

NAVAER ISSUE OF 6 PAGES
AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS-NAVY DEPT.

COLUMN NUMBER	1	2	3	4
LOADING CONDITION	SCOUT	SCOUT	SCOUT	SCOUT
GROSS WEIGHT LBS.	6370	6600	6600	7000
EMPTY WEIGHT - Actual - LBS.	4800			
FUEL/OIL GALS.	120/9	156/10	156/10	223/10
FIXED GUNS/AMMUNITION	1-.30/500			
FLEXIBLE GUNS/AMMUNITION	1-.30/600			
ENGINE POWER USED FOR PERFORMANCE	NORMAL	MILITARY	NORMAL	NORMAL
WING LOADING LBS/SQ.FT.	21.8	22.6	22.6	24.0
POWER LOADING ① LBS/BHP.	12.7	12.0	13.2	14.0
V-MAX. SEA LEVEL MPH.	171	176	170	169
V-MAX. AIRPLANE CRIT. ALT. MPH.	183/8100	182/4600	182/8100	180/8100
V-STALL. GROSS WEIGHT. ② MPH.	52.7	53.6	53.6	55.2
V-STALL. WITHOUT FUEL ② MPH.	49.5	49.6	49.6	49.6
TIME-TO-CLIMB -10000FT.- MIN.	11.9	12.5	13.0	15.0
TIME-TO-CLIMB -20000FT.- MIN.				
SERVICE CEILING FT.	17400	15500	16600	15500
TAKE-OFF DISTANCE -CALM- FT.	1000		1110	1355
TAKE-OFF DISTANCE -15 KN- FT.	560		630	780
TAKE-OFF DISTANCE -25 KN- FT.	330		380	482
RATE OF CLIMB -S.L.- FT/MIN.	860	940	790	680
MAX. RANGE/V-AV. ③ ST.MI/MPH.	630/121		815/122	1150/125
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.	145		200	300
COMBAT RADIUS NMI.				
ENGINE /PROP.GEAR RATIO	Ranger V-770-8 (3:2)			
Engine Ratings - BHP/RPM/ALT				
	Normal	Military	Emergency	
	500/3150/SL-8100	550/3300/SL-4600	Take-off (5 min.)	Climb (30 min.)
			600/3300/S.L.	525/3000/S.L.
	550/3300/Take-off		545/3000/5000	
NOTE	STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS.			
	① BHP AT MAX.CRIT.ALT. ② STALL-WITHOUT POWER ③ AT 1500' ALTITUDE			

TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT
FIXED	PROTECTED	10	120	Wings: (External)
	UNPROTECTED		240	Bombs: 2-100#
	TOTAL-INCL.PROT.	10	360	Depth Bombs: 2-325#
	INCREASE-REMOVED PROTECTION			Fuselage: (External) S03C-2C only
AUX.				Bombs: 1-500# or 1-100#
	DROPPABLE	None		Depth Bombs: 1-325#
	DROPPABLE			
PROTECTED+UNPROTECTED+DROPPABLE		10	360	

REMARKS- For column (4), Emergency take-off ratings reduce take-off distance (25 Kn. wind) to 400 Ft.; Emergency Climb rating increases Sea-level rate of climb to 870 ft./min. These emergency ratings are not recommended for repeated use.

SUPERSEDES 2/1/43

DATE - 1 NOV 1943

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MODEL-S03C-2C,-3

**NAVAER
AIRPLANE CHARACTERISTICS & PERFORMANCE**

BUREAU OF AERONAUTICS-NAVY DEPT.

COLUMN NUMBER	5	6	7	8
LOADING CONDITION	BOMBER 1-500#	A.S. PATROL 2-325#	INSHORE PATROL 2-325#	FERRY
GROSS WEIGHT LBS.	7000	7000	6600	6600
EMPTY WEIGHT LBS.	4800		4475	4655
FUEL/OIL GALS.	136/10	180/11	113/9	226/10
FIXED GUNS/AMMUNITION	1-.30/500		1-.30/500	None
FLEXIBLE GUNS/AMMUNITION	1-.30/600		None	None
ENGINE POWER USED FOR PERFORMANCE	NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING LBS/SQ.FT.	24.0	24.0	22.6	22.6
POWER LOADING (1) LBS/BHP.	14.0	14.0	13.2	13.2
V-MAX. SEA LEVEL MPH.	163	161	162	170
V-MAX. AIRPLANE CRIT. ALT. MPH.	175/8100	172/8100	173/8100	182/8100
V-STALL. GROSS WEIGHT. (2) MPH.	55.2	55.2	53.6	53.6
V-STALL. WITHOUT FUEL (2) MPH.	51.9	50.4	50.8	47.8
TIME-TO-CLIMB -10000FT.- MIN.	15.2	15.7	13.3	13.0
TIME-TO-CLIMB -20000FT.- MIN.				
SERVICE CEILING FT.	15200	15100	16400	16600
TAKE-OFF DISTANCE -CALM- FT.	1420	1462	1190	1110
TAKE-OFF DISTANCE -15 KN- FT.	818	845	672	630
TAKE-OFF DISTANCE -25 KN- FT.	504	522	405	380
RATE OF CLIMB -S.L.- FT/MIN.	670	650	770	790
MAX. RANGE/V-AV. (3) STMI/MPH.	665/130	875/124	555/120	1200/120
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.	155	215	125	
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 Scout 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.

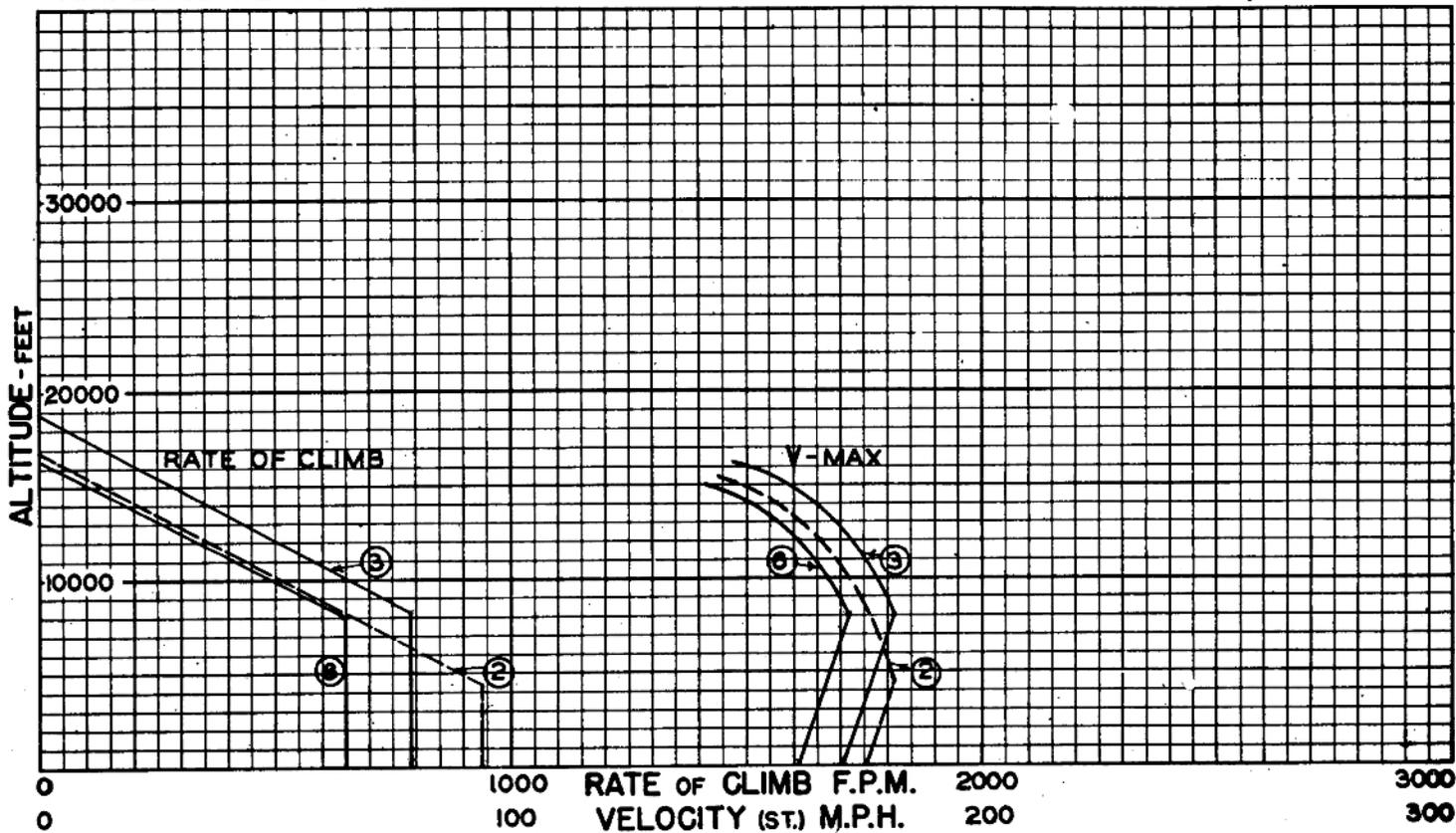
The following changes (S03C-2C changes) are incorporated: - Contract - thru B-44; Service - thru #3.

Weights are based on S03C-2C, S03C-3 is approximately 30# lighter than the -2C.

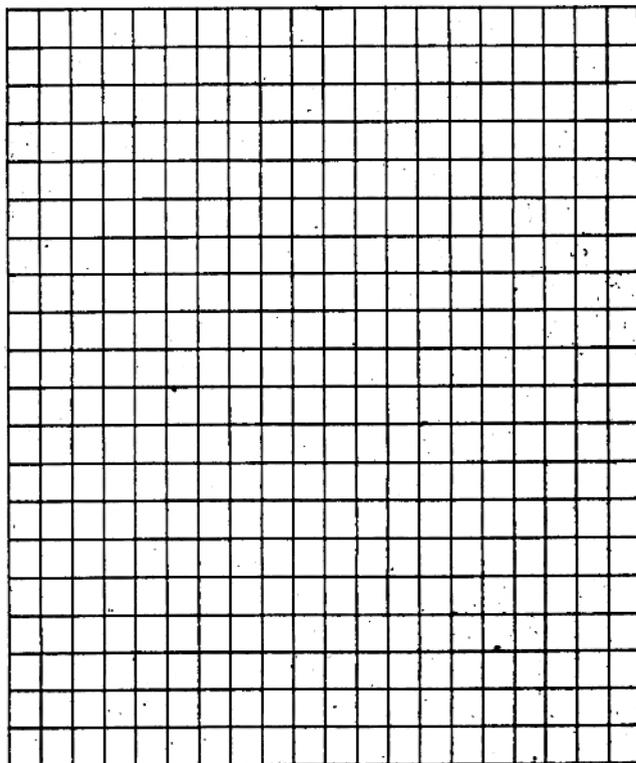
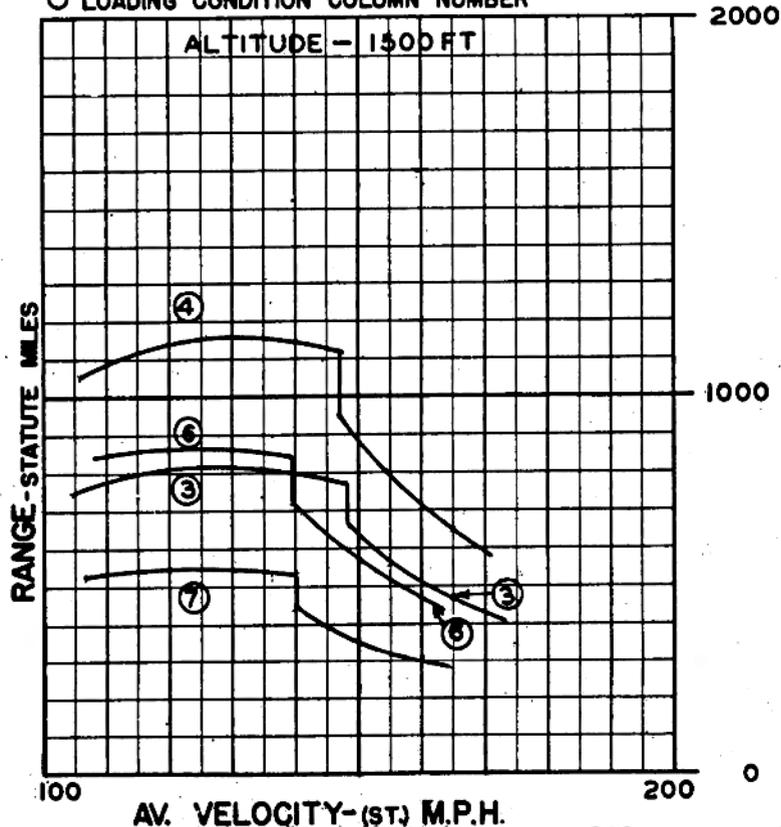
Condition (5) - S03C-2C only has fuselage bomb-rack.

Condition (6), (7) - Armor, fuselage removable fuel tank, .30 cal. flexible gun and ammunition removed. S.S. oil tank replaced by non-S.S. tank.

7000# Gross Weight suitable for catapult operations and normal take-off only, and should be used with caution.



○ LOADING CONDITION COLUMN NUMBER



AV. VELOCITY-(ST.) M.P.H.

AV. VELOCITY-(ST.) M.P.H.

0 100 200

0 100 200

0 100 200

0 100 200

0 100 200

0 100 200

0 100 200

0 100 200

0 100 200

0 100 200

0 100 200

0 100 200

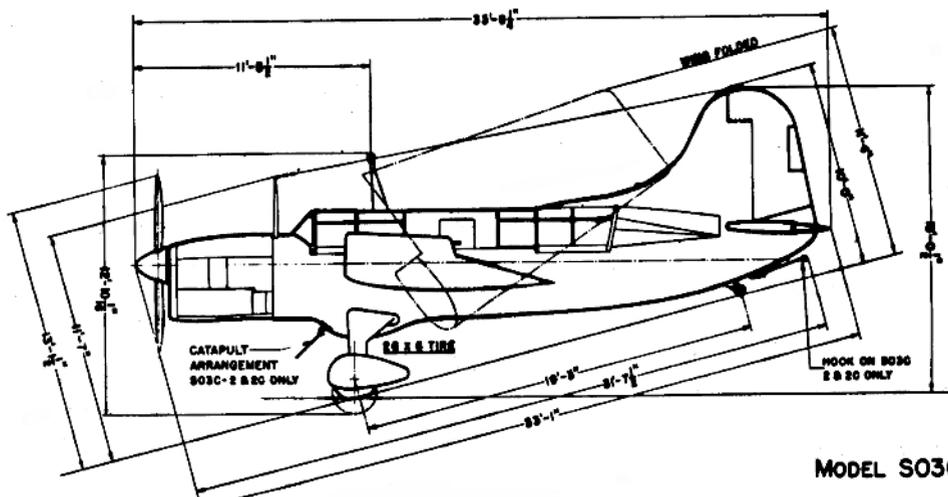
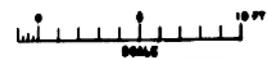
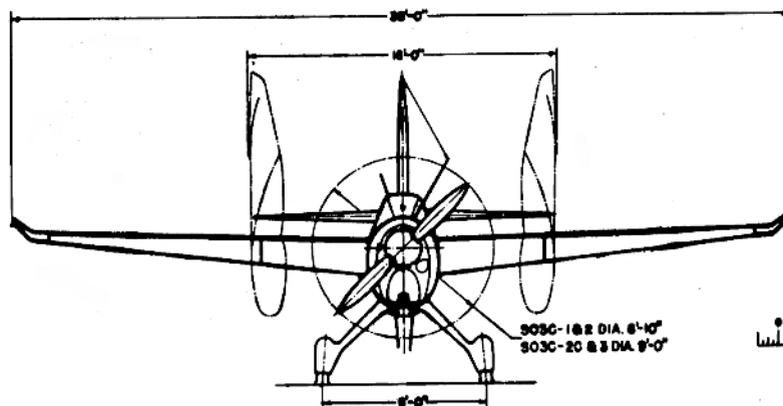
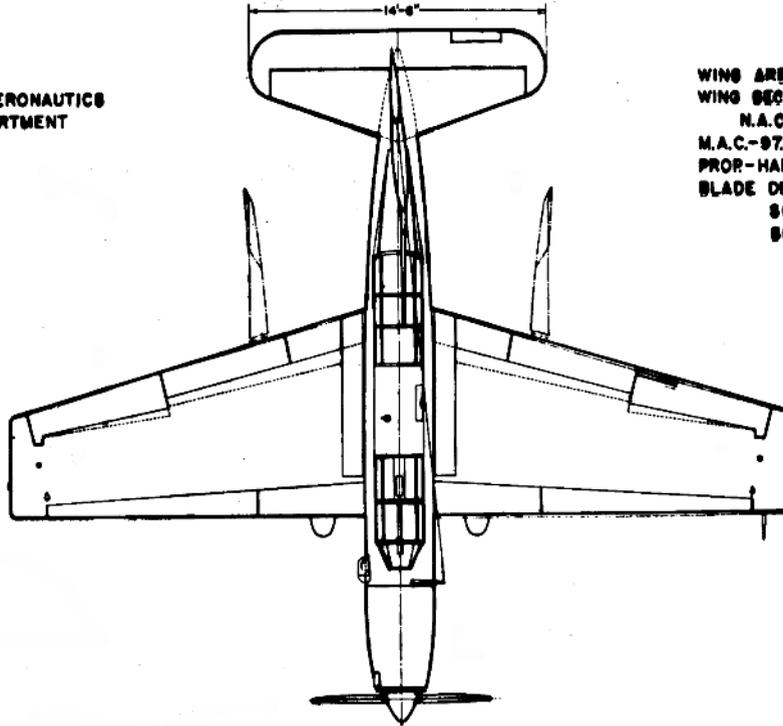
0 100 200

0 100 200

STATUTE NAUTICAL

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA-293 SQ. FT.
WING SECTION-
N.A.C.A. 23017-23009
M.A.C.-97.6"
PROP-HAMILTON STD. C.S.
BLADE DESIGN NOB.
S03C-1 & 2, C-6167A
S03C-2C & 3, D-6101A



MODEL S03C-1, 2, 2C & 3

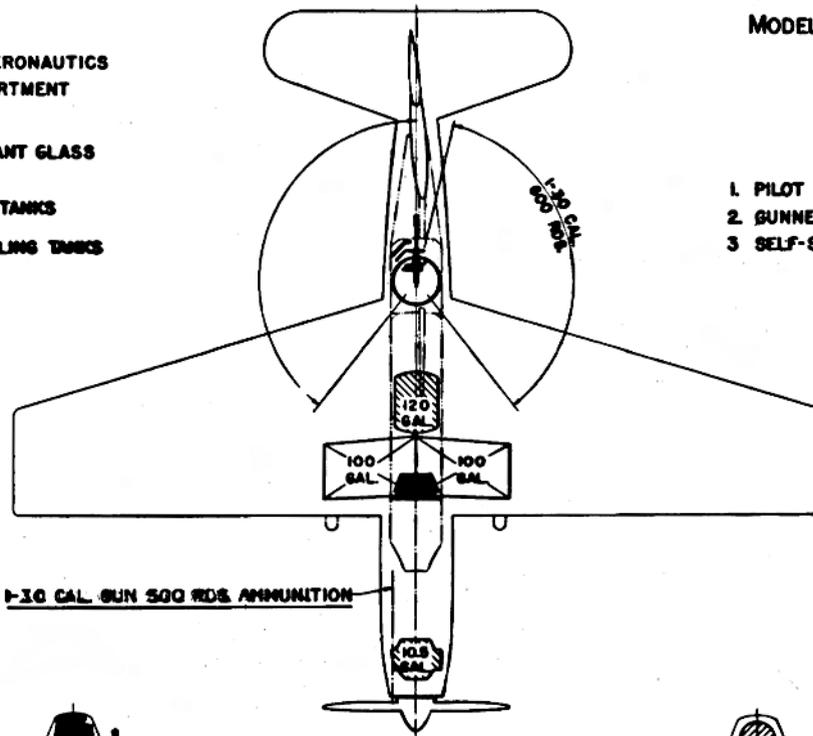
MODEL S03C-1,2,2C & 3

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

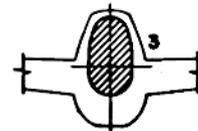
-  BULLET RESISTANT GLASS ARMOR PLATE
-  SELF-SEALING TANKS
-  NON SELF-SEALING TANKS

PROTECTION

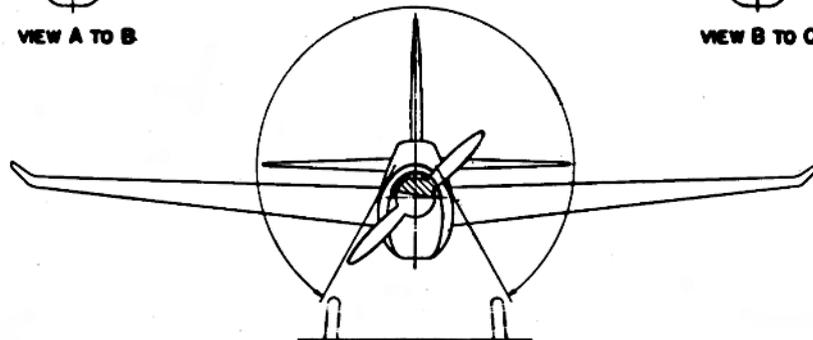
- 1. PILOT AFT 91 LBS.
- 2. GUNNER 53 LBS.
- 3. SELF-SEALING CELLS 195 LBS.



VIEW A TO B



VIEW B TO C



VIEW C

