



WORK INSTRUCTION

Process Name/Title: TAPING ASSEMBLY PROCESS

Effectivity Date:

June 11, 2024

Model code/Part number:

310D / 7N0198-7020A

Customer: TRJ

Car Model: TOYOTA-RAV4

Validity Date:

n/a

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Document No.:

WI-ENG-PDE-911

Revision No.:

1

Page No.:

1 of 10

PARTS:

1. Connector 6098-3802 (W); AVSSf 0.3 Black Wires L=768±3mm; Black Corrugated tube ø5 L=605±3mm (no slit); Black VM tube (Sunprene) ø9 L=120±3mm; Black tape

JIG:

1. Insertion jig
2. Locking jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

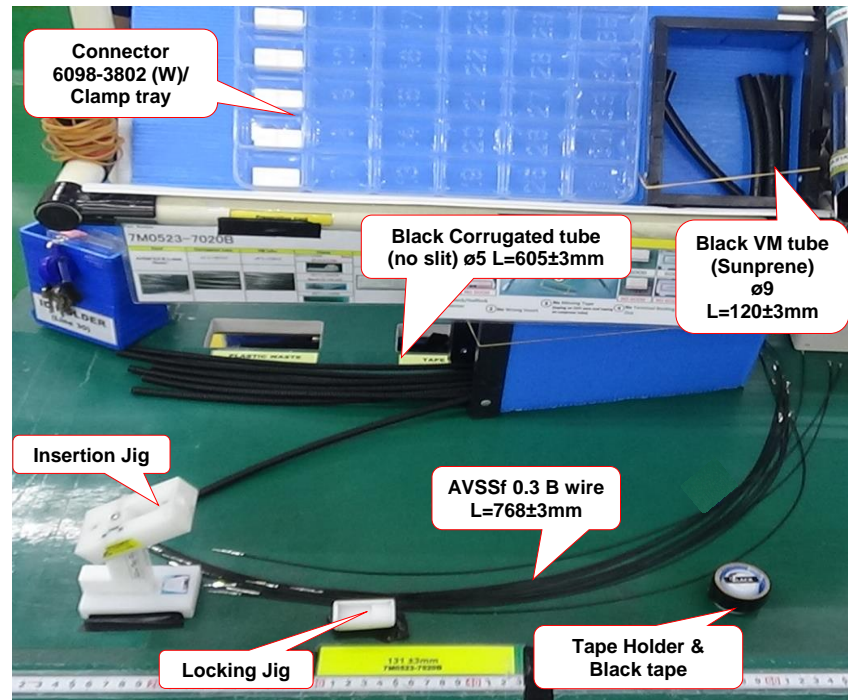
QUALITY POINTERS

1

P1

Table Lay-out

TABLE LAY-OUT



Safety Instruction

Be sure to wear 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

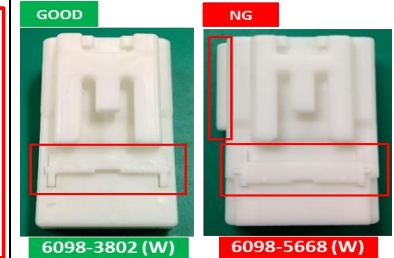
For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.

Document reference/s:

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

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

CONNECTOR ILLUSTRATION



Revision History

Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted	Prepared by	Reviewed by	Approved by	Noted by
06/11/24	1	Change purpose from Pre-launch to Masspro.					M. Ariola	C. Villanueva	A. Arañes	n/a
06/03/24	0	Initial issue.					M. Ariola	C. Villanueva	A. Arañes	n/a

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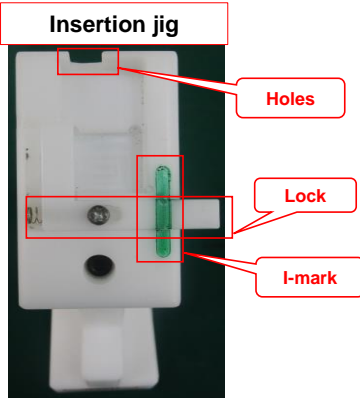
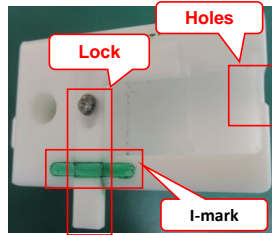
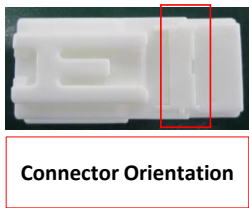
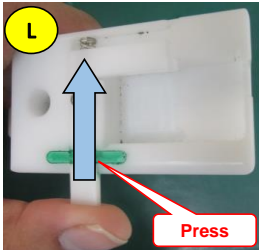
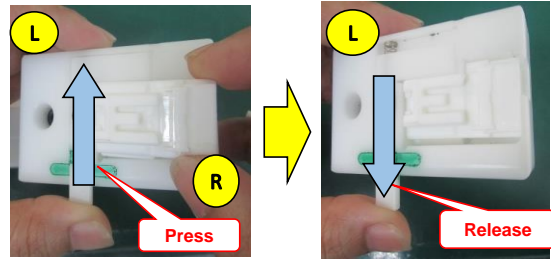
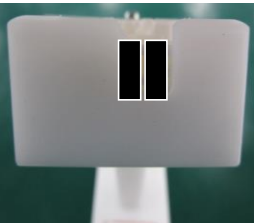
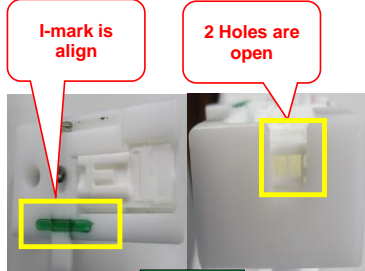
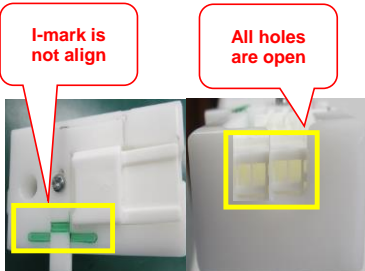
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Revision No.:

1

Page No.:

2 of 10

PARTS:	1. Connector 6098-3802 (W)		JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
2	P1 Connector setting to insertion jig 6098-3802	<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 (6098-3802) into jig using right hand and release the lock.</p><p>3. Check the holes/terminal slot for B-B wires.</p></div></div> <div>N/A</div> <div><div><p>1. Use the provided jig per model 2. No wrong orientation of connector</p><div><p>Connector Orientation Illustration</p><div><p>GOOD</p><p>NG</p></div></div></div></div>		

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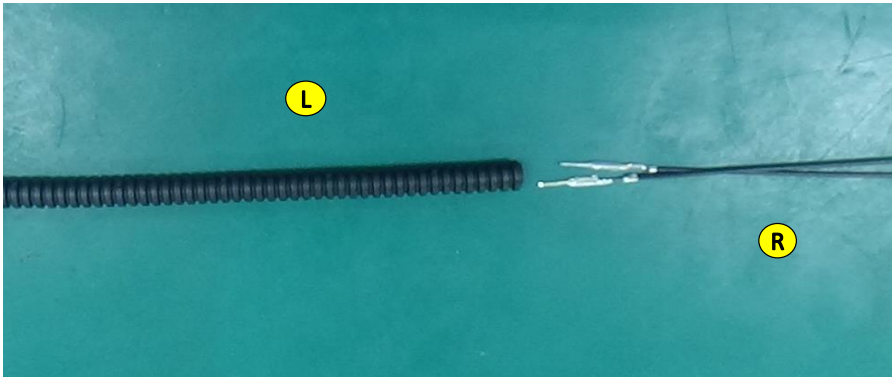
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Revision No.:

1

Page No.:

3 of 10

PARTS:		1. AVSSf 0.3 Black Wires L=768±3mm [2pcs] 2. Black Corrugated tube ø5 L=605±3mm (no slit)		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	P1	<div>Wire insertion to Black Corrugated tube ø5 L=605±3mm (no slit)</div> <div></div> <div>1. Get Black COT Ø5 L=605±3mm using left hand and insert Black wire AVSSf 0.3 L=768±3mm using right hand.</div>		N/A	1. No wrong use of parts 2. No deformed terminal

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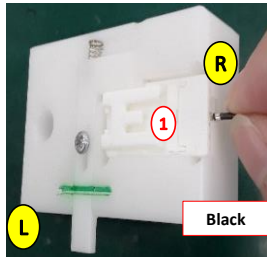
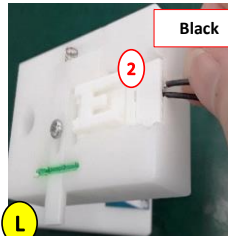
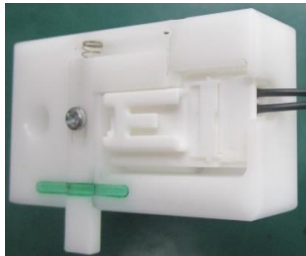
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Revision No.:

1

Page No.:

4 of 10

PARTS:	1. Assy parts		JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	P1 Wire insertion to connector 6098-3802 (W)	<div><p>Wire facing</p></div> <div><p>1. Get the first Black wire and insert to Slot 1 of connector using right hand.</p></div> <div><p>2. Get the second Black wire and insert to Slot 2 of connector using right hand.</p></div> <div><p>3. After insertion, push the lock button using left thumb and then hold the wires and gently pull out the connector from jig using right hand.</p></div>	N/A	<p>Important reminders/Note/s:</p> <p>1. Please hold the wire near terminal during insertion.</p> <p>2. Insertion must be from left to right.</p> <p>3. Make sure wires are properly inserted.</p> <p>Conduct <u>Pull-Push-Pull-Pull</u> after insertion.</p> <p>Do not exert extra force.</p> <p>Document reference/s:</p> <p>1. Refer to WI-PRO-CNC-017 for Wire and Strip length tolerance.</p> <p>2. Refer to GL-PRO-ASY for pull-push procedure.</p> <p>1. No loose insertion</p> <p>2. No wrong insertion</p> <p>3. One by one insertion</p> <p>4. No deformed terminal</p> <p>5. No wrong wire facing</p>

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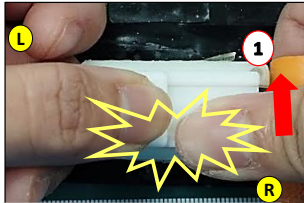


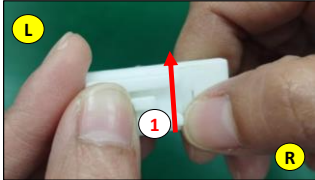
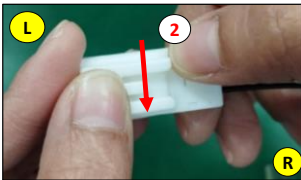
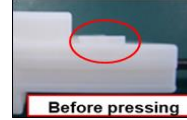

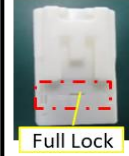


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Revision No.:

1

Page No.:

5 of 10

PARTS:		1. Assy parts		JIG:	1. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
5	P1	Connector Lock	<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><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 slide touching the connector lock based on the sequence illustrated.</p></div>	<div><p>Before pressing</p></div> <div><p>After pressing</p></div> <div><p>GOOD Full Lock</p></div> <div><p>NG Half Lock</p></div> <div><p>LOCKING JIG</p></div>	<p>1. Use the provided jog per model 2. No unlocked/half-locked connector</p> <p>Important reminders/Note/s:</p> <p>1. Manual locking may cause damaged connector lock.</p> <p>Document reference/s:</p> <p>1. Refer to WI-PRO-KIT-001 for Proper locking and checking of connector lock.</p>

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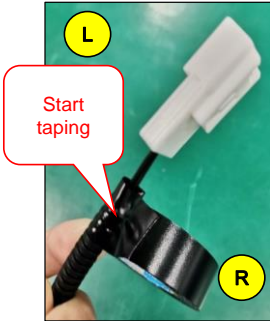

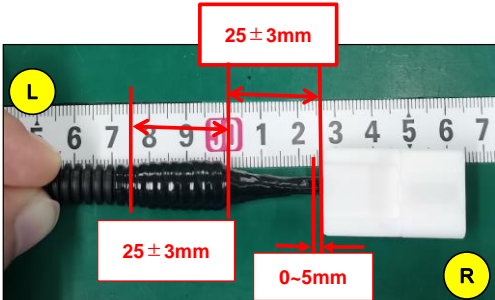

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Revision No.:

1

Page No.:

6 of 10

PARTS:		1. Assy parts 2. Black tape		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
6	P1 Taping 1 Corrugated tube to wire near Connector	<div><p>1. Hold the COT using left hand, get Black tape using right hand then start taping process using both hands.</p></div> <div><p>2. Hold the corrugated tube using left hand and measure from end of COT up to connector 25±3mm</p></div> <div><p>3. After taping, check the measurement and taping condition.</p></div>		<div><p>MEASURING TAPE</p></div>	<p>1. No flip-out tape 2. No peel-off tape 3. No loose tape 4. No missing tape 5. No wrong dimension 6. No wrong use of tape</p> <p>Important reminders and Note/s: 1. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>Document reference/s: 1. Refer to WI-PRO-ASY-001 for taping procedure.</p>

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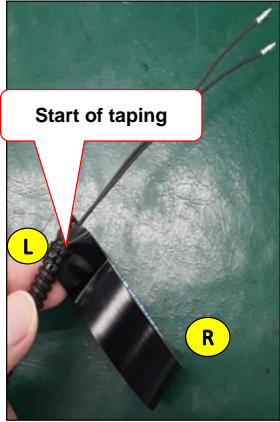
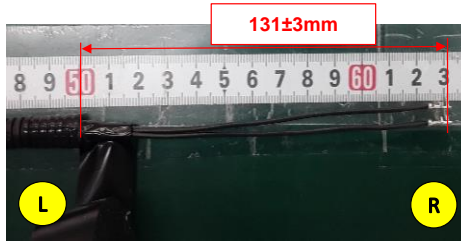
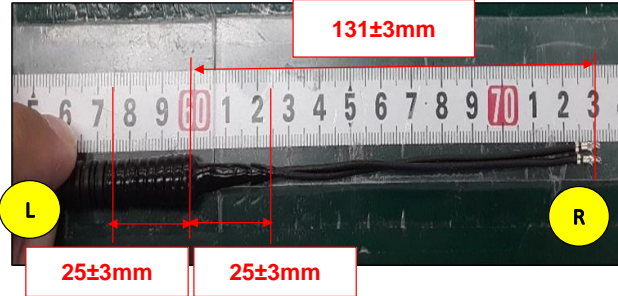

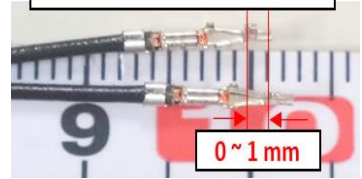
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Revision No.:

1

Page No.:

7 of 10

PARTS:		1. Assy parts 2. Black tape	JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
7	P1 Taping 2 Corrugated tube to wire near terminal	<div><p>Start of taping</p></div> <div><p>131±3mm</p></div> <div><p>131±3mm 25±3mm 25±3mm</p></div> <div><p>1. Hold the COT (Assy Part) using left hand, get the Black tape then start taping using both hands.</p><p>2. Measure from end of COT up to the terminal tip 131±3m then continue the taping process.</p><p>3. After taping, check the taping condition, wire alignment and measurement.</p></div>	<div><p>MEASURING TAPE</p></div>	<div><p>Wire alignment tolerance</p><p>0~1mm</p></div> <div><p>1. No flip-out tape 2. No peel-off tape 3. No loose tape 4. No missing tape 5. No wrong dimension 6. No wrong use of tape</p></div> <div><p>Important reminders and Note/s: 1. Please use calibrated/verified measuring tape when getting the measurement.</p><p>Document reference/s: 1. Refer to WI-PRO-ASY-001 for taping procedure.</p></div>

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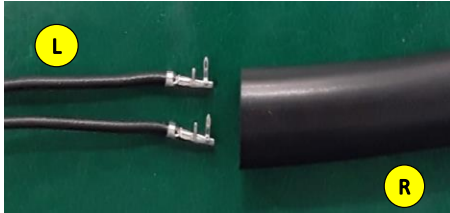
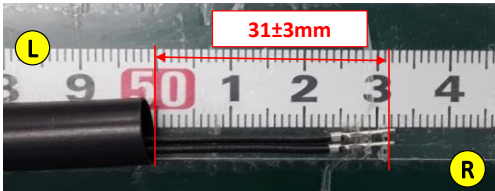
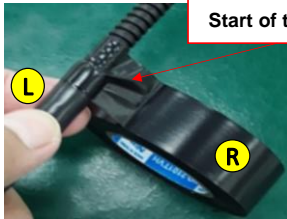


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Revision No.:

1

Page No.:

8 of 10

PARTS:		1. Assy parts 2. Black tape		3. VM tube (Sunprene) Ø9 L=120±3mm	JIG:	n/a	
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
8	P1	Wire insertion to Black VM tube (Sunprene) ø9 L=120±3mm	<div></div> <div>1. Get and hold Black wires (Assy Parts) using right hand then get and insert VM tube (Sunprene) Ø9 L=120±3mm using left hand.</div>			n/a	1. No wrong use of parts 2. No deformed terminal
9		Taping 3 Black Corrugated tube (No slit) to Black VM tube (Sunprene)	<div></div> <div>1. Measure from end of VM tube (Sunprene) up to the terminal pointed tip 31±3mm.</div> <div></div> <div>2. Hold the VM tube (Sunprene) using left hand, get the Black tape then start taping using right hand.</div> <div></div> <div>3. After taping, check the taping condition and measurement.</div>			<div>MEASURING TAPE</div> 	Important reminders and Note/s: 1. Please use calibrated/verified measuring tape when getting the measurement. Document reference/s: 1. Refer to WI-PRO-ASY-001 for taping procedure. 1. No flip-out tape 2. No peel-off tape 3. No loose tape 4. No missing tape 5. No wrong dimension 6. No wrong use of tape

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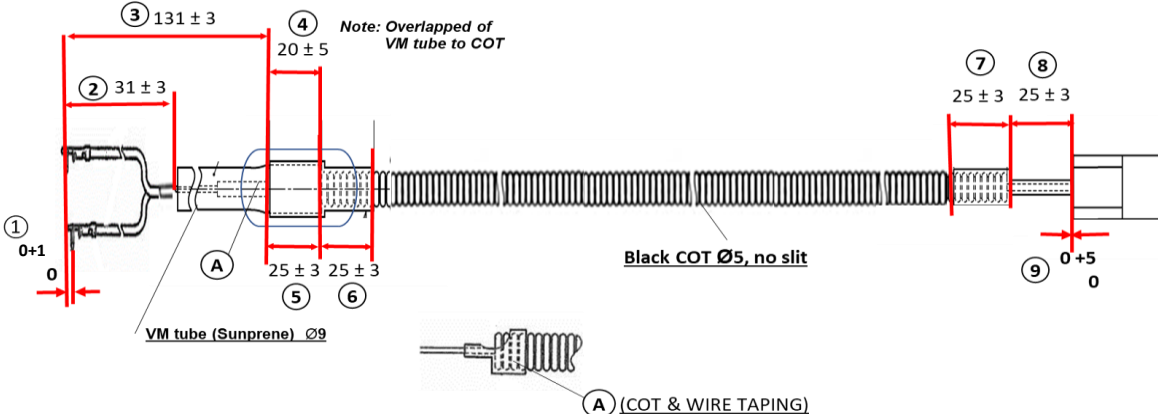

WI-ENG-PDE-911

Revision No.:

1

Page No.:

9 of 10

PARTS:		1. Assy parts		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
10	P1	Measurement		<div>MEASURING TAPE</div> 	<p>Important reminders and note/s:</p> <p>1. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>2. For Hatsumono, Nakamono and Owarimono.</p> <p>Document reference/s:</p> <p>1. Refer to WI-PRO-ASY-056 for Sub-assembly Hatsumono Nakamono Owarimono Inspection</p> <p>1. No wrong dimension.</p>

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Page No.:

10 of 10

PARTS:

1. Assy parts

JIG:

N/A

VISUAL INSPECTION/ QUALITY CHECKPOINTS

TAPING - P1

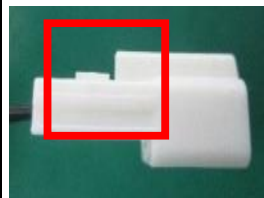
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GOOD



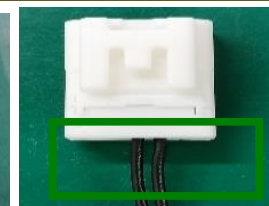
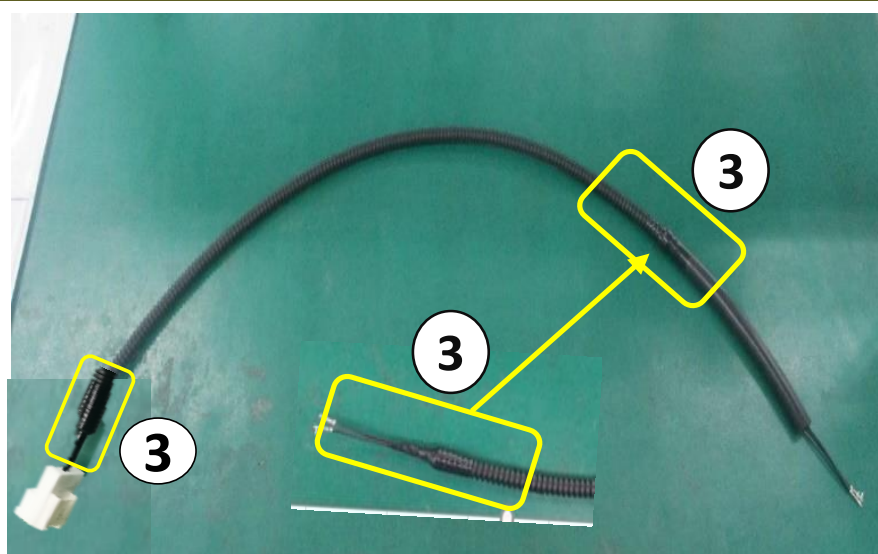
GOOD



NO GOOD



NO GOOD



GOOD



GOOD



NO GOOD



NO GOOD

1 No Unlock/Halflock Connector

2 No Wrong Insert

3 No Missing Tape
(taping on COT-wire near connector, COT-wire near terminal and taping on VM tube)

4 No Terminal Backing Out

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