

DECLASSIFIED

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		COMBAT *	COMBAT *	BOMBER 1-2000#	BOMBER 1-2000# One 150 gal. Tank External
GROSS WEIGHT	LBS.	18782	18782	20940	22031
EMPTY WEIGHT - Actual -	LBS.	14097			
FUEL/OIL	GALS.	500/28	500/28	500/28	650/36
FIXED GUNS/AMMUNITION		4-20 mm./800 rds.			
FLEXIBLE GUNS/AMMUNITION		None			
ENGINE POWER USED FOR PERFORMANCE		MILITARY	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	37.9	37.9	42.2	44.4
POWER LOADING ①	LBS./BHP.	7.8	8.5	9.5	10.0
V- MAX. SEA LEVEL	MPH.	340	317	294	281
V- MAX./CRITICAL ALT.	MPH./FT.	368/16100	357/16700	326/16400	311/16200
V- STALL GROSS WEIGHT ②	MPH.	85.2	85.2	90.0	92.3
V- STALL WITHOUT FUEL ②	MPH.	78.1	78.1	83.2	83.7
TIME-TO-CLIMB -10000FT.-	MIN.	4.5	5.3	6.5	7.2
TIME-TO-CLIMB -20000FT.-	MIN.	11.3	13.1	17.1	19.8
SERVICE CEILING	FT.	27200	26600	24300	23000
TAKE-OFF DISTANCE -CALM-	FT.			858	988
TAKE-OFF DISTANCE -15 KN-	FT.			578	674
TAKE-OFF DISTANCE -25 KN-	FT.			421	496
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	2490	1970	1630	1470
MAX. RANGE / V-AV. ③	ST. MI./MPH.			1305/182	1565/178
RANGE / V-AV. -60%NSP-③-	ST. MI./MPH.				
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.			290	430

ENGINE / PROP. GEAR RATIO		R - 4360-4 (.425)	
ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL	TAKE-OFF
	3000/2700/SL-2200	2500/2550/SL-5000	
2400/2700/13500	2200/2550/14500		

AUX. FIXED	TANKAGE IN GALLONS	OIL	FUEL	OFFENSIVE ARMAMENT
	PROTECTED		36	500
UNPROTECTED				Depth Bombs: 1-650#, or 1-325#
TOTAL - FIXED INTERNAL	36		500	Mines: 1-1000#
DROPPABLE				Torpedoes : 1 MK13-3
DROPPABLE - Wing- 2 @ 150 (alternate with bombs & radar)			300	WINGS (external) Bombs: 2-1000#, 2-500#, or 2-250#, or 6-100#
TOTAL	36		800	Depth Bombs: 2-650#, or 2-325#

NOTE	STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS	Mines: 2-1000#
	① BHP AT MAX. CRIT. ALT.	Gun Packages: Two gun packages containing 4-.50 cal./600 rds. may be carried.
	② STALL - WITHOUT POWER	
	③ AT 1500' ALTITUDE	

* See Note - page 2

DECLASSIFIED

NAVAER-1519B (Rev. 9-44)

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		5	6	7	8
LOADING CONDITION		BOMBER 1-2000# Fuse. 2-1000# Wings	SCOUT One 150 gal. Tank External	TORPEDO 1 MK13-3	ROCKET 1-2000# plus 8-5" A.R.
GROSS WEIGHT	LBS.	22799	20031	21069	21649
EMPTY WEIGHT - Actual -	LBS.	14097			
FUEL/OIL	GALS.	500/28	650/36	500/28	500/28
FIXED GUNS/AMMUNITION		4-20 mm./800 rds.			
FLEXIBLE GUNS/AMMUNITION		None			
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	45.9	40.4	42.5	43.7
POWER LOADING ①	LBS./BHP	10.4	9.1	9.6	9.8
V-MAX. SEA LEVEL	MPH.	284	292	291	282
V-MAX./ CRITICAL ALT.	MPH./ FT.	315/16300	327/16400	325/16400	314/16200
V-STALL. GROSS WEIGHT ②	MPH.	93.9	88.0	90.2	91.5
V-STALL. WITHOUT FUEL ②	MPH.	87.6	79.0	83.6	84.8
TIME-TO-CLIMB -10000FT.-	MIN.	7.6	6.0	6.6	7.0
TIME-TO-CLIMB -20000FT.-	MIN.	21.6	15.2	17.3	19.0
SERVICE CEILING	FT.	22500	24900	24000	23400
TAKE-OFF DISTANCE -CALM-	FT.	1066	770	871	1008
TAKE-OFF DISTANCE -15 KN.-	FT.	734	514	588	695
TAKE-OFF DISTANCE -25KN.-	FT.	542	370	302 428	514
TAKE-OFF DISTANCE -50 FT. OBST.	FT.				
TAKE-OFF DISTANCE	SECONDS				
RATE OF CLIMB -SL-	FT./ MIN.	1390	1750	1610	1520
MAX. RANGE / V-AV. ③	ST. MI./ MPH.	1180/184	1760/177	1290/181	1210/177
RANGE / V-AV. -60%NSP-③-	ST. MI./ MPH.				
SEARCH RADIUS / V-AV. -20%R-	NMI./ KN.				
A. S. W. RADIUS / V-AV. -20%R-	NMI./ KN.				
SCOUT RADIUS	NMI.		450		
COMBAT RADIUS	NMI.	270		285	270

PERFORMANCE 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:- Displacing gear, fuselage and wing bomb-racks aboard;

Bombs, radar, sway bracing and rocket launchers

not aboard. Installation of 8 Martin launchers.

reduces V max. 5 mph. at 16100 ft. (military power)

CLEAN CONDITION :- Combat Condition with displacing gear, and all bomb-racks removed. V max. increased 5 mph. at 16100 ft. (military power)

FERRY CONDITION :- Gross Weight (Radar, armor, & armament removed) = 19895#
800 gals. fuel, max. range = 2160 st. mi. at 173 mph. at 1500 ft.

ROCKET CONDITION :- Rockets suspended from Martin (quick removable) launchers.

Note: Two wing bomb-racks and one fuselage bomb-rack carried in all conditions except "CLEAN"

AN/APS-4 radar carried in conditions (3), (4), (6), (7), (8).

AIRPLANE CHARACTERISTICS & PERFORMANCE

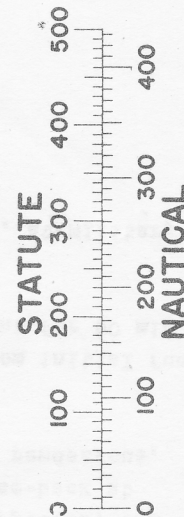
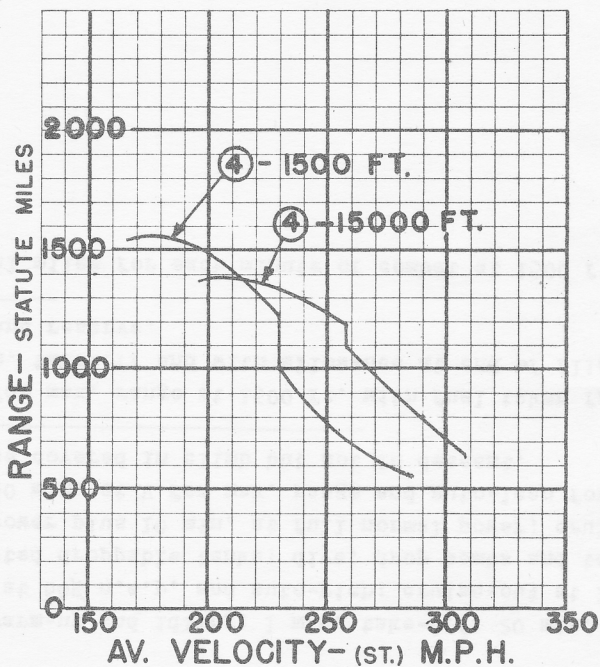
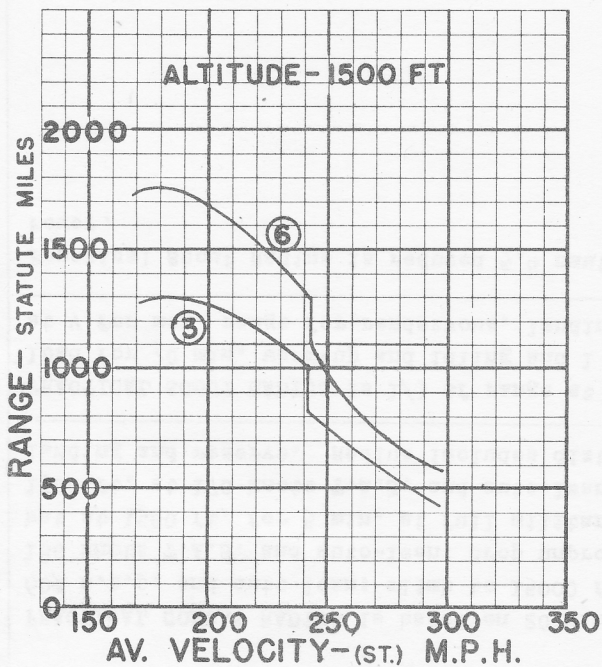
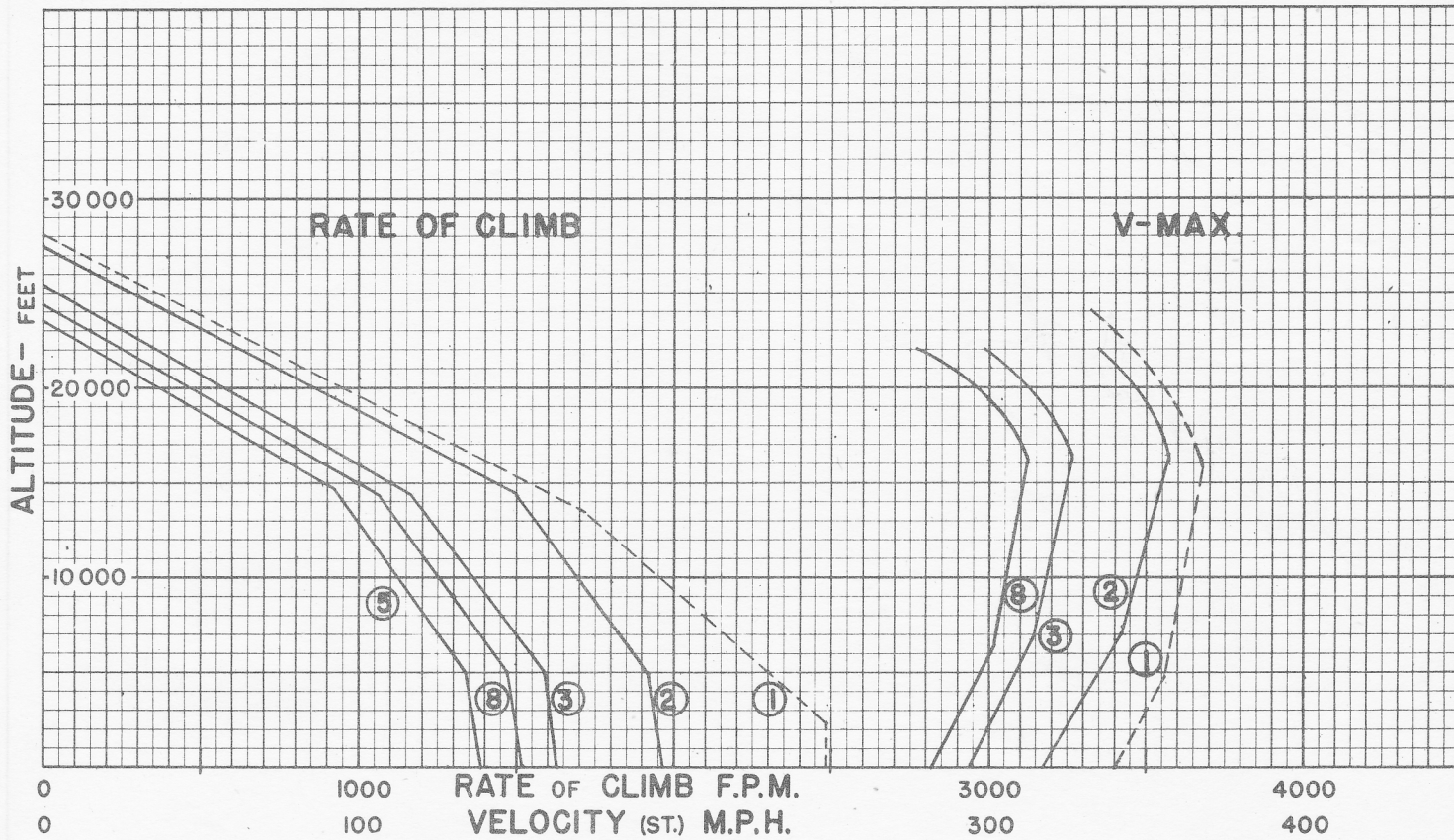
BUREAU OF AERONAUTICS, NAVY DEPT.

PRACTICAL COMBAT RADIUS is based on 20 min. warm-up and idling; 1 min. take-off; 20 min. rendezvous at 60% n.s.p. and auto-lean; climb to 15000 ft. at 60% n.s.p. and auto-rich; cruise-out at 15000 ft. at 180 knots T.A.S. and auto-lean; drop unprotected droppable tanks; dive, drop bombs and torpedoes; combat at 1500 ft. for 5 min. at full military power plus 10 min. at full normal power; cruise-back at 1500 ft. at 170 knots T.A.S. and auto-lean; 60 min. at V for max. range and auto-lean for rendezvous, landing and reserve. Radius includes distance covered in climb but not in descent.

PRACTICAL SCOUT RADIUS is $1/3$ of range at V for max. range at 1500 ft. with fuel taken from initial fuel load for 20 min. warm-up and idling and 1 min. take-off and with allowance at end of flight for 60 min. at V for max. range for rendezvous, landing and reserve.

Practical Scout Radius is reduced 5.4 nautical miles for each minute of combat at 1500 ft. at Military Power.

Superseded

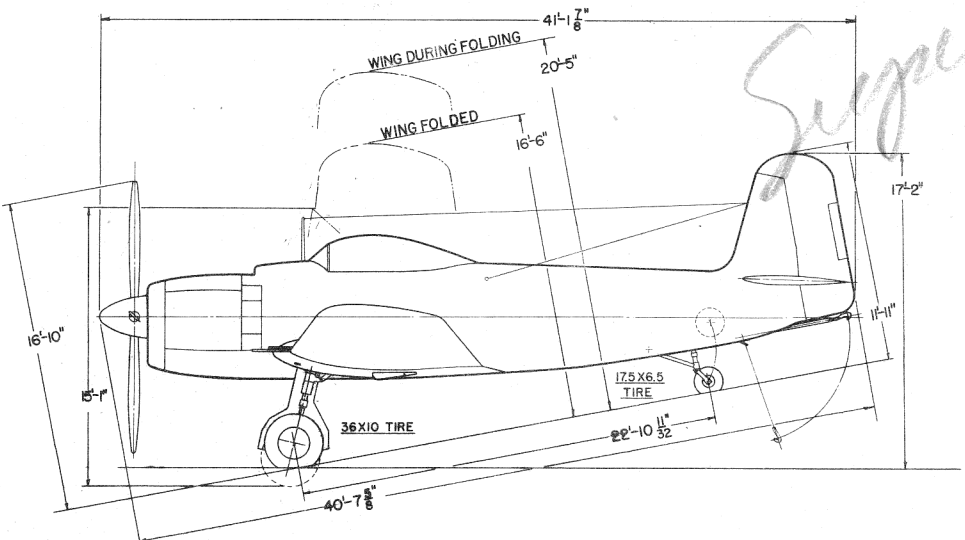
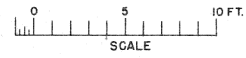
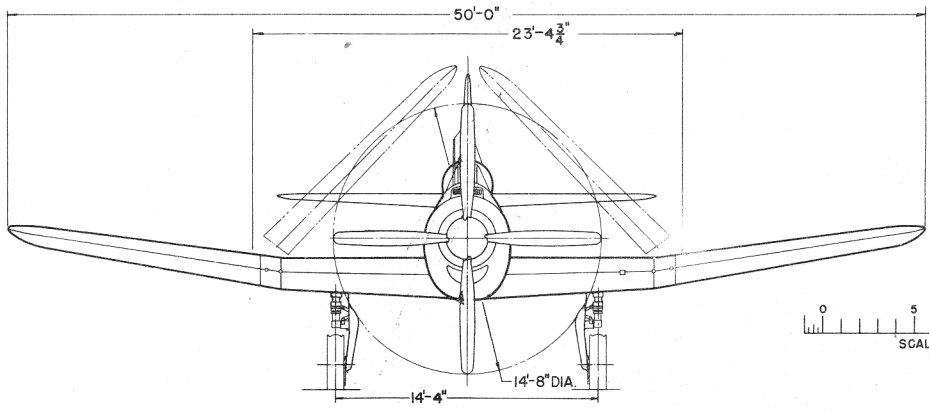
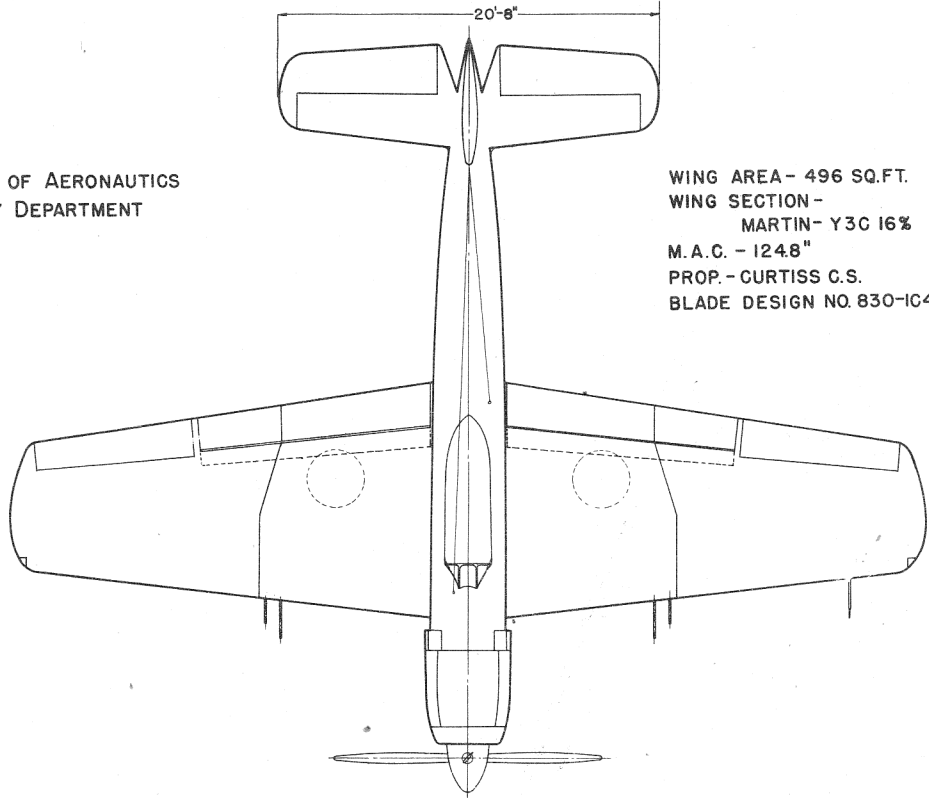


○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS, NAVY DEPT. AIRPLANE PERFORMANCE





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



Superseded

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 | 136 LBS. |
| 3. SELF-SEALING CELLS | 382 LBS. |
| 4. OIL COOLER | 42 LBS. |

