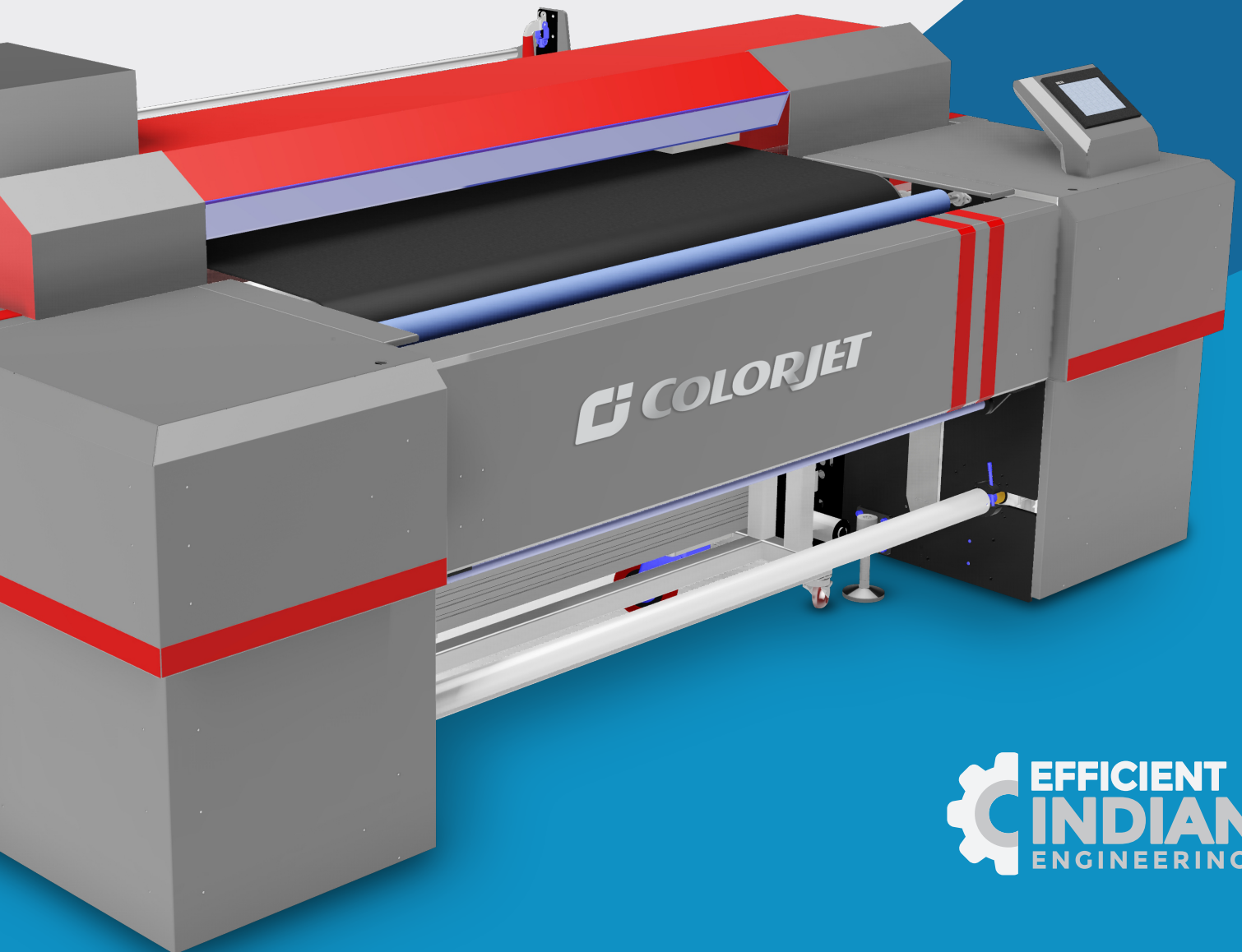




India's largest manufacturer of digital inkjet printers

TXF

USER MANUAL



Foreword

This user manual is briefly describing the operational aspects of the **TXF** machine. In this document, the step-wise instructions for handling various aspects of the machine with visual screens are provided for easy and better understanding. It also describes the error messages encountered while working with the machine with appropriate remedial actions required to be taken by the user.

This manual serves as the reference tool which guides their customers how to use or operate the **TXF** machine without anyone else assistance. The information provided in this document ensures its uniqueness and language quality. For safe and proper use of the product, please read this manual carefully and follow all the instructions.

Disclaimer

The information and instructions provided in this user manual have been checked for accuracy, uniqueness, and reliability. ColorJet group reserves all the rights to modify and revise this manual as per the company requirements without any prior notice.

“No part of this document shall be reproduced or used by externals without prior permission of the ColorJet group”.

The reference table is shown in the below table:

Doc Type	Doc Code	Machine Name	Version	Date of Issue
User Manual		TXF	1.0	

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1. About Document

Purpose

The purpose of this document is to guide and educate the targeted audience about the Printer and its related functionality so that they can easily and effectively handle it as per their requirements. Additionally, this document also provides step-wise instructions for handling and operating the various aspects of the printer and its related software with the help of graphical screens for easy and better understanding. Moreover, the document also describes commonly encountered problems while working with the printer along with appropriate remedial actions.

Intended Audience

This document is meant for all the users who want to use the Printer for their printing business. Sometimes, the targeted audience has little knowledge about the printer but in most of the cases, targeted audience is much familiar with the terminologies of printer and printing business. Thus, this document is designed to facilitate both types of users.

2. Printer Overview

The **Front View** of the printer is shown in the image below:

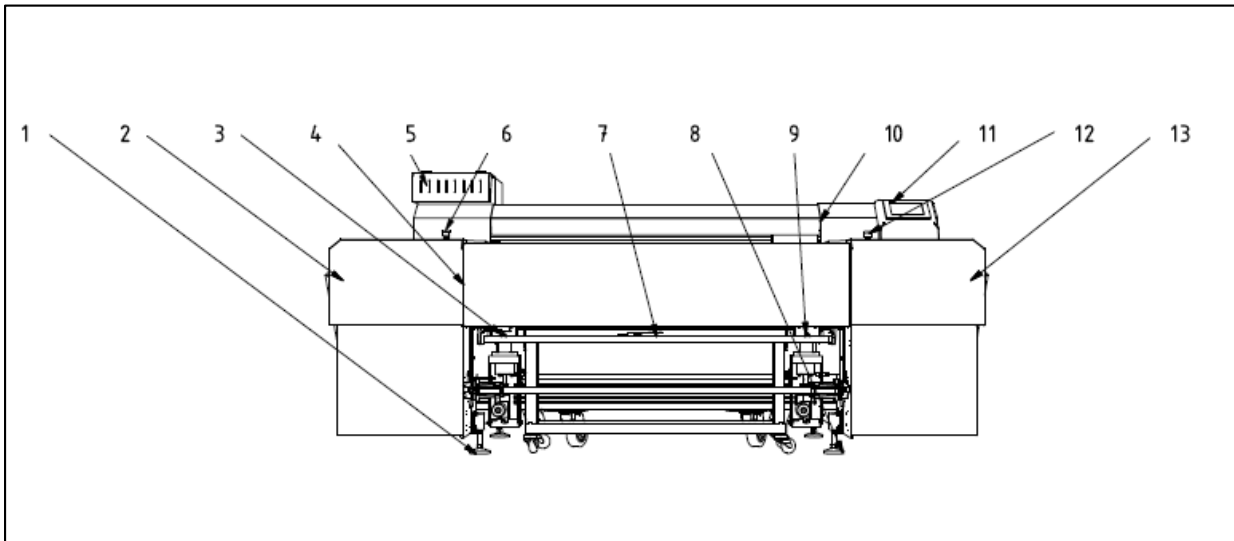


Fig 1: Displaying the Front View of the Printer

Table 1: List of Different Parts of the Printer

1. Leveler	2. Left Supply Cabinet (Front)
3. Washing Disengage Bolt	4. Front Dryer
5. Cartridge Unit	6. Emergency Button
7. Front Dryer Out Handle	8. Leveler
9. Washing Disengage Bolt	10. Print Engine
11. HMI	12. Emergency Button
13. Right Supply Cabinet	

The **Back View** of the printer is shown in the image below:

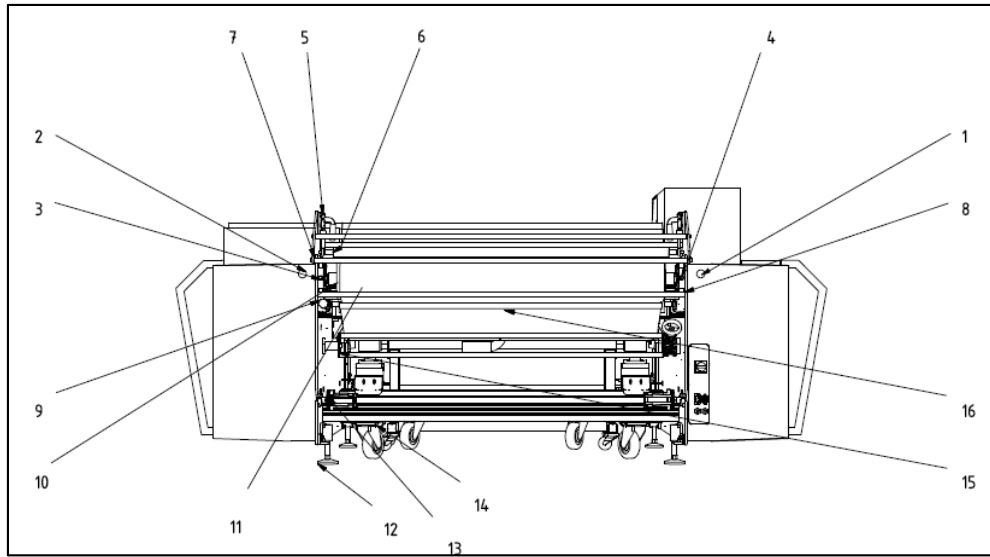


Fig 2: Displaying the Back View of the Printer

Table 2: List of Different Parts of the Printer

1. Left Emergency Button	2. Right Emergency Button
3. Left Belt Tensioner Bolt	4. Right Belt Tensioner Bolt
5. Toggle Clamp	6. Press Roller
7. Upper Fabric Guide Roller	8. Lower Fabric Guide Roller
9. Snub Adjustment Nob	10. Conveyor Belt Roller
11. Conveyor Belt	12. Leveler
13. Core Holder	14. Caster(Wheel)
15. Fabric Tensioner	16. Glue Dryer

3. Control Panel (Print Engine)

The **Control Panel** is shown in the image below:

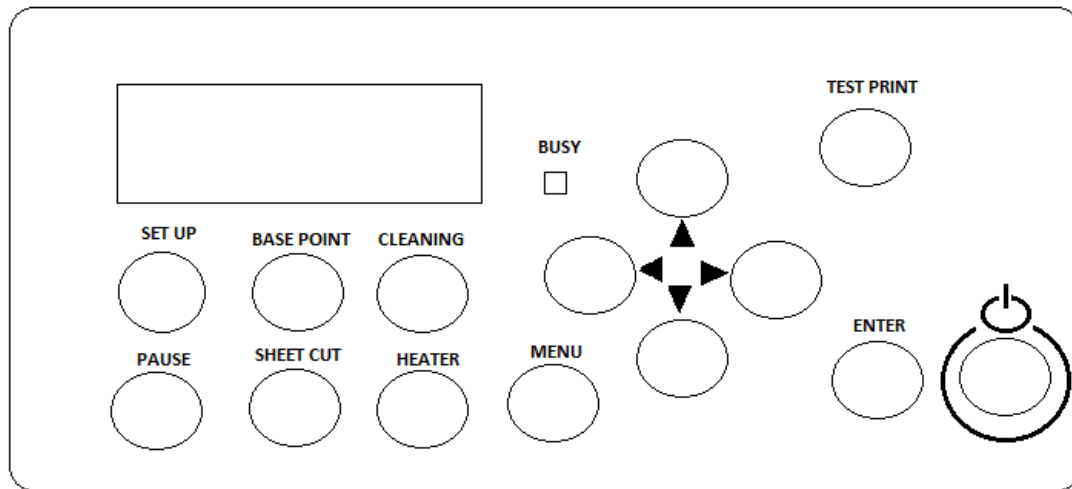


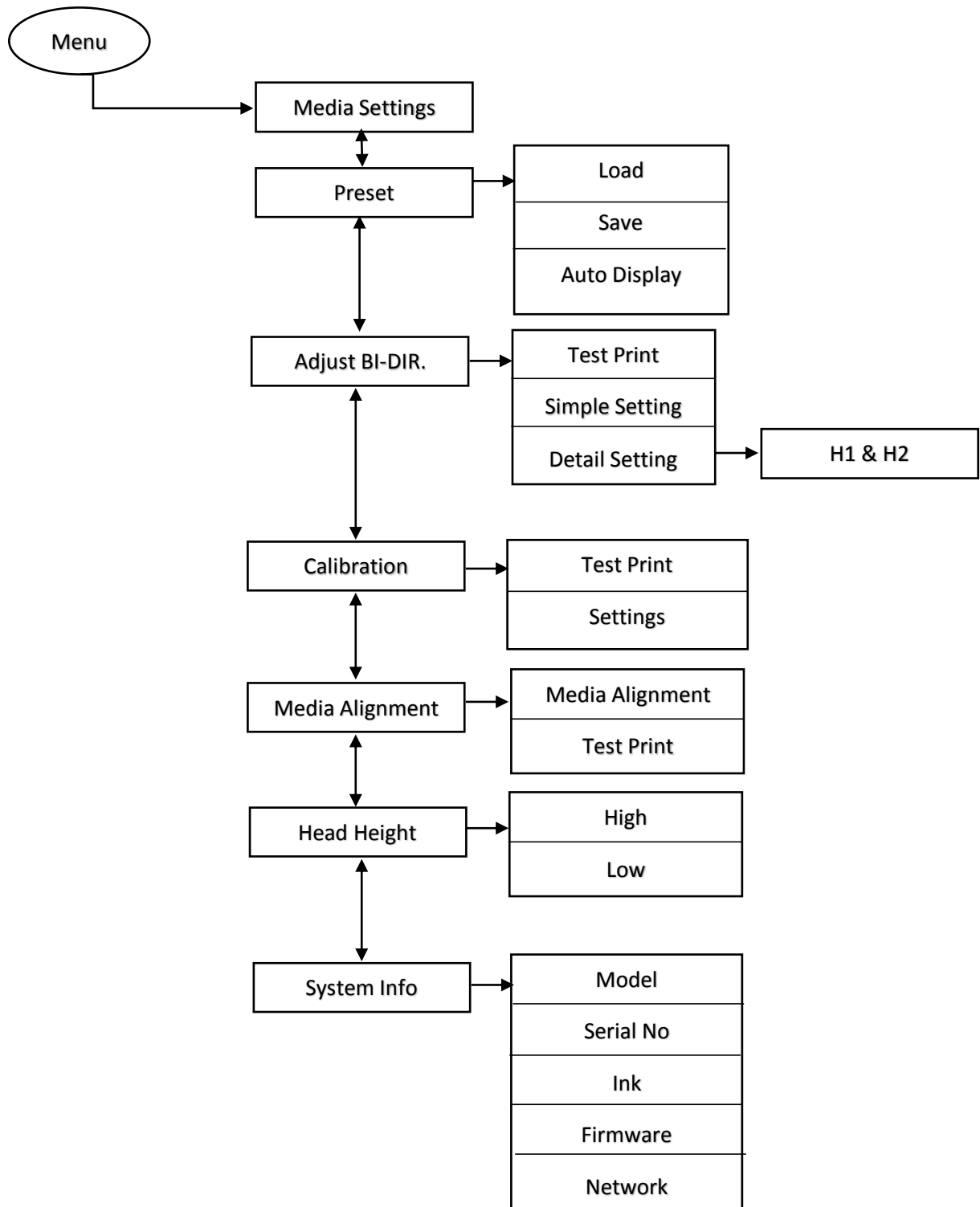
Fig 3: Displaying the Control Panel Layout

The description of each control button is given as below:

- **POWER ON/OFF:** Get ON or OFF the printer.
- **Cursor Keys:** Move in right, left, up, and down directions to select a particular option from the menu list.
- **BUSY:** Light gets ON during the printing and other operations.
- **TEST PRINT:** Perform test print to verify the print head nozzle status.
- **SET UP:** Enable to bring the printer in ready state. The light gets ON when fabric is loaded and printer gets started.
- **BASE POINT:** Set the print origin.
- **CLEANING:** Use to clean the print head.
- **PAUSE:** Pause the printing operation.
- **MENU:** Display the list of menu items to perform a particular task.
- **ENTER:** Use to confirm the selection and apply on the selected job.

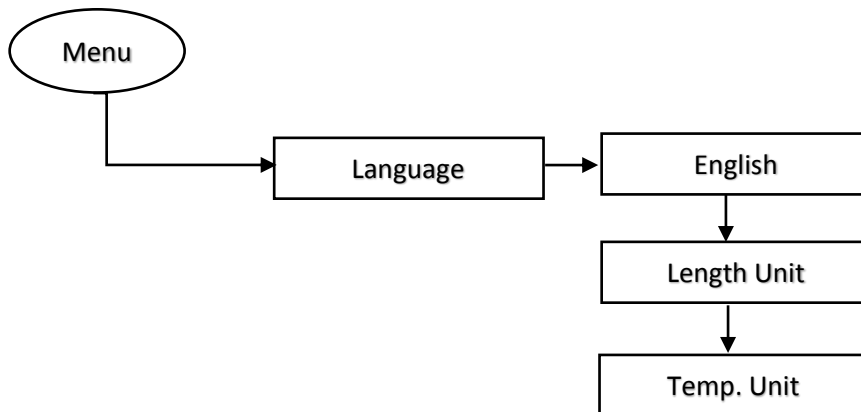
Main Menu

The **Main Menu** and its related sub options are shown in the image below:



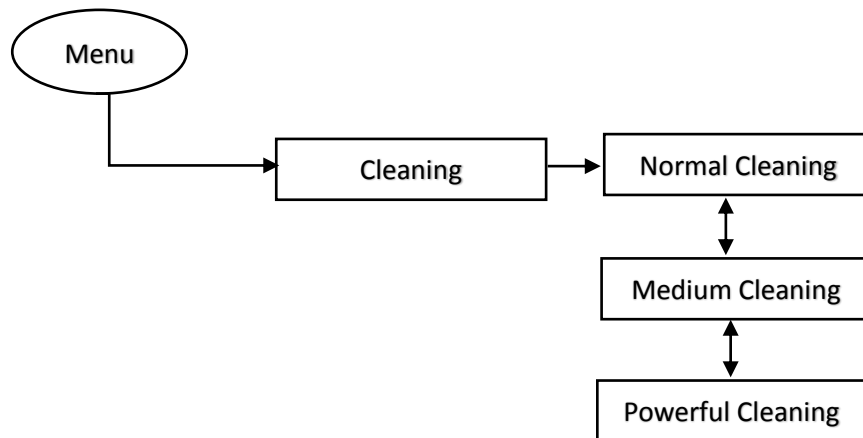
Language Menu

The **Language Menu** and its related options are shown in the image below:



Cleaning Menu

The **Cleaning Menu** and its related options are shown in the image below:



4. Control Panel (Conveyor Belt)

Start Up Screen

Switch ON the printer from the main power panel, the following Start Up screen appears on HMI, as shown below:



Fig 4: Displaying the Start Up Screen

Tapping the Start Up screen to go to the next screen, as shown below:



Fig 5: Displaying the "NO CYCLE IS SELECTED" Screen

The description of different options in the **NO CYCLE IS SELECTED** screen is given as follow:

- **OPERATIONS:** Move to the OPERATIONS screen and perform different operations viz. DIAGNOSTICS, GLUE CYCLE, and WASH CYCLE.
- **PREPARE TO PRINT:** Move to the PREPARE TO PRINT screen to make the Conveyor Belt system "Online".

Operations

When you select the **OPERATIONS** icon on the HMI, the **OPERATIONS** screen appears as shown below:



Fig 6: Displaying the OPERATIONS Screen

The description of different options in the **OPERATIONS** screen is given as follow:

- **DIAGONSTICS:** Move to the SERVICE MODE screen.
- **GLUE CYCLE:** Move to the GLUE CYCLE screen to start the glue coating and removing process.
- **WASH CYCLE:** Move to the WASH CYCLE screen to wash the Conveyor Belt.
- **← Icon:** Go back to the previous screen.

Service Mode

To open the **SERVICE MODE** screen, select the **DIAGNOSTICS** icon from the **OPERATIONS** screen (Refer to Fig 6). The **SERVICE MODE** screen is shown as below:



Fig 7: Displaying the SERVICE MODE Screen

The description of different options in the **SERVICE MODE** screen is given as follow:

- **BELT:** Move the belt manually.
- **TUB:** Move the washing Tub Up, Down, and maintenance.
- **BELT DRYER FAN:** Switch ON or OFF the BELT DRYER FAN.
- **TAKEUP:** Run the fabric Take Up motor manually.
- **IR DRYER FAN:** Switch ON or OFF the IR DRYER FAN.

Controlling Belt Motion

To control the belt motion, select the **BELT** icon from the **SERVICE MODE** screen (Refer to Fig 7). The **BELT MOTION** screen appears as shown below:



Fig 8: Displaying the BELT MOTION Screen

Using the **BELT MOTION** screen, you can perform the following actions:

- **BELT SPEED HZ:** Set the speed of the Conveyor Belt.
- **ADVANCE:** Move the belt in the forward direction.
- **REVERSE:** Move the belt in the reverse direction.
- **TUB DOWN:** Lower down the tub.

Setting Belt Speed

To set the belt speed, select the **BELT SPEED HZ** icon from the **BELT MOTION** screen. The **Numeric Keypad** appears on the **BELT MOTION** screen, as shown below:

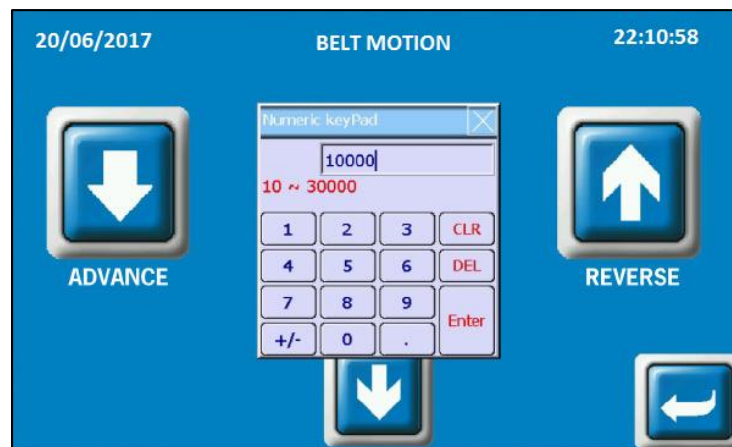


Fig 9: Setting the Belt Speed

Now, enter the belt speed in the **Numeric Keypad** and select the **Enter** button to set the belt speed.

Setting Washing Unit

To set the position of washing tub, select the **TUB** icon from the **SERVICE MODE** screen. The **WASHING UNIT** screen appears, as shown below:

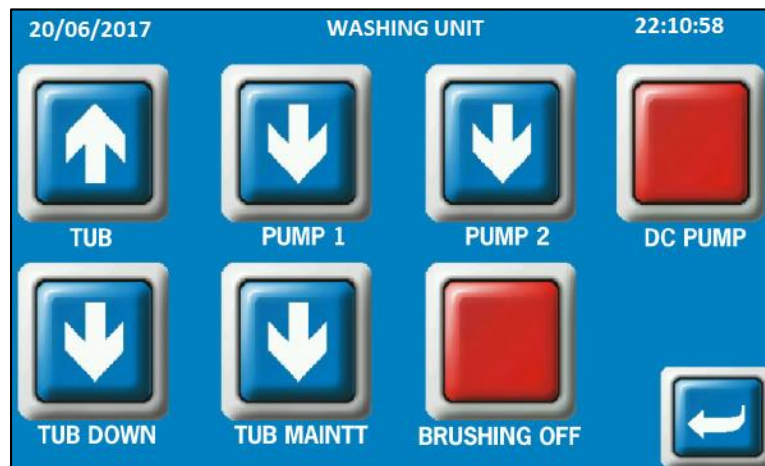


Fig 10: Displaying the WASHING UNIT Screen

Using the **WASHING TUB** screen, you can perform the following actions:

- **TUB**: Move the washing tub in upward direction.
- **TUB DOWN**: Move the washing tub in downward direction.
- **BRUSHING OFF**: Switch ON or OFF the washing tub functioning.
- **TUB MAINTT**: Move the tub to the maintenance position.

Controlling Take Up Motion

To update the take up motion, select the **TAKE UP** icon from the **SERVICE MODE** screen. The **TAKE UP MOTION** screen appears on the screen, as shown below:

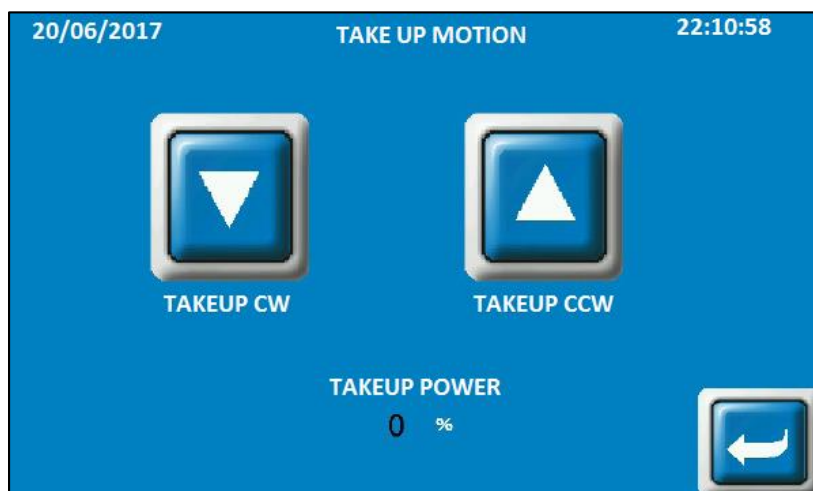


Fig 11: Displaying the TAKE UP MOTION Screen

Using the **TAKE UP MOTION** screen, you can perform the following actions:

- **TAKEUP CW:** Move the take up in clockwise direction.
- **TAKEUP CCW:** Move the take up in anti-clockwise direction.

Setting Glue Cycle

To start the glue cycle, select the **GLUE CYCLE** option from the **OPERATIONS** screen (Refer to Fig 6). The **GLUE CYCLE** screen appears as shown below:



Fig 12: Displaying the GLUE CYCLE Screen

Using the **GLUE CYCLE** screen, you can perform the following actions:

- **BELT SPEED:** Specify or select the belt movement speed in percentage.
- **CYCLE TIME:** Specify the duration for which belt is to be run.
- **START/STOP GLUE PROCESS:** Use for starting and stopping the glue process cycle.
- **BELT DIRECTION:** Choose the belt movement direction.
- **HEATER:** Go to heater setting and make desirable changes as per the requirements.

Setting Wash Cycle

To start the wash cycle, select the **WASHING CYCLE** option from the **OPERATIONS** screen (Refer to Fig 6). The **WASHING CYCLE** screen appears as shown below:



Fig 13: Displaying the WASHING CYCLE Screen

Using the **WASHING CYCLE** screen, you can perform the following actions:

- **BELT SPEED:** Specify or select the belt movement speed in percentage.
- **CYCLE TIME:** Specify the duration for which belt is to be run.
- **WASHING OFF:** Use for starting and stopping the washing cycle.
- **WASH SETTINGS:** On clicking the WASH SETTINGS, the WASH CYCLE SETTINGS screen appears. Please refer the below section.

You can open the **WASH CYCLE SETTINGS** screen simply by selecting the **WASH SETTINGS** button (Refer to Fig. 13) from the **WASHING CYCLE** screen. The **WASH CYCLE SETTINGS** screen appears as shown below:

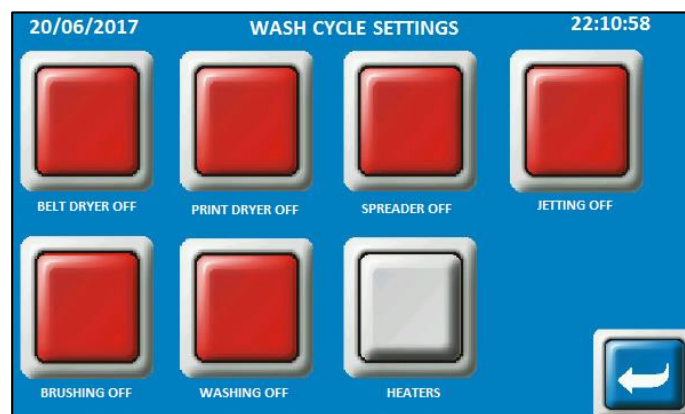


Fig 14: Displaying the WASH CYCLE SETTINGS Screen

Using the settings screen, you can ON or OFF the Belt Dryer, Print Dryer, Jetting, Brushing, Washing, and Heaters.

Controlling Heaters Settings

To change or update the heater settings, select the **HEATERS** button from the **WASH CYCLE SETTINGS** screen (Refer to Fig 14). The **HEATERS SETTINGS** screen appears as shown below:

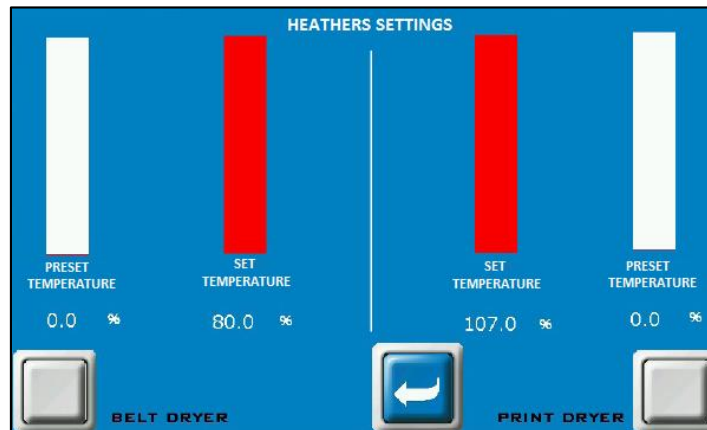


Fig 15: Displaying the HEATERS SETTINGS Screen

Using the above screen, change the belt and print dryers settings by updating the SET and PRESET TEMPERATURES.

PREPARE TO PRINT Option

The **PREPARE TO PRINT** enables to make the Conveyor Belt online. You can ON or OFF Brushing, Jetting, and Washing, take up, print dryer, and belt dryer. Additionally, you can also set the take up directions. The **PREPARE TO PRINT** screen appears when you select the **PREPARE TO PRINT** option from the **Start Up** screen, as shown below:



Fig 16: Displaying the PREPARE TO PRINT Screen

After making the desirable changes, select the **MAKE READY** option to save the selection and the **Confirmation** screen appears to ask whether you want to save the changes or not, as shown below:

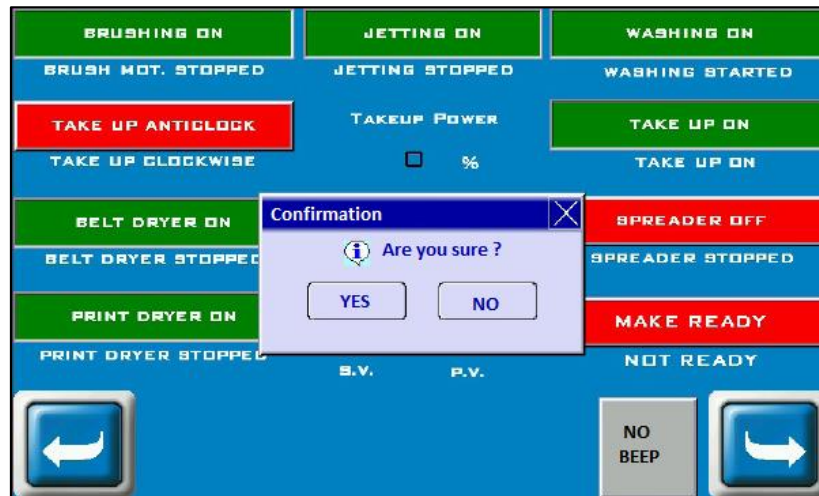


Fig 17: Displaying the Confirmation Dialog Screen

On clicking to the **YES** button, the **ONLINE** screen appears as shown as shown below:



Fig 18: Displaying the ONLINE Screen

Using the above screen, you can make the Conveyor System Online or Offline. Additionally, you can also update Heaters, Belt Dryer, and Take Up power settings.

The description of different options is given as follow:

- **OFFLINE:** Use to make the Conveyor Belt **"ONLINE"**.
- **STOP:** Use to make the Conveyor Belt **"OFFLINE"**.
- **STATUS:** On clicking this button, you will be redirected to the **PREPARE TO PRINT** screen from where you can enable or disable the given options.
- **HEATERS:** Heater temperature can be set using the HEATERS icon.
- **OVERRIDE:** Heaters can be overridden to go **"ONLINE"**
- **TAKEUP POWER:** Display the takeup power on the screen.

5. Before Use

Preparation Before Starting the Printer

Before start using the printer, please check and confirm the below mentioned instructions for effective and efficient utilization of the machine:

- Check the room temperature and maintain it
- Check the ink level of each color in the ink tank
- Check whether the waste ink bottle is full or not
- Check the water level in the water tank
- Refresh dirty water in the water tank

Switch ON the Printer

Follow these steps to Switch ON the printer:

Step 1: Turn ON the power switch available on the back side of the printer to start the Conveyor Belt, as shown below:

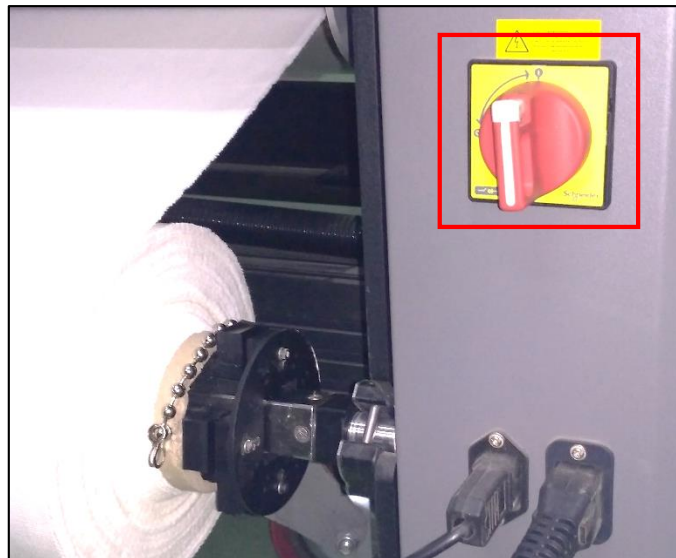


Fig 19: Turning ON the Conveyor Belt

The **Start Up Screen of HMI** appears as shown below:



Fig 20: Displaying the Start Up Screen

Step 2: Remove the fabric, if any.

Step 3: Check whether the belt is in the Centre or not. If not, Centre it by moving the belt in the reverse direction and adjust the shifting control shaft.

Step 4: Run wash cycle for 10-15 min with heaters **"ON"** to clean and dry the Conveyor Belt.

Step 5: Make the Conveyor Belt **"ONLINE"**.

Step 6: Load fabric and engage the Press Roller.

Step 7: Close the front glass cover of the printer.

Step 8: Switch ON the main power of the printer, as shown below:

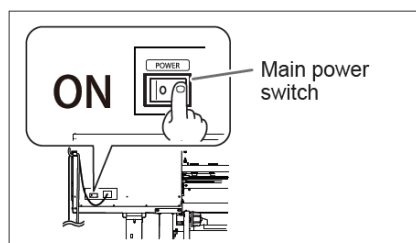


Fig 21: Switching ON the Main Power

Step 9: Press the **Power ON/OFF** button from the Control Panel of the print engine to start it, as shown below:

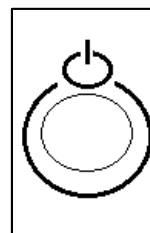


Fig 22: Power ON from Control Panel

Step 10: Set the starting position of the print from the **Control Panel** of the print engine.

Step 11: Issue the test print using the **TEST PRINT** button from the **Control Panel** of the print engine.

Step 12: Start printing.

Step 13: Care about fabric handling from Supply and Take Up sides (particularly till time the fabric is wind up in take up roller).

Step 14: Check the Take Up power and set as required.

Now, the printer is ready for use.

Glue Implementation

About Glue (Adhesive)

Glue is composed of three different chemicals and two solvents.

Chemicals:

- **Prima:** It is used as a primitive coat, for smoothening the belt surface. To be done only when the previous glue layers have been washed completely.
- **Therma:** It is used for an intermediate coat, for activating and deactivating the glue according to the temperature variation.
- **Perma:** It is the final glue coat, to make the belt sticky for the fabric.

Solvent:

- **Cleantek:** This liquid solution is used for the renewing/refreshing the tackiness of the Perma adhesive. In digital printing, the adhesive film must be even, thin and hard (to maintain accurate distance in between print head and fabric). The Cleantek removes foreign elements, like dust and micro fibers, from the top layer, hence enhancing the adhesion property of the Perma. If there is no improvement using the Cleantek, it means it's time for a coat of the Perma.
- **Solvtek:** This is used for the either to dilute the adhesives, or for complete removal of the all adhesive layers. Removing all the layers is required for two reasons:-
 - When the thickness of the adhesive layer goes on increasing due to multiple coat of the Perma
 - When the glue layer feels smudgy or groovy (in terms of evenness).

Stages of Glue (Adhesive) Process

Stage 1: Prima coat

Stage 2: Therma coat

Stage 3: Perma coat

An interval of 4hrs is required for the glue to set and dry. After each glue coat, run the glue cycle for 50 minutes with glue heater ON. After final coat of Perma, printing can be started. The third stage is generally a repetitive process, repetition depending on the frequency of printing hours. And when the glue coats gets uneven or once in 2-3 months, whole process has to be repeated after removing existing Glue layers.

Note: Average consumption for the Cleantek solvent is 500ml for one time.

Application of Adhesive on Printing Blanket (Conveyor Belt)

Approximate consumption of chemicals for a year:

- **Prima** : Approx. 2 Ltrs
- **Therma**: Approx. 2 Ltrs
- **Perma**: Approx. 5 Ltrs
- **Cleantek**: Approx. 4 Ltrs
- **Solvtek** : Approx. 10 Ltrs

Note: Actual consumption depends on the work load, fabric type used and the maintenance. Generally, shelf life for these chemicals is approx. 4 years.

Glue Process Preparation

Follow these steps for glue process preparation:

Step 1: Keep the **ventilators** and **exhaust** fans ready.

Step 2: Lift up the **Press Roller** and remove the fabric, if any.

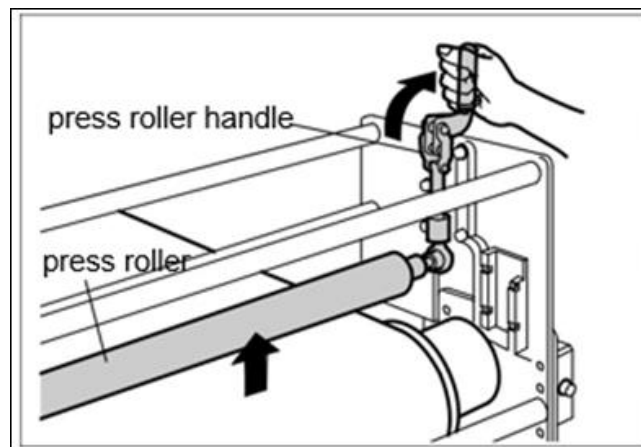


Fig 23: Pressing Rollers

Step 3: Run the **Wash Cycle** from HMI, simultaneously belt can be cleaned by wiping with cloth.



Fig 24: Running the Wash Cycle

Step 4: Put masking PVC tape on both edges of the Conveyor Belt, by simultaneously moving the belt through HMI in slow speed.

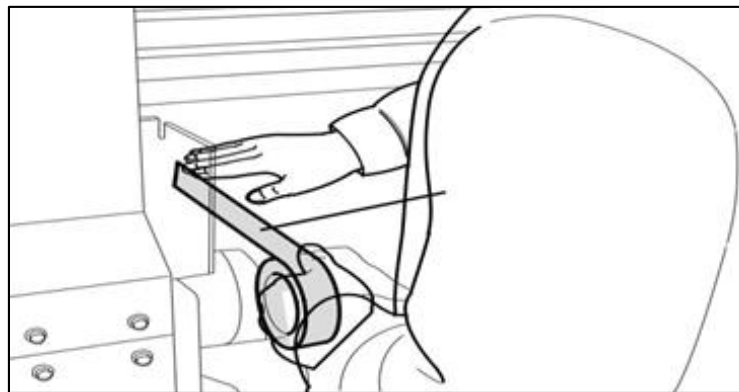


Fig 25: Using Masking Tape

Step 5: Put on gloves, goggles, and face mask for safety



Fig 26: Using Safety Precautions

Step 6: Keep ready following items:-

- Glue container(500-600ml), whichever required
- Home cleaner liquid spray
- Pouring container
- Waste bin
- Woven cotton bud sticks (for spreading the glue)

Glue Coating Procedure

Note: Extreme care to be taken during the glue process, any negligence may render the coat unsuitable for use, and complete process may be required to be repeated. 3 person will be required for this process.

Follow these steps to start the glue coating process:

Step 1: Put the Press Roller down.

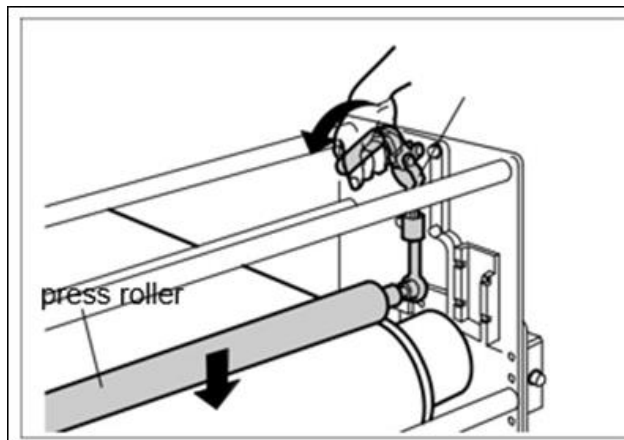


Fig 27: Closing the Press Roller

Step 2: Set the HMI to Glue Cycle mode, set the belt speed as 7 (Ensure that belt direction is reverse, and washing tub should be down).



Fig 28: Enabling the Glue Cycle Mode

Step 3: Go to the back of the machine. Pour the 70% glue equally throughout the belt, near the Press Roller, leaving the 10cm from both the edges.

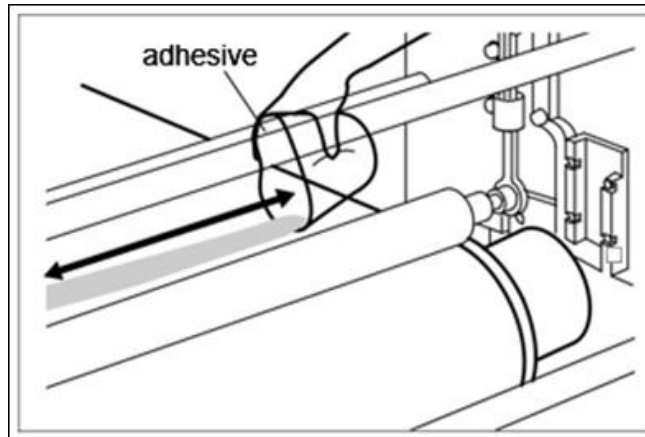


Fig 29: Pouring the Glue

Step 4: Let the two persons hold the Press Roller firmly, so that it doesn't move.

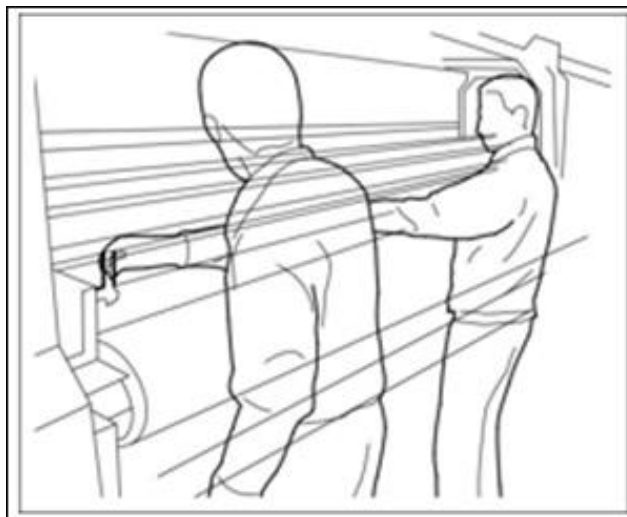


Fig 30: Closing the Press Roller

Step 5: Once the glue has crossed the press roller, speed can be increased to 20. Using the cotton bud stick, keep spreading the glue from the area where glue is in excess, to the area wherever the glue is less in quantity.

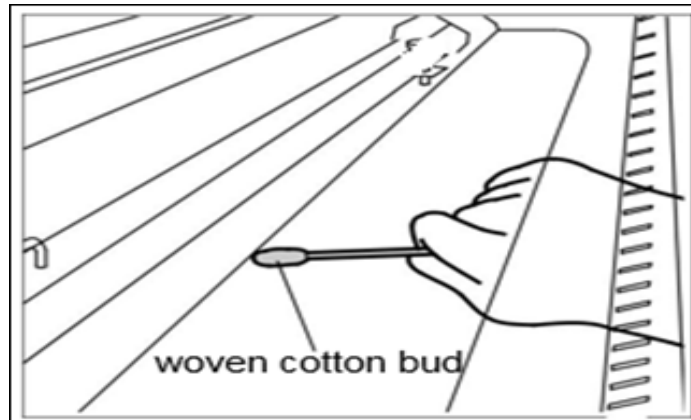


Fig 31: Spreading the Glue

Step 6: Wherever the glue under the press roller is diminishing, pour the remaining glue over such areas.

Step 7: When glue below the Press Roller seems to be diminishing at some areas, and becoming of higher viscosity and uneven, person standing in front, should start spraying the cleaner liquid continuously till the end.

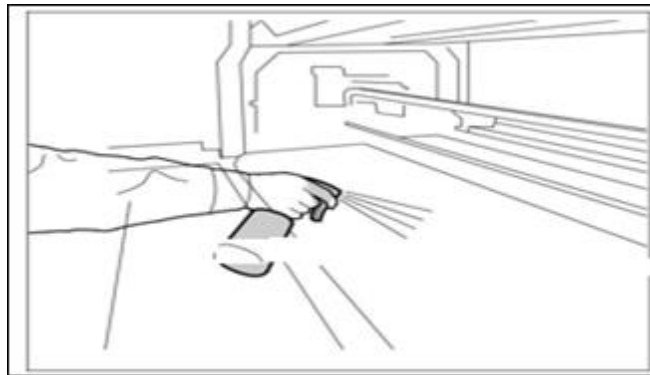


Fig 32: Spraying the Cleaner Liquid

Step 8: Later the cleaner liquid spraying should be done throughout the belt, until the remaining glue appears to be deactivated, due to mixing of cleaner liquid.

Step 9: Once the glue seems to be deactivated, stop spraying liquid, and do simultaneously and quickly below steps:-

- Slightly rotate the Press Roller in opposite direction, to move the sticky portion upwards away from the belt.
- Lift the Press Roller from the both sides at a time and stop the glue cycle immediately from the HMI screen.

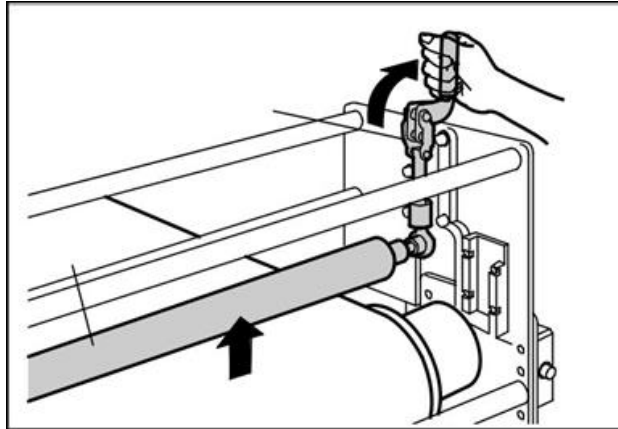


Fig 33: Lifting Up the Press Roller

Step 10: Remove the excess deactivated glue and throw in the waste bin. Wipe up only the area where liquid is present, touching dry belt will damage the coating.

Step 11: Once excess glue is removed, run glue cycle for 30-50 min with glue dryer on.

Step 12: Wipe off the glue from the Press Roller, with the help of cleaner damp towel.

While cleaning the Press Roller, cover the belt surface with poly sheet to avoid the glue remains falling on the belt surface.

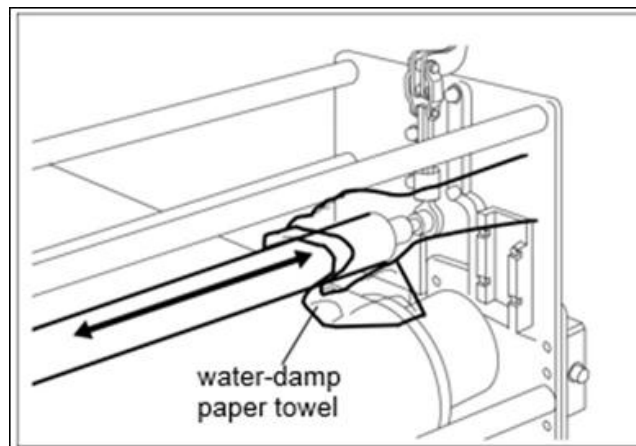


Fig 34: Wiping Off the Glue from the Press Roller

Step 13: Leave machine idle for 4 hours to let glue dry and set. (Next glue coat has to be done only after resting period of 4 hours) Above process has to be repeated for every glue coat process.

Glue Removing Preparation

Prepare and ready the following below mention things before removing glue:

- Prepare proper ventilators.
- Wear proper safety armament to prevent from touching glue and cleaner.
- Put cover sheets on under belt, printer front and rear to protect them from dropped glue and cleaner.

Note: Do not use the Belt washing Unit while glue coating or glue removing. Glue or the Cleaner may damage the Brush-roller or sponge roller so put a cover on the washing unit.

Glue Removing Procedure

Follow these steps to remove glue:

Step 1: Prepare cleaner which is dedicated to using glue.

Step 2: Wipe cloth or paper towel with purified water. Place wipe clothes on belt to cover belt.



Fig 35: Wiping the Belt

Step 3: Pour cleaner liquid (Solvtek) onto wipe clothes.

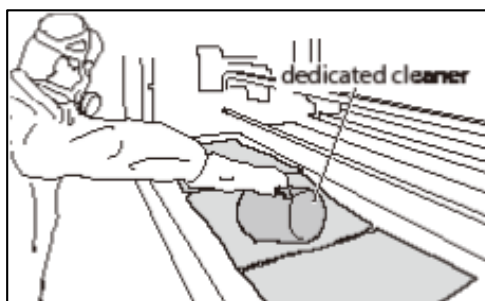


Fig 36: Pouring Cleaner Liquid

Step 4: Wait 5 minutes to dissolve glue.

Step 5: Wipe dissolved glue and cleaner by wipe clothes.

Step 6: After wiping out the part, turn the belt and repeat wiping until wipe out over all.



Fig 37: Wiping the Glue

Step 7: Spray or pour purified water onto the belt.

Step 8: Wipe out cleaner on the belt by paper towel.

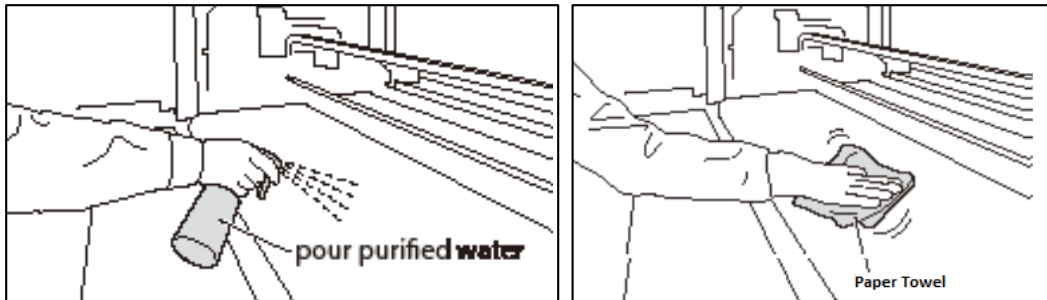


Fig 38: Wiping Out Cleaner from the Belt

Step 9: After clean up the part, turn belt and repeat cleaning until clean up over all. Remove cover sheet which covers washing unit.

Step 10: Finally, remove remained cover sheets, and keep the belt dry one day.



Fig 39: Removing the Cover Sheet

Fabric Loading

Follow these steps to load fabric in the printer:

Step 1: Keep the well pressed and pre-treated fabric roll winded into the empty core of diameter 65-70mm. Insert the supply roller into the core of the fabric roll. Attach the core holders on both ends and tighten them.

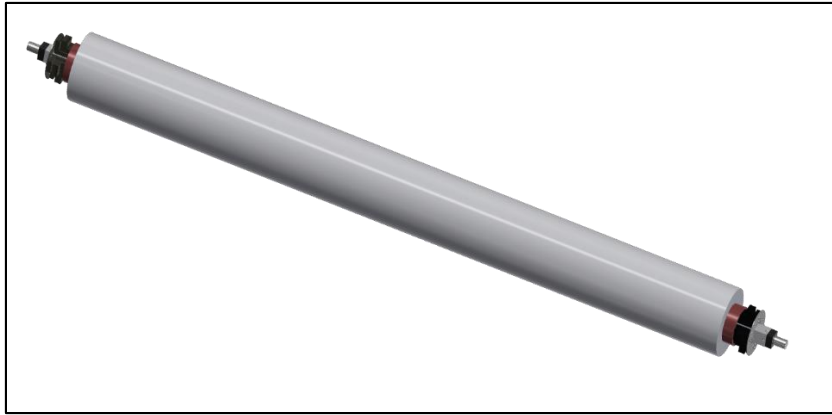


Fig 40: Displaying the Fabric Roll

Step 2: Remove the roller stopper pin, and place the supply roller into the rear of the machine. Replace the stopper pin.

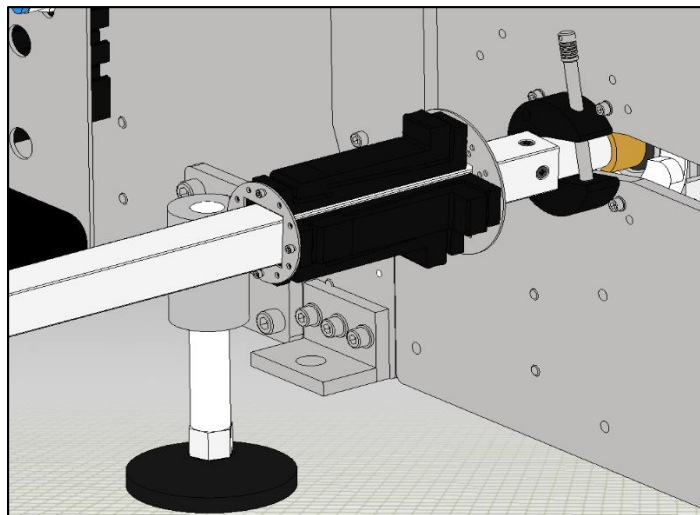


Fig 41: Removing the Roller Stopper Pin

Step 3: Fix the takeup roller by following the given instructions:

- Using the **Takeup** option in the service mode, rotate and align the Takeup Motor Coupling so that takeup roller can easily fix in it, as shown below:

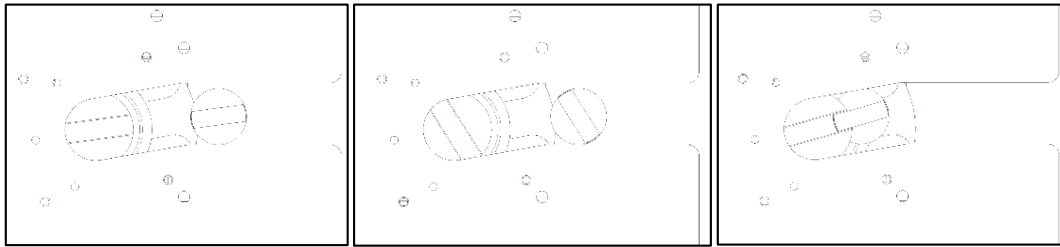


Fig 42: Fixing the Core Holder into Takeup Roller

- Insert the empty core into the takeup roller.
- Fix the core holders at both ends of empty core.

Step 3: Pull out the fabric and let it roll out, passing through the fabric tensioner and onto the Fabric Guiding Rods. This can be shown through the line diagram, as shown below:

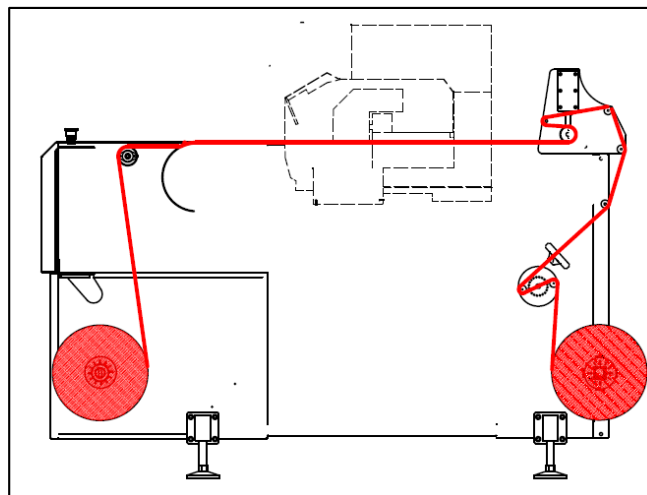


Fig 43: Displaying the Fabric Loading Path

Step 4: Keeping the fabric stretched, to keep wrinkle free, pass below the press roller and pull down the Press Roller through toggle handle.

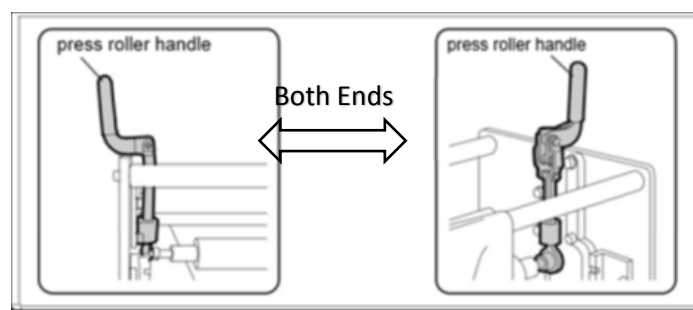


Fig 44: Displaying the Setting of Press Roller Handles

Step 5: Adjust the **Fabric Tensioner** (as shown in Fig 45) such that the fabric get stretched and to remove any slack. Do not over tension the fabric.

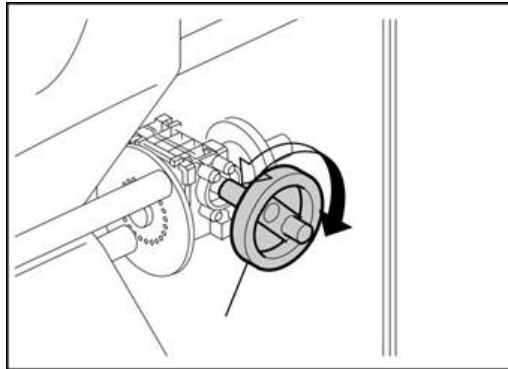


Fig 45: Adjusting the Fabric Tensioner

Step 6: Press Belt Forward from HMI to feed fabric forward (Care to smooth out the wrinkles, if any). Pass the fabric between the front Print Dryer and the Stretcher Rollers.



Fig 46: Pressing Belt Forward Icon

Step 7: Insert the empty Core into the take-up roller, with Core holders at both edges.

Step 8: Attach the falling edge of the fabric to the core by sticking evenly and properly.

Step 9: Set the take up power to 70% approx. (depends on the fabric type) and switch on the take up in HMI. Move the belt forward a little, so that fabric gets securely winded into the take up roller.



Fig 47: Setting Up the Take-Up Power

6. Printing

Check Ink Level

Check the ink level in cartridges and refill it, if required, as shown below:



Fig 48: Displaying the Main Ink Tank

Head Height Adjustment

Follow these steps to adjust the head height as per the requirements of the fabric thickness:

Step 1: Press the **MENU** button from the **Control Panel** of the print engine.

Step 2: Press Up or Down button and select the **HEAD HEIGHT** option, as shown below:

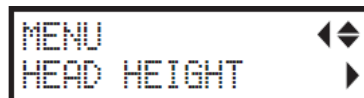


Fig 49: Selecting the Head Height Option

Step 3: Press the Right arrow button to confirm the selection (Refer to Fig 49).

Step 4: Press the Left or Right button to select the **HIGH** or **LOW** option as per the requirement, as shown below:



Fig 50: Selecting the HIGH OR LOW Option

Step 5: Press the **ENTER** button to confirm the selection. The **HEAD HEIGHT** screen appears (Refer to Fig 51).

Step 6: Press the **ENTER** button to select the **CHANGE** option to modify the settings, as shown below:



Fig 51: Setting the Head Height

Step 7: After selecting the **CHANGE** option, open the front cover to adjust the head height.

Step 8: Move the **Height Adjustment Lever** to adjust Print Head height viz. High and Low, as shown below:

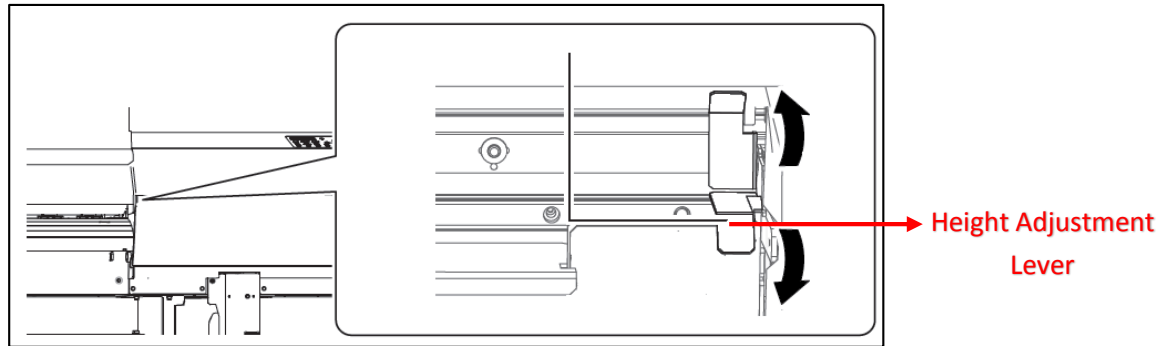


Fig 52: Displaying the Height Adjustment Lever

Step 9: After adjusting the height, close the front cover.

Now, the Print Head height is adjusted and to verify the result, issue the **TEST PRINT** command.

Note: If fabric is wrinkled or loose, move the Height Adjustment Lever to High. Generally, the head adjustment lever is set to Low.

Performing Normal Cleaning

Follow these steps to perform normal cleaning:

Step 1: Press the **CLEANING** button from the **Control Panel** of the print engine, as shown below:

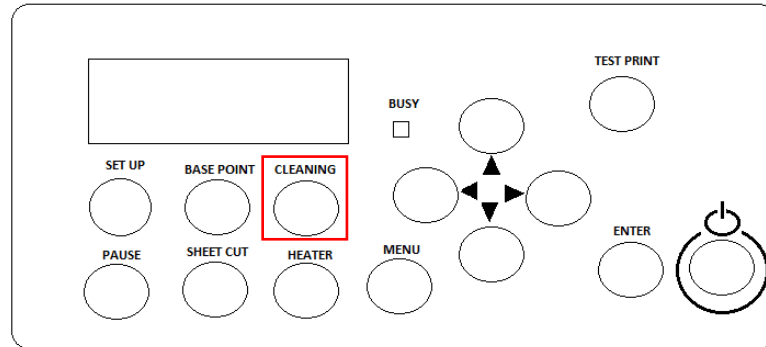


Fig 53: Clicking the Cleaning Button

Additionally, select the **MENU**→**CLEANING** path and you are redirected to the **CLEANING** menu. The **CLEANING** screen with its related options appears.

Step 2: Press the Right arrow button to select the **NORMAL CL.** option from the list, as shown below:

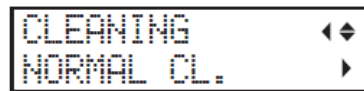


Fig 54: Selecting the NORMAL CL. Option

Now, the next group selection screen appears with available group options viz. A, B, or AB. The group description is given as follow:

- **A Group:** Refer to the Print Head 1.
- **B Group:** Refer to the Print Head 2.
- **AB Group:** Refer to both Print Heads.

Step 3: Select the desired group from the below given screen using the Left, Right, Up, or Down arrow keys and press the **ENTER** key to confirm the selection, as shown below:

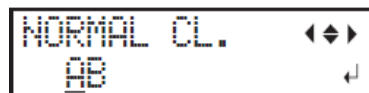


Fig 55: Selecting a Group to Perform Cleaning

Now, the cleaning process gets started. If you want to verify whether normal cleaning corrects the blocked nozzles or not, then perform the test printing by pressing the Test Print button on the control panel. If test result is not OK, then again perform the cleaning process using different cleaning options viz. Medium and Powerful cleaning.

Note: To perform cleaning on all the groups, press and hold the **CLEANING** button on the **Control Panel** for few seconds.

Setting Print Origin

Follow these steps to set the print origin;

Step 1: Move the carriage using the Left, Right, Up, or Down arrow button from the Control Panel of the print engine, at the location from where you want to start the printing.

Step 2: After setting the location, press the **BASE POINT** button from the **Control Panel**, as shown below:

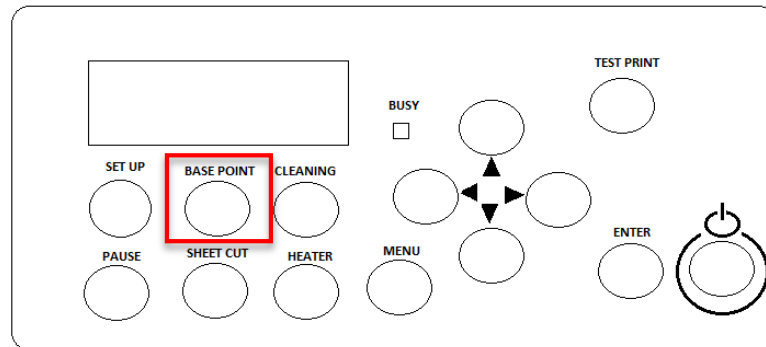


Fig 56: Pressing the BASE POINT Button

When the process is completed, the following screen with character “B” and output width appears, as shown below:



Fig 57: Finishing the Print Origin Process

Setting Test Print Direction

By default, the test print direction is “**FEED**”. You can change the direction either **Feed** or **SCAN** to save the wastage of fabric. If you select the FEED option, the test print prints one after another or vertically. On the other hand, if you select the SCAN option, the test print prints horizontally. Thus, the Conveyor Belt moves backward to the previous test print level.

Follow these steps to set the test print direction:

Step 1: Press the **MENU** button from the **Control Panel** of the print engine.

Step 2: Press the Up or Down arrow button and select the **SUB MENU** option, as shown below:

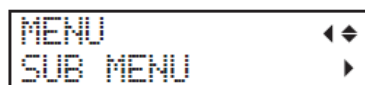


Fig 58: Selecting the SUB MENU Option

Step 3: Press the Right arrow button and select the **TEST PRINT POS** option, as shown below:

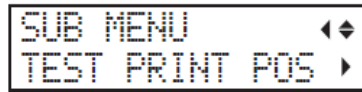


Fig 59: Selecting the TEST PRINT POS Option

On selecting the **TEST PRINT POS** option, the following screen appears, as shown below:



Fig 60: Displaying the TEST PRINT POS Sub Options

Step 4: Select the desired option either **FEED** or **SCAN** and press the **ENTER** button (Fig. 60).

Now, the test print direction gets set.

Performing Test Print

Follow these steps to perform test print:

Step 1: Set the print origin by following all the steps mentioned in the “**Setting Print Origin**” section.

Step 2: Press the **TEST PRINT** button from the Control Panel of the print engine and hold it for few seconds.

The following test print is printed on the fabric, as shown below:

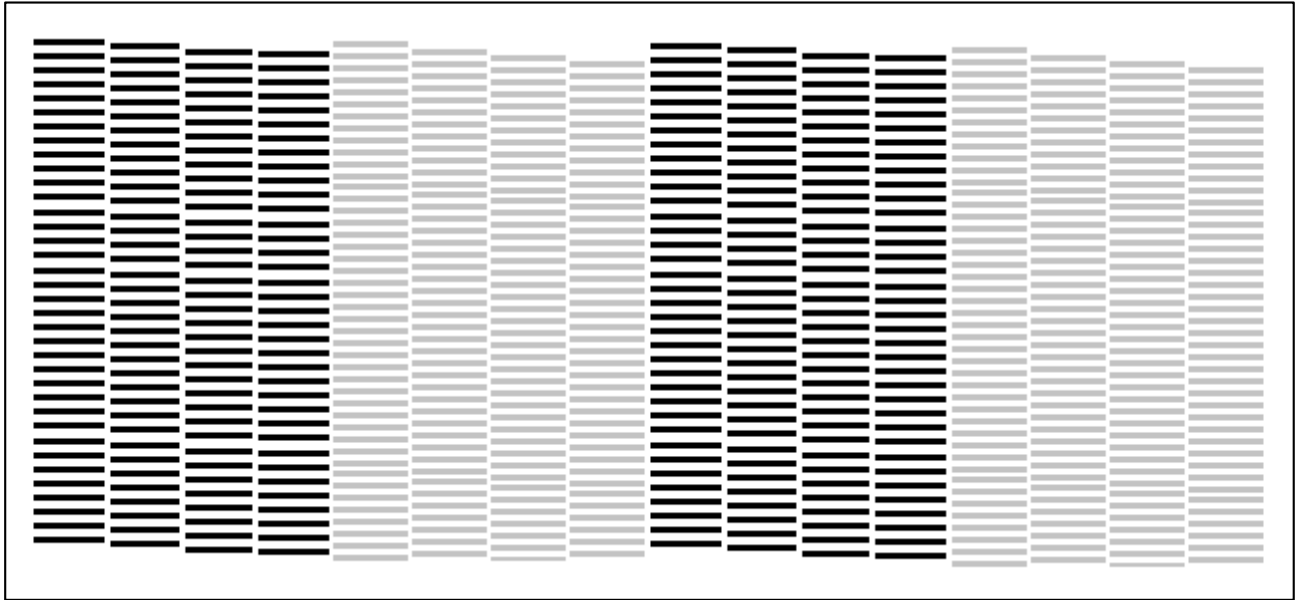


Fig 61: Showing the TEST PRINT Result

In the above figure, you can see that few nozzles are not firing. Thus, to overcome from this situation, we recommended to use head cleaning methods to clean print head for quality printing.

Printer Calibration

Feed Calibration

The **Feed Calibration** is used for the printer step calibration to verify and correct the fabric feeding. The printer prints a complete image in several passes. A pass is the horizontal carriage sweep perpendicular to the fabric movement. After each pass, the printer moves the fabric forward for the next pass and it (the next pass) should be in continuation with the previously printed pass. If there is any gapping or overlapping situation then it will cause horizontal white or dark bands or stripes to appear in the print output. Thus, in this situation, step size needs to be adjusted. The step size is affected by multiple factors like head height, thickness and type of the printing fabric etc. Feed Adjust should be used to fine adjust the step size.

Getting the Feed Correction Value

To get the correction value, you have to select the **TEST PRINT** option under the **CALIBRATION** menu. The **Feed Test result** prints on the fabric, as shown below:

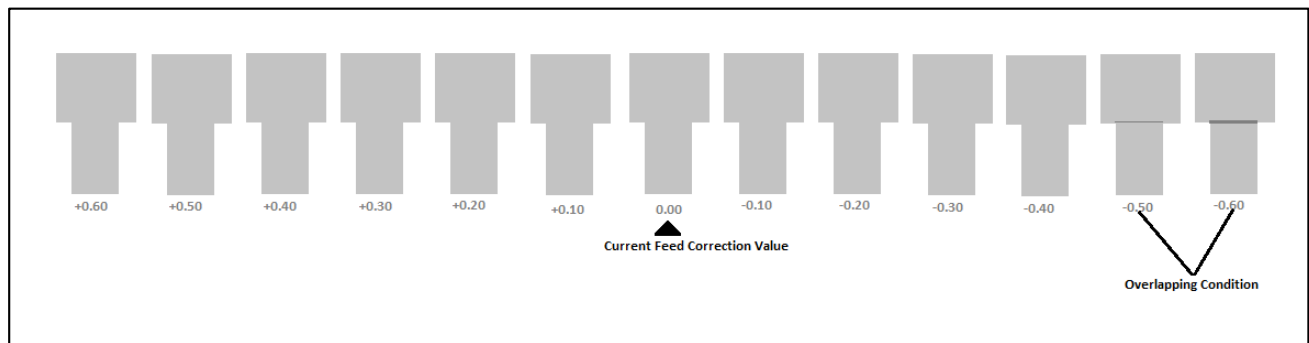


Fig 62: Displaying the Feed Adjustment Test Result

In the above figure, you can notice that the pattern is corrected at “0.00” position. The correction value can either be positive or negative. Enter the correct correction value in the given field (Refer to Fig 66) and again verify the result by issuing the **TEST PRINT** command.

Follow these steps to perform feed calibration:

Step 1: Press the **MENU** button from the Control Panel of the print engine.

Step 2: Press the Up or Down arrow button and select the **CALIBRATION** option from the sub-menu list, as shown below:

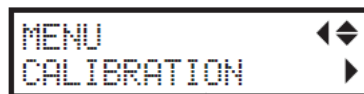


Fig 63: Selecting the CALIBRATION Option

Step 3: Press the Right arrow button to confirm the selection of the **CALIBRATION** option (Refer to Fig 63).

The **CALIBRATION** screen with **TEST PRINT** option appears, as shown below:

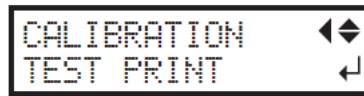


Fig 64: Issuing the Test Printing

Step 4: Press the **ENTER** button from the Control Panel of the print engine for test printing (Refer to Fig 64).

Step 5: After finishing the test printing, press the Down arrow button to select the **SETTING** option, as shown below:

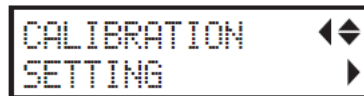


Fig 65: Selecting the SETTING Option

Step 6: Press the Right arrow button to confirm the selection.

Step 7: Press the Left or Right arrow button to position the cursor and then, press the right arrow to enter the correction value, as shown below:

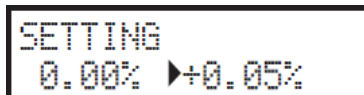


Fig 66: Entering the Correction Value

Now, the **Feed Calibration** value gets corrected.

Bidirectional Calibration

Bi-directional calibration is performed to achieve printing accuracy between the “Left to Right” and “Right to Left” print sweeps. If the bi-direction offset value is correct, the Left to Right test print would align accurately with the Right to Left test print at “0” position. In case of error in the BI-DIR offset, the Left to Right and Right to Left print would align at some other point on the scale. To check the BI-DIR calibration, select the Test Print option available under the ADJUST BI-DIR menu. The Bi-Dir test result is shown in the below figure:

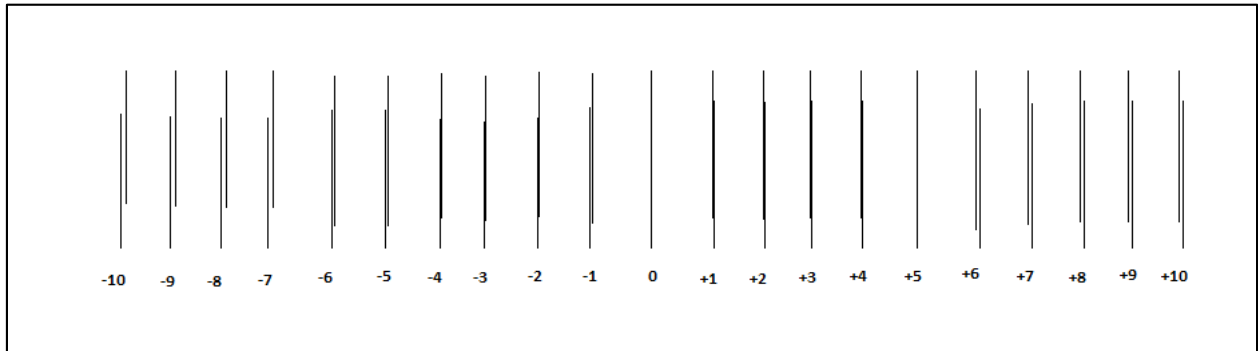


Fig 67: Displaying the Bidirectional Calibration

In the above figure, carefully observe the pattern at which position it is correct. The correction value can be either positive or negative. Enter the exact value in the given field (Refer to Fig 71) and verify the result by issuing the **TEST PRINT** command.

Follow these steps to perform bidirectional calibration:

Step 1: Press the **MENU** button from the **Control Panel**. The list of sub-menu appears on the screen.

Step 2: Press the Up or Down arrow button and select the **ADJUST BI-DIR** option, as shown below:

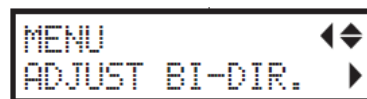


Fig 68: Selecting the ADJUST BI-DIR Option

Step 3: Press the Right arrow button to confirm the selection and press the **ENTER** button to issue the test printing, as shown below:

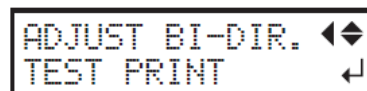


Fig 69: Issuing the Test Printing Command

The **ADJUST BI-DIR** screen consists of two setting options viz. **SIMPLE SETTING** and **DETAIL SETTING**. Here, the SIMPLE SETTING option is used. In case, the SIMPLE SETTING option is not effectively resolving the printing quality, then it is advisable to use the DETAIL SETTING option.

Step 4: After finishing the test printing, press the Up or Down arrow buttons and select the **SIMPLE SETTING** option to enter the correction value, as shown below:

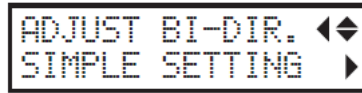


Fig 70: Selecting the SIMPLE SETTING Option

Step 5: Press the Right arrow button to select the **SIMPLE SETTING** option (Refer to Fig 70). The **SIMPLE SETTING** screen appears.

Step 6: Press the Left or Right arrow button and select the desired correction value, as shown below:



Fig 71: Feeding the Correction Value

Step 7: Press the **ENTER** button to confirm the selection.

Now, the printer gets calibrated and also its Bi-DIR correction value is updated. Similarly, if SIMPLE SETTING is not useful, then select the DETAIL SETTING option and follow the instructions that appear on the Control Panel.

Issuing Printing Command

With TXF, a rip software is provided. Using this ripping software, import the selected image and issue the Print command. Before printing, make sure the following instructions should be maintained:

- Make Conveyor Belt Online
- Set the Base Point

Pausing or Canceling Print

At any instance of time, user can pause or cancel the printing during it process.

Follow these steps to pause or cancel the printing:

Step 1: To pause the print process, press the **PAUSE** button from the **Control Panel** of the print engine, as shown below:

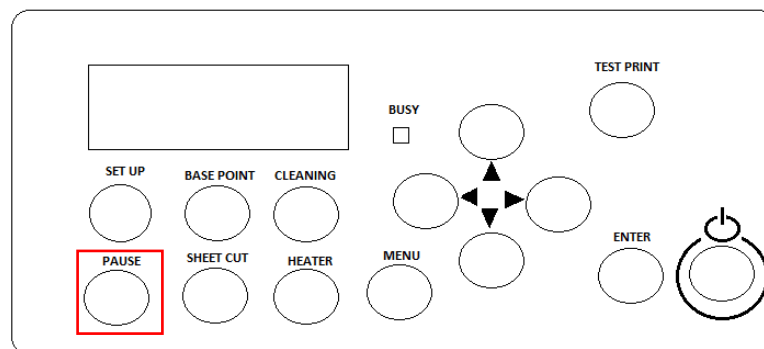


Fig 72: Selecting the Pause Command

On pressing the **PAUSE** button, the following screen appears, as shown below:

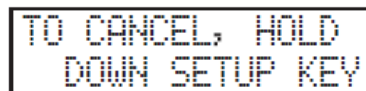


Fig 73: Displaying the Instruction Screen

Note: To resume the printing process, again press the **PAUSE** button.

Step 2: To cancel the printing process, press and hold the **SET UP** button from the **Control Panel** (Fig. 72). Now, the printing process gets cancelled.

Switch OFF Procedure

Follow these steps to switch off the printer:

Step 1: Take a test print to verify the result is same as when the printer is ON. If there is a difference then perform the remedial actions.

Step 2: Lift up the Press Roller.

Step 3: Remove the fabric from the belt.

Step 4: Run wash cycle for 10 minutes.

Step 5: Move down the washing tub using the HMI, as shown below:

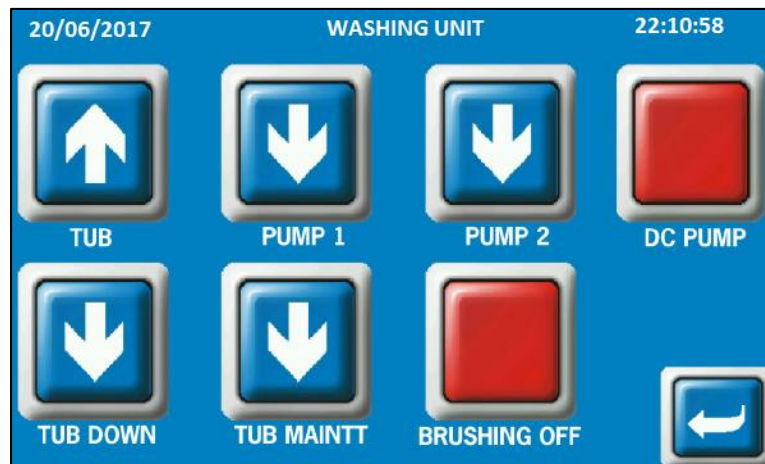


Fig 74: Removing the Washing Tub Using the TUB UP or TUB DOWN Option

Step 6: Check belt position with respect to roller, if not in center, move the belt in reverse direction through glue cycle till belt comes in center.

Step 7: Adjust the belt shifting control knob as per the requirements.

Step 8: Switch OFF the power button available on the Control Panel of the print engine, as shown below:

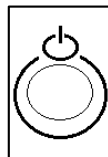


Fig 75: Displaying the Power OFF/ON Button

Step 9: Turn OFF the power switch available on the back side of the printer to stop the Conveyor Belt, as shown below:



Fig 76: Turning ON the Power Switch

Step 10: Cover the printer to protect the belt and other parts from dust.

Note: Don't Switch OFF the printer from the main power of print engine, as an automatic maintenance function is running which protects the Print Head nozzles from getting dried.

7. Utilizing the Preset Function

The **PRESET** function enables users to save and load the previously made printer settings.

Saving Preset Settings

Follow these steps to save the printer settings:

Step 1: Press the **MENU** button from the **Control Panel** of the print engine.

Step 2: Press the Down arrow button and select the **PRESET** option, as shown below:

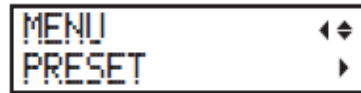


Fig 77: Selecting the PRESET Option

Step 3: After selecting the **PRESET** option, press the Right arrow to confirm the selection and select the **SAVE** option, as shown below:



Fig 78: Selecting the SAVE Option

Step 4: Press the Up or Down arrow button and select the desired options from the list, as shown below:



Fig 79: Selecting the Preset Name to Change

Note: The preset list consists of eight preset settings names viz. **NAME 1** to **NAME 8**.

Step 5: Press the **ENTER** button to confirm the selection.

The **SET NAME** screen appears.

Step 6: Press the Up or Down arrow button to enter a character. After selecting a character, press the Right arrow button to enter another character from the **Control Panel**, as shown below:

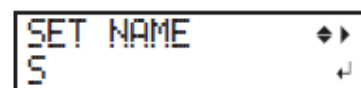


Fig 80: Entering the New Name of Current Settings

Note: The total length of preset name is 15 characters. The preset name must consist of characters from "A to Z", "0 to 9", and "-".

Step 7: After entering the preset name, press the **ENTER** button from the **Control Panel** of the print engine.

Now, the current settings get saved.

Loading the Previously Saved Settings

Follow these steps to load the previously saved preset:

Step 1: Press the **MENU** button from the **Control Panel** of the print engine.

Step 2: Press the Down arrow button and select the **PRESET** option, as shown below:



Fig 81: Selecting the PRESET Option

Step 3: After selecting the **PRESET** option, press the Right arrow and select the **Load** option, as shown below:



Fig 82: Selecting the LOAD Option

Step 4: Press the **ENTER** button to confirm the selection.

Now, the settings get changed and loaded. After completing the process, the following screen appears:

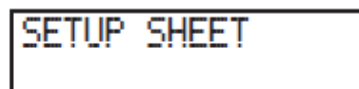


Fig 83: Displaying the SETUP SHEET Screen

Automatically Loading the Saved Preset When Fabric is Loaded

Follow these steps to automatically load the previously saved preset:

Step 1: Press the **MENU** button from the **Control Panel** of the print engine.

Step 2: Press the Down arrow button and select the **PRESET** option, as shown below:

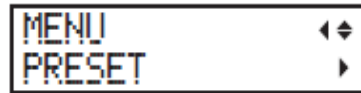


Fig 84: Selecting the PRESET Option

Step 3: After selecting the **PRESET** option, press the Right arrow and select the **AUTO DISPLAY** option, as shown below:

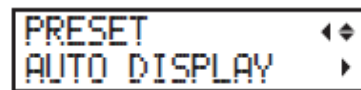


Fig 85: Selecting the AUTO DISPLAY option

Step 4: Press the Up or Down arrow button and select the **ENABLE** option, as shown below:

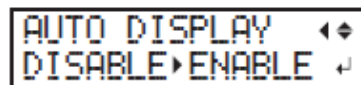


Fig 86: Selecting the ENABLE Option

Step 5: Press the **ENTER** button to confirm the selection.

Now, the AUTO DISPLAY option is enabled and whenever the fabric is loaded, the screen for loading the saved preset appears.

Follow the below mentioned step to load the saved preset:

Step 1: Press the **SETUP** button from the **Control Panel** of the print engine after loading the fabric. The **LOAD PRESET** screen appears, as shown below:

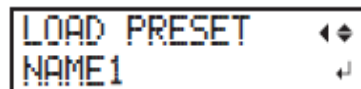


Fig 87: Selecting the Preset Setting Option

Step 2: Press the Up or Down arrow button and select the desired preset option to load previously saved settings (Refer to Fig 87).

Step 3: Press the **ENTER** button to confirm the selection.

Now, the preset setting gets applied to the currently loaded fabric.

8. Enabling the Sleep Mode

This machine embeds with the power saving feature, which is best known as “**Sleep Mode**”. The Sleep mode is activated when the machine is idle or not used for 30 or more minutes. In this mode, the sub power switch flashes which means that the machine is virtually ON but not in use. You can change the default settings as per the requirements by following steps given below.

Follow these steps to change the default time interval for the Sleep mode:

Step 1: Press the **MENU** button from the **Control Panel** of the print engine.

Step 2: Press the Up or Down arrow button and select the **SUB MENU** option, as shown below:

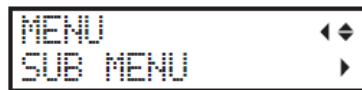


Fig 88: Selecting the Sub Menu Option

Step 3: Press the Right arrow button and select the **SLEEP** option, as shown below:

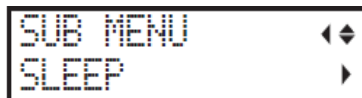


Fig 89: Selecting the Sleep Option

Step 4: Press the Up, Down, Left, or Right arrow button and select the **INTERVAL** option from the list.

Step 5: Press the Up or Down button to select the desired time interval for the Sleep mode and press the **ENTER** button to save the selection, as shown below:

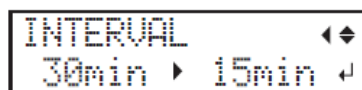


Fig 90: Settings the Time for Sleep Mode

Now, the Sleep Mode settings get changed.

9. Maintenance

Print Engine Maintenance

Print Head

Print Head is an important and delicate part of the printer. Thus, it must be handled with care to ensure the long life of the print heads. For print head maintenance, the following instructions should be taken care:

- Perform test printing daily 2-3 times to monitor the blockage in the head nozzles
- Perform normal cleaning daily to clean the Print Heads
- Avoid head damage due to fabric and print head confliction
- Printer should be ON from the sub power switch to avoid head nozzle dryness
- Check ink level to avoid Print Head nozzle dryness or air lock in ink pipeline
- Don't use expiry ink and store the ink at favorable environment

To maintain the printing quality, user should perform Normal, Medium, and Powerful cleaning as per the requirements.

Medium Cleaning

Follow these steps to perform medium cleaning:

Step 1: Perform a test print to check the blockage in the head nozzles. The test result is shown in the image below:

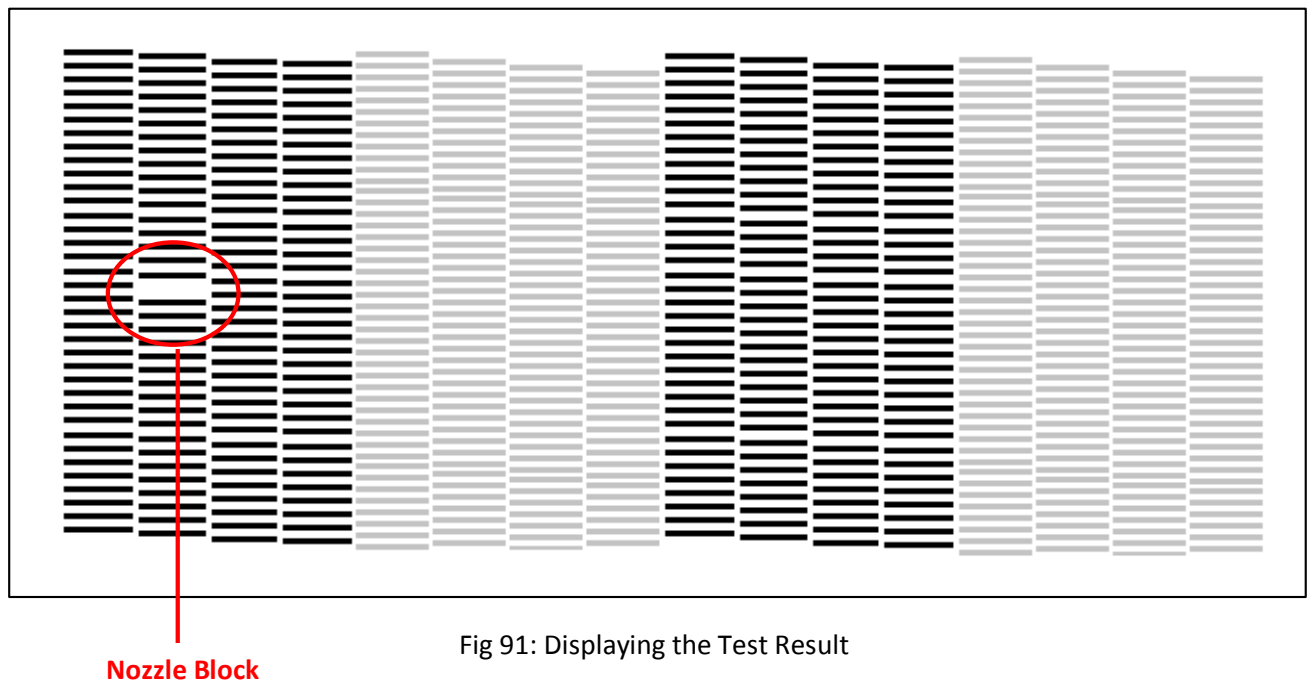


Fig 91: Displaying the Test Result

Step 2: Press the **MENU** button from the **Control Panel** of the print engine.

Step 3: Press the Up or Down arrow button and select the **CLEANING** option.

Step 4: Again, Press the Up or Down arrow button and select the **MEDIUM CL.** option, as shown below:

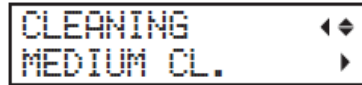


Fig 92: Selecting the MEDIUM CL. Option

Step 5: Press the Right arrow button to confirm the selection.

Step 6: Select the group whose nozzles you want to clean viz. A, B, and AB., as shown below:

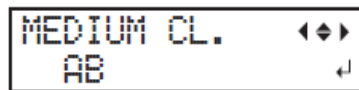


Fig 93: Selecting the Nozzle Group

Step 7: Press the **ENTER** button from the Control Panel of the print engine. Now, the cleaning process gets started.

The progress of cleaning process is shown in the image below:

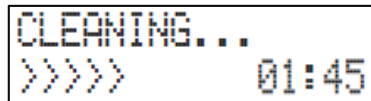


Fig 94: Displaying the Cleaning Process Progress

When the cleaning process gets completed, Fig. 92 appears again. Press the **MENU** button and start performing operations as per the requirements.

Powerful Cleaning (Not Recommended)

Follow these steps to perform the powerful cleaning:

Step 1: Follow Step 1 – Step 3 of the **Medium Cleaning** section.

Step 2: Press the Up or Down arrow button and select the **POWERFUL CL.** option, as shown below:

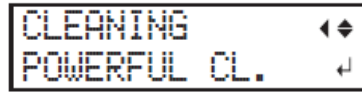


Fig 95: Selecting the POWERFUL CL. Option

Step 3: Press the **ENTER** button from the Control Panel of the print engine to start the powerful cleaning process.

The progress screen of the cleaning process appears, as shown below:

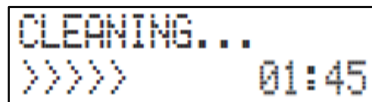


Fig 96: Selecting the Nozzle Group

When the cleaning process gets completed, Fig. 92 appears again. Press the **Menu** button and start performing operations as per the requirements.

Manual Cleaning

Before starting the manual cleaning, you need to follow the below mentioned instructions:

- Remove fabric to start the manual cleaning process.
- Try to finish the cleaning process in 30 minutes to avoid Print Head dryness.
- Use only cotton swabs provided with printer for cleaning.
- Don't reuse the cleaning material, mainly cleaning stick or cotton swabs, again and again.
- Don't put much pressure while cleaning the Print Head.

Manual Cleaning is done by enabling the Manual Cleaning mode which includes the cleaning of the following parts:

- Wiper cleaning
- Print Head and its surrounding surface cleaning

Let's discuss each process one by one in the upcoming section.

Enabling the Manual Cleaning Mode

Follow these steps to set the manual cleaning mode:

Step 1: Remove the previously loaded fabric.

Step 2: Press the **MENU** button from the **Control Panel** of the print engine.

Step 3: Press the Up or Down arrow button and select the **SUB MENU** option, as shown below:

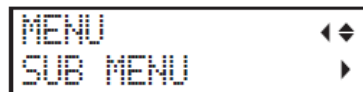


Fig 97: Selecting the Sub Menu Option

Step 4: Press the Right arrow button and select the **MAINTENANCE** option from the list, as shown below:



Fig 98: Selecting the Maintenance Option

Step 5: Press the Right arrow button and select the **CLEANING** option from the list, as shown below:



Fig 99: Selecting the Cleaning Option

Step 6: Press the **ENTER** button to start the cleaning process.

The **CLEANING** option consists of two sub options viz. **OPEN COVER L** and **OPEN COVER R**. The **OPEN COVER L** is used for cleaning the Print Head. On the other hand, the **OPEN COVER R** is used for cleaning the printer wipers. The **OPEN COVER R** screen appears as shown below:



Fig 100: Displaying the Open Cover R Screen

When the above shown screen appears, open the right cover and the start the cleaning process. When cleaning or set time (default 30 minutes) gets completed, press the **ENTER** button from the Control panel. The **FINISHED?** screen appears to finish the cleaning process, as shown below:

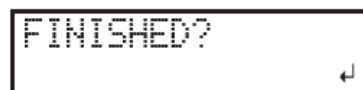


Fig 101: Displaying the Finished? Screen

Cleaning Wipers

Follow these steps to clean wipers:

Step 1: Set the **Manual Cleaning** mode by performing all the steps mentioned in the “**Setting Manual Cleaning Mode**” section. On selecting the **CLEANING** option, two sub-options appear on the screen viz. **OPEN COVER R** and **OPEN COVER L**. For wiper cleaning, select the **OPEN COVER R** option and press the **ENTER** button from the Control Panel of the print engine. The **OPEN COVER R** screen appears as shown below:

OPEN COVER R

Fig 102: Opening the Right Cover

Step 2: Open the right cover to start the wiper cleaning process, as shown below:

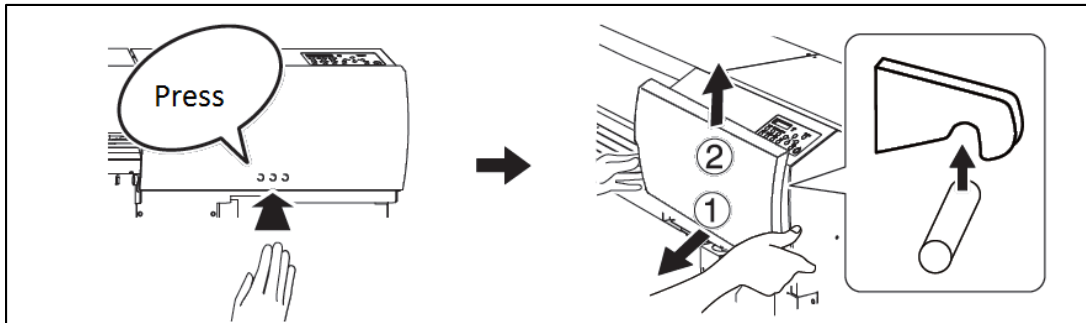


Fig 103: Open the Right Cover

Step 3: Wet the cleaning stick with the cleaning liquid, as shown below:



Fig 104: Displaying the Cleaning Liquid

Step 4: Clean both wipers one by one with the help of wet cleaning stick, as shown below:

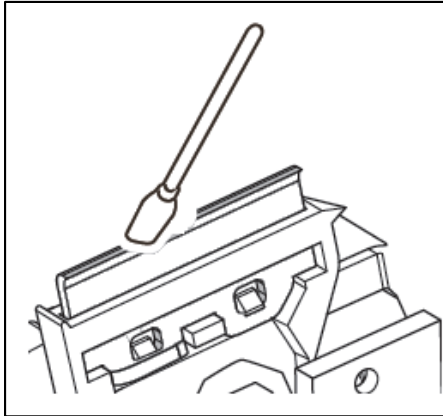


Fig 105: Cleaning the Wiper

Step 5: After completing the wiper cleaning, press the **ENTER** button from the **Control Panel** of the print engine. The **CLOSE COVER R** screen appears, as shown below:



Fig 106: Displaying the Close Cover R Screen

Step 6: Close the right cover, as shown below:

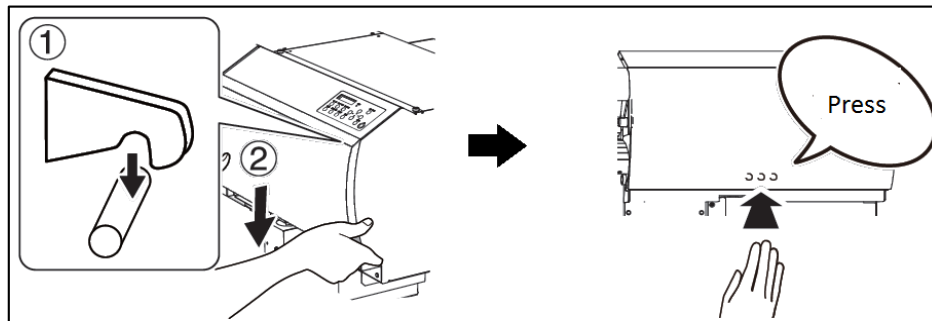


Fig 107: Closing the Cover

Now, wipers get cleaned.

Cleaning the Surrounding Area of Print Head

Follow these steps to clean the surrounding area of Print Head:

Step 1: Set the **Manual Cleaning** mode by performing all the steps mentioned in the **Setting Manual Cleaning Mode** section.

Step 2: Press the Up or Down arrow and select the **OPEN COVER L** option.

Step 3: Press the **ENTER** button from the **Control Panel** of the print engine.

Step 4: Open the left cover to clean the surrounding area of the Print Head, as shown below:

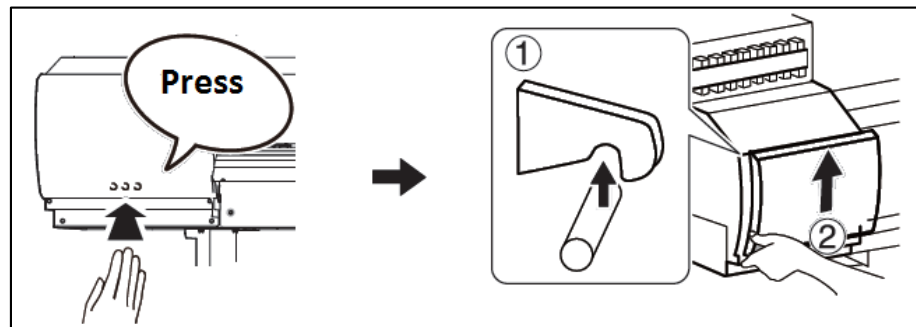


Fig 108: Removing the Left Cover

As per the given instruction on the screen, the following screen appears, as shown below:



Fig 109: Displaying the Instruction to Remove Cut Rail

Step 5: Remove the bolt and Cut Rail, as shown below:

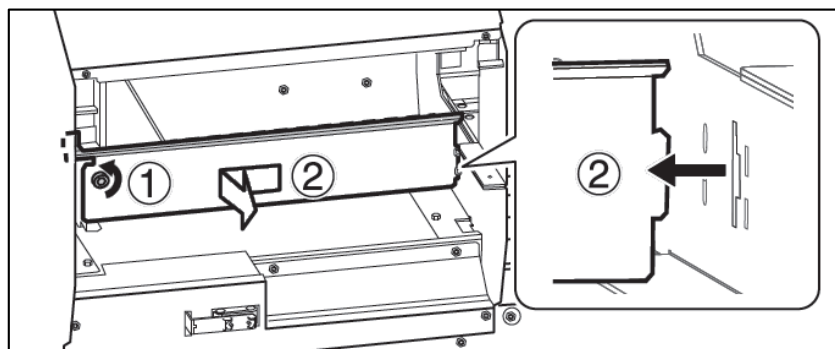


Fig 110: Removing the Bolt (1) and Cut Rail (2)

Step 6: Press the **ENTER** button from the Control Panel of the print engine to move to the next step.

Step 7: Open the right cover.

Step 8: Wet the cleaning stick with the cleaning liquid.

Step 9: Start the cleaning the area near to the Print Head, as shown below:

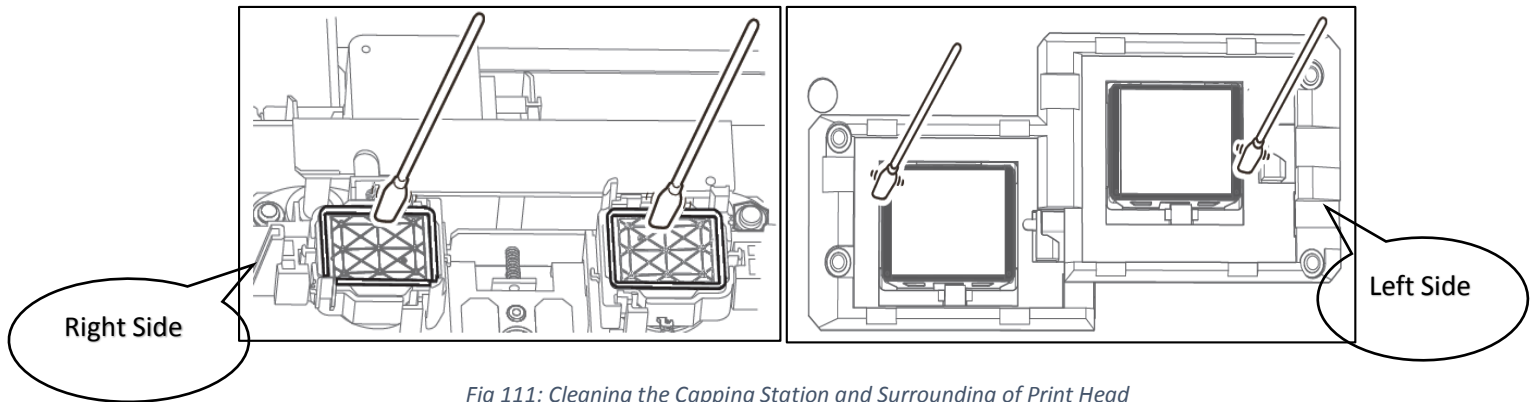


Fig 111: Cleaning the Capping Station and Surrounding of Print Head

Note: While cleaning the Print Head, don't touch the surface of Print Head.

Step 10: After cleaning, press the **ENTER** button from the Control panel.

Step 11: Fix the cut rails.

Step 12: Close the left cover.

Step 13: Close the right cover.

Step 14: When all covers are closed, the automatic cleaning gets started.

Now, the cleaning process gets completed. After completing the process, issue the test printing to verify the result.

Conveyor Belt Maintenance

Belt Maintenance

Note: Conveyor Belt is an important part of the printer and has to be handled carefully. During printing, the belt position has to be monitored from time to time, belt should always be running well inside the rollers.

Centering of Belt

Below section explains about centering of belt, when it has shifted towards edge of the roller:

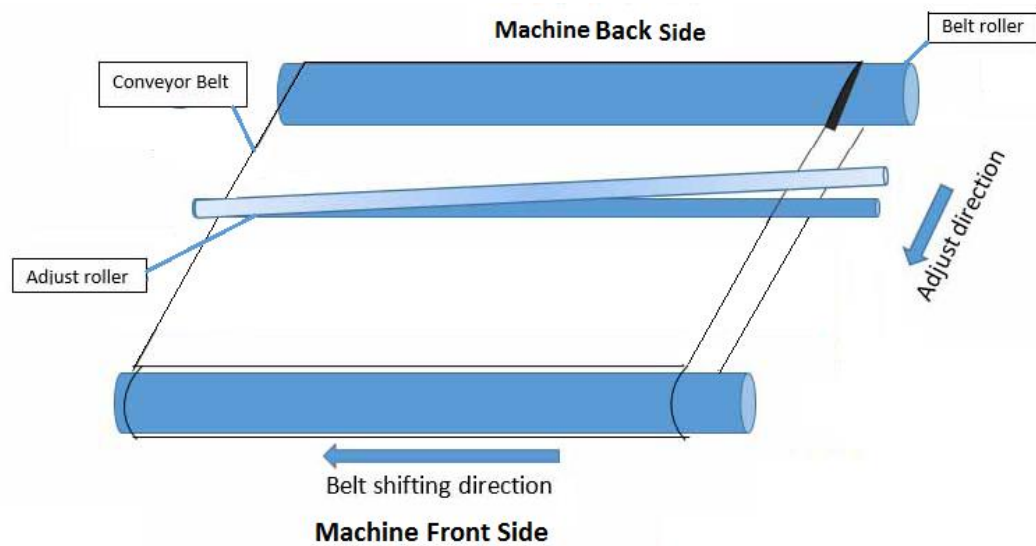
- If the belt is shifting one side more than 5mm in 1 hour, do the following
 - Wait for the running print to be completed, if repeats are given, stop immediately after the running image is completed, and prevent giving next command.
 - Takeout the fabric, lower the tub and run glue cycle in reverse direction with 70% speed.
 - When the belt is rotated reversely (without adjusting), further shifting is stopped and belt starts moving in opposite direction. Closely monitor the process until it comes in the center. Once belt has positioned centrally, glue cycle has to be stopped and shifting control adjustment has to be done as mentioned further in next section.
- If the belt shifting has crossed 5mm outside the roller, print has to be stopped immediately and belt has to be repositioned in center by loosening the tensioner screws, else severe damage to belt can happen. If you feel unconfident about doing so, please call the engineer.

Belt shifting control

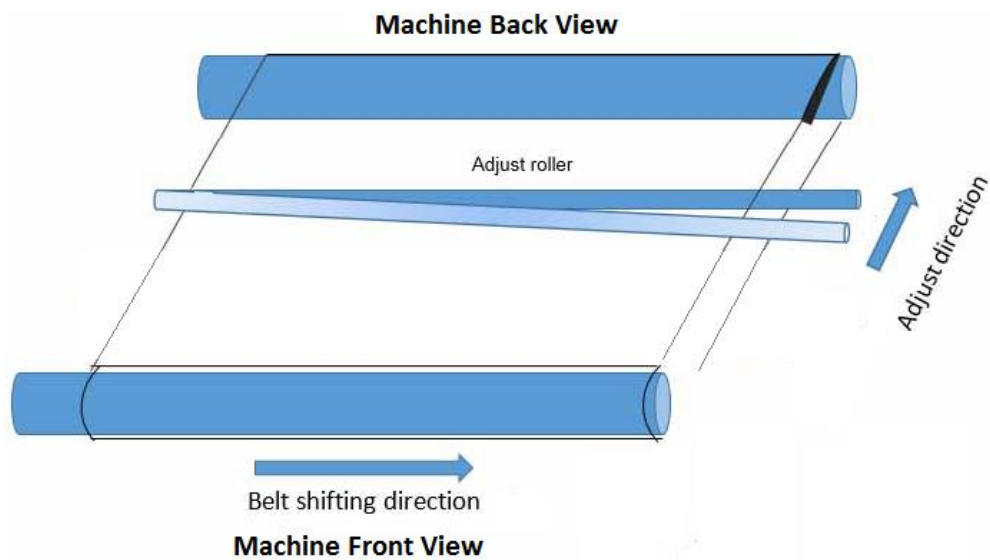
Below procedure explains about the Conveyor Belt shifting control.

- Belt shifting can be controlled 'on the fly' as well as when print is stopped.
- To control the position of Adjust Roller, turn the Toggle switch into FWD/REV direction (The Toggle Switch is available backside of the HMI) as per the requirements.

Case-I: Belt Shifted Towards Left



Case-2: Belt Shifted Towards Right



Glue coating layer

- It is strictly recommended that company suggested glue has to be used, else it may cause damage to sponge rollers, Conveyor Belt, brush motor assembly and belt motor coupling
- Glue coating has to be checked from time to time for its adhesive strength. Whenever required, fresh coating is to be done. Also wiping with wet cloth can clean the previous coating layer sometimes.

Precautions

- If the glue layers are peeling off partly, it is very dangerous for the print head, and also results in printing wastage, due to sewage on belt.
- If Glue adhesion goes less, it can damage the print head, by fabric getting entangled with the head.

Take Up and Supply Fabric

Precautions:

- Supply fabric tensioner not to be over tensioned, which may result in wrinkles in fabric due to guiding shaft sagging.
- Supply tension and take up power to be kept as per the fabric requirement. Over pressure of take up motor may result in wearing out of take up roller parts and tearing of fabric.

Daily Maintenance

- Perform normal cleaning 3 – 4 times in a day to check the status of the Print Head.
- Water renewal every 4 hours in Water tank.
- Add 2 spoons of caustic soda in every water recycle
- Wiper blades to clean by water rinse.
- Run wash cycle after finishing of every fabric roll, remove the fabric thread remains if any.
- Waste ink tank to be emptied
- Belt shifting has to be regularly monitored and adjusted if required.
- Press roller and fabric guiding rollers to be wiped to remove the ink stains daily.

Weekly Maintenance

Washing Tub Maintenance

- Washing Tub is an integral part of the Printer. Its maintenance is equally important as the production job work. Every week whole tub unit has to be cleaned thoroughly.
- The timely maintenance increases overall productivity by minimizing the downtime of machine. And also increases the life of tub related parts.
- Cleaning of water tank, jetting pipes, brush roller and refreshing tank water frequently, helps to prevent fabric threads, mold or algae choking the water flow in the tub, jetting pipe and water tank.

Precautions:

- Tub should always be lowered before turning off machine.
- Never run washing tub with jetting pump off.
- Never engage washing tub immediately after glue coating.
- Always use clean RO processed water for washing system, for longer life of related parts.
- Cable tie or clamp the jetting pump float wire as instructed by engineer.
- Cable tie or clamp the jetting pump outlet pipe.

Tub removal steps for Maintenance:

- A. Open the drain valve of the Main tank inlet to empty it.
- B. Remove the tub front cover.
- C. Select the **TUB DOWN** button on the HMI screen, as shown below:

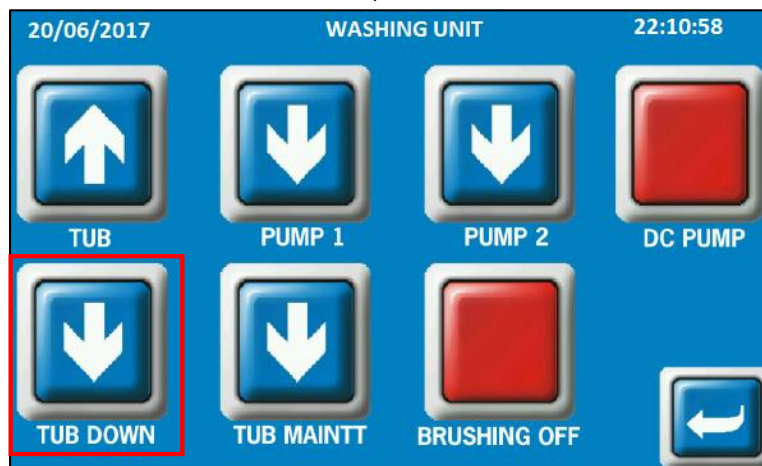


Fig 112: Removing the Washing Tub

- D. Unscrew two fasteners (one on each side) from the actuator brackets.
- E. Disconnect the brush motor cable.
- F. Select the **TUB MAINTT** button on the HMI screen to disengage the tub from the trolley (Refer to Fig. 112).
- G. Pull the trolley out to start the maintenance work.
- H. After cleaning is completed, reverse the steps to fix the tub.

Cleaning points:

(Use water to clean the washing tub, don't use any chemical or detergent)

- Brush has to be combed to remove fabric threads, and thoroughly rinsed to remove Glue residue layer on it.
- Sponge rollers has to be simultaneously rinsed and squeezed.
- Jetting pump has to be checked for any choked pieces in its inlet.
- Jetting pipe has to be rinsed thoroughly to get rid of fabric threads by opening dead plug using exact size spanner 18mm.
- Water tank bottom has to be cleaned.

- Water tank filter plates should be cleaned with hard brush to remove stuck threads.
- Tub bottom has to be rinsed and cleaned.

Monthly Maintenance

- LM guide to be wiped off to remove dust particles on monthly basis.
- Cleaning the floor inside of the Printer, particularly near water tank and washing tub.
- Encoder strip to be softly cleaned with wet tissue paper, on monthly basis.

Refreshing the Ink Tanks (Recommended Every Six Months)

Follow these steps to refresh the ink cartridges:

Step 1: Press the **MENU** button from the **Control Panel** of the print engine.

Step 2: Press the Up or Down arrow button and select the **SUB MENU** option from the list, as shown below:



Fig 113: Selecting the SUB MENU Option

Step 3: Press the Right arrow button and select the **INK CONTROL** option from the list, as shown below:

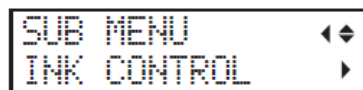


Fig 114: Selecting the INK CONTROL Option

Step 4: Press the Right arrow button and select the **REFRESH SUBTANK** option, as shown below:

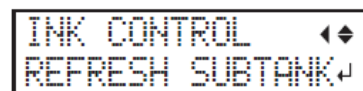


Fig 115: Starting the Refreshing Ink Tank Process

Step 5: Press the **ENTER** button from the control panel to start the process.

Step 6: After cleaning the ink cartridges, press the **ENTER** button to finish the process.

Now, the ink cartridges get refreshed. To verify the result, issue the **TEST PRINT** command.

9. Troubleshooting

PRINTER NOT INITIALIZING

- Print engine is OFF
- Servo board not powered ON / Faulty
- Main Board faulty

JETTING PUMP NOT WORKING

- Jetting pump float is down
- Water is less in tank
- Not enabled from HMI
- Disable & re-enable the washing option in HMI
- Make printer offline & online
- Make sure belt is in motion, Pump stops when belt is idle
- Tub sensor position disturbed
- Jetting pump air lock /clogged by foreign materials
- Pump failure
- Pump fuse blown

WATER SEEPAGE IN BELT

- Tub is brought down & up during pause (in between print)
- Sponge roller is dry or left dry for few days
- Sponge roller turn off/ shape is distorted
- Glue dryer is OFF

BELT SHIFTED

- Shifting not monitored & arrested through shifting control switch
- Shifting control switch is turned to wrong direction

FABRIC NOT STICKING TO BELT

- Glue heater not on or not working
- Glue coating layer needs new glue coating
- Belt layer is full of dust/threads need manual cleaning/wiping

PRINT NOT DRYING/INK MARKS ON BACK OF FABRIC

- Print dryer is not on or not working
- Dryer temperature is not sufficient
- Coating of fabric is not there/ correct
- Fabric supporting bar and Take up roller is stained with ink

FABRIC STICK ON THE COVEYOR BELT NOT WINDING ON TO THE CORE

- Take-up force is less
- Fabric core is slipping & not intact with core holder

IMPRESSION OF INK ON PLAIN FABRIC

- Belt is not washed properly
- Water in tank is dirty & have fabric lint
- Fabric threads are stick over the belt
- Brush is congested with fabric threads and not uprooting the threads from the belt

PRINT IS SHIFTING WRT FABRIC/JUNK PRINTING

- Encoder scale is having ink stains (print shows vertical color bands)
- Encoder sensor is not clean

PRINT IS BLUR (NOT SHARP)

- No proper calibration- bi-direction & step
- Head height disturbed and not calibrated for above
- Incorrect resolution selected

LINES IN PRINTS

- Nozzle blocked in heads (check nozzle test)
- Incorrect feed step (calibration required)
- Conveyor Belt coupling is loose



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