

	WORK INSTRUCTION				Effectivity Date:		June 11, 2024	
	TAPING ASSEMBLY PROCESS				Validity Date:		n/a	
	Process Name/Title:		Model code/Part number: 310B / 7M0521-7021		Customer: TRJ		Car Model: TOYOTA-RAV4	
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO		Document No.: WI-ENG-PDE-416A		Revision No.: 2		Page No.: 1 of 12	

PARTS:	1. Connector 6188-0066 (GR); Black Corrugated tube (no slit) Ø7 L= 45±3mm; Black Corrugated tube (no slit) Ø7 L= 295±3mm; Connector 6189-1161 (B); Black Corrugated tube (no slit) Ø7 L=460±4mm; MRSW CP TVSSf 0.3 G-B/W wires L=658±3mm; AVSSf 0.3 Y/OR wire L=396±2mm; Black tape			JIG:	1. Insertion jig with switch cover 2. Terminal Cover Jig 3. Locking Jig		
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS	
1	P1 Table Lay-out				<p>Safety Instruction Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</p> <p>Housekeeping 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.</p> <p>Alert level For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</p>	<p>Document reference/s: <i>1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance</i></p> <p>1. No missing parts/tools 2. No excess parts/tools</p>	

Revision History					Prepared by		Reviewed by		Approved by		Noted by	
06/11/24	2	Inclusion of Car model "TOYOTA-RAV 4".	D.Castillo	C.Villanueva	A. Arañes	N/A						n/a
03/10/23	1	Improve Quality pointers: Reminders, notes and references on page no.1, 3, 6, 7, 8, 10 and 11 due to Document process improvement. Inclusion of Quality Checkpoints.	M. Ariola	J. Loterte	C. Villanueva	A. Arañes						
02/23/22	0	Initial issue.	K. Doria	J. Loterte	Villanueva	A. Arañes						
Eff. Date	Rev. No	Details of Change		Revised	Reviewed	Approved	Noted	Est. Date:		February 23, 2022		

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Model code/Part number:

310B / 7M0521-7021

Customer: TRJ

Car Model: TOYOTA-RAV4

Validity Date:

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☐ PRE-LAUNCH

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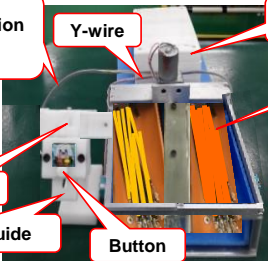

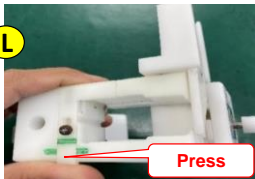

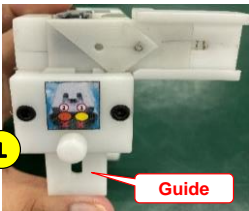
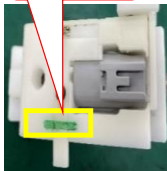
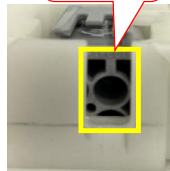
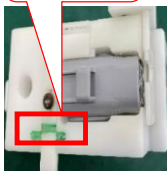
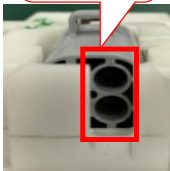
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PARTS:		1. Connector 6188-0066 (GR)		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	P1 Connector setting to insertion jig 6188-0066 (GR)	<div><div><div>INSERTION JIG WITH SWITCH COVER</div><div><div><div>Insertion jig</div><div>Y-wire</div><div>Switch cover</div><div>OR-wire</div><div>Holes</div><div>Wire guide</div><div>Button</div></div><div></div><div><div>CONNECTOR ORIENTATION</div><div></div></div></div></div><div><div><div><div><div>L</div><div></div><div>Press</div></div><div>1. Press the lock of insertion jig using left thumb.</div></div><div><div><div><div>L</div><div></div><div>Release</div></div><div>2. Insert the connector 6188-0066 (GR) into jig using right hand and release the lock. Note: Follow the connector orientation</div></div></div><div><div><div><div>L</div><div></div><div>Guide</div></div><div>3. Push the guide using left hand. The slot for Y wire will be opened.</div></div></div></div><div>n/a</div><div><div><div><div><div>I-mark is align</div><div></div></div><div><div>1 hole is open</div><div></div></div></div><div>GOOD</div><div><div><div><div>I-mark is not align</div><div></div></div><div><div>2 holes are open</div><div></div></div></div><div>NG</div><div>1. Use the provided jig per model 2. No wrong orientation of connector 3. No wrong use of connector 4. No damaged connector</div></div></div></div></div></div>			

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TAPING ASSEMBLY PROCESS

Effectivity Date:

June 11, 2024

Model code/Part number:

310B / 7M0521-7021

Customer:

TRJ

Car Model:

TOYOTA-RAV4

Document No.:

WI-ENG-PDE-416A

Purpose:


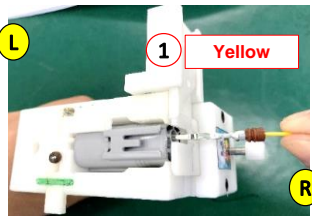
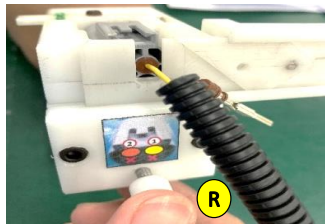
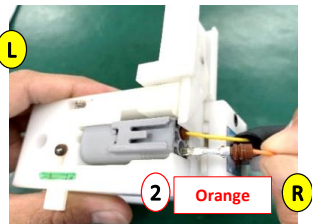
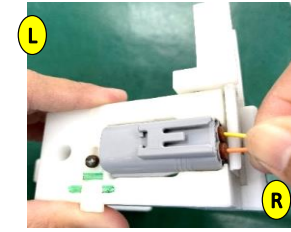
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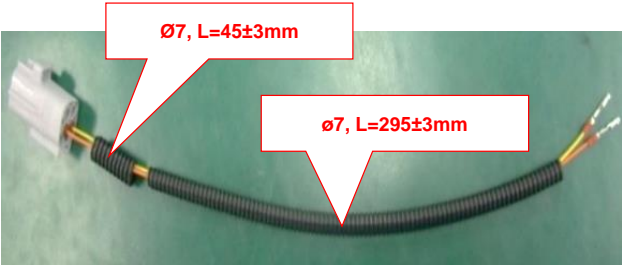
PARTS:	1. AVSSf 0.3 Y/OR wire L=396±2mm		JIG:	1. Insertion jig with switch cover
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	P1 Wire insertion to connector 6188-0066 (GR)	<div><p>WIRE FACING</p></div> <div><p>1. Get the Y wire then insert to terminal slot 1 using right hand.</p></div> <div><p>2. Press the button using right thumb. Slot for OR wire will be opened.</p></div> <div><p>3. Get the OR wire then insert to terminal slot 2 using right hand.</p></div> <div><p>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.</p></div>	n/a	<div>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing</div> <div>Important reminders/Note/s: 1. Please hold the wire near terminal during insertion. 2. Make sure wires are properly inserted. Conduct <u>Pull-Push-Pull-Push</u> after insertion. Do not exert extra force.</div> <div>Document reference/s: 1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance. 2. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</div>

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	TAPING ASSEMBLY PROCESS				Validity Date:		n/a			
	Process Name/Title:		Model code/Part number: 310B / 7M0521-7021		Customer: TRJ	Car Model: TOYOTA-RAV4		Document No.:	WI-ENG-PDE-416A	
	Purpose:		<input type="checkbox"/> PROTOTYPE		<input type="checkbox"/> PRE-LAUNCH	<input checked="" type="checkbox"/> MASSPRO	Revision No.:		2	Page No.:

PARTS:		1. Black Corrugated tube (no slit) Ø7 L= 45±3mm 2. Black Corrugated tube (no slit) Ø7 L= 295±3mm 3. Assy parts			JIG:	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
4	P1 Wire insertion to Black Corrugated tube (no slit) Ø7 L= 45±3mm Ø7 L= 295±3mm	<div><div>1. Get the corrugated tube (no slit) Ø7 L= 45±3mm using right hand then insert the yellow wire and orange wire by using left hand.</div></div> <div><div>2. Get the corrugated tube (no slit) Ø7 L= 295±3mm using right hand then insert the yellow wire and orange wire by using left hand.</div></div> <div></div>			n/a	1. No wrong usage of parts 2. No damaged rubber seal 3. No damaged terminal

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310B / 7M0521-7021

Customer: TRJ

Car Model: TOYOTA-RAV4

Document No.:

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Purpose:

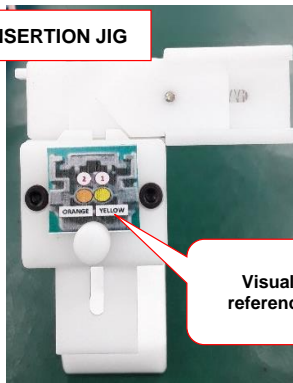
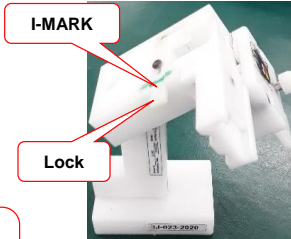

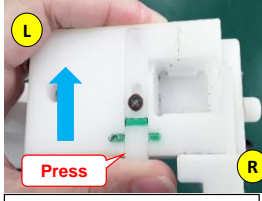
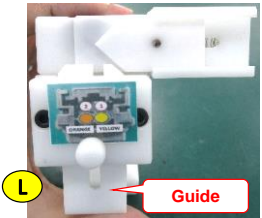


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PARTS:	1. Connector 6189-1161 (B)		JIG:	1. Insertion Jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
5	P1 Connector setting to insertion jig 6189-1161 (B)	<div><div>INSERTION JIG</div><div>Visual reference</div></div> <div><div>I-MARK</div><div>Lock</div></div> <div><div>CONNECTOR ORIENTATION</div></div> <div><div>Visual reference</div><div>Press</div></div> <div><div>1. Press the insertion jig lock using left thumb.</div></div> <div><div>2. Get the connector 6189-1161 (B) using right hand and insert to insertion jig. Release the lock after insertion.</div></div> <div><div>Note: Follow the connector orientation.</div></div> <div><div>3. Press the guide using left thumb. The slot for Y wire will be opened.</div></div> <div><div>Guide</div></div>	n/a	<div>CONNECTOR ORIENTATION ILLUSTRATION</div> <div><div>I-mark is align</div><div>GOOD</div></div> <div><div>I-mark is not align</div><div>NG</div></div> <div>1. Use the provided jig per model 2. No wrong usage of parts 3. No wrong orientation of connector 4. No damaged connector</div>


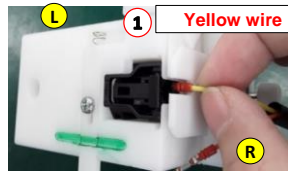


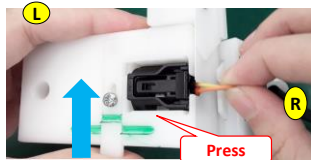
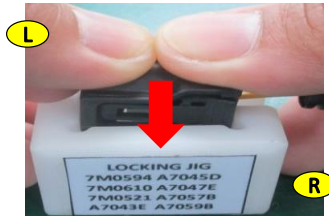


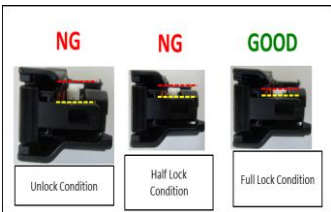

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		Process Name/Title:		Model code/Part number: 310B / 7M0521-7021		Customer: TRJ	Car Model: TOYOTA-RAV4		Document No.: WI-ENG-PDE-416A	
		Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO		Revision No.:		2	Page No.:	6 of 12		


PARTS:	1. Assy parts				JIG:	1. Insertion jig 2. Locking jig				
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION				TOOLS/PPE	QUALITY POINTERS			
6	P1 Wire insertion to connector 6189-1161 (B)	<div><div>WIRE FACING</div></div> <div><div>1. Hold the insertion jig using left hand. Get the Y wire and insert to connector using right hand.</div></div> <div><div>2. Press the button using right thumb. slot for OR wire will be open.</div></div> <div><div>3. Get the OR wire and insert to connector using right hand.</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>				n/a	<div>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 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. Do not exert extra force.</div> <div>Document reference/s:</div> <div>1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance.</div> <div>2. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</div>			
7	Connector Lock	<div><div>1. Put the connector into locking jig using right hand then press 2x using both hands. Check the connector if properly locked.</div></div> <div><div>BEFORE PRESSING</div></div> <div><div>AFTER PRESSING</div></div> <div></div>				<div>LOCKING JIG</div> 	<div>1. Use the provided locking jig per model 2. No unlock/half-locked connector</div> <div>Important reminders/Note/s:</div> <div>1. Manual locking may cause damaged connector lock.</div>			


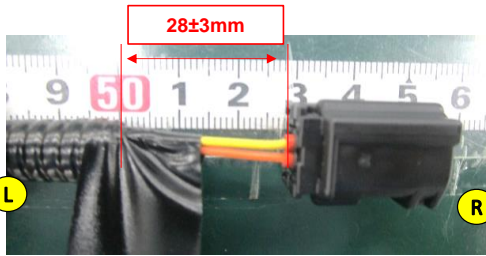
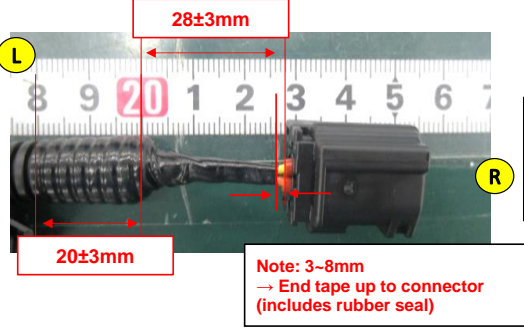

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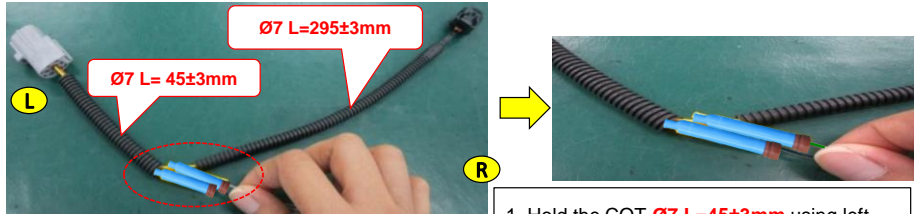

PARTS:		1. Assy parts 2. Black tape		JIG:	n/a	
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS	
8	P1 Taping 1 Black Corrugated tube to wire near connector	<div><p>1. Hold the corrugated tube using left hand, make 2 windings of pre-taping at the middle of COT and wire using right hand.</p></div> <div><p>2. Measure from end of the corrugated tube up to connector 28±3mm then continue the taping process.</p></div> <div><p>3. After taping, check the measurement and tape condition.</p><p>Note: 3~8mm → End tape up to connector (includes rubber seal)</p></div>		<div>MEASURING TAPE</div> 	<p>Important reminders/Note/s:</p> <p>1. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>1. No flip-out tape 2. No peel-off tape 3. No loose tape 4. No missing tape 5. No wrong dimension 6. No wrong use of tape</p>	


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	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO				Revision No.:	2	Page No.:	8 of 12	

PARTS:		1. Black Corrugated tube (no slit) Ø7 L=460±4mm 2. MRSW CP TVSSf 0.3 G-B/W wires L=658±3mm 3. Assy parts		JIG:	1. Terminal Cover Jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
9	Wire insertion to Black Corrugated tube Ø7 L=460±4mm	<div>  <p>1. Get the terminal cover jig using right hand then insert to both terminals (G-B/W wires) using right hand.</p> </div> <div>  <p>2. Get the corrugated tube Ø7, L=460±4mm using right hand then insert the G-B/W wires using left hand.</p> </div>		<div>  <p>TERMINAL COVER JIG</p> </div>	1. No wrong usage of parts 2. No damaged rubber seal 3. No exposed rubber seal during insertion
10	Wire insertion to Assy parts	<div>  <p>1. Hold the COT Ø7 L=45±3mm using left hand then insert the G-B/W wires using right hand.</p> </div> <div>  <p>2. After insertion, remove the cover jig using right hand.</p> </div>			

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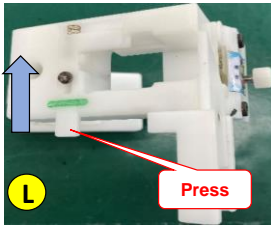
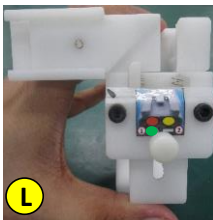
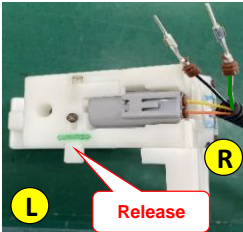
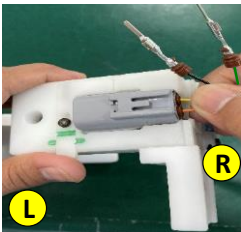
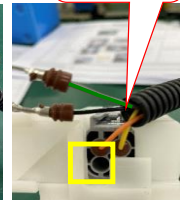
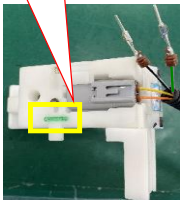
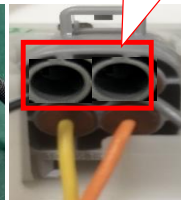
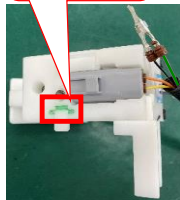
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PARTS:	1. Assy parts		JIG:	1. Insertion Jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
11	P1 Connector setting to insertion jig (Assy parts) 6188-0066 (GR)	<div><div><div>INSERTION JIG</div><div><div>I-MARK</div><div>Lock</div><div>Visual reference</div><div>Unlock button</div><div>Guide lock</div></div><div><div>CONNECTOR ORIENTATION</div></div></div><div><div><p>2. Press the lock of insertion jig using left thumb.</p></div><div><div><p>3. Insert the connector 6188-0066 (GR) into jig using right hand and release the lock. Note: Follow the connector orientation</p></div></div><div><div><p>1. Push the guide lock using left thumb. The holes for G wire will be opened.</p></div></div></div></div>	n/a	<div><div><div>Connector Orientation Illustration</div><div><div>I-mark is align</div><div>1 hole is open</div></div><div><p>GOOD</p></div><div><div>I-mark is not align</div><div>2 holes are open</div></div><div><p>NG</p></div></div><div><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></div></div>

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**WORK INSTRUCTION**

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

June 11, 2024

Validity Date:

n/a

Model code/Part number:

310B / 7M0521-7021

Customer:

TRJ

Car Model:

TOYOTA-RAV4

Document No.:

WI-ENG-PDE-416A

Purpose:


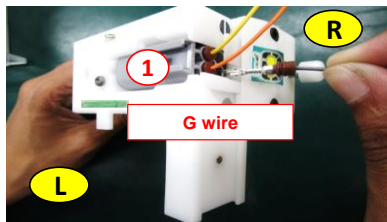
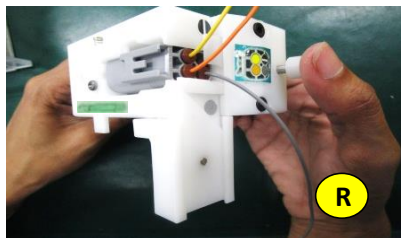
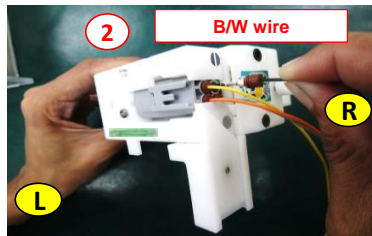
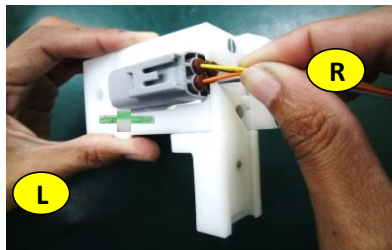
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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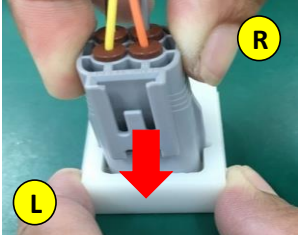


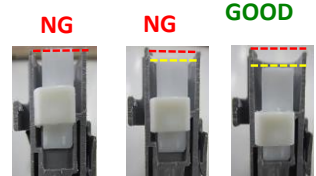




PARTS:	1. Assy parts			JIG:	1. Insertion jig 2. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
12	P1 Wire insertion to connector 6188-0066 (GR)	<div><p>Wire facing</p></div> <div><p>1. Hold the G wire then insert to terminal slot ① using right hand.</p></div> <div><p>2. After insertion of G wire press the button using right thumb. The slot for B/W wire will be opened.</p></div> <div><p>3. Hold the B/W wire then insert to terminal slot ② using right hand.</p></div> <div><p>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.</p></div>		n/a	<div>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing</div> <div>Important reminders/Note/s: 1. Please hold the wire near terminal during insertion. 2. Make sure wires are properly inserted. <u>Conduct Pull-Push-Pull-Push after insertion.</u> <u>Do not exert extra force.</u></div> <div>Document reference/s: 1. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance. 2. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</div>

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	WORK INSTRUCTION				Effectivity Date:	June 11, 2024		
	Process Name/Title: TAPING ASSEMBLY PROCESS				Validity Date:	n/a		
	Model code/Part number: 310B / 7M0521-7021		Customer: TRJ	Car Model: TOYOTA-RAV4	Document No.:	WI-ENG-PDE-416A		
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO				Revision No.:	2	Page No.:	11 of 12

PARTS:	1. Assy parts			JIG:	1. Insertion jig 2. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
13	P1	<div></div> <div></div> <div>Connector Cross Sectional View   Unlock Condition Half Lock Condition Full Lock Condition</div> <div>1. Put the connector into locking jig then press 2x using right hand. Check if properly locked.</div>		<div>LOCKING JIG</div> 	<p>Document reference/s:</p> <p>1. Manual locking may cause damaged connector lock.</p> <p>1. Use the provided jig per model 2. No half-lock/unlock connector</p>

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Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

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Page No.:

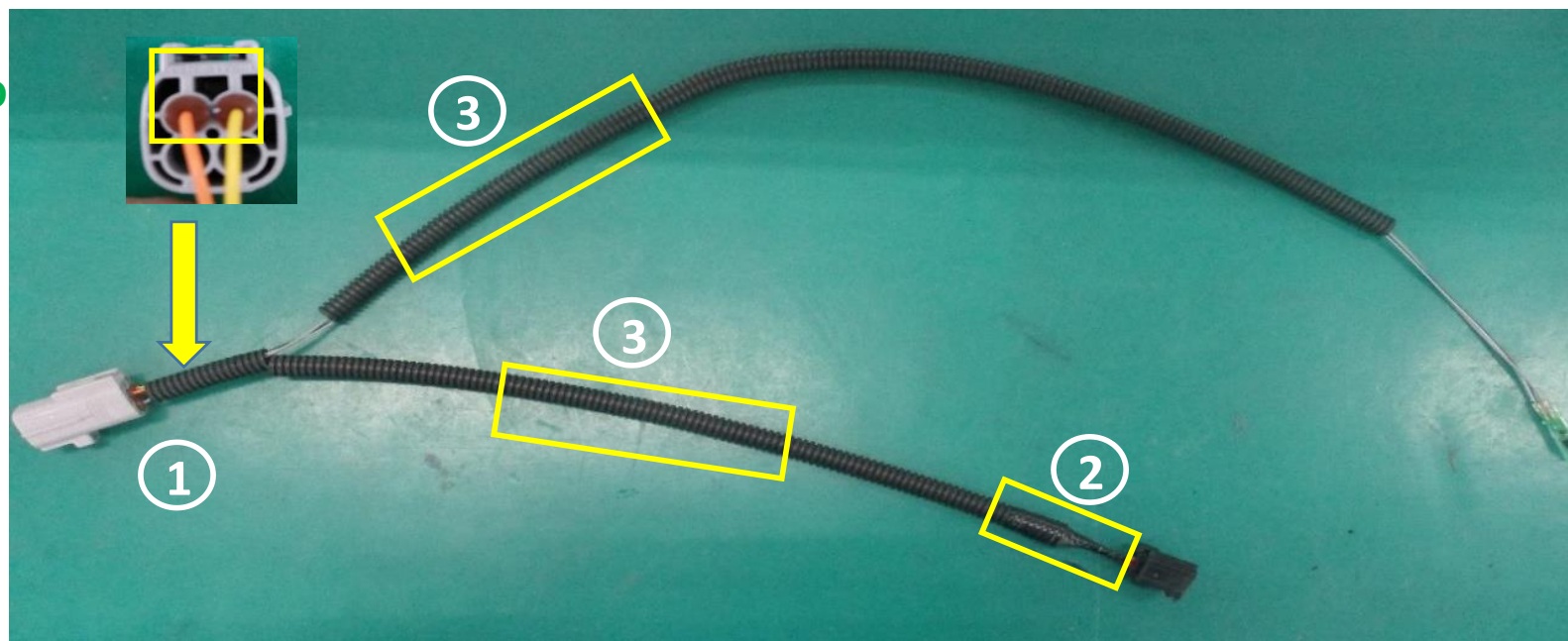
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PARTS:

1. Assy parts

JIG:

n/a

VISUAL INSPECTION/ QUALITY CHECKPOINTS**P1****7M0521-7021****GOOD****NO GOOD****NO GOOD****GOOD****No WRONG INSERT****1****NO TERMINAL BACKING OUT****2****No MISSING TAPE****3****No MISSING COT**

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