

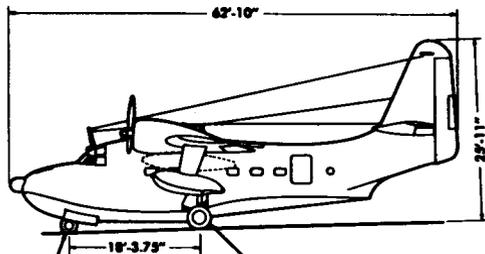
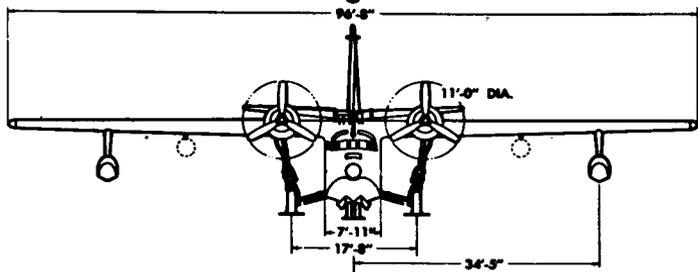
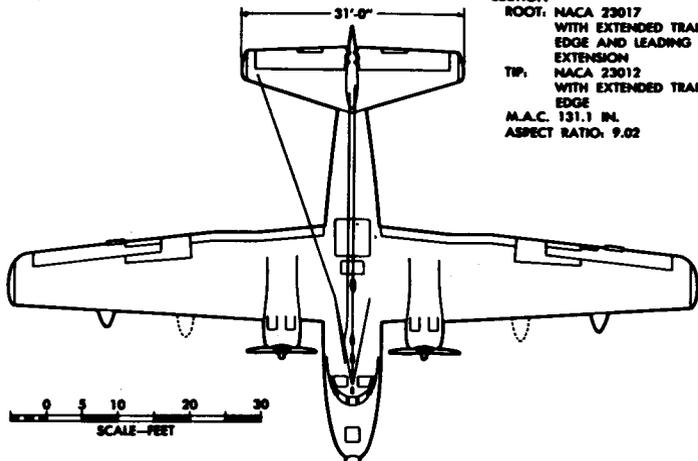


# STANDARD AIRCRAFT CHARACTERISTICS

## HU-16D ALBATROSS

BUREAU OF NAVAL WEAPONS  
NAVY DEPARTMENT

WING  
AREA: 1035 SQ. FT.  
SECTION  
ROOT: NACA 23017  
WITH EXTENDED TRAILING  
EDGE AND LEADING EDGE  
EXTENSION  
TIP: NACA 23012  
WITH EXTENDED TRAILING  
EDGE  
M.A.C. 131.1 IN.  
ASPECT RATIO: 9.02

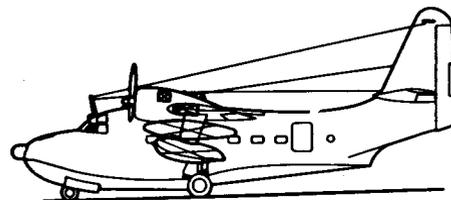
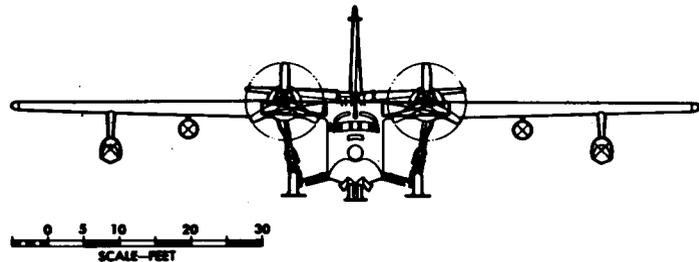
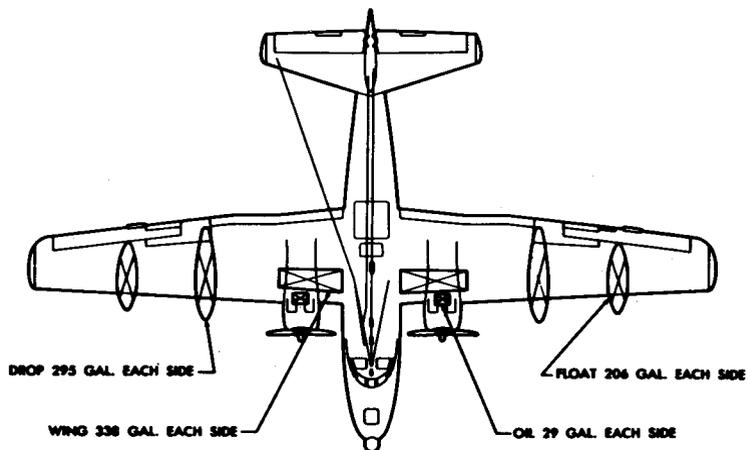


26 D. = 6-6 PLY      40 D. = 12-14 PLY

DESCRIPTIVE ARRANGEMENT  
UF-2

BUREAU OF NAVAL WEAPONS  
NAVY DEPARTMENT

☒ NON SELF-SEALING TANK



ARMAMENT AND TANKAGE  
UF-2

**POWER PLANT**

NO. & MODEL . . . (2)R1820-76A, -76B  
 MANUFACTURER . . . Curtiss-Wright  
 SUPERCHARGER . . . 1 Stage, 2 Speed  
 REDUCTION GEAR RATIO . . . 0.666  
 PROP. MFR. . . . . HAM. STD.  
 PROP. TYPE . . . Hydro., Rev. Pitch  
 NO. BLADES/DIA . . . . . 3/11 ft.  
 BLADE DESIGN NO . . . . . 7007 B-7

ATO

NO. & MODEL . . . . . (4)14AS1000  
 or 15KS1000  
 MANUFACTURER . . . . . AEROJET  
 THRUST . . . . . 1000 lb. (each)  
 DURATION . . . . . 14 or 15 sec.

RATINGS

	BHP	@ RPM	@ CRITICAL ALT.
T. O.	1425	2700	2500
MIL.	1425	2700	2500
	1100	2700	10300
NORM	1275	2500	3000
	975	2500	11800

ENG. SPEC. NO. N-826-B

**CARGO CAPACITIES**INSIDE CLEARANCES

Length (overall) . . . . . 26'-1"  
 Width (max.) . . . . . 7'-5"  
 Height (max.) . . . . . 6'-4"  
 Cabin Floor Area . . . . . 145 sq. ft.  
 Floor Strength . . . . . 200 lb./sq. ft.  
 Cabin Volume . . . . . 568 cu. ft.

MAIN LOADING DOOR

Width (max.) . . . . . 2'-9"  
 Height (max.) . . . . . 4'-0"  
 Door Sill Height  
 (above Ground) . . . . . 5'-10"  
 (above Water) . . . . . 1'-6"

CARGO HATCH (OVERHEAD)

Width (max.) . . . . . 4'-10"  
 Length (max.) . . . . . 5'-3"

**PERSONNEL**

Crew (normal) . . . . . 4  
 Litter Patients . . . . . 12  
 plus  
 Attendants . . . . . 2  
 or  
 Passengers . . . . . 10

**MISSION AND DESCRIPTION**

The basic mission of the UF-2 is to rescue 12 litter patients, or 10 passengers, from sea or land and return to base without refueling. The normal crew consists of pilot, co-pilot, navigator and radio operator. Oxygen facilities are provided for both crew and passengers. No armament or combat protection is afforded.

The UF-2 is a modified version of the UF-1 and has notably improved performance. Aerodynamic refinements consist of increased wing area, enlarged tail surfaces, cambered leading edge in lieu of wing slots, chordwise de-icing boots and flush mounting of certain antennae. A centrally located gust lock system has been added.

The propellers include full feathering and reversing features. A rudder boost system maintains adequate directional control during single engine operation at low speeds. An auxiliary power unit, independent of batteries, supplies electrical power for starting engines, electronic ground checks, and emergency operation. Nacelle work platforms are integral and permit servicing at sea or in the field.

Either two or four JATO units may be used during take-off and are mountable in flight.

DEVELOPMENT

First Flight . . . . . Jan. 13, 1959  
 Service Use . . . . . Jan. 30, 1959

**DIMENSIONS**WING

AREA . . . . . 1035 sq. ft.  
 SPAN . . . . . 96 ft. 8 in.  
 MAC . . . . . 131.1 in.  
 LENGTH . . . . . 62 ft. 10 in.  
 HEIGHT . . . . . 25 ft. 11 in.  
 TREAD . . . . . 17 ft. 8 in.  
 PROP. CLEARANCE . . . (3Pt. Grd.) 8'  
 (Water) 4'

**WEIGHTS**

LOADINGS	LBS.	L. F.
EMPTY	23025	
BASIC	25094	
DESIGN	32000	2.77
MAX. T. O. (Field)	37500	
(Water, ATO) est.	34000	
MAX. LDG. (Field)	37500	
(Water)	32000	

**FUEL AND OIL**

GALS.	NO. TANKS	LOCATION
676	2	Wing
590	2	Wing Drop
412	2	Float

FUEL GRADE . . . . . 115/145  
 FUEL SPEC. (applicable) MIL-F-5572

**OIL**

CAPACITY (GALS.) . . . . . 58 (not incl. prop. oil)  
 GRADE . . . . . 1100  
 SPEC. (applicable) . . . . . MIL-L-6082

**ELECTRONICS**COMMUNICATION

VHF Comm./Dir. Finder Set  
 HF Liaison Sets (2) . . . . . AN/ARC-38  
 HF Receiver . . . . . AN/ARR-41  
 LF Transmitter . . . . . AN/ART-33  
 UHF Command Set . . . . . AN/ARC-27

NAVIGATION

Radio Compass (2) . . . . . AN/APN-59  
 Marker Beacon . . . . . AN/ARN-12  
 LORAN . . . . . AN/APN-70  
 UHF Dir. Finder . . . . . AN/ARA-25  
 VOR Receiver . . . . . AN/ARN-14  
 Glide Slope . . . . . AN/ARN-18  
 TACAN . . . . . AN/ARN-21A  
 Radar Altimeter . . . . . AN/APN-22

IDENTIFICATION

IFF . . . . . AN/APX-6, -6B  
 Coder Group (SIF) . . . . . AN/APA-89  
 IFF Interr. Set . . . . . AN/APX-28

SEARCH

Radar . . . . . AN/APX-31A

GENERAL

ICS (7 Place) . . . . . AN/AIC-5B  
 Trailing Antenna . . . . . AS-401/A

## PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		① SEARCH AND RESCUE - NO EXTERNAL TANKS	③ SEARCH AND RESCUE-TWO 300 GAL. DROP TANKS	⑤ TRANSPORT NO EXTERNAL TANKS	⑦ TRANSPORT TWO 300 GAL. DROP TANKS
TAKE-OFF WEIGHT	lb.	32928	36797	33477	37346
Fuel internal/external (GAS)	lb./lb.	6528/0	6528/3540	6528/0	6528/3540
Payload passengers/cargo	lb./lb.	(A)	(A)	10/400	10/400
Wing loading	lb./sq.ft.	31.8	35.6	32.3	36.1
Stall speed - power-off	kn.	78	85	79	86
Load Take-off run at S.L. - calm	ft.	1700	2280	1800	2400
Take-off run at S.L. - kn. wind	ft.	--	--	--	--
Water Take-off time - ATO - calm	sec.	19	(B)	19	(B)
Max. speed/altitude (C)	kn./ft.	204/3700	203/3700	204/3700	203/3700
Rate of climb at S.L. (C)	fpm	1170	935	1130	900
Time: S.L. to 10,000 ft. (C)	min.	10.8	15	11	15
Time: S.L. to 20,000 ft. (C)	min.	30	44	31	46
Service ceiling (100 fpm) (C)	ft.	23800	21400	23500	21100
Combat range	n.mi.	1595	2410	1490	2206
Average cruising speed	kn.	132	134	147	150
Cruising altitude	ft.	1500	1500	10000	10000
Combat radius/Mission time	n.mi./hr.	725/11.1	1130/17.1	717/9.9	1090/14.4
Average cruising speed	kn.	134	136	149	152
Cruising altitude	ft.	1500	1500	10000	10000
		②	④	⑥	⑧
LANDING WEIGHT (FIRST LANDING)	lb.	29888	31987	30202	32061
Fuel	lb.	3488	5258	3253	4783
Stall speed-power-off/approach power	kn./kn.	69/49	72/51	70/50	72/51
Distance - grd roll/over 50 ft. obst.	ft./ft.	1080/2210	1150/2360	1090/2240	1150/2360
LANDING WEIGHT (SECOND LANDING)	lb.	28930	29429	25079	25578
Fuel	lb.	530	700	530	700
Stall speed-power-off/approach power	kn./kn.	69/47	69/48	61/43	62/44
Distance - grd roll/over 50 ft. obst.	ft./ft.	1050/2150	1060/2170	930/1910	950/1950

## NOTES

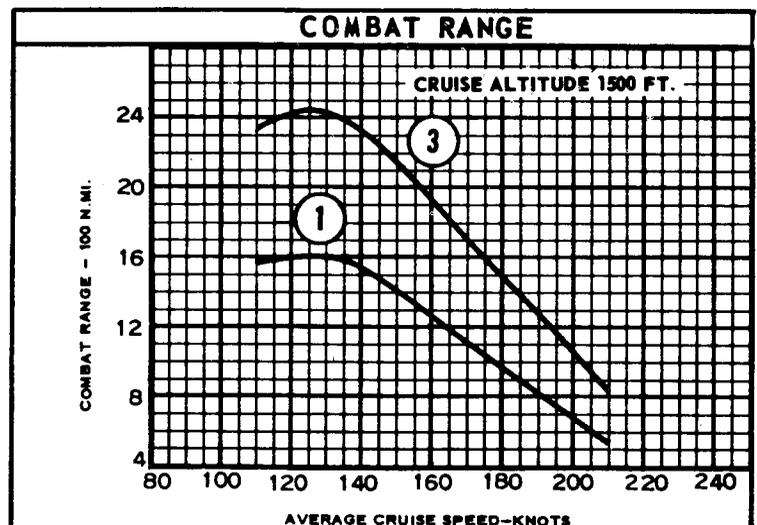
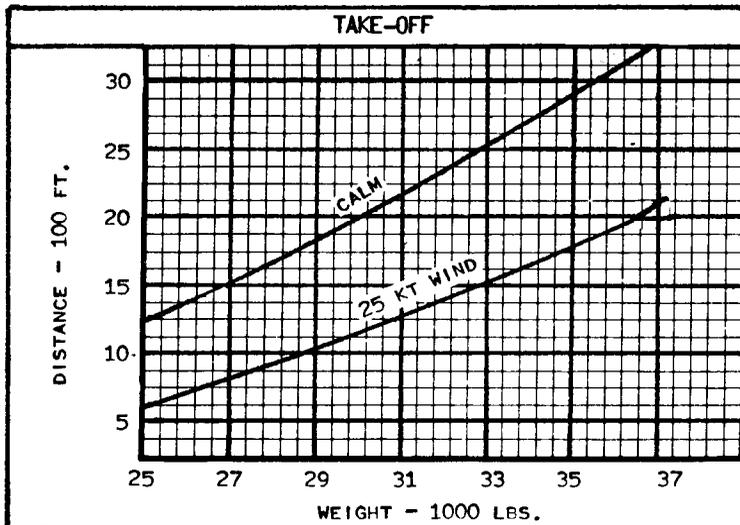
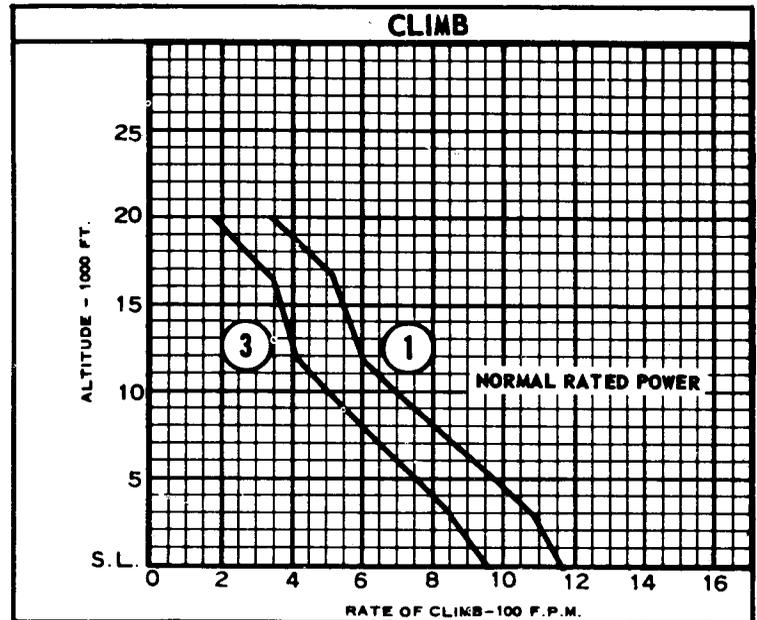
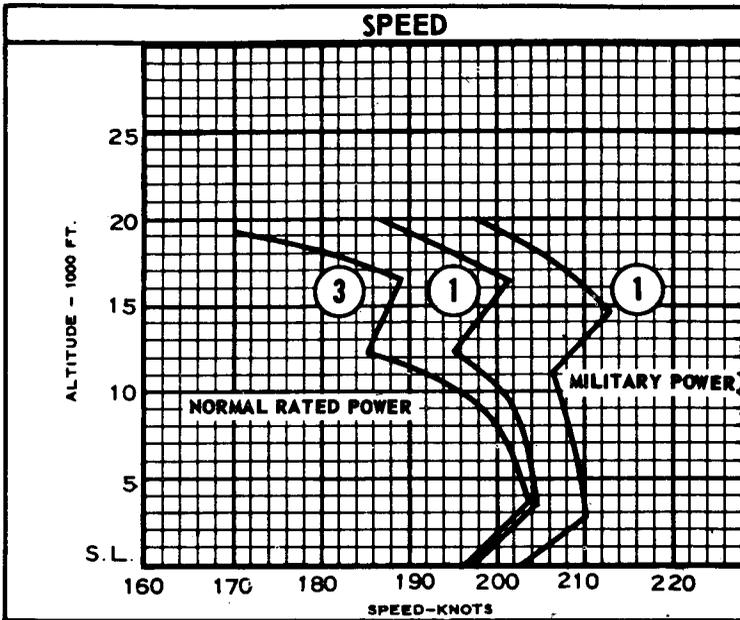
(A) Pick up 10 passengers (2000 lbs.)

(B) Exceeds estimated maximum seaplane take-off weight of 34000 lbs. with ATO

(C) Normal Rated Power

Fuel allowance for heater and generator (30.5 lb./hr.) has been included for all missions.

PERFORMANCE BASIS: U. S. A. F. Flight Test (Fuel Consumption not increased 5%)

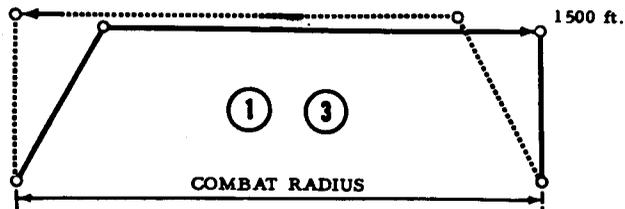


○ LOADING CONDITION COLUMN NUMBER

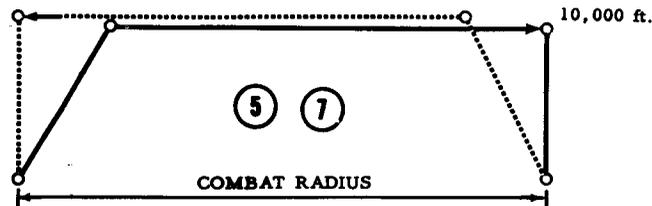
## NOTES

SEARCH AND RESCUE MISSION

WARM-UP, TAXI, TAKE-OFF: 10 min. at N. R. P. at sea level  
 CLIMB-OUT: With normal rated power to 1500 ft.  
 CRUISE-OUT: At 1500 ft. at long range speeds  
 LAND AT REMOTE BASE: Pick up 10 passengers (2000 lbs.)  
 TAKE-OFF FROM REMOTE BASE: 10 min. at N. R. P. at sea level  
 CLIMB-BACK: With normal rated power to 1500 ft.  
 CRUISE-BACK: At 1500 ft. at long range speeds  
 RESERVE: 5% of initial fuel plus 30 min. at long range speeds at sea level

TRANSPORT MISSION

WARM-UP, TAXI, TAKE-OFF: 10 min. at N. R. P. at sea level  
 CLIMB-OUT: With normal rated power to 10,000 ft.  
 CRUISE-OUT: At 10,000 ft. at long range speeds  
 LAND AT REMOTE BASE: Unload 10 passengers with baggage (2400 lbs.)  
 TAKE-OFF FROM REMOTE BASE: 10 min. at N. R. P. at sea level  
 CLIMB-BACK: With normal rated power to 10,000 ft.  
 CRUISE-BACK: At 10,000 ft. at long range speeds  
 RESERVE: 5% of initial fuel plus 30 min. at long range speeds at sea level



Single Engine Rate of Climb: Sea level, military power on one engine  
 other engine inoperative (propeller feathered), flaps and gear retracted:

<u>GROSS WEIGHT</u>	<u>RATE OF CLIMB</u>	<u>CLIMB SPEED</u>
29000 lbs.	355 fpm	108 kts.
32000 lbs.	245 fpm	108 kts.
35000 lbs.	135 fpm	108 kts.
38000 lbs.	25 fpm	108 kts.



LOADING CONDITION COLUMN NUMBER