



WORK INSTRUCTION

Process Name/Title:

TAPING ASSEMBLY PROCESS

Model code/Part number: TP1 / 7L0146-7020A Customer: TRQSS Car Model: SUBARU-ASCENT

Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ☒ MASSPRO

Effectivity Date:

October 9, 2023

Validity Date:

n/a

Document No.:

WI-ENG-PDE-726A

Revision No.:

1

Page No.:

1 of 10

PARTS:

1. Connector 7283-1020 (W); AVSSf wire 0.3 B L= 418±2mm; AVSSf wire 0.3 Y L=338±2mm; AVSSf wire 0.3 B L= 226±2mm; Connector 7282-1028 (W); Black tape; Black Corrugated tube ø5 L=61±3mm; Black Corrugated tube ø5 L=226±3mm

JIG:

1. Insertion jig with/without switch cover
2. Pushing jig
3. Terminal cover jig

NO.

PROCESS NAME

1 WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

1

P1

Table lay-out

1

TABLE LAY-OUT

Connector 7283-1020 (W)/ Connector tray

Connector 7282-1028 (W)/ Connector tray

Black Corrugated tube ø5 L=226±3mm

Black Corrugated tube ø5 L=61±3mm

Insertion jig (A) with switch cover

AVSSf wire 0.3 B L= 418±2mm

AVSSf wire 0.3 Y L= 338±2mm

AVSSf wire 0.3 B L= 226±2mm

Insertion jig (B)

Pushing jig

Terminal cover

Tape holder/Black tape

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.

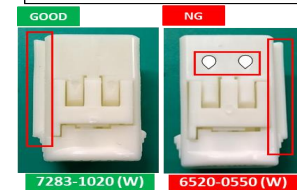
Alert level
For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.

1. No deformed terminal
2. No wrong usage of parts

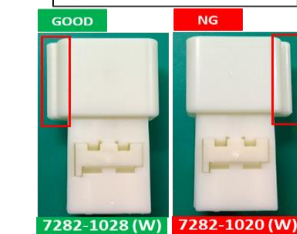
Document references

1. Refer to WI-PRO-CNC-017 for Wire and strip length tolerance

CONNECTOR ILLUSTRATION



CONNECTOR ILLUSTRATION



Revision History

Prepared by

Reviewed by

Approved by

Noted by

10/09/23 1 Change purpose from Pre-launch to Masspro. Update work procedure/Illustration on page 2,3,5 and 6; Additional Quality checkpoints and table lay-out

M. Ariola J.Loterte C. Villanueva A. Arañes

09/20/23 0 Initial issue.

M. Mañalac J.Loterte C. Villanueva A. Arañes

Eff. Date Rev. No Details of Change

Revised Reviewed Approved Noted Est. Date: September 20, 2023

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Document No.:

WI-ENG-PDE-726A

Revision No.:

1

Page No.:

2 of 10

PARTS:		1. Connector 7283-1020 (W)		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	P1	<div><div><div>Insertion jig with Switch Cover</div><div><div>Black wires</div><div>Yellow wires</div><div>Insertion jig</div></div><div><div>I-mark</div><div>Insertion jig orientation</div><div>Connector Orientation</div></div></div><div><div><div><div><div>R</div><div>L</div><div>Press</div></div><div><div>R</div><div>L</div><div>Press</div></div><div><div>R</div><div>L</div><div>Release</div></div></div><div><div>1. Press the lock of insertion jig using left thumb.</div><div>2. Insert the connector 7283-1020 (W) into jig using right hand and release the lock.</div></div><div><div><div></div><div>3. Check the holes/terminal slot for Y wire.</div></div></div></div></div></div>		n/a	<div><div>1. Use provided jig per model</div><div>2. No wrong usage of parts</div><div>3. No wrong orientation of connector</div><div>4. No damaged connector</div></div> <div><div>CONNECTOR ILLUSTRATION</div><div><div>GOOD</div><div>NG</div></div><div><div><div>7283-1020 (W)</div><div>6520-0550 (W)</div></div></div></div>

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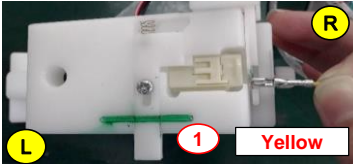
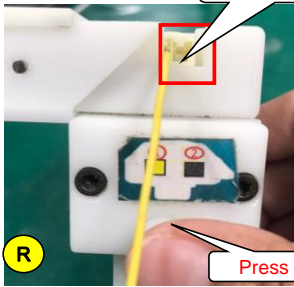
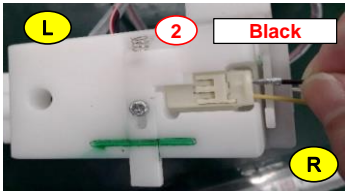
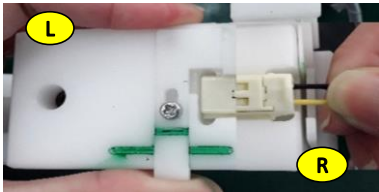
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Revision No.:

1

Page No.:

3 of 10

PARTS:		1. Connector 7283-1020 (W) 2. AVSSf 0.3 B wire L=418±3mm		2. AVSSf 0.3 Y wire L=338±3mm		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
3	P1	Wire insertion to connector 7283-1020 (W) (Assy parts)	<div><div><p>Wire facing</p></div><div><p>1. Get the Yellow wire using right hand then insert to terminal slot 1 using right hand.</p></div><div><p>2. Press the button using right hand, the slot for Black wire will be opened.</p></div><div><p>3. Get Black wire using right hand then insert to terminal slot 2 using right hand.</p></div><div><p>4. After insertion, press the lock using left thumb and then hold the wires and gently pull out the connector from jig using right hand.</p></div></div>			n/a	<p>Important reminders/Note/s:</p> <p>1. Please hold the wire near terminal during insertion. 2. Make sure wires are properly inserted . Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force</p> <p>Document references:</p> <p>1.Refer to WI-PRO-CNC-017 for Wire and strip lenght tolerance 2. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</p> <p>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing</p>

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Purpose:

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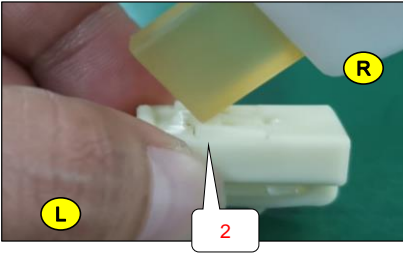
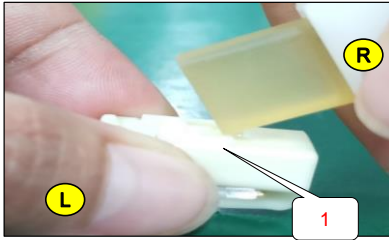
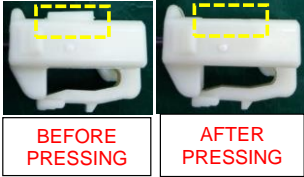
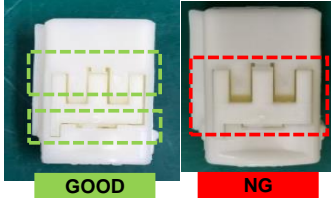
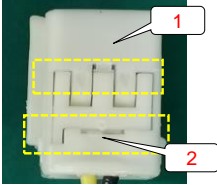
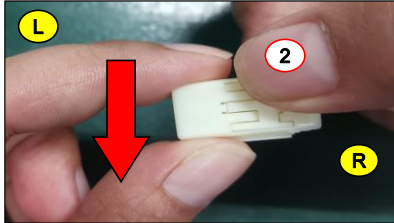
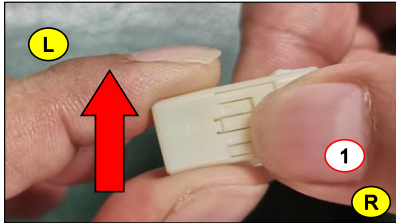

WI-ENG-PDE-726A

Revision No.:

1

Page No.:

4 of 10

PARTS:	1. Assy parts		JIG:	1. Pushing jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	P1 Connector lock 1	<div>LOCKING SEQUENCE</div> <div><p>1. Hold the connector using left hand and place on the table. Get the pushing jig using right hand and start the sequential locking based on above illustration. Push the lower part of the connector lock first and then push the upper part. <i>(Note: Position of Pushing jig must be slanted)</i></p><p>2. Ensure that the connector is in locked condition by touching the connector lock based on the sequence illustrated.</p></div>	<div>PUSHING JIG</div> 	<p>Important reminders/Note/s:</p> <p>1. Manual locking may cause damaged connector lock.</p> <p>1. Use provided jig tool per model to avoid damaged connector lock 2. No unlocked/half-locked connector 3. No damaged connector</p>

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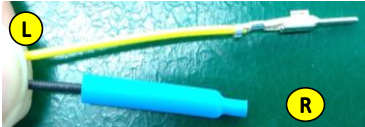
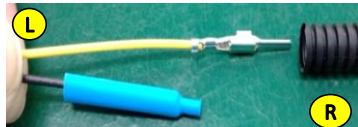




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Revision No.:

1

Page No.:

5 of 10

PARTS:		1. Assy parts 2. Black Corrugated tube $\varnothing 5$ L=226 \pm 3mm 3. Black Corrugated tube $\varnothing 5$ L=61 \pm 3mm		4. AVSSf wire 0.3 B L= 226 \pm 2mm	JIG:	1. Terminal cover jig
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
5	P1	Wire insertion to Black Corrugated tube (no slit) $\varnothing 5$ L=226 \pm 3mm	<div><p>1. Get the terminal cover jig and insert to B wire using right hand.</p></div> <div><p>2. Get the Corrugated tube (no slit) $\varnothing 5$ L=226\pm3mm using right hand and insert the wires using left hand.</p></div> <div><p>3. Remove the terminal cover jig using right hand after insertion.</p></div>		<div>TERMINAL COVER JIG</div> 	1. No wrong use of parts 2. No deformed terminal
6		Wire insertion to Black Corrugated tube (no slit) $\varnothing 5$ L=61 \pm 3mm	<div><p>1. Get the B wire L=226\pm1mm using right hand then combine to Y wire.</p></div> <div><p>2. Get the corrugated tube (no slit) $\varnothing 5$ L=61\pm3mm using right hand then insert the B-Y wires using left hand.</p></div>		n/a	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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☒ MASSPRO

Document No.:

WI-ENG-PDE-726A

Revision No.:

1

Page No.:

6 of 10

PARTS:	1. Connector 7282-1028 (W)			JIG:	1. Insertion jig	
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
7	P1 Connector setting to insertion jig Connector 7282-1028 (W)	<div><div><div><div><div>INSERTION JIG</div><div></div></div></div><div><div></div><div>INSERTION JIG ORIENTATION</div></div><div><div></div><div>CONNECTOR ORIENTATION</div></div></div><div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div></div></div></div></div>				

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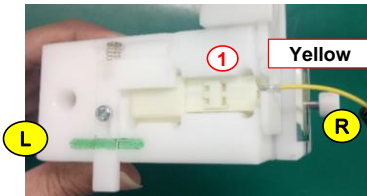
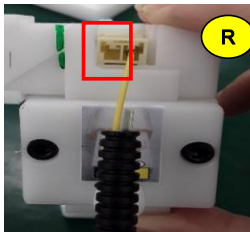
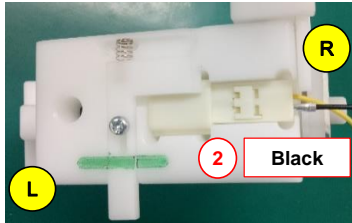
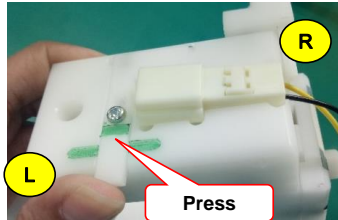
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Revision No.:

1

Page No.:

7 of 10

PARTS:	1. Assy parts 2. Connector 7282-1028 (W)		JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
8	P1 Wire insertion to connector 7282-1028 (W)	<div><div>WIRE FACING</div></div> <div><div>1. Insert the Yellow wire using right hand and insert to connector.</div></div> <div><div>2. Press the button using right hand, the slot for Black wire will be opened.</div></div> <div><div>3. Get Black wire using right hand and insert to connector.</div></div> <div><div>4. After insertion, press the lock using left thumb and then hold the wires and gently pull out the connector from jig using right hand.</div></div>	n/a	<div>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing.</div> <div>Important reminder/Note/s: 1. Please hold the wire near terminal during insertion. 2. Make sure wires are properly inserted. Conduct <u>PULL-PUSH-PULL-PUSH</u> after insertion. Do not exert extra force.</div> <div>Document reference/s: 1. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</div>

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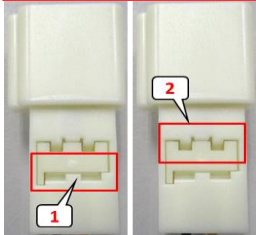
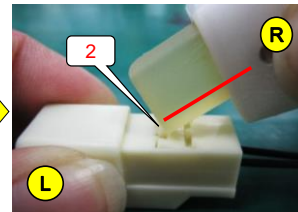
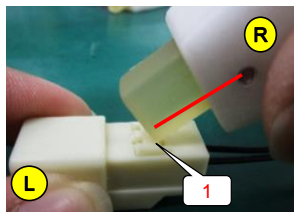
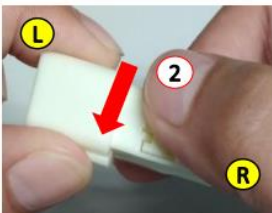
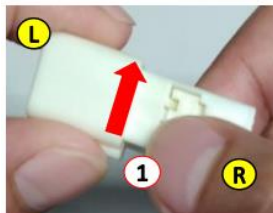
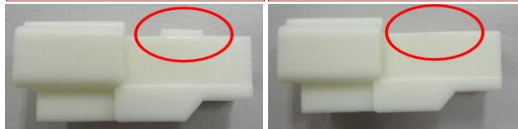

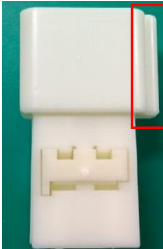
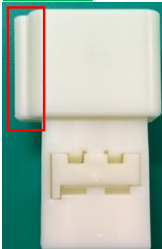
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

8 of 10

PARTS:	1. Assy parts		JIG:	1. Pushing jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
9	P1 Connector lock 2	<div><div>PRESSING SEQUENCE</div><div></div><div></div><div>1. Hold the connector using left hand and place on the table. Get the pushing jig using right hand and start the sequential locking based on the above illustration. Push the lower part of the connector lock first and then push the upper part.</div><div></div><div>2. Ensure that connector is in locked condition by touching the connector lock based on the sequence illustrated.</div><div><div>Before pressing</div><div>After pressing</div></div></div> <div><div>PUSHING JIG</div></div> <div><div>CONNECTOR ILLUSTRATION</div><div><div>GOOD</div><div>NG</div><div></div><div>7282-1028 (W)</div><div>7282-1020 (W)</div></div></div> <div><div>1. No unlocked/half-locked connector</div><div>2. No damage connector</div><div>3. Use provided jig tool per model to avoid damaged lock.</div><div><div>Important reminders/Note/s:</div><div>1. Manual locking may cause damaged connector lock.</div><div>2. Position of Pushing jig must be slanted.</div></div></div>		

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WORK INSTRUCTION

TAPING ASSEMBLY PROCESS

Effectivity Date:

October 9, 2023

Process Name/Title:

Model code/Part number: **TP1 / 7L0146-7020A** Customer: **TRQSS** Car Model: **SUBARU- ASCENT**

Validity Date:

n/a

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Document No.:

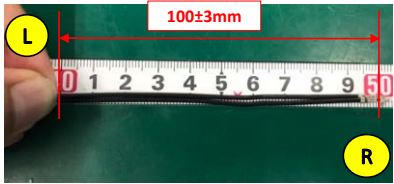
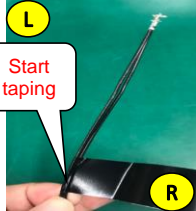


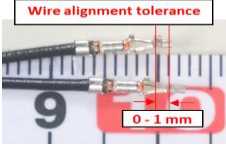
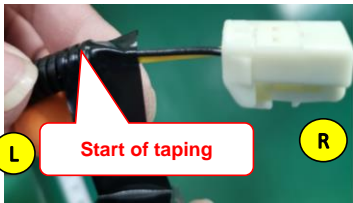
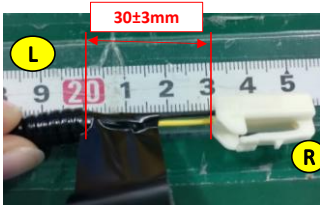
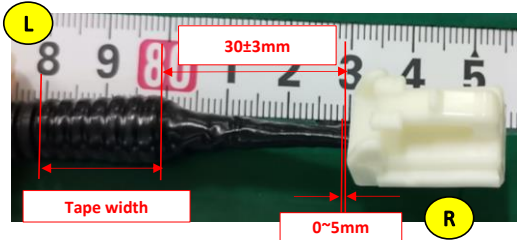

WI-ENG-PDE-726A

Revision No.:

1

Page No.:

9 of 10

PARTS:		1. Assy parts 2. Black tape		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
10	Spot taping	<div><p>1. Hold the wire using left hand, measure the wire up to terminal tip 100±3mm.</p></div> <div><p>2. Get the Black tape, Conduct 2x windings of tape then cut using both hands.</p></div> <div><p>3. After insertion, check the measurement and taping condition.</p></div>		<div><p>MEASURING TAPE</p></div>	<div><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>Important reminders/Note/s:</p><p>1. Please use calibrated/verified measuring tape when getting the measurement</p><div><p>Wire alignment tolerance 0 - 1 mm</p></div></div>
11	P1 Taping 1 Black COT to wire near connector	<div><p>1. Hold the COT using left hand, get Black tape and start pre-taping using right hand.</p></div> <div><p>2. Hold the COT using left hand and measure the COT up to the end of connector 30mm, proceed on taping process.</p></div> <div><p>3. After taping, check the dimension and taping condition.</p><p>Tape width 0~5mm</p></div>		<div><p>MEASURING TAPE</p></div>	<div><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>Important reminders/Note/s:</p><p>1. Please use calibrated/verified measuring tape when getting the measurement</p></div>

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**WORK INSTRUCTION**

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

October 9, 2023

Model code/Part number:

TP1**/ 7L0146-7020A**

Customer:

TRQSS

Car Model:

SUBARU-ASCENT

Validity Date:

n/a

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Document No.:

WI-ENG-PDE-726A

Revision No.:

1

Page No.:

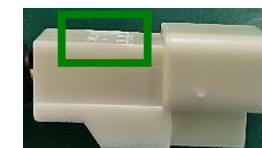
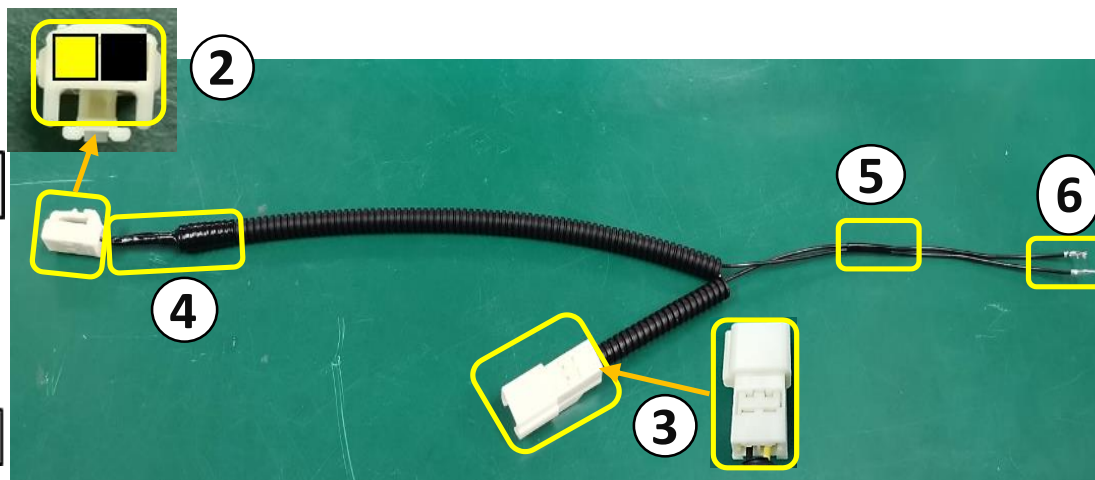
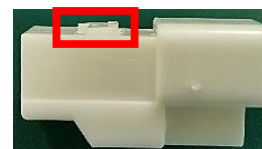
10 of 10

PARTS:

n/a

JIG:

n/a

1 QUALITY CHECKPOINTS**P1****7L0146-7020A****GOOD****GOOD****NO GOOD****NO GOOD****GOOD****NO GOOD**

1 No **Unlock/Halflock Connector**
(on 2 connector)

2 **3** No **Wrong Insert** (on 2 connector)

4 No **Missing Tape**

5 No **Missing Spot tape**

6 No **Deformed Terminal**

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