

J-2X

Propulsion System



Pratt & Whitney Rocketdyne



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Overview:

The J-2X has been selected by NASA to be the upper stage propulsion for the ARES I and the Earth Departure Stage (EDS) engine for the ARES V. These vehicles are being developed to provide human access to space under the Constellation Program.

The J-2X is a derivative of the J-2 Apollo era engine that transported humans to the moon. The J-2X is a re-startable expendable gas generator cycle engine that utilizes liquid hydrogen and oxygen as propellants to provide the high performance needed to support the NASA exploration missions.



Specifications

Thrust, vacuum	294,000 lbs
Specific Impulse (in vacuum)	448 seconds
Pressure-combustion chamber	1,380 psia
Mixture Ratio (O/F)	5.5-4.5
Nozzle Area Ratio	92
Weight	5,450 lbs
Operational Starts	4
Operational Seconds	2000
Length (in)	185
Exit Dia. (in)	120



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