

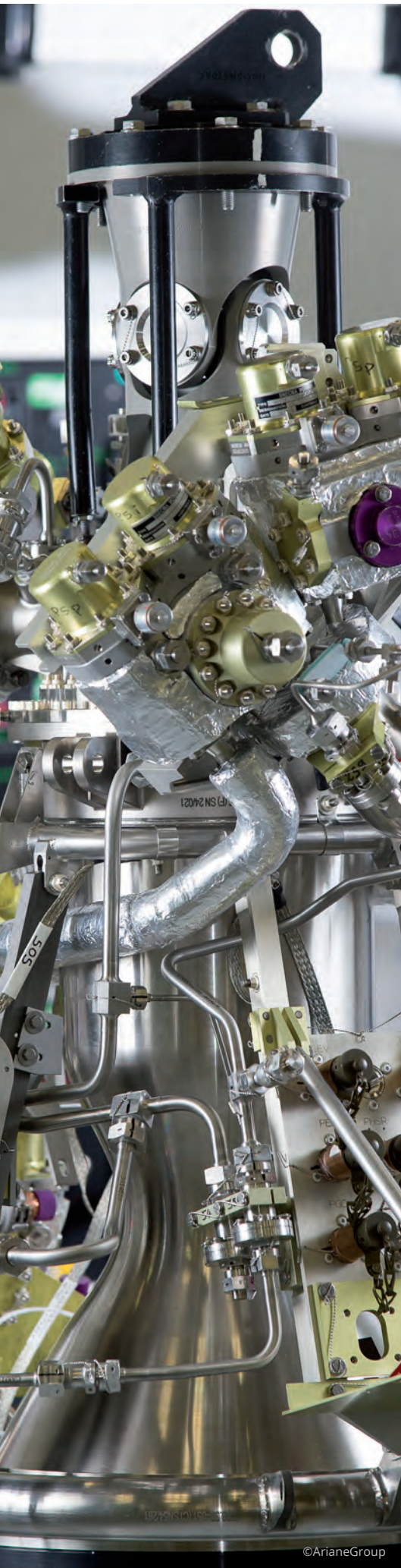


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HM7B ENGINE

PROPULSION SOLUTIONS FOR LAUNCHERS

- › POWERS THE ARIANE 5 CRYOGENIC UPPER STAGE
- › MORE THAN 200 ENGINES BUILT
- › RECORD RELIABILITY WITH MORE THAN 20 YEARS OF IN-FLIGHT SUCCESS



HM7B SPACE PROPULSION

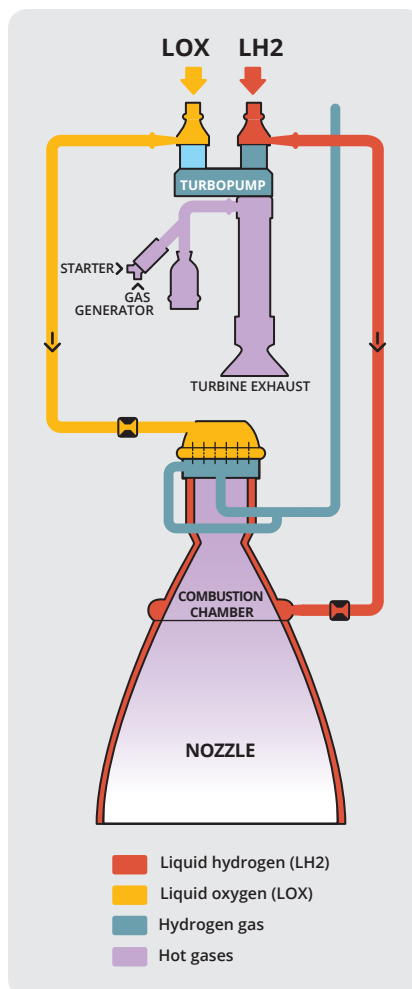
The HM7B cryogenic engine powers the cryogenic upper stage of Ariane 5 ECA, on which it has performed more than 130 consecutive successful flights.

The HM7B was qualified in 1979 for the first flight of Ariane 1 and, since then, has undergone a number of improvements: increased thrust, specific impulse, burn time and reliability.

The engine is supplied with liquid hydrogen and oxygen by a turbopump, with a high-speed line (turbine, hydrogen pump) running at more than 60,000 rpm.

Taking all versions together, more than 200 HM7B engines have been built by ArianeGroup for development and qualification programs as well as for actual flights.

As of the beginning of 2020, the HM7B engine has recorded a run of 148 consecutive successes.



SPECIFICATIONS

Cycle	Gas generator
Vacuum thrust (kN)	64.8
Specific impulse (s)	446
Propellants	LOX-LH2
Propellant flow rate (kg/s)	14.8
Mixing ratio	4.9
TP rotation speed (rpm)	60,800
Height (m)	2.01
Engine mass (kg)	165

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