



WORK INSTRUCTION

Process Name/Title: TAPING ASSEMBLY PROCESS

Effectivity Date:

July 15, 2023

Model code/Part number: 320B / 7L0053-7025

Customer: TRQSS

Car Model: TOYOTA-RAV4

Validity Date:

n/a

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Document No.:

WI-ENG-PDE-139A

Revision No.:

9

Page No.:

1 of 7

PARTS:

9

1. Assy parts; Black tape; Black SV tube (Vinyl) Ø7 L=57±3mm; Black SV tube (Vinyl) Ø7 L=213±3mm; AVSSf 0.3 Y wire L=326±2mm; AVSSf 0.3 OR wire L=326±2mm; Connector 6189-0451 (W); Connector 6188-0066 (GR)

JIG:

1. Insertion jig with and without switch cover
2. Terminal cover jig
3. Locking jig

NO.

PROCESS NAME

9

WORK PROCEDURE/ ILLUSTRATION

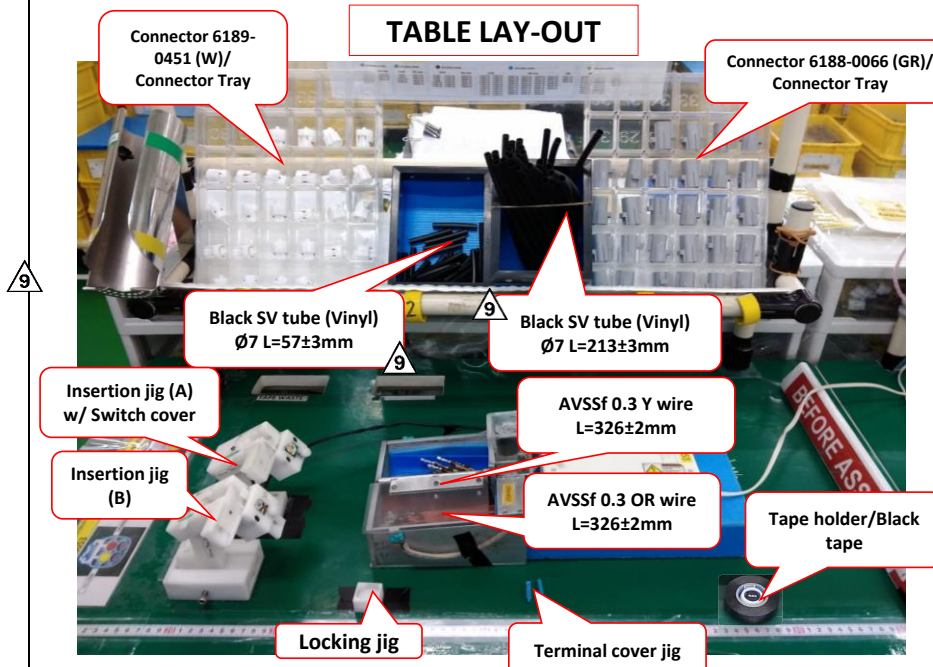
TOOLS/PPE

QUALITY POINTERS

1

P1

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

Document references:

1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance

Revision History

Prepared by

Reviewed by

Approved by

Noted by

07/15/23

9

Excluded process from OFFLINE ASSEMBLY PROCESS to P1. Transferred process no.3-7 to P2 due to new process distribution; Updated template; Inclusion of CAR MODEL "TOYOTA-RAV4"; Update Table lay-out illustration; Standardized tube description: SV tube (Vinyl); Refer to ENGDRR-127 For Document revision request. Remove spot taping process.

M. Ariola

J. Loterte

C.Villanueva

A. Arañes

05/12/23

8

Inclusion of quality checkpoints; improve the important reminders/note/s and document references

J. Loterte

C.Villanueva

A. Arañes

n/a

01/15/22

7

Change part number from 7L0053-7024 to 7L0054-7025 due to change of PCB from 2 chip (61C619-0002) to 1 chip (7N0994-7060); Change wire color from Gray (GR) to Green (G) (Refer to CL-ENG-PDE-020). Improve work procedure and illustration. Additional checkpoint in checking of wire tolerance (Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance).

M. Catapang

J. Loterte

C.Villanueva

A. Arañes

Eff. Date

Rev. No

Details of Change

Revised

Reviewed

Approved

Noted

Est. Date:

July 18, 2018

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☐ PROTOTYPE

☐ PRE-LAUNCH

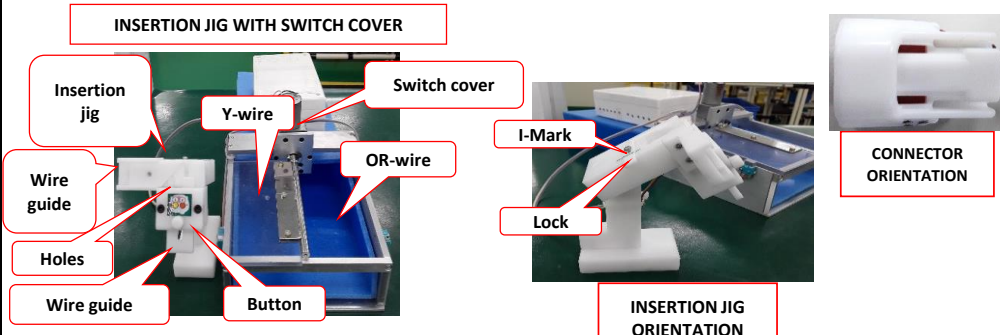
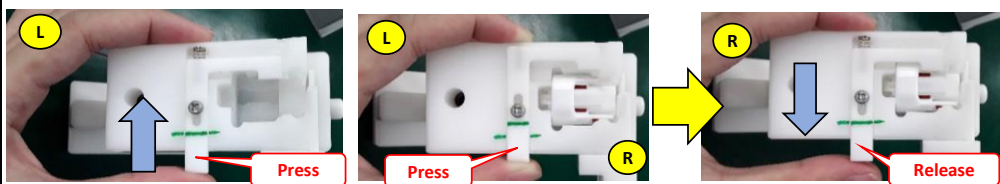
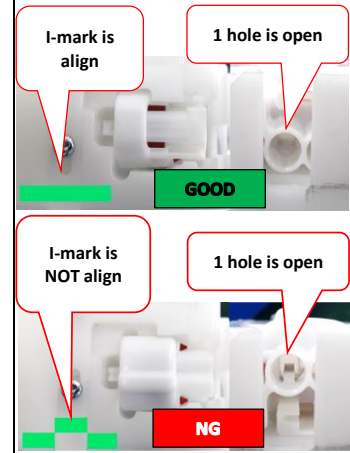
☒ MASSPRO

Revision No.:

9

Page No.:

2 of 7

PARTS:		1. Connector 6189-0451 (W)		JIG	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	P1	<p>Connector setting to insertion jig 6189-0451 (W)</p>  <p>INSERTION JIG ORIENTATION</p>  <p>1. Press the lock of insertion jig using left thumb.</p> <p>2. Insert the connector 6189-0451 (W) into jig using right hand then release the lock using left thumb. Note: Follow the connector orientation.</p> <p>3. Push the guide using right hand. The slot for Yellow wire will be opened.</p>		n/a	<p>Connector Orientation Illustration</p>  <p>1. Use the provided jig per model 2. No wrong orientation of connector 3. No wrong use of connector 4. No damaged connector</p>

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☒ MASSPRO

Revision No.:

9

Page No.:

3 of 7

PARTS:

1. AVSSf 0.3 wires Y L=326±2mm; OR L=326±2mm

JIG

1. Insertion jig with switch cover

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

3

P1

Wire Insertion to
Connector 6189-0451
(W)

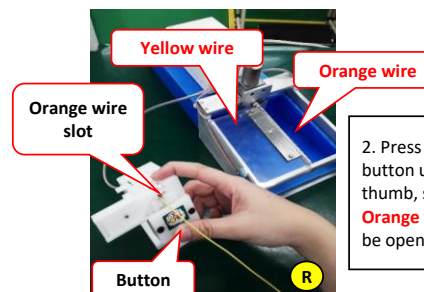


WIRE FACING

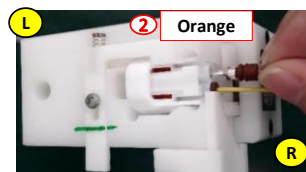


1 Yellow

1. Hold the insertion jig using left hand, get **Yellow wire** and insert to connector slot **1** using right hand.



2. Press the button using right thumb, slot for **Orange wire** will be opened.



2 Orange

3. Hold the insertion jig using left hand, get **Orange wire** and insert to connector slot **2** using right hand.



4. After insertion, push the lock using left thumb and then hold the wires and gently pull out the connector from jig using right hand.

n/a

1. No loose insertion
2. No wrong insertion
3. One by one insertion
4. No deform terminal
5. No wrong wire facing

Important reminders/Note/s:

1. Please hold the wire near terminal during insertion
 2. Make sure wires are properly inserted.
- Conduct Pull-Push-Pull-Push after insertion.
Do not exert extra force.

Document references/:

1. Refer to GL-PRO-ASY-029 for Pull-Push procedure.
2. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance

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☐ PRE-LAUNCH

☒ MASSPRO

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9

Page No.:

4 of 7

PARTS:

9

1. Assy parts
2. Black SV tube (Vinyl) Ø7 L=57±3mm

9

3. Black SV tube (Vinyl) Ø7 L=213±3mm

JIG

1. Locking jig
2. Terminal cover jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

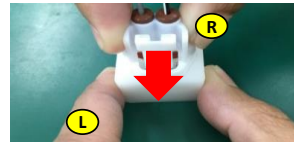
TOOLS/PPE

QUALITY POINTERS

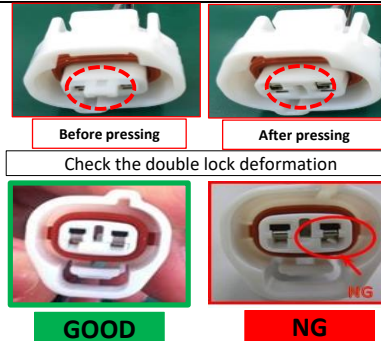
4

9

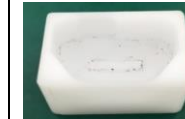
Connector lock



1. Put the connector into locking jig using right hand then press **2x**. Touch the connector lock if properly locked.



LOCKING JIG



1. Use the provided locking jig per model
2. No unlock/half-lock connector

Important reminders/Note/s:

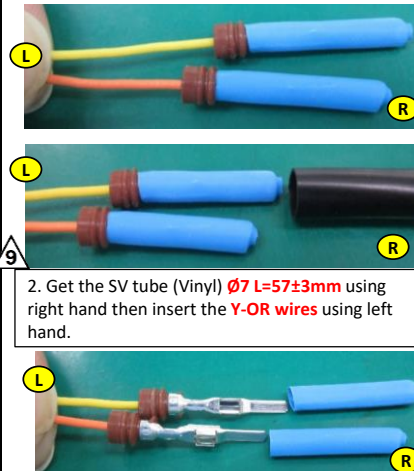
1. Manual locking may cause damaged connector lock.

5

9

P1

Wire insertion to Black SV tube (Vinyl) Ø7 L=57±3mm Ø7 L=213±3mm



2. Get the SV tube (Vinyl) Ø7 L=57±3mm using right hand then insert the **Y-OR wires** using left hand.

1. Get the cover jig then insert to **Y-OR wires** using right hand.



3. Get the SV tube (Vinyl) Ø7 L=213±3mm using right hand then insert the **Y-OR wires** using left hand.

4. After insertion, remove the cover jig using right hand.

TERMINAL COVER JIG



1. No wrong usage of parts
2. No damaged rubber seal

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OFFLINE ASSEMBLY

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Model code/Part number: **320B / 7L0053-7025**

Customer: **TRQSS**

Car Model: **TOYOTA-RAV4**

Document No.:

WI-ENG-PDE-139A

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

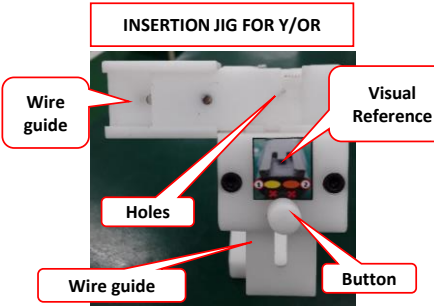
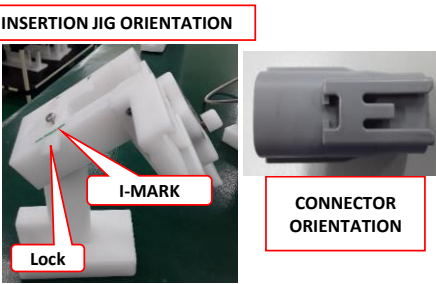
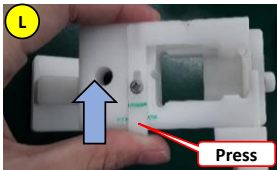
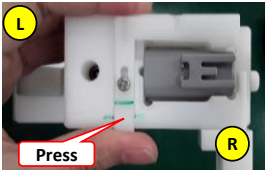
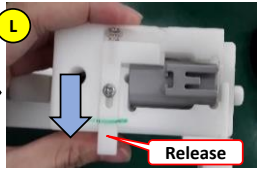
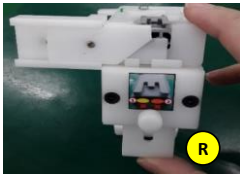



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Revision No.:

9

Page No.:

5 of 7

PARTS:		1. Connector 6188-0066 (GR)		JIG	1. Insertion jig	
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
6	P1	<div><div><div><div>INSERTION JIG FOR Y/OR</div><div></div></div><div><div>INSERTION JIG ORIENTATION</div><div></div></div></div><div><div><div><div><div>L</div><div></div><div>Press</div></div><div><div>1. Press the lock of insertion jig using left thumb.</div></div></div><div><div><div><div>L</div><div></div><div>Press</div></div><div><div><div>L</div><div></div><div>Release</div></div><div><div>2. Insert the connector 6188-0066 (GR) into jig using right hand then release the lock.</div><div>Note: Follow the connector orientation.</div></div></div><div><div><div><div><div></div><div>R</div></div><div><div></div><div>R</div></div></div><div><div>3. Push the guide using right thumb. The slot for Y wire will be opened.</div></div></div></div></div><div>n/a</div><div><div><div>Connector Orientation Illustration</div><div><div><div><div>I-mark is align</div><div>1 hole is open</div></div><div></div><div>GOOD</div></div></div><div><div><div><div>I-mark is NOT align</div><div>2 holes are open</div></div><div></div><div>NG</div></div></div></div><div><div>1. Use provided jig per model</div><div>2. No wrong usage of parts</div><div>3. No wrong orientation of connector</div><div>4. No damaged connector</div></div></div></div></div></div></div>				

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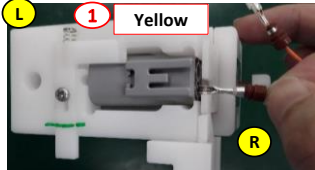
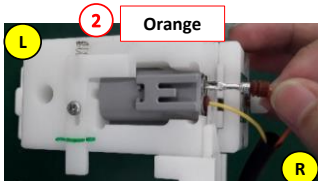


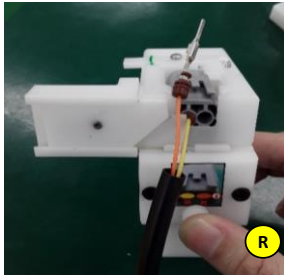
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Revision No.:

9

Page No.:

6 of 7

PARTS:		1. Assy parts		JIG	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
7	P1	<div><div><div>WIRE FACING</div></div><div><div><div>1. Hold the insertion jig using left hand. Get the assy parts, insert the Yellow wire to connector slot 1 using right hand.</div></div><div><div><div>2. Press the button using right thumb, slot for Orange wire will be opened.</div></div><div><div><div>3. Get Orange wire then insert to connector slot 2 using right hand.</div></div><div><div></div></div></div><div><div><div>4. After insertion, push the lock using left thumb and then hold the wires and gently pull out the connector from jig using right hand.</div></div></div></div><div>n/a</div><div><div>1. No loose insertion</div><div>2. No wrong insertion</div><div>3. One by one insertion</div><div>4. No deform terminal</div><div>5. No wrong wire facing</div><div>Important reminders/Note/s:</div><div>1. Please hold the wire near terminal during insertion.</div><div>2. Make sure wires are properly inserted.</div><div>Conduct Pull-Push-Pull-Push after insertion.</div><div>do not exert extra force.</div><div>Document reference/s:</div><div>1. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</div></div></div></div>			

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7 of 7

PARTS:

1. Assy parts
2. Black tape

JIG

n/a

NO.

PROCESS NAME


WORK PROCEDURE/ ILLUSTRATION

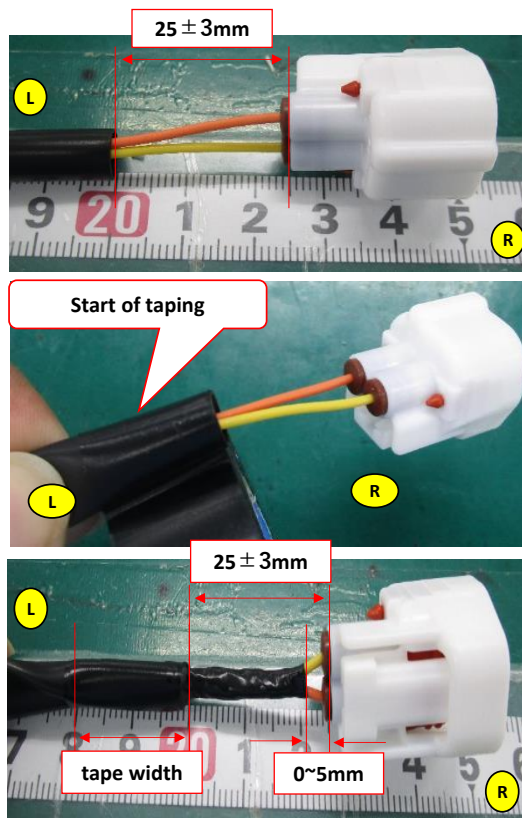
TOOLS/PPE


QUALITY POINTERS

8

P1


Taping 1
SV tube (Vinyl) to wire
near connector




1. Measure from end of SV Tube (Vinyl) up to edge of connector **25±3mm** using both hands.

2. Get the **Black tape** using right hand then start taping process using both hands.

3. After taping, check the measurement, wire alignment and taping condition.

MEASURING TAPE



Important reminders/Note/s:

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

1. No flip-out tape
2. No peel-off tape
3. No loose tape
4. No missing tape
5. No wrong use of tape
6. No wrong dimension

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