



WORK INSTRUCTION

TAPING ASSEMBLY PROCESS

Effectivity Date:

April 24, 2023

Process Name/Title:

Validity Date:

n/a

Model Code/Part number: 220D / 7L0134-7020

Customer:

TRQSS

Document No.:

WI-ENG-PDE-446A

Purpose:

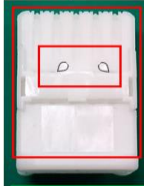

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

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PARTS:		1. (Connector 6098-3810(W); Connector 6188-0407(W); MR SW CP(G-B/W L=590±3mm with sunprene tube L=72±3mm); Black Vinyl tube Ø5 L=64±3mm; Black Corrugated tube(no slit) Ø5 L=75±3mm & Ø7 L=78±3mm; Black Corrugated tube(with slit) Ø5 L=317±3mm; AVSSf 0.3 Black L=649±3mm); Black tape				JIG	1. Insertion jig 2. Locking jig 3. Terminal cover jig			
NO.	PROCESS NAME		WORK PROCEDURE/ ILLUSTRATION				TOOLS/PPE	QUALITY POINTERS		
1	P1	Table lay-out	<div><div>TABLE LAY-OUT</div><div><div>Connector tray/ Connector (6098-3810)</div><div>Black Vinyl tube Ø5 L=64±3mm</div><div>Black Corrugated tube (no slit) Ø5 L=75±3mm</div><div>Connector tray/ Connector (6188-0407)</div><div>Black Corrugated tube (with slit) Ø5 L=317±3mm</div><div>MR SW CP (with sunprene tube) TVSSf 0.3 Green L=614±2mm TVSSf 0.3 Black/White L=614±2mm Black Sunprene tube Ø5 L=72±3mm</div><div>Insertion jig A</div><div>Insertion jig B</div><div>Locking jig A</div><div>Locking jig B</div><div>Terminal cover jig</div><div>COT adaptor</div><div>Black tape/ Tape holder</div><div>AVSSf 0.3 Black L=649±2mm</div></div></div> <div><div>Safety Instruction Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</div><div>Housekeeping 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.</div><div>Alert level For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</div></div>				<div>1. No missing parts/tools. 2. No excess parts/tools.</div> <div>Document references: 1. Refer to WI-PRO-CNC-071 Wire and Strip Length Tolerance. 2. Refer to WI-PRO-KIT-006 For Wire taping with Vinyl Tube.</div> <div><div>CONNECTOR ILLUSTRATION</div><div><div>GOOD</div><div>NG</div><div></div><div></div><div>6098-3810 (W)</div><div>6098-5677 (W)</div></div></div>			
Revision History							Prepared by	Reviewed by	Approved by	Noted by
04/24/23	3	Inclusion of quality checkpoints				J.Loterte	C.Villanueva	A. Arañes	n/a	
09/23/22	2	Improve: Work procedure/Illustration process no.4 proper checking of connector lock. Quality pointer; Reminders/notes and references on pg. no. 1, 2, 3, 4, 5, 6, 9 and 10 due to document improvement.				M.Ariola	J.Loterte	C.Villanueva	A. Arañes	
03/28/22	1	Change From Pre-Launch to Masspro. Additional table Lay-out.				M.Ariola	J.Loterte	C.Villanueva	A. Arañes	
03/09/22	0	Initial issue.				M.Ariola	J.Loterte	C.Villanueva	A. Arañes	
Eff. Date	Rev. No	Details of Change				Revised	Reviewed	Approved	Noted	
						J. Loterte		C. Villanueva	A. Arañes	n/a
						Est. Date:		March 09, 2022		

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PARTS:

1. Connector 6098-3810 (W)

JIG

1. Insertion jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

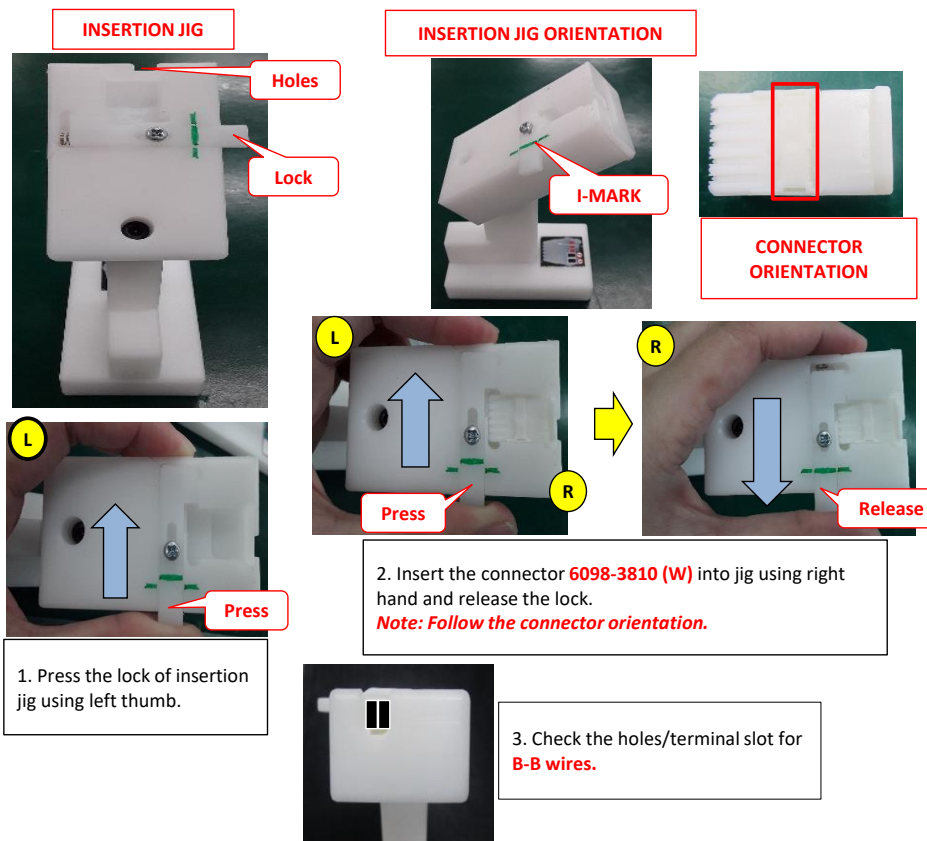
TOOLS/PPE

QUALITY POINTERS

2

P1

Connector setting to
insertion jig
6098-3810 (W)

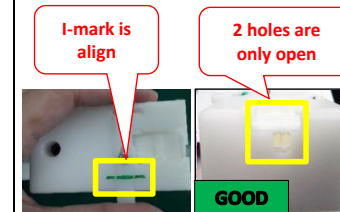


2. Insert the connector **6098-3810 (W)** into jig using right hand and release the lock.
Note: Follow the connector orientation.

3. Check the holes/terminal slot for **B-B wires**.

n/a

Connector Orientation Illustration



CONNECTOR ILLUSTRATION



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. AVSSf 0.3 B L=649±3mm [2pcs]

JIG

1. Insertion jig

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	P1	<p>Wire insertion to connector 6098-3810 (W)</p> <p>1. Get the 1st Black wire then insert to connector slot 1 using right hand.</p> <p>2. Get the 2nd Black wire then insert to connector slot 2 using right hand.</p> <p>3. After insertion, push the lock using left thumb then hold the wires and gently pull out the connector from jig using right hand.</p>	n/a	<p>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deformed terminal 5. No wrong wire facing</p> <p>Important reminders/Notes:</p> <p>1. Make sure wires are properly inserted. Conduct Pull-Push-Pull-Push after insertion. Do not exert extra force.</p> <p>2. Please hold the wire near terminal.</p> <p>3. Insertion must be from left to right</p> <p>Document references:</p> <p>1. Please refer to GL-PRO-ASSY-029 for Pull-Push procedure.</p> <p>2. Refer to WI-PRO-CNC-127 for awire and stp length tolerance .</p>

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4 of 12**PARTS:**

1. Assy parts

JIG

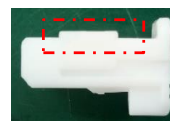
1. Locking jig

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

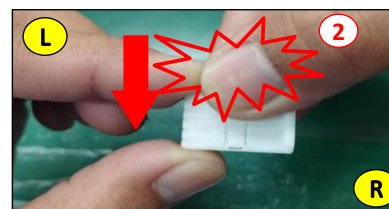
4

P1

Connector Lock

**Before Pressing****After Pressing**

1. Put the connector into locking jig using right hand then press to lock **2x**.



2. Ensure that connector is in locked condition by slide touching the connector lock based on the sequence illustrated.

LOCKING JIG

1. Use provided jig tool per model
2. No unlock/half-locked connector

Important reminders/Note/s:

- 1. Manual locking may cause damaged connector lock.**

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PARTS:

1. Assy parts
2. Black Vinyl tube $\varnothing 5$ L=64 \pm 3mm

3. Black tape

JIG

n/a

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

5

Wire insertion to Black Vinyl tube $\varnothing 5$ L=64 \pm 3mm



1. Get the Black Vinyl tube $\varnothing 5$ L=64 \pm 3mm using right hand and insert B-B wires using left hand.

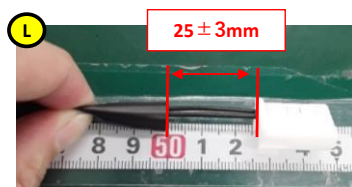
n/a

1. No wrong use of part.

6

P1

Taping 1 Black Vinyl tube to wire near connector

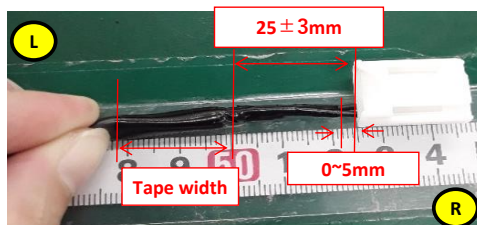


1. Hold vinyl tube using left hand, measure from Vinyl tube up to end of connector 25 \pm 3mm.



2. Get Black tape using right hand, hold the vinyl tube ($\varnothing 5$ L=64 \pm 3mm) using left hand then fold the vinyl tube and start taping using right hand.

MEASURING TAPE



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

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

Important reminders/Note/s:

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

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PARTS:

1. Assy parts
2. Black tape

3. Black Corrugated tube (No slit) $\varnothing 5$ L=75 \pm 3mm

JIG

1. Terminal cover jig

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

7

Wire insertion to Black Corrugated tube (No slit) $\varnothing 5$ L=75 \pm 3mm



1. Get the terminal cover jig using right hand then insert the **B-B wires** using left hand.



2. Get the Black COT $\varnothing 5$ L=75 \pm 3mm using right hand and insert **B-B wires** using left hand.



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

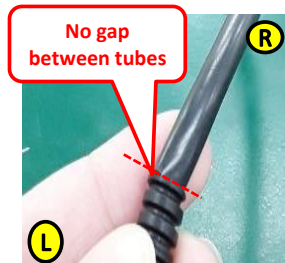
TERMINAL COVER JIG

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

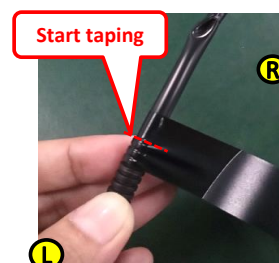
8

P1

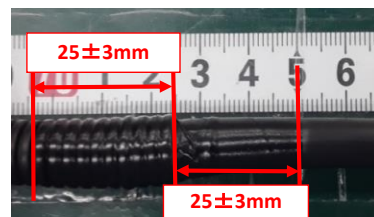
Taping 2 Black corrugated tube to Black vinyl tube near connector



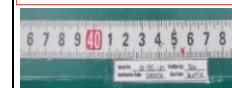
1. Fix the corrugated tube and vinyl tube using both hands. Make sure no gap between corrugated tube and vinyl tube.



2. Get the **Black tape** and start taping process using both hands.



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

MEASURING TAPE

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

Important reminders/Note/s:

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

2. Must be no gap between tubes.

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PARTS:

1. MRSW CP TVSSf 0.3 G-B/W L=590±3mm w/ Black sunprene tube Ø5 L=72±3mm
2. Black Corrugated tube Ø7 L=78±3mm (no slit)

JIG

1. Terminal cover jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

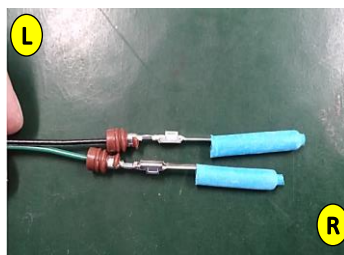
TOOLS/PPE

QUALITY POINTERS

9

P1

Wire insertion to Black
Corrugated tube Ø7
L=78±3mm (no slit)



1. Get the terminal cover jig using right hand then insert the **G** and **B/W** wires.



2. Get the Corrugated **Ø7 L=78±3mm (no slit)** using right hand and insert the **G** and **B/W** wires



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

TERMINAL COVER
JIG



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

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PARTS: 1. Connector 6188-0407 (W)

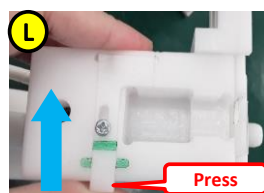
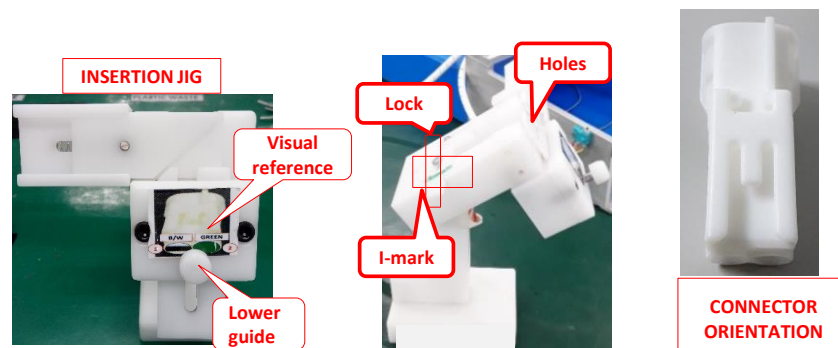
JIG 1. Insertion jig

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
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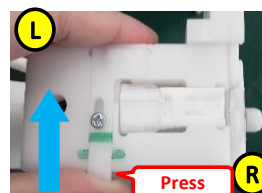
10

P1

Connector setting to
Insertion jig
6188-0407 (W)

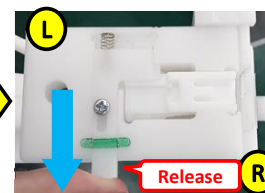


1. Press the lock of insertion jig using left thumb.



2. Insert the connector **6188-0407 (W)** into jig using right hand and release the lock.

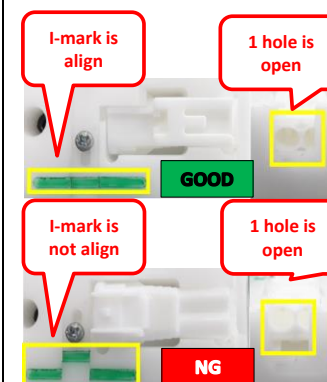
Note: Refer to above illustration for correct setting.



3. Press the lower wire guide using right thumb. Terminal slot for **B/W wire** will be open.

n/a

Connector Orientation Illustration



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:

- Connector 6188-0407 (W)
- MRSW CP TVSSf 0.3 G-B/W L=590±3mm w/ Black sunprene tube Ø5 L=72±3mm

JIG

- Insertion jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

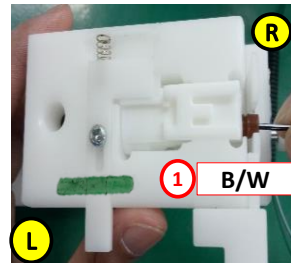
TOOLS/PPE

QUALITY POINTERS

11

P1

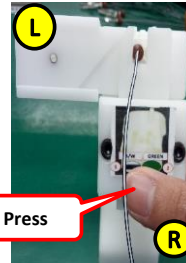
Wire Insetion to
Connector
6188-0407 (W)



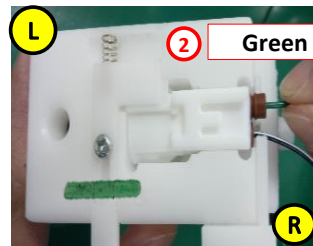
1. Hold the Insertion jig using left hand. Get **Black/White wire** then insert to terminal **slot 1** using right hand.



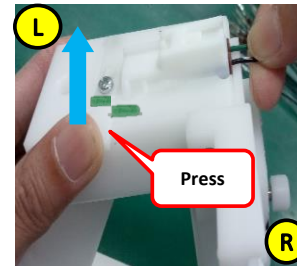
Wire facing



2. Push the button using right hand. The slot for **Green wire** will be opened.



3. Get **Green wire** then insert to terminal **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 deformed terminal
5. No wrong wire facing

Important reminders/Note/s:

1. Make sure wires are properly inserted. Conduct Pull-Push-Pull-push after insertion. Do not exert extra force.

2. Please hold the wire near terminal.

Document references:

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

2. Please refer to GL-PRO-ASSY-029 for Pull-Push procedure.

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PARTS:

1. Assy parts
2. Black tape

CONNECTOR CROSS SECTIONAL VIEW

JIG

1. Locking jig

NO.

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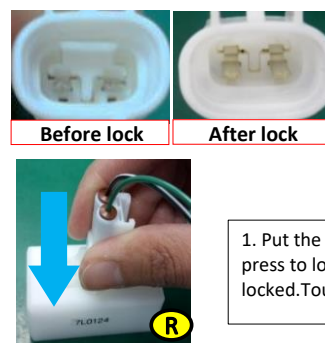
WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

12

Connector Lock



1. Put the connector into locking jig using right hand then press to lock **2x**. Check the connector lock if properly locked. Touch the condition of lock after pressing.

LOCKING JIG



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

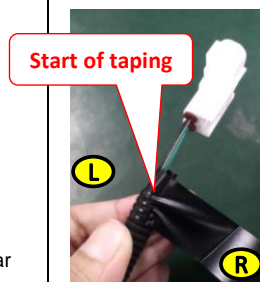
Important reminders/Note/s:

1. Manual locking may cause damaged connector lock.

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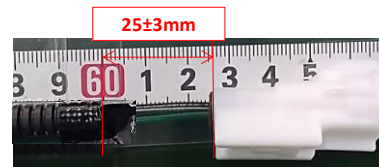
P1

Taping 3
COT to Wire near
Connector



Start of taping

1. Hold the Corrugated tube using left hand then start taping using right hand.



2. Measure from end of the COT up to connector **25±3mm** then continue the taping process using both hands.

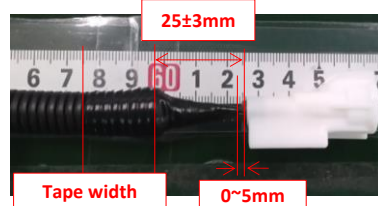
MEASURING TAPE



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

Important reminders/Note/s:

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



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

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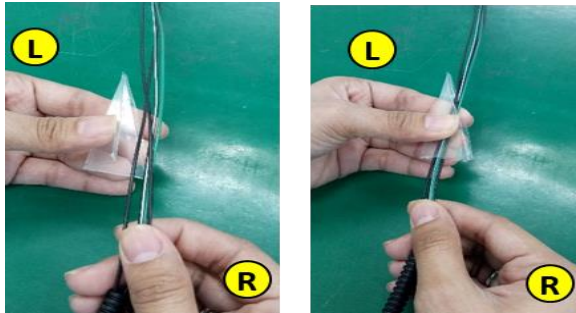


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PARTS:		1. Assy parts 2. Black Corrugated tube Ø5 L=317±3mm (with slit)			JIG	1. COT Adaptor
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION			TOOLS/PPE	QUALITY POINTERS
14	P1	<div>Wire insertion to Black Corrugated tube (w/slit) Ø5 L=317±3mm</div> <div> 1. Hold the COT adaptor using left hand. Combined the 2 assy parts and put inside the COT adaptor using right hand</div> <div> 2. Hold the COT adaptor with wires using left hand, get the Black Corrugated tube (w/slit) Ø5 L=317±3mm using right hand and insert to COT adaptor. Pull the adaptor and push the COT (same timing) using both hands. Make sure all wires are inserted.</div>			<div>COT ADAPTOR</div> <div></div>	1. No wrong use of parts 2. No wires left in between the COT with slit

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WORK INSTRUCTION

TAPING ASSEMBLY PROCESS

Effectivity Date:

April 24, 2023

Process Name/Title:

Validity Date:

n/a

Model Code/Product Number: 220D /

7L0134-7020

Customer:

TRQSS

Document No.:

WI-ENG-PDE-446A

Purpose:

☐ PROTOTYPE

☐ PRE-LAUNCH

☒ MASSPRO

Revision No.:

3

Page No.:

12 of 12

PARTS:

n/a

JIG

n/a

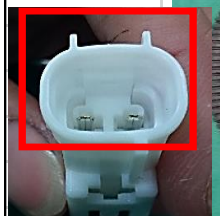
3 QUALITY CHECKPOINTS

P1

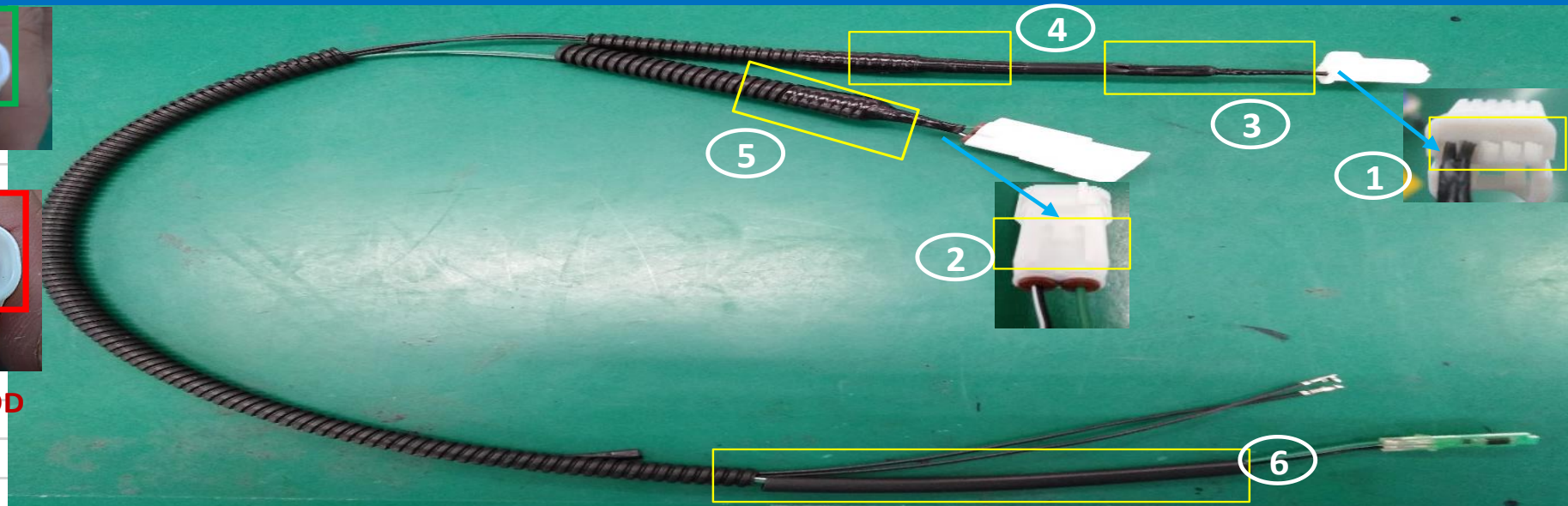
7L0134-7020



GOOD



NO GOOD



1

No **WRONG INSERT**

2

No **UNLOCKED/HALFLOCKED CONNECTOR**

NO **TBO**

3

4

5

No **MISSING TAPE**

6

No **MISSING VINYL**

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