

**AIRPLANE CHARACTERISTICS & PERFORMANCE**

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		SEARCH MK-35 TORPEDO 8-5" HVAR AN/APS/31	SEARCH MK-35 TORPEDO 8-5" HVAR AN/APS/31	SEARCH MK-35 TORPEDO 8-5" HVAR AN/APS/31 1-150 GAL.TANK	SEARCH MK-35 TORPEDO 8-5" HVAR AN/APS/31 2-150 GAL.TANK
GROSS WEIGHT	LBS.	20554	20554	21645	22698
EMPTY WEIGHT - SPECIFICATION	LBS.	13733			
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.	37.4	37.4	39.4	41.3
POWER LOADING ①	LBS./BHP.	8.9	11.4	12.0	12.6
V-MAX. SEA LEVEL	KN.	232	211	206	200
V-MAX.	KN./FT.	237/2100	228/7900	222/7800	216/7700
V-STALL GROSS WEIGHT ②	KN.	73.4	73.4	76.2	79.0
V-STALL WITHOUT FUEL ②	KN.	68.7	68.7	70.0	71.1
TIME-TO-CLIMB -10000FT-	MIN.	6.6	7.3	7.9	8.7
TIME-TO-CLIMB -20000FT-	MIN.	28.8	30.3		
SERVICE CEILING	FT.	20400	20200	19000	17900
TAKE-OFF DISTANCE -CALM-	FT.	817	817	966	1126
TAKE-OFF DISTANCE -15 KN-	FT.	518	518	624	739
TAKE-OFF DISTANCE -25 KN-	FT.	355	355	435	523
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	1990	1490	1370	1260
MAX. RANGE / V-AV. ③	N MI./KN.		995/135	1260/136	1495/133
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-	N MI./KN.		250/150	320/150	395/150
SCOUT RADIUS	N MI.				
COMBAT RADIUS	N MI.				
ENGINE / PROP GEAR RATIO R-2800-46W/.450:1					
ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL		TAKE OFF	
	2300/2800/S.L.-600'	1800/2600/S.L.-6500'		2300/2800/S.L.	
TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT	
AUX. FIXED	PROTECTED	36	420	Bomb Bay:	
	UNPROTECTED			1-MK-35 Torpedo	
	TOTAL-FIXED INTERNAL				
	DROPPABLE (Wings) 2 @ 150 GAL.		300	Rockets:	
DROPPABLE			8-5" HVAR (Ex-9 head) on MK9-2 launchers		
TOTAL	36	720			
NOTE	① BHP AT MAX. CRIT. ALT.				
	② STALL - WITHOUT POWER				
	③ AT 1500' ALTITUDE				

A-5011

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## NOTES:

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

## Search Condition:

1-MK-35 torpedo, 4-MK-51 wing bomb racks, AN/APS-31 radar, 8-MK-9 rocket launchers, 8-5" HVAR, 2-sonobuoys and 2-MK-6 float lights aboard.

- (1) AN/APS-31 radar carried on outboard starboard wing rack.  
 (2) XL-22 searchlight on outboard port wing rack as alternate to 8-5" HVAR affects performance of Condition 1 as follows:

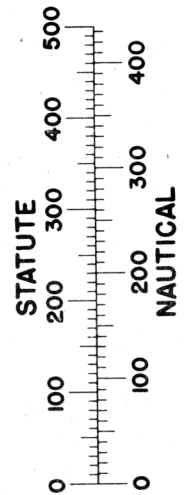
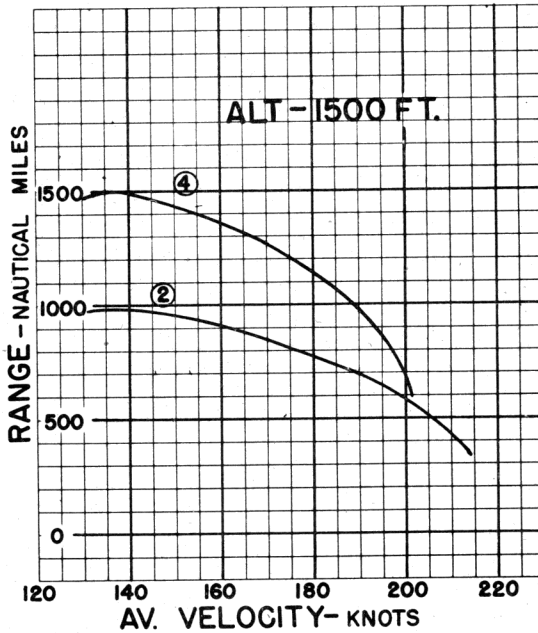
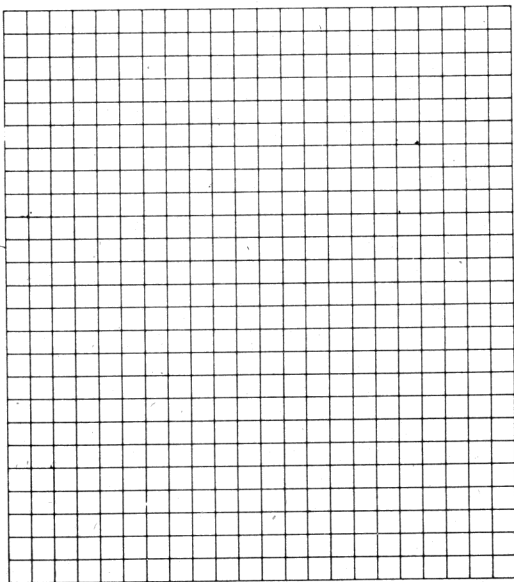
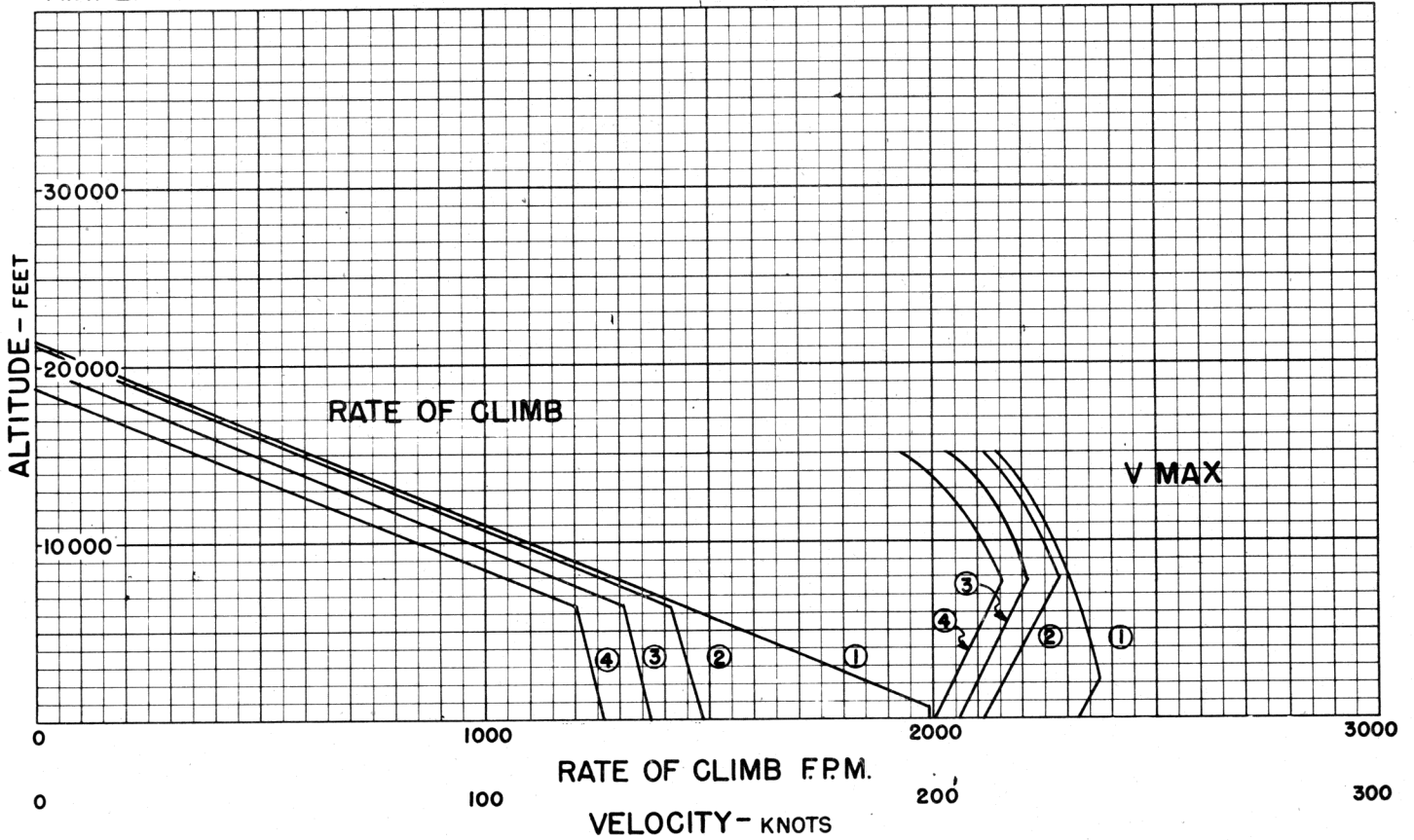
Gross weight, lbs.	19538	Take-off, 25 Kn. wind, ft.	314
Empty wt., lbs.	12717	Rate of climb, SL, ft/min.	2130
Vmax., S.L., Kn.	233		

- (3) Drop tanks carried on inboard wing bomb racks.  
 (4) In all conditions, swaybracing is aboard only for stores actually carried.  
 (5) Condition 1 less rockets but with launchers: Vmax SL = 241 Kn., Vmax/ACA = 246 kn/2200 ft.

A.S.W. Radius Formula No. PA-1 (Mod.) Condition 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, rockets, launchers 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.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

 SELF-SEALING TANKS  
 NON SELF-SEALING TANKS

WING AREA - 548.7  
 WING SECTION - NACA 23018-23012  
 M.A.C. - 115.07

