



WORK INSTRUCTION

Process Name/Title:

CLAMP ASSEMBLY PROCESS

Model code/Part number:

380D / 7L0140-7020B

Customer:

TRQSS

Car Model:

TOYOTA-CAMRY

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Effectivity Date:

October 15, 2024

Validity Date:

n/a

Document No.:

WI-ENG-PDE-1095

Revision No.:

1

Page No.:

1 of 7

PARTS:

1. Assy parts; Label 7V8110-0020; Clamp 82711-52090 (W); Clamp 82711-16820 (BR); Black tape [2pcs]

JIG:

1. Clamp Assembly jig
2. Label dispenser

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

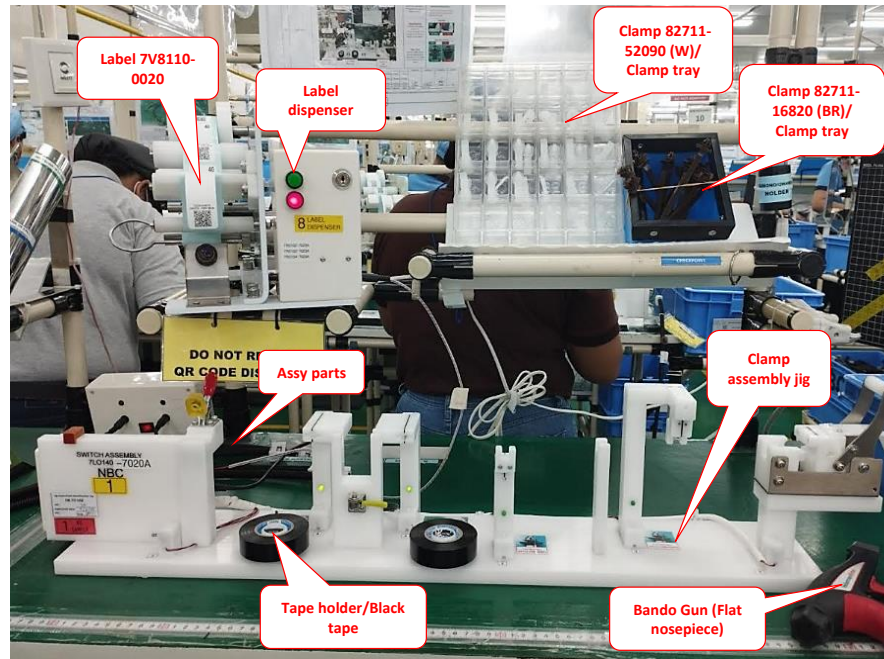
TOOLS/PPE

QUALITY POINTERS

1

Clamp
Assy

Table Lay-out

**Safety Instruction**

Be sure to wear required 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.

1. No wrong use of parts
2. No deformed terminal

Document reference/s:

1. Please refer to WI-PRO-CNC-017 for Wire and Strip length tolerance.
2. Please refer to WI-ENG-PDE- 669 for Offline Assembly Process

Revision History

Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted	Prepared by	Reviewed by	Approved by	Noted by
10/15/24	1	Change from Pre-launch to Masspro.	A. Hernandez	C. Villanueva	A. Arañes	n/a	A. Hernandez	C. Villanueva	A. Arañes	n/a
10/14/24	0	Initial Issue.	A. Hernandez	C. Villanueva	A. Arañes	n/a				

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☐ PRE-LAUNCH

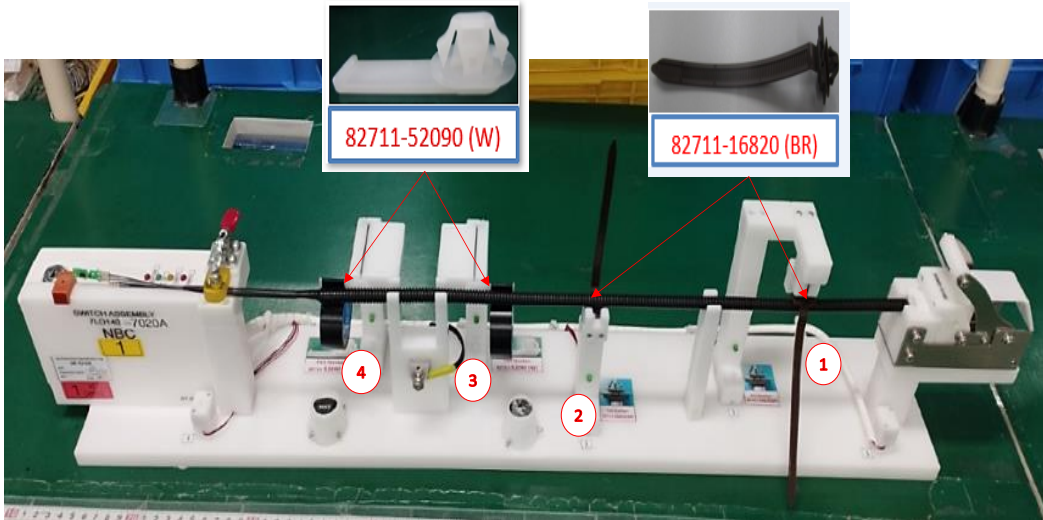





☒ MASSPRO

Revision No.:

1

Page No.:

2 of 7

PARTS:		1.Clamp 82711-16820 (BR) 2. Clamp 82711-52090 (W) 3.Black Tape		JIG:	1.Clamp Assembly Jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	Clamp Assy Clamp setting	<div></div> <div>1. Get 2pcs. of clamp 82711-52090 (W) using right hand and set to clamp location 4 and 3 using both hands.</div> <div>2. Get 2pcs. of clamp 82711-16820 (BR) using right hand and set to clamp location 2 and 1 using both hands.</div> <div>3. Initially attach the black tape to Location 4 and 3.</div>			<div>1. No wrong use of clamp 2. No damaged clamp 2. No wrong use of tape</div> <div><div>STANDARD TAPING FOR CLAMP</div><div>One side tape under clamp</div></div> <div>Important reminders/Note/s:</div> <div>1. Please check the clamp and band clamp before start of assembly to avoid wrong use of clamp.</div> <div><div>CLAMP ILLUSTRATION</div><div><div>GOOD</div><div>82711-52090 (W)</div></div><div><div>NG</div><div>82711-12A80 (W)</div></div></div> <div><div>BAND CLAMP ILLUSTRATION</div><div><div>GOOD</div><div>82711-16820 (BR)</div></div><div><div>NG</div><div>82711-26380 (BR)</div></div></div>

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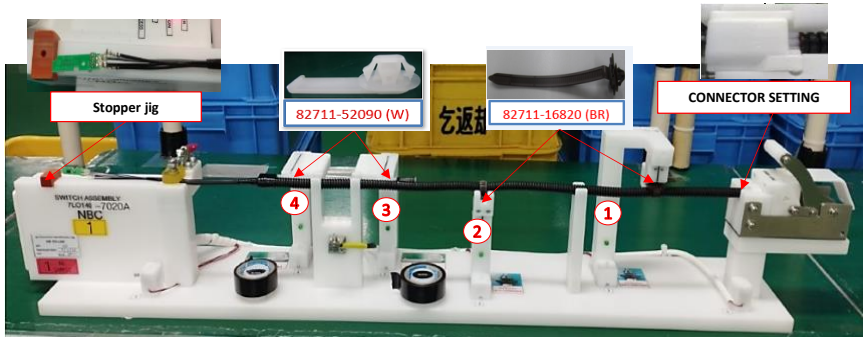




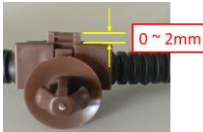


WI-ENG-PDE-1095

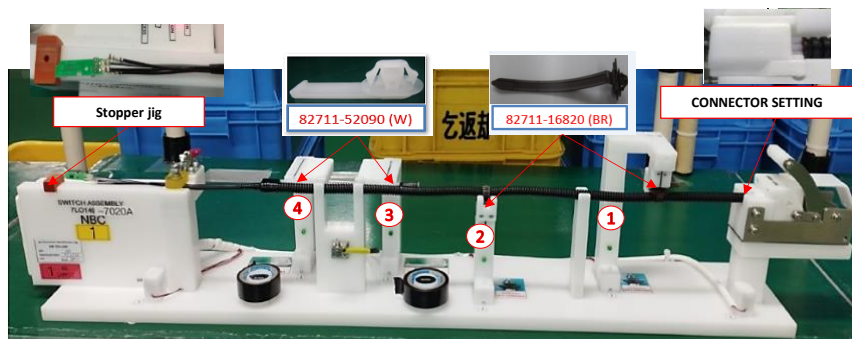
Revision No.:

1

Page No.:

3 of 7

PARTS:		1.Clamp 82711-16820 (BR) 2.Clamp 82711-52090 (W) 3.Black Tape 4.Assy parts		JIG:	1.Clamp Assembly Jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	Clamp Assy	Clamp Assembly			
		<div></div> <div>1. Get the assy parts and then set into jig. <i>(See above picture for correct setting)</i>. First, set the connector 6189-1142 (W) to Receiver base 1. Continue to set the harness in jig. last, set the PCB and B-B wires to stopper jig and push down the toggle clamp.</div> <div>2. Initially tighten the band clamp on clamp location 1 and 2 using both hands.</div> <div>3. Get the bando gun using both hand and cut the band clamp on location 1 using both hands. Press the SW button after cut. Proceed to Clamp location 2 and continue the process.</div> <div>4. Cut the band clamp on clamp location 2 using both hands. Press the SW button after cut. Proceed to Clamp location 3 and continue the process.</div> <div><div><div>GOOD</div><div>NG</div></div><div></div><div><div>BANDO GUN ALIGNMENT</div></div></div> <div>Note: Setting of band clamp cutter depends on the size of the COT/Vinyl tube. For: $\phi 5 - 1^{\circ}2$, $\phi 7 - 3^{\circ}4$</div>		<div><div>BANDO GUN</div><div>FLAT NOSEPIECE</div></div> <div></div> <div></div> <div><div>BANDO GUN ILLUSTRATION</div></div> <div>1. No wrong use of clamp 2. No damaged clamp 2. No wrong use of tape</div> <div>Important reminders/Note/s: 1. Make sure no gap between stopper and terminals 2. Using steel rule, check if the band cut measurement is within the required dimension and should not exceed the allowable range (0~2mm).</div>	



1. Get the assy parts and then set into jig. (*See above picture for correct setting*). First, set the connector **6189-1142 (W)** to **Receiver base 1**. Continue to set the harness in jig. last, set the **PCB** and **B-B wires** to stopper jig and push down the toggle clamp.

2. Initially tighten the band clamp on clamp **location 1 and 2** using both hands.



Note: Setting of band clamp cutter depends on the size of the COT/Vinyl tube.
For: $\phi 5 - 1 \sim 2$, $\phi 7 - 3 \sim 4$

3. Get the bando gun using both hand and cut the band clamp on **location 1** using both hands. Press the SW button after cut. Proceed to Clamp **location 2** and continue the process.

4. Cut the band clamp on clamp **location 2** using both hands. Press the SW button after cut. Proceed to Clamp **location 3** and continue the process.



Fixed setting of band clamp cutter: 3 ~ 4



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☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

4 of 7

PARTS:1. Clamp 82711-16820 (BR)
2. Clamp 82711-52090 (W)3. Black Tape
4. Assy parts

5. Label 7V8110-0020

JIG:

1. Clamp Assembly jig
2. Label dispenser**NO.****PROCESS NAME****WORK PROCEDURE/ ILLUSTRATION****TOOLS/PPE****QUALITY POINTERS**

4

Clamp
AssyClamp Assembly
(Continuation)

5. Hold the tape on clamp location **3**. Make **3 windings** of tape then cut the tape using both hands. Continue the process on clamp location **4**.

6. Hold the tape on clamp location **4**. Make **3 windings** of tape then cut the tape using both hands. Continue the process on label attachment

7. For label attachment, get the QR code label then attach using both hands. *(Refer to the next page for label attachment).*

8. Conduct **POINT CHECKING** before removing the harness from jig.



QR Code label facing

1. No wrong use of clamp
2. No damaged clamp
2. No wrong use of tape

Important reminders/Note/s:

1. Make sure no gap between stopper and terminals



STOPPER JIG



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Document No.:

WI-ENG-PDE-1095

Revision No.:

1

Page No.:

5 of 7**PARTS:**

1. Assy parts
2. Label 7V8110-0020

JIG:

1. Clamp Assembly jig
2. Label dispenser

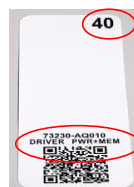
NO.**PROCESS NAME****WORK PROCEDURE/ ILLUSTRATION****TOOLS/PPE****QUALITY POINTERS**

5

Clamp
Assy

Label Attachment

Model Code	Item No.	Item Name
7L0139-7020	73230-AQ040	Driver Manual
7L0140-7020	73230-AQ010	Driver PWR+MEM
7L0141-7020	73230-AQ020	Driver Power



Model code

Item no. & name

1. Get the label.

Note: Check the model code, item no. & name

2. Align the end part of label in the jig.

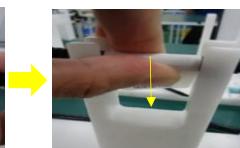
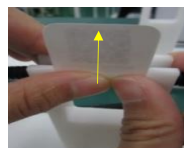


3. Fold the center part of the label



4. Align both end part of label .

5. After alignment , Press the label with both fingers .



6. Press the label upside down using finger.

**GOOD**Acceptable overlap
0~1mm**NG**

1. No bubbles
2. No damage
3. No peel off
4. No wrong use of label
5. No missing parts
6. No loose attachment
7. No wrong usage of label

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WI-ENG-PDE-1095

Revision No.:

1

Page No.:

6 of 7

PARTS:

1. Assy part

JIG:

N/A

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

MEASURING
TAPE



Important reminders and note/s:

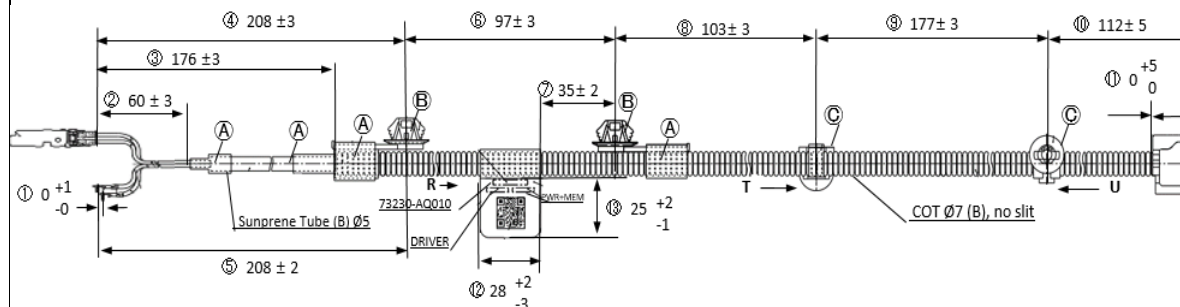
1. Please use calibrated/verified measuring tape when getting the measurement.

2. For Hatsumono, Nakamono and Owarimono.

Document reference/s:

1. Refer to WI-PRO-ASY-056 for Sub-assembly Hatsumono Nakamono Owarimono Inspection

1. No wrong dimension



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1

Page No.:

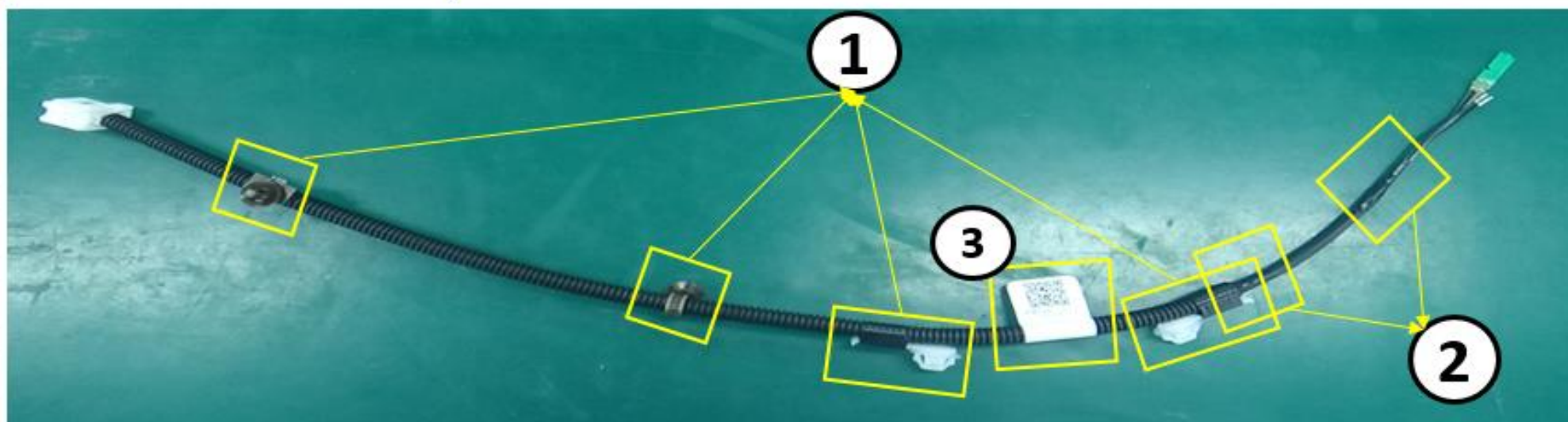
7 of 7

PARTS:

1. Assy part

JIG:

n/a

VISUAL INSPECTION/QUALITY CHECKPOINTS**CLAMP ASSY****7L0140-7020B****1 No Mis-align of Clamp****3 No Missing QR Code****2 No Missing Tape (Black Tape)**

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