

# First test flight of SpaceX's big Starship

April 17, 2023

**In news**— SpaceX is planning to launch the first orbital test mission of its huge Starship vehicle on April 17 2023.

## About Starship-

- Starship is a super heavy-lift launch vehicle developed by SpaceX.
- Standing at 119 m tall, it is designed to be the **tallest and most powerful launch vehicle** ever built, and the first intended to be **fully reusable**.
- The Starship launch vehicle is made up of the **first-stage booster and the Starship second stage**.
- The **second stage functions as a self-contained spacecraft for carrying crew** or cargo once in orbit.
- **Both stages are powered by Raptor engines that burn liquid oxygen and liquid methane propellants** in a highly efficient full-flow staged combustion power cycle.
- Both rocket stages are designed to be reused by landing vertically at the launch pad.
- It is designed to send astronauts to the Moon and Mars and beyond.
- It is designed to be fully and rapidly reusable.
- The U.S. space agency NASA has picked the Starship spacecraft to ferry astronauts to the Moon in late 2025 – a mission known as Artemis III – for the first time since the Apollo program ended in 1972.
- Starship consists of a 164-foot (50-meter) tall spacecraft designed to carry crew and cargo that sits atop a 230-foot tall first-stage Super Heavy booster rocket.
- Collectively referred to as Starship, the spacecraft and the Super Heavy rocket have never flown in combination

together, although there have been several sub-orbital test flights of the spacecraft alone.

- Starship, which has six engines of its own, will continue to an altitude of nearly 150 miles, completing a near-circle of the Earth before splashing down in the Pacific Ocean about 90 minutes after launch.
- It generates 17 million pounds of thrust, more than twice of that of the Saturn V rockets used to send Apollo astronauts to the Moon.

### SpaceX's Starship rocket system

