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J. B. Miller
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CNLM--2283

TI84 027579

PRATT & WHITNEY AIRCRAFT NUCLEAR J-58 TURBOJET ENGINE

PERFORMANCE VARIATION WITH RADIATOR DIAMETER

The variation of engine performance with liquid metal radiator diameter and flight altitude has been estimated for both the 1600F NaK and 1800F NaK radiators at Mach 0.6 and hot day atmospheric conditions. The net thrust, air flow and reactor power is presented in Figs 1 to 3 for the Pratt & Whitney Aircraft J-58 engine with the 1600F NaK radiator. The net thrust, air flow and reactor power for the 1800F NaK radiator is presented in Figs 4 to 6.

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John W. Larson
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JWL:gfd

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CLASSIFICATION CANCELLED

RE-CLASSIFIED TO

BY AUTHORITY OF DIVISION OF CLASSIFICATION

BY: TED REDMON DATE: 12-8-75

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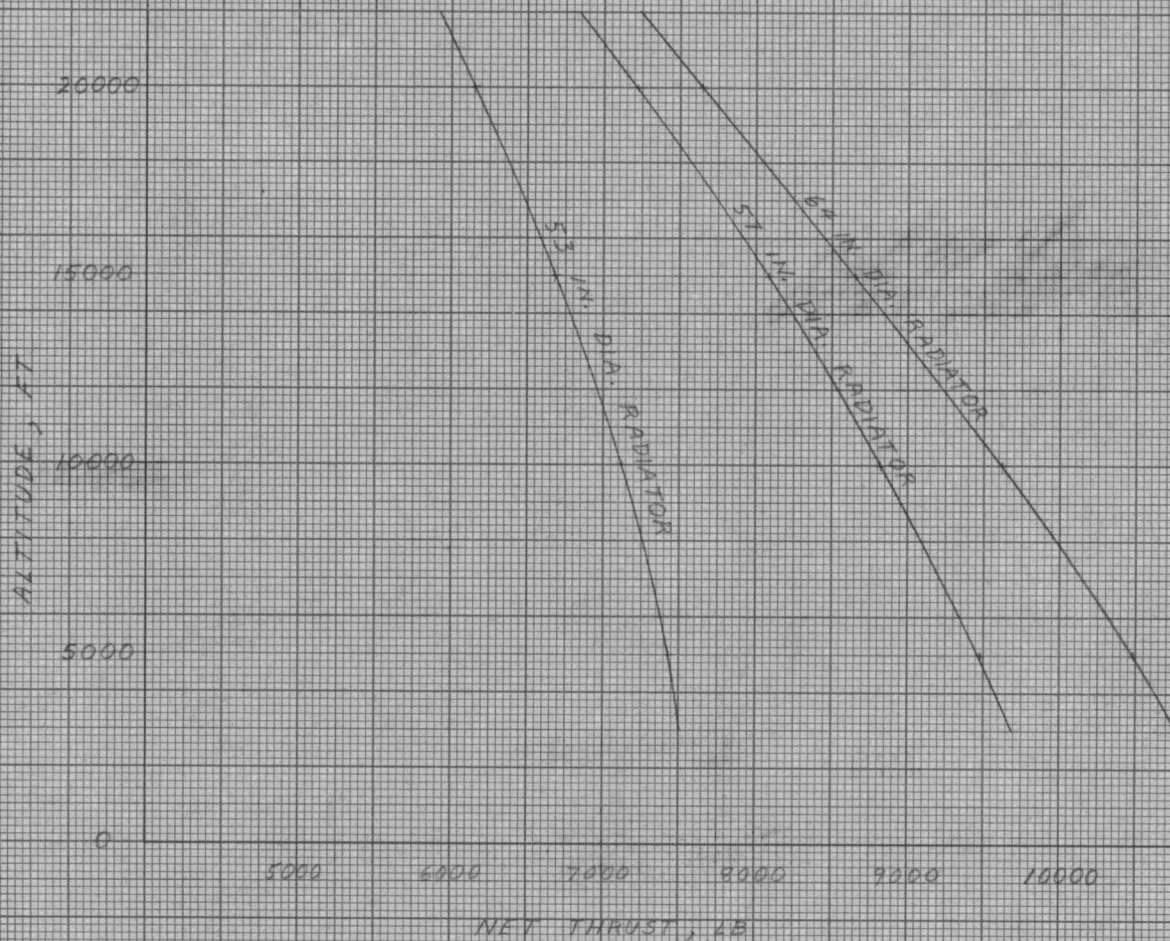
FIG 1

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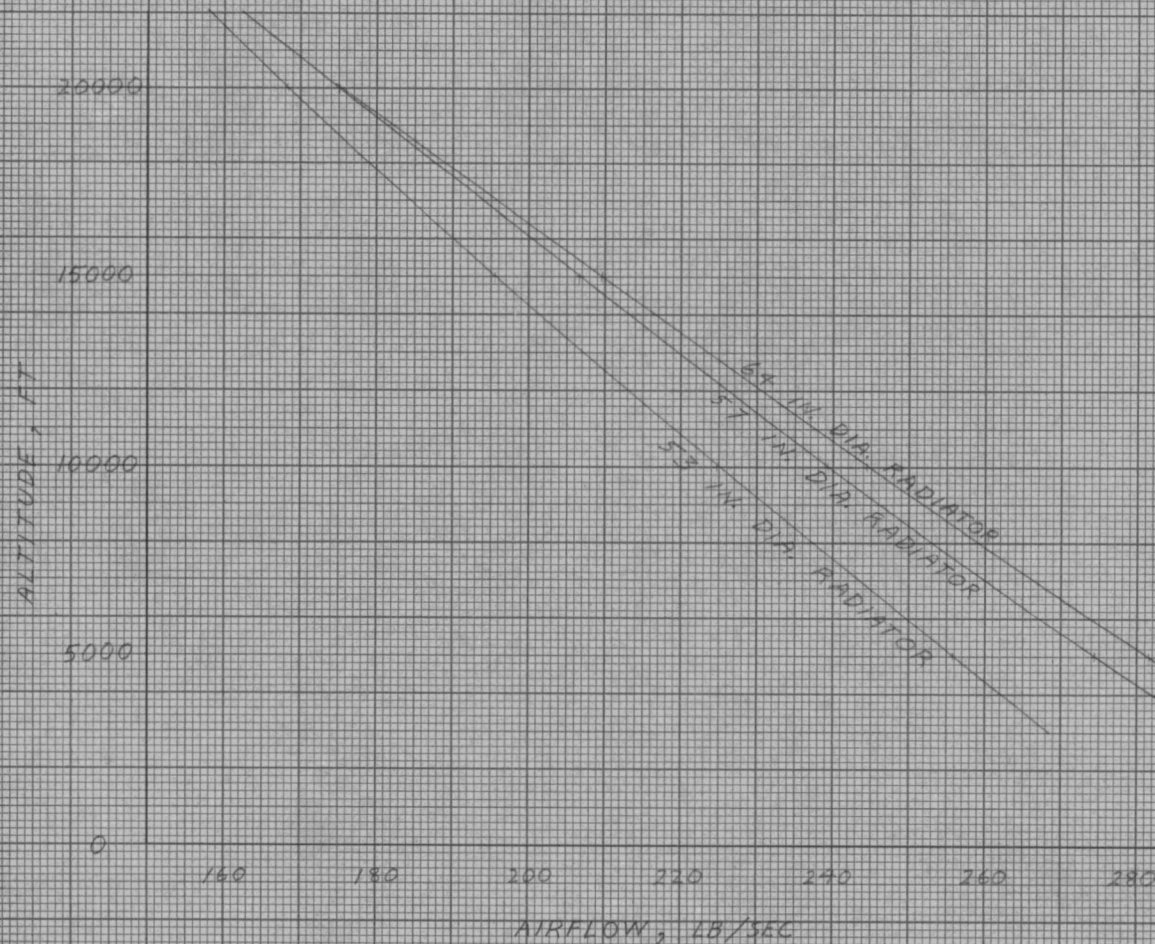
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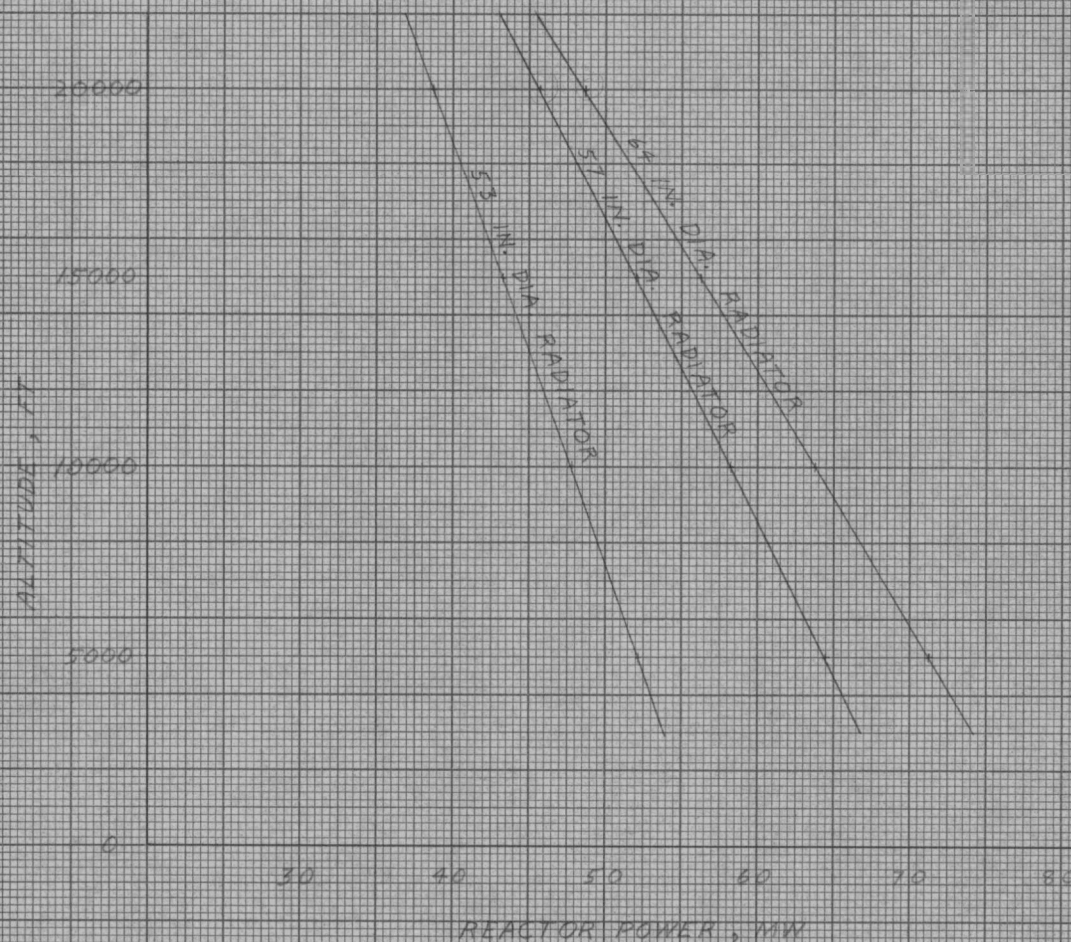
PRATT & WHITNEY AIRCRAFT NUCLEAR J58 TURBOJET ENGINE
Nuclear Heat Operation

ESTIMATED NET THRUST
MACH 0.6, HOT DAY ATMOSPHERE
1600F NaK RADIATOR



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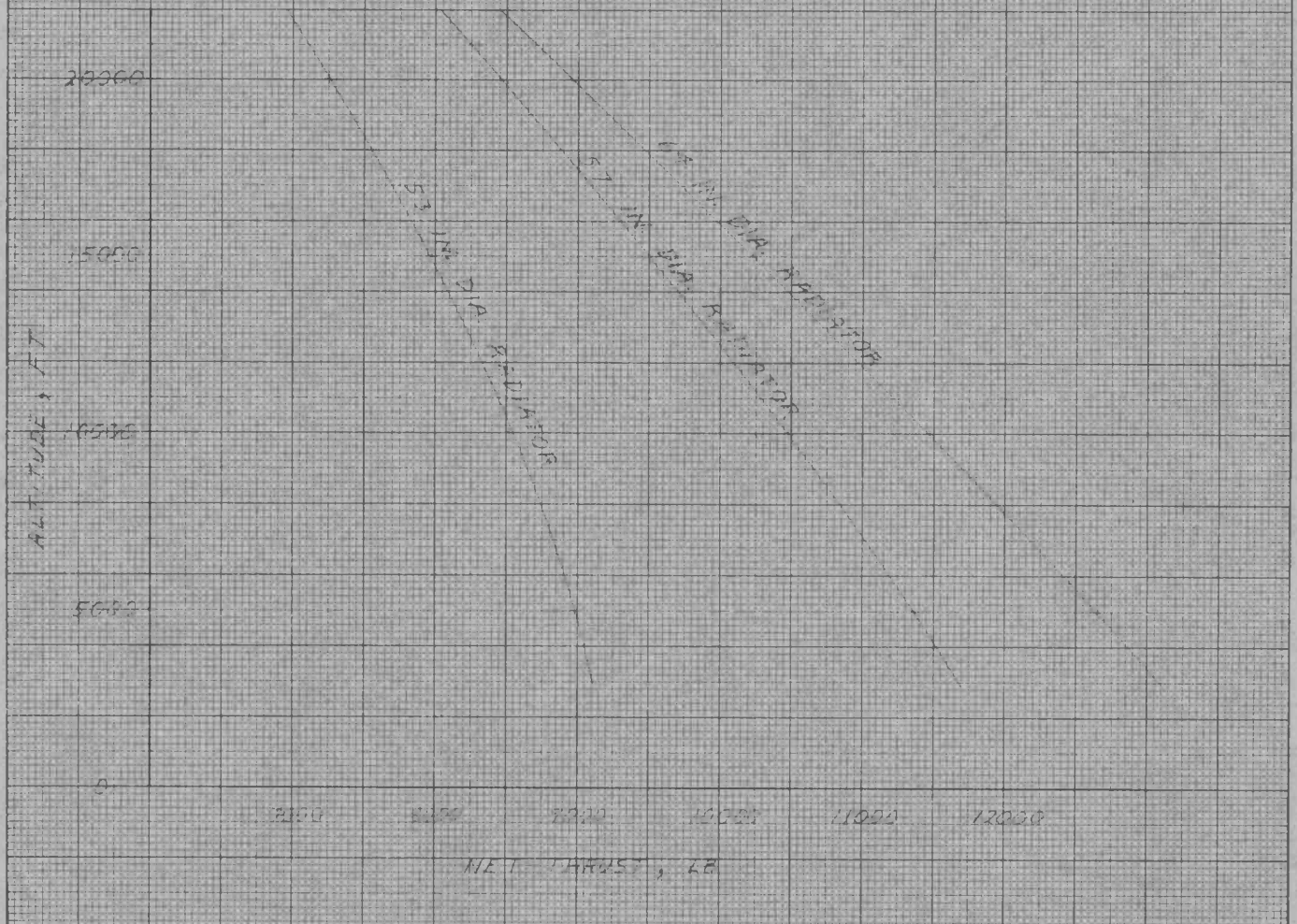
PRATT & WHITNEY AIRCRAFT NUCLEAR J58 TURBOJET ENGINE
Nuclear Heat OperationESTIMATED AIRFLOW
MACH 0.6, HOT DAY ATMOSPHERE
1600F NaK RADIATOR

OFFICIAL USE ONLY**PRATT & WHITNEY AIRCRAFT NUCLEAR J58 TURBOJET ENGINE
Nuclear Heat Operation****ESTIMATED REACTOR POWER
MACH 0.6, HOT DAY ATMOSPHERE
1600F NaK RADIATOR**

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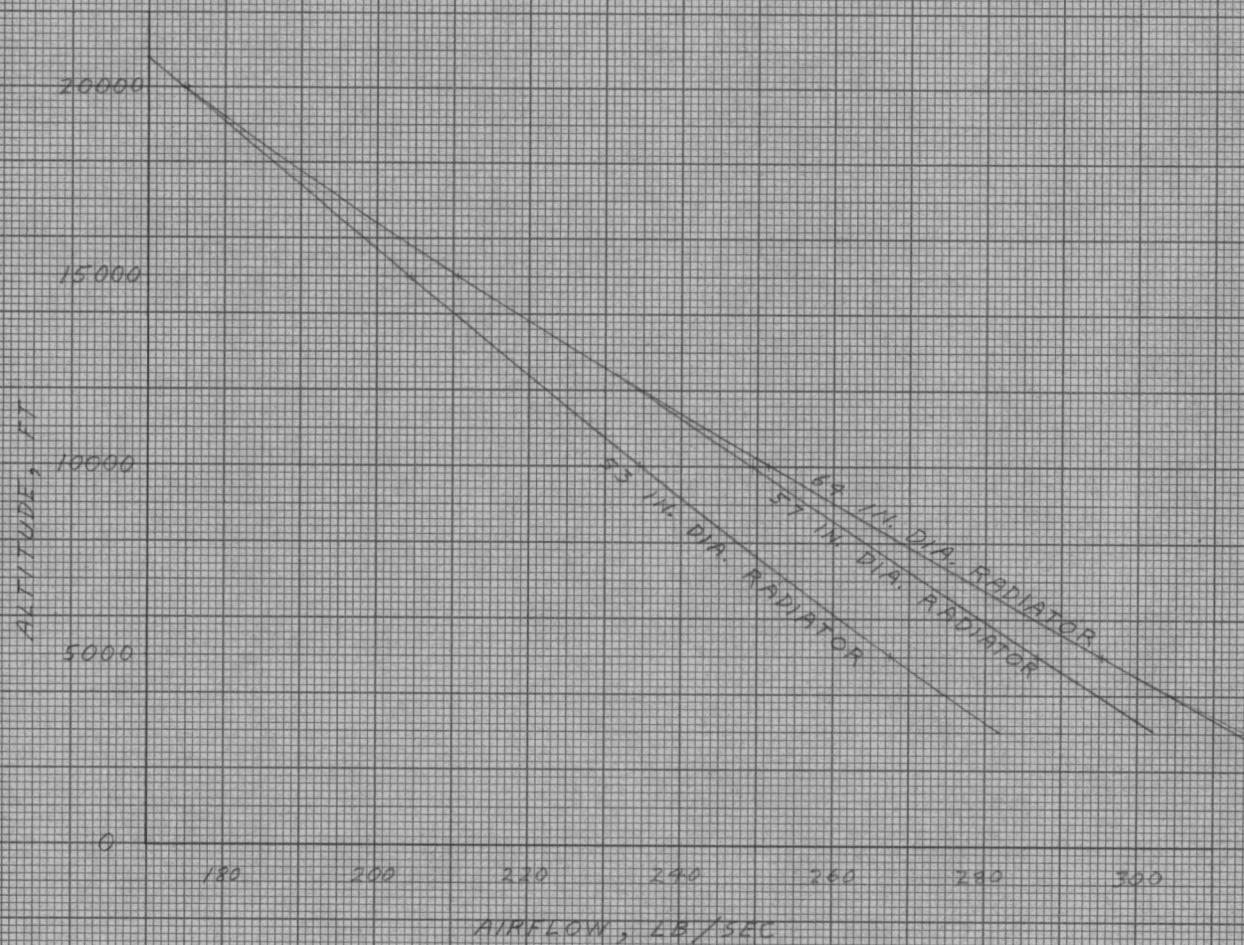
PRATT & WHITNEY AIRCRAFT NUCLEAR J58 TURBOJET ENGINE
Nuclear Heat Operation

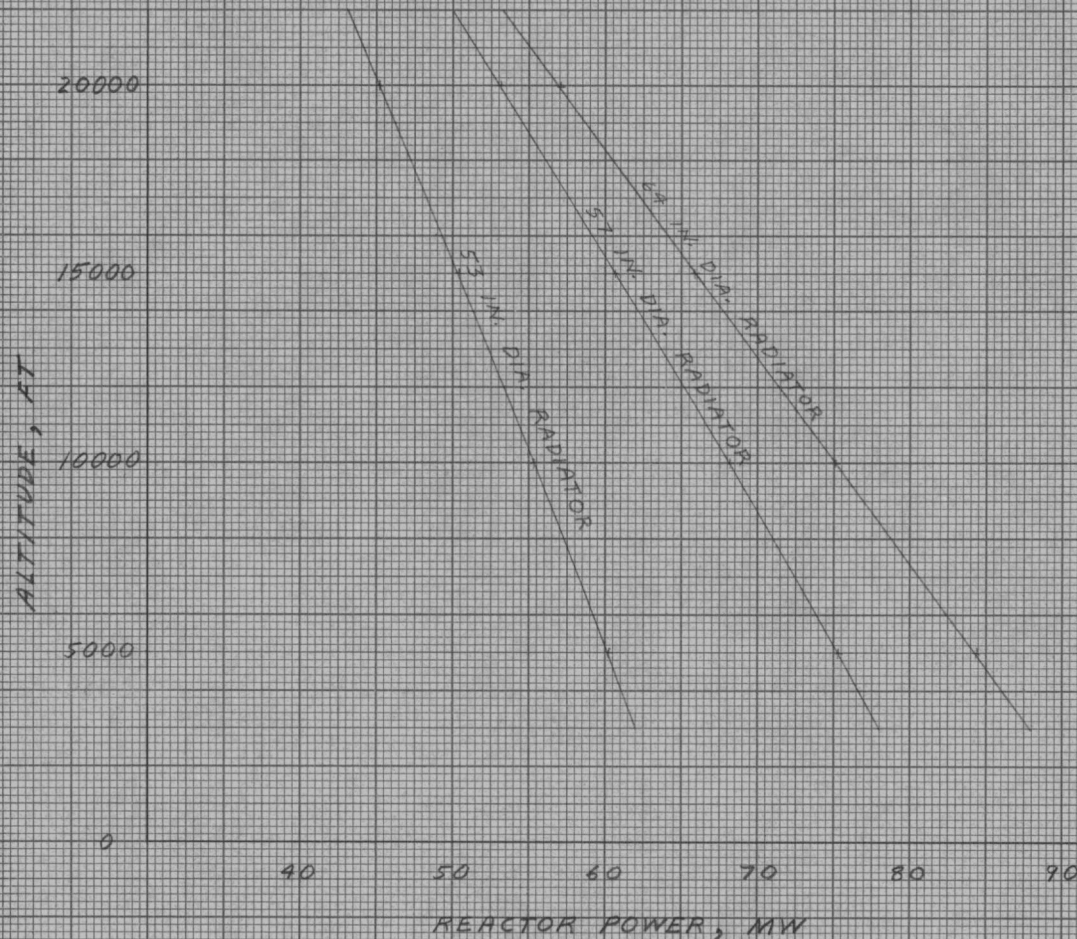
ESTIMATED NET THRUST
MACH 0.6, HOT DAY ATMOSPHERE
1800F NaK RADIATOR



PRATT & WHITNEY AIRCRAFT NUCLEAR J58 TURBOJET ENGINE
Nuclear Heat Operation

ESTIMATED AIRFLOW
MACH 0.6, HOT DAY ATMOSPHERE
1800F NaK RADIATOR



OFFICIAL USE ONLY**PRATT & WHITNEY AIRCRAFT NUCLEAR J58 TURBOJET ENGINE**
Nuclear Heat Operation**ESTIMATED REACTOR POWER**
MACH 0.6, HOT DAY ATMOSPHERE
1800F NaK RADIATOR**OFFICIAL USE ONLY**