

ISSUE OF 6 PAGES  
**AIRPLANE CHARACTERISTIC & PERFORMANCE**

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		BOMBER 1-1000#	BOMBER 1-1000# One Tank External	CLEAN CONDITION See Note page 2	CLEAN CONDITION See Note page 2
GROSS WEIGHT	LBS.	19067	19819	17910	17910
EMPTY WEIGHT	- Estimated - LBS.	13947			
FUEL/OIL	GALS.	360/20	460/26	360/20	360/20
FIXED GUNS/AMMUNITION		4 - 20 mm. / 800 rds			
FLEXIBLE GUNS/AMMUNITION		none			
ENGINE POWER USED FOR PERFORMANCE		NORMAL	NORMAL	MILITARY POWER	NORMAL
WING LOADING	LBS./SQ.FT.	44.8	46.5	42.1	42.1
POWER LOADING ①	LBS./BHP.	8.7	9.0	7.5	8.2
V-MAX. SEA LEVEL	MPH.	323	310	355	332
V-MAX. AIRPLANE CRIT. ALT.	MPH.	365/16300	349/16800	386/16200	376/17100
V-STALL GROSS WEIGHT ②	MPH.	84.7	86.4		
V-STALL WITHOUT FUEL ②	MPH.	79.8	80.1		
TIME-TO-CLIMB -10000FT.-	MIN.	5.7	6.1	4.3	5.2
TIME-TO-CLIMB -20000FT.-	MIN.	14.0	15.2	10.8	12.3
SERVICE CEILING	FT.	26300	25600	28000	27300
TAKE-OFF DISTANCE -CALM-	FT.	737	818		
TAKE-OFF DISTANCE -15 KN-	FT.	485	543		
TAKE-OFF DISTANCE -25 KN-	FT.	341	388		
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT./MIN.	1830	1730	2610	2040
MAX. RANGE /V-AV ③	STMI/MPH.	1140/185	1375/182		
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	N MI.				
COMBAT RADIUS	N MI.	155	285		
ENGINE / PROP GEAR RATIO		P. & W. XR - 4360 - 8A (.425)			
ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL		TAKE-OFF	
	3000/2700/SL - 1500'	2500/2550/SL - 5000'		3000/2700	
	2400/2700/13500'	2200/2550/14500'			
TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT	
AUX. FIXED	PROTECTED		360	FUSELAGE BOMB-BAY:	
	UNPROTECTED	32		Bombs: 1-1600#A.P., 1-1000#, or 1-500#	
	TOTAL - FIXED INTERNAL	32	360	Depth Bombs: 1-650#, or 1-325#	
	DROPPABLE - B. B. - Unprot -		130	FUSELAGE: (External)	
	DROPPABLE -Wings - 2@100		200	Torpedo: 1 MK 13-3	
TOTAL	32	590	WINGS: (External)		
NOTE	STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS		Bombs: 2-1000#, or 2-500#		
	① BHP AT MAX. CRIT. ALT.		Depth Bombs: 2-650#, or 2-325#		
	② STALL-WITHOUT POWER		NOTE: Bombs or Torpedoes cannot be carried in the bomb-bay or on the fuselage with the bomb-bay tank installed.		
	③ AT 1500' ALTITUDE				

SUPERSEDES 1 JAN. 1944

DATE 1 AUG. 1944

PAGE 1

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MODEL XBTC-2

NAVAER-15198 (Rev. 4-44)

## AIRPLANE CHARACTERISTICS &amp; PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		5	6	7	8
LOADING CONDITION		BOMBER 2-1000# One Internal One External	TORPEDO 1MK 13-3 One Tank External	BOMBER 1-1000# * (proposed)	BOMBER 1-1000# ** (alternate)
GROSS WEIGHT	LBS.	20125	20944	20563	18900
EMPTY WEIGHT	- Estimated - LBS.	13947		14288	13780
FUEL/OIL	GALS.	360/20	460/26	540/30	360/20
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.	47.1	49.3	48.3	46.6
POWER LOADING ①	LBS./BHP.	9.1	9.5	9.2	8.5
V-MAX. SEA LEVEL	MPH.	310	297	321	325
V-MAX. AIRPLANE CRIT. ALT.	MPH.	349/16800	322/16600	362/16900	367/16900
V-STALL. GROSS WEIGHT ②	MPH.	87.0	88.8	87.9	86.4
V-STALL. WITHOUT FUEL ②	MPH.	82.2	82.7	80.8	81.4
TIME-TO-CLIMB -10000FT.-	MIN.	6.3	6.9	6.5	5.6
TIME-TO-CLIMB -20000FT.-	MIN.	15.8	17.7	16.5	13.7
SERVICE CEILING	FT.	25300	24200	25000	23500
TAKE-OFF DISTANCE -CALM-	FT.	849	960	884	732
TAKE-OFF DISTANCE -15 KN.-	FT.	565	645	591	487
TAKE-OFF DISTANCE -25KN.-	FT.	407	475	430	352
TAKE-OFF TIME	SECONDS.				
RATE OF CLIMB -SL-	FT./MIN.	1680	1550	1620	1870
MAX. RANGE /V-AV. ③	ST. MI./MPH.	1060/185	1245/180	1665/189	1150/185
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.	155	265	390	170

PERFORMANCE IS BASED ON - CALCULATIONS

RANGE &amp; RADIUS ARE BASED ON ENGINE REQUIREMENT

FUEL CONSUMPTION DATA INCREASED

BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.

Max. range in the ferry condition (G.W. = 18042, 690 gals fuel) is 2210 st. miles at 170 st. mph at 1500 ft.

The following changes are incorporated: - Contract - thru "R"

CONDITIONS THREE AND FOUR: These conditions are approximately representative of the airplane of col. 2 in the cleanest, ready for combat, condition with cruise out fuel consumed, bombs and AN/APS-4 radar dropped.

AN/APS-4 radar on wing bomb-rack for conditions 1, 2, 5, 6, 7, & 8.

\*This condition incorporates the proposed addition of 2-90 gal. protected fuel tanks aft of the pilot. External configuration is the same as conditions one thru six.

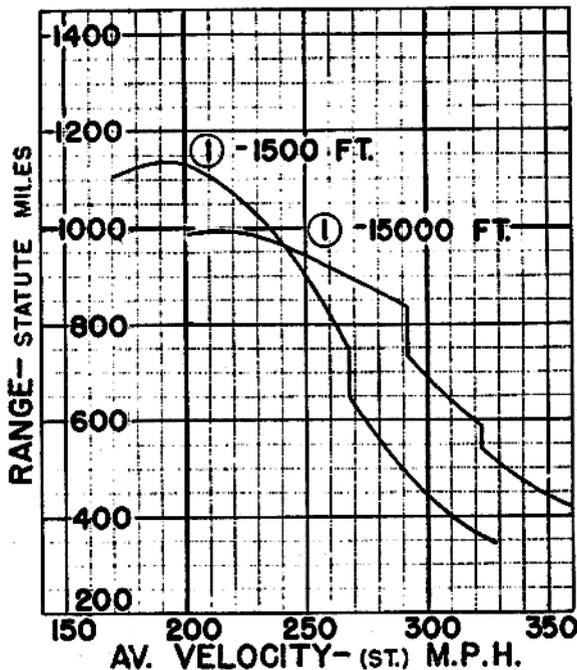
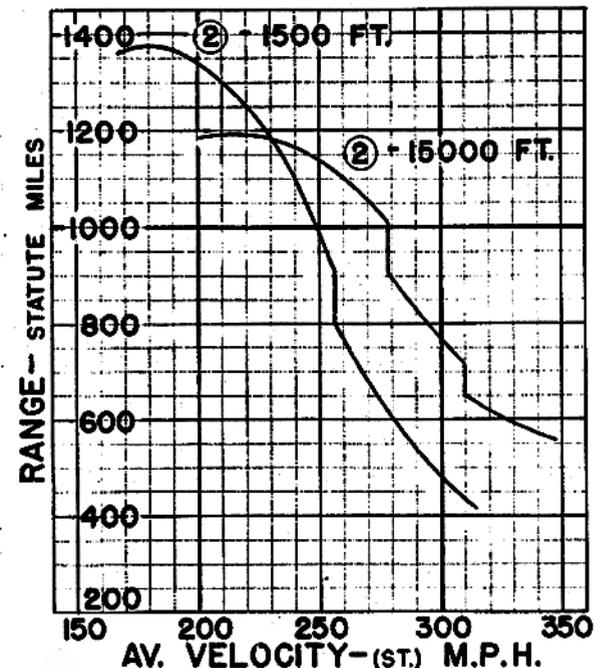
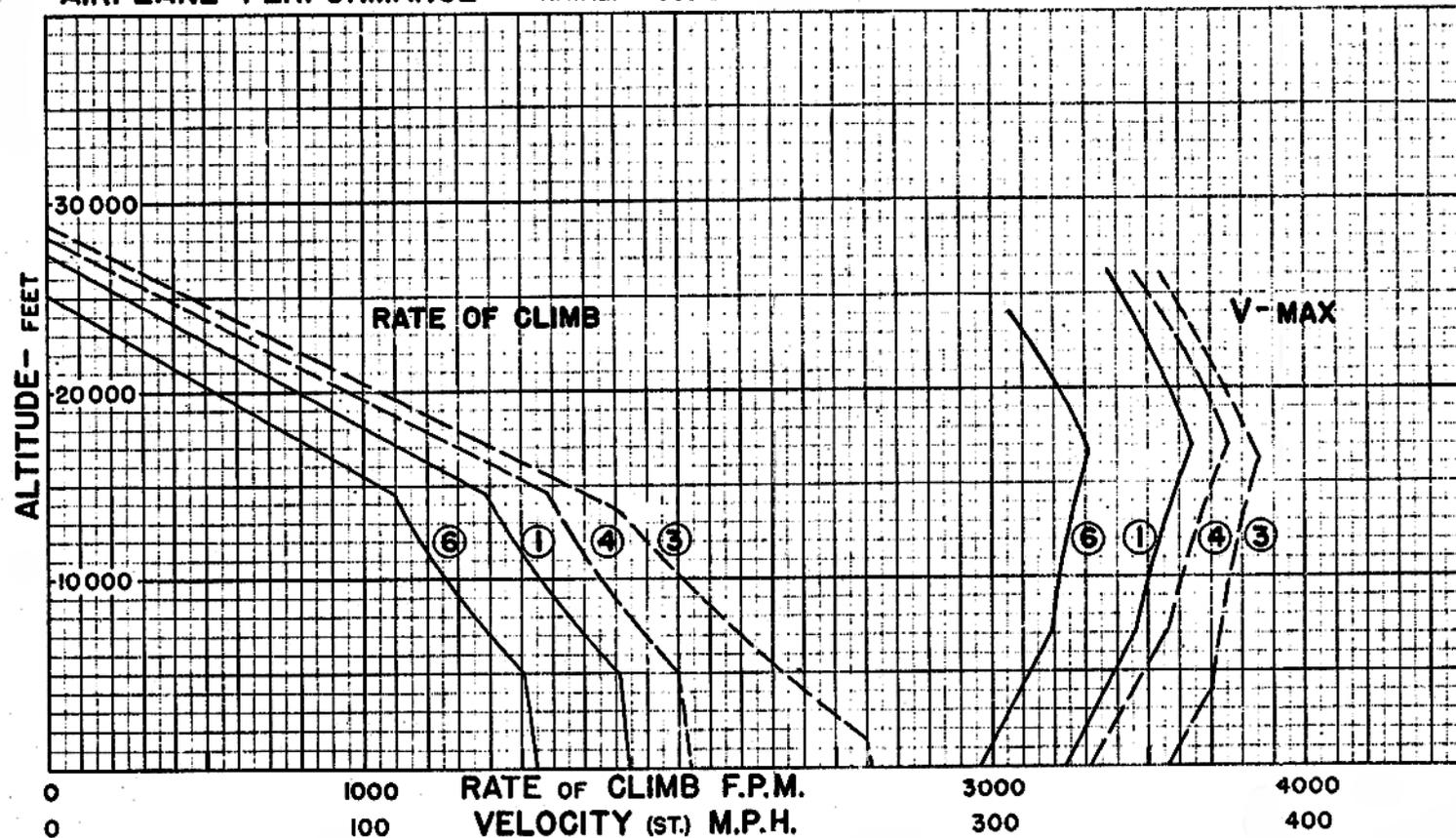
\*\*This condition incorporates the alternate wing outer panel design with 406 sq. ft. area, straight leading edge, and conventional flaps. All other conditions incorporate the outer panel with swept-back leading edge, duplex flaps, and 425 sq. ft. area.

See page 3 for combat radius problem

# AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

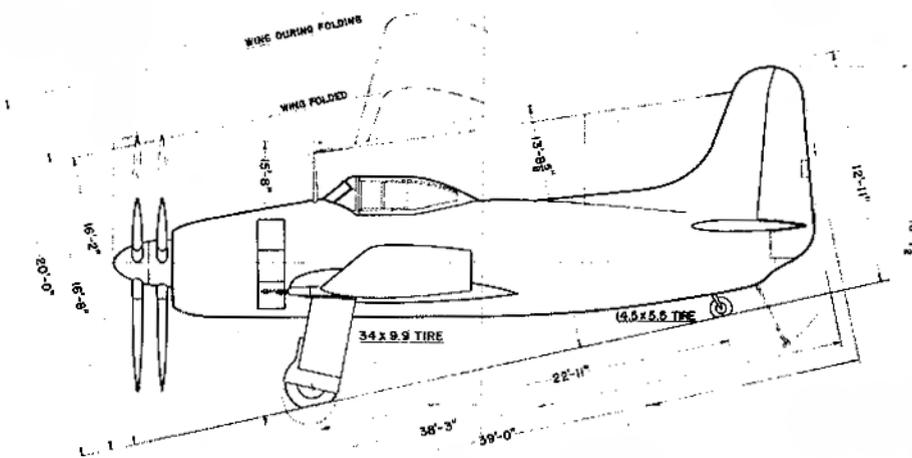
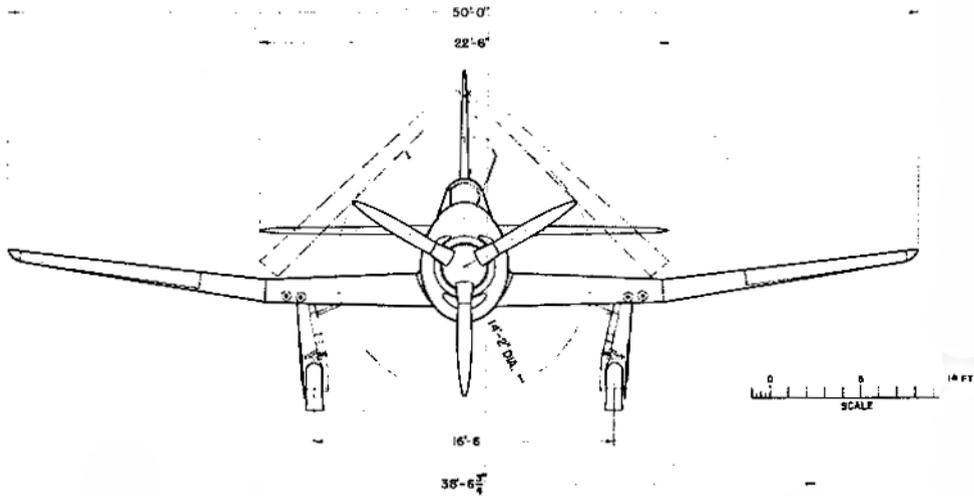
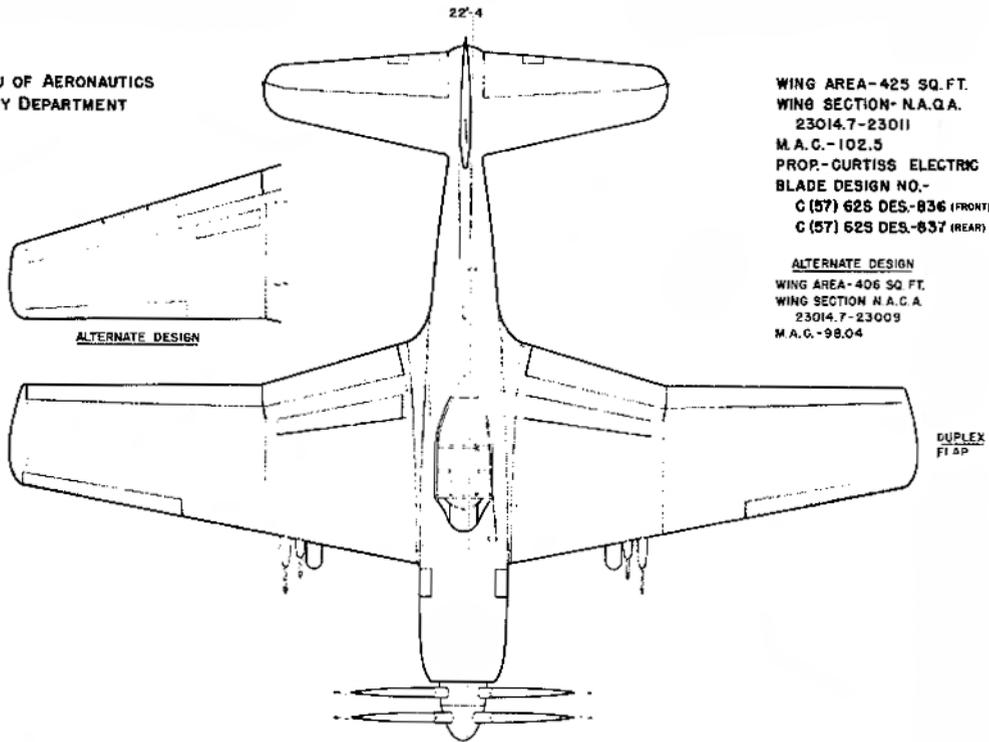
PRACTICAL COMBAT RADIUS is based on 20 min. warm up and idling; one min. take off; 20 min. rendezvous at 60% normal sea level power (n.s.p.) and auto lean; climb to 15000 ft. at 60% n.s.p. and auto rich; cruise out at 180 knots and auto lean; drop unprotected droppable tanks; dive; drop bombs and torpedoes;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



○ LOADING CONDITION COLUMN NUMBER

WING AREA-425 SQ. FT.  
WING SECTION- N.A.G.A.  
23014.7-23011  
M. A. C.-102.5  
PROP.-CURTISS ELECTRIC  
BLADE DESIGN NO.-  
C (57) 625 DES.-836 (FRONT)  
C (57) 625 DES.-837 (REAR)

ALTERNATE DESIGN  
WING AREA-406 SQ. FT.  
WING SECTION N.A.C.A.  
23014.7-23009  
M. A. C.-98.04

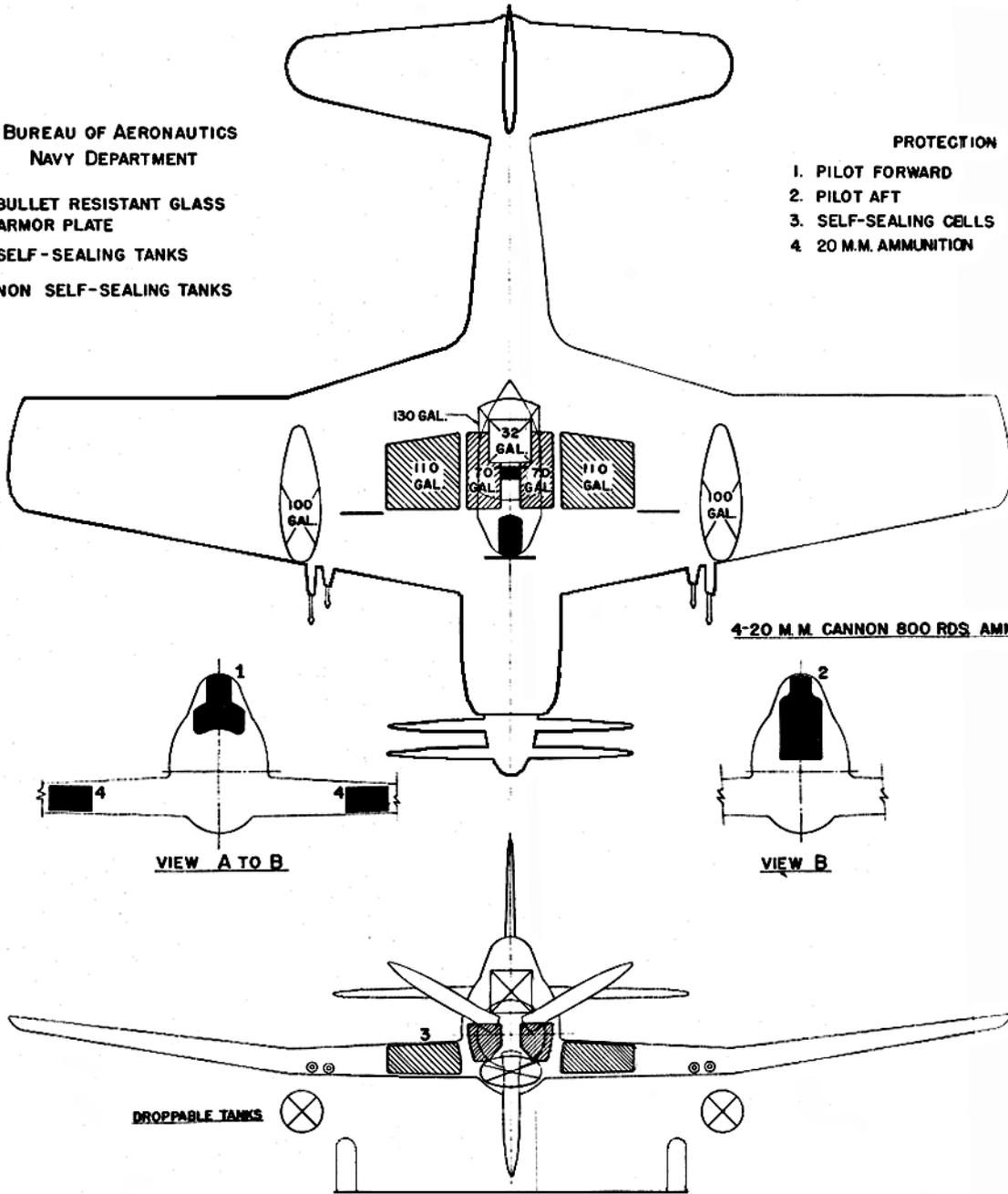


BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

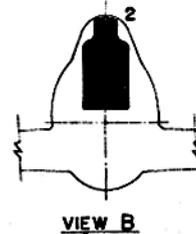
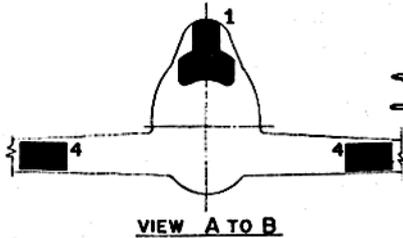
- BULLET RESISTANT GLASS ARMOR PLATE
- ▨ SELF-SEALING TANKS
- ⊗ NON SELF-SEALING TANKS

PROTECTION

- |                       |         |
|-----------------------|---------|
| 1. PILOT FORWARD      | 139 LBS |
| 2. PILOT AFT          | 179 LBS |
| 3. SELF-SEALING CELLS | 505 LBS |
| 4. 20 M.M. AMMUNITION | 14 LBS  |



4-20 M.M. CANNON 800 RDS. AMMUNITION



DROPPABLE TANKS ⊗

