The *Kingfisher* achieved its main recognition during WW II when, as a seaplane piloted by daring crews, it plucked many downed airmen from Pacific waters. Frequently this was done under heavy enemy fire, and not infrequently the load or circumstances were such that the return trip was made taxiing. This claim to fame overshadowed its other distinguishing mark — it was the monoplane that replaced biplanes operating from the Navy's battleships.

Vought was given a contract to build the XOS2U-1 prototype in March 1937. Two other VOS prototypes ordered in the same period were both biplanes. Neither went into production.

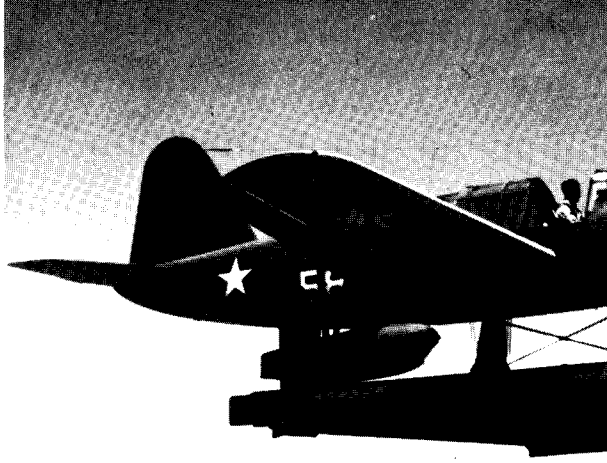
Vought's engineers designed the smallest possible monoplane to do the observation/scout mission, using the P&W R-985 Wasp Jr. engine in preference to larger engines used in other designs. To provide the needed lift from a cantilever monoplane wing, drooped ailerons were used along with the flaps. Spoilers were used for low-speed lateral control. With its compact size, its wings were non-folding, unlike those of its contemporaries and successors operating in the shipboard role. Increased use of metal construction over previous Vought designs was featured and extensive use was made of spot welding in its fuselage construction. Typical of U.S. Navy catapult scouts, it was convertible from a standard single main float seaplane to a fixed landing gear landplane.

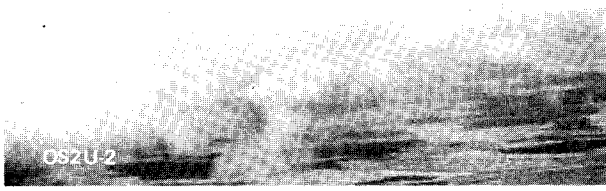
After Navy trials of the XOS2U-1 in 1938, 54 production OS2U-1s were ordered from the by then combined Vought-Sikorsky Aircraft. The first of these went into service in August 1940 with VO-4, a battleship-based observation squadron. Successive orders for the very similar -2s and -3s followed, and 300 were also built by the Naval Aircraft Factory as OS2N-1s, duplicates of the OS2U-3s. With the pre-Pearl Harbor buildup and some foreign deliveries under lend-lease, a total of 1,519 *Kingfishers* were delivered before production ceased in late 1942.

In both the U.S. Navy and foreign service, as either a landplane or seaplane, *Kingfishers* were used in all manner of over-ocean scout and patrol duties, even carrying bombs or depth charges on offshore ASW missions.

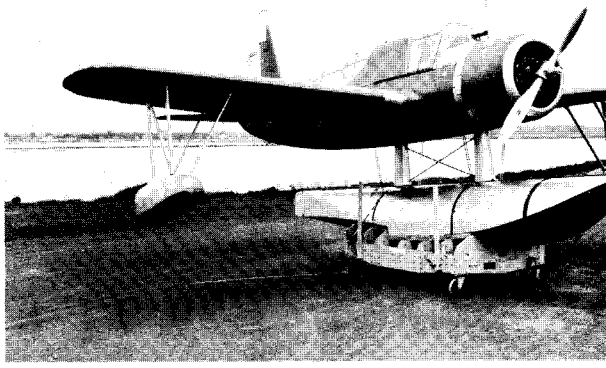
While their role as scout planes catapult-launched from the Navy's capital ships was their most dramatic duty when the war began, their later use was shifted more and more to the search and rescue mission. Flying them as seaplanes, their pilots and radiomen/gunners were given the job of rescuing downed U.S. flyers whether adrift at sea or on sometimes unfriendly island shores.

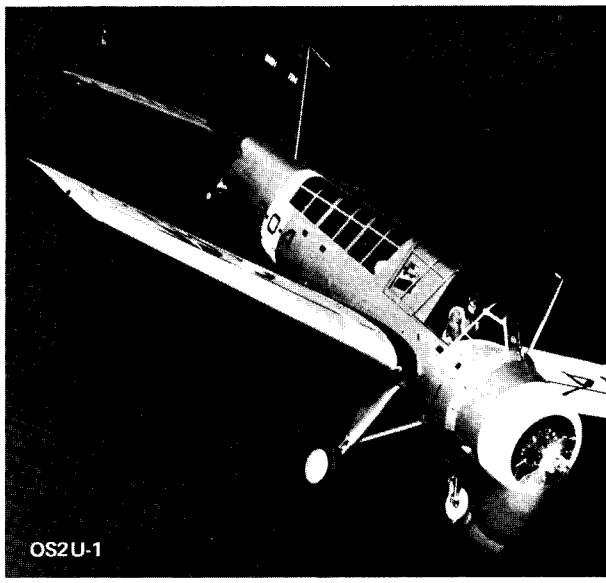
In all their roles, they continued in service through the war period, and beyond — in some countries, well beyond. Today a handful survive, those in this country being carried on battleships which themselves are now famed reminders of a past age.





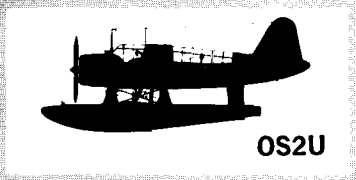
OS2U-2





OS2U-1

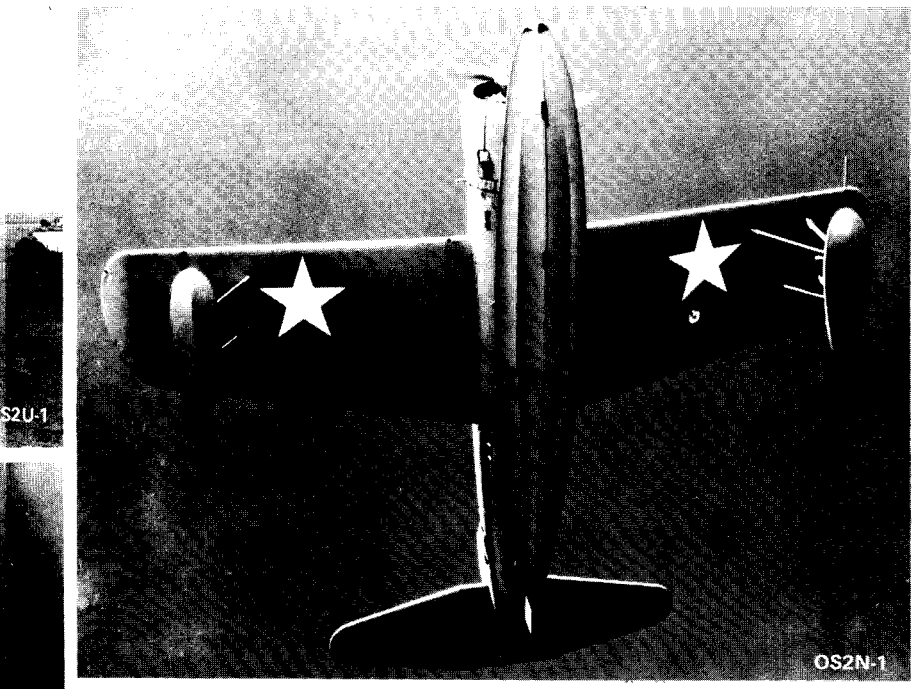
KINGFISHER



OS2U

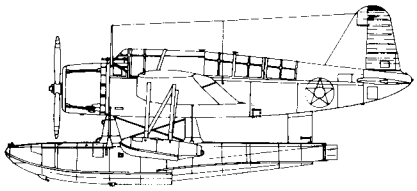
Dimensions, -2 and -3		typical
Span		35'11"
Length	seaplane	33'7"
	landplane	30'1"
Height	seaplane	15'0"
	landplane	12'11"
Engine: -1 P&W R-985-48		450 hp
-2 P&W R-985-50		450 hp
-3 P&W R-985-AN-2		450 hp
Performance, -2 and -3		typical
Max speed	seaplane	170 mph
	landplane	177 mph
Service ceiling	seaplane	16,000'
	landplane	17,100'
Max range	seaplane	1,485 miles
	landplane	825 miles

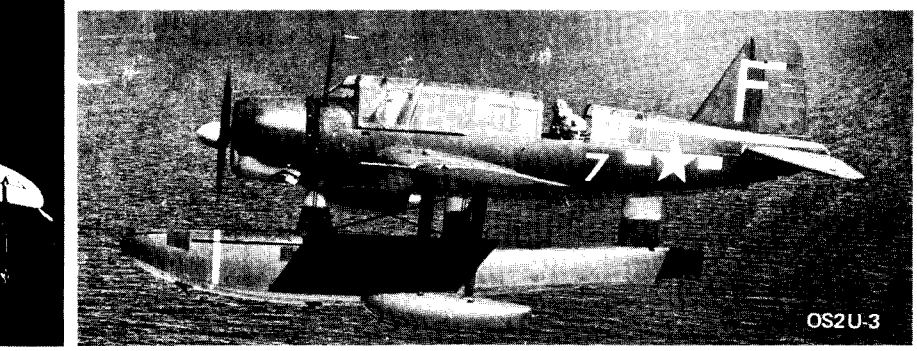
Armament (all):
one .30 machine gun, fixed
one .30 machine gun, flexible
two 100-lb. bombs



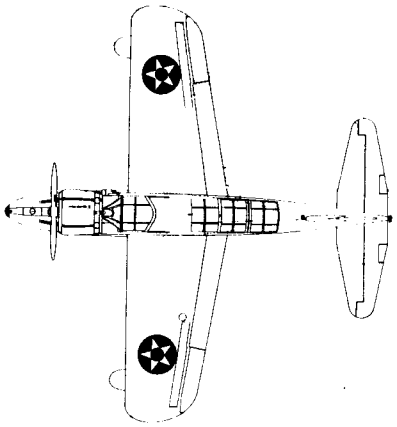
OS2U-1

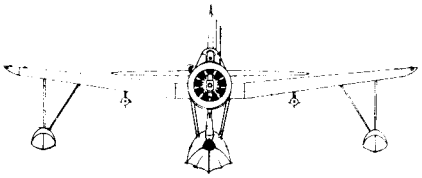
OS2N-1





OS2U-3





NAVAER ISSUE OF 6 PAGES

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS-NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		SCOUT	SCOUT	A.S.PATROL 1-325#	INSHORE PATROL 2-325#
GROSS WEIGHT	LBS.	5600	6000	6000	5770
EMPTY WEIGHT (Actual)	LBS.	4123			3687
FUEL/OIL	GALS.	141/10	207/10	150/10	141/10
FIXED GUNS/AMMUNITION		1-.30/500			
FLEXIBLE GUNS/AMMUNITION		1-.30/600			None
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING	LBS/SQ.FT.	21.4	22.9	22.9	22.0
POWER LOADING ①	LBS/BHP.	14.1	15.0	15.0	14.4
V-MAX. SEA LEVEL	MPH.	157	155	151	148
V-MAX. AIRPLANE CRIT. ALT.	MPH.	164/5500	163/5500	158/5500	155/5500
V-STALL. GROSS WEIGHT. ②	MPH.	62.4	64.6	64.6	63.3
V-STALL. WITHOUT FUEL ②	MPH.	57.5	57.5	59.5	58.4
TIME-TO-CLIMB - 5000FT.-	MIN.	12.1	18.8	18.5	15.3
TIME-TO-CLIMB - 10000FT.-	MIN.	29.1	42.6	46.9	37.7
SERVICE CEILING	FT.	13000	11000	10400	11500
TAKE-OFF DISTANCE -CALM-	FT.				
TAKE-OFF DISTANCE -15 KN-	FT.				
TAKE-OFF DISTANCE -25 KN-	FT.				
TAKE-OFF TIME	SECONDS.	30	37	38	33
MAX. RANGE/V-AV. ③	ST.MI/MPH.	805/119	1155/119	760/111	710/109
BOMBING RADIUS/V-AV.-20% R:-	NMI/KN.				
BOMBING RADIUS/V-AV.-33% R:-	NMI/KN.				
PATROL RADIUS/V-AV.-20% R:-	NMI/KN.				
PATROL RADIUS/V-AV.-33% R:-	NMI/KN.				
SCOUT. RADIUS	NMI.	200	300	185	170
COMBAT RADIUS	NMI.				
ENGINE/PROP.GEAR RATIO		P.&W. R-985-AN-2 or -8 (D.D)			
ENGINE RATING BHP/RPM/ALT.		NORMAL: 400/2200/SL-5500		MILITARY:	
		450/2300/Take-off			

NOTE: STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS.
① BHP AT MAX. CRIT. ALT. ② STALL-WITHOUT POWER ③ AT 5000' ALTITUDE

TANKAGE IN GALLONS		OIL	FUEL
FIXED	PROTECTED	10	100
	UNPROTECTED		141
	TOTAL-INCL. PROT.	10	241
	INCREASE-REMOVED PROTECTION	(Fixed)	
AUX.			
	DROPPABLE	None	
	DROPPABLE	None	
PROTECTED+UNPROTECTED+DROPPABLE		10	241

OFFENSIVE ARMAMENT

WINGS (External):
Bombs : 2-100# (Max)
Depth Bombs: 2-325# (Max)

REMARKS- Conditions #2 and #3 are for catapult take-off only.
Conditions #1, #2 and #3 have full armor, armament and fuel protection.
Condition #4:- Armor, flexible gun and ammunition, 2 wing tanks, and fuselage tank vapor dilution system are removed.

ALSO OS2N-1SEA

SUPERSEDES 12/7/42

DATE- 1 AUG 1943

~~CONFIDENTIAL~~

MODEL-OS2U-3SEA

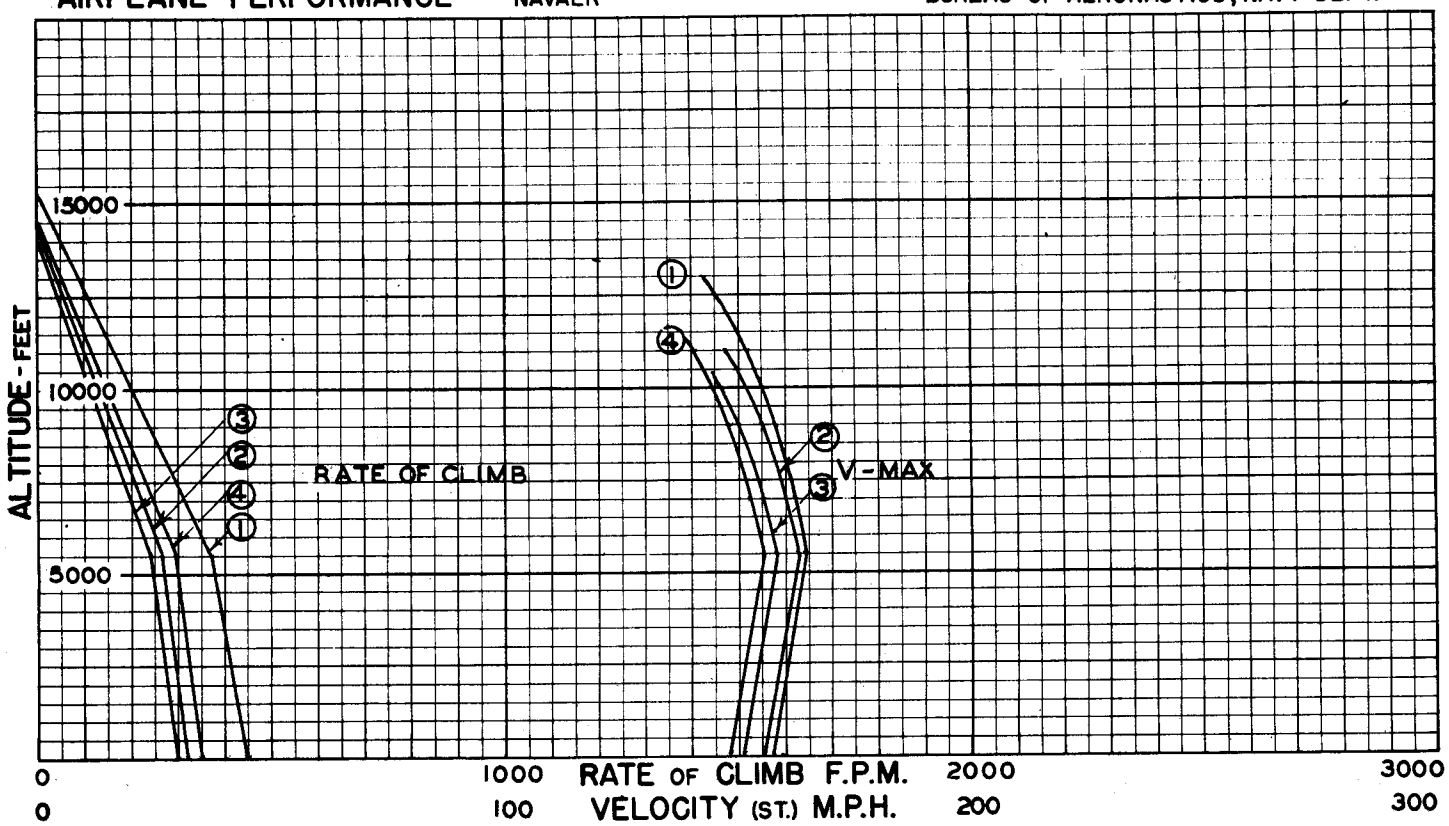
NAVAER
AIRPLANE CHARACTERISTICS & PERFORMANCE — BUREAU OF AERONAUTICS-NAVY DEPT.

COLUMN NUMBER				
LOADING CONDITION				
GROSS WEIGHT LBS.				
EMPTY WEIGHT LBS.				
FUEL/OIL GALS.				
FIXED. GUNS/AMMUNITION				
FLEXIBLE GUNS/AMMUNITION				
ENGINE POWER USED FOR PERFORMANCE				
WING LOADING LBS/SQ.FT.				
POWER LOADING (1) LBS/BHP.				
V-MAX. SEA LEVEL MPH.				
V-MAX. AIRPLANE CRIT. ALT. MPH.				
V-STALL. GROSS WEIGHT. (2) MPH.				
V-STALL. WITHOUT FUEL (2) MPH.				
TIME-TO-CLIMB -10000FT.- MIN.				
TIME-TO-CLIMB -20000FT.- MIN.				
SERVICE CEILING FT.				
TAKE-OFF DISTANCE -CALM- FT.				
TAKE-OFF DISTANCE -15 KN- FT.				
TAKE-OFF DISTANCE -25 KN- FT.				
TAKE-OFF TIME SECONDS.				
MAX. RANGE/V-AV. (3) ST.MI/MPH.				
BOMBING RADIUS/V-AV.-20% R.- NMI/KN.				
BOMBING RADIUS/V-AV.-33% R.- NMI/KN.				
PATROL RADIUS/V-AV.-20% R.- NMI/KN.				
PATROL RADIUS/V-AV.-33% R.- NMI/KN.				
SCOUT. RADIUS NMI.				
COMBAT RADIUS NMI.				

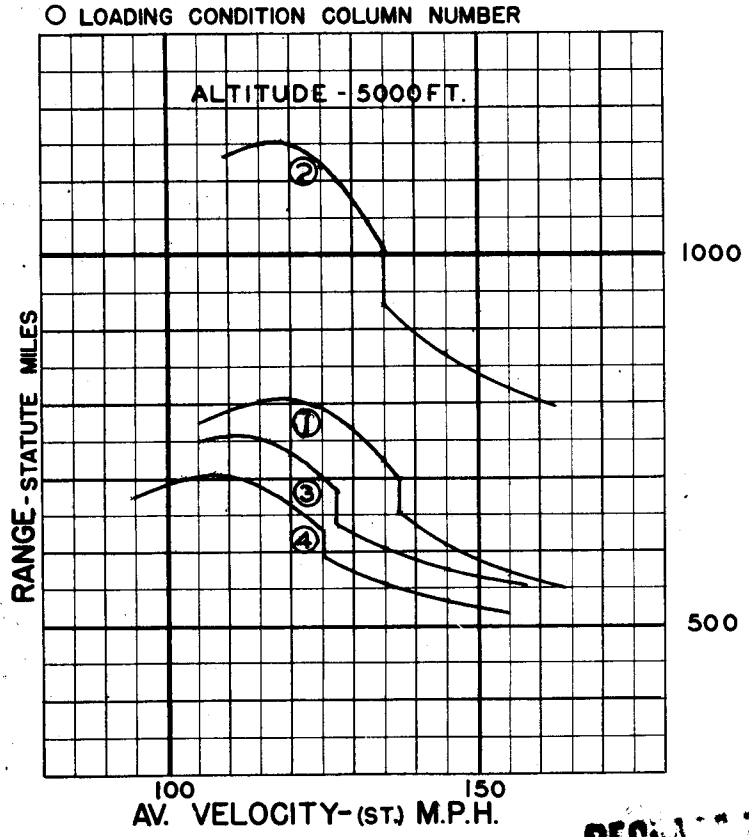
PERFORMANCE IS BASED ON- FLIGHT TEST
RANGE & RADIUS ARE BASED ON FLIGHT TEST FUEL CONSUMPTION DATA INCREASED BY 5 PERCENT TO CONFORM WITH PAST EXPERIENCE.

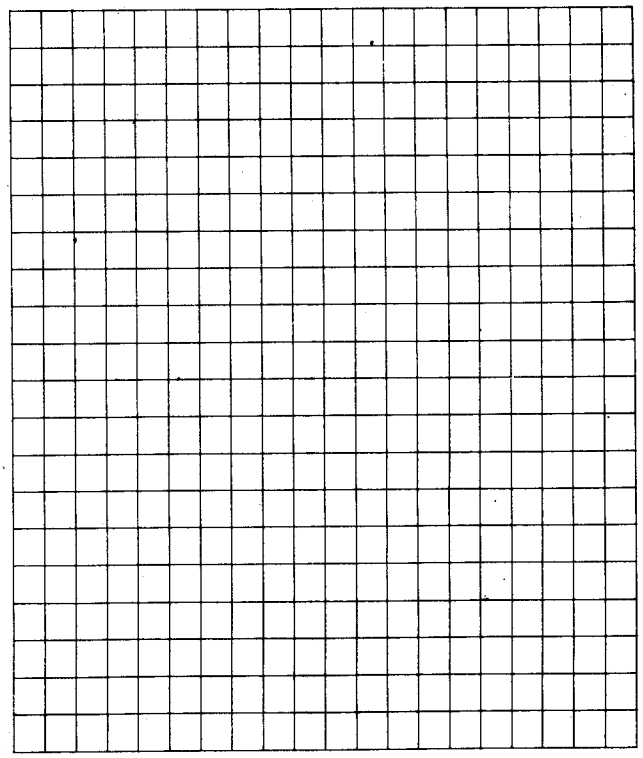
Practical Scouting Radius is 1/3 of range at V for max. range at 1500 ft. with fuel taken out for 20 min. warm-up and idle, 1 min. take-off and 60 min. for rendezvous, landing and reserve.

The following changes are incorporated: Contract - thru AG, Service - thru #60.



○ LOADING CONDITION COLUMN NUMBER



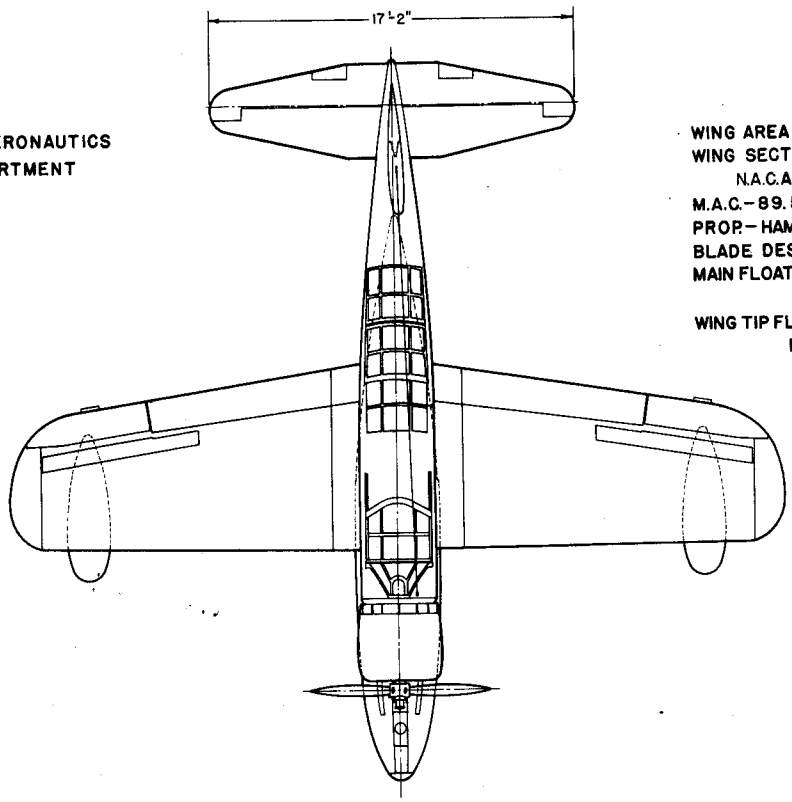


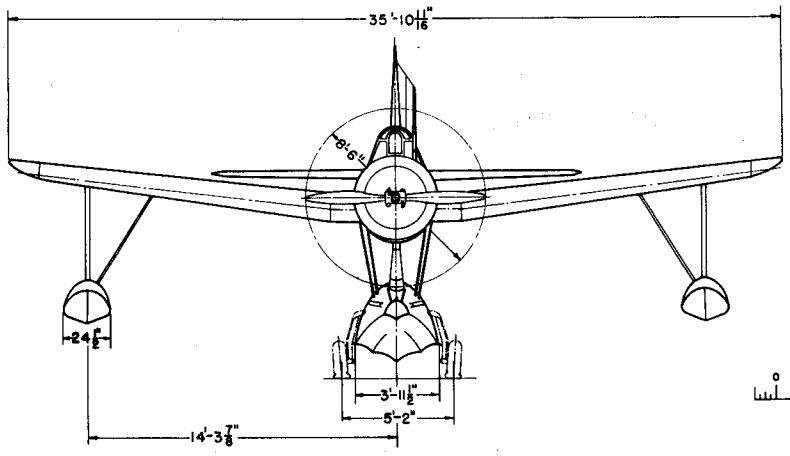
ALSO - OS2N-1 SEA

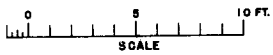
DECLASSIFIED

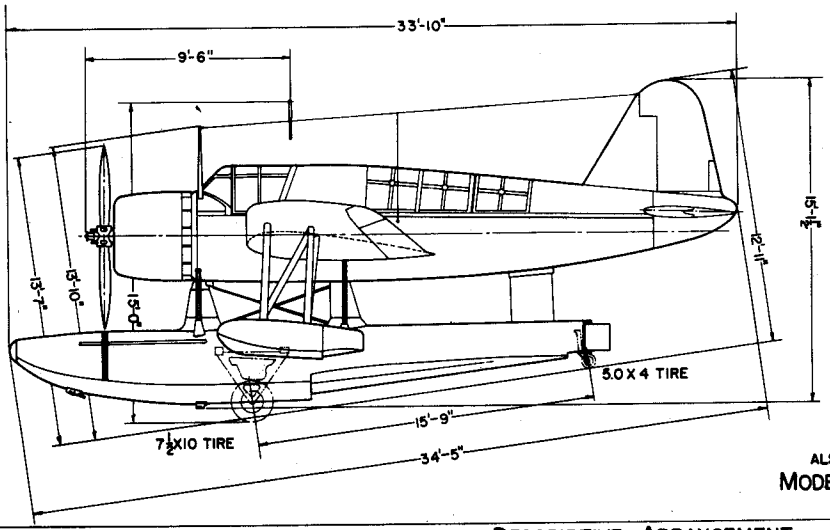
BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA-262 SQ. FT.
WING SECTION-
N.A.C.A 23015-23009
M.A.C.-89.5"
PROP.-HAMILTON STD.C.S.
BLADE DES. NO. 6167A-12
MAIN FLOAT DISPL.-
9860 LBS.
WING TIP FLOATS DISPL.-
1500 LBS.(TOTAL)









DECLASSIFIED

ALSO OS2N-1 SEAPLANE
MODEL OS2U-3 SEAPLANE

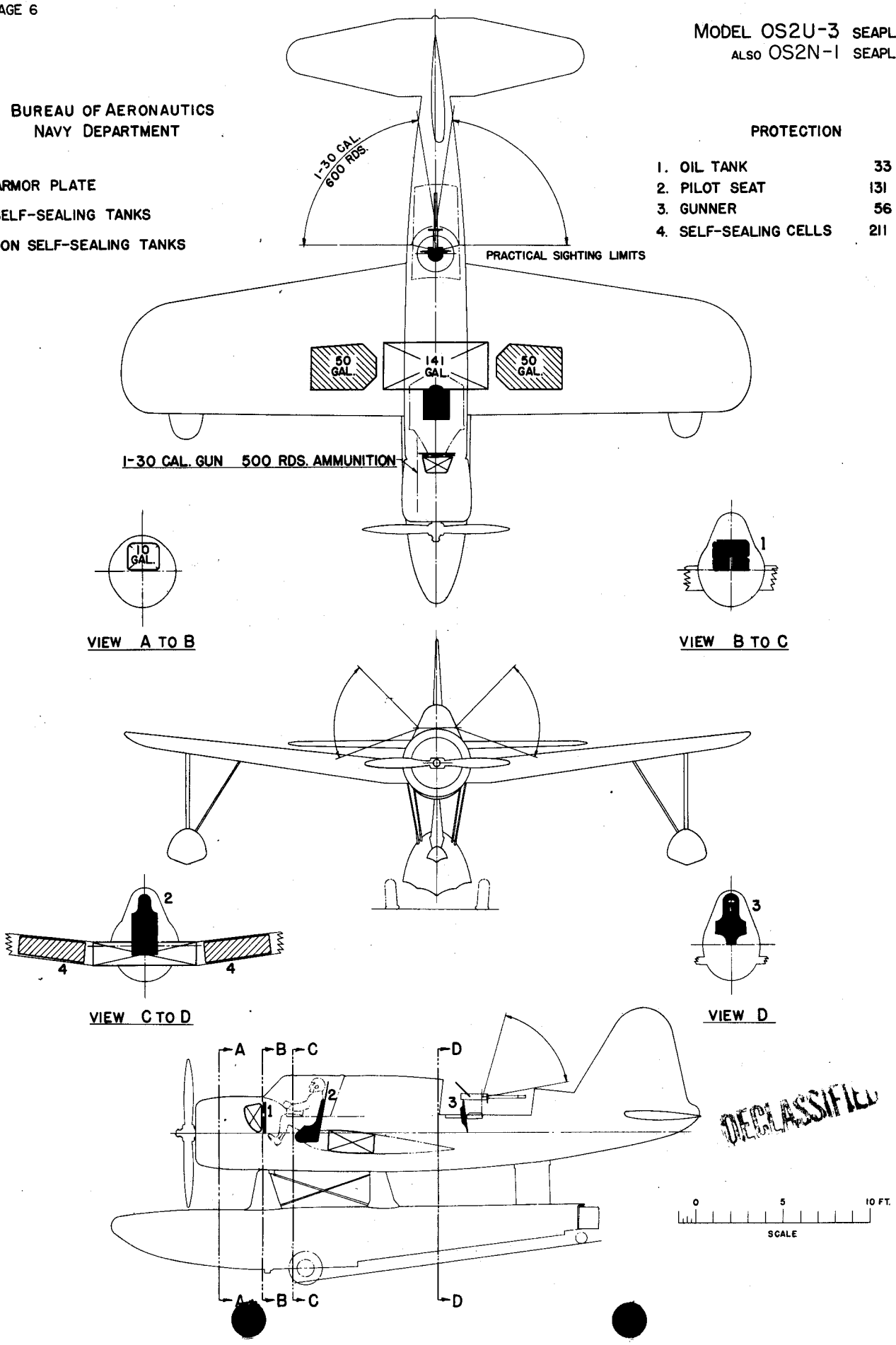
MODEL OS2U-3 SEAPLANE
ALSO OS2N-1 SEAPLANE

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

ARMOR PLATE
SELF-SEALING TANKS
NON SELF-SEALING TANKS

PROTECTION

1.	OIL TANK	33 LBS
2.	PILOT SEAT	131 LBS
3.	GUNNER	56 LBS
4.	SELF-SEALING CELLS	211 LBS



DECLASSIFIED