



## WORK INSTRUCTION

Process Name/Title:

## OFFLINE ASSEMBLY PROCESS

Effectivity Date:

June 6, 2024

Model code/Part number:

310B / 7M0555-7020A

Customer: TRJ

Car Model: TOYOTA-RAV4

Validity Date:

n/a

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Document No.:

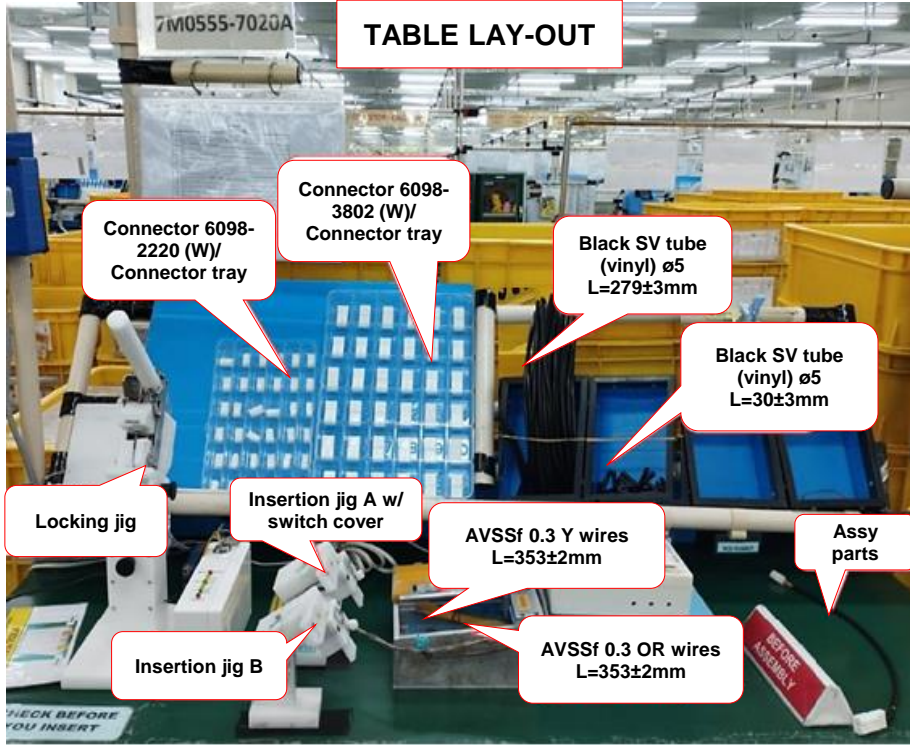
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PARTS:		1. Assy parts ;Connector 6098-2220 (W) ;Connector 6098-3802 (W) ;AVSSf 0.3 Y-OR wires L=353±2mm ;Black SV tube (vinyl) ø5 L=279±3mm ; Black SV tube (vinyl) ø5 L=30±3mm		JIG:	1. Insertion jig with switch cover & insertion jig only 2. Locking jig		
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS		
1	Offline Table Lay-out			<b>Safety Instruction</b> Be sure to wear required personal protective equipment during operation (gloves, finger cots, etc.)  <b>Housekeeping</b> 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.  <b>Alert level</b> For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.	<b>Document reference/s:</b> 1. Refer to <b>WI-PRO-CNC-017</b> 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
06/06/24	3	Additional Work procedure/Illustration and notes on page 4-5 as countermeasure for the customer claim(Broken lock of Connector 6098-2220 (W). Improve measurement and visual inspection.		A.Hernandez	C. Villanueva	A. Arañes	n/a
04/26/23	2	Inclusion of Locking jig process for connector 6098-2220 (W); Inclusion of Quality Checkpoints; Improve Quality Checkpoints. Change Table lay-out.		M. Ariola	J. Loterte	C. Villanueva	A. Arañes
11/12/22	1	Improve Quality pointers; Reminders/note/s and reference/s on process no.4 for the improvement and countermeasure of connector locking process; pages no. 1,35 and 6 as document improvements.		M. Ariola	J. Loterte	C. Villanueva	A. Arañes
Eff. Date	Rev. No	Details of Change		Revised	Reviewed	Approved	Noted
				Est. Date:	June 02, 2022		

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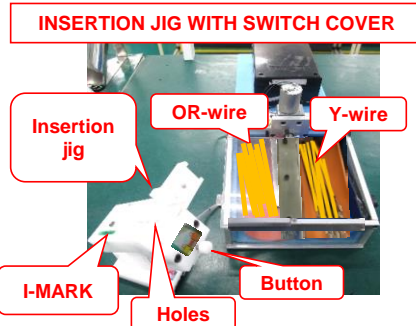
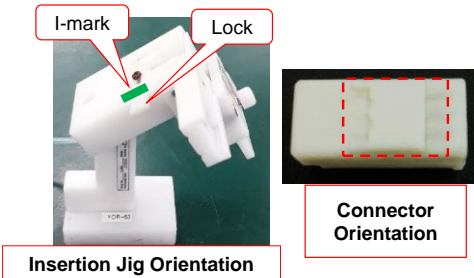
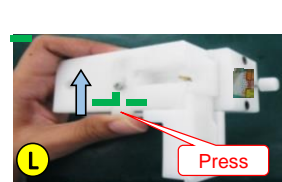
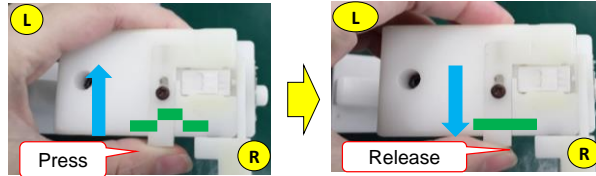
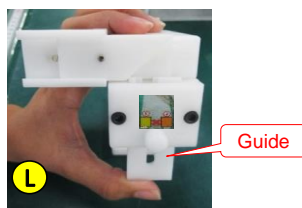
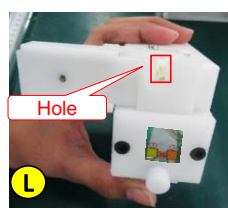
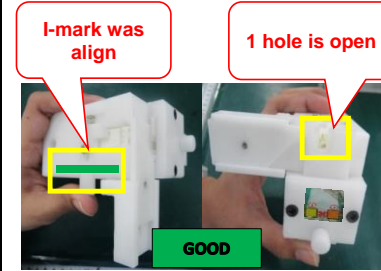
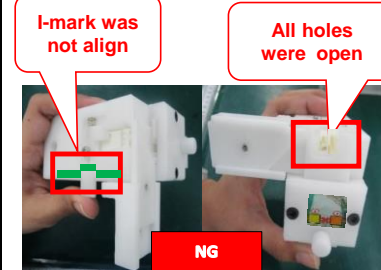
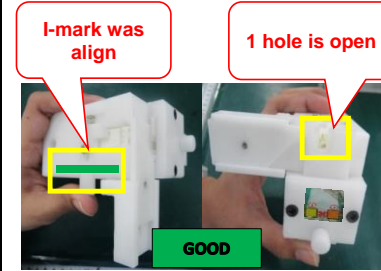
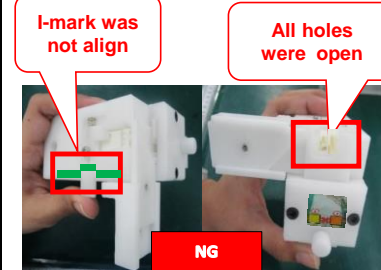
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PARTS:		1. Connector 6098-2220 (W)		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	Offline  Connector setting to insertion jig 6098-2220 (W)	<div><div><div><b>INSERTION JIG WITH SWITCH COVER</b></div><div></div><div></div><div></div><div></div><div><p>1. Press the lock of insertion jig using left thumb.</p></div><div><p>2. Get the connector <b>6098-2220 (W)</b> using right hand and insert to insertion jig. Release the lock after insertion. <i>Note: Follow the connector orientation.</i></p></div><div></div><div></div><div><p>3. Push the guide using left hand. The slot for <b>Y-wire</b> will be opened.</p></div></div></div> <div>n/a</div> <td><div><b>Connector Orientation Illustration</b></div><div></div><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></td>		<div><b>Connector Orientation Illustration</b></div> <div></div> <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>	

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310B / 7M0555-7020A

Customer: TRJ

Car Model: TOYOTA-RAV4

Validity Date:

n/a

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WI-ENG-PDE-532

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

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PARTS:		1. Connector 6098-2220 (W) 2. AVSSf 0.3 Y-OR wires L=353±2mm		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	Offline	Wire insertion to connector 6098-2220 (W)		n/a	<p><b>Important reminders/Note/s:</b></p> <p>1. Please hold the wire near terminal during insertion.</p> <p>2. Make sure wires are properly inserted. Conduct <u>Pull-Push-Pull-Push</u> procedure.</p> <p>3. Insertion must be from left to right.</p> <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><b>Document reference/s:</b></p> <p>1. Refer to <u>GL-PRO-ASY-029</u> for Pull-Push procedure.</p> <p>2. Refer to <u>WI-PRO-CNC-017</u> for Wire and Strip Length Tolerance</p>

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Process Name/Title:	310B / 7M0555-7020A		
Model code/Part number:	310B / 7M0555-7020A	Customer:	TRJ
		Car Model:	TOYOTA-RAV4
Purpose:	<input type="checkbox"/> PROTOTYPE	<input type="checkbox"/> PRE-LAUNCH	<input checked="" type="checkbox"/> MASSPRO

PARTS:	1. Assy parts		JIG:	1. Locking jig
NO.	PROCESS NAME	3 WORK PROCEDURE/ ILLUSTRATION		3 QUALITY POINTERS
4	Offline	<div><div><div>CONNECTOR RETAINER ILLUSTRATION</div><div>SIDE VIEW</div><div><div></div><div></div><div>GOOD</div><div>NG</div></div></div><div><div><div></div><div></div><div></div><div></div></div><div><div>1. Check the Retainer lock of connector before insertion to locking jig. <i>Note: Must be <b>NO</b> half-locked condition prior connector locking.</i></div></div></div></div>		<div><div>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.</div><div>2. Maintain 10mm proper holding of wire to connector</div><div>3. Connector must be fully inserted to connector slot.</div><div>4. Make sure no offset setting before locking process.</div><div>5. No wrong setting of connector.</div><div>6. No damaged connector lock</div><div>7. No unlocked/ half-locked connector.</div></div> <div><div>Important reminders/Note/s:</div><div>1. Incomplete locking process will alarm the jig.</div><div>2. No retainer in connector cannot proceed.</div><div>3. If encountered abnormality, <b>STOP</b> and immediately <b>CALL</b> the attention of the leader. <b>WAIT</b> for further instruction and continue the process.</div></div>
		<div><div>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. <b>NOTE: CONNECTOR LOCKING JIG WILL NOT FUNCTION IF CONNECTOR NOT REACH THE SENSOR.</b></div></div>		

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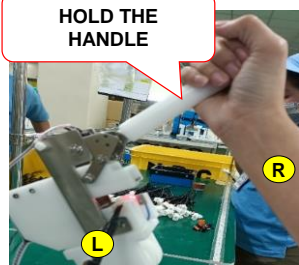
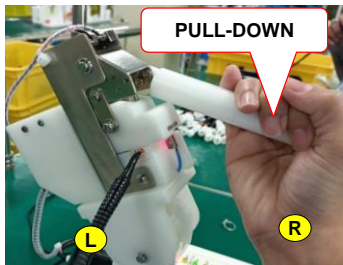
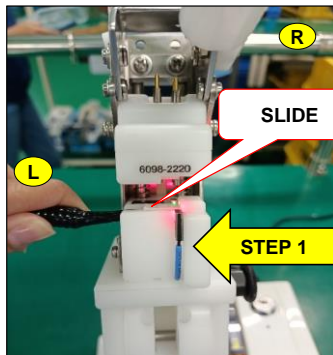
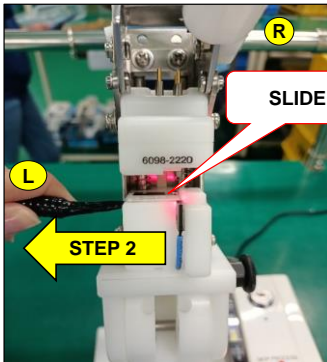
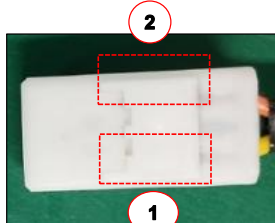

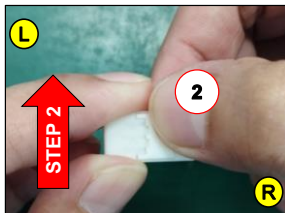




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OFFLINE ASSEMBLY PROCESS

Effectivity Date:	June 6, 2024		
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Process Name/Title:	310B / 7M0555-7020A		
Model code/Part number:	310B / 7M0555-7020A	Customer:	TRJ
Car Model:	TOYOTA-RAV4		
Purpose:	<input type="checkbox"/> PROTOTYPE	<input type="checkbox"/> PRE-LAUNCH	<input checked="" type="checkbox"/> MASSPRO

PARTS:		1. Assy parts		JIG:	1. Locking jig
NO.	PROCESS NAME	3 WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	3 QUALITY POINTERS
4	Offline Connector lock (Continuation)	<div><div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div><div><div></div><div></div></div></div></div><div>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.</div><div>4. Remove the locked connector using left hand based on the illustration, follow the direction of arrow.</div><div>5. Ensure that connector is in locked condition by slide touching the connector lock based on the sequence illustrated.</div></div></div></div>		<div>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.</div> <div>2. Maintain 10mm proper holding of wire to connector</div> <div>3.Connector must be fully inserted to connector slot.</div> <div>4. Make sure no offset setting before locking process.</div> <div>5.No wrong setting of connector.</div> <div>6. No damaged connector lock</div> <div>7. No unlocked/ half-locked connector</div> <div><b>Important reminders/Note/s:</b> 1. <i>Incomplete locking process will alarm the jig.</i> 2. <i>No retainer in connector cannot proceed.</i> 3. <i>If encountered abnormality, STOP and immediately CALL the attention of the leader. WAIT for further instruction and continue the process.</i></div>	

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☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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<b>PARTS:</b>		1. Assy parts 2. Black SV tube (vinyl) $\varnothing 5\text{ L}=279\pm 3\text{mm}$ 3. Black SV tube (vinyl) $\varnothing 5\text{ L}=30\pm 3\text{mm}$		JIG:	n/a
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>		<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>
5	Offline	<div><div><div>L</div></div><div><div>L</div></div></div> <div>1. Get the <b>SV tube (vinyl) <math>\varnothing 5\text{ L}=279\pm 3\text{mm}</math></b> using right hand then insert the <b>Y-OR wire</b> using left hand.</div> <div>2. Get the <b>SV tube (vinyl) <math>\varnothing 5\text{ L}=30\pm 3\text{mm}</math></b> using right hand then insert the <b>Y-OR wire</b> using left hand.</div>		n/a	1. No wrong use of parts 2. No deformed terminal

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PARTS:		1. Connector 6098-3802 (W)		JIG:	1.Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
6	Offline  Connector setting to insertion jig 6098-3802 (W)	<div><div><div></div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div><div><p>1. Press the lock of insertion jig using left thumb.</p><p>2. Insert the connector <b>6098-3802 (W)</b> into jig using right hand and release the lock. <i>Note: Follow the connector orientation.</i></p><p>3. Push the guide using left hand. The slot for <b>Y wire</b> will be opened.</p></div></div>		n/a	<div><p>1. Use the provided jig per model</p><p>2. No wrong orientation of connector</p><p>3. No wrong use of connector</p><p>4. No damaged connector</p></div> <div><div>Connector Orientation</div><div><div></div><div></div></div><div><div>GOOD</div><div>NG</div></div><div><div>CONNECTOR ILLUSTRATION</div><div><div></div><div></div></div><div><div>GOOD</div><div>NG</div></div><div><div>6098-3802 (W)</div><div>6098-5668 (W)</div></div></div></div>

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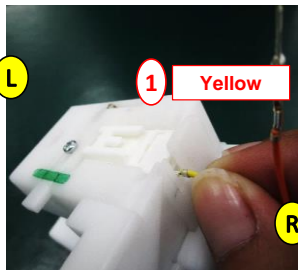
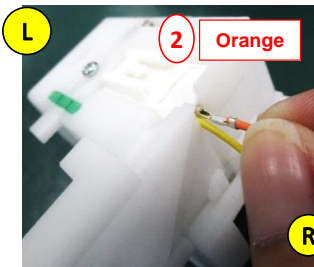

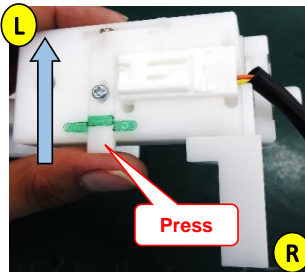
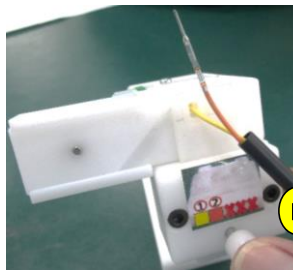
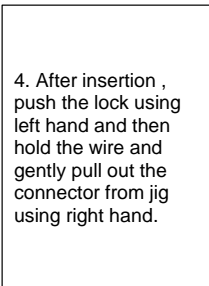
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PARTS:		1. Assy parts 2. AVSSf 0.3 B wires L=571±3mm [2pcs.]		JIG:	1.Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
7	Offline  Wire insertion to connector 6098-3802 (W)	<div><div><div><p>1. Get the <b>Y wire</b> and insert to terminal slot 1 using right hand.</p></div><div><p>3. Get the <b>OR wire</b> then insert to terminal slot 2 using right hand.</p></div></div><div><div><p>WIRE FACING</p></div><div><p>Press</p></div></div><div><div><p>2. After insertion of <b>Y wire</b> press the button using right hand. The slot for <b>OR wire</b> will be opened.</p></div><div><p>4. After insertion , push the lock using left hand and then hold the wire and gently pull out the connector from jig using right hand.</p></div></div></div> <div>n/a</div> <div><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><b>Important reminders/Note/s:</b></p><p>1. Please hold the wire near terminal during insertion.</p><p>2. Make sure wires are properly inserted. Conduct <b>Pull-Push-Pull-Push</b> procedure.</p><p>3. Insertion must be from left to right.</p><p><b>Document reference/s:</b></p><p>1.Refer to <b>GL-PRO-ASY-029</b> for Pull-Push procedure.</p><p>2. Refer to <b>WI-PRO-CNC-017</b> for Wire and Strip Length Tolerance</p></div>			

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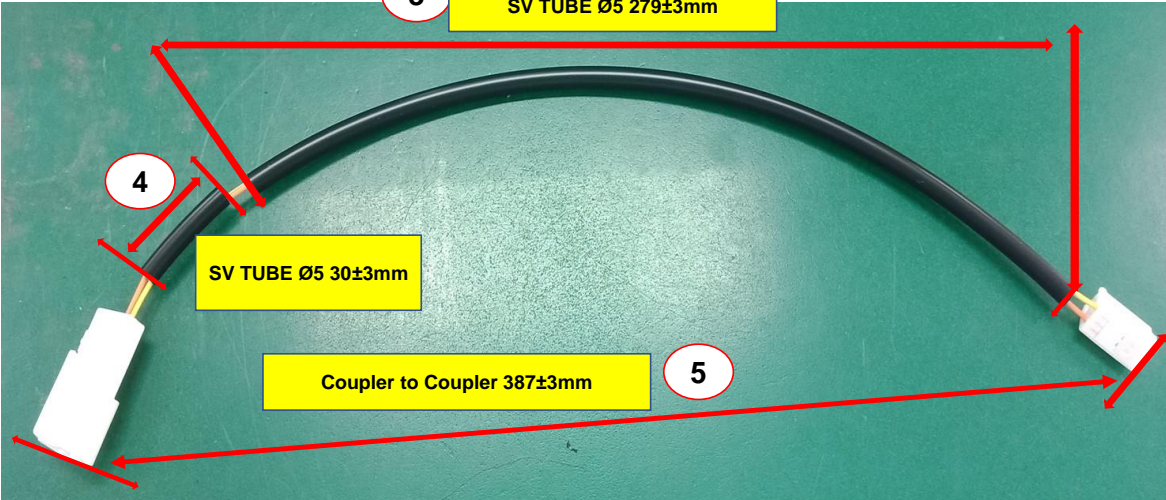
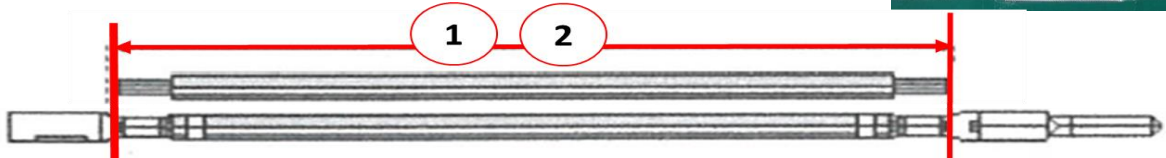
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PARTS:		1. Assy parts		JIG:	n/a
NO.	PROCESS NAME	3 WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	3 QUALITY POINTERS
8	Offline	<div><div><div>3</div><div>SV TUBE Ø5 279±3mm</div></div><div><div>4</div><div>SV TUBE Ø5 30±3mm</div></div><div><div>5</div><div>Coupler to Coupler 387±3mm</div></div></div> <div><p>Note:</p><p>1. Measurement point: End of core wire to the end of core wire</p><p>2. Terminal is reference only.</p></div> <div><div>3</div><div>MEASURING TAPE</div></div>		<p><b>Important reminders and note/s:</b></p> <p>1.Please use calibrated /verified measuring tape when getting the measurement.</p> <p>2. For Hatsumono,Nakamono and Owarimono.</p> <p><b>Document reference/s:</b></p> <p>1. Refer to <b>WI-PRO-ASY-056</b> for Sub-assembly Hatsumono Nakamono Owarimono Inspection.</p> <p>1.No wrong dimension</p>	

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PARTS:

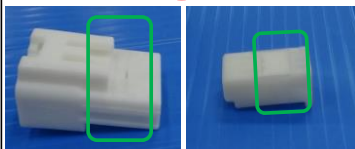
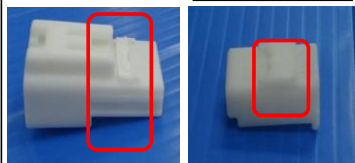
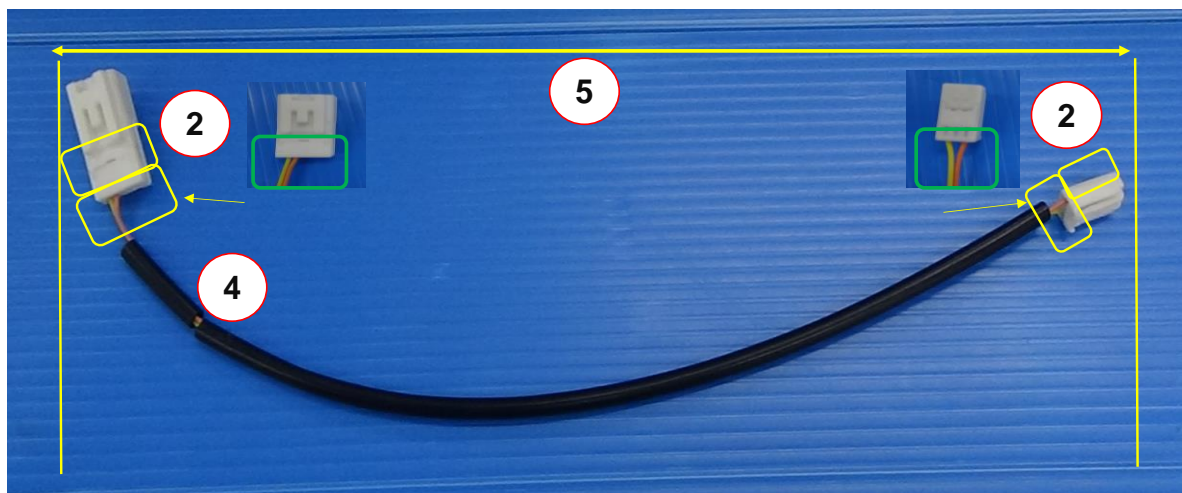
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JIG:

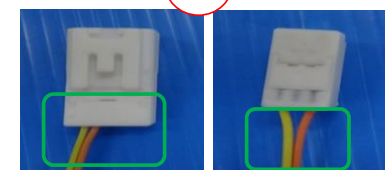
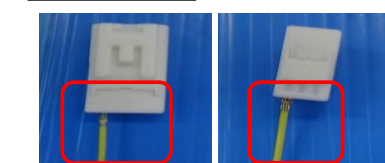
n/a

**VISUAL CHECKPOINT****OFFLINE INSERTION****7M0555-7020A**

1

**GOOD****GOOD****NO GOOD****NO GOOD**

3

**GOOD****GOOD****NO GOOD****NO GOOD**

1

**No Unlock connector**

3

**No Terminal Backing Out**

2

**No Wrong insert**

4

**No Missing SV Tube**

5

**Check the Alingment**

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