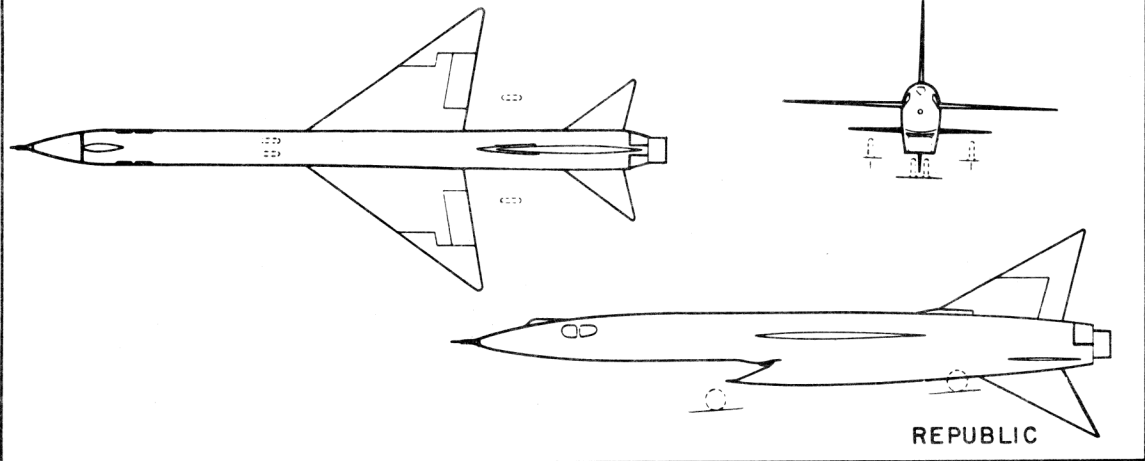


Characteristics Summary

FIGHTER (RESEARCH) ······ XF - 103



Wing Area 401 sq ft Length 81.9 ft
Span 35.8 ft Height 18.3 ft

AVAILABILITY			PROCUREMENT			
Number available			Number to be delivered in fiscal years			
ACTIVE	RESERVE	TOTAL				

STATUS

- | | |
|------------------------------|--|
| 1. Design Initiated: Apr 50 | 4. First Flight (Airplane #1): Mar 59(est) |
| 2. Contract Approved: Sep 51 | 5. First Flight (Airplane #2): Nov 59(est) |
| 3. Mock-Up: Mar 53 | |

Navy Equivalent: None

Mfr's Model: AP-57

POWER PLANT

†(1) YJ67-W-3/
XRJ55-W-1
Wright
ENGINE RATINGS
Turbo-Jet
S.L.S. LB - RPM - MIN
Max: *22,100-6350/8170-5
Mil: 13,950-6350/8170-30
Nor: 12,150-6350/7925-Cont
*With afterburner operating

Ram-jet
Design Mach Nr .. 2.24 - 3.0
Altitude (ft). 35,000 - 75,000
Thrust (lb)..... 37,400

† Double-cycle engine with afterburner operating as a ramjet engine

FEATURES

Crew 3
Double-cycle turbojet-ramjet engine
Delta wing and tail
Titanium structures
Downward ejection escape capsule
Forward vision periscope
Maneuvering stabilizer
Submerged pilot's compartment
Liquid oxygen system
Variable area ram air intake
Air turbine powered hydraulic and electric system

Max fuel capacity: 2730 gal

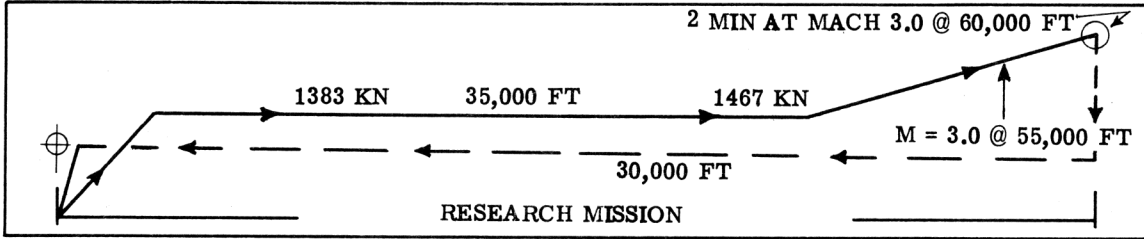
ARMAMENT

The mission of the XF-103 is to prove out the double-cycle engine in flight; to explore the problems of systems reliability at high Mach numbers and high altitudes; to evaluate the practicability of a pilot's escape capsule as a means of emergency escape at high Mach numbers to ascertain the effectiveness of utilizing titanium as a primary material for aircraft and missile construction; to engage in flight research on tactics for interceptor type aircraft at high Mach numbers.

Deleted, 5th Ed;
Add Nr 3; 2 Jan 58

Classification cancelled
or changed to ~~Unclassified~~
AUTH: AF 50 AF de-1 Sec. Class Guide Sec Dir 5000.10
By: A. R. Sorensen Security Agent
Signature and Grade
15 Dec 1966 18 Dec 1969

Characteristics Summary Basic Mission XF-103



PERFORMANCE		
COMBAT RADIUS	FERRY RANGE	S P E E D
200 naut. mi with zero lb payload at 531 knots avg. in 0.76 hours.	Not Available with gal fuel at knots avg. in hours at lb T.O. wt.	COMBAT 1720 ^(b) knots at 60,000 ft alt, max power MAX 1720 knots at 47,500-70,000 ft alt, max power BASIC 1720 knots at 50,000 ft alt, max power
C L I M B	C E I L I N G	T A K E - O F F
19,150 fpm sea level, take-off weight Turbo-jet power	50,000 ft 100 fpm, take-off weight Turbo-jet power	ground run 7140 ft no assist 7140 ^(c) ft assisted
23,900 fpm sea level, combat weight Turbo-jet power	69,570 ft 500 fpm, combat weight Ram-jet power	over 50 ft height 14,200ft no assist 14,200 ^(c) ft assisted
L O A D	W E I G H T S	S T A L L I N G S P E E D
Fuel: 2730 gal protected 0 % droppable 0 % external 0 %	Empty..... 32,575 lb Combat... 38,200 lb Take - off 51,267 lb limited by mission	175.1 knots power-off, landing config- uration, take-off weight
		TIME TO CLIMB 21.4 min S.L. to 60,000 ft, T.O. Wt, Turbojet plus Ramjet power

N O T E S
<p>1. Performance Basis:</p> <ul style="list-style-type: none"> (a) Contractor's estimated data (Not substantiated by WADC) (b) Max power is with ramjet operation (c) Assisted Take-off system currently under development (d) Data not based on Spec. MIL-C-5011A <p>2. Revision Basis: To reflect latest characteristics and performance data.</p>