

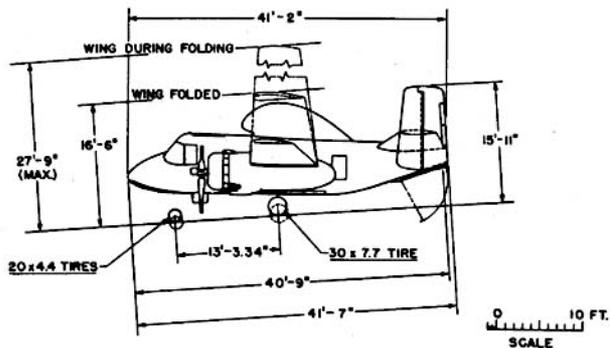
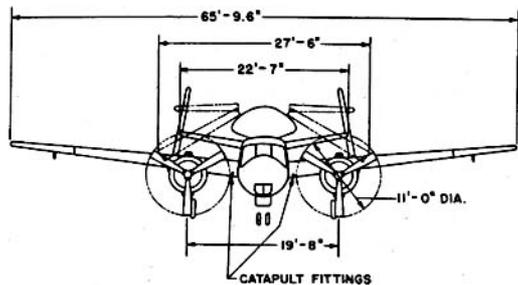
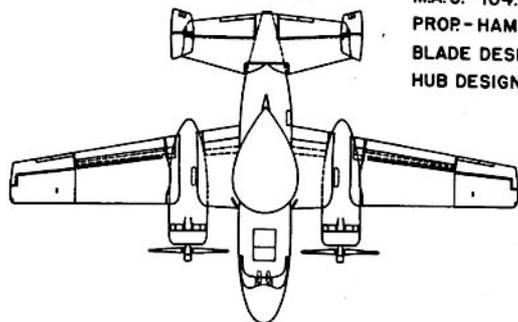
STANDARD AIRCRAFT CHARACTERISTICS

WU-1

CHANGE VOUGHT

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA-543.4 SQ. FT.
WING SECTION-
ROOT-NACA 4418 MOD.
INNER FOLD-NACA
4418 MOD.
TIP-NACA 4412 MOD.
M.A.C.-104.19"
PROP-HAMILTON STD. (3 BL.)
BLADE DESIGN 6915 MOD. A-7
HUB DESIGN 43D-51

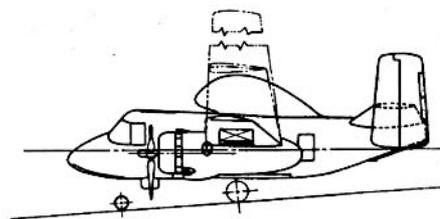
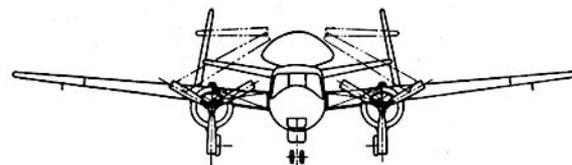
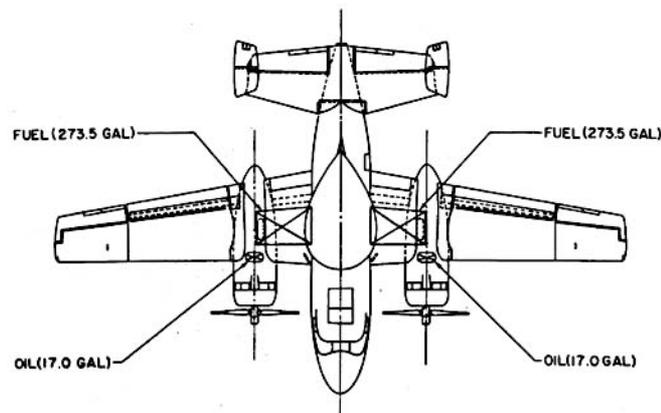


DESCRIPTIVE ARRANGEMENT

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

☒ NON SELF-SEALING TANKS

SCALE 0 10 FT



ARMAMENT AND TANKS

POWER PLANT

NO. & MODEL.....(2) R-1820-32
 MFR.....Wright
 SUPERCH.....1 Stage, 1 Speed
 PROP. GEAR RATIO.....0.5625
 PROP. MFR.....Ham. Std.
 PROP. DES. NO.....6915A-7
 NO. BL./DIA.....3/11'-0"

RATINGS

	Bhp	⊙	Rpm	⊙	Alt.
T. O.	1,525		2,800		1,300
MIL.	1,425		2,700		2,500
NORMAL	1,275		2,500		3,700

ORDNANCE

NONE

MISSION AND DESCRIPTION

The WU-1 aircraft is a twin-engine, carrier-based AEW/CIC airplane carrying a crew of four: pilot, co-pilot, and two airborne CIC officers. It is designed to perform a search function and relay certain types of intelligence via electronic links to its carrier, ground stations or other aircraft. The airplane is specifically configured to fulfill the defensive airborne CIC mission (task force protection).

The airplane is a mid-wing monoplane. Alighting gear is of the tricycle type; the main gear is housed in the nacelles, the nose gear in the fuselage. Longitudinal and directional control surfaces are conventional. Lateral control is achieved by the use of circular arc spoilers and ailerons. Landing flaps are double-slotted, operating on fixed hinges. Provisions are included for catapult take-offs and arrested landings. Wing folding is provided.

As of date of issue of this chart, it is expected that the configuration will be changed to a single vertical tail design with tail folding provisions. As a result, fuselage length will increase about 10 feet, and weight will increase about 460 pounds.

First flight — December 1952
 Service use to start — January 1954

DIMENSIONS

WING AREA.....543 sq. ft.
 SPAN.....65' - 10"
 LENGTH.....41' - 7"
 HEIGHT.....16' - 6"
 TREAD.....19' - 0"
 M.A.C.....8' - 8"

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY.....	16,836.....	
BASIC.....	16,983.....	
DESIGN.....	21,351..	3.0
MAX.T.O..(Field).	21,871*	2.9
MAX.LAND.(Field).	21,871.....	

All weights are estimated.

*Maximum anticipated loading.

FUEL AND OIL

Gals.	No. Tanks	Location
547	2	Wing

FUEL GRADE.....115/145
 FUEL SPEC...MIL-F-5572

OIL

CAPACITY (Gals.).....34
 GRADE.....1100
 SPEC.....MIL-O-6082

ELECTRONICS

SEARCH RADAR.....AN/APS-20B
 UHF COMMUNICATION...AN/ARC-27
 HF COMMUNICATION.....AN/ARC-2
 INTERPHONE.....AN/AIC-A
 UHF HOMING.....AN/ARA-25
 OSCILLOSCOPE.....OS-4/AP
 GROUND STAB.....AN/APA-57C
 RADAR RELAY TRANS...AN/ART-28
 RADAR RELAY REC....AN/AER-27A
 IFF.....AN/APX-6, -7
 COUNTERMEASURES..AN/APR-9B,-13

(SEE NOTES)

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) AEW 1 Pilot 1 Co-Pilot 2 CIC Officers			
TAKE-OFF WEIGHT	lb.	21,351			
Fuel	lb.	3,282			
Payload	lb.	--			
Wing loading	lb./sq.ft.	39.3			
Stall speed - power-off	kn.	71.5			
Take-off run at S.L. - calm	ft.	498			
Take-off run at S.L. 17.5kn. wind	ft.	274			
Take-off to clear 50 ft. - calm	ft.	--			
Max. speed/altitude	(1) kn./ft.	237/5,000			
Rate of climb at S.L.	(1) fpm	2,450			
Time: S.L. to 10,000 ft.	(1) min.	4.7			
Time: S.L. to 20,000 ft.	(1) min.	13.4			
Service ceiling (100 fpm)	(1) ft.	26,500			
Combat range	n.mi.	1,025			
Average cruising speed	kn.	132			
Cruising altitude(s)	ft.	1,500			
Combat Endurance	hr.	7.8			
Average cruising speed	kn.	132			
COMBAT LOADING CONDITION		(2)			
COMBAT WEIGHT	lb.	20,038			
Engine power		Military			
Fuel	lb.	1,969			
Combat speed/combat altitude	kn./ft.	237/1,500			
Rate of climb/combat altitude	fpm/ft.	2,960/1,500			
Combat ceiling (500 fpm)	ft.	25,000			
Rate of climb at S.L.	fpm	2,960			
Max. speed at S.L.	kn.	235			
Max. speed/altitude	kn./ft.	242/4,000			
LANDING WEIGHT					
Fuel	lb.	328			
Stall speed - power-off	kn.	66.6			
Stall speed - with approach power	kn.	59.1			

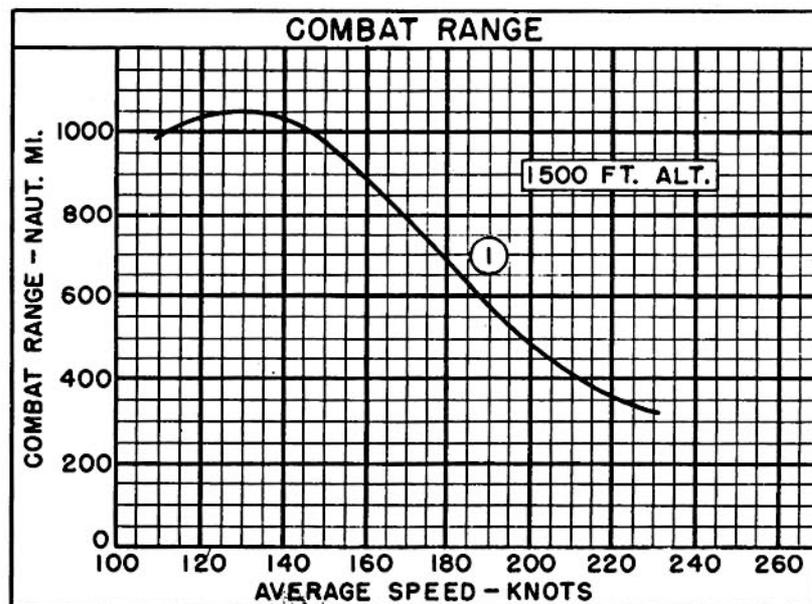
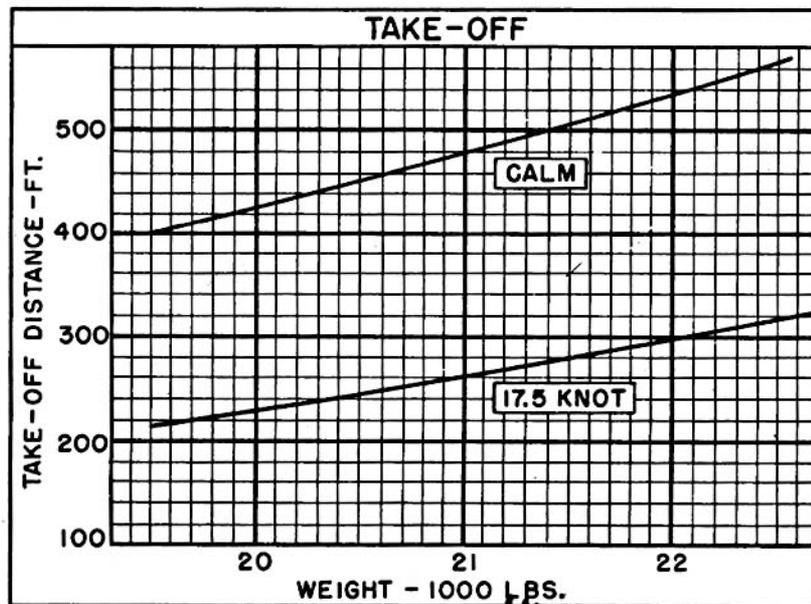
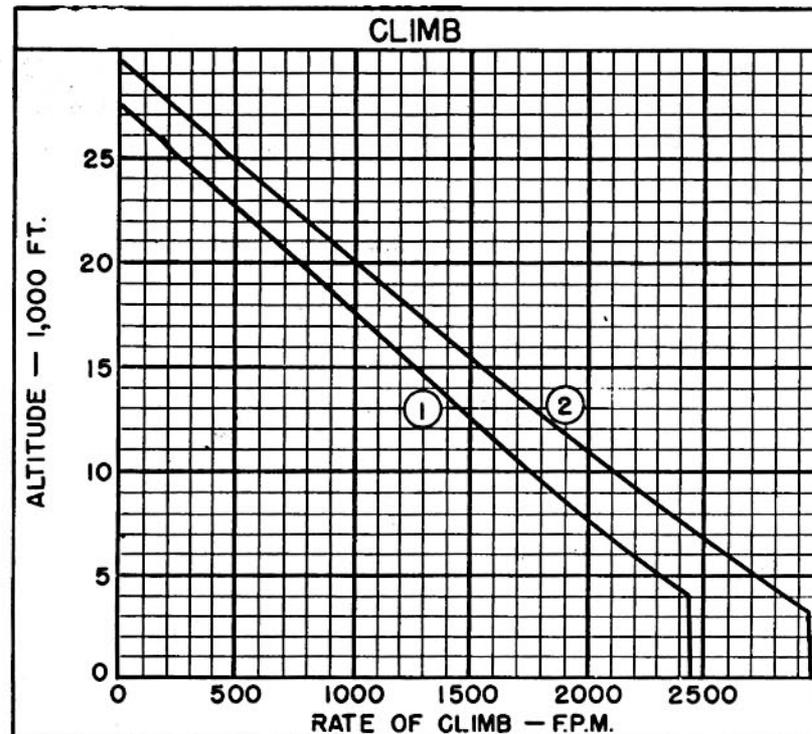
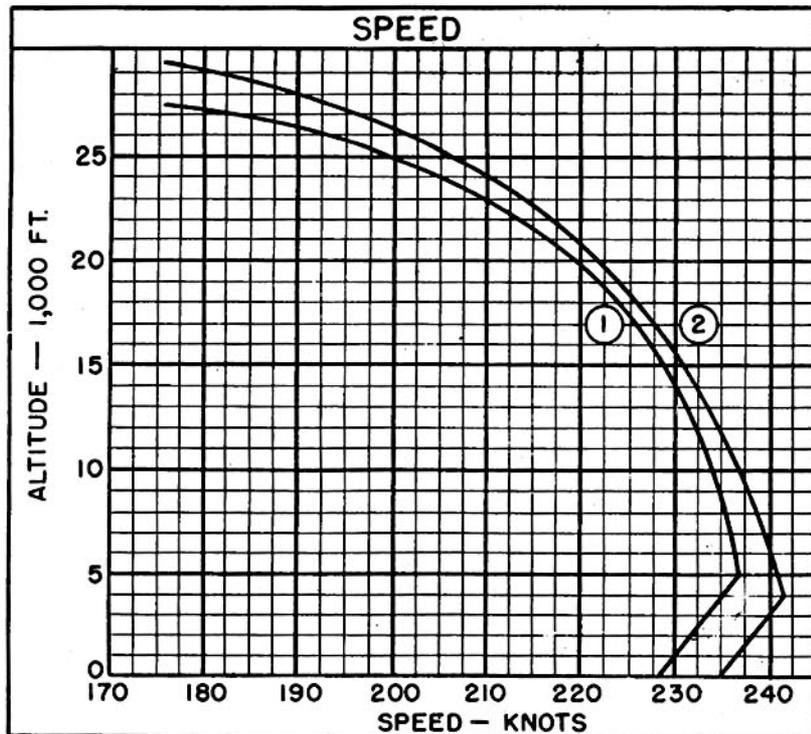
NOTES

(1) Normal Power

Performance is based on calculations.

Combat range and endurance are based on engine specification fuel consumption data increased 5%.

Spotting: 200 ft. length is required to spot 13 airplanes on the 96 ft. wide deck immediately aft of the forward ramp on CV-9 class carriers.



NOTES

RANGE AND ENDURANCE PROBLEM

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

CLIMB: to 1,500 feet at normal rated power

COMBAT RANGE AND ENDURANCE: Cruise at V for long range at 1,500 feet

RESERVE: 10% of initial fuel load (58 minutes at 132 knots)

ELECTRONICS (Continued)

RADIO ALTIMETER.....AN/APN-1

DIRECTION COUNTERMEASURES....AN/APA-69A

BEACON RECEIVER.....AN/ARN-12

VISUAL OMNI-RANGE RECEIVER....AN/ARN-19