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BY T.G. Hill ON 12/19/96

NAVAIR 00-110AA6-4

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Standard Aircraft Characteristics

NAVY MODEL A-6C AIRCRAFT

(TITLE UNCLASSIFIED)

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

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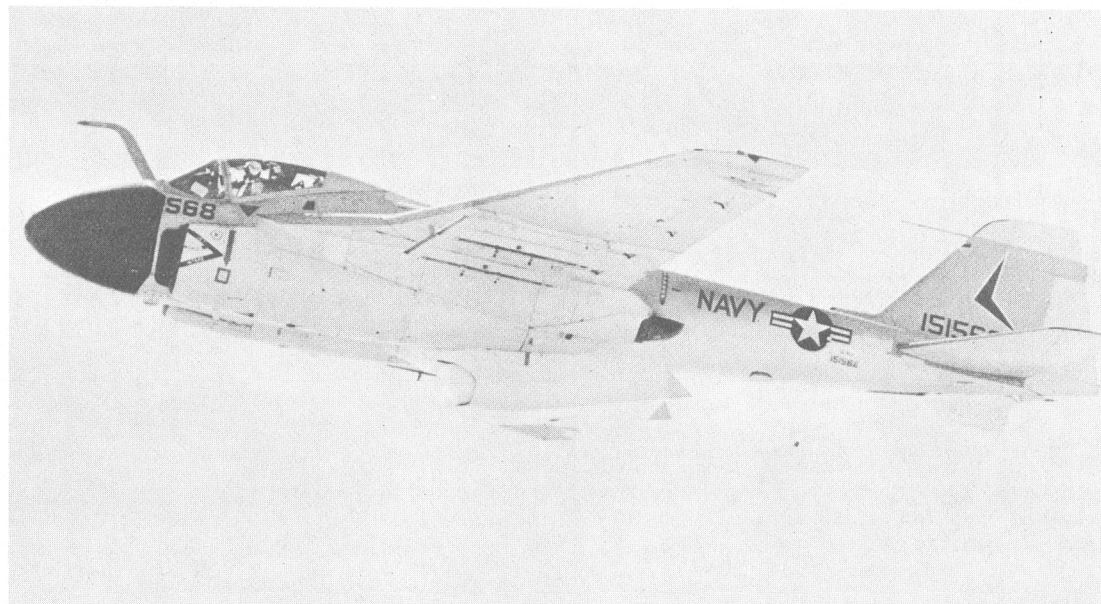
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SERVICE



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

STANDARD AIRCRAFT CHARACTERISTICS

A-6C TRIM

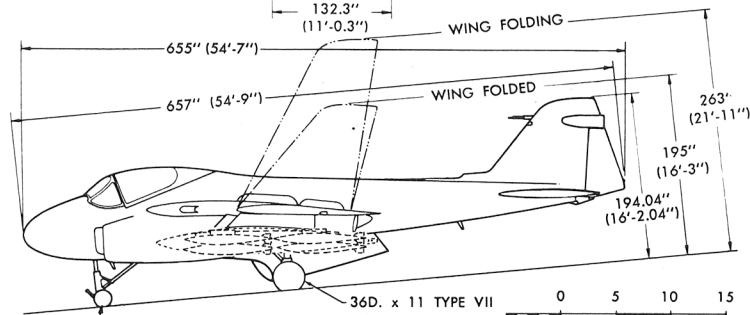
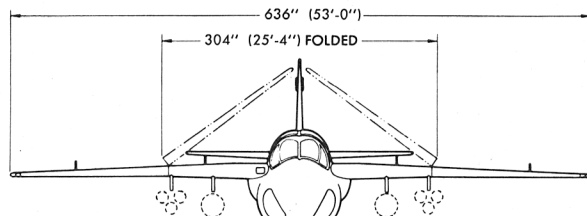
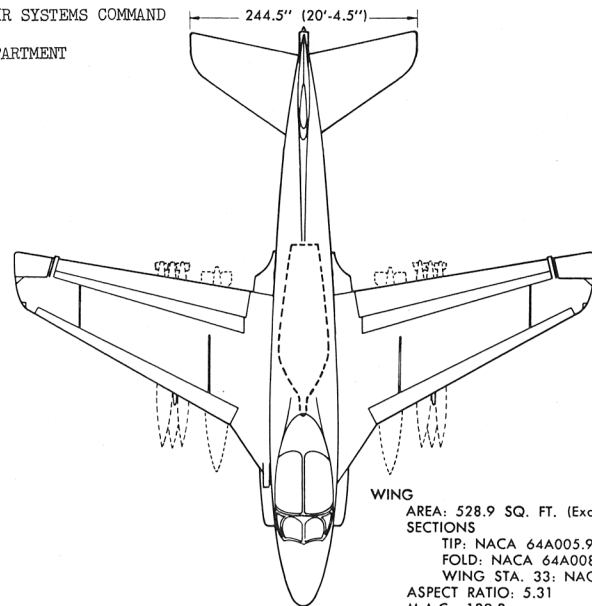
GRUMMAN

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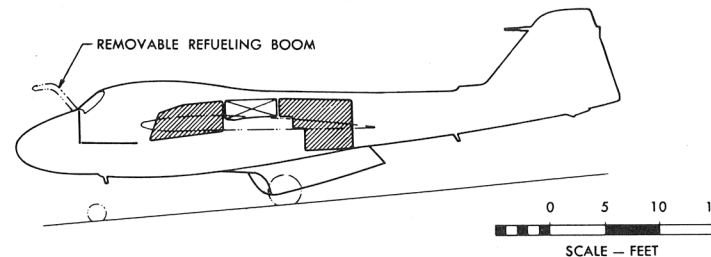
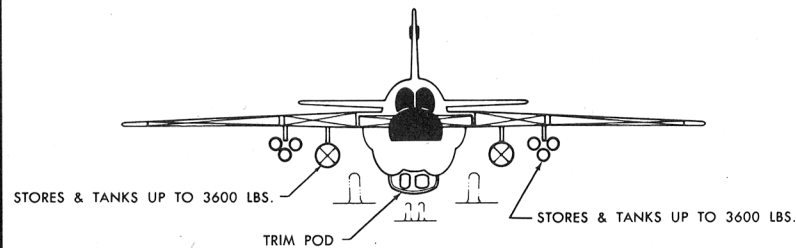
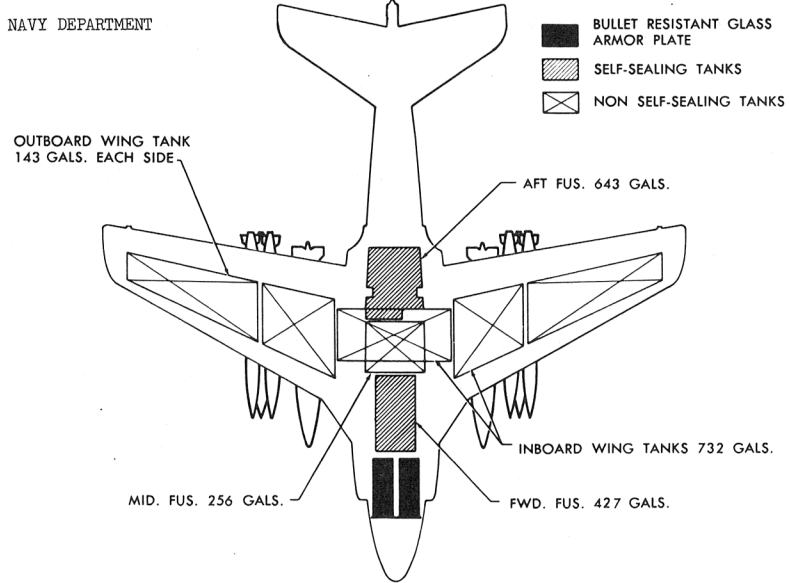
NAVAL AIR SYSTEMS COMMAND
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20D. x 5.5 TYPE VII

DESCRIPTIVE ARRANGEMENT

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ARMAMENT AND TANKAGE

STANDARD AIRCRAFT CHARACTERISTICS, NAVWEPS FORM 13100/48 (Rev. 7-65)

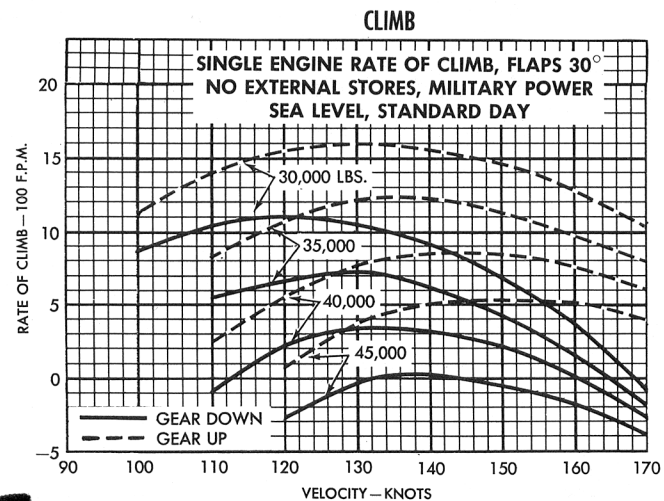
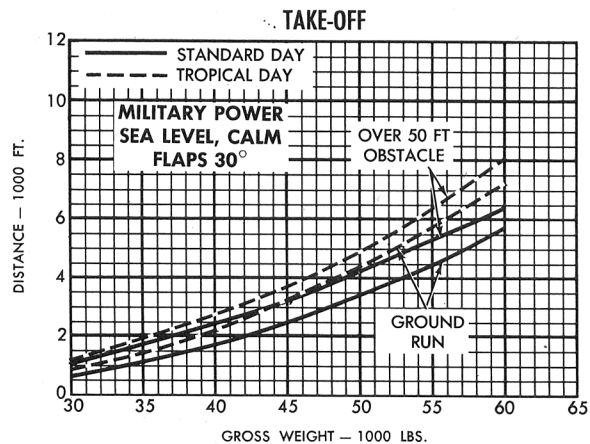
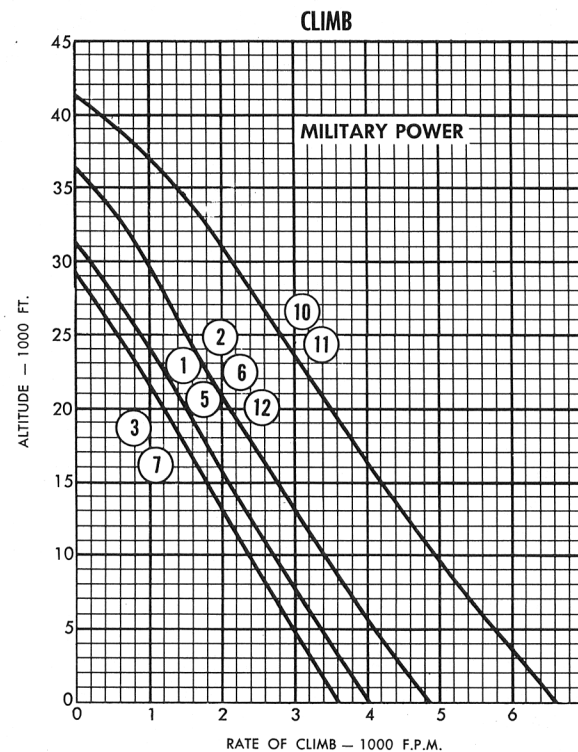
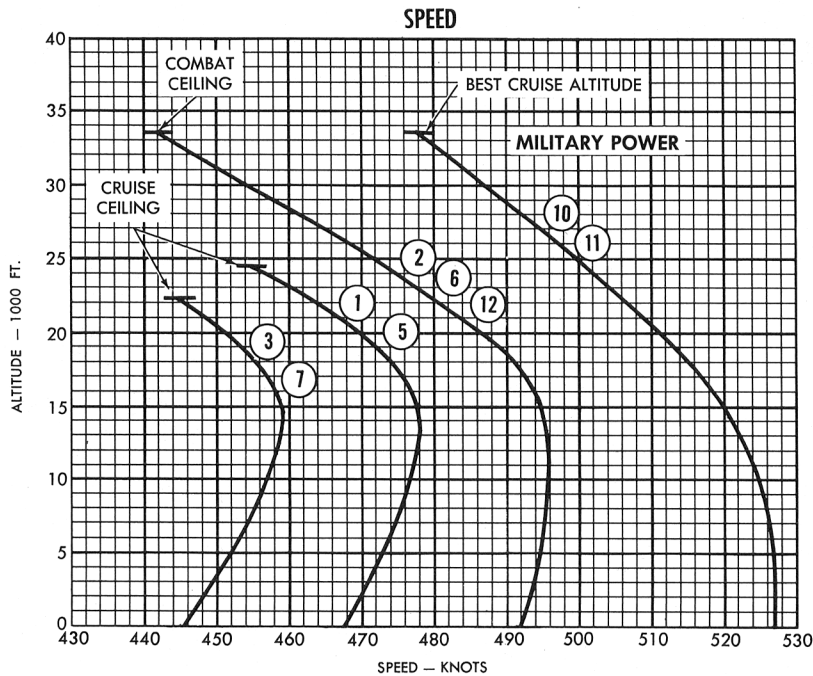
PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	HI-LO-LO-HI TRIM DASH		HI-LO-LO-HI TRIM DASH		LO-LO-LO TRIM DASH		LO-LO-LO TRIM DASH		FERRY	
	①	(12) MK-82 Snakeye I (2) 300 Gal. Tanks	③	(20) MK-82 Snakeye I	⑤	(12) MK-82 Snakeye I (2) 300 Gal. Tanks	⑦	(20) MK-82 Snakeye I	⑨	(4) 300 Gal. Tanks
TAKE-OFF WEIGHT	lb.	57,980		58,612		57,980		58,612		55,105
Fuel internal/external (JP-5)	lb./lb.	15,939/4018		15,939/0		15,939/4018		15,939/0		15,939/8036
Payload	lb.	6864		11,440		6864		11,440		0
Wing loading	lb./sq. ft.	109.2		110.9		109.2		110.9		104.2
Stall speed—power-off	kn.	132.5		133.1		132.5		133.1		129.1
Take-off run at S.L.—calm	ft.	5120		5290		5120		5290		4480
Take-off run at S.L.—25 kn. wind	ft.	3890		4010		3890		4010		3380
Take-off to clear 50 ft.—calm	ft.	5850		6000		5850		6000		5150
Max. speed/altitude (A)	kn./ft.	478/13,500		459/15,000		478/13,500		459/15,000		505/10,000
Rate of climb at S.L. (A)	fpm.	3990		3620		3990		3620		4900
Time: S.L. to 20,000 ft. (A) (B)	min.	7.7		8.7		7.7		8.7		5.8
Time: S.L. to 30,000 ft. (A) (B)	min.	19.0		29.5		19.0		29.5		11.9
Service ceiling (100 fpm) (A)	ft.	30,700		28,200		30,700		28,200		35,300
Combat range (C)	n.mi.	1108		701		687		474		1901
Average cruising speed cr. distance/cr. time	kn.	399		386		257		258		405
Cruising altitude(s)	ft.	26,500—34,800		24,000—31,900		S.L.		S.L.		30,300—39,700
Combat radius/mission time (C)	n.mi./hr.	500/2.53		314/1.63		345/2.14		246/1.38		—
Average cruising speed	kn.	403		400		251		241		—
COMBAT LOADING CONDITION	②	TANKS DROPPED STORES RETAINED	④	STORES RETAINED	⑥	TANKS DROPPED STORES RETAINED	⑧	STORES RETAINED	⑩	TANKS DROPPED
COMBAT WEIGHT	lb.	53,546		52,236		53,546		52,236		46,237
Engine power		Military		Military		Military		Military		Military
Fuel	lb.	15,939		9563		15,939		9563		15,939
Combat speed/combat altitude	kn./ft.	493/2000		449/2000		493/2000		449/2000		527/2000
Rate of climb/combat altitude	fpm/ft.	4540/2000		4000/2000		4540/2000		4000/2000		6280/2000
Combat ceiling (500 fpm)	ft.	33,500		29,400		33,500		29,400		39,400
Rate of climb at S.L.	fpm.	4860		4300		4860		4300		6660
Max. speed at S.L.	kn.	492		447		492		447		527
Max. speed/altitude	kn./ft.	496/11,500		462/15,000		496/11,500		462/15,000		527/5000
LANDING WEIGHT (stores & tanks off)	lb.	32,931		33,252		32,931		33,252		32,647
Fuel	lb.	2188		2019		2188		2019		2349
Stall speed—power-off/approach power	kn./kn.	96.8/90.8		97.1/91.2		96.8/90.8		97.1/91.2		96.3/90.3
Landing distance—ground roll/over 50 ft. obst.	ft./ft.	1745/2395		1760/2410		1745/2395		1760/2410		1730/2380

NOTES

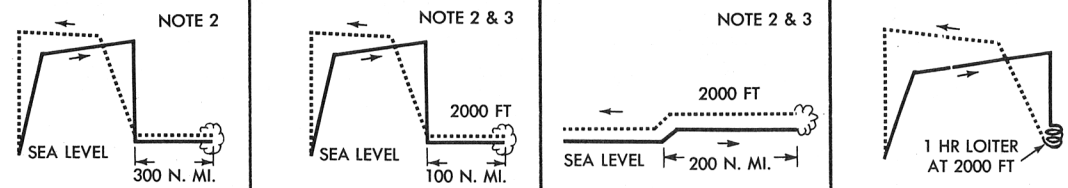
PERFORMANCE BASIS: Contractor flight test.
SPOTTING: A total of 63 airplanes can be accommodated in the safe parking area on the flight and hangar decks of a CVA-19 class angled deck carrier.

- (A) Military rated thrust.
- (B) Take-off gross weight, minus fuel for warm-up, taxi, take-off and climb.
- (C) Tanks retained throughout mission. Mission performance is based on reserves using five percent of total take-off fuel, plus 20 minutes maximum endurance at sea level.



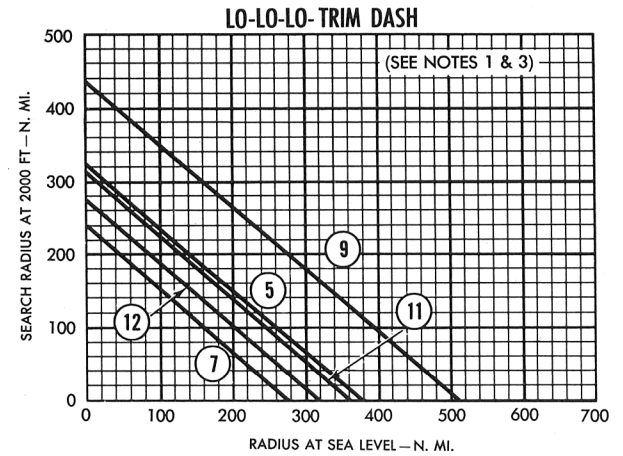
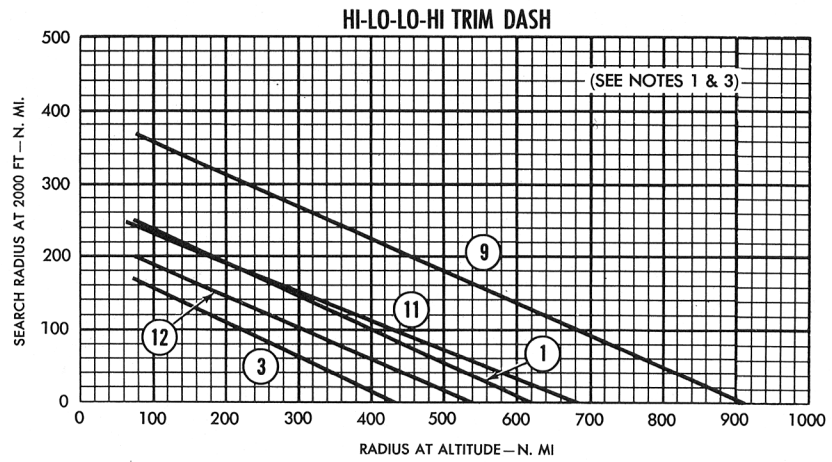
MISSION SUMMARY - ALTERNATE LOADINGS

EXTERNAL STORE LOADINGS	Take-Off Gross Weight	HI-LO-LO-HI		HI-LO-LO-HI TRIM Dash		LO-LO-LO TRIM Dash		CLOSE SUPPORT	
		Combat Radius n. mi.	Mission Time hours	Combat Radius n. mi.	Mission Time hours	Combat Radius n. mi.	Mission Time hours	Combat Radius n. mi.	Mission Time hours
(1) (12) MK 82 Snakeye I (2) 300 Gal. Drop Tanks (5)	57,980	-	-	500	2.53	345	2.14	400	3.03
(3) (20) MK 82 Snakeye I (7)	58,612	-	-	314	1.63	246	1.38	204	2.10
(9) (4) 300 Gal. Drop Tanks	55,105	608	3.66	786	3.89	473	3.14	697	4.41
(11) Clean Configuration	46,227	-	-	534	2.36	331	2.02	447	3.18
(12) (12) MK 82 Snakeye I	53,541	-	-	407	2.04	288	1.69	308	2.54



NOTES

- (1) Mission performance reflects the effects of mission reserves computed with five percent of total take-off fuel, plus 20 minutes maximum endurance at sea level. Tanks retained throughout mission.
- (2) For variation of low altitude radius, refer to graphs.
- (3) Maximum speed for TRIM operations is 400 knots.



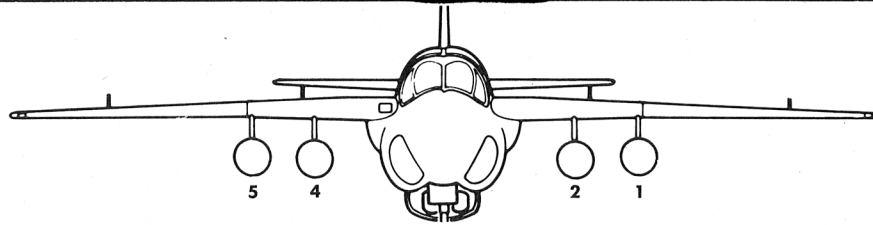
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		STATION 5	STATION 4	STATION 2	STATION 1			STATION 5	STATION 4	STATION 2	STATION 1		
		Outboard	Inboard	Inboard	Outboard			Outboard	Inboard	Inboard	Outboard		
BOMB RACKS LAUNCHERS AND ADAPTERS	52 Aero 7A-1 EBR	1	1	1	1	GUIDED MISSILES	570 AGM-12B Bullpup A	1	1	1	1		
	87 A/A37B-3 PMBR	1	1	1	1		1785 AGM-12C Bullpup B	1	1	1	1		
	96 A/A37B-5 TER	1	1	1	1		400 AGM-45A Shrike	2	2	2	2		
	215 A/A37B-6 MER	1	1	1	1		160 AIM-9B Sidewinder 1A	1	1	1	1		
	90 Aero 5A-1 Missile	1	1	1	1		195 AIM-9D Sidewinder 1C	1	1	1	1		
	90 LAU-7/A Launcher	1	1	1	1		ROCKET PODS	200 7 Round 2.75 FFAR	3	2	2	3	
	20 ADU-299/E Adapter	1	1	1	1			540 19 Round 2.75 FFAR	3	2	2	3	
	87 ADU-315 or Dual ADU-316 Adapter	1	1	1	1			540 4 Round 5.0 ZUNI	3	2	2	3	
	10 Aero 1A Adapter	1	1	1	1			MINES	2000 MK 25	1	1	1	1
	BOMBS	260 MK 81 LDGP	6	4	4				6	1260 MK 36	1	1	1
295 MK 81 Snakeye		6	4	4	6	580 MK 50	1		1	1	1		
530 MK 82 LDGP		6	4	4	6	1200 MK 52	1		1	1	1		
570 MK 82 Snakeye		6	4	4	6	385 MK 53	1		1	1	1		
985 MK 83 LDGP		3	2	2	3	2130 MK 55	1		1	1	1		
1970 MK 84 LDGP		1	1	1	1	2200 MK 56	1		1	1	1		
290 AN-M57 GP		6	4	4	6	PARAFLARES AND MARINE LOCATION MARKER	30 MK 6 Mod-6 Flare	6	4	4	6		
585 AN-M64 GP		1	1	1	1		27 MK 24 Mod-2A,3,4 Flare	6	4	4	6		
800 M-117 Demolition		4	4	4	4		340 SUU-40/A Flare Pod	2	not authorized	not authorized	2		
1200 AN-M65 GP		1	1	1	1		340 SUU-44/A Flare Pod	2	authorized	authorized	2		
2275 AN-M66 GP		1	1	1	1		- MK 58 Marine Marker	4	4	4	4		
275 AN-M81 Fragmentation		6	4	4	6	PRACTICE BOMBS AND TRAINING SHAPES	25 MK 76	6	4	4	6		
230 AN-M88 Fragmentation		6	4	4	6		217 MK 86	6	4	4	6		
572 MK 36 Destructor	6	4	4	6	333 MK 87		6	4	4	6			
1045 MK 40 Destructor	2	2	2	2	783 MK 88		3	2	2	3			
520 MK 77 Firebomb	2	2	2	2	57 MK 89		3	2	2	3			
912 MK 79 Firebomb	1	1	1	1	5 MK 106		6	4	4	6			
868 BLU-27/B Firebomb	2	-	-	2	527 MK 124		6	4	4	6			
440 MK 94 Chemical	1	1	1	1	465 Aero 8A-1 Container		6	1	1	6			
CLUSTER BOMBS	780 CBU-1A/A	1	not authorized	not authorized	1		2100 MK 104	↑	1	1	↑		
	860 CBU-9 Mods	1	authorized	authorized	1		2100 BDU-6E	not authorized	1	1	not authorized		
	830 CBU-24 Mods	3	2	2	3	1970 BDU-8/B	↓	1	1	↓			
	830 CBU-29 Mods	3	2	2	3	500 BDU-11/E		1	1				
	830 CBU-49 Mods	3	2	2	3	500 BDU-12/B		1	1				
	470 MK 20 Mod-0 Rockeye	6	4	4	6	515 BDU-20C		1	1				
SPECIAL WEAPONS	2040 MK 28	not authorized	1	1	not authorized								
	2060 MK 43	not authorized	1	1	not authorized								
	500 MK 57	not authorized	1	1	not authorized								
	715 B-61	not authorized	1	1	not authorized								

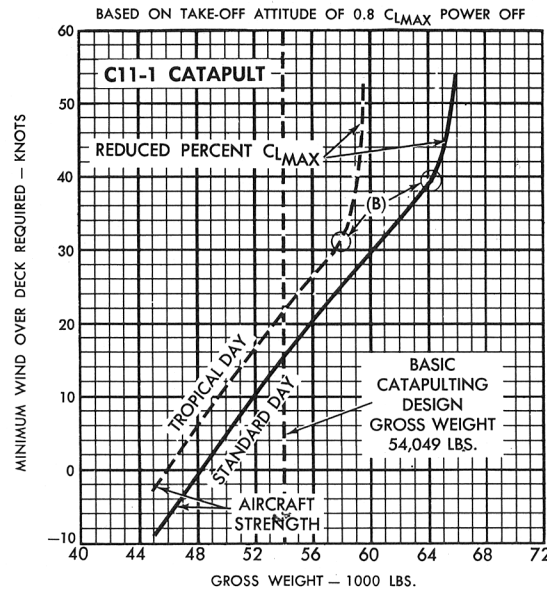
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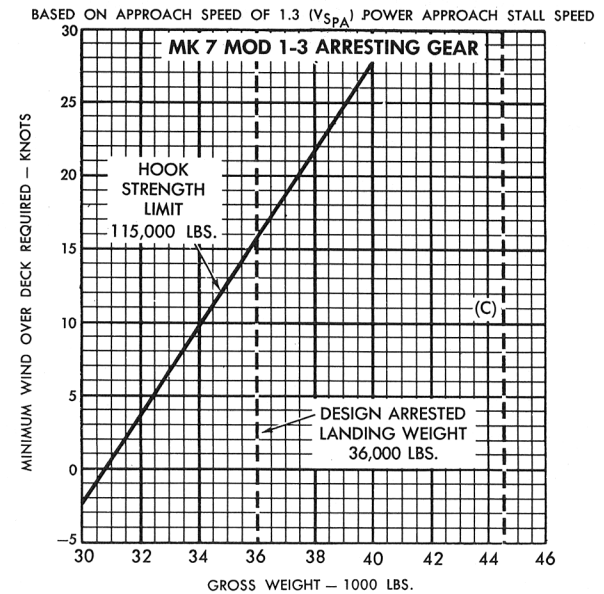
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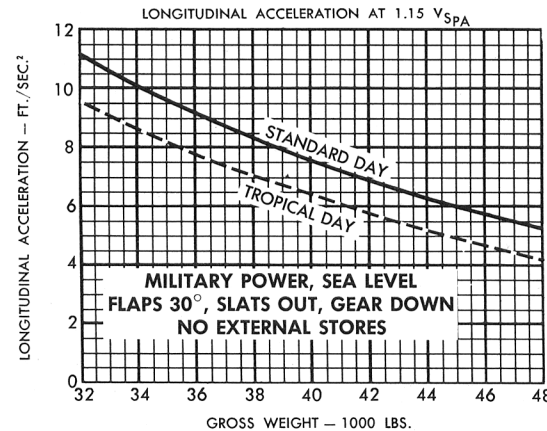
MINIMUM WIND OVER DECK REQUIRED FOR CATAPULTING



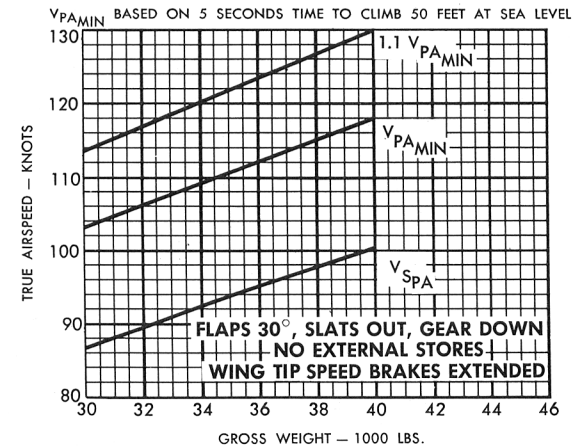
MINIMUM WIND OVER DECK REQUIRED FOR ARRESTING



WAVE-OFF ACCELERATION



MINIMUM CARRIER APPROACH SPEEDS



NOTES

- (A) These curves should be used for planning purposes only. Actual catapult and arresting gear operation should be in accordance with applicable Aircraft Technical Orders, and Catapult and Arresting Gear Bulletins.
- (B) Maximum weight for tropical day longitudinal acceleration of 2.1 ft/sec² for C11-1 catapult at take-off.
- (C) Maximum weight, 44,500 lbs, for tropical day longitudinal acceleration of 5.0 ft/sec² at 1.15 V_{SPA} (speed brakes retracted).
- (D) Flap deflection: for catapulting $\delta_f = 30^\circ$, for landing $\delta_f = 30^\circ$.

NOTES

HI-LO-LO-HI

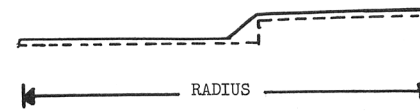
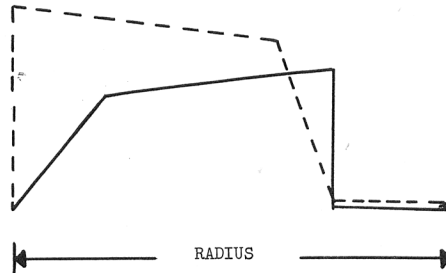
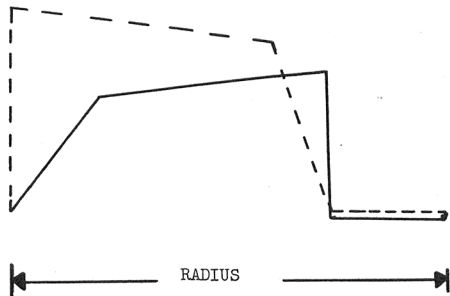
- (1) Warm-up, Taxi, Take-off: 5 Min. S.L. NRP
- (2) Climb: On Course To Opt Cruise Alt With Mil Thrust
- (3) Cruise Out: At Speed For Max Range at Opt Cruise Alt. (Drop Fuel Tanks When Empty)
- (4) Descend: To S.L. When 100/200/300 N.Mi. From Target (No Fuel Used, No Dist. Gained)
- (5) Cruise: At Max Range Speed at S.L.
- (6) Combat: 5 Min. MRT (Stores on, No Dist. Gained)
- (7) Drop Stores
- (8) Cruise: At Max Range Speed At S.L. To a Point 100/200/300 N.Mi. From Target
- (9) Climb: On Course To Opt Cruise Alt With Mil Thrust
- (10) Cruise Back: At Max Range Speed at Opt Alt.
- (11) Reserve: 5% of Initial Fuel Plus 20 Min. at Max Endurance Speed at S.L.

HI-LO-LO-HI TRIM "DASH" MISSION

- (1) Warm-up, Taxi, Take-off: 5 Min. S.L. NRP
- (2) Climb: On Course To Opt Cruise Alt With Mil Thrust
- (3) Cruise Out: At Speed For Max Range at Opt Cruise Alt. (Drop Fuel Tanks When Empty)
- (4) Descend: To 2,000 Ft. When 100/200/300 N.Mi. From Target (No Fuel Used, No Dist. Gained)
- (5) Run In: At 400 Kts at 2,000 Ft. Altitude
- (6) Combat: 5 Min. MRT (Stores on, No Dist. Gained)
- (7) Drop Stores
- (8) Run Out: At 400 Kts at 2,000 Ft. Altitude To a Point 100/200/300 N.Mi. From Target
- (9) Climb: On Course To Opt Cruise Alt With Mil Thrust
- (10) Cruise Back: At Max Range Speed at Opt Alt.
- (11) Reserve: 5% of Initial Fuel Plus 20 Min. at Max Endurance Speed at S.L.

LO-LO-LO TRIM "DASH" MISSION

- (1) Warm-up, Taxi, Take-off: 5 Min. S.L. NRP
- (2) Cruise Out: At Speed For Max Range at S.L. (Drop Fuel Tanks When Empty)
- (3) Climb: On Course To 2,000 Ft. With Mil Thrust When 100/200/300 N.Mi. From Target
- (4) Run In: At 400 Kts at 2,000 Ft. Altitude
- (5) Combat: 5 Min. MRT (Stores on, No Dist. Gained)
- (6) Drop Stores
- (7) Run Out: At 400 Kts at 2,000 Ft. Altitude To a Point 100/200/300 N.Mi. From Target
- (8) Descend: To S.L. (No Fuel Used, No Dist. Gained)
- (9) Cruise Back: At Max Range Speed at Sea Level
- (10) Reserve: 5% Initial Fuel Plus 20 Min. at Max Endurance Speed at S.L.



○ LOADING CONDITION COLUMN NUMBER

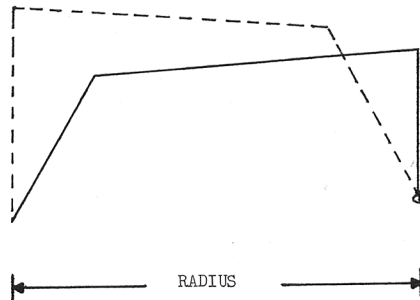
NOTES

CLOSE SUPPORT

- (1) Warm-up, Taxi, Take-off: 5 Min. S.L. NRP
- (2) Climb: On Course To Opt Cruise Alt With Mil Thrust
- (3) Cruise Out: At Speed For Max Range at Opt Cruise Alt. (Drop Fuel Tanks When Empty)
- (4) Descend: To 2,000 Ft. (No Fuel Used, No Dist. Gained)
- (5) Loiter: One Hour at Max Endurance Speed at 2,000 Ft. (Stores On, No Dist. Gained)
- (6) Drop Stores
- (7) Climb: On Course To Opt Cruise Alt With Mil Thrust
- (8) Cruise Back: At Max Range Speed at Opt Alt
- (9) Reserve: 5% of Initial Fuel Plus 20 Min. at Max Endurance Speed at S.L.

FERRY

- (1) Warm-up, Taxi, Take-Off: 5 Min. S.L. NRP
- (2) Climb: On Course To Cruise Alt With Mil Thrust
- (3) Cruise Out: Speed For Max Range at Opt Cruise Alt
- (4) Reserve: 5% of Initial Fuel Plus 20 Min. at Max Endurance Speed at S.L.



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