STANDARD AIRCRAFT CHARACTERISTICS

FJ-3/3M "FURY"

NORTH AMERICAN

30 APRIL 1958
MISSION AND DESCRIPTION

The primary mission of the FJ-3 airplane is the destruction of enemy aircraft in flight. The secondary mission is to attack enemy ground or waterborne installations by employment of gun fire, bombs, and/or other destructive agents.

The FJ-3 airplane is a single-seat, carrier-based, day fighter capable of operating from an H-1, H-1C, CT, and CV catapult and a NK 5 or MK 7 arresting gear. Special features of this airplane include its sweptback wing and tail, hydraulic speed brakes, and hydraulic power-operated irreversible controls with artificial feel for the all-moving horizontal tail and ailerons.

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

Max. design dive speed = 590 km. KIAS at 5000 ft.
Max. design Mach No. = 1.18 at 25,000 ft.

The FJ-3 is basically an FJ-2 modified to incorporate the J65-W-15B engine and an inlet area of 470 square miles. The wing slats are replaced by a fuel carrying extended cambered leading edge.

DEVELOPMENT

First flight (J65-W-15B engine)..........................December 1955
Service use (J65-W-15B engine)..........................January 1956

DIMENSIONS

- Wing area: 303.3 sq. ft.
- Span: 37 ft. 1 in.
- Aspect ratio: 5.27
- Sweepback: 25 deg.
- Length: 37 ft. 7 in.
- Height: 13 ft. 3 in.
- Thickness: 9 in.

POWER PLANT

NO. & MODEL: J65-W-15B
MFR.: Wright Aero Corp.
TYPE: Axial Flow
LENGTH: 152.6 in.
DIAPHRAGM: 39.0 in.
AUGMENTATION: None

RATINGS

LRP.
MAX.
NLR
6700
7650
6300
3000

Sea Level Static
Spec. No. W.A.D. = N890A

ORDNANCE

GUNS

No. 20mm
SIZE
4
LOCATION Pud. Pns.
GUN CAMERA
MARK 16 = MOD 2
SIGHT UNIT
MARK 11 = MOD 0

EXTERNAL STORES

Airplanes 136112 and subsequent:
Inboard stations:
5-in. HVAR
500 lb. G.P. bomb
Aero 6 series rocket pack
250 lb. low drag bomb
Intermediate stations:
5-in. HVAR
500 lb. G.P. bomb
1000 lb. G.P. bomb
1000 lb. low drag bomb
1000 lb. low drag bomb
Sidewinder
Aero 6, 7, and 9 series rocket pack
260 lb. frac. bomb

WEIGHTS

LOADING
LOADS
WEIGHT
12, 205
12, 697
16, 452
15, 669
23, 719
20, 065
14, 916

BIWEIGHTS

BIWEIGHT
LOADS
WEIGHT
12, 205
12, 697
15, 669
23, 719
20, 065
14, 916

FUEL AND OIL

FUEL...J7-F-5
OIL...(applicable) MIL-P-5624

ELECTRONICS

CABIN TRANSDUCER: AN/AAC-27A
CABIN AUTO GUN FINGER: AN/AAG-25
IFF TRANSDUCER: AN/APX-56
RADAR: AN/APS-30 and AN/APS-30A
RADIO COMPASS: AN/ARA-14E
PROVISIONS FOR GUNSHIELD:
ROLL STAB: AN/ARN-21 and AN/ARH-9
## PERFORMANCE SUMMARY

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>TAKE-OFF WEIGHT</td>
<td>1 lb.</td>
<td>17,189</td>
<td>20,287</td>
<td>21,024</td>
<td>21,876</td>
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<tr>
<td>Fuel</td>
<td>1 lb.</td>
<td>1.3 lb.</td>
<td>652</td>
<td>652</td>
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<tr>
<td>Payload</td>
<td>1 lb.</td>
<td>1.6 lb.</td>
<td>347</td>
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<tr>
<td>Wing loading</td>
<td>1 lb./sq. ft.</td>
<td>347</td>
<td>347</td>
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<tr>
<td>Stall speed - power-off</td>
<td>115.5</td>
<td>115.5</td>
<td>123.4</td>
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<td>123.4</td>
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<tr>
<td>Take-off run at S.L. - calms</td>
<td>1.750</td>
<td>1.750</td>
<td>2520</td>
<td>2750</td>
<td>2970</td>
<td>2550</td>
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<tr>
<td>Take-off run at S.L. 25 km. wind</td>
<td>1.750</td>
<td>1.750</td>
<td>1600</td>
<td>1730</td>
<td>1880</td>
<td>1600</td>
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<tr>
<td>Take-off clear of 50 ft. - calms</td>
<td>1.750</td>
<td>1.750</td>
<td>3950</td>
<td>4300</td>
<td>4600</td>
<td>3700</td>
</tr>
<tr>
<td>Max. speed/altitude</td>
<td>592/s.2</td>
<td>592/s.2</td>
<td>592/10,000</td>
<td>592/15,000</td>
<td>592/10,000</td>
<td>592/10,000</td>
</tr>
<tr>
<td>Rate of climb at S.L.</td>
<td>592/s.2</td>
<td>592/s.2</td>
<td>592/s.2</td>
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<td>592/s.2</td>
<td>592/s.2</td>
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<tr>
<td>Take-off run at S.L. 25 km. wind</td>
<td>3.1</td>
<td>3.1</td>
<td>4.2</td>
<td>4.5</td>
<td>5.0</td>
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<tr>
<td>Take-off clear of 50 ft. - calms</td>
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<td>3.1</td>
<td>4.5</td>
<td>5.0</td>
<td>5.0</td>
<td>4.5</td>
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<tr>
<td>Service ceiling (100 fpm)</td>
<td>49,000</td>
<td>49,000</td>
<td>42,200</td>
<td>42,200</td>
<td>39,500</td>
<td>44,100</td>
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<tr>
<td>Combat range</td>
<td>860</td>
<td>1200</td>
<td>1190</td>
<td>1035</td>
<td>1250</td>
<td>1250</td>
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<tr>
<td>Average cruising speed</td>
<td>417</td>
<td>417</td>
<td>417</td>
<td>417</td>
<td>417</td>
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</tr>
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<td>417</td>
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</tr>
<tr>
<td>Combat radius/Mission time</td>
<td>200/s.2</td>
<td>200/s.2</td>
<td>560/s.2</td>
<td>512/s.2</td>
<td>245/s.2</td>
<td>7/3</td>
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<tr>
<td>IFR Range/Mission time</td>
<td>200/s.2</td>
<td>200/s.2</td>
<td>560/s.2</td>
<td>512/s.2</td>
<td>245/s.2</td>
<td>7/3</td>
</tr>
<tr>
<td>(2) 60% Internal Fuel</td>
<td>15.669</td>
<td>17,189</td>
<td>17,926</td>
<td>17,926</td>
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</tr>
<tr>
<td>(4) Full Internal Fuel</td>
<td>15.669</td>
<td>17,189</td>
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<td>(6) Full Internal Fuel</td>
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<tr>
<td>COMBAT WEIGHT</td>
<td>1 lb.</td>
<td>15.669</td>
<td>17,189</td>
<td>17,926</td>
<td>17,926</td>
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</tr>
<tr>
<td>Engine power</td>
<td>Military</td>
<td>Military</td>
<td>Military</td>
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</tr>
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<td>Fuel</td>
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<td>17,189</td>
<td>17,926</td>
<td>17,926</td>
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</tr>
<tr>
<td>Calibration/mission time</td>
<td>1075/s.2</td>
<td>1075/s.2</td>
<td>1075/s.2</td>
<td>1075/s.2</td>
<td>1075/s.2</td>
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<td>IFR Range/Mission time</td>
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<td>1075/s.2</td>
<td>1075/s.2</td>
<td>1075/s.2</td>
</tr>
<tr>
<td>LANDING WEIGHT</td>
<td>1 lb.</td>
<td>14,165</td>
<td>14,330</td>
<td>14,771</td>
<td>14,789</td>
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</tr>
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<td>Fuel</td>
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<td>14,165</td>
<td>14,330</td>
<td>14,771</td>
<td>14,789</td>
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</tr>
<tr>
<td>Stall speed - power-off</td>
<td>104.7/104.7</td>
<td>104.7/104.7</td>
<td>106.9/106.9</td>
<td>106.9/106.9</td>
<td>107/105</td>
<td>107/105</td>
</tr>
<tr>
<td>Distance - ground run/over 50 ft. obstacle ft.</td>
<td>3250/4500</td>
<td>3250/4500</td>
<td>3250/4500</td>
<td>3250/4500</td>
<td>3250/4500</td>
<td>3250/4500</td>
</tr>
</tbody>
</table>

### NOTES

- **PERFORMANCE BASIS:** Contractor's and NATO flight test data.
- **RANGE and Radius** based on flight test fuel consumption increased by 5%
- **(A) Military-rated Thrust**
- **(B) UNFLIGHT Refueling:** Outbound from A-30-2 tanker, 3,360 lb. fuel transferred at 592 n.m. out. If wing tanks are dropped just prior to combat, combat radius reduced 270 n.m., mission time reduced 145 hr.
- **(C) One IFR from A-30-2 tanker at loiter altitude at the end of original loiter period will extend loiter and mission time 21/4 hr.
- **(D) For four A-30-2 tankers in lieu of 2 A-60 and 2 A-20 XTA rocket packages, Combat Radius is 224 n.m., Mission Time is 21/4 hr.
- **All loadings include guns and ammunition; wing tanks are dropped when empty mission time; any time where fuel is used and distance gained including CAI loiter, Combat and Refueling allowance time.
NOTES

SPOTTING: A total of 78 airplanes (wings folded) can be accommodated in a landing spot on the flight and hangar decks of a CVA-19 class angled deck carrier.

GENERAL PURPOSE FIGHTER
WARM-UP, TAKE-OFF ACCELERATE: 5 minutes at normal rated thrust at sea level.
CLIMB: On course to optimum cruise altitude with military rated thrust.
CRUISE-OUT: At altitudes and speeds for maximum range.
RESERVE: To 35,000 feet (No fuel used, no distance gained).
COMBAT: At 35,000 feet for 20 minutes at military rated thrust (Combat concluded at initial cruise-back altitude).
CRUISE-BACK: At altitudes and speeds for maximum range.
RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.

COBORT AIR PATROL
WARM-UP, TAKE-OFF ACCELERATE: 5 minutes at normal rated thrust at sea level.
CLIMB: On course to optimum cruise altitude with military rated thrust.
CRUISE-OUT: To patrol station 150 n.m.i. from base at altitudes and speeds for maximum range.
LOTTER: On station at speed for maximum endurance at and cruise-out altitude.
COMBAT: 20 minutes at maximum speed with military rated thrust (Combat concluded at initial cruise-back altitude).
CRUISE-BACK: To base 150 n.m.i. at altitudes and speeds for maximum range.
RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.

GROUND SUPPORT FIGHTER
WARM-UP, TAKE-OFF ACCELERATE: 5 minutes at normal rated thrust at sea level.
CLIMB: On course to optimum cruise altitude with military rated thrust.
CRUISE-OUT: At altitudes and speeds for maximum range.
RESERVE: To sea level (No fuel used, no distance gained).
LOTTER: 10 minutes at speed for maximum endurance.
COMBAT: At sea level for 10 minutes at military rated thrust.
CLIMB: On course to optimum cruise altitude with military rated thrust.
CRUISE-BACK: At altitudes and speeds for maximum range.
RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5% of initial fuel load.

If JP-4 fuel is used, the following are applicable:

1 General Purpose Fighter, clean
2 General Purpose Fighter, 2-200 gal. external tanks
3 Combat Air Patrol, 2-200 gal. external tanks + 2 Sidewinders

With 3 loading and in-flight refueling, 122 lb. less fuel is received, the refueling point decreased by 40 n. mi., Combat Radius decreased by 60 n. mi. and Mission Time decreased by .24 hr.

LOADING CONDITION COLUMN NUMBER

FJ-3/3M

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30 APRIL 1958