



WORK INSTRUCTION

OFFLINE ASSEMBLY PROCESS

Effectivity Date:

December 17, 2022

Process Name/Title:

Validity Date:

n/a

Model Code/Part Number:

ES1

/ 7M0510-7020C

Customer:

TRJ

Document No.:

WI-ENG-PDE-374

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

3

Page No.:

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PARTS:

1. All parts: Connector 7186-8849 (W); AVSSf 0.3 wires Y-OR L=185±2mm; AVSSf 0.3 wires BR L=229±2mm; B L=211±2mm; Connector 4F5450-0000 (W); Clip clamp (POP-7067-0); Black Corrugated tube ø7 L= 127±3mm (no slit)

JIG:

1. Insertion jig
2. Terminal cover jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

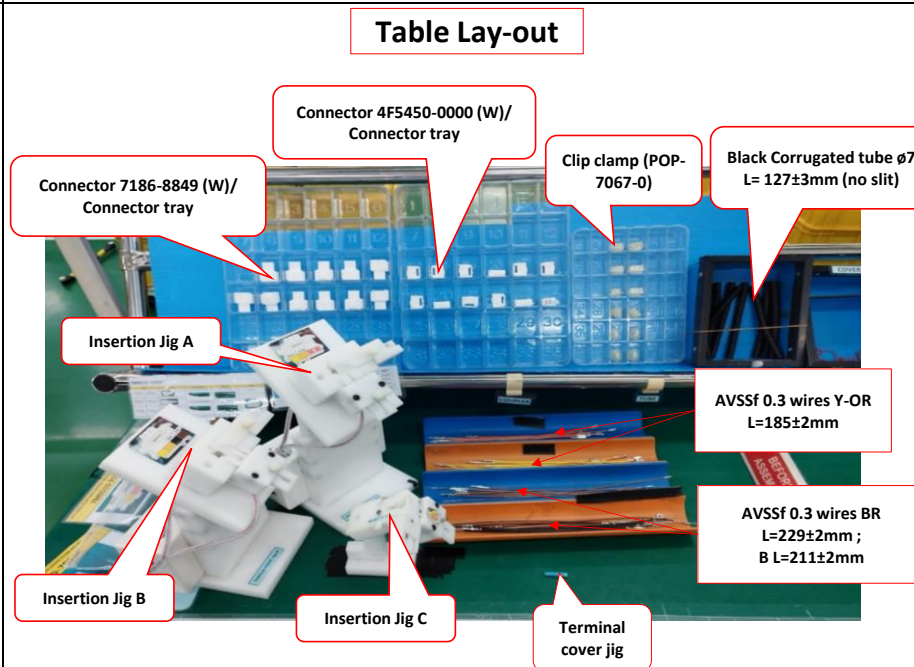
TOOLS/PPE

QUALITY POINTERS

1

n/a

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 reference/s:

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

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
12/17/22	3	Removal of Item #3 and 4 on Quality Pointers related to the function of Insertion Jig. Addition of "Must have slight movement after insertion" on Quality Pointers #6	M. Catapang	J. Loterte	C. Villanueva	A. Arañes				
08/30/22	2	Improve quality pointers and notes in process no.1, 2, 3, 4, 5, 7 and 8 as document improvement. Additional process in: Process no.3 and 5, procedure5 - pushing of wires as countermeasure for encountered terminal backing out.	M. Catapang	J. Loterte	C. Villanueva	A. Arañes				
08/02/22	1	Change of table layout illustration ; Document title from Kitting assembly process to Offline assembly process. Transferring of process no.4, 5 and 9 from P1 to offline process. Improve illustration of process no.6 due to process improvement. Additional quality pointers in process no.2	M. Catapang	J. Loterte	C. Villanueva	A. Arañes	M. Catapang	J. Loterte	C. Villanueva	A. Arañes
Est. Date:			November 26, 2021							

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PROTOTYPE



PRE-LAUNCH



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PARTS:

1. Connector 7186-8849 (W)

JIG

1. Insertion jig

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
2	n/a Connector setting to insertion jig 7186-8849 (W)	<p>Insertion jig</p> <p>Visual reference</p> <p>Reset</p> <p>Adjustable</p> <p>Slider lock</p> <p>Slide</p> <p>Button</p> <p>Guide</p> <p>Insertion jig (Back view)</p> <p>Insertion jig Orientation</p> <p>Connector Orientation</p> <p>GOOD</p> <p>NG</p> <p>1. Slide the slide lock using right thumb.</p> <p>2. Insert the connector 7186-8849 (W) into jig using left hand and release the side lock.</p> <p>3. Push the guide using left hand. The slot for Orange wire will be opened.</p> <p>Hole</p> <p>Release</p>	n/a	<p>Important reminders/Note/s:</p> <p>1. Cannot insert the inverted connector.</p> <p>1. Use provided jig per model 2. No wrong usage of parts 3. No wrong orientation of connector 4. No damaged connector</p> <p>CONNECTOR ILLUSTRATION</p> <p>GOOD NG</p> <p>7186-8849 (W) 7186-8847 (W)</p>

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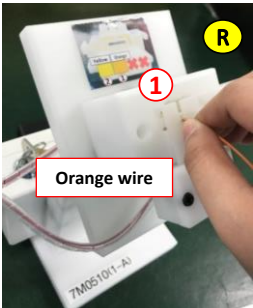
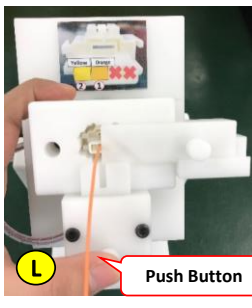
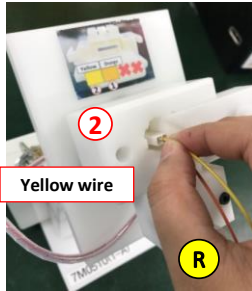
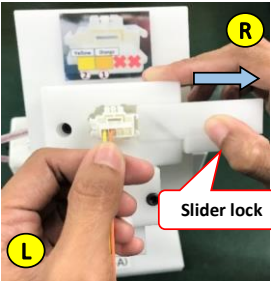
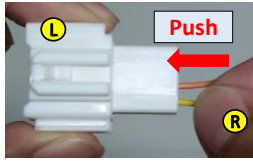
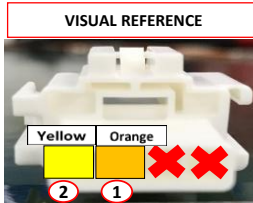
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PARTS: 1. AVSSf 0.3 wires Y-OR L=185±2mm**JIG**

1. Insertion jig

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	n/a	<p>Wire insertion to Connector 7186-8849 (W)</p>      <p>1. Get the Orange wire then insert to terminal slot 1 using right hand. Conduct Pull-Push-Pull-Push after insertion.</p> <p>2. Press the button using left hand. The slot for Yellow wire will be opened.</p> <p>3. Get the Yellow wire then insert to terminal slot 2 using right hand. Conduct Pull-Push-Pull-Push. After insertion, press the button using left hand. GO sound will be heard.</p> <p>4. Slide the lock using right thumb and then hold the wires and gently pull out the connector from jig using left hand.</p> <p>5. After removing the connector from jig, conduct Pushing (1x) of Y wire using right hand to confirm that wire is fully inserted. Repeat the process for OR wire.</p> <p>WIRE FACING</p>  <p>VISUAL REFERENCE</p> <p>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing 6. Must have slightly movement after insertion</p> <p>Important reminders/Note/s:</p> <p>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. 3. Conduct Pushing of wires after removing the connector from jig. 6. Pushing of wires will be done one by one of every inserted wires</p> <p>Document references:</p> <p>1. Refer to GL-PRO-ASY-029 for Pull-Push procedure. 2. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance</p>	n/a	

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1. Assy parts

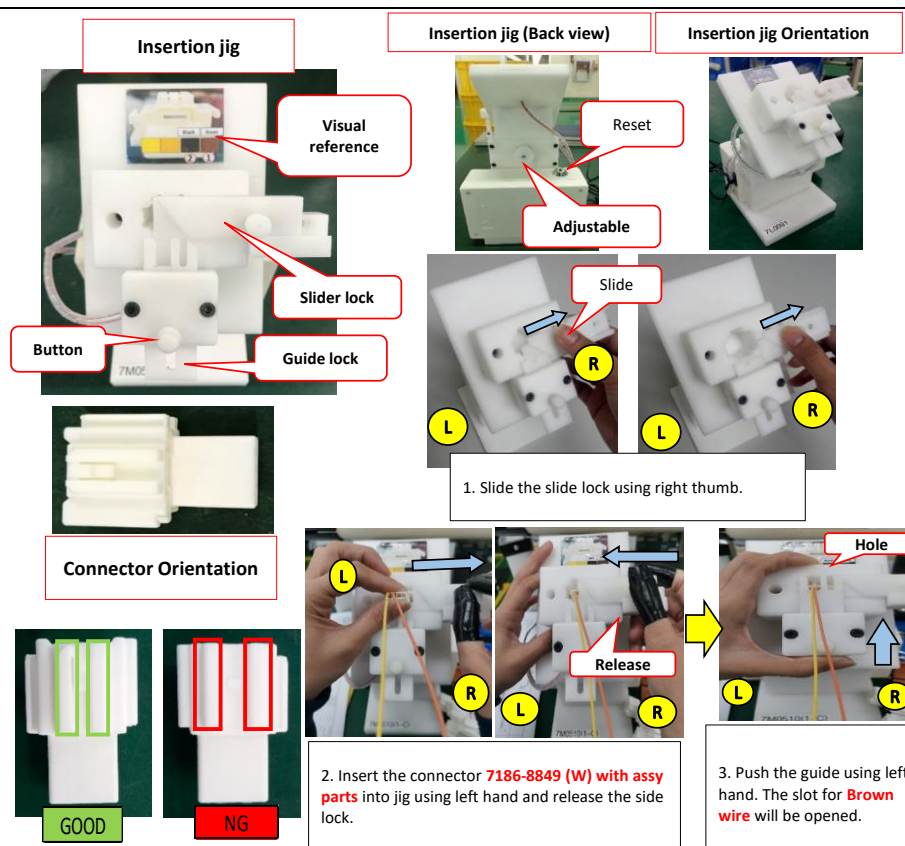
JIG

1. Insertion jig

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

4

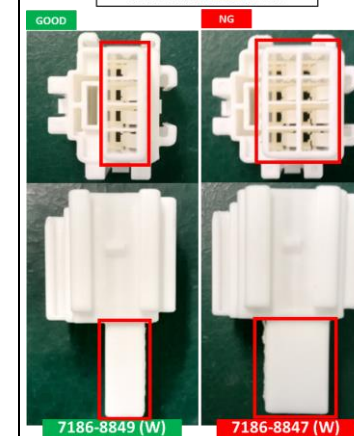
n/a

Connector setting to
insertion jig with Assy parts
7186-8849 (W)

n/a

Important reminders/Note/s:**1. Cannot insert the inverted connector.**

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

CONNECTOR ILLUSTRATION

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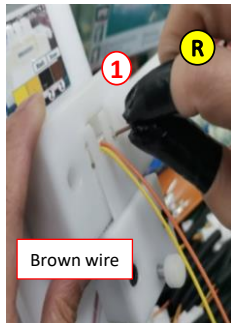

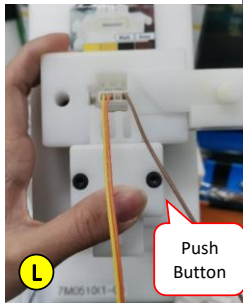
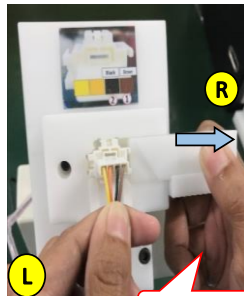
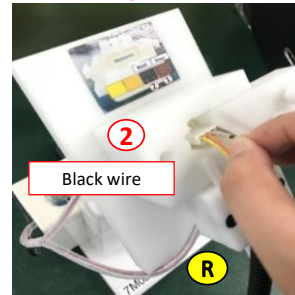
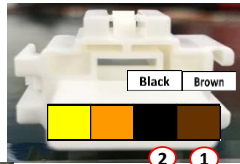
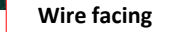
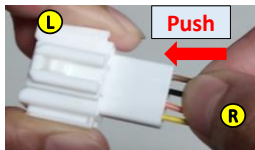
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PARTS:

1. AVSSf 0.3 wires BR L=211±2mm ; B L=229±2mm

JIG

1. Insertion jig

NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
5	n/a	Wire insertion to Connector with Assy parts 7186-8849 (W)	<div><p>1. Get the Brown wire then insert to terminal slot 1 using right hand. Conduct Pull-Push-Pull-Push after insertion.</p></div> <div><p>Wire facing</p></div> <div><p>Push Button</p></div> <div><p>Slider lock</p></div> <div><p>Black wire</p></div> <div><p>Black Brown</p><p>2 1</p></div> <div><p>Black Brown</p></div> <div><p>Push</p></div> <div><p>2. Press the button using left hand. The slot for Black wire will be opened.</p><p>3. Get the Black wire then insert to terminal slot 2 using right hand. Conduct Pull-Push-Pull-Push. After insertion, press the button using left hand. GO sound will be heard.</p><p>4. Slide the lock using right thumb and then hold the wires and gently pull out the connector from jig using left hand.</p><p>5. After removing the connector from jig, conduct Pushing (1x) of B wires using right hand to confirm that wire is fully inserted. Repeat the process for Y wire.</p></div>	n/a	<div><p>1. No loose insertion</p><p>2. No wrong insertion</p><p>3. One by one insertion</p><p>4. No deformed terminal</p><p>5. No wrong wire facing</p><p>6. Must have slightly movement after insertion</p></div> <div><p>Important reminders/Note/s:</p><p>1. Please hold the wire near terminal.</p><p>2. Make sure wires are properly inserted.</p><p>Conduct Pull-Push-Pull-Push after insertion.</p><p>Do not exert extra force.</p><p>3. Conduct Pushing of wires after removing the connector from jig.</p><p>6. Pushing of wires will be done one by one of every inserted wires</p></div> <div><p>Document references:</p><p>1. Refer to GL-PRO-ASY-029 for Pull-Push procedure.</p><p>2. Refer to WI-PRO-CNC-017 for Wire and Strip Length Tolerance</p></div>	

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PARTS:

1. Assy parts
2. Black Corrugated tube $\phi 7$ L=127 \pm 3mm (no slit)

JIG

1. Terminal cover jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

6

n/a

Wire insertion to Black Corrugated tube $\phi 7$ L=127 \pm 3mm (no slit)



1. Get the terminal cover jig using right hand then insert the **Brown wire** using left hand.



2. Get the Corrugated tube $\phi 7$ L=127 \pm 3mm (**no slit**) using right hand and insert to assy parts.



3. After insertion, remove the terminal cover jig using right hand.

Terminal cover jig



1. No deformed terminal
2. No wrong usage of parts

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1. Connector 4F5450-0000 (W)

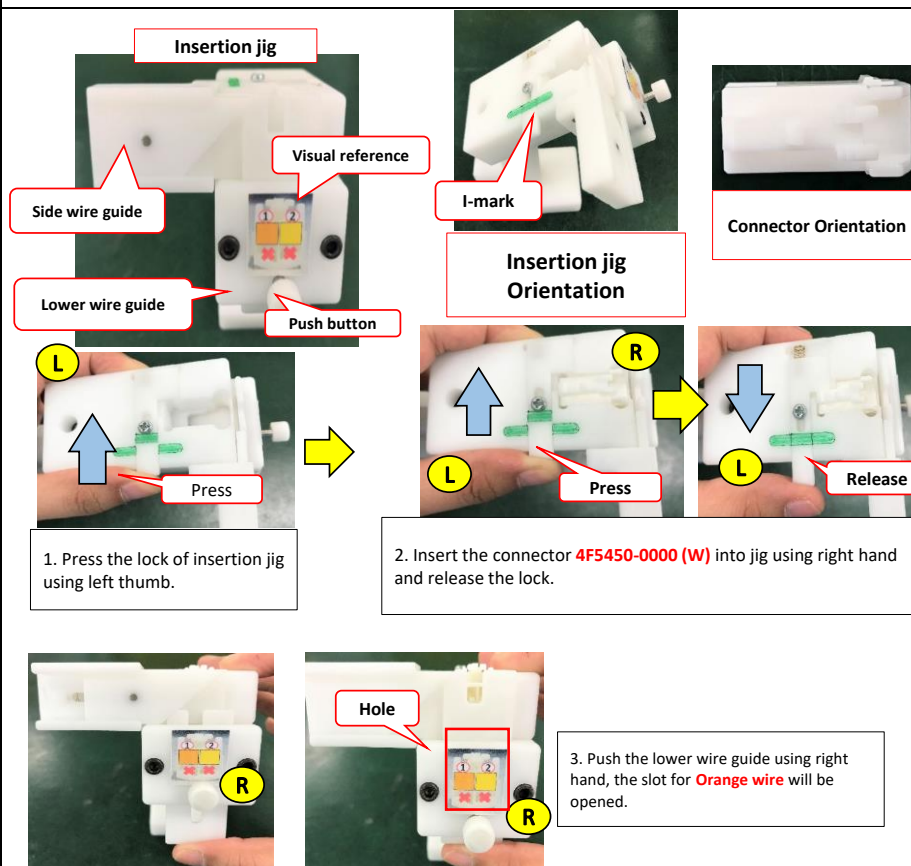
JIG

1. Insertion jig

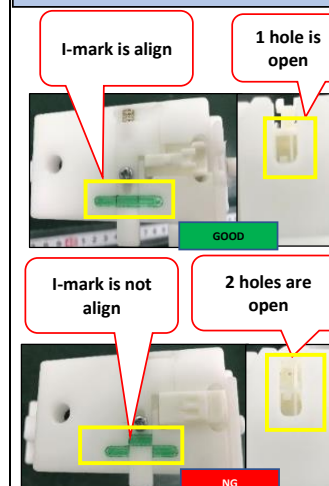
NO.**PROCESS NAME****WORK PROCEDURE/ ILLUSTRATION****TOOLS/PPE****QUALITY POINTERS**

7

n/a

Connector setting to
insertion jig
4F5450-0000 (W)

n/a

Connector Orientation Illustration**Important reminders/Note/s:****1. Follow the connector orientation**

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

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PARTS:

1. Assy parts

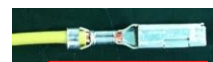
JIG

1. Insertion jig

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

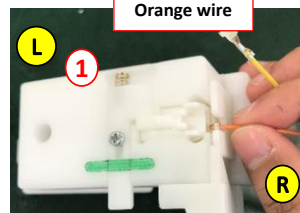
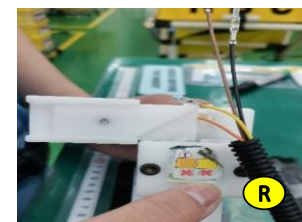
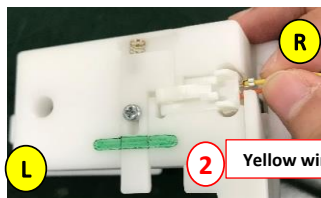
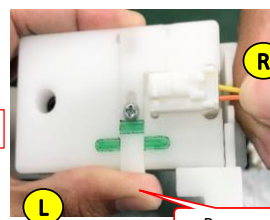
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n/a

Wire insertion to Connector
4F5450-0000 (W)**VISUAL REFERENCE**

Wire facing

Orange wire

1. Get the **Orange wire** using right hand and insert to connector.2. Press the button using right hand, the slot for **Yellow wire** will be opened.3. Get the **Yellow wire** using right hand and insert to connector.

4. After insertion, press the lock guide 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 deformed terminal
5. No wrong wire facing

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.

Document references:

1. Refer to GL-PRO-ASY-029 for Pull-Push procedure.

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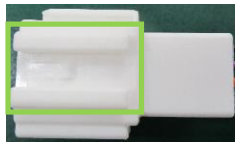
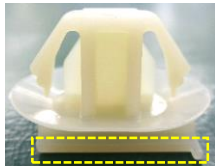
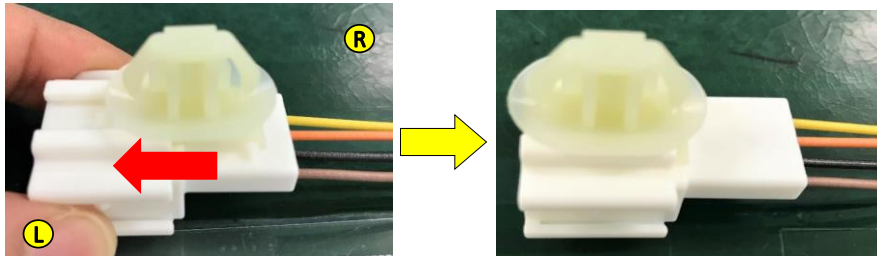
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PARTS:

1. Assy parts
2. Clip clamp POP-7067-0 (W)

JIG

n/a

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
9	n/a	<div> CONNECTOR ORIENTATION</div> <div> CLIP ORIENTATION</div> <div> 1. Hold the connector using left hand and get the Clip clamp POP-7067-0 (W) then insert using right hand.</div>	n/a	<ol style="list-style-type: none">1. No loose clamp attached2. No damage clamp3. No wrong use of clamp

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