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LCH Prachand — India's Indigenous Attack Helicopter and its Strategic Significance

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SUBJECTS COVERED

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LCH Prachand — India's Indigenous Attack Helicopter and its Strategic Significance

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WHY IN NEWS

President Droupadi Murmu flew as co-pilot in the LCH Prachand at Jaisalmer Air Force Station on February 27, 2026 — becoming the first Indian President to undertake a sortie in an attack helicopter and drawing national attention to India's indigenous combat aviation programme.

WHAT IS THE LCH PRACHAND?

The **Light Combat Helicopter (LCH) Prachand** is India's **first indigenously designed and developed dedicated combat helicopter**, manufactured by **Hindustan Aeronautics Limited (HAL)** at its Rotary Wing Research and Design Centre in Bengaluru.

"**Prachand**" means fierce or formidable in Sanskrit — reflecting its combat role.

KEY SPECIFICATIONS

Parameter	Specification
Type	Light attack helicopter
Developer/Builder	HAL (Hindustan Aeronautics Limited)
Max take-off weight	~5,800 kg
Engines	Two Shakti turboshaft engines (HAL-Safran joint venture)
Max speed	~268 km/h
Range	~550 km
Service ceiling	~6,500 metres (designed for Himalayan operations)
Crew	2 (pilot + weapons systems officer in tandem configuration)

ARMAMENT

- **20mm M621 turret gun** (nose-mounted)

Mistral 2 air-to-air missiles (anti-helicopter capability)

Rocket pods (70mm rockets)

Anti-tank guided missiles (compatible with future integration)

Dhruvastra (HAL-developed ATGM) integration planned

ADVANCED FEATURES

Low radar cross-section (stealth design elements)

Crashworthy undercarriage

Night-attack capability via FLIR (Forward Looking Infrared)

Electronic warfare suite

Self-sealing fuel tanks

DEVELOPMENT HISTORY

The LCH programme was initiated in the early 2000s as India sought to fill the gap between light utility helicopters and heavier attack platforms. The requirement was driven by the **1999 Kargil War**, where India lacked a capable high-altitude attack helicopter.

Key milestones:

2010: First prototype flight

2016: Production clearance for limited series production

2022 (September): Formal **induction into Indian Army** (3 units initially)

2022: IAF also inducted LCH into service (attack helicopter squadron)

2023 onwards: Production ramping up; eventual requirement of **160 LCH** (IAF: 65, Army: 95)

WHY HIGH-ALTITUDE CAPABILITY MATTERS

The defining design requirement of LCH was **high-altitude performance** — specifically the ability to operate in the **Himalayan terrain** up to 6,500 metres. This is strategically critical:

KARGIL WAR LESSON

During Operation Vijay (1999), the Indian Air Force used Mi-17 transport and Mi-35 attack helicopters. The Mi-35 — while capable — was Soviet-designed for European theatres and struggled at extreme altitude. The absence of a dedicated light attack helicopter that could operate effectively above 5,000 metres was a recognised capability gap.

SIACHEN CONTEXT

The **Siachen Glacier** (5,400 metres) requires helicopters for all logistics and medical evacuation. An indigenous attack helicopter capable of operating here provides both deterrence and tactical fire support capability on the world's highest battlefield.

CHINA FACTOR

India's **Line of Actual Control (LAC)** with China runs across terrain ranging from 4,000 to 5,500 metres. LCH provides a rapid close air support asset that can operate in this environment — complementing the Apaches (AH-64E) in the IAF inventory (which are US-made and excellent but primarily designed for lower altitude operations).

COMPARISON — APACHE AH-64E VS LCH PRACHAND

Feature	Apache AH-64E	LCH Prachand
Origin	USA (Boeing)	India (HAL)
Max altitude	~4,500 m effectively	~6,500 m
MTOW	~10,400 kg (heavier)	~5,800 kg (lighter)
Primary role	Armoured warfare, tank killing	High-altitude attack, anti-infantry
India's fleet	22 with IAF	65 ordered (IAF), 95 (Army)

HAL'S ROLE IN INDIGENOUS DEFENCE

Hindustan Aeronautics Limited is India's state-owned aerospace and defence company headquartered in Bengaluru. It is one of the largest aerospace companies in Asia by revenue.

Key HAL products:

- **LCH Prachand** (attack helicopter)
- **Dhruv ALH** (Advanced Light Helicopter — utility variant)
- **Tejas Mk1A** (light combat aircraft — in production)
- **HTT-40** (basic trainer aircraft)
- **Sukhoi Su-30MKI** (licence manufacture, 270+ delivered)

HAL's **Shakti engine** — developed with France's Safran — powers both the Dhruv ALH and LCH. It is one of India's few indigenous aero-engine developments.

PRESIDENT MURMU'S SORTIE — SIGNIFICANCE

President Droupadi Murmu's decision to fly in the LCH was not ceremonial alone. As **Supreme Commander of the Armed Forces**, the President's engagement with indigenous defence platforms sends a clear message:

- Institutional endorsement of HAL's capabilities
- Boosts morale of defence engineers and test pilots
- Underscores commitment to indigenous defence manufacturing under **Atmanirbhar Bharat**

Her previous sorties: **Sukhoi-30 MKI** (April 2023, Tezpur Air Force Station, Assam) and **Rafale** (October 2023, Ambala Air Force Station) — making her the most aviation-active Indian President on record.

UPSC RELEVANCE

LCH Prachand, HAL, Shakti engine, service ceiling, Jaisalmer, Vayu Shakti exercise, Apache AH-64E.

MAINS GS-3:

Indigenous defence manufacturing; high-altitude warfare; HAL's role in Atmanirbhar Bharat.

INTERVIEW:

India's helicopter fleet gap — why indigenous development matters in the context of high-altitude conflict.

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LCH PRACHAND — CORE DATA:

Full name: **Light Combat Helicopter Prachand** (Prachand = fierce/formidable)

Developer: **HAL**, Bengaluru (Rotary Wing R&D Centre)

Service ceiling: **~6,500 m** (Himalayan operations capability)

Engines: **Two Shakti turboshaft** (HAL-Safran JV)

Crew: **2** (tandem configuration)

Armament: **20mm turret gun**, Mistral 2 AAM, rocket pods

Formal induction: **September 2022** (Indian Army); IAF also inducted

Total order: **160 LCH** — IAF: 65, Army: 95

PRESIDENT MURMU'S SORTIES:

LCH Prachand: **February 27, 2026**, Jaisalmer (25 min, as co-pilot)

Su-30 MKI: **April 2023**, Tezpur Air Force Station

Rafale: **October 2023**, Ambala Air Force Station

Role: Supreme Commander of the Armed Forces

HAL — KEY FACTS:

Full form: Hindustan Aeronautics Limited

Headquarters: **Bengaluru**, Karnataka

Type: Central PSU under Ministry of Defence

Products: LCH, Dhruv ALH, Tejas, HTT-40, Su-30MKI (licensed)

HIGH-ALTITUDE CONTEXT:

Siachen Glacier: **~5,400 m** (world's highest battlefield)

LAC altitude: **4,000–5,500 m**

Kargil War (1999): Exposed lack of dedicated high-altitude attack helicopter

Apache AH-64E: US-made; 22 with IAF; effective up to ~4,500 m

OTHER RELEVANT FACTS:

Dhruvastra: HAL-developed anti-tank guided missile; planned integration on LCH

FLIR: Forward Looking Infrared — enables night-attack capability

Vayu Shakti: IAF exercise showcasing aerial combat and precision strike capabilities

Shakti engine: ~1,000 shp; one of India's few indigenous aero-engine programs

Sources: PIB, HAL, Indian Air Force

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