

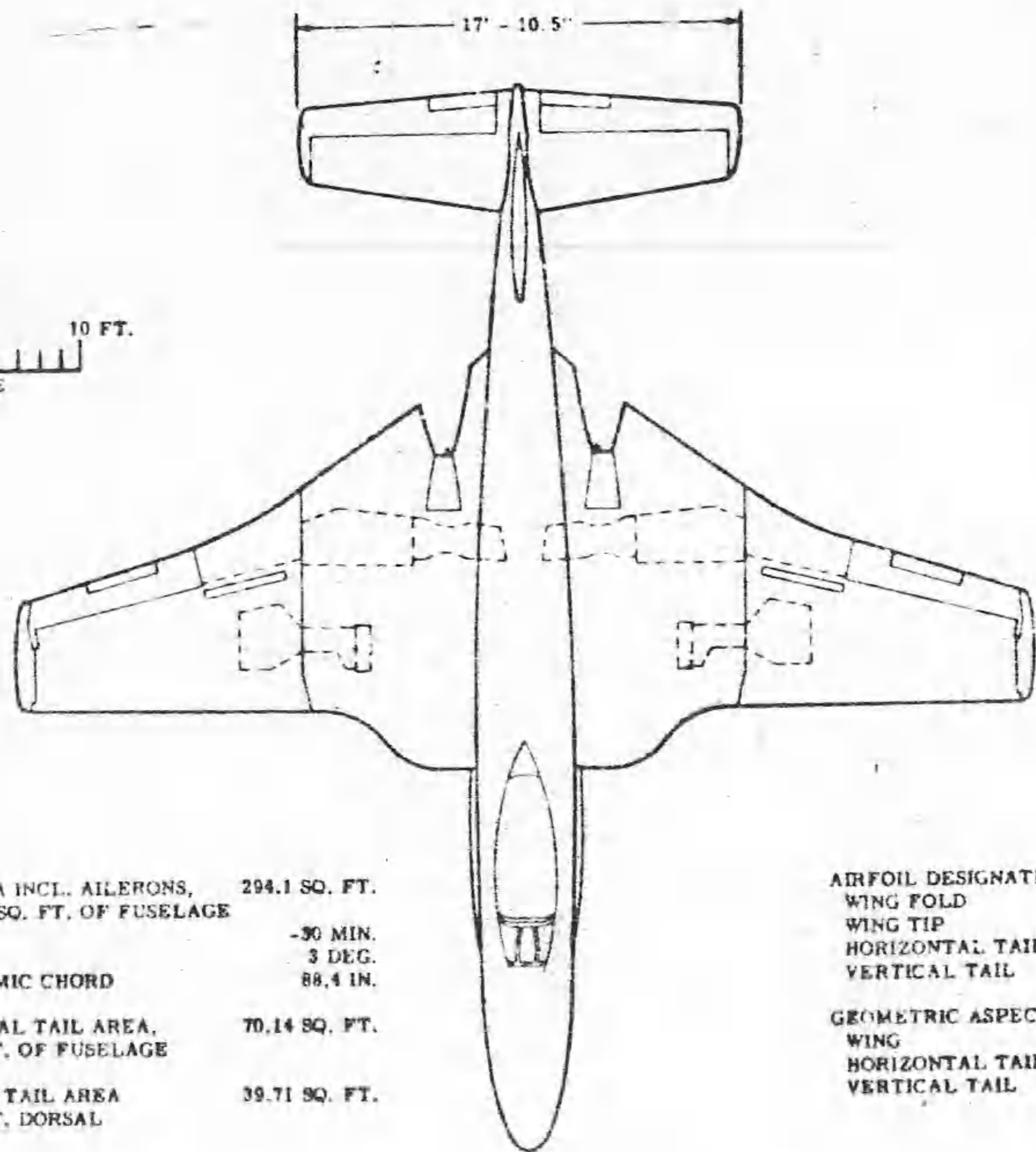
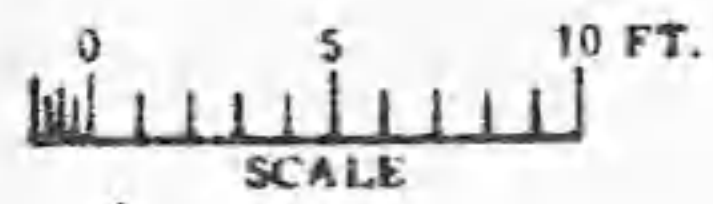
STANDARD AIRCRAFT CHARACTERISTICS

F2H-3 "BANSHEE"

MCDONNELL

Unclassified
VE Retmors 3-22-73
by [signature]

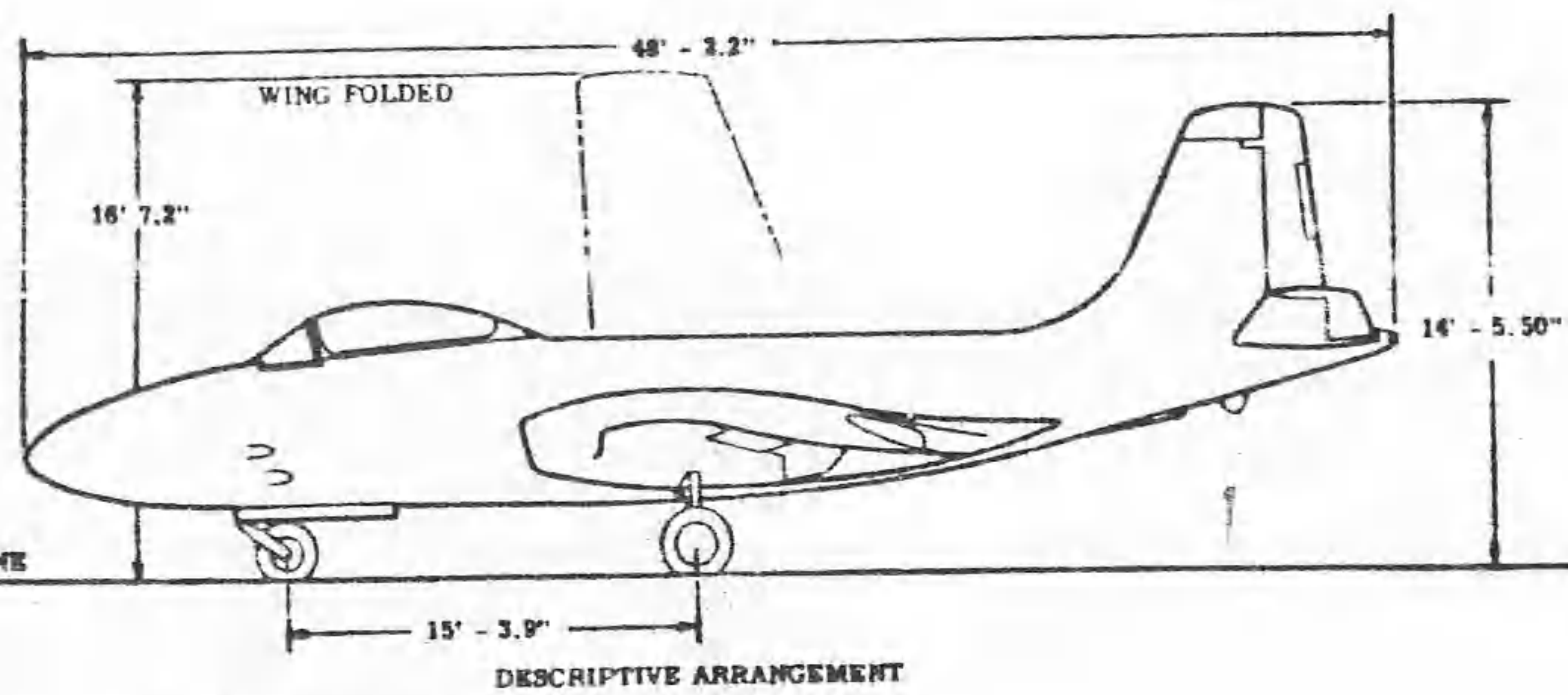
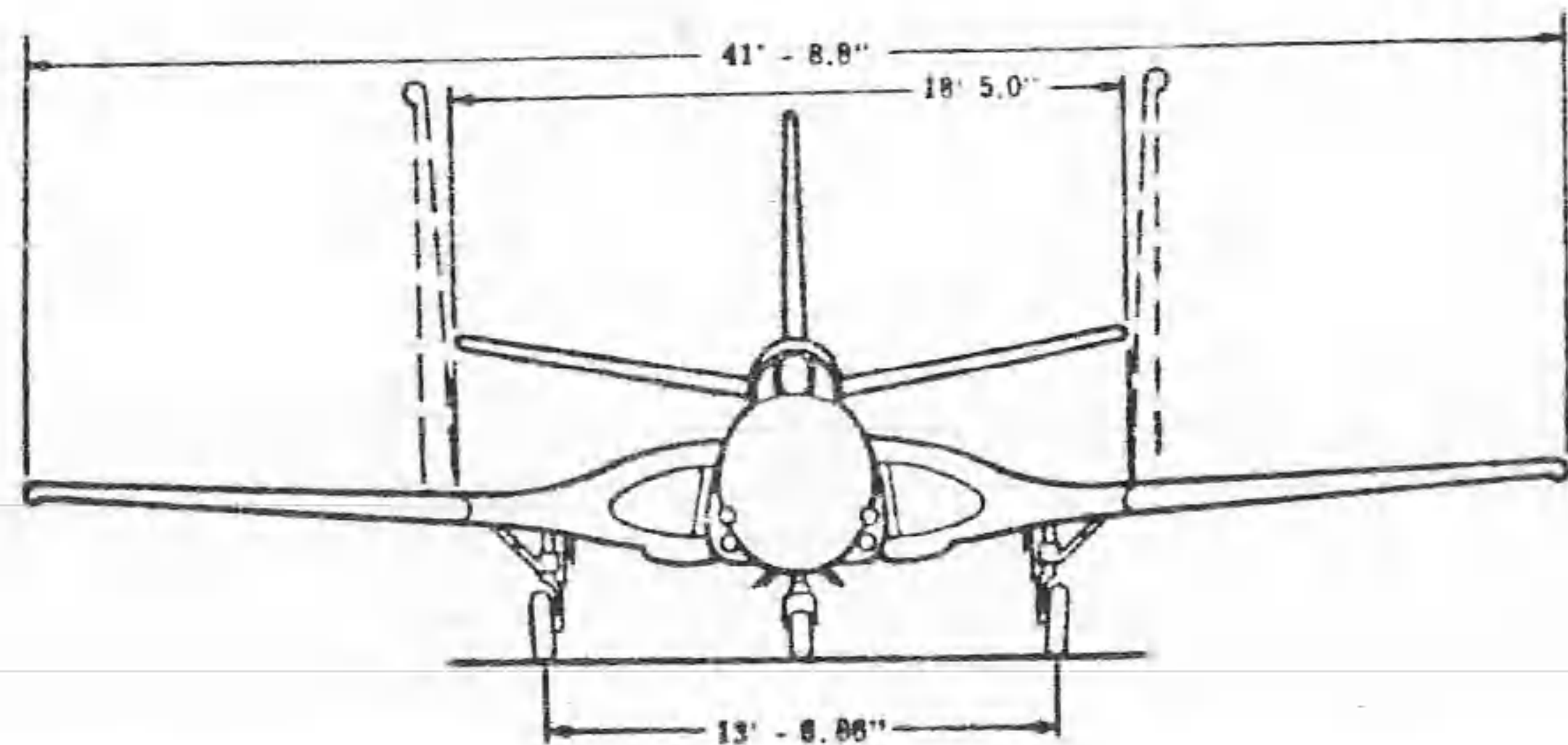




TOTAL WING AREA INCL. ALERONS,
FLAPS AND 32.3 SQ. FT. OF FUSELAGE 294.1 SQ. FT.
INCIDENCE -30 MIN.
DIHEDRAL 3 DEG.
MEAN AERODYNAMIC CHORD 88.4 IN.
TOTAL HORIZONTAL TAIL AREA,
INCL. 3.82 SQ. FT. OF FUSELAGE 70.14 SQ. FT.
TOTAL VERTICAL TAIL AREA
INCL. 1.83 SQ. FT. DORSAL 39.71 SQ. FT.

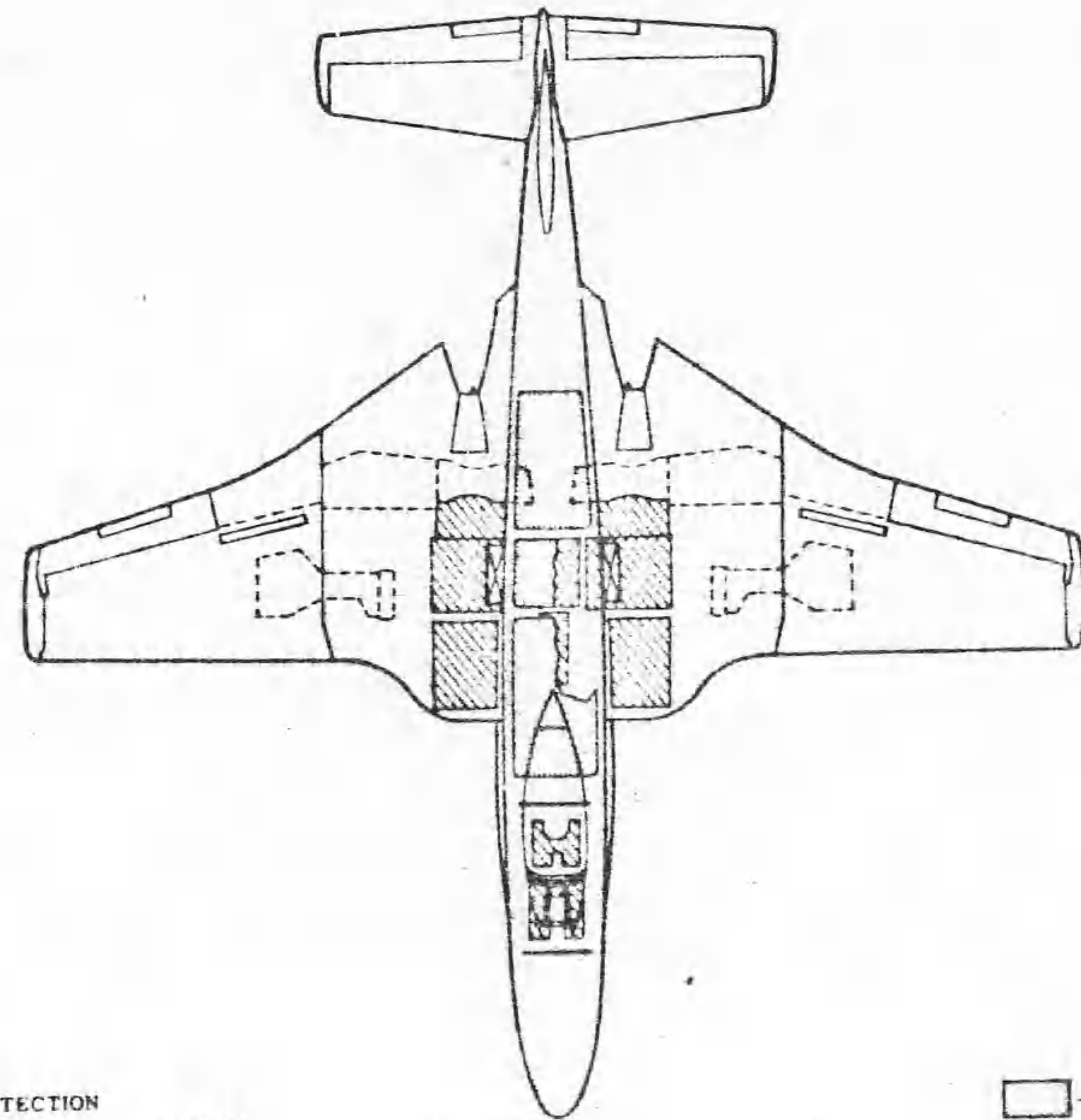
AIRFOIL DESIGNATION
WING FOLD NACA-65A-212
WING TIP NACA-63A-206
HORIZONTAL TAIL NACA-65-009
VERTICAL TAIL NACA-65-009

GEOMETRIC ASPECT RATIO
WING 5.93
HORIZONTAL TAIL 4.5
VERTICAL TAIL 1.1



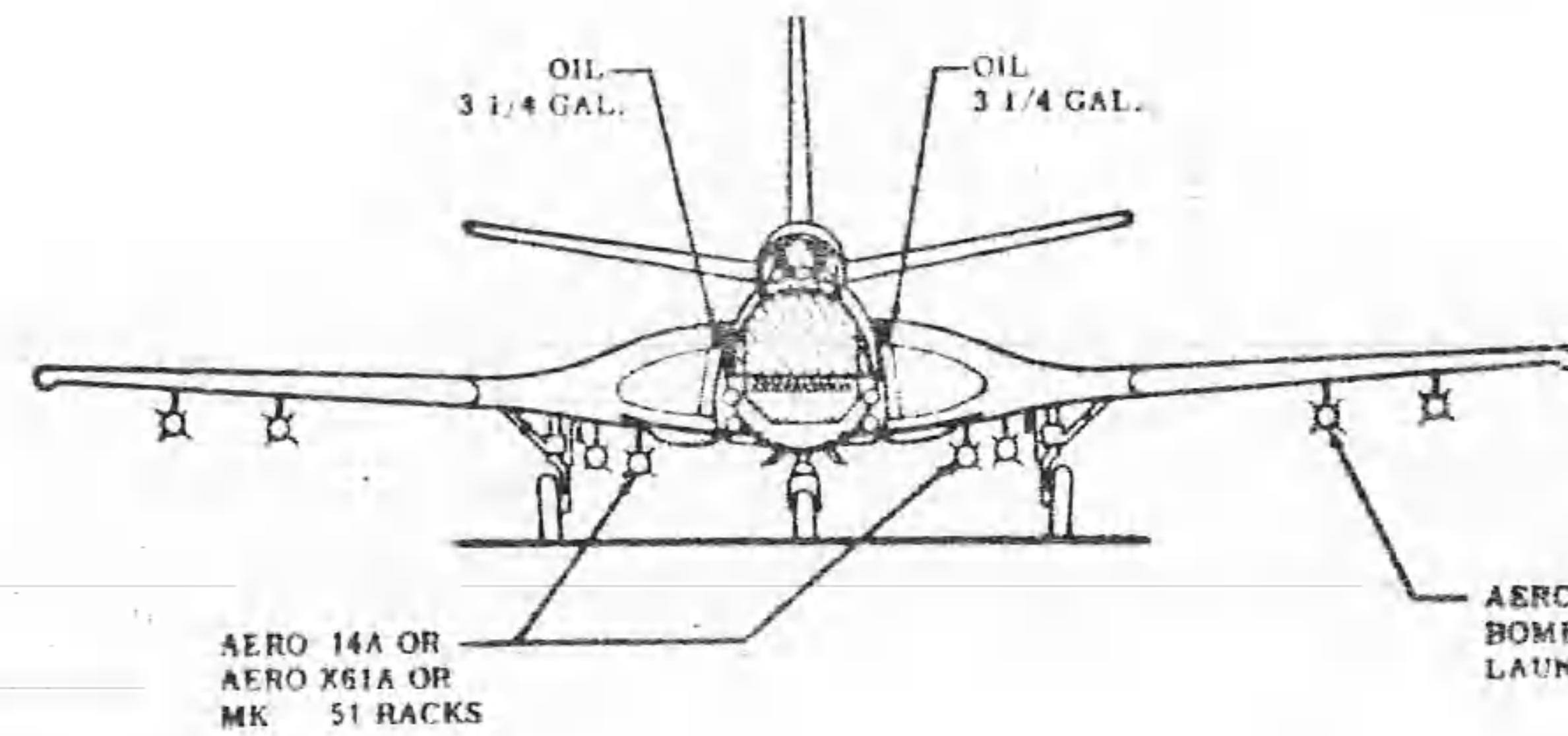
STATIC GROUND LINE

DESCRIPTIVE ARRANGEMENT



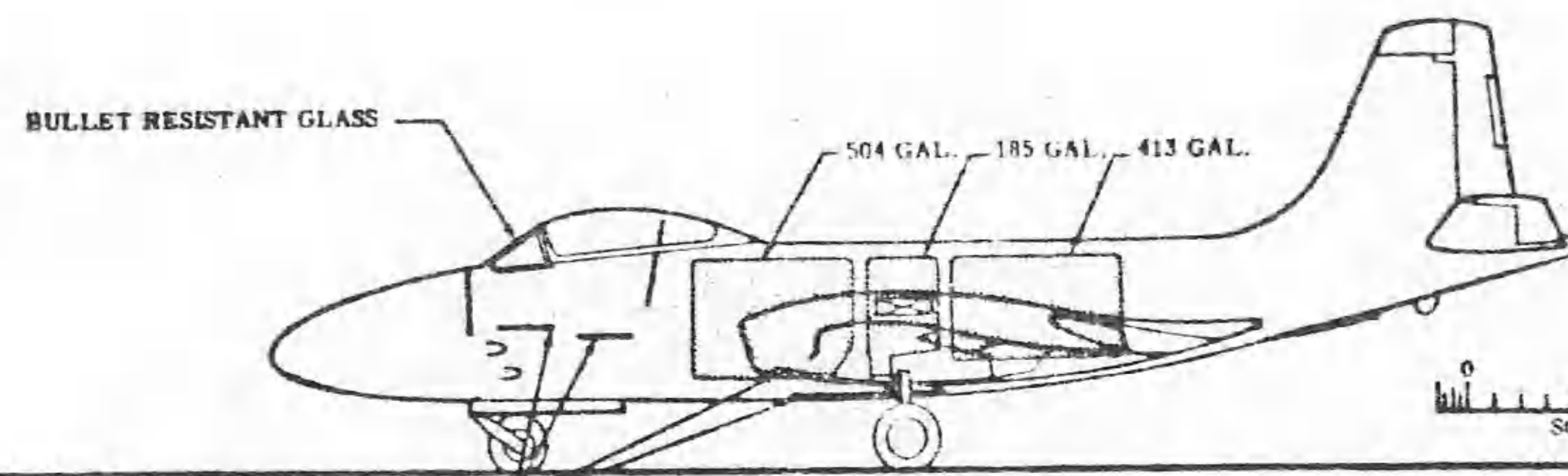
PROTECTION
PILOT FORWARD 79 LBS.
PILOT AFT 48
VENTRAL 432 LBS.
SELF-SEALING FUEL CELLS 643 LBS.

□ FUEL TANK
⊗ OIL TANK
▨ ARMOR



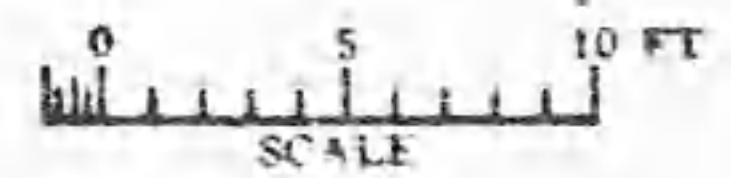
AERO 14A OR
AERO X61A OR
MK 51 RACKS

AERO 14A COMBINATION
BOMB RACK - ROCKET
LAUNCHERS



VENTRAL ARMOR - 1/2" 24ST

TANKAGE ARRANGEMENT



12

POWER PLANT

NO. & MODEL.....(2) J34-WE-34
 MFR.....Westinghouse
 TYPE.....11 Stg. Axial Compr.
 2 Stg. Turbine
 ENG. LENGTH.....120"
 ENG. DIAMETER.....50"

RATINGS

	Lbs.	⊙ Rpm	⊙ Alt.
T. O.	3,250	12,500	S.S.L.
MIL.	3,250	12,500	S.S.L.
NORM.	2,650	11,800	S.S.L.

SPEC. NO. WAGT-24C4D-2C

MISSION AND DESCRIPTION

The F2H-3 airplane is a single place all weather fighter designed for either land or carrier based operations.

The airframe is of stressed metal skin construction with all surfaces being of the full cantilever type.

Equipment includes an APQ-41 radar, automatic pilot, ejection seat, and cockpit pressurization. The primary control system incorporates power actuation with artificial feel forces for the aileron and elevator. Split type trailing edge flaps and wing mounted speed brakes are provided. The F2H-3 is designed for carrier operations without tip tanks. Its internal fuel capacity has been increased by 25 gallons over that of the F2H-2.

Mock-up date — October 1950
 First flight (prototype) — December 1951
 Service use to start — August 1952.

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	13,183
BASIC.....	13,780
DESIGN.....	18,600	7.5
COMBAT.....	18,367	7.6
MAX.T.O. (Field).....	25,214	5.5
(Cat.).....	25,214
MAX.LAND. (Field).....	19,200
(Arrest.).....	16,700

All weights are calculated.

* Maximum Anticipated Loading

FUEL AND OIL

Gals.	No. Tanks	Location
1,102	3	Fuse., S.S.
340	2	Wing, Drop
FUEL GRADE.....115/145		
FUEL SPEC.....MIL-F-5572		

OIL

CAPACITY (Gals.).....	6.5
GRADE.....	1010
SPEC.....	MIL-O-6081

ORDNANCE

GUNS			
No.	Size	Location	Rds.
4	20mm (Mk. 16)	Nose	600
FIRE CONTROL			
A.F.C.S.....Mk. 6 Mod. 0			

BOMBS AND ROCKETS			
Type	Size	Location	No.
Bombs	100#	Wings	8
Bombs	250#	Wings	8
Bombs	500#	Wings	2
HVAR	5"	Wings	8
HPAG	5"	Wings	8

2 - Mk. 51-11 Bomb Racks
 8 - Aero 14A Combination Bomb Rack and Rocket Launchers

Any combination of above not to exceed 3,200 pounds.

DIMENSIONS

WING AREA.....	294 sq. ft.
SPAN.....	41' - 9"
LENGTH.....	48' - 2"
HEIGHT.....	14' - 6"
TREAD.....	13' - 7"
M.A.C.....	7' - 4"

ELECTRONICS

VHF COMMAND.....	AN/ARC-1 or -1A
(Installation Provisions Only)	
UHF COMMAND.....	AN/ARC-27
HOMING.....	AN/ARR-2A
UHF D.F.....	AN/ARA-25
ALTITUDE ER.....	AN/APN-1
ADF.....	AN/ARN-6
HOMING.....	AN/ARN-21
(P.S.I., Repl. for AN/ARR-2A and AN/ARN-6)	
SEARCH RADAR.....	AN/APQ-41
(250 aircraft only)	
(See NOTES)	

TAKE-OFF LOADING CONDITION		(1) FIGHTER Full Internal Fuel	(3) FIGHTER 2 - 170 Gallon Tanks	(5) GRD. SUPPORT 2-170 Gal. Tanks 4-5" HVAR Rock. 4-250 lb. Bombs
TAKE-OFF WEIGHT	lb.	21,013	23,507	25,214
Fuel (Fixed/Drop)	lb.	6,612/-	6,612/2,040	6,612/2,040
Payload (Ammunition, Rockets, Bombs)	lb.	337	337	337/1,580
Wing loading	lb./sq.ft.	71.5	80.0	85.8
Stall speed - power-off	kn.	115	122	127
Take-off run at S.L. - calm	ft.	2,490	3,210	3,800
Take-off run at S.L. 25 kn. wind	ft.	1,560	2,100	2,470
Take-off to clear 50 ft. - calm	ft.	--	--	--
Max. speed/altitude (A)	kn./ft.	470/S.L.	454/S.L.	381/30,000
Rate of climb at S.L.	fpm (B)	5,150	(A) 3,200	(A) 2,360
Time: S.L. to 20,000 ft.	min. (B)	4.6	(A) 7.9	(A) 12.6
Time: S.L. to 30,000 ft.	min. (B)	8.2	(A) 14.4	(A) 39.0
Service ceiling (100 fpm)	ft. (B)	47,000	(A) 41,300	(A) 30,500
Combat range	n.mi.	1,015	1,497	955
Average cruising speed	kn.	400	385	390
Cruising altitude(s)	ft.	40,000	40,000	30,000/35,000
Combat radius	n.mi.	415	625	330
Average cruising speed	kn.	430	435	400
COMBAT LOADING CONDITION		(2) CLEAN	(4) CLEAN	
COMBAT WEIGHT	lb.	18,367	21,013	
Engine power		Military	Military	
Fuel	lb.	3,966	6,612	
Combat speed/combat altitude	kn./ft.	455/35,000	450/35,000	
Rate of climb/combat altitude	fpm/ft.	2,300/35,000	1,800/35,000	
Combat ceiling (500 fpm)	ft.	46,600	45,000	
Rate of climb at S.L.	fpm	6,000	5,150	
Max. speed at S.L.	kn.	503	500	
Max. speed/altitude	kn./ft.	503/S.L.	500/S.L.	
LANDING WEIGHT	lb.	15,672	15,797	
Fuel	lb.	1,271	1,382	
Stall speed - power-off	kn.	99	99	
Stall speed - with approach power	kn.	94	94	

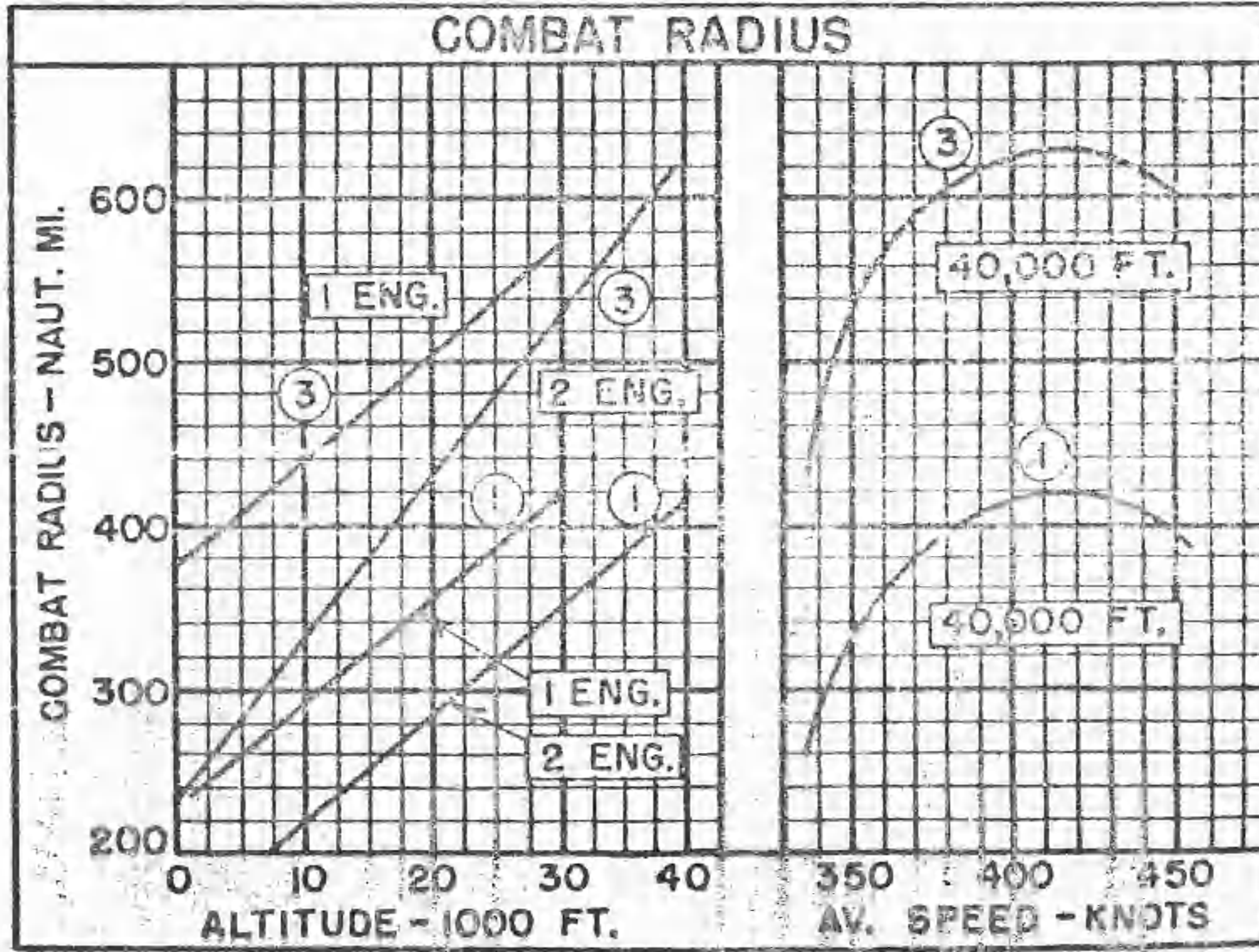
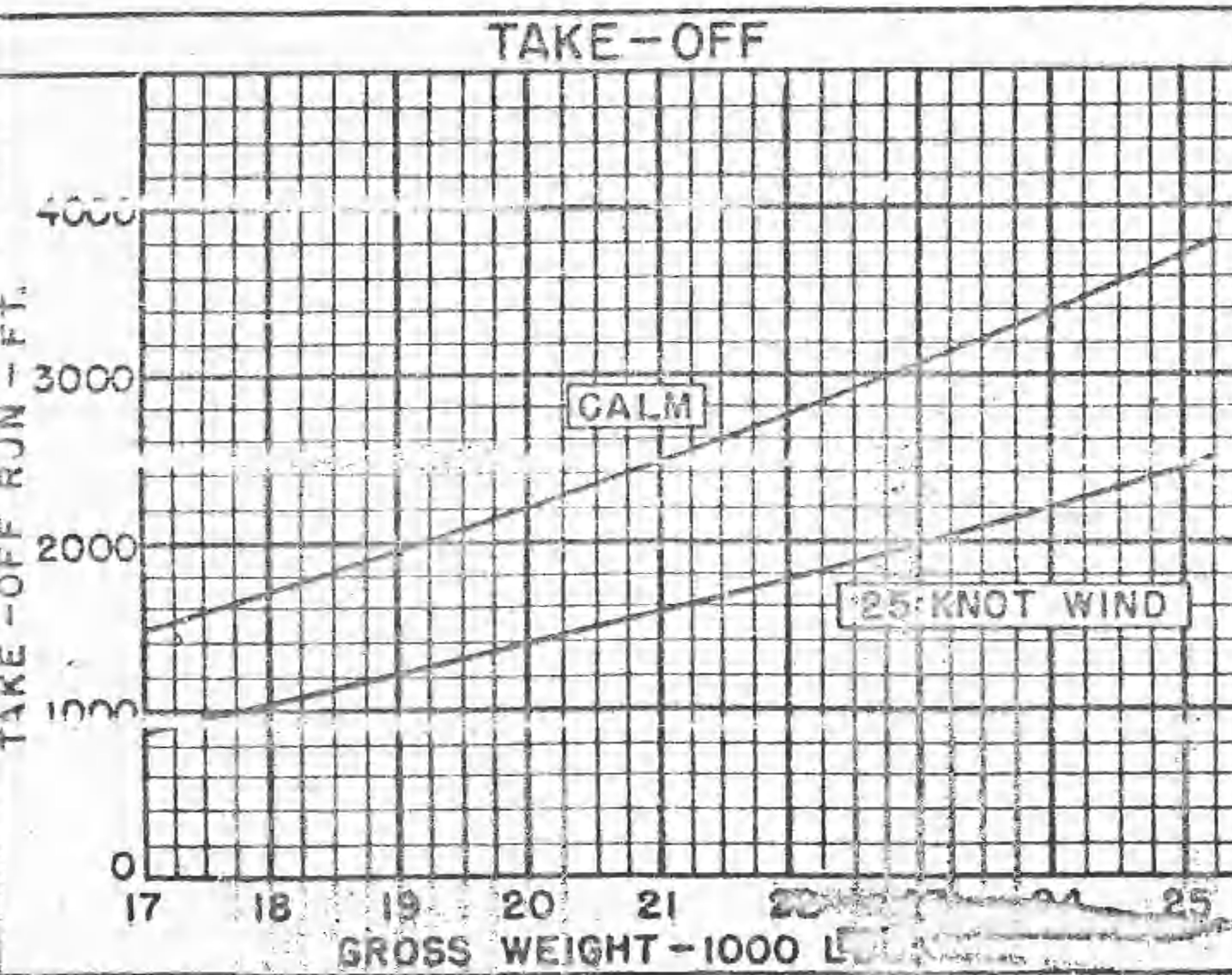
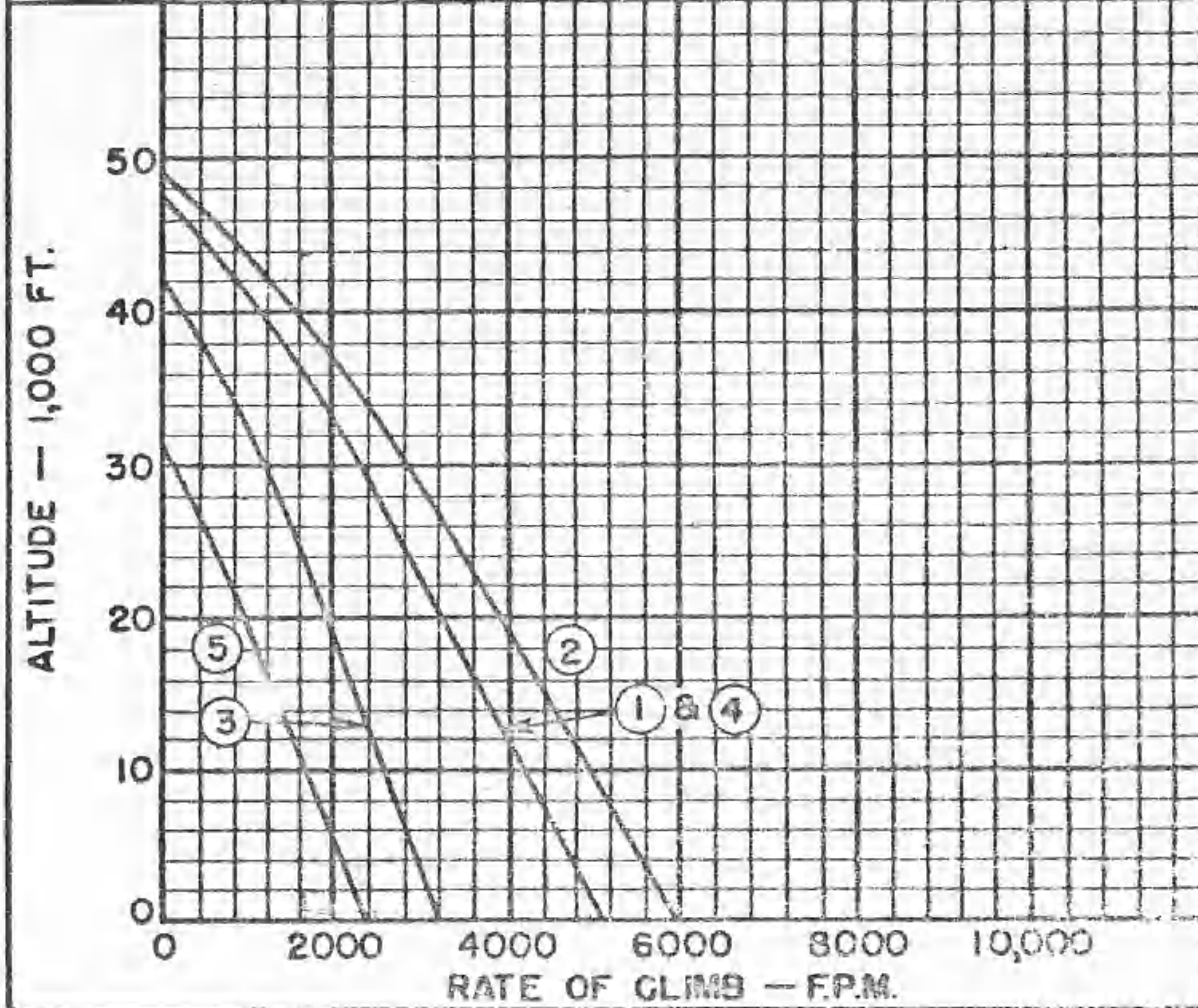
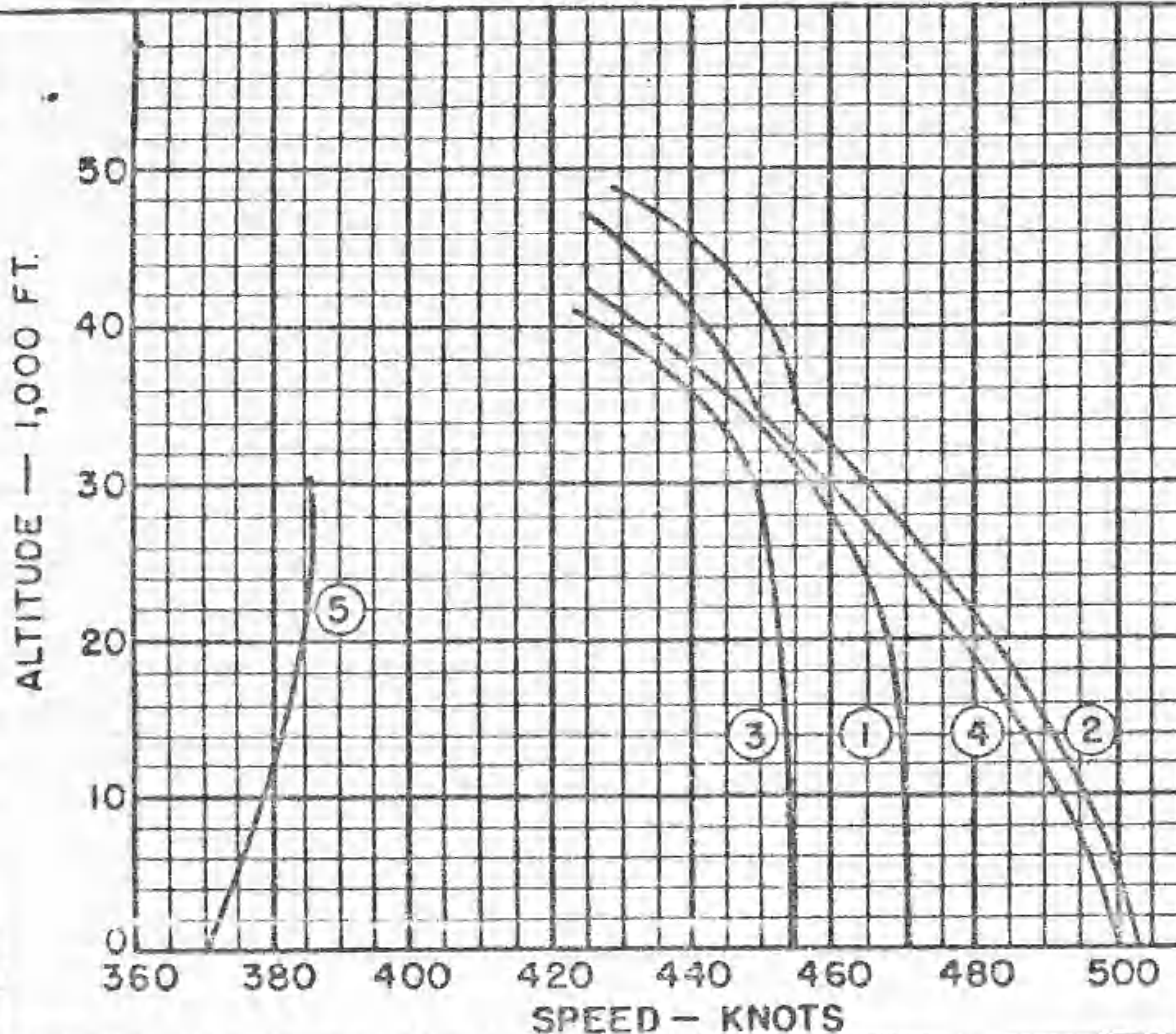
NOTES

- (A) Normal Power
(L) Military Power

Performance is based on calculations and NATC flight test of the F2H-2 airplane.

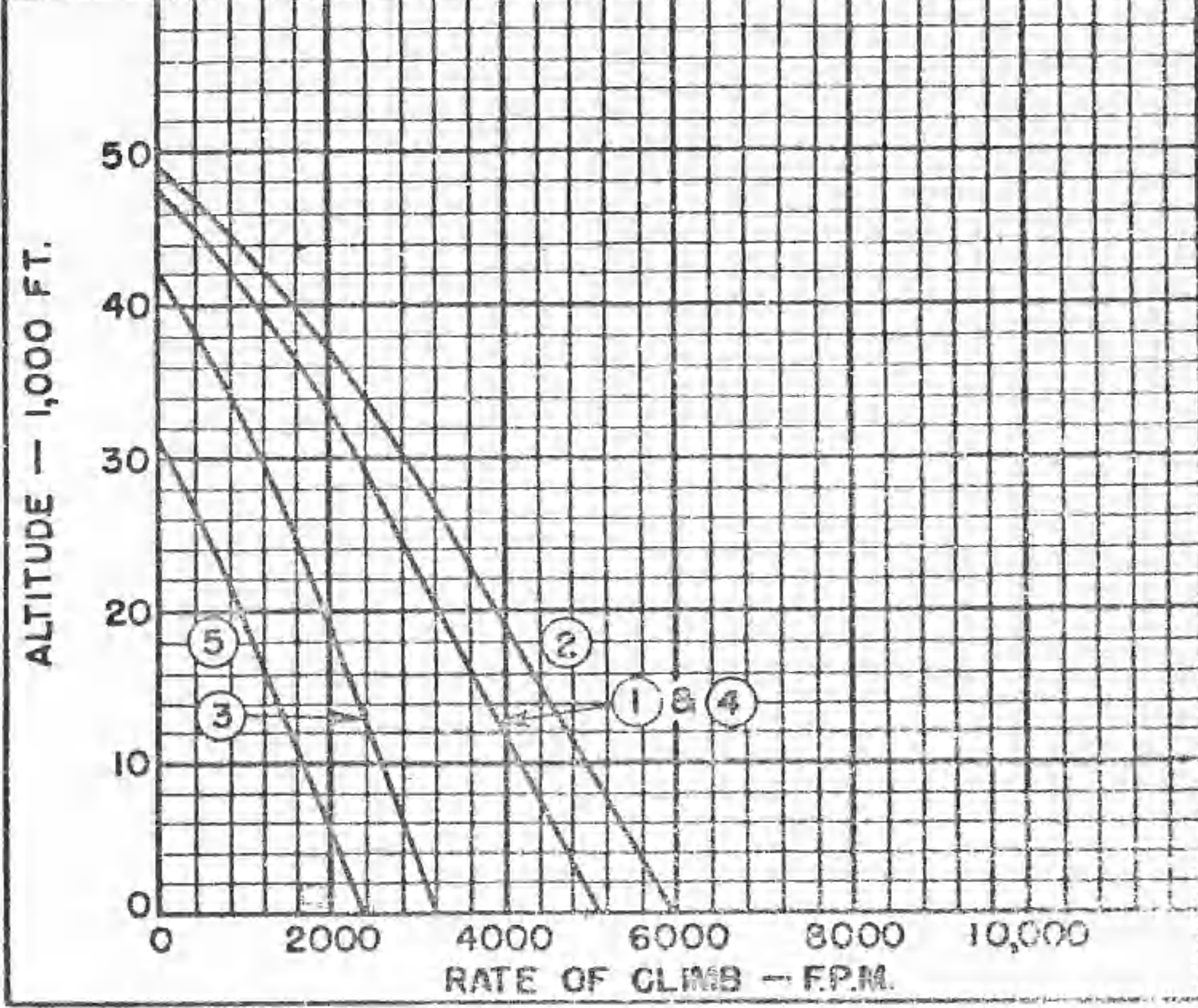
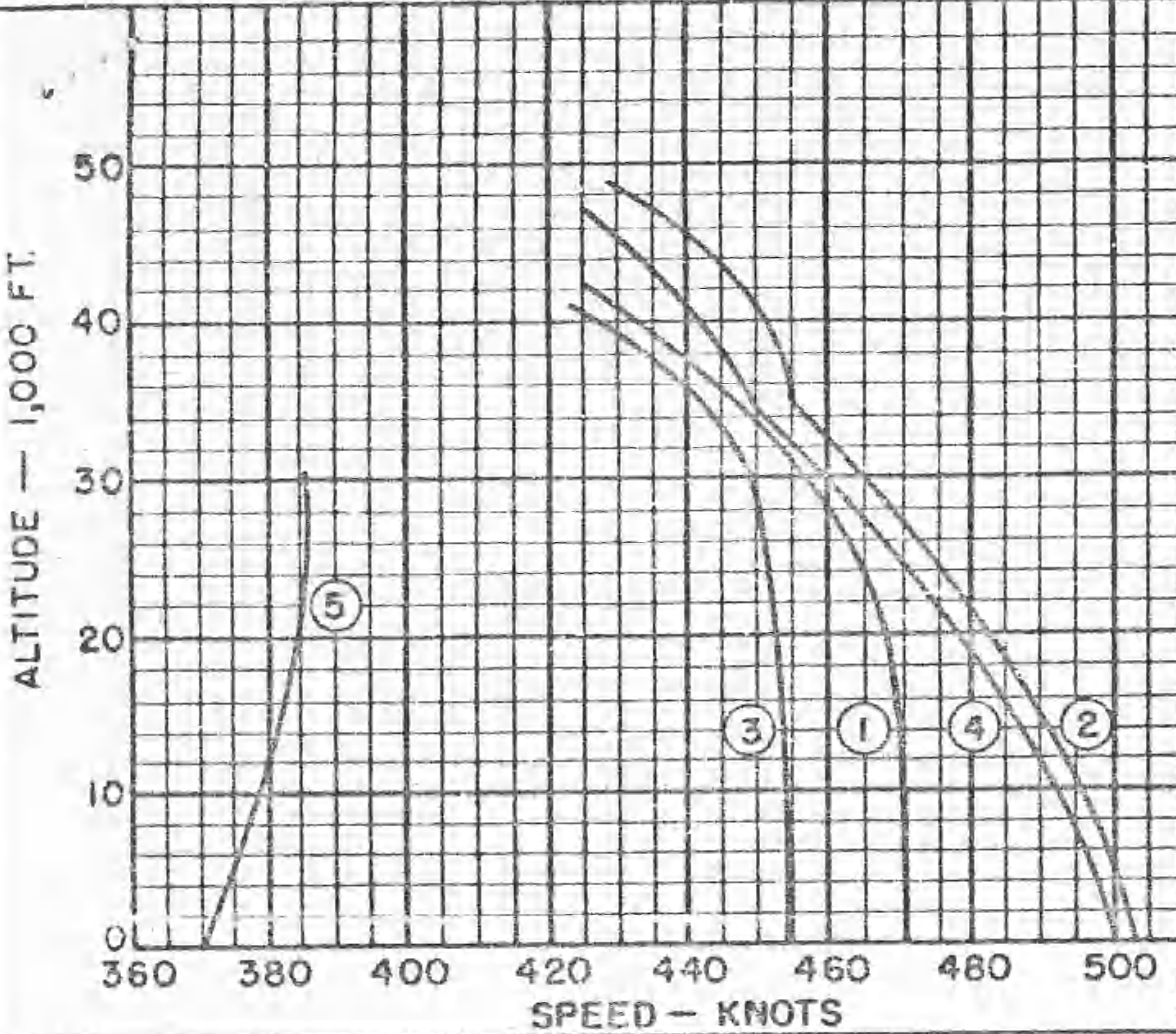
Range and radius are based on flight test fuel consumption increased by 5%.

Spotting: 200 ft. length is required to spot 24 airplanes (wings folded) on the 96 ft. wide deck immediately aft of the forward ramp on the CV-3 class carriers.

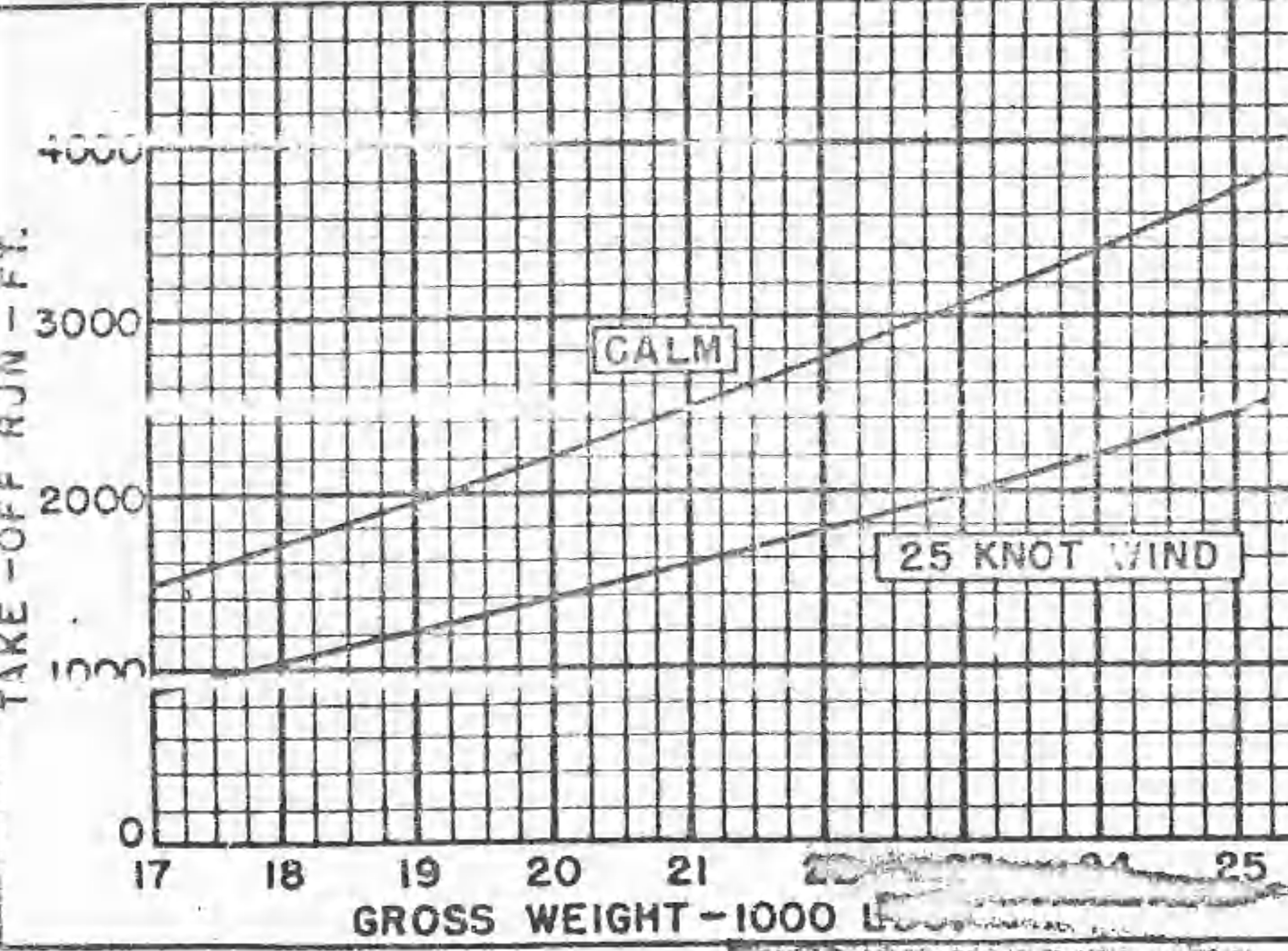


SPEED

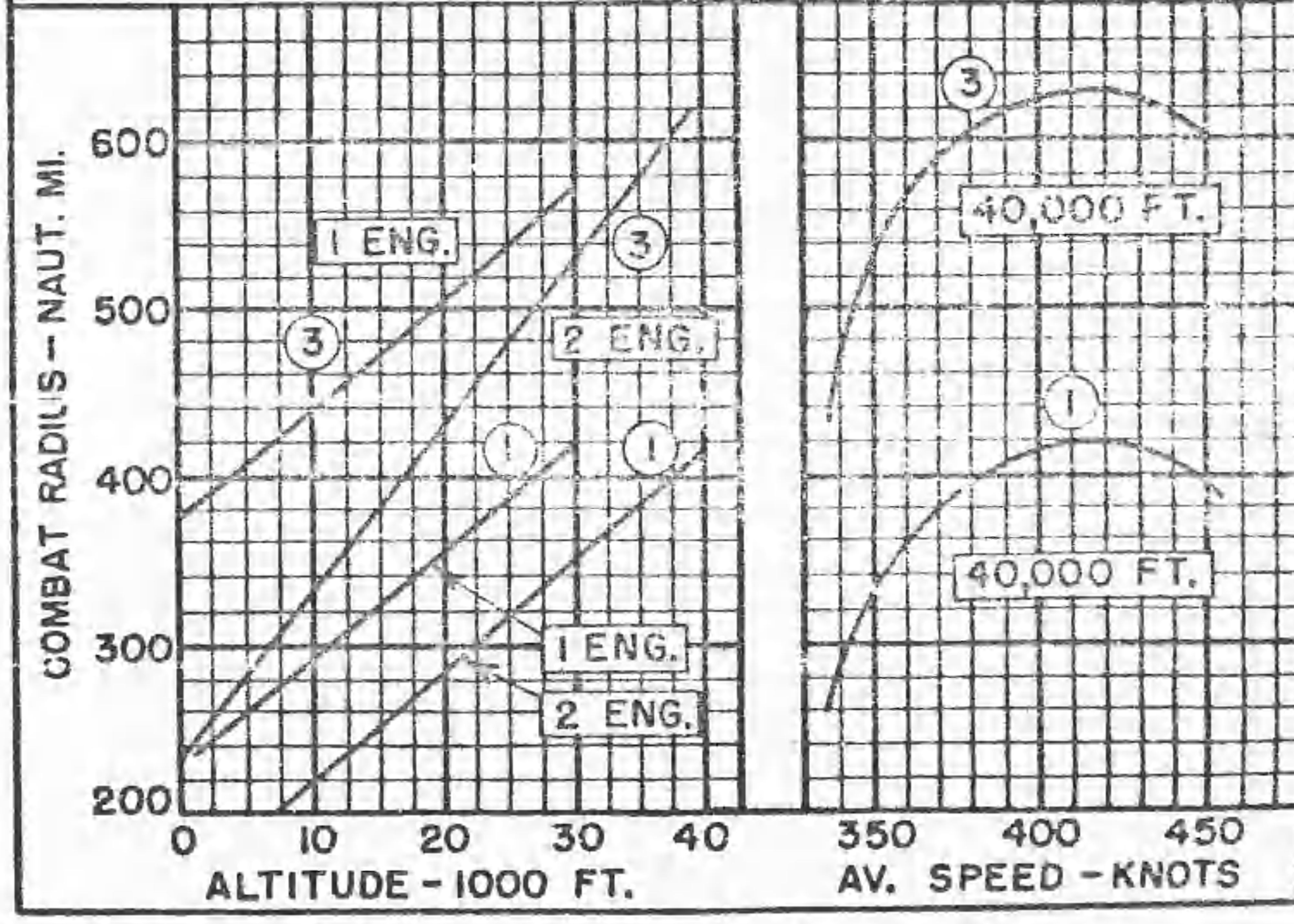
CLIMB



TAKE-OFF



COMBAT RADIUS

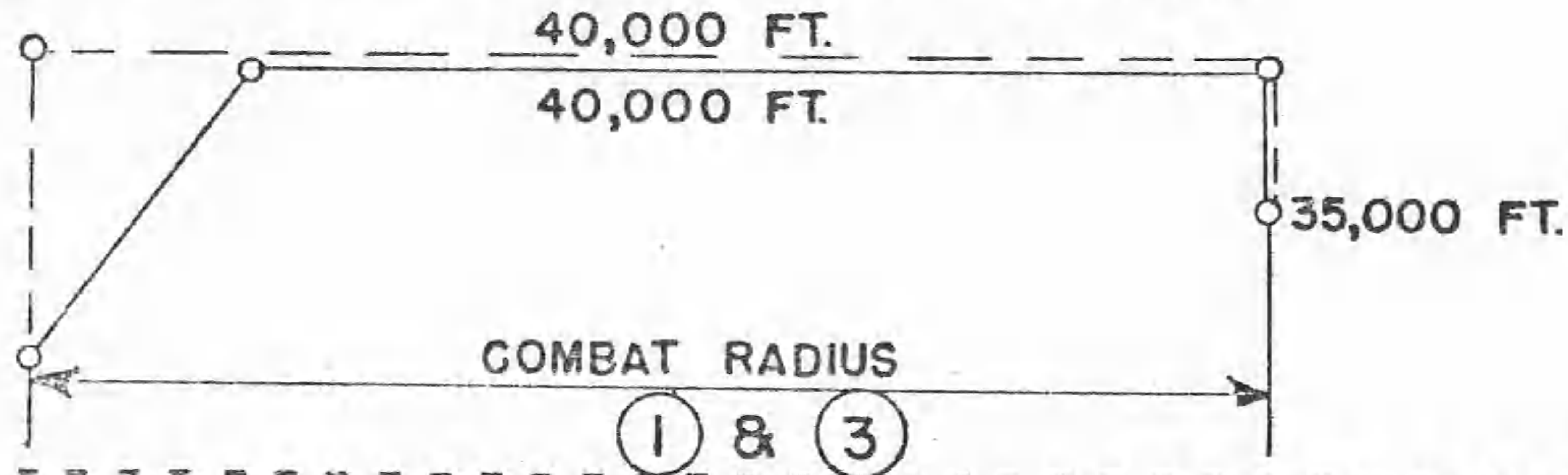


NOTES

GENERAL PURPOSE AND ESCORT FIGHTER COMBAT RADIUS PROBLEM (GAS TURBINE)

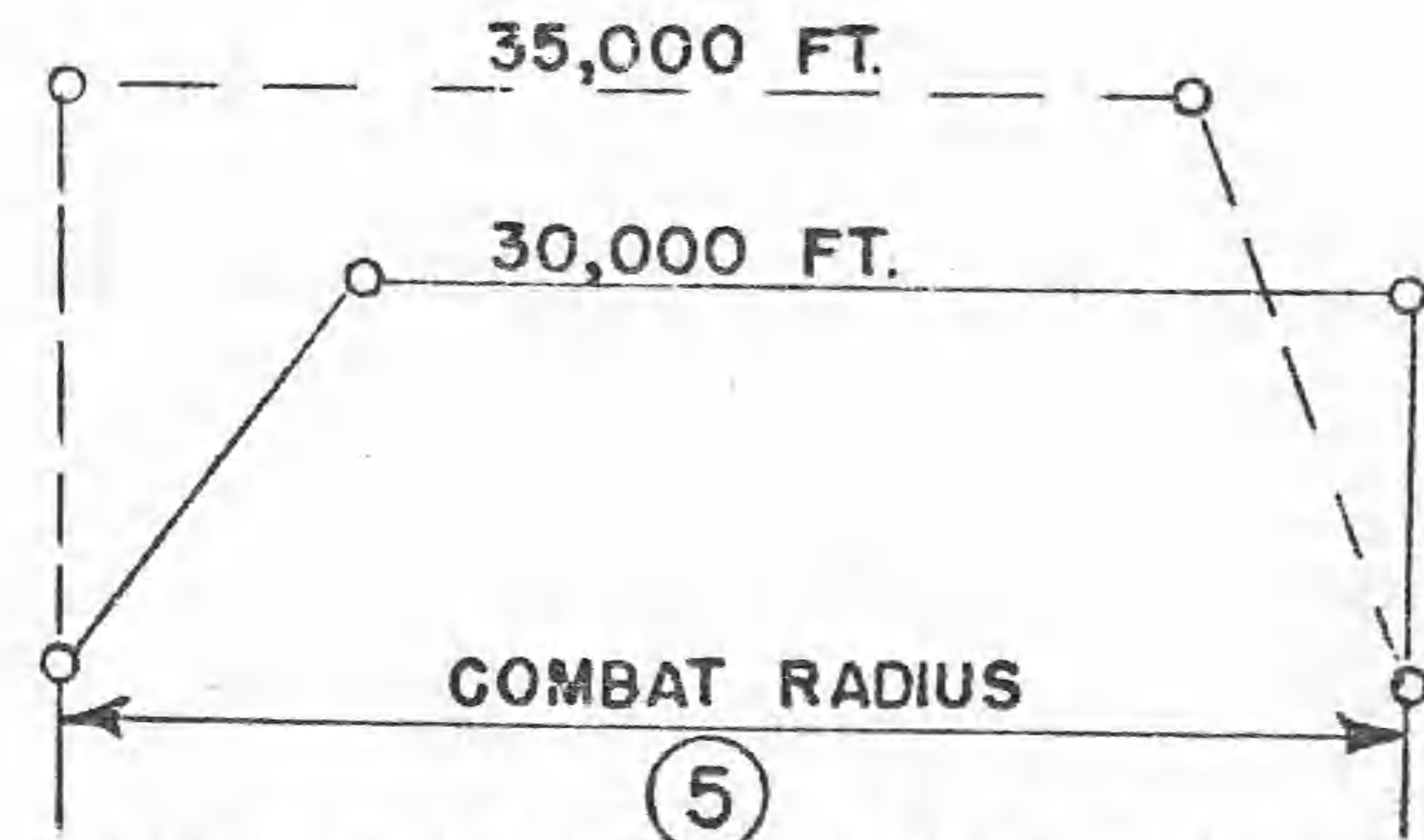
- ARM-UP, TAXI, TAKE-OFF: 5 minutes at normal power.
- LIMB: To 40,000 feet at military power.
- CRUISE-OUT: At V for long range at 40,000 feet. External tanks dropped when empty.
- DESCEND: To 35,000 feet. (No fuel used, no distance gained.)
- COMBAT: At 35,000 feet for 20 minutes at military power. (Assume combat concluded at cruise-back altitude.)
- CRUISE-BACK: At V for long range at 40,000 feet.
- RESERVE: 20 minutes at V for maximum endurance at sea level plus 5% of initial fuel load.

COMBAT RADIUS = CLIMB + CRUISE-OUT = CRUISE-BACK



GROUND SUPPORT FIGHTER COMBAT RADIUS PROBLEM (GAS TURBINE)

- ARM-UP, TAXI, TAKE-OFF: 5 minutes at normal power.
- LIMB: To altitude for maximum radius (30,000 feet) at normal power.
- CRUISE-OUT: At V for long range at 30,000 feet. External tanks dropped when empty.
- DESCEND: To sea level. (No fuel used, no distance gained.)
- COMBAT: 10 minutes at V for maximum endurance at sea level.
- DROP BOMBS AND FIRE EXTERNAL ROCKETS
- COMBAT: At sea level for 10 minutes at military power.
- LIMB: To altitude for maximum radius (35,000 feet) at normal power.
- CRUISE-BACK: At V for long range at 35,000 feet.
- RESERVE: 20 minutes at V for maximum endurance at sea level plus 5% of initial fuel load.



The F2H-4 airplane is the same as the F2H-3 airplane but carries AN/APG-37 radar instead of AN/APQ-41 radar. Weight and performance of the two airplanes are the same.

ELECTRONICS (Continued)

- RADAR.....AN/APG-37
(150 aircraft only)
- IFF.....AN/APX-6
- IFF (I-R UNIT).....AN/APX-17
(Planned Service Installation)