

**Project Title: Redesign the Part Eject System of Robert Bosch LLC End Line
Performance Testers**

Sponsor: Robert Bosch LLC

The project that we would like to propose is to redesign the part eject system of our end of line performance testers. Our end of line performance testers are designed to run a wide range of engine cooling fan assembly types and sizes but we are experiencing an undesirable amount of technical downtime due to improper changeovers and part breakage related to the current design of our eject systems. The design concept will consist of pneumatic lift cylinders, pneumatic or electronic positioning locks, electronic stepper motors and encoders to ensure proper setup. The system will require a lot of design work including 3D animated proposals along with knowledge of how to integrate new features such as the positioning encoders and locks with our current machine controls (Allen Bradley Compactlogix PLC).

The budget for this project is \$10,000.