

MISSION AND DESCRIPTION

This airplane is a conventionally powered, high performance, carrier or land based, general purpose fighter.

The primary mission is the destruction of enemy aircraft, airborne or grounded. This mission may be carried out on an offensive basis in which case the action would presumably be carried out over enemy held territory or on a defensive basis when interception of an incoming enemy attack becomes a necessity. A secondary mission of this type results from its flexibility in regard to ordnance carrying capabilities. Armed with bombs and/or rockets, within prescribed limits, it may be used to great advantage for destroying enemy ground installations.

The outstanding configuration characteristic of this low-wing monoplane is the inverted gull appearance of the wing coupled with great length of fuselage ahead of the cockpit canopy.

It is of conventional structure. The wing center section is a metal box-beam, with single-spar panels fabric covered aft of the spar. Wood ailerons, metal slotted flaps. Stabilizer of either conventional or metalite construction with fabric-covered movable surfaces. Quick-change power-plant with 13.5 gal. water tank. Folding wings.

DIMENSIONS

SPAN.....41'-0"
LENGTH.....33'-8"
HEIGHT.....14'-9"
WING AREA.....314 sq. ft.
M.A.C.....94"
TREAD.....12'-1"

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	9167.....	
BASIC.....	9859.....	
DESIGN.....	10138.....	8.10
COMBAT.....	12405.....	7.25
MAX.T.O.....	16160.....	5.60
MAX.LAND.....	15000.....	

All weights are actual.

FUEL AND OIL

Gals. - No. Tanks - Location
234.....1...Fuse.(protected)
300.....2...Wing (drop)
FUEL GRADE.....115/145
FUEL SPEC.....AN-F-48

OIL

CAPACITY (Gals.).....23.5
SPEC.....AN-O-8
GRADE.....1100-1120

ELECTRONICS

TRANSMITTER.....RT-18/ARC-1
RECEIVER, LF.....R-23A/ARC-5
RECEIVER, VHF.....R-4A/ARR-A
IFF.....RT-22/APX-1

POWER PLANT

NO. & MODEL....(1) R-2800-18W
MFR.....P. & W.
SUPERCH.....2 Stage, 2 Speed
PROP.GEAR RATIO.....20:9
PROP. MFR.....Ham. Std.
PROP.DES.NO.....6501A-0
NO.BL./DIA.....4/13'-2"

RATINGS

	Bhp.	@ Rpm.	@ Alt.
T.O.	2100	2800	S.L.
MIL.	2100	2800	1000'
	1900	2800	14000'
	1800	2800	23000'
NORMAL	1700	2600	7000'
	1630	2600	18000'
	1550	2600	26000'

SEE NOTE

SPEC NO. N-8082

ORDNANCE

GUNS

No.	Size	Location	Rds.
6	.50 Cal.	Wing	2400
MK. 8-6 Illuminated Sight			

BOMBS

Type	Size	Location	No.
Bomb	1000#	Wing	2
Bomb	500#	Wing	2
Bomb	250#	Wing	2

ROCKETS

HVAR	5"	Wing	8
on MK.5 Rocket Launcher			
A.R.	11.5"	Wing	2

PERFORMANCE SUMMARY



LOADING CONDITION		(1) Fighter 1-150 Gal. Tank External	(3) Rocket 2-11.75" AR 8-5" HVAR	(5) Escort 2-150 Gal. Tanks External
TAKE-OFF WEIGHT	lbs	13597	16160	14658
Fuel (fixed/drop)	lbs	1404/900	1404/	1404/1800
Bombs	lbs			
Wing/Power Loading (A)	lbs/sq. ft. lbs/ bhp	43.3/5.7	51.5/10.5	46.7/9.5
Stall Speed--Power off	kn	81.0	88.3	84.1
Stall Speed--Power off - No Fuel	kn	73.8	84.4	74.4
Stall Speed--Power on	kn	66.9	73.0	69.5
Maximum Speed/Alt. (B)	kn/ft	347/31400	303/30600	326/31000
Take-off Distance, deck -- calm	ft	790	1349	974
Take-off Distance, deck 25 kn.	ft	377	708	480
Take-off Distance, Airport	ft			
Rate of climb -- sea level (B)	ft/min	2510	1880	2320
Service Ceiling (B)	ft	38400	34800	36700
Time-to-climb 10000 ft. (B)	min	4.2	5.9	4.7
Time-to-climb 20000 ft. (B)	min	8.8	13.1	10.0
Combat Range/V av 15000	ft. n.mi/kn	1005/185	360/182	1300/180
Combat Radius/V av	ft. n.mi/kn	315/178	35/178	525/178
LOADING CONDITION		(2) Combat	(4) Combat	
GROSS WEIGHT	lbs	12480	12480	
Engine power		Maximum	Normal	
Fuel	lbs	1404	1404	
Bombs/Tanks				
Max. speed at sea level	kn	325	280	
Max. speed/ACA Max.	kn	393/20500	372/31800	
Combat speed/Alt.	kn/ft	378/15000	320/15000	
Rate of climb SL	ft/min	4770	2910	
Ceiling for 500 fpm R/C	ft	38500	37100	
Time-to-climb/Alt.	min/ft	4.9/20000	7.5/20000	

NOTES

- (A) BHF at Maximum Critical Altitude
 (B) Normal BHF

Performance is based on flight test of the F4U-4 airplane.

Range and radius are based on flight test fuel consumption data of the F4U-4 airplane increased by 5%.

 Combat Condition: Two capped pylons aboard. Rocket launchers not aboard. Addition of 8 MK5-1 launchers decreases Vmax at S.L. of Condition (2) to 318 knots and Vmax/ACA to 384 knots/20400 ft.

NOTES

Clean Condition: Same as Combat Condition except pylons removed. At combat power, $V_{max}/SL = 333$ knots and $V_{max}/ACA = 403$ knots/20600 ft.

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

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

Two wing pylons (capped when not in use) aboard in all conditions. Rocket launchers carried in rocket condition only.

FIGHTER COMBAT RADIUS FORMULA NO. F-1-CONDITIONS NOS.-(1), (3), & (5) RADIUS=CLIMB/CRUISE-OUT=CRUISE BACK

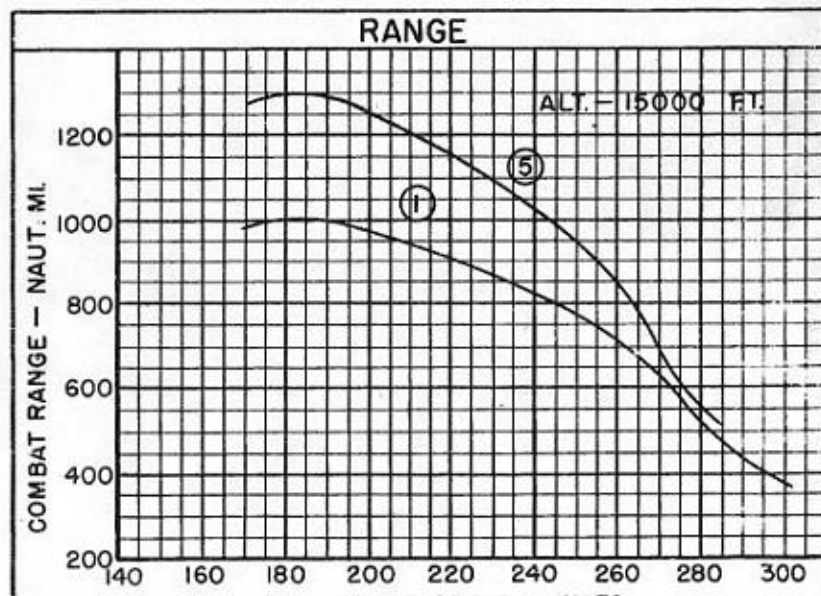
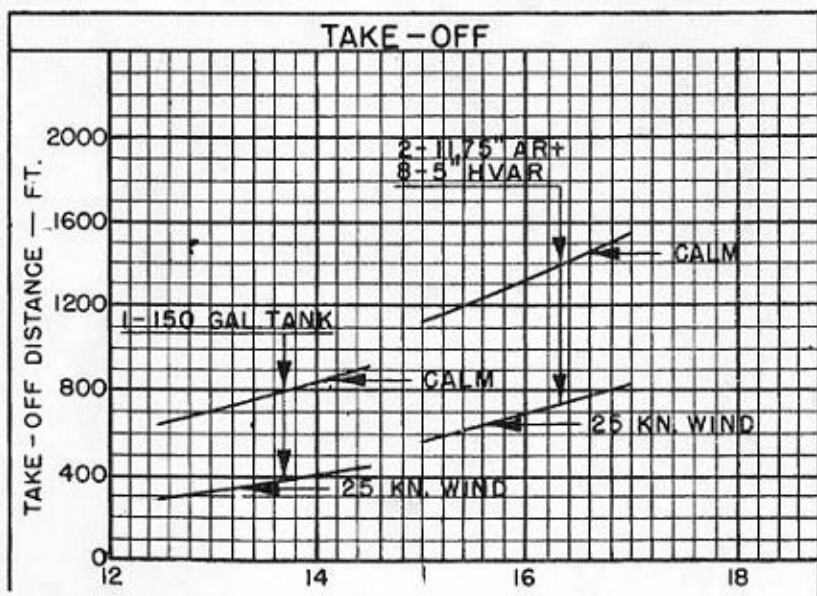
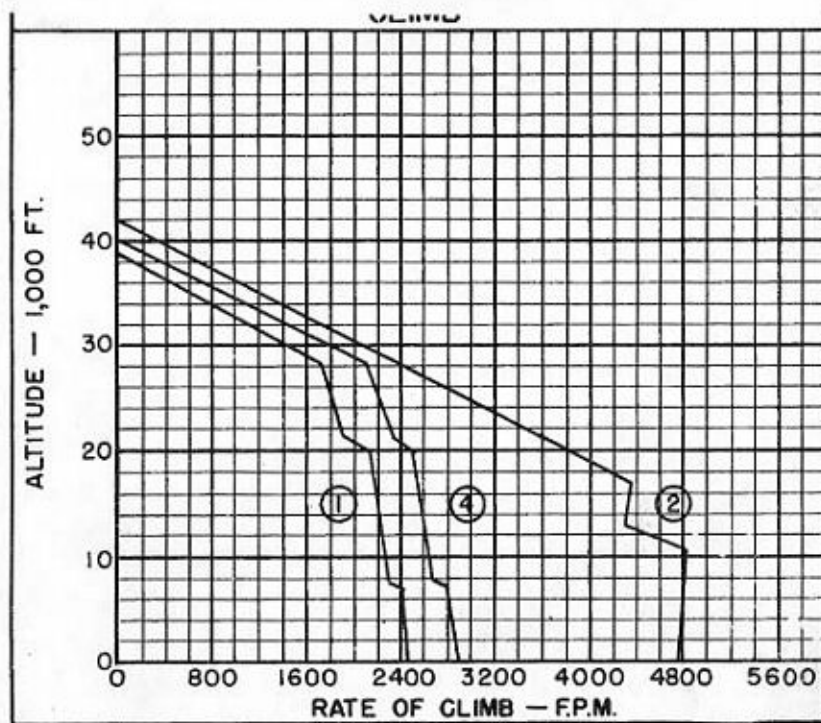
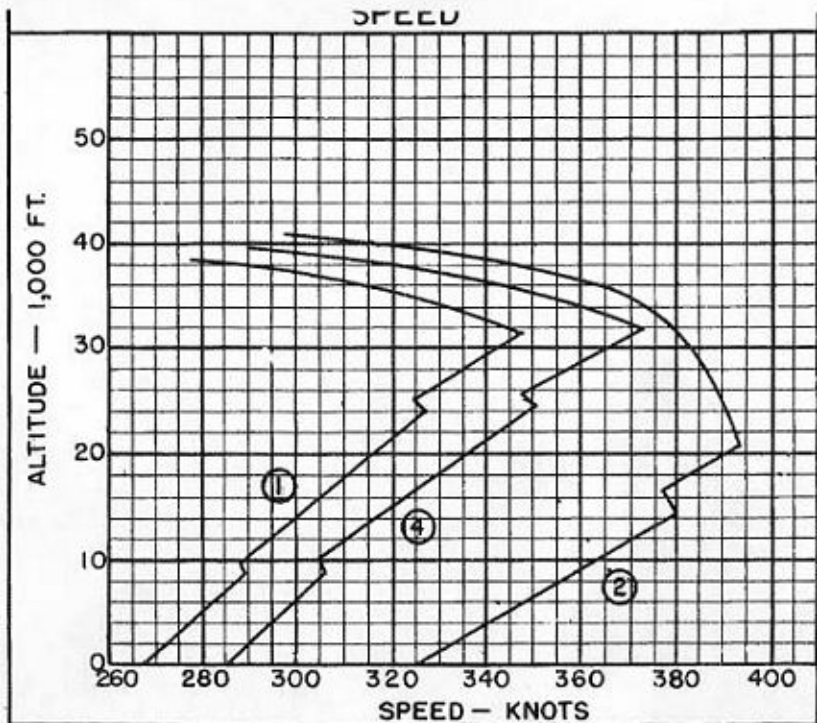
<u>WARM-UP</u>	<u>RENDEZVOUS</u>	<u>CLIMB</u>	<u>CRUISE OUT</u>	<u>DROP BOMBS</u>	<u>COMBAT</u>	<u>CRUISE BACK</u>	<u>RESERVE</u>
20 min.	20 min. at sea level	to 15000 ft.	at 15000 ft.		20 min. at 15000 ft.	at 1500 ft.	60 min. at
<u>TAKE-OFF</u>	at 60% N.S.P.	at N.R.P.	Vel. for Max. Range	FIRE ROCKETS	10 min. WEP	170 kts.TAS	Vel. for Max.Range
1 min.	Auto Lean.	Auto.Lean	Auto.Lean		10 min.Mil.Pr. and descend	Auto.Lean.	Auto.Lean.

Engine ratings from Flight Test:

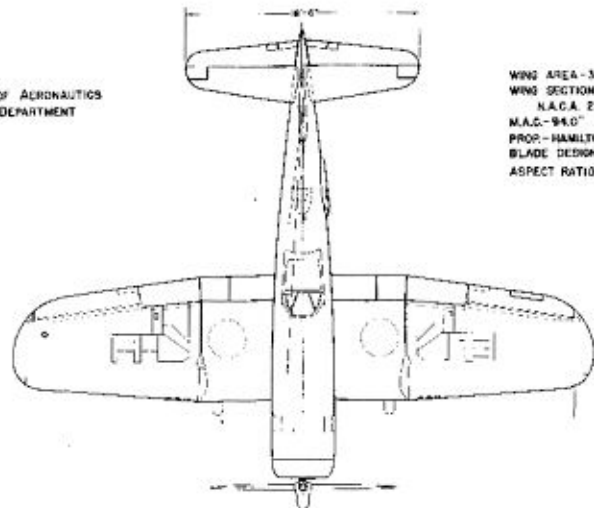
	<u>Bhp.</u>	<u>Rpm.</u>	<u>Alt.</u>
T.O.	2100	2800	S. L.
Mil.	2100	2800	3000'
	1900	2800	19000'
	1800	2800	25500'
Norm.	1700	2600	6800'
	1630	2600	20000'
	1550	2600	28000'

DECLASSIFIED

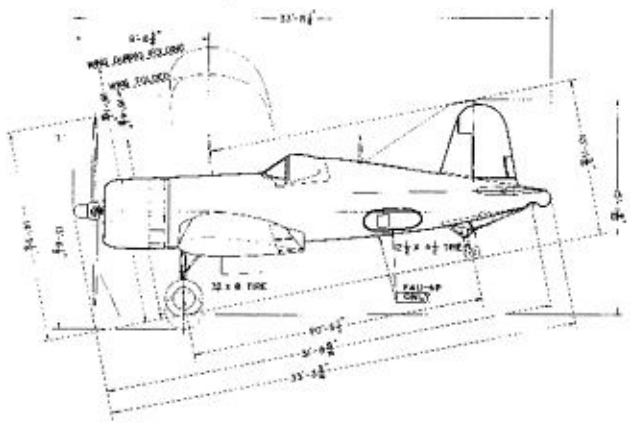
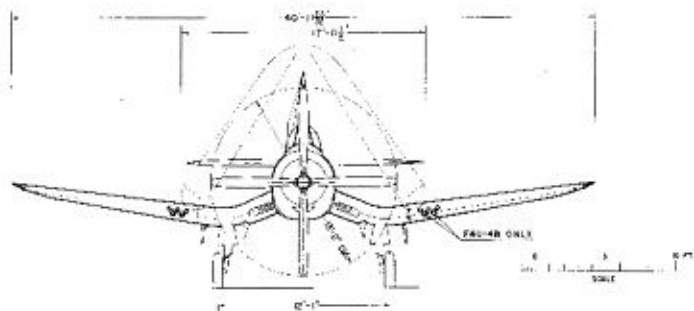
DECLASSIFIED



BUREAU OF AERONAUTICS
NAVY DEPARTMENT



WING AREA - 314 SQ. FT.
WING SECTION -
N.A.C.A. 23016-23009
M.A.C. - 94.0"
PROP. - HAMILTON STD. O.S.
BLADE DESIGN NO. 6501A-0
ASPECT RATIO 5.4



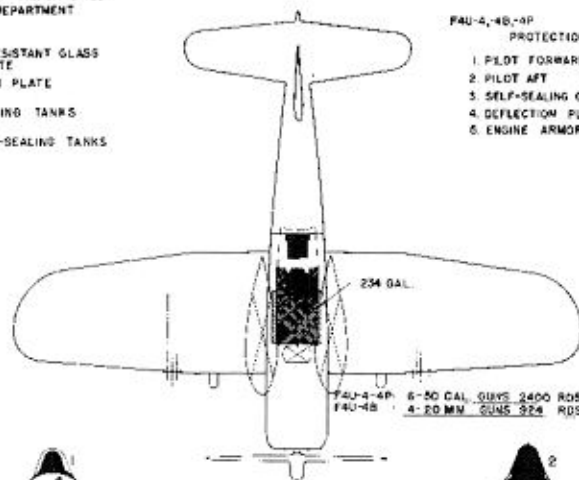
DESCRIPTIVE ARRANGEMENT

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

- BULLET RESISTANT GLASS ARMOR PLATE
- DEFLECTION PLATE
- ▨ SELF-SEALING TANKS
- ⊗ NON SELF-SEALING TANKS

FAU-4, 4B-4P
PROTECTION

- | | |
|-----------------------|-----------|
| 1. PILOT FORWARD | 36.5 LBS. |
| 2. PILOT AFT | 60.2 LBS. |
| 3. SELF-SEALING CELLS | 177 LBS. |
| 4. DEFLECTION PLATE | 20 LBS. |
| 5. ENGINE ARMOR | 175 LBS. |



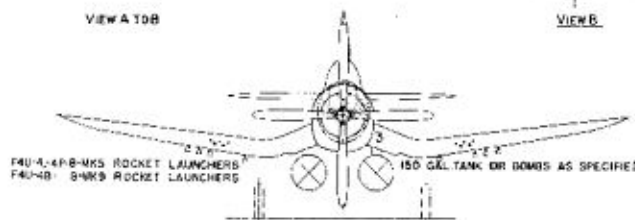
FAU-4-4P: 6-20 CAL. GUNS 2400 RDS. AMMUNITION
FAU-4B: 4-20 MM GUNS 924 RDS. AMMUNITION



VIEW A 10B

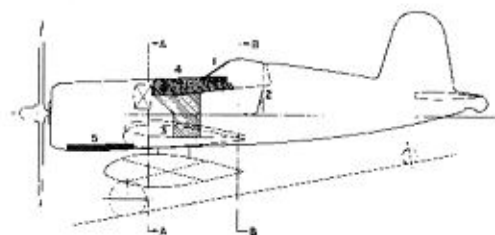


VIEW B



FAU-4-4P-B-MKS ROCKET LAUNCHERS
FAU-4B: 8-MKS ROCKET LAUNCHERS
150 GAL. TANK OR BOMBS AS SPECIFIED

0 5 10 FT.
SCALE



ARMAMENT & TANKS