

T ECHNICAL INFORMATION



PRODUCT

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Models No. ▶ 6990D

Description ▶ 9.6V Cordless impact driver

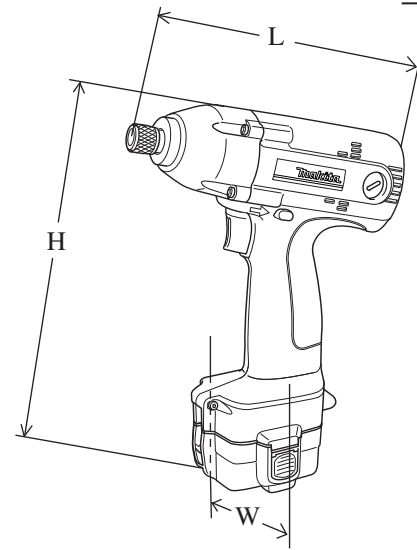
CONCEPTION AND MAIN APPLICATIONS

This model is 9.6V cordless impact driver with more compact and light weight body comparing with Mod.6908D.

The fastening speed is fastest in this class.

The variation of this model is as listed below.

Model No.	Battery				Charger
	No.	Type	Ah	Q'ty	
6990DWA	9122	Ni-Cd	2.0	1 pc.	DC1411
6990DWE	9122		2.0	2 pc.	
6990DWD	9134	Ni-MH	2.6	1 pc.	
6990DWDE	9134		2.6	2 pc.	
6990DWF	9135		3.0	1 pc.	
6990DWFE	9135		3.0	2 pc.	



Dimensions : mm (")	
Width (W)	77 (3)
Height (H)	231 (9-1/8)
Length (L)	168 (6-5/8)

► Specification

Voltage (V)	D/C 9.6 V	
No load speed (min.=rpm)	0 - 2,300	
Impact per minute (min.=bpm)	0 - 3,000	
Max.fastening torque	* 90N.m (918Kgf.cm, 790in.lbs) (when fastening high tensile bolt M12 for 3 sec.)	
Driving shank : mm (")	6.35 (1/4) Hex	
Capacities	Screws	M4 - M8 (5/32" - 5/16")
	Standard bolt	M5 - M12 (3/16" - 15/32")
	High tensile bolt	M5 - M10 (3/16" - 3/8")
	Course thread	22 - 90mm (7/8" - 3-1/2")
	Self drilling screw (Teks)	Ø4 - Ø6x13 - 45mm (5/32" - 1/4"x 1/2" - 1-3/4")
Net weight: kg (lbs)	1.4 (3.1 lbs)	

► Standard equipment

- * Philips bit 2-65 1 pc.
- * Battery cover 1 pc.
- * Plastic carrying case 1 pc.

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

► Optional accessories

- * Various Philips bits
- * Various socket bit
- * Various drill chuck
- * Bit piece for short size bit
- * Set plate for battery without push button
- * Battery 9133
- * Battery 9134
- * Battery 9135
- * Battery 9100
- * Battery 9102
- * Battery 9102A
- * Battery 9120
- * Battery 9122
- * Charger DC1411
- * Charger DC1801
- * Automotive charger DC1422

- < 1 > Removing housing R and L
 Remove hammer case from housing R and L.
 And then, housing R and L can be removed.

- < 2 > Removing sleeve section
 (1) Take off ring spring from the groove on anvil.
 (2) Flat washer, compression spring, sleeve and 2 pcs. of steel ball 3.5 can be removed from anvil.
 (3) Anvil can be removed from hammer case.

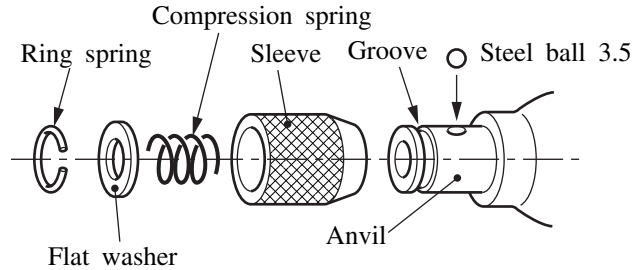


Fig. 1

- (4) When assembling anvil to hammer case, put MAKITA grease N No.2 by approx.0.5g to the cylindric part of anvil.

- < 3 > 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 steel ball 5.6 from spindle.

< Note > 25 steel ball 3.5s are installed in hammer.
 Check the quantity when assembling.

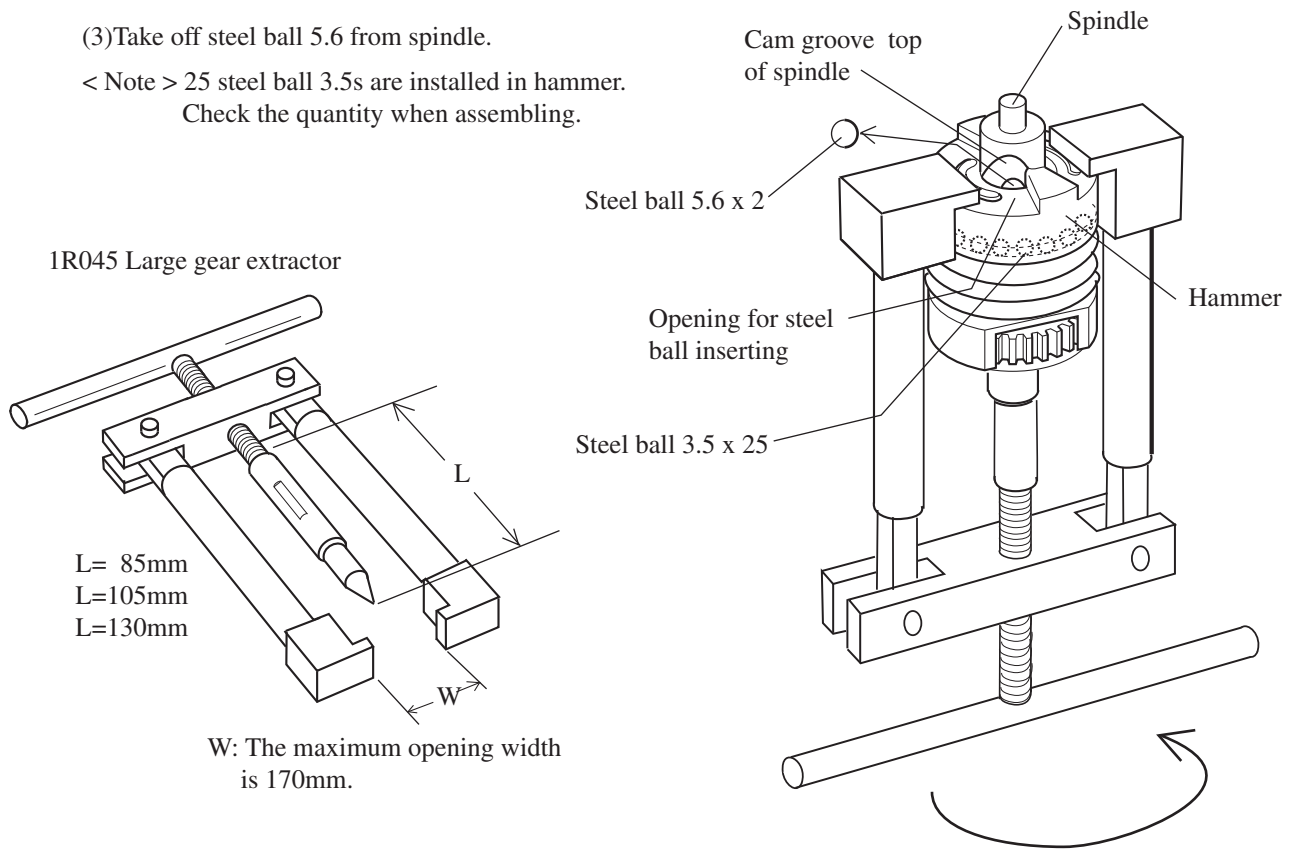


Fig. 2

► **Repair**

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

- (1) Spindle : 0.5g
- (2) Hammer : 0.5g
- (3) Opening for steel ball inserting : 0.5g
- (4) Spur gear 22 : 2.0g

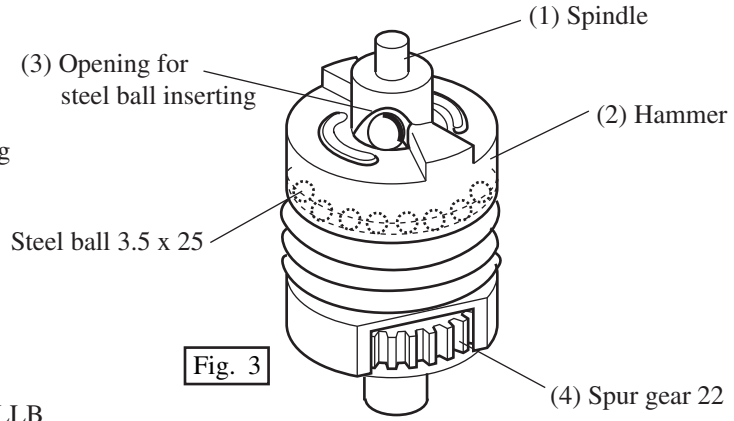
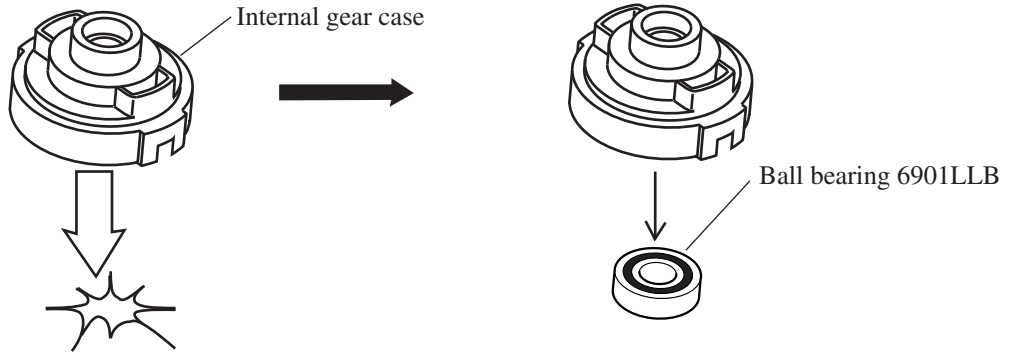


Fig. 3

< 4 > Removing ball bearing 6901LLB



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

Ball bearing 6901LLB can be removed from internal gear case by the shock.

Fig. 4

< 4 > Fastening torque for tapping screws

Tapping screws	Fastened position	Fastening torque: N.m (Kgf.cm)
4 x 18	Housing set (R & L)	1.27 - 1.76 (13 - 18)
4 x 25	*Hammer case	1.76 - 2.16 (18 - 22)
3 x 8	FET Spacer	1.1 - 1.5 (11 - 15)

< Note > Hammer case has to be fastened diagonally as illustrated in Fig. 4, when assembling.

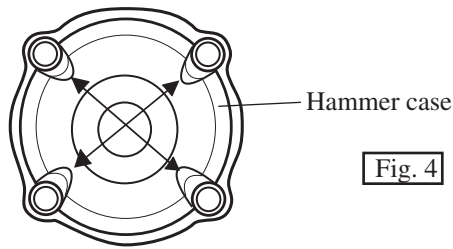
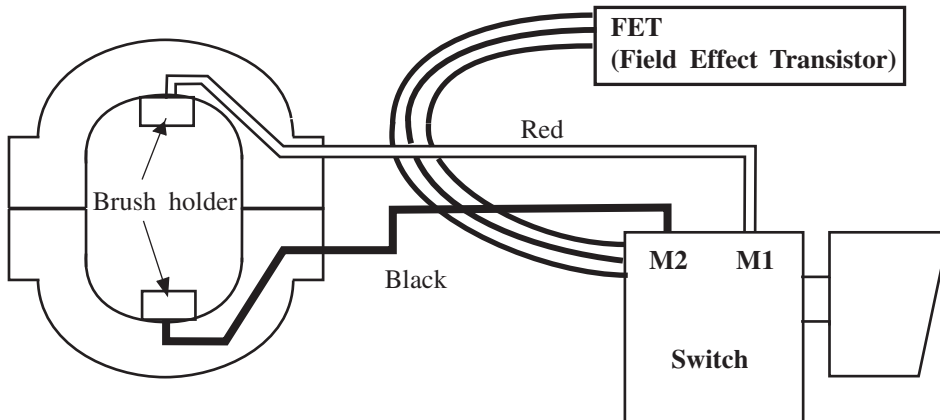


Fig. 4

► **Circuit diagram**



► **Wiring diagram**

Pass the lead wires as illustrated in Fig.5.

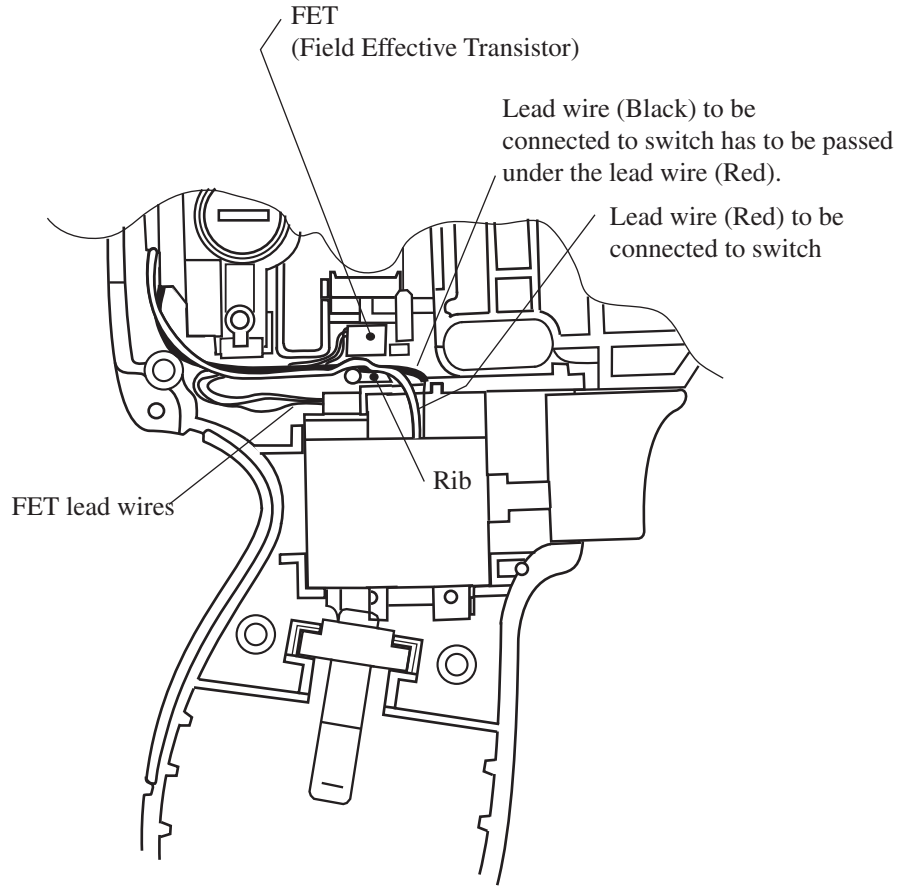


Fig.5