

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		COMBAT	COMBAT	COMBAT With Rocket Launchers	BOMBER 1-2000#
GROSS WEIGHT	LBS.	19000	19000	19040	21140
EMPTY WEIGHT	-ACTUAL- LBS.	14296			
FUEL / OIL	GALS.	500/28	500/28	500/28	500/28
FIXED GUNS/AMMUNITION		4-20mm/800 rds.			
FLEXIBLE GUNS/AMMUNITION		None			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	MILITARY	NORMAL
WING LOADING	LBS./SQ.FT.	38.3	38.3	38.4	42.6
POWER LOADING ①	LBS./BHP.	7.9	8.6	7.9	9.6
V-MAX. SEA LEVEL.	KN	296	277	292	254
V-MAX./CRITICAL ALT.	KN/FT.	319/16000	311/16900	314/15900	282/16500
V-STALL GROSS WEIGHT ②	KN	83.2	83.2	83.3	87.8
V-STALL WITHOUT FUEL ②	KN	76.3	76.3	76.5	81.4
TIME-TO-CLIMB -10000FT-	MIN.	4.5	5.4	4.5	6.6
TIME-TO-CLIMB -20000FT-	MIN.	11.4	13.1	11.5	16.8
SERVICE CEILING	FT.	26800	26400	26500	23900
TAKE-OFF DISTANCE -CALM-	FT.	570	570	575	754
TAKE-OFF DISTANCE -15 KN-	FT.	366	366	370	496
TAKE-OFF DISTANCE -25 KN-	FT.	253	253	255	352
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	2480	1950	2470	1600
MAX. RANGE / V-AV. ③	NMI./KN		1330/155	1300/153	1070/154
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 B-1	N MI.		350		305

ENGINE / PROP GEAR RATIO P. & W. XR-4360-4 (.425)

ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL	TAKE-OFF
	3000/2700/S.L.-1500'	2500/2550/S.L.-5000'	3000/2700/S.L.
2400/2700/-13500'	2200/2550/-14500'		

AUX. FIXED	TANKAGE IN GALLONS	OIL	FUEL	OFFENSIVE ARMAMENT
	PROTECTED			500
UNPROTECTED	36			Bombs - 1-2000#, 1-1600#, 1-1000#, or 1-500#
TOTAL - FIXED INTERNAL	36		500	Depth Bombs - 1-650#, or 1-325#
DROPPABLE				Mines - 1-2000#, or 1-1000#
DROPPABLE Wings - 2 @ 150			300	Torpedoes - 1 MK 13-3
TOTAL	36		800	WINGS-external - alternate with radar & drop tanks.

NOTE			
	① BHP AT MAX. CRIT. ALT.		
② STALL - WITHOUT POWER			Depth Bombs - 2-650#, or 2-325#
③ AT 1500' ALTITUDE			Mines - 2-1000#
			Gun Packages - 2
			WINGS - Martin Rocket Launchers
			Rockets - 8-5" HVAR, or 8-5" A.R.

B

MODEL XBTM-1

NAVAER-15198 (Rev. 9-44)

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		5	6	7	8
LOADING CONDITION		BOMBER 1-2000# One 150 gal. Tank External	BOMBER 1-2000# Fuse. 2-1000# Wings	TORPEDO 1 Mk 13-3	ROCKET 8-5" HVAR 1-2000#
GROSS WEIGHT	LBS.	22220	23000	21335	22300
EMPTY WEIGHT - ACTUAL -	LBS.	14296			
FUEL/OIL	GALS.	650/36	500/28	500/28	500/28
FIXED GUNS/AMMUNITION		4-20mm/800 rds			
FLEXIBLE GUNS/AMMUNITION		None			
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	44.8	46.4	43.0	45.0
POWER LOADING ①	LBS./BHP	10.1	10.4	9.7	10.1
V-MAX. SEA LEVEL	KN	247	243	251	241
V-MAX./ CRITICAL ALT.	KN/ FT.	272/16300	267/16300	278/16400	267/16300
V-STALL. GROSS WEIGHT ②	KN	89.9	91.5	88.1	93.1
V-STALL. WITHOUT FUEL ②	KN	81.6	85.5	81.6	86.7
TIME-TO-CLIMB -10000FT.-	MIN.	7.4	7.9	6.8	7.5
TIME-TO-CLIMB -20000FT.-	MIN.	19.5	21.5	17.5	19.9
SERVICE CEILING	FT.	22900	22300	23600	22700
TAKE-OFF DISTANCE -CALM-	FT.	858	938	772	915
TAKE-OFF DISTANCE -15 KN.-	FT.	571	628	509	616
TAKE-OFF DISTANCE -25KN.-	FT.	410	455	361	444
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF DISTANCE	SECONDS				
RATE OF CLIMB -SL-	FT./ MIN.	1460	1360	1580	1440
MAX. RANGE / V-AV. ③	NMI./KN	1290/155	910/155	1040/153	930/151
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 B-1	NMI.	420	265	285	270

PERFORMANCE IS BASED ON -

FLIGHT TEST

RANGE & RADIUS ARE BASED ON Engine Specification

FUEL CONSUMPTION DATA INCREASED

BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.

COMBAT CONDITION:	(1) (2) Two wing bomb-racks and sway-bracing and fuselage bomb-rack and displacing gear aboard. Radar and rocket launchers not aboard. (3) same as (1) & (2) except for the addition of 8 Martin rocket launchers.
CLEAN CONDITION:	Combat condition with bomb racks, displacing gear, and sway bracing removed. At Military Power- Vmax/S.L. = 300 kn; Vmax/ACA = 323 kn/16000 ft.
FERRY CONDITION:	Armor & Armament are removed.
ROCKET CONDITION:	Rockets suspended from Martin launchers.
RADAR:	AN/APS-4 radar carried on wing bomb-rack for conditions 4,5,7 & 8
Spot:	200 foot length is required to spot 20 airplanes on the 96 foot wide deck immediately aft of the forward ramp on CV-9 class carriers.
NOTE -	Fuselage bomb-rack & displacing gear and wing bomb-racks and sway-bracing aboard in all conditions except CLEAN. Rocket launchers carried in conditions 3 & 8 only.

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		9	10		
LOADING CONDITION		COMBAT	FERRY Two 150 gal. Tanks External		
GROSS WEIGHT	LBS.	19270	19590		
EMPTY WEIGHT	-CALCULATED LBS.	14346	13790		
FUEL/OIL	GALS.	500/28	800/36		
FIXED GUNS/AMMUNITION		4-20/800	None		
FLEXIBLE GUNS/AMMUNITION		None	None		
ENGINE POWER USED FOR PERFORMANCE		COMBAT	NORMAL		
WING LOADING	LBS./SQ.FT.	38.8			
POWER LOADING ①	LBS./BHP	6.5			
V-MAX. SEA LEVEL	KN	316			
V-MAX./ CRITICAL ALT.	KN/ FT.	338/13900			
V-STALL. GROSS WEIGHT ②	KN	83.7			
V-STALL. WITHOUT FUEL ②	KN	76.8			
TIME-TO-CLIMB -10000FT.-	MIN.	4.3			
TIME-TO-CLIMB -20000FT.-	MIN.	9.6			
SERVICE CEILING	FT.	27600			
TAKE-OFF DISTANCE -CALM-	FT.	589			
TAKE-OFF DISTANCE -15 KN.-	FT.	380			
TAKE-OFF DISTANCE -25KN.-	FT.	263			
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF DISTANCE	SECONDS				
RATE OF CLIMB -SL-	FT./ MIN.	2930			
MAX. RANGE / V-AV. ③	NMI./KN	1310/155	2040/148		
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.				

PERFORMANCE IS BASED ON -

RANGE & RADIUS ARE BASED ON

FUEL CONSUMPTION DATA INCREASED

BY PERCENT TO CONFORM WITH PAST EXPERIENCE.

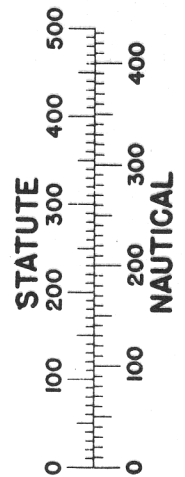
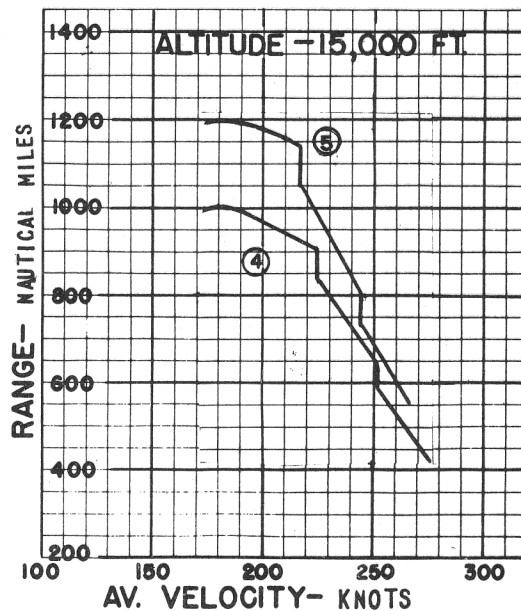
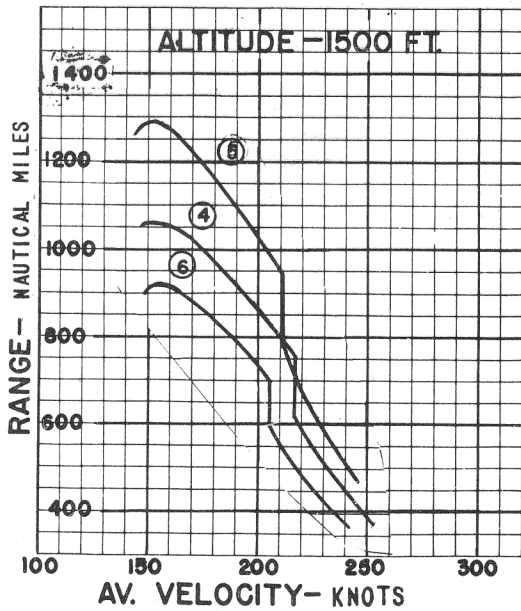
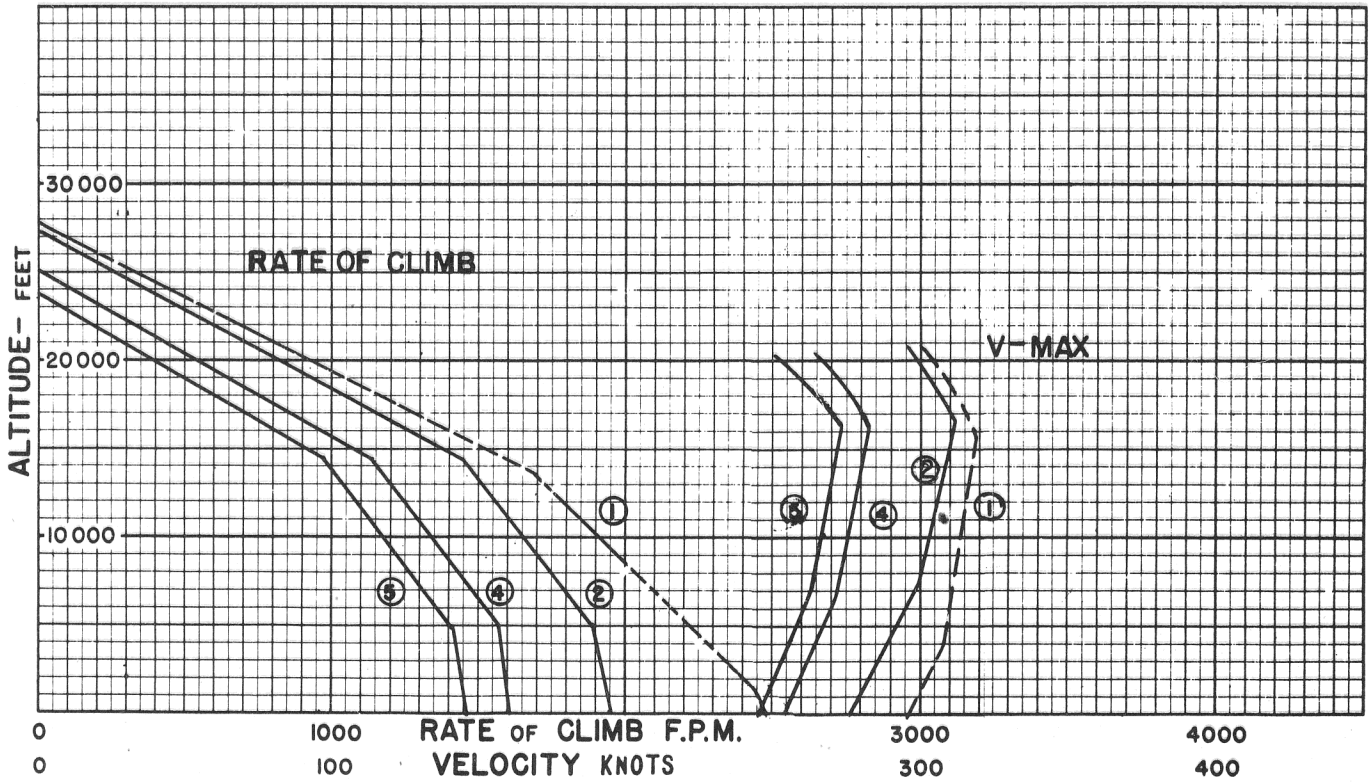
Condition 9 is representative of the airplane equipped for Combat Power operation. Combat power ratings are:

3600BHP/2700rpm/minus 2000ft(no ram)
2960BHP/2700rpm/11200ft.

BOMBER COMBAT RADIUS FORMULA NO. B-1-CONDITIONS NOS. - 2 thru 8 RADIUS. = CLIMB / CRUISE-OUT = CRUISE BACK

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

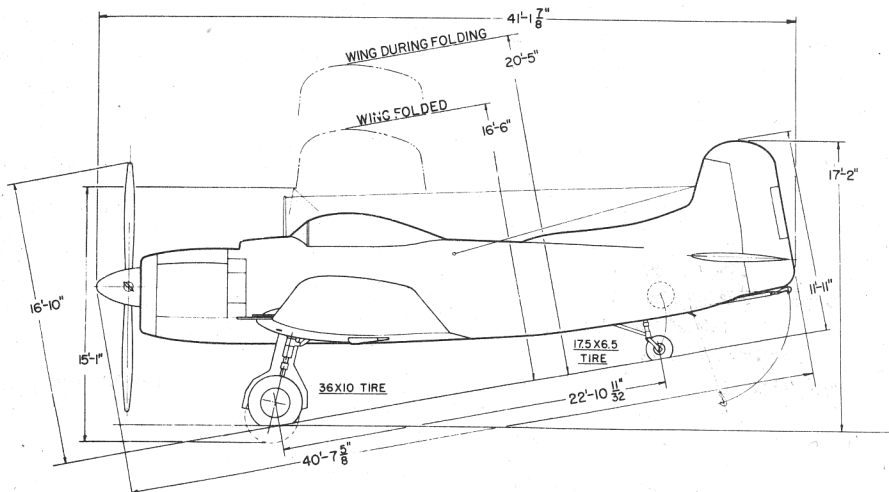
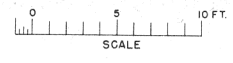
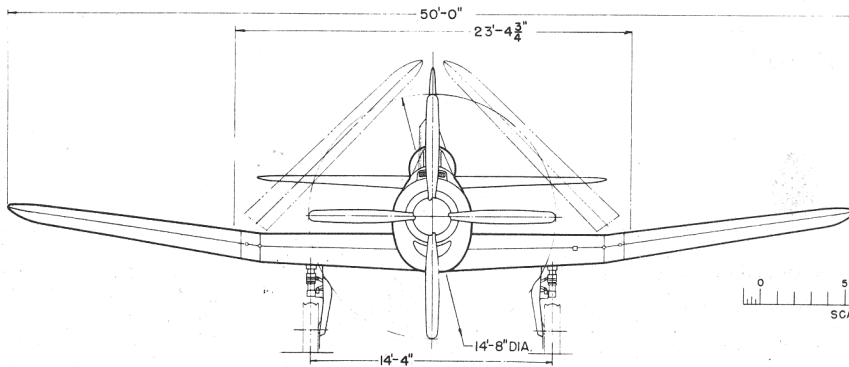
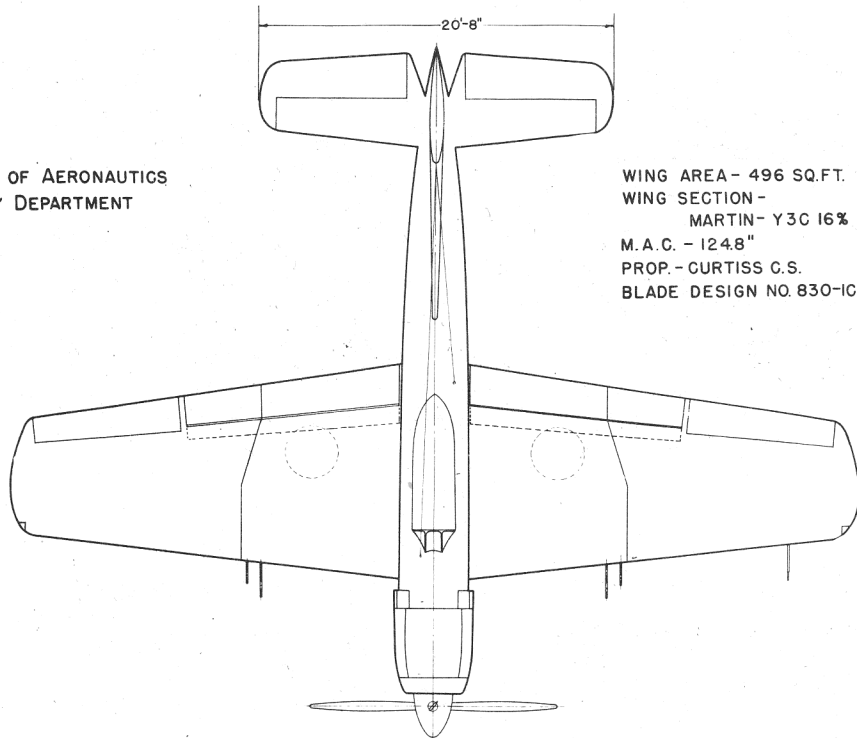
* Condition 2 only; all other conditions cruise-out at vel. for max. range as 180 kn. is less than Vel. for max. range.







○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 496 SQ. FT.
WING SECTION -
MARTIN - Y3C 16%
M. A. C. - 124.8"
PROP. - CURTISS C.S.
BLADE DESIGN NO. 830-IC4-6



BUREAU OF AERONAUTICS
NAVY DEPARTMENT

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

PROTECTION

- | | |
|-----------------------|----------|
| 1. PILOT FORWARD | 117 LBS. |
| 2. PILOT AFT | 138 LBS. |
| 3. SELF-SEALING CELLS | 382 LBS. |
| 4. OIL COOLER | 42 LBS. |

