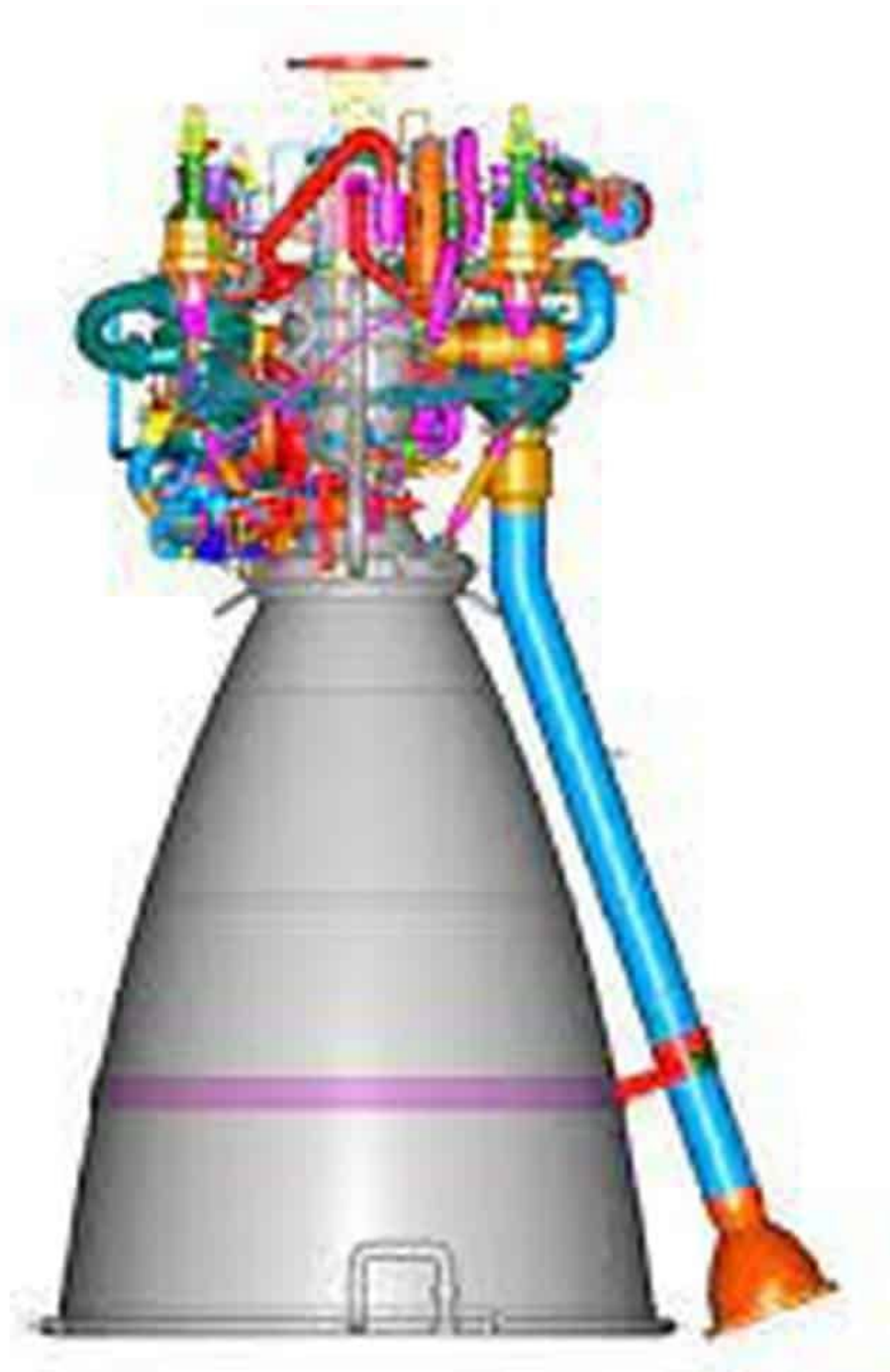


What is CE-20 cryogenic engine?

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About CE-20 Cryogenic Engine:

- It has been **designed and developed by the Liquid Propulsion Systems Centre (LPSC)** , a subsidiary of ISRO.
- It will **power the Cryogenic Upper Stage of the LVM3 launch vehicle** for the **Chandrayaan-3 mission**.

- It is the **first Indian cryogenic engine to feature a gas-generator cycle.**
- It is one of the most **powerful upper-stage cryogenic engines in the world.**
- This engine develops a **nominal thrust of 186.36 kN in vacuum.**

What is a Cryogenic stage?

- The cryogenic stage is technically a very **complex system** due to its **use of propellants at extremely low temperatures** and the associated thermal and structural problems.
- It uses **liquid fuels that are cooled to very low temperatures.**
- A Cryogenic rocket stage is **more efficient** and **provides more thrust for every kilogram of propellant it burns** compared to solid and earth-storable liquid propellant rocket stages.

Chandrayaan-3 Mission:

- Chandrayaan-3 is **India's third moon mission** and is a follow-on mission to Chandrayaan-2 to demonstrate **end-to-end capability in safe landing and roving on the lunar surface.**
- Chandrayaan-3 mission has **three major modules** — the **Propulsion module, Lander module, and Rover.**
- The mission is slated to be launched **later this year by Launch Vehicle Mark 3 (LMV3)** from the Satish Dhawan Space Centre at Sriharikota.

Q1) What is the vision of ISRO?

The vision of the Indian Space Research organisation is to harness, sustain and augment space technology for national development, while pursuing space science research and planetary exploration.

Source: [ISRO successful in key test for India's third moon mission](#)

Source: <https://vajiramandravi.com/current-affairs/what-is-ce-20-cryogenic-engine/>

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