



3DSYSTEMS™

3D SYSTEMS- Procedures

PROJET® 3500 PRINTERS

“Procedure: Material Changeover from M3 Black”

P/N: N/A, Rev. A

Revision date: 15-Nov-2013



3DSYSTEMS™

Objectives

After completing this procedure you will be able to:

- ❑ Perform Material Changeover from ProJet® M3 Black.



BDSYSTEMS™

Safety Precautions

The following Safety Precautions should be followed when performing this procedure:

- Wear Nitrile gloves when handling waste drawer material.
- Refer to material MSDS and follow local guidelines when disposing of waste drawer material.



Material Changeover from M3 Black

Changing over from ProJet® M3 Black material requires some additional steps to completely remove the material from inside the ProJet® MDMs and printhead.

This procedure will help in achieving the optimal results.

This procedure will require several Material Changeover Wizards with manual interventions after each time a Changeover Wizard is run.



Material Changeover from M3 Black

PROCEDURE:

STEP 1:

Remove all M3 Black material bottles from MDM drawer Part Material Side.

STEP 2:

CAUTION: Surfaces may be HOT!

If necessary, wearing nitrile gloves and using a lint free cloth, remove any/all residual liquid material that may be present inside the MDM bottle holder cubby.

- There should be no liquid material settled at the bottom of the MDM bottle holder cubbies.



CAUTION: Inside surfaces of the MDM bottle systems may be HOT.
WARNING: Wear Nitrile Gloves anytime handling liquid material such as waste and/or spills.

Material Changeover from M3 Black

STEP 3:

Install new material type into ProJet® MDM drawer, Part Material Side, Slot #1 (left most position).

- Close MDM drawer.
- The ProJet® may take up to 15 minutes to recognize the new bottle.

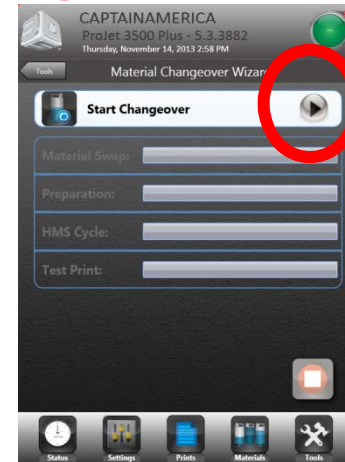
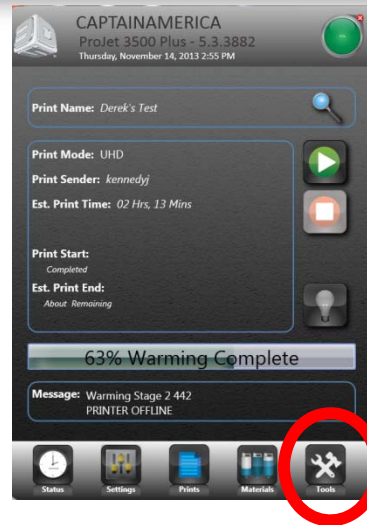


Material Changeover from M3 Black

STEP 4:

On the ProJet® operator panel, Select:
Tools → Material Changeover Wizard

- Select the Start Button to begin the Changeover Wizard.
- Follow the ProJet® prompts to prepare the changeover wizard.
- When prompted, EMPTY the WASTE DRAWER.
- The ProJet® will begin the Changeover Wizard when the material has fully melted.
- It may take 2 hours for the new material to fully melt.
- The first Changeover Wizard will run for approx. 3 hours and 40 minutes.



Follow all local guidelines when handling waste drawer material.

Material Changeover from M3 Black

There will be a sample PART VERIFICATION test pattern on the platform when the first changeover completes. The result will still have a heavy tint of black and dark gray material. **This is normal.** It will take several iterations to remove the M3 Black material.

STEP 5:

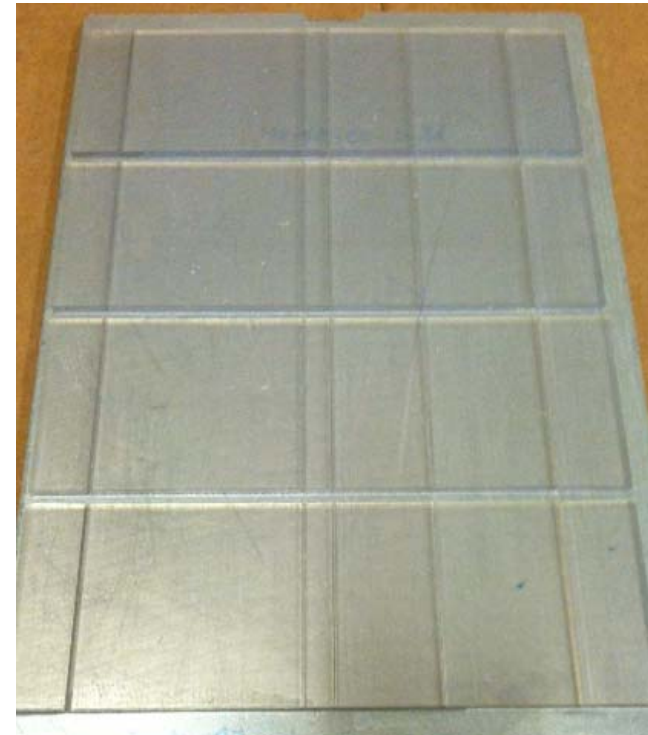
Remove the Platform from the ProJet® when the Changeover Wizard completes.

- Clean the platform and discard the Part Verification Test blocks.

STEP 6:

Re-Install a clean platform.

Sample Part Verification Test



Material Changeover from M3 Black

STEP 7:

Remove the bottle of new material from the ProJet® MDM bottle holder slot #1.

STEP 8:

CAUTION: Surfaces may be HOT!

If necessary, wearing nitrile gloves, use a lint free cloth to remove any/all residual liquid material that may be present inside the MDM bottle holder cubbies.

- There should be no liquid material settled at the bottom of the MDM bottle holder cubby.



CAUTION: Inside surfaces of the MDM bottle systems may be HOT.
WARNING: Wear Nitrile Gloves anytime handling liquid material such as waste and/or spills.

Material Changeover from M3 Black

STEP 9:

Install a bottle of ProJet® EZ Flush (P/N: 24193-900) into the MDM drawer, Part Material Side, Slot #1 (left most position).

- Close MDM drawer.
- The ProJet® may take up to 15 minutes to recognize the new bottle.

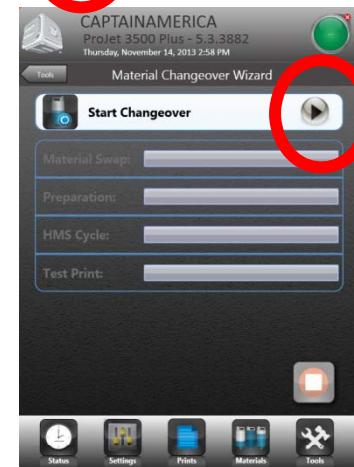
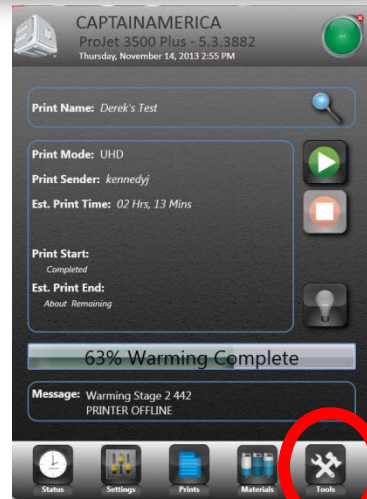


Material Changeover from M3 Black

STEP 10:

On the ProJet® operator panel, Select:
Tools → Material Changeover Wizard

- Select the Start Button to begin the Changeover Wizard.
- Follow the ProJet® prompts to prepare the changeover wizard.
- When prompted, EMPTY the WASTE DRAWER.
- The ProJet® will begin the Changeover Wizard when the material has fully melted.
- It may take up to 2 hours for the material to melt.



Follow all local guidelines when handling waste drawer material.

Material Changeover from M3 Black

STEP 11:

Allow the Changeover Wizard to run for **1 hour and 30 minutes** then **ABORT** the Wizard.

- After running the Changeover Wizard for 1 hour and 30 minutes, Select the RED or the ABORT Button on the operator panel.
- This will allow the Changeover Wizard to complete approximately 20 cycles or one half of a typical changeover.
- The ProJet® will then shortly complete the required maintenance with the EZ Flush material in Material Bottle Cubby Slot #1.



User Intervention is required to ABORT the Changeover Wizard while using EZ Flush.
User must manually abort the process after 1 hour and 30 minutes or a minimum of 20 cycles.
Do not allow the Changeover to run to completion (40 cycles).

Material Changeover from M3 Black

STEP 12:

When the ProJet® finishes aborting

- Open the chamber door and remove the empty platform.

STEP 13:

Remove the ProJet® EZ Flush install bottle from Slot #1.

Install the bottle of ProJet® EZ Flush into the MDM drawer, Part Material Side, Slot #2 (right most position).

- Close MDM drawer.
- The ProJet® may take up to 15 minutes to recognize the bottle changeover.

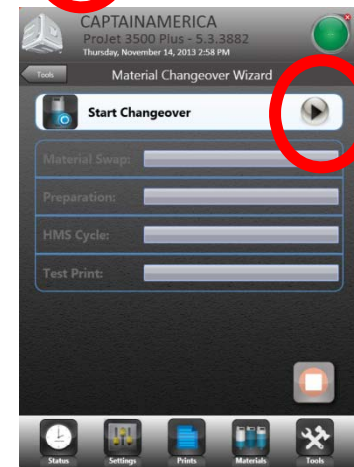
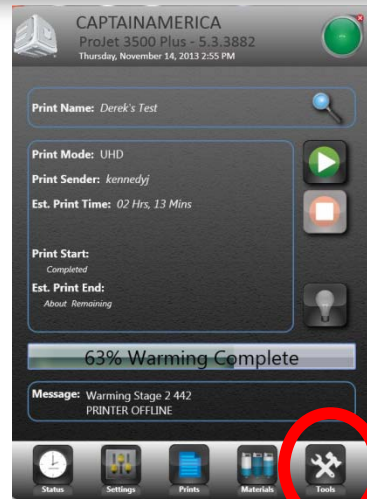


Material Changeover from M3 Black

STEP 14:

On the **ProJet®** operator panel, Select:
Tools → Material Changeover Wizard

- Select the Start Button to begin the Changeover Wizard.
- Follow the ProJet® prompts to prepare the changeover wizard.
- When prompted, EMPTY the WASTE DRAWER.
- The ProJet® will begin the Changeover Wizard when the material has fully melted.
- It may take up to 2 hours for the material to fully melt.



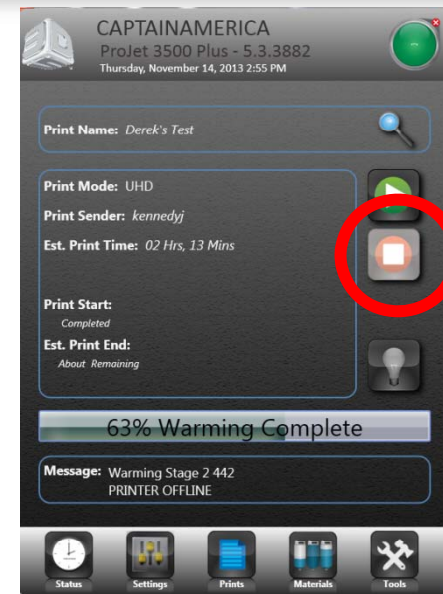
Follow all local guidelines when handling waste drawer material.

Material Changeover from M3 Black

STEP 15:

Allow the Changeover Wizard to run for **1 hour and 30 minutes** then **ABORT** the Wizard.

- After running the Changeover Wizard for 1 hour and 30 minutes, Select the RED or the ABORT Button on the operator panel.
- This will allow the Changeover Wizard to complete approximately 20 cycles or one half of a typical changeover.
- The ProJet® will then shortly complete the required maintenance with the EZ Flush material in Material Bottle Cubby Slot #2.



User Intervention is required to ABORT the Changeover Wizard while using EZ Flush.
User must manually abort the process after 1 hour and 30 minutes or a minimum of 20 cycles.
Do not allow the Changeover to run to completion (40 cycles).

Material Changeover from M3 Black

STEP 16:

Install new material type into ProJet® MDM drawer, Part Material Side, Slot #2 (right most position).

- Close MDM drawer.
- The ProJet® may take up to 15 minutes to recognize the new bottle.



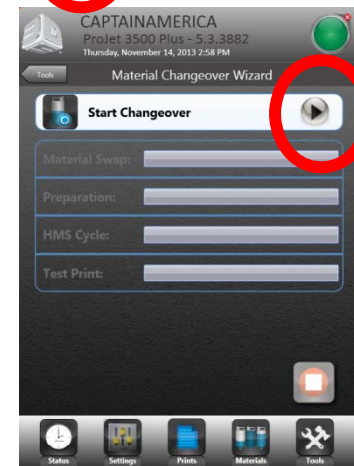
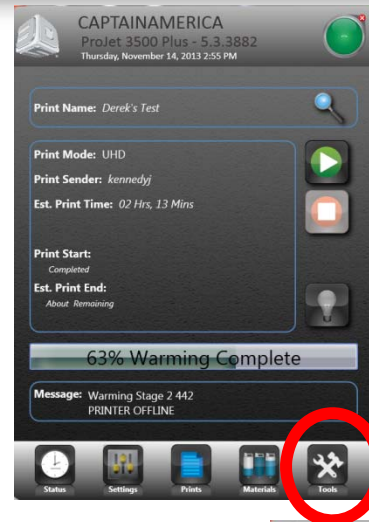
Material Changeover from M3 Black

STEP 17:

On the ProJet® operator panel, Select: **Tools**
→ **Material Changeover Wizard**

- Select the Start Button to begin the Changeover Wizard.
- Follow the ProJet® prompts to prepare the changeover wizard.
- When prompted EMPTY the WASTE DRAWER.
- The ProJet® will begin the Changeover Wizard when the material has fully melted.
- It may take up to 2 hours for the material to fully melt.
- This Changeover Wizard will run for approx. 3 hours and 40 minutes.

Follow all local guidelines when handling waste drawer material.



Material Changeover from M3 Black

There will be a sample PART VERIFICATION test pattern on the platform when the changeover completes. The result should mostly resemble the new desired part material.

STEP 18:

Remove the Platform from the ProJet® when the Changeover Wizard completes.

- Clean the platform and discard the Part Verification Test blocks.

If material does not resemble the new desired material type it may be necessary to:

- Clean any standing or pooled material from the ProJet® MDM material bottle cubbies.
- Re-Run a Changeover Wizard cycle to completion.

Sample Part Verification Test

