

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		COMBAT *	COMBAT *	COMBAT *	BOMBER 1-1000#
GROSS WEIGHT	LBS.	13500	13500	13500	14650
EMPTY WEIGHT	-Actual- LBS.	10093			
FUEL / OIL	GALS.	365/20	365/20	365/20	365/20
FIXED GUNS/AMMUNITION		2-20mm/400rds			
FLEXIBLE GUNS/AMMUNITION		none			
ENGINE POWER USED FOR PERFORMANCE		COMBAT	MILITARY	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	33.8	33.8	33.8	36.6
POWER LOADING ①	LBS./BHP.	6.1	7.1	7.5	8.1
V-MAX. SEA LEVEL	KN	310	299	280	253
V-MAX./CRITICAL ALT.	KN/FT.	326/13600	320/17300	313/17400	285/17000
V-STALL GROSS WEIGHT ②	KN	71.7	71.7	71.7	74.8
V-STALL WITHOUT FUEL ②	KN	65.8	65.8	65.8	69.0
TIME-TO-CLIMB -10000FT-	MIN.	3.2	3.8	4.0	4.5
TIME-TO-CLIMB -20000FT-	MIN.	7.8	8.2	9.3	10.6
SERVICE CEILING	FT.	33200	33200	32800	31100
TAKE-OFF DISTANCE -CALM-	FT.	416	416	416	515
TAKE-OFF DISTANCE -15 KN-	FT.	256	256	256	324
TAKE-OFF DISTANCE -25 KN-	FT.	171	171	171	221
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	3680	3250	2640	2360
MAX. RANGE / V-AV. ③	NMI./KN			1345/142	1120/141
RANGE / V-AV. -60%NSP-③-	NMI./KN				
SEARCH RADIUS / V-AV. -20%R-	NMI./KN				
A.S.W. RADIUS / V-AV. -20%R-	NMI./KN				
SCOUT RADIUS	N MI.				
COMBAT RADIUS	N MI.			315 (B-1)	275 (B-1)

ENGINE / PROP GEAR RATIO W.A.C. R-3350-24W (.4375)

ENGINE RATING BHP/RPM/ALT.	COMBAT	MILITARY	NORMAL	TAKE-OFF
	2800/2800/S.L.-1000'	2500/2800/S.L.-3500	2100/2400/S.L.-5500	2500/2900/S.L.
2200/2600/8000-11000'	1900/2600/11000-14800	1800/2400/9750-15000		

TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT
AUX. FIXED	PROTECTED		365	Fuselage (Explosive Displacing Gear)
	UNPROTECTED	31		Bombs: 1-2000#, 1-1600#, 1-1000# or 1-500#
	TOTAL - FIXED INTERNAL	31	365	Depthbombs: 1-650# or 1-325#
	DROPPABLE -Wings- 2 @ 150		300	Mines: 1-2000# or 1-1000#
	DROPPABLE -Alternate with bombs			Torpedo: 1 MK 13-3
TOTAL	31	665	Wings: (Paired MK 51-9 bomb racks)	
NOTE				Bombs: 2-1000#, 2-500#, 2-250#, or 6-100#
				Depth Bombs: 2-650#, or 2-325#
				Mines: 2-1000#
				Rockets: 2-11.75 "A.R. (Tiny Tim)"
				Note: AN/APS-4 Radar carried on right wing bomb-rack.

Reissued 1 January 1947

RESTRICTED

DATE 1 MAY 1945

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MODEL XBT2D-1

NAVAER-1519B (Rev. 9-44)

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COLUMN NUMBER		5	6	7	8
LOADING CONDITION		BOMBER 1-2000# 2-1000#	BOMBER 1-2000# One Tank External	TORPEDO 1 MK 13-3 One Tank External	ROCKET 8-5 "HVAR 1-1000# 1-Tank Ext.
GROSS WEIGHT	LBS.	17500	16729	16924	16873
EMPTY WEIGHT	Actual - LBS.	10093			
FUEL/OIL	GALS.	365/20	515/28	515/28	515/28
FIXED GUNS/AMMUNITION		2-20 mm/400 rds			
FLEXIBLE GUNS/AMMUNITION		NONE			
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	43.8	41.8	42.3	42.2
POWER LOADING ①	LBS./BHP	9.7	9.3	9.4	9.4
V-MAX. SEA LEVEL	KN	237	237	235	230
V-MAX./CRITICAL ALT.	KN/FT.	265/16800	266/16800	263/16800	257/16700
V-STALL. GROSS WEIGHT ②	KN	81.7	79.9	80.3	82.3
V-STALL. WITHOUT FUEL ②	KN	76.5	72.2	72.6	74.4
TIME-TO-CLIMB -10000FT.-	MIN.	6.0	5.5	5.7	5.7
TIME-TO-CLIMB -20000FT.-	MIN.	14.8	13.6	14.0	14.0
SERVICE CEILING	FT.	27800	28400	28200	28100
TAKE-OFF DISTANCE -CALM-	FT.	810	724	748	790
TAKE-OFF DISTANCE -15 KN.-	FT.	535	473	490	522
TAKE-OFF DISTANCE -25KN.-	FT.	380	332	346	371
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF DISTANCE	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	1810	1940	1900	1900
MAX. RANGE / V-AV. ③	NMI./KN	921/147	1370/141	1335/141	1290/139
RANGE / V-AV. -60%NSP-③-	NMI./KN				
SEARCH RADIUS/V-AV. -20%R-	NMI./KN.				
A. S. W. RADIUS/V-AV. -20%R-	NMI./KN.				
SCOUT RADIUS	NMI.				
COMBAT RADIUS	NMI.	250 (B-1)	455 (B-1)	450 (B-1)	440 (B-1)

PERFORMANCE IS BASED ON - PRELIMINARY FLIGHT TEST (except Rate of Climb is based on calculations).

RANGE & RADIUS ARE BASED ON ENGINE REQUIREMENT FUEL CONSUMPTION DATA INCREASED

BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.

* COMBAT CONDITION:	Fuselage displacing gear, bomb-rack and sway bracing aboard; Wing bomb-racks (faired) and sway bracing aboard; AN/APS 4 radar and rocket launchers not aboard; addition of 8 MK 9-1 rocket launchers reduces Vmax/S.L. by 4 kn. at COMBAT POWER.
CLEAN CONDITION:	Combat condition with all bomb-racks, sway bracing, and displacing gear removed. At COMBAT POWER Vmax/S.L. 313 kn; Vmax/13600 ft. = 329 kn.
ROCKET CONDITION:	8-5" head/5" motor rockets suspended from MK 9-1 launchers.
FERRY CONDITION:	Armor, Armament, and Radar removed, Gross Weight = 14950 lbs. with 665 gals fuel. Max. range at 1500 ft. = 2000 n.mi./136 kn.
NOTE:	Fuselage bomb-rack sway bracing and displacing gear, and wing bomb-racks and sway bracing in all conditions except CLEAN. AN/APS 4 radar on right wing bomb-racks for conditions 4, 6, 7, and 8. Rocket launchers carried in rocket condition only. Condition 5: 2000# bomb carried on fuselage, 1000# bombs carried on wings.

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BOMBER COMBAT RADIUS FORMULA NO. B-1-CONDITIONS NOS.- 4--8

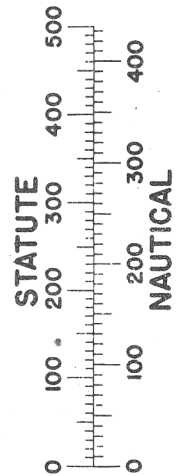
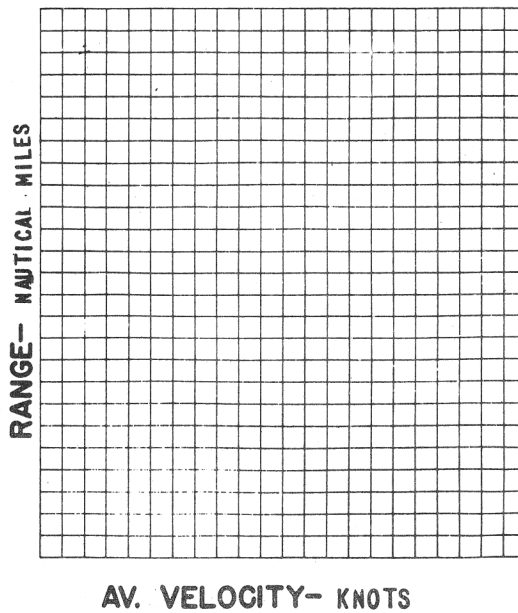
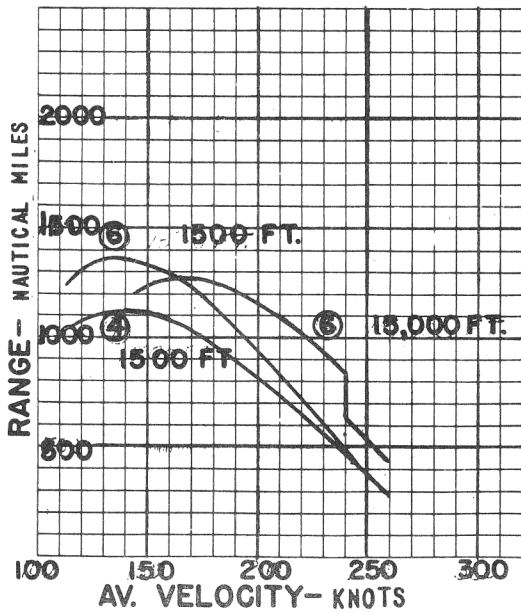
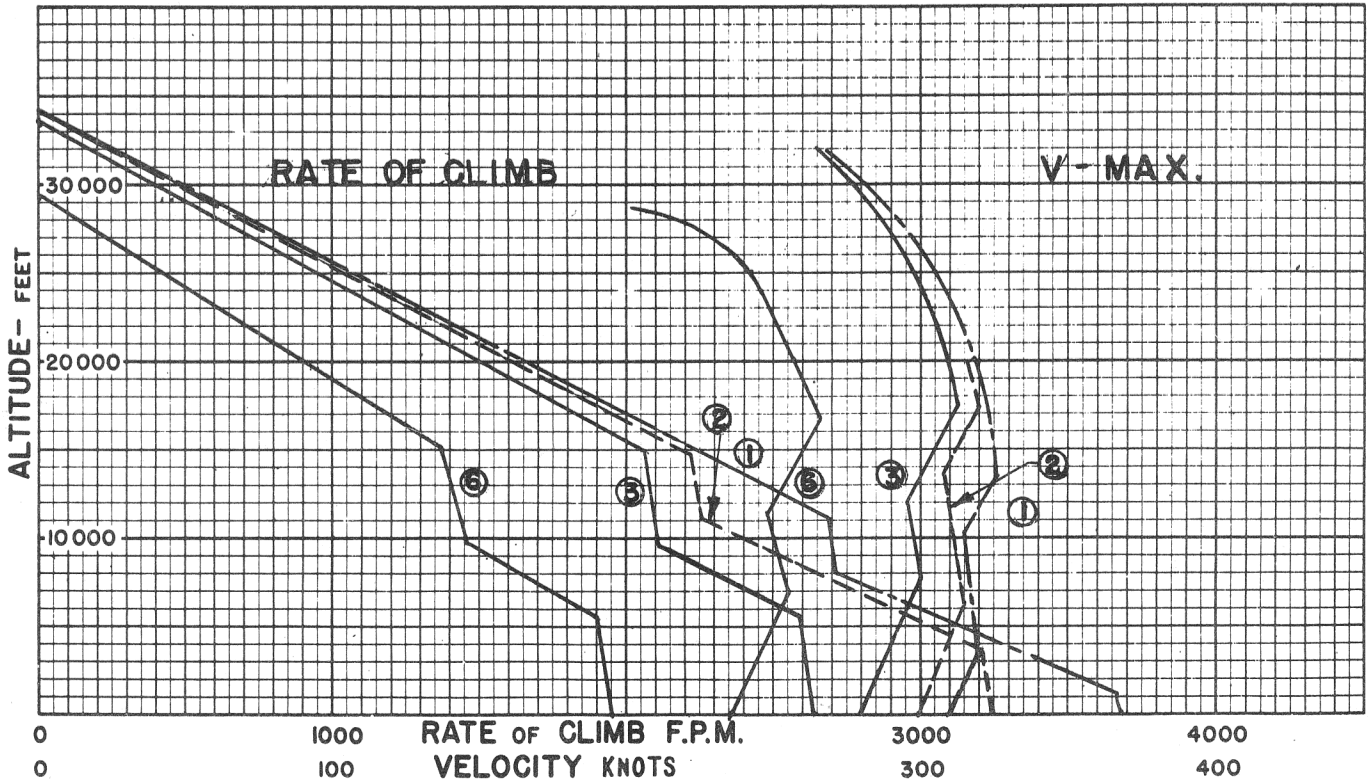
RADIUS = CLIMB + CRUISE-OUT + CRUISE BACK

<u>WARM-UP</u>	<u>RENDEZVOUS</u>	<u>CLIMB</u>	<u>CRUISE OUT</u>	<u>DROP TANKS</u>	<u>COMBAT</u>	<u>CRUISE BACK</u>	<u>RESERVE</u>
20 min.	20 min. at sea level	to 15000 ft.	at 15000 ft.	to 1500 ft.	15 min. at 1500 ft.	at 1500 ft.	60 min. at
<u>TAKE-OFF</u> 1 min.	at 60% N.S.P.	at 60% N.S.P.	180 kts.TAS	DROP BOMBS FIRE ROCKETS	5 min. WEP. 10 min. Nor.Pr.	170 kts.TAS Auto Lean.	Vel. for Max. Range Auto Lean.

Water available for approximately 12 minutes at COMBAT POWER.

188 ft. length is required to spot 20 airplanes on the 96 ft. wide deck immediately aft of forward ramp on CV-9 class carriers.

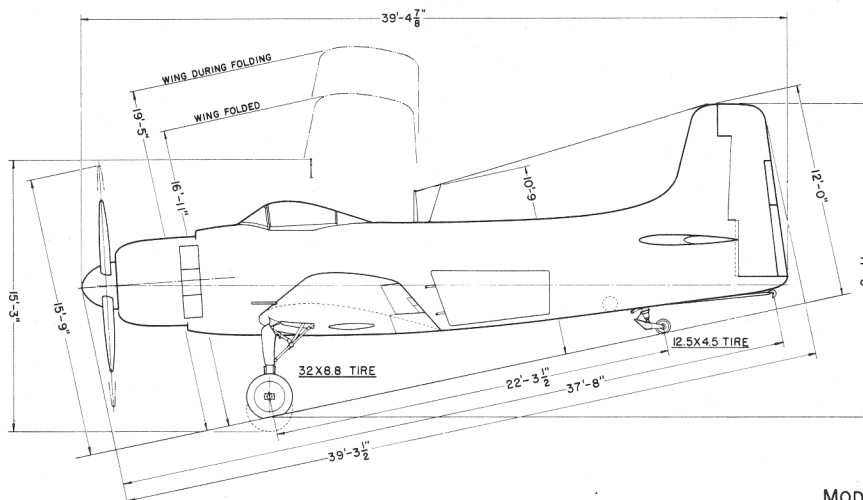
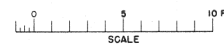
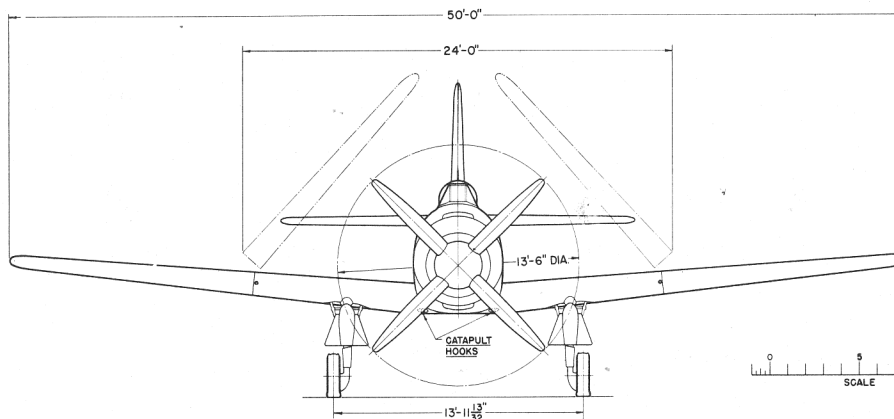
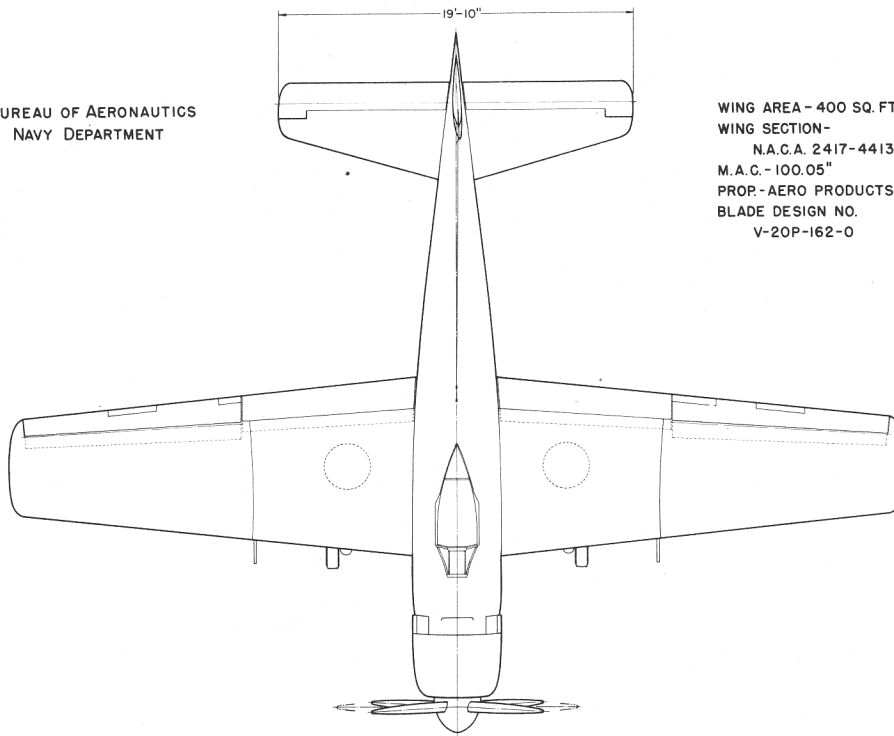
8-100# bombs or 8-250# bombs can be carried on MK-9 Rocket Launches.



○ LOADING CONDITION COLUMN NUMBER






BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 400 SQ. FT.
WING SECTION -
N.A.C.A. 2417-4413
M.A.C. - 100.05"
PROP - AERO PRODUCTS
BLADE DESIGN NO.
V-20P-162-0



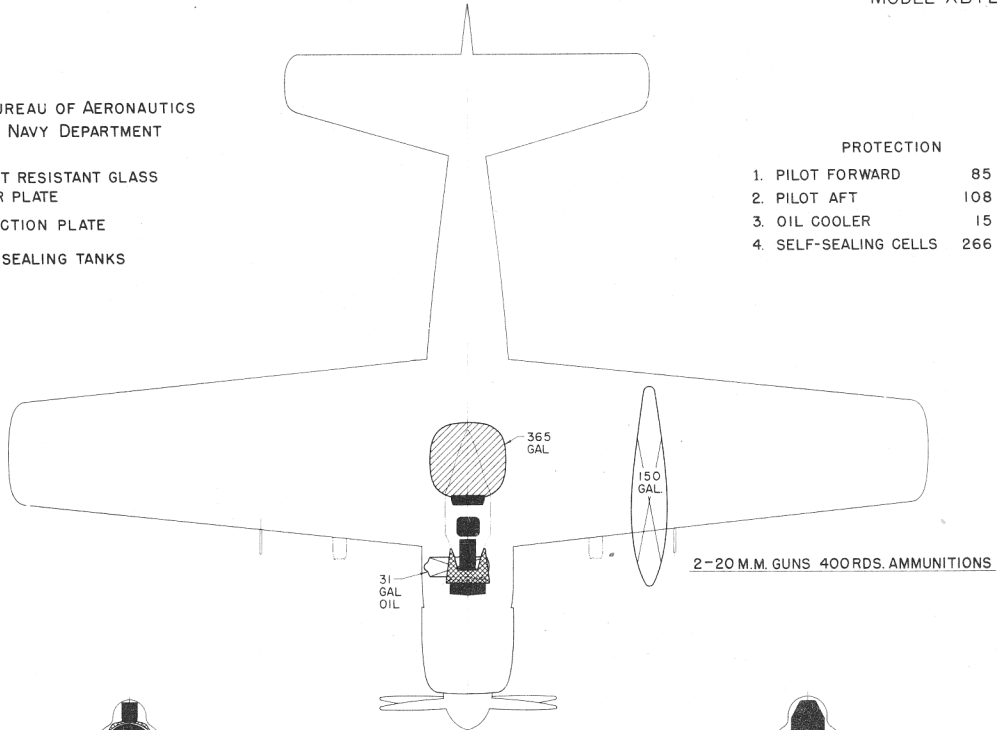
MODEL XBT2D-1

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

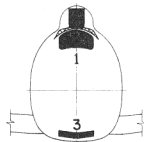
-  BULLET RESISTANT GLASS
-  ARMOR PLATE
-  DEFLECTION PLATE
-  SELF-SEALING TANKS
-  SELF-SEALING TANKS

PROTECTION

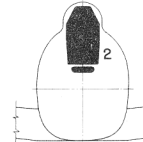
- 1. PILOT FORWARD 85 LBS.
- 2. PILOT AFT 108 LBS.
- 3. OIL COOLER 15 LBS.
- 4. SELF-SEALING CELLS 266 LBS.



2-20 M.M. GUNS 400RDS. AMMUNITIONS



VIEW A TO B



VIEW B

