

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS-NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		BOMBER 1-1000#	BOMBER 1-1000#	BOMBER 1-1000# Two Tanks External	BOMBER 2-1000#A.P.
GROSS WEIGHT	LBS.	15076	15076	15939	16112
EMPTY WEIGHT	-actual- LBS.	10363			
FUEL/OIL	GALS.	320/18	320/18	436/25	320/18
FIXED GUNS / AMMUNITION		4-.50/1600			
FLEXIBLE GUNS / AMMUNITION		1-.50/500			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS/SQ.FT.	35.8	35.8	37.8	38.3
POWER LOADING ①	LBS/BHP.	10.4	11.1	11.8	11.9
V-MAX. SEA LEVEL	MPH.	269	258	243	256
V-MAX. AIRPLANE CRIT. ALT.	MPH.	285/12400	280/13400	263/13400	278/13400
V-STALL. GROSS WEIGHT. ②	MPH.	79.6	79.6	82.0	82.4
V-STALL. WITHOUT FUEL ②	MPH.	74.4	74.4	74.9	77.3
TIME-TO-CLIMB -10000FT.-	MIN.	7.4	8.3	9.6	9.6
TIME-TO-CLIMB -20000FT.-	MIN.	19.7	21.1	26.3	25.6
SERVICE CEILING	FT.	24600	24200	22700	23,100
TAKE-OFF DISTANCE -CALM-	FT.		1220	1480	1450
TAKE-OFF DISTANCE -15 KN-	FT.		780	960	960
TAKE-OFF DISTANCE -25 KN-	FT.		540	670	670
RATE OF CLIMB -SL-	FT/MIN.	1580	1300	1120	1130
MAX. RANGE / V-AV. ③	ST. MI / MPH.		1130/155	1455/153	1090/163
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.		275	410	270
ENGINE / PROP. GEAR RATIO		W.A.C. R-2600-8 (16:9)			
ENGINE RATING BHP/RPM/ALT.		NORMAL		MILITARY	
		1500/2400/S.L.-5800		1700/2600/S.L.-3000	
		1350/2400/8900-13000		1450/2600/7800-12000	
		1700/2800/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 1500' ALTITUDE				

TANKAGE IN GALLONS		OIL FUEL		OFFENSIVE ARMAMENT	
FIXED	PROTECTED	25	320	FUSELAGE BOMB-BAY:-	
	UNPROTECTED			Bombs : 1-1600#, 2-1000#A.P.,	
	TOTAL-INCL. PROT.	25	320	1-1000#, or 2-500#	
	INCREASE-REMOVED PROTECTION	FIXED		Torpedoes : 1MK13-2, or-1 *	
AUX.				Depth Bombs: 1-650#, or 2-325#	
	DROPPABLE - Bomb-bay -		130	WINGS (External):-	
	DROPPABLE - Wing-- 2 @ 58		116	Bombs : 2-100#, or 2-500#	
	PROTECTED+UNPROTECTED+DROPPABLE	25	566	Depth Bombs: 2-325#	

REMARKS- * Torpedo loading is partially external and requires removal of bomb-bay doors and installation of supporting truss.

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS-NAVY DEPT.

COLUMN NUMBER	5	6	7	
LOADING CONDITION	BOMBER 2-1000#A.P. Two Tanks External	BOMBER 2-1000#A.P. 2-500# *	FERRY **	
GROSS WEIGHT LBS.	16975	17162	14116	
EMPTY WEIGHT - ACTUAL - LBS.	10363		9678	
FUEL/OIL GALS.	436/25	320/18	566/25	
FIXED GUNS/AMMUNITION	4-.50/1600		None	
FLEXIBLE GUNS/AMMUNITION	1-.50/500		None	
ENGINE POWER USED FOR PERFORMANCE	NORMAL	NORMAL	NORMAL	
WING LOADING LBS/SQ.FT.	40.3	40.8		
POWER LOADING ① LBS/BHP.	12.5	12.7		
V-MAX. SEA LEVEL MPH.	241	238		
V-MAX. AIRPLANE CRIT. ALT. MPH.	261/13400	257/13400		
V-STALL. GROSS WEIGHT. ② MPH.	84.6	85.0		
V-STALL. WITHOUT FUEL. ② MPH.	77.8	80.0		
TIME-TO-CLIMB -10000FT.- MIN.	11.3	11.7		
TIME-TO-CLIMB -20000FT.- MIN.	32.5	34.7		
SERVICE CEILING FT.	21600	21200		
TAKE-OFF DISTANCE -CALM- FT.	1780	1840		
TAKE-OFF DISTANCE -15 KN- FT.	1180	1220		
TAKE-OFF DISTANCE -25 KN- FT.	830	860		
RATE OF CLIMB -SL- FT./MIN.	970	940		
MAX. RANGE/V-AV. ③ ST.MI/MPH.	1400/151	1000/149	2020/150	
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.	400	250		

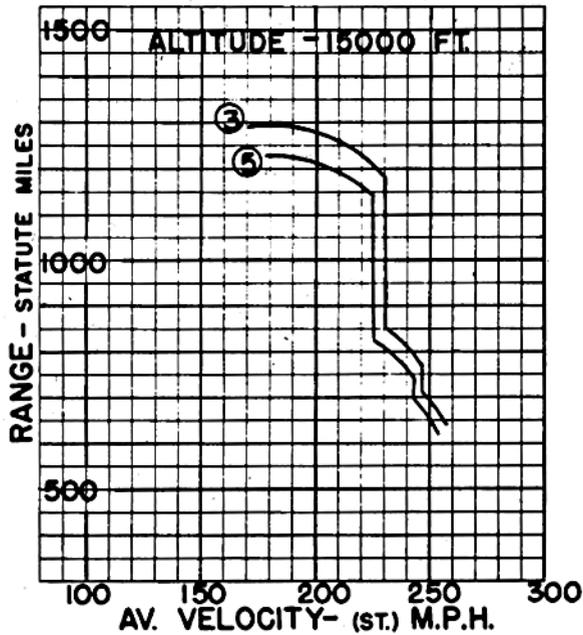
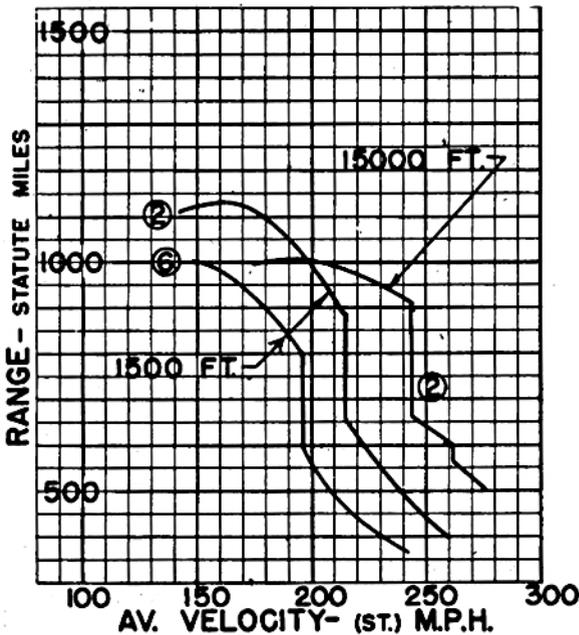
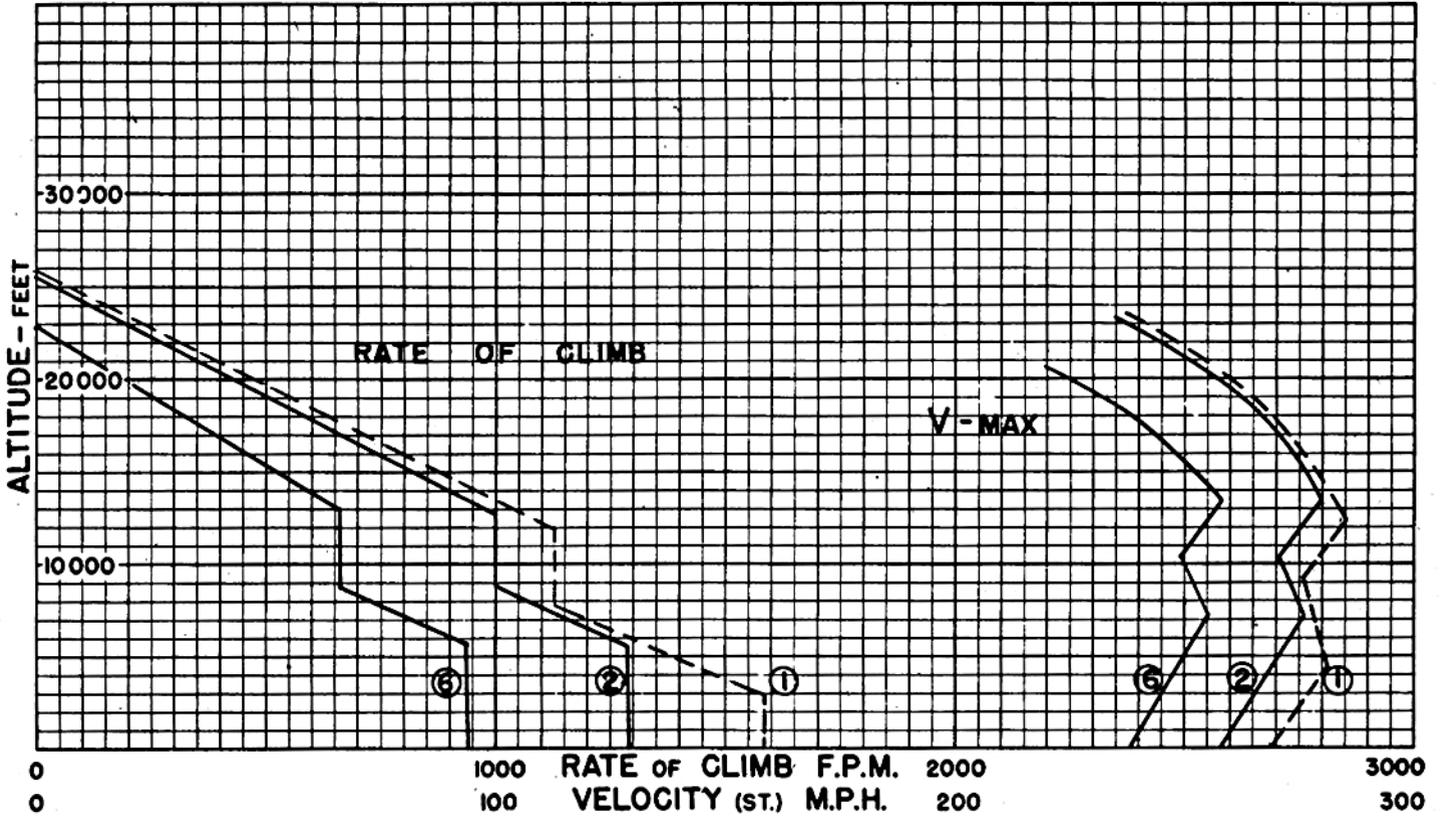
PERFORMANCE IS BASED ON- PROTOTYPE FLIGHT TEST

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

Practical Marine Corps Combat Radius is based on 20 min. warm-up and idling; 1 min. take-off; 10 min. rendezvous at 60% normal sea-level power (n.s.p) and auto-rich; climb to 15,000 feet at 60% n.s.p. and auto-lean; cruise-out at 15000 ft. at 60% n.s.p. and auto-lean; drop unprotected droppable tanks; dive; drop bombs and torpedoes; combat at 1500 feet for 5 min. at full military power plus 10 min. at full normal power; cruise-back at 1500' at 60% n.s.p. and auto-lean; 20 min. at V for max. range allowance awaiting landing; landing and reserve. Radius includes distance covered in climb but not in dive. (THIS COMBAT RADIUS IS IDENTICAL TO NORMAL VSB PROBLEM WITH THE EXCEPTION OF 20 MIN. ALLOWANCE IN LIEU OF 60 MIN. ALLOWANCE AT END OF FLIGHT).

* 2-1000#A.P. are internal; 2-500# are on wing bomb-racks.

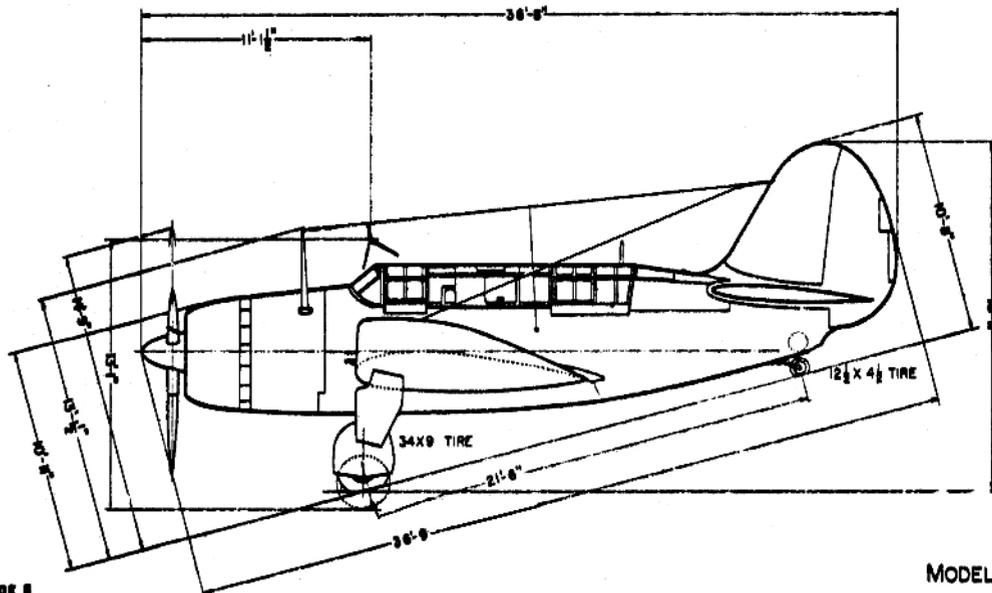
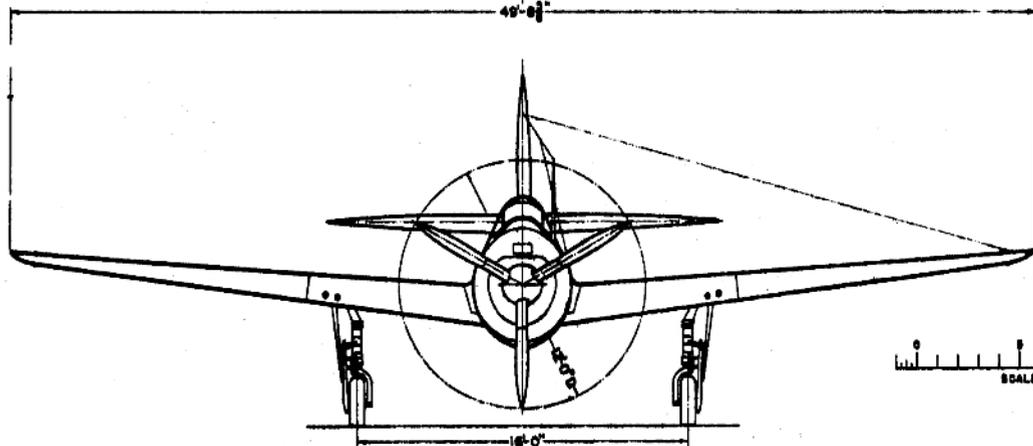
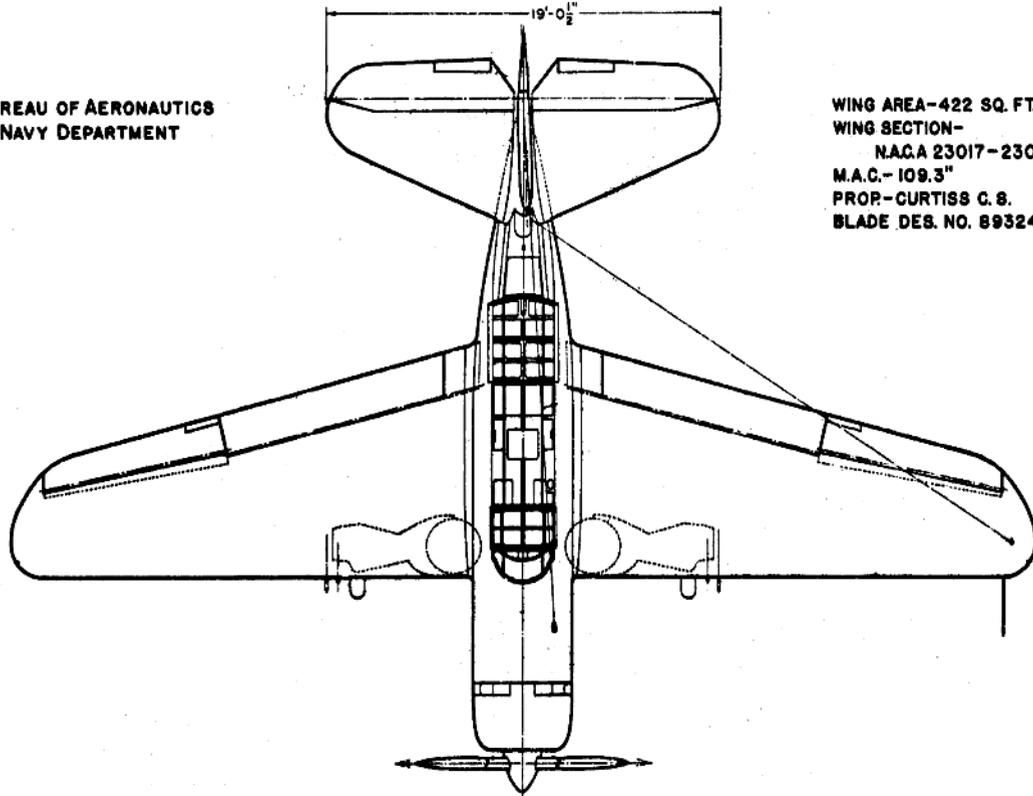
With one bomb-bay and two wing droppable tanks



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA-422 SQ. FT.
WING SECTION-
NACA 23017-23009
M.A.C.-109.3"
PROP-CURTISS C. 8.
BLADE DES. NO. 89324



PAGE 8

MODEL SB2C-1A

1 APRIL 1944

American Aviation Historical Society

DESCRIPTIVE ARRANGEMENT

NAVAER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

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

PROTECTION

- | | |
|-----------------------|----------|
| 1. PILOT FORWARD | 84 LBS. |
| 2. PILOT AFT | 152 LBS. |
| 3. TURRET | 257 LBS. |
| 4. SELF-SEALING CELLS | 365 LBS. |
| 5. COWL ARMOR | 176 LBS. |

