

Private U.S. Moon mission in jeopardy

A private moon mission attempting to make the first U.S. lunar soft landing in half a century is in jeopardy after a failure in the propulsion system resulted in a "critical loss" of fuel

VULCAN CENTAUR: New rocket developed by **United Launch Alliance** – successfully lifted lunar lander on Jan 8

Height: **61.6m**
Diameter: **5.4m**
Mass: **546,700kg**

RL10 engines

Fuel: Liquid hydrogen, liquid oxygen

Centaur second stage

Peregrine lander built by **Astrobotic Technology**

Intended touchdown: Lava plain on near side of Moon

Two solid rocket boosters

Booster



Fuel leak from Peregrine, just hours after separation from rocket, preventing lander from achieving stable position pointing towards Sun



Apollo 11

BE-4 engines

Fuel: Liquefied natural gas and liquid oxygen

PEREGRINE LUNAR LANDER

Carries five NASA instruments to study Moon's surface environment ahead of human missions later this decade

Propellant tank

Solar panel

Antenna

Thrusters

Engines

1.9m

