

TECHNICAL INFORMATION

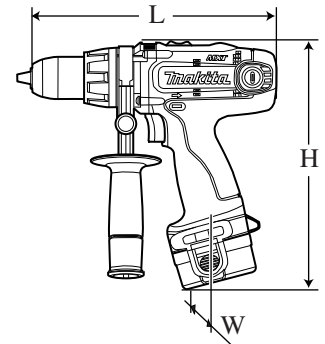


PRODUCT

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Models No. ▶ 8414D/ 8434D/ 8444D

Description ▶ Cordless Percussion-Driver Drills 12V/ 14.4V/ 18V



CONCEPT AND MAIN APPLICATIONS

The above products have been developed as successor models of the current 8443D series models and as the highest grade series models among Makita Cordless Percussion-Driver Drills.

Their brief advantages are;

*Powerful motor provides high operation efficiency.

*Mechanical 3-speed;

3rd speed: higher than the predecessors for finishing light duty jobs with extremely high efficiency

1st speed: lower than the predecessors for extra-heavy duty applications

*Easy operation mode change

*All the great advantages as Model 8443D series models

Dimensions: mm (")			
Model No.	8414D	8434D	8444D
Length (L)	259 (10-1/4)		
Width (W)	94 (3-11/16)	94 (3-11/16)	95 (3-3/4)
Height (H)	243 (9-9/16)	247 (9-3/4)	252 (9-7/8)

These new products are available in the following variations:

8414D

Model No.	Battery		Battery cover (quantity)	Charger	Flash light
	type	Quantity			
8414DWAE	1222 (Ni-Cd 2.0Ah)	2	2	DC1414	w/o light
8414DWAE3	1222 (Ni-Cd 2.0Ah)	3	3		ML120
8414DWALE	1222 (Ni-Cd 2.0Ah)	2	2		w/o light
8414DWDE	1234 (Ni-MH 2.6Ah)	2	2		ML120
8414DWDE3	1234 (Ni-MH 2.6Ah)	3	3		w/o light
8414DWDLE	1234 (Ni-MH 2.6Ah)	2	2		ML120
8414DWFE	1235 (Ni-MH 3.0Ah)	2	2		w/o light
8414DWFE3	1235 (Ni-MH 3.0Ah)	3	3		

8434D

Model No.	Battery		Battery cover (quantity)	Charger	Flash light
	type	Quantity			
8434DWAE	1422 (Ni-Cd 2.0Ah)	2	2	DC1414	w/o light
8434DWAE3	1422 (Ni-Cd 2.0Ah)	3	3		ML140
8434DWALE	1422 (Ni-Cd 2.0Ah)	2	2		w/o light
8434DWDE	1434 (Ni-MH 2.6Ah)	2	2		ML140
8434DWDE3	1434 (Ni-MH 2.6Ah)	3	3		w/o light
8434DWDLE	1434 (Ni-MH 2.6Ah)	2	2		ML140
8434DWFE	1435 (Ni-MH 3.0Ah)	2	2		w/o light
8434DWFE3	1435 (Ni-MH 3.0Ah)	3	3		

8444D

Model No.	Battery		Battery cover (quantity)	Charger	Flash light
	type	Quantity			
8444DWAE	1822 (Ni-Cd 2.0Ah)	2	2	DC1804	w/o light
8444DWAE3	1822 (Ni-Cd 2.0Ah)	3	3		ML180
8444DWALE	1822 (Ni-Cd 2.0Ah)	2	2		w/o light
8444DWDE	1834 (Ni-MH 2.6Ah)	2	2		ML180
8444DWDE3	1834 (Ni-MH 2.6Ah)	3	3		w/o light
8444DWDLE	1834 (Ni-MH 2.6Ah)	2	2		ML180
8444DWFE	1835 (Ni-MH 3.0Ah)	2	2		w/o light
8444DWFE3	1835 (Ni-MH 3.0Ah)	3	3		

► Specification

Model No.		8414D	8434D	8444D
Battery	Voltage: V	12V	14.4V	18V
	Capacity: Ah/ Cell	2.0/ Ni-Cd	2.0/ Ni-Cd	2.0/ Ni-Cd
		2.6/ Ni-MH	2.6/ Ni-MH	2.6/ Ni-MH
3.0/ Ni-MH		3.0/ Ni-MH	3.0/ Ni-MH	
Max. out put: W		210	250	310
No load speed: min.-1=rpm	3rd (Heighest)	0 - 1,600	0 - 1,700	
	2nd (High)	0 - 550	0 - 600	
	1st (Low)	0 - 300	0 - 300	
Blows per minute: min.-1=bpm	3rd (Heighest)	0 - 24,000	0 - 25,500	
	2nd (High)	0 - 8,250	0 - 9,000	
	1st (Low)	0 - 4,500	0 - 4,500	
Fastening torque: N.m (ft.lbs)	Hard joint	65 (47.9)	70 (51.6)	80 (59.0)
	Soft joint	31 (22.8)	32 (23.6)	40 (25.7)
Drill chuck	Capacity: mm (")	1.5 -13 (1/16 - 1/2)		
	Type	Keyless, Single sleeve		
Drilling capacity: mm (")	Steel	13 (1/2)	13 (1/2)	13 (1/2)
	Wood	45 (1-3/4)	50 (2)	65 (2-9/16)
	Concrete	13 (1/2)	14 (9/16)	16 (5/8)
Electric brake		Yes		
Torque adjustment		Yes		
Variable speed control		Yes		
Reverse switch		Yes		
Net weight: kg (lbs) [includes battery]		2.4 (5.3)	2.5 (5.5)	2.7 (6.0)

► Standard equipment

(for all variations listed in page 1)

Philips bit 2-45	2
Grip assembly	1
Depth gauge	1
Battery cover	For quantity, see the variation list in page 1.

Note: The standard equipment for the tool shown above may differ from country to country.

► Optional accessories

For all models

*Assorted drill bits for
wood and steel

*Assorted driver bits

For 8414D

Battery 1220
Battery 1222
Battery 1234
Battery 1235
Battery 1235A
Battery 1235F
Charger DC1414
Charger DC1439
Charger DC1804
Automotive Charger DC1422
Automotive Charger DC1822

For 8434D

Battery 1420
Battery 1422
Battery 1434
Battery 1435
Battery 1435F
Charger DC1414
Charger DC1439
Charger DC1804
Automotive Charger DC1422
Automotive Charger DC1822

For 8444D

Battery 1822
Battery 1834
Battery 1835
Battery 1835F
Charger DC1804
Automotive Charger DC1822

► Repair

[1] DISASSEMBLY/ ASSEMBLY

[1] -1. Drill Chuck

REMOVAL

When replacing Gear assembly, remove Drill chuck first as described below.
(When replacing only Housing, you need not remove Drill chuck.)

- 1) After opening the chuck jaws to the full, remove the chuck screw (M6x22 (-) Flat head screw) by turning it clockwise.
Use impact driver drill if it is difficult to remove the screw.
- 2) Slide Speed change lever to the position of "1" (1st speed), and slide Action mode change lever to the drill mode as illustrated in **Fig. 1**.
Secure the short arm of a hex wrench with the chuck jaws. Hold the machine firmly, and then remove Drill chuck by hitting the long arm of the hex wrench using plastic hammer to turn Drill chuck counterclockwise. (**Fig. 2**)

Fig. 1

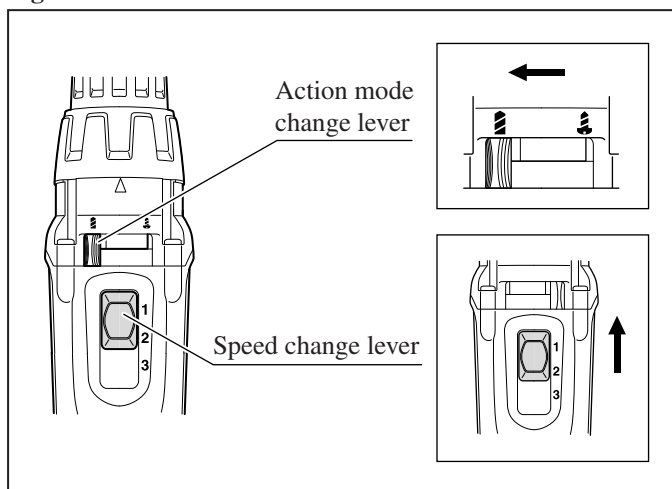
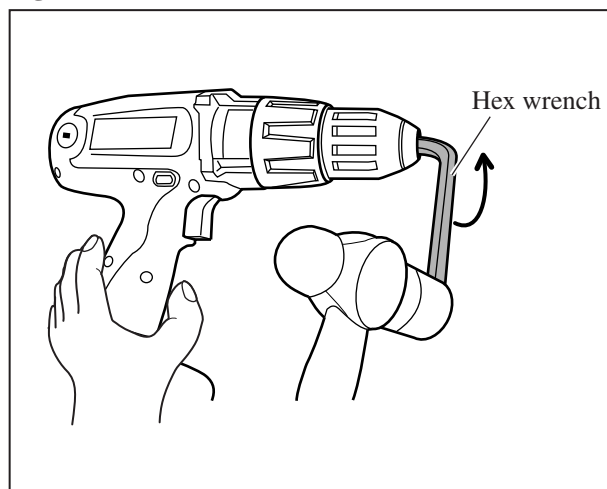


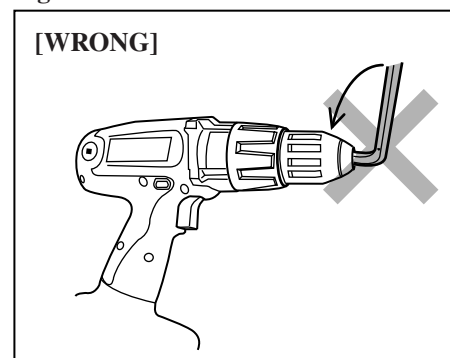
Fig. 2



Note:

This product has "Spindle Lock system".
After hex wrench is secured in Drill chuck, it is impossible to turn the wrench in order to adjust the position of its long arm. (**Fig. 3**)
Therefore, make sure that the hex wrench is positioned as illustrated in **Fig. 2** before securing it in drill chuck.

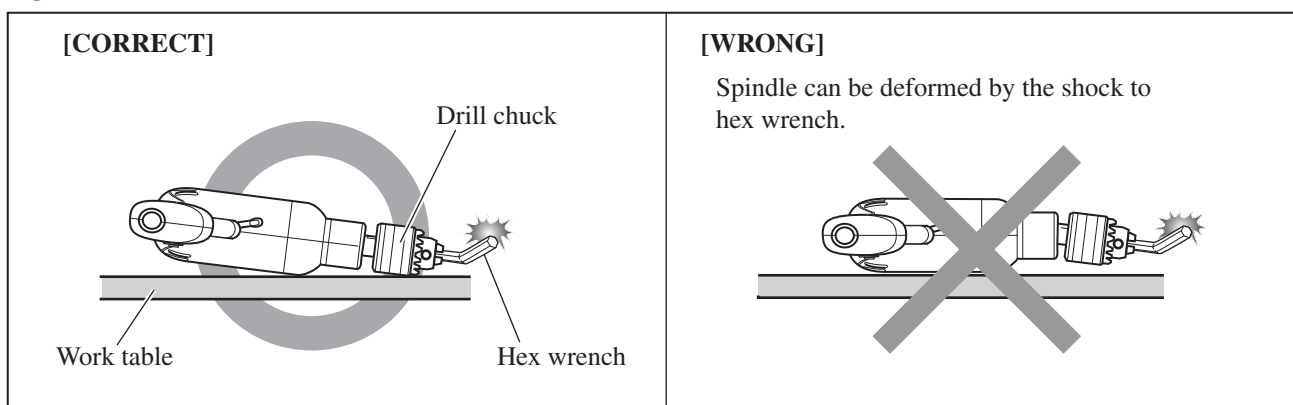
Fig. 3



Caution:

Place the tool on a work table so that Drill chuck touches the surface of the work table as illustrated to left in **Fig. 4**.
Failure to follow this instruction can result in deformation of Spindle.

Fig. 4



► Repair

[1] -1. Drill Chuck (cont.)

INSTALLATION

- 1) Make sure that Flat washer 13 is mounted to Spindle before installing Drill chuck. (**Fig. 5**)
- 2) Slide Speed change lever to the position of "1" (1st speed), and slide Action mode change lever to the drill mode as illustrated in **Fig. 1**. Push in F/R change lever for the forward rotation mode. (**Fig. 6**)
Secure the short arm of a hex wrench in the chuck jaws, and the long arm in vise. Hold the grip of the machine firmly so that your hand cannot be pulled away by reaction torque. And then tighten Spindle into Drill chuck by pulling the trigger of Switch until Spindle is locked. (**Fig. 6**)

Note: Release the trigger of Switch just after Spindle is locked. Do not keep on pulling the trigger for longer than one second.

- 3) Fasten Drill chuck to Spindle with the chuck screw (M6x22 (-) Flat head screw) by turning it counterclockwise.

If you reuse a screw removed from Drill chuck, apply an appropriate amount of adhesive (ThreeBond 1321B/ 1342 or Loctite 242) to the screw for secure fastening.

Fig. 5

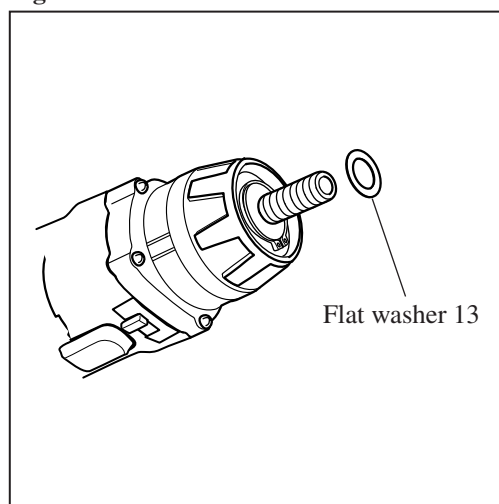
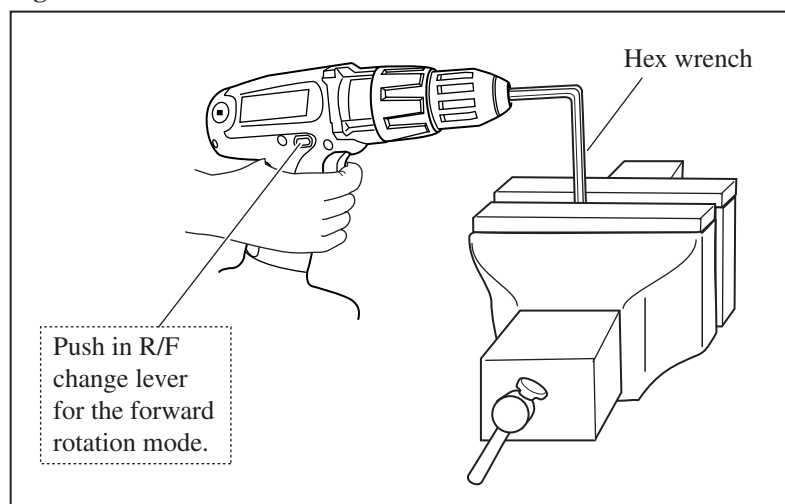


Fig. 6



[1] -2. Installing Speed Change Lever

- 1) Before installing Speed change lever on Gear assembly, make sure that;
 - a. Two Leaf springs are installed to Speed change lever as illustrated to left in **Fig. 7**.
 - b. Two compression springs are installed to speed change lever as illustrated to right in **Fig. 7**.
- 2) Assemble Speed change lever to the projection on Gear assembly. (**Fig. 8**)

Fig. 7

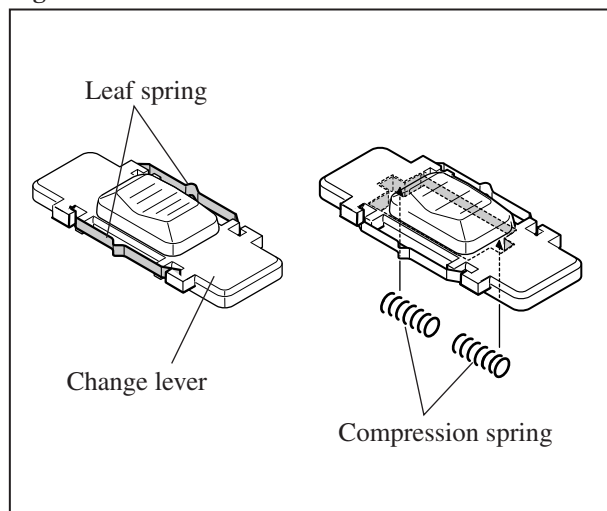
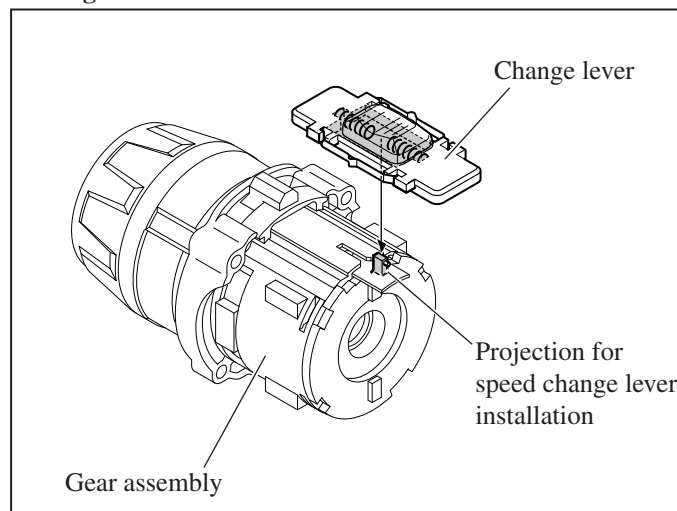


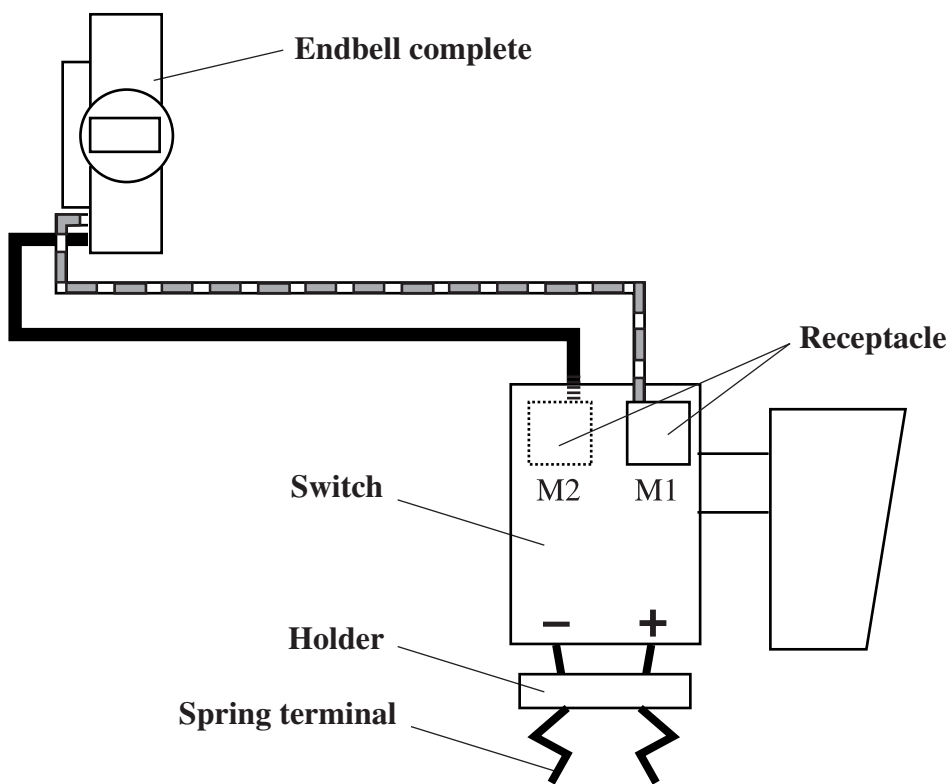


Fig. 8



► **Circuit diagram**

Color index of lead wires' sheath	
Black	
Red	



► **Wiring diagram**

