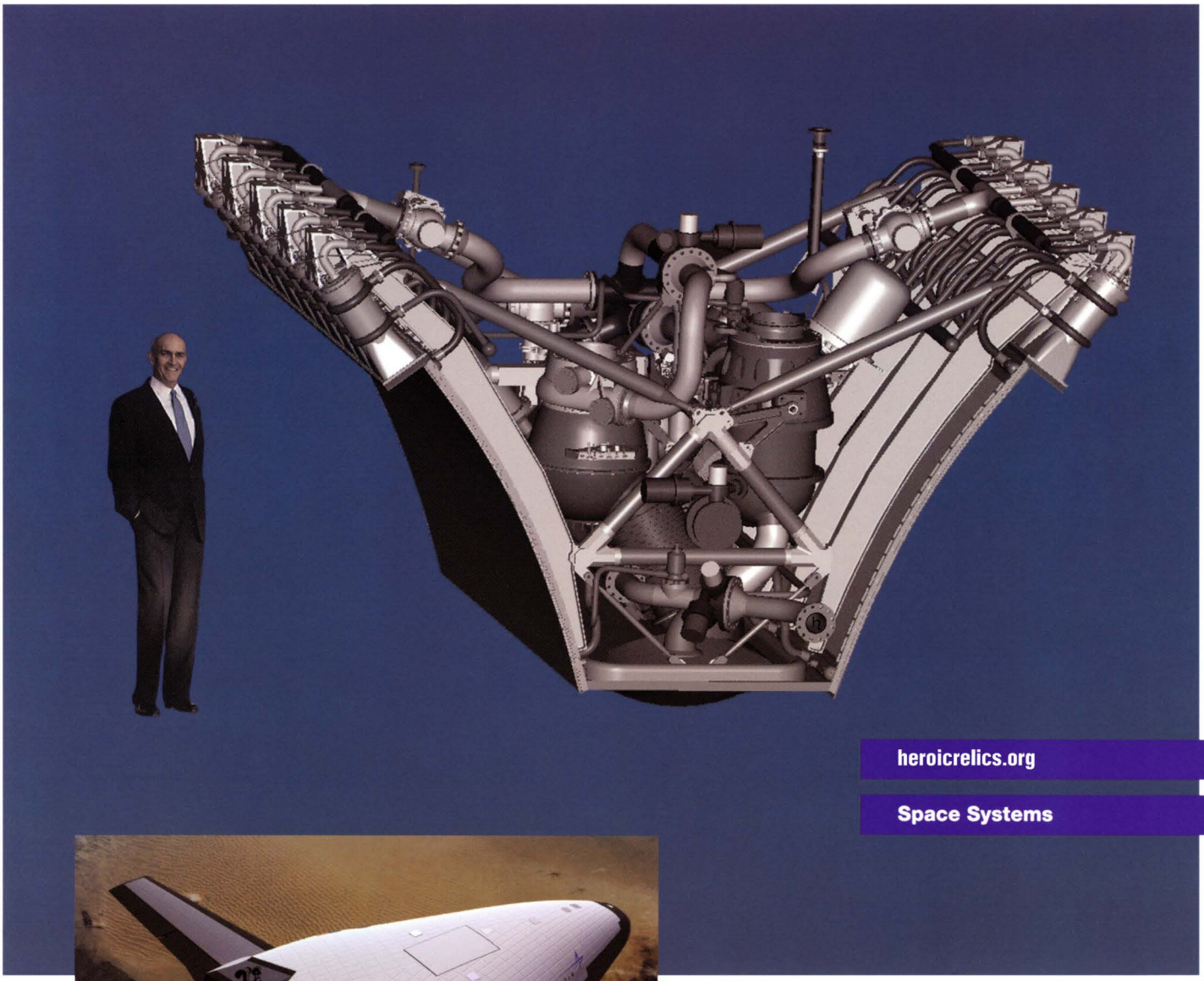
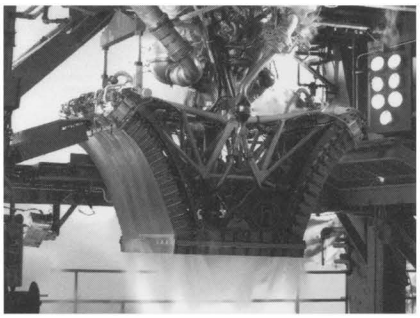
XRS-2200
Linear Aerospike Engine



heroicrelics.org

Space Systems

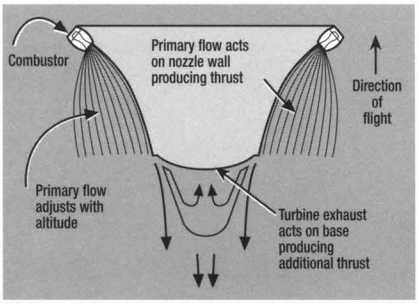
XRS-2200
Linear Aerospike Engine



Linear hot-fire test

Overview

The XRS-2200 Linear Aerospike Engine is being produced for use on the Lockheed Martin Skunk Works' X-33 Vehicle. This Aerospike allows development of the most traceable X-33. Flight operation, flight control, and installed engine performance are fully representative of the Reusable Launch Vehicle. The engine structure is integral to the vehicle, demonstrating installed weight benefits. Over $500 million have been invested to date in aerospike engines, and previous full-size versions of the engine have accumulated 73 tests and over 4,000 seconds of operation.



Aerospike operation

Specifications

Thrust:	At Sea Level:	204,420 lbf
	In Vacuum:	266,230 lbf
Specific Impulse:	At Sea Level:	339.0 sec
	In Vacuum:	436.5 sec
Propellants:	Oxygen, Hydrogen	
Mixture Ratio (O/F):	5.5	
Chamber Pressure:	857 psia	
Cycle:	Gas Generator	
Area Ratio:	58	
Throttling:	50-100% thrust	
Differential Throttling:	±15%	
Dimensions:	Forward End:	134 in. wide X 90 in. long
	Aft End:	42 in. wide X 90 in. long
	Forward to Aft:	90 in.

Lockheed Martin's X-33 Advanced Technology Demonstrator

XRS-2200 Aerospike Benefits

- X-33 to RLV flight operation traceability
- Representative engine to vehicle integration
- Risk retirement prior to RLV

Space Systems

For more information contact:

Boeing North American, Inc.
Rocketdyne Division
heroicrelics.org
6633 Canoga Avenue
P.O. Box 7922
Canoga Park, CA 91309-7922