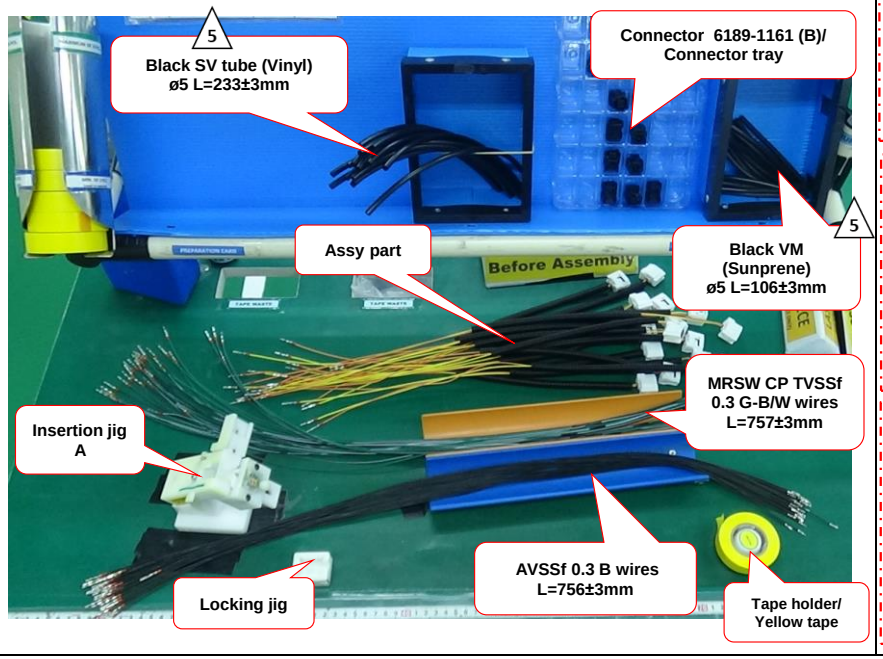
	WORK INSTRUCTION			Effectivity Date:	February 13, 2024	
	Process Name/Title:	TAPING ASSEMBLY PROCESS		Validity Date:	n/a	
	Model code/Part number: 780B / 7R0104-7023A	Customer: TRMX	Car Model: TOYOTA-TUNDRA	Document No.:	WI-ENG-PDE-557A	
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	5	Page No.: 1 of 8

PARTS: 5	1. Assy parts: Connector 6189-1161 (B); Black SV tube (Vinyl) ø5 L=233±3mm; Yellow tape; Black VM tube (Sunprene) ø5 L=106±3mm; MRSW CP TVSSf 0.3 B/W-G L=757±3mm; AVSSf 0.3 B wires L=756±3mm	JIG:	1. Insertion jig 2. Locking jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
1	5 P1	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.	***Document reference/s:*** *1. Please refer to **WI-PRO-KIT-005** for Wire taping without Vinyl tube.* *2. Please refer to **WI-PRO-CNC-017** for Wire and Strip Length tolerance* *3. Please refer to **WI-ENG-PDE-831** for Offline assembly process* 1. No missing parts/tools 2. No excess parts/tools

Revision History

Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted
02/13/24	5	Transfer some process to Offline assembly process. Additional process, Spot taping due to encountered out of tolerance (Process 6). Provision of measuring jig. Update table lay-out. Change term from Vinyl tube to SV tube (Vinyl) and Sunprene tube to VM tube (Sunprene). Inclusion of Car model "TOYOTA-TUNDRA"	D.Castillo	C. Villanueva	A. Arañes	n/a
01/19/23	4	Remove Taping 1: Black Viny tube to wire near connector and transfer to P3; Transfer process of Taping 2: Black sunprene tube to wire near terminal and hotmelted wires from P2 as DCS Countermeasure for missing tape and cut. Inclusion of Quality Checkpoints.	M. Ariola	J. Loterte	C. Villanueva	A. Arañes
11/15/22	3	Change table lay-out. Remove Insertion jig B and transfer to P2.	M. Ariola	J. Loterte	C. Villanueva	A. Arañes

Prepared by	Reviewed by	Approved by	Noted by
D. Castillo	C. Villanueva	A. Arañes	n/a
Est. Date:	July 19, 2022		

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PARTS: 5	1. Assy parts 2. Black SV tube (Vinyl) ø5 L= 233±3mm	JIG:	n/a

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
2	5 P1	Wire insertion to Black SV tube (Vinyl) ø5 L= 233±3mm	 1. Get the SV tube (Vinyl) **ø5 L= 233±3mm** using right hand then insert the **Y-OR wires** using left hand.	n/a	1. No wrong use of parts 2. No deformed terminal

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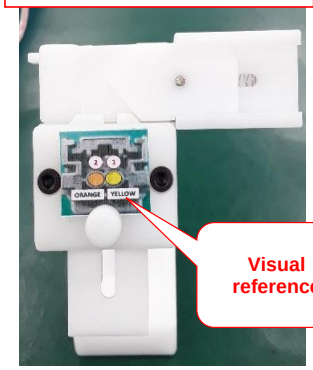
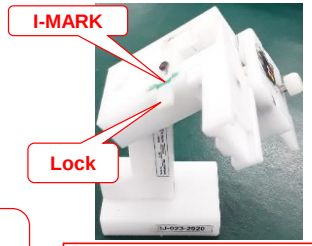
	Model code/Part number: 780B / 7R0104-7023A	Customer: TRMX	Car Model: TOYOTA-TUNDRA	Document No.:	WI-ENG-PDE-557A
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	5 — Page No.: 3 of 8

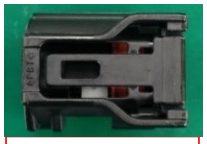
PARTS:	1. Connector 6189-1161 (B)			JIG:	1. Insertion jig
NO.	**PROCESS NAME**		**WORK PROCEDURE/ ILLUSTRATION**	**TOOLS/PPE**	**QUALITY POINTERS**
3	P1	Connector setting to insertion jig 6189-1161 (B)		N/A	

INSERTION JIG

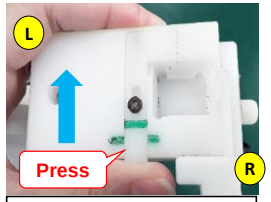




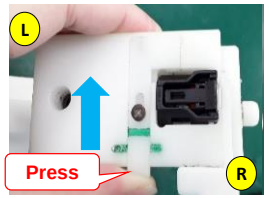
INSERTION JIG ORIENTATION

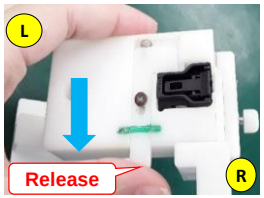


CONNECTOR ORIENTATION

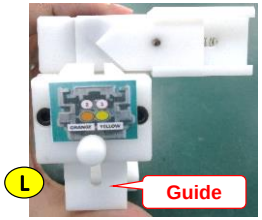


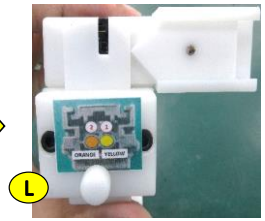
1. Press the insertion jig lock using left thumb.





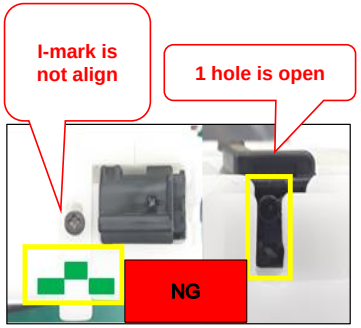
2. Get the connector **6189-1161 (B)** using right hand and insert to insertion jig. Release the lock after insertion.





3. Press the guide using left thumb. The slot for **Y wire** will be opened.

CONNECTOR ORIENTATION ILLUSTRATION



1. Use the provided jig per model
2. No wrong usage of parts
3. No wrong orientation of connector
4. No damaged connector

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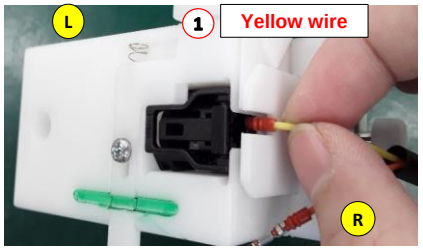
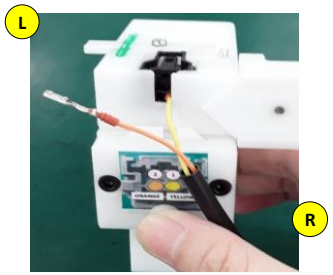
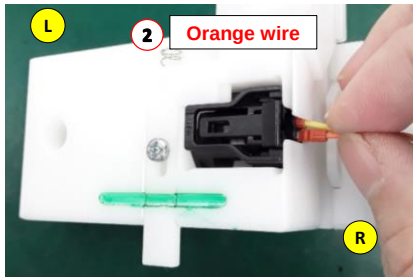
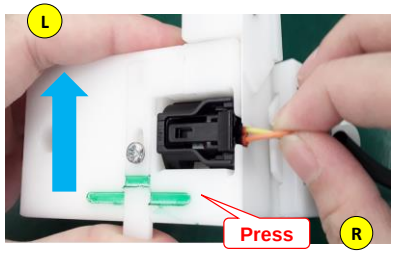
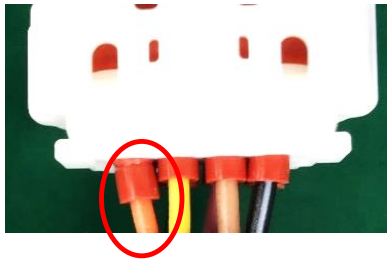
	Process Name/Title:	TAPING ASSEMBLY PROCESS		Validity Date:	n/a		
	Model code/Part number: 780B / 7R0104-7023A	Customer: TRMX	Car Model: TOYOTA-TUNDRA	Document No.:	WI-ENG-PDE-557A		
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	5	Page No.:	4 of 8

PARTS:	1. Assy parts	JIG:	1. Insertion jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	P1	Wire insertion to connector 6189-1161 (B)	WIRE FACING  1. Hold the insertion jig using left hand. Get the **Y wire** and insert to connector using right hand.  2. Press the button using right thumb. slot for **OR wire** will be open.  3. Get the **OR wire** and insert to connector using right hand.  4. After insertion, push the lock using left thumb and then hold the wires and gently pull out the connector from jig using right hand.	N/A	1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing  ***Important reminders/Note/s:*** *1. Make sure wires are properly inserted.* *Conduct **Pull-Push-Pull-Push** after insertion.* *Do not exert extra force.* *2. During insertion, hold the wire not rubber seal to prevent sagging.* ***Document reference/s:*** *1. Please refer to **WI-PRO-CNC-017** for Wire and Strip Length tolerance.* *2. Please refer to **GL-PRO-ASY-029** for Pull-Push procedure.*

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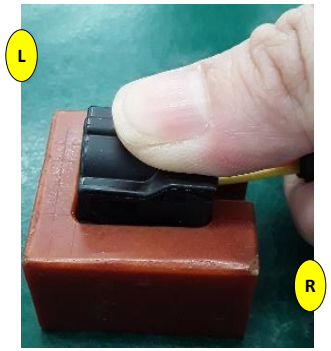
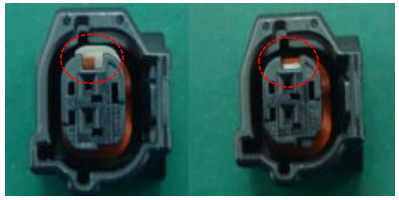
PARTS:	1. Assy parts			JIG:	1. Locking jig
NO.	**PROCESS NAME**		**WORK PROCEDURE/ ILLUSTRATION**	**TOOLS/PPE**	**QUALITY POINTERS**
5	P1	Connector lock	 1. Put the connector into locking using right hand and then press **2x** using both hands.  Before Pressing / After Pressing 	LOCKING JIG 	***Important reminders/note/s:*** *1. Manual locking may cause damaged connector lock.* 1. Use the provided jig tool per model 2. No unlock/half-locked connector 3. No damaged lock

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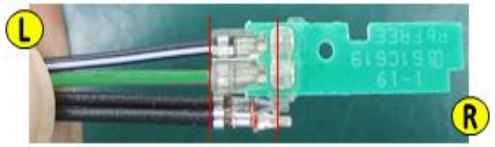
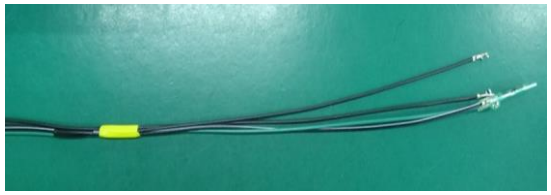
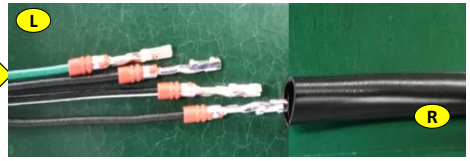
PARTS:	1. AVSSf 0.3 B wires L=756±3mm [2pcs] 2. MRSW CP TVSSf 0.3 G-B/W L=757±3mm	3. Yellow tape	JIG:	n/a

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
6	P1	5 Taping 1 Spot taping	 1. Fix the hotmelted wire and terminal pointed tip using both hands. 2. Hold the wires using left hand, get the **Yellow tape** using right hand then make **2 windings** of tape using both hands. ***Note: Position of spot taping must be right beside Black tape.***  3. Check the wire alignment and taping condition.	n/a	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
7		5 Wire insertion to Black VM tube (Sunprene) ø5 L=106±3mm	 1. Get the **G-B/W hotmelted wires (MR SW CP)** and **B-B wires L=756±3mm** using both hands then hold using left hand.  2. Get the VM tube (Sunprene) **ø5 L= 106±3mm** using right hand then insert the **G-B/W hotmelted wires** and **B-B wires** using left hand.	n/a	***Document reference/s:*** *1. Please refer to **WI-PRO-CNC-017** for Wire and Strip length tolerance.* 1. No wrong use of parts 2. No deformed terminal

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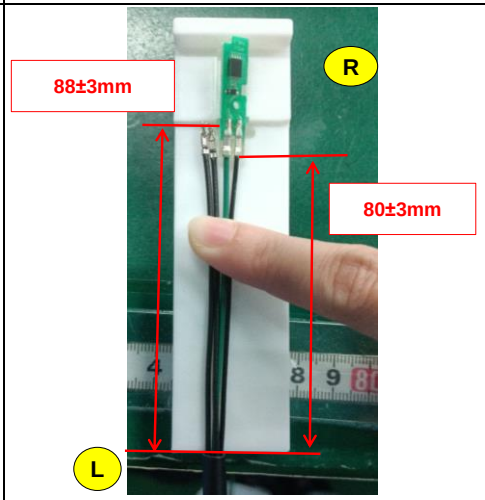
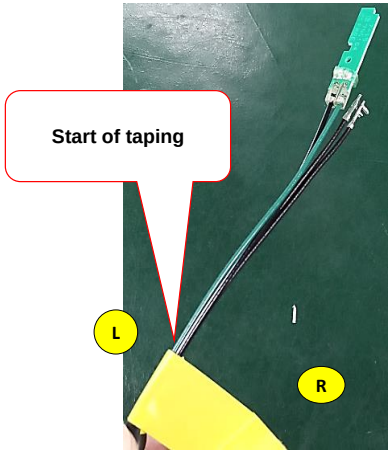
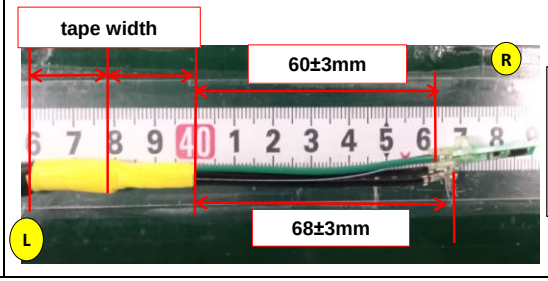
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	5	Page No.:	7 of 8

PARTS:	1. Assy parts 2. Yellow tape	JIG:	1.Measuring jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
8	P1	5 Taping 2 Black VM tube (Sunprene) to wire near terminal and hotmelted wires	 1. Hold the VM tube (Sunprene) using left hand. Measure from end of VM tube (Sunprene) up to the edge of hotmelted wires **80±3mm** and from end of VM tube (Sunprene) up to the terminal pointed tip **88±3mm** using the provided measuring jig.  2. Hold the VM tube (Sunprene) using left hand. Get the **Yellow tape** using right hand then start taping process using both hands.  3. After taping, check the measurement, wire alignment and taping condition.	MEASURING JIG MEASURING TAPE 	***Important reminders/note/s:*** *1. Use **YELLOW TAPE** only.* *2. Please use calibrated/verified measuring tape when getting the measurement.* 1. No peel-off tape 2. No flip out tape 3. No loose tape 4. No wrong use of tape 5. No wrong dimension

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PARTS:	N/A	JIG:	N/A

QUALITY CHECKPOINTS

P2 7R0104-7023A

NO GOOD

GOOD

Proper alignment of B-B wires and hotmelt

1 No WRONG INSERT
No UNLOCKED/HALFLOCKED
NO TBO

2 No Missing tape(*yellow tape*)

TAPE WIDTH /
60±3mm **vt to hotmelt**
68±3 mm **vt to terminal**

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