

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		1	2	3	4
LOADING CONDITION		FIGHTER	FIGHTER	FIGHTER	FIGHTER One 150 gal. fuse tank external
GROSS WEIGHT	LBS.	21650	21650	21650	22780
EMPTY WEIGHT	- Calculated - LBS.	16190			
FUEL/OIL	GALS.	380/25	380/25	380/25	530/33
FIXED GUNS/AMMUNITION		4-20mm/800 rds+4-.50 cal/1200 rds			
FLEXIBLE GUNS/AMMUNITION		NONE			
ENGINE POWER USED FOR PERFORMANCE		WAR EMERGENCY	MILITARY	NORMAL	NORMAL
WING LOADING	LBS./SQ.FT.	47.6	47.6	47.6	50.0
POWER LOADING ①	LBS./BHP.	6.0	6.7	7.5	7.8
V-MAX. SEA LEVEL	MPH.	391	374	346	339
V-MAX. AIRPLANE CRIT. ALT.	MPH.	424/19200	409/20900	409/23400	400/23100
V-STALL GROSS WEIGHT ②	MPH.			89.6	91.8
V-STALL WITHOUT FUEL ②	MPH.			84.6	85.2
TIME-TO-CLIMB -10000FT-	MIN.	2.6	3.0	3.4	3.6
TIME-TO-CLIMB -20000FT-	MIN.	6.2	6.9	7.6	8.2
SERVICE CEILING	FT.	36000	35400	35800	34900
TAKE-OFF DISTANCE -CALM-	FT.			710	802
TAKE-OFF DISTANCE -15 KN-	FT.			479	550
TAKE-OFF DISTANCE -25 KN-	FT.			350	405
TAKE-OFF TIME	SECONDS				
RATE OF CLIMB -SL-	FT/MIN.	4260	3780	3020	2830
MAX. RANGE /V-AV. ③	STMI/MPH.			1015/178	1310/179
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.			30	195

ENGINE / PROP. GEAR RATIO		2 P&W R-2800-22W (.45)			
ENGINE RATING BHP/RPM/ALT.	WAR EMERGENCY	MILITARY	NORMAL	TAKE-OFF	
	2380/2800/S.L.	2100/2800/S.L.-1000	1700/2600/S.L.-7000	2100/2800	
	2400/2800/1000	1600/2800/8800-16000	1450/2600/11100-18500		
	1790/2800/9500				
	1850/2800/14000				

TANKAGE IN GALLONS			OFFENSIVE ARMAMENT	
AUX. FIXED	OIL	FUEL		
PROTECTED	42	380	WINGS: (external)	
UNPROTECTED			BOMBS: 2-1000#, or 2-500#	
TOTAL - FIXED INTERNAL	42	380		
DROPPABLE Wings-2@150		300	FUSELAGE: (external)	
DROPPABLE Fuse-1@300		300	BOMBS: 1-2000#, 1-1600#, or 1-1000#	
(alternate-1@ 150 gals.)		(150)	TORPEDOES: 1 MK 13-2	
TOTAL	42	980		

NOTE	STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS	
	① BHP AT MAX. CRIT. ALT.	
	② STALL-WITH POWER	
	③ AT 1500' ALTITUDE	

NOTE: Two wing bomb-racks available for either bombs or 150 gal. drop. tanks. Fuselage bomb-rack available for either bomb, torpedo, or one droppable tank

NAYAER-15198 (Rev. 4-44)

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER		5	6	7	8
	LOADING CONDITION	FIGHTER One 300 gal. fuse. tank External	BOMBER 2-1000# *	TORPEDO 1 MK13-2 *	FERRY Three Tanks External
	GROSS WEIGHT LBS.	23881	25914	26124	23331
	EMPTY WEIGHT - Calculated - LBS.		16190		15590
	FUEL/OIL GALS.	680/42	680/42	680/42	980/42
	FIXED GUNS/AMMUNITION	4-20 mm./800 rds + 4-50 cal./1200 rds			NONE
	FLEXIBLE GUNS/AMMUNITION	NONE			
	ENGINE POWER USED FOR PERFORMANCE	NORMAL	NORMAL	NORMAL	NORMAL
	WING LOADING LBS./SQ.FT.	52.5	57.0	57.4	51.3
	POWER LOADING ① LBS./BHP	8.2	8.9	9.0	8.0
	V-MAX. SEA LEVEL MPH.	335	305	300	
	V-MAX. AIRPLANE CRIT. ALT. MPH.	394/23000	353/22300	347/22100	
	V-STALL. GROSS WEIGHT ② MPH.	94.1	98.0	98.4	
	V-STALL. WITHOUT FUEL ② MPH.	85.6	90.0	90.4	
	TIME-TO-CLIMB -10000FT.- MIN.	3.9	4.4	4.5	
	TIME-TO-CLIMB -20000FT.- MIN.	8.7	10.2	10.4	
	SERVICE CEILING FT.	34000	32100	31900	
	TAKE-OFF DISTANCE -CALM- FT.	900	1127	1152	
	TAKE-OFF DISTANCE -15 KN.- FT.	623	790	806	
	TAKE-OFF DISTANCE -25KN.- FT.	462	598	613	
	TAKE-OFF TIME SECONDS.				
	RATE OF CLIMB -SL- FT./MIN.	2660	2330	2290	
	MAX. RANGE /V-AV. ③ ST. MI./MPH.	1630/181	1320/181	1305/181	2250/166
	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.	315	360*	355*	

PERFORMANCE IS BASED ON-- PROTOTYPE FLIGHT TEST

RANGE & RADIUS ARE BASED ON ENGINE REQUIREMENTS.

FUEL CONSUMPTION DATA INCREASED

BY 15 PERCENT TO CONFORM WITH PAST EXPERIENCE.

* See Page 3 for Combat Radius Problems

Anti-Detonant fluid available for 12 min. at war emergency power

NOTE: Provisions available for fuel pump back from droppable to main tanks.

The F7F-2 is a modification of the F7F-1 to provide an additional crew member with improved radio and radar facilities

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

FOR CONDITIONS THREE, FOUR AND FIVE

PRACTICAL COMBAT RADIUS is based on 20 min. warm up and idle; 1 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 V for max. range and auto lean; drop bombs and unprotected droppable tanks; combat at 15000 ft. for 10 min. at war emergency power plus 10 min. at military rated power; descend; cruise back at 1500 ft. at 170 knots true air speed and auto lean; 60 min. at V for max. range and auto lean allowance for rendezvous, landing and reserve. Radius includes distance covered in climb but not in descent.

FOR CONDITIONS SIX AND SEVEN

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 war emergency 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.

FOR CONDITION FIVE

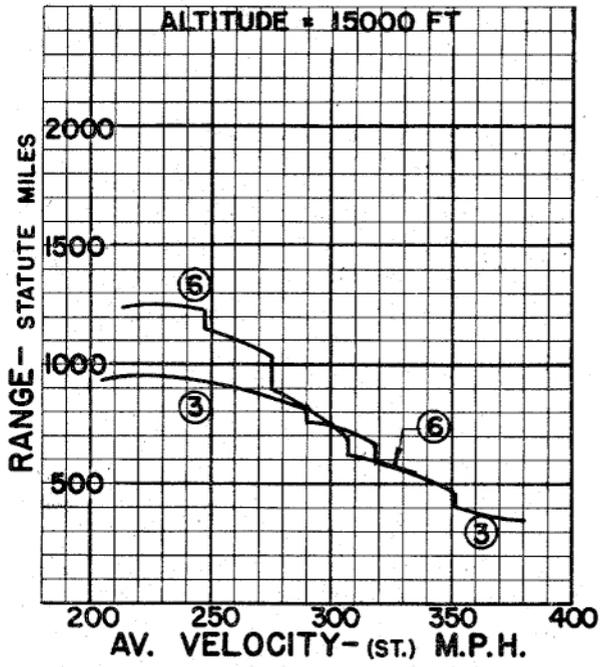
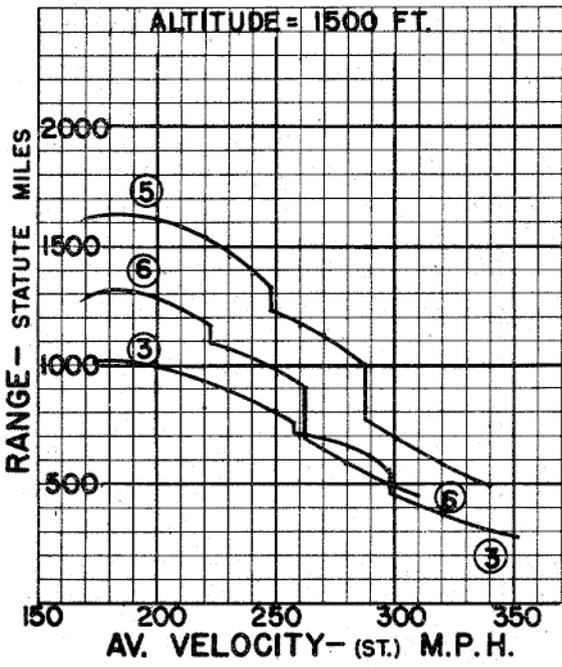
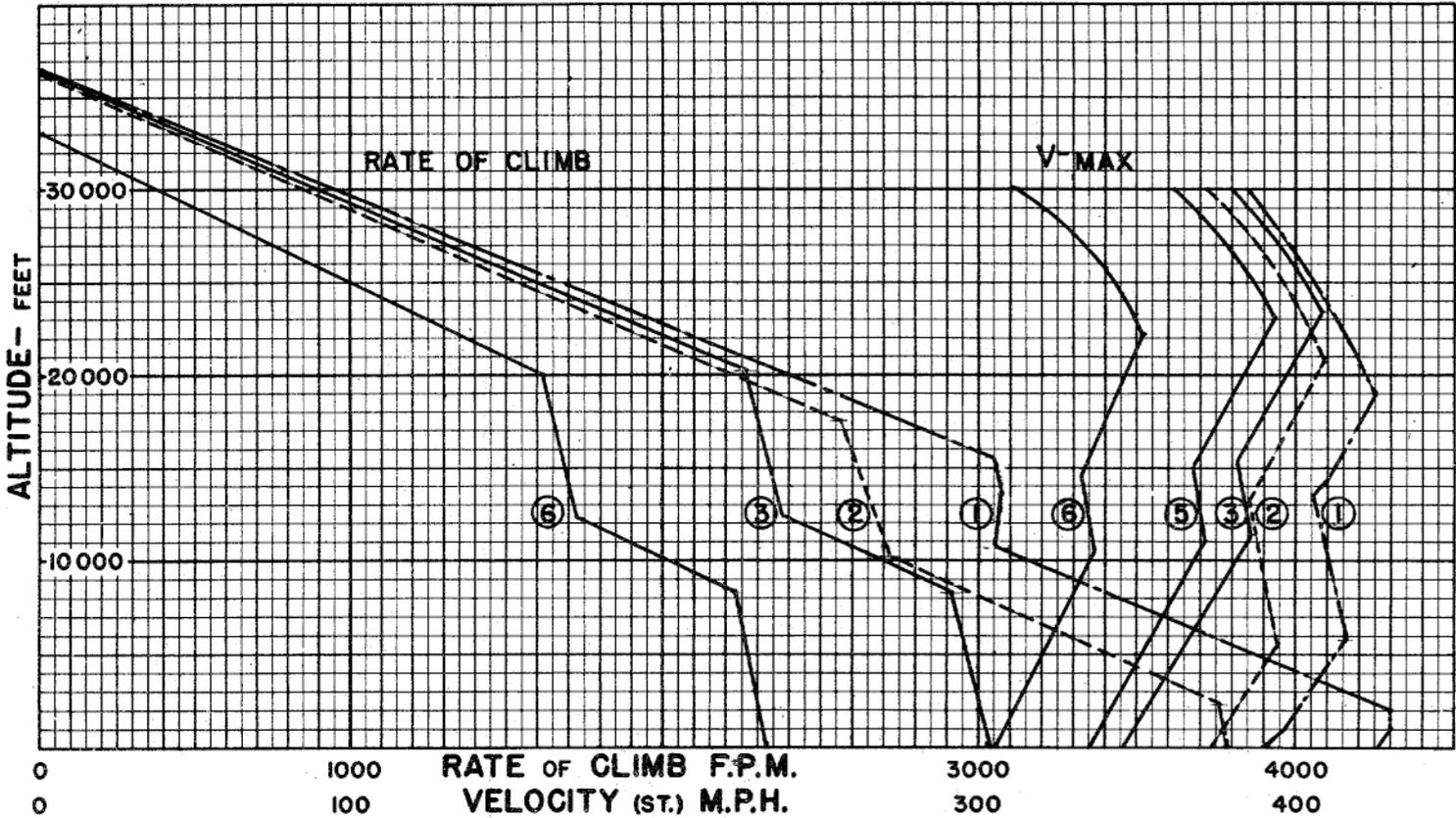
On entering combat 35 gals. of fuel remain in drop. tank and must be dropped or it may be used to increase the cruise out speed to approximately 243 knots, or for .3 hrs. search.

*Rendezvous time has been increased from 10 min. and auto rich to 20 min. and auto lean. (See F7F-1 sheets of 1 May 1944)

AIRPLANE PERFORMANCE

NAVAER - 1335-C

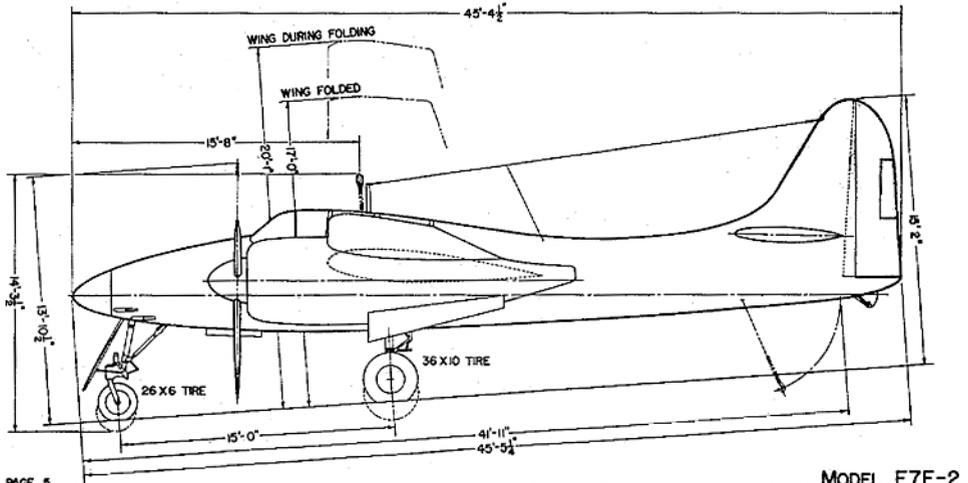
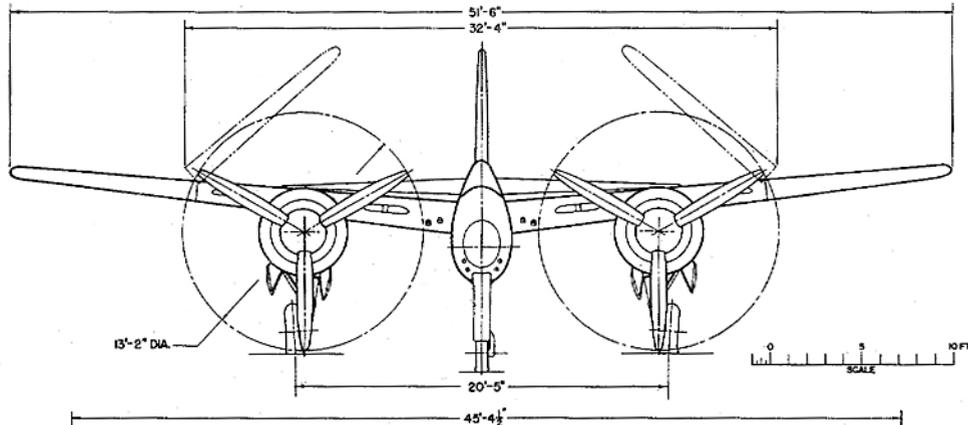
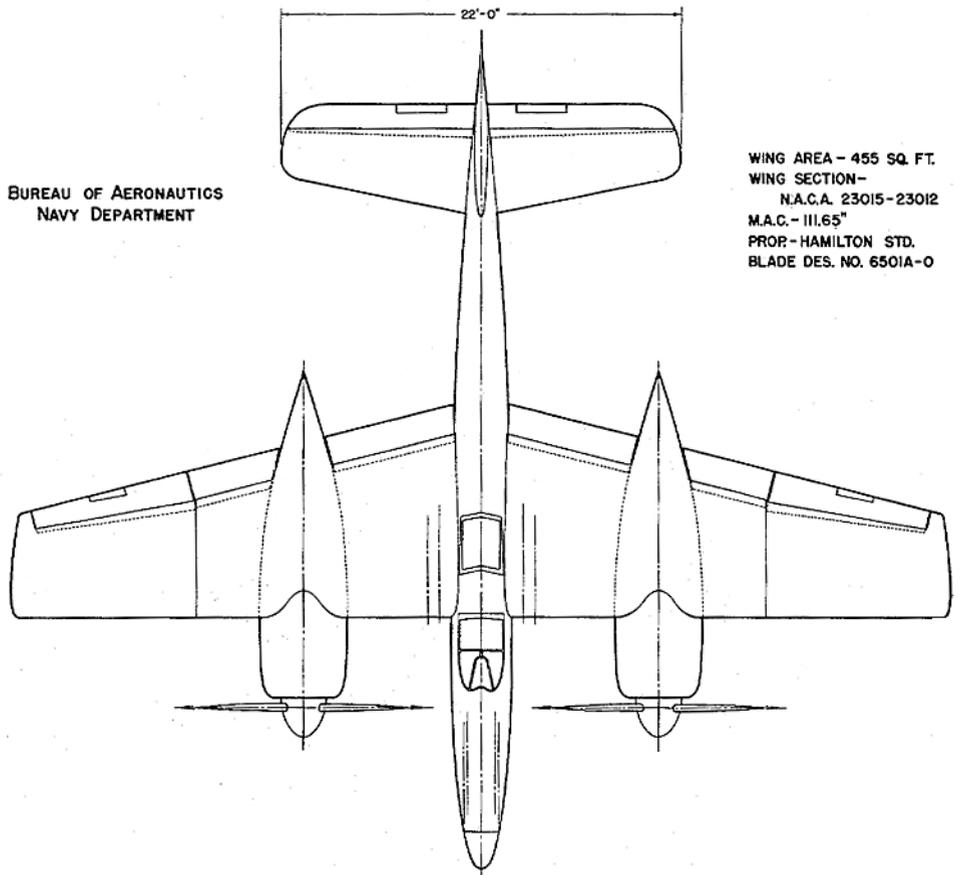
BUREAU OF AERONAUTICS, NAVY DEPT.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 455 SQ. FT.
WING SECTION -
N.A.C.A. 23015-23012
M.A.C. - 111.65"
PROP - HAMILTON STD.
BLADE DES. NO. 6501A-0

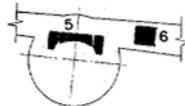
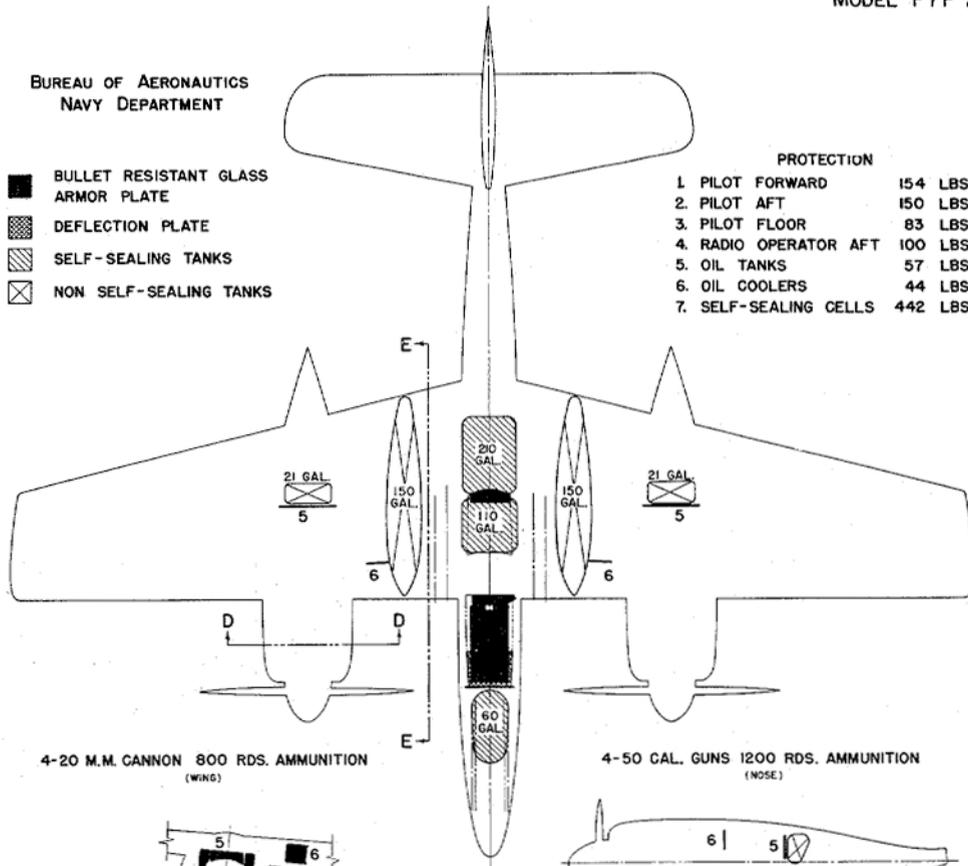


BUREAU OF AERONAUTICS
NAVY DEPARTMENT

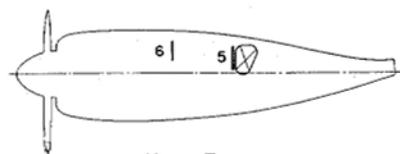
- BULLET RESISTANT GLASS ARMOR PLATE
- ▨ DEFLECTION PLATE
- ▧ SELF-SEALING TANKS
- ⊗ NON SELF-SEALING TANKS

PROTECTION

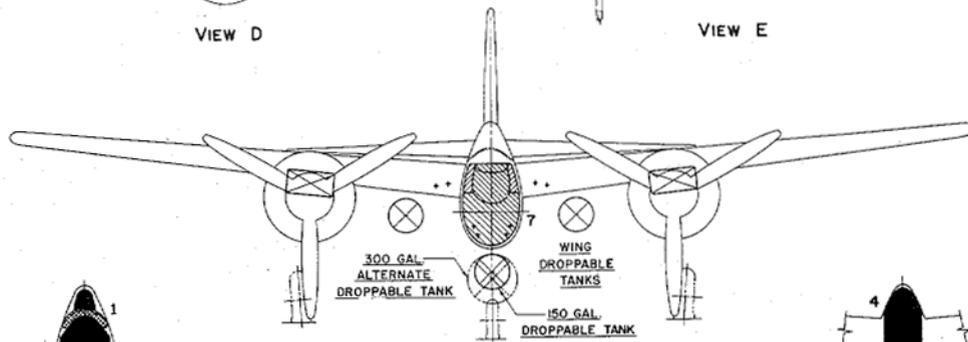
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|-----------------------|----------|
| 1. PILOT FORWARD | 154 LBS. |
| 2. PILOT AFT | 150 LBS. |
| 3. PILOT FLOOR | 83 LBS. |
| 4. RADIO OPERATOR AFT | 100 LBS. |
| 5. OIL TANKS | 57 LBS. |
| 6. OIL COOLERS | 44 LBS. |
| 7. SELF-SEALING CELLS | 442 LBS. |



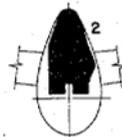
VIEW D



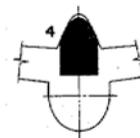
VIEW E



VIEW A TO B



VIEW B TO C



VIEW C

