

ARTEMIS I

Powered by Aerojet Rocketdyne

The first uncrewed, integrated flight test of NASA's Space Launch System rocket and Orion spacecraft.



Artemis I is Powered by Aerojet Rocketdyne Throughout its Mission

SLS LAUNCH

- 1 Four **RS-25** engines will fire non-stop for more than 8 minutes providing over two million pounds of thrust to ensure SLS reaches outer space.
- 2 Orion's **jettison motor**, which generates 40,000 pounds of thrust for the Launch Abort System (LAS), pulls the LAS off the crew module during both nominal operations and abort modes.
- 3 A single **RL10** engine will power the second stage of the SLS once the rocket has reached outer space. This 24,000 pound thrust engine provides the power to set Orion on a course for the Moon.
- 4 Sixteen **reaction control system thrusters** will provide pitch, yaw and roll control for the ICPS upper stage, as well as settling burns. The ICPS also employs eight high-pressure helium tanks.

ORION OUTBOUND CRUISE

- 5 The 6,000 pound thrust **Orion Main Engine** on the service module will maneuver the spacecraft and provide primary propulsion for Orion's major in-space maneuvers.
- 6 Eight **auxiliary engines** on Orion's service module each generate 105 pounds of axial thrust, supplementing and backing up the Orion Main Engine. A single **nitrogen tank** on Orion's service module helps maintain cabin pressurization.

EARTH REENTRY & LANDING

- 7 Orion's 12 **reaction control system thrusters**, each generating 160 pounds of thrust, will be used to control and properly orient the Orion crew module during atmospheric reentry.
- 8 After splashdown, Orion's self-righting flotation system inflates five air bags with helium, allowing the crew to safely exit the capsule. The helium is stored in five **composite overwrapped pressure vessels**.



Space Launch System and the Orion spacecraft are taking humans to the Moon & beyond



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