Characteristics Summary

BOMBER (SUPersonic) .... Xb-70A Air Vehicle Nr 2

Valkyrie

North American

Wing Area ................. 6297 sq ft.  Length ..................... 185.8 ft.
Span ...................... 105.0 ft.  Height .................... 30.7 ft.

Availability

<table>
<thead>
<tr>
<th>TEST</th>
<th>INVENTORY</th>
<th>TOTAL</th>
<th>FY 65</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
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</tbody>
</table>

Procurement

Number to be delivered in fiscal years

Status

1. Design Initiated: .......... Nov 55
2. Mock-up ................... Mar 59
3. First Flight, Air Vehicle Nr 2 .. Jul 65

Primary purpose of the vehicle is to demonstrate airworthiness in a sustained Mach 3 high altitude environment.

Power Plant

(6) YJ93-GE-3
General Electric
S.L.S.  LB  -  RPM  -  MIN
Max: 28,000 - 6825 - Cont
Min: 19,900 - 6825 - Cont
Nor: 17,700 - 6825 - Cont
*With afterburner

Features

Crew ....................... 2
Canard
Airframe constructed from steel and titanium
Variable area inlet
Convergent-divergent exhaust nozzle
Folding wing tips
ILS ...................... AN/ARN-58
IFF radar .............. AN/APX-46
UHF command .......... AN/ARC-60
Interphone .......... AN/AIC-18
TACAN .............. AN/ARN-65

Max fuel capacity: 47,470 gal
Grade ............... JP-6

Special Stores

Not Applicable

Oct 65
(AFG 1, Addn 78)
(7 of 76)
### Characteristics Summary Basic Mission

**M = 3.0**

65,000 FT
Accelerate 1.37 - 3.0 Mach

25,000 FT
Acceleration to 1.37 Mach

OPERATIONAL RANGE: 3964 N. Miles

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### PERFORMANCE

<table>
<thead>
<tr>
<th>COMBAT RADIUS</th>
<th>OPERATING RANGE</th>
<th>SPEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT APPLICABLE</td>
<td>4009 naut. mi with 44,439 gal fuel at 3.15 hours</td>
<td>MAX 1721 knots at 65,000 - 71,750 ft alt, Min A/B power</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CLimb</th>
<th>CFliming</th>
<th>TAKe-OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>6830 fpm sea level, take-off weight military power</td>
<td>76,950 ft 100 fpm, combat weight max. power</td>
<td>ground run</td>
</tr>
<tr>
<td>30,350 fpm sea level, combat weight maximum power</td>
<td>76,750 ft 500 fpm, combat weight maximum power</td>
<td>8100 ft no assist assisted over 50 ft height</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOAD</th>
<th>WEGHTS</th>
<th>MIN. SAFE SPEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel: 44,439 gal</td>
<td>Empty….. 230,876 lb</td>
<td>163.4 Knots - T. O. Wt</td>
</tr>
<tr>
<td>protected</td>
<td>Combat… 313,086 lb</td>
<td>113.0 knots - Landing Wt</td>
</tr>
<tr>
<td>%</td>
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<tr>
<td>DENSITY: JP-6 lb/gal (6.55)</td>
<td>Take - off 542,029 lb</td>
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**NOTES**

1. Performance Basis:
   - (a) Based on actual weight of air vehicle. Flight test instrumentation & instrumentation package not included.
   - (b) 313,086 lbs is the weight 1200 n. miles prior to mission completion.

Revision Basis: To reflect latest characteristics and performance based on actual vehicle weight.