

### India's Light Combat Aircraft to Be Armed With Beyond Visual Range Missile

Israeli defense contractor Rafael Advanced Defense Systems successfully completed integration of the I-Derby beyond-visual-range (BVR) air-to-air missile on the Indian Air Force's Tejas Light Combat Aircraft (LCA) with test firing of the missile scheduled for the end of 2017, Flight Global reports.

According to a Rafael representative, the new missile is slated to become the LCAs main air-to-air weapon following the completion of testing by the end of the year. The last test firing of a I-Derby BVR missile occurred at the Chandipur Integrated Test Range (ITR) in the Indian state of Odisha in May.

"The objective of the test was to assess the Derby integration with aircraft systems on board Tejas, including the aircraft avionics, fire-control radar, launchers and missile weapon delivery system and to verify its performance," the Indian Ministry of Defense (MoD) said in a statement at the time.

Enjoying this article? Click here to subscribe for full access. Just \$5 a month.

"A safe separation was followed by missile guidance towards RADAR

acquired target. The flawless launch was demonstrated with all on-board systems performing satisfactorily and the missile scored a direct hit on the target with complete destruction of it. The test firing achieved all its planned objectives," the MoD statement added. "The Derby firing is a major step towards clearing BVR capabilities on LCA aircraft for FOC [full operational capability]."

The missile, fitted with a fire-and-forget guidance system, has an estimated range of over 50 kilometers and an estimated speed of Mach 4. According to Rafael, the LCA could be equipped with an extended-range variant of the I-Derby with a range of up to 100 kilometers. The weapon can be fired from missile rail launchers fitted underneath the aircraft's wings.

The Tejas LCA is a supersonic, single-seat, single-engine multirole light fighter aircraft, which has been under development since 1983 by the Aeronautical Development Agency in cooperation with Indian state-owned military aircraft maker Hindustan Aeronautics Limited (HAL). As I noted elsewhere:

The Indian Air Force intends to induct a total of 123 Tejas Mark-IA

aircraft. In November 2016, the Indian MoD cleared the purchase of a first batch of 83 Mark-IA LCAs. The IAF is also currently slated to receive 40 Tejas Mark-I aircraft by early 2018.

However, HAL has so far not yet been able to meet the target of eight aircraft per year. In July 2016, the IAF inducted the first two serially-produced LCAs, followed by three more aircraft during the year. A sixth LCA is expected to join the IAFs Number 45 Squadron. HAL is expected to produce 16 LCAs during the full-production phase.

In addition, I explained (See: “India’s Newest Fighter Jet Completes Maiden Flight”):

The Mark-I variant (...) suffered from a number of technical shortfalls, according to a May 2015 report by the Comptroller and Auditor General (CAG) of India — the Indian government’s principal oversight body — including inadequate electronic warfare capabilities, problems with the on board radar system, and reduced internal-fuel capacity.

The technical shortcomings will be corrected in the Mark I-A variant. Gun trials for the LCA are slated to commence in August 2017.