

STANDARD AIRCRAFT CHARACTERISTICS
F-1C FURY
NORTH AMERICAN

POWER PLANT

NO. AND MODEL.....(1) J65-W-2
 MFR., Wright Aeronautical Corp.
 TYPE.....Axial Flow
 LENGTH.....124 in.
 DIAMETER.....39 in.
 AUGMENTATION.....None

RATINGS

	<u>LBS</u>	<u>RPM</u>	<u>ALT.</u>
TAKE OFF	7,220	8,300	8,800
MILITARY	7,220	8,300	8,800
NORMAL	6,400	8,000	8,800

SPEC. NO. W.A.D. N879-14

ORDNANCEGUNS

<u>NO.</u>	<u>SIZE</u>	<u>LOCATION</u>	<u>RDS.</u>
4	20mm	Fuse. Fwd.	646

FIRE CONTROL

A.F.C. Mk. 16 Mod. 2
 Radar Ranging
 Equipment.....AN/APG-30

MISSION AND DESCRIPTION

The FJ-3 is a single place, jet propelled fighter designed for land and carrier operations. The primary mission of the airplane is the destruction of enemy aircraft.

Features of this airplane include swept-back wing and tail, hydraulic speed brakes, aerodynamically actuated wing slats, NACA slotted flaps, hydraulic power-operated irreversible controls with artificial feel for the all-movable horizontal tail and ailerons.

The cockpit is provided with differential pressurization, adequate heating and cooling, a jettisonable canopy, an ejection-type seat, and anti-G suit provisions.

Design maximum dive speed is 590 knots EAS at 5,000 feet.

Design maximum Mach No. is 1.18 at 25,000 feet.

DEVELOPMENT

First flight.....July 3, 1953
 Service use.....March 1954

DIMENSIONS

WING
 AREA.....288 sq. ft.
 SPAN.....37' -1"
 M.A.C.....8' -1"
 SWEEPBACK.....35 Deg.
 LENGTH.....38' -7"
 HEIGHT.....13' -8"
 TREAD.....9.0 ft.

WEIGHTS

<u>LOADINGS</u>	<u>LBS</u>	<u>L.F.</u>
EMPTY.....	12,784.....	
BASIC.....	13,790.....	
DESIGN.....	16,482.....	6.5
COMBAT.....	16,600.....	6.4
MAX.T.O. (Field).....	19,360.....	4.9
(Cat.).....	19,360.....	
MAX.LAND. (Field).....	19,360.....	
(Arrest).....	15,000.....	

All weights are estimated.

* Max. anticipated wt.

FUEL AND OIL

<u>GALS.</u>	<u>No.</u>	<u>TANKS</u>	<u>LOCATION</u>
213	3		Wing
222	2		Fuselage
400.0	2(Drop)		Wing

FUEL GRADE...80 or higher
 FUEL SPEC.....MIL-F-5572

OIL

CAPACITY (Gals).....3.26
 GRADE.....1010
 SPEC.....MIL-O-6081A

ELECTRONICS

UHF TWR-RCVR.....AN/ARC-27A
 UHF A.D.F.....AN/ARA-25
 IFF.....AN/APX-6B
 RADIO COMPASS.....AN/ARN-6
 RADAR.....AN/APG-30
 VOR.....AN/ARC-14E (with alternate provisions for AN/ARN-21)
 Service Installation:
 SELECTIVE IDENTIFICATION
 FEATURE.....AN/APA-89
 (Provisions will be installed in 188th and subsequent aircraft).

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) Fighter			
TAKE-OFF WEIGHT	lb.	19,360			
Fuel (Gasoline)	lb.	2,610/2,400			
Payload	lb.	- - -			
Wing loading	lb./sq.ft.	67.2			
Stall speed - power-off	kn.	111.5			
Take-off run at S.L. - calm	ft.	2,050			
Take-off run at S.L. 25 kn. wind	ft.	1,380			
Take-off to clear 50 ft. - calm	ft.	- - -			
Max. speed/altitude (A)	kn./ft.	533/11,000			
Rate of climb at S.L. (B)	fpm	6,750			
Time: S.L. to 20,000 ft. (B)	min.	3.9			
Time: S.L. to 30,000 ft. (B)	min.	7.3			
Service ceiling (100 fpm) (B)	ft.	43,200			
Combat range	n.mi.	995			
Average cruising speed	kn.	470			
Cruising altitude(s)	ft.	41,300/46,200			
Combat radius	n.mi.	320			
Average cruising speed	kn.	470			
Mission time	hrs.	1.7			
COMBAT LOADING CONDITION		(2) Clean			
COMBAT WEIGHT	lb.	16,600			
Engine power		Military			
Fuel	lb.	2,610			
Combat speed/combat altitude	kn./ft.	530/35,000			
Rate of climb/combat altitude	fpm/ft.	3,030/35,000			
Combat ceiling (500 fpm)	ft.	47,000			
Rate of climb at S.L.	fpm	9,400			
Max. speed at S.L.	kn.	599			
Max. speed/altitude	kn./ft.	599/S.L.			
LANDING WEIGHT	lb.	14,833			
Fuel	lb.	812			
Stall speed - power-off	kn.	97.4			
Stall speed - with approach power	kn.	94.4			

NOTES

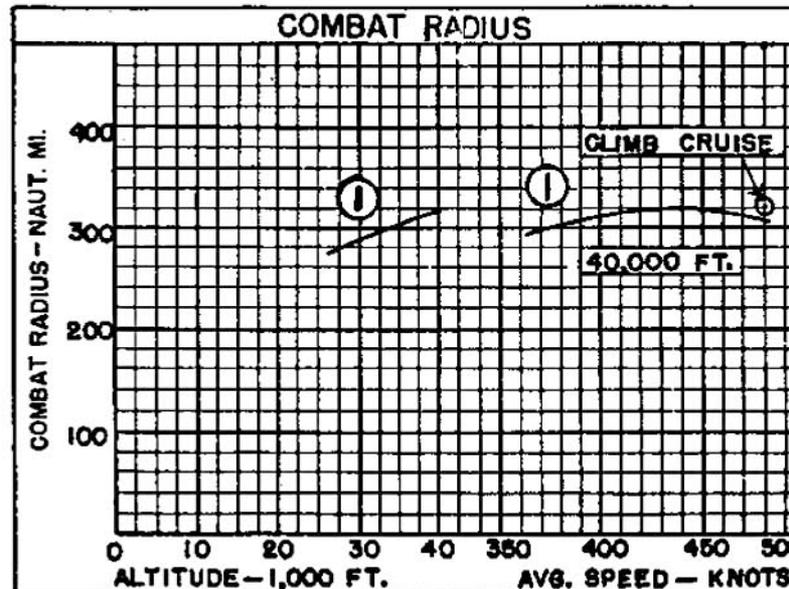
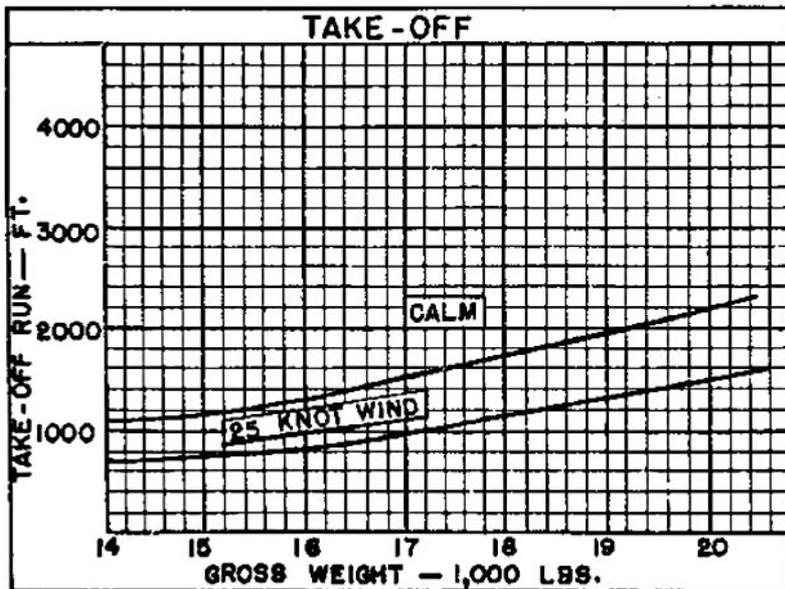
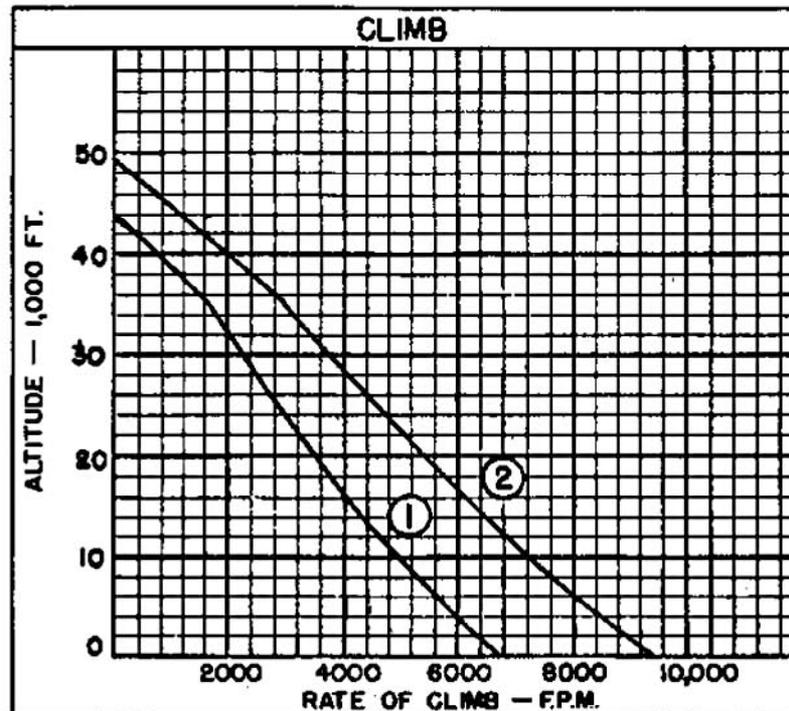
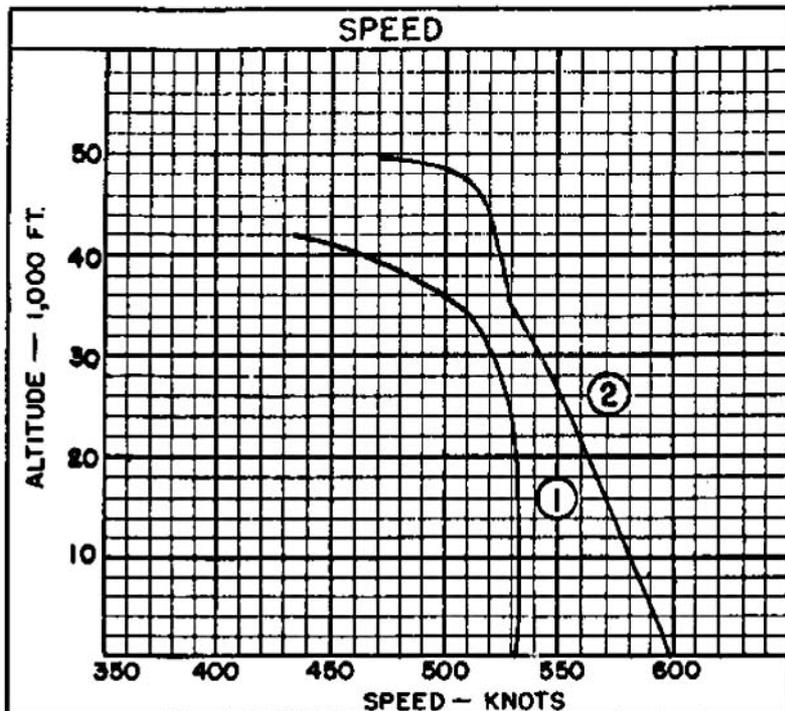
(A) Normal Rated Thrust

(B) Military Rated Thrust

Performance Basis: Calculations

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

Radius is 385 nautical miles when JP-4 fuel is used. (Fuel = 2,827/2,600 lbs.)



○ LOADING CONDITION COLUMN NUMBER

NOTES

SPOTTING: 25 airplanes (wings folded) can be spotted in a rectangular area 200 ft. long and 96 ft. wide.

COMBAT RADIUS PROBLEM - GENERAL PURPOSE FIGHTER (GAS TURBINE)

WAKE UP, TAXI, ACCELERATION: 5 minutes at normal power.

CLIMB: To altitude for best cruise at military power.

CRUISE OUT: At speed for long range at altitude for best cruise.

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

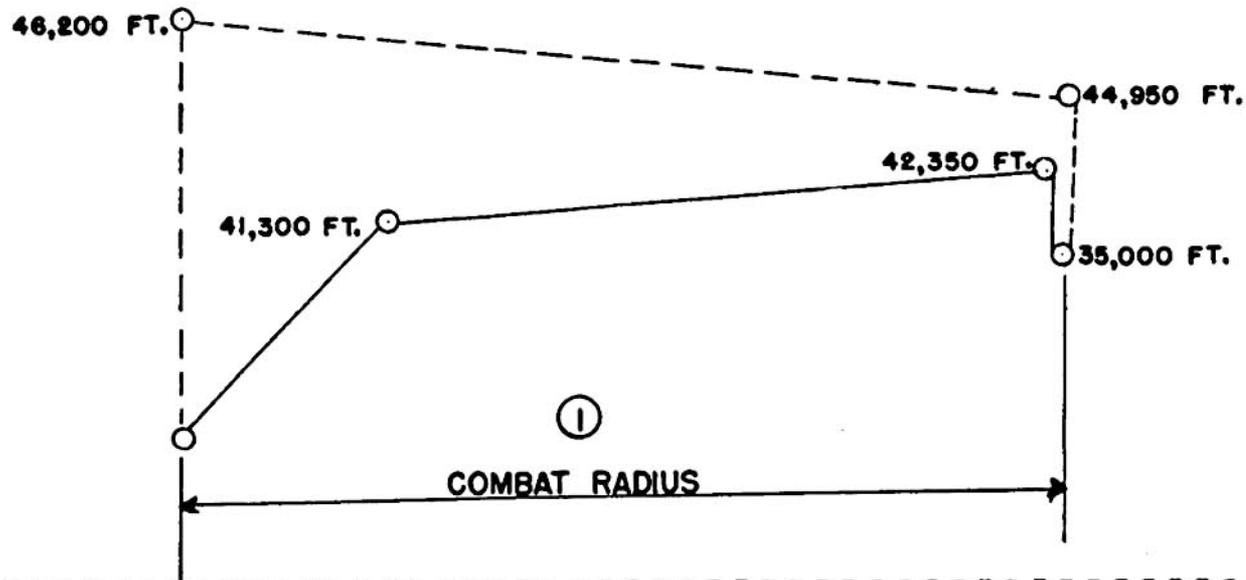
COMBAT: Fuel allowance for 20 minutes operation with military power at 35,000 ft. (External tanks dropped when empty). (Assume combat concluded at initial cruise back altitude).

CRUISE BACK: At speed for long range at altitude for best cruise.

RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.

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

$$\text{MISSION TIME INCLUDES CLIMB} + \text{CRUISE-OUT} + \text{COMBAT} + \text{CRUISE BACK}$$



Radius is reduced approximately 8.5 nautical miles for each additional minute of combat.

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