



WORK INSTRUCTION

TAPING ASSEMBLY PROCESS

Process Name/Title:

Model code/Part number: **TM3 / 7L0143-7020A** Customer: **TRQSS** Car Model: **SUBARU-ASCENT**

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Effectivity Date:

August 30, 2023

Validity Date:

n/a

Document No.:

WI-ENG-PDE-712B

Revision No.:

1

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PARTS:

1. All parts (Assy parts; Black corrugated tube Ø5, L=65±3mm (no slit); Black tape; Gray Urethane foam t=4; 75mm X 30mm); Orange tape

JIG:

1. Continuity checker jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

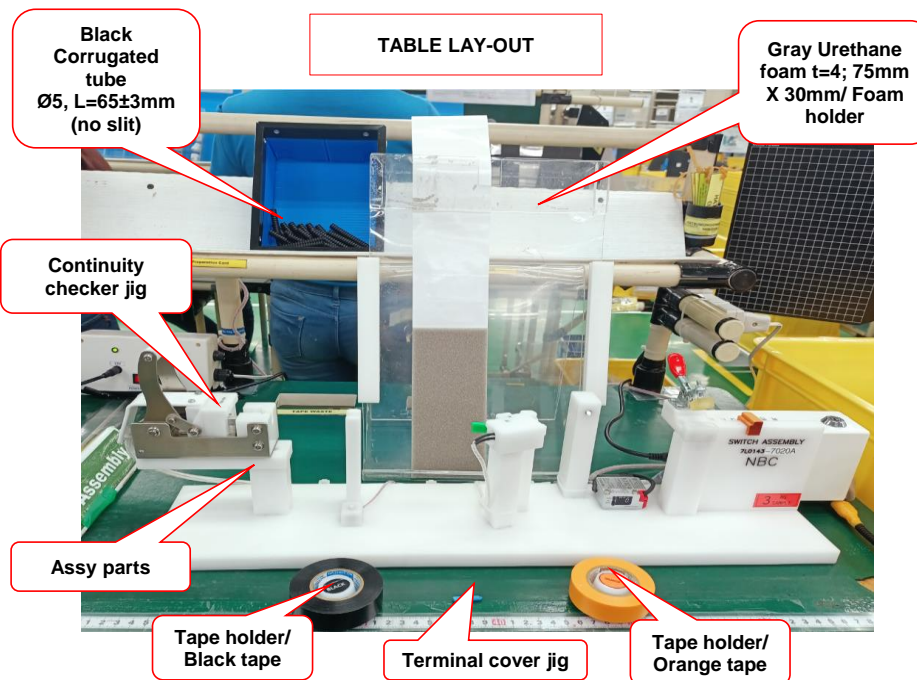
TOOLS/PPE

QUALITY POINTERS

1

P2

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 work place 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	Prepared by	Reviewed by	Approved by	Noted by
08/30/23	1	Change from Pre-launch to Masspro. Inclusion of table lay-out. Provide continuity checker jig. Change process sequence (Page 3-4) to prevent wrong use of tape.	M. Ariola	J.Loterte	C. Villanueva	A. Arañes	M. Ariola	J. Loterte	C. Villanueva	A. Arañes
07/24/23	0	Initial issue.	M. Ariola	J.Loterte	C. Villanueva	A. Arañes	M. Ariola	J. Loterte	C. Villanueva	A. Arañes

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PARTS:		1. Assy parts 2. Black Corrugated tube (no slit) Ø5 L=65±3mm		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	P2	Wire insertion to Black corrugated tube (no slit) Ø5 L=65±3mm	 <p>1. Hold the wires using left hand, get the terminal cover jig using right hand then insert the B and B jointed wires using left hand.</p>	TERMINAL COVER JIG 	1. No deformed terminal 2. No wrong usage of parts
			 <p>2. Get the corrugated tube (no slit) Ø5 L=65±3mm using right hand then insert the B and B jointed wires using left hand.</p>		
			 <p>3. After insertion, remove the terminal cover jig using right hand.</p>		

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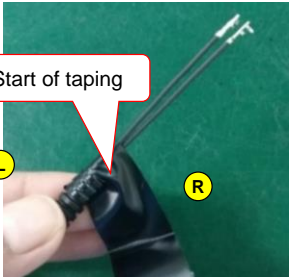
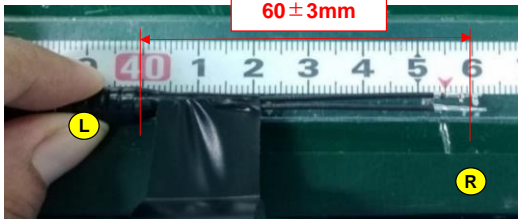

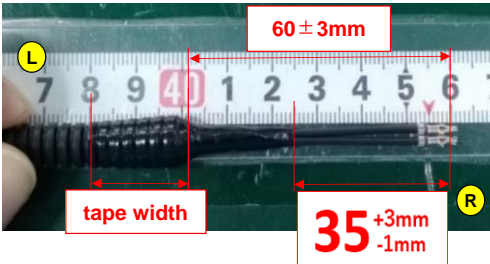

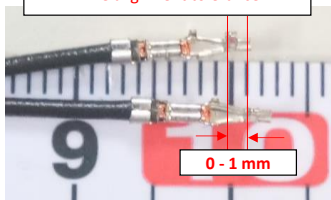
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PARTS:		1. Black tape 2. Assy parts		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	P2 Taping 2 COT to wire near terminal	<div><div><p>Start of taping</p></div><div><p>60 ± 3mm</p></div><div><p>35 +3mm -1mm</p></div><div><p>60 ± 3mm tape width 35 +3mm -1mm</p></div><div><p>1. Hold the COT using left hand, get the Black tape using right hand then start pre-taping using both hands.</p><p>2. Measure from end of COT up to terminal pointed tip 60±3mm then continue the taping process using both hands.</p><p>3. Confirm measurement of 35+3/-1mm from end of tape up to terminal pointed tip then continue the taping process using both hands.</p><p>4. After taping, check the measurement, taping condition and terminal appearance.</p></div></div> <div><div>MEASURING TAPE</div></div> <div><div>Wire alignment tolerance</div><p>0 - 1 mm</p></div>		<div>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</div> <div>Important reminders/Note/s:</div> <div>1. Please use calibrated/verified measuring tape when getting the measurement.</div> <div>2. For Hatsumono and Owarimono.</div>	

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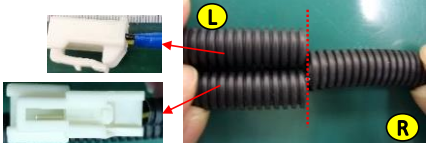
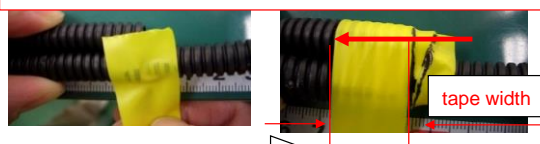
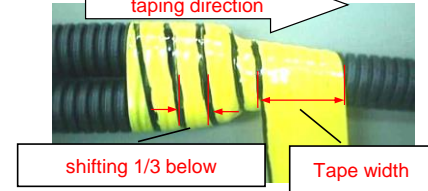
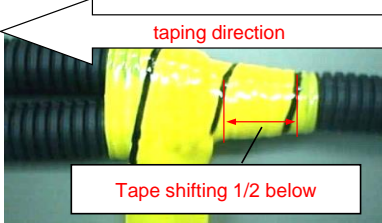
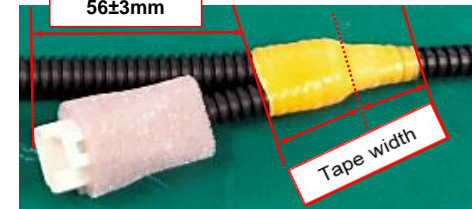

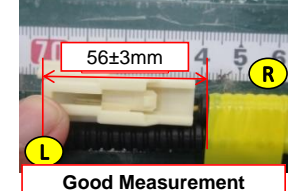


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PARTS:	1. Orange tape 2. Assy parts		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	P2 Y-Taping	<div><div>No gap between Corrugated tubes</div><div><div>1. Fix the corrugated tube.</div></div><div><div>Note: Do 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 56±3mm.</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>4. Wind the tape backward 1/2 shifting.</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></div><div>Important reminders/Note/s: 1. Please use calibrated/verified measuring tape when getting the measurement. 2. Used Yellow tape for easy visualization of shifting lines , but actual should be <u>ORANGE TAPE</u>. 1.No flip out tape 2.No tape peeling 3. No loose tape 4. No wrong use of tape 5. No wide interval between COT 6. No exposed wire</div></div></div>	

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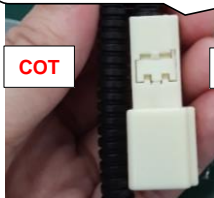




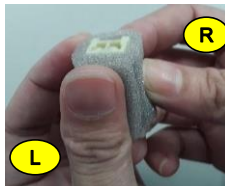

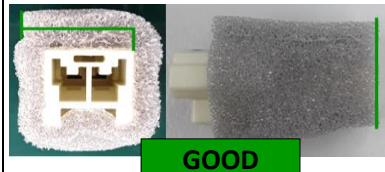
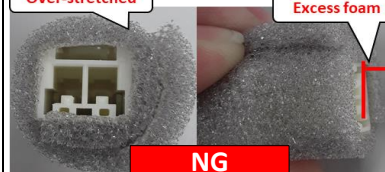
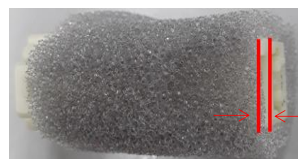
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PARTS:		1. Gray Urethane foam t=4; 75mm X 30mm 2. Assy parts		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
5	P2 Urethane foam manual attachment to connector	<div><div><div>Step 1: Identify the right facing to attached 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> <div><div>DO NOT STRETCH THE URETHANE FOAM</div><div><div>GOOD</div></div><div><div>Over-stretched</div><div>Excess foam</div><div>NG</div></div><div></div><div>0~3mm tolerance from Urethane foam to Connector</div></div> <div><div>1. No damaged Urethane foam</div><div>2. No missing Urethane foam</div><div>3. No stretched Urethane foam</div></div>			

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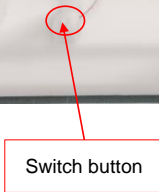

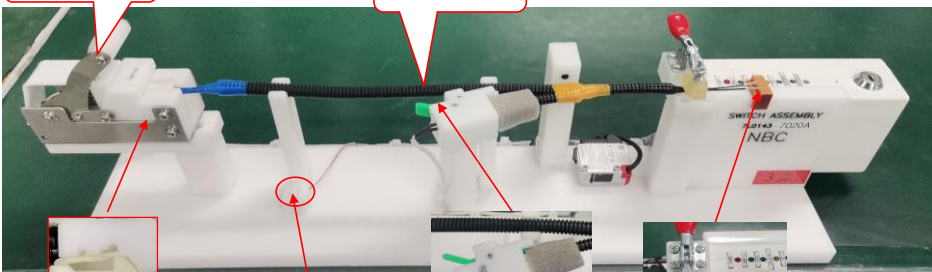
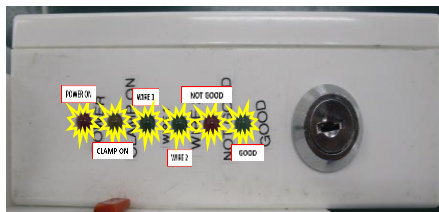


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PARTS:	1. Assy parts		JIG:	1. Continuity checker jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
6	P2	<div><div><div>Checker 1</div><div>Clip Checker</div><div>Connector Setting</div><div>Switch button</div><div>Connector setting</div><div>Stopper jig</div></div><div><p>1. Get the assy parts and set to tester jig using both hands. (See above picture for correct setting). First set the connector 7283-1138 (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.</p><p>2. Check if all LED light for Power ON, Wire1 & Wire2 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>3. Press the switch button using right hand. GO buzzer will be heard.</p><p>4. Conduct POINT CHECKING before removing the harness from the jig.</p></div><div></div></div> <td>n/a</td> <td><div><p>1. No deformed terminal 2. No wrong usage of parts</p><div>STOPPER</div><div>SWITCH</div><p>Important reminders/Note/s:</p><p>1. Make sure no gap between the terminal and stopper.</p></div></td>	n/a	<div><p>1. No deformed terminal 2. No wrong usage of parts</p><div>STOPPER</div><div>SWITCH</div><p>Important reminders/Note/s:</p><p>1. Make sure no gap between the terminal and stopper.</p></div>

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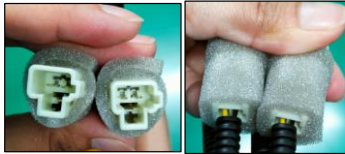

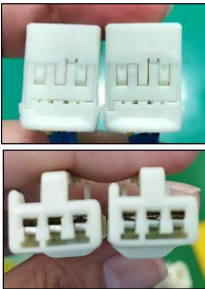

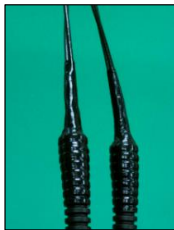
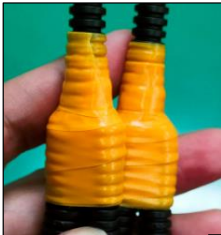

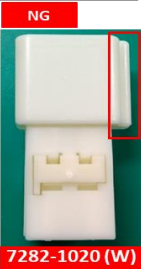
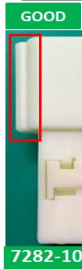
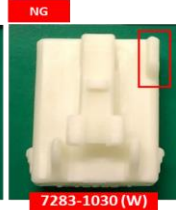
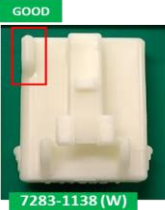
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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PARTS:		1. Assembled parts 2. Master sample		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
7	P2	<div>Visual/By Two's Inspection</div> <div></div> <div></div> <div></div> <div></div> <div>1. Conduct alignment of harness (Master sample vs. Assembled part) using right hands.</div> <div>2. Check the connector lock condition, insertion and terminal.</div> <div>3. Check the taping condition of COT to wire near connector</div> <div>4. Check the presence of attached urethane foam.</div> <div>5. Check the Y-taping condition. Color of tape must be <u>ORANGE</u> only.</div> <div>6. Check the taping condition from COT to wire near terminal</div> <div>7. Check the terminal appearance. Must be no deformed terminal.</div>			<div>1. No skip checking during inspection.</div> <div></div> <div>CONNECTOR ILLUSTRATION</div> <div></div> <div>7282-1028 (W) 7282-1020 (W)</div> <div>CONNECTOR ILLUSTRATION</div> <div></div> <div>7283-1138 (W) 7283-1030 (W)</div>

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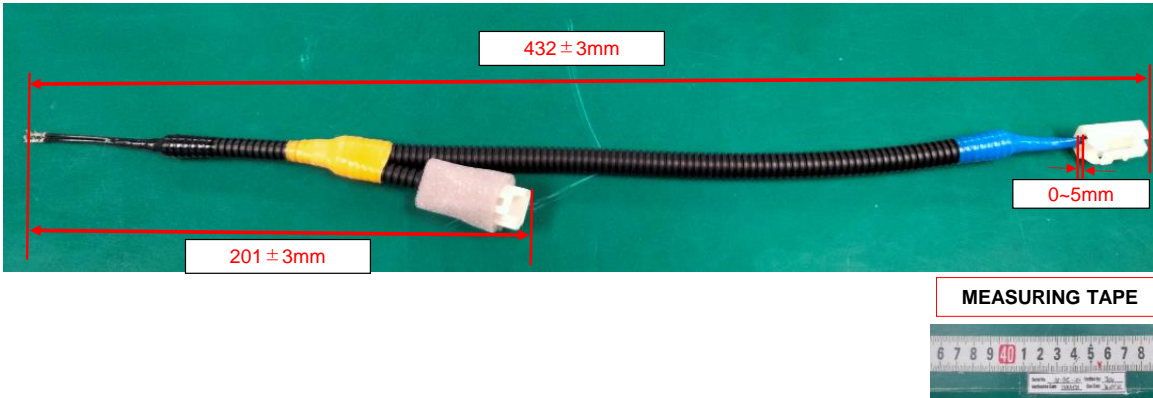
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PARTS:		n/a		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
8	P2	Measurement			<p>1. No wrong dimension</p> <p>Important reminders/Note/s:</p> <p>1. Please use calibrated/verified measuring tape when getting the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

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PARTS:

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QUALITY CHECKPOINTS

P2

7L0143-7020A



GOOD



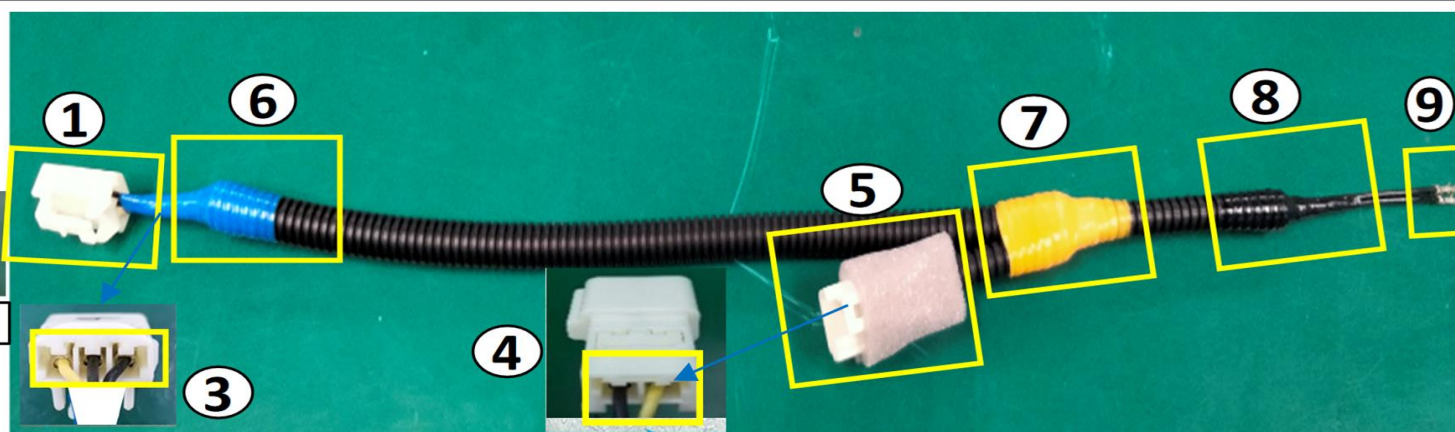
NO GOOD



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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