



## WORK INSTRUCTION

## OFFLINE ASSEMBLY PROCESS

Effectivity Date:

May 17, 2024

Process Name/Title:

Validity Date:

n/a

Model code/Part number:

240B / 7M0488-7020C

Customer:

TRJ

Car Model:

LEXUS ES

Document No.:

WI-ENG-PDE-075

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

3

Page No.:

1 of 6

## PARTS:

1. Connector 6098-5677 (W); Black corrugated tube  $\phi 5$ , L=264 $\pm$ 3mm(no slit); AVSSf 0.3 B wire L=367 $\pm$ 2mm

JIG:

1. Insertion jig
2. Locking jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

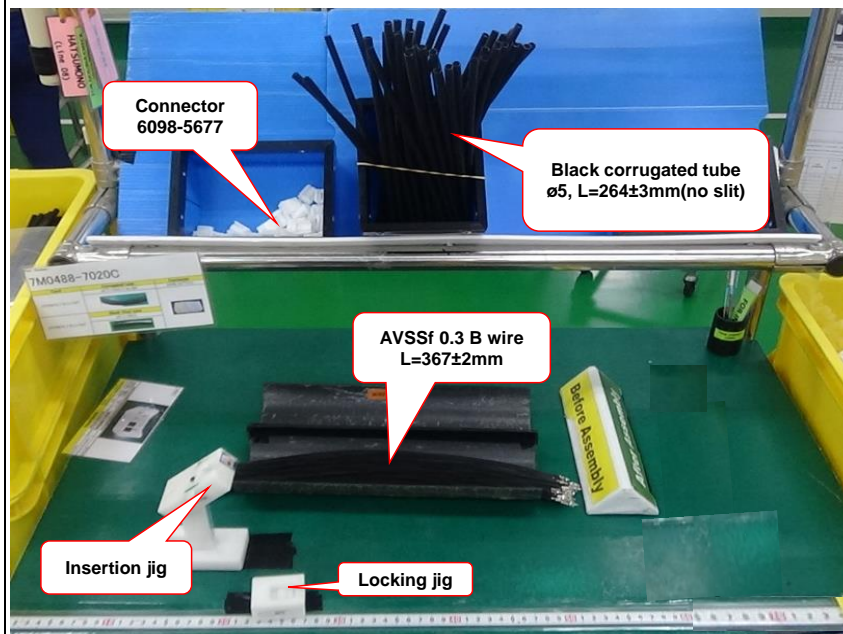
QUALITY POINTERS

1

Offline

Table Lay-out

## 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.

## Document references:

1. Refer to WI-PRO-CNC-017 for Wire and Strip length tolerance.

1. Use provided jig per model
2. No wrong usage of parts
3. No wrong orientation of connector
4. No damaged connector

## Revision History

							Prepared by	Reviewed by	Approved by	Noted by
05/17/24	3	Change title from Kitting assembly process to Offline Assembly process. Additional Table Lay-out, Measurement and Visual inspection. Remove terminal cover jig and change process sequence due to process improvement. Update Connector lock work procedure/illustration. Inclusion of Car model "LEXUS ES"	D.Castillo	C. Villanueva	A. Arañes	n/a				
02/18/21	2	Remove cycle time; Change connector colours in accordance with color standardization for plastic parts (Refer to GL-COM-003); Change 2x pulling to Pull-Push-Pull in insertion quality pointers; Put assy parts on pg. 3 parts section; Change illustration of wire insertion to COT.	J. Loterte	C. Villanueva	A. Shimamura	A. Arañes				
08/01/20	1	Change effective and validity date; Corrections on some process; Update Cycle time.	J. Loterte	R. Peñalosa	A. Shimamura	A. Arañes				
Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted	Est. Date:	January 27, 2020		

**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:

**OFFLINE ASSEMBLY PROCESS**

Effectivity Date:

**May 17, 2024**

Model code/Part number:

**240B / 7M0488-7020C**

Customer:

**TRJ**

Car Model:

**LEXUS ES**

Document No.:

**WI-ENG-PDE-075**

Purpose:

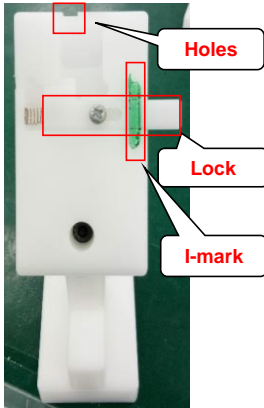


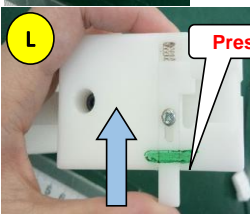

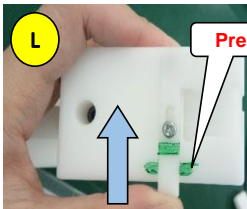

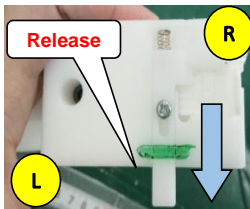

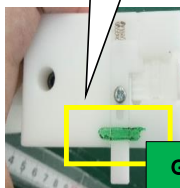
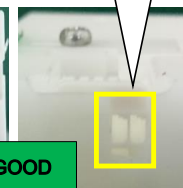
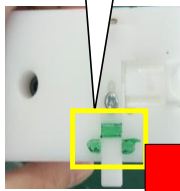
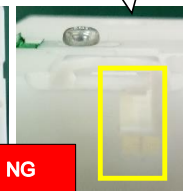
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

**3**

Page No.:


**2 of 6**


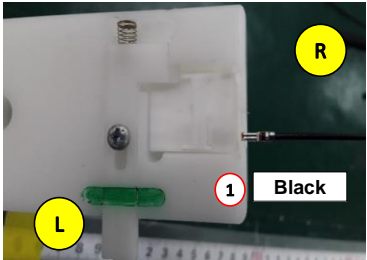
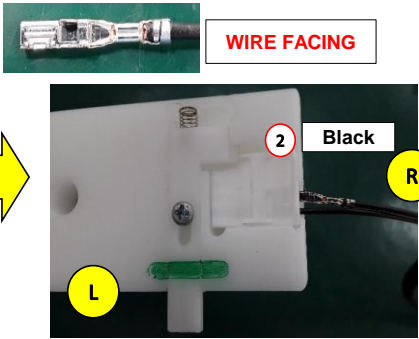
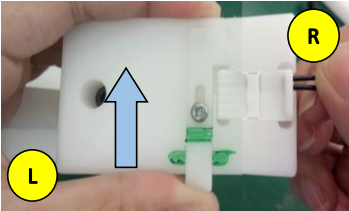
PARTS:		1. Connector 6098-5677 (W)		JIG:	1. Insertion jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	Offline	<div><div><div>Insertion Jig</div></div><div><div>Insertion Jig Orientation</div></div><div><div>Connector Orientation</div></div></div> <div><div><div><div>L</div></div><div><div>Press</div></div><div><div>L</div></div><div><div>Press</div></div><div><div>Release</div></div><div><div>R</div></div><div><div>L</div></div></div><div><div></div><div>3. Check the holes/terminal slot for <b>B-B wires</b>.</div></div></div>		n/a	<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>Connector Orientation Illustration</div><div><div><div>I-mark is align</div></div><div><div>2 Holes are widely open</div></div><div>GOOD</div></div><div><div><div>I-mark is align</div></div><div><div>2 holes are partially open.</div></div><div>NG</div></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

	<b>WORK INSTRUCTION</b>				Effectivity Date:	<b>May 17, 2024</b>		
	<b>OFFLINE ASSEMBLY PROCESS</b>				Validity Date:	n/a		
	Process Name/Title:		Model code/Part number: <b>240B / 7M0488-7020C</b>		Customer: <b>TRJ</b>	Car Model: <b>LEXUS ES</b>		Document No.: <b>WI-ENG-PDE-075</b>
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO		Revision No.: <b>3</b>		Page No.: <b>3 of 6</b>			

<b>PARTS:</b>	1. Corrugated tube Ø5, L=264±3mm (no slit) 2. AVSSf 0.3 B wire L=367±2mm [2pcs]			3. Connector 6098-5677 (W)	JIG:	1. Insertion jig
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>			<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>
3	<div>3</div> <div>Wire Insertion to Corrugated tube Ø5, L=264±3mm (no slit)</div>	<div></div> <div>1. Get black corrugated tube <b>Ø5, L=264±3mm (no slit)</b> using left hand then insert two (2) Black wires <b>L=367±2mm</b> using right hand.</div>			n/a	<div>1. No wrong usage of parts 2. No deformed terminal</div> <div><b>Document references:</b> 1. Refer to <b>WI-PRO-CNC-017</b> for Wire and Strip length tolerance.</div>
4	<div>3</div> <div>Offline</div> <div>Wire Insertion to Connector 6098-5677 (W)</div>	<div><div><div>1. Hold the insertion jig using left hand, get the <b>first Black wire</b> and insert to <b>Slot 1</b> of connector using right hand. <b>Note: Insertion must be from left to right.</b></div></div><div><div>2. Get the <b>2nd Black wire</b> and insert to <b>Slot 2</b> of connector using right hand.</div></div><div><div>3. After insertion, push the lock button using left thumb and then hold the wires and gently pull out the connector from jig using right hand.</div></div></div>			n/a	<div>1. No loose insertion 2. No wrong dimension 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing</div> <div><b>Important reminders/Note/s:</b> 1. Please hold the wire near terminal during insertion. 2. Make sure wires are properly inserted. Conduct <b>Pull-Push-Pull-Push</b> after insertion. Do not exert extra force.</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:

**OFFLINE ASSEMBLY PROCESS**

Effectivity Date:

**May 17, 2024**

Validity Date:

n/a

Model code/Part number:

**240B / 7M0488-7020C**

Customer:

**TRJ**

Car Model:

**LEXUS ES**

Document No.:

**WI-ENG-PDE-075**

Purpose:

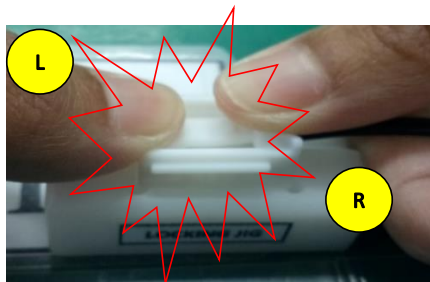

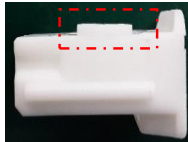
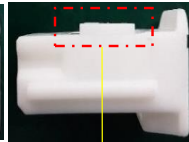
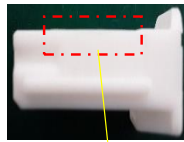
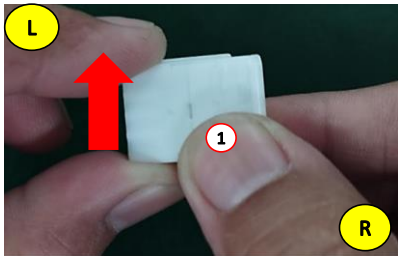

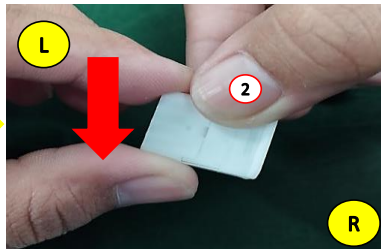
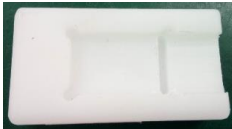
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

3

Page No.:

4 of 6

PARTS:		1. Assy part		JIG:	1. Locking jig
NO.	PROCESS NAME	3 WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
5	Offline	Connector lock	<div><div></div><div><p>1. Put the connector into locking jig using right hand then press 2x to lock. Touch the connector lock to confirm if properly pressed.</p></div></div> <div><div></div><div><p>Before Pressing      After Pressing</p></div><div><div></div><div><p>GOOD      NG</p><p>Fully Locked      UnLocked</p></div></div></div> <div><div></div><div></div><div></div><div><p>2. Ensure that connector is in locked condition by slide touching the connector lock based on the sequence illustrated.</p></div></div>	<div>Locking jig</div> 	<p>1. Use provided jig tool per model to avoid damaged lock. 2. No Unlock and half-locked connector 3. No damaged lock</p> <p><b>Important reminders/note/s:</b></p> <p>1. <b>MANUAL LOCKING MAY CAUSE DAMAGED CONNECTOR LOCK.</b></p> <p><b>Document reference/s:</b></p> <p>1. Refer to <b>GL-PRO-ASY-017</b> for verification of connector lock.</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:

**OFFLINE ASSEMBLY PROCESS**

Effectivity Date:

May 17, 2024

Validity Date:

n/a

Model code/Part number:

**240B / 7M0488-7020C**Customer: **TRJ**

Car Model:

**LEXUS ES**

Document No.:

**WI-ENG-PDE-075**

Purpose:

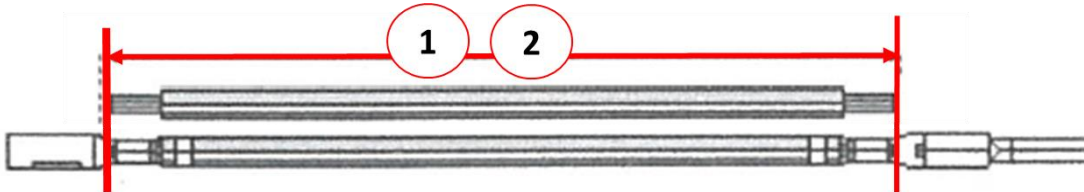
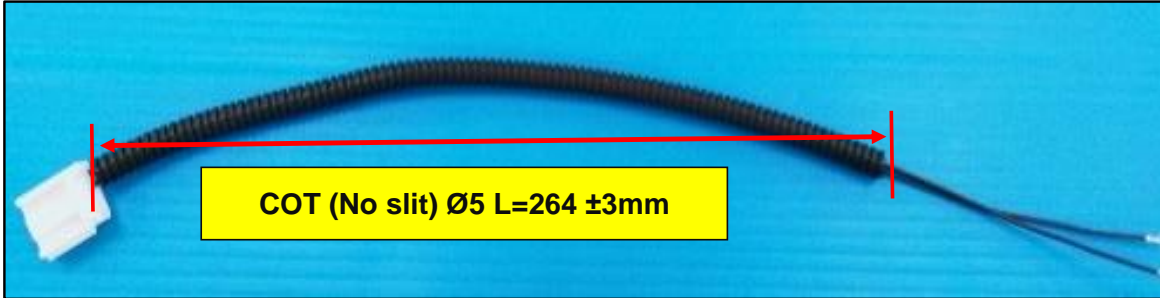

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

3

Page No.:

5 of 6

<b>PARTS:</b>		1.Assy part		JIG:	n/a
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>		<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>
6	Offline Measurement	<p>Note:</p> <ol style="list-style-type: none"><li>1. Measurement point: End of core wire to the end of core wire</li><li>2. Terminal is reference only.</li></ol>   <p>COT (No slit) Ø5 L=264 ±3mm</p>		<div>MEASURING TAPE</div>  <p><b>Important reminders and note/s:</b></p> <ol style="list-style-type: none"><li>1. Please use calibrated/verified measuring tape when getting the measurement.</li><li>2. For Hatsumono, Nakamono and Owarimono.</li></ol> <p><b>Document reference/s:</b></p> <ol style="list-style-type: none"><li>1. Refer to <b>WI-PRO-ASY-056</b> for Sub-assembly Hatsumono Nakamono Owarimono Inspection</li></ol>	1. No wrong dimension

**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:

**OFFLINE ASSEMBLY PROCESS**

Effectivity Date:

May 17, 2024

Validity Date:

n/a

Model code/Part number:

**240B / 7M0488-7020C**Customer: **TRJ**

Car Model:

**LEXUS ES**

Document No.:

**WI-ENG-PDE-075**

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

3

Page No.:

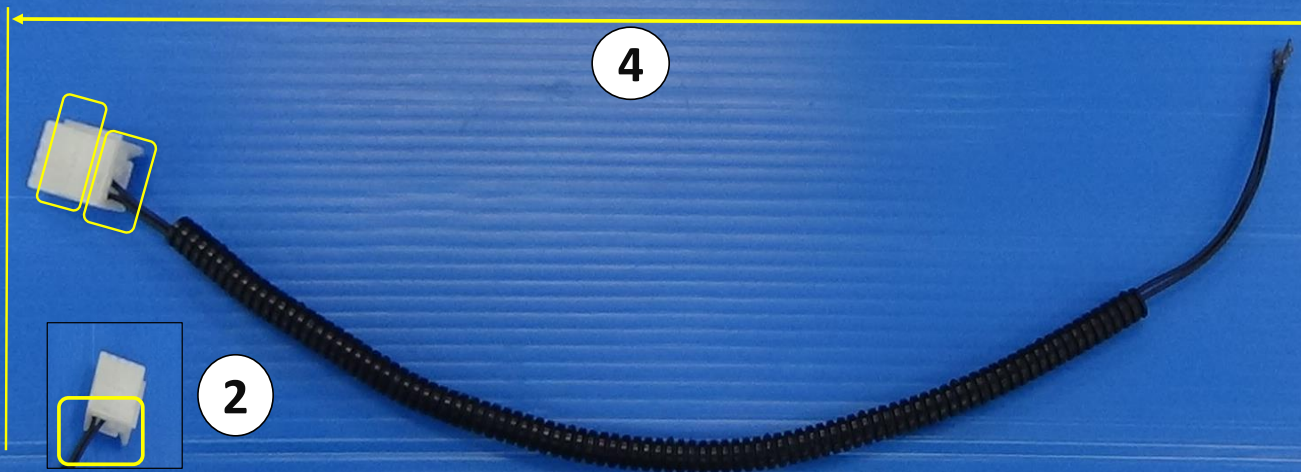
6 of 6

**PARTS:**

1. Assy parts

JIG:

n/a

**VISUAL INSPECTION/ QUALITY CHECKPOINTS****OFFLINE INSERTION****7M0488-7020C****1****GOOD****NO GOOD****4****2****1****No Unlock/Half locked  
connector****2****No Wrong insert****3****No Terminal Backing Out****4****Check the Alignment****GOOD****NO GOOD**

**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