



WORK INSTRUCTION
TAPING ASSEMBLY PROCESS

Effectivity Date:	September 29, 2023		
Validity Date:	n/a		
Document No.:	WI-ENG-PDE-723B		
Revision No.:	1	Page No.:	1 of 10

Process Name/Title:	TAPING ASSEMBLY PROCESS		
Model code/Part number:	TP1 / 7L0088-7023B	Customer:	TRQSS
Car Model:	SUBARU-ASCENT		
Purpose:	<input type="checkbox"/> PROTOTYPE	<input type="checkbox"/> PRE-LAUNCH	<input checked="" type="checkbox"/> MASSPRO

PARTS:		1. Assy parts 2. Black Corrugated tube (no slit) Ø5 L=62±3mm		3. Black tape 4. Gray tape 5. Urethane foam		JIG:	1. Continuity checker jig 2. Terminal cover jig
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
1	P2	Tayble Lay-out	<div><div>Black Corrugated tube Ø5, L=62±3mm (no slit)</div><div>TABLE LAY-OUT</div><div>Gray Urethane foam t=4; 75mm X 30mm/ Foam holder</div><div>Continuity checker jig</div><div>Assy parts</div><div>Tape holder/ Black tape</div><div>Terminal cover jig</div><div>Tape holder/ Gray tape</div></div>			<div><div>Safety Instruction Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</div><div>Housekeeping 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.</div><div>Alert level For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</div></div>	1. No deformed terminal 2. No wrong usage of parts

Revision History						Prepared by	Reviewed by	Approved by	Noted by
09/29/23	1	Change from pre-launch to mass pro and inclusion of table lay-out.				A.Hernandez	J. Loterte	C. Villanueva	A. Arañes
09/02/23	0	Initial Release				A.Hernandez	J. Loterte	C. Villanueva	A. Arañes
Eff. Date	Rev. No	Details of Change				Revised	Reviewed	Approved	Noted

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☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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PARTS:		1. Assy parts 2. Black Corrugated tube (no slit) Ø5 L=62±3mm		JIG:	1. Terminal cover jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	P2	<div><p>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.</p></div> <div><p>2. Get the corrugated tube (no slit) Ø5 L=62±3mm using right hand then insert the B and B wires using left hand.</p></div> <div><p>3. After insertion, remove the terminal cover jig using right hand.</p></div>		<div>TERMINAL COVER JIG</div> 	1. No wrong use of parts 2. No deformed terminal

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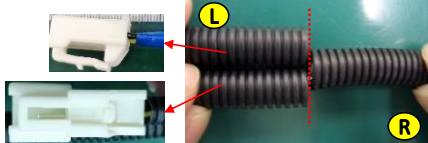
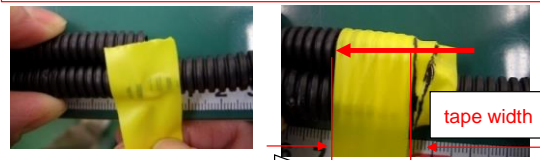
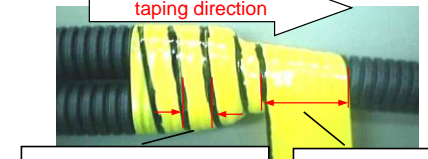
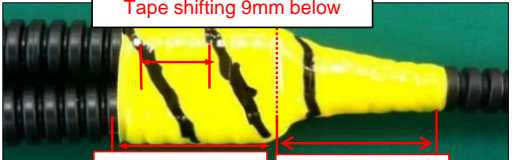

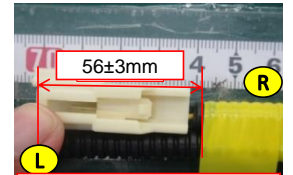


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PARTS:		1. Assy parts 2. Gray tape		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	P2	Y-Taping	<div><div>No gap between Corrugated tubes</div><div><div>1. Fix the corrugated tube.</div></div><div><div>Note: Do not exert excessive force during pulling & winding of tape</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 52mm.</div></div><div><div>taping direction</div><div><div>shifting 1/3 below</div><div>Tape width</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>Tape shifting 9mm below</div><div><div>Tape width</div><div>Tape width</div></div><div>4. Wind the tape backward 1/2 shifting.</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 TAPE</div></div></div></div>	<div><div>56±3mm</div><div>Good Measurement</div></div> <div><div>GOOD FACING</div></div> <div><div>NG FACING</div></div> <div>Important reminders/Note/s: 1. Used Yellow tape for easy visualization of shifting lines , but actual should be <u>GRAY TAPE</u>. 2. Please use calibrated/verified measuring tape when getting the measurement. 1.No rip 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</div>	

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PARTS:
1. Assy parts
2. Black tape

JIG:

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

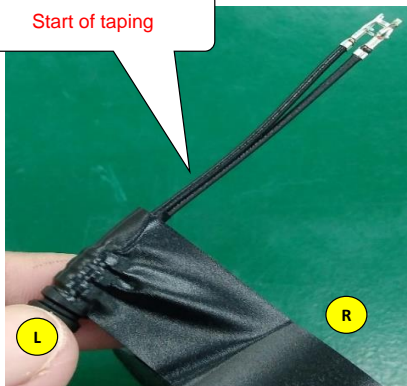
QUALITY POINTERS

4

P2

Taping 2
Black corrugated tube to
wire near terminal

Start of taping



1. Hold the COT using left hand, get the **Black tape** using right hand then start pre-taping using both hands.

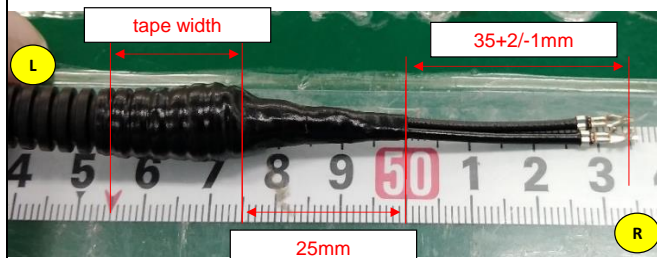
60 ± 3mm



2. Measure from end of COT up to terminal pointed tip **60±3mm** then continue the taping process using both hands.

tape width

35±2/-1mm

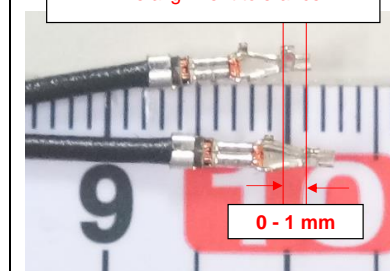


3. After taping, check the measurement, taping condition and terminal appearance.

MEASURING TAPE



Wire alignment tolerance



0 - 1 mm

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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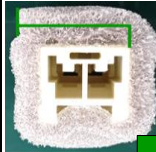
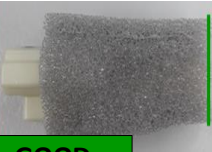
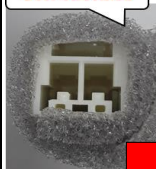

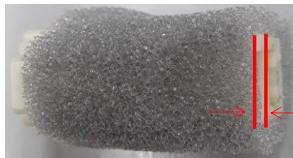





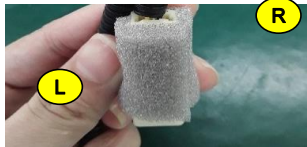
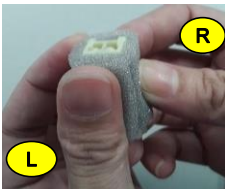
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PARTS:		1. Assy parts 2. Black tape		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
5	P2	Urethane foam manual attachment to connector		N/A	<div>DO NOT STRETCH THE URETHANE FOAM</div> <div><div></div><div></div><div><div>Over-stretched</div></div><div><div>Excess foam</div></div><div></div></div> <div>0~3mm tolerance from Urethane foam to Connector</div> <div>1. No damaged Urethane foam 2. No missing Urethane foam 3. No stretched Urethane foam</div>
		<div>Step 1: Identify the right facing to attached the foam</div> <div><div>COT</div><div>Connector</div></div> <div>Step 2: Get the Urethane foam and begin the attachment. Note: Foam and connector must be align</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></div><div></div><div></div><div></div><div></div><div>Step 4: Press the Urethane foam side by side after attachment.</div></div>			

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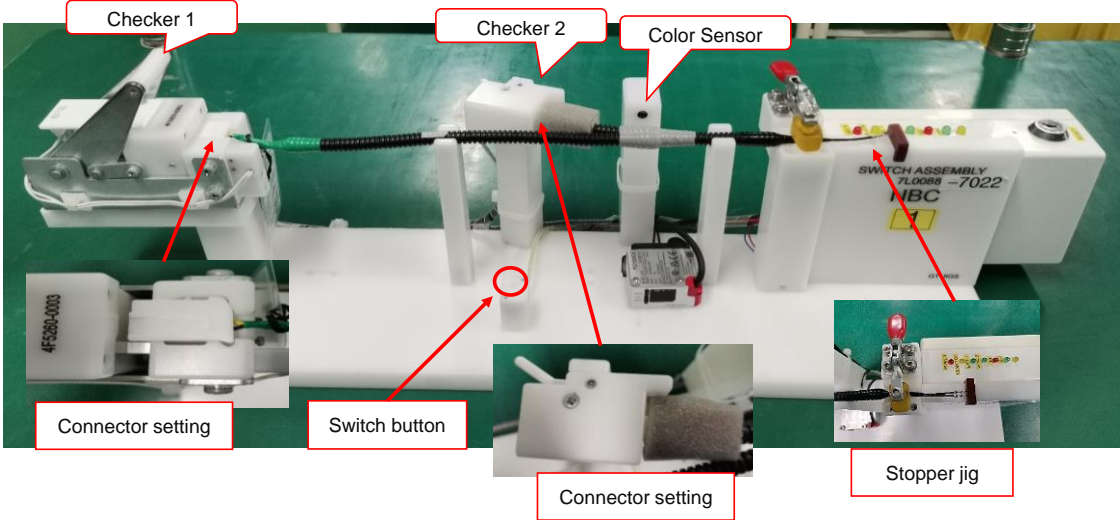
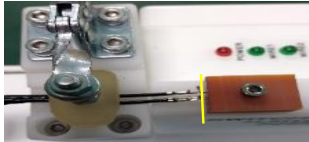
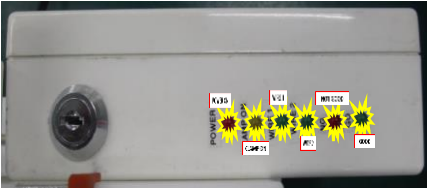
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PARTS:	1. Assy parts		JIG:	1. Continuity checker jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
6	P2 Continuity Test	 <p>1. Get the assy parts and set to tester jig using both hands. First, set the connector 7282-1028 (W) to Clip Checker 1 then lock. Second, set the connector 4F5260-0000 (W) to Checker 2 then pull the checker fixture for continuity checking. Last, set the B-B wires together within the stopper jig then press by toggle clamp. (See above picture for correct setting).</p> <p>2. Check if all LED light for Power, Clamp on, Wire1, Wire2 & B-B Wires. Check if the color Sensor detected the Gray tape 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.</p>	 <p>STOPPER</p> <p>Important reminders/Note/s:</p> <p>1. Make sure no gap in between the terminal and stopper</p> <p>2. Counter will be the basis of quantity of harness per box. Only LEADER are allowed to reset the counter.</p> <p>1. No wrong insertion 2. No wrong orientation of connector</p> 	

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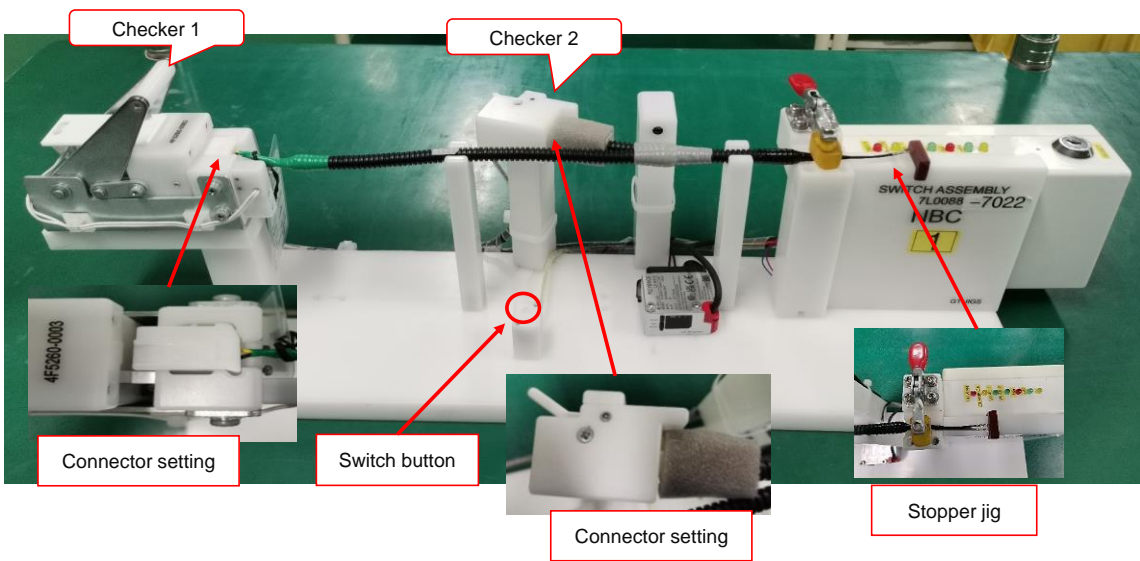
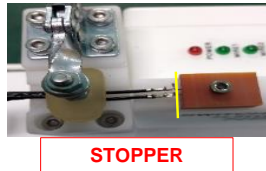
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PARTS:	1. Assy parts		JIG:	1. Continuity checker jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
6	P2	<div><div>Checker 1</div><div>Checker 2</div><div>Connector setting</div><div>Switch button</div><div>Connector setting</div><div>Stopper jig</div></div> <div>3. Press the SW button using right hand for continuity checking. GO sound will be heard.</div> <div>4. Conduct POINT CHECKING before removing the harness from jig.</div> <div>5. For the removal of harness from the jig, First, remove the connector Checker 2. Second, remove the B-B wires to toggle clamp. Last remove the connectors to checker 1.</div>	<div><div>STOPPER</div><div>Important reminders/Note/s: 1. Make sure no gap in between the terminal and stopper 2. Counter will be the basis of quantity of harness per box. Only LEADER are allowed to reset the counter.</div></div> <div>1. No wrong insertion 2. No wrong orientation of connecto</div>	

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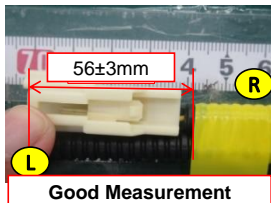
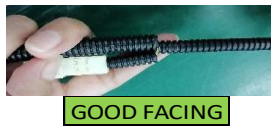



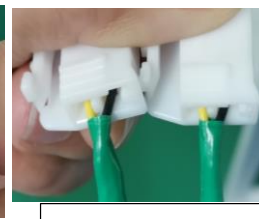
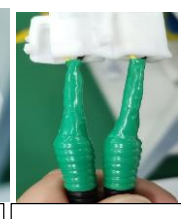



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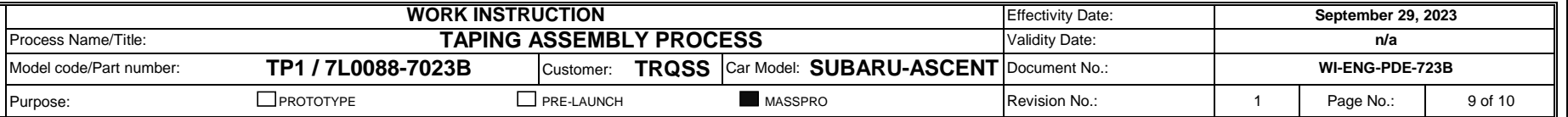
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PARTS:		1. Assy parts 2. Gray tape		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
7	P2	Visual/By Two's Inspection	<div><p>ACTUAL PRODUCTS</p></div>		<div><p>Good Measurement</p></div> <div><p>GOOD FACING</p></div> <div><p>NG FACING</p></div>
			<div><p>1. Conduct alignment of harness (Master sample vs. Assembled part)</p></div> <div><p>2. Check the connector lock condition, insertion and terminal.</p></div> <div><p>3. Check the tapping condition of COT to wire near connector</p></div> <div><p>4. Check the presence of attached urethane foam.</p></div> <div><p>5. Check the Y-taping condition. Color of tape must be GRAY only.</p></div> <div><p>6. Check the tapping condition from COT to wire near terminal</p></div> <div><p>7. Check the terminal appearance. Must be no deformed terminal.</p></div>		<p>Important reminders/Note/s:</p> <p>1. Used Yellow tape for easy visualization of shifting lines , but actual should be <u>GRAY TAPE</u>.</p> <p>2. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>1.No nip 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</p>

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PARTS:

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JIG:

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QUALITY CHECKPOINTS**P2****7L0088-7023B**

GOOD



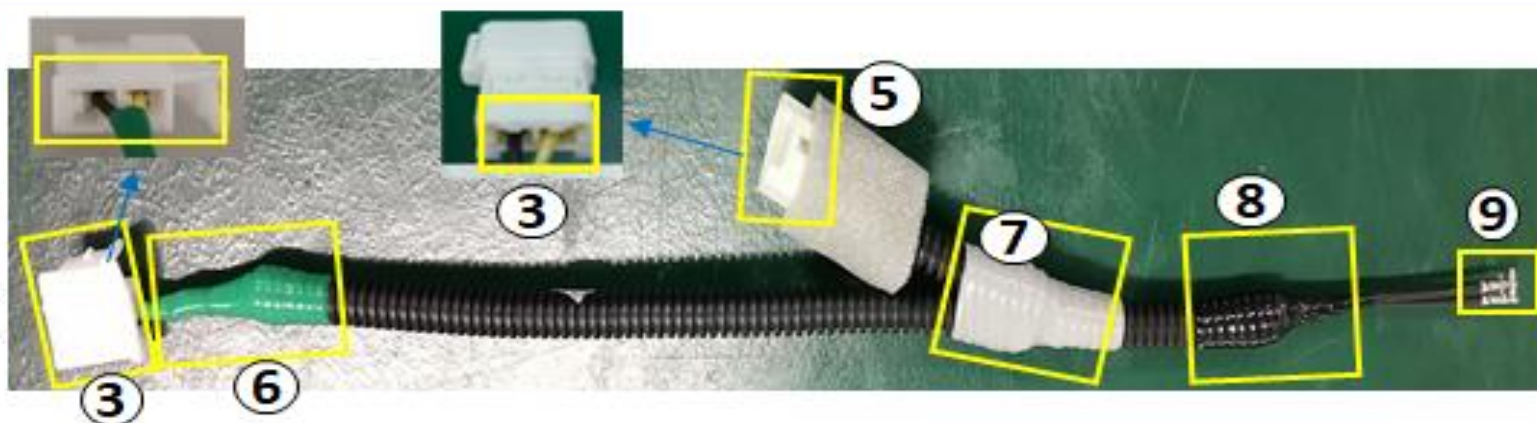
NO GOOD



GOOD



NO GOOD



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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