Fusion3

EDGE 3D Printer

MAINTENANCE:
INSTALLING FIRMWARE UPDATES

Revision 12/22/2022

INSTALLING FIRMWARE UPDATES

How to update EDGE's firmware
For firmware versions **1.4t7** and higher

IMPORTANT: If you are upgrading FROM version 1.4t6 or EARLIER, TO version 1.4t7 and HIGHER, THERE IS A HARDWARE CHANGE YOU MUST MAKE TO YOUR PRINTER. See last section

LINK TO FIRMWARE UPDATE FILE

A link to the firmware file will be provided to you separately.

DOWNLOADING & INSTALLING THE UPDATE

Firmware updates are quick and easy on EDGE:

1. You'll receive a notification (direct email, notification on Fusion3 website, interaction with Support team) that a firmware update is available.

2. This update will come in the form of a .zip file called "*fusionware.zip*". It may also have a version number in the file name eg "*fusionware X.x.zip*".

3. **DO NOT** unzip or extract the contents of the file!

4. Transfer the update to the printer:

    a. (preferred) Upload it via the network interface like it's a normal .gcode file (you will need to select "all files" in the upload dialog box). The printer will automatically start to apply the update once the upload is complete.

    b. Copy it to a USB drive and insert this drive into the port on the front of EDGE. You will need to rename the file to "***fusionware.zip***", with no version string and with a lowercase *f*.

5. (Method B only) Press "*START PRINT*" on the control panel. Navigate to the external USB drive.

6. (Method B only) Select the "*fusionware.zip*" file.

7. The printer will apply the update. There are multiple stages to the update process

    a. The printer will display a "please wait while updates are installed" message with a cycling progress bar.

    b. After stage 1, the printer will display a message that "updates were successful". Press OK, but continue to wait.

    c. Let the printer sit **at least 3 minutes**. You may see it display an "updating" or "reconnecting" message once more.

8. COMPLETELY power cycle the printer: turn it off, wait 10 seconds, then turn it back on.

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NOTE: Firmware updates may also include updated onboard documentation and changes to the user interface

IF YOU ENCOUNTER ERROR MESSAGES AFTER UPDATING

If you see new or unusual error messages in red popups, don't panic! In 99% of cases this can be solved by doing the following:
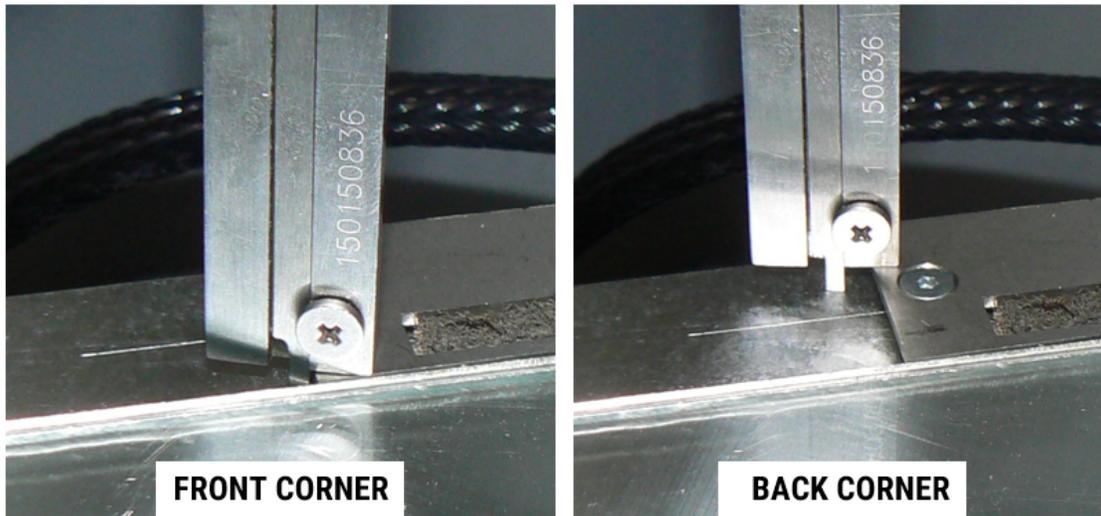
1. Power cycle the machine (completely off, wait 10 sec, power on).

2. Go to the *Console* screen again

3. Repeat the "*M997 S0*" command as described above.

4. Wait 30 seconds, then power cycle the machine again.

5. If this doesn't solve your issue, repeat the firmware update process from step 3.

6. If, after installing the update twice, you still see red error messages when the printer starts, or when trying to run a print, contact Customer Support.

HARDWARE CHANGE FOR V 1.4T12 AND HIGHER (includes 1.4Stable1)

Starting on this firmware version, you **must** make the change described here to ensure the scrub plate sits perfectly level with respect to the bed.
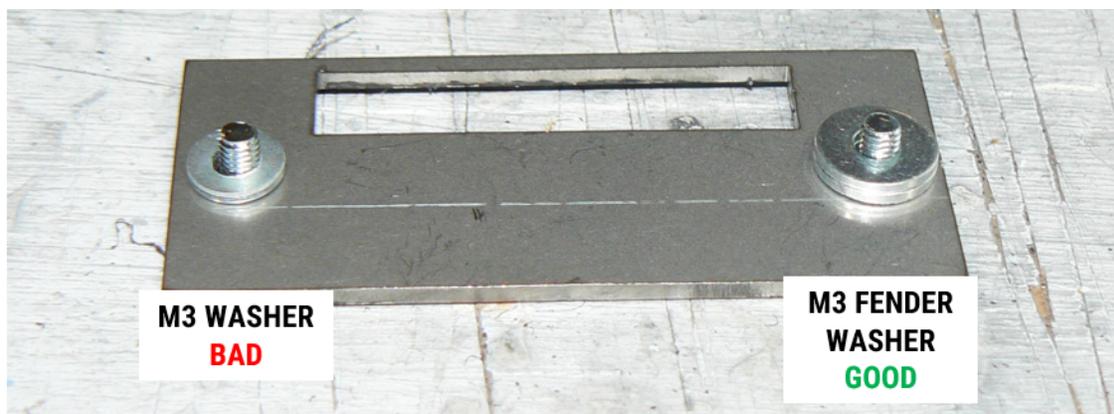
If the scrub plate is not perfectly level, your printer's nozzle offset calibration will be incorrect and your first layer will be consistently too close, or too far away, from the bed.

1. Measure the distance from the top of the plate to the bed at both left corners as shown. The distance must be within 0.1mm of each other. Adjust the scrub plate and screws as needed.

ONLY proceed to the steps below if you cannot get the scrub plate to level out.
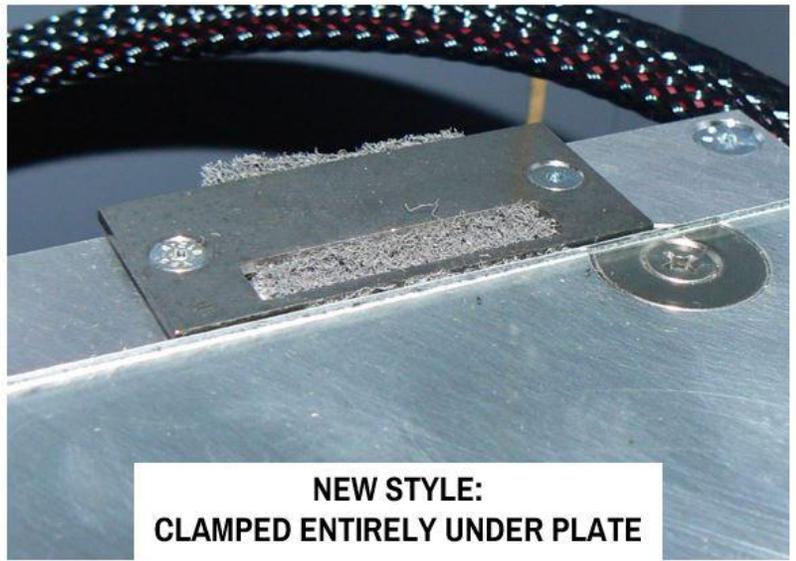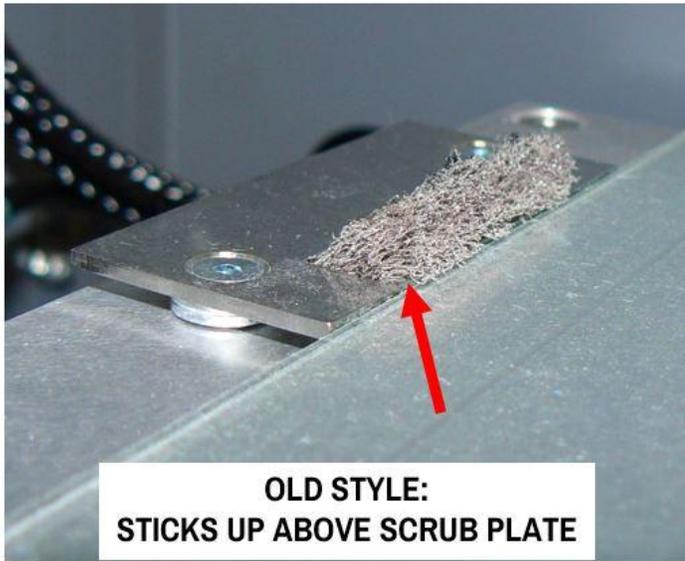
1. Remove the scrub plate from the bed.

2. On the screws, remove the small black rubber ring that helps retain the washers.

3. Make sure your scrub plate is spaced off the bed using **two M3 fender washers**. Not normal M3 washers. If you need to replace them they are McMaster-Carr P/N 91100A120.
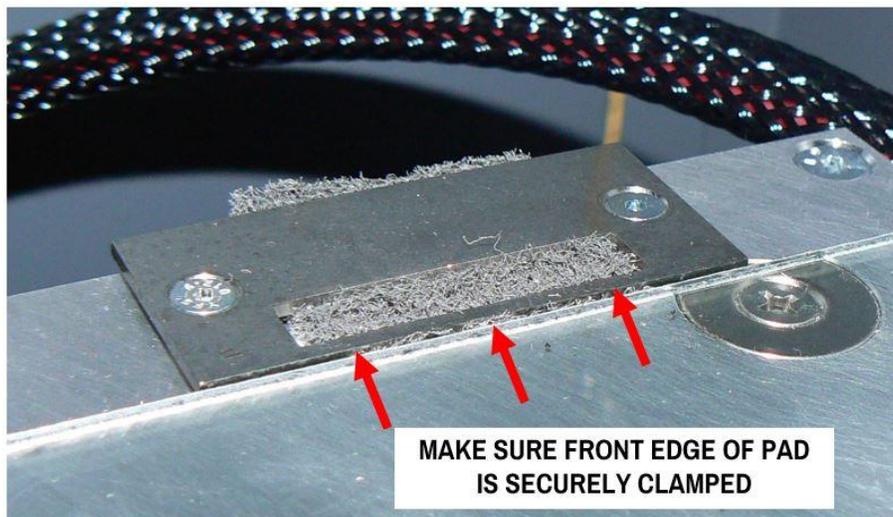

4. Brush off the bed under the scrub plate to make sure the surface is clean and smooth.

5. We recommend replacing your scrub pad at this time as well.

6. Reinstall the scrub plate.

HARDWARE CHANGE FOR V 1.4t7 AND HIGHER

Starting on this firmware version, you **must** change how your print head scrub pad is installed in the print head scrub plate.

OLD STYLE:
STICKS UP ABOVE SCRUB PLATE

NEW STYLE:
CLAMPED ENTIRELY UNDER PLATE

1. See our instructions for changing the print head scrub pad for how to remove the clamp plate.

2. Remove and discard the old scrub pad

3. Install a new scrub pad completely under the clamp plate. Make sure it extends far enough under the front of the clamp plate to be securely held in place.

MAKE SURE FRONT EDGE OF PAD
IS SECURELY CLAMPED

4. Firmly tighten the clamp plate screws until the plate is parallel and level with the tool plate. You may need to remove your print surface or shift its position slightly forward to get the plate fully screwed down.