

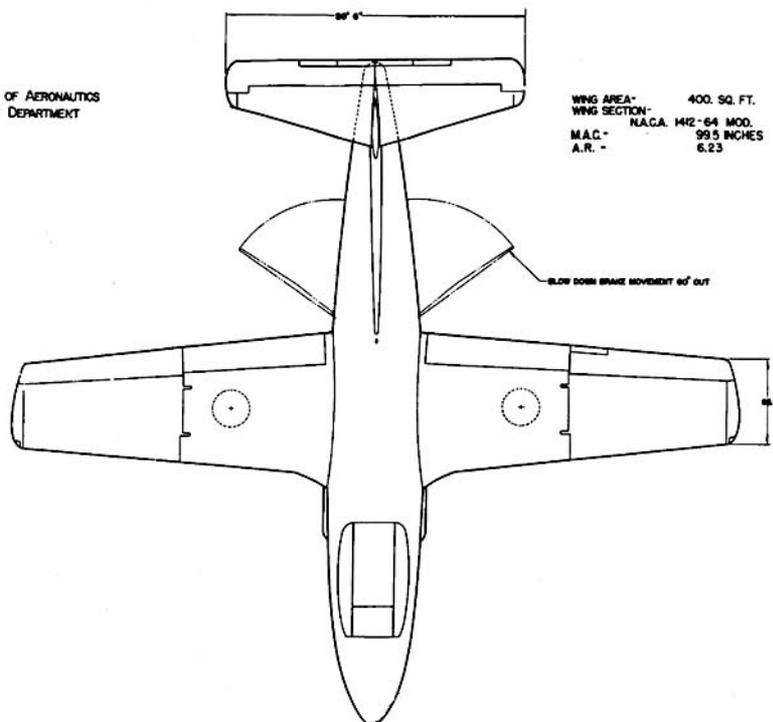
STANDARD AIRCRAFT CHARACTERISTICS

XF3D-1 "SKY NIGHT"

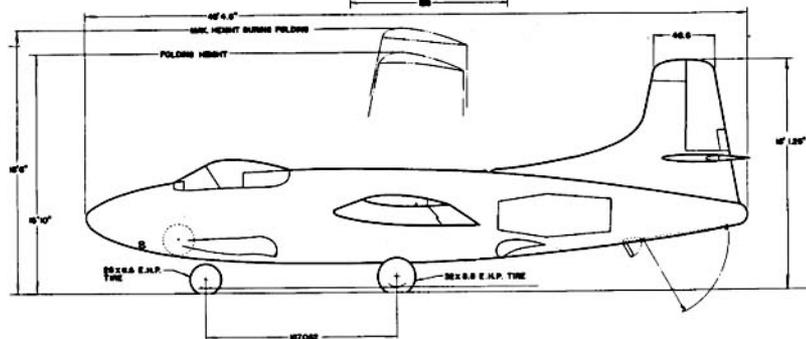
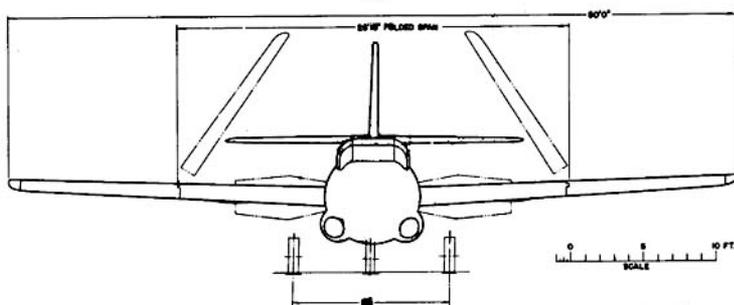
DOUGLAS

EXPERIMENTAL

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

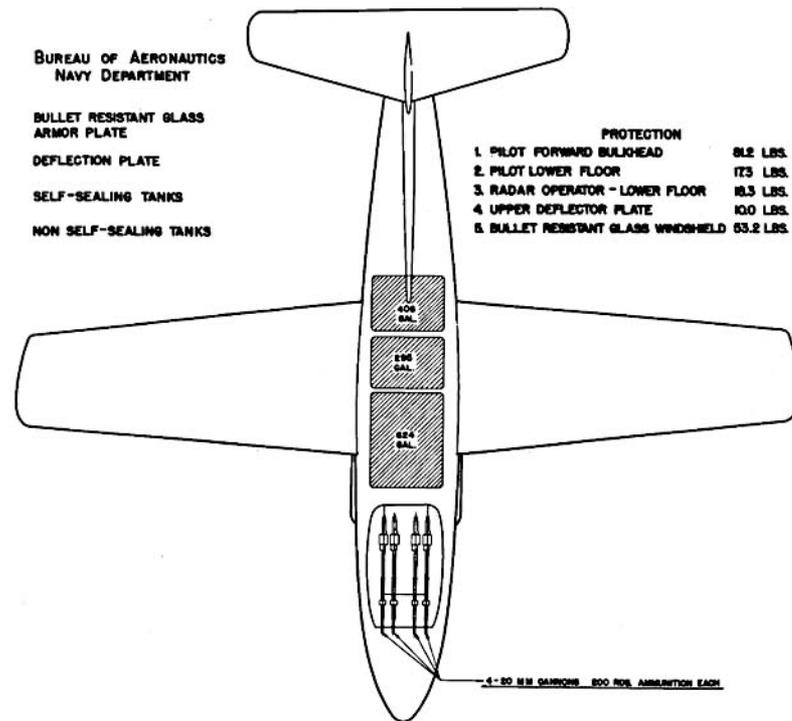


WING AREA - 400. SQ. FT.
WING SECTION - N.A.C.A. 442-64 MOD.
M.A.C. - 99.5 INCHES
A.R. - 6.25

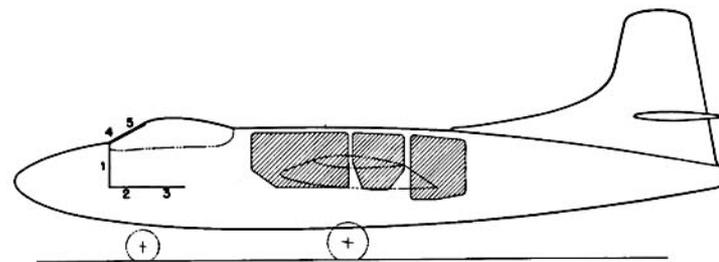
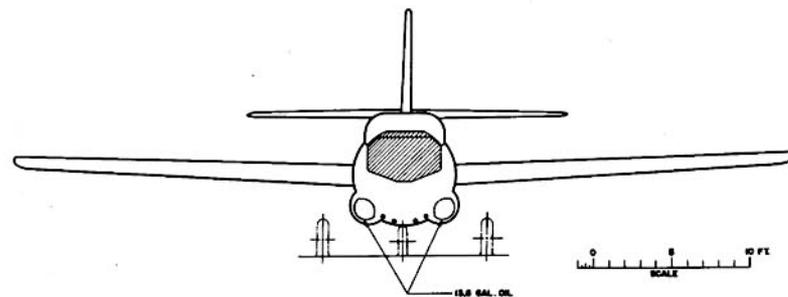


BUREAU OF AERONAUTICS
NAVY DEPARTMENT

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



- PROTECTION
- | | |
|--------------------------------------|-----------|
| 1. PILOT FORWARD BULKHEAD | 81.2 LBS. |
| 2. PILOT LOWER FLOOR | 173 LBS. |
| 3. RADAR OPERATOR - LOWER FLOOR | 18.3 LBS. |
| 4. UPPER DEFLECTOR PLATE | 10.0 LBS. |
| 5. BULLET RESISTANT GLASS WINDSHIELD | 63.2 LBS. |





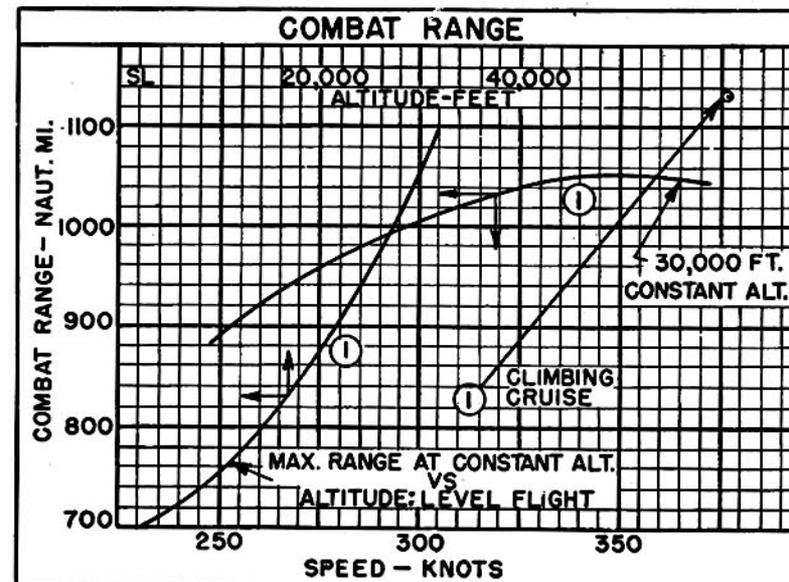
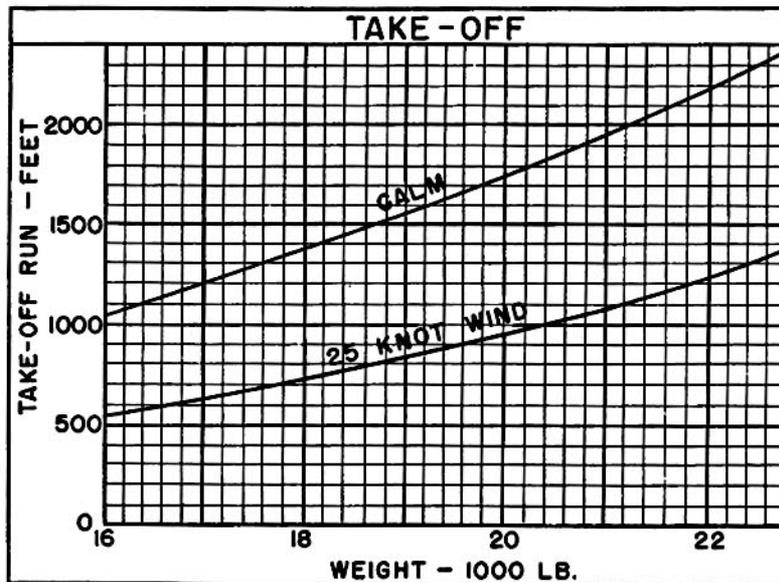
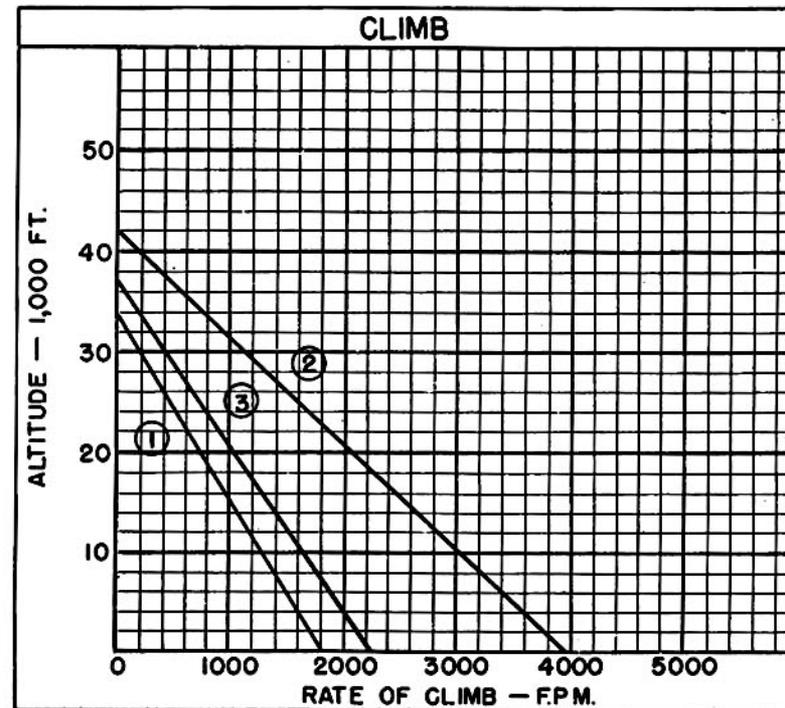
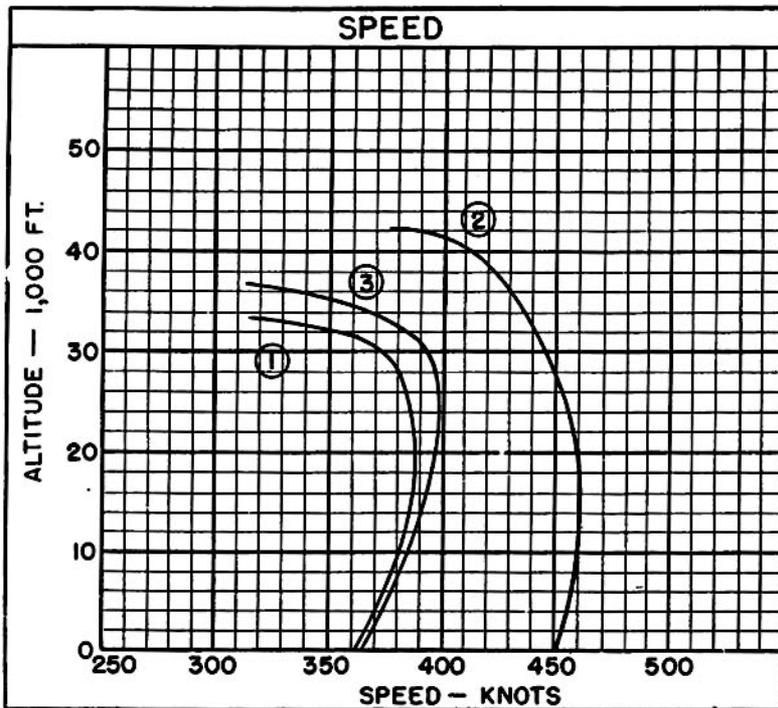
PERFORMANCE SUMMARY			
LOADING CONDITION		(1) FIGHTER	
TAKE-OFF WEIGHT	lbs.	22,676	
Fuel	lbs.	7,800	
Bombs	lbs.		
Wing/Power Loading (A)	lbs/sq.ft;lbs/bhp.	56.6/-	
Stall Speed--Power off	kn.	93.8	
Stall Speed--Power off - No Fuel	kn.	76.0	
Stall Speed--Power on	kn.	93.8	
Maximum Speed/Alt (B)	kn/ft.	389/20,000	
Take-off Distance, deck -- calm	ft.	2,350	
Take-off Distance, deck 25 kn.	ft.	1,350	
Take-off Distance, Airport (50' Obs.)	ft.	4,120	
Rate of climb -- sea level (B)	ft/min.	1,800	
Service Ceiling (B)	ft.	31,600	
Time-to-climb 20,000 ft. (B)	min.	17.1	
Time-to-climb 30,000 ft. (B)	min.	41.7	
Combat Range/ \sqrt{V} av	ft. n.mi/kn.	1,130/376	
Combat Radius/ \sqrt{V} av	ft. n.mi/kn.	450/358	
LOADING CONDITION		(2) Combat	(3) Combat
GROSS WEIGHT	lbs.	19,556	19,556
Engine power		Military	Normal
Fuel	lbs.	4,680	4,680
Bombs/Tanks			
Max. speed at sea level	kn.	452	365
Max. speed/Alt	kn/ft.	460/15,000	398/23,600
Combat speed/Alt	kn/ft.	460/15,000	392/15,000
Rate of climb SL	ft/min.	3,990	2,240
Ceiling for 500 fpm R/C	ft.	36,800	29,300
Time-to-climb/Alt.	min/ft.	19.2/35,000	49.3/35,000

NOTES

- (A) BHP at Maximum Critical Altitude
 (B) Normal BHP

Performance is based on calculations.

 Range and radius are based on engine specification fuel consumption increased by 5%.



○ LOADING CONDITION COLUMN NUMBER

NOTES

200 feet length is required to spot 16 planes on the 96' wide deck immediately aft of the forward ramp on CV-9 Class Carriers.

COMBAT RADIUS PROBLEM NO. F-4

<u>WARM-UP TAKE-OFF RENDEZVOUS</u>	<u>CLIMB (A)</u>	<u>CRUISE-OUT</u>	<u>DESCEND</u>	<u>COMBAT</u>	<u>CLIMB (B)</u>	<u>CRUISE-BACK</u>	<u>RESERVE</u>
5 min. at Sea Level Static Normal Power of All Engines	at max. rate with military power to initial cruise-out alt. (Alt. not greater than alt. for 300 ft./min. max. rate of climb with normal power)	with optimum range operation. (State altitudes and any special engine operations involved)	to 15,000 ft. (no fuel used, no distance made good) DROP TANKS only when empty and state when dropped	at 15,000 ft. and Vmax. 10 min. at Mil. power of which 5 min. is with augmentation if available (Fuel used, but no distance made good)	to initial cruise-back alt. under same conditions as for Climb (A) (Fuel used and distance made good)	under same conditions as cruise-out.	10% of total initial fuel load

COMBAT RADIUS = CLIMB (A) / CRUISE-OUT = CRUISE-BACK / CLIMB (B)

