

### EAS4710 - Group 5 - Spring 2021

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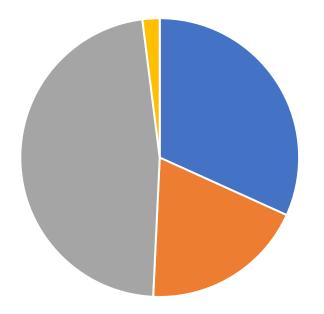
### Performance

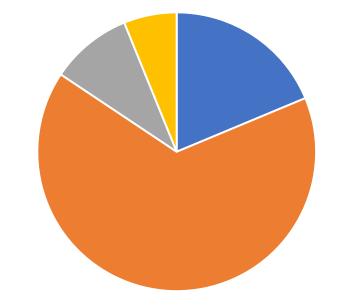
- Maximum Range (Internal Fuel Supply): 748 [nmi]
- Maximum Range (With External Fuel Tanks): 1447 [nmi]
- Maximum Loiter Time: 5.21 [hr]
- Service Ceiling: 35,000 [ft]
- Maximum speed: 370 [mph]
- Cruise speed: 320 [mph]
- Stall speed: 92 [mph]
- Runway Takeoff Distance: 1,740 [ft]
- Runway Landing Distance: 3,424 [ft]
- Aircraft Weight with Payload: 12,742 [lbs]
- Aircraft Empty Weight: 8,754 [lbs]

## **Cost Breakdown**

### Per Unit Cost: ~\$21.7M

- Raw Materials:  $\sim$  \$4M
- Quality Control: ~\$2M





Raw Materials Manufacturing Quality Control Engineering

## Per Year Operational Costs: ~\$1M

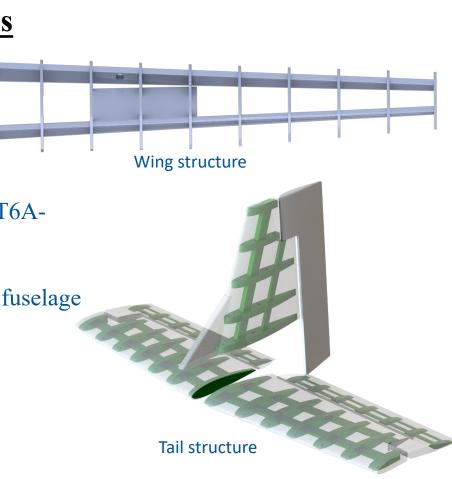
- Fuel: ~*\$318K*
- Crew: ~\$473K



## **Structures**

- Wing Airfoil
  - Root: NACA 63A415
  - Tip: NACA 63A212
- Fuselage: Semi-Monocoque
- Engine: Pratt & Whitney Canada PT6A-68B turboprop 1600 [hp]
- Materials
  - Aluminum: wings, ribs, spars, fuselage frame and stringers
  - Steel: landing gear
  - Titanium: engine housing

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## Features

- 5 External Hardpoints •
- Weapons (Customizable)
  - 2 AGM-65 bombs
  - 2 AIM-9L Sidewinder missiles
  - 2 FN Herstal M3P guns on the wings
  - GIAT M20A1 Heavy Cannon under Fuselage
- Room for 2 crew members (1 crew required) •
- Ability to complete lengthy ferry missions or stealth • bombing runs
- Deployable Flares and Chaff for deterring IR and RADAR Homing Systems
- Self-Sealing Fuel Bladders
- Additional 600 lb per wing; external fuel tank capabilities

# Why Choose the A-55 Vulture?

### Versatility

Whether you're conducting a long-range reconnaissance mission or a short-range support and attack operation, the A-55 Vulture will come through for you!

### Customization

This aircraft is capable of being kitted out with a variety of armaments and avionics, making it the definitive all-in-one light-attack vehicle.

### Affordability

Compared to similar light-attack aircraft, this aircraft costs less to produce per unit, as well as costing less to maintain during its lifespan.

### Safety

With its state-of-the-art combat countermeasures, built-in fire suppression systems and failsafe ejection seats, your pilots will live to fight another day!