

# World's most powerful rocket Starship set for next launch

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Starship, SpaceX's massive prototype rocket that may one day send humans to Mars, is poised for its next flight on Thursday.

It will be the fourth test for the most powerful launch system ever built, vital to NASA's plans for landing astronauts on the moon later this decade and to SpaceX CEO's Elon Musk's hopes of one day colonizing the Red Planet.

A two-hour liftoff window from the company's Starbase in Boca Chica, Texas opens at 7:00 am local time (1200 GMT). Weather conditions look favorable, and the Federal Aviation Administration has given its green light.

Three previous attempts have ended in Starship's fiery destruction, all part of what the company says is an acceptable cost in its rapid trial-and-error approach to development.

"The fourth flight test turns our focus from achieving orbit to demonstrating the ability to return and reuse Starship and Super Heavy," SpaceX said in a statement.

Super Heavy is the booster, while Starship refers to both the upper stage and the two stages combined.

The [flight path](#) will be similar to the third test, which took place in March and saw Starship fly halfway around the globe before it was eventually lost as it re-entered the atmosphere over the Indian Ocean, 49 minutes into the mission.

Since then SpaceX says it has made several software and hardware upgrades and hopes to achieve a soft splashdown for the booster stage in the Gulf of Mexico, and a "controlled entry" for the [upper stage](#).

Designed to eventually be fully reusable, Starship stands 397 feet (121 meters) tall with both stages combined—90 feet taller than the Statue of Liberty.

Its Super Heavy booster produces 16.7 million pounds (74.3 Meganewtons) of thrust, almost double that of the world's second most powerful rocket, NASA's Space Launch System—though the latter is now certified, while Starship is still under development.

SpaceX's strategy of carrying out tests in the real world rather than in labs has paid off in the past.

Its Falcon 9 rockets have come to be workhorses for NASA and the [commercial sector](#), its Dragon capsule sends astronauts and cargo to the International Space Station, and its Starlink internet satellite constellation now covers dozens of countries.

But the clock is ticking for SpaceX to be ready for NASA's planned return of astronauts to the moon in 2026, using a modified Starship as the lander vehicle.

To accomplish this, SpaceX will need to first place a Starship in orbit, then refuel it with multiple "Starship tankers" for its onward journey—a complex engineering feat that has never before been accomplished.

At least one SpaceX fan has grown tired of waiting. Japanese billionaire Yusaku Maezawa announced this week he has canceled a planned trip around the moon on Starship with a crew of artists, because he has no idea when it might actually happen.

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