A Message From

Administrator Jared Isaacman

Dear NASA Team,

Within the next week, Congress will be briefed by the Aerospace Safety Advisory Panel, and NASA's independent investigative report on the Starliner Crewed Flight Test will be released publicly. Many of you know this program intimately, and some of you lived every development in real time. We returned the crew safely, but the path we took did not reflect NASA at its best.

There is no expectation of perfection in missions as challenging as those we are entrusted to undertake. Even with our best efforts and programs, like CCP that have seen great success, mistakes will occur. What defines us is whether we learn from them, improve because of them, and strengthen confidence across this workforce and the nation we serve. That requires transparency and accountability, neither of which can be selectively applied.

In this letter, I will summarize the timeline, the organizational root causes, and the actions we are taking to restore trust and move forward. Let me begin with the most important point. Starliner has design and engineering deficiencies that must be corrected, but the most troubling failure revealed by this investigation is not hardware. It is decision making and leadership that, if left unchecked, could create a culture incompatible with human spaceflight.

Program History
Starliner was conceived under the Commercial Crew Program in 2010 with the intent to establish dissimilar crew access to low Earth orbit. After the retirement of the Shuttle, it became a national imperative to never again accept a gap in American human spaceflight capability.

- Orbital Flight Test 1 (OFT-1), December 2019
  A mission elapsed time error prevented the guidance software from calculating orbit insertion burn timing, which triggered excessive thruster firings, incorrect orbital insertion, major propellant use, and ten thrusters declared failed off. The mission was declared a high-visibility close call.

- Orbital Flight Test 2 (OFT-2), August 2021
  During the OFT-2 launch countdown cycle test of the Service Module Prop System manifold isolation valves, 13 of the 24 oxidizer valves failed to cycle open (stuck in closed position), resulting in a launch scrub. The spacecraft and booster were rolled back. The SM was removed and replaced for launch many months later.

- Orbital Flight Test 2 (OFT-2), May 2022
  This mission proceeded mostly nominally compared to the other missions. However, three aft SM RCS thrusters were declared failed off in flight.

- Preparation for Crewed Flight
  The OFT and OFT-2 investigations did not drive to, or take sufficient action on, the root causes of major anomalies. The investigations often stopped at the proximate (direct) cause, treated it with a fix, or accepted the issue as an unexplained anomaly. In some cases, the proximate-cause diagnosis itself was incorrect due to insufficient rigor in following the data to its logical conclusion.

- Crewed Flight Test (CFT), June 2024
  After delays and unexpected helium leaks, NASA and Boeing launched astronauts Butch Wilmore and Suni Williams aboard Starliner.

  During rendezvous and proximity operations, propulsion anomalies cascaded into multiple thruster failures and a temporary loss of six-degree-of-freedom control. Controllers and crew performed with extraordinary professionalism. Flight rules were appropriately challenged, control was recovered, and docking was achieved.

  It is worth restating what should be obvious. At that moment, had different decisions been made, had thrusters not been recovered, or had docking been unsuccessful, the outcome of this mission could have been very different.

  The astronauts remained safely aboard the International Space Station while advocating for the data, testing, and leadership engagement necessary to complete their mission safely. On the ground, joint Boeing and NASA teams conducted tests, reviewed data, and evaluated next steps.

  In September 2024, Starliner undocked autonomously, experienced an unexpected CM propulsion failure, and landed successfully, though without fault tolerance in the crew module thrusters through reentry. Butch and Suni subsequently returned safely to Earth aboard SpaceX Crew-9 in March 2025.

Investigation
Mistakes occurred from the program's inception and continued throughout execution, including contract management, oversight posture, technical rigor, and leadership decision making.

Boeing built the spacecraft, and from the onset NASA approved variances and agreed to fly it. As development progressed, design compromises and inadequate hardware qualification extended beyond NASA's complete understanding.

Variances exist across all major aerospace programs and, by themselves, are not unusual. The engineering reality, however, is that Starliner with its qualification deficiencies is less reliable for crew survival than other crewed vehicles, as noted by the report.

But at NASA, we managed the contract. We accepted the vehicle. We launched the crew. We made decisions from docking through post-mission actions. A considerable portion of the responsibility and accountability rests here.

Root Causes
While we have identified organizational root causes, the technical investigations to identify proximate (direct) causes for the service module and crew module thruster anomalies remain ongoing. Acknowledging that present-day reality is essential to mission success.

First, NASA's limited-touch acquisition and management posture left the agency without the systems knowledge and development insight required to confidently certify a human-rated spacecraft, and insight versus oversight was not applied consistently.

Second, Boeing's propulsion system design and certification approach allowed hardware to operate outside qualification limits, which is incompatible with crew safety margins.

Third, NASA's programmatic desire to maintain two dissimilar crew transportation systems influenced technical and operational risk discussions. It is through this lens that we examine leadership decision-making through the phases of the mission.

- Pre-Launch
  More than thirty scheduled CFT launch attempts created cumulative schedule pressure and decision fatigue. Prior OFT thruster risk was never fully understood, corrective actions from OFT-1 were incomplete, and flight rationale was therefore inadequate. Witness statements routinely reflected a belief that the management within the Commercial Crew Program could only succeed if Starliner launched.

- On-Orbit
  Disagreement over crew return options deteriorated into unprofessional conduct while the crew remained on-orbit. Witness statements described an environment where advocacy tied to Starliner program viability persisted alongside insufficient senior NASA leadership engagement to refocus teams on safety and mission outcomes.

- Post-Mission
  Despite the loss of six-degree-of-freedom control and cost thresholds exceeding a Type A mishap by a factor of one hundred, a mishap was not declared. Concern for the Starliner program's reputation influenced that decision. Initially, the Commercial Crew Program investigated itself.

Ultimately, these decisions were inconsistent with NASA's safety culture.

A subsequent independent investigation was commissioned, and the record is now being corrected. Today, we are formally designating this event a Type A mishap to ensure lessons are fully captured for future missions.

Programmatic advocacy exceeded reasonable bounds and placed the mission, the crew, and America's space program at risk in ways that were not fully understood at the time decisions were being contemplated. This created a culture of mistrust that can never happen again, and there will be leadership accountability.

Path Forward
NASA will continue working with Boeing, as we do with all partners undertaking flight tests. Sustained crew and cargo access to low Earth orbit will remain essential, and America benefits from competition and redundancy.

But to be clear: NASA will not fly another crew on Starliner until technical causes are understood and corrected, the propulsion system is fully qualified, and appropriate investigation recommendations are implemented.

Transparency
Transparency is not a weakness. It is a strength. We will release the investigation in full, redacted only where legally required and as directed by our commercial partner.

Pretending unpleasant situations did not occur teaches the wrong lessons. Failure to learn invites failure again and suggests that, in human spaceflight, failure is an option. It is not.

America entrusts NASA with the hardest endeavors ever attempted. The world looks to us for the discoveries, achievements, and leadership only this agency can deliver, and that requires putting the mission and the crew first.

We will achieve success through extreme ownership, immense competence, and decisive action.

Jared Isaacman
NASA Administrator