Standard Aircraft Characteristics

NAVY MODEL
A-4A
AIRCRAFT
(TITLE UNCLASSIFIED)

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PUBLISHED BY DIRECTION OF THE COMMANDER OF THE NAVAL AIR SYSTEMS COMMAND

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THE 441-1 airplane is a light-weight, carrier based, jet attack airplane whose primary mission is the destruction of enemy ground and surface targets.

The arrangement is conventional with all-metal semi-monocoque structure and three-spar low aspect-ratio wing. Landing gear, flaps and speed-brakes are hydraulically operated. An electrically operated, fully adjustable stabilizer is used to trim throughout the normal flight range. The ailerons, elevator, and rudder systems are hydraulically powered. Manual control is provided for emergencies. This airplane does not have folding wings nor provisions for inflight refueling.

First Flight: August 1954
Service Use: October 1956

WING
Area: 260 sq. ft.
Span: 27' - 6'
MAC: 10' - 9.6'
Sweepback (n chord): 13.2°
Length: 19' - 12'
Height: 13' - 0'
Tread: 7' - 9.6'

DIMENSIONS

ELECTRONICS

Integrated Package consisting of:

- Communication

- Instrumentation

- Navigation & Attack

- External Missiles

DEVELOPMENT

WEIGHTS

LOADING
LBS
LBS
DRY TO BALZI
1250
7.0
WEIGHT
LBS
LBS
DRY TO BALZI
1250
7.0
MAX. T.O. (Field)
2000
4.2
MAX. LAND (Field)
16000
5.5
MAX. LOAD (Field)
2000
4.2
(Air)
12000
7.0

All weights are as actual

FUEL AND OIL

NO. TANKS
1
3
FUEL CAPACITY (gals)
568
232
1200
FUELSPEC (applicable)
MIL-F-5624
MIL-F-5624

OIL
CAPACITY (gals)
7.4 or 5
2.8

CONTRACTOR

DECLASSIFIED
## PERFORMANCE SUMMARY

<table>
<thead>
<tr>
<th>TAKE-OFF WEIGHT</th>
<th>(1) LOW ALT. ATTACH</th>
<th>(2) SEA LEVEL</th>
<th>(3) SEA LEVEL</th>
<th>(4) SEA LEVEL</th>
<th>(5) SEA LEVEL</th>
<th>(6) SEA LEVEL</th>
<th>(7) SEA LEVEL</th>
<th>(8) SEA LEVEL</th>
<th>(9) SEA LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-1000 LB. STORE</td>
<td>2-150 GAL. EXT. TANK</td>
<td>2-1000 LB. STORE</td>
<td>2-150 GAL. EXT. TANK</td>
<td>1-5000 LB. STORE</td>
<td>2-500 GAL. EXT. TANK</td>
<td>1-5000 LB. STORE</td>
<td>2-500 GAL. EXT. TANK</td>
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<tr>
<td>TAKE-OFF WEIGHT</td>
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<td>18,128</td>
<td>18,128</td>
<td>18,128</td>
<td>16,853</td>
<td>20,788</td>
<td>20,788</td>
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<td>20,788</td>
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<tr>
<td>Fuel Internal/External (25-5)</td>
<td>lb.</td>
<td>lb.</td>
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<tr>
<td>Payload</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
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<td>lb.</td>
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<tr>
<td>Wing loading</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
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<td>lb.</td>
</tr>
<tr>
<td>Stall speed - power-off</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
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<tr>
<td>Take-off run at S.L. - calm (a)</td>
<td>ft.</td>
<td>ft.</td>
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<tr>
<td>Take-off run at S.L. 25 mph wind (a)</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
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<tr>
<td>Take-off to clear 50 ft. - calm (a)</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
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</tr>
<tr>
<td>Max. speed/altitude (a)</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
</tr>
<tr>
<td>Rate of climb at S.L.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
</tr>
<tr>
<td>Time S.L. to 5000 ft.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
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<tr>
<td>Time S.L. to 30,000 ft.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
<td>min.</td>
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<tr>
<td>Service ceiling (100 ft)</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
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<td>ft.</td>
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<tr>
<td>Average cruising speed</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
</tr>
<tr>
<td>Cruising altitude(e)</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
</tr>
<tr>
<td>Combat radius/Mission time</td>
<td>(a) n.mi./hr.</td>
<td>(a) n.mi./hr.</td>
<td>(a) n.mi./hr.</td>
<td>(a) n.mi./hr.</td>
<td>(a) n.mi./hr.</td>
<td>(a) n.mi./hr.</td>
<td>(a) n.mi./hr.</td>
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<tr>
<td>Average cruising speed</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
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<td>km.</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
</tr>
<tr>
<td>15,000 ft. store delivery radius/mission time</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
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</tbody>
</table>

### COMBAT LOADING CONDITION

<table>
<thead>
<tr>
<th></th>
<th>(2) TANKS OFF STORE RETAINED</th>
<th>(4) TANKS OFF STORE RELEASED</th>
<th>(6) STORES RETAINED</th>
<th>(8) TANKS OFF STORE RETAINED</th>
<th>(10) STORES RETAINED</th>
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<tbody>
<tr>
<td>COMBAT WEIGHT</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
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<tr>
<td></td>
<td>15,876</td>
<td>15,876</td>
<td>11,650</td>
<td>11,650</td>
<td>11,650</td>
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<tr>
<td>Engine power</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
</tr>
<tr>
<td></td>
<td>FULL INTERNAL</td>
<td>FULL INTERNAL</td>
<td>MILITARY</td>
<td>MILITARY</td>
<td>MILITARY</td>
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<tr>
<td>Fuel</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
<td>lb.</td>
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<tr>
<td>Combat speed/combat altitude</td>
<td>km/h</td>
<td>km/h</td>
<td>km/h</td>
<td>km/h</td>
<td>km/h</td>
</tr>
<tr>
<td>Rate of climb/combat altitude</td>
<td>km/h</td>
<td>km/h</td>
<td>km/h</td>
<td>km/h</td>
<td>km/h</td>
</tr>
<tr>
<td>Combat ceiling (500 fps)</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
</tr>
<tr>
<td>Rate of climb at 15,000 ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
<td>ft.</td>
</tr>
<tr>
<td>Combat radius/Mission time</td>
<td>(a) n.mi./hr.</td>
<td>(a) n.mi./hr.</td>
<td>(a) n.mi./hr.</td>
<td>(a) n.mi./hr.</td>
<td>(a) n.mi./hr.</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
<td>km.</td>
</tr>
<tr>
<td>15,000 ft. store delivery radius/mission time</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
<td>n.mi./hr.</td>
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</tbody>
</table>

### NOTES

**PERFORMANCE BASIS:** Contractor and NAC Flight Test Results

**RANGE AND/OR RADIUS** are based on NAC Flight test fuel consumption data.

A. Military Rated Thrust

B. For NAC/NAW of 15-2, fuel on Combat Radius and Mission Time see Notes Page

All configurations include wing pylons, guns and ammunition.

**MISSION TIME:** Any time zero fuel is used and distance gained plus combat time.

**SPOTTING:** A total of 106 aircraft can be accommodated in a landing spot on the flight and hangar decks of a CVA-19 class angled deck carrier.
NOTES

LOADING
(All data based on JP-4 Fuel)

- 1-1050 lb. store plus 2-150 gal. ext. tanks
- 1-3500 lb. store plus 2-450 gal. ext. tanks
- 2-500 + 1-1000 lb. stores

LOW ALTITUDE ATTACK

START ENGINE, TAKE-OFF AND ACCELERATE: 5 minutes, with normal power at sea level.

CLIMB-OUT: Maximum rate of climb, military power on course to optimum cruise altitude.

CRUISE-OUT: Maximum range airspeeds at optimum cruise altitude. (Drop tanks when empty).

DECLIND: To S.L. (no fuel consumed - no distance covered) drop bombs, fire rockets.

COMBAT: At S.L. 5 minutes, military power. No distance made good.

CLIMB-BACK: At max. rate of climb, military power on course to optimum cruise altitude.

CRUISE-BACK: Maximum range airspeeds at optimum cruise altitude.

DECLIND: To sea level (no fuel consumed - no distance covered)

RESERVE: 54 initial fuel plus 20 min. at speed for maximum endurance.

15,000 FT. STORE DELIVERY

SEA LEVEL STORE DELIVERY

START ENGINE, TAKE-OFF AND ACCELERATE: 5 minutes, normal power at sea level.

CLIMB-OUT: Maximum rate of climb, military power on course to optimum cruise altitude.

CRUISE-OUT: Maximum range airspeeds at optimum cruise altitude. (Drop tanks when empty).

DECLIND: To S.L. (no fuel consumed - no distance covered)

RESERVE: At S.L. for 50 min. at max. speed with military power. Drop bombs, fire rockets.

COMBAT: At S.L. 5 minutes, military power. No distance made good.

CLIMB-BACK: At max. rate of climb, military power on course to optimum cruise altitude.

CRUISE-BACK: Maximum range airspeeds at optimum cruise altitude.

DECLIND: To S.L. (no fuel consumed - no distance covered)

RESERVE: At S.L. for 30 min. at max. speed with military power.

15,000 FT. STORE DELIVERY

ORDNANCE (Continued)

<table>
<thead>
<tr>
<th>Type</th>
<th>Weight</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOMBS</td>
<td></td>
<td>2-Mk.82 Mod. 1 (250 lb.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2-Mk.82 Mod. 2 or 3 (1000 lb.)</td>
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<tr>
<td></td>
<td></td>
<td>2-Mk.82 Mod. 3 (300 lb.)</td>
</tr>
<tr>
<td>DROP TANK</td>
<td>2-150 gal. DAC (2 fins)</td>
<td></td>
</tr>
<tr>
<td>FIRE BOMB</td>
<td>2-Mk. 9 Mod. 0 or 2-150 gal. DAC fuel tanks</td>
<td></td>
</tr>
</tbody>
</table>

Pyrotechnics

- 2-Aero 54 Flare Dispensers
- 2-Flares (9) 2.25" Aero 3A
- 2-Flares (4) 2.75" Aero 27A
- 2-Flares (4) 5.00" Aero X10A
- 2-2-3A (1000 lb.)
- 2-Mk.50 (500 lb.)

LOADING CONDITION COLUMN NUMBER

DECLASSIFIED

SERVICENAVIR 00-110AAB-3