

The Cleanup From SpaceX's Last Starship Launch Looms Over Its Next One

Explosion during test flight last month worried residents of Turks and Caicos and raised concerns about risks to commercial planes

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SpaceX is planning its next Starship test flight, weeks after the last one [involved an explosion](#) that rained rocket parts across the Caribbean and disrupted air traffic.

The [Elon Musk](#)-led company said in a recent government filing that the earliest it could conduct another test flight for Starship is Feb. 24. Right now, SpaceX isn't permitted to fly the huge vehicle until it completes an investigation into the incident and receives regulatory clearance for another flight.

Aviation-safety officials have weighed potential changes to future launches to avoid a similar disruption to air travel or worse, according to people involved in the discussions.

The explosion is expected to be discussed this month by a Federal Aviation Administration safety panel that will review procedures for keeping aircraft safe if there is debris generated by space mishaps. The panel was scheduled before the SpaceX explosion, the agency said.

SpaceX has said that it would "implement corrective actions to make improvements on future Starship flight tests."

The explosion minutes into the Jan. 16 test flight alarmed air-safety officials who worried that falling debris could cause a catastrophic aviation accident. It also alarmed residents of Turks and Caicos, who have been cleaning up detritus from the vehicle.

Lori Kaine said she often finds seashells and pieces of coral while walking the beaches of the island territory. Since the explosion, she has been collecting pieces of the spacecraft, including lightweight heat-shield tiles and what appeared to be burned rubber.

“I was very upset when I saw all the debris,” said Kaine, who is worried about potential health effects from the material. “I want to know what the next steps are with regulatory bodies.”

[Starship is designed](#) to enable deep-space missions, including Musk’s dream of [sending humans to Mars](#). The company describes the rocket, roughly 400-feet-tall when stacked up, as the most powerful in history. It began [testing it in flight in 2023](#).

SpaceX has a reputation for taking big risks, accepting crashes as a possibility from testing new rockets and spacecraft. Current and former executives have said that failures allow the company to gather data, learn quickly and improve.



ince the explosion, a Turks and Caicos resident says she has seen pieces of the spacecraft wash up on the beach, including what looked like pieces of rubber. Photo: Lori Kaine

The explosion last month renewed tensions between the airline industry and SpaceX, which aims to increase how often it conducts Starship launches.

Video of the explosion from airline passengers and pilots circulated online, showing parts of the spacecraft burning up in the atmosphere. But some debris fell across regularly trafficked airspace, prompting the FAA to impose a temporary no-fly zone.

The mishap delayed the departure of more than 240 flights, with 75 facing delays of at least one hour, the FAA said. A dozen flights in the air at the time of the explosions had to hold positions for an average of 41 minutes.

No planes were hit and no explosion-related injuries have been reported, according to the FAA. The agency confirmed one report of minor damage to a vehicle on the ground in Turks and Caicos.

“SpaceX put people in danger yesterday, and their for-profit corporation should reimburse every other for-profit corporation that had to divert, change course or delay because of their operations in the national airspace system,” said Steve Jangelis, safety chairman for the Air Line Pilots Association, in a post on LinkedIn after the explosion.

At an industry event Wednesday, a SpaceX executive said the airspace was cleared for longer than teams would have liked, but that was done out of an abundance of caution.



More debris that Turks and Caicos resident Lori Kaine says she has collected from the exploded Starship vehicle. Photo: Lori Kaine

“You don’t want to ever lose a rocket,” Shana Diez, director of Starship flight reliability at the company, said during a panel discussion. But the mishap demonstrated, she said, “that the safety measures that we put in place, to have that pre-coordinated debris response area there, were successful in keeping the public safe.”

For future launches, U.S. aviation-safety officials have been discussing requiring SpaceX to fly Starship at night, when commercial air traffic is lighter.

SpaceX has pushed the envelope with Starship before. During Starship’s first flight in April 2023, the rocket’s [engines destroyed a launchpad](#), sending chunks of concrete flying into the Gulf of Mexico and spreading debris nearby. SpaceX installed a water system to prevent a repeat incident, but environmental groups criticized the company and regulators for allowing the mission to unfold as it did.

In Turks and Caicos, SpaceX representatives in late January met with a local government disaster-management team, along with U.K. aviation accident officials to develop a debris-recovery plan.

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taking people out scuba diving, fishing and more, said there are mangrove areas where that won’t be possible.

“From an aesthetic standpoint, it’s a bit frustrating,” he said.

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“Public safety is our top priority, and it is important the work to clear the debris begins as soon as possible,” a representative from the U.K. government said.

A statement from the government in Turks and Caicos urged residents to cover their hands if they touch debris, and wash after coming into direct contact with any. SpaceX has said that hazardous materials aren’t present in the debris and that it doesn’t expect major effects on marine species and water quality.

Some residents are skeptical that all the debris can be removed. Mathew Slattery, who runs a business