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TECH

SpaceX Says Falcon 9 Rocket Investigation Still Pursuing Various Leads

Pending results, company said it still anticipates returning to flight as early as November



An explosion on the launch site of a SpaceX Falcon 9 rocket is shown in this still image from video in Cape Canaveral, Fla., in early September. *PHOTO: U.S. LAUNCH REPORT//REUTERS*

By **ANDY PASZTOR**

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An investigative update released Friday by SpaceX offered little insight into the likely root cause of a catastrophic explosion that destroyed one of the company's Falcon 9 rockets during routine ground tests in Florida three weeks ago.

Space Exploration Technologies Corp. said it believes there was "a large breach" in the helium system of the booster's upper stage, which in less than one-tenth of a second caused an intense fire, also destroyed a commercial satellite and cut off the flow of data.

But SpaceX's statement didn't identify the probable culprit or even point to a number of various possible causes.

Instead, the Southern California company said "all plausible causes are being tracked" and carefully investigated as part of the comprehensive probe. The

company, founded and run by billionaire entrepreneur Elon Musk, reiterated that pending results of the investigation, “we anticipate returning to flight as early as the November timeframe.” Government and industry officials previously said the next flight is likely to be from a different pad in the adjacent Kennedy Center launch facility.

The statement also said the review has “exonerated any connection with last year’s” explosion of another unmanned Falcon 9 shortly after takeoff. SpaceX has said the earlier accident was caused by the failure of a low-tech, structural support holding a helium container inside the second stage. Since then, the company has revamped quality-control procedures to ensure the safety of hardware provided by suppliers.

The investigation into the latest accident is being led by SpaceX, with participation from the Federal Aviation Administration, the National Aeronautics and Space Administration and the Air Force. Specifics about the status or focus of the probe haven’t been made public, and the final report may remain under wraps based on earlier legal and procedural precedents.

Friday’s statement, however, provided the most detail so far about the extent of damage to the Air Force launchpad leased by SpaceX. While substantial areas of the pad at Cape Canaveral Air Force Station were affected by the initial blast and subsequent explosions, the company said its support building adjacent to the pad wasn’t affected, while the “tanks and plumbing that hold our super-chilled liquid oxygen” fuel also escaped damage and remain “in good working order.”

The company said “the pad’s control systems are also in relatively good condition.”

In perhaps the best bit of news for customers jittery about further hurdles in working through SpaceX’s already delayed list of launches, the company said “our manufacturing and production is continuing in a methodical manner, with teams continuing to build engines, tanks, and other systems as they are exonerated from the investigation.” But the statement didn’t elaborate on which payloads would likely be the first to go once flights resume.

The helium container, which investigators determined broke loose in the 2015 explosion, is used to pressurize an upper-stage tank containing liquid oxygen for the engines. The latest accident ended with the more-than-200-foot-tall booster bursting into a fireball while it was being fueled as part of a practice launch countdown. Debris, video images and information from some 3,000 channels of data are being analyzed by investigators.

A number of important SpaceX customers, including commercial-satellite operators and military officials, have expressed support for the company. High-ranking civilian and uniformed Air Force officials have indicated they have no plans to reassess earlier determinations making the company eligible to launch national security satellites.

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