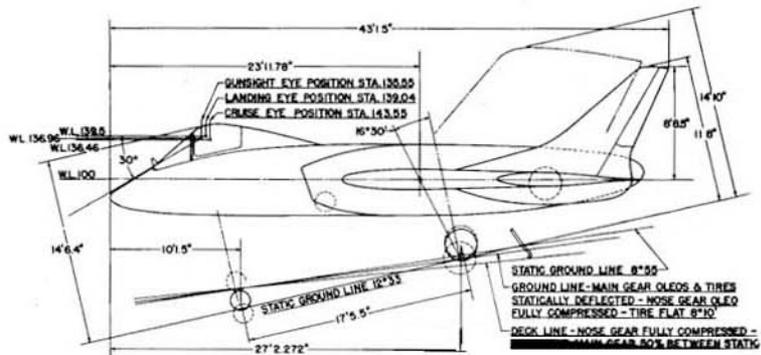
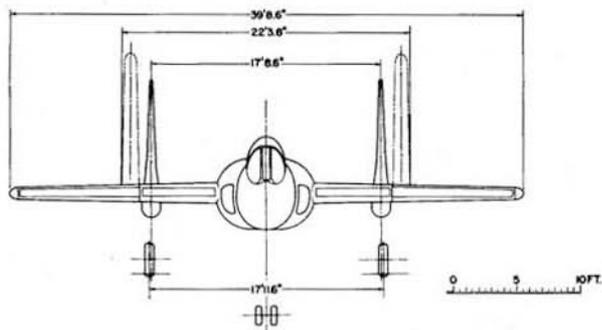
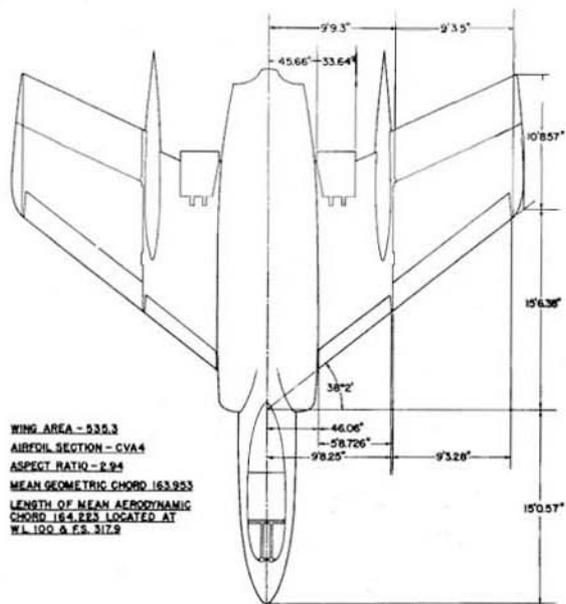
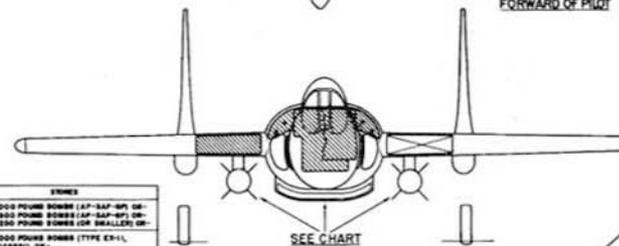
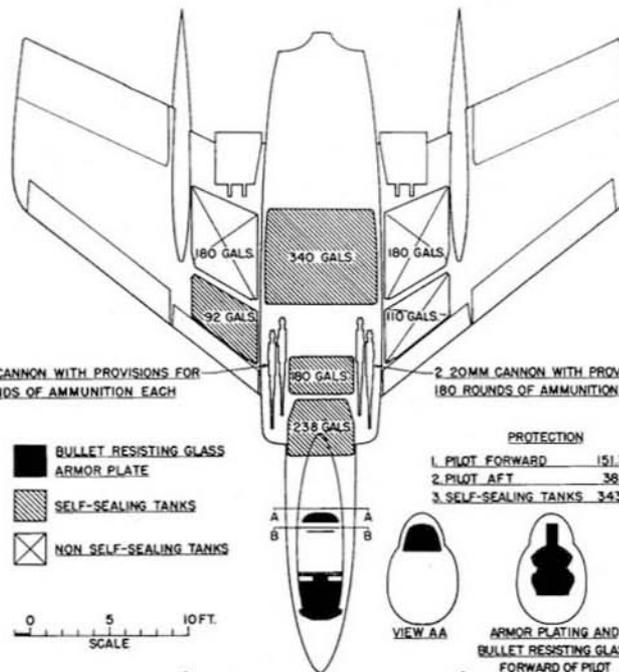


STANDARD AIRCRAFT CHARACTERISTICS
F7U-3 "CUTLASS"

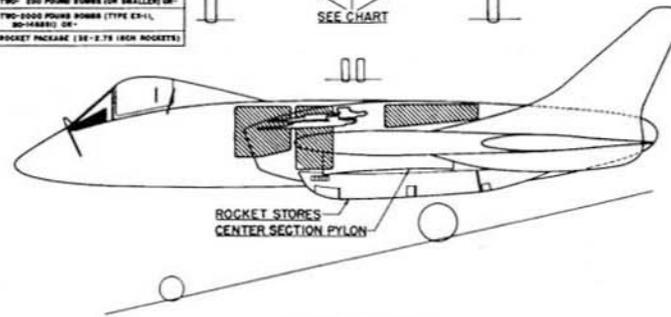
CHANGE VUGHT



DESCRIPTIVE A



ARMAMENT	BOMBS
1	TWO 1000 POUND BOMBS (AF-SAP-4R) OR TWO 600 POUND BOMBS (AF-SAP-61) OR TWO 500 POUND BOMBS (OR SMALLER) OR
2	TWO 5000 POUND BOMBS (TYPE EX-1, BO-HARS) OR
3	ROCKET PACKAGE (38" X 78" HIGH ROCKETS)



ARMAMENT & TANKS

Standard Aircraft Characteristics NAVER 13358 (REV. 1-49)

POWER PLANT

NO. & MODEL.....(2) J-46-WE-8
 MFR.....Westinghouse
 AFTERBURNER.....Integral
 A.B.MFR.....Westinghouse
 TYPE...12 Stage Axial Compr.
 2 Stage Turbine
 ENG. LENGTH.....200"
 ENG. DIA.....29"

(See NOTES)

RATINGS

Lbs. @ Rpm @ Alt.

T. O. +
 A. B. 5,800 10,100 S.S.L.
 MIL. +
 A. B. 5,800 10,100 S.S.L.
 MIL. 3,960 10,100 S.S.L.
 NORM. 3,540 10,100 S.S.L.
 W.E.C. CURVES DATED 5/11/51

ORDNANCE

No.	GUNS		Rds.
	Size	Location	
4	20mm	Fuselage	656
	(Mk.12)		

BOMBS AND ROCKETS

Type	Size	Location	No.
Bombs	1,000#	Outer Pylons, Wings	2
Bombs	2,000#	Inner Pylons, Wings	2
Rock.	2.75"	Center Line Station	44
Rock.	HPAG	Center Line Station	11
Miss. SPARROW	I	Inner & Outer Pylons	4

FIRE CONTROL

Armament Control Sys...Aero 5A
 MAX. BOMB CAP.....6,000 lbs.

MISSION AND DESCRIPTION

The F7U-3 is a carrier based, single place fighter airplane. Its primary mission is the destruction of enemy aircraft.

Longitudinal and lateral control are provided by ailerons and elevators which combine the functions of elevators and ailerons. Full span, retractable slats in the leading edge of the wing are used in take-off and landing. Split flap-type speed brakes are located on the center section trailing edge of the wing. The main gear of the tricycle landing gear retracts into the lower vertical fin stubs, while the nose gear retracts into the fuselage. The cabin is pressurized and is fitted with an ejection seat. Two pylons may be attached to the wing to provide means for carrying bombs, rockets and missiles. A fuselage centerline rocket package is provided to carry 2.75 inch rockets and HPAG rockets.

First flight -- 20 December 1951
 Service use -- January 1953

DIMENSIONS

WING AREA.....535 sq. ft.
 SPAN.....39' - 9"
 LENGTH.....43' - 2"
 HEIGHT.....14' - 6"
 TREAD.....18' - 0"
 M.A.C.....13' - 8"

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	17,110.....	
BASIC.....	17,713.....	
DESIGN.....	24,100..7.5	
COMBAT.....	23,672..7.5	
MAX.T.O..(Field)	32,500*5.6	
	(Cat.)32,500.....	
MAX.LAND.(Field)	25,300.....	
	(Arrest.)22,000.....	

All weights are estimated.

* Maximum anticipated loading

FUEL AND OIL

Gals.	No. Tanks	Location
775	3	Fuse., S.S.
91	1	Wing, S.S.
454	5	Wing, Bladder
FUEL GRADE.....	100/130	
FUEL SPEC.....	MIL-F-5572	

OIL

CAPACITY (Gals.).....	4
GRADE.....	1010
SPEC.....	MIL-O-6081

ELECTRONICS

UHF COMM...AN/ARC-27 or -27A
 RADIO ALT....AN/APN-1 or -22
 IFF.....AN/APX-6
 RADAR.....AN/APG-30
 A.D.F.....AN/ARA-25
 (Planned Service Installation)
 MF AUTO.RADIO COMP...AN/ARN-6
 (Overload item not for combat)
 VISUAL HOMING.....AN/ARN-21
 (P.S.I., Repl. for AN/ARR-2A
 and AN/ARN-6)

(See NOTES)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) FIGHTER Full Internal			
TAKE-OFF WEIGHT	lb.	26,840			
Fuel	lb.	7,920			
Payload (Ammunition)	lb.	405			
Wing loading	lb./sq.ft.	50.2			
Stall speed - power-off	kn.	112			
Take-off run at S.L. - calm (2)/(3) ft.		2,750/1,595			
Take-off run at S.L., 25kn. wind (2)/(3) ft.		1,760/1,005			
Take-off to clear 50 ft. - calm	ft.	—			
Max. speed/altitude (1)	kn./ft.	532/15,000			
Rate of climb at S.L. (2)	fpm	4,590			
Time: S.L. to 20,000 ft. (2)	min.	5.6			
Time: S.L. to 30,000 ft. (2)	min.	10.2			
Service ceiling (100 fpm) (2)	ft.	40,600			
Combat range	n.mi.	800			
Average cruising speed	kn.	490			
Cruising altitude(s)	ft.	38,700/42,700			
Combat radius	n.mi.	260			
Average cruising speed	kn.	490			
COMBAT LOADING CONDITION		(2) COMBAT	(3) COMBAT		
COMBAT WEIGHT	lb.	23,672	23,672		
Engine power		Mil. + A. B.	Military		
Fuel	lb.	4,752	4,752		
Combat speed/combat altitude	kn./ft.	540/35,000	518/35,000		
Rate of climb/combat altitude	fpm/ft.	4,980/35,000	1,460/35,000		
Combat ceiling (500 fpm)	ft.	46,800	40,800		
Rate of climb at S.L.	fpm	14,240	5,330		
Max. speed at S.L.	kn.	606	554		
Max. speed/altitude	kn./ft.	606/S.L.	556/5,000		
LANDING WEIGHT					
Fuel	lb.	20,436			
Fuel	lb.	1,516			
Stall speed - power-off	kn.	96.8			
Stall speed - with approach power	kn.	93.2			

NOTES

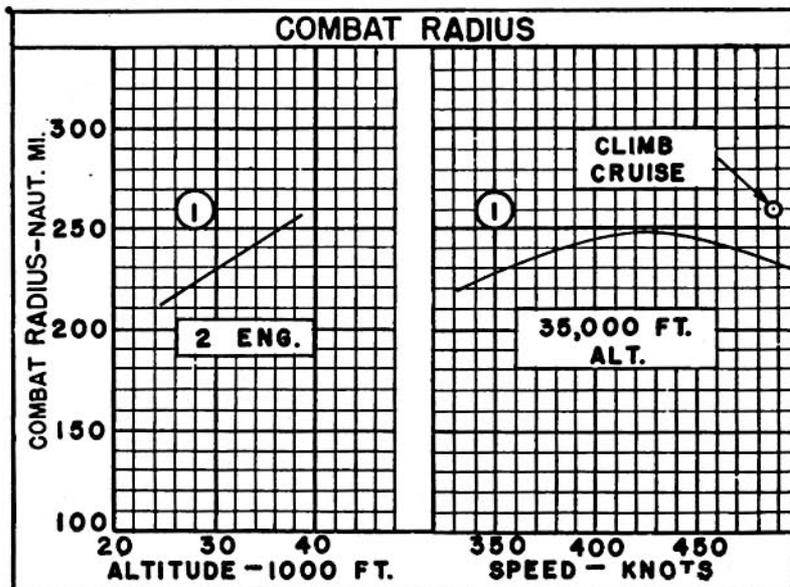
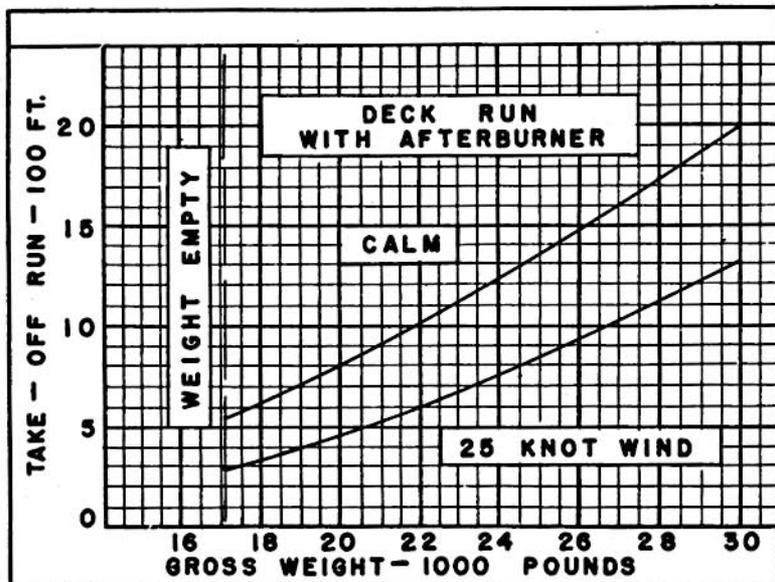
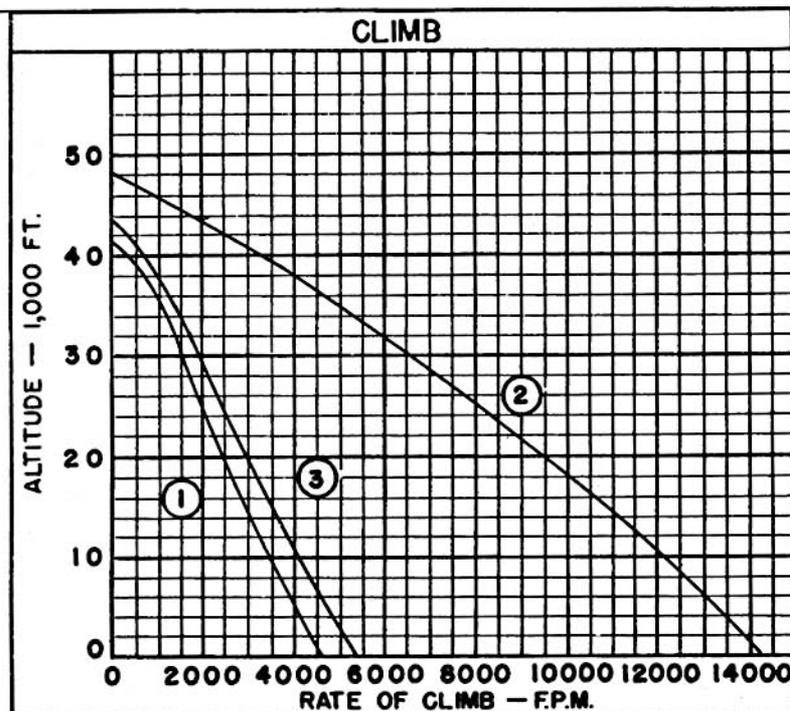
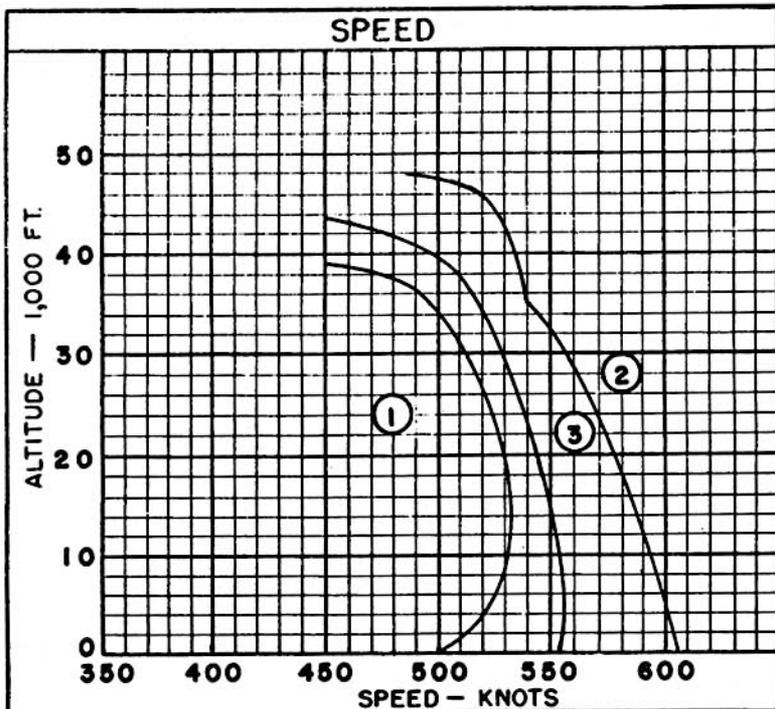
- (1) Normal Power
- (2) Military Power
- (3) Military + Afterburner

Performance is based on calculations.

Range and radius are based on engine specification fuel consumption increased by 5%.

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

Standard Aircraft Characteristics NAVALER 1335E (REV. 2-50)



○ LOADING CONDITION COLUMN NUMBER

NOTES

Airplanes nos. 1 through 16 incl. have J35-A-29 engines; airplanes nos. 17 through approx. 120 have J46-WE-8 engines; subsequent airplanes will have J46-WE-2 engines.

Performance as shown is for the J46-WE-8 engines. Performance with the J35-A-29 and J46-WE-2 engines differs from that for the J46-WE-8 engines as follows:

Item	J35-A-29	J46-WE-2
Engine Weight (lb.)	+ 1,078	0
Take-off run at S. L., calm, max. thrust (ft.)	+ 360	- 180
Max. speed, max. thrust, S. L. (kts.)	- 18	+ 4
35,000 ft. (kts.)	- 14	+ 5
Rate of climb, max. thrust, S. L. (ft./min.)	- 6,600	+ 3,410
35,000 ft. (ft./min.)	- 1,810	+ 960
Radius of action (n.mi.)	- 40	+ 4

GENERAL PURPOSE AND ESCORT FIGHTER COMBAT RADIUS PROBLEM (GAS TURBINE)

WARM-UP, TAXI, TAKE-OFF: 5 minutes at normal power

CLIMB: To cruising ceiling at military power (cruising ceiling = altitude for 300 ft./min. rate of climb at normal power)

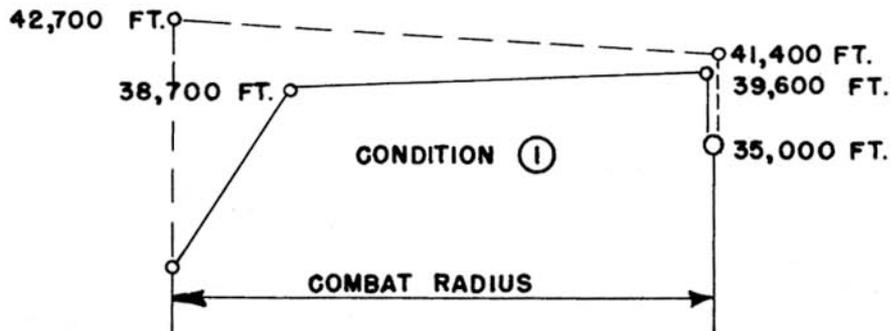
CRUISE-OUT: At V for long range at cruising ceiling

DESCEND: To 35,000 ft. (no fuel used, no distance gained)

COMBAT: At 35,000 ft. for 20 minutes, of which 15 minutes is at military power and 5 minutes is at combat power (assume combat concluded at initial cruise-back altitude)

CRUISE-BACK: At V for long range at cruising ceiling

RESERVE: 20 minutes at speed for maximum endurance with both engines operating at sea level plus 5% of initial fuel load



Based on F-5 problem, combat radius would increase to 350 n.mi.

ELECTRONICS (Continued)

VHF REC. AND HOMING EQUIPMENT.....AN/ARR-2A
(Interim installation pending availability of
AN/ARN-21)