



## WORK INSTRUCTION

Process Name/Title:

## OFFLINE ASSEMBLY PROCESS

Model code/Part number:

311D / 7L0152-7023

Customer:

TRQSS

Car Model:

TOYOTA RAV 4

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Effectivity Date:

October 4, 2024

Validity Date:

n/a

Document No.:

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Revision No.:

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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

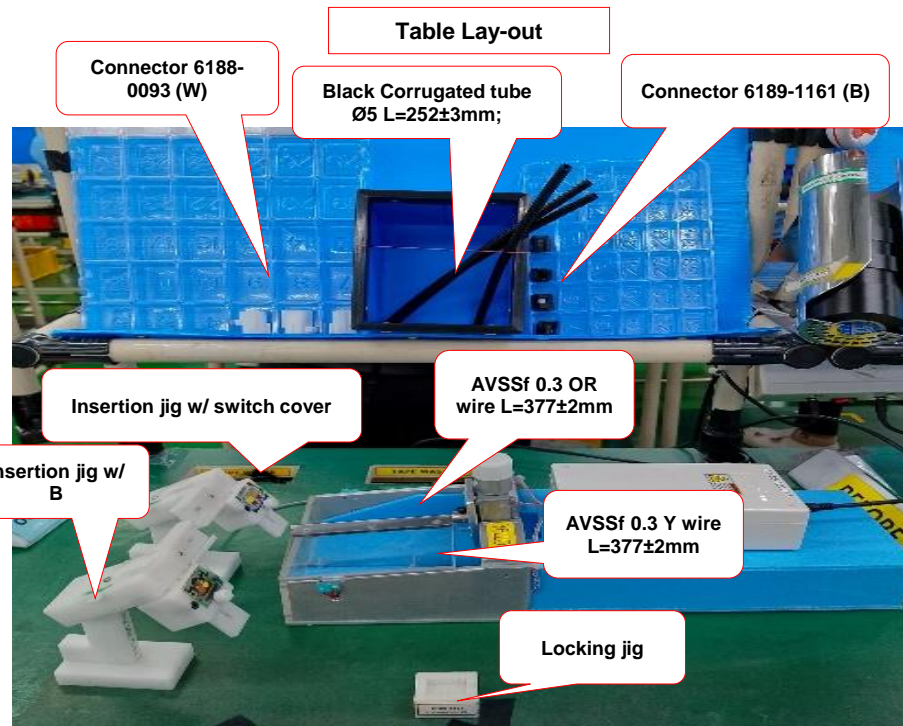
TOOLS/PPE

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

Reviewed by

Approved by

Noted by

10/04/24

0

Initial issue.

A.Hernandez

C. Villanueva

A. Arañes

n/a

A.Hernandez

C. Villanueva

A.Arañes

n/a

Eff. Date

Rev. No

Details of Change

Revised

Reviewed

Approved

Noted

Est. Date:

October 4, 2024

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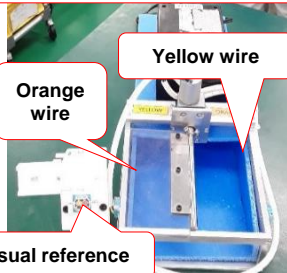
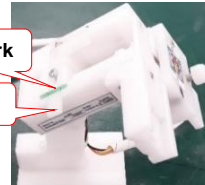

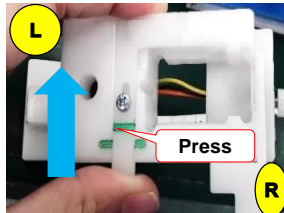
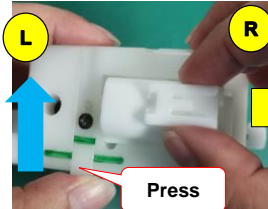
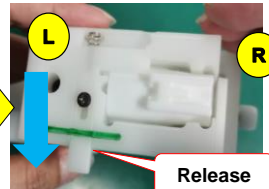
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PARTS:		1. Connector 6188-0093 (W)		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	Offline  Connector setting to insertion jig 6188-0093 (W)	<div><div><div>Insertion jig with switch cover</div><div></div><div><div>I-mark</div><div>Lock</div><div></div><div>INSERTION JIG ORIENTATION</div><div></div><div>CONNECTOR ORIENTATION</div></div><div><div><div>L</div><div></div><div>Press</div></div><div>1. Press the lock using left hand.</div><div><div><div>L</div><div></div><div>Press</div></div><div>2. Get the connector <b>6188-0093 (W)</b> using right hand then insert to insertion jig. Release the lock after insertion. <b>Note: Follow the connector orientation.</b></div><div><div><div>L</div><div></div><div>Release</div></div><div>3. Push the lower wire guide upward using right hand. Slot for <b>Yellow wire</b> will be opened.</div></div></div></div></div></div>		n/a	<div>1. No wrong insertion of wires</div> <div>2. No loose insertion</div> <div>3. No wrong insertion</div> <div>4. One by one insertion</div> <div>5. No deformed terminal</div> <div>6. No wrong wire facing</div> <div><b>Important reminders/Note/s:</b> <b>1. Please hold the wire near terminal.</b> <b>2. Make sure wires are properly inserted.</b> <b>Conduct Pull-Push-Pull-Push after insertion.</b> <b>Do not exert extra force.</b></div> <div><b>Document references:</b> <b>1. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</b> <b>2. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance</b></div>

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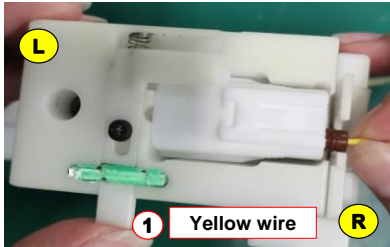
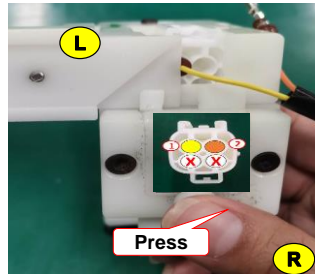
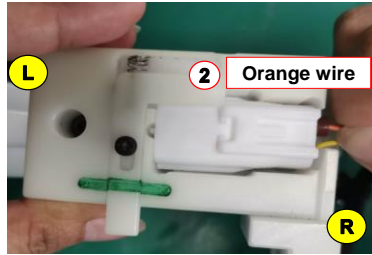
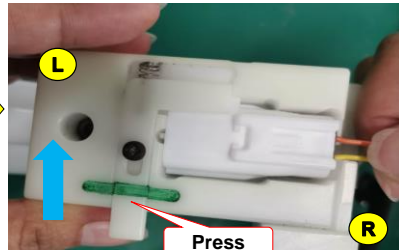
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<b>PARTS:</b>		1. AVSSf 0.3 Y-OR wire L=377±2mm		JIG:	1. Insertion jig with switch cover
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>		<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>
3	Offline Wire insertion to insertion 6188-0093 (W)	<div><b>WIRE TERMINAL FACING</b></div> <div><p>1. Hold the insertion jig using left hand. Get the <b>Yellow wire</b> then insert to terminal slot <b>1</b> using right hand.</p></div> <div><p>2. Press the button using right thumb. The slot for <b>Orange wire</b> will be opened.</p></div> <div><p>3. Get the <b>Orange wire</b> then insert to terminal slot <b>2</b> 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 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><b>Important reminders/Note/s:</b> <b>1. Please hold the wire near terminal.</b> <b>2. Make sure wires are properly inserted.</b> <b>Conduct Pull-Push-Pull-Push after insertion.</b> <b>Do not exert extra force.</b></p> <p><b>Document references:</b> <b>1. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</b> <b>2. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance</b></p>

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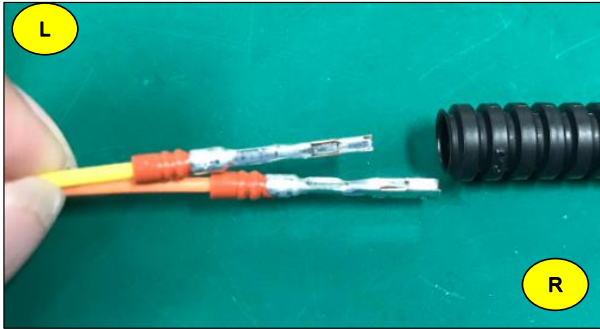


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PARTS:		1. Assy parts 2. Black Corrugated tube Ø5 L=252±3mm		3. Connector 6189-1161 (B)		JIG:	n/a
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
4	Offline	Wire insertion to Black Corrugated tube Ø5 L=252±3mm	<div><div>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

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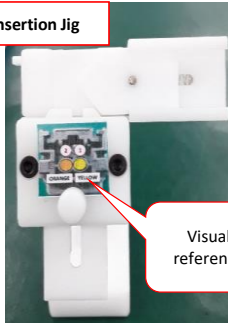
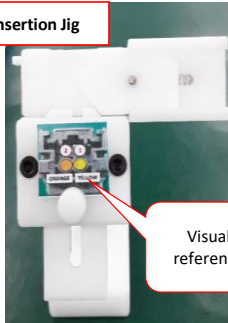
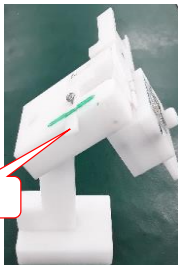
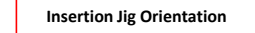

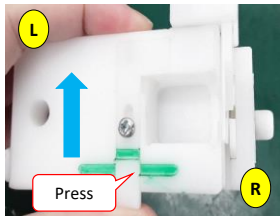
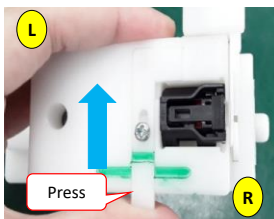
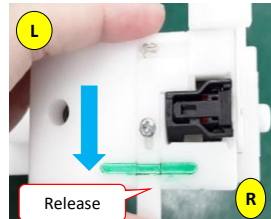
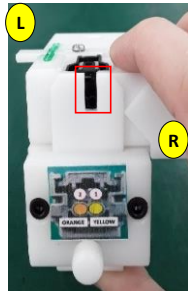




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PARTS:		1. Connector 6189-1161 (B)		JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
5	Offline Connector setting to insertion jig 6189-1161 (B)	<div><div><p>Insertion Jig</p></div><div><p>Visual reference</p></div><div><p>Lock</p></div><div><p>Insertion Jig Orientation</p></div><div><p>Connector Orientation</p></div><div><p>Press</p></div><div><p>Press</p></div><div><p>Release</p></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></div><div><p>3. Push the guide using right hand. The slot for <b>Y wire</b> will be opened.</p></div></div> <td>n/a</td> <td><div><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></div><div><div><p><b>CONNECTOR ORIENTATION ILLUSTRATION</b></p><div><p>I-mark is align</p><p>1 hole is open</p><p><b>GOOD</b></p></div><div><p>I-mark is not align</p><p>1 hole is open</p><p><b>NG</b></p></div></div></div></td>		n/a	<div><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></div> <div><div><p><b>CONNECTOR ORIENTATION ILLUSTRATION</b></p><div><p>I-mark is align</p><p>1 hole is open</p><p><b>GOOD</b></p></div><div><p>I-mark is not align</p><p>1 hole is open</p><p><b>NG</b></p></div></div></div>

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☐ PRE-LAUNCH

☒ MASSPRO

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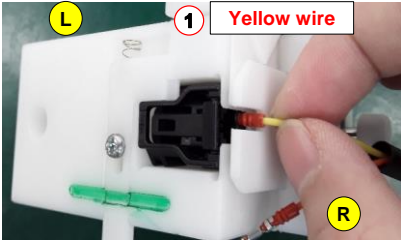
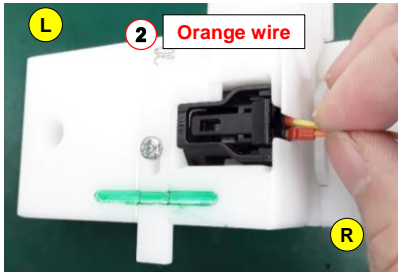
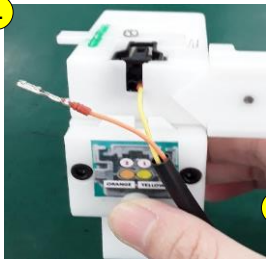
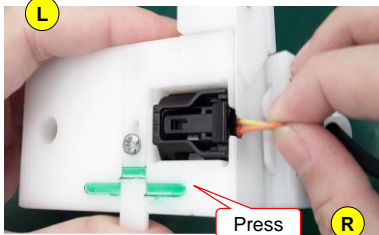

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PARTS:	1. Assy parts			JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
6	Offline  Wire insertion to connector 6189-1161 (B)	<div><p>Wire terminal facing</p></div> <div><p>1. Hold the insertion jig using left hand. Get the <b>Yellow wire</b> then insert to terminal slot <b>1</b> using right hand.</p></div> <div><p>3. Get the <b>Orange wire</b> then insert to terminal slot <b>2</b> using right hand.</p></div> <div><p>2. Press the button using right thumb. Slot for <b>Orange wire</b> will be opened.</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>Note: During insertion, hold the wire not <b>rubber seal</b> to prevent sagging.</p>  <p><b>Important reminders/Note/s:</b> 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><b>Document references:</b> 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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PARTS:	1. Assy parts		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
7	Offline Connector lock	<div><div></div><div><p>1. Put the connector into locking jig using both hands and then press <b>2x</b>. Check the connector lock if properly lock.</p></div><div><div></div><div><b>BEFORE PRESSING</b></div><div></div><div><b>AFTER PRESSING</b></div><div><div><div><div><b>NG</b></div></div><div><b>NG</b></div></div><div><b>GOOD</b></div></div><div><div>Unlock Condition</div><div>Half Lock Condition</div><div>Full Lock Condition</div></div></div></div> <div><div><b>LOCKING JIG</b></div><div></div></div>	<p><b>Important reminders/Note/s:</b> <b>1. Manual locking may caused damaged connector lock</b></p> <p>1. Use provided locking jig per model. 2. No unlock/half-locked connector</p>	

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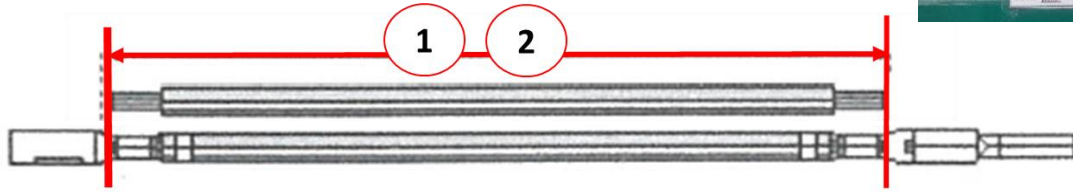

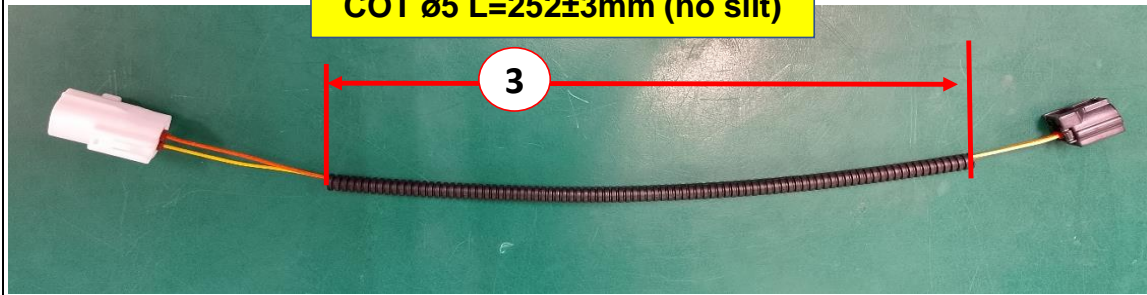
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PARTS:		1. Assy Parts		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
8	Offline	Measurement	<p>Note:</p> <ol style="list-style-type: none"><li>1. Measurement point: End of core wire to the end of core wire</li><li>2. Terminal is reference only.</li></ol>   <p><b>COT ø5 L=252±3mm (no slit)</b></p> 	<b>MEASURING TAPE</b>	<p><b>Important reminders and note/s:</b></p> <ol style="list-style-type: none"><li>1. Please use calibrated/verified measuring tape when getting the measurement.</li><li>2. For Hatsumono, Nakamono and Owarimono.</li></ol> <p><b>Document reference/s:</b></p> <ol style="list-style-type: none"><li>1. Refer to <b>WI-PRO-ASY-056</b> for Sub-assembly Hatsumono Nakamono Owarimono Inspection</li></ol> <p>1. No wrong dimension</p>

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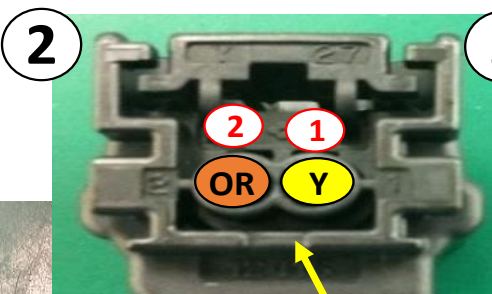
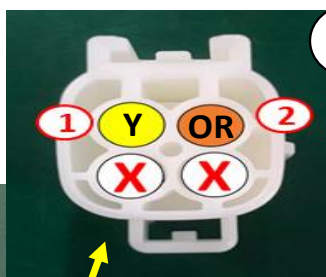
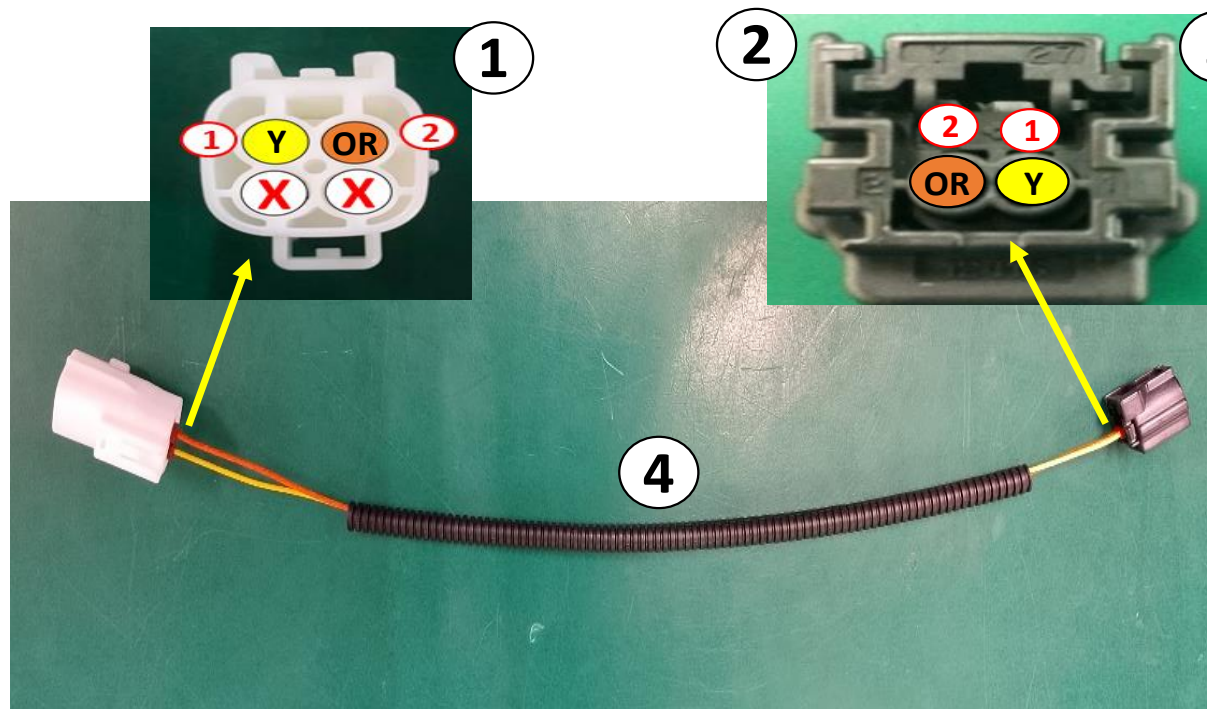
JIG:

n/a

### VISUAL INSPECTION/QUALITY CHECKPOINTS

## OFFLINE INSERTION

## 7L0152-7023



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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