

ISSUE OF 6 PAGES
AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS-NAVY DEPT.

COLUMN NUMBER		1	2	3	4			
LOADING CONDITION		FIGHTER	FIGHTER	FIGHTER	FIGHTER			
GROSS WEIGHT	LBS.	12039	12039	12039	12836			
EMPTY WEIGHT - Actual	LBS.	8982						
FUEL/OIL	GALS.	237/13	237/13	237/13	361/20			
FIXED GUNS/AMMUNITION		6-.50/2350rds						
FLEXIBLE GUNS/AMMUNITION		None						
ENGINE POWER USED FOR PERFORMANCE		WATER INJECTION	MILITARY	NORMAL	NORMAL			
WING LOADING	LBS/SQ.FT.	38.3	38.3	38.3	40.8			
POWER LOADING ①	LBS/BHP.	6.1	7.3	7.8	8.3			
V-MAX. SEA LEVEL	MPH.	359	350	328	327			
V-MAX. AIRPLANE CRIT. ALT.	MPH.	417/19900	407/23900	405/24800	403/24800			
V-STALL. GROSS WEIGHT. ②	MPH.	87.0	87.0	87.0	89.8			
V-STALL. WITHOUT FUEL. ②	MPH.	81.8	81.8	81.8	81.9			
TIME-TO-CLIMB -10000FT.-	MIN.	3.6	4.4	5.2	5.8			
TIME-TO-CLIMB -20000FT.-	MIN.	7.7	9.5	10.8	12.3			
SERVICE CEILING	FT.	36800	36800	37000	36100			
TAKE-OFF DISTANCE -CALM-	FT.			710	825			
TAKE-OFF DISTANCE -15 KN-	FT.			475	554			
TAKE-OFF DISTANCE -25 KN-	FT.			340	408			
RATE OF CLIMB -SL-	FT./MIN.	2890	2550	1990	1780			
MAX. RANGE/V-AV. ③	S.T.MI/MPH.			1015/182	1515/186			
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.			125	350			
ENGINE /PROP GEAR RATIO		P&W R - 2800 - 8W (2:1)						
ENGINE RATING BHP/RPM/ALT.	WATER INJ.	2135/2700/SL-1700	MILITARY	2000/2700/S.L.-1700	NORMAL	1675/2550/S.L.-5500	TAKE OFF	2000/2700
		1975/2700/14500		1755/2700/5400		1570/2550/7200		
		1975/2700/16800		1800/2700/15700		1625/2550/16750		
				1640/2700/18100		1530/2550/18200		
		1650/2700/21000		1550/2550/22000				
NOTE STATUTE MILES USED-EXCEPT-RADIUS IS GIVEN IN NAUTICAL MILES & KNOTS.								
① BHP AT MAX.CRIT.ALT. ② STALL-WITHOUT POWER ③ AT 1500' ALTITUDE								

TANKAGE IN GALLONS		OIL	FUEL	OFFENSIVE ARMAMENT
FIXED	PROTECTED	24	237	None
	UNPROTECTED		424	
	TOTAL-INCL.PROT.	24	361	
	INCREASE-REMOVED PROTECTION	FIXED		
AUX.				
	DROPPABLE - FUSELAGE - (EXT)		175	
	DROPPABLE + Protected	24	412	
PROTECTED+UNPROTECTED+DROPPABLE		24	535	

REMARKS- 10 gals. water injection fluid in all conditions. The following changes are incorporated:
 Contract - thru 89; Service - thru 82.

SUPERSEDES 1 JULY 1943
DATE - MAR. 1, 1944

PAGE 1

MODEL-F4U-1

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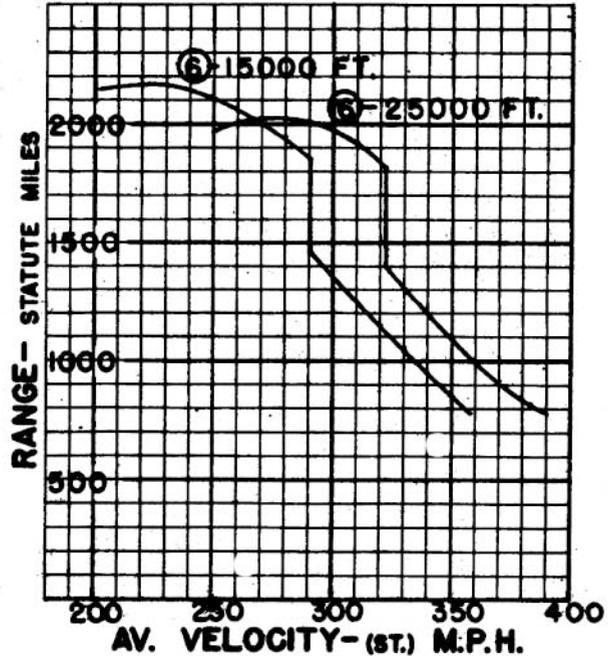
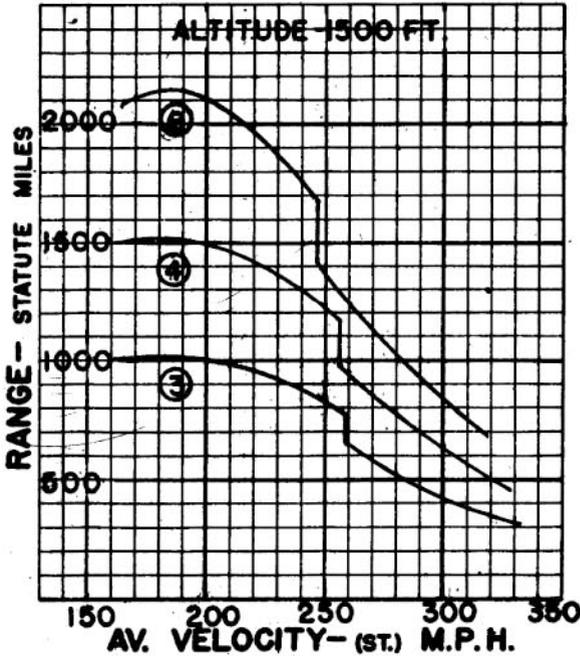
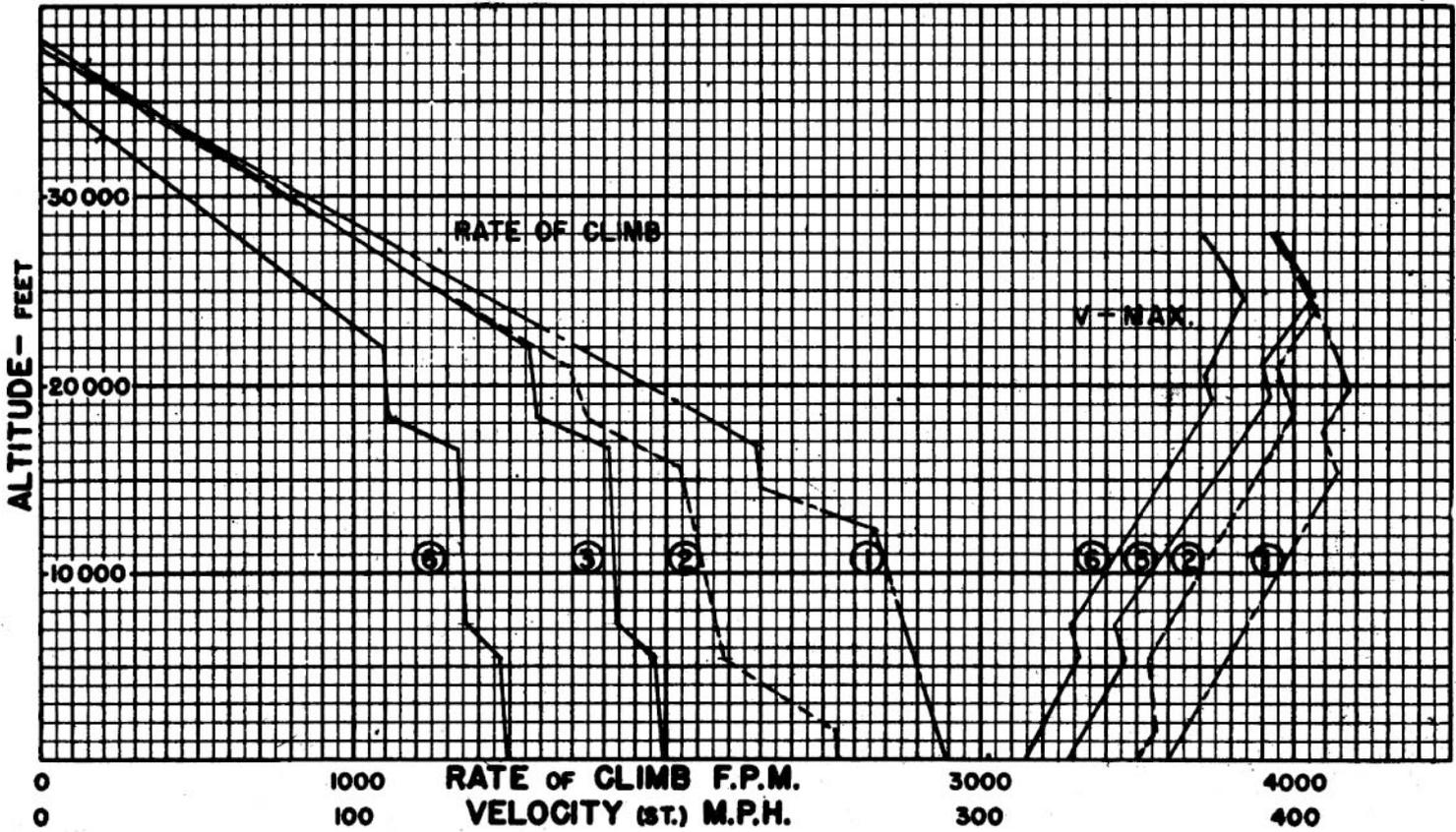
COLUMN NUMBER	5	6	7
LOADING CONDITION	FIGHTER One Tank External	FIGHTER One Tank External	FERRY One Tank External
GROSS WEIGHT LBS.	13259	14003	12763
EMPTY WEIGHT - Actual - LBS.	8982		8849
FUEL/OIL GALS.	412/24	536/24	536/24
FIXED GUNS/AMMUNITION	6-.50/2350 rds		None
FLEXIBLE GUNS/AMMUNITION	None		None
ENGINE POWER USED FOR PERFORMANCE	NORMAL	NORMAL	NORMAL
WING LOADING LBS/SQ.FT.	42.2	44.6	40.6
POWER LOADING ① LBS/BHP.	8.5	9.0	8.2
V-MAX. SEA LEVEL MPH.	317	315	
V-MAX. AIRPLANE. CRIT. ALT. MPH.	387/24600	384/24600	
V-STALL. GROSS WEIGHT. ② MPH.	92.9	95.5	
V-STALL. WITHOUT FUEL ② MPH.	83.8	83.8	
TIME-TO-CLIMB -10000FT.- MIN.	6.3	7.0	
TIME-TO-CLIMB -20000FT.- MIN.	13.4	14.9	
SERVICE CEILING FT.	35400	34500	
TAKE-OFF DISTANCE -CALM- FT.	1209	1385	
TAKE-OFF DISTANCE -15 KN- FT.	836	972	
TAKE-OFF DISTANCE -25 KN- FT.	625	741	
RATE OF CLIMB -SL- FT./MIN.	1640	1490	
MAX. RANGE/V-AV. ③ ST.MI/MPH.	1665/186	2140/186	2220/176
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.	340 *	340 *	

PERFORMANCE IS BASED ON- FLIGHT TEST

RANGE & RADIUS ARE BASED ON FLIGHT TEST FUEL CONSUMPTION DATA INCREASED BY 5 PERCENT TO CONFORM WITH PAST EXPERIENCE.

Practical Combat Radius is on 20 min. warm-up and idle; 1 Min. take-off; 10 min. rendezvous at 60% normal sea-level power and auto-rich; climb to 15000 ft. at 60% N.S.P. and auto-lean; cruise-out at 15000' at V for max. range and auto-lean; drop bombs and unprotected droppable tanks; 8.5 min. combat at water injection power plus 11.5 min. combat at full military power; descent; cruise-back at 1500' at V for max. range and auto-lean; 60 min. rendezvous, landing and reserve at V for max. range and auto-lean. Radius includes distance covered in climb but not in descent.

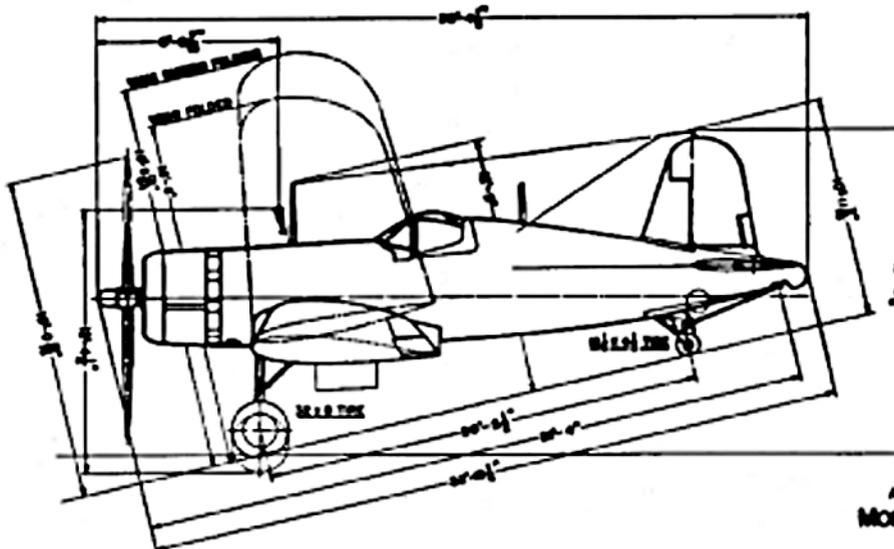
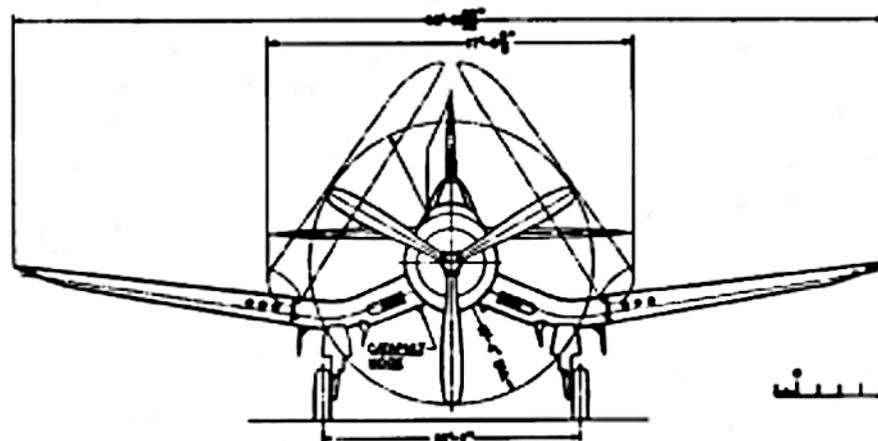
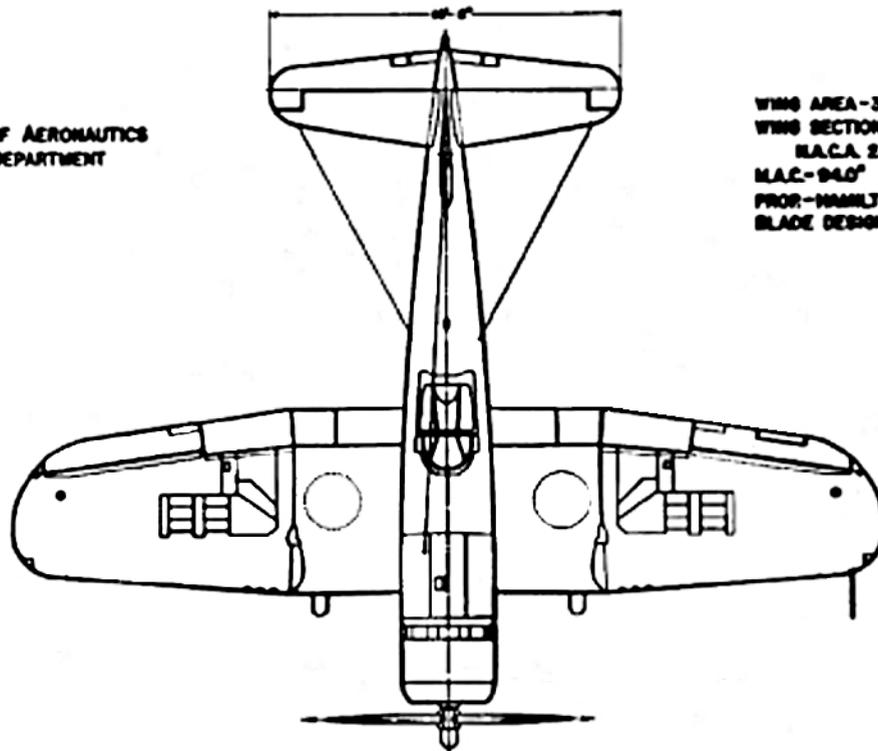
* These combat radii limited by amount of protected fuel available for combat and return - for column 5, 48 gallons fuel remain in tank at the combat radius and must be dropped, used for approx. 54 min. search going out (at V for max. range) or used to increase cruise out speed from 160 to 250 knots; for column 6, 166 gals. must be dropped, used for approx. 186 min. search or increase cruise out speed from 180 knots to V max.



○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 344 SQ. FT.
WING SECTION -
N.A.C.A. 23018-23009
M.A.C. - 94.0°
PROP. - HAMILTON STD. C.S.
BLADE DESIGN NO. 6443



FG-1
ALSO F3A-1
MODEL - F4U-1, 6, 10

MODEL - F4U-1, & 1D
ALSO F3A-1
FG-1

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

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

PROTECTION

1. OIL TANK (F4U-1 ONLY) 32 LBS.
2. PILOT FORWARD 40 LBS.
3. PILOT AFT 63 LBS.
4. SELF-SEALING CELLS 177 LBS.
5. DEFLECTION PLATE 25 LBS.

