Standard Aircraft Characteristics

NAVY MODEL
RF-8A
AIRCRAFT
(TITLE UNCLASSIFIED)

THIS PUBLICATION SUPERSEDES NAVAIR 00-110A-1 DATED 1 MAY 1955 IN PART AND ALL ADDENDA THERETO

This publication shall not be carried in aircraft on combat missions or when there is a reasonable chance of its falling into the hands of an unfriendly nation, unless specifically authorized by the "Operational Commander."

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

NOTICE—This document contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18, U. S. C., Sections 793 and 794. The transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

1 JULY 1967
Reproduction for non-military use of the information or illustrations contained in this publication is not permitted without specific approval of the issuing service (NAVAIR or USAF). The policy for use of Classified Publications is established for the Air Force in AFR 205-1 and for the Navy in Navy Regulations, Article 1509.

LIST OF CHANGED PAGES ISSUED

INSERT LATEST CHANGED PAGES. DESTROY SUPERSEDED PAGES.

NOTE: The portion of the text affected by the current change is indicated by a vertical line in the outer margins of the page.

* The asterisk indicates pages changed, added or deleted by the current change.

ADDITIONAL COPIES OF THIS PUBLICATION MAY BE OBTAINED AS FOLLOWS:

ASAF ACTIVITIES.—In accordance with Technical Order No. 00-1-2.
NAVY ACTIVITIES.—Use DD FORM 1348 and submit in accordance with the instructions contained in NAVSUP PUBLICATION 437—Military Standard Requisitioning and Issue Procedures.

For information on other available material and details of distribution refer to NAVSUP PUBLICATION 2002, SECTION VIII and NAVAIR 00-500A.
STANDARD AIRCRAFT CHARACTERISTICS
RF-8A CRUSADER
CHANCE Vought
POWER PLANT

No. & Model ---- J57-P-4
MFR. ---------- PRATT AND WHITNEY
Type -------- Axial Flow
Length ---------- 2400
Diameter --------- 41
Augmentation ---- Afterburning

RATINGS

LBS. @ RPM @ ALT
MIL. 16000 6100 S.S.L.
MIL. 10200 6100 S.S.L.
NORM. 8700 5780 S.S.L.
Eng, Spec. No. P&W N-1669-C

MISSION AND DESCRIPTION

The FBU-1P is a photographic reconnaissance airplane. It is designed to fly general day reconnaissance missions, special missions for beach and amphibious mapping and charting, and night reconnaissance.

The FBU-1P is similar to the FBU-1 fighter version except for (1) the front fuselage "cokine" and flaps to facilitate the photographic and infight refueling (IFR) equipment, (2) the strike camera fairing on the bottom centerline of the fuselage and (3) removal of the gunumps. The FBU-1P is a single-place swept-wing airplane having a high variable incidence wing and a low unit horizontal tail.

DEVELOPMENT

First Flight ............... January 1957
Service Use ............... November 1957

DIMENSIONS

WING
Area ........... 375 sq. ft.
Span ............ 357-6"
MAC ................ 141`
Sweepback - " CHORD 420
LENGTH ........... 541-0"
HEIGHT .............. 151-0"
TREAD .............. 91-0"

ELECTRONICS

VHF Navigation 
Receiver, AN/ARN-14
....., AN/ARN-21
UHF Transmitter Receiver
....., AN/ARC-27A
IFF Transponder ....... AN/ARP-25
CODER .......... AN/ARP-89
Radar Altimeter ....... AN/ARN-22

WEIGHTS

LOADINGS 
LBS. L.F.P.
EMPTY .......... 16,796
BASIC .......... 17,564
DESIGN .......... 24,000
COMBAT .......... 23,752
MAX.T.O. (FIELD) ........ 27,822
(CAT) .......... 27,822
MAX.LANQ. (FIELD) ........ 23,800
(AREST) .......... 20,000

FUEL AND OIL

TOTAL GAL NO. TANKS LOCATION
637 3 MAIN FUSELAGE
285 5 AFT FUSELAGE
575 1 WING
FUEL GRADE ............... J-5
FUEL SPEC (APPLICABLE) .... MIL-F-5624
OIL
CAPACITY (GALS.) (USABLE) 4.0
SPEC (APPLICABLE) MIL-L-7808

CAMERAS

No. DESCRIPTION LOCATION
1 CAMERA, KB-10A FUSELAGE
5 CAMERAS, CAX-12 FUSELAGE
1 SCANNER FUSELAGE
1 SCANNER CONVERTER FUSELAGE
## PERFORMANCE SUMMARY

<table>
<thead>
<tr>
<th>TAKE-OFF WEIGHT</th>
<th>(1) HIGH ALT. PHOTO MISSION</th>
<th>(4) LOW ALT. PHOTO MISSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAKE-OFF WEIGHT</td>
<td>lb</td>
<td>lb</td>
</tr>
<tr>
<td>Fuel internal/external (JF-5)</td>
<td>27,922</td>
<td>27,822</td>
</tr>
<tr>
<td>Escaped</td>
<td>10,176</td>
<td>10,176</td>
</tr>
<tr>
<td>Max. load</td>
<td>920</td>
<td>520</td>
</tr>
<tr>
<td>Wing loading</td>
<td>73.2</td>
<td>74.2</td>
</tr>
<tr>
<td>Stall speed – power-off</td>
<td>137.2</td>
<td>137.2</td>
</tr>
<tr>
<td>Take-off run at S.L. – calm</td>
<td>5,600</td>
<td>5,600</td>
</tr>
<tr>
<td>Take-off run at S.L.-25 km. wind</td>
<td>12,560</td>
<td>12,170</td>
</tr>
<tr>
<td>Take-off to clear 50 ft. – calm</td>
<td>6,450</td>
<td>6,450</td>
</tr>
<tr>
<td>Max. speed/altitude</td>
<td>585/10,000</td>
<td>585/10,000</td>
</tr>
<tr>
<td>Escaped</td>
<td>500</td>
<td>360</td>
</tr>
<tr>
<td>Time: S.L. to 20,000 ft.</td>
<td>2.4</td>
<td>4.3</td>
</tr>
<tr>
<td>Time: S.L. to 30,000 ft.</td>
<td>4.6</td>
<td>7.2</td>
</tr>
<tr>
<td>Service ceiling (100 fps)</td>
<td>41,600</td>
<td>41,600</td>
</tr>
<tr>
<td>Combat range</td>
<td>1,740</td>
<td>1,740</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>495</td>
<td>495</td>
</tr>
<tr>
<td>Cruise altitude</td>
<td>42,700</td>
<td>42,700</td>
</tr>
<tr>
<td>Combat radius/mission time</td>
<td>640 / 3.84</td>
<td>422 / 1.86</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>495</td>
<td>495</td>
</tr>
<tr>
<td>IFR RADIUS/MISSION TIME N, MI/HRS</td>
<td>1,190/2.08</td>
<td>937/4.01</td>
</tr>
</tbody>
</table>

### COMBAT LOADING CONDITION

<table>
<thead>
<tr>
<th>(2) 60% FUEL</th>
<th>(3) 60% FUEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine power</td>
<td>lb</td>
</tr>
<tr>
<td>Fuel</td>
<td>lb</td>
</tr>
<tr>
<td>Combat speed/combat altitude</td>
<td>500/75,000</td>
</tr>
<tr>
<td>Rate of climb/combat altitude</td>
<td>10,225,000</td>
</tr>
<tr>
<td>Combat ceiling (1,000 fps)</td>
<td>43,200</td>
</tr>
<tr>
<td>Rate of climb at S.L.</td>
<td>lb</td>
</tr>
<tr>
<td>Max. speed at S.L.</td>
<td>835/25,000</td>
</tr>
<tr>
<td>Max. speed/altitude</td>
<td>835/30,000 / 585/6300</td>
</tr>
</tbody>
</table>

### LANDING WEIGHT

| lb | 19,046 | 4,500 |
| lb | 7,900  | 4,800 |

#### NOTES

(A) MILITARY POWER
(B) INFLIGHT REFUELING – OUTBOUND ONLY
TRANSFER 3515 LBS AT 725 N, MI, OUT, RADIUS
IS REDUCED 16 N, MI, AND REFUEL ALLOWANCE IS INCREASED BY 5 MINUTES FOR EACH ADDITIONAL AIRCRAFT UP TO A TOTAL OF 4 AIRCRAFT.
PERFORMANCE BASIS: FLIGHT TEST DATA OF F6U-1 MODIFIED TO F6U-1P CONFIGURATION

SPOTTING: A TOTAL OF 81 AIRCRAFT CAN BE ACCOMODATED IN A LANDING SPOT ON THE FLIGHT DECK AND HANGAR DECKS OF A CVA-19 CLASS ANGLED DECK CARRIER (FLIGHT 43; HANGAR 38 AIRPLANES)
NOTES

HIGH ALTITUDE PHOTOGRAPHIC MISSION

WARM-UP, TAKE-OFF, ACCELERATE: 5 MINUTES WITH NORMAL RATED THRUST AT SEA LEVEL.
CLIMB: ON COURSE TO CRUISE ALTITUDE WITH MILITARY RATED THRUST.
CRUISE-OUT: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE.
DESCEND: TO 35,000 FEET (NO FUEL USED, NO DISTANCE GAINED)
RUN-IN: AT 35,000 FEET FOR 50 N.MI. AT MAXIMUM SPEED WITH MILITARY RATED THRUST.
FUEL ALLOWANCE AT TARGET: 2 MINUTES WITH NORMAL RATED THRUST AT 35,000 FEET (NO CREDIT FOR DISTANCE GAINED)
FUEL ALLOWANCE FOR Evasive ACTION: 3 MINUTES AT MAXIMUM THRUST FUEL FLOW AT A SPEED MIDWAY BETWEEN MAXIMUM SPEED WITH MILITARY RATED THRUST AND MAXIMUM SPEED WITH MILITARY RATED THRUST AT 35,000 FEET.
RUN-OUT: AT 35,000 FEET FOR 50 N.MI AT MAXIMUM SPEED WITH MILITARY RATED THRUST.
CLIMB: ON COURSE TO 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 PERCENT OF INITIAL FUEL LOAD.

LOW ALTITUDE PHOTOGRAPHIC MISSION

WARM-UP, TAKE-OFF, ACCELERATE: 5 MINUTES WITH NORMAL RATED THRUST AT SEA LEVEL.
CLIMB: ON COURSE TO CRUISE ALTITUDE WITH MILITARY RATED THRUST.
CRUISE-OUT: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE.
DESCEND: TO SEA LEVEL (NO FUEL USED, NO DISTANCE GAINED)
RUN-IN: AT SEA LEVEL FOR 50 N.MI. AT MAXIMUM SPEED WITH MILITARY RATED THRUST.
FUEL ALLOWANCE AT TARGET: 8 MINUTES WITH NORMAL RATED THRUST AT SEA LEVEL (NO CREDIT FOR DISTANCE GAINED)
FUEL ALLOWANCE FOR Evasive ACTION: 2 MINUTES AT MAXIMUM THRUST FUEL FLOW AT A SPEED MIDWAY BETWEEN MAXIMUM SPEED WITH MILITARY RATED THRUST AND MAXIMUM SPEED WITH MILITARY RATED THRUST AT SEA LEVEL.
RUN-OUT: AT SEA LEVEL FOR 50 N.MI. AT MAXIMUM SPEED WITH MILITARY RATED THRUST.
CLIMB: ON COURSE TO 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 PERCENT OF INITIAL FUEL LOAD.