

**WORK INSTRUCTION**

Process Name/Title:

TAPING ASSEMBLY PROCESS

Effectivity Date:

March 31, 2023

Validity Date:

n/aModel Code/Part Number **240B / 7M0514-7021**

Customer:

TRJ

Document No.:

WI-ENG-PDE-440C

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

Page No.:

1 of 9**PARTS:**

1. Clamp 82711-52090 (W); Clamp 82711-3A540 (W); Clamp 82711-34490 (B); Black tape; Yellow tape

JIG:

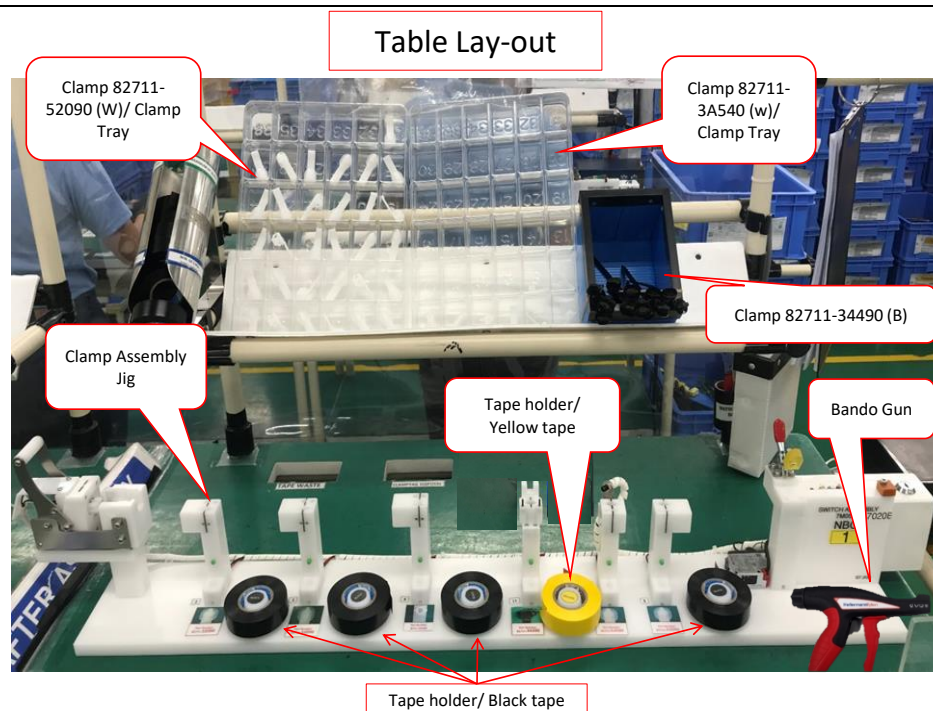
1. Clamp Assembly Jig

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

1

P3

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.

BANDO GUN

1. No missing parts/tools
2. No excess parts/tools

Revision History

Eff. Date	Rev. No	Details of Change	Prepared	Checked	Approved	Noted	Prepared by	Reviewed by	Approved by	Noted by
03/31/23	1	Work instruction improvement. Transfer Black Corrugated tube to wire near connector 6188-0066 (GR) taping from P2 to P3 (Page 3). Inclusion of quality checkpoints (Page 9).	D.Castillo	J. Loterte	C. Villanueva	A. Arañes				
09/21/22	0	Initial issue	D.Castillo	J. Loterte	C. Villanueva	A. Arañes				
		New establish due to merging of Offline Assembly Process (WI-ENG-PDE-439) to P1 (WI-ENG-PDE-440A).								

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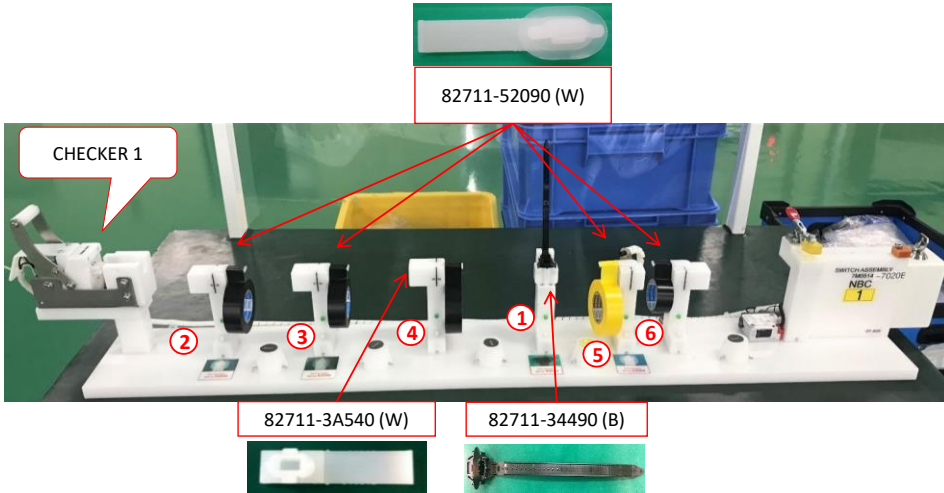
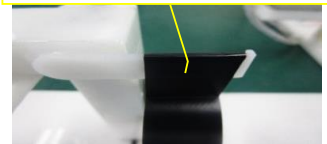
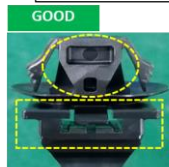
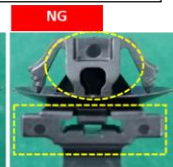


WI-ENG-PDE-440CPurpose: ☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

1

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PARTS:		1. Assy parts 2. Black tape [4pcs]		3. Yellow tape [1pc]		JIG	1. Clamp Assembly Jig
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION				TOOLS/PPE	QUALITY POINTERS
2	P3 Clamp Setting	<div><div></div><div><div><div>1. Get 2pcs. of clamp 82711-52090 (W) using both hands then set to clamp location 2 and 3.</div><div>2. Get 2pcs. of clamp 82711-52090 (W) using both hands then set to clamp location 5 and 6.</div><div>3. Get 1pc. of clamp 82711-3A540 (W) using right hand then set to clamp location 4 using both hands.</div></div><div><div>4. Get 1pc. of clamp 82711-34490 (B) using right hand then set to clamp location 1 using both hands.</div><div>5. Initially attach the Yellow tape to location 5 using both hands.</div><div>6. Initially attach the Black tape to location 1, 2, 3 and 6 using both hands.</div></div></div></div>				n/a	<div><div>STANDARD TAPING FOR CLAMP</div><div>One side tape under clamp</div><div></div><div>1. No wrong use of parts 2. No wrong use of tape 3. No damaged clamp 4. No wrong clamp position</div><div>Important reminders/Note/s: <i>1. Please check the Clamp first before start of assembly to avoid wrong use of clamp.</i></div><div><div>BAND CLAMP ILLUSTRATION</div><div><div><div>GOOD</div><div></div><div>82711-34490 (B)</div></div><div><div>NG</div><div></div><div>82711-16830 (B)</div></div></div><div><div>CLAMP ILLUSTRATION</div><div><div>GOOD</div><div></div><div>82711-52090 (W)</div></div><div><div>NG</div><div></div><div>82711-12A80 (W)</div></div></div></div></div>

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☐ PROTOTYPE

☐ PRE-LAUNCH


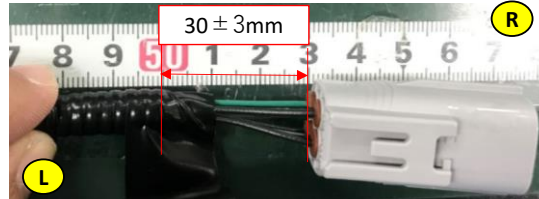
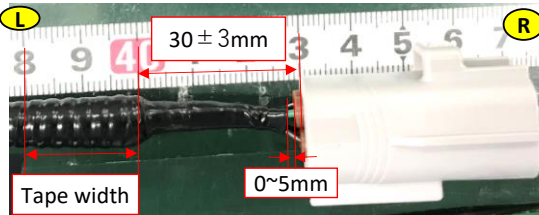

☒ MASSPRO

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1

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PARTS:		JIG		n/a	
1. Assy parts 2. Black tape [1pc]					
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
3	P3 Taping 2 Black Corrugated tube to wire near connector 6188-0066 (GR)	<div><div>Start of taping</div><div>1. Hold the COT using left hand, get the Black tape using right then start pre-taping at the middle of COT and wires using both hands.</div></div> <div><div>2. Measure from end of COT up to edge of connector 30±3mm using both hands.</div></div> <div><div>3. After taping, check the measurement and taping condition.</div></div>		<div>MEASURING TAPE</div> 	<p>Important reminder/Note/s:</p> <p>1. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>Document references:</p> <p>1. Please refer to WI-PRO-ASY-001 for taping procedure.</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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PARTS:

1. Assy parts

JIG

1. Clamp assembly jig

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION

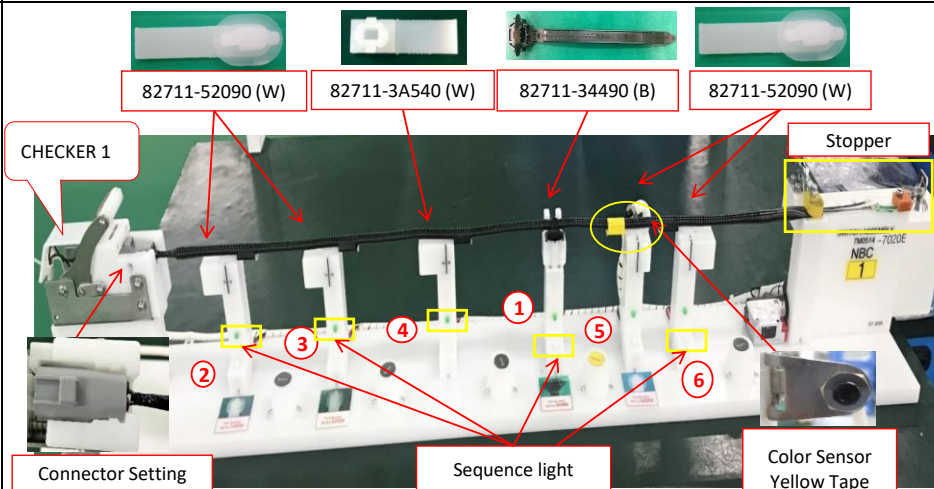
TOOLS/PPE

QUALITY POINTERS

4

P3

Clamp assembly



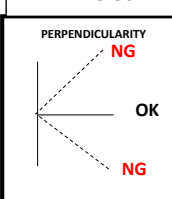
1. Get the assy parts then put into jig. (*See above picture for correct setting*). First, set the connector 6188-0066 (GR) to **Checker 1** then close the checker fixture for continuity checking. Continue to set the harness in the jig up to the end of **B-B wires** and **G/BW hotmelted wires** within the stopper, then pull down the **Toggle clamp**.

2. On **clamp location 1**, Initially tighten the band clamp using both hands. Continue if the sequence light in location **1** was **ON**.

3. Get the bando gun using right hand then cut the band clamp. Press the **SW button** after cut. Continue if the sequence light on clamp location **2** was **ON**.



BANDO GUN



Note: Setting of band clamp cutter depends on the size of the COT/Vinyl tube.
For: $\phi 5 - 1 \sim 2$, $\phi 7 - 3 \sim 4$



Fixed setting of band clamp cutter: 1~2

Bando gun



FLAT NOSEPIECE

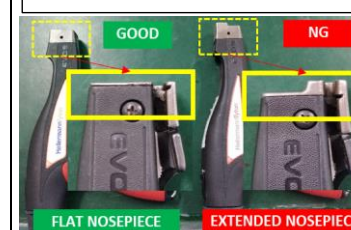


Important reminders/Note/s:

1. Make sure no gap between stopper and hotmelted

1. No loose/tight clamp attached
2. No damage clamp
3. No missed tape
4. No missing parts
5. Make sure no clearance between PCB and stopper jig

BAND CLAMP ILLUSTRATION



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PARTS:

1. Assy parts

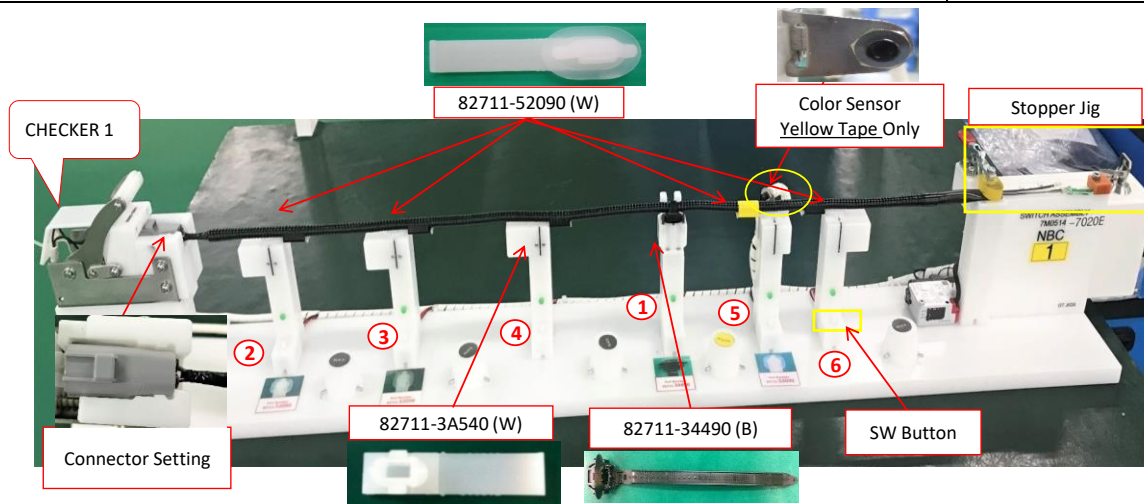
JIG

1. Clamp assembly jig

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

4

P3

Clamp assembly
(Continuation)

4. Hold the tape on clamp location **2** then start taping using both hands. Make **3 windings** of tape then cut the tape. Press the **SW button** after taping. Continue if the sequence light in location **3** was **ON**.

5. Hold the tape on clamp location **3** then start taping using both hands. Make **3 windings** of tape then cut the tape. Press the **SW button** after taping. Continue if the sequence light in location **4** was **ON**.

6. Hold the tape on clamp location **4** then start taping using both hands. Make **3 windings** of tape then cut the tape. Press the **SW button** after taping. Continue if the sequence light in location **5** was **ON**.

7. Hold the **yellow tape** on clamp location **5** then start taping using both hands. Make **3 windings** of tape then cut the tape. Press the **SW button** after taping. Continue if the sequence light in location **6** was **ON**.

8. Hold the tape on clamp location **6** then start taping using both hands. Make **3 windings** of tape then cut the tape. Press the **SW button** after taping. **GO** sound will be heard.

9. After taping, Conduct **POINT CHECKING** before removing the harness from the jig.

**Important reminders/Note/s:**

1. Make sure no gap between stopper and hotmelted

1. No loose/tight clamp attached
2. No damage clamp
3. No missed tape
4. No missing parts
5. Make sure no clearance between PCB and stopper jig

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☐ PROTOTYPE

☐ PRE-LAUNCH

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PARTS:

1. Assy parts

JIG

n/a

NO.

PROCESS NAME

WORK PROCEDURE/ ILLUSTRATION


TOOLS/PPE

QUALITY POINTERS

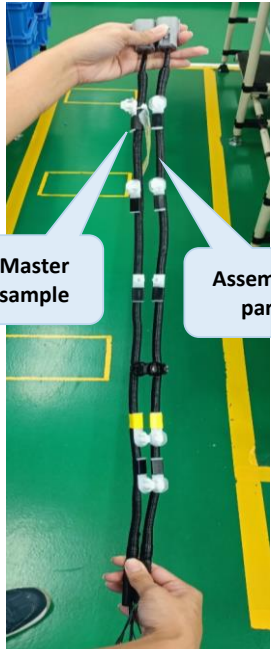
5

P3

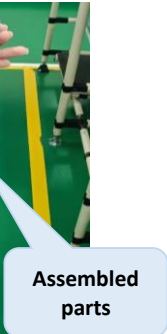
Visual/By Two's Inspection





ACTUAL PRODUCT




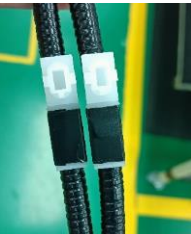

Master sample



Assembled parts



2. Check the **terminal, connector lock condition and insertion.**



3. Check the **presence of clamp, taping condition, tape color and half-wrap taping.**

1. Conduct alignment of harness (**Master sample vs. assembled parts**) using both hands.

MASTER SAMPLE



1. No skip inspection process

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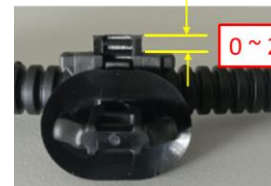
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

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PARTS:	1. Assy parts			JIG	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
5	P3 Visual/By Two's Inspection (Continuation)	<div></div> <div></div> <div></div> <div>4. Check the presence of band clamp and band cut.</div> <div></div> <div>6. Check the taping condition and appearance of PCB and terminals.</div>		<div>5. Check the presence of tape in COT to sunpren tube and tape condition.</div> <div></div> <div>1. No skip inspection process</div> <div>Important reminders/Note/s: 1. Using a steel rule, check if the band cut measurement is within the required dimension and should not exceed the allowable range (0~2mm).</div> <div></div>	

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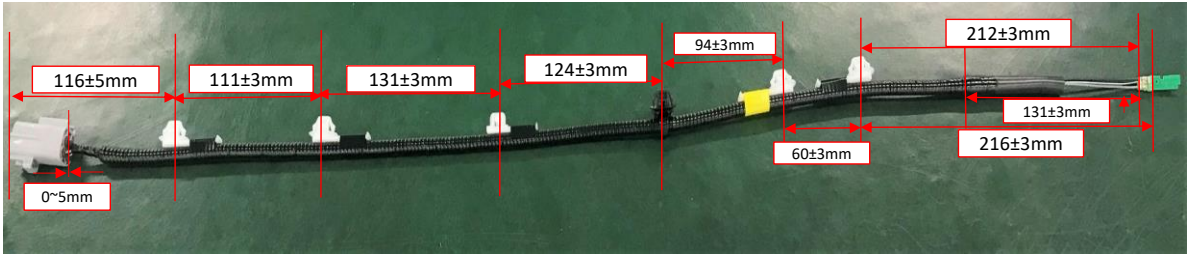

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Purpose:	<input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO		

PARTS:	n/a			JIG	n/a
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION		TOOLS/PPE	QUALITY POINTERS
6	P3	Measurement	 		<p>Important reminders/Note/s:</p> <p>1. For Hatsumono and Owarimono</p> <p>2. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>1. No wrong dimension</p>

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PARTS:

n/a

JIG

n/a



QUALITY CHECKPOINTS

P3

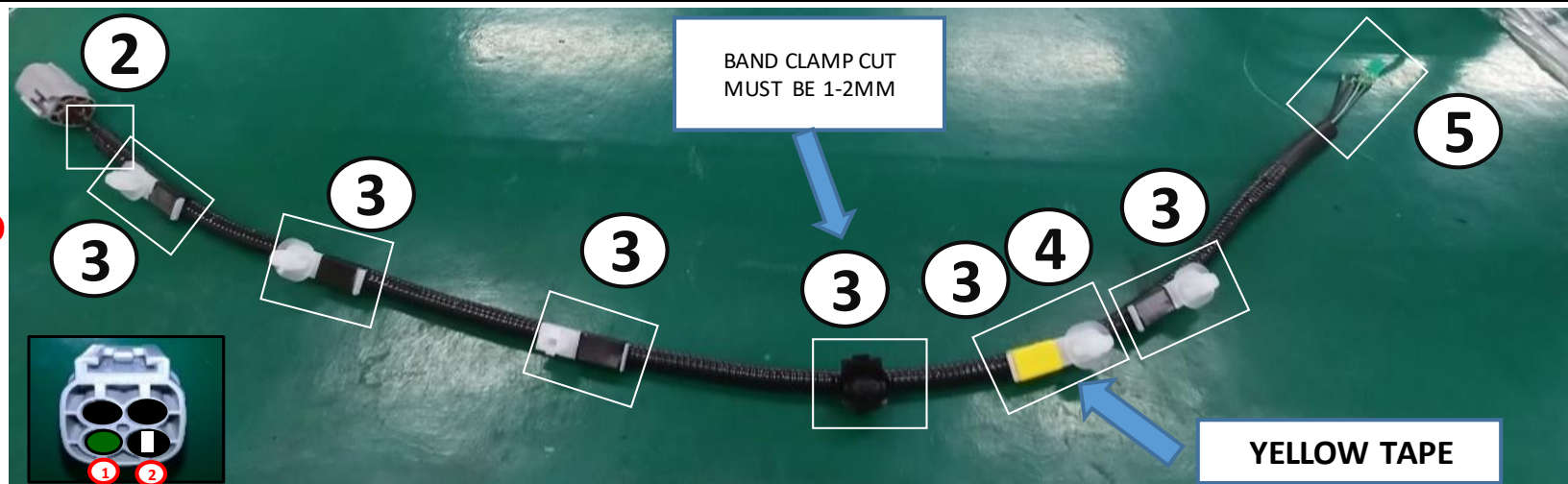
7M0514-7021



NO GOOD



GOOD



- ① No **WRONG INSERT**
No **TBO**
No **Unlocked/halflocked connector**

- ② No **MISSING TAPE**
③ No **MISSING Clamp**

- ④ No **Wrong use of tape**
⑤ No **Deformed Terminal**

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