

# SpaceX launches, lands rocket for first time since Sept blast (Update)

January 14 2017

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This still image from video obtained from SpaceX shows a Falcon 9 rocket preparing for lift off from Vandenberg Air Force Base, California, on January 14, 2017

SpaceX on Saturday successfully launched and landed its first unmanned Falcon 9 rocket since a costly and complicated launchpad explosion in September.

"Liftoff of the Falcon 9," a SpaceX commentator said as the tall white rocket launched from Vandenberg Air Force Base in California at 9:54 am (1754 GMT), carrying a payload of 10 satellites for Iridium, a

mobile and data communications company.

Moments after the Falcon 9 soared into the sky, the rocket's two sections separated as planned, sending the satellites to orbit and the tall portion, known as the first stage, of the rocket back to Earth.

Cheers erupted at SpaceX mission control in Hawthorne, California as live video images showed the first stage powering its engines and landing steady and upright on a platform marked with an X in the Pacific Ocean.

SpaceX has successfully landed multiple rockets this way, on both land and water, as part of its effort to bring down the cost of space flight by re-using multimillion dollar components instead of jettisoning them in the ocean after launch.

The platform, or droneship, was labeled "Just Read the Instructions."

Though the landings garner plenty of excitement, SpaceX's primary mission was to safely deliver the payload of satellites to orbit.

"Mission looks good," SpaceX CEO Elon Musk wrote on Twitter.

"All satellites deployed."

Saturday's launch was the first in a series planned to upgrade Iridium's global communications network.

The \$3 billion project aims to send 81 satellites to space in the coming months.



This still image from video obtained from SpaceX shows a Falcon 9 rocket lifting off from Vandenberg Air Force Base, California, on January 14, 2017

## High stakes

The stakes for SpaceX were high after a pair of accidents.

September's blast destroyed a \$200 million [satellite](#) Facebook had planned to use to beam high-speed internet to Africa. Another explosion in June 2015 two minutes after liftoff obliterated a Dragon cargo ship packed with goods bound for the astronauts at the International Space Station.

The incidents cost SpaceX dearly, possibly pushing the privately owned company into the red, the Wall Street Journal reported this week.

"That June 2015 disaster, followed by months of launch delays, contributed to a quarter-billion dollar annual loss and a six percent drop in revenue, after two years of surging sales and small profits," the paper

said after a review of internal financial documents from 2011 to 2015, forecasts for the next decade and interviews with former SpaceX employees.

Three weeks after last September's accident, the company removed a long-standing phrase from its website saying it was "profitable and cash-flow positive."

That "suggest(ed) both profit and cash flow had moved into the red for 2016," the Journal said, noting that it found an operating loss for every quarter in 2015 and negative cash flow of roughly \$15 million.

SpaceX, headed by Musk, a billionaire entrepreneur who also runs Tesla Motors, declined to comment on the findings and is not obligated to release its financial figures because it is a private company.

"The company is in a financially strong position and is well positioned for future growth," with \$1 billion in cash and no debt, SpaceX chief financial officer Bret Johnson was quoted as saying.

## **Fueling concerns**

The June 2015 accident—in which the unmanned Dragon cargo ship exploded in a massive fireball two minutes after launch—was caused by a faulty strut that allowed a helium tank to snap loose, SpaceX said.

Last September's explosion, during a test a day prior to a scheduled launch, was traced to a problem with a pressure vessel in the second-stage liquid oxygen tank.

SpaceX said it will change the way it fuels for now and redesign its pressure vessels in the future.

But a report out this week by a top NASA advisory group also expressed concerns about the way SpaceX fuels its rockets, particularly since it plans to start launching astronauts to space in the coming years.

SpaceX uses super chilled liquid oxygen, and since the temperature must stay so low, it plans to have astronauts inside the spacecraft atop the rocket before fueling is complete, known as a "load and go" approach.

The Aerospace Safety Advisory Panel urged NASA to scrutinize this process closely, saying its risks may not be "adequately understood."

Musk has lofty goals, including colonizing Mars and revolutionizing the launch industry by making rocket components reusable.

Founded in 2002, SpaceX logged 18 successful launches of the Falcon 9 before the 2015 accident.

The company has a \$1.6 billion contract with NASA to supply the International Space Station using its Dragon space capsule, which is the only cargo ship that can return to the Earth intact.

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