



## WORK INSTRUCTION

Process Name/Title:

## TAPING ASSEMBLY PROCESS

Effectivity Date:

September 27, 2023

Validity Date:

n/a

Model code/Part number:

TM3

/

7L0114-7021A

Customer:

TRQSS

Car Model:

SUBARU-ASCENT

Document No.:

WI-ENG-PDE-710B

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

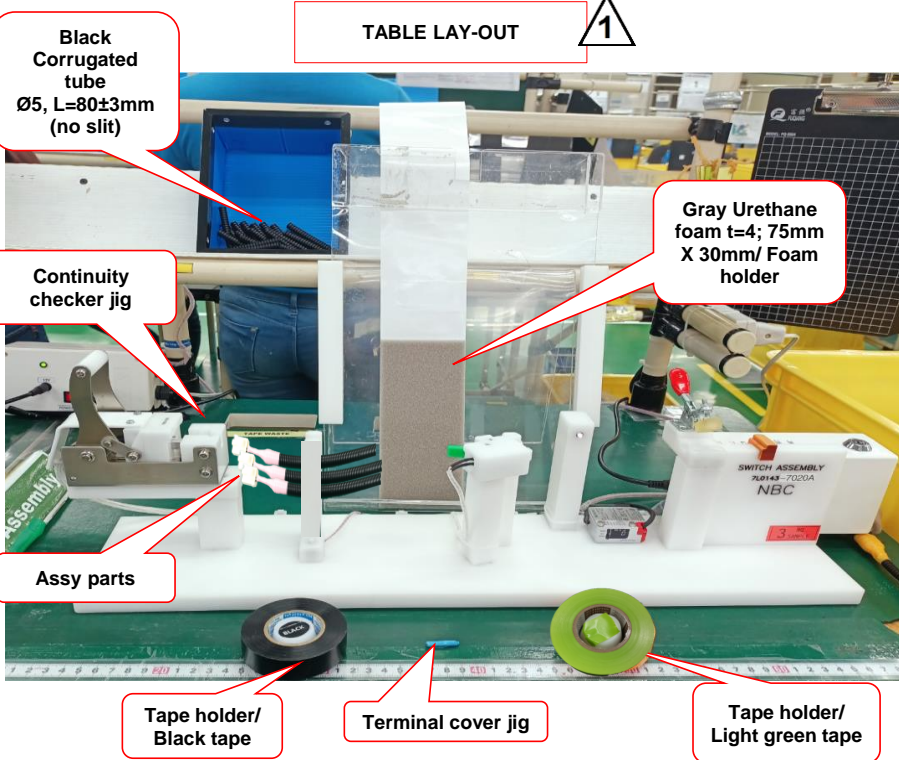
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PARTS:	1. All parts (Assy parts) 2. Black corrugated tube Ø5, L=80±3mm (no slit) 3. Gray Urethane foam t=4; 75mm X 30mm 4. Black tape 5. Light green tape	JIG:	1. Continuity checker jig
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NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
1	P2 Table Lay-out	 <p>TABLE LAY-OUT 1</p>	<p><b>Safety Instruction</b> Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</p> <p><b>Housekeeping</b> 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.</p> <p><b>Alert level</b> For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</p>	1. No deformed terminal 2. No wrong usage of parts

Revision History								Prepared by	Reviewed by	Approved by	Noted by		
09/27/23	1	Change from pre-launch to mass pro. Inclusion of table lay-out and continuity tester process.				A.Hernandez	J.Loterte	C.Villanueva	A. Arañes				
07/28/23	0	Initial issue.				D.Castillo	J.Loterte	C.Villanueva	A. Arañes	A.Hernandez	J. Loterte	C. Villanueva	A. Arañes
Eff. Date	Rev. No	Details of Change				Revised	Reviewed	Approved	Noted	Est. Date:	July 28, 2023		

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<b>PARTS:</b>		1. Assy parts 2. Black corrugated tube Ø5 L=80±3mm (no slit)		JIG:	1. Terminal cover jig
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>		<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>
2	P2	Wire insertion to Black corrugated tube (no slit) Ø5 L=80±3mm	 <p>1. Hold the wires using left hand, get the terminal cover jig using right hand then insert the <b>B and B jointed wires</b> using left hand.</p>	<div>TERMINAL COVER JIG</div> 	1. No deformed terminal 2. No wrong usage of parts
			 <p>2. Get the corrugated tube (no slit) Ø5 L=80±3mm using right hand then insert the <b>B and B jointed wires</b> using left hand.</p>		
			 <p>3. After insertion, remove the terminal cover jig using right hand.</p>		

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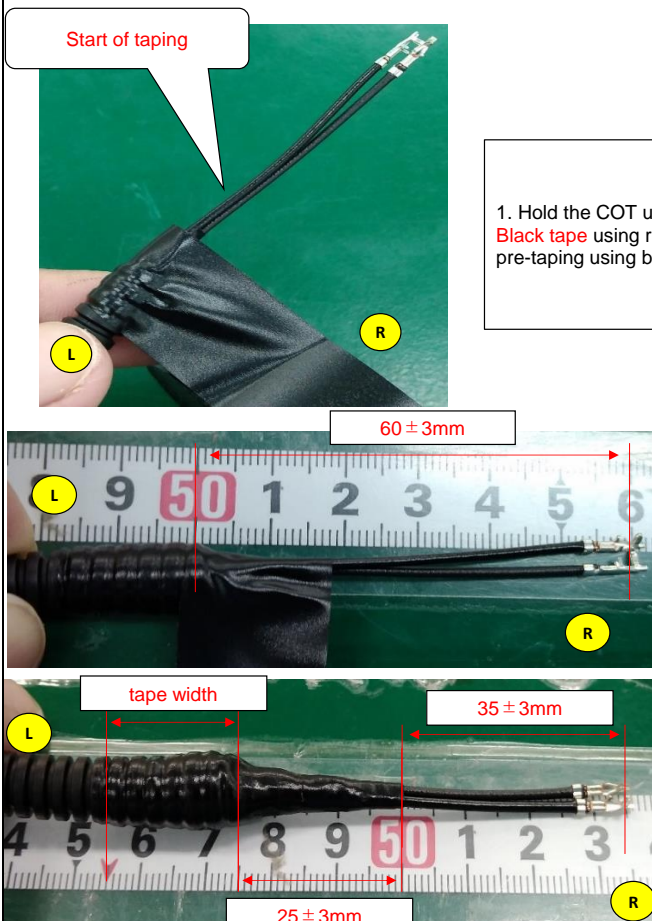

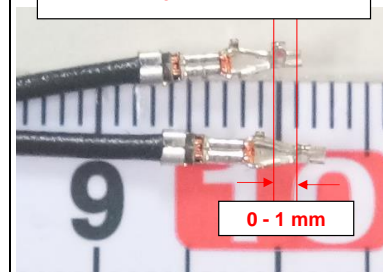
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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PARTS:		1. Assy parts 2. Black tape [1pc]		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	P2	<p>Taping 4 COT to wire near terminal</p>  <p>The illustration shows three steps of the taping process. Step 1: A hand holds a black tape (COT) against a wire terminal. A callout says 'Start of taping'. Step 2: A measuring tape is used to measure the length of the tape from the end of the COT to the terminal. A dimension of 60 ± 3mm is indicated. Step 3: The tape is shown fully applied to the wire. Dimensions for the tape width (25 ± 3mm) and the length of the tape (35 ± 3mm) are indicated. A yellow 'L' and 'R' label is present in the bottom left and right corners of the images respectively.</p> <p>1. Hold the COT using left hand, get the <b>Black tape</b> using right hand then start pre-taping using both hands.</p> <p>2. Measure from end of COT up to terminal pointed tip <b>60±3mm</b> then continue the taping process using both hands.</p> <p>3. After taping, check the measurement, taping condition and terminal appearance.</p>		<p>MEASURING TAPE</p> 	<p>Wire alignment tolerance</p>  <p>0 - 1 mm</p> <p>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</p> <p><b>Important reminders/Note/s:</b></p> <p><b>1. Please use calibrated/verified measuring tape when getting the measurement.</b></p>

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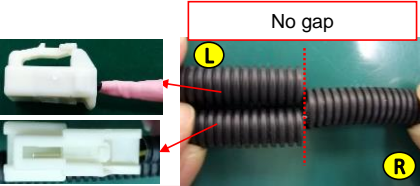

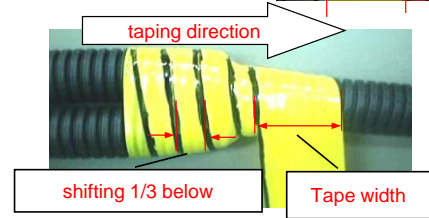
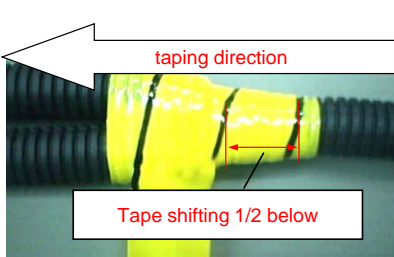


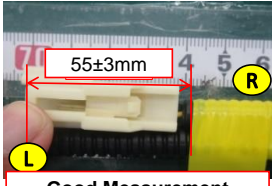


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PARTS:		1. Assy parts 2. Light green tape [1pc]		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
4	P2  Taping 3 Y-Taping	<div><div></div><div><div>1. Fix the corrugated tube.</div></div><div><div>Note: Do not exert excessive force during pulling &amp; winding of tape</div><div></div><div><div>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 <b>55±3mm</b>.</div></div><div><div></div><div><div>3. Wind the tape 1/3 shifting until it reach the other side of corrugated tube (must be tape width)</div></div><div><div></div><div><div>4. Wind the tape backward 1/2 shifting.</div></div><div><div></div><div><div>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.</div></div></div></div><div><div>MEASURING TAPEA</div></div></div></div></div>		<div><div></div><div><div>55±3mm</div></div><div><div>Good Measurement</div></div><div><div></div><div><div>GOOD FACING</div></div><div><div></div><div><div>NG FACING</div></div></div><div><div>Important reminders/Note/s:</div><div><div>1. Please use calibrated/verified measuring tape when getting the measurement.</div><div>2. Used Yellow tape for easy visualization of shifting lines , but actual should be <u>LIGHT GREEN</u>.</div></div><div><div>1. No unlocked/half-locked connector</div><div>2. No damage connector.</div></div></div></div></div>	

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Model code/Part number: **TM3 / 7L0114-7021A** Customer: **TRQSS** Car Model: **SUBARU-ASCENT**

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

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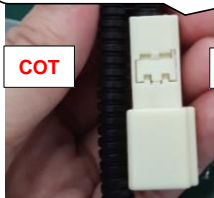




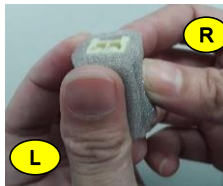

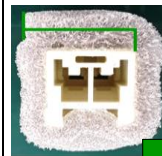
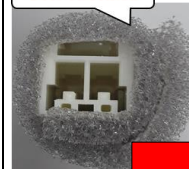

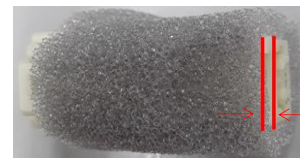
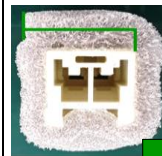
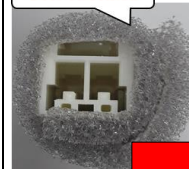

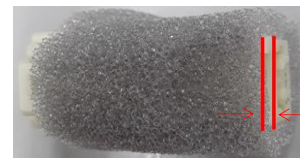
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PARTS:		1. Gray Urethane foam t=4; 75mm X 30mm 2. Assy parts		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
5	P2 Urethane foam manual attachment to connector	<div><div><div>Step 1: Identify the right facing to attached the foam</div><div><div>COT</div><div>Connector</div></div></div><div><div>Step 2: Get the Urethane foam and begin the attachment. Note: Foam and connector must be align</div><div><div>L</div><div>R</div></div></div><div><div>Step 3: Attached the foam in all sides of the connector. Note: Follow the attachment sequence based on the illustration</div><div><div>L</div><div>R</div></div><div><div>L</div><div>R</div></div><div>Step 4: Press the Urethane foam side by side after attachment.</div></div></div> <div>n/a</div> <td><div>DO NOT STRETCH THE URETHANE FOAM</div><div><div><div>GOOD</div></div><div><div><div>Over-stretched</div><div>NG</div></div><div><div>Excess foam</div></div></div><div><div><div>0~3mm tolerance from Urethane foam to Connector</div></div></div><div>1. No damaged Urethane foam 2. No missing Urethane foam 3. No stretched Urethane foam</div></div></td>		<div>DO NOT STRETCH THE URETHANE FOAM</div> <div><div><div>GOOD</div></div><div><div><div>Over-stretched</div><div>NG</div></div><div><div>Excess foam</div></div></div><div><div><div>0~3mm tolerance from Urethane foam to Connector</div></div></div><div>1. No damaged Urethane foam 2. No missing Urethane foam 3. No stretched Urethane foam</div></div>	

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☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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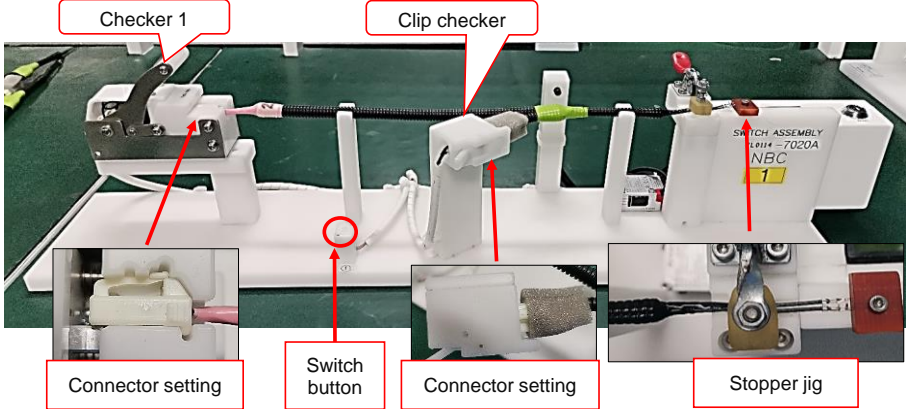


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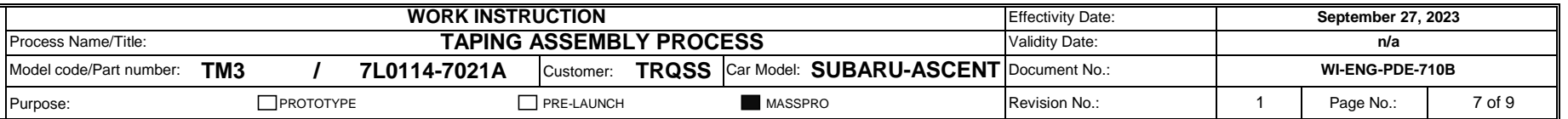
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PARTS:	1. Assy parts		JIG:	1. Continuity checker jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
6	P2	<div><div><div><div><div>Checker 1</div><div></div></div></div><div><div>1. Get the assy parts and set to tester jig 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 the stopper jig then pull down the toggle clamp.</div><div>2. Check if LCD light for Power ON, Wire1 &amp; Sensor 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.</div><div>3. Press the switch button using right hand. GO buzzer will be heard.</div><div>4. Conduct POINT CHECKING before removing the harness from the jig.</div></div><div></div></div></div>	n/a	<div><div></div><div>STOPPER</div><div>Important reminders/Note/s: 1. Make sure no gap between the terminal and stopper.</div></div>

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

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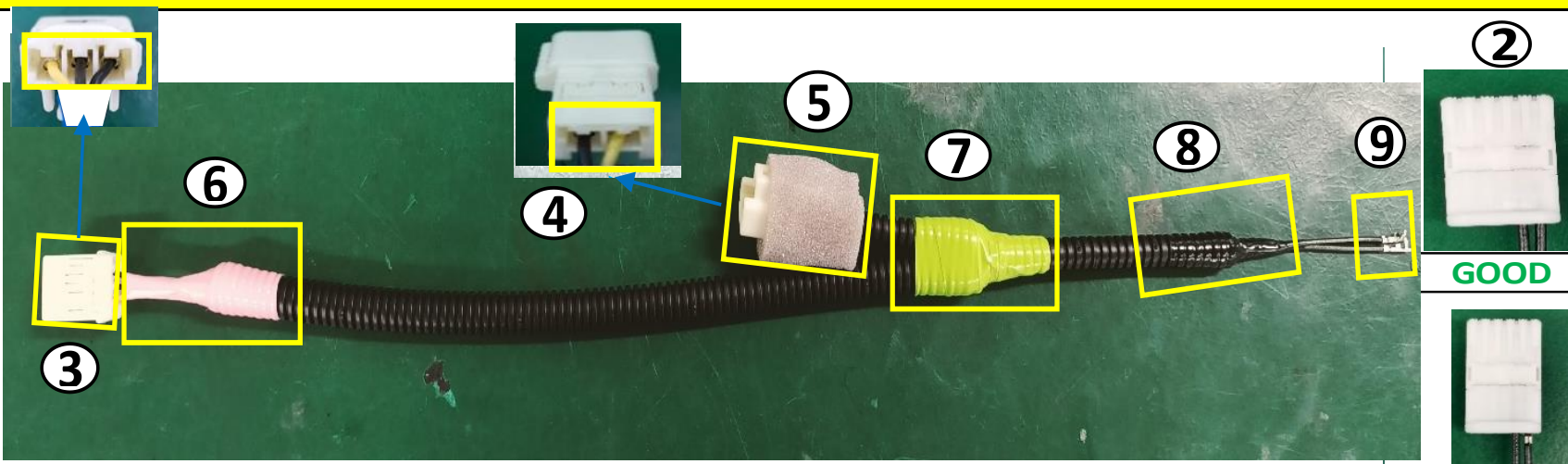
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PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

**P2****7L0114-7021A****GOOD****NO GOOD****GOOD****NO GOOD****②****GOOD****NO GOOD****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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