

STANDARD AIRCRAFT CHARACTERISTICS

F2H-3,4 "BANSHEE"

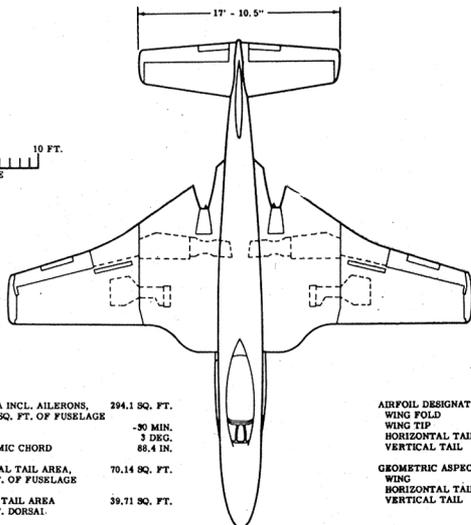
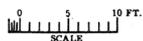
MCDONNELL

Standard Aircraft Characteristics NAVAER 1335A (REV. 1-49)

1 MAY 1951

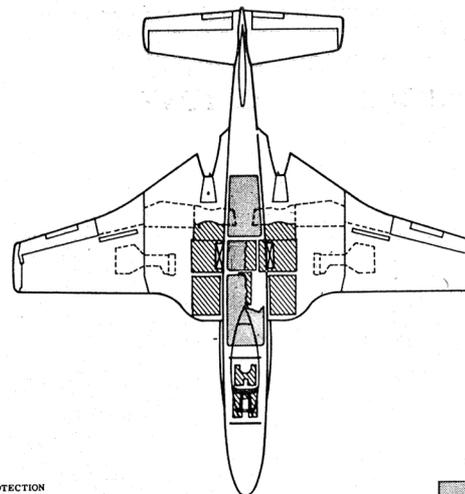
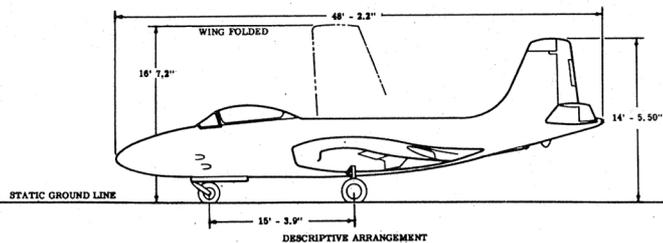
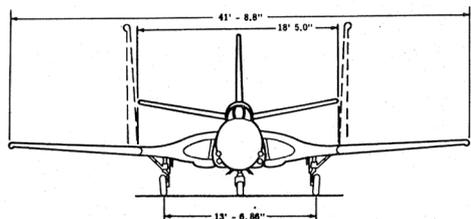
F2H-3,4

SERVICE



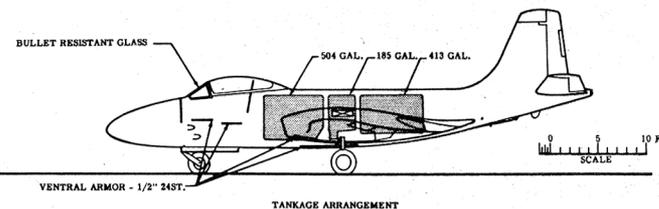
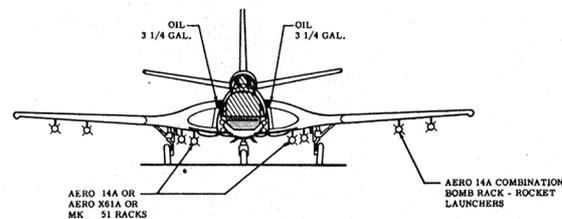
TOTAL WING AREA INCL. ALERONS,
FLAPS AND 33.3 SQ. FT. OF FUSELAGE 294.1 SQ. FT.
INCIDENCE -50 MIN.
DIEHEDRAL 3 DEG.
MEAN AERODYNAMIC CHORD 88.4 IN.
TOTAL HORIZONTAL TAIL AREA,
INCL. 3.82 SQ. FT. OF FUSELAGE 70.14 SQ. FT.
TOTAL VERTICAL TAIL AREA 39.71 SQ. FT.
INCL. 1.63 SQ. FT. DORSAI

AIRFOIL DESIGNATION
WING FOLD NACA-65A-212
WING TIP NACA-65A-209
HORIZONTAL TAIL NACA-65-009
VERTICAL TAIL NACA-65-009
GEOMETRIC ASPECT RATIO
WING 5.93
HORIZONTAL TAIL 4.5
VERTICAL TAIL 1.1



PROTECTION
PILOT FORWARD 79 LBS.
PILOT AFT 48
VENTRAL 432 LBS.
SELF-SEALING FUEL CELLS 643 LBS.

----- FUEL TANK
----- OIL TANK
----- ARMOR



F2H-3,-4

1 MAY 1951

POWER PLANT

NO. & MODEL.....(2) J34-WE-34
 MFR.....Westinghouse
 TYPE.....11 Stg. Axial Compr.
 2 Stg. Turbine
 ENG. LENGTH.....120"
 ENG. DIAMETER.....50"

RATINGS

Lbs. @ Rpm @ Alt.

T. O. 3,250 12,500 S.S.L.
 MIL. 3,250 12,500 S.S.L.
 NORM. 2,650 11,800 S.S.L.

SPEC. NO. WAGT-24C4D-2C

ORDNANCE**GUNS**

No.	Size	Location	Rds.
4	20mm (Mk. 16)	Nose	600

FIRE CONTROL

A. F. C. S. Mk. 6 Mod. 0

BOMBS AND ROCKETS

Type	Size	Location	No.
Bombs	100#	Wings	8
Bombs	250#	Wings	8
Bombs	500#	Wings	2
HVAR	5"	Wings	8
HPAG	5"	Wings	8

2 - Mk. 51-11 Bomb Racks
 8 - Aero 14A Combination Bomb
 Rack and Rocket Launchers

Any combination of above not
 to exceed 3,200 pounds.

MISSION AND DESCRIPTION

The F2H-3 airplane is a single place all weather fighter designed for either land or carrier based operations.

The airframe is of stressed metal skin construction with all surfaces being of the full cantilever type.

Equipment includes an APQ-41 radar, automatic pilot, ejection seat, and cockpit pressurization. The primary control system incorporates power actuation with artificial feel forces for the aileron and elevator. Split type trailing edge flaps and wing mounted speed brakes are provided. The F2H-3 is designed for carrier operations without tip tanks. Its internal fuel capacity has been increased by 225 gallons over that of the F2H-2.

Mock-up date — October 1950
 First flight (prototype) — December 1951
 Service use to start — August 1952

DIMENSIONS

WING AREA	.....294 sq. ft.
SPAN	.....41' - 9"
LENGTH	.....48' - 2"
HEIGHT	.....14' - 6"
TREAD	.....13' - 7"
M.A.C.	.....7' - 4"

WEIGHTS

Loadings	Lbs.	L.F.
EMPTY	.....13,183	.....
BASIC	.....13,780	.....
DESIGN	.....18,600	.....7.5
COMBAT	.....18,367	.....7.6
MAX.T.O. (Field)	25,214	5.5
(Cat.)	25,214	.....
MAX.LAND. (Field)	19,200	.....
(Arrest.)	16,700	.....

All weights are calculated.

* Maximum Anticipated Loading

FUEL AND OIL

Gals.	No. Tanks	Location
1,102	3	Fuse., S.S.
340	2	Wing, Drop
FUEL GRADE.....115/145		
FUEL SPEC.....MIL-F-5572		

OIL

CAPACITY (Gals.)	.....6.5
GRADE	.....1010
SPEC	.....MIL-O-6081

ELECTRONICS

VHF COMMAND	.....AN/ARC-1 or -1A (Installation Provisions Only)
UHF COMMAND	.....AN/ARC-27
HOMING	.....AN/ARR-2A
UHF D.F.	.....AN/ARA-25
ALTIMETER	.....AN/APN-1
ADF	.....AN/ARN-6
HOMING	.....AN/ARN-21 (P.S.I., Repl. for AN/ARR-2A and AN/ARN-6)
SEARCH RADAR	.....AN/APQ-41 (250 aircraft only) (See NOTES)

PERFORMANCE SUMMARY						
TAKE-OFF LOADING CONDITION		(1) FIGHTER Full Internal Fuel	(3) FIGHTER 2 - 170 Gallon Tanks	(5) GRD. SUPPORT 2-170 Gal. Tank 4-5" HVAR Rock. 4-250 lb. Bombs		
TAKE-OFF WEIGHT	lb.	21,013	23,507	25,214		
Fuel (Fixed/Drop)	lb.	6,612/-	6,612/2,040	6,612/2,040		
Payload (Ammunition, Rockets, Bombs)	lb.	337	337	337/1,580		
Wing loading	lb./sq.ft.	71.5	80.0	85.8		
Stall speed - power-off	kn.	115	122	127		
Take-off run at S.L. - calm	ft.	2,490	3,210	3,800		
Take-off run at S.L. 25 kn. wind	ft.	1,560	2,100	2,470		
Take-off to clear 50 ft. - calm	ft.	---	---	---		
Max. speed/altitude (A)	kn./ft.	470/S.L.	454/S.L.	381/30,000		
Rate of climb at S.L.	fpm (B)	5,150	(A) 3,200	(A) 2,360		
Time: S.L. to 20,000 ft.	min. (B)	4.6	(A) 7.9	(A) 12.6		
Time: S.L. to 30,000 ft.	min. (B)	8.2	(A) 14.4	(A) 39.0		
Service ceiling (100 fpm)	ft. (B)	47,000	(A) 41,300	(A) 30,500		
Combat range	n.mi.	1,015	1,490	955		
Average cruising speed	kn.	400	385	390		
Cruising altitude(s)	ft.	40,000	40,000	30,000/35,000		
Combat radius	n.mi.	415	625	330		
Average cruising speed	kn.	430	435	400		
COMBAT LOADING CONDITION		(2) CLEAN	(4) CLEAN			
COMBAT WEIGHT	lb.	18,367	21,013			
Engine power		Military	Military			
Fuel	lb.	3,966	6,612			
Combat speed/combat altitude	kn./ft.	455/35,000	450/35,000			
Rate of climb/combat altitude	fpm/ft.	2,300/35,000	1,800/35,000			
Combat ceiling (500 fpm)	ft.	46,600	45,000			
Rate of climb at S.L.	fpm	6,000	5,150			
Max. speed at S.L.	kn.	503	500			
Max. speed/altitude	kn./ft.	503/S.L.	500/S.L.			
LANDING WEIGHT	lb.	15,672	15,797			
Fuel	lb.	1,271	1,382			
Stall speed - power-off	kn.	99	99			
Stall speed - with approach power	kn.	94	94			

NOTES

(A) Normal Power

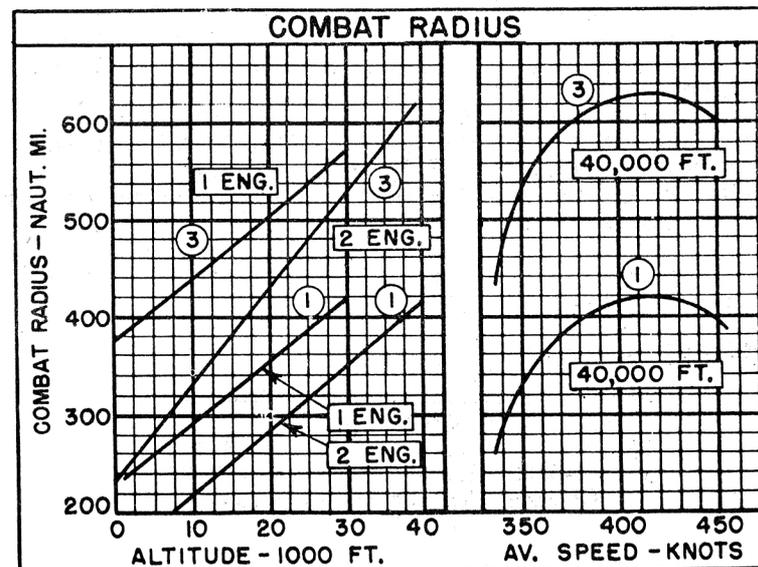
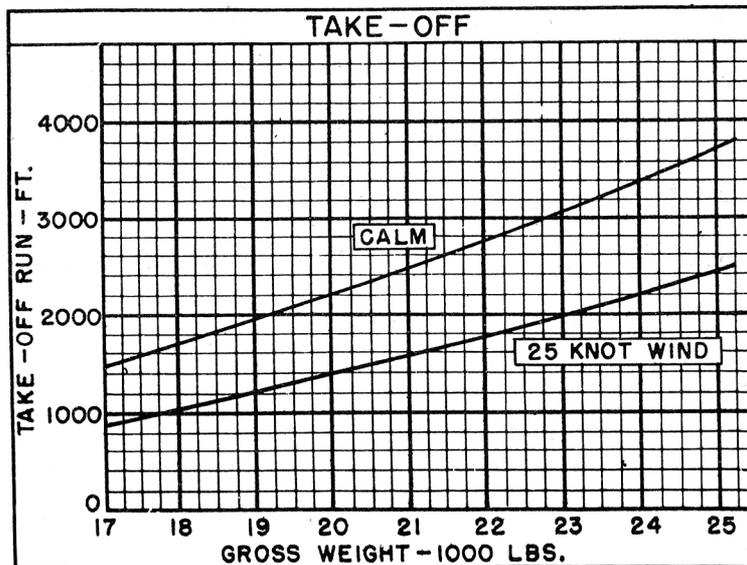
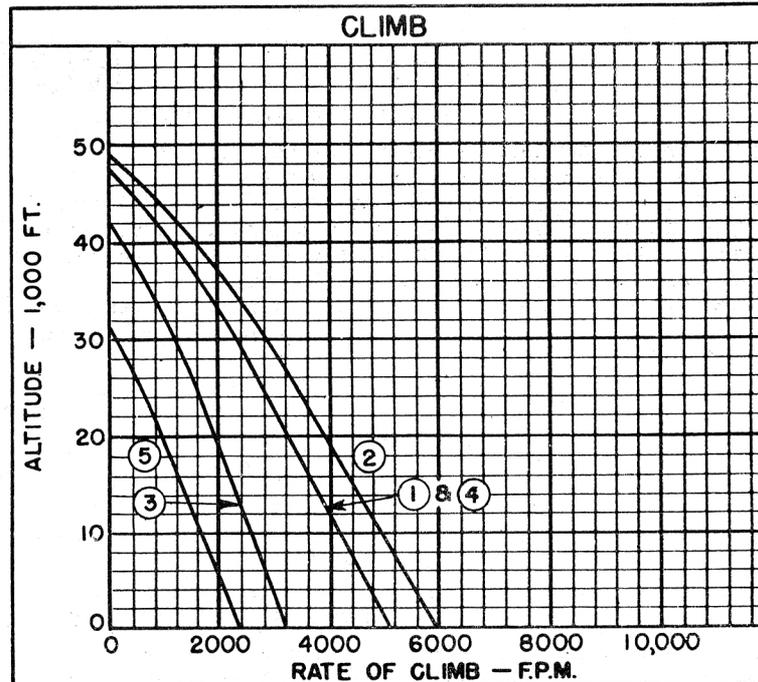
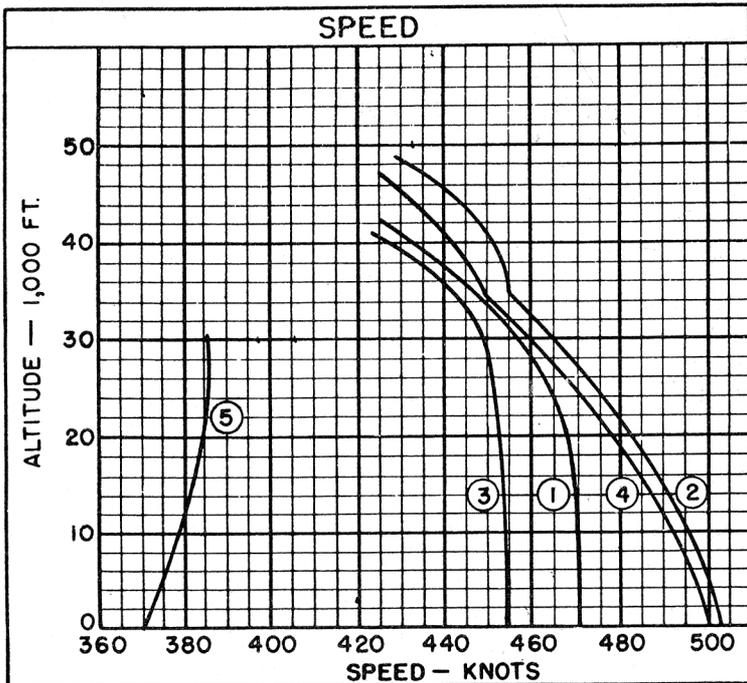
(B) Military Power

 Performance is based on calculations and NATC flight test of the F2H-2 airplane.

Range and radius are based on flight test fuel consumption increased by 5%.

Spotting: 200 ft. length is required to spot 24 airplanes (wings folded) on the 96 ft. wide deck immediately aft of the forward ramp on the CV-9 class carriers.

Standard Aircraft Characteristics NAVAR 1335E (REV. 2-50)



○ LOADING CONDITION COLUMN NUMBER

NOTES

GENERAL PURPOSE AND ESCORT FIGHTER COMBAT RADIUS PROBLEM (GAS TURBINE)

WARM-UP, TAXI, TAKE-OFF: 5 minutes at normal power.

CLIMB: To 40,000 feet at military power.

CRUISE-OUT: At V for long range at 40,000 feet. External tanks dropped when empty.

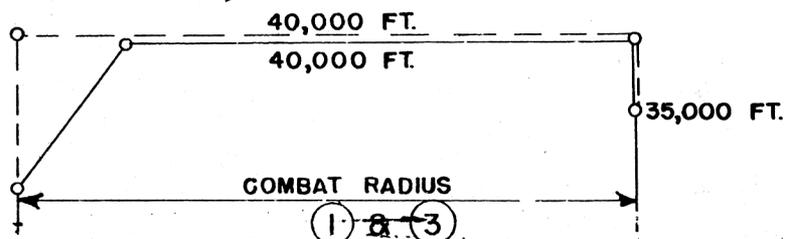
DESCEND: To 35,000 feet. (No fuel used, no distance gained.)

COMBAT: At 35,000 feet for 20 minutes at military power. (Assume combat concluded at cruise-back altitude.)

CRUISE-BACK: At V for long range at 40,000 feet.

RESERVE: 20 minutes at V for maximum endurance at sea level plus 5% of initial fuel load.

COMBAT RADIUS = CLIMB + CRUISE-OUT + CRUISE-BACK



GROUND SUPPORT FIGHTER COMBAT RADIUS PROBLEM (GAS TURBINE)

WARM-UP, TAXI, TAKE-OFF: 5 minutes at normal power.

CLIMB: To altitude for maximum radius (30,000 feet) at normal power.

CRUISE-OUT: At V for long range at 30,000 feet. External tanks dropped when empty.

DESCEND: To sea level. (No fuel used, no distance gained.)

LOITER: 10 minutes at V for maximum endurance at sea level.

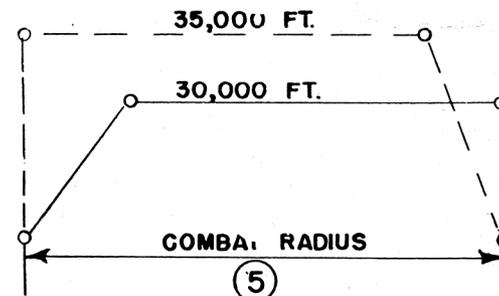
DROP BOMBS AND FIRE EXTERNAL ROCKETS

COMBAT: At sea level for 10 minutes at military power.

CLIMB: To altitude for maximum radius (35,000 feet) at normal power.

CRUISE-BACK: At V for long range at 35,000 feet.

RESERVE: 20 minutes at V for maximum endurance at sea level plus 5% of initial fuel load.



The F2H-4 airplane is the same as the F2H-3 airplane but carries AN/APG-37 radar instead of AN/APQ-41 radar. Weight and performance of the two airplanes are the same.

ELECTRONICS (Continued)

RADAR.....AN/APG-37
(150 aircraft only)

IFF.....AN/APX-6

IFF (I-R UNIT).....AN/APX-17
(Planned Service Installation)