

Arke-class Heavy Lifter Flight Profile

Atmospheric Autopilot and Trajectories mods are recommended for optimal flight. With heavier payloads, the NCS Adapters should be unlocked and filled.

Launch

- Deploy flaps and slats
- Rotate at 100m/s
- Be gentle on rotation or tail strikes will occur
- Set pitch to 30°
- Retract flaps and slats
- Climb to 5km
- Level off to 10° and cruise
- Activate aerospike when TWR drops below 1.0
- Switch to closed cycle once thrust trails off
- Pitch to 20°, hold until Ap is at ~80km, and cut throttle
- Circularize at Ap

Reentry & Landing

- De-orbit burn should put the landing marker just behind KSC
- Angle of Attack should be 50 degrees through re-entry
- With lighter payloads, use and abuse crossrange
- With heavier payloads, try to aim for 20 degree glideslope and conserve fuel
- Stall speed is 35m/s fully fuelled