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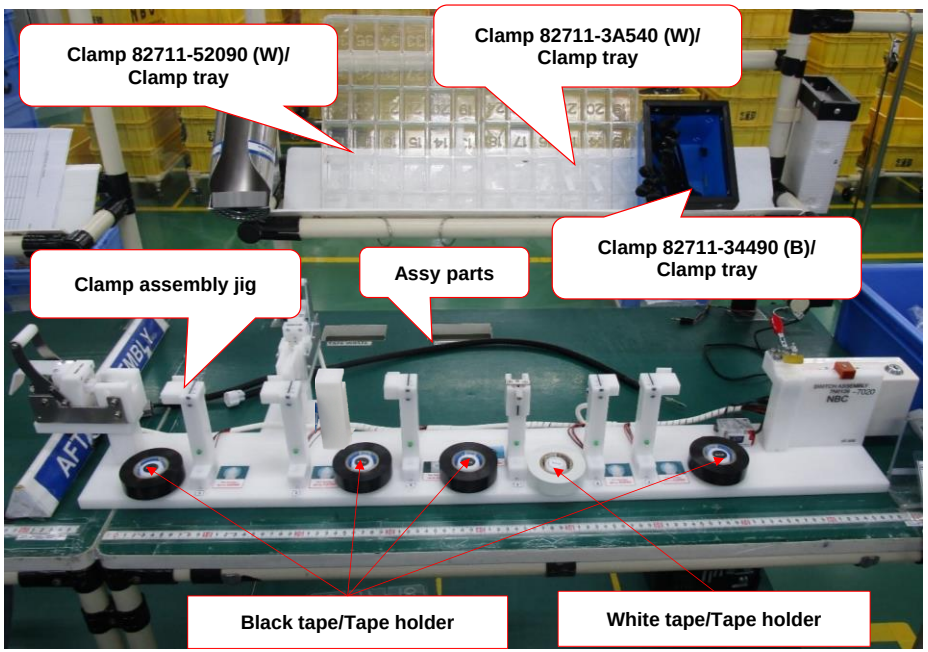
|---|---|---|---|---|---|
| NBC | WORK INSTRUCTION | | | Effectivity Date: | November 13, 2024 |
| | Process Name/Title: | CLAMP ASSEMBLY PROCESS | | Validity Date: | n/a |
| | Model code/Part number: 178D / 7N0129-7021C | Customer: TRJ | Car Model: TOYOTA COROLLA | Document No.: | WI-ENG-PDE-1163 |
| | Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO | | | Revision No.: 1 | Page No.: 1 of 7 |

| | | | |
|---|---|---|---|
| **PARTS:** | 1.Assy parts; Clamp 82711-52090 (W); Clamp 82711-3A540 (W); Clamp 82711-34490 (B); Black tape [4pcs.]; White tape [1pc.] | JIG: | 1. Clamp assembly jig |

| NO. | PROCESS NAME | | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
|---|---|---|---|---|---|
| 1 | Clamp Assy | Table Lay-out | **TABLE LAY-OUT**<br>  <br> | **Safety Instruction**<br>Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)<br><br>**Housekeeping**<br>1. Maintain and always practice 5's.<br>2. Personal things on the workplace is prohibited. Keep it in your locker.<br><br>**Alert level**<br>For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.<br><br>**BANDO GUN**<br> | ***Document reference/s:***<br>*1. Refer to **WI-ENG-PDE-463A-B** for Taping assembly process*<br><br>1. No missing parts/tools<br>2. No excess parts/tools |

Revision History

| Eff. Date | Rev. No | Details of Change | Revised | Reviewed | Approved | Noted |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| 11/13/24 | 1 | Change pre-launch to mass pro. | A.Hernandez | C.Villanueva | A. Arañes | N/A |
| 11/12/24 | 0 | Initial issue. | A.Hernandez | C.Villanueva | A. Arañes | N/A |

| Prepared by | Reviewed by | Approved by | Noted by |
|---|---|---|---|
| A.Hernandez | C.Villanueva | A. Arañes | n/a |
| Est. Date: | November 12, 2024 | | |

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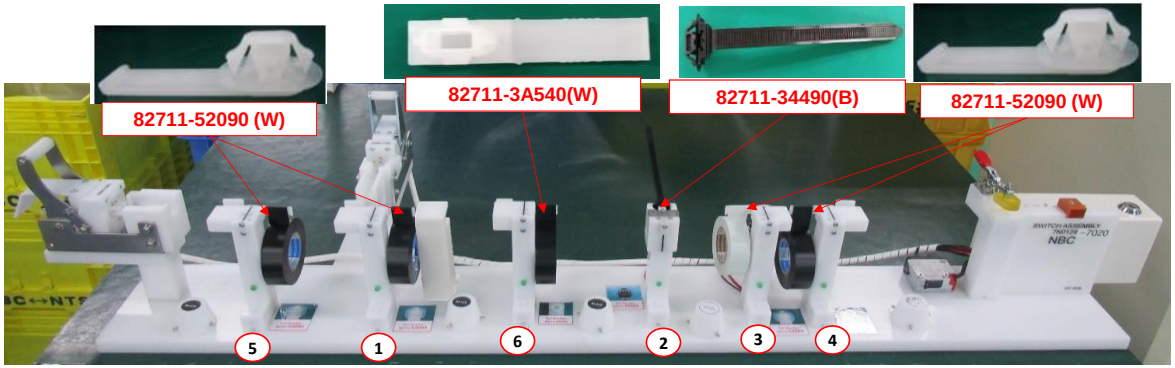
| | Model code/Part number: 178D / 7N0129-7021C | Customer: TRJ | Car Model: TOYOTA COROLLA | Document No.: | WI-ENG-PDE-1163 |
| | Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO | | | Revision No.: 1 | Page No.: 2 of 7 |

| | | | |
|---|---|---|---|
| **PARTS:** | 1. Clamp 82711-52090 (W) [4pcs.]<br>2. Clamp 82711-3A540 (W)<br>3. Clamp 82711-34490 (B)<br>4. Black tape [4pcs.]<br>5. White tape | JIG: | 1. Clamp assembly jig |

| NO. | PROCESS NAME | | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
|---|---|---|---|---|---|
| 2 | Clamp Assy | Clamp setting | | | 1. No wrong use of parts<br>2. No wrong use of tape<br>3. No damaged clamp<br>4. No wvrong clamp position |




1. Get 2 pcs. of clamp **82711-52090 (W)** using both hands then insert to clamp location **5 and 1** using both hands.

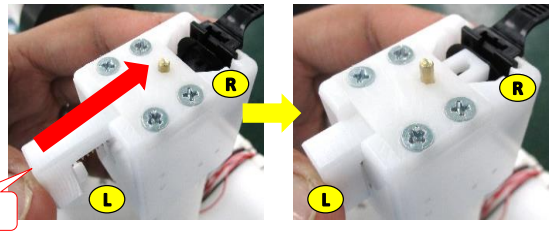
2. Get 2 pcs. of clamp **82711-52090 (W)** using both hands then insert to clamp location **3 and 4** using both hands.

3. Get 1 pc. of clamp **82711-3A540 (W)** using right hand then insert to clamp location **6** using both hands.

4. Get 1 pc. of clamp **82711-34490 (B)** using right hand then insert to clamp location **2** using both hands.

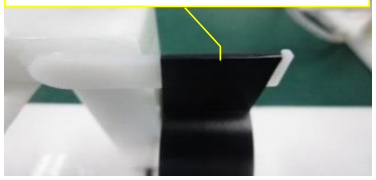
5. Get the **White tape** then initially attach to clamp location **3** using both hands.

6. Get the **Black tape** then initially attach to clamp location **5, 1, 6 and 4** using both hands.




**STANDARD TAPING FOR CLAMP**

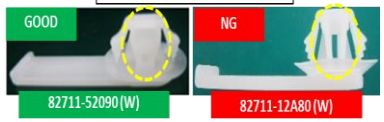
One wind for under tape



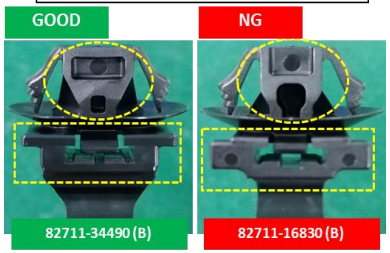
***Important reminders/Note/s:***

*1. Please check the Clamp first before start of assembly to avoid wrong use of clamp.*

CLAMP ILLUSTRATION




BAND CLAMP ILLUSTRATION

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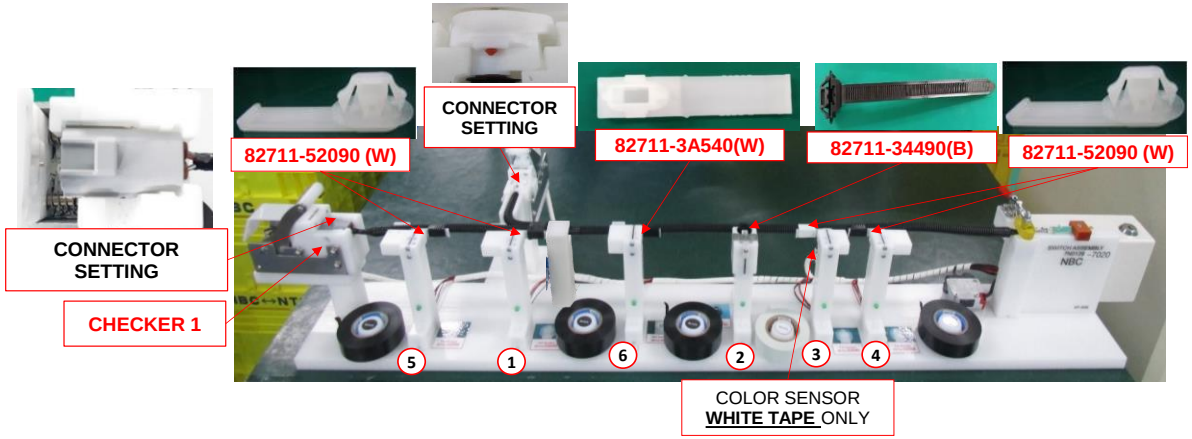
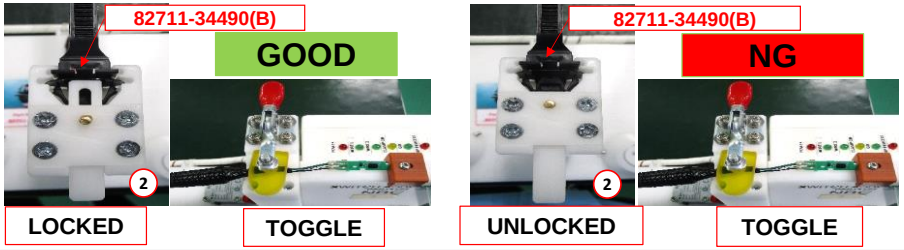
| | WORK INSTRUCTION | | | Effectivity Date: | November 13, 2024 | |
|---|---|---|---|---|---|---|
| | Process Name/Title: | CLAMP ASSEMBLY PROCESS | | Validity Date: | n/a | |
| | Model code/Part number: 178D / 7N0129-7021C | Customer: TRJ | Car Model: TOYOTA COROLLA | Document No.: | WI-ENG-PDE-1163 | |
| | Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO | | | Revision No.: | 1 | Page No.: 3 of 7 |

| PARTS: | 1. Assy parts<br>2. Black tape | 3. White tape | JIG: | 1. Clamp assembly jig |
|---|---|---|---|---|

| NO. | PROCESS NAME | | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
|---|---|---|---|---|---|
| 3 | Clamp Assy | Clamp assembly | | | 1. No wrong use of parts<br>2. No wrong use of tape<br>3. No damaged clamp<br>4. No wrong clamp position |



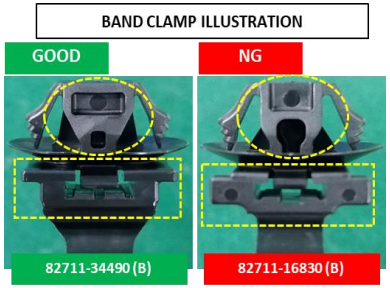

1. Get the assy parts and set into jig. ***(See above picture for correct setting of harness).*** First, set the connector **6188-0066 (GR)** to **Checker 1** then pull the checker fixture for continuity checking. Second, set the connector **6189-0451 (W)** to **Checker 2** then pull the checker fixture for continuity checking. Continue to set the harness in jig. Last, set the PCB within the stopper then press by **Toggle clamp**. Continue if the sequence light of location **1** was **ON.**




**NOTE:** On clamp location 2, if clamp **82711-34490 (B)** is **locked** and the **toggle clamp** is **set,** the process will **proceed.** If **clamp 82711-34490 (B)** is **unlock** and the **toggle clamp** is **set**, the process will **not proceed** and **NG buzz** will be heard.

***Important reminders/Note/s:***

*1. Make sure no gap between stopper jig and PCB.*

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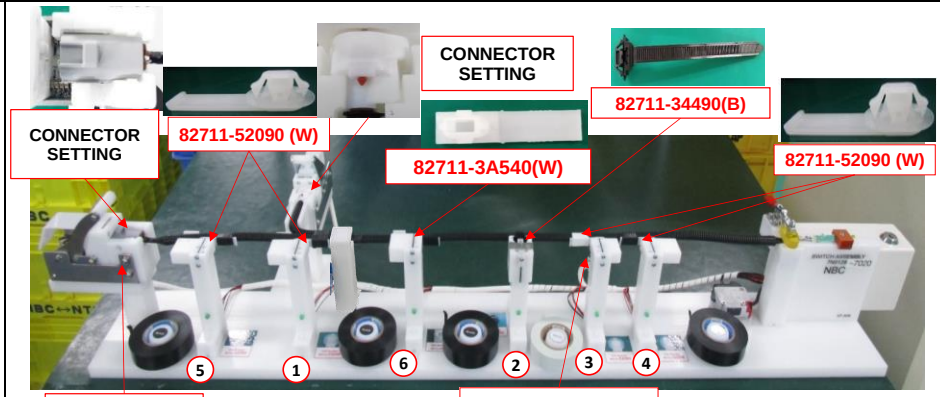
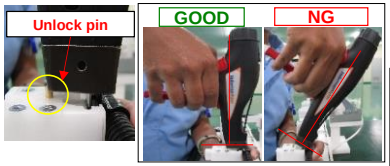
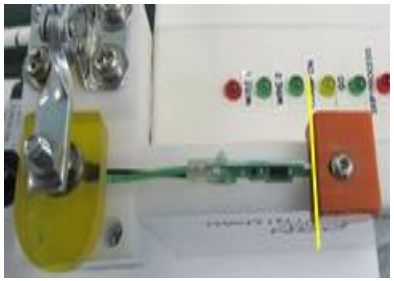
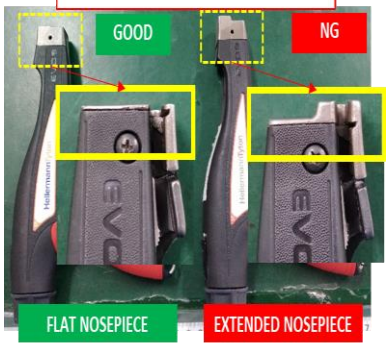
| | WORK INSTRUCTION | | | Effectivity Date: | November 13, 2024 | |
|---|---|---|---|---|---|---|
| | Process Name/Title: | CLAMP ASSEMBLY PROCESS | | Validity Date: | n/a | |
| | Model code/Part number: 178D / 7N0129-7021C | Customer: TRJ | Car Model: TOYOTA COROLLA | Document No.: | WI-ENG-PDE-1163 | |
| | Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO | | | Revision No.: | 1 | Page No.: 4 of 7 |

| PARTS: | 1. Assy parts<br>2. Black tape | 3. White tape | JIG: | 1. Clamp assembly jig |
|---|---|---|---|---|

| NO. | PROCESS NAME | | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
|---|---|---|---|---|---|
| 3 | Clamp Assy | Clamp assembly (Continuation) |  <br>2. Check if all LED light for **Power On, Clamp On, Wire1 & Wire2** was **ON.** If encountered abnormality, **STOP** and immediately **CALL** the attention of the leader. **WAIT** for further instruction then continue the process.<br>3. Hold the tape on clamp location **1,** make **3 windings** of tape then cut the tape using both hands. Press the **SW button** after taping. Continue the process if sequence light on clamp location **2** was **ON.**<br>4. Initially tighten the band clamp on clamp location **2** using both hands.<br>5. Get the bando gun using right hand then cut the band clamp on location **2** using both hands. Press the **SW button** after cut. Continue the process if sequence light on clamp location **3** was **ON.**<br>  <br>BANDO GUN ALIGNMENT<br>PERPENDICULARITY<br>NG OK NG<br> <br>Fixed setting of band clamp cutter: 1~ 2<br>**NOTE:** Pin must be hit during cutting of bando gun.<br>**Note: Setting of band clamp cutter depends on the size of the COT/Vinyl tube. For: ø5 - 1~2, ø7 - 3~4** | BANDO GUN<br> | 1. No wrong use of parts<br>2. No wrong use of tape<br>3. No damaged clamp<br>4. No wrong clamp position<br>  <br>***Important reminders/Note/s:***<br>*1. Make sure no gap between stopper jig and PCB.*<br>BANDO GUN ILLUSTRATION<br>  |

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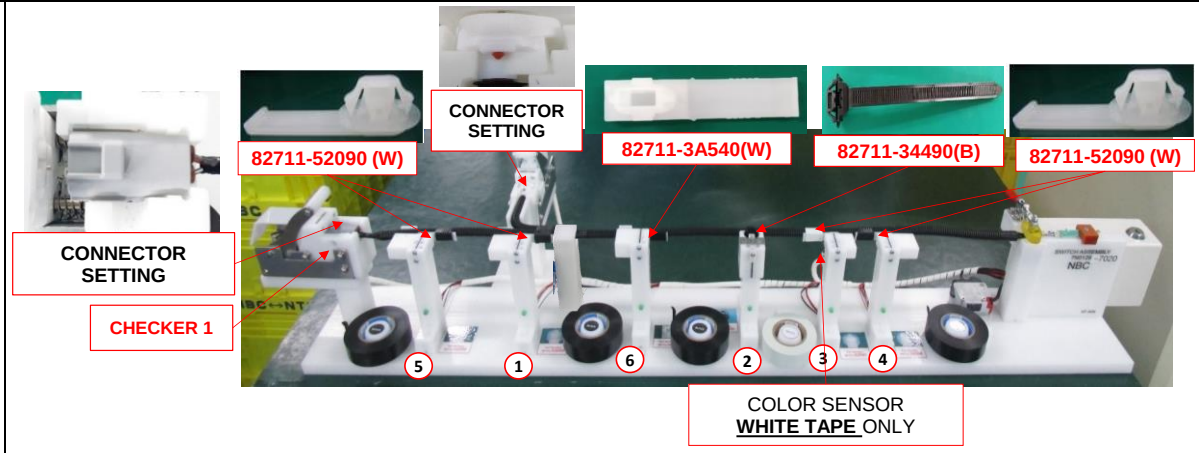
| | Purpose: ☐PROTOTYPE | ☐PRE-LAUNCH | ■MASSPRO | Revision No.: 1 | Page No.: 5 of 7 |

| | | | |
|---|---|---|---|
| **PARTS:** | 1. Assy parts<br>2. Black tape<br>3. White tape | JIG: | 1. Clamp assembly jig |

| NO. | PROCESS NAME | | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
|---|---|---|---|---|---|
| 3 | Clamp Assy | Clamp assembly (Continuation) | | | 1. No wrong use of parts<br>2. No wrong use of tape<br>3. No damaged clamp<br>4. No wrong clamp position |




6. Hold the tape on clamp location **3,** make **3 windings** of tape then cut the tape using both hands. **Color sensor** light will beep/buzz if sensor detects **White tape.** Press the **SW button** after taping. Continue the process if sequence light on clamp location **4** was **ON.**

7. Hold the tape on clamp location **4,** make **3 windings** of tape then cut the tape using both hands. Press the **SW button** after taping. Continue the process if sequence light on clamp location **5** was **ON.**

8. Hold the tape on clamp location **5,** make **3 windings** of tape then cut the tape using both hands. Press the **SW button** after taping. Continue the process if sequence light on clamp location **6** was **ON.**

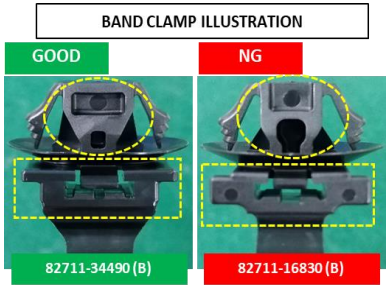
9. Hold the tape on clamp location **6,** make **3 windings** of tape then cut the tape using both hands. Press the **SW button** after taping. **Go** sound will be heard.

10. After taping, **CONDUCT POINT CHECKING** before removing the harness from jig.

***Important reminders/Note/s:***

*1. Make sure no gap between stopper jig and PCB.*

*2. Make 2-3 windings for clamp taping.*

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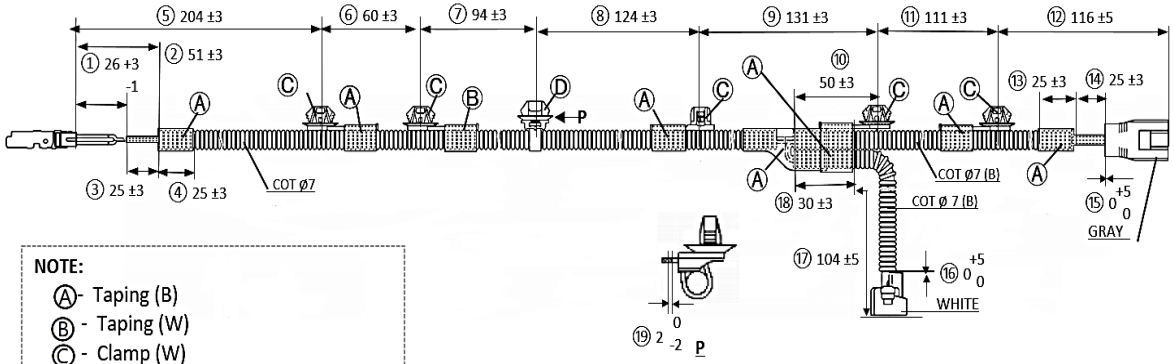
| | Purpose: | ☐ PROTOTYPE ☐ PRE-LAUNCH ■ MASSPRO | | Revision No.: | 1 / Page No.: 6 of 7 |

| PARTS: | 1. Assy parts | JIG: | N/A |
|---|---|---|---|

| NO. | PROCESS NAME | | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
|---|---|---|---|---|---|
| 4 | Clamp Assy | Measurement |   <br>**NOTE:**<br>Ⓐ- Taping (B)<br>Ⓑ - Taping (W)<br>Ⓒ - Clamp (W)<br>Ⓓ - Clamp (B)<br>① - Dimension tolerance is internal control only | **MEASURING TAPE** | ***Important reminders/Note/s:***<br>*1. FOR **HATSUMONO** AND **OWARIMONO.***<br>*2. Please use calibrated/verified measuring tape when getting the measurement.*<br>***Document reference/s:***<br>***1**. Refer to **WI-PRO-ASY-056** for Sub-assembly Hatsumono Nakamono Owarimono Inspection.*<br>1. No wrong dimension |

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| | Purpose: | ☐ PROTOTYPE | ☐ PRE-LAUNCH | ■ MASSPRO | Revision No.: | 1 | Page No.: 7 of 7 |

| | | | |
|---|---|---|---|
| **PARTS:** | 1. Assy parts | JIG: | N/A |

**VISUAL INSPECTION/ QUALITY CHECKPOINTS**

| **CLAMP ASSY** | **7N0129-7021C** |
|---|---|

1 **No Wrong facing of clamp**

2 3 4 **No Missing Tape (Black tape)**

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