



## WORK INSTRUCTION

## TAPING ASSEMBLY PROCESS

Effectivity Date:

February 28, 2024

Process Name/Title:

Model code/Part number:

310D/ 7N0194-7020

Customer: TRJ

Car Model:

TOYOTA RAV4

Document No.:

WI-ENG-PDE-752B

Purpose:

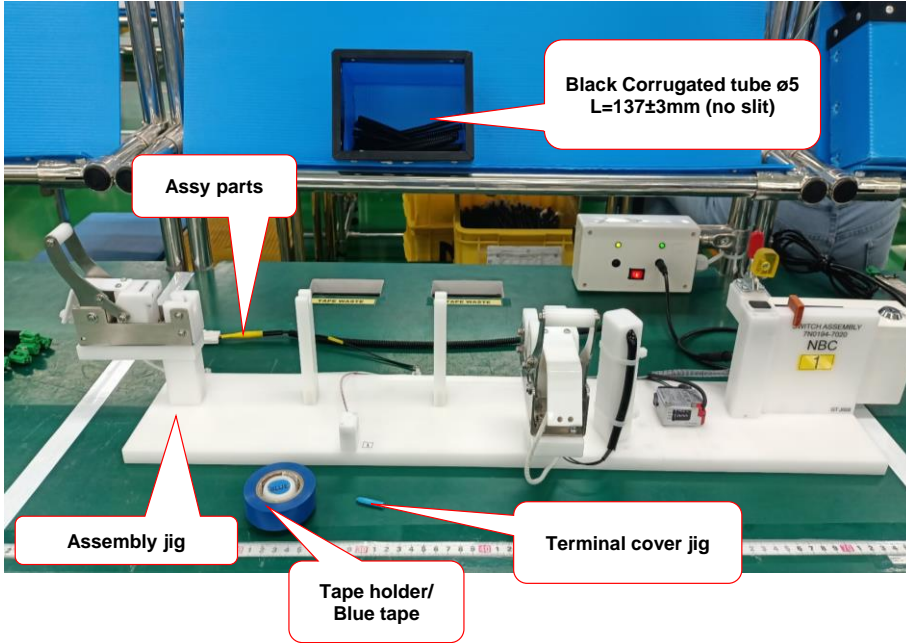
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

0

Page No.:


1 of 8




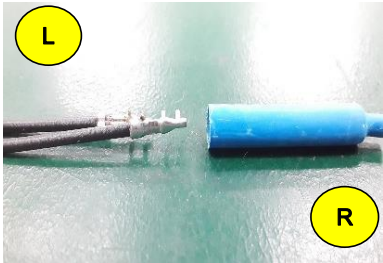
PARTS:	1. Assy parts; Black Corrugated tube ø5 L=137±3mm (no slit); Blue tape				JIG:	1. Assembly jig 2. Terminal cover jig				
NO.	PROCESS NAME	WORK PROCEDURE/ ILLUSTRATION				TOOLS/PPE	QUALITY POINTERS			
1	P2	<div>Table Lay-out</div>  <div>Black Corrugated tube ø5 L=137±3mm (no slit)</div> <div>Assy parts</div> <div>Assembly jig</div> <div>Tape holder/ Blue tape</div> <div>Terminal cover jig</div>				<div><b>Safety Instruction</b> Be sure to wear prescribed personal protective equipment during operation (gloves, finger cots, etc.)</div> <div><b>Housekeeping</b> 1. Maintain and always practice 5's. 2. Personal things on the workplace is prohibited. Keep it in your locker.</div> <div><b>Alert level</b> For any trouble, inform the Assembly Assistant Supervisor or Line Leader for immediate corrective action.</div>	<div><b>Document reference/s:</b> 1. Refer to <b>WI-PRO-CNC-017</b> for <b>Wire and Strip Length Tolerance</b>.</div> <div>1. No missing parts/tools 2. No excess parts/tools</div>			
Revision History						Prepared by	Reviewed by	Approved by	Noted by	
02/28/24	0	Initial issue.				D. Castillo	C. Villanueva	A. Arañes	n/a	
Eff. Date	Rev. No	Details of Change				Revised	Reviewed	Approved	Noted	
						Est. Date:	November 11, 2023			

**CONFIDENTIAL:** Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)  
MASTER COPY

DCC Stamp


	<b>WORK INSTRUCTION</b>				Effectivity Date:		<b>February 28, 2024</b>	
	<b>Process Name/Title: TAPING ASSEMBLY PROCESS</b>				Validity Date:		n/a	
	<b>Model code/Part number: 310D/ 7N0194-7020</b>		<b>Customer: TRJ</b>	<b>Car Model: TOYOTA RAV4</b>	Document No.:		<b>WI-ENG-PDE-752B</b>	
	<b>Purpose:</b> <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO				Revision No.:		0	Page No.:

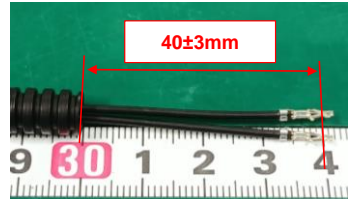
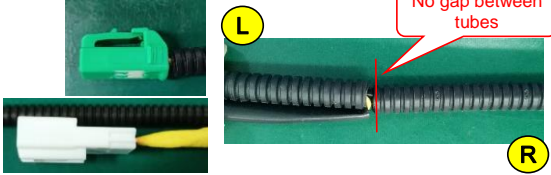
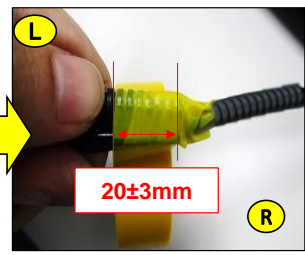
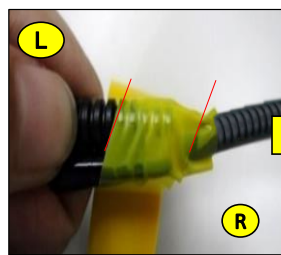
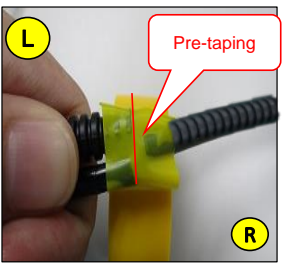
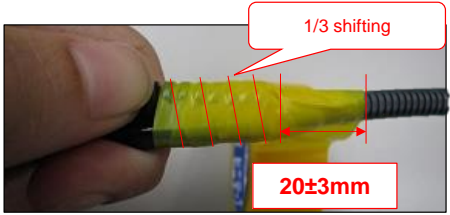

<b>PARTS:</b>		1. Assy parts 2. Black corrugated tube ø5 L=137±3mm (no slit)		JIG:	1. Terminal cover jig	
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>		<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>	
2	P2 Wire insertion to Black corrugated tube ø5 L=137±3mm (no slit)		1. Get the terminal cover jig using right hand and insert wires using left hand.	<div>TERMINAL COVER JIG</div> 	1. No wrong usage of parts 2. No deformed terminal	
			2. Get the Black Corrugated tube <b>ø5 L=137±3mm (no slit)</b> using right hand and insert to wires.			
			3. After insertion, remove the terminal cover jig using right hand.			

**CONFIDENTIAL:** Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

**NBC (Philippines)**  
**MASTER COPY**

DCC Stamp

	<b>WORK INSTRUCTION</b>			Effectivity Date:	<b>February 28, 2024</b>		
	<b>TAPING ASSEMBLY PROCESS</b>			Validity Date:	n/a		
	Process Name/Title:			Document No.:	WI-ENG-PDE-752B		
	Model code/Part number: <b>310D/ 7N0194-7020</b>		Customer: <b>TRJ</b>	Car Model: <b>TOYOTA RAV4</b>	Revision No.: 0      Page No.:      3 of 8		
Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO							


<b>PARTS:</b>	1. Assy parts 2. Blue tape			JIG:	n/a				
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>			<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>			
3	P2	Y-Taping	<div><p>1. Fix the COT and SV tube (Vinyl). Make sure no gap in between.</p><p>2. Measurement from end of corrugated tube up to terminal tip. Must be <b>40±3mm</b>.</p></div> <div><p>3. Get the tape and fix the COT and SV tube (Vinyl) to COT. Make <b>1</b> wind pre-taping before shifting.</p><p>4. Make <b>1</b> shifting to the left until tape width then wind the tape <b>2x</b>.</p></div> <div><p>5. Make <b>1/3</b> shifting to the right side until tape width on COT.</p></div>			<div><b>MEASURING TAPE</b></div> 	<p><b>Important reminders/Note/s:</b></p> <p>1. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>2. Use <b>YELLOW</b> tape to easily visualize the tape shifting. But actual should be <b>BLUE TAPE</b>.</p> <p><b>Document references:</b></p> <p>1. Refer to WI-PRO-ASY-001 for Taping process</p>		

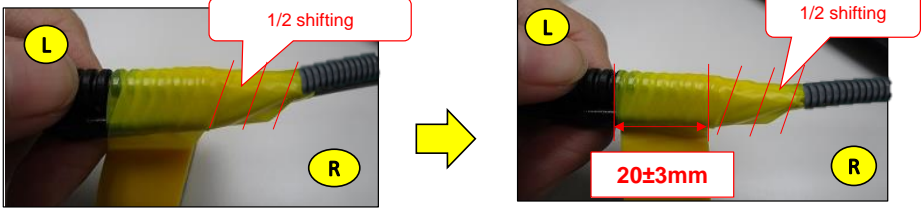
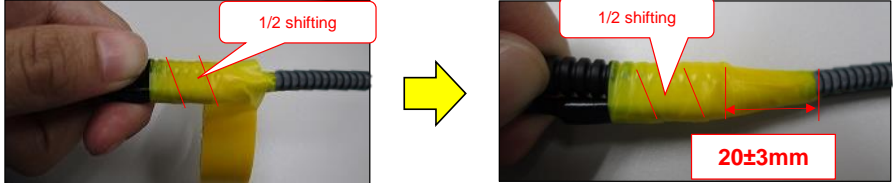
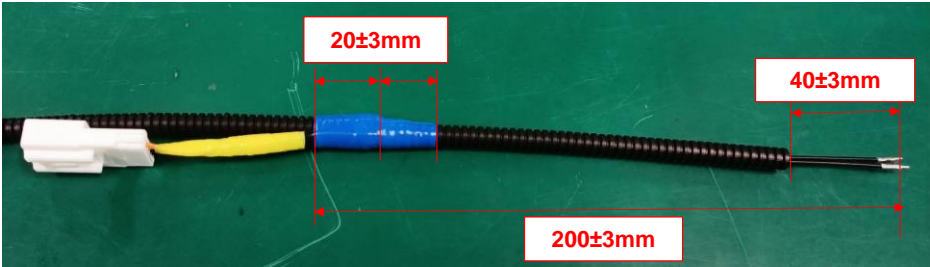

**CONFIDENTIAL:** Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

**NBC (Philippines)**

**MASTER COPY**

DCC Stamp

	<b>WORK INSTRUCTION</b>			Effectivity Date:	<b>February 28, 2024</b>		
	Process Name/Title: <b>TAPING ASSEMBLY PROCESS</b>			Validity Date:	n/a		
	Model code/Part number: <b>310D/ 7N0194-7020</b>		Customer: <b>TRJ</b>	Car Model: <b>TOYOTA RAV4</b>	Document No.:	<b>WI-ENG-PDE-752B</b>	
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO			Revision No.:	0	Page No.:	4 of 8

<b>PARTS:</b>	1. Assy parts 2. Blue tape			JIG:	n/a		
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>			<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>	
3	P2  Y-Taping (Continuation)	<div></div> <div>6. Make 1/2 shifting to the left until tape width then wind the tape 2x.</div> <div></div> <div>7. Make 1/2 shifting to the right until tape width on COT. Wind the tape 2x then cut the tape.</div> <div></div> <div>8. After taping, check the measurement from corrugated tube up to terminal tip 40±3mm, end tape of Y-taping to terminal tip 200±3mm and taping condition.</div>			<div>MEASURING TAPE</div> 	<p><b>Important reminders/Note/s:</b></p> <p>1. Please use calibrated/verified measuring tape when getting the measurement.</p> <p>2. Use <b>YELLOW</b> tape to easily visualize the tape shifting. But actual should be <b>BLUE TAPE</b>.</p> <p><b>Document references:</b></p> <p>1. Refer to WI-PRO-ASY-001 for Taping process</p> <p>1. No loose tape 2. No flip-out tape 3. No peel-off tape 4. No wrong use of tape 5. No wrong dimension 6. No wide interval between the COT 7. No exposed wire</p>	

**CONFIDENTIAL:** Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)

MASTER COPY

DCC Stamp

**WORK INSTRUCTION**

Process Name/Title:

**TAPING ASSEMBLY PROCESS**

Effectivity Date:

**February 28, 2024**

Model code/Part number:

**310D/ 7N0194-7020**

Customer:

**TRJ**

Car Model:

**TOYOTA RAV4**

Document No.:

**WI-ENG-PDE-752B**

Purpose:

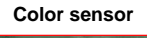









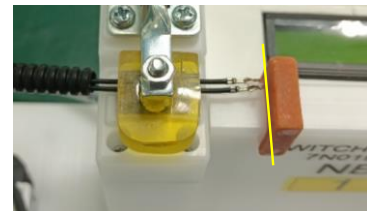
☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

0

Page No.:

5 of 8


<b>PARTS:</b>	1. Assy parts			JIG:	n/a
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>		<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>
4	P2	Assembly jig	<div></div> <p>1. Get the assy parts then set into jig (<i>See above illustration</i>). First, set the connector 7283-102060 (G) to Checker 1 then pull the checker picture for continuity checking. Second, set the connector 6098-5668 (W) to Checker 2 then pull the checker picture for continuity checking. Last, put the terminal into stopper jig then pull the toggle clamp using both hands.</p> <p>2. Check in the counter if <b>Wire 1 and Wire 2</b> was <b>ON</b>. If encountered abnormality, <b>STOP</b> and immediately <b>CALL</b> the attention of the leader. <b>WAIT</b> for further instruction then continue the process.</p> <p>3. If the <b>Color sensor</b> is <b>ON</b>. Press the SW button. <b>GO</b> buzzer will be heard.</p> <p>4. Conduct <b>POINT CHECKING</b> before removal from jig.</p> <div></div>	n/a	<div><p><b>Important reminders/note/s:</b></p><p>1. Make sue no gap between stopper jig and terminal.</p><ol style="list-style-type: none"><li>1. No loose tape</li><li>2. No flip-out tape</li><li>3. No peel-off tape</li><li>4. No wrong use of tape</li><li>5. No wrong dimension</li><li>6. No wide interval between the COT</li><li>7. No exposed wire</li></ol></div>


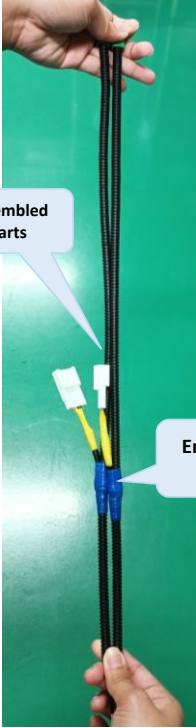






**CONFIDENTIAL:** Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

**NBC (Philippines)**  
**MASTER COPY**

DCC Stamp



	<b>WORK INSTRUCTION</b>				Effectivity Date:		<b>February 28, 2024</b>	
	Process Name/Title: <b>TAPING ASSEMBLY PROCESS</b>				Validity Date:		n/a	
	Model code/Part number: <b>310D/ 7N0194-7020</b>		Customer: <b>TRJ</b>	Car Model: <b>TOYOTA-RAV 4</b>	Document No.:		<b>WI-ENG-PDE-752B</b>	
	Purpose: <input type="checkbox"/> PROTOTYPE <input type="checkbox"/> PRE-LAUNCH <input checked="" type="checkbox"/> MASSPRO				Revision No.:		0	Page No.:

<b>PARTS:</b>		1. Assy parts 2. Master sample		JIG:	n/a
<b>NO.</b>	<b>PROCESS NAME</b>	<b>WORK PROCEDURE/ ILLUSTRATION</b>	<b>TOOLS/PPE</b>	<b>QUALITY POINTERS</b>	
5	P1	Visual inspection	<div><p>ACTUAL PRODUCT</p><p>Assembled parts</p><p>Engineering sample</p></div>	<div><div>MASTER SAMPLE</div><p>1. No skip checking during inspection</p><p>2. Check the <b>connector lock condition, wire insertion and terminal.</b></p><p>3. Check <b>taping condition</b> and <b>color of tape</b></p><p>4. Check the <b>terminal appearance</b>. Must be <b>no deformed terminal.</b></p></div>	

**CONFIDENTIAL:** Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

**NBC (Philippines)**  
**MASTER COPY**

DCC Stamp

**WORK INSTRUCTION**

Process Name/Title:

**TAPING ASSEMBLY PROCESS**

Effectivity Date:

**February 28, 2024**

Model code/Part number:

**310D/ 7N0194-7020**Customer: **TRJ**Car Model: **TOYOTA-RAV 4**

Validity Date:

**n/a**

Document No.:

**WI-ENG-PDE-752B**

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Revision No.:

**0**

Page No.:

**7 of 8****PARTS:**

1. Assy parts

JIG:

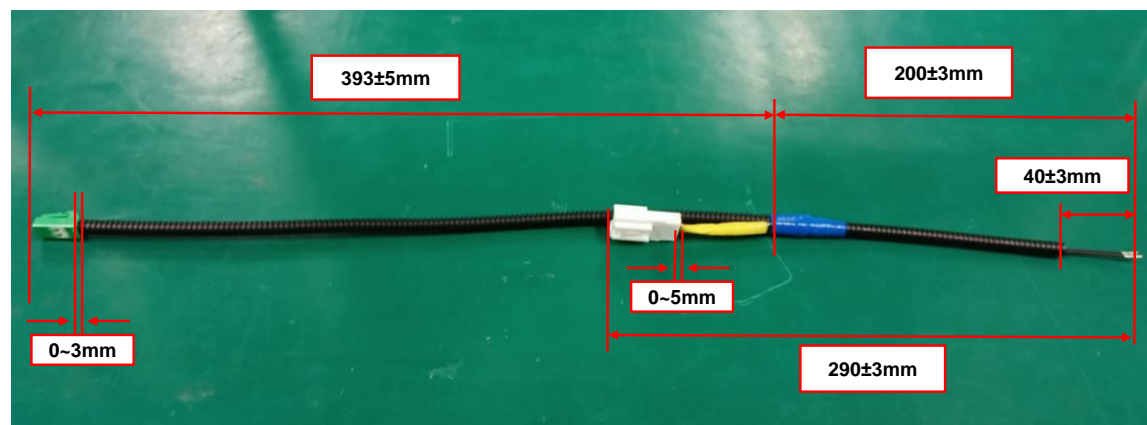
n/a

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

6

P1

Measurement

**MEASURING  
TAPE**

**Important reminders and note/s:**  
**1. Please use calibrated/verified measuring tape when getting the measurement.**

**2. For Hatsumono, Nakamono and Owarimono.**

**Document reference/s:**

**1. Refer to WI-PRO-ASY-056 for Sub-assembly Hatsumono Nakamono Owarimono Inspection**

1. No wrong dimension

**CONFIDENTIAL:** Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

**NBC (Philippines)  
MASTER COPY**

DCC Stamp

**WORK INSTRUCTION**

Process Name/Title:

**TAPING ASSEMBLY PROCESS**

Effectivity Date:

February 28, 2024

Model code/Part number:

310D/ 7N0194-7020

Customer: TRJ

Car Model: TOYOTA RAV4

Validity Date:

n/a

Purpose:

☐ PROTOTYPE☐ PRE-LAUNCH☒ MASSPRO

Document No.:

WI-ENG-PDE-752B

Revision No.:

0

Page No.:

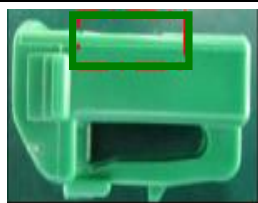
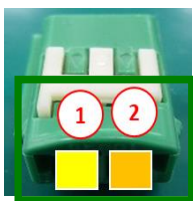
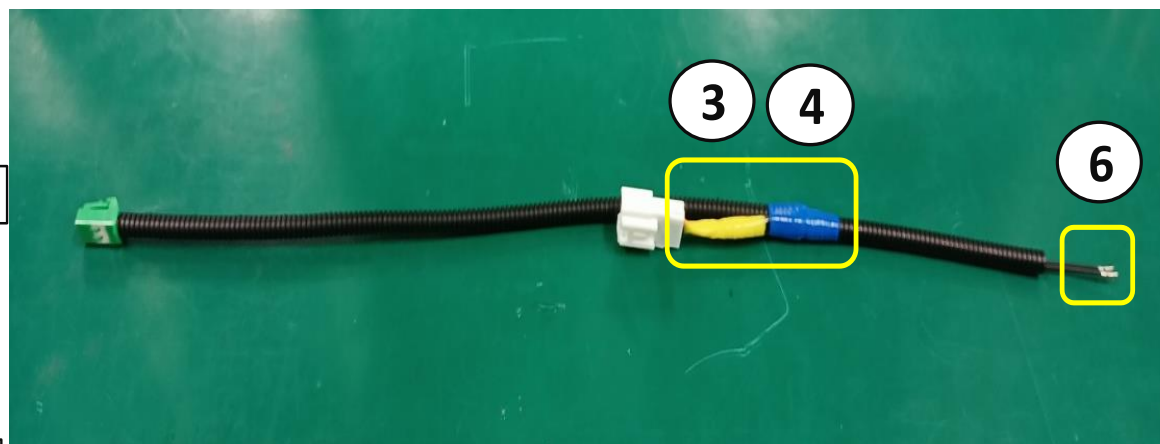
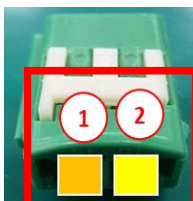
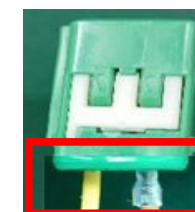
8 of 8

PARTS:

n/a

JIG:

N/A

**QUALITY CHECKPOINTS****P2****7N0194-7020****GOOD****GOOD****GOOD****NO GOOD****NO GOOD****NO GOOD**

① No **Unlock/**  
**Halflock**  
**Connector**

② No **Wrong Insert**

③ No **Missing Tape**

④ No **Wrong used of**  
**tape**

⑤ No **Terminal Backing Out**

⑥ No **Deformed**  
**Terminal**

**CONFIDENTIAL:** Any misuse or misappropriation, including unauthorized copying, reproduction in any form, disclosure or publishing of this document or any information herein is strictly prohibited.

NBC (Philippines)  
**MASTER COPY**

DCC Stamp