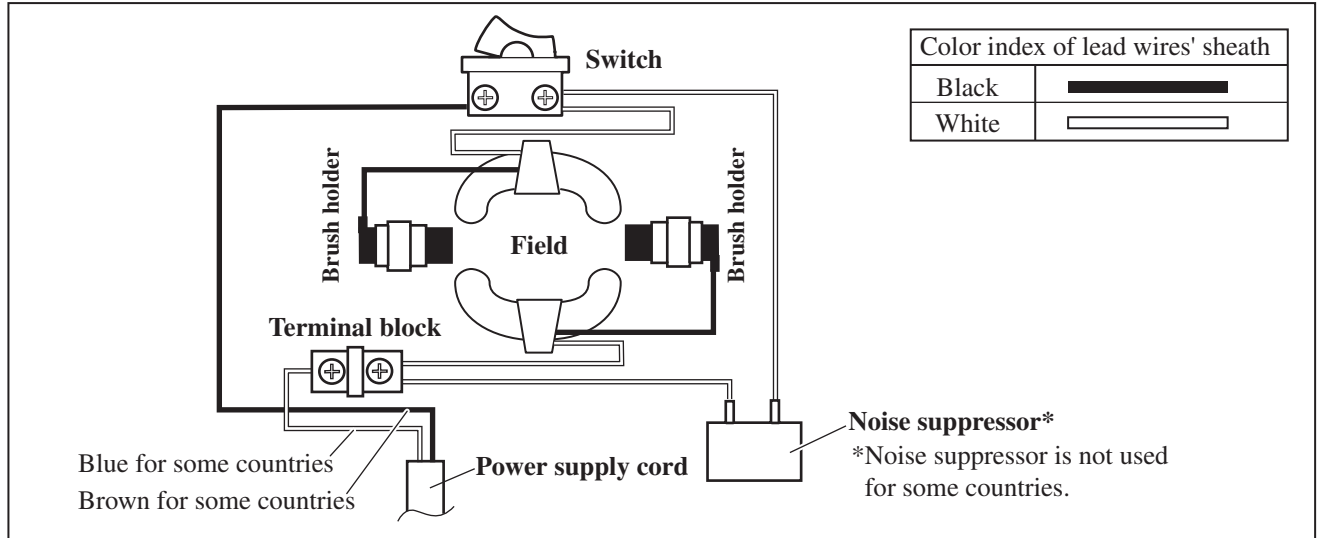
Take the following steps:

- ① Loosen Tapping screw 4x12 a little bit.
- ② Pull Lever complete out of the groove.
- ③ Pull the end of Lever complete out of the hole, then move Lever complete along the space between Base and Motor housing.



► Circuit diagram

Fig. D-1



► Wiring diagram

Route Lead wires as illustrated in Fig. D-2.

- ① ④ Field lead wire (black):
Route through the opening 1/opening 2 of Motor housing, then connect to Brush holder.
Note: Be sure to fix with Lead wire holder 1/
Lead wire holder 6.
 - ② Field lead wire (white):
Route through the opening 1 of Motor housing, then connect to Switch.
Note: Be sure to fix with Lead wire holders 2, 3.
 - ③ Lead wire of Noise suppressor (white):
Connect to Switch.
Note: Be sure to fix with Lead wire holders 4, 5.
 - ⑤ Field lead wire (white):
Route through the opening 2 of Motor housing, then connect to Terminal block.
 - ⑥ Lead wire (white) of Noise suppressor:
Connect to Terminal block.
 - ⑦ Lead wire (white or blue) of Power supply cord:
Connect to Terminal block.
 - ⑧ Lead wire (black or brown) of Power supply cord:
Connect to Switch.
Note: Be sure to route through the groove of Motor housing.
- Note:** Put slack portions of Lead wires in spaces 1 and 2.

Fig. D-2

