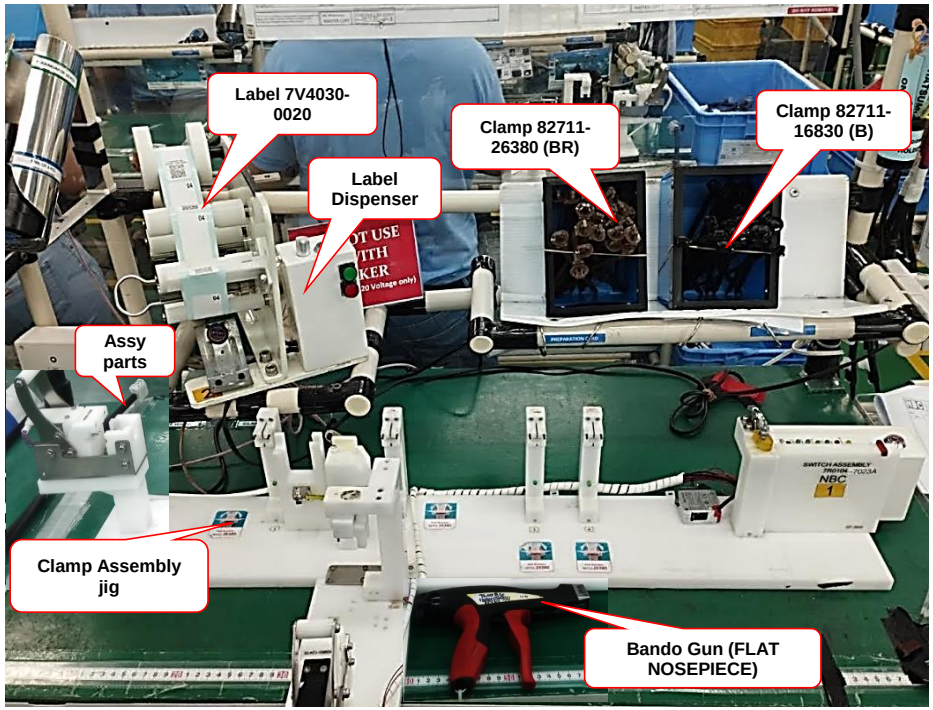
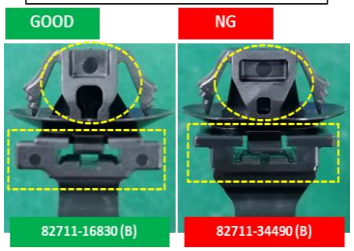
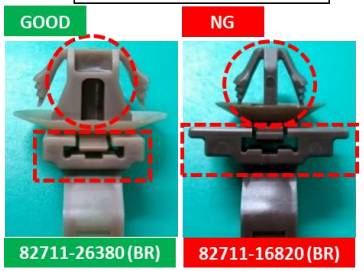
	WORK INSTRUCTION			Effectivity Date:	February 13, 2024	
	Process Name/Title:	CLAMP ASSEMBLY PROCESS		Validity Date:	n/a	
	Model code/Part number: 780B / 7R0104-7023A	Customer: TRMX	Car Model: TOYOTA-TUNDRA	Document No.:	WI-ENG-PDE-832	
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	0	Page No.: 1 of 11

PARTS:	1. Assy Parts; Clamp 82711-26380 (BR); Clamp 82711-16830 (B); Label 7V4030-0020	JIG:	1. Clamp assembly jig 2. Label dispenser

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
1	Clamp Assy	Table Lay-out	**TABLE LAY-OUT**  	**Safety Instruction** Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.) **Housekeeping** 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker. **Alert level** For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.	1.No missing parts/tools 2. No excess parts/tools BAND CLAMP ILLUSTRATION  BAND CLAMP ILLUSTRATION 

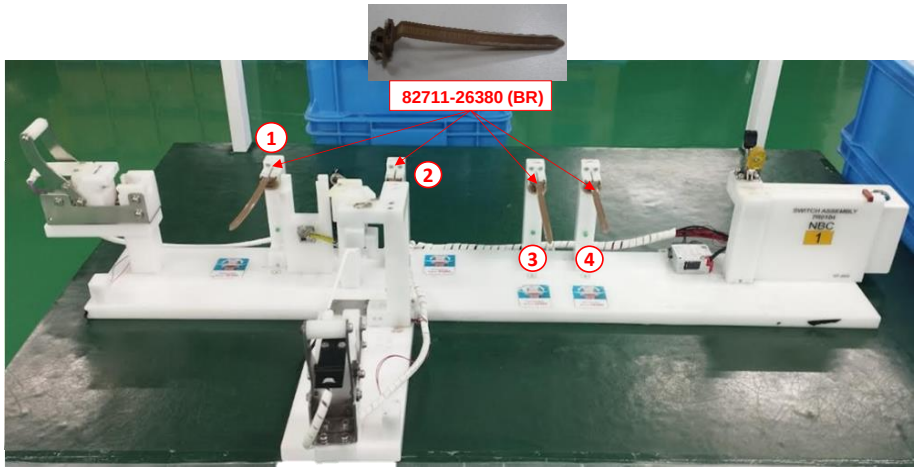
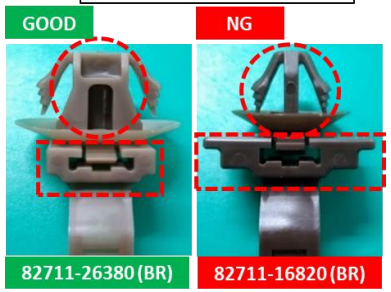
Revision History							Prepared by	Reviewed by	Approved by	Noted by
02/13/2024	0	Initial issue. Transfer from Taping to Clamp assembly jig.	D.Castillo	C. Villanueva	A. Arañes	n/a	D. Castillo	C. Villanueva	A. Arañes	n/a
Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted	Est. Date:	February 13, 2024		

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

PARTS:	1. Assy parts 2. Clamp 82711-26380 (BR) [4pcs.]	JIG:	1. Clamp assembly jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
2	Clamp Assy	Clamp Setting	 1. Get 1pc. of clamp **82711-26380 (BR)** using right hand and set to clamp location **1** using both hands. 2. Get 1pc. of clamp **82711-26380 (BR)** using right hand and set to clamp location **2** using both hands. 3. Get 1pc. of clamp **82711-26380 (BR)** using right hand and set to clamp location **3** using both hands. 4. Get 1pc. of clamp **82711-26380 (BR)** using right hand and set to clamp location **4** using both hands.	n/a	1. No wrong use of clamp 2. No damaged clamp 2. No wrong use of tape ***Important reminders/note/s:*** *1. Please check the clamp and band clamp before start of assembly to avoid wrong use of clamp.* BAND CLAMP ILLUSTRATION 

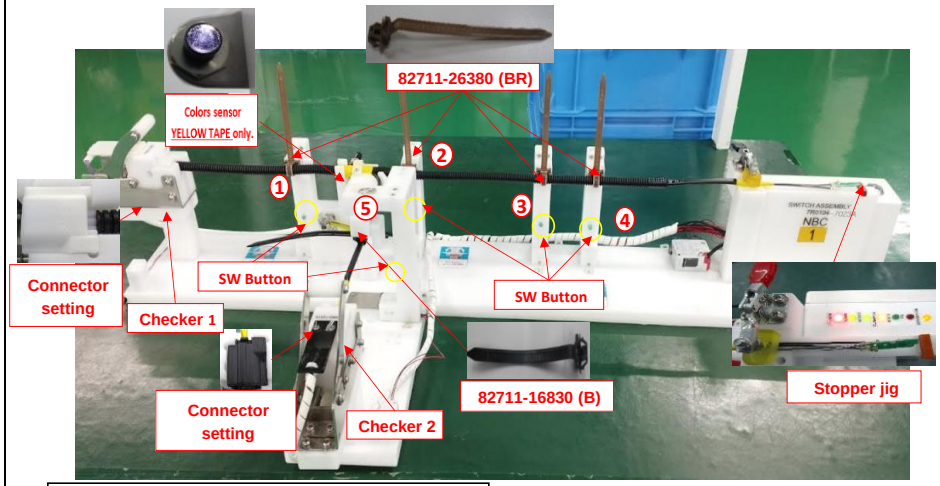
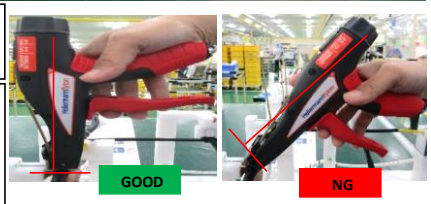
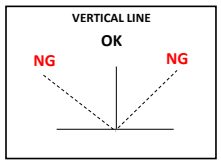
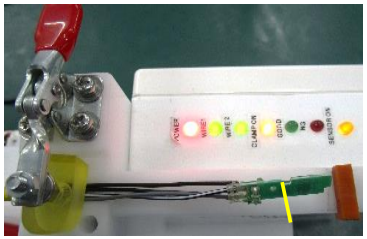
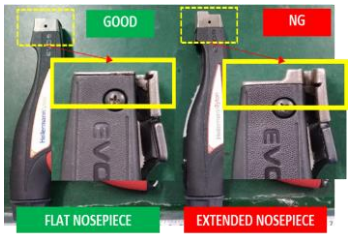
CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp

	WORK INSTRUCTION			Effectivity Date:	February 13, 2024		
	Process Name/Title:	CLAMP ASSEMBLY PROCESS		Validity Date:	n/a		
	Model code/Part number: 780B / 7R0104-7023A	Customer: TRMX	Car Model: TOYOTA-TUNDRA	Document No.:	WI-ENG-PDE-832		
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	0	Page No.:	3 of 11

PARTS:	1. Assy parts	JIG:	1. Clamp assembly jig

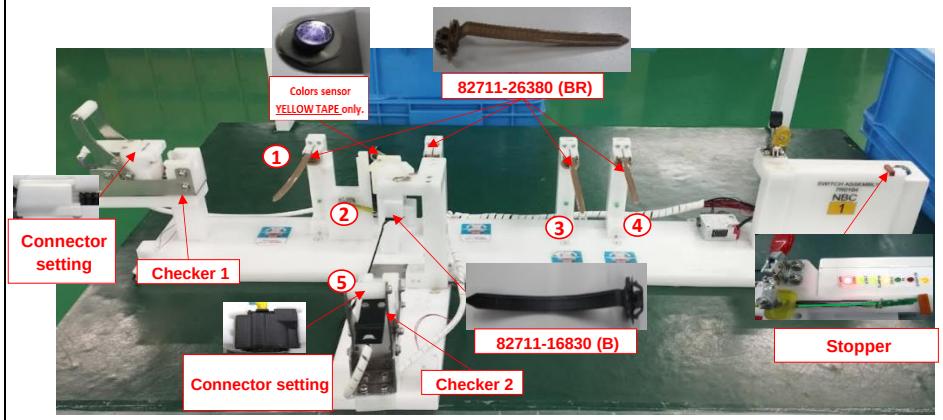
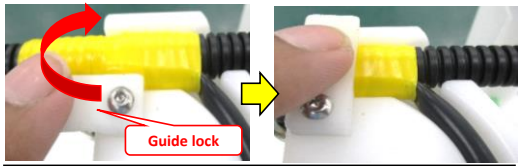
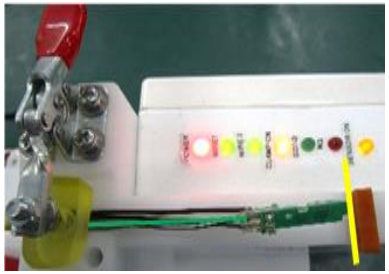
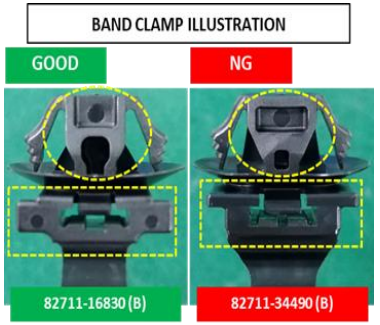
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	Clamp Assy	Clamp assembly	 1. Initially tighten the band clamp on clamp location **1, 2, 3, 4, and 5** using both hands. 2. Get the Bando Gun using right hand and cut the band clamp on location **1** using both hands. Press the **SW button** after cutting of band clamp. Continue the process if clamp location **2** was on. 3. Cut the band clamp on clamp location **2** using both hands. Press the **SW button** after cutting of band clamp. Continue the process if clamp location **3** was on. 4. Cut the band clamp on clamp location **3** using both hands. Press the **SW button** after cutting of band clamp. Continue the process if clamp location **4** was on.  	**BANDO GUN (FLAT NOSEPIECE)** 	1. No loose attachment of clamp 2. No damaged clamp 3. No missed tape 4. No missing parts ***Important reminders/Note/s:*** *1. Make sure no gap between the **PCB** and **stopper jig.*** *2.Setting of band clamp cutter depends on the size of the **COT/Vinyl tube.*** ***For: ø5 - 1~2, ø7 - 3~4***  **BANDO GUN ILLUSTRATION** 

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

PARTS:	1. Assy parts 2. Clamp 82711-16830 (B)	JIG:	1. Clamp assembly jig

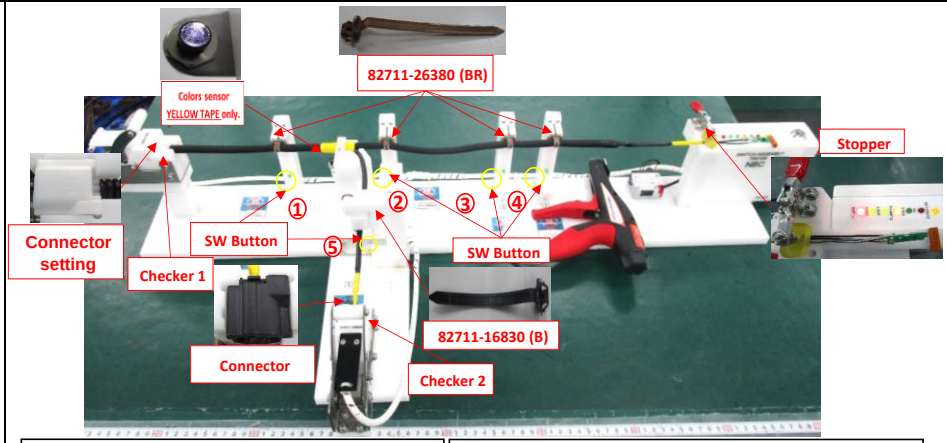
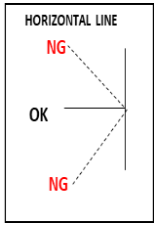
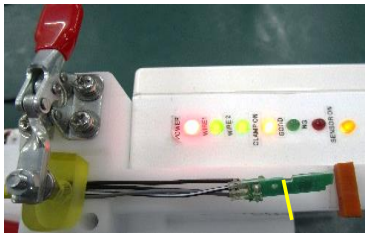
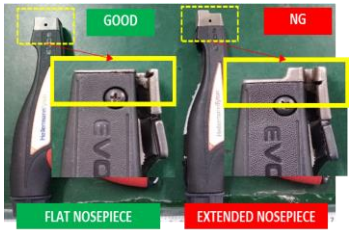
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	Clamp Assy	Clamp setting (Continuation)	 5. Hold the assy parts and then set to jig. ***(See above picture for correct setting).*** First, set the connector **6189-1142 (W)** to **Checker 1** then pull the checker fixture for continuity checking. Continue to set the harness in jig. **Color sensor** light will be beep/buzz if sensor detects **Yellow tape.** *(See below illustration for Y-Taping lock.)* Second, set the **PCB** and **B-B wires** to stopper jig and push down the toggle clamp. Last, set the connector **6189-1161 (B)** to **Checker 2** then push the checker fixture for continuity checking.  6. Using left index finger, push the guide lock to lock the Y-taping portion. 7. Get 1pc. of clamp **82711-16830 (B)** using right hand and set to clamp location **5** using both hands. 8. Check if all LED light for **Power On, Clamp On, Wire1 & Wire2, Sensor ON** was On. If encountered abnormality, **STOP** and immediately **CALL** the attention of the leader. **WAIT** for further instruction then continue the process.	n/a	1. No loose attachment of clamp 2. No damaged clamp 3. No missed tape 4. No missing parts ***Important reminders/Note/s:*** *1. Make sure no gap between the **PCB** and **stopper 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

PARTS:	1. Assy parts	JIG:	1. Clamp assembly jig

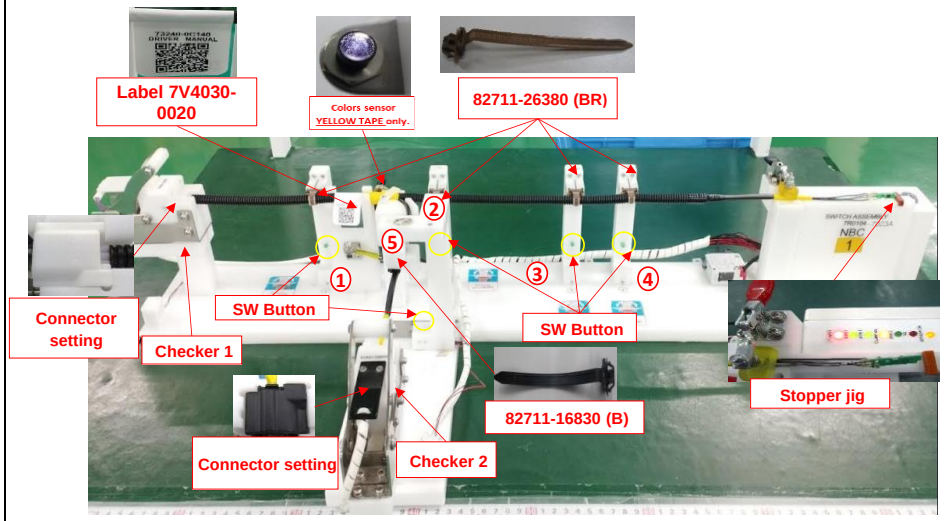
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	Clamp Assy	Clamp assembly (Continuation)	 5. Cut the band clamp on clamp location **4** using both hands. Press the **SW button** after cutting of band clamp. Continue the process if clamp location **5** was on. 6. Cut the band clamp on clamp location **5** using both hands. *(See below illustration)*. Press the **SW button** after cutting of band clamp. Continue on label Attachment. **BAND CLAMP CUT POSITION FOR 82711-16830 (B)**  **Fixed setting of band clamp cutter: 1 ~ 3**	**BANDO GUN (FLAT NOSEPIECE)** 	1. No loose attachment of clamp 2. No damaged clamp 3. No missed tape 4. No missing parts 5. No wrong use of tape 6. No wrong use of clamp ***Important reminders/Note/s:*** *1. Make sure no gap between the **PCB** and **stopper jig.*** *2.Setting of band clamp cutter depends on the size of the **COT/Vinyl tube.*** ***For: ø5 - 1~2, ø7 - 3~4***  **BANDO GUN ILLUSTRATION** 

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

PARTS:	1. Assy parts	JIG:	1. Clamp assembly jig 2. Label Dispenser

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	Clamp Assy	Clamp assembly (Continuation)	 7. For label attachment, **color sensor** will light if detects the **label code**. After attachment, press the **SW button** using both index finger **(same timing). Go** sound will be heard. *(Refer to the next page for label attachment)*. 8. Conduct **POINT CHECKING** before removing the harness from jig.	n/a	1. No loose attachment of clamp 2. No damaged clamp 3. No missed tape 4. No missing parts 5. No wrong use of 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

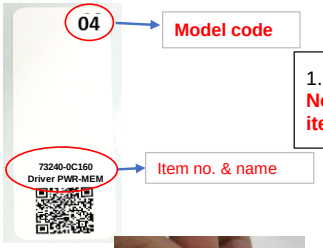
DCC Stamp

	WORK INSTRUCTION			Effectivity Date:	February 13, 2024	
	Process Name/Title:	CLAMP ASSEMBLY PROCESS		Validity Date:	n/a	
	Model code/Part number: 780B / 7R0104-7023A	Customer: TRMX	Car Model: TOYOTA-TUNDRA	Document No.:	WI-ENG-PDE-832	
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	0	Page No.: 7 of 11

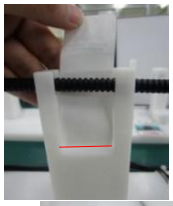
PARTS:	1. Assy parts 2. Label 7V4030-0020	JIG:	1. Clamp assembly jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	Clamp Assy	Label attachment		n/a	1. No bubbles 2. No damage 3. No peel off 4. No wrong use of label 5. No missing parts 6. No loose attachment 7. No wrong usage of label

Model	Item No	Item Name
7R0102	73240-0C140	Driver Manual
7R0103	73240-0C150	Driver Power
7R0104	73240-0C160	Driver PWR-MEM
7R0105	73230-0C170	Passenger Manual
7R0106	73230-0C180	Passenger Manual



1. Get the label.
Note: Check the model code, item no. & name

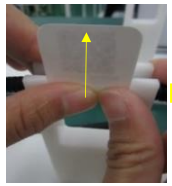


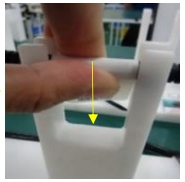
2. Align the end part of label in the jig.

3. Fold the center part of the label

4. Align both end part of label

5. After alignment , Press the label with both fingers .





6. Press the label upside down using finger.

Acceptable overlap
0~1mm

GOOD

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.

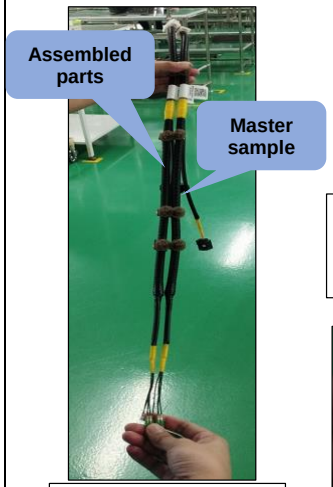
NBC (Philippines)
MASTER COPY

DCC Stamp

	WORK INSTRUCTION			Effectivity Date:	February 13, 2024	
	Process Name/Title:	CLAMP ASSEMBLY PROCESS		Validity Date:	n/a	
	Model code/Part number: 780B / 7R0104-7023A	Customer: TRMX	Car Model: TOYOTA-TUNDRA	Document No.:	WI-ENG-PDE-832	
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	0	Page No.: 8 of 11

PARTS:	1. Assembled parts 2. Master sample	JIG:	n/a

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
5	Clamp Assy	Visual/By two's inspection			1. No skip checking during inspection.



1. Conduct **alignment of harness (Master sample vs. Assembled parts)** using both hands.

2. Check the **connector lock, terminal** and **insertion**.

3. Check the **presence of all clamp attachment** and **band clamp cut**.

4. Check the **presence** and **condition of QR code label attachment.**

5. Check the **presence of clamp attachment** and **band clamp cut**.

MASTER SAMPLE

Impotant reminders/note/s:

1. Using steel rule, check if the band cut measurement is within the required dimension and should not exceed the allowable range ***(0~2mm).***

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:	February 13, 2024	
	Process Name/Title:	CLAMP ASSEMBLY PROCESS		Validity Date:	n/a	
	Model code/Part number: 780B / 7R0104-7023A	Customer: TRMX	Car Model: TOYOTA-TUNDRA	Document No.:	WI-ENG-PDE-832	
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	0	Page No.: 9 of 11

PARTS:	1. Assembled parts 2. Master sample	JIG:	n/a

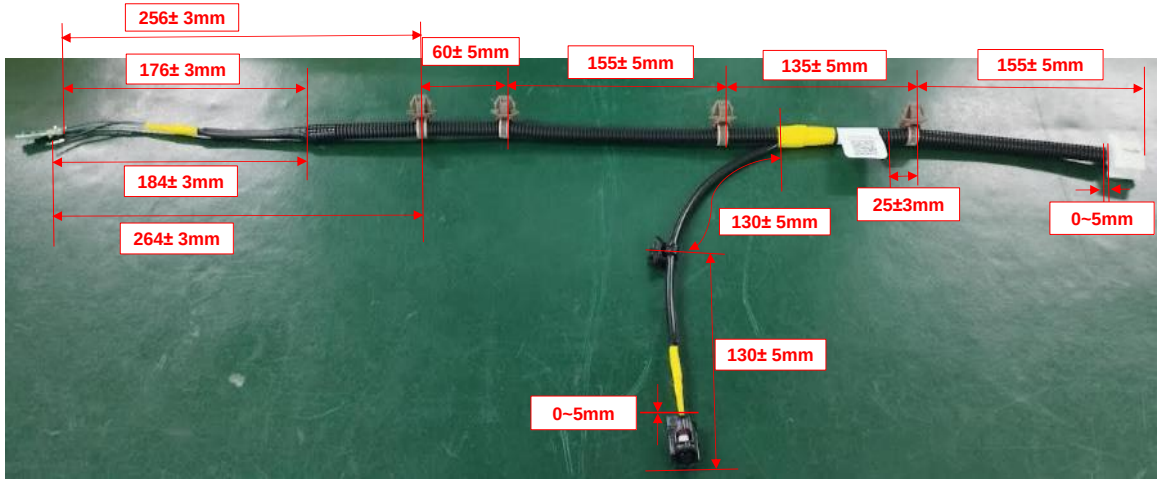
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
5	Clamp Assy	Visual/By two's inspection (Continuation)	 ACTUAL PRODUCT 6. Check the **connector lock, terminal** and **insertion**. 7. Check the **Y-Taping condition** and **color of tape (Yellow tape only).** 8. Check the **Taping condition of COT to sunprene tube. Conduct slightly bending.** 9. Check the **Taping condition and color of tape (Yellow tape only)** 10. Check the **terminal** and **PCB appearance**. Must be **no deformed terminal**.		1. No skip checking during inspection. MASTER SAMPLE MASTER SAMPLE

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

PARTS:	n/a	JIG:	n/a

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
6	Clamp Assy	Measurement	 MEASURING TAPE		1. No wrong dimension ***Important reminders and note/s:*** *1. Please use calibrated/verified measuring tape when getting the measurement.* *2. For Hatsumono, Nakamono and Owarimono.* ***Document reference/s:*** *1. Refer to **WI-PRO-ASY-056** for Sub-assembly Hatsumono Nakamono Owarimono Inspection*

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

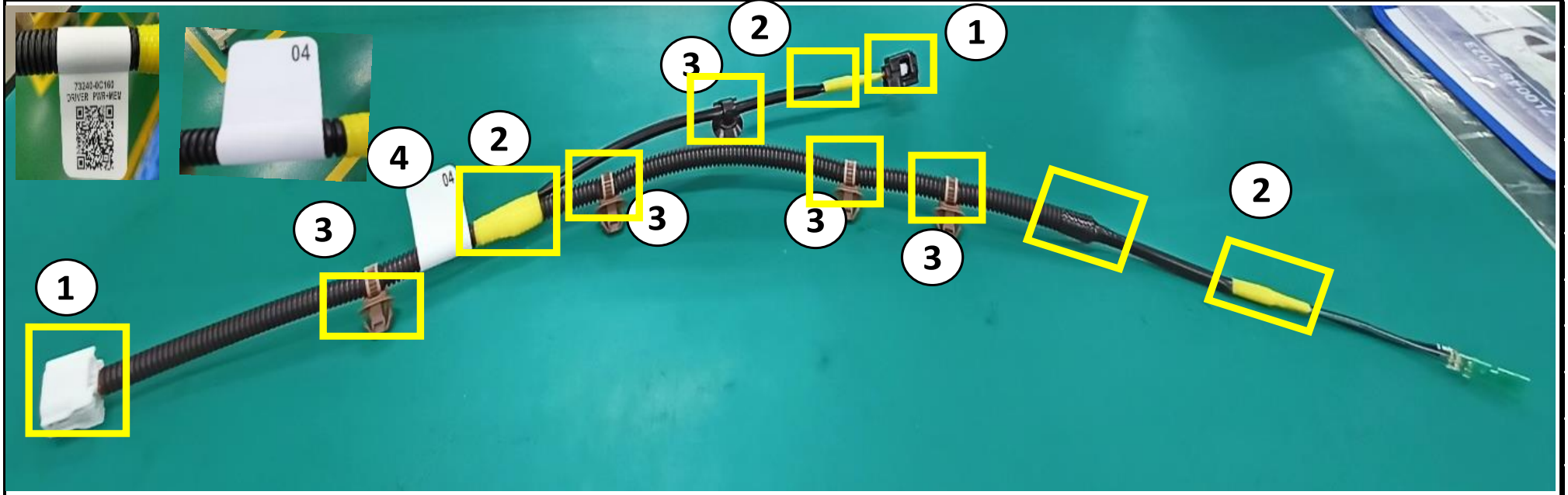
NBC	WORK INSTRUCTION			Effectivity Date:	February 13, 2024
	Process Name/Title:	CLAMP ASSEMBLY PROCESS		Validity Date:	n/a
	Model code/Part number: 780B / 7R0104-7023A	Customer: TRMX	Car Model: TOYOTA-TUNDRA	Document No.:	WI-ENG-PDE-832
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.: 0	Page No.: 11 of 11

PARTS:	n/a	JIG:	n/a

QUALITY CHECKPOINTS

CLAMP ASSY

7R0104-7023A



1 NO UNLOCKED/ HALF LOCKED CONNECTOR

2 No MISSING TAPE

3 No MISSING CLAMP

4 NO MISSING QR CODE
No wrong facing of QR CODE

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