



WORK INSTRUCTION TAPING ASSEMBLY PROCESS

Effectivity Date:

August 12, 2021

Process Name/Title:

TAPING ASSEMBLY PROCESS

Validity Date:

n/a

Product Name/Code:

240B / 17J613-7091P

Customer:

NBC

Document No.:

WI-ENG-PDE-300E

Purpose:

☐ PROTOTYPE☒ PRE-LAUNCH☐ MASSPRO

Revision No.:

0

Page No.:

1 of 7

PARTS:	1. Assy parts	JIG:	1. Insertion jig			
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS		
1	P5 Connector setting to insertion jig (Assy parts) 4F1640-000 (W)	<div><div>INSERTION JIG</div><div>Visual reference</div><div>Guide Lock</div><div>Button</div><div>Holder</div><div>Connector Orientation</div><div>Note: Check the connector before insertion.</div><div>1. Set the connector 4F1640-000 (W) (Assy parts with Black sunprene tube) to holder using both hands.</div><div>2. Set the connector 4F1640-000 (W) (Assy parts with Green sunprene tube) to insertion jig using right hand. Note: Follow the connector orientation.</div><div>3. Press the guide lock button using left index finger.</div><div>4. Hold the Group 3 wires (3pcs) using right hand for insertion.</div><div>BEFORE PRESSING</div><div>AFTER PRESSING</div></div> <div><div>Safety Instruction</div><div>Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</div><div>Housekeeping</div><div>1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.</div><div>Alert level</div><div>For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</div><div>Finger COTS</div></div> <div><div>1. Use the provided jig per model 2. No wrong usage of parts 3. No wrong orientation of connector 4. No damaged 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><div><div>GOOD</div><div>NG</div><div>UNLOCK</div><div>HALF-LOCKED</div></div></div>				
Revision History		Prepared by		Reviewed by	Reviewed by	Approved by
08/12/21 0 Initial issue		D. Castillo		C. Villanueva	A. Shimamura	A. Arañes
Eff. Date	Rev. No	Details of Change	Revised	Checked	Approved	Noted

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

August 12, 2021

Product Name/Code:

240B / 17J613-7091P

Customer:

NBC

Validity Date:

n/a

Purpose:

☐ PROTOTYPE☒ PRE-LAUNCH☐ MASSPRO

Document No.:

WI-ENG-PDE-300E

Revision No.:

0

Page No.:

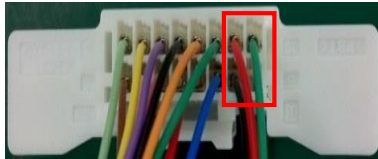

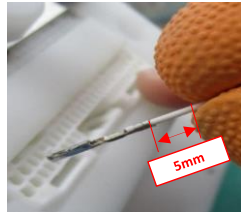
2 of 7

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&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> 	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
				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</div><div>2</div><div>3</div><div>4</div><div>5</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>																																																								

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

August 12, 2021

Product Name/Code:

240B / 17J613-7091P

Customer:

NBC

Document No.:

WI-ENG-PDE-300E

Purpose:

☐ PROTOTYPE☒ PRE-LAUNCH☐ MASSPRO

Revision No.:

0

Page No.:

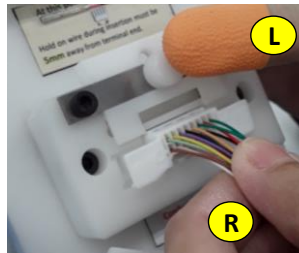

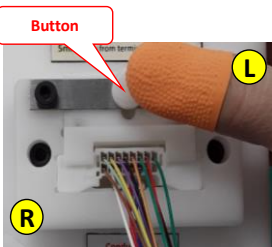






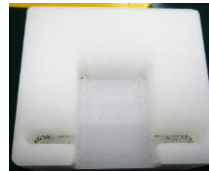
3 of 7

PARTS:

1. Assy parts
2. Tesa

JIG

1. Insertion jig

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
2	Wire insertion to connector (Group 3 wires) 4F1640-000 (W) (Continuation)	<div></div> <div>BEFORE PRESSING</div> <div>AFTER PRESSING</div> <div><p>6. Press the button using left thumb.</p></div> <div><p>7. Hold the wires using right hand then gently pull out the connector from jig. Check the insertion condition.</p></div>	<div>Finger COTS</div>  <div>GOOD</div>  <div>NG</div> 	<ol style="list-style-type: none">1. No wrong wire insertion2. No terminal backing out3. No deformed terminal4. Make sure wires are properly inserted.5. Must have slight MOVEMENT after insertion6. No bend terminal/wires
3	Connector lock	<div></div> <div><p>1. Put the connector to locking jig using right hand then press down the connector to locking jig 2x using right thumb.</p><p>2. Touch the connector lock after locking.</p><p>Note: Please refer to GL-PRO-ASY-017 for the verification of connector lock.</p></div> <div>Before lock</div>  <div>After lock</div> 	<div>LOCKING</div> 	<p>NOTE: MANUAL LOCKING MAY CAUSED DAMAGED LOCK.</p> <ol style="list-style-type: none">1. No damaged double lock.2. No halfed lock connector

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

Effectivity Date:

August 12, 2021

Process Name/Title:

TAPING ASSEMBLY PROCESS

Validity Date:

n/a

Product Name/Code:

240B / 17J613-7091P

Customer:

NBC

Document No.:

WI-ENG-PDE-300E

Purpose:

☐ PROTOTYPE☒ PRE-LAUNCH☐ MASSPRO

Revision No.:

0

Page No.:

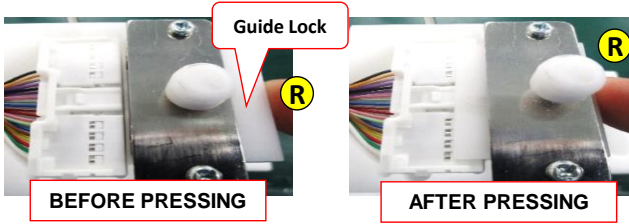
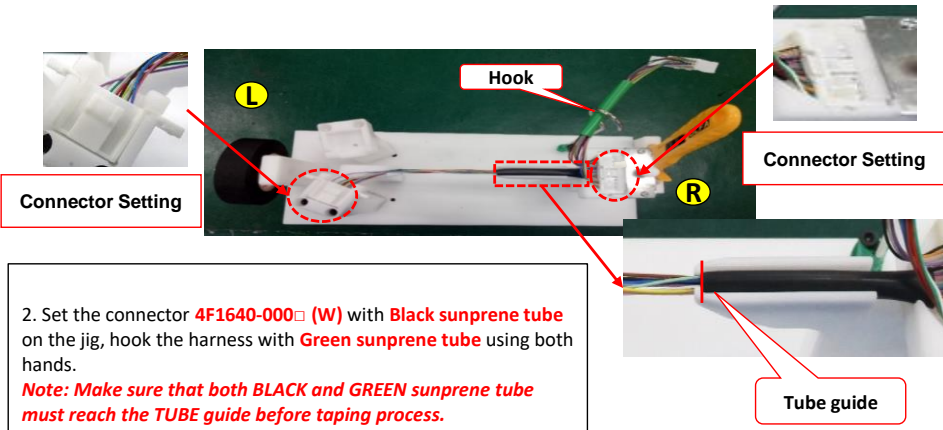

4 of 7

PARTS:

1. Assy parts
2. Tesa

JIG

1. Insertion 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 1827842-1 (W) then push the guide lock using right index finger.</p></div> <div><p>2. Set the connector 4F1640-000 (W) with Black sunprene tube on the jig, hook the harness with Green sunprene tube using both hands. Note: Make sure that both BLACK and GREEN sunprene tube must reach the TUBE guide before taping process.</p></div>	 <p>OLFA Cutter</p>	<ol style="list-style-type: none">1. No wrong setting of harness2. No wrong orientation of connector

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

August 12, 2021

Product Name/Code:

240B / 17J613-7091P

Customer:

NBC

Validity Date:

n/a

Purpose:

☐ PROTOTYPE☒ PRE-LAUNCH☐ MASSPRO

Document No.:

WI-ENG-PDE-300E

Revision No.:

0

Page No.:

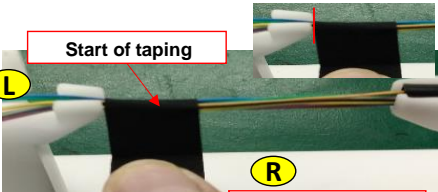
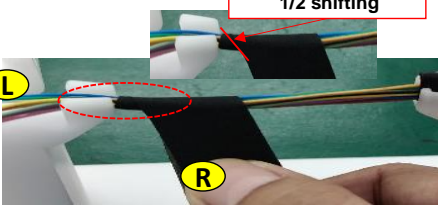




5 of 7

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 1 winding of tape before</p><p>4. Wind the 1/2 shifting or 3-4 winds 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>

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

Effectivity Date:

August 12, 2021

Process Name/Title:

TAPING ASSEMBLY PROCESS

Validity Date:

n/a

Product Name/Code:

240B / 17J613-7091P

Customer:

NBC

Document No.:

WI-ENG-PDE-300E

Purpose:

☐ PROTOTYPE☒ PRE-LAUNCH☐ MASSPRO

Revision No.:

0

Page No.:

6 of 7

PARTS:

1. Assy parts

JIG

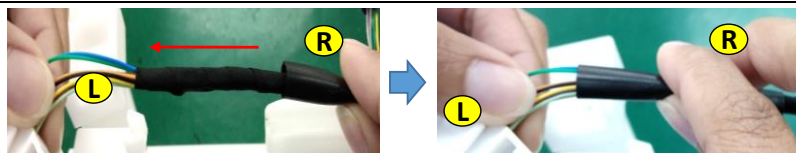
1. Taping jig
2. Measuring jig

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

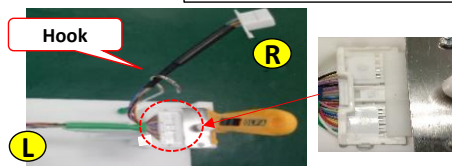
4

P5

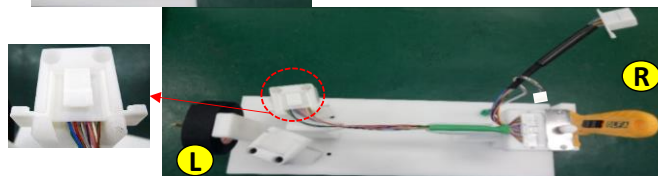
Taping 1 & 2
Wire taping (Tesa)
(Continuation)



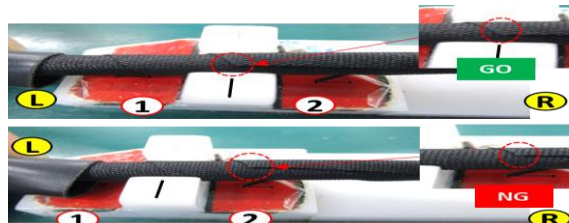
7. After taping, move the vinyl tube to left side using right hand.



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

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp

**WORK INSTRUCTION**

Effectivity Date:

August 12, 2021

Process Name/Title:

TAPING ASSEMBLY PROCESS

Validity Date:

n/a

Product Name/Code:

240B / 17J613-7091P

Customer:

NBC

Document No.:

WI-ENG-PDE-300E

Purpose:

☐ PROTOTYPE☒ PRE-LAUNCH☐ MASSPRO

Revision No.:

0

Page No.:

7 of 7**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

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp