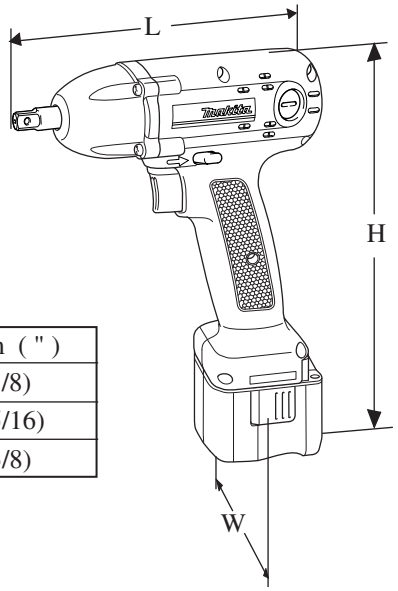
Models No. ► BTW070

Description ► 9.6V Cordless Impact Wrench

CONCEPTION AND MAIN APPLICATIONS

The above model has been developed as a 9.5mm (3/8") square drive version of Mod.BTD060, for fastening work in automobile assembling line.



Dimensions : mm (")	
Width (W)	66 (2-5/8)
Height (H)	236 (9-5/16)
Length (L)	162 (6-3/8)

► Specification

No load speed : (min -1= rpm)		0 - 2,500
Blows per min : (min -1= bpm).		0 - 3,000
Drive shank : mm=(")		Hex 9.5 (3/8)
Max. fastening torque		65 Nm (663kgf.cm, 575 in.lbs)
Capacity	Standard bolt	M5 - M12 (3/16 - 1/2)
	High tensile bolt	M5 - M10 (3/16 - 3/8)
Electric brake		Yes
Reverse switch		Yes
Net weight inc. battery B9107A		1.07Kg (2.4lbs)

► Optional accessories

* DC14SA Charger
* Protector
* Battery 9017A

Light weight and compact size body
Only 1.07 Kg (2.4lbs)
Overall length : only 162mm(6-3/8")
in comparison with 170mm of Mod.6909D

Newly developed compact and powerful "D28 type" motor with following benefits
* Externally accessible carbon brush
* Replaceable armature
* Very efficient cooling structure

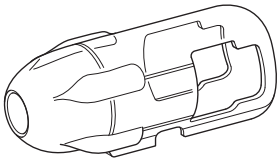
9.5 (3/8") Square drive

Light and durable magnesium alloyed hammer case

Reversible switch of push button type

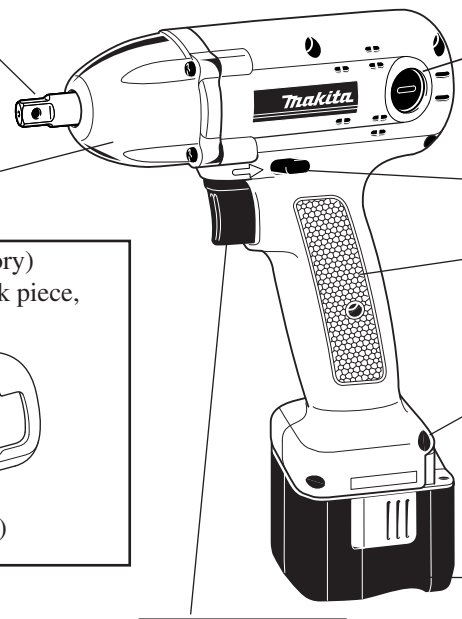
The slim grip for easy operation even with gloved hand

Rubber protector (optional accessory) can be installed for protecting work piece, especially, the body of automobile



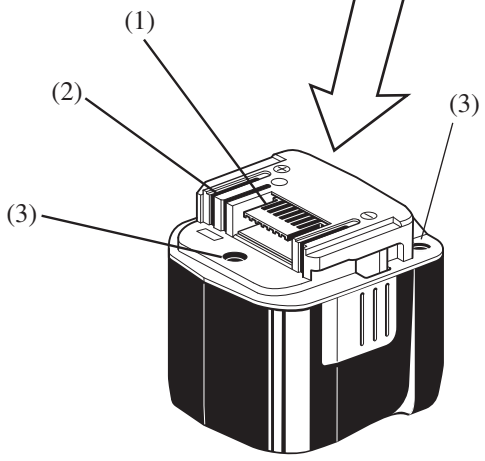
(Rubber protector)

The body is assembled with machine screws for easy disassembling and repairing



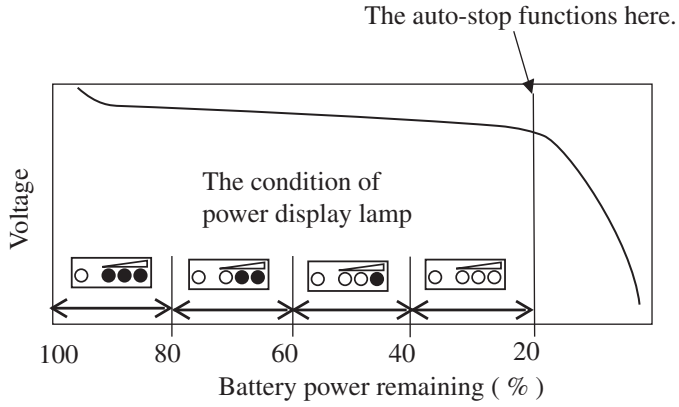
Newly developed 9.6V Ni-MH battery "B9017A" with power display

Easily operatable variable speed control switch



Equipped with auto-stop system

If the power remaining drops to 20%, the electric current is to be stopped automatically to avoid incomplete tightening.



(1) Built-in memory chip

Each battery's own identity and history of usage are recorded in the built-in memory chip and the data are transmitted to the built-in micro computer of the charger to make the optimum charge.

(2) Slide type terminal

keeping steady contact against machine's vibration. And the terminals prevent, structurally, unintentional short circuit.

(3) Replaceable battery body

Battery case is replaceable, when only the case is damaged, and the inner parts can be separated from the battery case for recycling.

Comparison of products

Manufacturer		MAKITA	
Model No.		BTW070	6909D
Voltage (V)		9.6	9.6
No load speed : (min -1= rpm)		0 - 2,500	0 - 2,200
Blows per min : (min -1= bpm)		0 - 3,000	0 - 2,800
Max. fastening torque		65	88
Material of Hammer case		Magnesium	Aluminum
Externally accessible brush		Yes	Yes
Overall length		162	170
Net weight Kg.	On catalog	1.0	1.4
	Measured	1.07	1.49

Comparison of working amount and speed

< Note > *The figures listed below may change depending on the condition of battery, room temperature, charger, etc.

***The figures of BTW070 shows the result, until the auto-stop system functions.**

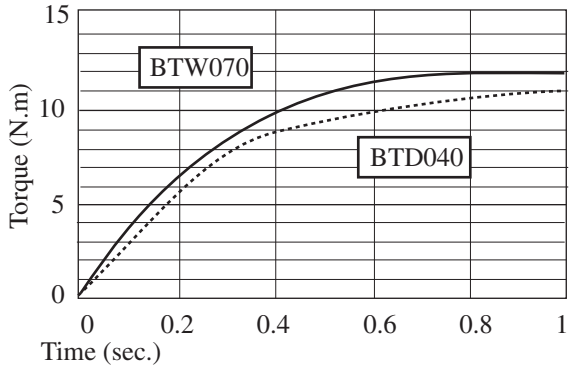
(In other words, the battery is discharged 80% of its own capacity.)

*The same of model 6909D shows the result, until the battery is discharged completely.

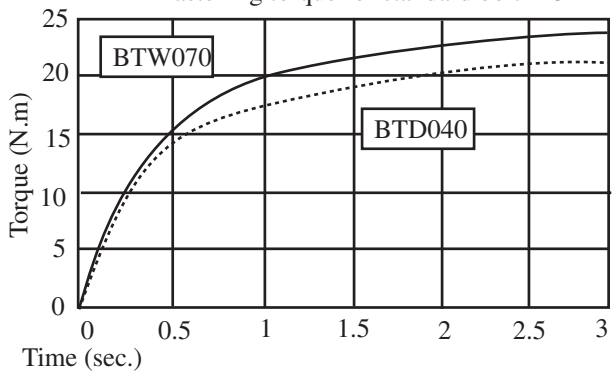
Manufacturer / Working condition / Model No.		MAKITA	
		BTW070	6909D
Fastening tapping screw Ø5x16mm in the screw hole of Ø4.2mm bored in pp. plate	Fastening speed sec./ pc.	0.63	0.47
	Fastening No. of screws per one full charged battery (pcs.)	415	712
Fastening tapping screw Ø6x16mm in the screw hole of Ø5.5mm bored in steel plate	Fastening speed sec./ pc.	0.85	0.81
	Fastening No. of screws per one full charged battery (pcs.)	326	456

The relation between fastening torque and fastening time

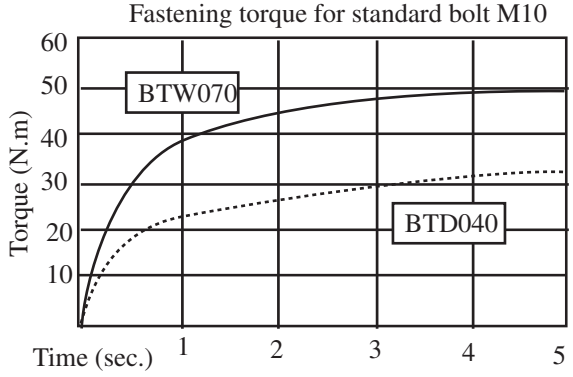
Fastening torque for standard bolt M6



Fastening torque for standard bolt M8



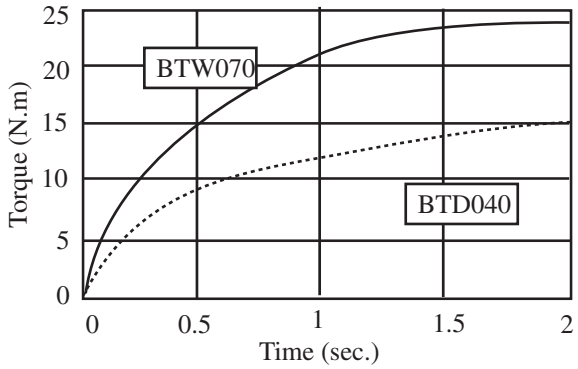
Fastening torque for standard bolt M10



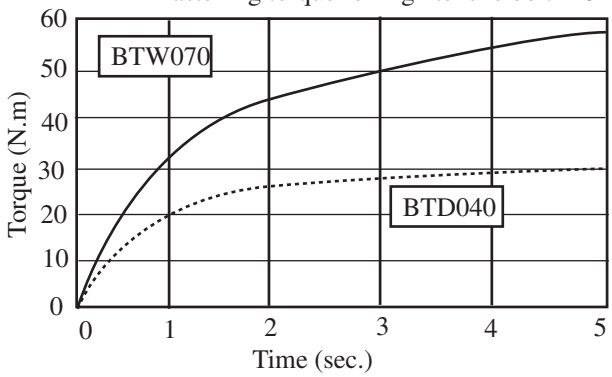
Comparison of products

The relation between fastening torque and fastening time

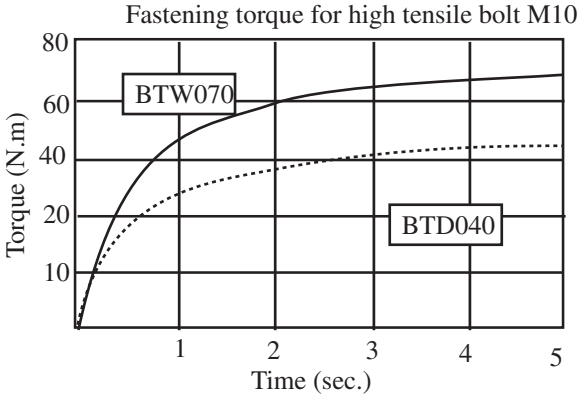
Fastening torque for high tensile bolt M6



Fastening torque for high tensile bolt M8



Fastening torque for high tensile bolt M10



Repair

<1> Disassembling housing R and L

Remove hammer case from housing by taking off 4 pcs. of pan head screws M4x20, and disassemble housing R and L as illustrated in Fig. 1.

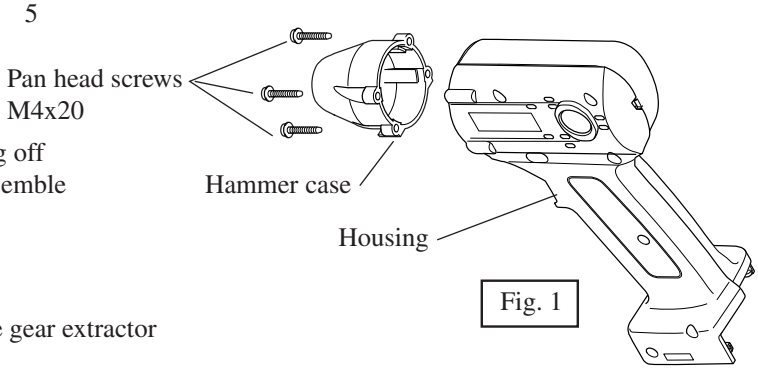


Fig. 1

< 2 > Removing hammer

(1) Press down hammer with 1R045: Large gear extractor by turning the handle.

(2) Adjust the opening for steel ball inserting to the cam groove top of spindle.

(3) Take off 2 steel balls 5.6 from spindle.

< Note > 29 pcs. of steel balls 3 are installed in hammer. Check the quantity when assembling.

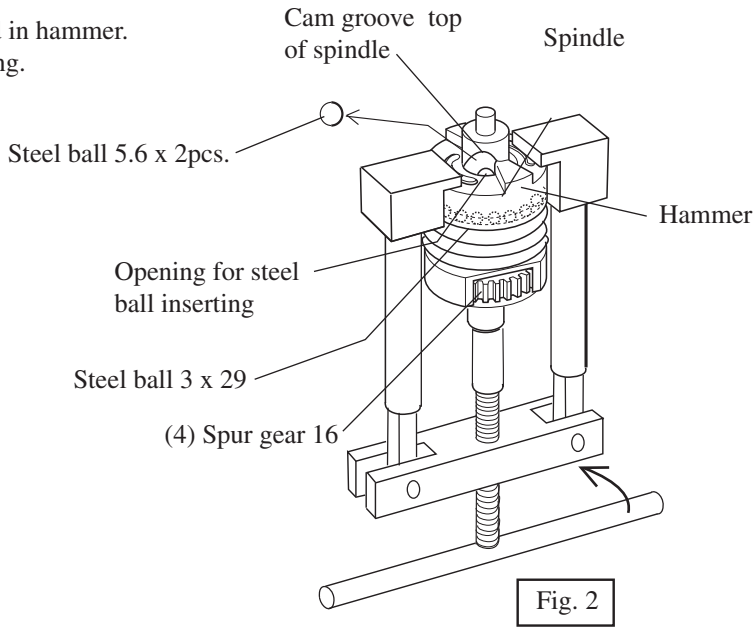


Fig. 2

(4) Apply MAKITA grease N No.2 to the position No. 1, 2, 3 and 4, when assembling.

(1) Spindle : 0.5g
(2) Steel ball 3 : 0.5g
(3) Steel ball 5.6 : 0.5g
(4) Spur gear 16 : 2.0g

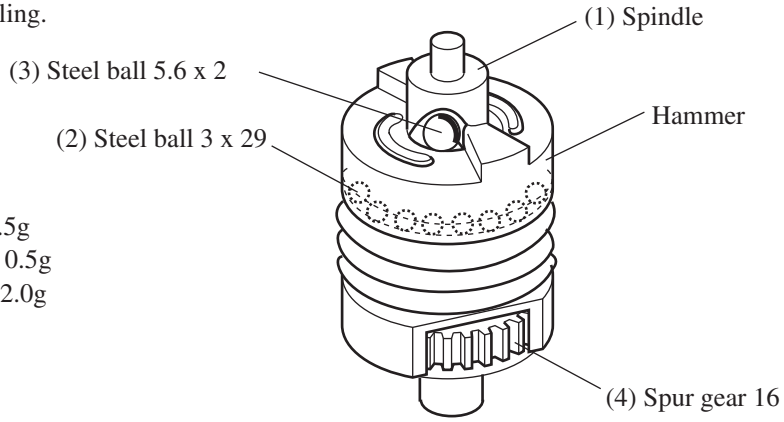
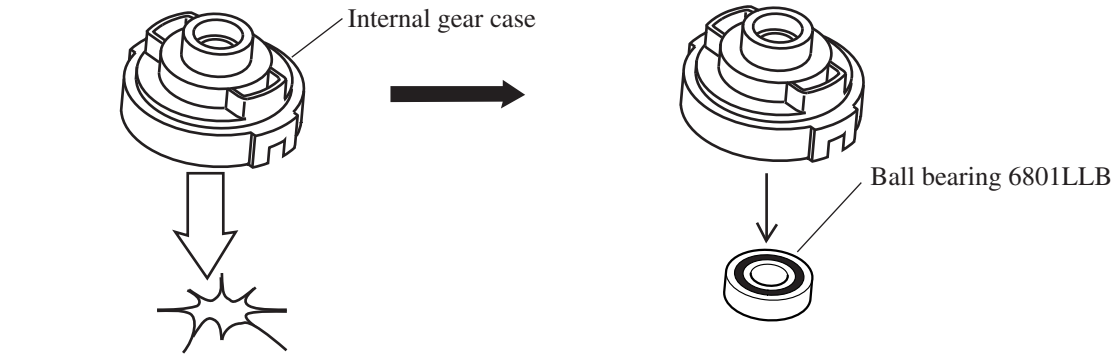


Fig. 3

< 5 > Removing ball bearing 6801LLB



Give a shock by knocking internal gear case on the table.

Ball bearing 6801LLB can be removed from internal gear case by the shock.

Fig. 4

< 6 > Fastening FET spacer with tapping screw ST 3x8

When assembling FET spacer, the fastening torque of tapping screw ST 3x8 is approx. 1.1 Nm - 1.5 Nm (11Kgf.cm - 15 Kgf.cm).

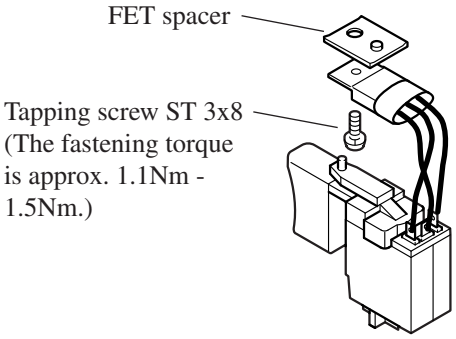


Fig. 7

< 7 > Hammer case has to be fastened diagonally as illustrated in in Fig.8.

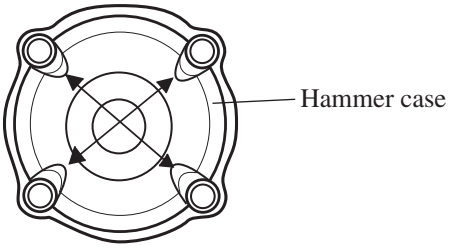
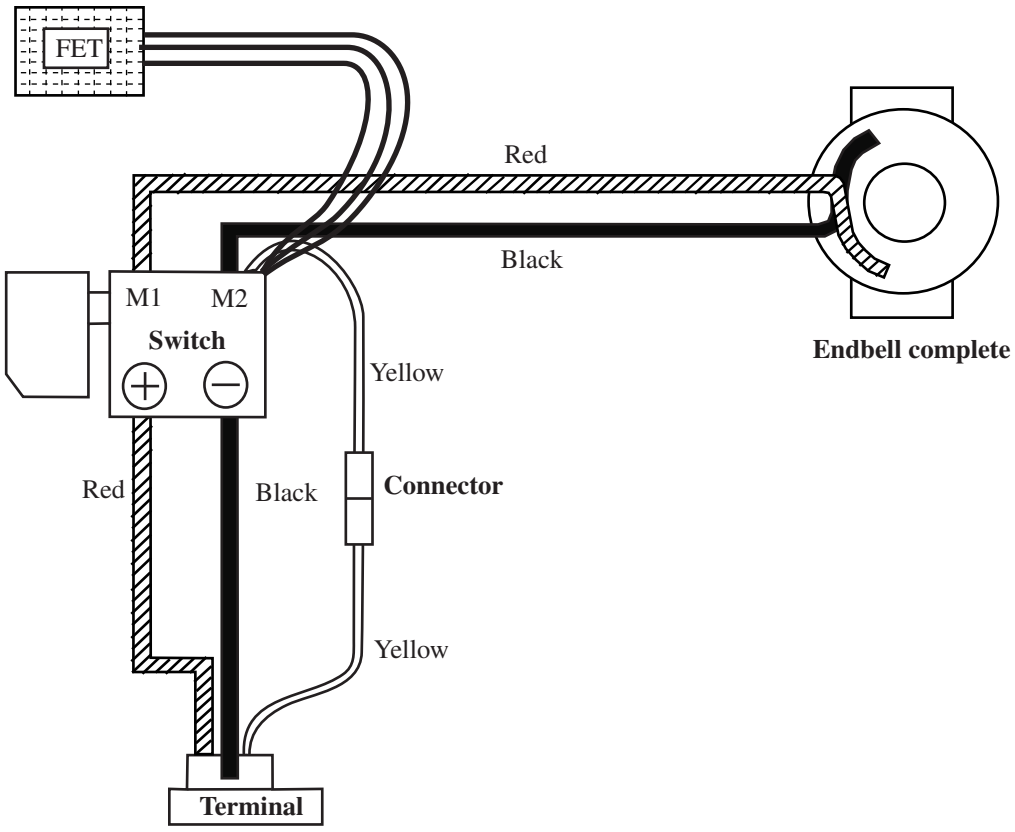


Fig.8

Circuit diagram



Wiring diagram

