

RS-27A

Propulsion System



Pratt & Whitney Rocketdyne



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Propulsion System



Delta launch

Overview:

The RS-27A propulsion system consists of one main and two vernier engines. The main engine is a single-start, fixed thrust, liquid bi-propellant (LOX/RP-1) gas generator cycle device. The main RS-27A engine provides 200,000 lb of sea-level thrust and 237,000 lb at altitude. The vernier engines produce 1,012 lb thrust each and provide vehicle roll control throughout flight.

Specifications

Type:	Liquid Propellant/Pump-fed	
Propellants:	LOX/RP-1	
Thrust:	(Sea Level):	200,000 lb
	(Altitude):	237,000 lb
Specific Impulse:	(Sea Level):	255 sec
	(Altitude):	302 sec
Run Duration:	265 sec	
Mixture Ratio (O/F):	2.245:1	
Chamber Pressure:	700 psia	
Area Ratio:	12:1	
Weight:	2,528 lb	
Dimensions:	149 in. long	67 in. dia



RS-27A engine in place on test stand to be hot fired



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