More teeth for Jaguar: Nearly 120 of the Indian Air Force jets are being modernised

The Indian Air Force (IAF) has lit the afterburners to make its Jaguars fighting fit for modern warfare and increase their service life.

The Jaguars, the only aircraft with the IAF capable of carrying nuclear weapons other than the Mirage-2000s, are being fitted with autopilots, next generation avionics and lethal armaments under an ambitious modernisation programme that will see the fighters flying well after 2030.

Nearly 120 Jaguars are being modernised. So far, the IAF has procured autopilots for 55 Jaguars and talks for 95 more, which includes spare autopilots, are underway, according to information shared by the government in Parliament.

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The upgradation of the Ambala-based fighter jets, in service for more than four decades, is being carried out by the Hindustan Aeronautics Limited (HAL) at a cost of more than Rs 3,000 crore.

Autopilots would lessen pilot workload, freeing them from physically flying the jet during long flights though, in an ultimate test of IAF top guns, six Jaguars flew all the way to Alaska for a joint exercise with the US Air Force in 2004.

The government is also reviving a plan to re-engine the aircraft with a more powerful powerplant. The IAF feels the Jaguars, powered by Rolls Royce Adour-811 turbofan engines, are underpowered, and wants a more powerful engine for the fighters.

The Jaguar's cockpit will be completely transformed as well

But its hunt for a new power-plant has not been easy. In 2010, its bid for more than 250 turbofans for the Jaguars could not take off as one of the contenders - Rolls Royce, which offered its upgraded Adour MK-821 engine - backed out leaving only Honeywell's F124IN engine in the fray.

The Indian government prefers to avoid single-vendor bids in military acquisitions.

The Jaguar's cockpit is going to completely transform. It's going to turn all glass. There will be digital MFDs (multifunction displays) replacing the traditional analog gauges and dials, and pilots will have fly-by-wire controls.

Speaking to the media in June 2012 after the passing out parade at the Dundigal Air Force Academy, Hyderabad, Air Chief Marshal NAK Browne said the key year for the IAF's modernisation projects would be 2022.

'All the contracts which are signed during the 11th plan… will be executed till 2017. At least 65 to 70 per cent of modernisation will be accomplished by 2017, and the rest by 2022,' he told PTI.

A key aspect of the modernisation would be the increase in the numerical strength of the air force from 34 to 42 squadrons.

But this would involve a huge effort in terms of training more pilots, technicians and creating the infrastructure to utilise the platforms.

According to Air Chief Marshal (retd) S. Krishnaswamy, a key imperative is to make the best use of things we already have.

'We must meet international standards in keeping our aircraft/helicopters, weapons, weapon systems, surveillance systems, sensors, communication network and operational infrastructure that are already in the inventory in a high state of readiness.

'The inability to obtain spares or keep machines online should not be an excuse to import new. Obsolete ones must be retired strictly as per plans,' he added.

The situation with regard to the IAF is not good, and has yet to bottom out before it begins to improve.

Further, despite its poor shape, the IAF remains the one segment of our armed forces where we retain a clear edge over Pakistan because of the Su- 30MKI, and the poorer condition of the Fiza'ya (Pakistan Air Force).

Why it is absolutely necessary that we meet targets is that the PLA Air Force's modernisation drive is on schedule and in another five years we will confront a genuinely modern and numerically significant adversary to the north.

The Chinese have acquired Su-30MK from the Russians and have developed or are developing a number of fighters themselves, including the fifth generation J-20.

The IAF's hopes rest on the acquisition of the Rafale and the fifth generation fighter (FGFA) it is developing with Russia.

And so, the combat environment in India's northern borders will be the most advanced anywhere, with aircraft requiring the latest in terms of AESA radars, long-range precision strike weapons, beyond visual range missiles and so on.

To beef up numbers, India will field upgraded Mirage 2000s, Jaguars, Mig- 29s and Mig-27s, in addition to the domestically developed LCA Tejas in both its Mark I and Mark II versions.

But aircraft are only one aspect of the modernisation project. Remember, that with a technologically inferior air force, India bested Pakistan in the 1965 war with that country. That was because of training and morale.

According to Krishnaswamy, it is vital to have 'availability of adequate number of fully trained operational and technical crew to maintain and operate 24x7'.

Today, training is in a shambles. The air force is still scrambling to acquire a basic trainer, the Swiss Pilatus PC-7, because the indigenously developed HPT-32 was grounded in 2009.

It lacks an intermediate jet trainer, since the HAL's HJT-36 remains under development, and does not have a useful lead-in fighter trainer.