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BY F.C. Hilt ON 12/19/96

NAVAIR 00-110AF4-3

Standard Aircraft Characteristics

NAVY MODEL
F-4J
AIRCRAFT

(TITLE UNCLASSIFIED)

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DATED APRIL 1973 WHICH SHOULD BE DESTROYED
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PUBLISHED BY DIRECTION OF THE
COMMANDER OF THE NAVAL AIR SYSTEMS COMMAND

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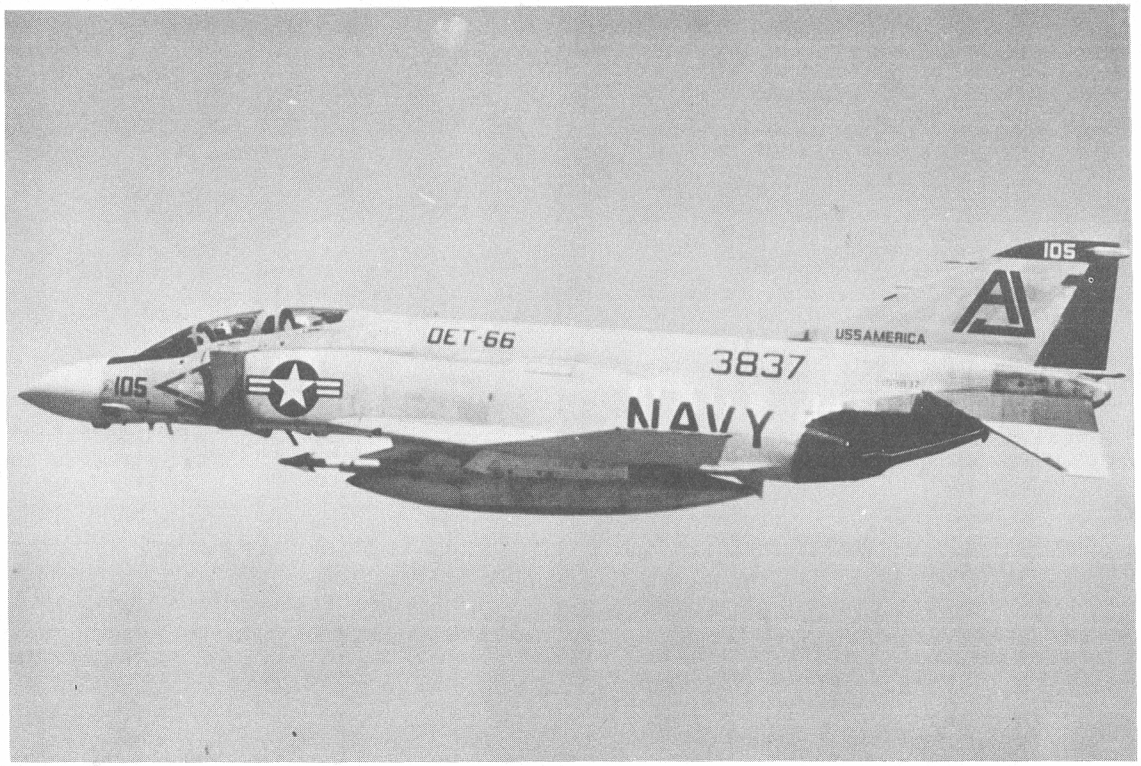
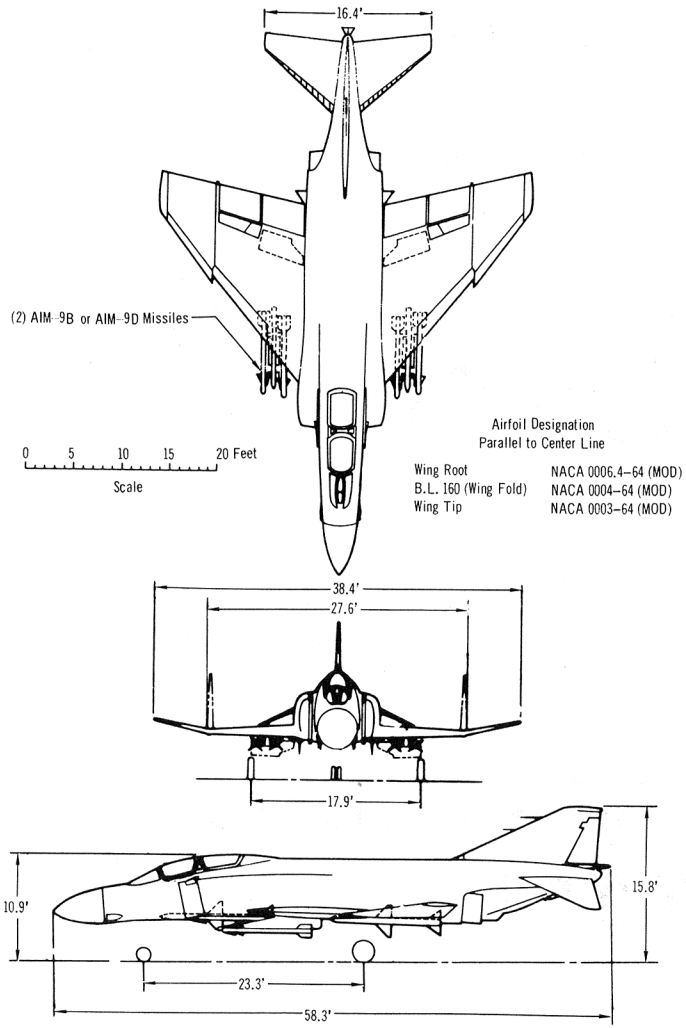


STANDARD AIRCRAFT CHARACTERISTICS

F-4J PHANTOM II

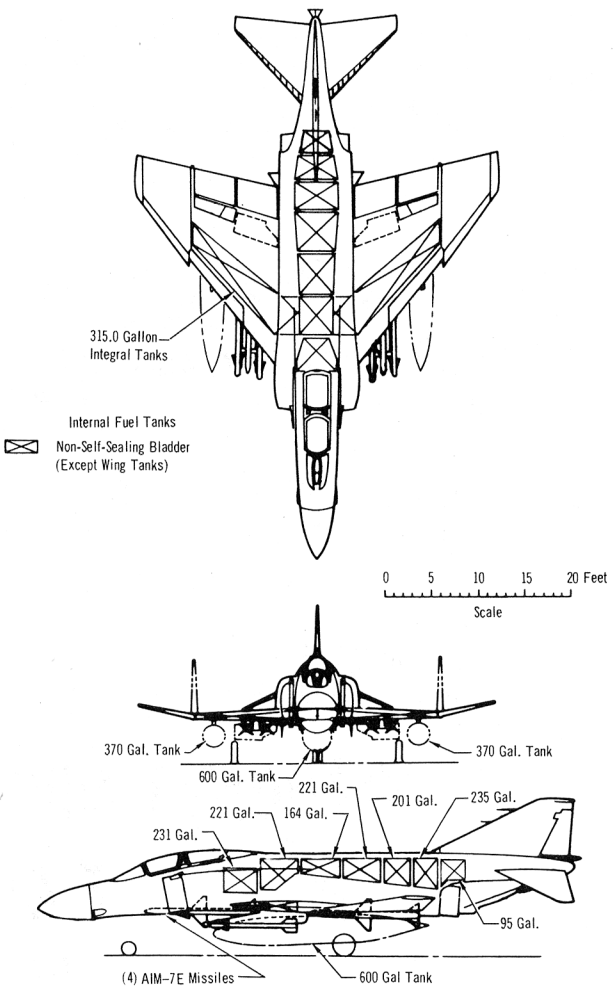
MCDONNELL

NAVAL AIR SYSTEMS COMMAND
NAVY DEPARTMENT



DESCRIPTIVE ARRANGEMENT

NAVAL AIR SYSTEMS COMMAND
NAVY DEPARTMENT



ARMAMENT AND TANKAGE

STANDARD AIRCRAFT CHARACTERISTICS, NAVWEPS FORM 13100 4B (Rev. 7-65)

POWER PLANT

Number and Model	(2) J79-GE-10
Manufacturer	General Electric
Specifications:	G.E. E-2039
Type	Axial Flow Turbojet
Augmentation	Afterburner
Length with A/B	208.69 Inches (Cold)
Diameter	39.06 Inches (Cold)
Dry Weight	3855 Lb.
Tail Pipe	Variable Position

RATINGS*

Power Setting	Static Thrust at Sea Level (Lb.)	RPM	
Maximum (A/B)	17,859	97.1%	7460
Military	11,870	97.1%	7460
Normal	11,110	96.7%	7435
90% Normal	10,000	92.9%	7140
75% Normal	8,330	89.8%	6900
Idle	350	65.1%	5000

*As defined in G.E. Spec. E-2039, dated 5 October 1965, Para. 3.4.4 Table I and subject to conditions therein. Maximum time with A/B and military is 30 minutes below 35,000 feet and two (2) hours above 35,000 feet. Time at or below normal power is continuous.

ELECTRONICS

CADC	A/A24G-33
CNI Systems	
TACAN	AN/ARN-86
ADF	AN/ARA-50
ICS	LS-459/A1C
3500 Channel UHF Comm.	
IFF	KY-532A/ASQ
AFCS	AN/ASA-32L
Navigational Computer	AN/ASN-39A
Altimeter	AN/APN-141(V)
Missile Control System	AWG-10
Includes Radar	AN/APG-59 ( )
Missile Control Group	OA-6822
All-Altitude Bombing System	AN/AJB-7
Vertical Reference Set	AN/ASN-70
Approach Power Control Set	AN/ASN-54(V)
Space Provisions for Installation of Data Link	AN/ASW-25A

( ) Indicates Future Mod Identification.

The following equipment is effective on the F-4J on A/C 153071, 153851 and 155529 and up but was not included in the weight or drag of the airplane for purposes of performance calculation.

Warning	AN/APR-25
Decoy Dispenser	AN/ALE-29
Countermeasure Set	AN/ALQ-51A/100
Countermeasure Set	AN/ALQ-91A
Air-to-Air IFF	AN/APX-76
UHF Communication	KY-28
Radar Beacon	AN/APN-154
Data Link	AN/ASW-25A

MISSION AND DESCRIPTION

The F-4J is a two-place, twin-jet, general purpose fighter whose primary mission is the destruction of enemy aircraft. The increased 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 diverse combination of conventional bombs, nuclear bombs, rocket packages, gun pods, 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. The F-4J features swept wing and tail, automatically controlled compression-ramp inlets, and leading and trailing edge flaps with boundary layer control. Lateral control is achieved by ailerons in combination with spoilers. An all-movable stabilator provides longitudinal control.

The AWG-10 Missile Control Subsystem provides the necessary guidance and control functions in the launching of air-to-air missiles. A Multiple Weapons Subsystem and an All-Altitude Bombing Computer are used for delivery of conventional bombs and rockets.

Other electronics includes a CNI system consisting of various communications, navigation and identification subsystems; a Central Air Data Computer (CADC) which senses air data parameters and supplies appropriate signals to various subsystems; the Automatic Flight Control Subsystem (AFCS) which provides three axis stability augmentation, pilot relief modes, and altitude hold; and the Radar Altimeter.

Equipment includes a pressurized cabin with ejection seats, a liquid oxygen system, and anti-G non-pressure suit and full pressure suit provisions.

DEVELOPMENT

Configuration Change Authorized	December 1964
First Flight Prototype (Modified F-4B)	March 1966
First Flight Production	May 1966

DIMENSIONS

Wing	
Area	530 Sq. Ft.
Span	38.4 Ft.
M.A.C.	16.04 Ft.
Sweepback (25% Chord)	45^0
Incidence	$+1^0$
Dihedral - Inner Panel	0^0
Outer Panel	$+12^0$
Length	58.3 Ft.
Height	15.8 Ft.
Wheelbase	23.3 Ft.
Tread	17.9 Ft.
MLG Tires	30 x 11.5-14.5 Type VIII
NLG Tires	18 x 5.7 Type VII

WEIGHTS

Loading	Lb.	Subsonic L.F.	Supersonic L.F.
Empty	**30778**		
Basic	**31176**		
Design	**37500**	8.5	6.5
Combat	**41673**	7.7	5.9
Maximum takeoff			
Field	**56000**		
Cat.	**56000**		
Maximum Landing			
Field	**46000** at 10 Ft/Sec		
Arrest	**40000**		

FUEL AND OIL

No. Tanks	Gallons	Location
7	1368	Fuselage, Bladder
2	630	Wing, Integral
1	600	Fuselage, External, Drop
2	740	Wing, External, Drop

Grade	JP4 or JP5
Specification	MIL-F-5624B-1
Integral with Engines (Usable Tank Capacity per Engine)	5.15 Gal.
Specification	MIL-L-23699 (WEP)

ORDNANCE

Four AIM-7D/E Missiles on Fuselage

	Fuselage ℄	Inboard Wing	Outboard Wing
Air-to-Air Missiles			
AIM-7D, AIM-7E		2	
AIM-9B, AIM-9D		4	
Special Weapons			
MK-28 (EX)	1		
MK-43	1		
MK-57	1		
MK-61	1		
Conventional Bombs			
MK-81	6	6	12
MK-82	6	6	12
MK-83	3	4	4
MK-117A1	5	3	3
Rocket Packages			
Aero 7D (19-2.75" rockets per package)	3	6	6
LAU 10A (4-5.00" Zuni rockets per package)	3	6	6
Practice Dispenser			
Aero 8A	1		
Gun Pod			
MK-4 (20mm)	1		

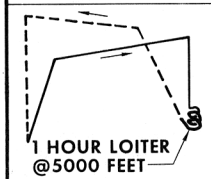
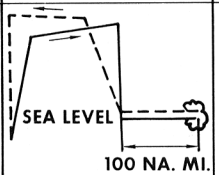
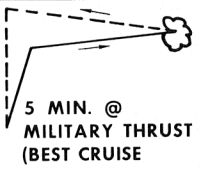
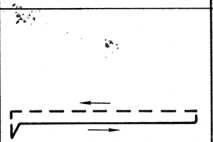
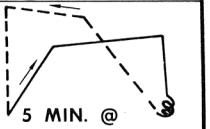
PERFORMANCE SUMMARY

TAKEOFF LOADING CONDITION			① Fighter	③ Fighter	⑤ Fighter	⑦ Area Intercept	⑨ Deck Launched Intercept	⑪ Ferry C	⑬ HI-LO-HI Attack
			(4) AIM-7E	(4) AIM-7E (1) 600 Gal. Tank (I)	(4) AIM-7E + (4) AIM-9D + (1) 600 Gal. Tank (I)	(4) AIM-7E + (1) 600 Gal. Tank (I)	(4) AIM-7E + (1) 600 Gal. Tank (I)	(2) 370 Gal. Tanks + (1) 600 Gal. Tank	(8) MK-82 S.E. + (2) 370 Gal. Tanks (I)
Take - off Weight		Lb.	46,833	51,268	52,676	51,268	51,268	55,096	56,000
Fuel Internal/External (JP-5, 6.8 Lb/Gal.)		Lb.	13,587/-	13,587/4,080	13,587/4,080	13,587/4,080	13,587/4,080	13,587/9,112	13,587/5,032
Payload Missiles/Bombs		Lb.	1820/-	1820/-	2580/-	1820/-	1820/-	-/-	- 4480
Wing Loading		Lb./Sq.Ft.	88.4	96.7	99.4	96.7	96.7	104.0	105.7
Stall Speed - (Approach Power)		Kt.	138	145	147	145	145	150	151
Takeoff Run at S.L. - Calm	A/B	Ft.	4410/2490	5600/3070	6030/3280	5600/3070	5600/3070	6830/3650	7140/3810
Takeoff Run at S.L. - 25 Kt. Wind	A/B	Ft.	3280/1830	4210/2300	4540/2460	4210/2300	4210/2300	5190/2770	5450/2900
Takeoff to Clear 50 Ft. - Calm	A/B	Ft.	5750/3680	7000/4370	7430/4620	7000/4370	7000/4370	8270/5030	8600/5200
Maximum Speed/Altitude	A	Kn./Ft.	601/25,000	591/25,000	582/25,000	591/25,000	591/25,000	584/25,000	567/20,000
Rate of Climb at S.L.	A	fpm	12,220	10,330	9350	10,650 L	10,900 L	9050	7500
Time: S.L. to 20,000 Ft.	A/B L	Min.	1.99/0.62	2.44/0.72	2.73/0.77	3.74/1.72 K	-/1.70 K	2.81/0.80	4.13/1.09
Time: S.L. to 30,000 Ft.	A/B L	Min.	3.70/1.10	4.67/1.28	4.70/1.38	5.97/2.28 K	-/2.25 K	5.63/1.42	9.95/1.96
Service Ceiling (100 fpm)	A	Ft.	35,750	37,250	36,050	38800 L	39200 L	35,450	31,950
Combat Range		Na.Mi.	981	1308	1108	-	-	1699/1521	953
Average Cruising Speed		Kn.	489	490	488	-	-	490/488	473
Cruising Altitude Initial		Ft.	35,550	33,500	33,200	-	-	32,300/32,300	30,700
Cruising Altitude Final		Ft.	40,150	40,000	39,050	-	-	41,050/40,150	37,000
Combat radius		Na.Mi.	351	518	415	443	195	-	409
Mission Time	D	Hr.	1.46	2.14	1.72	1.75	0.67	-	1.80
Average Cruising Speed		Kn.	489	490	490	490	489	-	479
C.A.P. Loiter Time	E	Hr.	0.79	1.50	1.07	-	-	-	-
Mission Time	D	Hr.	1.47	2.18	1.76	-	-	-	-
IFR Radius	D	Na.Mi.	666	888	781	821	687	2684/2455	780
Mission Time	D	Hr.	2.99	3.89	3.47	3.54	2.98	5.72/5.27	3.36

COMBAT LOADING CONDITION			② (4) AIM-7E	④ (4) AIM-7E	⑥ (4) AIM-7E + (4) AIM-9D	⑧ (4) AIM-7E	⑩ (4) AIM-7E	⑫ Tanks Dropped	⑭ (2) TER at B.L. 81.50 + (1) MER at ℄
Combat Weight		Lb.	41,399	43,897	45,305	43,897	43,897	45,064	43,456
Engine Power			MAX.	MIL.	MAX.	MAX.	MAX.	MAX.	MIL.
Fuel	F	Lb.	8153	10,600	10,600	10,600	10,600	13,587	11,171
Combat Speed / Combat Altitude		Kn./Ft.	1230/36,089	563/36,089	1161/36,089	1154/50,000	1227/36,089	1230/41,000	614/S.L.
Rate of Climb at Combat Altitude	G/H	fpm	18,800/11,560	-/2070	11,250/9530	3950/430	17,500/10,650	13,550/6880	-/11,770
Combat Ceiling (500 fpm)	G/H	Ft.	54,700/50,950	-/40,100	50,100/48,600	53,600/49,850	53,600/49,850	53,750/49,700	-/38,950
Rate of Climb at S.L.		fpm	41,250	13,150	35,150	38,800	38,800	38,600	11,770
Maximum Speed at S.L.		Kn.	760	632	717	760	760	772	614
Maximum Speed		Kn.	1230	602	1161	1227	1227	1241	587
Altitude		Ft.	36,089	25,000	36,089	36,089	36,089	36,089	25,000
Landing Weight		Lb.	35,498	35,754	37,246	35,754	35,754	34,117	34,829
Fuel		Lb.	2251	2457	2541	2457	2457	2640	2544
Stall Speed-Power-Off		Kn.	137	137	140	137	137	134	135
Stall Speed-Approach Power		Kn.	120	121	123	121	121	118	119
Landing Distance-Ground Roll		Ft.	2900	2920	3030	2920	2920	2800	2850
Over 50 Ft. Obstacle		Ft.	4810	4830	4940	4830	4830	4710	4760

Notes:
A. Military thrust
B. Maximum thrust
C. Ferry range with tanks dropped/retained
D. Mission time excludes warm-up, takeoff and reserve time
E. C.A.P. radius = 150 nautical miles
F. 60% of takeoff fuel or full internal fuel
G. Supersonic climb speed schedule
H. Subsonic climb speed schedule
I. Fuel tanks dropped when empty
J. No 5% service tolerance on fuel flow
K. Includes time increment due to ground operation and acceleration to climb speed.
L. Includes weight reduction due to ground operation and fuel consumed during climb.

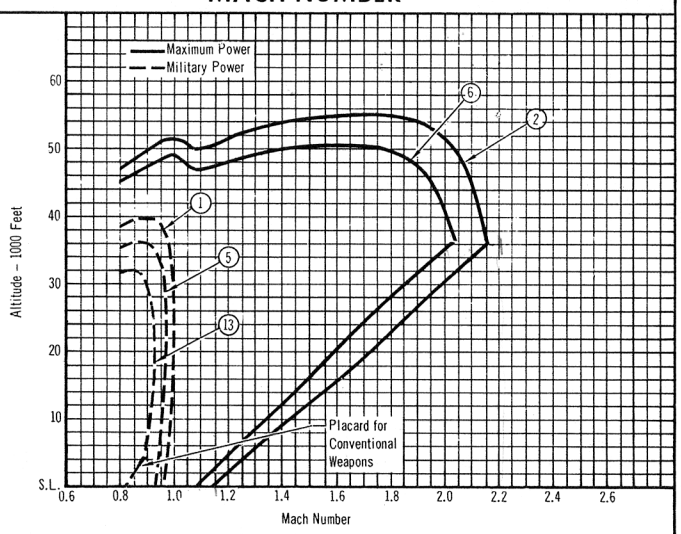
MISSION SUMMARY-ALTERNATE LOADINGS

	CLOSE SUPPORT		HI-LO-LO-HI		HI-HI-HI		LO-LO-LO		HI-LO-HI	
										
EXTERNAL STORE LOADING (C)	T.O.G.W.	COMBAT RADIUS NA. MI.	MISSION TIME HOUR (A)	COMBAT RADIUS NA. MI.	MISSION TIME HOUR (A)	COMBAT RADIUS NA. MI.	MISSION TIME HOUR (A)	COMBAT RADIUS NA. MI.	MISSION TIME HOUR (A)	COMBAT RADIUS NA. MI.	MISSION TIME HOUR (A)
(15) (1) MK-28 + (2) 370 GAL. TANKS (E)	52,739	372	2.51	416	1.99	639	2.69	291	1.91	521	2.20
(16) (6) MK-82 S.E + (2) 370 GAL. TANKS (E)	54,342	309	2.27	367	1.84	576	2.45	271	1.85	468	2.00
(17) (6) MK-82 S.E. + (4) AIM-7E + (2) 370 GAL. TANKS (E)	56,162	270	2.11	338	1.72	533	2.28	260	1.78	432	1.86
(18) (8) MK-82 S.E. + (2) 370 GAL TANKS (E)	56,000	244	2.03	315	1.67	507	2.21	250	1.77	409	1.80
(19) (24) MK-81 S.E + (4) AIM-7E	55,454	21 (B)	1.10	118 (B)	0.87	249	1.19	131	0.99	169	0.84
(20) (5) MK-83 + (2) 370 GAL. TANKS (E)	56,274	266	2.12	334	1.73	530	2.31	256	1.79	430	1.89
(21) (8) MK-83 + (4) AIM-7E	55,673	43 (B)	1.19	136 (B)	0.95	288	1.31	142	1.04	199	0.93
(22) (2) MK-82 S.E + (2) 370 GAL. TANKS + (1) 600 GAL. TANK (E) (G)	56,304	447	2.85	500	2.39	705	2.99	341	2.33	597	2.54
(23) (D) (6) MK-82 S.E. + (4) AIM-7E + (4) AIM-9D + (1) 600 GAL. TANK (E)	56,072	152	1.65	228	1.30	406	1.80	207	1.48	314	1.41

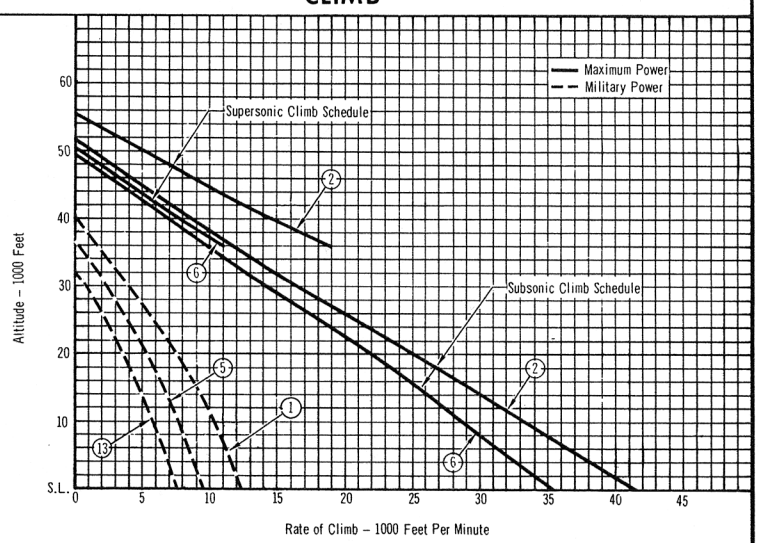
NOTES

(A) TIME EXCLUDES WARM-UP, TAKE-OFF AND LANDING TIME.
(B) DESCENTS WERE STARTED BEFORE OPTIMUM CRUISE ALTITUDE WAS ATTAINED.
(C) AIM-7E OR AIM-9D MISSILES ARE RETAINED
(D) LESS NO. 7 FUEL CELL TO REMAIN WITHIN C.G. LIMITS
(E) FUEL TANKS DROPPED WHEN EMPTY
(F) NO 5% SERVICE TOLERANCE ON FUEL FLOW
(G) LESS 450 LBS FUEL TO REMAIN WITHIN T.O.G.W. LIMIT

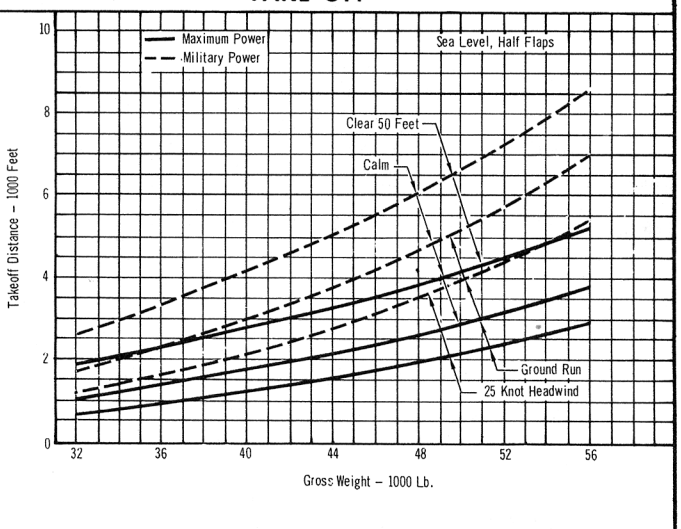
MACH NUMBER



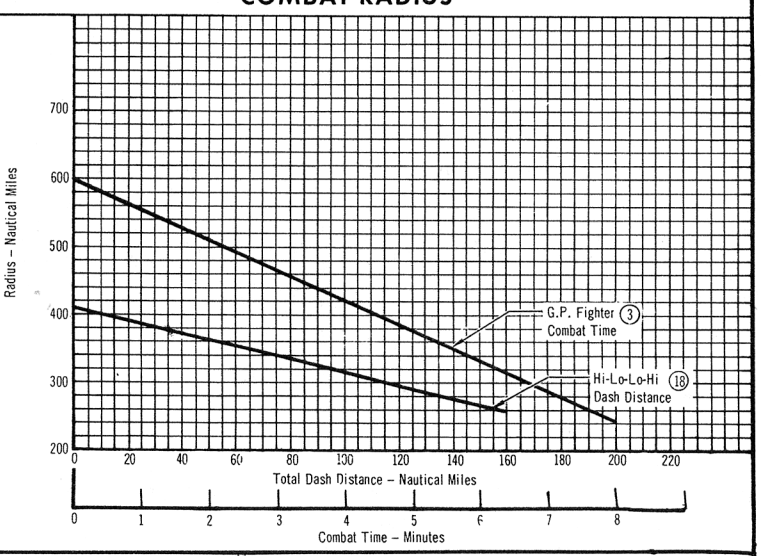
CLIMB



TAKE-OFF

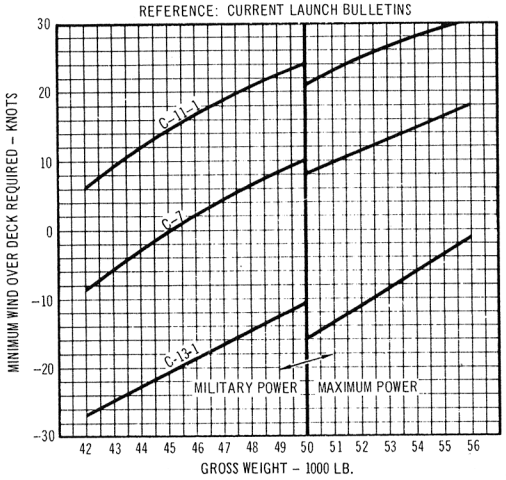


COMBAT RADIUS

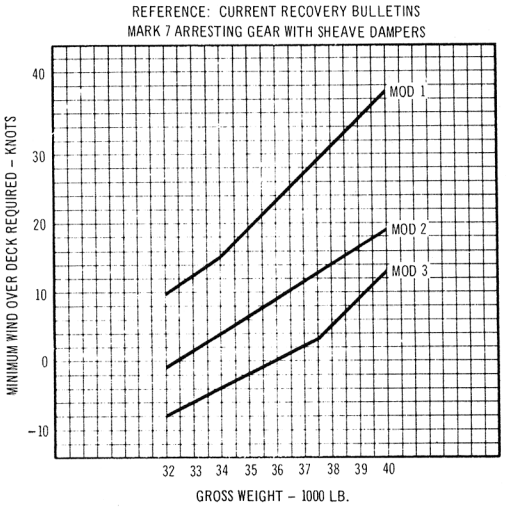


○ LOADING CONDITION COLUMN NUMBER

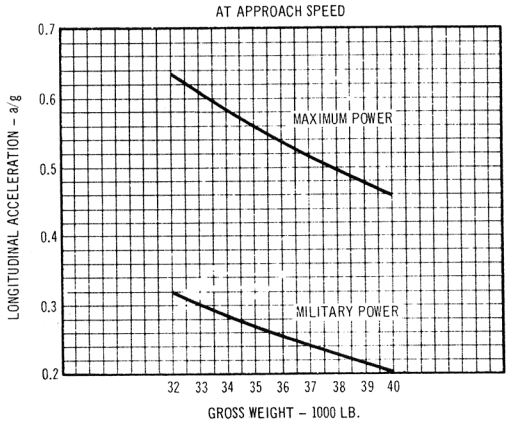
MINIMUM WIND OVER DECK REQUIRED FOR CATUPULTING vs GROSS WEIGHT



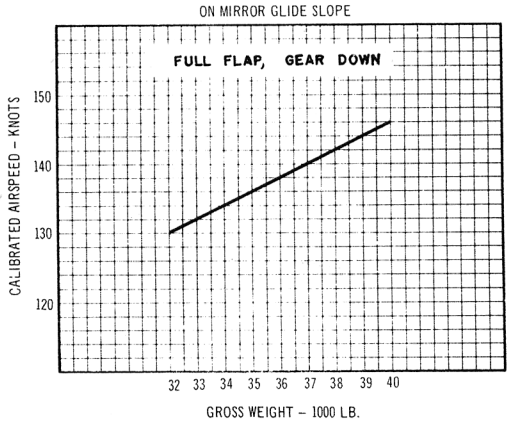
MINIMUM WIND OVER DECK REQUIRED FOR ARRESTING vs GROSS WEIGHT



WAVE-OFF ACCELERATION

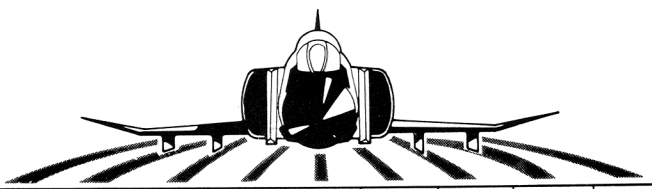


MINIMUM CARRIER APPROACH SPEEDS



STANDARD AIRCRAFT CHARACTERISTICS, NAVWEPS FORM 13100/4H (Rev. 7-65)

EXTERNAL STORE LOADING



STORE	9	8	7	6	5	4	3	2	1
GUIDED MISSILES - AIR-TO-AIR									
(AIM-7D/7E) SPARROW III		1	1	1		1	1	1	
(AIM-9B/9D) SIDEWINDER		2						2	
SPECIAL WEAPONS									
MK-28 (EX)/(RE)					1				
MK-43					1				
MK-57					1				
MK-61					1				
ROCKET LAUNCHERS - AIR-TO-GROUND									
AERO-7D(LAU-3A)	3	3			3			3	3
LAU-10A	3	3			3			3	3
AERO-6A-2 (LAU-32A)	3	3			3			3	3
CONVENTIONAL BOMBS									
MK-81 250 LB L.D.	6	3			6			3	6
MK-82 500 LB L.D.	6	3			6			3	6
MK-83 1000 LB L.D.	2	2			3			2	2
MK-81 SNAKEYE	6	3			6			3	6
MK-82 SNAKEYE	6	3			6			3	6
AN-M57A1 289 LB BANDED LUG	6	3			6			3	6
AN-M81 275 LB BANDED LUG	6	3			6			3	6
AN-M88 230 LB BANDED LUG	6	3			6			3	6
M-117A1 BOMB	3	3			5			3	3
FIRE BOMBS									
MK-77 MOD 1	4	2			3			2	4
MK-79 MOD 1	1				1				1
DISPENSERS									
SUU-7A/A(CBU-1A AND 2A/A)					1				
AERO 8A PRACTICE BOMB DISPENSER	2				1				2
SUU-30		3			5			3	
FUEL TANKS									
370 GALLON	1								1
600 GALLON					1				
PRACTICE SHAPES									
MK-86	6	3			6			3	6
MK-87	6	3			6			3	6
MK-88	2	2			3			2	2
MK-104					1				
BDU-11E					1				
RMU-8A TOW TARGET					1				
MK-4 GUN POD					1				
D-704 REFUELING (BUDDY) TANK					1				
CP-5 STARTER POD					1				
ALQ-31 ECM POD					1				

NOTES

GENERAL PURPOSE AND ESCORT FIGHTER

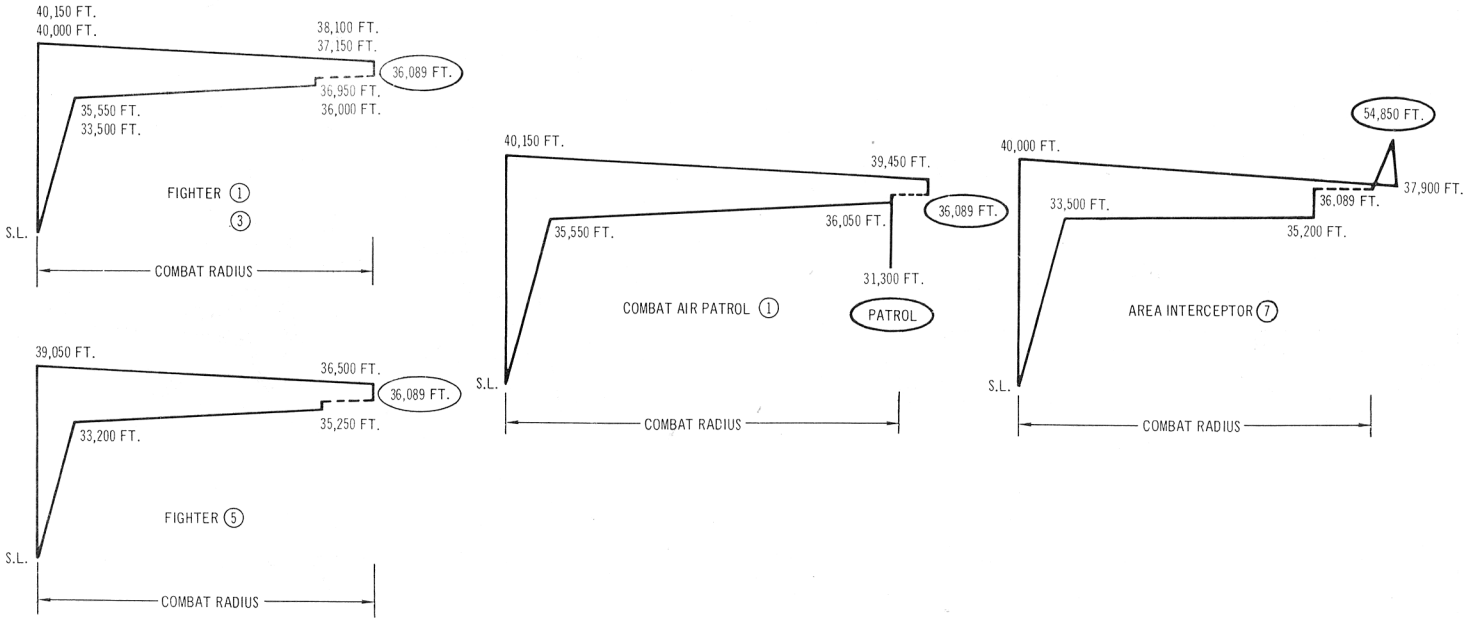
1. WARM-UP, TAKEOFF AND ACCELERATE: 5 minutes with normal thrust. (See note)
2. CLIMB: On course to optimum cruise altitude with military thrust.
3. CRUISE OUT: On course at altitudes and speeds for maximum range.
4. ACCELERATE: With maximum thrust at 36,089 feet from cruise speed to 1.5 MN.
5. COMBAT FUEL ALLOWANCE: 2 minutes at maximum power at 1.5 MN at 36,089 feet. (No distance credited)
6. CRUISE BACK: At altitudes and speeds for maximum range.
7. DESCENT: To sea level. No fuel, time or distance credited.
8. RESERVE: Fuel shall be 5% of total initial fuel plus fuel required for 20 minutes loiter at sea level at speeds for maximum endurance with both engines operating.

COMBAT AIR PATROL

1. WARM-UP, TAKEOFF AND ACCELERATE: 5 minutes with normal thrust. (See note)
2. CLIMB: On course to optimum cruise altitude with military thrust.
3. CRUISE OUT: 150 nautical miles at altitudes and speeds for maximum range.
4. LOITER: On station at altitudes and speeds for maximum endurance.
5. COMBAT FUEL ALLOWANCE: Accelerate with maximum thrust at 36,089 feet from loiter speed to 1.5 MN at 36,089 feet. 2 minutes at maximum thrust at 1.5 MN at 36,089 feet. (No distance credited)
6. CRUISE BACK: 150 nautical miles at altitudes and speeds for maximum range.
7. DESCENT: To sea level. No fuel, time or distance credited.
8. RESERVE: Fuel shall be 5% of total initial fuel plus fuel required for 20 minutes at sea level at speeds for maximum endurance with both engines operating.

AREA INTERCEPTOR

1. WARM-UP, TAKEOFF AND ACCELERATE: 5 minutes with normal thrust. (See note)
2. CLIMB: On course to optimum cruise altitude with military thrust.
3. CRUISE OUT: At altitudes and speeds for maximum range.
4. ACCELERATE: At 36,089 feet to maximum supersonic climb speed.
5. CLIMB: On course with maximum thrust to supersonic combat ceiling.
6. COMBAT FUEL ALLOWANCE: 2 minutes with maximum thrust at 1.5 MN at combat ceiling. (No distance credited)
7. CRUISE BACK: At altitudes and speeds for maximum range.
8. DESCENT: To sea level. No fuel, time or distance credited.
9. RESERVE: Fuel shall be 5% of total initial fuel plus fuel required for 20 minutes loiter at sea level at speeds for maximum endurance with both engines operating.



NOTES: All takeoff gross weights of 52,000 pounds and over have an additional 1 minute CRT in the warm-up and takeoff fuel allowance.
Fuel tanks dropped when empty.
Performance Basis: Calculated data based on flight test of F-4E/J aircraft.
No 5% service tolerance on fuel flow.

NOTES

DECK LAUNCHED INTERCEPT MISSION

1. WARM-UP, TAKEOFF AND ACCELERATE: 5 minutes with normal thrust. (See note)
2. CLIMB: On course to 36,089 feet with maximum thrust.
3. ACCELERATE: To 1.8 MN at 36,089 feet.
4. CRUISE OUT: On course at 36,089 feet at 1.8 MN with modulated afterburner.
5. COMBAT FUEL ALLOWANCE: 2 minutes at 1.8 MN at 36,089 feet. (No distance credited)
6. CRUISE BACK: At altitudes and speeds for maximum range.
7. DESCENT: To sea level. No fuel, time and distance credited.
8. RESERVE: Fuel shall be 5% of total initial fuel plus fuel required for 20 minutes loiter at sea level at speeds for maximum endurance with both engines operating.

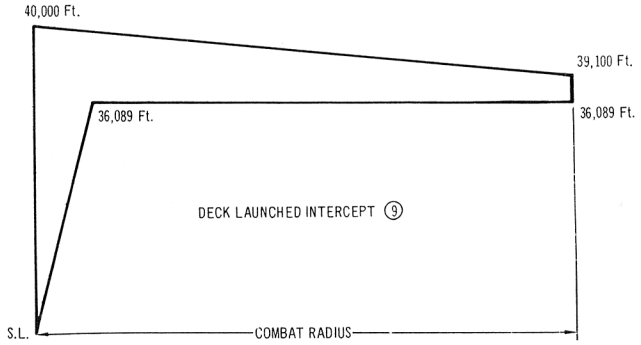
INFLIGHT REFUEL MISSIONS

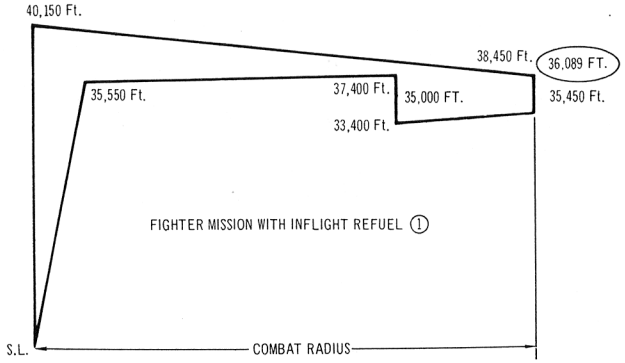
1) WARM-UP, TAKE-OFF, ACCELERATE: 5 Minutes with normal thrust at sea level. (See Note)
2) CLIMB: On course to optimum cruise altitude with military thrust.
3) CRUISE-OUT: At altitudes and speeds for maximum range.
4) DESCEND: To 35,000 feet for rendezvous with tanker.
5) LOITER: 15 Minute rendezvous allowance at maximum endurance speeds.
6) REFUEL: From A3D-2 Tanker at the following distances from base:

(1)	G.P. Fighter	433 nautical miles
(3)	G.P. Fighter	582 nautical miles
(5)	G.P. Fighter	482 nautical miles
(7)	Area Interceptor	582 nautical miles
(9)	Deck-Launched Interceptor	553 nautical miles
(11)	Ferry Range	753 nautical miles
(13)	Hi-Lo-Hi Attack	355 nautical miles

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 takeoff gross weights of 52,000 pounds and over have an additional one minute CRT in the warm-up and takeoff fuel allowances.
Fuel tanks dropped when empty.
Performance Basis: Calculated data based on flight test of F-4E J aircraft.
No 5% service tolerance on fuel flow.

NOTES - ALTERNATE LOADINGS

HI-LO-HI

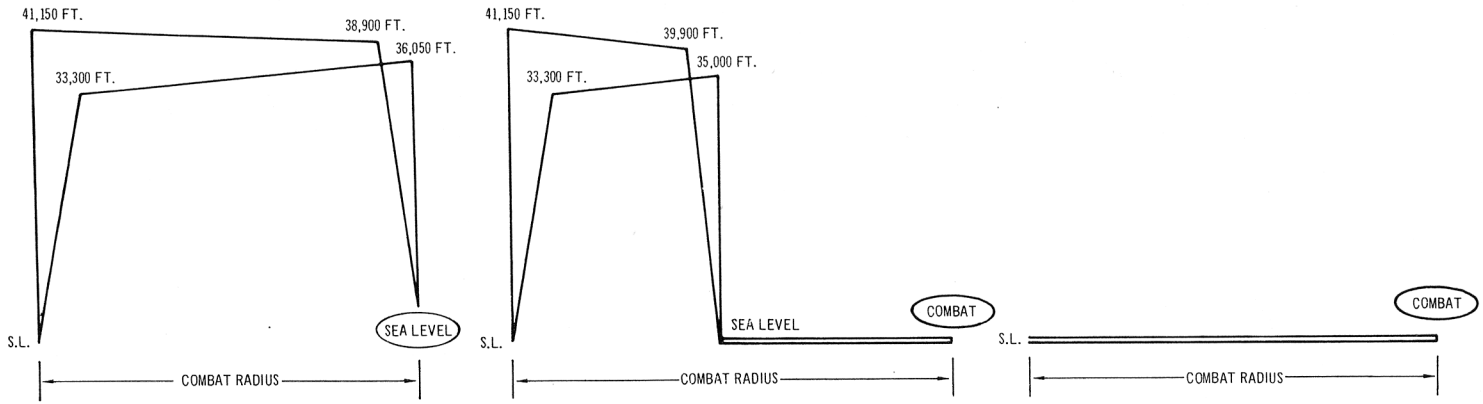
1. WARM-UP, TAKEOFF AND ACCELERATE: 5 minutes with normal thrust. (See note)
2. CLIMB: On course with military thrust to optimum cruise altitude.
3. CRUISE OUT: At optimum cruise altitude at speeds for maximum range.
4. DESCENT: To sea level. No fuel, time or distance credited.
5. COMBAT FUEL ALLOWANCE: 5 minutes with maximum speed with military thrust. (No distance credited). Drop stores after combat.
6. CLIMB: On course with military thrust to optimum cruise altitude.
7. CRUISE BACK: At altitudes and speeds for maximum range.
8. DESCENT: To sea level. No fuel, time or distance credited.
9. RESERVE: Fuel shall be 5% of total initial fuel plus fuel required for 20 minutes loiter at sea level at speed for maximum endurance with both engines operating.

SEA LEVEL RUN-IN (HI-LO-LO-HI)

1. WARM-UP, TAKEOFF AND ACCELERATE: 5 minutes with normal thrust. (See note)
2. CLIMB: On course with military thrust to optimum cruise altitude.
3. CRUISE OUT: At altitudes and speeds for maximum range.
4. DESCENT: To sea level. No fuel, time or distance credited.
5. CRUISE OUT: 100 nautical miles at speeds for maximum range at sea level.
6. COMBAT FUEL ALLOWANCE: 5 minutes at maximum speed with military thrust. (No distance credited). Drop stores after combat.
7. CRUISE BACK: 100 nautical miles at speeds for maximum range at sea level.
8. CLIMB: On course with military thrust to optimum cruise altitude.
9. CRUISE BACK: At altitudes and speeds for maximum range.
10. DESCENT: To sea level. No fuel, time or distance credited.
11. RESERVE: Fuel shall be 5% of total initial fuel plus fuel required for 20 minutes loiter at sea level at speed for maximum endurance with both engines operating.

SEA LEVEL LO-LO-LO

1. WARM-UP, TAKEOFF AND ACCELERATE: 5 minutes with normal thrust. (See note)
2. CRUISE OUT: At sea level at speed for maximum range.
3. COMBAT FUEL ALLOWANCE: 5 minutes at maximum speed with military thrust. (No distance credited). Drop stores after combat.
4. CRUISE BACK: At sea level at speeds for maximum range.
5. RESERVE: Fuel shall be 5% of total initial fuel plus fuel for 20 minutes loiter at sea level at speeds for maximum endurance with both engines operating.



NOTES: Configuration illustrated is (1) MK-28 + (2) 370 gallon tanks.
All takeoff gross weights of 52,000 pounds and over have an additional 1 minute CRT in the warm-up and takeoff fuel allowances.
Fuel tanks dropped when empty.

Performance Basis: Calculated data based on F-4E/J aircraft.
No 5% service tolerance on fuel flow.

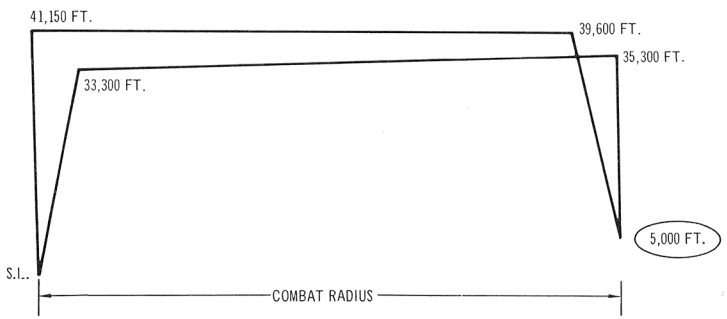
NOTES - ALTERNATE LOADINGS

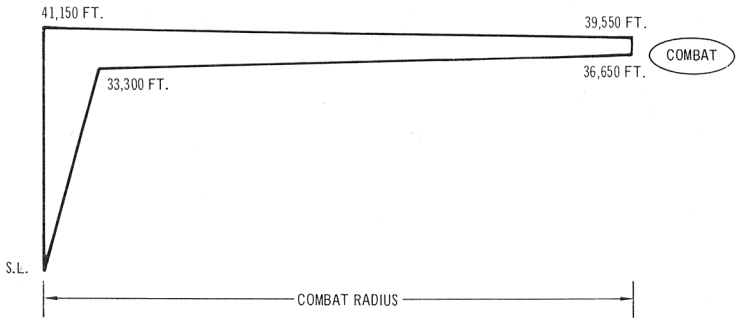
CLOSE SUPPORT

1. WARM-UP, TAKEOFF AND ACCELERATE: 5 minutes with normal thrust. (See note)
2. CLIMB: On course with military thrust to optimum cruise altitude.
3. CRUISE OUT: At altitudes and speeds for maximum range.
4. DESCENT: To 5000 feet. No fuel, time or distance credited.
5. LOITER: At 5000 feet for 1 hour at speeds and power for maximum endurance. Stores are dropped after loiter.
6. CLIMB: On course with military thrust to optimum cruise altitude.
7. CRUISE BACK: At altitudes and speeds for maximum range.
8. DESCENT: To sea level. No fuel, time or distance credited.
9. RESERVE: Fuel shall be 5% of total initial fuel plus fuel required for 20 minutes loiter at sea level at speeds for maximum endurance with both engines operating.

HIGH ALTITUDE SUBSONIC: HI-HI-HI

1. WARM-UP, TAKEOFF AND ACCELERATE: 5 minutes with normal thrust. (See note)
2. CLIMB: On course with military thrust to optimum cruise altitude.
3. CRUISE OUT: At altitudes and speeds for maximum range.
4. COMBAT FUEL ALLOWANCE: 5 minutes at maximum speed with military thrust. (No distance credited). Drop stores after combat.
5. CRUISE BACK: At altitudes and speeds for maximum range.
6. DESCENT: To sea level. No fuel, time or distance credited.
7. RESERVE: Fuel shall be 5% of total initial fuel plus fuel required for 20 minutes loiter at sea level at speeds for maximum endurance with both engines operating.





NOTES: Configuration illustrated is (1) MK-28 + (2) 370 gallon tanks.
All takeoff gross weights of 52,000 pounds and over have an additional one minute CRT in the warm-up and takeoff fuel allowances.
Fuel tanks dropped when empty.
Performance Basis: Calculated data based on F-4E/J aircraft.
No 5% service tolerance on fuel flow.

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