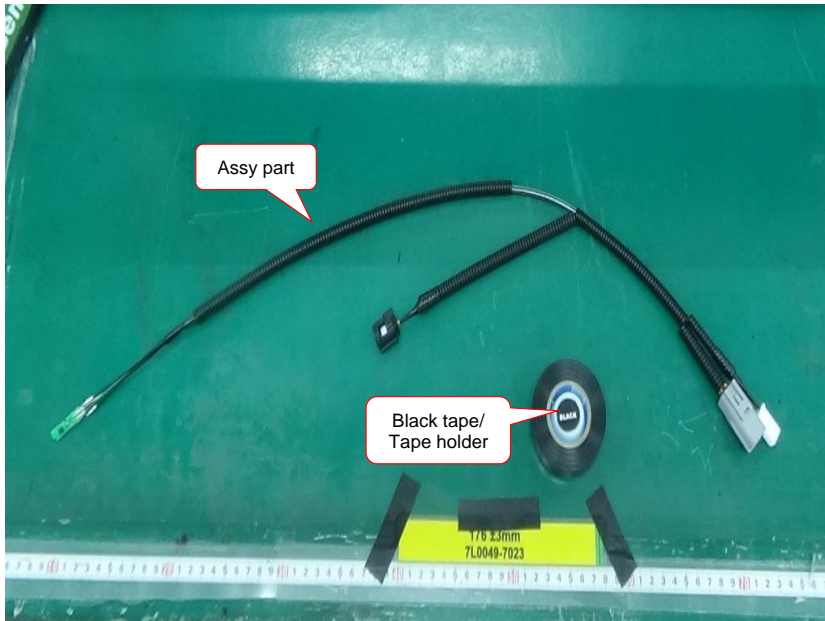




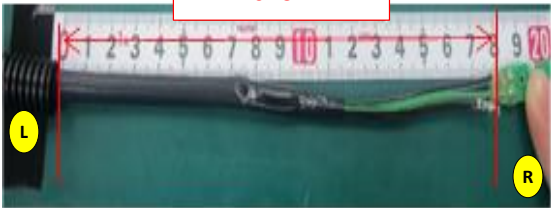



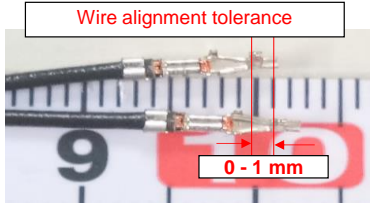
	WORK INSTRUCTION TAPING ASSEMBLY PROCESS				Effectivity Date:	September 4, 2024		
	Process Name/Title:				Validity Date:	n/a		
	Model code/Part number: 241B / 7L0049-7023		Customer: TRQSS	Car Model: LEXUS ES	Document No.:	WI-ENG-PDE-422C		
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO		Revision No.:		3	Page No.:	1 of 7	

PARTS:		1. Assy parts; Black tape		JIG:	n/a
NO.	PROCESS NAME	3	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
1	P3	Table Lay-out	<div style="border: 1px solid red; padding: 5px; text-align: center; margin-bottom: 10px;"> Table Lay-out </div> 	<div style="border: 1px solid red; padding: 5px; margin-bottom: 10px;"> Safety Instruction Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.) </div> <div style="border: 1px solid red; padding: 5px; margin-bottom: 10px;"> Housekeeping 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker. </div> <div style="border: 1px solid red; padding: 5px;"> Alert level For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action. </div>	1. No missing parts/tools 2. No excess parts/tools

Revision History						Prepared by	Reviewed by	Approved by	Noted by		
09/04/24	3	Separate Clamp assembly and transfer Taping 4 and Y-taping process from P2 due to process improvement. Improved Table lay-out, Measurement and Visual inspection/Quality checkpoints.	D.Castillo	C. Villanueva	A. Arañes	n/a	 D. Castillo	 C. Villanueva	 A. Arañes	n/a	
10/17/23	2	Update template and inclusion of Car Model.	A.Hernandez	J. Loterte	C. Villanueva	A. Arañes					
12/16/22	1	Improve quality pointers: Reminders/notes, references and by two's inspection. Inclusion of Quality checkpoints	M. Catapang	J. Loterte	C. Villanueva	A. Arañes					
03/04/22	0	Initial issue	M. Catapang	J. Loterte	C. Villanueva	A. Arañes					
Eff. Date	Rev. No	Details of Change				Revised	Reviewed	Approved	Noted	Est. Date:	March 04, 2022

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	Model code/Part number: 241B / 7L0049-7023		Customer: TRQSS	Car Model: LEXUS ES	Document No.: WI-ENG-PDE-422C		
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO			Revision No.:	3	Page No.:	2 of 7

PARTS:		1. Assy parts 2. Black tape		JIG:	n/a	
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS		
2	P3 Taping 4 Corrugated tube to Sunprene tube	<div><div>176±3mm</div><div>1.Measure the end of the corrugated tube up to the edge of hotmelt and terminal pointed tip 176mm using both hands.</div><div><div>Start of taping</div><div>2. Hold corrugated tube using left hand then start taping using right hand.</div><div><div>20±3mm</div><div>176±3mm</div><div>20±3mm</div><div>3. After taping, check the measurement and tape condition</div></div></div><div><div>MEASURING TAPE</div></div><div><div>Important reminders and Note/s:</div><div>1. Please use calibrated/verified measuring tape when getting the measurement.</div><div>Document reference/s:</div><div>1. Refer to WI-PRO-ASY-001 for taping procedure.</div><div><div>Wire alignment tolerance</div><div>0 - 1 mm</div></div></div></div>				

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TAPING ASSEMBLY PROCESS

Effectivity Date:

September 4, 2024

Model code/Part number:

241B / 7L0049-7023

Customer:

TRQSS

Car Model:

LEXUS ES

Document No.:

WI-ENG-PDE-422C

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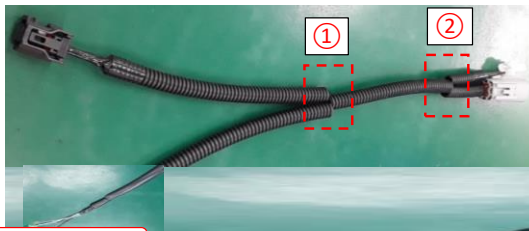
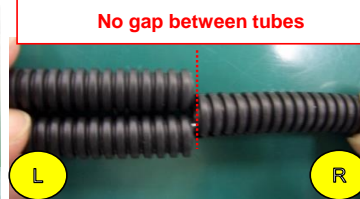
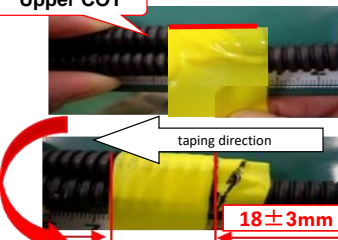
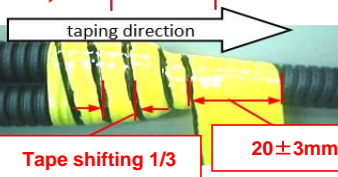

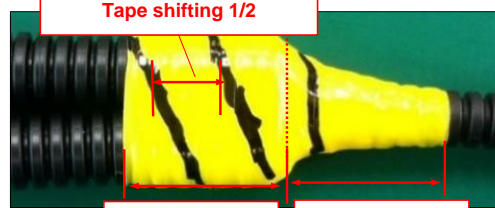


☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

3

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PARTS:		1. Assy parts 2. Black tape		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	P3 Y-taping 1	<div><div><div><div><div><div><div>①</div><div>②</div></div><div></div><div><div>No gap between tubes</div><div></div></div><div><div>1. Fix the 3 corrugated tube.</div></div><div><div>2. Start taping at the middle of combined tubes, position the tape into upper COT (2 winds). Then wind the tape to left side, width must be 18±3mm (2 winds).</div></div><div><div>3. Wind the tape 1/3 shifting until it reach the other side of COT then wind the tape, width must be 20±3mm (2 winds).</div></div><div><div>4. Wind the tape backward 1/2 shifting until it reach the COT. Then wind the tape, width must be 20±3mm (2 winds).</div></div><div><div>5. Wind the tape 1/2 shifting going to other side of COT. Then wind the tape, width must be 20±3mm (2 winds) and cut the tape. After taping, check the condition of tape and measurement.</div></div><div><div>Upper COT</div><div></div><div><div>18±3mm</div></div><div><div>Note: Do not exert excessive force during pulling & winding of tape</div></div><div><div>taping direction</div></div><div><div>Tape shifting 1/3</div><div></div><div><div>20±3mm</div></div><div><div>taping direction</div></div><div><div>tape shifting 1/2</div><div></div></div><div><div>Tape shifting 1/2</div><div></div><div><div>18±3mm</div><div>20±3mm</div></div></div></div></div></div></div></div></div></div>		<div>MEASURING TAPE</div> <div></div>	<div>Important reminders/Note/s:</div> <div><div>1. Use YELLOW TAPE for easy visualization of shifting lines, but actual should be BLACK TAPE.</div><div>2. Please use calibrated/verified measuring tape when getting the measurement.</div></div> <div><div>Document reference/s:</div><div><div>1. Refer to WI-PRO-ASY-001C for taping procedure (Special)</div></div></div> <div><div>1. No flip-out tape</div><div>2. No peel-off tape</div><div>3. No loose tape</div><div>4. No missing tape</div><div>5. No wrong dimension</div><div>6. No wrong use of tape</div><div>7. Do not exert excessive force during pulling & winding of tape</div></div> <div><div>Proper facing of Y taping</div><div></div></div>

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WORK INSTRUCTION

Process Name/Title:

TAPING ASSEMBLY PROCESS

Model code/Part number:

241B / 7L0049-7023

Customer:

TRQSS

Car Model:

LEXUS ES

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Effectivity Date:

September 4, 2024

Validity Date:

n/a

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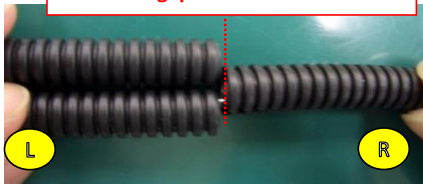
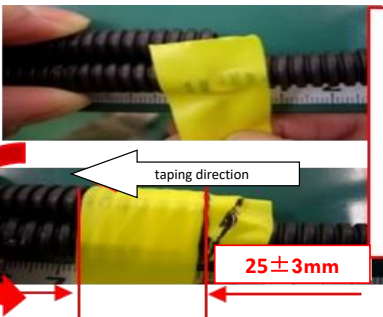
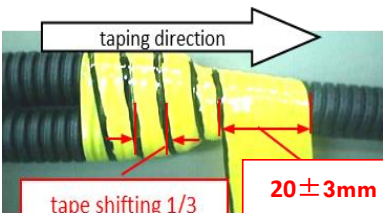

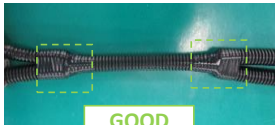

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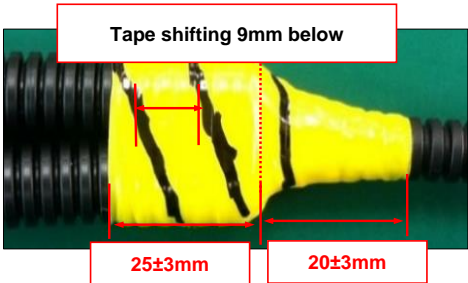
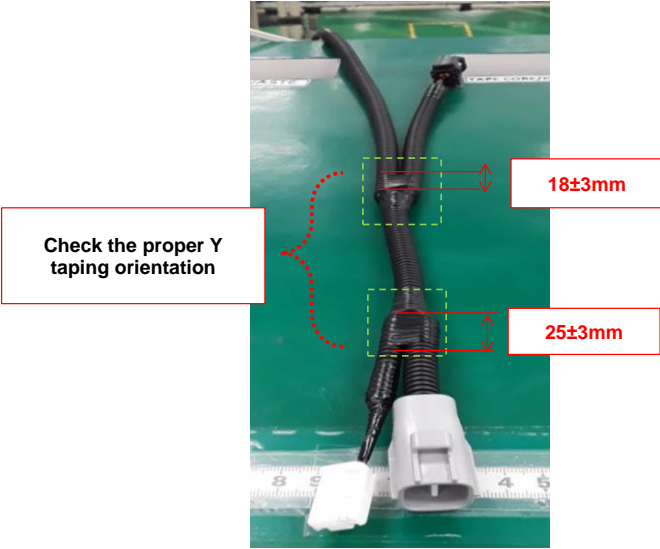



PARTS:		1. Assy parts 2. Black tape		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
4	P3	Y-taping 2			
		<div><div></div><div><div>No gap between tubes</div><div>1. Fix the 3 corrugated tube .</div></div><div><div>taping direction</div><div>25±3mm</div><div>Note: Do not exert excessive force during pulling & winding of tape</div></div><div><div>taping direction</div><div>tape shifting 1/3 below</div><div>20±3mm</div><div>2. Start taping at the middle of combined tubes, position the tape into upper COT (2 winds). Then wind the tape to left side, width must be 25±3mm (2 winds).</div><div>3. Wind the tape 1/3 shifting until it reach the other side of COT then wind the tape, width must be 20±3mm (2 winds).</div></div></div>		<div><div>MEASURING TAPE</div></div>	<div><div>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.</div><div>Document reference/s: 1. Refer to WI-PRO-ASY-001C for taping procedure (Special)</div><div>1. No tape peeling 2. No flip out of tape 3. No wide interval between the COT 4. No exposed wire 5. Y taping should be same facing</div></div> <div><div>Proper facing of Y taping</div><div><div>GOOD</div><div>NG</div></div></div>

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	Process Name/Title: TAPING ASSEMBLY PROCESS			Validity Date:	n/a		
	Model code/Part number: 241B / 7L0049-7023		Customer: TRQSS	Car Model: LEXUS ES	Document No.: WI-ENG-PDE-422C		
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO			Revision No.:	3	Page No.:	5 of 7


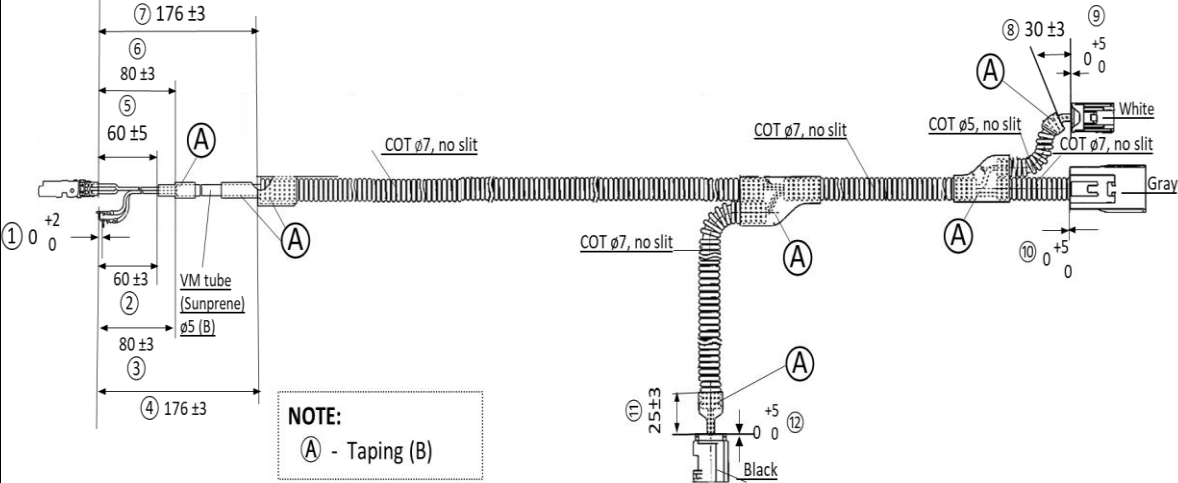
PARTS:		1. Assy parts 2. Black tape		JIG:	n/a	
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS	
4	P3 Y-taping 2 (continuation)	<div><div><p>taping direction</p><p>tape shifting 1/2</p></div><div><p>Tape shifting 9mm below</p><p>25±3mm</p><p>20±3mm</p></div><div><p>4. Wind the tape backward 1/2 shifting until it reach the COT. Then wind the tape, width must be 20±3mm (2 winds).</p><p>5. Wind the tape 1/2 shifting going to other side of COT. Then wind the tape, width must be 20±3mm (2 winds) and cut the tape. After taping, check the condition of tape and measurement.</p></div><div><p>Check the proper Y taping orientation</p><p>18±3mm</p><p>25±3mm</p></div></div> <div><p>MEASURING TAPE</p></div> <div><p>Important reminders/Note/s:</p><p>1. Use <u>YELLOW TAPE</u> for easy visualization of shifting lines, but actual should be <u>BLACK TAPE</u>.</p><p>2. Please use calibrated/verified measuring tape when getting the measurement.</p><p>Document reference/s:</p><p>1. Refer to WI-PRO-ASY-001C for taping procedure (Special)</p><p>1. No tape peeling 2. No flip out of tape 3. No wide interval between the COT 4. No exposed wire 5. Y-taping should be same facing</p><p>Proper facing of Y taping</p><div><p>NG</p></div><div><p>GOOD</p></div></div>				

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	Model code/Part number: 241B / 7L0049-7023		Customer: TRQSS	Car Model: LEXUS ES	Document No.: WI-ENG-PDE-422C		
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO			Revision No.:	3	Page No.:	6 of 7

PARTS:	1. Assy parts			JIG:	n/a		
NO.	PROCESS NAME	3 WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS		
6	P3	Measurement	<div>MEASURING TAPE</div>   <div>NOTE: A - Taping (B)</div>		<div>Important reminders and note/s:</div> <div>1. Please use calibrated/verified measuring tape when getting the measurement.</div> <div>2. For Hatsumono, Nakamono and Owarimono.</div> <div>Document reference/s:</div> <div>1. Refer to WI-PRO-ASY-056 for Sub-assembly Hatsumono Nakamono Owarimono Inspection</div> <div>1. No wrong dimension</div>		

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PARTS:

1. Assy parts

JIG:

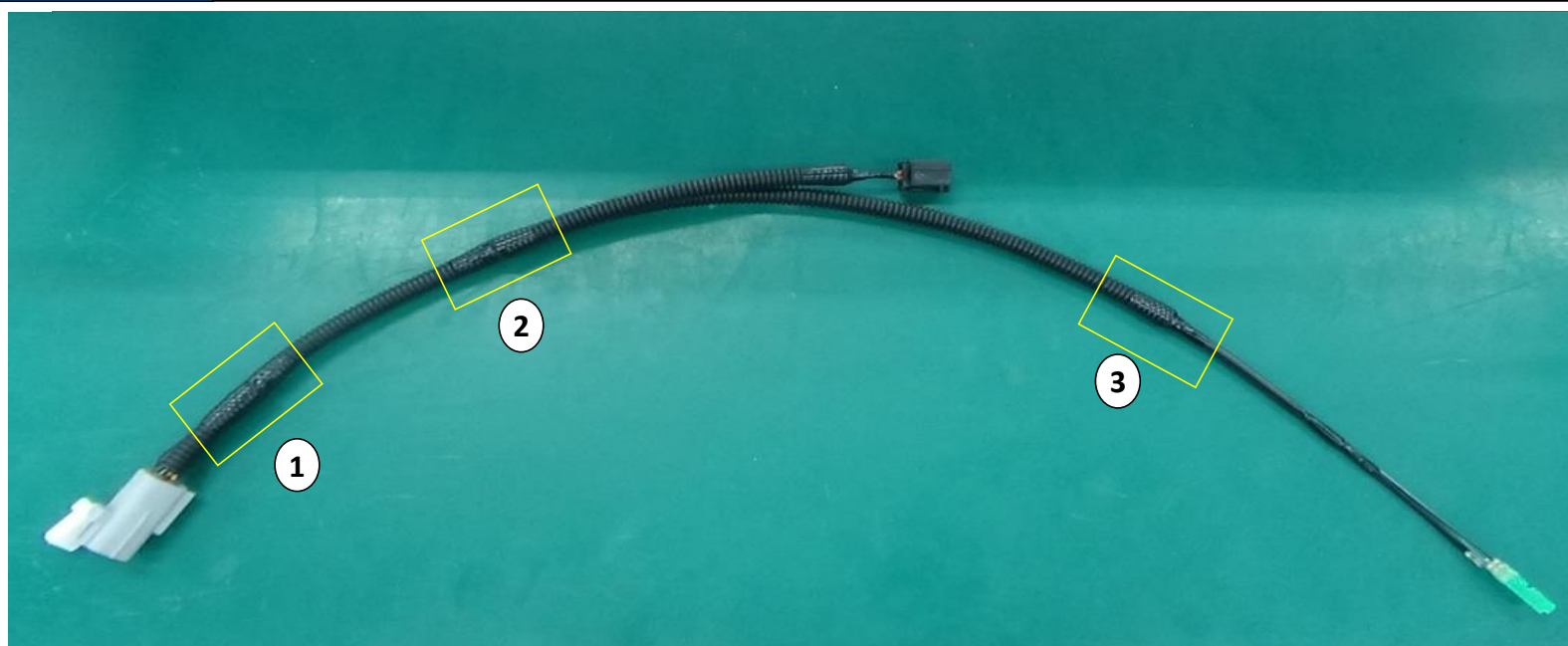
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VISUAL INSPECTION/ QUALITY CHECKPOINTS

P3

7L0049-7023



Proper alignment of
B-B wires and PCB

1

2

3

No Missing Tape

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