

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1.	2	3	4
LOADING CONDITION		COMBAT *	COMBAT *	COMBAT *	FIGHTER ONE 150 GAL. TANK EXTERNAL
GROSS WEIGHT	LBS.	12420	12420	12420	13530
EMPTY WEIGHT	ACTUAL LBS.	9205			
FUEL / OIL	GALS.	234/13	234/13	234/13	384/23
FIXED GUNS/AMMUNITION		6 .50 Cal/2400 rds.			
FLEXIBLE GUNS/AMMUNITION		None			
ENGINE POWER USED FOR PERFORMANCE		COMBAT	MILITARY	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	39.6	39.6	39.6	43.1
POWER LOADING ①	LBS./BHP.	6.0	7.3	8.0	8.7
V-MAX. SEA LEVEL	MPH.	381	359	332	317
V-MAX./CRITICAL ALT.	MPH./FT.	446/26200	425/27600	420/29200	400/29000
V-STALL GROSS WEIGHT ②	MPH.	89.4	89.4	89.4	93.2
V-STALL. WITHOUT FUEL ②	MPH.	84.2	84.2	84.2	85.0
TIME-TO-CLIMB -10000FT.-	MIN.	2.9	3.2	3.7	4.1
TIME-TO-CLIMB -20000FT.-	MIN.	5.9	6.8	7.7	8.5
SERVICE CEILING	FT.	41500	41500	42000	40800
TAKE-OFF DISTANCE -CALM-	FT.	630	630	630	780
TAKE-OFF DISTANCE -15 KN-	FT.	410	410	410	518
TAKE-OFF DISTANCE -25 KN-	FT.	288	288	288	370
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	3870	3410	2760	2500
MAX. RANGE / V-AV. ③	ST. MI. / MPH.			1005/215	1560/206
RANGE / V-AV. -60%NSP-③-	ST. MI. / MPH.				
SEARCH RADIUS / V-AV. -20%R-	NMI. / KN.				
A.S.W. RADIUS / V-AV. -20%R-	NMI. / KN.				
SCOUT RADIUS	N MI.				
COMBAT RADIUS (F-1)	N MI.			50	285 (a)

ENGINE / PROP GEAR RATIO P & W R-2800-18W (.45)

ENGINE RATING BHP/RPM/ALT.	COMBAT	MILITARY	NORMAL	TAKE-OFF
		2380/2800/SL	2100/2800/SL - 4300	1700/2600/SL - 9000
	2170 -2260/2900-17000	1810-1885/8600-18000	1630/10200-20000	
	2050-2080/19500-23300	1690-1710/20700-25000	1550/21300-26600	

TANKAGE IN GALLONS OIL FUEL OFFENSIVE ARMAMENT

AUX. FIXED	PROTECTED		234	
	UNPROTECTED	23.5		Wings - On pylons
	TOTAL - FIXED INTERNAL	23.5	234	Bombs - 2-1000#, 2-500#, or 2-250#
	DROPPABLE			
AUX. DROPPABLE	DROPPABLE Wing Pylons 2@150		300	Wings Outer Panel MK 5-1 rocket launchers
	(Alternate 2 @ 150 S.S.)			Rockets - 8-5" HVAR
TOTAL		23.5	534	
NOTE	STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS			NOTE: Two wing pylons available for either droppable tanks or bombs
	① BHP AT MAX. CRIT. ALT.			
	② STALL-WITHOUT POWER			
	③ AT 1500' ALTITUDE			
* See Page 2				

SUPERSEDES 1 OCTOBER 1944

NAVAER-1519B (Rev. 9-44)

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COLUMN NUMBER		5	6	7
LOADING CONDITION		BOMBER 1 - 1000# One 150 Gal. Tank External	BOMBER 2 - 1000#	ROCKET 8 - 5" HVAR One 150 Gal. Tank External
GROSS WEIGHT	LBS.	14515	14412	14670
EMPTY WEIGHT	-Actual- LBS.	9205		
FUEL/OIL	GALS.	384/23	234/13	384/23
FIXED GUNS/AMMUNITION		6 - .50 Cal./2400 rds.		
FLEXIBLE GUNS/AMMUNITION		None		
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	46.2	45.9	46.7
POWER LOADING ①	LBS./BHP	9.4	9.3	9.5
V-MAX. SEA LEVEL	MPH.	299	296	302
V-MAX./ CRITICAL ALT.	MPH./ FT.	377/28700	373/28600	381/28700
V-STALL. GROSS WEIGHT ②	MPH.	96.6	96.3	99.7
V-STALL. WITHOUT FUEL ②	MPH.	88.6	91.5	89.1
TIME-TO-CLIMB -10000FT.-	MIN.	4.5	4.5	4.6
TIME-TO-CLIMB -20000FT.-	MIN.	9.5	9.5	9.6
SERVICE CEILING	FT.	39500	39600	39800
TAKE-OFF DISTANCE -CALM-	FT.	950	937	1020
TAKE-OFF DISTANCE -15 KN.-	FT.	642	632	698
TAKE-OFF DISTANCE -25KN.-	FT.	466	459	513
TAKE-OFF DISTANCE -50 FT. OBST.	FT.			
TAKE-OFF DISTANCE	SECONDS			
RATE OF CLIMB -SL-	FT./ MIN.	2270	2280	2240
MAX. RANGE / V-AV. ③	ST. MI. / MPH.	1415/193	840/187	1435/195
RANGE / V-AV. -60%NSP-③-	ST. MI. / MPH.			
SEARCH RADIUS/V-AV. -20%R-	NMI. / KN.			
A. S. W. RADIUS/V-AV. -20%R-	NMI. / KN.			
SCOUT RADIUS	NMI.			
COMBAT RADIUS	NMI.	285 (b)	45	285 (c)

PERFORMANCE IS BASED ON - FLIGHT TEST OF F4U-4 AIRPLANE

RANGE & RADIUS ARE BASED ON A.E.L.

FUEL CONSUMPTION DATA INCREASED

BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.

*COMBAT CONDITION: Two capped pylons aboard; Rocket launchers not aboard - At Combat Power
 Combat Condition plus 8 MK5-1 launchers; Vmax/SL - 372; Vmax - 436/26100
 Combat Condition less pylon caps; Vmax/SL - 374; Vmax - 438/26100

CLEAN CONDITION: Same as Combat Condition except pylons removed; at Combat Power
 Vmax/S.L.-389; Vmax-455/26300.

ROCKET CONDITION: Rockets suspended from MK5-1 launchers.

FERRY CONDITION: Armament removed, Gross Weight - 13313# 534 gals. fuel; Maximum range at
 1500 ft. is 2110 st. mi. at 202 mph.

FUEL TRANSFER: Provisions are incorporated for fuel transfer from droppable to main tanks
 after take-off.

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WATER CAPACITY: 13.5 gals. water available for approximately 12 minutes at Combat Power.

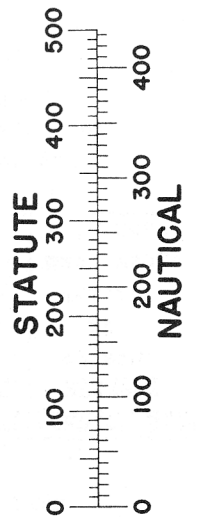
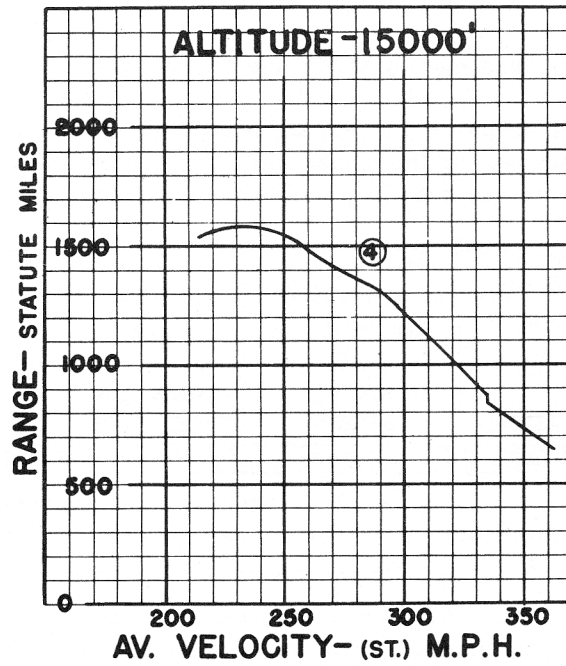
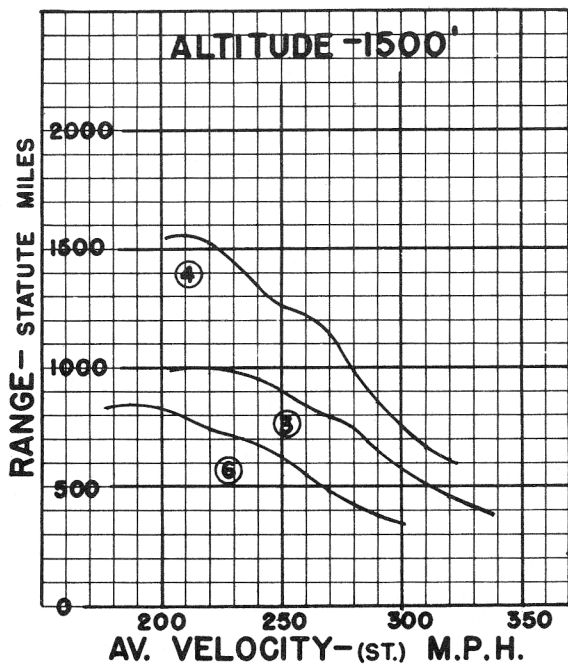
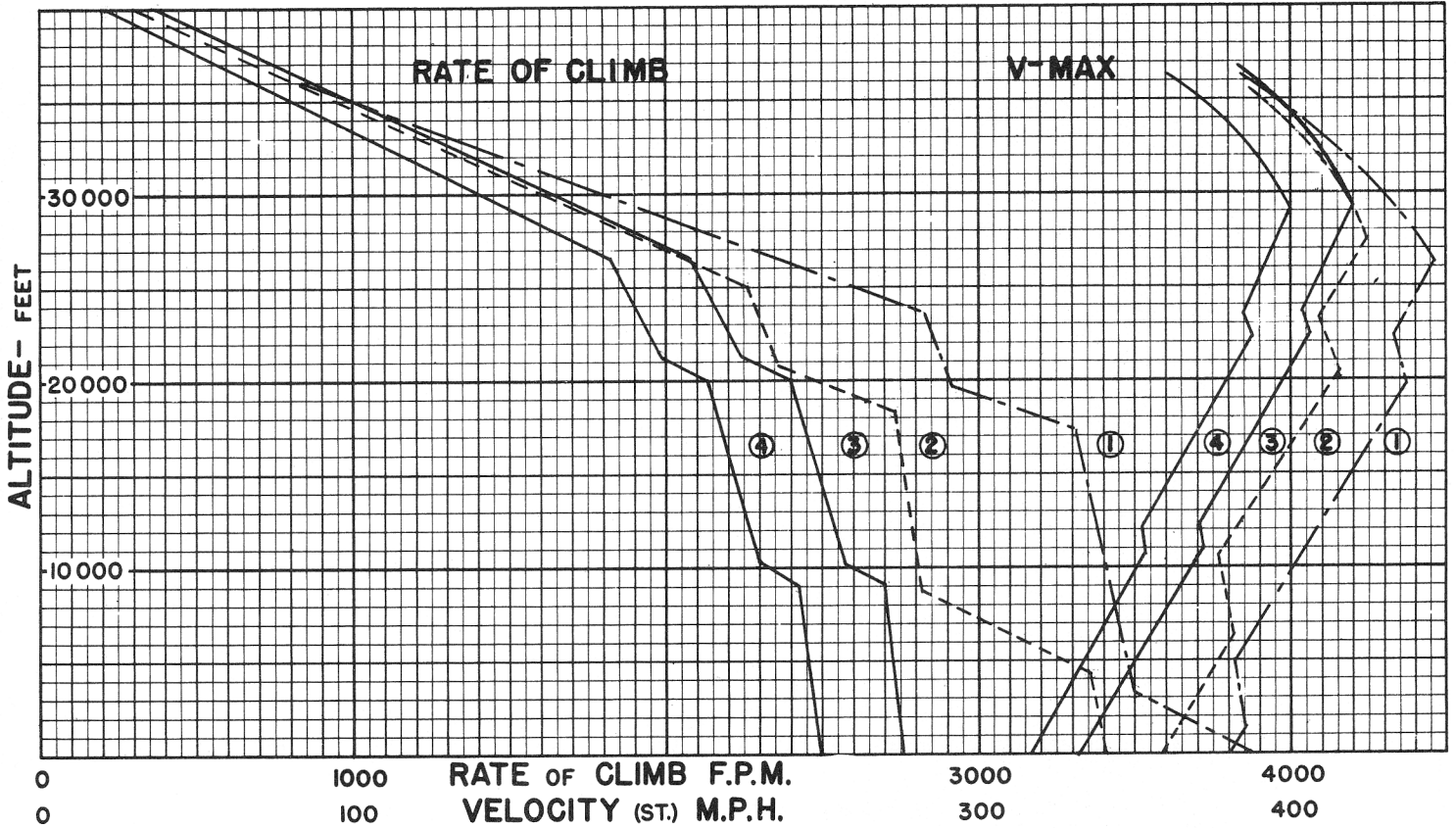
SPOTTING: 200 ft. length is required to spot 30 airplanes on the 96 ft. wide deck immediately aft of the forward ramp on CV-9 Class Carriers.

NOTE: Two wing pylons (capped when not in use) aboard in all conditions except "CLEAN"
Rocket launchers carried in Rocket Condition only.

FIGHTER COMBAT RADIUS FORMULA NO. F-1-CONDITIONS NOS. -3,4,5,6,7				RADIUS = CLIMB + CRUISE-OUT + CRUISE BACK			
WARM-UP 20 min.	RENDEZVOUS 20 min. at sea level	CLIMB to 15000 ft.	CRUISE OUT at 15000 ft. Vel. for	DROP TANKS and BOMBS	COMBAT 20 min. at 15000 ft.	CRUISE BACK at 1500 ft. Vel. for	RESERVE 60 min. at Vel. for
TAKE-OFF 1 min.	at 60% N.S.P. Auto Lean.	at 60% N.S.P. Auto Rich.	Max. Range Auto Lean.	FIRE ROCKETS	10 min. WEP. 10 min. Mil. Pr. and descend	Max. Range Auto Lean.	Max. Range Auto Lean.

Combat radii noted with () are limited by the amount of protected fuel for use in Combat and return. In the following conditions the listed amounts of fuel remaining in the droppable tank on entering combat must be dropped or may be used to increase cruise-out speed or to search.

- Col. 4(a). 17 gals. may be used to increase cruise out speed to 250 kts. or for 0.30 hours search at V for max. range.
- Col. 5(b). 7 gals. may be used to increase cruise out speed to 218 kts. or for 0.10 hours search at V for max. range.
- Col. 7(c). 8 gals. may be used to increase cruise out speed to 222 kts. or for 0.13 hours search at V for max. range.



○ LOADING CONDITION COLUMN NUMBER

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ARMAMENT DATA:

Protection - Pilot Forward	-	34 Lbs.
Pilot Aft	-	130 Lbs.
Self-Sealing Cells	-	177 Lbs.
Deflection Plate	-	33 Lbs.

6-50cal/2400rds. in wings.

DESCRIPTIVE DATA:

Span	-	40'-11 3/4"
Span Folded	-	17'-0 1/2"
Length Level	-	33'-8 1/4"
Length 3-Pt.	-	33'-3 3/16"
Height Level	-	15'-1 1/4"
Height Folded	-	16'-4 1/2"
Height 3-Pt.	-	14'-9 1/2"
Wing Area	-	314 Sq. Ft.
Airfoil Section	-	N.A.C.A. 23018-009
M.A.C.	-	94.0"
Propeller	-	Hamilton Standard C.S.
Blade Design No.	-	6501A-0/4 Blade
Propeller Diameter	-	13'-2"