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[Signature]
A. W. Frascella
Public Information Officer
By direction of the Commander

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AIR-7203
ON 12-27-84 O. H. Parsons Security Specialist
(DATE) (SIGNATURE) (RANK)
NAVAL AIR SYSTEMS COMMAND
DEPARTMENT OF THE NAVY

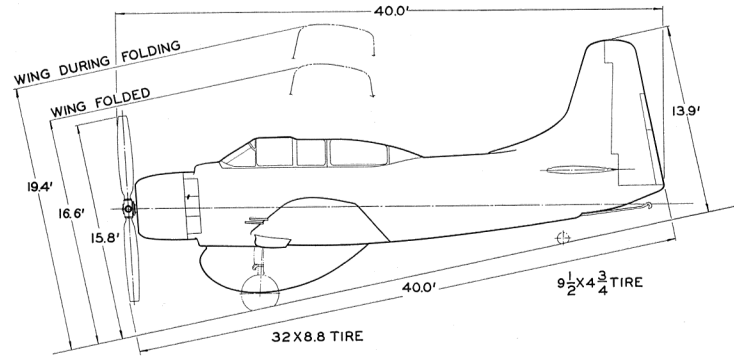
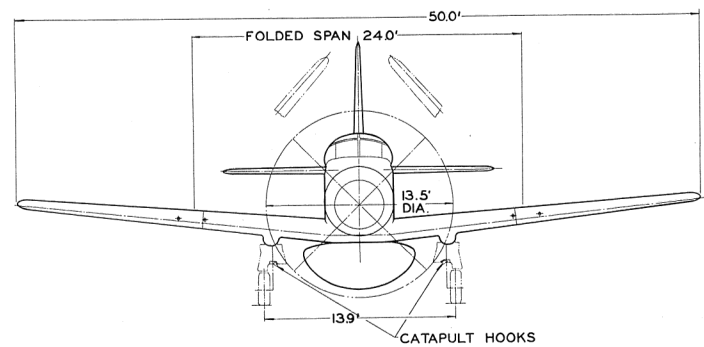
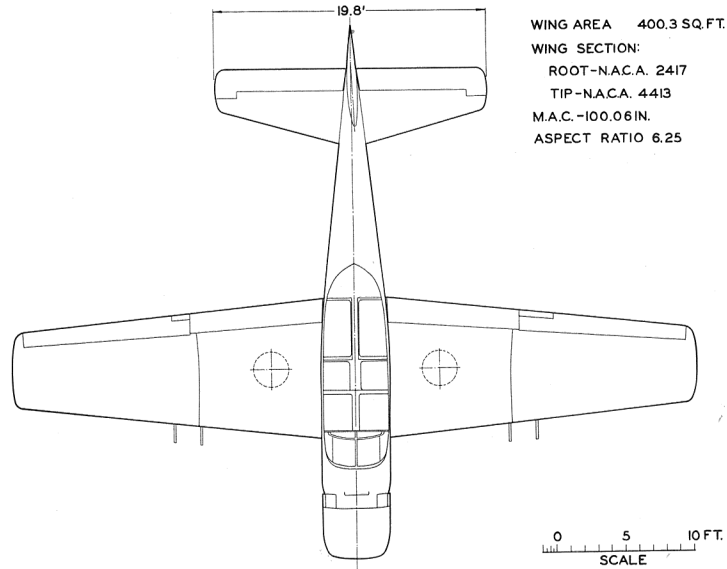
STANDARD AIRCRAFT CHARACTERISTICS

AD-5W SKYRAIDER

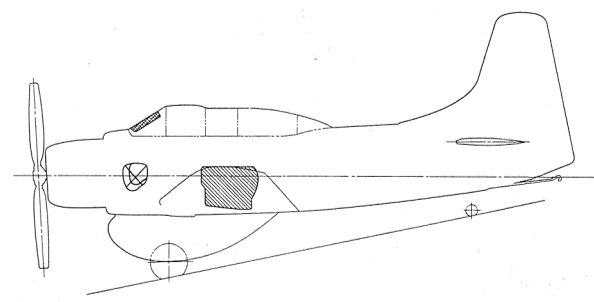
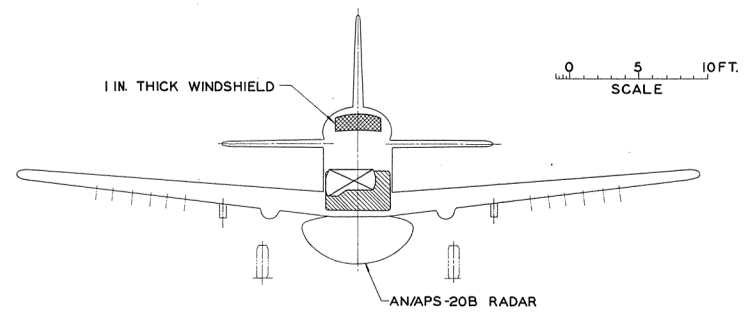
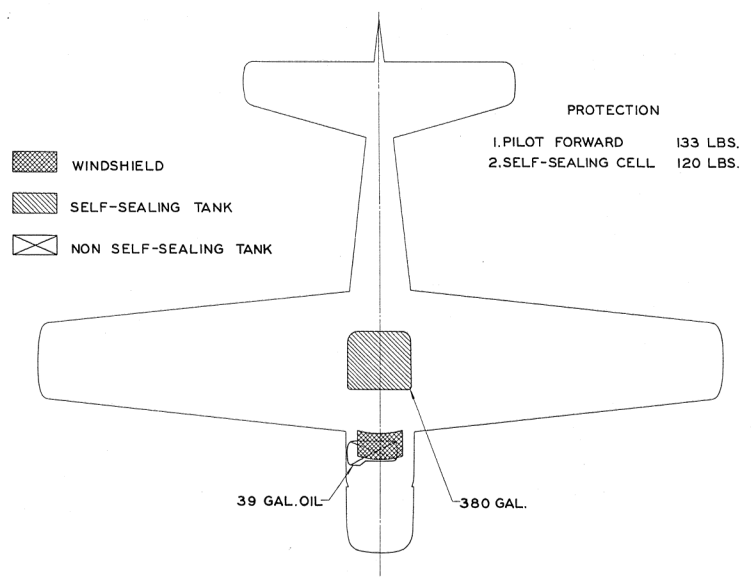
DOUGLAS AIRCRAFT COMPANY, INC., EL SEGUNDO DIVISION

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COPY NO. 20



DESCRIPTIVE ARRANGEMENT



ARMAMENT & TANKAGE

POWER PLANT

No. & Model..... (1)R-3350-26-WA
 Mfr..... Wright Aero
 Engine Spec. No. N-836-D
 Supchg..... Single Stage Two Speed
 Reduction Gear Ratio4375:1
 Prop. Mfr..... Aero Products
 Prop. Des..... A-642-G-805
 Prop. Blade Des..... M20A2-162-0
 No. Blades/Prop. Dia..... 4/13'6"

RATINGS

	BHP	@RPM	@Alt.
T.O.	2700	2900	S.L.
Mil.	2700	2900	3700
	2100	2600	14500
Norm.	2300	2600	6200
	1900	2600	17000

ORDNANCE

Although no ordnance is carried on search missions, the AD-5W airplane is equipped with inner-wing bomb racks identical to those on other AD-5 models and can carry the same stores. There is no centerline bomb station on the AD-5W. All provisions including controls are available in the outer wing for the installation of six Aero 14 racks per wing, and in the wing fold for four 20mm guns with 200 rounds of ammunition per gun.

MISSION AND DESCRIPTION

The principal mission of the AD-5W is that of air-borne early warning and anti-submarine search from carrier or land bases. The AD-5W is a development of the proven AD-4 Series and incorporates improvements in equipment, arrangement, and performance and stability. Installation provisions for all armor and armament carried on other AD-5 models are retained.

The side-by-side seating arrangement of pilot and assistant pilot-navigator operator facilitates all-weather operation. The unified cockpit arrangement with the radar operator aft of the pilot provides interchange of crew positions and maintenance of electronic equipment in flight. AN/APS-20B radar is installed for search operations. Appropriate radar and communications relay equipment also are installed.

DEVELOPMENT

Contract approval dates:

- NOa(s) 52-247, 19 December 1951, 64 airplanes
- NOa(s) 52-979, 24 April 1952, 84 airplanes
- NOa(s) 54-324, L.I., 16 October 1953, 50 airplanes.

Production status:

In production. Delivery of last airplane schedule March 1956.

DIMENSIONS

Span 50.0 ft.
 Length 40.0 ft.
 Height 15.8 ft.
 Tread 13.9 ft.
 Prop. Gnd. Clr..... 6.25 in.
 Turn. Radius..... 32 ft.

WEIGHTS

Loadings	Lbs.	L.F.
Empty (A).....	12,092	
Basic.....	14,802	
Flt. Design.....	17,000	6.4
Combat.....	17,125	6.4
Max. T.O.....	25,000	
Arr. Landing.....	17,500	

FUEL AND OIL

Gal.	No. Tanks	Location
380*	1	Fuselage
150 or 300	2	Wing Drop
Fuel Grade		115/145
Fuel Spec.		MIL-F-5572
*Self Sealing Tank		
Max. Usable Fuel 980 Gals. (limited by oil capacity)		

OIL

Capacity	39 Gals.
Spec.	AN-0-8
Grade	1120

ELECTRONICS

UHF Trans-Rec. & Relay .. AN/ARC-27A
 Radio Altimeter AN/APN-22
 Marker Beacon AN/ARN-12
 IFF AN/APX-6
 IFF Coder AN/APA-89
 IFF AN/APX-7
 LF ADF AN/ARN-6
 UHF ADF AN/ARA-25
 Interphone AN/AIC-4
 Radar Relay AN/ART-28
 Radar Search..... AN/APS-20
 Radar GPI..... AN/APA-57
 Provisions
 VHF Relay AN/ARC-28
 MHF Trans-Rec..... AN/ARC-2

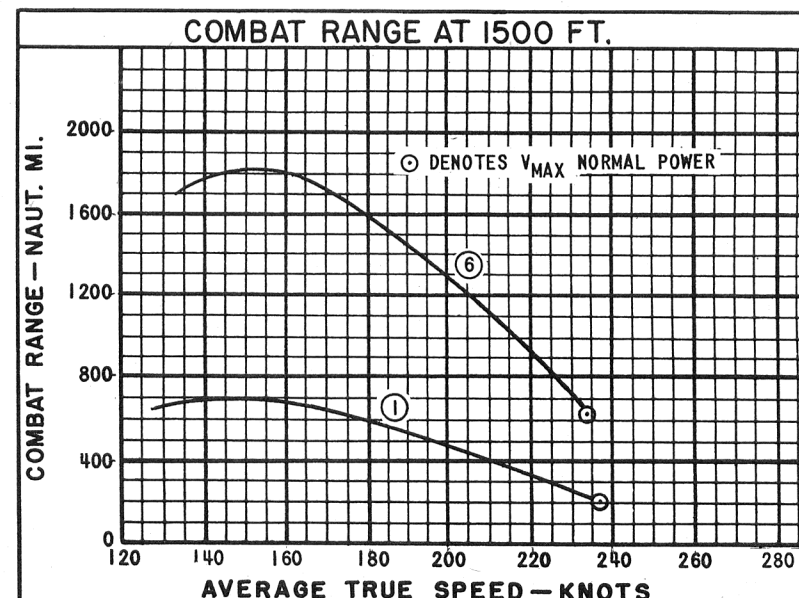
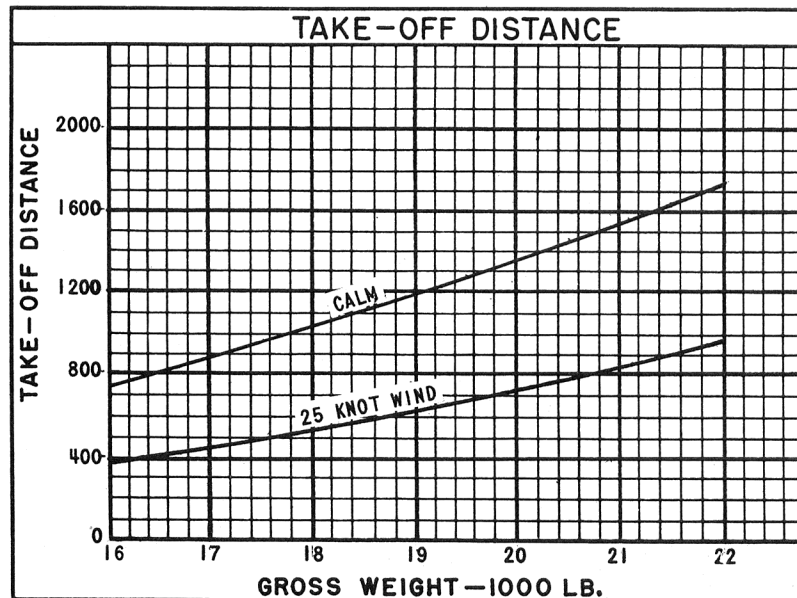
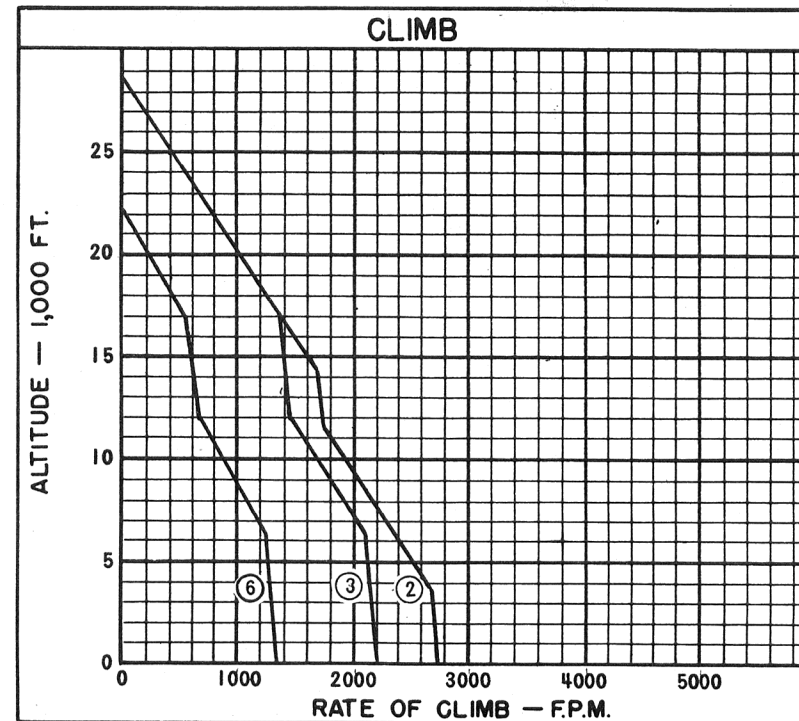
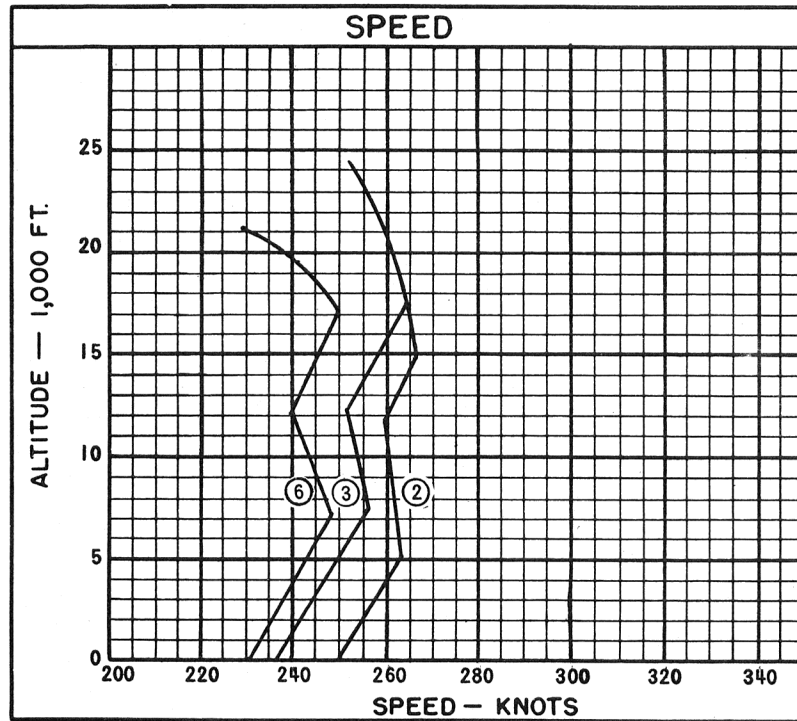
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PERFORMANCE SUMMARY						
TAKE-OFF LOADING CONDITION		(1) SEARCH 1500 ft. cruise altitude	(1) SEARCH 7000 ft. cruise altitude	(5) SEARCH 2-150 gal. fuel tanks (Aerola)	(6) SEARCH 2-300 gal. fuel tanks (Aerola)	
TAKE-OFF WEIGHT	lb.	18,037		20,041	22,047	
Fuel	lb.	2280		4080	5880	
Payload (AN/APS-20)	lb.					
Wing loading	lb./sq.ft.	45.1		50.1	55.1	
Stall speed - power-off	kn.	87.9		92.7	97.2	
Take-off run at S.L. - calm	ft.	1045		1360	1760	
Take-off run at S.L. - 25 kn.wind	ft.	540		735	980	
Take-off to clear 50 ft. - calm	ft.	1830		2385	3150	
Max. speed/altitude (A)	kn./ft.	263/17,300		257/17,300	250/17,200	
Rate of climb at S.L. (A)	fpm	2030		1640	1330	
Time: S.L. to 10,000 ft. (A)	min.	5.2		6.5	8.3	
Time: S.L. to 20,000 ft. (A)	min.	12.8		17.1	24.2	
Service ceiling (100 fpm) (A)	ft.	26,800		23,800	21,100	
Combat range	n.mi.	685	658	1294	1798	
Average cruising speed	kn.	160	170	160	160	
Cruising altitude(s)	ft.	1500	7000	1500	1500	
Combat radius (C)	n.mi.	274	263	518	719	
Average cruising speed	kn.	160	170	160	160	
Total Mission Time	hr.	4.4	3.9	8.1	11.1	
COMBAT LOADING CONDITION		(2) 60% FUEL	(3) 60% FUEL			
COMBAT WEIGHT	lb.	17,125	17,125			
Engine power		MILITARY	NORMAL			
Fuel	lb.	1368	1368			
Combat speed/combat altitude	kn./ft.	253/1500				
Rate of climb/combat altitude	fpm/ft.	2750/1500				
Combat ceiling (500 fpm)	ft.	24,200				
Rate of climb at S.L.	fpm	2760	2210			
Max. speed at S.L.	kn.	250	237			
Max. speed/altitude	kn./ft.	266/14,900	264/17,300			
LANDING WEIGHT	lb.	(4) 15,989				
Fuel	lb.	232				
Stall speed - power-off	kn.	82.8				
Stall speed - with approach power	kn.	77.1				

NOTES

- (A) Normal Rated Power.
- (B) Performance Basis: Performance is calculated and based on flight tests of the AD-5W.
Combat range and radius are based on fuel consumption data from AD-4B, AD-5, and AD-6 flight tests and are increased 5%.
- (C) Combat Radius is 40% of Combat Range.
- (D) All loadings include inner wing racks.
- (E) This revision prepared to incorporate results of AD-5W flight tests.
- (F) Spotting: 20 aircraft can be spotted in an area 96 ft. wide and 200 ft. long.

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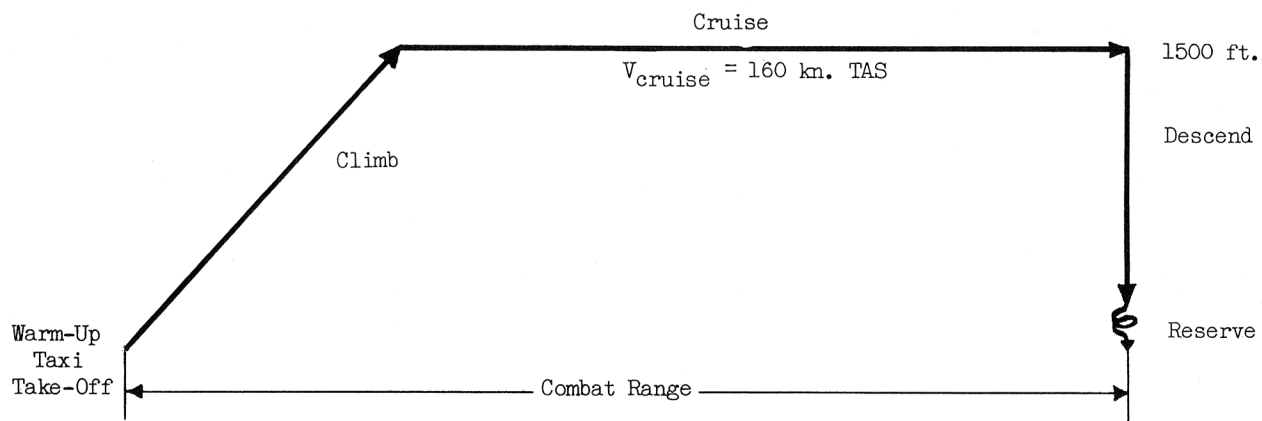
⊙ DENOTES LOADING CONDITION COLUMN NUMBER

NOTES

COMBAT RANGE

<u>Warm-Up, Taxi, Take-Off</u>	<u>Climb</u>	<u>Cruise</u>	<u>Reserve</u>
Fuel for 10 min. at S.L. normal power.	At maximum rate of climb with normal power to 1500 ft.	At 1500 ft. at speed for maximum range operation, tanks dropped when empty.	Fuel allowance: 5 percent of initial fuel plus 20 min. at speed for long range at sea level.

Combat Range = Climb + Cruise

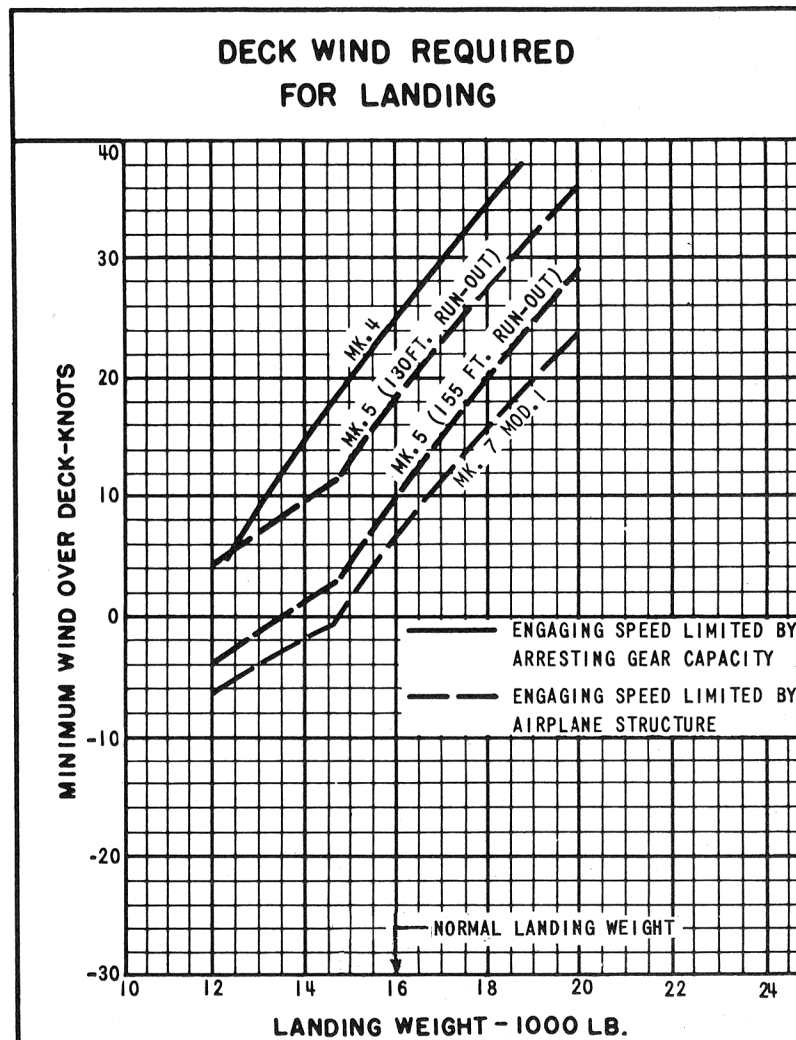
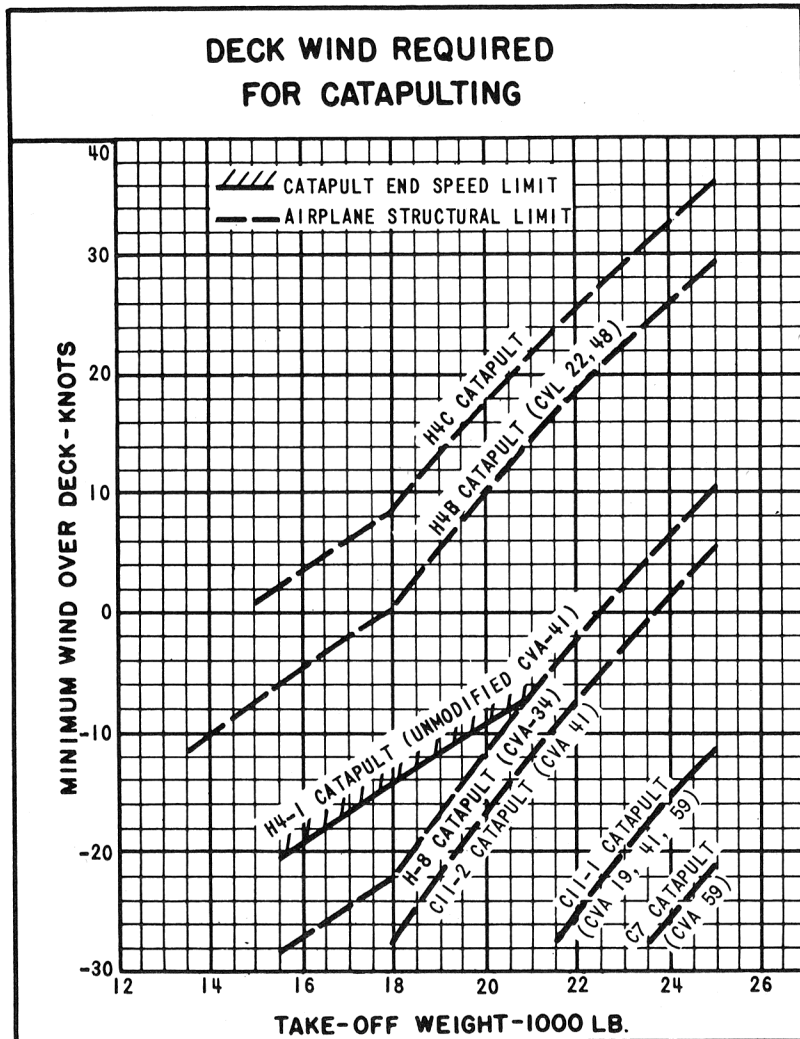


COMBAT RADIUS

Combat radius is 40 percent of combat range at 1500 ft. altitude.

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CARRIER SUITABILITY



NOTE:

The arrested landing approach speed equals 1.15 times the power-off stalling speed.

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