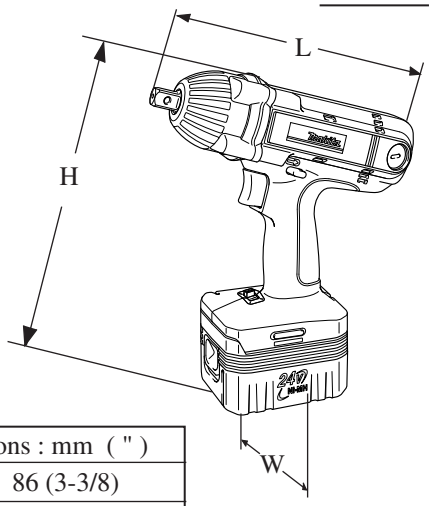
Models No. ► BTW200

Description ► Cordless Impact wrench



CONCEPT AND MAIN APPLICATIONS

BTW200 is equipped with newly developed 24 V Ni-MH battery.
The method of speed change is electric 2 speed + variable speed change.
The max. fastening torque amounts to 200 N.m (2,040Kgf.cm / 1,770in.lbs), which corresponds to Mod.6904VH, AC type impact wrench.
The variation of this model is as listed blow.

Model No.	Battery				Charger
	No.	Type	Ah	Q'ty	
BTW200SH	B2417	Ni-MH	1.7	1 pc.	DC24SA
BTW200SF	B2430		3.0	1 pc.	

Dimensions : mm (")	
Width (W)	86 (3-3/8)
Height (H)	277 (10-7/8)
Length (L)	226 (8-7/8)

► Specification

Voltage (V)		D/C 24 V
No load speed (min-1=rpm)	**High speed**	0 - 2,000
	Low speed	0 - 1,600
Impact per minute (min-1=ipm)	**High speed**	0 - 3,000
	Low speed	0 - 2,500
Square drive : mm (")		12.7 (1/2)
Capacities	**Standard bolt**	M10 - M16 (3/8 - 5/8")
	High Tensile bolt	M10 - M12 (3/8 - 1/2")
Max. fastening torque	**High speed**	200 N.m (2,040Kgf.cm, 1,770in.lbs)
	Low speed	150 N.m (1,530Kgf.cm, 1,320in.lbs)
Charging time with DC24SA	Model BTW200SH	** approx. 30 minutes
	Model BTW200SF	** approx. 60 minutes
Net weight: kg (lbs)		* 2.8 (6.1 lbs)

* 2.8 (6.1 lbs) : including the weight of battery 2417 / 1.7Ah.

** approx. 30 minutes / ** approx. 60 minutes : The figures left mentioned may be change depending on the conditions of battery, room temperature, charger, etc.

► Standard equipment

* Socket 19 - 52 ..... 1 pc.
* Pin 4 ..... 1 pc.
* O ring 24 ..... 1 pc. (not included in the product for North America)

< Note > The standard equipment for the tool shown may differ from country to country.

► Optional accessories

* Various sockets
* Battery 2417
* Battery 2430
* Charger DC24SA
* Bit adapter assembly (for philips bit)
* Shoulder strap

<1> Disassembling housing R and L
Take off bumper from housing with hand.
Dismount hammer case from housing by taking off 4 hex socket head bolts M5x35, and disassemble housing R and L as illustrated in Fig. 1.

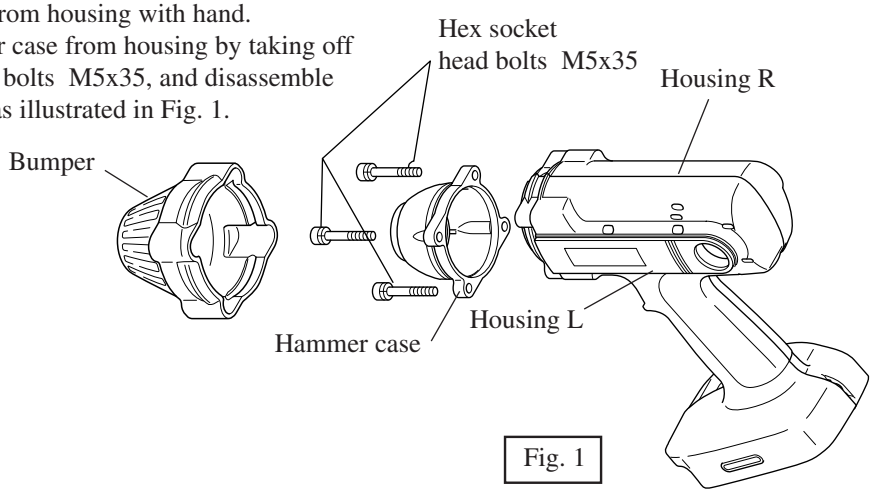


Fig. 1

<2> Apply 0.5g of MAKITA grease N No.2 on the cylindric part of anvil, when inserting it into hammer case.

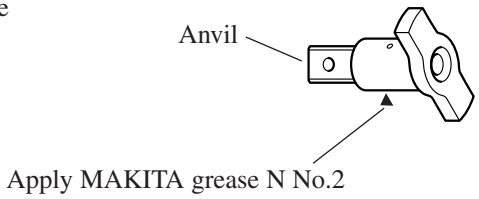


Fig. 2

<3> Disassembling hammer section
(1) Grip the hammer section with large gear extractor No.1R045 as illustrated in Fig. 3.
Press spindle to hammer by turning the handle clock-wise until it stops.

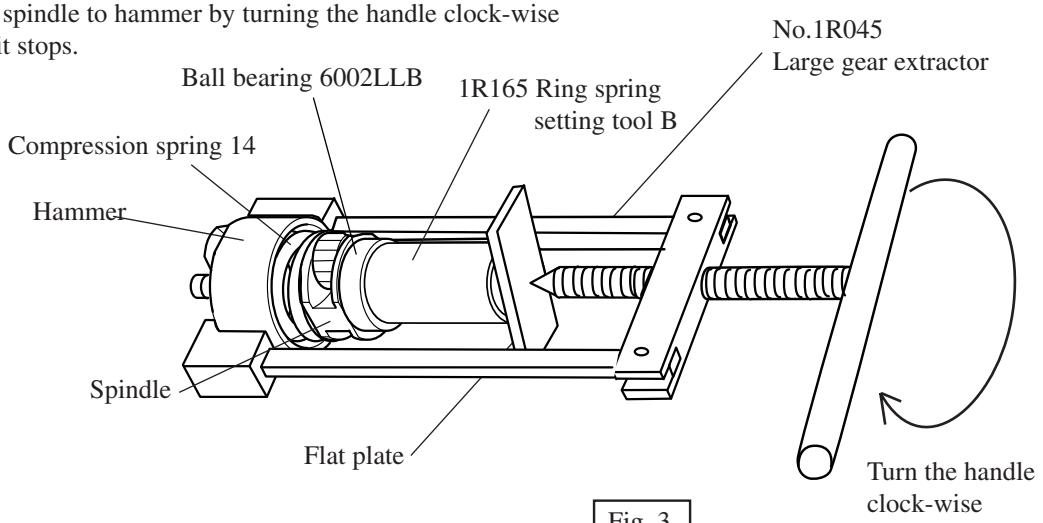


Fig. 3

(2)Adjust the opening for steel ball inserting, to the cam groove top of spindle as illustrated in Fig. 5.

(3)Take off 2 steel balls 5.6 with magnetic bar or tweezers from spindle.

(4)Loosen the handle of 1R045 turning it anti-clockwise and remove hammer from spindle.

< Note > Set the hammer as per Fig.5A, when removing it from spindle. Otherwise steel balls 4 will fall off hammer.

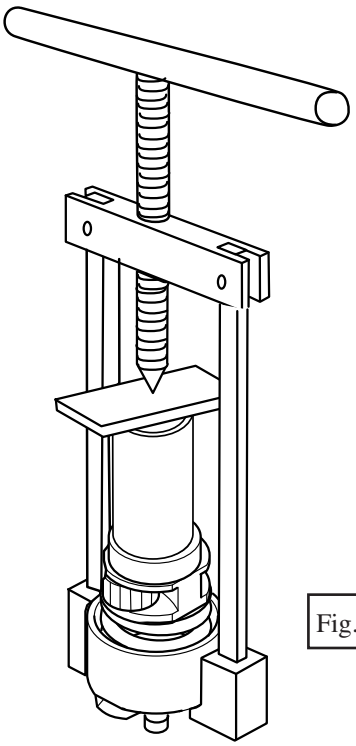


Fig. 5A

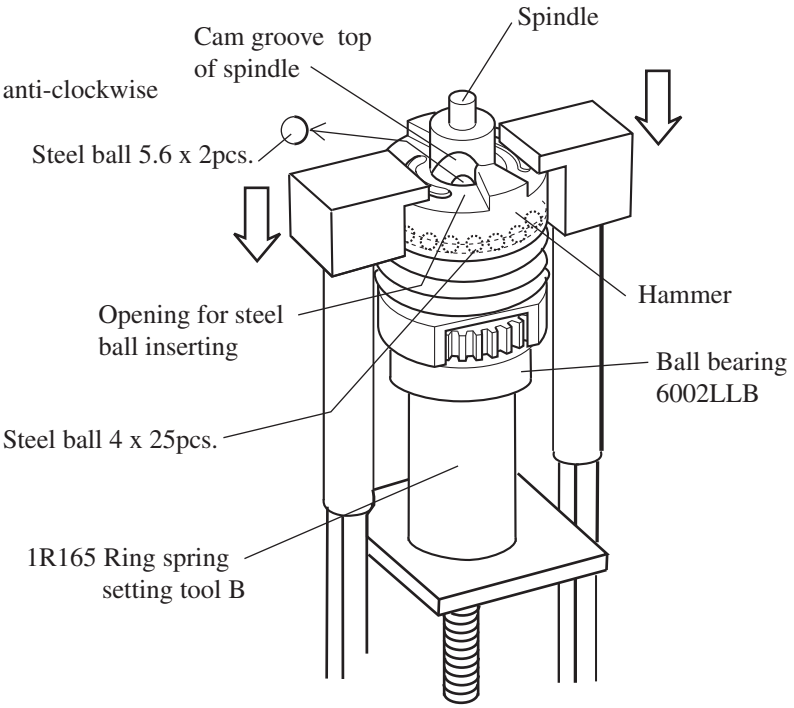


Fig. 5

(5)When assembling, adjust the "opening for steel ball inserting", to the "cam groove top" of spindle and insert steel ball 4 into hammer as illustrated in Fig. 5.

(6) Apply MAKITA grease N No.2 in small volume to the position marked with black triangle mark. See Fig. 6.

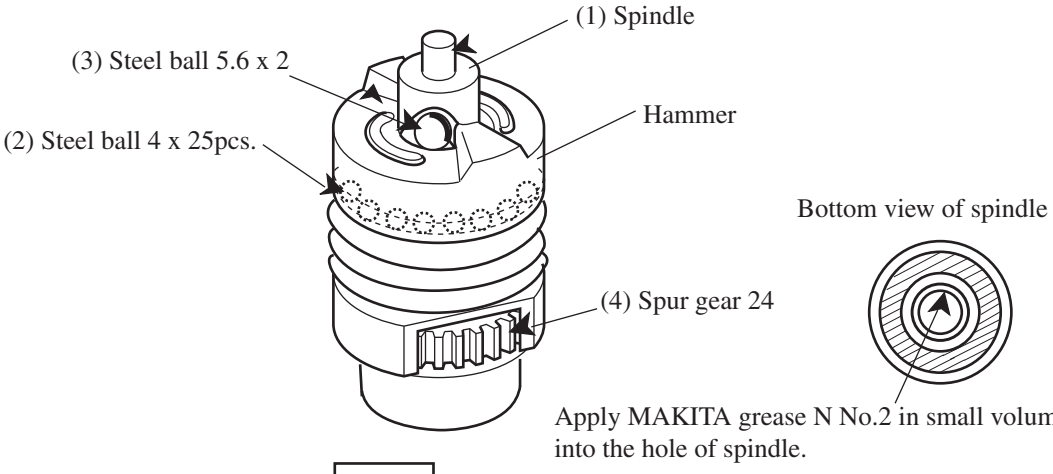
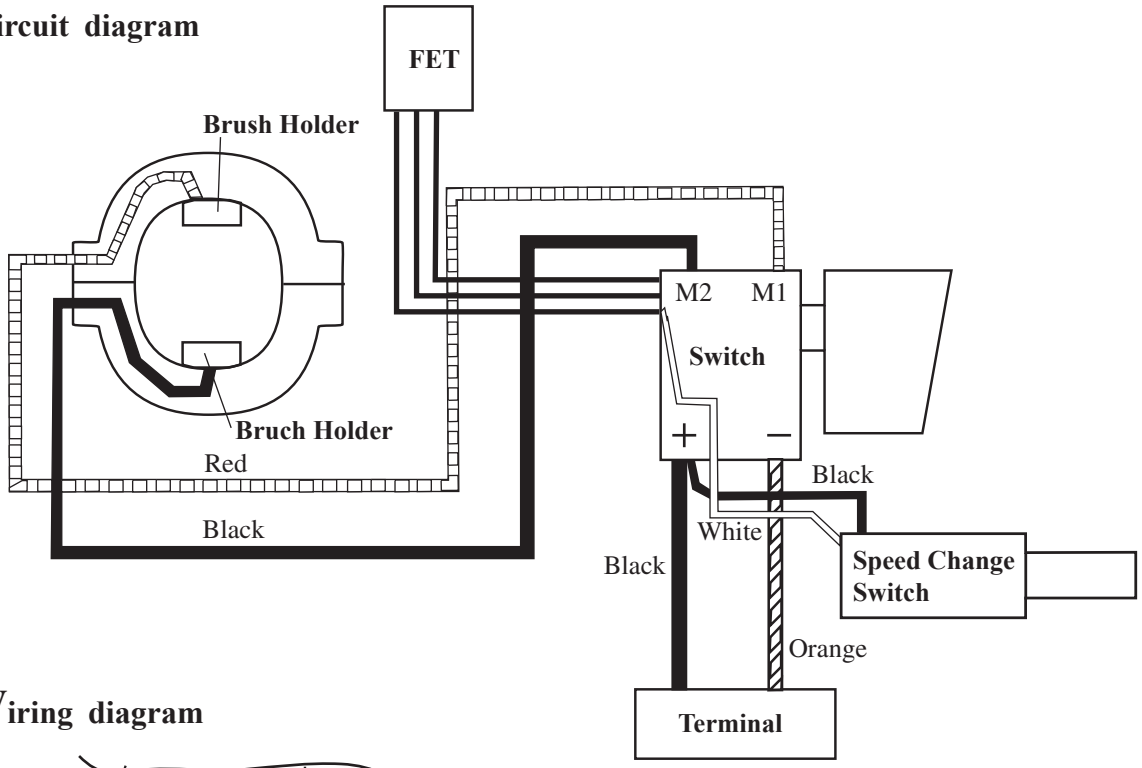


Fig. 6

Circuit diagram



Wiring diagram