



GULFSTREAM COMPLETES ULTIMATE LOAD TESTING FOR G500

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Gulfstream Aerospace Corp. announced it has completed ultimate load testing for the all-new Gulfstream G500.

Ultimate load represents 150 percent of limit load and is equivalent to a 1.5 safety factor specified by the Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA). Limit load is the maximum level that an aircraft should experience once during its service life. Completion of the full-scale aircraft ultimate test fulfills the certification requirements for both the FAA and EASA.

Carried out over five months, the testing focused on the aircraft's fuselage, wing, vertical and horizontal stabilizers and control surfaces. It involved eight primary test conditions, including wing up and down bending, horizontal up and down bending and wing torsion.

More than 6,000 channels of instrumentation, including load cells, strain gages, displacement transducers and instrumented links/pins, were used to monitor the test article's structural response. Cameras inside the wing, empennage and fuselage allowed engineers and technicians

real-time insight into the structure's behavior.

“This is a significant accomplishment in development of the G500,” said Mark Burns, president, Gulfstream. “The successful completion of these tests confirms the airframe’s solid construction, fulfills certification requirements and clears the way for us to proceed with additional testing.”

Gulfstream will now conduct an additional company test, applying increasingly higher loads to determine the structural test article’s destruction point. Destructive testing of aircraft components is important to demonstrate and refine Gulfstream’s engineering models, designs and analysis methods.

Later this year, Gulfstream will begin a multi-year fatigue program for the G500 that will simulate three lifetimes of airframe operation.

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