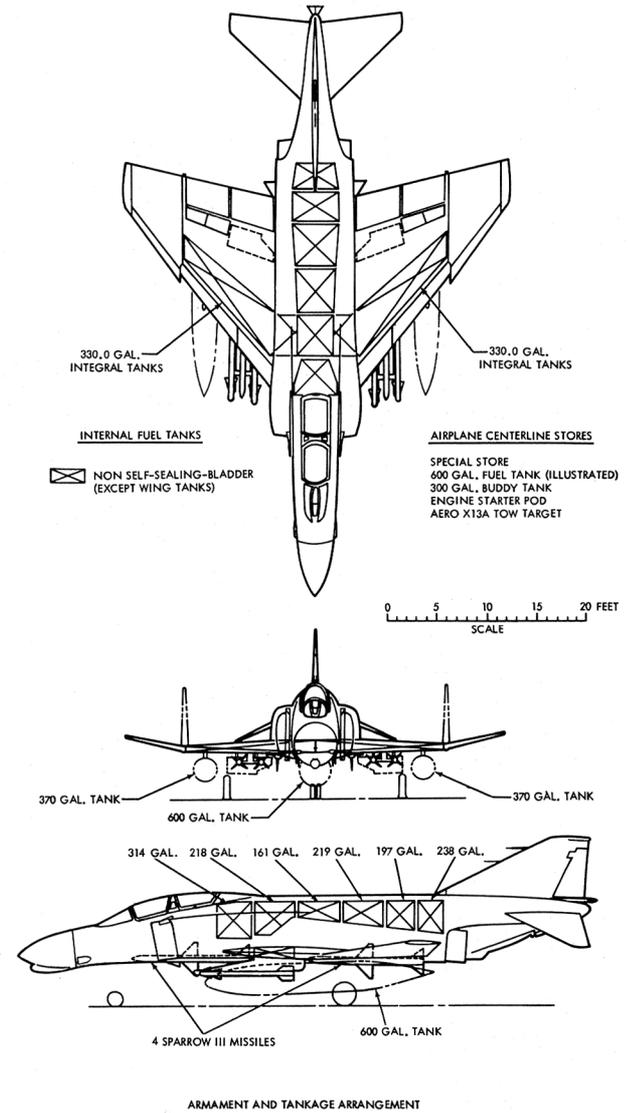
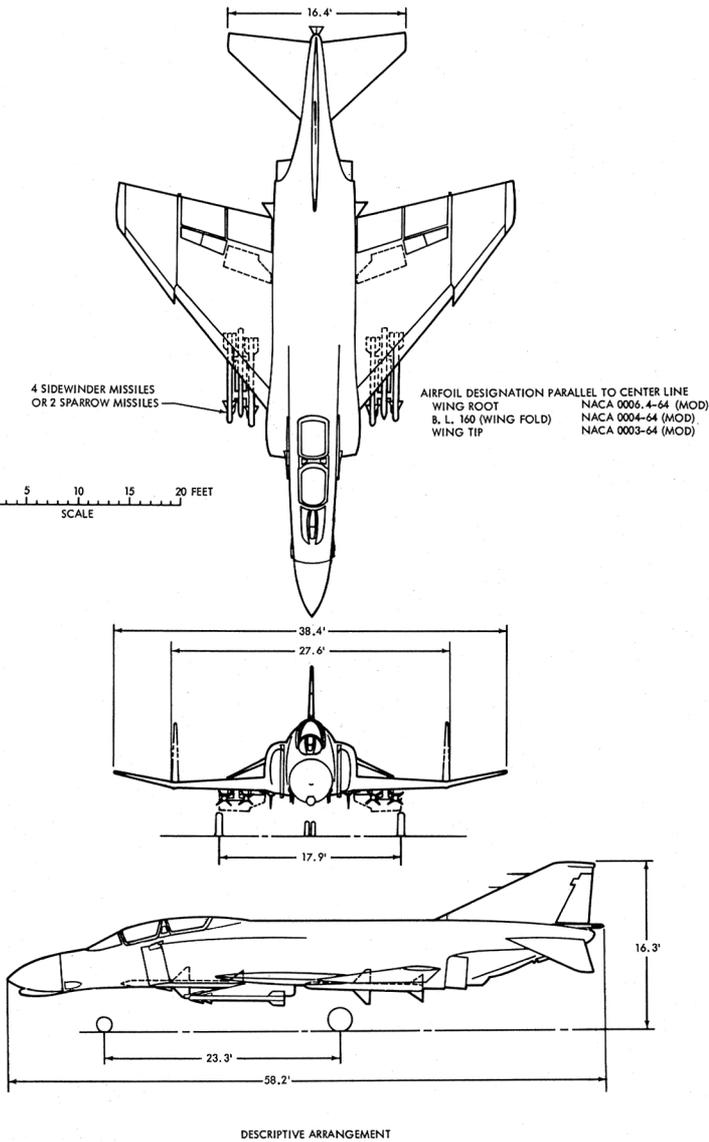


STANDARD AIRCRAFT CHARACTERISTICS

F4H-1 PHANTOM II

McDONNELL



POWER PLANT

NO. & MODEL.....(2) J79-GE-8
 MFR.....GENERAL ELECTRIC
 TYPEAXIAL FLOW
 LENGTH WITH A/B.207.3" (COLD)
 DIAMETER38.3" (COLD)
 AUGMENTATION.....AFTERBURNER

RATINGS

	LBS	@	RPM	@	ALT
MAX (A/B)	17000	(100%)	7685	SSL	
MIL	10900	(100%)	7685	SSL	
NORM	10300	(96%)	7385	SSL	
90% NORM	9270	(94%)	7220	SSL	
75% NORM	7720	(91.5%)	7025	SSL	
IDLE	410	(65.1%)	5000	SSL	

SPEC NO. G.E. E-763A

ORDNANCE

FOUR SPARROW III MISSILES ON
 FUSELAGE

AAM-N-6A (R)

FOUR SIDEWINDER 1C IRAH OR
 1A MISSILES ON WING PYLONS OR
 TWO SPARROW MISSILES

SPECIAL STORE ON C_L STATION

FIRE CONTROL SYSTEM AMCS AERO
 -1A

INCLUDES RADAR SET...AN/APQ-72
 RADAR SET GROUP...AN/APA-128
 INFRA-RED DETECTING...AN/AAA-4

ALL ATTITUDE BOMBING SYS.....
 AN/AJB-3A

MISSION AND DESCRIPTION

THE F-4B IS A TWIN-JET, TWO-PLACE GENERAL-PURPOSE FIGHTER WHOSE PRIMARY MISSION IS THE DESTRUCTION OF ENEMY AIRCRAFT. IT CARRIES FOUR AIR-TO-AIR MISSILES SEMI-SUBMERGED IN THE FUSELAGE PLUS UP TO FOUR WING PYLON-MOUNTED AIR-TO-AIR MISSILES. AN ALTERNATE MISSION INCLUDES DELIVERY OF A SPECIAL STORE, FOR EXTENDED RANGE MISSIONS, BOTH CENTERLINE AND WING TANKS CAN BE CARRIED. THE AIRPLANE CAN BE REFUELED IN FLIGHT AND ALSO CAN ACT AS A "BUDDY" TANKER.

SPECIAL FEATURES OF THE F-4B ARE THE SWEEP WING AND TAIL, AUTOMATICALLY CONTROLLED COMPRESSION-RAMP AIR INLETS, LEADING AND TRAILING-EDGE HIGH-LIFT FLAPS WITH BOUNDARY LAYER CONTROL. LATERAL CONTROL IS ACHIEVED BY MEANS OF SPOILERS IN COMBINATION WITHAILERONS. AN ALL-MOVABLE STABILATOR PROVIDES LONGITUDINAL CONTROL.

EQUIPMENT INCLUDES A PRESSURIZED CABIN WITH EJECTION SEATS, LIQUID OXYGEN SYSTEM, ANTI-G AND FULL PRESSURE SUIT PROVISIONS AND AUTOPILOT.

DEVELOPMENT

FIRST FLIGHT MAY 1958
 SERVICE USE JUNE 1961

WEIGHTS

LOADING	LBS	L.F.
EMPTY	27424	
BASIC	27694	
DESIGN	34500	6.5
COMBAT	38018	5.9
MAX. T.O.		
(FIELD)	56000	
(CAT)	56000	3.8
MAX.LDG.		
(FIELD)	38000	
(ARREST)	34000	4.2

FUEL AND OIL

NO. TANKS	TOTAL GAL	LOCATION
6	1347	FUSELAGE
2	660	WINGS
1	600	FUSELAGE
2	740	EXTERNAL (DROP) WING EXTERNAL (DROP)

FUEL GRADE JP4 OR JP5
 FUEL SPECS -(APPLICABLE)
 JP4-MIL-F-5624D
 JP5-MIL-J-5161E

OIL

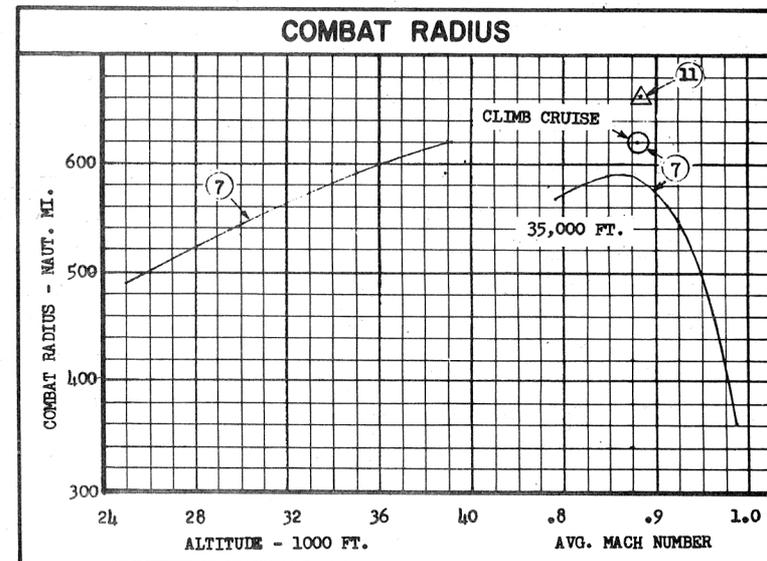
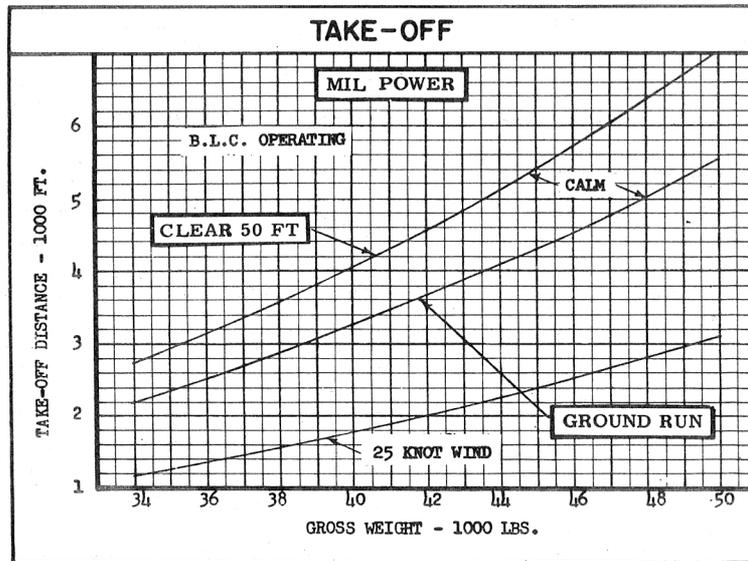
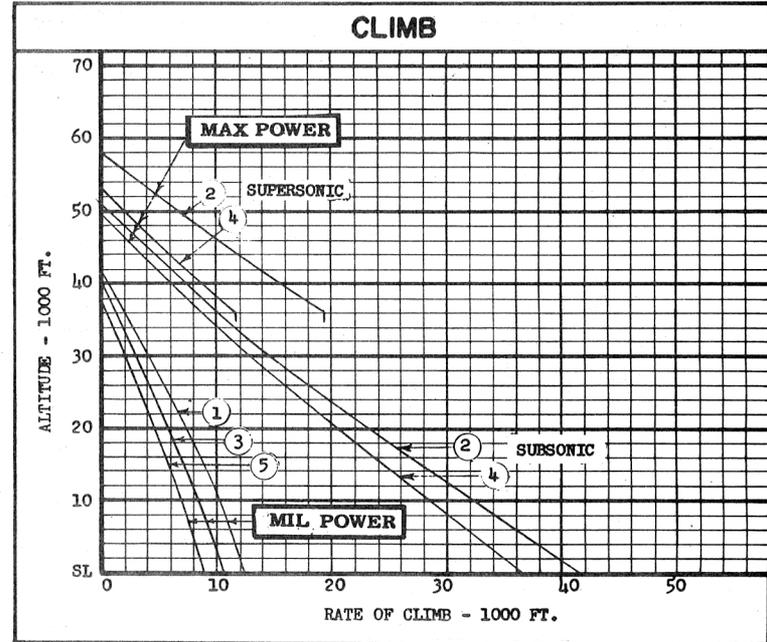
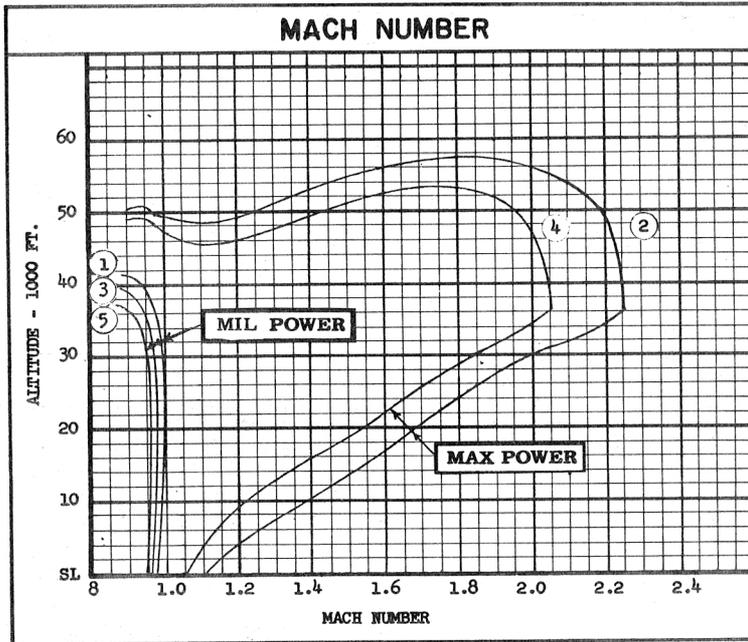
CAPACITY (GAL).....5.15
 SPECS (APPLCABLE) MIL-L-7808D
 OR MIL-C-8188B

DIMENSIONS

WING
 AREA 530 SQ. FT.
 SPAN 38.4 FT.
 M.A.C. 16.04 FT.
 SWEEPBACK $\frac{1}{4}$ CHORD 45⁰
 LENGTH 58.2 FT.
 HEIGHT 16.3 FT.
 TREAD 17.9 FT.

ELECTRONICS

CADC.....*32-87106
 CNI.....AN/ASQ-19
 AFCSAN/ASA-32
 NAVIGATIONAL COMPUTER.....AN/ASN-27
 ALTIMETERAN/APN-22
 FIRE CONTROL SYS. AMCS AERO-1A
 INCLUDES RADAR...AN/APQ-72
 RADAR SET GROUP...AN/APA-128
 IR DETECTING SYS.... AN/AAA-4
 ALL-ATTITUDE BOMB. SYS. AN/AJB-3A
 SPACE PROVISIONS FOR INSTAL. OF
 DATA LINS AN/ASW-13
 *SCD NO; "AN" NO. NOT YET
 ASSIGNED



○ LOADING CONDITION COLUMN NUMBER

			PERFORMANCE SUMMARY					
TAKE-OFF LOADING CONDITION			① FIGHTER (L) SPARROWS III	③ FIGHTER (L) SPARROWS III + (L) SIDEWINDERS	⑤ FIGHTER (L) SPARROWS III + (L) SIDEWINDERS (1) 600 GAL. TANK	⑦ FIGHTER (L) SPARROWS III + (1) 600 GAL. TANK	⑨ 15,000' STORE DEL (1) MK-28 + (2) 370 GAL. TANK	⑪ AREA INTERCEPTOR (L) SPARROWS III + (1) 600 GAL. TANK
TAKE-OFF GROSS WEIGHT	LB.		13,479	14,811	14,210	14,878	14,618	14,878
Fuel (JP-5, 6.8 lb./Gal.) Internal/External	lb.		13,648/-	13,648/-	13,648/4,080	13,648/4,080	13,648/5,032	13,648/4,080
Payload	lb.		1,608	2,368	2,368	1,608	2,010	1,608
Wing Loading	lb/sq. ft.		82.0	81.5	92.8	90.3	93.6	90.3
Stall Speed-(Approach Pwr. BLC on, Wing Rock)	kn.		132	134	140	139	141	139
Take-Off Run At S.L. - Calm	A/B	ft.	3,960/2,060	4,260/2,210	5,330/2,740	4,990/2,570	5,450/2,790	4,990/2,570
Take-Off Run at S.L.-25 Knot Wind	A/B	ft.	2,200/1,280	2,375/1,380	2,985/1,750	2,790/1,640	3,050/1,790	2,790/1,640
Take-Off to Clear 50 Ft. Obstacle	A/B	ft.	4,970/2,490	5,350/2,670	6,750/3,310	6,320/3,100	6,890/3,370	6,320/3,100
Max. Speed/Altitude	A	M/ft.	1.00/25,000	.98/25,000	.97/20,000	.98/25,000	.97/20,000	.98/25,000
Rate of Climb at S.L.	A	ftm.	12,300	10,600	9,000	10,350	9,950	10,650
Time: S.L. to 30,000 Ft.	A/B	min.	3,67/1.19	4.73/1.30	6.11/1.57	4.74/1.39	5.00/1.46	6.48/2.40
Time: S.L. to 40,000 Ft.	A/B	min.	7.92/2.16	- / 2.40	- / 2.95	- / 2.63	- / 2.80	17.53/3.64
Service Ceiling (100 fpm)	A	ft.	41,050	39,400	37,000	38,700	37,950	40,000
Combat Range	C	na.mi.	1,164	1,005	1,339	1,538	1,591	1,606
Average Cruising Speed	M		.88	.87	.87	.88	.88	.88
Initial Cruising Altitude	ft.		36,950	36,450	34,500	34,950	34,200	34,650
Final Cruising Altitude	ft.		42,200	41,250	41,050	42,000	41,750	42,000
Combat Radius	na.mi.		429	344	518	620	625	625
Mission Time	hr.		1.78	1.48	2.18	2.54	2.50	2.54
Average Cruising Speed	M		.88	.88	.87	.88	.88	.89
I.F.R. Radius	na.mi.		802	678	903	1,067	1034	1064
Mission Time	hr.		3.51	3.07	3.99	4.57	4.38	4.53
C.A.P. Loiter Time	hr.		1.10	.76	1.44	1.86	-	/
Mission Time	hr.		1.77	1.46	2.16	2.53	-	/
COMBAT LOADING CONDITION			② SPARROWS RETAINED	④ SPARROWS & SIDEWINDER RETAINED	⑥ SPARROWS & SIDEWINDER RETAINED	⑧ SPARROWS RETAINED	⑩ STORE RETAINED	⑫ CLEAN
COMBAT WEIGHT	LB.		38,018	39,350	41,849	40,517	41,495	38,909
Engine Power	Maximum		8,187	8,187	10,635	10,635	11,206	10,635
Fuel	lb.		2.25	2.05	.92	.95	1.53	2.23
Combat Speed	M		40,000	40,000	40,000	40,000	15,000	50,000
Combat Altitude	ft.		15600/7400	8700/6300	- /400	- /1100	- /24800	7400/350
Rate of Climb at Combat Altitude	E/F	ftm.	57100/50100	52500/48800	- /39600	- /41600	55200/48200	57500/49800
Combat Ceiling (500 fpm)	E/F	ft.	41,550	36,450	11,450	13,300	37,500	41,650
Rate of Climb at S.L.	ftm.		1.11	1.06	.96	.98	1.10	1.12
Max. Speed at S.L.	M		2.23/45000	2.02/45000	.98/25000	1.00/25000	2.21/45000	2.27/45000
Max. Speed/Altitude	M/ft.							
LANDING WEIGHT	LB.		30,379	30,998	31,253	30,640	D 30693/30414	D 30644/30368
Fuel	lb.		2,156	2,203	2,407	2,366	D 2411/2135	D 2366/2094
Stall Speed-(Power-Off, BLC Off)	kn.		127	128	129	127	D 127/127	D 127/127
Stall Speed-(Approach Power, BLC on, Wing Rock)	kn.		110	111	112	111	D 111/110	D 111/110
Distance-Ground Roll	ft.		2,160	2,210	2,220	2,180	D 2190/2170	D 2180/2160
Distance-Over 50 Ft. Obstacle	ft.		2,430	2,480	2,500	2,450	D 2460/2440	D 2450/2430

NOTES

PERFORMANCE BASIS: CALCULATIONS & FLIGHT TEST

RANGE AND/OR RADIUS: RANGE AND RADIUS ARE BASED ON ENGINE SPECIFICATION FUEL CONSUMPTION INCREASED 5%

SPOTTING: A TOTAL OF 57 AIRCRAFT CAN BE ACCOMMODATED IN A LANDING SPOT ON THE FLIGHT AND HANGAR DECKS OF A CVA-19 CLASS ANGLED DECK CARRIER (FLIGHT 30 ; HANGAR 27 AIRPLANES)

A. Military Rated Thrust

B. Maximum Rated Thrust

C. Using single engine loiter during landing reserve period increases range approximately 30 nautical miles.

D. C.A.P. Radius - 150 Nautical Miles

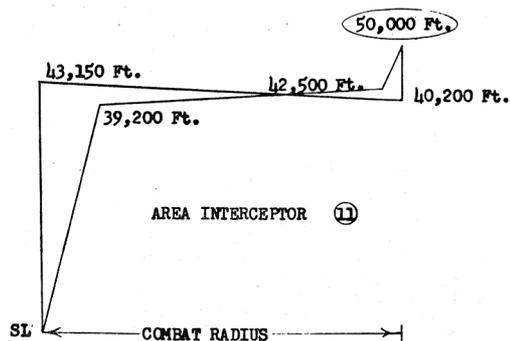
E. SUPERSONIC CLIMB SPEED SCHEDULE

F. Subsonic Climb Speed Schedule

NOTES

AREA INTERCEPTOR

- 1) WARM-UP, TAKE-OFF, ACCELERATE: 2 min. with normal thrust at sea level.
- 2) CLIMB: On course to cruise ceiling with military thrust.
- 3) CRUISE-OUT: At altitude and speeds for long range at cruise ceiling.
- 4) CLIMB: On course to combat ceiling with maximum thrust.
- 5) COMBAT FUEL ALLOWANCE: 5 min. at MN of 1.5 with maximum thrust at 50,000 ft. Expend missiles
- 6) CRUISE-BACK: At altitudes and speeds for maximum range.
- 7) RESERVE: 20 min. at speed for maximum endurance at sea level (2 engines operating) plus 5% of initial fuel load.

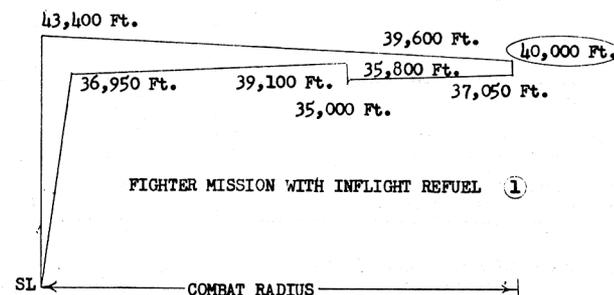


MISSION TIME: EXCLUDES WARMUP, TAKE-OFF AND RESERVE FUEL
 CYCLE TIME: EXCLUDES WARMUP AND TAKE-OFF FUEL

INFLIGHT REFUEL MISSIONS

- 1) WARM-UP, TAKE-OFF, ACCELERATE: 5 min. with normal thrust at sea level.
- 2) CLIMB: On course to optimum cruise altitude with military thrust.
- 3) CRUISE-OUT: At altitudes and speeds for maximum range.
- 4) DESCEND: to 35,000 ft. for rendezvous with tanker.
- 5) LOITER: 15 min. rendezvous allowance at maximum endurance speeds.
- 6) REFUEL: From A3D-2 Tanker at the following distances from base:
 - ① G.P. Fighter
 - ③ G.P. Fighter
 - ⑤ G.P. Fighter
 - ⑦ G.P. Fighter
 - ⑨ Store delivery
 - MIL-C-5011A Mission
 - Design Mission
 - ⑪ Area Interceptor
 - MIL-C-5011A Mission
 - Design Mission
- 7) CLIMB: On course to optimum cruise altitude with military thrust.

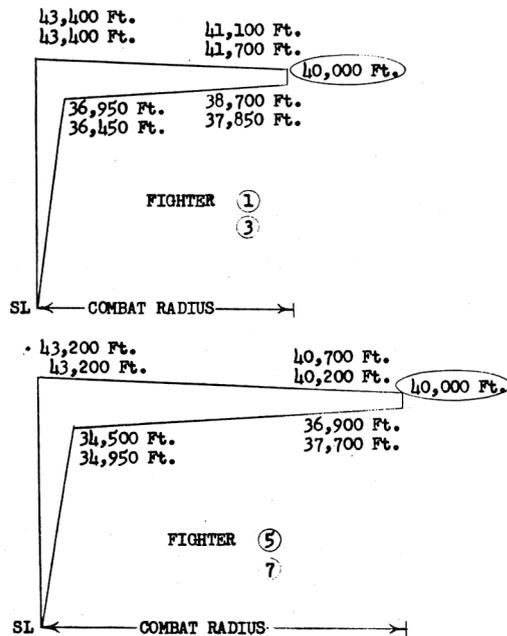
THE REMAINING STEPS ARE DEFINED FROM STEP (3) OF THE PARTICULAR MISSION.



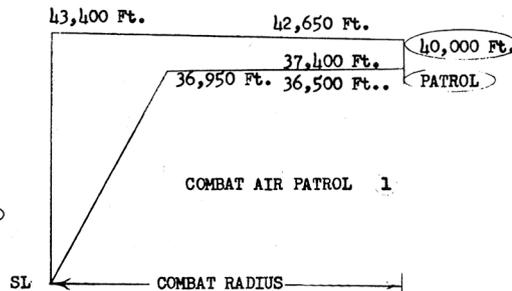
NOTES

GENERAL PURPOSE FIGHTER

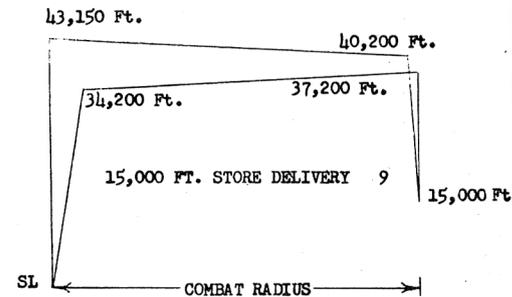
- 1) WARM-UP, TAKE-OFF, ACCELERATE: 5 min. with normal thrust at sea level.
- 2) CLIMB: On course to cruise altitude with military thrust
- 3) CRUISE-OUT: At altitude and speeds for maximum range
- 4) COMBAT FUEL ALLOWANCE: Accelerate with maximum power at 40,000 ft. from cruise speed to MN of 1.5 and remain at this speed and altitude for 2 min. at maximum power
- 5) CRUISE-BACK: At altitudes and speeds for maximum range
- 6) RESERVE: 20 min. at speed for maximum endurance at sea level (2 engines operating) plus 5% of initial fuel load.

COMBAT AIR PATROL

- 1) WARM-UP, TAKE-OFF, ACCELERATE: Same as G.P. Fighter.
- 2) CLIMB: Same as G.P. Fighter.
- 3) CRUISE-OUT: To a point 150 na.mi. from base at altitudes and speeds for best range
- 4) LOITER: On station at speed and altitude for maximum endurance
- 5) COMBAT FUEL ALLOWANCE: Same as G.P. Fighter.
- 6) CRUISE-BACK: 150 na.mi. to base at speed and altitude for best range.
- 7) RESERVE: Same as G.P. Fighter.

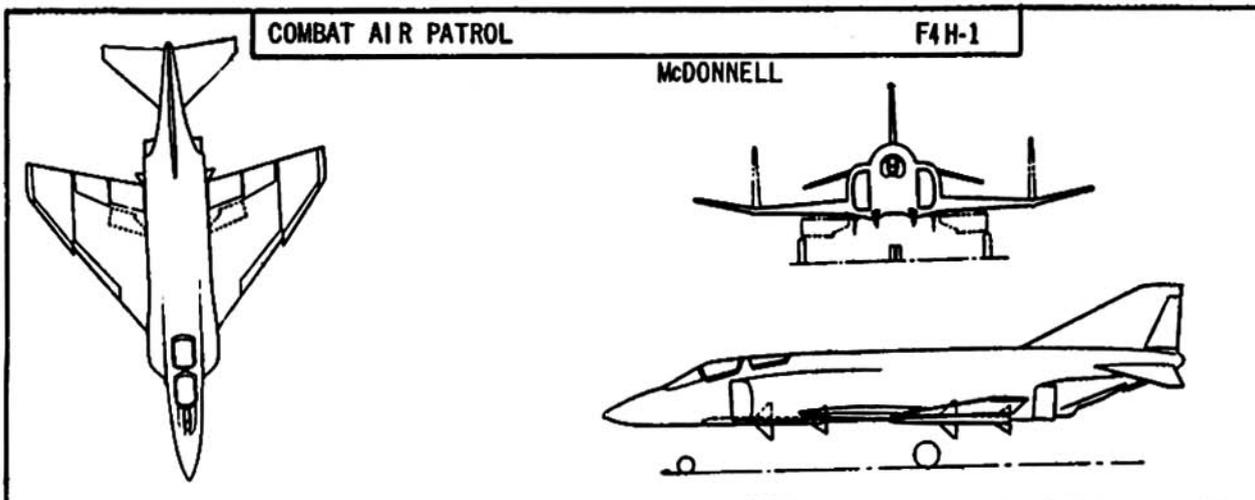
15,000 FT. STORE DELIVERY

- 1) WARM-UP, TAKE-OFF, ACCELERATE: Same as G.P. Fighter.
- 2) CLIMB: Same as G.P. Fighter.
- 3) CRUISE-OUT: Same as G.P. Fighter.
- 4) DESCEND to 15,000 FT.: No fuel used, no credit for distance gained
- 5) STORE DELIVERY AND EVASIVE ACTION: Fuel for 2 min. at speed midway between maximum speed with military thrust and maximum speed with maximum thrust using fuel flow at maximum thrust.
- 6) CLIMB: On course to cruise altitude using maximum thrust.
- 7) CRUISE-BACK: At altitudes and speeds for best range.
- 8) RESERVE: Same as G.P. Fighter.



MISSION TIME: EXCLUDES WARMUP, TAKE-OFF AND RESERVE FUEL
CYCLE TIME: EXCLUDES WARMUP AND TAKE-OFF FUEL

CHARACTERISTICS SUMMARY



COMBAT AIR PATROL

F4H-1

MCDONNELL

WING AREA 530 sq. ft.

LENGTH 57' - 7"

WING SPAN 38' - 8"

HEIGHT 16' - 4"

AVAILABILITY			PROCUREMENT			
NUMBER AVAILABLE			NUMBER DELIVERED			
			IN FISCAL YEARS			
ACTIVE	RESERVE	TOTAL				

STATUS	
First Flight	May 1958
Service Use (Estimated)	November 1960

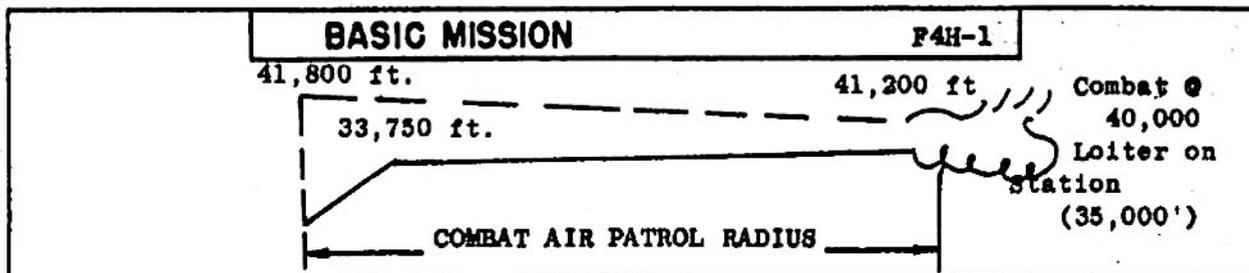
ENGINES			
(2) GE J79-GE-8			
	LBS	RPM	ALT
MIL & AB	17,000	7460	SSL
MIL	10,700	7460	SSL
NORM.	10,000	7385	SSL
SPEC. NO. E-733			

FEATURES
Crew - 2
Boundary Layer Control
Speed Brakes
Leading and Trailing Edge Flaps

ARMAMENT
4 SPARROW III Missiles
4 SIDEWINDER Missiles
1 Special Store
Semi-Submerged Sparrows
Fire Control System
AMCS Aero X-14

MAVER 1519 A (REV. 1-49)

CHARACTERISTICS SUMMARY



PERFORMANCE

COMBAT RADIUS	COMBAT RANGE	SPEED
150 naut. mi. 524 knots avg. Combat Air Patrol Mission Time 2.4 hrs. Loiter Time 1.8 hrs. Loading: 4 SPARROW III Missiles - (1) 600 gal tank	1440 naut. mi. 524 knots avg. -- hours	707 knots at S.L. 1070 knots at 25,000 ft. 1195 knots at 40,000 ft. Combat Weight MILITARY - A.B. Power
CLIMB	CEILING	TAKE OFF
13,200 ft./min. Sea Level, T. O. wt. Military Power	40,000 ft. 100 ft./min., T. O. wt. Military Power	4575 ft. Calm No Assist Military Thrust
45,000 ft./min Sea Level Combat Weight Military A.B. Power	57,000 ft. 500 ft./min. Combat Weight Military - A.B. Power	3250 - 25 Knot Wind Military Thrust
LOAD	WEIGHTS	STALLING SPEED
Fuel 2572 gal. fixed 1972 drop 600 JP-5 Fuel	Empty 27,538 lbs. *Combat 40,261 lbs. Take-off 47,451 lbs. *SPARROWS Retained	102.5 knots Approach Power Flaps down, LDG wt. TIME TO CLIMB 40,000 ft. in 2.0 min. T.O. Wt., Max. Power

NOTES

PERFORMANCE is based on CALCULATIONS AND FLIGHT TEST with the J79-GE-2 engine
 RANGE and RADIUS are based on engine specification ufuel consumption and
 adjusted for F4H-1 flight test results with the J79-GE-2 engine
 GENERAL PURPOSE FIGHTER RADIUS - 410 N.Mi. MISSION TIME - 1.6 hrs.
 GENERAL PURPOSE IFR MISSION RADIUS - 760 n.mi. MISSION TIME - 3.5 hrs.
 REASON FOR REISSUE: Incorporation of flight test data