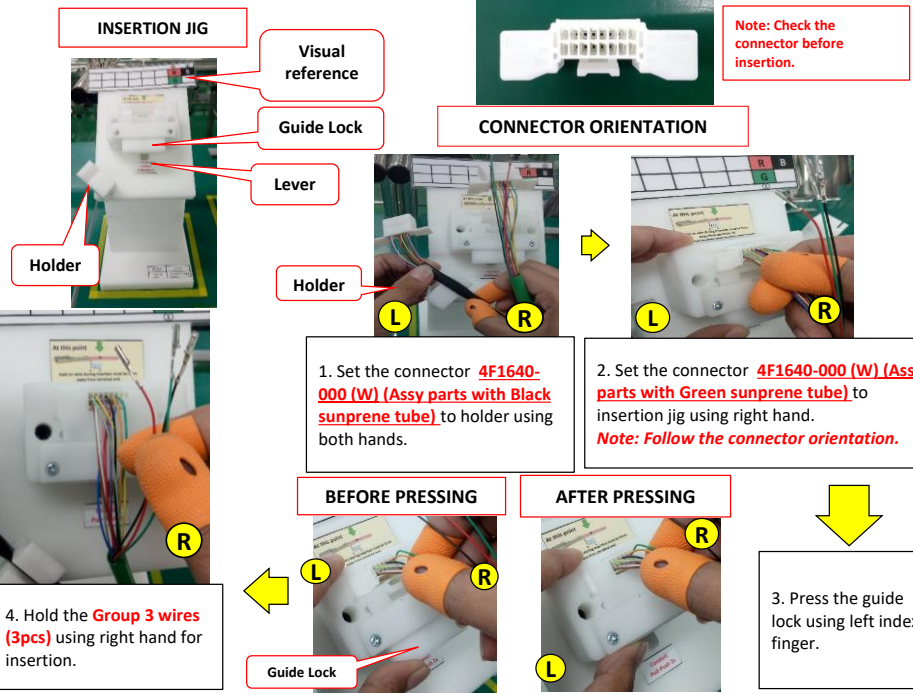

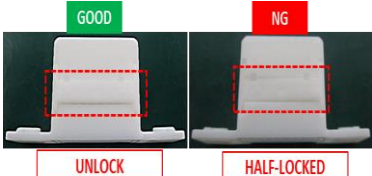
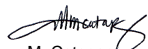

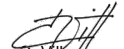

	<b>WORK INSTRUCTION</b>				Effectivity Date:		<b>May 05, 2022</b>	
	Process Name/Title: <b>TAPING ASSEMBLY PROCESS</b>				Validity Date:		n/a	
	Product Name/Code: <b>014B / 17J924-7051Y</b>		Customer: <b>NBS</b>		Document No.:		<b>WI-ENG-PDE-493E</b>	
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO		Revision No.:		1	Page No.:	1 of 7	

<b>PARTS:</b>		1. Assy parts		<b>JIG:</b>		1. Insertion jig	
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>				<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>
1	P5  Connector setting to insertion jig (Assy parts) 4F1640-000 (W)	<div>  <p><b>INSERTION JIG</b></p> <p><b>CONNECTOR ORIENTATION</b></p> <p><b>Visual reference</b></p> <p><b>Guide Lock</b></p> <p><b>Lever</b></p> <p><b>Holder</b></p> <p><b>Note: Check the connector before insertion.</b></p> <p>1. Set the connector <b>4F1640-000 (W)</b> (Assy parts with <b>Black sunprene tube</b>) to holder using both hands.</p> <p>2. Set the connector <b>4F1640-000 (W)</b> (Assy parts with <b>Green sunprene tube</b>) to insertion jig using right hand. <b>Note: Follow the connector orientation.</b></p> <p><b>BEFORE PRESSING</b></p> <p><b>AFTER PRESSING</b></p> <p>3. Press the guide lock using left index finger.</p> <p>4. Hold the <b>Group 3 wires (3pcs)</b> using right hand for insertion.</p> <p><b>Guide Lock</b></p> </div>				<div> <p><b>Safety Instruction</b></p> <p>Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</p> <p><b>Housekeeping</b></p> <p>1. Maintain and always practice 5's.</p> <p>2. Personal things on the workplace is prohibited. Keep it in your locker.</p> <p><b>Alert level</b></p> <p>For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</p> <p><b>Finger COTS</b></p>  </div>	<div> <p>1. Use the provided jig per model</p> <p>2. No wrong usage of parts</p> <p>3. No wrong orientation of connector</p> <p>4. No damaged connector</p> <p><b>Note: If encountered abnormality, STOP and immediately CALL the attention of the leader. WAIT for further instruction and continue the process. Do not attempt to repair.</b></p> <div>  <p><b>GOOD</b> <b>UNLOCK</b></p> <p><b>NG</b> <b>HALF-LOCKED</b></p> </div> </div>

Revision History								Prepared by	Reviewed by	Approved by	Noted by
05/05/22	1	Change document purpose from pre-launch to masspro	M. Catapang	J. Loterte	C. Villanueva	A. Arañes					
04/28/22	0	Initial issue	M. Catapang	J. Loterte	C. Villanueva	A. Arañes	M. Catapang	J. Loterte	C. Villanueva	A. Arañes	
Eff. Date	Rev. No	Details of Change	Revised	Checked	Approved	Noted	Est. Date:	April 28, 2022			

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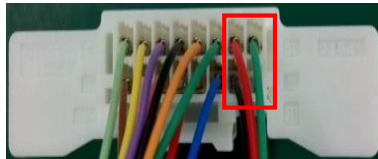

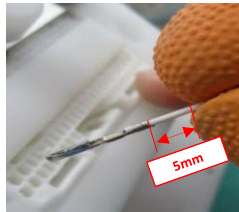
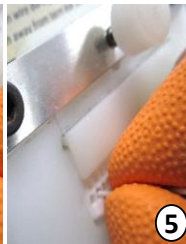
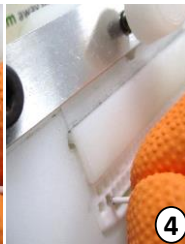
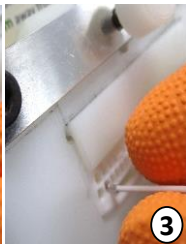
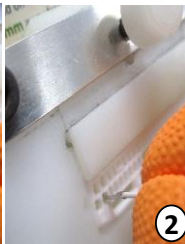
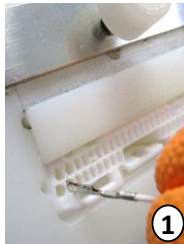
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**PARTS:**

1. Assy parts

**JIG**

1. Insertion jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION								TOOLS/PPE	QUALITY POINTERS																																																			
2	P5	Wire insertion to connector (Group 3 wires) 4F1640-000 (W) (Assy parts)	<div>WIRE INSERTION ILLUSTRATION</div> 	<table><tr><td></td><td colspan="8">GREEN SUNPRENE TUBE (GROUP 1&amp;3 WIRES)</td><td></td></tr><tr><td>SECOND ROW TO INSERT</td><td>LG</td><td>Y</td><td>V</td><td>B</td><td>OR</td><td>G</td><td>R</td><td>G</td><td></td></tr><tr><td></td><td>176</td><td>180</td><td>177</td><td>181</td><td>181</td><td>188</td><td>189</td><td>190</td><td></td></tr><tr><td>FIRST ROW TO INSERT</td><td>BR</td><td>W</td><td>P</td><td>GR</td><td>R</td><td>L</td><td>B</td><td>EMPTY</td><td></td></tr><tr><td></td><td>179</td><td>185</td><td>178</td><td>181</td><td>184</td><td>184</td><td>190</td><td>EMPTY</td><td></td></tr></table>									GREEN SUNPRENE TUBE (GROUP 1&3 WIRES)									SECOND ROW TO INSERT	LG	Y	V	B	OR	G	R	G			176	180	177	181	181	188	189	190		FIRST ROW TO INSERT	BR	W	P	GR	R	L	B	EMPTY			179	185	178	181	184	184	190	EMPTY		<div>Finger COTS</div> 	<div>1. No wrong wire insertion 2. No terminal backing out 3. No deformed terminal 4. Make sure wires are properly inserted. 5. Must have slight MOVEMENT after insertion 6. No bend terminal/wires</div>
				GREEN SUNPRENE TUBE (GROUP 1&3 WIRES)																																																											
			SECOND ROW TO INSERT	LG	Y	V	B	OR	G	R	G																																																				
				176	180	177	181	181	188	189	190																																																				
			FIRST ROW TO INSERT	BR	W	P	GR	R	L	B	EMPTY																																																				
	179	185	178	181	184	184	190	EMPTY																																																							
<div><div>WIRE FACING</div><div>Note: Hold on wire during insertion must be 5mm away from terminal end.</div></div>	<div><div>1. Get the wire and hold it 5mm away from terminal. 2. Half insert the wire. 3. Release wire to check the color. 4. Hold again 5mm away from terminal 5. Fully inserted wires (avoid bending during insertion) Note: Follow the insertion sequence based on the visual reference</div></div>	<div>Note: Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.</div>																																																													
<div></div>		<div>Note: Automatically dispose and replace the unit if once encountered Bend terminal, Difficulty of insertion, Half-locked connector.</div>																																																													
		<div>Note: If encountered abnormality, STOP and immediately CALL the attention of the leader. WAIT for further instruction and continue the process. Do not attempt to repair.</div>																																																													

**Finger COTS**

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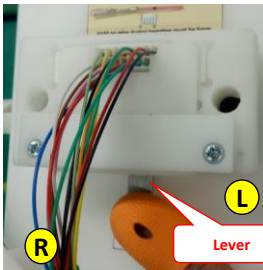
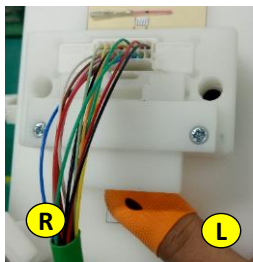
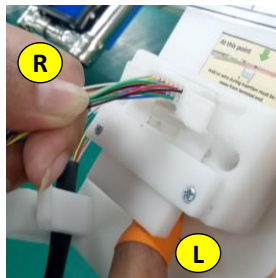

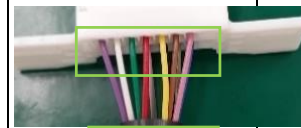
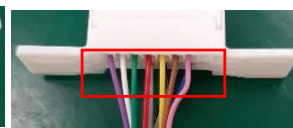




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PARTS:		1. Assy parts		JIG	1. Insertion jig 2. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	P5	Wire insertion to connector (Group 3 wires) 4F1640-000 (W) (Continuation)	<div><b>BEFORE PRESSING</b></div>  <div><b>AFTER PRESSING</b></div>   <div>6. Press the button using left thumb.</div> <div>7. Hold the wires using right hand then gently pull out the connector from jig. Check the insertion condition.</div>	<div><b>Finger COTS</b></div>   <div><b>GOOD</b></div>  <div><b>NG</b></div>	1. No wrong wire insertion 2. No terminal backing out 3. No deformed terminal 4. Make sure wires are properly inserted. 5. Must have slight MOVEMENT after insertion 6. No bend terminal/wires
3		Connector lock	 <div>1. Put the connector to locking jig using right hand then press down the connector to locking jig <b>2x</b> using right thumb. 2. Touch the connector lock after locking. <b>Note: Please refer to GL-PRO-ASY-017 for the verification of connector lock.</b></div> <div><b>Before lock</b></div>  <div><b>After lock</b></div> 	<div><b>LOCKING</b></div> 	<div><b>NOTE: MANUAL LOCKING MAY CAUSED DAMAGED LOCK.</b></div> <div>1. No damaged double lock. 2. No halved lock connector</div>

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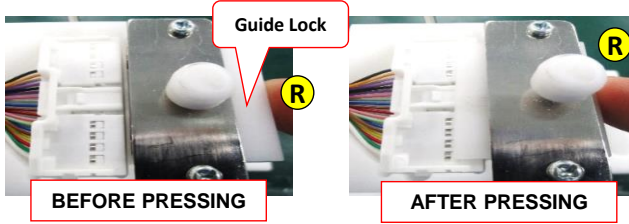
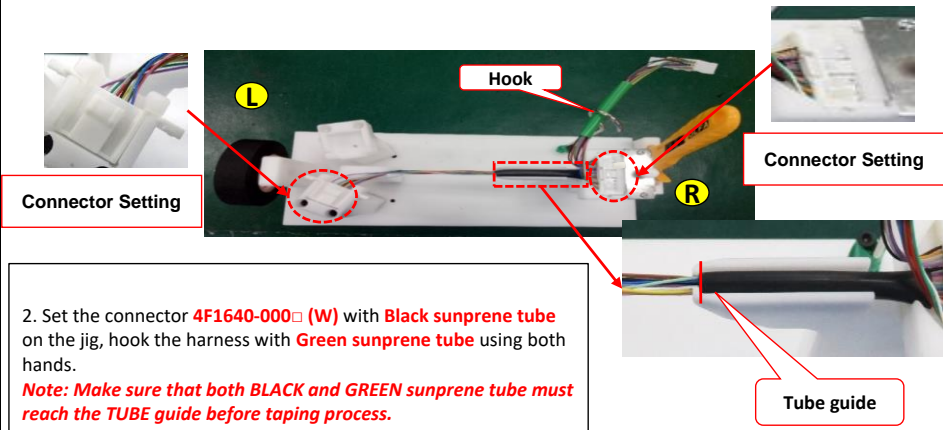

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**PARTS:**

1. Assy parts
2. Tesa tape [1pc]

**JIG**

1. Taping jig

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	P5 Taping 1 & 2 Wire taping (Tesa)	<div><p>1. Set the connector <b>1827842-1 (W)</b> then push the guide lock using right index finger.</p></div> <div><p>2. Set the connector <b>4F1640-000□ (W)</b> with <b>Black sunprene tube</b> on the jig, hook the harness with <b>Green sunprene tube</b> using both hands.</p><p><b>Note: Make sure that both BLACK and GREEN sunprene tube must reach the TUBE guide before taping process.</b></p></div>		<ol style="list-style-type: none"><li>1. No wrong setting of harness</li><li>2. No wrong orientation of connector</li></ol>

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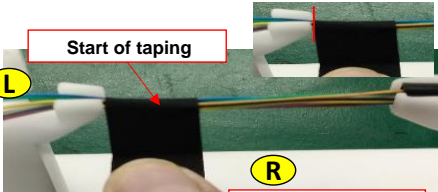
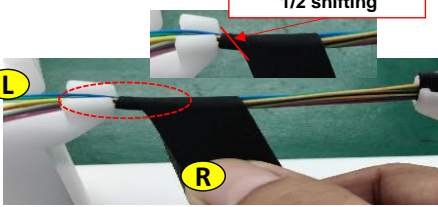



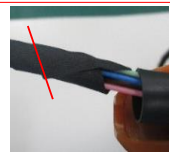
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**PARTS:**

1. Assy parts

**JIG**

1. Taping jig

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	P5 Taping 1 & 2 Wire taping (Tesa) (Continuation)	<div><p>Start of taping</p><p>1/2 shifting</p></div> <div><p>3. Using the guide, make <b>1 winding</b> of tape before shifting.</p><p>4. Wind the <b>1/2 shifting or 3-4 winds</b> going to the right side near vinyl tube using both hands.</p><p>5. Use the provided cutter to cut the tesa tape using right hand.</p><p>6. Remove the harness in jig using left hand then press the tape using right hand.</p></div>	 <p>OLFA Cutter</p>	<div><p>The end tape must be half wrap</p></div> <div><p>1. No loose tape 2. No excessive tape winding 3. No damage on parts 4. No peel off tape 5. No bend wire 6. No NG of end tape</p></div>

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**PARTS:**

1. Assy parts

**JIG**

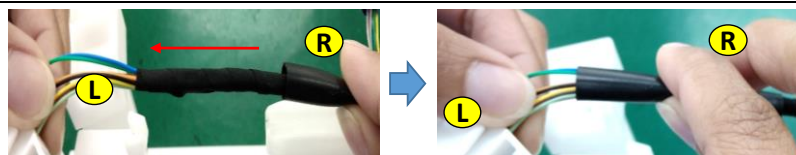
1. Taping jig
2. Measuring jig

**NO.****PROCESS NAME****WORK PROCEDURE/ ILLUSTRATION****TOOLS/PPE****QUALITY POINTERS**

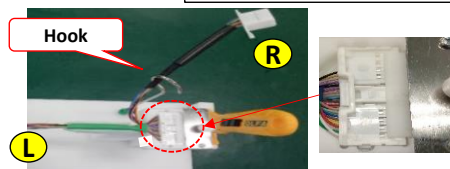
4

P5

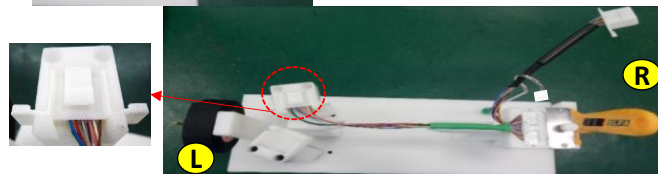
Taping 1 & 2  
Wire taping (Tesa)  
(Continuation)



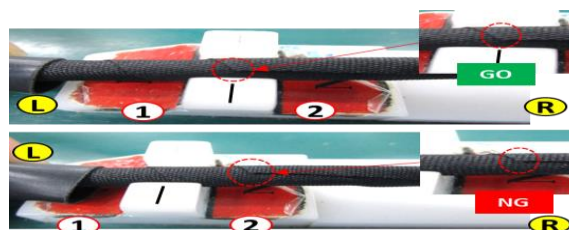
7. After taping, move the vinyl tube to left side using right hand.



8. Place the assy parts with **Black sunprene tube** to Hook.



9. Set the assy with **Green sunprene tube** then repeat the process from step 3 to 7.



10. After taping, check the **END POINT TAPE** using measuring jig.  
**Note: END POINT TAPE should be within the limit GO. If end point tape reaches the location 1 and 2 it will be considered as NG.**

OLFA Cutter



The end tape must be half wrap



1. No loose tape
2. No excessive tape winding
3. No damage on parts
4. No peel off tape
5. No bend wire
6. No NG of end tape

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**PARTS:**

1. Assy parts

**JIG**

1. WIP Holder

**NO.****PROCESS NAME****WORK PROCEDURE/ ILLUSTRATION****TOOLS/PPE****QUALITY POINTERS**

5

P5

Pass WIP to P6



1. Pass WIP to WIP Holder.  
**Note: One piece flow.**

**WIP HOLDER**

1. No WIP overflow

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