

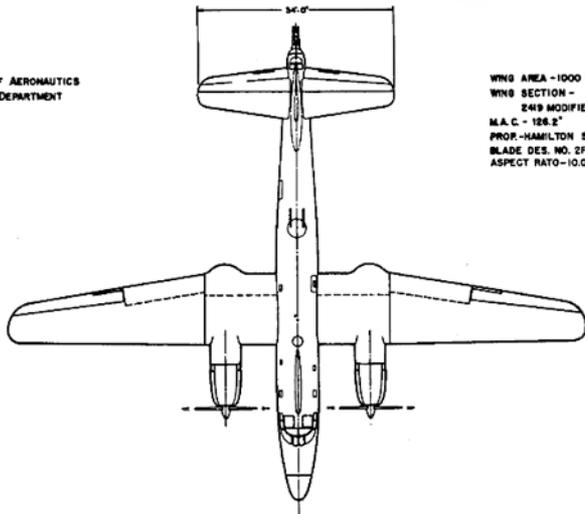


STANDARD AIRCRAFT CHARACTERISTICS

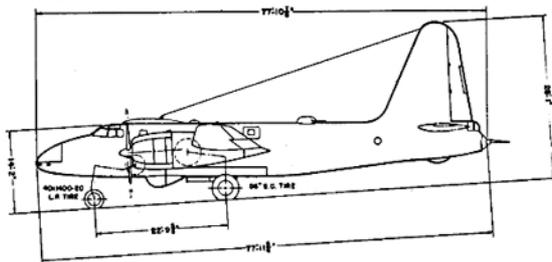
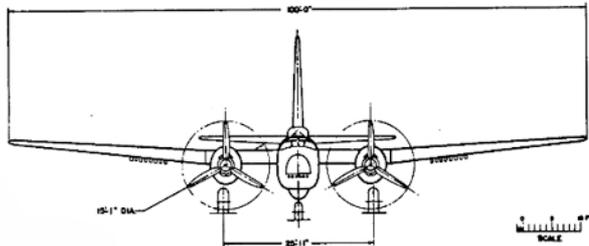
P2V-3 "NEPTUNE"

LOCKHEED

BUREAU OF AERONAUTICS
NAVY DEPARTMENT



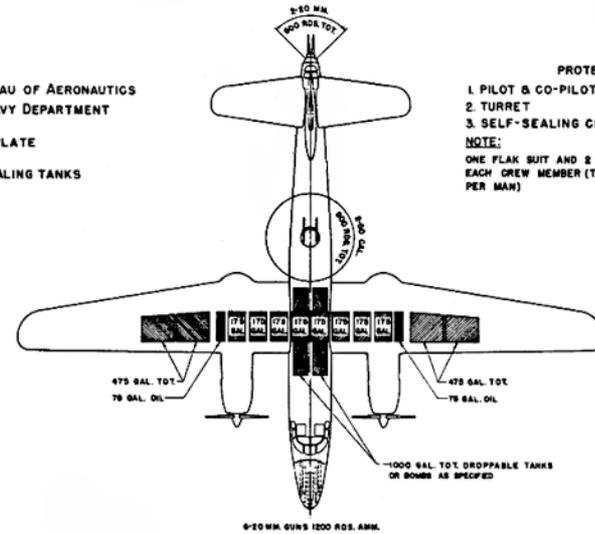
WING AREA - 1000 SQ. FT.
WING SECTION -
2419 MODIFIED S. 4410.5
M.A.C. - 128.2"
PROP. - HAMILTON STD.
BLADE DES. NO. 2F17K3 - 245
ASPECT RATIO - 10.0



DESCRIPTIVE ARRANGEMENT

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

- ARMOR PLATE
- SELF-SEALING TANKS

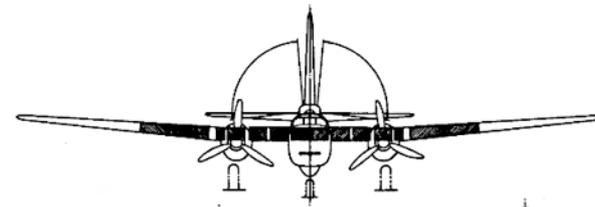


PROTECTION

1. PILOT & CO-PILOT F.W'D. 200 LBS.
2. TURRET 150 LBS.
3. SELF-SEALING CELLS 3000 LBS. EST.

NOTE:

ONE FLAK SUIT AND 2 FLAK CURTAINS FOR EACH CREW MEMBER (TOTAL WEIGHT 40 LBS. PER MAN)



ARMAMENT & TANKS

MISSION AND DESCRIPTION

The P2V-3 is designed for use as a day and night land-based anti-submarine and anti-surface-vessel long range patrol airplane. Its secondary tactical missions are rocket attack, night torpedo attack, mine laying, mast level bombing, horizontal bombing, photo reconnaissance.

The P2V-3 was developed from the P2V-2, and like it, has an all metal semi-monocoque fuselage, with wings of conventional two-spar dual construction strengthened to take the more powerful engines.

It has a crew of seven, Fowler-type wing flaps with aileron droop, "varicam" stabilizer, thermal anti-icing of wing and tail surfaces, and 50 gallons of water for combat power.

The first flight of the prototype was in May 1948; entered service use in August 1948.

DIMENSIONS

WING AREA.....1,000 sq. ft.
SPAN.....100' - 0"
LENGTH.....77' - 11"
HEIGHT.....28' - 1"
TREAD.....25' - 11"
M.A.C.....10' - 6"
PROP. CLEAR.....1' - 7"

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	34,700.....	
BASIC.....	38,700.....	
DESIGN.....	54,000.....	2.65
COMBAT.....	49,255.....	2.65
MAX.T.O.....	62,000.....	2.3
MAX.LAND.....	54,000.....	

All weights are actual.

FUEL AND OIL

Gals.	No. Tanks	Location
950	2	Wing, S.S.
1,400	2	Wing, S.S.
1,000	2	Drop, S.S.
FUEL GRADE.....115/145		
FUEL SPEC.....AN-F-48		

OIL

CAPACITY (Gals.).....156
GRADE.....1120
SPEC.....AN-O-8

ELECTRONICS

HF, VHF TRANS....AN/ARC-1,-2
VHF RELAY.....AN/ARC-28
HF LIAISON TRANS...AN/ART-13
MHF LIAISON REC....AN/ARR-15
RANGE REC.....AN/ARC-5
IFF.....AN/APX-1,-13
RADIO COMPASS.....AN/ARN-7
RADIO ALTIMETER.....AN/APN-1
BEACON RECEIVER.....AN/ARN-8
LORAN.....AN/APN-4
VHF HOMING.....AN/ARR-2
SEARCH RADAR.....AN/APS-20
RADAR RELAY TRAN...AN/ART-26
RADAR RELAY REC....AN/ARR-27
GROUND POS. IND....AN/APA-57
RCM.....AN/APR-4,-9
RCM & PAN.ADAPT..AN/ARR-5,-7

POWER PLANT

NO. & MODEL....(2) R-3350-26W
MFR.....WAC
SUPERCH.....1 Stage, 2 Speed
PROP. GEAR RATIO.....0.4375
PROP. MFR.....Ham. Std.
PROP. DES. NO.....2F17K3-24S
NO. BL./DIA.....3/15'-1"

RATINGS

	Bhp @	Rpm @	Alt.
T. O.	2700	2900	S. L.
COMBAT	3150	2900	S. L.
MIL.	2700	2900	3700'
	2100	2600	14,500'
NORMAL	2300	2600	6200'
	1900	2600	17000'
SPEC. NO. N-836-B (SEE NOTES)			

ORDNANCE**GUNS**

No.	Size	Location	Rds.
6	20 mm	Nose	1,200
2	.50 cal.	Deck	800
2	20 mm	Tail	800
2 Turret Sights.....Mk. 18			
1 Pilot Sight...Mk. 8, Mod. 8			

BOMBS & ROCKETS

Type	Size	Location	No.
D.B.	325#	Fuselage	12
Mines	2000#	Fuselage	2
Mines	1000#	Fuselage	8
Bombs	2000#	Fuselage	4
Bombs	1000#	Fuselage	8
Bombs	100#	Fuselage	12
Torp.	Mk-35	Fuselage	2
Torp.	Mk-41	Fuselage	2
A.R.	11.75"	Fuselage	2
HVAR	5"	Wing	16

MAX. BOMB CAPACITY..8000 Lbs.



PERFORMANCE SUMMARY					
LOADING CONDITION		(1) PATROL 8,000# Mines		(5) PATROL 2-Mk. 34 Torp.	(6) PATROL
TAKE-OFF WEIGHT	lbs.	62,000		58,528	62,000
Fuel (Fixed/Drop)	lbs.	11,862/-		14,100/-	14,100/4,278
Bombs	lbs.	8,000		2,286	—
Wing/Power Loading (A) lbs/sq.ft;lbs/bhp.		62.0/16.3		58.5/15.4	62.0/16.3
Stall Speed--Power off	kn.	90.1		87.2	90.1
Stall Speed--Power off - No Fuel	kn.	79.8		74.7	73.8
Stall Speed--Power on	kn.	71.7		69.4	71.7
Maximum Speed/Alt (B)	kn/ft.	261/19,000		264/19,000	261/19,000
Take-off Distance, deck -- calm	ft.	1,860		1,660	1,860
Take-off Distance, deck	kn.	ft.			
Take-off Distance, Airport	ft.	2,700		2,510	2,700
Rate of climb -- sea level (B)	ft/min.	1,220		1,340	1,220
Service Ceiling (B)	ft.	25,000		25,800	25,000
Time-to-climb 10,000 ft. (B)	min.	9.2		8.3	9.2
Time-to-climb 20,000 ft. (B)	min.	24.3		21.3	24.3
Combat Range/V av	ft. n.mi/kn.	1,715/155		2,240/148	2,875/151
Combat Radius/V av (ASW-1)	ft. n.mi/kn.	685/155		895/148	1,150/151
Combat Endurance	hrs/kn.			16.7/135	
LOADING CONDITION		(2) COMBAT	(3) COMBAT	(4) COMBAT	
GROSS WEIGHT	lbs.	49,255	49,255	49,255	
Engine power		Combat	Military	Normal	
Fuel	lbs.	7,117	7,117	7,117	
Bombs/Tanks		—	—	—	
Max. speed at sea level	kn.	262	253	242	
Max. speed/Alt	kn/ft.	276/16,500	276/16,500	273/19,000	
Combat speed/Alt	kn/ft.	267/1,500	257/1,500	246/1,500	
Rate of climb SL	ft/min.	2,310	2,080	1,760	
Ceiling for 500 fpm R/C	ft.	24,000	24,000	24,000	
Time-to-climb/Alt.	min/ft.	—	—	—	

NOTES

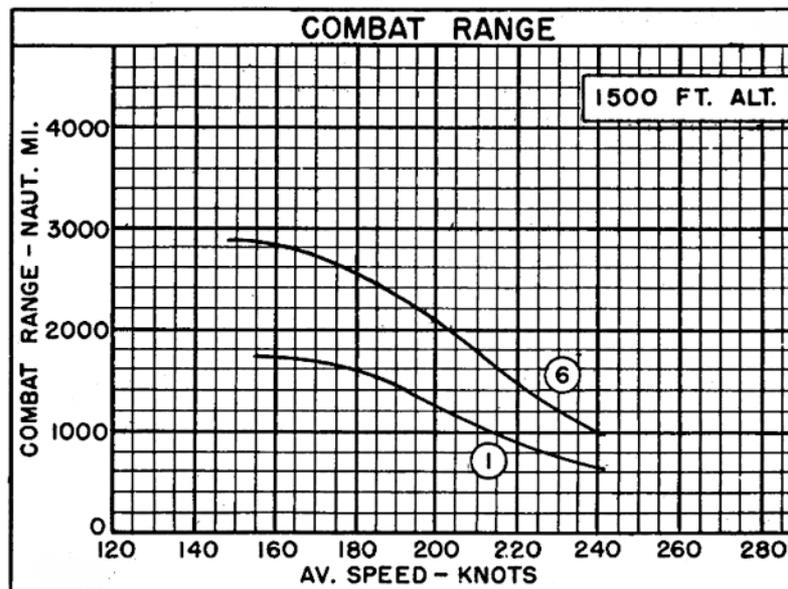
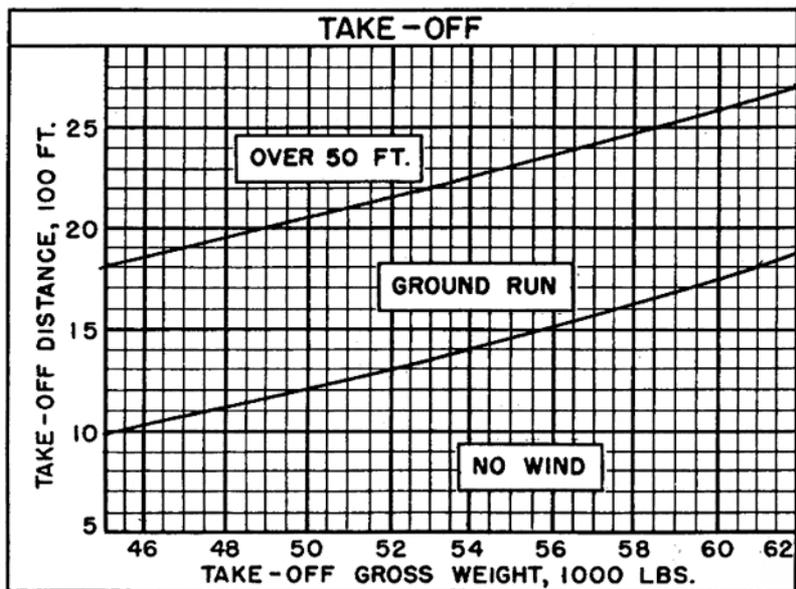
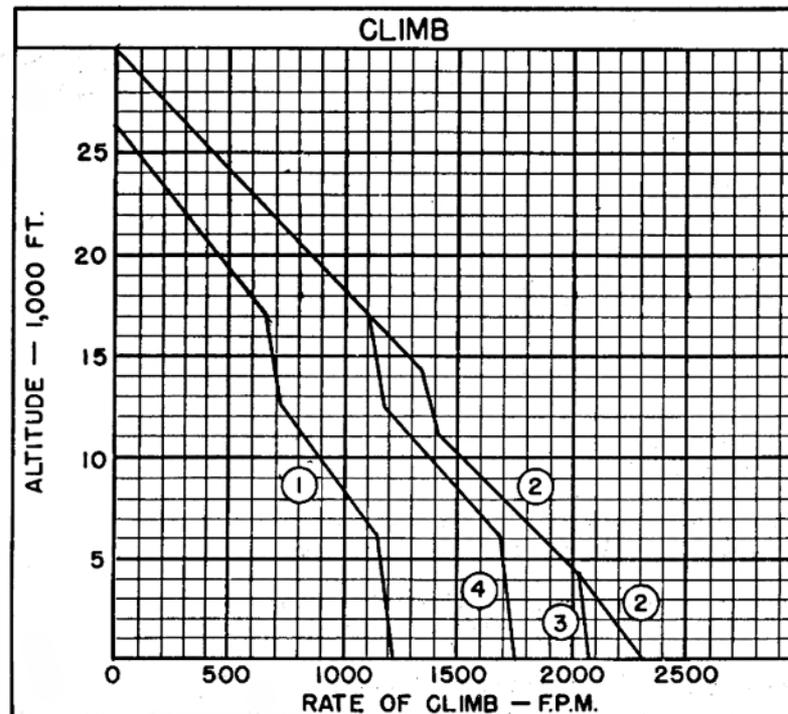
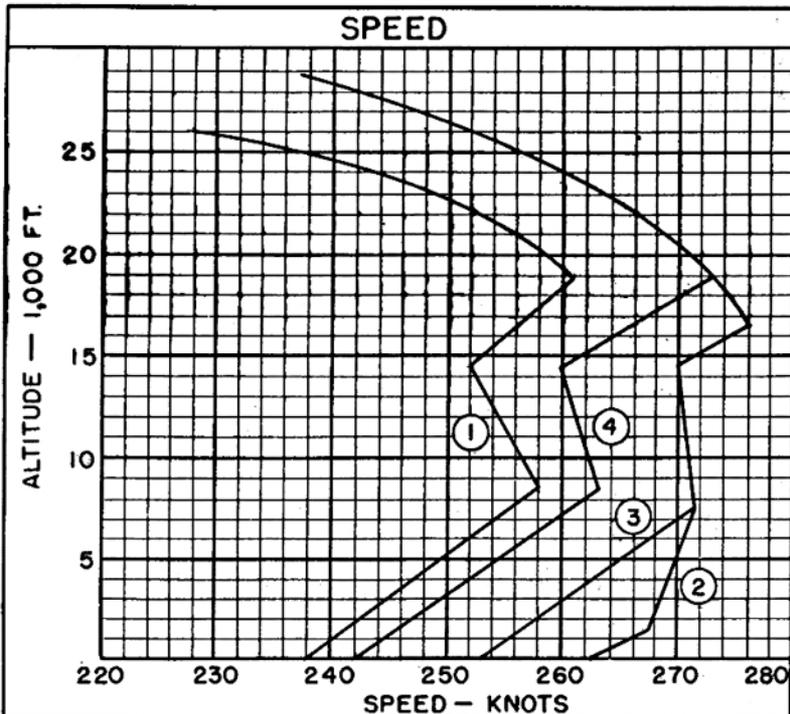
(A) BHP at Maximum Critical Altitude

(B) Normal BHP

Performance is based on flight test of P2V-3 airplane.

Combat range and radius are based on flight test fuel consumption data increased 5%.

Combat radius is 40% of combat range (ASW-1 Problem)



○ LOADING CONDITION COLUMN NUMBER

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

NOTES

Combat Range for ferry loading (62,000 lbs. take-off gross weight, 19,000 lbs. of fuel, no ammunition, no rocket launchers) = 3,035 n. miles at 1,500 ft. altitude.

 Single engine rate-of-climb at sea level, on military power, as follows:

Gross Weight, Lbs.	Rate-of-Climb, Ft./Min.
40,000	960
50,000	570
60,000	285

 All radii are reduced approximately 5 nautical miles for each minute of combat power operation at 1,500 ft. altitude.

 The same flight plan is followed in the determination of endurance as in that of combat range, except that the average speed used for maximum endurance is the minimum recommended speed.

 All Conditions: Sixteen Mk-9 rocket launchers installed; removal of launchers increases range by 40 n. miles. Rockets not aboard.

 Condition (5): Addition of sixteen 5" HVAR and removal of the torps. (in order not to exceed the maximum allowable take-off gross weight) reduces range by 180 n. miles.

 The following engine ratings from flight test were used in preparation of performance data:

	Bhp @ Rpm @ Alt.		Bhp @ Rpm @ Alt.
T. O.	2,610 2,800 S. L.	NORMAL	2,300 2,600 6,200
MILITARY	2,610 2,800 4,400'		1,900 2,600 17,000
	2,100 2,600 14,500'		

 Combat power is restricted to 3,090 Bhp at 2,800 Rpm at Sea Level.
