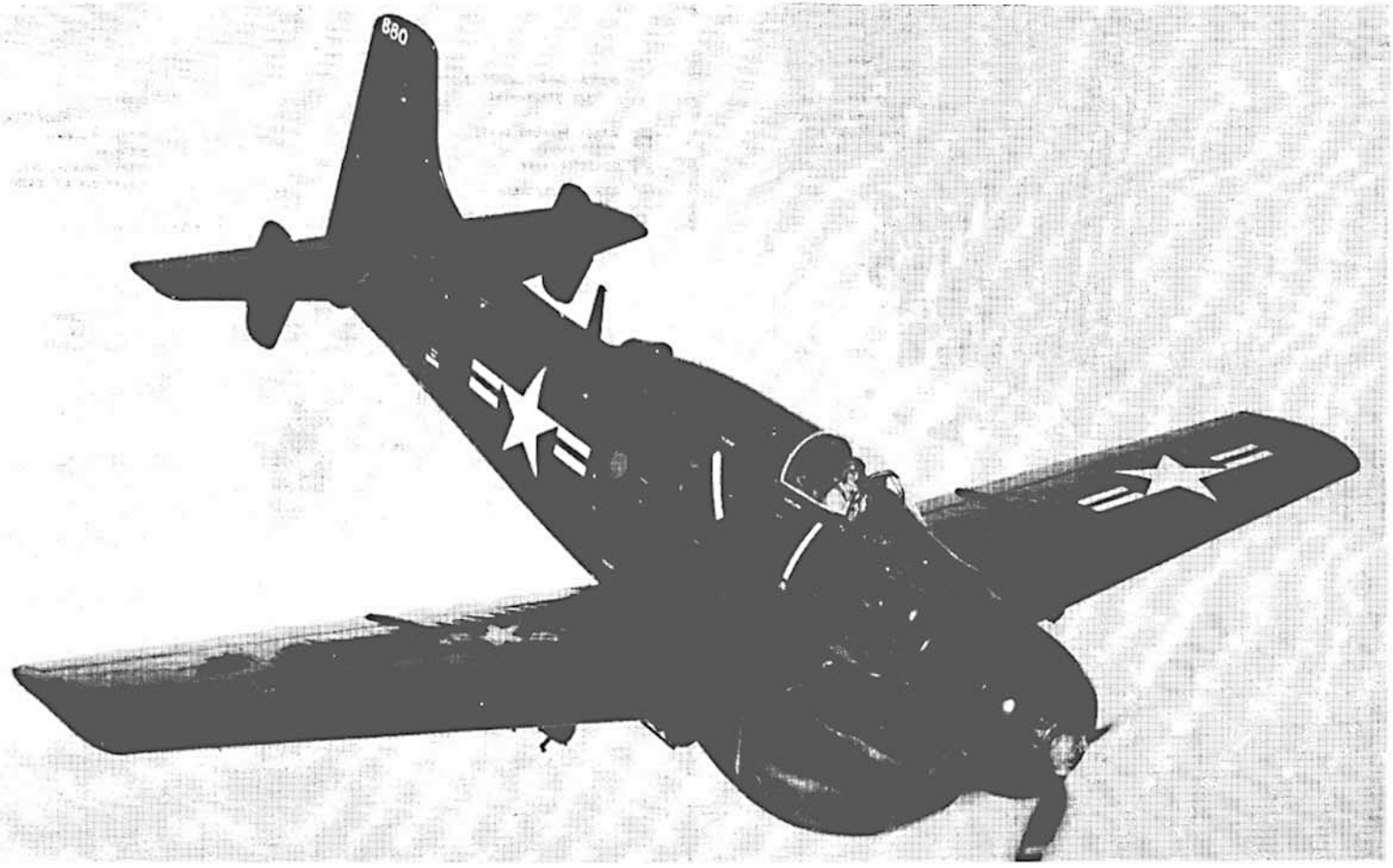


STANDARD AIRCRAFT CHARACTERISTICS

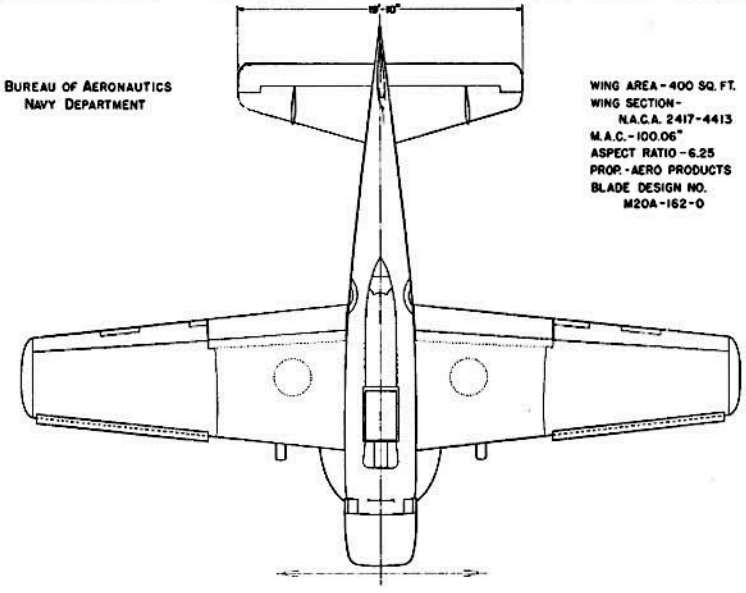
AD-3W "SKYRAIDER"

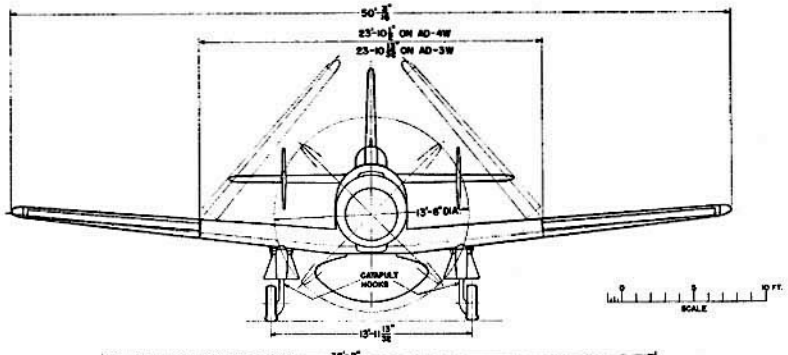
DOUGLAS

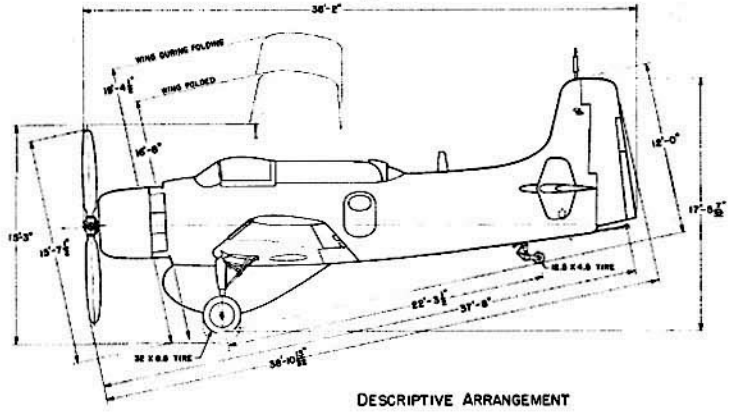
Standard Aircraft Characteristics NAVAER 1335A

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 400 SQ. FT.
WING SECTION -
N.A.C.A. 2417-4413
M.A.C. - 100.06"
ASPECT RATIO - 6.25
PROP. - AERO PRODUCTS
BLADE DESIGN NO.
M20A-162-0







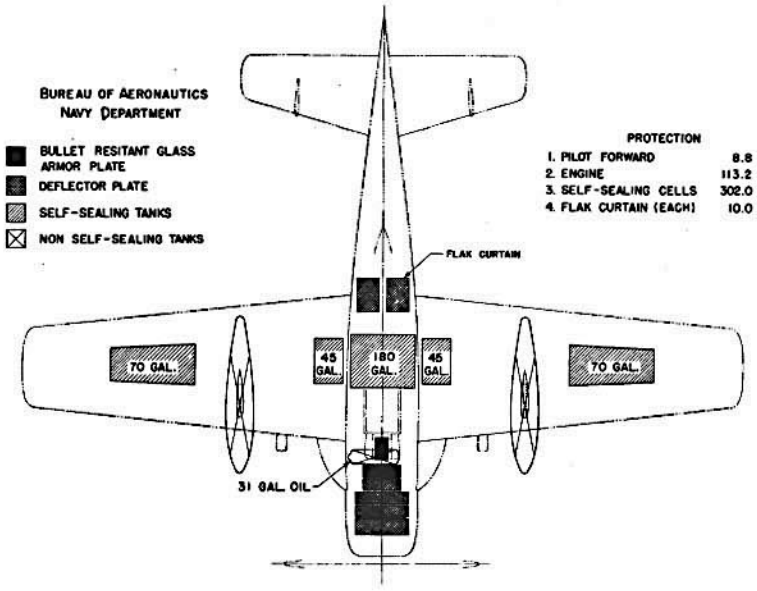
DESCRIPTIVE ARRANGEMENT

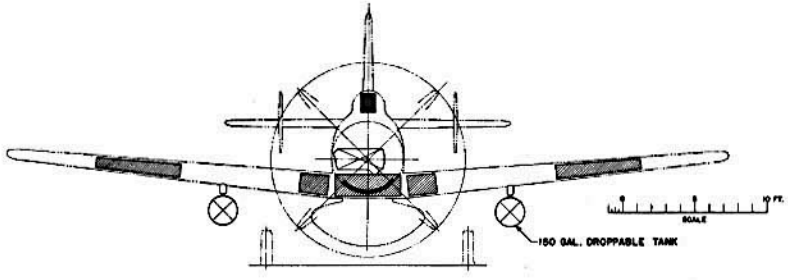
BUREAU OF AERONAUTICS
NAVY DEPARTMENT

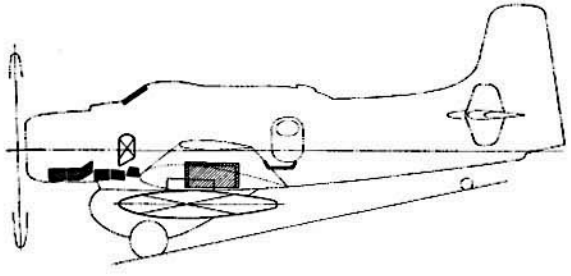
- BULLET RESITANT GLASS ARMOR PLATE
- DEFLECTOR PLATE
- SELF-SEALING TANKS
- NON SELF-SEALING TANKS

PROTECTION

1. PILOT FORWARD	8.8 LBS.
2. ENGINE	113.2 LBS.
3. SELF-SEALING CELLS	302.0 LBS.
4. FLAK CURTAIN (EACH)	10.0 LBS.







ARMAMENT AND TANKS

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

MISSION AND DESCRIPTION

The principal mission of the AD-3W airplane is to provide airborne early warning of enemy attack. It is a three-place attack airplane, not equipped with dive brakes. It is carrier-based.

The interior arrangement provides an enclosed compartment abaft the pilot's cockpit for two radar operators with partial controls for the radio and complete 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 fiberglas 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. Slotted flaps are fitted.

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY	12,944	
BASIC	13,299	
DESIGN	15,600	6.0
COMBAT	16,600	5.6
MAX.T.O..(Cat.)	19,700	4.7
(Field)	20,600	4.5
MAX.LD.(Smooth)	20,600	
(Rough)	18,300	
(Arrest.)	18,300	
(Qualif.)	15,600	

All weights are actual.

FUEL AND OIL

Gal.	No. Tanks	Location
180	1	Fuse.,S.S.
230	4	Wings,S.S.
300	2	Wings,Drop

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

OIL

CAPACITY (Gals.).....31
GRADE.....1120
SPEC.....AN-O-8

POWER PLANT

NO. & MODEL...(1) R-3350-26WA
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.
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

NONE

DECLASSIFIED

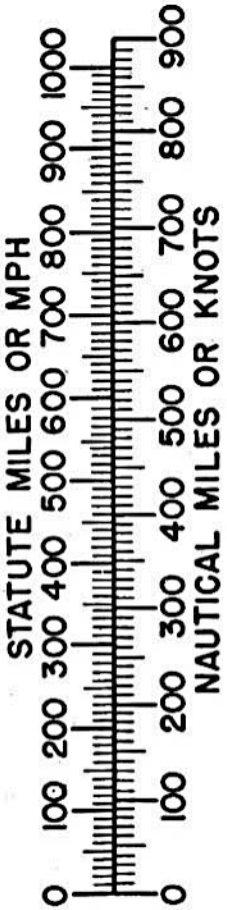
DIMENSIONS

WING AREA	400 sq. ft.
SPAN	50' - 0"
LENGTH	38' - 2"
HEIGHT	15' - 8"
TREAD	13' - 11"
M.A.C	8' - 4"
PROP. CLEAR	6"

ELECTRONICS

VHF RELAY	AN/ARC-28
VHF COMM	AN/ARC-1
LF COMM	AN/ARC-5
VHF NAVIGATION	AN/ARR-2A
RADIO ALTM	AN/APN-1
SEARCH RADAR	AN/APS-20A
IFF	AN/APX-1AM
IFF RELAY	AN/APX-13A
RADAR RELAY	AN/ART-26

SEE NOTES



PERFORMANCE SUMMARY

LOADING CONDITION		(1) AEW 2-150 Gal. Tanks	(3) AEW		
TAKE-OFF WEIGHT	lbs.	18,670	16,600		
Fuel (Fixed/Drop)	lbs.	2,460/1,800	2,460/-		
Bombs	lbs.	—	—		
Wing/Power Loading (A) lbs/sq.ft; lbs/bhp.		46.7/9.8	41.5/8.7		
Stall Speed--Power off	kn.	86.0	81.0		
Stall Speed--Power off - No Fuel	kn.	75.6	74.9		
Stall Speed--Power on	kn.	77.2	73.0		
Maximum Speed/Alt (B)	kn/ft.	230/17,900	242/18,000		
Take-off Distance, deck -- calm	ft.	983	742		
Take-off Distance, deck 25 kn.	ft.	477	339		
Take-off Distance, Airport	ft.	—	—		
Rate of climb -- sea level (B)	ft/min.	2,300	2,770		
Service Ceiling (B)	ft.	30,200	33,000		
Time-to-climb 10,000ft. (B)	min.	4.7	3.9		
Time-to-climb 20,000ft. (B)	min.	11.5	9.1		
Combat Range/V av 1,500 ft.	n.mi/kn.	1,280/130	740/130		
Combat Radius/V av 1,500 ft.	n.mi/kn.	510/130	295/130		
Combat Endurance/V av 1,500 ft.	hr/kn.	10.6/120	6.1/120		
LOADING CONDITION		(2) COMBAT			
GROSS WEIGHT	lbs.	16,600			
Engine power		Military			
Fuel	lbs.	2,460			
Bombs/Tanks					
Max. speed at sea level	kn.	231			
Max. speed/Alt	kn/ft.	244/15,500			
Combat speed/Alt	kn/ft.	234/1,500			
Rate of climb SL	ft/min.	3,310			
Ceiling for 500 fpm R/C	ft.	29,500			
Time-to-climb/Alt.	min/ft.				

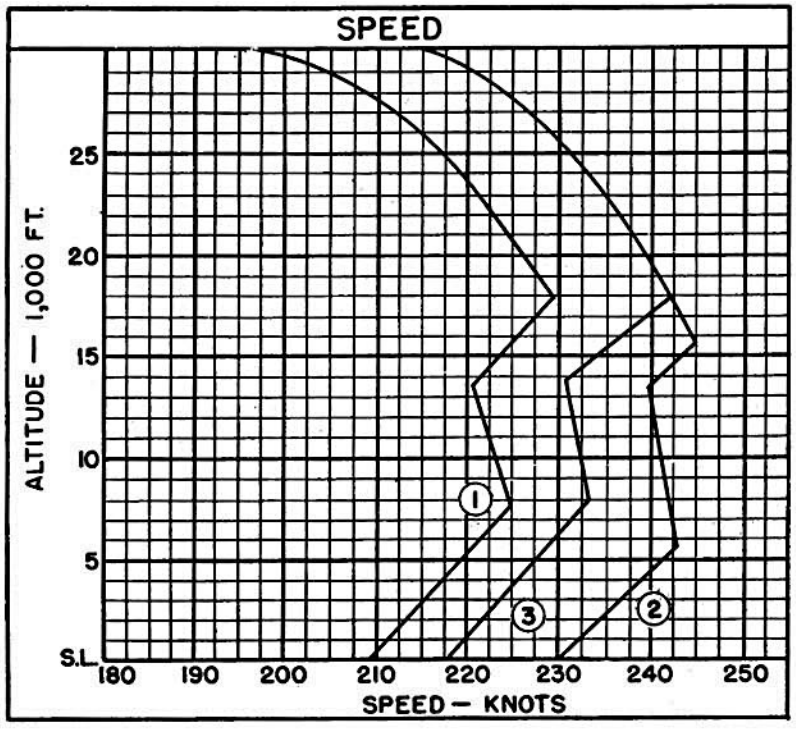
NOTES

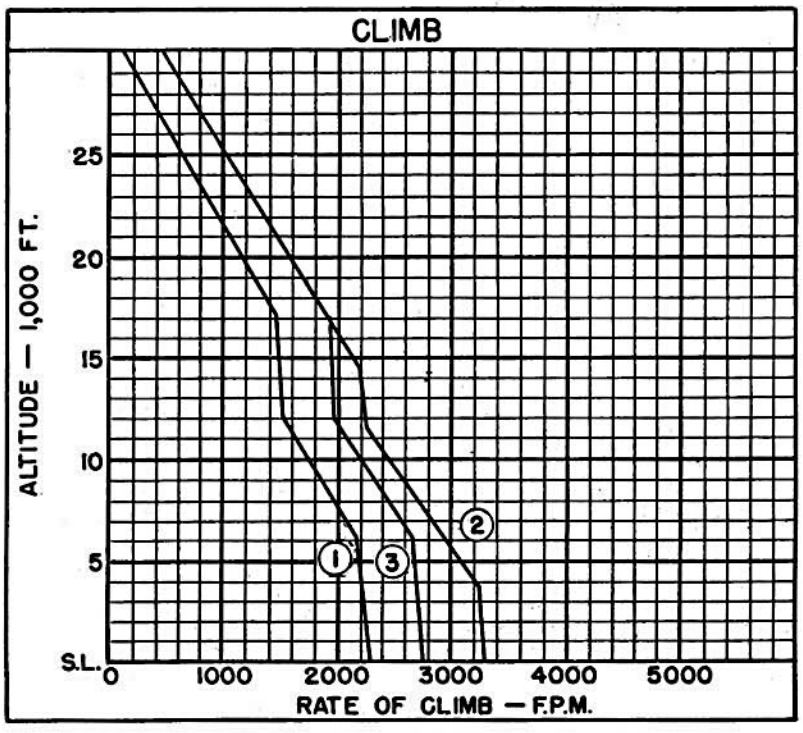
(A) BHP at Maximum Critical Altitude
(B) Normal BHP

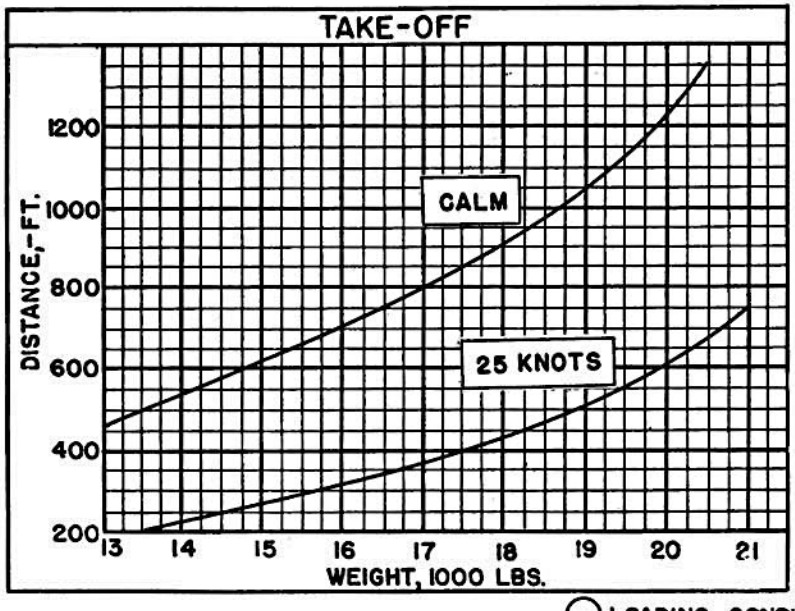
Performance is based on flight test of AD-1 airplane and partial flight tests of AD-3W airplane.

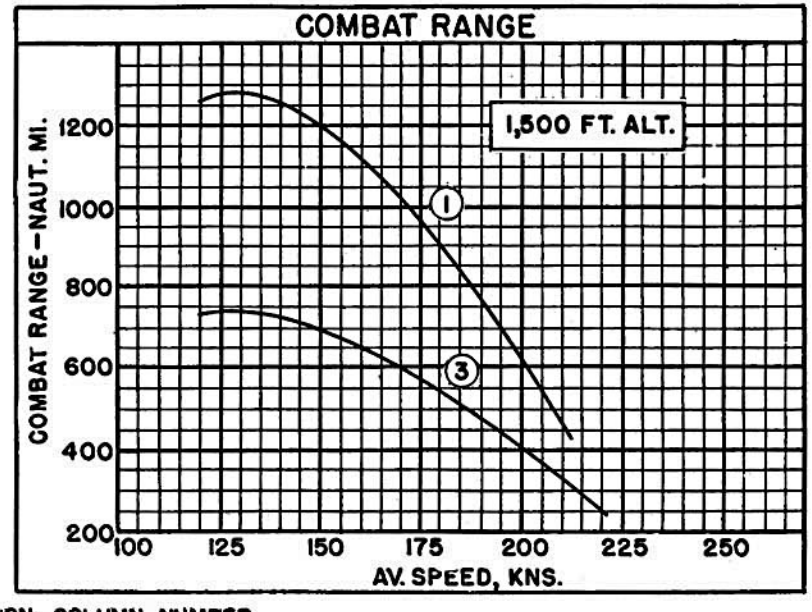
Range and radius are based on engine specification fuel consumption data increased by 5%.

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









◯ LOADING CONDITION COLUMN NUMBER

NOTES

GENERAL ASW PATROL PROBLEM NO. ASW-1

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

All loadings include 2 Mk-51 wing bomb racks with sway bracing.

Spotting: 200 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.

Combat endurance is based on same assumptions and allowances as combat range. Speed for maximum endurance is approximately 112 kn. but endurance at 120 kn. is presented because handling characteristics are poor at lower speeds.

The following Electronics equipment will be installed in service:

Ground Position Indicators.....AN/APA-57
and AN/APA-81
