MiG, Aviadvigatel Confirm MiG-31 Development

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RAC MiG is working on a "radical modernization" of the MiG-31 Foxhound. Russia has 180 of the Mach 3 interceptors.

Russian Aircraft Corporation MiG and Aviadvigatel have confirmed that work continues on “radical modernization” of the MiG-31 Foxhound, with the focus on extending the performance of the aging, out-of-production Mach 3 interceptor so that it can carry out not only air-defense duties but also serve the recently established VKO, the Russian acronym for the country’s Air and Space Defense (Command). Under a directive from the Russian defense ministry, RAC MiG is working on new versions of the aircraft more capable than the current MiG-31BM.

Speaking to AIN at the Engines-2014 exposition held April 15 to 17 in Moscow, Aleksander Inozemtsev, executive director and general designer at the Aviadvigatel aero-engine design house, said that although the MiG-31 has been in service for more than a quarter century, “it remains a unique weapon; no other country possesses anything of the kind.” He described the aircraft as “the world’s only interceptor that can loiter for a very long time while on airspace patrol thanks to the low fuel consumption of the Aviadvigatel D30-F6 bypass turbojet, which enables the airplane to accelerate to 3,000 kilometers per hour [1,620 knots/1,864 mph] when attacking an aerial target.”

The Russian government has decided to support MiG-31 development and modernization following heated discussions in parliament and the defense ministry's think-tank. Aviadvigatel and industrial partner Perm Motor Plant have submitted reports about the current status of the D30-F6 fleet, the equipment used to manufacture it and the supply of parts. Inozemtsev commented: "Nothing is lost. There were 1,500 engines [and 500 airframes] built. The existing MiG-31 fleet has amassed a moderate number of flying hours and their engines have a long lifetime remaining. There is a stock of engines and spares. We informed the government that we can support MiG-31 fleet operations for a long time."

Studies by defense ministry think-tanks assert that neither the recently developed Sukhoi PAKFA fifth-generation fighter nor the Tupolev PAKDA can replace the MiG-31 for a number of vital defense roles, such as protecting Russia's vast northern territories against attack by U.S. cruise missiles and warplanes, according to Inozemtsev. "We must carry out some work to refresh our stocks. We have submitted modernization proposals that are influencing the decisions being made. I think the MiG-31 fleet will undergo refit and modernization," Inozemtsev said.

He declined to elaborate, citing the classified nature of MoD programs. "All I can say is that this unique weapon will be further improved. After refit, the aircraft will be employed not so much on air-defense duties and more in the interests of the Air and Space Defense [Command]. This will be possible through exploration of the high potential of the airframe and powerplant."

Russia currently has 180 MiG-31s. The aircraft first flew in 1976, and the follow-on MiG-31M first took to the sky in 1985. The MiG-31D appeared in 1987 and demonstrated its ability to fly at Mach 2.83 with six long-range air-to-air missiles on a typical 3.5-hour intercept mission. During a trial in 1994 a developmental MiG-31 destroyed a low-flying target from a distance of 162 nm (300 km).

The most recent variant, the MiG-31BM, is a multirole aircraft with the redeveloped Zaslon-M passive phased-array radar, capable of detecting up to 10 targets simultaneously at a range of up to 175 nm (324 km). It can employ the RVV-BD active radar-guided weapon, with a firing range of 108 nm (200 km). The MiG-31BM can also carry R-77 infrared-guided air-to-air missiles, Kh-31 air-to-surface missiles and KAB-500 EO/IR-guided bombs. The Sokol plant in Nizhny Novgorod continues to upgrade in-service aircraft to the MiG-31BM configuration at a rate of 15 aircraft per year. The facility has a Russian MoD contract for about 60 MiG-31BMs for delivery between 2011 and 2018.

On a related subject, issues were raised during parliamentary hearings on the role of United Technologies and Pratt & Whitney in "destroying" military production capability at the Perm Motor Plant. The U.S. firms had been shareholders, but after some controversy Russian government entities bought back their stock holdings "two to three years ago," according to Inozemtsev. This has enabled Perm to sell PS90A advanced turbofans to Iran to power Tupolev Tu-204 jetliners, a move previously opposed by the U.S. State Department.