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Standard Aircraft Characteristics

NAVY MODEL A-7B AIRCRAFT

(TITLE UNCLASSIFIED)

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STANDARD AIRCRAFT CHARACTERISTICS

A-7B

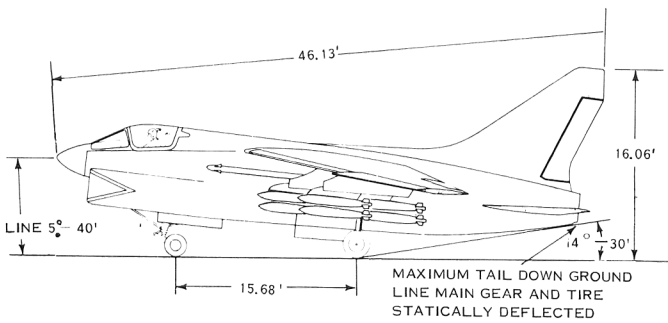
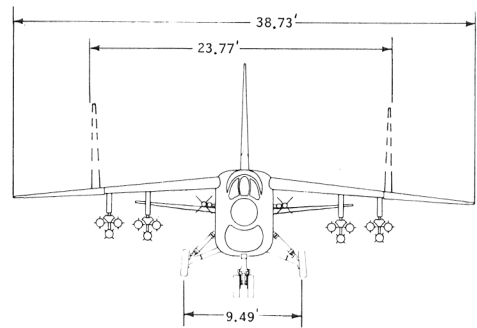
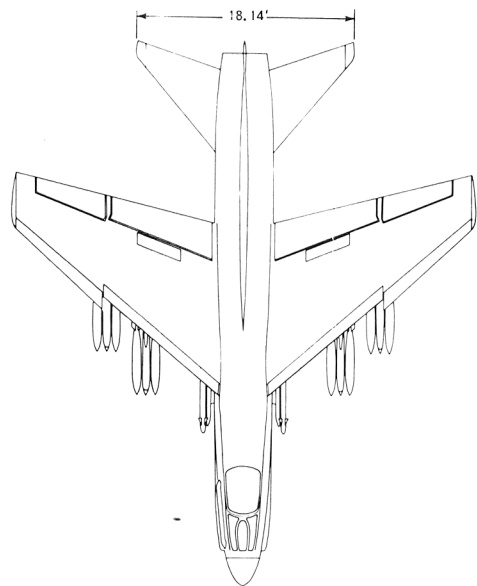
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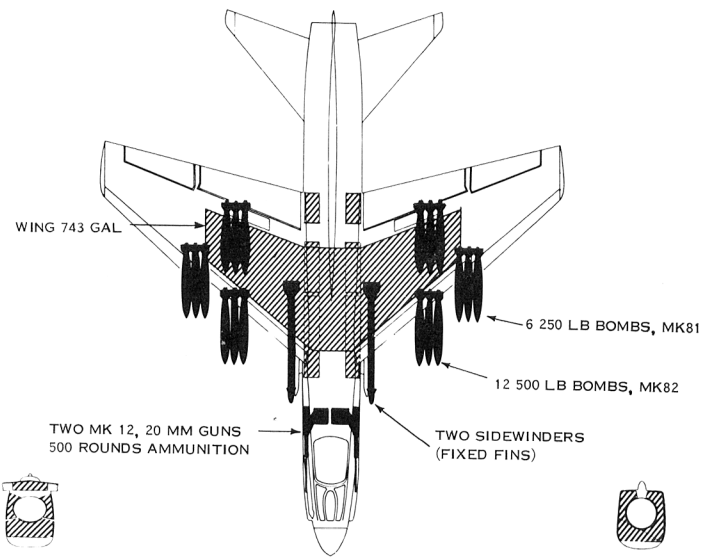
DESCRIPTIVE ARRANGEMENT



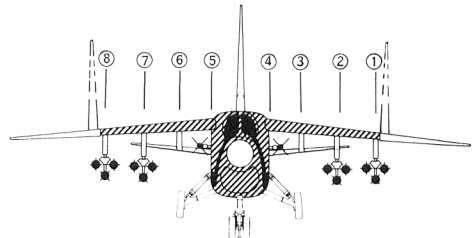
STATIC GROUND LINE 5° - 40'

MAXIMUM TAIL DOWN GROUND LINE MAIN GEAR AND TIRE STATICALLY DEFLECTED

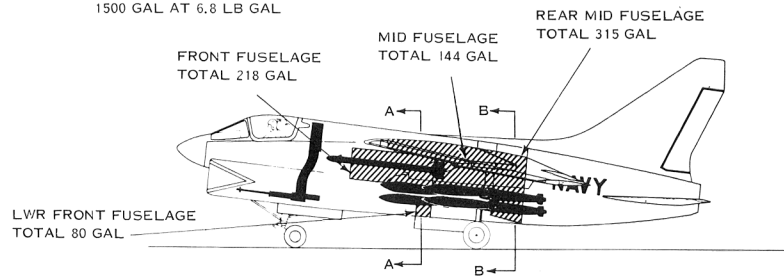
ARMAMENT & TANKAGE



WET PYLONS - 1 & 3, 6 & 8



ARMAMENT
FUEL CELLS
TOTAL USEABLE CAPACITY
1500 GAL AT 6.8 LB GAL



A-7B

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| ELECTRONICS | MISSION AND DESCRIPTION | WEIGHTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|--------------|--------|-------------------|-------|--------|-----|-------|--------|-----|--------|--------|-----|-----------------------|--------|-----|-----------|--------|--------------|----------|--------|------------|-------------------|--------|-----|------|-----------|----------|--------------|---------------|--|--|--|----------|--|--|--|-----|---|----------------|----|---------|--|--|--|-----|---|-----|----|----|---|-----------|-----|-----|---|---------------|---------|-------------------------|--|--|--|----------------|--|--|--|-----|---|-----------------|----|-----------------------|--|--|--|-------|--|--|--|-----|--|--|--|---|--|--|--|---------------------------|--|--|--|--|--|--|--|----------------------------|--|--|--|--|--|--|--|-----|-------------|----------|---|----------------------------------|----------------------|-----|-------------------------------------|--|-----|----------------|--|---|--|--|---|--|--|
| Radar AN/APQ-116 Radar Beacon AN/APN-154 Shrike Improved Display System Weapon Release Computer CP-741/A Weapon Station Control and Junction Box 215-37225 Weapon Release Programmer AN/AWE-1 Sight Unit 215-21126 Armament Monitor and Control T-375 Fuse Function Control AN/AWW-2A Transmitter AN/ARW-77 Launcher Electrical Package A/A24B-2A Special Warning Receiver AN/APR-27 Countermeasures Receiver AN/ALR-25 Countermeasures Receiver AN/ALR-26 ECM Pods AN/ALQ-81, AN/ALQ-88 AN/ALQ-100/51A AN/ALA-29 Countermeasures Set AN/ALE-29A Integrated ECM Control AN/ASW-26 Initiator, Destruct Igniter AN/ASN-54 Dispenser Set - Autopilot - Approach Power Compensator - Trim System - Nose Gear Steering - UHF Communications AN/ARC-51A UHF Auxiliary Receiver AN/ARR-69 Audio Amplifier 401-10083-1 Data Link AN/ASW-25A Juliet 28 - Doppler Navigator AN/APN-153 Navigation Computer AN/ASN-41 Roller Map AN/ASN-67 Heading and Attitude Reference System AN/ASN-50 Attitude Indicator Coupler CU-1466/ASN Standby Vertical Reference MIL-A-22858 Radar Altimeter AN/APN-141 Coupler, Linearizer CU-1464/APN-41 Angle-of-Attack System - Air Data Computer CP-828A/A TACAN AN/ARN-52 UHF Direction Finder AN/ARA-50 Cmd Mach/Airspeed Indicator 215-21124-2 IFF AN/APX-64 AIMS - MK-12 Computer KIT-1A/T SEC In-flight Monitor TS-1843/APX Indicator AAU-19/A Integrated Flight Instrumentation System - Horizontal Situation Indicator ID-1013A All Attitude Indicator ID-1329 Turn Rate Gyro T-751/AJB-3 Switch/Demodulator 215-27143 | <p>The A-7B is a single-place, carrier-based, turbo-fan, light attack airplane. The airplane is designed to provide high attack utility and flexibility for close support and interdiction missions by virtue of a large number of external store stations to provide ordnance loading capacity and freedom of ordnance choice, a large internal fuel capacity to make external fuel unnecessary for most missions, while retaining a maximum number of stations for armament, an excellent overload capability in terms of wind-over-deck requirements, flying qualities, and structural integrity. Features to expedite maintenance and airplane turnaround are important A-7B design characteristics.</p> <p>The A-7B has fixed wing incidence and a high-lift system composed of leading edge flaps and single slotted trailing edge flaps. Lateral control is provided by outboard ailerons and inboard spoilers. Superior stability and control qualities over the entire aircraft speed envelope, including transonic, are features of the A-7B.</p> <p>A stick steering autopilot is provided to augment the weapon system capability. An approach power compensator provides automatic speed control for carrier landing.</p> <p style="text-align: center;">POWER PLANT</p> Engine TF30-P-8 Manufacturer Pratt & Whitney Length 127.58 Inches Diameter 42.4 Inches Specification N-1915 (1 Nov. '65) Compressor Axial Flow Tail Pipe Nozzle Fixed | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Loading</th> <th style="text-align: left;">Pounds</th> <th style="text-align: left;">Limit Load Factor</th> </tr> </thead> <tbody> <tr> <td>Empty</td> <td>16,133</td> <td>7.0</td> </tr> <tr> <td>Basic</td> <td>16,477</td> <td>7.0</td> </tr> <tr> <td>Design</td> <td>27,100</td> <td>7.0</td> </tr> <tr> <td>Combat⁽⁸⁾</td> <td>25,732</td> <td>7.0</td> </tr> <tr> <td>Max T.O.*</td> <td>38,000</td> <td>5.0 overload</td> </tr> <tr> <td>Max T.O.</td> <td>35,600</td> <td>5.3 normal</td> </tr> <tr> <td>Max Ldg (Carrier)</td> <td>25,300</td> <td>7.0</td> </tr> </tbody> </table> <p style="text-align: center;">○ Loading Condition Column Number * 42,000 lb with ECP 16</p> <p style="text-align: center;">FUEL AND OIL</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Gal.</th> <th style="text-align: left;">No. Tanks</th> <th style="text-align: left;">Location</th> <th style="text-align: left;">Self Sealing</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center;">Main Cluster:</td> </tr> <tr> <td colspan="4" style="text-align: center;">Fuselage</td> </tr> <tr> <td>218</td> <td>2</td> <td>Left and Right</td> <td>No</td> </tr> <tr> <td colspan="4" style="text-align: center;">Forward</td> </tr> <tr> <td>144</td> <td>2</td> <td>Mid</td> <td>No</td> </tr> <tr> <td>80</td> <td>1</td> <td>Main Sump</td> <td>Yes</td> </tr> <tr> <td>315</td> <td>1</td> <td>Fuselage: Aft</td> <td>Partial</td> </tr> <tr> <td colspan="4" style="text-align: center;">Bladder Transfer System</td> </tr> <tr> <td colspan="4" style="text-align: center;">Wing: Integral</td> </tr> <tr> <td>743</td> <td>1</td> <td>Transfer System</td> <td>No</td> </tr> <tr> <td colspan="4" style="text-align: center;">Useable Fuel Capacity</td> </tr> <tr> <td>1,500</td> <td colspan="3"></td> </tr> <tr> <td colspan="4" style="text-align: center;">Oil</td> </tr> <tr> <td colspan="4" style="text-align: center;">Fuel Specification MIL-J5624F</td> </tr> <tr> <td colspan="4" style="text-align: center;">Fuel Grade JP-5</td> </tr> <tr> <td colspan="4" style="text-align: center;">Engine Oil Tank (total) 5 Gal.</td> </tr> <tr> <td colspan="4" style="text-align: center;">(useable) 4 Gal.</td> </tr> <tr> <td colspan="4" style="text-align: center;">Oil Specification MIL-J-7808</td> </tr> </tbody> </table> <p style="text-align: center;">ORDNANCE</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">No.</th> <th style="text-align: left;">Description</th> <th style="text-align: left;">Location</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>20-MM Aircraft Guns, Mk 12 Mod 0</td> <td>Lower Front Fuselage</td> </tr> <tr> <td>500</td> <td>(Normal) Rounds of 20-MM Ammunition</td> <td></td> </tr> <tr> <td>680</td> <td>(Max) External</td> <td></td> </tr> <tr> <td>2</td> <td>Fuselage Pylons for Single Sidewinders (500-lb capacity)</td> <td></td> </tr> <tr> <td>6</td> <td>Wing Mounted Pylons (3 per side), 4 - 3500-lb capacity (2 wet), 2 - 2500-lb capacity (wet)</td> <td></td> </tr> </tbody> </table> | Loading | Pounds | Limit Load Factor | Empty | 16,133 | 7.0 | Basic | 16,477 | 7.0 | Design | 27,100 | 7.0 | Combat ⁽⁸⁾ | 25,732 | 7.0 | Max T.O.* | 38,000 | 5.0 overload | Max T.O. | 35,600 | 5.3 normal | Max Ldg (Carrier) | 25,300 | 7.0 | Gal. | No. Tanks | Location | Self Sealing | Main Cluster: | | | | Fuselage | | | | 218 | 2 | Left and Right | No | Forward | | | | 144 | 2 | Mid | No | 80 | 1 | Main Sump | Yes | 315 | 1 | Fuselage: Aft | Partial | Bladder Transfer System | | | | Wing: Integral | | | | 743 | 1 | Transfer System | No | Useable Fuel Capacity | | | | 1,500 | | | | Oil | | | | Fuel Specification MIL-J5624F | | | | Fuel Grade JP-5 | | | | Engine Oil Tank (total) 5 Gal. | | | | (useable) 4 Gal. | | | | Oil Specification MIL-J-7808 | | | | No. | Description | Location | 2 | 20-MM Aircraft Guns, Mk 12 Mod 0 | Lower Front Fuselage | 500 | (Normal) Rounds of 20-MM Ammunition | | 680 | (Max) External | | 2 | Fuselage Pylons for Single Sidewinders (500-lb capacity) | | 6 | Wing Mounted Pylons (3 per side), 4 - 3500-lb capacity (2 wet), 2 - 2500-lb capacity (wet) | |
| Loading | Pounds | Limit Load Factor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Empty | 16,133 | 7.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basic | 16,477 | 7.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design | 27,100 | 7.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Combat ⁽⁸⁾ | 25,732 | 7.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max T.O.* | 38,000 | 5.0 overload | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max T.O. | 35,600 | 5.3 normal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max Ldg (Carrier) | 25,300 | 7.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gal. | No. Tanks | Location | Self Sealing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Main Cluster: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuselage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 218 | 2 | Left and Right | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Forward | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 144 | 2 | Mid | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | 1 | Main Sump | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 315 | 1 | Fuselage: Aft | Partial | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bladder Transfer System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wing: Integral | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 743 | 1 | Transfer System | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Useable Fuel Capacity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel Specification MIL-J5624F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fuel Grade JP-5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engine Oil Tank (total) 5 Gal. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (useable) 4 Gal. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oil Specification MIL-J-7808 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. | Description | Location | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 20-MM Aircraft Guns, Mk 12 Mod 0 | Lower Front Fuselage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 500 | (Normal) Rounds of 20-MM Ammunition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 680 | (Max) External | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Fuselage Pylons for Single Sidewinders (500-lb capacity) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Wing Mounted Pylons (3 per side), 4 - 3500-lb capacity (2 wet), 2 - 2500-lb capacity (wet) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DIMENSIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Wing Area 375 Sq Ft Span: Maximum 38.73 Ft Folded 23.77 Ft Aspect Ratio 4 Sweep 1/4 Chord 35° MGC 130.13 In. Length 46.13 Ft Height 16.06 Ft Maximum Tread 9.49 Ft | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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PERFORMANCE SUMMARY

| TAKEOFF LOADING CONDITION | | ① HI-HI-HI MISSION CLEAN AIRPLANE | ② PRIMARY ATTACK MISSION 6 MK 81 SNAKEYES | ③ PRIMARY ATTACK MISSION 12 MK 81 SNAKEYES | ④ 5000 FT LOITER MISSION 12 MK 82 & 6 MK 81 BOMB | ⑤ DEEP STRIKE MISSION 1 MK 28 & 3-300-GAL TANKS | ⑥ FERRY MISSION 2-300-GAL TANKS |
|--|-------------|--------------------------------------|---|--|--|---|------------------------------------|
| TAKEOFF WEIGHT | LB | 27,245 | 29,812 | 31,857 | 36,512 | 37,027 | 32,229 |
| FUEL — INTERNAL/EXTERNAL | LB/LB | 10,200/0 | 10,200/0 | 10,200/0 | 10,200/0 | 10,200/6,120 | 10,200/4,080 |
| PAYLOAD ¹ | LB | 0 | 1,800 | 3,600 | 7,500 | 2,000 | 0 |
| WING LOADING | LB/SQ FT | 72.65 | 79.50 | 84.95 | 97.37 | 98.74 | 85.94 |
| STALL SPEED — POWER-OFF | KNOTS | 121.8 | 127.6 | 132.4 | 141.5 | 141.8 | 133.5 |
| TAKEOFF GRD. RUN/OVER 50 FT OBS — CALM, 59° F ² , SL | FT/FT | 2,780/3,530 | 3,520/4,330 | 4,150/5,040 | 5,810/6,730 | 5,880/6,800 | 4,320/5,200 |
| TAKEOFF GRD RUN/OVER 50 FT OBS — CALM 89.6° F ² , SL | FT/FT | 3,500/4,260 | 4,430/5,250 | 5,310/6,210 | 7,520/8,630 | 7,600/8,700 | 5,520/6,440 |
| MRT MAX SPEED/ALTITUDE | KNOTS/FT | 592/S. L. | 542/10,500 | 533/14,000 | 472/8,500 | 533/9,000 | 556/6,000 |
| MRT RATE OF CLIMB AT SL | FPM | 6,290 | 5,530 | 4,940 | 3,780 | 4,040 | 5,070 |
| MRT TIME: SL TO 20,000 FT ³ | MIN | 3.9 | 5.3 | 6.7 | 10.5 | 7.7 | 5.4 |
| MRT TIME: SL TO 30,000 FT ³ | MIN | 6.6 | 11.5 | - - - - | - - - - | - - - - | 11.3 |
| MRT SERVICE CEILING (100 FPM) | FT | 42,400 | 36,500 | 32,800 | 26,600 | 31,700 | 36,800 |
| COMBAT RANGE | NMI | 2,533 | 1,707 | 1,436 | 1,011 | 2,794 | 2,770 |
| AVERAGE CRUISING SPEED | KNOTS | 476 | 439 | 419 | 388 | 454 | 462 |
| CRUISING ALTITUDE (S) | FT | 40,757/47,239 | 33,239/39,942 | 29,615/36,508 | 22,405/29,146 | 27,041/41,339 | 33,371/43,179 |
| COMBAT RADIUS/MISSION TIME ⁴ | NMI/HR | 1,206/5.13 | 694/3.47 | 613/3.16 | 389/2.89 | 1,210/5.31 | - - - - - |
| AVERAGE CRUISING SPEED | KNOTS | 478 | 399 | 388 | 408 | 457 | - - - - - |
| IFR REFUEL RADIUS ⁵ /MISSION TIME ⁴ | NMI/HR | 1,852/7.86 | 1,265/5.85 | 1,163/6.05 | 776/4.83 | - - - - - | - - - - - |
| FUEL TRANSFERRED/DISTANCE FROM BASE | LB/NMI | 5,463/1,025 ⁷ | 5,386/841 ⁸ | 5,710/773 ⁹ | 5,181/503 ¹⁰ | - - - - - | - - - - - |
| ACCELERATION AT CES AT 89.6° F ² | FT/SEC/SEC | 4.93 | 3.86 | 3.20 | 1.88 | 1.80 | 2.87 |
| COMBAT LOADING CONDITION | | ① HI-HI-HI MISSION CLEAN AIRPLANE | ② BOMBS RETAINED | ③ BOMBS RETAINED | ④ BOMBS RETAINED | ⑤ BOMBS RETAINED | ⑥ FERRY MISSION 2-300-GAL TANKS |
| COMBAT WEIGHT | LB | 23,165 | 25,732 | 27,777 | 32,432 | 30,499 | 26,517 |
| ENGINE POWER | | MILITARY | MILITARY | MILITARY | MILITARY | MILITARY | MILITARY |
| FUEL | LB | 6,120 | 6,120 | 6,120 | 6,120 | 9,792 | 8,586 |
| COMBAT SPEED/COMBAT ALTITUDE | KN/FT | 556/27,329 | 531/SL | 515/SL | 473/5,000 | 528/SL | - - - - - |
| RATE OF CLIMB/COMBAT ALTITUDE | FPM/FT | 4,050/27,329 | 6,520/SL | 5,890/SL | 3,680/5,000 | 5,370/SL | - - - - - |
| COMBAT CEILING (500 FPM) | FT | 43,900 | 37,200 | 33,300 | 26,800 | 33,500 | 38,600 |
| RATE OF CLIMB AT SL | FPM | 7,290 | 6,520 | 5,890 | 4,630 | 5,370 | 6,370 |
| MAX. SPEED AT SL | KNOTS | 593 | 531 | 515 | 469 | 528 | 553 |
| MAX. SPEED/ALTITUDE | KN/FT | 593/SL | 543/11,500 | 535/13,300 | 474/9,000 | 535/10,000 | 556/5,500 |
| LANDING WEIGHT ¹¹ | LB | 18,038 | 18,836 | 19,099 | 19,888 | 19,420 | 19,192 ¹² |
| FUEL | LB | 993 | 1,024 | 1,042 | 1,076 | 1,337 | 1,243 |
| STALL SPEED - POWER-OFF/ APPR POWER | KNOTS/KNOTS | 98.9/96.4 | 101.2/98.6 | 102.0/99.5 | 104.0/101.5 | 102.9/100.3 | 102.7/100.1 |
| DIST GRD ROLL/OVER 50 FT OBS | FT/FT | 3,080/4,040 | 3,200/4,160 | 3,250/4,210 | 3,350/4,310 | 3,280/4,240 | 3,300/4,260 |

- NOTES:
- PAYLOAD IS DROPPABLE ORDINANCE. DOES NOT INCLUDE 500 ROUNDS OF AMMUNITION OR EXTERNAL FUEL TANKS.
 - MILITARY THRUST.
 - CLIMB TIMES CONSIDER WEIGHT REDUCTION DUE TO FUEL USED.
 - MISSION TIME EXCLUDES TIME FOR WARMUP AND TAKEOFF AND 20-MINUTE LOITER AT SEA LEVEL.
 - CYCLE TIME IS MISSION TIME PLUS 20-MINUTE LOITER AT SEA LEVEL.
 - REFUEL RADIUS IS DETERMINED WITH REFUELING TO FULL INTERNAL FUEL CAPACITY OF 10,200 POUNDS. REFUELING ALTITUDE IS CRUISE CEILING WITH FULL INTERNAL FUEL.
 - REFUEL ALTITUDE IS 39,700 FT.
 - REFUEL ALTITUDE IS 32,600 FT.
 - REFUEL ALTITUDE IS 28,700 FT.
 - REFUEL ALTITUDE IS 21,000 FT.
 - 1.63 LB AMMUNITION RETAINED
 - 1.63 LB AMMUNITION AND EXTERNAL FUEL TANKS RETAINED

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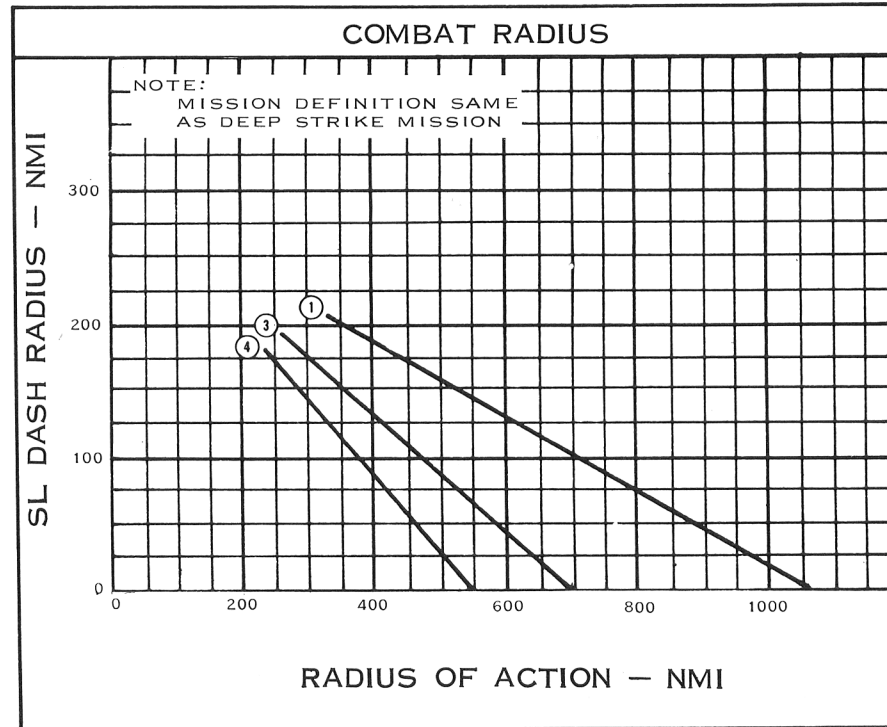
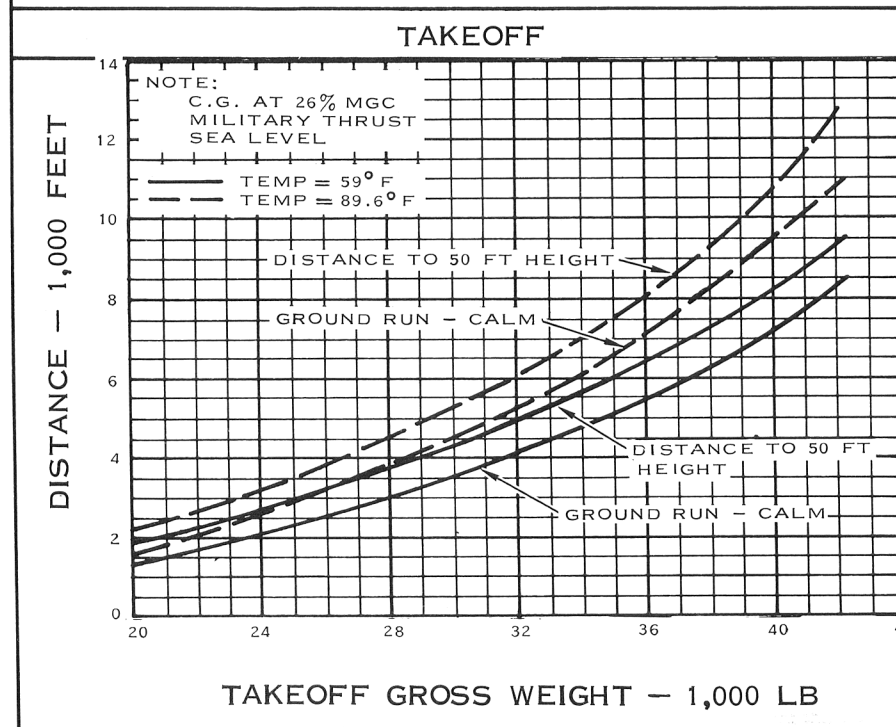
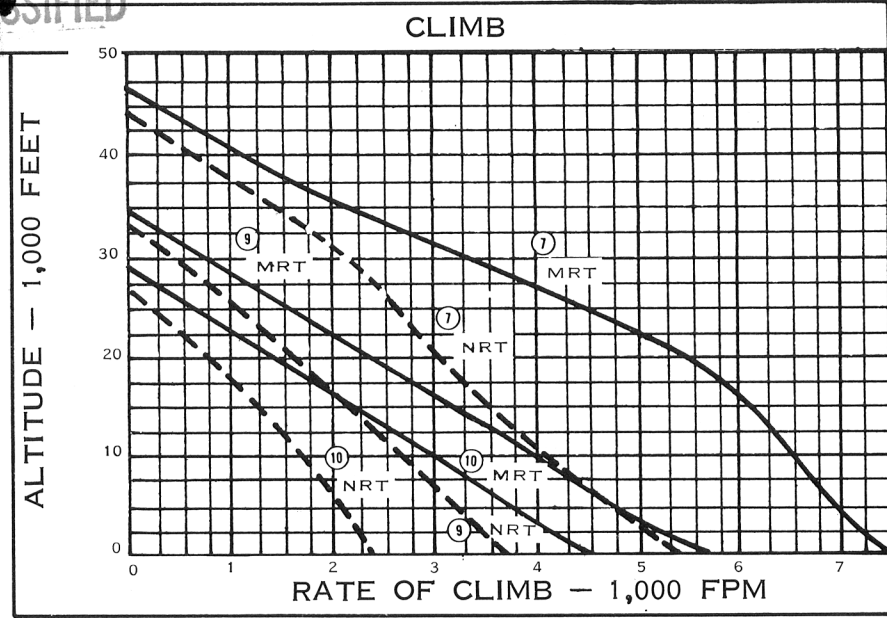
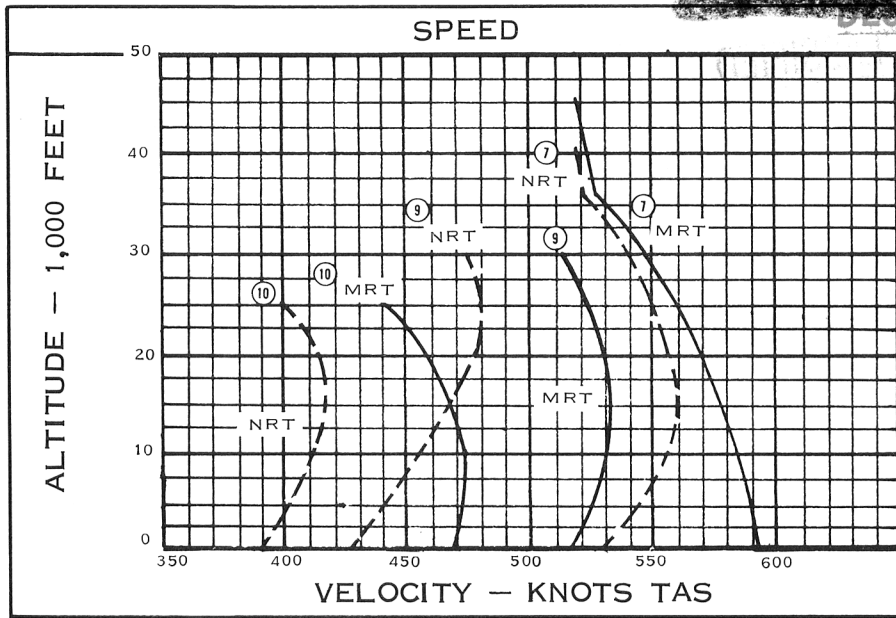
SERVICE

SUPPLEMENTAL MISSION SUMMARY

| MISSION LOADINGS FUEL - GAL TAKEOFF WT - LB | HI-LO-LO-HI MISSION | | | | LO-LO-LO MISSION | | 5000 FT LOITER MISSION | | HI-HI-HI MISSION | |
|--|---------------------|----------------|------------------|----------------|------------------|----------------|------------------------|----------------|------------------|----------------|
| | 100 NMI IN & OUT | | 200 NMI IN & OUT | | RADIUS NMI | TIME* HOURS | RADIUS NMI | TIME* HOURS | RADIUS NMI | TIME* HOURS |
| | RADIUS NMI | TIME* HOURS | RADIUS NMI | TIME* HOURS | | | | | | |
| | | | | | | | | | | |
| 1 MK 28 1500 GAL INT 29,489 $a = 3.98 \text{ FT/SEC}^2$ *** | 846 | 3.98 | 723 | 3.80 | 503 | 4.15 | 821 | 4.46 | 1088 | 4.68 |
| 1 MK 28 1500 GAL INT 900 GAL EXT 37,027 $a = 1.80 \text{ FT/SEC}^2$ *** | 1242 | 5.78 | 1147 | 5.66 | 760 | 5.91 | 1188 | 6.19 | 1435 | 6.35 |
| 6 MK 81 SNAKEYES 1500 GAL INT 29,812 $a = 3.86 \text{ FT/SEC}^2$ *** | 694 | 3.50 | 592 | 3.38 | 456 | 3.92 | 652 | 3.86 | 897 | 4.07 |
| 6 MK 81 SNAKEYES 1500 GAL INT 1200 GAL EXT 39,842 $a = 1.12 \text{ FT/SEC}^2$ *** | 1064 | 5.53 | 982 | 5.45 | 726 | 5.62 | 997 | 5.85 | 1226 | 6.02 |
| 6 MK 82 SNAKEYES 1500 GAL INT 31,438 $a = 3.31 \text{ FT/SEC}^2$ *** | 654 | 3.35 | 558 | 3.25 | 443 | 3.78 | 597 | 3.67 | 846 | 3.88 |
| 6 MK 82 SNAKEYES 1500 GAL INT 1200 GAL EXT 41,468 $a = .832 \text{ FT/SEC}^2$ *** | 995 | 5.27 | 919 | 5.2 | 703 | 5.68 | 916 | 5.54 | 1149 | 5.72 |
| 20 MK 82 SNAKEYES 1500 GAL INT 40,920 $a = .96 \text{ FT/SEC}^2$ *** | 369 | 2.30 | 329 | 2.35 | 324 | 2.65 | 245 | 2.30 | 459 | 2.54 |
| 12 MK 82 GP 6 MK 81 GP 2 MK 84 GP 1500 GAL INT 41,000 $a = .85 \text{ FT/SEC}^2$ *** | 405 | 2.42 | 356 | 2.44 | 342 | 3.00 | 285 | 2.45 | 509 | 2.70 |
| <p>* MISSION TIME: EXCLUDES TIME FOR WARMUP AND TAKEOFF AND 20-MINUTE LOITER TIME ** BCS: BEST CRUISE SPEED *** ACCELERATION AT CATAPULT END SPEED AT 89.6° F, MILITARY THRUST</p> | | | | | | | | | | |

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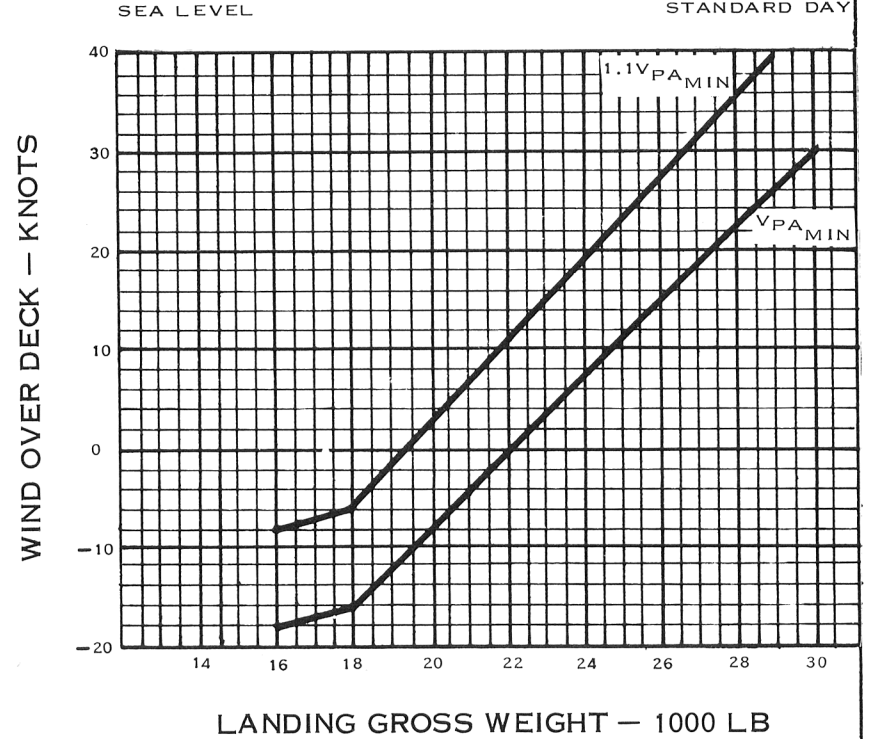
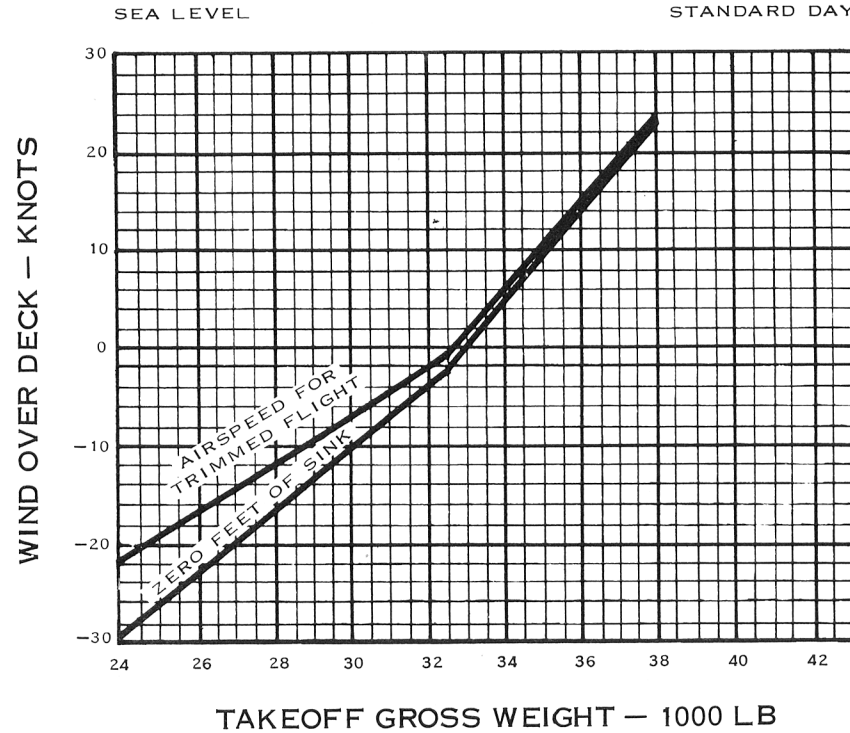
○ — LOADING CONDITION CODE NUMBER

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CARRIER SUITABILITY

MINIMUM WIND OVER DECK REQUIRED FOR CATAPULTING¹

MINIMUM WIND OVER DECK REQUIRED FOR LANDING²



NOTES:

1. C-11-1 BUWEPS SKETCH RSSH-1338K OF 10 NOVEMBER 1961
2. MK - 7, MOD 1 - 3 BUWEPS SKETCH R S S H - 1259F OF 5 JUNE 1962

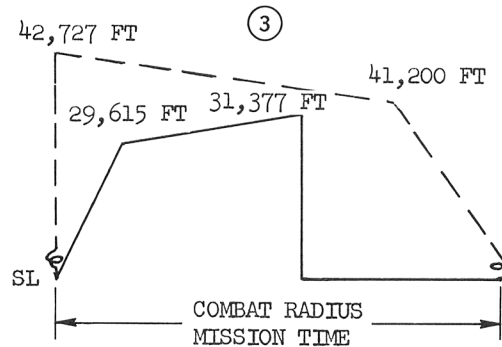
SERVICE

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NAVAIR 00-110 AA7-2

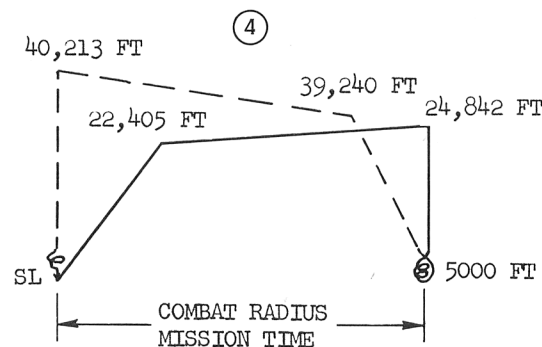
PRIMARY ATTACK MISSION

WARMUP, TAXI, TAKEOFF: 5 MIN
 SL NRT
 CLIMB: ON COURSE TO OPT CRUISE ALT WITH MIL THRUST
 CRUISE OUT: AT SPEED FOR MAX RANGE AT OPT CRUISE ALT
 DESCEND: TO SL (NO FUEL USED, NO DISTANCE GAINED)
 RUN IN: 200 NMI AT SL AT SPEED FOR MAX RANGE
 COMBAT: 5 MIN AT MRT (STORES ON, NO DIST GAINED) DROP BOMBS
 CLIMB: ON COURSE TO OPT CRUISE ALT WITH MIL THRUST
 CRUISE BACK: AT MAX RANGE SPEED AT OPT ALT
 RESERVE: 5% OF INITIAL FUEL + 20 MIN AT MAX ENDURANCE SPEED AT SL



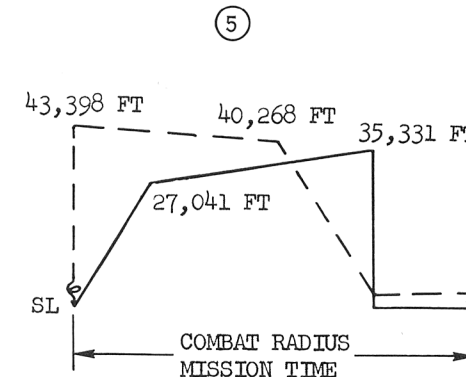
5000 FT LOITER MISSION

WARMUP, TAXI, TAKEOFF: 5 MIN SL NRT
 CLIMB: ON COURSE TO OPT CRUISE ALT WITH MIL THRUST
 CRUISE OUT: AT MAX RANGE SPEED AT OPT CRUISE ALT (DROP FUEL TANKS WHEN EMPTY)
 DESCEND: TO 5000 FT (NO FUEL USED, NO DIST GAINED)
 LOITER: 1 HOUR AT MAX END. SPEED (NO DIST GAINED) STORES DROPPED AT END OF LOITER
 CLIMB: ON COURSE TO OPT CRUISE ALT WITH MIL THRUST
 CRUISE BACK: AT MAX RANGE SPEED AT OPT ALT
 RESERVE: 5% INITIAL FUEL + 20 MIN AT MAX ENDURANCE SPEED AT SL



DEEP STRIKE MISSION

WARMUP, TAXI, TAKEOFF: 5 MIN
 SL NRT
 CLIMB: ON COURSE TO OPT CRUISE ALT WITH MIL THRUST
 CRUISE OUT: AT MAX RANGE SPEED AT OPT CRUISE ALT (DROP FUEL TANKS WHEN EMPTY)
 DESCEND: TO SL WHEN 50 NMI FROM TARGET (NO FUEL USED, NO DIST GAINED)
 RUN IN: 50 NMI AT V_{MAX} AT MRT
 COMBAT: 5 MIN AT MRT (STORES ON, NO DIST GAINED) DROP BOMBS
 RUN OUT: 50 NMI AT V_{MAX} AT MRT AT SL
 CLIMB: ON COURSE TO OPT CRUISE ALT WITH MIL THRUST
 CRUISE BACK: AT MAX RANGE SPEED AT OPT ALT
 RESERVE: 5% INITIAL FUEL + 20 MIN AT MAX ENDURANCE SPEED AT SL



NOTE:
 MISSION TIME: EXCLUDES TIME FOR WARMUP AND TAKEOFF AND 20-MINUTE LOITER TIME
 CYCLE TIME: MISSION TIME PLUS 20 MINUTES SL LOITER

○ LOADING CONDITION COLUMN NUMBER

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SERVICE

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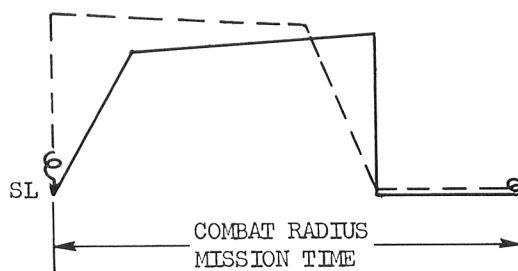
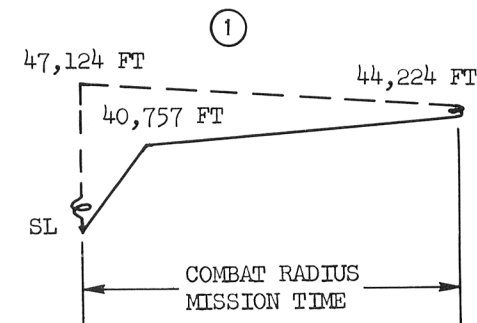
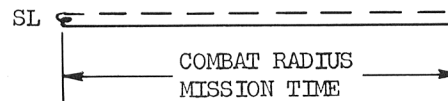
LO-LO-LO
MISSION

HI-HI-HI
MISSION

WARMUP, TAXI, TAKEOFF: 5 MIN
SL NRT
CLIMB: ON COURSE TO OPT CRUISE
ALT WITH MIL THRUST
CRUISE OUT: AT MAX RANGE SPEED
AT OPT CRUISE ALT (DROP FUEL
TANKS WHEN EMPTY)
DESCEND: TO SL WHEN 100/200
NMI FROM TARGET (NO FUEL USED,
NO DIST GAINED)
CRUISE: AT MAX RANGE SPEED AT SL
(DROP FUEL TANKS WHEN EMPTY)
COMBAT: 5 MIN AT MRT (STORES ON, NO
DISTANCE GAINED)
DROP STORES
CRUISE: AT MAX RANGE SPEED AT SL
TO A POINT 100/200 NMI FROM
TARGET
CLIMB: ON COURSE TO OPT CRUISE
ALT WITH MIL THRUST
CRUISE BACK: AT MAX RANGE SPEED AT
OPT ALT
RESERVE: 5% INITIAL FUEL + 20 MIN
AT MAX ENDURANCE SPEED AT SL

WARMUP, TAXI, TAKEOFF: 5 MIN
SL NRT
CRUISE: AT MAX RANGE SPEED AT SL
(DROP FUEL TANKS WHEN EMPTY)
COMBAT: 5 MIN AT MRT (STORES ON, NO
DISTANCE GAINED)
DROP STORES
CRUISE: AT MAX RANGE SPEED AT
SEA LEVEL
RESERVE: 5% INITIAL FUEL + 20 MIN
AT MAX ENDURANCE SPEED AT SL

WARMUP, TAXI, TAKEOFF: 5 MIN
SL NRT
CLIMB: ON COURSE TO OPT CRUISE ALT
WITH MIL THRUST
CRUISE OUT: AT MAX RANGE SPEED AT
OPT CRUISE ALT (DROP FUEL TANKS
WHEN EMPTY)
COMBAT: 5 MIN AT MRT (STORES ON, NO
DIST GAINED)
DROP STORES
CRUISE BACK: AT MAX RANGE SPEED AT
OPT ALT
RESERVE: 5% INITIAL FUEL + 20 MIN
AT MAX ENDURANCE SPEED AT SL



NOTE
MISSION TIME: EXCLUDES TIME FOR WARMUP AND TAKEOFF AND 20-MINUTE LOITER TIME
CYCLE TIME: MISSION TIME PLUS 20 MINUTES SL LOITER

○ LOADING CONDITION COLUMN NUMBER

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