**Mini-Jector**(**Model: #55.1) Disassembling and Assembling :Instructions**

**Location of Machine:** Composites Lab, RFM 1218

**Location of SOP and Machine Operating & Safety Manual:** Composites Lab website under resources;Composites Lab TRACS site; and Hardcopy near machine.

**Emergency Contact:**

* Call 911
* Call EHS & Risk Management at 512-245-3616
* Call Head Lab Technician, Dr. Ray Cook (office 512-245-2050)
* Call Dr. Jitendra S Tate (office 512-245-4872)

**Before Disassembling this machine:**

* You must have permission from Dr. Tate.
* You must have received formal training from technician or, trained research student (designated by Dr. Tate) related to machine safety and operation.
* You must read and understand **SOP and Machine Operating & Manual.**
* You must use this machine under direct supervision of Dr. Tate or, Dr. Cook or, trained research student (designated by Dr. Tate).
* You must have signed “Lab Rules” document with Dr. Tate. This document must be signed every semester fall, spring, and summer (as applicable).
* If you do NOT follow above instructions you will be held responsible for your own safety and damages.

**Safety Precautions:**

Protective Equipment: Prior to performing this procedure, the following personal protective equipment must be obtained and ready for use: **Safety Goggles, insulated gloves, and lab coat**

**Important Safeguards:**

1. Always wear safety glasses and insulated gloves for dismantling process.
2. Always make sure that machine is properly purged before dismantling.
3. Never reach into the machine when the machine is going through its cycle or at any time other than when loading or unloading the ‘V’ mold.
4. Make sure the machine is securely bolted to its table or workbench before dismantling.
5. Always shut off power the power to the machine when performing maintenance task.
6. Never purge the machine without using the purging fixture supplied with machine.
7. Always make sure that machine is in cold state before dismantling..
8. Always make sure that water supply is turn off and all the power supply is switched off.

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| **Mini-Jector Disassembling :Instructions** | |
| 1. Unscrew and take out the hopper. | C:\Users\p_k33\Desktop\Hopper.jpg |
| 1. Remove the cables and have them numbered with the sockets. | C:\Users\p_k33\Desktop\minijector\cables.jpg |
| 1. Unscrew the hopper holder with the use of Allen key. | C:\Users\p_k33\Desktop\minijector\20150601_155816_resized.jpg |
| 1. Take out the front casing by unscrewing it with allen key and screw driver. | C:\Users\p_k33\Desktop\minijector\20150601_155918_resized.jpg |

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| 5. Take out the front end bolt with the help of allen key by unscrewing it.  For information : This is the bolt which holds the screw and gives support for the movement | C:\Users\p_k33\Desktop\minijector\20150601_155947_resizedg.jpg |
| 1. Unscrew the barrel holding nut with the help of Wrench. | C:\Users\p_k33\Desktop\minijector\20150601_155947_resizedbdfb.jpg C:\Users\p_k33\Desktop\minijector\20150601_155947_resizeddfb.jpg |
| 1. Take out the barrel carefully from the from the mini jector machine | 1. C:\Users\p_k33\Desktop\minijector\20150423_153757_resized.jpg |
| 1. Put the barrel on a table and unscrew the clamps with the screw driver.   (Take out the heater wrapped to the nozzle as well by unscrewing) | C:\Users\p_k33\Desktop\minijector\20150423_153757_resized1.jpg C:\Users\p_k33\Desktop\minijector\20150423_155747_resized.jpg |
| 1. Put the barrel in a vice and unscrew the nozzle . Take it out. | C:\Users\p_k33\Desktop\minijector\20150423_153802_resized.jpg C:\Users\p_k33\Desktop\minijector\20150423_153820_resized.jpg |
| 1. Hook up the Screw from the other end with means of any iron rod and pull it out of the barrel.   Note : Before this step it is advised to heat the barrel upto 500 degree c, it makes convenient to take out the screw as it is hot. | C:\Users\p_k33\Desktop\minijector\20150428_143819_resized.jpg C:\Users\p_k33\Desktop\minijector\20150427_163408_resized.jpg |
| 1. Remove the screw tip by unscrewing it out of screw. | C:\Users\p_k33\Desktop\minijector\20150428_143819_resizedg.jpg |
| 1. Clean thoroughly the barrel, screw, screw tip, Barrel body outside and inside .   Note : It is advised to heat all the parts upto 500 degree c in order to clean them properly. | C:\Users\p_k33\Desktop\minijector\20150428_143819_resized.jpg |

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| **Mini-Jector Assembling :Instructions** | |
| 1. Clean thoroughly the barrel, screw, screw tip, Barrel body outside and inside .  Note : It is advised to heat all the parts upto 500 degree c in order to clean them properly. |  |
| 1. Screw up the screw tip to the screw after proper cleaning of screw tip. Make sure it doesn’t have any particle stuck in it. | C:\Users\p_k33\Desktop\minijector\20150428_143819_resizedg.jpg |
| 1. Slide the screw inside the barrel make sure it pass through without any obstruction in the path. | C:\Users\p_k33\Desktop\minijector\20150428_143819_resized.jpg C:\Users\p_k33\Desktop\minijector\20150427_163408_resized.jpg |
| 1. Screw up the nozzle in the barrel make sure it is firmly tightened.   (Note: Apply molycote or thread lubricant to the thread for better sealing) | C:\Users\p_k33\Desktop\minijector\20150423_153802_resized.jpg C:\Users\p_k33\Desktop\minijector\20150423_153820_resized.jpg |

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| 1. Put the barrel on a table and put the heaters on it and tighten the clamps with the screw driver.   (Make sure both the heaters are properly align to top and bottom) | C:\Users\p_k33\Desktop\minijector\20150423_153757_resized1.jpg C:\Users\p_k33\Desktop\minijector\20150423_155747_resized.jpg |
| 1. Place the barrel in the mini jector machine, it needs to be holded on the same position until it is tightened .   ( It needs to be done with care as barrel with the screw may seems heavy while holding at same position) | 1. C:\Users\p_k33\Desktop\minijector\20150423_153757_resized.jpg |
| 1. Tighten the barrel holding nut while holding barrel in the same position. | C:\Users\p_k33\Desktop\minijector\20150601_155947_resizedbdfb.jpg C:\Users\p_k33\Desktop\minijector\20150601_155947_resizeddfb.jpg |

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| 1. Tighten the screw holding bolt with the allen key , make sure it is tightened completely as it hold the screw and is responsible for the movement of screw inside barrel. | C:\Users\p_k33\Desktop\minijector\20150601_155947_resizedg.jpg |

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| 1. Screw in the bolt of casing after putting the casing in place with the help of Allen key and screw driver . | C:\Users\p_k33\Desktop\minijector\20150601_155918_resized.jpg |
| 1. Screw up the hopper holder with the help of Allen key. | C:\Users\p_k33\Desktop\minijector\20150601_155816_resized.jpg |
| 1. Plug in the heater cables to the socket as numbered before. | C:\Users\p_k33\Desktop\minijector\cables.jpg |
| 1. screw up the hopper. | C:\Users\p_k33\Desktop\Hopper.jpg |