

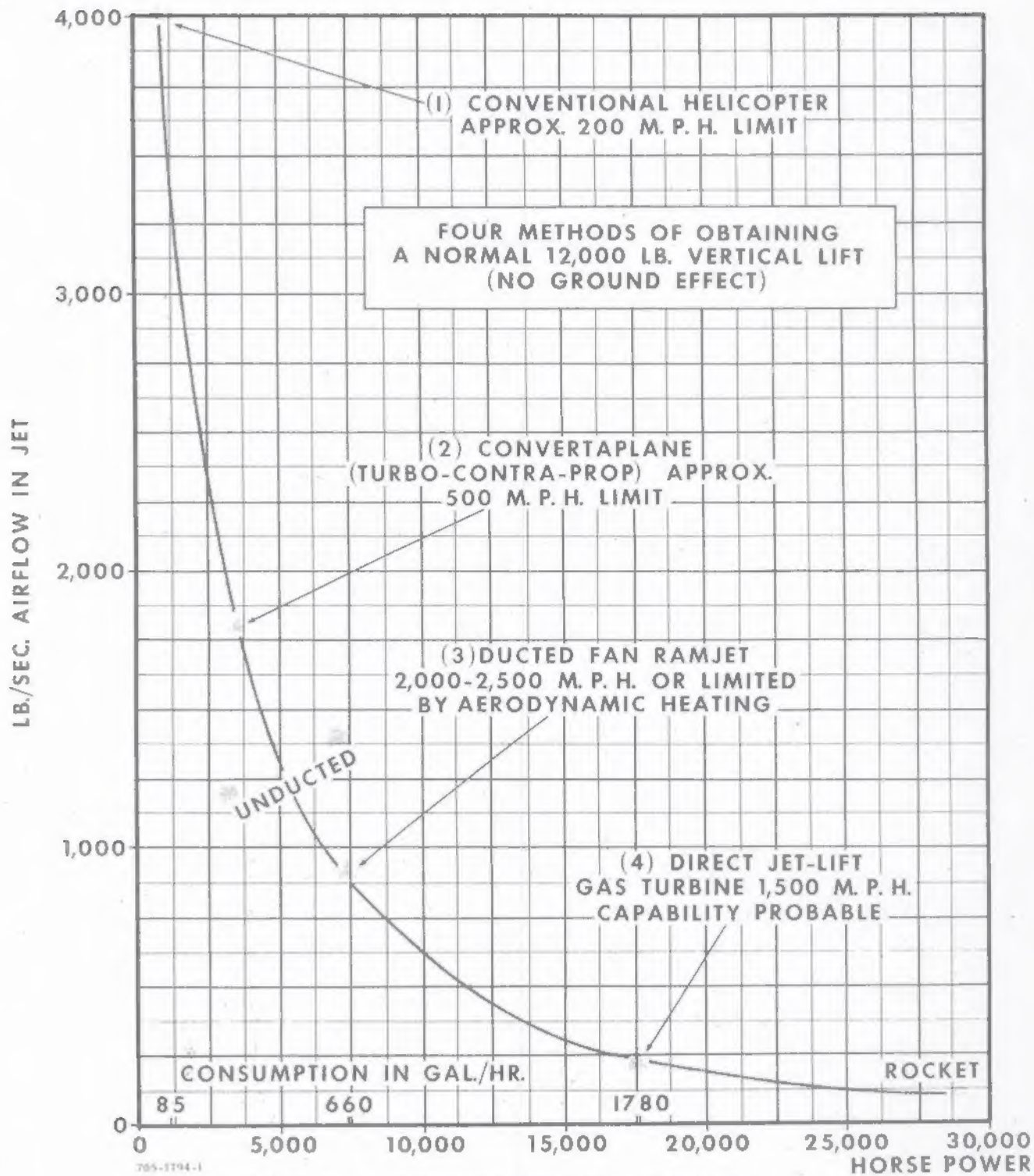
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Declassified on June 14, 2001 by the
 Air Force Declassification Office
 IAW EO 12958

Unclassified

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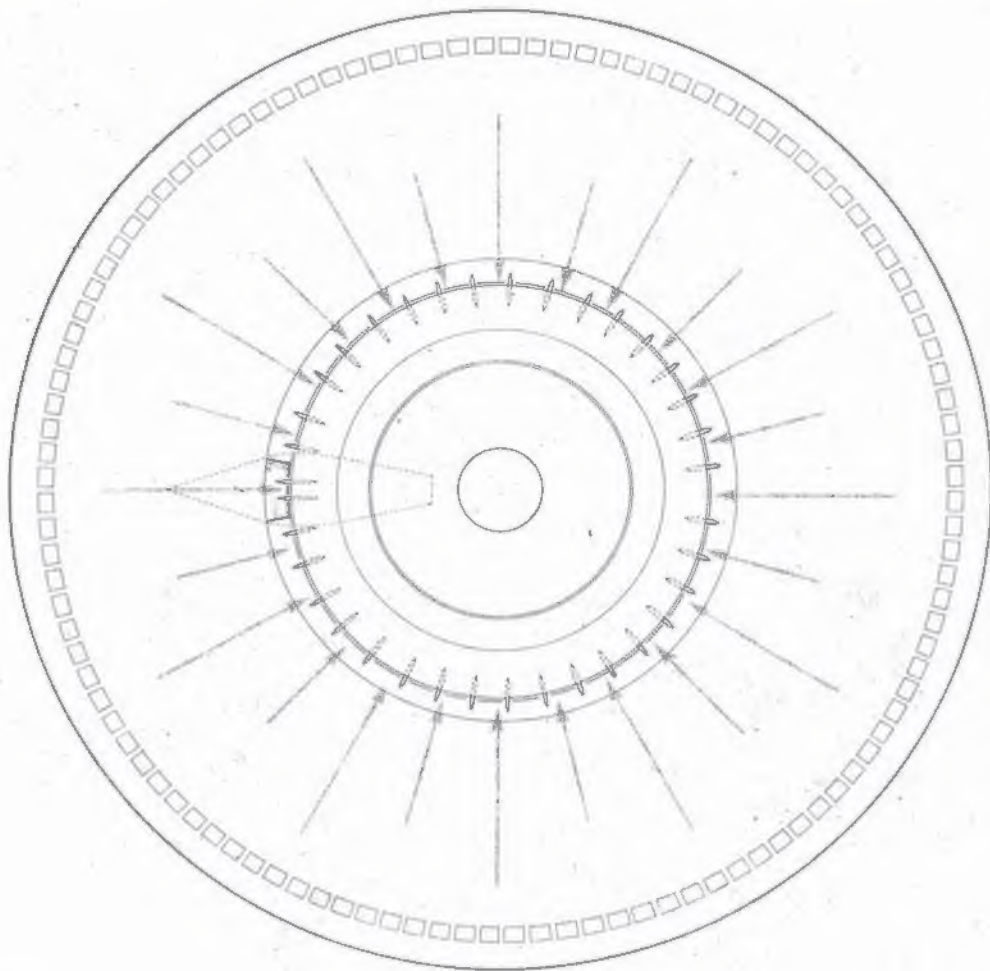
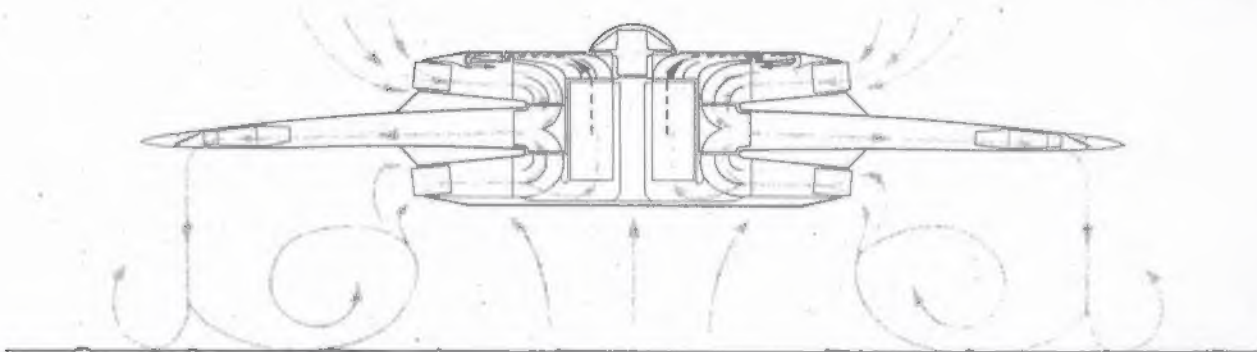
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V.T.O. EFFICIENCY CHART

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720-1794-1

**FLOW DISTRIBUTION-HOVERING
AND GROUND CUSHION**

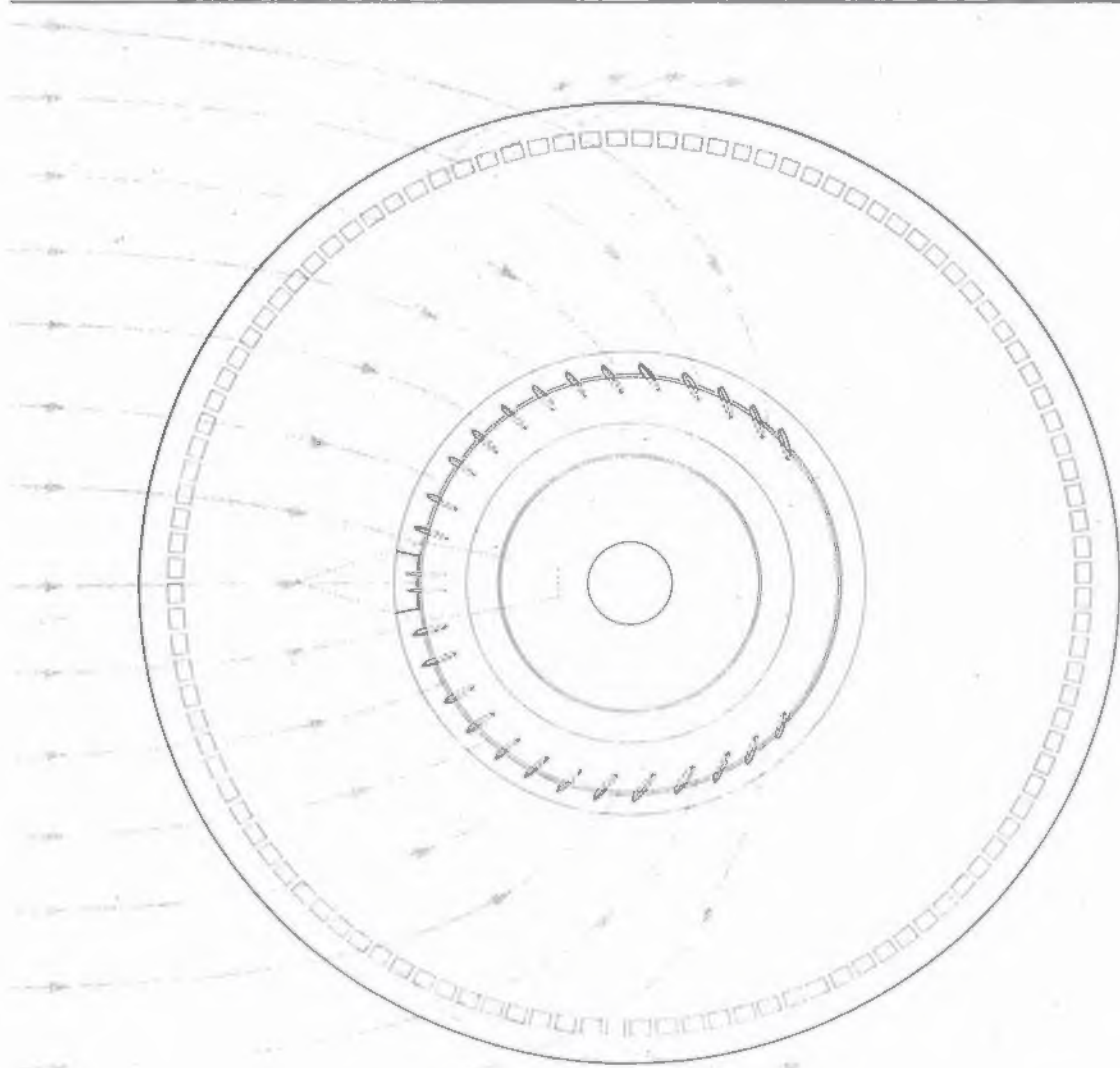
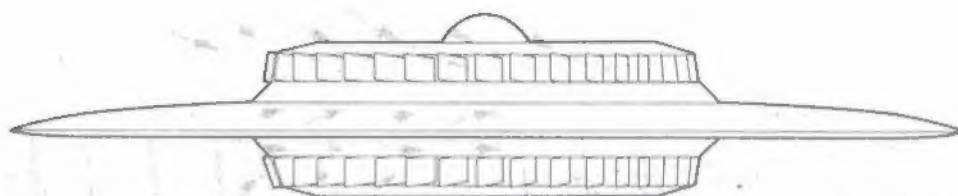
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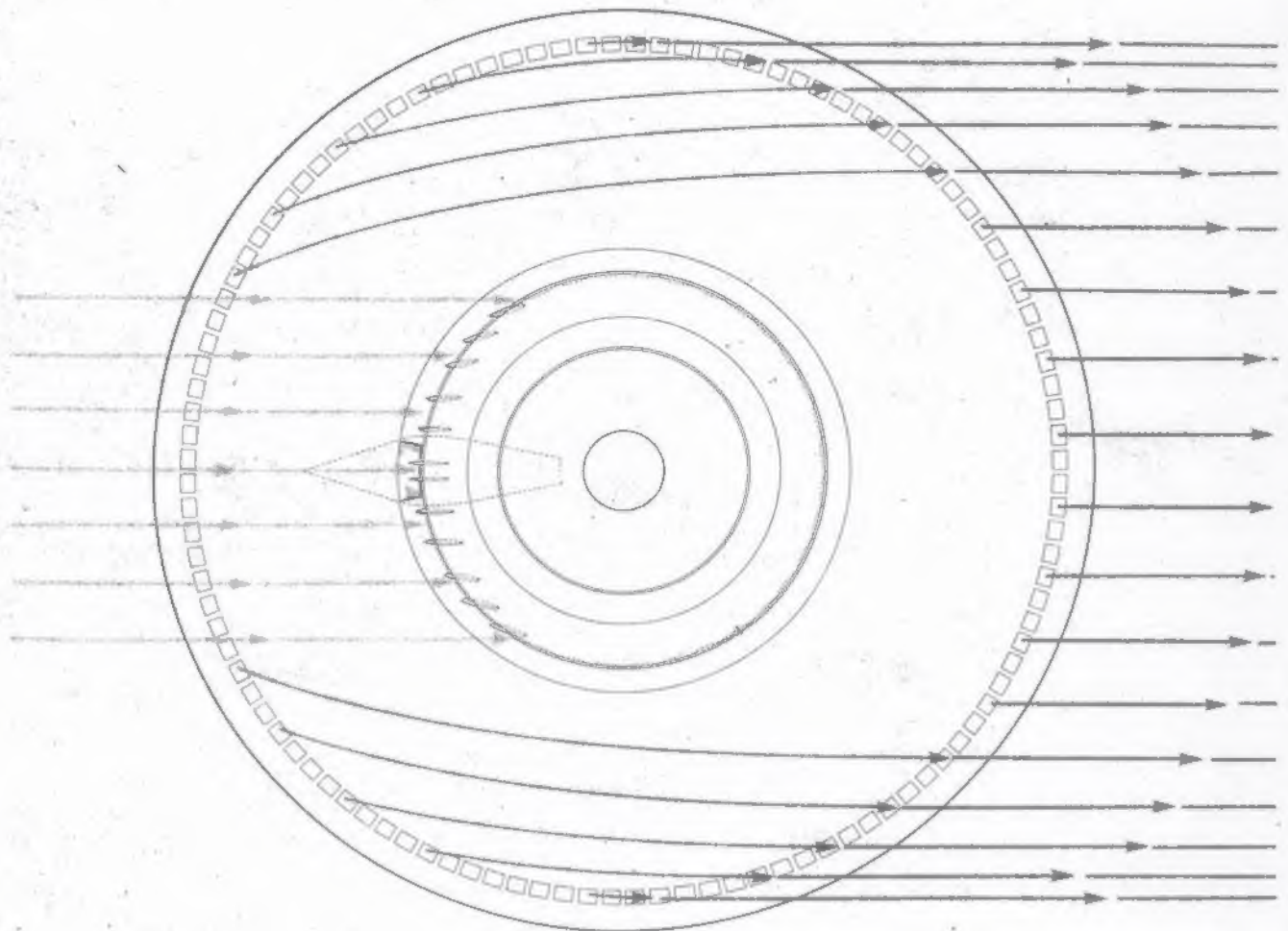
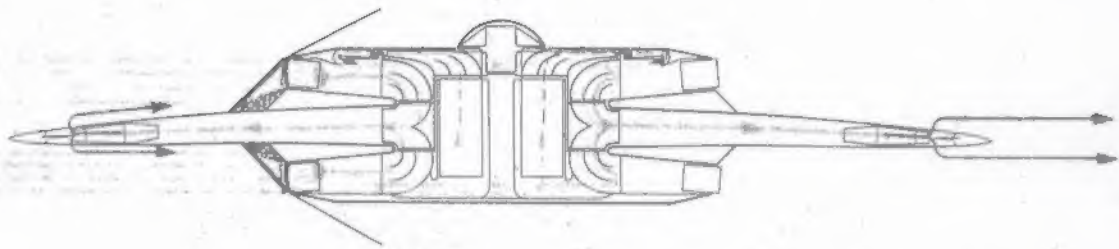
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**TRANSITION TO FORWARD FLIGHT
FROM GROUND CUSHION**

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AIRFLOW IN FORWARD FLIGHT

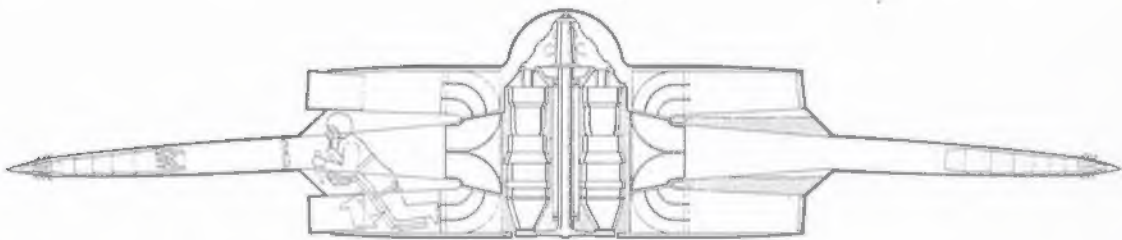
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AVRO AIRCRAFT LIMITED



1019-1794-1

**2 VIEW GENERAL ARRANGEMENT
-33 FT. AIRCRAFT SCHEMATIC**

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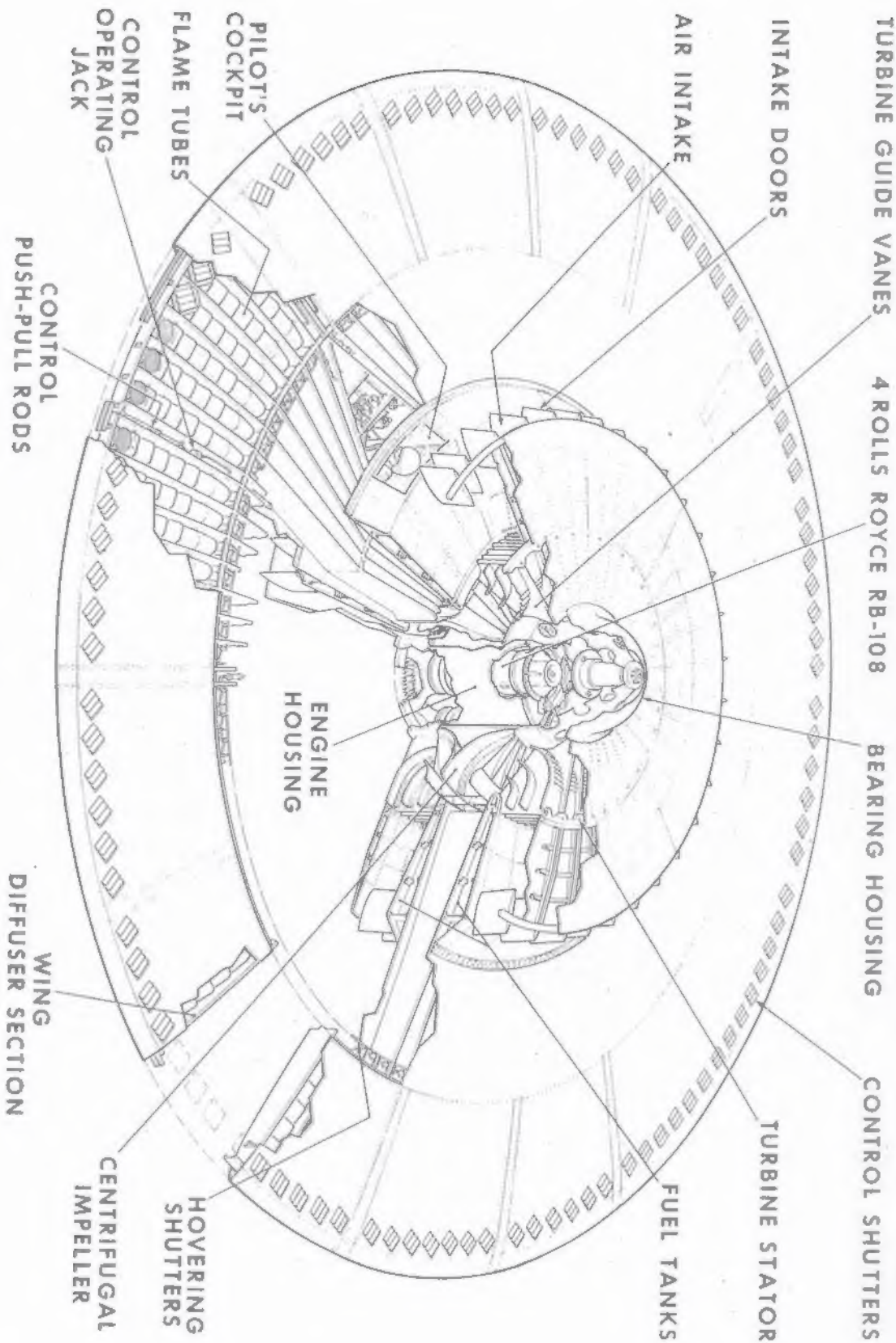
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1120 AIRCRAFT ENGINE



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1018-1794-1

RAMJET AIRCRAFT-DUCTED FAN ASSISTED

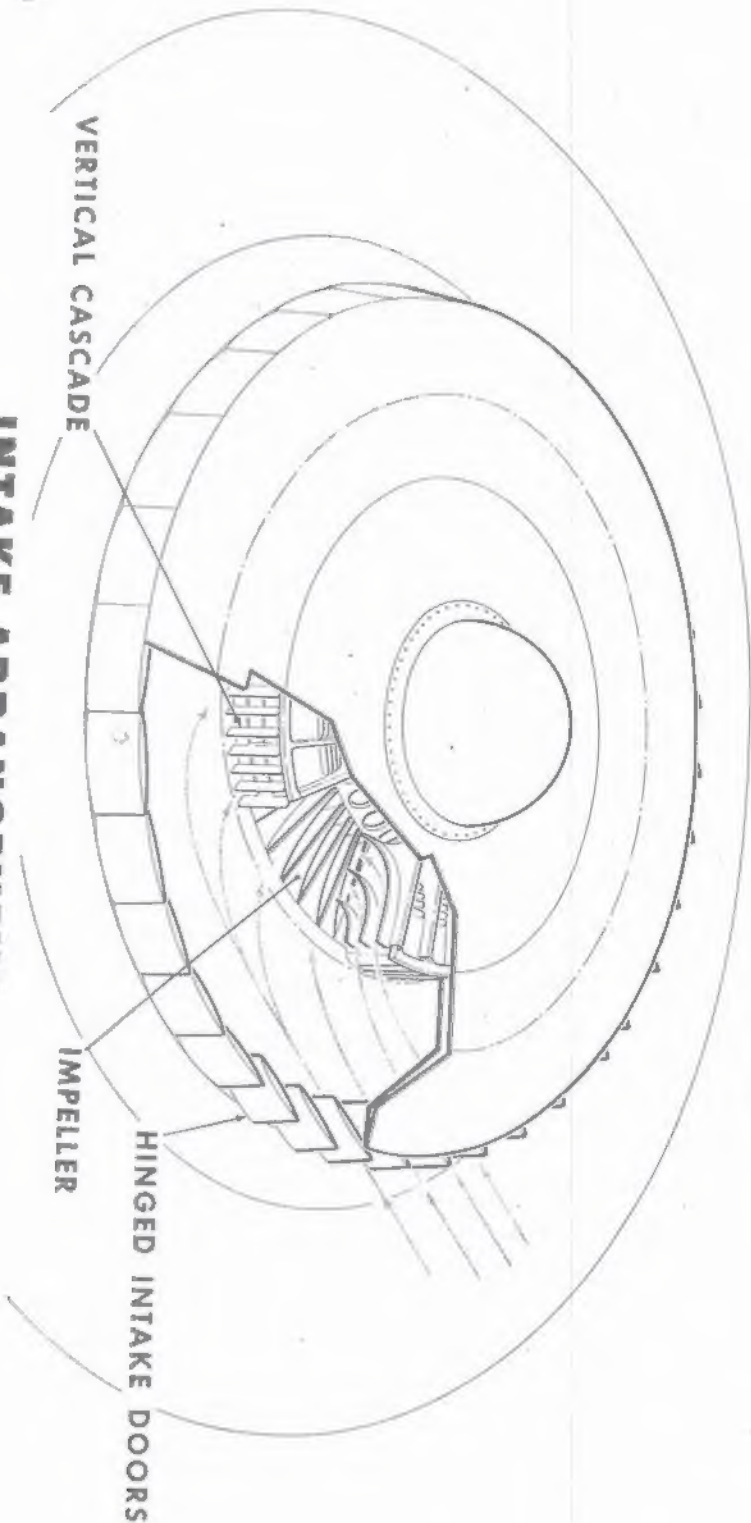
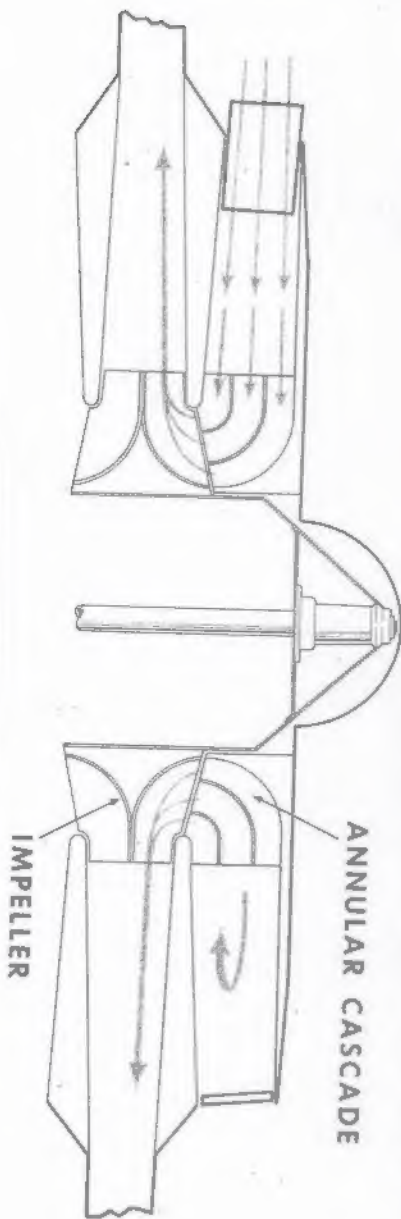
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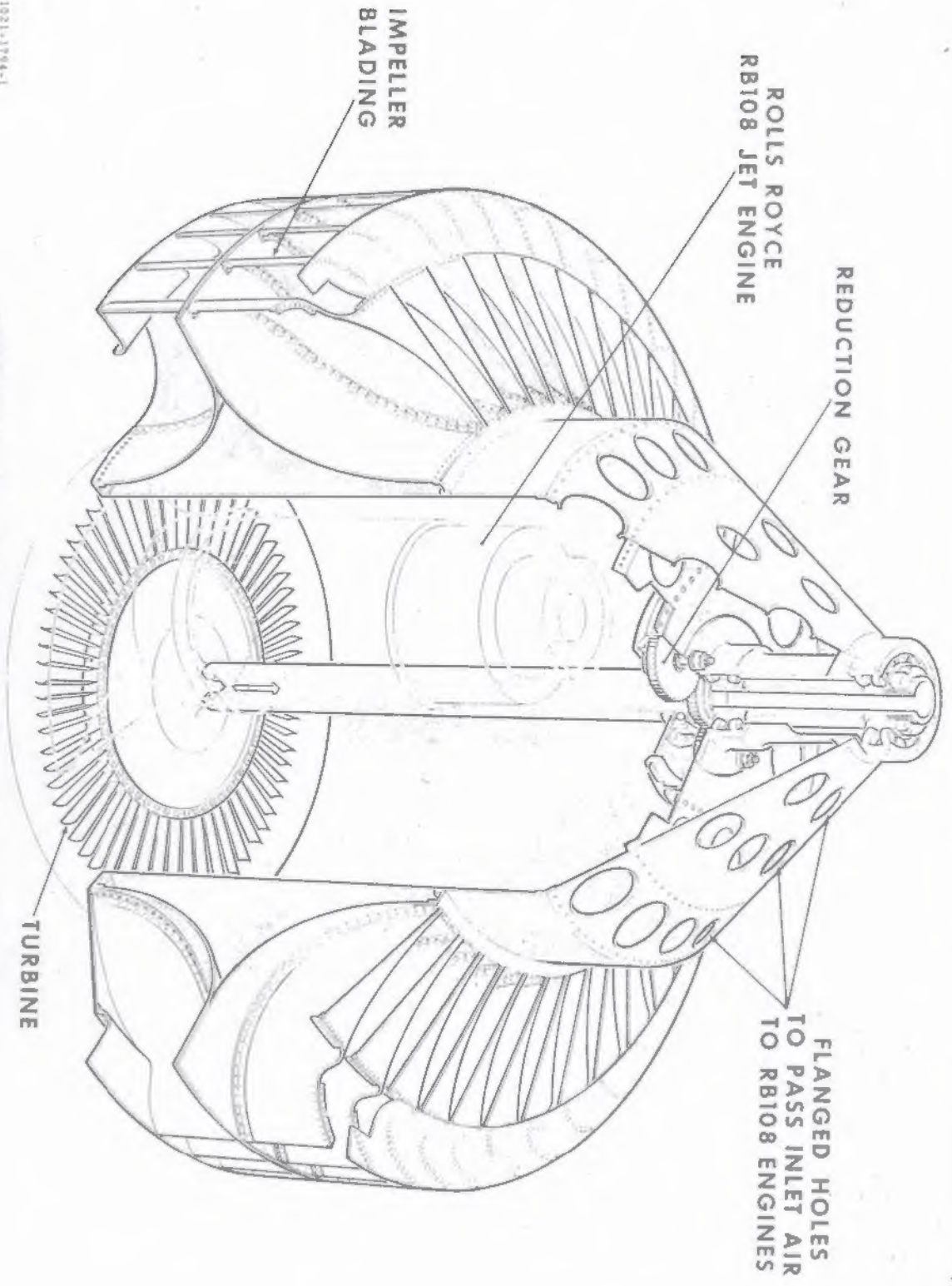
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AIROB - AIRCRAFT LIMITED



PROJECT 1794



IMPELLER AND TURBINE ASSEMBLY

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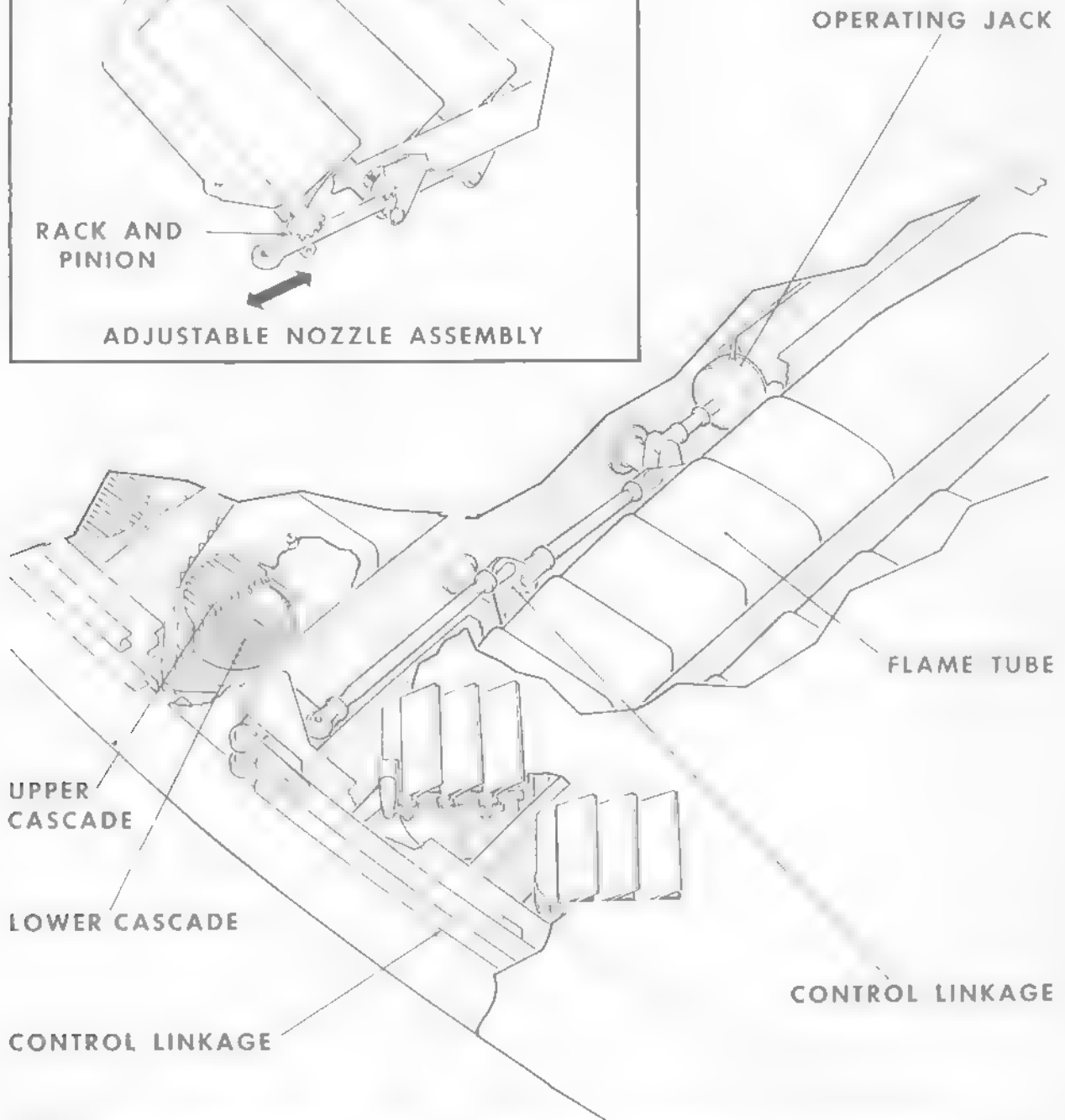
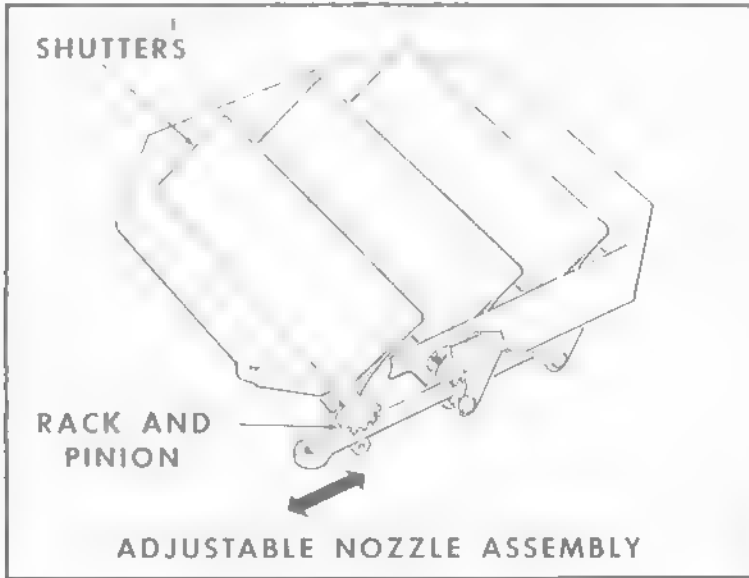
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FLAME TUBE AND FINAL NOZZLE ASSEMBLY

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FORWARD FLIGHT SHUTTERS

CONTROL VALVE ASSEMBLY

HOVERING SHUTTERS

IMPELLER

SELECTOR VALVE

TURBINE

OPERATING JACK FOR HOVERING SHUTTERS

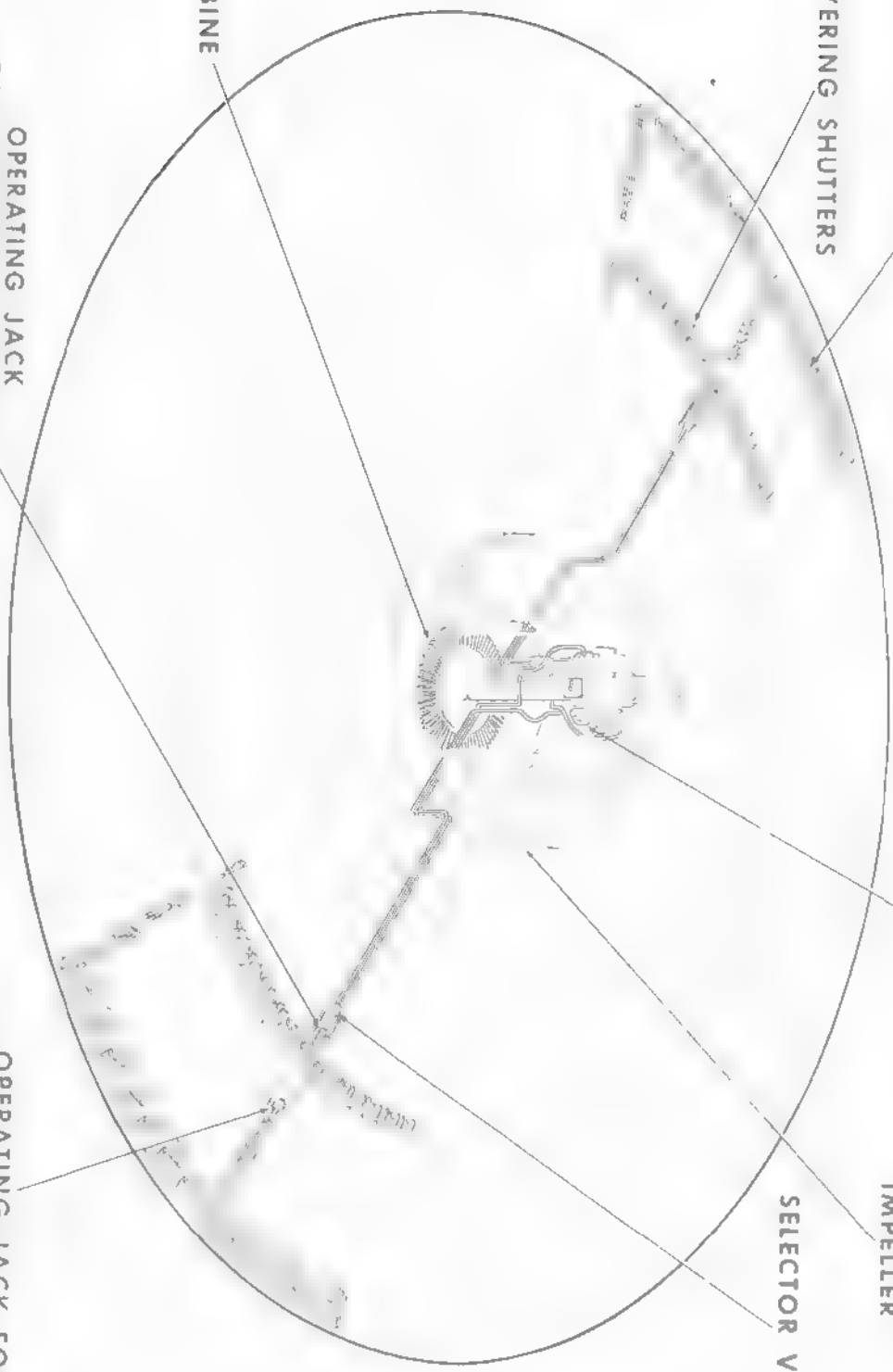
OPERATING JACK FOR FORWARD FLIGHT SHUTTERS

TYPICAL ARRANGEMENT OF CONTROL ASSEMBLY

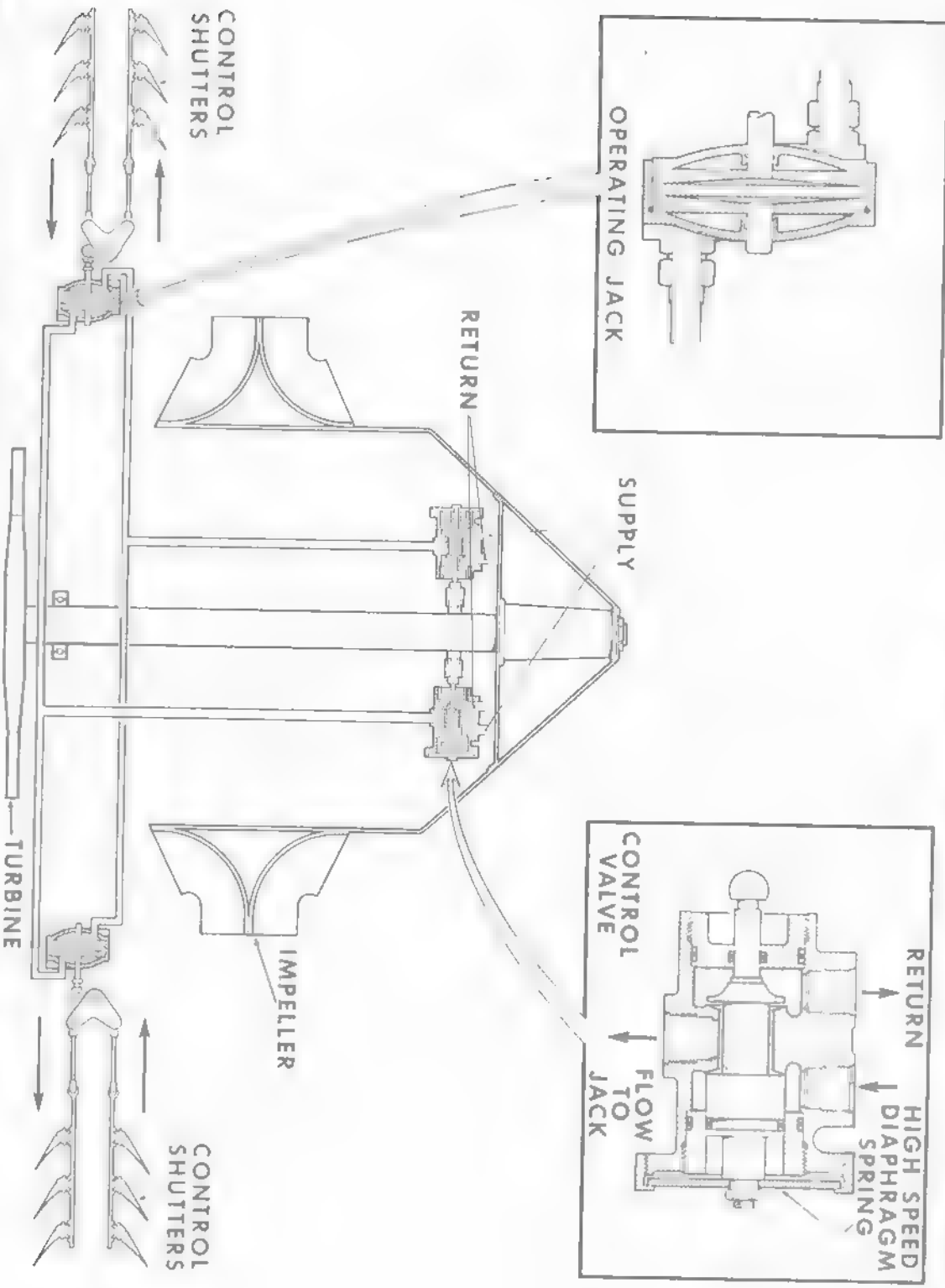
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PROJECT 1798



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SCHEMATIC DIAGRAM OF STABILIZER SYSTEM

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6TH SCALE SUBSONIC MODEL

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PROJECT 1294

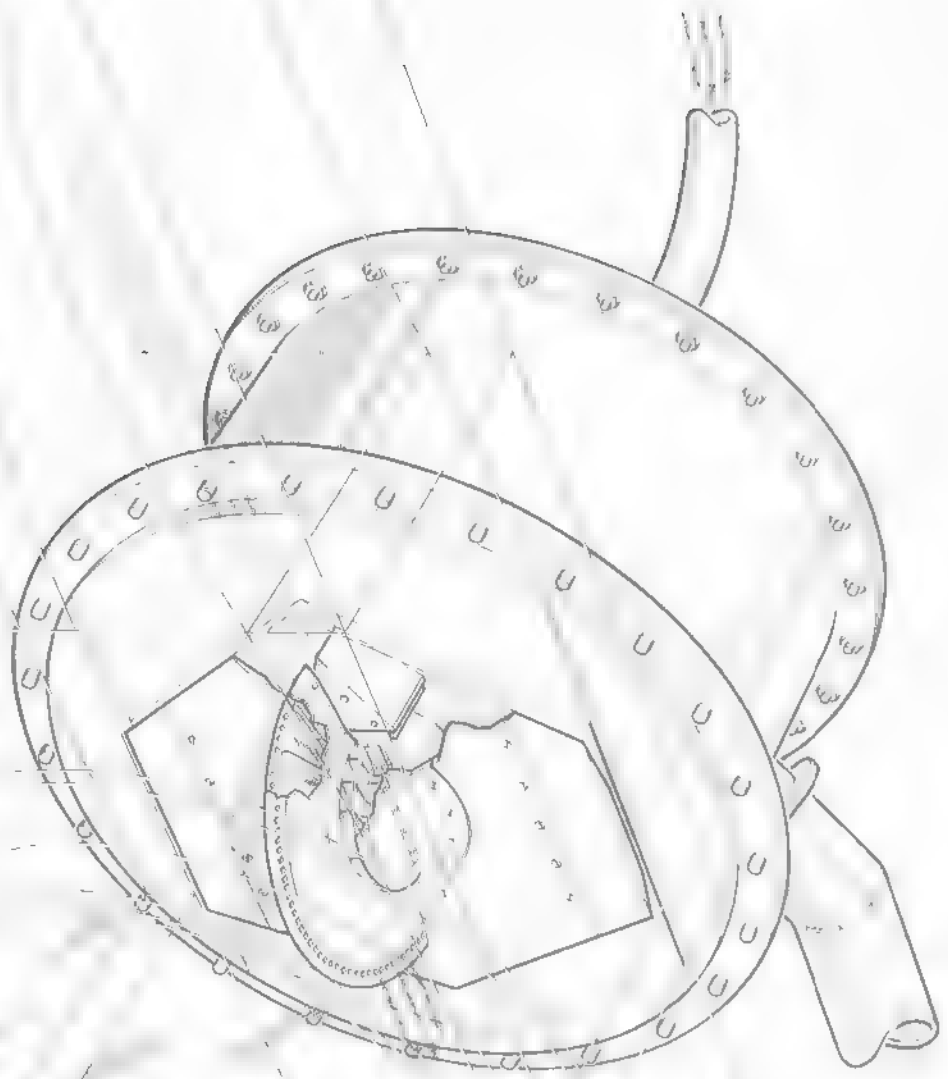


INTAKE MODEL

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SUPERSONIC CONTROL MODEL

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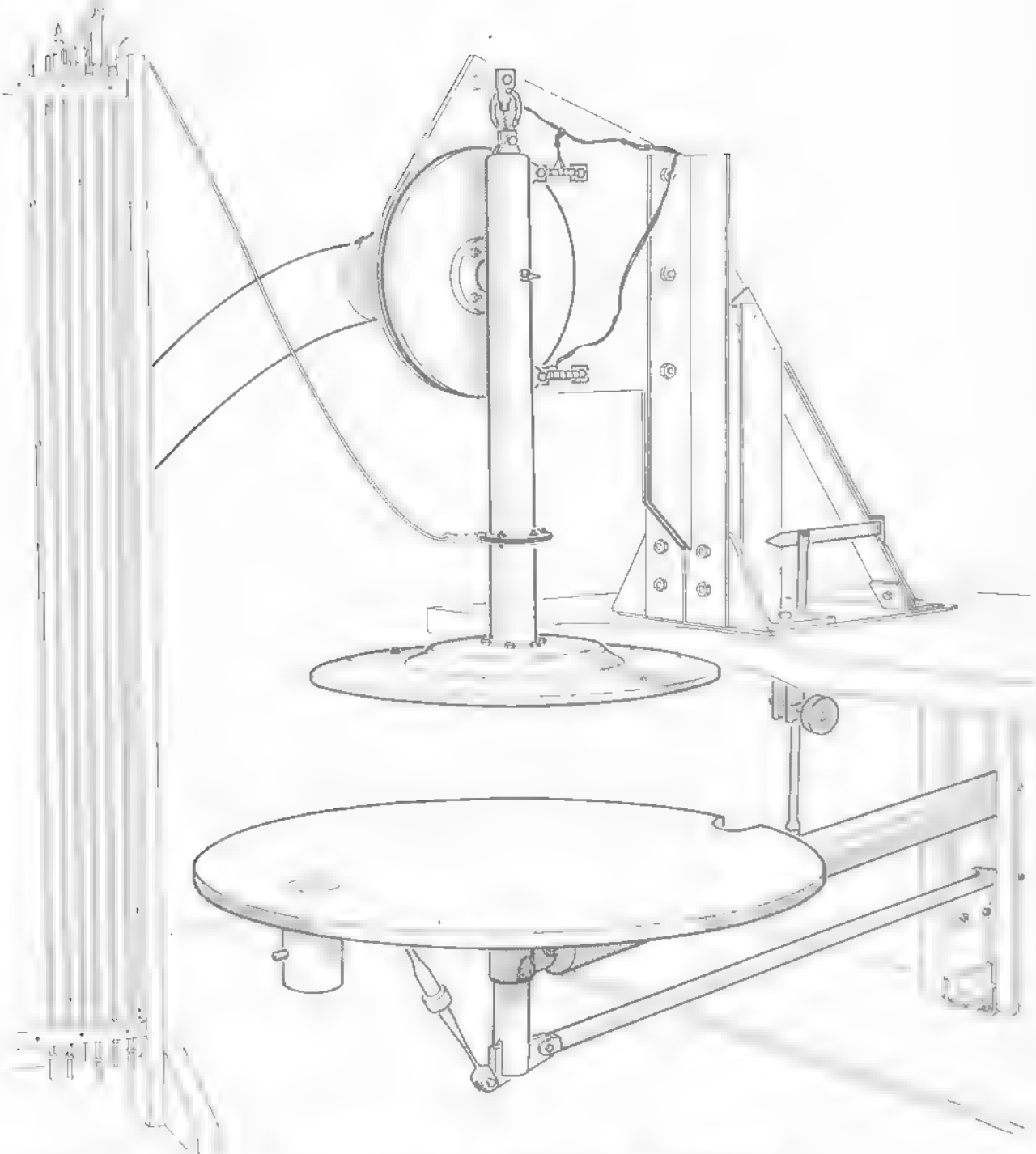
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GROUND EFFECTS MODEL
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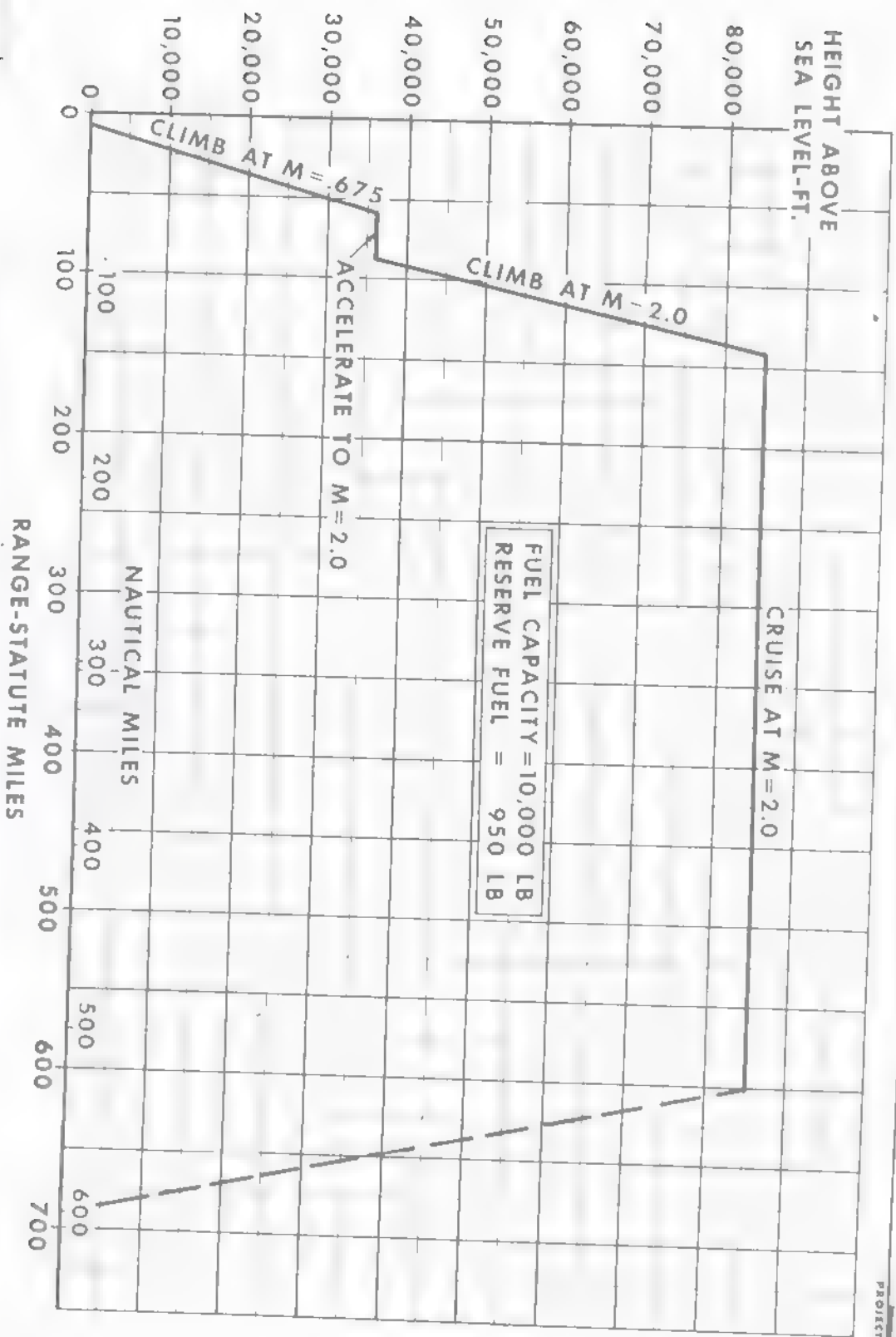


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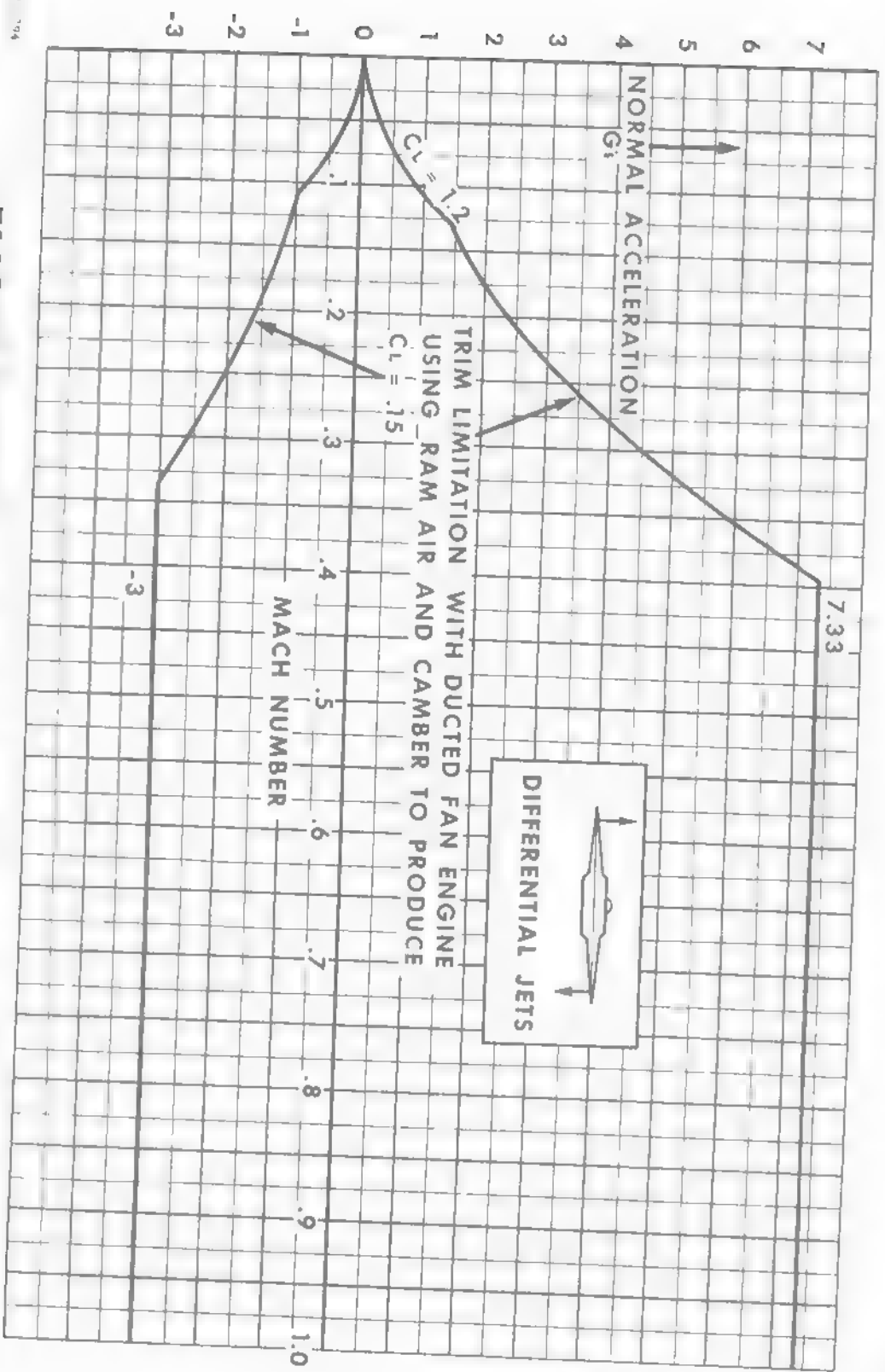
11 100 11/16/1971 (11/16/71)

PROJECT 1194



**4 RB108 DUCTED FAN-RAMJET AIRCRAFT
STILL AIR RANGE**

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992 794

FLIGHT ENVELOPE OF DUCTED FAN AIRCRAFT USING RAM AIR AT SEA LEVEL

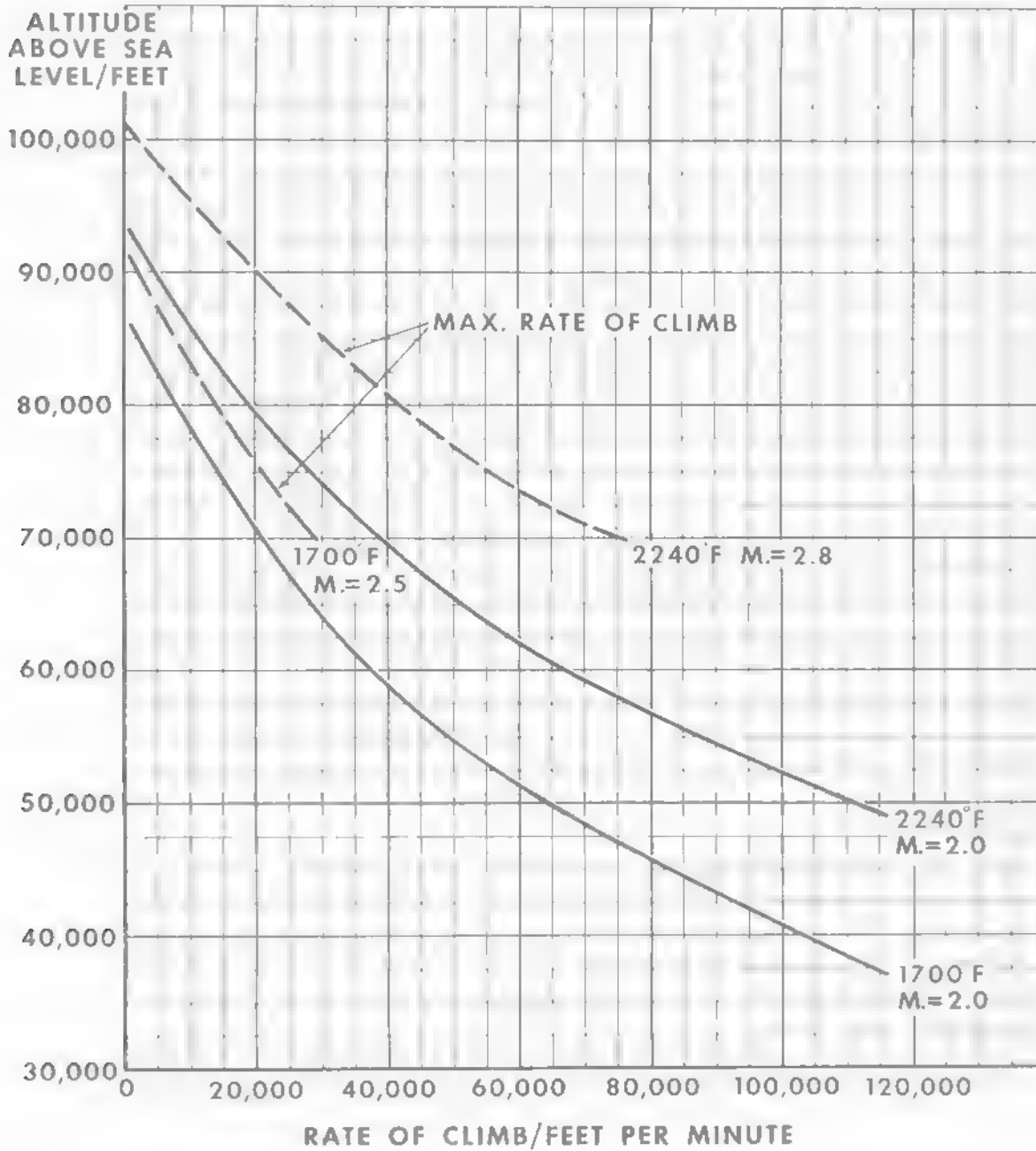
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**4 RB 108 DUCTED FAN RAMJET AIRCRAFT
RATE OF CLIMB VS ALTITUDE**

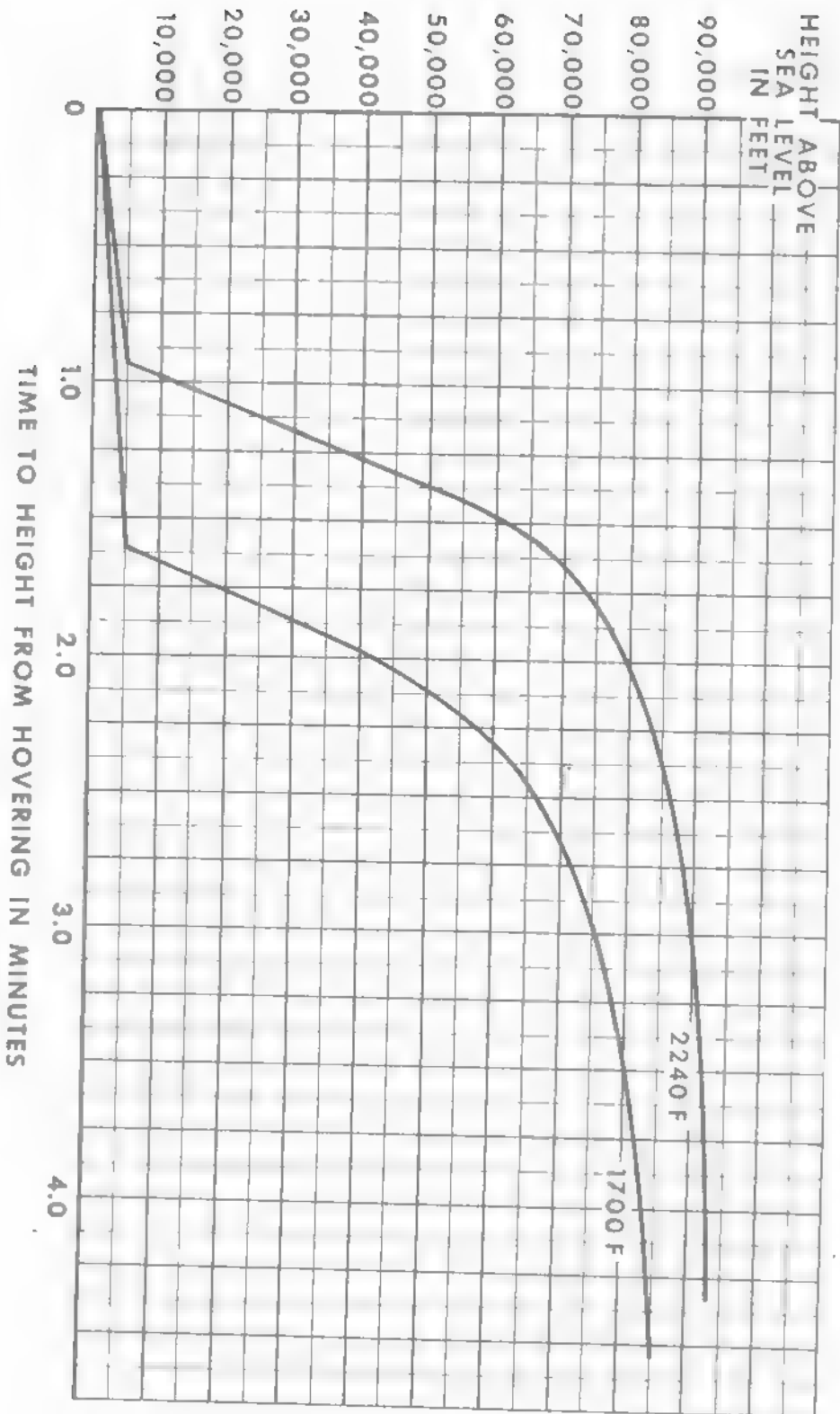
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PROJECT 1794



**4 RB108 DUCTED FAN RAMJET
AIRCRAFT TIME TO HEIGHT AND M=2.0
FROM HOVERING AT SEA LEVEL**

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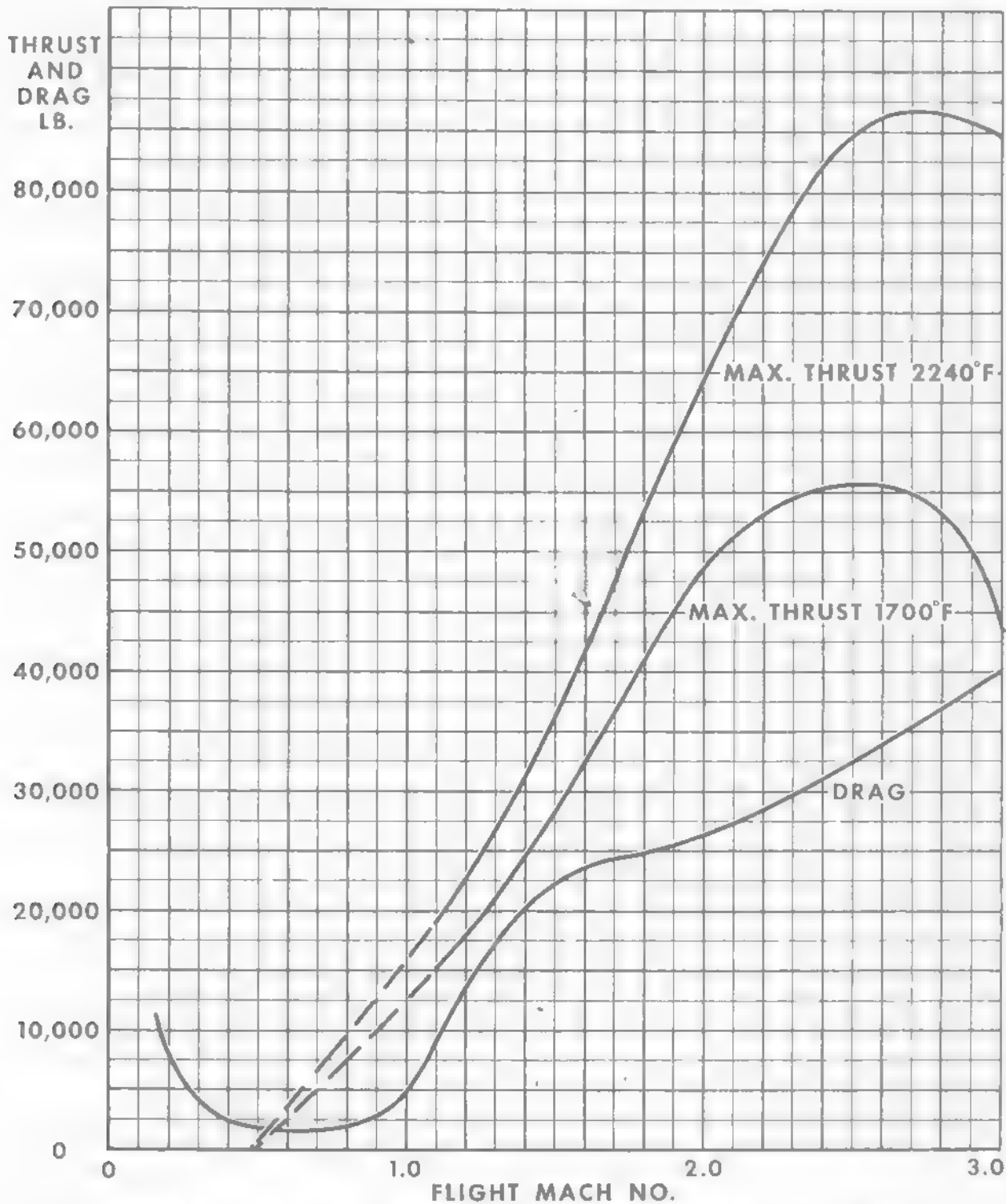
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PROJECT 1794



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THRUST AND DRAG VS. M. AT 36,000 FT.

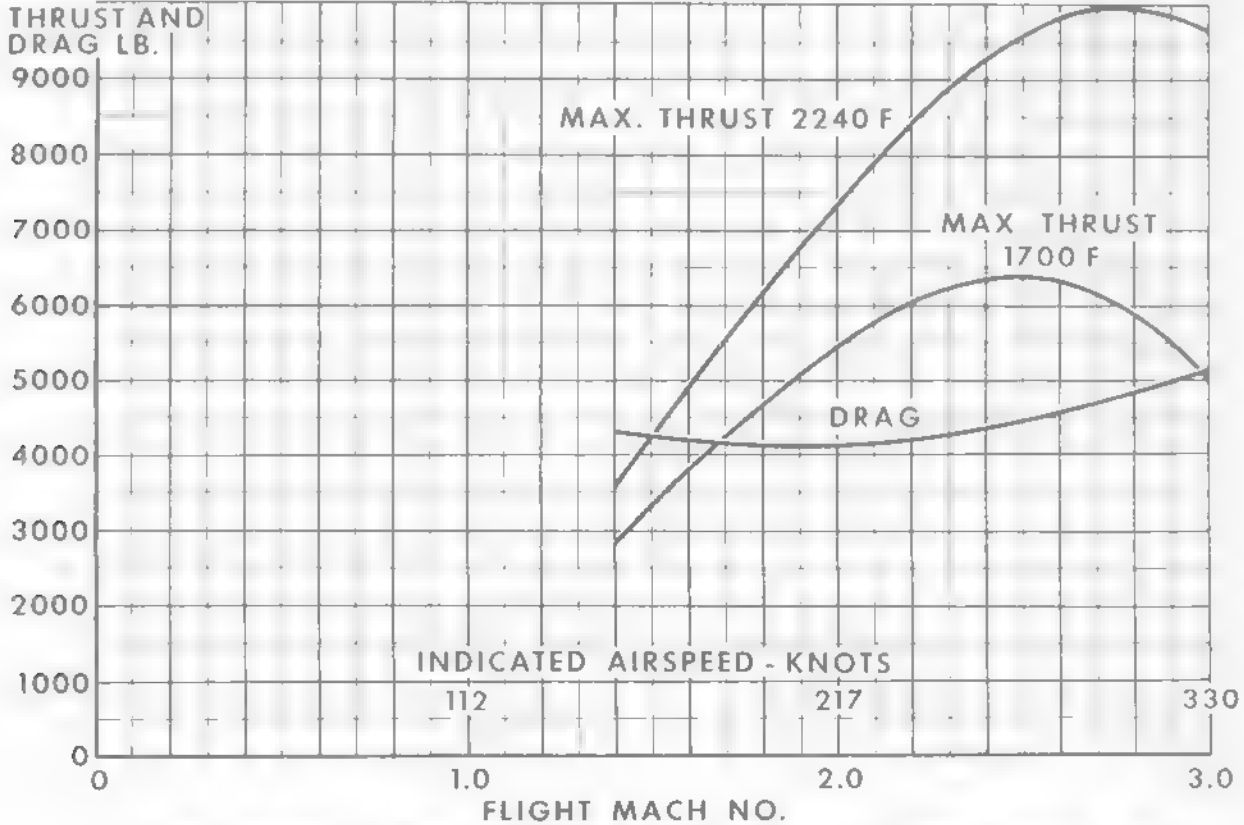
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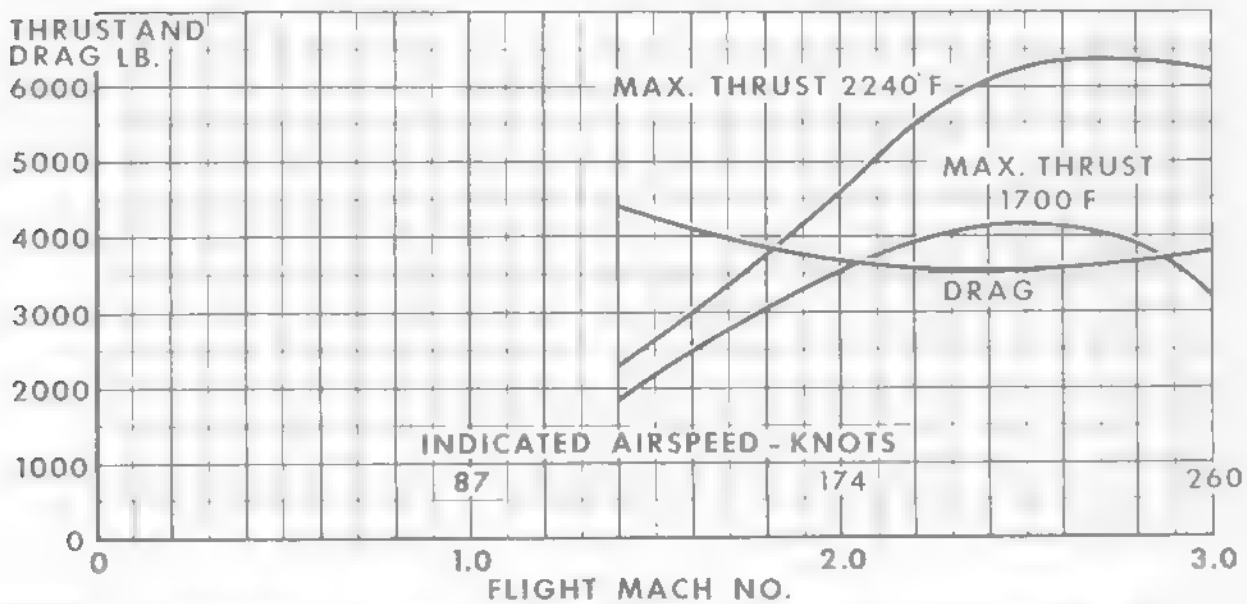
55RDZ-14519 21

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THRUST AND DRAG VS. M. AT 80,000 FT.



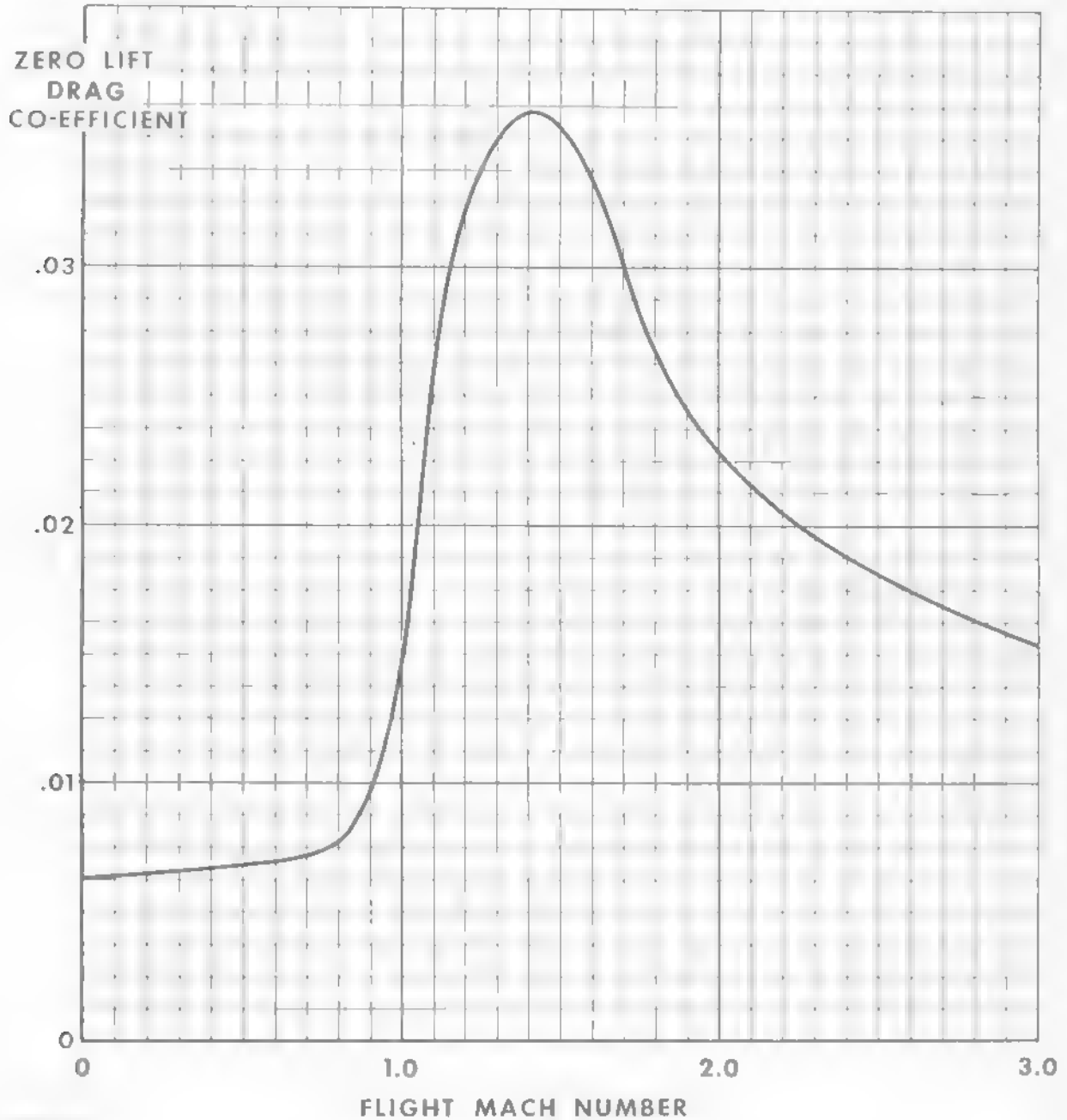
THRUST AND DRAG VS. M. AT 90,000 FT.

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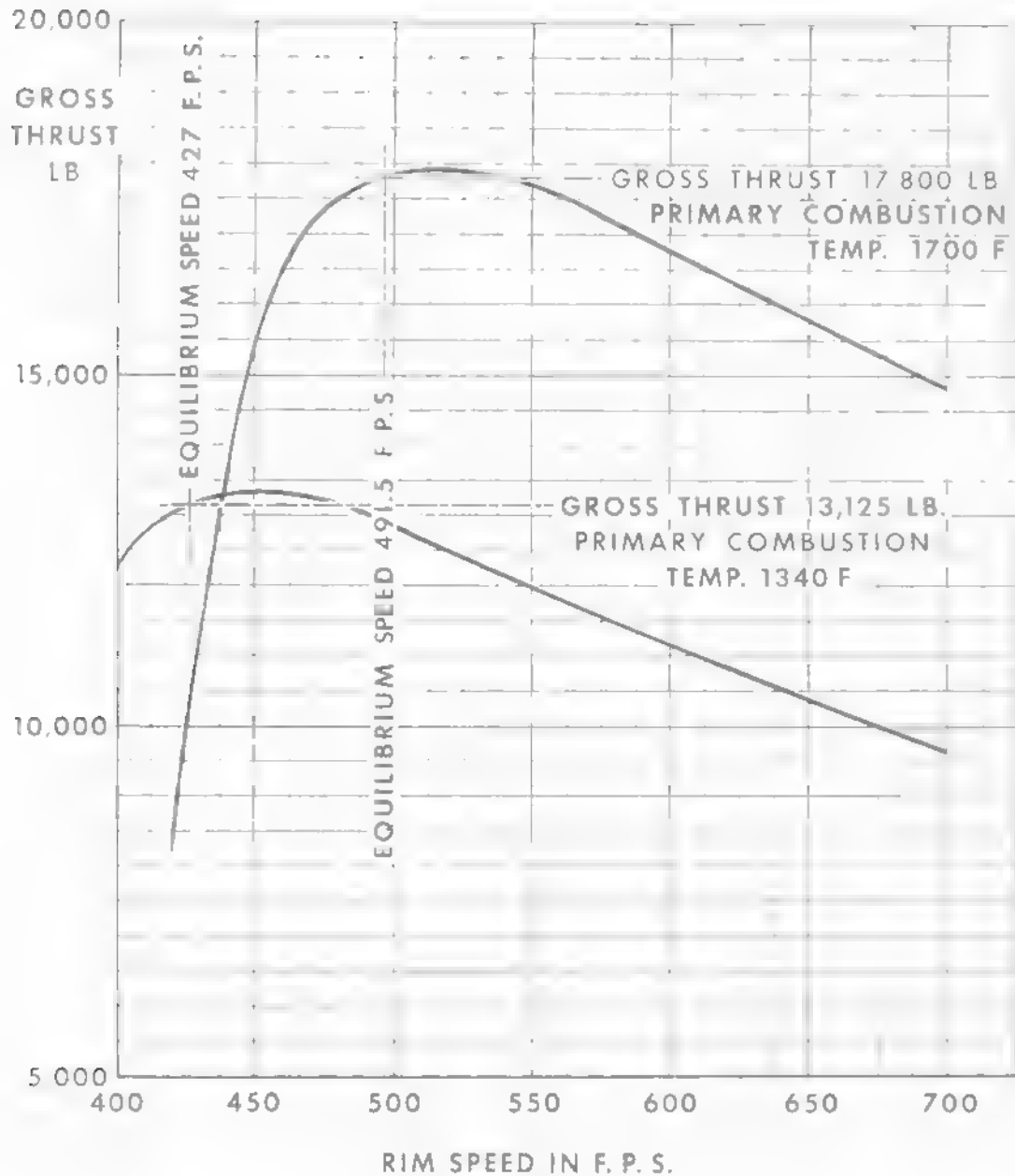
**DUCTED FAN RAMJET AIRCRAFT
ZERO-LIFT DRAG COEFFICIENT VS.
FLIGHT MACH NUMBER**

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**STATIC THRUST VS. RIM SPEED
(NO COMBUSTION IN SECONDARY FLOW)**

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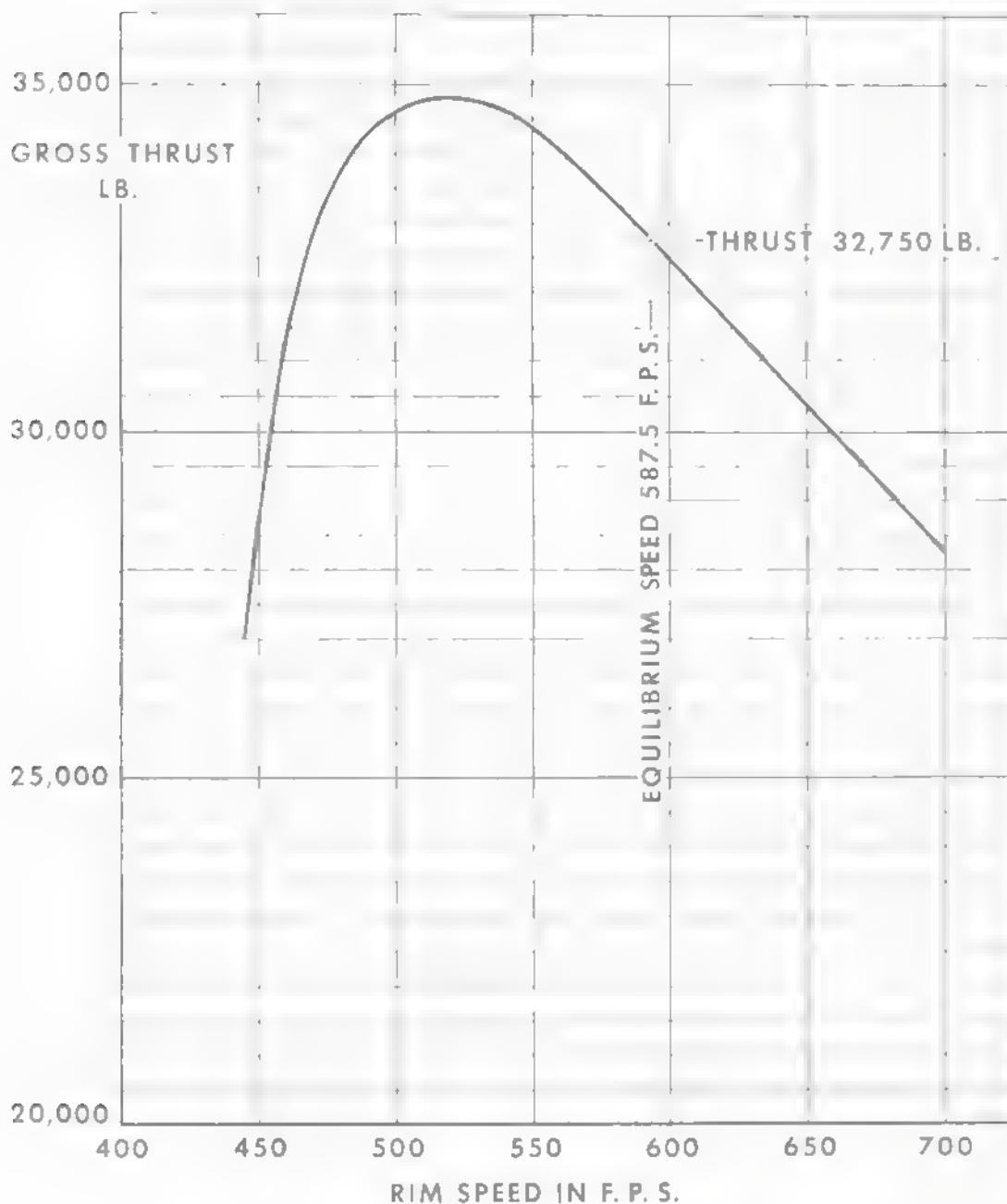
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PROJECT 1704

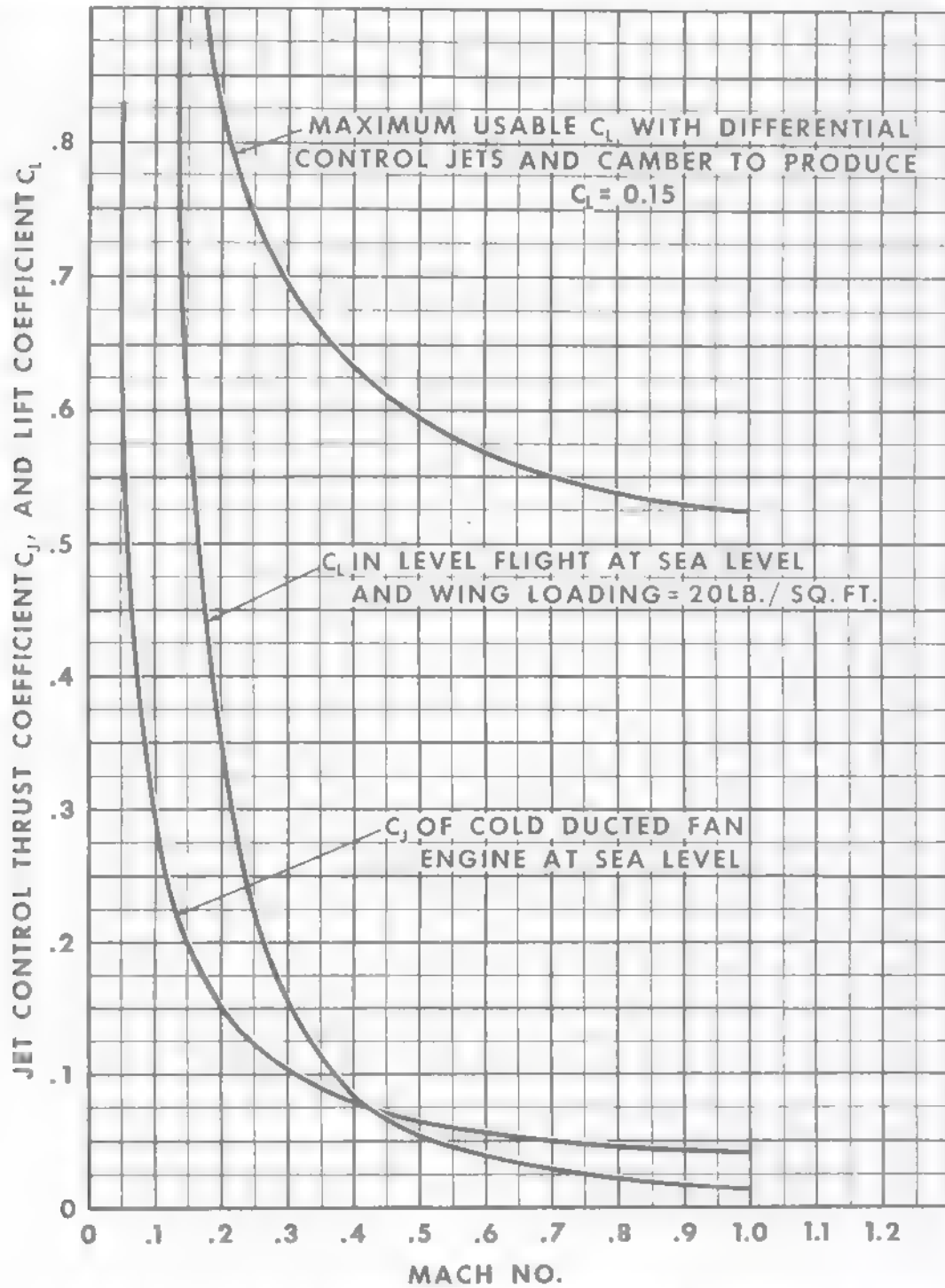


**STATIC THRUST VS. RIM SPEED
(COMBUSTION TO 1200°K IN SECONDARY FLOW)**

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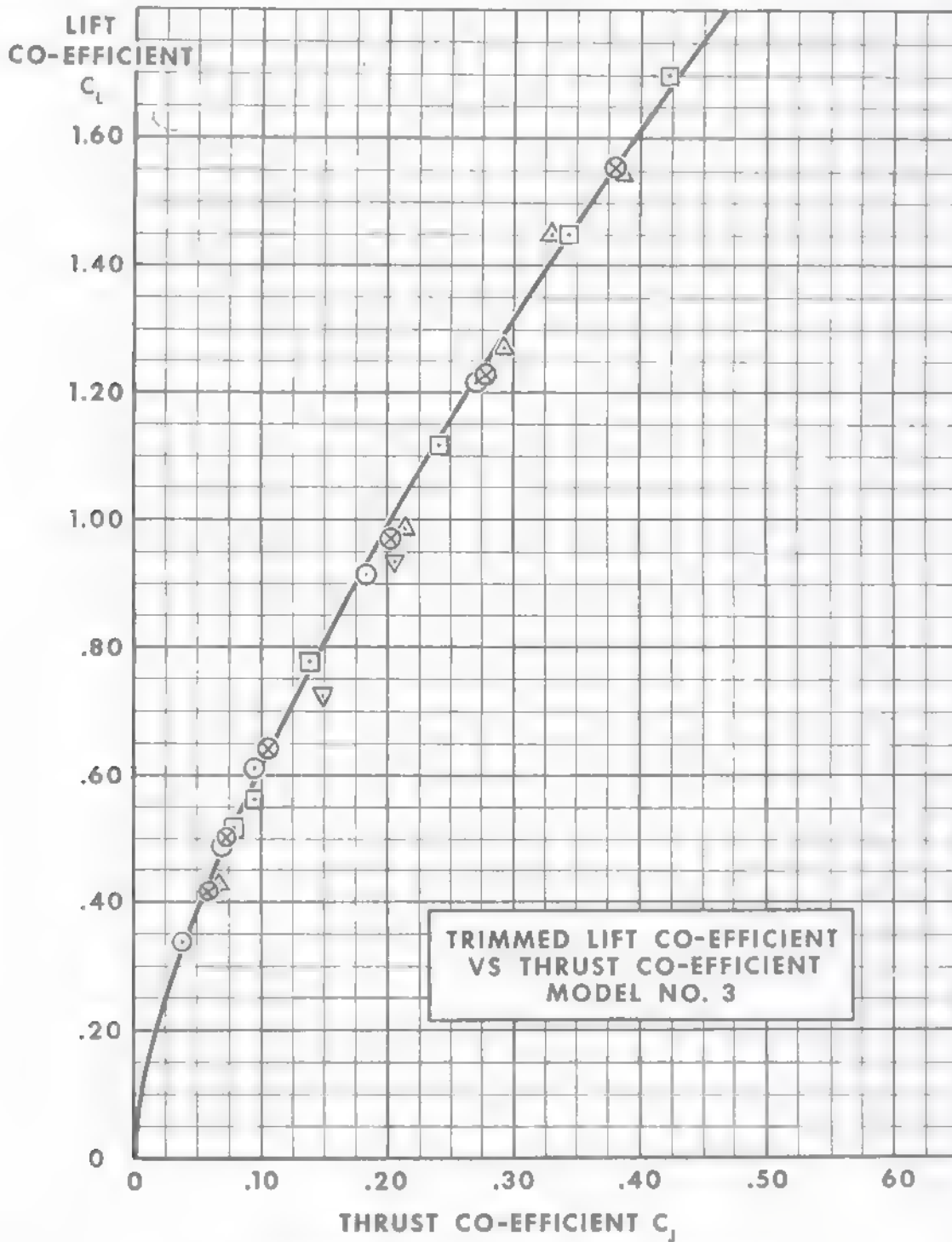
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LIFT AND THRUST CHARACTERISTICS OF DUCTED FAN AIRCRAFT AT SEA LEVEL

991-1794-1



993 1794-1

CONTROL EFFECTIVENESS

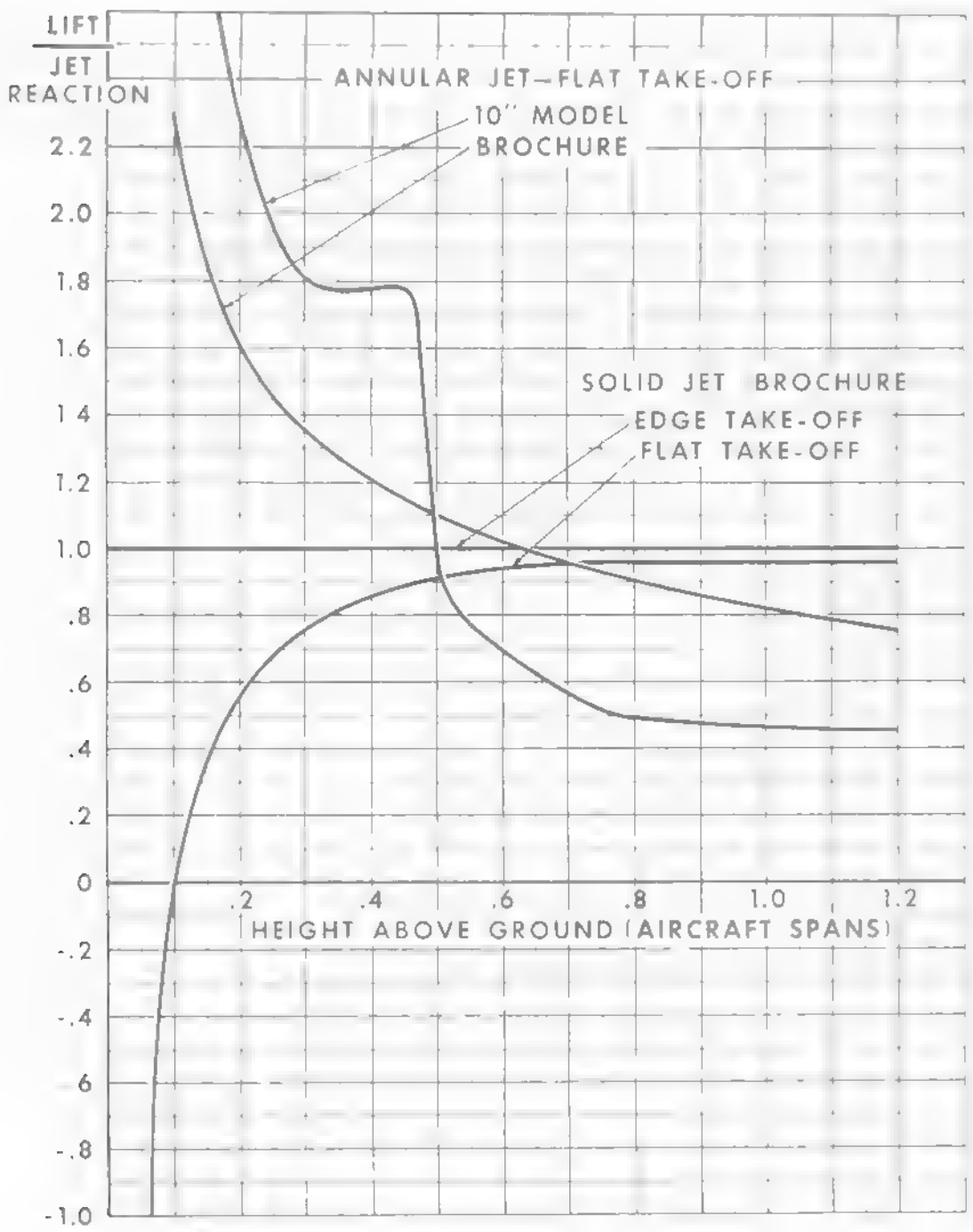
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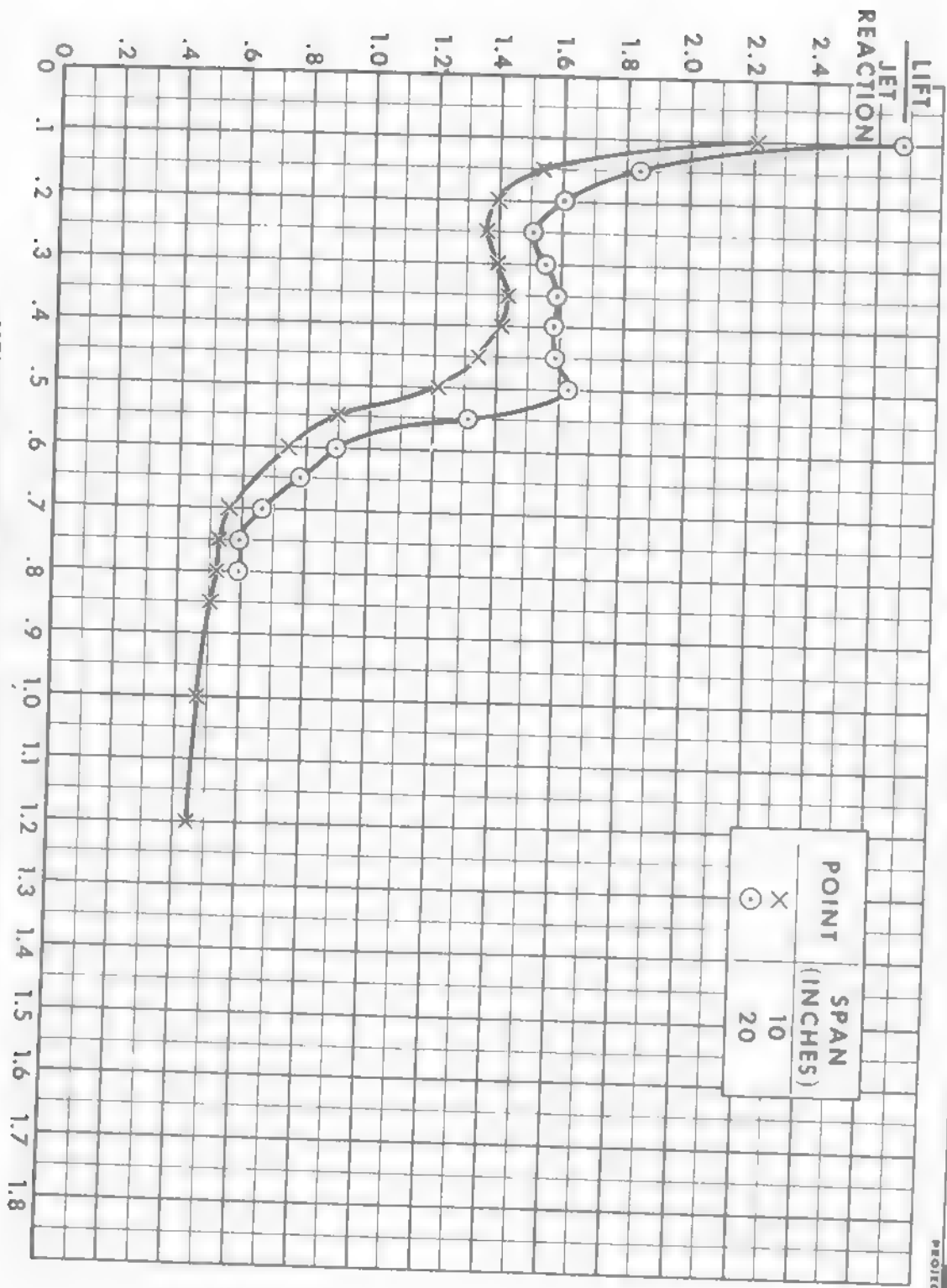
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COMPARISON OF GROUND EFFECT CURVES

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HEIGHT ABOVE GROUND (AIRCRAFT SPANS)
EFFECT OF SCALE

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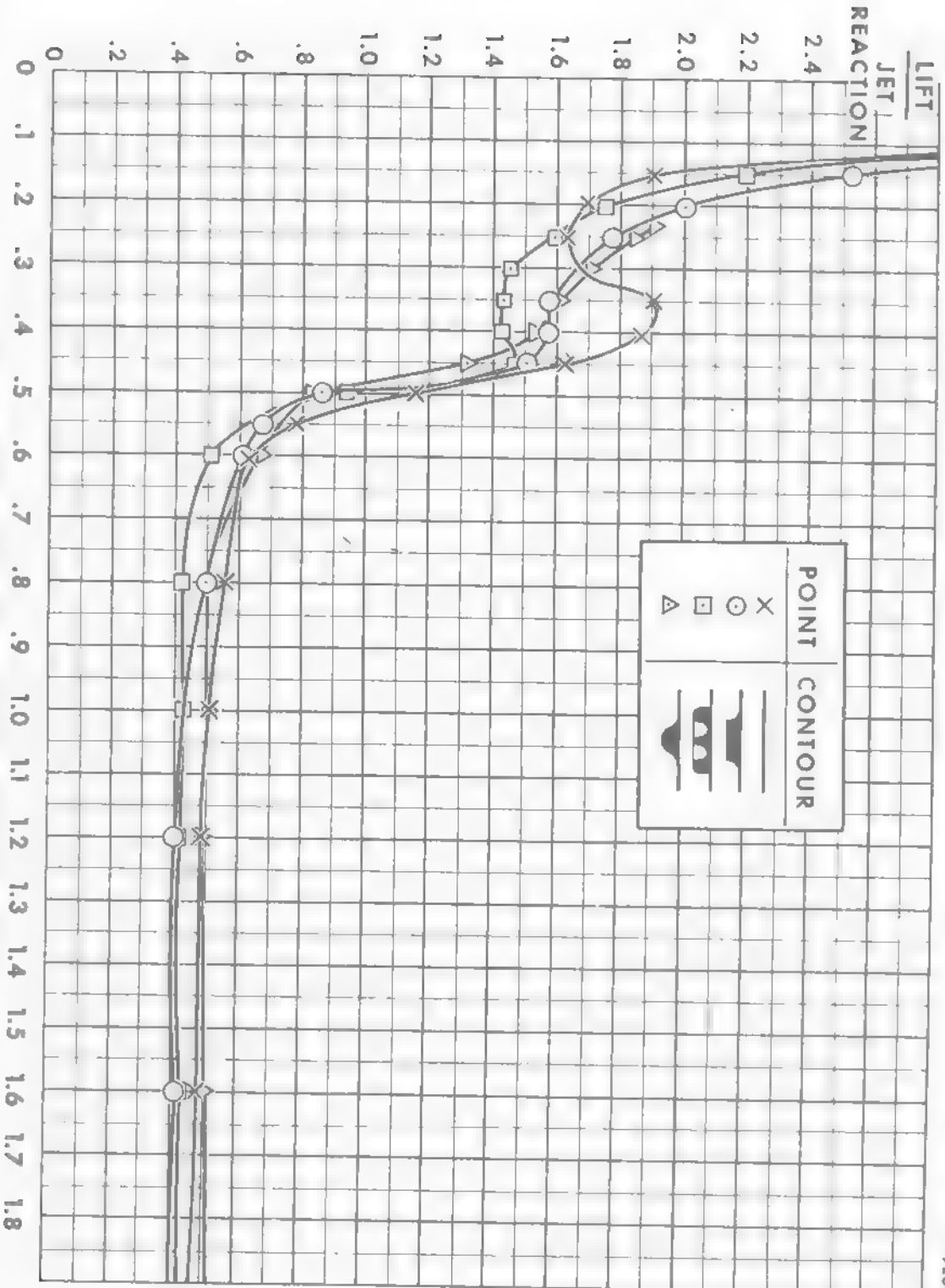
480-1794-1

83



4800 AIRCRAFT LIFT/270

PROJECT 1794



HEIGHT ABOVE GROUND (AIRCRAFT SPANS)
EFFECT OF LOWER SURFACE CONTOUR

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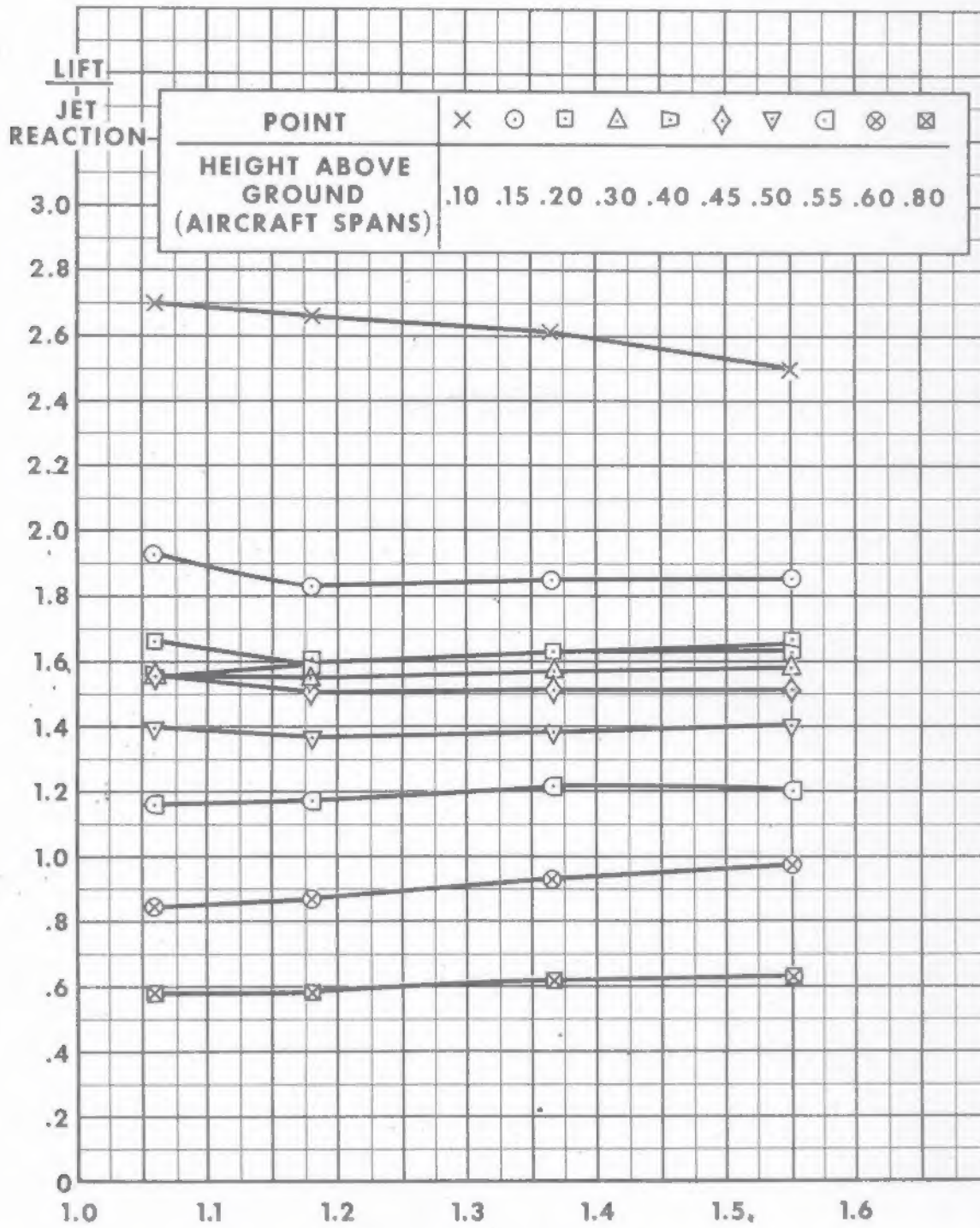
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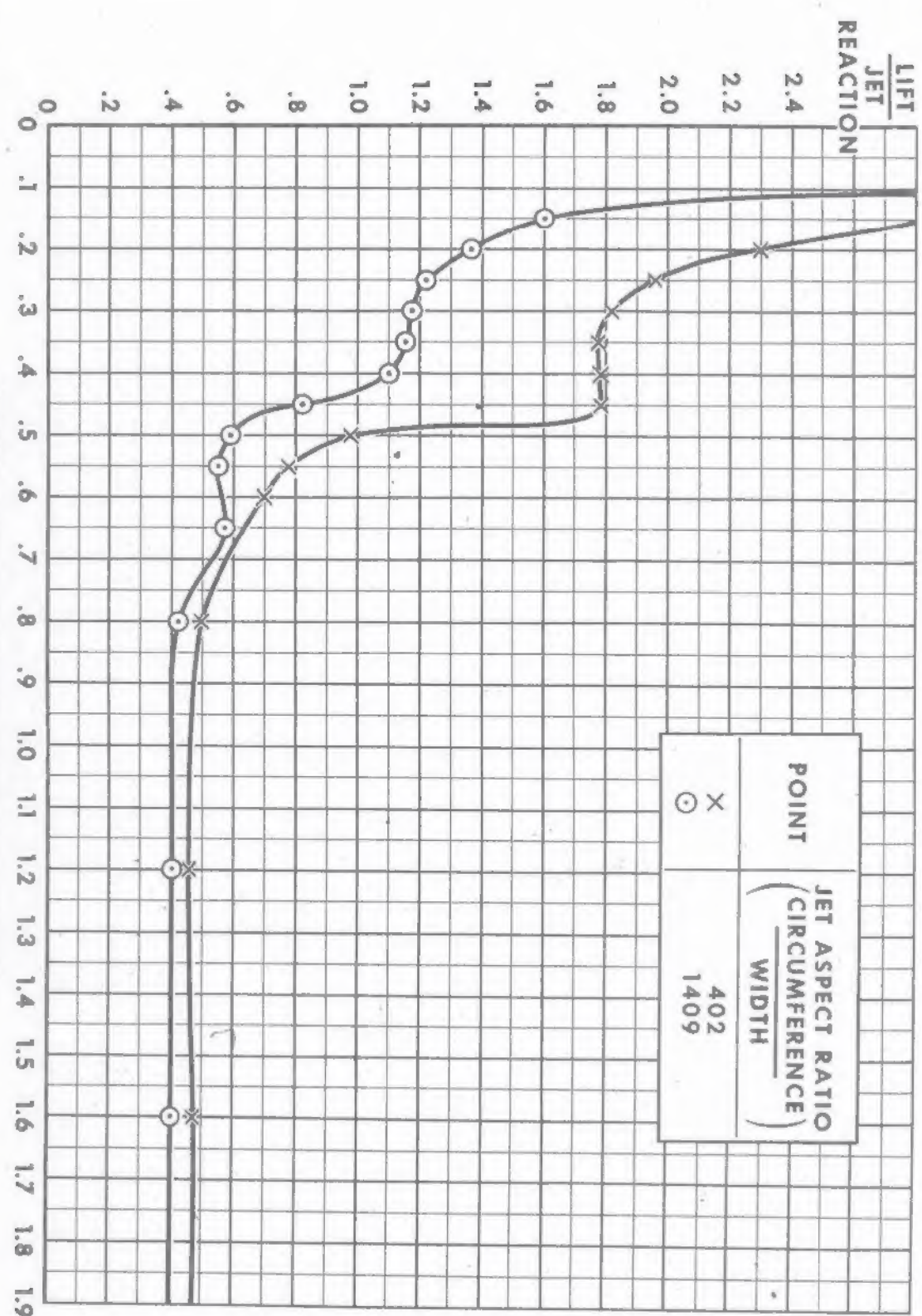


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EFFECT OF NOZZLE PRESSURE RATIO

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POINT	JET ASPECT RATIO (CIRCUMFERENCE / WIDTH)
X	402
⊙	1409

EFFECT OF NOZZLE ASPECT RATIO

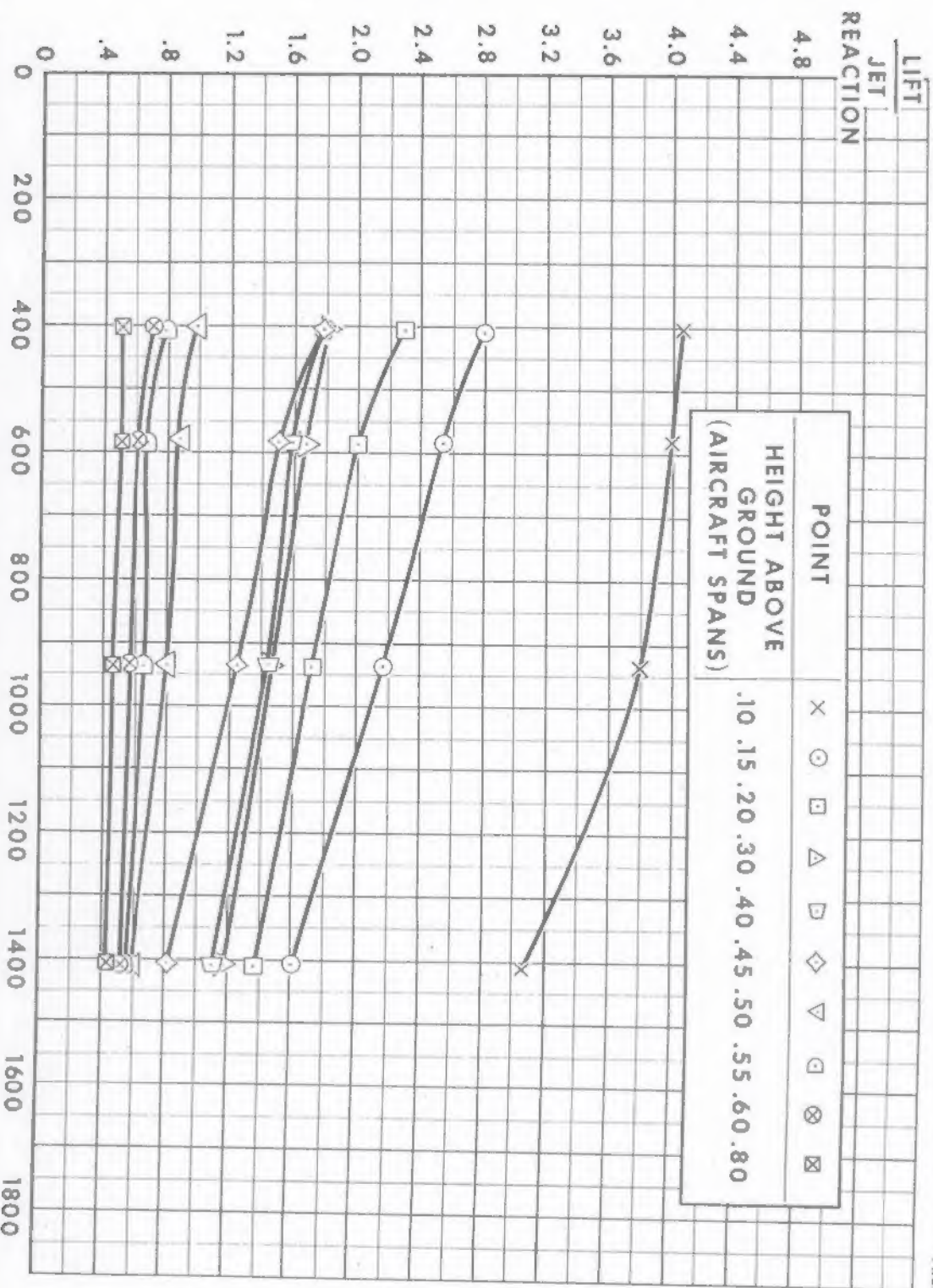
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EFFECT OF NOZZLE ASPECT RATIO
JET ASPECT RATIO (CIRCUMFERENCE/WIDTH)

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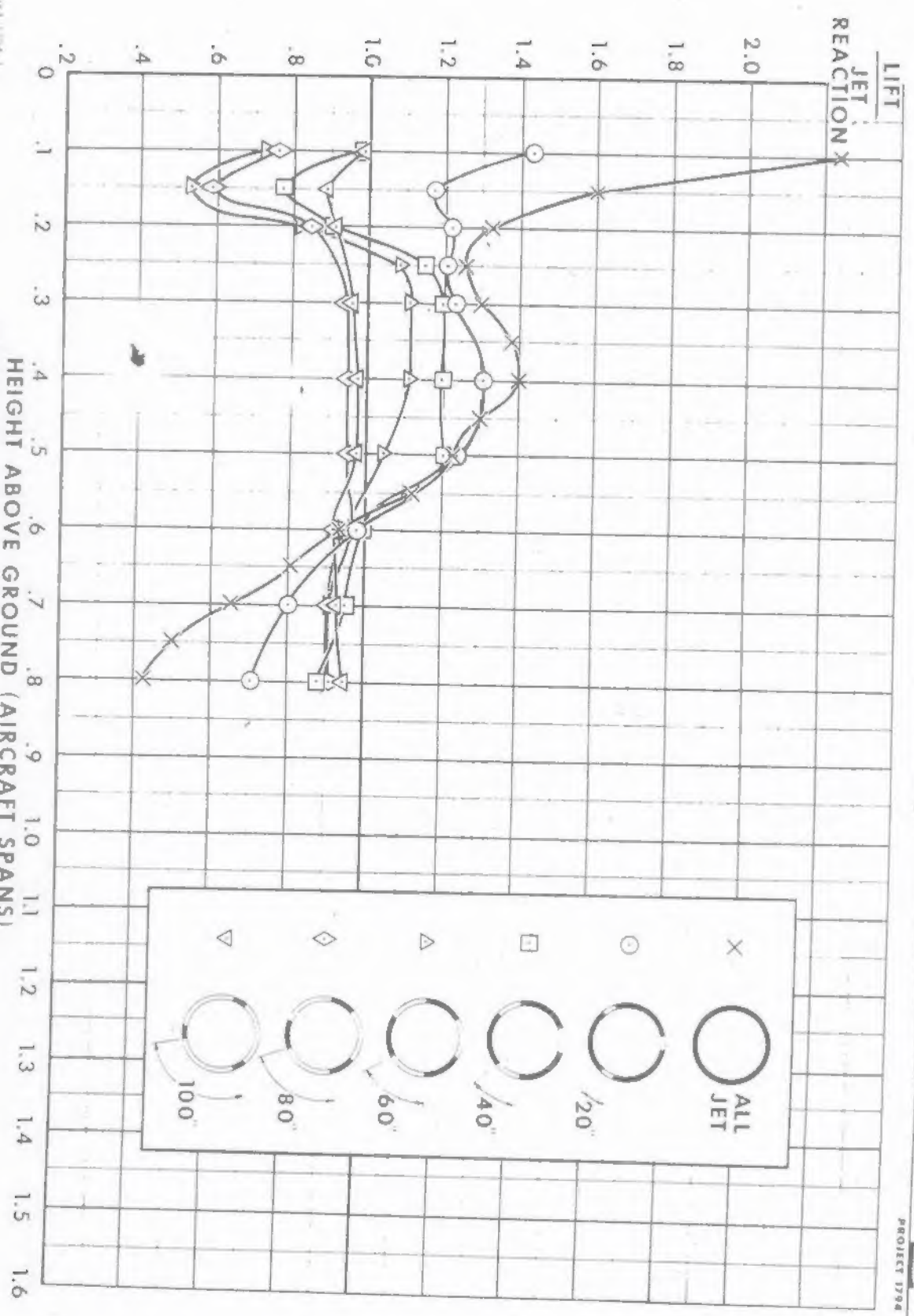
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EFFECT OF LOCAL JET BLOCKAGE

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