

**AIRPLANE CHARACTERISTICS & PERFORMANCE**

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER			1	2	3	4	
LOADING CONDITION			COMBAT	COMBAT	COMBAT 1-TANK, EXT.	COUNTER- MEASURES 3-TANKS-EXT.	
GROSS WEIGHT	LBS.		18812	18812	19854	22000	
EMPTY WEIGHT - SPECIFICATION	LBS.		14749				
FUEL/OIL	GALS.		360/28	360/28	510/28	810/36	
FIXED GUNS/AMMUNITION	4-20mm/800 Rds. - MK I Sight System and ASG-10A						
FLEXIBLE GUNS/AMMUNITION	NONE						
ENGINE POWER USED FOR PERFORMANCE			COMBAT	NORMAL	NORMAL	NORMAL	
WING LOADING	LBS./SQ.FT.		37.9	37.9	40.0	44.4	
POWER LOADING ①	LBS./BHP.		6.5	8.6	9.0	10.0	
V-MAX. SEA LEVEL	KN.		299	263	257	244	
V-MAX./CRITICAL ALTITUDE	KN./FT.		315/11400	303/18000	295/17900	278/17700	
V-STALL GROSS WEIGHT ②	KN.		82.8	82.8	85.1	89.6	
V-STALL WITHOUT FUEL ②	KN.		77.9	77.9	78.3	79.1	
TIME-TO-CLIMB -10000 FT-	MIN.		4.0	5.4	6.0	7.3	
TIME-TO-CLIMB -20000 FT-	MIN.		9.8	11.3	12.7	17.4	
SERVICE CEILING	FT.		30,600	29,100	27,700	24,900	
TAKE-OFF DISTANCE -CALM-	FT.				644	830	
TAKE-OFF DISTANCE -15 KN-	FT.				417	551	
TAKE-OFF DISTANCE -25 KN-	FT.				291	394	
TAKE-OFF DISTANCE -50 FT. OBST.	FT.						
TAKE-OFF TIME	SECONDS						
RATE OF CLIMB -SL-	FT./MIN.		2840	1860	1700	1400	
MAX. RANGE /V-AV. ③	N MI./KN.				1160/162	1680/156	
RANGE /V-AV. -60% NSP-③-	N MI./KN.						
SEARCH RADIUS /V-AV. -20% R-	N MI./KN.						
A.S.W. RADIUS/V-AV. -20% R-	N MI./KN.						
SCOUT RADIUS	S-1 N MI.				320		
COMBAT RADIUS	B-1 N MI.					450	
ENGINE / PROP GEAR RATIO P & W R-4360-4 / .425							
ENGINE RATING BHP/RPM/ALT.	COMBAT		MILITARY		NORMAL		T.O.
	3310/2700/S.L.		2950/2700/S.L.		2425/2550/S.L.		2975/2700/S.L.
	2900/2700/9000		3000/2700/3000		2500/2550/5000		
			2400/2700/16200		2200/2550/15750		
T.O. Rating is from AEL Calibration with "Rich" Mixture Control. Combat Rating is estimated.							
Military and Normal Ratings are from AEL Calibration with "Normal" Mixture Control.							

TANKAGE IN GALLONS			OIL	FUEL	OFFENSIVE ARMAMENT
AUX. FIXED	PROTECTED			360	FUSELAGE - Ext. on Douglas Bomb Ejector (alternate with drop tank)
	UNPROTECTED		36		Bombs - 1-2000#, 1-1600#, 1-1000# or 1-500#
	TOTAL - FIXED INTERNAL		36	360	Depth Bombs - 1-650#, or 1-325#
	DROPPABLE 2 @ 150 on wings			300	Mines - 1-2000# or 1-1000#
	DROPPABLE 1 @ 150 on fuselage			150	Torpedo - 1 MK 13-3
TOTAL			36	810	WINGS - Ext. (Alternate with radar and drop tanks)
NOTE	① BHP AT MAX. CRIT. ALT.				Bombs - 2-1000#, 2-500#, 2-250#, or 6-100#
	② STALL - WITHOUT POWER				Depth Bombs - 2-650# or 2-325#
	③ AT 1500' ALTITUDE				Mines - 2-1000#
					Rocket Launcher - MK-9
					Rockets 8-5" HVAR or 8- 5" AR

Supersedes 1 March 1947

NAVAER-1519B (REV. 2-47)

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		5		
LOADING CONDITION		BOMBER 1-1000# 1-TANK EXT. AN/APS-4 RADAR		
GROSS WEIGHT	LBS.	21034		
EMPTY WEIGHT - SPECIFICATION	LBS.	14749		
FUEL/OIL	GALS.	510/28		
FIXED GUNS/AMMUNITION		4-20mm/300 Rds. - MK I Sight System and ASG-10A		
FLEXIBLE GUNS/AMMUNITION		NONE		
ENGINE POWER USED FOR PERFORMANCE		NORMAL		
WING LOADING	LBS./SQ.FT.	42.4		
POWER LOADING ①	LBS./BHP	9.6		
V-MAX. SEA LEVEL	KN.	240		
V-MAX./CRITICAL ALT.	KN./FT.	272/17600		
V-STALL GROSS WEIGHT ②	KN.	87.6		
V-STALL WITHOUT FUEL ②	KN.	81.0		
TIME-TO-CLIMB -10000FT.-	MIN.	6.7		
TIME-TO-CLIMB -20000FT.-	MIN.	16.0		
SERVICE CEILING	FT.	25900		
TAKE-OFF DISTANCE -CALM-	FT.	754		
TAKE-OFF DISTANCE -15 KN.-	FT.	496		
TAKE-OFF DISTANCE -25KN.-	FT.	352		
TAKE-OFF DISTANCE -50 FT OBST.	FT.			
TAKE-OFF TIME	SECONDS			
RATE OF CLIMB -SL-	FT./MIN.	1520		
MAX. RANGE /V-AV. ③	NMI./KN.	1015/152		
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.	270		

PERFORMANCE IS BASED ON - Flight Tests of XB7M-1 Airplane  
 RANGE & RADIUS ARE BASED ON AET. FUEL CONSUMPTION DATA INCREASED  
 BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.

The AM-1Q is designed to operate in the same group with standard AM-1 airplanes, but always with one more auxiliary droppable fuel tank than the standard AM-1 airplane on the same mission in order to compensate for the 140 gallon internal fuselage tank deleted in the "Q" version. Scout Condition: Two wing bomb racks (MK 51) with sway bracing and bomb ejector (fuselage) aboard. Sway bracing for bomb ejector aboard only in bomber conditions. AN/APS-4 radar and rocket launchers not aboard. Addition of 12 MK-9 launchers reduces Vmax S.L. to 293 kn. and Vmax/ACA to 309 kn/11300 ft. at combat power. Addition of 12-5" HVAR increases gross weight of Condition (1) to 20537# and reduces Vmax S.L. to 274 kn and Vmax/ACA to 290 kn/11000 ft.

NOTES:

1. AN/APS-4 radar is carried on starboard bomb-rack.
2. 12-100# bombs or 12-250# bombs can be carried at MK-9 rocket launcher positions by replacing launchers with MK-55 bomb-racks.
3. 25 gallons of ADI fluid are available for 15 minutes at combat power.
4. 200 ft. length is required to spot 20 planes on the 96-foot wide deck immediately aft. of the forward ramp on CV-9 class carriers.

## AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

**BOMBER COMBAT RADIUS FORMULA NO. B-1-CONDITIONS NOS. -4&5** **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	to	*	<u>DESCEND</u>	15 min.		60 min.
	sea level	15000 ft.	at 15000 ft.	to 1500 ft.	at 1500 ft.	at 1500 ft.	at
<u>TAKE-OFF</u>	at	at		<u>DROP BOMBS</u>	5 min. Com.Pow.	170 kts.TAS	Vel. for
1 min.	60% N.S.P.	Norm. Pr.		<u>FIRE</u>	10 min. Nor.Pr.		Max.Range
	Norm. Mix.	Norm.Mix.	Norm.Mix.	<u>ROCKETS</u>		Norm. Mix.	Norm.Mix.

\*Condition (4) - Cruise-out at 191 kn.

Condition (5) - Cruise-out at 186 kn.

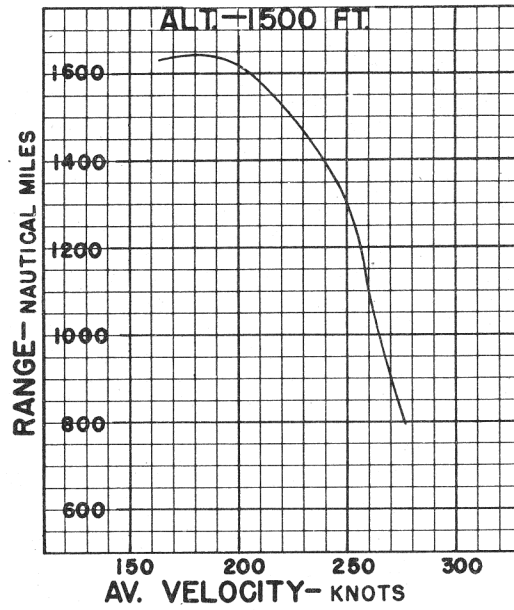
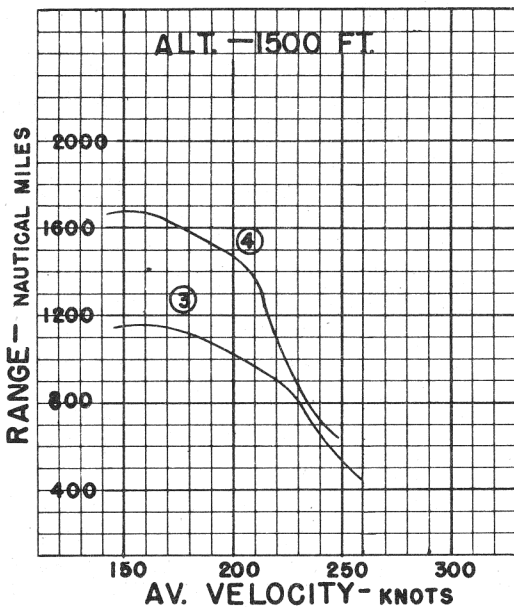
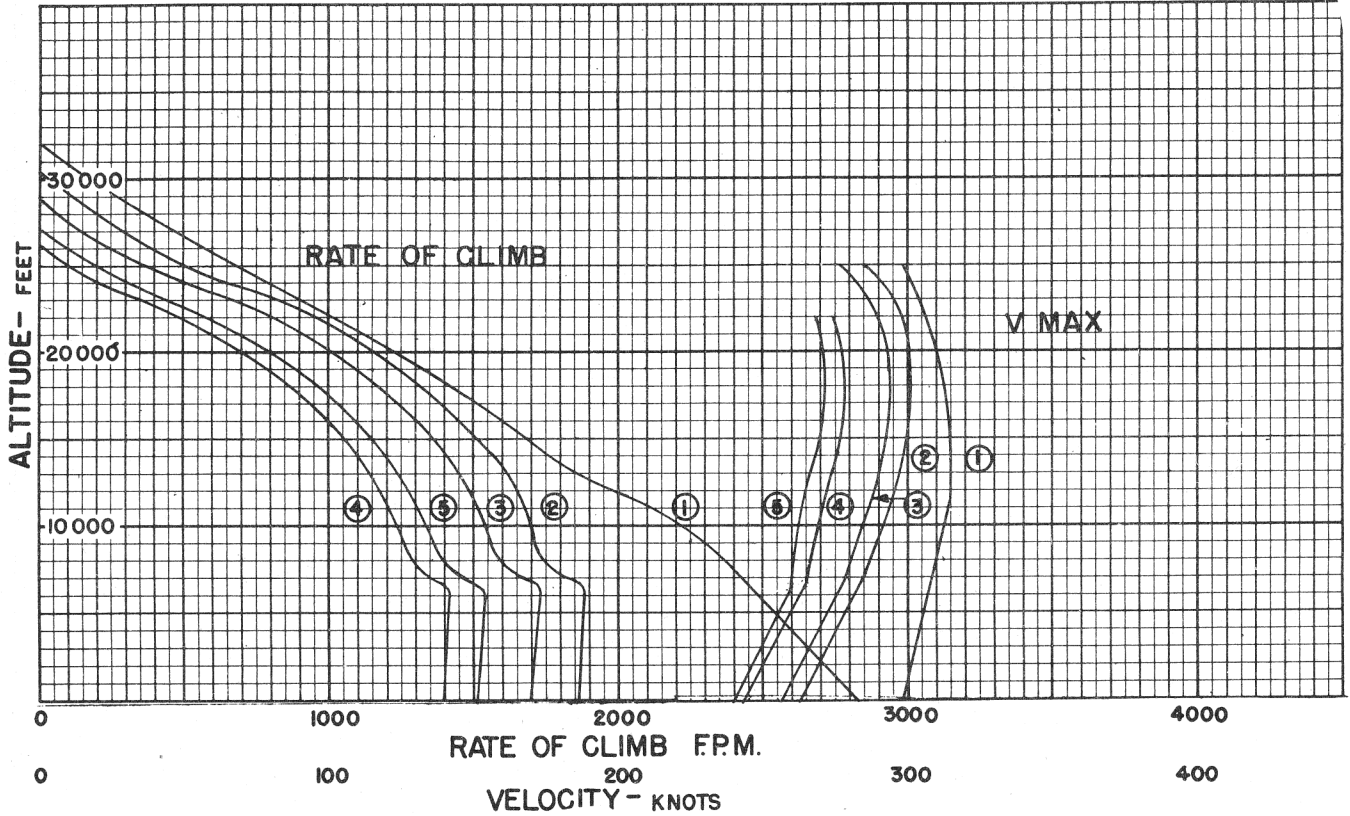
Combat radius of condition 4 limited by amount of protected fuel for use in combat and return. 137.7 gals. fuel remain in unprotected tanks when entering combat and must be dropped, used for approximately 1.5 hours search at speed for maximum range, or used to increase speed in cruise-out to approximately 264 knots.

**SCOUTING RADIUS FORMULA NO. S-1-CONDITIONS NOS. - 3**

RADIUS IS 1/3 RANGE AT VEL.FOR MAX.RANGE AT 1500 FT. Fuel for 20 min.warm-up,1 min.T.O. used at start of flight. Allowance for 60 min.at V.for max.range for rendezvous,landing and reserve carried entire distance

Scout radius is reduced 7 n.mi. for each minute of combat power operation at 1500 ft.

No provisions are incorporated for fuel transfer from droppable to main tanks after take-off.

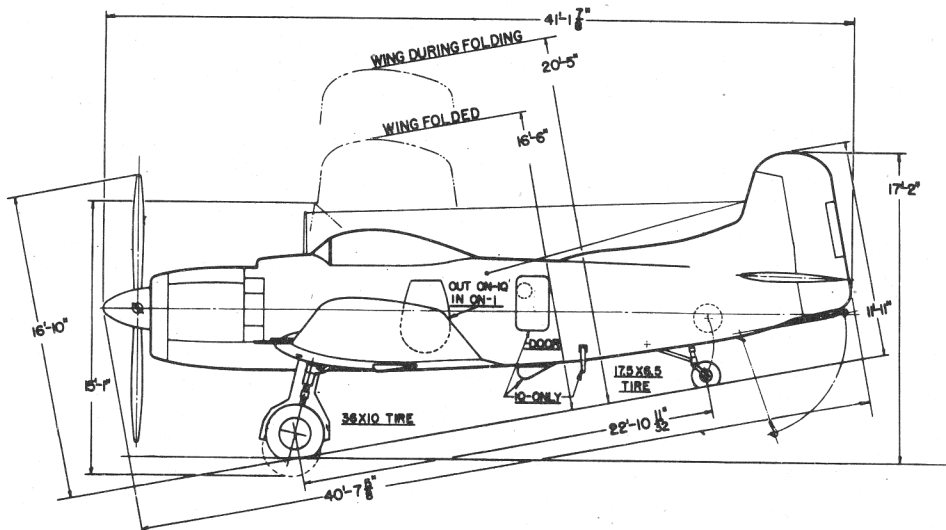
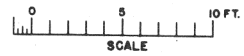
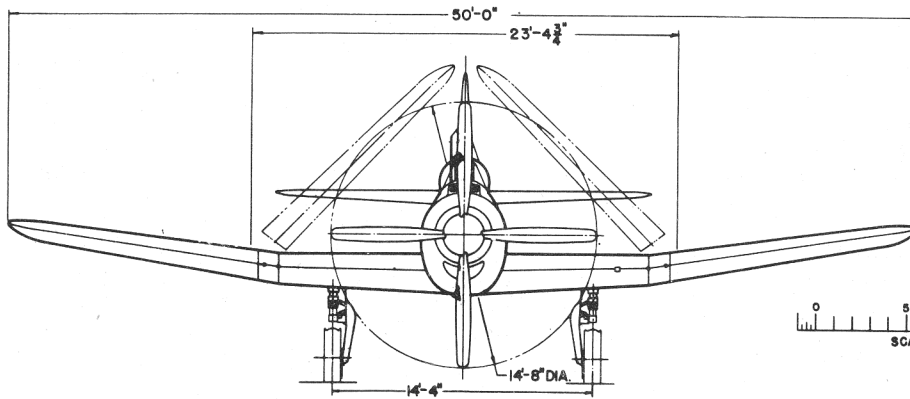
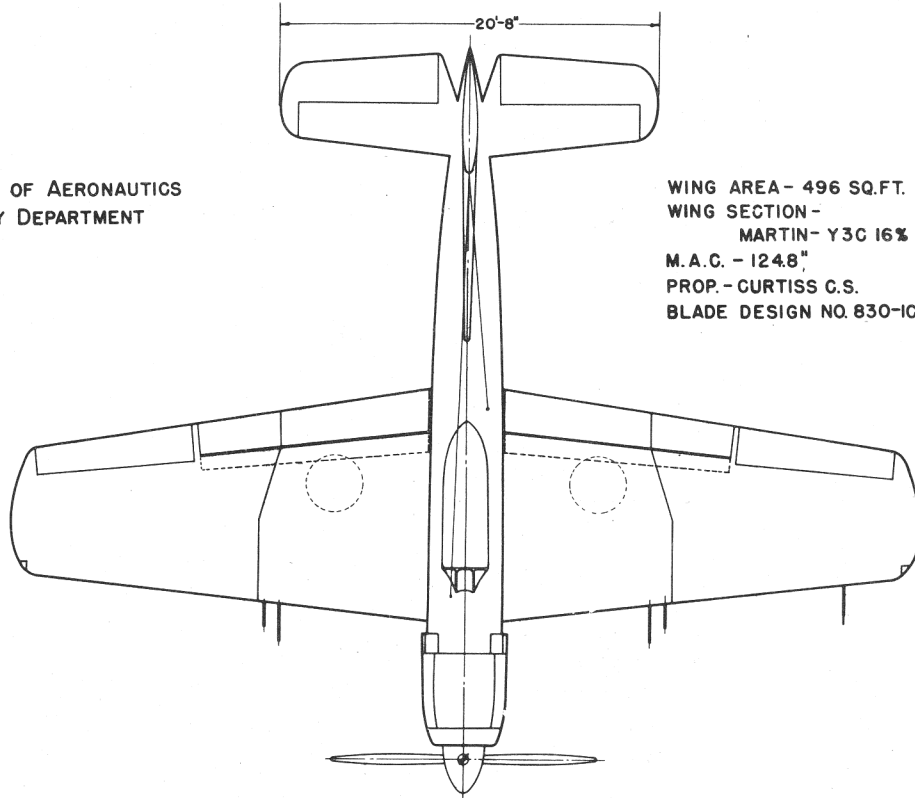


○ LOADING CONDITION COLUMN NUMBER





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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. 830-1C4-6



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.A SELF-SEALING CELLS AM-1                  | 382 LBS. |
| 3.B SELF-SEALING CELLS AM-IQ                 | 252 LBS. |
| 4. OIL COOLER                                | 42 LBS.  |
| 5. FLAK CURTAIN<br>(REAR COCKPIT AM-IQ ONLY) | 10 LBS.  |

