National Aeronautics and Space Administration



5...4...3...2...1... SPACE LAUNCH SYSTEM

NASA's Space Launch System: Progress Report

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1

PHASED APPROACH TO HUMAN EXPLORATION

Now Using the International **Space Station**



Begin missions in

cislunar space. Build

Deep Space Gateway.

Deep Space Transport.

Initiate assembly of

Phase 0

Research and testing to solve exploration challenges. Evaluate potential for lunar resources. Develop standards.

Leaving Earth-Moon system and reaching Mars

After 2030

CREATING ECONOMIC OPPORTUNITIES, ADVANCING TECHNOLOGIES, AND ENABLING DISCOVERY and conduct. yearlong Mars simulation mission.

Phases 3/4

Begin sustained crew expeditions to Martian system and surface of Mars.

NASA'S SPACE LAUNCH SYSTEM: AMERICA'S NEXT GREAT ROCKET

Interim Cryogenic Propulsion Stage: The second stage for the first SLS launch will push Orion beyond the moon.

\$2.00

Orion:

Carries explorers safely into space & back.

Stage Adapter:

Provides space for sending several small spacecraft to the moon and beyond.

Core Stage:

Larger than any other rocket stage, the SLS core stage holds fuel for launch.



Solid Rocket Boosters:

The largest boosters to ever fly will provide most of the power for the first two minutes of flight.

RS-25 Engines:

The most reliable engines of their kind; upgraded with new technology.

BLOCK 1 EM-1 EXPANDED VIEW

Launch Abort System Crew Module Service Module

Encapsulated Service Module Panels~

Spacecraft Adapter Orion Stage Adapter Interim Cryogenic Propulsion Stage

Solid Rocket – Boosters (2)

Launch Vehicle Stage Adapter

Core Stage

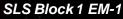
RS-25 Engines (4)





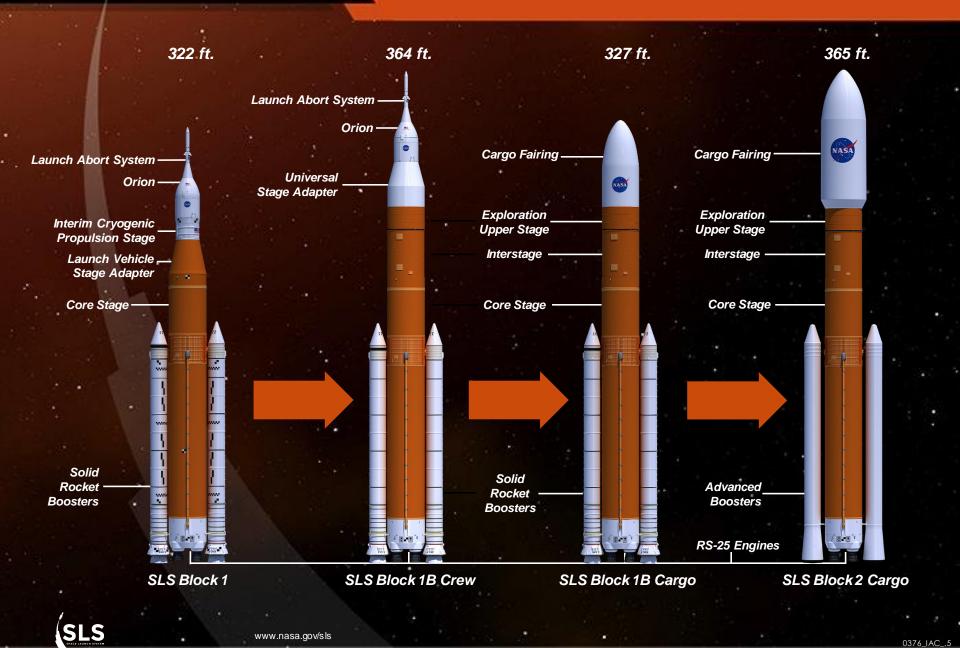
Orion Multi-Purpose

Crew Vehicle

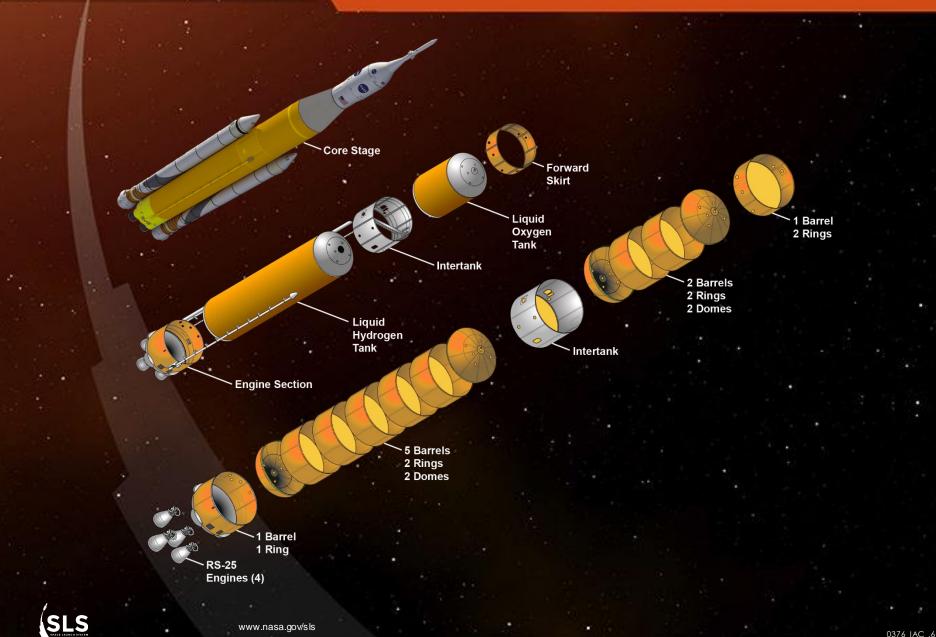




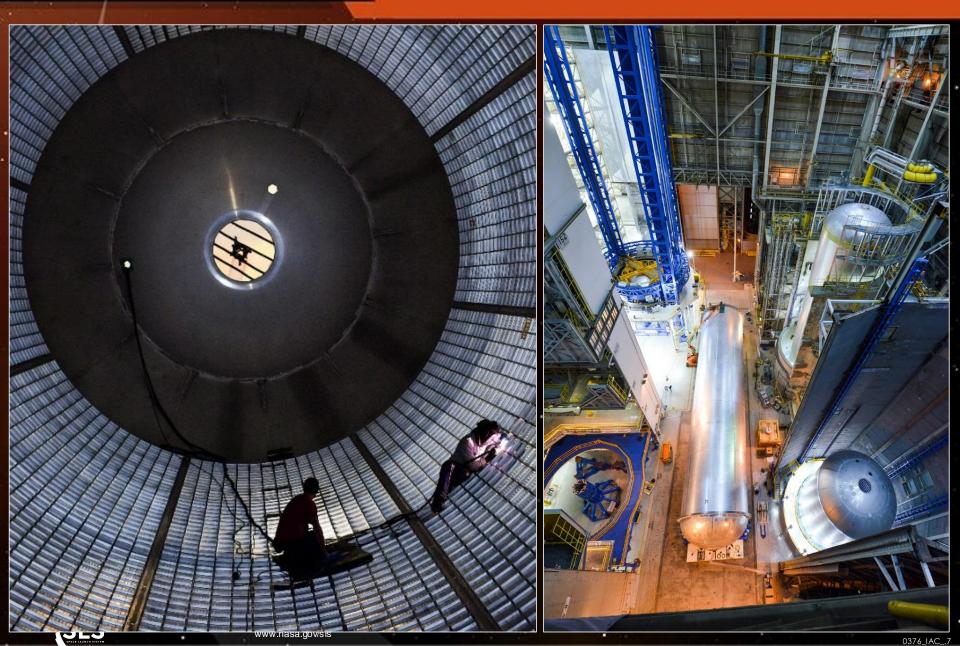
NASA SLS – SPACE LAUNCH SYSTEM



CORE STAGE DESIGN



CORE STAGE MANUFACTURING



CORE STAGE TESTING



SOLID ROCKET BOOSTER PROGRESS









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RS-25 PROGRESS



IN-SPACE STAGE, PAYLOAD HARDWARE PROGRESS



SLS BACE LAUNCH SYSTEM

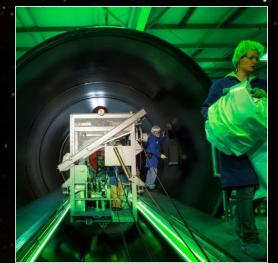
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BLOCK 1B PROGRESS











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CISLUNAR MISSIONS

HIGHLIGHTS FROM OUR PROGRESS





QUESTIONS?

UNITED ST



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