

NG-23 Mission

Delivering Cargo to the International Space Station



Mission Parameters

Launch Vehicle:
Falcon 9 Rocket

Cargo Spacecraft:
Cygnus

Launch Site:
Space Launch Complex
40 (SLC-40)
Cape Canaveral Space Force
Station

Ascent Cargo Mass:
Up to 5,000 kg (11,000 lb.)

Descent Cargo Mass:
Up to 5,000 kg (11,000 lb.)

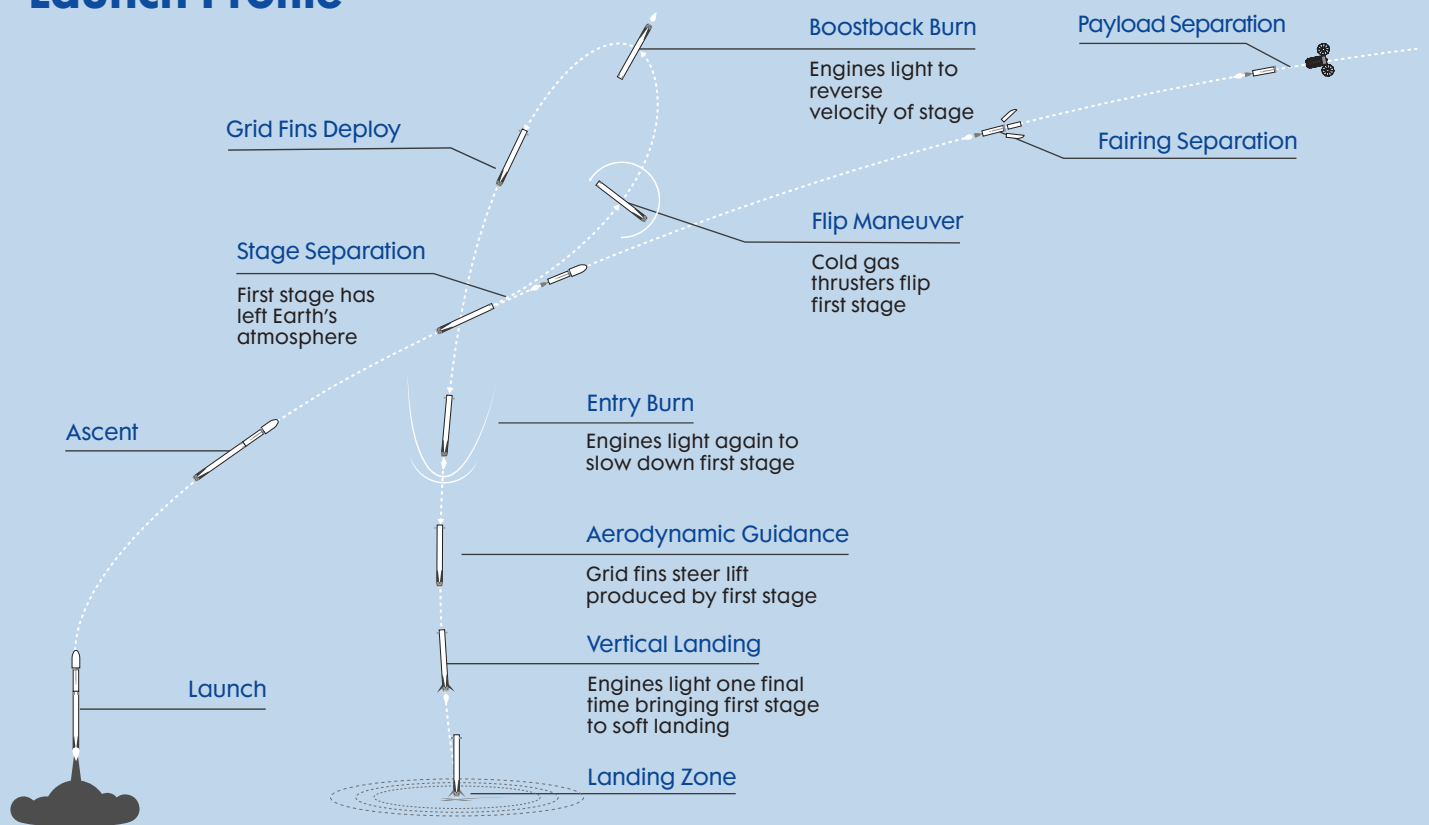
Initial Orbit Altitude:
245 km x 245 km

Inclination:
51.64°

Transit to Station:
Two Days

Duration at Station:
Up to 200 Days Berthed

Launch Profile



*not drawn to scale

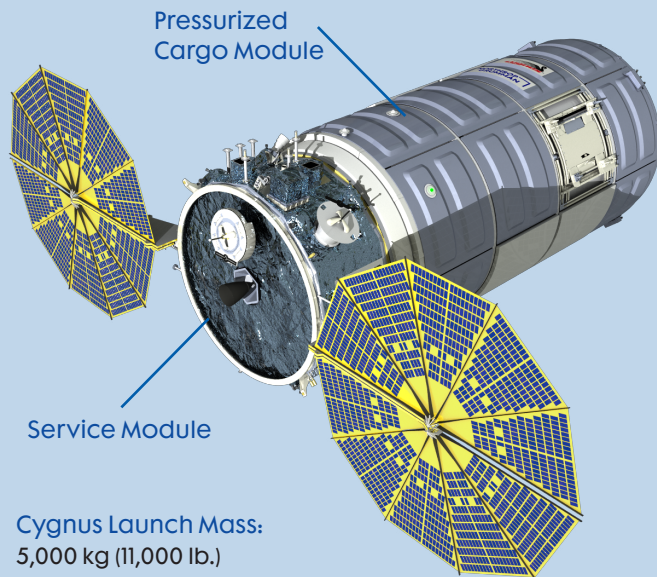
Mission Description

NG-23 will be the first mission to use the Cygnus XL Pressurized Cargo Module. For this mission, the Cygnus spacecraft will deliver up to 5,000 kg. (11,000 lb.) of cargo to the International Space Station, a 33 percent increase in cargo capacity. Cygnus is comprised of two primary components, the Pressurized Cargo Module and the Service Module. In keeping with company tradition, each spacecraft is named after an important

figure in the aerospace industry. Northrop Grumman is honored to name the NG-23 Cygnus spacecraft after NASA astronaut William "Willie" C. McCool, an accomplished astronaut and pilot who lost his life in 2003 when he piloted the Columbia space shuttle. The S.S. Willie McCool will be launched into orbit using a Falcon 9 rocket from Space Launch Complex 40 at Cape Canaveral Space Force Station in Florida. Upon arrival

at the International Space Station, the cargo will be unloaded from Cygnus. First conducted on the NG-17 mission, Cygnus offers the capability to perform routine reboost services as needed while berthed to the station. Once its mission has been completed, Cygnus will perform a safe, destructive reentry into Earth's atmosphere.

Cygnus Spacecraft



Cygnus Launch Mass:
5,000 kg (11,000 lb.)

Propellant Mass:
1,218 kg (2,685 lb.)

Ascent Cargo Mass:
Up to 5,000 kg (11,000 lb.)

Pressurized Volume:
38 m³

Height:
8.0 m (26.25 ft.)

Power Generation:
2 fixed wing UltraFlex™ solar arrays,
ZTI gallium arsenide cells

Descent Cargo Mass:
Up to 5,000 kg (11,000 lb.)

Falcon 9 Launch Vehicle



Diameter:
3.7 m (12 ft.)

Height:
70 m (229.6 ft.)

Mass:
549,054 kg (1,207,920 lb.)

Payload to LEO:
22,800 kg (50,265 lb.)