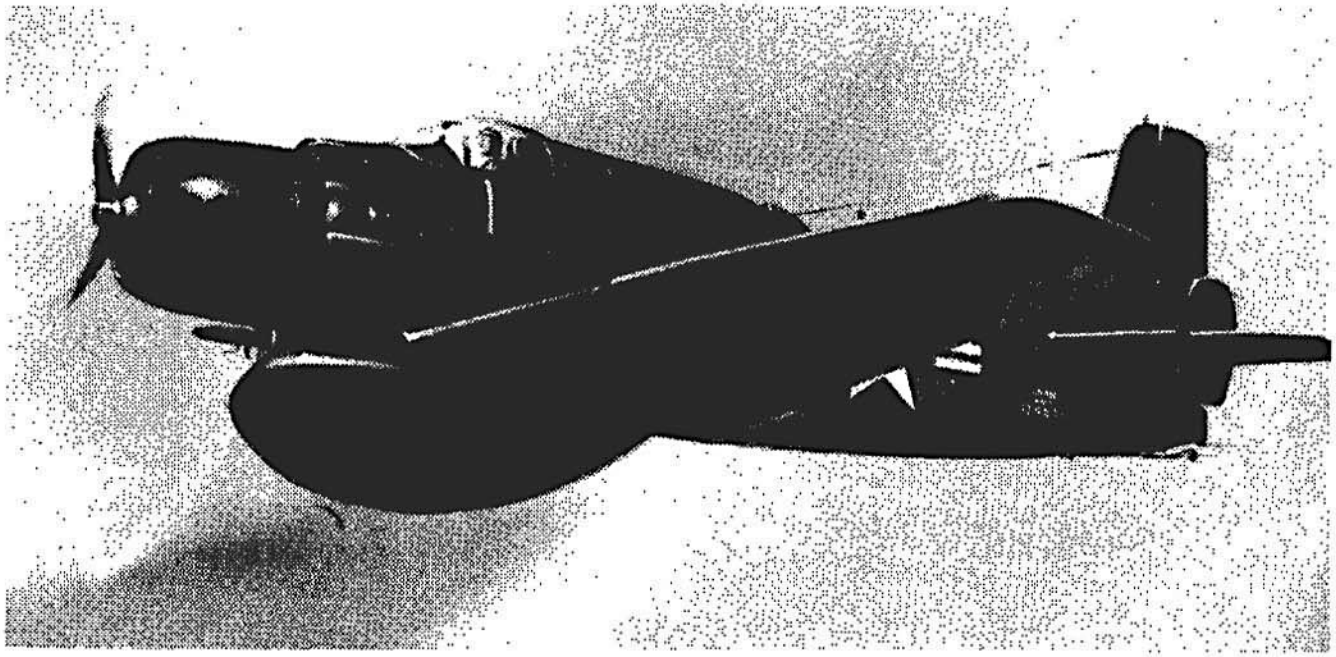
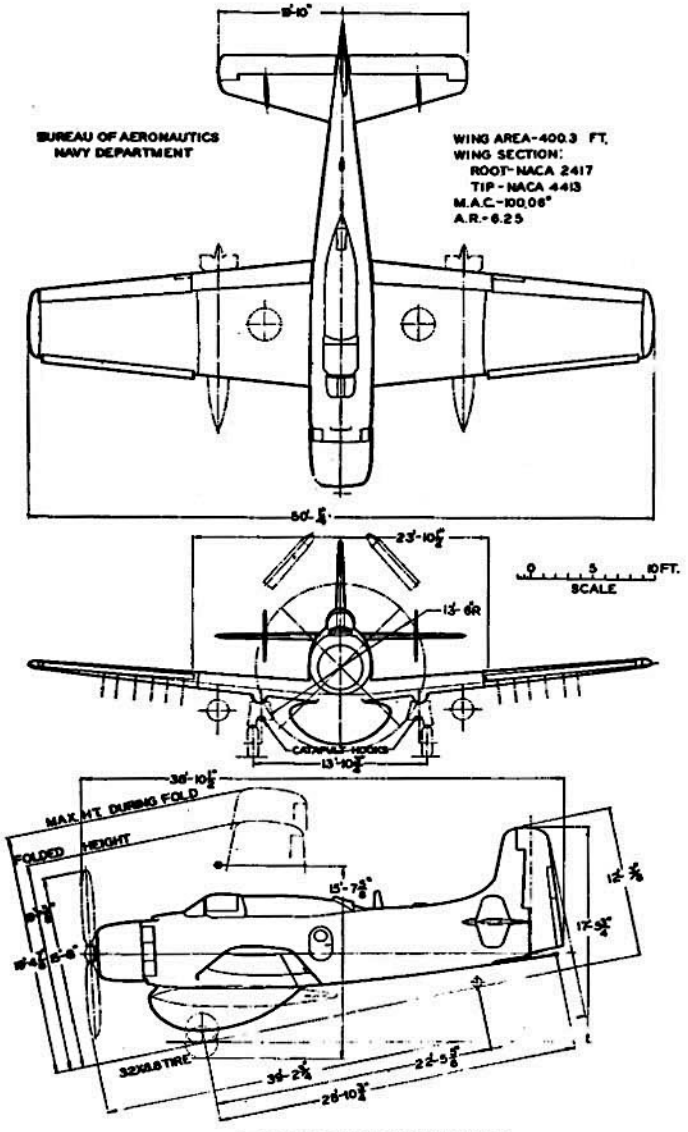


STANDARD AIRCRAFT CHARACTERISTICS

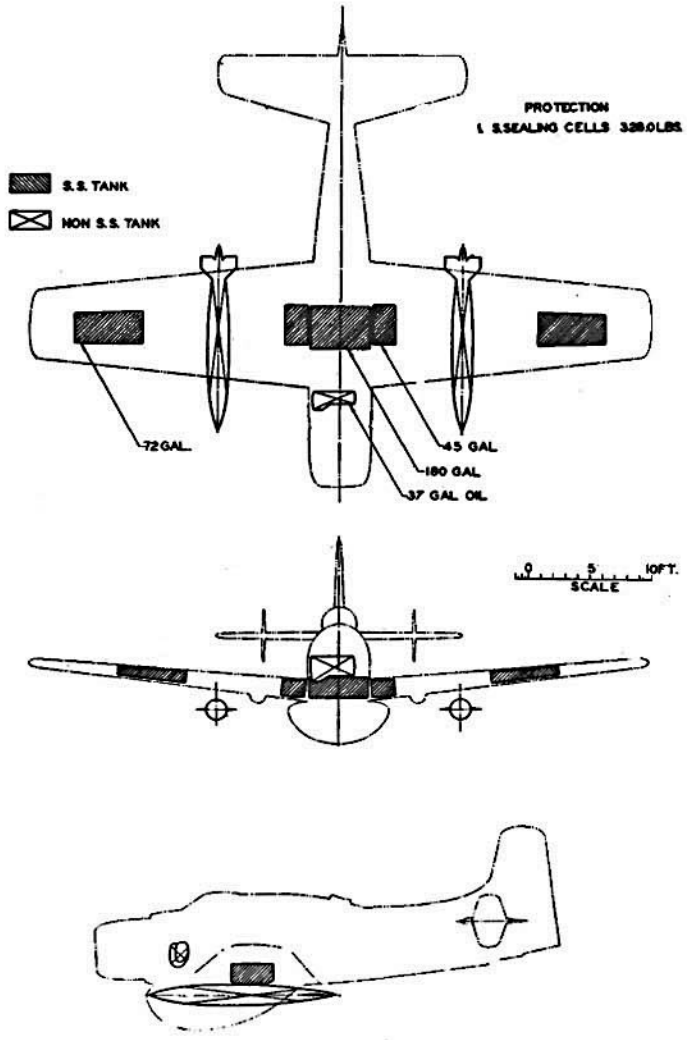
AD-4W "SKYRAIDER"

DOUGLAS

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



DESCRIPTIVE ARRANGEMENT



ARMAMENT & TANKS

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

POWER PLANT

NO.& MODEL.....(1) R-3350-26W
MFR.....Wright
SUPERCH.....1 Stage, 2 Speed
PROP.GEAR RATIO.....0.4375
PROP.MFR.....Aero Prod
PROP.DES.NO.....M20A-162-0
NO.BL./DIA.....4/13' -6"

RATINGS

	Bhp	@ Rpm	@ Alt.
T.O.	2,700	2,900	S.L.
COMBAT	3,020	2,900	S.L.
	2,570	2,600	8,900'
MIL	2,700	2,900	3,700'
	2,100	2,600	14,500'
NORMAL	2,300	2,600	S.L.
	1,900	2,600	17,100'

SPEC. NO. N-836

ORDNANCE

BOMBS AND ROCKETS

Racks	Max.Cap	Location	No.
MK.51	2,000	Inner Wing	2

(For external fuel only)

MISSION AND DESCRIPTION

The principal mission of the AD-4W is to provide airborne early warning of enemy attack. The airplane also has complete ASW search capabilities. This version of the AD-4 series airplane is a single engine, three place attack land airplane.

The interior arrangement provides an enclosed cockpit for the pilot with all flying controls and instruments. An enclosed compartment is also provided behind the pilot's cockpit for two radar operators with partial controls for the radar equipment. A passage is provided on the starboard side to permit access in flight to the electronic equipment for minor repair and adjustment. Entrance doors with windows are provided on each side of the rear compartment. The doors may be released in flight for emergency exit.

A fiberglass radome is suspended under the fuselage to house the search AEW antenna.

The airplane is conventional in arrangement with aluminum alloy semi-monocoque structure. Arresting gear and catapult hooks are provided to permit operation from any size carrier.

DEVELOPMENT

First flight - - - - - - - - February 1950
Service use - - - - - - - - May 1950

DIMENSIONS

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

WEIGHTS

Loadings	Lbs	L.F.
EMPTY	13,366	
BASIC	13,754	
DESIGN	15,595	6.0
COMBAT	16,070	5.8
MAX.T.O.(Field)	24,000	
(Cat.)	18,300	
MAX.LAND(Field)	21,000	
(Arrest)	17,000	

* All weights are actual

FUEL AND OIL

Gal.	No. Tanks	Location
180	1	* Fuselage
90	2	* Wing Inbd.
144	2	* Wing Outbd.
300	2	Wing Drop

FUEL GRADE.....115/145
FUEL SPEC.....AN-F-48

OIL

CAPACITY.....37 gal.
SPEC.....AN-O-8
GRADE.....1120

* Self sealing tanks.

ELECTRONICS

VHF COMM.....AN/ARC-28
VHF COMM.....AN/ARC-27
(P.S.I.Repl. for AN/ARC-28)
VHF COMM.....AN/ARC-2
(Alternate to (1) AN/ARC-27/AN/ARC-1)
INTERPHONE.....AN/AIC-4A
RADIO ALTM.....AN/APN-1
RANGE REC.....AN/ARR-2A
NAV.SYS.....AN/ARN-21
(P.S.I.Repl for AN/ARR-2A)
(Continued on Note page)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) SEARCH AN/APS-20 Radar	(3) SEARCH AN/APS-20 Radar 2-150 gal. drop tanks			
TAKE-OFF WEIGHT	lb.	17,054	19,124			
Fuel internal/external	lb.	2,484/None	2,484/1800			
Payload	lb.	- - -	- - -			
Wing loading	lb./sq.ft.	42.7	47.7			
Stall speed - power-off	kn.	78.3	82.9			
Take-off run at S.L. - calm	ft.	667	900			
Take-off run at S.L. 25 kn. wind	ft.	296	420			
Take-off to clear 50 ft. - calm	ft.	- - -	- - -			
Max. speed/altitude (A)	kn./ft.	246/18,900	233/18,600			
Rate of climb at S.L. (A)	fpm	2,190	1,760			
Time: S.L. to 10,000 ft. (A)	min.	4.9	6.0			
Time: S.L. to 20,000 ft. (A)	min.	11.6	14.3			
Service ceiling (100 fpm) (A)	ft.	28,200	25,200			
Combat range	n.mi.	725	1,275			
Average cruising speed	kn.	130	132			
Cruising altitude(s)	ft.	1,500	1,500			
Combat radius	n.mi.	290	510			
Average cruising speed	kn.	130	132			
COMBAT LOADING CONDITION		(2) COMBAT				
COMBAT WEIGHT	lb.	16,070				
Engine power		Military				
Fuel	lb.	1,476				
Combat speed/combat altitude	kn./ft.	236/1,500				
Rate of climb/combat altitude	fpm/ft.	2,940/1,500				
Combat ceiling (500 fpm)	ft.	26,400				
Rate of climb at S.L.	fpm	2,980				
Max. speed at S.L.	kn.	232				
Max. speed/altitude	kn./ft.	249/16,500				
LANDING WEIGHT	lb.	14,822				
Fuel	lb.	228				
Stall speed - power-off	kn.	73				
Stall speed - with approach power	kn.	70.6				

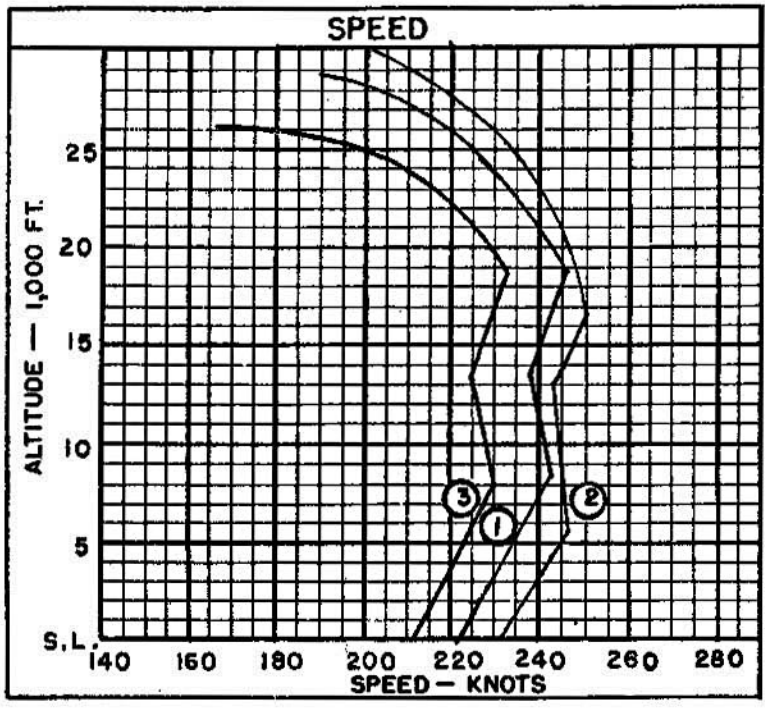
NOTES

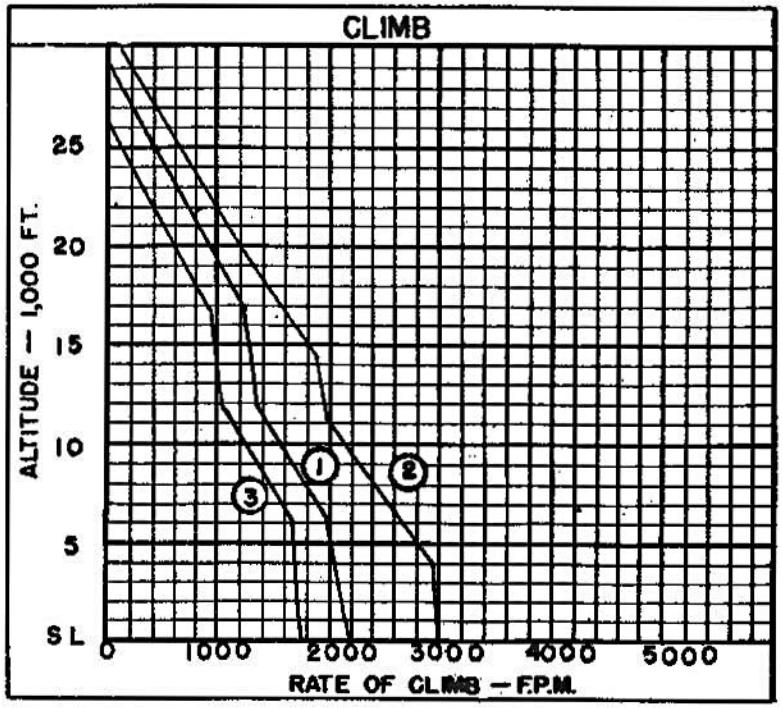
(A) Normal rated power.

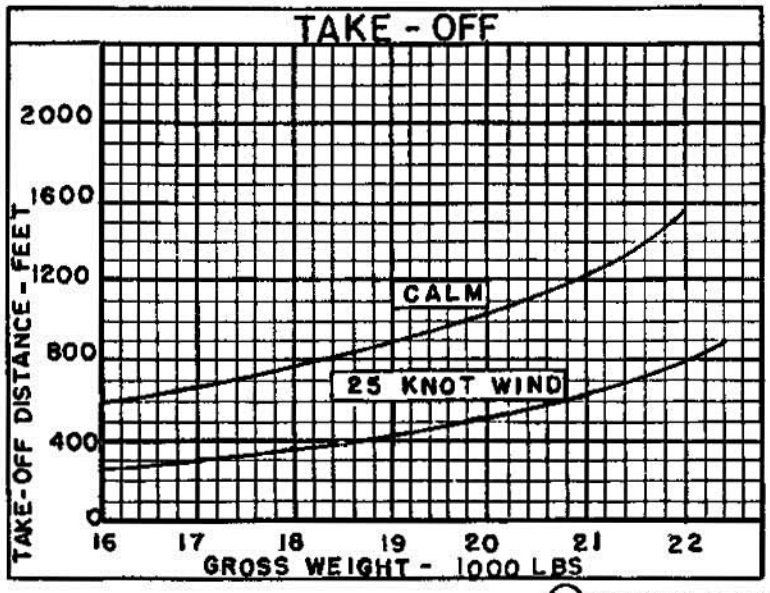
Performance is based on AD series flight test.

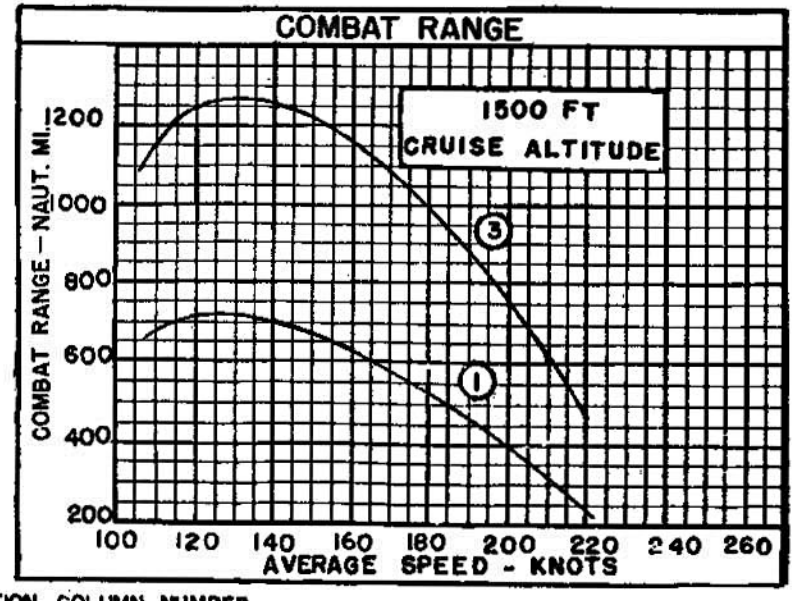
Range and radius are based on AD series flight test fuel consumption data increased 5%.

20 airplanes (wings folded) can be spotted in a rectangular area 200 feet long and 96 feet wide.









◯ LOADING CONDITION COLUMN NUMBER

Standard Aircraft Characteristics NAVAER 1335E (REV. 2-60)

NOTES

ASW RANGE PROBLEM

LOADING CONDITIONS (1) & (3).
WARM-UP, TAXI, TAKE-OFF: 10 minutes at normal power.
CLIMB: On course to 1,500 feet at normal power.
CRUISE: At V for long range at 1,500 feet. External tanks are dropped when empty.
RESERVE: 20 minutes at sea level at V for long range + 5% of initial fuel load.

COMBAT RANGE = CLIMB + CRUISE.
COMBAT RADIUS = 40% of COMBAT RANGE.

ELECTRONICS (Continued)

RADAR GPI.....AN/APA-57C
GR.POSIT.IND.....AN/APA-81
RADAR.....AN/APS-20A
(Speed Control Kit)
RADAR.....AN/APS-20C
IFF.....AN/APX-6