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Standard Aircraft Characteristics

NAVY MODEL TA-4F AIRCRAFT

(TITLE UNCLASSIFIED)

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

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STANDARD AIRCRAFT CHARACTERISTICS

MODEL TA-4F
(J52-P-6A ENGINE)

DOUGLAS

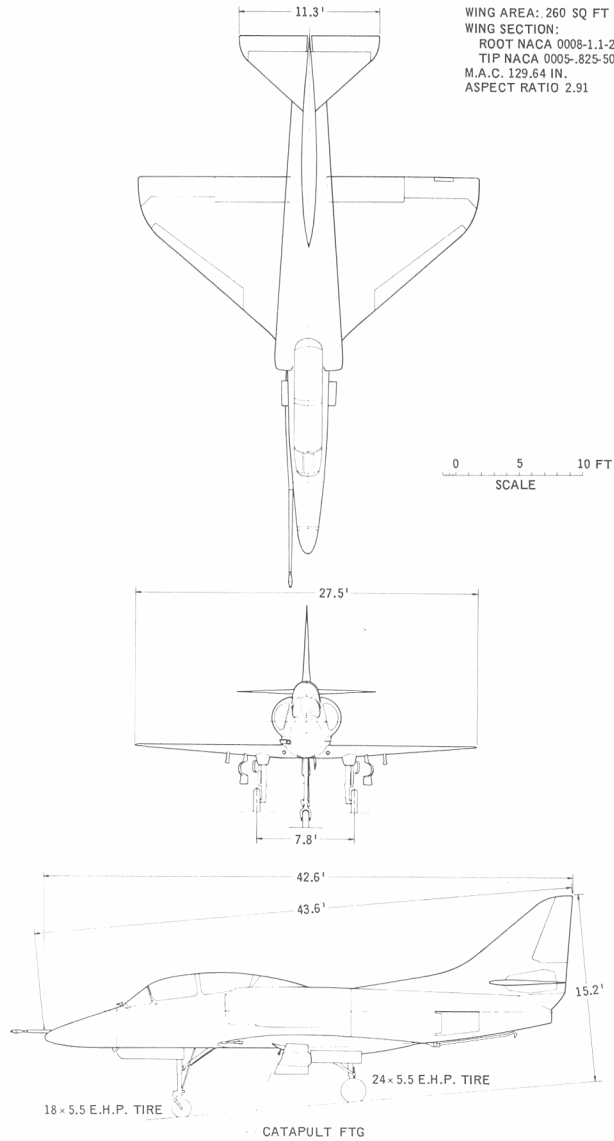
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TA-4F (J52-P-6A)

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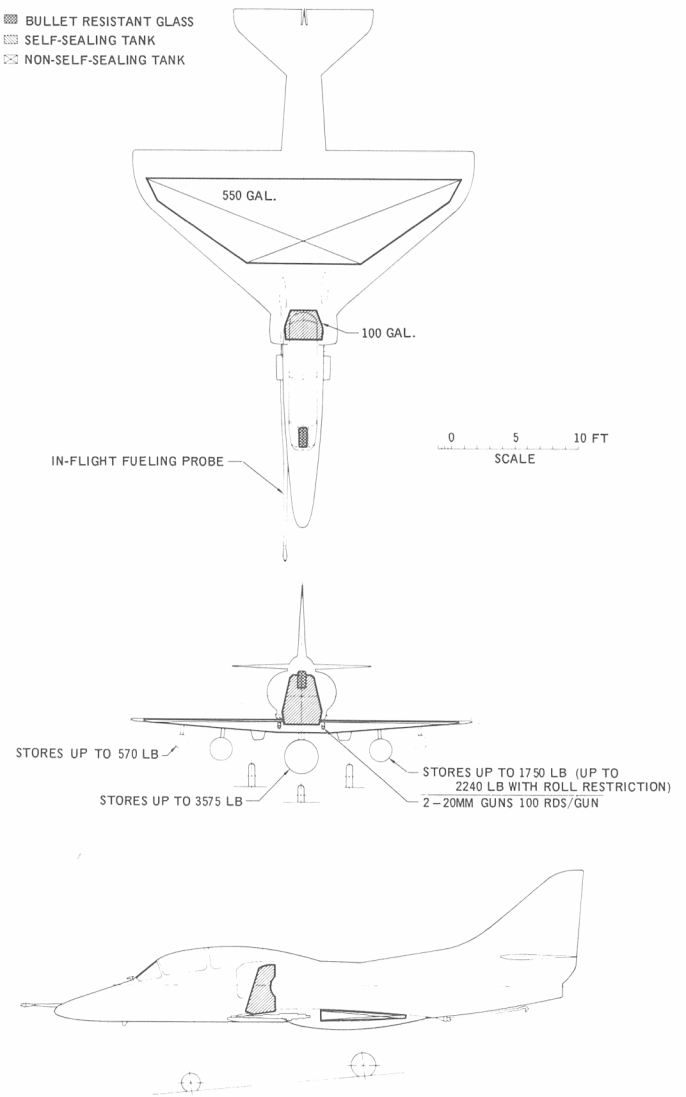
NAVAL AIR SYSTEMS COMMAND
NAVY DEPARTMENT



DESCRIPTIVE ARRANGEMENT

NAVAL AIR SYSTEMS COMMAND
NAVY DEPARTMENT

- BULLET RESISTANT GLASS
- ▨ SELF-SEALING TANK
- ▤ NON-SELF-SEALING TANK



ARMAMENT AND TANKAGE

POWER PLANT	MISSION AND DESCRIPTION	WEIGHTS																																							
<p>No. & Model (1) J52-P-6A Axial Flow Twin Spool Turbojet Without Afterburner MFR. - P & W Aircraft Spec. No. N1731-B</p> <p>Length 116 in. Diameter 31 in.</p> <p style="text-align: center;">RATINGS</p> <table border="0"> <tr> <td>MIL.</td> <td>11,650</td> <td>RPM</td> <td>8500 lb.</td> </tr> <tr> <td>Norm.</td> <td>11,400</td> <td>RPM</td> <td>7500 lb.</td> </tr> </table>	MIL.	11,650	RPM	8500 lb.	Norm.	11,400	RPM	7500 lb.	<p>The TA-4F is a two-seat advanced jet trainer version of the A-4E airplane. Missions include training of pilots in combat aerobatics, tactical maneuvers, instrument flying, carrier take-off and landing, and air-to-air and air-to-surface weapon delivery.</p> <p>The space for the second cockpit is obtained by moving the nose section of the basic A-4E forward 28 inches and reducing the size of the fuselage fuel tank. The nose landing gear is moved forward with the nose section. The rear seat is elevated above the forward seat for good visibility. Controls and instruments are repeated in the rear cockpit. Nose wheel steering and wing landing spoilers are installed.</p> <p>Spotting: A total of 175 airplanes can be accommodated in a landing spot on the flight and hangar decks of a CVA-59 class carrier.</p>	<table border="0"> <thead> <tr> <th><u>LOADINGS</u></th> <th><u>LEBS</u></th> <th><u>L.F.</u></th> </tr> </thead> <tbody> <tr> <td>Empty</td> <td>10,530</td> <td></td> </tr> <tr> <td>Basic</td> <td>10,842</td> <td></td> </tr> <tr> <td>Flight Design</td> <td>12,504</td> <td>7.0</td> </tr> <tr> <td>Combat</td> <td>16,833</td> <td>5.2</td> </tr> <tr> <td>Max. Take-Off</td> <td>24,500</td> <td>3.6</td> </tr> <tr> <td>Max. Landing</td> <td></td> <td></td> </tr> <tr> <td> Arrest</td> <td>14,500</td> <td>6.0</td> </tr> <tr> <td> Airfield</td> <td>16,000</td> <td>5.5</td> </tr> </tbody> </table>	<u>LOADINGS</u>	<u>LEBS</u>	<u>L.F.</u>	Empty	10,530		Basic	10,842		Flight Design	12,504	7.0	Combat	16,833	5.2	Max. Take-Off	24,500	3.6	Max. Landing			Arrest	14,500	6.0	Airfield	16,000	5.5				
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PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	(1) HI-HI-HI CLEAN AIRPLANE	(3) HI-HI-HI 2-300 GAL. TANKS	(5) S.L. STORE DELIVERY 1-MK 28 STORE 2-300 GAL. TANKS	(7) 5000 FT LOITER 1-300 GAL. TANK 12-MK81 SNAKEYES	(9) FERRY 3-300 GAL. TANKS
TAKE-OFF WEIGHT	lb. 15,709	20,913	23,079	22,686	23,136
Fuel internal/external (JP-5)	lb./lb. 4488/0	4488/4080	4488/4080	4488/2040	4488/6120
Payload	lb. NONE	NONE	2040	3600	NONE
Wing loading	lb./sq. ft. 60.4	80.4	88.8	87.3	89.0
Stall speed—power-off	kn. 113	132	139	138	139
Take-off run at S.L.— calm (A)	ft. 2290	3930	5230	4970	5270
Take-off run at S.L.— 25 kn. wind (A)	ft. 1550	2780	3790	3590	3820
Take-off to clear 50 ft.— calm (A)	ft. 3620	5870	7560	7230	7610
Max. speed/altitude (A)	kn./ft. 582/S.L.	530/3000	519/5000	469/9000	517/5000
Rate of climb at S.L. (A)	fpm. 9350	5750	4900	4400	4850
Time: S.L. to 20,000 ft. (A)	min. 2.9	5.1	6.3	7.4	6.5
Time: S.L. to 30,000 ft. (A)	min. 5.3	11.3	16.6	- - -	17.1
Service ceiling (100 fpm) (A)	ft. 42250	33700	30850	28600	30650
Combat range (Tanks Retained)	n.mi. 855	1330	1115	625	1535 (B)
Average cruising speed	kn. 434	420	419	394	416
Cruising altitude(s)	ft. 37,300-41,500	30,400-38,500	28,000-34,800	26,900-31,400	27,900-37,700
Combat radius/mission time	n.mi./hr. 395/1.9	680/3.3	435/2.1	145/1.8	- - -
Average cruising speed	kn. 434	425	425	408	- - -
IFR radius/mission time	n.mi./hr. 700/3.4	- - -	- - -	- - -	- - -
IFR fuel transferred/distance	lb./n.mi. 2480/394	- - -	- - -	- - -	- - -
COMBAT LOADING CONDITION	(2)	(4) TANKS RETAINED	(6) TANKS DROPPED STORE RETAINED	(8) TANK DROPPED BOMBS RETAINED	(10) TANKS RETAINED
COMBAT WEIGHT	lb. 13,914	16,833	18,602	20,463	17,016
Engine power	MILITARY	MILITARY	MILITARY	MILITARY	MILITARY
Fuel	lb. 2693	4488	4488	4488	4488
Combat speed/combat altitude	kn./ft. 514/38,500	492/33,300	543/S.L.	481/5,000	519/S.L.
Rate of climb/combat altitude	fpm/ft. 2150/38,500	1500/33,300	6900/S.L.	4300/5,000	7200/S.L.
Combat ceiling (500 fpm)	ft. 43,500	37,250	35,700	29,750	36,500
Rate of climb at S.L.	fpm. 10,650	7500	6900	5250	7200
Max. speed at S.L.	kn. 582	531	543	478	519
Max. speed/altitude	kn./ft. 582/S.L.	532/4000	545/5000	482/12,000	521/5000
LANDING WEIGHT	lb. 12,011	12,989	13,119	13,341	13,719
Fuel	lb. 790	1041	1045	966	1191
Stall speed—power-off/approach power	kn./kn. 98/94	102/98	103/98	104/99	107/102
Landing distance—ground roll/over 50 ft. obst.	ft./ft. 2155/2870	2310/3025	2330/3045	2365/3080	2430/3145

NOTES

(A) Military thrust, takeoff weight, stores and tanks retained.

(B) Ferry range is 1665 n.mi. if tanks dropped when empty.

(C) All loadings except clean airplane include all five pylons, guns and ammunition.

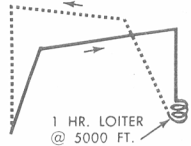
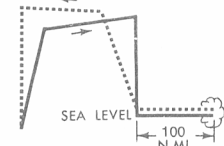
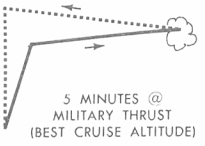


(D) Data Basis: NATC and DAC Flight Tests of the Model A-4E.

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SERVICE

MISSION SUMMARY — ALTERNATE LOADINGS

		CLOSE SUPPORT		HI-LO-LO-HI		HI-HI-HI		LO-LO-LO		HI-LO-HI	
											
EXTERNAL STORE LOADING	T.O.G.W.	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.
5 (1) MK 28 (2) 300 GAL TANKS	23,079	385	2.9	445	2.4	625	3.0	320	2.3	540	2.7
11 (1) MK 28	18,602	60(D)	1.4	135(E)	1.0	300	1.5	135	1.0	200	1.0
12 (3) AGM-12B BULLPUPS (2) 300 GAL TANKS	23,060	350	2.7	410	2.3	575	2.9	305	2.2	500	2.5
13 (6) MK 81 SNAKEYES	18,504	55(D)	1.4	125(E)	1.0	280	1.4	125	1.0	180	1.0
14 (6) MK 81 SNAKEYES (2) 300 GAL TANKS	22,981	350	2.7	415	2.3	580	2.9	305	2.2	505	2.5
15 (6) MK 82 SNAKEYES	20,094	40(D)	1.3	125(E)	1.0	240	1.3	125	1.0	165	0.9
16 (6) MK 82 SNAKEYES (2) 300 GAL TANKS (B)	24,500 (-71)	295	2.5	375	2.2	520	2.7	290	2.1	455	2.3

NOTES

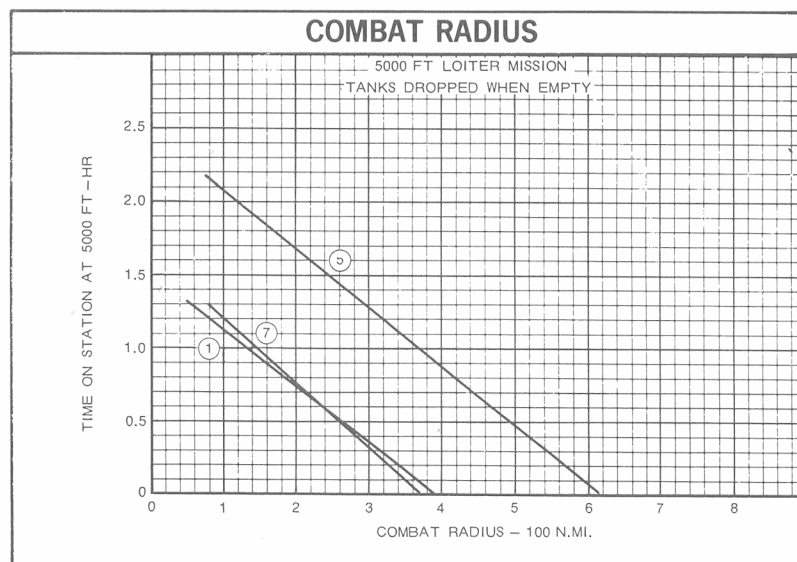
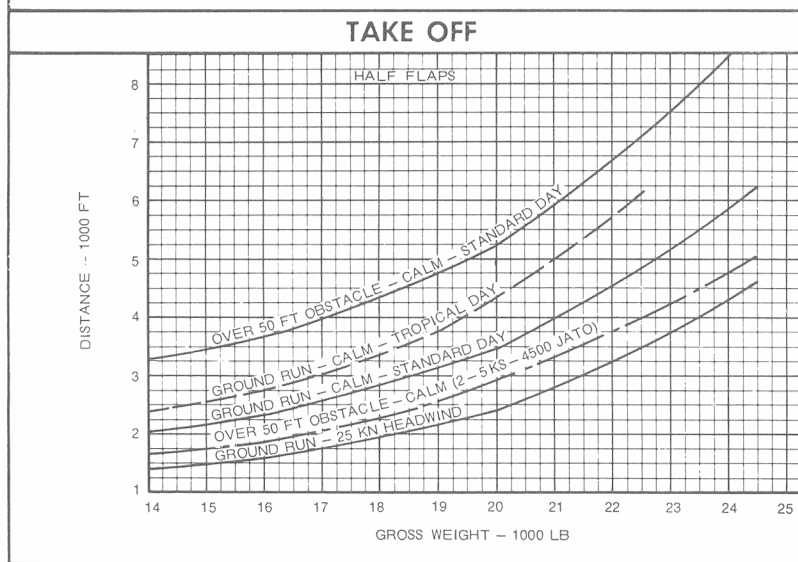
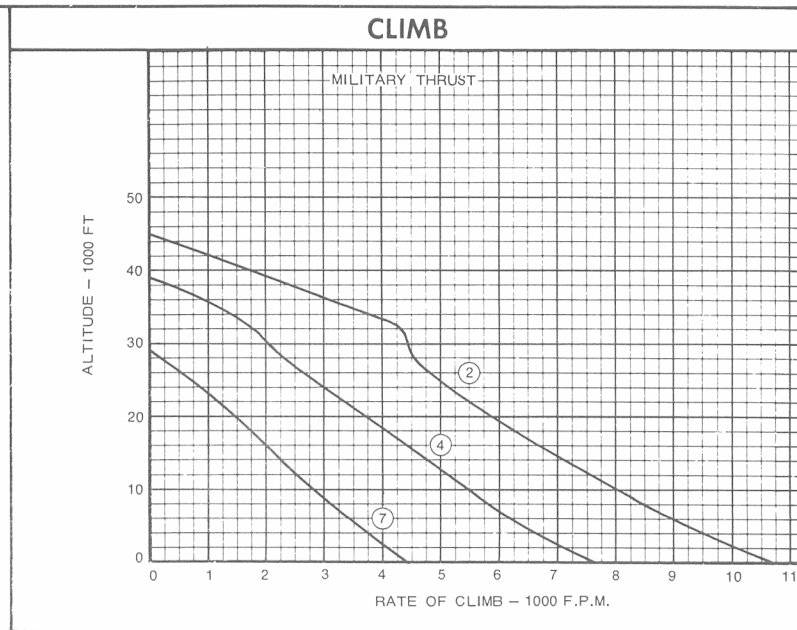
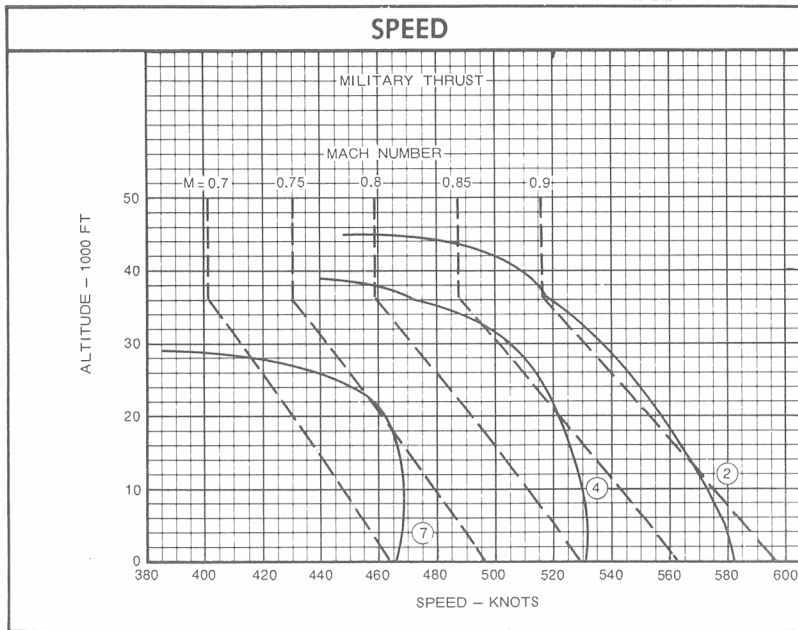
- (A) All loadings include all five pylons, guns and ammunition.
 (B) Fuel off-loaded to meet takeoff weight limitation.
 (C) Mission time does not include time for warmup and takeoff or 20 minute loiter.
 (D) Cruise at 5000 ft instead of optimum cruise altitude.
 (E) Cruise at sea level during entire mission.
 (F) Data Basis: NATC and DAC Flight Tests of the Model A-4E.

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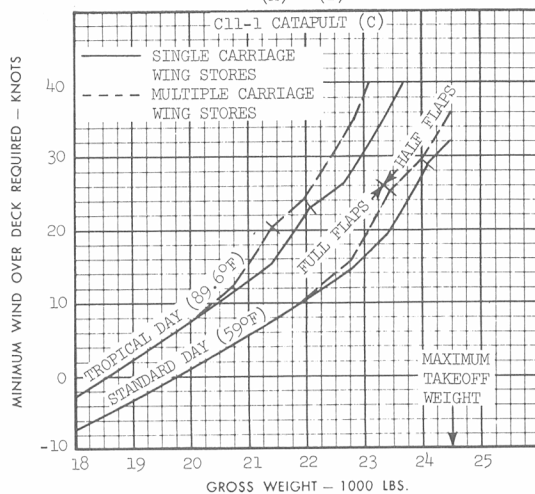
○ LOADING CONDITION COLUMN NUMBER

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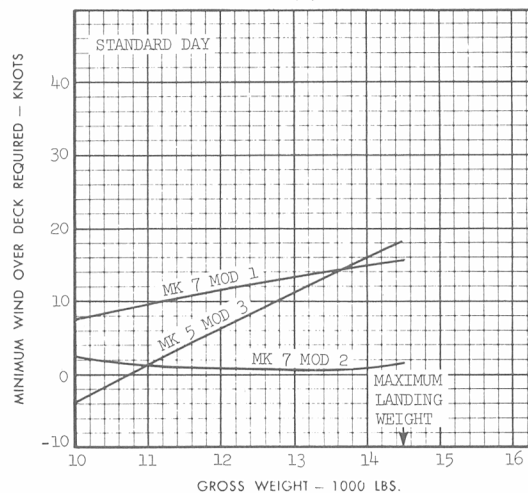
MINIMUM WIND OVER DECK REQUIRED FOR CATAPULTING VS. GROSS WEIGHT

(A) (B)



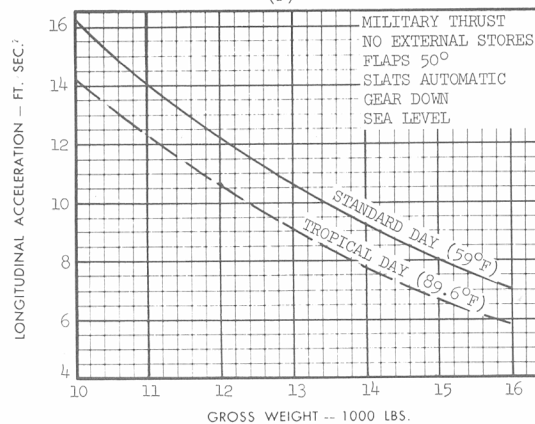
MINIMUM WIND OVER DECK REQUIRED FOR ARRESTING VS. GROSS WEIGHT

(d)



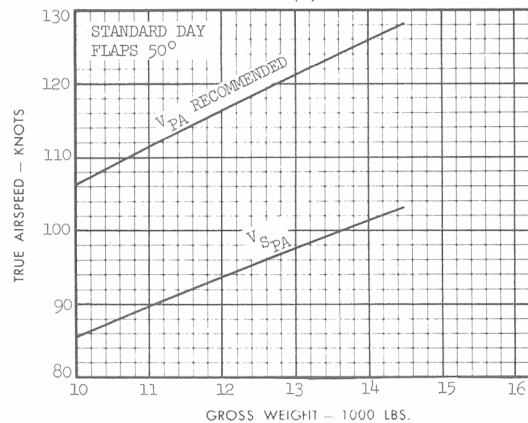
WAVE-OFF ACCELERATION

(F)



MINIMUM CARRIER APPROACH SPEEDS

(E)



NOTES

- (A) Catapult takeoff speeds are derived from a correlation of NATC minimums on A-4A, -4B, -4C, and -4E.
 (B) Catapult end speed is limited by a maximum longitudinal acceleration of 5.47g up to a gross weight of 22,850 lb on the C11-1 and C7 catapult and 22,720 lb on the C13 catapult, and a tow force of 120,000 lb at higher gross weights.

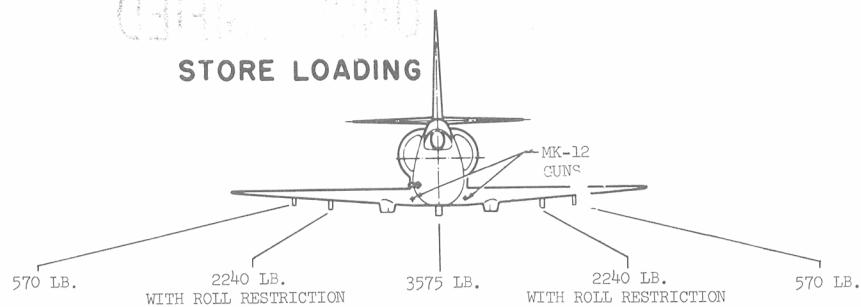
- (C) Minimum wind over deck required for C7 catapult is C11-1 requirement minus 12 knots, and minus 28 knots for the C13 catapult.
 (D) Engaging speed limited by 5.14g maximum horizontal load factor.
 (E) Approach speeds based on fleet operational speeds and corresponding to 16 1/2 units on the pilot's angle-of-attack indicator.
 (F) Waveoff acceleration based on longitudinal acceleration at fleet operational approach speeds.

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TA-4F (J52-P-6A)

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Ordnance	Station No. 5 Left Outboard	Station No. 4 Left Inboard	Station No. 3 Fuselage Centerline	Station No. 2 Right Inboard	Station No. 1 Right Outboard	
Suspension Equipment	1) Aero 20A Rack-Pylon 1) Aero 5A-1 Launcher Adapter 1) Aero 5A Pylon-Launcher 1) A/A 37B-1 MBR	1) Aero 20A Rack-Pylon 1) Aero 1A Adapter 1) MK-44 Missile Cluster Adapter (Lazy Dog) 1) Aero 3A Launcher 1) Aero 5A-1 Launcher Adapter 1) Aero 5A Pylon-Launcher 1) A/A 37B-1 MBR 1) A/A 37B-3 PMBR 1) MER 1) TER	1) Aero 7A Rack-Pylon 1) MK-44 Missile Cluster Adapter (Lazy Dog) 1) Aero 5A-1 Launcher Adapter 1) Aero 5A Pylon-Launcher 1) A/A 37B-1 MBR 1) A/A 37B-3 PMBR 1) MER 1) TER	1) Aero 20A Rack-Pylon 1) Aero 1A Adapter 1) MK-44 Missile Cluster Adapter (Lazy Dog) 1) Aero 3A Launcher 1) Aero 5A-1 Launcher Adapter 1) Aero 5A Pylon-Launcher 1) A/A 37B-1 MBR 1) A/A 37B-3 PMBR 1) MER 1) TER	1) Aero 20A Rack-Pylon 1) Aero 5A-1 Launcher Adapter 1) Aero 5A Pylon-Launcher 1) A/A 37B-1 MBR	
Bombs	1) MK-81 1) MK-81 Snakeye 1) MK-82 1) MK-82 Snakeye 1) AN-M81 (260 lb Frag.) 1) AN-M88 (220 lb Frag.) 1) AN-M57A (250 lb GP) 1) AN-M64A1 (500 lb GP) 1) AN-M30A1 (100 lb GP) 1) MK-94 Chemical 1) MK-77 Fire Bombs	6) MK-81 6) MK-81 Snakeyes 3) MK-82 3) MK-82 Snakeyes 1) MK-83 1) M117 Demolition 5) AN-M81 (260 lb Frag.) 5) AN-M88 (220 lb Frag.) 5) AN-M57A (250 lb GP) 1) AN-M64A1 (500 lb GP) 1) AN-M65A1 (1000 lb GP) 1) AN-M30A1 (100 lb GP) 1) MK-94 Chemical 3) MK-77 Fire Bombs 1) MK-79 Fire Bomb 2) CBU-1A/A 2) CBU-2A/A	6) MK-81 6) MK-81 Snakeyes 3) MK-82 6) MK-82 Snakeyes 3) MK-83 1) MK-84 1) M117 Demolition 6) AN-M81 (260 lb Frag.) 6) AN-M88 (220 lb Frag.) 6) AN-M57A (250 lb GP) 1) AN-M64A1 (500 lb GP) 1) AN-M65A1 (1000 lb GP) 1) AN-M66A2 (2000 lb GP) 1) AN-M30A1 (100 lb GP) 6) MK-94 Chemical 4) MK-77 Fire Bombs 1) MK-79 Fire Bomb	6) MK-81 6) MK-81 Snakeyes 3) MK-82 3) MK-82 Snakeyes 1) MK-83 1) M117 Demolition 5) AN-M81 (260 lb Frag.) 5) AN-M88 (220 lb Frag.) 5) AN-M57A (250 lb GP) 1) AN-M64A1 (500 lb GP) 1) AN-M65A1 (1000 lb GP) 1) AN-M30A1 (100 lb GP) 1) MK-94 Chemical 3) MK-77 Fire Bombs 1) MK-79 Fire Bomb 2) CBU-1A/A 2) CBU-2A/A	1) MK-81 1) MK-81 Snakeye 1) MK-82 1) MK-82 Snakeye 1) AN-M81 (260 lb Frag.) 1) AN-M88 (220 lb Frag.) 1) AN-M57A (250 lb GP) 1) AN-M64A1 (500 lb GP) 1) AN-M30A1 (100 lb GP) 1) MK-94 Chemical 1) MK-77 Fire Bombs	

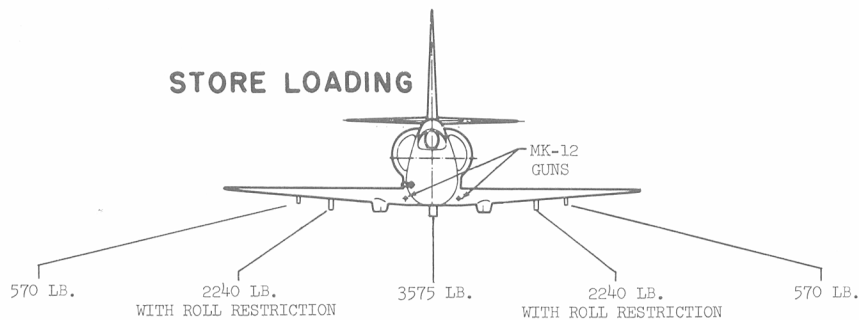
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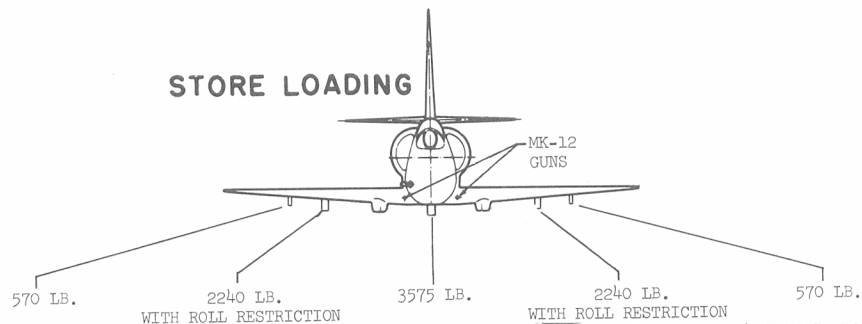


Ordnance		Station No. 5 Left Outboard	Station No. 4 Left Inboard	Station No. 3 Fuselage Centerline	Station No. 2 Right Inboard	Station No. 1 Right Outboard	
Bombs (Continued)		1) Aero 7A (Lazy Dog)	1) Aero 7A (Lazy Dog) 1) MK-44 Cluster Adapter (Lazy Dog)	1) MK-44 Cluster Adapter (Lazy Dog)	1) Aero 7A (Lazy Dog) 1) MK-44 Cluster Adapter (Lazy Dog)	1) Aero 7A (Lazy Dog)	
Guided Missiles		1) AGM-45A Shrike 1) AGM-12A, -12B Bullpup A	1) AGM-45A Shrike 1) AGM-12A, -12B Bullpup A 1) AGM-12C Bullpup B 1) Sidewinder 1A	1) AGM-12A, -12B Bullpup A	1) AGM-45A Shrike 1) AGM-12A, -12B Bullpup A 1) AGM-12C Bullpup B 1) Sidewinder 1A	1) AGM-45 Shrike 1) AGM-12A, -12B Bullpup A	
Rocket Launchers		1) LAU-32A/A 1) LAU-3A/A 1) LAU-10/A	2) LAU-32A/A 2) LAU-3A/A 2) LAU-10/A	3) LAU-32A/A 3) LAU-3A/A 3) LAU-10/A	2) LAU-32A/A 2) LAU-3A/A 2) LAU-10/A	1) LAU-32A/A 1) LAU-3A/A 1) LAU-10/A	
Mines		1) MK-50 with MK-15 Parapack	1) MK-36 with MK-27 Parapack 1) MK-36 Drill Mine with MK-4 Drill Kit 1) MK-50 with MK-15 Parapack 1) MK-52 with MK-20 Parapack or MK-35 Parapack	1) MK-25 with MK-26 Parapack or MK-34 Parapack 1) MK-25 Drill Mine with MK-4, -5 Drill Kit 1) MK-36 with MK-27 Parapack 1) MK-36 Drill Mine with MK-4 Drill Kit 1) MK-50 with MK-15 Parapack 1) MK-52 with MK-20 Parapack or MK-35 Parapack 1) MK-55 with MK-24 Parapack or MK-36 Parapack 1) MK-56 or MK-56 Drill Mine with MK-28, Mod 1 Parapack	1) MK-36 with MK-27 Parapack 1) MK-36 Drill Mine with MK-4 Drill Kit 1) MK-50 with MK-15 Parapack 1) MK-52 with MK-20 Parapack or MK-35 Parapack	1) MK-50 with MK-15 Parapack	

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Ordnance		Station No. 5 Left Outboard	Station No. 4 Left Inboard	Station No. 3 Fuselage Centerline	Station No. 2 Right Inboard	Station No. 1 Right Outboard	
Tanks and Pods		1) IM-119A Film Delivery Container 1) LAU-10/A Leaflet Dispenser 1) GTC-85 Pod-Mounted	1) 150 Gal Ext Tank 1) 300 Gal Ext Tank 1) MK-12 Mod 0 Chemical Tank 1) ALQ-31 ECM Pod 1) ALQ-31A Pod 1) MK-900 Chaff Dispenser 1) IM-119A Film Delivery Container 1) LAU-10/A Leaflet Dispenser 1) GTC-85 Pod-Mounted	1) 150 Gal Ext Tank 1) 300 Gal Ext Tank 1) 400 Gal Ext Tank 1) 300 Gal Buddy Tank 1) Aero 14B Spray Tank 1) ALQ-31 ECM Pod 1) ALQ-31A Pod 1) MK-900 Chaff Dispenser 1) LAU-10/A Leaflet Dispenser 1) NAVFAC 1) GTC-85 Pod-Mounted	1) 150 Gal Ext Tank 1) 300 Gal Ext Tank 1) MK-12 Mod 0 Chemical Tank 1) ALQ-31 ECM Pod 1) ALQ-31A Pod 1) MX-900 Chaff Dispenser 1) IM-119A Film Delivery Container 1) LAU-10/A Leaflet Dispenser 1) GTC-85 Pod-Mounted	1) 150 Gal Ext Tank 1) 300 Gal Ext Tank 1) MK-12 Mod 0 Chemical Tank 1) ALQ-31 ECM Pod 1) ALQ-31A Pod 1) MX-900 Chaff Dispenser 1) IM-119A Film Delivery Container 1) LAU-10/A Leaflet Dispenser 1) GTC-85 Pod-Mounted	
Special Weapons				1) MK-28/MK-104 1) MK-43/BDU-8B /BDU-18 1) MK-57/BDU-12 /BDU-19 1) BDU-11E			
Pyrotechnics		6) MK-5 Mods 7, 10 Parachute flares 6) MK-6 Mods 5, 6 Parachute flares 6) MK-24 Mods 2A, 3 Parachute flares 6) MK-6 Mod 3 Float Light	6) MK-5 Mods 7, 10 Parachute flares 6) MK-6 Mods 5, 6 Parachute flares 6) MK-24 Mods 2A, 3 Parachute flares 6) MK-6 Mod 3 Float Light	6) MK-5 Mods 7, 10 Parachute flares 6) MK-6 Mods 5, 6 Parachute flares 6) MK-24 Mods 2A, 3 Parachute flares 6) MK-6 Mod 3 Float Light	6) MK-5 Mods 7, 10 Parachute flares 6) MK-6 Mods 5, 6 Parachute flares 6) MK-24 Mods 2A, 3 Parachute flares 6) MK-6 Mod 3 Float Light	6) MK-5 Mods 7, 10 Parachute flares 6) MK-6 Mods 5, 6 Parachute flares 6) MK-24 Mods 2A, 3 Parachute flares 6) MK-6 Mod 3 Float Light	

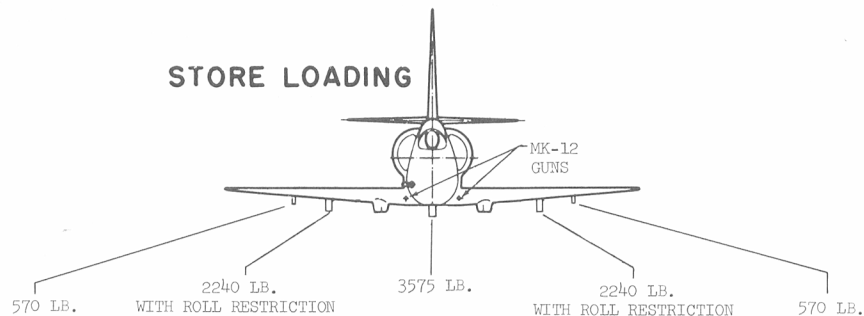
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Ordnance		Station No. 5 Left Outboard	Station No. 4 Left Inboard	Station No. 3 Fuselage Centerline	Station No. 2 Right Inboard	Station No. 1 Right Outboard	
Training Stores		1) MK-86 WSF 1) MK-87 WSF 6) MK-76, Mod 4, 5 (With MK-10 Lug) 6) MK-89 6) MK-106 Mod 3 6) MK-76 Mod 5 (With MK-14 Lug) 1) Aero 6A-1, 6A-2 1) Aero 7D	6) MK-86 WSF 6) MK-87 WSF 1) MK-88 WSF 6) MK-76 Mod 4, 5 (With MK-10 Lug) 6) MK-89 6) MK-106 Mod 3 6) MK-76 Mod 5 (With MK-14 Lug) 1) Aero 6A-1, 6A-2 2) Aero 7D 1) FAGU Pipe Organ 1) MK-26 Mod 0 Side winder target rocket	6) MK-86 WSF 6) MK-87 WSF 1) MK-88 WSF 6) MK-76, Mod 4, 5 (With MK-10 Lug) 6) MK-89 6) MK-106 Mod 3 6) MK-76 Mod 5 (With MK-14 Lug) 1) Aero 8A PBC (MK-76, MK-89, MK-106) 1) Aero 6A-1, 6A-2 3) Aero 7D 1) FAGU Pipe Organ 1) Aero 6A, or LAU-32 and A/A37B-3 PMBR with MK-76, Mod 5 or MK-106 Mod 3 1) Banner Tow Target	6) MK-86 WSF 6) MK-87 WSF 1) MK-88 WSF 6) MK-76 Mod 4, 5 (With MK-10 Lug) 6) MK-89 6) MK-106 Mod 3 6) MK-76 Mod 5 (With MK-14 Lug) 1) Aero 6A-1, 6A-2 2) Aero 7D 1) FAGU Pipe Organ 1) MK-26 Mod 0 Sidewinder target rocket	1) MK-86 WSF 1) MK-87 WSF 6) MK-76 Mod 4, 5 (With MK-10 Lug) 6) MK-89 6) MK-106 Mod 3 6) MK-76 Mod 5 (With MK-14 Lug) 1) Aero 6A-1, 6A-2 1) Aero 7D	

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NOTES

HI-HI-HI

Warm-Up, Taxi, Takeoff: 5 min
S.L. NRP
Climb: On course to opt cruise
alt with Mil power
Cruise Out: At max range speed at
opt cruise alt (drop fuel tanks
when empty)
Combat: 5 Min at MRT (stores on, no
distance gained) (drop stores)
Cruise Back: At max range speed at
opt alt
Reserve: 5% initial fuel + 20 min
at max endurance speed at S.L.

SEA LEVEL STORE DELIVERY

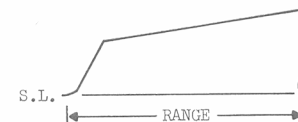
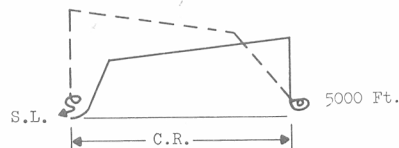
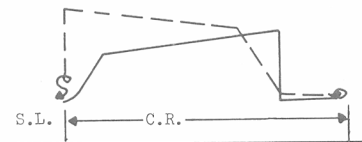
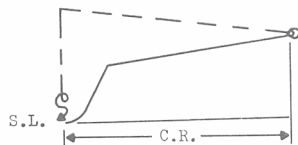
Warm-Up, Taxi, Takeoff: 5 min
S.L. NRP
Climb: On course to opt cruise
alt with Mil power
Cruise Out: At max range speed
at opt cruise alt (drop
fuel tanks when empty)
Descend: To S.L. when 50 n mi
from target (no fuel used
no distance gained)
Run In: 50 n mi at V_{max} at MRT
Combat: 5 min at MRT (stores on,
no distance gained) stores
dropped after combat
Runout: 50 n mi at V_{max} at MRT
at S.L.
Climb: On course to opt cruise
alt with Mil power
Cruise Back: At max range speed
at opt alt
Reserve: 5% initial fuel + 20
min at max endurance speed
at S.L.

CLOSE AIR SUPPORT

Warm-Up, Taxi, Takeoff: 5 min
S.L. NRP
Climb: On course to opt cruise
alt with Mil power
Cruise Out: At max range speed
at opt cruise alt (drop fuel
tanks when empty)
Descend: To 5000 Ft. (no fuel used
no distance gained)
Loiter: 1 hr at max end. speed no
distance gained, stores
dropped at end of loiter
Climb: On course to opt cruise
alt with Mil power
Cruise Back: At max range speed
at opt alt
Reserve: 5% initial fuel + 20 min
at max end. speed at S.L.

FERRY RANGE

Warm-Up, Taxi, Takeoff: 5 min
S.L. NRP
Climb: On course to opt cruise
alt with Mil power
Cruise Out: At max range speed
at opt cruise alt (drop
fuel tanks when empty)
Reserve: 5% initial fuel + 20
min at max end. speed at
S.L.



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HI-LO-LO-HI

Warm-Up, Taxi, Takeoff: 5 min
S.L. NRP

Climb: On course to opt cruise
alt with Mil power

Cruise Out: At max range speed
at opt cruise alt (drop
fuel tanks when empty)

Descend: To S.L. when 100/200
n mi from target (no fuel
used, no distance gained)

Cruise: At max range speed at
S.L. (drop fuel tanks when
empty)

Combat: 5 Min. at MRT (stores on,
no distance gained)

Drop Stores

Cruise: At max range speed at
S.L. to a point 100/200
n mi from target

Climb: On course to opt cruise
alt with Mil power

Cruise Back: At max range speed
at opt alt

Reserve: 5% initial fuel + 20
min at max end speed at S.L.

LO-LO-LO

Warm-Up, Taxi, Takeoff: 5 min S.L.
NRP

Cruise: At max range speed at S.L.
(drop fuel tanks when empty)

Combat: 5 Min. at MRT (stores on, no
distance gained)

Drop Stores

Cruise: at max range speed at S.L.

Reserve: 5% initial fuel + 20 min
at max endurance speed at S.L.

HI-LO-HI

Warm-Up, Taxi, Takeoff: 5 min
S.L. NRP

Climb: On course to opt cruise
alt with Mil power

Cruise Out: At max range speed
at opt cruise alt (drop fuel
tanks when empty)

Descend: To S.L. (no fuel used, no
distance gained)

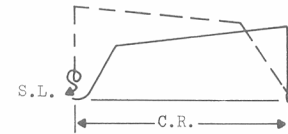
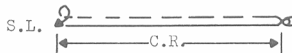
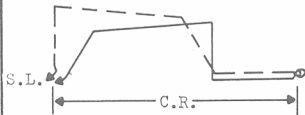
Combat: 5 Min. at MRT (stores on, no
distance gained)

Drop Stores

Climb: On course to opt cruise alt
with Mil power

Cruise Back: At max range speed at
opt alt

Reserve: 5% initial fuel + 20 min
at max endurance speed at S.L.



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