

Linerless Barcode Printer

## **Linerless Series**

Direct Thermal

#### **Series Models**

Alpha-2R/ Alpha-30R/ Alpha-30L/ Alpha-40L Series DA210/ DA220 / DH240/ DH220 Series MB240 Series

Linerless Cleaning Kit User Manual

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## **1** Introduction

Thank you very much for purchasing TSC linerless barcode printer.

This manual presents how to care for the linerless printer and the related maintenance procedures to ensure the quality of prints.

#### For Cleaning

Depending on the media used, the printer may accumulate residues (media dust, adhesives, etc.) as a by-product of normal printing. To maintain the best printing quality, you should remove these residues by cleaning the printer periodically. Regularly clean the print head and supply sensors once change a new media to keep the printer at the optimized performance and extend printer life.

#### For Disinfecting

Sanitize your printer to protect yourself and others and can help prevent the spread of viruses.

#### Important

- Set the printer power switch to O (Off) prior to performing any cleaning or disinfecting tasks. Leave the power cord connected to keep the printer grounded and to reduce the risk of electrostatic damage.
- Do not wear rings or other metallic objects while cleaning any interior area of the printer.
- Use only the cleaning agents recommended in this document. Use of other agents may damage the printer and void its warranty.
- Do not spray or drip liquid cleaning solutions directly into the printer. Apply the solution on a clean lint-free cloth and then apply the dampened cloth to the printer.
- Do not use canned air in the interior of the printer as it can blow dust and debris onto sensors and other critical components.
- Only use a vacuum cleaner with a nozzle and hose that are conductive and grounded to drain off static build up.
- All reference in these procedures for use of isopropyl alcohol requires that a 99% or greater isopropyl alcohol content be used to reduce the risk of moisture corrosion to the printhead.
- Do not touch printhead by hand. If you touch it careless, please use 99% Isopropyl alcohol to clean it.
- Always taking personal precaution when using any cleaning agent.

## **2** Linerless Cleaning Kit

It is recommended that the cleaning supplies listed be used. Using unapproved cotton swabs, solvent, tools, etc. may damage the cutter blade or other printing mechanism of the printer.

Important: Always taking personal precaution when using any cleaning agent. Protective gloves are recommended.



- **1.** \* Cleaning solution for linerless printing
- 2. Printhead cleaning pen (or 99% Isopropyl alcohol)
- 3. Sponge foam swab
- 4. Lint-free cloth

#### \* Cleaning solution instructions:

- Siloxanes and silicones, dimethyl; CASRN: 63148-62-9; Contains no hazardous ingredients according to GHS.
- Storage temperature: -30~ 60°C
- Notes:
  - Skin contact:

Wash off with plenty of water. Prolonged skin contact is unlikely to result in absorption of harmful amounts.

- Inhalation:

Move person to fresh air and keep comfortable for breathing; consult a physician.

- Eye contact:

Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion:

Rinse mouth with water. No emergency medical treatment necessary.

Environmental precautions:

Discharge into the environment must be avoided. Local authorities should be advised if significant spillages cannot be contained.

- Methods and materials for containment and cleaning up:
   Soak up with inert absorbent material. If dyked material can be pumped, store recovered material in appropriate container.
- Precautions for safe handling:

Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied. Use only with adequate ventilation.

- Conditions for safe storage:

Keep in properly labelled containers. Store in accordance with the particular national regulations. Do not store with the following product types: Strong oxidizing agents.

## **3 Cleaning the Component of the Printer**

#### **3.1 Before You Begin**

#### WARNING:

To avoid the risk of personal injury from electrical shock, before performing any replacement procedures, unplug the power cord (or battery) from the printer (or power outlet) to ensure that power is removed.

To prepare the printer for the replacement or installation:

- 1. Protect yourself from ESD and wear protective gloves.
- 2. Place the printer on a flat surface.
- 3. Set the printer's power switch to the O (Off) position.
- 4. Remove the power adapter (printer battery) from the printer or unplug the power cord from the AC power outlet.
- 5. Disconnect interface cable from the printer.
- 6. Remove the media from the printer.
- 7. Read through the maintenance procedures.

#### Note:

Please follow the cleaning recommendations regularly. If there is any adhesive residue, please make sure that the cleaning action removes all the foreign matter and does not accumulate to ensure the smooth operation in the future.

#### **3.2 DA Series Printer**

Depending on the media used, the printer may accumulate residues (media dust, adhesives, etc.) as a by-product of normal printing. To maintain the best printing quality, you should remove these residues by cleaning the printer periodically. Regularly clean the printhead and supply sensors once change a new media to keep the printer at the optimized performance and extend printer life.

#### **3.2.1** Printer Cleaning Process

Printer Part Method Interval	
<ul> <li>I. Turn off the printer. Follow the steps in Before You Begin to prepare the printer.</li> <li>Open the printer cover.</li> <li>Apply some cleaning solution on a lint-free cloth or sponge foam swab and then remove the adhesive, particles, and dust that build up on the (1) anti-sticky rubbers, (2) rubber surface, (3) flat area on the front panel, (4) flat area on the cutter module or tear-off module, and (5) cover under the printhead.</li> <li>Note: Do not use cleaning solution to clean the printhead.</li> <li>Clean as needed or after printing every 1 km.</li> <li>Please determine the maintenance intervals based on actual usage.</li> <li>Note: Interior/Exterior</li> </ul>	ır.



Printer Part	Method	Interval
Printhead	<ol> <li>Turn off the printer.</li> <li>Open the printer cover.</li> <li>Wait until the printhead cools down. It takes at least one minute.</li> <li>Use the cleaning pen in the linerless cleaning kit (or 99% Isopropyl alcohol) to clean the surface of the print head.</li> </ol>	<ul> <li>Clean as needed or after printing every 1 km.</li> <li>Please determine the maintenance intervals based on actual usage.</li> <li>Note:</li> <li>Ensure thorough cleaning to remove any adhesive residue completely without accumulation of foreign matter.</li> </ul>

#### 3.2.2 Linerless Cutter Cleaning Process



#### Interval

#### 5. Turn on the switch on the inside of the linerless cutter in the direction of the drawing.



Method

Turn the linerless cutter guide over to expose the blade. Apply some cleaning solution on a lint-free cloth or sponge foam swab and then clean the cutter blade.

#### WARNING:

When cleaning the blade, it is important that you keep your hands away from the gate in order to avoid injury to personnel.



Interval
k

# Method Interval 8. Remove the four screws to release the cutter. C2149-4PD0185 8150F540801 1 9. Rotate the screw as follows to move the blade to clean more of the cutter area. Apply some cleaning solution on a lint-free cloth or sponge foam swab and then clean the cutter blade.

#### **3.3 DH Series Printer**

Depending on the media used, the printer may accumulate residues (media dust, adhesives, etc.) as a by-product of normal printing. To maintain the best printing quality, you should remove these residues by cleaning the printer periodically. Regularly clean the printhead and supply sensors once change a new media to keep the printer at the optimized performance and extend printer life.

For this model, you can refer to <u>DH Series: How To Clean Your Linerless Printer</u> video on TSC YouTube.

#### **3.3.1** Printer Cleaning Process

Printer Part	Method	Interval
	<ol> <li>Turn off the printer. Follow the steps in Before You Begin to prepare the printer.</li> <li>Open the printer cover. Separate the media holders and press the lock to keep the holders open.</li> <li>Apply some cleaning solution on a lint-free cloth or sponge foam swab and then remove the adhesive, particles, and dust that build up on the (1) media holders, (2) flat surface around the sensor (includes antistick rubber sheet for 4" printer), (3) flat area on the front panel, (4) flat area on the cutter module or tear-off module, (5) tear edge, and (6) cover under the printhead.</li> </ol>	<ul> <li>Clean as needed or after printing every 1 km</li> </ul>
Interior/Exterior		<ul> <li>Please determine the maintenance intervals based on actual usage.</li> <li>Note: Ensure thorough cleaning to remove any adhesive residue completely without accumulation of foreign matter.</li> </ul>



Printer Part	Method	Interval
Linerless Platen Roller	<ol> <li>Turn off the printer.</li> <li>Open the printer cover.</li> <li>Apply some cleaning solution on a lint-free cloth and then wipe off the adhesive, particles, and dust that build up on the platen roller. Rotate the platen roller to make sure the platen roller is entirely cleaned.</li> </ol> <b>Wote:</b> If there is any adhesive residue, please make sure that the cleaning action removes all the foreign matter and does not accumulate.	<ul> <li>Clean as needed or after printing every 1 km.</li> <li>Please determine the maintenance intervals based on actual usage.</li> </ul>
Printhead	<ol> <li>Turn off the printer.</li> <li>Open the printer cover.</li> <li>Wait until the printhead cools down. It takes at least one minute.</li> <li>Use the cleaning pen in the linerless cleaning kit (or 99% Isopropyl alcohol) to clean the surface of the print head.</li> </ol> Note: If there is any adhesive residue, please make sure that the cleaning action removes all the foreign matter and does not accumulate.	<ul> <li>Clean as needed or after printing every 1 km.</li> <li>Please determine the maintenance intervals based on actual usage.</li> </ul>

#### **3.3.2** Linerless Cutter Cleaning Process

#### For 2" & 4" LCD series printer

	Method	Interval
Fo 1. 2.	low the steps below to expose and then clean the cutter blade. Select <b>Favorites</b> on the printer's display panel. Select <b>Linerless Maintain</b> when the screen appears. Select <b>Clean Cutter Blade</b> . (Then, the printer should be making the sound of a blade being exposed.) <b>CAUTION:</b> Selecting Clean Cutter Blade will lift to expose the cutter blade. To avoid risk of personal injury, keep your hands away from the cutter gate when selecting this item.	
	Favorites   Vertical Length Adjustment   Offset   0 dot   Shift V   0 dot   Linerless Maintain   Clean Cutter Blade   Reset Counter	<ul> <li>Clean as needed or after printing every 1 km.</li> <li>Please determine the maintenance intervals based on actual usage.</li> <li>Note: Ensure thorough cleaning to remove any adhesive residue completely without</li> </ul>
3.	Follow the steps displayed on the LCD. Power OFF the printer first.	accumulation of foreign matter.



	Method	Interval
8.	Wipe off the adhesive, particles, or dust from the upper/lower cutter blades and cutter gate. CAUTION: Do not use stain remover, alcohol, or any aggressive solvents to wipe off stained residue adhering to the surface of the removable blade, or scrape with sharp tools.	
	<image/>	





#### For 2" LED series printer

		Method			Interval
Follow the steps below to d cutter blade.					
There are three utilities for function is on first item with I. Release the printhead le II. Activate these functions	carriage-open to set n only when the prin ver (carriage-open) s by pressing and holo	up printer hardwar ter has the linerless to that the LED light ling the FEED butto	re. The <b>Expose lin</b> s module installed t up in RED. on for three second	<b>erless cutter blade</b> ds, releasing the	
button at different LED in Carriage-open	ndicator signals. The LED indicator v	vill be changed as f	following pattern		<ul> <li>Clean as needed or after</li> </ul>
LED indicator	Amber Green	Red Amber	Red Green		<ul><li>printing every 1 km.</li><li>Please determine the</li></ul>
* Expose linerless cutter blade (Linerless cutter module installed)	Release	(4 blinks)		Please refer to each functional info for the	maintenance intervals based on actual usage.
1. Switch between line mode and page mode		Release		next steps.	Ensure thorough cleaning to remove any adhesive residue
2. Initialize Network setting			Release		completely without accumulation of foreign matter.
* Only when the printer has t Refer to next page to expos	he linerless module ins	stalled will this Amb	er/Green indicator	light illuminate.	



3. After releasing the button, the LED will change to a **GREEN** blinking light. Press the **FEED** button to expose the linerless cutter blade. (Then, the printer should be making the sound of a blade being exposed.)

#### CAUTION:

Performing this step will lift to expose the cutter blade. To avoid risk of personal injury, keep your hands away from the cutter gate when selecting this item.



Method	Interval
7. Wipe off the adhesive, particles, or dust from the cutter blade and	cutter gate.
CAUTION:	
Do not use stain remover, alcohol, or any aggressive solvents to v	wipe off stained residue adhering
to the surface of the removable blade, or scrape with sharp tools	
Please ensure that any residue in th	e crevice of the
cutter upper bar is also removed wi	th the sponge foam
swab.	





#### 3.4 MB Series Printer

Depending on the media used, the printer may accumulate residues (media dust, adhesives, etc.) as a by-product of normal printing. To maintain the best printing quality, you should remove these residues by cleaning the printer periodically. Regularly clean the printhead and supply sensors once change a new media to keep the printer at the optimized performance and extend printer life.

For this model, you can refer to MB Series: How To Clean Your Linerless Printer video on TSC YouTube.

#### 3.4.1 Printer Cleaning Process

<ul> <li>1. Turn off the printer. Follow the steps in Before You Begin to prepare the printer.</li> <li>2. Open the printer cover.</li> <li>3. Apply some cleaning solution on a lint-free cloth or sponge foam swab and then remove the adhesive, particles, and dust that build up on the (1) media guide, (2) rubber surface, (3) flat area on the front panel, and (4) flat area on the cutter module or tear-off module. Note: Do not use cleaning solution to clean the printhead.</li> <li>Interior/Exterior</li> </ul>	Printer Part	Method	Interval
	Interior/Exterior	<ol> <li>Turn off the printer. Follow the steps in Before You Begin to prepare the printer.</li> <li>Open the printer cover.</li> <li>Apply some cleaning solution on a lint-free cloth or sponge foam swab and then remove the adhesive, particles, and dust that build up on the (1) media guide, (2) rubber surface, (3) flat area on the front panel, and (4) flat area on the cutter module or tear-off module. Note: Do not use cleaning solution to clean the printhead.</li> </ol>	<ul> <li>Clean as needed or after printing every 1 km.</li> <li>Please determine the maintenance intervals based on actual usage.</li> <li>Note: Ensure thorough cleaning to remove any adhesive residue completely without accumulation of foreign matter.</li> </ul>

Printer Part	Method	Interval
Linerless Platen Roller	<ol> <li>Turn off the printer. Follow the steps in Before You Begin to prepare the printer.</li> <li>Open the media cover and printhead.</li> <li>Apply some cleaning solution on a lint-free cloth and then wipe off the adhesive, particles, and dust that build up on the platen roller. Rotate the platen roller to make sure the platen roller is entirely cleaned.</li> </ol>	<ul> <li>Clean as needed or after printing every 1 km</li> <li>Please determine the maintenance intervals based on actual usage.</li> <li>Note: Ensure thorough cleaning to remove any adhesive residue completely without accumulation of foreign matter.</li> </ul>

Printer Part	Method	Interval
Printhead	<ol> <li>Turn off the printer. Follow the steps in Before You Begin to prepare the printer.</li> <li>Open the media cover and printhead.</li> <li>Wait until the printhead cools down. It takes at least one minute.</li> <li>Use the cleaning pen in the linerless cleaning kit (or 99% Isopropyl alcohol) to clean the surface of the print head.</li> </ol>	<ul> <li>Clean as needed or after printing every 1 km.</li> <li>Please determine the maintenance intervals based on actual usage.</li> <li>Note:</li> <li>Ensure thorough cleaning to remove any adhesive residue completely without accumulation of foreign matter.</li> </ul>

#### **3.4.2** Linerless Cutter Cleaning Process

<ul> <li>Follow the steps below to expose and then clean the cutter blade.</li> <li>1. Select Favorites on the printer's display panel.</li> <li>2. Select Linerless Maintain when the screen appears. Select Clean Cutter Blade.</li> </ul>
CAUTION: Selecting Clean Cutter Blade will lift to expose the cutter blade. To avoid risk of personal injury, keep your hands away from the cutter gate when selecting this item.









#### 3.5 Alpha Series Printer

Depending on the media used, the printer may accumulate residues (media dust, adhesives, etc.) as a by-product of normal printing. To maintain the best printing quality, you should remove these residues by cleaning the printer periodically. Regularly clean the printhead and supply sensors once change a new media to keep the printer at the optimized performance and extend printer life.

#### 3.5.1 Printer Cleaning Process

Interior/Exterior       1. Turn off the printer. Follow the steps in Before You Begin to prepare the printer.       2. Open the printer cover.       3. Apply some cleaning solution on a lint-free cloth or sponge foam swab and then remove the adhesive, particles, and dust that build up on the (1) media holders, (2) flat area under the printhead, (3) tear bar, (4) edge of the printer cover, and (5) flat area on the front panel.       4. Clean as needed of after printing even km.         Interior/Exterior       Note:       Do not use cleaning solution to clean the printhead.       4. Clean as needed of after printing even km.         Interior/Exterior       Note:       Do not use cleaning solution to clean the printhead.       5. Clean as needed of after printing even km.         Interior/Exterior       Note:       Do not use cleaning solution to clean the printhead.       5. Note:	Printer Part	Method	Interval
2 3	Printer Part Interior/Exterior	Method         1. Turn off the printer. Follow the steps in Before You Begin to prepare the printer.         2. Open the printer cover.         3. Apply some cleaning solution on a lint-free cloth or sponge foam swab and then remove the adhesive, particles, and dust that build up on the (1) media holders, (2) flat area under the printhead, (3) tear bar, (4) edge of the printer cover, and (5) flat area on the front panel.         Note: Do not use cleaning solution to clean the printhead.	<ul> <li>Clean as needed or after printing every 1 km.</li> <li>Please determine the maintenance intervals based on actual usage.</li> <li>Note: Ensure thorough cleaning to remove any adhesive residue completely without accumulation of foreign matter.</li> </ul>

Printer Part	Method	Interval
Linerless Platen Roller	<ol> <li>Turn off the printer.</li> <li>Open the printer cover.</li> <li>Apply some cleaning solution on a lint-free cloth and then wipe off the adhesive, particles, and dust that build up on the platen rollers. Rotate the platen roller to make sure the platen roller is entirely cleaned.</li> </ol>	<ul> <li>Clean as needed or after printing every 1 km</li> <li>Please determine the maintenance intervals based on actual usage.</li> <li>Note: Ensure thorough cleaning to remove any adhesive residue completely without accumulation of foreign matter.</li> </ul>



## **Revision History**

Date	Content	Editor
2023/11/29	First release	Camille
2024/3/5	Added the DH series printer info. Added the DH series video link Updated the MB series	Camille



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