

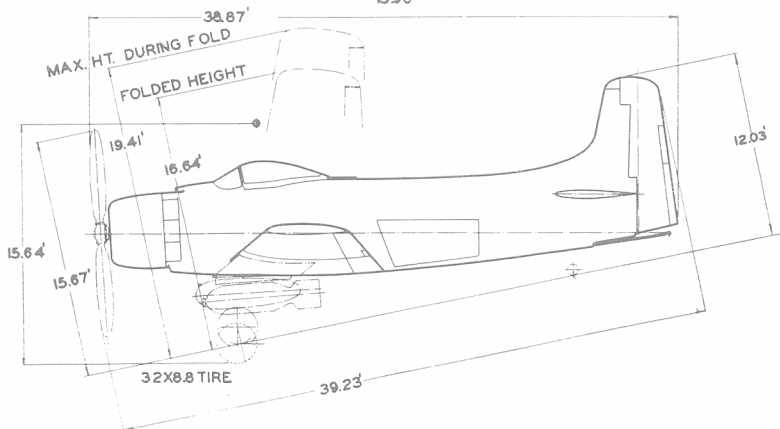
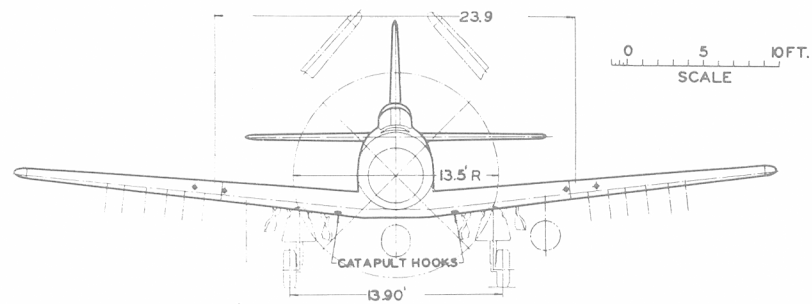
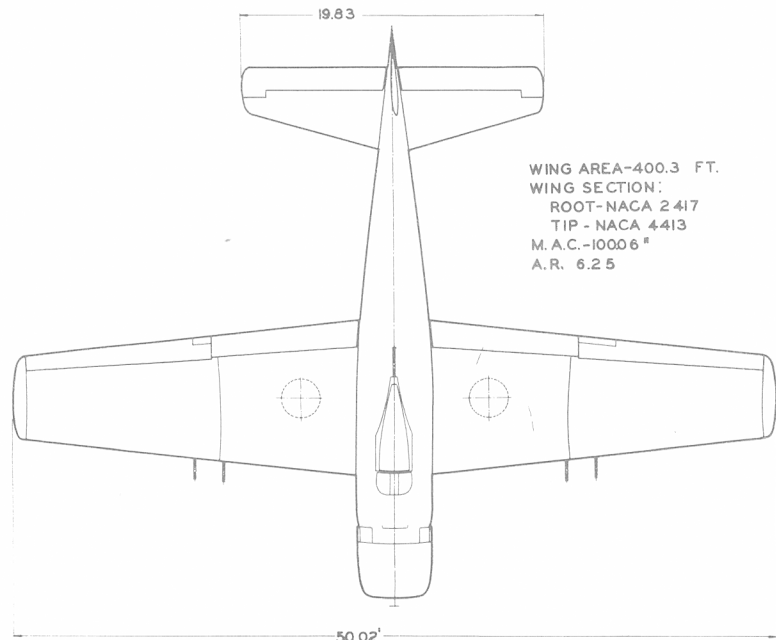
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Standard Aircraft Characteristics NAVAER 1335A (REV. 1-49)

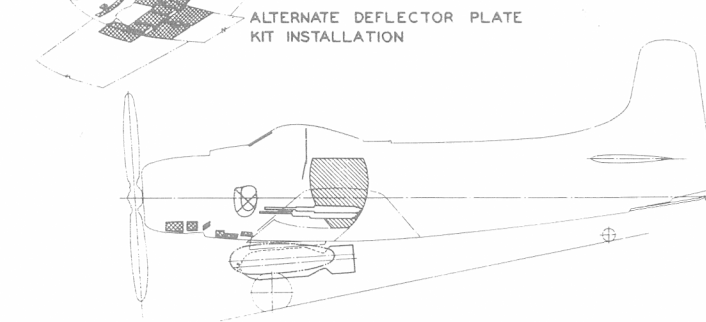
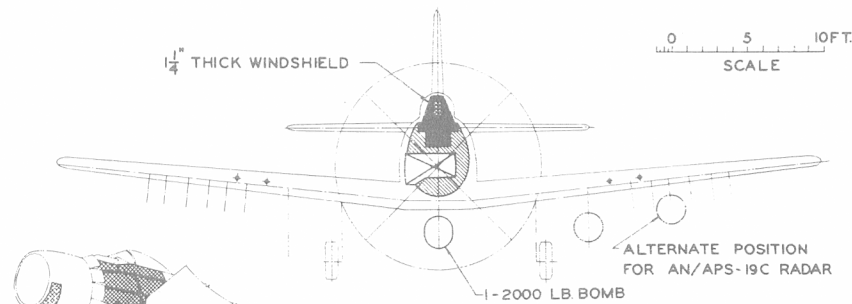
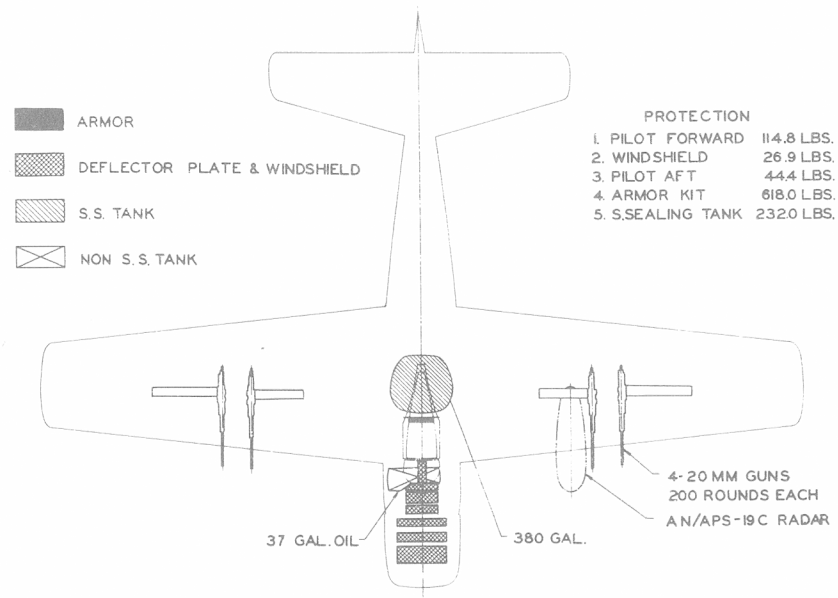
STANDARD AIRCRAFT CHARACTERISTICS

AD-6 "SKYRAIDER"

DOUGLAS



DESCRIPTIVE ARRANGEMENT



ARMAMENT & TANKAGE

POWER PLANT

NO. & MODEL... (1) R-3350-26WA
 MFR.....Wright
 SUPERCH.....1 Stage, 2 Speed
 RED. GR. RATIO.....0.4375
 PROP. MFR.....Aero Products
 BLADE DESIGN..A64208/M20A-162-0
 NO. BL./DIA.....4/13' -6"

RATINGS

	BHP	RPM	ALT
T.O.	2700	2900	S.L.
MIL.	2700	2900	S.L. to 3,700'
	2100	2600	11,500 to 14,500'
NORM.	2300	2600	S.L. to 6,200
	1900	2600	12,000 to 17,000'
SPEC. NO. 836-C			

ORDNANCE

<u>GUNS</u>			
No.	Size	Location	Rds
4	20mm, M-3	Wings	800

FIRE CONTROL
 GUNSIGHT MK20 MOD 4
 BOMB DIRECTOR SET
 MK 3 MOD 4

<u>EXTERNAL LOAD</u>			
Racks	No.	Location	Max. Cap.
Aero	12	Wing	500 lbs.
14A			
14 & 30	1	Fuselage	3500 lbs
Ejector			
MK 51	2	In. Wing	2000 lbs
MOD 14			
Max. Load Capacity...			
12,000 lbs.			

MISSION AND DESCRIPTION

The primary mission of the AD-6 is the destruction of sea and ground targets by dive bombing attacks. The airplane is also capable of torpedo and glide bombing, rocket attacks and tactical support missions. The AD-6 is designed to operate from all classes of naval aircraft carriers or from land bases.

The airplane is conventional in design and structure. Landing gear, canopy, flaps, wing folding, and three fuselage dive brakes are hydraulically operated. Flaps are single-slotted trailing-edge type. The pressure-balance type ailerons are operated by power boost. The rudder is equipped with a spring tab system. Longitudinal trim is achieved by an electrically adjustable stabilizer. Oxygen for five hours is supplied.

The centerline bomb station is capable of carrying external stores up to 3500 lbs weight and 30 inches diameter. A combination 14 and 30 inch suspension bomb ejector and a MK 3 MOD 4 bomb director are installed. Aero 1A adapters are provided for stores weighing over 2000 lbs.

DEVELOPMENT

First flight.....June 1953
 Service use.....September 1953

DIMENSIONS

<u>WING</u>	
AREA.....	400 sq. ft.
SPAN.....	50' -0"
M.A.C.....	8' -4"
LENGTH.....	38' -11"
HEIGHT.....	15' -8"
TREAD.....	13' -11"
PROP. GRD. CLEAR.....	6"

WEIGHTS

LOADINGS	LBS	L.F
EMPTY.....	11,992.....	
BASIC.....	13,434.....	
DESIGN.....	15,595..7.0.	
COMBAT.....	16,233..6.7.	
MAX. T.O. (Field).....	25,000..4.1.	
(Cat.).....	25,000.....	
MAX. LAND. (Field).....	21,000.....	
(Arrest).....	17,500.....	

All weights are calculated.

FUEL AND OIL

No. Tanks	Tot. Gal	Location
1	380	Fuselage
1	300	Ctr. Drop
2	600	Wing Drop
FUEL GRADE...115/145		
FUEL SPEC.. MIL-F-5572		

OIL

CAPACITY (Gals).....	37
GRADE.....	1120
SPEC.....	MIL-O-6082A

ELECTRONICS

UHF COMM.....	AN/ARC-27A
VHF COMM.....	AN/ARC-1
(Alt. to AN/ARC-27A)	
NAV. RECEIVER.....	AN/ARN-6
UHF ADF.....	AN/ARA-25
BEACON REC.....	AN/ARN-12
RADIO ALT.....	AN/APN-22
IFF.....	AN/APX-6
SEARCH RADAR (Prov)	AN/APS-19C

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Standard Aircraft Characteristics NAVAER-1335C

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AD-6

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) ATTACK 1-2000 lb. GP bomb AN/APS-19C Radar	(3) ATTACK 1-2000 lb. G.P. bomb 2-150 Gal. Ext. Fuel Tanks 12-5" HVAR	(4) ATTACK 1-1660 lb. store	(5) ATTACK 1-1660 lb. store 2-300 Gal. Ext. Fuel Tanks
TAKE-OFF WEIGHT	lb.	19,145	22,616	18,616	22,586
Fuel	lb.	2,280	4,080	2,280	5,880
Payload	lb.	2,000	3,680	1,660	1,660
Wing loading	lb./sq.ft.	47.9	56.5	46.5	56.5
Stall speed - power-off	kn.	83.0	90.2	81.8	90.1
Take-off run at S.L. - calm	ft.	915	1,820	850	1,810
Take-off run at S.L. 25 kn. wind	ft.	435	930	400	925
Take-off to clear 50 ft. - calm	ft.	-	-	-	-
Max. speed/altitude (A)	kn./ft.	278/19,500	254/19,000	287/19,600	264/19,200
Rate of climb at S.L. (A)	fpm	1,900	1,310	2,030	1,360
Time: S.L. to 10,000 ft. (A)	min.	5.6	8.6	5.3	8.4
Time: S.L. to 20,000 ft. (A)	min.	14.2	26.9	13.0	24.7
Service ceiling (100 fpm) (A)	ft.	26,200	21,200	27,400	21,700
Combat range	n.mi.	665	1,090	710	1,855
Average cruising speed	kn.	170	175	170	175
Cruising altitude(s)	ft.	5,000	5,000	5,000	5,000
Combat radius	n.mi.	250	535	260	660(B)
Average cruising speed	kn.	170	170	170	175
Mission Time	hrs.	3.3	6.7	3.4	7.9
COMBAT LOADING CONDITION		(2) COMBAT AN/APS-19C Radar No bomb			(6) COMBAT No store No external tank
COMBAT WEIGHT	lb.	16,233			16,956
Engine power		Military			Military
Fuel	lb.	1,368			2,280
Combat speed/combat altitude	kn./ft.	276/S.L.			(C)280/S.L.
Rate of climb/combat altitude	fpm/ft.	3,140/S.L.			3,000/S.L.
Combat ceiling (500 fpm)	ft.	27,300			27,600
Rate of climb at S.L.	fpm	3,140			3,000
Max. speed at S.L.	kn.	276			280
Max. speed/altitude	kn./ft.	298/17,300			299/17,300
LANDING WEIGHT					
LANDING WEIGHT	lb.	15,084			15,070
Fuel	lb.	219			394
Stall speed - power-off	kn.	73.6			73.6
Stall speed - with approach power	kn.	70.4			70.4

NOTES

(A) Normal Rated Power

(B) External fuel tanks and 1159 lbs. of external fuel dropped prior to combat.

(C) If the 1660 lb store was aboard, this speed would be decreased by 8 knots.

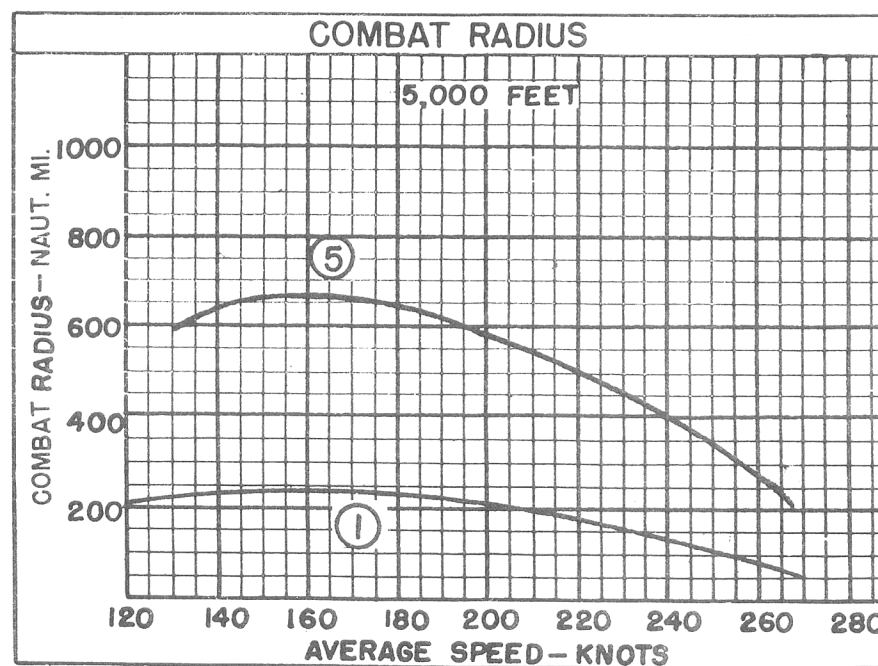
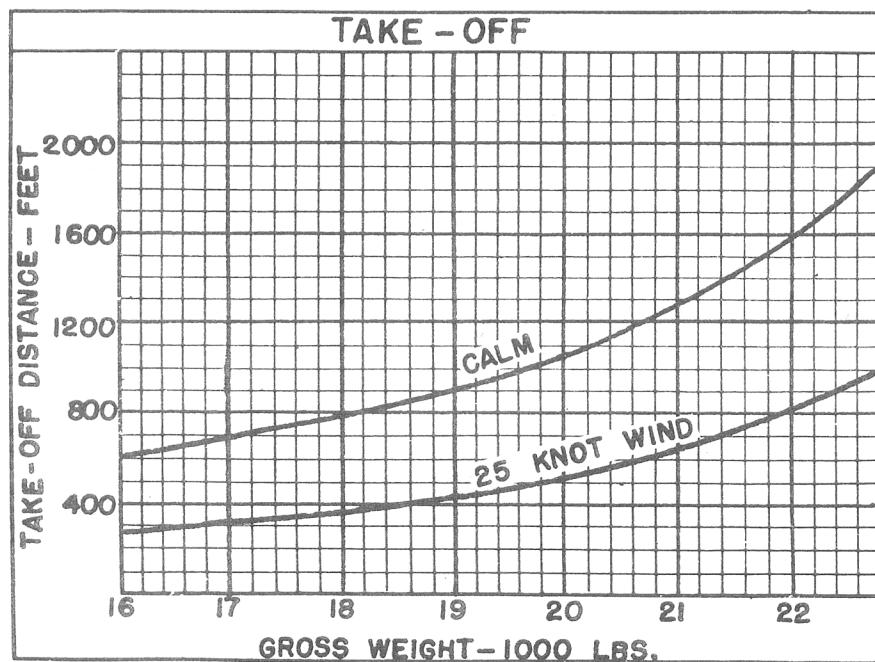
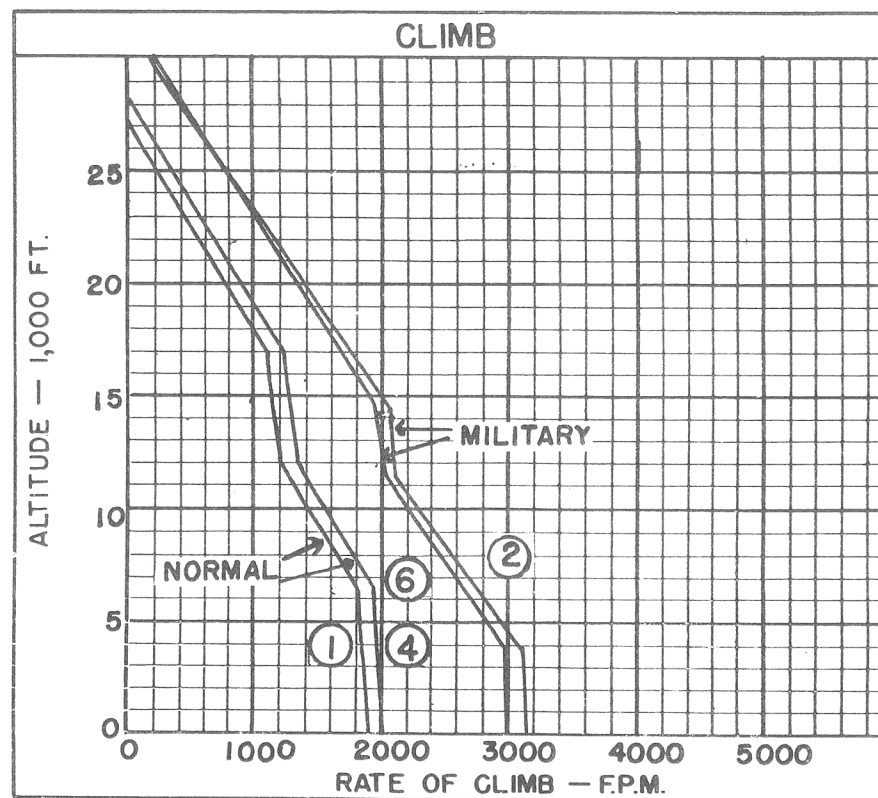
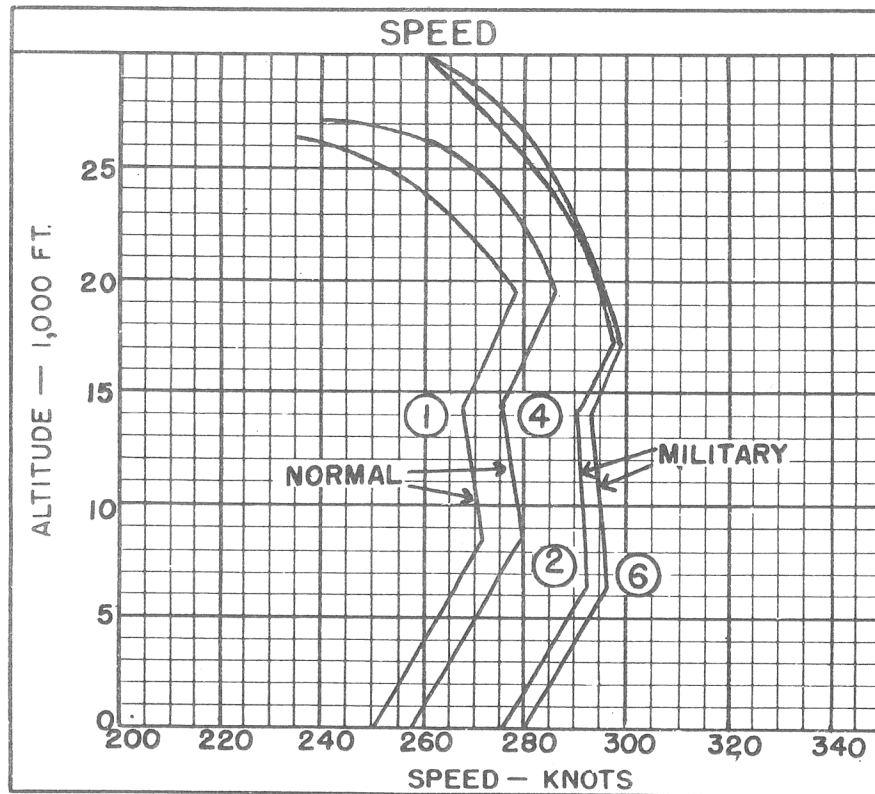
PERFORMANCE BASIS: Calculations based on contractors flight test of the AD-2 and AD-4B aircraft.

ALL LOADINGS INCLUDE ALL MAIN RACKS, 12 AERO 14ARACKS

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NAVAER-1335D (Rev. 10-51)

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○ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics NAVAER 1335E (REV. 2-50)

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NOTES

SPOTTING: A maximum operating spot aboard a CVA-19 (canted deck) class carrier consists of 42 aircraft on the flight deck with elevators and landing area clear and 41 aircraft on the hangar deck with hangar bay fire doors and elevators clear. Total 83 aircraft.

LOW ALTITUDE ATTACK AND GROUND SUPPORT BOMBER

WARM-UP, TAKE-OFF, ACCELERATE: 10 minutes at normal rated power at sea level.

CLIMB: To 5000 ft. at normal rated power.

CRUISE-OUT: At speed for long range at 5000 feet.

DESCEND: To sea level. (No fuel used, no distance covered).

DROP BOMBS AND FIRE ROCKETS

COMBAT: 5 minutes at maximum power plus 10 minutes at normal rated power at sea level.

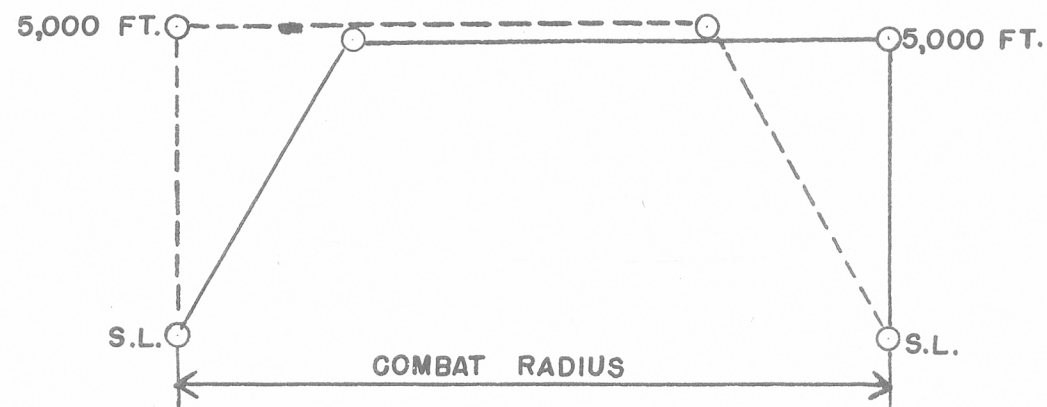
CLIMB: To 5000 ft. with normal rated power.

CRUISE-BACK: At speed for long range at 5000 feet.

RESERVE: 20 minutes at speed for long range at sea level plus 5 percent of initial fuel.

$$\text{COMBAT RADIUS} = \text{CLIMB} + \text{CRUISE OUT} = \text{CLIMB} + \text{CRUISE BACK}$$

$$\text{MISSION TIME} = \text{TIME REQUIRED FOR CLIMB} + \text{CRUISE OUT} + \text{COMBAT} + \text{CLIMB} + \text{CRUISE BACK}$$



○ LOADING CONDITION COLUMN NUMBER

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Standard Aircraft Characteristics NAVAER 1335F (REV. 1-49)

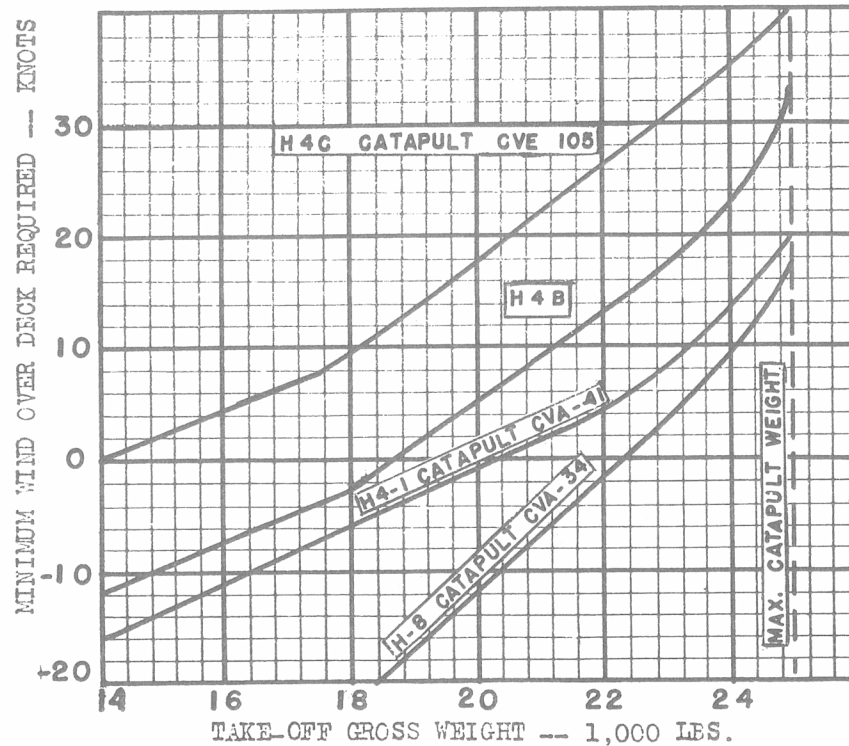
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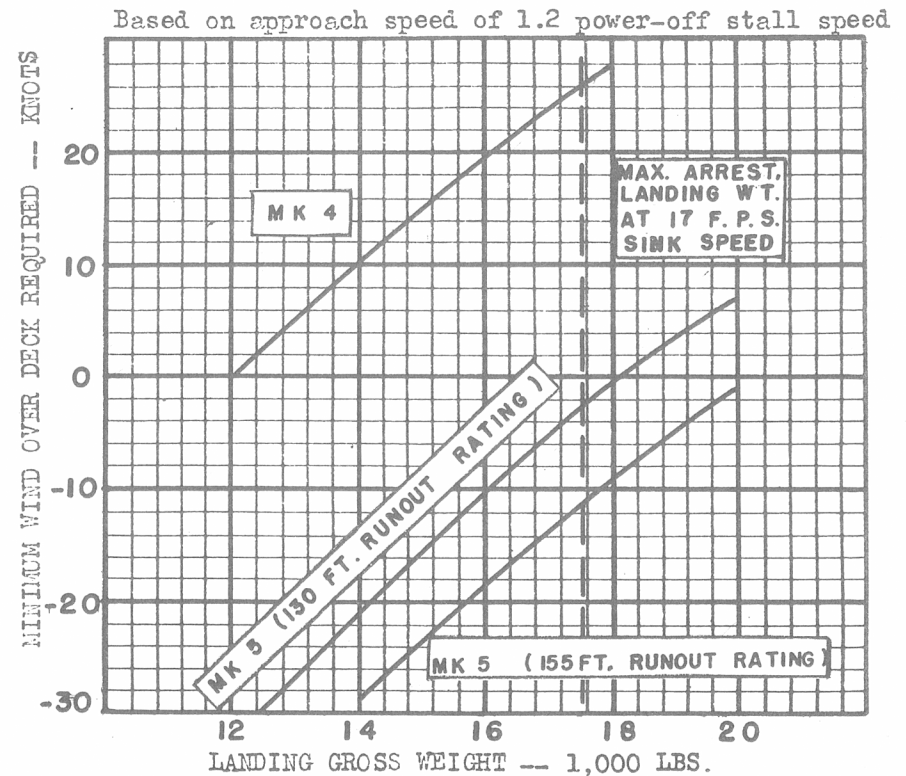
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CARRIER SUITABILITY

MINIMUM WIND OVER DECK REQUIRED FOR CATAPULTING
VS. GROSS WEIGHT



MINIMUM WIND OVER DECK REQUIRED FOR LANDING
VS. GROSS WEIGHT



NOTES

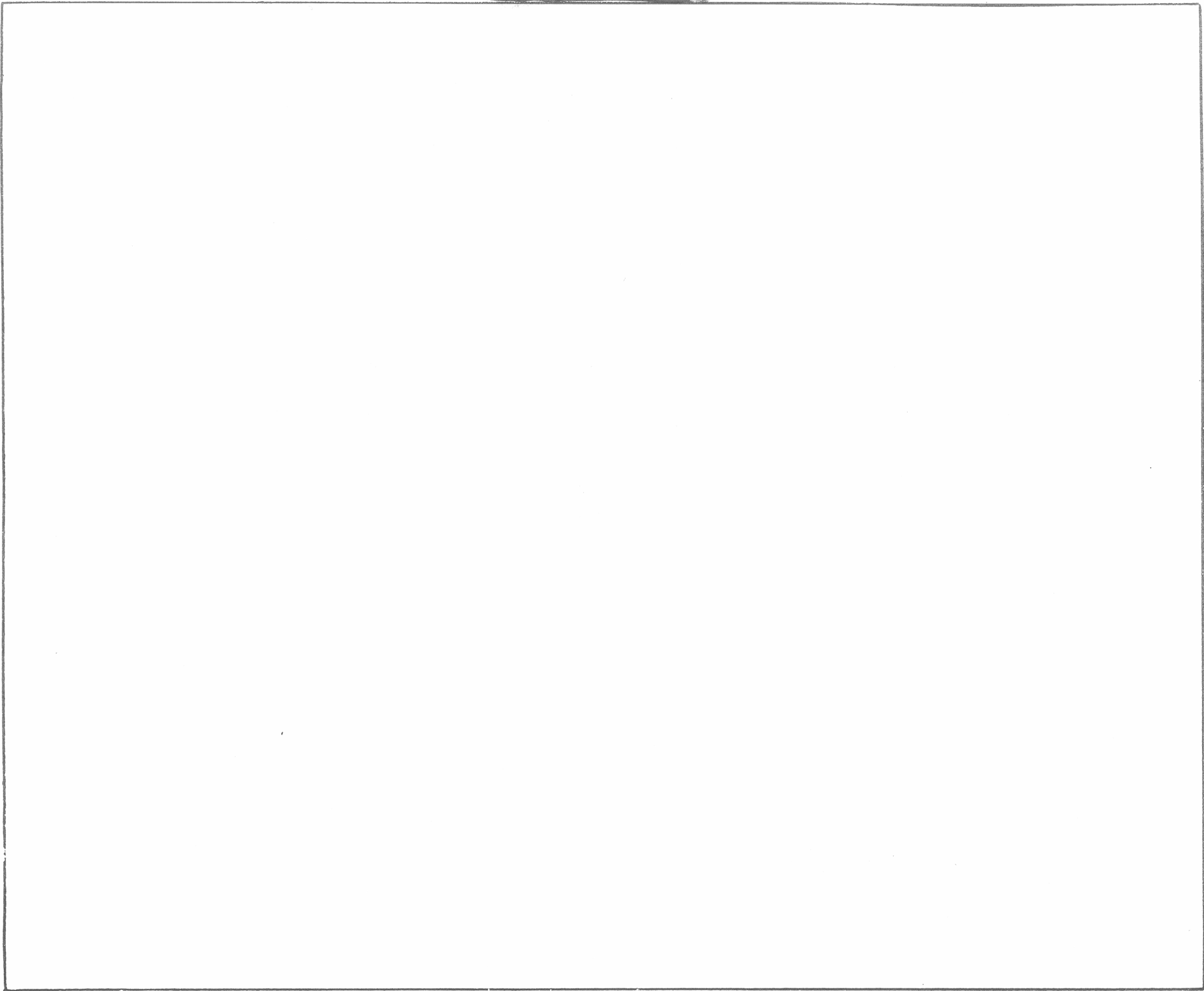
- (A) These curves should be used for planning purposes only. Actual catapult and arresting gear operation should be in accordance with applicable Aircraft Technical Orders, and Catapult and Arresting Gear Bulletins.
- (B) Based on NATC flight test.

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NAVAER-13351 (New 5-52)

1 JULY 1954

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Standard Aircraft Characteristics NAVAER 1335F (REV. 1-49)

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