



CST-100

STARLINER

What's Going Up: Starliner Orbital Flight Test (OFT)

The Orbital Flight Test (OFT) for Boeing's CST-100 Starliner will carry commemorative items befitting the spacecraft's role as the first Boeing-owned and -operated human-rated spacecraft to be launched into orbit. Although Boeing and its heritage companies built all of the spacecraft that NASA has operated to carry astronauts on their missions, Starliner will break new ground for Boeing and chart a new, successful course for the American aerospace industry.

The practice of carrying items aboard a spacecraft with the purpose of becoming meaningful souvenirs goes back to the early days of America's space program. One example is Gus Grissom, who took rolls of coins with him on his 15-minute suborbital flight in July 1961. In the years that followed, astronauts routinely took small bags of souvenirs with them that became small trophies for family, friends and colleagues. Apollo astronauts even took items with them on their lunar missions. The practice was followed throughout the 30 years of space shuttle flights and is continued today by the crews of the International Space Station.

In each case, the items from these missions are meant to evoke the value, meaning and reward of spaceflight even for those who did not make the trip themselves. Boeing continues the tradition to reward the immense work and dedication required to develop, build and fly a spacecraft capable of safely taking crews into orbit, to the space station and back to Earth.

Following the completed mission, many of the commemorative items will be distributed by their sponsoring companies to teams around the country that played a role in Starliner's development and in NASA's Commercial Crew Program. Along with a host of American flags, Starliner coins and program decals, several unique items will also make the trip into orbit aboard Starliner.

Bill Boeing's ID Card for Air Travel

A card that Boeing's founder signed and used to travel the United States by air will orbit the world in a spacecraft built by his company.



Boeing founder Bill Boeing was inspired to build aircraft long before there was a known market for them. From the start, he committed his company to "build it better," and that high standard has guided the company's thousands of employees for more than 100 years. With Starliner, that high bar prompted innovative designs that start with a proven foundation and then build extraordinary capabilities, such as autonomous guidance and docking systems along with a parachute-and-airbag landing and recovery approach that places astronaut safety and operability at the forefront.



This identification card is numbered "1" for Bill Boeing and carries his original signature. It was issued to him to use to board any flight by the United Airlines and Transport Corporation, the precursor of United Airlines. Normally stored in The Boeing Company archives, the ID card will travel inside Starliner on a mission that is poised to re-establish American preeminence in launching humans on groundbreaking missions.

Starliner's OFT also will set the company on a path for commercial spaceflight similar to the path Bill Boeing began in 1916, when his aircraft company produced its first airplane and followed it up soon after with aircraft designed to meet the needs of the U.S. Air Mail service.

Just as Bill Boeing's airplanes and pioneering work opened new avenues for travel throughout his company's first 100 years, Starliner will open orbital human spaceflight to more people than ever before.



On March 1, 1919, Bill Boeing (holding the mailbag at right) and Eddie Hubbard flew the first international mail flight from Seattle, Washington, to Vancouver, British Columbia, in the Boeing Model C, the company's first production airplane.

Starliner Space Seedlings

A mix of tree seeds with a history that harkens back to the Apollo era will be among the first commemorative items to fly to space in Boeing's CST-100 Starliner.

In 1971, astronaut Stu Roosa took 500 seeds from five different species of trees around the moon with him on the Apollo 14 mission. His special cargo included 100 seeds each of loblolly pine, sycamore, sweetgum, redwood and Douglas fir. When the seeds were brought back to Earth, the U.S. Forest Service germinated them and sent them around the country to be planted, eventually becoming "moon trees."

In honor of those first space trees, Boeing's CST-100 Starliner will carry the same mix of seeds on its first flight test to low Earth orbit. When the seeds return, they'll be distributed to Boeing sites, suppliers and other stakeholders across the country, growing the first generation of Starliner trees.



A "Moon Tree" planted at NASA's Goddard Spaceflight Center in Maryland sprouted from seeds carried on Apollo 14.
(NASA photo)



Silver Snoopy Pins

Symbol of human spaceflight safety gets special ride into orbit with Starliner Orbital Flight Test.

The revered symbol of safety in human spaceflight, dozens of Silver Snoopy pins will be packed inside Starliner's cargo bags to orbit the Earth and return at the end of the mission. The small items depict the beloved American beagle happily wearing a spacesuit.

NASA's missions have routinely included cargo space for the safety mascot that was designed by cartoonist Charles M. Schulz to highlight Snoopy's special relationship with human spaceflight and the constant drive to do things safer and better than before.

Receiving a Silver Snoopy is one of the preeminent lifetime honors in human spaceflight. The award is conferred by astronauts on those who directly contribute to the success of the U.S. human spaceflight program. Boeing is honored to carry on this tradition by taking these meaningful items on a flight dedicated to making orbital spaceflight safer.

Suppliers' Commemoratives

No one at Boeing does anything alone, and that is the case with our approach to human spaceflight as well. Starliner's development and construction relied on dedicated suppliers who put in their best efforts to deliver quality parts for the spacecraft that will make its first flight test. From company flags to custom patches, many suppliers have packed small cases with lightweight items for flight inside the Starliner OFT crew module, where the spacecraft's fully functional life support system will provide an atmosphere like the one they experienced on Earth. The items will be returned to the companies after Starliner's flight back to Earth.

More Information:

Learn more at www.boeing.com/space/starliner.
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