

# Attex 6x6 Racer

## Project:

To build a 6x6 racer to compete in the 2024 New East Extreme Dirt Track Series for Ryan and Cliff Nelson..

## Expectations:

Students will assess a current 6x6 machine and find out what will be needed to build a racer.

Students will:

- Tear down the machine
- Inventory parts that can be reused
  - Bag and label parts and keep an inventory of them
- Inventory parts that will need to be replaced
  - Bag and label parts to keep to compare with new parts to ensure that they will fit
- Order new parts
  - Look up new parts
  - Order new parts
  - Reconcile shipping receipt with new parts
- Clean and Paint parts that will be reused
  - Includes glass beading
- Clean and repair the body as needed (may include polishing)
- Assemble machine
- Test run engine and machine
  - Ultimately take a field trip to Pine Lake Race Track to test run the new racer.
- Fabricate new parts if/when necessary by collaborating with some of the other programs within the school such as Welding, and Precision Engineering.

## **Major Components:**

### **Cuyuna 440 2-Stroke Engine**

- Dissassembly
- Inspect for wear
- Order new parts
  - This also includes interacting with the machine shop
- Engine assembly
  - Piston Rings
  - Cylinders
  - Heads
  - Set timing
  - Test run

### **T-20 Transmission**

- Dissassembly
- Inspect for wear
- Order new parts
  - Seals
  - O-Rings
  - Send bands out for relining
- Reassembly
- Test

### **Roll Cage Fabrication**

- Partner with Welding
- Partner with Precision Manufacturing

### **Axle Fabrication**

- Partner with Precision Manufacturing

### **Bead Lock Rings and Hubs**

- Partner with Precision Manufacturing