

## Safety Firsts

**Production of the storied 747** will come to an end as 2022 draws to a close. With more than five decades of service so far, the iconic “Queen of the Skies” leaves a lasting legacy of safety firsts.

### The 747 was the first airplane with:

- Triple redundancy in all major systems.
- Quadruple redundancy in the control and hydraulic systems.
- Three wing spars, with the third spar extending to the outboard engine.
- Four main landing gear (the plane can operate with just two) that contribute to a soft landing.
- Enclosed overhead bins replacing open hat racks.
- Full-motion simulators for training.



### MOTION PICTURE

The 747 team created the industry's first full-motion simulator. During development of the airplane, Boeing invested millions of dollars in a flight training program, including behavioral flight training (instead of procedural) and a cadre of top flight instructors. The “Test Data Van” is at the ready in the background.

PHOTO: BOEING ARCHIVES



### HOME STRETCH SKETCH

One of the last 747s under construction, in Everett, Washington, as seen through the pencil, pen then paint of Jeff Barlow from Boeing Creative & Digital.

IMAGE: JEFF BARLOW/BOEING