

SERVICE MANUAL

For PTL-CL-LED

How to replace the Conv. PWB/ PWB Holder Ass'y
and attaching the silicone



Parts List No.

PTL-CL-LED: A-256

CONTENTS

1. TOOLS REQUIRED.....	3
2. TROUBLESHOOTING.....	3
3. DISASSEMBLY PROCEDURE.....	4
4. CAUTIONS FOR REASSEMBLING.....	7

1. TOOLS REQUIRED



PWB Ass'y Pusher

In addition, V-Block, a hand press machine or a plastic hammer (hammer), and Dow Corning Toray Co. Ltd's Silicone: SE 9157 CLEAR is required.

Caution: Please wear Grounded Static Control Wrist Strap to prevent any damage that static electricity might cause to the LED and Conv. PWB.

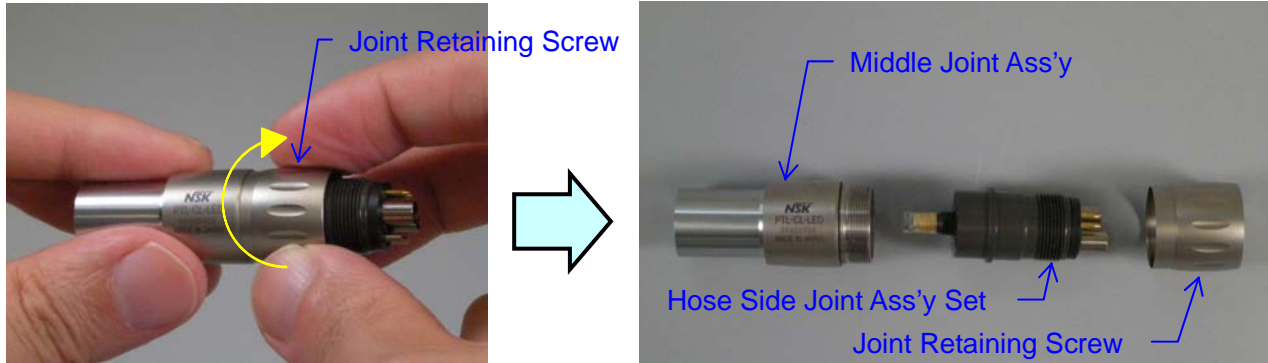
2. TROUBLESHOOTING

	Problem	Probable Cause	Solution
Related to LED	LED does not illuminate	LED Ass'y may need to be changed	See this manual's section 3-1 to 3-2, 4-3 to 4-5. Check and replace the LED Ass'y.
		Conv. PWB and/or PWB Holder Ass'y may need to be changed	See this manual's section 1, 3-1 to 3-5, and 4-1 to 4-5. Check and replace the Conv. PWB and/or PWB Holder Ass'y.

3. DISASSEMBLY PROCEDURE

3-1. Removal of the Joint Retaining Screw

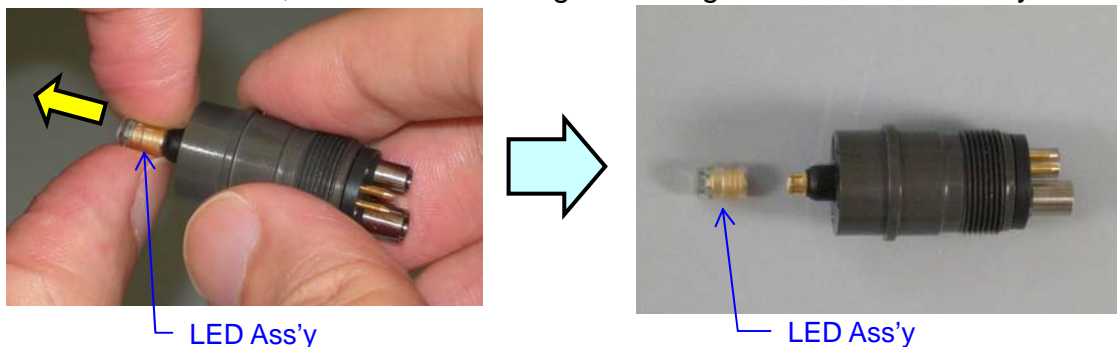
Hold the LED coupling's handpiece side with your left hand. Hold the Joint Retaining Screw with your right hand and turn clockwise to remove the Joint Retaining Screw.



3-2. Removal of the LED Ass'y

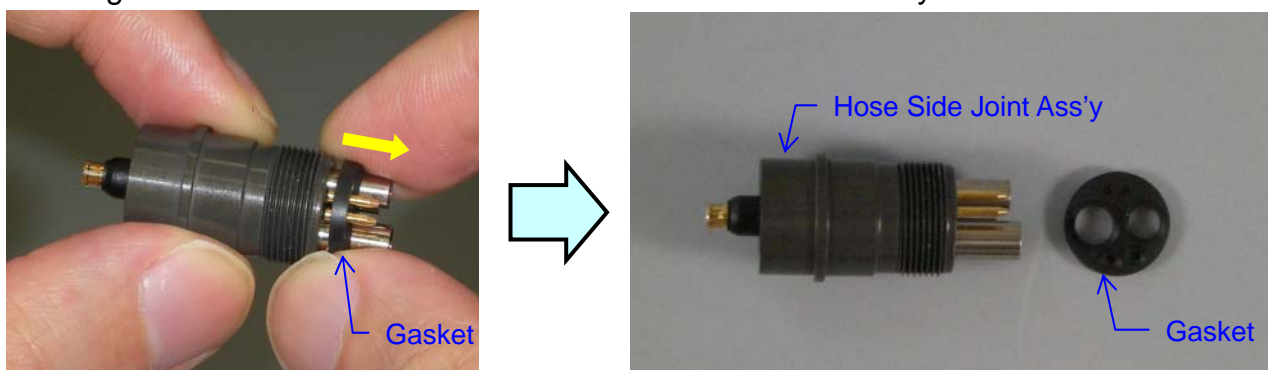
Use fingers to take out the LED Ass'y.

Caution: Take the LED Ass'y straightly out to prevent damaging the pin inside the LED Ass'y.
In addition, do not touch the light-emitting face of the LED Ass'y when removing.



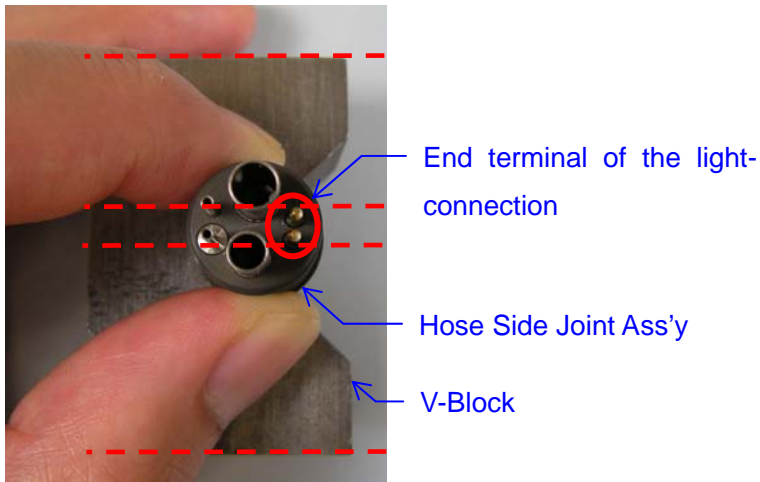
3-3. Removal of the Gasket

Use fingers to take out the Gasket from the Hose Side Joint Ass'y.

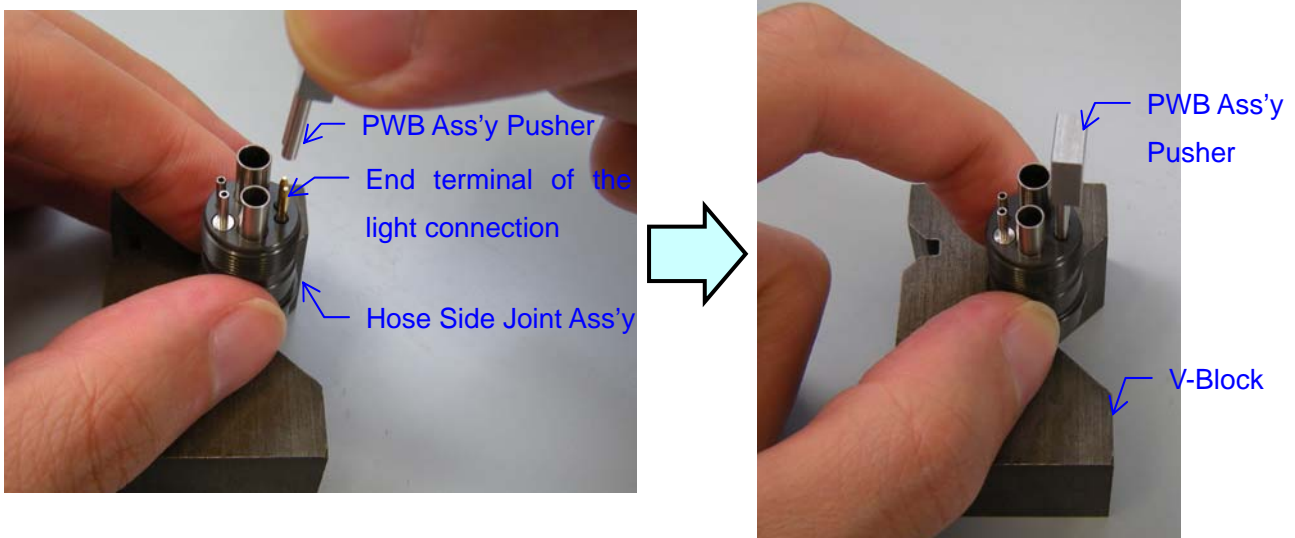


3-4. Removal of the PWB Ass'y

Place the Hose Side Joint Ass'y on the V-Block in the direction shown below, so that the PWB-Ass'y can be pushed out.

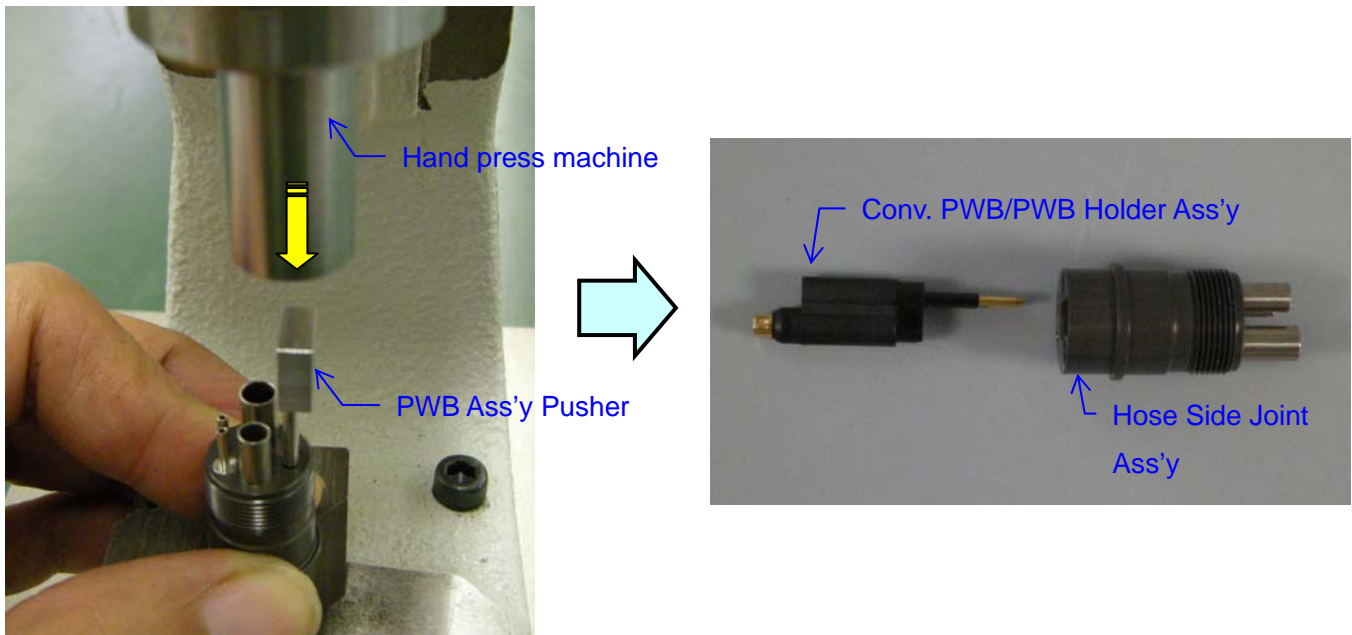


Attach the PWB Ass'y Pusher to the end terminal of the light connection with the Pusher's narrow side facing the Drive & Exhaust Air pipe (so that this Pusher will not be disturbed by the Drive & Exhaust Air pipe when pushed in).



Use tools such as a hand press machine or a plastic hammer (hammer) to gently push out the Conv. PWB/PWB Holder Ass'y.

Caution: Straightly push out the Conv. PWB/PWB Holder Ass'y (do not damage the Conv.-PWB/PWB Holder Ass'y).



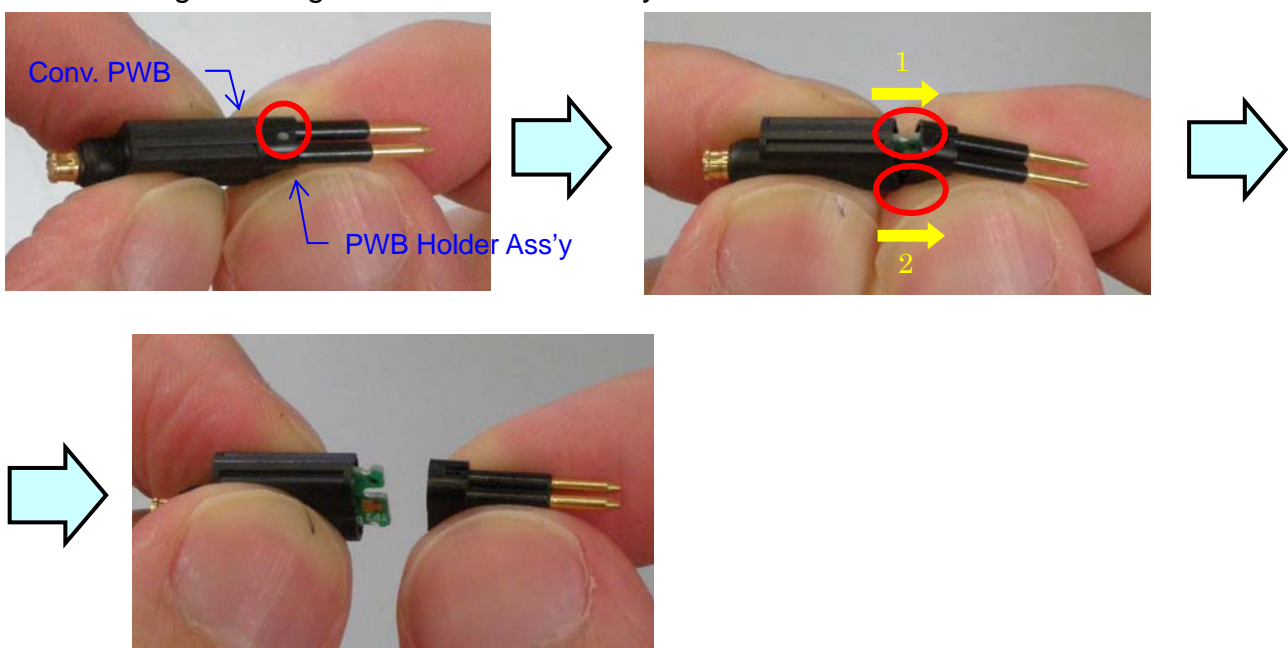
3-5. Removal of the PWB Holder Ass'y

Hold the Conv. PWB with your left hand and PWB Holder Ass'y with your right hand.

Take the upper side of the PWB Holder Ass'y's hole out from the Conv. PWB's hook as shown below.

Follow the same procedure to take the lower side of the PWB Holder Ass'y's hole out from the Conv. PWB's hook.

Caution: Do not try to pull PWB Holder Ass'y out from the Conv. PWB at one-time, since this might damage the PWB Holder Ass'y's hole and the Conv. PWB's hook.



4. CAUTIONS FOR ASSEMBLING

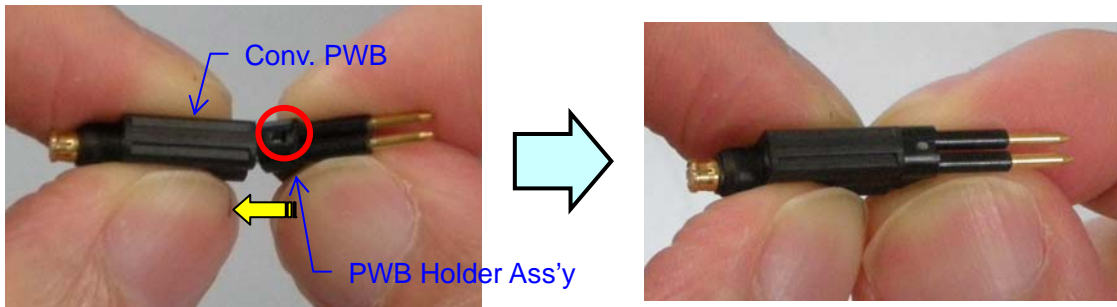
Reverse the procedure for disassembly with following cautions, when assembling.

4-1. Reassembling the PWB Holder Ass'y

Hold the Conv. PWB with your left hand.

Hook the upper side of the Conv. PWB's hook into the hole of the PWB Holder Ass'y.

Attach the lower side of the Conv. PWB's hook into the hole of the PWB Holder Ass'y.

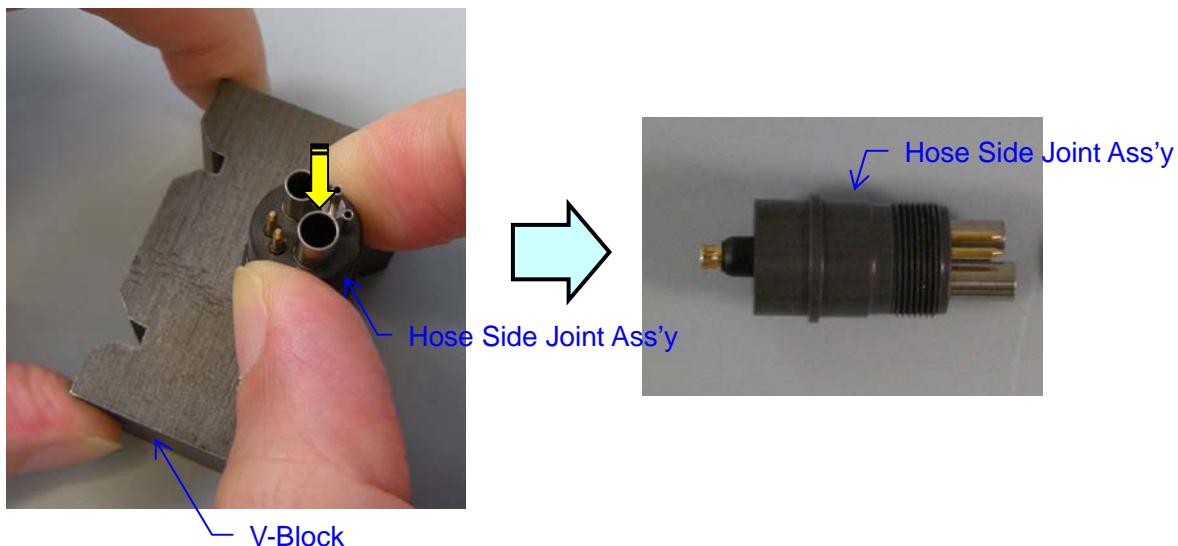


4-2. Reassembling the Conv. PWB/PWB Holder Ass'y

Use hands to gently push the Conv. PWB/PWB Holder Ass'y into the Hose Side Joint Ass'y (until it can not be pushed in by hands any more).

Place the side of the Conv. PWB onto the tools such as V-Block to gently push the Conv.-PWB/PWB Holder Ass'y into the Hose side Joint Ass'y.

Caution: Be careful *not* to press the LED connecting part.



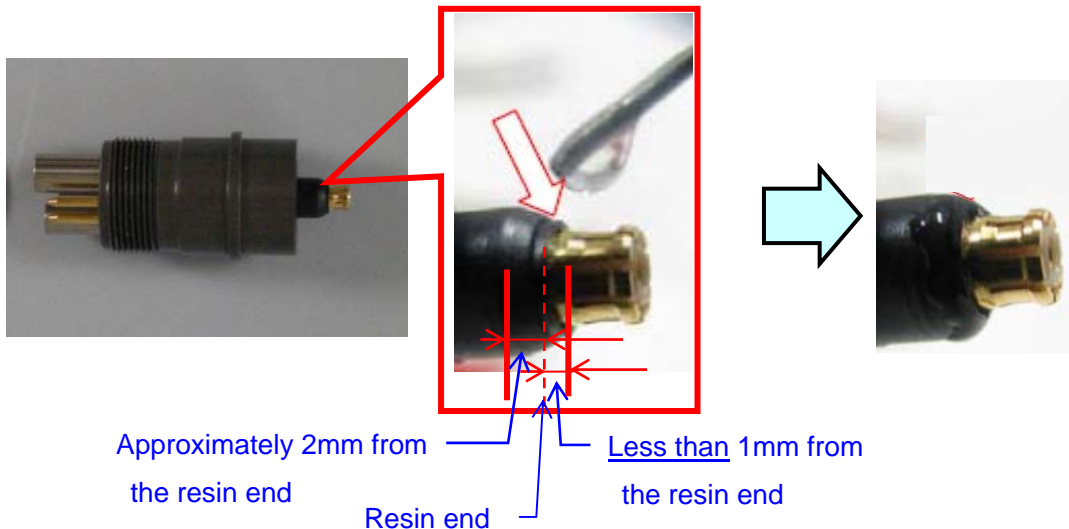
4-3. Attaching Silicone

Temporarily attach the LED Ass'y and check whether the LED illuminates before finally attaching Silicone.

Attach a smaller dot of Dow Corning Toray's Silicone: SE 9157 CLEAR to the place marked in Red arrow (range: between the solid line).

Caution: Be careful not to put extra Silicone beyond the Red solid line.

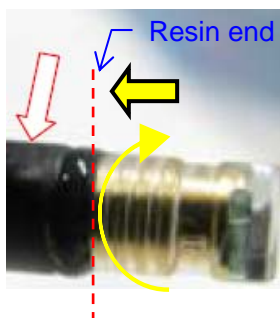
Completely wipe off the Silicone and try again in case you put excess Silicone.



4-4. Attaching an LED Ass'y

Attach an LED Ass'y. While gently pushing the LED Ass'y towards the resin end, rotate the LED Ass'y so that the attached Silicone will be evenly distributed.

Caution: Wipe off the excess Silicone if attached around the Red arrow area.



Leave the attached LED Ass'y for more than 2 hours to let the Silicone dry.

4-5. Checking LED lighting

After reassembling, check that the LED illuminates.