

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER			1	2	3	4
LOADING CONDITION			SCOUT	SCOUT	BOMBER 1-2000# BOMB 2-WING TANKS	BOMBER 1-2000# BOMB AN/APS-4 RADAR
GROSS WEIGHT	LBS.		19197	19197	23386	21410
EMPTY WEIGHT	Actual LBS.		14500			
FUEL / OIL	GALS.		510 /28	510 /28	810 /36	510 /28
FIXED GUNS/AMMUNITION	4-20 mm/800 rds. - Mk. I Sight System & ASG-10A					
FLEXIBLE GUNS/AMMUNITION	None					
ENGINE POWER USED FOR PERFORMANCE			COMBAT	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.		38.5	38.5	47.0	43.0
POWER LOADING ①	LBS./BHP.		7.7	16.0	19.5	17.8
V-MAX. SEA LEVEL.	KN		304	268	241	245
V-MAX. / CRITICAL ALT.	KN/FT.		319/11600	308/18200	272/17700	279/17800
V-STALL GROSS WEIGHT ②	KN		83.6	83.6	92.2	88.2
V-STALL WITHOUT FUEL ②	KN		76.8	76.8	82.3	81.9
TIME-TO-CLIMB -10000FT.-	MIN.		4.1	5.6	8.3	6.9
TIME-TO-CLIMB -20000FT.-	MIN.		10.2	12.7	21.0	16.5
SERVICE CEILING	FT.		30,500	29,600	24,100	26,700
TAKE-OFF DISTANCE -CALM-	FT.		580	580	960	773
TAKE-OFF DISTANCE -15 KN-	FT.		373	373	646	510
TAKE-OFF DISTANCE -25 KN-	FT.		258	258	468	363
TAKE-OFF DISTANCE -50 FT. OBST.	FT.					
TAKE-OFF TIME	SECONDS					
RATE OF CLIMB -SL-	FT./MIN.		2780	1810	1250	1490
MAX. RANGE / V-AV. ③	NMI./KN			1260/164	1575/165	
RANGE / V-AV. -60%NSP-③-	NMI./KN					
SEARCH RADIUS / V-AV. -20%R-	NMI./KN					
A.S.W. RADIUS / V-AV. -20%R-	NMI./KN					
SCOUT RADIUS (S-1)	N MI.			350		
COMBAT RADIUS (B-1)	N MI.				590	285
ENGINE / PROP GEAR RATIO			P & W R-4360-4/.425			T.O.
ENGINE RATING BHP/RPM/ALT.	COMBAT	MILITARY	NORMAL		T.O.	
	3310/2700/S.L.	2950/2700/S.L.	2425/2550/S.L.		2975/2700/S.L.	
	2900/2700/9000	3000/2700/3000	2500/2550/5000			
		2400/2700/16200	2200/2550/15750			
Combat rating is estimated. Military and Normal ratings are from AEL calibration with "Normal" Mixture Control. T.O. Rating is from AEL calibration with "Rich" Mixture Control.						
TANKAGE IN GALLONS			OIL	FUEL	OFFENSIVE ARMAMENT	
AUX. FIXED	PROTECTED		36	510	FUSELAGE - Ext. on Douglas Bomb Ejector (alternate with drop tank)	
	UNPROTECTED		36	510	Bombs - 1-2000#, 1-1600#, 1-1000# or 1-500#	
	TOTAL - FIXED INTERNAL				Depth Bombs - 1-650# or 1-325#	
	DROPPABLE				Mines - 1-2000# or 1-1000#	
	DROPPABLE 2@ 150 gal. on wing				300	Torpedo - 1 Mk 13-3
TOTAL		36	810	WINGS - Ext. (Alternate with radar and drop tanks)		
NOTE	① BHP AT MAX. CRIT. ALT.			Bombs - 2-1000#, 2-500#, 2-250# or 6-100#		
	② STALL - WITHOUT POWER			Depth Bombs - 2-650# or 2-325#		
	③ AT 1500 ALTITUDE			Mines - 2-1000#		
			Rocket Launcher - Mk-9			
			Rockets 8-5" HVAR or 8-5" AR			

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Performance is based on flight tests of XBTM-1 Airplane. Range and radius are based on A.E.L. fuel consumption data increased by 15% to conform with past experience.

Scout Condition: Two wing bomb racks (Mk 51) with sway bracing and bomb ejector (fuselage) aboard. Sway bracing for bomb ejector aboard only in bomber conditions. AN/APS-4 radar and rocket launchers not aboard. Addition of 12 Mk-9 rocket launchers reduces V max S.L. to 298 kn. and V max/ACA to 313 kn/11500 ft. at combat power. Addition of 12-5" HVAR increases gross weight of condition (1) to 20922 and reduces V max S.L. to 279 kn and V max/ACA to 293 kn/11200 ft.

Notes:

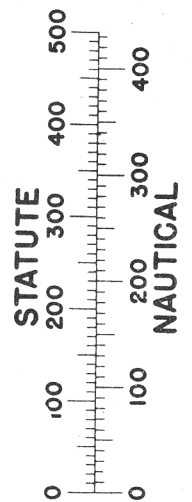
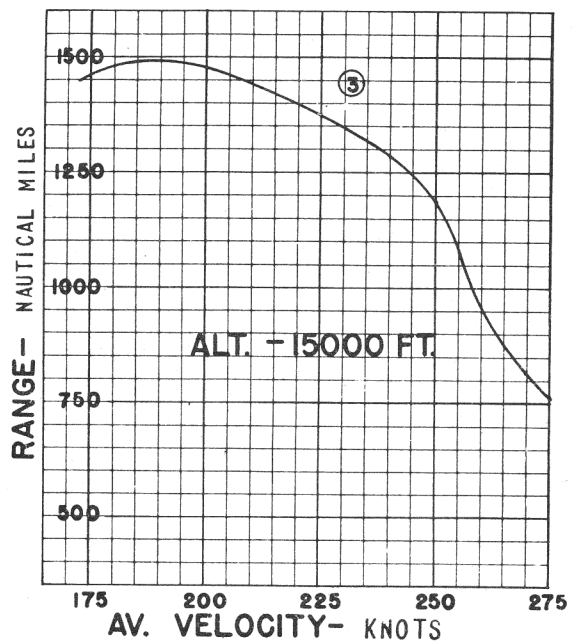
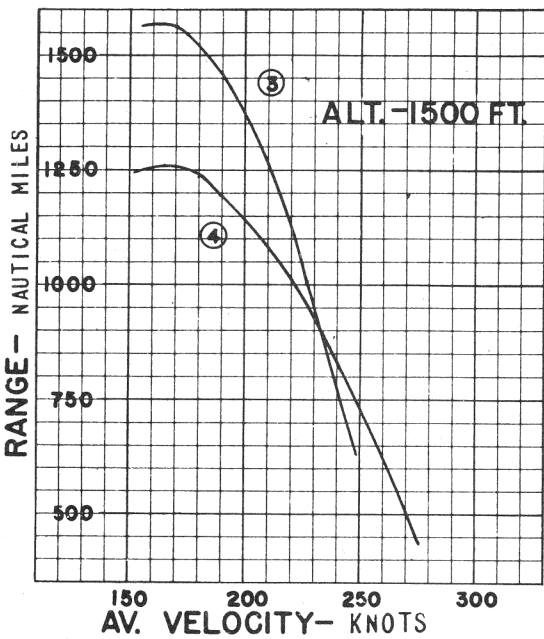
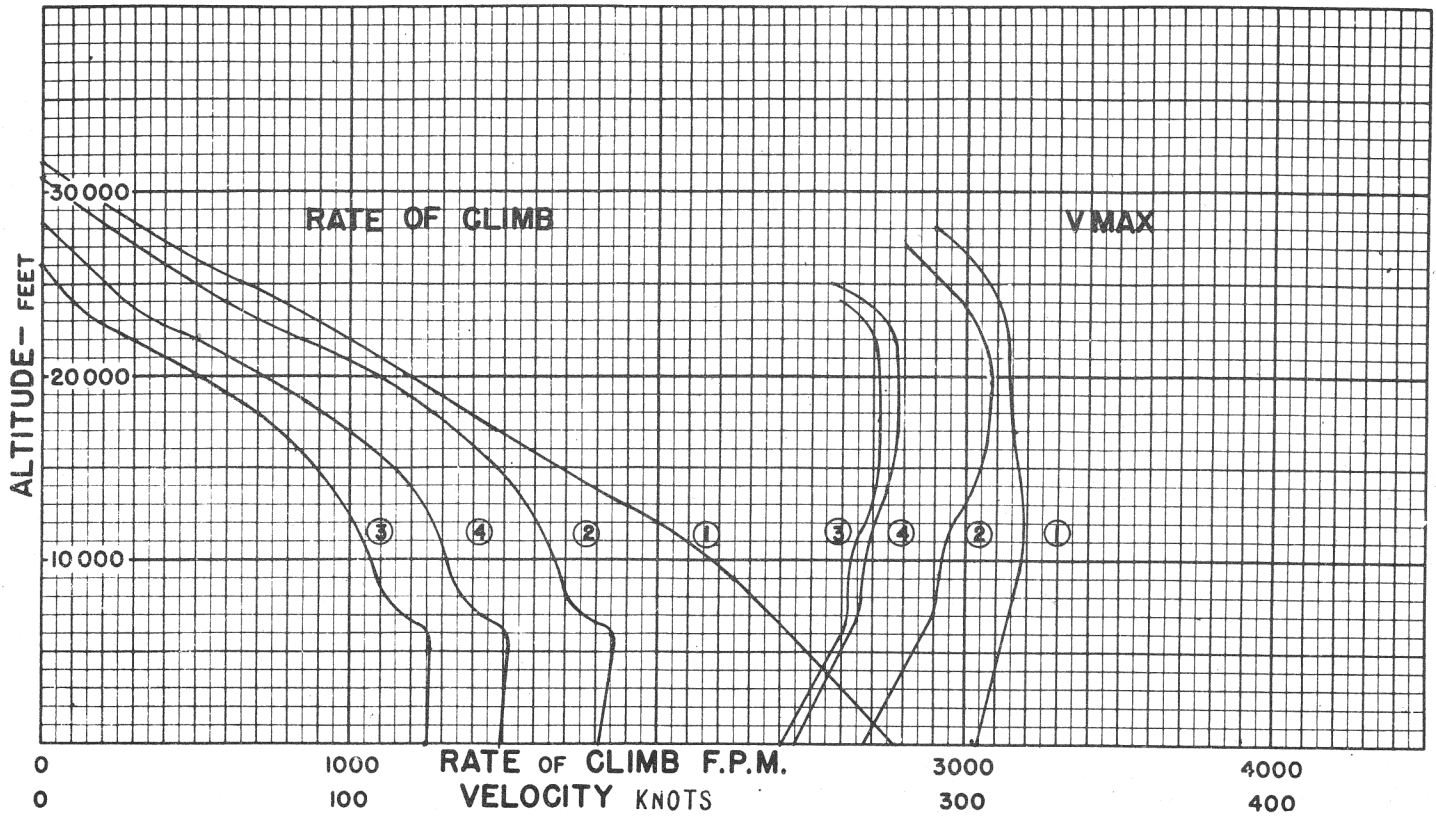
1. AN/APS-4 radar is carried on port wing bomb-rack.
2. 12-100# bombs or 12-250# bombs can be carried at Mk-9 rocket launcher positions by replacing launchers with Mk-55 bomb-racks.
3. 25 gallons of AD1 fluid are available for 15 minutes at combat power.
4. 200 ft. length is required to spot 20 planes on the 96-foot wide deck immediately aft of the forward ramp on CV-9 Class Carriers.

SCOUTING RADIUS FORMULA NO. S-1-CONDITIONS NOS. - 2

RADIUS IS 1/3 RANGE AT VEL. FOR MAX. RANGE AT 1500 FT. 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 ent. distance. Practical scout radius is reduced 6.7 nautical miles for each min. of combat power operation at 1500 ft.

BOMBER COMBAT RADIUS FORMULA NO. B-1-CONDITIONS NOS. - 3 & 4 RADIUS = CLIMB + CRUISE-OUT-CRUISE BACK

WARM-UP	RENDEZVOUS	CLIMB	CRUISE OUT	DROP TANKS	COMBAT	CRUISE BACK	RESERVE
20 min.	20 min. at sea level	to 15000 ft.	at 15000 ft.	DESCEND to 1500 ft	15 min. at 1500 ft.	at 1500 ft.	60 min. at
<u>TAKE-OFF</u> 1 min.	at 60% N.S.P.	at Nor. Pr.	Vel. for Max. Range	DROP BOMBS FIRE ROCKETS	5 min. WEP. 10 min. Nor. Pr.	170 kts. TAS	Vel. for Max. Range
	"Normal" Mixture	"Normal" Mixture	"Normal" Mixture			"Normal" Mixture	"Normal" Mixture



○ LOADING CONDITION COLUMN NUMBER