	WORK INSTRUCTION				Effectivity Date:		March 11, 2025	
	TAPING ASSEMBLY PROCESS				Validity Date:		n/a	
	Process Name/Title:		Model code/Part number: 412D / 75V117-7111		Customer: TRJ	Car Model: LEXUS-ES		Document No.: WI-ENG-PDE-1123
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO		Revision No.:		1	Page No.:	1 of 18	


PARTS:		1. Assy parts (L wire with Black SV tube, Black tape); Connector PBVP-12V-S (W); Black SV tube (Vinyl) Ø7 L= 87±3mm; Black SV tube (Vinyl) Ø8.5 L=102±3mm; Connector PBVP-10V-S (W); Connector 4A1230-0000 (W); AVSS 0.3 V L=139±2mm; BR L=141±2mm; W/G L=145±2mm; AVSS 0.3 R L=240±2mm; L L=89±2mm; GR L=228±2mm; GR/B L=224±2mm; LG L=226±2mm; P L=230±2mm; B L=234±2mm; G L=232±2mm;			JIG:		1. Insertion jig 2. Steering Navigation	
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE		QUALITY POINTERS	
1	P1 <div>1</div> Table lay-out	<div><div>Table Lay-out</div><div><div>Connector PBVP-10V-S (W)</div><div>Black SV tube (Vinyl) Ø7 L=87±3mm</div><div>Assy parts (L wire with Black SV tube, Black tape)</div><div>2 Layer Navigation</div><div>Black SV tube (Vinyl) Ø8.5 L= 102±3mm</div><div>Insertion Jig B</div><div>Insertion Jig A</div><div>Empty box for Pre-assy</div><div>Connector 4A1230-0000 (W)</div><div>Connector PBVP-12V-S (W)</div></div></div>			<div><b>Safety Instruction</b> Be sure to wear required 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><b>Document reference/s:</b> 1. Refer to <b>WI-PRO-CNC-017</b> for Wire and Strip Length Tolerance 2. Refer to <b>WI-ENG-PDE-1151</b> for Taping assembly process (Pre-assy)</div> <div>1. No deformed terminal 2. No wrong usage of parts</div>	



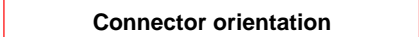
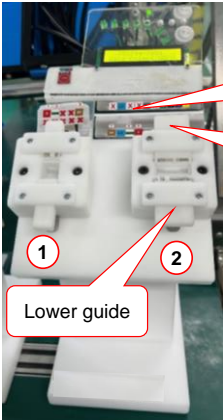
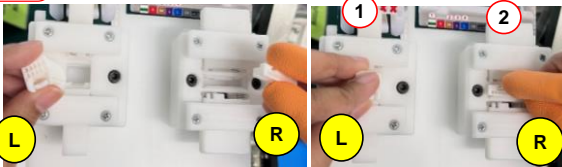

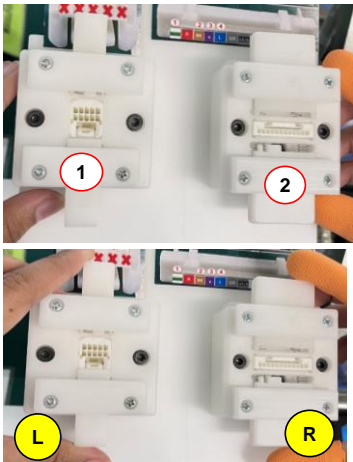


Revision History						Prepared by	Checked by	Reviewed by	Approved by
03/11/25	1	Change from Pre-launch to Masspro. Inclusion of Table lay-out. Provision of Insertion jig. Separation of L wire to tube taping.			D.Castillo	J.Loterte	C. Villanueva	A. Arañes	
11/28/24	0	Initial issue.			D.Castillo	n/a	C. Villanueva	A. Arañes	
Eff. Date	Rev. No	Details of Change			Revised	Checked	Reviewed	Approved	Est. Date: November 28, 2024

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	<b>Process Name/Title: TAPING ASSEMBLY PROCESS</b>				Validity Date:	n/a		
	Model code/Part number: <b>412D / 75V117-7111</b>		Customer: <b>TRJ</b>	Car Model: <b>LEXUS-ES</b>	Document No.:	<b>WI-ENG-PDE-1123</b>		
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO				Revision No.:	1	Page No.:	2 of 18

<b>PARTS:</b>	1. Connector 4A1230-0000 (W) 2. Connector PBVP-12V-S (W)			JIG:	1. Insertion jig 2. Steering Navigation		
<b>NO.</b>	<b>PROCESS NAME</b>	<b>1</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>	<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>		
2	P1		<div><div>Insertion Jig</div><div></div><div></div><div>Visual reference</div><div>Upper guide</div><div>Lower guide</div><div>Connector orientation</div><div></div><div>1. Get the 1 pc of <b>4A1230-0000 (W)</b> using left hand and 1 pc of <b>PBVP-12V-S (W)</b> connector using right hand then insert to insertion jig. <i>Note: Follow the connector orientation.</i></div><div></div><div>Press</div><div>2. Press the upper and lower guide using both hands in same timing. Holes that need to be insert are only open.</div></div> <div><div>STEERING NAVIGATION (2 layer)</div></div> <div><div>CONTROLLER</div></div>	1. Use the provided jig per model 2. No wrong usage of parts 3. No wrong orientation of connector 4. No damaged connector			

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## WORK INSTRUCTION

Process Name/Title:

## TAPING ASSEMBLY PROCESS

Effectivity Date:

March 11, 2025

Model code/Part number:

412D / 75V117-7111

Customer:

TRJ

Car Model:

LEXUS-ES

Validity Date:

n/a

Purpose:



PROTOTYPE



PRE-LAUNCH



MASSPRO

Revision No.:

1

Page No.:

3 of 18

## PARTS:

1. AVSS 0.3 V L=139±2mm; BR L=141±2mm; W/G L=145±2mm

JIG:

1. Insertion jig
2. Steering Navigation

NO.

PROCESS NAME

1

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

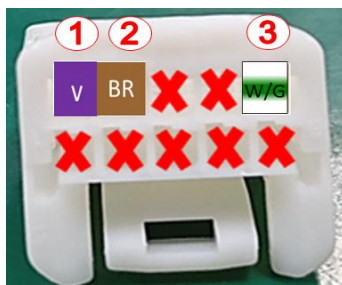
QUALITY POINTERS

3

P1

Wire insertion to  
Connector  
4A1230-0000 (W)

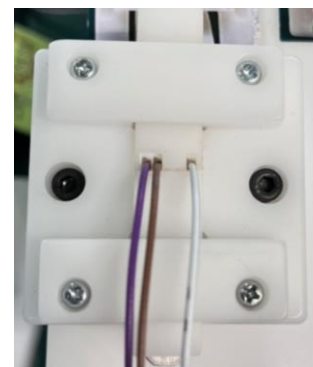
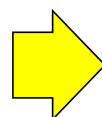
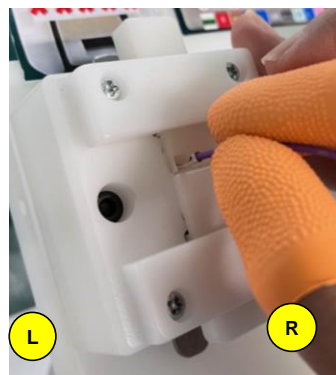
INSERTION SEQUENCE FROM LEFT TO  
RIGHT



TERMINAL  
FACING

## WIRE INSERTION ILLUSTRATION

1	2			3
V	BR	X	X	W/G
139	141			145
X	X	X	X	X



1. Get the **V** wire using left hand and transfer to right hand then insert to connector. Repeat the process for **BR** and **W/G** wires. Check the wire after insertion.  
*Note: Follow the insertion sequence based on the illustration.*

STEERING  
NAVIGATION (2 layer)



CONTROLLER



1. Use provided jig per model
2. No wrong usage of parts
3. One by one insertion
4. No wrong insertion
5. No deformed terminal
6. No stuck of terminal tip

**Important reminders/Note/s:**

1. Make sure wires are properly inserted. Conduct **Pull-Push-Pull-Push** after insertion. Do not exert extra force.
2. Please hold the wires near terminal during insertion.
3. Automatically dispose and replace the unit if once encountered bend terminal, difficulty of insertion and half-locked connector.
4. Insertion of wires must be from left to right.


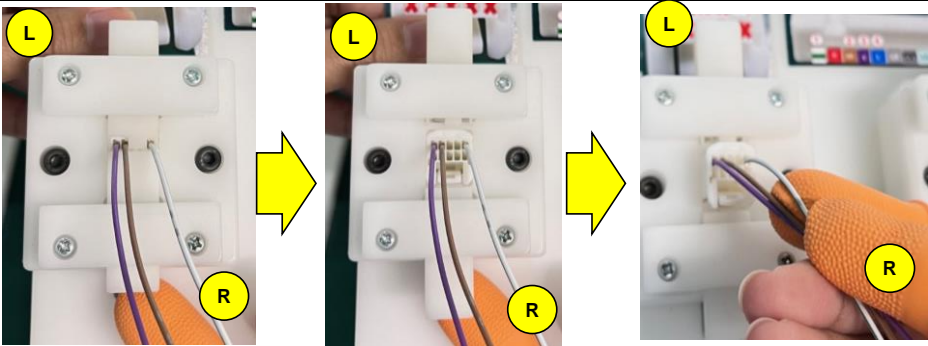
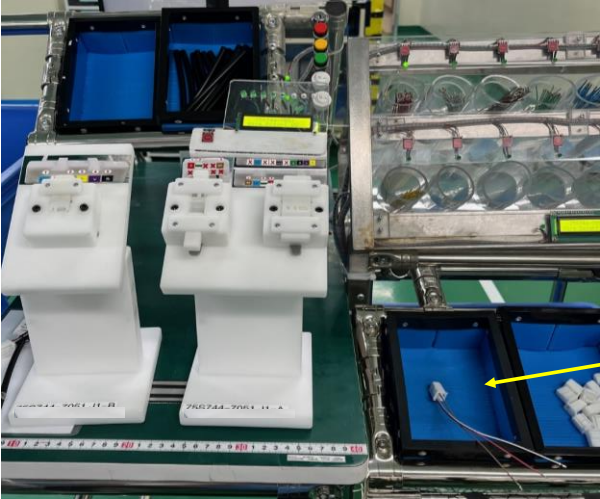
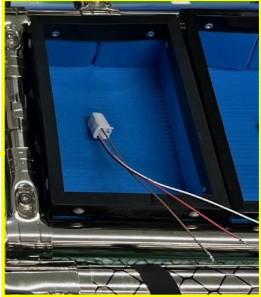


**Document reference/s:**

1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance.
2. Refer to WI-ENG-PDE-044 for Steering Navigation Controller procedure..
3. Refer to GL-PRO-ASY-029 for Pull-Push procedure.

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		<b>WORK INSTRUCTION</b>			Effectivity Date:	<b>March 11, 2025</b>		
		<b>TAPING ASSEMBLY PROCESS</b>			Validity Date:	<b>n/a</b>		
		Model code/Part number:	<b>412D / 75V117-7111</b>	Customer:	<b>TRJ</b>	Car Model:	<b>LEXUS-ES</b>	Document No.: <b>WI-ENG-PDE-1123</b>
		Purpose:	<input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO			Revision No.:	<b>1</b>	Page No.: <b>4 of 18</b>
<b>PARTS:</b>		1. AVSS 0.3 V L=139±2mm; BR L=141±2mm; W/G L=145±2mm			JIG:	1. Insertion jig 2. Steering Navigation		
<b>NO.</b>	<b>PROCESS NAME</b>	<b>1 WORK PROCEDURE/ ILLUSTRATION</b>			<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>		
4	P1  Wire insertion to Connector 4A1230-0000 (W) (Continuation)	<div>  <p>2. Press the Upper and lower button using both hands. Remove the 1st connector with inserted wires using right hand.</p> </div> <div>  <p>3. After removal to insertion jig, put the assy parts to empty box. <b>Note: Follow the illustration.</b></p>  </div>			<div> <b>STEERING NAVIGATION (2 layer)</b>   </div> <div> <b>CONTROLLER</b>   </div>	<p>1. Use provided jig per model          2. No wrong usage of parts          3. One by one insertion          4. No wrong insertion          5. No deformed terminal          6. No stuck of terminal tip</p> <p><b>Important reminders/Note/s:</b></p> <p><b>1. Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.</b>  <b>2. Please hold the wires near terminal during insertion.</b>  <b>3. Automatically dispose and replace the unit if once encountered bend terminal, difficulty of insertion and half-locked connector.</b>  <b>4. Insertion of wires must be from left to right.</b></p> <p><b>Document reference/s:</b></p> <p><b>1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance.</b>  <b>2. Refer to WI-ENG-PDE-044 for Steering Navigation Controller procedure..</b>  <b>3. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</b></p>		

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## WORK INSTRUCTION

Process Name/Title:

## TAPING ASSEMBLY PROCESS

Effectivity Date:

March 11, 2025

Model code/Part number:

412D / 75V117-7111

Customer:

TRJ

Car Model:

LEXUS-ES

Validity Date:

n/a

Purpose:



PROTOTYPE



PRE-LAUNCH



MASSPRO

Revision No.:

1

Page No.:

5 of 18

## PARTS:

1. AVSS 0.3 R L=240±2mm; L L=89±2mm; GR L=228±2mm; GR/B L=224±2mm; LG L=226±2mm; P L=230±2mm; B L=234±2mm; G L=232±2mm

JIG:

1. Insertion jig
2. Steering Navigation

## NO.

## PROCESS NAME

1

## WORK PROCEDURE/ ILLUSTRATION

## TOOLS/PPE

## QUALITY POINTERS

5

P1

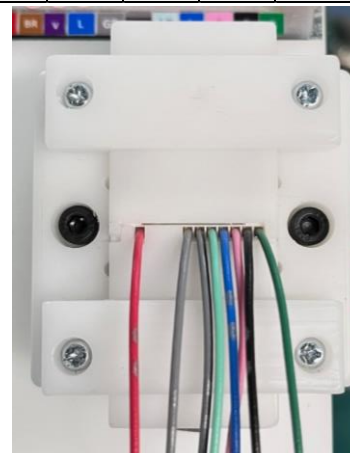
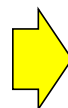
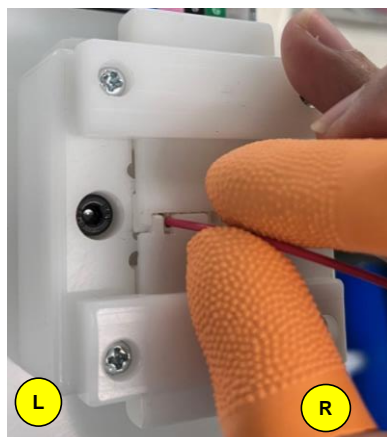
Wire insertion to  
Connector  
PBVP-12V-S (W)

## INSERTION SEQUENCE FROM LEFT TO RIGHT

TERMINAL  
FACING

## WIRE INSERTION ILLUSTRATION

	1				3	4	5	6	7	8	9
X	R	X	X	X	GR	GR/B	LG	L	P	B	G
	240				228	224	226	224	230	234	232



1. Get the **R** wire using right hand then insert to connector. Repeat the process for **GR, GR/B LG, L, P, B and G** wires. Check the wire after insertion.

*Note: Follow the insertion sequence based on the illustration.*

STEERING  
NAVIGATION (2 layer)

## CONTROLLER

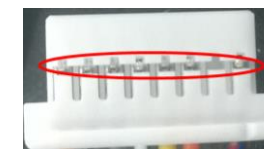


## Important reminders/Note/s:

1. **Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.**
2. **Please hold the wires near terminal during insertion.**
3. **Automatically dispose and replace the unit if once encountered bend terminal, difficulty of insertion and half-locked connector.**
4. **Insertion of wires must be from left to right.**

## Document reference/s:

1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance.
2. Refer to WI-ENG-PDE-044 for Steering Navigation Controller procedure..
3. Refer to GL-PRO-ASY-029 for Pull-Push procedure.
4. Refer to GL-PRO-ASY-025 for Inspection Standard for connector insertion.




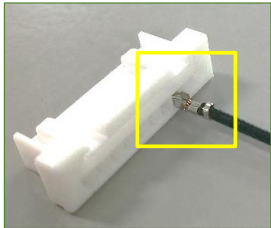
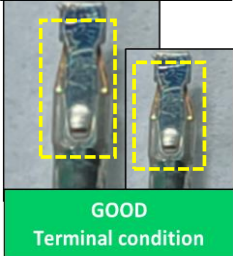
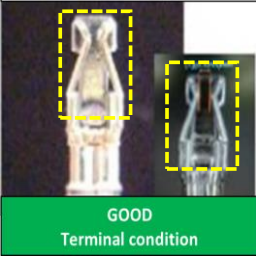

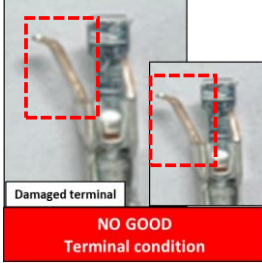

**Terminal tip must be visible**

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	<b>WORK INSTRUCTION</b>				Effectivity Date:	<b>March 11, 2025</b>		
	<b>Process Name/Title: TAPING ASSEMBLY PROCESS</b>				Validity Date:	n/a		
	Model code/Part number: <b>412D / 75V117-7111</b>		Customer: <b>TRJ</b>	Car Model: <b>LEXUS-ES</b>	Document No.:	<b>WI-ENG-PDE-1123</b>		
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO				Revision No.:	1	Page No.:	6 of 18


<b>PARTS:</b>	1. AVSS 0.3 R L=240±2mm; L L=89±2mm; GR L=228±2mm; GR/B L=224±2mm; LG L=226±2mm; P L=230±2mm; B L=234±2mm; G L=232±2mm		JIG:	1. Insertion jig 2. Steering Navigation	
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>	<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>	
5	P1  Wire insertion to Connector PBVP-10V-S (W) (Continuation)	<div><div>Proper alignment of terminal to connector</div><div>BACK VIEW OF TERMINAL</div><div>GOOD Terminal condition</div><div>FRONT OF TERMINAL</div><div>GOOD Terminal condition</div></div> <div><div>Improper alignment of terminal to connector</div><div>BACK VIEW OF TERMINAL</div><div>Damaged terminal NO GOOD Terminal condition</div><div>FRONT VIEW OF TERMINAL</div><div>NO GOOD Terminal condition</div></div> <div>Note: <b>*Make sure the terminal was in proper alignment before insert.</b> <b>*Avoid hitting the terminal into the connector during wire insertion, if encountered abnormality stop the process and call the attention of Immediate superior and Automatically disposed and replace the unit.</b></div>		<div>1. Use provided jig per model 2. No wrong usage of parts 3. One by one insertion 4. No wrong insertion 5. No deformed terminal 6. No stuck of terminal tip</div> <div>Important reminders/Note/s:</div> <div><b>1. Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.</b> <b>2. Please hold the wires near terminal during insertion.</b> <b>3. Automatically dispose and replace the unit if once encountered bend terminal, difficulty of insertion and half-locked connector.</b> <b>4. Insertion of wires must be from left to right.</b></div> <div>Document reference/s:</div> <div><b>1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance.</b> <b>2. Refer to WI-ENG-PDE-044 for Steering Navigation Controller procedure..</b> <b>3. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</b> <b>4. Refer to GL-PRO-ASY-025 for Inspection Standard for connector insertion.</b></div>	


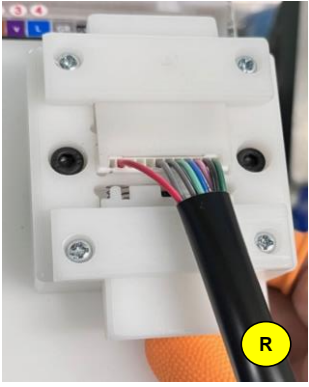
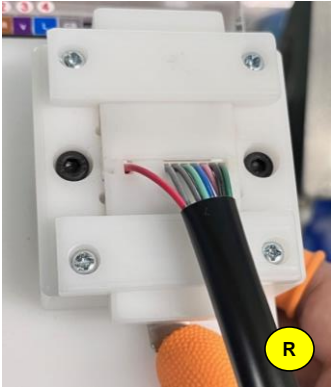
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	Model code/Part number: <b>412D / 75V117-7111</b>		Customer: <b>TRJ</b>	Car Model: <b>LEXUS-ES</b>	Document No.:	<b>WI-ENG-PDE-1123</b>		
	Purpose: <input type="checkbox"/> PROTOTYPE		<input type="checkbox"/> PRE-LAUNCH	<input checked="" type="checkbox"/> MASSPRO	Revision No.:	1	Page No.:	7 of 18

<b>PARTS:</b>		1. Black SV tube (Vinyl) Ø8.5 L=102±3mm		JIG:	1. Insertion jig
<b>NO.</b>	<b>PROCESS NAME</b>	<div>1</div> <b>WORK PROCEDURE/ ILLUSTRATION</b>	<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>	
6	P1  Wire insertion to Black SV tube (Vinyl) Ø8.5 L=102±3mm	<div><p>1. Get the <b>Black SV tube (Vinyl) Ø8.5 L=102±3mm</b> using right hand. Hold the wire using left hand then insert the wires.</p><p>2. Press the lower guide using right hand. Holes that need to be inserted are only open.</p></div>	n/a	1. No wrong usage of parts 2. No deformed terminal 3. No tangled wires	

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

Effectivity Date:

**March 11, 2025**

Process Name/Title:

Model code/Part number:

**412D / 75V117-7111**

Customer:

**TRJ**

Car Model:

**LEXUS-ES**

Validity Date:

**n/a**

Document No.:

**WI-ENG-PDE-1123**

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

**1**

Page No.:

**8 of 18****PARTS:**

1. Assy parts

JIG:

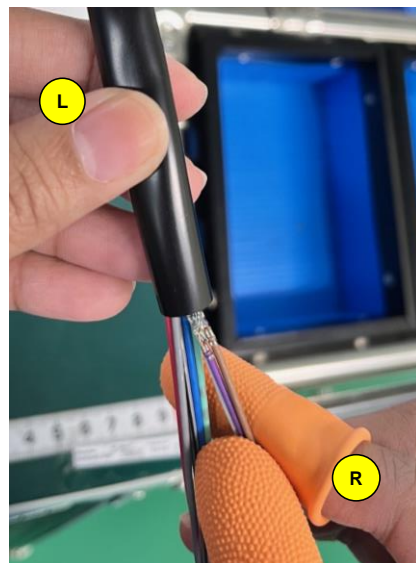
1. Insertion jig

**NO.****PROCESS NAME****1****WORK PROCEDURE/ILLUSTRATION****TOOLS/PPE****QUALITY POINTERS**

7

P1

Wire insertion to assy parts



1. Hold the **Black VM tube (Sunprene)** using left hand and insert the wires of assy parts (Connector with wire) using right hand.



n/a

1. No wrong usage of parts
2. No deformed terminal
3. No tangled wires

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## WORK INSTRUCTION

Process Name/Title:

## TAPING ASSEMBLY PROCESS

Effectivity Date:

March 11, 2025

Model code/Part number:

412D / 75V117-7111

Customer:

TRJ

Car Model:

LEXUS-ES

Document No.:

WI-ENG-PDE-1123

Purpose:



PROTOTYPE



PRE-LAUNCH



MASSPRO

Revision No.:

1

Page No.:

9 of 18

## PARTS:

1. Assy parts

JIG:

1. Insertion jig
2. Steering Navigation

## NO.

## PROCESS NAME



## WORK PROCEDURE/ ILLUSTRATION

## TOOLS/PPE

## QUALITY POINTERS

8

P1

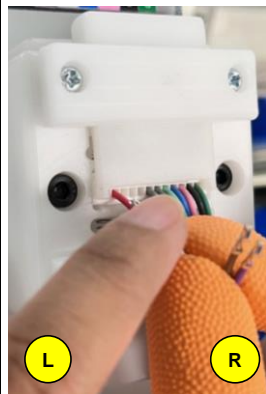
Wire insertion to  
Connector  
PBVP-10V-S (W)

## INSERTION SEQUENCE FROM LEFT TO RIGHT

TERMINAL  
FACING

## WIRE INSERTION ILLUSTRATION

1	2	3	4								
W/G	R	BR	V	L	GR	GR/B	LG	L	P	B	G
145	240	141	139	89	228	224	226	224	230	234	232



1. Hold the **W/G** wire using right hand and support the wire by left index finger then insert to connector slot 1 using right hand. Repeat the process on **W/G** and **R** wires.  
*Note: Follow the insertion sequence based on the above illustration.*

2. Get the assy part (L wire with Black tube taping) using right hand.  
*Note: L wire with Black tube taping must be on top while insertion.*

STEERING  
NAVIGATION (2 layer)

## CONTROLLER



1. Use provided jig per model
2. No wrong usage of parts
3. One by one insertion
4. No wrong insertion
5. No deformed terminal
6. No stuck of terminal tip

**Important reminders/Note/s:**

1. **Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.**
2. **Please hold the wires near terminal during insertion.**
3. **Automatically dispose and replace the unit if once encountered bend terminal, difficulty of insertion and half-locked connector.**
4. **Insertion of wires must be from left to right.**

**Document reference/s:**

1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance.
2. Refer to WI-ENG-PDE-044 for Steering Navigation Controller procedure..
3. Refer to GL-PRO-ASY-029 for Pull-Push procedure.
4. Refer to GL-PRO-ASY-025 for Inspection Standard for connector insertion.

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# WORK INSTRUCTION

Process Name/Title:

## TAPING ASSEMBLY PROCESS

Effectivity Date:

March 11, 2025

Model code/Part number:

412D / 75V117-7111

Customer:

TRJ

Car Model:

LEXUS-ES

Document No.:

WI-ENG-PDE-1123

Purpose:



PROTOTYPE



PRE-LAUNCH



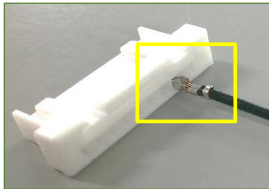



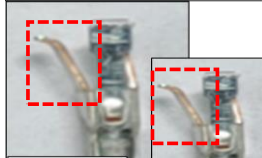
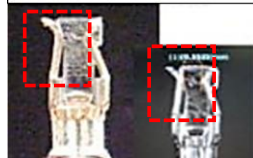
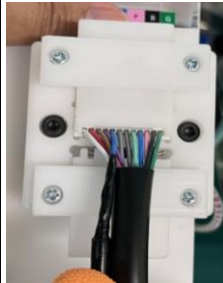
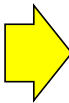



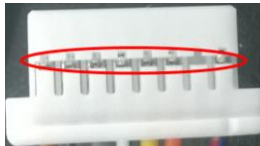
MASSPRO

Revision No.:

1

Page No.:


10 of 18



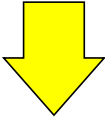
PARTS:		1. Assy parts		JIG:	1. Insertion jig 2. Steering Navigation	
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS	
8	P1	<div>Proper alignment of terminal to connector</div> <div></div> <div><div>BACK VIEW OF TERMINAL</div><div></div><div>GOOD Terminal condition</div></div> <div><div>FRONT OF TERMINAL</div><div></div><div>GOOD Terminal condition</div></div>		<div>Improper alignment of terminal to connector</div> <div></div> <div><div>BACK VIEW OF TERMINAL</div><div><div>Damaged terminal</div></div><div>NO GOOD Terminal condition</div></div> <div><div>FRONT VIEW OF TERMINAL</div><div></div><div>NO GOOD Terminal condition</div></div>		1. Use provided jig per model 2. No wrong usage of parts 3. One by one insertion 4. No wrong insertion 5. No deformed terminal 6. No stuck of terminal tip  <b>Important reminders/Note/s:</b> <b>1. Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.</b> <b>2. Please hold the wires near terminal during insertion.</b> <b>3. Automatically dispose and replace the unit if once encountered bend terminal, difficulty of insertion and half-locked connector.</b> <b>4. Insertion of wires must be from left to right.</b>  <b>Document reference/s:</b> <b>1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance.</b> <b>2. Refer to WI-ENG-PDE-044 for Steering Navigation Controller procedure..</b> <b>3. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</b> <b>4. Refer to GL-PRO-ASY-025 for Inspection Standard for connector insertion.</b>
		Wire insertion to Connector PBVP-10V-S (W) (Continuation)	<div>Note: <b>*Make sure the terminal was in proper alignment before insert.</b> <b>*Avoid hitting the terminal into the connector during wire insertion, if encountered abnormality stop the process and call the attention of Immediate superior and Automatically disposed and replace the unit.</b></div> <div><div></div><div></div><div></div><div></div><div></div><div><div>3. Press the upper lock by left hand and hold the assy part by right hand. Check the wire after insertion</div></div></div> <div><div></div><div>Terminal tip must be visible</div></div>			

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	<b>WORK INSTRUCTION</b>				Effectivity Date:	<b>March 11, 2025</b>		
	<b>Process Name/Title: TAPING ASSEMBLY PROCESS</b>				Validity Date:	n/a		
	Model code/Part number: <b>412D / 75V117-7111</b>		Customer: <b>TRJ</b>	Car Model: <b>LEXUS-ES</b>	Document No.:	<b>WI-ENG-PDE-1123</b>		
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO				Revision No.:	1	Page No.:	11 of 18

<b>PARTS:</b>		1. Black SV tube (Vinyl) Ø7 L=87±3mm 2. Assy parts		JIG:	n/a
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>		<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>
9	P1  Wire insertion to Black SV tube (Vinyl) Ø7 L=87±3mm	<div><div>1. Get the <b>Black SV tube (Vinyl) Ø7 L=87±3mm</b> using right hand. Hold the wire of assy parts using left hand then insert the wires.</div></div>		n/a	1. No wrong usage of parts 2. No deformed terminal 3. No tangled wires

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Model code/Part number:

**412D / 75V117-7111**Customer: **TRJ**

Car Model:

**LEXUS-ES**

Document No.:

**WI-ENG-PDE-1123**

Purpose:



PROTOTYPE



PRE-LAUNCH




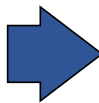

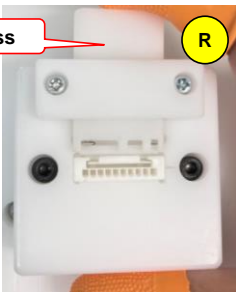
MASSPRO

Revision No.:

**1**

Page No.:

**12 of 18**

PARTS:		1. Connector PBVP-10V-S (W)		JIG:	1. Insertion jig
NO.	PROCESS NAME	1 WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
10	P1  Connector setting to insertion jig PBVP-10V-S (W)	<div><div><div>Insertion Jig</div><div><div>Visual reference</div><div>Upper guide</div></div><div></div><div><div>Connector orientation</div><div><div>1. Get the 1 pc of <b>PBVP-10V-S</b> connector using right hand then insert to insertion jig. <i>Note: Follow the connector orientation.</i></div></div><div><div>Press</div><div><div>2. Press the upper guide using right hand in same timing. Holes that need to be insert are only open.</div></div></div></div></div></div>		n/a	1. Use the provided jig per model 2. No wrong usage of parts 3. No wrong orientation of connector 4. No damaged connector

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**WORK INSTRUCTION**

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**TAPING ASSEMBLY PROCESS**

Effectivity Date:

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**412D / 75V117-7111**

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**WI-ENG-PDE-1123**

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

13 of 18

**PARTS:**

1. Assy parts

JIG:

1. Insertion jig

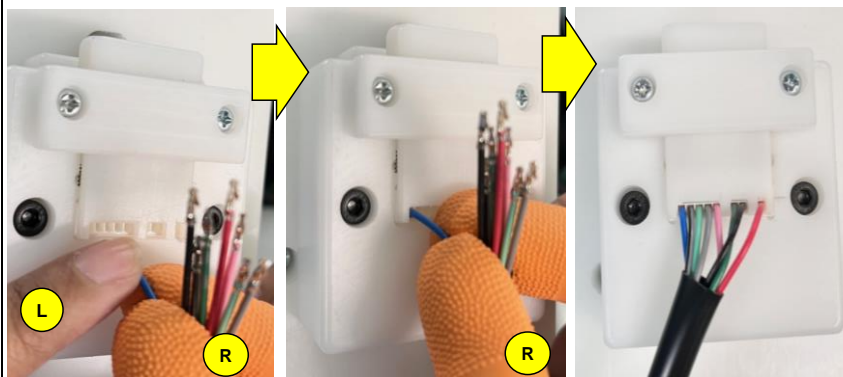
**NO.****PROCESS NAME****1****WORK PROCEDURE/ ILLUSTRATION****TOOLS/PPE****QUALITY POINTERS**

11

P1

Wire insertion to Connector  
PBVP-10V-S (W)**INSERTION SEQUENCE FROM LEFT TO RIGHT****TERMINAL  
FACING****WIRE INSERTION ILLUSTRATION**

1	2	3	4	5		6	7		8
L	GR/B	LG	GR	P	X	G	B	X	R
224	224	226	228	230	X	232	234	X	240



1. Hold the **L wire** using right hand and support the wire by left index finger then insert to connector slot 1 using right hand. Repeat the process on **GR/B, LG, GR, P, G, B and R wires**.

*Note: Follow the insertion sequence based on the above illustration.*

n/a

1. Use provided jig per model
2. No wrong usage of parts
3. One by one insertion
4. No wrong insertion
5. No deformed terminal
6. No stuck of terminal tip

**Important reminders/Note/s:**

1. **Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.**
2. **Please hold the wires near terminal during insertion.**
3. **Automatically dispose and replace the unit if once encountered bend terminal, difficulty of insertion and half-locked connector.**
4. **Insertion of wires must be from left to right.**

**Document reference/s:**

1. Refer to **WI-PRO-CNC-017** for **Wire and Strip Length Tolerance**.
2. Refer to **GL-PRO-ASY-029** for **Pull-Push procedure**.
3. Refer to **GL-PRO-ASY-025** for **Inspection Standard for connector insertion**.

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Document No.:

WI-ENG-PDE-1123

Purpose:



PROTOTYPE



PRE-LAUNCH



MASSPRO

Revision No.:

1

Page No.:

14 of 18

### PARTS:

1. Assy parts

JIG:

1. Insertion jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

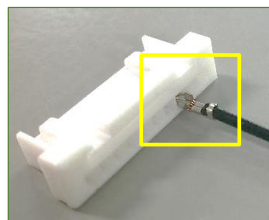
QUALITY POINTERS

11

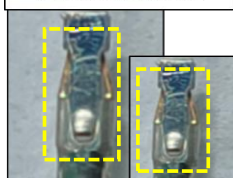
P1

Wire insertion to  
Connector  
PBVP-10V-S (W)  
(Continuation)

Proper alignment of terminal to connector

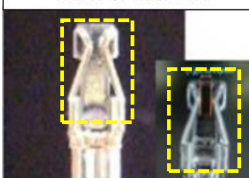


BACK VIEW OF TERMINAL



GOOD  
Terminal condition

FRONT OF TERMINAL



GOOD  
Terminal condition

Note:

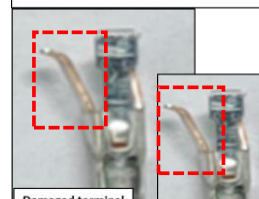
**\*Make sure the terminal was in proper alignment before insert.**  
**\*Avoid hitting the terminal into the connector during wire insertion, if encountered abnormality stop the process and call the attention of Immediate superior and Automatically disposed and replace the unit.**



Improper alignment of terminal to connector



BACK VIEW OF TERMINAL



Damaged terminal  
NO GOOD  
Terminal condition

FRONT VIEW OF TERMINAL



NO GOOD  
Terminal condition

2. Press the upper lock by left hand and hold the assy part by right hand. Check the wire after insertion

1. Use provided jig per model

2. No wrong usage of parts

3. One by one insertion

4. No wrong insertion

5. No deformed terminal

6. No stuck of terminal tip

**Important reminders/Note/s:**

**1. Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.**

**2. Please hold the wires near terminal during insertion.**

**3. Automatically dispose and replace the unit if once encountered bend terminal, difficulty of insertion and half-locked connector.**

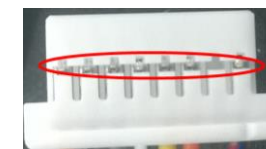
**4. Insertion of wires must be from left to right.**

**Document reference/s:**

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

**2. Refer to GL-PRO-ASY-029 for Pull-Push procedure.**

**3. Refer to GL-PRO-ASY-025 for Inspection Standard for connector insertion.**



Terminal tip must be visible

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WI-ENG-PDE-1123

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Revision No.:

1

Page No.:

15 of 18

PARTS:

1. Assy parts

JIG:

n/a

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

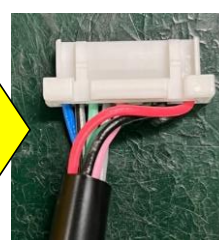
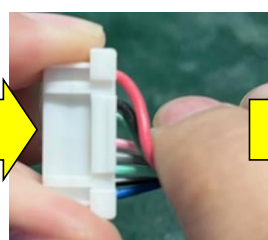
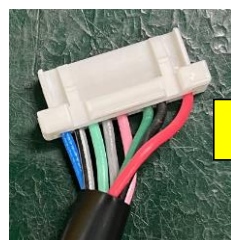
TOOLS/PPE

QUALITY POINTERS

12

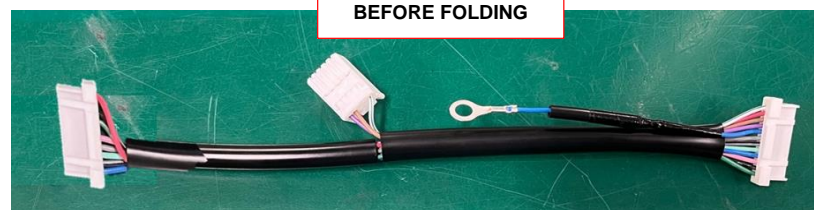
P1

Wire folding/  
Wire arrangement

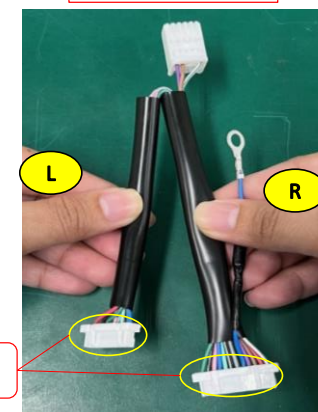


1. Hold the assy parts using both hands.  
Conduct bending and folding to wire with  
connector (PBVP-10V-S) using both hands.  
*Note: Follow the illustration*

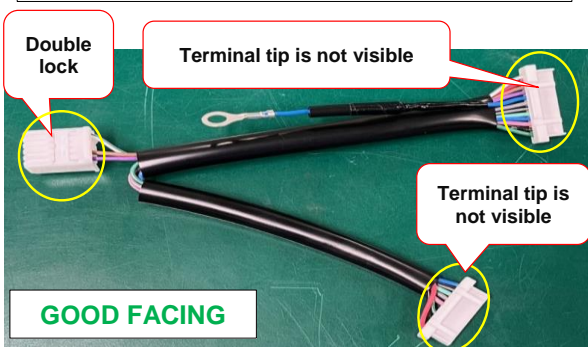
AFTER FOLDING



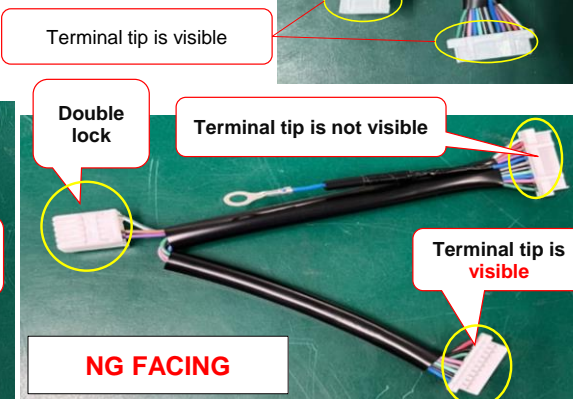
BEFORE FOLDING



2. Hold the assy parts using both hands then conduct folding  
and wire arrangement.  
*Note: Follow the illustration.*



GOOD FACING



NG FACING


1. No wrong orientation of connector
2. No wrong use of connector
3. No wrong terminal facing

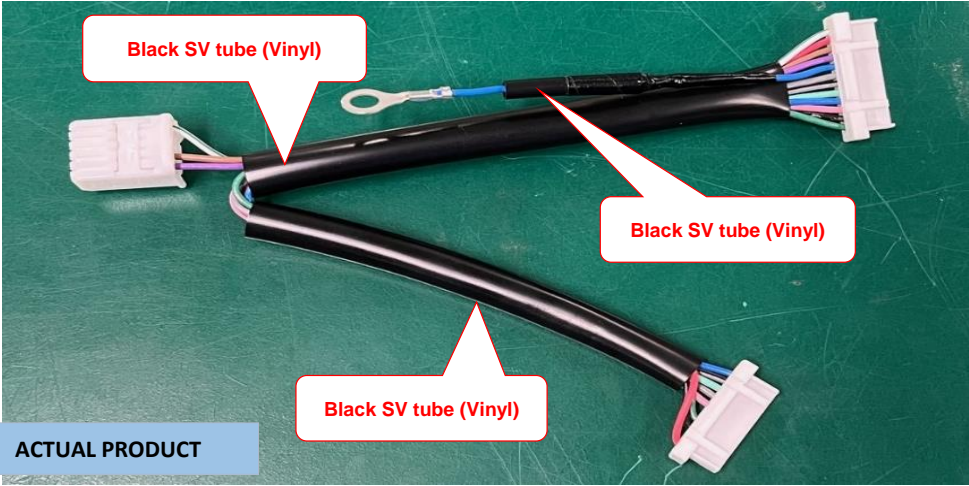
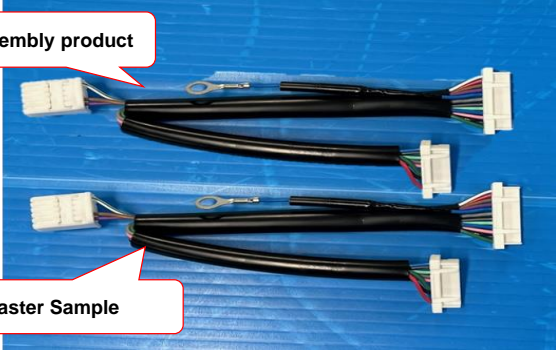


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	Model code/Part number: <b>412D / 75V117-7111</b>		Customer: <b>TRJ</b>	Car Model: <b>LEXUS-ES</b>	Document No.:	<b>WI-ENG-PDE-1123</b>		
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO				Revision No.:	1	Page No.:	16 of 18


<b>PARTS:</b>		1. Assy parts 2. Master sample		JIG:	n/a	
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>			<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>
13	P1  Visual/By Two's Inspection	<div>1. Check the connector lock. Locking of connector is included to Steering electrical test.</div> <div>2. Check the wire alignment. Make sure no tangled wires</div> <div>3. Check the terminal if with backing out (not fully inserted) or no deformed terminal.</div> <div><p><b>ACTUAL PRODUCT</b></p></div> <div><div>4. Check the orientation of harness.</div><div>5. Compare to <b>Engineering sample</b> by tapping.</div><div><p><b>Assembly product</b> <b>Master Sample</b></p></div></div> <td></td> <td><p><b>Document reference/s:</b></p><p>1. Refer to <b>WI-QAD-QAC-252</b> Steering Electrical Test</p><p><b>MASTER SAMPLE</b></p></td>				<p><b>Document reference/s:</b></p> <p>1. Refer to <b>WI-QAD-QAC-252</b> Steering Electrical Test</p> <p><b>MASTER SAMPLE</b></p> 

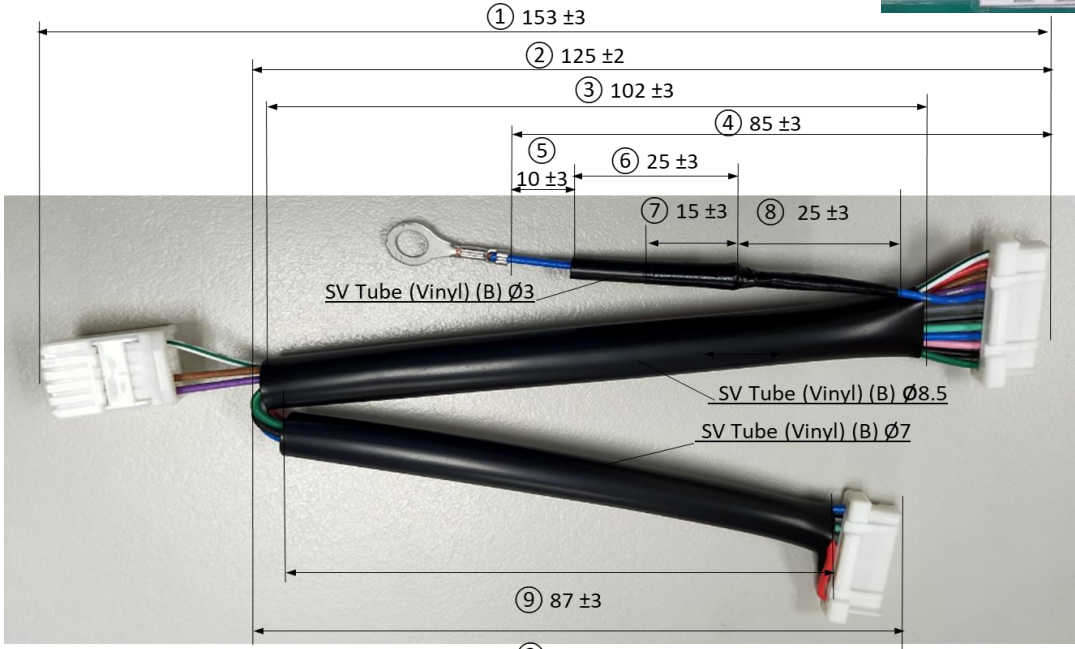
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	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO				Revision No.:	1	Page No.:	17 of 18

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

**NOTE:**  
② + ② = 230  
  
\* Unit of measurement is in millimeter

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PROTOTYPE



PRE-LAUNCH



MASSPRO

Revision No.:

1

Page No.:

18 of 18

### PARTS:

1. Assy parts

JIG:

n/a

### VISUAL INSPECTION/ QUALITY CHECKPOINTS

## STEERING

## 75V117-7111

1. Check the Connector lock, should be unlock.

Black SV tube (Vinyl)

Black SV tube (Vinyl)

Black SV tube (Vinyl)

2. Make sure horn terminal is located on the "Connector lock" side

3. Check the orientation of harness.

4. Check if no missing parts.

5. Check the terminal if with backing out (not fully inserted) or deformed terminal.

6. Check the wire alignment. Make sure no tangled wires.

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