

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

STANDARD AIRCRAFT CHARACTERISTICS

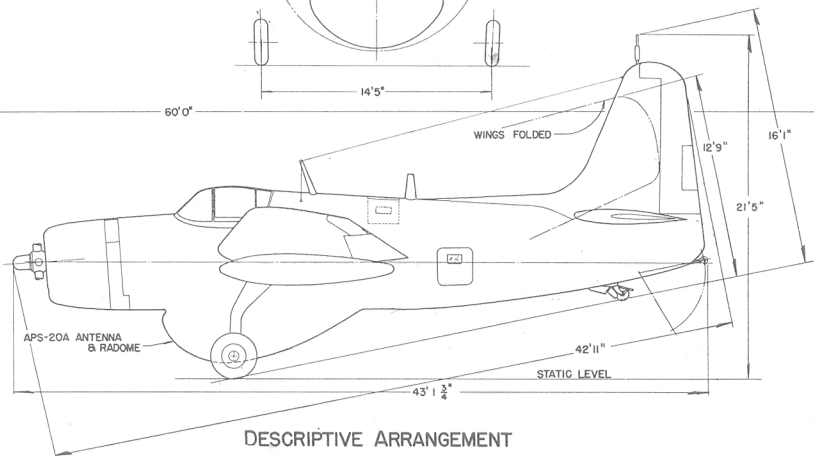
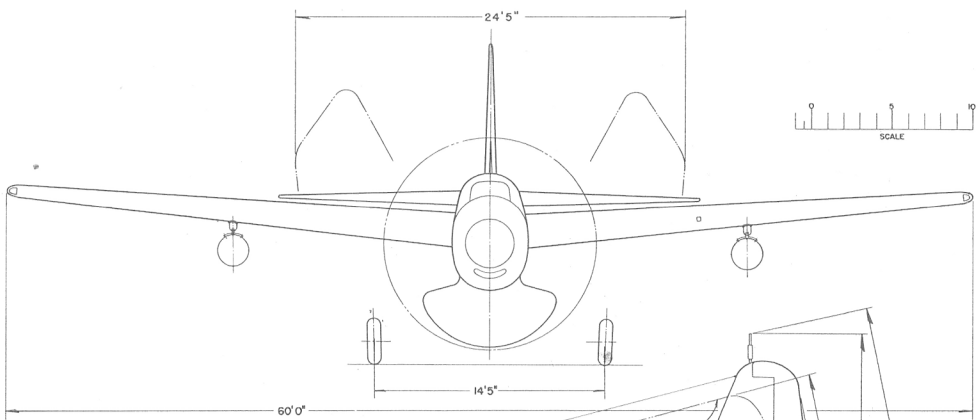
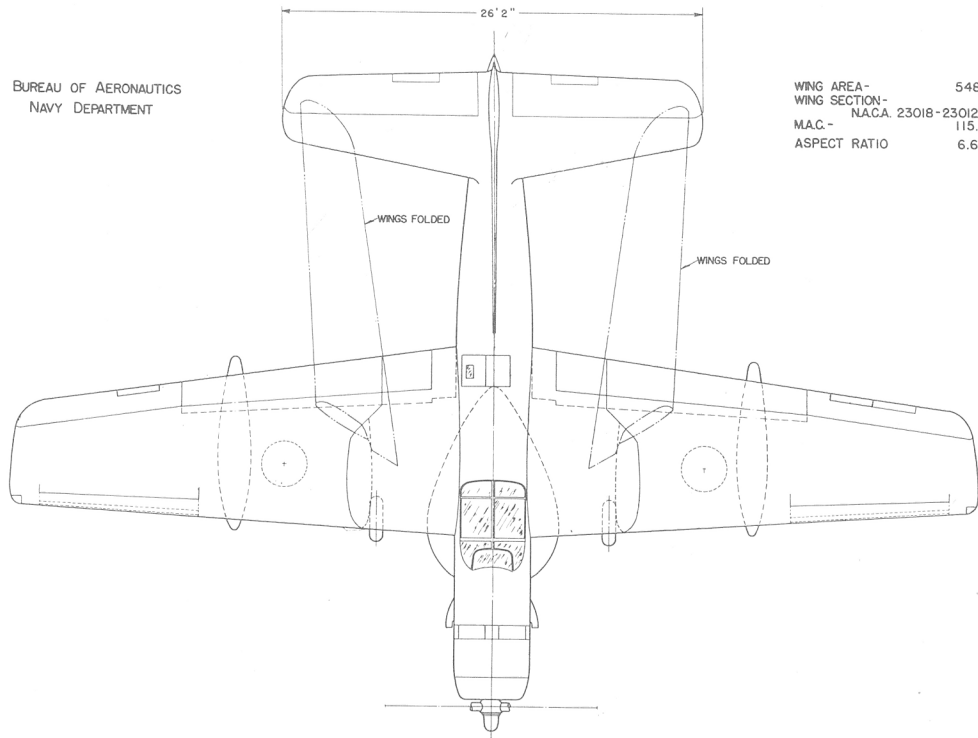
AF-2W "GUARDIAN"

GRUMMAN

DOWNGRADED AT 3 YEAR INTERVALS:
DECLASSIFIED AFTER 12 YEARS
DOD DIR 5010.107

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

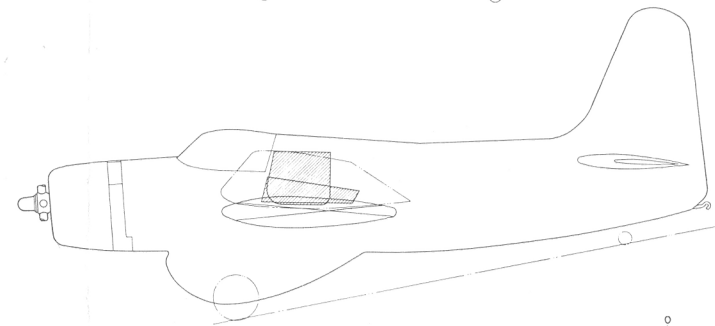
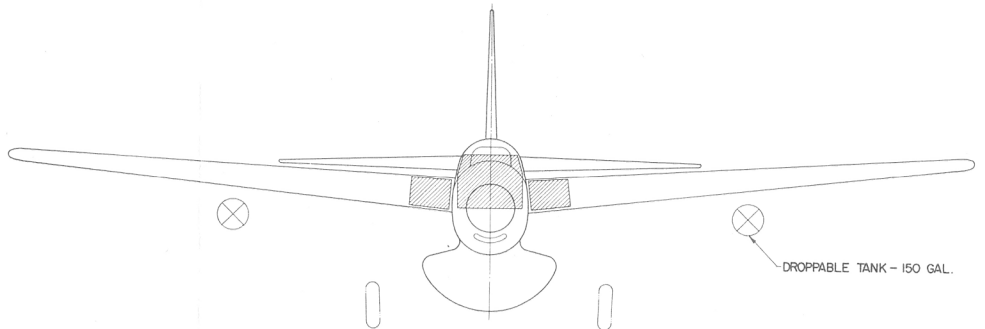
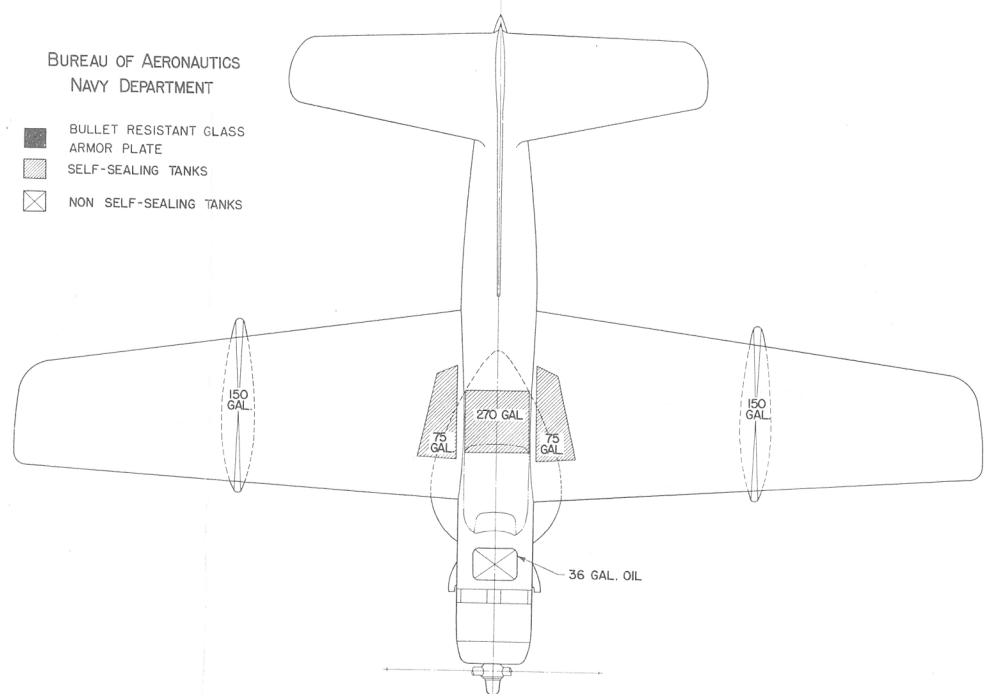
WING AREA - 548.7
WING SECTION - NACA 23018-23012
M.A.C. - 115.07
ASPECT RATIO 6.6



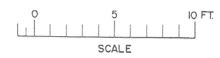
DESCRIPTIVE ARRANGEMENT

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

- BULLET RESISTANT GLASS
- ARMOR PLATE
- ▨ SELF-SEALING TANKS
- ⊗ NON SELF-SEALING TANKS



ARMAMENT & TANKS



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

MISSION AND DESCRIPTION

The AF-2W airplane's primary mission is that of radar search for submarines. This airplane, after detection of underwater craft, directs its companion airplane, the model AF-2S (attack version) onto the target to launch the attack.

The airplane is a 4 place land plane for operation ashore or aboard aircraft carriers, with or without the aid of a catapult.

The airplane is conventional in design and structure, with an all-metal 2 spar wing and a semi-monocoque fuselage. Landing gear, slotted flaps, wing folding and pilot's canopy are hydraulically operated. Ailerons are of sealed balance type with spring tabs and one trim tab. Rudder has a combination trim and 4 to 1 ratio balance tab. Elevators are interconnected; one is equipped with a spring tab and the other with a trim tab. Power plant installation is conventional with steel tube mount.

WEIGHTS

Loadings	Lbs.	Lbs.
EMPTY.....	15,667.....	
BASIC.....	15,959.....	
DESIGN.....	19,200.....	5.0
COMBAT.....	19,451.....	4.9
MAX.T.O.....	21,564.....	4.3
MAX.LAND.....	19,200.....	

All weights are calculated.

POWER PLANT

NO. & MODEL.....(1) R-2800-48
MFR.....Pratt & Whitney
SUPERCH.....1 Stage, 1 Speed
PROP. GEAR RATIO.....0.45
PROP. DES. NO.....6557A-6
NO. BL./DIA.....4/13'-2"

RATINGS

Bhp @ Rpm @ Alt.

	T. O.	2,300	2,800	S. I.
MIL.	2,300	2,800	3,500'	
NORMAL	1,900	2,600	7,000'	

SPEC. NO. N-8132-A

FUEL AND OIL

Gals.	No. Tanks	Location
270	1	Fuse., S.S.
150	2	Wing, S.S.
300	2	Wing, Drop

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

OIL

CAPACITY (Gals.).....36
GRADE.....1100
SPEC.....AN-O-8

ORDNANCE

NONE

CAMERAS

Recon. Camera.....K-25
Gun Camera Provisions

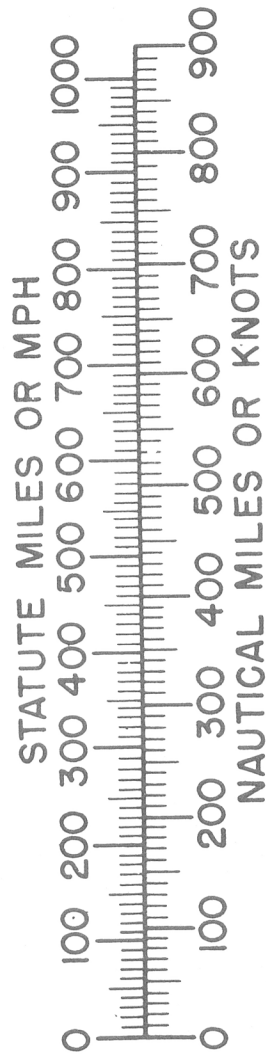
DIMENSIONS

WING AREA.....549 sq. ft.
SPAN.....60' - 0"
LENGTH.....43' - 2"
HEIGHT.....16' - 1"
TREAD.....14' - 5"
M.A.C.....9' - 7"
PROP. CLEAR.....9"

ELECTRONICS

RADAR ALT.....AN/APN-1
VHF COMMAND.. AN/ARC-1 or -1A
MHF LIAISON.....AN/ARC-2
RANGE REC.....AN/ARC-5
HOMING.....AN/ARR-2A
WIRE RECORDER.....13A-3-J
RADAR.....AN/APS-20A
IFF.....AN/APX-2A
RADAR RELAY TRANS...AN/ART-26
GRD. POSITION IND...AN/APA-57
COUNTERMEASURE.....AN/APA-70A
COUNTERMEASURE REC...AN/APR-9
SONOBUOY REC.....AN/ARR-31

DECLASSIFIED AT 3 YEAR INTERVALS:
DECLASSIFIED AFTER 12 YEARS.



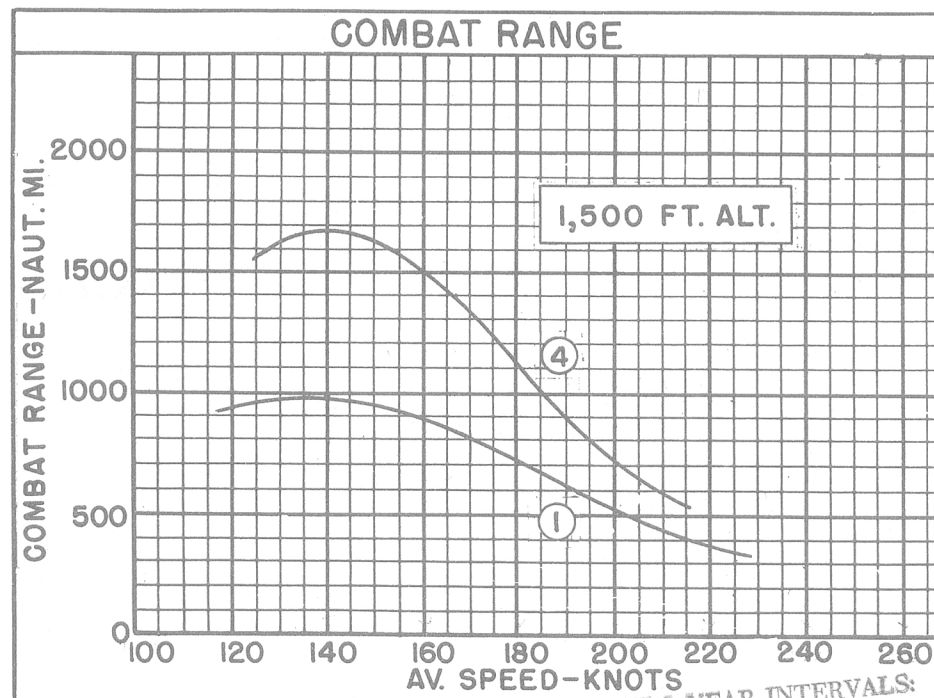
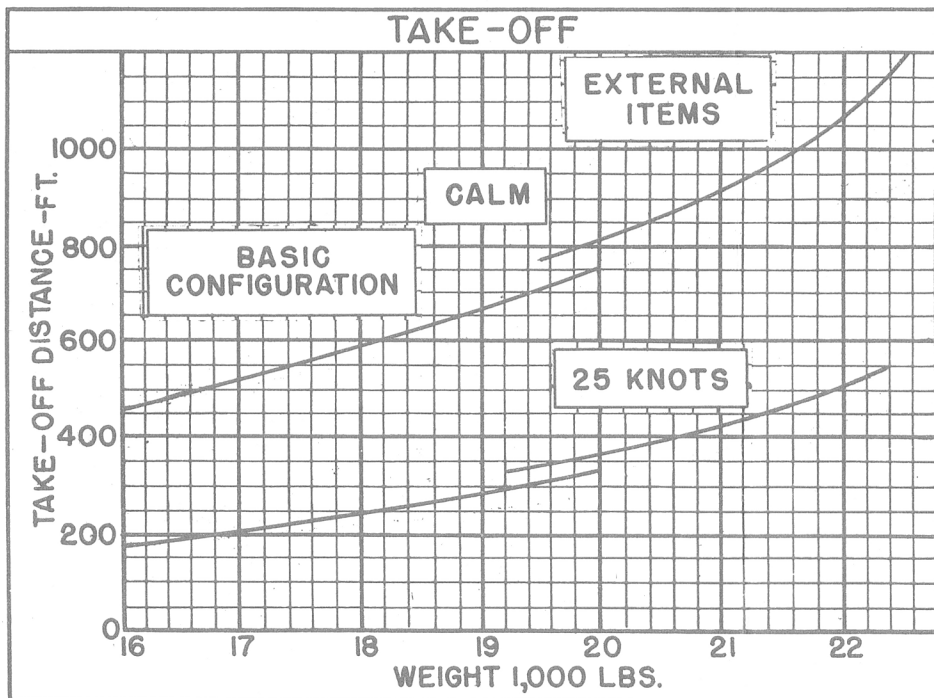
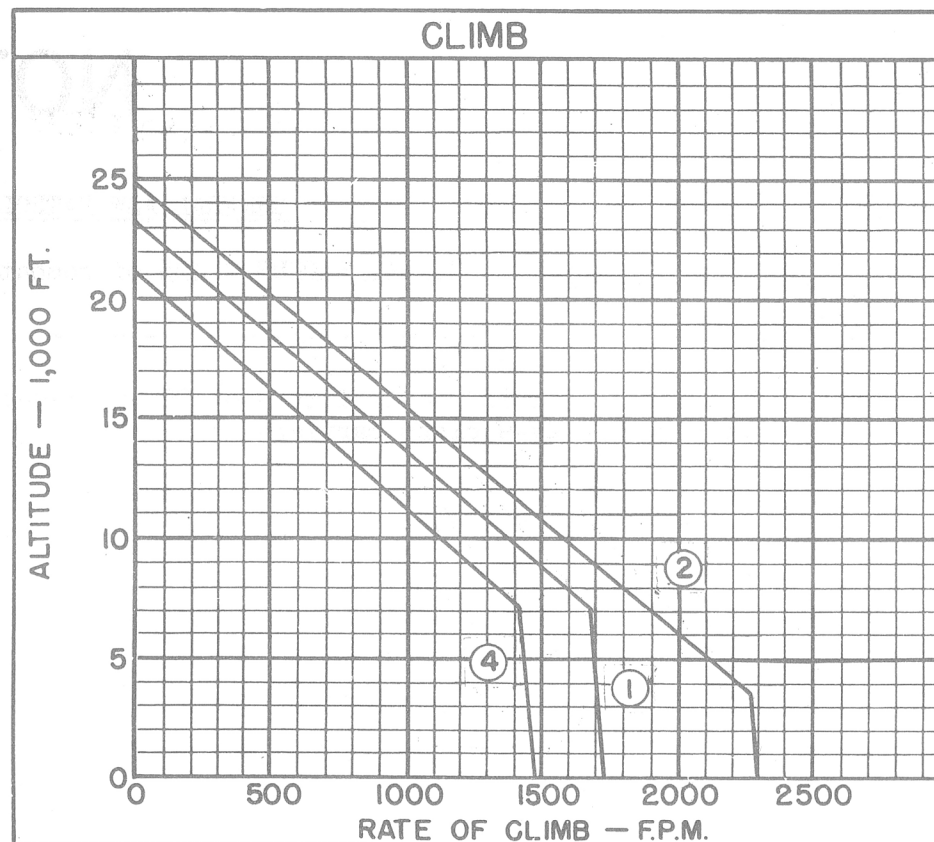
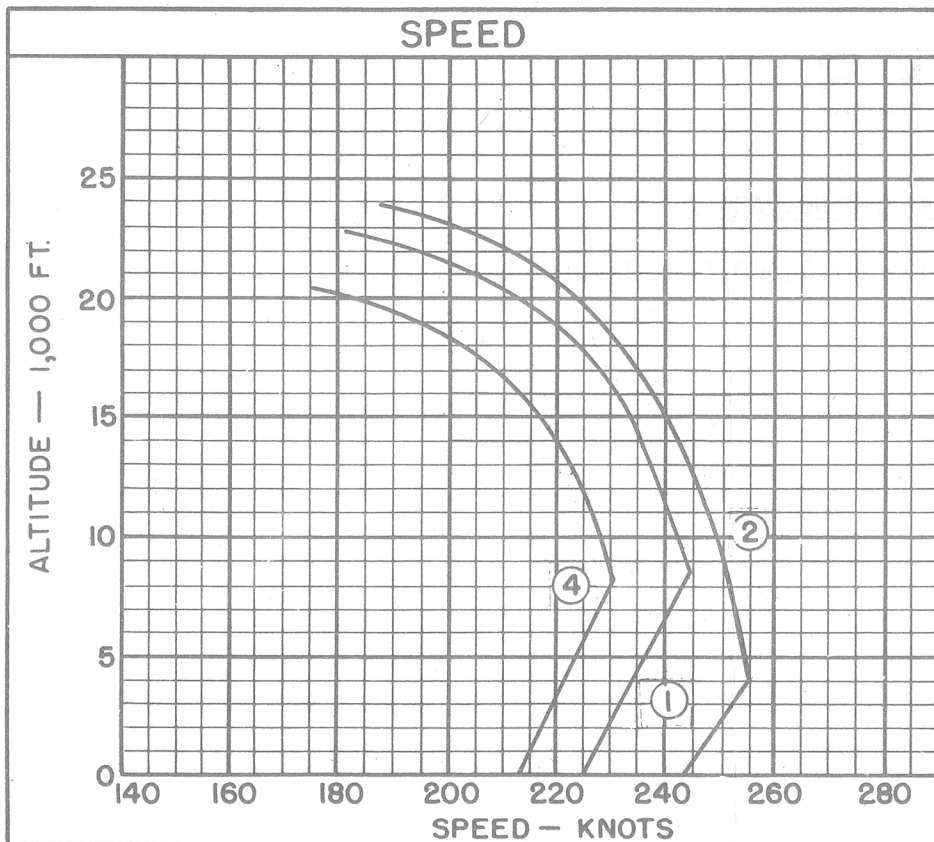
PERFORMANCE SUMMARY				
LOADING CONDITION		(1) SEARCH	(4) SEARCH 2-150 Gal. Tanks	
TAKE-OFF WEIGHT	lbs.	19,451	21,564	
Fuel (Fixed/Drop)	lbs.	2,520/-	2,520/1,800	
Bombs	lbs.			
Wing/Power Loading (A) lbs/sq.ft; lbs/bhp.		35.5/10.2	39.3/11.4	
Stall Speed--Power off	kn.	71.4	77.0	
Stall Speed--Power off - No. Fuel	kn.	66.8	68.9	
Stall Speed--Power on	kn.	66.7	71.7	
Maximum Speed/Alt (B)	kn/ft.	244/8,520	231/8,360	
Take-off Distance, deck -- calm	ft.	701	968	
Take-off Distance, deck 25 kn.	ft.	294	438	
Take-off Distance, Airport	ft.			
Rate of climb -- sea level (B)	ft/min.	1,730	1,490	
Service Ceiling (B)	ft.	22,300	20,100	
Time-to-climb 10,000 ft. (B)	min.	6.1	7.1	
Time-to-climb 20,000 ft. (B)	min.	19.6	30.3	
Combat Range/V av 1,500	ft. n.mi./kn.	980/138	1,680/140	
Combat Radius/V av 1,500	ft. n.mi./kn.	390/138	670/140	
LOADING CONDITION		(2) COMBAT	(3) COMBAT	
GROSS WEIGHT	lbs.	18,443	18,443	
Engine power		Military	Normal	
Fuel	lbs.	1,512	1,512	
Bombs/Tanks				
Max. speed at sea level	kn.	243	260	
Max. speed/Alt	kn/ft.	256/5,150	246/8,550	
Combat speed/Alt	kn/ft.	247/1,500	230/1,500	
Rate of climb SL	ft/min.	2,300	1,850	
Ceiling for 500 fpm R/C	ft.	20,100	19,400	
Time-to-climb/Alt.	min/ft.			

NOTES

- (A) BHP at Maximum Critical Altitude
- (B) Normal BHP

Performance is based on calculations. Range and radius are based on engine specification fuel consumption data increased by 5%.

All conditions include A N/APS-20A radar.



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

○ LOADING CONDITION COLUMN NUMBER

DOWNGRADED AT 5 YEAR INTERVALS:
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

DECLASSIFIED
CONFIDENTIAL

NOTES

GENERAL ASW PATROL PROBLEM NO. ASW-1

COMBAT RADIUS = 40% of combat range at 1,500 ft. altitude.

Spotting: 205 ft. length is required to spot 20 airplanes on the 96 ft. wide deck immediately aft of the forward ramp on the CV-9 class carriers.

DECLASSIFIED
CONFIDENTIAL