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DOD DIR 5200.10

# Standard Aircraft Characteristics

## NAVY MODEL F-4B AIRCRAFT

(TITLE UNCLASSIFIED)

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1 MAY 1955 IN PART AND ALL ADDENDA THERETO

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PUBLISHED BY DIRECTION OF THE  
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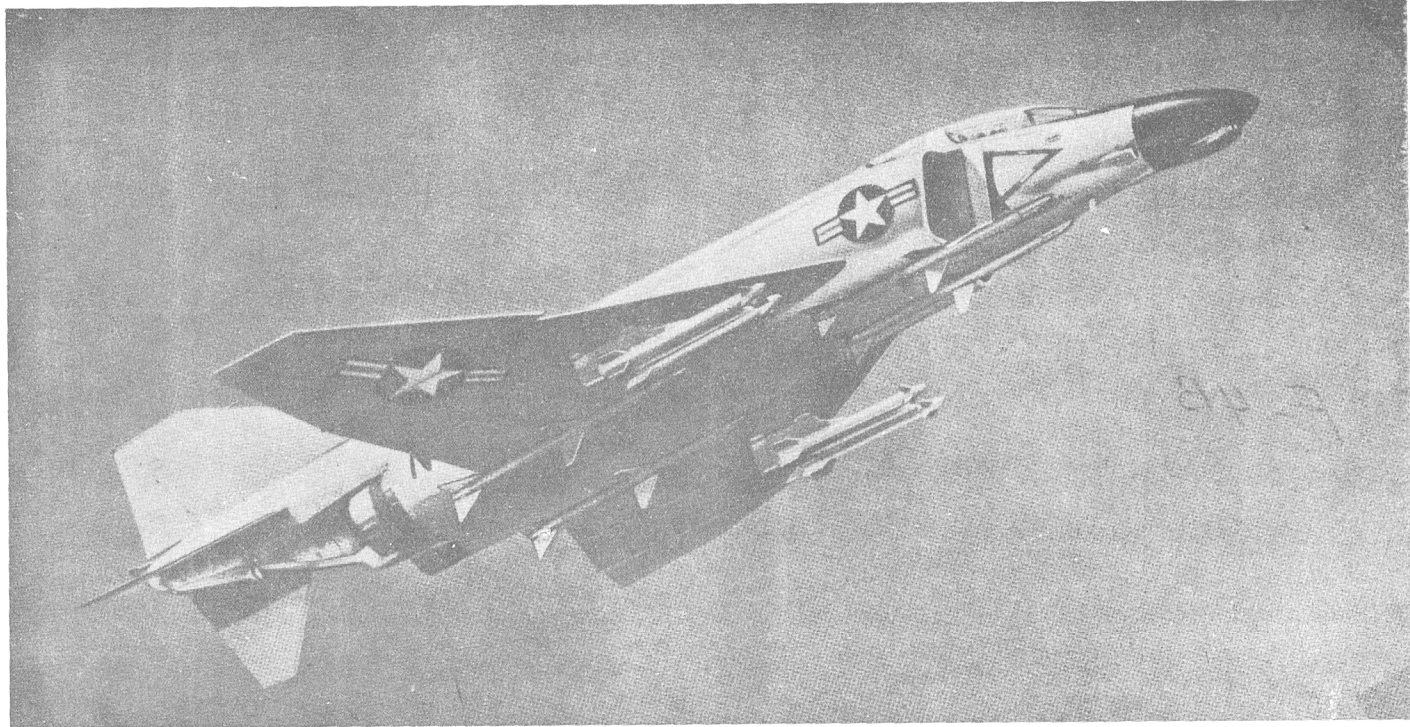
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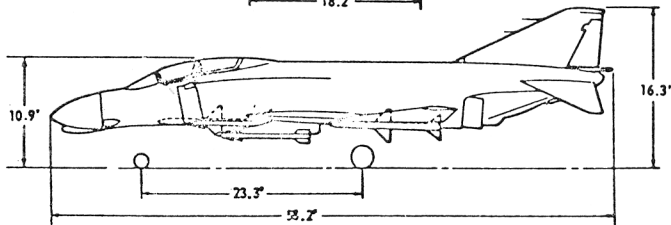
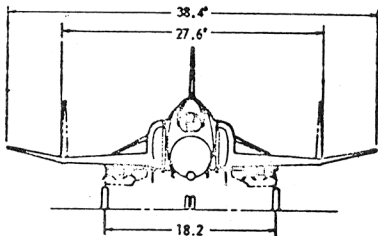
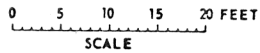
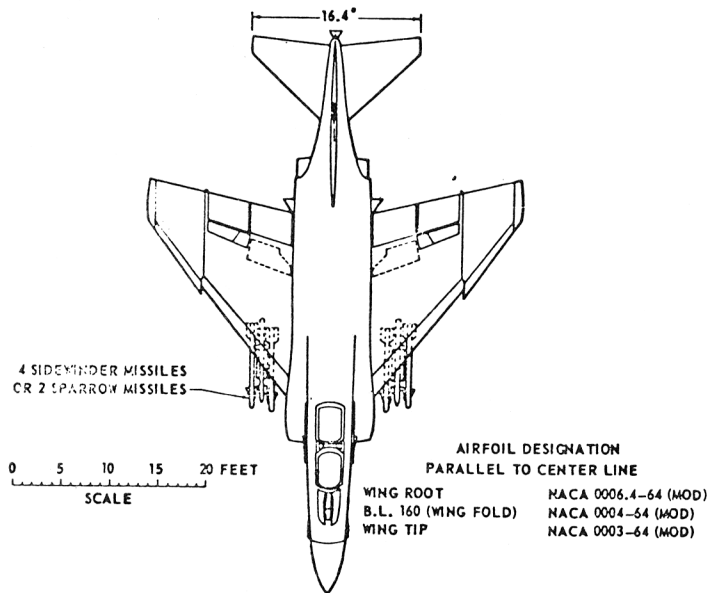
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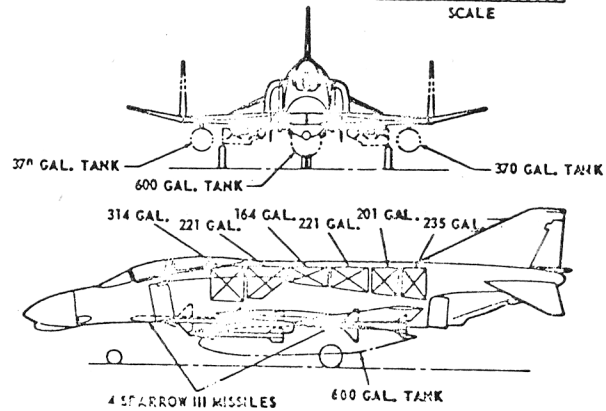
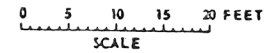
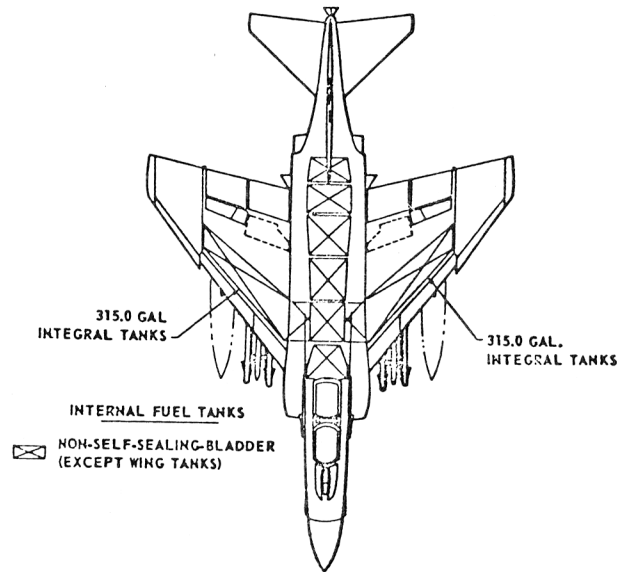
# STANDARD AIRCRAFT CHARACTERISTICS

F-4B PHANTOM II

MCDONNELL



DESCRIPTIVE ARRANGEMENT



ARMAMENT AND TANKAGE ARRANGEMENT

POWER PLANT		MISSION AND DESCRIPTION		WEIGHTS																																																																											
No. and Model (2) J79-GE-8 Manufacturer GENERAL ELECTRIC Specification G.E. E-763A Type AXIAL FLOW TURBOJET Augmentation AFTERBURNER Length with A/B 208.45 INCHES (COLD) Diameter 38.3 INCHES MAX. (COLD) Dry Weight 3608 LB. Tail Pipe VARIABLE POSITION		THE F-4B IS A TWO-PLACE, TWIN-JET, GENERAL PURPOSE FIGHTER WHOSE PRIMARY MISSION IS THE DESTRUCTION OF ENEMY AIRCRAFT. THE CAPABILITY TO CARRY AND DELIVER CONVENTIONAL AND SPECIAL WEAPONS ENABLES THE AIRCRAFT TO PERFORM INTERMEDIATE AND LONG RANGE ATTACK MISSIONS. BASIC ARMAMENT IS FOUR AIR-TO-AIR MISSILES CARRIED SEMI-SUBMERGED UNDER THE FUSELAGE PLUS UP TO FOUR WING PYLON MOUNTED AIR-TO-AIR MISSILES. A COMBINATION OF CONVENTIONAL BOMBS, NUCLEAR BOMBS, ROCKET PACKAGES AND FUEL TANKS CAN BE CARRIED ON FIVE STATIONS BENEATH THE WING AND FUSELAGE. THREE EXTERNAL TANKS PLUS A RETRACTABLE PROBE FOR INFLIGHT REFUELING PROVIDES FOR EXTENDED RANGE MISSIONS.		<table border="1"> <thead> <tr> <th rowspan="2">LOADING</th> <th colspan="2">SUBSONIC</th> <th rowspan="2">SUPERSONIC</th> </tr> <tr> <th>LB</th> <th>L.F.</th> </tr> </thead> <tbody> <tr> <td>EMPTY</td> <td>27897*</td> <td></td> <td></td> </tr> <tr> <td>BASIC DESIGN</td> <td>28265</td> <td></td> <td></td> </tr> <tr> <td>COMBAT</td> <td>37500</td> <td>8.5</td> <td>6.5</td> </tr> <tr> <td>Max. T.O. FIELD</td> <td>38507</td> <td>8.3</td> <td>6.3</td> </tr> <tr> <td>Max. LANDING FIELD</td> <td>54800**</td> <td></td> <td></td> </tr> <tr> <td>ARREST</td> <td>54800**</td> <td></td> <td></td> </tr> <tr> <td>FIELD</td> <td>38000</td> <td></td> <td></td> </tr> <tr> <td>ARREST</td> <td>34000</td> <td></td> <td></td> </tr> </tbody> </table> <p>*DERIVED FROM ACTUAL WEIGHTS                      **FOR EMERGENCY CONDITIONS 56,000 LBS IS ALLOWABLE BUT GREATER THAN NORMAL TIRE AND WHEEL WEAR MAY BE EXPECTED FROM TAKE-OFF AT G.W. ABOVE 54,800 LB.</p>			LOADING	SUBSONIC		SUPERSONIC	LB	L.F.	EMPTY	27897*			BASIC DESIGN	28265			COMBAT	37500	8.5	6.5	Max. T.O. FIELD	38507	8.3	6.3	Max. LANDING FIELD	54800**			ARREST	54800**			FIELD	38000			ARREST	34000																																					
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PERFORMANCE SUMMARY					
TAKE-OFF LOADING CONDITION	(1) FIGHTER (4) SPARROWS III	(3) FIGHTER (4) SPARROW III (1) 600 GAL TK.	(5) FIGHTER(4) SPIII (1) 600 GAL TK. (2) 370 GAL TKS.	(7) FIGHTER (4) SP III + (4) SDW (1) 600 GAL TK.	(9) AREA INTERCEPT (4) SP III (1) 600 GAL TK.
TAKE-OFF WEIGHT LB.	43,907	48,287	53,999	49,659	48,287
FUEL INTERNAL/EXTERNAL (JP-5) LB./LB.	13,505/—	13,505/4,080	13,505/9,112	13,505/4,080	13,505/4,080
PAYLOAD LB.	1,608	1,608	1,608	2,332	1,608
WING LOADING LB./SQ.LB.	82.8	91.1	101.9	93.7	91.1
STALL SPEED - POWER-OFF /APPR. POWER KN.	152/133	159.6/139	168.6/147	161.7/141	159.6/139
TAKE-OFF RUN AT S.L. - CALM (A)(B) FT.	4,025/2,085	5,110/2,600	6,710/3,400	5,465/2,780	5,110/2,600
TAKE-OFF RUN AT S.L. 25KN. WIND (A)(B) FT.	3,000/1,510	3,800/1,940	4,850/2,470	4,090/2,090	3,800/1,940
TAKE-OFF TO CLEAR 50 FT. - CALM (A)(B) FT.	5,060/2,520	6,450/3,150	8,560/4,110	6,880/3,350	6,450/3,150
MAX. M/ALTITUDE/SPEED(A) M/FT./KN.	993/25,000/597	976/20,000/599	962/20,000/591	961/20,000/590	976/20,000/599
RATE OF CLIMB AT S.L. (A) FPM.	12,170	10,200	8,400	8,880	10,200
TIME: S.L. TO 30000 FT. (A)(B) MIN.	3.70/1.19	4.72/1.39	6.15/1.67	6.07/1.59	5.80/2.41
TIME: S.L. TO 40000 FT. (I)(A)(B) MIN.	7.80/2.10	10.41/2.63	11.25/3.31	11.59/3.05	11.42/3.71
SERVICE CEILING (100 FPM.) (A) FT.	41,000	38,550	35,550	36,750	38,550
COMBAT RANGE N.MI.	1,126	1,496	1,803	1,301	1,563
AVERAGE CRUISING SPEED KN.	505	505	505	499	505
CRUISING ALTITUDE(S) FT.	37,065/42,060	34,960/41,910	32,900/41,765	34,465/41,055	34,600/41,900
COMBAT RADIUS/MISSION TIME (E) N.MI./HR.	410/1.71	509/2.47	756/3.09	495/2.10	(d) 613/2.51:640/2.62
AVERAGE CRUISING SPEED KN.	505	505	505	499	(d) 505/505
I.F.R. RADIUS/MISSION TIME(E) N.MI/HR.	771/3.12	1025/4.42	990/4.28	853/3.79	(d) 1023/4.22/1024/4.4
CAP LOITER TIME(F)/MISSION TIME HR/HR.	1.03/1.70	1.78/2.45	2.40/3.07	1.33/2.04	—
COMBAT LOADING CONDITION	(2) (4) SPARROWS III	(4) (4) SPARROWS III	(6) (4) SPARROW III	(8) (4) SPIII + (4)SDW	(10) CLEAN
COMBAT WEIGHT LB.	38,505	41,004	43,958	42,376	39,396
ENGINE POWER	MAXIMUM	MILITARY	MAXIMUM	MAXIMUM	MAXIMUM
FUEL LB.	8,103	10,551	13,505	10,551	10,551
COMBAT SPEED/COMBAT ALTITUDE KN/FT.	(g) 1,290/40,000	(h) 545/40,000	(g) 1,284/40,000	(g) 1,175/40,000	(g) 1,279/50,000
RATE OF CLIMB/COMBAT ALTITUDE FPM./FT.	(g) 15,370/40,000	(h) 960/40,000	(g) 13,000/40,000	(g) 7,880/40,000	(g) 7,200/50,000
COMBAT CEILING (500 FPM.) (G)(H) FT.	56,850/49,950	-/41,400	54,400/47,300	51,100/47,350	57,200/49,750
RATE OF CLIMB AT S.L. FPM.	40,800	13,150	35,700	34,050	40,550
MAX. SPEED AT S.L. KN.	734	648	727	701	741
MAX. SPEED/ALTITUDE KN./FT.	1,279/45,000	601/25,000	1,273/45,000	1,158/45,000	1,302/45,000
LANDING WEIGHT LB.	30,955	31,212	31,464	31,212	(d) 31,212/30,953
FUEL LB.	2,161	2,367	2,619	2,367	(d) 2367/2108
STALL SPEED - POWER-OFF/APPR. POWER KN./KN.	128/111	129/112	129/112	129/112	(d) 129/112:128/111
DIST. -GRD ROLL/OVER 50 FT. OBS (J) FT./FT.	2,220/3,200	2,235/3,225	2,250/3,250	2,235/3,225	(d) 2235/3225:5200
NOTES:	(A) MILITARY RATED THRUST (B) MAXIMUM RATED THRUST (C) USING SINGLE ENGINE LOITER DURING LANDING RESERVE PERIOD INCREASES RANGE APPROX 30 NA.MI. (D) MIL-C-5011A MISSION DEFINITION DESIGN MISSION DEFINITION (E) MISSION TIME EXCLUDES WARM-UP, T.O. AND RESERVE TIME		(F) C.A.P. RADIUS - 150 NAUTICAL MILES (G) SUPERSONIC CLIMB SPEED SCHEDULE (H) SUBSONIC CLIMB SPEED SCHEDULE (I) 40,000 FT OR COMBAT CEILING WHICHEVER IS LOWER (J) WITH DRAG CHUTE		

PERFORMANCE SUMMARY					
TAKE-OFF LOADING CONDITION		(11) 15000 <sup>v</sup> STORE DEL. (1) MK-28 + (2) 370 GAL TRS.	(13) PI-LO-11 ATTACK (12) MK-82 (2) 370 GAL TRS		
TAKE-OFF WEIGHT	LB.	50,102	55,170		
FUEL INTERNAL/EXTERNAL (JP-5)	LB./LB.	13,505/5,032	13,505/5,032		
PAYLOAD	LB.	2,040	6,300		
WING LOADING	LB./SQ.LB.	94.5	104.1		
STALL SPEED - POWER-OFF/APPR. POWER	KN.	162.5/142	170.4/149		
TAKE-OFF RUN AT S.L. - CALM (A)(B)	FT.	5,585/2,845	7,050/3,570		
TAKE-OFF RUN AT S.L. 25 <sup>KN</sup> WIND (A)(B)	FT.	4,180/2,140	5,410/2,730		
TAKE-OFF TO CLEAR 50 FT. - CALM (A)(B)	FT.	7,060/3,420	9,030/4,315		
MAX M/ALTITUDE/SPEED (A)	M/FT./KM.	.962/20,000/591	.922/20,000/566		
RATE OF CLIMB AT S.L. (A)	FPM.	9,850	6,800		
TIME: S.L. TO 30000 FT. (A)(B)	MIN.	4.75/1.42	10.68/2.12		
TIME: S.L. TO 40000 FT. (i)(A)(B)	MIN.	10.37/2.72	13.80/4.42		
SERVICE CEILING (100 FPM.) (A)	FT.	37,950	31,650		
COMBAT RANGE	N.MI.	1,480	982		
AVERAGE CRUISING SPEED	KN.	505	489		
CRUISING ALTITUDE(S)	FT.	34,550/41,650	32,125/38,200		
COMBAT RADIUS/MISSION TIME (E)	N.MI./HR.	(d) 564/2.27 769/3.05	461/2.13		
AVERAGE CRUISING SPEED	KN.	(d) 505/505	489		
IFR RADIUS/MISSION TIME (E)	N.MI./HR.	(d) 1000/4.25 1255/5.32	817/3.83		
CAP LOITER TIME (F) MISSION TIME	HR/HR	--	--		
COMBAT LOADING CONDITION		(12) (1) MK-29	(14)(2) TER@ B.L. 81.50 + (1) CL MER		
COMBAT WEIGHT	LB.	42,007	40,775		
ENGINE POWER		MAXIMUM	MILITARY		
FUEL	LB.	11,122	11,122		
COMBAT SPEED/COMBAT ALTITUDE	KN./FT.	(G) 958/15,000	(H) 628/3,000		
RATE OF CLIMB/COMBAT ALTITUDE	FPM./FT.	(H) 24,900/15,000	(H) 10,850/3,000		
COMBAT CEILING (500 FPM.) (G)(H)	FT.	54,900/48,100	-/39,950		
RATE OF CLIMB AT S.L.	FPM.	37,500	11,500		
MAX. SPEED AT S.L.	KN.	777	628		
MAX. SPEED/ALTITUDE	KN./FT.	1261/45,000	589/25,000		
LANDING WEIGHT	LB.	(d) 31,260/31,001	32,203		
FUEL	LB.	(d) 2,415/1,156	2,550		
STALL SPEED - POWER-OFF/APPR. POWER	KN./KN.	(d) 129/123/128/112	131/114		
DIST. - GRD ROLL/OVER 50 FT. OBS (J)	FT./FT.	(d) 2240/3230 2225/3205	2,300/3,310		
NOTES:	(A) MILITARY RATED THRUST (B) MAXIMUM RATED THRUST (C) USING SINGLE ENGINE LOITER DURING LANDING RESERVE PERIOD INCREASES RANGE APPROX 30 NA.MI. (D) MIL-C-5011A MISSION DEFINITION/DESIGN MISSION DEFINITION (E) MISSION TIME EXCLUDES WARM-UP, T.O. AND RESERVE TIME	(F) C.A.P. RADIUS - 150 NAUTICAL MILES (G) SUPERSONIC CLIMB SPEED SCHEDULE (H) SUBSONIC CLIMB SPEED SCHEDULE (I) 40,000 FT OR COMBAT CEILING WHICHEVER IS LOWER (J) WITH DRAG CHUTE			

~~CONFIDENTIAL~~

NAVAIR OO-110AF4-1  
SERVICE

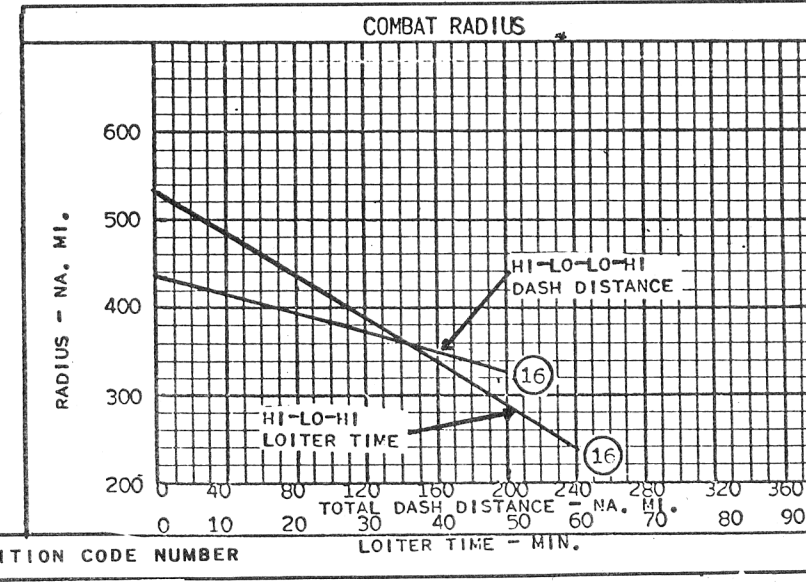
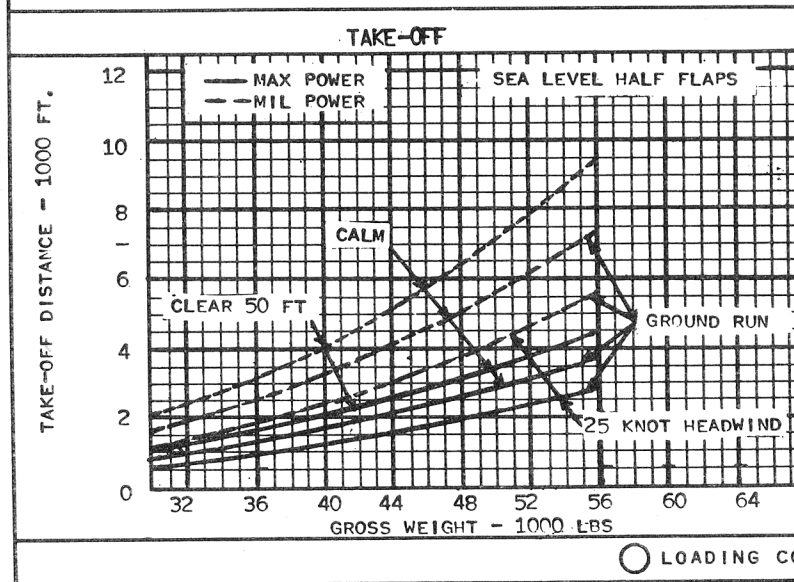
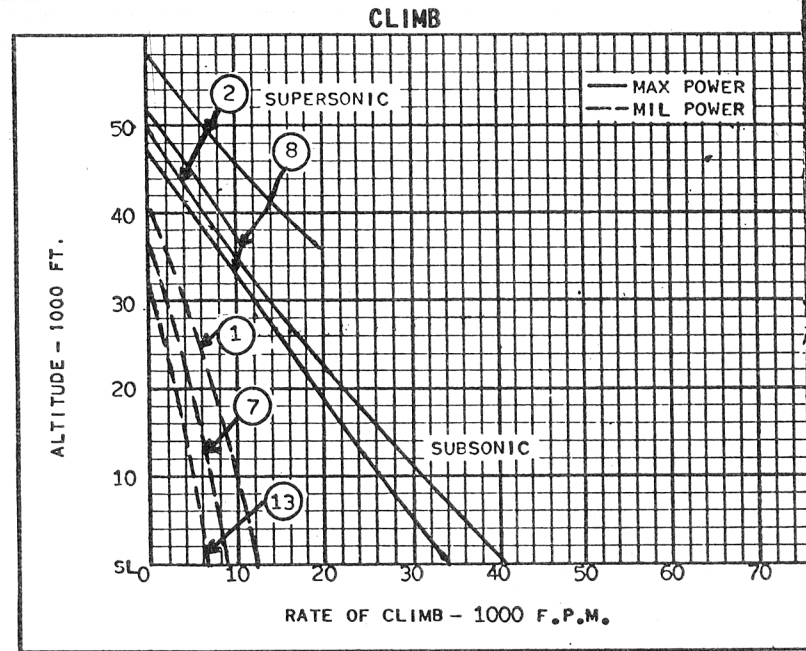
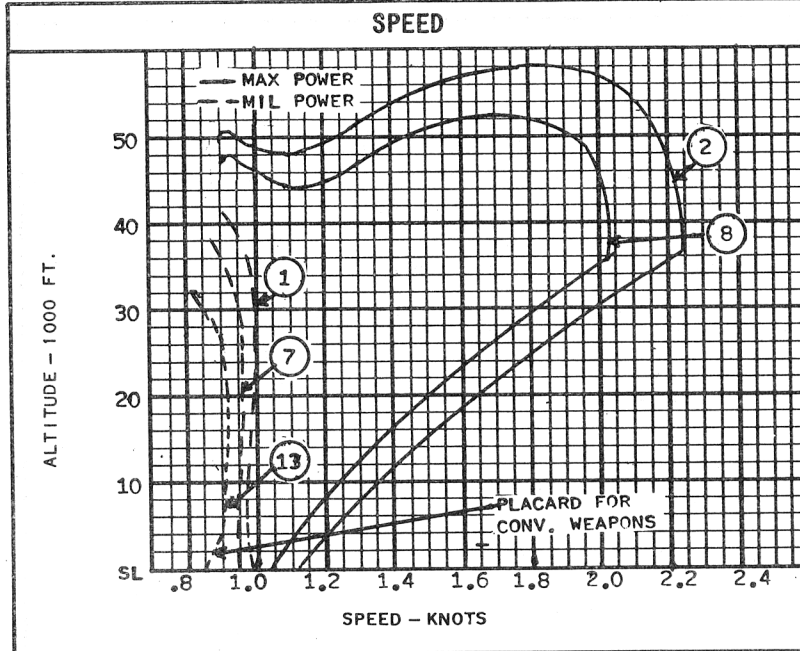
SUPPLEMENTAL

Loading	Take-off Gross Weight Lbs.	Ordnance		HI-LO-HI		HI-LO-LO-HI		LO-LO-LO	
		Sparrows Lb.	Other Ordnance Lb.	Sea Level Store Delivery 3,000 Ft. Loiter for 15 Min. at Target		Sea Level Store Delivery 100 Na.Mi. In & 100 Na.Mi. Out With 5 Min. MKT at Target		Sea Level Store Delivery	
				Radius Na.Mi.	Time Hours	Radius Na.Mi.	Time Hours	Radius Na.Mi.	Time Hours
⑮ (1) MK-28 + (2) 370 Gal.Tks.	50,102		2,010	652	2.83	477	2.17	365	2.18
⑯ (12) MK-82 + (2) 370 Gal.Tks.	55,170		6,300	461	2.13	330	1.67	301	1.94
⑰ (4) SP III + (20) MK-82	55,948	1,608	10,500	177	1.03	B 120	.84	170	1.13
⑱ (4) SP III + (10) MK-82 + (2) 370 Gal.Tks.	55,728	1,608	5,250	434	2.03	311	1.60	292	1.88
⑲ (6) MK-82 + (6) AERO 7D + (1) 600 Gal.Tk.	53,611		5,712	334	1.94	241	1.41	264	1.75
⑳ (4) SP III + (24) MK-81	51,928	1,608	6,480	202	1.12	B 123	.86	177	1.19
㉑ (4) SP III + (12) MK-81 + (2) 370 Gal.Tks.	53,718	1,608	3,240	457	2.12	325	1.65	299	1.93
㉒ (6) MK-81 + (1) 600 + (2) 370 Gal.Tks.	54,549		1,620	721	3.14	566	2.58	413	2.58
㉓ (7) MK-83 + (2) 370 Gal.Tks.	55,870		7,000	457	2.11	329	1.66	301	1.93
㉔ (4) SP III + (10) MK-83	55,448	1,608	10,000	183	1.05	B 121	.85	173	1.15

A. Time excludes warm-up, take-off and landing time.

B. Descents were started before optimum cruise altitude was attained.





○ LOADING CONDITION CODE NUMBER

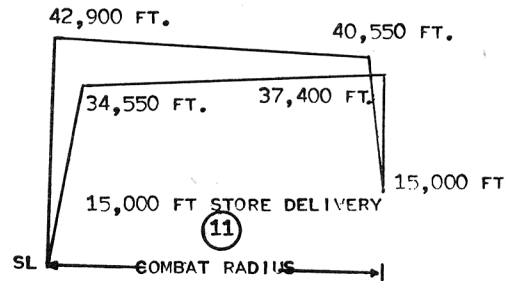
NOTES

15,000 FT. STORE DELIVERY  
MIL-C-5011A MISSION DEFINITION

- 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-PACK: AT ALTITUDES AND SPEEDS  
FOR BEST RANGE.
- 8) RESERVE: SAME AS G.P. FIGHTER.

DESIGN MISSION DEFINITION DEVIATES  
FROM MIL-C-5011A AS FOLLOWS:

- 5) STORE DELIVERY: NO TIME OR FUEL  
ALLOWANCE FOR EVASIVE ACTION.
- 6) CLIMB: ON COURSE TO CRUISE ALTITUDE  
USING MILITARY THRUST.
- 8) RESERVE: 20 MIN. AT SPEED FOR MAXIMUM  
ENDURANCE AT SEA LEVEL (SINGLE ENGINE  
OPERATION) PLUS 5% INITIAL FUEL LOAD.



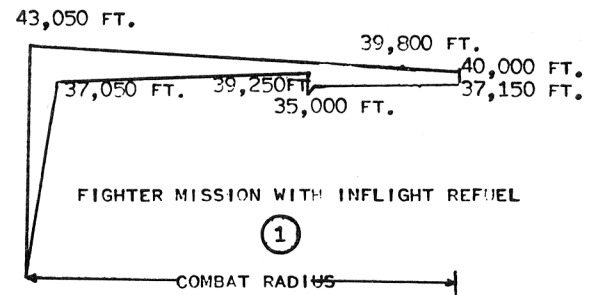
INFLIGHT REFUEL MISSIONS

- 1) WARM-UP, TAKE-OFF, ACCELERATE: 5 MIN. WITH NORMAL  
THRUST AT SEA LEVEL. (SEE NOTE)
- 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	498	NA.MI.
3 G.P. FIGHTER	646	NA.MI.
5 G.P. FIGHTER	219	NA.MI.
7 G.P. FIGHTER	520	NA.MI.
9 AREA INTERCEPTOR		
MIL-C-5011A MISSION	633	NA.MI.
DESIGN MISSION	607	NA.MI.
11 STORE DELIVERY		
MIL-C-5011A MISSION	547	NA.MI.
DESIGN MISSION	671	NA.MI.
13 Hi-Lo-Hi ATTACK	416	NA.MI.

- 7) CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH  
MILITARY THRUST.

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



NOTE: ALL TAKE-OFF GROSS WEIGHTS OVER 50,000 LBS. HAVE AN ADDITIONAL 1 MINUTE CRT IN  
THE WARM-UP AND TAKE-OFF FUEL ALLOWANCES.

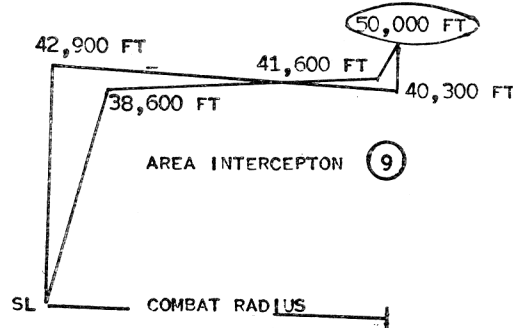
NOTES

AREA INTERCEPTOR  
MIL-C-5011A MISSION DEFINITION

- 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  $M_N$  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.

DESIGN MISSION DEFINITION DEVIATES FROM MIL-C-5011A AS FOLLOWS:

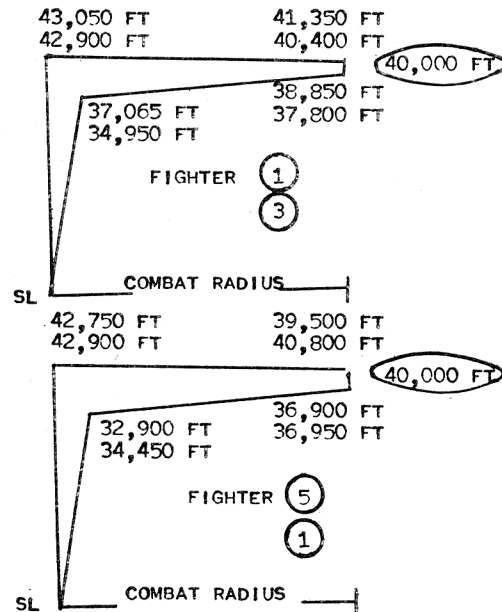
- 2) CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY THRUST.
- 3) CRUISE-OUT: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE.
- 7) RESERVE: 20 MIN. AT SPEED FOR MAXIMUM ENDURANCE AT SEA LEVEL (SINGLE ENGINE OPERATION) PLUS 5% INITIAL FUEL LOAD.



NOTE: ALL TAKE-OFF GROSS WEIGHTS OVER 50,000 LBS. HAVE AN ADDITIONAL 1 MIN CRT IN THE WARM-UP AND TAKE-OFF FUEL ALLOWANCE.

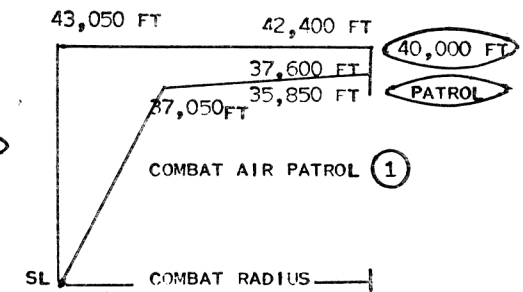
GENERAL PURPOSE FIGHTER

- 1) WARM-UP, TAKE-OFF, ACCELERATE: 5 MIN. WITH NORMAL THRUST AT SEA LEVEL. (SEE NOTE)
- 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  $M_N$  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 FOR BEST RANGE.
- 7) RESERVE: SAME AS G.P. FIGHTER.



○ LOADING CONDITION COLUMN NUMBER

HI-LO-HI

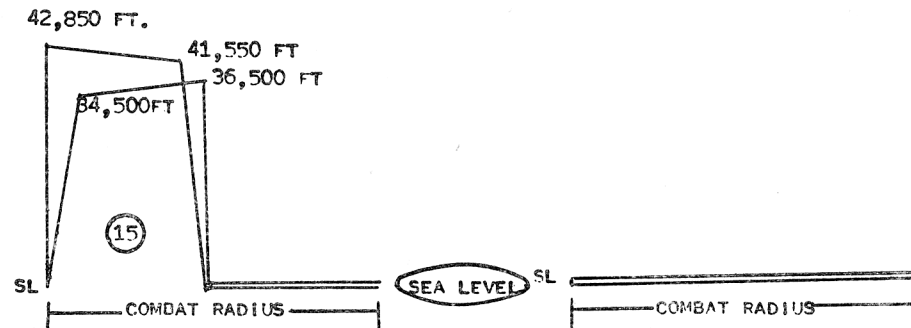
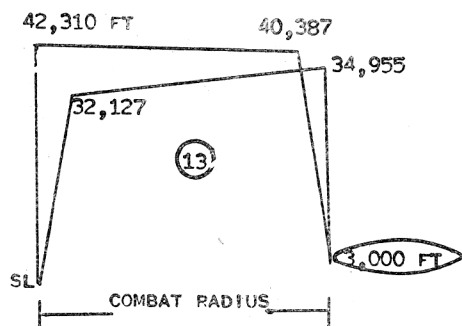
- 1) WARM-UP, TAKE-OFF, ACCELERATE: 5 MIN. NRT PLUS 1 MIN. CRT AT SEA LEVEL
- 2) CLIMB: ON COURSE TO CRUISE ALTITUDE WITH MILITARY THRUST.
- 3) CRUISE-OUT: AT ALTITUDE AND SPEEDS FOR MAXIMUM RANGE.
- 4) DESCEND TO 3,000 FT.: NO FUEL USED, NO CREDIT FOR DISTANCE GAINED.
- 5) COMBAT FUEL ALLOWANCE: 15 MIN. LOITER AT SPEED FOR MAXIMUM ENDURANCE.
- 6) CLIMB: ON COURSE TO CRUISE ALTITUDE USING MILITARY THRUST.
- 7) CRUISE-BACK: AT ALTITUDE AND SPEEDS FOR MAXIMUM RANGE.
- 8) RESERVE: 20 MIN. AT SPEED FOR MAXIMUM ENDURANCE AT SEA LEVEL (2 ENGINES OPERATING) PLUS 5% OF INITIAL FUEL LOAD.

NOTES  
HI-LO-LO-HI

- 1) WARM-UP, TAKE-OFF, ACCELERATE: 5 MIN NRT PLUS 1 MIN. CRT AT SEA LEVEL.
- 2) CLIMB: ON COURSE TO CRUISE ALTITUDE WITH MILITARY THRUST.
- 3) CRUISE-OUT: AT ALTITUDE AND SPEEDS FOR MAXIMUM RANGE.
- 4) DESCEND TO SEA LEVEL: NO FUEL USED, NO CREDIT FOR DISTANCE GAINED.
- 5) DASH: 100 NA.MI. TO TARGET AT SPEED FOR MAXIMUM RANGE.
- 6) COMBAT FUEL ALLOWANCE: 5 MIN. AT MAXIMUM SPEED WITH MILITARY THRUST.
- 7) DASH: 100 NA.MI. AWAY FROM TARGET AT SPEED FOR MAXIMUM RANGE.
- 8) CLIMB: ON COURSE TO CRUISE ALTITUDE USING MILITARY THRUST.
- 9) CRUISE-BACK: AT ALTITUDE AND SPEEDS FOR MAXIMUM RANGE.
- 10) RESERVE: 20 MIN. AT SPEED FOR MAXIMUM ENDURANCE AT SEA LEVEL (2 ENGINES OPERATING) PLUS 5% OF INITIAL FUEL LOAD.

LO-LO-LO

- 1) WARM-UP, TAKE-OFF, ACCELERATE: 5 MIN. NRT PLUS 1 MIN. CRT AT SEA LEVEL.
- 2) CRUISE-OUT: AT SEA LEVEL WITH SPEEDS FOR MAXIMUM RANGE.
- 3) CRUISE-BACK: AT SEA LEVEL WITH SPEEDS FOR MAXIMUM RANGE.
- 4) RESERVE: 20 MIN. AT SPEED FOR MAXIMUM ENDURANCE AT SEA LEVEL (2 ENGINES OPERATING) PLUS 5% OF INITIAL FUEL LOAD.



○ LOADING CONDITION COLUMN NUMBER