

**WORK INSTRUCTION**Process Name/Title: **TAPING ASSEMBLY PROCESS**

Effectivity Date:

April 28, 2023

Model Code/Part Number: **TM3 / 7L0114-7020A**Customer: **TRQSS**

Validity Date:

n/a

Purpose: ☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Document No.:

WI-ENG-PDE-314B

Revision No.:

3

Page No.:

1 of 9

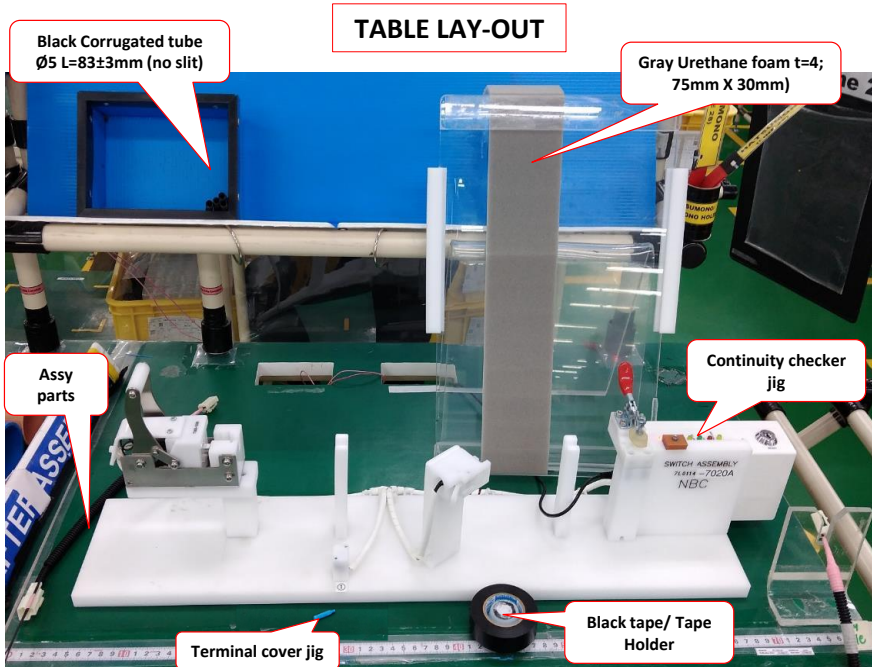
PARTS:

1. Assy parts
2. Black corrugated tube (no slit) Ø5 L=83±3mm

3. Black tape
4. Gray Urethane foam t=4; 75mm X 30mm)

JIG:

1. Continuity checker jig
2. Terminal cover jig

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
1	P2 Table Lay-out		<p>Safety Instruction Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</p> <p>Housekeeping 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.</p> <p>Alert level For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</p>	<ol style="list-style-type: none">1. No missing parts/tools2. No excess parts/tools

Revision History

Eff. Date	Rev. No	Details of Change	Revised	Reviewed by	Approved	Noted	Est. Date:	Prepared by	Reviewed by	Approved by	Noted by
04/28/23	3	Inclusion of quality checkpoints	J. Loterte	C. Villanueva	A. Arañes	n/a					
10/07/22	2	Change tolerance from 35+/-3mm to 35+3/-1mm as countermeasure of encountered NG dimension from end of tape up to terminal tip on process no.4.quality pointers: Reminders/notes and references in page no.2,3,4,5,6,7 and 8 due to document improvement. Work procedure/illustration in process no.7-Visual/by two's inspection.	M.Ariola	J. Loterte	C. Villanueva	A. Arañes					
09/24/21	1	Improve all process description and illustration; Change from pre-launch to masspro	M. Catapang	J. Loterte	C. Villanueva	A. Arañes					
08/02/21	0	Initial issue	M. Catapang	C. Villanueva	A. Shimamura	A. Arañes					
								J. Loterte	C. Villanueva	A. Arañes	n/a

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

TAPING ASSEMBLY PROCESS

Effectivity Date:

April 28, 2023

Process Name/Title:

Model Code/Part Number: **TM3 / 7L0114-7020A**

Customer:

TRQSS

Validity Date:

n/a

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Document No.:

WI-ENG-PDE-314B

Revision No.:

3

Page No.:

2 of 9

PARTS:

1. Assy parts
2. Black tape

3. Black corrugated tube (no slit) $\varnothing 5$ L=83 \pm 3mm

JIG

1. Terminal cover jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

2

Wire insertion to
Black corrugated tube
 $\varnothing 5$ L=83 \pm 3mm
(no slit)



1. Hold the wires using left hand, get the terminal cover jig using right hand then insert the **B-B wires** using left hand.



2. Get the corrugated tube (**no slit**) $\varnothing 5$ L=83 \pm 3mm using right hand then insert the **B-B wires** using left hand.



3. After insertion, remove the terminal cover jig using right hand.

TERMINAL COVER JIG

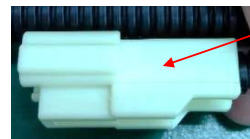
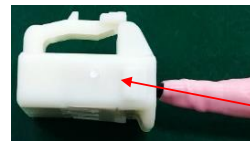


1. No wrong usage of parts
2. No deformed terminal tip

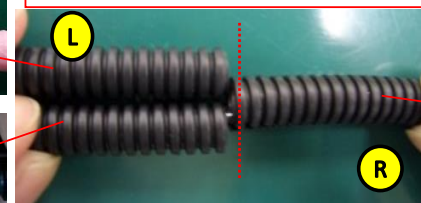
3

P2

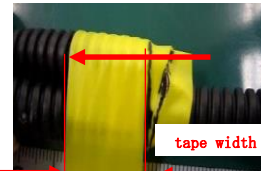
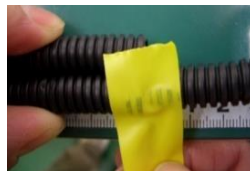
Y-Taping



No gap between Corrugated tubes



1. Fix the corrugated tube.

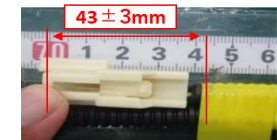


2. Start taping at the middle of combined Corrugated tubes, then wind the tape to left side, measurement from end of connector up to end of tape must be **43mm**.

1. No flip-out tape
2. No peel-off tape
3. No loose tape
4. No missing tape
5. No wrong use of tape
6. No wrong dimension

Important reminders/Note/s:

1. Used **YELLOW TAPE** easy visualization of shifting lines, but actuals should be **BLACK TAPE**.
2. Do not exert excessive force during pulling & winding of tape.



CORRECT MEASUREMENT

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**Model Code/Part Number: **TM3 / 7L0114-7020A**Customer: **TRQSS**Purpose: ☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Effectivity Date:

April 28, 2023

Validity Date:

n/a

Document No.:

WI-ENG-PDE-314B

Revision No.:

3

Page No.:

3 of 9

PARTS:

1. Assy parts
2. Black tape

JIG

n/a

NO.

PROCESS NAME

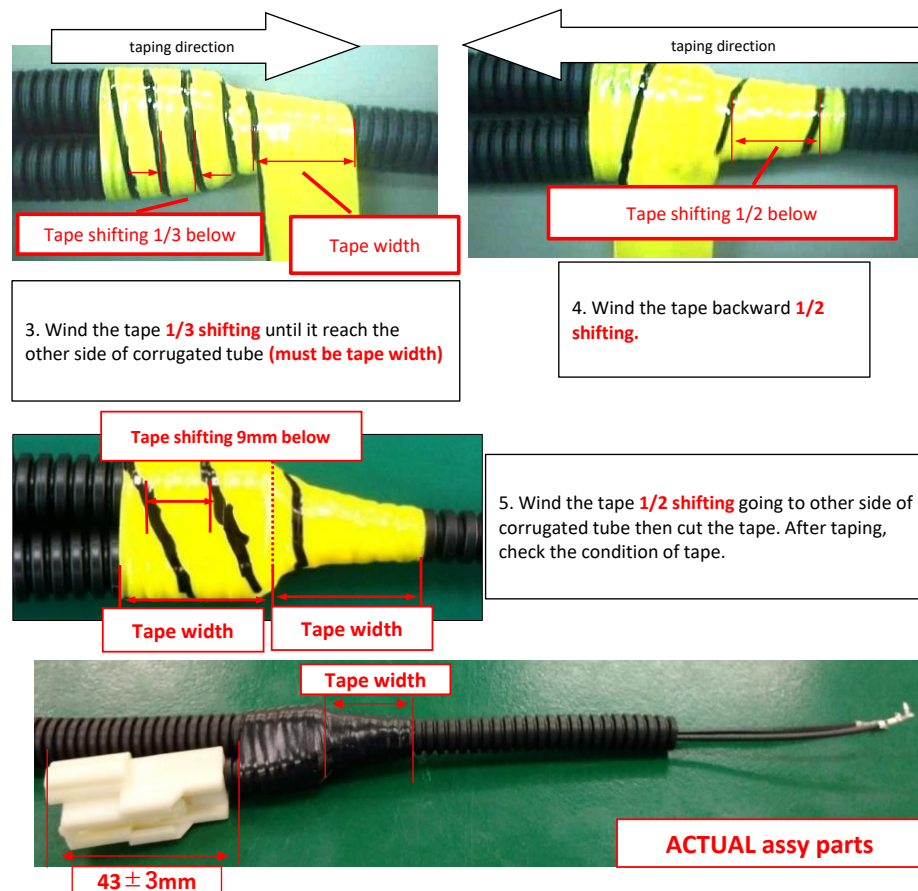
WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

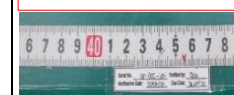
QUALITY POINTERS

3

P2

Y-Taping
(Continuation)

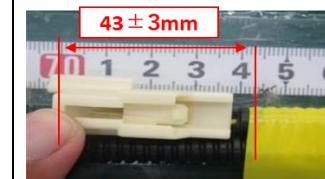
MEASURING TAPE



1. No flip-out tape
2. No peel-off tape
3. No loose tape
4. No missing tape
5. No wrong use of tape
6. No wrong dimension

Important reminders/Note/s:

1. Used YELLOW TAPE for easy visualization of shifting lines, but actual should be BLACK TAPE.
2. Please use calibrated/verified measuring tape when getting the measurement.

CORRECT
MEASUREMENT

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

TAPING ASSEMBLY PROCESS

Effectivity Date:

April 28, 2023

Process Name/Title:

Model Code/Part Number: **TM3 / 7L0114-7020A**

Customer:

TRQSS

Validity Date:

n/a

Document No.:

WI-ENG-PDE-314B

Purpose:



PROTOTYPE



PRE-LAUNCH



MASSPRO

Revision No.:

3

Page No.:

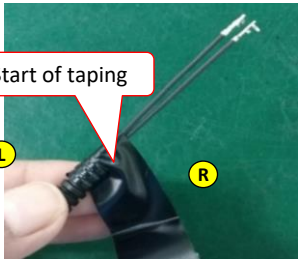
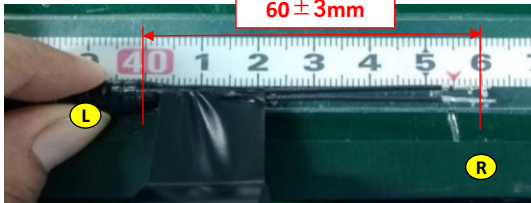

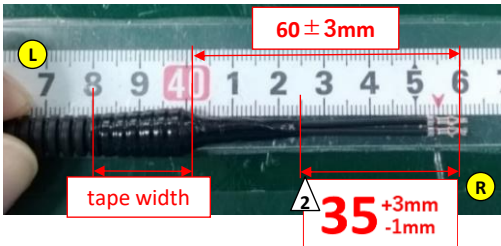

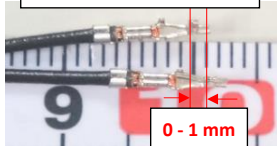
4 of 9

PARTS:

1. Assy parts
2. Black tape

JIG

n/a

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	P2 Taping 1 COT to wire near terminal	<div><p>Start of taping</p></div> <div><p>60 ± 3mm</p></div> <div><p>1. Hold the COT using left hand, get the Black tape using right hand then start pre-taping using both hands.</p></div> <div><p>35 +3mm -1mm</p></div> <div><p>2. Measure from end of COT up to terminal pointed tip 60±3mm then continue the taping process using both hands.</p></div> <div><p>60 ± 3mm</p><p>tape width</p><p>35 +3mm -1mm</p></div> <div><p>3. Confirm measurement of 35 +3/-1mm from end of tape up to terminal pointed tip then continue the taping process using both hands.</p></div> <div><p>4. After taping, check the measurement, taping condition and terminal appearance.</p></div>	 <p>MEASURING TAPE</p>	<ol style="list-style-type: none">1. No flip-out tape2. No peel-off tape3. No loose tape4. No missing tape5. No wrong use of tape6. No wrong dimension <p>Important reminders/Note/s:</p> <p>1. Please use calibrated/verified measuring tape when getting the measurement.</p> <div><p>Wire alignment tolerance</p><p>0 - 1 mm</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

TAPING ASSEMBLY PROCESS

Process Name/Title:

Model Code/Part Number: **TM3 / 7L0114-7020A**

Customer:

TRQSS

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Effectivity Date:

April 28, 2023

Validity Date:

n/a

Document No.:

WI-ENG-PDE-314B

Revision No.:

3

Page No.:

5 of 9

PARTS:

1. Assy parts
2. Gray Urethane foam t=4; 75mm X 30mm

JIG

n/a

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

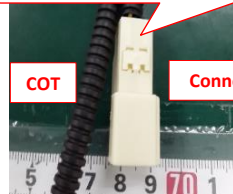
QUALITY POINTERS

5

P2

Urethane foam attachment

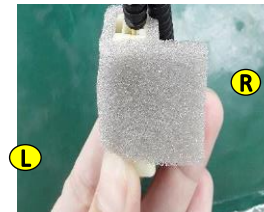
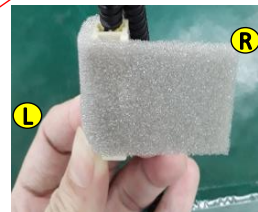
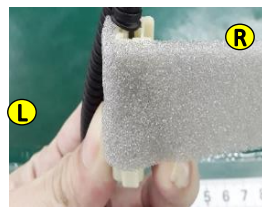
Step 1: Identify the right facing to attached the foam



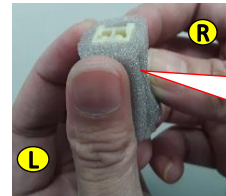
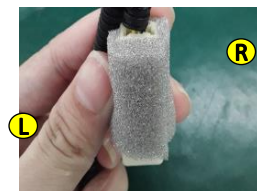
Step 2: Get the Urethane foam and begin the attachment.



Step 3: Attached the foam in all sides of the connector.



Step 4: Press the Urethane foam side by side after attachment.



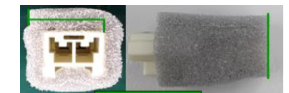
n/a

1. No damaged Urethane foam
2. No missing Urethane foam
3. No stretched Urethane foam

Important reminders/Note/s:

1. Foam and connector must be align.
2. Follow the attachment sequence based on the illustration.
3. Do not stretch the Urethane foam.
4. Tolerance from Urethane foam to connector must be 0~3mm.

URETHANE FOAM CONDITION



NG



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

Model Code/Part Number: **TM3 / 7L0114-7020A**

Customer: **TRQSS**

Purpose: ☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Effectivity Date:

April 28, 2023

Validity Date:

n/a

Document No.:

WI-ENG-PDE-314B

Revision No.:

3

Page No.:

6 of 9

PARTS:

1. Assy parts

JIG

1. Continuity checker jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

6

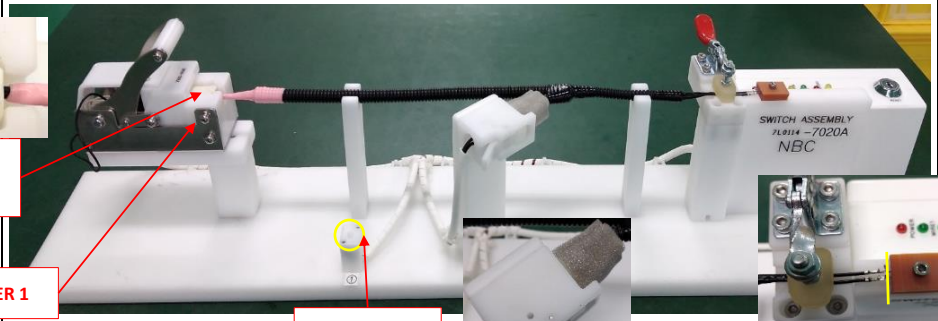
P2

Continuity Test



CONNECTOR
SETTING

CHECKER 1



SW Button

CLIP CHECKER
2

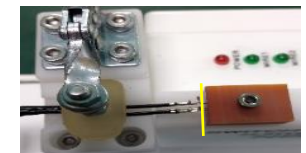
STOPPER

n/a

1. No wrong insert
2. No wrong orientation of connector

Important reminders/Note/s:

1. Make sure no gap between the terminal and stopper.



STOPPER

1. Get the assy parts and set to tester jig using both hands. (*See above picture for correct setting*). First set the connector **7283-1030 (W)** to **Checker 1** then pull the checker fixture for continuity checking. Second, set the connector **7282-1028 (W)** to **Clip checker** then lock. Last, set the **B-B wires** to together within the stopper jig then press by toggle clamp.

3. Press the **SW** button using right index finger for continuity checking. **Go** sound will be heard.

2. Check if all **LED** light for **Power ON, Wire1 & Wire2** was **ON**. If encounter abnormality or hearing **NG** buzzer, **STOP** and immediately **CALL** the attention of the leader. **WAIT** for further instruction and continue the process.

4. Conduct **POINT CHECKING** before removing the harness from jig.

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


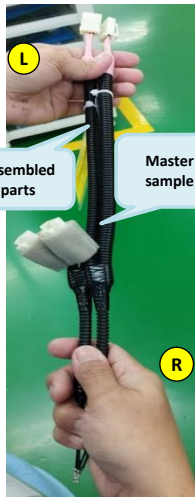

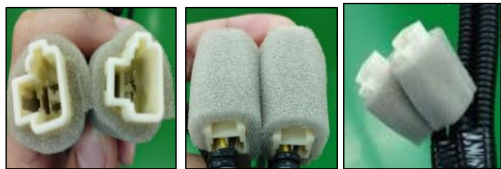

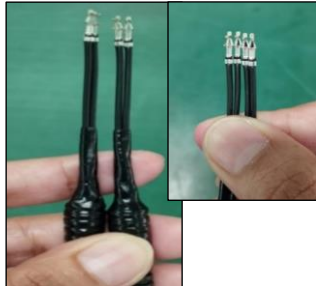
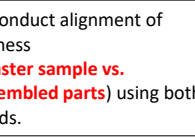

TAPING ASSEMBLY PROCESS

Effectivity Date:	April 28, 2023
Validity Date:	n/a
Document No.:	WI-ENG-PDE-314B
Revision No.:	3
Page No.:	7 of 9

Process Name/Title: **TAPING ASSEMBLY PROCESS**

Model Code/Part Number: **TM3 / 7L0114-7020A** Customer: **TRQSS**

Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ☒ MASSPRO

PARTS:		1. Assembled parts 2. Master sample		JIG	n/a	
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
7	P2	Visual/By Two's Inspection	<div><div><p>ACTUAL PRODUCT</p></div><div><div><div><p>Assembled parts</p><p>Master sample</p></div><div><p>2. Check the connector lock, insertion, terminal, Taping condition and color of tape (PINK TAPE).</p></div><div><p>3. Check the terminal, insertion and presence of Urethane foam attachment.</p></div><div><p>4. Check the Y-Taping condition.</p></div><div><p>5. Check the terminal, insertion and taping condition. Must no deformed terminal.</p></div><div><p>1. Conduct alignment of harness (Master sample vs. Assembled parts) using both hands.</p></div></div></div></div>			<div><div>MASTER SAMPLE</div><p>1.No skip checking during inspection.</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**

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

April 28, 2023

Model Code/Part Number:

TM3 / 7L0114-7020A

Customer:

TRQSS

Validity Date:

n/a

Document No.:

WI-ENG-PDE-314B

Purpose:

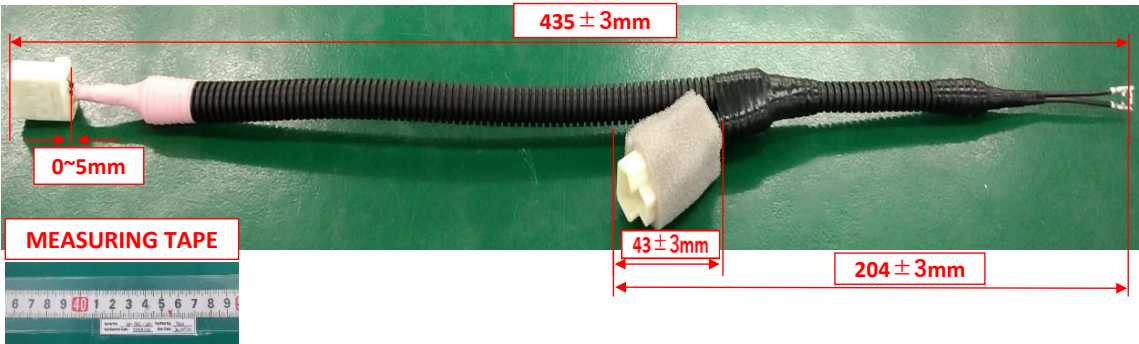
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

3

Page No.:

8 of 9

PARTS:		n/a			JIG	n/a
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
8	Measurement					1. No wrong dimension. Important reminders/Note/s: 1. For Hatsumono and Owarimono. 2. Please use calibrated/verified measuring tape when getting the measurement.
	P2					

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

TAPING ASSEMBLY PROCESS

Effectivity Date:

April 28, 2023

Process Name/Title:

Model Code/Part Number: **TM3 / 7L0114-7020A**

Customer:

TRQSS

Validity Date:

n/a

Document No.:

WI-ENG-PDE-314B

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Revision No.:

3

Page No.:

9 of 9

PARTS:

n/a

JIG

n/a



QUALITY CHECKPOINTS

P2

7L0114-7020A



GOOD



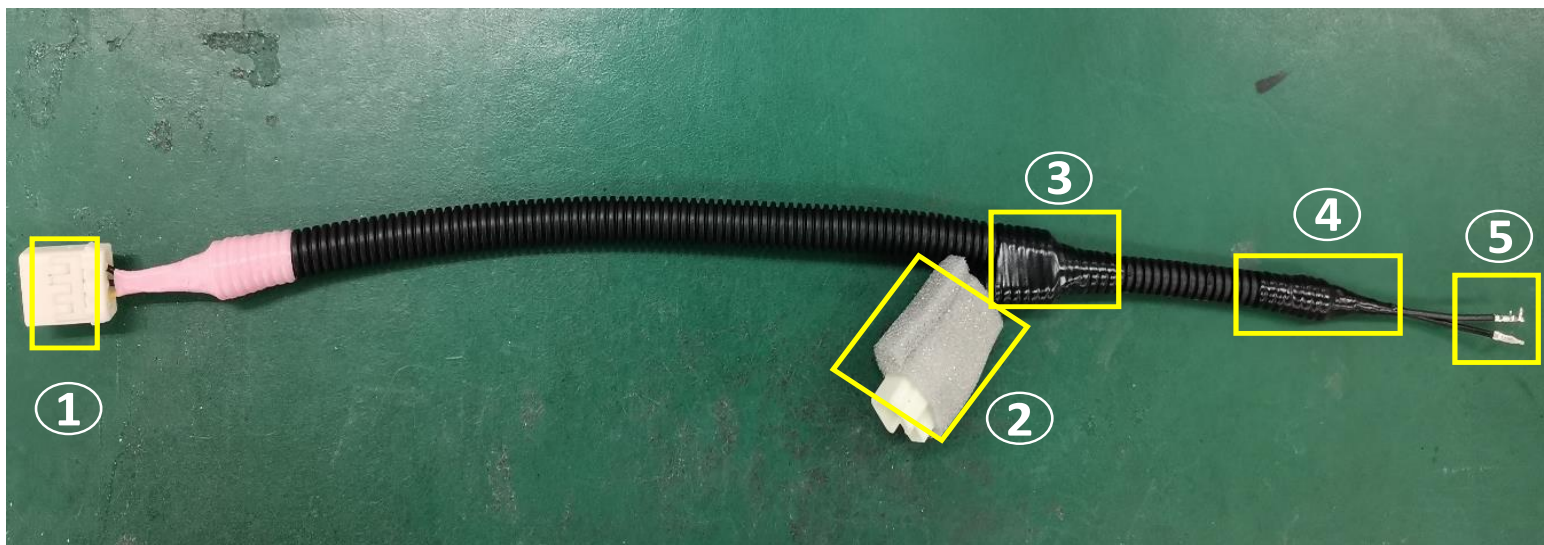
NO GOOD



GOOD



NO GOOD



① No Unlocked/ Half Locked Connector

② No Missing Sponge

③④ No Missing Tape

⑤ No Deformed Terminal

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