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

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NAVAIR 00-110AA7-1

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Standard Aircraft Characteristics

NAVY MODEL A-7A AIRCRAFT

Attack
(V A-h)

(TITLE UNCLASSIFIED)

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1 MAY 1955 IN PART AND ALL ADDENDA THERETO**

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

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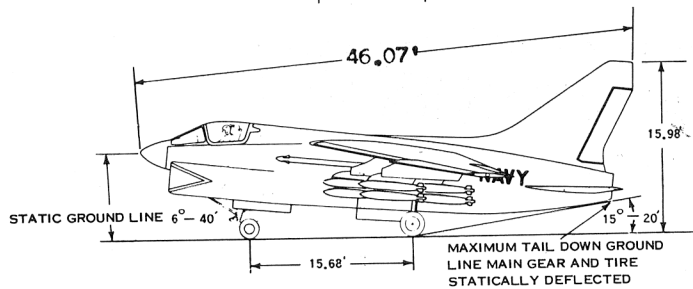
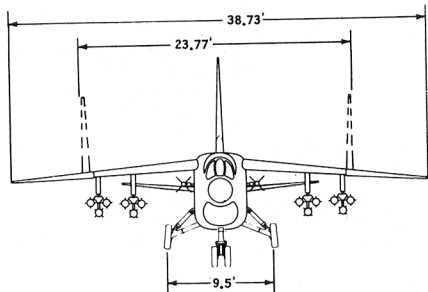
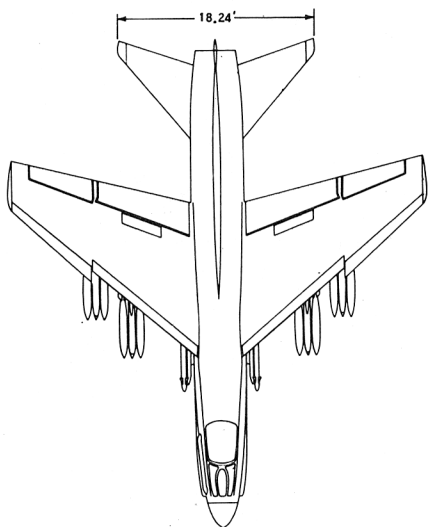
STANDARD AIRCRAFT CHARACTERISTICS

A-7A CRUSADER II

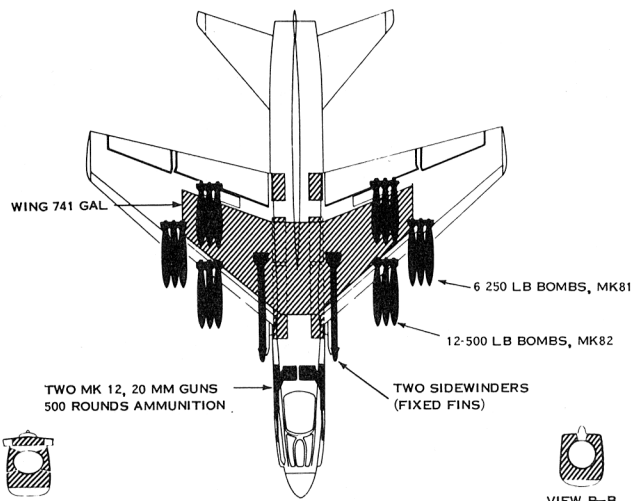
LTV VOUGHT AERONAUTICS DIVISION

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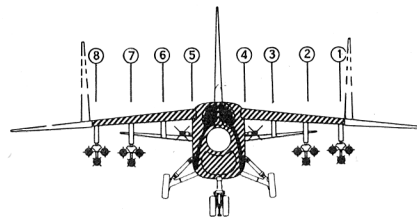
DESCRIPTIVE ARRANGEMENT



ARMAMENT & TANKAGE

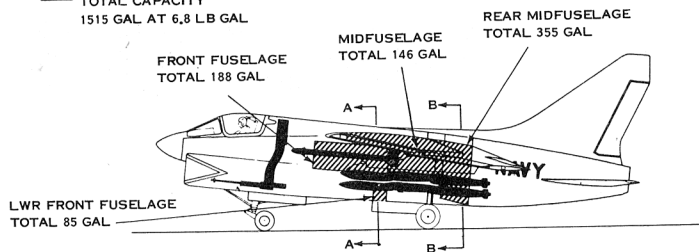


WET PYLONS - 1 & 3, 6 & 8



ARMAMENT

FUEL CELLS
TOTAL CAPACITY
1515 GAL AT 6.8 LB GAL



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POWER PLANT		MISSION AND DESCRIPTION		WEIGHTS																																	
No. & MODEL (1) TF30-P-6 MFR. PRATT AND WHITNEY COMPRESSOR AXIAL FLOW LENGTH 127.58 IN. DIAMETER 42.4 IN. TAIL PIPE NOZZLE FIXED		THE A-7A IS A SINGLE-PLACE, CARRIER-BASED, TURBOFAN, LIGHT ATTACK AIRPLANE DERIVED FROM THE F-8 CRUSADER SERIES. THE AIRPLANE IS DESIGNED TO PROVIDE HIGH ATTACK UTILITY AND FLEXIBILITY FOR CLOSE SUPPORT AND INTERDICTION MISSIONS BY VIRTUE OF A LARGE NUMBER OF EXTERNAL STORE STATIONS TO PROVIDE ORDNANCE LOADING CAPACITY AND FREEDOM OF ORDNANCE CHOICE, A LARGE INTERNAL FUEL CAPACITY TO MAKE EXTERNAL FUEL UNNECESSARY FOR MOST MISSIONS, WHILE RETAINING MAXIMUM NUMBER OF STATIONS FOR ARMAMENT, AN EXCELLENT OVERLOAD CAPABILITY IN TERMS OF WIND-OVER-DECK REQUIREMENTS, FLYING QUALITIES, AND STRUCTURAL INTEGRITY. FEATURES TO EXPEDITE MAINTENANCE AND AIRPLANE TURNAROUND ARE IMPORTANT A-7A DESIGN CHARACTERISTICS.		LOADING	POUNDS	LIMIT LOAD FA.																															
RATINGS <table border="1"> <thead> <tr> <th></th> <th>LBS</th> <th>RPM</th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>N₁</td> <td>N₂</td> </tr> <tr> <td>MILITARY</td> <td>11,350</td> <td>9,950</td> <td>14,600</td> </tr> <tr> <td>NORMAL</td> <td>9,100</td> <td>9,250</td> <td>14,100</td> </tr> </tbody> </table> SEA LEVEL STATIC SPEC No. N-1832					LBS	RPM				N ₁	N ₂	MILITARY	11,350	9,950	14,600	NORMAL	9,100	9,250	14,100	EMPTY	15,497	7.0															
	LBS	RPM																																			
		N ₁	N ₂																																		
MILITARY	11,350	9,950	14,600																																		
NORMAL	9,100	9,250	14,100																																		
		THE A-7A HAS FIXED WING INCIDENCE AND A HIGH-LIFT SYSTEM COMPOSED OF LEADING EDGE FLAPS AND SINGLE SLOTTED TRAILING EDGE FLAPS. LATERAL CONTROL IS PROVIDED BY OUTBOARDAILERONS AND INBOARD SPOILERS. SUPERIOR STABILITY AND CONTROL QUALITIES OVER THE ENTIRE AIRCRAFT SPEED ENVELOPE, INCLUDING TRANSONIC, ARE FEATURES OF THE A-7A.		BASIC	15,982	7.0																															
				COMBAT	26,922																																
		A STICK STEERING AUTOPILOT IS PROVIDED TO AUGMENT THE WEAPON SYSTEM CAPABILITY. AN APPROACH POWER COMPENSATOR PROVIDES AUTOMATIC SPEED CONTROL FOR CARRIER LANDING.		MAX LANDING (CARRIER)	24,500																																
ORDNANCE <table border="1"> <thead> <tr> <th>No.</th> <th>LOCATION</th> <th>LOADING</th> </tr> </thead> <tbody> <tr> <td colspan="3">STORE STATIONS</td> </tr> <tr> <td>2</td> <td>FUSELAGE</td> <td>SINGLE SIDEWINDER OR LAU-33/A 2 ROUND ZUNI LAUNCHERS (500# CAPACITY)</td> </tr> <tr> <td>2</td> <td>INBD WING</td> <td>STORES UP TO 2500#</td> </tr> <tr> <td>2</td> <td>INTER WING</td> <td>STORES UP TO 3500#</td> </tr> <tr> <td>2</td> <td>OUTBD WING</td> <td>STORES UP TO 3500#</td> </tr> <tr> <td colspan="3">GUNS</td> </tr> <tr> <td>2</td> <td>LOWER FRONT FUSELAGE</td> <td>MK-12 20MM GUNS WITH 500(NORMAL) ROUNDS OR 680(MAX) ROUNDS OF 20MM AMMO.</td> </tr> </tbody> </table>				No.	LOCATION	LOADING	STORE STATIONS			2	FUSELAGE	SINGLE SIDEWINDER OR LAU-33/A 2 ROUND ZUNI LAUNCHERS (500# CAPACITY)	2	INBD WING	STORES UP TO 2500#	2	INTER WING	STORES UP TO 3500#	2	OUTBD WING	STORES UP TO 3500#	GUNS			2	LOWER FRONT FUSELAGE	MK-12 20MM GUNS WITH 500(NORMAL) ROUNDS OR 680(MAX) ROUNDS OF 20MM AMMO.	FUEL AND OIL <table border="1"> <thead> <tr> <th>GALLONS</th> <th>NO. TANKS</th> <th>LOCATION</th> </tr> </thead> <tbody> <tr> <td>774</td> <td>6</td> <td>FUSELAGE</td> </tr> <tr> <td>741</td> <td>1</td> <td>WING</td> </tr> </tbody> </table> FUEL GRADE JP-5 FUEL SPEC OIL 5.0 GAL. OIL SPECMIL-L- 23699			GALLONS	NO. TANKS	LOCATION	774	6	FUSELAGE	741
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741	1	WING																																			
		DIMENSIONS WING AREA 375 Sq Ft SPAN 38.73 Ft MAXIMUM 38.73 Ft FOLDED 23.77 Ft ASPECT RATIO 4 SWEEP 1/4 CHORD 35° MAC 130.13 INCHES LENGTH 46.07 Ft HEIGHT 15.98 Ft MAXIMUM TREAD 9.5 Ft		ELECTRONICS RADAR AN/APQ-116 DATA LINK ASW-25 CENTRAL AIR DATA COMPUTER AUTOMATIC FLT CONTROL SYS ASW-26 ROLL/PITCH TRIM SYSTEM APPROACH POWER COMPENSATING SYSTEM NOSE-GEAR STEERING SYSTEM CNI DOPPLER RADAR AN/APN-153(V) NAVIGATION COMPUTER AN/ASN-41 RADAR ALTIMETER AN/APN-141 TACAN AN/ARN-52(V) NAV SYS ROLLER MAP 2-INCH REMOTE ATT IND SYS ATT & HEADING REFERENCE ... AN/ASN-50 RADAR BEACON (X-BAND) AN/APN-154 UHF RADIO SET AN/ARC-51A UHF ADF AN/ARA-50 UHF AUXILIARY RECEIVER AN/ARR-69 IFF AN/APX-64 INTEGRATED FLT INSTRUMENTATION SYSTEM ADI (4060AL) HSI (ID-1013)																																	
				WEAPONS CONTROL WEAPON RELEASE COMPUTER ... CP-741/A ELECTRICAL FUZING AN/AWN-2 RADIO COMMAND CONTROL TRANS..AN/ARW-77 SIGHT UNIT ARMAMENT MONITOR & CONTROL T-375 LAUNCHER ELECTRICAL PACKAGE .. A/A24B-2A WEAPONS RELEASE PROGRAMMER ... AWE-1		ECM ECM RECEIVERS(2) AN/ALR-15 PASSIVE RADAR HOMING SYS AN/ASR-1 COUNTERMEASURES PODS(WING STN 1&8)..... AN/ALO-81 AN/ALO-31A AN/ALQ-76																															

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PERFORMANCE SUMMARY

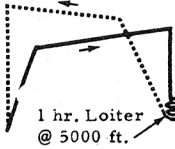
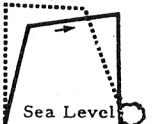
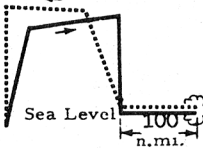
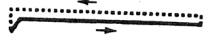

TAKE-OFF LOADING CONDITION	(1) PRIMARY ATTACK CLEAN AIRPLANE	(3) PRIMARY ATTACK 12 MK 81 SNAKEYES	(5) CLOSE SUPPORT 12 MK 82 & 6 MK 81 BOMBS	(7) DEEP STRIKE 1 MK 28 & 3-300 GAL TANKS	(9) FERRY MISSION 2-300 GAL TANKS
TAKE-OFF WEIGHT LB.	26,657	31,936	36,020	36,762	32,514
FUEL INTERNAL/EXTERNAL LB./LB.	10,200/0	10,200	10,200	10,200/6120	10,200/4080
PAYLOAD (A) & (B) LB.	0	3600	7500	2000	0
WING LOADING LB./SQ.LB.	71.1	85.2	96.0	98.0	86.7
STALL SPEED - POWER-OFF KN.	122.5	135.2	143.7	144.6	136.9
TAKE-OFF RUN AT S.L. (c) CALM (STD DAY) FT.	3100	5300	7500	8000	5500
TAKE-OFF RUN AT S.L. (c) (TROP DAY) FT.	3200	5700	8200	8700	6000
TAKE-OFF TO CLEAR 50 FT. (c) CALM (STD DAY) FT.	4100	6550	9100	9600	6900
MAX. SPEED/ALTITUDE (c) KN./FT.	595/SL	505/13,000	450/7500	532/11,000	
RATE OF CLIMB AT S.L. (c) FPM.	6570	4180	3090	3700	4600
TIME: S.L. TO 20000 FT. (c) MIN.	4.3	7.9	--	9.4	6.7
TIME: S.L. TO 30000 FT. (c) MIN.	8.1	--	--	--	15.2
SERVICE CEILING (100 FPM.) (c) FT.	40,200	29,200	22,000	28,100	32,900
COMBAT RANGE N.MI.	2505	1500	1180	2860	2452
AVERAGE CRUISING SPEED KN.	475	415	390	450	434
CRUISING ALTITUDE(S) FT.	37,500-46,000	24,900-38,500	16,500-37,500	23,500-41,300	28,800-38,500
COMBAT RADIUS/MISSION TIME N.MI./HR.	975/4.9	570/3.25	350/2.8	1200/3.8	--
AVERAGE CRUISING SPEED ALT/SL KN.	475/271	418/266	392/-	450/562	--
COMBAT LOADING CONDITION	(2) CLEAN AIRPLANE	(4) BOMBS RETAINED	(6) BOMBS RETAINED	(8) BOMBS RETAINED TANKS DROPPED	(10) FERRY MISSION 2-300 GAL TANKS
COMBAT WEIGHT LB.	22,647	27,856	31,940	29,818	26,802
ENGINE POWER	MILITARY	MILITARY	MILITARY	MILITARY	MILITARY
FUEL LB.	6120	6120	6120	9792	8568
COMBAT SPEED/COMBAT ALTITUDE KN./FT.	595/SL	491/SL	452/5000	559/SL	--
RATE OF CLIMB/COMBAT ALTITUDE FPM./FT.	7900/SL	5000/SL	3250/5000	5250/SL	--
COMBAT CEILING (500 FPM.) FT.	41,000	29,500	22,200	32,800	33,700
RATE OF CLIMB AT S.L. FPM.	7900	5000	3690	5250	5720
MAX. SPEED AT S.L. KN.	595	491	442	559	540
MAX. SPEED/ALTITUDE KN./FT.	595/SL	508/13,000	454/9,000	550/6,000	--
LANDING WEIGHT LB.	17,467	19,224	19,437	19,200	19,539
FUEL LB.	1010	1088	1117	1382	1305
STALL SPEED - POWER-OFF/APPR. POWER KN./KN.	98.4/95.5	103/100.2	103.5/100.5	103/100.2	104.5/101.5
DIST.-GRD ROLL/OVER 50 FT. OBS. FT./FT.	2580/3270	2800/3550	2840/3,580	2800/3550	2880/3,630
NOTES: (A) ALL LOADINGS EXCEPT CLEAN AIRPLANE INCLUDE PYLONS ON ALL WING STATIONS (B) PAYLOAD IS DROPPABLE ORDNANCE. DOES NOT INCLUDE 500 ROUNDS OF AMMUNITION (C) MILITARY THRUST			(D) MISSION TIME EXCLUDES TIME FOR WARM UP AND TAKE OFF AND 20 MINUTE LOITER FUEL AT SEA LEVEL. (E) ENGINE SPECIFICATION FUEL CONSUMPTION INCREASED 5% (F) DATA BASIS: ESTIMATED		

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MISSION SUMMARY - ALTERNATE LOADINGS

		CLOSE SUPPORT		HI-LO-HI		HI-LO-LO-HI		LO-LO-LO		HI-HI-HI	
											
EXTERNAL STORE LOADINGS (A)	T.O.G.W.	RADIUS N.MI.	TIME (B) HOURS	RADIUS N.MI.	TIME (B) HOURS	RADIUS N.MI.	TIME (B) HOURS	RADIUS N.MI.	TIME (B) HOURS	RADIUS N.MI.	TIME (B) HOURS
⑪ (1) MK 28	30,018	695	4.15	835	3.89	735	3.74	460	3.44	935	4.26
⑦ (1) MK 28 (3) 300 GAL. DROP TANKS	36,762	1150	6.2	1310	6.0	1215	6.45	755	5.57	1400	6.1
⑫ (6) MK 81 SNAKEYES	30,002	570	3.65	715	3.56	625	3.42	430	3.36	800	3.91
⑬ (6) MK 81 SNAKEYES (4) 300 GAL. DROP TANKS	38,994	1000	6.02	1165	5.87	1075	5.76	725	5.43	1240	6.17
⑭ (24) MK 81 SNAKEYES	35,988	340	2.82	515	2.8	455	2.57	360	2.62	555	3.0
⑮ (6) MK 82 SNAKEYES	31,592	540	3.67	645	3.25	610	3.36	410	3.19	775	4.08
⑯ (6) MK 82 SNAKEYES (2) 300 GAL. DROP TANKS	36,088	785	4.65	940	4.03	860	4.38	590	4.0	1015	4.23
⑰ (18) MK 82 SNAKEYES	38,690	260	2.49	425	2.46	385	2.76	320	2.54	465	2.64

NOTES

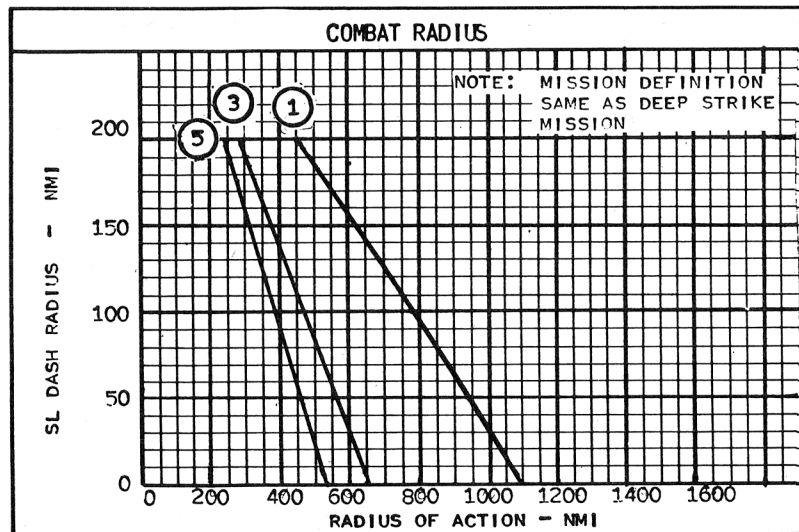
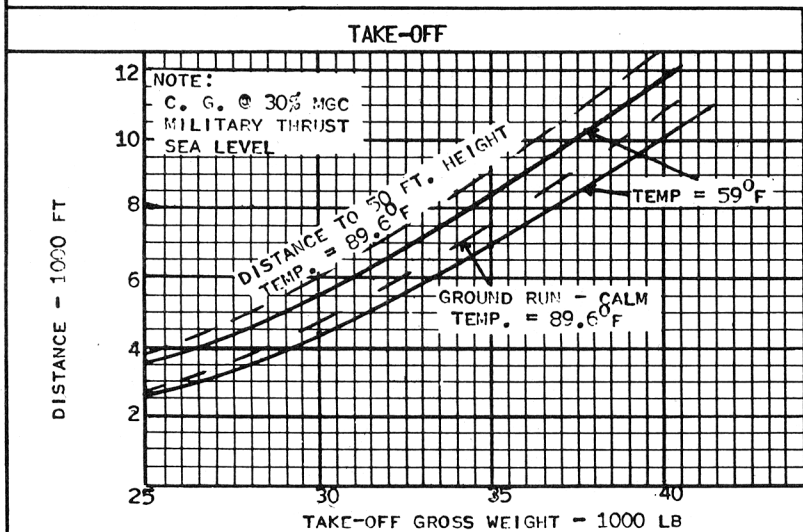
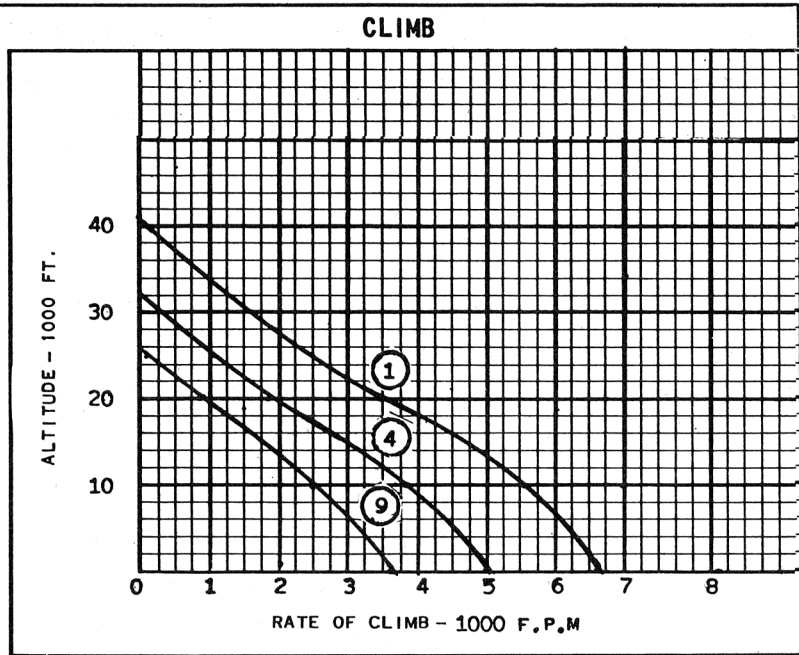
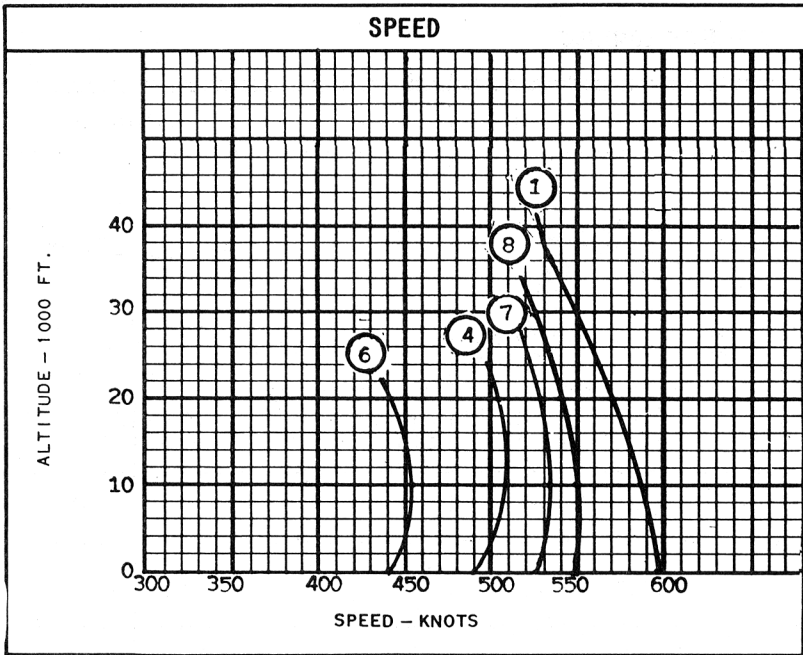
A: ALL LOADINGS INCLUDE PYLONS ON ALL WING STATIONS
500 ROUNDS OF 20 MM AMMUNITION AND FULL INTERNAL
FUEL (10,200 LBS.)

B: MISSION TIME EXCLUDES TIME FOR WARM UP AND TAKEOFF AND 20
MINUTES LOITER FUEL AT SEA LEVEL

C: ENGINE SPECIFICATION FUEL CONSUMPTION INCREASED 5%

D: DATA BASIS: ESTIMATED

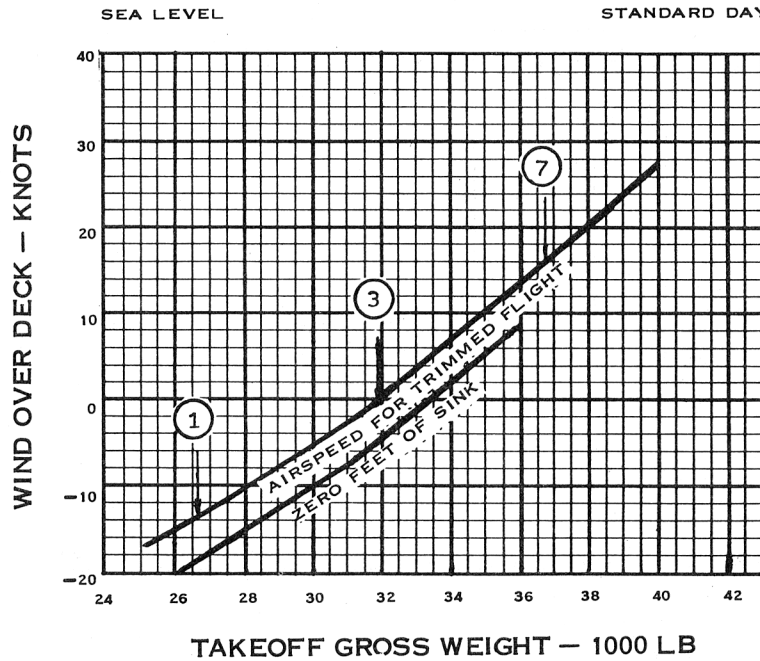
○ LOADING CONDITION COLUMN NUMBER



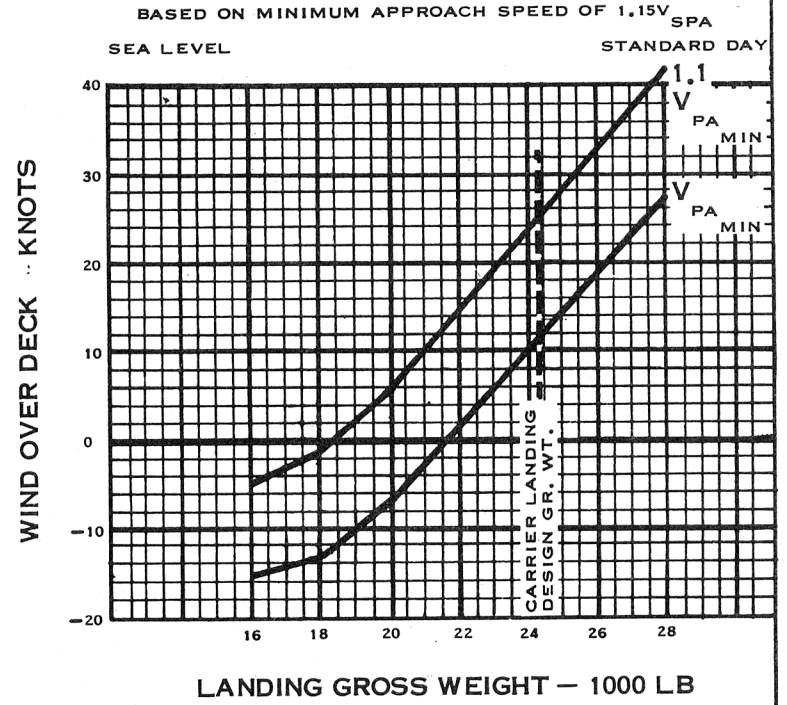
○ LOADING CONDITION CODE NUMBER

CARRIER SUITABILITY

MINIMUM WIND OVER DECK REQUIRED FOR CATAPULTING¹



MINIMUM WIND OVER DECK REQUIRED FOR LANDING²



NOTES:

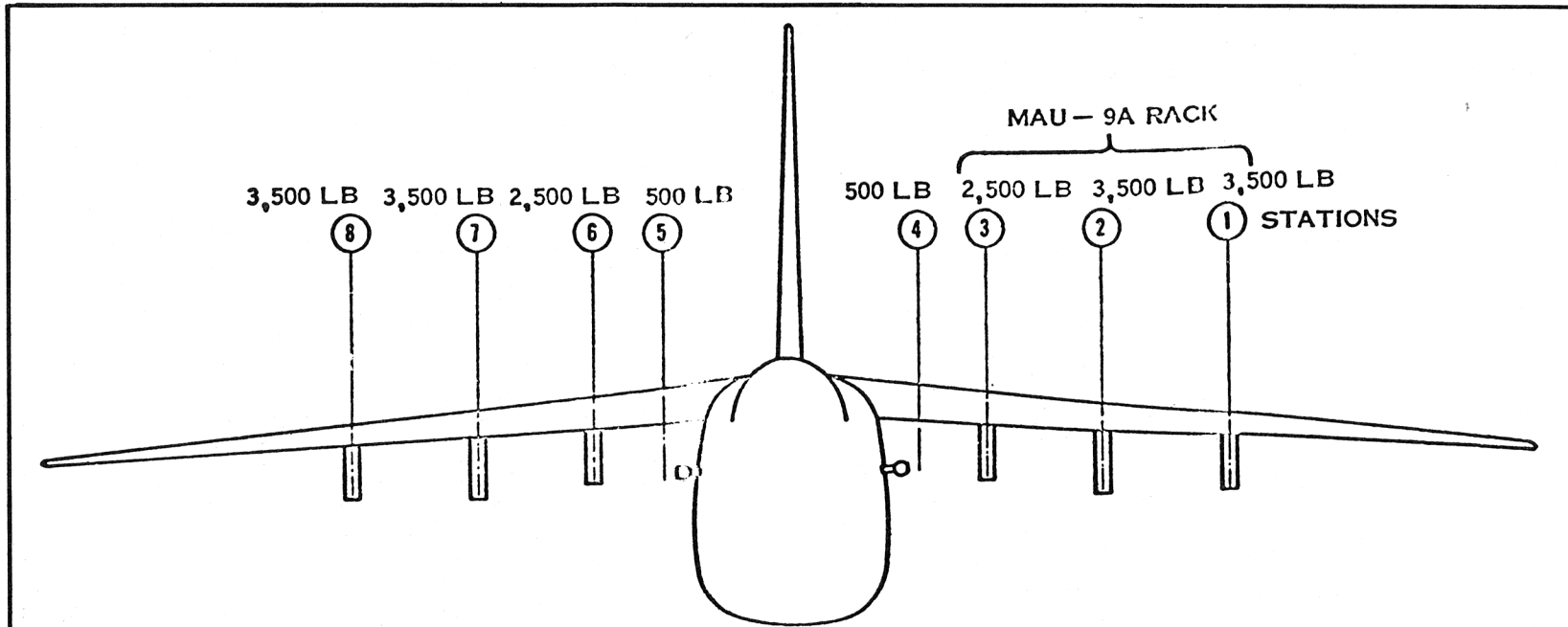
- 1. C-11-1 (2) BUWEPS SKETCH R S S H - 1338K OF 10 NOVEMBER 1961
- 2. MK - 7, MOD 1 - 3 BUWEPS SKETCH R S S H - 1259F OF 5 JUNE 1962

○ LOADING CONDITION COLUMN NUMBER

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	OUTBOARD (STN 1&8)	INTERMEDIATE (STN 2&7)	INBOARD (STN 3&6)	FUSELAGE (STN 4&5)
MINES	1) MK - 50 1) MK - 52 1) MK - 53 1) MK - 55 1) MK - 56	1) MK - 50 1) MK - 52 1) MK - 53 1) MK - 55 1) MK - 56	1) MK - 50 1) MK - 52 1) MK - 53 1) MK - 55 1) MK - 56	- - - -
BOMBS (A)	1) MK - 79 - MOD-1 FIRE BOMB 6) MK - 81 BOMBS 6) MK - 82 BOMBS 3) MK - 83 BOMBS 1) MK - 84 BOMB	1) MK - 79 - MOD-1 FIRE BOMB 6) MK - 81 BOMBS 6) MK - 82 BOMBS 3) MK - 83 BOMBS 1) MK - 84 BOMB	1) MK - 79 - MOD-1 FIRE BOMB 4) MK - 81 BOMBS 4) MK - 82 BOMBS 2) MK - 83 BOMBS 1) MK - 84 BOMB	- - - -
ROCKET LAUNCHERS (A)	3) LAU 3A/A 3) LAU 10/A 3) LAU 32/A 3) LAU 32A/A	3) LAU 3A/A 3) LAU 10/A 3) LAU 32/A 3) LAU 32A/A	2) LAU 3A/A 2) LAU 10/A 2) LAU 32/A 2) LAU 32A/A	- - - 1) LAU 33/A

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NOTES				
	OUTBOARD (STN 1&8)	INTERMEDIATE (STN 2&7)	INBOARD (STN 3&6)	FUSELAGE (STN 4&5)
SPECIAL WEAPONS	- - -	1) MK 28 1) MK 43 1) MK 57 1) TX-61	1) MK 28 1) MK 43 1) MK 57 1) TX-61	- - -
GUIDED MISSILES	1) SIDEWINDER 1A/1C IR 1) SHRIKE 1) BULLPUP "A" 1) BULLPUP "B"	- 1) SHRIKE 1) BULLPUP "A" 1) BULLPUP "B"	- 1) SHRIKE 1) BULLPUP "A" 1) BULLPUP "B"	1) SIDEWINDER 1A/1C IR - - -
EYE SERIES WEAPONS (A)	6) ROCKEYE II 4) SADEYE 6) MK 81 SNAKEYE I 6) MK 82 SNAKEYE I 1) WALLEYE 6) WETEYE	6) ROCKEYE II 4) SADEYE 6) MK 81 SNAKEYE I 6) MK 82 SNAKEYE I 1) WALLEYE 6) WETEYE	4) ROCKEYE II 2) SADEYE 4) MK 81 SNAKEYE I 4) MK 82 SNAKEYE I 1) WALLEYE 4) WETEYE	- - - - - -
FUEL TANKS	1) 300 GALLON 1) D704 AR TANK 1) 385 AR TANK	- - -	1) 300 GALLON - -	- - -
MISCELLANEOUS STORES (A)	- 1) AERO 14 SPRAY TANK 1) AN/ALQ 31A ECM Pod 1) AN/ALQ 76 ECM Pod 1) AN/ALQ 81 ECM Pod - 3) MK 12 MOD 0 SMOKE TANK 3) CBU-1A OR -2 DISPENSER	1) AERO 8A-1 BOMB CONTAINER - - - - -	1) AERO 8A-1 BOMB CONTAINER - - - - 1) MK 4 GUN Pod - -	- - - - - - -
MOUNTING/LAUNCHING DEVICES	1) DOUGLAS A/A37B-1 MBR 1) DOUGLAS MER 1) DOUGLAS TER 1) A/A 37B-3 PMBR - 1) LAU-7A LAUNCHER WITH ADAPTER FOR MAU-9A RACK	1) DOUGLAS A/A37B-1 MBR 1) DOUGLAS MER 1) DOUGLAS TER 1) A/A 37B-3 PMBR - -	1) DOUGLAS A/A37B-1 MBR 1) DOUGLAS MER 1) DOUGLAS TER 1) A/A 37B-3 PMBR - -	- - - - - 1) LAU-7A LAUNCHER -
<p>NOTES</p> <p>(A) MULTIPLE STORES MOUNTED ON DOUGLAS MBR, MER, OR TER. SADEYE IS CARRIED ONLY ON MER, WHILE OTHER STORES MAY BE MOUNTED SINGLY ON THE MAU-9A RACK.</p> <p>(B) ALL WING STORES OR WING MOUNTING/LAUNCHING DEVICES ARE MOUNTED ON THE MAU-9A RACK.</p> <p>(C) ONLY INDIVIDUAL STATION MAXIMUM CAPABILITIES ARE LISTED. COMBINATION OF STORES COULD RESULT IN INTERFERENCE BETWEEN STORES.</p>				
<p>○ LOADING CONDITION COLUMN NUMBER</p>				

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~~CONFIDENTIAL~~

DECLASSIFIED

SERVICE

NOTES

PRIMARY ATTACK

WARM-UP, TAXI, AND TAKE-OFF: 5 MINUTES AT NORMAL RATED THRUST AT SEA LEVEL

CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY RATED THRUST

CRUISE OUT: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE

DESCEND: TO SL WHEN 200 N.MI FROM TARGET (NO FUEL USED, NO DISTANCE GAINED)

CRUISE: AT MAXIMUM RANGE SPEED AT SL

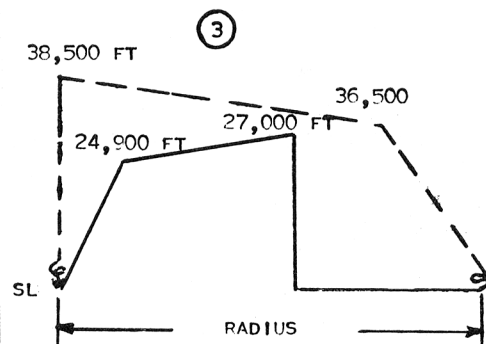
COMBAT: 5 MIN WITH MILITARY RATED THRUST AT SL (NO DISTANCE GAINED)

DROP STORES

CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY RATED THRUST

CRUISE BACK: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE

RESERVE: 5% INITIAL FUEL + 20 MIN @ MAXIMUM ENDURANCE AT SL



CLOSE SUPPORT

WARM-UP, TAXI, AND TAKE-OFF: 5 MINUTES AT NORMAL RATED THRUST AT SEA LEVEL

CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY RATED THRUST

CRUISE OUT: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE

DESCEND: TO 5000 FT (NO FUEL USED, NO DISTANCE GAINED)

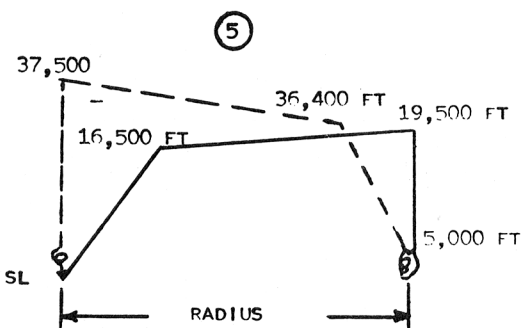
LOITER: FOR 1 HOUR AT MAXIMUM ENDURANCE SPEED AT 5000 FT (NO DISTANCE GAINED)

DROP STORES

CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY RATED THRUST

CRUISE BACK: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE

RESERVE: 5% INITIAL FUEL + 20 MIN @ MAXIMUM ENDURANCE AT SL



DEEP STRIKE

WARM-UP, TAXI, AND TAKE-OFF: 5 MINUTES AT NORMAL RATED THRUST AT SEA LEVEL

CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY RATED THRUST

CRUISE OUT: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE (DROP FUEL TANKS WHEN EMPTY)

DESCEND: TO SL WHEN 50 N.MI FROM TARGET (NO FUEL USED, NO DISTANCE GAINED)

RUN IN: 50 N.MI @ SL AT MAXIMUM SPEED AT MILITARY RATED THRUST

COMBAT: 5 MIN WITH MILITARY RATED THRUST AT SL (NO DISTANCE GAINED)

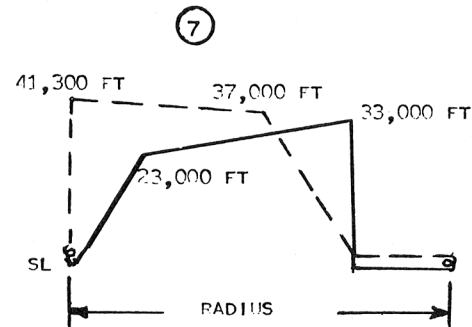
DROP STORE

RUN OUT: 50 N.MI @ SL AT MAXIMUM SPEED AT MILITARY RATED THRUST

CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY RATED THRUST

CRUISE BACK: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE

RESERVE: 5% INITIAL FUEL + 20 MIN @ MAXIMUM ENDURANCE AT SL



NOTE:
MISSION TIME: EXCLUDES TIME FOR WARMUP AND TAKEOFF AND 20-MINUTE LOITER TIME
CYCLE TIME: MISSION TIME PLUS 20 MINUTES SL LOITER

○ LOADING CONDITION COLUMN NUMBER

NOTES

HI-LO-LO-HI

WARM-UP, TAXI, AND TAKE-OFF: 5 MINUTES AT NORMAL RATED THRUST AT SEA LEVEL

CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY RATED THRUST

CRUISE OUT: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE (DROP FUEL TANKS WHEN EMPTY)

DESCEND: TO SL WHEN 100 N.MI FROM TARGET (NO FUEL USED, NO DISTANCE GAINED)

CRUISE: AT MAXIMUM RANGE SPEED AT SL (DROP FUEL TANKS WHEN EMPTY)

COMBAT: 5 MIN WITH MILITARY RATED THRUST AT SL (NO DISTANCE GAINED)

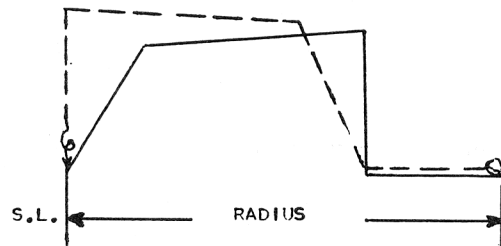
DROP STORES

CRUISE: AT MAXIMUM RANGE SPEED AT SL TO A POINT 100 N.MI FROM TARGET

CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY RATED THRUST

CRUISE BACK: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE

RESERVE: 5% INITIAL FUEL + 20 MIN @ MAXIMUM ENDURANCE AT SL



HI-LO-HI

WARM-UP, TAXI, AND TAKE-OFF: 5 MINUTES AT NORMAL RATED THRUST AT SEA LEVEL

CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY RATED THRUST

CRUISE OUT: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE (DROP FUEL TANKS WHEN EMPTY)

DESCEND: TO SL (NO FUEL USED, NO DISTANCE GAINED)

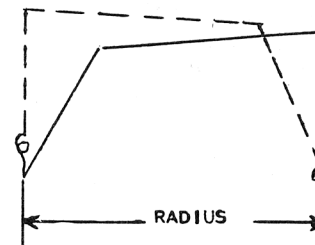
COMBAT: 5 MIN WITH MILITARY RATED THRUST AT SL (NO DISTANCE GAINED)

DROP STORES

CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY RATED THRUST

CRUISE BACK: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE

RESERVE: 5% INITIAL FUEL + 20 MIN @ MAXIMUM ENDURANCE AT SL



NOTE
 MISSION TIME: EXCLUDES TIME FOR WARMUP AND TAKEOFF AND 20-MINUTE LOITER TIME
 CYCLE TIME: MISSION TIME PLUS 20 MINUTES SL LOITER

○ LOADING CONDITION COLUMN NUMBER

SERVICE

NOTES

10-10-10

WARM-UP, TAXI, AND TAKE-OFF: 5 MINUTES AT NORMAL RATED THRUST AT SEA LEVEL

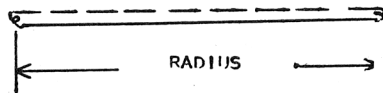
CRUISE: AT MAXIMUM RANGE SPEED AT SL (DROP FUEL TANKS WHEN EMPTY)

COMBAT: 5 MIN WITH MILITARY RATED THRUST AT SL (NO DISTANCE GAINED)

DROP STORES

RUN OUT: AT MAXIMUM RANGE SPEED AT SL

RESERVE: 5% INITIAL FUEL + 20 MIN @ MAXIMUM ENDURANCE AT SL



11-11-11

WARM-UP, TAXI, AND TAKE-OFF: 5 MINUTES AT NORMAL RATED THRUST AT SEA LEVEL

CLIMB: ON COURSE TO OPTIMUM CRUISE ALTITUDE WITH MILITARY RATED THRUST

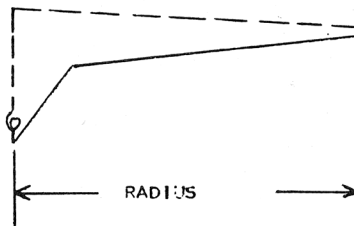
CRUISE OUT: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE (DROP FUEL TANKS WHEN EMPTY)

COMBAT: 5 MIN WITH MILITARY RATED THRUST AT CRUISE ALTITUDE (NO DISTANCE GAINED)

DROP STORES

CRUISE BACK: AT ALTITUDES AND SPEEDS FOR MAXIMUM RANGE

RESERVE: 5% INITIAL FUEL + 20 MIN @ MAXIMUM ENDURANCE AT SL



NOTE
MISSION TIME: EXCLUDES TIME FOR WARMUP AND TAKEOFF AND 20-MINUTE LOITER TIME
CYCLE TIME: MISSION TIME PLUS 20 MINUTES SL LOITER

○ LOADING CONDITION COLUMN NUMBER

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