
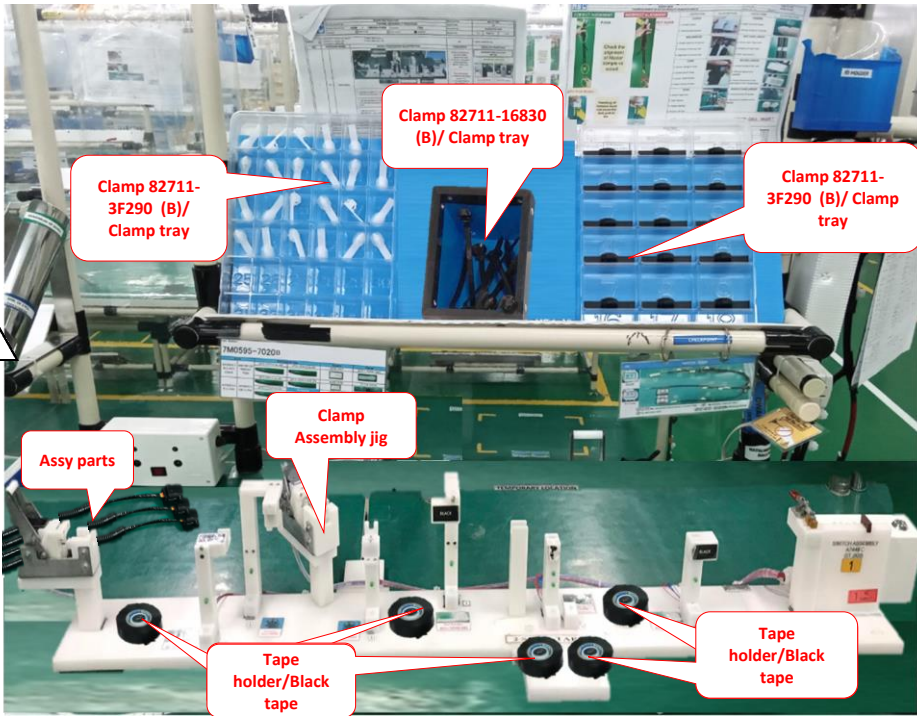

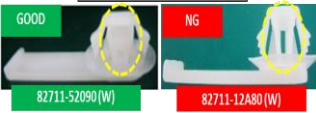
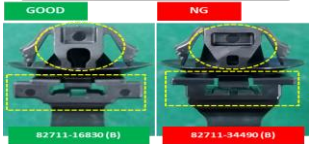
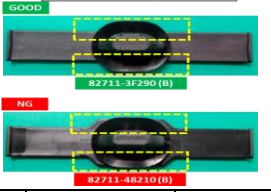






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|---|---|--|-----------------|--------------------------------|-------------------|--|--------------------|------------------|
|  | WORK INSTRUCTION | | | | Effectivity Date: | | September 20, 2023 | |
| | Process Name/Title: CLAMP ASSEMBLY PROCESS | | | | Validity Date: | | n/a | |
| | Model code/Part number: 420B/440B / A7448C | | Customer: TRQSS | Car Model: TOYOTA-LAND CRUISER | Document No.: | | WI-ENG-PDE-736 | |
| | Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO | | | | Revision No.: | | 1 | Page No.: 1 of 8 |

| | | | | | | | |
|--------|--------------|--|--|--|--|---|--|
| PARTS: | | 1. Assy parts; Clamp 82711-52090 (W) [3pcs]; Clamp 82711-16830 (B);Clamp 82711-3F290 (B); Black tape [5pcs] | | JIG: | | 1. Clamp Assembly jig | |
| NO. | PROCESS NAME | 1 WORK PROCEDURE/ ILLUSTRATION | | TOOLS/PPE | | QUALITY POINTERS | |
| 1 | n/a | <div>Table lay-out</div>  | | <div>Safety Instruction Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</div> <div>Housekeeping 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.</div> <div>Alert level For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</div> <div>MEASURING TAPE </div> | | <div>1. No missing parts/tools 2. No excess part/tools</div> <div>Important reminders/Note/s: 1. Please check the clamp before start of assembly to avoid wrong use of clamp</div> <div>CLAMP ILLUSTRATION  BAND CLAMP ILLUSTRATION  CLAMP ILLUSTRATION </div> | |

| | | | | | | | | | | | | | | | | | | | |
|------------------|---------|---|--|--|--|--|--|-------------|------------|---------------|-----------|---|--|---|--|---|--|---|--|
| Revision History | | | | | | | | Prepared by | | Reviewed by | | Approved by | | Noted by | | | | | |
| 09/20/2023 | 1 | Change Purpose from Pre-launch to Masspro. Additional table lay-out | | | | | | M. Ariola | J. Loterte | C. Villanueva | A. Arañes |  | |  | |  | |  | |
| 09/15/2023 | 0 | Initial Issue. | | | | | | M. Ariola | J. Loterte | C. Villanueva | A. Arañes | M. Ariola | | J. Loterte | | C. Villanueva | | A. Arañes | |
| Eff. Date | Rev. No | Details of Change | | | | | | Revised | Reviewed | Approved | Noted | Est. Date: | | September 15, 2023 | | | | | |

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| PARTS: | 1. Clamp 82711-52090 (W) [3pcs] 2. Clamp 82711-16830 (B) [2pcs] | 1. Clamp 82711-3F290 (B) 2. Black tape [5pcs] | JIG: | 1. Clamp Assembly jig |
|---------------|--|---|-----------|--|
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
| 2 | n/a Clamp assembly | <div data-bbox="562 395 1704 898"></div> <div data-bbox="577 906 1061 1037">1. Get 2 pcs. of clamp 82711-52090 (W) using both hands then insert to clamp location 3 and 4 using both hands.</div> <div data-bbox="577 1050 1061 1174">3. Get 2pcs. of clamp 82711-16830 (B) using both hands then insert to clamp location 1 and 2 using both hands.</div> <div data-bbox="1191 882 1675 997">2. Get 1pc. of clamp 82711-52090 (W) using both hands then insert to clamp location 7 using both hands.</div> <div data-bbox="1191 1034 1675 1147">4. Get 1pc. of clamp 82711-3F290 (B) using both hands then insert to clamp location 5 and 6 using both hands.</div> <div data-bbox="940 1189 1408 1316">5. Get the Black tape then initially attach to clamp location 3, 4, 5, 6 and 7 using both hands.</div> | | <div data-bbox="1733 438 1971 534">1. No wrong use of parts 2. No wrong use of tape 3. No damaged clamp 4. No wrong clamp position</div> <div data-bbox="1749 571 2110 671">Important reminders/Note/s: 1. Please check the clamp before start of assembly to avoid wrong use of clamp</div> <div data-bbox="1733 719 2101 1326"><p>CLAMP ILLUSTRATION</p><p>GOOD: 82711-52090 (W) NG: 82711-12A80 (W)</p><p>BAND CLAMP ILLUSTRATION</p><p>GOOD: 82711-16830 (B) NG: 82711-34490 (B)</p><p>CLAMP ILLUSTRATION</p><p>GOOD: 82711-3F290 (B) NG: 82711-48210 (B)</p></div> |

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|--------|--------------|---|--|---|-----------------------|
| PARTS: | | 1. Assy parts 2. Black tape [5pcs] | | JIG: | 1. Clamp Assembly jig |
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | | TOOLS/PPE | QUALITY POINTERS |
| 2 | n/a | Clamp assembly (Continuation) | | | |
| | | <div><div></div><div><p>1. Get the assy parts and set into jig. (<i>See above picture for correct setting of harness</i>). First, set the connector 6189-1161 (B) to Checker 1 then pull the checker fixture for continuity checking. Second, set the connector 6188-0093 (B) 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.</p><p>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.</p><p>3. Initially tighten the band clamp on clamp location 1 and 2 using both hands.</p><p>4. Get the bando gun using right hand then cut the band clamp on location 1 using both hands. Press the SW button after cut. Continue the process if sequence light on clamp location 2 was ON.</p><p>5. 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.</p></div></div> <div><div><div><div></div><div></div></div><div></div><div><div></div><div><p>Note: Setting of band clamp cutter depends on the size of the COT/SV tube (Vinyl) - 1~2, ø7 - 3~4</p></div></div></div></div> | | <div><p>1. No wrong use of parts 2. No wrong use of tape 3. No damaged clamp 4. No wrong clamp position</p><p>Important reminder/Note/s:</p><p>1. <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></p></div> | |

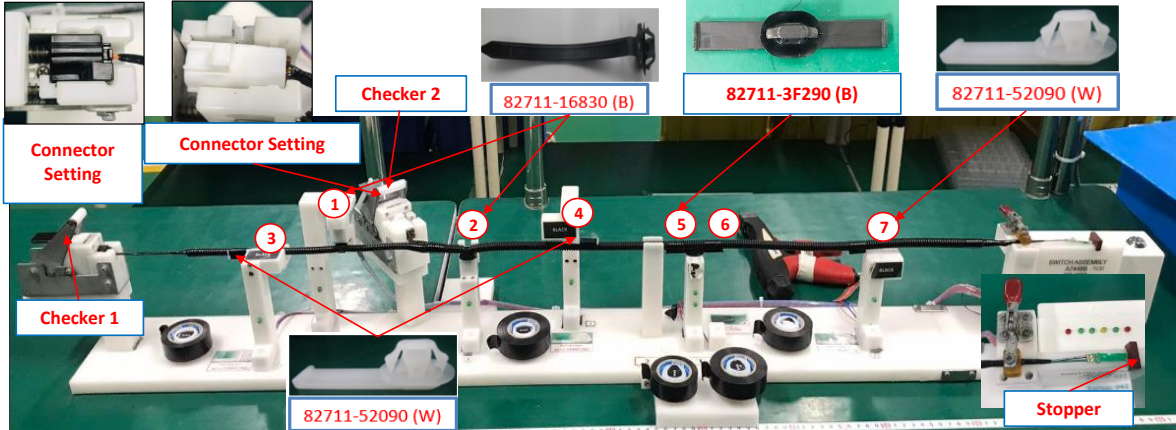

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| | Process Name/Title: CLAMP ASSEMBLY PROCESS | | | | Validity Date: | n/a | | |
| | Model code/Part number: 420B/440B / A7448C | | Customer: TRQSS | Car Model: TOYOTA-LAND CRUISER | Document No.: | WI-ENG-PDE-736 | | |
| | Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO | | | | Revision No.: | 1 | Page No.: | 4 of 8 |

| | | | | |
|---------------|---------------|--|------|-----------------------|
| PARTS: | 1. Assy parts | | JIG: | 1. Clamp Assembly jig |
|---------------|---------------|--|------|-----------------------|

| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
|-----|--------------|---|-----------|--|
| 2 | n/a | <div>  </div> <div> <p>6. Hold the tape on clamp location 3, 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 4 was ON.</p> <p>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.</p> <p>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.</p> <p>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. Continue the process if sequence light on clamp location 7 was ON.</p> <p>10. Hold the tape on clamp location 7, make 3 windings of tape then cut the tape using both hands. Press the SW button after taping. Go sound will be heard.</p> <p>11. After taping, CONDUCT POINT CHECKING before removing the harness from jig.</p> </div> | | <div>  <p>Important reminders/Note/s: 1. Make sure no gap between stopper jig and PCB</p> </div> <div> <p>1. No wrong use of parts 2. No wrong use of tape 3. No damaged clamp 4. No wrong clamp position</p> </div> |

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420B/440B / A7448C

Customer:

TRQSSCar Model: **TOYOTA-LAND CRUISER**

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| | | | | |
|--------|---------------|---|-----------|------------------|
| PARTS: | 1. Assy parts | | JIG: | n/a |
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
| 3 | n/a | <div>Visual/By two's inspection</div> <div><div><div>ASSEMBLED PARTS</div><div>MASTER SAMPLE</div></div><div><div><div>3. Check alignment of harness (Master sample vs. assembled parts) using both hands</div></div><div><div><div>2. Check the connector lock condition, insertion and taping condition.</div><div>3. Check the connector lock condition, insertion.</div><div>4. Check the presence of all clamp attachment and band clamp cut and taping condition.</div></div></div></div></div> <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>82711-16830 (B)</div></div><div><div>NG</div><div>82711-34490 (B)</div></div></div><div><div>Important reminder/Note/s:</div><div>1. Using steel rule, check if the band cut measurement is within the required dimension and should not exceed the allowable range (0~2mm).</div></div></div> | | |

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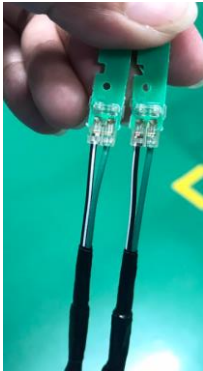

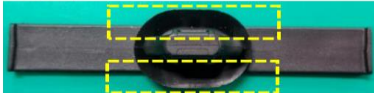

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| PARTS: | 1. Master sample 2. Assembled parts | | JIG: | n/a |
|---------------|--|---|-----------|---|
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
| 3 | n/a Visual/By two's inspection (Continuation) |  <p data-bbox="1451 592 1637 619">ACTUAL PRODUCT</p>  <p data-bbox="580 874 929 963">5. Check the presence of clamp and taping condition. Conduct slightly bending of parts with Wing-type clamp.</p>  <p data-bbox="967 1018 1167 1062">6. Check the Y-taping condition.</p>  <p data-bbox="1464 746 1682 815">7. Check the taping condition from COT to Black SV tube (Vinyl)</p>  <p data-bbox="936 1171 1153 1262">8. Check the taping condition from Black SV tube (Vinyl) to wire near PCB.</p>  <p data-bbox="1473 1118 1659 1163">9. Check the appearance of PCB</p> | | <p data-bbox="1818 501 2011 523">MASTER SAMPLE</p>  <p data-bbox="1727 842 2056 865">1. No skip checking during inspection</p> <p data-bbox="1856 911 2016 927">CLAMP ILLUSTRATION</p> <p data-bbox="1742 935 1798 948">GOOD</p>  <p data-bbox="1861 1050 1995 1066">82711-3F290 (B)</p> <p data-bbox="1742 1086 1787 1099">NG</p>  <p data-bbox="1861 1201 1995 1217">82711-48210 (B)</p> |

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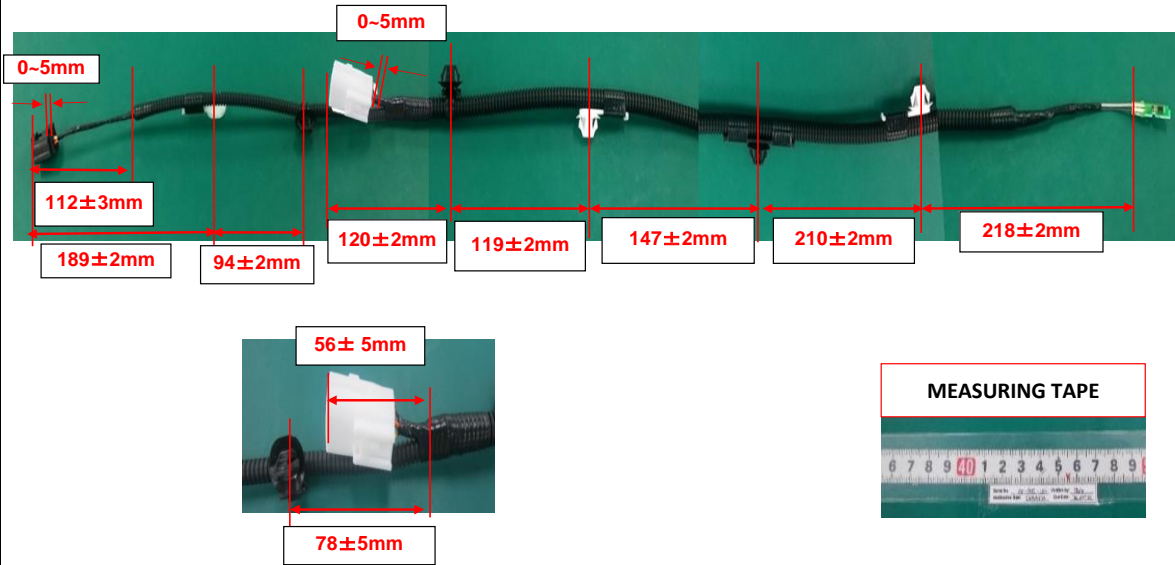

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| | | | | |
|--------|--------------|------------------------------|--|---|
| PARTS: | n/a | | JIG: | n/a |
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
| 4 | n/a | Measurement | <div></div> | <div><div>MEASURING TAPE</div></div> <div><p>Important reminders/Note/s:</p><p>1. For Hatsumono and Owarimono only</p><p>2. Please use calibrated/verified measuring tape when getting the measurement.</p><p>1. No wrong dimension</p></div> |

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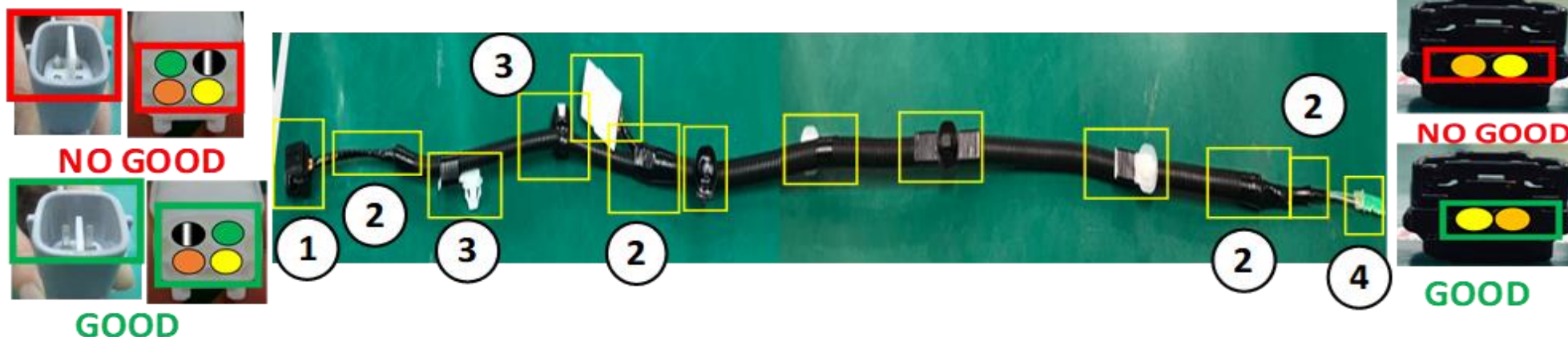
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PARTS:

n/a

JIG:

n/a

QUALITY CHECKPOINTS**CLAMP
ASSY****A7448C**

- ① No **WRONG INSERT**
No **UNLOCKED/HALFLOCKED**
No **TERMINAL BACKING OUT**

- ② No **MISSING TAPE**

- ③ No **MISSING CLAMP**

- ④ No **DEFORMED TERMINAL/PCB**

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