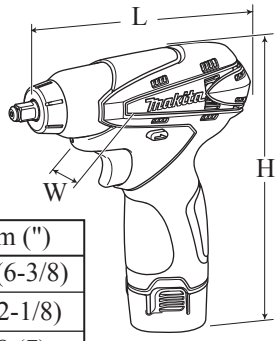
TECHNICAL INFORMATION

Models No. ► TW100D (WT01*1)

Description ► 10.8V Cordless Impact Wrench

*1: model number for USA, Canada, Panama, Columbia



Dimensions: mm (")	
Length (L)	163 (6-3/8)
Width (W)	54 (2-1/8)
Height (H)	178 (7)

CONCEPT AND MAIN APPLICATIONS

Model TW100D (WT01*1) has been developed as a sister tool of model TD090D, featuring 9.5mm (3/8") Square drive shaft instead of 6.35 (1/4") Hex shank of model TD090D (DT01*1).

This product is available in the following variations.

Model No.	Battery		Charger	Plastic carrying case	Housing color	Offered to
	type	quantity				
TW100DWE	BL1013 (Li-ion 1.3Ah)	2	DC10WA	Yes	Makita-blue	All countries except USA, Canada, Panama, Columbia
TW100DWEW					white	
TW100DZ	No		No	No	Makita-blue	
TW100DZW					white	
WT01	BL1014 (Li-ion 1.3Ah)	2	DC10WB	Yes	Makita-blue	USA, Canada, Panama, Columbia
WT01W					white	
WT01Z	No		No	No	Makita-blue	
WT01ZW					white	

► Specification

Battery	Cell	Li-ion
	Voltage: V	10.8*2, (10.8V/12Vmax*3)
	Capacity: Ah	1.3
	Charging time (approx.): min.	50 with DC10WA*2, (DC10WB*3)
Max. output: W		110
Driving shank: mm (")		9.5 (3/8) Square
Capacities	Standard bolt	M8 ~ M12 (5/16 ~ 1/2")
	High tensile bolt	M6 ~ M10 (1/4 ~ 3/8")
Impacts per min.: min-1=ipm		0 ~ 3,000
No load speed: min-1= rpm		0 ~ 2,300
Max. fastening torque*4: N.m [kgf.cm] (in.lbs)		110 [1,120] (1,000)
Electric brake		Yes
Variable speed control by trigger		Yes
Reverse switch		Yes
LED job light		Yes
Weight according to EPTA-Procedure 01/2003: kg (lbs)		0.95 (2.1)

***2:** for all countries except USA, Canada, Panama, Columbia
***3:** for USA, Canada, Panama, Columbia
***4:** catalogue value (torque at 6 seconds after seating, when fastening M12 [Strength designation: 10.9] high tensile bolt)

► Standard equipment

See the variation list above.

Note: The standard equipment for the tool shown above may vary by country.

► Optional accessories

Charger DC10WA and Li-ion battery BL1013 for all countries except USA, Canada, Panama, Columbia
Charger DC10WB and Li-ion battery BL1014 for USA, Canada, Panama, Columbia

Repair

CAUTION: Repair the machine in accordance with “Instruction manual” or “Safety instructions”.

[1] NECESSARY REPAIRING TOOLS

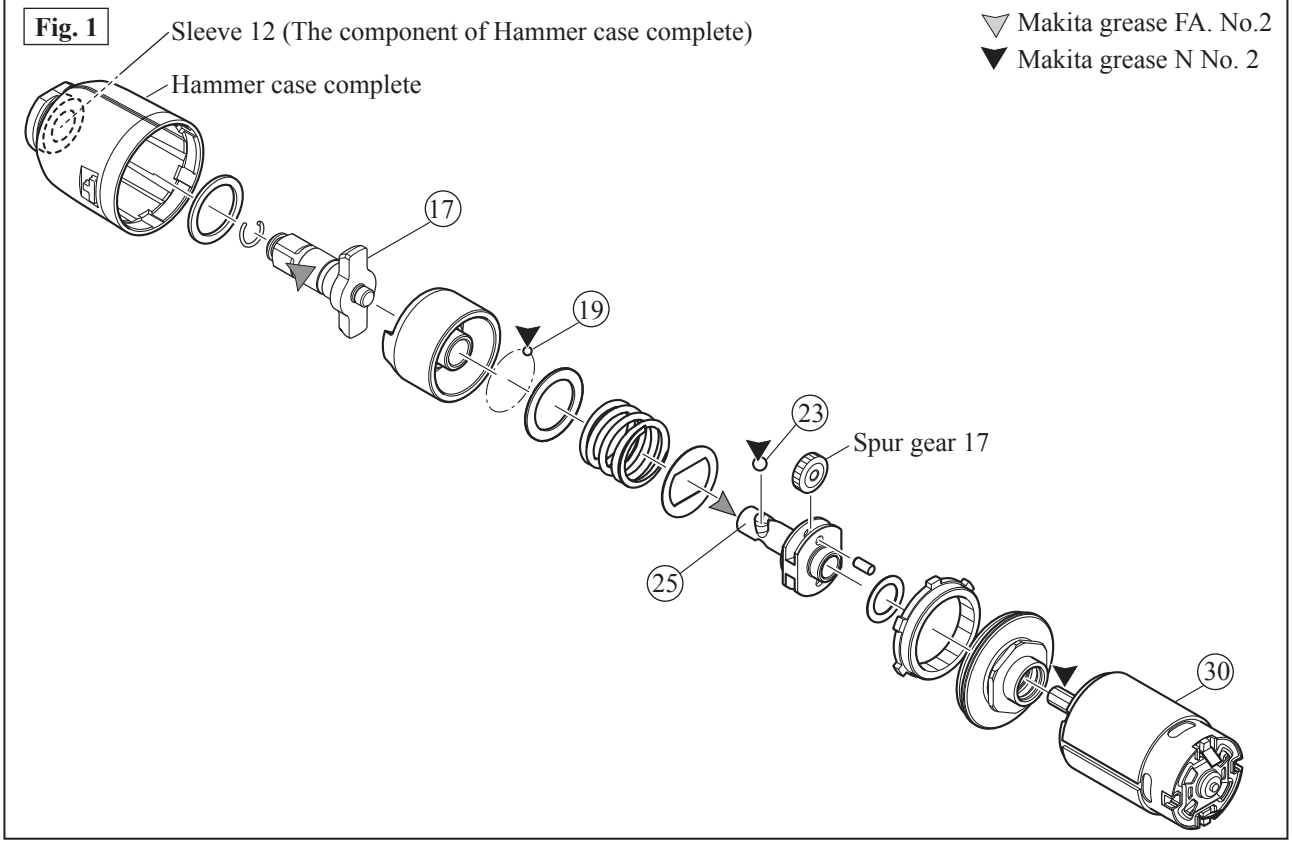
Code No.	Description	Use for
1R004	Retaining ring pliers ST-2	removing Ring spring 7
1R041	Vise plate	removing Hammer case complete
1R045	Gear extractor (large)	removing Hammer
1R222	Socket adapter	shrinking the deforming Ring spring 7
1R223	Torque wrench shaft	removing Hammer case complete
1R224	Ratchet head for 1R223	
1R288	Screwdriver Magnetizer	removing Steel balls
134844-7	Socket 27 -50	disassembling Hammer case complete

[2] LUBRICANT AND ADHESIVE APPLICATION

Apply the following lubricants to protect parts and product from unusual abrasion.

Item No.	Description	Portion to lubricate	Lubricant	Amount
⑰	Anvil assembly	Contact portion with Sleeve 12	Makita grease FA No.2	a little
㉕	Spindle	Hole to receive the bottom of Anvil		
⑲	Steel ball 3 (24pcs.)	Whole portion	Makita grease N. No.2	a little
㉓	Steel ball 4.8 (2pcs.)			
㉚	DC motor	Pinion teeth to engage with Spur gear 17		1g

Fig. 1



Repair

[2] DISASSEMBLY/ASSEMBLY

[3]-1. Hammer case section

DISASSEMBLING

(1) Remove Bumper from Hammer case complete. (**Fig. 2**)
(2) Remove two Set plates from Housings L and R as follows:
Insert a small slotted screwdriver through the punched hole of Set plate and move Set plate in the direction of the arrow using the screwdriver. (**Fig. 3**)
(3) Remove six 3x6 Tapping screws and Housing R from Housing L.
(4) Remove Hammer case section and Motor section from Housing L, and then separate Hammer case section from Motor section.
(5) Hold the flats of Hammer case complete with 1R041 in Vise as drawn in **Fig. 4**, and fit Socket 27-50 into the hexagonal portion of Bearing box complete. Turn Socket 27-50 clockwise using 1R224 and 1R223 to remove Bearing box complete. (**Fig. 4**)
Hammer section, Internal gear 43 and Bearing box complete are separated from Hammer case complete.

Fig. 2

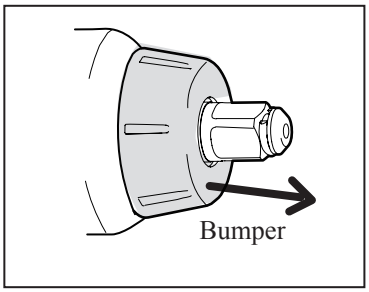


Fig. 3

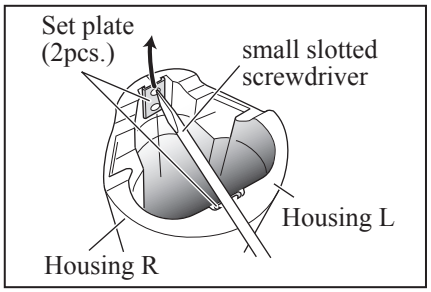
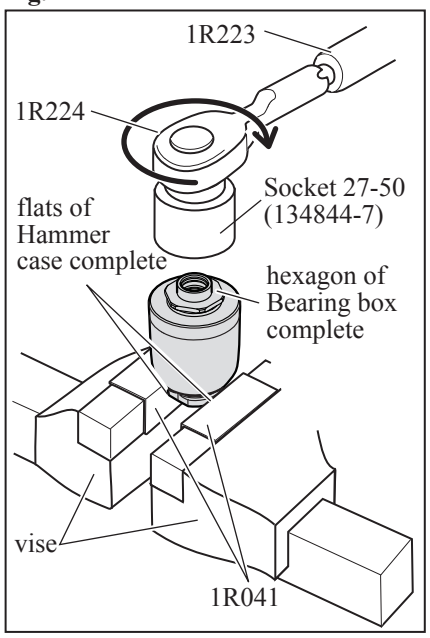


Fig. 4



ASSEMBLING

(1) Put Bearing box on a workbench and pile Internal gear 53, Hammer section and Hammer case complete vertically on Bearing box. (**Fig. 5**) Then fasten Bearing box to Hammer case complete by turning Socket 27-50 counterclockwise to 25 up to 30N.m. with 1R224 and 1R223.

Note: Internal gear 43 is directional as drawn in **Figs. 5 and 6**. Therefore;
- fit the stepped end of the gear into the groove of Bearing box.
- fit six projections of the gear into the grooves of Hammer case complete.

Fig. 5

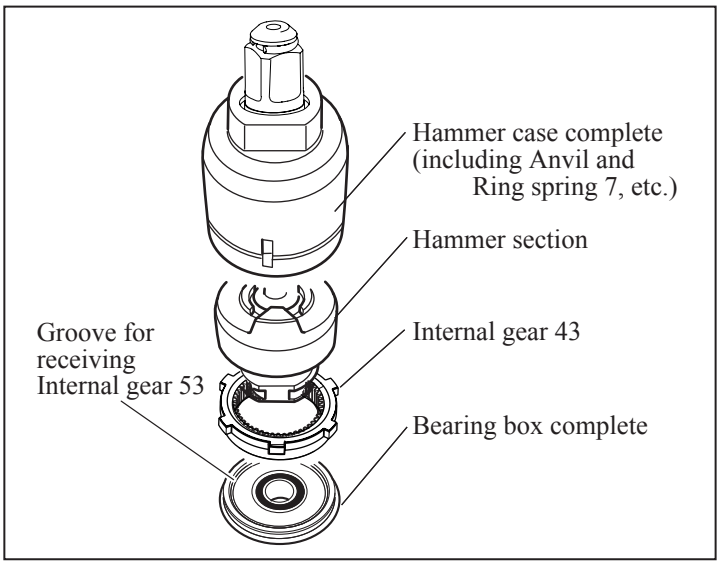
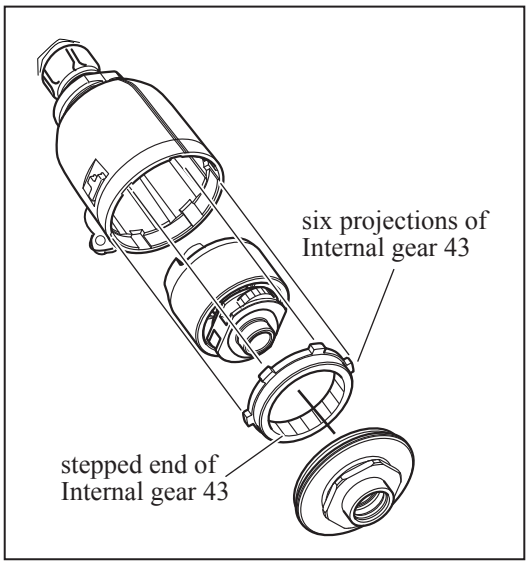


Fig. 6



(2) Engage the pinion gear of DC motor with the assembled Hammer case section.
(3) Set the assembled Hammer case section with DC motor to Housing L.
(4) Do the reverse of the disassembling step to fix Housing L to Housing R. (**Fig. 3**)
(5) Mount Bumper on Hammer case complete. (**Fig. 2**)

Repair

[3]-2. Hammer section

DISASSEMBLING

(1) Remove Hammer section in accordance with **[3]-1. Hammer case section**.
(2) Press down Hammer to the full with 1R045 and 1R346, and then reverse the handle to align the opening for Steel ball insertion with the top of cam grooving on Spindle.
Remove Steel ball 4.8 from Spindle using Tweezers or 1R288. (**Fig. 7**)
(3) When Hammer is separated from Spindle, the setting posture is turned upside down from shown in **Fig. 7** to **Fig. 8** to prevent Steel balls 3 from being dropped. There are 24pcs. of Steel balls 3 in the groove of Hammer.
(As drawn in **Fig. 11,** the groove is designed to have a space equivalent to one Steel ball 3.)
(4) Hammer section can be disassembled. (**Fig. 9**) Flat washer 20 and Steel balls 3 are removed. (**Fig. 10**)

Fig. 7

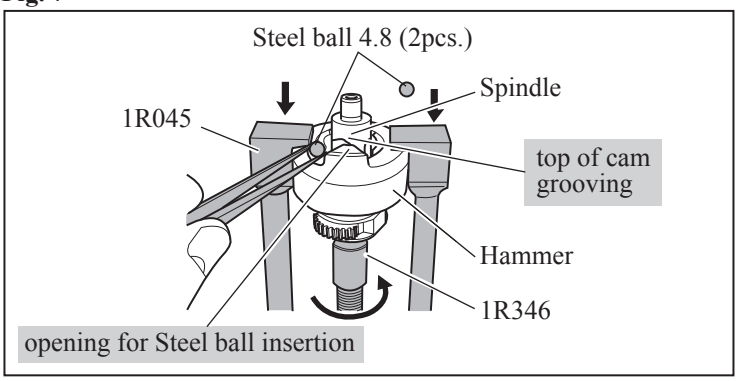


Fig. 8

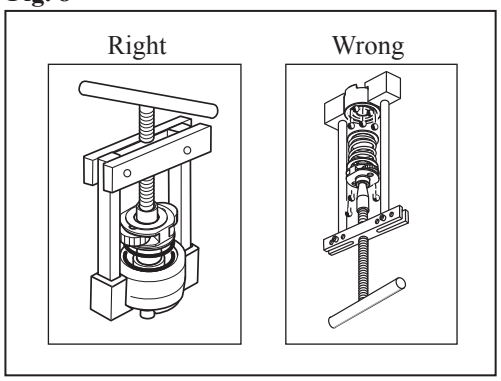


Fig. 9

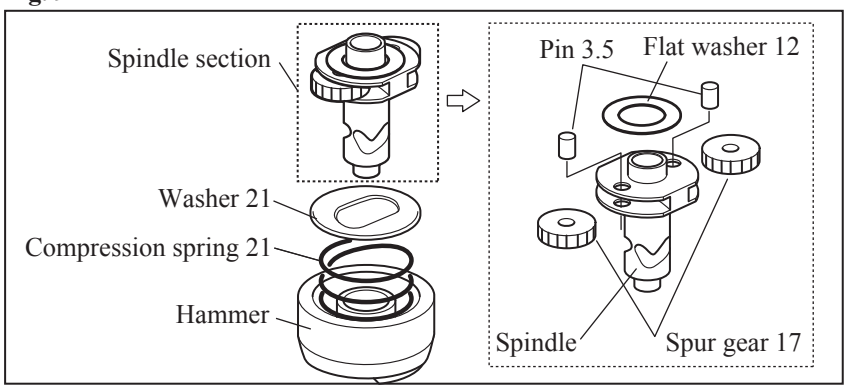
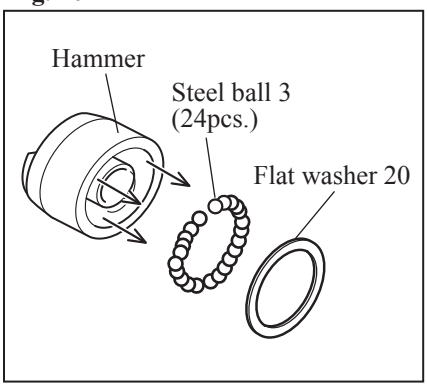


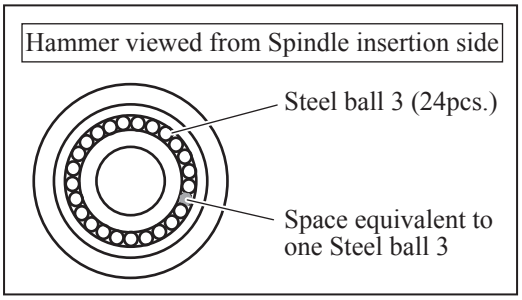
Fig. 10



ASSEMBLING

Take the reverse of the disassembling step.
Note: Put Steel ball 3 (24pcs.) into Hammer as drawn in **Fig. 11**.
Space equivalent to one Steel ball proves Hammer and Steel ball 3 (24pcs.) are normal.

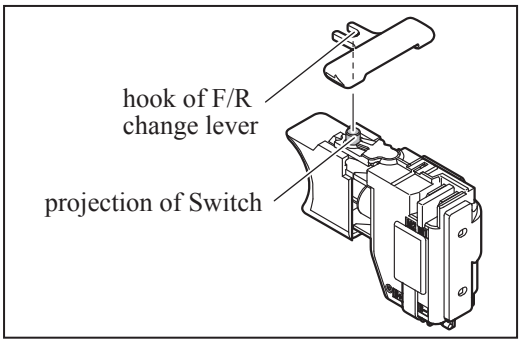
Fig. 11



[3]-3. Assembling F/R Change Lever

Hook F/R change lever with the projection of Switch, then install them in Housing L. (**Fig. 12**)

Fig. 12



► Repair

[3] ASSEMBLING / DISASSEMBLING

[3]-4. Replacing Anvil

(1) Disassemble Hammer case complete by steps drawn in **Figs. 2 to 5**.
Note: It is not necessary to disassemble Hammer case section when the only Ring spring 7 has a damage. Skip the above steps.
(2) Remove Ring spring 11 from the groove of Anvil using 1R004 carefully**.**
(3) Set New Ring spring 11 in place as drawn in **Fig. 13**.
Note: Ring spring 11 is expanded through the setting process, and therefore, press it using Pliers (**Fig. 14**) and then insert and remove 1R222 (or Socket bit for 9.5mm square shank wrench) several times until Ring spring 11 is completely fit into the groove. (**Fig. 15)**

Fig. 13

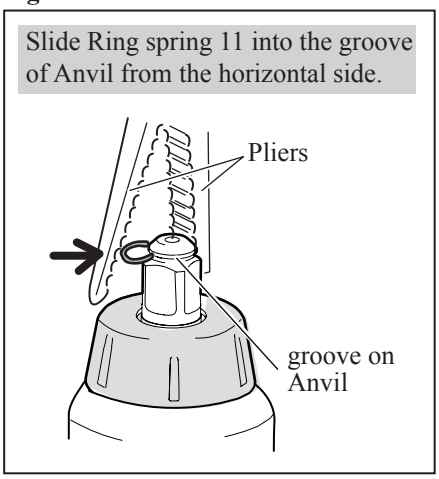


Fig. 14

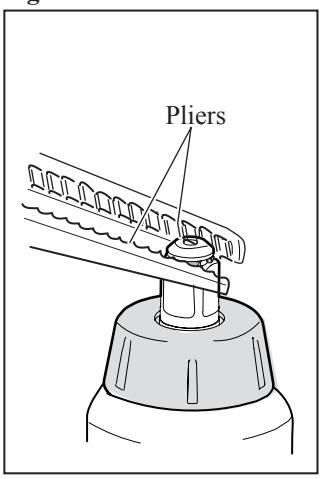
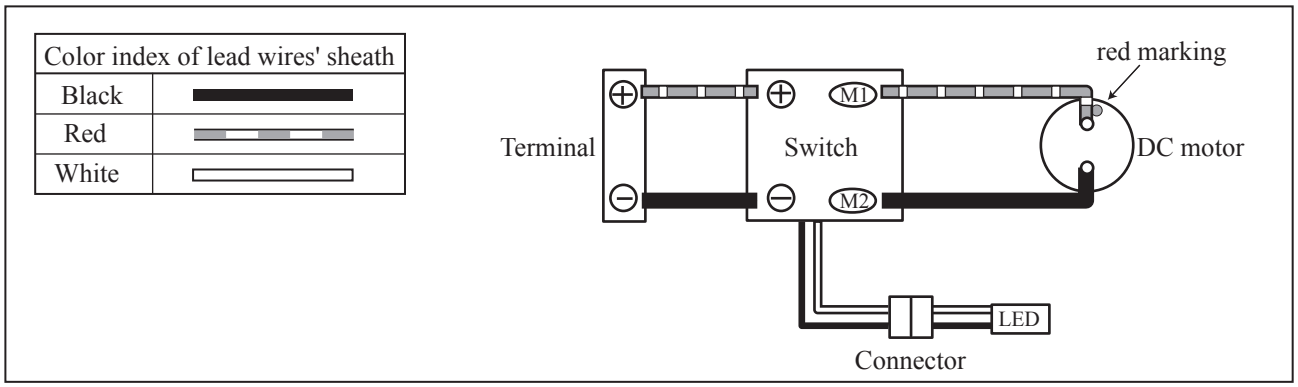


Fig. 15

► Circuit diagram

Fig. D-1



Wiring diagram

Fig. D-2

Pay attention to the directions of lead wires and connect Flag receptacles to electrical parts.
Refer to the following drawings.

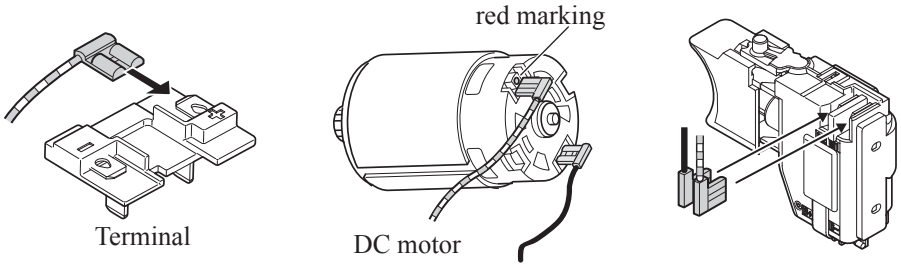


Fig. D-3

Before installing Switch in Housing R, route Lead wires as drawn below and connect two Connectors.
Do not put their Lead wires on the ribs of Housing L.

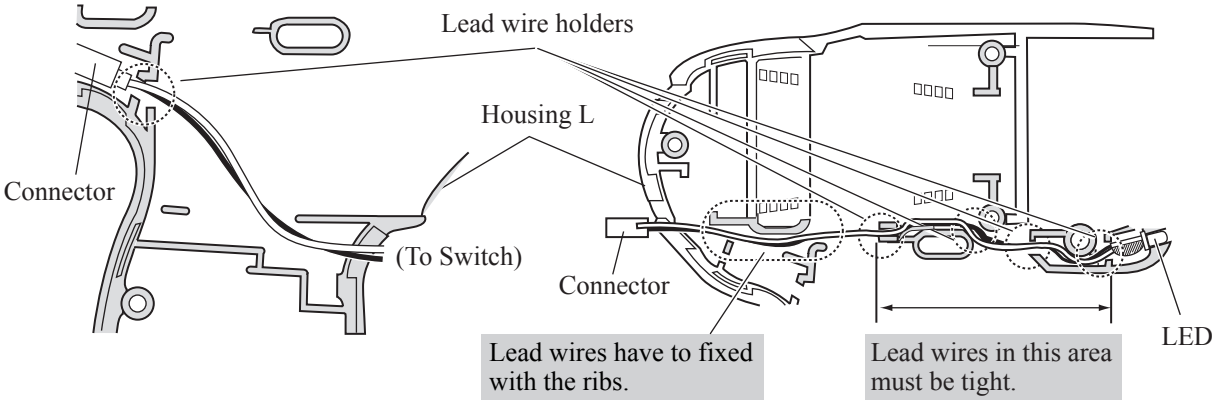


Fig. D-4