

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		PATROL	PATROL	BOMBER 12-100#	BOMBER 6-500#
GROSS WEIGHT	LBS.	One 215 gal. B.B. Tank 32516	One 215 gal. B.B. Tank 32516	One 215 gal. B.B. Tank 33776	33846
EMPTY WEIGHT - ACTUAL	LBS.	20273			
FUEL/OIL	GALS.	1189/66	1189/66	1189/66	974/54
FIXED GUNS/AMMUNITION		6-.50 cal./2200 rds			
FLEXIBLE GUNS/AMMUNITION		7-.50 cal./2800 rds			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	53.3	53.3	55.3	55.5
POWER LOADING ①	LBS./BHP.	11.2	12.0	12.5	12.6
V-MAX. SEA LEVEL	MPH.	264	255	254	254
V-MAX./CRITICAL ALT.	MPH./FT.	278/12700	276/14400	274/14400	274/14400
V-STALL GROSS WEIGHT ②	MPH.	112.4	112.4	114.5	114.6
V-STALL WITHOUT FUEL ②	MPH.	99.2	99.2	101.7	104.3
TIME-TO-CLIMB -10000FT-	MIN.	10.1	10.8	11.8	11.9
TIME-TO-CLIMB -20000FT-	MIN.	-	33.2	37.5	37.7
SERVICE CEILING	FT.	18000	21300	20600	20600
TAKE-OFF DISTANCE -CALM-	FT.	1257	1257	1383	1390
TAKE-OFF DISTANCE -15 KN-	FT.	859	859	951	958
TAKE-OFF DISTANCE -25 KN-	FT.	630	630	704	709
TAKE-OFF DISTANCE -50 FT. OBST.	FT.	2160	2160	2476	2496
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	1180	1010	930	930
MAX. RANGE / V-AV. ③	ST. MI. / MPH.		2010/159	1940/160	1560/160
RANGE / V-AV. -60%NSP-③	ST. MI. / MPH.				
SEARCH RADIUS / V-AV. -20%R- (P-1)	NMI / KN.		550/138 (P-1)	530/139 (P-1)	425/140 (P-1)
A.S.W. RADIUS / V-AV. -20%R-	NMI / KN.				
SCOUT RADIUS	N MI.				
COMBAT RADIUS	N MI.				

ENGINE / PROP GEAR RATIO		2 W. A. C. R-2600-13 or -29 (16:9)		
ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL		TAKE-OFF
	1700/2600/S.L.-3000	1500-2400-S.L.-5800		1700/2600/S.L.
	1450/2600/7200-12000	1350/2400/8900-13000		
Engine Ratings are ABL ratings. These do not conform with the engine data obtained in PBJ-1J flight tests. Flight test data are used in the performance calculations.				

AUX. FIXED	TANKAGE IN GALLONS		OFFENSIVE ARMAMENT
	OIL	FUEL	
PROTECTED	75	974	FUSELAGE BOMB-BAY
UNPROTECTED			BCMB3: 1-2000#, 2-1600#, 3-1000#, 6-P., 4-1000# A.P. 6-500#, 8-250#, 24-100#
TOTAL - FIXED INTERNAL	75	974	DEPTH BOMBS: 3-650#, 6-325#
DROPPABLE - BOMB-BAY		335	FUSELAGE BOMB-BAY:
DROPPABLE			(with 215 gal. B.B. tank installed)*
B.B. removable S.S.		215	BOMBS: 2-1600#, 2-1000# O.P., 4-1000# A.P., 4-500#, or 12-100#
TOTAL * See note page 2	75	1524	DEPTH BOMBS: 2-650#, 4-325#
NOTE	STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS		
	① BHP AT MAX. CRIT. ALT.		
	② STALL-WITH POWER		
③ AT 1500' ALTITUDE			
			Torpedo (external - with B.B. doors open) 1-113-3

* See note page 2

NAVAL-1518 (Rev. 9-44)

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		5	6	7
LOADING CONDITION		BOMBER 4-1000#	ROCKET 12-100# 8 - 5" AR 215 gal. B.B.T.	FERRY 585 gal. B.B. 2-50 gal. Int.
GROSS WEIGHT	LBS.	34846	34448	31914
EMPTY WEIGHT - ACTUAL -	LBS.	20273		19329
FUEL/OIL	GALS.	974/54	1189/66	1659/76
FIXED GUNS/AMMUNITION		6-.50/2200		None
FLEXIBLE GUNS/AMMUNITION		7-.50/2800		None
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL
WINGLOADING	LBS./SQ.FT.	57.1	56.5	52.3
POWER LOADING ①	LBS./BHP	12.9	12.8	11.9
V-MAX SEA LEVEL	MPH	252	247	
V-MAX/ CRITICAL ALT.	MPH/ FT.	271/14400	265/14400	
V-STALL GROSS WEIGHT ②	MPH	116.3	115.7	
V-STALL WITHOUT FUEL ②	MPH	106.1	102.9	
TIME-TO-CLIMB -10000FT.-	MIN.	12.8	12.6	
TIME-TO-CLIMB -20000FT.-	MIN.	-	44.8	
SERVICE CEILING	FT.	19900	20100	
TAKE-OFF DISTANCE -CALM-	FT.	1498	1480	
TAKE-OFF DISTANCE -15 KN-	FT.	1037	1023	
TAKE-OFF DISTANCE -25KN-	FT.	771	760	
TAKE-OFF DISTANCE -50 FT. OBST.	FT.	2803	2752	
TAKE-OFF DISTANCE	SECONDS			
RATE OF CLIMB -SL-	FT./MIN.	870	880	
MAX. RANGE / V-AV. ③	ST. MI. / MPH	1520/161	1850/156	3000/163
RANGE / V-AV. -60%NSP-③-	ST. MI. / MPH			
SEARCH RADIUS/V-AV. -20%R-P-1	NMI./KN.	415/140(P-1)	500/136(P-1)	
A S. W. RADIUS/V-AV. -20%R-	NMI./KN.			
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.

Search Radius is 40% of range at V for maximum range at 1500 ft. with 20% of initial fuel load as allowance for warm-up, take-off, climb and rescue. Bombs, torpedoes, radar and all droppable tanks are carried the entire distance. Radius is reduced 4 nautical miles for each minute of maximum rated power at 1500 ft.

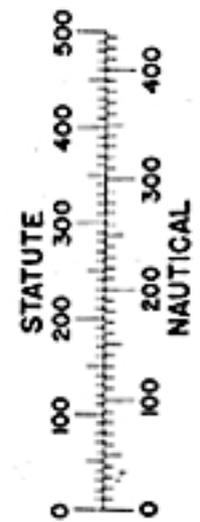
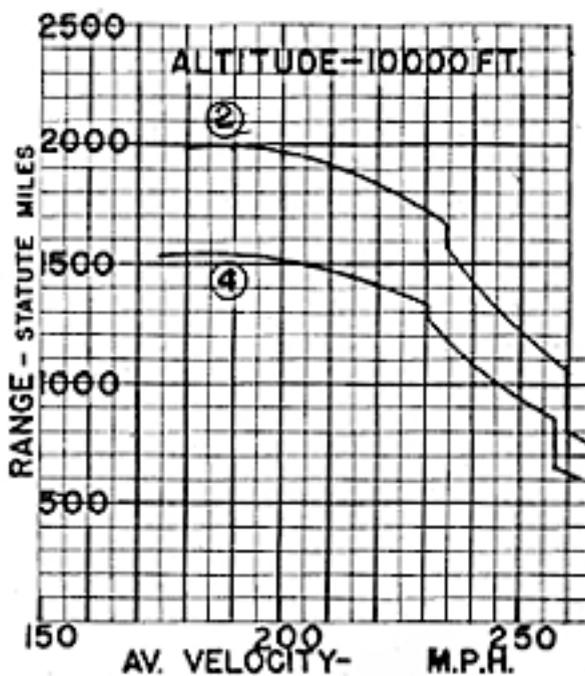
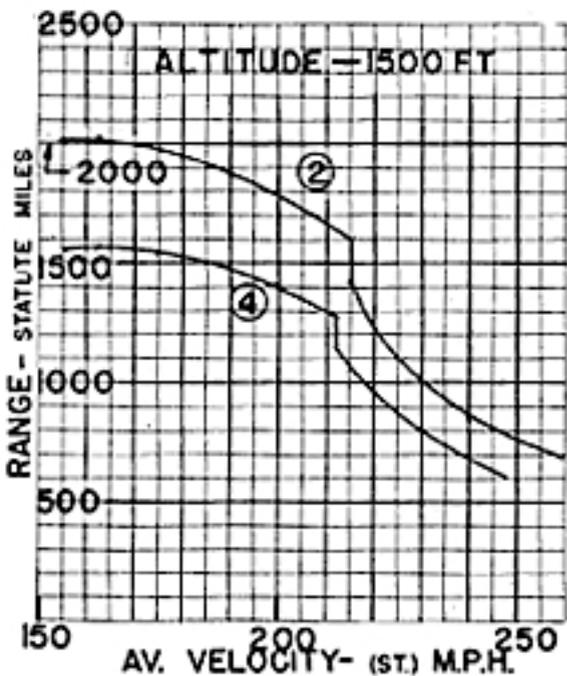
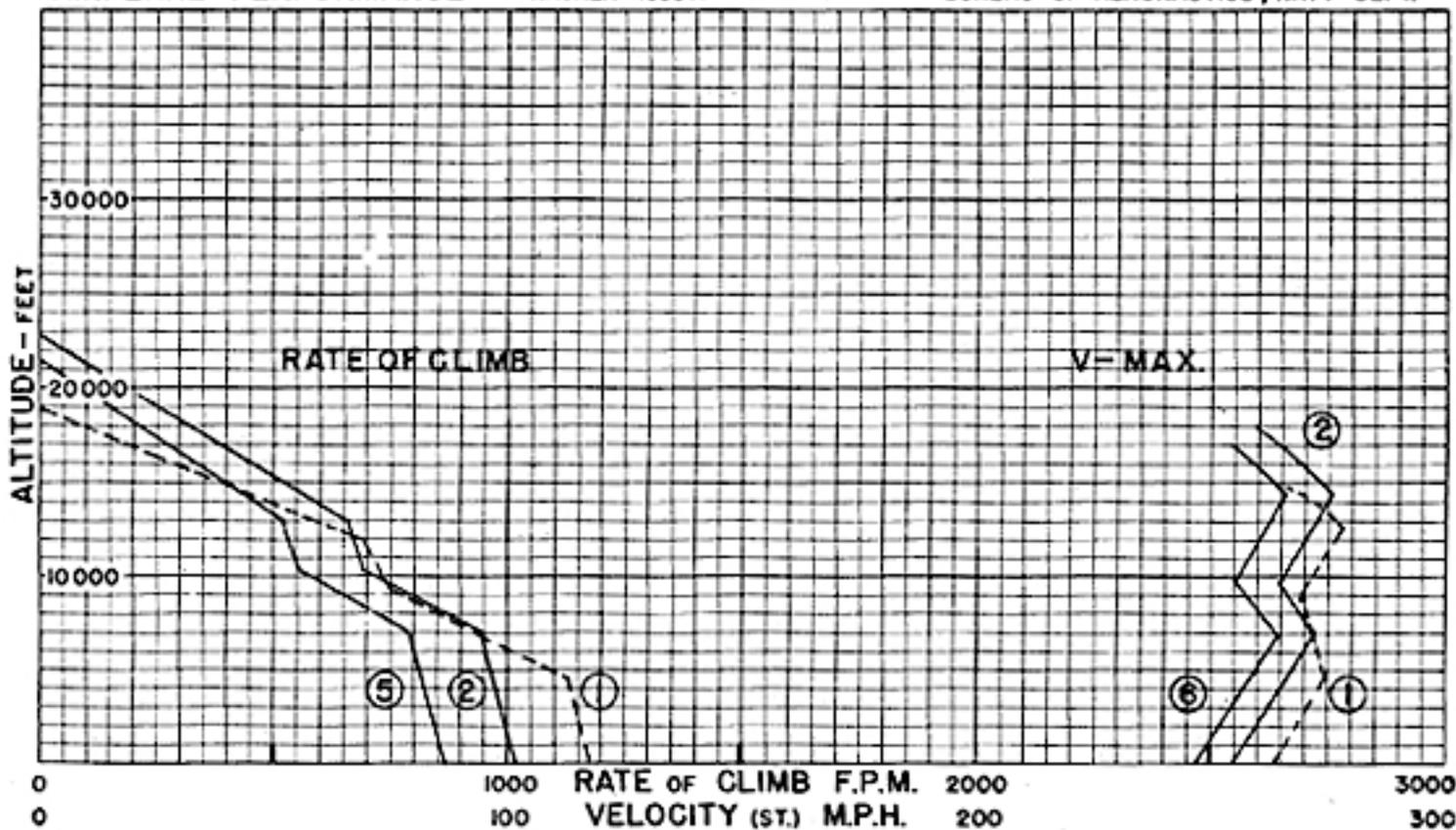
Performance for all conditions does not include the effect of de-icer boots and external bomb racks. Rockets on MK5-1 launchers. Launchers are aboard in condition (6).

AN/APS-3 Radar Nacelle is carried on wing tip for all conditions. For ferry condition (7), internal parts are removed. Ferry range will increase 55 St/Mi by removing radar nacelle. Vmax/ACA for condition (1) is increased 3.7 MPH by removing radar nacelle.

Ferry condition (7). One 585 gal. B.B. and two 50 gal. internal tanks are carried in lieu of the one 335 gal. and one 215 gal. B.B. tanks.

The following combinations of bombs and/or tanks are possible in the fuselage bomb-bay.

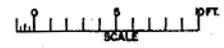
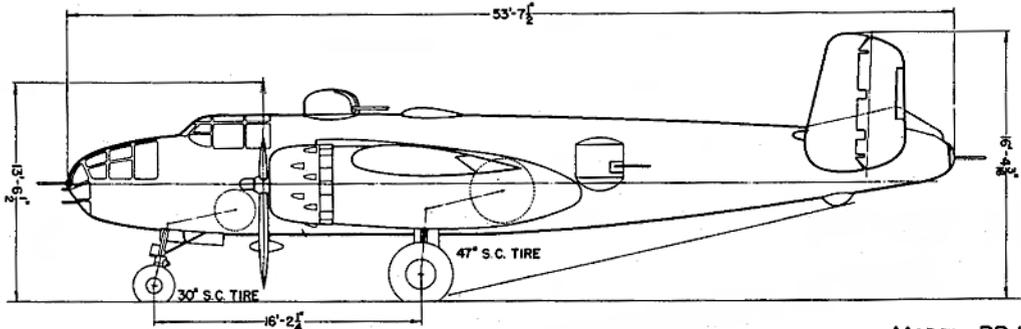
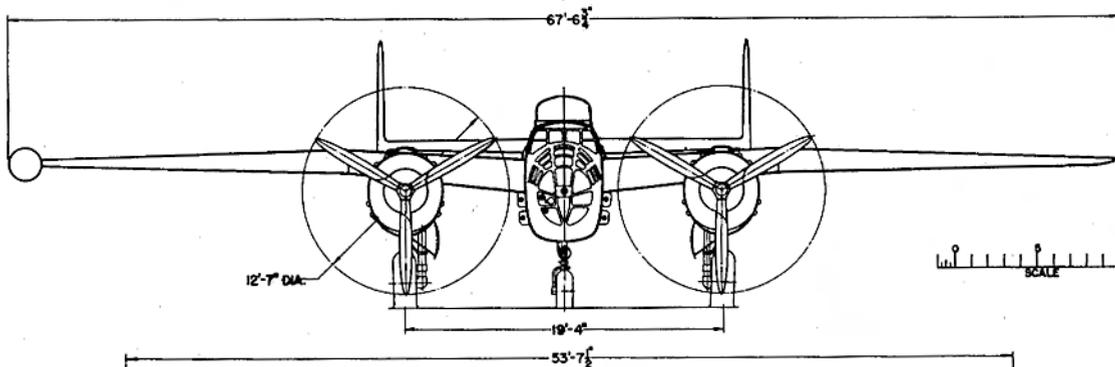
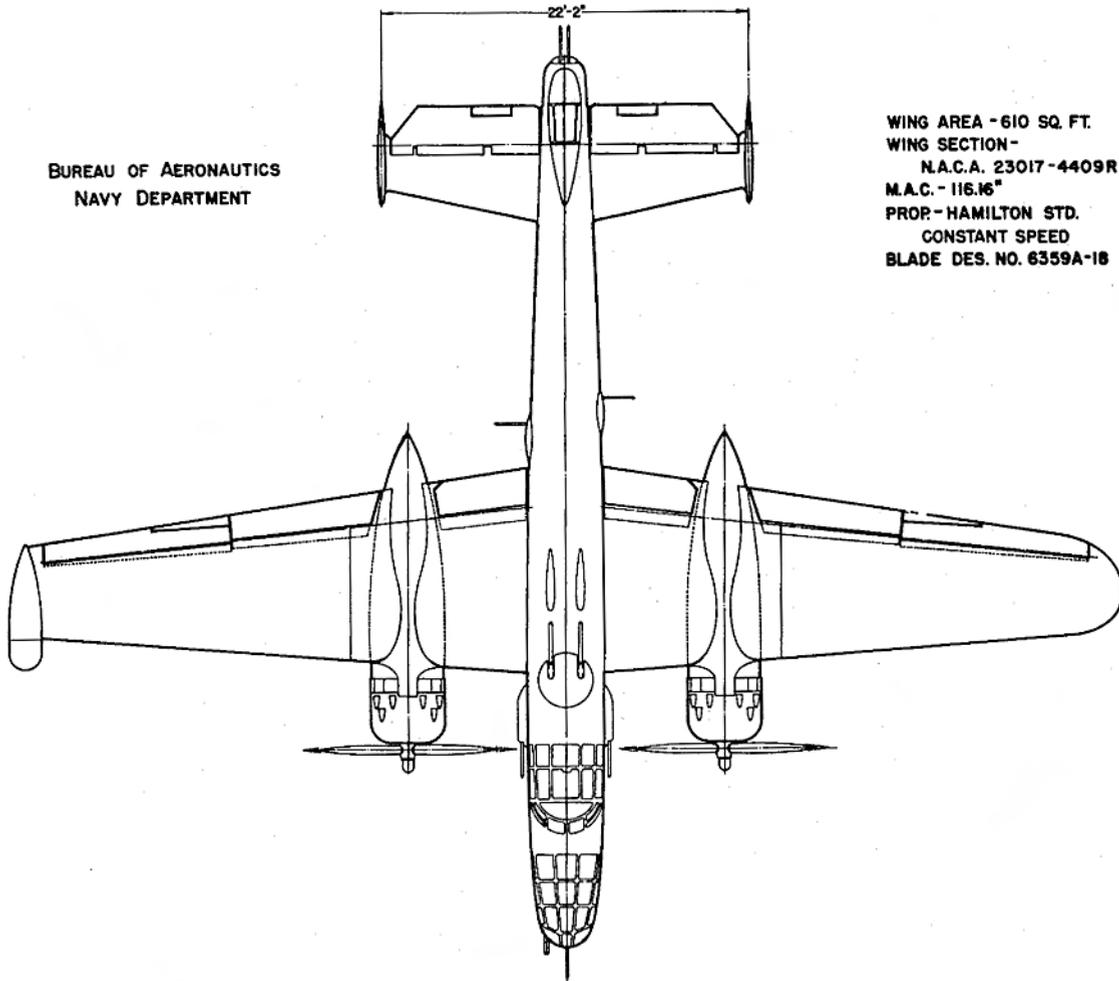
1. One 585 gal. unprot. droppable tank and no bombs.
2. One 335 gal. unprot. droppable tank and no bombs.
3. One 335 gal. unprot. droppable tank and one 215 gal. protected (not droppable) tank.
4. One 215 gal. protected (not droppable) tank and the bombs listed on page 1.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 610 SQ. FT.
WING SECTION -
N.A.C.A. 23017-4409R
M.A.C. - 116.16"
PROP. - HAMILTON STD.
CONSTANT SPEED
BLADE DES. NO. 6359A-18



MODEL PBJ-1J

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

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

PROTECTION

1. BOMBARDIER	37 LBS
2. PILOT & CO-PILOT FWD.	358 LBS.
3. PILOT & CO-PILOT AFT.	200 LBS.
4. TURRET	56 LBS.
5. HYDRAULIC RESERVOIR	23 LBS.
6. SIDE WAIST	74 LBS.
7. TAIL TURRET	196 LBS.
8. SELF-SEALING CELLS	1321 LBS.

