

F/A-18C

Lot 20 BLOCK 51 (10)

BUNO 165407

QUICK

REFERENCE

HANDBOOK

CHAPTER – 3



BIOHAZARD

INDEX

NORMAL CHECKLIST

INTERIOR CHECKS

PREFLIGHT

ENGINE START

POST ENGINE START

PANEL SETUP / MISSION SETUP

BEFORE TAKEOFF CHECKLIST

TAKEOFF FIELD / CARRIER

AFTER TAKEOFF / CLIMB / 10000FT / CRUISE

HAIL – R CHECKS

DESCENT

LANDING CHECKLIST

AFTER LANDING

BEFORE ENGINE SHUTDOWN

ENGINE SHUTDOWN

FENCE IN

FENCE OUT

MEMORY ITEMS

COMMS

**CASE I COMM
AERIAL REFUELING**

CASE II COMM

**CASE III COMM
AWACS COMM**

TARGET ASPECT DEFINITION

MANEUVERS

OFFENSIVE MISSILE CRANKING

EVADING – HOT

EVADING – SIDE

EVADING – COLD

THREATS TABLE

PERFORMANCE

**CROSSWIND LIMIT
MAX ABORT SPEED – MAX THRUST**

**DENSITY RATIO
MAX ABORT SPEED – MIL THRUST**

CAUTION / WARNING / ADVISORY PANEL

LEFT

RIGHT

ADVISORY LIGHTS PANEL

WARNINGS / CAUTIONS / FCS CAUTIONS / ADVISORIES

**WARNING LIGHTS
CAUTIONS
FCS CAUTIONS
ADVISORIES**

**WARNING LIGHTS INDEX
CAUTION LIGHTS INDEX
FCS CAUTION LIGHTS INDEX
ADVISORIES INDEX**

LIMITATIONS

Who dunnit?

INTERIOR CHECKS

EJECTION SEAT ... SAFE & LOCKED

PARKING BRAKE ... SET

LEFT SIDEWALL

L/H C/Bs ... IN

NUCLEAR CON Sw ... ENABLE

LEFT UPPER CONSOLE

MC ... NORM

HYD ISOL Sw ... NORM

DISPENS RESET Sw... GUARDED

ANT SEL COMM 1 ... AUTO

ANT SEL IFF ... BOTH

OBOGS ... OFF

OXYGEN ... OFF

COMM PANEL

RLY ... OFF

G XMT ... OFF

ILS PRESET CH ... SET CHANNEL

ILS SET SWITCH ... UFC

CRYPTO ... NORM

MODE 4 ... DIS

MASTER ... NORM

VOLUME CONTROL PANEL

RWR ... AS DESIRED

WPN ... AS DESIRED

FCS GAIN Sw ... NORM

REFUEL PROBE ... RETRACT

EXTERNAL TANK SWITCHES

WING ... NORM

CTR ... NORM

DUMP SWs ... OFF

INTERNAL WING ... NORM

STROBES ... OFF

EXT LIGHTS ... SET

GEN TIE CONTROL ... NORM (GUARD)

THROTTLES ... OFF

EXT LIGHT Sw ... OFF

LEFT FWD CONSOLEHOOK BYPASS ... FIELD / **CARRIER**

LDG/TAXI LT ... OFF

ANTI-SKID Sw ... ON / **OFF**

LAUNCH BAR ... RETRACT

FLAP SWITCH ... FULL

SELECT JETT BTN ... SAFE

LDG GEAR ... DOWN

CANOPY JETT ... FORWARD

INSTRUMENT PANEL

MASTER ARM Sw ... SAFE

FIRE / APU FIRE LT ... NOT PRESSED

INTERIOR CHECKS**INSTRUMENT PANEL (CONTINUED)**

DDIs / AMPCD ... OFF

HUD ... OFF

ADF SWITCH ... OFF

COMM 1 / COMM 2 ... OFF

ALT SOURCE ... BARO / **RDR**

ATT SOURCE ... AUTO

LOWER FWD PANEL

AUX REL ... NORM

DISPENSER ... OFF

ECM MODE ... OFF

LOWER RIGHT FWD PANEL

STBY ATT IND ... CAGED / LOCKED

RIGHT FWD PANEL

IR COOL Sw ... OFF

HMD ... OFF

SPIN RECOVERY ... GUARDED / OFF

RIGHT SIDEWALL

R/H C/Bs ... IN

RIGHT UPPER CONSOLE

DEFOG HANDLE ... MID

WINDSHIELD A/I ... OFF

RIGHT FWD CONSOLE

HOOK ... UP

RADIO ALT ... OFF

WING FOLD ... SAME AS WING

AV COOL Sw ... NORM

RIGHT CONSOLE

GEN SWs ... NORM

BAT SWITCH ... OFF

ECS SYSTEM

MODE ... AUTO

CAB TEMP ... 10° CLOCK

CAB PRESS ... NORM

PITOT A/I ... AUTO

ENG A/I ... OFF

BLEED AIR ... NORM & DOWN

INTERIOR LIGHTS ... AS DESIRED

SENSORS

FLIR ... OFF

LTD/R ... AFT

LST/NFLR ... OFF

RADAR / INS ... OFF

KY-58 PANEL

MODE ... P

FILL SELECT KNOB ... 1

VOLUME ... SET

RADIO ENCR PWR ... OFF

PREFLIGHT

PARKING BRAKE ... SET
VOL RWR ... MID
VOL WPN ... MID
STROBES ... OFF
HOOK BYPASS ... FIELD / **CARRIER**
ANTI-SKID ... ON / **OFF**
FLAPS ... FULL
ATTITUDE SOURCE ... BARO / **RDR**
DEFOG HANDLE ... MID
HOOK ... UP
WING FOLD ... SAME AS WING
SENSORS ... OFF

ENGINE START

BATTERY ... CHECKED
FIRE TEST ... COMPLETED
COMM 1 / COMM 2 ... SET
APU ... START
STROBES ... BRT / DIM
RIGHT ENGINE ... START
DDIs / HUD ... ON
BLEED AIR ... CYCLE
WARNING LIGHTS ... TEST
LEFT ENGINE ... START

POST ENGINE START

EJECTION SEAT ... ARM
DDIs ... FCS / BIT
RADAR ... OPERATE
INS ... GND / **CV**
STORES ... LOAD
FUEL ... LOAD
DISPENSER ... ON
ECM ... STBY
RWR ... ON
FCS RST BUTTON ... PUSH
SYSTEMS ... CHECK
PROBE / LCH BAR / SPD BRAKE / HOOK / PT HEAT
TRIM ... CHECK
T/O TRIM BUTTON ... DEPRESS
FLAPS ... AUTO
FLT CONTROLS ... CHECK
FLAPS ... HALF
TAKEOFF TRIM ... SET

All WEIGHTS	... 12°	FIELD
44000 and below	... 16°	CARRIER
45000 – 48000	... 17°	CARRIER
49000 – 51900	... 19°	CARRIER

PANEL SETUP

OBOGS ... ON
OXYGEN FLOW ... ON
ILS PANEL ... CHANNEL / UFC
APU ... VERIFY OFF
HOOK BYPASS ... FIELD / **CARRIER**
FUEL ... SET BINGO
TIMEZONE ... SET Z
ALT SOURCE ... BARO / **RDR**
ATT SOURCE ... STBY THEN AUTO
STBY ATTITUDE ... UNCAGE
QNH / QFE ... SET
RA ... 200 / **40**
HMD ... ALIGN
INS ... IFA
FLIR ... STBY / ON

MISSION SETUP

COMM 1 ... ATC
COMM 2 ... INFLIGHT FREQ
IFF ... ON
D/L ... ON
TCN ... SET & ON
BULLSEYE ... SET
WYPTs ... SET
DISPENSER PROG ... SETUP

BEFORE TAKEOFF CHECKLIST	
HARNESSES	... LOCKED
SEAT	... ARMED
NWS	... LO / OFF
WARN LIGHTS	... CHECK
CONTROLS	... CHECK
FLAPS	... SET
TRIM	... SET
HOOK	... UP
WINGS	... SPREAD & LOCKED

TAKEOFF FIELD	
EMER JETT BUTTON	... LOCATE
ENGINES	... MIL CHECK
FLT CONTROLS	... CHECK
N2	... 80%
BRAKES	... RELEASE
AFTERBURNER	... if needed
DURING T/O ROLL	
ENG INST CHECK	... EGT / OIL / NOZZLE
100 kts	... CHECK
@ POSITIVE RATE OF CLIMB	
GEAR	... UP
@ ACCEL	
FLAPS	... UP

TAKEOFF CARRIER			
CATAPULT THROTTLE SETTINGS			
WT BOARD	ENGINE POWER		
≤ 44000	MIL	MIL / MAX	MAX
≥ 45000			MAX

EMER JETT BUTTON	... LOCATE
ENGINES	... MIL CHECK
FLT CONTROLS	... CHECK
AFTERBURNER	... if needed
@ POSITIVE RATE OF CLIMB	
GEAR	... UP
@ ACCEL	
FLAPS	... UP

F404-GE-402			GND IDLE		ENG START	FLT IDLE		MIL steady			MAX thrust	
MIL	each 10900 lbs		MIN	MAX	PEAK	MIN	MAX	MIN	MAX	PEAK	MAX	PEAK
MAX	each 18000 lbs											
N1	+ 0.5%	%		108			108		108		108	
N2	+ 1%	%	63	70		68	73	90	102		102	
EGT	+ 8°C	°C	190	590	815			715	880	902	920	942
FF	x 100	pph	4,2	9				60	125		(438)	
NOZZLE	+ 3%	%	73	84				0	48			
OIL PRESS		psi	45	110		55	110	95	180			

AFTER TAKEOFF	
LDG GEAR	... CONFIRM UP
FLAPS	... CONFIRM UP
LDG / TX LT	... CONFIRM OFF
FORMATION LTS	... AS NEEDED
CLIMB UNTIL ABOVE 10000 FT	
IAS	... MAX 350 or by CASE
10000 FT	
ALTIMETER	... CHECK
FUEL TRANSFER	... CHECK
RA	... 5000 or as needed
CRUISE	
MAX RANGE	... 4.2 AOA but ≤ M0.5
MAX ENDURANCE	... 5.6 AOA

HAIL – R CHECKS

HOOK	... UP	/	DOWN	HEATS	... ENG A/I
ANTI-SKID	... ON	/	OFF	ACL	... BOX if needed
INSTRUMENTS	... SET			ICLS	... BOX if needed
LDG WEIGHT	... CHECK			LIGHTS	... SET
RA	... 200	/	500	RADALT	... SET TO HUD

LDG WEIGHT LIMIT

FIELD	
LDG flared	39000 lbs
FCLP / touch&go / baricade	33000 lbs
CARRIER	
UNRESTRICTED	33000 lbs
RESTRICTED	34000 lbs
HWC > 40 kts	HALF FLAPS
HWC < 40 kts	FULL FLAPS

DESCENT

ENGINE A/I	... AS DESIRED
PITOT HEAT	... AUTO
DEFOG	... HIGH
WINDSHIELD A/I	... AS DESIRED
COMM 1 / COMM 2	... SET
IFF	... AS DIRECTED
SENSORS	... AS REQUIRED
QNH /QFE	... SET & CHECK
RA	... 200 / 500
<i>OR BY APPROACH MINIMUM</i>	
DDIs	... HUD / HSI 10NM
AMPCD	... CHECKLIST
TCN	... SET & ON
ILS	... SET & ON

LANDING CHECKLIST

HARNES	... LOCKED
HOOK BYPASS	... FIELD / CARRIER
ANTI-SKID	... ON / OFF
DISPENSER	... OFF
GEAR	... DOWN
FLAPS	... FULL / FULL
HOOK	... UP / DOWN

AFTER LANDING

FLAPS	... AUTO /	HALF
T/O TRIM	... PUSH /	LEAVE
WINGS	... LEAVE /	UNLOCK
CANOPY	... AS DESIRED	

BEFORE ENGINE SHUTDOWN

PARKING BRAKE	... SET
FLIR	... OFF
RADAR	... OFF
INS	... OFF
AVIONICS	... OFF
STBY ATT	... CAGE
COMM 1 / COMM 2	... OFF
EXT & INT LIGHTS	... OFF
OBOGS	... OFF
OXY FLOW	... OFF

ENGINE SHUTDOWN

BRAKE GAUGE	... 3000 psi
NWS	... OFF
FLAPS	... FULL
LEFT ENGINE	... SHUTDOWN
HYD PRESSURE	... PUMP TO DECREASE
DDIs / HUD	... OFF
RIGHT ENGINE	... SHUTDOWN
EJECTION SEAT	... SAFE
BATTERY SWITCH	... OFF

FENCE IN

FENCE IN	
BULLSEYE	... assure SET
COUNTERMEASURES	... ARMED
ECM	... AS FRAGGED
WEAPONS	... PREPARED and CONFIGURED
TACAN	... A/A TCN set if required
EXTERNAL LIGHTS	... OFF
MASTER ARM	... ARM
EW / SA / RDR ATTK	... SELECTED
HMD	... ON
FUEL State	... CHECK
External FUEL Tanks	... FEEDING
WARNING LIGHTS	... CHECK
FLIGHT CALLSIGN	... LUCKY 1-1
	... FENCED IN
FUEL STATE	... 9.8

FENCE OUT

FENCE OUT	
EXTERNAL LIGHTS	... ON
MASTER ARM	... SAFE
COUNTERMEASURES	... STBY
ECM	... AS FRAGGED
WEAPONS	... AS REQUIRED
TACAN	... SET & ON
FUEL State	... CHECK
External FUEL Tanks	... FUEL FLOW CHECK
WARNING LIGHTS	... CHECK
BDA CHECK	... CONSIDER
FLIGHT CALLSIGN	... LUCKY 1-1
	... FENCED OUT
FUEL STATE	... 4.8

MEMORY ITEMS

HUNG START

NO EGT increase within 20 seconds

THROTTLE ... OFF
CRANK ENGINE ... 3 MIN
THROTTLE ... IDLE

IF STILL NO START

THROTTLE ... OFF
AFTER 3 MIN
ENG CRANK ... OFF
APU ... OFF

MAX N2 FOR ENG CRANK IS 30%

HOT START

EGT rises thru 750°C

THROTTLE ... OFF
CRANK ENGINE ... UNTIL EGT < 200°C

EGT 815°C NOT EXCEEDED

THROTTLE ... IDLE

EGT 815°C EXCEEDED OR 2nd START

THROTTLE ... OFF
CRANK ENGINE ... 3 MIN
ENG CRANK ... OFF
APU ... OFF

MAX N2 FOR ENG CRANK IS 30%

ENG FIRE ON GND

THROTTLE ... OFF
FIRE LIGHT ... PUSH
FIRE EXT RDY LT ... PUSH
BATTERY ... OFF
EGRESS ... PERFORM

ENG FIRE ON TAKEOFF

BEFORE V1

TAKEOFF ... ABORT

AFTER V1

EMER T/O PROC ... PERFORM

ENG FIRE INFLIGHT

SIMULTANEOUS OR DUAL FIRE

THROTTLES ... MIN PRACTICAL

SINGLE FIRE LIGHT

THROTTLE ... OFF
FIRE LIGHT ... PUSH
FIRE EXT RDY LT ... PUSH
HOOK ... DOWN

ENGINE STALL

THROTTLE ... IDLE

IF STALL DOES NOT CLEAR

THROTTLE ... OFF
FIRE LIGHT ... PUSH

ENG CAUTIONS

EGT HIGH / FLAMEOUT / IN TEMP
OIL PR / OVRSPD

THROTTLE ... IDLE

TAKEOFF ABORT

THROTTLE ... IDLE
SPEEDBRAKE ... AS DESIRED
BRAKES ... APPLY
HOOK ... DOWN IF REQ

EMERGENCY TAKEOFF

THROTTLE ... MIL / MAX
ON-SPEED AOA ... MAINTAIN
EMER JETT BUTTON... PUSH IF REQ

LOSS OF THRUST ON TAKEOFF

BEFORE V1

TAKEOFF ... ABORT

AFTER V1

EMER T/O PROC ... PERFORM

EMER CATAPULT FLYAWAY

THROTTLES ... MAX
RUDDER ... AGAINST YAW
EMER JETT BUTTON... PUSH

AFTER ROTATION COMPLETE

WATERLINE SYM ... 10° PITCH
LATERAL STICK ... RESTRICT TO HALF
IF UNABLE TO STOP YAW
EJECT ... PERFORM

EMERGENCY BRAKES

BRAKES ... RELEASE
EMER BRAKE HAN ... PULL TO DETEND
BRAKES ... APPLY

MEMORY ITEMS

LOSS OF DIRECTIONAL CONTROL GND

IF TAKEOFF CONTINUED

EMER T/O PROC ... PERFORM

IF TAKEOFF ABORTED

THROTTLE ... IDLE

IF NOSEWHEEL STEER FAIL SUSPECTED

PADDLE SWITCH ... OFF

IF DIRECTIONAL PROBLEM REMAINS

N/W STEER ... ENGAGE

EMER BRAKES ... SELECT

HOOK ... DOWN

APU FIRE

INFLIGHT OR ON GND

APU FIRE LIGHT ... PUSH

FIRE EXT RDY LT ... PUSH

ON GND

THROTTLE ... OFF

EGRESS ... PERFORM

L AND R BLEED WARNING

THROTTLES ... MIN PRACTICAL

OXY FLOW ... OFF

OBOGS ... OFF

BLEED AIR ... OFF

DO NOT CYCLE

L OR R BLEED WARNING

THROTTLE ... IDLE

BLEED AIR ... OFF

DO NOT CYCLE

INLET ICE CAUTION

ENG A/I ... ON

DEPARTURE RECOVERY

CONTROLS ... RELEASE

SPEEDBRAKE ... IN

IF STILL OUT OF CONTROL

THROTTLES ... IDLE

ALTITUDE ... CHECK

AOA ... CHECK

AIRSPEED ... CHECK

YAW RATE ... CHECK

RECOVERY INDICATED BY
AOA & YAW RATE TONES
REMOVED

RECOVER ... COMPLETE

PASSING 6000ft AGL

DIVE NOT RECOVERED

EJECT ... PERFORM

FLT CONTROL CAUTIONS

DEL ON / FCES / MECH ON

SPEEDBRAKE ... CHECK IN

KIAS ... < 400 / M0.8

FALLING LEAF RECOVERY

LONGITUDINAL STICK

AOA POSITIVE ... FULL FWD

AOA NEGATIVE ... FULL AFT

RECOVERY INDICATED BY
AOA & YAW RATE TONES
REMOVED

RECOVER ... COMPLETE

PASSING 6000ft AGL

DIVE NOT RECOVERED

EJECT ... PERFORM

SPIN RECOVERY

COMMAND ARROW PRESENT

LATERAL STICK ... FULL

SPIN RCY SW ... RCY

LATERAL STICK ... FULL WITH ARROW

YAW RATE STOPS

LATERAL STICK ... SMOOTH NEUTRAL

SPIN RCY SW ... NORM

RECOVER ... COMPLETE

PASSING 6000ft AGL

DIVE NOT RECOVERED

EJECT ... PERFORM

CASE I RECOVERY COMMS

INITIAL CALL

MARSHAL	... MARSHAL
TAILNUMBER	... 401
MOTHERS RAD/DME	... 250 for 42
ANGELS	... ANGELS 12
FUEL STATE	... STATE 2.4

MOTHER

TAILNUMBER	... 401
RECOVERY TYPE	... CASE I RECOVERY
BRC	... BRC 015
QNH	... 2997

CQ

TAILNUMBER	... 401
QNH	... 2997
TAILNUMBER	... 401
LEAVING MARSHAL	... COMMENCING
TAILNUMBER	... 401
INITIAL	... INITIAL
TAILNUMBER	... 401
SPINNING	... SPINNING
TAILNUMBER	... 401
SPIN AT 90	... SPIN 90
TAILNUMBER	... 401
DEP LDG PATTERN	... DEPARTING ___NM, UPWIND
TAILNUMBER	... 401
BREAK	... BREAKING AT ___
TAILNUMBER	... 401
BALL	... HORNET BALL
FUEL STATE	... 2.2

CASE II RECOVERY COMMS

INITIAL CALL

MARSHAL	... MARSHAL
TAILNUMBER	... 401
MOTHERS RAD/DME	... 250 for 42
ANGELS	... ANGELS 12
FUEL STATE	... STATE 2.4

MOTHER

TAILNUMBER	... 401
WX	... VIS 5NM 015OVC
QNH	... 2997
RECOVERY TYPE	... CASE II RECOVERY
MARSHAL	... MARSHAL ON R160
DME / ANGELS	... 22 ANGELS 17
BRC	... BRC 015
EAT	... EAT 22

COMMS

TAILNUMBER	... 401
QNH	... 2987
MARSHAL	... MARSHAL ON R160
DME / ANGELS	... 22 ANGELS 7
EAT	... EAT 22
TAILNUMBER	... 401
ESTABLISHED	... ESTABLISHED
ANGELS	... ANGELS 7
FUEL STATE	... STATE 2.3
TAILNUMBER	... 401
ESTABLISHED	... COMMENCING
FUEL STATE	... STATE 2.2
TAILNUMBER	... 401
ESTABLISHED	... INITIAL
FUEL STATE	... 2.2
TAILNUMBER	... 401
BALL	... HORNET BALL
FUEL STATE	... 2.1
TAILNUMBER	... 401
CLARA	... CLARA

CASE III RECOVERY COMMS

INITIAL CALL

MARSHAL ... **MARSHAL**
TAILNUMBER ... **401**
MOTHERS RAD/DME ... **250 for 42**
ANGELS ... **ANGELS 12**
FUEL STATE ... **STATE 2.4**

MOTHER

TAILNUMBER ... **401**
WX ... **VIS 3NM 006OVC**
QNH ... **2997**
RECOVERY TYPE ... **CASE III RECOVERY**
APPR TYPE ... **CV-1 APPR**
MARSHAL ... **MARSHAL ON R160**
DME / ANGELS ... **22 ANGELS 17**
FINAL BEARING ... **F/B 015**
EAT ... **EAT 22**
BUTTON ... **APPROACH BUTTON 18**

COMMS

TAILNUMBER ... **401**
QNH ... **2987**
MARSHAL ... **MARSHAL ON R160**
DME / ANGELS ... **22 ANGELS 7**
EAT ... **EAT 22**

TAILNUMBER ... **401**
ESTABLISHED ... **ESTABLISHED**
ANGELS ... **ANGELS 7**
FUEL STATE ... **STATE 2.3**

TAILNUMBER ... **401**
ESTABLISHED ... **COMMENCING**
FUEL STATE ... **STATE 2.2**

MARSHAL ... **401**
... **SWITCH BUTTON 18**

TAILNUMBER ... **401**
... **SWITCHING BUTTON 18**

TAILNUMBER ... **401**
... **CHECKING IN**
FUEL STATE ... **2.1**

COMMS

APPROACH ... **401**
F/B ... **FINAL BEARING 017**

TAILNUMBER ... **401**
5000 ... **PLATTFORM**

APPROACH ... **401**
... **SAY NEEDLES**

TAILNUMBER ... **401**
... **FLY UP AND ON**

APPROACH ... **401**
¾ NM ... **¾ NM CALL THE BALL**

TAILNUMBER ... **401**
... **HORNET BALL**
... **2.0**

LSO ... **ROGER BALL**

AERIAL REFUELING

CHECKLIST

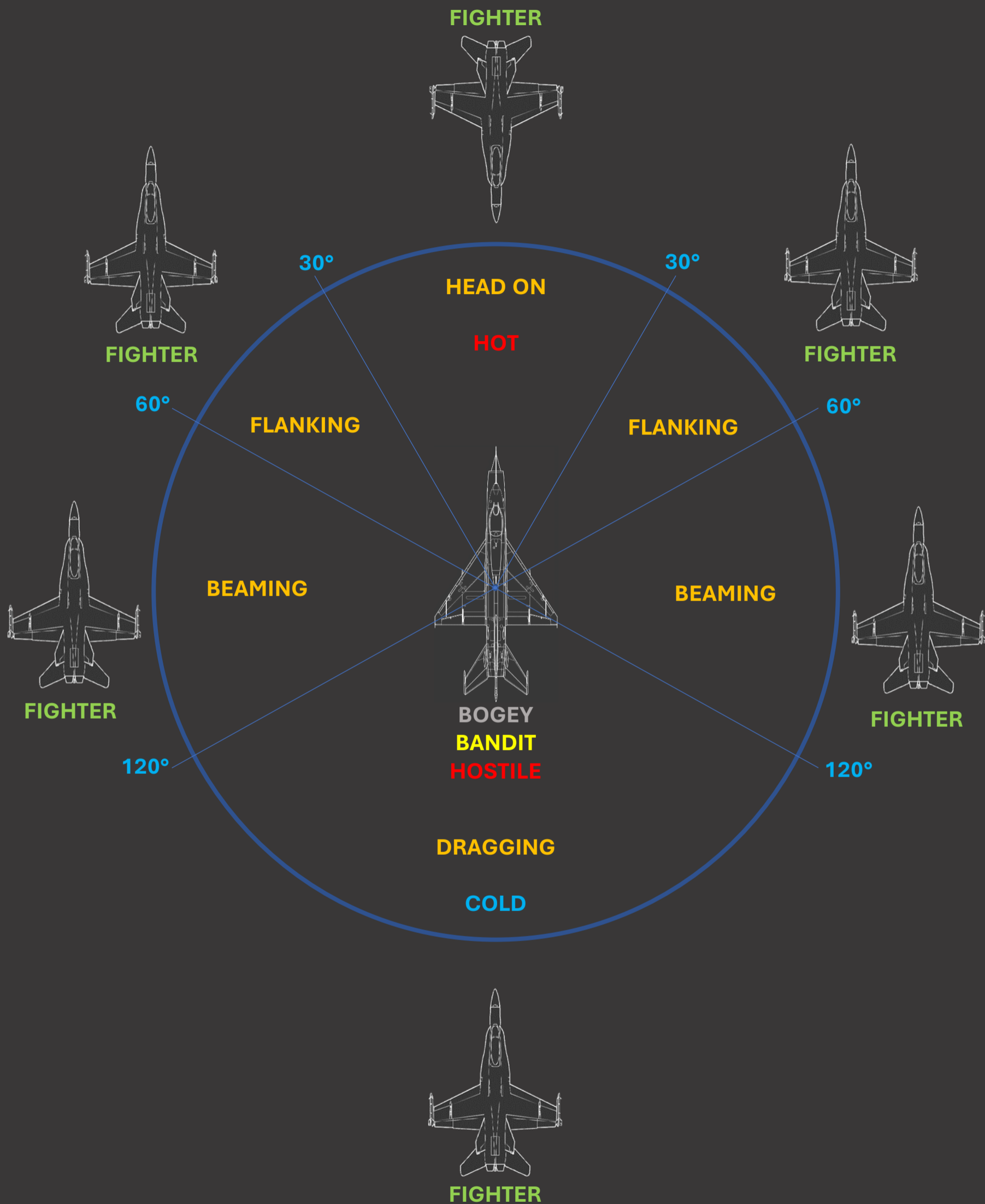
TCN	... SELECT & ON
TANKER FREQ	... COMM 1
ALTIMETER	... SET STD
RADAR	... STBY / SILENT
ECM	... STBY
MASTER ARM Switch	... SAFE
Internal WING FUEL switch	... AS DESIRED
EXTERNAL TANKS	... AS DESIRED
AIR REFUELING PROBE	... EXTEND (\leq 300 KIAS)
EXTERIOR LIGHTS (NIGHT)	... STEADY BRIGHT
AFTER BEING VISUAL REPORT	
	... NOSE COLD
	... SWITCHES SAFE

COMMS

FLT CALLSIGN	... LUCKY 1-1
	... REQUEST TO JOIN
FLT CALLSIGN	... LUCKY 1-1
	... REQUEST TO PRE-CONTACT
	... LEFT HOSE
FLT CALLSIGN	... LUCKY 1-1
	... THANKS AND BYE

COMMS	
AWACS	... MAGIC
FLT CALLSIGN	... LUCKY 1-1
	... BULLSEYE 265 for 73
	... FL 320
AWACS	... LUCKY 1-1
	... ALFA CHECK
FLT CALLSIGN	... LUCKY 1-1
	... ALFA CHECK 085 / 73
	... REQUEST PICTURE
AWACS	... LUCKY 1-1
	... RADAR CONTACT
	... PROCEED INBOUND CAP
AWACS	... LUCKY 1-1
	... RADAR CONTACT
	... SAY STATE
FLT CALLSIGN	... LUCKY 1-1
FOX 3 – FOX 1 – FOX 2	... 2 – 2 – 2 PLUS
FUEL STATE	... 11.8
PLAYTIME	... ONE PLUS FIFTEEN
FLT CALLSIGN	... LUCKY 1-1
	... RTB
	... LEAVING FREQUENCY

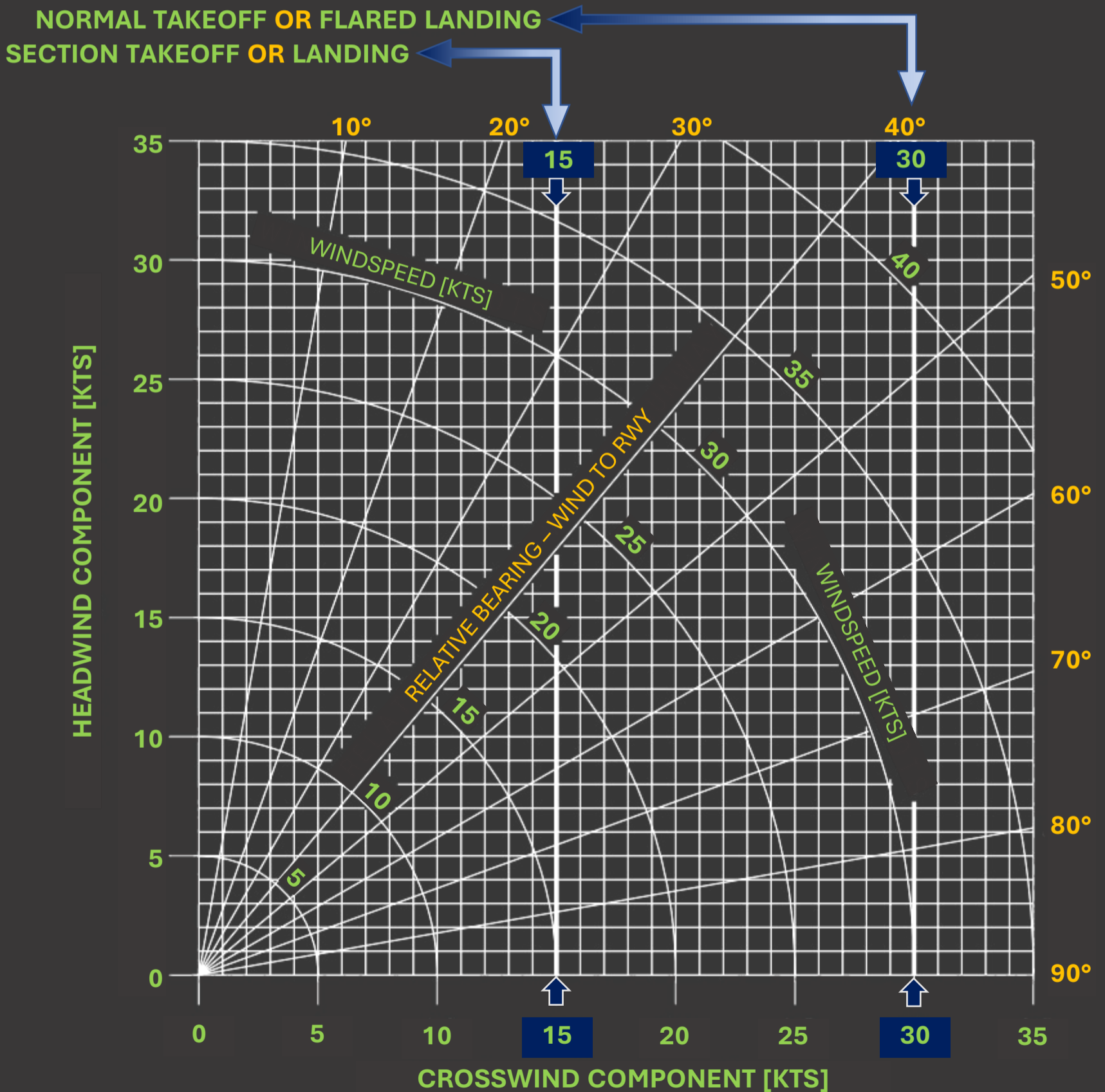
TARGET ASPECT DEFINITION



CROSSWIND LIMITS

RULE OF THUMB

CWC =	$(20 + \text{windangle}) \times \text{windvelocity}$	[kts]
HWC / TWC =	$(110 - \text{windangle}) \times \text{windvelocity}$	[kts]



DENSITY RATIO

PRESSURE ALTITUDE CALCULATION

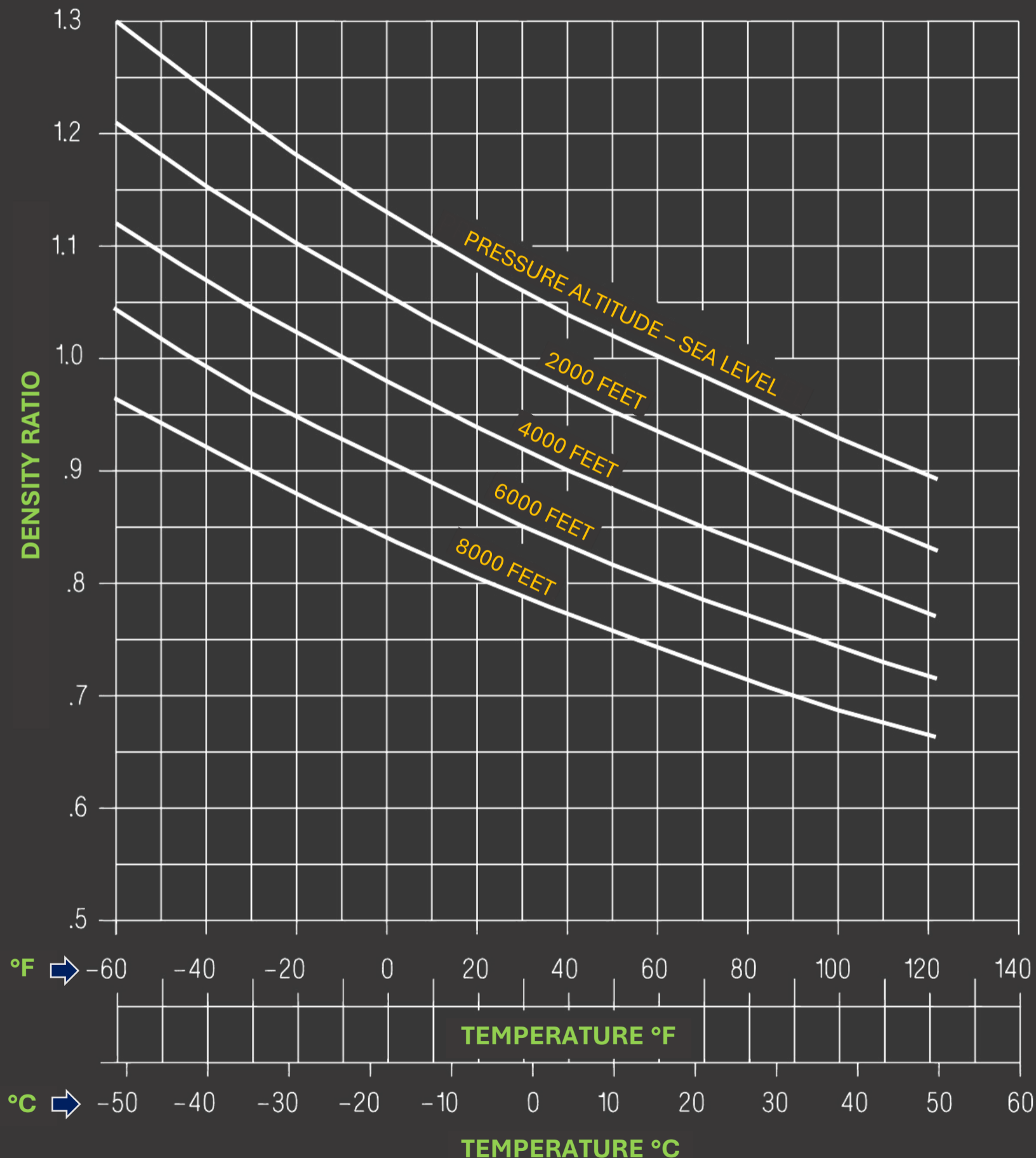
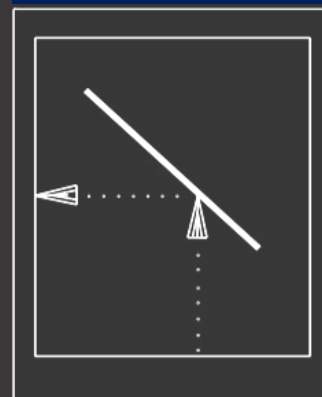
ASSUMPTION

QNH 29.87 inHG

FIELD ELEV 1539 feet TIFLIS LOCHINI UGTB

$$\begin{aligned}
 PA &= ((29.92 - QNH) \times 1000) + \text{FIELD ELEV} \\
 &= ((29.92 - 29.87) \times 1000) + 1539 \\
 &= (50) + 1539 \\
 &= 1589 \text{ feet}
 \end{aligned}$$

GUIDE



RULE OF THUMB:

$$\text{TEMPERATURE } ^\circ\text{F} = ^\circ\text{C} \times 2 - 10\% + 32$$

MAXIMUM ABORT SPEED – MAXIMUM THRUST

AIRCRAFT CONFIGURATION

TRAILING EDGE FLAPS 30° / GEAR DOWN

ASSUMPTION

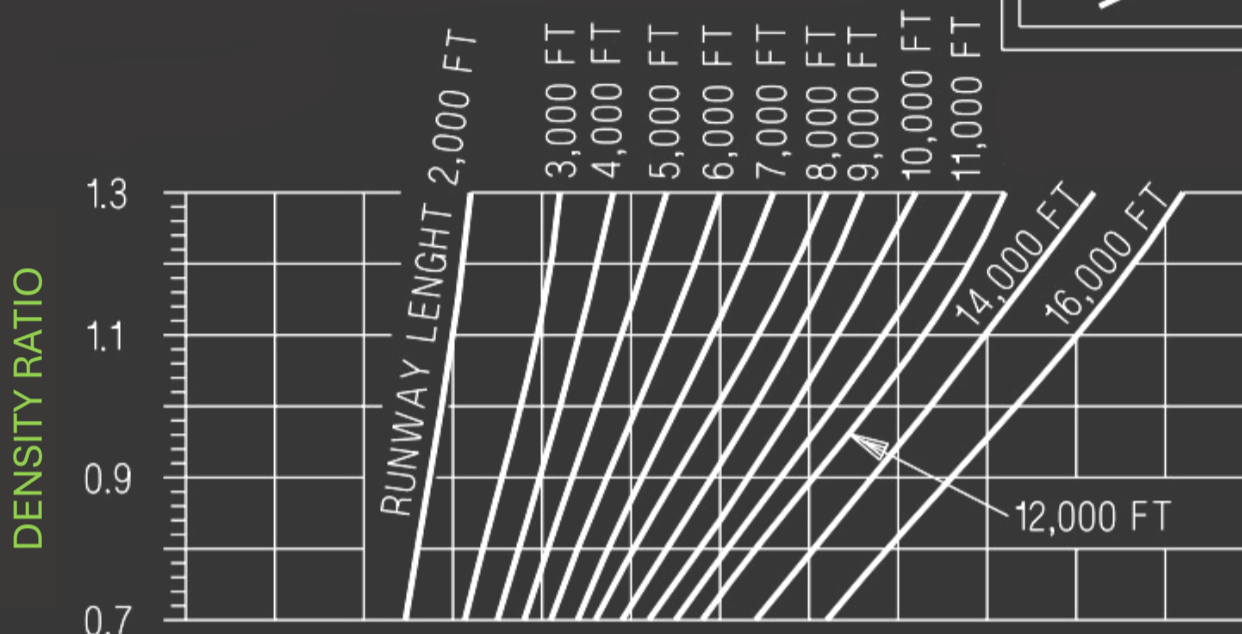
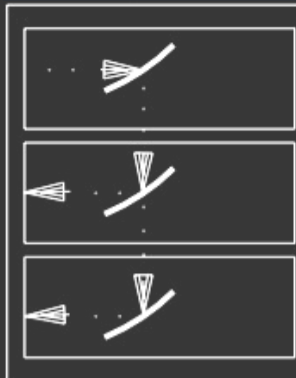
STANDARD DAY

REMAINING ENGINE GROUND IDLE

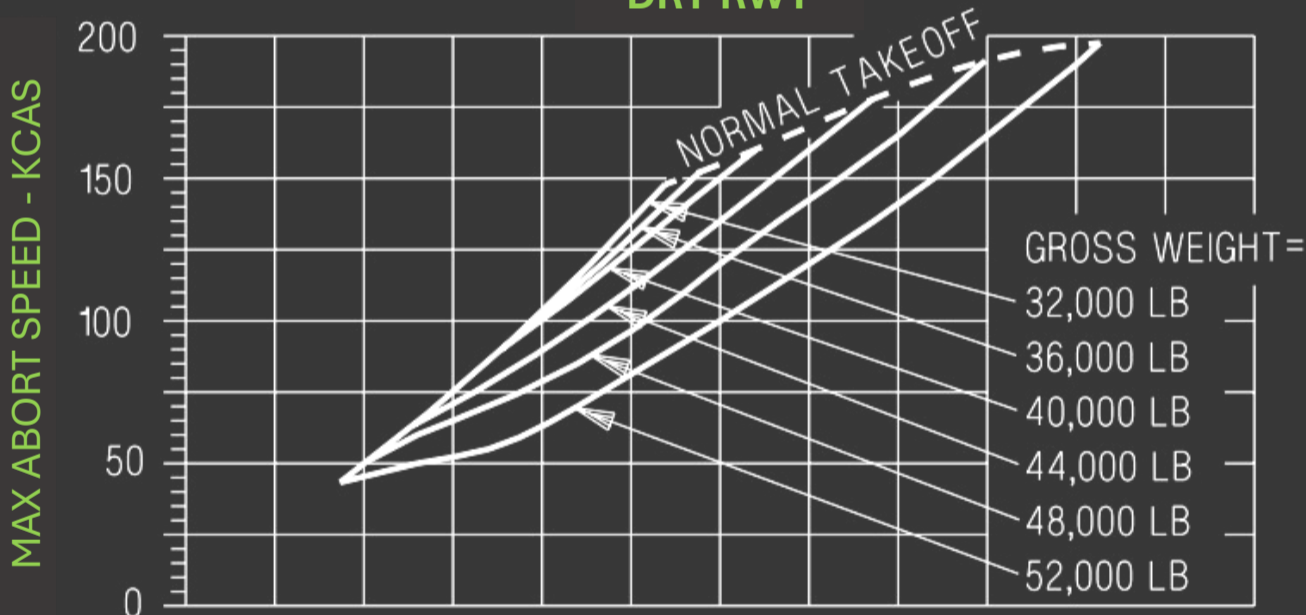
THRUST AFTER FAILURE RECOGNIZED

FUEL GRADE JP-5

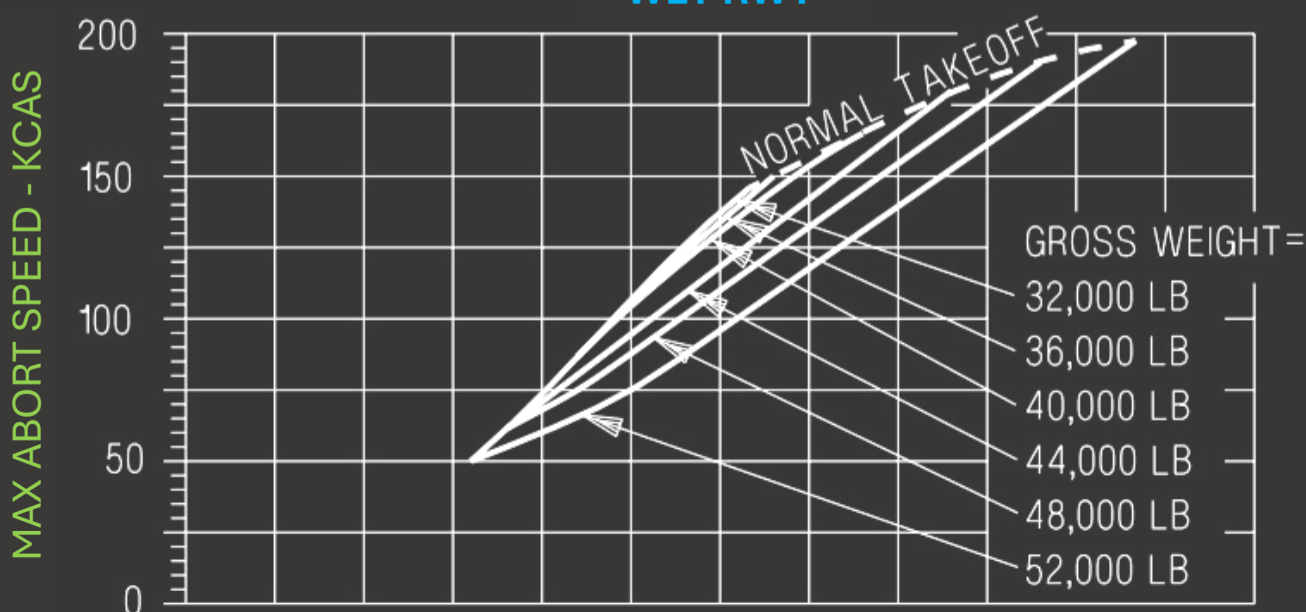
GUIDE



DRY RWY



WET RWY



MAXIMUM ABORT SPEED – MILITARY THRUST

AIRCRAFT CONFIGURATION

TRAILING EDGE FLAPS 30° / GEAR DOWN

ASSUMPTION

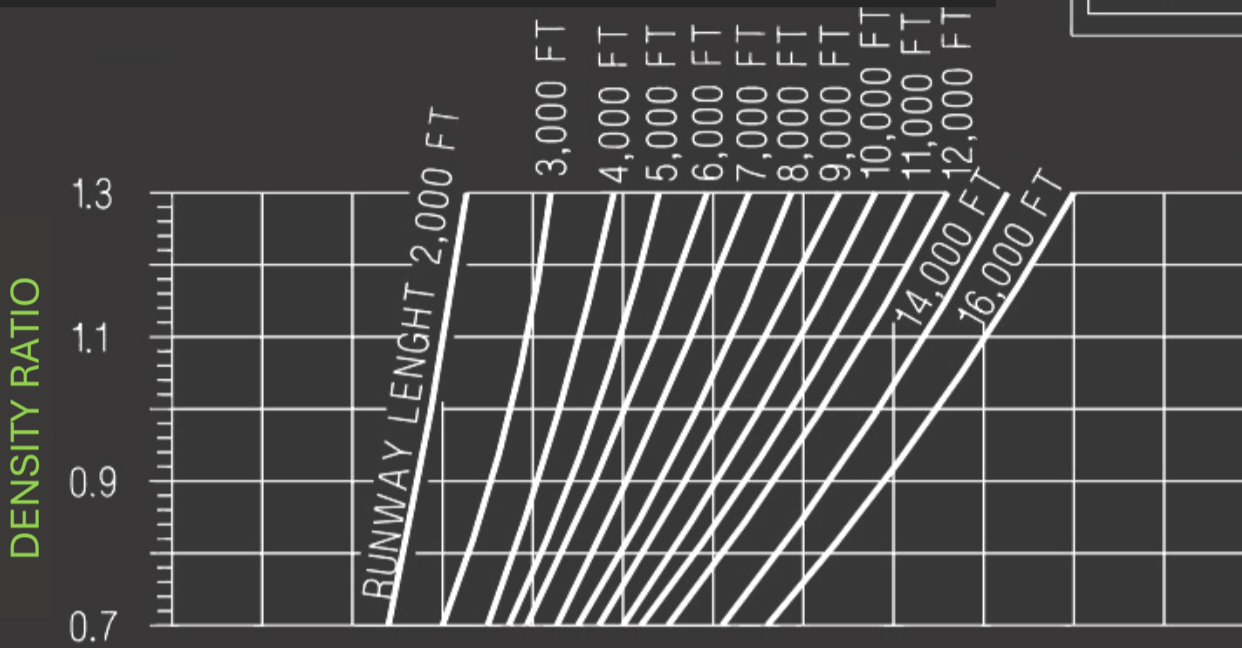
STANDARD DAY

REMAINING ENGINE GROUND IDLE

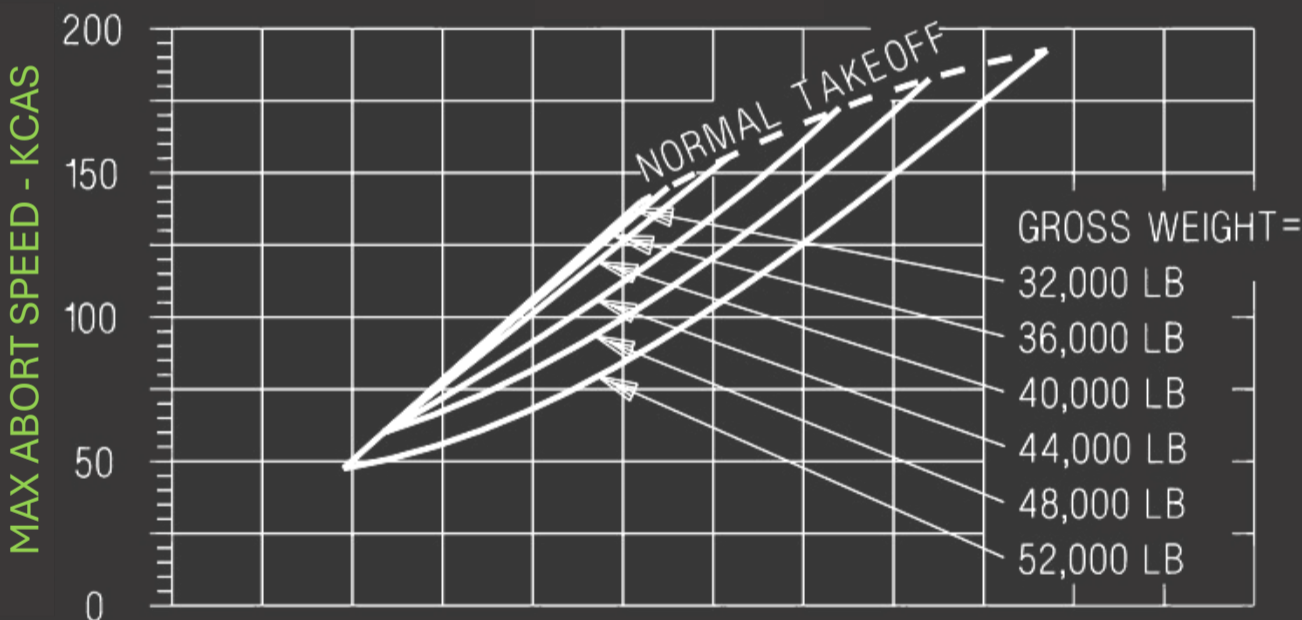
THRUST AFTER FAILURE RECOGNIZED

FUEL GRADE JP-5

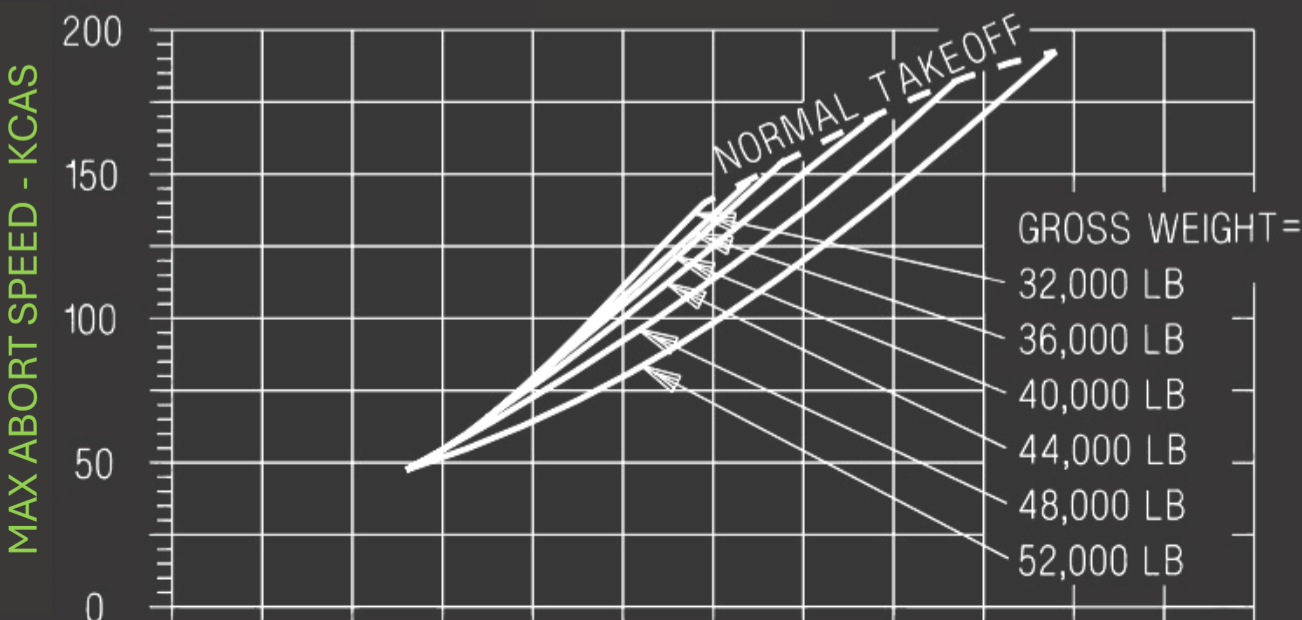
GUIDE



DRY RWY

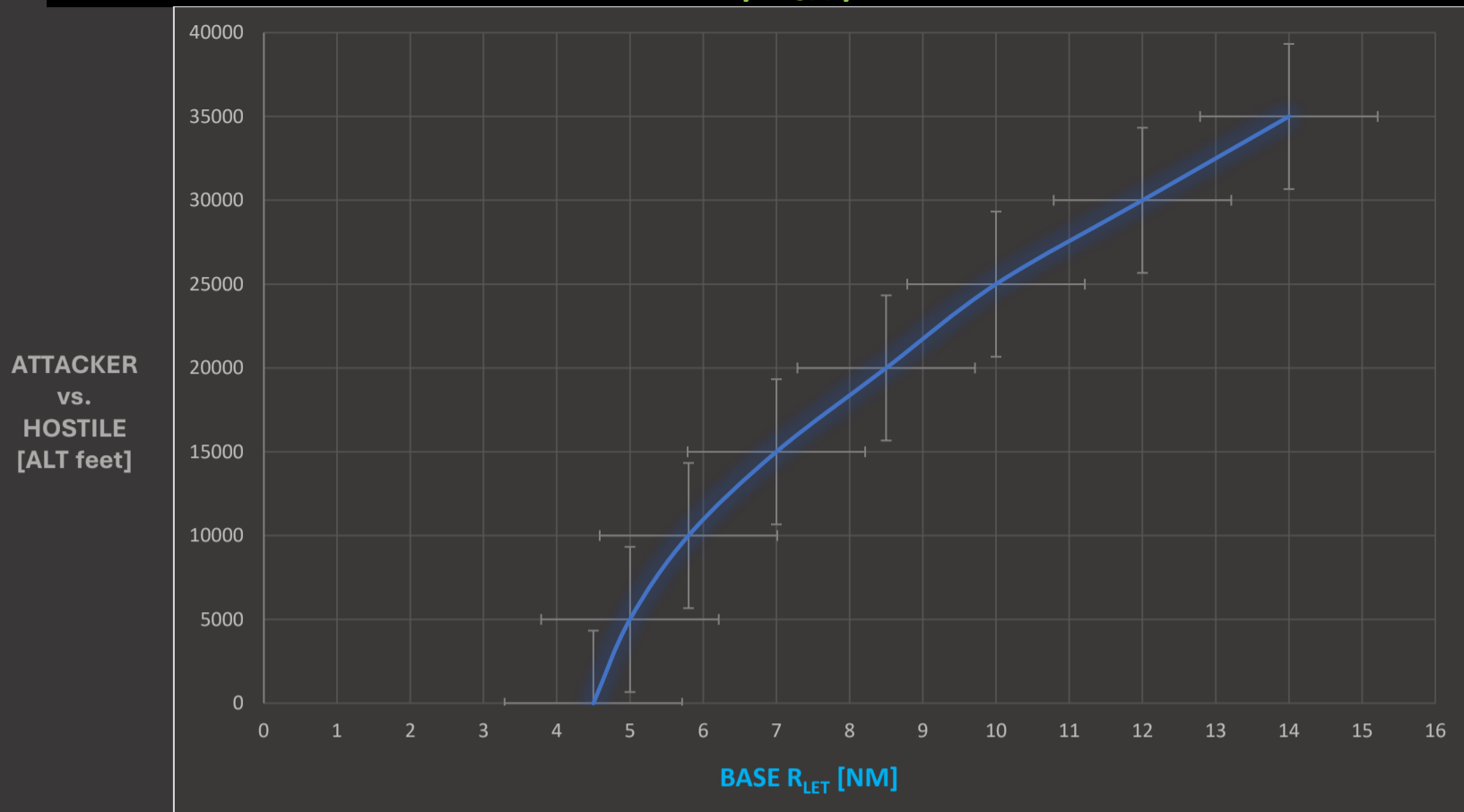


WET RWY



OFFENSIVE MISSILE CRANKING

AIM-120C / V_{OPT} / HOT ASPECT



[ALT feet]	BASE R _{LET}	DELTA
DECK	4,5	
5000	5,0	0,5
10000	5,8	0,8
15000	7,0	1,2
20000	8,5	1,5
25000	10,0	1,2
30000	12,0	2,0
35000	14,0	2,0



SEEKER type	R _{LET} MODIFIER [NM]
FOX 1	
AIM-7	-1,0 to -2,0
R-27R / R-27ER	0
SUPER-530	-1,5 to -3,0
FOX 3	
AIM-120	0
R-77	-0,5 to -1,0
AIM-54	0

V_{OPT} = MACH 1 @ ALTITUDE

if going above V_{OPT} adjust by equivalent percentage to R_{LET}, thus ADD 15% to R_{LET}

V_{MAX} = 1,15.

Or just simply multiply the MACH value, whether being higher or lower than M1,0

CALCULATE R_{LET}

$$R_{LET} = MACH \times (BASE R_{LET} + R_{LET} MODIFIER)$$

e.g.

$$= M1,15 \times (both @ 20k + AIM-120)$$

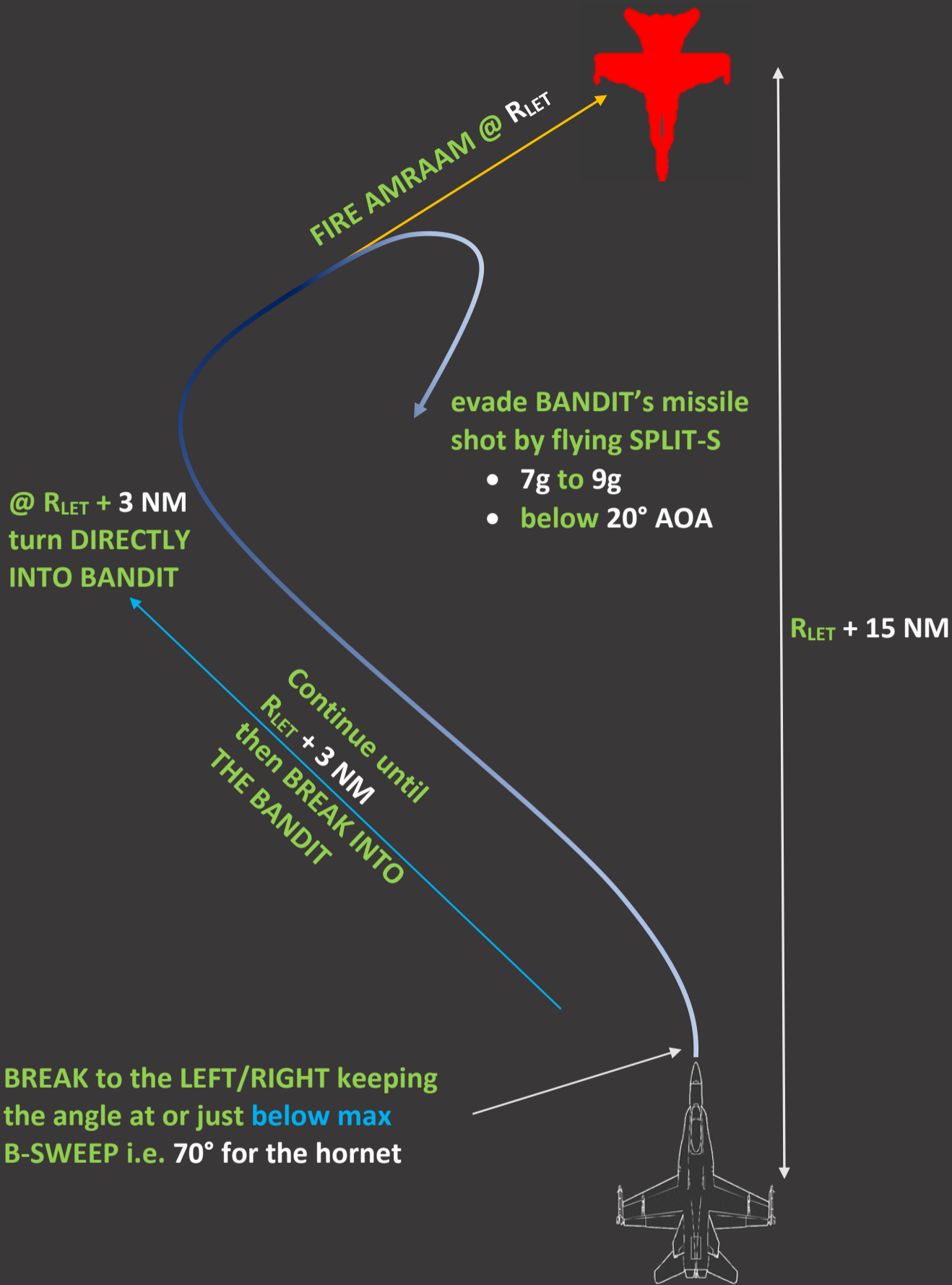
$$= 1,15 \times (8,5 + 0)$$

$$= 9,78 NM$$

$$= 10 NM$$

OFFENSIVE MISSILE CRANKING

AIM-120C / V_{OPT} / HOT ASPECT

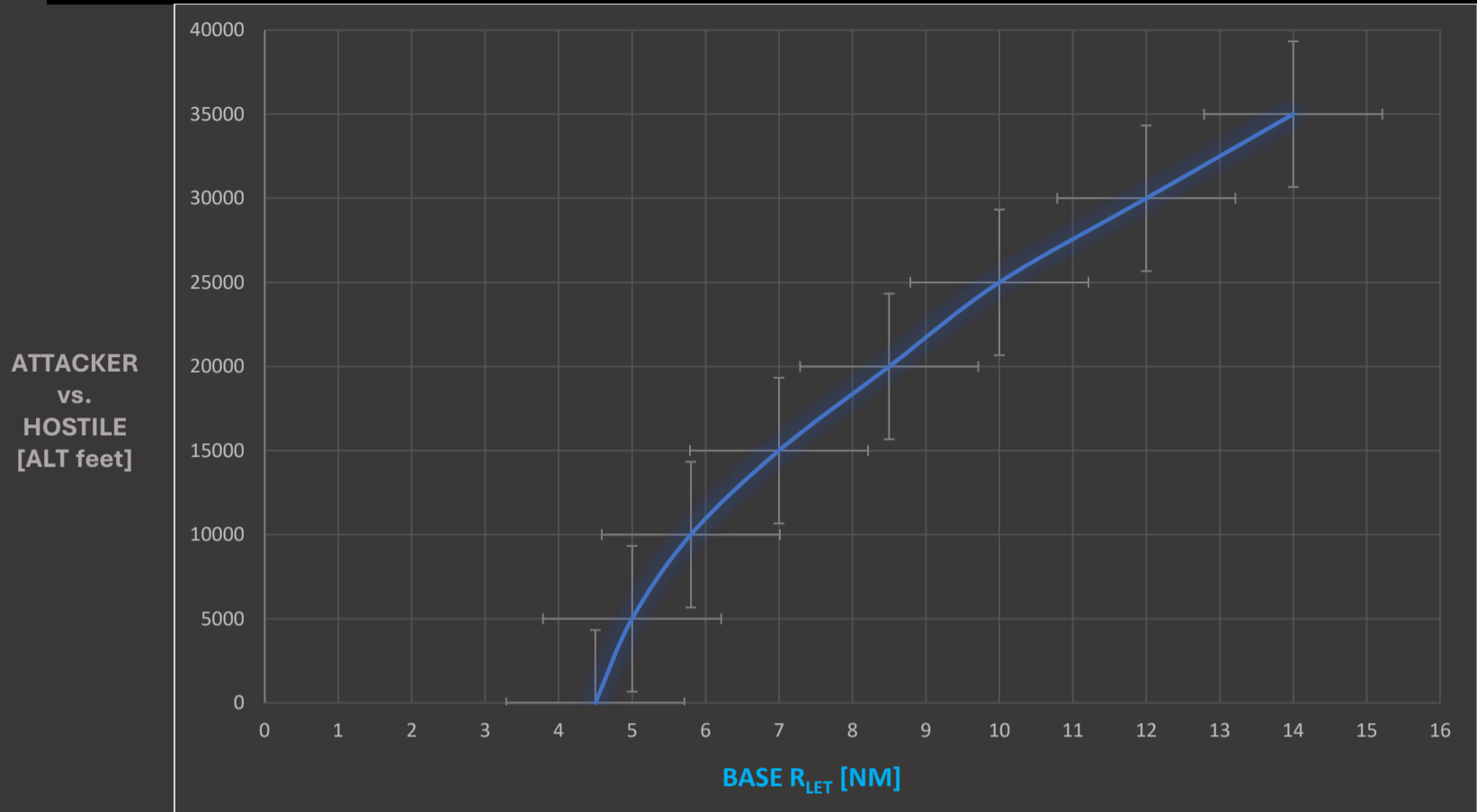


[ALT feet]	BASE R _{LET}	DELTA
DECK	4,5	
5000	5,0	0,5
10000	5,8	0,8
15000	7,0	1,2
20000	8,5	1,5
25000	10,0	1,5
30000	12,0	2,0
35000	14,0	2,0

SEEKER type	R _{LET} MODIFIER [NM]
FOX 1	
AIM-7	-1,0 to -2,0
R-27R / R-27ER	0
SUPER-530	-1,5 to -3,0
FOX 3	
AIM-120	0
R-77	-0,5 to -1,0
AIM-54	0

EVADING CLOSE RANGE RADAR GUIDED MISSILES

AIM-120C / V_{OPT} / HOT ASPECT



[ALT feet]	BASE R _{LET}	DELTA
DECK	4,5	
5000	5,0	0,5
10000	5,8	0,8
15000	7,0	1,2
20000	8,5	1,5
25000	10,0	1,5
30000	12,0	2,0
35000	14,0	2,0



SEEKER type	R _{LET} MODIFIER [NM]
FOX 1	
AIM-7	-1,0 to -2,0
R-27R / R-27ER	0
SUPER-530	-1,5 to -3,0
FOX 3	
AIM-120	0
R-77	-0,5 to -1,0
AIM-54	0

V_{OPT} = MACH 1 @ ALTITUDE

if going above V_{OPT} adjust by equivalent percentage to R_{LET}, thus ADD 15% to R_{LET}

V_{MAX} = 1,15.

Or just simply multiply the MACH value, whether being higher or lower than M1,0

CALCULATE R_{LET}

$$R_{LET} = \text{MACH} \times (\text{BASE } R_{LET} + R_{LET} \text{ MODIFIER})$$

e.g.

$$= \text{M1,15} \times (\text{both @ 20k} + \text{AIM-120})$$

$$= 1,15 \times (8,5 + 0)$$

$$= 9,78 \text{ NM}$$

$$= 10 \text{ NM}$$

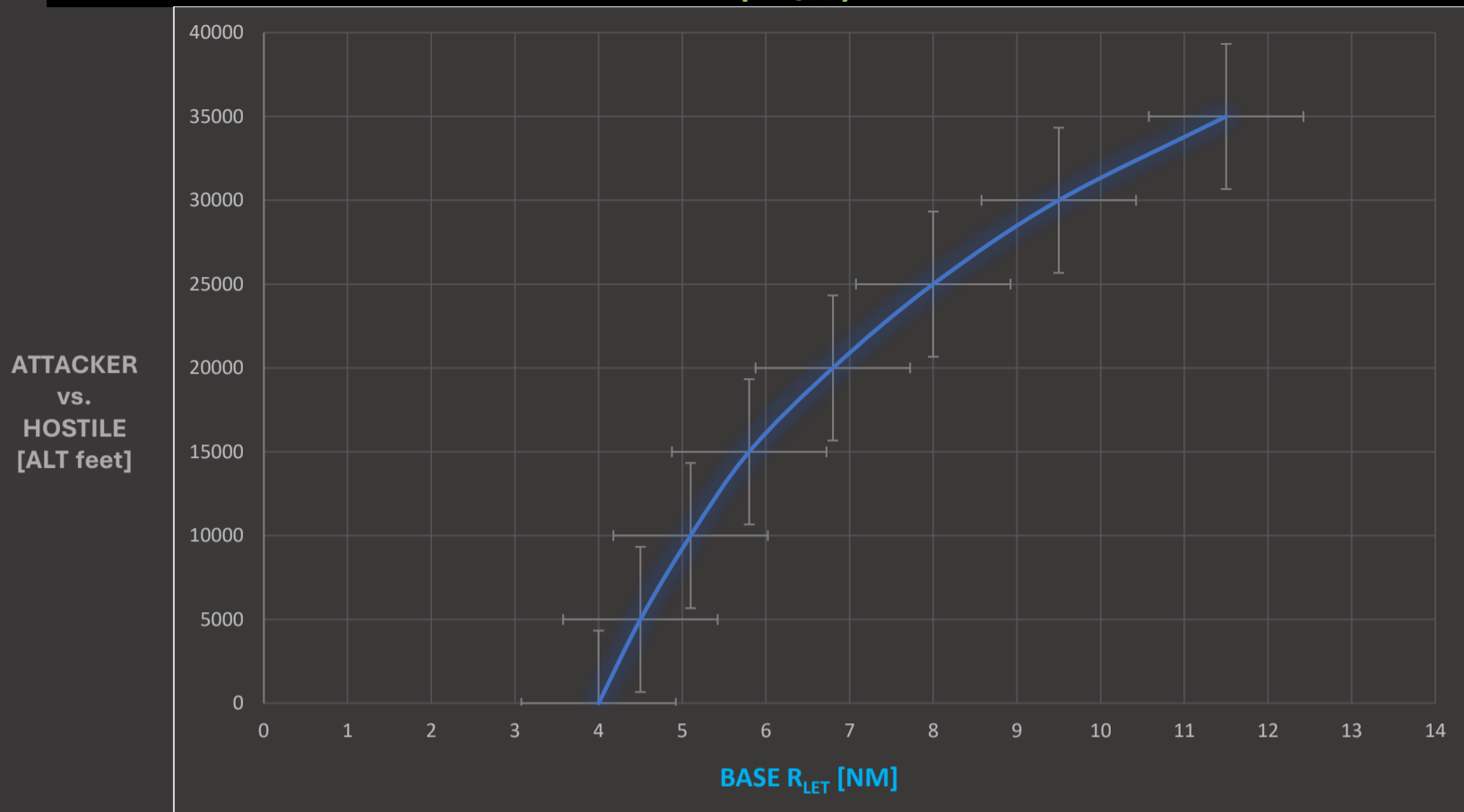
EVASION

DECK OFFENSIVE LOW NOTCH / BEAM PUSH

ABOVE 5000ft AGL DEFENSIVE SPLIT-S

EVADING CLOSE RANGE RADAR GUIDED MISSILES

AIM-120C / V_{OPT} / SIDE ASPECT



[ALT feet]	BASE R _{LET}	DELTA
DECK	4,0	
5000	4,5	0,5
10000	5,1	0,6
15000	5,8	0,7
20000	6,8	1,0
25000	8,0	1,2
30000	9,5	1,5
35000	11,5	2,0



SEEKER type	R _{LET} MODIFIER [NM]
FOX 1	
AIM-7	-1,0 to -2,0
R-27R / R-27ER	0
SUPER-530	-1,5 to -3,0
FOX 3	
AIM-120	0
R-77	-0,5 to -1,0
AIM-54	0

V_{OPT} = MACH 1 @ ALTITUDE

if going above V_{OPT} adjust by equivalent percentage to R_{LET}, thus ADD 15% to R_{LET}

V_{MAX} = 1,15.

Or just simply multiply the MACH value, whether being higher or lower than M1,0

CALCULATE R_{LET}

$$R_{LET} = \text{MACH} \times (\text{BASE } R_{LET} + R_{LET} \text{ MODIFIER})$$

e.g.

$$= \text{M1,15} \times (\text{both @ 20k} + \text{AIM-120})$$

$$= 1,15 \times (6,8 + 0)$$

$$= 7,82 \text{ NM}$$

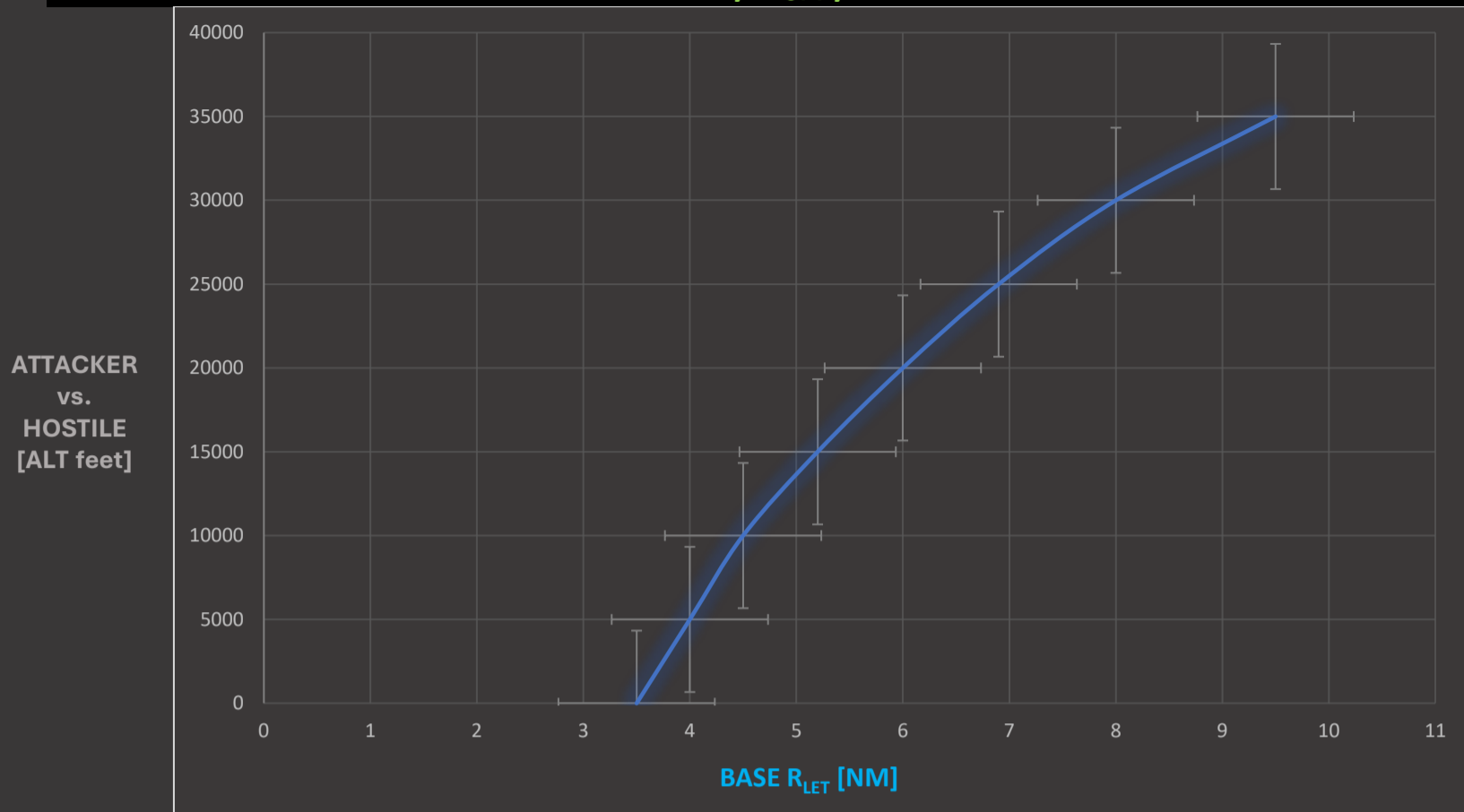
$$= 8 \text{ NM}$$

EVASION

DECK DEFENSIVE LOW 45° SNAKE
 ABOVE 5000ft AGL DEFENSIVE SPLIT TURN OUT

EVADING CLOSE RANGE RADAR GUIDED MISSILES

AIM-120C / V_{OPT} / COLD ASPECT



[ALT feet]	BASE R _{LET}	DELTA
DECK	3,5	
5000	4,0	0,5
10000	4,5	0,5
15000	5,2	0,7
20000	6,0	0,8
25000	6,9	0,9
30000	8,0	1,1
35000	9,5	1,5



SEEKER type	R _{LET} MODIFIER [NM]
FOX 1	
AIM-7	-1,0 to -2,0
R-27R / R-27ER	0
SUPER-530	-1,5 to -3,0
FOX 3	
AIM-120	0
R-77	-0,5 to -1,0
AIM-54	0

V_{OPT} = MACH 1 @ ALTITUDE

if going above V_{OPT} adjust by equivalent percentage to R_{LET}, thus ADD 15% to R_{LET}

V_{MAX} = 1,15.

Or just simply multiply the MACH value, whether being higher or lower than M1,0

CALCULATE R_{LET}

$$R_{LET} = \text{MACH} \times (\text{BASE } R_{LET} + R_{LET} \text{ MODIFIER})$$

e.g.

$$= \text{M1,15} \times (\text{both @ 20k} + \text{AIM-120})$$

$$= 1,15 \times (6,0 + 0)$$

$$= 6,90 \text{ NM}$$

$$= 7 \text{ NM}$$

EVASION

DECK DEFENSIVE NOTCH / BEAM

ABOVE 5000ft AGL DEFENSIVE SPLIT NOTCH / BEAM

AIRBORNE THREATS

11	F	<u>F-111</u>	25	F	<u>MiG-25P</u>	76	T	<u>IL-76</u>	F4	F	<u>F-4E</u>	
13	T	<u>C-130</u>	29	F	<u>MiG-29</u>	78	T	<u>IL-78</u>	F5	F	<u>F-5E</u>	
14	F	<u>F-14</u>		F	<u>Su-27</u>	95	B	<u>Tu-95</u>	JF	F	<u>JF-17</u>	
15	F	<u>F-15</u>		F	<u>Su-33</u>	AN	T	<u>AN-26B</u>	KC	T	<u>KC-10</u>	
16	F	<u>F-16</u>		F	<u>J-11A</u>		T	<u>AN-30M</u>		T	<u>KC-135</u>	
17	T	<u>C-17</u>		30	F	<u>Su-30</u>	AV	B	<u>AV-8B</u>	M2	F	<u>Mirage</u>
18	F	<u>F/A-18</u>	31	F	<u>MiG-31</u>	B1	B	<u>B-1</u>	S3	B	<u>S-3</u>	
19	F	<u>MiG-19</u>	34	F	<u>Su-34</u>	BJ	B	<u>Tu-160</u>	Tu	B	<u>Tu-142</u>	
21	F	<u>MiG-21</u>	39	B	<u>Su-39</u>	E2	A	<u>E-2C</u>	A	AWACS		
22	B	<u>Tu-22M3</u>	50	A	<u>A-50</u>	E3	A	<u>E-3</u>		B	BOMBER	
23	F	<u>MiG-23</u>		A	<u>KJ-2000</u>	E6	B	<u>EA-6B</u>		F	FIGHTER	
24	B	<u>Su-24</u>	52	B	<u>B-52</u>	F2	F	<u>F-2</u>	T	TRANSPORTER		

SEARCH RADAR UNITS

S	Unknown Search Radar		
	<u>EWR 1L13</u>		101
	<u>EWR 55G6</u>		102
	<u>S125 SR P 19</u>	[2],[3]	122
BB	Big Bird SR	[10]	104
CS	Clam Shell low-ALT	[10]	103
DE	Dog Ear 9S80M1 SR	[13]	109
HQ	HQ-7 SR	[7]	128
SD	Snow Drift SR	[11]	107
TS	<u>Tin Shield ST-68U</u>	[5]	130

ENGAGING GND UNITS

2	<u>SA-2 Guideline</u>	CH	28/++	126
3	<u>SA-3 S125 TR SNR</u>	CH	13/++	123
5	<u>SA-5 GAMMON</u>	CH		129
6	<u>SA-6 Kub STR 9S91</u>	CH	22/26	108
7	<u>HQ-7 Launcher</u>	EV	10/18	127
8	<u>SA-8 Osa 9A33</u>	CH	09/16	117
10	<u>SA-10 S300PS TR</u>	CH	46/++	110
11	<u>SA-11 BUK LL</u>	CH	23/++	115
13	<u>SA-13 Strela</u>	FL	05/12	118
15	<u>SA-15 Tor 9A331</u>	CH	09/20	119
19	<u>SA-19 Grison</u>	EV	05/12	120
A	<u>Gepard</u>	EV	02/10	207
	<u>Vulcan M163</u>	EV	02/05	208
	<u>ZSU 23 4 Shilka</u>	EV	02/07	121
HK	Hawk SR/TR/CWAR	CH	25/++	
	203 / 204 / 206			
NS	<u>NASAMS AIM120</u>	CH	06/35	209
P	<u>Patriot MIM-104</u>	CH	48/++	202
RO	<u>Roland ADS</u>	EV	06/20	201
RP	Rapier Blindfire	--	--/--	124
RT	Rapier Launcher	EV	07/10	125

NAVAL UNITS

40	CV	<u>Tarawa</u>	FL	08/13	407
49	FR	<u>Perry</u>	CH	50/++	401
AE	DE	<u>Arleigh Burke IIa</u>	CH	57/++	412
	CR	<u>Ticonderoga</u>	CH	55/++	315
HN	DE	<u>052C Haikou</u>	CH	64/++	410
	CR	<u>Pyotr Velikiy</u>	CH	74/++	313
HP	VE	<u>Grisha / Albatros</u>	CH	08/17	306
M	DE	<u>052B Guandgzhou</u>	CH	27/48	409
R	FR	<u>054A Yantai</u>	CH	35/++	411
PS	VE	<u>Molniya</u>	EV	04/09	312
	TT	071 Amphib Assault	EV	04/09	408
SS	CV	<u>CVN-70</u> Vinson	CH	14/35	402
	CV	<u>CVN-71</u> Roosevelt	CH	14/35	403
	CV	<u>CVN-72</u> Lincoln	CH	14/35	404
	CV	<u>CVN-73</u> Washington	CH	14/35	405
	CV	<u>CVN-74</u> Stennis	CH	14/35	406
	CV	<u>CVN-75</u> Truman	CH	14/35	413
SW	CV	<u>Kuznecow</u> 2017	CH	09/20	320
	CV	<u>Kuznecow</u> old	CH	09/20	301
T2	CR	<u>Moscow</u>	CH	47/++	303
TP	FR	<u>Neustrash</u>	CH	09/20	319
	FR	<u>Rezky</u>	CH	08/17	309
U		Unknown NAVAL			

xxx AGM-88C HARM Radar Codes for PB Mode

CV	Carrier	CH	CHAFF
CR	Cruiser	FL	FLARE
DE	Destroyer	EV	EVADE
TT	Transporter	25 / ++	=
VE	Corvette	NM / ALT	max
[x]	associated SAM	++ >50k ft	

chart created by "Dmitriy Kozyrev", edited by cruizzzer



GO	SUCCESSFUL BIT (Built-In Test) of ALQ-165 ASPJ Airborne Self Protection Jammer <i>Remains illuminated until BIT mode is deselected</i>	NO GO	UNSUCCESSFUL BIT (Built-In Test) of ALQ-165 ASPJ Airborne Self Protection Jammer <i>Remains illuminated until BIT mode is deselected</i> <i>ALQ-126 jammer is inoperable</i>
L BLEED	Left ENGINE BLEED AIR VALVE is automatically closed due to the Fire & Bleed Air Test switch or bleed air leak or fire has been detected in LEFT ENGINE bleed air ducting	R BLEED	Right ENGINE BLEED AIR VALVE is automatically closed due to the Fire & Bleed Air Test switch or bleed air leak or fire has been detected in RIGHT ENGINE bleed air ducting
SPD BRK	Speed brake is NOT FULLY retracted	STBY	ALQ-165 (ASPJ) is set to STBY (Standby) on the ECM (Electronic Countermeasure) panel. LIGHT will remain ON for 2 to 4 minutes.
L BAR	Launch bar malfunction NOSE GEAR CANNOT RETRACT Launch bar can only be extended with weight on wheels	REC	Indicates aircraft is being ILLUMINATED by a threat's radar
L BAR	Launch bar EXTENDED with weight on wheels	XMIT	Lit when ECM Jammer is TRANSMITTING. DO NOT use XMIT on a CARRIER
		ASPJ OH	ALQ-165 (ASPJ) is (Airborne Self Protection Jammer) OVERHEATING



RCDR ON	Flight Recorder is ON	DISP	Countermeasure dispense program is ACTIVE
—		—	
—		—	
—		SAM	Surface-to-Air Missile tracking radar LOCKED TO AIRCRAFT Light is ... SOLID when RADAR IS TRACKING and Light is ... FLASHING when GUIDING A MISSILE
AI	Airborne Intercept (AI) RADAR LOCKED TO AIRCRAFT	AAA	Anti-Aircraft Artillery (AAA) fire control radar is LOCKED TO AIRCRAFT STEADY LIGHT for all radar directed AAA <u>except</u> ZSU-23-4 Shilka = radar-directed gun systems in which the light will FLASH at 3 Hz
CW	Aircraft illuminated by CONTINUOUS WAVE (CW) RADAR		

ADVISORY LIGHTS PANEL



CK SEAT	APU ACC	BATT SW
<p>One or both ejection seats ... not armed with ... WOW and ... right throttle at MIL</p>	<p>APU accumulator pressure LOW</p> <ul style="list-style-type: none"> Possible leak in isolated HYD 2B system <p>-----</p> <p>1. HYD ISOL ORIDE (10 seconds max)</p> <p>If caution still ON or COMES ON again –</p> <p>2. Extend landing gear as soon as practical</p>	<p>Battery switch ... ON without AC power on aircraft</p> <hr/> <p>Battery switch ... OFF with AC power on aircraft</p> <ul style="list-style-type: none"> Prolonged ground operation with CAUTION ON may damage battery and DC electrical system

ADVISORY LIGHTS PANEL



FCS HOT

Flight control computer A or right transformerrectifier overtemperature

- FCS airscoop cannot be closed in flight

-
- | | |
|-----------------------|--------------|
| 1. Airspeed | ... SUBSONIC |
| 2. AV/FCS cool switch | ... EMERG |

GEN TIE

115/200 volt AC BUS TIE OPEN

- **RESETTING** the GEN TIE switch may cause loss of the operating generator
- **With** ... L GEN ... ON
 - No OBOGS
- **With** ... R GEN ... ON
 - No HUD
 - No ADC
 - No ADC
 - No AOA information on HUD display if called up on L DDI

With BOTH generators operating –

- | | |
|--------------------------|-------------------|
| 1. Generator tie control | ... RESET... NORM |
|--------------------------|-------------------|
- If light remains ON –**
- | | |
|----------------------------------|--------|
| 2. Continue mission with GEN TIE | ... ON |
|----------------------------------|--------|
- With L or R GEN light –**
- | | |
|---------------------|-----------|
| 1. Generator switch | ... CYCLE |
|---------------------|-----------|
- If generator restored –**
- | | |
|------------------------------------|--------|
| 2. Do not attempt to reset GEN TIE | |
| 3. Continue mission with GEN TIE | ... ON |
- If generator still failed –**
- | | |
|--|---------|
| 2. Generator switch | ... OFF |
| 3. Land as soon as practical | |
| 4. Refer to Emergency Power Distribution chart | |

ADVISORY LIGHTS PANEL



FUEL LO

At least one feed tank below 800 pounds

- No negative g
- Sideslip may be required to transfer wing fuel

-
1. Fuel flow ... REDUCE (if practical)
 2. Refer to Fuel Transfer Failures

FCES

Third like failure or flight control function lost

- Caution light backup for DDI FCS cautions
- ★ Refer to FCS Failure

-
- *1. Speedbrake ... Check IN
 - *2. Decelerate slowly to below 400 knots/M0.8
 3. If flaps full ... RAISE TO HALF
 4. Do not exceed ... +15° AOA
(+12° AOA with asymmetric wing stores)
 5. MENU FCS ... IDENTIFY FAILURE
Refer to FCS Failure Indications And Effects
 6. FCS ... RESET
- If no RESET and DDI warnings and cautions inoperative –
7. FCS circuit breakers ... CHECK
 8. Emergency Jettison Button ... PUSH (If required)
 9. Flaps ... HALF
 10. Airspeed ... 200-250 knots
 11. Make controllability check at safe altitude and on-speed AOA
 12. If flying qualities unacceptable, make controllability check with flaps in AUTO
 13. If controllability permits landing
... short field arrestment recommended
 14. Reduce sink rate for landing
 15. Land as soon as practical

ADVISORY LIGHTS PANEL



L GEN	R GEN
Designated generator OFFLINE	Designated generator OFFLINE
<ul style="list-style-type: none"> • Either generator can support the total aircraft electrical load • With both lights ON ... No OBOGS • If associated with ... BOOST LO and ... both HYD <p style="text-align: center;">circuit cautions may be a PTS failure</p>	<ul style="list-style-type: none"> • Either generator can support the total aircraft electrical load • With both lights ON ... No OBOGS • If associated with ... BOOST LO and ... both HYD <p style="text-align: center;">circuit cautions may be a PTS failure</p>
<p>1. Generator switch ... CYCLE</p> <p>If generator still failed –</p> <p>2. Generator switch ... OFF</p> <p>3. Land as soon as practical</p>	<p>1. Generator switch ... CYCLE</p> <p>If generator still failed –</p> <p>2. Generator switch ... OFF</p> <p>3. Land as soon as practical</p>

WARNING LIGHTS		* Immediate action item	☆ Discussion in part V
INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION	
APU FIRE	APU fire detected	<u>IN FLIGHT or ON GROUND</u> * 1. APU FIRE light ... PUSH * 2. Fire Extinguisher READY Lt ... PUSH <u>ON GROUND</u> * 3. THROTTLES ... OFF * 4. EGRESS	
L BAR	<u>GROUND</u> Launch bar malfunction <u>INFLIGHT</u> Launch bar not locked up Nose Gear will not retract ☆ Refer to Launch Bar Malfunction	After both THROTTLES at MIL ... 1. Launch bar switch ... RETRACT If light still on ... 2. Suspend catapult launch If light on after takeoff ... 1. Gear ... LEAVE DOWN IF PRACTICAL 2. Launch bar switch ... RETRACT 3. Launch bar circuit breaker ... PULL CV ... 4. DIVERT or REMOVE cross deck pendants 1 and 4 and make normal landing ASHORE ... 4. Remove arresting wires	

WARNING LIGHTS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>L BLEED and R BLEED (DUAL)</p>	<p>BLEED AIR leak detected in common ducting. If both BLD OFF cautions on</p> <ul style="list-style-type: none"> No OBOGS No ECS or pressurization Loss of anti-g protection No external fuel transfer No crossbleed start No THROTTLE boost No windshield anti-ice/rain removal May get AV AIR HOT during approach To prevent canopy fogging, select OFF/RAM or RAM/DUMP and move DEFOG handle to ... HIGH BLD OFF caution is not an indication of actual valve position. Valve could still be open allowing BLEED AIR to leak 	<p>* 1. THROTTLES ... Min practical for flight ----- OBOGS Aircraft * 2. Emergency oxygen green ring ... PULL * 3. OXY FLOW knob ... OFF * 4. OBOGS control switch ... OFF * 5. BLEED AIR knob ... OFF (DO NOT CYCLE) 6. Maintain ALTITUDE below 10,000 feet 7. At aircrew discretion, discontinue emergency oxygen below 10,000 feet by pressing the reset lever. Remove oxygen mask. If lights go out 8. THROTTLES ... Use as necessary 9. Land as soon as practical If lights stay on 8. Hook ... DOWN 9. Land as soon as possible ----- Non-OBOGS Aircraft * 2. BLEED AIR knob ... OFF (DO NOT CYCLE) 3. Maintain a/c ALTITUDE ...below 25,000ft If lights go out 4. THROTTLES ... Use as necessary 5. Land as soon as practical If lights stay on 4. Hook ... DOWN 5. Land as soon as possible</p>

WARNING LIGHTS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
L BLEED or R BLEED (SINGLE)	<p>BLEED AIR leak detected on designated side</p> <ul style="list-style-type: none"> • BLD OFF caution is not an indication of actual valve position. Valve could still be open allowing BLEED AIR to leak. • If both bleeds are secured • No OBOGS • No ECS or pressurization • Loss of anti-g protection • No external fuel transfer • No crossbleed start • No THROTTLE boost • No windshield anti-ice/rain removal • May get AV AIR HOT during approach • To prevent canopy fogging, select OFF/RAM or RAM/DUMP and move DEFOG handle to ... HIGH 	<p>* 1. THROTTLE affected ENGINE ... IDLE</p> <p>* 2. BLEED AIR knob ... OFF affected ENG (DO NOT CYCLE)</p> <p>If lights go out</p> <p>3. Land as soon as practical</p> <p>-----</p> <p>OBOGS Aircraft</p> <p>If light stays on</p> <p>3. Emergency oxygen green ring ... PULL</p> <p>4. OXY FLOW knob ... OFF</p> <p>5. OBOGS control switch ... OFF</p> <p>6. BLEED AIR knob ... OFF (DO NOT CYCLE)</p> <p>7. Maintain ALTITUDE ... below 10,000 feet</p> <p>8. At aircrew discretion, discontinue emergency oxygen below 10,000 feet by pressing the reset lever. Remove oxygen mask.</p> <p>If light still on –</p> <p>9. THROTTLE affected ENGINE ... OFF</p> <p>10. Land as soon as possible</p> <p>11. Perform a single ENGINE landing</p> <p>-----</p> <p>Non-OBOGS Aircraft</p> <p>If light stays on</p> <p>3. BLEED AIR knob ... OFF (DO NOT CYCLE)</p> <p>4. Maintain aircraft ... below 25,000 feet</p> <p>If light still on</p> <p>5. THROTTLE affected ENGINE ... OFF</p> <p>6. Land as soon as possible</p> <p>7. Perform a single ENGINE landing</p>

WARNING LIGHTS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>FIRE</p>	<p>ENGINE fire detected</p> <p>☆ Refer to <i>ENGINE Fire On Ground or ENGINE Fire In Flight</i></p>	<p>GROUND</p> <ul style="list-style-type: none"> * 1. THROTTLES ... OFF * 2. FIRE light affected ENGINE ... PUSH * 3. Fire extinguisher READY Lt ... PUSH * 4. BATTERY switch ... OFF * 5. EGRESS <p>ON TAKEOFF</p> <p>If decision to stop is made ...</p> <ul style="list-style-type: none"> * 1. ABORT <p>If takeoff is continued ...</p> <ul style="list-style-type: none"> * 1. Execute Emergency Takeoff procedure <p>INFLIGHT</p> <p>Simultaneous or Dual FIRE lights</p> <ul style="list-style-type: none"> * 1. THROTTLES ... Min practical for flight <p>If single FIRE light or confirmed ENG fire</p> <ul style="list-style-type: none"> * 2. THROTTLE affected ENGINE ... OFF * 3. FIRE light affected ENGINE ... PUSH * 4. Fire extinguisher READY Lt ... PUSH * 5. Hook ... DOWN <p>If F/A-18A/B and if external fuel transfer desired</p> <ul style="list-style-type: none"> 6. Hook circuit breaker ... PULL 7. Hook handle ... UP
<p>GEAR HANDLE</p>	<p>Landing gear in transit, unsafe, or planing link, or ADC failure</p> <hr style="border-top: 1px dashed black;"/> <p>Below 7,500 feet and below 175kts and over 250 feet per minute descent</p> <p><i>Refer to Landing Gear Unsafe/Fails to Extend</i></p>	<p>STEADY</p> <ul style="list-style-type: none"> 1. Check gear down indicators <hr style="border-top: 1px dashed black;"/> <p>FLASHING</p> <ul style="list-style-type: none"> 1. Gear ... DOWN <p style="text-align: center;">or</p> <ul style="list-style-type: none"> 2. Increase AIRSPEED or ALTITUDE
<p>HOOK</p>	<p>☆</p> <p>Hook position does not agree with handle position</p>	<p>If hook will not extend ...</p> <ul style="list-style-type: none"> 1. Hook circuit breaker ... PULL <p>If hook still will not extend CV ...</p> <ul style="list-style-type: none"> 2. DIVERT <p>If DIVERT not practical or Field Landing ...</p> <ul style="list-style-type: none"> 2. Shut down right ENGINE, restart for landing
<p>RADAR ALT LOW LIGHT</p>	<p>ALTITUDE below preset primary radar ALTITUDE</p>	<p>Information</p>



WARNING LIGHTS		* Immediate action item	☆ Discussion in part V
INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION	
THREAT WARNINGS	Refer to A1-F18AC-TAC-100		
UNSAFE REAR COCKPIT	Landing gear in transit	Information	

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>L AMAD R AMAD</p>	<p>AMAD oil temperature too high</p> <p>☆ Refer to AMAD Caution</p> <ul style="list-style-type: none"> May indicate a fuselage fuel leak 	<p>INFLIGHT</p> <ol style="list-style-type: none"> THROTTLE affected ENGINE ... IDLE Wing fuel transfer switch ... NORM MENU ENG ... CHECK FUEL TEMP <79°C If conditions permit consider shutting down ENGINE, restart for landing <p>If generator drops offline ...</p> <ol style="list-style-type: none"> Shut down ENGINE, restart for landing Land as soon as practical <p>GROUND</p> <ol style="list-style-type: none"> Shut down affected ENGINE when practical
<p>L AMAD PR R AMAD PR</p>	<p>Loss of designated AMAD oil</p> <p>☆ Refer to AMAD PR Caution</p>	<ol style="list-style-type: none"> Generator ... OFF <p>If more than 30 minutes to landing ...</p> <ol style="list-style-type: none"> Shutdown affected ENGINE, restart for landing
<p>ANTI SKID</p>	<p>Anti skid system INOPERATIVE</p> <ul style="list-style-type: none"> Use caution during braking After cycling anti-skid switch, ANTI SKID caution will not reappear and brakes may not be available for 13 ½ seconds inflight, or 9 ½ seconds during landing rollout, until BIT is completed. 	<p>AIRBORNE</p> <ol style="list-style-type: none"> ANTI SKID switch ... CYCLE <p>If caution reappears ...</p> <ol style="list-style-type: none"> ANTI SKID switch ... OFF <p>On ground or during landing ...</p> <ol style="list-style-type: none"> ANTI SKID switch ... OFF
<p>AOA DEGD</p>	<p>A single AOA probe is selected</p> <ul style="list-style-type: none"> AOA indexers may be inaccurate 	<p>CV</p> <ol style="list-style-type: none"> Notify LSO approach light indications may be inaccurate
<p>APU ACCUM</p>	<p>APU accumulator pressure low</p> <ul style="list-style-type: none"> Possible leak in isolated HYD 2B system 	<ol style="list-style-type: none"> HYD ISOL ORIDE (10 seconds max) <p>If caution still on or comes on again ...</p> <ol style="list-style-type: none"> Extend landing gear as soon as practical
<p>ASPJ AMP</p>	<p>BIT detected failure in Receiver RF-preamplifier</p>	<p>Information</p>
<p>ASPJ DEGD</p>	<p>Continuous BIT failure detected</p>	<ol style="list-style-type: none"> Run ... ASPJ IBIT
<p>ASPJ HI B</p>	<p>BIT detected failure in ASPJ HI-band</p>	<p>Information</p>
<p>ASPJ LO B</p>	<p>BIT detected failure in ASPJ LO-band</p>	<p>Information</p>
<p>ASPJ OVRHT</p>	<p>Non safety-of-flight overheat in ASPJ</p>	<p>Information</p>
<p>ASPJ RPTF</p>	<p>BIT detected failure in ASPJ RF Tunable filter</p>	<p>Information</p>

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>ATARS OVRHT</p>	<p>ATARS subsystem is overheated</p> <ul style="list-style-type: none"> • Does not include data link pod overtemp • No data link overheat reporting is provided with ATARS switch OFF • Electrical power is available to both RADAR and ATARS during ground operation on aircraft power, however cooling is only provided to RADAR if both systems are powered on 	<p><u>GROUND</u></p> <p>1. RADAR switch ... OFF</p> <p><u>INFLIGHT</u></p> <p>1. ATARS switch ... OFF</p> <p>2. CLP power knob ... OFF</p>
<p>L ATSR R ATSR</p>	<p>Designated air turbine starter RPM too high</p>	<p><u>GROUND</u></p> <p>After ENGINE start (other than momentary)</p> <p>1. Shut down affected ENGINE</p> <p><u>INFLIGHT</u></p> <p>In OBOGS equipped aircraft above 10,000 feet ...</p> <p>* 1. Emergency OXY Green Ring ... PULL</p> <p>* 2. OXY flow knob ... OFF</p> <p>* 3. OBOGS control switch ... OFF</p> <p>All aircraft</p> <p>4. BLEED AIR knob ... OFF both ENGINES (DO NOT CYCLE)</p> <p>In OBOGS equipped aircraft</p> <p>5. Descend ... below 10,000 feet</p> <p>In non-OBOGS equipped aircraft</p> <p>5. Descend ... below 25,000 feet</p> <p>All aircraft, if caution remains</p> <p>6. THROTTLE affected ENGINE ... IDLE</p> <p>7. Land as soon as practical</p>
<p>AV AIR DGD</p>	<p>Low avionics cooling air pressure or cabin air exit regulator controller failed</p>	<p>If ECM suite is ON or needed</p> <p>1. ECS Mode switch ... MANUAL</p>

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>AV AIR HOT</p>	<p>Avionics cooling air hot or low flow</p> <ul style="list-style-type: none"> • Prolonged caution may result in loss of <ul style="list-style-type: none"> MC 1 MC 2 INS HUD DDI etc • If BLEED AIR off, see remarks under <i>L BLEED OFF/R BLEED OFF</i> • Monitor cabin pressure. Loss of airflow to the avionics may indicate a loss of airflow to the cockpit pressurization system. 	<p><u>INFLIGHT</u></p> <ol style="list-style-type: none"> 1. If cabin pressure is functioning BLEED AIR knob ... CHECK NORM 2. In no cabin pressurization BLEED AIR knob ... CYCLE 3. Cabin pressure ... Verify 4. ECS Mode switch ... MANUAL <p>If caution on after 1 minute ...</p> <ol style="list-style-type: none"> 5. AIRSPEED ... SUBSONIC 6. ALTITUDE ... Below 25,000 feet 7. Unneeded avionics ... OFF 8. ECS Mode switch ... OFF/RAM <p>If caution still on after another minute ...</p> <ol style="list-style-type: none"> 9. Consider selecting AV/FCS COOL switch to ... EMERG <p>If caution still on after another minute ...</p> <ol style="list-style-type: none"> 10. Consider selecting BLEED AIR knob ... OFF <p><u>GROUND</u></p> <ol style="list-style-type: none"> 1. BLEED AIR knob ... CYCLE 2. ECS Mode switch ... MANUAL <p>If caution remains on –</p> <ol style="list-style-type: none"> 3. Either THROTTLE ... ADVANCE (about 72%)
<p>AUTO PILOT</p>	<p>Autopilot has disengaged</p>	<ol style="list-style-type: none"> 1. Paddle switch ... PRESS
<p>E BATT LO U BATT LO</p>	<p>Emergency BATTERY and/or utility BATTERY charge low</p>	<p><u>INFLIGHT</u></p> <ol style="list-style-type: none"> 1. Avoid high speed 2. BATTERY switch ... OFF / ON FOR LDG
<p>BATT SW</p>	<p>BATTERY switch ON without AC power on aircraft BATTERY switch OFF with AC power on aircraft</p> <ul style="list-style-type: none"> • Prolonged ground operation with caution on may damage BATTERY and DC electrical system 	<p>If AC power ON & BAT switch OFF or</p> <p><u>ORIDE ...</u></p> <ol style="list-style-type: none"> 1. BATTERY switch ... ON <p>If no internal DC power & BAT switch ON or</p> <p><u>ORIDE ...</u></p> <ol style="list-style-type: none"> 2. Refer to Double Generator Or Double Transformer - Rectifier Failure

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>L BLD OFF and R BLD OFF (DUAL)</p>	<p>Both BLEED AIR shutoff valves have been commanded CLOSED If both BLD OFF cautions ON</p> <ul style="list-style-type: none"> No OBOGS No ECS or pressurization Loss of anti-g protection No external fuel transfer No crossbleed start No THROTTLE boost No windshield anti-ice/rain removal May get AV AIR HOT during approach To prevent canopy fogging, select OFF/RAM or RAM/DUMP and move DEFOG handle to ... HIGH <p>BLD OFF cautions are not an indication of actual valve position. Valve(s) could still be open allowing BLEED AIR to leak.</p>	<p>If BLEED AIR shutoff caused by L BLEED and R BLEED warnings (“BLEED AIR Left/Right” voice warnings) 1. Refer to L BLEED and R BLEED (dual) warning procedure If BLEED AIR shutoff NOT caused by L BLEED and R BLEED warnings 1. BLEED AIR knob ... Cycle</p> <hr/> <p>OBOGS Aircraft If cautions remain on or return 2. Emergency oxygen green ring ... PULL 3. OXY FLOW knob ... OFF 4. OBOGS control switch ... OFF 5. BLEED AIR knob ... OFF (DO NOT CYCLE) 6. Maintain ALTITUDE ... below 10,000 feet 7. At aircrew discretion, discontinue emergency oxygen below 10,000 feet by pressing the reset lever. Remove oxygen mask 8. Land as soon as practical</p> <hr/> <p>Non-OBOGS Aircraft If cautions remain on or return 2. BLEED AIR knob ... OFF (DO NOT CYCLE) 3. Maintain ALTITUDE ... below 25,000 feet 4. Land as soon as practical</p>
<p>L BLD OFF or R BLD OFF (SINGLE)</p>	<p>Designated BLEED AIR shutoff valve has been commanded closed.</p> <p>BLD OFF caution is not an indication of actual valve position. Valve could still be open allowing BLEED AIR to leak.</p>	<p>If BLEED AIR shutoff caused by L BLEED and/or R BLEED warnings (“BLEED AIR Left/ Right” voice warnings) 1. Refer to appropriate L BLEED and/or R BLEED warning procedure If BLEED AIR shutoff NOT caused by L BLEED and/or R BLEED warnings 1. BLEED AIR knob ... CYCLE If caution remains on or returns 2. BLEED AIR knob... OFF affected ENGINE (DO NOT CYCLE)</p>

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
L BOOST LO R BOOST LO	No designated AMAD pump ENGINE feed pressure <ul style="list-style-type: none"> • May indicate fuselage fuel leak • May indicate fuel transfer failure • Afterburner may not operate above 30,000 feet • Crossfeed opens automatically, if associated with GEN and both HYD circuit cautions, may be a PTS failure 	<ol style="list-style-type: none"> 1. Check for indications of a fuselage fuel leak 2. Monitor fuel transfer 3. Land as soon as practical
BRK ACCUM	Brake accumulator pressure low <ul style="list-style-type: none"> • Possible leak in isolated HYD 2B system • Emergency brakes may not be available 	<ol style="list-style-type: none"> 1. Extend landing gear as soon as practical
CANOPY	Canopy unlocked <ul style="list-style-type: none"> • In F/A-18B/D rear seat occupant should lower seat and lean as far forward as possible 	<u>INFLIGHT</u> <ol style="list-style-type: none"> 1. Slow below 300 knots (200 in F/A-18B/D) if practical 2. Descend 3. Canopy switch ... DOWN If light stays on ... 4. Land as soon as practical
CAUT DEGD	Caution indications degraded <ul style="list-style-type: none"> • Cautions may be false or erratic 	<ol style="list-style-type: none"> 1. SDC (C/D ONLY) ... RESET 2. MC 1 ... CYCLE 3. Land as soon as practical If caution remains or reappears ...
CG	Tanks 1 and 4 fuel distribution out of balance	<ol style="list-style-type: none"> 1. Stop maneuvering 2. Check transfer tanks 1 & 4 3. Calculate CG 4. Refer to Landing With Aft CG If CG aft of limit ...
CK FLAPS	Flaps switch in AUTO position at takeoff	<ol style="list-style-type: none"> 1. Place FLAP switch in correct position for takeoff
CHECK SEAT	One or both ejection seats not armed with WOW and right THROTTLE at MIL	<ol style="list-style-type: none"> 1. Check occupied seats armed
CNI	CNI interface failure <ul style="list-style-type: none"> • UFC may not operate in some or all modes 	<ol style="list-style-type: none"> 1. Check BIT page If CSC MUX fail 2. Refer to CSC MUX FAILURE
DFIR OVRHT	DFIRS reporting an overtemperature condition	Information
DFIRS GONE	DFIRS inadvertently deployed	Unless visually confirmed intact <ol style="list-style-type: none"> 1. Land as soon as practical
DL OVRHT	ATARS Data Link pod subsystem overheated	<ol style="list-style-type: none"> 1. CLP power knob ... OFF

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>DTR1 COLD DTR2 COLD</p>	<p>ATARS tape deck is cold</p> <ul style="list-style-type: none"> Usually occurs at startup Warmup takes less than 5 minutes at 32°F = 0°C Up to 45 min warmup may be required at -40°F = -40°C GROUND - Recce mode not available until both decks are warmed up INFLIGHT - Recce mode is available with one deck warmed up 	<p>1. ATARS switch ... ON</p> <p>2. ATARS preflight check ... DISCONTINUE</p> <p>When caution is removed</p> <p>3. ATARS preflight checks ... CONTINUE</p>
<p>DTR1 SHTDN DTR2 SHTDN</p>	<p>ATARS tapedeck shutdown caused by cold, overtemp or condensation</p> <ul style="list-style-type: none"> Record capability is disabled Additional information is displayed on the BITATARS-MAINT page, and a condensation cue advisory is displayed on RECCE video. 	<p>1. ATARS switch ... ON</p> <p>If caution remains after 20 min</p> <p>2. ATARS switch ... OFF</p> <p>3. CLP power knob ... OFF</p>
<p>L DUCT DR R DUCT DR</p>	<p>Designated duct door closed above Mach 1.33 or open below Mach 1.23</p> <ul style="list-style-type: none"> Drag is increased with door open At AIRSPEEDs above Mach 1.33 with door failed closed, ENGINE inlet pressure oscillations, “inlet buzz”, will gradually increase with increasing Mach, and possibly culminate in ENGINE stall. 	<p>1. Reduce speed ... below Mach 1.33</p>
<p>DUMP OPEN</p>	<p>Fuel dump valve open with OFF selected</p>	<p>1. Dump switch ... CYCLE</p> <p>2. BINGO Bug ... SET ABOVE CURRENT FUEL STATE</p> <p>If dump continues and F/A-18A/B</p> <p>3. INTR WING SW ... INHIBIT</p> <p>All aircraft</p> <p>4. Land as soon as practical</p> <p>If fuel continues to dump on deck</p> <p>5. Turn aircraft into the wind</p> <p>6. Secure ENGINES once safely stopped</p>
<p>L EGT HIGH R EGT HIGH</p>	<p>Designated exhaust gas temperature out of limits</p>	<p>* 1. THROTTLE affected ENGINE ... IDLE</p> <p>2. MENU ENG ... CHECK EGT</p> <p>If EGT high at IDLE ...</p> <p>3. THROTTLE affected ENGINE ... OFF</p>
<p>ENG MATCH</p>	<p>One ENGINE is F404-GE-400 and other ENGINE is F404-GE-402</p>	<p>Information</p>

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
ERASE FAIL	A unit has reported a critical failure which may prevent successful erasure of stored data	Information
EXT TANK	External tanks pressurized on ground or tanks have overpressurized	<u>GROUND</u> 1. Do not catapult
EXT XFER	External fuel available but not transferring. • On F/A-18C/D aircraft, selecting ORIDE on both EXT TANKS fuel control switches may inhibit centerline tank transfer	1. Hook ... CONFIRM UP (F/A-18A/B) ... Fuel DDI ... CHECK (F/A-18C/D) 2. External tank switch ... ORIDE <i>If still no transfer</i> 3. Cycle external tank switch from ORIDE to NORM to ORIDE 4. BLEED AIR knob ... CYCLE THRU OFF TO NORM 5. Attempt positive and negative g's 6. Attempt air-to-air refueling 7. Monitor fuel quantities and CG <i>If external fuel not transferring or transfer complete</i> 8. External tank switches ... NORM <i>If practical</i> 9. Descend below freezing level <i>If CV landing required and centerline tank is still over 1/4 full</i> 10. Centerline tank ... SELECT JETT <i>Before Landing</i> 11. External tank switches ... NORM
L FLAMEOUT R FLAMEOUT	Designated ENGINE flamed out ☆ <i>Refer to ENGINE Failure</i>	* 1. THROTTLE affected ENGINE ... IDLE 2. If RPM continues to decrease ... THROTTLE OFF
FLIR OVRHT	FLIR internal overheat	Information
L FUEL HOT R FUEL HOT	Designated ENGINE fuel feed temperature too high • Fuel temperature greater than 79°C may cause AMAD to overheat with associated cautions	1. Fuel flow ... INCREASE (if practical) 2. Wing fuel switch ... CHECK NORM 3. MENU ENG ... MONITOR FUEL TEMP (<79°C)
FUEL LO	At least one feed tank below 800 pounds • No negative g • Sideslip may be required to transfer wing fuel	1. Fuel flow ... REDUCE (if practical) 2. <i>Refer to Fuel Transfer Failures</i>
FUEL XFER	Tanks 1 and 4 fuel distribution out of balance	1. Stop maneuvering 2. Check transfer tanks 1 & 4 3. Calculate CG <i>If CG aft of limit ...</i> 4. <i>Refer to Landing With Aft CG</i>

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>L GEN R GEN</p>	<p>Designated generator off line</p> <ul style="list-style-type: none"> • Either generator can support the total aircraft electrical load • With both lights on No OBOGS • If associated with BOOST LO and both HYD circuit cautions, may be a PTS failure 	<p>1. Generator switch ... CYCLE</p> <p>If generator still failed –</p> <p>2. Generator switch ... OFF</p> <p>3. Land as soon as practical</p>
<p>GEN TIE</p>	<p>115/200 volt AC bus tie open</p> <ul style="list-style-type: none"> • Resetting the GEN TIE switch may cause loss of the operating generator • With L GEN ... ON <ul style="list-style-type: none"> ○ No OBOGS • With R GEN ... ON <ul style="list-style-type: none"> ○ No HUD ○ No ADC ○ No ADC and AOA information on HUD display if called up on Left DDI 	<p>With both generators operating –</p> <p>1. Generator tie control ... RESET - NORM</p> <p>If light remains on</p> <p>2. Continue mission with GEN TIE on</p> <p>With L or R GEN light ...</p> <p>1. Generator switch ... CYCLE</p> <p>If generator restored ...</p> <p>2. Do not attempt to reset GEN TIE</p> <p>3. Continue mission with GEN TIE on</p> <p>If generator still failed ...</p> <p>2. Generator switch ... OFF</p> <p>3. Land as soon as practical</p> <p>4. Refer to Emergency Power Distribution chart</p>
<p>GPS DEGD</p>	<p>GPS approach flight phase and EHPE exceeds 108 ft for 10 sec</p>	<p>Information</p>
<p>GUN GAS</p>	<p>Gun purge air pressure low</p>	<p>1. Do not fire gun, even if caution clears</p>
<p>HAND CNTRL</p>	<p>One hand controller inop</p>	<p>Information</p>
<p>HOME FUEL</p>	<p>Fuel remaining sufficient to fly to home waypoint with 2000 lbs reserve</p>	<p>1. Analyze Configuration fuel flow and profile for BINGO</p>
<p>HYD 1A</p>	<p>Hydraulic system 1A pressure LOW</p> <ul style="list-style-type: none"> • No effect on systems operation for single failure 	<p>1. Refer to Hydraulic Flow Diagram</p>
<p>HYD 1B</p>	<p>Hydraulic system 1B pressure LOW</p> <ul style="list-style-type: none"> • No effect on systems operation for single failure 	<p>1. With a LLEF CH1 and CH4 failure ... do not reset FCS</p> <p>2. Refer to Hydraulic Flow Diagram</p>

CAUTIONS

* Immediate action item


☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>HYD 1A HYD 1B</p>	<p>LLEF Xs may be reset if BLIN code 67 is present</p> <ul style="list-style-type: none"> • Prolonged use of a failed hydraulic pump without the pump shaft shearing as indicated by fluctuations in system pressure will generate considerable heat and may result in AMAD bay fire. Consideration should be made for an ENGINE restart prior to landing • Prolonged use of a hydraulic pump without hydraulic fluid as indicated by circuit caution cycling will generate considerable heat and may result in AMAD bay fire. Consideration should be made for an ENGINE restart prior to landing. • If system pressure has decreased to zero with no fluctuations, the pump shaft has probably sheared, and ENGINE shutdown is not required • If associated with GEN and BOOST LO cautions, may be a PTS failure 	<p>1. HYDRAULIC pressure gage ... CHECK If pressure is fluctuating</p> <p>OR</p> <p>If failure was preceded by circuit caution cycling</p> <p>2. Left ENGINE ... OFF (if required, restart for landing)</p> <p>3. Land as soon as practical</p>
<p>HYD 1A HYD 2B</p>	<p>No TE flaps</p> <ul style="list-style-type: none"> • No left rudder 	<p>1. Refer to FLAPS OFF and RUD OFF cautions</p>
<p>HYD 2A</p>	<p>Hydraulic system 2A pressure LOW</p>	<p>1. With a RLEF CH2 and CH3 failure ... do not reset FCS</p> <p>2. Select jettison all unwanted external stores prior to extending LDG gear</p> <p>3. Perform ... emergency gear extension</p> <p>4. Refuel probe switch ... EMER EXT (if needed)</p> <p>5. Make a short field arrestment if practical</p> <p>If arrested landing not practical, after landing</p> <p>6. Use ... EMERGENCY BRAKES</p> <p>7. Use steady brake pressure (do not pump)</p> <p>Consider disengaging NWS with paddle switch on touchdown</p>
<p>HYD 2B</p>	<p>Hydraulic system 2B pressure LOW</p>	<p>1. Refer to Hydraulic Failures</p>

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>HYD 2A HYD 2B</p>	<p>RLEF Xs may be reset if BLIN code 67 is present</p> <ul style="list-style-type: none"> • Prolonged use of a failed hydraulic pump without the pump shaft shearing as indicated by fluctuations in system pressure will generate considerable heat and may result in AMAD bay fire. Consideration should be made for an ENGINE restart prior to landing. • Prolonged use of a hydraulic pump without hydraulic fluid as indicated by circuit caution cycling will generate considerable heat and may result in AMAD bay fire. Consideration should be made for an ENGINE restart prior to landing • If system pressure has decreased to zero with no fluctuations, the pump shaft has probably sheared, and ENGINE shutdown is not required. • If associated with GEN and BOOST LO cautions, may be a PTS failure. 	<ol style="list-style-type: none"> 1. HYDRAULIC pressure gage ... CHECK If pressure is fluctuating OR If failure was preceded by circuit caution cycling 2. Right ENGINE ... OFF (if required, restart for landing) 3. Select jettison all unwanted external stores prior to extending the landing gear 4. Perform emergency gear extension 5. Make a Short Field Arrestment as soon as practical If arrested landing not practical, after landing 6. Use ... EMERGENCY BRAKES 7. Use steady brake pressure (do not pump) <p>Consider disengaging NWS with paddle switch on touch down</p>
<p>IFF 4</p>	<p>Mode 4 OFF, ZEROIZED, not responding</p>	<p>Information</p>
<p>IFF OVRHT</p>	<p>IFF (APX-111) overheat condition exists</p>	<p>Information</p>
<p>L IN TEMP R IN TEMP</p>	<p>Designated ENGINE inlet temperature out of limits</p>	<p>* 1. THROTTLE affected ENGINE ... IDLE 2. Land as soon as practical</p>
<p>INLET ICE</p>	<p>ENGINE inlet icing conditions detected</p>	<p>* 1. ENGINE anti-ice switch ... ON 2. Pitot anti-ice switch ... ON 3. Refer to INLET ICE Caution</p>
<p>INS ATT</p>	<p>HUD attitude supplied by the standby attitude indicator</p> <ul style="list-style-type: none"> • W replaced  on the HUD • GPS or EGI GPS function still operates 	<ol style="list-style-type: none"> 1. ATTD/ATT select switch ... STBY 2. Attempt an inflight alignment 3. GPWS ... Unboxed
<p>INS DEGD</p>	<p>Failure detected during periodic INS BIT</p>	<p><u>GROUND</u> 1. Secure and realign INS</p> <p><u>INFLIGHT</u> if INS information is incorrect</p> <ol style="list-style-type: none"> 1. ATTD/ATT Select Switch ... STBY 2. Position keeping source ... ADC 3. Perform inflight alignment

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
INS VEL	INS and ADC vertical velocities do not agree	Cross check HUD velocity vector, HUD digital vertical velocity readout and standby rate of climb indicator
LADDER	Boarding ladder unlocked • May FOD left ENGINE	<u>INFLIGHT</u> 1. Get visual check if practical 2. Land as soon as practical
MC 1	Mission computer 1 failed • Only cautions available are ○ AUTO PILOT ○ MC 1 ○ HYD 1A ○ HYD 1B ○ HYD 2A ○ HYD 2B • GPS or EGI GPS function inoperable • G-limiter and Roll-limiter functions disabled	1. Cycle switch If caution remains or reappears 2. Use no more than 1/2 stick with roll limited stores aboard. Reduce acceleration below 7.5g above 32,357 pounds gross weight <i>or</i> if unsymmetrical (rolling) 3. Land as soon as practical
MC 2	Mission computer 2 failed	1. Cycle switch
MC CONFIG	MC OFP incorrect	1. ABORT
MU LOAD	MU not communicating on AVMUX	1. ABORT
NAV FAIL	Indicates GPS and INS and ADC failure <i>or</i> EGI and ADC failure	<u>GROUND</u> 1. Secure and realign INS <u>INFLIGHT</u> 1. ATTD/ATT Select Switch ... STBY 2. Use standby ALTITUDE/AIRSPEED/vertical velocity indicators 3. Position keeping source ... TACAN 4. Perform inflight alignment
NAV HVEL	• GPS not operating INS and ADC velocities disagree. Can be caused by high wind velocity • GPS operating INS and GPS, ADC and GPS, or INS and ADC horizontal velocities do not agree	Information
NAV VVEL	• GPS not operating INS and ADC vertical velocities do not agree • GPS operating INS and GPS vertical velocities do not agree	Cross check HUD velocity vector, HUD digital vertical velocity readout and standby rate of climb indicator
NFLR OVRHT	NAVFLIR overheat	1. NAVFLIR ... OFF (if practical)

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>OBOGS DEGD</p>	<p>Oxygen concentration is below acceptable limits</p> <ul style="list-style-type: none"> A disconnected oxygen hose or removing the oxygen mask without placing the OXY Flow knob to OFF may result in an OBOGS DEGD caution. Verify proper mask and hose integrity 	<p>If aircraft above 10,000 feet</p> <ul style="list-style-type: none"> * 1. Emergency oxygen green ring ... PULL * 2. OXY flow knob ... OFF * 3. OBOGS control switch ... OFF 4. Maintain cabin ALTITUDE below 10,000 feet 5. At aircrew discretion, discontinue emergency oxygen below 10,000 feet by pressing reset lever. <p>Remove oxygen mask.</p>
<p>OCS</p>	<p>MC on SMS overlay halted due to run time</p> <ul style="list-style-type: none"> Certain stores may not be available 	<p>1. Attempt to reload overlay</p>
<p>L OIL PR R OIL PR</p>	<p>Designated ENGINE oil pressure out of limits</p>	<ul style="list-style-type: none"> * 1. THROTTLE affected ENGINE ... IDLE <p>If caution still on ...</p> <ul style="list-style-type: none"> 2. THROTTLE affected ENGINE ... OFF (if practical)
<p>L OVRSPD R OVRSPD</p>	<p>Designated fan or compressor RPM high</p>	<ul style="list-style-type: none"> * 1. THROTTLE affected ENGINE ... IDLE 2. MENU ENG ... MONITOR RPM <p>If 106% N1 (400 ENGINE) / 108% N1 (402 ENGINE) or 102% N2 RPM exceeded ...</p> <ul style="list-style-type: none"> 3. THROTTLE affected ENGINE ... OFF (if practical)
<p>OXY LOW</p>	<p>Oxygen quantity indication below 1 liter</p>	<ul style="list-style-type: none"> 1. Oxygen quantity ... CHECK <p>If under 1 liter ...</p> <ul style="list-style-type: none"> 2. Maintain CAB ALT ... below 10,000 feet
<p>PARK BRAKE</p>	<p>INS ... ON</p> <p>THROTTLES ... over 80%</p> <p><i>and</i></p> <p>PARKING BRAKE ... SET</p>	<p><u>GROUND</u></p> <ul style="list-style-type: none"> 1. Parking Brake ... CHECK <p><u>INFLIGHT</u></p> <ul style="list-style-type: none"> 1. Parking Brake Handle ... CHECK 2. Make arrested landing 3. Immediately prior to landing ... CYCLE BRAKE HANDLE
<p>L PITOT HT R PITOT HT</p>	<p>Designated pitot heater malfunction</p>	<ul style="list-style-type: none"> 1. Pitot heat switch ... ON 2. after LDG, pitot heat switch ... OFF
<p>POS/ADC</p>	<p>EGI, GPS and INS velocity or GPS and INS unreliable.</p> <p>Position keeping function supplied by ADC, however the position keeping function is unreliable.</p>	<ul style="list-style-type: none"> 1. Use TACAN position keeping
<p>PROBE UNLK</p>	<p>Air refueling probe not fully retracted with switch in RETRACT</p>	<ul style="list-style-type: none"> 1. Slow below 300 knots 2. Probe switch ... CYCLE

CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
RACK UNCPL	BRU-32 failed to lock or unlock during rack test <ul style="list-style-type: none"> • Store may not be jettisonable 	1. ABORT
S/W CONFIG	Software incompatible	1. ABORT
L STALL R STALL	Stall detected	* 1. THROTTLE affected ENGINE ... IDLE If stall does not clear * 2. THROTTLE affected ENGINE ... OFF * 3. FIRE light affected ENGINE ... PUSH If stall clears 2. Land as soon as practical using affected ENGINE for approach and landing as required
TANK PRESS	<u>GROUND</u> Internal fuel tank pressure high Catapult may cause structural damage <u>INFLIGHT</u> Internal fuel tank pressure low above 20,000 feet <ul style="list-style-type: none"> • Possible fuel pump cavitation above 40,000 feet • High rates of descent may damage fuel cells 	<u>GROUND</u> 1. BLEED AIR switch ... OFF 2. ABORT <u>INFLIGHT</u> 1. BLEED AIR switches ... CYCLE If caution remains or reappears 2. Do not exceed 0.9 Mach in dive
TK PRES LO	<u>INFLIGHT</u> Internal fuel tank pressure ... LOW <u>ABOVE 20,000 FEET</u> <ul style="list-style-type: none"> • Possible fuel pump cavitation above 40,000 feet • High rates of descent may damage fuel cells 	<u>INFLIGHT</u> 1. BLEED AIR switches ... CYCLE If caution remains or reappears 2. Do not exceed 0.9 Mach in dive
TK PRES HI	<u>GROUND</u> Internal fuel tank pressurized <ul style="list-style-type: none"> • Catapult may cause structural damage <u>INFLIGHT</u> Internal fuel tank pressure high. <ul style="list-style-type: none"> • Possible exceedance of tank structural limits 	<u>GROUND</u> 1. BLEED AIR switch ... OFF 2. ABORT <u>INFLIGHT</u> 1. BLEED AIR switches ... CYCLE If caution remains or reappears 2. Maintain ... 0 to +2.5 g
VEL	INS velocity degraded or high wind velocity	Information
VOICE/AUR	Voice alert or master caution aural tone inoperative EADI is unavailable if the cause is CSC failure	1. Check BIT page If CSC MUX fail 2. Refer to CSC MUX FAILURE

CAUTIONS * Immediate action item ☆ Discussion in part V		
INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
WDSHLD HOT	Windshield temperature high or sensor failed	<p>If visible moisture present; either ice or rain ...</p> <p>1. Anti-ice/rain removal switches ... AS REQUIRED</p> <p>If visible moisture not present ...</p> <p>1. Anti-ice/rain removal switches ... OFF</p> <p>2. Power ... REDUCE</p> <p>If caution remains; consider ...</p> <p>1. BLEED AIR switch ... OFF</p> <p>2. Land as soon as practical</p>
WING UNLK	Either wingfold unlocked	1. Land as soon as practical

FCS CAUTIONS		* Immediate action item	☆ Discussion in part V
INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION	
AIL OFF	Either aileron OFF	1. Flaps 2. Fly	... HALF FOR LANDING ... ON-SPEED AOA
AIR DATA	MC cannot determine which source error correction (SEC) to command or ADC SEC disagrees with MC commanded SEC	<u>GROUND</u> 1. ABORT <u>INFLIGHT</u> 1. Maintain subsonic AIRSPEED 2. Land as soon as practical	
AUTO PILOT	Uncommanded auto pilot disengage	1. Paddle switch	... PRESS
CHECK TRIM	Trim incorrect for takeoff	1. Set correct takeoff trim	
DEL ON	Any axis in DEL • Refer to DEL ON Caution	* 1. Speedbrake * 2. Decelerate slowly to below 400 kts / 0.8 Mach 3. If flaps full 4. Do not exceed 5. MENU FCS If reset to CAS desired ... 6. Climb to a safe ALTITUDE 7. AIRSPEED 160-180 KNOTS - flaps HALF 200-300 KNOTS - flaps AUTO 8. FCS If pitch axis in DEL ... 6. Do not extend speedbrake (unless required) 7. Flaps 8. Fly 9. Reduce sink rate for field landings If yaw and/or roll axis in DEL ... 6. External stores ... JETTISON ASYMMETRIC WING STORES 7. Rudder 8. Do not use more than ½ rudder pedal or lateral stick in flight 9. Flaps 10. Fly 11. Reduce sink rate for landing	... Check IN ... RAISE TO HALF ... +15° AOA ... IDENTIFY FAILURE ... RESET ... HALF FOR LANDING ... ON-SPEED AOA
FC AIR DAT	L & R pitot static probes DISAGREE • Use flap setting which provides best handling qualities ☆ Refer to FC AIR DAT Caution	1. Maintain below 350 knots, minimum sideslips, AOA <10°, maximum 2g 2. Gain switch 3. Flaps (200 knots straight and level) <u>FOR LANDING</u> 4. Fly onspeed approach to touchdown	... ORIDE ... HALF OR FULL

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>FCES</p>	<p>Third like failure or flight control function lost</p> <ul style="list-style-type: none"> Caution light backup for DDI FCS cautions <p>☆ Refer to FCS Failure</p>	<p>* 1. Speedbrake ... Check IN</p> <p>* 2. Decelerate slowly to below 400 kts / 0.8 Mach</p> <p>3. If flaps full ... RAISE TO HALF</p> <p>4. Do not exceed ... +15° AOA (+12° AOA with asymmetric wing stores)</p> <p>5. MENU FCS ... IDENTIFY FAILURE</p> <p><i>Refer to FCS Failure Indications And Effects</i></p> <p>6. FCS ... RESET</p> <p>If no RESET and DDI warnings and cautions inoperative ...</p> <p>7. FCS circuit breakers ... CHECK</p> <p>8. Emergency Jettison Button ... PUSH (If required)</p> <p>9. Flaps ... HALF</p> <p>10. AIRSPEED ... 200-250 knots</p> <p>11. Make controllability check at safe ALTITUDE and on-speed AOA</p> <p>12. If flying qualities unacceptable, make controllability check with flaps in AUTO</p> <p>13. If controllability permits landing – short field arrestment recommended</p> <p>14. Reduce sink rate for landing</p> <p>15. Land as soon as practical</p>
<p>FCS</p>	<p>☆ Refer to FCS Failure Indicators and Effects</p> <p>☆ Refer to FCS Failure</p> <p>☆ Refer to Uncommanded Pitch and Roll Excursions</p>	<p>1. MENU FCS ... IDENTIFY FAILURE</p> <p>2. FCS ... RESET</p> <p>If no reset and second like failure exists</p> <p>3. Maintain 200-300 knots minimum sideslip AOA <10° 2g maximum</p> <p>4. FCS circuit breakers ... CHECK</p> <p>5. If CG aft of 24% or lateral asymmetry over 12,000 foot-pounds, jettison external stores as soon as practical</p> <p>6. Make controllability check</p> <p>7. Land as soon as practical</p>
<p>FCS HOT</p>	<p>Flight control computer A or right transformerrectifier overtemperature</p> <ul style="list-style-type: none"> FCS air scoop cannot be closed in flight 	<p>1. AIRSPEED ... SUBSONIC</p> <p>2. AV/FCS cool switch ... EMERG</p>

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
FLAPS OFF	<p>Leading and/or trailing edge flaps inoperative</p> <ul style="list-style-type: none"> Pressing FCS RESET with failed leading edge flaps may aggravate a split LEF condition Pressing FCS RESET with failed trailing edge flaps will not cause or aggravate a split flap condition in any case If fuel is a concern, selecting GAIN ORIDE with flap switch in AUTO may allow all non-failed flaps to move to a more fuel conserving 3°/3° position <p>☆ Refer to FLAPS OFF Caution</p>	<p>If leading edge flaps failed ...</p> <ol style="list-style-type: none"> Do not exceed 10° AOA with flaps AUTO Make controllability check at safe ALTITUDE Flaps ... HALF FOR LANDING If LEF extension less than 10°, do not exceed 7° AOA for landing <p>If hydraulic failure or leak suspected</p> <ol style="list-style-type: none"> Do not press FCS reset button if HYD 1B or HYD 2A caution is displayed <p>If trailing edge flaps failed ...</p> <ol style="list-style-type: none"> Make controllability check at safe ALTITUDE Flaps ... HALF OR FULL FOR LANDING Use ... 10° - 11° AOA for landing if required
FLAP SCHED	<p>Flaps frozen and not scheduling properly (AOA or air data) or leading edge flap at least 10° off schedule and AOA over 12°</p> <ul style="list-style-type: none"> For shipboard operations - notify LSO that indexers /approach light are inaccurate or inoperative. AOA displayed to aircrew in the HUD E-bracket is FCS derived AOA. Perform AOA/AIRSPEED check before and after going dirty 	<ol style="list-style-type: none"> Reduce ... AOA Gain switch ... ORIDE below 350 knots <p>For landing –</p> <ol style="list-style-type: none"> Flaps ... FULL at 200 knots Fly onspeed approach to touchdown
G-LIM 7.5 G	<p>G-limiter set to 7.5g regardless of gross weight or store loading</p> <ul style="list-style-type: none"> Intermittently setting of the G-LIM 7.5 cautions while on the ground with accompanying master caution tone and “flight controls” voice alert is a known condition. The caution usually occurs following sudden THROTTLE retractions to idle 	<p>Reduce acceleration below 7.5 g above 32,357 pounds gross weight</p> <p><i>or</i></p> <p>if unsymmetrical (rolling)</p>
G-LIM OVRD	<p>G-limiter overridden</p> <ul style="list-style-type: none"> If the caution appears without pilot initiation, the paddle switch may be failed internally. The nose wheel steering and auto pilot may be commanded off without pilot action or notification 	<p>Information</p>

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>MECH ON (continue...)</p>	<p>Stabilator has reverted to mechanical control</p> <ul style="list-style-type: none"> If aircraft experiences recurrences of MECH reversions, do not continue to reset the FCS <p>☆ Refer to MECH ON Caution</p>	<p>* 1. Speed brake ... CHECK IN</p> <p>* 2. Decelerate slowly to below 400 kts / 0.8 Mach</p> <p>3. If flaps full ... RAISE TO HALF</p> <p>4. Do not exceed 250 kts with flaps HALF</p> <p>5. Do not exceed ... +15°AOA (+12° AOA with asymmetric wing stores)</p> <p>6. MENU FCS ... IDENTIFY FAILURE If reset to CAS is desired ...</p> <p>7. Climb to a safe ALTITUDE</p> <p>8. AIRSPEED 160-180 knots – flaps HALF 200-300 knots – flaps AUTO</p> <p>9. FCS ... RESET</p> <p>10. Takeoff trim ... PUSH (recenters stick)</p> <p>If RESET unsuccessful/not desired and roll / yaw CAS functioning ...</p> <p>7. Flaps ... HALF FOR LANDING</p> <p>8. Fly ... ON-SPEED AOA</p> <p>9. Reduce sink rate for field landing If RESET unsuccessful/not desired and roll / yaw axis in DEL ...</p> <p>7. External stores: <u>SHIPBASED</u> JETTISON ASYMMETRIC WING STORES <u>SHOREBASED</u> REDUCE ASYMMETRIC STORES TO 10,000 FOOT-POUNDS MAXIMUM</p> <p>8. Rudder ... MINIMIZE INPUTS</p> <p>9. Do not use more than ½ rudder pedal or lateral stick in flight</p> <p>10. Flaps ... HALF FOR LANDING</p> <p>11. Fly ... ON-SPEED AOA</p> <p>12. Reduce sink rate for field landing</p> <p style="text-align: center;">- - - CONTINUE - - -</p>

FCS CAUTIONS

* Immediate action item

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
<p>MECH ON (continued)</p>	<p>Stabilator has reverted to mechanical control</p> <ul style="list-style-type: none"> If aircraft experiences recurrences of MECH reversions, do not continue to reset the FCS <p>☆ Refer to MECH ON Caution</p>	<p>--- CONTINUED ---</p> <p>If RESET unsuccessful/not desired and AIL/RUD OFF ...</p> <p>7. Wing stores ... JETTISON</p> <p>8. Flaps ... HALF FOR LANDING</p> <p>9. AIRSPEED ... 200-250 knots</p> <p>10. Make controllability check at safe ALTITUDE</p> <p>11. If flying qualities unacceptable, make controllability check with flaps in AUTO</p> <p>12. If controllability permits landing ... Short Field arrestment recommended</p> <p>13. Reduce sink rate for field landings</p>
<p>NWS</p>	<p>Nosewheel steering inoperative/ malfunction</p> <p>FLASHING (on HUD) loss or partial loss of HYD 2 pressure</p> <p>STEADY (on DDI) Nosewheel steering inoperative</p>	<p>Emergency high gain nosewheel steering available on aircraft 161702 AND UP with failed channel (2 or 4) circuit breaker pulled, wings unlocked, and NWS button pressed.</p> <p>DCS FA-18C is 165407</p>
<p>R-LIM OFF</p>	<p>Roll rate limiting failed</p>	<p>1. Use no more than ½ stick with roll limited stores aboard</p>

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
RUD OFF	<p>One or both rudders inoperative</p> <p>☆ <i>Refer to RUD OFF Caution</i></p> <ul style="list-style-type: none"> • If a dual channel rudder actuator failure is reset, the failure could be triggered again and reappear with severe yaw, roll and pitch transients during critical flight phase(s). Transients occurring close to the ground could be unrecoverable. During the takeoff and landing phases, any ejection decision should be made early • Once configured for landing, maintain on-speed and balanced flight • Failure to maintain AOA below 10° and balanced flight may result in a departure in yaw and roll that is unrecoverable, even with full opposite rudder and stick. Because of the rate at which AOA and sideslip buildup can occur in this configuration, the safe ejection envelope can be rapidly exceeded during the takeoff and landing phases • If single ENGINE, departure is probable with the use of afterburner • Lineup control is degraded with left or right rudder failed. Ensure all lineup corrections are performed slowly and smoothly • Minimize large, rapid THROTTLE inputs. If single ENGINE, large THROTTLE transients will cause significant yaw and roll, making heading control difficult • Rudder toe-in or out will not be available for takeoff or landing. Due to a lack of rudder toe-in, bolter performance may be degraded. The autopilot will be inoperative 	<ol style="list-style-type: none"> 1. Perform controllability check at ALTITUDE 2. DO NOT RESET if flying qualities are acceptable for a safe recovery 3. Perform a straight-in landing (If practical, set flaps HALF)

ADVISORIES		* Immediate action item	☆ Discussion in part V
INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION	
ALGN	INS switched to NAV without a complete alignment	Complete alignment or switch to GYRO mode	
AM DL	Radar hardware needed to support AMRAAM data link not installed.	Information	
A/P	Autopilot mode selected	Information	
ARMAMENT ADVISORIES	<i>Refer to A1-F18AC-TAC-series</i>		
ATTH	Autopilot attitude hold mode selected	Information	
BALT	Autopilot barometric ALTITUDE hold mode selected	Information	
L BAR	Launch bar extended on the deck	Information	
BIT	<p>Built-in test failure</p> <p>☆ <i>Refer to ADC Failure</i></p>	<p>1. MENU BIT ... CHECK</p> <p>If ADC status</p> <p>NOGO (A/B)</p> <p>MUX FAIL (C/D)</p> <p>or</p> <p>NOT RDY</p> <p>1. Confirm AIRSPEED box blank</p> <p>2. Confirm ALTITUDE box blank or contains radar ALTITUDE (below 5000 feet AGL)</p> <p>3. During CV Operations <i>recover early if practical</i></p> <p>4. ATT Switch ... STBY</p> <p>5. Use AOA E bracket for AOA control</p> <p>6. Inform the LSO the indexers will be inoperative/inaccurate</p> <p>7. GPWS ... Unbox</p>	
COM1H COM2H	ARC 210 COM1 OR COM2 not loaded with Have Quick time	Information	
COM1S COM2S	ARC 210 COM1 OR COM2 not loaded with SINGARS time	Information	
CDATA	Unit other than MU contains classified data	Information	
CONFIG	All systems have not been checked for configuration compatibility because one or more of the systems is not communicating	Information	
CPLD	Autopilot coupled to WYPT OAP SEQ# TCN	Information	

ADVISORIES

*** Immediate action item**

☆ Discussion in part V

INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION
CRUIS	Gain switch in ORIDE and flap switch AUTO <ul style="list-style-type: none"> Leading and trailing edge flaps about 3° Flaps optimized for 35,000 feet, Mach 0.7, and 2° AOA 	Information
D-BAD	ALE-47 indicates a misfire	Information
DISCH (FIRE EXTGH)	FIRE EXTGH pushbutton pressed	Information
F-QTY	Failure in fuel quantity gaging system that may affect fuel or CG display	1. Fuel DDI display ... CHECK If all fuel quantities invalid 2. Signal data computer ... RESET 3. FUEL BIT ... PERFORM
FLAPS	TRAILING EDGE FLAPS ... OFF LEADING EDGE FLAPS ... OFF SPIN mode ... ON GAIN ORIDE ... SELECTED FLAPS HALF/FULL ... over 250 knots	Information
FPAS	Flight Performance Advisory System is unable to calculate HOME FUEL caution	Information
FUEL	FUEL LO, BINGO, or CG caution BIT failure	FUEL BIT ... INITIATE
FULL	Flaps switch FULL	Information
GPS	GPS NORM flight phase mode selected and EHPE exceeds 1092 ft.	Information
HALF	Flaps switch HALF	Information
L HEAT R HEAT	Designated ENGINE anti-ice valve open	Information
HSEL	Autopilot heading hold mode selected	Information
LAND	Gain switch in ORIDE and flap switch HALF or FULL <ul style="list-style-type: none"> Leading edge flaps 17° Leading edge flaps optimized for 8.1° AOA Trailing edge flaps 30° or 45° 	Information
LEFT	STEADY Left gear down and locked ----- FLASHING Left gear planing link failed	Information ----- 1. Refer to Planing Link Failure
LOAD	Improper weapon load or codes or incompatible fuzing. Refer to A1-F18AC-TAC-series.	Check SMS for proper configuration

ADVISORIES		* Immediate action item	☆ Discussion in part V
INDICATOR	CAUSE/REMARKS	CORRECTIVE ACTION	
M4 OK	Mode 4 valid interrogation reply	Information	
MU FL	Memory Unit memory full. Oldest stored data will be overwritten.	Information	
NOSE	Nose gear down and locked	Information	
NOSEC	GPS operating in non-secure mode	Information	
PCODE	<ul style="list-style-type: none"> • Keys are ... INCORRECT • Parity error ... DETECTED • Keys not ... LOADED 	Information	
P/INS	Satellite communication lost. INS not being updated with GPS data.	Information	
RALT	Autopilot radar ALTITUDE hold mode selected	Information	
RC DL	Data link pod installed and ATARS not powered	1. ATARS switch ... ON If advisory remains 2. ATARS power switch ... OFF 3. CLP power knob ... OFF	
RCDR	MU turned off	Information	
READY (APU)	APU on line and ready	Information	
READY (FIRE EXTGH)	Fire extinguisher armed	Information	
RSET	Reset cleared FCS failure	Information	
RSET	Reset did not clear FCS failure	Information	
RIGHT	STEADY Right gear down and locked -----	Information	
	FLASHING Right gear planing link failed	1. Refer to Planing Link Failure	
SKID	Gear down and anti-skid switch ... OFF	Information	
SPD BRK	Speedbrake not fully retracted	Information	
TRIM	Control surfaces trimmed: roll and yaw neutral stabilator 4° NU (10.3 PROM AND BELOW) <i>or</i> 12° NU (10.5.1 PROM AND UP) MECH stick position zero	Information	
WPNS	Bulk data transfer error or JSOW overheat condition	Information	
YCODE	GPS not tracking in secure mode	1. Select NOSEC GPS if required	

INDEX

WARNING LIGHTS

APU FIRE	FIRE	THREAT WARNINGS
L BAR	GEAR HANDLE	UNSAFE
L & R BLEED	HOOK	
L or R BLEED	RADAR ALT LOW LIGHT	

CAUTIONS

L/R AMAD	DTR 1 or 2 COLD	INS ATT
L/R AMAD PR	DTR 1 or 2 SHTDN	INS DEGD
ANTI SKID	L or R DUCT DR	INS VEL
AOA DEGD	DUMP OPEN	LADDER
APU ACCUM	L/R EGT HIGH	MC 1
ASPJ AMP	ENG MATCH	MC 2
ASPJ DEGD	ERASE FAIL	MC CONFIG
ASPJ HI B	EXT TANK	MU LOAD
ASPJ LO B	EXT XFER	NAV FAIL
ASPJ OVRHT	L/R FLAMEOUT	NAV HVEL
ASPJ RPTF	FLIR OVRHT	NFLR OVRHT
ATARS OVRHT	L/R FUEL HOT	OBOGS DEGD
L/R ATS	FUEL LO	OCS
AV AIR DGD	FUEL XFER	L/R OIL PR
AV AIR HOT	L/R GEN	L/R OVRSPD
AUTO PILOT	GEN TIE	OXY LOW
E/U BATT LO	GPS DEGD	PARK BRAKE
BATT SW	GUN GAS	L/R PITOT HEAT
L&R BLD OFF	HAND CNTRL	POS / ADC
L or R BLD OFF	HOME FUEL	PROBE UNLK
L&R BOOST LO	HYD 1A	RACK UNCPL
BRK ACCUM	HYD 1B	S/W CONFIG
CANOPY	HYD 1A & HYD 1B	L/R STALL
CAUT DEGD	HYD 1A & HYD 2B	TANK PRESS
CG	HYD 2A	TK PRES LO
CK FLAPS	HYD 2B	TK PRES HI
CHECK SEAT	HYD 2A & HYD 2B	VEL
CNI	IFF 4	VOICE / AUR
DFIR OVRHT	IFF OVRHT	WDSHLD HOT
DFIRIS GONE	L/R IN TEMP	
DL OVRHT	INLET ICE	

INDEX**FCS CAUTIONS**

AIL OFF	FCES	G-LIM OVRD
AIR DATA	FCS	MECH ON
AUTO PILOT	FCS HOT	NWS
CHECK TRIM	FLAPS OFF	R-LIM OFF
DEL ON	FLAP SCHED	RUD OFF
FC AIR DAT	G-LIM 7.5 G	

ADVISORIES

ALIGN	F-QTY	PCODE
AM DL	FLAPS	P/INS
A/P	FPAS	RALT
ARMAMENT ADVISORY	FUEL	RC DL
ATTH	FULL	RCDR
BALT	GPS	READY (APU)
L BAR	HALF	READY (FIRE EXTGH)
BIT	L/R HEAT	RSET
COM 1/2 H	HSEL	RSET
COM 1/2 S	LAND	RIGHT
CDATA	LEFT	SKID
CONFIG	LOAD	SPD BRK
CPLD	M4 OK	TRIM
CRUIS	MU FL	WPNS
D-BAD	NOSE	YCODE
DISCH (FIRE EXTGH)	NOSEC	

OPERATING LIMITATIONS

ENGINE LIMITATIONS F404-GE-402

F404-GE-402 MIL each 10900 lbs MAX each 18000 lbs			GND IDLE		ENG START	FLT IDLE		MIL steady			MAX thrust	
			MIN	MAX	PEAK	MIN	MAX	MIN	MAX	PEAK	MAX	PEAK
N1	± 0.5%	%		108			108		108		108	
N2	+ 1%	%	63	70		68	73	90	102		102	
EGT	+ 8°C	°C	190	590	815			715	880	902	920	942
FF	x 100	pph	4,2	9	*			60	125		(438)	
NOZZLE	+ 3%	%	73	84				0	48			
OIL PRESS		psi	45	110		55	110	95	180			

* an excessive FF is an indication for a HOT START

OIL PRESSURE – GROUND

- For ambient temperatures above -18°C (0°F)
oil pressure must peak below 180 psi and start to decrease within 30 seconds after reaching idle rpm and continue to decrease to steady state limits
- For ambient temperatures below -18°C (0°F)
maximum oil pressure 2½ minutes after start is 180 psi
- Steady-state GROUND IDLE oil pressure limit is 45 to 110 psi (warm oil)

SYSTEM LIMITATIONS

REFUELING PROBE	EXT – RET	300kts
	EXTENDED	400kts
LANDING GEAR	EXT – RET	250kts
	TIRES	NOSE GEAR 190kts GS MAIN GEAR 210kts GS
T/E FLAPS	HALF / FULL	250kts
CANOPY	OPEN	60kts

CG LIMITATIONS

- FORWARD LIMIT is ... 17% MAC

NOTE

Maximum thrust field takeoffs are permissible at CG location forward to 16% subject to air density restrictions

- AFT LIMIT is

- FE (Fighter Escort) config ... 28% MAC
 - All other config ... 27% - 28% MAC
- (Refer to AOA limitations)*

TRIM SETTINGS

TRIM		... 12°	FIELD
44,000	and below	... 16°	CARRIER
45,000	– 48,000	... 17°	CARRIER
49,000	– 51,900 (MTOW)	... 19°	CARRIER

OPERATING LIMITATIONS

LATERAL WEIGHT ASYMMETRY LIMITS

FIELD takeoff	22,000 ft-lbs
CATAPULT takeoff	
Weight board ≤ 36,000 lbs	6,000 ft-lbs
Weight board ≥ 37,000 lbs	22,000 ft-lbs
INFLIGHT conditions	26,000 ft-lbs

Asymmetric jettison/normal release of a store from station 2 or 8 that weighs in excess of 2330 pounds (i.e., GBU-24, MK-60, MK65, Walleye II ER/DL) exceeds the lateral weight asymmetry limitation and is prohibited (even if this is the normal SMS release sequence, except in an emergency).

FCLP or CARRIER landing with <i>(including wingtip AIM-9 and wing fuel)</i>	GW ≤ 33,000 lbs	17,000 ft lbs
CARRIER landing with <i>(including wingtip AIM-9 and wing fuel)</i>	GW > 33,000 lbs	14,500 ft lbs
FIELD landing <i>(flared)</i> <i>with sink rate at touchdown up to 500 fpm</i>		26,000 ft lbs

FCLP FIELD CARRIER LANDING PRACTICE

ANGLE OF-ATTACK LIMITATIONS

Flaps AUTO

CONFIGURATION	AOA LIMIT [°]	CG [% MAC]
FE (Fighter Escort) <i>Fighter Escort (FE) refers to the clean aircraft with or without pylons, fuselage stores, or wingtip missiles</i>	Unrestricted -6° to +25°	17 to 25% 25 to 28%
FE plus centerline tanks / stores	Unrestricted -6° to +25°	17 to 23.5% 23.5 to 28%
FE with centerline tank / stores plus inboard tanks / stores	-6° to +25°	17 to 27.5%
FE without centerline tank / stores plus inboard tanks / stores	-6° to +35° -6° to +25°	17 to 24% 24 to 27.5%
FE with/without centerline tank / stores plus outboard tanks / stores	-6° to +25°	17 to 27.5%
FE with/without centerline tank / stores plus inboard and outboard tanks / stores	-6° to +20°	17 to 27%

AURAL WARNING sounds whenever AOA LIMIT is exceeded

Lateral Weight Asymmetry AOA Limits

- a. 6,000 to 12,000 ft-lbs asymmetry -6° to +20°
- b. 12,000 to 26,000 ft-lbs asymmetry -6° to +12°
- c. 22,000 to 26,000 ft-lbs asymmetry
 1. Abrupt lateral stick inputs are PROHIBITED
 2. Smooth inputs up to 1/2 stick for rolling maneuvers up to a maximum of 180° bank angle change are authorized
 3. Rudder pedal inputs are authorized only as required to maintain balanced flight (Slip indicator ball centered)

OPERATING LIMITATIONS

WEIGHTS

ZFW	... 25093 lbs	no racks / no ammo M61A1
ZFW	... 25424 lbs	no racks / with ammo M61A1
ZFW	... 26804 lbs	with racks / with ammo M61A1
MTOW	... 51900 lbs	

LANDING WEIGHT LIMITATION

FIELD	LDG flared	... 39000 lbs	
	FCLP / touch & go / baricade	... 30700 lbs	before AFC 029
	FCLP / touch & go / baricade	... 33000 lbs	after AFC 029
CARRIER	unrestricted	... 33000 lbs	
	restricted	... 34000 lbs	

Arrestments above 33,000 pounds are subject to the following restrictions:

1. Arresting gear ... MK 7 MOD 3 Only
2. Glideslope ... 3.5° Maximum
3. Recovery Head Wind (RHW)
 - a. > 40 knots ... HALF FLAPS allowed
 - b. < 40 knots ... FULL FLAPS only
4. Lateral Weight Asymmetry 14,500 ft-lb maximum
(External pylon stores, AIM-9 Wing tips, and wing fuel)
 1. NO MOVLAS recovery (Manual Operated Visual Landing Aid System)

FUEL

NAME		NOTE	
FPU-8A FUELTANK		330 gallons	
		2240 lbs	(STANDARD JP-5)
		2150 lbs	(JP-4)
INTERNAL FUEL CAPACITY			
TANK #1		2840	
TANK #2	left ENG feed	1600	
TANK #3		1440	right ENG feed
TANK #4		3660	
TOTAL		9540	
WINGS		LEFT WING	RIGHT WING
	620	1240	620
TOTAL INTERNAL			10780

STORES

9	8	7	6	5	4	3	2	1
TP	DL13	DL13		FLIR DL13	FLIR ATFLIR	DL13	DL13	TP
	BOMBS A/G	BOMBS A/G		BOMBS		BOMBS A/G	BOMBS A/G	
A/A	A/A	A/A	A/A		A/A	A/A	A/A	A/A
	ROCKETS	ROCKETS				ROCKETS	ROCKETS	

OPERATING LIMITATIONS

ACCELERATION LIMITATIONS WITHOUT G LIMITER

Configuration	Symmetrical	Asymmetrical
Flaps HALF or FULL	+0.5g to +2.0g	+0.5g to +1.5g
Flaps AUTO	(32,357 pounds or less) -3.0g to +7.5g	-1.0g to +6.0g
GEAR Retraction and/or GEAR Extension	+0.5g to +2.0g	+0.5g to +1.5g

CATAPULT THROTTLE SETTINGS

WEIGHT BOARD	ENGINE POWER		
44000 and below	MIL	MIL / MAX	MAX
45000 and above			MAX

NOTE

MIL/MAX power setting is defined as stabilizing in Military power while in catapult tension, and selecting maximum afterburner at holdback release

LDG CONFIGURATION

Weight [lbs]	FULL FLAPS	HALF FLAPS	HALF FLAPS	HALF FLAPS	HALF FLAPS or FULL FLAPS	
	8.1° AOA	8.1° AOA	7.0° AOA	7.0° AOA 0° LEF	10.0° AOA 0° TEF	7.0° AOA 0° LEF 0° TEF
	Normal LDG	Normal LDG	DEL / MECH	LEF Failure	TEF Failure	LEF / TEF Failure
24,000	117	126	131	133	161	192
25,000	119	129	134	135	164	196
26,000	121	131	136	135	167	200
27,000	124	134	139	141	170	204
28,000	126	136	141	143	173	208
29,000	128	139	144	146	177	212
30,000	130	141	146	148	180	215
31,000	133	144	149	151	183	219
32,000	135	146	151	153	186	222
33,000	137	148	153	156	188	226
34,000	139	151	156	158	191	229
35,000	141	153	158	160	194	232
36,000	143	155	160	162	197	236
37,000	145	157	162	165	199	239
38,000	147	159	165	167	202	242
39,000	149	161	167	169	205	245

FAILURE IS NOT AN OPTION



*created
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cruizzzer*