

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		SCOUT SEAPLANE	SCOUT SEAPLANE	RESCUE SEAPLANE 58 GAL. EXTERNAL TANK	ASW SEAPLANE 1 - 250# B. RADAR
GROSS WEIGHT	LBS.	5574	5574	5784	5968
EMPTY WEIGHT	SPECIFICATION LBS.	4144			
FUEL/OIL	GALS.	120/7.5	120/7.5	178/10	120/7.5
FIXED GUNS/AMMUNITION		1 - .50 Cal/150 Rds.			
FLEXIBLE GUNS/AMMUNITION		None			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	23.4	23.4	24.3	25.1
POWER LOADING ①	LBS./BHP.	10.1	11.2	11.6	11.9
V-MAX. SEA LEVEL	KN	164	160	156	150
V-MAX./CRITICAL ALT.	KN/FT.	175/8300	174/9800	169/9700	163/9700
V-STALL GROSS WEIGHT ②	KN	54.4	54.4	55.4	56.4
V-STALL WITHOUT FUEL ②	KN	50.8	50.8	50.1	52.8
TIME-TO-CLIMB -10000FT-	MIN.	8.5	9.6	10.5	11.4
TIME-TO-CLIMB -20000FT-	MIN.	28.2	29.6	35.0	42.8
SERVICE CEILING	FT.	21900	21900	20900	20000
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	29	29	31	34
RATE OF CLIMB -SL-	FT./MIN.	1250	1120	1030	950
MAX. RANGE / V-AV. ③	NMI./KN		755/99	1070/98	645/96
RANGE / V-AV. -60%NSP-③-	NMI./KN				
SEARCH RADIUS / V-AV. -20%R-	NMI./KN				
A.S.W. RADIUS / V-AV. -20%R- (PA-1)	NMI./KN				170/100
SCOUT RADIUS (S-1)	N MI.		210		
RESCUE RADIUS	N MI.			440	
ENGINE / PROP GEAR RATIO		RANGER V - 770 - 8/3:2			
ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL		TAKE-OFF	
	550/3300/SL - 7500	500/3150/SL - 9000		550/3300/SL	
	ABOVE VALUES ARE AEL - AUTO RICH RATINGS.				
TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT	
AUX. FIXED	PROTECTED		120		
	UNPROTECTED				
	TOTAL - FIXED INTERNAL	10		WING - EXTERNAL	
	DROPPABLE EXTERNAL (WING)		58	Bomb - 1 - 250# on MK51-12 Bombrack	
	DROPPABLE				
TOTAL	10	178	Performance is based on calculations. Range is based on AEL fuel consumption data increased by 15 percent to conform with past experience.		
NOTE	① BHP AT MAX. CRIT. ALT.				
	② STALL-WITHOUT POWER				
	③ AT 1500' ALTITUDE				

Reissued 1 January 1947

DATE

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MODEL XOSE-2

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NOTES:

Bomb Racks - 2 MK51-12 wing bomb racks and sway bracing carried in all conditions.

Radar - AN/APS-4 radar carried on MK51-12 bomb rack on Stbd. wing in Condition (4) only.

Scout Radius Formula No. S-1 Condition 2.

Radius is $\frac{1}{3}$ range at velocity for max. range at 1500 feet..Fuel for 20 min. warm-up, 1 min. T.O. used at start of flight. Allowance for 60 min. at V for max. range for rendezvous, landing and reserve carried entire distance.

Scout Radius is reduced 4 N.Mi. for each minute of Military Power operation at 1500 ft.

RESCUE RADIUS (condition 3)

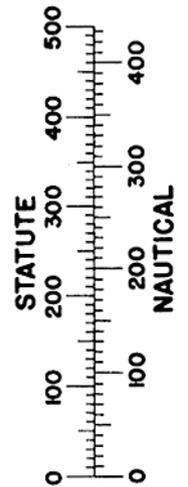
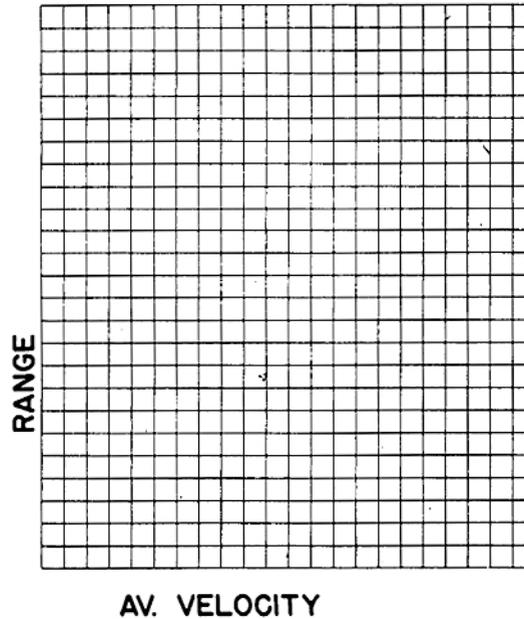
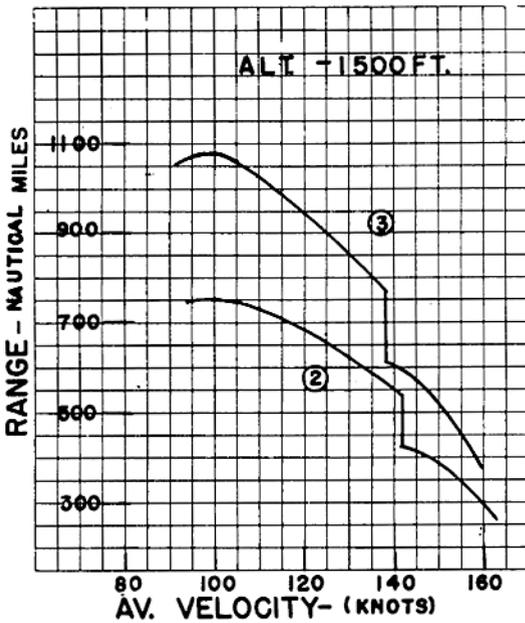
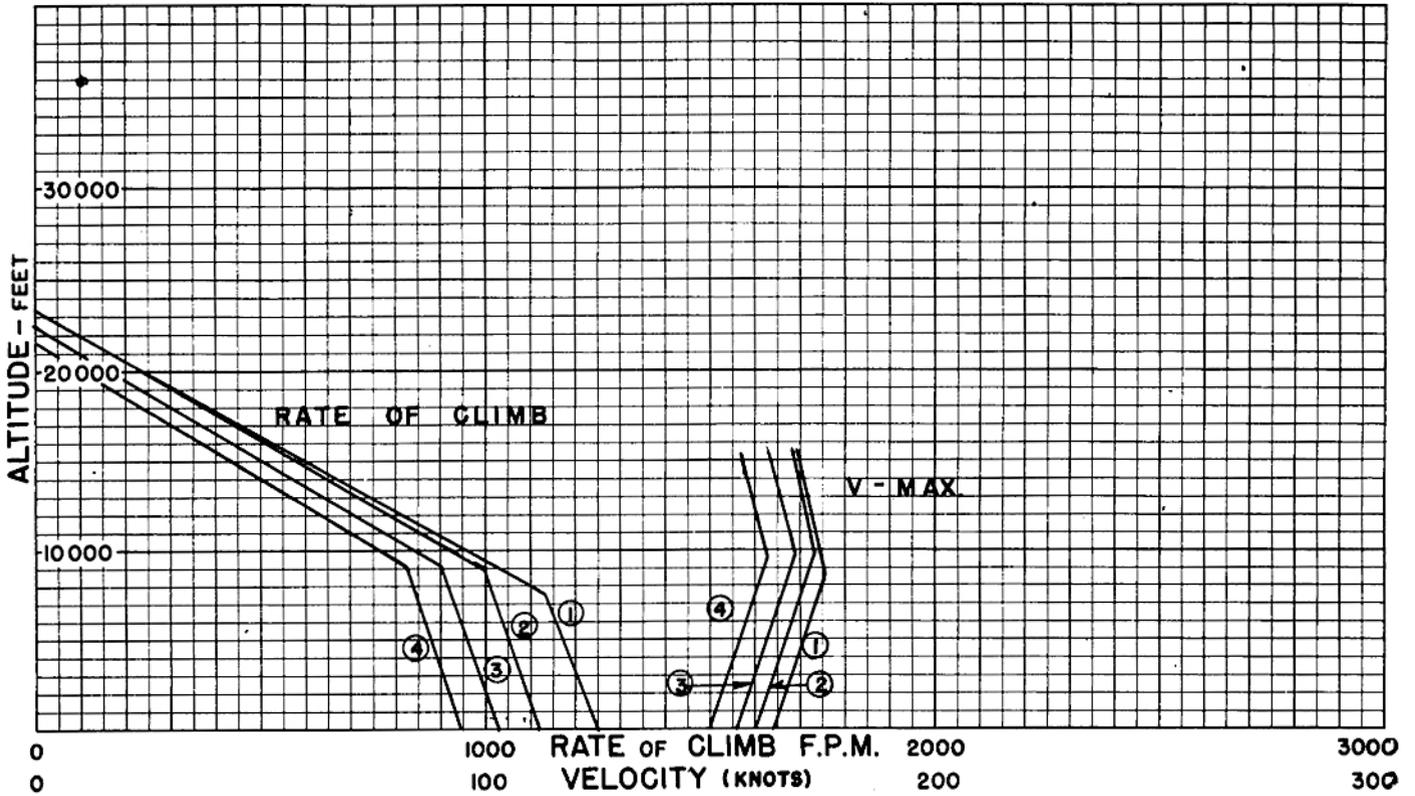
Top off and catapult; 1 min. take-off; cruise out at 1500 feet at vel. for max. range; 30 min. search at 1500 feet at vel. for max. range; land and rescue specified number of survivors at 180 pounds each; 1 min. take-off, cruise back at 1500 feet at vel. for max. range; allowance for 60 min. at vel for max. range for rendezvous, landing and reserve. No fuel is dropped and external tanks are carried entire distance.

Condition 3 - Rescue 1 survivor at 180# making gross weight of 5434# for take-off after rescue.

A.S.W. Radius Formula No. PA-1 - Condition 4.

Practical A.S.W. Radius is $\frac{1}{3}$ of range at V for max. range at 1500 feet 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.

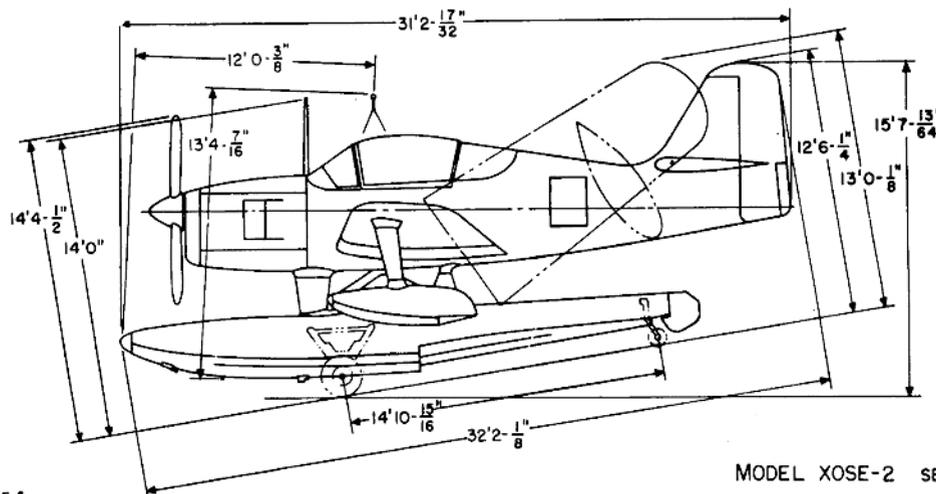
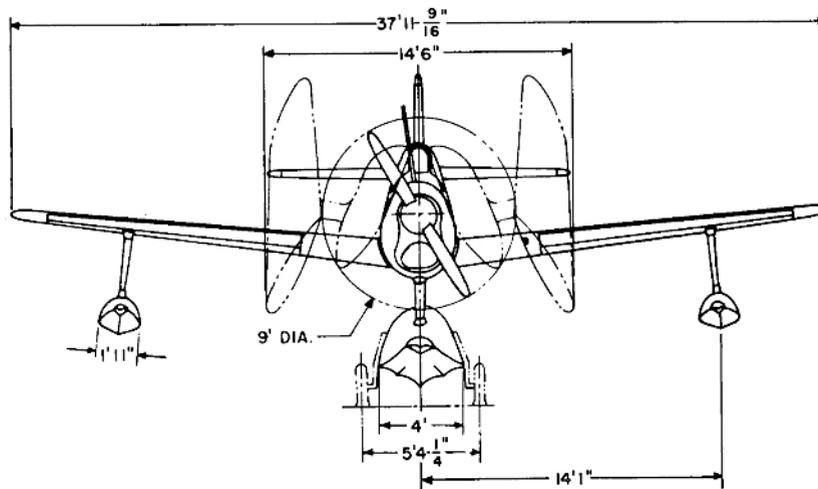
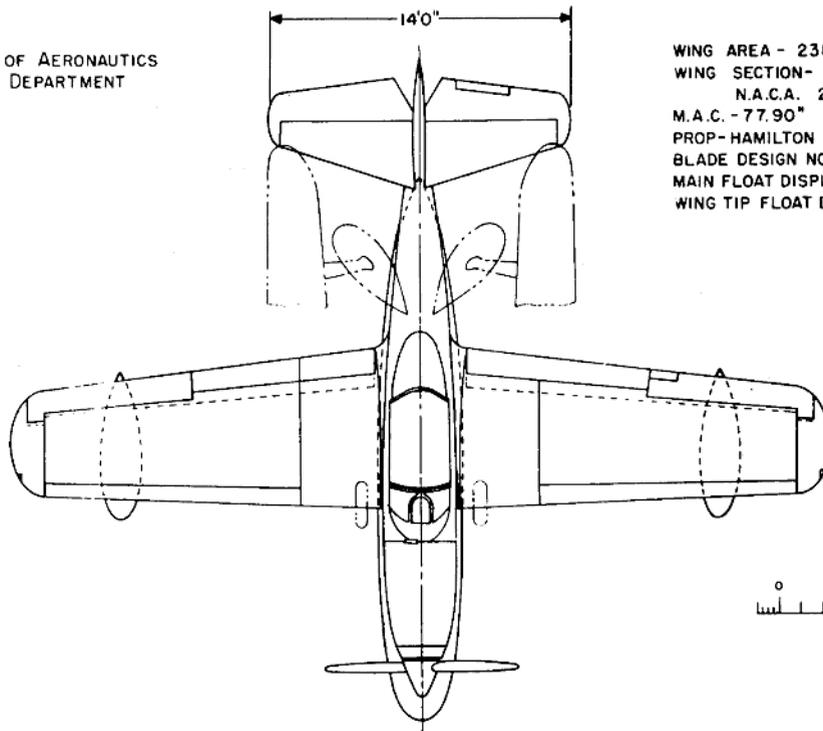
A.S.W. Radius is reduced 3 N.Mi. for each minute of Military Power operation at 1500 feet.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 238.0 SQ. FT.
WING SECTION -
N.A.C.A. 2417-2409
M.A.C. - 77.90°
PROP - HAMILTON STANDARD
BLADE DESIGN NO. - D6101A-12
MAIN FLOAT DISPL. - 8600 LBS.
WING TIP FLOAT DISPL. - 1450 LBS. (TOTAL)



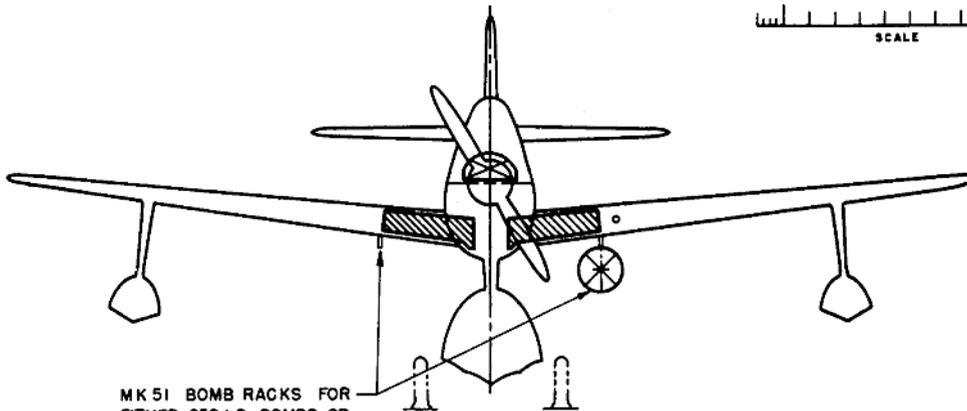
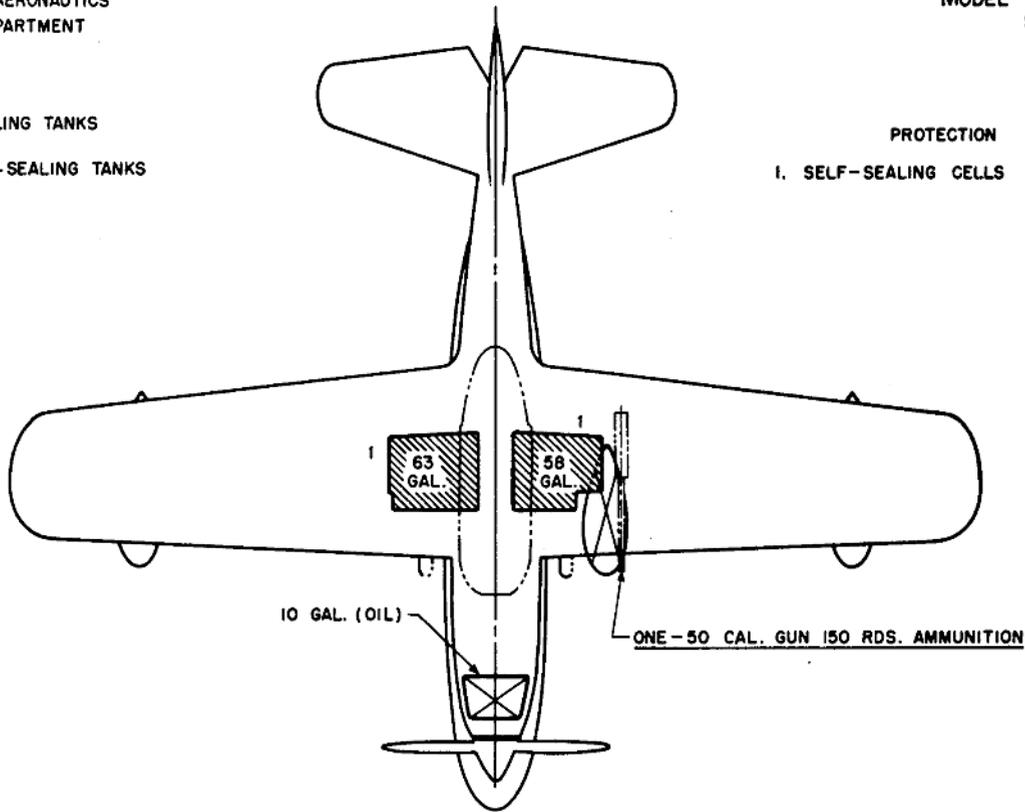
MODEL XOSE-2 SEAPLANE

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

MODEL XOSE-2
SEAPLANE

- ▨ SELF-SEALING TANKS
- ⊠ NON SELF-SEALING TANKS

PROTECTION
1. SELF-SEALING CELLS 130 LBS.



MK 51 BOMB RACKS FOR
EITHER 250 LB. BOMBS OR
58 GAL. DROPPABLE TANK
(PORT RACK ONLY)

