

STANDARD AIRCRAFT CHARACTERISTICS

F/A-18E SUPER HORNET

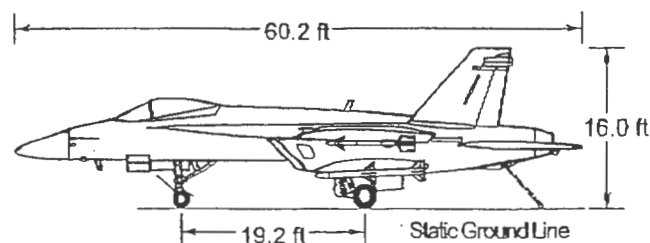
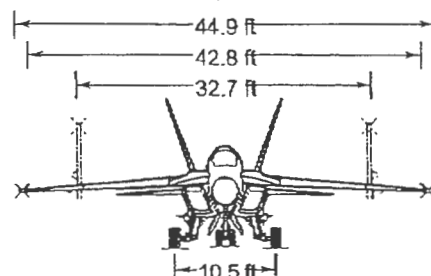
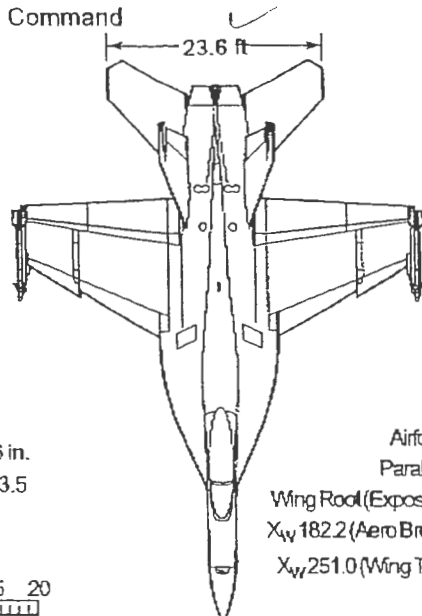
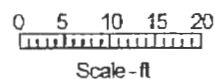


All Inquiries Concerning Data in
This Chart Should Be Directed to
NAVAIR, Code AIR-4.3.2.2

Naval Air Systems Command
Navy Department

Wing

Area: 500 ft²
MAC: 157.146 in.
Aspect Ratio: 3.5



Descriptive Arrangement

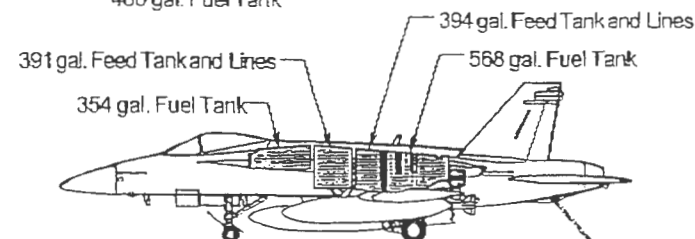
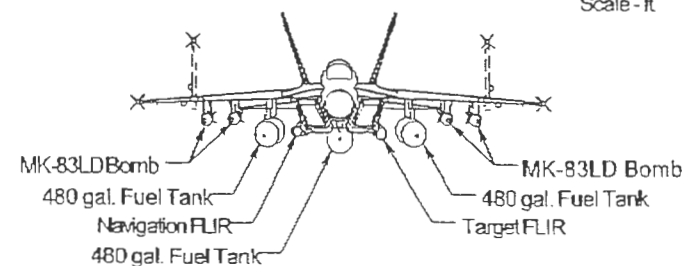
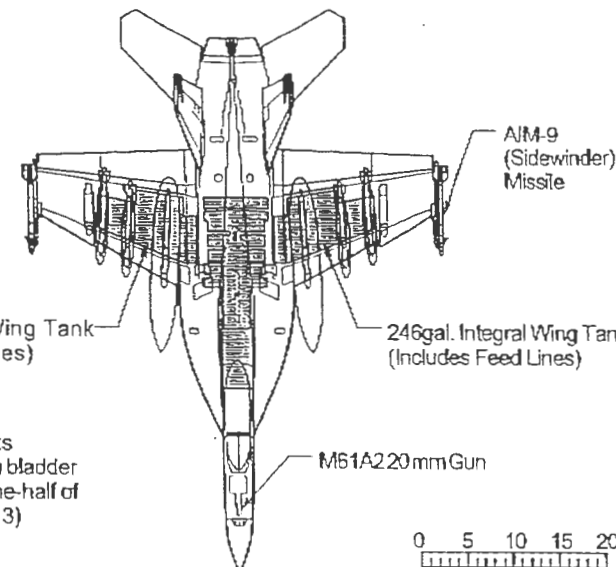
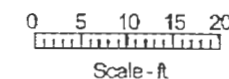
Naval Air Systems Command
Navy Department

246 gal. Integral Wing Tank
(Includes Feed Lines)

246 gal. Integral Wing Tank
(Includes Feed Lines)

Internal tanks
(Self sealing bladder
in bottom one-half of
tanks 2 and 3)

M61A2 20mm Gun



Armament and Tankage


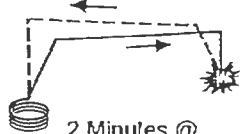
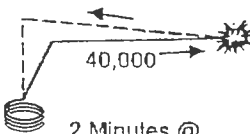
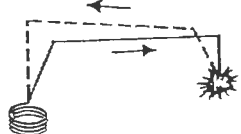
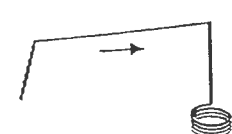
OC12333001.doc

Power Plant		Mission and Description		Weights	
Number and Model	(2) F414-GE-400	The F/A-18E will be employed in two mission applications, fighter and attack. When employed in fighter squadrons the F/A-18E will provide fighter cover for tactical air projection over land and sea and complement Fleet Air Defense. The primary attack missions are interdiction, close air support, defense suppression, strike against seaborne targets, and tactical nuclear strike.		Aircraft Loading	
Manufacturer	General Electric			F/A-18E Empty	
Specification	E1311	The F/A-18E is a single place, twin tail, twin engine, high performance, aircraft carrier suitable aircraft. The aircraft is a balance of conventional and composite materials. External skins for the wings, trailing edge flaps, stabilator, vertical tails and many access doors are made of carbon/epoxy composite material. A powered wingfold system minimizes deck area spotting requirements.		Basic	
Type	Axial Flow Turbofan			Design	
Augmentation	Fully Modulated Afterburner (No Stops)	Two low-bypass turbofan engines with afterburners power the F/A-18E. The internal fuel supply can be supplemented with up to three 480 gallon external fuel tanks. A retractable refueling probe provides in-flight refueling capability.		Combat	
Length With A/B	155.5 in. (Cold)			F/A-18E Maximum Takeoff	
Inlet Diameter	30.6 in. (Cold)	Armament is carried on eleven store stations. Two wingtip stations are dedicated to Sidewinders. Two lower fuselage stations carry either AMRAAM's or Sparrows for fighter missions, and a Navigation FLIR pod and a Targeting FLIR Pod for surface attack missions. The centerline station can carry unguided 1,000 pound class bombs or fuel stores, including the Aerial Refueling Store. The six wing stations can carry a complement of conventional and precision guided air-to-surface weapons. These stations can each carry AMRAAM's, Sparrows and Sidewinders. In the forward fuselage, the F/A-18E is equipped with a lightweight, internal M61 20 mm gun.		Field	
Dry Weight	2,445 lb			Catapult	
Tail Pipe	Variable Position CD			F/A-18E Maximum Landing	
		The aircraft is controlled by a digital fly-by-wire Flight Control System through irreversible hydraulic flight control surfaces. Lateral control is provided by a combination of ailerons, flaperons, and asymmetric deflections of the all movable horizontal tail. Pitch attitude is controlled by asymmetric deflections of the horizontal tail surfaces. Directional control is provided by dual rudders. High lift devices consist of leading and trailing edge flaps and a fixed leading edge extension to the wing. Maneuvering flaps are used to enhance turn performance.		Field	
				Arrest	
		The F/A-18E's multi-mission capability is due largely to the APG-73 multimode radar. A digital signal processor allows operation in both air-to-air and air-to-surface modes. A radar mode which resolves closely spaced airborne targets and a Doppler Beam Sharpened Patch mode with a resolution improvement of 67.1 over the real beam radar map mode are highlights of the system. Other air-to-air radar modes include search, track, and air combat maneuvering automatic acquisition modes. Air-to-surface radar modes include ground mapping, moving target indication/track, fixed target track, and terrain avoidance. Digitally-generated clutter-free radar displays aid the pilot in interpreting the display and analyzing tactical situations.		1b	
				Subsonic L.F. Supersonic L.F.	
		The F/A-18E's Multi-Source Integration (MSI) provides maximum air-to-air weapon effectiveness while reducing pilot workload. MSI blends the best data from all available sources (Radar, FLIR, Data Link, Weapons) into a single coherent target backfile.		34,554(E)	
				43,900	
		The radar warning receiver, electronic jammer, decoy set and chaff/flare dispensing set provides extensive self protection for the F/A-18E.		7.5	
				7.5	
		The avionics system is designed for one-man operation. Two central digital computers interface with the avionics suite which is tied together through a digital multiplex system. Flight and combat information is presented to the pilot on a Head-Up Display (HUD), two CRT Digital Display Indicators, a full color LCD center display and a flat panel Up-Front Control Display just below the HUD. Most weapon system modes can be controlled with switches on the throttle or stick and during critical attack phases, the pilot need not remove his hands from the throttle and stick.		59,500	
				44,000	
		Other electronics include secure radio communication, a ring gyro inertial navigation set, global positioning system, navigation FLIR, color digital mapping system, a deployable flight incident recorder, and a reconnaissance package.			
		The F/A-18E has a pressurized cabin with an ejection seat, On-Board Oxygen Generation System (OBOGS) and an anti-G system.			
Ratings*		Development		Fuel and Oil	
Power Setting	Static Thrust at Sea Level (lb)	Contract date	July 1992	Number of Tanks	
Maximum (A/B)	20,729	First Flight	November 1995	4	
Intermediate	13,923	Initial sea Trials	January 1997	2	
90% Intermediate	12,531	Follow-on Sea Trials	March 1999	1	
70% Intermediate	9,746	IOC	September 2001	2	
50% Intermediate	6,952			Grade	
Flight Idle	461			Specification	
Ground Idle	399			Integral With Engines	
				(Usable Tank Capacity per Engine)	
				Specification	
				Oil	
				1.2 Galon	
				MIL-L-23699 or MIL-L-7808	
Electronics		Dimensions		Ordnance	
Airborne Weapons Control	AN/APG-73	Wing	Length	6 BBL M61A2 (20mm) Gun Internally Mounted in Forward Fuselage w/ 400 Rounds of Ammo	
Radar Set	AYO-TBD	Area	60.2 ft	Armament Stations	
Stores Management Set	AN/AAS-38A	Span	16.0 ft	11 10 9 8 7 6 5 4 3 2 1	
Detecting Set	AN/AAR-50	M.A.C.	19.2 ft	Air-to-Air Missiles	
Infrared Navigation Receiving Set	CP-1001/AWG	Sweepback (25% Chord)	10.5 FT	AIM-9 LAM Sidewinder	
HARM Command Launch Computer		Incidence	32 x 11.5 - 15.26 FR	AIM-7M Sparrow	
		Dihedral	22 x 6.6 - 15.20 FR	AIM-120A AMRAAM	
Electronic Warfare	AN/ALR-67(V)2 or (V)3			Air-to-Ground Missiles	
Countermeasures Warning and Control	AN/ALQ-165 (Provisions)			AGM-65E/F Maverick	
Countermeasures Set	AN/ALE-47			AGM-68A HARM	
Countermeasures Dispensing Set	AN/ALE-50			AGM-84C Harpoon	
Decoy Set	MX-9965/A			AGM-84E SLAM	
Interference Blanker				AGM-45A/B Shrike	
Navigation and Flight Controls	AN/ASN-139			Conventional Weapons	
Inertial Navigation Set	AN/ASN-163			MK-82 LDGP	
Satellite Signals Navigation Set (GPS)	AN/ASW-44			MK-82/BSU-85	
Flight Control Electronic Set				MK-82 LGB	
Control and Display				MK-83 BSU-85	
Head-Up Display	IP-1566/A			MK-83 LGB	
Digital Display Indicator	IP-TBD			MK-84 LDGP	
Up-Front Control Display	IP-TBD			MK-84 LGB	
Multipurpose Color Display	ASQ-196			MK-20 Rockeye II	
Digital Video Mapping Set				Practice Bombs	
Communication and Identification	AN/ARN-118			BDU-36	
TACAN	AN/ARA-53			MK-76	
Instrument Landing System	AN/ARC-210/KY-58			MK-106	
Radio Set and Secure Voice Encoder	APX-100/KIT-1A			BDU-33	
IFF Transponder	AM-7360/A			MK-48	
Intercommunication Amplifier D Control	C-10382/A			Rocket Packages	
Control Converter				LAU-10	
Mission Processing and Recording	CP-2216/AYK-14			LAU-61	
Digital Data Computer	AN/ASQ-194			LAU-68	
Recording and Monitoring Set				Special Weapons	
Reconnaissance	AN/ZSD-1			3-61	
Advanced Tactical Air Reconnaissance System					

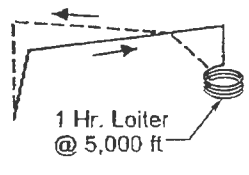
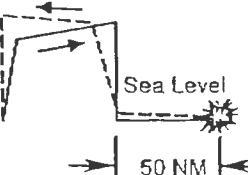

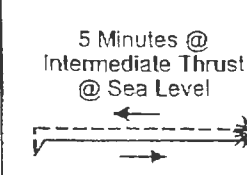

Performance Summary (F)

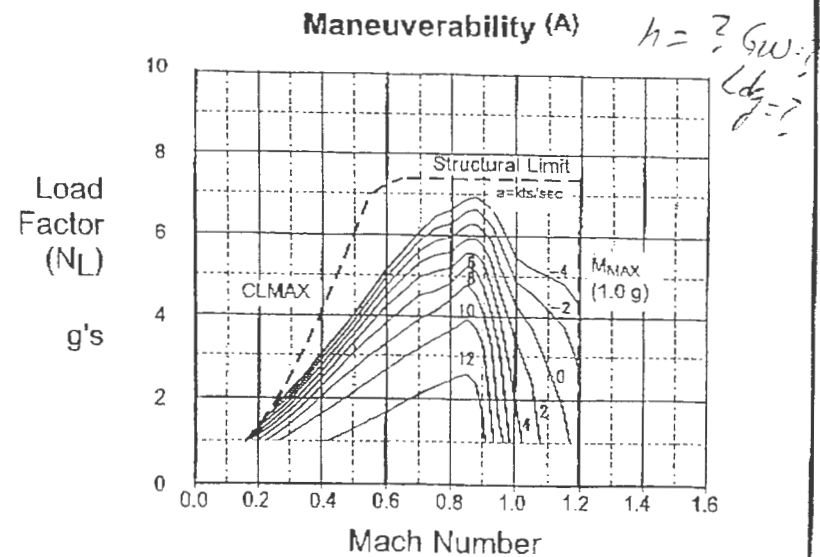
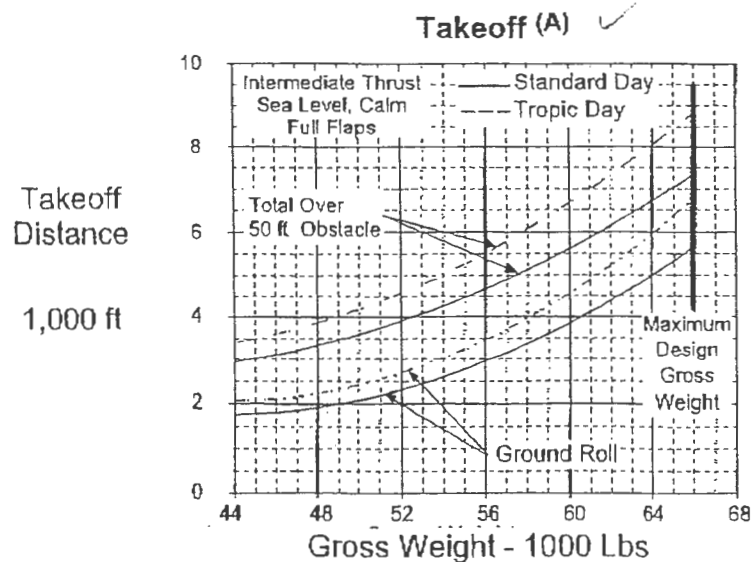
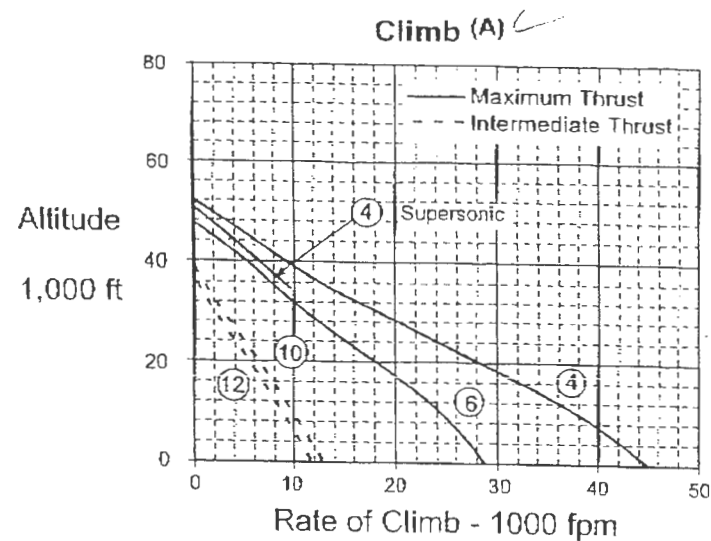
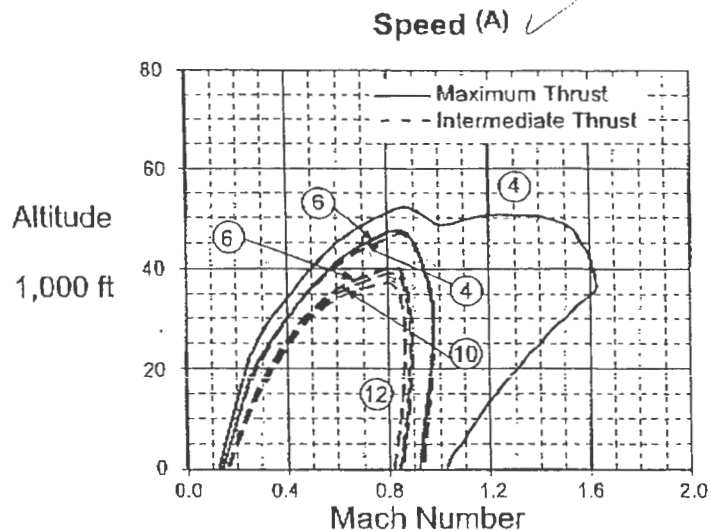
Takeoff Loading Conditions (A)	Hi-Hi-Hi ① Clean	Fighter Escort ③ (2) AIM-120	Fighter Escort ⑤ (5) AIM-120 + (2) 480 Gal. Tanks + TFLIR	Deck Launched Intercept ⑦ (2) AIM-120 + (1) 480 Gal. Tank	Interdiction ⑨ (4) MK-83 LD + (2) 480 Gal. Tanks + TFLIR/NFLIR	Close Support ⑪ (7) MK-82/BSU-86 + (1) AIM-120 + (2) 480 Gal. Tanks + TFLIR	Ferry ⑬ (3) 480 Gal. Tanks
Takeoff Weight lb	47,569	48,247	58,948	52,107	60,769	61,753	59,327
Fuel - Internal/External (JP-5) lb/lb	14,850	14,850	14,850/6,562B	14,850/3,217	14,850/6,528	14,850/6,528	14,850/9,745
Payload (Bombs, Missiles, Guns, Ammo, Chaff) lb	866	1,544	2,946	1,544	5,422	5,446	866
Wing Loading lbs/sq ft	95.1	96.5	117.9	104.0	121.5	123.5	118.7
Stall Speed - Power-Off/Takeoff Power kts/kts	129/110	130/111	144/126	135/116	146/129	147/130	144/127
Takeoff Run at SL - Calm/25 kts Wind ^(B) ft/ft	1,890/1,277	1,934/1,309	3,590/2,623	2,312/1,597	4,050/3,000	4,321/3,222	3,681/2,698
Takeoff to Clear 50 ft - Calm/25 kts Wind ^(B) ft/ft	3,280/2,440	3,363/2,505	5,349/4,123	3,919/2,950	5,813/4,508	6,078/4,729	5,442/4,201
Maximum Effort Takeoff - Calm ^(C) ft	1,231	1,261	2,268	1,504	2,537	2,694	2,322
Maximum Speed/Altitude ^(B) kts/ft	621/SL	618/SL	564/SL	610/SL	558/SL	545/SL	584/SL
Rate of Climb at SL ^(B) fpm	18,050	17,500	11,500	15,400	10,900	10,150	12,100
Time: SL to 20,000 ft ^(B) min	1.30	1.37	2.56	1.63	2.76	3.08	2.29
Time: SL to 30,000 ft ^(B) min	2.38	2.52	5.32	3.07	5.91	7.06	4.55
Service Ceiling (100 fpm) ^(B) ft	44,750	44,250	36,950	42,450	35,950	34,600	38,200
Combat Range NMI	1,266	1,217	1,232 ^(E)	1,413 ^(E)	1,157 ^(E)	1,053 ^(E)	1,654 ^(E)
Average Cruising Speed kts	484	484	454	482	453	452	469
Cruising Altitude(s) Initial/Final ft/ft	39,600/44,850	38,450/43,050	35,100/41,650	38,650/44,900	34,450/40,700	34,300/40,200	35,400/43,700
Combat Radius/Mission Time ^(D) NM/hr	597/2.55	404/1.70	475/2.13 ^(E)	201/0.73 ^(E)	388/1.76 ^(E)	305/2.35 ^(E)	-
Average Cruising Speed kts	484	484	454	482	453	454	-
Cruising Altitude(s) Initial/Final ft/ft	39,600/43,300	39,450/43,050	35,100/41,650	40,000/44,900	34,450/42,900	34,300/42,200	-
Loiter Time min	-	-	-	-	-	60	-
Combat Loading Conditions (A)	② Clean	④ Missiles Retained	⑥ Tanks and Missiles Retained	⑧ Tanks and Missiles Retained	⑩ Tanks and Bombs Retained	⑫ Tanks, Missile and Bombs Retained	⑭ Tanks Retained
Combat Weight lb	41,629	42,307	50,392	44,790	52,281	53,202	49,489
Engine Thrust	Intermediate	Maximum	Maximum	Maximum	Intermediate	Intermediate	Intermediate
Fuel lb	8,910	8,910	12,827	10,840	12,827	12,827	14,757
Combat Speed/Combat Altitude kts/ft	541/40,550	736/10,000	602/10,000	668/40,000	558/SL	541/5,000	Ø / Ø
Rate of Climb/Combat Altitude fpm/ft	3,100/40,550	37,850/10,000	24,450/10,000	8,150/40,000	12,950/SL	10,350/5,000	Ø / Ø
Combat Ceiling (500 fpm) ft	46,600	51,450	46,800	50,100	37,800	35,750	40,600
Rate of Climb at SL fpm	20,950	44,950	28,850	39,450	12,950	11,800	14,700
Maximum Speed at SL ^(C) kts	685	677	608	659	602	589	624
Maximum Speed/Altitude ^(C) kts/ft	972/37,500	932/36,089	608/SL	885/36,089	602/SL	589/SL	624/SL
Landing Weight lb	34,903	35,607	40,460	36,378	38,248	39,378	37,622
Fuel lb	2,185	2,211	2,890	2,428	2,795	2,853	2,890
Stall Speed - Power-Off/Approach Power kts/kts	110/102	112/103	119/109	113/104	116/106	117/108	115/105
Landing Dist. - Ground Roll/Over 50 ft Obstacle ft/ft	3,181/3,896	3,245/3,960	3,719/4,434	3,316/4,031	3,499/4,214	3,612/4,327	3,436/4,151
Notes (A) All loadings include (2) AIM-9 Tip Missiles and Gun With Full Ammo (B) Intermediate thrust, Standard day (C) Maximum thrust, Standard day (D) Mission time excludes time for warmup and takeoff and 20 minute loiter at sea level (E) External fuel tanks retained when empty (F) Performance basis derived from F/A-18E Flight Test and Wind Tunnel Data (Boeing-STL 99A0035, Rev A)							
○ Loading Condition Column Number							

Mission Summary - Alternative Loadings (Fighter Profiles) (D)

		Hi-Hi-Hi		Fighter Escort		Deck Launched Intercept		Combat Air Patrol		Ferry Range	
		 5 Minutes @ Intermediate Thrust (Best Cruise Altitude)		 2 Minutes @ Maximum Thrust Mach 1.0 @ 10,000 ft		 2 Minutes @ Maximum Thrust Mach 1.4 @ 40,000 ft		 150 NM		 Range	
External Store Loading (A)	TOGW (lb)	Combat Radius (NM)	Mission Time(B) (hr)	Combat Radius (NM)	Mission Time(B) (hr)	Combat Radius (NM)	Mission Time(B) (hr)	Combat Loiter Time @ 150 NM (hr)	Mission Time(B) (hr)	Range (NM)	Mission Time(B) (hr)
③ (2) AIM-120	48,247	574	2.46	404	1.70	170	0.61	1.36	2.03	1,217	2.51
⑦ (2) AIM-120 + (1) 480 Gal. Tank (C)	52,017 52,517	676	2.89	518	2.19	201	0.73	1.80	2.48	1,413	2.93
⑮ (2) AIM-120 + (3) 480 Gal. Tanks (C)	60,005	759	3.40	636	2.81	279 ^(E)	1.15	2.48 ^(F)	3.16	1,570	3.43
⑮ (5) AIM-120 + TFLIR	50,955	478	2.07	330	1.40	136	0.53	0.88	1.58	1,016	2.11
⑰ (5) AIM-120 + (1) 480 Gal. Tank + TFLIR (C)	54,725	564	2.47	428	1.85	157 ^(G)	0.61	1.09	1.83	1,182	2.51
⑱ (5) AIM-120 + (3) 480 Gal. Tanks + TFLIR (C)	62,713	644	2.94	536	2.41	239 ^(H)	1.01	1.92 ^(I)	2.65	1,336	2.96
⑲ (3) AIM-120 + (2) AIM-9 + TFLIR	50,651	478	2.07	329	1.40	136 ^(J)	0.53	0.88	1.57	1,015	2.11
⑳ (3) AIM-120 + (2) AIM-9 + (1) 480 Gal. Tank + TFLIR (C)	54,421	580	2.52	441	1.89	165 ^(G)	0.63	1.31	2.02	1,216	2.55
㉑ (3) AIM-120 + (2) AIM-9 + (3) 480 Gal. Tanks + TFLIR (C)	62,409	648	2.95	539	2.42	238 ^(H)	1.01	1.94 ^(I)	2.07	1,342	2.97
Notes											
(A) All Loadings Include (2) AIM-9 Tip Missiles and Gun With Full Ammo				(D) Performance Basis Derived From F/A-18E Flight Test and F/A-18E Wind Tunnel Data (Boeing-STL 99A00035, Rev A)				(G) Dash at M = 1.2 at 35,000 ft			
(B) Mission Time Excludes Warmup, Takeoff, and 20 Minute Loiter at Sea Level				(E) Dash at M _{max} = 0.96 at 40,000 ft				(H) Dash at M _{max} = 0.93 at 40,000 ft			
(C) External Fuel Tanks Retained When Empty				(F) Accel to M _{max} = 1.00 at 35,000 ft				(I) Accel to M _{max} = 0.96 at 35,000 ft			
								(J) Dash at M = 1.3 at 40,000 ft			
○ Loading Condition Column Number											

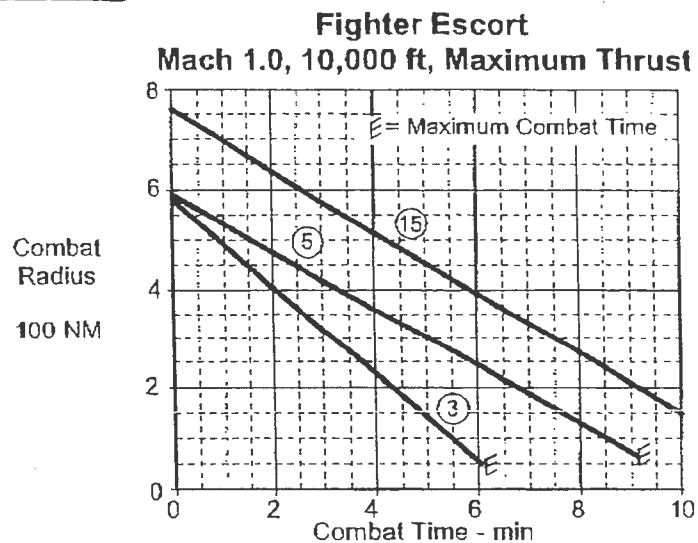
Mission Summary - Alternative Loadings (Attack Profiles) (D)

		Close Support		Interdiction		Hi-Hi-Hi		Lo-Lo-Lo		Hi-Lo-Hi	
		 1 Hr. Loiter @ 5,000 ft		 Sea Level 50 NM		 5 Minutes @ Intermediate Thrust (Best Cruise Altitude)		 5 Minutes @ Intermediate Thrust @ Sea Level		 5 Minutes @ Intermediate Thrust @ Sea Level	
External Store Loading (A), (C)	TOGW (lb)	Combat Radius (NM)	Mission Time ^(B) (hr)	Combat Radius (NM)	Mission Time ^(B) (hr)	Combat Radius (NM)	Mission Time ^(B) (hr)	Combat Radius (NM)	Mission Time ^(B) (hr)	Combat Radius (NM)	Mission Time ^(B) (hr)
⑨ (4)MK-83LD+(2)480 Gal. Tanks+TFLIR/NFLIR	60,769	344	2.51	388	1.76	598	2.71	293	1.96	492	2.25
⑪ (7)MK-82BSU-86+(1)AIM-120+(2)480 Gal. Tanks+TFLIR	61,753	305	2.35	350	1.61	557	2.54	279	1.87	457	2.11
⑫ (4)MK-83LD+(3)480 Gal. Tanks+TFLIR/NFLIR	64,539	388	2.72	434	1.97	638	2.91	325 Pg. 13	2.15	539	2.47
⑬ (5)MK-83LD+(1)AIM-120+(2)480 Gal. Tanks+TFLIR	62,105	336	2.48	385	1.74	591	2.68	293	1.95	487	2.22
⑭ (2)MK-84LD+(2)AIM-120+(2)480 Gal. Tanks+TFLIR/NFLIR	61,859	322	2.42	367	1.67	571	2.60	285	1.90	469	2.15
⑮ (2)MK-84LGB+(1)AIM-120+(3)480 Gal. Tanks+TFLIR	64,873	405	2.78	458	2.07	660	2.99	335	2.20	558 Pg. 13	2.54
⑯ (4)MK-83LGB+(1)AIM-120+(1)480 Gal. Tank+TFLIR	57,807	274	2.17	324	1.44	539	2.37	252	1.69	421	1.88
⑰ (4)AGM-65F+(2)480 Gal. Tanks+TFLIR/NFLIR	60,033	322	2.43	361	1.65	571	2.61	282	1.91	468	2.16
⑱ (4)HARM+(1)AIM-120+(2)480 Gal. Tanks+TFLIR	60,509	331	2.46	374	1.70	583	2.65	288	1.93	479	2.20
Notes (A) All Loadings Include (2) AIM-9 Missiles and Gun With Full Ammo (B) Mission Time Excludes Warmup, Takeoff, and 20 Minute Loiter at Sea Level (C) External Fuel Tanks Retained When Empty (D) Performance Basis Derived From F/A-18E Flight Test and Wind Tunnel Data (MDC 99A0035, Rev A)											
<input type="radio"/> Loading Condition Column Number											

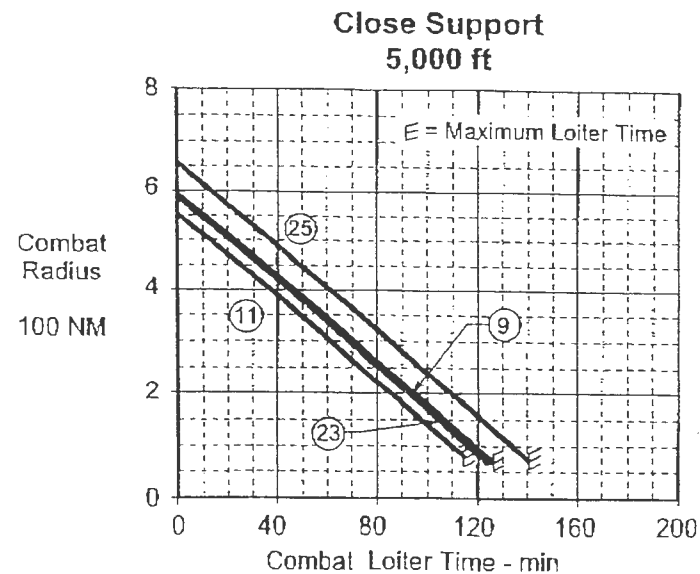
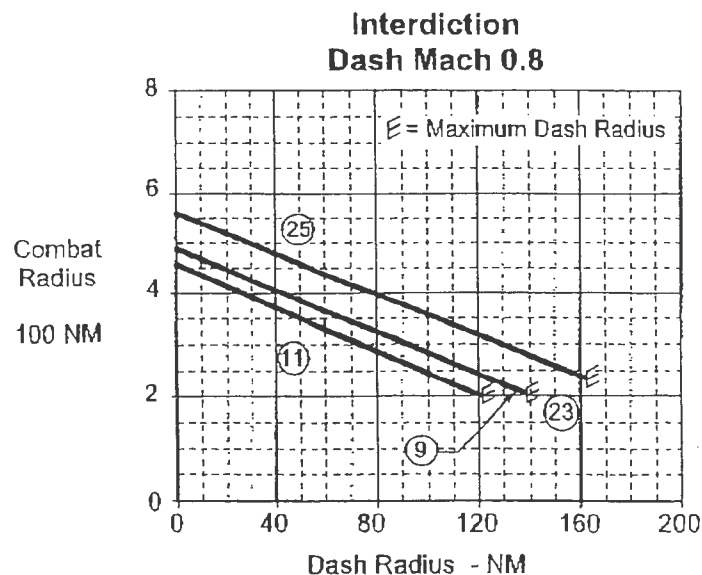
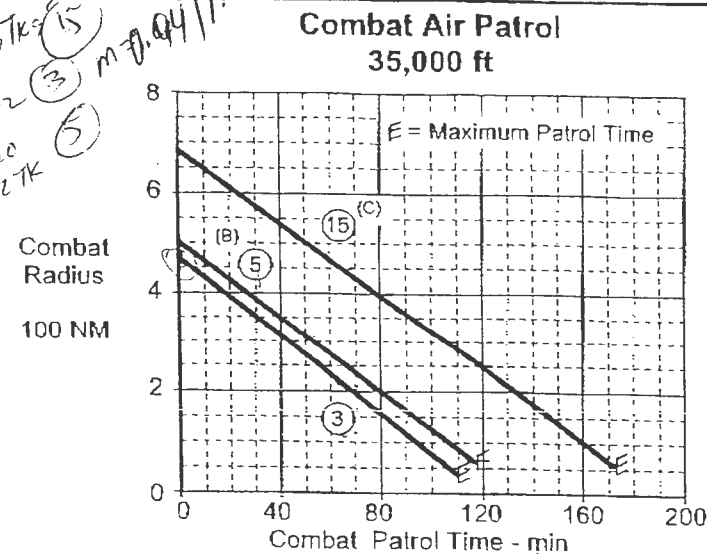


(A) Performance Basis Derived From F/A-18E Flight Test and Wind Tunnel Data (MDC 99A0035, Rev A)

○ Loading Condition Column Number



550 24 2 + 27K 085/11
680 212 + 37K 15
470nm 2 + 2 3 m 0.04/1.60
5-20 27K 5



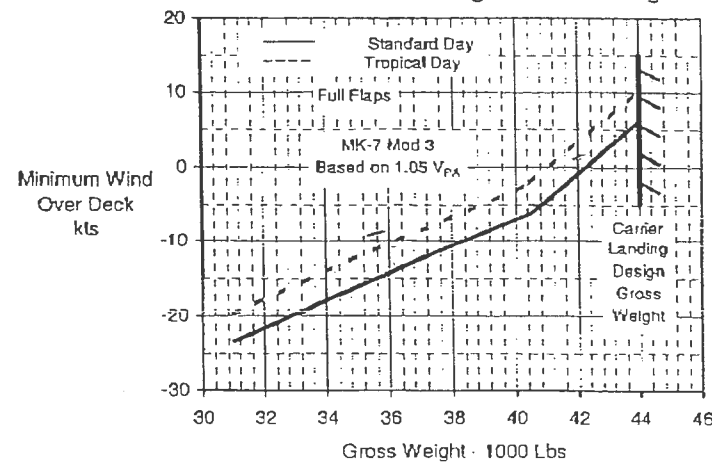
(A) Performance Basis Derived From F/A-18E Flight Test and Wind Tunnel Data (MDC 99AD035, Rev A)

(B) Accel to $M_{max} = 0.98$ at 35,000 ft

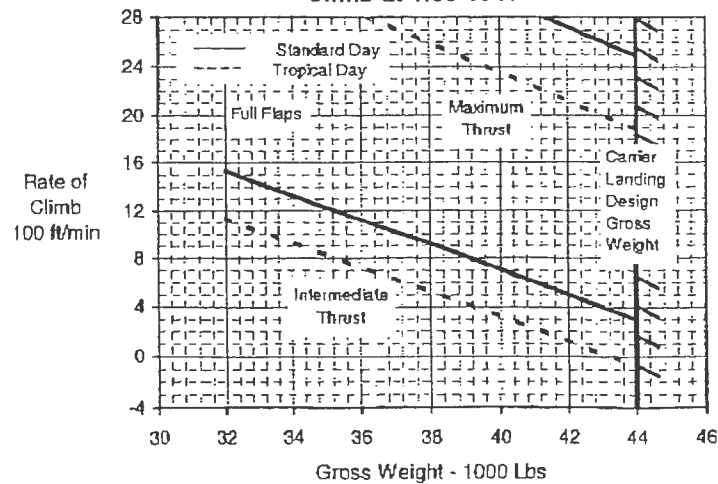
(C) Accel to $M_{max} = 1.00$ at 35,000 ft

○ Loading Condition Column Number

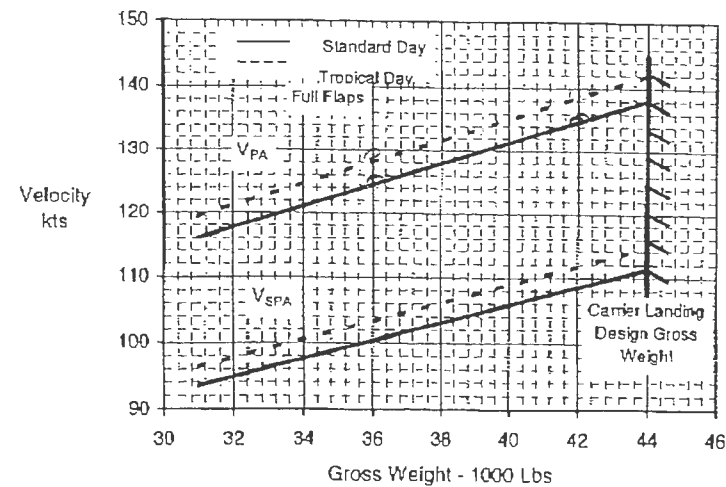
Minimum Wind Over Deck Required For Arresting vs Gross Weight



Single Engine Rate of Climb at 1.05 VPA



Carrier Approach Speeds



(A) Performance Basis Derived From F/A-18E Flight Test and Wind Tunnel Data (MDC 99A0035, Rev A)

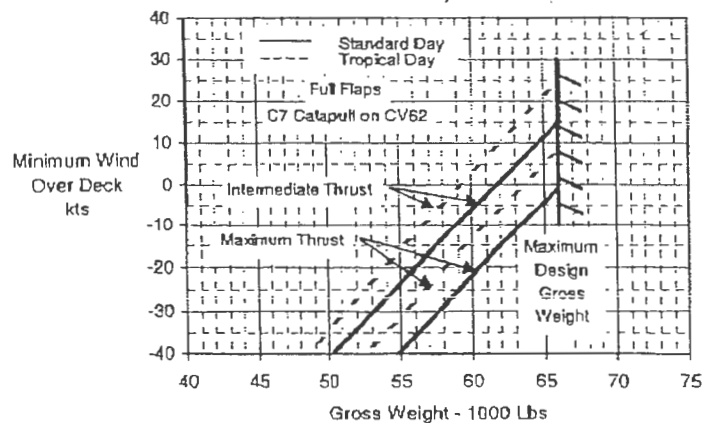
F/A-18E
MARCH 2001

PAGE 9

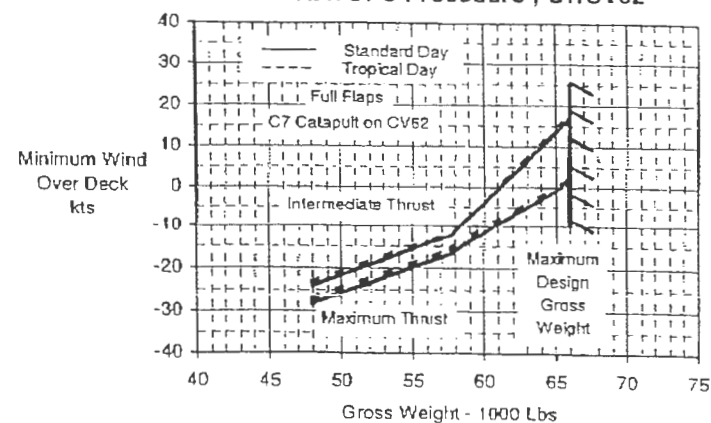
AUGUST 2000

F/A-18E

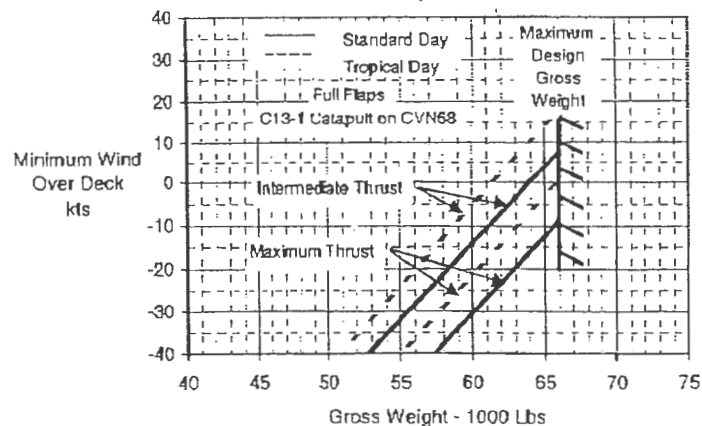
Minimum Wind Over Deck Required For
Catapulting vs Gross Weight
Sink Based ; C7/CV62



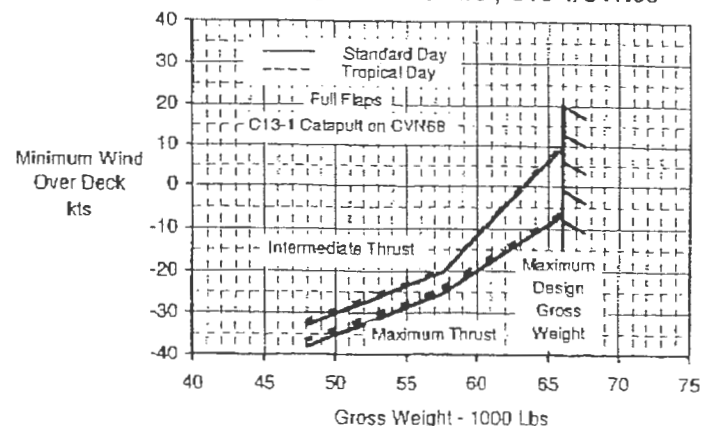
Minimum Wind Over Deck Required For
Catapulting vs Gross Weight
NATOPS Procedure ; C7/CV62



Minimum Wind Over Deck Required For
Catapulting vs Gross Weight
Sink Based ; C13-1/CVN68

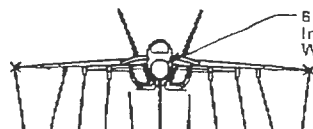


Minimum Wind Over Deck Required For
Catapulting vs Gross Weight
NATOPS Procedure ; C13-1/CVN68



(A) Performance Basis Derived From F/A-18E Flight Test and Wind Tunnel Data (MDC 990035, Rev A)

External Stores Loading

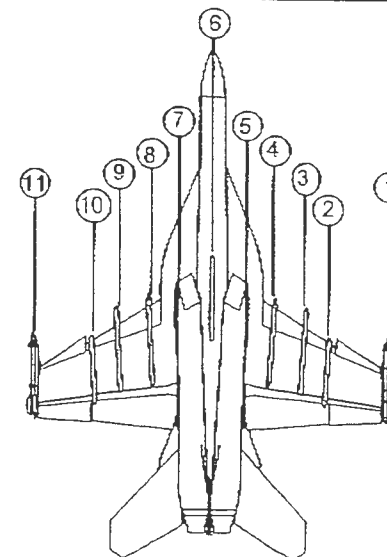


6 BBL M61A2 Gun (20 mm)
Internally Mounted
With 400 Rounds Ammo

Stores	11	10	9	8	7	6	5	4	3	2	1
Air-to-Air Missiles											
AIM-9L/M Sidewinder (1)	1	1	2	2				2	2	1	1
AIM-7M Sparrow (2)		1	1	1	1		1	1	1	1	
AIM-120A AMRAAM (3)		1	2	2	1		1	2	2	1	
Air-to-Ground Missiles											
AGM-65E/F Maverick (4)		1	1	1				1	1	1	
AGM-88A HARM (5)		1	1	1				1	1	1	
AGM-84C/D Harpoon			1	1				1	1		
AGM-84E SLAM			1	1				1	1		
AGM-45A/B Shrike (5)		1	1	1				1	1	1	
Fuel Tanks											
330 Gal Tank					1		1		1		
480 Gal Tank					1		1		1		
Aerial Refueling Store						1					
Practice Bombs											
BDU-36				1					1		
MK-76 (6)		3	6	6				6	6	3	
MK-106 (6)		3	6	6				6	6	3	
BDU-33 (6)		3	6	6				6	6	3	
MK-48 (6)		3	6	6				6	6	3	
Rocket Packages											
LAU-10		1	2	2				2	2	1	
LAU-61		1	2						2	1	
LAU-68		2	2						2	2	
Special Weapons											
B-61			1						1		
General Purpose Bombs											
MK-82 LDGP		1	2	2		1		2	2	1	

Stores	11	10	9	8	7	6	5	4	3	2	1
MK-82/BSU-86		1	2	2		1		2	2	1	
MK-83 LDGP		1	2	2		1		2	2	1	
MK-83/BSU-85			2	2		1		2	2		
MK-84 LDGP			1	1				1	1		
Laser Guided Bombs											
MK-82 LGB		1	1	1				1	1	1	
MK-83 LGB			1	1				1	1		
MK-84 LGB			1					1			
GBU-24			1	1				1	1		
Cluster Bombs											
MK-20 Rockeye II		1	2	2		1		2	2	1	
CBU-59 APAM		1	2	2		1		2	2	1	
CBU-72		1	2	2		1		2	2	1	
CBU-78 Gator		1	2	2		1		2	2	1	
EO Guided Bombs											
Walleye I			1						1		
Walleye I ER/DL			1						1		
Walleye II ER/DL			1						1		
Mines - Underwater Series											
MK-56			1	1				1	1		
MK-60			1	1				1	1		
Mines - Quickstrike Series											
MK-62		1	2	2		1		2	2	1	
MK-63			1	1				1	1		
MK-65			1	1				1	1		
Fire Bombs											
MK-77		1	2	2		1		2	2	1	

Stores	11	10	9	8	7	6	5	4	3	2	1
Pods											
Target FLIR											
Navigation FLIR											
LDT/SCAM (ASQ-173)						1					
AN/AWW-13 Data Link					1						
ALQ-167 ECM Pod											
ALE-41 Chaff Pod		1	1						1	1	
Flares, Smoke Bombs											
MK-58 (6)			3	4					4	3	
LUU-2 Flares (6)			3	4					4	3	
Dispensers											
SUU-25			1							1	
Decoys											
TALD				2	1				1	2	



Notes:

(1) Carried on LAU-127A

(2) Carried on LAU-115A and LAU-116A

(3) Carried on LAU-127A and LAU-116A

(4) Carried on LAU-117A

(5) Carried on LAU-118A

(6) Carried on Multiple Ejector Rack (MER)

F/A-18E

MARCH 2001

F/A-18E

Notes

Hi-Hi-Hi

Takeoff: Start engines, takeoff, and accelerate to climb speed: Fuel allowance at sea level static equal to 4.6 minutes at intermediate thrust plus 30 seconds at maximum thrust if afterburners are required for takeoff.

Climb: Intermediate thrust climb from sea level to best cruise altitude.

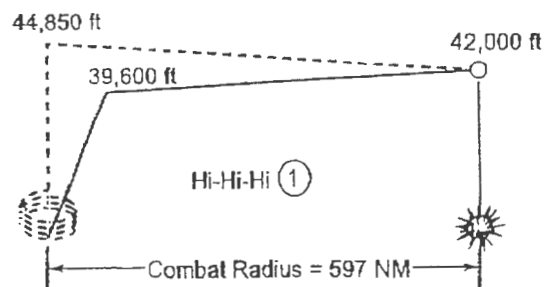
Cruise out: Cruise climb at best conditions.

Combat: Fuel allowance equal to 5 minutes at maximum speed with intermediate thrust at best cruise altitude. (Drop bombs, retain mounting hardware and missiles).

Cruise back: Cruise climb at best conditions.

Descent: Descend to sea level. (No fuel used, no distance gained).

Reserve: Fuel allowance equal to 20 minutes sea level loiter plus 5% of takeoff fuel.



Fighter Escort

Takeoff: Start engines, takeoff, and accelerate to climb speed: Fuel allowance at sea level static equal to 4.6 minutes at intermediate thrust plus 30 seconds at maximum thrust if afterburners are required for takeoff.

Climb: Intermediate thrust climb from sea level to best cruise altitude.

Cruise out: Cruise climb at best conditions.

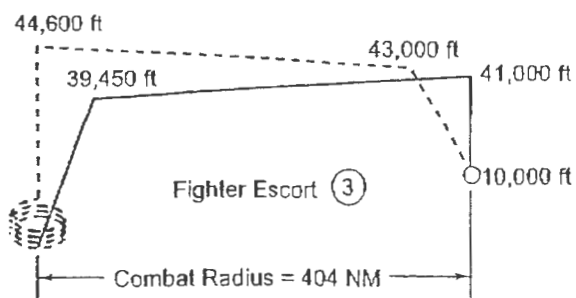
Combat: Fuel allowance equal to 2 minutes at maximum thrust, Mach 1.0 at 10,000 ft (missiles retained).

Climb: Intermediate thrust climb from 10,000 ft to best cruise altitude.

Cruise back: Cruise at best conditions.

Descent: Descend to sea level. (No fuel used, no distance gained).

Reserve: Fuel allowance equal to 20 minutes sea level loiter plus 5% of takeoff fuel.



Deck Launched Intercept

Takeoff: Start engines, takeoff, and accelerate to Mach 0.3: Fuel allowance at sea level static equal to 4.6 minutes at intermediate thrust plus 30 seconds at maximum thrust if afterburners are required for takeoff.

Acceleration: Maximum thrust acceleration from Mach 0.3 to Mach 0.9 at sea level.

Climb: Maximum thrust climb Mach 0.9 to 40,000 ft.

Acceleration: Maximum thrust acceleration from Mach 0.9 to Mach 1.4 at 40,000 ft.

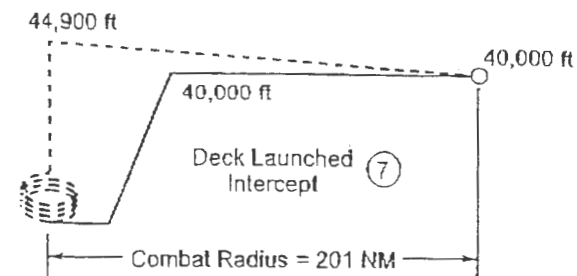
Dash out: Mach 1.4 dash at 40,000 ft.

Combat: Fuel allowance equal to 2 minutes at maximum thrust, Mach 1.4 at 40,000 ft (missiles retained).

Cruise back: Cruise climb at best conditions.

Descent: Descend to sea level. (No fuel used, no distance gained).

Reserve: Fuel allowance equal to 20 minutes sea level loiter plus 5% of takeoff fuel.



○ Loading Condition Column Number

Notes

Interdiction

Takeoff: Start engines, takeoff, and accelerate to climb speed: Fuel allowance at sea level static equal to 4.6 minutes at intermediate thrust plus 30 seconds at maximum thrust if afterburners are required for takeoff.

Climb: Intermediate thrust climb from sea level to best cruise altitude.

Cruise out: Cruise climb at best conditions.

Descent: Descend to sea level. (No fuel used, no distance gained).

Run-in to target: Sea level dash for 50 NM at Mach 0.8.

Combat: Fuel allowance equal to 5 minutes at intermediate thrust, Mach 0.8 at sea level. (Drop bombs, retain mounting hardware and missiles).

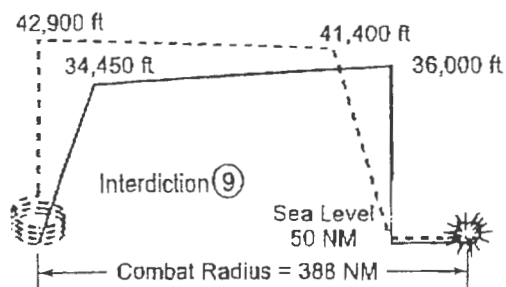
Run-out from target: Sea level dash for 50 NM at Mach 0.8.

Climb: Intermediate thrust climb from sea level to best cruise altitude.

Cruise back: Cruise climb at best conditions.

Descent: Descend to sea level. (No fuel used, no distance gained).

Reserve: Fuel allowance equal to 20 minutes sea level loiter plus 5% of takeoff fuel.



Close Support

Takeoff: Start engines, takeoff, and accelerate to climb speed: Fuel allowance at sea level static equal to 4.6 minutes at intermediate thrust plus 30 seconds at maximum thrust if afterburners are required for takeoff.

Climb: Intermediate thrust climb from sea level to best cruise altitude.

Cruise out: Cruise climb to best conditions.

Descent: Descend to sea level. (No fuel used, no distance gained).

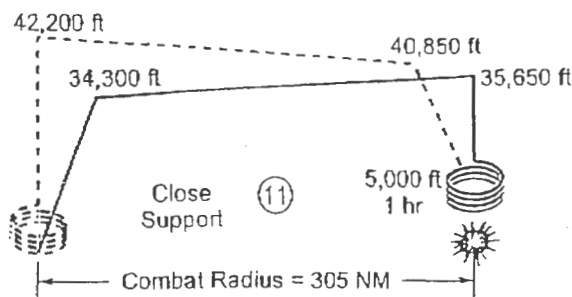
Loiter: Loiter for 1 hour at speed for maximum endurance at 5,000 ft (Drop bombs after loiter, retain mounting hardware and missiles).

Climb: Intermediate thrust climb from 5,000 ft to best cruise altitude.

Cruise back: Cruise climb at best conditions.

Descent: Descend to sea level. (No fuel used, no distance gained).

Reserve: Fuel allowance equal to 20 minutes sea level loiter plus 5% of takeoff fuel.



Ferry

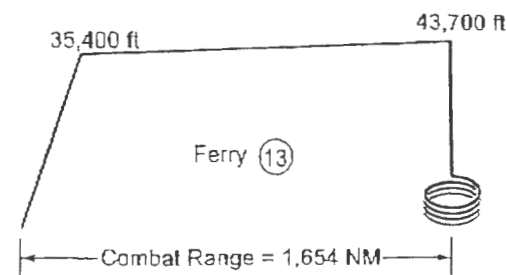
Takeoff: Start engines, takeoff, and accelerate to climb speed: Fuel allowance at sea level static equal to 4.6 minutes at intermediate thrust plus 30 seconds at maximum thrust if afterburners are required for takeoff.

Climb: Intermediate thrust climb from sea level to best cruise altitude.

Cruise out: Cruise climb at best conditions.

Descent: Descend to sea level. (No fuel used, no distance gained).

Reserve: Fuel allowance equal to 20 minutes sea level loiter plus 5% of takeoff fuel.



○ Loading Condition Column Number

Notes

Combat Air Patrol

Takeoff: Start engines, takeoff, and accelerate to climb speed: Fuel allowance at sea level static equal to 4.6 minutes at intermediate thrust plus 30 seconds at maximum thrust if afterburners are required for takeoff.

Climb: Intermediate thrust climb from sea level to best cruise altitude.

Cruise out: Cruise climb at best conditions for a total distance of 150 NM (climb plus cruise)

Descent: Descend to 35,000 ft. (No fuel used, no distance gained).

Loiter: Loiter at speed for maximum endurance at 35,000 ft.

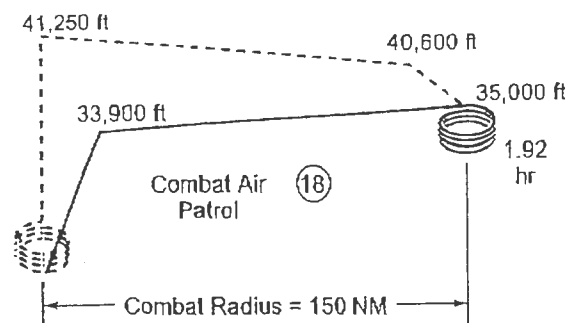
Combat: Fuel used to accelerate from loiter speed at 35,000 ft to Mach 1.2 plus 2 minutes at maximum thrust, Mach 1.2 at 35,000 ft (missiles retained).

Climb: Intermediate thrust climb from 35,000 ft to best cruise altitude.

Cruise back: Cruise climb at best conditions for a total distance of 150 NM (climb plus cruise).

Descent: Descend to sea level. (No fuel used, no distance gained).

Reserve: Fuel allowance equal to 20 minutes sea level loiter plus 5% of takeoff fuel.



Note: Accel to Mmax = 0.96 at 35,000 ft

Lo-Lo-Lo

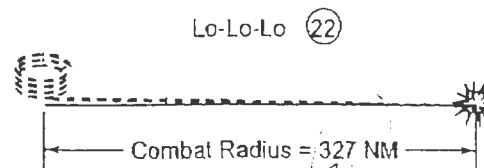
Takeoff: Start engines, takeoff, and accelerate to cruise speed: Fuel allowance at sea level static equal to 4.6 minutes at intermediate thrust plus 30 seconds at maximum thrust if afterburners are required for takeoff.

Cruise out: Cruise at best cruise speed at sea level.

Combat: Fuel allowance equal to 5 minutes at maximum speed with intermediate thrust at sea level. (Drop bombs; retain mounting hardware and missiles).

Cruise back: Cruise at best cruise speed at sea level.

Reserve: Fuel allowance equal to 20 minutes sea level plus 5% of takeoff fuel.



Hi-Lo-Hi

Takeoff: Start engines, takeoff, and accelerate to climb speed: Fuel allowance at sea level static equal to 4.6 minutes at intermediate thrust plus 30 seconds at maximum thrust if afterburners are required for takeoff.

Climb: Intermediate thrust climb from sea level to best cruise altitude.

Cruise out: Cruise climb at best conditions.

Descent: Descend to sea level. (No fuel used, no distance gained).

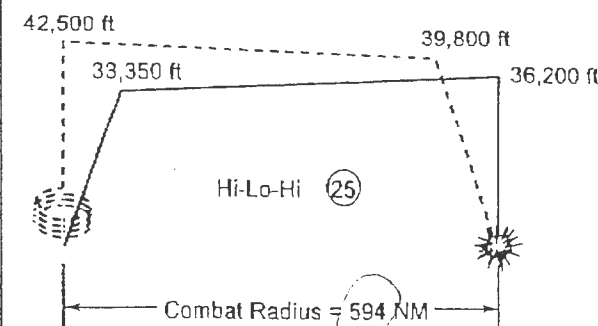
Combat: Fuel allowance equal to 5 minutes of maximum speed with intermediate thrust at sea level. (Drop bombs; retain mounting hardware and missiles).

Climb: Intermediate thrust climb from sea level to best cruise altitude.

Cruise back: Cruise climb at best conditions.

Descent: Descend to sea level. (No fuel used, no distance gained).

Reserve: Fuel allowance equal to 20 minutes sea level loiter plus 5% of takeoff fuel.



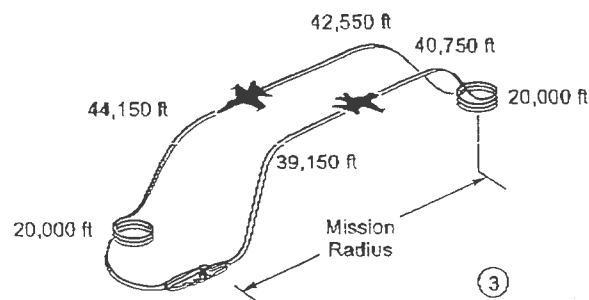
○ Loading Condition Column Number

Notes

Specification Missions (B)

Fighter Escort Mission
(2) AIM-9 + (2) AIM-120
Combat Radius = 441 NM

Deck Cycle Time = 116.0 min



Takeoff (A): Start engines and takeoff allowance equal to 20 minutes idle thrust and 0.5 minutes intermediate thrust, sea level static (0.5 minutes at maximum thrust instead of intermediate thrust if afterburners are required for takeoff).

Acceleration: Intermediate thrust acceleration from 150 KCAS to climb speed at sea level.

Climb: Intermediate thrust climb from sea level to best cruise altitude.

Cruise out: Cruise climb at best conditions.

Descent: Idle thrust descent to 20,000 ft at Mach 0.8 (credit time, fuel, and distance).

Combat: Fuel allowance equal to 4 intermediate thrust sustained turns at Mach 0.7 at 20,000 ft and 3 maximum thrust sustained turns at Mach 0.9 at 20,000 ft.

Climb: Intermediate thrust climb from 20,000 ft to best cruise altitude.

Cruise Back: Cruise climb at best conditions.

Descent: Idle thrust descent to 20,000 ft at 250 KCAS (credit time, fuel, and distance).

Descent (A): Idle thrust descent to 1,200 ft at 250 KCAS (credit time and fuel; no credit for distance).

Carrier approach (A): Cruise at 150 KCAS for a distance of 12 NM at 1,200 ft (credit time and fuel; no credit for distance).

Reserve (A): 100 NM bingo (no credit for distance).

Intermediate thrust acceleration from 150 KCAS to best climb speed at sea level.

Intermediate thrust climb from sea level to best profile altitude.

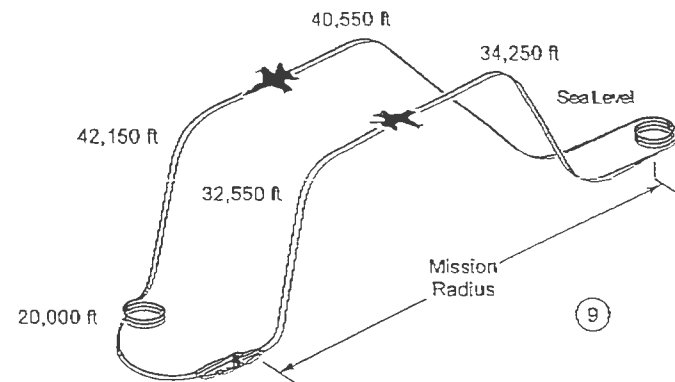
Cruise at best profile altitude(s) at best conditions.

Idle thrust descent to 10,000 ft at 250 KCAS (credit time, fuel and distance).

10 minutes 10,000 ft loiter at maximum endurance speed.

Interdiction Mission
(2) AIM-9 + (4) MK-83 LD + TFLIR/NFLIR + (2) 480 Gal. Tanks
Combat Radius = 427 NM

Deck Cycle Time = 114.3 min



Takeoff (A): Start engines and takeoff allowance equal to 20 minutes idle thrust and 0.5 minutes intermediate thrust, sea level static (0.5 minutes at maximum thrust instead of intermediate thrust if afterburners are required for takeoff).

Acceleration: Intermediate thrust acceleration from 150 KCAS to climb speed at sea level.

Climb: Intermediate thrust climb from sea level to best cruise altitude.

Cruise out: Cruise climb at best conditions.

Descent: Idle thrust descent to sea level at Mach 0.8 (credit time, fuel, and distance).

Dash out: 50 NM Mach 0.8 dash at sea level.

Combat: Fuel allowance equal to 3 (4 g) sustained turns at Mach 0.8 at 5,000 ft (drop bombs; retain mounting hardware and missiles) and 1 maximum thrust sustained turn at Mach 0.8 at 5,000 ft.

Dash back: 50 NM Mach 0.8 dash at sea level.

Climb: Intermediate thrust climb from sea level to best cruise altitude.

Cruise Back: Cruise climb at best conditions.

Descent: Idle thrust descent to 20,000 ft at 250 KCAS (credit time, fuel and distance).

Descent (A): Idle thrust descent to 1,200 ft at 250 KCAS (credit time and fuel; no credit for distance).

Carrier approach (A): Cruise at 150 KCAS for a distance of 12 NM at 1,200 ft (credit time and fuel; no credit for distance).

Reserve (A): 100 NM bingo (no credit for distance).

Intermediate thrust acceleration from 150 KCAS to best climb speed at sea level.

Intermediate thrust climb from sea level to best profile altitude.

Cruise at best profile altitude(s) at best conditions.

Idle thrust descent to 10,000 ft at 250 KCAS (credit time, fuel and distance).

10 minutes 10,000 ft loiter at maximum endurance speed.

(A) Time is not included in deck cycle time

(B) Performance Basis Derived From F/A-18E Flight Test and Wind Tunnel Data (MDC 99A0035, Rev A)

○ Loading Condition Column Number

SET//NCE

NAVAIR00-110AF18-5

SERVICE

Back Page
Cover Sheet

MARCH 2001

F/A-18E

PAGE 15

F/A-18E

MARCH 2001