

**AIRPLANE CHARACTERISTICS & PERFORMANCE**

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		SEARCH MK-35 TORPEDO AN/APS-31	SEARCH MK-35 TORPEDO AN/APS-31	SEARCH MK-35 TORPEDO AN/APS-31 1-150 GAL. TANK	SEARCH MK-35 TORPEDO AN/APS-31 2-150 GAL. TANKS
GROSS WEIGHT	LBS.	19405	19405	20495	21548
EMPTY WEIGHT (SPECIFICATION)	LBS.	13720			
FUEL/OIL	GALS.	420/23	420/23	570/32	720/36
FIXED GUNS/AMMUNITION		None			
FLEXIBLE GUNS/AMMUNITION		None			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	35.4	35.4	37.3	39.3
POWER LOADING ①	LBS./BHP.	8.4	10.8	11.4	12.0
V-MAX. SEA LEVEL	KN.	241	22.0	213	208
V-MAX.	KN./FT.	247/2200	238/8000	231/7900	224/7800
V-STALL GROSS WEIGHT ②	KN.	71.2	71.2	74.1	77.0
V-STALL WITHOUT FUEL ②	KN.	66.4	66.4	67.7	68.8
TIME-TO-CLIMB -10000 FT.-	MIN.	6.0	5.5	7.2	7.8
TIME-TO-CLIMB -20000 FT.-	MIN.	21.5	22.8	29.2	
SERVICE CEILING	FT.	21700	21600	20300	19200
TAKE-OFF DISTANCE -CALM-	FT.	675	675	832	970
TAKE-OFF DISTANCE -15 KN-	FT.	421	421	530	630
TAKE-OFF DISTANCE -25 KN-	FT.	284	284	365	439
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	2150	1630	1500	1380
MAX. RANGE / V-AV. ③	N MI./KN.		1100/135	1400/136	1655/133
RANGE / V-AV -60% NSP-③-	N MI./KN.				
SEARCH RADIUS / V-AV. -20% R-	N MI./KN.				
A.S.W. RADIUS / V-AV. -20% R- (PA-1)	N MI./KN.		285/150	355/150	420/150
SCOUT RADIUS	N MI.				
COMBAT RADIUS	N MI.				
ENGINE / PROP GEAR RATIO		2800-46W / .45			
ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL		T.O.	
	2300/2800/SL-600	1800/2600/SL-6500		2300/2800/S.L.	
TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT	
AUX. FIXED	PROTECTED		420		
	UNPROTECTED			Bomb Bay (5-MK 8 shackles)	
	TOTAL - FIXED INTERNAL			1-MK-35 torpedo	
	DROPPABLE (Wings) 2 @ 150 GAL. DROPPABLE		300	or 2-MK-24 mines	
TOTAL	36	720	Rockets (8-MK 9-2 Launchers)		
			8-5" HVAR (Ex-9 head)		
NOTE	① BHP AT MAX. CRIT. ALT.				
	② STALL - WITHOUT POWER				
	③ AT 1500' ALTITUDE				
<b>PRELIMINARY</b>					

VA

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Performance is based on calculations. Range and radius are based on engine specification fuel consumption data increased by 15 per cent to conform with past experience.

Search Condition: MK-35 torpedo, 4 MK-51 wing bomb racks, AN/APS-31 radar and sway bracing and 8 MK-9 rocket launchers aboard.

Notes:

- (1) AN/APS-31 radar carried on outboard starboard wing rack.
- (2) XL-22 searchlight carried on outboard port wing rack as an alternate loading to 8-5" HVAR.
- (3) Drop tanks carried on inboard wing bomb racks.
- (4) In all conditions sway bracing is aboard only for stores actually carried.
- (5) Addition of 8-5" HVAR to Condition (1) increases gross weight to 20501 lbs., increases T.O. (25 kn. wind) to 350 ft. and decreases R/C (S.L.) to 2000 f.p.m.
- (6) Addition of XL-22 searchlight to Condition (1) increases T.O. (25 kn. wind) to 310 ft. and decreases R/C (S.L.) to 2130 f.p.m.

A.S.W. Radius Formula No. PA-1 (Mod.) Cond. Nos. 2, 3, 4.

Radius is 1/3 range at 150 kn. at 1500 ft. altitude. Allowance of 20% of initial fuel load for warm-up, take-off, climb and reserve is carried entire distance. AN/APS-31 radar, MK-35 torpedo and drop tanks are carried entire distance.

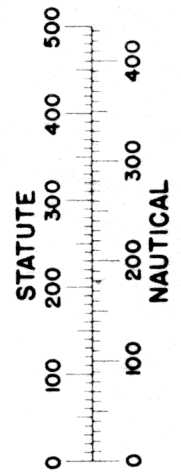
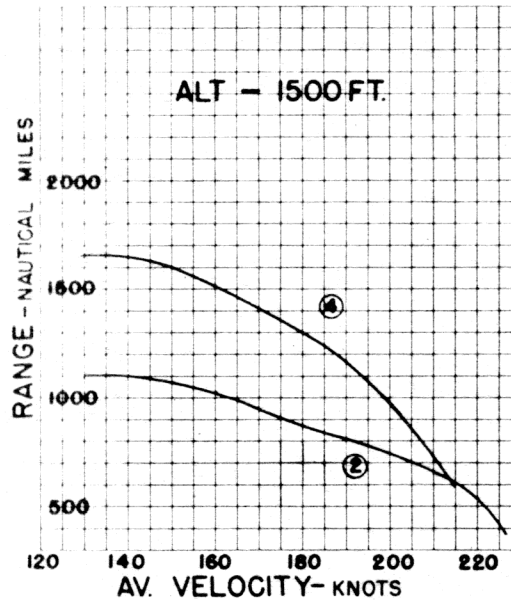
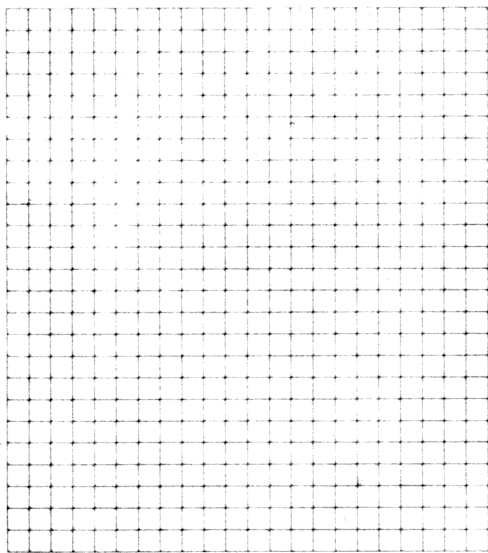
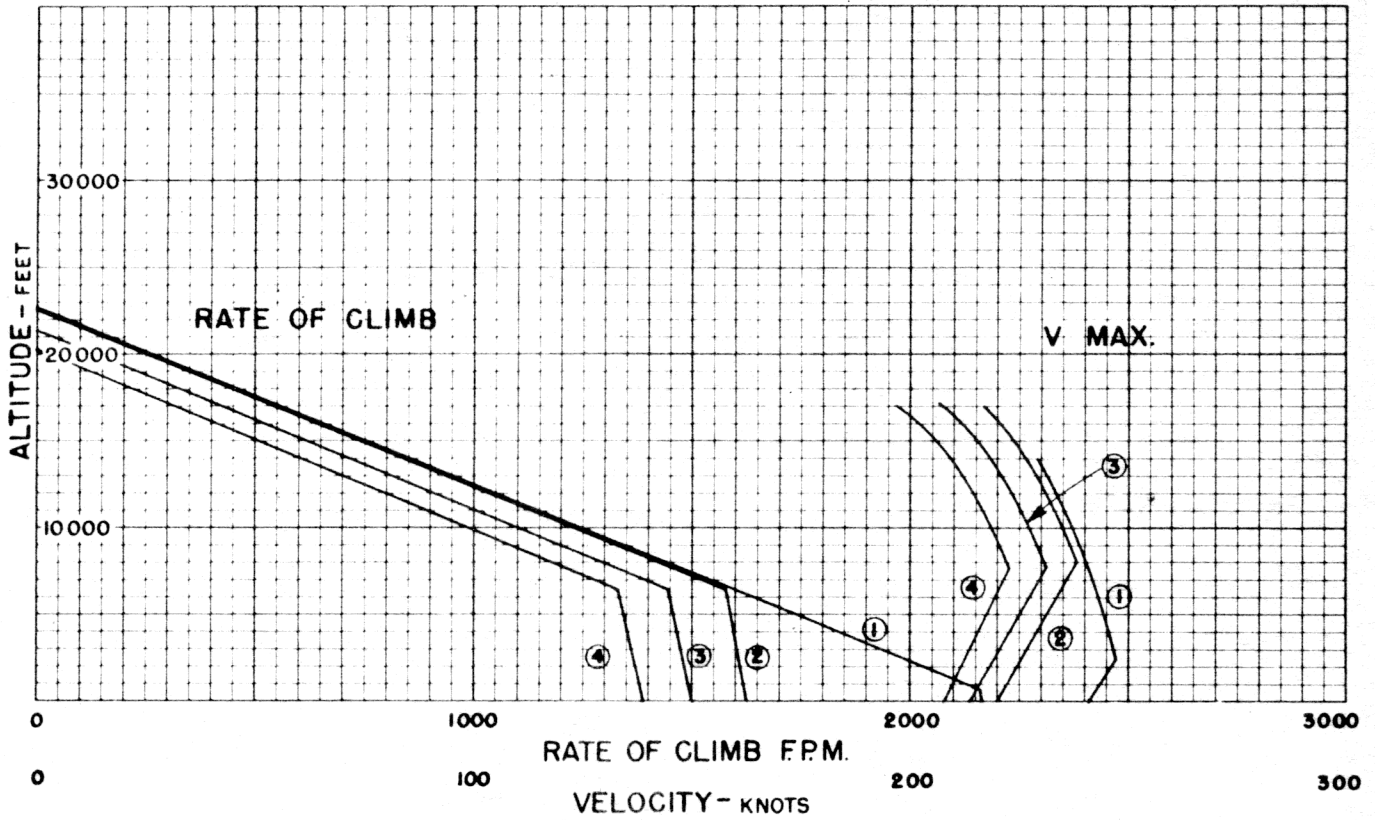
205 ft. length is required to spot 20 airplanes on the 96 ft. wide deck immediately aft of the forward ramp on CV-9 class carriers.

The XTB3F-2S airplane is a three-place, reciprocating engine propelled, carrier based ASW airplane with conventional landing gear.

C H A R A C T E R I S T I C S

Span.....60'-0"  
 Span folded.....24'-2"  
 Height-3 pt.....14'-3"  
 Length-3 pt.....42'-11"  
 Wing Area.....549 sq. ft.  
 Airfoil section.....NACA 23018-23012  
 Propeller.....H.S. C.S. 13'-2"/4 bl.  
 Design 6557A-6

**PRELIMINARY**



○ LOADING CONDITION COLUMN NUMBER

PRELIMINARY