maxtec	Document Title: **Work Instructions, MaxO2ME Analyzer Assembly**	
	Document Number: **WI-4066**	Revision Number: **M**

1.0 SCOPE

1.1 This document shall provide the guidelines and documentation requirements for the final assembly of the MaxO2ME analyzers.

2.0 MANUFACTURING INSTRUCTIONS

ALERTS:

QUALITY **SAFETY** **ACCEPT / CORRECT** **REJECT / INCORRECT** **RECORD / SIGN**

SAFETY EQUIPMENT REQUIRED:

1. Safety glasses
2. Smock
3. Electrostatic Discharge (ESD) wrist strap and work mat.

MATERIALS REQUIRED:

1. Material Pick List Components
2. Syringe filled with RP39P28 Gasket material
3. Cotton Swabs

EQUIPMENT AND TOOLS REQUIRED:

1. Pneumatic Torque Driver @ 60 in-oz
2. Manual Torque Driver @ 50 in-oz
3. Soldering Station
4. Clippers
5. Speaker Soldering Fixture MT390
6. Monitor Test System MT367
7. 4x “AA” Batteries
8. Tweezers
9. Pliers
10. X-Acto Knife
11. T-8 Torx Driver
12. #1 Phillips Head Driver

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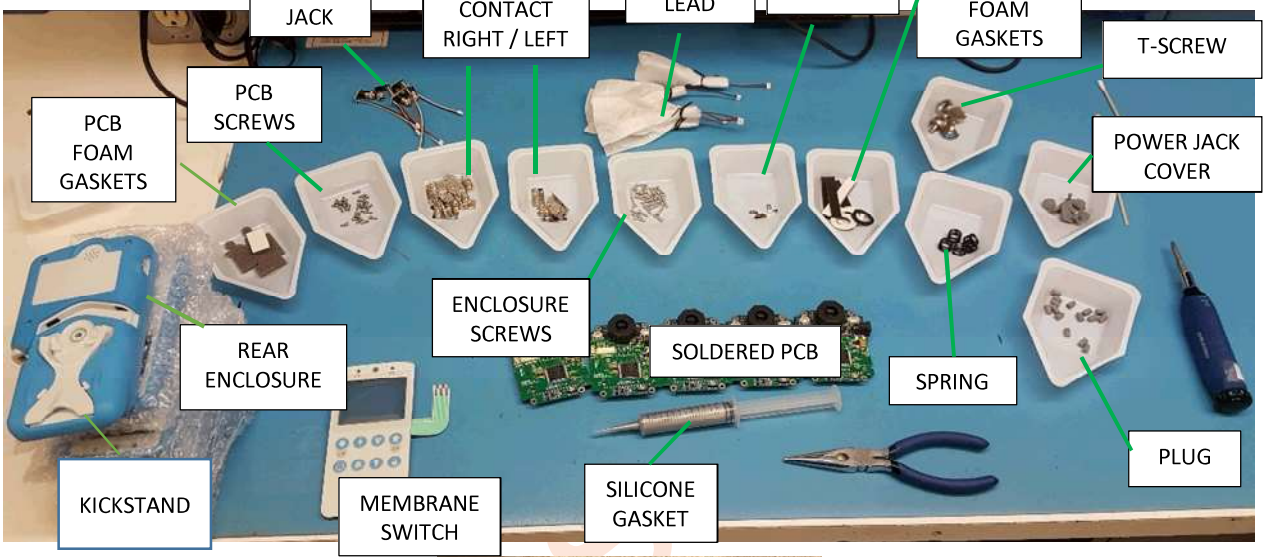
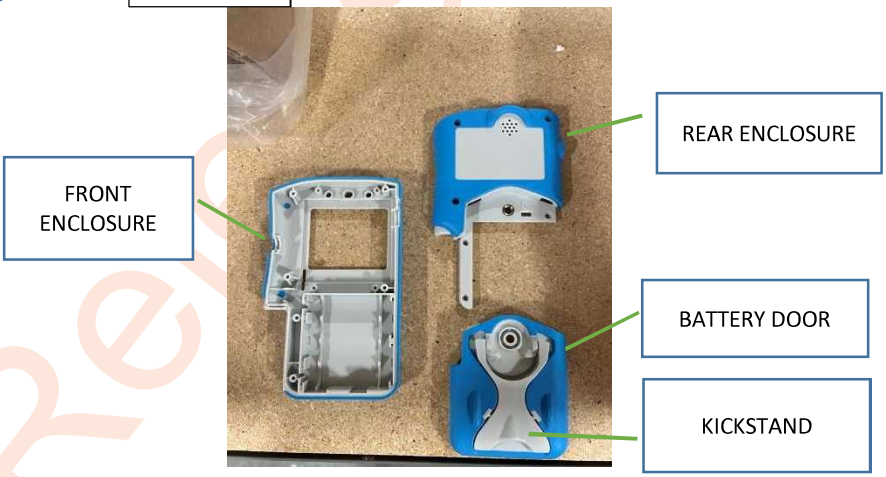
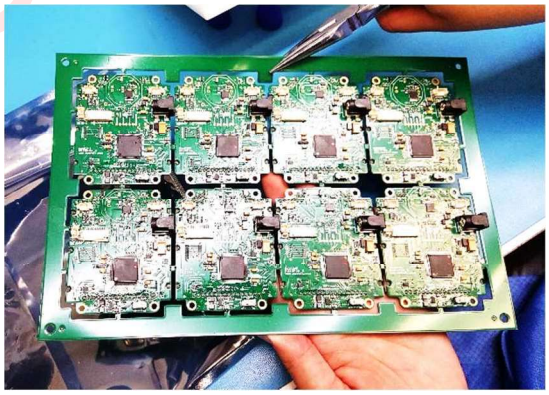
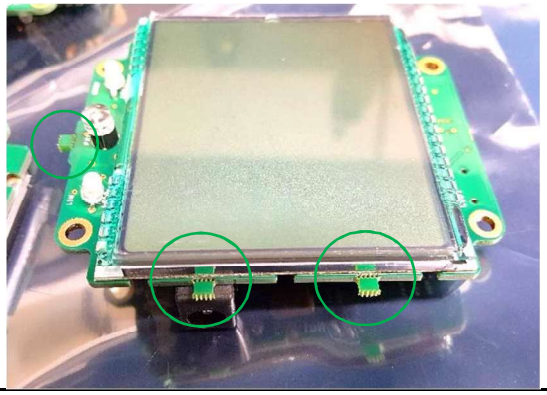
TASK	INSTRUCTION
SETUP	  ENSURE all components diagramed above are accounted for prior to assembly.

TASK	INSTRUCTION
1	Print labels according to LCS. **Mark completion on in-process form**
2	Inspect labels according to LCS **Mark completion on in-process form** Note: personal inspecting labels must be different from the one who printed the labels.
3	SEPARATE Printed Circuit Boards (PCBs) from panel with pliers.   REMOVE excess board material. Use caution not to damage any board traces.

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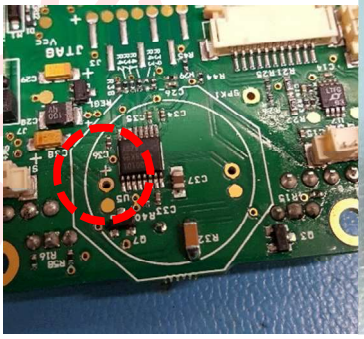
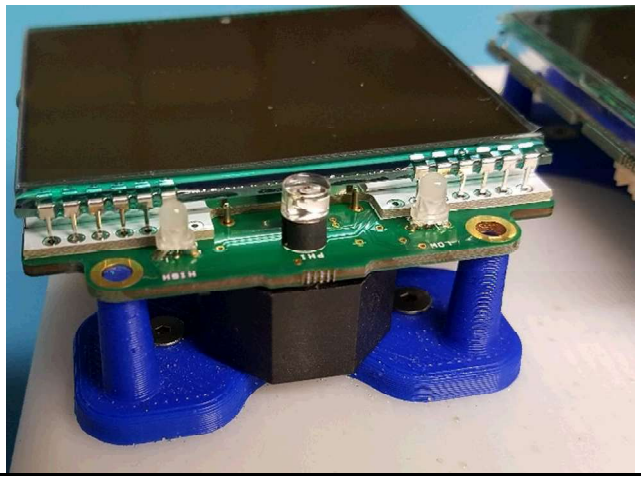
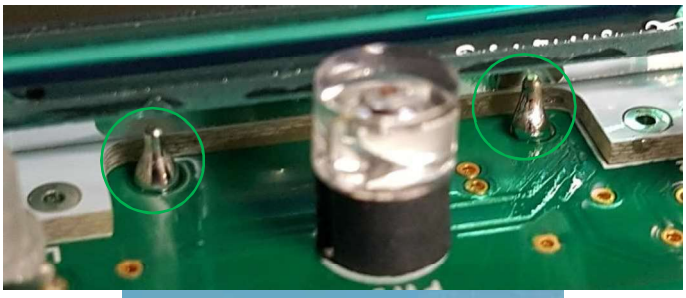
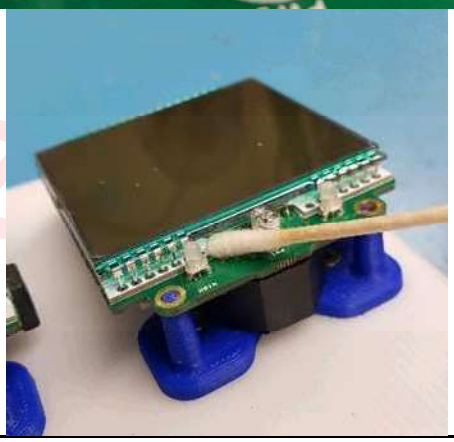
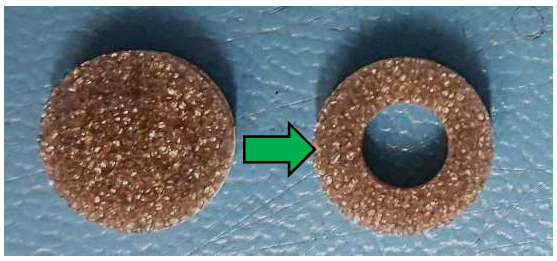
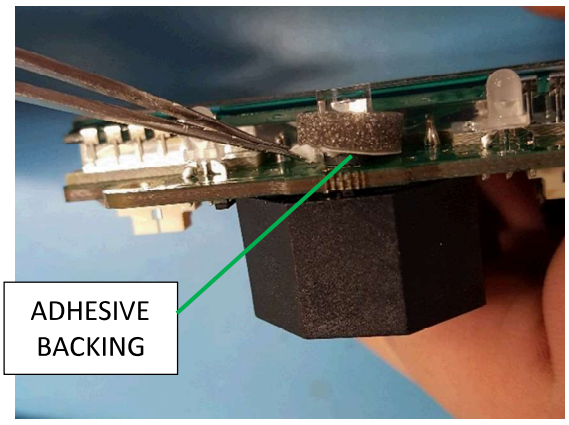
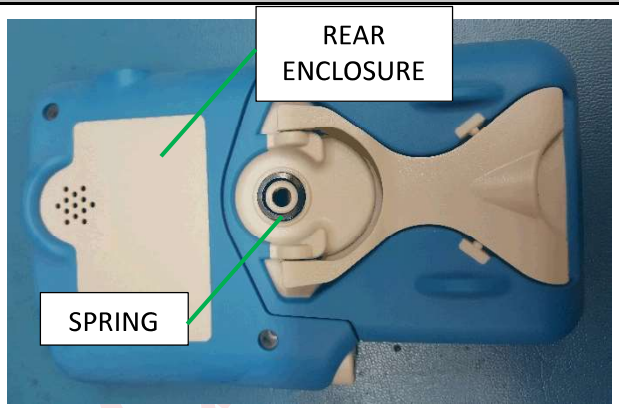
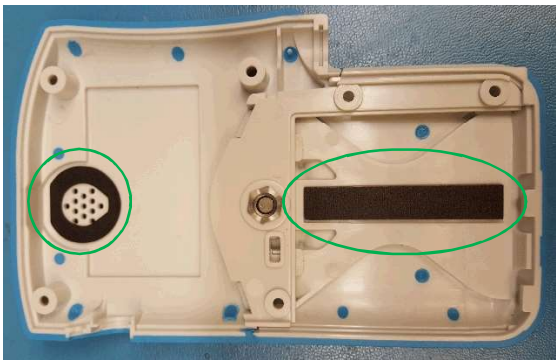
TASK	INSTRUCTION
4	TURN **ON** soldering station. SET temperature to approximately 800°F. TIN soldering tip as necessary. CAUTION: HOT 
5	PLACE Speaker leads into PCB. ENSURE **+** and **-** leads match with corresponding marks on PCB. And that the speaker sits flat.   PLACE PCB/Speaker on Soldering Fixture MT390. 

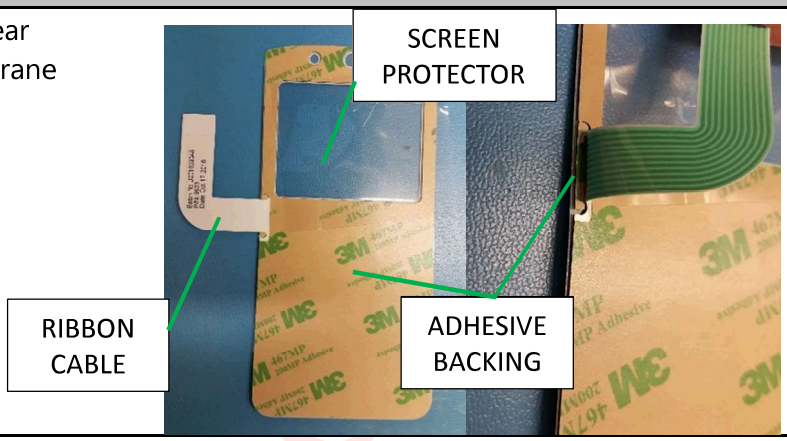
TASK	INSTRUCTION
6	TOUCH Solder wire to speaker lead and PCB joint. TOUCH Iron to tip of solder wire. TWIST Iron ¼ turn to deposit solder. REPEAT on remaining lead.  CLEAN solder joints with alcohol. REMOVE PCB from fixture. **Mark completion on in-process form** 
7	REMOVE center foam from Photocell gasket. Leave adhesive backing on until ready to place on the PCBA  PLACE foam gasket over LED. REMOVE adhesive backing with tweezers and PRESS gasket into place. 

TASK	INSTRUCTION
8	REMOVE inner foam section from PCB cover gasket REMOVE adhesive backing PLACE foam gasket over switch TOGGLE switch to the **LEFT** ☑ **Mark completion on in-process form**

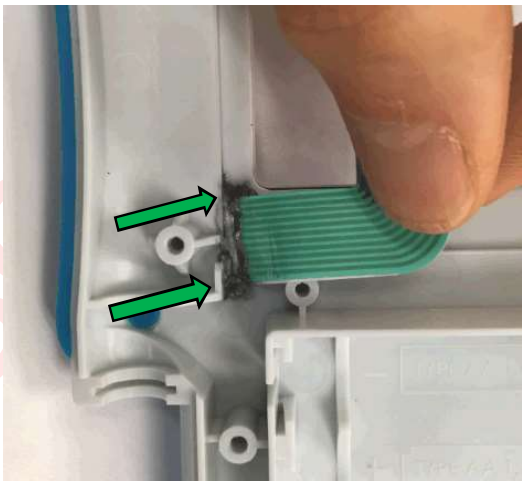
TASK	INSTRUCTION
9	UNWRAP Enclosures PLACE Spring in Battery Door THREAD T-Screw into Battery Door ☑ **Mark completion on in-process form**
10	SEPARATE Rear Enclosure and Battery Door from Front Enclosure APPLY Buzzer Gasket. APPLY Battery Foam to door ☑ **Mark completion on in-process form**

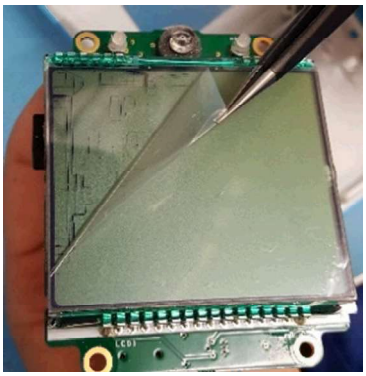


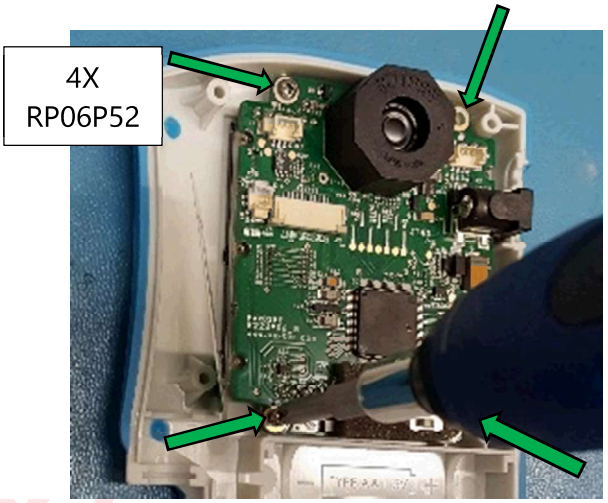
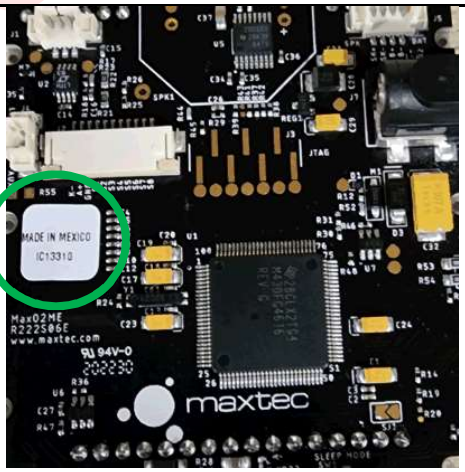


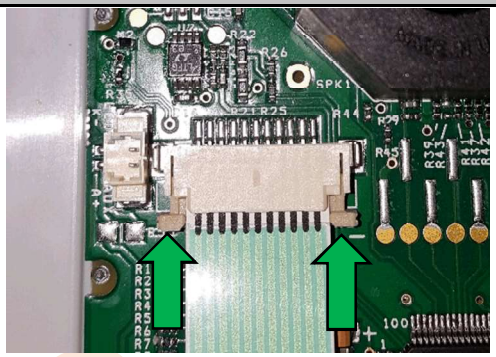
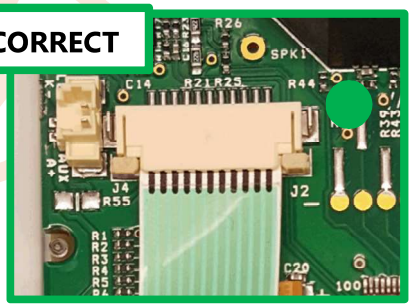
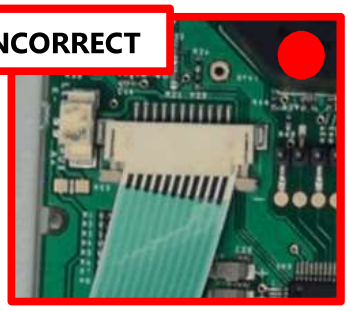
TASK	INSTRUCTION
11	REMOVE adhesive backing and Rear Screen Protector Film from membrane switch. 
12	INSERT ribbon cable through front enclosure slot.  PRESS the membrane switch into recessed area all around the perimeter.  ⚠ VERIFY no bubbles are present on the membrane switch. REPLACE if bubbles persist.

TASK	INSTRUCTION
13	FILL syringe with gasket material CUT tip of syringe APPLY a bead of gasket material to the identified area behind ribbon cable. ⚠ WIPE off any excess material that could interfere with PCB screen. ☑ **Mark completion on in-process form**
14	REMOVE PCB screen protector





TASK	INSTRUCTION
15	PLACE PCB onto housing. SECURE PCB to housing with 4 Phillip-head screws. TIGHTEN to 50 in-oz with manual torque driver ⚠ CHECK LCD for discoloration. If discoloration occurs back off screws by ¼ turn each and RECHECK. If discoloration continues reject. 
16	✎ Record the board serial number on the Unit to Board Serial Number form.  

TASK	INSTRUCTION
17	CONNECT ribbon cable.  PUSH tabs to lock in place. ⚠ ENSURE ribbon cable is straight. **CORRECT**  **Mark completion on in-process form** **INCORRECT** 

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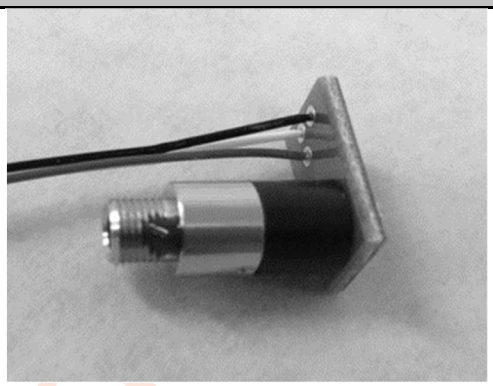
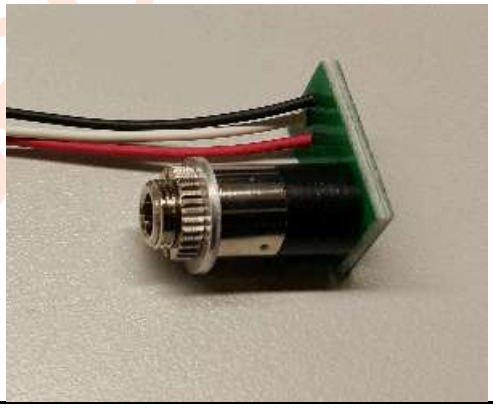
TASK	INSTRUCTION
18	APPLY red Loctite #262 to bottom 1/3rd of sensor jack threads. PLACE metal washer onto threads THREAD nut on until it bottoms out. ⚠ WIPE off any excess Loctite ⚠ This may be performed as a batch process during material setup.



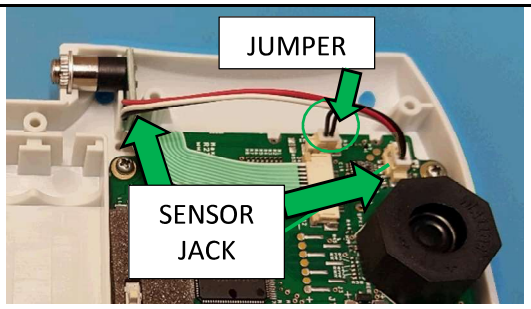


19

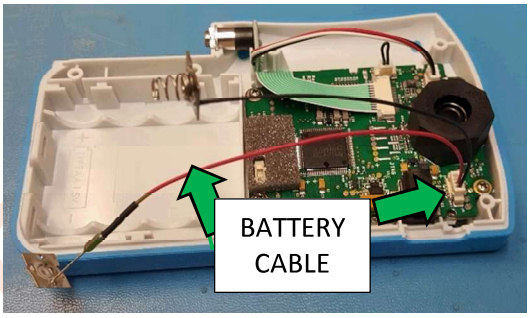
CONNECT Jumper to PCB

CONNECT Sensor Jack to PCB

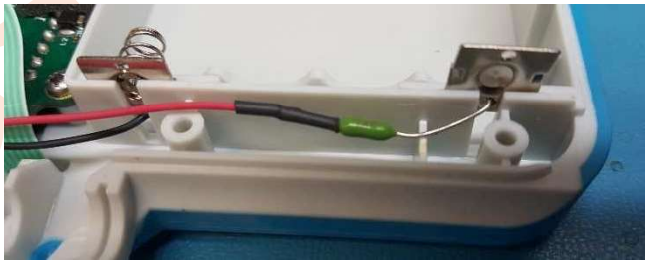
PLACE Sensor Jack into housing



CONNECT Battery Cable to PCB



INSERT Battery cable contacts into enclosure.



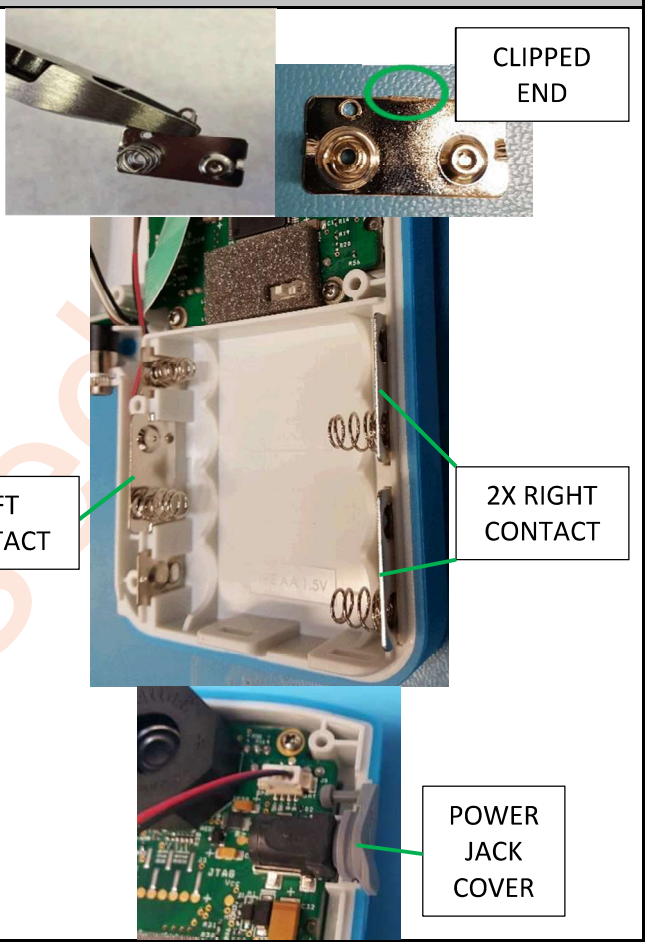
⚠ Contact wires face **DOWN**

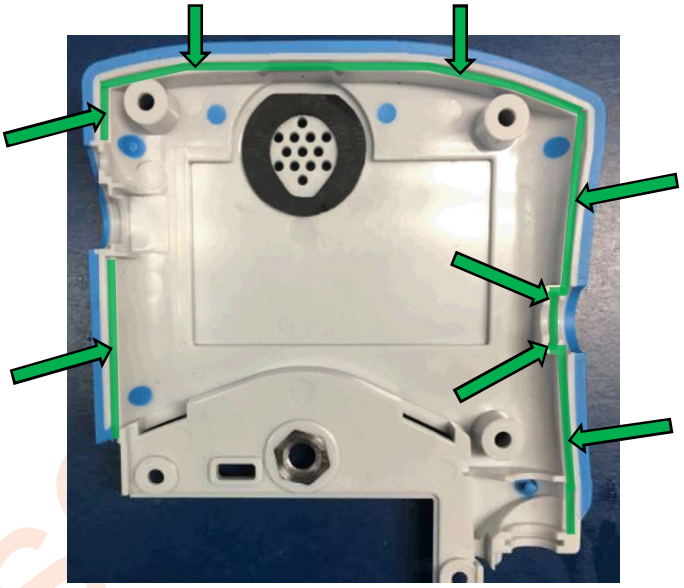
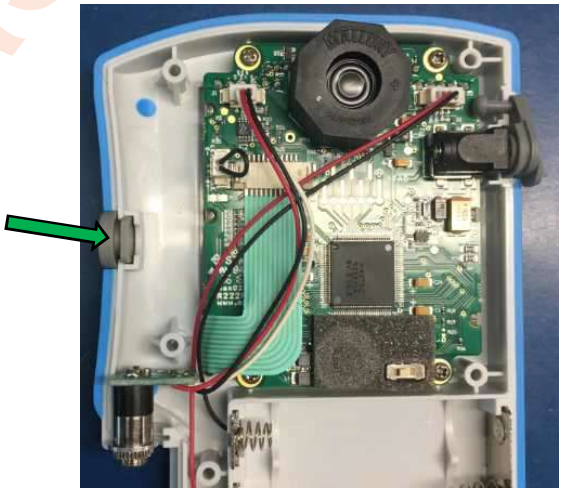
PRESS contacts into place with flat edge of tweezers.

⚠ MOVE wires so they do not get pinched during rear enclosure assembly.

☑ **Mark completion on in-process form**

TASK	INSTRUCTION
20	CLIP off protrusion from battery contacts. ⚠ This can be performed as a batch process during material setup. INSERT **1x Left** and **2x Right** Battery contacts. ⚠ Clipped ends face **DOWN** PRESS contacts into place with flat edge of tweezers. INSERT Power Jack Cover ☑ **Mark completion on in-process form**



TASK	INSTRUCTION
21	APPLY continuous bead of gasket material to identified inside edges of REAR enclosure.  ⚠ WIPE off any excess material.  INSERT rubber plug into the slot of the FRONT enclosure. ☑ **Mark completion on in-process form**

TASK	INSTRUCTION
22	Prior to placing the rear enclose onto the front enclosure, place the unit label on the rear encloser in the upper left corner of the white/grey plastic area leaving a small gap from the blue colored portion. **Record the Unit Number on the Unit to Board Serial Number form matching it to the Board Serial Number.** 
22	PLACE rear enclosure onto front enclosure. FASTEN with 6 screws. USE pneumatic torque driver set to 60+/-10 in-oz TIGHTEN screw over sensor jack housing **first** to hold in place. If holes become stripped replace enclosure. A manual torque driver can also be used if necessary. WIPE off any excess gasket material that squeezes out after assembly.