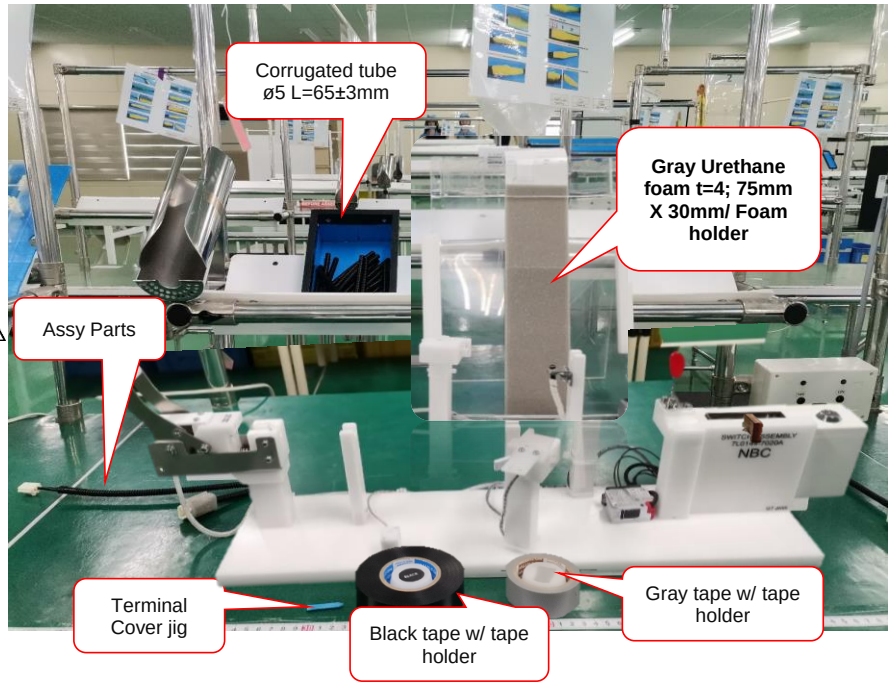
NBC	WORK INSTRUCTION			Effectivity Date:	October 09, 2023
	Process Name/Title:	TAPING ASSEMBLY PROCESS		Validity Date:	n/a
	Model code/Part number:	TP1 / 7L0144-7020A	Customer: TRQSS / Car Model: SUBARU-ASCENT	Document No.:	WI-ENG-PDE-724B
	Purpose:	☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO		Revision No.:	1 — Page No.: 1 of 9

PARTS:	1. Assy Parts 2. Black Corrugated tube ø5 L=65±3mm 3. Gray Urethane foam t=4; 75mm X 30mm 4. Black Tape 5. Gray Tpe	JIG:	1. Continuity Checker jig 2. Terminal Cover jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
1	P2	Table Lay-out	1 **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 deformed terminal 2. No wrong usage of parts

Revision History

Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted
10/09/23	1	Change purpose from Pre-launch to Masspro. Additional table lay-out; Update Quality checkpoints; Inclusion of Continuity checking process.	A.Hernandez	J.Loterte	C. Villanueva	A. Arañes
09/06/23	0	Initial release	A.Hernandez	J.Loterte	C. Villanueva	A. Arañes

Prepared by	Reviewed by	Approved by	Noted by
A.Hernandez	J.Loterte	C. Villanueva	A. Arañes
Est. Date:	September 06, 2023		

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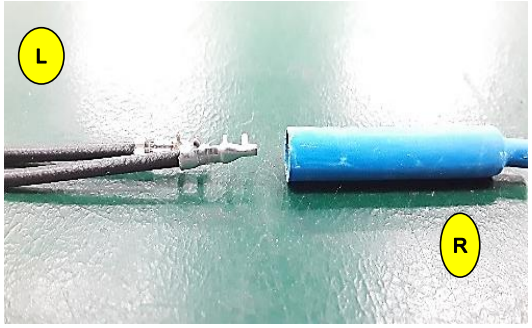
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	1	Page No.: 2 of 9

PARTS:	1. Assy Parts 2. Black Corrugated tube (no slit) Ø5 L=65±3mm	JIG:	1. Terminal Cover jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
2	P2	Wire insertion to Black Corrugated tube (no slit) Ø5 L=65±3mm	 1. Hold the wires using left hand, get the terminal cover jig using right hand then insert the B and B wires using left hand. 2. Get the corrugated tube (no slit) Ø5 L=65±3mm using right hand then insert the B and B wires using left hand. 3. After insertion, remove the terminal cover jig using right hand.	TERMINAL COVER JIG 	1. No wrong use of parts 2. No deformed terminal ***Document references:*** ***1. Refer to WI-PRO-CNC-017 for Wire and Strip length tolerance.***

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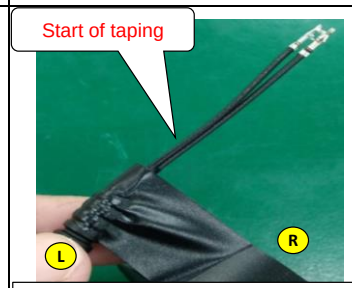
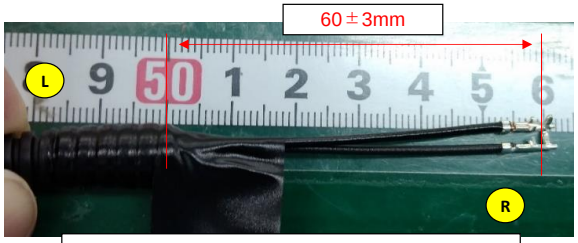
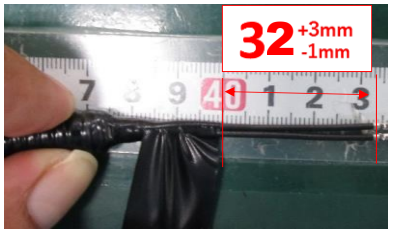
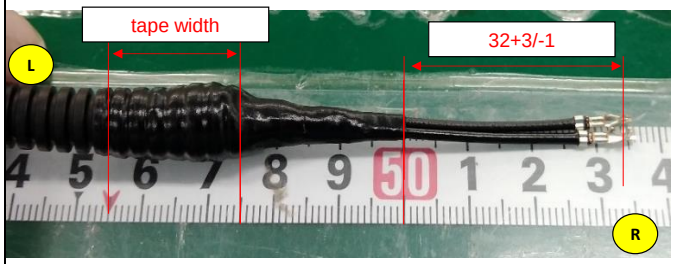
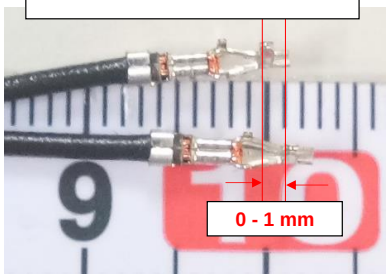
	Model code/Part number: TP1 / 7L0144-7020A	Customer: TRQSS	Car Model: SUBARU-ASCENT	Document No.:	WI-ENG-PDE-724B	
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	1	Page No.: 3 of 9

PARTS:	1. Assy parts 2. Black tape	JIG:	n/a

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	P2	Taping 2 Black corrugated tube to wire near terminal	 1. Hold the COT using left hand, get the Black tape using right hand then start pre-taping using both hands.  2. Measure from end of COT up to terminal pointed tip 60±3mm then continue the taping process using both hands.  3. Confirm measurement of **32+3/-1mm**from end of tape up to terminal pointed tip then continue the taping process using both hands.  3. After taping, check the measurement, taping condition and terminal appearance.	**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. Please use calibrated/verified measuring tape when getting the measurement.***

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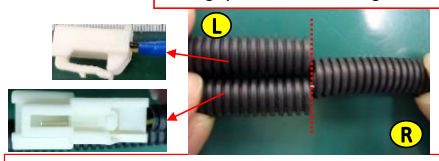
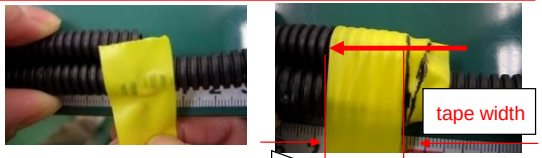
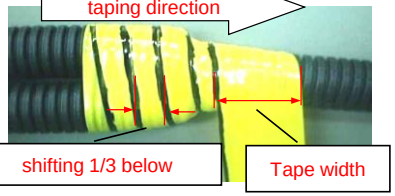
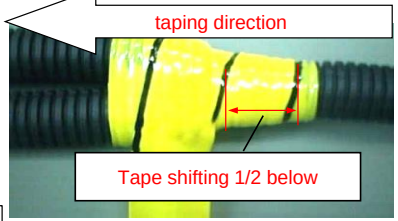
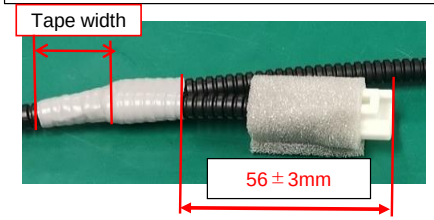
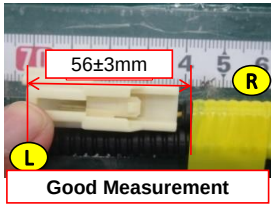
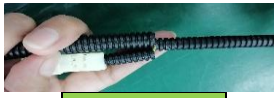
	Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO			Revision No.:	1	Page No.: 4 of 9

PARTS:	1. Assy parts 2. Gray tape	JIG:	n/a

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	P2	Y-TAPING	No gap between Corrugated tubes  1. Fix the corrugated tube. Note: Do not exert excessive force during pulling & winding of tape  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 56mm.  3. Wind the tape 1/3 shifting until it reach the other side of corrugated tube (must be tape width)  4. Wind the tape backward 1/2 shifting.  5. Wind the tape 1/2 shifting going to other side of corrugated tube then cut the tape. After taping, check the condition of tape.	MEASURING TAPE 	 Good Measurement  GOOD FACING NG FACING ***Important reminders/Note/s:*** ***1. Used Yellow tape for easy visualization of shifting lines , but actual should be GRAY TAPE.*** ***2. Please use calibrated/verified measuring tape when getting the measurement.*** 1.No flip out tape 2.No tape peeling 3. No loose tape 4. No wrong use of tape 5. No gap between Corrugated tubes 6. No exposed wire

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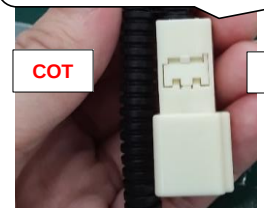
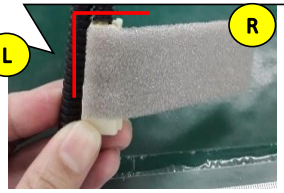
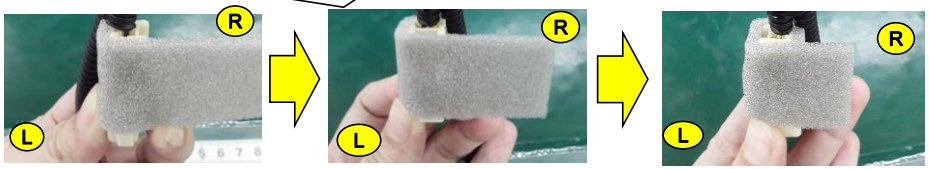
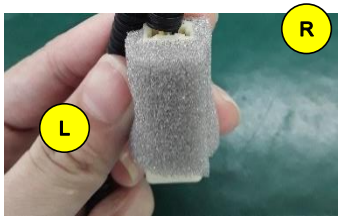
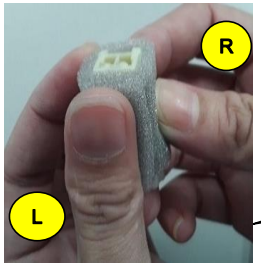
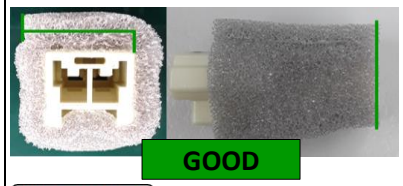
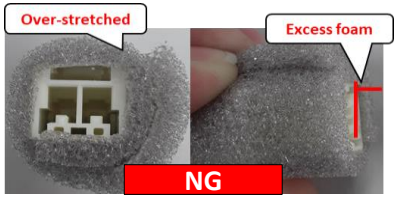
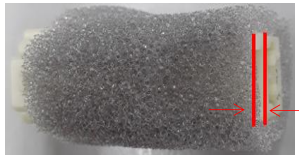
	Purpose:	☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO		Revision No.:	1

PARTS:	1. Gray Urethane foam t=4; 75mm X 30mm 2. Assy parts	JIG:	n/a

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
5	P2	Urethane foam manual attachment to connector	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**    **0~3mm tolerance from Urethane foam to Connector** 1. No damaged Urethane foam 2. No missing Urethane foam 3. No stretched Urethane foam

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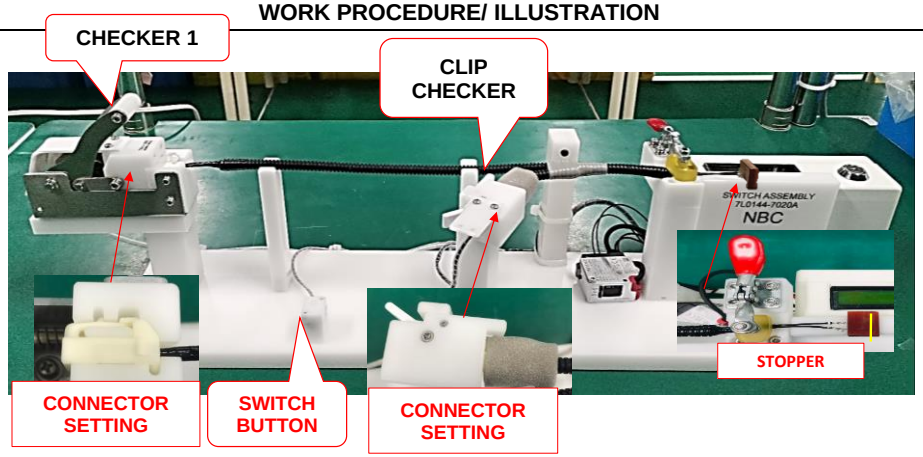
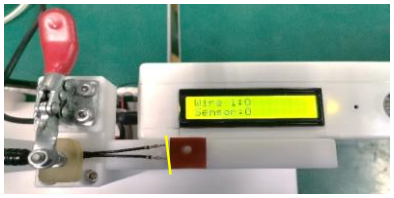
	Model code/Part number: TP1 / 7L0144-7020A	Customer: TRQSS	Car Model: SUBARU-ASCENT	Document No.:	WI-ENG-PDE-724B	
	Purpose: ☐PROTOTYPE ☐PRE-LAUNCH ■MASSPRO			Revision No.:	1	Page No.: 6 of 9

PARTS:				JIG:	
NO.	**PROCESS NAME**		**WORK PROCEDURE/ ILLUSTRATION**	**TOOLS/PPE**	**QUALITY POINTERS**
6	P2	Continuity checking	 1. Get the assy parts and set into tester jig using both hands. ***(See above picture for correct setting).*** First set the **connector 7282-7028 (W)** to **clip checker** then lock. Second, set the **connector 7283-1020 (W)** to **checker 1** then pull the checker fixture for continuity checking. Last, set the **B-B wires** together with the stopper jig then press by toggle clamp. 2. Press the **SW button** using right hand for continuity checking. **GO** sound wil be heard, 3. Conduct **POINT CHECKING** before removing the harness from jig.	**n/a**	1. No deformed terminal 2. No wrong usage of parts  STOPPER ***Important reminders/Note/s:*** ***1. Make sure no gap between the terminal and stopper.***

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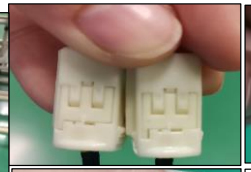
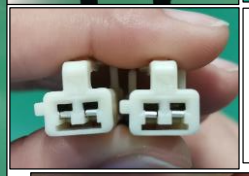
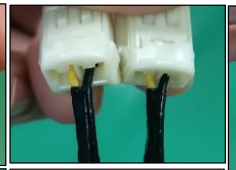
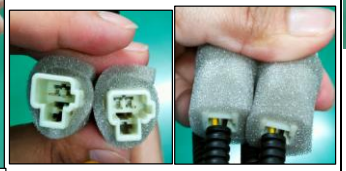
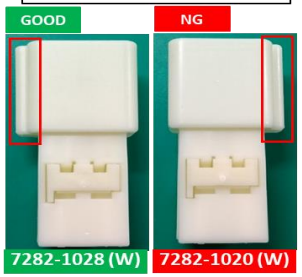
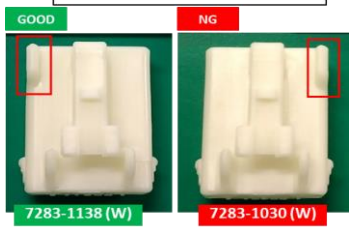
	Purpose: ☐PROTOTYPE ☐PRE-LAUNCH ■MASSPRO			Revision No.:	1	Page No.: 7 of 9

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	 1. Conduct **alignment of harness (Master sample vs. Assembled part)** using right hands.    2. Check **the connector lock condition**, **insertion** and **terminal**. 3. Check **the taping condition of COT to wire near connector**  4. Check **the presence of attached urethane foam**. 5. Check the **Y-taping condition**. **Color of tape must be GRAY only**. 6. Check the **taping condition from COT to wire near terminal** 7. Check **the terminal appearance**. Must be **no deformed terminal**.		1. No skip checking during inspection. CONNECTOR ILLUSTRATION  CONNECTOR ILLUSTRATION 

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	Purpose:	☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO		Revision No.:	1
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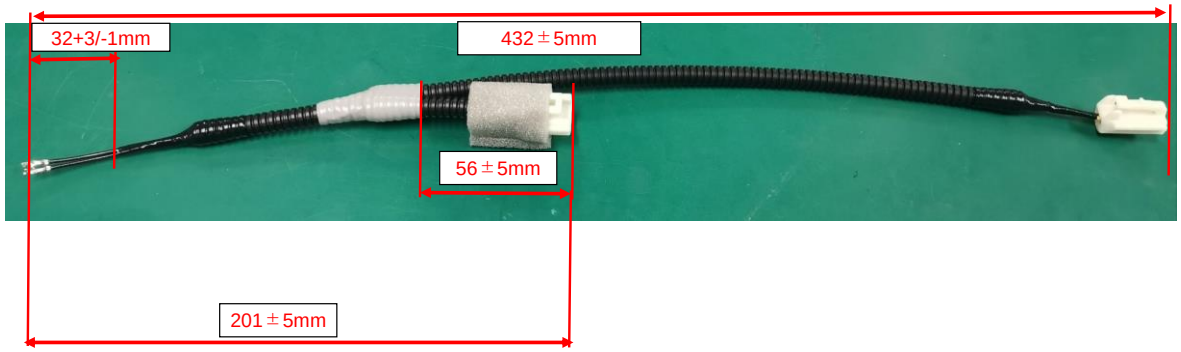
PARTS:	n/a	JIG:	n/a

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

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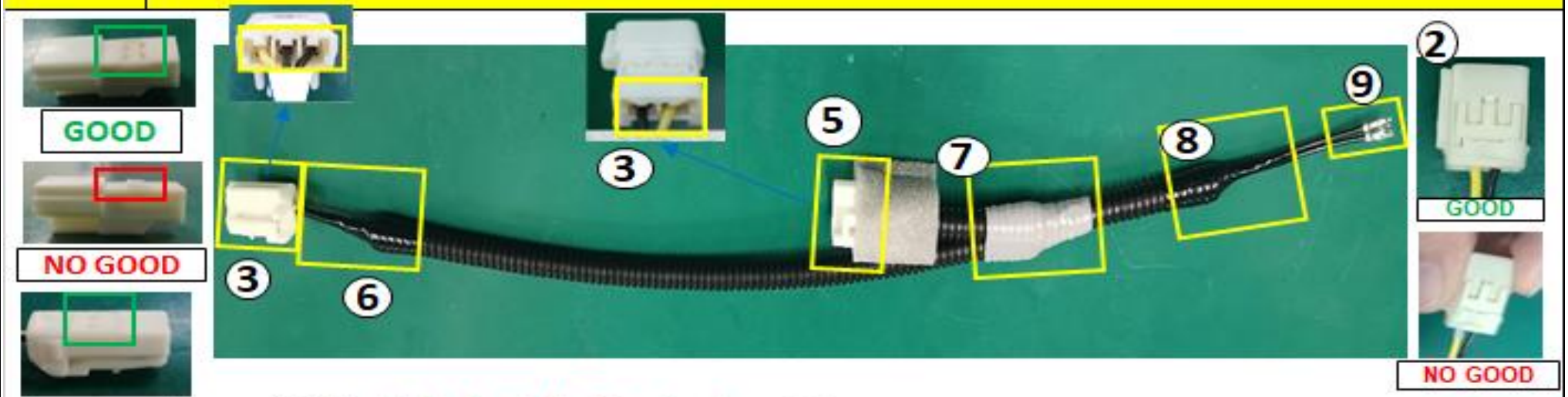
	Purpose:	☐ PROTOTYPE	☐ PRE-LAUNCH	■ MASSPRO	Revision No.:	1	Page No.: 9 of 9

PARTS:	n/a	JIG:	n/a

QUALITY CHECKPOINTS

P2 **7L0144-7020A**



1. No Unlocked/ Half Locked Connector
2. No Terminal Backing Out
3. 4 No wrong insert
5. No Missing Sponge tape
6. 7. 8. No Missing Tape/ No wrong color of tape
9. No Deformed Terminal

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