

**AIRPLANE CHARACTERISTICS & PERFORMANCE**

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		COMBAT	COMBAT	FIGHTER	FERRY
GROSS WEIGHT	LBS.	12135	12135	14386	13423
EMPTY WEIGHT	-Calculated- LBS.		8182		8093
FUEL/OIL	GALS.	465/4	465/4	805/4	805/4
FIXED GUNS/AMMUNITION		6-.50 cal/1500 rds.			None
FLEXIBLE GUNS/AMMUNITION		None			None
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	47.6	47.6	56.4	
POWER LOADING ①	LBS./BHP.				
V-MAX. SEA LEVEL	KN	463	415	393	
V-MAX./ 20000'	KN	471	450	428	
V-STALL GROSS WEIGHT ②	KN	85.2	85.2	92.7	
V-STALL WITHOUT FUEL ②	KN	74.7	74.7	75.7	
TIME-TO-CLIMB -10000FT-	MIN.	2.3	3.4	4.5	
TIME-TO-CLIMB -20000FT-	MIN.	5.1	7.4	9.8	
SERVICE CEILING	FT.	47400	44400	40600	
TAKE-OFF DISTANCE -CALM-	FT.	1370	1370	1990	
TAKE-OFF DISTANCE -15 KN-	FT.	978	978	1464	
TAKE-OFF DISTANCE -25 KN-	FT.	750	750	1155	
TAKE-OFF R/C -S.L.-	FT./MIN.			620	
WAVE-OFF R/C -S.L.-	FT./MIN.		840		
RATE OF CLIMB -SL-	FT./MIN.	4690	3160	2440	
MAX. RANGE / V-AV. ③	NMI./KN		745/295	1190/278	1210/273
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	T-3 N MI.		125	330	
COMBAT RADIUS	F-3 N MI.		80	325	
ENGINE /		One TG-180 Jet Motor			
ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL			
	3820# Static Thrust/7600 rpm/S.L.	3200# Static Thrust/7300 rpm/S.L.			
TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT	
AUX. FIXED	PROTECTED		465	- None -	
	UNPROTECTED	4			
	TOTAL - FIXED INTERNAL	4	465		
	DROPPABLE				
	DROPPABLE -Wing Tip- 2 @ 170 gal.		340		
TOTAL	4	805			
NOTE	① BHP AT MAX. CRIT. ALT.				
	② STALL - WITHOUT POWER				
	③ AT 20000' ALTITUDE				

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DATE 1 April 1946

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MODEL XFJ-1

6852

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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> and <u>BOMBS</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 and	15 min. -V max. at 15000 ft.	at 20000 ft.	15 min. at
<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. Thr.	at Vel. for Max. Range	10000 ft S.L. Vel. for max. End

INTERCEPTOR COMBAT RADIUS FORMULA NO. I-3 CONDITIONS NOS. 2 &amp; 3 RADIUS=CLIMB+CRUISE-OUT=CRUISE BACK

<u>WARM-UP</u>	<u>CLIMB</u>	<u>CRUISE-OUT</u>	<u>DROP</u> <u>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.

Provisions are incorporated for fuel pump-back from droppable to main tanks after take-off.

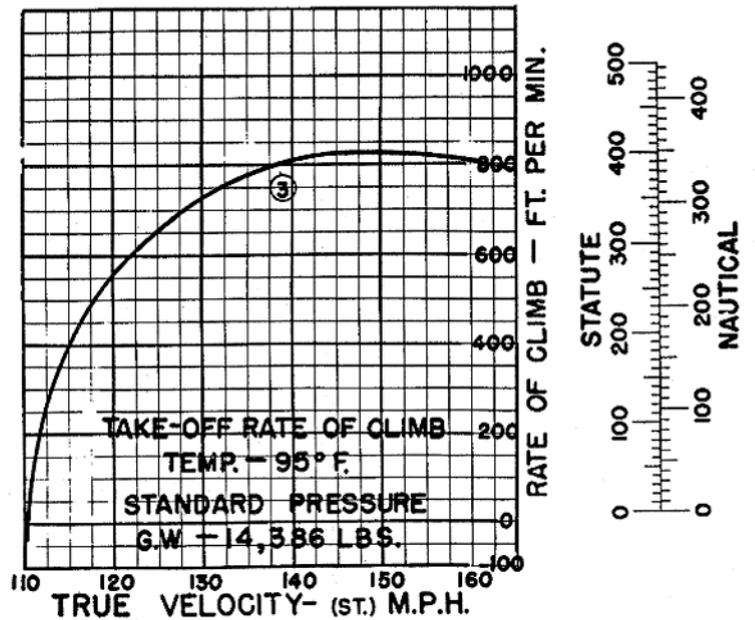
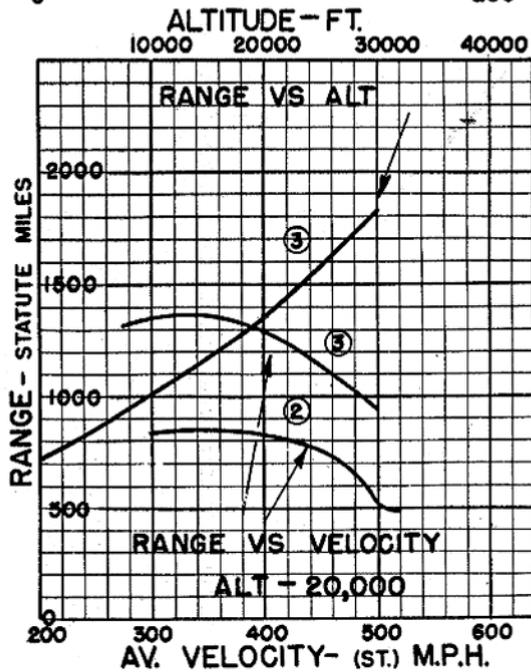
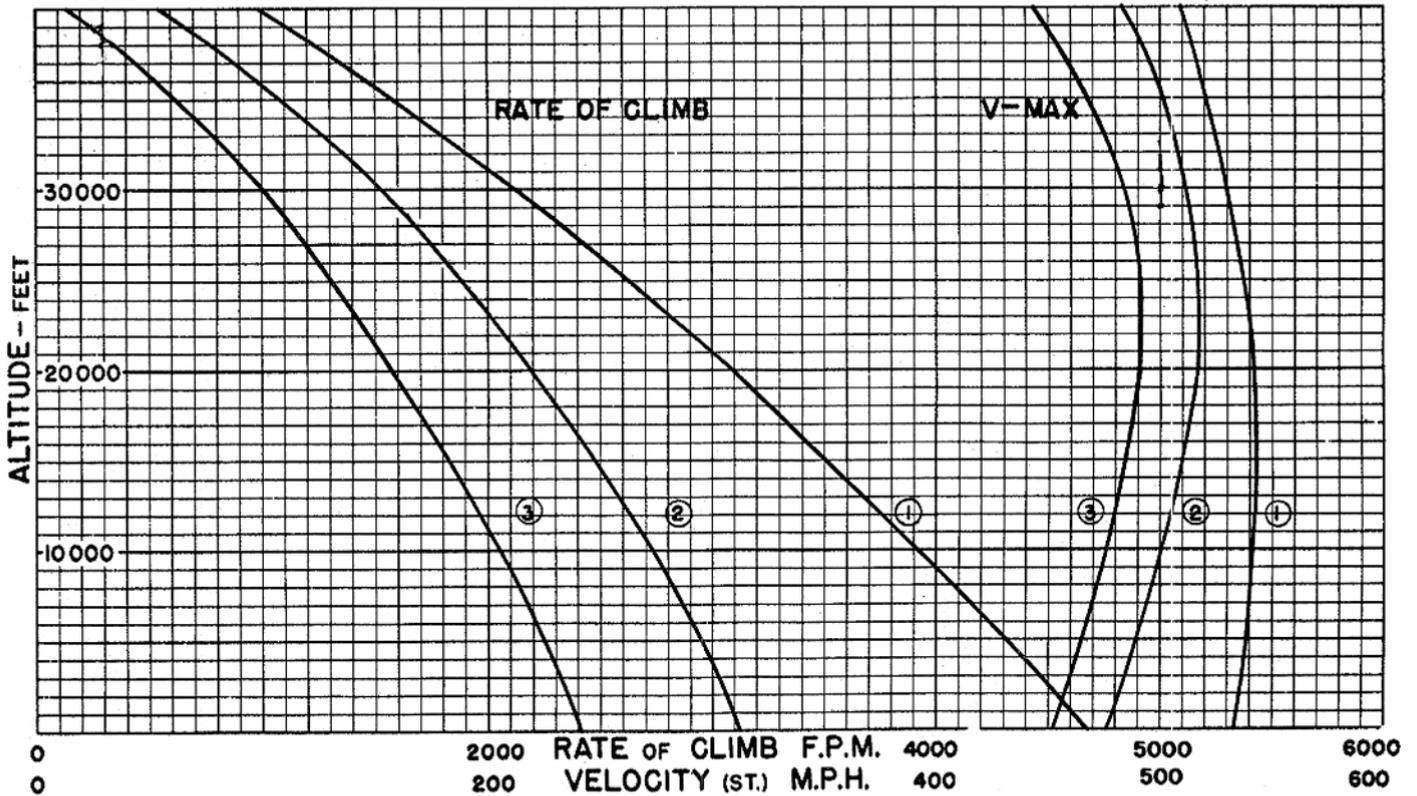
TAKE-OFF RATE OF CLIMB: Rate of climb at 107 kn IAS (based on catapult terminal velocity of 81.5 kn and 25 knot relative wind.)

WAVE-OFF RATE OF CLIMB: Rate of climb at V-stall plus 8.7 kn IAS.

NOTE: Both take-off and wave-off rates of climb are for flaps and landing gear full down at full military thrust at standard sea level pressure and a temperature of 95 degrees F.

NOTE: Range and radius calculations are based on the use of gasoline for fuel.

SPOTTING: 200 ft. are required to spot 23 planes on the 96 ft. wide flight deck immediately aft of the forward ramp on the CV-9 class carriers.



○ LOADING CONDITION COLUMN NUMBER

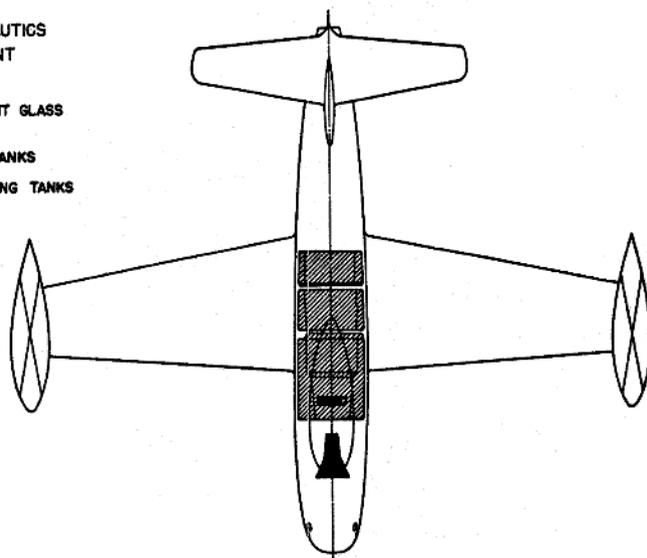
MODEL XFJ-1

PROTECTION

- 1. PILOT FORWARD- 70.1 LBS.
- 2. PILOT AFT- 48.0 LBS.
- 3. SELF SEALING CELLS- 358 LBS.

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NAVY DEPARTMENT

-  BULLET RESISTANT GLASS  
ARMOR PLATE
-  SELF-SEALING TANKS
-  NON SELF-SEALING TANKS



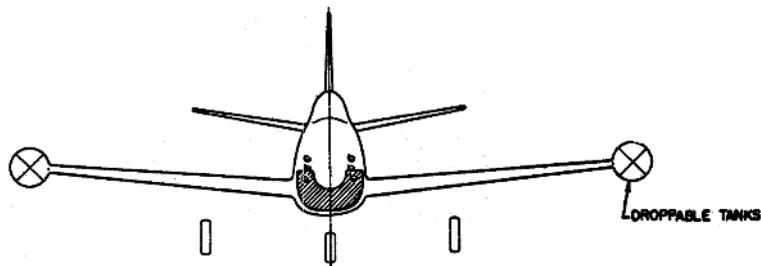
6 - 50 CAL. GUNS 250 RDS. AMMUNITION PER GUN



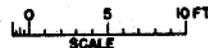
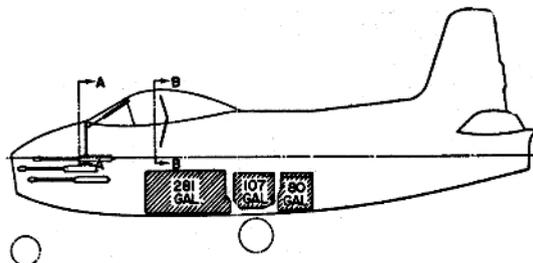
VIEW A-A



VIEW B-B



WING TIP TANKS 170 GAL. EA.



BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

WING AREA 255.33 SQ. FT.  
WING SECTION - NACA 64H-12  
M.A.C. 84.26 IN.

