

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		A.S. PATROL 6-325# Int.	A.S. PATROL 6-325# Int.	BOMBER 4-1000# Int.	BOMBER 4-500# Int. Two 150 gal. Tanks External
GROSS WEIGHT	LBS.	33668	33668	35718	35800
EMPTY WEIGHT	- ACTUAL - LBS.	21028			
FUEL/OIL	GALS.	1149/65	1149/65	1149/65	1449/81
FIXED GUNS/AMMUNITION		5-.50 cal. / 1250 rds.			
FLEXIBLE GUNS/AMMUNITION		2-.50 cal. / 800 rds.			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	49.1	49.1	52.1	52.2
POWER LOADING ①	LBS./BHP.	10.5	11.6	12.3	12.3
V-MAX. SEA LEVEL	MPH.	271	249	247	240
V-MAX./CRITICAL ALT.	MPH./FT.	282/13700	274/14500	270/14400	262/14300
V-STALL GROSS WEIGHT ②	MPH.	83.2	83.2	85.7	85.8
V-STALL WITHOUT FUEL ②	MPH.	74.2	74.2	77.0	74.6
TIME-TO-CLIMB -10000 FT-	MIN.	7.6	9.5	10.8	10.9
TIME-TO-CLIMB -20000 FT-	MIN.	21.7	25.8	30.6	30.6
SERVICE CEILING	FT.	23900	23400	22200	22000
TAKE-OFF DISTANCE -CALM-	FT.	1795	1795	2070	2130
TAKE-OFF DISTANCE -15 KN-	FT.	1267	1267	1471	1517
TAKE-OFF DISTANCE -25 KN-	FT.	957	957	1126	1161
TAKE-OFF DISTANCE -50 FT. OBST.	FT.	2418	2418	2728	2802
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	1638	1190	1070	1060
MAX. RANGE / V-AV. ③	ST. MI./MPH.	1790/171	1790/171	1710/172	2145/164
RANGE / V-AV. -60% N.S.P. ③	ST. MI./MPH.				
SEARCH RADIUS / V-AV. -20% R-T-1	NMI./KN.	485/149	485/149	465/152	575/152
A.S.W. RADIUS / V-AV. -20% R-T-1	NMI./KN.	405/149	405/149		
SCOUT RADIUS	N MI.				
COMBAT RADIUS	N MI.				
ENGINE / PROP GEAR RATIO		2 P.M.W. R-2800-31 (16:9)			
ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL		TAKE-OFF	
	2000/2700/S.L. -1500'	1600/2400/S.L. -5200'		2000/2700	
	1600/2700/9500-12000	1450/2400/8800-13300'			
	- See page 3 -				

TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT
AUX. FIXED	PROTECTED	40	1149	WINGS - on pylons - alternate with dropp tanks
	UNPROTECTED	69		Bombs - 2-1000#, 2-500#, 2-250#, or 2-100#
	TOTAL - FIXED INTERNAL	109	1149	Depth Bombs - 2-650#, or 2-325#
	DROPPABLE SYSTEMS 2 @ 150		300	Mines - 2-1000#
	DROPPABLE 2 @ 150 (A.S.)		177	WING - fuselage -
" Alt. A.S. (non A.S.)		237	Bombs - 4-1000#, 6-500#, 6-250#, or 6-100#	
TOTAL	109	1863	Depth Bombs - 4-650#, or 6-325#	
NOTE	STATUTE MILES USED - EXCEPT - RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS			Mines - 1-2000#, 1-1860#, 1-1600# or 4-1000#
	① BHP AT MAX. CRIT. ALT.	Torpedoes - 1 MK 13-3		
	② STALL - WITH POWER	Rockets - 2-11.75" A. R.		
	③ AT 1500' ALTITUDE	WINGS - MK5 launchers		
		Rockets - 8-5" HVAR or AR		
See page 3 for additional bomb/missile				

SUPERSEDES 1 FEBRUARY 1944

NAVAER-16100 (Rev. 9-44)

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER	5	6	7	8
LOADING CONDITION	TORPEDO 1MK13-3 Internal	BOMBER 4-1000# Int. 2-1000# Ext.	ROCKET 2-11.75"A.R. Internal 8-5"RVAR Ext.	FERRY Fwd. B.B. Tank Aft. B.B. Tank 2 Tanks Ext.
GROSS WEIGHT LBS.	33845	36000	35072	34813
EMPTY WEIGHT - ACTUAL - LBS.		21028		20458
FUEL/OIL GALS.	1149/65	880/50	1149/65	1863/109
FIXED GUNS/AMMUNITION		5-.50 cal. /1250 rds		None
FLEXIBLE GUNS/AMMUNITION		2-.50 cal. / 800 rds		None
ENGINE POWER USED FOR PERFORMANCE	NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING LBS./SQ.FT.	49.3	52.5	51.1	50.7
POWER LOADING ① LBS./BHP	11.7	12.4	12.1	12.0
V-MAX. SEA LEVEL MPH.	249	240	242	
V-MAX./ CRITICAL ALT. MPH./ FT.	274/14500	262/14300	264/14400	
V-STALL. GROSS WEIGHT ② MPH.	83.4	86.0	84.9	
V-STALL. WITHOUT FUEL ② MPH.	74.4	79.4	76.1	
TIME-TO-CLIMB -10000FT.- MIN.	9.6	11.0	10.5	
TIME-TO-CLIMB -20000FT.- MIN.	26.2	32.1	29.5	
SERVICE CEILING FT.	23300	21900	22400	
TAKE-OFF DISTANCE -CALM- FT.	1815	2160	2010	
TAKE-OFF DISTANCE -15 KN- FT.	1284	1540	1426	
TAKE-OFF DISTANCE -25KN- FT.	969	1180	1090	
TAKE-OFF DISTANCE -50 FT. OBST. FT.	2433	2835	2660	
TAKE-OFF DISTANCE SECONDS				
RATE OF CLIMB -SL- FT./MIN.	1180	1050	1100	
MAX. RANGE / V-AV. ③ ST. MI. / MPH.	1785/171	1235/162	1700/163	2930/163
RANGE / V-AV. -80%NSP-③ ST. MI. / MPH.				
SEARCH RADIUS/V-AV. -20%R-P-1 NMI./KN.	485/150	335/154	455/152	
A.S.W. RADIUS/V-AV. -20%R- NMI./KN.				
SCOUT RADIUS NMI.				
COMBAT RADIUS NMI.				

PERFORMANCE IS BASED ON- PV-2 Flight Test

RANGE & RADIUS ARE BASED ON Flight test FUEL CONSUMPTION DATA INCREASED

BY 5 PERCENT TO CONFORM WITH PAST EXPERIENCE.

SEARCH RADIUS (P-1) 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.

A.S.W. RADIUS (PA-1) 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.

Search and A.S.W. radius are reduced 4 nautical miles for each minute of military power operation at 1500'.

Two wing pylons carried in all conditions (capped when not in use). Removal of pylons increases Vmax/S.L. by 1 mph and max. range at 1500 ft. by 0.7%.

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		9	10		
LOADING CONDITION		A.S. PATROL 6-325# Int.	A.S. PATROL 6-325# Int.		
GROSS WEIGHT	LBS.	34251	34251		
EMPTY WEIGHT - CALCULATED -	LBS.	21220			
FUEL/OIL	GALS.	1149/65	1149/65		
FIXED GUNS/AMMUNITION		8-.50 cal. / 2000 rds			
FLEXIBLE GUNS/AMMUNITION		2-.50 cal. / 800 rds			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL		
WINGLOADING	LBS/SQ.FT.	49.9	49.9		
POWER LOADING ①	LBS./BHP	10.7	11.8		
V-MAX. SEA LEVEL	MPH.	269	247		
V-MAX/ CRITICAL ALT.	MPH./ FT.	280/13600	270/14400		
V-STALL. GROSS WEIGHT ②	MPH.	83.9	83.9		
V-STALL. WITHOUT FUEL ②	MPH.	75.0	75.0		
TIME-TO-CLIMB -10000FT.-	MIN.	7.9	9.9		
TIME-TO-CLIMB -20000FT.-	MIN.	22.7	27.2		
SERVICE CEILING	FT.	23600	23000		
TAKE-OFF DISTANCE -CALM-	FT.	1867	1867		
TAKE-OFF DISTANCE -15 KN-	FT.	1324	1324		
TAKE-OFF DISTANCE -25KN-	FT.	1003	1003		
TAKE-OFF DISTANCE -50 FT. OBST.	FT.	2501	2501		
TAKE-OFF DISTANCE	SECONDS				
RATE OF CLIMB -SL-	FT./ MIN.	1590	1160		
MAX. RANGE / V-AV. ③	ST. MI. / MPH.	1775/167	1775/167		
RANGE / V-AV. -60%NSP-③-	ST. MI. / MPH.	-	-		
SEARCH RADIUS/V-AV. -20%R P-1	NMI. / KN.	485/150	485/150		
A. S. W. RADIUS/V-AV. -20%R-PA-1	NMI. / KN.	405/150	405/150		
SCOUT RADIUS	NMI.				
COMBAT RADIUS	NMI.				

PERFORMANCE IS BASED ON - FLIGHT TEST

RANGE & RADIUS ARE BASED ON FLIGHT TEST FUEL CONSUMPTION DATA INCREASED BY 5 PERCENT TO CONFORM WITH PAST EXPERIENCE.

These loading conditions show performance for the PV-2D which is identical to the PV-2 except for the installation of 8 fixed .50 cal. nose guns in lieu of 5 and revised oil system incorporating 2-25 gal. S.S. tanks in lieu of the 2-34.5 gal. unprotected tanks making a new oil capacity of 90 gals.

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

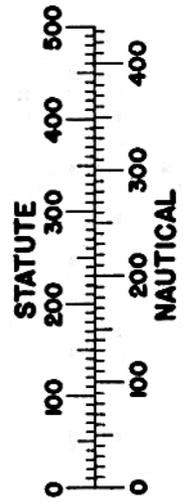
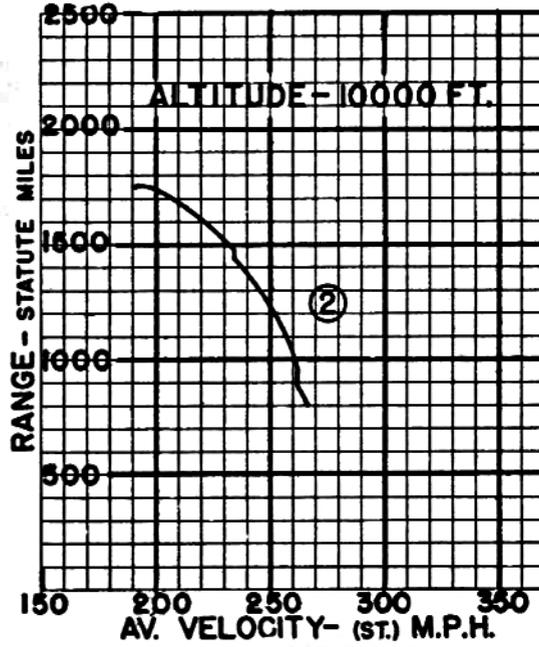
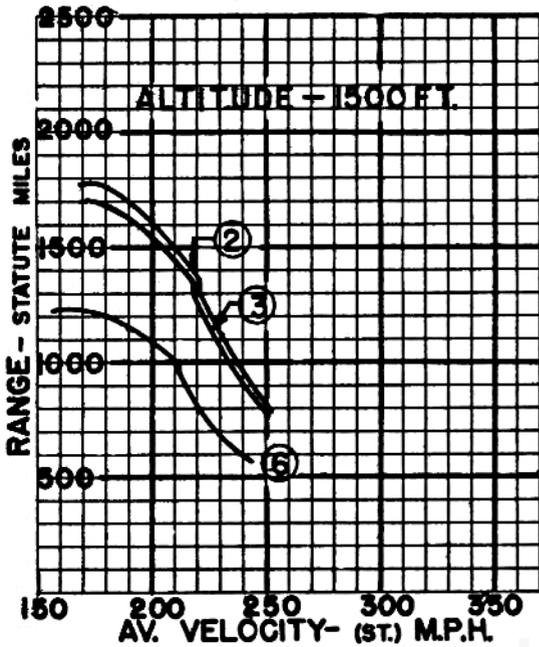
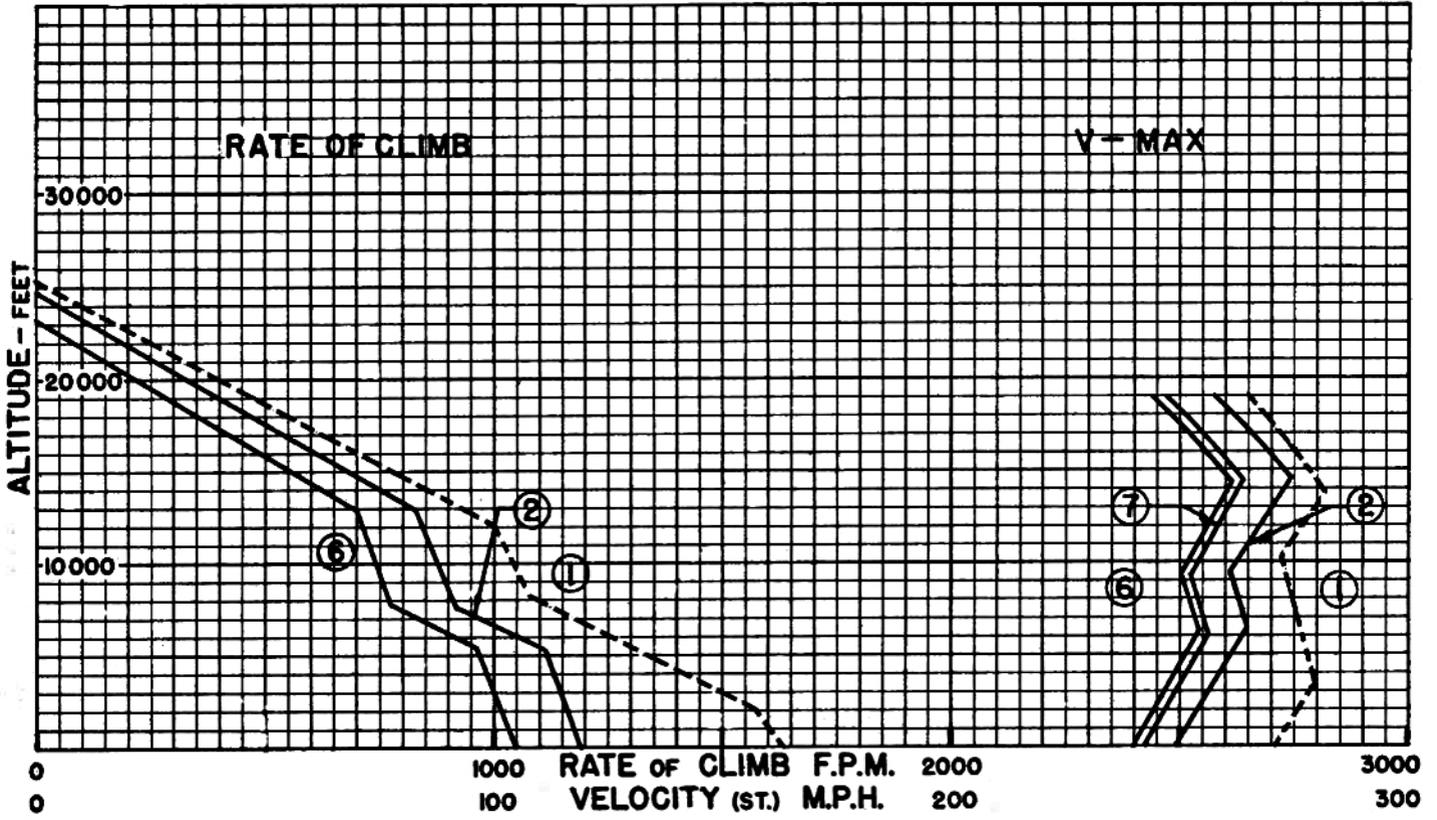
Engine Ratings are AEL ratings. These ratings do not conform to engine data obtained from PV-2 flight test. The flight test are used in performance calculations.

RAMMED FLIGHT TEST ENGINE RATINGS

MILITARY	NORMAL	TAKE-OFF
2000/2700/S.L.-1200'	1600/2400/S.L.-5300	2000/2700
1600/2700/8200-12000	1450/2400/7700-13000'	

With either the forward or aft bomb-bay fuel tanks installed, the following offensive armament may be carried:

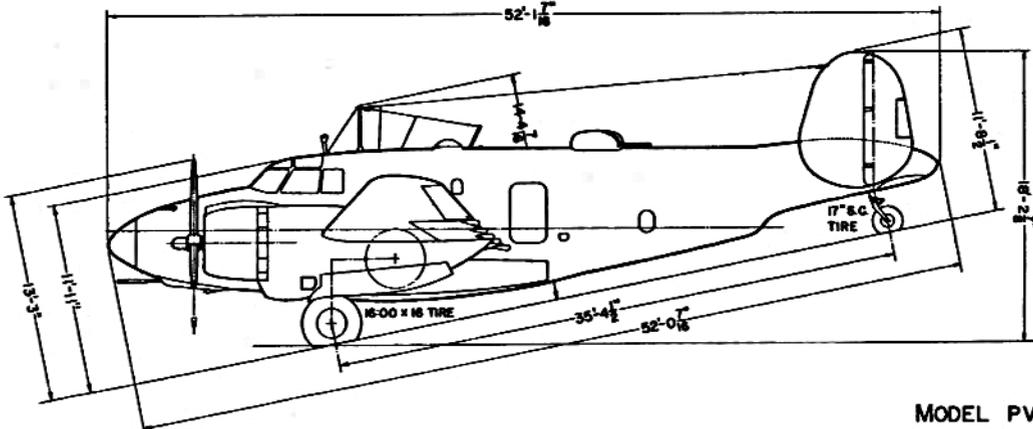
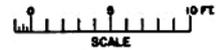
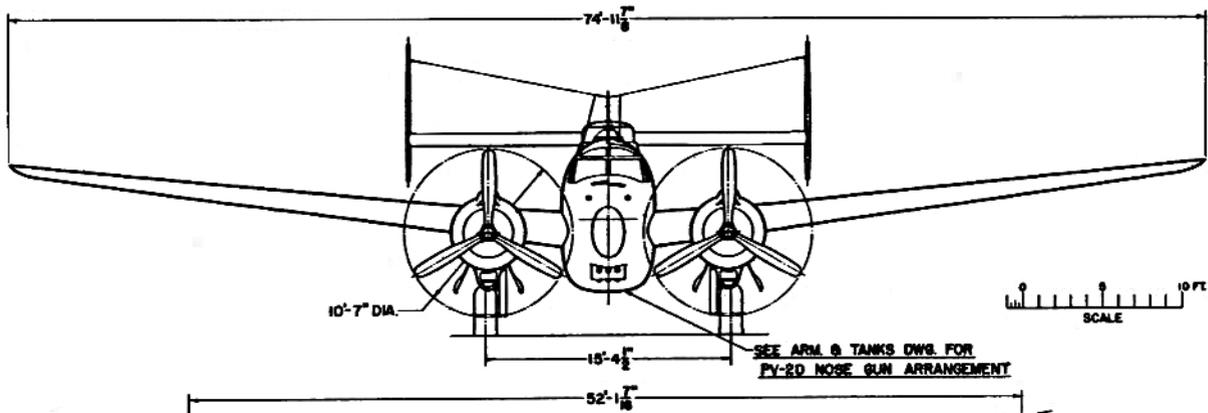
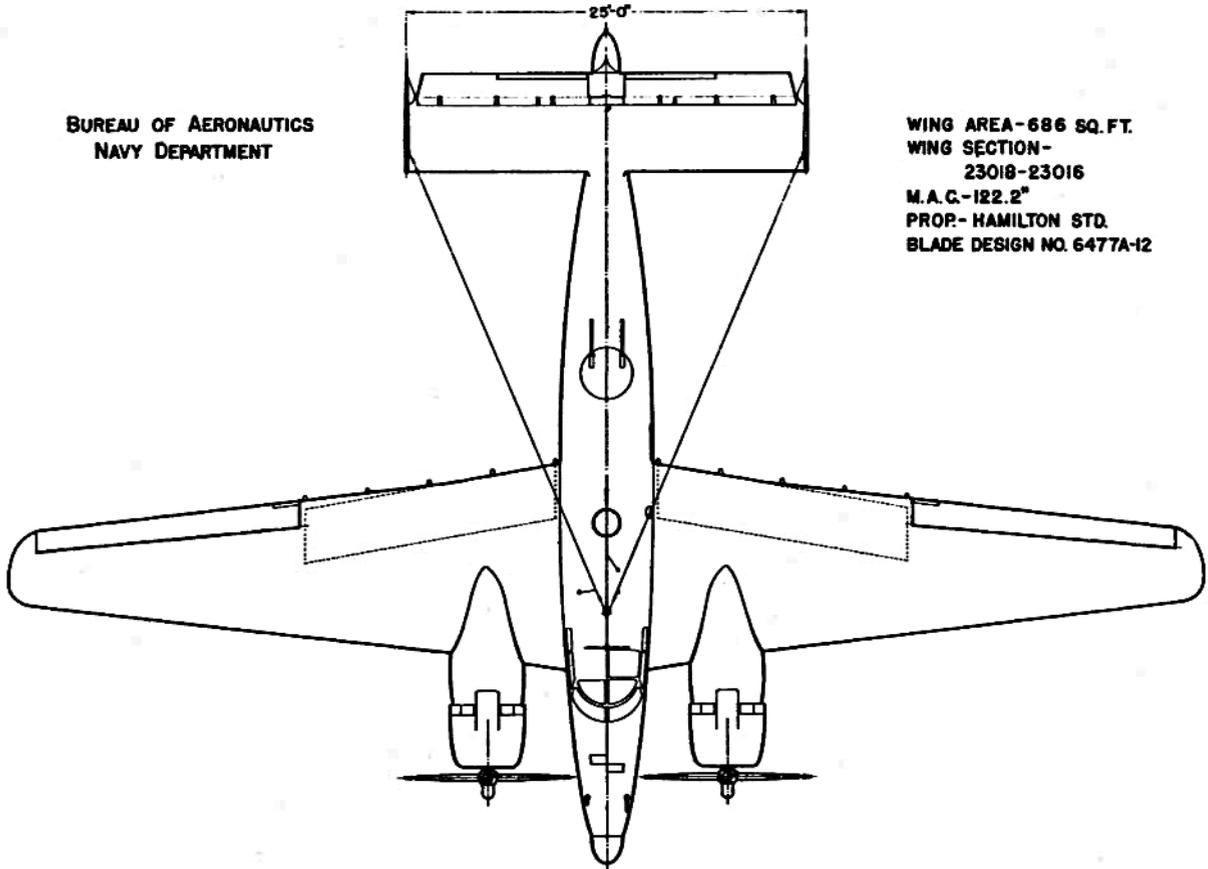
Bombs - 2-1000#, 3-500#, 3-250#, or 3-100#
 Depth Bombs- 2-650#, or 3-325#
 Mines - 2-1000#



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA-686 SQ. FT.
WING SECTION-
23018-23016
M.A.C.-122.2°
PROP.- HAMILTON STD.
BLADE DESIGN NO. 6477A-12



MODEL PV-2,-2D

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

- ARMOR PLATE
- SELF-SEALING TANKS
- NON SELF-SEALING TANKS

PROTECTION

- | | |
|--------------------------|------------|
| 1. PILOT & CO-PILOT FW'D | 179 LBS. |
| 2. PILOT & CO-PILOT AFT | 170 LBS. |
| 3. PILOT FLOOR | 39 LBS. |
| 4. RADIO OPERATOR | 160 LBS. |
| 5. TURRET | 166.5 LBS. |
| 6. SELF-SEALING CELLS | 1255 LBS. |

NOTE: 20-GAL. OIL TANKS PROTECTED FROM 20 CAL. BY "ARMORITE"

