Objet/Eden350V Troubleshooting Guide and More
Specialized Bicycle Components
Contributer(s): Diana Nelson (Engineering Intern)

Serial Numbers of machines

Eden350V S/N: 3716
Eden260V S/N: 32090
Balco Waterjet S/N: WJ855
Dimension FDM: P07908

Stratasys Technical Assistance

When technical assistance is needed, you must call the main Stratasys line at **800-801-6491** and follow the menu instructions. They will direct you to an engineer that will assist you. Do not contact the engineer directly; Stratasys has to open a ticket for the service first.

The engineers that come to Specialized when service is needed are Peter Padan and Rich Alves. Their contact information is below. In the case that the East coast office is closed and it is urgent, you may contact the engineers directly.

Peter Padan has an electric car that needs to be plugged in when he comes. He can plug his car in at one of the ports in the warehouse (near shipping). If you need an extension cord you can borrow one from the Facilities cage but make sure you put it back. Don't have him park in the first port directly across from shipping since that's where the delivery trucks pull up.

Peter Padan, CS Engineer

Phone: 339-234-8637 **Email**: Peter.Padan@stratasys.com

Rich Alves, CS Engineer

Phone: 978-487-5828 **Email:** Richard.Alves@stratasys.com

Sandy Baker, Supplies/Parts Sales

Phone: 800-801-6491 option 2 **Email:** Sandra.Baker@stratasys.com

Patricia Gelineau, Client Services Coordinator (Call Patty for technical assistance/service, she'll connect you to an engineer)

Phone: 800-801-6491 **Email**: Patricia.Gelineau@stratasys.com

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Submitting a Purchase Order

1. Navigate to Paceline, http://paceline.specialized.com/Pages/Default.aspx
2. From the "I need to…" dropdown menu on the left-hand side, select "Create/Edit Purchase Order"
3. In the "Enter PO Number" box…
   a. Enter **3688** for **VeroBlue Model Resin** (default quantity: 4 (3.6 kg) cartridges)
   b. Enter **3566** for **Support Resin** (default quantity: 8 (3.6 kg) cartridges)
   c. Enter **4916** for **RGD525 High Temp Model Resin**
   d. Enter **4925** for **VeroClear Transparent Model Resin**
   e. Enter **5293** for **replacement print head**
4. Edit the form with your name and phone number as the Requestor and save the changes you make for future POs. All other information is already input for you.
5. Click "Copy to new" in the upper right-hand corner just avoid confusion of multiple POs with the same PO number.
6. When you are ready to submit, click "Submit PO for Approval" in the top right side of the screen.
7. Wait for an email from purchase_orders@specialized.com saying that your PO has been approved by Mark Schroeder. Once approved, either click on the *view/Print PO link* from the email or navigate in Paceline to the main PO screen. Click "My Purchase Orders" and search for the PO you just made. Open the recently approved PO and click the "Actions" dropdown menu in the top, left corner. Select "Export -> PDF."
8. Save/label the PDF and send it as an attachment to supportus@stratasys.com
9. You'll get an email from shipping when your package has arrived.
10. Lastly, Accounts Payable will send you an invoice to approve. Wait until you receive the package to approve the invoice.

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Common 3D Printer Common Glitches

Situation: Open Eden350v software, error box pops up, "????" displayed on the material weight counters

> **Solution:** Close the program, shut down computer, turn off 3D printer from the switch on the back of the machine. Wait 20-30 seconds. Turn switch back on and it switches the computer on. Open the Eden software. Press "Scroll Lock, Scroll Lock, Enter" to switch to the other computer. Build the tray. Switch back to Eden computer. Press red circle to start the print job.

Situation: You have both model and/or resin cartridges inserted (one cartridge almost empty and the other one full). During the print job, the almost empty cartridge runs out but the weight does not read "zero" on the Eden software. The print job encountered an error in the middle of the job and did not finish. Insert screenshot of error

> **Solution:** Load cells need to be re-calibrated. Navigate to Options->Wizards->Load Cell Calibration. The Wizard will take you through the necessary steps. See Load Cell Calibration tips in this document for further clarification. Remove empty cartridge and start the print job over with only a full cartridge inserted. You can try to resume the print job but there will likely be an inconsistency that appears on the printed part from where the job stopped and started again.

Situation: Flaky surfaces on printed parts. Example images shown below:

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Solution: Roller Knife needs to be replaced. See the following links for instructions on replacing:

\\Nas\shared_epic\Engineering\Reference Docs\EDEN350V\DOC-08633_Rev-B Roller Knife.pdf

Roller Bath Clean Up Instructions: (link doesn't work but you can navigate here from the G Drive)

\\Nas\shared_epic\Engineering\Reference Docs\EDEN350V\Tech Note # 180-0105A-05 Customer info - Roller Bath Cleanup.pdf

Situation: Lost communication with OHDB

Solution: First try to exit Eden software and wiggle around the cable circled in the photo below. Try disconnecting and plugging it back in. Restart Eden software and see if the errors still show up. If this doesn't fix the problem then call Objet.
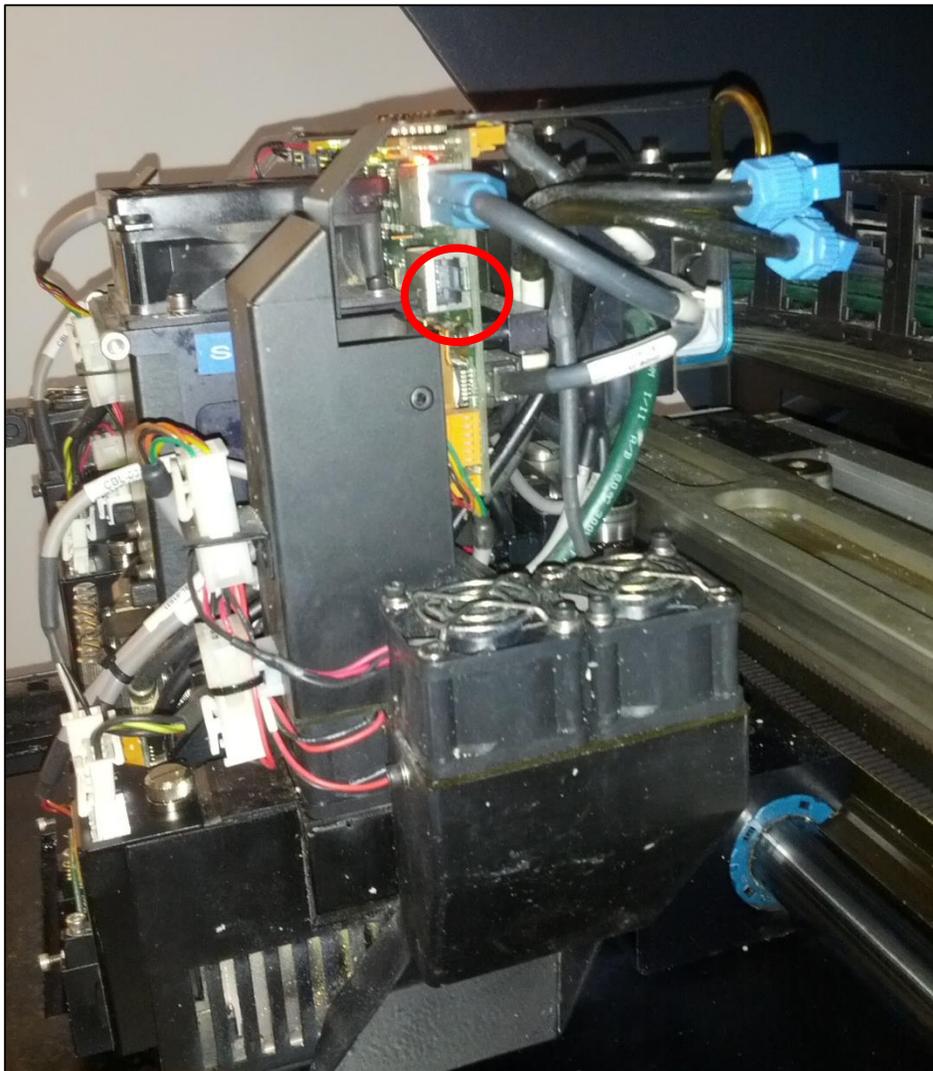
Objet/Eden350V Troubleshooting Guide and More
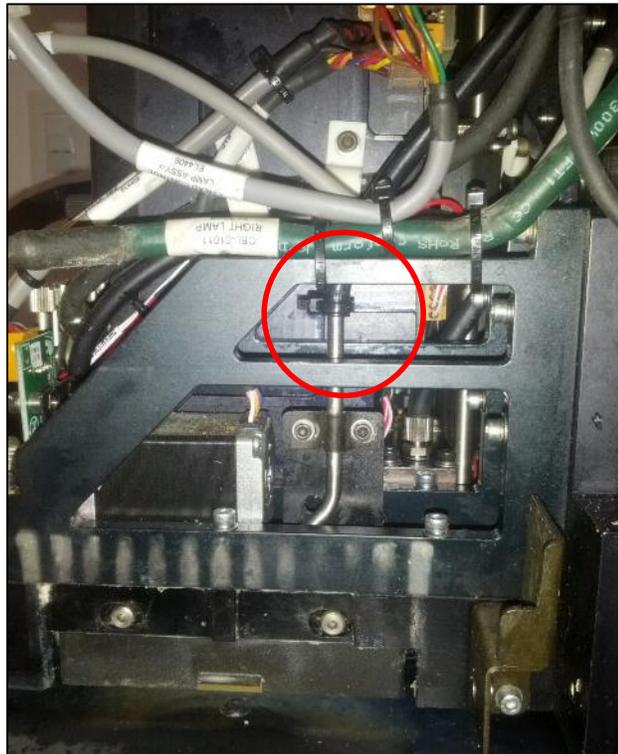## Specialized Bicycle Components
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Situation: A sloppy mess on the tray. Roller waste bath overflowing.
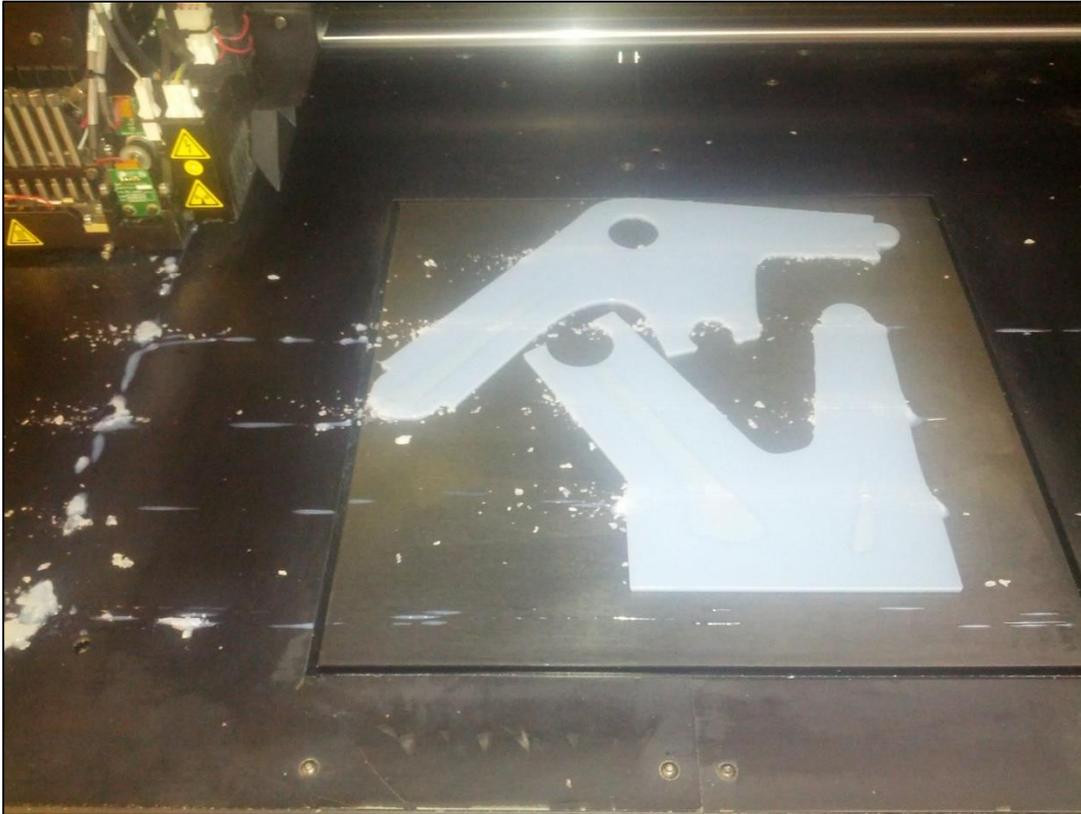
Solution: Take off the right UV lamp assembly. Clean out roller bath which is probably full of waste resin gunk. First check and make sure the black tube is attached to the metal tube that sucks up waste material. (SEE PHOTO TO THE RIGHT) It's easy to pull the metal tube out of the black tube when cleaning the roller waste bath.

If the black tube is attached then this means that the waste pump tubing is clogged.

Objet/Eden350V Troubleshooting Guide and More
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Situation: Parts look like melting wax

Solution: This means that the Z-axis of the tray was too low when the parts were being printed. Resin was basically spraying out of the heads and not printing precisely since the heads were too far away from the tray. To ensure this doesn't happen you'll have to watch the printer at the start and make sure the tray is in the proper position when it starts printing. To help avoid this, before starting a job navigate to Options->Go to tray upper position. Restart Eden software if needed and restart the job.

Be sure to thoroughly clean the tray, heads, and UV lamps after this happens. Resin will spray onto the UV lamps glass and cure. This will affect the calibration of the UV lamps and could lead to more errors. If it looks and feels like there is brownish dried stuff on the surface of the glass then you will need to remove the UV lamp assemblies, take the glass plates off and scrub them with an **ultrafine s**anding pad until all of the dried residue is removed. It takes some time to sand it all off so don't give up too soon. Don't use any rougher sanding paper than ultrafine or you'll scratch the glass.

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Receiving Parts from Engineers and Designers

1. From Outlook, right click attachments and select "Save all Attachments" if there are more than one attachment. Save the files to G:\Engineering_YourName\RP Requests\Date\Requestor'sName
2. Navigate to the Collab Z drive Rapid Prototype Requests page to save the files to the server http://collab.specialized.com/rprequest/default.aspx?RootFolder=%2Frprequest%2FShared%20 Documents%2FPending&FolderCTID=0x012000EA1160EF27CB7C48B6FCC4CD6B487F22&View={ 8BD1CBB6-2DED-4764-9081-2319E15BC700}
   a. From Collab, click "Add document" at the bottom of the page.
   b. Upload the .stl files by browsing for them individually. Click "OK", then press "Save" on the next page that pops up. You will have to go through this procedure for each individual file.
   c. From the 3D printer computer, open the Objet software to place parts on the tray.
   d.
   e. You can also use a USB Drive to transfer files from your computer to the 3D printer computer.

Cleaning Tips

1. Always clean the wiper blades BEFORE cleaning the print heads. During the Head Cleaning Wizard, the heads are wiped by the wiper blades after cleaning so it's important that the wiper blades are cleaned first. Use the Wiper Blade Cleaning Wizard.
2. Print Heads – use a clean room cloth with alcohol. Use a new cloth each time you clean the print heads because any debri/particles on old cloths can damage the print heads. Start with cloth in the middle of the print heads and wipe towards the outside edges. DO NOT rub back and forth. The red arrows in the diagram below demonstrate which direction to wipe the print heads. Use as light of pressure as possible while still removing all residues left by the resin. Use a wooden coffee stirrer to remove resin gunk from between the print heads (example shown below).
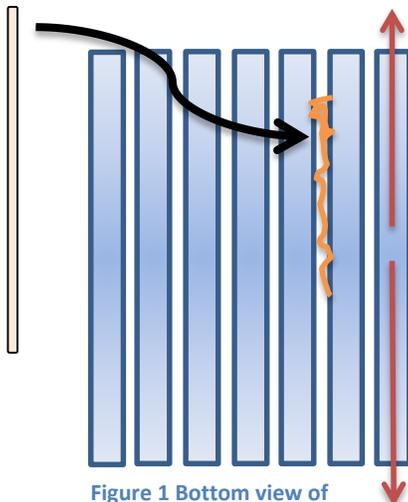

Figure 1 Bottom view of Print Heads