

# NASA's moon rocket moved to launch pad for 1st test flight

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The NASA Artemis rocket with the Orion spacecraft aboard stands on pad 39B at the Kennedy Space Center in Cape Canaveral, Fla., Wednesday, Aug. 17, 2022. NASA is aiming for an Aug. 29 liftoff for the lunar test flight. Credit: AP Photo/Terry Renna

NASA's new moon rocket arrived at the launch pad Wednesday ahead of

its debut flight in less than two weeks.

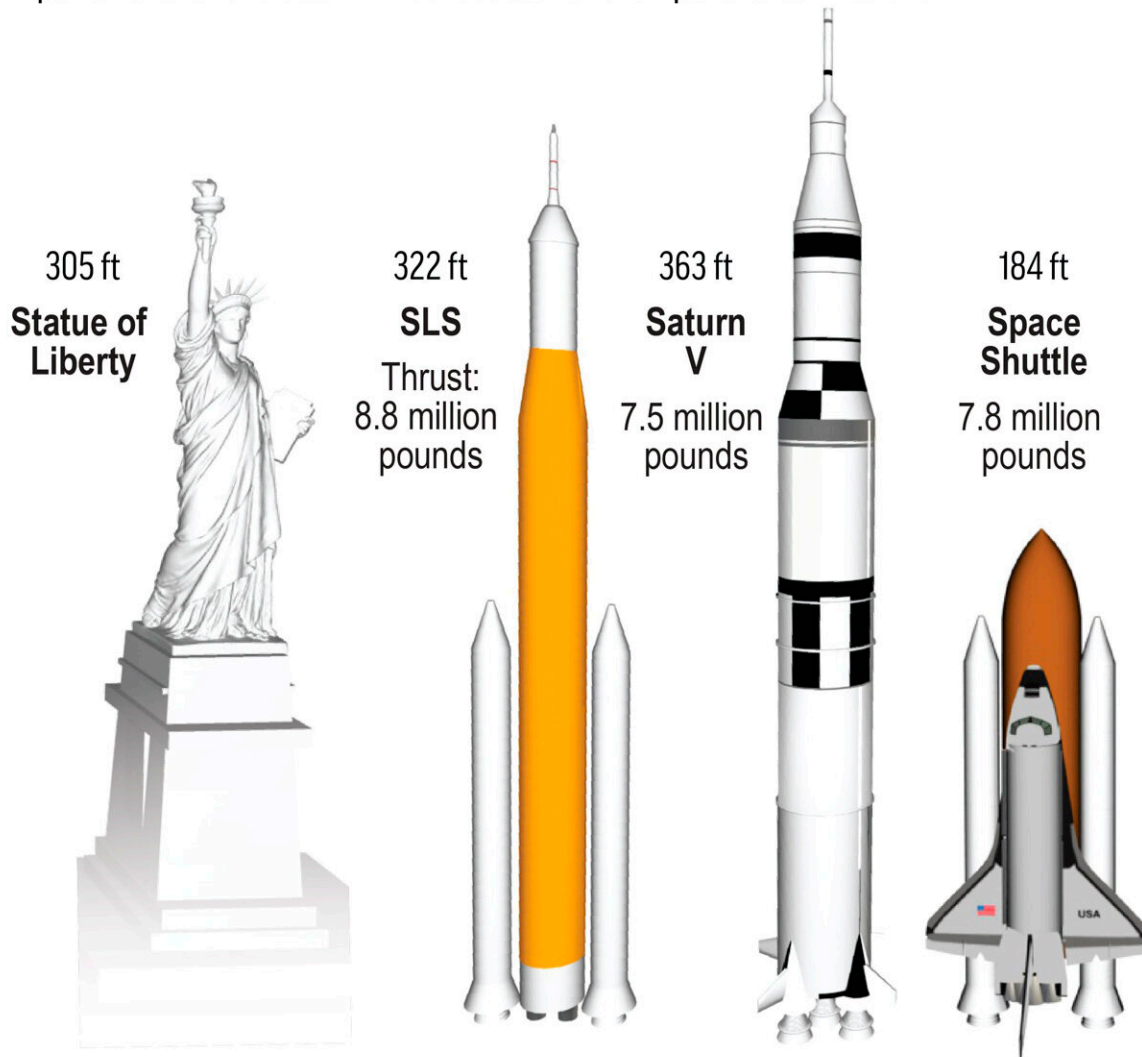
The 322-foot (98-meter) [rocket](#) emerged from its mammoth hangar late Tuesday night, drawing crowds of Kennedy Space Center workers, many of whom were not yet born when NASA sent astronauts to the moon a half-century ago. It took nearly 10 hours for the rocket to make the four-mile trip to the pad, pulling up at sunrise.

NASA is aiming for an Aug. 29 liftoff for the lunar [test flight](#). No one will be inside the crew capsule atop the rocket, just three mannequins swarming with sensors to measure radiation and vibration.

The capsule will fly around the moon in a distant orbit for a couple weeks, before heading back for a splashdown in the Pacific. The entire flight should last six weeks.

The flight is the first moonshot in NASA's Artemis program. The [space agency](#) is aiming for a lunar-orbiting flight with astronauts in two years and a lunar landing by a human crew as early as 2025. That's much later than NASA anticipated when it established the program more than a decade ago, as the space shuttle fleet retired. The years of delays have added billions of dollars to the cost.

NASA's new moon rocket – the Space Launch System or SLS – is shorter but more powerful than the Saturn V rocket used for the Apollo lunar missions.

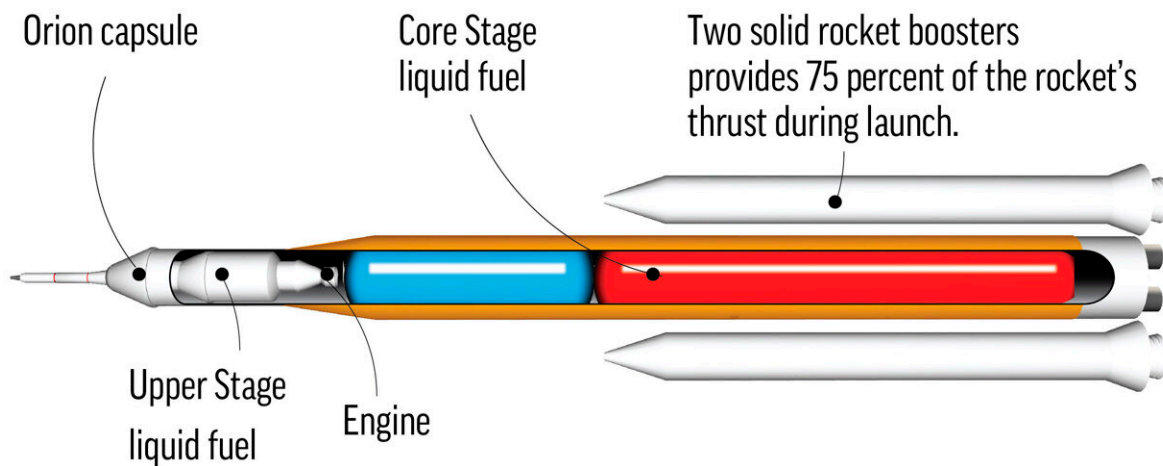


A comparison of the Saturn V and the new Moon rocket called the Space Launch System or SLS.

"Now for the first time since 1972, we're going to be launching a rocket that's designed for [deep space](#)," NASA's rocket program manager, John Honeycutt, said recently.

NASA's new SLS moon rocket, short for Space Launch System, is 41 feet (12 meters) shorter than the Saturn V rockets used during Apollo a half-century ago. But it's more powerful, using a core stage and twin strap-on boosters, similar to the ones used for the space shuttles.

NASA's new moon rocket will deliver the Orion capsule which will carry astronauts in future missions.



A cutaway of the Space Launch System or SLS.

"When you look at the rocket, it almost looks retro. It looks like we're looking back toward the Saturn V," NASA Administrator Bill Nelson told reporters earlier this month. "But it's a totally different, new, highly sophisticated, more sophisticated rocket and spacecraft."

Twenty-four astronauts flew to the moon during Apollo, with 12 of them landing on it from 1969 through 1972. The [space](#) agency wants a more diverse team and more sustained effort under Artemis, named after Apollo's mythological twin sister.



The NASA Artemis rocket with the Orion spacecraft aboard leaves the Vehicle Assembly Building moving slowly to pad 39B at the Kennedy Space Center in Cape Canaveral, Fla., Tuesday, Aug. 16, 2022. NASA is aiming for an Aug. 29 liftoff for the lunar test flight. Credit: AP Photo/Terry Renna



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NASA's Artemis rocket, with the Orion spacecraft aboard, stands in the vehicle



assembly building before rolling out to launch pad 39B at the Kennedy Space Center, Tuesday, Aug. 16, 2022, in Cape Canaveral, Fla. NASA is aiming for an Aug. 29 liftoff for the lunar test flight. No one will be inside the crew capsule atop the rocket, just three mannequins. Credit: AP Photo/Terry Renna



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"I want to underscore that this is a test [flight](#)," Nelson said. "It's just the beginning."

This was the rocket's third trip to the pad. A countdown test in April was marred by fuel leaks and other equipment trouble, forcing NASA to return the rocket to the hangar for repairs. The [dress rehearsal](#) was repeated at the pad in June, with improved results.

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