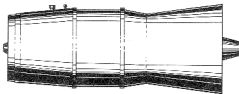


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*Propulsion Characteristics Summary***RAMJET**

MA24-XEA

(MA24-XEA)

Marquardt
Spec. 5705
21 May 58
(Not Approved)

(AFAPL)

FEATURES

A variable geometry supersonic internally mounted ramjet with an air turbine driven fuel pump, and may be controlled either manually or automatically. Incorporates a hydraulic-pneumatic fuel system. This engine is an advanced version of the XRJ59-MA-3.

AVAILABILITY

Experimental Engine Jul 59
Installation Engine None

CONTRACTUAL

R&D covered under USAF Contract AF 33(600)-37828 at a total cost of \$2,500,000.

STATUS

Development discontinued after satisfactory ground test feasibility demonstration.

GENERAL

Diffuser	Furnished by the airframe manufacturer	Exhaust Nozzle	Variable area, convergent-divergent, $A_5/A_3 = 0.12$ to 0.65
Area Variable	Exit nozzle	D. P. Nozzle Efficiency	97%
D. P. Total Pressure Recovery	72%	Ignition	Spark igniter
Combustion Chamber	Annular can	Fuel Injection	Spray bars
Inside Diameter at Combustion Chamber Entrance	25.6 in.	Thrust Control	Hydraulic-pneumatic
Ignition Limits	Not documented	Fuel	RJ-1, MIL-F-25558
D. P. Combustion Efficiency	97%	Accessory Drive Provisions	None

SIZE & WEIGHT

Length (overall) 89.0 in.
Diameter (outside) 33.5 in.
Weight (dry) 585 lb

UTILIZATION

Development engine.

Apr 73
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MA24-XEA

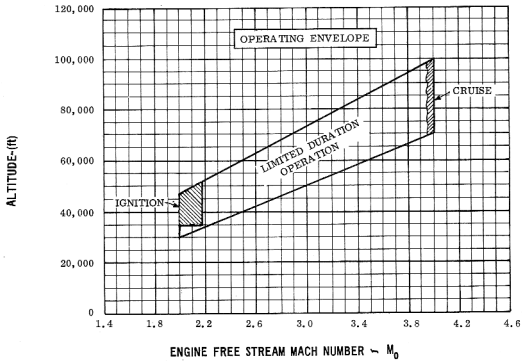
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Performance

ESTIMATED DESIGN POINT PERFORMANCE

Mach Number 4.0
Altitude 90,000 ft
Net Internal Thrust 1310 lb
Specific Fuel Consumption 1.93 lb/hr/lb

ARDC MODEL ATMOSPHERE



ENGINE SCHEMATIC

