

	WORK INSTRUCTION						Effectivity Date:		August 28, 2024		
	Process Name/Title: CLAMP ASSEMBLY PROCESS						Validity Date:		n/a		
	Model code/Part number: 311D / 7L0153-7023			Customer: TRQSS		Car Model: TOYOTA-RAV4		Document No.:		WI-ENG-PDE-1019	
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO						Revision No.:		0		Page No.: 1 of 6

PARTS:	1. Assy parts; Clamp 82711-52090 (W); Clamp 82711-48210 (B); Clamp 82711-34490 (B); Clamp 82711-3A540 (W); Clamp 82711-33650 (B); Black tape [5 pcs.]						JIG:		1. Clamp Assembly Jig	
---------------	---	--	--	--	--	--	------	--	-----------------------	--

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
1	Clamp Assy Table Lay-out	<div style="border: 1px solid red; padding: 5px; display: inline-block; margin-bottom: 10px;">TABLE LAY-OUT</div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid red; padding: 5px; text-align: center;">Clamp 82711-52090 (W) /Clamp tray</div> <div style="border: 1px solid red; padding: 5px; text-align: center;">Clamp 82711-3A540 (W) /Clamp tray</div> <div style="border: 1px solid red; padding: 5px; text-align: center;">Clamp 82711-48210 (B) /Clamp tray</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid red; padding: 5px; text-align: center;">Clamp 82711-34490 (B) /Clamp box</div> <div style="border: 1px solid red; padding: 5px; text-align: center;">Clamp 82711-33650 (B) /Clamp tray</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid red; padding: 5px; text-align: center;">Clamp assembly jig</div> <div style="border: 1px solid red; padding: 5px; text-align: center;">Tape holder & Black tape</div> <div style="border: 1px solid red; padding: 5px; text-align: center;">Bando Gun</div> </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>	<div style="margin-bottom: 10px;"> Document references: 1. Refer to WI-ENG-PDE-791A-B for Taping assembly process. </div> <div> 1. No missing parts/tools. 2. No missing parts/tools </div> <div style="text-align: center; margin-top: 10px;"> CLAMP ILLUSTRATION </div> <div style="text-align: center;"> BAND CLAMP ILLUSTRATION </div>

Revision History						Prepared by		Reviewed by		Approved by		Noted by		
08/28/24	0	Initial issue. Separate Clamp assembly process from Taping assembly process.	D.Castillo	C. Villanueva	A. Arañes	n/a	 D. Castillo		 C. Villanueva		 A. Arañes		n/a	
Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted	Est. Date:		August 28, 2024					

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

**WORK INSTRUCTION**

Process Name/Title:

CLAMP ASSEMBLY PROCESS

Effectivity Date:

August 28, 2024

Model code/Part number:

311D / 7L0153-7023

Customer:

TRQSS

Car Model:

TOYOTA-RAV4

Document No.:

WI-ENG-PDE-1019

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

0

Page No.:

2 of 6

PARTS:		1. Clamp 82711-52090 (W) 2. Clamp 82711-48210 (B) 3. Clamp 82711-34490 (B) 4. Clamp 82711-3A540 (W) 5. Clamp 82711-33650 (B) 6. Black tape [4 pcs.]					JIG:	1. Clamp Assembly Jig	
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION					TOOLS/PPE	QUALITY POINTERS
2	Clamp Assy	Clamp setting	<div><div> 82711-34490 (B)</div><div> 82711-52090 (W)</div><div> 82711-3A540 (W)</div><div> 82711-48210 (B)</div><div> 82711-33650 (B)</div></div> <div></div> <div><div><div>1. Get 1pc. of clamp 82711-34490 (B) using right hand and set to clamp location 1 using both hands.</div><div>2. Get 1pc. of clamp 82711-52090 (W) using right hand and set to clamp location 2 using both hands.</div><div>3. Get 1pc. of clamp 82711-3A540 (W) using right hand and set to clamp location 3 using both hands.</div></div><div><div>4. Get 1pc. of clamp 82711-48210 (B) using right hand and set to clamp location 4 and 5 using both hands.</div><div>5. Get 1pc. of clamp 82711-33650 (B) using right hand and set to clamp location 6 using both hands.</div><div>6. Initially attach Black tape to clamp location 2, 3, 4, 5 and 6 using both hands.</div></div></div>						<div>1. No wrong use of tape 2. No wrong clamp position 3. No damaged clamp 4. No missing clamp</div> <div>Important reminders/Note/s: 1. Please check the Clamp first before start of assembly to avoid wrong use of clamp.</div> <div><div>STANDARD TAPING FOR CLAMP</div><div>One wind for under tape</div><div></div><div><div>CLAMP ILLUSTRATION</div><div><div>GOOD 82711-52090 (W)</div><div>NG 82711-12A80 (W)</div></div><div><div>BAND CLAMP ILLUSTRATION</div><div><div>GOOD 82711-34490 (B)</div><div>NG 82711-16830 (B)</div></div></div></div></div>

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY



WORK INSTRUCTION

Process Name/Title:

CLAMP ASSEMBLY PROCESS

Effectivity Date:

August 28, 2024

Model code/Part number:

311D / 7L0153-7023

Customer:

TRQSS

Car Model:

TOYOTA-RAV4

Validity Date:

n/a

Purpose:



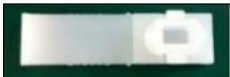


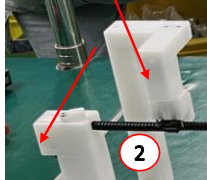


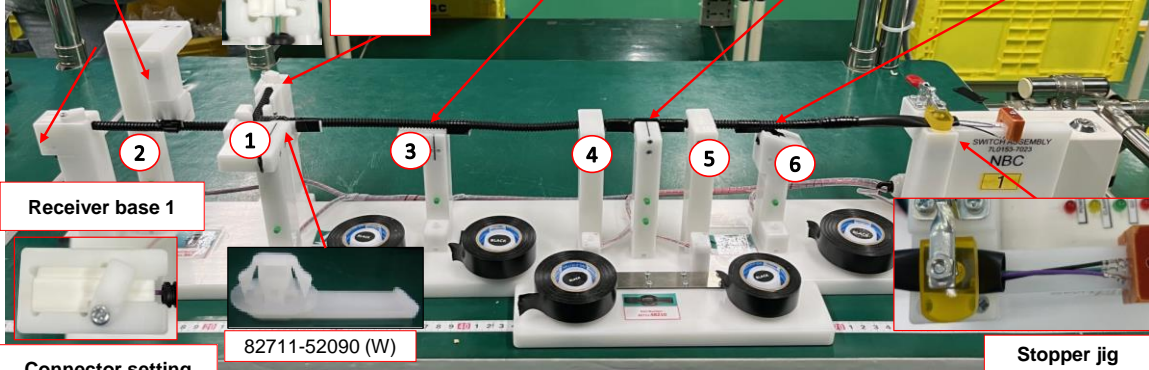



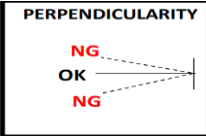

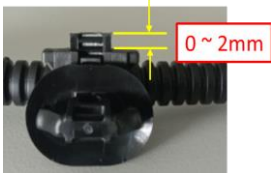
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

0

Page No.:

3 of 6

PARTS:		1. Clamp 82711-52090 (W) 2. Clamp 82711-48210 (B) 3. Clamp 82711-34490 (B)	4. Clamp 82711-3A540 (W) 5. Clamp 82711-33650 (B) 6. Black tape [4 pcs.]	7. Pink tape 8. Assy part	JIG:	1. Clamp Assembly Jig
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	Clamp Assy	Clamp Assembly	<div><div> 82711-34490 (B)</div><div> Receiver base 2</div><div> 82711-3A540 (W)</div><div> 82711-48210 (B)</div><div> 82711-33650 (B)</div><div> Receiver base 1</div><div> 82711-52090 (W)</div><div> Connector setting</div><div></div><div> Stopper jig</div></div>			<div>1. No wrong use of tape 2. No wrong clamp position 3. No damaged clamp 4. No missing clamp</div> <div>Important reminders/Note/s: 1. <i>Must be no gap between terminal and stopper jig.</i> 2. <i>Make 2-3 windings for clamp taping</i> 3. <i>Using steel rule, check if the band cut measurement is within the required dimension and should not exceed the allowable range (0~2mm).</i> 4. <i>Setting of band clamp cutter depends on the size of the COT/SV tube (Vinyl) ø5- 1~2, ø7- 3~4</i></div>
			<div><div>1. Put the assy into jig. <i>(See above picture for the correct setting).</i> First, set the connector 6098-3802 (W) to Receiver base 1. Second, set the connector 6098-3810 (W) to Receiver base 2. Continue the the setting of harness and B-G-V wires together within stopper then press by toggle clamp.</div><div>2. Check if all LED light for Power On and Clamp On was ON. If encountered abnormality, STOP and immediately CALL the attention of the leader. WAIT for further instruction then continue the process.</div></div> <div><div>3. On clamp location 1, hold the tape then make 3 windings of tape then cut the tape using both hands. Press the SW button after taping. Continue the process if the sequence light on location 2 was ON.</div><div>4. Initially tighten the band clamp on location 1 using both hands. Get the bando gun using right hand then cut the band clamp using both hands. Continue the process if the sequence light on location 3 was ON.</div></div> <div><div><div>PROPER CUTTING POSITION OF BANDO GUN</div><div> GOOD</div></div><div><div>IMPROPER CUTTING POSITION OF BANDO GUN</div><div> NG</div></div></div> <div><div>BANDO GUN ALIGNMENT</div><div><div>PERPENDICULARITY</div><div></div><div> Fixed setting of band clamp cutter: 1~ 2</div></div></div> <div><div> 0 ~ 2mm</div><div><div>BANDO GUN ILLUSTRATION</div><div><div>GOOD</div><div>NG</div></div><div><div>FLAT NOSEPIECE</div><div>EXTENDED NOSEPIECE</div></div></div></div>			

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp



WORK INSTRUCTION

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

August 28, 2024

Model code/Part number:

311D / 7L0153-7023

Customer:

TRQSS

Car Model:

TOYOTA-RAV4

Validity Date:

n/a

Purpose:






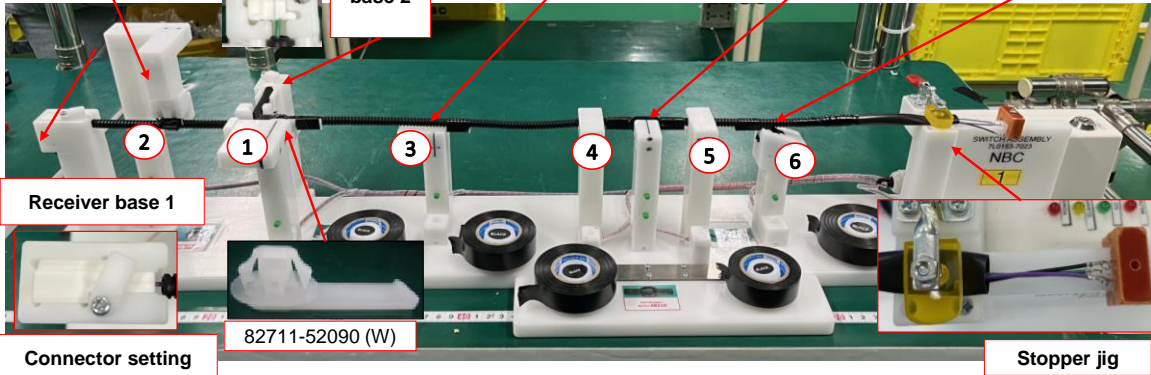


☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

0

Page No.:

4 of 6

PARTS:		1. Assy parts		JIG:	1. Clamp assembly jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	Clamp Assy	Clamp assembly (Continuation)		<div><div><div></div><div></div><div></div><div></div><div></div></div><div></div><div><div>Connector setting</div><div>Receiver base 2</div><div>82711-34490 (B)</div><div>82711-3A540 (W)</div><div>82711-48210 (B)</div><div>82711-33650 (B)</div><div>Receiver base 1</div><div>82711-52090 (W)</div><div>Connector setting</div><div>Stopper jig</div></div></div> <div><div><div>5. On clamp location 3, hold the tape then make 3 windings of tape then cut the tape using both hands. Press the SW button after taping. Continue the process if the sequence light on location 4 was ON.</div><div>6. On clamp location 4, hold the tape then make 3 windings of tape then cut the tape using both hands. Press the SW button after taping. Continue the process if the sequence light on location 5 was ON.</div></div><div><div>7. On clamp location 5, hold the tape then make 3 windings of tape then cut the tape using both hands. Press the SW button after taping. Continue the process if the sequence light on location 6 was ON.</div><div>8. On clamp location 6, hold the tape then make 3 windings of tape then cut the tape using both hands. Press the SW button after taping. GO sound will be heard.</div></div><div><div>9. After taping, CONDUCT POINT CHECKING. Remove harness from jig, Start from Toggle clamp up to Connector receiver base 1 and 2.</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 tight/loose clamp attachment</div></div> <div><div>Important reminders/Note/s:</div><div><div>1. Must be no gap between terminal and stopper jig.</div><div>2. Make 2-3 windings for clamp taping</div></div><div><div>CLAMP ILLUSTRATION</div><div><div><div>GOOD</div><div></div><div>82711-52090 (W)</div></div><div><div>NG</div><div></div><div>82711-12A80 (W)</div></div></div></div></div>	

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp

**WORK INSTRUCTION**

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

August 28, 2024

Model code/Part number:

311D / 7L0153-7023

Customer:

TRQSS

Car Model:

TOYOTA-RAV4

Document No.:

WI-ENG-PDE-1019

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

0

Page No.:

5 of 6

PARTS:	1. Assy parts		JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
4	Clamp Assy Measurement	<div><div>Measuring tape</div></div> <p>NOTE: (A) - Taping (B) (B) - Clamp (B) (C) - Clamp (W) (S) - Dimension overlapped Sunprene and COT</p> <div></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>

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp

**WORK INSTRUCTION**

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

August 28, 2024

Model code/Part number:

311D / 7L0153-7023

Customer:

TRQSS

Car Model:

TOYOTA-RAV4

Document No.:

WI-ENG-PDE-1019

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

0

Page No.:

6 of 6

PARTS:

1. Assy parts

JIG:

n/a

VISUAL INSPECTION/ QUALITY CHECKPOINTS**CLAMP ASSY****7L0153-7023****① No Wrong Facing of Clamp****② ③ No Missing Tape (Black Tape)**

CONFIDENTIAL: Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)
MASTER COPY

DCC Stamp