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USASMDC/ARSTRAT

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PROGRAM NOTES

C-130J Models Tested for New Vertical Separation Rules

Maintenance employees at Robins AFB, GA, the center's Depot Maintenance Partnership and Business Development office, Lockheed Martin, and subcontractor AeroMech Inc., collaborated earlier this year in an effort to ensure that three variations of the C-130J model will meet new Federal Aviation Administration (FAA) guidelines.

A separation rule new to the United States, known in the aviation world as "reduced vertical separation minimum" (RVSM), went into effect in January, according to Brian Smith, AeroMech flight test engineer.

The RVSM standards, which provide greater fuel efficiency by allowing more aircraft to fly at higher altitudes, have been in place over the Atlantic since 1997, and in Europe since 2000.

"Prior to January 20, aircraft flying between 29,000 feet and 41,000 feet were separated vertically by air traffic controllers by 2,000 feet," Smith said. "With the new RVSM airspace that went into effect on January 20, air traffic control now separates airplanes by 1,000 feet."

To ensure that all C-130J models have certified altimetry systems that are accurate enough to allow them to fly under the new regulations, three variants of the aircraft were brought to Robins for RVSM flight testing. Two other variants were also tested at other locations in support of certification efforts.

The Robins testing was performed on an EC-130J, a special operations plane, and two HC-130J Coast Guard aircraft, said Raymond Birt of the center's Depot Maintenance Partnership and Business Development office.

Each aircraft arriving from its squadron was met by Robins C-130 mechanics, who installed a modification to collect data that would be used to certify the aircraft model for operation in RVSM airspace. To install this modification, specific panels were removed, as well as the aircraft's rudder, vertical stabilizer leading edge and tip. The modification was used only for data collection and reinstalled after each aircraft's flight test activity was complete.

Birt was contacted by the Aeronautical Systems Center (ASC) at Wright-Patterson AFB, OH, to discuss a possible partnership to modify three C-130J aircraft at Robins for RVSM main-

tenance and flight testing. Because of time constraints, a partnership was not possible. In an effort to support Lockheed Martin and ASC, a decision was made to work the project organically, with ASC funding the center's C-130 Production Branch and AeroMech.

After the modification was installed on the aircraft, the flight test process began with an hour of low-level passes over the airfield. These passes were required to calibrate the trailing cone, which was connected to the AeroMech flight test equipment inside the aircraft.

While the trailing cone sensed the free-stream air pressure, Lockheed Martin personnel on the ground used a ground pressure transducer to record ground pressure for

each low pass over the runway.

"Altimetry systems utilize sensors that are located near the fuselage surface and can be inherently incorrect. The point of the trailing cone is to obtain a true reading of the pressure of the air mass through which the airplane is flying," Smith said. "The true, free-stream pressure from trailing cone can then be used to establish the need, and basis, for an appropriate altimetry system error correction."

After the low-level passes the aircraft then flew out over the Atlantic to obtain additional high-altitude data.

Final RVSM certification of the C-130J aircraft is pending review and approval of the certification data by various military regulatory organizations.

PEOPLE



The Senate has confirmed Air Force **General T. Michael Moseley** as Air Force chief of staff. Moseley, who was deputy chief of staff, replaced General John Jumper.



Air Force **Lieutenant General John D. W. Corley** has been nominated for appointment to the grade of general with assignment as Air Force vice chief of staff.



Air Force **Lieutenant General Norton A. Schwartz** has been nominated for appointment to the rank of general with assignment as commander, U.S. Transportation Command, Scott AFB, IL.



Air Force **Major General David A. Deptula** has been nominated for appointment to the rank of lieutenant general with assignment as vice commander, Pacific Air Forces, Hickam AFB, HI.



Air Force **Major General John L. Hudson** has been nominated for appointment to the rank of lieutenant general with assignment as commander, Aeronautical Systems Center, Air Force Materiel Command, Wright-Patterson AFB, OH.