

Commercial

SpaceX acquires parachute supplier

Jeff Foust November 30, 2023



Pioneer Aerospace supplied the drogue chutes used on Crew Dragon spacecraft, seen here during the Demo-1 test flight in 2019. Credit: NASA TV

WASHINGTON — In a rare acquisition, SpaceX has purchased out of bankruptcy a company that provided components for Dragon spacecraft parachutes.

A federal bankruptcy court in Florida approved an agreement Nov. 22 whereby SpaceX would acquire Pioneer Aerospace for \$2.2 million. The deal was [first reported by The Information](#).

Pioneer's parent company, Aviation Safety Resources (ASR), filed for Chapter 11 bankruptcy protection in the Middle District of Florida on Nov. 1. ASR acquired Pioneer Aerospace from Safran Electronics and Defense in June 2022.

Connecticut-based Pioneer has developed parachutes for space and other applications for decades. That work ranged from parafoils developed in the 1960s for potential use on Gemini spacecraft to parachutes flown on Mars lander missions and the OSIRIS-REx sample return capsule. It also supplied drogue chutes for SpaceX's Crew Dragon and its cargo variant.

Pioneer Aerospace filed with the bankruptcy court Nov. 9 an asset purchase agreement with SpaceX, whereby SpaceX would acquire substantially all the assets of Pioneer for \$2.2 million. That included intellectual property for drag chutes and drogue chutes, "specifically inclusive of SPX-00000432 Drogue Chute." The bankruptcy court approved the sale Nov. 22.

Neither SpaceX nor Pioneer Aerospace have publicly commented on the deal, and Pioneer's website does not even mention the Chapter 11 filing. SpaceX did not respond to questions Nov. 29 about the deal; the company rarely acknowledges media inquiries.

One industry source, speaking on background, said the deal was likely an effort to preserve SpaceX's supply chain, speculating that the cost to acquire Pioneer out of bankruptcy may have been less than what SpaceX would have spent on finding a new drogue chute supplier and requalifying that component for use on crewed missions.

Both SpaceX and Boeing, the other company with a NASA commercial crew contract, struggled to develop parachutes for their spacecraft, [suffering test setbacks at times](#). Even after entering service, there were incidents [such as "lagging" parachutes that opened later than expected but did not jeopardize safety](#).

"Parachutes turned out to be way harder than we thought," said Phil McAlister, director of the commercial spaceflight division at NASA Headquarters, during a presentation on lessons learned from the commercial crew program at a Nov. 20 meeting of the NASA Advisory Council's human exploration and operations committee. "We thought, 'We've done parachutes during Apollo, how hard could it be?' It could be very hard."

He noted a lot of the Apollo-era parachute experience was from half a century ago and "maybe wasn't documented as well as we had hoped." He added there was not a large industrial base for large parachutes, which complicated development.

The acquisition is notable also because SpaceX rarely buys other companies. SpaceX President Gwynne Shotwell [said at the Satellite 2022 conference in March 2022](#) that the only companies that SpaceX had acquired since its founding 20 years earlier was an unnamed machine shop as well as Swarm Technologies, a startup that was developing a constellation of smallsats for internet of things (IoT) services.

The acquisition of Swarm, [reported by the Wall Street Journal to be worth \\$524 million](#), was widely seen as an acquisition of talent and technology. While Swarm continues to provide IoT services to existing customers, [it has since stopped sales of new receivers](#), and stated that customers will be served in the future by direct-to-device capabilities on Starlink satellites.