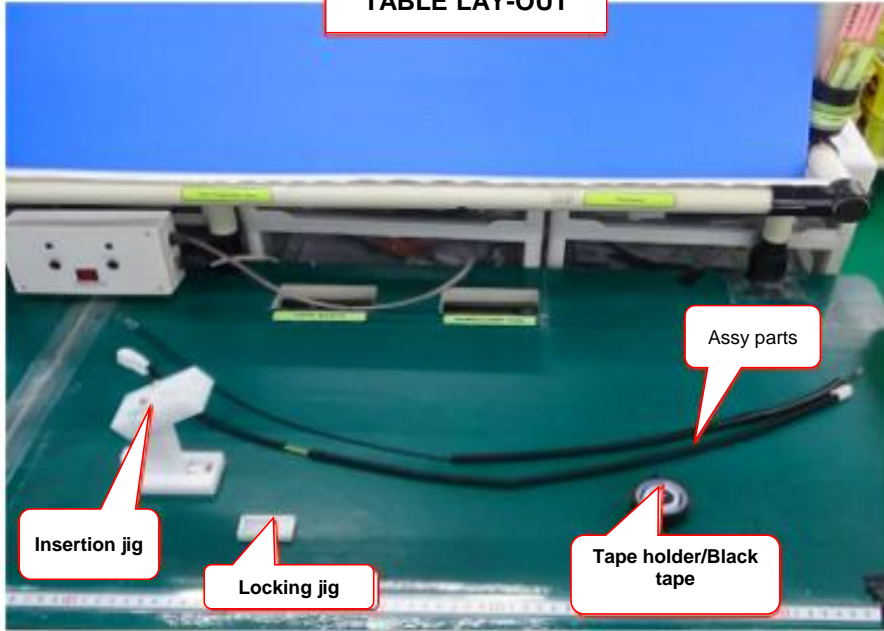



	<b>WORK INSTRUCTION</b>			Effectivity Date:	<b>May 20, 2024</b>		
	<b>TAPING ASSEMBLY PROCESS</b>			Validity Date:	n/a		
	Process Name/Title:	<b>101D / 7N0096-7020A</b>	Customer: <b>TRJ</b>	Car Model: <b>TOYOTA RAV4</b>	Document No.:	<b>WI-ENG-PDE-535B</b>	
	Purpose:	<input type="checkbox"/> PROTOTYPE	<input type="checkbox"/> PRE-LAUNCH	<input checked="" type="checkbox"/> MASSPRO	Revision No.:	4	Page No.: 1 of 10

PARTS:		1. Assy parts; Black tape		JIG:	1. Insertion jig 2. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
1	P2	Table Lay-out	<div><div>TABLE LAY-OUT</div></div>	<div><div><b>Safety Instruction</b> Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</div><div><b>Housekeeping</b> 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.</div><div><b>Alert level</b> For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</div></div>	1. No missing parts/tools 2. No excess parts/tools

Revision History							Prepared by	Reviewed by	Approved by	Noted by
05/20/24	4	Transfer to new format and inclusion of Car model "TOYOTA RAV4".	A.Hernandez	C. Villanueva	A. Arañes	n/a	 A.Hernandez	 C. Villanueva	 A. Arañes	n/a
08/15/23	3	Changed table-Lay-out; Inclusion of Quality Checkpoints (page 9); Remove and transferred process of Clamp setting; Clamp assembly; Visual/By two's inspection and measurement from P2 to CLAMP ASSEMBLY PROCESS; Transferred process no.2;3;4;5 and 6 from P1 to P2 due to new process distribution; Standardized tube description: SV tube (Vinyl)	M. Ariola	J. Loterte	C. Villanueva	A. Arañes				
12/03/23	2	Improve quality pointers, notes reference in process in all process as document improvement. Modified from 3MP to 2MP. Work procedure and illustration in process no.6 - visual/by two's inspection. Additional quality checkpoints	M. Catapang	J. Loterte	C. Villanueva	A. Arañes				
6/03/22	1	Change document purpose from pre-launch to masspro.	M. Catapang	J. Loterte	C. Villanueva	A. Arañes				
Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted	Est. Date:	June 1, 2022		

**WORK INSTRUCTION**

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May 20, 2024

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**TAPING ASSEMBLY PROCESS**

Validity Date:

n/a

Model code/Part number:

101D / 7N0096-7020A

Customer: TRJ

Car Model: TOYOTA-RAV4

Document No.:

WI-ENG-PDE-535B

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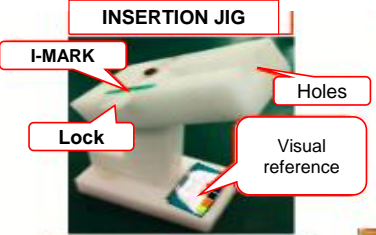
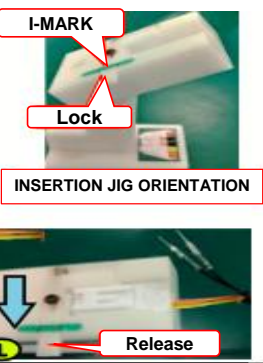
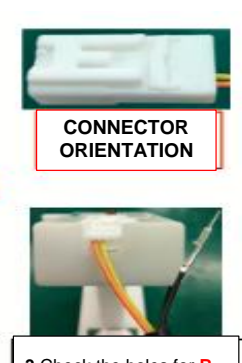
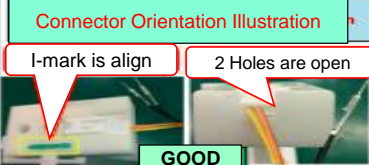
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

4

Page No.:

2 of 10

PARTS:	1. Assy parts		JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
2	Wire insertion to assy parts	<div><p>1. Hold the corrugated tube (no slit) <b>ø5 L=171±3mm</b> using left hand then insert assy parts using right hand.</p></div> <div><p>2. Hold the SV tube (vinyl) <b>ø5 L=182±3mm</b> using left hand then insert the assy parts using right hand.</p></div>	n/a	1. No wrong use of parts 2. No deformed terminal 3. No wrong insertion
3	P2 Connector setting to insertion jig 6098-3802 (W) (Assy parts)	<div><p>1. Press the lock of insertion jig using left thumb.</p></div> <div><p>2. Insert the connector <b>6098-3802 (W)</b> into jig using right hand and release the lock.</p></div> <div><p>3. Check the holes for <b>B-B wires</b>, it must be opened.</p></div>	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>

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**WORK INSTRUCTION****TAPING ASSEMBLY PROCESS**

Process Name/Title:

Model code/Part number:

**101D / 7N0096-7020A**Customer: **TRJ**Car Model: **TOYOTA-RAV4**

Purpose:

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Effectivity Date:

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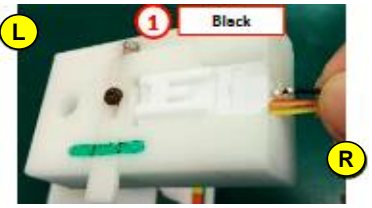


**WI-ENG-PDE-535B**

Revision No.:

**4**

Page No.:

**3 of 10**

PARTS:		1. Assy parts		JIG:	1. Insertion jig 2. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
4	P2	Wire insertion to connector 6098-3802 (W) (Assy part)	<div><p>Wire facing</p></div> <div><p>1. Get the assy part and hold the <b>B wire</b> then insert to terminal slot <b>1</b> using right hand. <i>Note insertion of wire must be from left to right.</i></p></div> <div><p>2. Hold the <b>B wire</b> then insert to terminal slot <b>2</b> using right hand.</p></div> <div><p>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.</p></div>	n/a	<p><b>Important reminders/Note/s:</b></p> <p><b>1. Please hold the wire near terminal.</b></p> <p><b>2. Make sure wires are properly inserted.</b></p> <p><b>Conduct <u>Pull-Push-Pull-Push</u> after insertion.</b></p> <p><b>Do not exert extra force.</b></p> <p><b>Document references:</b></p> <p><b>1. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</b></p> <p>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deform terminal 5. No wrong wire facing</p>

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**WORK INSTRUCTION****TAPING ASSEMBLY PROCESS**

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101D / 7N0096-7020A

Customer: TRJ

Car Model: TOYOTA-RAV4

Validity Date:

n/a

Document No.:

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Purpose:


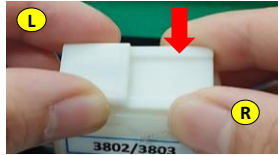


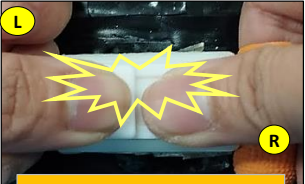
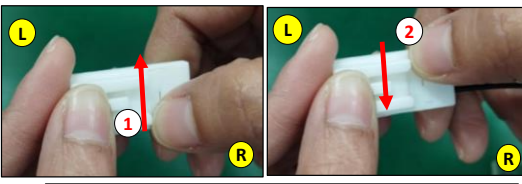




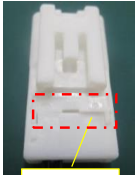
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

4

Page No.:

4 of 10

PARTS:	n/a		JIG:	1.Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
5	P2 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><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>6. Ensure that connector is in locked condition by slide touching the connector lock based on the sequence illustrated.</p></div></div>	<div><p>LOCKING JIG</p></div>	<div><p>Before pressing</p><p>After pressing</p></div> <div><div><p>Full Lock</p></div><div><p>Half Lock</p></div></div> <p><b>GOOD</b> <b>NG</b></p> <p><b>Important reminders/Note/s:</b> <b>1. MANUAL LOCKING MAY CAUSE DAMAGED CONNECTOR</b></p> <p>1. Use the provided jig tool to lock the connector. 2. No unlock/half-locked connector</p>

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## WORK INSTRUCTION

## TAPING ASSEMBLY PROCESS

Process Name/Title:

Model code/Part number:

101D / 7N0096-7020A

Customer: TRJ

Car Model: TOYOTA-RAV4

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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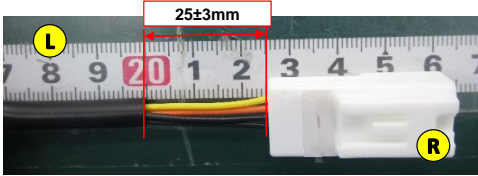
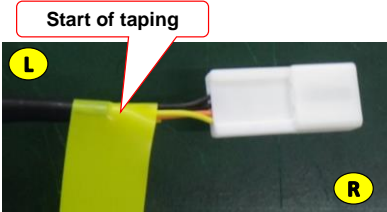
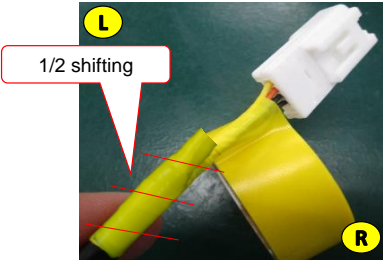
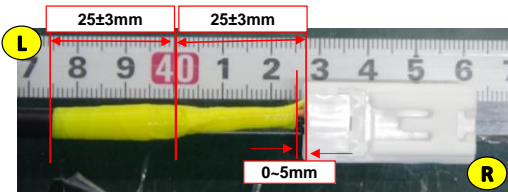

WI-ENG-PDE-535B

Revision No.:

4

Page No.:

5 of 10

PARTS:		1. Assy parts 2. Black tape	JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
6	P2 Taping 3 Black SV tube (vinyl) to wire near connector	 <p>1. Measure from end of SV tube (vinyl) up to connector <b>25mm</b> using both hands.</p>  <p>2. Get the <b>Black tape</b> using right hand then conduct pre-taping between the SV tube (vinyl) and wires near connector. <b>NOTE: WITHOUT FOLDING OF TUBE</b></p>  <p>3. Make <b>1/2 shifting</b> using both hands going to wire side then make <b>3 windings</b> of tape then cut the tape.</p>  <p>4. After taping, check the taping condition and measurement.</p>		<b>Important reminders/Note/s:</b> <b>1. Use <u>YELLOW TAPE</u> for easy visualization of shifting lines, but actual should be <u>BLACK TAPE</u>.</b> <b>2. Please use calibrated/verified measuring tape when getting the measurement.</b>  1. No flip-out tape 2. No peel-off tape 3. No loose tape 4. No missing tape 5. No wrong use of tape 6. No wrong dimension

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May 20, 2024

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Model code/Part number:

101D / 7N0096-7020A

Customer: TRJ

Car Model: TOYOTA-RAV4

Validity Date:

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Document No.:

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Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

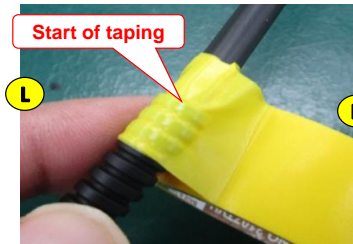
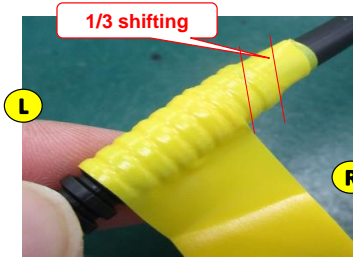

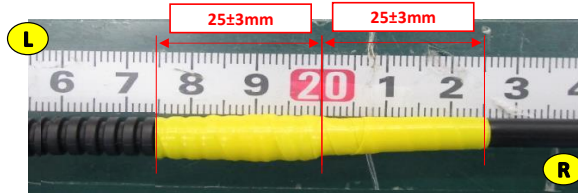

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Revision No.:

4

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
7	P2 Taping 1 Black Corrugated tube to Black SV tube (vinyl) near connector	<div><p>1. Get the <b>Black tape</b> using right hand then make <b>2 windings</b> of tape at the middle of COT and SV tube using both hands.</p></div> <div><p>2. Make <b>1/3 shifting</b> using both hands going to the side of COT until it reach <b>25mm</b> then make <b>2 windings</b> of tape before shifting to other side.</p></div> <div><p>3. Make <b>1/2 shifting</b> using both hands going to other side of vinyl tube then make <b>3 windings</b> of tape and cut the tape.</p></div> <div><p>4. After taping, check the taping condition and measurement.</p></div>	<div><b>MEASURING TAPE</b></div> 	<p><b>Important reminders/Note/s:</b></p> <ol style="list-style-type: none"><li>1. Use <b>YELLOW TAPE</b> for easy visualization of shifting lines, but actual should be <b>BLACK TAPE</b>.</li><li>2. Please use calibrated/verified measuring tape when getting the measurement.</li></ol> <ol style="list-style-type: none"><li>1. No flip-out tape</li><li>2. No peel-off tape</li><li>3. No loose tape</li><li>4. No missing tape</li><li>5. No wrong use of tape</li><li>6. No wrong dimension</li></ol>

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# WORK INSTRUCTION

## TAPING ASSEMBLY PROCESS

Effectivity Date:

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Model code/Part number:

101D / 7N0096-7020A

Customer: TRJ

Car Model: TOYOTA-RAV4

Validity Date:

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Document No.:

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Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

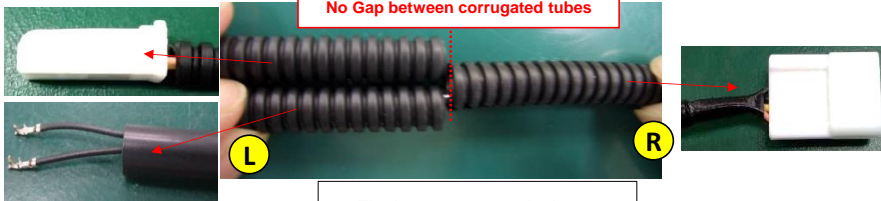
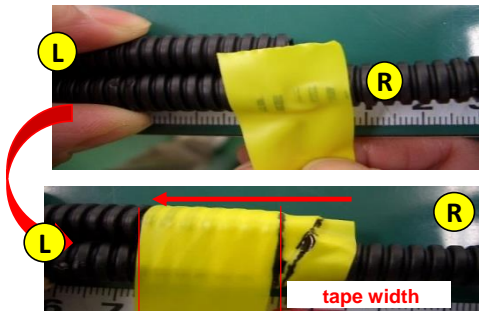
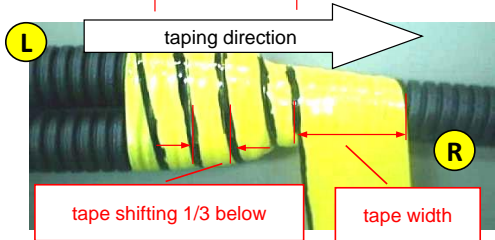
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Revision No.:

4

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
8	P2	Y-Taping	<div><p>1. Fix the 3 corrugated tube.</p></div> <div><p>2. Start taping at the middle of combined Corrugated tubes, then wind the tape to left side, width must be same with tape (19mm)</p></div> <div><p>3. Wind the tape 1/3 shifting until it reach the other side of corrugated tube (must be tape width)</p></div>	n/a	<p><b>Important reminders/Note/s:</b></p> <p>1. Use <b>YELLOW TAPE</b> for easy visualization of shifting lines, but actual should be <b>BLACK TAPE</b>.</p> <p>2. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>1. No flip-out tape 2. No peel-off tape 3. No loose tape 4. No missing tape 5. No wrong use of tape 6. No wrong dimension</p>

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Document No.:

WI-ENG-PDE-535B

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

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Revision No.:

4

Page No.:

8 of 10

### PARTS:

1. Assy parts
2. Black tape

JIG:

n/a

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

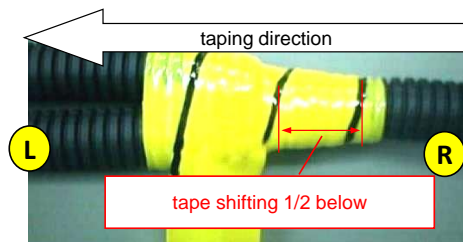
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QUALITY POINTERS

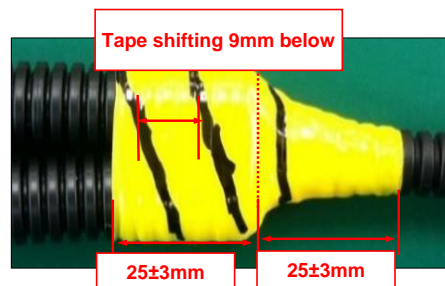
8

P2

Y-Taping  
(Continuation)



4. Wind the tape backward **1/2 shifting**



5. Wind the tape **1/2 shifting** going to other side of corrugated tube then cut the tape. After taping, check the condition of tape.

### MEASURING TAPE



**Important reminders/Note/s:**  
**1. Use YELLOW TAPE for easy visualization of shifting lines, but actual should be BLACK TAPE.**  
**2. Please use calibrated/verified measuring tape when getting the measurement.**

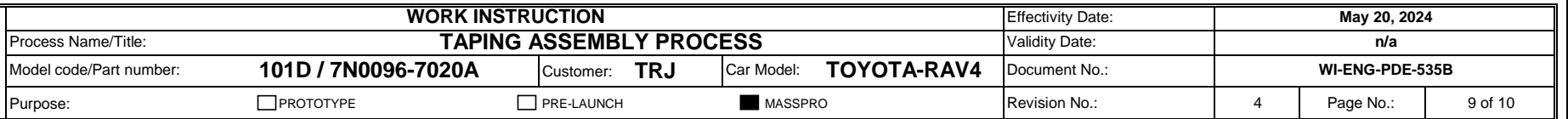
1. No flip-out tape
2. No peel-off tape
3. No loose tape
4. No missing tape
5. No wrong use of tape
6. No wrong dimension

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# WORK INSTRUCTION

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☐ PROTOTYPE

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☒ MASSPRO

Revision No.:

4

Page No.:

10 of 10

### PARTS:

1. Assy parts
2. Black tape

JIG:

n/a



### VISUAL INSPECTION/QUALITY CHECKPOINTS

P2

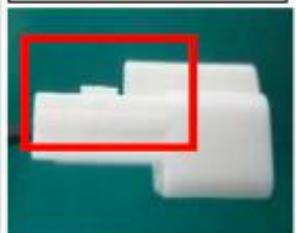
7N0096-7020A



GOOD



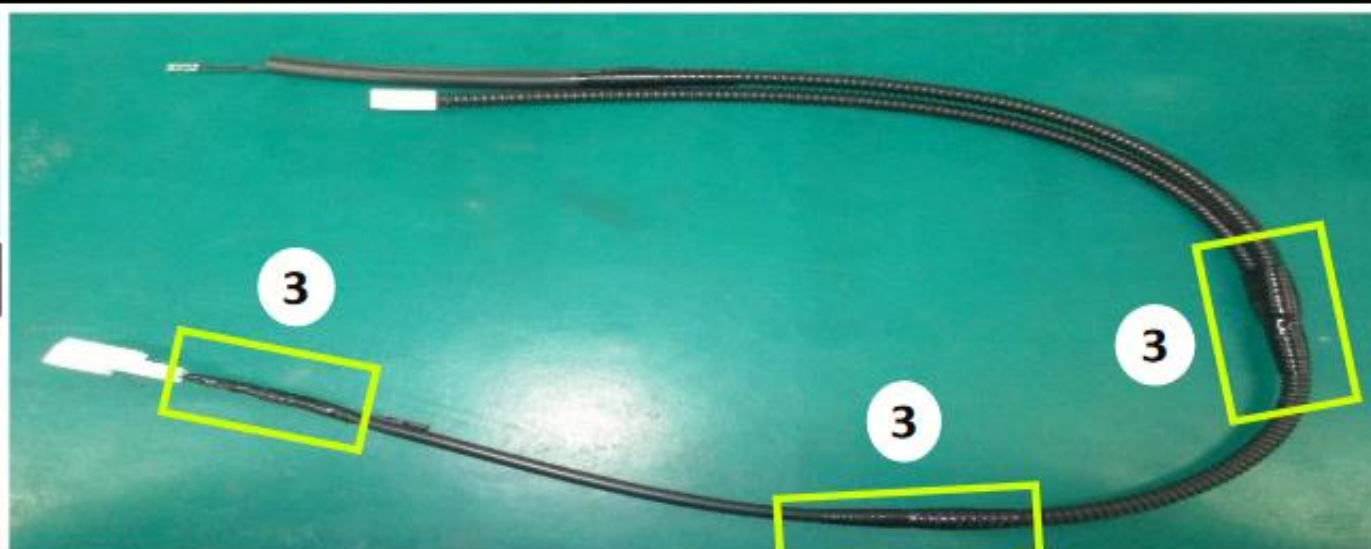
GOOD



NO



NO



3 No Missing Tape

- 1 No Unlock/  
Halflocked Connector
- 2 No Wrong Insert  
(no wrong slot)

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