

## Italian KC-767 Air-To-Air Refueling Tests With F-35A Sep 21, 2015

*Aviation Week*

*Guy Norris*



The Italian KC-767A, similar in overall configuration to the 767-200/2C-based KC-46A tanker currently in development for the U.S. Air Force, is the first international tanker to be certified to refuel a U.S. military aircraft. Based out of Edwards AFB, California, the testing was designed to broaden the operational capability of Italy's F-35 fleet as well as increase interoperability with other F-35 operators. The Italian KC-767A, which is almost identical to the 767 tanker configuration originally considered by the U.S. Air Force under the abandoned lease plan, will likely enable Italy to self-deploy two of its locally assembled F-35s to Luke AFB in Arizona early in 2016.

*Photo: Lockheed Martin*



During the flight to a test area over the Pacific Ocean off the California coast close to Point Mugu NAS, we were shadowed by AF-04, one of the dedicated flight science F-35 test fleet at Edwards. For our test, the F-35A carried a symmetric load of GBU-12 and AIM-9X weapons. Italian and U.S. flight crews say clearance of the full air refueling envelope was completed without incident, auguring well for the eventual introduction of the KC-46A on tanking duty with the F-35. "We are really satisfied with the behavior of the tanker," says Aeronautica Militare test pilot Maj. Fabio de Michele, who leads the KC-767/F-35 test and certification campaign. "The receiver pilots were surprised by how well they could keep station behind the tanker and particularly liked the lighting system. There was no wake turbulence or any difficulties, even when tanking at night," he adds.

*Photo: Guy Norris/AW&ST*



The first of more than 45 test flights was conducted on July 29, when the KC-767, one of four Italian air force tankers from the 8th Sqdn. of the 14th Wing based at Pratica di Mare airbase, near Rome, offloaded more than 16,000 lb. of fuel. Each subsequent test flight included 5-77 contacts and involved the average transfer of 25,000 lb. of fuel.

*Photo: Guy Norris/AW&ST*



Crews control the refueling boom using side-sticks and a fly-by-wire control system. For the operation, remote aerial refueling operators (RARO), or "boomers," are equipped with head-mounted displays.

*Photo: Guy Norris/AW&ST*



The displays project three-dimensional imagery of the boom and area beneath the tail of the tanker.

*Photo: Guy Norris/AW&ST*



Pilots approaching the tanker take visual cues from these rows of belly-mounted lights.

*Photo: Guy Norris/AW&ST*



Tanker crews obtain situational awareness of aircraft movement below and around the aircraft through a set of ventrally mounted cameras.

*Photo: Guy Norris/AW&ST*



Dual cameras for the RARO stereoscopic system are mounted forward of the boom and just aft of the central drogue. Both systems are seen in their stowed positions.

*Photo: Guy Norris/AW&ST*



Since entering service in early 2011, the Italian air force tanker fleet has, through the end of August 2015, maintained a 98.9% mission success rate, flown more than 3,850 sorties and offloaded almost 27 million lb. of fuel. In addition to supporting its domestic fleet, the KC-767A has been certified in support of several allied combat types including U.K. Typhoons, French Rafales and Spanish EF-18s.

*Photo: Lockheed Martin*