

**AIRPLANE CHARACTERISTICS & PERFORMANCE**

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER			1	2	3	4					
LOADING CONDITION			A. S. PATROL 4-650#	A. S. PATROL 4-650# One Bomb-bay Tank	A. S. PATROL 4-325# One Bomb-bay Tank	PATROL  Two Bomb-bay Tanks					
GROSS WEIGHT	LBS.		51860	54525	53225	54400					
EMPTY WEIGHT - Actual -	LBS.		29915								
FUEL / OIL	GALS.		2350 / 130	2744 / 150	2744 / 150	3138 / 150					
FIXED GUNS/AMMUNITION			None								
FLEXIBLE GUNS/AMMUNITION			4-.50 cal./800 rds.								
ENGINE POWER USED FOR PERFORMANCE			NORMAL	NORMAL	NORMAL	NORMAL					
WING LOADING	LBS./SQ.FT.		36.8	38.8	37.8	38.7					
POWER LOADING ①	LBS./BHP.		19.2	20.2	19.7	20.1					
V-MAX. SEA LEVEL	MPH.		194	192	193	193					
V-MAX./CRITICAL ALT.	MPH./FT.		209 / 13000	207 / 13000	208 / 13000	207 / 13000					
V-STALL GROSS WEIGHT ②	MPH.		76.1	77.9	77.1	77.9					
V-STALL. WITHOUT FUEL ②	MPH.		64.9	65.2	64.0	63.0					
TIME-TO-CLIMB -10000FT.-	MIN.		21.4	25.3	23.3	25.1					
TIME-TO-CLIMB -20000 FT.-	MIN.		-	-	-	-					
SERVICE CEILING	FT.		17600	16800	17100	16600					
TAKE-OFF DISTANCE -CALM-	FT.										
TAKE-OFF DISTANCE -15 KN-	FT.										
TAKE-OFF DISTANCE -25 KN-	FT.										
TAKE-OFF DISTANCE -50 FT. OBST.	FT.										
TAKE-OFF TIME	SECONDS		44	56	49	55					
RATE OF CLIMB -SL-	FT./MIN.		550	470	510	480					
MAX. RANGE / V-AV. ③	ST. MI. / MPH.		2725 / 134	2880 / 136	3130 / 135	3530 / 135					
RANGE / V-AV. -60%NSP-③-	ST. MI. / MPH.										
SEARCH RADIUS / V-AV. -20%R-	NMI. / KN.		745 / 117	790 / 119	835 / 118	935 / 118					
A.S.W. RADIUS / V-AV. -20%R-	NMI. / KN.		610 / 117	660 / 119	700 / 118						
SCOUT RADIUS	N MI.										
COMBAT RADIUS	N MI.										
ENGINE / PROP. GEAR RATIO			2 H. A. C. R-2600-12 (16:7)								
ENGINE RATING BHP/RPM/ALT.			NORMAL		TAKE-OFF						
			1500 / 2400 / SL-5800		1700 / 2800						
			1350 / 2400 / 8800-13000								
TANKAGE IN GALLONS			OIL			FUEL			OFFENSIVE ARMAMENT		
AUX. FIXED	PROTECTED						WING BOMB-BAYS:-				
	UNPROTECTED			150	2350		Bombs - 8-1600#, 8-1000#, 8-500#, or 12-100#.				
	TOTAL - FIXED INTERNAL			150	2350		Depth Bombs - 8-650#, or 8-325# Mines - 4 MK 13, 8 MK-26-1				
	DROPPABLE						WINGS (external):-				
	DROPPABLE-Bomb-bays-						Torpedoes - 2 MK 13-2				
NOTE	Unprotected - 2 @ 394			788							
	TOTAL			150	3138						
	STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS						Note: Bombs cannot be carried together with droppable tank in bomb-bay				
	① BHP AT MAX. CRIT. ALT.										
② STALL-WITH POWER											
③ AT 1500' ALTITUDE											

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LOADING CONDITION				
GROSS WEIGHT LBS.				
EMPTY WEIGHT LBS.				
FUEL/OIL GALS.				
FIXED GUNS/AMMUNITION				
FLEXIBLE GUNS/AMMUNITION				
ENGINE POWER USED FOR PERFORMANCE				
WING LOADING LBS./SQ.FT.				
POWER LOADING ① LBS./BHP				
V-MAX. SEA LEVEL MPH.				
V-MAX./ CRITICAL ALT. MPH./ FT.				
V-STALL. GROSS WEIGHT ② MPH.				
V-STALL. WITHOUT FUEL ② MPH.				
TIME-TO-CLIMB -10000FT.- MIN.				
TIME-TO-CLIMB -20000FT.- MIN.				
SERVICE CEILING FT.				
TAKE-OFF DISTANCE -CALM- FT.				
TAKE-OFF DISTANCE -15 KN.- FT.				
TAKE-OFF DISTANCE -25KN.- FT.				
TAKE-OFF DISTANCE -50 FT. OBST. FT.				
TAKE-OFF DISTANCE SECONDS				
RATE OF CLIMB -SL- FT./ MIN.				
MAX. RANGE / V-AV. ③ ST. MI./ MPH.				
RANGE / V-AV. -60%NSP-③- ST. MI./ MPH.				
SEARCH RADIUS / V-AV. -20%R- NMI./ KN.				
A. S. W. RADIUS / V-AV. -20%R- NMI./ KN.				
SCOUT RADIUS NMI.				
COMBAT RADIUS NMI.				

PERFORMANCE IS BASED ON-PROTOTYPE FLIGHT TEST

RANGE & RADIUS ARE BASED ON PROTOTYPE FLIGHT TEST

FUEL CONSUMPTION DATA INCREASED

BY 5 PERCENT TO CONFORM WITH PAST EXPERIENCE.

The following changes are incorporated - Contract-thru CX; Service thru #70

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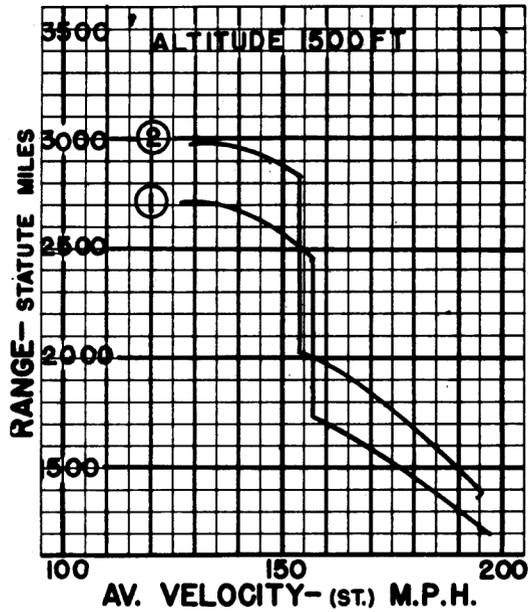
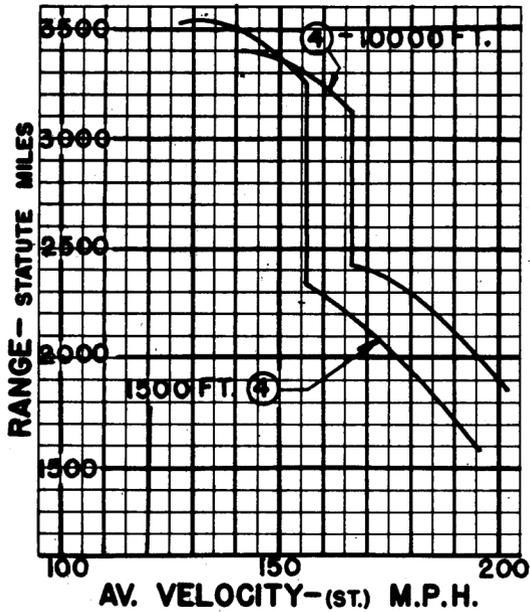
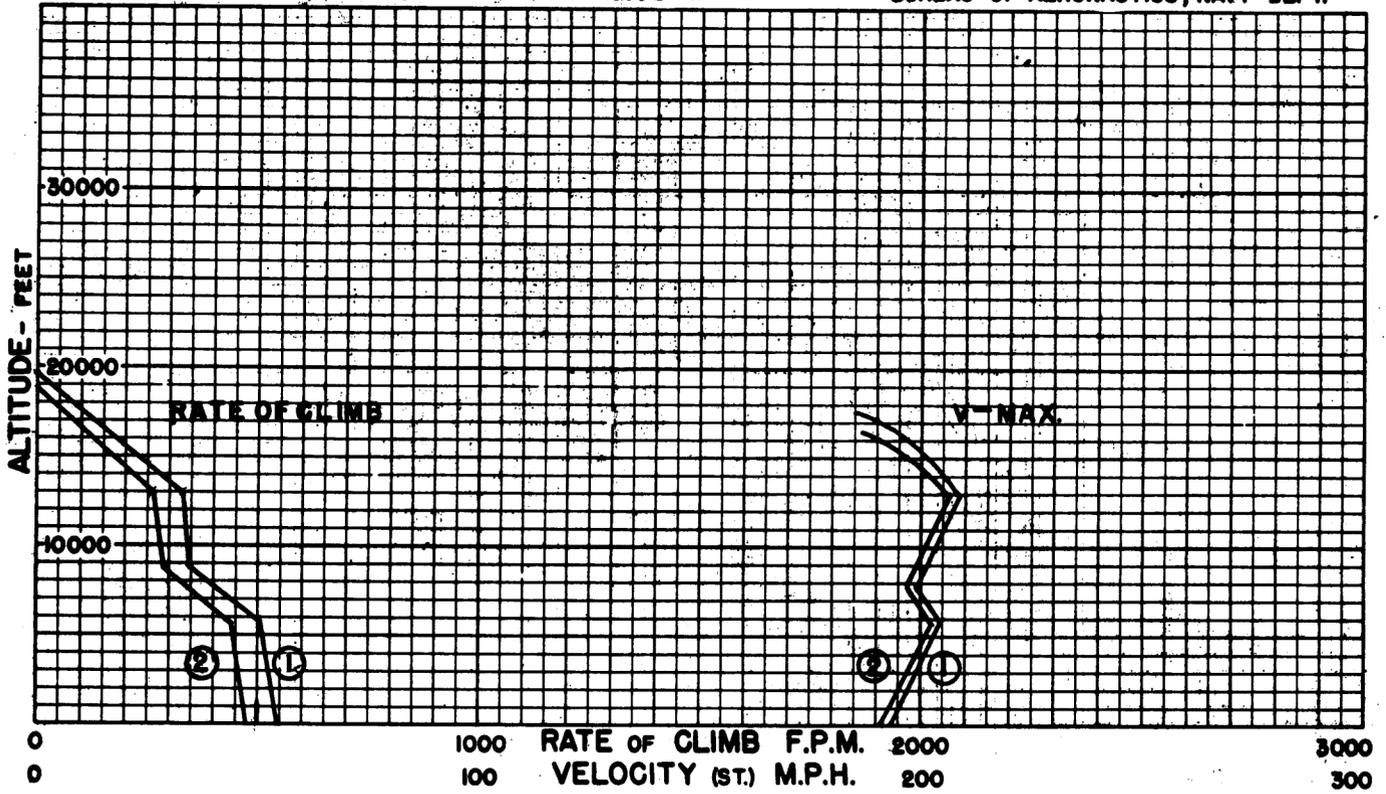
Performance for all conditions includes effect of ASG-1 radar and de-icer boots; removal of de-icer boots (177#) increases V max. approx. 4 mph and increases max. range approx. 2%.

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Practical Search Radius is 40% of range at V for max. range at 1500 ft. with 20% of initial fuel load as allowance for warm-up, take-off, climb and reserve. Depth Bombs and droppable tanks are carried the entire distance.

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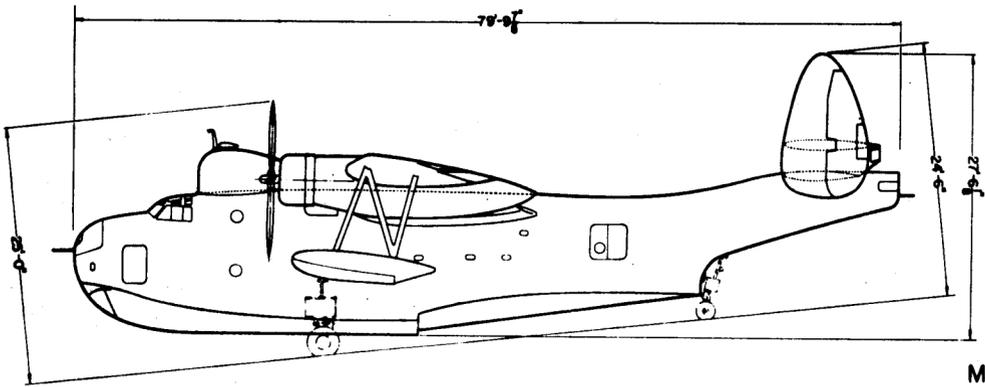
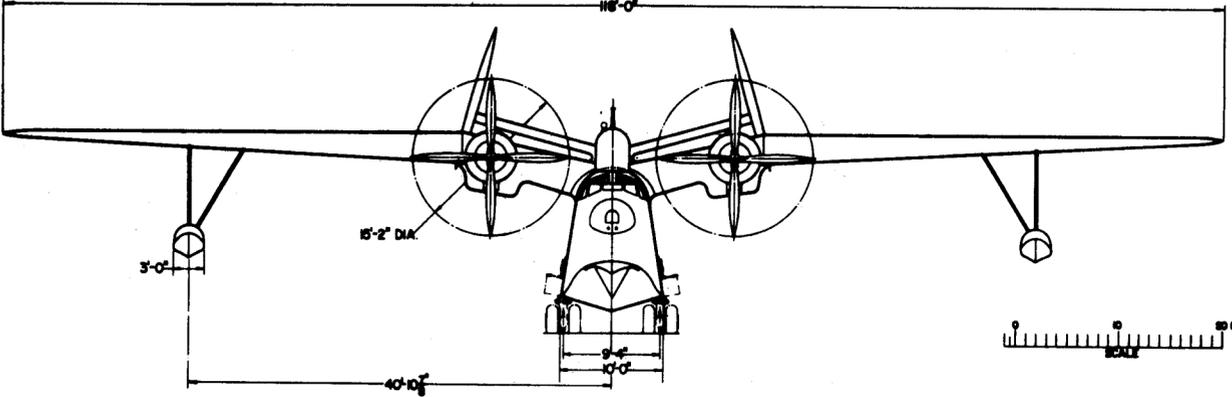
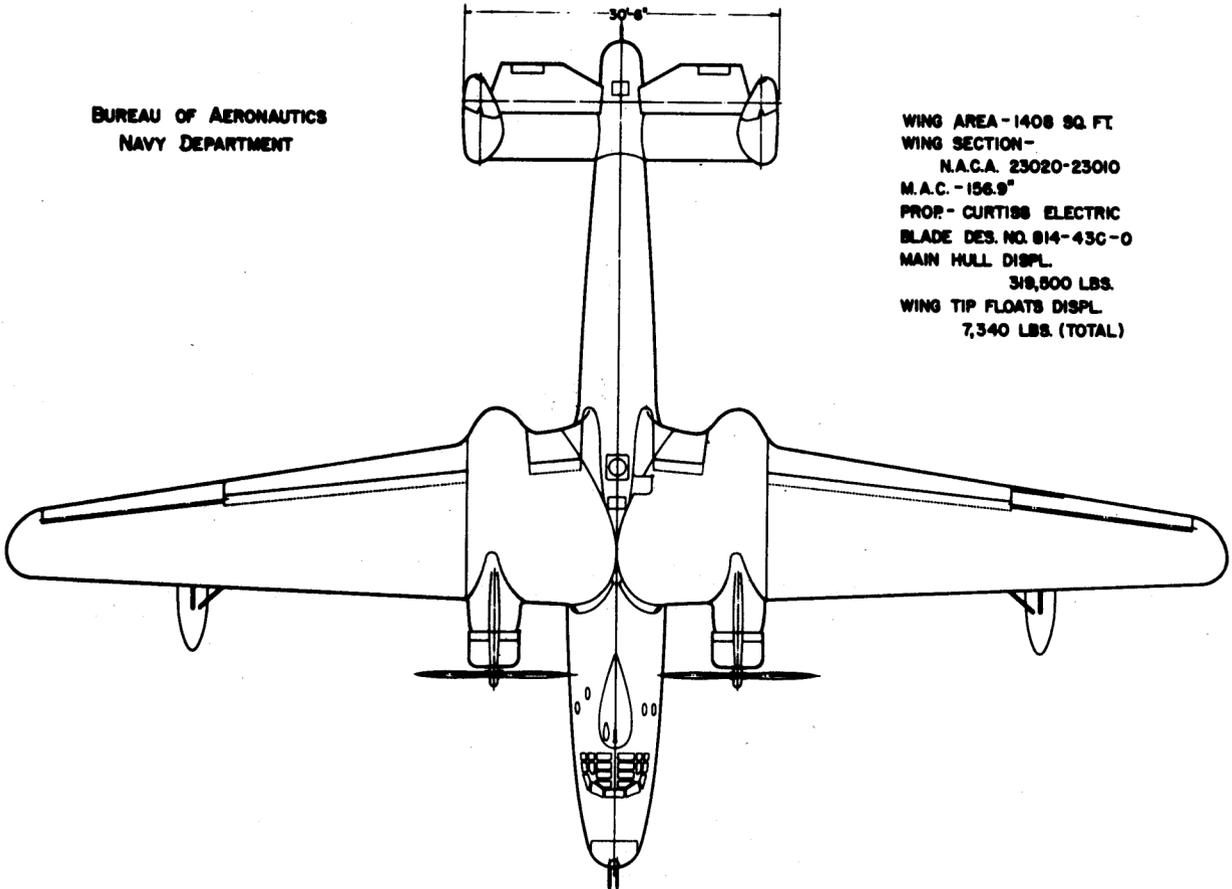
Practical A.S.W. Radius is 1/3 of range at V for max. range at 1500 ft. with 20% of initial fuel load as allowance for warm-up, take-off, climb, and reserve. Depth bombs and droppable tanks are carried the entire distance.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

WING AREA - 1408 SQ. FT.  
WING SECTION -  
N.A.C.A. 23020-23010  
M.A.C. - 156.9"  
PROP - CURTISS ELECTRIC  
BLADE DES. NO. 814-43C-0  
MAIN HULL DISPL.  
318,800 LBS.  
WING TIP FLOATS DISPL.  
7,340 LBS. (TOTAL)



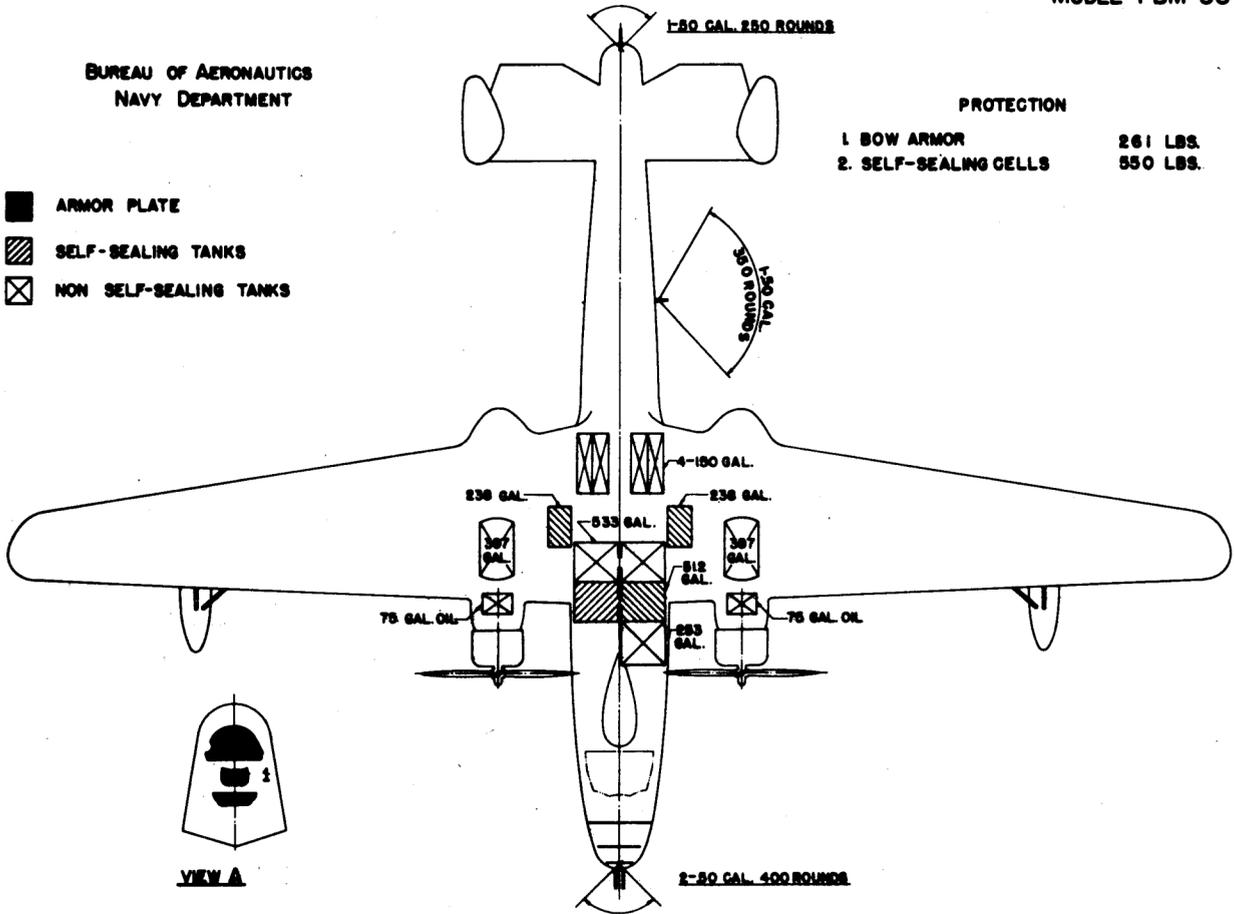
MODEL PBM-3S

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

PROTECTION

- 1 BOW ARMOR 261 LBS.
- 2. SELF-SEALING CELLS 550 LBS.

- ARMOR PLATE
- ▨ SELF-SEALING TANKS
- ⊠ NON SELF-SEALING TANKS



VIEW A

