

RICOH

Ri 2000

# Print Head Recovery Guide

**RICOH**  
imagine. change.

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## ***Introduction***

This document is intended to aid RICOH Ri 2000 users in diagnosing nozzle drop out and printer error codes listed below. White heads on the Ri 2000 can clog if the auto maintenance is interrupted for any reason for a short amount of time (over the weekend) - Machine powered off, low or no white ink, SC or other error (waste tank full for example), this instruction was developed to outline the method to recover these heads.

## ***Scope***

This applies to RICOH Ri 2000

## ***Symptoms***

- *Error code 988*
- *Error code 990*
- *Many missing white nozzles*

## ***Required Supplies***

- Lint Free wipes
- Carriage Cap
- Ricoh cleaning Liquid Type 1
- Cleaner cartridges for each white channel (must be 100% if complete flushing is required)

**Step 1.** If the print head has no or few nozzles printing as shown below, then check the ink volume level for that channel. If ink cartridge volume is below 20% - replace the low cartridges so there will be enough ink to make the strong cleans needed to recover the head affectively.



No. Nozzle printing or a large number of nozzles blocked

**Step 2.** Perform 5 Strong cleans on the affected channel – check the nozzle after each clean – if there is little or no improvement, go to step 3– if it is completely or almost recovered then the maintenance is finished, and normal maintenance can proceed.

**Step 3.** Check maintenance unit, carriage, and encoder and the carriage rails and perform maintenance as described in the user manual section 3.3 and 3.4 – also here are the links to our maintenance videos

<https://ricohdtg.com/support/ricoh-dtg-university-for-ri-2000/>

The weekly maintenance video is the most important

**Step 4.** Perform a normal head clean and Print nozzle check pattern to confirm the current situation. If the nozzle is OK (below) then the maintenance is finished. If not proceed to step 5



**Step 5. Caution:** Only perform this step if you can visibly see dried ink on the head surface itself (the red area in the picture below) If the surface is clean then this step will not help proceed to step 7

Gently wipe the cleaning applicator soaked with the cleaning liquid on the nozzle part of the head. (**Red area** in below picture) Always use clean surface and do not use the used surface at once. Gently wipe toward to following **Yellow arrow** (one way of rear to front). Repeat wipe until clean the nozzle surface. (Change surface of swab per wipe) Then perform strong clean.



Gently wipe on the red area along yellow arrow. **Important:** Only perform this step a maximum of 10 wipes

**Step 6.** Print nozzle check pattern to check nozzle pattern, if fixed then this operation is finished. If nozzle clogging still present, then go to step 7

**Step 7.** Check firmware version. Install new firmware if older version present. Current version of firmware is 1.31 (See Firmware install document for step-by-step instructions or call tech support.

**Step 8.** Replace the white ink cartridges with white cleaning cartridges and select settings, and ink path control. Select fill with cleaner, then select white carriage. Printer will fill white channels with cleaner.

**Step 9.** Once printer is filled with cleaner in the white lines, perform strong head clean and do nozzle check. Repeat this process up to three times to check if nozzles improve or not. If you see improvement continue strong cleans until nozzle check is 100% or close to it. If close, you are ready to refill with white ink. If NO improvement is noticeable in nozzle situation, proceed to next step.

**Step 10.** Go to settings menu, select ink path, fill with cleaner for white carriage. **Note:** You will require full cleaning cartridges for this fill to complete. Once filling is completed, proceed to next step.

**Step 11.** Enter service menu, Select printer system, select initial charging flags, reset the white carriage to false. Check the 4-color flag is set to true, if not select Set. Repeat the instructions from step 9 and check nozzles and try to recover with cleans. If the nozzle has not improved then proceed to the next step

**Step 12.** On the control panel - select the manual clean option to move the carriage in the middle of the printer and then power off the printer.

**Step 13.** To avoid unexpected behavior, shut down the power from the rear power switch

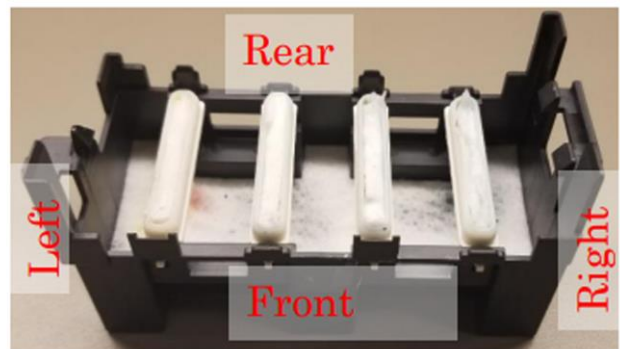
**Step 14.** Fold 1 lint free wipe in half then in half again into 4 equal rectangles. Cut the lint free wipe into 4 equal pieces



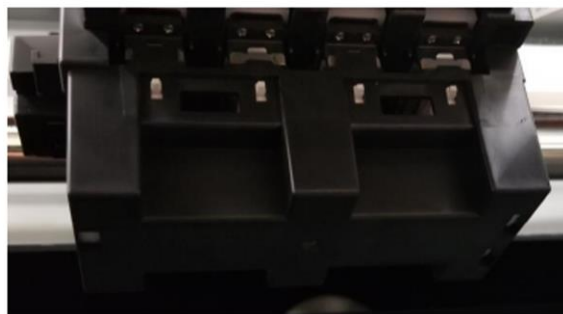
**Step 15.** Roll each of the 4 lint free wipes and rip or cut to about 2 inches in length



**Step 16.** Soak the lint free wipes in the carriage cap with Ricoh Type 1 cleaning solution that is supplied with the printer



**Step 17.** Mount the carriage cap to the bottom of the carriage unit



**Step 18.** Leave for 2 days up to a week if possible. Always keep the carriage cap moist with cleaning liquid during this time. **Apply only enough cleaning fluid to saturate the lint free wipe.**

**Step 19.** Remove the carriage cap, then power on.

**Step 20.** Perform a strong clean on the whites and check the nozzle check – if you see improvement continue with strong cleans –if the heads recover to 100% or close to it you can refill with white ink. If not, then repeat step 12-16. and contact tech support at (877)626-2538 extension 2, for further instructions.

Note: Depending on the severity of the clog you can still make vibrant prints by utilizing 1200 x 1200 16 pass white layer in the RIP. Tech support can also guide you through this.