

STARSHIP FLIGHT TEST

MISSION OVERVIEW

SpaceX is targeting as soon as Thursday, April 20 for the first flight test of a fully integrated **Starship and Super Heavy rocket** from Starbase in Texas. The 62 minute launch window opens at 8:28 a.m. CT and closes at 9:30 a.m. CT.

Starship is a fully reusable transportation system designed to carry both crew and cargo to Earth orbit, help humanity return to the Moon, and travel to Mars and beyond. With a test such as this, success is measured by how much we can learn, which will inform and improve the probability of success in the future as SpaceX rapidly advances development of Starship.

WEBCAST

A live webcast of the flight test will begin ~45 minutes before liftoff.

PHOTOS

High-resolution photos will be posted at [flickr.com/spacex](https://www.flickr.com/photos/spacex/).

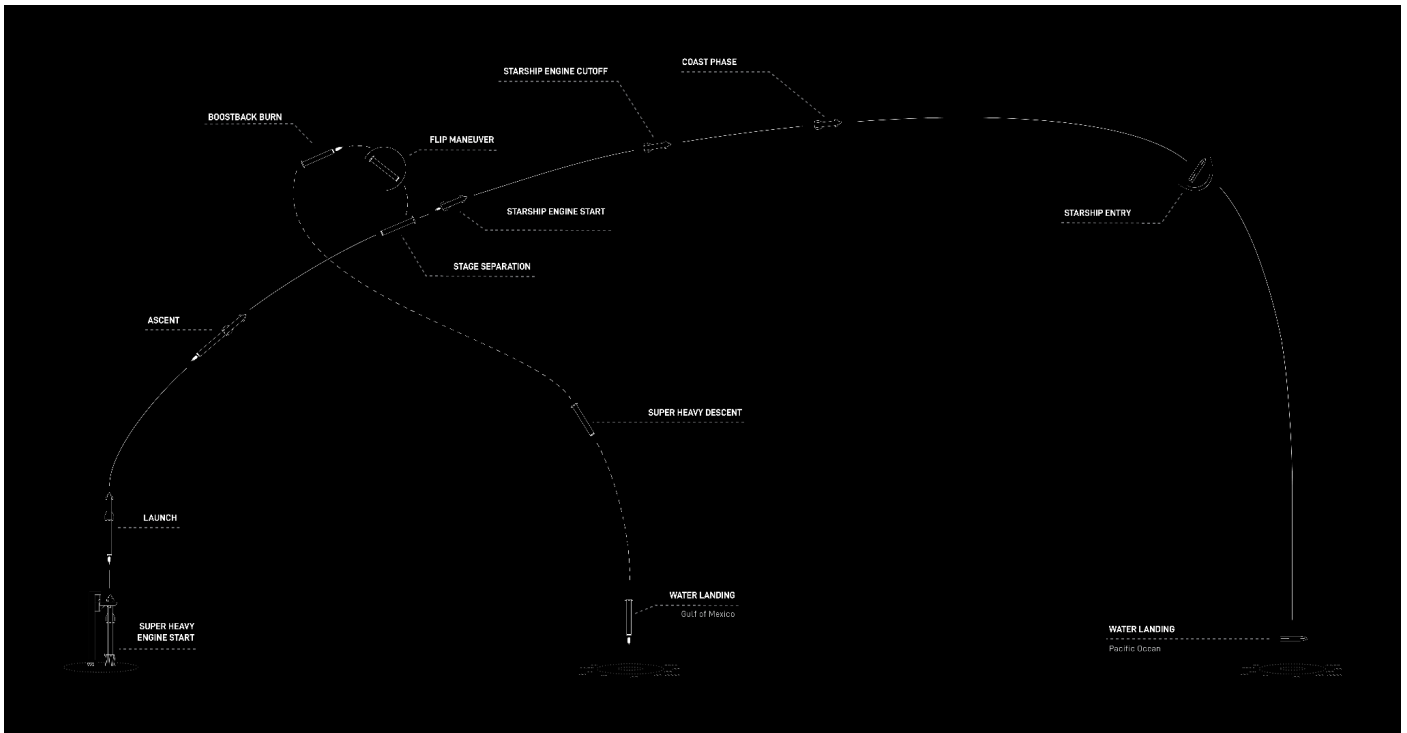
To date, the SpaceX team has completed multiple sub-orbital flight tests of Starship's upper stage from **Starbase**, successfully demonstrating an unprecedented approach to controlled flight. **These flight tests** helped validate the vehicle's design, proving Starship can fly through the subsonic phase of entry before re-lighting its engines and flipping itself to a vertical configuration for landing.

In addition to the testing of Starship's upper stage, the team has conducted numerous tests of the Super Heavy rocket, which include the increasingly complex static fires that led to a full-duration 31 Raptor engine test – the largest number of simultaneous rocket engine ignitions in history. The team has also constructed the world's tallest rocket launch and catch tower. At 146 meters, or nearly 500 feet tall, the launch and catch tower is designed to support vehicle integration, launch, and catch of the Super Heavy rocket booster. For the first flight test, the team will not attempt a vertical landing of Starship or a catch of the Super Heavy booster.

A live webcast of the flight test will begin ~45 minutes before liftoff. As is the case with all developmental testing, this schedule is dynamic and likely to change, so be sure to stay tuned to our social media channels for updates.

As we venture into new territory, we continue to appreciate all of the support and encouragement we have received from those who share our vision of a future where humanity is out exploring among the stars!

MISSION PROFILE



MISSION TIMELINE (ALL TIMES APPROXIMATE)

COUNTDOWN

Hr/Min/Sec	Event
- 02:00:00	SpaceX Flight Director Conducts Poll and Verifies Go for Propellant Load
- 01:39:00	Booster LOX (Liquid Oxygen) Load Underway
- 01:39:00	Booster Fuel Load (Liquid Methane) Underway
- 01:22:00	Ship Fuel Load (Liquid Methane) Underway
- 01:17:00	Ship LOX Load Underway
- 00:16:40	Raptor Begins Engine Chill on Booster
- 00:00:40	Fluid Interfaces Begin their Ventdown Sequence
- 00:00:08	Raptor Startup Sequence Begins
- 00:00:00	Excitement Guaranteed

FLIGHT TEST TIMELINE | BEST CASE SCENARIO

Completion of the milestones below are not required for a successful test, but each milestone completed will certainly make for an exciting test.

Hr/Min/Sec	Event
00:00:55	Max Q (Moment of Peak Mechanical Stress on the Rocket)
00:02:49	Booster Main Engine Cutoff
00:02:52	Stage Separation
00:02:57	Starship Ignition
00:03:11	Booster Boostback Burn Startup
00:04:06	Booster Boostback Burn Shutdown
00:07:32	Booster is Transonic
00:07:40	Booster Landing Burn Startup
00:08:03	Booster Landing Burn Shutdown
00:09:20	Starship Engine Cutoff

01:17:21	Starship Entry
01:28:43	Starship is Transonic
01:30:00	Starship Splashdown