

Low Altitude Escape Motor (LEM)

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In news- As part of the Gaganyaan mission, ISRO has recently successfully test-fired the Low Altitude Escape Motor (LEM) of the Crew Escape System.

Low Altitude Escape Motor (LEM)-

- **LEM is a distinctive special purpose solid rocket motor with four reverse flow nozzles** and generates maximum sea level thrust of 842 kN with burn time of 5.98 s.
- The nozzle end of LEM is mounted at the fore end of the launch vehicle unlike at aft end in conventional rocket motors to avoid exhaust plume impingement on the crew module.
- This necessitates the use of a reverse flow multiple nozzle in this solid rocket motor. The reverse flow nozzle implies the reversal of the exhaust gas flow direction in the nozzle region.
- **The Crew Escape System (CES)** takes away the Crew module of Gaganyaan mission in case of any eventuality and rescues the astronauts.
- In case of mission-abort during the initial phase of flight, **LEM provides required thrust to CES, to take away Crew Module from the launch vehicle.**