

Why two astronauts are stuck in space

Nearly two months after launch and almost 50 days after they were initially supposed to return to Earth, two astronauts stuck at the International Space Station finally appear to be closer to their homeward voyage. That they were trapped by troubles with their Boeing Starliner spacecraft has only raised fresh doubts about the company's technological and engineering capabilities as it weathers several major scandals.

The two astronauts who made the journey on the Starliner, Barry Wilmore and Sunita Williams, have been at the ISS longer than initially intended, though NASA and Boeing both insist the astronauts are not "stranded," as some headlines have indicated. They have reserves of oxygen and supplies and could use other spacecraft docked at the station if they needed to make a quick exit back to Earth.

The trip was always intended as a test voyage for the spacecraft, and Boeing and NASA have said that the time spent understanding and fixing the spacecraft's issues — multiple helium leaks and thrusters that shut off unexpectedly — while it was in space was valuable.

"We don't understand the issues enough to fix them permanently, and the only way that we can do that is take the time in this unique environment and get more data, run more tests," Mark Nappi, vice president and program manager of Boeing's commercial crew program, said in a June press conference.

On Saturday, NASA and Boeing engineers performed tests on 27 of the spacecraft's 28 thrusters, the system that propels the Starliner into space. On Tuesday, the space agency announced that the tested thrusters were performing well enough to bring the spacecraft back to Earth, and that

after looking at the testing data, Boeing and NASA would determine a date for the vessel and its crew to leave the station.

None of this means Boeing's space program is on track; it has struggled ever since its initial contract with the US government was signed, and it's not clear whether the company will be able to change course in time for the Starliner to be ready for the missions it was designed for.