

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS NAVY DEPT

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		PATROL	A. S. PATROL 4-325#	A. S. PATROL 4-325#	A. S. PATROL 2-650#
GROSS WEIGHT	LBS.	36353	31029	34000	36000
EMPTY WEIGHT - Actual -	LBS.	19288			
FUEL/OIL	GALS.	2070/116	1000/56	1463/82	1776/98
FIXED GUNS/AMMUNITION		NONE			
FLEXIBLE GUNS/AMMUNITION		3-50 cal./2210 rds. & 1-30 cal./1000 rds.			
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	26.0	22.2	24.3	25.8
POWER LOADING ①	LBS./BHP.	17.3	14.8	16.2	17.1
V-MAX. SEA LEVEL	MPH.	174	172	170	170
V-MAX. AIRPLANE CRIT. ALT.	MPH.	186/6700	183/6700	181/6700	181/6700
V-STALL GROSS WEIGHT ②	MPH.	77.8	71.9	75.2	77.4
V-STALL WITHOUT FUEL ②	MPH.	63.1	64.6	64.8	65.0
TIME-TO-CLIMB -10000FT-	MIN.	18.1	13.0	15.8	18.1
TIME-TO-CLIMB -20000FT-	MIN.	-	-	-	-
SERVICE CEILING	FT.	15100	17800	16100	15000
TAKE-OFF DISTANCE -CALM-	FT.				
TAKE-OFF DISTANCE -15 KN-	FT.				
TAKE-OFF DISTANCE -25 KN-	FT.				
TAKE-OFF TIME	SECONDS	70	41	53	68
RATE OF CLIMB -SL-	FT/MIN.	600	820	680	600
MAX. RANGE/V-AV ③	STMI/MPH.	3700/111	1855/105	2590/107	3105/115
BOMBING RADIUS/V-AV -20%R-	NMI/KN.				
BOMBING RADIUS/V-AV -33%R-	NMI/KN.				
PATROL RADIUS/V-AV -20%R-	NMI/KN.	830/98	420/91	580/94	690/100
PATROL RADIUS/V-AV -33%R-	NMI/KN.	670/99	350/92	480/95	565/101
SCOUT RADIUS	N MI.				
COMBAT RADIUS	N MI.				
ENGINE / PROP. GEAR RATIO		2 P&W R 1830-92 (16:9)			
ENGINE RATING BHP/RPM/ALT.		NORMAL		TAKE-OFF	
		1050/2550/SL-7000		1200/2700	
TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT	
AUX. FIXED	PROTECTED		622	WINGS: (EXTERNAL)	
	UNPROTECTED	130	1463	BOMBS: 2-1600#; 4-500#	
	TOTAL - FIXED INTERNAL	130	2085	: 4-1000#; 12-100#	
	DROPPABLE			DEPTH BOMBS	
	DROPPABLE			: 8-325#; 4-650#	
TOTAL	130	2085	TORPEDOES		
			: 2-MK 13-2		
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				

NAAER-1519B (Rev. 4-44)

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		5	6		8
LOADING CONDITION		BOMBER 4-500#	BOMBER 4-1000#	TORPEDO 2 MK 13-2	FERRY
GROSS WEIGHT	LBS.	36000	37000	38000	34216
EMPTY WEIGHT - Actual -	LBS.		19288		18805
FUEL/OIL	GALS.	1679/94	1524/86	1633/94	2070/116
FIXED GUNS/AMMUNITION		NONE			
FLEXIBLE GUNS/AMMUNITION		3-50 cal./2210 & 1-30 cal./1000			NONE
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	25.8	26.4	27.1	24.5
POWER LOADING ①	LBS./BHP	17.1	17.6	18.1	16.3
V-MAX. SEA LEVEL	MPH.	168	165	167	181
V-MAX. AIRPLANE CRIT. ALT.	MPH.	179/6700	176/6700	177/6700	194/6800
V-STALL. GROSS WEIGHT ②	MPH.	77.4	78.5	79.6	95.4
V-STALL. WITHOUT FUEL ②	MPH.	65.7	68.2	68.6	60.4
TIME-TO-CLIMB -10000FT.-	MIN.	18.6	20.2	21.7	15.4
TIME-TO-CLIMB -20000FT.-	MIN.	-	-	-	-
SERVICE CEILING	FT.	14900	14100	13600	16700
TAKE-OFF DISTANCE -CALM-	FT.				
TAKE-OFF DISTANCE -15 KN.-	FT.				
TAKE-OFF DISTANCE -25KN.-	FT.				
TAKE-OFF TIME	SECONDS.	68	79	94	53
RATE OF CLIMB -SL-	FT./MIN.	590	540	510	710
MAX. RANGE /V-AV. ③	ST. MI./MPH.	2865/109	2485/117	2640/122	4050/111
BOMBING RADIUS/V-AV -20%R-	NMI./KN.	965/96	850/102	895/107	
BOMBING RADIUS/V-AV -33%R-	NMI./KN.	790/97	705/103	740/108	
PATROL RADIUS/V-AV -20%R-	NMI./KN.				
PATROL RADIUS/V-AV -33%R-	NMI./KN.				
SCOUT RADIUS	NMI.				
COMBAT RADIUS	NMI.				

PERFORMANCE IS BASED ON - FLIGHT TEST

RANGE & RADIUS ARE BASED ON PROTOTYPE FLIGHT TEST

FUEL CONSUMPTION DATA INCREASED

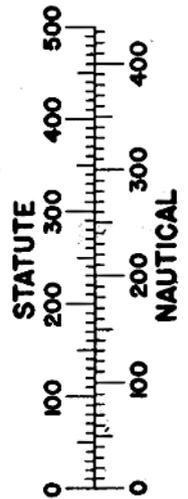
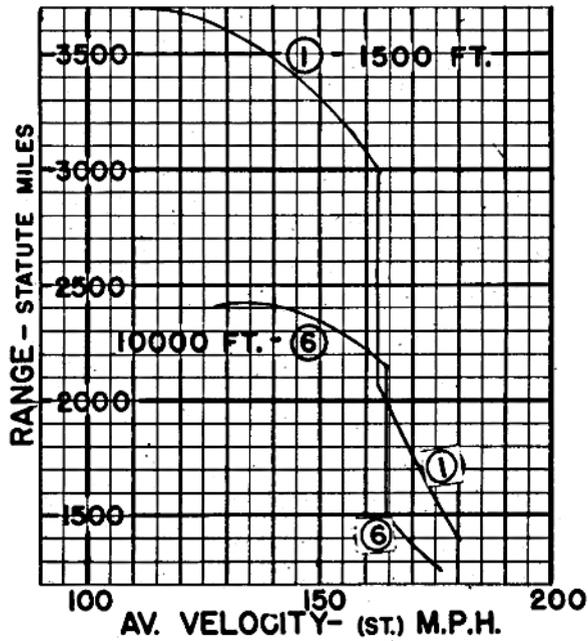
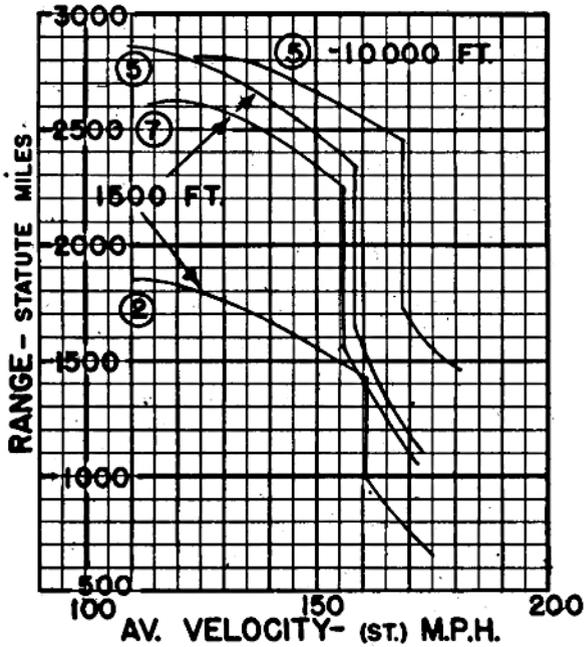
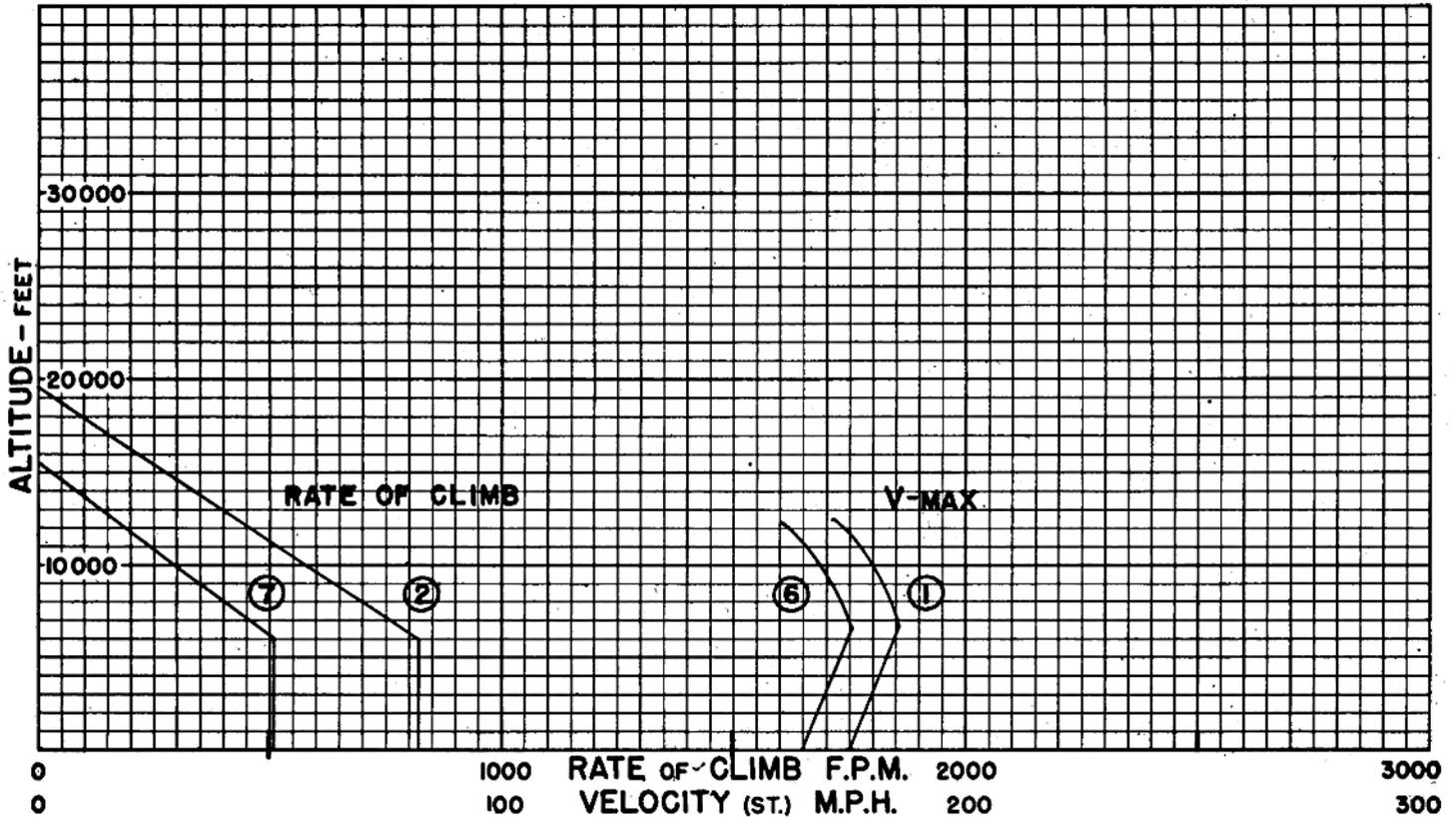
BY 5 PERCENT TO CONFORM WITH PAST EXPERIENCE.

PRACTICAL PATROL RADIUS is 1/3 of range at V for max. range at 1500' with fuel taken out for reserve.

PRACTICAL BOMBING RADIUS is 1/2 of range at V for max. range at 1500' with fuel taken out for reserve.

Reserve considered 20% of initial fuel load for good flight conditions and 33% for adverse flight conditions. Bombs, torpedoes and droppable tanks carried all the way.

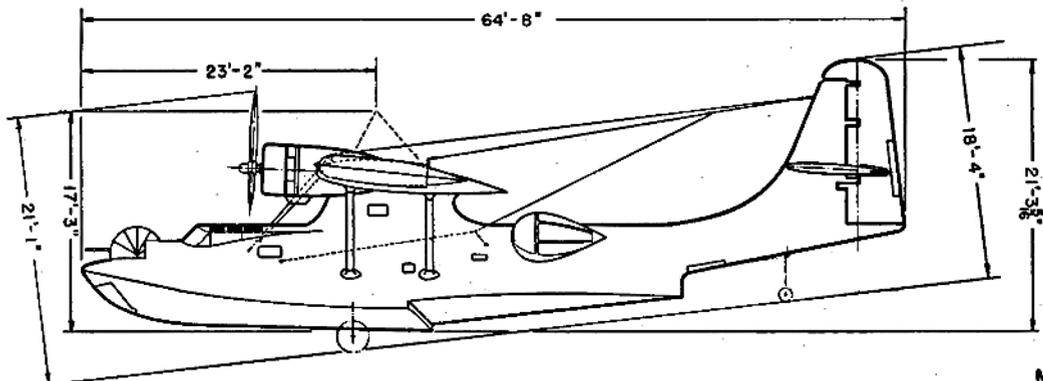
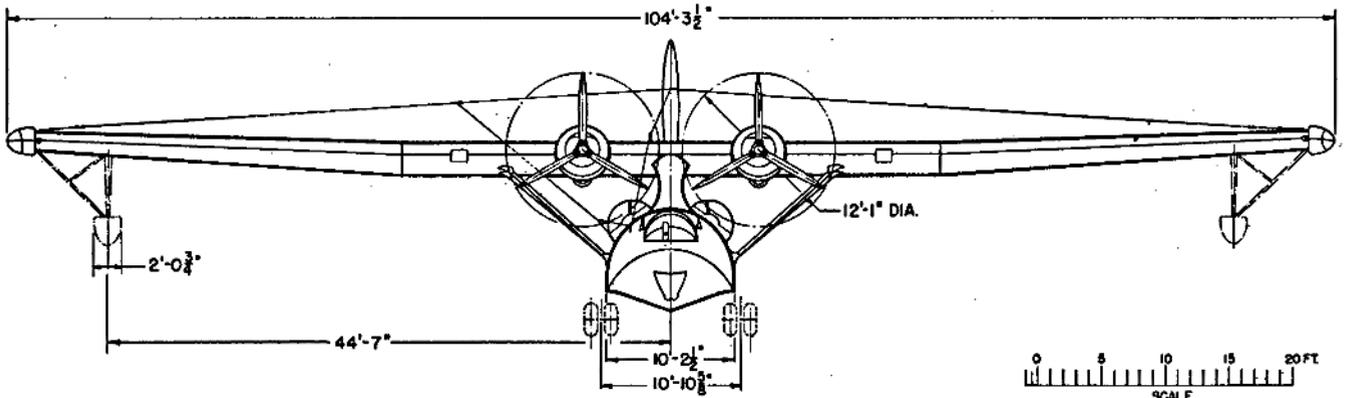
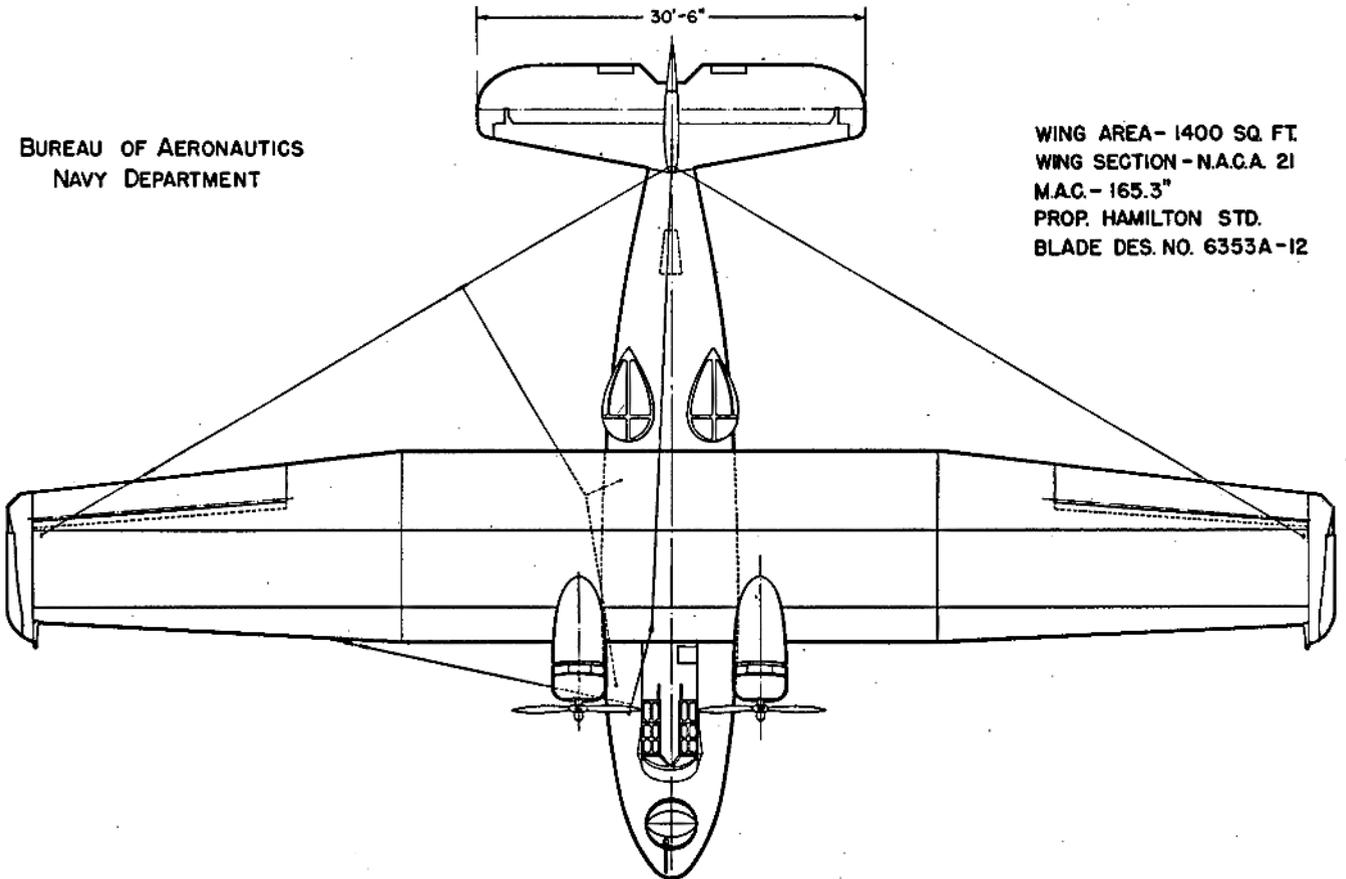
The following changes are incorporated: Contract - thru "P", Service - thru #35.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 1400 SQ. FT.
WING SECTION - N.A.C.A. 21
M.A.C. - 165.3"
PROP. HAMILTON STD.
BLADE DES. NO. 6353A-12



BUREAU OF AERONAUTICS
NAVY DEPARTMENT

MODEL PBN-1

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

PROTECTION

- 1. PILOT & CO PILOT 120 LBS.
- 2. SIDE WAIST GUNNERS 111 LBS.
- 3. TUNNEL GUNNER 92.5 LBS.
- 4. FUEL SUMP ARMOR 103 LBS.
- 5. SELF-SEALING CELLS 533 LBS.

