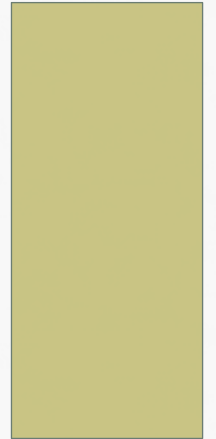


HAL
(Hindustan Aeronautics Ltd)

Compiled by Sanjay Mohan Bhatnagar



HAL (about)

Type	State-owned enterprise
Industry	Aerospace and Defense
Founded	1940 (As Hindustan Aircraft). 1964 (Renamed Hindustan Aeronautics)
Headquarters	Bangalore, Karnataka, India
Chairman and Managing Director	T. Suvarna Raju
Products	Transport aircraft, Fighter aircraft, Helicopters
Revenue	Rs. 17,406 crore (US \$2.5 billion) (2016/17)
Number of employees	32108 (March, 2014)

- An Indian Govt. owned aerospace and defense company headquartered in Bangalore, India.
- Governed under the management of the Indian Ministry of Defense.

HAL (about)

- The government-owned corporation primarily involved in the operations of the aerospace and is currently involved in the **design, fabrication and assembly of aircraft, jet engines, helicopters and their spare parts.**
- It has several facilities spread across India including Nasik, Korwa, Kanpur, Koraput, Lucknow, Bangalore, Hyderabad and Kasaragod.
- **HAL HF-24 Marut fighter-bomber was the first fighter aircraft made in India.**

Some In-house developed products

- **Agricultural aircraft:** HA-31 Basant
- **Fighter aircraft:** HF-24 Marut — Mk1 and Mk1T
- **Light Combat Aircraft:** Tejas

HAL (about)

Some In-house developed products

Advanced Light Helicopter: Dhruv

Attack helicopter: Rudra

Observation and reconnaissance aircraft: HAOP-27
Krishak

Transport and passenger aircraft: Saras, developed by HAL Lucknow and National Aerospace Laboratories (NAL)

Utility aircraft: HAL-26 Pushpak

Gliders: HAL G-1 — HAL's first original design, dating from 1941. Only one was built.

Gliders (Training): Ardhra

Gliders (Training): Rohini

HAL (about)

Some In-house developed products

Unmanned Aerial Vehicles

- PTA Lakshya
- PTA Lakshya 2
- NRUAV
- Nishant UAV
- Rustom H
- UCAV Tejas - Unmanned Combat Aerial Vehicle (under development)

Do You Know?????

- The IAF constituted the first LCA squadron with just two aircraft in 2016
- As of July 2018, IAF has inducted only nine aircraft.
- Tejas has once again missed the FOC (Final Operational Clearance) in June and the development of the Tejas-Mk 1A with specific enhancements has been delayed.
- With this development, HAL's aircraft division will be headed by a **serving three-star officer** or an Air Marshal of the IAF, and effectively give the IAF control over the country's indigenous LCA project.

Air-Marshal is a **three-star rank in the Indian Air Force** and is held by the officers who typically hold very senior appointments of the formation.

HAL's Light Combat Aircraft project to come under IAF control

- **The government to hand over control of the Bengaluru division of HAL to the Indian Air Force (IAF).**
- With this, the **fixed wing aircraft division** will come under the IAF.
- This is to prevent more time and cost overruns on the indigenous Light Combat Aircraft (LCA) project.
- This comes at a particularly crucial time as the next phase of the LCA project, development of the MK2 variant, as well as the country's next fighter aircraft programme, the Advanced Medium Combat Aircraft (AMCA), begin to take shape.

The LCA programme was sanctioned in 1983 and the aircraft made its first flight in 2001.

LCA - Developments

- In addition, three institutions — **Aeronautical Development Agency (ADA)**, **Aeronautical Development Establishment (ADE)** and **Gas Turbine Research Establishment (GTRE)** — which are under the **Defense Research Development Organization (DRDO)** are likely to be brought under the direct control of the Chief of the Air Staff.
- Thus, the entire development cycle of the LCA will have the IAF's oversight.
- This will ensure timely execution of the project.

LCA – Design Reboot

- The LCA is powered by an **American GE-404 engine**.
- It produces 84KN thrust.
- IAF has stated is **underpowered**.
- **This engine is to be corrected in the LCA-Mk2** (a larger aircraft)
- **This will be powered by the GE-414 engine.**
- It produces 98kN thrust.

- Accommodation of the larger and more powerful engine needs more fuel, a larger wingspan.
- This calls for a major design and engineering effort.
- **The first prototype of the Mk2 expected to make its debut flight in 2022-23**, and complete the IOC and FOC approvals in the next five years.
- **The current target is to have the first squadron ready by 2028.**

LCA – Design Reboot

- The IAF intends to have several squadrons of the LCA-Mk2 as **it has to replace three Mirage squadrons, three Mig-29 squadrons and six Jaguar squadrons.**

A **squadron** typically has about **18 aircraft, 16 fighters and two trainers.** However, this can vary, depending on the type of aircraft and the necessity.

Thanks for reading

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Courtesy:

https://en.wikipedia.org/wiki/Hindustan_Aeronautics_Limited and

<https://www.thehindu.com/news/national/hals-light-combat-aircraft-project-to-fly-under-the-iaf/article24603571.ece>