

STANDARD AIRCRAFT CHARACTERISTICS

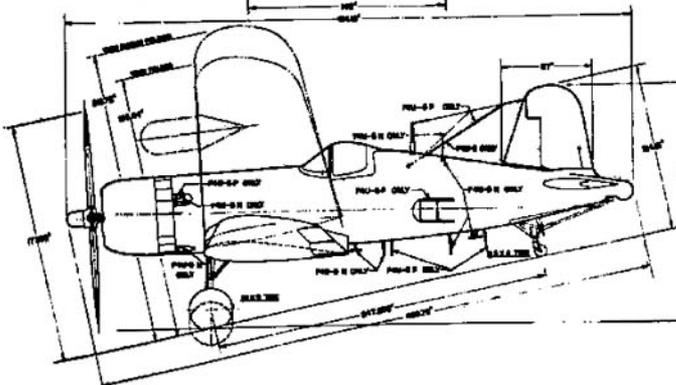
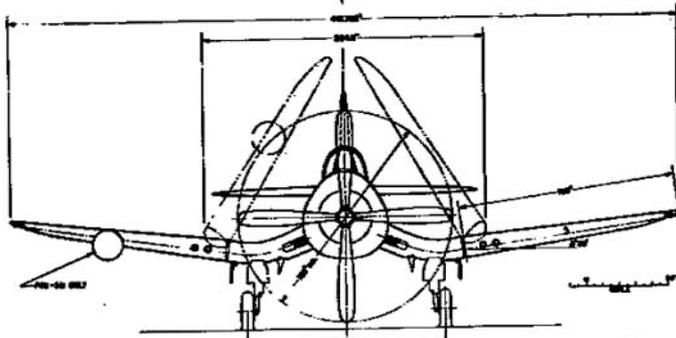
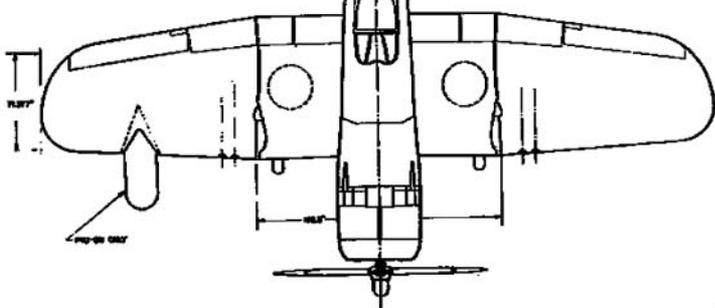
F4U-5N "CORSAIR"

CHANCE VOUGHT

BUREAU OF AERONAUTICS
NAVY DEPARTMENT



WING AREA - 244.85 SQ. FT.
WING SECTION -
SAGA 8308-13008
M.A.S. - 9427
PROJ. - ENGINEER ETD. C.S.
BLK. DRAW. NO. 9479-0
ASPECT RATIO - 0.5

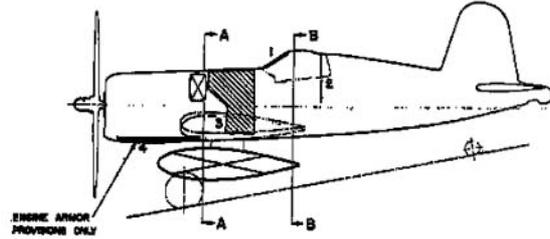
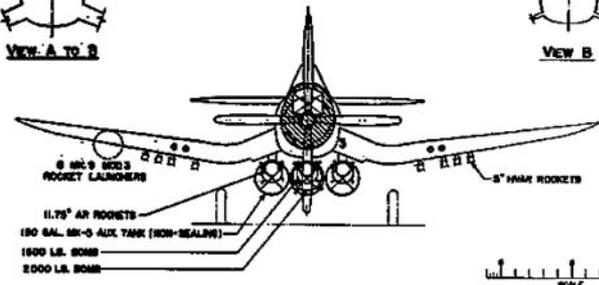
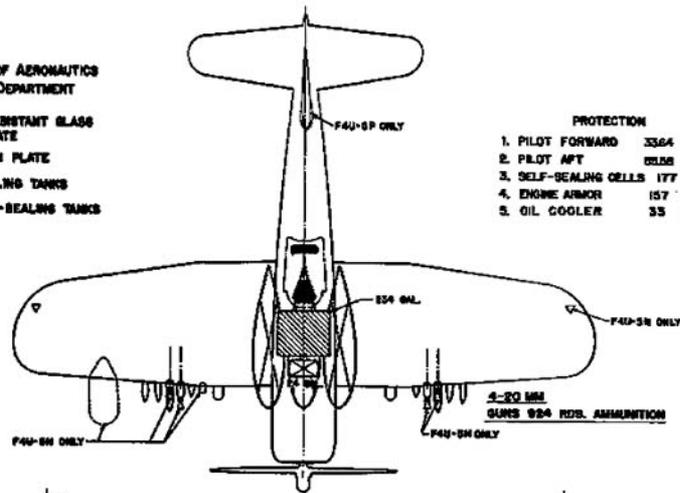


DESCRIPTIVE ARRANGEMENT

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

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

- PROTECTION
1. PILOT FORWARD 3364 LBS.
 2. PILOT AFT 8858 LBS.
 3. SELF-SEALING CELLS 177 LBS.
 4. ENGINE ARMOR 157 LBS.
 5. OIL COOLER 33 LBS.



ARMAMENT & TANKS

STANDARD Aircraft Characteristics NAVAER 1335B (REV. 1-4-49)

POWER PLANT

NO. & MODEL....(1) R-2800-32W
 MFR.....Pratt and Whitney
 SUPERCH...2 Stage, Var. Speed
 PRCP. GEAR RATIO.....0.450
 PRCP. MFR.....Hamilton Stan.
 PRCP. DES. NO.....6837A-0
 NO. BL./DIA.....4/13'-2"

RATINGS

	Bhp	Rpm	Alt.
T. O.	2,300	2,800	S. L.
COMB.	2,675	2,800	S. L.
	2,120	2,800	30,000'
MIL.	2,300	2,800	S. L.
	1,800	2,800	30,000'
NORM.	1,900	2,600	S. L.
	1,500	2,600	30,000'
SPEC. NO. H-8119			

ORDNANCE**GUNS**

No.	Size	Location	Rds.
4	20mm M-3	Wings	924
Mk. 20-0.....Optical Sight, Illuminated			

BOMBS AND ROCKETS

Type	Size	Location	No.
HVAR	5"	Wing	8
A.R.	11.75"	Wing	2
Bomb	500#	Wing	2
Bomb	1,000#	Wing	2
Bomb	1,600#	Wing	2
A.R.	11.75"	Fuselage	1
Bomb	500#	Fuselage	1
Bomb	1,000#	Fuselage	1
Bomb	1,600#	Fuselage	1
Bomb	2,000#	Fuselage	1

MAX. BOMB CAP.....5,200 lbs.
 (Field Operation)

MISSION AND DESCRIPTION

The F4U-5N is a high performance, propeller driven, single seat, land-based or carrier-based night fighter.

Its mission is to search out and destroy enemy aircraft, installations, or surface craft.

Except for the night fighter radar equipment this airplane is essentially the same as the F4U-5.

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	10,532.....	
BASIC.....	11,457.....	
DESIGN.....	12,000..	7.0
COMBAT.....	14,071..	6.0
MAX.T.O..(Field)	18,300*	4.6
	(Cat.)18,300.....	
MAX.LAND.(Field)	15,000.....	
	(Arrest)14,000.....	

All weights are actual.
 * Limited by flight characteristics

FUEL AND OIL

Gals.	No. Tanks	Location
234	1	Fuse, Seal
300	2	Wing, Drop

FUEL GRADE.....115/145
 FUEL SPEC....MIL-F-5572

OIL

CAPACITY (Gals.).....25.5
 GRADE.....1100
 SPEC.....MIL-O-6082

DIMENSIONS

WING AREA.....	314 sq. ft.
SPAN.....	41' - 0"
LENGTH.....	34' - 0"
HEIGHT.....	14' - 9"
TREAD.....	12' - 1"
M.A.C.....	7' - 10"

ELECTRONICS

VHF RELAY.....AN/ARC-28
 (Includes (2) ARC-1 or -1A)
 UHF COMM.....AN/ARC-27
 (P.S.I., Repl. for ARC-28)
 HOMING.....AN/ARR-2A
 ALTIMETER.....AN/APN-1
 RANGE REC.....R-23A/ARC-5
 VISUAL HOMING.....AN/ARR-21
 (P.S.I., Repl. for ARR-2A
 and R-23A/ARC-5)
 RADAR.....AN/APS-19A
 IFF.....AN/APX-2 or -2A or -6
 (See NOTES)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) FIGHTER 1-150 Gal. Tank External	(4) FIGHTER 8-5 th HVAR 1-150 Gal. Tank External		
TAKE-OFF WEIGHT	lb.	15,105		16,225
Fuel (Fixed/Drop)	lb.	1,404/900		1,404/900
Payload	lb.	519		1,639
Wing loading	lb./sq.ft.	48.1		51.7
Stall speed - power-off	kn.	89.2		93.2
Take-off run at S.L. - calm	ft.	1,000		1,220
Take-off run at S.L. 25 km. wind	ft.	520		690
Take-off to clear 50 ft. - calm	ft.	—		—
Max. speed/altitude (1)	kn./ft.	323/30,000		309/30,000
Rate of climb at S.L. (1)	fpm	2,450		2,100
Time: S.L. to 10,000 ft. (1)	min.	4.2		5.0
Time: S.L. to 20,000 ft. (1)	min.	8.9		11.0
Service ceiling (100 fpm) (1)	ft.	36,900		33,000
Combat range	n.mi.	710		555
Average cruising speed	kn.	210		200
Cruising altitude(s)	ft.	15,000		15,000
Combat radius	n.mi.	200		165
Average cruising speed	kn.	205		202
COMBAT LOADING CONDITION	(2) 3-Pylons 8-Launchers	(3) 3-Pylons 8-Launchers		(5) 1-150 Gal. External Tank
COMBAT WEIGHT	lb.	14,071	14,071	15,105
Engine power		Combat	Military	Combat
Fuel	lb.	1,404	1,404	1,404/900
Combat speed/combat altitude	kn./ft.	353/15,000	332/15,000	342/15,000
Rate of climb/combat altitude	fpm/ft.	3,940/15,000	3,260	3,680
Combat ceiling (500 fpm)	ft.	43,000	38,100	40,100
Rate of climb at S.L.	fpm	4,340	3,570	4,060
Max. speed at S.L.	kn.	309	291	299
Max. speed/altitude	kn./ft.	384/30,000	362/32,000	369/31,000
LANDING WEIGHT	lb.	12,327		
Fuel	lb.	240		
Stall speed - power-off	kn.	80.0		
Stall speed - with approach power	kn.	71.2		

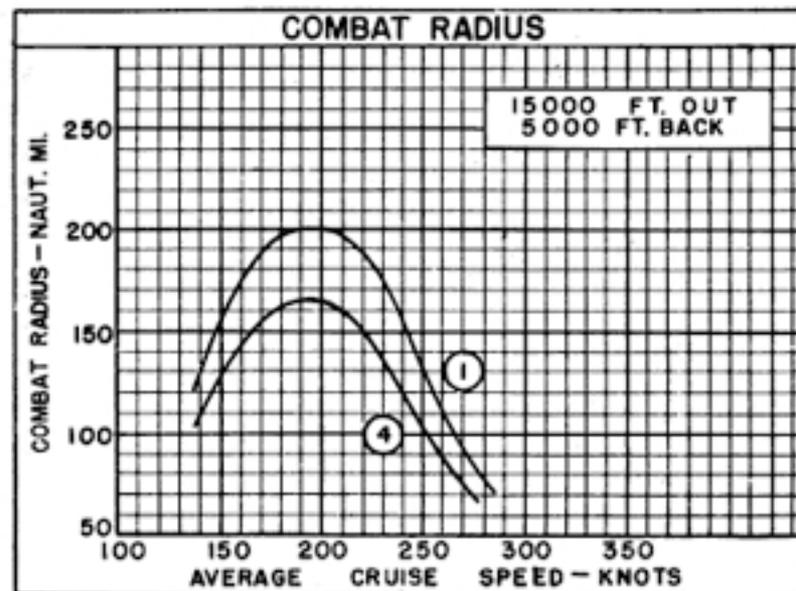
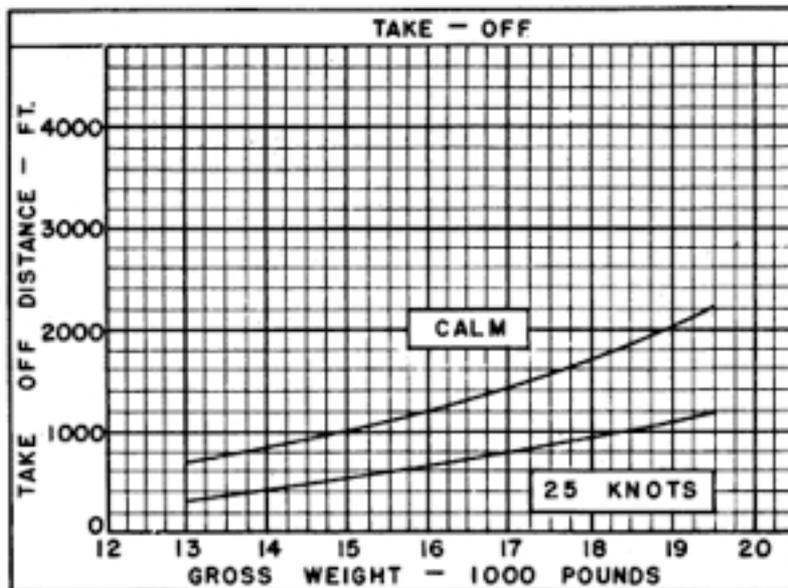
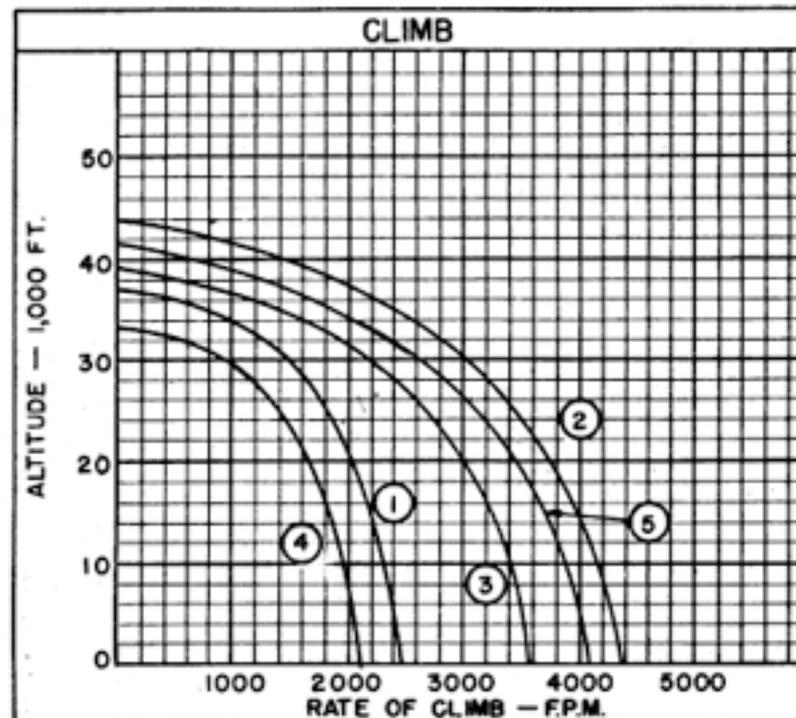
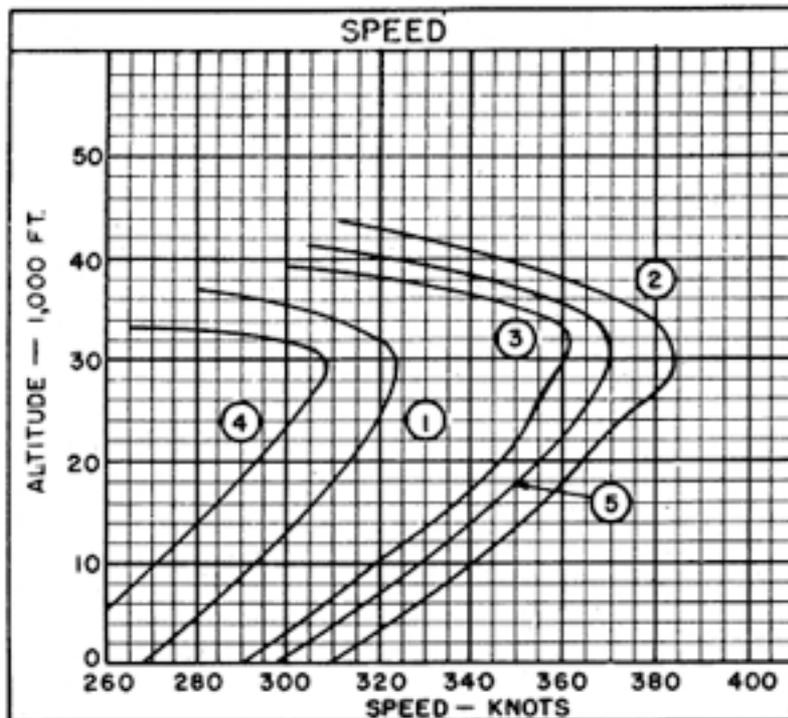
NOTES

(1) Normal Power

Performance is based on NATC flight test of F4U-5 airplane.

Range and radius are based on NATC flight test fuel consumption increased 5%.

All conditions are with 3 wing pylons and 8 Mk 9-3 rocket launchers aboard. Addition of 8 - 5th HVAR's decreases Condition (2) V_{max}, at Sea Level by 22 knots and V_{max}, at 31,000 feet by 28 knots.



○ LOADING CONDITION COLUMN NUMBER

STANDARD AIRCRAFT CHARACTERISTICS NAVAL 1335E (REV. 2-60)

NOTES

Water available for 3.8 minutes at combat power.

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

GENERAL PURPOSE AND ESCORT FIGHTER COMBAT RADIUS PROBLEM (RECIPROCATING ENGINE)

WARM-UP, TAXI, TAKE-OFF: 10 minutes at normal power

CLIMB: To 15,000 feet at normal power; normal mixture

CRUISE-OUT: At 15,000 feet at V for long range; normal mixture. External tank dropped when empty.

COMBAT: 10 minutes at combat power plus 10 minutes at military power at 15,000 feet

DESCEND: To 5,000 feet

CRUISE-BACK: At 5,000 feet at V for long range; normal mixture

RESERVE: 20 minutes at V for long range at sea level plus 5% of initial fuel load

$$\text{COMBAT RADIUS} = \text{CLIMB} + \text{CRUISE-OUT} + \text{CRUISE-BACK}$$

F4U-5NL is a winterized version of the F4U-5N airplane. Winterization equipment consists of wing-empennage de-icer boots and a windshield-propeller anti-icing fluid system. Total weight change from the F4U-5N is + 9 lbs.

ELECTRONICS (Continued):

CLOSE SUPPORT BOMB GUIDANCE EQUIPMENT.....AN/ARM-61 (24 aircraft only)

STANDARD AIRCRAFT CHARACTERISTICS NAVAL AV 1335F (REV. 1-49)