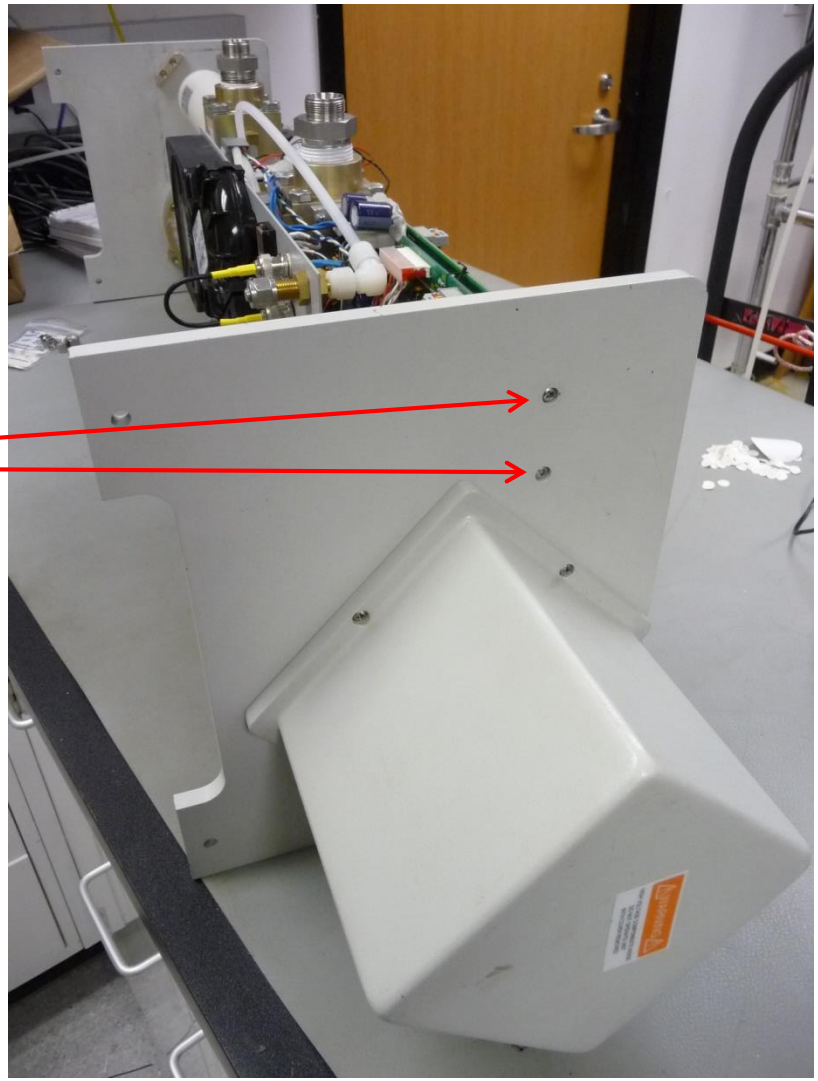
Removal of TSI Neph chopper motor assembly (1)

The neph can be either in the horizontal or vertical position.

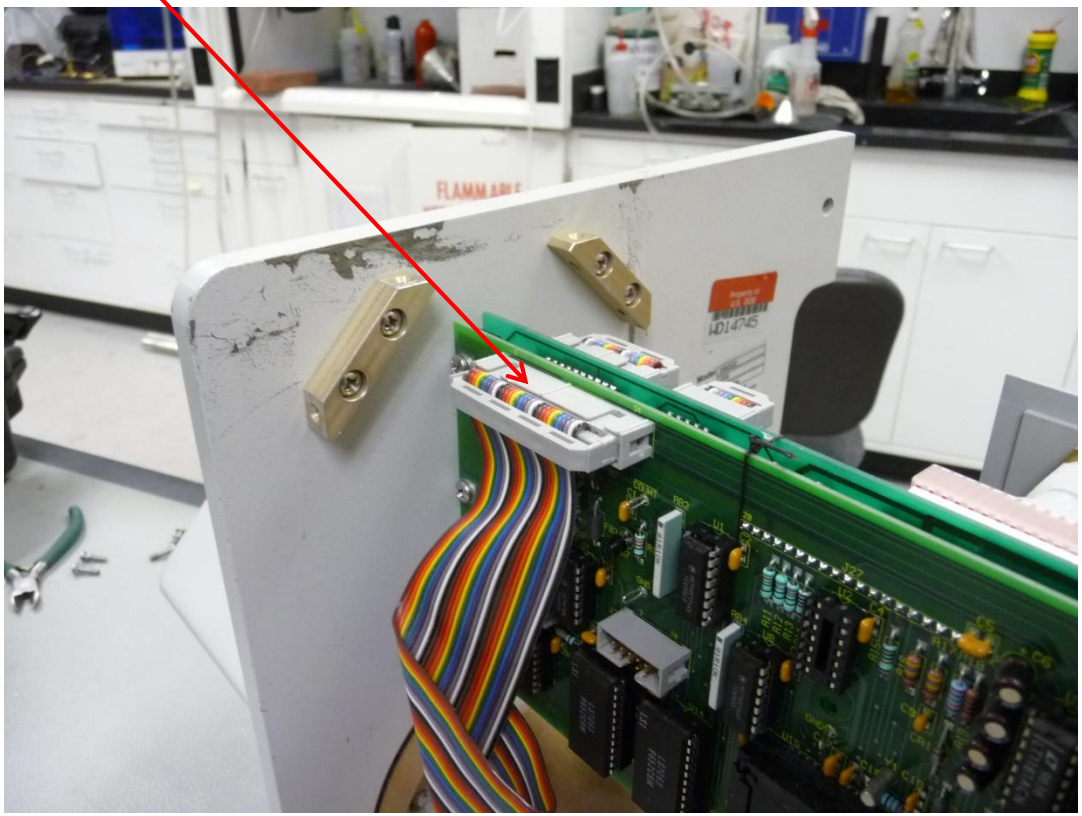
Start by removing these two (2) screws.

This will release the end plate from the circuit board assembly.



Removal of TSI Neph chopper motor assembly (2)

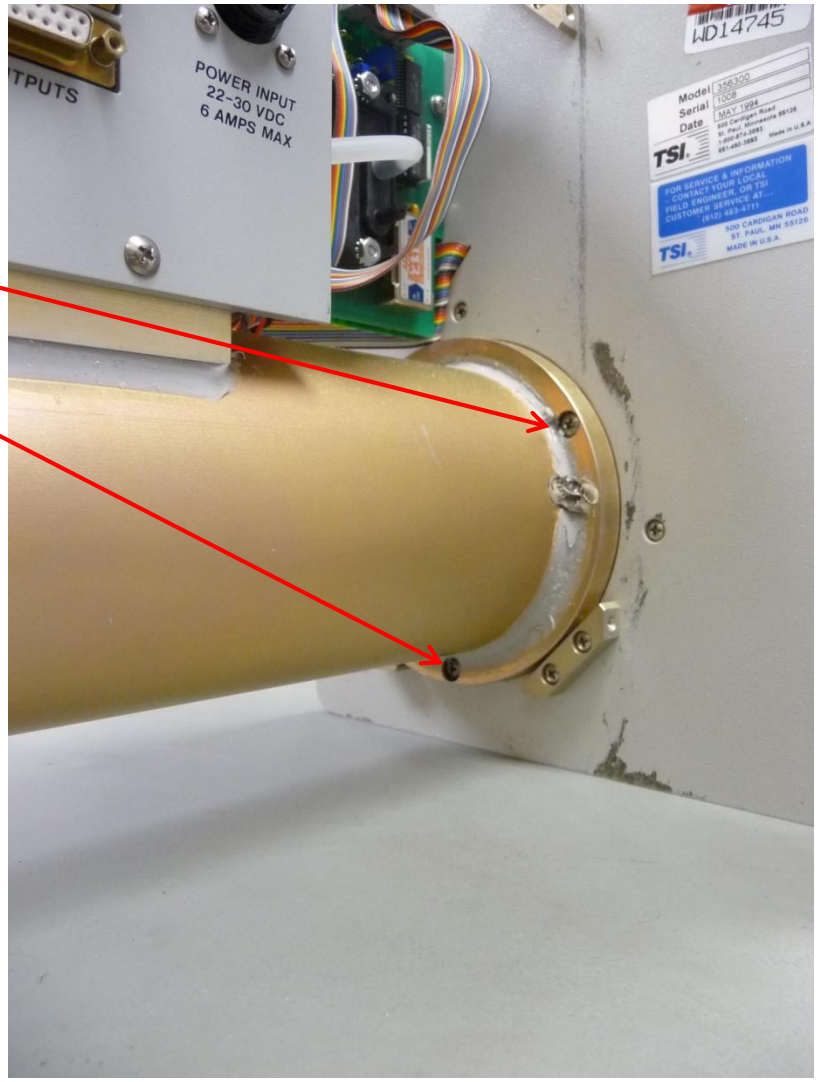
Next, unplug this connector.



Removal of TSI Neph chopper motor assembly (3)

Next, remove these three (3) screws that hold the end plate to the neph body (only 2 of the screws are shown in this photo).

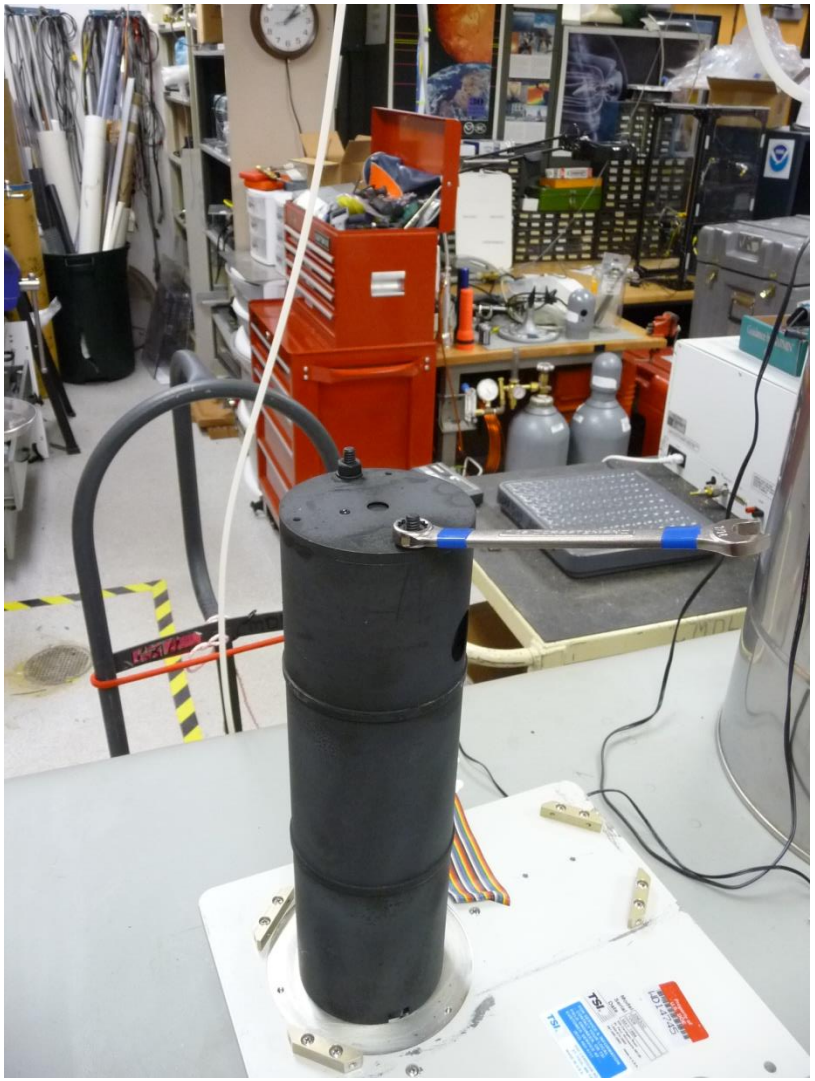
After these screws are removed you can pull the optics assembly from the neph.



Removal of TSI Neph chopper motor assembly (4)

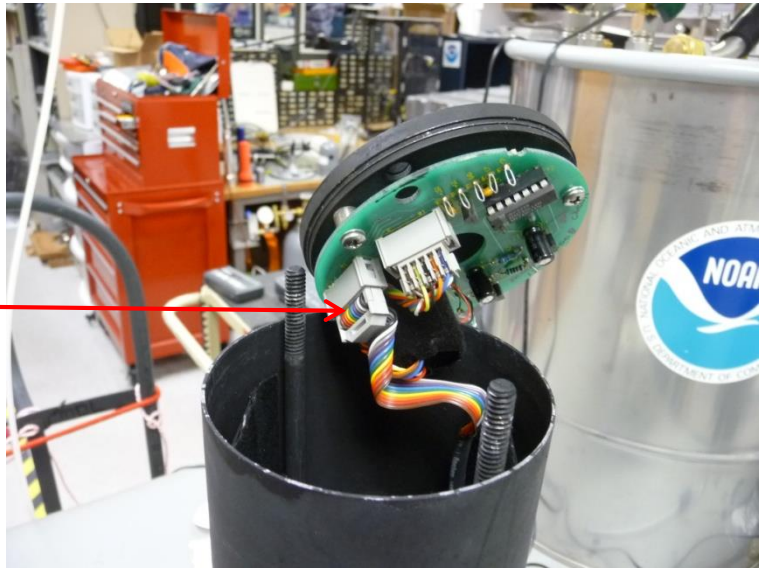
Set the optics assembly vertically on a table or work bench. Remove the two (2) nuts using a 7/16” wrench.

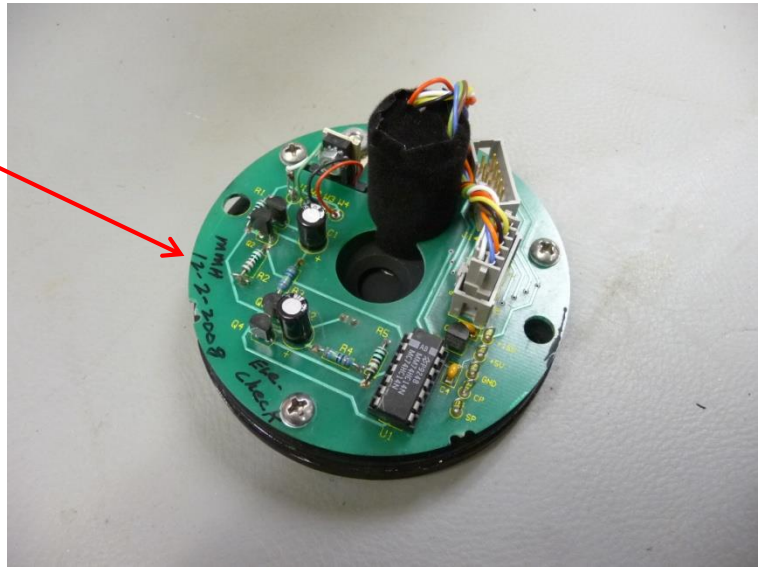
The chopper motor assembly is at the top of this column. You may be able to see the chopper blade inside the round hole in the center of the plate.



Removal of TSI Neph chopper motor assembly (5)

- Lift up the chopper motor assembly and remove this connector.
- This is the chopper motor assembly.
- To open, remove the three small screws that hold the circuit board to the plate.
- After opening this assembly, you can access the chopper blade to clean it. Do not remove it from its shaft unless necessary for other reasons.





Nephelometer chopper blade (this is inside the chopper motor assembly)

The calibrator is the shiny silver part (upper right in this photo). It is supposed to be a 'fixed brightness object' for calibrating the PMTs. If the neph has become extremely dirty, it will have a different brightness than before and the calibration will be off. If so you may have to clean this section of the blade. You can do this by using alcohol and a clean wiping cloth, applying very light pressure so as not to scratch the surface. When dry you can re-insert the chopper blade back into the chopper motor assembly, and re-install this into the optics column. Finally, re-assemble the neph and perform several zero measurements (until they are stable) and then perform a span check. The new constants you get from this span check should then be transferred to the nephelometer as they are now the proper ones.