

ISSUE OF 6 PAGES
AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		PATROL 6-325# D.B.	PATROL 6-325# D.B.	PATROL MK13-3 Torp 2-250 Gallon BB Tanks	BOMBER 8-1000# Bombs
GROSS WEIGHT	LBS.	54711	54711	58000	58000
EMPTY WEIGHT - ACTUAL	LBS.	33484			
FUEL / OIL	GALS.	2350/130	2350/130	2789/155	1902/106
FIXED GUNS/AMMUNITION		None			
FLEXIBLE GUNS/AMMUNITION		6-50 Cal./2800 Rds. - See Page 2 for Gunsights			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	54.7	54.7	58	58
POWER LOADING ①	LBS./BHP.	28.8	30.4	32.2	32.2
V-MAX. SEA LEVEL	KN	251	244	244	244
V-MAX./CRITICAL ALT.	KN/FT.	276/17700	274/18400	271/18400	271/18400
V-STALL GROSS WEIGHT ②	KN	78.5	78.5	80.8	80.8
V-STALL WITHOUT FUEL ②	KN	67.6	67.6	68.2	72.4
TIME-TO-CLIMB -10000FT.-	MIN.	9.8	11.0	12.4	12.4
TIME-TO-CLIMB -20000FT.-	MIN.	25.2	27.1	31.5	31.5
SERVICE CEILING	FT.	24200	24200	23200	23200
TAKE-OFF DISTANCE -CALM-	FT.	1645	1645	1920	1920
TAKE-OFF DISTANCE -15 KN-	FT.	1135	1135	1344	1344
TAKE-OFF DISTANCE -25 KN-	FT.	848	848	1008	1008
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	1140	1030	930	930
MAX. RANGE / V-AV. ③	NMI./KN		3010/143	3450/148	2240/153
RANGE / V-AV. -60%NSP-③-	NMI./KN				
SEARCH RADIUS / V-AV. -20%R-	NMI./KN		940/146	1070/151	700/156
A.S.W. RADIUS / V-AV. -20%R-	NMI./KN		785/146		
SCOUT RADIUS	N MI.				
COMBAT RADIUS	N MI.				
ENGINE / PROP GEAR RATIO		2 - R-3350-8 / .4375:1			
ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL		TAKE-OFF	
	2250/2600/SL-4700	2100/2400/SL-4000		2300/2800	
	1900/2600/10250-15800	1800/2400/9500-16500			
TANKAGE IN GALLONS		OIL	FUEL	ARMAMENT	
AUX. FIXED	PROTECTED		2350	Fuselage Bomb Bay - (Alternate with Drop Tanks)	
	UNPROTECTED	156		Bombs: 4-2000#; 4-1600#; 8-1000#; 8-500#.	
	TOTAL - FIXED INTERNAL	156	2350	Depth Bombs: 12-325#.	
	DROPPABLE BOMB BAY			Fragmentation Cluster: 12-100#.	
	DROPPABLE 4@ 250 Gal.		1000	Mines: 2-2000#; 8-1000#.	
TOTAL	156	3350	Torpedoes: 2-MK13-3		
NOTE	① BHP AT MAX. CRIT. ALT.				
	② STALL - WITH POWER				
	③ AT 1500 ft. ALTITUDE				

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Performance is based on calculations. Range and radius are based on engine specification fuel consumption data increased by 15% to conform with past experience.

Gunsights: Bow Turret - MK9 Gunsight
Deck Turret - MK18 Gunsight
Tail Turret - MK9 Gunsight

With full internal fuel of 3350 gallons, G. W. is increased to 60000# giving a maximum range and velocity at 1500 feet of 4095 N.Mi/148 Kn.

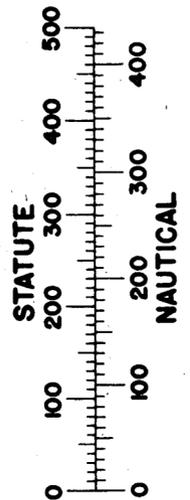
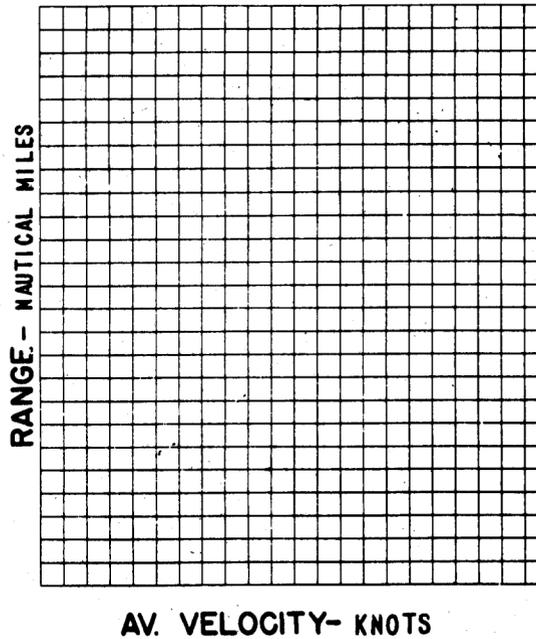
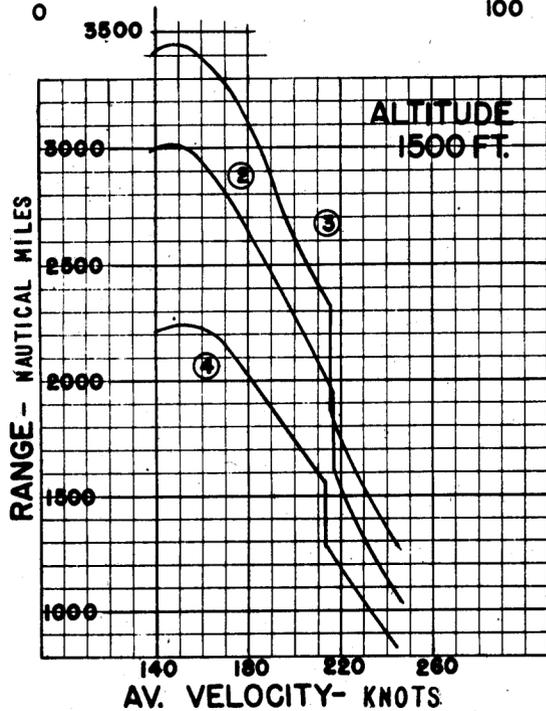
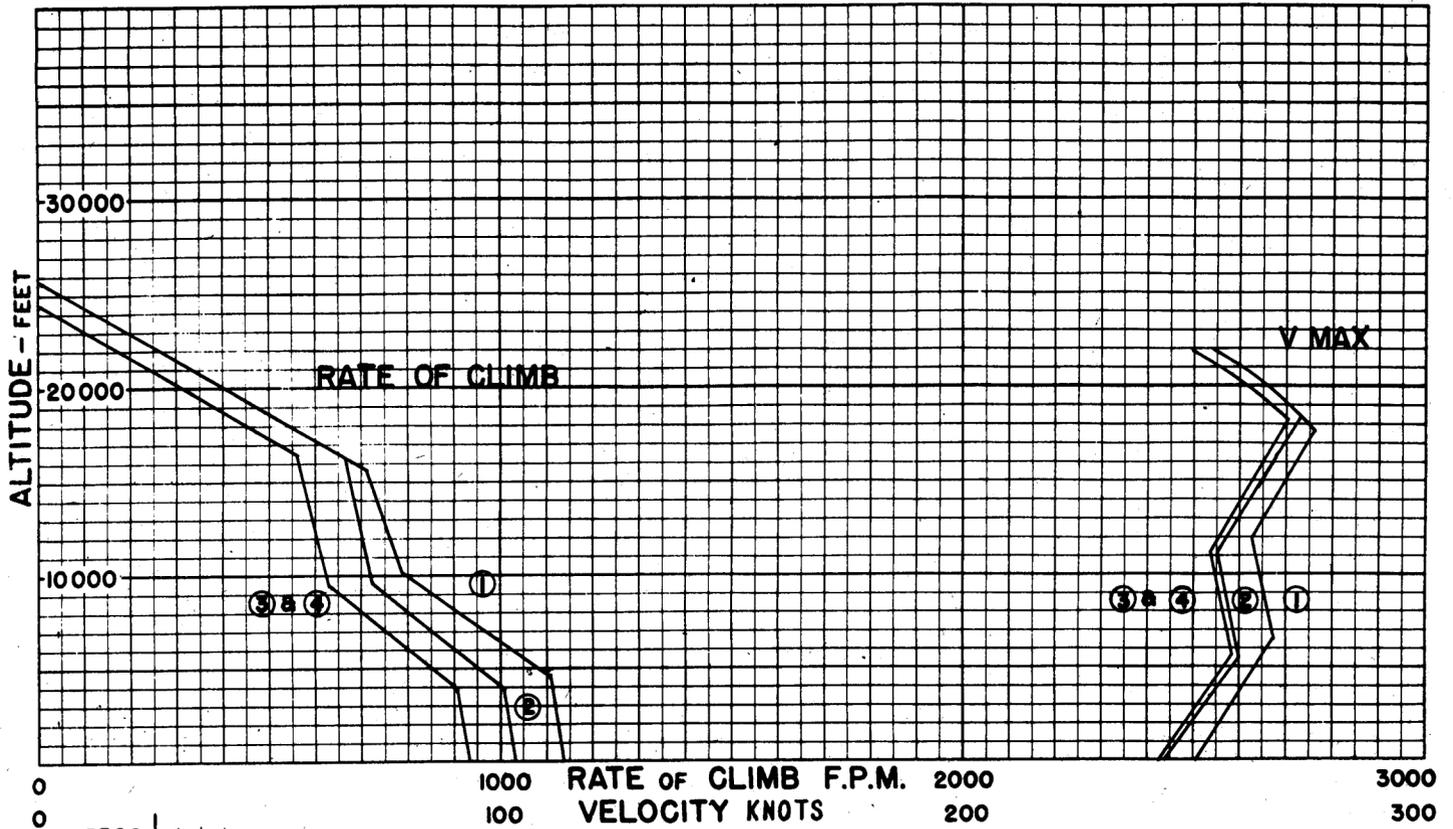
Practical Search Radius; - P-1 - Conditions (2), (3) and (4):

40% maximum range at velocity for maximum range at 1500 feet with 20% of initial fuel load as allowance for warm-up, take-off, climb and reserve. Bombs, torpedoes, radar and all droppable tanks are carried the entire distance.

Practical A.S.W. Radius - PA-1 - Condition (2):

33.3% maximum range at velocity for maximum range at 1500 feet with 20% of initial fuel load as allowance for warm-up, take-off, climb and reserve. Bombs, torpedoes, radar and all droppable tanks are carried the entire distance.

All radii are reduced approximately 6.5 N.Mi for each minute of maximum rated power operation at 1500 feet.

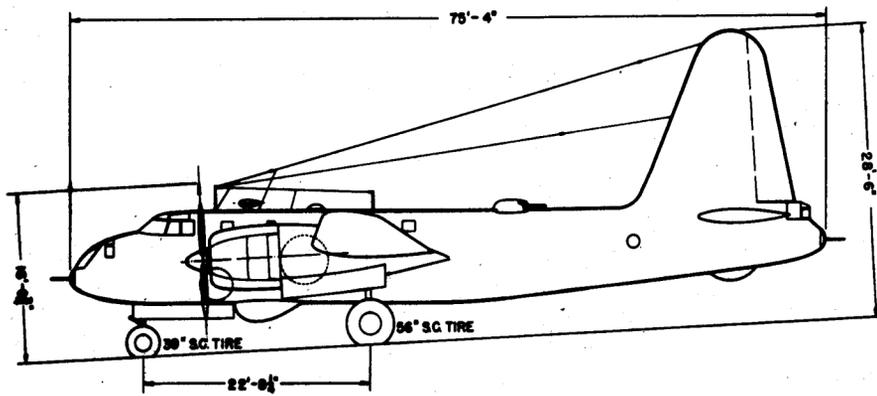
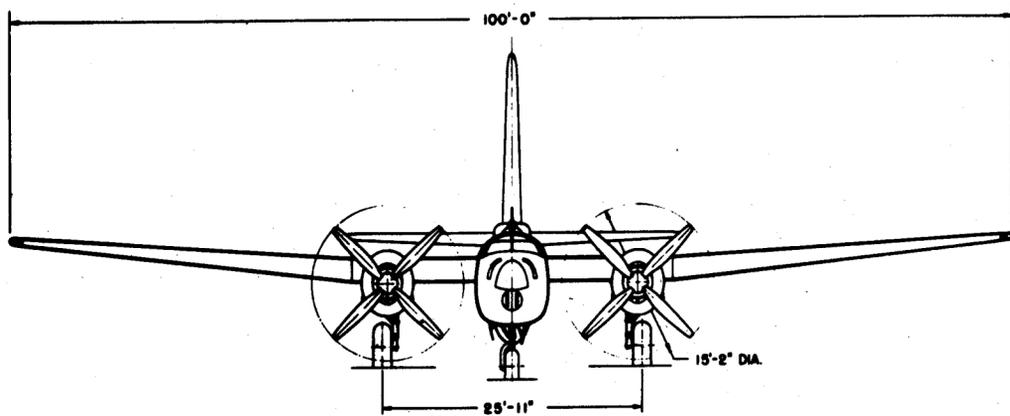
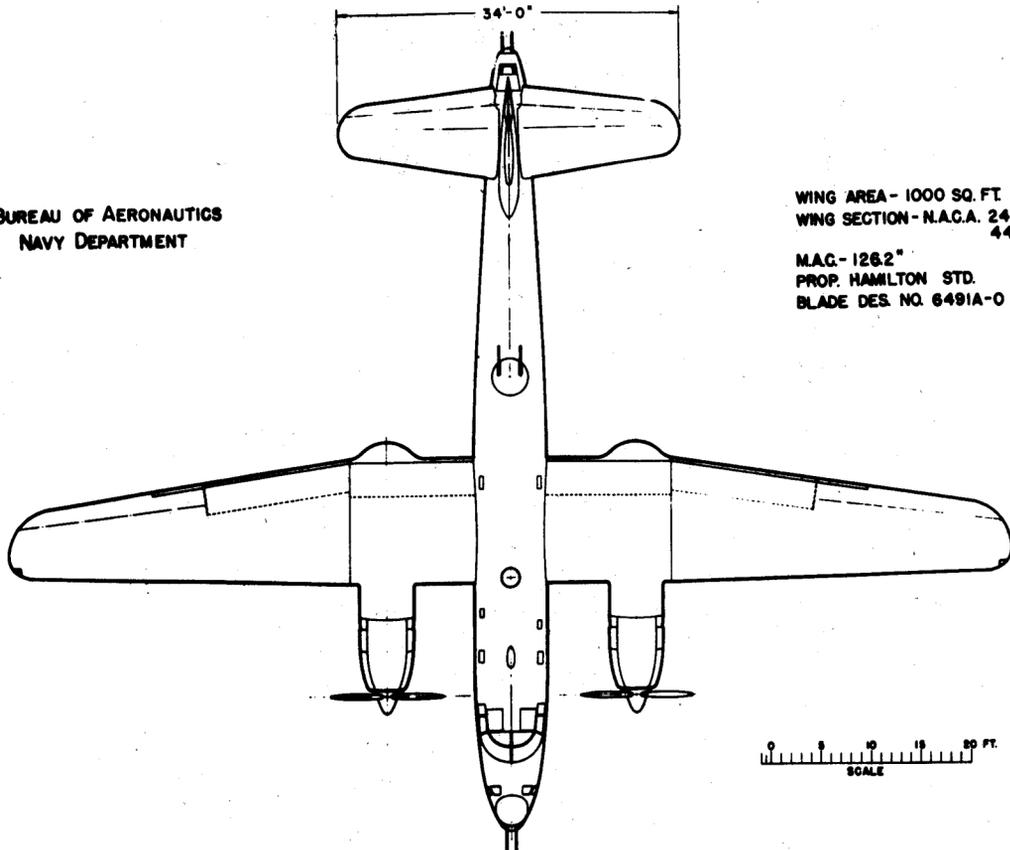


○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 1000 SQ. FT.
WING SECTION - N.A.C.A. 2419
4410.5

M.A.C. - 126.2"
PROP. HAMILTON STD.
BLADE DES. NO. 6491A-0



BUREAU OF AERONAUTICS
NAVY DEPARTMENT

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

PROTECTION

1. BOW GUNNER 145 LBS.
2. PILOT & CO-PILOT FW'D. 107 LBS.
3. TURRET 100 LBS.
4. TAIL GUNNER 229 LBS.
5. SELF-SEALING CELLS 1960 LBS.

NOTE:

ONE FLAK SUIT, WEIGHT 80 LBS., AND TWO FLAK CURTAINS, WEIGHT 10 LBS. EACH, FOR EACH CREW MEMBER (TOTAL WEIGHT 40 LBS. PER CREW MEMBER).

