

GE F414 Fighter Jet Engine

June 25, 2023 • vajiramandravi.com



About GE F414 Fighter Jet Engine:

- It is a **high-performance, two-spool, axial-flow turbofan engine** that is **used to power** a variety of military aircraft, including the **F/A-18E/F Super Hornet, the JAS 39 Gripen, and the Tejas Mark II.**
- It is a **derivative of the GE F404 engine**, which was developed in the 1970s.
- It has been **used by U.S. Navy aircraft for more than 30 years.**
- The F414 powers or is on order to power jets in the **U.S., Sweden, Australia, Kuwait, Brazil, South Korea, India and Indonesia.**
- **Features:**
 - It combines the proven reliability, maintainability, and operability of its successful F404 predecessor with advanced technologies to **provide up to 35 percent more thrust.**
 - Its simple, **modular design is reliable and easy to maintain.**

- It is the **first fighter engine to use a Full Authority Digital Electronic Control (FADEC)**. FADEC **provides precise control of the engine's performance**, which improves fuel efficiency and reduces emissions.
 - Is the **first fighter engine to use an integrated electronic engine instrumentation (IEE) system**. IEE **provides real-time data on the engine's performance**, which helps pilots to make informed decisions about engine operation.
 - Its wide chord, **high-pressure compressor (HPC) provides greater efficiency and lower emissions** than previous generation engines.
 - The **engine's low-pressure turbine (LPT)** is designed for **high efficiency and durability**.
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Q1) What is a turbofan engine?

A turbofan engine is the most modern variation of the basic gas turbine engine. As with other gas turbines, there is a core engine, whose parts and operation are discussed on a separate page. In the turbofan engine, the core engine is surrounded by a fan in the front and an additional turbine at the rear. The fan and fan turbine are composed of many blades, like the core compressor and core turbine, and are connected to an additional shaft.

Source: [Why GE's plan to make fighter jet engines in India is a big deal](#)

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