Navy use of land-based patrol planes began before the Pearl Harbor attack and our entry into WW II. With the need for longer ranges and increased use of land-based types, particularly for Arctic and other northern wintertime operations, the Navy acquired Army B-24s, redesignated as PB4Y-1s, beginning in September 1942. Operation of these aircraft dictated several changes to meet most Navy patrol-bomber needs: the high altitude capability of the B-24 was not necessary, additional crew space and electronics installation were required, and the single plane operations in the Pacific theater necessitated increased armament.

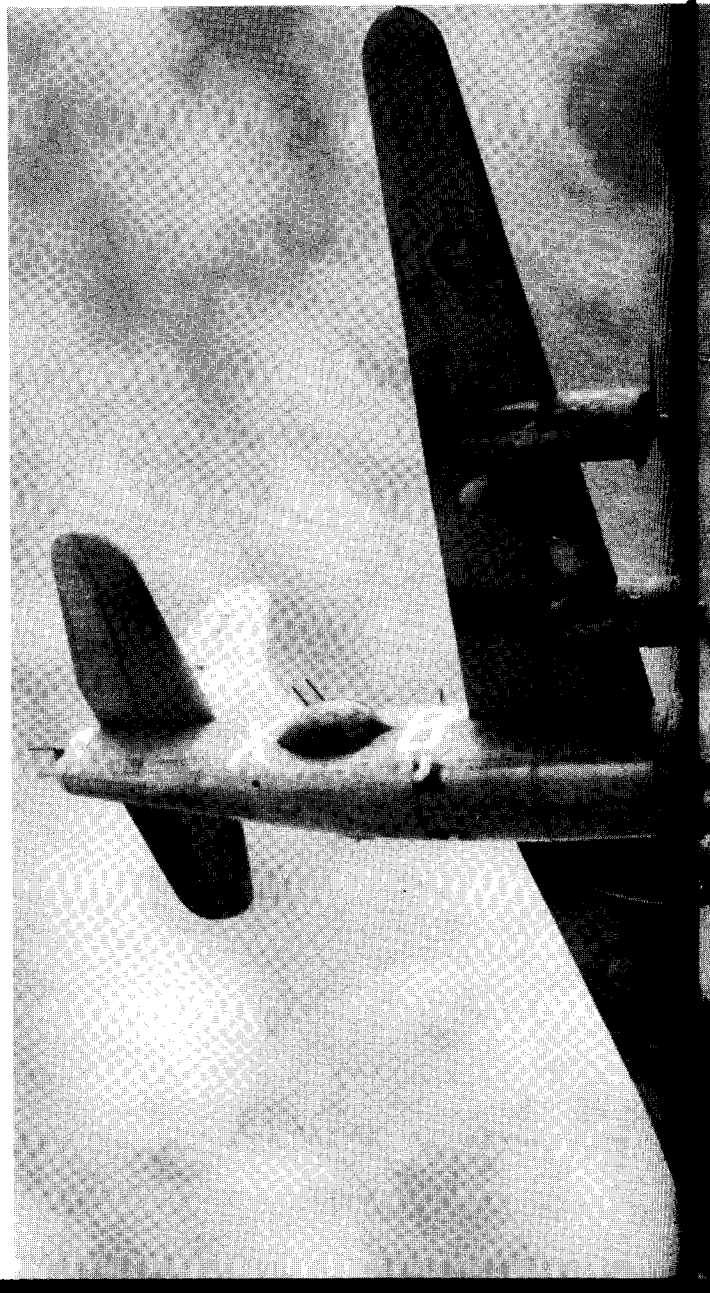
To meet these requirements, a much modified version of the *Liberator* evolved as the PB4Y-2 *Privateer.* With a longer nose, an additional top turret and new waist-powered turrets, the new model was also designed with a single vertical tail in place of the B-24's twin tails. The first XPB4Y-2 flights were made in late 1943 with the twin tail configuration prior to single tails being installed. The *Liberator's* turbo superchargers were deleted, and mechanically supercharged P&W R-1830s installed with higher power ratings at the lower altitudes at which Navy patrol missions were flown. While initial PB4Y-2s had a *Liberator*-type nose turret, most were modified, as were PB4Y-1s, to have an Erco ball turret installed in the nose.

Production PB4Y-2s were delivered to Navy squadrons beginning in May 1944 with VPBs 118 and 119 taking their *Privateers* into Pacific theater combat operations in January 1945. From this time on, PB4Y-2s augmented and gradually replaced the Navy's *Liberators* in VPB squadrons. Some *Privateers* were equipped to carry and launch two *Bat*-guided glide bombs as PB4Y-2Bs, and these were also in operational service in the spring of 1945. When *Privateer* production was terminated at war's end, 840 had been built (including the three prototypes).

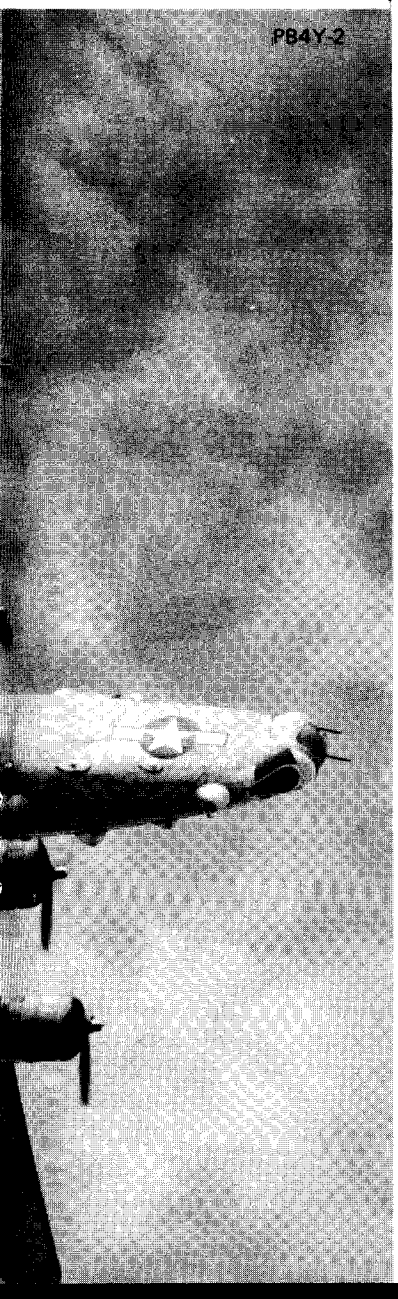
With some modified for weather flying as PB4Y-2Ms, the *Privateers* were the mainstays of Navy VP squadrons in the post-war period. Some were modified with improved AWS systems as -2Ss before they were finally replaced by P2Vs and placed in desert storage.

The build-up for the Korean War brought them back into service with recalled reserve and newly formed regular VP squadrons. Some were also delivered to the French in Southeast Asia. As the P4Y-2 series, they served with both fleet and reserve squadrons; through much of the Fifties with the latter. A few served the Coast Guard as P4Y-2Gs and the final Navy use saw them flying as P4Y-2K target drones into the early Sixties.

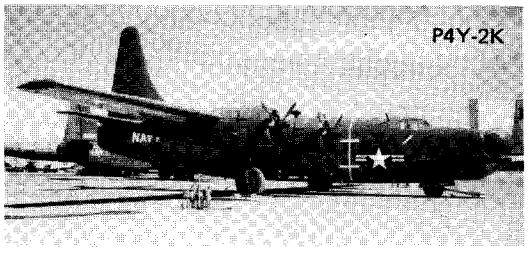
PB4Y-2M

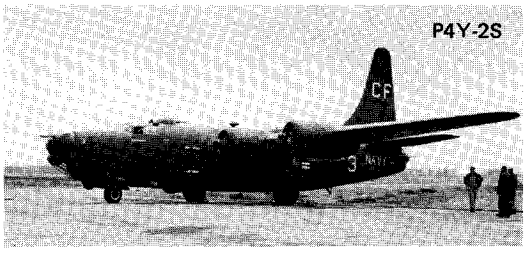


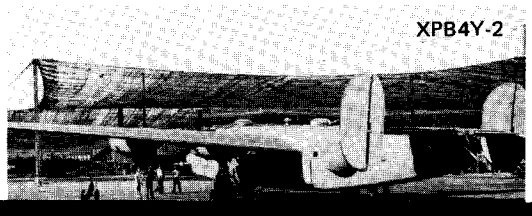
PB4-2

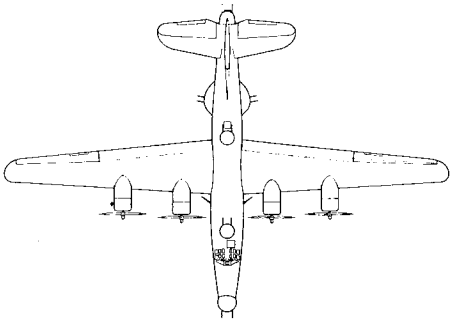


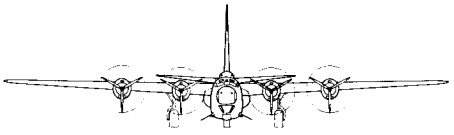
Span	110′
Length	74′7″
Height	29′2″
Engine	
four P&W R-1830-94	1,350hp
Maximum speed	247 mph
Service ceiling	19,500′
Maximum range	
two bombay tanks	2,900 miles
Crew	12
Armament	12 – .50 machine guns
	up to 12,800 lbs. of bombs

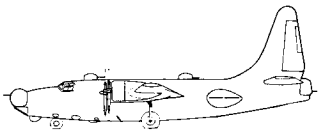












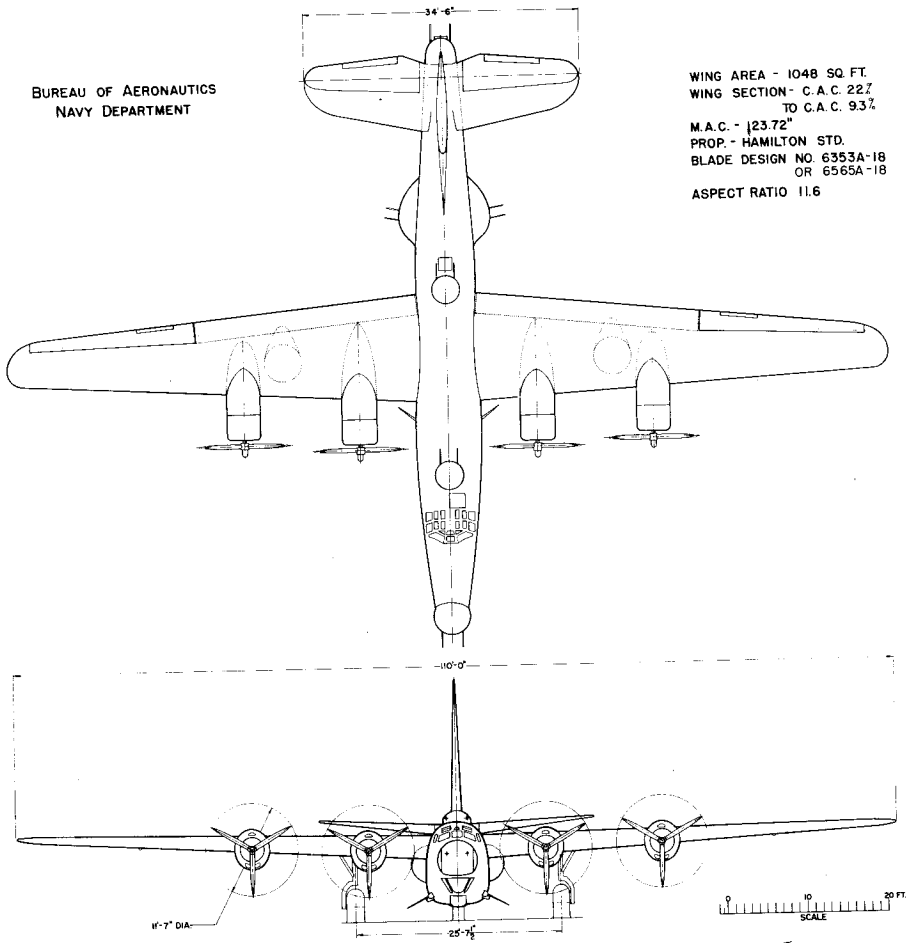
DECLASSIFIED

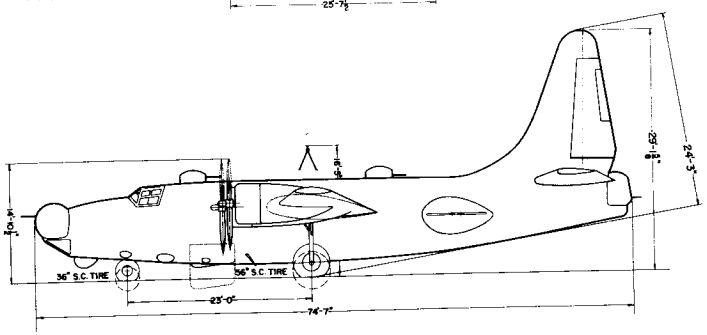
STANDARD AIRCRAFT CHARACTERISTICS

PB4Y-2 "PRIVATEER"

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 1048 SQ. FT.
WING SECTION - C.A.C. 22.7
TO C.A.C. 9.3%
M.A.C. - 123.72"
PROP. - HAMILTON STD.
BLADE DESIGN NO. 6353A-18
OR 6565A-18
ASPECT RATIO 11.6



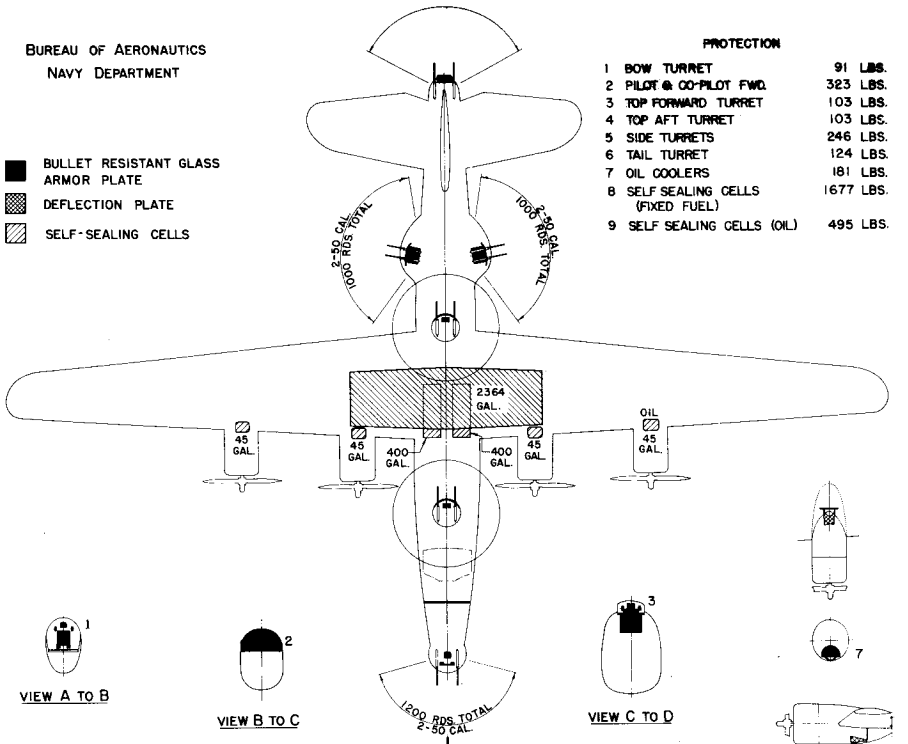


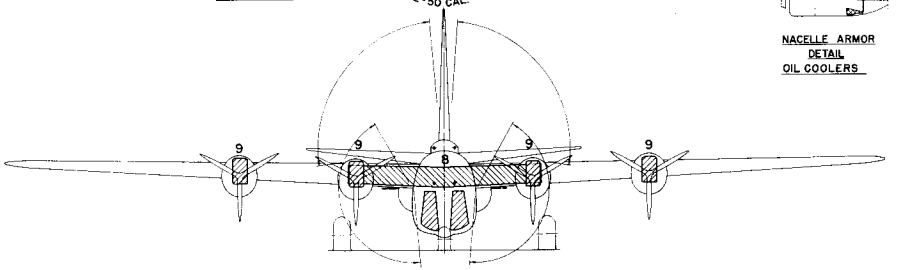
DESCRIPTIVE ARRANGEMENT

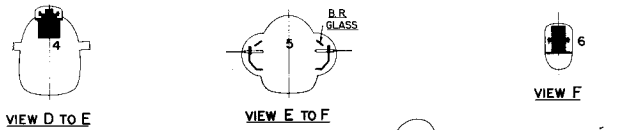
BUREAU OF AERONAUTICS
NAVY DEPARTMENT

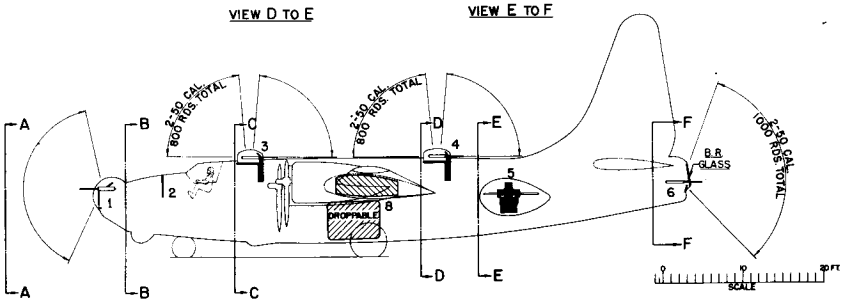
- BULLET RESISTANT GLASS ARMOR PLATE
- DEFLECTION PLATE
- SELF-SEALING CELLS

PROTECTION		
1	BOW TURRET	91 LBS.
2	PILOT & CO-PILOT FWD.	323 LBS.
3	TOP FORWARD TURRET	103 LBS.
4	TOP AFT TURRET	103 LBS.
5	SIDE TURRETS	246 LBS.
6	TAIL TURRET	124 LBS.
7	OIL COOLERS	181 LBS.
8	SELF SEALING CELLS (FIXED FUEL)	1677 LBS.
9	SELF SEALING CELLS (OIL)	495 LBS.









ARMAMENT & TANKS

DECLASSIFIED

MISSION AND DESCRIPTION

The PB4Y-2 is the single tail Navy version of the Liberator (PB4Y-1). It is a long range medium altitude patrol landplane. It features the Davis wing and tricycle landing gear. Two modifications have been made to date from the basic airplane, the PB4Y-2S for anti-submarine warfare and the PB4Y-2B which is a "Bat" carrier. Carries a crew of eleven men.

Structure is conventional, using a two-spar wing carrying a hydraulically actuated Fowler flap, and containing means for thermal de-icing.

WEIGHTS

Loadings	Gross Lbs.	L.F.
EMPTY	37464	
BASIC	39790	
DESIGN	56000	2.67
COMBAT	54965	2.60
MAX.T.O	64000	2.25
MAX.LAND	56000	

All weights are actual.

POWER PLANT

NO. & MODEL.....(4) R-1830-94
MFGR.....Pratt & Whitney
SUPERCH.....1 Stage, 2 Speed
PROP. GEAR RATIO.....16:9
PROP. MFGR.....Ham. Std.
PROP. DES. NO.....6353A-18
NO. BL/DIA.....3/11'-7"

RATINGS

	Bhp	RPM	Alt.
T.O.	1350	2800	S.L.
MIL.	1350	2800	3900
	1100	2800	13500
NORM.	1100	2600	8200
	1000	2600	14500

SEE NOTE
SPEC NO. N-5136

FUEL AND OIL

Gal.	No. Tanks	Location
2364	1	Wing (self seal)
1600	4	Bomb bay

FUEL GRADE....100/130
FUEL SPEC.....AN-F-48

OIL

CAPACITY (gal.).....180
SPEC.....AN-O-8
GRADE.....1100-1120

ORDNANCE

GUNS

No.	Size	Location	Rds
2	.50 cal.	Nose turret	1200
2	.50 cal.	Tail turret	2000
4	.50 cal.	Waist	2000
2	.50 cal.	Deck, Fwd.	800
2	.50 cal.	Deck, Aft.	800

SIGHTS

MK. 9 Illu . sight in nose, tail and waist
MK.18 sight in Deck turrets

BOMBS

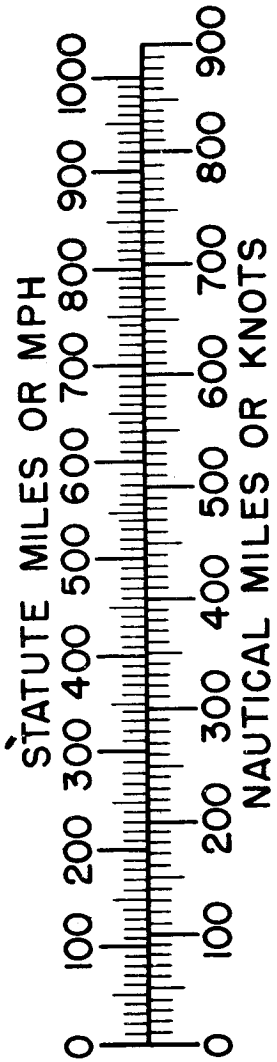
Type	Size	Location	No.
Bomb	2000#	Fus.	4
Bomb	1000#	Fus.	8
Bomb	500#	Fus.	12
D. B.	325#	Fus.	12
Mines	2000#	Fus.	4
Mines	1000#	Fus.	8

DIMENSIONS

SPAN.....110'-0"
LENGTH.....74'-9"
HEIGHT.....29'-2"
WING AREA.....1048 sq. ft.
M.A.C.....123.7"
TREAD.....25'-8"

ELECTRONICS

COMMAND.....ATB/ARB or AN/ARC-1
LIAISON.....ATC/RAX
COMPASS.....SCR-269
MARKER BEACON.....AN/ARN-8
ALTIMETER.....AN/APN-1 or AN/APN-4
IFF.....AN/APX-2 or AN/APX-8
SEARCH RADAR.....AN/APS-2G or AN/APS-15B



PERFORMANCE SUMMARY

LOADING CONDITION		(1) Patrol 4-650# Bombs	(3) Patrol 4-650# Bombs	(5) Patrol	
TAKE-OFF WEIGHT	lbs	64000	60000	60000	
Fuel - Fixed/Drop	lbs	14184/1914	12714	14184/612	
Bombs	lbs	2600	2600		
	lbs				
Wing/Power Loading (A)lbs/sq.ft.lbs/	bhp	61.0/16.0	57.2/15.0	57.2/15.0	
Stall Speed--Power off	kn	91.9	89.0	89.0	
Stall Speed--Power off - No Fuel	kn	79.5	79.0	77.3	
Stall Speed--Power on	kn	83.5	80.8	80.8	
Maximum Speed/Alt (B)	kn/ft	208/13900	211/13900	211/13900	
Take-off Distance, deck -- calm	ft	1890	1650	1650	
Take-off Distance, deck kn.	ft				
Take-off Distance, Airport	ft	3170	2900	2900	
Rate of climb -- sea level (B)	ft/min	730	820	820	
Service Ceiling (B)	ft	18300	19600	19600	
Time-to-climb 10000 ft. (B)	min	16.3	14.3	14.3	
Time-to-climb 20000 ft. (B)	min				
Combat Range/V av 1500 ft.	n.mi/kn	1920/139	1600/137	1870/136	
Combat Radius/V av 1500 ft.	n.mi/kn	770/139	640/137	750/136	
LOADING CONDITION		(2) Combat	(4) Combat		
GROSS WEIGHT	lbs	54965	54965		
Engine power		Military	Normal		
Fuel	lbs	9660	9660		
Bombs/Tanks					
Max. speed at sea level	kn	209	195		
Max. speed/ACA	kn	218/12800	214/13900		
Combat speed/Alt.	kn/ft	212/1500	198/1500		
Rate of climb SL	ft/min	1190	890		
Ceiling for 500 fpm R/C	ft	13700	13300		
Time-to-climb/Alt.	min/ft	17.5/20000	47.4/20000		

NOTES

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

Performance is based on the flight test of the PB4Y-2 airplane. Range and radius are based on flight test fuel consumption data of the PB4Y-2 airplane increased by 5%.

Combat radius is .4 of maximum combat range at 1500 ft.

NOTES CONTINUED ON LAST PAGE

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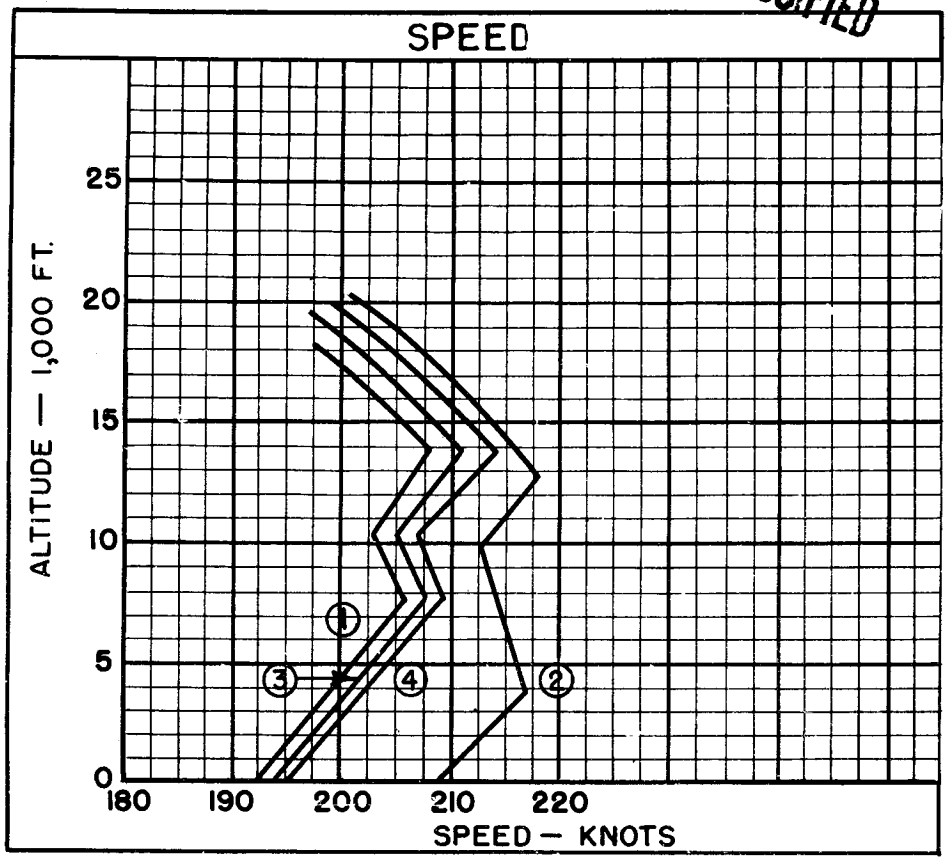

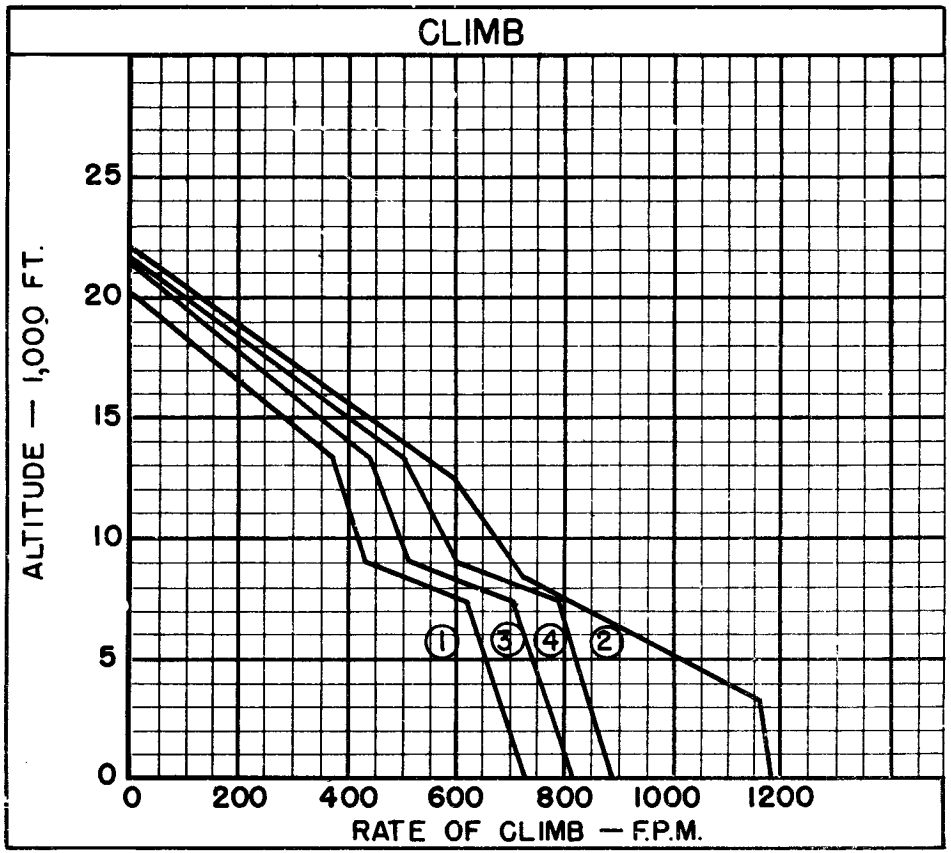

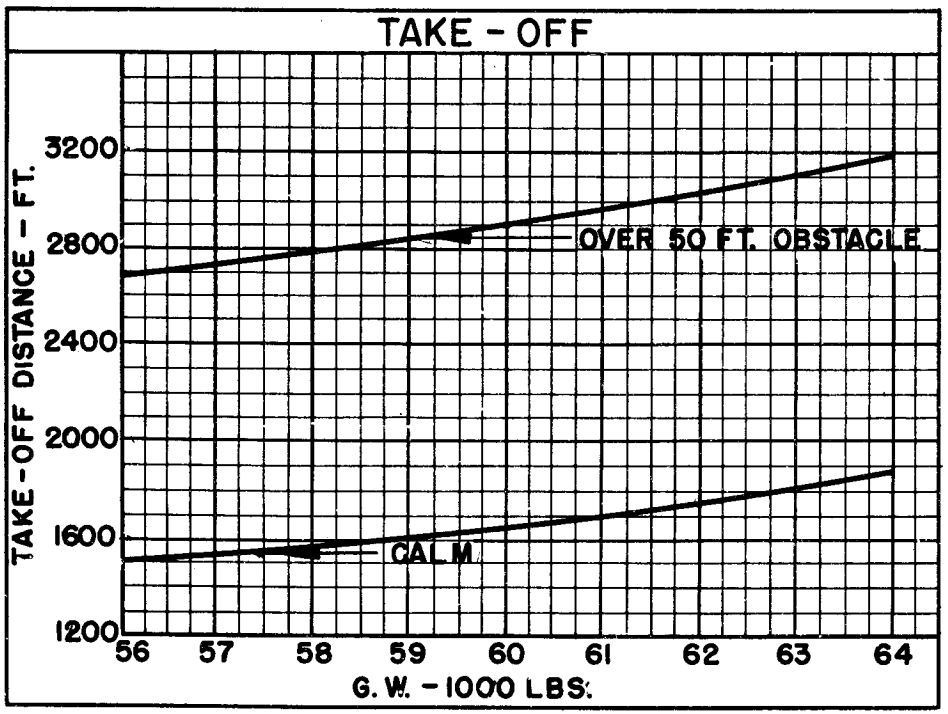

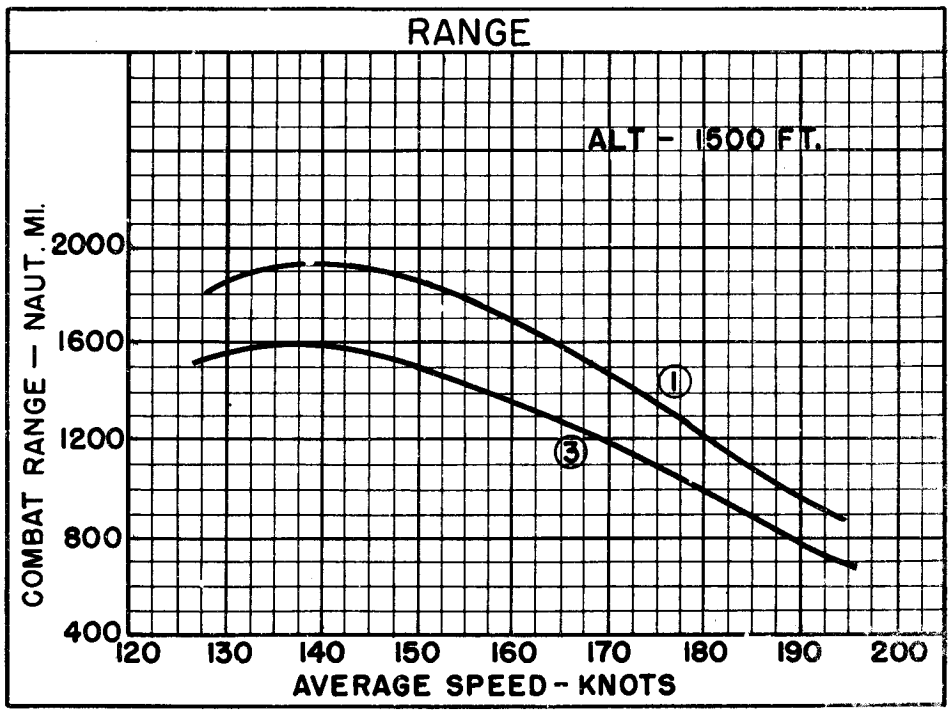

NOTES

Combat radius is reduced 5 nautical miles for each minute of maximum rated power operation at 1500 ft.

Engine ratings from Flight Test:

	Bhp.	Rpm.	Alt.
T.O.	1350	2800	S.L.
Mil.	1350	2800	3200
	1100	2800	12200
Norm.	1100	2600	7200
	1000	2600	13400

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