



WORK INSTRUCTION

Effectivity Date:

April 20, 2024

Process Name/Title:

TAPING ASSEMBLY PROCESS

Validity Date:

n/a

Model code/Part number:

420/440 / A7446C

Customer:

TRQSS

Car Model: TOYOTA-LAND CRUISER

Document No.:

WI-ENG-PDE-872B

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

1 of 8

PARTS:

1. Assy parts; Black tape

JIG:

1. Insertion jig
2. Terminal cover jig
3. Locking jig

NO.

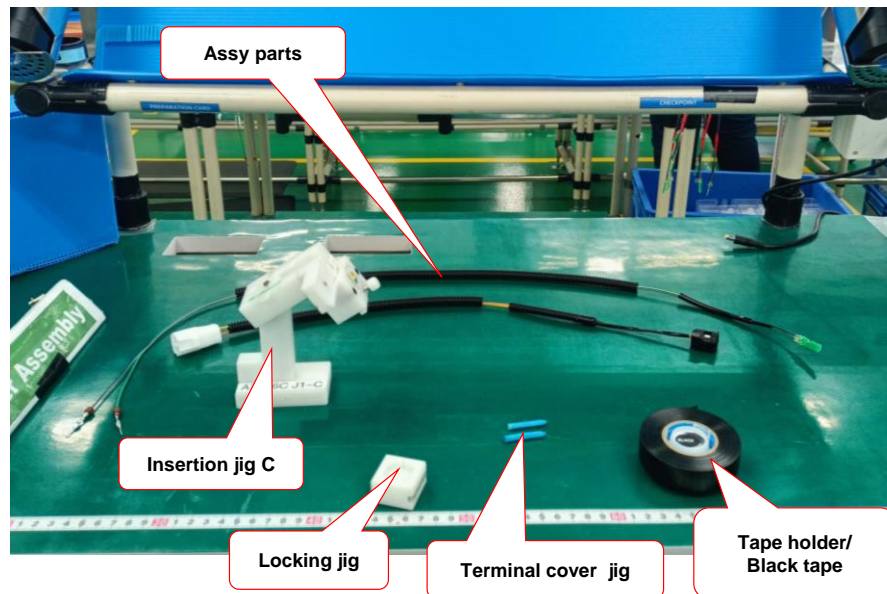
PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

TABLE LAY-OUT



Safety Instruction

Be sure to wear prescribed 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 missing parts/tools
2. No excess parts/tools


Revision History

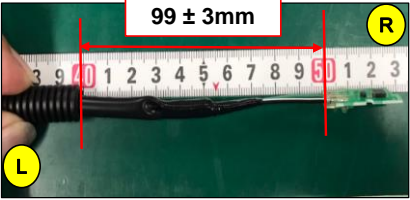
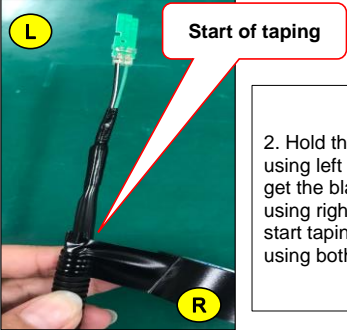
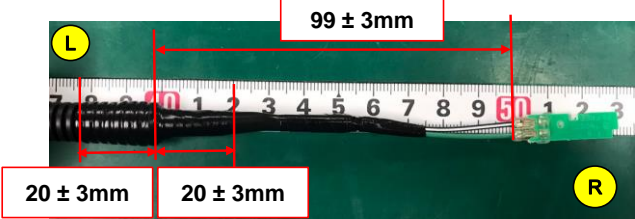

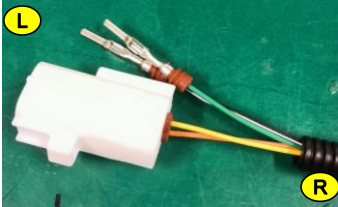

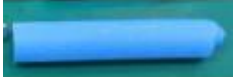
| Eff. Date | Rev. No | Details of Change | Revised | Reviewed | Approved | Noted | Prepared by | Reviewed by | Approved by | Noted by |
|-----------|---------|--|------------|---------------|-----------|-------|-------------|---------------|-------------|----------|
| 04/20/24 | 1 | Change from Pre-launch to Masspro. Correct the process sequence. Update the measurement. Inclusion of Table lay-out. | D.Castillo | C. Villanueva | A. Arañes | n/a | D. Castillo | C. Villanueva | A. Arañes | n/a |
| 04/16/24 | 0 | Initial Issue. | D.Castillo | C. Villanueva | A. Arañes | n/a | | | | |

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| | Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO | | | | Revision No.: | 1 | Page No.: | 2 of 8 |

| | | | | | |
|---------------|---|--|--|--|---|
| PARTS: | 1. Assy parts 2. Black tape | | | JIG: | 1. Terminal cover jig |
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | | TOOLS/PPE | QUALITY POINTERS |
| 2 | P2 Taping 1 Black Corrugated tube to Black SV tube (Vinyl) | <div><p>1. Measure from end of Black Corrugated tube (No slit) up to Hotmelted wires (G-B/W wires) 99±3mm using both hands.</p></div> <div><p>2. Hold the assy parts using left hand, then get the black tape using right hand then start taping process using both hands.</p></div> <div><p>3. After taping, check the measurement and taping condition.</p></div> | | <div>MEASURING TAPE</div>  | Important reminders/Note/s: 1. Please use calibrated/verified measuring tape when getting the measurement. Document references: 1. Refer to WI-PRO-ASY-001 for Taping process 1. No flip-out tape 2. No peel-of tape 3. No loose tape 4. No missing tape 5. No wrong use of tape 6. No wrong dimension |
| 3 | 1 Wire insertion to Black corrugated tube (Assy parts) | <div></div> <p>1. Get the terminal cover jig then insert to both terminals (Hotmelted wires G-B/W) using both hands. Hold the assy parts using left hand then insert the G-B/W wires using right hand.</p> | | <div>TERMINAL COVER JIG</div>  | 1. No wrong usage of parts 2. No deformed terminal |

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☐ PROTOTYPE

☐ PRE-LAUNCH

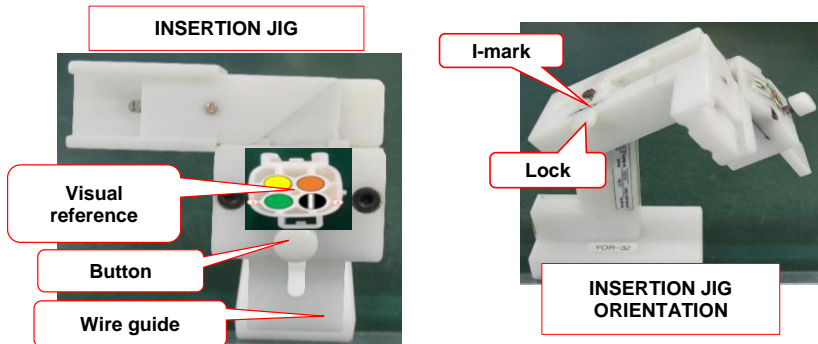

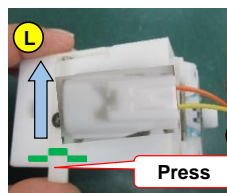
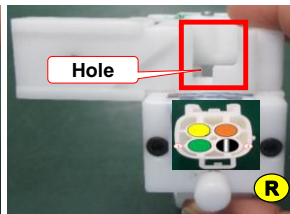
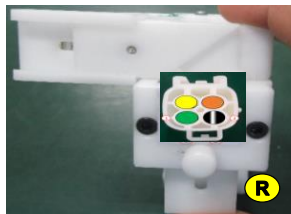
☒ MASSPRO

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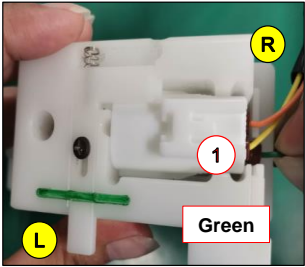
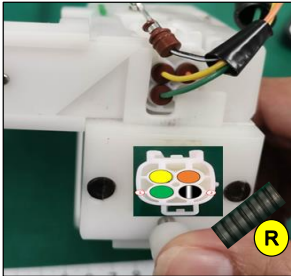
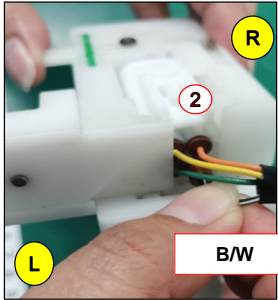
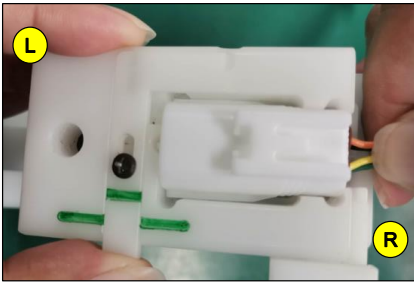
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|--------|--|---|--|-----------|--|
| PARTS: | | 1. Assy parts | | JIG: | 1. Insertion jig |
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | | TOOLS/PPE | QUALITY POINTERS |
| 4 | P2 Connector setting to insertion jig 6189-0093 (W) | <div><div><div>INSERTION JIG</div><div></div></div><div><div></div><div><p>1. Push the lower wire guide upward using right thumb. Slot for Green wire will be opened.</p><p>2. Press the lock using left thumb.</p><p>1. Push the wire guide upward using right hand. Slot for Green wire will be opened.</p></div></div></div> | | n/a | 1. Use the provided jig per model 2. No wrong orientation of connector 3. No wrong use of connector 4. No damaged connector |

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| PARTS: | 1. Assy parts | | | JIG: | 1. Insertion jig |
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | TOOLS/PPE | QUALITY POINTERS | |
| 5 | P2 | <div>Wire insertion to connector 6189-0093 (W)</div> <div><p>WIRE FACING</p><p>1 Hold the Green wire then insert to terminal slot 1 using right hand.</p><p>2. Press the button using right thumb. The slot for B/W wire will be opened.</p><p>3. Hold the B/W wire then insert to terminal slot 2 using right hand.</p><p>4. After insertion, push the lock using left thumb then hold the wires and gently pull out the connector from jig using right hand.</p></div> <td>n/a</td> <td><div>1. No wrong insertion of wires 2. No loose insertion 3. No wrong insertion 4. One by one insertion 5. No deformed terminal 6. No wrong wire facing</div><div>Important reminders/Note/s: 1. Please hold the wire near terminal. 2. Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.</div><div>Document reference/s: 1. Please refer to GL-PRO-ASY-029 for Pull-Push procedure.</div></td> | n/a | <div>1. No wrong insertion of wires 2. No loose insertion 3. No wrong insertion 4. One by one insertion 5. No deformed terminal 6. No wrong wire facing</div> <div>Important reminders/Note/s: 1. Please hold the wire near terminal. 2. Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.</div> <div>Document reference/s: 1. Please refer to GL-PRO-ASY-029 for Pull-Push procedure.</div> | |



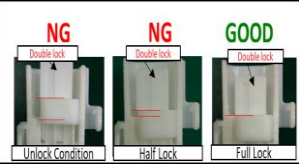


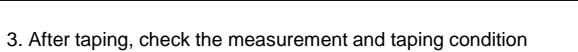
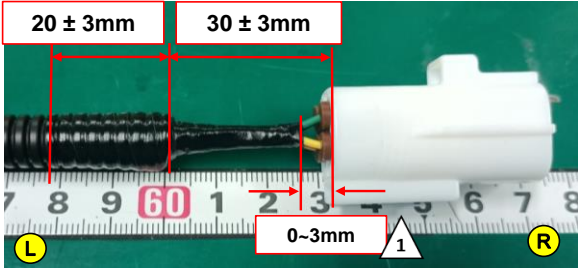
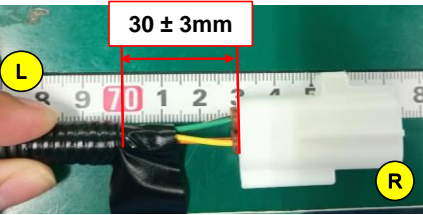
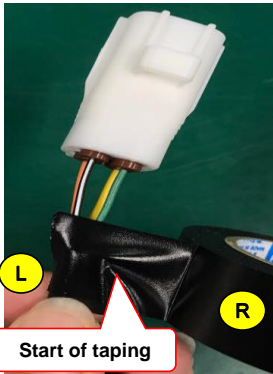

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|---------------|---|---|--|---|---|
| PARTS: | 1. Assy parts 2. Black tape | | | JIG: | 1. Locking jig |
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | | TOOLS/PPE | QUALITY POINTERS |
| 6 | Connector lock | <div></div> <div>1. Put the connector into locking jig using both hands and then press 2x. Check the connector lock if properly lock.</div> | | <div>LOCKING JIG</div>  | 1. Use provided locking jig per model. 2. No unlock/half-locked connector Document reference/s: 1. Please refer to GL-PRO-ASY-029 for Pull-Push procedure. |
| 7 | P2 Taping 4 Black SV tube (Vinyl) to wire near connector | <div></div> <div>2. Measure from end of the corrugated tube up to connector 30±3mm then continue the taping process using both hands.</div> <div>1. Hold the corrugated tube using left hand, get the Black tape using right hand then start pre-taping using both hands.</div> <div>3. After taping, check the measurement and taping condition</div> | | <div>MEASURING TAPE</div>  | 1. No flip-out tape 2. No peel-of tape 3. No loose tape 4. No missing tape 5. No wrong use of tape 6. No wrong dimension Important reminders/Note/s: 1. Please use calibrated and verified measuring tape when getting the measurement. Document references: 1. Refer to WI-PRO-ASY-001 for Taping process |

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|--------|--------------|--------------------------------|-----------------------------------|---------------------------------------|--|
| PARTS: | | 1. Assy parts 2. Black tape | | JIG: | n/a |
| NO. | PROCESS NAME | WORK PROCEDURE/ ILLUSTRATION | | TOOLS/PPE | QUALITY POINTERS |
| 8 | P2 | Y-Taping | <div><div></div><div></div></div> | <div></div> <div>MEASURING TAPE</div> | <div>1. No flip-out tape 2. No peel-of tape 3. No loose tape 4. No missing tape 5. No wrong use of tape 6. No wrong dimension</div> <div>Important reminders/Note/s: 1. Use <u>YELLOW TAPE</u> for easy visualization of shifting lines, but actual should be <u>BLACK TAPE</u>. 2. Please use calibrated/verified measuring tape when getting the measurement.</div> |

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PARTS:

1. Assy parts

JIG:

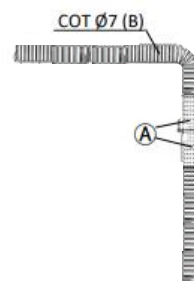
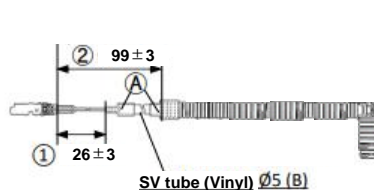
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NO.**PROCESS NAME****WORK PROCEDURE/ ILLUSTRATION****TOOLS/PPE****QUALITY POINTERS**

9

P2

Measurement

**NOTE:**

A - Taping (B)

WIRE TYPE TABLE

| No. | Color | Wire Type |
|-----|-------|-----------|
| 1 | G | AVSS 0.3f |
| 2 | B/W | AVSS 0.3f |
| 3 | Y | AVSS 0.3f |
| 4 | OR | AVSS 0.3f |

MEASURING TAPE**Important reminders and note/s:**

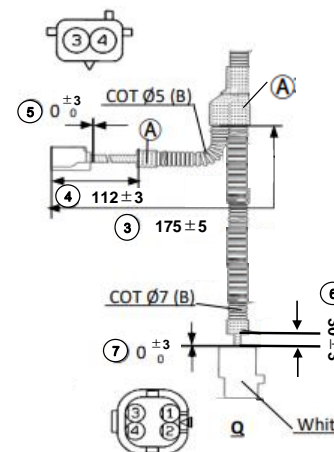
1. Please use calibrated/verified measuring tape when getting the measurement.

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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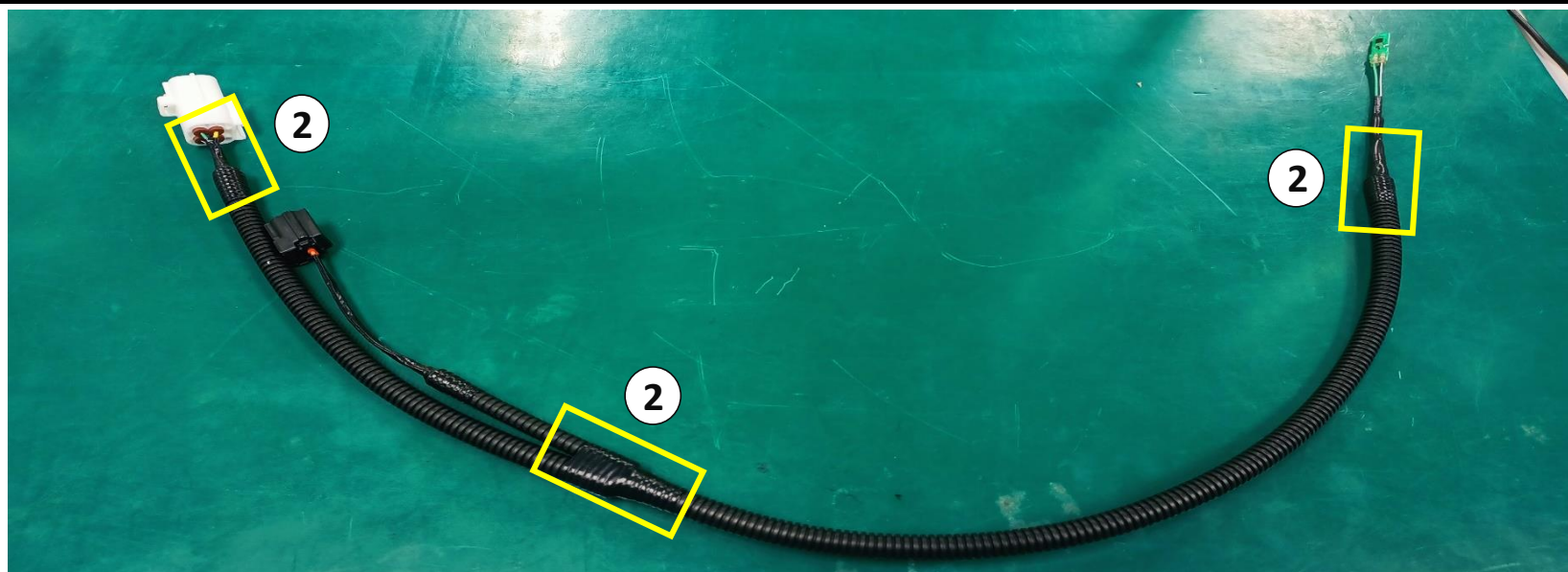
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PARTS:

1. Assy parts

JIG:

n/a

QUALITY CHECKPOINTS**TAPING - P2****A7446C****① No Deformed terminal****② No Missing tape**

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