



WORK INSTRUCTION

TAPING ASSEMBLY PROCESS

Effectivity Date:

September 23, 2022

Process Name/Title:

Validity Date:

n/a

Model Code/Part Number: 220D / 7L0135-7020

Customer: TRQSS

Document No.:

WI-ENG-PDE-438A

Purpose:

☒ PROTOTYPE☐

PRE-LAUNCH

☒ MASSPRO

Revision No.:

2

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PARTS:

1. Assy parts; Connector 6098-3810 (W); Black Vinyl tube $\phi 5$ L= 95 \pm 3mm; Black Sunprene tube $\phi 5$ L=117 \pm 3mm; AVSSf 0.3 G L=686 \pm 3mm; Black corrugated tube $\phi 5$ L=407 \pm 4mm (no slit); Black tape (1pc.)

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>Safety Instruction Be sure to wear required 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>Document reference/s: <u>2</u> 1. Refer to WI-ENG-PDE-457 7L0135-7020 Offline Assembly Process</div> <div>1. No missing parts/tools 2. No excess parts/tools</div>

Revision History

Eff. Date	Rev. No	Details of Change	Revised	Reviewed	Approved	Noted	Est. Date:	Prepared by	Reviewed by	Reviewed by	Approved by
09/23/22	2	Improve quality pointers: Reminders/notes and references in process no.1,2,3,4,5,8 and 10 due to document improvement. Work procedure/illustration in process no.5 - connector lock.	M. Catapang	J. Loterte	C. Villanueva	A. Arañes		M. Catapang	J. Loterte	C. Villanueva	A. Arañes
03/28/22	1	Change Pre-launch to Masspro.	K. Doria	J. Loterte	C. Villanueva	A. Arañes					
03/03/22	0	Initial issue.	K. Doria	J. Loterte	C. Villanueva	A. Arañes					

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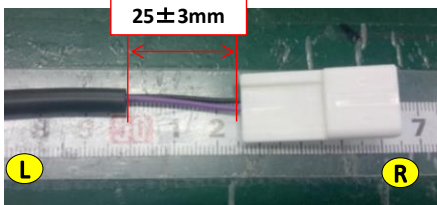
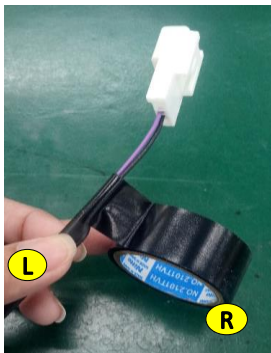
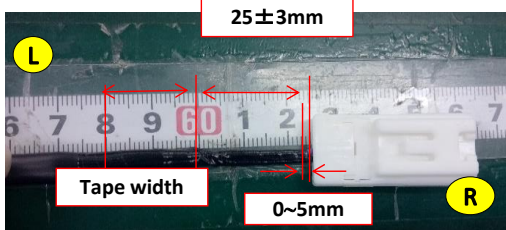

Purpose: ☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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PARTS:		1. Assy parts 2. Black tape		JIG	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
2	P1 Taping 1 Black Vinyl tube to wire near connector	<div></div> <div><p>1. Get the assy parts, measure the end of the Vinyl tube up to the connector 25±3mm using both hands.</p></div> <div></div> <div><p>2. Hold the Vinyl tube using left hand then start taping process using both hands.</p></div> <div></div> <div><p>3. After taping, check the measurement and taping condition.</p></div>		<p>MEASURING TAPE</p> 	<p>Important reminders/Note/s:</p> <p>1. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>1. No loose tape 2. No peel-off tape 3. No flip-out tape 4. No wrong dimension 5. No wrong use of tape 6. No missing tape</p>

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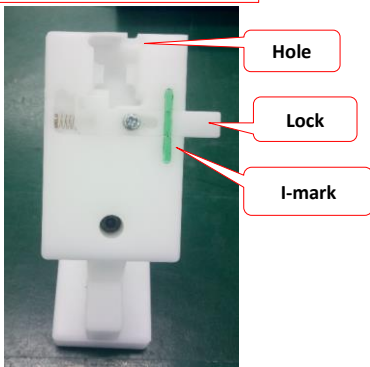
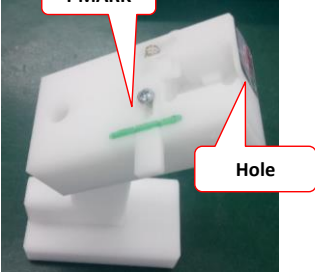


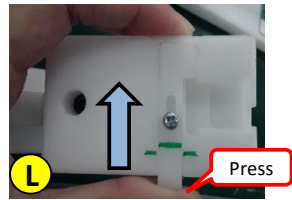
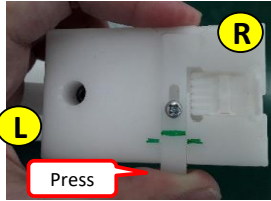
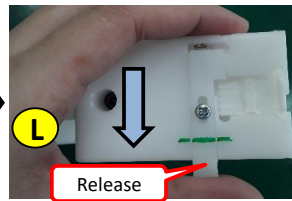
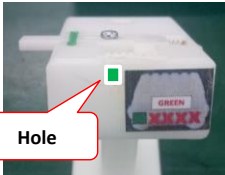
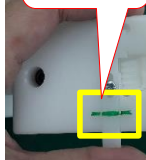

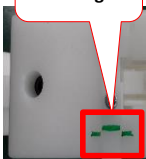


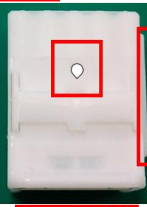
WORK INSTRUCTION TAPING ASSEMBLY PROCESS

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Process Name/Title: **TAPING ASSEMBLY PROCESS**

Model Code/Part Number: **220D / 7L0135-7020** Customer: **TRQSS**

Purpose: ☐ PROTOTYPE ☐ PRE-LAUNCH ☒ MASSPRO

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
3	P1 Connector insertion to insertion jig 6098-3810 (W)	<p>INSERTION JIG</p>  <p>I-MARK</p>  <p>Connector orientation</p>  <p>Insertion jig orientation</p>  <p>Press</p>  <p>Press</p>  <p>Release</p>  <p>1. Press the lock of insertion jig using left thumb.</p> <p>2. Insert the connector 6098-3810 (W) into jig using right hand and release the lock.</p> <p>Hole</p>  <p>3. Check the hole/terminal slot for Green wire.</p>	N/A	<p>Connector Orientation Illustration</p> <p>I-mark is align</p>  <p>1 hole is open</p>  <p>GOOD</p> <p>I-mark is not align</p>  <p>Half of hole is open</p>  <p>NG</p> <p>CONNECTOR ILLUSTRATION</p> <p>GOOD</p>  <p>6098-3810 (W)</p> <p>NG</p>  <p>6098-5677 (W)</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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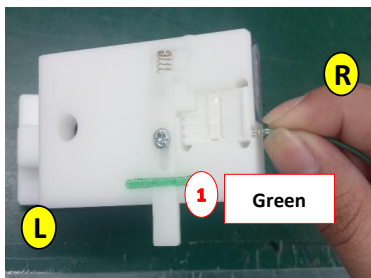
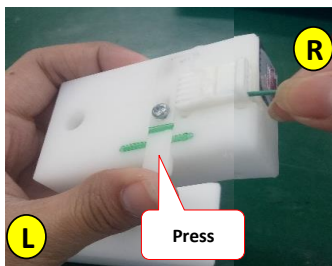
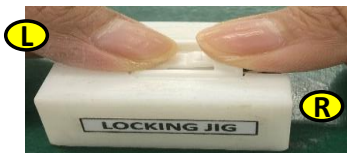
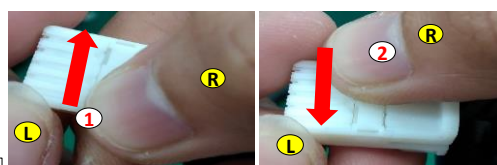



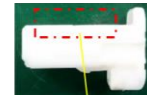
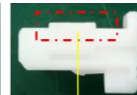
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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PARTS:		1. AVSSf 0.3 G L=686±3mm		JIG	1. Insertion jig 2. Locking jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
4	P1	Wire insertion to connector 6098-3810 (W)	<div><p>Wire facing</p><p>1. Get the Green wire and insert to terminal slot ① using right hand.</p><p>2. After insertion, press 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><p>1. No loose insertion 2. No wrong insertion 3. One by one insertion 4. No deform terminal 5. No wrong wire facing</p><p>2. 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.</p><p>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</p></div>
5	2	Connector Lock	<div><p>1. Put the connector into locking jig using right hand then press 2x using both hands. Touch the connector lock to confirm if properly locked.</p><p>2. Ensure that connector is in locked condition by slide touching the connector lock based on the sequence illustrated.</p><div><p>Before Pressing</p><p>After Pressing</p></div></div>	<div><p>LOCKING JIG</p></div>	<div><p>1. Use the provided locking jig per model 2. No unlock/half-locked connector</p><p>CONNECTOR LOCK CONDITION</p><div><div><p>GOOD Fully Locked</p></div><div><p>NG UnLocked</p></div></div></div>

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PARTS:

1. Black Vinyl tube $\phi 5$ L=95 \pm 3mm
2. AVSSf 0.3 G L=686 \pm 3mm

3. Black corrugated tube (no slit) $\phi 5$ L=407 \pm 4mm

JIG

1. Terminal cover jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

TOOLS/PPE

QUALITY POINTERS

6

Wire insertion to Black Vinyl tube
 $\phi 5$ L=95 \pm 3mm



1. Get the Black Vinyl tube $\phi 5$ L=95 \pm 3mm using right hand and insert the **G wire** using left hand.

n/a

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

7

P1

Wire insertion to Black corrugated tube (no slit)
 $\phi 5$ L=407 \pm 4mm



1. Combined the assy parts (**G, V and B wire with vinyl tube**), get the terminal cover jig using right hand and insert wires using left hand.



2. Get the Black corrugated tube (no slit) $\phi 5$ L=407 \pm 4mm using right hand and insert the wires using left hand.

TERMINAL COVER JIG



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

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

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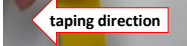

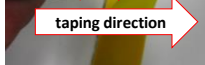



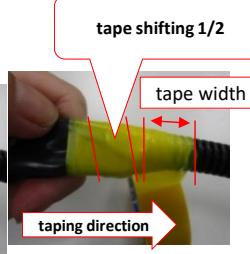

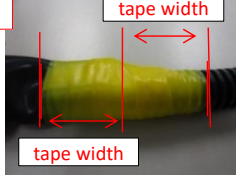
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PARTS:

1. Assy parts
2. Black tape

JIG

n/a

NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION	TOOLS/PPE	QUALITY POINTERS
8	P1 Y-Taping	<p>Note: Do not exert excessive force during pulling & winding of tape.</p> <p>L  R</p> <p> tape width</p> <p> tape shifting 1/2 below</p> <p> taping direction</p> <p>2. Hold two vinyl tube using left hand and fix to COT. Make 1 winding for pre-tape before shifting then wind the tape down to vinyl tube until tape width.</p> <p> tape shifting 1/3 below</p> <p> taping direction</p> <p>3. From vinyl tube, make 1/3 shifting to COT until tape width. Wind the tape 1 time before shifting.</p> <p> tape shifting 1/2 below</p> <p> taping direction</p> <p> tape width</p> <p> tape shifting 1/2</p> <p> taping direction</p> <p> tape width</p> <p>4. From COT, wind the tape down to vinyl tube (1/2 shifting) until tape width.</p> <p>5. From vinyl tube, wind the tape (1/2 shifting) going to side of corrugated tube then cut the tape after 2 windings. After taping, check the condition of tape.</p>	n/a	<p>2</p> <p>Important reminders/Note/s:</p> <ol style="list-style-type: none">1. Use YELLOW TAPE for easy visualization of shifting lines, but actual should be BLACK TAPE.2. Please use calibrated/verified measuring tape when getting the measurement. <ol style="list-style-type: none">1. No peel-off tape2. No flip out tape3. No loose tape4. No wrong use of tape5. No wrong dimension6. No missing tape

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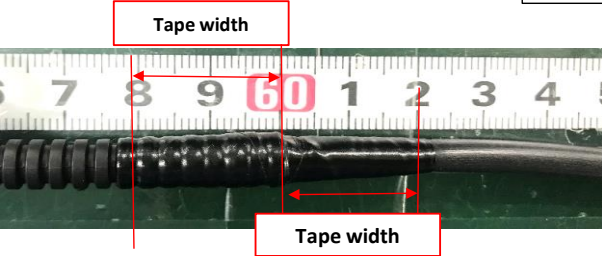

Purpose: ☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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PARTS:	1. Assy parts 2. Black tape 3. Black Sunprene tube $\phi 5$ L=117 \pm 3mm			JIG	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
9		 <div data-bbox="1032 443 1503 560">2. Get the Black Sunprene tube $\phi 5$ L=117\pm3mm using right hand and insert to B-V-G wires.</div>		n/a	1. No wrong usage of parts 2. No deformed terminal
10	P1 Taping 3 Corrugated tube to Sunprene tube	 <div data-bbox="616 874 1070 991">1. Hold the COT using left hand and measure from the end of Corrugated tube up to the terminal tip 176\pm3mm.</div>  <div data-bbox="1104 962 1503 1078">2. Hold the Corrugated tube using left hand then start taping using both hands.</div>  <div data-bbox="1193 1142 1503 1294">3. After taping, check the taping condition and terminal appearance.</div>		 <div data-bbox="1563 938 1765 962">MEASURING TAPE</div>	2 1. No peel-off tape 2. No flip out tape 3. No loose tape 4. No wrong use of tape 5. No wrong dimension 6. No missing tape Important reminders/Note/s: 1. Please use calibrated/verified measuring tape when getting the measurement.

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