



WORK INSTRUCTION

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

June 21, 2024

Model code/Part number:

373D / 7N0174-7020B

Customer:

TRJ

Car Model:

TOYOTA-RAV4

Validity Date:

n/a

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Document No.:

WI-ENG-PDE-924A

Revision No.:

1

Page No.:

1 of 10

PARTS:

1. Assy parts: Connector 6098-3870 (B); AVSSf 0.3 wires B L=204±2mm; Black SV tube (Vinyl) ø5 L=20±3mm; Black corrugated tube ø5 L=360±3mm; Gray tape(19mm)

JIG:

1. Insertion jig
2. Locking jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

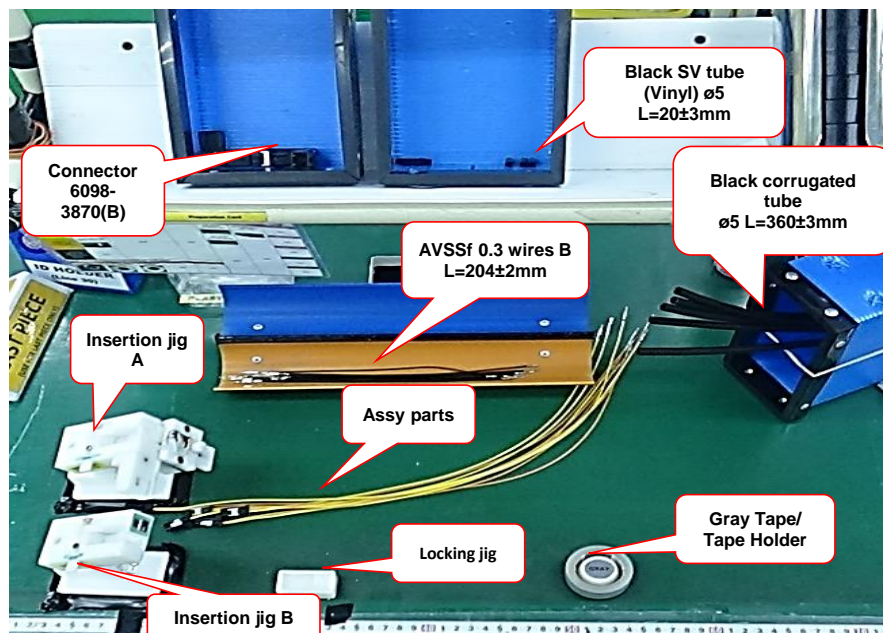
QUALITY POINTERS

1

P1

Table Lay-out

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 references:

1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance
2. Refer to WI-ENG-PDE-665 for 7N0174-7020A Offline assembly process

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

Revision History

								Prepared by	Reviewed by	Approved by	Noted by
06/21/24	1	Change from Pre-launch to Masspro. Add the Wire insertion to Black Corrugated tube. Improved the Visual Inspection/Quality Checkpoint.	A. Hernandez	C. Villanueva	A. Arañes	n/a		A. Hernandez	C. Villanueva	A. Arañes	n/a
06/18/24	0	Initial issue	A. Hernandez	C. Villanueva	A. Arañes	n/a					
Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted	Est. Date:	June 18, 2024			

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Revision No.:

1

Page No.:

2 of 10

PARTS:	1. Connector 6098-3870 (B)		JIG:	1. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
2	P1 Connector setting to insertion jig 6098-3870 (B)	<div><div>Connector Orientation</div><div><div>Insertion Jig</div><div><div>Visual reference</div><div>Push Button</div><div>Slider guide</div><div>Lower guide</div><div>I-mark</div><div>Lock</div></div><div>Insertion Jig Orientation</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>I-mark is not align</div><div>2 holes are open</div><div>NG</div></div><div>1. Use the provided jig per model 2. No wrong orientation of connector</div></div>

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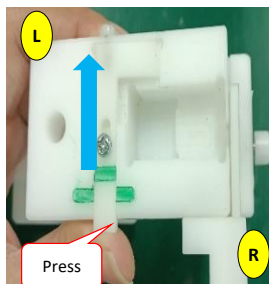
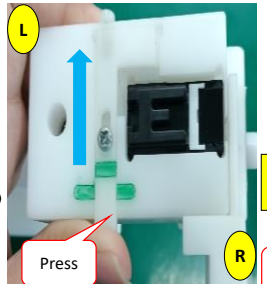
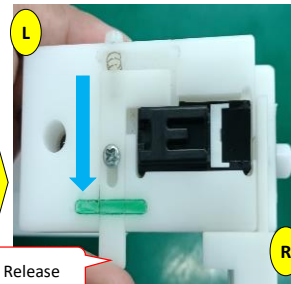
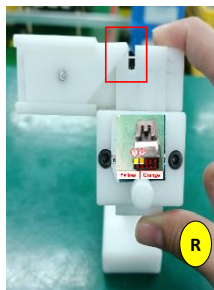

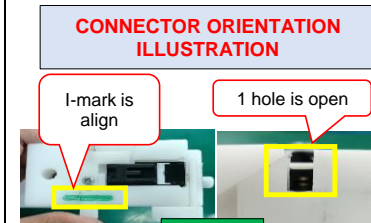

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

3 of 10

PARTS:		1. Connector 6098-3870 (B)		JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	P1	<div><div><div><p>Press</p></div><div><p>Press</p></div><div><p>Release</p></div><div><p>1. Press the insertion jig lock using left hand.</p></div><div><p>2. Get the connector 6098-3870 (B) using right hand and insert to insertion jig. Release the lock after insertion.</p></div></div><div><div><p>3. Push the lower wire guide upward using right hand. Slot for yellow wire will be open.</p></div></div></div>		n/a	<div>CONNECTOR ORIENTATION ILLUSTRATION</div> <div><div><p>GOOD</p></div><div><p>NG</p></div><div>1. Use the provided jig per model 2. No wrong orientation of connector</div></div>

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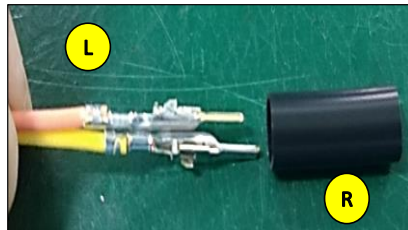
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Revision No.:

1

Page No.:

4 of 10

PARTS:		1. Assy parts 2. Black Corrugated tube $\varnothing 5$ L=360 \pm 3mm (no slit)		3. Black SV tube (Vinyl) $\varnothing 5$ L=20 \pm 3mm		JIG:	1. Locking jig
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
4	P1	Wire insertion to Black corrugated tube $\varnothing 5$ L=360 \pm 3mm (no slit)	<div><div><div>1</div></div><div>1. Get the Black Corrugated tube $\varnothing 5$ L=360\pm3mm (no slit) using right hand then insert the Y-OR wires using left hand.</div></div>			n/a	1. No wrong use of parts 2. No deformed terminal
5		Wire Insertion to Black SV tube (Vinyl) $\varnothing 5$ L=20 \pm 3mm	<div><div></div><div>1. Get the Black SV tube (Vinyl) $\varnothing 5$ L=20\pm3mm using right hand then insert the Y-OR wires using left hand.</div></div>			n/a	1. No wrong use of parts

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Page No.:

5 of 10

PARTS:

1. Assy parts

JIG:

1. Insertion jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

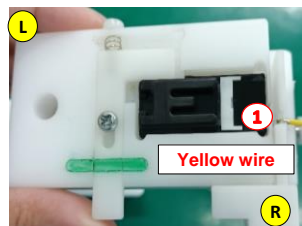
TOOLS/PPE

QUALITY POINTERS

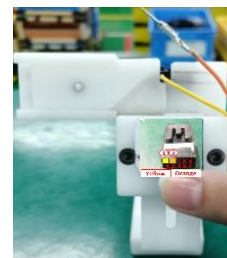
6

P1

Wire insertion to connector
6098-3870 (B)

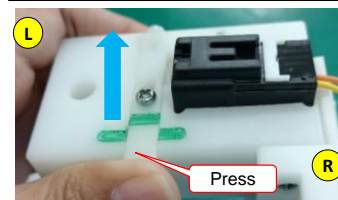
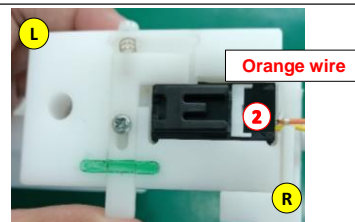


Wire Facing



1. Hold the insertion jig using left hand. Get the assy part and hold the **Yellow wire** then insert to connector using right hand.

2. Press the button using right thumb. slot for **Orange wire** will be open.



3. Hold the **Orange wire** and insert to connector 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 deform terminal
5. No wrong wire facing.

Important reminders/Note/s:

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.

Document References:

1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance
2. Refer to GL-PRO-ASY-028 for Pull-Push procedure.

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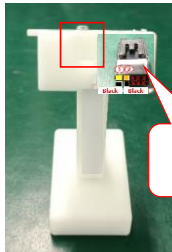

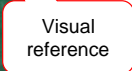


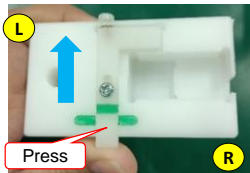
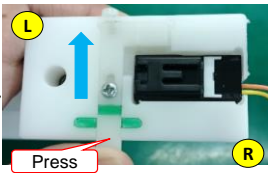
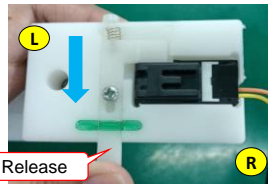
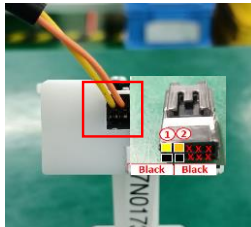
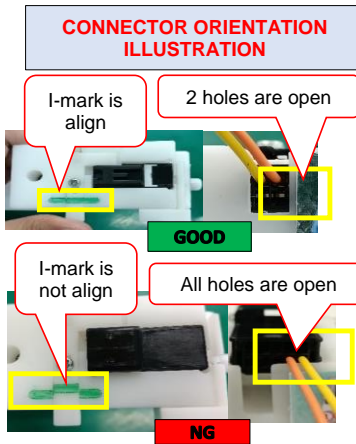
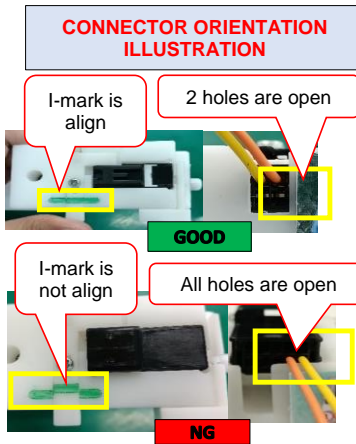
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Revision No.:

1

Page No.:

6 of 10

PARTS:		1. Assy parts		JIG:	1. Insertion jig with Switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
7	P1	<div><div><div><p>Insertion Jig</p></div><div><p>I-mark</p></div><div><p>Visual reference</p></div><div><p>Connector Orientation</p></div><div><p>Insertion Jig Orientation</p></div><div><p>Press</p></div><div><p>Press</p></div><div><p>Release</p></div><div><p>Slot for Black-Black wire are open.</p></div><div><p>1. Press the insertion jig lock using left hand.</p><p>2. Get the connector 6098-3870 (B) using right hand and insert to insertion jig. Release the lock after insertion.</p></div></div><div>Connector setting to insertion jig 6098-3870 (B) (Assy parts)</div><td>n/a</td><td><div><div><p>CONNECTOR ORIENTATION ILLUSTRATION</p><p>I-mark is align</p><p>2 holes are open</p><p>GOOD</p><p>I-mark is not align</p><p>All holes are open</p><p>NG</p></div><p>1. Use the provided jig per model 2. No wrong orientation of connector</p></div></td></div>		n/a	<div><div><p>CONNECTOR ORIENTATION ILLUSTRATION</p><p>I-mark is align</p><p>2 holes are open</p><p>GOOD</p><p>I-mark is not align</p><p>All holes are open</p><p>NG</p></div><p>1. Use the provided jig per model 2. No wrong orientation of connector</p></div>

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Customer: TRJ

Car Model: TOYOTA-RAV4

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☐ PROTOTYPE

☐ PRE-LAUNCH

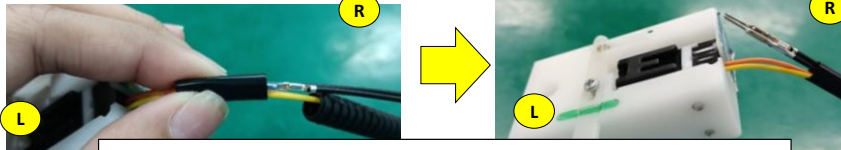
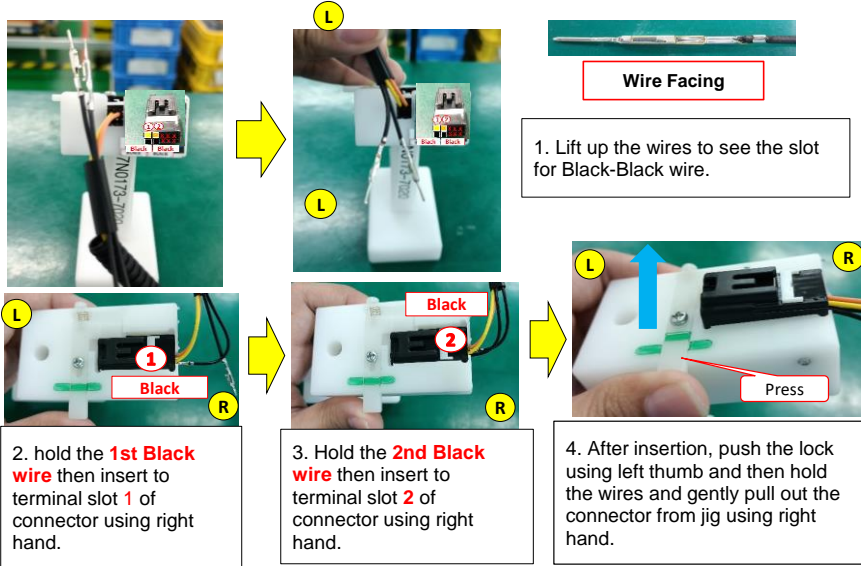
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Revision No.:

1

Page No.:

7 of 10

PARTS:		1. Assy parts		JIG:	1. Insertion jig with Switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
8	P1	Wire insertion to Black SV tube (Vinyl) ø5 L=20±2mm (Assy parts)	 1. Get the Black wire [2pcs] and insert to SV tube (Vinyl) using right hand.	n/a	1. No wrong use of parts
9		Wie insertion to connector 6098-3870 (B)	 1. Lift up the wires to see the slot for Black-Black wire. Wire Facing 2. hold the 1st Black wire then insert to terminal slot 1 of connector using right hand. 3. Hold the 2nd Black wire then insert to terminal slot 2 of connector 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. Press	n/a	1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deform terminal 5. No wrong wire facing. Important reminders/Note/s: 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. Document References: 1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance 2. Refer to GL-PRO-ASY-028 for Pull-Push procedure.

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☐ PRE-LAUNCH







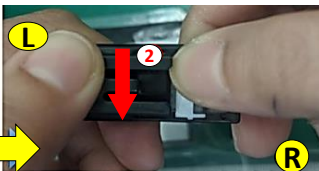

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Revision No.:

1

Page No.:

8 of 10

PARTS:		1. Assy parts		JIG:	1. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
10	P1	Connector lock			
		<div><div><p>1. Load the connector into the jig holding both side of the connector, tip first.</p></div><div><p>2. Press the lower part of connector to fully insert into the locking jig.</p></div></div> <div><div><p>Right thumb-Lower Left thumb-middle</p><p>3. Press the lower parts of connector using right hand while left hand holding the middle.</p></div><div><p>Right thumb-upper Left thumb-middle</p><p>4. Press the upper part of connector using right hand while left hand holding the middle.</p></div><div><p>Right thumb-middle Left thumb-middle</p><p>5. Lift then press the connector in the middle using left and right hand.</p></div><div><p>1</p><p>2</p><p>6. Ensure that connector is in locked condition by touching the connector lock based on the sequence illustrated.</p></div></div>		<div><div>LOCKING JIG</div></div>	<p>Important reminders/Note/s:</p> <p>1. Manual locking may cause damaged connector</p> <p>2. Refer WI-PRO-KIT-001 Proper locking and checking of connector lock</p> <p>1. No Unlock and half-locked</p> <p>2. Use provided jig tools per model to avoid damaged lock.</p>

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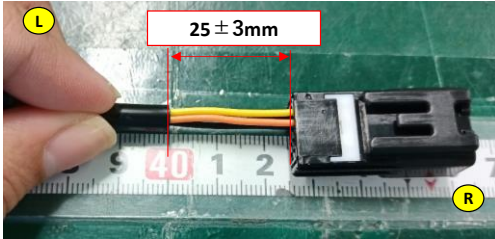
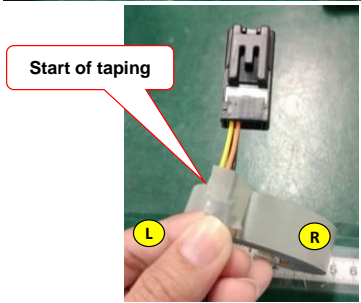
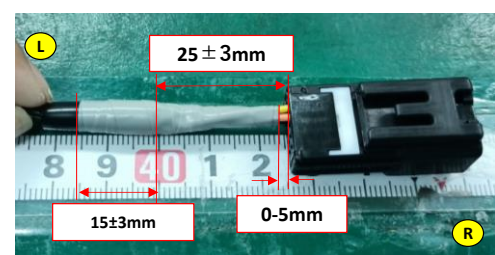
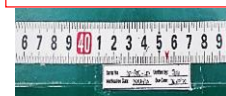
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Revision No.:

1

Page No.:

8 of 10

PARTS:		1. Assy parts 2. Gray tape (19mm)	JIG:	1. Measuring tape
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
11	P1 Taping 1 Black SV tube (Vinyl) to wire near connector	<div><p>25 ± 3mm</p><p>Start of taping</p><p>2. Hold the tube using left hand, get the Gray tape using right hand then start pre-taping using both hands.</p><p>25 ± 3mm</p><p>15 ± 3mm</p><p>0-5mm</p></div>	<div>MEASURING TAPE</div> 	<p>Important reminders/Note/s:</p> <ol style="list-style-type: none">1. Use GRAY TAPE only2. Please use calibrated/verified measuring tape when getting the measurement. <ol style="list-style-type: none">1. No flip-out tape2. No peel-off tape3. No loose tape4. No missing tape5. No wrong dimension6. No wrong use of tape

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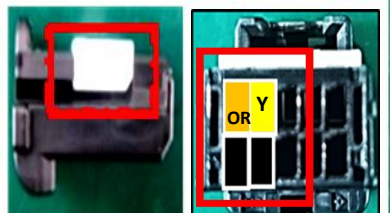
10 of 10

PARTS:

1. Assy parts

JIG:

n/a

**VISUAL INSPECTION/QUALITY CHECKPOINTS****P1****7N0174-7020B****GOOD****GOOD****NO GOOD****NO GOOD****5****4****GOOD****NO GOOD****1** No **Unlock/Halflock Connector****3** No **Terminal Backing Out****2** No **Wrong Insert****4** No **Wrong Used of Tape (Gray tape)****5** No **Deformed Terminal**

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