



F-35 Lightning II Program

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F-35 ITF AND ITALIAN AIR FORCE KC-767 'FUEL' THE WAY FOR A MILESTONE

Italy's F-35 program achieved two recent milestones with the completion of the first aerial refueling certification between an Italian Air Force KC-767A tanker with an F-35A and the inaugural flight of an Italian-built F-35A.

"Italy is one of the partner nations on the F-35 program and since we are getting ready to receive our first two F-35s from our Cameri [Italy] Final Assembly and Check Out Facility, we needed to certify the Italian tanker. This is a full certification with all the F-35s, so it doesn't matter if the F-35s are Italian, USAF or Australian assets," said Italian Air Force Maj. Fabio De Michele, 311th Flight Test Squadron experimental test pilot.

The Italian test team arrived here early-July and the first test sortie was flown July 22.

"We require only three more test sorties to complete the program. If the remaining flights are successfully completed as scheduled, the program will complete this week," said Vince Caterina, 461st Flight Test Squadron, F-35 experimental test pilot.

"Overall, we are pretty satisfied with the campaign since we are nearing the end of full certification. We are really happy to be the first international tanker to be certified with the F-35. This is truly a historic milestone for the Italian Air Force," added De Michele.

With these specific tests, De Michele highlighted the Italian tanker's incorporation of a new concept of refueling, called a remote vision system, which involves boom operators looking through a helmet-mounted display.

"The HMD displays three-dimensional imagery through the use of two stereoscopic cameras on the bottom of the KC-767A," De Michele said.

Throughout the duration of testing, De Michele noted the multiple organizations who were involved in order to ensure the success of each of the refueling certification trials.

"There were test boom operators [from the 418th Flight Test Squadron] that were responsible for checking the compatibility between the two aircraft involved. There were also flight test engineers who were tracking data and making sure that nothing was going to go beyond the limit of the receiver and the tanker," said De Michele. "Since we had the aircraft fully instrumented, we could see all the data real-time and capture what we needed to certify the aircraft."

"There were four primary organizations directly involved with the test program: the Italian Air Force the 461st FLTS/JSF ITF, the 418th FLTS, and the Lockheed Martin Corporation. The integrated test team developed and executed the test plan to ensure aerial refueling certification requirements would be met in a safe and effective manner," said Christina Ryskey, 418th FLTS Aerial Refueling flight test engineer.

In addition to this, Ryskey mentioned there were teams of flight test boom operators, human systems integration engineers, fuel systems engineers, flying qualities engineers, Boeing personnel, F-35 maintenance teams, the F-35 Joint Program Office, the Air Force Life Cycle Management Center at Wright Patterson AFB, Ohio, the 412th Test Wing Range Squadron and the Navy Sea Test Range, who were all part of the testing process.

Of those organizations, the 418th FLTS was the designated lead test organization, who prepared the test package to include the test plan and safety plan, according to Sawn Sandland, 418th FLTS program manager.

"This is the first time we've done this sort of thing. This is number one in a long line of foreign tankers that will be tested at Edwards AFB to support AR certification with multiple USAF receivers," said Sandland. "Right after this Italian tanker



An Italian Air Force KC-767A tanker prepares to refuel an F-35A during their first test sortie July 22, 2015. Italy's F-35 program achieved two recent milestones with the completion of the first aerial refueling certification between an Italian Air Force KC-767A tanker with an F-35A and the inaugural flight of an Italian-built F-35A. (Lockheed Martin photo/Jonathan Case)

test, we'll be testing the Australian tanker. We have a whole other coalition tanker effort that's going to certify additional receivers with the Italian, Australian and United Arab Emirates tanker, which we plan to start within the next year."

Italy's first F-35A Lightning II, known as AL-1 and assembled at the Cameri Final Assembly and Check Out (FACO) facility, flew for the first time on Sept. 7 and marked the program's first-ever F-35 flight outside the United States.

When the first Italian-built F-35As are ready to be ferried to Luke AFB, Arizona, next year for their student pilots to begin flight training, their KC-767s are anticipated to refuel them on the cross Atlantic voyage.