



WORK INSTRUCTION

TAPING ASSEMBLY PROCESS

Effectivity Date:

October 01, 2024

Process Name/Title:

Model code/Part number:

500B / 7L0084-7023A

Customer:

TRQSS

Car Model:

TOYOTA-SIENNA

Validity Date:

n/a

Document No.:

WI-ENG-PDE-1073A

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

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PARTS:

1. All parts: Connector 6189-0451 (W); AVSSf 0.3 Y-OR wires L=329±2mm; Black SV tube (vinyl) Ø7 L=57±3mm; Black SV tube (Vinyl) Ø7 L=189±3mm; Connector 6188-0066 (GR); Black COT tube (no slit) Ø7 L=397±3mm; MRSW CP TVSSf 0.3 G-B/W wires L=808±3mm; Yellow tape; AVSSf 0.3 B L=710±3mm

JIG:

1. Insertion jig with switch cover
2. Locking jig
3. Terminal cover jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

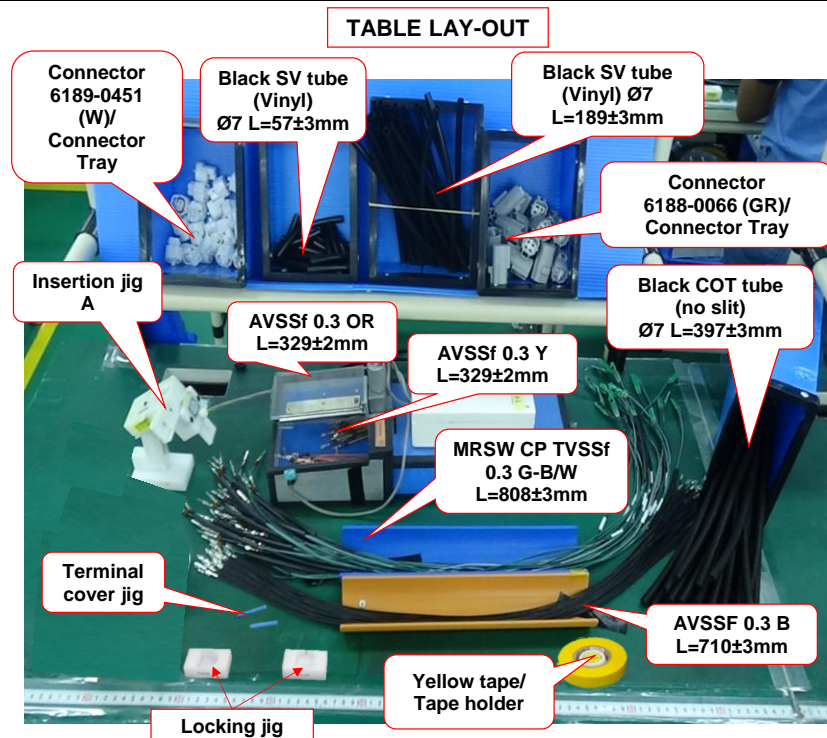
TOOLS/PPE

QUALITY POINTERS

1

P1

Table Lay-out

**Safety Instruction**

Be sure to wear required 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.

Document reference/s:

1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance
2. Refer to WI-PRO-KIT-006 Wire Taping with Vinyl tube

1. No missing parts/tools
2. No excess parts/tools
3. No wrong position of parts/tools

Revision History

Prepared by

Reviewed by

Approved by

Noted by

Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted	Est. Date:	September 26, 2024
10/01/24	1	Change purpose from Pre-launch to Masspro.	M. Ariola	C. Villanueva	A. Arañes	n/a		
09/26/24	0	Initial issue. Transfer process 8 and 10 from P2 and additional spot taping process due to process improvement. Align switch cover to insertion jig. Inclusion of car model "TOYOTA-SIENNA" Improved Table lay-out and Visual inspection/Quality checkpoints.	M. Ariola	C. Villanueva	C. Villanueva	A. Arañes		

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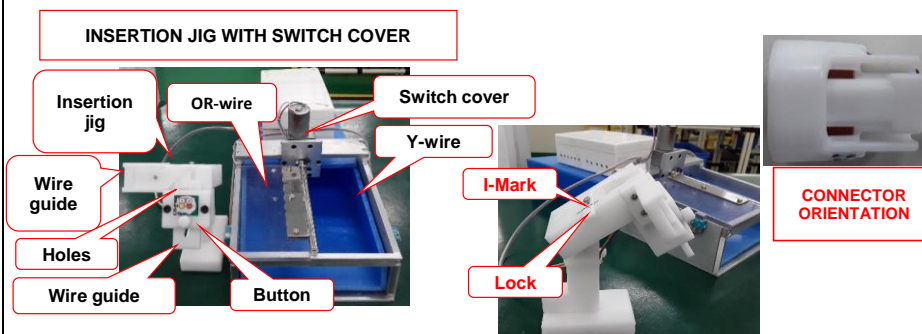
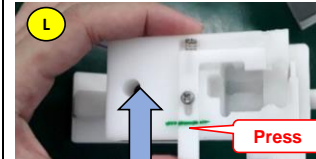
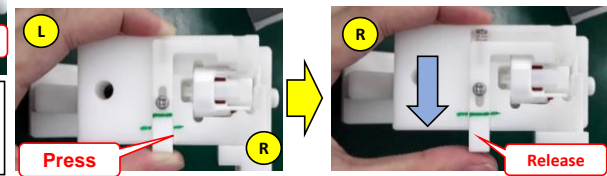
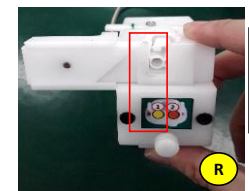
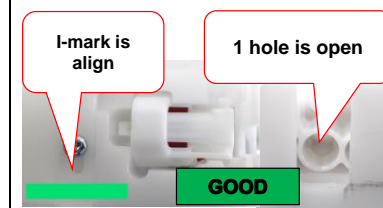

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PARTS:		1. Connector 6189-0451 (W)		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	P1	<p>Connector setting to insertion jig 6189-0451 (W)</p>  <p>INSERTION JIG ORIENTATION</p>  <p>1. Press the lock of insertion jig using left thumb.</p>  <p>2. Insert the connector 6189-0451 (W) into jig using right hand then release the lock using left thumb. Note: Follow the connector orientation.</p>  <p>3. Push the guide using right hand. The slot for Yellow wire will be opened.</p>		n/a	<p>Connector Orientation Illustration</p>  <p>GOOD</p>  <p>NG</p> <p>1. Use the provided jig per model 2. No wrong orientation of connector 3. No wrong use of connector 4. No damaged connector</p>

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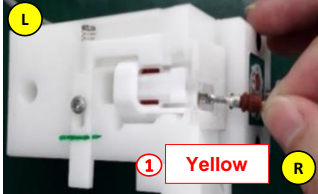
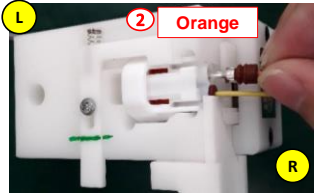
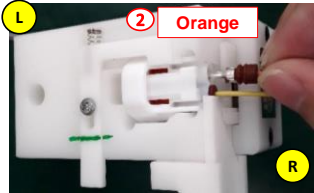
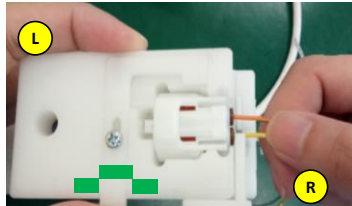
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PARTS:		1. AVSSf wires Y-OR L=329±2mm		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	P1	<div>Wire insertion to connector 6189-0451 (W)</div> <div><p>WIRE FACING</p></div> <div><p>1. Hold the insertion jig using left hand, get Yellow wire and insert to connector slot 1 using right hand.</p></div> <div><p>2. Press the button using right thumb, slot for Orange wire will be opened.</p></div> <div><p>3. Hold the insertion jig using left hand, get Orange wire and insert to connector slot 2 using right hand.</p></div> <div><p>4. After insertion, push the lock using left thumb and then hold the wires and gently pull out the connector from jig using right hand.</p></div>		n/a	<p>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing</p> <p>Important reminders/Note/s: 1. Please hold the wire near terminal. 2. Make sure wires are properly inserted. Conduct <u>Pull-Push-Pull-Push</u> after insertion. Do not exert extra force.</p> <p>Document references: 1. Refer to GL-PRO-ASY-029 for Pull-Push procedure. 2. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance</p>

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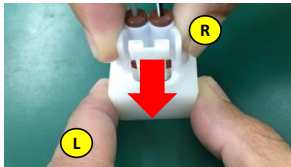





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PARTS:		1. Assy parts 2. Black SV tube (vinyl) Ø7 L=57±3mm		JIG:	1. Locking jig 2. Terminal cover jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
4	Connector lock	 1. Put the connector into locking jig using right hand then press 2x . Touch the connector lock if properly locked.		 LOCKING JIG	Important reminders/Note/s: 1. MANUAL LOCKING MAY CAUSE DAMAGED CONNECTOR 1. Use the provided locking jig per model 2. No unlock/half-lock connector
5	P1 Wire insertion to Black SV tube (vinyl) Ø7 L=57±3mm	 1. Get the cover jig then insert to Y-OR wires using right hand.  2. Get the SV tube (vinyl) Ø7 L=57±3mm using right hand then insert the Y-OR wires using left hand.  3. After insertion, remove the cover jig using right hand.		 TERMINAL COVER JIG	1. No wrong usage of parts 2. No damaged rubber seal

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PARTS:		1. Connector 6188-0066 (GR)		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
6	P1 Connector setting 6188-0066 (GR)	<div><div><div>INSERTION JIG FOR Y/OR</div><div>INSERTION JIG ORIENTATION</div><div><div>Wire guide</div><div>Holes</div><div>Wire guide</div><div>Visual Reference</div><div>Button</div><div>Lock</div><div>I-MARK</div><div>CONNECTOR ORIENTATION</div></div></div><div><div><div><div>L</div><div>↑</div><div>Press</div></div><div><div>L</div><div>→</div><div>Press</div></div><div><div>L</div><div>↓</div><div>Release</div></div></div><div><div><div>1. Press the lock of insertion jig using left thumb.</div><div><div>2. Insert the connector 6188-0066 (GR) into jig using right hand then release the lock. <i>Note: Follow the connector orientation.</i></div></div></div><div><div><div><div>3. Push the guide using right thumb. The slot for Y wire will be opened.</div></div></div></div></div></div></div>		n/a	<div><div>Connector Orientation Illustration</div><div><div>I-mark is align</div><div>1 hole is open</div><div>GOOD</div></div><div><div>I-mark is NOT align</div><div>2 holes are open</div><div>NG</div></div><div><div>1. No flip-out tape</div><div>2. No peel-off tape</div><div>3. No loose tape</div><div>4. No missing tape</div><div>5. No wrong dimension</div><div>6. No wrong use of tape</div></div></div>

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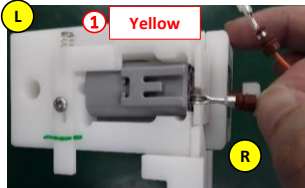
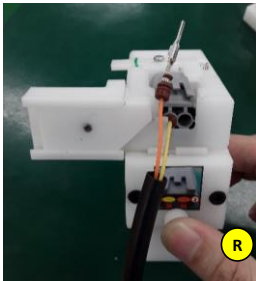
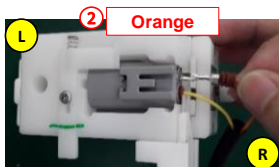


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PARTS:		1. Assy parts		JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
7	P1 Wire insertion to Connector 6188-0066 (GR)	<div><p>WIRE FACING</p></div> <div><p>1. Hold the insertion jig using left hand. Get the assy parts, insert the Yellow wire to connector slot 1 using right hand.</p></div> <div><p>2. Press the button using right thumb, slot for Orange wire will be opened.</p></div> <div><p>3. Get Orange wire then insert to connector slot 2 using right hand.</p></div> <div><p>4. After insertion, push the lock using left thumb and then hold the wires and gently pull out the connector from jig using right hand.</p></div> <div><p>NOTE: SET ASIDE THE ASSY PARTS</p></div>		n/a	<p>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing</p> <p>Important reminders/Note/s: 1. Please hold the wire near terminal. 2. Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.</p> <p>Document references: 1. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</p>

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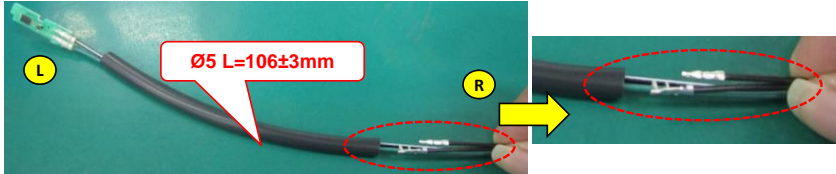
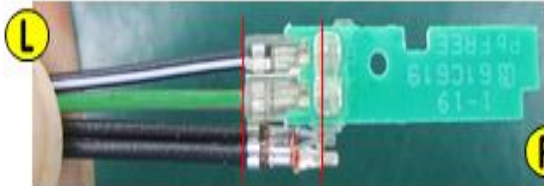


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PARTS:		1. Assy parts 2. AVSSf 0.3 wires B L=710±3mm [2pcs.]		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
8	Wire insertion to Black VM tube (Sunprene) Ø5 L=106±3mm	 <div>1. Hold the Black VM tube (Sunprene) Ø5 L=106±3mm using left hand then continue to insert the assy parts using right hand.</div>		n/a	1. No wrong usage of parts 2. No damaged rubber seal
9	Spot taping	 <div>1. Fix the hotmelted wire and terminal pointed tip using both hands.</div>  <div>2. Hold the wires using left hand, get the Yellow tape using right hand then make 2 windings of tape using both hands. Note: Position of spot taping must be right beside Black tape.</div>  <div>3. Check the wire alignment and taping condition.</div>		n/a	1. Use the provided jig per model 2. No wrong orientation of connector 3. No wrong use of connector 4. No damaged connector

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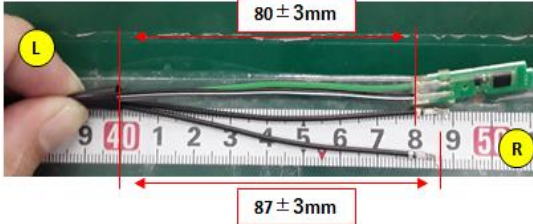
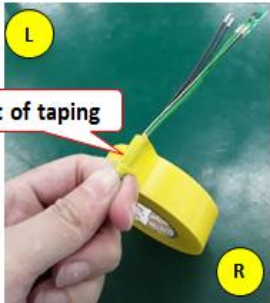
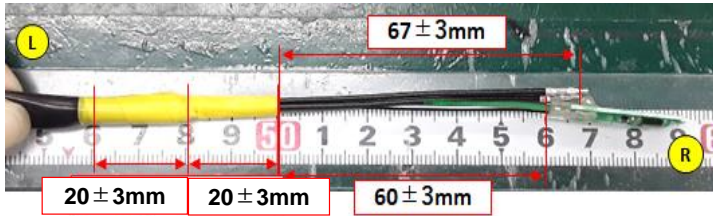

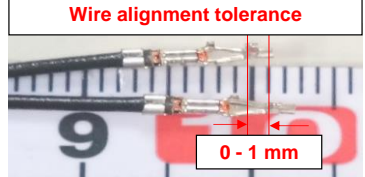
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PARTS:		1. Assy parts		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
10	P1	<p>Taping 1 VM tube (Sunprene) to wire near terminal and hotmelted wire</p>  <p>1. Hold VM tube (Sunprene) using left hand, measure from VM tube (Sunprene) to end of hotmelted wire 80 ± 3mm and from VM tube (Sunprene) to terminal tip 87 ± 3mm</p>  <p>2. Get the Yellow tape using right hand then start taping process using both hands.</p> <p>Start of taping</p>  <p>3. After taping, check the measurement and taping condition.</p>		<p>MEASURING TAPE</p> 	<p>Wire alignment tolerance</p>  <p>Important reminders/Note/s: 1. Use YELLOW TAPE only 2. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>1. Use the provided jig per model 2. No wrong orientation of connector 3. No wrong use of connector 4. No damaged connector</p>

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PARTS:		1. Assy parts		JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
11	P1	<div><p>1. Get the cover jig then insert to G-B/W wires using right hand.</p></div> <div><p>2. Get the corrugated tube Ø7 L=397±3mm (no slit) using right hand then insert the G-B/W wires using left hand.</p></div>		n/a	1. No wrong usage of parts 2. No damaged rubber seal

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1. Assy parts

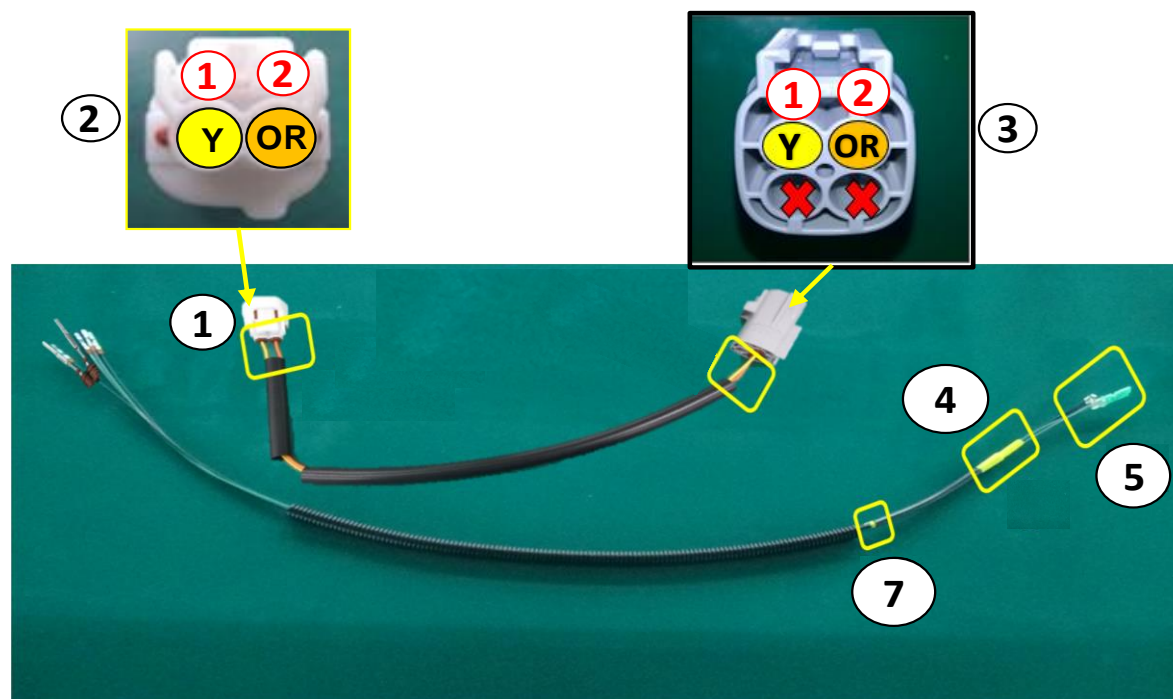
JIG:

n/a

VISUAL INSPECTION/ QUALITY CHECKPOINTS

TAPING - P1

7L0084-7023A



- 1 No Unlocked /Half-locked Connector
- 2 No Wrong Insert
- 3 No Wrong Insert
- 4 No Wrong color of Tape (Yellow tape)
- 5 No Deformed Terminal
- 6 No Terminal Backing out
- 7 No Missing spot tape) (Yellow tape)

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