

SNC'S UPDATED DREAM CHASER TO RESUME FLIGHT TESTS

News / Manufacturer



Sierra Nevada Corporation is preparing its full-scale Dream Chaser engineering test vehicle for the second round of atmospheric free-flight flight testing, and the reusable spacecraft is scheduled for delivery to NASA's Armstrong Flight Test Centre in California by early 2016.

The company has been enhancing the test vehicle since its first free-flight in October 2013, which ended in a crash landing after one hydraulic landing gear failed to deploy.

Despite the expensive but non-critical setback, the drop test from a Skycrane helicopter yielded important flight data, and "significant changes" have been made to the test vehicle's structure and systems, including the composite wings and aeroshells, the company says.

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The Dream Chaser test vehicle has been refurbished and improved ahead of its second flight test phase.

Sierra Nevada Corporation

In another step forward, Lockheed Martin has completed the first Dream Chaser orbital vehicle cabin assembly.

The aerostructure is being fabricated at Lockheed's F-35 plant in Fort Worth, Texas, and will soon be delivered to SNC's facility in Colorado for assembly and integration.

After losing out on NASA's Commercial Crew Programme in 2014 to Boeing and SpaceX, the company has offered a cargo version of Dream Chaser to resupply the International Space Station, with a contract award expected in November that would cover the period from 2018 to 2024.

SNC Space Systems chief Mark Sirangelo says if successful, Dream Chaser could be ready for its first orbital mission in late 2018.

"We are expecting to be done in about 2.5 years from when we start the programme," he says.

Unlike the test vehicle based on the original design concept, the fully configured version will have folding wings and a cargo module with foldable solar arrays to fit snugly inside the payload bay of multiple heavy-lift rockets, such as the Atlas V, Delta IV and Ariane 5.

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SNC's Dream Chaser orbital vehicle cabin assembly has been fabricated at US Air Force Plant 4 in Fort Worth, Texas by Lockheed Martin.

Sierra Nevada Corporation

Not winning that Cargo Resupply Services II contract would be another blow to the programme, but Sirangelo says the team is resilient and is probably in a more stable position than in 2013 since it now has “real vehicles” and is well into development.

“It’s far more viable than it ever was,” he says, adding that the lifting-body spacecraft was never meant just for NASA, although it was supported for five years under the Commercial Crew Programme.

Dream Chaser is being offered for commercial and governmental space operations around the

globe, not just US government pursuits. Sirangelo says SNC wants to bring the next “Space Shuttle” programme to the world, and the Dream Chaser team is engaged with many spaceports about potentially supporting landing and recovery operations.

“We have been predicted to die every year since we’ve been doing this. We have real vehicles, we’re into development,” says Sirangelo.

08 OCTOBER 2015

SOURCE: FLIGHTGLOBAL

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