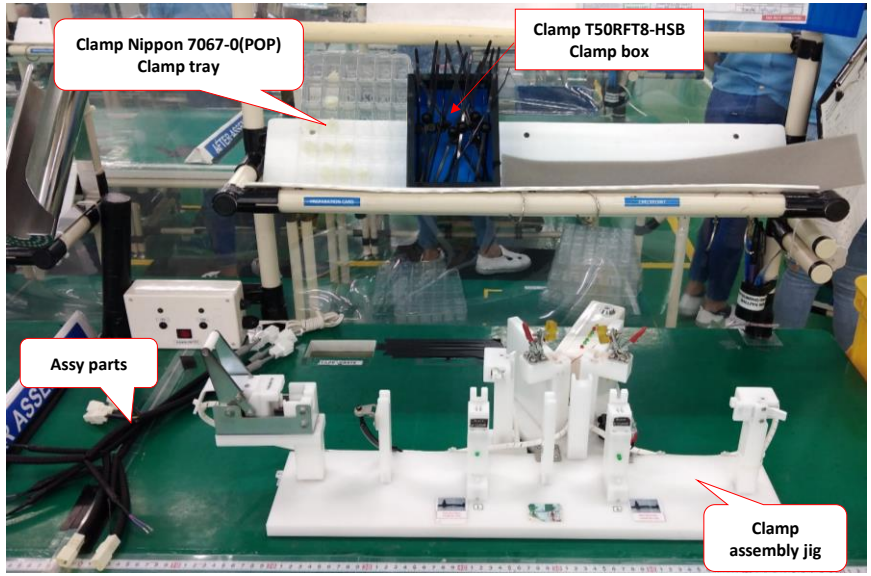
	WORK INSTRUCTION			Effectivity Date:	October 07, 2022		
	Process Name/Title:	TAPING ASSEMBLY PROCESS		Validity Date:	n/a		
	Model Code/Part Number:	TP1 / 7L0092-7021	Customer: TRQSS	Document No.:	WI-ENG-PDE-063D		
	Purpose:	☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO		Revision No.:	6	Page No.:	1 of 11

PARTS:	1. Assy parts: Clamp T50RFT8-HSB; Clamp Nippon 7067-0(POP)	JIG:	1. Clamp assembly jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
1	P4	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. **BANDO GUN** 	1. No wrong use of clamp 2. No wrong orientation of clamp

Revision History							Prepared by	Reviewed by	Approved by	Noted by
10/07/22	6	Improve: Quality pointers and notes in process no.2,5,6 and 7 a document improvement. Work procedure and illustration in process no.6 - visual/by two's inspection as process improvement.	M. Catapang	J. Loterte	C. Villanueva	A. Arañes	M. Catapang	J. Loterte	C. Villanueva	A. Arañes
04/12/22	5	Additional table layout. Transfer process no. 3 from P2 to P4 as improvement in overall process. Additional color sensor in jig for the detection of colored tape (Gray tape).	M. Catapang	J. Loterte	C. Villanueva	A. Arañes				
02/15/21	4	Change part number from 7L0092-7020A to 7L0092-7021 due to change in tape color from Black tape to Gray tape in process COT to wire near connector.Conduct review of documents.	M. Catapang	C. Villanueva	A. Shimamura	A. Arañes				
Eff. Date	Rev. No	Details of Change	Revised	Checked	Approved	Noted	Est. Date:	February 11, 2020		

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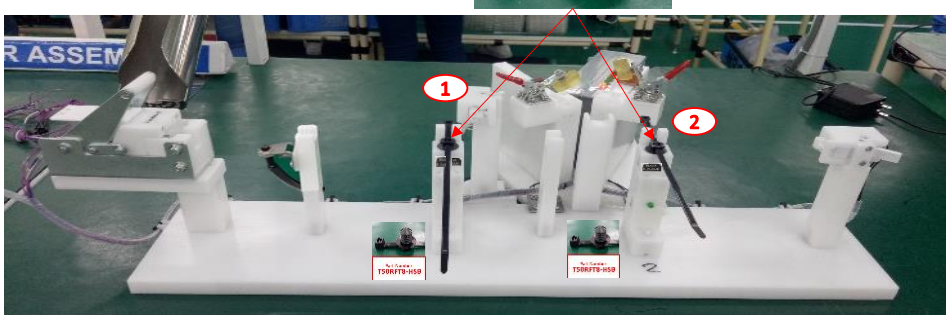
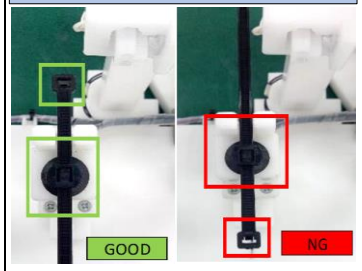
PARTS:	1. Clamp T50RFT8-HSB [2pcs.]	**JIG**	1. Clamp assembly jig

NO.			WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
2	P4	Clamp Setting	(T50RFT8-HSB)  Get the clamp **T50RFT8-HSB [2 pcs]** and set to clamp location ① and ② using right hand.	n/a	6 ***Important reminders/Note/s:*** ***1. Please check the Clamp first before start of assembly to avoid wrong use of clamp.*** 1. No wrong use of clamp 2. No wrong orientation of clamp **Clamp Orientation Illustration** 

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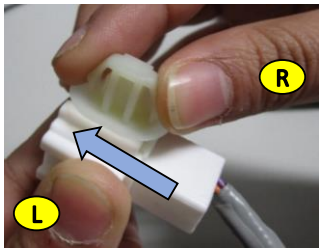
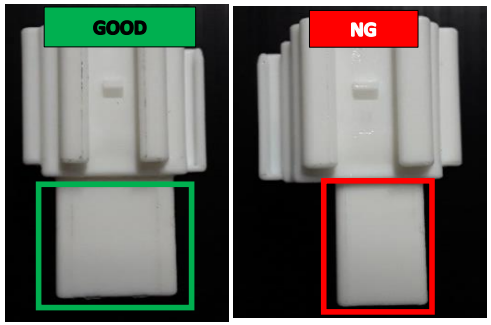
PARTS:	1. Assy parts 2. Clamp Nippon 7067-0(POP)	**JIG**	n/a

NO.			WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	P4	Clamp Attachment	 CLAMP ORIENTATION  1. Hold the connector using left hand and insert the Clamp **(7067-0(POP))** using right hand. Connector Orientation Illustration 	n/a	1. No loose attachment 2. No wrong usage of parts 3. No missing clamp

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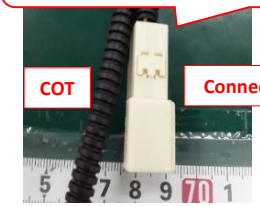
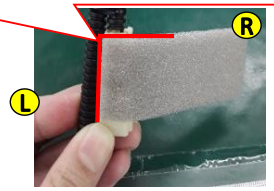
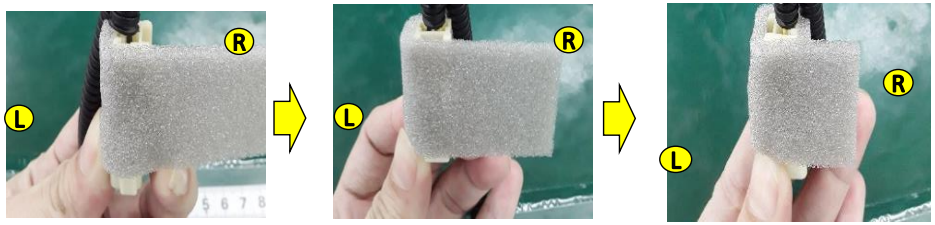
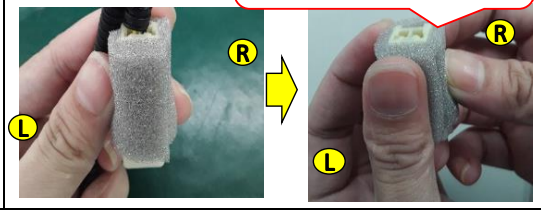
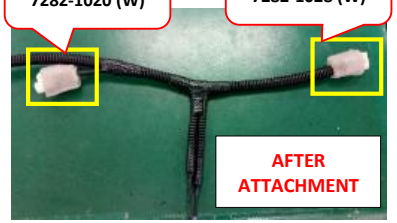
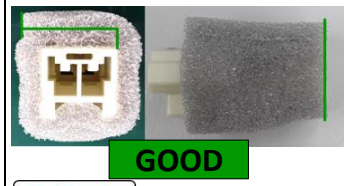
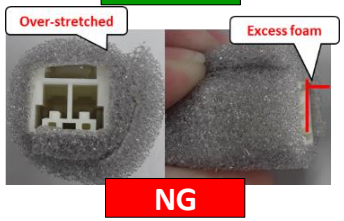
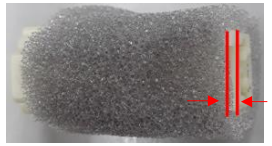
	WORK INSTRUCTION			Effectivity Date:	October 07, 2022		
	Process Name/Title:	TAPING ASSEMBLY PROCESS		Validity Date:	n/a		
	Model Code/Part Number:	TP1 / 7L0092-7021	Customer: TRQSS	Document No.:	WI-ENG-PDE-063D		
	Purpose:	☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO		Revision No.:	6	Page No.:	4 of 11

PARTS:	1. Urethane foam t=4; 75mm X 30mm [2pcs.]	JIG	n/a

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	P4	Urethane foam manual attachment to connector 7282-1020 (W) **(FIRST)** 7282-1028 (W) **(SECOND)**	Step 1: Identify the right facing to attached the foam  Step 2: Get the Urethane foam and begin the attachment. Note: Foam and connector must be align  Step 3: Attached the foam in all sides of the connector. Note: Follow the attachment sequence based on the illustration  Step 4: Press the Urethane foam side by side after attachment.  	n/a	DO NOT STRETCH THE URETHANE FOAM   1. No damaged Urethane foam 2. No missing Urethane foam 3. No stretched Urethane foam  0~3mm tolerance from Urethane foam to Connector

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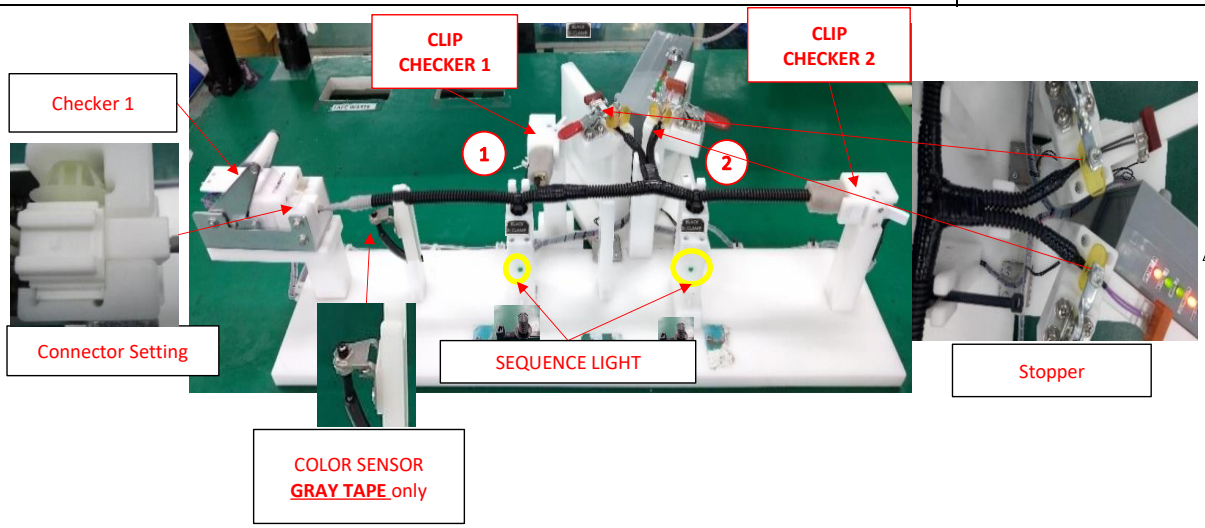
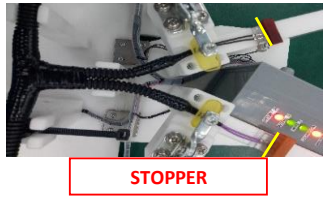
PARTS:	1. Assy parts	**JIG**	1. Clamp assembly jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
5	P4	Clamp Assembly			 6 ***Important reminders/Note/s:*** ***1. Make sure no gap between stopper and terminals*** 1. No damaged clamp 2. No missing clamp 3. No loose/tight attachment

1. Get the assy parts. First, set the connector **7186-8847 (W)** to **Checker 1** then pull the checker fixture for continuity checking. **Color sensor** light will beep/buzz if sensor detects **Blue tape.** Second, set the connector **7282-1020 (W)** to **Clip checker1** for continuity checking. Third, set the connector **7282-1028 (W)** to **Clip checker 2** for continuity checking. Last, set the **B-B wires and V-V wires** with terminal end together within the stopper then press by **Toggle clamp**. Continue if the sequence light of location ① was **ON.**

2. Check if all LED light for POWER ON, WIRE1 and WIRE2, CLAMP ON, SENSOR was ON. Check also if clamp location ① sequence light is **ON.** If encountered abnormality, STOP and immediately CALL the attention of the leader. WAIT for further instruction then continue the process.

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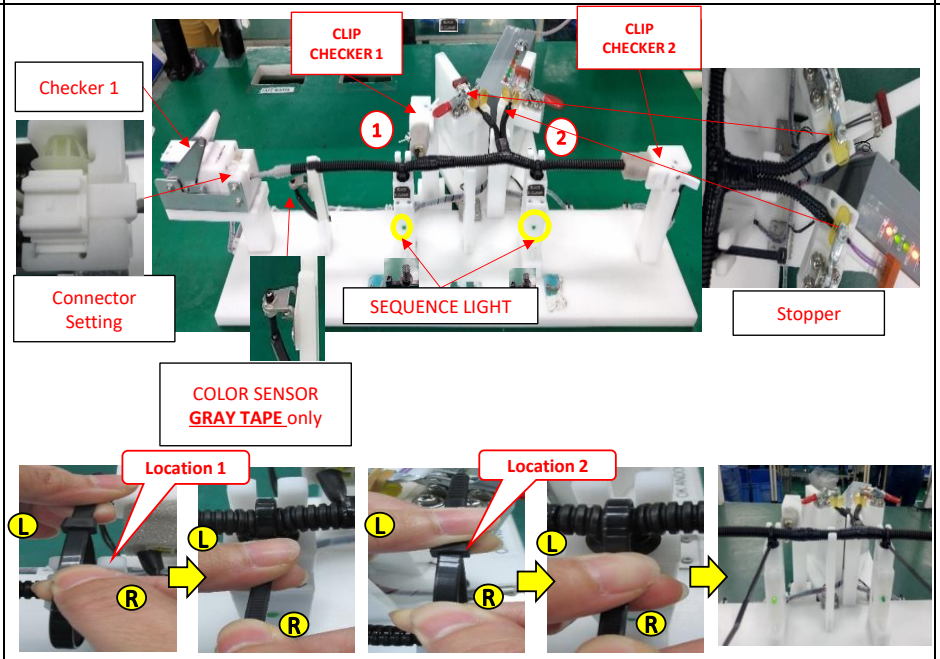
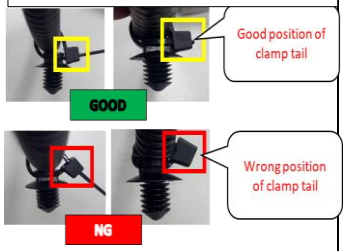
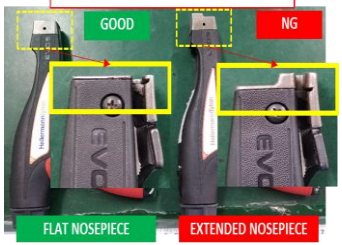
PARTS:	1. Assy parts	**JIG**	1. Clamp assembly jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
5	P4	Clamp Assembly (Continuation)	 3. Initially tighten the band clamp on location ① and ② using both hands. 4. Get the bando gun and cut the band clamp **(T50RFT8-HSB)** on **location 1** using right hand. Press the SW button after cutting. Continue the process if clamp location ② if light was **ON.**	**Bando Gun** 	 6 ***Important reminders/Note/s:*** ***1. Make sure no gap between stopper and terminals*** 1. No damaged clamp 2. No missing clamp 3. No loose/tight attachment **Clamp Orientation (T50RFT8-HSB)**  6 **BANDO GUN ILLUSTRATION** 

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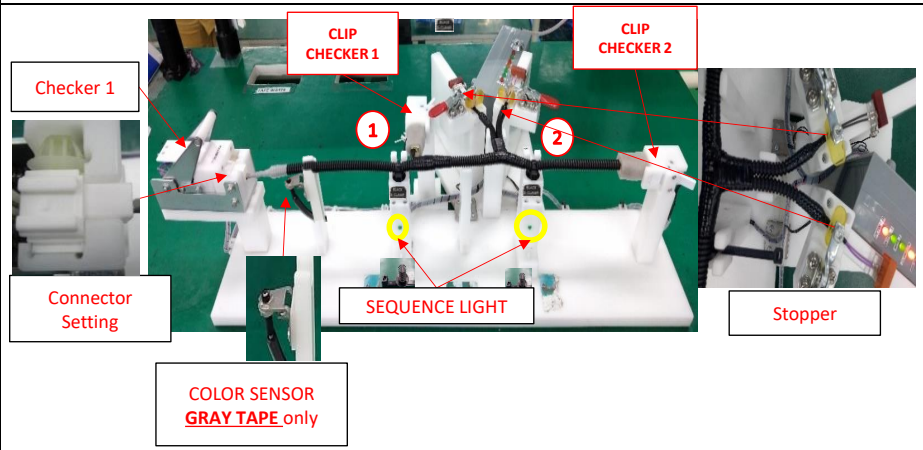
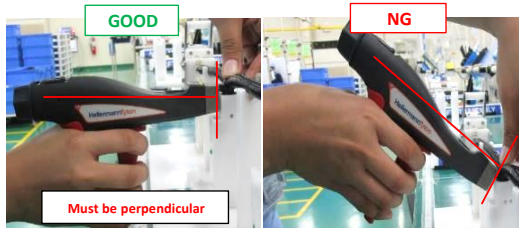
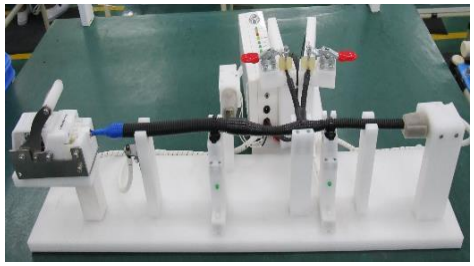
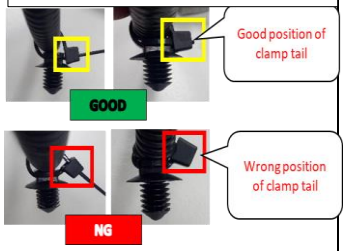
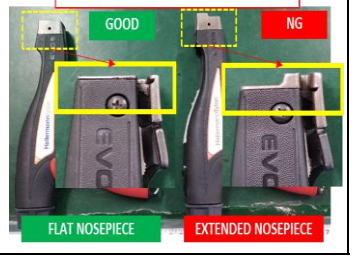
PARTS:	1. Assy parts	**JIG**	1. Clamp assembly jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
5	P4	Clamp Assembly (Continuation)	  **BANDO GUN ALIGNMENT** NG OK NG PERPENDICULARITY Note: Setting of band clamp cutter depends on the size of the COT/Vinyl tube. For: ø5 - 1~2, ø7 - 3~4  5. Cut the band clamp **(T50RFT8-HSB)** on **location 2** using both hands. Press the sequence light button after cutting. **Go** sound will be heard if the result is **GOOD.**	**Bando Gun** 	 6 STOPPER ***Important reminders/Note/s:*** ***1. Make sure no gap between stopper and terminals*** 1. No damaged clamp 2. No missing clamp 3. No loose/tight attachment **Clamp Orientation (T50RFT8-HSB)**  6 **BANDO GUN ILLUSTRATION** 

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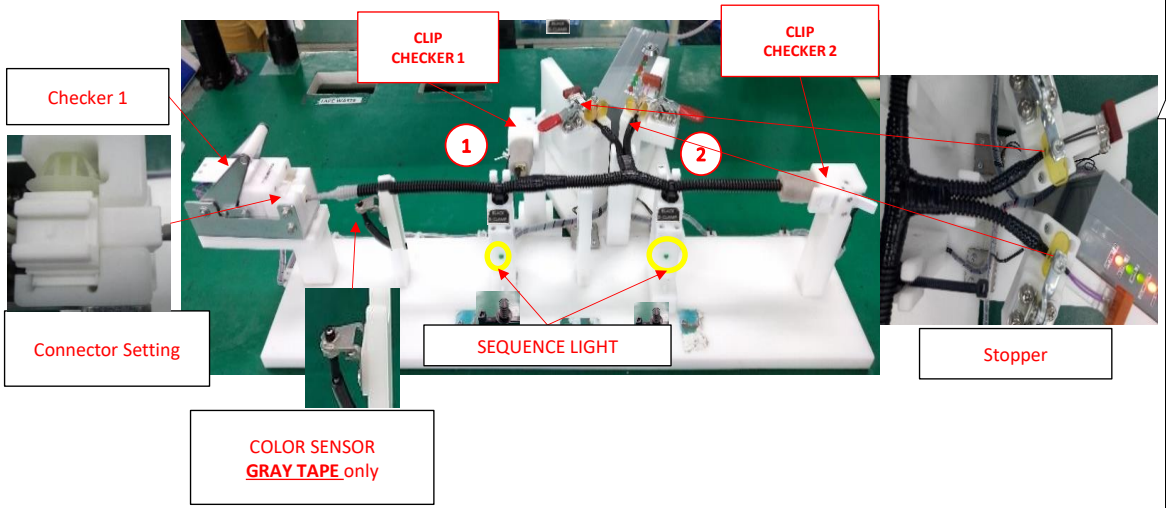
PARTS:	1. Assy parts	**JIG**	1. Clamp assembly jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
5	P4	Clamp Assembly (Continuation)	 6. **CONDUCT POINT CHECKING** before removing the harness from jig. 7. After **POINT CHECKING**, push the checker fixture of **Checker 1**, remove the connector on **Clip Checker 1** and **Clip Checker 2,** remove the toggle clamp (same timing).		6 ***Important reminders/Note/s:*** ***1. Make sure no gap between stopper and terminals*** 1. No damaged clamp 2. No missing clamp 3. No loose/tight attachment

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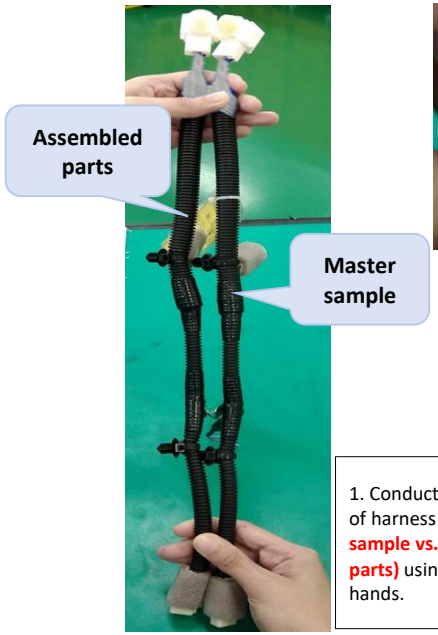
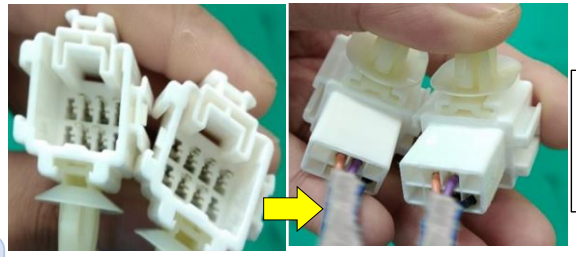
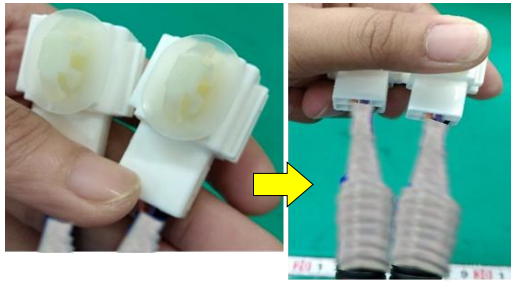
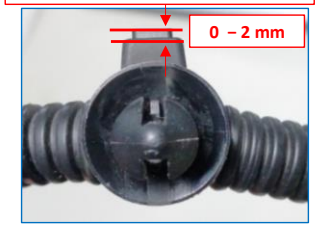
PARTS:	1. Assy parts	JIG	n/a

NO.	PROCESS NAME		6 WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
6	6 P4	Visual Inspection/By Two's inspection (Continuation)	 1. Conduct alignment of harness **(Master sample vs. assembled parts)** using both hands.  2. Check the **terminal and insertion.**  3. Check the **presence of clamp** attachment and taping condition.		6 **MASTER SAMPLE** 1. No skip checking during inspection **STANDARD BAND CLAMP CUT MEASUREMENT**  ***Important reminders/Note/s:*** ***1. Using a steel rule, check if the band cut measurement is within the required dimension (0~2mm) and should not exceed the maximum value.***

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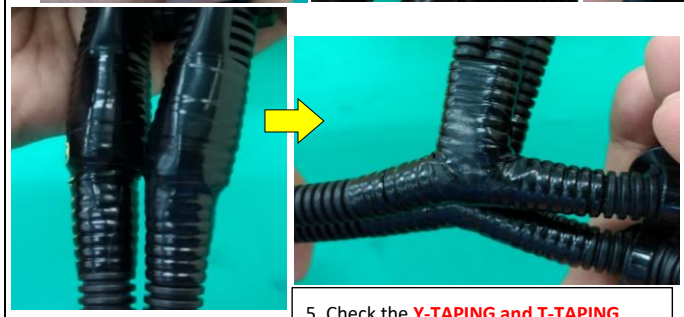
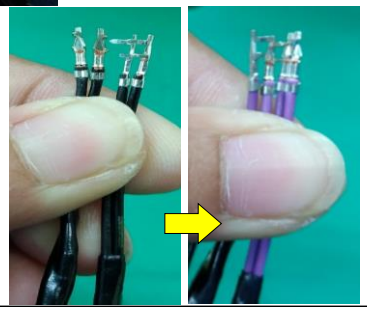
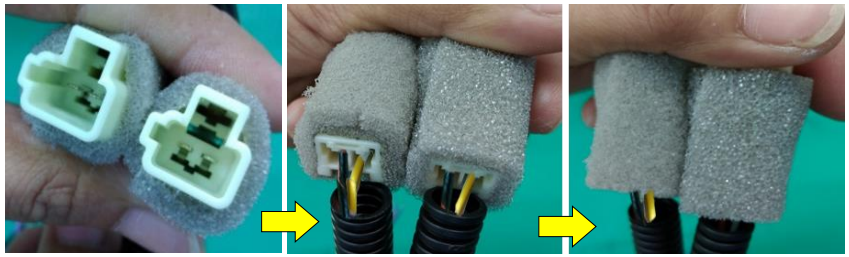
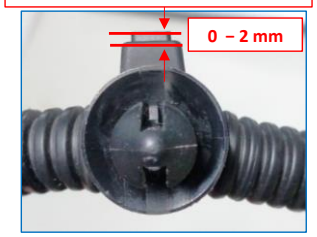
PARTS:	1. Assy parts	JIG	n/a

NO.	PROCESS NAME		6 WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
6	P4	6 Visual Inspection/By Two's inspection (Continuation)	4. Check the **terminal, insertion** and **presence of urethane foam** attachment.  5. Check the **Y-TAPING and T-TAPING** condition.  6. Check the **taping condition from COT to wire** and the terminal appearance of **B-B wire** and **V-V wire.**  7. Check the **terminal, insertion** and **presence of urethane foam** attachment.		6 **MASTER SAMPLE** 1. No skip checking during inspection **STANDARD BAND CLAMP CUT MEASUREMENT**  ***Important reminders/Note/s:*** ***1. Using a steel rule, check if the band cut measurement is within the required dimension (0~2mm) and should not exceed the maximum value.***

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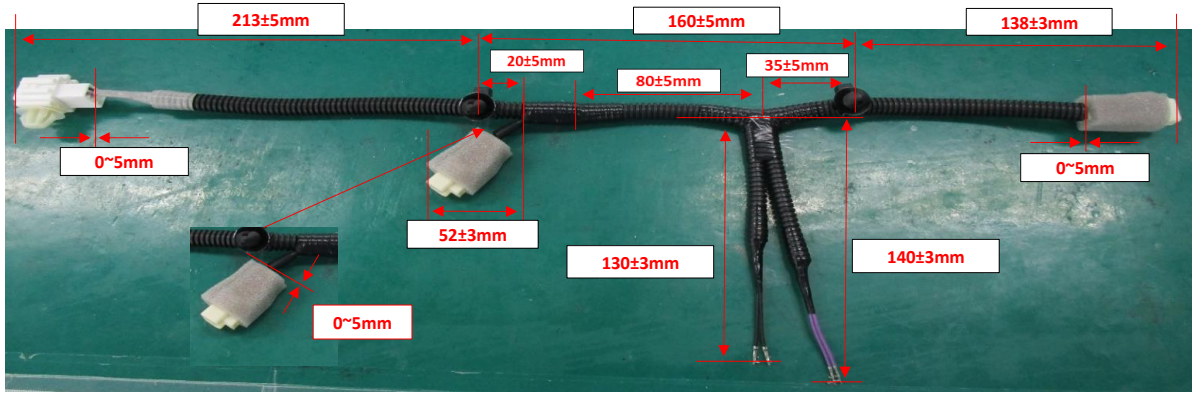
PARTS:	n/a	JIG	n/a

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
7	P4	Measurement	MEASURING TAPE Note: Please use calibrated/verified measuring tape when getting the measurement. 		6 *Important reminders/Note/s:* **1. FOR HATSUMONO AND OWARIMONO** 1. No wrong dimension

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