
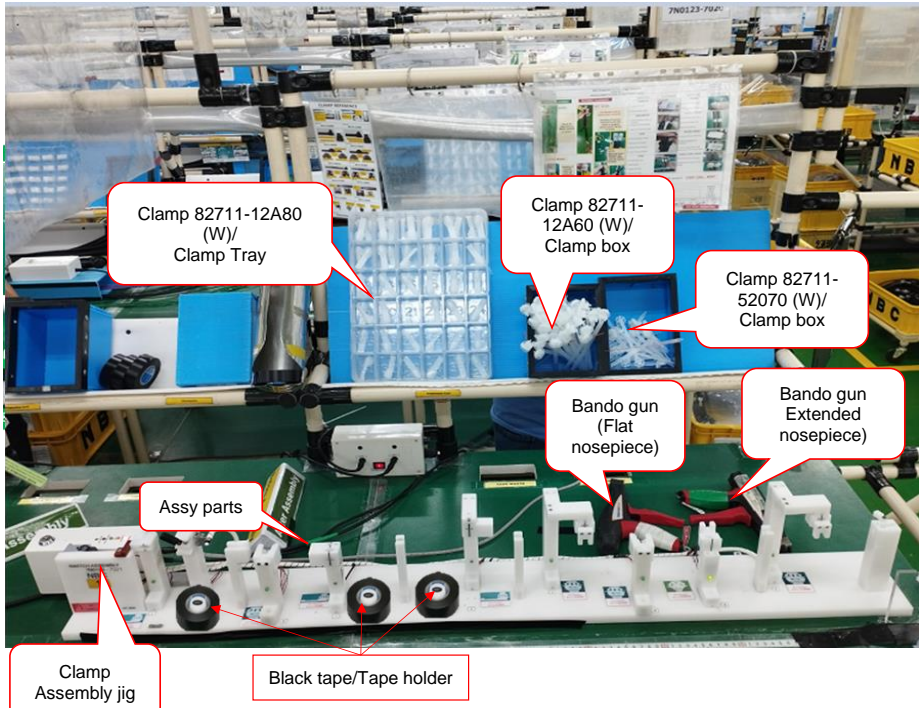








|   |   |  |                      |                                 |                   |                         |           |        |
|---|---|--|----------------------|---------------------------------|-------------------|-------------------------|-----------|--------|
|  | <b>WORK INSTRUCTION</b>   |  |                      |                                 | Effectivity Date: | <b>October 17, 2024</b> |           |        |
|   | Process Name/Title: <b>CLAMP ASSEMBLY PROCESS</b>   |  |                      |                                 | Validity Date:    | n/a                     |           |        |
|   | Model code/Part number: <b>840B / 7N0120-7021</b>   |  | Customer: <b>TRJ</b> | Car Model: <b>TOYOTA-SIENTA</b> | Document No.:     | <b>WI-ENG-PDE-1001</b>  |           |        |
|   | Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO |  |                      |                                 | Revision No.:     | 0                       | Page No.: | 1 of 9 |

|   |                     |   |  |
|---|---------------------|---|--|
| <b>PARTS:</b> 1. Assy parts; Clamp 82711-12A80 (W); Clamp 82711-12A60 (W); Clamp 82711-52070; Black tape [3pcs] |                     | <b>JIG:</b> 1. Clamp assembly jig   |  |
| <b>NO.</b>  | <b>PROCESS NAME</b> | <b>WORK PROCEDURE/ ILLUSTRATION</b>   | <b>TOOLS/PPE</b>   |
| 1   | CLAMP ASSY          | <div style="text-align: center;"> <p>Table Lay-out</p>  </div>   | <div style="border: 1px solid red; padding: 5px;"> <p><b>Safety Instruction</b></p> <p>Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</p> </div> <div style="border: 1px solid red; padding: 5px;"> <p><b>Housekeeping</b></p> <p>1. Maintain and always practice 5's.<br/>2. Personal things on the workplace is prohibited. Keep it in your locker.</p> </div> <div style="border: 1px solid red; padding: 5px;"> <p><b>Alert level</b></p> <p>For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</p> </div> |
|   |                     | <b>QUALITY POINTERS</b>   |  |
|   |                     | 1. No missing parts/tools<br>2. No excess parts/tools<br><br><b>Document reference/s:</b><br>1. Refer to <b>WI-ENG-PDE-616</b> for Taping assembly process<br><br><div style="text-align: center;"> <p>CLAMP ILLUSTRATION</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>GOOD</p>  <p>82711-12A80 (W)</p> </div> <div style="text-align: center;"> <p>NG</p>  <p>82711-52090 (W)</p> </div> </div> <p>BAND CLAMP ILLUSTRATION</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>GOOD</p>  <p>82711-12A60 (W)</p> </div> <div style="text-align: center;"> <p>NG</p>  <p>82711-52070 (B)</p> </div> </div> <p>BAND CLAMP ILLUSTRATION</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>GOOD</p>  <p>82711-52070 (B)</p> </div> <div style="text-align: center;"> <p>NG</p>  <p>82711-12A60 (W)</p> </div> </div> </div> |  |

|                  |         |  |  |  |  |            |              |             |             |             |                  |
|------------------|---------|--|--|--|--|------------|--------------|-------------|-------------|-------------|------------------|
| Revision History |         |  |  |  |  |            |              | Prepared by | Reviewed by | Approved by | Noted by         |
|                  |         |  |  |  |  |            |              |             |             |             |                  |
| 10/17/24         | 0       | Initial issue. Separate clamp assy from Taping assembly process. |  |  |  | D.Castillo | C.Villanueva | A. Arañes   | N/A         |             |                  |
| Eff. Date        | Rev. No | Details of Change  |  |  |  | Revised    | Reviewed     | Approved    | Noted       | Est. Date:  | October 17, 2024 |

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## WORK INSTRUCTION

Process Name/Title:

## CLAMP ASSEMBLY PROCESS

Effectivity Date:

October 17, 2024

Model code/Part number:

840B / 7N0120-7021

Customer:

TRJ

Car Model:

TOYOTA-SIENTA

Document No.:

WI-ENG-PDE-1001

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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| PARTS: | 1. Clamp 82711-12A80 (W) [3pcs.]<br>2. Clamp 82711-12A60 (W) [4pcs.] | 3. Clamp 82711-52070 (W)<br>4. Black tape [3pcs.] | JIG:  | 1. Clamp assembly jig  |
|--------|--|---|---|--|
| NO.    | PROCESS NAME   | WORK PROCEDURE/ ILLUSTRATION                      | TOOLS/PPE   | QUALITY POINTERS   |
| 2      | CLAMP ASSY   | Clamp setting                                     | <div data-bbox="577 858 1077 1327"><div>1. Get <b>2pcs.</b> of clamp <b>82711-12A80 (W)</b> then set to clamp location <b>6 and 7</b> using both hands.</div><div>2. Get <b>1pc.</b> of clamp <b>82711-12A80 (W)</b> then set to clamp location <b>8</b> using both hands.</div><div>3. Get <b>2pcs.</b> of clamp <b>82711-12A60 (W)</b> then set to clamp location <b>5 and 3</b> using both hands.</div><div>4. Get <b>2pcs.</b> of clamp <b>82711-12A60 (W)</b> then set to clamp location <b>4 and 2</b> using both hands.</div><div>5. Get <b>1pc.</b> of clamp <b>82711-52070 (W)</b> then set to clamp location <b>1</b> using both hands.</div></div> <div data-bbox="1144 916 1704 995">6. Initially attach <b>Black tape</b> on clamp location <b>6, 7, and 8</b> using both hands.</div> <div data-bbox="1211 1027 1442 1278"></div> <div data-bbox="1458 1075 1666 1187">Take note: Make an excess attach tape on clamp location 8 for easy setting up of assy parts.</div> | <div data-bbox="1787 379 2078 400"><b>STANDARD TAPING FOR CLAMP</b></div> <div data-bbox="1823 421 2040 442">One wind for under clamp</div> <div data-bbox="1742 453 2101 592"></div> <div data-bbox="1733 612 1935 740"><div>1. No loose tape</div><div>2. No flip-out tape</div><div>3. No peel-off tape</div><div>4. No wrong use of tape</div><div>5. No wrong use of clamp</div><div>6. No missing clamp</div></div> <div data-bbox="1742 762 2123 831"><b>Important reminders/Note/s:</b><br/>1. Please check the <b>Clamp</b> first before start of assembly to avoid wrong use of clamp.</div> <div data-bbox="1742 852 2123 1343"><div data-bbox="1868 858 1989 874">CLAMP ILLUSTRATION</div><div data-bbox="1742 884 2123 979"><div><div>GOOD</div></div><div><div>NG</div></div></div><div data-bbox="1854 995 2024 1011">BAND CLAMP ILLUSTRATION</div><div data-bbox="1742 1021 2123 1171"><div><div>GOOD</div></div><div><div>NG</div></div></div><div data-bbox="1854 1187 2024 1203">BAND CLAMP ILLUSTRATION</div><div data-bbox="1742 1212 2123 1343"><div><div>GOOD</div></div><div><div>NG</div></div></div></div> |

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# WORK INSTRUCTION

Process Name/Title:

## CLAMP ASSEMBLY PROCESS

Effectivity Date:

October 17, 2024

Validity Date:

n/a

Model code/Part number:

840B / 7N0120-7021

Customer:

TRJ

Car Model:

TOYOTA-SIENTA

Document No.:

WI-ENG-PDE-1001

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

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### PARTS:

1. Assy parts

JIG:

1. Clamp assembly jig

### NO.

### PROCESS NAME

### WORK PROCEDURE/ ILLUSTRATION

### TOOLS/PPE

### QUALITY POINTERS

3

CLAMP  
ASSY

Clamp assembly

**1. Get the assy parts then put into jig. (See above picture for correct setting).** First, set the connector 6098-3810 (W) to Receiver base 1. Continue to set the harness in jig. Color sensor light will beep/buzz if sensor detects Red tape. Fold the tube until the terminal end reaches the guide. (See below illustration)

**2. Fold the tube using both hands. Must be no gap.**

**3. Slide down the guide using right hand. Terminal end must be no gap in guide.**

**Important reminders/Note/s:**  
1. Must be no gap between terminal and stopper jig.  
2. Make 2-3 windings for clamp taping

**CLAMP ILLUSTRATION**

| GOOD            | NG              |
|-----------------|-----------------|
|                 |                 |
| 82711-12A80 (W) | 82711-52090 (W) |

**BAND CLAMP ILLUSTRATION**

| GOOD            | NG              |
|-----------------|-----------------|
|                 |                 |
| 82711-12A60 (W) | 82711-52070 (W) |

**BAND CLAMP ILLUSTRATION**


| GOOD            | NG              |
|-----------------|-----------------|
|                 |                 |
| 82711-52070 (W) | 82711-12A60 (W) |

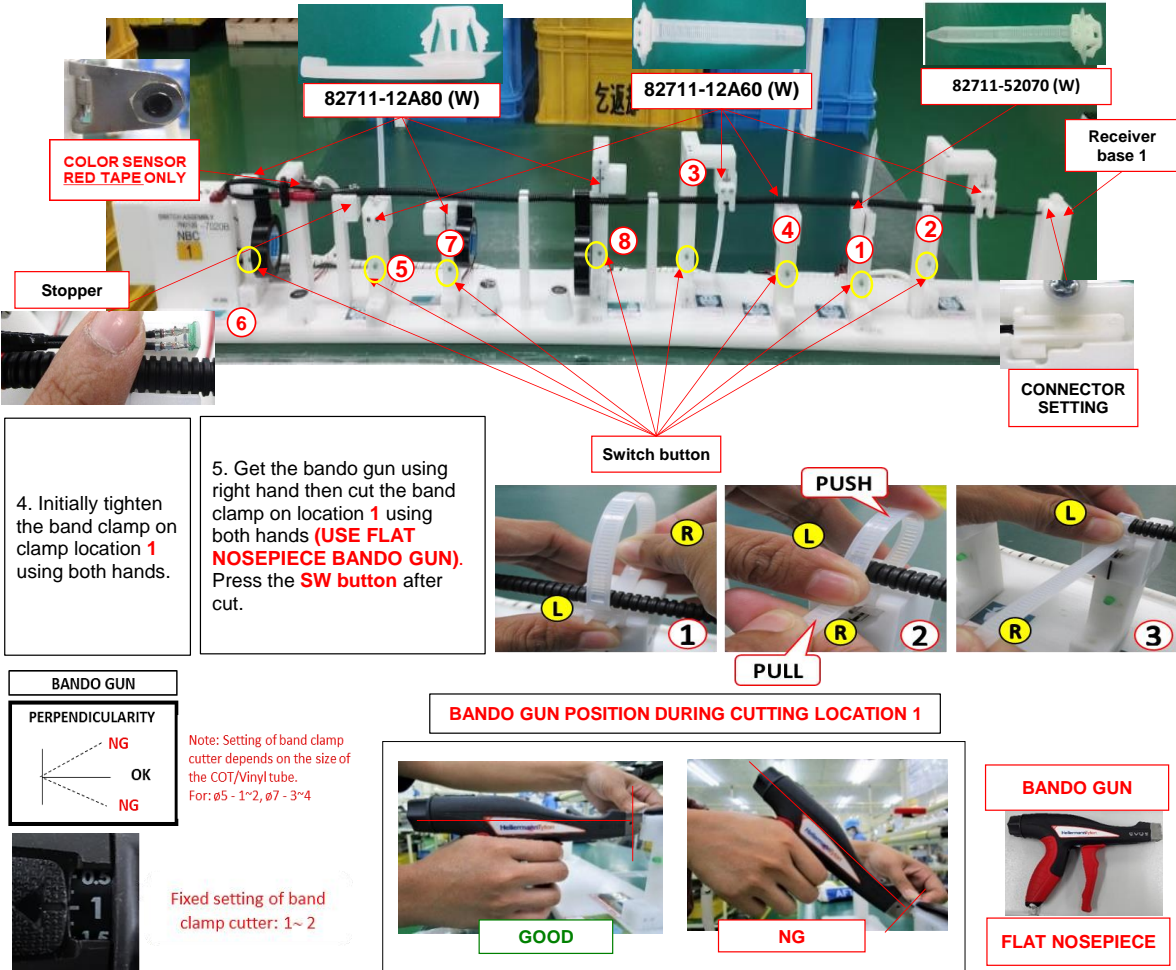



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|  | <b>WORK INSTRUCTION</b>   |  |                      | Effectivity Date:               | <b>October 17, 2024</b> |                        |        |
|   | Process Name/Title: <b>CLAMP ASSEMBLY PROCESS</b>   |  |                      | Validity Date:                  | n/a                     |                        |        |
|   | Model code/Part number: <b>840B / 7N0120-7021</b>   |  | Customer: <b>TRJ</b> | Car Model: <b>TOYOTA-SIENTA</b> | Document No.:           | <b>WI-ENG-PDE-1001</b> |        |
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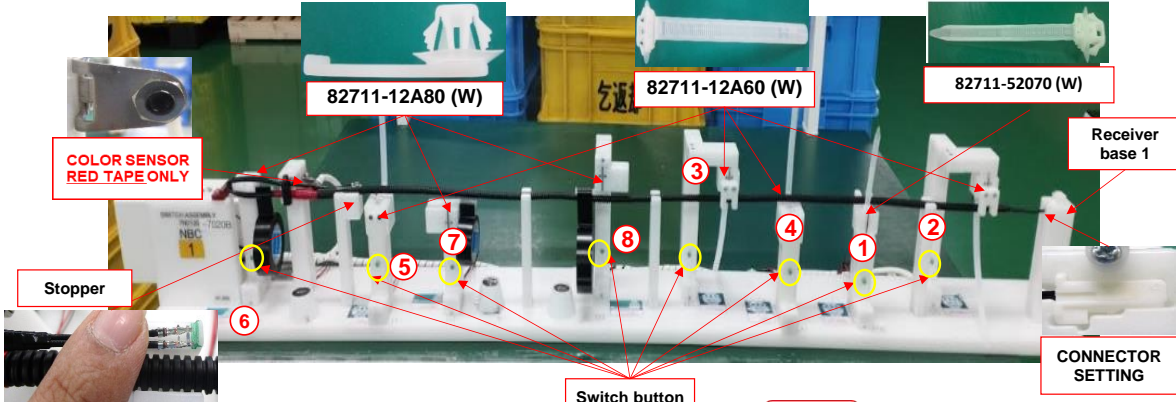








|               |                     |   |  |  |  |
|---------------|---------------------|---|--|--|--|
| <b>PARTS:</b> | 1. Assy parts       |   | JIG:   | 1. Clamp assembly jig  |  |
| <b>NO.</b>    | <b>PROCESS NAME</b> | <b>WORK PROCEDURE/ ILLUSTRATION</b>   | <b>TOOLS/PPE</b>   | <b>QUALITY POINTERS</b>  |  |
| 3             | CLAMP ASSY          | <div>Clamp assembly (Continuation)</div> <div></div> | <div></div> | <div><ol style="list-style-type: none"><li>1. No loose tape</li><li>2. No flip-out tape</li><li>3. No peel-off tape</li><li>4. No wrong use of tape</li><li>5. No wrong use of clamp</li><li>6. No missing clamp</li></ol><p><b>Important reminders/Note/s:</b></p><ol style="list-style-type: none"><li>1. Must be no gap between terminal and stopper jig.</li><li>2. Make 2-3 windings for clamp taping</li></ol><div></div></div> |  |

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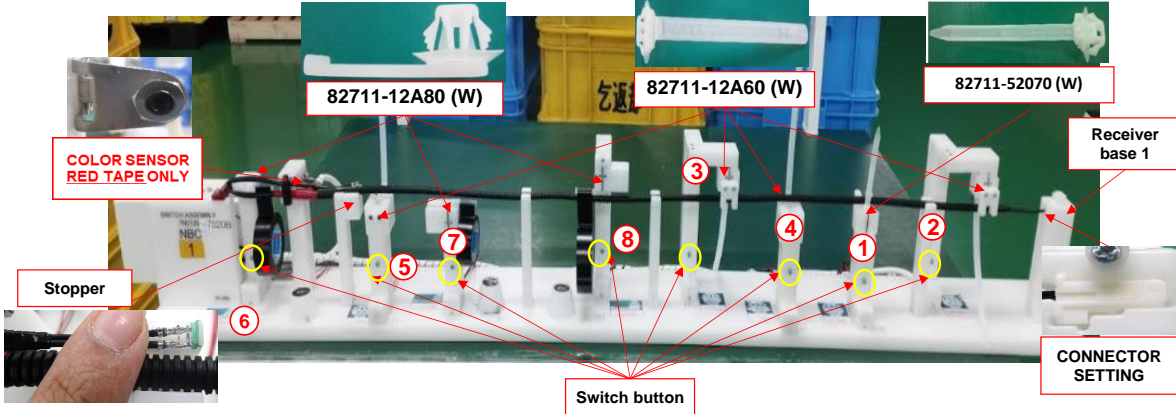
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|  | <b>WORK INSTRUCTION</b>   |  |                      | Effectivity Date:               | <b>October 17, 2024</b>              |           |        |
|   | Process Name/Title: <b>CLAMP ASSEMBLY PROCESS</b>   |  |                      | Validity Date:                  | n/a                                  |           |        |
|   | Model code/Part number: <b>840B / 7N0120-7021</b>   |  | Customer: <b>TRJ</b> | Car Model: <b>TOYOTA-SIENTA</b> | Document No.: <b>WI-ENG-PDE-1001</b> |           |        |
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|               |                     |  |  |      |                       |                         |  |
|---------------|---------------------|--|--|------|-----------------------|-------------------------|--|
| <b>PARTS:</b> | 1. Assy parts       |  |  | JIG: | 1. Clamp assembly jig |                         |  |
| <b>NO.</b>    | <b>PROCESS NAME</b> | <b>WORK PROCEDURE/ ILLUSTRATION</b>  |  |      | <b>TOOLS/PPE</b>      | <b>QUALITY POINTERS</b> |  |
| 3             | CLAMP ASSY          | <div><div></div><div><p>6. Initially tighten the band clamp on clamp location <b>5, 3, 4 and 2</b> using both hands. Continue if the sequence light on clamp location <b>2</b> was <b>ON</b>.</p><p>7. Get the bando gun using right hand then cut the band clamp on location <b>2</b> using both hands (<b>USE EXTENDED NOSEPIECE BANDO GUN</b>). Press the <b>SW button</b> after cut. Continue if the sequence light on clamp location <b>3</b> was <b>ON</b>.</p></div><div><div><div><b>BANDO GUN ALIGNMENT</b></div><div><div><b>PERPENDICULARITY</b></div><div><div>OK</div><div>NG</div><div>NG</div></div></div></div><div><p>Note: Setting of band clamp cutter depends on the size of the COT/Vinyl tube.<br/>For: ø5 - 1~2, ø7 - 3~4</p><div></div></div></div><div><div><div><b>BANDO GUN POSITION DURING CUTTING LOCATION 2</b></div><div><div></div><div></div></div></div><div><div><b>BANDO GUN ILLUSTRATION</b></div><div><div></div><div></div></div></div></div></div> <div><div></div><div><div><div>1. No loose tape</div><div>2. No flip-out tape</div><div>3. No peel-off tape</div><div>4. No wrong use of tape</div><div>5. No wrong use of clamp</div><div>6. No missing clamp</div></div><div><div><b>Important reminders/Note/s:</b></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>3. <b>TILTING OF BANDO GUN</b><br/><b>APPLICABLE ONLY IN CLAMP 82711-12A60 (W) DURING FINAL CUT.</b></div></div></div><div><div><b>BAND CLAMP ILLUSTRATION</b></div><div><div></div><div></div></div></div></div></div> |  |      |                       |                         |  |

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|   | Process Name/Title: <b>CLAMP ASSEMBLY PROCESS</b>   |  |                      | Validity Date:                  | n/a                                  |           |        |
|   | Model code/Part number: <b>840B / 7N0120-7021</b>   |  | Customer: <b>TRJ</b> | Car Model: <b>TOYOTA-SIENTA</b> | Document No.: <b>WI-ENG-PDE-1001</b> |           |        |
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|               |                     |   |                  |                         |
|---------------|---------------------|---|------------------|-------------------------|
| <b>PARTS:</b> | 1. Assy parts       |   | JIG:             | 1. Clamp assembly jig   |
| <b>NO.</b>    | <b>PROCESS NAME</b> | <b>WORK PROCEDURE/ ILLUSTRATION</b>   | <b>TOOLS/PPE</b> | <b>QUALITY POINTERS</b> |
| 3             | CLAMP ASSY          | <div><div></div><div><div>8. Cut the band clamp on location 3 using both hands (USE EXTENDED NOSEPIECE BANDO GUN). Press the SW button after cut. Continue if the sequence light on clamp location 4 was ON.</div><div>9. Cut the band clamp on location 4 using both hands (USE EXTENDED NOSEPIECE BANDO GUN). Press the SW button after cut. Continue if the sequence light on clamp location 5 was ON.</div><div>10. Cut the band clamp on location 5 using both hands (USE EXTENDED NOSEPIECE BANDO GUN). Press the SW button after cut. Continue if the sequence light on clamp location 6 was ON.</div><div><div>BANDO GUN ALIGNMENT</div><div><div>PERPENDICULARITY</div><div>OK</div><div>NG</div><div>NG</div></div><div>Note: Setting of band clamp cutter depends on the size of the COT/vinyl tube.<br/>For: ø5 - 1~2, ø7 - 3~4</div></div><div><div>BANDO GUN POSITION DURING CUTTING</div><div>LOCATION 3, 4 and 5</div><div><div>GOOD</div><div>NG</div></div></div><div><div>BANDO GUN ILLUSTRATION</div><div><div>GOOD</div><div>NG</div></div><div><div>EXTENDED NOSEPIECE</div><div>FLAT NOSEPIECE</div></div></div></div></div> <div><div><div>1. No loose tape</div><div>2. No flip-out tape</div><div>3. No peel-off tape</div><div>4. No wrong use of tape</div><div>5. No wrong use of clamp</div><div>6. No missing clamp</div></div><div><div>Important reminders/Note/s:</div><div>1. Must be no gap between terminal and stopper jig.</div><div>2. Make 2-3 windings for clamp taping</div><div>3. TILTING OF BANDO GUN APPLICABLE ONLY IN CLAMP 82711-12A60 (W) DURING FINAL CUT.</div></div><div><div>BAND CLAMP ILLUSTRATION</div><div><div>GOOD</div><div>NG</div></div><div><div>82711-12A60 (W)</div><div>82711-52070 (B)</div></div></div></div> |                  |                         |


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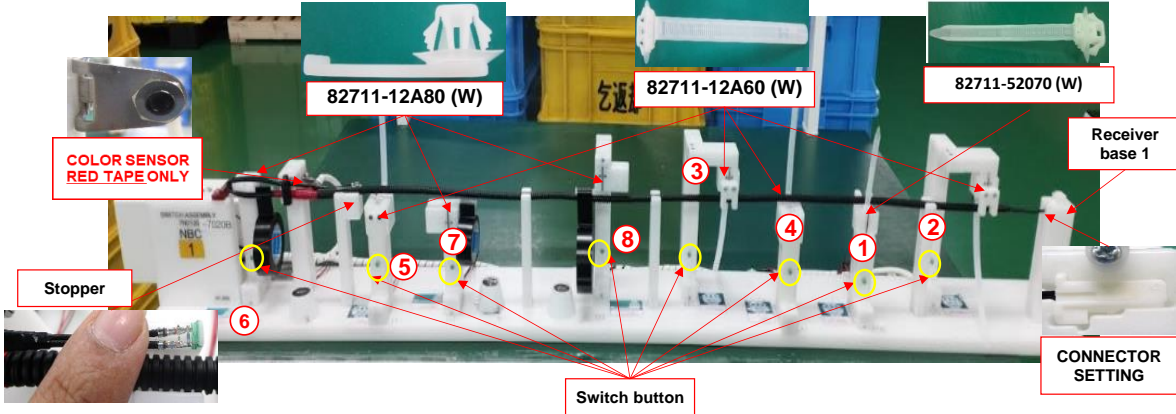


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|  | <b>WORK INSTRUCTION</b>   |  |                      | Effectivity Date:               | <b>October 17, 2024</b>              |           |        |
|   | Process Name/Title: <b>CLAMP ASSEMBLY PROCESS</b>   |  |                      | Validity Date:                  | n/a                                  |           |        |
|   | Model code/Part number: <b>840B / 7N0120-7021</b>   |  | Customer: <b>TRJ</b> | Car Model: <b>TOYOTA-SIENTA</b> | Document No.: <b>WI-ENG-PDE-1001</b> |           |        |
|   | Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO |  |                      | Revision No.:                   | 0                                    | Page No.: | 7 of 9 |

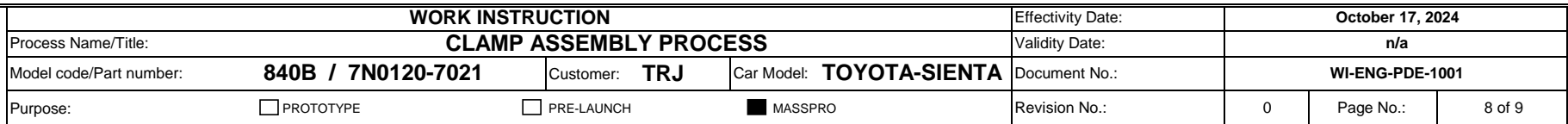
|               |                     |   |                  |   |
|---------------|---------------------|---|------------------|---|
| <b>PARTS:</b> | 1. Assy parts       |   | JIG:             | 1. Clamp assembly jig   |
| <b>NO.</b>    | <b>PROCESS NAME</b> | <b>WORK PROCEDURE/ ILLUSTRATION</b>   | <b>TOOLS/PPE</b> | <b>QUALITY POINTERS</b>   |
| 3             | CLAMP ASSY          | <div>Clamp assembly (Continuation)</div> <div></div> <div>11. Hold the tape on clamp location <b>6</b> then start taping using both hands. Make <b>3 windings</b> of tape then cut the tape. Press the <b>SW button</b> after taping. Continue if the sequence light in location <b>7</b> was <b>ON</b>.</div> <div>12. Hold the tape on clamp location <b>7</b> then start taping using both hands. Make <b>3 windings</b> of tape then cut the tape. Press the <b>SW button</b> after taping. Continue if the sequence light in location <b>8</b> was <b>ON</b>.</div> <div>13. Hold the tape on clamp location <b>8</b> then start taping using both hands. Make <b>3 windings</b> of tape then cut the tape. Press the <b>SW button</b> after taping. <b>GO</b> sound will be heard.</div> <div>14. After taping, conduct <b>POINT CHECKING</b> before removing the harness from the jig.</div> |                  | <div></div> <div>1. No loose tape<br/>2. No flip-out tape<br/>3. No peel-off tape<br/>4. No wrong use of tape<br/>5. No wrong use of clamp<br/>6. No missing clamp</div> <div><b>Important reminders/Note/s:</b><br/>1. <i>Must be no gap between terminal and stopper jig.</i><br/>2. <i>Make 2-3 windings for clamp taping</i></div> <div></div> |

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**WORK INSTRUCTION**

Process Name/Title:

**CLAMP ASSEMBLY PROCESS**

Effectivity Date:

**October 17, 2024**

Validity Date:

n/a

Model code/Part number:

**840B / 7N0120-7021**Customer: **TRJ**Car Model: **TOYOTA-SIENTA**

Document No.:

**WI-ENG-PDE-1001**

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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**PARTS:**

1. Assy part

JIG:

n/a

**VISUAL INSPECTION/ QUALITY CHECKPOINTS****CLAMP ASSY****7N0120-7021****① No Wrong Facing of Clamp****② ③ No Missing Tape ( Black Tape )**

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