

NAVAIR 00-110AF8-6

Standard Aircraft Characteristics

NAVY MODEL
F-8H
AIRCRAFT

THIS MANUAL SUPERSEDES NAVAIR 00-110AF8-6
DATED JANUARY 1970 WHICH SHOULD BE DESTROYED
IN ACCORDANCE WITH APPLICABLE SECURITY REGULATIONS

PUBLISHED BY DIRECTION OF THE
COMMANDER OF THE NAVAL AIR SYSTEMS COMMAND

MARCH 1973

NAVAIR 01-110AF8-6

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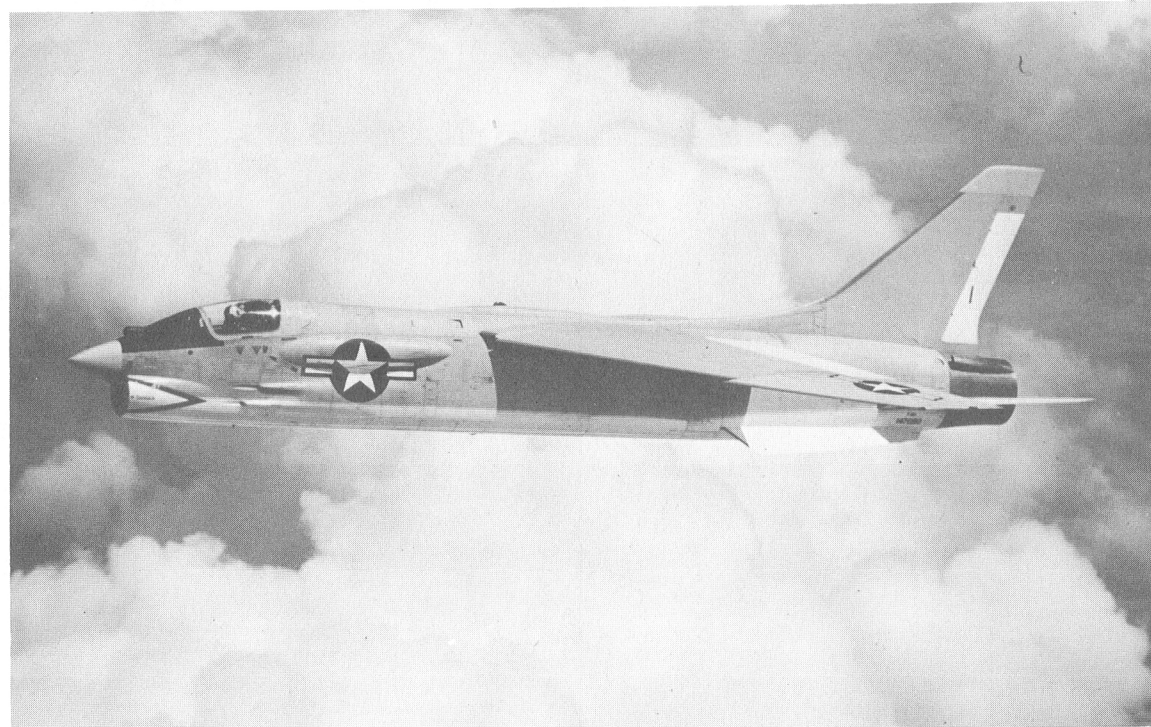
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STANDARD AIRCRAFT CHARACTERISTICS, NAVWEPS FORM 13100/4D (Rev. 7-65)



STANDARD AIRCRAFT CHARACTERISTICS F-8H "CRUSADER"



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

POWER PLANT	MISSION AND DESCRIPTION	WEIGHTS																											
<p>Engine J57-P-420 Augmentation Afterburning Manufacturer Pratt and Whitney Length 269.52 Inches Diameter 40.44 Inches Specification N-6141 (14 July 1969) Compressor Axial Flow</p> <p style="text-align: center;">RATINGS</p> <p>Specification Thrust Ratings (sea level static) maximum* 19,600 lbs. (15 minute limit in-flight, and 5 minute limit in takeoff and ground operation)** military 12,400 lbs. (30 minute limit) normal 9,150 lbs.</p> <p>*With afterburning **Additional limitations noted in NATOPS Flight Manual</p>	<p>The F-8H airplane is a single-seat, carrier or land-based jet fighter designed to maintain air superiority during task force strikes and to deliver, as an attack airplane, a large number of stores of various types and sizes. The airplane is a re-manufactured F-8D airplane with these primary improvements: (1) J57-P-420 engine (2) increased service life wing, (3) improved landing and arresting gear, (4) provisions for mounting stores on wing pylons for increased armament capability, (5) CP-742A/APO deviated pursuit computer and AN/ASA-63 Missile Acquisition Programmer to allow launching of AIM-9D missiles with lead on the target, and (6) SHOEHORN equipment provisions for electronic warning and countermeasures. The basic F-8H airplane is the same externally as the F-8D airplane except for the addition of the Bullpup equipment fairing on the wing top centerline in the dorsal area and SHOEHORN antenna fairings on the trailing edge of the vertical fin and on the bottom of the fuselage between the main landing gear wheel wells.</p>	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>LOADING</u></th> <th style="text-align: center;"><u>LB</u></th> <th style="text-align: center;"><u>LF</u></th> </tr> </thead> <tbody> <tr> <td>Empty</td> <td style="text-align: right;">18,824</td> <td></td> </tr> <tr> <td>Basic (Guns only)</td> <td style="text-align: right;">19,700</td> <td></td> </tr> <tr> <td>Design</td> <td style="text-align: right;">26,000</td> <td style="text-align: center;">6.4</td> </tr> <tr> <td>Combat ②</td> <td style="text-align: right;">25,802</td> <td></td> </tr> <tr> <td>MAX T.O., Field</td> <td style="text-align: right;">34,280</td> <td></td> </tr> <tr> <td>MAX Land., Field</td> <td style="text-align: right;">26,000</td> <td></td> </tr> <tr> <td>MAX Catapult</td> <td style="text-align: right;">34,280</td> <td></td> </tr> <tr> <td>MAX Land., Carrier</td> <td style="text-align: right;">24,000</td> <td></td> </tr> </tbody> </table> <p>○ Loading Condition Column Number</p>	<u>LOADING</u>	<u>LB</u>	<u>LF</u>	Empty	18,824		Basic (Guns only)	19,700		Design	26,000	6.4	Combat ②	25,802		MAX T.O., Field	34,280		MAX Land., Field	26,000		MAX Catapult	34,280		MAX Land., Carrier	24,000	
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<p>UHF Command Radio AN/ARC-51A Speech Security Equipment KY-28/TSEC ADF AN/ARA-50 TACAN AN/ARN-52(V) IFF AN/APX-72 IFF Mode 4 Computer KIT-1A/TSEC Radio Altimeter AN/APN-22 Altitude Encoding Computer CPU-46A/A-22 Gyro Stabilized Magnetically Slaved Compass MA-1 Autopilot CV/AES-6 Armament Control System AN/AWG-4 (Includes AN/APO-149 Radar Set, EX-16 Computer Group, CP-742A/APO Deviated Pursuit Computer and AN/ASA-63 Missile Acquisition Programmer) ECM SHOEHORN (Includes AN/ALO-51A/100, AN/APR-27, AN/ALE-29A and AN/APR-30) Fuse Control AN/AWW-2A Approach Power Compensating System Inflight Monitor Tester TS 1843</p>	<p style="text-align: center;">WING</p> <p>Area 375 sq. ft. Span 35' 8" M.A.C. 141.4" Sweepback 1/4 chord 42.0° Length 54' 2.75" Height 15' 9.1" Tread 9'8"</p>	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>GALS</u></th> <th style="text-align: center;"><u>NO. TANKS</u></th> <th style="text-align: center;"><u>LOCATION</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">513</td> <td style="text-align: center;">3</td> <td>Fuselage, bladder, main system</td> </tr> <tr> <td style="text-align: center;">263</td> <td style="text-align: center;">5</td> <td>Fuselage, bladder, transfer system</td> </tr> <tr> <td style="text-align: center;">572</td> <td style="text-align: center;">1</td> <td>Wing, integral, trans- fer system</td> </tr> <tr> <td colspan="2">Fuel capacity (total usable)</td> <td style="text-align: right;">1348 Gallons</td> </tr> <tr> <td colspan="2">Fuel specification</td> <td style="text-align: right;">MIL-F-5624C</td> </tr> <tr> <td colspan="2">Fuel Grade</td> <td style="text-align: right;">JP-5</td> </tr> </tbody> </table> <p style="text-align: center;">OIL</p> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Oil capacity (total) (usable)</td> <td style="text-align: right;">6.1 Gallons 3.0 Gallons</td> </tr> <tr> <td>Oil specification</td> <td style="text-align: right;">MIL-L-23699</td> </tr> </tbody> </table>	<u>GALS</u>	<u>NO. TANKS</u>	<u>LOCATION</u>	513	3	Fuselage, bladder, main system	263	5	Fuselage, bladder, transfer system	572	1	Wing, integral, trans- fer system	Fuel capacity (total usable)		1348 Gallons	Fuel specification		MIL-F-5624C	Fuel Grade		JP-5	Oil capacity (total) (usable)	6.1 Gallons 3.0 Gallons	Oil specification	MIL-L-23699		
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PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		HI-HI MISSION ① CLEAN AIRPLANE	GENERAL PURPOSE FIGHTER MISSION ② 2 SIDEWINDERS	GENERAL PURPOSE FIGHTER MISSION ③ 4 SIDEWINDERS	HI-LO-HI MISSION ④ 2 MK-84 BOMBS	CLOSE AIR SUPPORT MISSION ⑤ 8 MK-81 SNAKEYES	CLOSE AIR SUPPORT MISSION ⑥ 8 MK-82 SNAKEYES
TAKEOFF WEIGHT	LB	29,468	30,084	30,791	33,862	32,776	34,280 ¹⁶
FUEL - INTERNAL/EXTERNAL	LB/LB	9,166/0	9,166/0	9,166/0	9,166/0	9,166/0	8,510/0
PAYLOAD ¹	LB	165	575	985	4,105	2,573	4,733
WING LOADING	LB/SQ. FT	78.58	80.22	82.11	90.30	87.40	91.41
STALL SPEED - POWER OFF	KNOTS	144.4	147.5	146.5	157.5	154.3	158.8
TAKEOFF GRD. RUN/OVER 50 FT OBS - CALM, 59°F, SL, CRT	FT/FT	2,430/3,490	2,560/3,620	2,690/3,780	3,340/4,520	3,100/4,240	3,430/4,630
TAKEOFF GRD. RUN/OVER 50 FT OBS - CALM, 89°F, SL, CRT	FT/FT	3,020/4,130	3,180/4,300	3,460/4,500	4,200/5,430	3,900/5,090	4,330/4,570
MRT MAX SPEED/ALTITUDE	KNOTS/FT	616/SL	610/SL	600/SL	599/SL	566/15,000	552/15,000
MRT RATE OF CLIMB AT SL	FPM	8,000	7,400	6,730	6,080	5,850	4,850
MRT TIME: SL TO 20,000 FT ²	MIN	2.8	3.0	3.4	3.9	4.5	5.3
MRT TIME: SL TO 30,000 FT ²	MIN	4.7	5.2	6.1	7.0	9.1	11.5
MRT SERVICE CEILING (100 FPM)	FT	42,000	41,500	40,400	38,100	36,600	33,900
COMBAT RANGE	N MI	1,239	1,201	1,042	925	798	615 ¹⁷
AVERAGE CRUISING SPEED	KNOTS	483	483	479	479	456	447
CRUISING ALTITUDE (SI)	FT	36,815/40,985	36,270/40,951	35,388/40,588	33,824/37,258	29,734/35,921	26,748/31,911
COMBAT RADIUS ³ /WITH IFR ⁴	N MI/N MI	558/1,016	358/814	343/771	333/720	140/455	63 ¹⁸ /379
AVERAGE CRUISING SPEED/WITH IFR	KNOTS/KNOTS	484/481	485/478	480/476	451/476	458/449	344/442
MISSION TIMES ⁹ /WITH IFR	HR/HR	2.39/4.32	1.38/3.29	1.32/3.13	1.55/3.08	1.62/3.03	1.36/2.73
IFR FUEL TRANSFERRED/DISTANCE FROM BASE	LB/N MI	4,908/610 ⁶	4,890/561 ⁷	4,873/508 ⁸	4,783/447 ⁹	4,693/364 ¹⁰	4,384/287 ¹¹
COMBAT AIR PATROL/WITH IFR	N MI/N MI	150/150	150/150	150/150			
LOITER TIME ¹² /WITH IFR	HRS/HRS	0.44/3.39	.77/3.49	.71/3.18			
MISSION TIME ⁹ /WITH IFR	HRS/HRS	1.39/4.34	1.50/4.21	1.41/3.91			
IFR FUEL TRANSFERRED/DISTANCE FROM BASE	LB/N MI	7,027/150 ¹³	6,926/150 ¹³	6,805/150 ¹³			
ACCELERATION AT .9 C _L MAX AT 89°F DAY, CRT	FT/SEC/SEC	8.15	7.70	7.38	5.88	6.19	5.44

COMBAT LOADING CONDITION

COMBAT LOADING CONDITION		ARMAMENT RETAINED ②	ARMAMENT RETAINED ④	ARMAMENT RETAINED ⑥	ARMAMENT RETAINED ⑧	ARMAMENT RETAINED ⑩	ARMAMENT RETAINED ⑫
COMBAT WEIGHT	LB	25,801	26,417	27,124	30,195	29,109	30,876
ENGINE POWER		MAXIMUM	MAXIMUM	MAXIMUM	MAXIMUM	MAXIMUM	MAXIMUM
FUEL	LB	5,500	5,500	5,500	5,500	5,500	5,106
COMBAT SPEED/COMBAT ALTITUDE	KNOTS/FT	994/35,000	965/35,000	925/35,000	546 ¹⁴ /SL	579 ¹⁴ /5,000	528 ¹⁴ /5,000
RATE OF CLIMB/COMBAT ALTITUDE	FPM/FT	13,380/35,000	12,600/35,000	11,700/35,000	18,550/SL	16,110/5,000	14,300/5,000
COMBAT CEILING (500 FPM)	FT	51,600	51,000	50,200	48,200	47,400	46,400
RATE OF CLIMB AT SL	FPM	23,300	22,100	20,700	18,600	17,400	15,700
MAX SPEED AT SL	KNOTS	662	656	650	545 ¹⁴	546 ¹⁴	495 ¹⁴
MAX SPEED/ALTITUDE	KNOTS/FT	1,004/36,089	977/36,089	937/36,089	704/36,089	632 ¹⁴ /11,500	594 ¹⁴ /14,700
LANDING WEIGHT ¹⁵	LB	21,523	21,739	22,063	22,021	22,542	22,508
FUEL	LB	1,386	1,396	1,423	1,430	1,505	1,471
STALL SPEED - PWR OFF/APP PWR	KNOTS/KNOTS	124/118	122/119	121/117	123/119	125/121	125/121
DIST GRD ROLL/OVER 50 FT OBS - CALM 59°F, SL	FT/FT	5,700/6,660	4,700/5,580	6,020/6,980	6,000/6,920	6,340/7,300	6,310/7,270

PERFORMANCE BASIS: CALCULATED DATA BASED ON F-8E FLIGHT TEST DATA OF NATESTCEN REPORTS FT2122-016R-64 DTD: 4 MAY 1964, FT2122-019R-64 DTD 25 MAY 1964 AND CONTRACTOR F-8D AND F-8E(FN) FLIGHT TEST DATA, WIND TUNNEL DATA, AND ESTIMATES.

NOTES

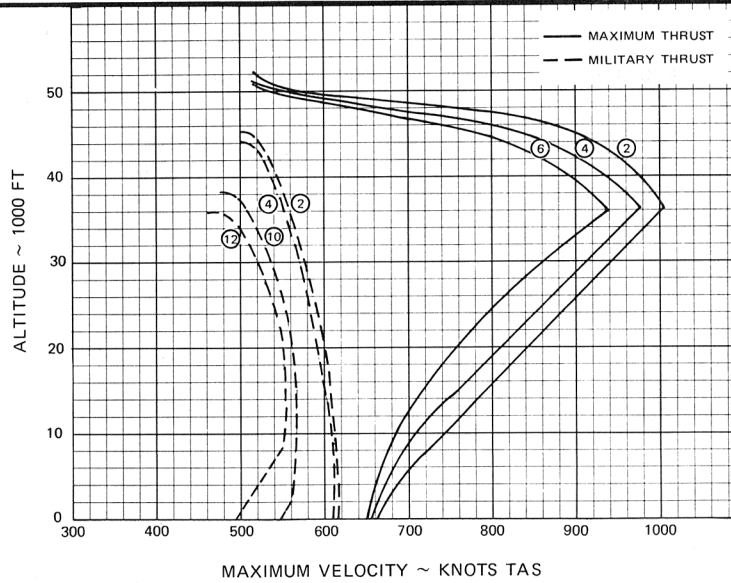
NOTES

- PAYLOAD INCLUDES 500 ROUNDS OF AMMUNITION.
- TIME-TO-CLIMB CONSIDERS WEIGHT REDUCTION DUE TO GROUND OPERATION AND FUEL USED TO CLIMB.
- HI-LO-HI RADIUS IS FOR 100 N. MI. CRUISE AT SEA LEVEL; CLOSE AIR SUPPORT RADIUS IS FOR 1 HOUR LOITER TIME ON STATION.
- REFUEL RADIUS IS DETERMINED WITH REFUELING TO FULL INTERNAL FUEL CAPACITY. REFUELING ALTITUDE IS 35,000 FT OR BEST CRUISE ALTITUDE WITH FULL INTERNAL FUEL, WHICHEVER IS LESS.
- MISSION TIME EXCLUDES TIME FOR WARMUP AND TAKEOFF AND 20-MINUTE LOITER AT SEA LEVEL.
- REFUEL ALTITUDE IS 34,800 FT.
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- REFUEL ALTITUDE IS 31,400 FT.
- REFUEL ALTITUDE IS 27,401 FT.
- REFUEL ALTITUDE IS 24,349 FT.
- LOITER TIME IS TIME-ON-STATION (150 NAUTICAL MILES FROM BASE).
- REFUEL ALTITUDE IS 30,000 FT.
- SPEED LIMITATION
- AMMUNITION AND STORES EXPENDED.
- WEIGHT LIMIT.
- RANGE AT MAX. TOGW (34,936 LBS) = 681 NMI.
- RADIUS AT MAX. TOGW (34,936 LBS) = 106 NMI.

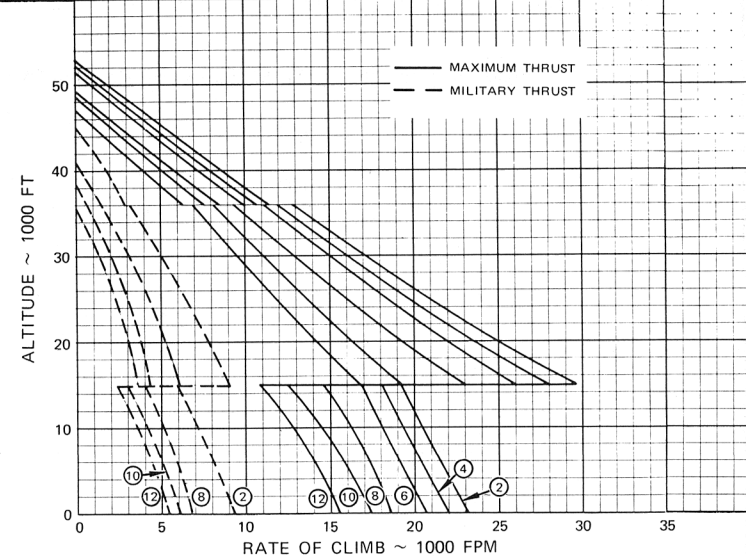
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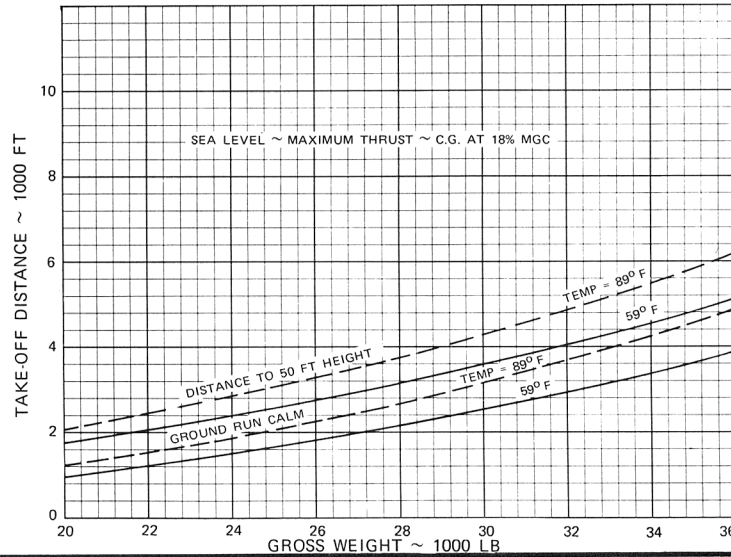
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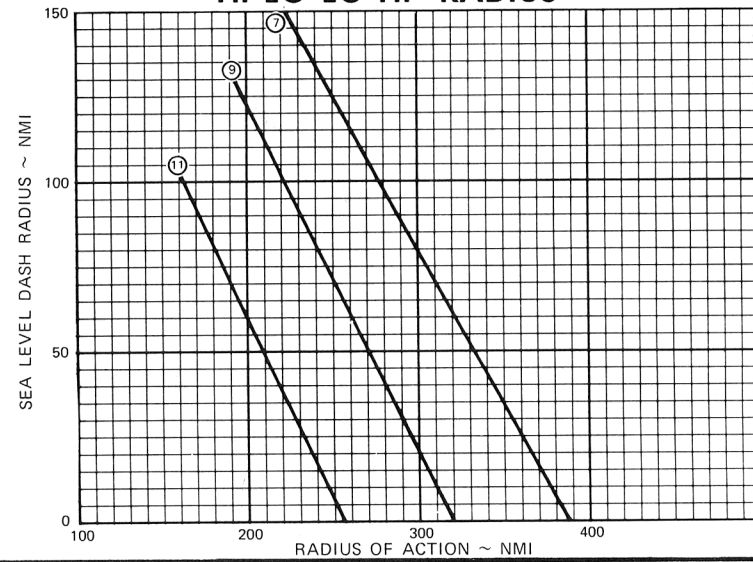
CLIMB



TAKE-OFF

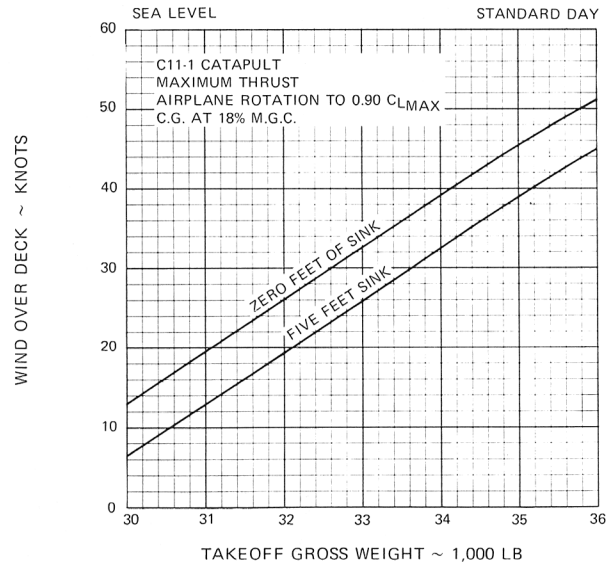


HI-LO-LO-HI RADIUS

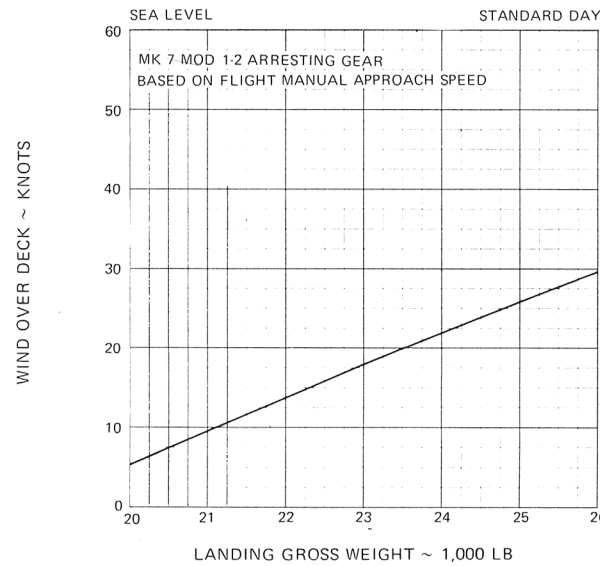


○ LOADING CONDITION COLUMN NUMBER

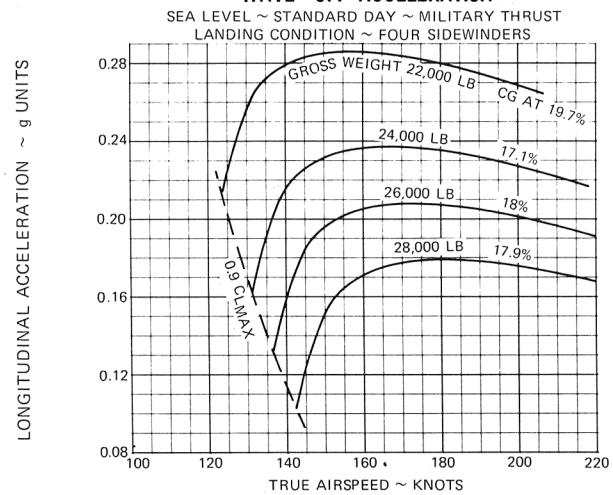
MINIMUM WIND OVER DECK REQUIRED FOR CATAPULTING



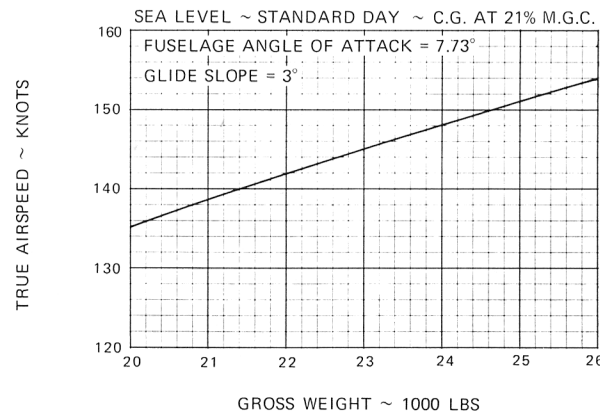
MINIMUM WIND OVER DECK REQUIRED FOR ARRESTING



WAVE-OFF ACCELERATION



OPTIMUM CARRIER APPROACH SPEEDS

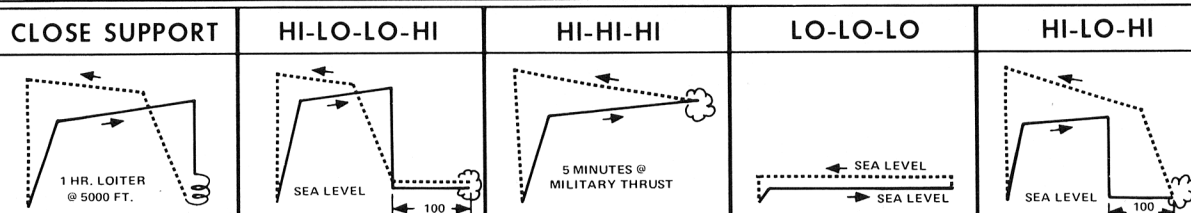


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MISSION SUMMARY—ALTERNATE LOADINGS

EXTERNAL STORE LOADING	T.O.G.W. lb	CLOSE SUPPORT		HI-LO-LO-HI		HI-HI-HI		LO-LO-LO		HI-LO-HI	
		COMBAT RADIUS n. mi.	MISSION TIME hr.	COMBAT RADIUS n. mi.	MISSION TIME hr.	COMBAT RADIUS n. mi.	MISSION TIME hr.	COMBAT RADIUS n. mi.	MISSION TIME hr.	COMBAT RADIUS n. mi.	MISSION TIME hr.
7 2 MK-84 G.P. a = 5.88 FT/SEC/SEC ²	33,862	191	1.80	276	1.39	451	1.96	227	1.38	333	1.55
9 8 MK-81 SNAKEYES a = 6.19 FT/SEC/SEC ²	32,776	140	1.62	221	1.25	378	1.74	200	1.32	272	1.37
11 8 MK-82 SNAKEYES a = 5.44 FT/SEC/SEC ²	34,280	63	1.36	164	1.00	310	1.46	171	1.15	211	1.12
12 8 MK-82 SNAKEYES a = 4.98 FT/SEC/SEC ²	34,936	106	1.48	204	1.18	348	1.62	192	1.27	251	1.29
13 2 MK-83 a = 6.76 FT/SEC/SEC ²	31,892	219	1.91	288	1.61	470	2.04	231	1.40	348	1.61
14 8 FUSELAGE ZUNI ³ a = 6.80 FT/SEC/SEC ²	31,019	199	1.84	268	1.39	464	1.99	221	1.40	328	1.55

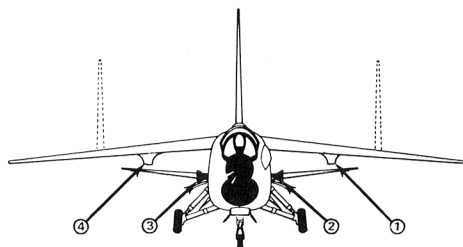
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NOTES

- MISSION TIME EXCLUDES TIME FOR WARMUP AND 20-MINUTE LOITER TIME AT SEA LEVEL.
- ACCELERATION, a, IS AT 0.9 C_LMAX WITH COMBAT THRUST AT 89° F.
- MK 32 WARHEAD ON ZUNI ROCKETS

STORE LOADING



TYPE OF LOADING	STATIONS 1 & 4	UNIT WT. (WT./STORE) LB.	UNIT DRAG INDEX	STATIONS 2 & 3	UNIT WT. (WT./STORE) LB.	UNIT DRAG INDEX	
RACKS (3) ~ NO. CARRIED PER STATION	(1) AERO 7A-1 EBR + PYLON	227 ¹	10 ¹	(1) LAU-7/A LAUNCHER + SINGLE FUSELAGE PYLON	103 ¹	2.5 ¹	
	(1) A/A 37B-6 MER ²	223 ³	20.5 ³	(2) LAU-7/A LAUNCHERS + (3) DUAL FUSELAGE PYLON	STA 2 / STA. 3 250 ¹ / 253 ¹	7.5 ¹	
	(1) A/A 37B-5 TER ²	105 ³	9 ³	(1) AERO 3A LAUNCHER + SINGLE FUSELAGE PYLON	62 ¹	2.5 ¹	
	(1) A/A 37B-1 MBR ²	155 ³	12 ³	(2) AERO 3A LAUNCHERS + (3) DUAL FUSELAGE PYLON	STA 2 / STA. 3 168 ¹ / 171 ¹	7.5 ¹	
	(1) A/A 37B-3 PMBR ²	87 ³	10 ³				
AIR-TO-GROUND ROCKET LAUNCHERS, AIR-TO-AIR MISSILES (3) ~ MAXIMUM NO. CARRIED PER STATION.	(2) AERO-6A ⁴ , 6A-14, 6A-24 (NOSE AND TAIL CONE ON)	148	1.0	(2) LAU-33/A ⁵ (MK 32 MOD O HEAD)	262	7.5	
	(2) AERO-7D ⁶ (NOSE AND TAIL CONE ON)	431	2.0	(2) LAU-33/A ⁵ (MK 24 MOD O HEAD)	262	13.0	
	(2) LAU-3A/A ⁶ (NOSE AND TAIL CONE ON)	417	2.0	(1) LAU-35/A ^{5,8} (MK 32 MOD O HEAD)	262	7.5	
	(2) LAU-10/A ⁷ (NOSE CONE ON, TAIL CONE OFF)	533	5.0	(1) LAU-35/A ^{5,8} (MK 24 MOD O HEAD)	262	13.0	
	(2) LAU-10/A ⁷ (NOSE AND TAIL CONE OFF, MK 32 MOD O HEAD)	533	16.0	(2) AIM - 9B SIDEWINDER MISSILE	164	5.0	
	(2) LAU-10/A ⁷ (NOSE AND TAIL CONE OFF, MK 24 MOD O HEAD)	533	16.0	(2) AIM - 9C SIDEWINDER MISSILE	205	5.0	
	(2) LAU-32 A/A ⁴ (NOSE AND TAIL CONE ON)	168	1.0	(2) AIM - 9D SIDEWINDER MISSILE	195	5.0	
	(2) LAU-32 B/A ⁴ (NOSE AND TAIL CONE ON)	168	1.0				
	(2) LAU-56/A ⁴ (NOSE AND TAIL CONE ON)	168	1.0				
	(2) LAU-60/A ⁶ (NOSE AND TAIL CONE ON)	473	2.0				
	(2) LAU-61/A ⁶ (NOSE AND TAIL CONE ON)	542	6.5				
	(2) LAU-68/A ⁴ (NOSE AND TAIL CONE ON)	217	2.5				
	(2) LAU-69/A ⁶ (NOSE AND TAIL CONE ON)	506	6.5				
GENERAL PURPOSE BOMBS (3) ~ MAXIMUM NO. CARRIED PER STATION.	(2) MK 81 CONICAL/SNAKEYE I	260/301	3.5/5.3				
	(2) MK 82 CONICAL/SNAKEYE I	527/571	4.8/7.5				
	(2) MK 83	985	5.8				
	(2) MK 84	1970	5.5				
	(2) M117A1	823	10.5				
FIRE BOMBS (3) ~ MAX. NO. CARRIED PER STA.	(2) MK 77 MOD 2	520	4.5				
	(2) MK 77 MOD 4	520	14.5				
	(2) MK 79 MOD 1	912	6.5				

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

STORE LOADING



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

TYPE OF LOADING	STATIONS 1 & 4	UNIT WT. (WT./STORE) LB.	UNIT DRAG INDEX	STATIONS 2 & 3	UNIT WT. (WT./STORE) LB.	UNIT DRAG INDEX	
CLUSTER BOMBS (2) ~ MAX. NO. CARRIED PER STA.	(1) MK 20 ROCKEYE II	475	10.5				
	(2) CBU-24	830	23.0				
	(2) CBU-29	830	23.0				
	(2) CBU-49	830	23.0				
PRACTICE BOMBS (3) ~ MAXIMUM NO. CARRIED PER STATION.	(1) MK 76	24	2.8				
	(1) MK 86	217	3.1				
	(1) MK 87	333	4.0				
	(1) MK 88	750	5.8				
	(1) MK 89 MOD 0	57	1.2				
	(1) MK 89 MOD 1	57	1.2				
FLARES (3) ~ MAX. NO. CARRIED PER STA.	(1) MK 24 MOD 2, 3 & 4	27	3.3				
	(1) MK 45 MOD 0	27	3.3				
<p>NOTES: (1) INCLUDES PYLON (2) ON AERO 7A-1 EBR (3) DOES NOT INCLUDE PYLON AND AERO 7A-1 EBR (4) CONTAINS 7 2.75 IN. FFAR</p> <p>(5) CONTAINS TWO 5.0 IN. FFAR ZUNI ROCKETS. (6) CONTAINS NINETEEN 2.75 IN. FFAR (7) CONTAINS FOUR 5.0 IN. FFAR ZUNI ROCKETS. (8) THE LAU 35/A WAS DESIGNED FOR ONLY THE LOWER STATION OF THE DUAL FUSELAGE PYLON ON STATION 2; THE LAU 33/A CAN BE USED ON ANY OTHER DUAL OR SINGLE PYLON STATION.</p> <p>UNIT DRAG INDEX REFLECTS MAXIMUM INTERFERENCE DRAG AND MECHANICAL FUZE DRAG ON BOMBS. REFER TO NATOPS FLIGHT MANUAL (NAVY MODEL F-8H AIRCRAFT, NAVAIR 01-45HHE-1) FOR LOADINGS WITH SMALLER INTERFERENCE DRAG.</p>							

NOTES

GENERAL PURPOSE AND ESCORT FIGHTER

WARM-UP, TAKE-OFF, ACCELERATE: 5 minutes with normal thrust and 1 minute with maximum thrust at sea level.

CLIMB: On course to cruise altitude with military rated thrust.

CRUISE-OUT: At altitudes and speeds for maximum range.

ACCELERATE: With maximum thrust at 36089 feet from cruise speed to 1.5 MN.

COMBAT FUEL ALLOWANCE: At 36089 feet for 2 minutes at 1.5 MN. (No distance credited)

CRUISE-BACK: At altitudes and speeds for maximum range.

RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5 per cent of initial fuel load.

GENERAL PURPOSE FIGHTER WITH IN-FLIGHT REFUELING (A-3B TANKER)

WARM-UP, TAKE-OFF, ACCELERATE: 5 minutes with normal thrust and 1 minute with maximum thrust at sea level.

CLIMB: On course to cruise altitude with military rated thrust.

CRUISE-OUT: At altitudes and speeds for maximum range.

DESCEND to refueling altitude: 35,000 ft. or best cruise altitude with full internal fuel, whichever is less. (no fuel used, no distance gained).

RENDEZVOUS: 15 minutes at maximum endurance airspeeds.

FUEL TRANSFER: No fuel used, no distance gained.

REFUEL POINT: Limited to return of aircraft to base with normal reserve if contact for refueling is not made or refuel point not to exceed 80% of total radius.

CRUISE: Continue cruise-out at altitudes and speeds for maximum range.

The remainder of the problem is the same as the General Purpose Fighter Problem.

COMBAT AIR PATROL

WARM-UP, TAKE-OFF, ACCELERATE: 5 minutes with normal thrust and 1 minute with maximum thrust at sea level.

CLIMB: On course to cruise altitude with military rated thrust.

CRUISE: To a point 150 nautical miles from base at altitudes and speed for maximum range.

DESCEND: To 35000 ft., no fuel used, no distance gained.

LOITER: On station at speed for maximum endurance at 35000 ft. altitude.

COMBAT FUEL ALLOWANCE Accelerate with maximum thrust at 35000 feet from loiter speed to 1.5 MN. 2 minutes at maximum thrust at 1.5 MN at 35000 feet. (No distance credited)

CRUISE-BACK: 150 nautical miles to base at altitudes and speeds for maximum range.

RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5 per cent of initial fuel load.

CLOSE AIR SUPPORT

WARM-UP, TAKE-OFF, ACCELERATE: 5 minutes with normal thrust and 1 minute with maximum thrust at sea level.

CLIMB: On course to cruise altitude with military-rated thrust.

CRUISE-OUT: At altitudes and speeds for maximum range.

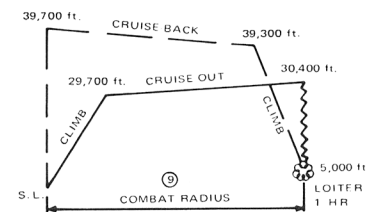
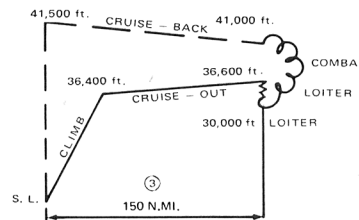
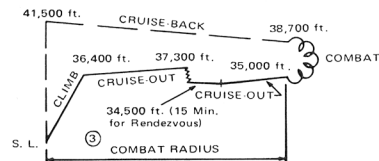
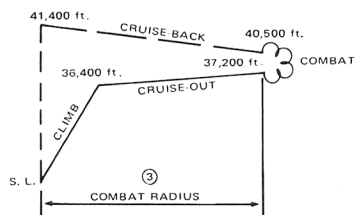
DESCEND: To 5,000 ft., no fuel used, no distance gained.

LOITER: One hour on station at speed for maximum endurance at 5,000-FT altitude. Drop stores at end of loiter.

CLIMB: On course to cruise altitude with military-rated thrust.

CRUISE BACK: At altitudes and speeds for maximum range.

RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5 per cent initial fuel load.



○ LOADING CONDITION COLUMN NUMBER

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

NOTES

HI-LO-LO-HI

WARM-UP, TAKE-OFF, ACCELERATE: 5 minutes with normal thrust and 1 minute with maximum thrust at sea level.

CLIMB: On course to cruise altitude with military rated thrust.

CRUISE-OUT: At altitudes and speeds for maximum range.

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

RUN IN: 100 n.mi. at sea level at speed for maximum range.

COMBAT: 5 minutes at military rated thrust (stores on, no distance gained). Drop stores.

RUN OUT: 100 n.mi. at sea level at speed for maximum range.

CLIMB: On course to cruise altitude with military rated thrust.

CRUISE-BACK: At altitudes and speeds for maximum range.

RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5 per cent initial fuel load.

HI-HI-HI

WARM-UP, TAKE-OFF, ACCELERATE: 5 minutes with normal thrust and 1 minute with maximum thrust at sea level.

CLIMB: On course to cruise altitude with military rated thrust.

CRUISE-OUT: At altitudes and speeds for maximum range.

DESCEND: To altitude for maximum military thrust mach number (no fuel used, no distance gained).

COMBAT: 5 minutes at military rated thrust at altitude for maximum Mach number (stores on, no distance gained). Drop stores. Guns are not fired.

CLIMB: On course to cruise altitude with military rated thrust.

CRUISE-BACK: At altitudes and speeds for maximum range.

RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5 per cent initial fuel load.

LO-LO-LO

WARM-UP, TAKE-OFF, ACCELERATE: 5 minutes with normal thrust and 1 minute with maximum thrust at sea level.

CRUISE OUT: At sea level at speed for maximum range.

COMBAT: 5 minutes at military rated thrust (stores on, no distance gained) Drop stores.

CRUISE BACK: At sea level at speed for maximum range.

RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5 percent initial fuel load.

HI-LO-HI

WARM-UP, TAKE-OFF, ACCELERATE: 5 minutes with normal thrust and 1 minute with maximum thrust at sea level.

CLIMB: On course to cruise altitude with military rated thrust.

CRUISE-OUT: At altitudes and speeds for maximum range.

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

RUN IN: 100 n.mi. at sea level at speed for maximum range.

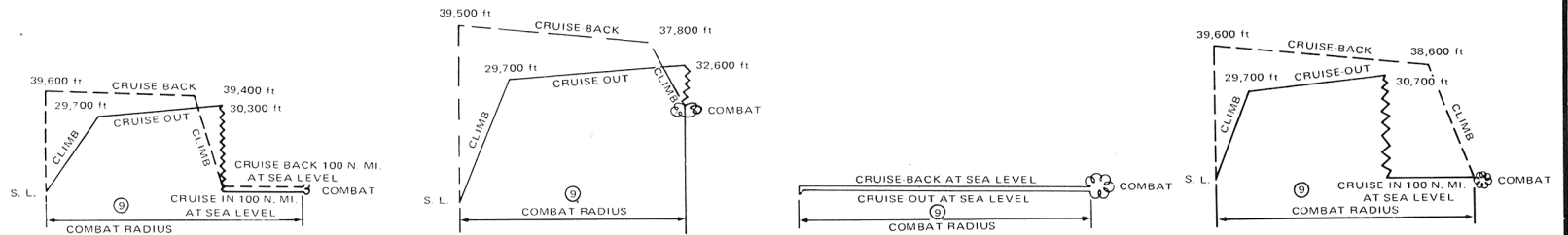
COMBAT: 5 minutes at military rated thrust (stores on, no distance gained). Drop stores.

CLIMB: On course to cruise altitude with military rated thrust.

CRUISE-BACK: At altitudes and speeds for maximum range.

RESERVE: 20 minutes at speed for maximum endurance at sea level plus 5 per cent initial fuel load.

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



○ LOADING CONDITION COLUMN NUMBER