



WORK INSTRUCTION

Process Name/Title:

OFFLINE ASSEMBLY PROCESS

Model code/Part number:

311D / 7L0152-7024

Customer:

TRQSS

Car Model:

TOYOTA RAV 4

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Effectivity Date:

May 15, 2025

Validity Date:

n/a

Document No.:

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Revision No.:

1

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PARTS:

1. Connector 6188-0093 (W); Connector 6189-1161 (B); AVSSf 0.3 Y-OR wire L=377±2mm ; Black Corrugated tube Ø5 L=252±3mm;

JIG:

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

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

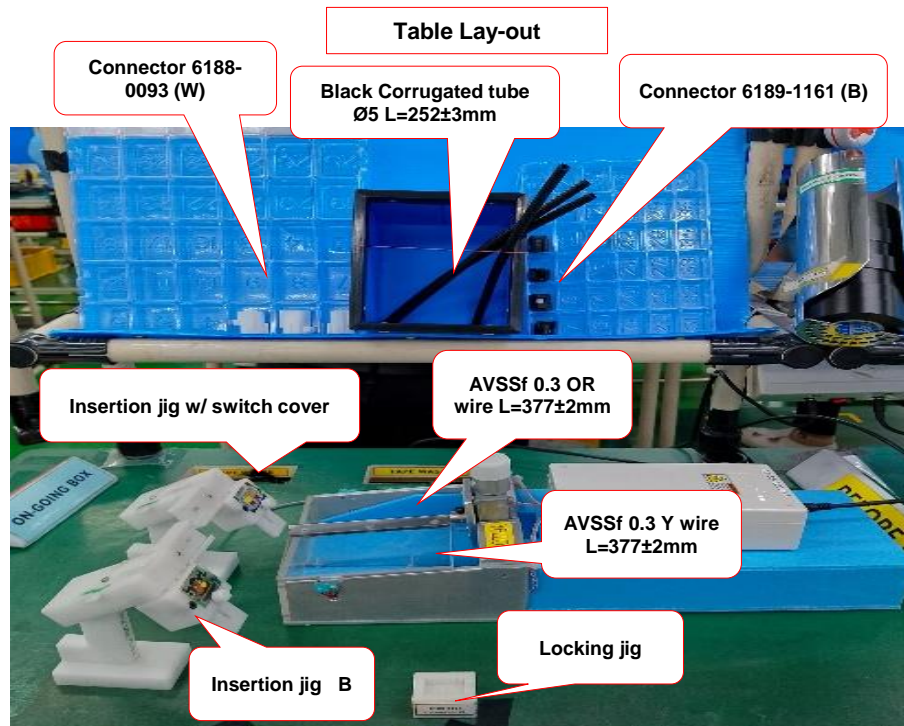
TOOLS/PPE

QUALITY POINTERS

1

Offline

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 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.

Important reminders/Note/s:

1. Refer to WI-ENG-PDE-675 for Offline assembly process
2. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance

1. No missing parts/tools
2. No excess parts/tools

Revision History

Prepared by

Checked by

Reviewed by

Approved by

05/15/25 1 Change documents purpose from pre-launch to mass pro.

A.Hernandez J.Loterte C. Villanueva A. Arañes

04/28/25 0 Initial issue.

A.Hernandez J.Loterte C. Villanueva A. Arañes

A.Hernandez

J.Loterte

C. Villanueva

A. Arañes

Eff. Date Rev. No

Details of Change

Revised

Checked

Reviewed

Approved

Est. Date:

April 28, 2025

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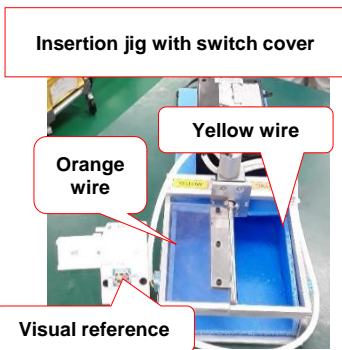
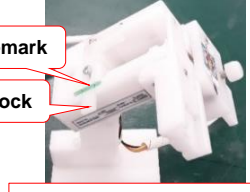

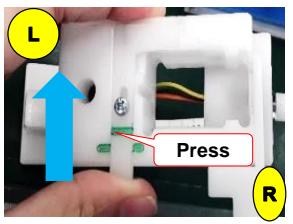
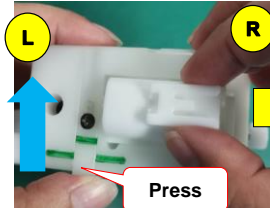
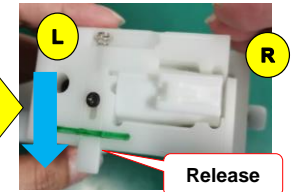
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PARTS:		1. Connector 6188-0093 (W)		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	Offline Connector setting to insertion jig 6188-0093 (W)	<div><div><p>Insertion jig with switch cover</p><p>Visual reference</p><p>Orange wire</p><p>Yellow wire</p></div><div><p>I-mark</p><p>Lock</p><p>INSERTION JIG ORIENTATION</p><p>CONNECTOR ORIENTATION</p></div><div><p>Press</p><p>1. Press the lock using left hand.</p><p>Press</p><p>2. Get the connector 6188-0093 (W) using right hand then insert to insertion jig. Release the lock after insertion. Note: Follow the connector orientation.</p><p>Release</p><p>3. Push the lower wire guide upward using right hand. Slot for Yellow wire will be opened.</p></div></div> <div><p>n/a</p></div> <td><p>1. No wrong insertion of wires 2. No loose insertion 3. No wrong insertion 4. One by one insertion 5. No deformed terminal 6. 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. 2. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance</p></td>		<p>1. No wrong insertion of wires 2. No loose insertion 3. No wrong insertion 4. One by one insertion 5. No deformed terminal 6. 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. 2. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance</p>	

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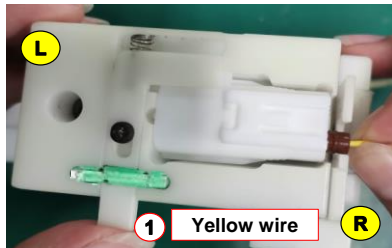
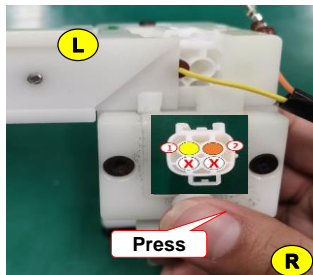
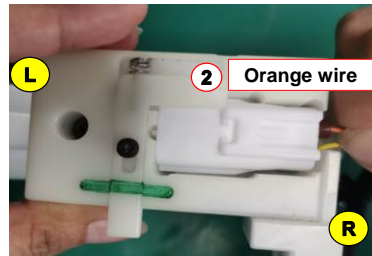
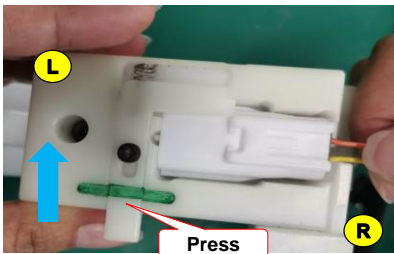
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PARTS:	1. AVSSf 0.3 Y-OR wire L=377±2mm		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	Offline Wire insertion to insertion 6188-0093 (W)	<div><div>WIRE TERMINAL FACING</div></div> <div><div><div>1 Yellow wire</div></div><div>1. Hold the insertion jig using left hand. Get the Yellow wire then insert to terminal slot 1 using right hand.</div></div> <div><div><div>Press</div></div><div>2. Press the button using right thumb. The slot for Orange wire will be opened.</div></div> <div><div><div>2 Orange wire</div></div><div>3. Get the Orange wire then insert to terminal slot 2 using right hand.</div></div> <div><div><div>Press</div></div><div>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.</div></div> <div>n/a</div> <div><div>1. No wrong insertion of wires 2. No loose insertion 3. No wrong insertion 4. One by one insertion 5. No deformed terminal 6. No wrong wire facing</div><div>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.</div><div>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</div></div>		

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PARTS:		1. Assy parts 2. Black Corrugated tube Ø5 L=252±3mm	3. Connector 6189-1161 (B)	JIG:	n/a
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	Offline	Wire insertion to Black Corrugated tube Ø5 L=252±3mm	<div><div></div><div><p>1. Get the Black corrugated tube (No slit) Ø5, L=252±3mm using right hand then insert the Y-OR wire using right hand.</p></div></div> <div></div>	n/a	1. No deformed terminal

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☐ PRE-LAUNCH

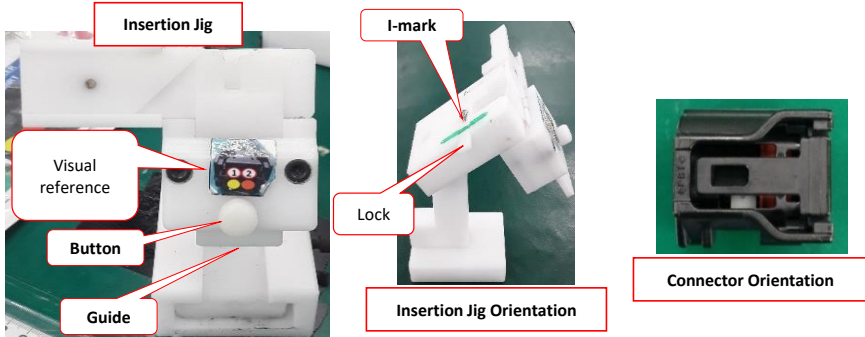
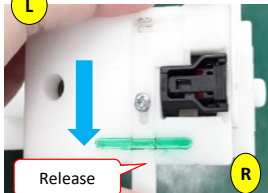
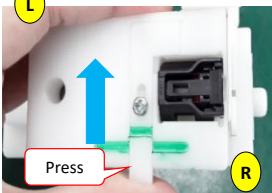
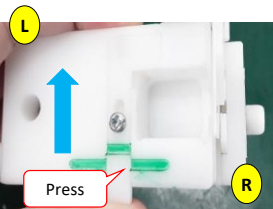
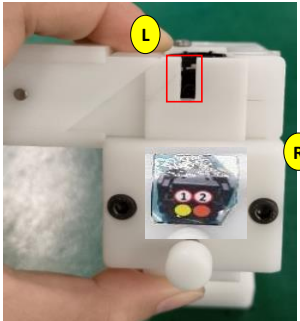


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PARTS:	1. Connector 6189-1161 (B)		JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
5	Offline Connector setting to insertion jig 6189-1161 (B)	<div><div></div><div></div><div></div><div><p>2. Get the connector 6189-1161 (B) using right hand and insert to insertion jig. Release the lock after insertion. <i>Note: Follow the connector orientation.</i></p><p>3. Push the guide using right hand. The slot for Y wire will be opened.</p></div></div> <div>n/a</div> <div><div>1. Use the provided jig per model 2. No wrong orientation of connector 3. No wrong use of connector 4. No damaged connector</div><div><div>CONNECTOR ORIENTATION ILLUSTRATION</div><div><div><p>GOOD</p></div><div><p>NG</p></div></div></div></div>		

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PARTS: 1. Assy parts

JIG:

1. Insertion jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

6

Offline

Wire insertion to connector 6189-1161 (B)

Wire terminal facing

1 Yellow wire

2 Orange wire

Press

Press

1. Hold the insertion jig using left hand. Get the **Yellow wire** then insert to terminal slot **1** using right hand.

2. Press the button using right thumb. Slot for **Orange wire** will be opened.

3. Get the **Orange wire** then insert to terminal slot **2** using right hand.

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.

n/a

1. No loose insertion
2. No wrong insertion
3. One by one insertion
4. No deformed terminal
5. No wrong wire facing

Note: During insertion, hold the wire not rubber seal to prevent sagging.



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.

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

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PARTS:	1. Assy parts		JIG:	1. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
7	Offline Connector lock	<div><div><div></div><div><p>1. Put the connector into locking jig using both hands and then press 2x. Check the connector lock if properly lock.</p></div></div><div><div></div><div></div><div><div>BEFORE PRESSING</div><div>AFTER PRESSING</div></div></div><div><div><div><div>NG</div></div><div>Unlock Condition</div></div><div><div><div>NG</div></div><div>Half Lock Condition</div></div><div><div><div>GOOD</div></div><div>Full Lock Condition</div></div></div></div>	<div>LOCKING JIG</div> <div></div>	<p>Important reminders/Note/s: 1. Manual locking may caused damaged connector lock</p> <p>1. Use provided locking jig per model. 2. No unlock/half-locked connector</p>

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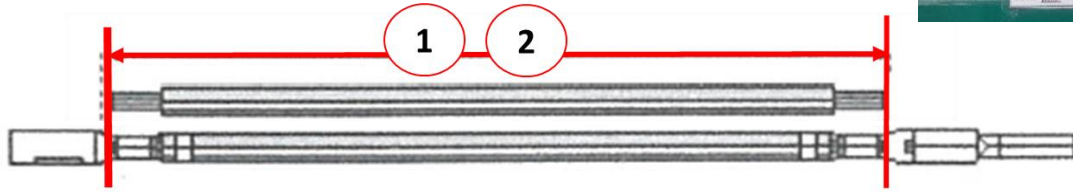

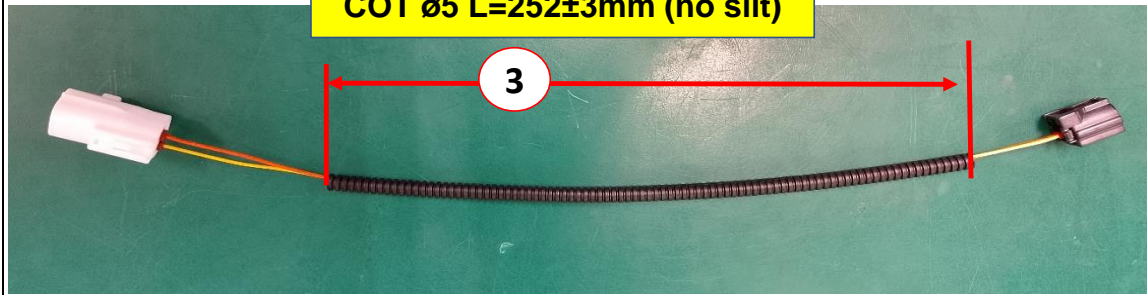
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PARTS:		1. Assy Parts		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
8	Offline	Measurement	<p>Note:</p> <ol style="list-style-type: none">Measurement point: End of core wire to the end of core wireTerminal is reference only.   <p>COT ø5 L=252±3mm (no slit)</p> 	MEASURING TAPE	<p>Important reminders and note/s:</p> <ol style="list-style-type: none">Please use calibrated/verified measuring tape when getting the measurement.For Hatsumono, Nakamono and Owarimono. <p>Document reference/s:</p> <ol style="list-style-type: none">Refer to WI-PRO-ASY-056 for Sub-assembly Hatsumono Nakamono Owarimono Inspection <p>1. No wrong dimension</p>

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1. Assy Parts

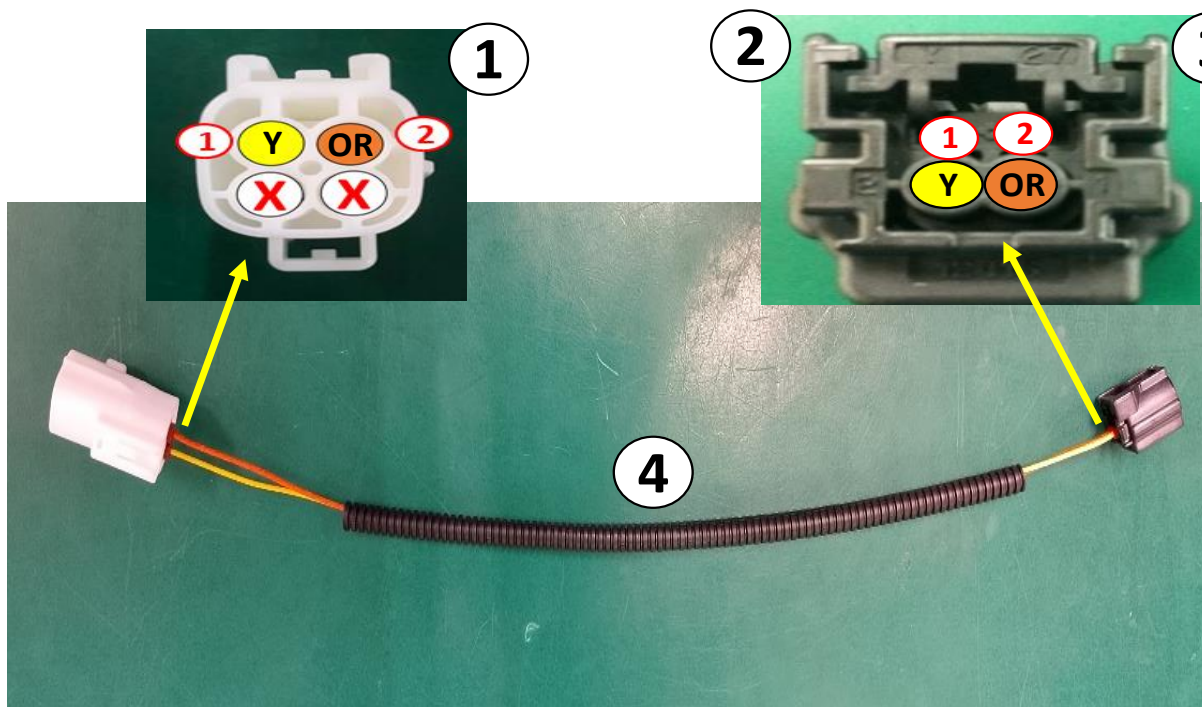
JIG:

n/a

VISUAL INSPECTION/QUALITY CHECKPOINTS

OFFLINE INSERTION

7L0152-7024



① ② No Wrong Insert

③ No Half locked/Unlocked Connector

④ No Missing COT

⑤ No Deformed Terminal

⑥ No Terminal Backing Out

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