# AIRPLANE CHARACTERISTICS & PERFORMANCE

## COLUMN NUMBER

<table>
<thead>
<tr>
<th>LOADING CONDITION</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROSS WEIGHT, LBS.</td>
<td>21720</td>
<td>21720</td>
<td>21720</td>
<td>22811</td>
</tr>
<tr>
<td>EMPTY WEIGHT, LBS</td>
<td>455/26</td>
<td>455/26</td>
<td>455/26</td>
<td>605/35</td>
</tr>
<tr>
<td>FUEL/OIL, GALS.</td>
<td>4-20mm/800 rds &amp; 4-.50 gal/1200 rds.</td>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## ENGINE POWER USED FOR PERFORMANCE

| WING LOADING, LBS/SQ FT. | 47.7 | 47.7 | 47.7 | 50.1 |
| POWER LOADING, LBS/BHP | 5.9 | 6.4 | 7.2 | 7.6 |
| V-MAX, MPH | 367 | 359 | 335 | 326 |
| V-MAX/CRITICAL ALT, MPH/FT. | 435/22200 | 428/23100 | 411/23300 | 400/23100 |
| V-STALL GROSS WEIGHT, LBS. | 91.3 | 91.3 | 91.3 | 93.6 |
| V-STALL WITHOUT FUEL, LBS. | 85.5 | 85.5 | 85.5 | 85.8 |
| TIME-TO-CLIMB -10000 FT. | 2.3 | 2.5 | 3.2 | 3.4 |
| TIME-TO-CLIMB -20000 FT. | 5.4 | 5.8 | 7.0 | 7.6 |
| SERVICE CEILING, FT. | 40700 | 40100 | 39200 | 38200 |
| TAKE-OFF DISTANCE -CALM- | 650 | 650 | 650 | 637 |
| TAKE-OFF DISTANCE -15 KT- | 433 | 433 | 433 | 497 |
| TAKE-OFF DISTANCE -25 KT- | 312 | 312 | 312 | 312 |
| TAKE-OFF DISTANCE -50 KT. OBST. | 4530 | 4160 | 3230 | 3000 |
| RATE OF CLIMB, FT/MIN. | 4530 | 4160 | 3230 | 3000 |
| RANGE / V-NAV. -60%NSP | 1200/180 | 1490/178 |
| RANGE / V-NAV. -20% R | ST. MI. / MPH |
| SEARCH RADIUS / V-NAV. -20% R | NMI / KN. |
| A.S.W. RADIUS / V-NAV. -20% R | NMI / KN. |
| SCOUT RADIUS | N Ml. |
| COMBAT RADIUS | 110 | |
| (R-1) | |
| N Ml. |

## ENGINE/PROPELLER GEAR RATIO

<table>
<thead>
<tr>
<th></th>
<th>2 P &amp; W R-2800-34W (.45)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHP/RPM ALT.</td>
<td></td>
</tr>
<tr>
<td>2380/2800/R.L.</td>
<td></td>
</tr>
<tr>
<td>2400/2800/1000/1</td>
<td></td>
</tr>
<tr>
<td>1790/2800/500/1</td>
<td></td>
</tr>
<tr>
<td>1850/2800/15500</td>
<td></td>
</tr>
</tbody>
</table>

## ENGINE RATING

<table>
<thead>
<tr>
<th>FUEL</th>
<th>OIL</th>
<th>MILITARY</th>
<th>NORMAL</th>
<th>TAKE-OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>455</td>
<td>1700/2600/ST-8500</td>
<td>1500/2600/11700-18300</td>
<td>2100/2800/R.L.</td>
</tr>
</tbody>
</table>

## TANKAGE IN GALLONS

<table>
<thead>
<tr>
<th>OIL</th>
<th>FUEL</th>
<th>TANKAGE IN GALLONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>455</td>
<td>Fuselage - external</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bombs - 1-2000#, or 1-1600#</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Torpedoes - 1 MK-13-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mines - 1-1860# or 1-1600#</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rockets - 1-11.75&quot; A.R.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wings - external</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bombs - 2-1000#, 2-500#, 2-250# or 2-100#</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Depth Bombs - 2-650# or 2-325#</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mines - 2-1000#</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rockets - 2-11.75&quot; A.R.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wings - Outer Panel - MK-9 Rocket launcher</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rockets - 8.5&quot; HVAR or AR</td>
</tr>
</tbody>
</table>

## DATE

1 March 1946

## MODEL

F7F-3

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**NOTES**

- BHP AT MAX. CRIT. ALT.
- STALL - WITH POWER.
- AT 3500' ALTITUDE (Manual Lean)
## MODEL-F7F-3

### AIRPLANE CHARACTERISTICS & PERFORMANCE

<table>
<thead>
<tr>
<th>COLUMN NUMBER</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LOADING CONDITION</strong></td>
<td><strong>FIGHTER</strong></td>
<td><strong>TORPEDO</strong></td>
<td><strong>BOMBER</strong></td>
<td><strong>ROCKET</strong></td>
</tr>
<tr>
<td>LBS.</td>
<td>23766</td>
<td>26075</td>
<td>25720</td>
<td>24910</td>
</tr>
<tr>
<td><strong>EMPTY WEIGHT</strong></td>
<td>Actual LBS.</td>
<td>16270</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FUEL/OIL</strong></td>
<td>GALS.</td>
<td>755/42</td>
<td>455/26</td>
<td>755/42</td>
</tr>
<tr>
<td><strong>FIXED GUNS/AMMUNITION</strong></td>
<td>4-20mm/600 rds &amp; 4-.50 cal./1200 rds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FLEXIBLE GUNS/AMMUNITION</strong></td>
<td>None</td>
<td></td>
<td></td>
<td></td>
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</tbody>
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### ENGINE POWER USED FOR PERFORMANCE

<table>
<thead>
<tr>
<th>WING LOADING (LBS/MPH)</th>
<th>NORMAL</th>
<th>NORMAL</th>
<th>NORMAL</th>
<th>NORMAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>52.2</td>
<td>57.2</td>
<td>56.5</td>
<td>54.7</td>
<td></td>
</tr>
<tr>
<td>7.9</td>
<td>8.7</td>
<td>8.6</td>
<td>8.3</td>
<td></td>
</tr>
<tr>
<td>326</td>
<td>299</td>
<td>301</td>
<td>311</td>
<td></td>
</tr>
<tr>
<td>399/23100</td>
<td>363/22800</td>
<td>366/22800</td>
<td>379/22900</td>
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</tr>
<tr>
<td>95.5</td>
<td>100.1</td>
<td>99.4</td>
<td>97.8</td>
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</tr>
<tr>
<td>86.0</td>
<td>90.9</td>
<td>94.1</td>
<td>88.5</td>
<td></td>
</tr>
<tr>
<td>3.7</td>
<td>4.4</td>
<td>4.2</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>10.0</td>
<td>9.6</td>
<td>9.0</td>
<td></td>
</tr>
<tr>
<td>37600</td>
<td>35700</td>
<td>35900</td>
<td>36700</td>
<td></td>
</tr>
<tr>
<td>817</td>
<td>1077</td>
<td>1038</td>
<td>990</td>
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</tr>
<tr>
<td>556</td>
<td>749</td>
<td>720</td>
<td>688</td>
<td></td>
</tr>
<tr>
<td>417</td>
<td>560</td>
<td>535</td>
<td>512</td>
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</tr>
<tr>
<td>37600</td>
<td>35700</td>
<td>35900</td>
<td>36700</td>
<td></td>
</tr>
</tbody>
</table>

### PERFORMANCE IS BASED ON - Flight Tests of F7F-1 & F7F-3N Airplanes

**RANGE & RADIUS ARE BASED ON PRELIMINARY A.B.E.**

**FUEL CONSUMPTION DATA INCREASED BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.**

**COMBAT CONDITION:** Two fairied MK51-7 wing bomb rack and sway bracing plus fuselage shackle and swy bracing aboard; rocket launchers not aboard. At Combat Power - Combat Condition plus 8 MK9 launchers; Vmax/SL - 361 mph Vmax - 428/22000.

**CLEAN CONDITION:** Combat Condition with all bomb racks and swy bracing removed. At Combat Power - Vmax/SL - 377 mph; Vmax - 447/22300.

**ROCKET CONDITION:** Rockets suspended from MK9 rocket launchers.

**FERRY CONDITION:** Armor & Armament removed - Gross Weight - 23500; Fuel - 1055 Gals. Maximum range at 1500 ft. is 2560 st. mi. at 173 mph.

**FUEL TRANSFER:** Provisions are incorporated for fuel transfer from droppable to main tanks after take-off.

**SPOTTING:** 210 ft. length is required to spot 15 airplanes on the 96 ft. wide deck immediately aft of the forward ramp on CV-9 Class Carriers.

**WATER CAPACITY:** Water available for approximately 12 minutes at Combat Power.

### NOTE:

Rocket launchers carried in rocket condition only.

Two fairied wing bomb racks and sway bracing plus fuselage shackle and sway bracing aboard in all conditions except CLEAN.
Missing Page
BUREAU OF AERONAUTICS
NAVY DEPARTMENT

BULLET RESISTANT GLASS
ARMOR PLATE
DEFLECTION PLATE
SELF-SEALING TANKS
NON SELF-SEALING TANKS

PROTECTION
1. PILOT FORWARD 154 LBS.
2. PILOT AFT 150 LBS.
3. PILOT FLOOR 83 LBS.
4. OIL TANKS 57 LBS.
5. OIL COOLERS 44 LBS.
6. SELF-SEALING CELLS 527 LBS.

4-20 M.M. CANNON 800 RDS. AMMUNITION
(200 PER)

4-50 CAL. GUNS 1200 RDS. AMMUNITION
(300 PER)

VIEW A TO B

VIEW B

VIEW C

VIEW D

WING DROPABLE TANKS
300 GAL.
ALTERNATE DROPABLE TANK
200 GAL.
DROPABLE TANK

A
B

A
B

DECLASSIFIED