



WORK INSTRUCTION

Process Name/Title:

CLAMP ASSEMBLY PROCESS

Effectivity Date:

November 30, 2023

Model code/Part number:

382D / 7N0186-7020B

Customer: TRJ

Car Model: TOYOTA-CAMRY

Validity Date:

n/a

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Document No.:

WI-ENG-PDE-768

Revision No.:

1

Page No.:

1 of 8

| | | | | | | | |
|--------|--------------|---|--|--|------|--|---|
| PARTS: | | 1. Assy parts 2.Clamp 82711-48210 (B) 3.Clamp 82711-52090 (W) | 4.Clamp 82711-3A540 (W) 5.Clamp 82711-60640 (B) 6.Clamp 82711-33650 (B) | 7. Clamp 882711-34490 (B) 8. Black tape [5pc] 9. Blue tape [1pc] | JIG: | 1. Bando gun 2. Clamp assembly jig | |
| NO. | PROCESS NAME | | WORK PROCEDURE/ ILLUSTRATION | | | TOOLS/PPE | QUALITY POINTERS |
| 1 | P2 | TABLE LAY-OUT | <div>TABLE LAY-OUT</div> <div><div>Clamp 82711-33650 (B)</div><div>Clamp 82711-48210 (B)</div><div>Clamp 82711-60640 (B)</div><div>Clamp 82711-3A540 (W)</div><div>Clamp 82711-52090 (W)</div><div>Clamp Assembly jig</div><div>Assy parts</div><div>Clamp 882711-34490 (B)</div><div>Black tape with tape holder</div><div>Blue tape with tape holder</div><div>Bando Gun</div></div> | | | <div><div>Safety Instruction Be sure to wear required 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> | 1. No missing parts/tools 2. No excess parts/tools |

Revision History

| Eff. Date | Rev. No | Details of Change | Revised | Reviewed | Approved | Noted | Prepared by | Reviewed by | Approved by | Noted by |
|-----------|---------|---|-------------|--------------|-----------|-------|-------------|-------------------|-------------|----------|
| | | | | | | | | | | |
| 11/30/23 | 1 | Correction in Quality pointers in Connector from "2 connector change to 1 connector". | A.Hernandez | C.Villanueva | A. Arañes | n/a | A.Hernandez | C.Villanueva | A. Arañes | n/a |
| 11/24/23 | 0 | Initial issue | A.Hernandez | C.Villanueva | A. Arañes | n/a | A.Hernandez | C.Villanueva | A. Arañes | n/a |
| Eff. Date | Rev. No | Details of Change | Revised | Reviewed | Approved | Noted | Est. Date: | November 24, 2023 | | |

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:

CLAMP ASSEMBLY PROCESS

Effectivity Date:

November 30, 2023

Validity Date:

n/a

Model code/Part number:

382D / 7N0186-7020B

Customer: TRJ

Car Model: TOYOTA-CAMRY

Document No.:

WI-ENG-PDE-768

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Revision No.:

1

Page No.:

2 of 8

| PARTS: | | 1. Assy parts 2.Clamp 82711-48210 (B) 3.Clamp 82711-52090 (W) | 4.Clamp 82711-3A540 (W) 5.Clamp 82711-60640 (B) 6.Clamp 82711-33650 (B) | 7. Clamp 882711-34490 (B) 8. Black tape [5pc] 9. Blue tape [1pc] | JIG: | 1. Temporary jig 2. Bando Gun |
|--------|--------------|---|---|--|-----------|---|
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | | | TOOLS/PPE | QUALITY POINTERS |
| 2 | P2 | Clamp Setting | | | | <div>1. No wrong use of parts 2. No wrong use of tape 3. No damaged clamp 4. No wrong clamp position</div> <div>Important reminders/Note/s: 1. Please check the Clamp first before start of assembly to avoid wrong use of clamp.</div> <div>One side tape under clamp </div> <div>CLAMP ILLUSTRATION </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>4. Get 1pc. of clamp 82711-60640 (B) using right hand and set to clamp location 4 using both hands.</div> <div>5. Get 1pc. of clamp 82711-48210 (B) using right hand and set to clamp location 5 and 6 using both hands.</div> <div>6. Get 1pc. of clamp 82711-33650 (B) using right hand and set to clamp location 7 using both hands.</div> <div>7. Initially attach Blue tape to clamp location 3 using both hands and Black tape to clamp location 2,4,5,6 and 7 using both hands.</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:

CLAMP ASSEMBLY PROCESS

Effectivity Date:

November 30, 2023

Model code/Part number:

382D / 7N0186-7020B

Customer: TRJ

Car Model: TOYOTA-CAMRY

Validity Date:

n/a

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Document No.:

WI-ENG-PDE-768

Revision No.:

1

Page No.:

3 of 8

| | | | | | | | |
|--------|--------------|--|---|------|----------------------------------|------------------|--|
| PARTS: | | 1. Assy Parts 2. Black tape [5pc] 3. Blue tape [1pc] | | JIG: | 1. Temporary jig 2. Bando Gun | | |
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | | | TOOLS/PPE | QUALITY POINTERS | |
| 3 | P2 | Clamp Assembly | <div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div> <div><div><p>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 B-B wires together within stopper then press by toggle clamp.</p><p>2. Check if all LED light for POWER and CLAMP ON was ON. If encountered abnormality, STOP and immediately CALL the attention of the leader. WAIT for further instruction and continue the process. Continue if the sequence light in location 1 is ON.</p><p>3. Initially tighten the band clamp on location 1 using both hands. Continue to clamp location 2.</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></div><div><div></div><div></div><div><p>Note: Setting of band clamp cutter depends on the size of the COT/Vinyl tube. For: ø5 - 1~2, ø7 - 3~4</p></div><div></div><div></div></div></div> <td><div></div></td> <td><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><i>Important reminders/Note/s:</i></p><p>1. Please check the Clamp first before start of assembly to avoid wrong use of clamp.</p><div></div><div><p>BANDO GUN ILLUSTRATION</p><div></div><div></div></div><div></div></div></td> | | | <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><i>Important reminders/Note/s:</i></p><p>1. Please check the Clamp first before start of assembly to avoid wrong use of clamp.</p><div></div><div><p>BANDO GUN ILLUSTRATION</p><div></div><div></div></div><div></div></div> |



No gap between stopper and terminals



BANDO GUN ILLUSTRATION

GOOD NG

FLAT NOSEPIECE EXTENDED NOSEPIECE



BANDO GUN

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

CLAMP ASSEMBLY PROCESS

Process Name/Title:

Model code/Part number:

382D / 7N0186-7020B

Customer:

TRJ

Car Model:

TOYOTA-CAMRY

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Effectivity Date:

November 30, 2023

Validity Date:

n/a

Document No.:

WI-ENG-PDE-768

Revision No.:

1

Page No.:

4 of 8

PARTS:

1. Assy Parts
2. Black tape [5pc]
3. Blue tape [1pc]

JIG:

1. Temporary jig
2. Bando Gun

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

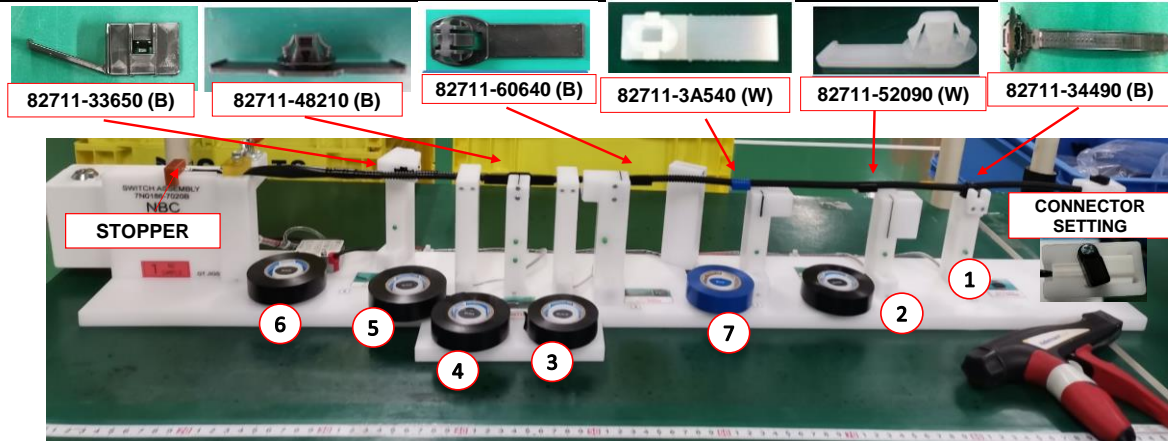
TOOLS/PPE

QUALITY POINTERS

3

P2

Clamp Assembly
(Continuation)



5. Hold the tape on clamp location **2**, make **3 windings** of tape then cut the tape using both hands. Press the SW button after cut

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 cut.

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 cut.

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 cut.

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 cut.

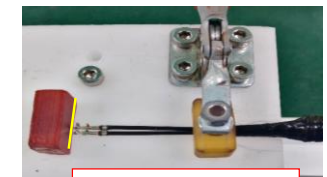
10. Hold the **BLUE** tape on clamp location **7**, make **3 windings** of tape then cut the tape using both hands. Press the SW button after cut.

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

1. No wrong use of parts
2. No wrong use of tape
3. No damaged clamp
4. No wrong clamp position

Important reminders/Note/s:

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



No gap between stopper and terminals

BANDO GUN



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

CLAMP ASSEMBLY PROCESS

Effectivity Date:

November 30, 2023

Process Name/Title:

Model code/Part number:

382D / 7N0186-7020B

Customer: TRJ

Car Model: TOYOTA-CAMRY

Validity Date:

n/a

Document No.:

WI-ENG-PDE-768

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH


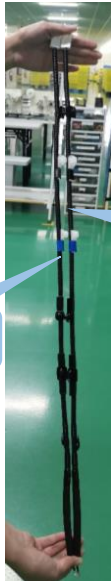










☒ MASSPRO

Revision No.:

1

Page No.:

5 of 8

| | | | | | |
|--------|--------------|---|--|---|------------------|
| PARTS: | | 1. Assy parts 2. Master sample | | JIG: | n/a |
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | | TOOLS/PPE | QUALITY POINTERS |
| 4 | P2 | <div><div><p>ACTUAL PRODUCT</p></div><div><div><p>Assembled parts</p></div><div><div><p>Master sample</p></div><div></div><div></div><div><div><p>2. Check the connector lock condition, insertion, terminal and taping condition.</p></div></div><div><div></div><div></div><div></div><div></div><div></div></div><div><div><p>1. Conduct alignment of harness (Master sample vs. Assembled parts) using both hands.</p></div><div></div><div><div><p>3. Check the presence of clamp attachment, taping condition and color of tape.</p></div></div></div></div></div></div> | | <div><p>1. No skip checking during inspection.</p><div>MASTER SAMPLE</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:

CLAMP ASSEMBLY PROCESS

Effectivity Date:

November 30, 2023

Validity Date:

n/a

Model code/Part number:

382D / 7N0186-7020BCustomer: **TRJ**Car Model: **TOYOTA-CAMRY**

Document No.:

WI-ENG-PDE-768

Purpose:





☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

6 of 8

| PARTS: | 1. Assy parts 2. Master sample | | JIG: | n/a |
|---------------|--|---|-----------|---|
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS |
| 4 | P2 Visual/By Two's Inspection (Continuation) |  <div>ACTUAL PRODUCT</div>  <div>4. Check the Taping condition. Conduct slightly bending to avoid overlook of missing tape.</div>  <div>5. Check the terminal. Must no deformed terminal.</div> | | 1. No skip checking during inspection. <div>MASTER SAMPLE</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:

CLAMP ASSEMBLY PROCESS

Effectivity Date:

November 30, 2023

Validity Date:

n/a

Model code/Part number:

382D / 7N0186-7020BCustomer: **TRJ**Car Model: **TOYOTA-CAMRY**

Document No.:

WI-ENG-PDE-768

Purpose:

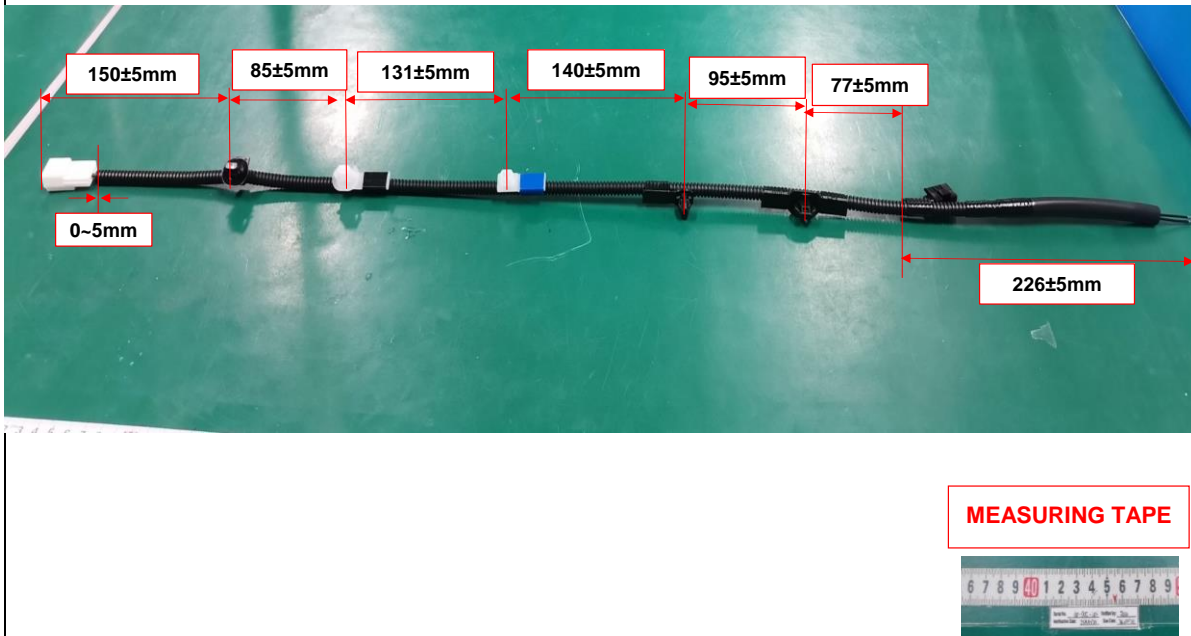
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

7 of 8

| PARTS: | | n/a | | JIG: | n/a |
|--------|--------------|------------------------------|---|-----------|---|
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | | TOOLS/PPE | QUALITY POINTERS |
| 5 | P2 | Measurement |  | | <p>1. No wrong dimension</p> <p>Important reminders/Note/s:</p> <p>1. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>2. For Hatsumono and Owarimono.</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:

CLAMP ASSEMBLY PROCESS

Effectivity Date:

November 30, 2023

Validity Date:

n/a

Model code/Part number:

382D / 7N0186-7020B

Customer: TRJ

Car Model: TOYOTA-CAMRY

Document No.:

WI-ENG-PDE-768

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Revision No.:

1

Page No.:

8 of 8

PARTS:

n/a

JIG:

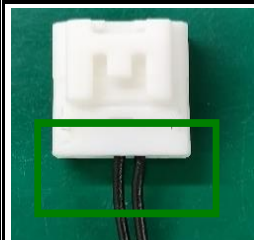
n/a



QUALITY CHECKPOINTS

P2

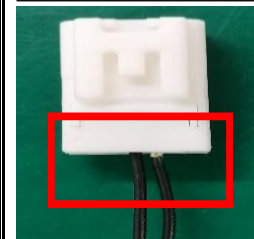
7N0186-7020B



GOOD



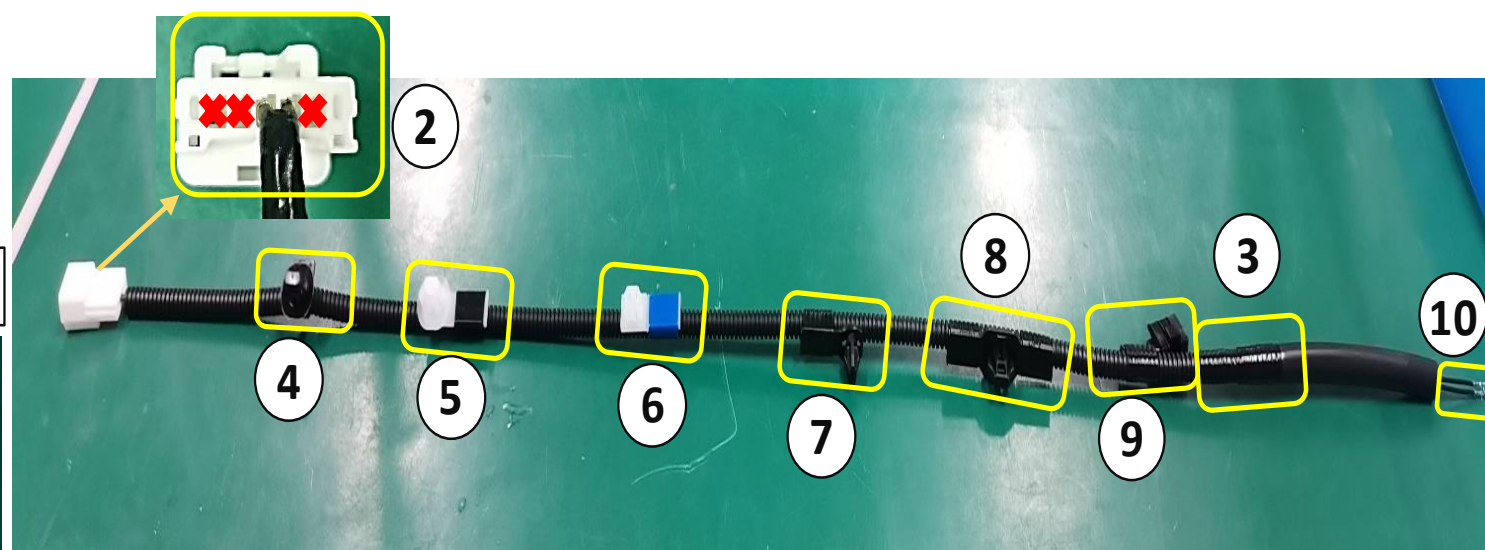
GOOD



NO GOOD



NO GOOD



1 No Unlock/Halflock Connector (on 1 connector)

2 No Wrong Insert (on 2)

3 No Missing Tape

4 5 6 No Missing of Clamp

7 8 9

10 No Deformed Terminal

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