

QC
Auro
C-105
Ext.
P/Perf/102

QCX
Auro
CF105
P-Perf-102

15

FILE IN VAULT.

(15)

UNCLASSIFIED
ANALYZED

C-105

Extract P/Perf/102

STANDARD AIRCRAFT CHARACTERISTICS

WITH 2 P.S. 13 ENGINES

copy "

July '55



ANALYZED

(15)

A. V. ROE CANADA LIMITED
MALTON - ONTARIO

TECHNICAL DEPARTMENT (Aircraft)

AIRCRAFT

REPORT NO. P/Perf/102

FILE NO.

NO OF SHEETS

TITLE

C-105 STANDARD AIRCRAFT CHARACTERISTICSWITH 2 P.S. 13 ENGINES

Classification cancelled / changed to Unclassified
By authority of AVRO Arrow Declassif. Board
Date 28 Jul 87
Signature *[Signature]*, Co-Chairperson
Unit / Rank / Appointment DSIS 3

PREPARED BY T. Grayson
D. Pon

DATE July '55

CHECKED BY

DATE

SUPERVISED BY

DATE

APPROVED BY

ISSUE NO.	REVISION NO.	REVISED BY	APPROVED BY	DATE	REMARKS

8795226

45721

LOADING AND PERFORMANCE

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

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

WEIGHT:

Take-Off Weight with 15,510 Lb. Fuel (78.2% Max.)	Lb.	55,889
Operational Weight Empty	Lb.	40,379
Combat Weight (1/2 Fuel)	Lb.	48,130
Landing Weight (With Reserve Fuel + Missiles)	Lb.	42,200
Wing Loading at Normal Take-Off Weight	Lb./Sq.Ft.	44.5
Power Loading at Normal Take-Off Weight	Lb./Lb. Thrust	1.19

SPEED

True Air Speed in Level Flight		
At Sea Level at Combat Weight		
Maximum Thrust	Kts.	★ 720
Military Thrust	Kts.	650
True Air Speed in Level Flight		
At 50,000 Ft. at Combat Weight		
Maximum Thrust	Kts.	1,110

CEILING

Combat Ceiling at Combat Weight, Rate of Climb = 500 F.P.M.		
Maximum Thrust at 1.5 M.N.	Ft.	62,200

RATE OF CLIMB

Steady Rate of Climb at Sea Level, Combat Weight		
Maximum Thrust at M.N. = .92	F.P.M.	50,000
Military Thrust at 530 Kts.	F.P.M.	25,200
Steady Rate of Climb at 50,000 Ft., Combat Weight		
Maximum Thrust at M.N. = 1.5	F.P.M.	11,500

TIME TO HEIGHT

Time to 50,000 Ft. M.N. = 1.5 from Engine Start at Take-Off		
Weight = 55,889 Lb.		
Maximum Thrust	Mins.	4.1

MANOEUVRABILITY

Combat Load Factor at Combat Weight		
Maximum Thrust at M.N. = 1.50 at 50,000 Ft.		1.84

★ Placard Speed = 720 Kts.

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Unit / Rank / Appointment DSIS 3

~~SECRET~~

TAKE-OFF DISTANCE

Take-Off Distance over 50 Ft. Obstacle at Sea Level		
Take-Off Weight = 55,889 Lb.		
Maximum Thrust	Ft.	2,500
Military Thrust	Ft.	3,800
Maximum Thrust Hot Day	Ft.	3,300

LANDING DISTANCE

Landing Distance over 50 Ft. Obstacle at Sea Level at Combat Weight Ft. 5,000

STALLING SPEED

True Stalling Speed in Landing Configuration at Combat Weight		
at Sea Level	Kts.	105

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., 5Min. Fuel Reserve on Landing

High Speed Mission with 15,510 Lb. Fuel	N.M.	200
High Speed Mission with Full Internal Fuel	N.M.	318

Combat Radius of Action at 50,000 Ft., Mission as above except Cruise Out at M.N. = .92

Maximum Range Mission with 15,510 Lb. Fuel	N.M.	315
Maximum Range Mission with Full Internal Fuel	N.M.	491

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 15,510 Lb. of Fuel	N.M.	217
Sea Level Mission with Full Internal Fuel	N.M.	318

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.		1,675
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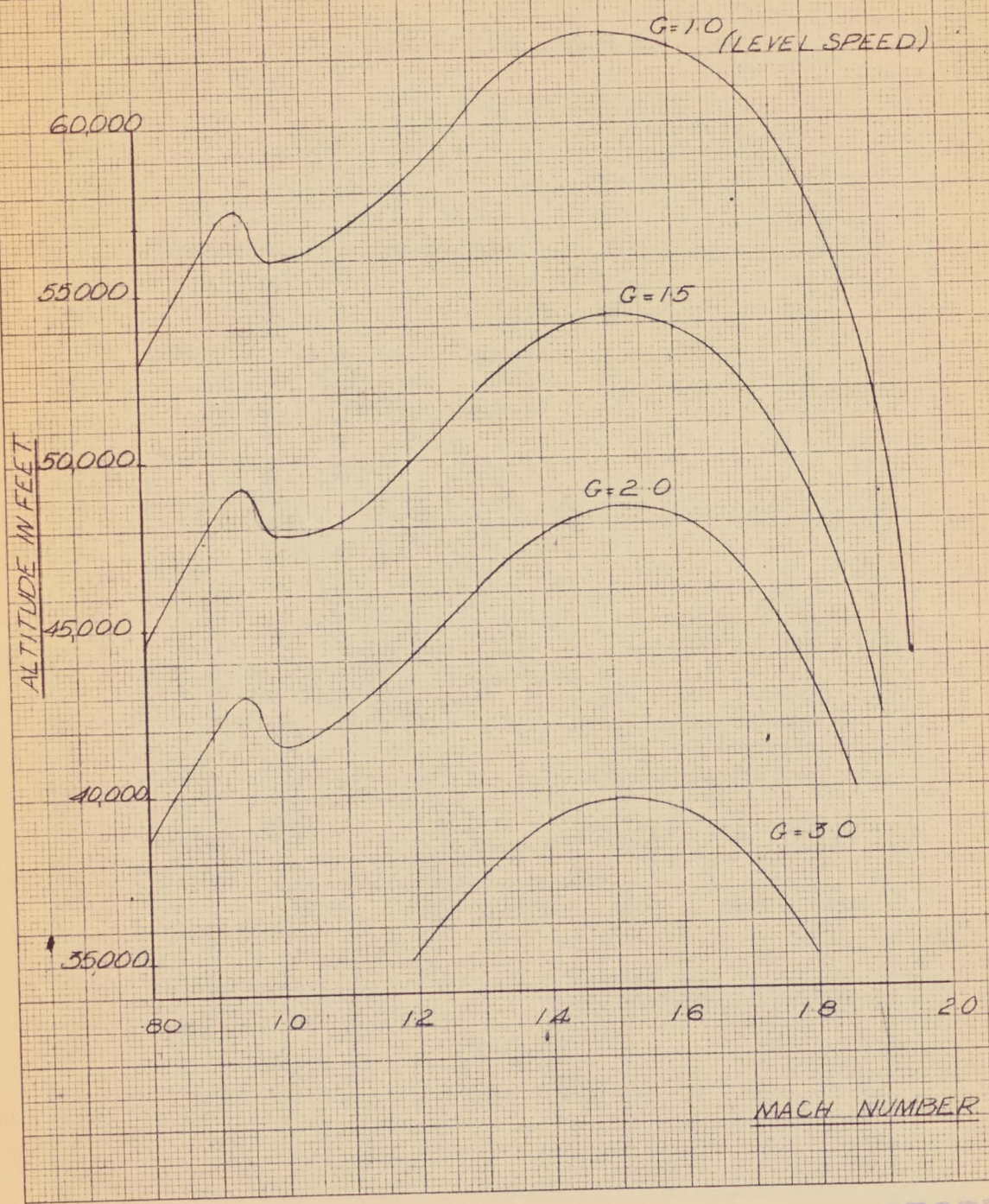
~~SECRET~~

KE 10 X 10 TO THE 1/2 INCH 339-12
KLEFFEL & ESSER CO. MADE IN U.S.A.

MAXIMUM G SUSTAINED
IN LEVEL TURN

COMBAT WEIGHT
48,129 LBS.

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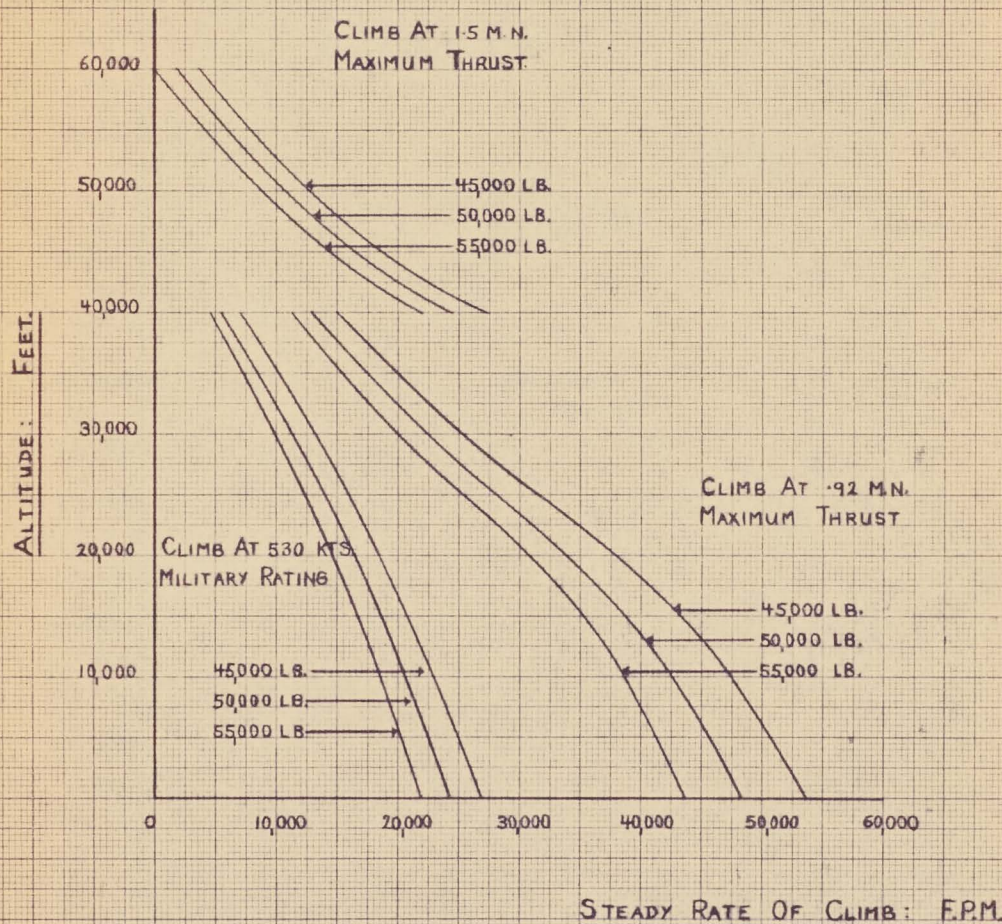


MACH NUMBER

JULY 55 ~~SECRET~~ ST. GRAISON

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RATE OF CLIMB

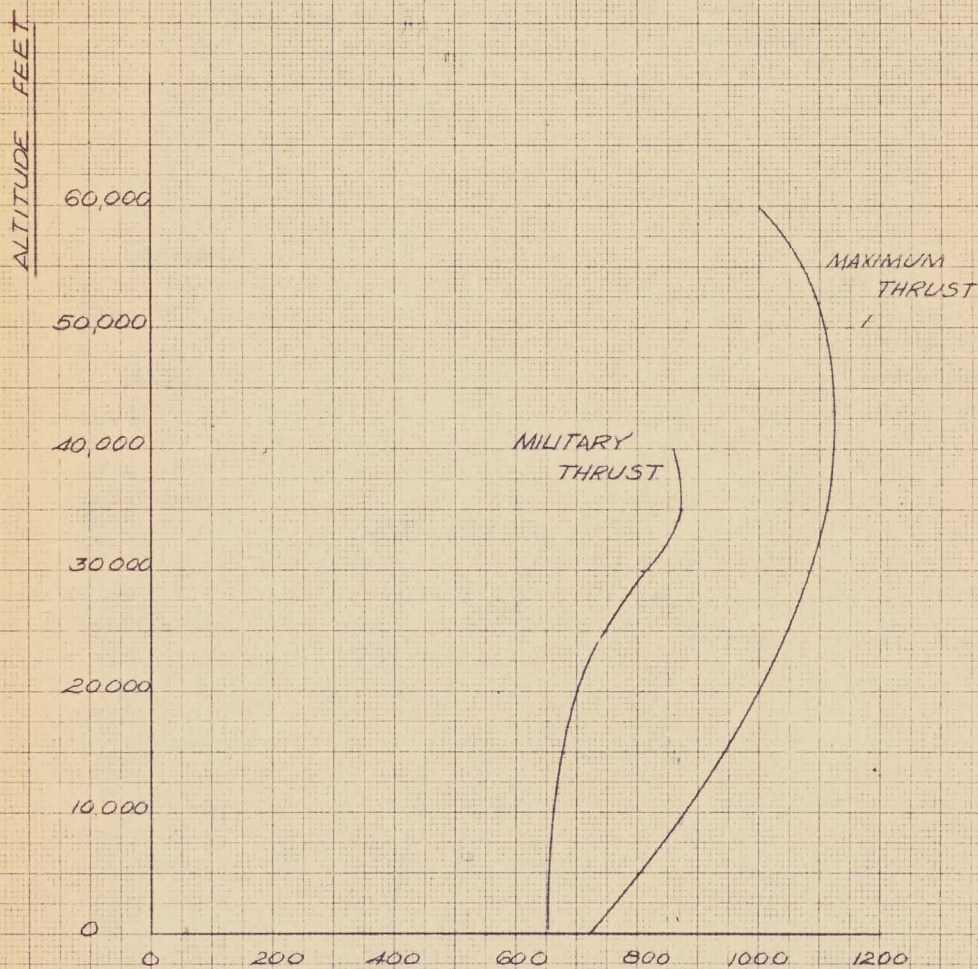


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LEVEL FLIGHT TRUE AIRSPEED

COMBAT WEIGHT = 48129LB



LEVEL FLIGHT TRUE AIRSPEED - KNOTS

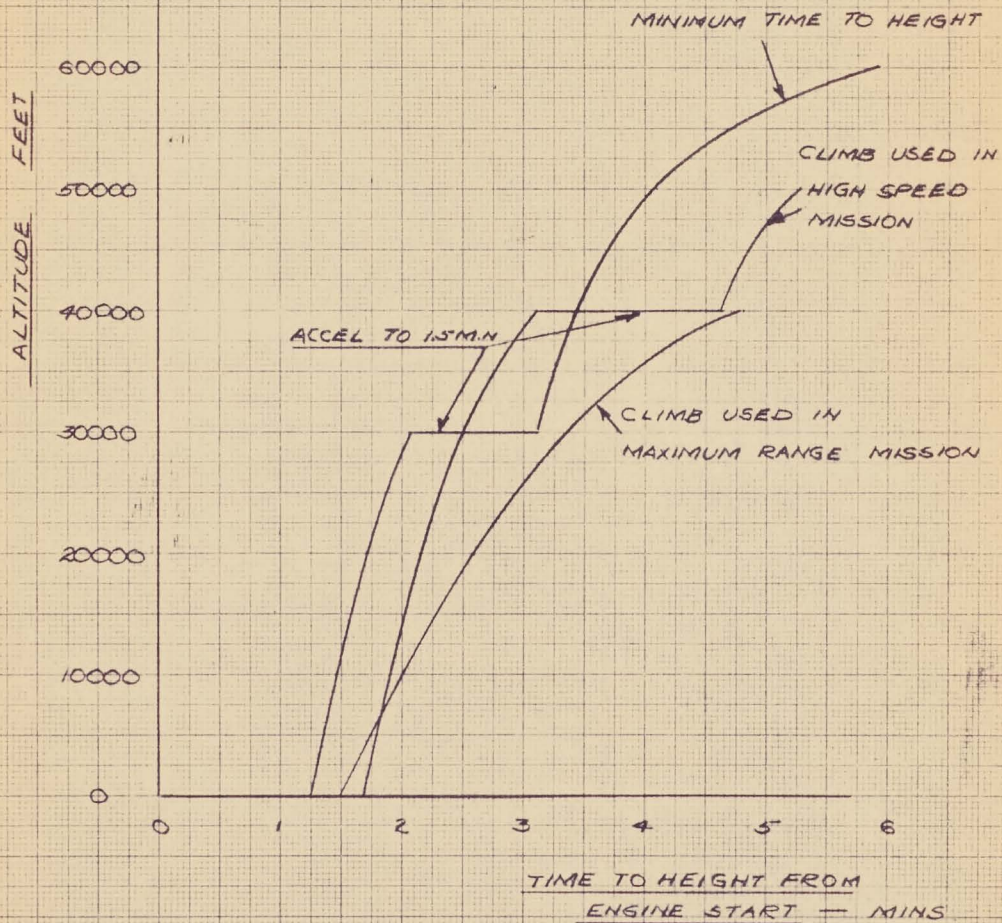
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TIME TO HEIGHT

TAKEOFF WEIGHT = 55889 LB.

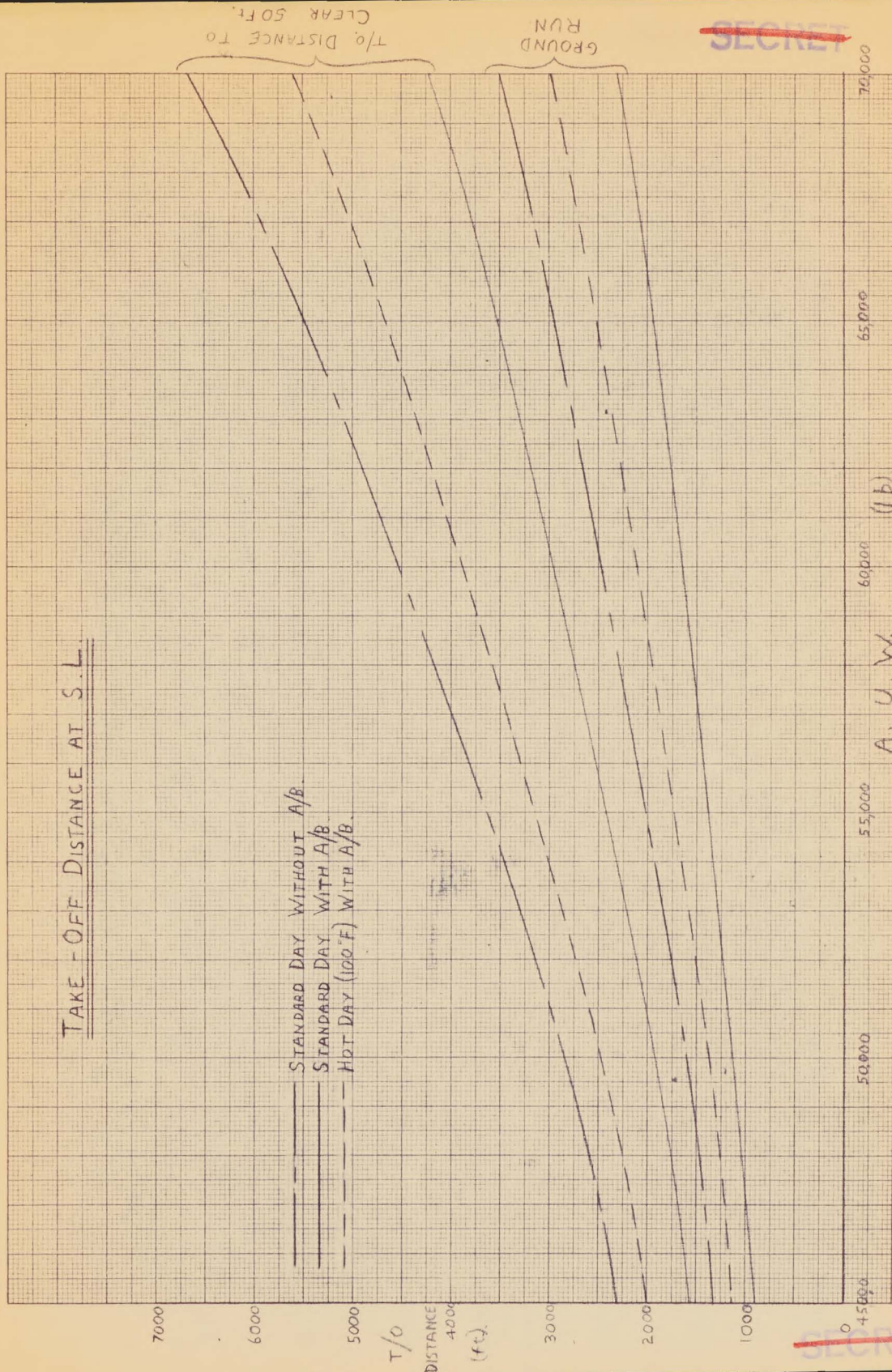
NOTE: ONE HALF MINUTE
ALLOWED FROM ENGINE
START TO MILITARY RATING



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TAKE-OFF DISTANCE AT S.L.

— STANDARD DAY WITHOUT A/B.
— STANDARD DAY WITH A/B.
- - - HOT DAY (100°F) WITH A/B.



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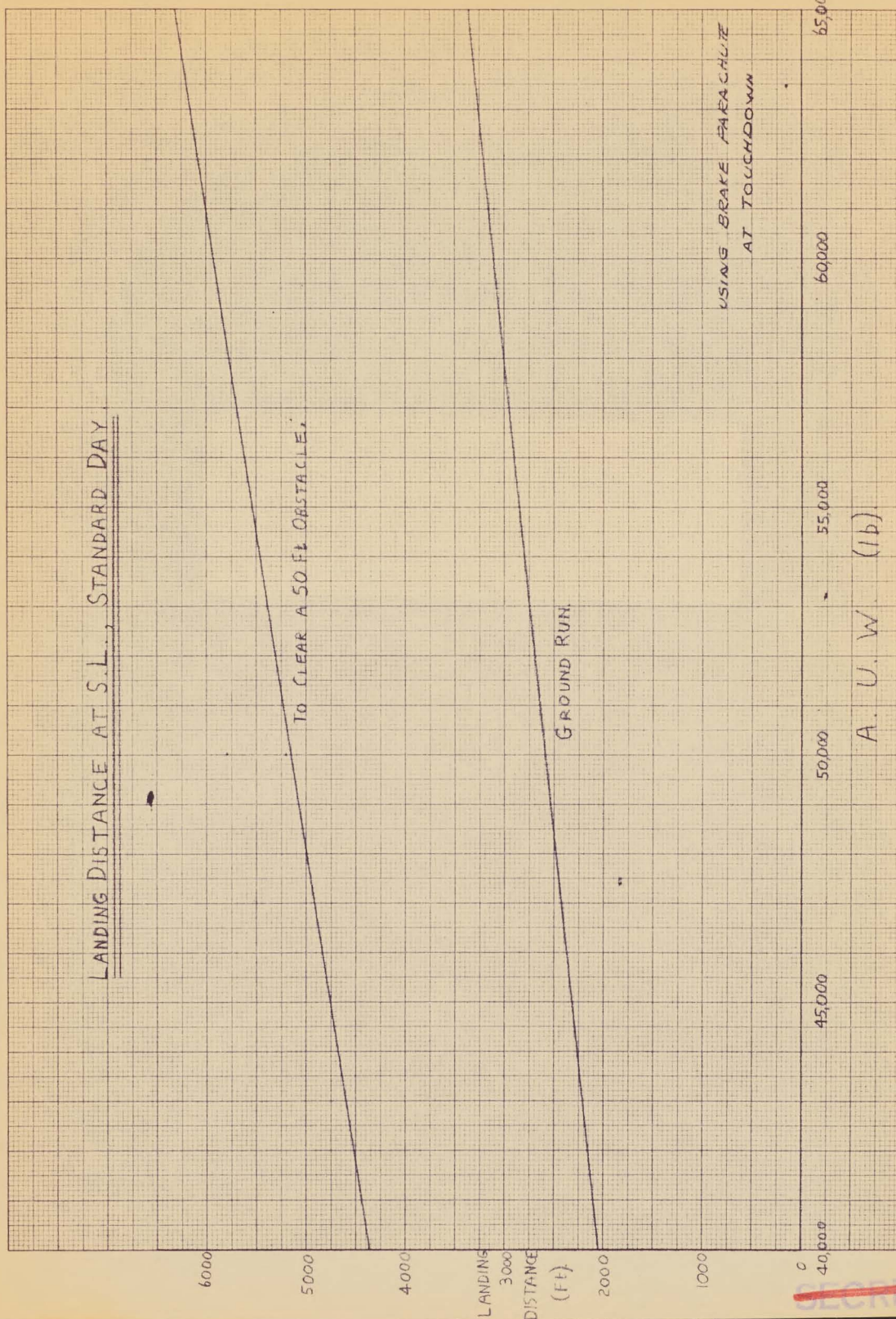
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LANDING DISTANCE AT S.L., STANDARD DAY

TO CLEAR A 50 FT. OBSTACLE

GROUND RUN

USING BRAKE PARACHUTE
AT TOUCHDOWN



A. U. W. (1b)

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Date.....28 Jul 87.....
Signature.....*Blubray*.....Co-Chairperson
Unit / Rank / Appointment.....DSIS-3.....

