

Tips:

SOFTWARE:

If too much reactivity is introduced into the system, the user will be given a warning. Eventually, if this is allowed to continue, the simulation will halt as the real world reactor would have broken and need to be repaired and restarted.

To restart the system, click the value reset button and then start the reactor again. If this fails, redeploy Node Red. If that should fail, restarting the Raspberry Pi has been found to correct any remaining errors.

For redeploying without making any actual changes to the simulation, move one of the nodes one click over from its current position in the editor. The editor will accept this as a change and allow redeployment.



Note the difference in alignment of the two nodes above.

IMPORTANT:

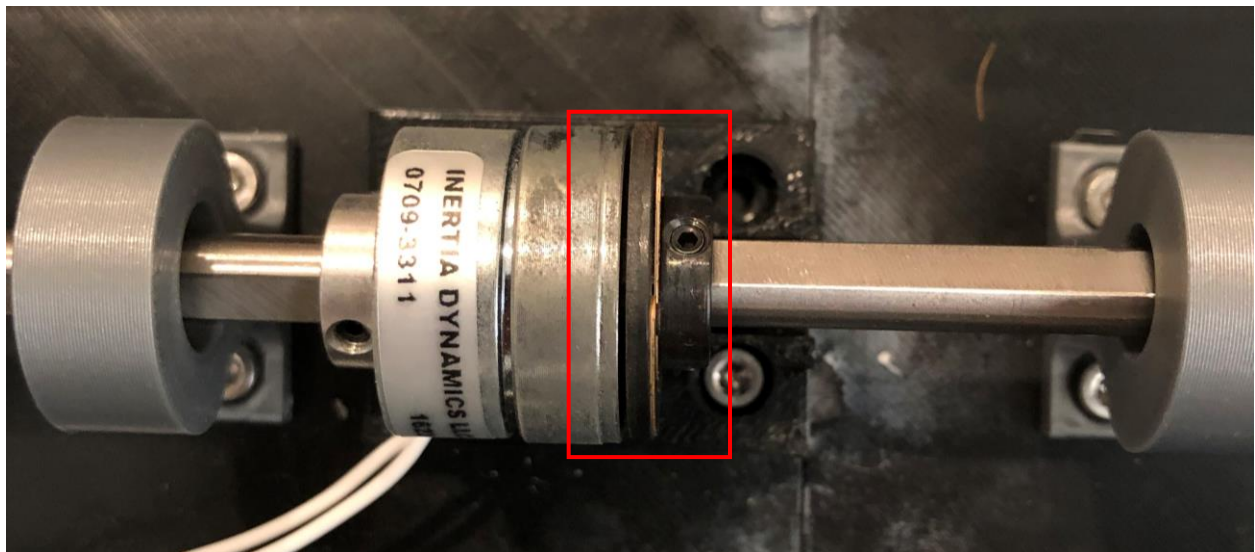
When the reactor SCRAM is activated, the reactor must be restarted to run again (the REACTOR START button must be clicked).

If the original model is being used without being set up from scratch based on the instructions in this repository, then load the node red JSON file ended with _ORIGINAL. This file uses the original paths instead of those used in the version made for easier distribution.

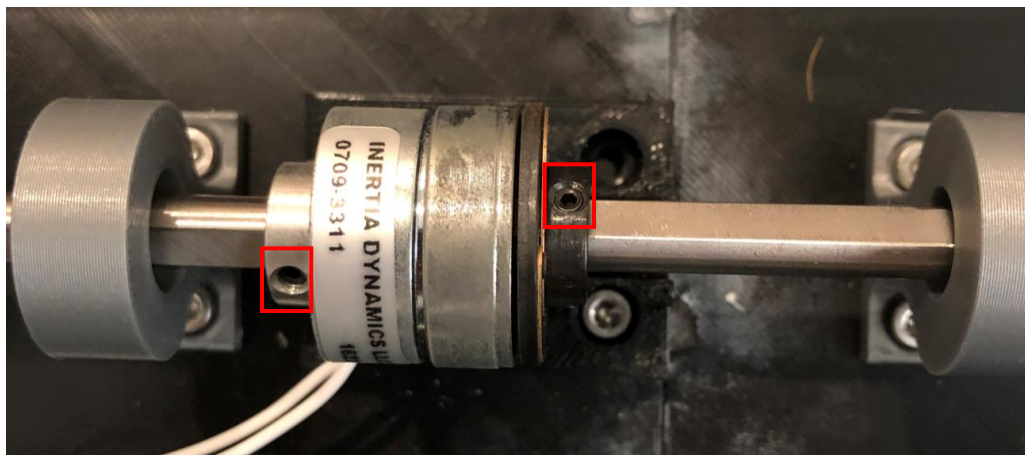
HARDWARE:

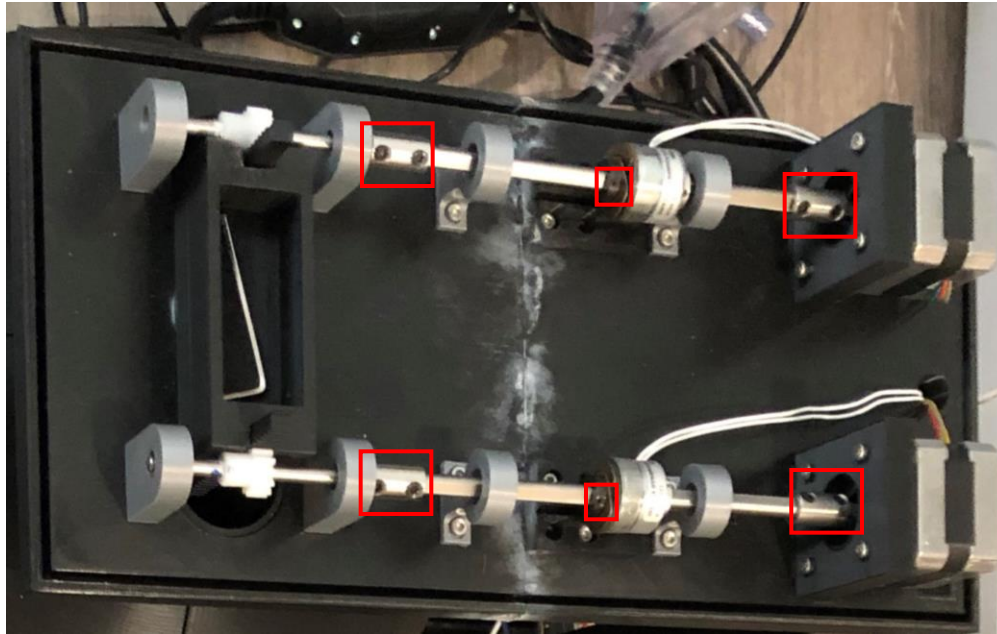
If the LED strip flashes when the clutches or pumps are activated or deactivated, this is normal. It is due to transients from the mechanical relays. Steps have been taken to prevent damaging transients, but some noticeable transients are still present.

Should the clutches not engage, it is likely their position needs to be readjusted. The pads should be as close to the clutch as possible without touching. This way when the magnet is activated they will be pulled in. A picture of a functional spacing is shown below. The main body of the clutch is to the left and the clutch pad is to the right. The spacing between the two is highlighted in red.



If the clutches are engaged but the control rods are not lifting, this may mean one of the set screws has come loose. Tighten all the set screws on the clutches and couplers.





If the control rods will not drop when released, make sure the model is on a level surface. Adjusting the angle of the RPV may allow for a better drop.