



WORK INSTRUCTION

Process Name/Title:

TAPING ASSEMBLY PROCES

Effectivity Date:

October 04, 2024

Model code/Part number:

310D / 7N0201-7020B

Customer:

TRJ

Car Model:

TOYOTA RAV4

Validity Date:

n/a

Purpose:



PROTOTYPE



PRE-LAUNCH



MASSPRO

Revision No.:

1

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PARTS:

1. Connector 6098-2220(W); Black Corrugated tube $\phi 5$ L=374 \pm 3mm with slit in 25 \pm 3mm; Black Corrugated tube $\phi 5$ L=300 \pm 3mm (no slit); Connector 6098-3802 (W); AVSSF 0.3 Y-OR L=718 \pm 3mm

JIG:

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

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

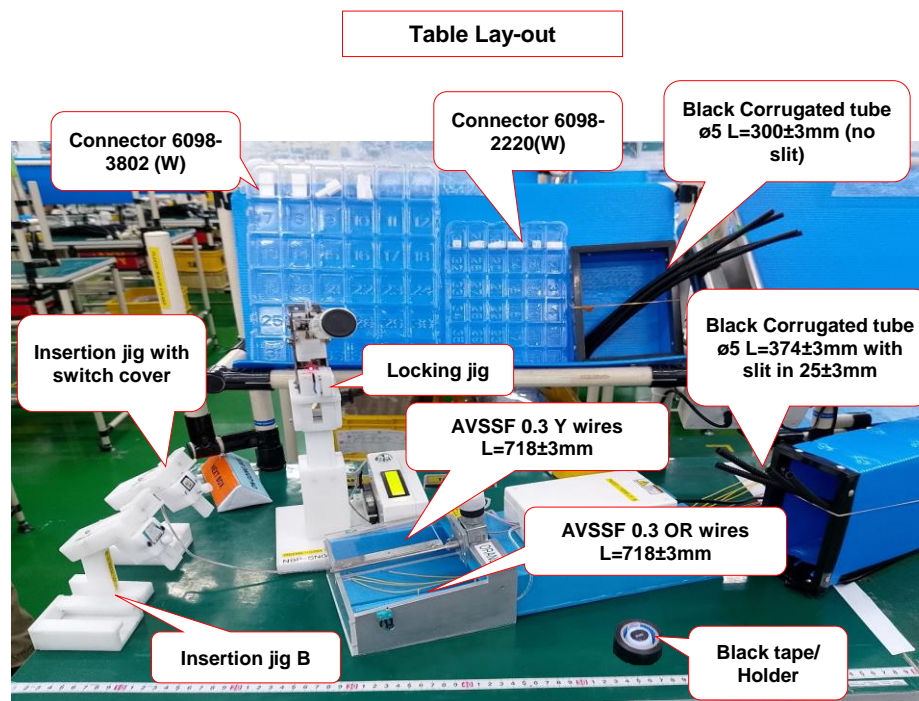
TOOLS/PPE

QUALITY POINTERS

1

P1

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.

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

Document reference/s:

1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance

Revision History

Prepared by

Reviewed by

Approved by

Noted by

10/04/24 1 Change pre-launch to mass pro. Split type process, transfer clamp assy to clamp assembly process.

A.Hernandez C.Villanueva A. Arañes n/a

08/20/24 0 Initial issue.

A.Hernandez C.Villanueva A. Arañes n/a

Eff. Date Rev. No Details of Change

Revised Reviewed Approved Noted

Est. Date:

August 20, 2024

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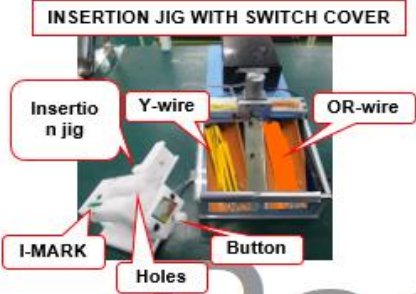
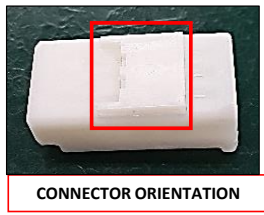
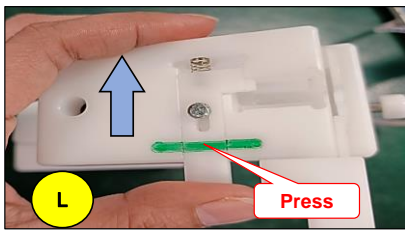
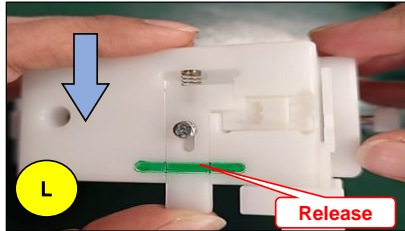
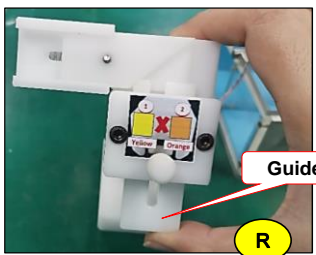
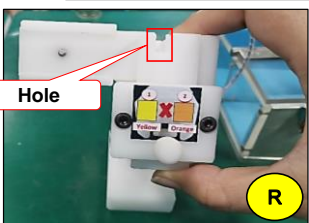
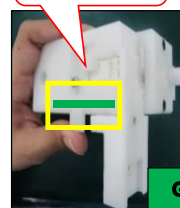
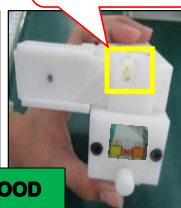
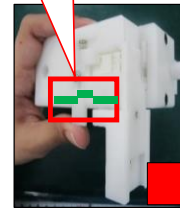
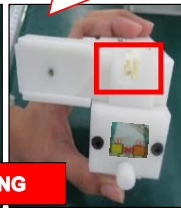
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PARTS:		1. Connector 6098-2220(W)		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	P1	<div><p>Connector setting to insertion jig 6098-2220(W)</p><div><p>INSERTION JIG WITH SWITCH COVER</p><p>CONNECTOR ORIENTATION</p></div><div><p>L Press</p><p>1. Press the lock of insertion jig using left thumb.</p></div><div><p>R Release</p><p>2. Insert the connector 6098-2220 (W) into jig using right hand and release the lock. Note: Follow the connector orientation.</p></div><div><p>L Guide</p><p>3. Push the guide using left hand. The slot for Y wire will be opened.</p></div><div><p>R Hole</p></div></div>		n/a	<div><p>Connector Orientation Illustration</p><div><p>I-mark is align</p><p>GOOD</p></div><div><p>1 hole is open</p></div><div><p>I-mark is not align</p><p>NG</p></div><div><p>All holes were open</p></div></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>

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PROTOTYPE



PRE-LAUNCH




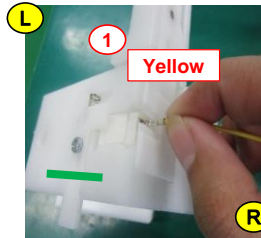
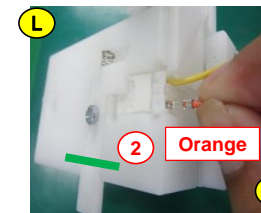
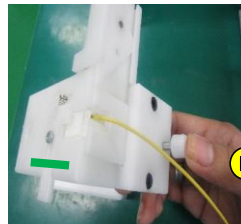
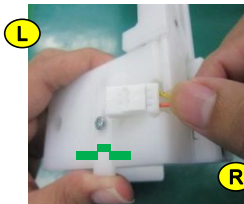
MASSPRO

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PARTS:	1. AVSSf 0.3 Y-OR L=718±3mm [2 pcs.]		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	P1	<div>Wire insertion to connector 6098-2220 (W)</div> <div><div><div></div><div>WIRE TERMINAL FACING</div></div><div><div><div></div><div>1. Get the Y wire then insert to terminal slot 1 using right hand.</div></div><div><div></div><div>3. Get the OR wire then insert to terminal slot 2 using right hand.</div></div></div><div><div><div></div><div>2. After insertion of Y wire, press the button using right thumb. The slot for OR wire will be opened.</div></div><div><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></div> <div>n/a</div> <div><div>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deform terminal 5. 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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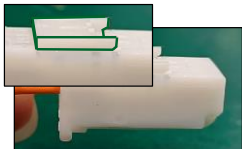
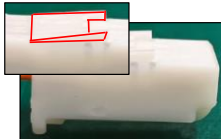
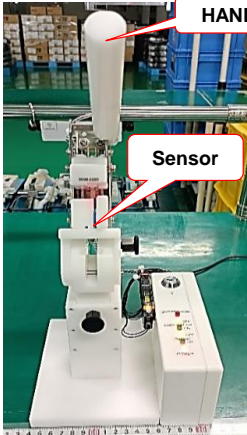
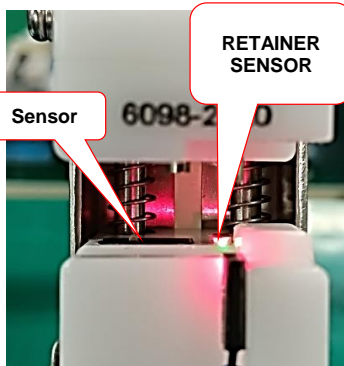
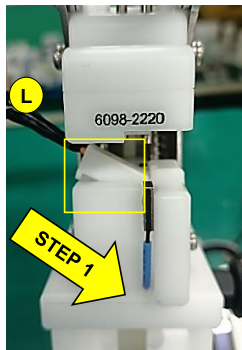
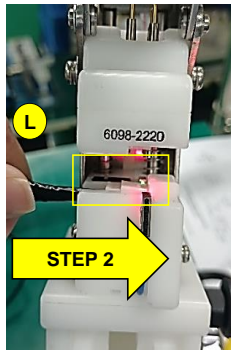
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PARTS:	1. Assy parts		JIG:	1. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	P1 Connector lock	<div><div><div>CONNECTOR RETAINER ILLUSTRATION SIDE VIEW</div><div><div>GOOD</div></div><div><div>NG</div></div></div><div><div></div><div></div><div></div><div></div></div><div><p>1. Check the Retainer lock of connector before insertion to locking jig. <i>Note: Must be NO half-locked condition prior connector locking.</i></p><p>2. Hold the assy parts using left hand and insert into connector locking jig based on the direction of arrow. Make sure the connector touch the sensor. Sound will be heard if properly lock. NOTE: CONNECTOR LOCKING JIG WILL NOT FUNCTION IF CONNECTOR NOT REACH THE SENSOR.</p></div></div>		<p>1. Please ensure that Connector lock/retainer will not touch or hit by any object prior insertion into locking jig to avoid half-lock connector.</p> <p>2. Maintain 10mm proper holding of wire to connector</p> <p>3. Connector must be fully inserted to connector slot.</p> <p>4. Make sure no offset setting before locking process.</p> <p>5. No wrong setting of connector.</p> <p>6. No damaged connector lock</p> <p>7. No unlocked/ half-locked connector.</p> <p>Important reminders/Note/s:</p> <p>1. Incomplete locking process will alarm the jig.</p> <p>2. No retainer in connector cannot proceed.</p> <p>3. If encountered abnormality, STOP and immediately CALL the attention of the leader. WAIT for further instruction and continue the process.</p>

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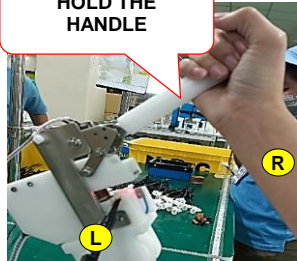
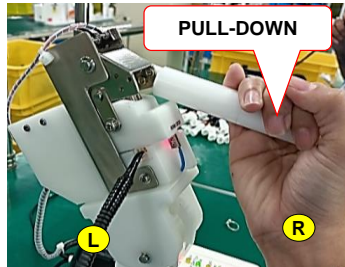
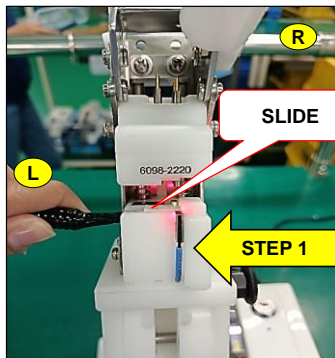
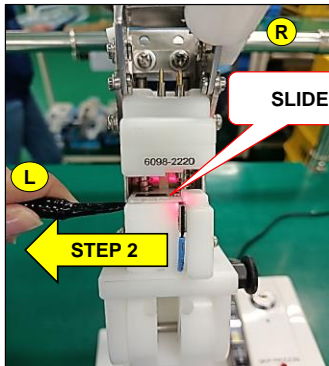
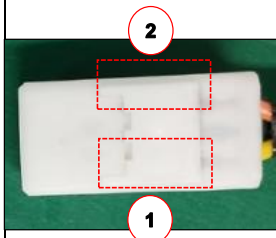

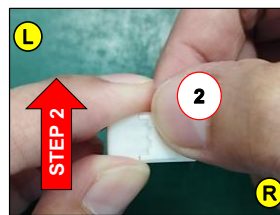
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PARTS:		1. Assy parts		JIG:	1. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
4	P1 Connector lock (Continuation)	<div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><p>3. Hold the handle of the connector locking jig using right hand then gently pull down and bring back to original position after locking. Note: Pull down one time only.</p><p>4. Remove the locked connector using left hand based on the illustration, follow the direction of arrow.</p><p>5. Ensure that connector is in locked condition by slide touching the connector lock based on the sequence illustrated.</p></div><td><p>1. Please ensure that Connector lock/retainer will not touch or hit by any object prior insertion into locking jig to avoid half-lock connector.</p><p>2. Maintain 10mm proper holding of wire to connector</p><p>3.Connector must be fully inserted to connector slot.</p><p>4. Make sure no offset setting before locking process.</p><p>5.No wrong setting of connector.</p><p>6. No damaged connector lock</p><p>7. No unlocked/ half-locked connector</p><p>Important reminders/Notes:</p><p>1. Incomplete locking process will alarm the jig.</p><p>2. No retainer in connector cannot proceed.</p><p>3. If encountered abnormality, STOP and immediately CALL the attention of the leader. WAIT for further instruction and continue the process.</p></td></div>		<p>1. Please ensure that Connector lock/retainer will not touch or hit by any object prior insertion into locking jig to avoid half-lock connector.</p> <p>2. Maintain 10mm proper holding of wire to connector</p> <p>3.Connector must be fully inserted to connector slot.</p> <p>4. Make sure no offset setting before locking process.</p> <p>5.No wrong setting of connector.</p> <p>6. No damaged connector lock</p> <p>7. No unlocked/ half-locked connector</p> <p>Important reminders/Notes:</p> <p>1. Incomplete locking process will alarm the jig.</p> <p>2. No retainer in connector cannot proceed.</p> <p>3. If encountered abnormality, STOP and immediately CALL the attention of the leader. WAIT for further instruction and continue the process.</p>	

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PRE-LAUNCH



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1. Assy parts
2. Black Corrugated tube $\phi 5$ L=374 \pm 3mm with slit in 25 \pm 3mm

JIG:

n/a

NO.**PROCESS NAME****WORK PROCEDURE/ ILLUSTRATION****TOOLS/PPE****QUALITY POINTERS**

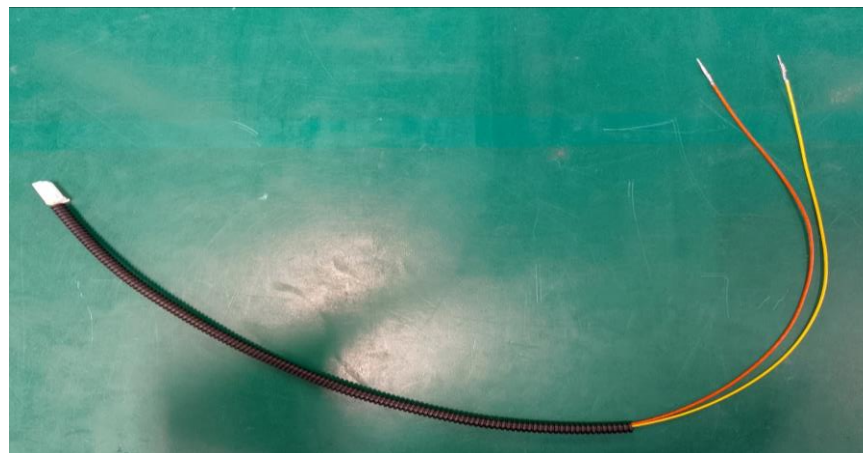
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P1

Wire insertion to Black
Corrugated tube $\phi 5$
L=374 \pm 3mm with slit in
 ± 3 mm



1. Get the **Black Corrugated tube $\phi 5$**
L=374 \pm 3mm with slit in ± 3 mm using left hand
then insert the **Y-OR wires** using right hand.



n/a

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

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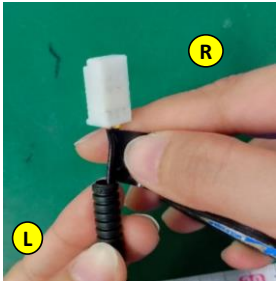
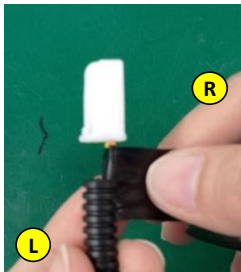
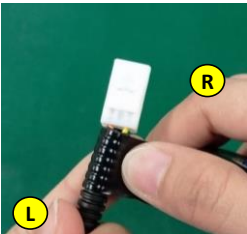
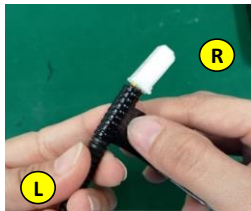
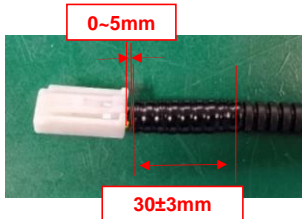

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PARTS:		1. Assy parts 2. Black tape		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
6	P1 Taping 1 Wire to Corrugated tube	<div><div></div><div><p>1. Hold the connector using left hand and tape the wires using right hand. Note: make 3 times winding.</p></div><div></div><div><p>2. Hold the connector using left hand and insert the tape into COT with 25mm slit using right hand.</p></div><div></div><div><p>3. After Insertion of tape, Wind the tape 2~3 times before shifting.</p></div><div></div><div><p>4. After Insertion of tape, Wind the tape 2~3 times before shifting.</p></div><div></div><div><p>5. After tape, check the taping condition and measurement.</p></div></div> <div><div>MEASURING TAPE</div></div> <div>1. No flip-out tape 2. No peel-off tape 3. No loose tape 4. No wrong use of tape 5. no wrong dimension. Important reminders/Note/s: 1. Please use calibrated/verified measuring tape when getting the measurement. 2. Use <u>BLACK TAPE</u> only. 3. Make sure tape covers thru entire slit.</div>			

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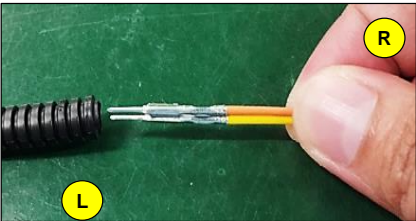
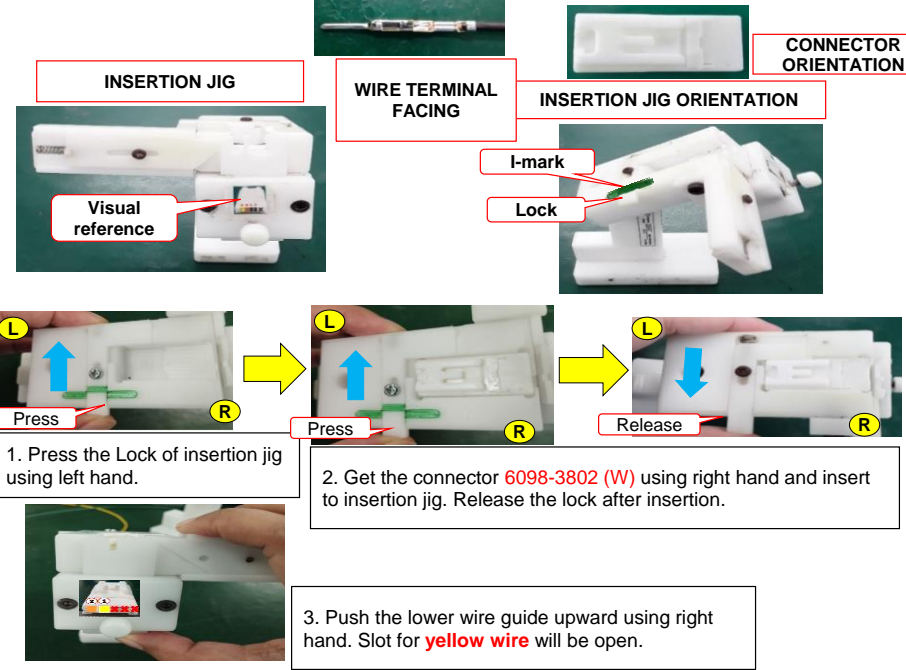
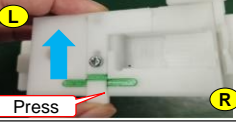


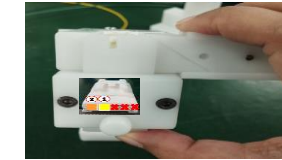
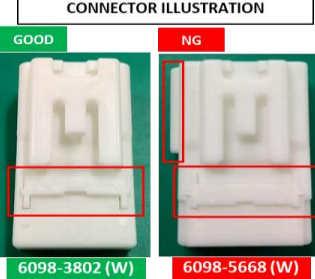
MASSPRO

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PARTS:	1. Assy parts 2. Black Corrugated tube ø5 L=300±3mm (no slit) 3. Connector 6098-3802 (W)			JIG:	
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
7	Wire Insertion to Black Corrugated tube ø5 L=300±3mm (no slit)	 <div data-bbox="996 424 1458 584">1. Get the Black corrugated tube ø5 L=300±0mm (no slit) using left had and get Y-OR wires using right hand then insert.</div>		n/a	1. No wrong usage of parts. 2. No deformed terminal
8	P1 Connector setting to insertion jig 6098-3802 (W)	 <div data-bbox="1310 667 1458 707">CONNECTOR ORIENTATION</div> <div data-bbox="656 707 790 722">INSERTION JIG</div> <div data-bbox="907 707 1055 754">WIRE TERMINAL FACING</div> <div data-bbox="1086 722 1355 738">INSERTION JIG ORIENTATION</div> <div data-bbox="622 834 723 874">Visual reference</div> <div data-bbox="1059 786 1137 810">I-mark</div> <div data-bbox="1059 834 1137 858">Lock</div> <div data-bbox="555 946 790 1074"><div data-bbox="566 1042 622 1066">Press</div></div> <div data-bbox="857 946 1104 1074"><div data-bbox="869 1042 925 1066">Press</div></div> <div data-bbox="1149 946 1451 1074"><div data-bbox="1160 1042 1216 1066">Release</div></div> <div data-bbox="555 1137 835 1297"></div> <div data-bbox="857 1241 1305 1289">3. Push the lower wire guide upward using right hand. Slot for yellow wire will be open.</div>		n/a	 <div data-bbox="1843 659 2045 675">CONNECTOR ILLUSTRATION</div> <div data-bbox="1776 691 1843 707">GOOD</div> <div data-bbox="1933 691 2000 707">NG</div> <div data-bbox="1776 914 1910 938">6098-3802 (W)</div> <div data-bbox="1933 914 2067 938">6098-5668 (W)</div> <div data-bbox="1731 954 2056 1002">1. Use provided jig per model 2. No wrong orientation of connector</div>

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**WORK INSTRUCTION**

Process Name/Title:

TAPING ASSEMBLY PROCES

Effectivity Date:

October 04, 2024

Model code/Part number:

310D / 7N0201-7020B

Customer:

TRJ

Car Model:

TOYOTA RAV4

Document No.:

WI-ENG-PDE-1014A

Purpose:



PROTOTYPE



PRE-LAUNCH






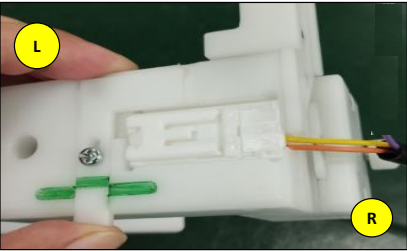
MASSPRO

Revision No.:

1

Page No.:

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PARTS:		1. Assy parts 2. Connector 6098-3802 (W)		JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
9	P1 Wire insertion to Connector 6098-3802 (W)	<div><div>WIRE FACING</div></div> <div><div>1. Hold the insertion jig using left hand. Insert the Yellow wire to connector using right hand. <i>Note:Conduct Pull-Push-Pull-Push after insertion.</i></div></div> <div><div>2. Press the lower wire guide using right thumb. Slot for Orange wire will be open. <i>Note:Conduct Pull-Push-Pull-Push after insertion.</i></div></div> <div><div>3. 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>		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 reminders/Note/s: <i>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.</i></div> <div>Document reference/s: <i>1. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</i></div>

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WORK INSTRUCTION

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TAPING ASSEMBLY PROCES

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PROTOTYPE



PRE-LAUNCH



MASSPRO

Revision No.:

1

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PARTS:

n/a

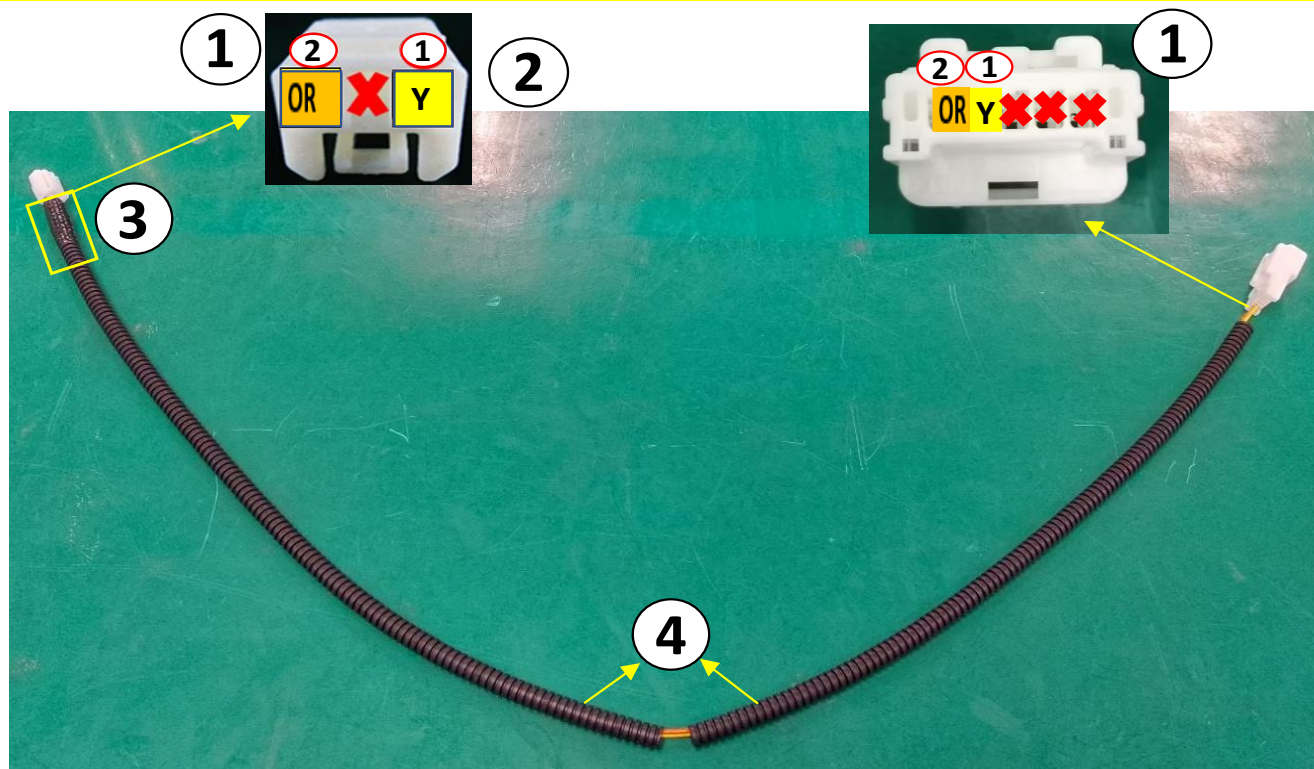
JIG:

n/a

VISUAL INSPECTION/ QUALITY CHECKPOINTS

TAPING - P1

7N0201-7020B



- 1 No Wrong insert
- 2 No Half locked/
Unlocked Connector
- 3 No Missing Tape (COT
with slit in)
- 4 No Missing COT
- 5 No Deformed Terminal
- 6 No Terminal Backing
Out

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