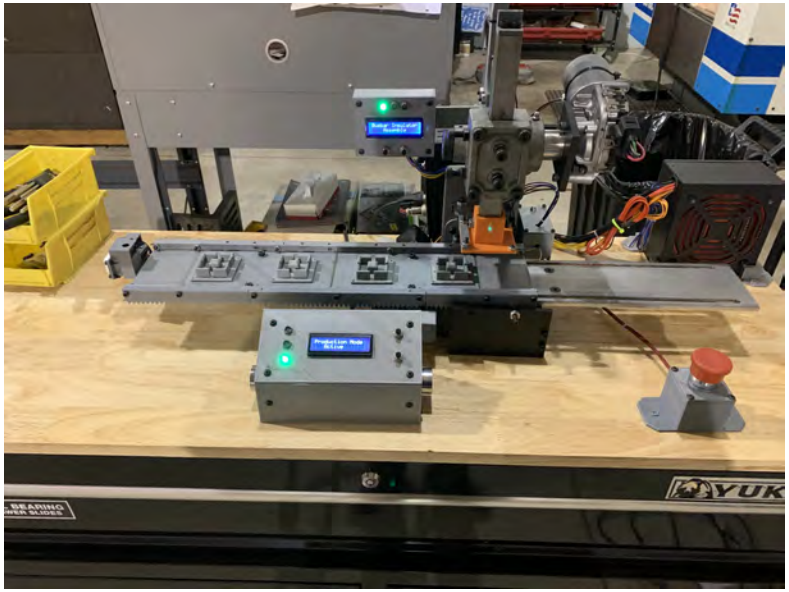
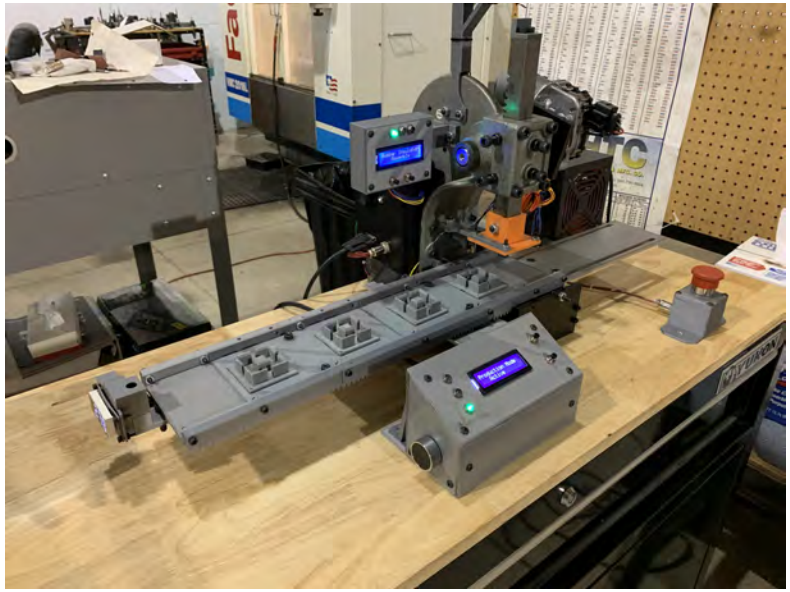
Figure 1: Overview of the Automated Busbar Insulator Assembly.



(a) Front view displaying the complete system.

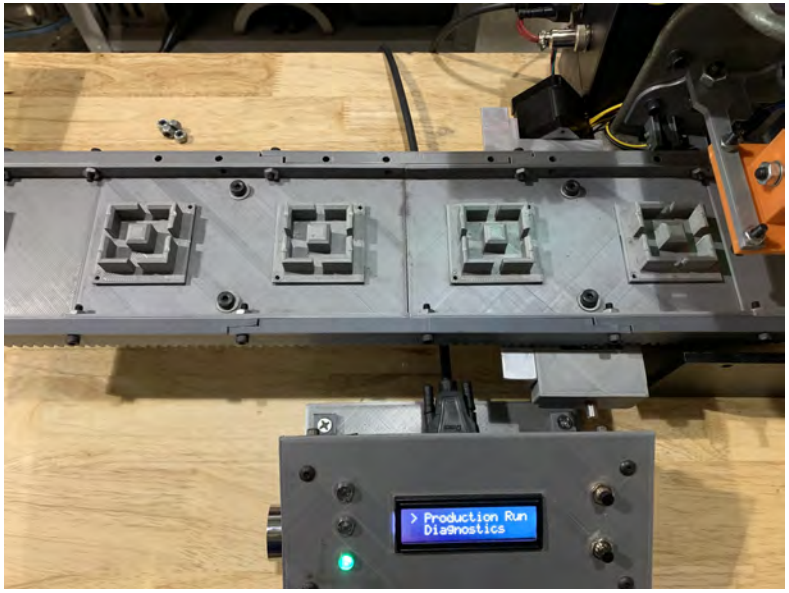


(b) Isometric View

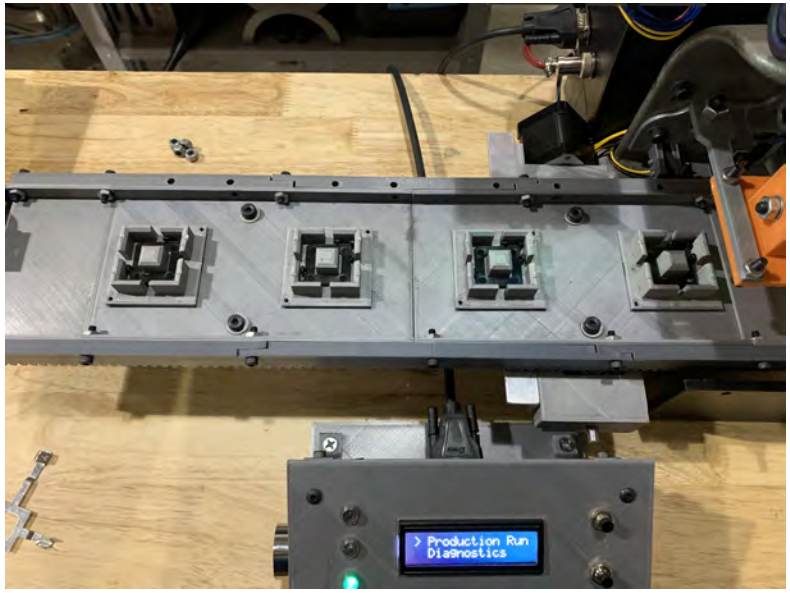
(c) Back view displaying the main electronics enclosure.

(d) Alternate back view showing the motor control and laser control module enclosures.

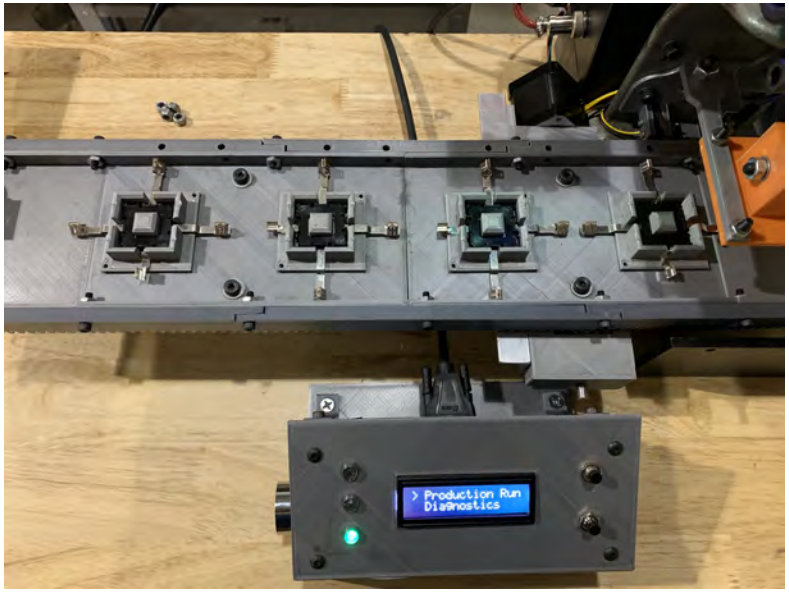
Figure 2: Overview of loading parts into the Automated Busbar Insulator Assembly.



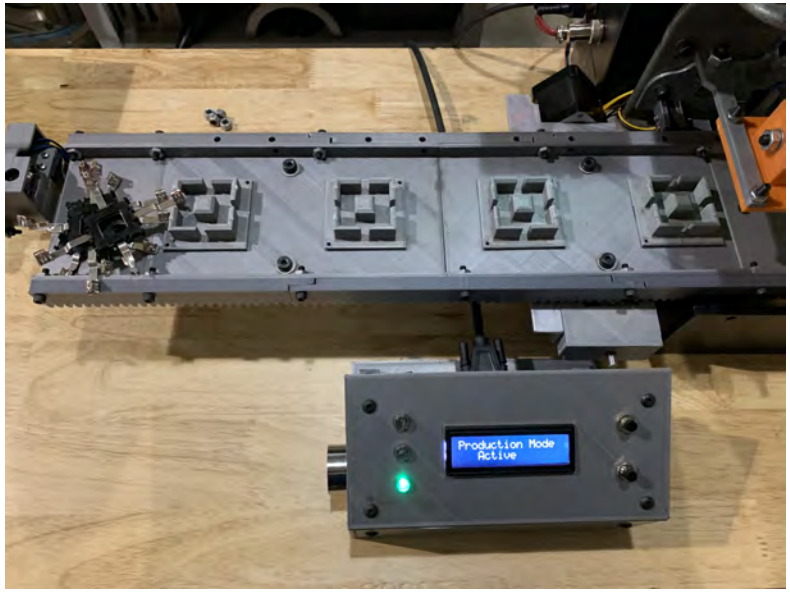
(a) A view of the four empty part nests.



(b) Plastic covers are then placed with tabs facing up.



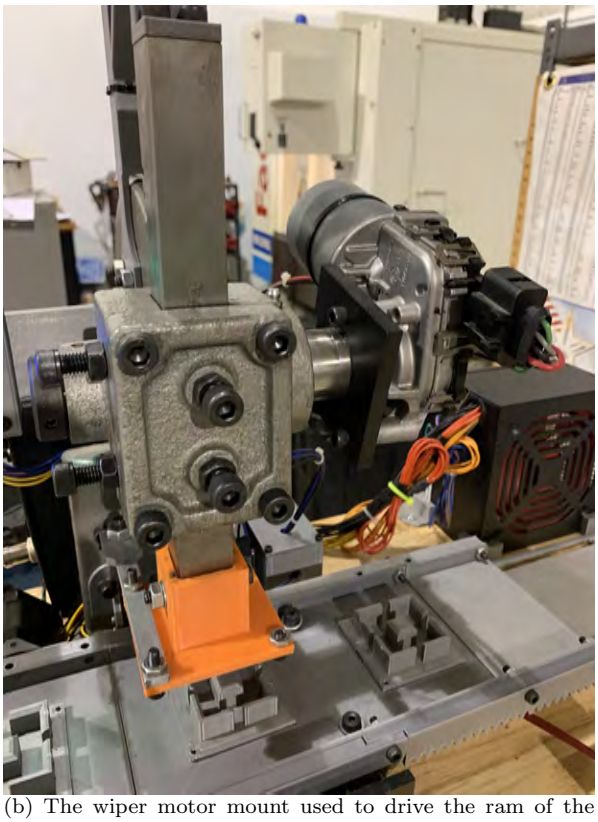
(c) Metal busbars are placed on top of the plastics and then another plastic cover is placed on top with the tabs facing down.



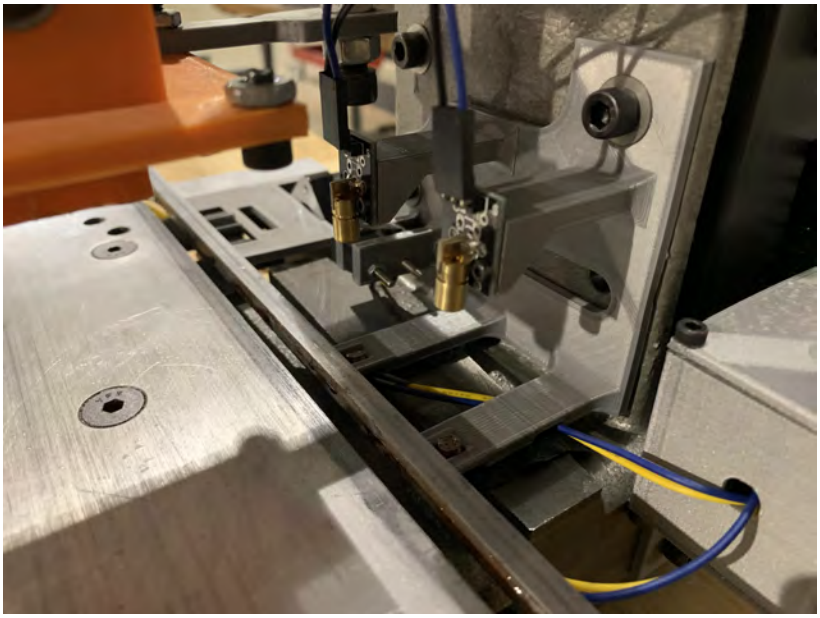
(d) The assembly snaps the plastics together, locking the metal busbar.

Figure 3: Overview of a few subsystems on the Automated Busbar Insulator Assembly.

(a) Stepper motor mount used to move the track.



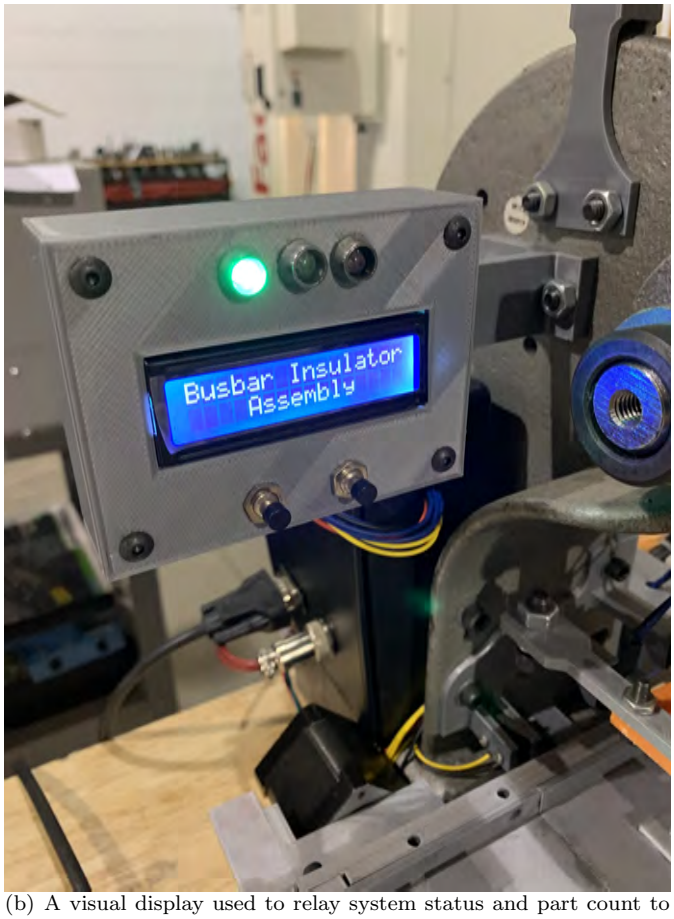
(b) The wiper motor mount used to drive the ram of the modified arbor press.



(c) The positioning system used to provide proper locating of the nests containing the plastic cover and stamped metal busbar through the use of light dependent resistors and laser modules.

Figure 4: Overview the displays on the Automated Busbar Insulator Assembly.

(a) The main menu of the user interface used to control the assembly with a total of four options (two pictured).



(b) A visual display used to relay system status and part count to the operator.