

QCX
Auro ANALYZED
CF105
P-Perf-105

Classification cancelled / Changed to *CONFIDENTIAL*
C-105
By Authority of *AWB* Extract P/Perf/105
25 Sept 57
STANDARD AIRCRAFT CHARACTERISTICS
Signed *RB* WITH 2 JT 4A-25 ENGINES
S. E. von Rokit *AWB* Appointment *copy* Sept. '55



ANALYZED

A. V. ROE CANADA LIMITED
MALTON - ONTARIO~~SECRET~~

TECHNICAL DEPARTMENT (Aircraft)

Classification cancelled / Changed to UNCLASS
AIRCRAFT: By authority of AVCS REPORT NO. P/Perf/105
Date 27 Sept 56
FILE NO: Signature [Signature] NO. OF SHEETS _____
Unit / Rank / Appointment AVCS

TITLE

C-105 STANDARD AIRCRAFT CHARACTERISTICSWITH 2 JT 4A-25 ENGINES

PREPARED BY D. Pon

DATE Sept. '55

CHECKED BY

DATE

SUPERVISED BY

DATE

APPROVED BY

DATE

~~SECRET~~

ISSUE NO	REVISION NO	REVISED BY	APPROVED BY	DATE	REMARKS

FORM 1516A

45720

15799 607

LOADING AND PERFORMANCE

SECRET

Performance Under N.A.C.A. Standard Atmospheric Conditions

To R.C.A.F. Specification AIR 7-4

WEIGHT:

Take-Off Weight with 15,298 Lb. Fuel (77.1% Max.)	Lb.	58,982
Operational Weight Empty	Lb.	43,684
Combat Weight (1/2 Fuel)	Lb.	51,333
Landing Weight (With Reserve Fuel + Missiles)	Lb.	44,200
Wing Loading at Normal Take-Off Weight	Lb./Sq.Ft.	47.0
Power Loading at Normal Take-Off Weight	Lb./Lb. Thrust	1.61

SPEED

True Air Speed In Level Flight		
At Sea Level at Combat Weight		
Maximum Thrust	Kts.	★ 755
Military Thrust	Kts.	640
True Air Speed in Level Flight		
At 50,000 Ft. at Combat Weight		
Maximum Thrust	Kts.	1,147

CEILING

Combat Ceiling at Combat Weight, Rate of Climb = 500 P.P.M.		
Maximum Thrust at 1.5 M.N.	Ft.	57,200

RATE OF CLIMB

Steady Rate of Climb at Sea Level, Combat Weight		
Maximum Thrust at M.N. = .92	F.P.M.	51,400
Military Thrust at 530 Kts.	F.P.M.	15,800
Steady Rate of Climb at 50,000 Ft., Combat Weight		
Maximum Thrust at M.N. = 1.5	F.P.M.	7,700

TIME TO HEIGHT

Time to 50,000 Ft. M.N. = 1.5 from Engine Start at Take-Off		
Weight = 58,982		
Maximum Thrust	Mins.	4.4

MANOEUVRABILITY

Combat Load Factor at Combat Weight		
Maximum Thrust at M.N. = 1.50 at 50,000 Ft.		1.50

★ Placard Speed = 720 Kts.

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TAKE-OFF DISTANCE

Take-Off Distance over 50 Ft. Obstacle at Sea Level
 Take-Off Weight = 58,982 Lb.

Maximum Thrust	Ft.	3,400
Military Thrust	Ft.	6,700
Maximum Thrust, Hot Day	Ft.	4,600

LANDING DISTANCE

Landing Distance over 50 Ft. Obstacle at Sea Level at Combat Weight Ft. 5,300

STALLING SPEED

True Stalling Speed in Landing Configuration at Combat Weight
 at Sea Level Kts. 110

RANGE

Combat Radius of Action at 50,000 Ft., Climb at M.N. = .92, Cruise out
 at M.N. = 1.5, Combat for 5 Mins. at M.N. = 1.50, Cruise Back at M.N. = .92,
 15 Min. Stack at 40,000 Ft., 5 Min. Fuel Reserve on Landing

High Speed Mission with 15,298 Lb. Fuel	N.M.	200
High Speed Mission with Full Internal Fuel	N.M.	309

Combat Radius of Action at 50,000 Ft., Mission as above except climb
 at 530 Kts. and cruise out at M.N. = .92

Maximum Range Mission with 15,298 Lb. Fuel	N.M.	406
Maximum Range Mission with Full Internal Fuel	N.M.	605

Combat Radius of Action at Sea Level, Cruise out at .6 M.N. and
 Combat at M.N. = .92 at Sea Level, Cruise Back at .92 M.N. at
 40,000 Ft., 15 Min. Stack, 5 Min. Fuel Reserve on Landing

Sea Level Mission with 15,298 Lb. of Fuel	N.M.	325
Sea Level Mission with Full Internal Fuel	N.M.	470

Ferry Range Mission at Economical Cruise Speed (M = .92 and Height,
 including 15 Mins. Stacking at 40,000 Ft., 5 Min. Fuel Reserve on
 Landing

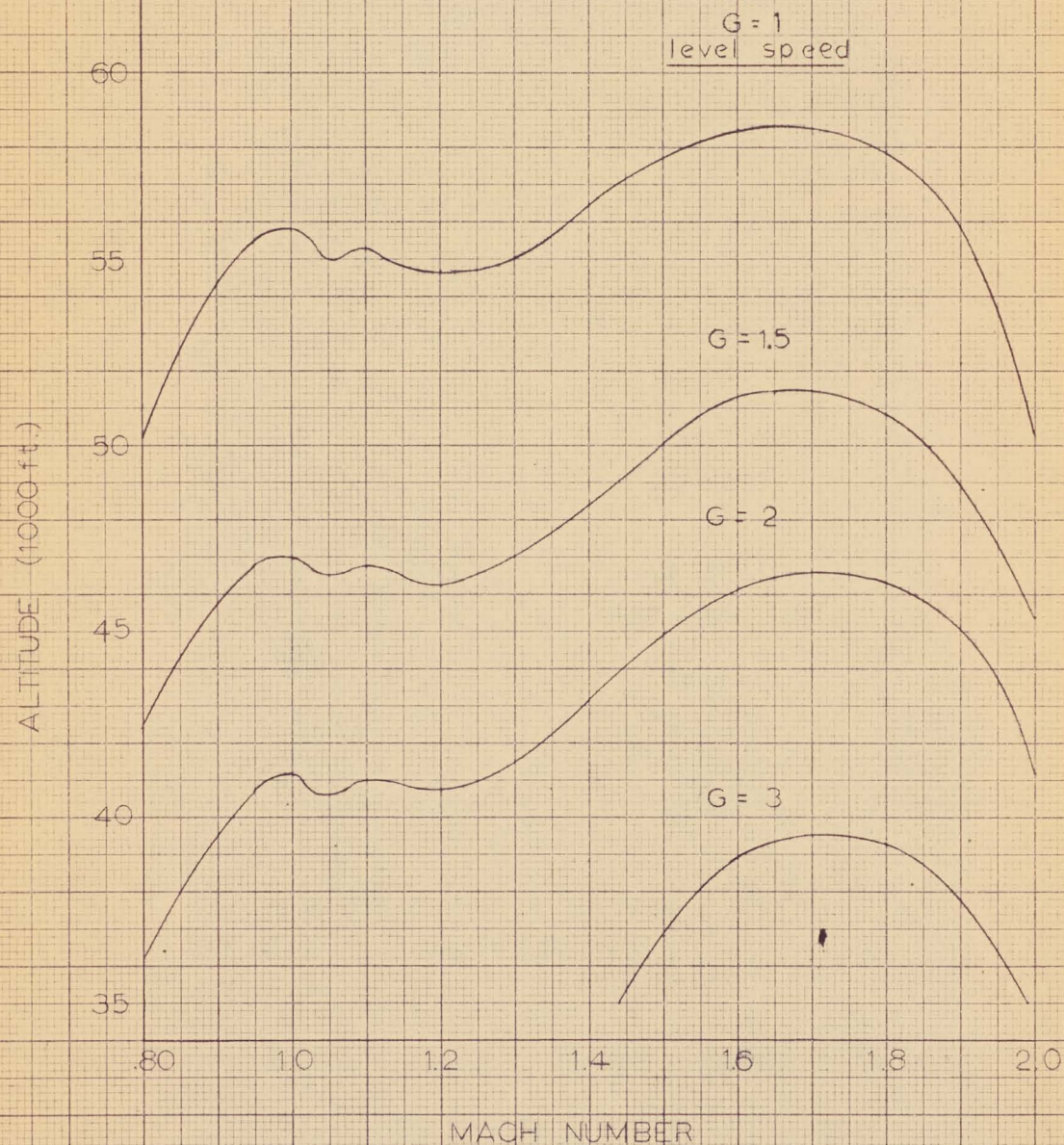
Range with Full Internal Fuel and 500 Gal. - External Tank .	N.M.	1,859
Range with full internal fuel	N.M.	1,609

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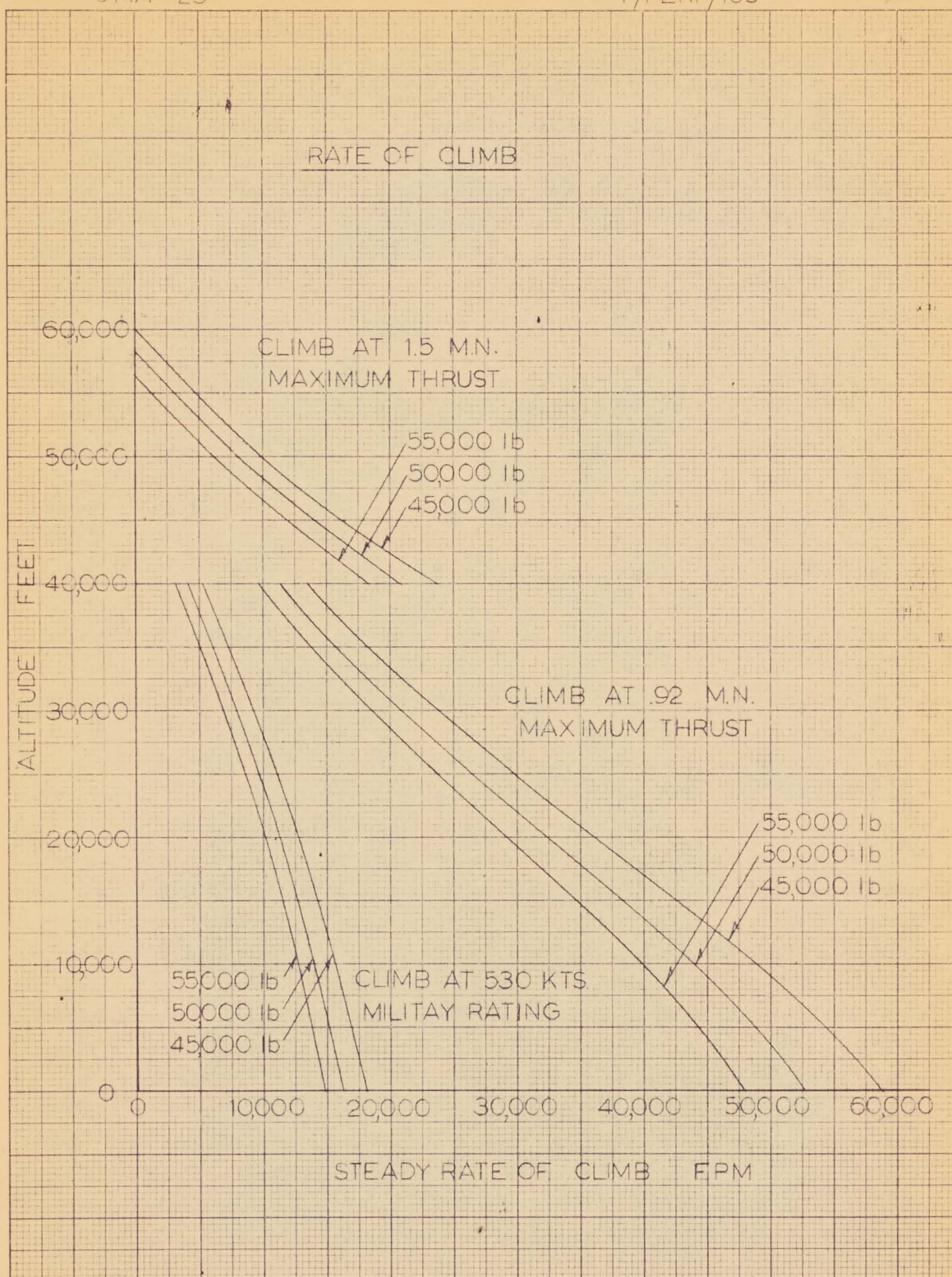
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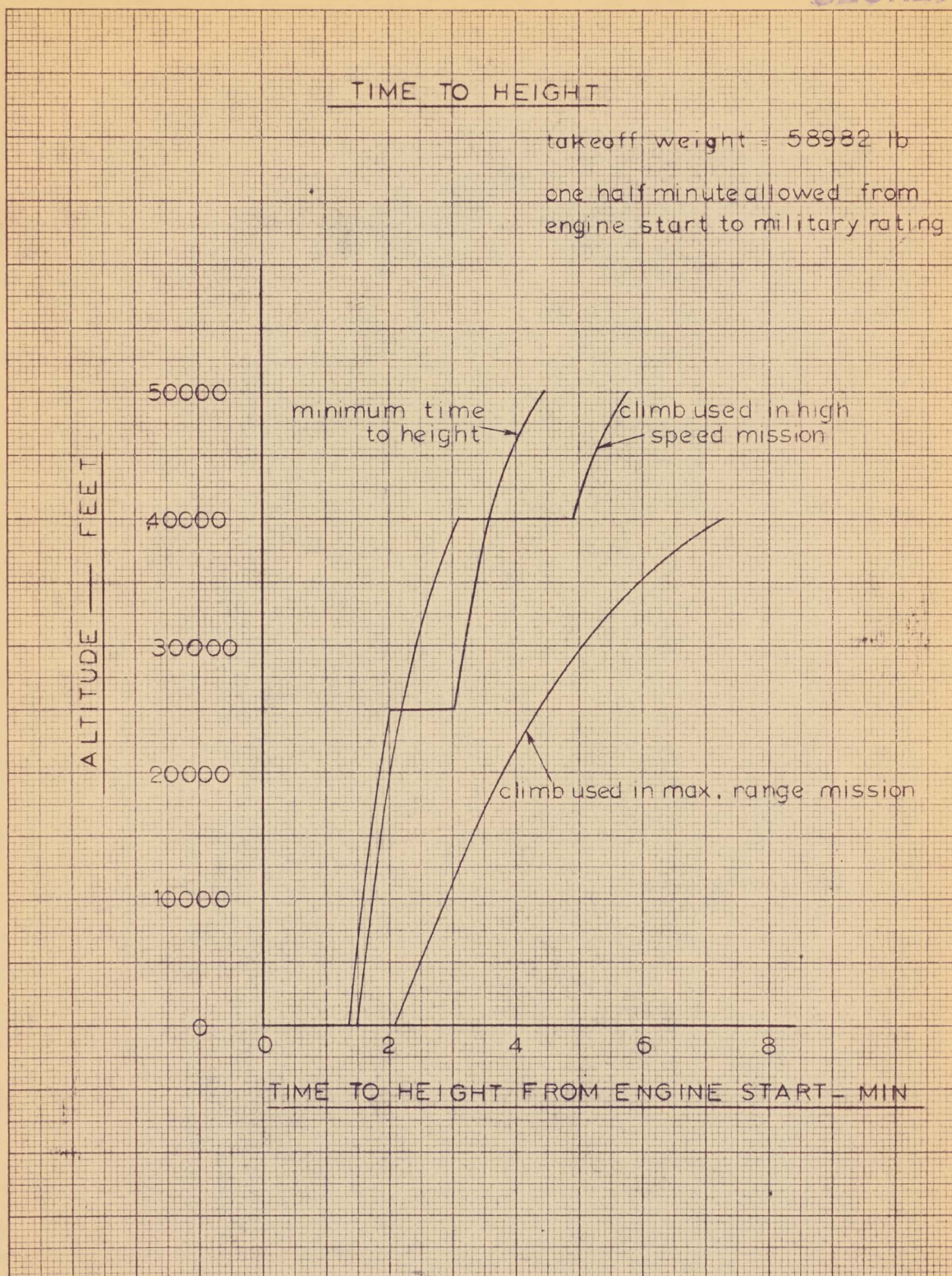
MAXIMUM G SUSTAINED IN LEVEL TURN

combat weight = 51333 lb



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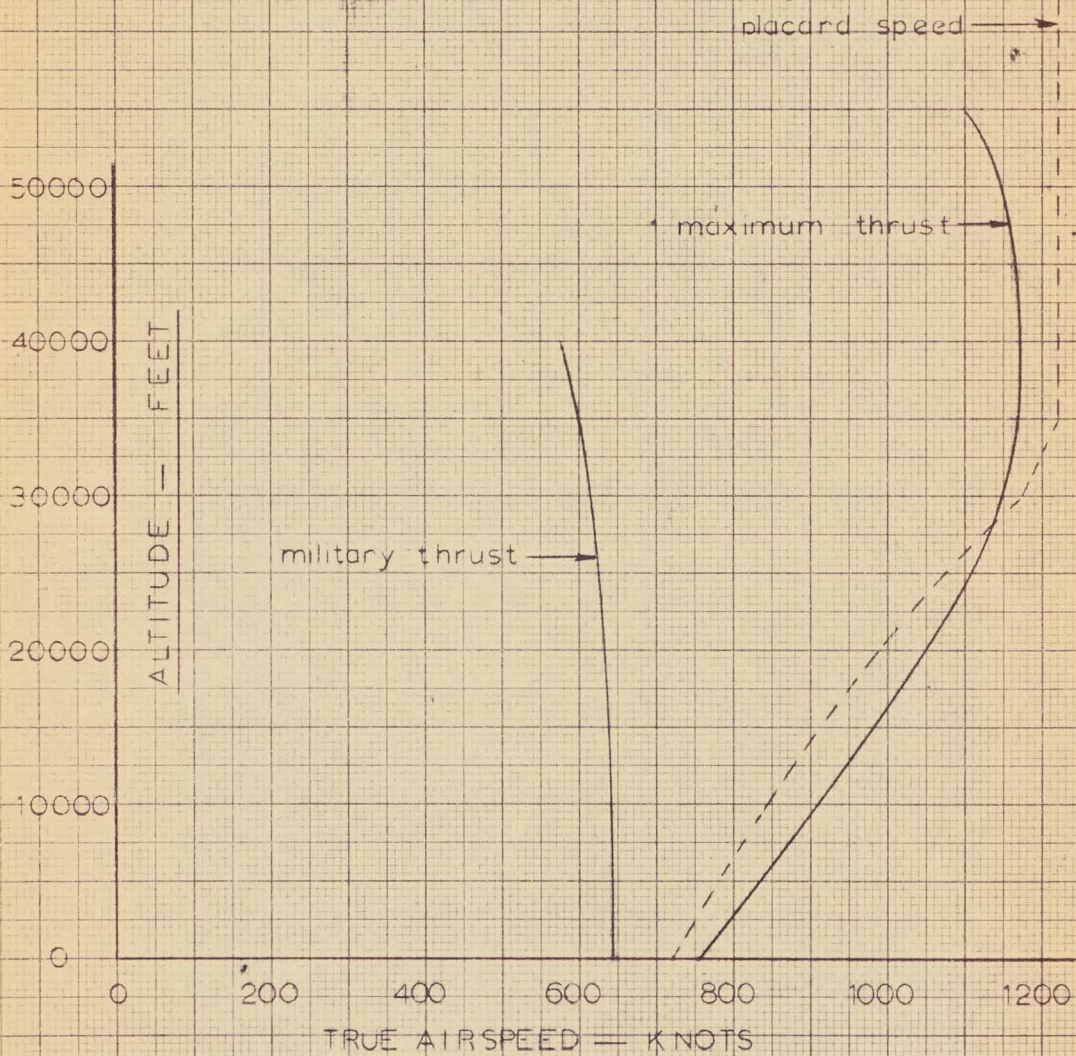




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LEVEL FLIGHT TRUE AIRSPEED

combat weight = 51335 lb



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AIRCRAFT
A U. W.

J T4A-25

COMPONENT

SHEET No.

DATE

REPORT No.

PREP BY

PIPERF/105

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TAKEOFF DISTANCE AT SEA LEVEL

standard day with a/b
standard day without a/b
hot day (100°F) with a/b

distance
to clear
50 ft
obstacle

ground
run

TAKEOFF DISTANCE - FT

70000

65000

60000

55000

50000

45000

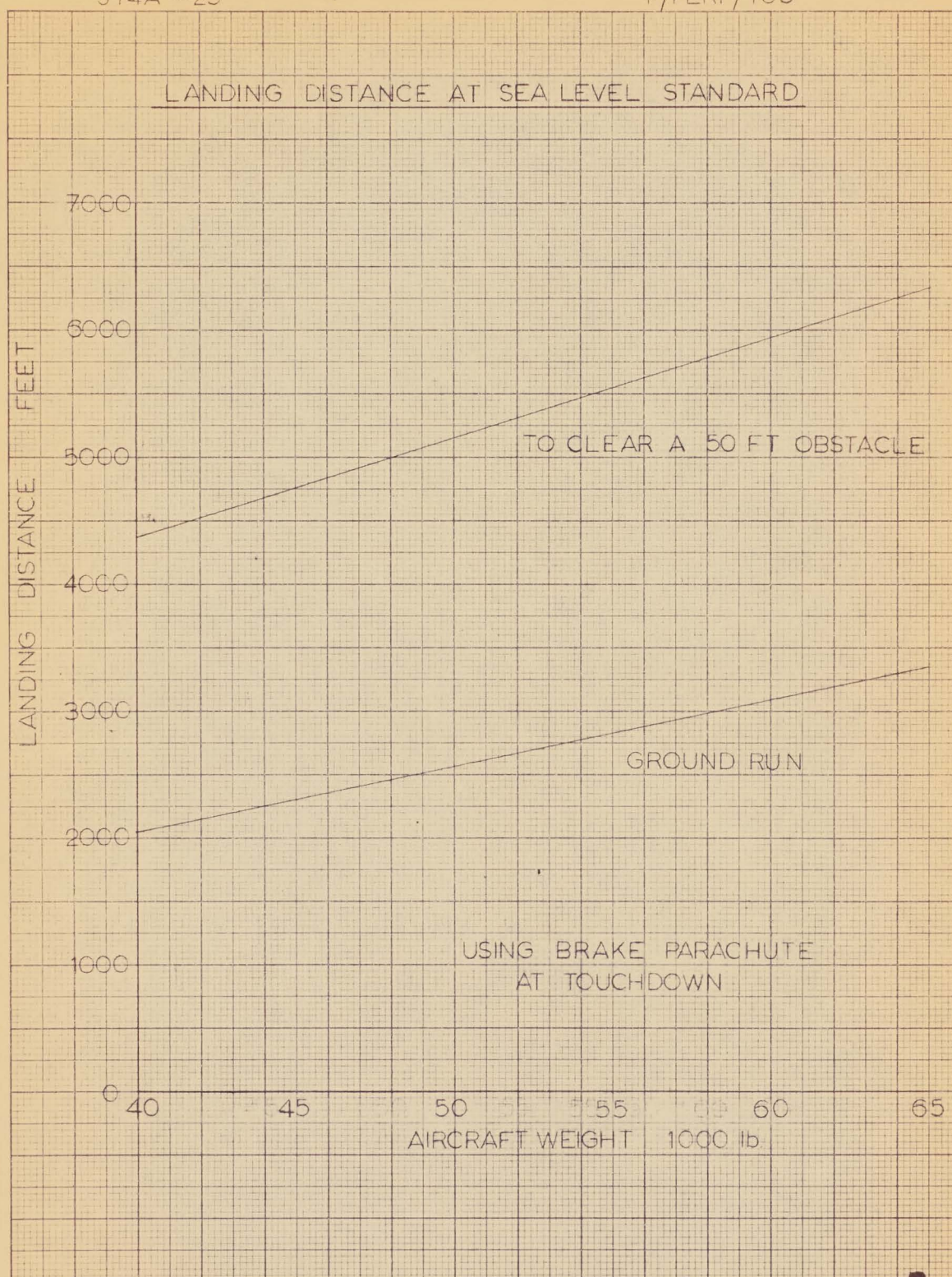
LB

AIRCRAFT WEIGHT

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JT4A - 25

P/PERF/105



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