

## AIRPLANE CHARACTERISTICS &amp; PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		A.S. PATROL 3-325#	A.S. PATROL 3-325#	A.S. PATROL 6-325#	BOMBER 6-500#
GROSS WEIGHT	LBS.	26500	26500	31077	30836
EMPTY WEIGHT - Actual -	LBS.	20197			19966
FUEL/OIL	GALS.	430/24	430/24	981/54	820/46
FIXED GUNS/AMMUNITION		5-.50 cal./1250 rds.			
FLEXIBLE GUNS/AMMUNITION		2-.30 cal./2000 rds. and 2-.50 cal./800 rds.			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	48.1	48.1	56.5	56.0
POWER LOADING ①	LBS./BHP.	8.3	9.1	10.7	10.6
V-MAX. SEA LEVEL	MPH.	296	274	271	271
V-MAX./CRITICAL ALT.	MPH./FT.	312/13800	303/14500	298/14500	298/14500
V-STALL GROSS WEIGHT ②	MPH.	91.0	91.0	98.6	98.2
V-STALL WITHOUT FUEL ②	MPH.	86.4	86.4	88.8	90.0
TIME-TO-CLIMB -10000FT-	MIN.	5.4	6.8	9.3	9.2
TIME-TO-CLIMB -20000FT-	MIN.	14.3	17.0	25.6	25.2
SERVICE CEILING	FT.	26300	25600	22800	22900
TAKE-OFF DISTANCE -CALM-	FT.	1252	1252	1884	1844
TAKE-OFF DISTANCE -15 KN-	FT.	850	850	1319	1290
TAKE-OFF DISTANCE -25 KN-	FT.	620	620	995	970
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	2230	1620	1210	1230
MAX. RANGE / V-AV. ③	ST. MI. / MPH.		785/164	1660/166	1375/166
RANGE / V-AV. -60%NSP-③	ST. MI. / MPH.				
SEARCH RADIUS / V-AV. -20%R-	NMI. / KN.		220/143	460/144	380/144
A.S.W. RADIUS / V-AV. -20%R-	NMI. / KN.		180/143	385/144	
SCOUT RADIUS	N MI.				
COMBAT RADIUS	N MI.				
ENGINE / PROP GEAR RATIO		2 P. & W. R-2800-31 (16:9)			
ENGINE RATING BHP/RPM/ALT.		MILITARY	NORMAL	TAKE-OFF	
		2000/2700/SL-1800'	1600/2400/SL-4900	2000/2700/SL	
		1600/2700/7900-11900	1450/2400/7900-12800		
TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT	
AUX. FIXED	PROTECTED See Note Page 2		981	FUSELAGE BOMB-BAY: - (alternate with drop tanks)	
	UNPROTECTED See Note Page 2	65		BOMBS: * 1-2000#, 1-1000#, 6-500#, 6-250# or 6-100#	
	TOTAL - FIXED INTERNAL	65	981	DEPTH BOMBS: 6-325#, or 2-650#	
	DROPPABLE - aft. B.B., unprot.		290	TORPEDO: * 1 MK13-3	
	DROPPABLE - fwd. B.B., unprot.*	*	200	WING PYLONS: -(alternate with drop tanks)	
DROPPABLE - Wing Pylons-2 @ 150		300	Bombs: 2-1000#, 2-500#, 2-250#, or 6-100#		
TOTAL	65	1771	DEPTH BOMBS: 2-650#, or 2-325#		
NOTE	STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS		*Require Partial opening of bomb-bay doors		
	① BHP AT MAX. CRIT. ALT.		** An alternate 189 gal. S.B. bomb-bay tank may be carried in fwd. bomb-bay (not droppable)		
	② STALL-WITHOUT POWER		See condition (5)		
	③ AT 1500' ALTITUDE				

SUPERSEDES 1 DEC. 1943

DATE 1 DECEMBER

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MODEL PV-1

## AIRPLANE CHARACTERISTICS &amp; PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		5	6	7	8*
LOADING CONDITION		BOMBER 3-500# One B.B. S.S. Tank	TORPEDO 1 MK13-3	BOMBER 3-500# 8-5"A.R.	BOMBER 2-1000# EXT 6-500# int.
GROSS WEIGHT	LBS.	30758	29971	30000	30893
EMPTY WEIGHT - Actual -	LBS.		19966		19874
FUEL/OIL	GALS.	1009/56	820/46	820/46	600/34
FIXED GUNS/AMMUNITION		5-.50 cal./1250 rds.			2-50/500
FLEXIBLE GUNS/AMMUNITION		2-.30 cal./2000 rds. 2-.50 cal./800 rds.			
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	55.9	54.4	54.5	56.1
POWER LOADING ①	LBS./BHP	10.6	10.3	10.3	10.7
V-MAX. SEA LEVEL	MPH.	271	262	265	262
V-MAX./ CRITICAL ALT.	MPH./ FT.	298/14500	288/14400	292/14400	288/14400
V-STALL. GROSS WEIGHT ②	MPH.	98.0	96.7	96.8	98.3
V-STALL. WITHOUT FUEL ②	MPH.	87.9	88.6	88.6	92.4
TIME-TO-CLIMB -10000FT-	MIN.	9.1	8.8	8.7	9.4
TIME-TO-CLIMB -20000FT-	MIN.	24.9	23.8	23.6	26.1
SERVICE CEILING	FT.	23000	23200	23200	22600
TAKE-OFF DISTANCE -CALM-	FT.	1831	1764	1750	1902
TAKE-OFF DISTANCE -15 KN-	FT.	1280	1230	1218	1327
TAKE-OFF DISTANCE -25KN-	FT.	963	918	910	1001
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF DISTANCE	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	1240	1280	1280	1210
MAX. RANGE / V-AV. ③	ST. MI./ MPH.	1730/166	1360/171	1375/163	950/162
RANGE / V-AV. -60%NSP-③	ST. MI./ MPH.				
SEARCH RADIUS/V-AV. -20%R-	NMI./ KN.	480/144	380/148	380/141	265/141
A.S.W. RADIUS/V-AV. -20%R-	NMI./KN.				
SCOUT RADIUS	NMI.				
COMBAT RADIUS	NMI.				

PERFORMANCE IS BASED ON - FLIGHT TEST

RANGE &amp; RADIUS ARE BASED ON ENGINE REQUIREMENT

FUEL CONSUMPTION DATA INCREASED

BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.

SEARCH RADIUS IS 40% RANGE AT VEL. FOR MAX. RANGE AT 1500 FT. ALLOWANCE of 20% of initial fuel load for warm-up, take-off, climb and reserve is carried entire distance. Bombs, radar, tanks also carried entire distance. Radius is reduced 2.4 Naut. Mi., for each min. of Combat @ Mil. Power @ 1500'.

A.S.W. RADIUS IS 1/3 RANGE AT VEL. FOR MAX. RANGE AT 1500 FT. Allowance of 20% of initial fuel load for warm-up, take-off, climb and reserve is carried entire distance. Bombs, radar, tanks also carried entire distance.

Weights and Performance include effect of de-icing equipment and two wing pylons (capped when not in use). For conditions (1) and (2) without de-icer boots, V max. is increased up to 1.0 mph. at S.L. (mil. power), max. range is increased up to 1.0% (1500 ft.); removal of wing pylons increases V max. 2 mph. at S.L. (mil. power) and increases max. range 1.0% (1500 ft.).

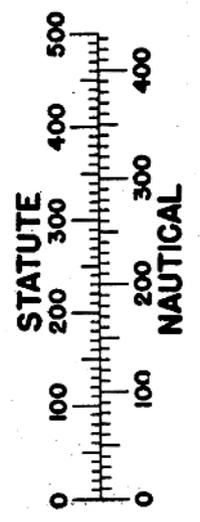
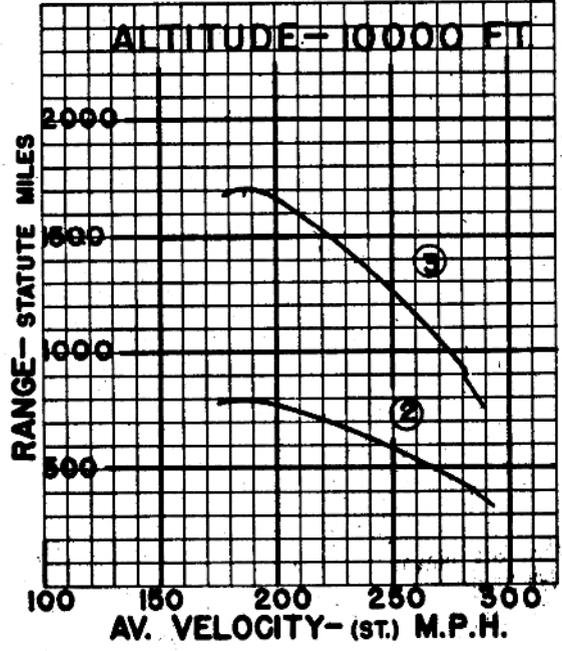
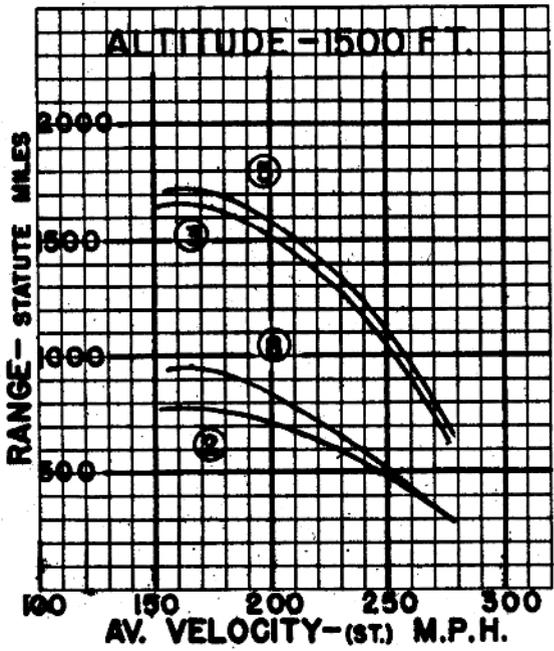
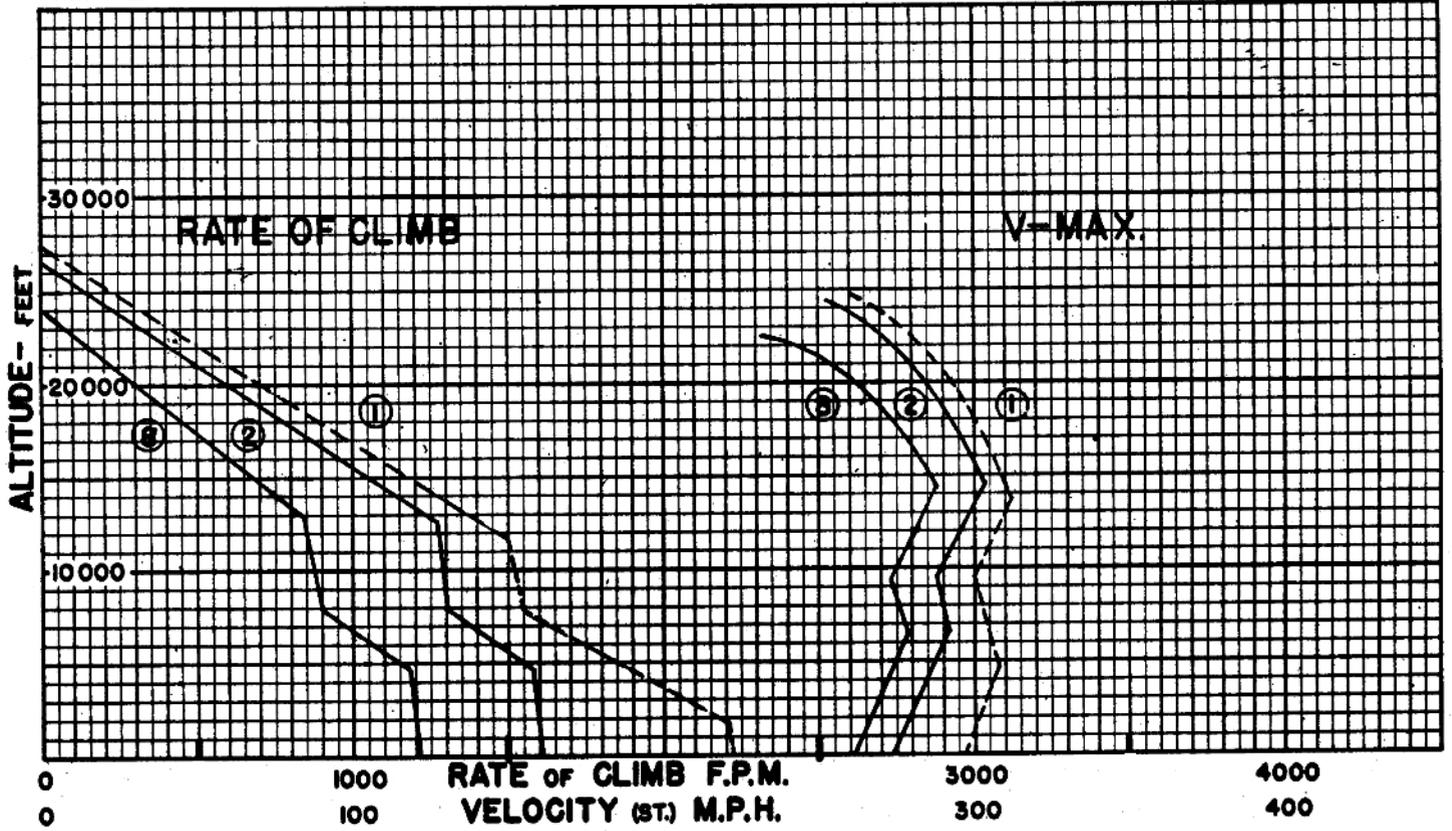
Condition 7 - Rockets suspended from MK5-1 launchers; Condition 8 Chin blisters are removed.

NOTE: Total internal fuel capacity (820 gals.) for conditions (4), (5), (6), (7) does not include 161 gal. aft fuselage tank. Total internal fuel capacity (981 gals.) for all other conditions include this tank which is being installed by service change #149.

For condition (3) with the 820 gal. fuel capacity, max. range at 1500 ft. is reduced to 1420 st. mi. at 166 mph.

NOTE: Oil tanks protected against .30 cal. gunfire only by "Armite" coating.

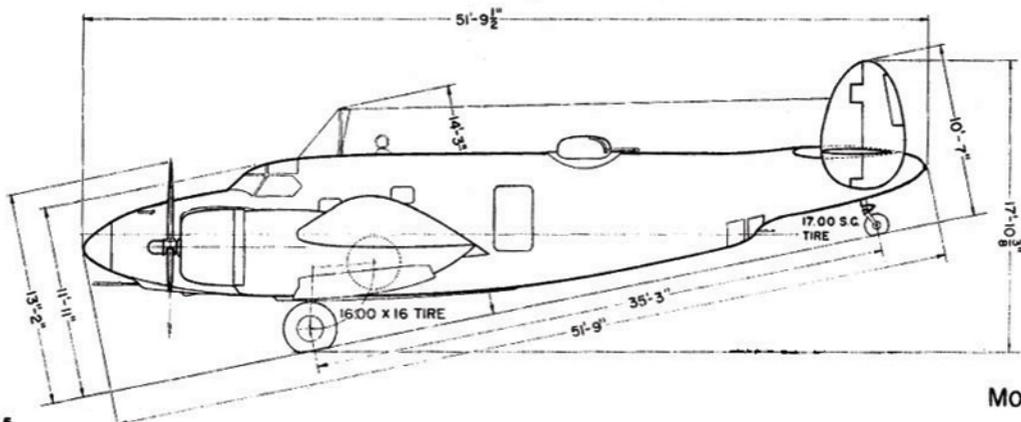
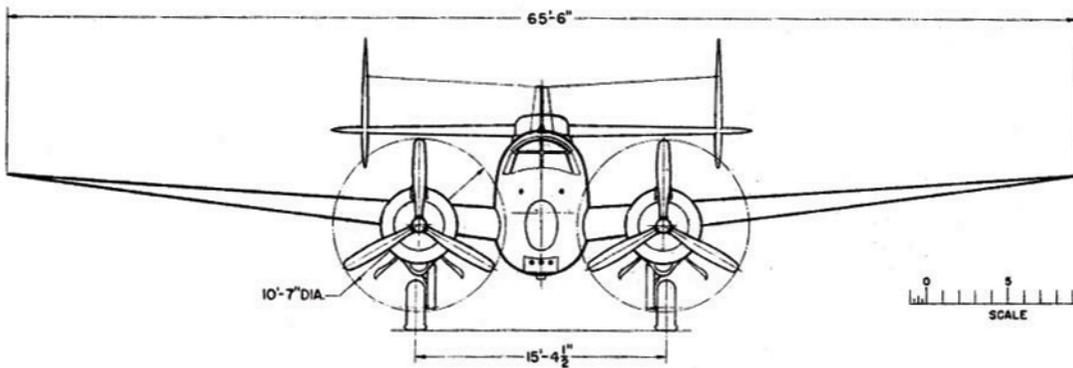
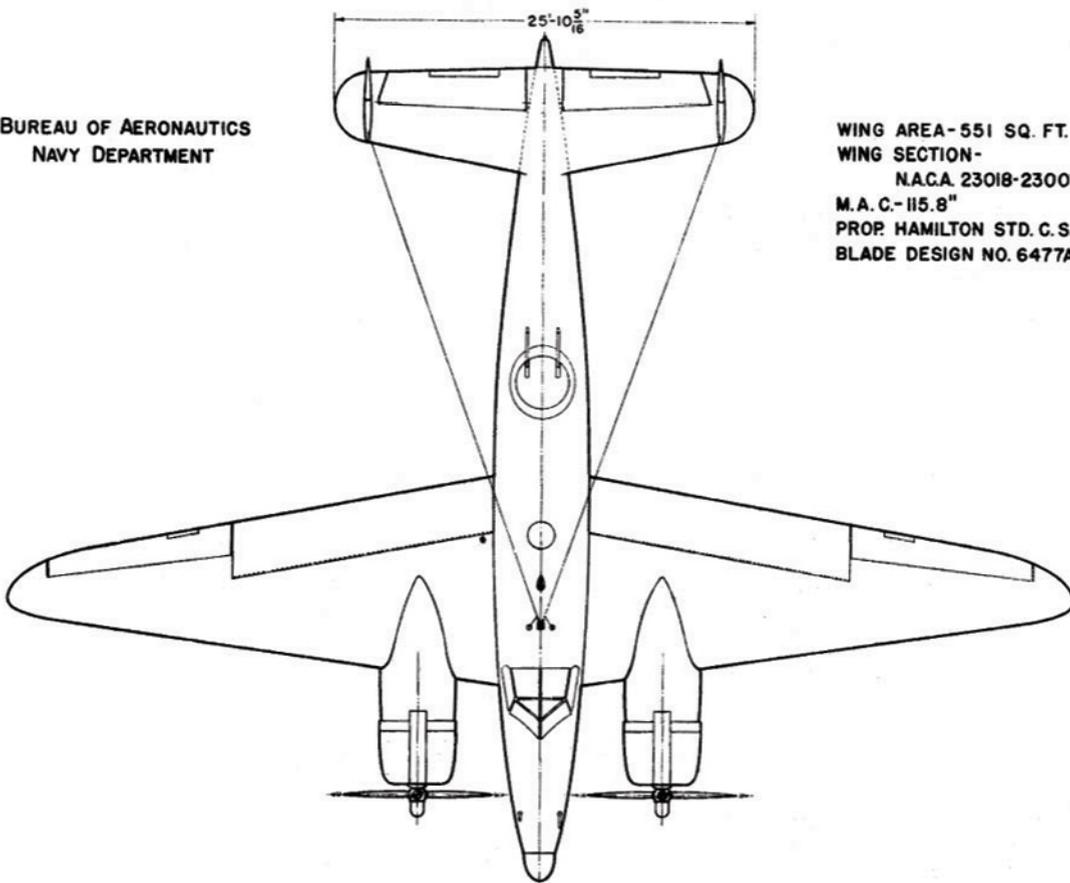
Ferry Conditions: G.W. 30485#, P<sup>4</sup> 1471/65, Range @ 1500' - 2635/165.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

WING AREA-551 SQ. FT.  
WING SECTION-  
N.A.C.A. 23018-23009  
M.A.C.-115.8"  
PROP. HAMILTON STD. C.S.  
BLADE DESIGN NO. 6477A-12



MODEL PV-1

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

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

PROTECTION

- |                          |             |
|--------------------------|-------------|
| 1. PILOT & CO-PILOT FW'D | 190.5 LBS.  |
| 2. PILOT AFT             | 86 LBS.     |
| 3. PILOT FLOOR           | 37.5 LBS.   |
| 4. RADIO OPERATOR        | 134 LBS.    |
| 5. TURRET                | 166.5 LBS.  |
| 6. TUNNEL                | 90 LBS.     |
| 7. GUNNERS B.R. GLASS    | 58 LBS.     |
| 8. SELF-SEALING CELLS    | 1285.5 LBS. |

NOTE: OIL TANKS PROTECTED FROM 30 CAL. BY 'ARMORITE'

