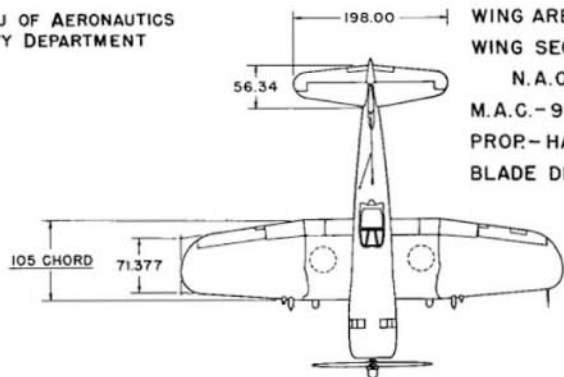


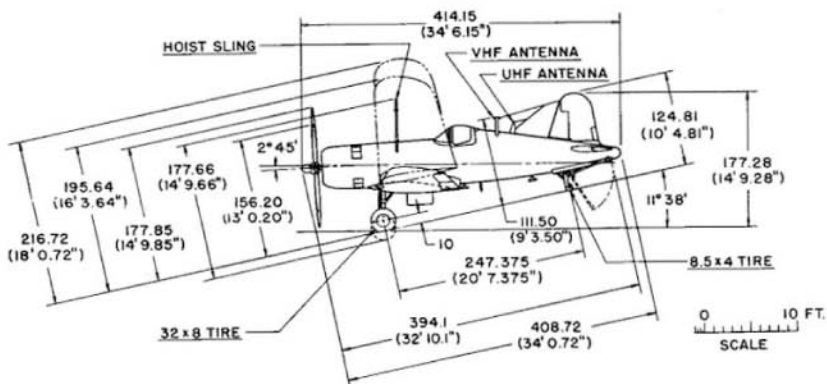
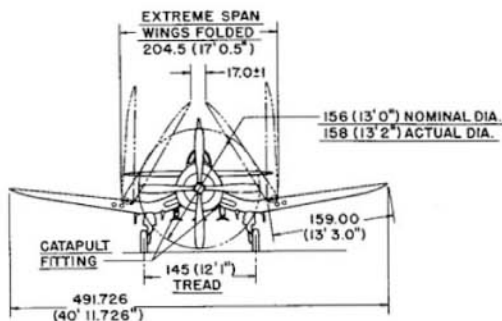
STANDARD AIRCRAFT CHARACTERISTICS.  
AU-1 "CORSAIR"

CHANGE VUGHT

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT



WING AREA - 314 SQ. FT.  
WING SECTION  
N.A.C.A. 23018-23009  
M.A.C. - 94"  
PROP. - HAMILTON STD. C.S.  
BLADE DESIGN NO. 6837A-0

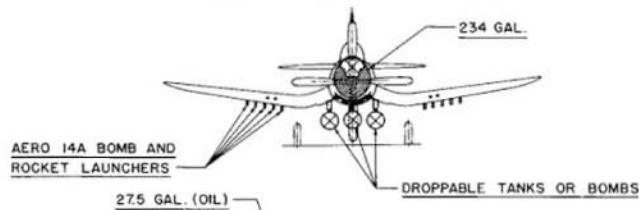
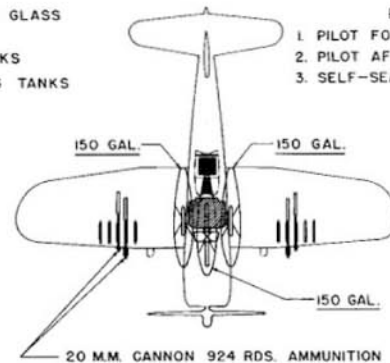


DESCRIPTIVE ARRANGEMENT

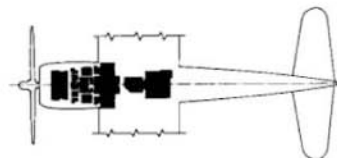
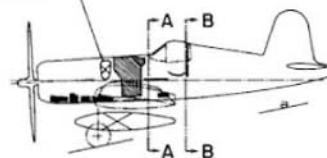
BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

- BULLET RESISTANT GLASS ARMOR PLATE
- ▣ SELF-SEALING TANKS
- ⊗ NON SELF-SEALING TANKS

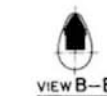
- PROTECTION
1. PILOT FORWARD 315.12 LBS.
  2. PILOT AFT 62.88 LBS.
  3. SELF-SEALING CELLS 143.66 LBS.



VIEW A-A



ARMAMENT AND TANKS



VIEW B-B



SCALE

Standard Aircraft Characteristics NAVAER 13358 (REV. 1-49)

**POWER PLANT**

NO. & MODEL... (1) R-2800-83WA  
 MFR.....Pratt and Whitney  
 SUPERCH.....1 Stage, 2 Speed  
 PRCP. GEAR RADIO.....0.450  
 PROP. MFR.....Hamilton Stan.  
 PROP. DES. NO.....6837A-0  
 NO. BL./DIA.....4/13'-2"

**RATINGS**

	<u>Bhp</u>	<u>Rpm</u>	<u>Alt.</u>
T. O.	2,300	2,800	S.L.
COMBAT	2,800	2,800	S.L.
	2,270	2,800	11,000'
MIL	2,300	2,800	700'
	1,700	2,800	16,000'
NORM.	1,800	2,600	8,500'
	1,500	2,600	18,500'

SPEC. NO. A-8104-A  
 (See NOTES)

**ORDNANCE**GUNS

<u>No.</u>	<u>Size</u>	<u>Location</u>	<u>Rds.</u>
4	20mm	Wings	924

BOMBS & ROCKETS

<u>Racks</u>	<u>No.</u>	<u>Location</u>	<u>Max. Cap.</u>
Aero	10	Wing	500#
14A			
MK-51	2	Wing	2,000#
MK-51	1	Fuselage	2,000#

MAX. BOMB CAPACITY 8,200 lbs.

**MISSION AND DESCRIPTION**

The AU-1 is a high performance, propeller driven, single-seat, carrier-based or land-based, day ground support attack airplane. It is basically a model F4U-5 airplane with an R-2800-83WA engine. The oil coolers have been relocated into the accessory section and additional armor has been installed in the cockpit and engine sections.

The airplane is of conventional stressed-skin construction with slotted flaps, frise ailerons, and horn-balanced elevator and rudder.

**DEVELOPMENT**

First flight(prototype)..September 1951

Service use.....February 1952

**DIMENSIONS**

WING  
 AREA.....314 sq.ft.  
 SPAN.....41' -0"  
 M.A.C.....7' -10"  
 LENGTH.....34' -1"  
 HEIGHT.....14' -10"  
 TREAD.....12' -1"  
 PROP. GRD. CLEARANCE.....6"

**WEIGHTS**

<u>Loadings</u>	<u>Lbs.</u>	<u>L.F.</u>
EMPTY.....	9,835	.....
BASIC.....	10,600	.....
DESIGN.....	12,000	7.5
COMBAT.....	13,343	6.7
MAX.T.O. (Field).....	19,400	.....
(Cat.).....	18,500	.....
MAX.LAND (Field).....	15,000	.....
(Arrest).....	13,000	.....

All weights are actual  
 \*Max. anticipated loading

**FUEL AND OIL**

<u>Gals.</u>	<u>No Tanks</u>	<u>Location</u>
234	1	Fuss., Seal
300	2	Wing, Drop
FUEL GRADE.....		115/145
FUEL SPEC		MIL-F-5572

**OIL**

CAPACITY(Gals).....27.5  
 GRADE.....1100  
 SPEC.....MIL-O-6082

**ELECTRONICS**

UHF TRANS.REC.....AN/ARC-27  
 (Provisions for UHF AN/ARC-1)  
 VHF HOMING.....AN/ARR-2A  
 RANGE REC.....R-23A/ARC-5  
 RADIO ALTIMETER.....AN/APN-1  
 IFF.....AN/APX-6

## PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) BOMBER 2-1,000# Bombs 10-250# Bombs 1-150 Gal Tank	(4) ATTACK 10-5" HVAR 2-150 Gal. Tanks	(5) BOMBER 6- 500# Bombs 1-1000# Bomb 2- 150 Gal. Tank
TAKE-OFF WEIGHT	lb. 18,979	16,752	19,398
Fuel (Fixed/Drop)	lb. 1404/900	1,404/1,800	1,404/1,800
Payload (Bombs/Rockets)	lb. 4,600/ -	-/1,400	4,000/ -
Wing loading	lb./sq.ft. 60.4	53.4	61.8
Stall speed - power-off	kn. 99.0	93.2	100.2
Take-off run at S.L. - calm	ft. 2,430	1,650	2,630
Take-off run at S.L. 25 kn. wind	ft. 1,430	950	1,540
Take-off to clear 50 ft. - calm	ft. ---	---	---
Max. speed/altitude (A)	kn./ft. 207/9,500	259/19,700	213/9,500
Rate of climb at S.L. (A)	fpm 920	1,480	890
Time: S.L. to 10,000 ft. (A)	min. 13.7	7.6	15.0
Time: S.L. to 20,000 ft. (A)	min. ---	---	---
Service ceiling (100 fpm) (A)	ft. 19,500	22,000	19,300
Combat range	n.mi. 420	1,105	705
Average cruising speed	kn. 160	175	165
Cruising altitude(s)	ft. 15,000	15,000	15,000
Combat radius	n.mi. 220	455	380
Average cruising speed	kn. 165	175	165
COMBAT LOADING CONDITION	(2) COMBAT	(3) COMBAT	
COMBAT WEIGHT	lb. 13,343	13,343	
Engine power	Combat	Military	
Fuel	lb. 1,404	1,404	
Combat speed/combat altitude	kn./ft. 314/S.L.	292/S.L.	
Rate of climb/combat altitude	fpm/ft. 4,620/S.L.	3,440/S.L.	
Combat ceiling (500 fpm)	ft. 28,800	26,800	
Rate of climb at S.L.	fpm 4,620	3,620	
Max. speed at S.L.	kn. 314	292	
Max. speed/altitude	kn./ft. 338/14,000	315/17,700	
LANDING WEIGHT	lb. 12,140		
Fuel	lb. 200		
Stall speed - power-off	kn. 80.0		
Stall speed - with approach power	kn. 72.0		

(A) Normal power.

## NOTES

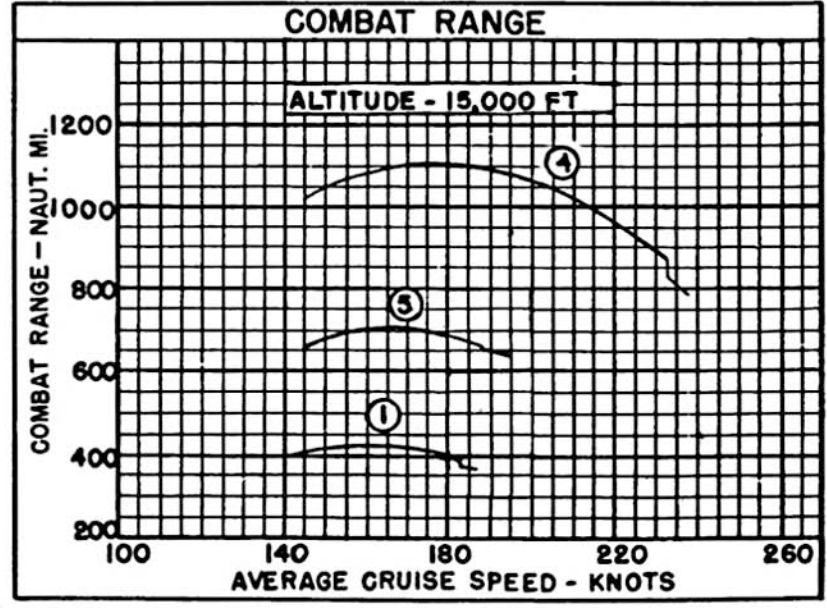
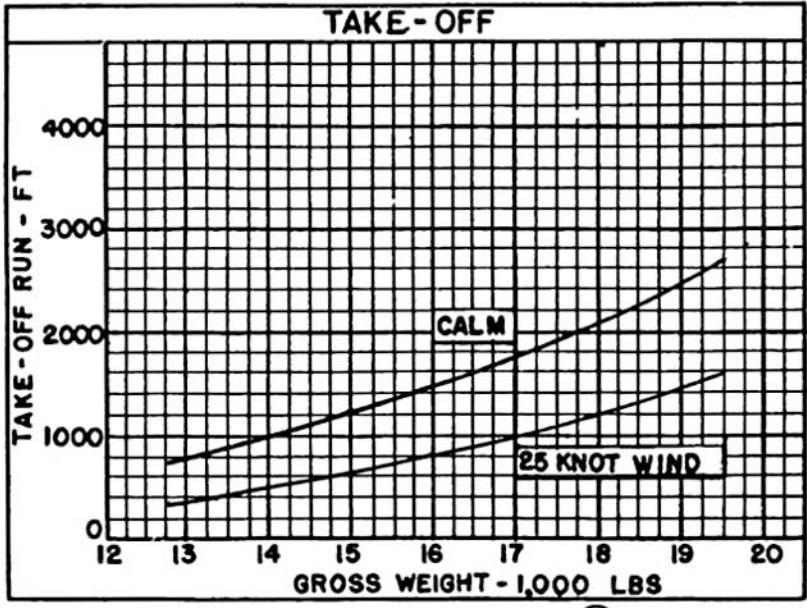
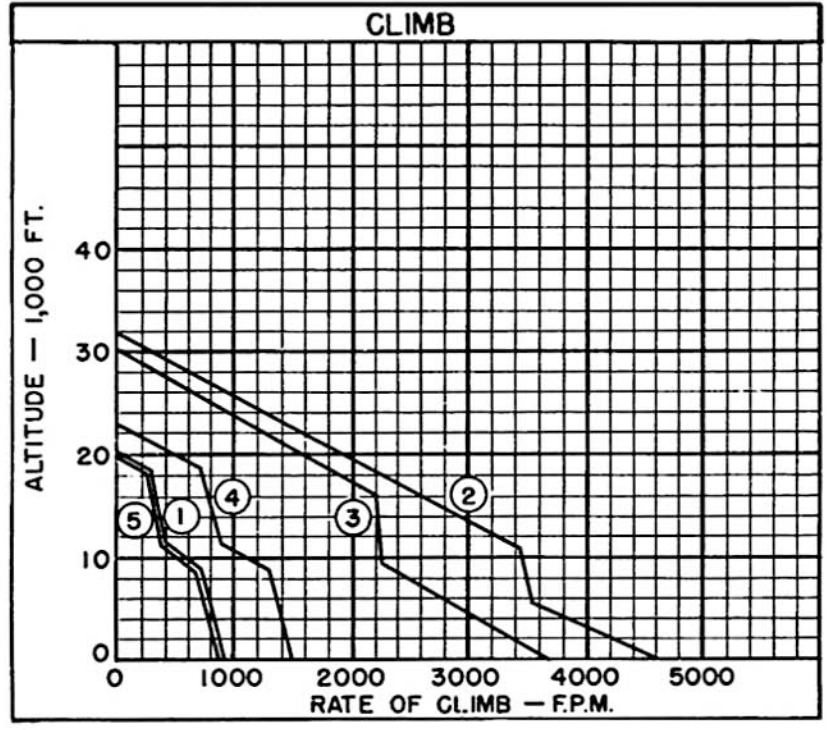
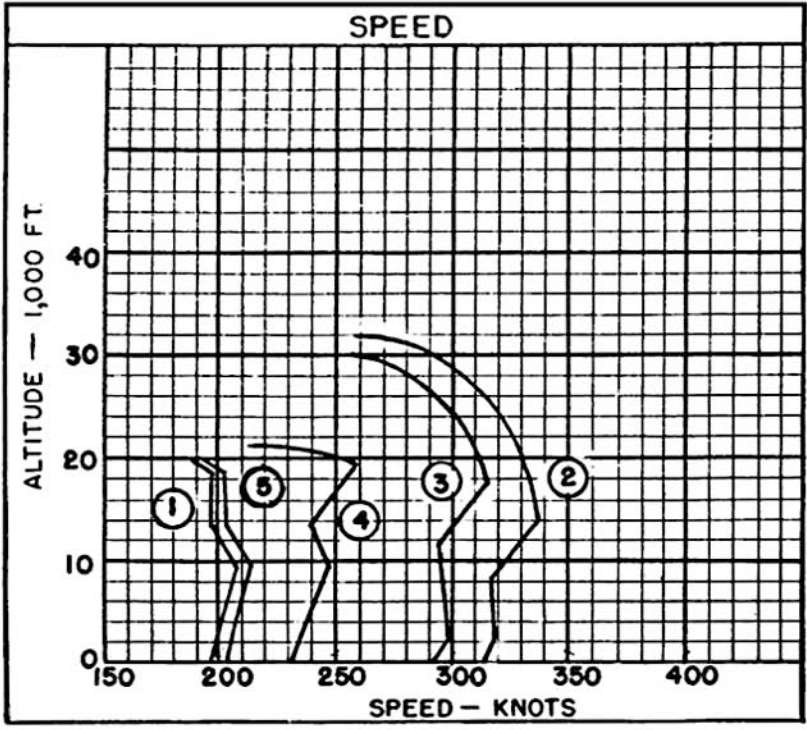
Performance is based on flight tests of the AU-1 airplane.

Engine ratings are based on use of 115/1145 aviation gasoline, and do not agree with Pratt &amp; Whitney Spec. No. A-8104-A, whose ratings are based on use of 100/130 aviation gasoline.

Range and radius are based on AEL fuel consumption data increased by 5%.

The combat configuration includes 3 MK-51 pylons and 10 Aero 14A launchers.

Standard Aircraft Characteristics NAVAER 1335E (REV. 2-60)



○ LOADING CONDITION COLUMN NUMBER

# NOTES

Spotting: 30 airplanes (wings folded) can be spotted in a rectangular area 200 ft long and 96 ft wide.

---

## LOW ALTITUDE ATTACK COMBAT RADIUS PROBLEM (RECIPROCATING ENGINE)

WARM-UP, TAXI, TAKE-OFF: 10 minutes at normal power

CLIMB: on course to 15,000 feet at normal power

CRUISE-OUT: at 15,000 feet, at V for long range. External fuel tanks dropped when empty.

DESCEND: to sea level. (No fuel used, no distance gained).

DROP BOMBS, FIRE ROCKETS

COMBAT: 15 minutes at sea level. (5 minutes at military power and 10 minutes at normal power).

CLIMB: on course to 5,000 feet at normal power.

CRUISE-BACK: at 5,000 feet at V for long range.

RESERVE: 20 minutes at V for long range at sea level plus 5% of initial fuel load.

$$\text{COMBAT RADIUS} = \text{CLIMB} + \text{CRUISE OUT} = \text{CLIMB} + \text{CRUISE-BACK}$$

