

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER			1	2	3	4
LOADING CONDITION			COMBAT	COMBAT	FIGHTER Two Tanks External	FERRY Two Tanks External
GROSS WEIGHT	LBS.		9306	9306	11125	10108
EMPTY WEIGHT	CALCULATED LBS.			5876		5781
FUEL/OIL	GALS.		370/3	370/3	650/3	650/3
FIXED GUNS/AMMUNITION			4 - 20 mm/600 rds (Mk. 23 Gun Sight)			None
FLEXIBLE GUNS/AMMUNITION			None			None
ENGINE POWER USED FOR PERFORMANCE			MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.		45.7	45.7	54.7	49.7
POWER LOADING ①	LBS./BHP.					
V-MAX. SEA LEVEL	KN		465	395	376	
V-MAX. 20000'	KN		460	414	395	
V-STALL GROSS WEIGHT ②	KN		81.5	81.5	89.0	
V-STALL WITHOUT FUEL ②	KN		71.1	71.1	71.8	
TIME-TO-CLIMB -10000 FT.-	MIN.		2.5	4.2	5.5	
TIME-TO-CLIMB -20000 FT.-	MIN.		6.0	10.1	13.7	
SERVICE CEILING	FT.		40900	38400	34300	
TAKE-OFF DISTANCE -CALM-	FT.		1600	1600	2430	
TAKE-OFF DISTANCE -15 KN-	FT.		1125	1125	1760	
TAKE-OFF DISTANCE -25 KN-	FT.		848	848	1370	
TAKE-OFF RATE OF CLIMB - ft/min*			1150	1150	630	
WAVE-OFF RATE OF CLIMB - ft/min*			940	940	670	
RATE OF CLIMB -SL-	FT./MIN.		4560	2740	2120	
MAX. RANGE / V-AV. ③	NMI./KN			680/321	1115/304	1140/295
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.					
INTERCEPTOR RADIUS	I-3 N MI.			130	345	
COMBAT RADIUS	F-3 N MI.			70	290	
ENGINE			WESTINGHOUSE 24C-4 JET UNIT			
ENGINE RATING	MILITARY		NORMAL		TAKE-OFF	
	3000/12000/S.L.		2430/11000/S.L.		3000/12000/S.L.	
	Lbs. static thrust/rpm/alt.					
AUX. FIXED	TANKAGE IN GALLONS	OIL	FUEL	OFFENSIVE ARMAMENT		
	PROTECTED		370	None		
	UNPROTECTED	3				
	TOTAL - FIXED INTERNAL	3	370			
	DROPPABLE			Note: Performance is based on calculations. Range and radius are based on Specification fuel consumption data increased 7 1/2% to conform with past experience.		
	DROPPABLE WING-TIP TANKS 2 @ 140		280			
TOTAL	3	650				
NOTE	① BHP AT MAX. CRIT. ALT.					
	② STALL - WITHOUT POWER					
	③ AT 20000' ALTITUDE					

Reissued 1 January 1947

## AIRPLANE CHARACTERISTICS &amp; PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

FIGHTER COMBAT RADIUS FORMULA NO. F-3-CONDITIONS NOS. - 2 &amp; 3. RADIUS=CLIMB / CRUISE-OUT = CRUISE BACK

<u>WARM-UP</u>	<u>RENDEZVOUS</u>	<u>CLIMB</u>	<u>CRUISE OUT</u>	<u>DROP TANKS</u>	<u>COMBAT</u>	<u>CRUISE BACK</u>	<u>RESERVE</u>
30 sec. at Max Stat. Thrust	Climb to 5000 ft.	to 20000 ft.	at 20000 ft.	and BOMBS	15 min. -V max. at 15000 ft.	at 20000 ft.	15 min. at 10000 ft.
<u>TAKE-OFF</u> 1 min. at T.O. Thrust	Mil. Thrust 10 min. REND. Vel. for Max. Range	Mil. Thrust	at Vel. for Max. Range	<u>DESCEND</u> to 15000 ft. <u>FIRE</u> <u>ROCKETS</u>	Mil. Thrust <u>RETURN</u> to 20000 ft. Mil. Thrust	at Vel. for Max. Range	15 min. at S.L. Vel. for max. End.

INTERCEPTOR RADIUS PROBLEM NO. I-3 CONDITION NOS. 2 &amp; 3 RADIUS = CLIMB / CRUISE-OUT = CRUISE-BACK

<u>WARM-UP</u>	<u>CLIMB</u>	<u>CRUISE-OUT</u>	<u>DROP TANKS</u>	<u>COMBAT</u>	<u>CRUISE-BACK</u>	<u>RESERVE</u>
30 sec. at Rated Take-off Thrust	to 20000 ft.	at 20000 ft.		at 20000 ft.	at 20000 ft.	10 min. at 10000 ft.
<u>TAKE-OFF</u> 1 min. at Rated Take-off Thrust	at Mil. Rated Thrust	at Norm. Rated Thrust		15 min. at Mil. Rated Thrust V-max	at Vel. for Max. Range	15 min. at S. L. Vel. for Max. End.

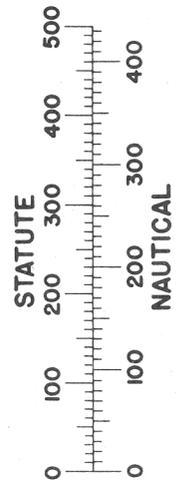
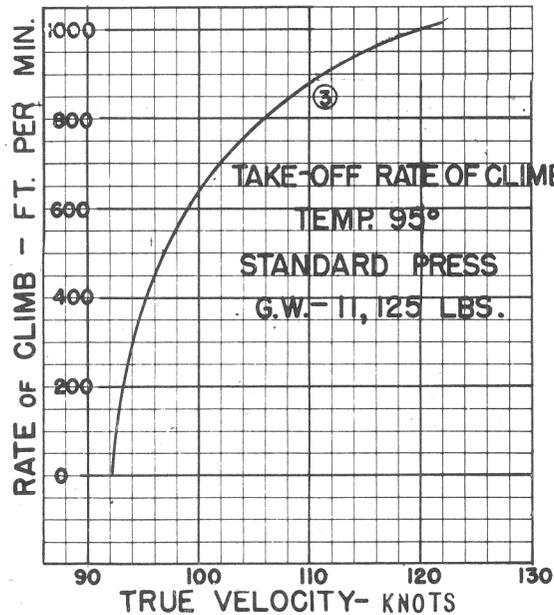
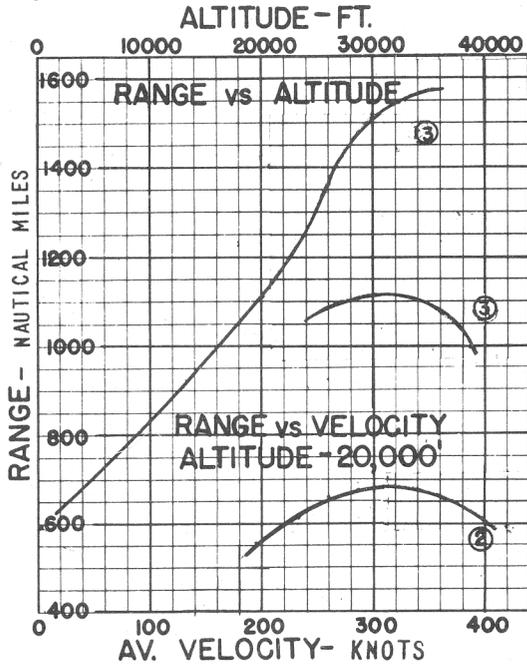
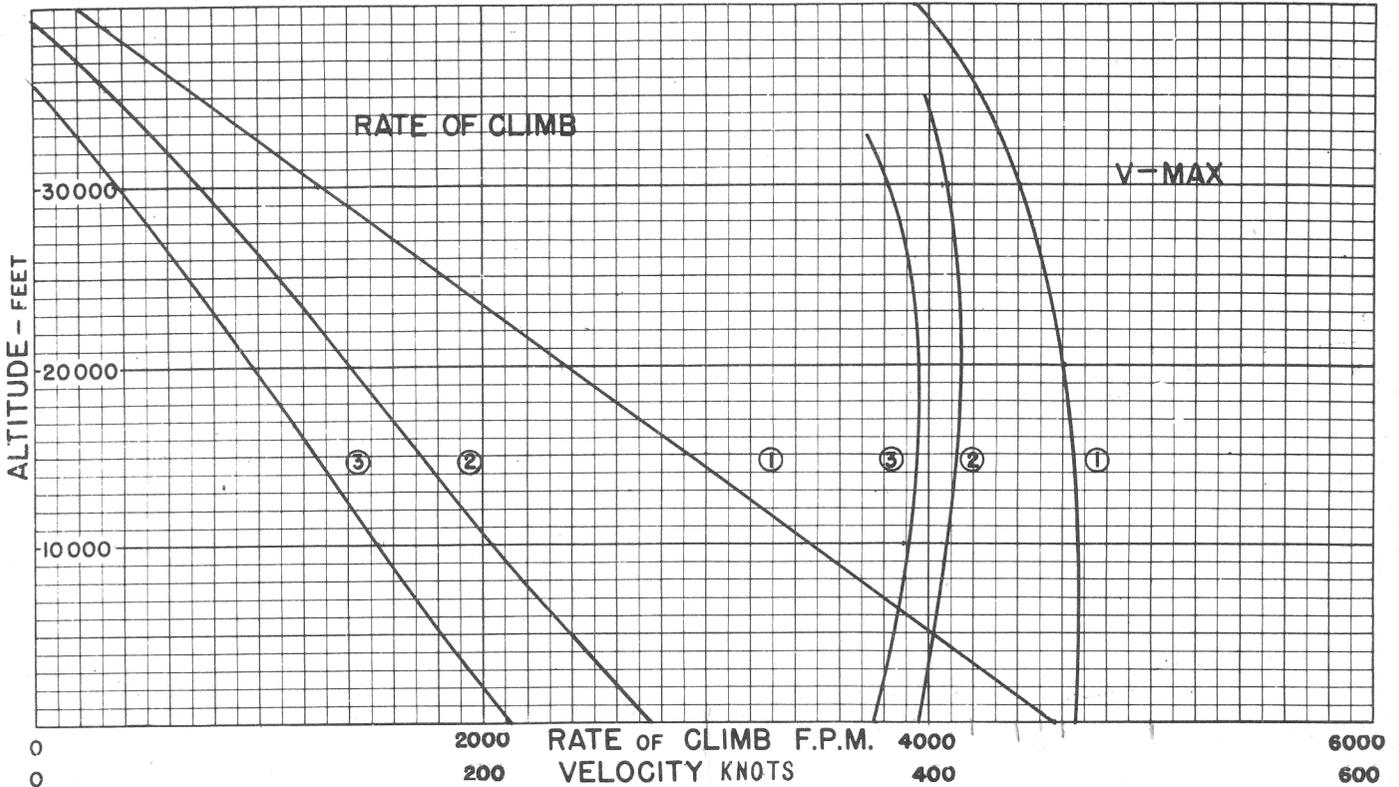
Note: Provisions are incorporated for fuel transfer from droppable to main tanks after take-off.

\*Take-Off Rate of Climb - Rate of Climb at 100 kn TAS with flaps and landing gear down.

\*Wave-Off Rate of Climb - Rate of Climb at V-stall plus 8.7 kn with flaps and landing gear down.

\*Note: Both values are given at standard sea-level pressure at a temperature of 95°F.

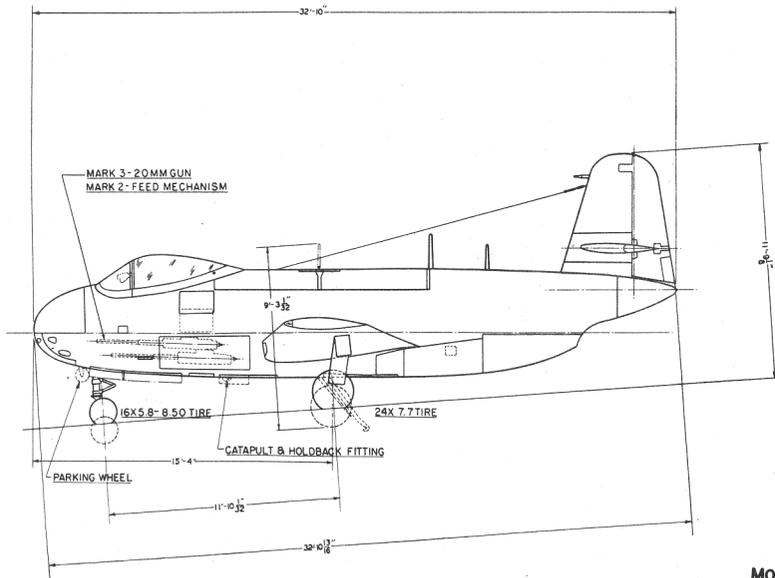
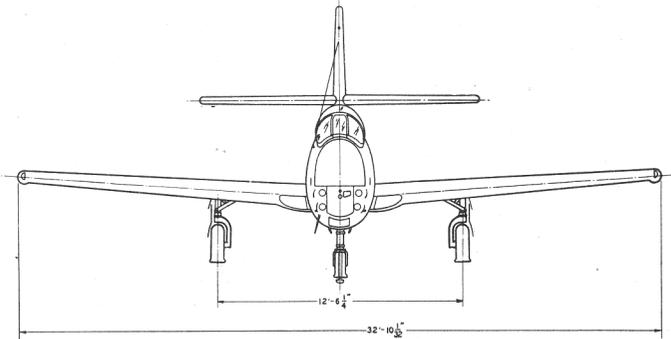
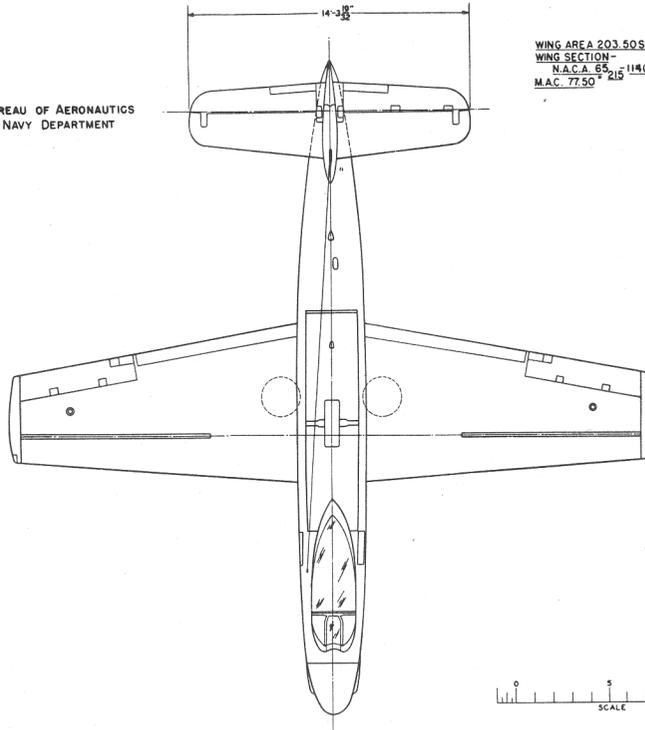
Spotting - 200 ft. length is required to spot 38 airplanes on the 96 ft. wide deck immediately aft of the forward ramp on CV-9 class carriers.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

WING AREA 203.50 SQ. FT.  
WING SECTION -  
N.A.C.A. 65 - 114 (a + 1) - 65 - 212 (a - 6)  
M.A.C. 77.50 \* 215



MODEL XF6U-1

MODEL XF6U-1

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

-  BULLET RESISTANT GLASS ARMOR PLATE
-  DEFLECTION PLATE
-  FUSELAGE TANKS
-  OIL TANK

PROTECTION

- 1. PILOT FORWARD 52.1 LBS.
- 2. PILOT AFT. 64.7 LBS.
- 3. FUSELAGE TANKS 243.6 LBS.
- 4. DEFLECTION PLATE 8.2 LBS.

