

## EMERGENCY PROCEDURE TABS

**NAVAIR 01-F14AAP-1B**  
**NATOPS**  
**POCKET CHECKLIST**

**F-14B**  
**AIRCRAFT**

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**01 AUGUST 2001**

ECS LEAKS  
 COCKPIT/OXYGEN  
 COOLANT/CANOPY

**ECS**

CONTROLLED  
 MANUAL  
 GROUND EGRESS

**EJECT/  
 EGRESS**

GENERATOR  
 TRANS/RECT  
 WOW

**ELECTRICAL**

AICS/AIRSTART  
 NOZZLE/START VALVE  
 OIL/THROTTLE

**ENGINE**

INFLIGHT  
 ON DECK  
 ELECTRICAL

**FIRE**

FLAPS  
 SPOILERS  
 WINGSWEEP  
 SAS

**FLIGHT  
 CONTROL**

DUMP  
 LEAK  
 PRESSURE  
 TRANSFER

**FUEL**

COMBINED  
 FLIGHT  
 BRAKES

**HYDRAULICS**

ARRESTMENT  
 BRAKES  
 BLOWN TIRE  
 LAUNCH BAR

**LANDING GEAR/  
 LANDING**

TAKEOFF  
 LANDING  
 CRUISE/FUEL  
 MIGRATION

**SINGLE ENGINE  
 OPS**

ABORT  
 BLOWN TIRE

**TAKEOFF**

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**NAVAIR 01-F14AAP-1B**

**NATOPS POCKET CHECKLIST**

**F-14B**

**AIRCRAFT**

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**01 AUGUST 2001**

**Change 3 — 15 JANUARY 2004**

**NATEC ELECTRONIC MANUAL**

# NAVAIR 01-F14AAP-1B

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## LIST OF EFFECTIVE PAGES

NOTE: Text affected by current change indicated by vertical line in outer margin.

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# NAVAIR 01-F14AAP-1B

## INTERIM CHANGE SUMMARY

*The following Interim Changes have been cancelled or previously incorporated into this manual.*

INTERIM CHANGE NUMBER(S)	REMARKS/PURPOSE
1 thru 30	Incorporated

*The following Interim Changes have been incorporated into this Change/Revision.*

INTERIM CHANGE NUMBER(S)	REMARKS/PURPOSE
31	Modifies the L and/or R Fuel Press Light(s) and Warning Tone Emergency Procedure, and Adds Fuel Imbalance / Fuel Quantity Balancing Emergency Procedure.

*Interim Changes Outstanding — To be maintained by the custodian of this manual.*

INTERIM CHANGE NUMBER(S)	ORIGINATOR/DATE (or DATE/TIME GROUP)	PAGES AFFECTED	REMARKS/PURPOSE

PTTUZYUW RULSABU1234 2032006-UUUU--RHMCSUU.  
ZNR UUUUU  
P 212006Z JUL 04 ZYB  
FM COMNAVAIRSYS COM PATUXENT RIVER MD//4.0P//  
TO ALL TOMCAT AIRCRAFT ACTIVITIES  
AL ALL TOMCAT AIRCRAFT ACTIVITIES  
INFO COMNAVAIRSYS COM PATUXENT RIVER MD//5.0F/4.1//  
COMNAVSAFECEN NORFOLK VA//11//  
COMNAVAILANT NORFOLK VA//N421B//  
COMNAVAIRPAC SAN DIEGO CA//N421B1//  
COMFITWINGLANT OCEANA VA//N4//  
NAVAIRDEPOT JACKSONVILLE FL//3.3.3//  
NAVSURVTRAINST PENSACOLA FL//02/025//  
BT  
UNCLAS //N03711//  
MSGID/GENADMIN/COMNAVAIRSYS COM/4.0P//  
SUBJ/F-14ABD AIRCRAFT NATOPS PUBLICATIONS INTERIM CHANGE -  
/SAFETY OF FLIGHT//  
REF/A/EML/COMNAVAIRFOR/20JUL2004//  
REF/B/MSG/FITRON ON ZERO ONE/021438ZJUN2004//  
REF/C/DOC/COMNAVAIRSYS COM/15JAN2004//  
REF/D/DOC/COMNAVAIRSYS COM/15JAN2004//  
REF/E/DOC/COMNAVAIRSYS COM/15JAN2004//  
REF/F/DOC/COMNAVAIRSYS COM/15JAN2004//  
REF/G/DOC/COMNAVAIRSYS COM/15JAN2004//  
REF/H/DOC/COMNAVAIRSYS COM/15JAN2004//  
NARR/REF A IS NATOPS REQUEST FOR RELEASE.  
REF B IS NATOPS URGENT CHANGE RECOMMENDATION.  
REF C IS F-14D POCKET CHECKLIST (PCL) 01-F14AAD-1B, DTD 15 APR 02  
WITH CHANGE 2 DTD 15 JAN 04.  
REF D IS F-14D FLIGHT MANUAL (NFM) 01-F14AAD-1, DTD 15 APR 02 WITH  
CHANGE 2 DTD 15 JAN 04.  
REF E IS F-14B POCKET CHECKLIST (PCL) 01-F14AAP-1B, DTD 01 AUG 01  
WITH CHANGE 3 DTD 15 JAN 04.  
REF F IS F-14B FLIGHT MANUAL (NFM) 01-F14AAP-1, DTD 01 AUG 01 WITH  
CHANGE 3 DTD 15 JAN 04.  
REF G IS F-14A POCKET CHECKLIST (PCL) 01-F14AAA-1B, DTD 15 MAY 03  
WITH CHANGE 1 DTD 15 JAN 04.  
REF H IS F-14A FLIGHT MANUAL (NFM) 01-F14AAA-1, DTD 15 MAY 03 WITH  
CHANGE 1 DTD 15 JAN 04.//  
RMKS/1. IRT REFS A AND B, THIS MESSAGE ISSUES INTERIM CHANGE (IC)  
NUMBER 18 TO REF C, INTERIM CHANGE (IC) NUMBER 29 TO REF D, INTERIM  
CHANGE (IC) NUMBER 33 TO REF E, INTERIM CHANGE (IC) NUMBER 49 TO REF  
F, INTERIM CHANGE (IC) NUMBER 107 TO REF G AND INTERIM CHANGE (IC)  
NUMBER 151 TO REF H.  
2. SUMMARY. THE FOLLOWING CHANGES MAKE MINOR CORRECTIONS TO REFS C  
THROUGH H FOR THE L AND/OR R FUEL PRESS LIGHT(S) AND WARNING  
TONE EMERGENCY PROCEDURE. THE CORRECTIONS FOLLOW A SIMPLE AND  
LOGICAL PROGRESSION THROUGH EACH PCL AND NFM AS INDICATED.  
3. CHANGE REF C (F-14D PCL) AS FOLLOWS:  
A. PAGE 114, TITLE:  
(1) DELETE: WARNING TONE.  
(2) ADD: 10 SEC WARNING TONE.

- B. PAGE 114, LINE 3 (AFTER STEP 2):
  - (1) DELETE: AND WARNING TONE
  - (2) ADD: NA
- C. PAGE 114, LINE 20 (AFTER WARNING PARAGRAPHS):
  - (1) DELETE: AND THE WARNING TONE
  - (2) ADD: NA
- D. PAGE 114A, NOTE SECTION, SECOND NOTE PARAGRAPH, LINE 1:
  - (1) DELETE: AND
  - (2) ADD: AND/OR
- 4. CHANGE REF D (F-14D NFM) AS FOLLOWS:
  - A. CHAPTER 14, PAGE 14-18, PARAGRAPH 14.6.1.1, TITLE:
    - (1) DELETE: WARNING TONE
    - (2) ADD: 10 SEC WARNING TONE.
  - B. CHAPTER 14, PAGE 14-18, PARAGRAPH 14.6.1.1, LINE 3:
    - (1) DELETE: AND WARNING TONE
    - (2) ADD: NA
  - C. CHAPTER 14, PAGE 14-18, PARAGRAPH 14.6.1.1, SECOND COLUMN, LINE 13:
    - (1) DELETE: AND THE WARNING TONE
    - (2) ADD: NA
  - D. CHAPTER 14, PAGE 14-18, SECOND COLUMN, SECOND NOTE PARAGRAPH, LINE 1:
    - (1) DELETE: AND
    - (2) ADD: AND/OR
- 5. CHANGE REF E (F-14B PCL) AS FOLLOWS:
  - A. PAGE 123, TITLE:
    - (1) DELETE: WARNING TONE.
    - (2) ADD: 10 SEC WARNING TONE.
  - B. PAGE 123, LINE 3 (AFTER STEP 2):
    - (1) DELETE: AND WARNING TONE
    - (2) ADD: NA
  - C. PAGE 124, LINE 1:
    - (1) DELETE: AND THE WARNING TONE
    - (2) ADD: NA
  - D. PAGE 124A, NOTE PARAGRAPH, LINE 1:
    - (1) DELETE: AND
    - (2) ADD: AND/OR
- 6. CHANGE REF F (F-14B NFM) AS FOLLOWS:
  - A. CHAPTER 14, PAGE 14-19, PARAGRAPH 14.6.1.1, TITLE:
    - (1) DELETE: WARNING TONE
    - (2) ADD: 10 SEC WARNING TONE.
  - B. CHAPTER 14, PAGE 14-19, PARAGRAPH 14.6.1.1, LINE 3:
    - (1) DELETE: AND WARNING TONE
    - (2) ADD: NA
  - C. CHAPTER 14, PAGE 14-19, PARAGRAPH 14.6.1.1, LINE 20:
    - (1) DELETE: AND THE WARNING TONE
    - (2) ADD: NA
  - D. CHAPTER 14, PAGE 14-19, PARAGRAPH 14.6.1.1, SECOND COLUMN, SECOND NOTE PARAGRAPH, LINE 1:
    - (1) DELETE: AND
    - (2) ADD: AND/OR
- 7. CHANGE REF G (F-14A PCL) AS FOLLOWS:
  - A. PAGE 94, TITLE:



(1) DELETE: WARNING TONE.  
(2) ADD: 10 SEC WARNING TONE.

B. PAGE 94, LINE 3 (AFTER STEP 2):  
(1) DELETE: AND WARNING TONE  
(2) ADD: NA

C. PAGE 94, LINE 20 (AFTER WARNING PARAGRAPHS):  
(1) DELETE: AND THE WARNING TONE  
(2) ADD: NA

D. PAGE 94A, NOTE SECTION, SECOND NOTE PARAGRAPH, LINE 1:  
(1) DELETE: AND  
(2) ADD: AND/OR

8. CHANGE REF H (F-14A NFM) AS FOLLOWS:

A. CHAPTER 14, PAGE 14-15, PARAGRAPH 14.6.1.1, TITLE:  
(1) DELETE: WARNING TONE  
(2) ADD: 10 SEC WARNING TONE.

B. CHAPTER 14, PAGE 14-15, PARAGRAPH 14.6.1.1, LINE 3:  
(1) DELETE: AND WARNING TONE  
(2) ADD: NA

C. CHAPTER 14, PAGE 14-15, PARAGRAPH 14.6.1.1, SECOND COLUMN,  
LINE 1:  
(1) DELETE: AND THE WARNING TONE  
(2) ADD: NA

D. CHAPTER 14, PAGE 14-15, PARAGRAPH 14.6.1.1, SECOND COLUMN,  
SECOND NOTE PARAGRAPH, LINE 1:  
(1) DELETE: AND  
(2) ADD: AND/OR

9. POINTS OF CONTACT:

A. F-14ABD NATOPS PROGRAM MANAGER, LT KYLE MILLER, TEL DSN 433-5147,  
OR COMM (757)433-5147, EMAIL: MILLERKA(AT)VF101.NAVY.MIL

B. NAVAIR POCS:

1. LT MIKE DOXEY, F-14ABD CLASS DESK, TEL DSN 757-7021, OR COMM  
(301)757-7021, EMAIL: MICHAEL.DOXEY(AT)NAVY.MIL

2. LCDR JR NASH, 4.0P NATOPS OFFICER, TEL DSN 995-2052, OR  
COMM (301)995-2052, EMAIL: JAMES.NASH(AT)NAVY.MIL

3. KRISTIN SWIFT, 4.0P NATOPS CHIEF ENGINEER, TEL DSN 995-4193,  
OR COMM (301)995-4193, EMAIL: KRISTIN.SWIFT(AT)NAVY.MIL

10. THIS MESSAGE WILL BE POSTED ON THE NATEC WEBSITE,  
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MAY BE FOUND IN TWO PLACES ON THIS WEBSITE:

(1) IN THE NATOPS IC DATABASE FOUND UNDER THE TMAPS OPTION, AND  
(2) IN THE AFFECTED PUBLICATION(S) JUST AFTER THE IC SUMMARY PAGE  
IF THE IC MESSAGE INCLUDES REPLACEMENT PAGES, THEY WILL BE  
ADDITIONALLY PLACED WITHIN THE MANUAL AND REPLACED PAGES DELETED.  
MESSAGES ARE NORMALLY POSTED IN THE DATABASE BEFORE APPEARING IN THE  
PUBLICATION. THIS MESSAGE WILL ALSO BE POSTED ON THE NATOPS WEBSITE,  
NATOPS.NAVAIR.NAVY.MIL. IF UNABLE TO VIEW THIS MESSAGE ON EITHER  
THE NATEC OR NATOPS WEBSITES, INFORM THE NATOPS GLOBAL CUSTOMER  
SUPPORT TEAM AT (301) 342-3276, DSN 342-3276, OR BY EMAIL AT  
NATOPS(AT)NAVY.MIL.//

BT  
#1234  
NNNN



PTTUZYUW RULSABU1234 2032005-UUUU--RHMCSUU.  
ZNR UUUUU  
P 212005Z JUL 04  
FM COMNAVAIRSYS COM PATUXENT RIVER MD//4.0P//  
TO ALL TOMCAT AIRCRAFT ACTIVITIES  
AL ALL TOMCAT AIRCRAFT ACTIVITIES  
INFO COMNAVAIRSYS COM PATUXENT RIVER MD//5.0F/4.1//  
COMNAVSAFECEN NORFOLK VA//11//  
COMNAVAIRPAC SAN DIEGO CA//N421B1//  
COMNAVAIRLANT NORFOLK VA//N421B//  
COMFITWINGLANT OCEANA VA//N4//  
NAVAIRDEPOT JACKSONVILLE FL//3.3.3//  
NAVSURVTRAINST PENSACOLA FL//02/025//  
FITRON ONE ZERO ONE  
BT  
UNCLAS //N03711//  
MSGID/GENADMIN/COMNAVAIRSYS COM/4.0P//  
SUBJ/F-14ABD AIRCRAFT NATOPS PUBLICATIONS INTERIM CHANGE -  
/SAFETY OF FLIGHT//  
REF/A/EML/COMNAVAIRFOR/20JUL2004//  
REF/B/MSG/FITRON ONE ZERO ONE/011815ZJUL2004//  
REF/C/DOC/COMNAVAIRSYS COM/15JAN2004//  
REF/D/DOC/COMNAVAIRSYS COM/15JAN2004//  
REF/E/DOC/COMNAVAIRSYS COM/15JAN2004//  
REF/F/DOC/COMNAVAIRSYS COM/15JAN2004//  
REF/G/DOC/COMNAVAIRSYS COM/15JAN2004//  
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CHANGE 2 DTD 15 JAN 04.  
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CHANGE 1 DTD 15 JAN 04.//  
RMKS/1. IRT REFS A AND B, THIS MESSAGE ISSUES INTERIM CHANGE (IC)  
NUMBER 17 TO REF C, INTERIM CHANGE (IC) NUMBER 28 TO REF D, INTERIM  
CHANGE (IC) NUMBER 32 TO REF E, INTERIM CHANGE (IC) NUMBER 48 TO REF  
F, INTERIM CHANGE (IC) NUMBER 106 TO REF G AND INTERIM CHANGE (IC)  
NUMBER 150 TO REF H.  
2. SUMMARY. THE FOLLOWING CHANGES MAKE CORRECTIONS TO  
REFS C THROUGH H FOR THE FUEL IMBALANCE/FUEL QUANTITY BALANCING  
EMERGENCY PROCEDURE. THE CORRECTIONS FOLLOW A SIMPLE AND LOGICAL  
PROGRESSION THROUGH EACH PCL AND NFM AS INDICATED. CHANGES MAY  
REQUIRE THE INSERTION OF A NEW PAGE IN SOME PCLS. REPLACEMENT  
PAGES CONTAINING THIS INTERIM CHANGE FOR DOWNLOADING AND  
INSERTION INTO REFS C THRU H WILL BE ATTACHED TO THIS INTERIM

CHANGE MSG WHEN IT IS POSTED ON THE NATEC AND NATOPS WEBSITES (SEE LAST PARA BELOW) .

3. CHANGE REF C (F-14D PCL), FUEL CHAPTER, PAGE 118, AS FOLLOWS:

A. (1) DELETE: STATEMENTS UNDER FIRST WARNING: "DURING AB OPERATIONS, NORM SHALL BE SELECTED. FWD OR AFT COULD DEplete THE SUMP TANKS."

(2) ADD (REPLACE WITH): "AB OPERATION IS NOT RECOMMENDED WITH A FUEL IMBALANCE OR WITH INDICATIONS OF VENTING FUEL."

B. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH BEFORE THE EXISTING NOTE PARAGRAPH AT THE BEGINNING OF THE PROCEDURE TO READ: "FUEL QUANTITY BALANCING IS NOT REQUIRED PRIOR TO COMPLETION OF WING/EXTERNAL TANK TRANSFER OR UNTIL ONE FUSELAGE TAPE DROPS BELOW 4,500 POUNDS."

C. (1) DELETE: NA

(2) ADD: STATEMENT IN CAPITAL ITALICS, PRIOR TO STEP 1, TO READ: "WITH A FUEL STATE BELOW 4500 POUNDS IN A SINGLE FEED GROUP AND A FUEL SPLIT GREATER THAN 1500 POUNDS BETWEEN THE AFT/LEFT AND FWD/RIGHT FEED GROUPS:"

D. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH IMMEDIATELY AFTER STEP 2 TO READ: "IF PRACTICAL, OBTAIN A VISUAL INSPECTION FOR VENTING FUEL.DO NOT DELAY EXECUTION OF EMERGENCY PROCEDURES FOR VISUAL INSPECTION."

E. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH AFTER PRECEDING (INSERTED) NOTE PARAGRAPH, BUT PRIOR TO THE EXISTING WARNING PARAGRAPH TO READ: "INDICATION OF FUEL BALANCING SHOULD APPEAR WITHIN 3 MINUTES OF SELECTING THE HIGH FUSELAGE TAPE SIDE."

F. (1) DELETE: ENTIRE WARNING THAT BEGINS WITH "AIRCRAFT ATTITUDE WILL HAVE A SIGNIFICANT INFLUENCE..."

(2) ADD: NA

G. (1) DELETE: NA

(2) ADD (MOVE): FIRST NOTE PARAGRAPH OF EXISTING PROCEDURE THAT BEGINS, "WITH A HIGH QUANTITY...", TO A POSITION IMMEDIATELY FOLLOWING THE SECOND ADDED NOTE PARAGRAPH BETWEEN STEPS 2 AND 3. UPDATE THE NOTE PARAGRAPH TO READ: "WITH A HIGH QUANTITY IN THE FWD/RT FUEL SYSTEM, THE GREATER STATIC HEAD PRESSURE, PARTICULARLY IN NOSE-UP ATTITUDES CAN CAUSE OVERFILLING OF THE AFT/LT FUEL SYSTEM AND SUBSEQUENT FUEL VENTING. TO PREVENT THIS, THE FEED SWITCH SHOULD BE RETURNED TO NORM BEFORE THE AFT/LT TAPE REACHES 6,200 POUNDS. OVERFILLING IS INDICATED BY A QUANTITY OF 6,600 POUNDS OR GREATER IN THE FWD/RT SYSTEM OR 6,200 POUNDS OF GREATER IN THE AFT/LT SYSTEM."

H. (1) DELETE: STATEMENT IMMEDIATELY PRECEDING STEP 3 THAT READS: "IF FUEL IMBALANCE INCREASES:"

(2) ADD (REPLACE WITH): "IF NO VENTING IS OBSERVED AND/OR THE FUEL IMBALANCE IS CORRECTED WITH THE FUEL FEED SWITCH:"

I. (1) DELETE: EXISTING STEP 3.

(2) ADD (REPLACE WITH): "3. FUEL FEED SWITCH - AS REQUIRED AND LAND AS SOON AS PRACTICABLE."

J. (1) DELETE: NA

(2) ADD (INSERT): STATEMENT IMMEDIATELY PRIOR TO STEP 4 TO READ: "IF FUEL VENTING EXISTS AND/OR FUEL IMBALANCE EXCEEDS 2,000 POUNDS:"

K. (1) DELETE: NA

(2) ADD (INSERT): NEW STEP 4 TO READ: "FUEL FEED SWITCH - NORM."

L. (1) DELETE: NA

(2) ADD (INSERT): WARNING PARAGRAPH IMMEDIATELY FOLLOWING NEW STEP 4 TO READ: "VENTING FUEL IN CONJUNCTION WITH AN UNCONTROLLABLE FUEL SPLIT IS INDICATIVE OF A MOTIVE FLOW FAILURE AND CAN RESULT IN THE HIGH FEED GROUP HAVING TRAPPED/UNUSABLE FUEL. IF THIS OCCURS, AIRCREW MAY HAVE AS LITTLE AS 4,500 POUNDS OF USABLE FUEL REMAINING AND A NEW BINGO PROFILE MAY BE REQUIRED."

M. (1) DELETE (CHANGE): RENUMBER EXISTING STEP 4 TO NEW STEP 5 WITHOUT CHANGING VERBIAGE.

N. (1) DELETE: NA

(2) ADD (INSERT): STATEMENT AFTER NEW STEP 5 TO READ: "IF INDICATIONS OF A FUEL LEAK EXIST:"

O. (1) DELETE: NA

(2) ADD (INSERT): NEW STEP 6 AFTER STATEMENT TO READ:

"6. REFER TO FUEL LEAK PROCEDURE (PAGE 116)."

4. CHANGE REF D (F-14D NFM), CHAPTER 14, PAGE 14-20, PARAGRAPH 14.6.6 AS FOLLOWS:

A. (1) DELETE: STATEMENTS UNDER FIRST WARNING: "DURING AB OPERATIONS, NORM SHALL BE SELECTED. FWD OR AFT COULD DEplete THE SUMP TANKS."

(2) ADD (REPLACE WITH): "AB OPERATION IS NOT RECOMMENDED WITH A FUEL IMBALANCE OR WITH INDICATIONS OF VENTING FUEL."

B. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH BEFORE THE EXISTING NOTE PARAGRAPH AT THE BEGINNING OF THE PROCEDURE TO READ: "FUEL QUANTITY BALANCING IS NOT REQUIRED PRIOR TO COMPLETION OF WING/EXTERNAL TANK TRANSFER OR UNTIL ONE FUSELAGE TAPE DROPS BELOW 4,500 POUNDS."

C. (1) DELETE: NA

(2) ADD: STATEMENT IN CAPITAL ITALICS, PRIOR TO STEP 1, TO READ: "WITH A FUEL STATE BELOW 4500 POUNDS IN A SINGLE FEED GROUP AND A FUEL SPLIT GREATER THAN 1500 POUNDS BETWEEN THE AFT/LEFT AND FWD/RIGHT FEED GROUPS:"

D. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH IMMEDIATELY AFTER STEP 2 TO READ: "IF PRACTICAL, OBTAIN A VISUAL INSPECTION FOR VENTING FUEL. DO NOT DELAY EXECUTION OF EMERGENCY PROCEDURES FOR VISUAL INSPECTION."

E. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH AFTER PRECEEDING (INSERTED) NOTE PARAGRAPH, BUT PRIOR TO THE EXISTING WARNING PARAGRAPH TO READ: "INDICATION OF FUEL BALANCING SHOULD APPEAR WITHIN 3 MINUTES OF SELECTING THE HIGH FUSELAGE TAPE SIDE."

F. (1) DELETE: ENTIRE WARNING THAT BEGINS WITH "AIRCRAFT ATTITUDE WILL HAVE A SIGNIFICANT INFLUENCE..."

(2) ADD: NA

G. (1) DELETE: NA

(2) ADD (MOVE): FIRST NOTE PARAGRAPH OF EXISTING PROCEDURE THAT BEGINS, "WITH A HIGH QUANTITY...", TO A POSITION IMMEDIATELY FOLLOWING THE SECOND ADDED NOTE PARAGRAPH BETWEEN STEPS 2 AND 3. UPDATE THE NOTE PARAGRAPH TO READ: "WITH A HIGH QUANTITY IN THE FWD/RT FUEL SYSTEM, THE GREATER STATIC HEAD PRESSURE, PARTICULARLY IN NOSE-UP ATTITUDES CAN CAUSE OVERFILLING OF THE AFT/LT FUEL SYSTEM AND SUBSEQUENT FUEL VENTING. TO PREVENT THIS, THE FEED SWITCH SHOULD BE RETURNED TO NORM BEFORE THE AFT/LT TAP REACHES 6,200 POUNDS. OVERFILLING IS INDICATED BY A QUANTITY OF 6,600 POUNDS OR GREATER IN THE FWD/RT SYSTEM OR 6,200 POUNDS OF GREATER IN THE AFT/LT SYSTEM."

H. (1) DELETE: STATEMENT IMMEDIATELY PRECEDING STEP 3 THAT READS: "IF FUEL IMBALANCE INCREASES:"

(2) ADD (REPLACE WITH): "IF NO VENTING IS OBSERVED AND/OR THE FUEL IMBALANCE IS CORRECTED WITH THE FUEL FEED SWITCH:"

I. (1) DELETE: EXISTING STEP 3.

(2) ADD (REPLACE WITH): "3. FUEL FEED SWITCH - AS REQUIRED AND LAND AS SOON AS PRACTICABLE."

J. (1) DELETE: NA

(2) ADD (INSERT): STATEMENT IMMEDIATELY PRIOR TO STEP 4 TO READ: "IF FUEL VENTING EXISTS AND/OR FUEL IMBALANCE EXCEEDS 2,000 POUNDS:"

K. (1) DELETE: NA

(2) ADD (INSERT): NEW STEP 4 TO READ: "FUEL FEED SWITCH - NORM."

L. (1) DELETE: NA

(2) ADD (INSERT): WARNING PARAGRAPH IMMEDIATELY FOLLOWING NEW STEP 4 TO READ: "VENTING FUEL IN CONJUNCTION WITH AN UNCONTROLLABLE FUEL SPLIT IS INDICATIVE OF A MOTIVE FLOW FAILURE AND CAN RESULT IN THE HIGH FEED GROUP HAVING TRAPPED/UNUSABLE FUEL. IF THIS OCCURS, AIRCREW MAY HAVE AS LITTLE AS 4,500 POUNDS OF USABLE FUEL REMAINING AND A NEW BINGO PROFILE MAY BE REQUIRED."

M. (1) DELETE (CHANGE): RENUMBER EXISTING STEP 4 TO NEW STEP 5 WITHOUT CHANGING VERBIAGE.

N. (1) DELETE: NA

(2) ADD (INSERT): STATEMENT AFTER NEW STEP 5 TO READ: "IF INDICATIONS OF A FUEL LEAK EXIST:"

O. (1) DELETE: NA

(2) ADD (INSERT): NEW STEP 6 AFTER STATEMENT TO READ: "6. REFER TO FUEL LEAK PROCEDURE (PAGE 14-19)."

5. CHANGE REF E (F-14B PCL), FUEL CHAPTER, PAGE 127 & 128 AS FOLLOWS:

A. (1) DELETE: STATEMENTS UNDER FIRST WARNING: "DURING AB OPERATIONS, NORM SHALL BE SELECTED. FWD OR AFT COULD DEplete THE SUMP TANKS."

(2) ADD (REPLACE WITH): "AB OPERATION IS NOT RECOMMENDED WITH A FUEL IMBALANCE OR WITH INDICATIONS OF VENTING FUEL."

B. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH BEFORE THE EXISTING NOTE PARAGRAPH AT THE BEGINNING OF THE PROCEDURE TO READ: "FUEL QUANTITY BALANCING IS NOT REQUIRED PRIOR TO COMPLETION OF WING/EXTERNAL TANK TRANSFER OR UNTIL ONE FUSELAGE TAP DROPS BELOW

4,500 POUNDS."

C. (1) DELETE: NA

(2) ADD: STATEMENT IN CAPITAL ITALICS, PRIOR TO STEP 1, TO READ: "WITH A FUEL STATE BELOW 4500 POUNDS IN A SINGLE FEED GROUP AND A FUEL SPLIT GREATER THAN 1500 POUNDS BETWEEN THE AFT/LEFT AND FWD/RIGHT FEED GROUPS:"

D. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH IMMEDIATELY AFTER STEP 2 TO READ: "IF PRACTICAL, OBTAIN A VISUAL INSPECTION FOR VENTING FUEL.DO NOT DELAY EXECUTION OF EMERGENCY PROCEDURES FOR VISUAL INSPECTION."

E. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH AFTER PRECEEDING (INSERTED) NOTE PARAGRAPH, BUT PRIOR TO THE EXISTING WARNING PARAGRAPH TO READ: "INDICATION OF FUEL BALANCING SHOULD APPEAR WITHIN 3 MINUTES OF SELECTING THE HIGH FUSELAGE TAPE SIDE."

F. (1) DELETE: ENTIRE WARNING THAT BEGINS WITH "AIRCRAFT ATTITUDE WILL HAVE A SIGNIFICANT INFLUENCE..."

(2) ADD: NA

G. (1) DELETE: NA

(2) ADD (MOVE): FIRST NOTE PARAGRAPH OF EXISTING PROCEDURE THAT BEGINS, "WITH A HIGH QUANTITY...", TO A POSITION IMMEDIATELY FOLLOWING THE SECOND ADDED NOTE PARAGRAPH BETWEEN STEPS 2 AND 3. UPDATE THE NOTE PARAGRAPH TO READ: "WITH A HIGH QUANTITY IN THE FWD/RT FUEL SYSTEM, THE GREATER STATIC HEAD PRESSURE, PARTICULARLY IN NOSE-UP ATTITUDES CAN CAUSE OVERFILLING OF THE AFT/LT FUEL SYSTEM AND SUBSEQUENT FUEL VENTING. TO PREVENT THIS, THE FEED SWITCH SHOULD BE RETURNED TO NORM BEFORE THE AFT/LT TAPE REACHES 6,200 POUNDS. OVERFILLING IS INDICATED BY A QUANTITY OF 6,600 POUNDS OR GREATER IN THE FWD/RT SYSTEM OR 6,200 POUNDS OF GREATER IN THE AFT/LT SYSTEM."

H. (1) DELETE: STATEMENT IMMEDIATELY PRECEDING STEP 3 THAT READS: "IF FUEL IMBALANCE INCREASES:"

(2) ADD (REPLACE WITH): "IF NO VENTING IS OBSERVED AND/OR THE FUEL IMBALANCE IS CORRECTED WITH THE FUEL FEED SWITCH:"

I. (1) DELETE: EXISTING STEP 3.

(2) ADD (REPLACE WITH): "3. FUEL FEED SWITCH - AS REQUIRED AND LAND AS SOON AS PRACTICABLE."

J. (1) DELETE: NA

(2) ADD (INSERT): STATEMENT IMMEDIATELY PRIOR TO STEP 4 TO READ: "IF FUEL VENTING EXISTS AND/OR FUEL IMBALANCE EXCEEDS 2,000 POUNDS:"

K. (1) DELETE: NA

(2) ADD (INSERT): NEW STEP 4 TO READ: "FUEL FEED SWITCH - NORM."

L. (1) DELETE: NA

(2) ADD (INSERT): WARNING PARAGRAPH IMMEDIATELY FOLLOWING NEW STEP 4 TO READ: "VENTING FUEL IN CONJUNCTION WITH AN UNCONTROLLABLE FUEL SPLIT IS INDICATIVE OF A MOTIVE FLOW FAILURE AND CAN RESULT IN THE HIGH FEED GROUP HAVING TRAPPED/UNUSABLE FUEL. IF THIS OCCURS, AIRCREW MAY HAVE AS LITTLE AS 4,500 POUNDS OF USABLE FUEL REMAINING AND A NEW BINGO PROFILE MAY BE REQUIRED."

M. (1) DELETE (CHANGE): RENUMBER EXISTING STEP 4 TO NEW STEP 5 WITHOUT CHANGING VERBIAGE.

N. (1) DELETE: NA  
 (2) ADD (INSERT): STATEMENT AFTER NEW STEP 5 TO READ: "IF INDICATIONS OF A FUEL LEAK EXIST:"

O. (1) DELETE: NA  
 (2) ADD (INSERT): NEW STEP 6 AFTER STATEMENT TO READ: "6. REFER TO FUEL LEAK PROCEDURE (PAGE 126A)."  
 6. CHANGE REF F (F-14B NFM), CHAPTER 14, PAGE 14-20A, PARAGRAPH 14.6.6 AS FOLLOWS:

A. (1) DELETE: STATEMENTS UNDER FIRST WARNING: "DURING AB OPERATIONS, NORM SHALL BE SELECTED. FWD OR AFT COULD DEplete THE SUMP TANKS."  
 (2) ADD (REPLACE WITH): "AB OPERATION IS NOT RECOMMENDED WITH A FUEL IMBALANCE OR WITH INDICATIONS OF VENTING FUEL."

B. (1) DELETE: NA  
 (2) ADD (INSERT): NOTE PARAGRAPH BEFORE THE EXISTING NOTE PARAGRAPH AT THE BEGINNING OF THE PROCEDURE TO READ: "FUEL QUANTITY BALANCING IS NOT REQUIRED PRIOR TO COMPLETION OF WING/EXTERNAL TANK TRANSFER OR UNTIL ONE FUSELAGE TAPE DROPS BELOW 4,500 POUNDS."

C. (1) DELETE: NA  
 (2) ADD: STATEMENT IN CAPITAL ITALICS, PRIOR TO STEP 1, TO READ: "WITH A FUEL STATE BELOW 4500 POUNDS IN A SINGLE FEED GROUP AND A FUEL SPLIT GREATER THAN 1500 POUNDS BETWEEN THE AFT/LEFT AND FWD/RIGHT FEED GROUPS:"

D. (1) DELETE: NA  
 (2) ADD (INSERT): NOTE PARAGRAPH IMMEDIATELY AFTER STEP 2 TO READ: "IF PRACTICAL, OBTAIN A VISUAL INSPECTION FOR VENTING FUEL.DO NOT DELAY EXECUTION OF EMERGENCY PROCEDURES FOR VISUAL INSPECTION."

E. (1) DELETE: NA  
 (2) ADD (INSERT): NOTE PARAGRAPH AFTER PRECEEDING (INSERTED) NOTE PARAGRAPH, BUT PRIOR TO THE EXISTING WARNING PARAGRAPH TO READ: "INDICATION OF FUEL BALANCING SHOULD APPEAR WITHIN 3 MINUTES OF SELECTING THE HIGH FUSELAGE TAPE SIDE."

F. (1) DELETE: ENTIRE WARNING THAT BEGINS WITH "AIRCRAFT ATTITUDE WILL HAVE A SIGNIFICANT INFLUENCE..."  
 (2) ADD: NA

G. (1) DELETE: NA  
 (2) ADD (MOVE): FIRST NOTE PARAGRAPH OF EXISTING PROCEDURE THAT BEGINS, "WITH A HIGH QUANTITY...", TO A POSITION IMMEDIATELY FOLLOWING THE SECOND ADDED NOTE PARAGRAPH BETWEEN STEPS 2 AND 3. UPDATE THE NOTE PARAGRAPH TO READ: "WITH A HIGH QUANTITY IN THE FWD/RT FUEL SYSTEM, THE GREATER STATIC HEAD PRESSURE, PARTICULARLY IN NOSE-UP ATTITUDES CAN CAUSE OVERFILLING OF THE AFT/LT FUEL SYSTEM AND SUBSEQUENT FUEL VENTING. TO PREVENT THIS, THE FEED SWITCH SHOULD BE RETURNED TO NORM BEFORE THE AFT/LT TAPE REACHES 6,200 POUNDS. OVERFILLING IS INDICATED BY A QUANTITY OF 6,600 POUNDS OR GREATER IN THE FWD/RT SYSTEM OR 6,200 POUNDS OF GREATER IN THE AFT/LT SYSTEM."

H. (1) DELETE: STATEMENT IMMEDIATELY PRECEDING STEP 3 THAT READS: "IF FUEL IMBALANCE INCREASES:"



(2) ADD (REPLACE WITH): "IF NO VENTING IS OBSERVED AND/OR THE FUEL IMBALANCE IS CORRECTED WITH THE FUEL FEED SWITCH:"

I. (1) DELETE: EXISTING STEP 3.

(2) ADD (REPLACE WITH): "3. FUEL FEED SWITCH - AS REQUIRED AND LAND AS SOON AS PRACTICABLE."

J. (1) DELETE: NA

(2) ADD (INSERT): STATEMENT IMMEDIATELY PRIOR TO STEP 4 TO READ: "IF FUEL VENTING EXISTS AND/OR FUEL IMBALANCE EXCEEDS 2,000 POUNDS:"

K. (1) DELETE: NA

(2) ADD (INSERT): NEW STEP 4 TO READ: "FUEL FEED SWITCH - NORM."

L. (1) DELETE: NA

(2) ADD (INSERT): WARNING PARAGRAPH IMMEDIATELY FOLLOWING NEW STEP 4 TO READ: "VENTING FUEL IN CONJUNCTION WITH AN UNCONTROLLABLE FUEL SPLIT IS INDICATIVE OF A MOTIVE FLOW FAILURE AND CAN RESULT IN THE HIGH FEED GROUP HAVING TRAPPED/UNUSABLE FUEL. IF THIS OCCURS, AIRCREW MAY HAVE AS LITTLE AS 4,500 POUNDS OF USABLE FUEL REMAINING AND A NEW BINGO PROFILE MAY BE REQUIRED."

M. (1) DELETE (CHANGE): RENUMBER EXISTING STEP 4 TO NEW STEP 5 WITHOUT CHANGING VERBIAGE.

N. (1) DELETE: NA

(2) ADD (INSERT): STATEMENT AFTER NEW STEP 5 TO READ: "IF INDICATIONS OF A FUEL LEAK EXIST:"

O. (1) DELETE: NA

(2) ADD (INSERT): NEW STEP 6 AFTER STATEMENT TO READ: "6. REFER TO FUEL LEAK PROCEDURE (PAGE 14-20)."

7. CHANGE REF G (F-14A PCL), FUEL CHAPTER, PAGE 98, AS FOLLOWS:

A. (1) DELETE: STATEMENTS UNDER FIRST WARNING: "DURING AB OPERATIONS, NORM SHALL BE SELECTED. FWD OR AFT COULD DEplete THE SUMP TANKS."

(2) ADD (REPLACE WITH): "AB OPERATION IS NOT RECOMMENDED WITH A FUEL IMBALANCE OR WITH INDICATIONS OF VENTING FUEL."

B. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH BEFORE THE EXISTING NOTE PARAGRAPH AT THE BEGINNING OF THE PROCEDURE TO READ: "FUEL QUANTITY BALANCING IS NOT REQUIRED PRIOR TO COMPLETION OF WING/EXTERNAL TANK TRANSFER OR UNTIL ONE FUSELAGE TAPE DROPS BELOW 4,500 POUNDS."

C. (1) DELETE: NA

(2) ADD: STATEMENT IN CAPITAL ITALICS, PRIOR TO STEP 1, TO READ: "WITH A FUEL STATE BELOW 4500 POUNDS IN A SINGLE FEED GROUP AND A FUEL SPLIT GREATER THAN 1500 POUNDS BETWEEN THE AFT/LEFT AND FWD/RIGHT FEED GROUPS:"

D. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH IMMEDIATELY AFTER STEP 2 TO READ: "IF PRACTICAL, OBTAIN A VISUAL INSPECTION FOR VENTING FUEL. DO NOT DELAY EXECUTION OF EMERGENCY PROCEDURES FOR VISUAL INSPECTION."

E. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH AFTER PRECEEDING (INSERTED) NOTE PARAGRAPH, BUT PRIOR TO THE EXISTING WARNING PARAGRAPH TO READ:

"INDICATION OF FUEL BALANCING SHOULD APPEAR WITHIN 3 MINUTES OF SELECTING THE HIGH FUSELAGE TAPE SIDE."

F. (1) DELETE: ENTIRE WARNING THAT BEGINS WITH "AIRCRAFT ATTITUDE WILL HAVE A SIGNIFICANT INFLUENCE..."

(2) ADD: NA

G. (1) DELETE: NA

(2) ADD (MOVE): FIRST NOTE PARAGRAPH OF EXISTING PROCEDURE THAT BEGINS, "WITH A HIGH QUANTITY...", TO A POSITION IMMEDIATELY FOLLOWING THE SECOND ADDED NOTE PARAGRAPH BETWEEN STEPS 2 AND 3. UPDATE THE NOTE PARAGRAPH TO READ: "WITH A HIGH QUANTITY IN THE FWD/RT FUEL SYSTEM, THE GREATER STATIC HEAD PRESSURE, PARTICULARLY IN NOSE-UP ATTITUDES CAN CAUSE OVERFILLING OF THE AFT/LT FUEL SYSTEM AND SUBSEQUENT FUEL VENTING. TO PREVENT THIS, THE FEED SWITCH SHOULD BE RETURNED TO NORM BEFORE THE AFT/LT TAPE REACHES 6,200 POUNDS. OVERFILLING IS INDICATED BY A QUANTITY OF 6,600 POUNDS OR GREATER IN THE FWD/RT SYSTEM OR 6,200 POUNDS OF GREATER IN THE AFT/LT SYSTEM."

H. (1) DELETE: STATEMENT IMMEDIATELY PRECEDING STEP 3 THAT READS: "IF FUEL IMBALANCE INCREASES:"

(2) ADD (REPLACE WITH): "IF NO VENTING IS OBSERVED AND/OR THE FUEL IMBALANCE IS CORRECTED WITH THE FUEL FEED SWITCH:"

I. (1) DELETE: EXISTING STEP 3.

(2) ADD (REPLACE WITH): "3. FUEL FEED SWITCH - AS REQUIRED AND LAND AS SOON AS PRACTICABLE."

J. (1) DELETE: NA

(2) ADD (INSERT): STATEMENT IMMEDIATELY PRIOR TO STEP 4 TO READ: "IF FUEL VENTING EXISTS AND/OR FUEL IMBALANCE EXCEEDS 2,000 POUNDS:"

K. (1) DELETE: NA

(2) ADD (INSERT): NEW STEP 4 TO READ: "FUEL FEED SWITCH - NORM."

L. (1) DELETE: NA

(2) ADD (INSERT): WARNING PARAGRAPH IMMEDIATELY FOLLOWING NEW STEP 4 TO READ: "VENTING FUEL IN CONJUNCTION WITH AN UNCONTROLLABLE FUEL SPLIT IS INDICATIVE OF A MOTIVE FLOW FAILURE AND CAN RESULT IN THE HIGH FEED GROUP HAVING TRAPPED/UNUSABLE FUEL. IF THIS OCCURS, AIRCREW MAY HAVE AS LITTLE AS 4,500 POUNDS OF USABLE FUEL REMAINING AND A NEW BINGO PROFILE MAY BE REQUIRED."

M. (1) DELETE (CHANGE): RENUMBER EXISTING STEP 4 TO NEW STEP 5 WITHOUT CHANGING VERBIAGE.

N. (1) DELETE: NA

(2) ADD (INSERT): STATEMENT AFTER NEW STEP 5 TO READ: "IF INDICATIONS OF A FUEL LEAK EXIST:"

O. (1) DELETE: NA

(2) ADD (INSERT): NEW STEP 6 AFTER STATEMENT TO READ: "6. REFER TO FUEL LEAK PROCEDURE (PAGE 97)."

8. CHANGE REF H (F-14A NFM), CHAPTER 14, PAGE 14-17, PARAGRAPH 14.6.6 AS FOLLOWS:

A. (1) DELETE: STATEMENTS UNDER FIRST WARNING: "DURING AB OPERATIONS, NORM SHALL BE SELECTED. FWD OR AFT COULD DEplete THE SUMP TANKS."

(2) ADD (REPLACE WITH): "AB OPERATION IS NOT RECOMMENDED WITH A FUEL IMBALANCE OR WITH INDICATIONS OF VENTING FUEL."

B. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH BEFORE THE EXISTING NOTE PARAGRAPH AT THE BEGINNING OF THE PROCEDURE TO READ: "FUEL QUANTITY BALANCING IS NOT REQUIRED PRIOR TO COMPLETION OF WING/EXTERNAL TANK TRANSFER OR UNTIL ONE FUSELAGE TAPE DROPS BELOW 4,500 POUNDS."

C. (1) DELETE: NA

(2) ADD: STATEMENT IN CAPITAL ITALICS, PRIOR TO STEP 1, TO READ: "WITH A FUEL STATE BELOW 4500 POUNDS IN A SINGLE FEED GROUP AND A FUEL SPLIT GREATER THAN 1500 POUNDS BETWEEN THE AFT/LEFT AND FWD/RIGHT FEED GROUPS:"

D. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH IMMEDIATELY AFTER STEP 2 TO READ: "IF PRACTICAL, OBTAIN A VISUAL INSPECTION FOR VENTING FUEL.DO NOT DELAY EXECUTION OF EMERGENCY PROCEDURES FOR VISUAL INSPECTION."

E. (1) DELETE: NA

(2) ADD (INSERT): NOTE PARAGRAPH AFTER PRECEEDING (INSERTED) NOTE PARAGRAPH, BUT PRIOR TO THE EXISTING WARNING PARAGRAPH TO READ: "INDICATION OF FUEL BALANCING SHOULD APPEAR WITHIN 3 MINUTES OF SELECTING THE HIGH FUSELAGE TAPE SIDE."

F. (1) DELETE: ENTIRE WARNING THAT BEGINS WITH "AIRCRAFT ATTITUDE WILL HAVE A SIGNIFICANT INFLUENCE..."

(2) ADD: NA

G. (1) DELETE: NA

(2) ADD (MOVE): FIRST NOTE PARAGRAPH OF EXISTING PROCEDURE THAT BEGINS, "WITH A HIGH QUANTITY...", TO A POSITION IMMEDIATELY FOLLOWING THE SECOND ADDED NOTE PARAGRAPH BETWEEN STEPS 2 AND 3. UPDATE THE NOTE PARAGRAPH TO READ: "WITH A HIGH QUANTITY IN THE FWD/RT FUEL SYSTEM, THE GREATER STATIC HEAD PRESSURE, PARTICULARLY IN NOSE-UP ATTITUDES CAN CAUSE OVERFILLING OF THE AFT/LT FUEL SYSTEM AND SUBSEQUENT FUEL VENTING. TO PREVENT THIS, THE FEED SWITCH SHOULD BE RETURNED TO NORM BEFORE THE AFT/LT TAPE REACHES 6,200 POUNDS. OVERFILLING IS INDICATED BY A QUANTITY OF 6,600 POUNDS OR GREATER IN THE FWD/RT SYSTEM OR 6,200 POUNDS OF GREATER IN THE AFT/LT SYSTEM."

H. (1) DELETE: STATEMENT IMMEDIATELY PRECEDING STEP 3 THAT READS: "IF FUEL IMBALANCE INCREASES:"

(2) ADD (REPLACE WITH): "IF NO VENTING IS OBSERVED AND/OR THE FUEL IMBALANCE IS CORRECTED WITH THE FUEL FEED SWITCH:"

I. (1) DELETE: EXISTING STEP 3.

(2) ADD (REPLACE WITH): "3. FUEL FEED SWITCH - AS REQUIRED AND LAND AS SOON AS PRACTICABLE."

J. (1) DELETE: NA

(2) ADD (INSERT): STATEMENT IMMEDIATELY PRIOR TO STEP 4 TO READ: "IF FUEL VENTING EXISTS AND/OR FUEL IMBALANCE EXCEEDS 2,000 POUNDS:"

K. (1) DELETE: NA

(2) ADD (INSERT): NEW STEP 4 TO READ: "FUEL FEED SWITCH - NORM."

L. (1) DELETE: NA  
 (2) ADD (INSERT): WARNING PARAGRAPH IMMEDIATELY FOLLOWING NEW STEP 4 TO READ: "VENTING FUEL IN CONJUNCTION WITH AN UNCONTROLLABLE FUEL SPLIT IS INDICATIVE OF A MOTIVE FLOW FAILURE AND CAN RESULT IN THE HIGH FEED GROUP HAVING TRAPPED/UNUSABLE FUEL. IF THIS OCCURS, AIRCREW MAY HAVE AS LITTLE AS 4,500 POUNDS OF USABLE FUEL REMAINING AND A NEW BINGO PROFILE MAY BE REQUIRED."

M. (1) DELETE (CHANGE): RENUMBER EXISTING STEP 4 TO NEW STEP 5 WITHOUT CHANGING VERBIAGE.  
 N. (1) DELETE: NA  
 (2) ADD (INSERT): STATEMENT AFTER NEW STEP 5 TO READ: "IF INDICATIONS OF A FUEL LEAK EXIST:"

O. (1) DELETE: NA  
 (2) ADD (INSERT): NEW STEP 6 AFTER STATEMENT TO READ: "6. REFER TO FUEL LEAK PROCEDURE (PAGE 14-16)."

9. POINTS OF CONTACT:  
 A. F-14ABD NATOPS PROGRAM MANAGER, LT KYLE MILLER, TEL DSN 433-5147, OR COMM (757)433-5147, EMAIL: MILLERKA(AT)VF101.NAVY.MIL  
 B. NAVAIR POCS:  
 1. LT MIKE DOXEY, F-14ABD CLASS DESK, TEL DSN 757-7021, OR COMM(301)757-7021, EMAIL: MICHAEL.DOXEY(AT)NAVY.MIL  
 2. LCDR JR NASH, 4.0P NATOPS OFFICER, TEL DSN 995-2052, OR COMM (301)995-2052, EMAIL: JAMES.NASH(AT)NAVY.MIL  
 3. KRISTIN SWIFT, 4.0P NATOPS CHIEF ENGINEER, TEL DSN 995-4193, OR COMM (301)995-4193, EMAIL: KRISTIN.SWIFT(AT)NAVY.MIL

10. THIS MESSAGE WILL BE POSTED ON THE NATEC WEBSITE, WWW.NATEC.NAVY.MIL WITHIN 15 DAYS OF RELEASE. NEW NATOPS IC MESSAGES MAY BE FOUND IN TWO PLACES ON THIS WEBSITE:  
 (1) IN THE NATOPS IC DATABASE FOUND UNDER THE TMAPS OPTION, AND  
 (2) IN THE AFFECTED PUBLICATIONS(S) JUST AFTER THE IC SUMMARY PAGE. IF THE IC MESSAGE INCLUDES REPLACEMENT PAGES, THEY WILL BE ADDITIONALLY PLACED WITHIN THE MANUAL AND REPLACED PAGES DELETED. MESSAGES ARE NORMALLY POSTED IN THE DATABASE BEFORE APPEARING IN THE PUBLICATION. THIS MESSAGE WILL ALSO BE POSTED ON THE NATOPS WEBSITE, NATOPS.NAVAIR.NAVY.MIL. IF UNABLE TO VIEW THIS MESSAGE ON EITHER THE NATEC OR NATOPS WEBSITES, INFORM THE NATOPS GLOBAL CUSTOMER SUPPORT TEAM AT (301) 342-3276, DSN 342-3276, OR BY EMAIL AT NATOPS(AT)NAVY.MIL.//  
 BT  
 #1234  
 NNNN

NAVAIR 01-F14AAP-1B  
F-14B AIRCRAFT  
PILOT'S POCKET CHECKLIST  
INTERIM CHANGE 32 & 33  
REPLACEMENT PAGES

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1. Replacement pages for Interim Change Numbers 32 & 33 to the F-14B PCL, NAVAIR 01-F14AAP-1B dated 15 Jan 2004, are attached as follows:

Page	Page Version Marking
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123	Change 3 W/ IC 33
124	Change 3 W/ IC 33
124a	Change 3 W/ IC 33
124b	Change 3
127	Change 3 W/ IC 32
128	Change 3 W/ IC 32



**CRITICAL PROCEDURE**

Procedures marked with an asterisk are considered to be time critical and are so identified to emphasize their importance. Pilots should be able to accomplish these procedures without reference to the checklist.

**EMERGENCY PROCEDURES INDEX**

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**CRITICAL PROCEDURE**

Procedures marked with an asterisk are considered to be time critical and are so identified to emphasize their importance. Pilots should be able to accomplish these procedures without reference to the checklist.

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<b>WARNING LIGHT</b>	<b>CAUTION LIGHT</b>	ADVISORY LIGHT
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LIGHT	CAUSE	ACTION
<b>ACLS/AP</b>	ACLS or autopilot disengagement.	Take control for manual landing approach.
AHRS	Failure of AHRS or compass controller.	Use INS-IMU; avoid IFR flight if INS-IMU not available.
<b>A/P REF</b>	Selected A/P reference is not engaged.	Depress autopilot reference pushbutton to engage A/P reference mode.
<b>ARI DGR</b>	Indicates degraded ARI performance	<ol style="list-style-type: none"> <li>1. MASTER RESET</li> <li>2. See page 96.</li> </ol>
<b>ARI/SAS OUT</b>	Loss of Roll or Yaw SAS and all ARI functions.	<ol style="list-style-type: none"> <li>1. Ensure ROLL and YAW STAB AUG switches ON.</li> <li>2. MASTER RESET.</li> <li>3. See page 96.</li> </ol>
<b>AUTO PILOT</b>	Autopilot or reference failure.	<ol style="list-style-type: none"> <li>1. MASTER RESET</li> </ol>
AUX FIRE EXT	Low-extinguisher agent pressure.	Report to maintenance.
<b>AUTO THROT</b>	Auto throttle has been disengaged.	<ol style="list-style-type: none"> <li>1. Assume manual/boost control.</li> <li>2. Satisfy APC interlocks.</li> <li>3. Reengage APC AUTO.</li> </ol>
AWG-9 COND	Overheat in AWG-9 coolant loop.	<ol style="list-style-type: none"> <li>1. AWG-9 LIQ COOLING switch OFF</li> <li>2. AWG-9 OFF</li> <li>3. See page 17.</li> </ol>
<b>BINGO</b>	Totalizer less than preset value.	Pilot option
<b>BLEED DUCT</b>	Bleed duct overheat condition or ECS regulating failure.	<ol style="list-style-type: none"> <li>*1. AIR SOURCE pushbutton OFF</li> <li>2. See page 11.</li> </ol>

**WARNING/CAUTION/ADVISORY LIGHTS (SHEET 1 OF 6)**

LIGHT	CAUSE	ACTION
<b>BRAKES</b>	Operating in Aux brake mode or antiskid failure	<ol style="list-style-type: none"> <li>1. Turn antiskid off.</li> <li>2. Cautious brake application</li> <li>3. Release emergency brake</li> </ol>
<b>CABIN PRESS</b>	Cabin pressure failure.	<ol style="list-style-type: none"> <li>1. O<sub>2</sub> mask on</li> <li>2. See page 17.</li> </ol>
<b>CADC</b>	CADC failure.	<ol style="list-style-type: none"> <li>1. MASTER RESET.</li> <li>2. See page 119.</li> </ol>
<b>CANOPY</b>	Canopy not locked.	<ol style="list-style-type: none"> <li>*1. Boost close</li> <li>*2. EJECT CMD lever — PILOT</li> <li>3. See page 20.</li> </ol>
<b>C &amp; D HOT</b>	Controls and displays hot.	<ol style="list-style-type: none"> <li>1. Select cabin air.</li> <li>2. WCS switch OFF.</li> </ol>
COOLING AIR (IN FLIGHT)	Indication of possible bleed duct failure forward of the pressure primary heat exchanger and 400°F modulating valve.	<ol style="list-style-type: none"> <li>1. AIR SOURCE OFF</li> <li>2. Assume ECS malfunction. See page 15.</li> </ol>
COOLING AIR (ON DECK)	Inadequate cooling.	<ol style="list-style-type: none"> <li>1. See page 14.</li> </ol>
<b>EMERG JETT</b>	EMERG STORES JETT pushbutton may be activated. Normal after emergency jettison.	<p>If not after emergency jettison: On deck — Report to maintenance.</p> <p>In flight —</p> <ol style="list-style-type: none"> <li>1. Do not press EMERG STORES JETT pushbutton.</li> <li>2. Obtain visual check of stores status.</li> <li>3. Avoid populated areas.</li> <li>4. Land as soon as practicable.</li> </ol>

**WARNING/CAUTION/ADVISORY LIGHTS (SHEET 2)**

LIGHT	CAUSE	ACTION
<div style="border: 1px dashed black; padding: 2px; display: inline-block;">L ENG SEC</div> <div style="border: 1px dashed black; padding: 2px; display: inline-block;">R ENG SEC</div>	Engine mode control in secondary	<ol style="list-style-type: none"> <li>1. Throttle — LESS THAN MIL</li> <li>2. ENG MODE SELECT switch — CYCLE</li> <li>3. See page 55.</li> </ol>
ENG FIRE EXT	Low-extinguisher agent pressure.	Report to maintenance
<div style="border: 1px dashed black; padding: 2px; display: inline-block;">FCS CAUTION</div>	DFCS failure has occurred. With no other lights, indicates loss of redundancy only.	<ol style="list-style-type: none"> <li>1. MASTER RESET.</li> <li>2. See page 94.</li> </ol>
FILM LOW	Mission Recorder film low.	Change film magazine.
<div style="border: 1px solid black; padding: 2px; display: inline-block;">L FIRE</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">R FIRE</div>	Fire/overheat condition in engine nacelle	<ol style="list-style-type: none"> <li>*1. Throttle IDLE</li> <li>*2. AIR SOURCE OFF.</li> <li>3. See page 71.</li> </ol>
<div style="border: 1px dashed black; padding: 2px; display: inline-block;">FLAP</div>	Flap position disparity with commanded position or asymmetric procedures.	<ol style="list-style-type: none"> <li>1. Airspeed below 225 KIAS.</li> <li>2. See page 92.</li> </ol>
<div style="border: 1px dashed black; padding: 2px; display: inline-block;">L FUEL LOW</div> <div style="border: 1px dashed black; padding: 2px; display: inline-block;">R FUEL LOW</div>	Usable fuel in L and AFT or R and FWD fuselage tanks 1,000 pounds.	<ol style="list-style-type: none"> <li>1. DUMP switch OFF.</li> <li>2. See page 124.</li> </ol>
<div style="border: 1px dashed black; padding: 2px; display: inline-block;">L FUEL PRESS</div> <div style="border: 1px dashed black; padding: 2px; display: inline-block;">R FUEL PRESS</div>	Sump tank boost pump discharge less than 9 psi.	<ol style="list-style-type: none"> <li>1. Both throttles — MIL POWER OR LESS</li> <li>2. Restore aircraft to 1.0g flight.</li> <li>3. See page 123.</li> </ol>
<div style="border: 1px dashed black; padding: 2px; display: inline-block;">FUSE HV</div>	AWW-4 electric fuse inoperative	Use manual fuse.
<div style="border: 1px dashed black; padding: 2px; display: inline-block;">L GEN</div> <div style="border: 1px dashed black; padding: 2px; display: inline-block;">R GEN</div>	Gen failure and/or disconnected from its ac bus.	<ol style="list-style-type: none"> <li>1. Reset</li> <li>2. See page 31.</li> </ol>

**WARNING/CAUTION/ADVISORY LIGHTS (SHEET 3)**

LIGHT	CAUSE	ACTION
<b>HYD PRESS</b>	Combined or flight pump discharge pressure 2,100 psi or less.	1. See page 133.
<b>HZ TAIL AUTH</b>	CADC failure or failure of actuators to follow schedule.	1. MASTER RESET (10 seconds) 2. Above 400 KIAS, restrict lateral control to 1/4 throw. 3. No oversweep on deck 4. See page 99.
IMU	Failure of IMU.	Switch to AHRS.
INTEG trim	Power loss or discrepancy between input signal and position.	1. MASTER RESET 2. Cycle INTEG TRIM cb's resetting DC (8F3), then AC (1I2) 3. Pull cb's and leave out if light remains on.
<b>R INLET</b> <b>L INLET</b>	Computer malfunction or ramp mispositioning.	*1. Avoid abrupt throttle movements. *2. Decelerate below 1.2 IMN. 3. See page 62.
<b>INLET ICE</b>	Icing condition exists inlet or eng anti-ice is on.	1. Select ORIDE/ON. 2. When clear of icing conditions select AUTO/OFF. 3. See page 65.
LADDER	Ladder not stowed.	1. Airspeed minimum. 2. See page 21.
LAUNCH BAR (Ground)	Launch bar unlocked, engines < MIL thrust.	As appropriate.
LAUNCH BAR (Flight)	Launch bar not locked in up position or cocked nose gear.	1. Do not retract landing gear. 2. See page 155.
<b>MASTER CAUTION</b>	Actuated by any light on caution panel.	Push to reset after discrete MSG noted.

**WARNING/CAUTION/ADVISORY LIGHTS (SHEET 4)**

LIGHT	CAUSE	ACTION
MACH TRIM	Failure of mach trim actuator to follow program.	1. MASTER RESET 2. Retrim manually.
MSL COND	AIM-54 coolant hot or no flow.	1. Check LIQ COOLING switch. 2. LIQ COOLING switch to AWG-9 if AWG-9/ AIM-54 selected. 3. See page 18.
NAV COMP	Navigation system advisory.	Check Navigation System status on CDNU.
<b>NWS ENGAGE</b>	Nosewheel steering is engaged.	Disengage before catapult or when runway heading established.
<b>L OIL HOT</b> <b>R OIL HOT</b>	Engine oil temp limits exceeded or high scavenge-oil temp.	1. On deck increase fuel flow. 2. Airborne see page 66.
<b>OIL PRESS</b>	L or R oil press <11 psi.	1. Throttle IDLE. 2. See page 67.
<b>OXY LOW</b>	Qty ≤ 2 liters.	1. Inform pilot. 2. See page 20.
<b>PITCH SAS</b>	Indicates inoperative pitch channel or pitch SAS failure.	1. MASTER RESET. 2. If light remains, no limitations. 3. See page 95.
<b>L RAMP</b> <b>R RAMP</b>	Computer/Mechanical malfunction or ramp mis-positioning.	*1. Avoid abrupt throttle movements. *2. Decelerate to below 1.2 IMN. 3. See page 62.
RATS	RATS operation enabled	As appropriate.
<b>RDR ENBL</b>	Radar operation on ground is possible.	WCS switch to STBY (as applicable).
<b>REDUCE SPEED</b>	Flaps fail down, airspeed 225 KIAS Total temp 338°F, 2.4 M	1. Reduce speed. 2. Check FLAP handle. 3. MASTER RESET

**WARNING/CAUTION/ADVISORY LIGHTS (SHEET 5)**

ECS

LIGHT	CAUSE	ACTION
<b>ROLL DGR</b>	Indicates inoperative roll channel and degraded roll authority.	<ol style="list-style-type: none"> <li>1. MASTER RESET</li> <li>2. See page 96.</li> </ol>
<b>RUDDER AUTH</b>	CADC failure or failure of actuator to follow schedule.	<ol style="list-style-type: none"> <li>1. MASTER RESET (10 seconds)</li> <li>2. See page 100.</li> </ol>
<b>SPOILERS</b>	Symmetric spoiler detector has locked down spoilers.	<ol style="list-style-type: none"> <li>1. MASTER RESET.</li> <li>2. See page 85.</li> </ol>
<b>START VALVE</b>	Starter solenoid air valve open after engine start.	<ol style="list-style-type: none"> <li>1. Ensure ENG CRANK — OFF</li> <li>2. AIR SOURCE pushbutton OFF.</li> <li>3. See page 48.</li> </ol>
<b>L STALL</b> <b>R STALL</b>	Engine stall and/or overtemp, or faulty monitor circuit.	See COMPRESSOR STALL and ENGINE FLAME-OUT procedures, page 48.
TARPS ECS	Overtemp in TARPS pod.	<ol style="list-style-type: none"> <li>1. TARP sensors-OFF.</li> <li>2. SYSTEM switch- OFF.</li> <li>3. See page 18.</li> </ol>
TRANS/RECT	Lack of dc output from either or both T/R.	Check bus tie: Left T/R — Master Test. Right T/R — OTBD spoilers See page 31.
<b>WHEELS</b>	Landing gear not down with flaps down and either throttles ≤ 85%.	Lower gear.
<b>WING SWEEP</b>	Failure of both wing sweep channels, or spider detent disengaged.	<ol style="list-style-type: none"> <li>1. Decelerate to below 0.9 M.</li> <li>2. See page 106.</li> </ol>
WING SWEEP	Failure of one wing sweep channel.	<ol style="list-style-type: none"> <li>1. MASTER RESET</li> <li>2. See page 106a.</li> </ol>
WSHLD HOT	Center windshield temp 300°F.	<ol style="list-style-type: none"> <li>1. WSHLD AIR switch OFF.</li> <li>2. See page 21.</li> </ol>
<b>YAW DGR</b>	Indicates inoperative yaw channel and degraded yaw authority.	<ol style="list-style-type: none"> <li>1. MASTER RESET</li> <li>2. See page 96.</li> </ol>

**WARNING/CAUTION/ADVISORY LIGHTS (SHEET 6)**

# ECS

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**ECS LEAK/  
ELIMINATION OF  
SMOKE AND FUMES**

ECS

**WARNING**

- Failure to immediately select AIR SOURCE OFF upon indication of an ECS leak may result in severe aircraft damage.
- Selection of AIR SOURCE to RAM allows bleed air to circulate throughout the 400 °F manifold system.

**DIRECT INDICATIONS OF ECS MALFUNCTION**

- a. BLEED DUCT caution light or FIRE warning light
- b. Smoke or fumes in cockpit
- c. Heat emanating from behind aft right corner of RIO cockpit
- d. Complete loss of ECS airflow.

**INDIRECT INDICATIONS OF ECS MALFUNCTION**

- a. Audible pop or squeal from ECS
- b. Rapid drop in cockpit airflow or reduced airflow
- c. Electrical fire indications
- d. Any ECS advisory light (AWG-9 COND, MSL COND, or COOLING AIR).

**CONTINUED**

The presence of any one direct indication or any two indirect indications shall be treated as an ECS leak.

*When an ECS leak occurs or smoke or fumes are present:*

- \*1. AIR SOURCE ..... OFF
- \*2. If smoke or fumes are present:
  - a. Altitude Below 35,000 Feet
  - b. Cabin PRESS switch DUMP
- \*3. RAM AIR INCR

**Note**

RAM air door may take up to 50 seconds to fully open.

- 4. Airspeed Below ..... 300 KIAS/0.8 IMN
- 5. Nonessential electrical equipment .... Secure
- 6. CANOPY DEFOG-CABIN AIR lever ..... CANOPY DEFOG
- 7. Land as soon as possible.

*If electrical fire:*

- 8. Follow electrical fire procedures.



The emergency generator switch should be left in NORM unless there are overriding considerations that mandate turning the emergency generator off.

**Note**

- **Securing all electrical power while airborne closes cockpit dump valve and cabin hot air valve, opens bleed air shutoff valves and dual-pressure regulator, and the ram air door remains at its last commanded position (ram air door takes up to 50 seconds to open). This results in full cold air to the cockpit, uncontrolled bleed air to circulate, and the loss of normal cabin-dump capability. Minimize low speed (less than 0.25 IMN) and ground operations as the heat exchanger cooling fan will be inoperative and ECS overheat condition will result.**
- **Selecting AIR SOURCE OFF eliminates pressurization to the service system (canopy, g-suit, external fuel tanks, pressure/ ventilation suit, and airbag seals). Rain removal, defog, and heating systems are also eliminated.**
- **If ECS airflow continues, ensure AIR SOURCE CONTROL (RC2) cb is in. If cb RC2 has popped, ECS control is lost.**

**Note**

Elimination of smoke or fumes without electrical power may be accomplished by ECS airflow. To obtain maximum smoke/fume removal capability under this condition, fly below 8,000 feet MSL and set the throttle to maximum practical position. This will open the cabin regulator valve for maximum ECS airflow. If smoke or fumes are not eliminated, it is most probable that smoke/fumes are being regenerated by an ECS air leak. As a last resort, jettison the canopy.

**COOLING AIR LIGHT**

**ON DECK**

- 1. AIR SOURCE ..... Check L ENG, R ENG,  
or BOTH ENG
- 2. Throttles ... Advance Without Closing Nozzles
- 3. CANOPY DEFOG-CABIN  
AIR lever ..... CANOPY DEFOG
- 4. ECS ..... MAN/FULL HOT

*If light goes out:*

- 5. Throttles ..... IDLE
- 6. ECS ..... As Desired

*If light remains illuminated:*

- 5. Secure systems.

CONTINUED

**IN FLIGHT**

1. AIR SOURCE ..... OFF



**Failure to immediately select AIR SOURCE pushbutton OFF upon indication of an ECS leak (bleed air or hot air leak indication) or upon hearing ECS turbine whine may result in an uncontrollable electrical fire, catastrophic ECS component failure, and/or loss of flight controls.**

*If associated with any other direct or indirect indication of ECS malfunction:*

- 2. Perform ECS Leak/Elimination of Smoke and Fumes procedure.**

*If not associated with any other direct or indirect indication of ECS malfunction and operational requirements dictate temporary reselection of RAM to regain lost service systems (external fuel transfer, cabin pressure, rain removal, engine anti-ice, etc.):*

3. AIR SOURCE ..... RAM  
 4. RAM AIR switch ..... FULL INCR  
 5. AIR SOURCE ..... OFF (when service system no longer required)  
 6. Land as soon as practicable.

## COCKPIT TEMPERATURE CONTROL MALFUNCTION

1. TEMP mode switch ..... MAN
2. TEMP thumbwheel ..... As Desired

*If temperature control is not regained:*



Reduce airspeed to 350 KIAS or 1.5 IMN, whichever is lower, to prevent ram air at temperature above 110 °F from entering aircraft. After ram air flow is stabilized, airspeed may be increased as required for flightcrew comfort or to increase flow to electronic equipment.

3. VENT AIRFLOW ..... OFF
4. AIR SOURCE ..... RAM (below 35,000 feet)
5. RAM AIR ..... INCR (select amount of ram air desired for flightcrew comfort)

## COCKPIT OVER PRESSURIZATION ON DECK

1. AIR SOURCE pushbutton ..... OFF
2. CABIN PRESS switch ..... DUMP
3. Canopy ..... OPEN when cockpit pressure altimeter equals the field elevation

CONTINUED

**WARNING**

The canopy may explosively leave the aircraft upon unlocking of the canopy sill locks if cockpit overpressure is not reduced.

**CABIN PRESS LIGHT**

- 1. Oxygen masks ..... ON

*If below 15,000 feet:*

- 2. CABIN PRESS switch ..... Cycle

**AWG-9 COND LIGHT ILLUMINATED AND/OR PUMP PHASE CIRCUIT BREAKERS POPPED OR AWG-9 PM ACRONYM**

- 1. LIQ COOLING switch ..... OFF
- 2. WCS switch ..... OFF
- 3. ANT SVO HYD PH A, B, C  
(IF2, IF4, IF6) cb's ..... Pull
- 4. AN/AWG-9 PUMP PH A, B, C  
(2G3, 2G6, 2G7) cb's ..... Pull

*If associated with any other direct or indirect indication of ECS malfunction, perform ECS Leak/Elimination of Smoke and Fumes procedure.*

- 5. Land as soon as practicable.

## TARPS ECS LIGHTS

1. TARPS sensors ..... OFF
2. SYSTEM switch ..... OFF
3. Pull TARPS cb's:
  - a. RECON ECS CONT DC (8G7)
  - b. RECON ECS CONT AC (2E2)
  - c. RECON HTR PWR PH A (2B1)
  - d. RECON HTR PWR PH B (2D1)
  - e. RECON HTR PWR PH C (2F1)
  - f. RECON POD (1F4)
  - g. RECON POD CONTR (8F7)
  - h. RECON POD DC PWR NO 2 (8F1)
  - i. RECON POD DC PWR NO 1 (8F2)
4. Ask for visual check of pod by wingman.
5. Land as soon as practicable.

## MSL COND LIGHT (AIM-54 ABOARD)

1. LIQ COOLING ..... Check

*If LIQ COOLING switch is in AWG-9/AIM-54:*

2. LIQ COOLING ..... AWG-9
3. STA 3/6 AIM-7/AIM-54 PUMP  
PH A, B, C (1D1, 1D3, 1D7) cb's ..... Pull
4. MSL HTR PH A, B, C  
(2G2, 2G5, 2G8) cb's ..... Pull

CONTINUED



*If associated with any other direct or indirect indication of ECS malfunction, perform ECS Leak/Elimination of Smoke and Fumes procedure:*

5. Land as soon as practicable.

## OXYGEN SYSTEM FAILURE

1. Oxygen quantity ..... Check
2. If possible, descend cabin altitude to less than 10,000 feet.

### WARNING

With mask removed, loss of cabin pressure above 10,000 feet MSL can rapidly cause hypoxia.

3. If not possible to descend, actuate emergency oxygen.

### WARNING

Once emergency oxygen is actuated, the oxygen flows until the emergency bottle is depleted (approximately 10 minutes). However, in worst case conditions, depletion could occur in significantly less than 10 minutes.

**OXY LOW LIGHT (RIO ONLY)**

1. Notify pilot.
2. Oxygen quantity ..... Less Than 2 Liters
3. Cabin altitude ..... Less Than 10,000 Feet
4. Oxygen masks ..... Release One Side

**WARNING**

With mask removed, loss of cabin pressure above 10,000 feet MSL can rapidly cause hypoxia.

5. OXYGEN switch ..... OFF

*Before landing:*

6. OXYGEN switch and masks ..... ON

**CANOPY LIGHT OR CANOPY LOSS**

- \*1. Canopy handle ..... BOOST CLOSE  
(canopy remaining)
- \*2. EJECT CMD lever ..... Pilot
3. Airspeed and altitude ..... Below 200 KIAS/  
15,000 Feet
4. Seats and visors ..... Down
5. If canopy has departed  
aircraft ..... Perform  
Controllability Check
6. Land as soon as possible.

**LADDER LIGHT**

1. Airspeed ..... Minimum Safe Operating
2. Obtain in-flight visual check if possible.
3. Land as soon as practicable.

**EJECT  
EGRESS**

**WSHLD HOT LIGHT**

1. WSHLD AIR ..... OFF

*If light remains illuminated:*

2. Reduce airspeed to less than 300 KIAS or 0.8 IMN.
3. AIR SOURCE ..... OFF (below 35,000 feet)

**Note**

If light remains illuminated after air source is off, indication is faulty. Turn ECS on and land as soon as practicable.

4. RAM AIR ..... INCR
5. Land as soon as practicable.

**EJECT  
EGRESS**

## EJECT/EGRESS

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**CONTROLLED  
EJECTION****EJECT/EGRESS****WARNING**

**Do not secure engines. Unsuccessful seat activation may require continued flight to allow alternate egress method.**

- 1. Place aircraft in safe envelope and attitude for ejection.**
- 2. Warn other crewmember.**
- 3. EJECT CMD lever ..... Select (RIO)**
- 4. IFF/SIF ..... EMERG/7700 (RIO)**
- 5. Position report ..... Transmit**
- 6. Check altimeter.**
- 7. Assume proper eject position:**
  - a. Head pressed back against headrest.**
  - b. Chin slightly elevated (10° up).**
  - c. Back straight.**
  - d. Hips against seat back.**
  - e. Thighs flat on seat survival kit.**
  - f. Elbows and arms pressed firmly against body.**
  - g. Feet on rudder pedals, heels on deck.**
  - h. Visor down, oxygen mask tightened, helmet secure.**

**CONTINUED**

**WARNING**

- Positioning the legs aft prior to ejection will cause the spine to flex and will increase the possibility of spinal injury and will also increase likelihood of seat/thigh slap with attendant leg injury.
- Proper body position is a critical factor in preventing ejection injuries.
- Minimum ejection altitudes are dependent upon dive angle, airspeed, and angle of bank.

**MANUAL BAILOUT****WARNING**

Manual bailout below 2,000 feet AGL (minimum sink rate): may not allow sufficient altitude for parachute deployment.

1. Warn RIO.
2. Place aircraft in safe envelope.
3. Ensure canopy is jettisoned.
4. Pitch trim ..... Full Nose Down

**CONTINUED**



5. Emergency restraint release ..... Pull
6. Ensure seat pan and leg restraints are disconnected from ejection seat.
7. Release stick.
8. Roll forward and push free of aircraft.

**GROUND EGRESS WITHOUT PARACHUTE AND SURVIVAL KIT**

ELECT

1. Kneel aircraft (if possible)
2. Canopy ..... Open or Jettison
3. Parking brake ..... Pull
4. Ejection seat ..... Safe
5. All fittings ..... Release (restraint fittings and O<sub>2</sub> hose)

ELECT

# ELECTRICAL

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**L OR R GEN LIGHT**

**ELECTRICAL**

- 1. Generator (affected generator switch) ..... **OFF/RESET, Then NORM**

*If generator does not reset:*

- 2. Generator (affected generator switch) ..... **TEST**
  - a. GEN light off ..... **Distribution System**
  - b. GEN light illuminated ..... **IDG or GCU**

**L OR R GEN AND TRANS/RECT LIGHTS**

- 1. Generator (affected generator switch) ..... **OFF/RESET, Then NORM**
- 2. If L GEN and TRANS/RECT light remains illuminated, select **EMERG GEN** on **MASTER TEST** panel.
- 3. Land as soon as practicable.

**DOUBLE GENERATOR FAILURE**

- 1. Both generator switches ..... **Cycle**

*When operating on emergency generator, the following important systems are inoperative:*

- a. **Emergency flight hydraulics.**
- b. **Outboard spoiler module and emergency flap activation.**

*If temporary loss of combined system pressure causes emergency generator to shift to 1 kVA mode:*

2. EMERG generator switch ..... Cycle



A shift to 1-kVA mode will cause loss of all DFCS functions and spoilers without illumination of caution lights. If the 5 kVA mode is regained, a MASTER RESET will be required to regain SAS, spoiler, authority stop, and ARI functions.

**Note**

DFCS synchronization can take up to 2 seconds following a power interrupt. If the MASTER RESET pushbutton is depressed during the synchronization time, an additional depression of the MASTER RESET pushbutton will be required to restore spoiler functionality.

3. Land as soon as practicable.

**ESSENTIAL BUSES NO. 1 (1 KVA MODE)**

ACM Control	Fuel Quantity Indicator
AICS Ramp Stow	Hydraulic Pressure Indication (Flight and Combined)
Airspeed Indication	ICS
Altitude Low Warning	IFF
Approach Lights	Jettison (Emergency)
Angle-of-Attack Indication	KY-28 or KY-58
AWG-15	Master Arm
Barometric Altimeter	Missile Release
ECM Destruct	Pilot Instrument Lights
Engine Backup Ignition	Radar Altimeter
Engine Instrument Group	Standby Attitude Indicator
Engine Stall Tone	Turn-and-Slip Indicator
Engine Stall Overtemp Warning	VHF/UHF (Receiver-Transmitter)
Fire Detection	Antenna Selection Remote Indicator, Cryptographics)
Fire Extinguishing	Wing Position Indications
Flap/Slat Position Ind	
Floodlights	

**ESSENTIAL BUSES NO. 2**

ACM Panel Lights	ECM (Navigational Aids,
ADF	IFF Interrogator, and Transmitter)
Advisory Lights	Eject Command Indicator
DFCS/SAS	Electronic Cooling
AHRS	Emergency Generator Test
AICS	Engine:
Air-Conditioning	Anti-Ice
Air Source Control	Fan Speed Limiting Circuit of AFTC
Antiskid Control	Nozzle Reset
Arresting Hook Control	Oil Cooling (GRD only)
ARI AOA System	Oil Pressure Indicators
Auxiliary Flap Control	Starting (Ground Use or Crank)
BDHI	Fuel Control
Beacon Augmenter	Fuel Control Indicators
Cabin Pressure Dump	Flight Control Trim
CADC	Fuel Feed/Dump/Transfer
Caution Lights	Fuel Management Panel
Cockpit Temperature Control	Ground-Roll Braking
Control Surface Position Indicator (Tail, Rudder, and Spoilers)	HUD
CSDC	

CONTINUED



**ESSENTIAL BUSES NO. 2 (Cont.)**

Hydraulic Valve  
Control

Ice Detection

ILS

In-Flight Refueling  
Probe/Light

Launch Bar

PMDIG (Display Panel)

Nose Landing Gear  
Kneeling

Nosewheel Steering

Oxygen Quantity  
Indicators

Probe Anti-Ice (AOA,  
Total Temperature,  
Pilot)

Radar Beacon

Servo-pneumatic  
Altimeter

Speedbrakes

Spoiler Control

Tacan

Utility/Map Lights

VDIG(R)

Warning Lights

Wheels and  
Speedbrakes Position  
Indicator

Windshield Air

Windshield Anti-Ice

Wing Sweep

CONTINUED

## FAILURE OF BOTH TRANSFORMER- RECTIFIERS EQUIPMENT INOPERATIVE LIST

AIM-7 MOTOR FIRE	GUN CONTROL POWER
AIM-54 MISSILE	GYRO POWER
ALE-47 CHAFF/FLARE DISPENSER	IFF AIR TO AIR
ALR-67 RECEIVER/ CONTROL	INTEGRATED TRIM
AMC BIT	INTERRUPTION FREE DC BUS FOR NO. 1 AND 2
AMCS ENABLE	L AND R AIM-7 BATTERY ARM
ANTENNA LOCK EXCITER	LIQUID COOLING CONTROL
APX-72 TEST SET	MASTER TEST
AUTOTHROTTLE	MECHANICAL FUZING STA 5 AND 6
CONTROL DISPLAY SUBSYSTEMS	MECHANICAL FUZING STA 3 AND 4
COOLING INTERLOCK COUNTING	MECHANICAL FUZING STA 1 AND 2
ACCELEROMETER	MISSILE AUXILIARY SUBSYSTEMS
DATA LINK	MONITOR BUS CONTROL
DDI/ANNUNCIATOR PANEL DIM CONTROL	OUTBOARD SPOILER MODULE
DEHYDRATOR UNIT	RADAR SUBSYSTEMS
DIGITAL DATA INDICATOR	RIGHT DC TEST STA 1A, 1B, 8A, 8B AIM-9 POWER
EGI	STA 1, 8, 8B AIM-9 COOLING POWER
ELECTRONIC COOLING	TARPS
EMERG. GENERATOR CONTROL	TCS
FEMS	WINDSHIELD DEFOG CONTROL
FUZE FUNCTION CONTROL	
GROUND POWER	
GROUND TEST	
GUN ARMED POWER	
GUN CLEAR POWER	

**TOTAL ELECTRICAL FAILURE**

1. Descend or climb to known VFR conditions.

**CAUTION**

All DFCS functions and spoilers will be lost. This will have an adverse effect on flying qualities. Terminate aggressive maneuvering immediately and remain subsonic. Expect minimal damping of oscillations in pitch and yaw and severely degraded roll control with flaps extended. Perform controllability check.

**Note**

- The standby attitude gyro is capable of providing reliable attitude information (within 6°) for up to 9 minutes after a complete loss of power.
  - Cabin pressure will be lost and ECS will go full cold.
2. Attempt to contact radar facilities or other aircraft by hand-held survival radio.
  3. Make arrested landing as soon as possible.

The following systems are still available:

1. Airspeed indicator.
2. Altimeter (STBY mode).

3. Cabin pressure altimeter.
4. Vertical velocity indicator.
5. Arresting hook (emergency extension only).
6. Standby attitude gyro (9 minutes).
7. Emergency wing sweep.
8. Landing gear.
9. Main flaps/slats.
10. Standby compass.

**WARNING**

Ground engine operation without electrical power supplied by either the generators or external power may cause 20-mm ammunition detonation because of excessive heat in the gun ammunition drum.

**CAUTION**

Do not operate engines on the ground without electrical power. Ground cooling fans are shut off, causing hot bleed air to cook off oil and hydrocarbons in the ECS ducting, resulting in smoke in the cockpit and possible damage to the ECS turbine compressor.

**Note**

- Total electrical failure will cause the sump tank interconnect, engine crossfeed, and motive flow isolation valves to close, fully isolating both tank systems. Wing and external fuel will transfer into fuselage.
- If possible, section IFR descent should be conducted to VFR conditions for landing.

**WEIGHT ON/OFF WHEELS SWITCH  
MALFUNCTION****ON DECK****INDICATIONS:**

1. WOW acronym is displayed.
2. Approach indexer is illuminated.
3. Nozzles may be partially closed at idle rpm.
4. Nosewheel steering is inoperative.
5. Launch bar light is illuminated (if nosegear turned  $> 10^\circ$ ).
6. Ground-roll braking is inoperative.
7. WG SWP MASTER TEST is disabled.
8. Oversweep is disabled.
9. Outboard spoiler module on with FLAP handle UP (wings  $< 62^\circ$ ).
10. Aircraft will not kneel.

*If two or more of the preceding anomalies are detected, the following action should be taken:*

**ON DECK — PILOT**

1. Clear runway (if applicable).
2. Generators ..... OFF
3. Throttles (after downlocks are in place) .. OFF



Failure of the left or right weight on/off wheels switches to the in-flight mode can cause loss of engine ejector air to the engine oil, IDGs and hydraulic heat exchangers, causing thermal disconnect and/or heat damage to the generators and aircraft hydraulic systems.

**ON DECK — RIO**

1. WCS ..... OFF



With failure of the weight on/off wheels switch to the in-flight mode, the following functions are enabled.

- a. AWG-9 can scan and radiate.
- b. ALQ-126 can transmit.
- c. Probe heaters will be on in AUTO.

- d. ALQ-167 can radiate (TARPS).
- e. BOL chaff can dispense.

## IN FLIGHT

For most systems, failure of both the left and right weight-on-wheels switches is required to cause the systems to revert to the on-deck mode. Should such failures occur, the following anomalies can result:

## INDICATIONS:

- a. Approach indexers are inoperative.
- b. APC will not engage.
- c. Outboard spoiler module inoperative (flaps up).
- d. Nozzles full open (gear down, throttles IDLE).
- e. Ground-roll spoiler braking (throttles IDLE).
- f. Radar will not scan.
- g. Autopilot cannot be engaged.
- h. BOL chaff will not dispense.
- i. At high altitude, ground cooling fans may overspeed and shut down, causing smoke in cockpit.
- j. RATS will be enabled airborne with the hook handle down or the hook out of the stowed position.

## WARNING

With RATS enabled airborne, military power provides 20 to 25 percent less thrust than normal, resulting in less than optimum waveoff and bolter performance.

*If two or more of the above anomalies are detected, the following action should be taken.*

**IN FLIGHT — PILOT**

**WARNING**

**Do not move both throttles to IDLE unless ANTI SKID SPOILER BK switch is set to OFF if weight on-off wheels switch is suspected because of loss of thrust and lift caused by nozzles opening and spoilers deploying.**

- 1. Throttles ..... Any position except IDLE**
- 2. ANTI SKID SPOILER BK switch ..... OFF**
- 3. Land as soon as practicable.**

**CAUTION**

**If weight on/off wheels switch failure is suspected, cocked-up, high-sink rate landing can result in damage to afterburner.**

**IN FLIGHT — RIO**

- 1. MLG SAFETY RLY NO. 1 and MLG SAFETY RLY NO. 2 cb .... Pull (6F5, 6F4)**

**CONTINUED**



**Note**

- **Circuit breakers can be reset after touchdown to enable ground-roll braking, antiskid, nozzles open at idle, and nosewheel steering.**
- **Circuit breakers must be reset simultaneously (within 0.1 sec) once on deck or a secondary fault may be declared which will inhibit ground roll braking.**

ENG

ENG

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**ABNORMAL START****ENGINE**

1. Throttle (affected engine) ..... OFF
2. BACKUP IGNITION switch ..... Check OFF

**CAUTION**

A catastrophic Hot Start will occur if the affected throttle is not immediately secured following a loss of electrical power during an engine start with the RPM below forty percent. Air flow will be cut off and fuel will continue to be scheduled to the engine with the igniters firing, causing a rapid and severe rise in EGT that will not be observed on the EIG due to power loss.

**Note**

- If hot start on deck, windmill engine until EGT is below 250 °C before attempting restart.
- If wet start, continue cranking until tailpipe is clear of fuel.

## ENGINE START VALVE LIGHT

- 1. Ensure ENG CRANK ..... OFF
- 2. AIR SOURCE ..... OFF

### Note

If operational necessity dictates, AIR SOURCE L ENG or R ENG may be selected provided the START VALVE light remains out. Crossbleed airstarts may not be available to the affected engine after a START VALVE light illuminates because of possible overspeed damage.

*If airborne:*

- 3. ENG START (RE1) cb ..... Pull

*If on deck:*

- 3. Throttle (affected engine) ..... OFF

## COMPRESSOR STALL

- \*1. Unload aircraft (0.5 to 1.0g)

*If greater than 1.1 IMN:*

- \*2. Both throttles ..... MIL

*When 1.1 IMN or less:*

- \*3. Both throttles ..... Smoothly to IDLE

*If EGT above 935 °C and/or engine response abnormal:*

- \*4. Throttle (affected engine) . . . . . OFF

*If EGT normal and/or airstart successful:*

- 5. Perform engine operability check.

**Note**

After any stall, throttle movement should be minimized until engine operability checks are performed. Engines should be exercised at 10,000 feet in cruise and then at approach speeds, one at a time, to ensure stall-free performance is available for landing. If engine performance is abnormal, set power as necessary and avoid further throttle movement. Land as soon as practical.

**ENGINE FLAMEOUT**

- \*1. Throttle (affected engine) . . . . . IDLE or Above
- \*2. BACKUP IGNITION switch . . . . . ON

*If hung start or no start:*

- \*3. Throttle (affected engine) Cycle OFF, Then IDLE

*If still hung or no start:*

- \*4. ENG MODE SELECT switch . . . . . SEC

*If one engine is operable, perform a crossbleed airstart.  
If both engines flamed out/inoperative or crossbleed not possible:*

**WARNING**

- A dual engine compressor stall may result in a total electrical failure, rendering the ICS, engine instruments, spin direction indicators (spin arrow and turn needle), and displays inoperative.
- If sufficient hydraulic pressure restores the 1-kVA mode of the emergency generator, it may be necessary to cycle the emergency generator switch through OFF/RESET to NORM to regain lost engine instruments.
- With existing ejection seat design limitations, the decision to exceed 350 KIAS rests with the aircrew.
- Sufficient hydraulic pressure for smooth flight control inputs should be available with one engine windmilling at 18 percent rpm or two engines at 11 percent rpm.
- Dive angles should not exceed 45°. At 7,500 feet AGL minimum, commence smooth 2g pullup to 20° dive, maximum. At 2,000 feet AGL minimum, pull up to level flight. If airstart is unsuccessful, convert airspeed to altitude and eject at 350 KIAS or less before controllability is lost.

**CONTINUED**



- \*5. Airspeed ..... 450 KIAS (altitude permitting)

*When start complete:*

- 6. BACKUP IGNITION switch ..... OFF
- 7. ENG MODE SELECT switch ..... PRI

*When PRI mode is restored:*

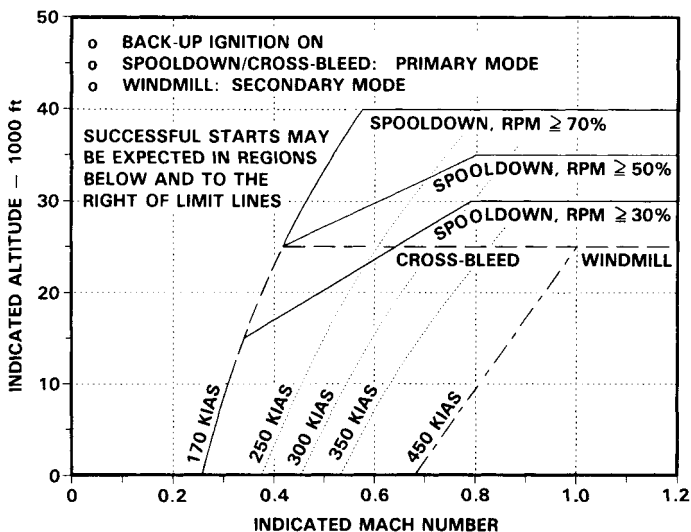
- 8. Maintain constant subsonic airspeed in level flight.
- 9. Affected L or R AICS (LF2 left, LG2 right) cb ..... Cycle

**WARNING**

If WING SWEEP advisory light is illuminated, cycling L AICS cb (LF2) may cause unintentional wing sweep unless WING SWEEP DRIVE NO. 1 (LE1) and WG SWP DR NO. 2/MANUV FLAP (LE2) cb's are pulled.

DATE: NOVEMBER 1988  
 DATA BASIS: FLIGHT TEST

**F110-GE-400 ENGINE**



NOTES

- WINDMILL RESTARTS SHOULD BE PERFORMED IN SECONDARY MODE. SECONDARY MODE PROVIDES HIGHER WINDMILLING RPM AND FASTER ENGINE ACCELERATION.
- THE OPTIMUM RESTART RPM IS 15% OR GREATER. RESTARTS FROM 10% RPM ARE SUCCESSFUL BUT ACCELERATE VERY SLOWLY AND ENGINE LIGHT OFF IS HARDER TO DETECT.
- IF THE WINDMILL RESTART IS DELAYED MORE THAN 2 MINUTES FROM SHUTDOWN THE LEFT ENGINE WILL REQUIRE UP TO 500 KIAS IN ORDER TO MAINTAIN A MINIMUM 10% RPM. THE RIGHT ENGINE WILL MAINTAIN 15% RPM AT 450 KIAS.

**AIRSTART ENVELOPE**

**CROSSBLEED AIRSTART**

- 1. Throttle (bad engine) . . . . . OFF
- 2. FUEL SHUT OFF handle . . . . . Check In
- 3. Throttle (good engine) . . . . . 80-Percent Rpm (minimum)
- 4. BACKUP IGNITION switch . . . . . ON
- 5. ENG MODE SELECT . . . . . PRI
- 6. ENG CRANK switch (bad engine) . . . . . ON
- 7. Throttle (bad engine) . . . . . IDLE Immediately

**Note**

The quickest light-offs are achieved with throttle to IDLE at less than 10 percent. Light-offs can take as long as 45 seconds.

*If hung start:*

- 8. Throttle (bad engine) . . . . . OFF, Then IDLE

*If still hung:*

- 9. ENG MODE SELECT switch . . . . . SEC

*When start complete:*

- 10. BACKUP IGNITION switch . . . . . OFF
- 11. ENG MODE SELECT switch . . . . . PRI

*When PRI mode restored:*

- 12. Maintain constant subsonic airspeed in level flight.

**CONTINUED**

- 13. Affected L or R AICS (LF2 left, LG2 right) cb ..... Cycle

**WARNING**

If WING SWEEP advisory light is illuminated, cycling L AICS cb (LF2) may cause unintentional wing sweep unless WING SWEEP DRIVE NO. 1 (LE1) and WG SWP DR NO. 2/MANUV FLAP (LE2) cb's are pulled.

**ENGINE OVERSPEED  
(N<sub>2</sub> 107.7-PERCENT RPM)**

- 1. Throttle (affected engine) ..... IDLE

*If overspeed continues:*

- 2. ENG MODE SELECT switch ..... SEC  
Verify ENG SEC light illuminated.

*If overspeed condition persists:*

- 3. Throttle (affected engine) ..... OFF

**Note**

Fuel flow automatically secured when rpm reaches 110 percent. To regain fuel flow, the throttle must be cycled OFF then to IDLE.

**Note**

An overspeed condition in excess of 110 percent will result in momentary loss of rpm indication until  $N_2$  rpm falls below  $110 \pm 5$  percent. EGT and FF indicators will continue to function normally.

4. Refer to Single-Engine Cruise Operations, page 181.
5. Land as soon as practicable.

## ENGINE TRANSFER TO SEC MODE

**CAUTION**

In SEC mode, idle lockup protection is lost. Decelerate below 1.1 IMN before retarding throttle to idle to avoid supersonic inlet buzz and possible compressor stall.

*If engine transfers to secondary mode:*

1. Throttle (affected engine): . . . . Less Than MIL
2. ENG MODE SELECT switch . . . . . Cycle

*If PRI mode restored:*

3. Maintain constant subsonic airspeed in level flight.

**WARNING**

If WING SWEEP advisory light is illuminated, cycling L AICS cb (LF2) may cause unintentional wing sweep unless WING SWEEP DRIVE NO. 1 (LE1) and WG SWP DR NO. 2/MANUV FLAP (LE2) cb's are pulled.

- 4. Affected L or R AICS (LF2 left, LG2 right) cb ..... Cycle

*If engine remains in SEC:*

- 3. ENG MODE SELECT switch ..... SEC
- 4. Avoid abrupt throttle movements.
- 5. Land as soon as practicable.

**CAUTION**

Landing in SEC mode may increase landing roll because of loss of nozzle reset. If runway length or braking conditions warrant, make an arrested landing.

**TRANSFER TO SECONDARY MODE RESULTS:**

- 1. SEC mode transfer from AB may result in pop stalls
- 2. Nozzle full closed (higher taxi thrust)

3. Stall warning is inoperative (engine overtemp warning still available)
4. No nozzle position indication.
5. No AB capability.
6. Decrease stall margin at low rpm.
7. 65- to 116-percent basic engine thrust available.
8. Main engine ignition continuously energized.
9. No Idle lockup protection.
10. IGV fixed full open (higher windmill airspeed).
11. RATS inoperative.

**UNCOMMANDED SEC MODE RPM DECAY**

**WARNING**

Engine will flame out if transfer is delayed below 59-percent rpm.

1. ENG MODE SELECT switch . . . . . PRI

*If PRI mode restored:*

2. Maintain constant subsonic airspeed in level flight.

**WARNING**

If WING SWEEP advisory light is illuminated, cycling L AICS (LF2) cb may cause unintentional wing sweep unless WING SWEEP DRIVE NO. 1 (LE1) and WG SWP DR NO. 2/MANUV FLAP (LE2) cb's are pulled.

- 3. Affected L or R AICS (LF2 left, LG2 right) cb ..... Cycle

**UNCOMMANDED ENGINE ACCELERATION — ON DECK**

- \*1. Paddle switch ..... Depress/Hold
- \*2. Throttle(s) ..... As Desired
- \*3. ENG MODE SELECT switch ..... SEC
- \*4. THROTTLE MODE ..... MAN

*If engine(s) still uncommanded and aircraft is not in catapult tension:*

- 5. Throttle(s) ..... OFF
- 6. FUEL SHUT OFF ..... Pull



**UNCOMMANDED ENGINE ACCELERATION —  
AIRBORNE (NO THROTTLE MOVEMENT)**

**WARNING**

If the APC cutout switch is shorted, attempting to disengage auto throttles using a breakout force of greater than 11 pounds or via the APC cutout switch (CAGE/SEAM button) may not be effective.

- 1. ENG MODE SELECT switches ..... SEC

*If dual engine uncommanded acceleration associated with CADC failure, normal primary mode may be regained by selecting PRI mode with gear handle down.*

*If engine still uncommanded and engine shutdown necessary:*

- 2. Throttle (affected engine) ..... OFF
- 3. Refer to Single-Engine Cruise Operations.

**EXHAUST NOZZLE FAILED**

**NO NOZZLE RESPONSE TO THROTTLE MOVEMENT**

- 1. Monitor engine oil pressure/rpm.
- 2. Throttles ..... Basic  
(Use minimum power required). Engine Only

**CONTINUED**

**Note**

- SEC mode transfer while in AB may result in pop stalls. Nonemergency manual selection of SEC mode airborne should be performed in basic engine with the power set above 85 percent rpm.
- If the fan speed limiter circuit has failed, engine rollback may occur with the selection of SEC mode. In event of engine rollback, PRI mode must be reselected above 59-percent rpm or flameout will occur and an airstart will not be possible.

**3. ENG MODE SELECT ..... SEC**

**4. Obtain visual inspection.**

*If nozzle open in SEC mode or abnormal response:*

**5. ENG MODE SELECT ..... PRI**

**6. Assume mechanical failure and land as soon as practicable.**

*If nozzle closed or a visual inspection is not possible:*

**5. ENG MODE SELECT ..... Remain in SEC**

**6. Assume electrical failure and land as soon as practicable.**

## STUCK OR JAMMED THROTTLES IN AFTERBURNER

1. L ENG or R ENG MODE ..... SEC
2. Apply maximum inboard force on throttles and retard as required.

*If throttles will not retard below MIN AB:*

3. Match throttles.
4. Relax aft pressure on throttles.
5. While forcing throttles apart laterally:
  - a. Pull throttles straight aft to MIL detent.
  - b. Move inboard and aft.
6. Do not reselect afterburner.

*If right throttle will not retard:*

7. Right FUEL SHUTOFF ..... Pull (if required)
8. Right throttle ..... MAX AB (after shutdown)
9. Refer to single-engine procedures.

*If left throttle will not retard:*

10. Left FUEL SHUTOFF ..... Pull (if required)
11. Refer to single-engine procedures.

**AICS MALFUNCTION**

**RAMPS LIGHT/INLET LIGHT**

- \*1. Avoid abrupt throttle movements.
- \*2. Decelerate to below 1.2 IMN.
- \*3. Affected INLET RAMPS switch ..... STOW

**Note**

A RAMPS light should always be accompanied by an INLET light when the LDG GEAR handle is UP.

*If RAMPS light remains illuminated:*

- 4. Throttle (bad engine) ..... 80 percent or less
- 5. If WING SWEEP advisory light is illuminated:  
Wing sweep drive cb's ..... Pull  
(LE1 and LE2)



If WING SWEEP advisory light is illuminated, cycling L AICS (LF2) cb may cause unintentional wing sweep unless WING SWEEP DRIVE NO. 1 (LE1) and WG SWP DR NO. 2 / MANUV FLAP (LE2) cb's are pulled.

- 6. Affected L or R AICS cb ..... Pull  
(LF2, left or LG2, right)

**CONTINUED**

**Note**

Pulling the AICS cb while airborne may illuminate the FCS CAUTION and ARI DGR lights. Above about 600 KIAS, the PITCH SAS and ROLL DGR lights will also be illuminated. These should clear with a MASTER RESET following a programmer reset.

- 7. Affected INLET RAMPS switch ..... AUTO
- 8. Land as soon as practicable.

*If INLET light only illuminated attempt AICS programmer reset:*

- 4. Decelerate below 0.5 IMN.
- 5. If WING SWEEP advisory light is illuminated:  
 Wing sweep drive cb's ..... Pull  
 (LE1 and LE2)



If WING SWEEP advisory light is illuminated, cycling L AICS (LF2) cb may cause unintentional wing sweep unless WING SWEEP DRIVE NO. 1 (LE1) and WG SWP DR NO. 2 / MANUV FLAP (LE2) cb's are pulled.

- 6. Affected L or R AICS cb ..... Cycle  
 (LF2, left or LG2, right)

**Note**

Pulling the AICS cb while airborne may illuminate the FCS CAUTION and ARI DGR lights. Above about 600 KIAS, the PITCH SAS and ROLL DGR lights will also be illuminated. These should clear with a MASTER RESET following a programmer reset.

*If INLET light goes off:*

- 7. Affected INLET RAMPS switch ..... AUTO

*If INLET light remains illuminated:*

- 7. Affected L or R AICS cb ..... Pull  
(LF2, left or LG2, right)

**Note**

Pulling the AICS cb while airborne may illuminate the FCS CAUTION and ARI DGR lights. Above about 600 KIAS, the PITCH SAS and ROLL DGR lights will also be illuminated. These should clear with a MASTER RESET following a programmer reset.

- 8. Affected INLET RAMPS switch ..... AUTO
- 9. Remain below 1.2 IMN.

*When AICS programmer reset attempts are completed:*

- 10. Wing sweep drive cb's ..... Reset  
(LE1 and LE2)

**INLET ICE LIGHT**

1. ENG/PROBE ANTI-ICE switch . . . . . ORIDE/ON

*When clear of known icing conditions:*

2. ENG/PROBE ANTI-ICE switch . . . . . AUTO/OFF

**WARNING**

Ice may form on inlet and ramp surfaces without any other visual indications which may cause compressor stalls and/or FOD.

**CAUTION**

The formation of ice on pitot static sensors may result in DFCS detected failures that may not clear with a MASTER RESET.

**L OR R OIL HOT LIGHT****CAUTION**

Illumination of an OIL HOT caution light may be an indication of above-normal gearbox scavenge oil temperature or high supply temperature. Continuous engine operation will result in reduced gearbox life and lubrication degradation.

**Note**

On deck, light may be caused by under-servicing or by excessive temperature on deck. Normally, advancing throttles out of IDLE will extinguish light.

1. Oil pressure ..... Check
2. Throttle (affected engine) ... 85-Percent Rpm

*If, after 1 minute, light is still illuminated:*

3. Throttle (affected engine) ..... OFF
4. Refer to Single-Engine Cruise Operations (page 181).
5. Relight engine for landing if necessary.
6. Land as soon as possible.

*If light goes out, land as soon as practicable.*



**OIL PRESS LIGHT AND/OR  
ABNORMAL OIL PRESSURE**

- 1. Throttle (affected engine) ..... IDLE

*If oil pressure is below 15 psi, above 65 psi, or engine vibration:*

*If shutdown is feasible:*

- 2. Throttle (affected engine) ..... OFF
- 3. Refer to Single-Engine Cruise Operations.

*If shutdown is not feasible:*

- 2. Rpm ..... Set minimum Rpm
- 3. Avoid high-g or large throttle movements.
- 4. Land as soon as possible.

FIRE

**RATS OPERATION IN FLIGHT**

- 1. Tailhook ..... DOWN

*If conditions permit:*

- 2. Anti-ice/hook control (7C2) cb ..... Pull

**WARNING**

**Pulling the anti-ice/hook control (7C2) cb disables RATS. Inform CV because of increased wind-over-deck requirements and gross weight settings for a non-RATS arrestment.**

**WARNING**

With the cb in and RATS operating, there is reduced thrust available for approach and use of afterburner may be required to arrest sink rate.

**CAUTION**

Circuit breaker 7C2 must be in prior to hook transition. Avoid icing conditions and rain with 7C2 pulled.

FIRE

**Note**

- If RATS secures when the hook is raised with no other weight-on-wheels indication, failure is internal to the RATS circuitry.
- With ANTI-ICE CONTR/HOOK CONT/WSHLD/AIR CB (7C2) pulled, approach indexers will flash.

# FIRE

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<b>L OR R FIRE LIGHT AND/OR FIRE IN FLIGHT</b>	<b>FIRE</b>
--	-------------

- \*1. Throttle (affected engine) ..... IDLE
- \*2. AIR SOURCE pushbutton ..... OFF

*If light goes OFF and no secondary indications:*

**Note**

**Fire detection test is not available on the emergency generator.**

- \*3. MASTER TEST ..... FIRE DET TEST

*If light remains on, FIRE DET TEST fails, or there are secondary indications:*

- \*4. FUEL SHUT OFF handle  
(affected engine) ..... Pull
- \*5. Throttle (affected engine) ..... OFF
- \*6. Climb and decelerate.
- \*7. Fire extinguisher pushbutton ..... Depress

**Note**

**Ensure BACKUP IGNITION switch is OFF.**

- 8. Refer to Single-Engine Cruise Operations.
- 9. Land as soon as possible.
- 10. If fire persists ..... Eject

**ENGINE FIRE ON THE GROUND****PILOT**

- \*1. Both FUEL SHUT OFF handles ..... Pull
- \*2. Both throttles ..... OFF
- 3. If conditions permit ..... Windmill Engine
- 4. BACKUP IGNITION switch ..... Check OFF



Excessive windmilling of engine with oil system failure may increase combustion/smoking (blue/white) and result in greater difficulty extinguishing, causing further damage to engine.

*If FIRE light and/or other secondary indications:*

- 5. Fire extinguisher pushbutton (related engine) ..... Depress
- 6. Egress.

**RIO**

- 1. Notify ground and/or tower.
- 2. Egress.

**ELECTRICAL FIRE**

- \*1. L and R generators ..... OFF

*If uncommanded SAS or spoiler inputs are present:*

- \*2. PITCH, ROLL, and YAW STAB  
AUG switches ..... OFF

If associated with any other direct or indirect indication of ECS malfunction, perform ECS leak/ Elimination of Smoke and Fumes procedure.



An electrical fire may affect the CADC and AICS system, causing random movements of the wings and ramps.

*If conditions permit:*

- 3. EMERG generator switch ..... OFF

**Note**

Securing all electrical power while airborne causes the ECS to go full cold.

*If cause of fire can be isolated:*

- 4. Pull cb's of affected equipment.
- 5. All generators ..... NORM

*If cause of fire cannot be isolated:*

- 4. Secure all unnecessary equipment.

FLT  
CONT

5. EMERG generator switch ..... NORM
6. Land as soon as possible.



Do not operate engines on the ground without electrical power. Ground-cooling fans are shut off, causing hot bleed air to cook off oil and hydrocarbons in the ECS ducting, resulting in smoke in the cockpit and possible damage to the ECS turbine compressor.

FLT  
CONT



# FLIGHT CONTROLS

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**CONTROLLABILITY  
CHECK****FLIGHT CONTROLS**

It is absolutely imperative that the aircrew thoroughly and safely evaluate the degraded handling characteristics of damaged or malfunctioning aircraft prior to continued flight and landing. This check does not take priority over existing emergency procedures.

**WARNING**

- If aircraft stalls or departs in dirty configuration, immediately unload and place throttles at military. Do not raise flaps until recovered. (If during flap/slat transition, follow uncommanded roll/yaw procedures.)
- A controllability check requires the total attention and awareness of the aircrew. The aircrew must be prepared to encounter unusual handling characteristics, since aerodynamic properties of the aircraft may be significantly changed. Stall speed as well as flight and ground handling characteristics may be drastically different from normal.

**Note**

If flight control malfunction is due to uncommanded stab aug transients, spoiler malfunction, flap/slat asymmetry, rudder malfunction (hardcover), and/or wing-sweep malfunctions; perform applicable

emergency procedure(s) as necessary before beginning a controllability check.

1. Climb to 10,000 feet AGL minimum.
2. Obtain visual check if possible.
3. Decelerate gradually to 200 KIAS if feasible.
4. Dirty aircraft, one configuration change at a time, while flying straight and level.

**Note**

Landing gear should be lowered before flaps. Do not lower arresting hook until landing gear is confirmed down and locked.

5. If flaps are lowered, do so incrementally and be alert for flap/slat asymmetry.
6. If maneuver flaps are used for landing approach:

WG SWP DR NO. 1 and ..... PULL  
 WG SWP DR NO. 2/ (LE1 and LE2).  
 MANUV FLAP cb's

**Note**

- Failure to pull wing sweep drive circuit breakers (LE1 and LE2) could result in inadvertent maneuver device retraction or wingsweep during approach.
- WINGSWEEP WARNING, WINGSWEEP ADVISORY and FLAP CAUTION lights will illuminate with both wingsweep drive circuit breakers pulled (LE1 and LE2).

7. Use differential thrust, if required, to achieve acceptable flight characteristics.
8. Slow-fly aircraft to determine approach handling characteristics, including turns.

9. Fly simulated approach to evaluate lineup corrections, power changes, and waveoff/bolter performance, and flight characteristics.
10. For landing, use minimum safe control speed, but no slower than optimum AOA.
11. If performance and flight . . . . . DIVERT characteristics dictate that a CV landing is not possible
12. If diverting with a flight control malfunction, make arrested landing, if possible.

#### Note

If normal landing rollout is attempted, flap handle should be checked DOWN on deck with SPL BK selected to enable full ground roll braking authority.

13. If directional control is in question:
  - a. A shorebased arrested landing should be flown to touchdown at or just prior to the arresting gear.
  - b. Use LSO if possible.
  - c. If arresting gear not engaged and performance and flight characteristics permit, execute waveoff/touch-and-go, if possible.
  - d. Expect directional excursions during waveoff/bolter, arrested landing, or landing rollout.
  - e. Nosewheel steering should not be engaged if rudder pedal authority is restricted.
  - f. Use rudder, lateral stick and/or differential braking to oppose any directional excursions during normal landing rollout.
  - g. Brief runway departure prior to landing and identify any obstructions in close proximity to the runway.

**DFCS POWER ON RESET (POR)**

If controllability is unsuitable for landing approach due to complete loss of spoilers or other major flight control malfunction, consideration may be given to attempting a flight control computer reset in an attempt to regain adequate controllability for landing. Aircrew must be alert for erroneous uncommanded SAS and/or spoiler control inputs following an airborne POR.

**WARNING**

If a dual failure has been declared that will not clear with a MASTER RESET, performing a power on reset (POR) to clear the failure can result in erroneous uncommanded SAS and/or spoiler control inputs.

**Note**

To minimize transient series servo actuator inputs; POR should be performed above 10,000 ft AGL, in the cruise configuration, between 250 and 300 knots.

1. BOTH SPOILER CONTR cb's ..... Pull  
(7G9, INBD and 8C5, OUTBD)
2. PITCH, ROLL, and YAW STAB AUG  
switches ..... OFF
3. ROLL A, YAW B, and YAW A cb's  
(7B4, 7B5, and 7B6) ..... Cycle (RIO)

**CONTINUED**

Observe PITCH SAS, ROLL DGR, YAW DGR, FCS CAUTION, ARI DGR, ARI/SAS OUT, SPOILERS, HZ TAIL AUTH, RUDDER AUTH, and AUTOPILOT caution lights illuminated.

#### Note

Attempt to reset cb's 7B4, 7B5, and 7B6 simultaneously to optimize DFCS power-up sequence.

4. MASTER RESET pushbutton . . . . . Depress  
Observe all lights extinguished with the exception of ARI/SAS OUT light due to ROLL and YAW STAB switches OFF.

#### WARNING

- If the system continues to display any DFCS related caution lights following MASTER RESET, this could be indicative of a recurring flight control malfunction.
- If a SPOILERS caution light will not extinguish following the execution of a POR, selection of ROLL STAB AUG switch ON can result in erroneous uncommanded SAS control inputs.
- When attempting to individually reset PITCH, ROLL, and YAW STAB AUG switches, be prepared to isolate the affected STAB AUG switch OFF if any uncommanded SAS inputs are observed.

**Note**

- **Minimize control stick inputs during or following MASTER RESET as this can result in the SPOILERS caution light with SPOILER CONTR cb's pulled.**
- **More than one MASTER RESET may be required to extinguish all caution lights.**

**5. Individually select PITCH, ROLL, and YAW STAB AUG switches ..... ON**

*If any uncommanded SAS control inputs:*

**6. Affected STAB AUG switch ..... OFF**

**WARNING**

**If uncommanded roll SAS inputs are observed following a POR, reselection of the SPOILER CONTR cb's can result in full spoiler deflection and an out of control aircraft.**

**7. If uncommanded roll SAS control inputs, DO NOT reset SPOILER CONTR cb's.**

**8. Perform Controllability Check procedure.**

*If no uncommanded roll SAS control inputs:*

**6. Reset SPOILER CONTR cb's.**

**7. Perform Controllability Check procedure.**





**Note**

SAS failure may cause uncommanded roll and/or yaw, even without illumination of the associated lights.

- c. Spoiler malfunction
  - d. Hardover rudder
  - e. Structural damage.
10. Slow-fly aircraft to determine controllability at 10,000 feet AGL minimum.

**BINDING/JAMMED FLIGHT CONTROLS ON THE GROUND**

1. Hold light pressure against binding/restriction to facilitate maintenance troubleshooting procedures.



Do not attempt to free controls by force since further damage to flight control system may result.

2. Abort mission.

**SPOILERS CAUTION LIGHT/SPOILER  
MALFUNCTION/SPOILER STUCK UP****CAUTION**

If the current configuration is acceptable for landing, careful consideration should be given before depressing Master Reset when a spoiler actuator mechanical malfunction is suspected. A deployed spoiler that resulted from DFCS computers dropping off line is not considered a mechanical failure.

**Note**

- Use lateral stick as primary control and rudder only as needed to maintain balanced flight.
- Subsequent depression of the MASTER RESET pushbutton will clear failure until the spoiler is commanded to move again.

1. MASTER RESET pushbutton . . . . . Depress

**Note**

DFCS synchronization can take up to 2 seconds following a power interrupt. If the Master Reset pushbutton is depressed during the synchronization time, an additional depression of the Master Reset pushbutton will be required to restore spoiler functionality.

*If failure remains/reoccurs:*

2. Avoid abrupt lateral control movements and high roll rates.



**With wings forward of 62°, excessive horizontal tail differential may cause severe structural damage.**

*If spoiler(s) fail down:*

3. Perform controllability check procedure, page 77.

*If spoiler(s) remain up or floating, or if control unsatisfactory with flaps down:*

#### **Note**

Any single, fully deflected, failed up spoiler is controllable even with flaps down and ROLL SAS off, if the remaining spoilers are operating. With multiple failures, aircraft configuration is the critical factor. With flaps down, roll control using lateral stick alone may be impossible. However, with flaps up, adequate roll control to regain wings level flight is available with use of lateral stick alone. Choice of flap position for landing and CV recovery/divert decision should be made following a controllability check.

4. Perform controllability check procedure, page 77, using maneuvering flap/slat (preferred) or no-flap configuration only.

#### Note

If controllability is unsuitable for landing approach due to complete loss of spoilers, consideration may be given to attempting a power on reset in an attempt to regain at least one spoiler set. See DFCS POR procedures, page 80.

*If controllability satisfactory:*

5. Perform maneuver flap/slat or no-flap straight-in approach at or above minimum control airspeed.

*If controllability still unsatisfactory:*

### WARNING

With both INBD and OUTBD spoiler control cb's pulled, all opposing spoiler control will be lost.

### CAUTION

Marginal control or loss of control may be experienced due to removal of a spoiler set with multiple failures present.

**Note**

If multiple failed-up spoiler panels result in unsatisfactory handling qualities regardless of flap position, an attempt may be made to fail the panels down by removing power via the corresponding spoiler cb's. This may take as long as 60 sec, and result in a marginal control situation or loss of control situation because power to the other spoilers has been removed. Therefore it should be considered only as a last resort.

5. SPOILER CONTR cb for affected pair . . . . . Pull  
(7G9 for INBD, 8C5 for OUTBD)

*If uncontrollable roll, or no improvement in controllability:*

6. SPOILER CONTR cb (affected spoiler) . . Reset
7. MASTER RESET pushbutton . . . . . Depress  
Best control for landing will occur with flaps up.  
See no-flaps and no-slats landing procedures.
8. If unsuitable for landing, perform controlled  
ejection.

*If controllability improves:*

9. Perform straight-in approach in best configuration with cb(s) out.

**Note**

Outboard spoiler position indicators will indicate down with cb 8C5 pulled.

**Note**

With cb's 7G9 and 8C5 pulled, ground roll braking is not available. Reset on landing rollout if desired.

**OUTBOARD SPOILER MODULE MALFUNCTION**

**WARNING**

An outboard spoiler module failure with flaps extended, below 180 KIAS, and with a combined hydraulic failure rendering the inboard spoilers inoperative can result in asymmetric spoiler float such that the aircraft may not be flyable at normal approach airspeeds.

**CAUTION**

If outboard spoilers fail with airspeed greater than 225 KIAS and wing sweep less than 62°, limit lateral stick to one-half pilot authority.

1. OUTBD SPOILER PUMP (2B2) cb . . . . . Check
  - a. If OUT . . . . . Attempt Reset
  - b. If IN and outboard spoiler module flag indicates OFF . . . . Pull OUTBD Spoiler Pump (2B2) cb

**CONTINUED**

The following important equipment is inoperative:

- (1) Outboard spoilers
  - (2) Flap and slat backup
  - (3) ACL.
2. Evaluate flaps-down lateral control characteristics at safe altitude.

If unacceptable:

- 3. Make flaps-up landing (No Flaps and No Slats Landing).

## FLAP AND SLAT ASYMMETRY

### Note

Uncommanded roll/yaw procedures take precedence if appropriate. Otherwise, perform the procedures below.

- 1. FLAP/SLAT CONTR SHUTOFF cb ..... Check in (RE2)

### WARNING

Lack of asymmetry protection (RE2 cb out) may cause uncommanded roll and/or yaw during flap or landing gear handle movement.

- 2. Flaps ..... Match Handle With FLAPS Position
- 3. Obtain visual check if possible to ascertain position of all flap and slat surfaces.
- 4. Slow-fly aircraft in approach configuration at or above 10,000 feet AGL to determine approach characteristics, conditions permitting.



5. Land as soon as practicable if aircraft is controllable and minimum approach airspeed is within shipboard arresting gear limits.

*If asymmetry is so large as to make landing impossible or minimum safe approach speed is above shipboard arresting gear limits with no possible divert field available:*

6. Climb above 10,000 feet AGL.
7. AUX FLAP/FLAP CONTR (7G3) cb ..... Pull

**WARNING**

- Failure to complete step 7 before the subsequent steps can result in large uncommanded pitch trim changes because of auxiliary flap movement.
- Pulling circuit breaker RE2 removes flap/slat asymmetry protection, which could result in an uncontrollable aircraft, and flap/slat overtravel protection, which could result in structural damage.

8. FLAP/SLAT CONTR SHUT-OFF (RE2) cb ..... Pull
9. Slowly move FLAP handle in direction to minimize asymmetry and/or lateral control requirements.
10. Stop flap and slat travel before reaching full up or down.
11. FLAP/SLAT CONTR SHUT-OFF (RE2) cb ..... Reset

**CONTINUED**

**WARNING**

Asymmetric slats may not be apparent until just before wing stall. Asymmetric slats can cause rapid rolloff above 15 units AOA.

12. If asymmetry has been corrected, land using 15 units AOA.
13. If asymmetry has not been corrected, flaps and slats did not respond to above procedure, or lateral control problems exist, land using minimum safe speed AOA if landing is elected.

**FLAP LIGHT****NOT AFTER LANDING/TAKEOFF FLAP TRANSITION**

1. Airspeed ..... Below 225 KIAS
2. FLAP handle ..... Ensure Full UP
3. MASTER RESET ..... Depress

*While holding MASTER RESET pushbutton depressed:*

4. Maneuver flap thumbwheel ..... Full Forward
5. Check FLAP light out.  
(Light can take up to 10 seconds to reilluminate.)

**CONTINUED** 

**AFTER LANDING/TAKEOFF FLAP TRANSITION  
OR REILLUMINATION AFTER ABOVE  
PROCEDURES**

1. MASTER RESET ..... Depress
2. If light is still illuminated, check FLAP handle and indicator position, then proceed with appropriate steps below.

**FLAP HANDLE UP AND FLAPS NOT FULLY  
RETRACTED**

1. FLAP handle ..... EMER UP  
If FLAP handle or flaps will not respond or FLAP light remains illuminated, refer to Flap and Slat Asymmetry procedures.

**FLAP HANDLE UP AND FLAPS INDICATING  
FULL UP**

1. Flaps ..... Cycle  
If FLAP handle or flaps will not respond or FLAP light remains illuminated, refer to Flap and Slat Asymmetry procedures.

**FLAP HANDLE DOWN AND FLAPS NOT FULLY  
EXTENDED**

1. Wing sweep ..... Ensure at 20°  
FLAPs will not respond or FLAP light remains illuminated. Refer to Flap and Slat Asymmetry procedures.

**FLAP HANDLE DOWN AND FLAPS DOWN**

1. Wing sweep ..... Ensure at 20°
2. MASTER RESET ..... Depress  
(allow 10 seconds for auxiliary flaps to extend)

**Note**

If FLAP handle or flaps will not respond or FLAP light remains illuminated, refer to Flap and Slat Asymmetry procedures.

**FCS CAUTION LIGHT****Note**

Verify maintenance file fault reporting acronyms (RIO) to troubleshoot system for maintenance debrief.

1. MASTER RESET pushbutton . . . . . Depress

*If light remains illuminated:*

**WARNING**

- The DFCS has lost redundancy but has not lost any authority.
- The DFCS is potentially one failure away from losing authority and may degrade to ROLL SAS OFF or YAW SAS OFF characteristics with a subsequent failure.

2. Airspeed . . . . . Remain below 600 KIAS or 1.3 IMN and adhere to the following limitations:
  - a. Above 0.5 IMN, no cross control inputs permitted above 10 units AOA.
  - b. With maneuvering devices retracted, coordinate all lateral stick inputs above 0.6 IMN and 15 units AOA.

**PITCH SAS LIGHT**

1. MASTER RESET pushbutton ..... Depress
2. If light remains illuminated .... No limitations

**CAUTION**

- The spoilers may be inoperative (ground roll braking) with a complete failure of the pitch computer.
- If spoilers are inoperative the degradation in the roll axis may be severe and a careful slow flight should be conducted to determine whether a CV approach should be attempted. Refer to spoiler failure procedure.

**Note**

- The PITCH SAS light will illuminate with any degrade to authority. Additional failures or a complete loss of SAS functions in the pitch axis may not provide any further warning.
- The autopilot will not be operational with a complete pitch SAS failure.

**ROLL DGR LIGHT, YAW DGR LIGHT AND/OR ARI DGR LIGHT**

1. MASTER RESET pushbutton ..... Depress
2. If light remains illuminated, aggressive maneuvering should be terminated.
3. Remain below 0.93 IMN.

**Note**

Rudder pedal shakers inop if YAW B fail.

**ARI/SAS OUT LIGHT (WITH ROLL DGR, YAW DGR OR ARI DGR LIGHT)**

1. Ensure ROLL and YAW STAB AUG switches ..... ON
2. MASTER RESET pushbutton ..... Depress

*If lights remain illuminated:*

3. Leave STAB AUG switches ..... ON (to take advantage of any remaining capability that the DFCS may be able to provide). Terminate aggressive maneuvering and remain below 0.93 IMN.

**WARNING**

Maneuvering with YAW SAS OFF or inoperative shall not be conducted above 15 units AOA with landing gear retracted.

**CONTINUED**

#### 4. Perform Controllability Check procedure.

**CAUTION**

- If spoilers are inoperative the degradation in the roll axis may be severe and a careful slow flight should be conducted to determine whether a CV approach should be attempted. Refer to spoiler failure procedure.
- CV landings with total yaw SAS failure require increased attention to control of directional oscillations especially in turbulence and/or during lineup corrections.
- Rudder pedal shakers inop if YAW B fail.

#### Note

ROLL DGR and ARI/SAS OUT lights may automatically extinguish upon selection of gear handle down. This is indicative of a DFCS dual air data failure (AOA or Mach sensor inputs). These failures inhibit roll SAS and ARI functions in cruise configuration, but not in the landing configuration.

## RUNAWAY STABILIZER TRIM

1. SPD BK/P-ROLL TRIM  
ENABLE (RA2) cb ..... Pull
2. Decelerate to below 300 KIAS.
3. Use Autopilot, if available, in cruise configuration to reduce pilot workload.
4. Minimum stick forces are achieved under following conditions:
  - a. Runaway nose down ..... FLAPS UP
  - b. Runaway nose up ..... FLAPS DOWN
5. Straight-in approach.

## STAB AUG TRANSIENTS

1. MASTER RESET pushbutton ..... Depress
2. Airspeed ..... Decelerate  
below 400 KIAS or 0.93 IMN
3. STAB AUG switches ..... All OFF

### Note

With ROLL or YAW STAB AUG OFF, the ARI/ SAS OUT light will be illuminated.

4. STAB AUG switches ..... Reset  
(reset individually to isolate failure)
5. Perform Controllability Check procedure.



**AUTOPILOT LIGHT**

1. MASTER RESET pushbutton ..... Depress

**HZ TAIL AUTH LIGHT**

1. MASTER RESET pushbutton ..... Depress  
(10 seconds)

*If light remains illuminated above 400 KIAS/0.9 IMN:*

2. ROLL STAB AUG switch ..... OFF

**Note**

ARI/SAS OUT light will illuminate.

3. Restrict lateral control inputs above 400 KIAS/0.9 IMN to one-quarter throw.



Above 400 KIAS/0.9 IMN there is a danger of torsional overstress to the fuselage with large lateral stick deflections.

4. Reduce airspeed and remain below 400 KIAS/0.90 IMN.

*Below 400 KIAS/0.9 IMN:*

5. ROLL STAB AUG switch ..... ON

**Note**

At low airspeeds, lateral control effectiveness may be reduced.

6. Do not select OV SW after landing.

## RUDDER AUTH LIGHT

1. MASTER RESET pushbutton . . . . . Depress (10 seconds)
2. If light remains illuminated . . Above 250 KIAS, restrict rudder inputs to less than 10°

### CAUTION

- With rudder authority stops failed open, excess rudder authority is available and could result in structural damage above 250 KIAS.
- After landing, nosewheel steering authority may be restricted to 10° (with neutral directional trim) and differential braking is required coming out of the arresting gear.

## RUDDER HARDOVER

A rudder hardover will result in a single fully deflected (over 30 degrees, pegged on cockpit indicator) inboard or outboard rudder with possible restricted opposing “good” rudder authority and a flight hydraulic failure. Rudder trim and rudder pedal authority may also be restricted.

### WARNING

With zero flight hydraulic pressure, ensure hydraulic transfer pump switch is secured as soon as possible. In the event of hydraulic malfunction, refer to appropriate hydraulic emergency procedure and execute appropriate steps in parallel as required.

CONTINUED

*After completion of uncommanded roll/yaw procedures:*

1. **Confirm rudder hardover via cockpit indicator and/or RIO/wingman visual inspection.**

**Note**

Restriction of authority, if any, of opposing “good” rudder may be determined by reference to the cockpit indicator.

2. **If carrier based, divert to an airfield with short field arresting gear.**
3. **Perform Controllability Check procedure.**

**Note**

- **Expect roll and yaw oscillations during throttle and control movements. Undesirable airspeed increase may occur due to differential thrust. Airspeed control may also be influenced by flap position and pilot workload. Specifically, evaluate the effects of any required differential thrust on lineup corrections, wave-off/bolter performance, and flight characteristics.**
  - **Simulation has indicated that full flap setting combined with severely restricted opposing rudder results in more pronounced roll and yaw oscillations.**
4. **During cruise, use differential thrust, rudder, lateral stick, and rudder trim to relieve pilot workload and control forces. Use lateral trim as necessary.**

**WARNING**

If jettison is required, consideration should be given to keeping the wing stations symmetric and avoiding aft c.g. conditions.

**Note**

It is unknown what the fuel consumption will be in this configuration. Therefore, fuel quantity must be closely monitored. Recommend using gear up, flaps down, single engine BINGO charts. Fuel imbalance may occur during prolonged flight with higher demands on one engine. Use feed switch to minimize fuel split.

5. If no suitable divert available and aircraft sufficiently controllable for a CV approach, attempt CV arrested landing.

**Note**

Recommend practice approach to CV, fuel permitting.

6. If no suitable divert available and controlled CV approach in question, perform a controlled ejection.

**CONTINUED** 

*Prior to landing:*

**WARNING**

Controllability of a rudder hardover airborne is no indication of the ability to maintain directional control on deck. Upon touchdown, expect the aircraft to experience uncontrollable directional excursions potentially departing the landing area/runway.

**Note**

- Ensure familiarity with landing considerations of controllability check procedures.
- Simulation indicated that bank angle control was enhanced by leading lateral stick inputs with differential thrust.

7. Lateral trim ..... Neutralize

**Note**

The use of lateral trim to reduce stick forces during actual approach and landing should be avoided as this reduces the spoiler deflection available for roll control.

8. Asym Thrust Limiter Sw ..... Off (if reqd.)

**WARNING**

Asymmetric thrust limiter should only be disabled if required to assist/maintain control.

**9. Perform arrested landing.**

**WARNING**

Use only opposing throttle for waveoff/bolter.

**CAUTION**

If rudder pedal authority is restricted, nosewheel steering should not be engaged upon landing rollout.

**UPRIGHT DEPARTURE/FLAT SPIN**

- \*1. Stick ..... Forward/Neutral  
Lateral, Harness — LOCK
- \*2. Throttles ..... Both IDLE
- \*3. Rudder ..... Rudder–Opposite  
Turn Needle/Yaw/Spin Arrow

*If there is no recovery:*

- \*4. Stick ..... Into Turn Needle

**CONTINUED**

*If yaw rate is steady/increasing or spin arrow flashing or eyeball out g sensed:*

- \*5. Roll SAS — ON, Stick — Full into turn needle and aft.**

*If recovery is indicated:*

- \*6. Controls ..... Neutralize**

- \*7. Recover at 17 units AOA; thrust as required.**

*If flat spin is verified by flat attitude, increasing yaw rate, increasing eyeball-out g, and lack of pitch and roll rates:*

- \*8. Canopy ..... Jettison**

- \*9. Eject (RIO command eject).**

**WARNING**

**Ejection guidelines are not meant to prohibit earlier canopy jettison and/or ejection. If insufficient altitude exists to recover from departed flight, the flightcrew should not hesitate to eject.**

**Note**

**At high yaw rates where eyeball-out g is sensed, aft stick and full lateral stick into the turn needle may arrest the yaw rate and increase the possibility of recovery. At these yaw rates, the additional differential tail provided by roll SAS on will also increase the possibility of recovery. It may be necessary to center the stick laterally momentarily to engage roll SAS.**

**INVERTED DEPARTURE/SPIN**

- \*1. Stick ..... Full Aft/Neutral Lateral  
Harness — LOCK
- \*2. Throttles ..... Both IDLE
- \*3. Rudder ..... Rudder-Opposite  
Turn Needle/Yaw/Spin Arrow

*If recovery is indicated:*

- \*4. Controls ..... Neutralize
- \*5. Recover at 17 units AOA; thrust as required.

*If spinning below 10,000 feet AGL:*

- \*6. Eject (RIO command eject).



Dual compressor stalls/overtemperatures should be expected in an inverted spin.

#### Note

If pedal adjustment and/or pilot positioning (because of negative g forces) is such that full rudder pedal travel cannot be obtained, full lateral control opposite the turn needle/yaw may provide an alternate recovery method. Aft longitudinal stick should be relaxed enough to allow full lateral stick application.



**WINGS SWEEP LIGHTS**

**ADVISORY LIGHT ONLY**

*No loss of normal control:*

- 1. **MASTER RESET** ..... Depress

**ADVISORY AND WARNING LIGHTS**

*No auto or manual control:*

- 1. **Airspeed** ..... Decelerate to 0.9 IMN or Less
- 2. **Check spider detent engaged.**
- 3. **MASTER RESET** ..... Depress (wait 15 seconds to determine system status)

*If advisory and warning lights illuminate again:*

- 4. **WING SWEEP DRIVE NO. 1 and WG SWP DR NO. 2/ MANUV FLAP cb's (LE1, LE2)** ..... Pull
- 5. **Emergency WING SWEEP handle** ..... Comply With Below Schedule:
  - a.  $\leq 0.4$  Mach — 20°
  - b.  $\leq 0.7$  Mach — 25°
  - c.  $\leq 0.8$  Mach — 50°
  - d.  $\leq 0.9$  Mach — 60°
  - e.  $\geq 0.9$  Mach — 68°



**Avoid ACM and aerobatics.**



**UNSCHEDULED WING SWEEP**

1. Emergency WING SWEEP handle ..... Raise and Hold



Unscheduled wing sweep at supersonic speed may cause structural damage.

2. Airspeed ..... Decelerate to 0.6 IMN or Less in 1g Nonmaneuvering Flight
3. Emergency WING SWEEP handle ..... FULL FWD

*If wings do not move full forward:*

4. Emergency WING SWEEP handle ..... Match With Actual Wing Position
5. WING SWEEP DRIVE NO. 1 and WG SWP DR NO. 2/ MANUV FLAP cb's (LE1, LE2) ..... Pull (refer to Aft Wing Sweep Landing, page 163)
6. Land as soon as practicable.

## ASYMMETRIC WING SWEEP

With asymmetric wing-sweep emergency condition, divert field landing is preferable to CV landing attempt. See Asymmetric Wings Approach Airspeed chart for 14 or 15 units AOA with asymmetric wing configurations.



To preclude potential damage to aircraft, avoid all wing-sweep commands prior to performing steps 1 through 8. Limit maneuvering envelope to 350 KIAS and 1.5g's.

1. Leave wings and flaps as set.
2. Altitude ..... Climb/Remain  
Above 10,000 feet AGL
3. Airspeed ..... 250 Knots/  
Do Not Exceed 12 Units AOA
4. Maneuver devices ..... Thumbwheel  
Manual Retract
5. WING SWEEP DRIVE NO. 1 and  
WG SWP DR. NO. 2/MANUV  
FLAP cb's (LE1, LE2) ..... Pull
6. All SAS's ..... ON

### Note

If roll SAS will not engage, accelerate and attempt to reset at 20-knot intervals. Stick may have to be released laterally in order to engage roll SAS.

CONTINUED

## 7. Confirm left and right wing position.

### Note

Wing-sweep tape indicates actual right wing position. All other cockpit wing position indications may be unreliable, including wing-sweep handle position. Visually verify left wing position.

If left wing is aft of 62° spoiler cutout and right wing is at 20°, perform Asymmetric Wing Sweep Unacceptable for Landing procedure.

8. Perform preliminary controllability check as follows:
  - a. Trim away from forward wing (opposite stick force) to ensure that maximum spoiler deflection is available.
  - b. Assess spoiler function by controlled left and right stick inputs.

### WARNING

- Aircraft controllability in approach configuration with spoilers inoperative and a large wing-sweep asymmetry will range from difficult to impossible depending on the split.
- Upon lowering the landing gear an uncommanded but controllable roll transient may occur because of spoiler gearing change from cruise to PA.

CONTINUED

- c. Landing gear ..... Down
- d. Leave flaps as set until further determinations are completed.
- e. Slowly increase AOA to no more than 15 units (attempt to maintain 0° sideslip)
- f. Make small lateral stick inputs to simulate lineup corrections.

If aircraft controllability is questionable for safe landing, perform Asymmetric Wing Sweep Unacceptable for Landing procedure.

If aircraft controllability is safe for landing, perform Asymmetric Wing Sweep Acceptable for Landing procedure.

### ASYMMETRIC WING SWEEP ACCEPTABLE FOR LANDING

Establish final landing configuration as follows:

1. AUX FLAP/FLAP CONTR cb (7G3) ..... Pull

#### Note

Pulling the AUX FLAP/FLAP CONTR cb (7G3) with the emergency WING SWEEP handle at the 20° position disables wingsweep commands.

*If both wings are forward of 50°:*

- a. Airspeed ..... Below 225 KIAS



Extending the main flaps with either wing aft of 50° could result in damage to both the flaps and the aft fuselage.

- b. Flaps ..... Lower incrementally to 20° to 25°



When flaps are set to greater than 25°, lateral pilot-induced oscillations are likely and may result in wingtip damage at touchdown and/or hard landings.

**Note**

The 25° flap position can be established first by noting when the spoiler position indicators switch to the dropped position during flap extension. An uncommanded but controllable roll transient because of the spoiler gearing change will also occur. Upon observing either event, retract the flaps to just less than 25°, the roll transient will occur in the opposite direction as the flaps pass through 25°. Main flap extension without auxiliary flaps will require greater than normal aft stick trim.

- c. Approach airspeed ..... 15 Units AOA

**Note**

Indicated AOA is subject to a 1- to 2-unit sideslip-induced error. Verify proper AOA at zero sideslip.

*If either wing is aft of 50°:*

- a. Flaps ..... UP

**CONTINUED**

b. Approach airspeed . . . . . 14 Units AOA



Wing rock and wing stall may occur at 16 to 16-1/2 units AOA during flaps-up approaches. Rapid lateral stick inputs will result in pitch coupling. Excessive descent rates may develop and/or wingtip damage at touchdown may occur. Precise AOA control and smooth lateral control inputs are required.

**Note**

Indicated AOA is subject to a 1- to 2-unit sideslip-induced error. Verify proper AOA at zero sideslip.

- 2. Emergency WING SWEEP handle . . . . . Leave in Position That Established Satisfactory Controllability
- 3. Gross weight . . . . . Reduce as Required
- 4. DLC . . . . . Stowed
- 5. Autothrottles (APC) . . . . . Do Not Engage
- 6. Confirm flight characteristics by flying a simulated landing approach at safe altitude to include lineup corrections, power changes, and waveoff.



**CAUTION**

Full spoiler authority will be required for landing with large wing-sweep asymmetry. Before attempting actual approach, trim away from forward wing (opposite stick forces) to ensure that maximum spoiler deflection is available.

7. Fly straight-in approach to arrested or normal landing.

**CAUTION**

Avoid rapid lateral stick inputs, since significant pitch-roll coupling may result in roll ratcheting, pitching motion, and lateral PIO tendency; an excessive descent rate may develop and/or wing-tip damage at touchdown may occur.

**Note**

- Maximum airspeed for wheelbrake application is 165 KIAS at gross weight of 46,000 pounds and 145 at 51,000 pounds.
- A crosswind from the swept-wing side is favorable while a cross-wind from the forward-wing side is unfavorable.

**Note**

- To reduce lateral stick force, the landing approach can be flown with rudder trim into the forward wing, allowing aircraft to yaw into the forward wing. Sideslip should be reduced with rudder just prior to touchdown.
- If desired, sideslip can be reduced to zero with rudder at the beginning of the approach and held to touchdown. Lateral stick force increases as sideslip is reduced. Method of approach is pilot's option.
- In the event of bolter or go-around, as airspeed increases, the aircraft will roll toward the swept wing and yaw toward the forward wing.

**ASYMMETRIC WING SWEEP UNACCEPTABLE FOR LANDING****WARNING**

Efforts to improve controllability by attempting to minimize or eliminate wing-sweep mismatch could result in an acceptable condition becoming unacceptable.

**Note**

Once spoiler operation is assessed, stick forces may be trimmed to reduce pilot workload during transit to field or CV. The use of lateral trim to reduce stick forces during actual approach and landing should be avoided as this reduces the spoiler deflection available for roll control.

- 1. Flaps ..... UP
- 2. AUX FLAP/FLAP CONTR (7G3) cb ..... In

**Note**

- At any point during the following procedures, if wing-sweep symmetry is regained at aft wing-sweep position and runway length/approach speed permit, aircrew may elect to perform Aft Wing Sweep Landing procedure.
- If left wing is jammed, wing-sweep command can result in right wing driving to either 19° (forward command) or 69° (aft command) actuator overtravel stop. Subsequent wing-sweep commands may not move the right wing.

*If spoilers are operational:*

- a. Emergency WING SWEEP handle ..... Input a Small Forward Command

*If spoilers are not operational:*

- a. **Emergency WING SWEEP handle** ..... **Input a Small Aft Command**

**3. Note movement of left and right wings and attempt to regain wing-sweep asymmetry by using the following wing-sweep commands.**

*If both wings are movable and left wing is forward of right wing:*

- a. **Airspeed** ..... **300 KIAS**
- b. **Emergency WING SWEEP handle** ..... **68°**
- c. **Emergency WING SWEEP handle** ..... **20°**
- d. **AUX FLAP/FLAP CONTR cb (7G3)** ..... **Pull**
- e. **Repeat preliminary landing controllability check (step 9 on page 79)**

*If both wings are movable and right wing is forward of left wing:*

- a. **Emergency WING SWEEP handle** ..... **20°**
- b. **AUX FLAP/FLAP CONTR cb (7G3)** ..... **Pull**
- c. **Repeat preliminary landing controllability check (step 9 on page 79)**

*If right wing is jammed and left wing is movable:*

- a. **Airspeed** ..... **300 KIAS**

**CONTINUED** 

**Note**

If right wing is jammed aft of spoiler cutout angle, matching left wing will result in loss of spoiler control. If this reduced lateral control is undesirable, left wing should be commanded just forward of spoiler cutout to regain spoiler control.

- b. Emergency WING SWEEP handle ..... Match Left Wing to Right Wing Position
- c. AUX FLAP/FLAP CONTR cb (7G3) ..... Pull
- d. Repeat preliminary landing controllability check (step 9 on page 79)

*If left wing is jammed and spoilers are operational:*

- a. Emergency WING SWEEP handle ..... 20°
- b. AUX FLAP/FLAP CONTR cb (7G3) ..... Pull
- c. Repeat preliminary landing controllability check (step 9 on page 79)

*If left wing is jammed aft of spoiler cutout, wing-sweep angle and spoilers are inoperative:*

- a. Airspeed ..... 300 KIAS
- b. Emergency WING SWEEP handle ..... 68°
- c. AUX FLAP/FLAP CONTR cb (7G3) ..... Pull
- d. Repeat preliminary landing controllability check (step 9 on page 79)

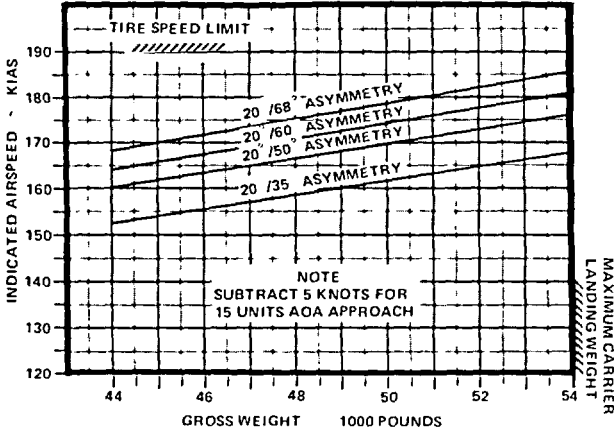
*If final wing configuration is unsafe for landing:*

- a. Prepare for and execute controlled ejection.

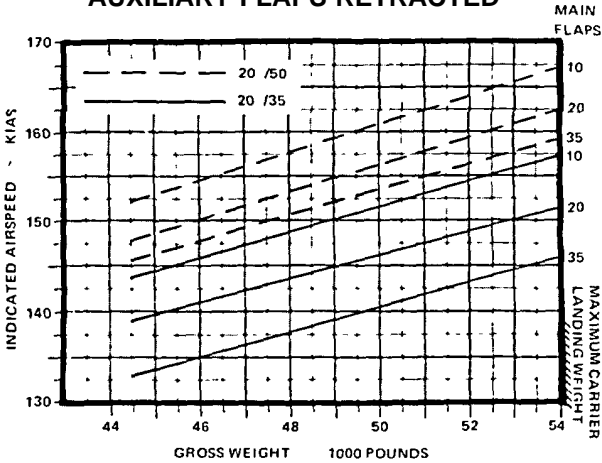
**CONTINUED** 

DATE: AUGUST 1986  
 DATA BASIS: FLIGHT TEST

**FLAPS UP APPROACH AIRSPEED (14 UNITS AOA)  
 FLAPS/SLATS RETRACTED**



**LANDING APPROACH AIRSPEEDS (15 UNITS AOA)  
 MAIN FLAPS/SLATS EXTENDED:  
 AUXILIARY FLAPS RETRACTED**



**ASYMMETRIC WINGS APPROACH AIRSPEED**

**CADC LIGHT**

1. MASTER RESET ..... Depress
2. CADC cb's (LA2, LB2, LC2, LH2) ..... Cycle
3. MASTER RESET ..... Depress

*If light remains illuminated:*

4. Remain below 1.5 IMN.  
One or more of following systems may be affected by CADC malfunction that illuminates only the CADC light:
  - a. Maximum safe Mach
  - b. Autopilot
  - c. Idle lockup function of AFTC
  - d. Wing-sweep indicator
  - e. Cockpit cooling less than Mach 0.25
  - f. HUD display (takeoff and landing)
  - g. Servo altimeter.

FUEL

**Note**

- Erroneous Mach inputs to AFTC may cause uncommanded acceleration of both engines to near military values in the primary engine mode.
- If illumination of the CADC light is accompanied by other caution or advisory light(s), refer to the appropriate procedure that will dictate the most restrictive limitation.

FUEL



## FUEL

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**L AND/OR R FUEL  
PRESS LIGHT(S)  
AND 10 SEC  
WARNING TONE**

**FUEL**

1. Both throttles ..... MIL Power or Less
2. Restore aircraft to 1.0g flight.

*If both lights remain on:*

3. Increase positive g's to greater than 1.0g.
4. Descend to below 25,000 feet.
5. Maintain cruise power settings or less.
6. Land as soon as possible.

### WARNING

- Illumination of both lights and the warning tone may be indicative of a total motive flow failure. Zero or negative-g flight should be avoided.
- Complete loss of motive flow will result in the sump tank interconnect and the engine feed crossfeed valve remaining in the closed position, isolating the forward and aft systems. Consequently, single-engine operation will cause fuel on the opposite side to be unavailable.

**CONTINUED**

■ *If one light remains on:*

3. No afterburner above 15,000 feet.
4. Fuel distribution ..... Monitor  
(balance if required)
5. Land as soon as practicable.

*If migration occurs after balancing, as indicated by a 100 to 300 PPM increase on the inoperative side or a 100 to 300 PPM decrease on the operative side above expected burn rate according to indicated fuel flow:*

6. FUEL PRESS ADVSY CB – PULL (7F1).

#### Note

Pulling the FUEL PRESS ADVSY CB will cause the engine crossfeed valve to close and the inoperative side fuselage motive flow shutoff valve to open. This will reduce the amount of fuel transfer from the operative side to the inoperative side.

**Note**

The L or R FUEL PRESS light and/or warning tone will extinguish when the FUEL PRESS ADVSY CB is pulled.

- 7. Maintain cruise power or less.
- 8. Fuel distribution – monitor (balance if required).

**WARNING**

If the sump tank interconnect valve has failed, selecting AFT or FWD on the FEED SWITCH could result in fuel migration to the inoperative side. If fuel migration occurs after selecting AFT or FWD on the FEED SWITCH (as indicated by a 100 to 300 PPM increase on the inoperative side), immediately return the feed switch to NORM.

- 9. Land as soon as possible.

**L OR R FUEL LOW LIGHT**

- 1. DUMP switch ..... OFF
- 2. Fuel distribution .. Check (balance if required)  
(see below if one wing does not transfer)

*If wing and/or external fuel remains:*

- 3. WING/EXT TRANS ..... ORIDE
- 4. Land as soon as practicable.

**FUEL TRANSFER FAILURES****CAUTION**

Wing and external fuel will not transfer with refuel probe switch in ALL EXTD. If probe extension required, select FUS EXT D to enable transfer.

**Note**

Fuel management panel will be inoperative if FUEL MGT PLN cb (RC1) is out.

1. Fuel Management Panel cb .. Check in (RC1)

*If wing fuel does not transfer:*

2. WING/EXT TRANS switch ..... ORIDE

*If one wing still does not transfer:*

3. FEED switch ..... Select High Fuselage Tape Side

*If wing fuel does not decrease after 2 minutes or wing fuel transfer is completed:*

4. FEED switch ..... NORM

*If external tanks fail to transfer or transfer slowly:*

**Note**

**Descending below freezing level may  
thaw possible frozen valves.**

**2. WING/EXT TRANS ..... ORIDE**

*If fuel continues to transfer improperly or does not transfer:*

- 3. In-flight refueling probe ..... All Extend,  
Then Retract**
- 4. Apply cyclic positive or negative g's.**
- 5. AIR SOURCE pushbutton .... OFF Then RAM  
Then ON (below 35,000  
feet, less than 300 KIAS)**
- 6. If conditions permit, descend below the freezing  
level and periodically check for good transfer.**

**CONTINUED**

**WARNING**

CV arrestment, CV touch-and-go, or normal field landings with full or partial fuel in the external tanks are not authorized because of overload of the nacelle backup structure. Only minimum rate-of-descent landings (minimum sink rate) are authorized.

**Note**

CSDC flycatcher 71-00031 displays free airstream temperature; if first digit is an even number, the temperature is above freezing.

**WINGS DO NOT ACCEPT FUEL WITH SWITCH IN ALL EXTD POSITION**

- 1. REFUEL PROBE ..... FUS EXTD
- 2. WING/EXT TRANS ..... OFF

**WINGS ACCEPT FUEL WITH SWITCH IN FUS EXTD POSITION**

- 1. WING/EXT TRANS ..... ORIDE

**UNCOMMANDED DUMP**

- 1. DUMP switch ..... Check OFF
- 2. FUEL FEED/DUMP (RD1) cb ..... Pull

**CONTINUED** 



**WARNING**

Pulling the fuel feed/dump circuit breaker (RD1) isolates the right and left fuel systems. It also deactivates the function of the feed switch, the automatic balance functions, and the fuel dump system. Should single engine operation subsequently be necessary, useable fuel will be limited to only what is available on the operating side.

**FUEL LEAK**

1. Land as soon as possible.

**CAUTION**

Use of afterburner with fuel leak should be limited to emergency use only.

2. WING/EXT TRANS ..... OFF

*If abnormal fuel quantity decrease ceases, fuel leak is in wing/wing pivot or attachment points for auxiliary tanks:*

3. If leak is not stopped, it is in engine/nacelle area. Proceed immediately with next step.
4. FUEL FEED/DUMP (RD1) cb ..... Pull

**CONTINUED**

**WARNING**

Pulling the fuel feed/dump circuit breaker (RD1) isolates the right and left fuel systems. It also deactivates the function of the feed switch, the automatic balance functions, and the fuel dump system. Should single engine operation subsequently be necessary, useable fuel will be limited to only what is available on the operating side.

**Note**

Enough time should be allowed for quantity tapes/feeds to develop split so that leak can be isolated to left or right feed group. Affected side will be low side.

5. Throttle (affected side) ..... OFF
6. Conditions permitting, allow rpm to decelerate to windmill rpm.
7. FUEL SHUT OFF ..... Pull
8. Refer to Single-Engine Cruise Operations.

SEE IC # 32

**FUEL IMBALANCE/FUEL QUANTITY  
BALANCING****WARNING**

AB operation is not recommended with a fuel imbalance or with indications of venting fuel.

**Note**

Fuel quantity balancing is not required prior to completion of wing/external tank transfer or until one fuselage tape drops below 4,500 pounds.

*WITH A FUEL STATE BELOW 4500 POUNDS IN EITHER THE AFT/LEFT OR FWD/RT FEED GROUPS AND A FUEL SPLIT GREATER THAN 1500 POUNDS BETWEEN THE AFT/LEFT AND FWD/RIGHT FEED GROUPS:*

1. Both throttles – MIL power or less.
2. FEED SWITCH – select high fuselage tape side.

**Note**

- If practical, obtain a visual inspection for venting fuel. Do not delay execution of emergency procedures for visual inspection.
- Indication of fuel balancing should appear within 3 minutes of selecting the high fuselage tape side.
- With a high quantity in the FWD/RT fuel system, the greater static head pressure, particularly in nose-up attitudes can cause overfilling of the AFT/LT fuel system and subsequent fuel venting. To prevent this, the feed switch should be returned to NORM before the AFT/LT tape reaches 6,200

HYD

SEE IC # 32

pounds. Overfilling is indicated by a quantity of 6,600 pounds or greater in the FWD/RT system or 6,200 pounds or greater in the AFT/LT system.

If no venting is observed and/or the fuel imbalance is corrected with the fuel feed switch:

3. FUEL FEED SWITCH – As required and land as soon as practicable.

**WARNING**

If the sump tank interconnect valve has failed closed, selecting AFT or FWD on the FUEL FEED SWITCH could result in rapid increase of the fuel imbalance. If this occurs (as indicated by an imbalance increase of 100 to 300 PPM) immediately return the FEED SWITCH to NORM.

If fuel venting exists and/or fuel imbalance exceeds 2,000 pounds:

4. FUEL FEED SWITCH – NORM.

**WARNING**

Venting fuel in conjunction with an uncontrollable fuel split is indicative of a motive flow failure and can result in the high feed group having trapped/unusable fuel. If this occurs, aircrew may have as little as 4,500 pounds of usable fuel remaining and a new bingo profile may be required.

5. Determine useable fuel and land as soon as possible.

If indications of a fuel leak exist:

6. Refer to FUEL LEAK PROCEDURE (page 126a).

# HYDRAULIC

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**COMBINED  
PRESSURE  
APPROXIMATELY  
2,400 TO 2,600 PSI**

**HYDRAULIC**

**WARNING**

If hammering (cavitation) is experienced in the hydraulic system, component rupture is imminent, turn the hydraulic transfer pump switch (BIDI) — OFF.

- 1. HYD ISOL switch ..... FLT

**Note**

Monitor AUX BRAKE PRESSURE gauge. Tap wheelbrakes to seat priority valve if pressure is decreasing.

- 2. In-flight REFUEL PROBE switch ..... EXTD  
(In carrier environment)

**CAUTION**

Wing and external fuel will not transfer with refuel probe switch in ALL EXTD. If probe extension required, select FUS EXTD to enable transfer.

- 3. Wing sweep ..... Set at 20°
- 4. L INLET RAMP switch ..... STOW  
(less than 1.2 IMN)

**CONTINUED**

**WARNING**

If WING SWEEP advisory light is illuminated, pulling L AICS (LF2) cb may cause unintentional wing sweep unless WING SWEEP DRIVE NO. 1 (LE1) and WG SWP DR NO. 2/MANUV FLAP (LE2) cb's are pulled.

- 5. L AICS cb ..... Pull (LF2)

**Note**

Pulling the AICS cb while airborne may illuminate the FCS CAUTION and ARI DGR lights. Above about 600 KIAS, the PITCH SAS and ROLL DGR lights will also be illuminated. These should clear with a MASTER RESET following a programmer reset.

- 6. L INLET RAMP switch ..... AUTO
- 7. DLC ..... Do not engage
- 8. EMERG FLT HYD switch ..... HIGH  
(on final, committed to land)
- 9. Land as soon as possible.

**CAUTION**

Monitor remaining hydraulic system pressure since the MASTER CAUTION and HYD PRESS lights will not illuminate if the remaining system fails.



**COMBINED PRESSURE ZERO**

- 1. HYD ISOL switch ..... FLT
- 2. HYD TRANSFER PUMP switch ..... SHUTOFF
- 3. In-flight REFUEL PROBE switch ..... EXTD  
(in carrier environment)

**CAUTION**

Wing and external fuel will not transfer with refuel probe switch in ALL EXTD. If probe extension required, select FUS EXT D to enable transfer.

- 4. Wing sweep ..... Set at 20°
- 5. EMERG FLT HYD ..... LOW

**WARNING**

- If the INLET RAMPS switch is not placed in STOW prior to the pressure reaching zero, do not place it in STOW after complete loss of pressure. Trapped fluid may be the only thing holding the affected ramp in position.

**WARNING**

- An outboard spoiler module failure with flaps extended, below 180 KIAS, and with a combined failure rendering the inboard spoilers inoperative, can result in asymmetric spoiler float such that the aircraft may not be flyable at normal approach airspeeds. A small amount of spoiler float can significantly increase approach speeds.
- Do not return to AUTO (LOW) mode once module is selected on (HIGH or LOW) with operating flight hydraulic system. When operated in conjunction with zero combined pressure, some backup module fluid will be expelled by thermal expansion. The module will remain fully serviced and operate normally as long as elevated temperatures are maintained. Once operating, the module should not be turned off in flight without combined system pressure available to reservice it. Doing so would result in fluid contraction and an underserviced condition that could prevent subsequent pump operation.

**CAUTION**

- Loss of combined pressure with landing flaps down may allow the auxiliary flaps to cycle causing moderate pitch oscillations.
- Monitor remaining hydraulic system pressure since the MASTER CAUTION and HYD PRESS lights will not illuminate if the remaining system fails.

**Note**

Complete loss of combined hydraulic pressure will result in the following caution lights due to the loss of a single channel SAS actuator function: PITCH SAS, ROLL DGR, YAW DGR, ARI DGR, and SPOILERS lights.

*The following important equipment is inoperative:*

- a. One-half authority of SAS/ARI actuators in pitch, roll and yaw.
- b. L AICS.
- c. Inboard spoilers.
- d. Emergency generator.
- e. DLC.
- f. Speedbrakes.
- g. Normal hook.

**CONTINUED**

- h. Hook extend (emergency actuation available).
  - i. Flaps and slats (emergency actuation available).
  - j. Landing gear (emergency actuation available).
  - k. Wheelbrakes (emergency actuation available).
  - l. Refuel probe (emergency actuation available if system fluid remains in return line).
  - m. Auxiliary flaps.
  - n. Nosewheel steering.
  - o. Gun drive.
6. LDG GEAR handle ..... EMERG DN
  7. HOOK ..... EMERG DN
  8. AUX FLAP/FLAP CONTR cb ..... Pull (7G3)
  9. Flaps (no auxiliary flaps available) ..... DN
  10. Brake accumulator (handpump) ..... Check
  11. ANTI SKID SPOILER BK switch . SPOILER BK  
(OFF for CV)
  12. EMERG FLT HYD switch ..... HIGH  
(on final, committed to land)

**WARNING**

Do not return to AUTO (LOW) mode once module is selected on (HIGH or LOW) with operating flight hydraulic system.

13. Make arrested landing as soon as possible.

CONTINUED

After landing:

- 14. Do not taxi out of arresting gear.
- 15. Engines ..... OFF

**FLIGHT PRESSURE APPROXIMATELY 2,400 TO 2,600 PSI**

**WARNING**

If hammering (cavitation) is experienced in the hydraulic system, component rupture is imminent. Turn the hydraulic transfer pump switch (BIDI) OFF.

- 1. Wing sweep ..... Set at 20°
- 2. R INLET RAMP switch ..... STOW  
(less than 1.2 IMN)
- 3. R AICS cb ..... Pull (LG2)

**CONTINUED**



**Note**

Pulling the AICS cb while airborne may illuminate the FCS CAUTION and ARI DGR lights. Above about 600 KIAS, the PITCH SAS and ROLL DGR lights will also be illuminated. These should clear with a MASTER RESET following a programmer reset.

- 4. R INLET RAMP switch ..... AUTO
- 5. EMERG FLT HYD switch ..... HIGH  
(on final, committed to land)



Monitor remaining hydraulic system pressure since the MASTER CAUTION and HYD PRESS lights will not illuminate if the remaining system fails.

*The following important equipment is inoperative:*

- a. Normal hook ..... Restored by  
weight-on-wheels;  
hook handle restowed

**Note**

Arrested landing will require emergency hook extension.

- 6. Land as soon as possible.

**FLIGHT PRESSURE ZERO**

1. HYD TRANSFER PUMP switch ..... SHUTOFF
2. Wing sweep ..... Set at 20°
3. EMERG FLT HYD switch ..... LOW

**WARNING**

If the INLET RAMPS switch was not placed in STOW prior to pressure reaching zero, do not place it in stow after complete loss of pressure. Trapped fluid may be the only thing holding the affected ramp in position.

**CAUTION**

Monitor remaining hydraulic system pressure since the MASTER CAUTION and HYD PRESS lights will not illuminate if the remaining system fails.

**Note**

Complete loss of flight hydraulic pressure will result in the following caution lights due to the loss of single channel SAS actuator function: PITCH SAS, ROLL DGR, YAW DGR, and ARI DGR lights.

**CONTINUED** 



*The following important equipment is inoperative:*

- a. One-half authority of SAS/ARI actuators in pitch, roll and yaw.
  - b. ACLS.
  - c. R AICS.
  - d. Normal hook ..... Restored by weight-on wheels; hook handle restored
4. EMERG FLT HYD switch ..... HIGH (on final, committed to land)
5. Land as soon as possible.

**Note**

Arrested landing will require emergency hook extension.

**BOTH COMBINED AND FLIGHT PRESSURE ZERO**

- 1. EMERG FLT HYD switch ..... LOW
- 2. Do not attempt CV recovery. Divert if possible.

**WARNING**

If any undesirable motions or oscillations occur, immediately release the stick and permit the motions to dampen before resuming active control.

**WARNING**

- Do not attempt IMC or close night formation while in the LOW mode.
- Operations of more than 8 minutes total in HIGH mode may fail the BFCM motor. The LOW mode should be selected as soon as practicable following a waveoff or bolter, and the HIGH mode reselected on the subsequent approach.
- Inboard spoilers can be expected to float, causing uncomfortable lateral stick requirements for level flight. Do not trim out lateral forces.

3. Reduce airspeed to below 250 KIAS if practicable.

**Note**

Airspeeds less than 250 KIAS while in the LOW mode will reduce the susceptibility of exceeding maximum stabilizer deflection rates.

*The following important equipment is operative in flight:*

- a. Horizontal stabilizers (significantly reduced rate, no SAS/ARI).
- b. Rudders (slightly reduced rate, no SAS/ARI).
- c. Main flaps and slats (reduced rate via thumb-wheel or flap handle).
- d. Outboard spoilers.

**CONTINUED**

- e. Hydraulic handpump.
- f. Landing gear (emergency actuation available).
- g. Hook extend (emergency actuation available).
- h. Refuel probe (emergency actuation available if system fluid remains in return line).
- i. Wheelbrakes (emergency actuation available).

*If in-flight refueling is required:*

- 4. Decelerate with tanker to 180 KIAS.
- 5. Maneuver flaps ..... Extend
- 6. EMERG FLT HYD switch ..... HIGH  
prior to moving to pre-contact)
- 7. Avoid abrupt control inputs during contact.

**WARNING**

- Any abrupt control input to effect engagement can rate limit the stabilizers and result in loss of control. The pilot must resist spotting the basket and rely on RIO commentary to perform engagement.
- Extended LOW mode operation (>30 minutes) after in-flight refueling will permit several additional minutes in HIGH mode for subsequent landing.
- Tanking from large-body tankers (KC-130, KC-10, KC-135) is hazardous and should not be attempted.

**Note**

Once engaged, the airspeed can safely be increased to 200 KIAS to improve the transfer rate.

8. EMERG FLT HYD switch ..... LOW  
(immediately once clear of tanker)
9. Maneuver flaps ..... Retract

**Field recovery:**

10. LDG GEAR handle ..... EMERG DN
11. Maneuver flaps ..... Extend with thumbwheel
12. Maneuver flap cb ..... Pull (LE2)
13. HOOK handle ..... EMERG DN
14. Brake accumulator ..... Check

*Established on final, committed to land:*

15. EMERG FLT HYD switch ..... HIGH

**WARNING**

- Aggressive nose movement in close can rate limit the stabilizers, resulting in low altitude loss of control. Do not use APCS.
- Inboard spoilers can be expected to float, causing uncomfortable lateral stick requirements for level flight. Do not trim out lateral forces.

**CONTINUED**

**CAUTION**

- Waveoff performance from low power settings is very poor. Carrying extra speed during IMC approach will improve waveoff performance by permitting smooth rotation to 15 units AOA to break the rate of descent while the engines are accelerating.
- Prolonged operation of the BFCM in the HIGH mode may cause failure of the module. The LOW mode should be selected as soon as practicable following a waveoff or bolter and the HIGH mode reselected on the subsequent approach.

16. If wings are at 20° ..... Fly straight-in approach between 15 units AOA and 180 KIAS
17. If wings are > 20° ..... Fly straight-In approach at 15 units AOA

**Note**

Control in LOW mode is satisfactory for performing transition to dirty configuration. Pitching moment caused by flap transition is easily countered with electrical trim because of very slow extension rate.

18. Make arrested landing as soon as possible.

*After landing:*

- 19. Do not taxi out of arresting gear.
- 20. Throttles ..... OFF

**BACKUP FLIGHT MODULE FAILURE**



Prolonged use of backup flight control module in the high mode may result in failure of the module.

- 1. FLT HYD BACKUP PH A, B, C, (2A1, 2C1, 2E1) cb's ..... In
- 2. Land as soon as possible.

**LOW-BRAKE ACCUMULATOR PRESSURE**

**IN FLIGHT**

- 1. HYD ISOL ..... T.O./LDG

*If pressure does not recover:*

- 2. LDG GEAR handle ..... DN
- 3. HYD HANDPUMP ..... Recharge Accumulator

**Note**

Monitor AUX BRAKE PRESSURE gauge. Tap wheelbrakes to seat priority valve if pressure is decreasing.

**CONTINUED**

*If accumulator cannot be recharged:*

- 4. Make arrested landing as soon as practicable.**
- 5. Parking brake . . . . . Pull (to lock wheels).**

LAND/  
LAND  
GEAR

LAND/  
LAND  
GEAR



## LANDING GEAR/LANDING

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**LANDING GEAR  
MALFUNCTION**

**LANDING GEAR/  
LANDING**

1. Remain below 280 KIAS.
2. Combined hydraulic pressure ..... Check
3. If less than 3,000 psi, refer to combined hydraulic failure procedures.

**LANDING GEAR INDICATES UNSAFE GEAR  
UP OR TRANSITION LIGHT ILLUMINATED**

1. LDG GEAR handle ..... DN

*If safe gear down indication is obtained and transition light is out:*

2. Landing gear ..... Leave Down
3. Obtain visual check of gear condition.

**WARNING**

A hyperextended main strut, whether caused by a broken piston or overextended piston barrel and/or main strut with a cocked wheel, will likely result in a combined hydraulic system failure while airborne, and a sheared strut upon touchdown. A hyperextended main strut is evident to a wingman by full vertical extension of the scissors and broken brake lines and to the tower or LSO by one main gear hanging noticeably lower than the other. When either of these situations occurs, landing procedures for a stub (MLG) mount must be followed.

4. Land as soon as practicable.

**CAUTION**

If landing gear indicates unsafe after retraction and a down-and-locked indication can be obtained, the brake pedals should be depressed for 60 seconds to ascertain whether brake hydraulic lines have been severed. If brake hydraulic lines are severed and a combined hydraulic failure occurs, refer to combined hydraulic system failure procedures.

**LANDING GEAR INDICATES UNSAFE GEAR  
DOWN, TRANSITION LIGHT OUT**

1. Transition light bulb ..... Check  
(LTS TEST)



If associated with launch bar light,  
leave gear down and obtain visual  
check.

2. Landing gear ..... Cycle

*If condition still exists:*

3. Obtain visual check if possible.
4. Make normal landing.

**LANDING GEAR INDICATES UNSAFE GEAR  
DOWN, TRANSITION LIGHT ILLUMINATED**

1. Obtain visual check if possible.



Visual determination of nose landing  
gear unlocked status is assisted by a  
red band painted on the nose landing  
gear drag brace oleo. If red is visible,  
the nosegear is not locked.



During an airborne visual inspection of the main landing gear (even if the paint stripe across the drag brace knee pin appears to be straight), the possibility exists that the downlock actuator has failed and the gear may not be locked in the down position.

**2. LDG GEAR handle ..... Cycle**

*If still unsafe:*

**3. Increase airspeed to 280 KIAS, pull positive g's, and yaw aircraft.**

*If main landing gear is still unsafe, go to step 5:*

*If nose landing gear indicates unsafe, transition light illuminated, continue with step 4:*

**4. LDG GEAR handle ..... Cycle UP Then DN  
in Less Than 2 Seconds**

**WARNING**

Failure to place the LDG GEAR handle to DN immediately after selecting UP may allow the main landing gear doors to receive the signal to close with the main gear struts extended, causing damage to the doors and inducing a possible combined hydraulic or brake system failure. Do not reselect UP with the LDG GEAR handle after the doors attempt to close, as indicated by an unsafe main-mount or visual inspection.

**Note**

Use of the above procedure should be done at the intended point of landing or within range of an acceptable divert field exercising a gear down bingo profile.

5. LDG GEAR handle ..... EMERG DN  
(refer to Landing Gear  
Emergency Lowering)

**Note**

Use of the Landing Gear Emergency Lowering procedure will result in loss of nosewheel steering.

*If still unsafe and visually confirmed unsafe or gear position cannot be confirmed:*

6. Refer to Landing Gear Malfunctions Emergency Landing Guide.

**CAUTION**

- When landing with a nosegear unsafe down indication, anticipate possible nose landing gear collapse. This possibility shall be reduced by using the brake pedals to prevent rollback as the arresting gear reaches full extension and by setting the parking brake after the aircraft has stopped.
- Do not attempt to tow aircraft by the nosegear until the gear is secured in the down position.
- Nose landing gear ground safety pin installation will not prevent nose-gear collapse. The nose landing gear strut must be restrained against forward rotation.

**LANDING GEAR INDICATES SAFE GEAR DOWN, TRANSITION LIGHT ILLUMINATED**

**CAUTION**

If associated with launch bar light, leave gear down and obtain visual check.

1. LDG GEAR handle ..... Cycle

*If transition light remains on:*

2. Obtain visual check.

**CONTINUED** 



- 3. Gear/sidebraces appear in place ..... Normal Landing

*If sidebraces are confirmed not in place:*

- 4. Refer to Landing Gear Malfunction Emergency Landing Guide.

**LAUNCH BAR LIGHT**

- 1. Landing gear ..... Leave Down
- 2. Obtain visual inspection.

*If nosegear is cocked, refer to Landing Gear Malfunction Guide.*

*If launch bar is down or visual inspection is not available:*

- 3. Remove arresting cables for field landing.
- 4. Remove crossdeck pendant Nos. 1 and 4 for CV landing.

**LANDING GEAR EMERGENCY LOWERING**

- 1. Airspeed ..... Less Than 280 KIAS
- 2. LDG GEAR handle ..... DN



The LDG GEAR handle should be pulled with a rapid and continuous 55-pound force until the handle is loose (fore and aft) in its housing as an indication of complete extension of the handle.

3. Push LDG GEAR handle in hard, turn 90° clockwise, pull, and hold.
4. Gear position indication ..... Check (12 seconds)
5. Make arrested landing if available.

*If any gear does not come down:*

6. Increase speed. Do not exceed 280 KIAS.
7. Apply positive and negative g to force gear down.
8. Obtain visual in-flight check if possible.
9. Refer to Landing Gear Malfunction Emergency Landing Guide on page 167.

**ARRESTING HOOK EMERGENCY DOWN**

1. HOOK handle ..... DN
2. HOOK handle ..... Pull, Then Rotate

**Note**

Pull handle aft approximately 4 Inches and turn counterclockwise. This will mechanically release the uplatch mechanism and allow the hook to extend.

3. Hook transition light ..... Check Off

*If light is illuminated and hook is visually checked up:*

4. HOOK handle ..... Restow in DN Position
5. HYD VALVE CONTR (7E5) cb ..... Pull and Reset After 5 Seconds

**CONTINUED** 

*If light is illuminated and hook is visually checked down:*

- 4. RAIN RPL/ANTI-ICE CONTR/  
HK CONTR (7C2) cb ..... Pull

**GROUND ROLL BRAKING FAILURE**

- \*1. ANTI SKID SPOILER BK switch ..... Check
- \*2. MASTER RESET pushbutton ..... Depress

**Note**

Ground roll braking may fail to extend spoilers on touchdown due to a momentary miscompare of the weight-on-wheels switches.

**BARRICADE ARRESTMENT**

- 1. External stores ... Jettison (except AIM-7 and AIM-54 on fuselage stations if wing is at full forward sweep)
- 2. External tanks ..... Jettison (empty tanks retained only for landing gear malfunction)
- 3. Fuel ..... Dump or Burn (reduce to 2,000 pounds)
- 4. Hook ..... DN (lower to permit engagement of crossdeck pendant, which will minimize barricade engagement speed and damage to aircraft)

**CONTINUED** ➤

5. Fly normal pattern and approach, on-speed, angle of attack, centerline, and meatball.

**Note**

Anticipate loss of meatball for a short period of time during the approach. Barricade stanchions may obscure the meatball.

*Upon engaging the barricade:*

6. Throttles ..... OFF
7. Evacuate aircraft as soon as practicable.

**WARNING**

Weight limits are:

- Wings at 20° ..... 51,800 Lb  
(max)
- Wings > 20° ≤ 35° ..... 46,000 Lb  
(max)
- Wings > 35° ..... Not Permitted

**BRAKE FAILURE AT TAXI SPEED**

- \*1. ANTI SKID SPOILER BK ..... SPOILER BK  
or OFF
2. Nosewheel steering ..... Engaged
3. Parking brake ..... Pull (if required)  
parking brake will lock  
both main wheels)

**CONTINUED** 

**WARNING**

Complete loss of hydraulic fluid through the wheelbrake hydraulic lines will render the parking brake and nose-wheel steering ineffective.

*If brakes still inoperative:*

- 4. HOOK ..... DN

**CAUTION**

After lowering hook, nosewheel steering will be automatically centered and will remain centered until nosewheel steering is cycled.

- 5. External lights ..... ON
- 6. Notify ground or tower.
- 7. Both throttles ..... OFF (if required)  
(if collision is imminent,  
DO NOT delay step 7)

**WARNING**

During shipboard operations, aircrew should not delay ejection decision if departure from the flight deck is imminent.

**BLOWN TIRE LANDING****CAUTION**

Do not allow aircraft to roll backward after the arrestment. The downlock actuator may have been damaged by tire failure and rearward movement of the aircraft could cause the gear to collapse.

1. Obtain in-flight visual check if possible.
2. ANTI SKID SPOILER BK ..... SPOILER BK  
(OFF for CV)
3. HOOK ..... DN
4. Make carrier or short-field, fly-in arrested landing as soon as practicable.
5. HYD ISOL switch ..... T.O./LND (on final)

*If arresting gear is not available:*

6. Land on centerline.
7. Nosewheel steering ..... Engaged

**AUXILIARY FLAP FAILURE**

1. Wing sweep ..... Ensure at 20°
2. AUX FLAP/FLAP CONTR cb (7G3) ..... Pull
3. Approach ..... 15 Units AOA

**Note**

With AUX FLAP/FLAP CONTR cb pulled, wings will not sweep aft.

**NO FLAPS AND NO SLATS LANDING**

1. Gross weight. Reduce (weight consistent with existing runway length and conditions)
2. Flaps ..... UP

**WARNING**

Setting the FLAP handle to the DN position inflight may create or aggravate a flap asymmetry condition and could make the aircraft uncontrollable.

**Note**

If outboard spoilers are needed for ground-roll braking, FLAP handle must be lowered at least 5° on landing rollout.

3. Fly landing pattern slightly wider than normal or make straight-in approach at 15 units AOA.
4. Use normal braking technique.

**CAUTION**

- Maximum airspeed for wheelbrake application is 165 KIAS at a gross weight of 46,000 pounds and 145 KIAS at 51,000 pounds.
- Use of full aft stick during landing in this configuration can result in tail-pipe ground contact.

**CONTINUED**

**CAUTION**

- **Avoid slow approaches. Wing drop and increased sink rate may occur at 16.5 to 17.5 units AOA.**
- **Aircrew should expect hot brakes following high-speed landings. Application of the parking brake could cause the brake assembly to fail and result in a brake failure.**



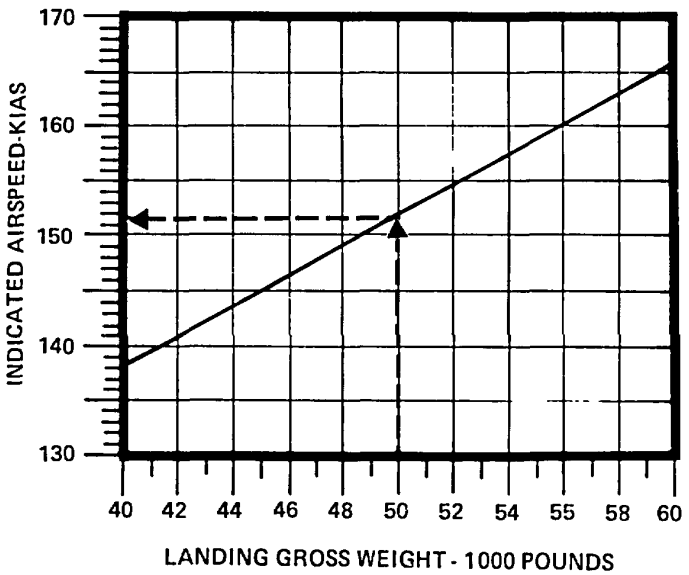
DATE: 1 MAY 1980

FUEL GRAD: JP-5  
(JP-8, JP-4)

DATA BASIS: FLIGHT  
TEST

FUEL DENSITY: 6.8  
(6.7, 6.5 lb/gal)

**ALL DRAG INDEXES, 0° FLAP, GEAR DOWN**



**LANDING APPROACH AIRSPEED (15 UNITS)**



**AFT WING SWEEP LANDING**

**Note**

CV arrestments are permitted with up to 40° wing sweep; emergency barricade engagements are permitted with up to 35° wing sweep.

- 1. Emergency WING SWEEP handle ..... Match Captain Bars With Actual Wing-Sweep Position Tape



Closely monitor wingsweep movement when attempting to match handle with wingsweep position. If abnormal movement is noticed, immediately return handle to previous position.

- 2. Gross weight ..... Reduce as Required

*If wings equal or less than 50°:*

- 3. Main flaps ..... Full Down

**Note**

Main flap/slat extension with the wings aft of 20° will result in a large nose-down pitch transient.

*If main flaps fail to extend:*

- 4. Maneuvering flaps ..... Extend

**WARNING**

If maneuvering flaps are used, ensure that maneuver flap thumbwheel is not actuated during the approach.

5. DLC and APC ..... Do Not Engage
6. Slow-fly aircraft at a safe altitude to determine approach airspeed (up to 17 units AOA for field landings with wings aft of 50°) and to evaluate handling/stall characteristics and waveoff performance.
  - Refer to emergency field arrestment guide for maximum engagement speed if field arrestment is desired.
  - Refer to landing approach speed table on page 255 for approach speed.
7. Fly straight-in approach at 15 units AOA (up to 17 units for field landings with wings aft of 50°).

**CAUTION**

Ventral fin clearance is reduced at elevated approach AOA. Ensure that a maximum of 17 units is maintained at touchdown.

**Note**

Maximum airspeed for wheelbrake application is 165 KIAS at gross weight of 46,000 pounds and 145 KIAS at 51,000 pounds.

**LANDING WITH AFT HUNG ORDNANCE**

1. Determine location of hung stores. Obtain visual check if possible.

*If hung ordnance exceeds 1000 pounds:*

2. Wing sweep . . . . . Set at 25° if ≤ 2,000 Pounds Hung Aft;  
Set at 30° if > 2,000 Pounds Hung Aft
3. Perform transition to gear-down configuration in straight-and-level flight.
4. AUX FLAP/FLAP/CONTR cb (7G3) . . . . . Pull
5. FLAPS . . . . . Full DN
6. Fly straight-in approach at 15 units AOA. Do not engage APC or DLC.

*CV approach:*

7. Perform CV arrestment in accordance with applicable recovery bulletin.

*Field approach:*

8. Spoiler brake . . . . . OFF
9. Perform field arrestment.

**Note**

Refer to Emergency Field Arrestment Guide for maximum engagement speed (page 169).

*If arresting gear is not available:*

- 10. If field arrestment is not available, spoiler brake ..... **BOTH**

**WARNING**

Expect a significant nose pitchup during landing rollout as spoilers deploy. Full forward stick may be required to avoid a tail strike.

FINAL CONFIGURATION	CARRIER LANDINGS		FIELD LANDING			
			ARRESTING GEAR AVAILABLE		NO ARRESTING GEAR AVAILABLE	
		NOTES		NOTES		NOTES
COCKED NOSE GEAR	LAND	1, 8, 11	ARRESTED LANDING	6, 8, 9, 11, 12, 13	LAND	6, 9, 11, 13
SIDE-BRACE NOT IN PLACE	LAND	1, 2, 8, 11	NO ARRESTED LANDING	3, 6, 7, 8, 11	LAND	3, 6, 7, 8, 11
NOSE GEAR UP/ UNSAFE DOWN	LAND	1, 2, 4, 8, 11	NO ARRESTED LANDING	4, 6, 8, 9, 10, 11	LAND	6, 8, 9, 10, 11
STUB NOSE GEAR	LAND	1, 2, 4, 8, 11	NO ARRESTED LANDING	4, 6, 8, 9, 10, 11	LAND	6, 8, 9, 10, 11
NOSE GEAR UP, ONE MAIN UP	EJECT PILOT OPTION TO LAND IF TANKS INSTALLED	1, 2, 4, 8, 11	PILOT OPTION EJECT OR ARREST	6, 8, 10, 11, 12	EJECT	—
ONE MAIN UP UNSAFE	LAND	1, 2, 8, 11	ARRESTED LANDING	6, 8, 10, 11, 12, 13	PILOT OPTION EJECT OR LAND	5, 6, 8, 10, 11, 13
BOTH MAIN UP UNSAFE	EJECT PILOT OPTION TO LAND IF TANKS INSTALLED	1, 2, 8, 11	PILOT OPTION EJECT OR ARREST	6, 8, 10, 11, 12	PILOT OPTION EJECT OR LAND	6, 8, 10, 11
MAINS ONE OR BOTH STUB/ MOUNT/HYPER- EXTENDED/ WHEEL COCKED	LAND	1, 2, 4, 8, 11	NO ARRESTED LANDING	4, 5, 6, 8, 11	LAND	5, 6, 8, 11
ALL GEAR UP	EJECT PILOT OPTION TO LAND IF TANKS INSTALLED	1, 2, 8, 11	PILOT OPTION EJECT OR LAND	4, 6, 8, 10, 11	PILOT OPTION EJECT OR LAND	6, 8, 10, 11
<ol style="list-style-type: none"> <li>1. DIVERT IF POSSIBLE</li> <li>2. HOOK DOWN BARRICADE ENGAGEMENT</li> <li>3. MINIMIZE SKID AND DRIFT ROLLOUT</li> <li>4. REMOVE ALL ARRESTING GEAR</li> <li>5. LAND OFF CENTER TO GEAR DOWN SIDE</li> <li>6. MINIMUM RATE OF DESCENT LANDING (480 FPM MAX)</li> <li>7. GRADUAL SYMMETRICAL BRAKING</li> <li>8. RETAIN EMPTY DROP TANKS</li> <li>9. LOWER NOSE GENTLY PRIOR TO FALL THROUGH</li> <li>10. SECURE ENGINES AT AIRFRAME CONTACT</li> <li>11. EXTERNAL ORDNANCE — SEL JETT IF REQUIRED. ACTIVATE EMERG LANDING GEAR LOWERING TO ENABLE RAISING GEAR HANDLE FOR SEL OR ACM JETT</li> <li>12. HOLD DAMAGED GEAR OFF DECK UNTIL PENDANT ENGAGEMENT.</li> <li>13. ENGAGE NWS IF OPERABLE, USE AS REQUIRED.</li> </ol>						

**LANDING GEAR MALFUNCTION  
EMERGENCY LANDING GUIDE**

TYPE OF ARRESTING GEAR	MAXIMUM ENGAGING SPEED (KNOTS) (D)											MAXIMUM OFF-CENTER ENGAGEMENT (FT)
	GROSS WEIGHT X 1,000 POUNDS											
	SHORT-FIELD LANDING (K) (L)					LONG FIELD LANDING (M)		ABORTED TAKEOFF (A)				
	40	44	48	51.8	54	57	60	64	68	69.8	72	
E-28	176 (B)	180	179	178	177	176	175	174	172	172	171	40
E-28 (G)	176 (B)	176	160	160	160	160	156	145	145	145	145	40
M-21	130	130	130	130	125	125	120	115	115	115	113	10
BAK-9	160	160	160	155	150	144	138	131	124	122	118	30
BAK-12 (H)	160	160	159	146	137	118	(J)	(J)	(J)	(J)	(J)	50
DUAL BAK-12 (C)	160	160	160	160	160	160	160	160	160	160	160	30
BAK-13	160	160	160	160	160	160	160	160	160	160	160	40

- (A) Data provided in aborted takeoff column may be used for emergency high gross weight arrestment.
- (B) Maximum engaging speed limited by aircraft limit horizontal-drag load factor (mass item limit "G").
- (C) Dual BAS-12 limits are based on 150 to 300 foot span, 1-1/4 inch cross deck pendant, 50,000 pound weight setting, and 1,200 foot runout. No information available regarding applicability to other configurations.
- (D) Maximum engaging speed limited by arresting gear capacity, except as noted.
- (E) Off-center engagement may not exceed 25 percent of the runway span.
- (F) Before making an arrestment, the pilot must check with the air station to confirm the maximum engaging speed because of a possible installation with less than minimum required rated chain length.
- (G) Only for the E-28 systems at Keflavik and Bermuda with 920 foot tapes.
- (H) Standard BAK-12 limits are based on 150 foot span, 1 inch cross deck pendant, 40,000 pound weight setting, and 950 foot runout. No information available regarding applicability to other configurations.
- (J) Engaging speed limit is 96 knots at 59,000 pounds. Due to runout limitations it is recommended this gear not be engaged at weights greater than 59,000 pounds.
- (K) Maximum of 3.0° glideslope.
- (L) Consult appropriate section for recommended approach speed.
- (M) Flared or minimum rate of descent landing.

**EMERGENCY FIELD ARRESTMENT GUIDE  
(SHEET 1 OF 2)**

**CONTINUED**



**AIRCRAFT ENGAGING SPEED LIMITS  
FOR E-5 EMERGENCY ARRESTING GEAR**

**AIRCRAFT: F-14B**

ARRESTING GEAR RATING	SHORT FIELD LANDING UP TO 54,000 POUNDS				LONG FIELD LANDING UP TO 60,000 POUNDS				ABORTED TAKEOFF 60,100 TO 72 000 POUNDS			
	STANDARD CHAIN		HEAVY CHAIN		STANDARD CHAIN		HEAVY CHAIN		STANDARD CHAIN		HEAVY CHAIN	
	E-5 E-5-2 COL. 2	E-5-1 E-5-3 COL. 3	E-5 E-5-2 COL. 4	E-5-1 E-5-3 COL. 5	E-5 E-5-2 COL. 6	E-5-1 E-5-3 COL. 7	E-5 E-5-2 COL. 8	E-5-1 E-5-3 COL. 9	E-5 E-5-2 COL. 10	E-5-1 E-5-3 COL. 11	E-5 E-5-2 COL. 12	E-5-1 E-5-3 COL. 13
COL. 1												
300 to 349	39(D)	39(D)	40(D)	40(D)	37(D)	37(D)	38(D)	38(D)	33(D)	33(D)	34(D)	34(D)
350 to 399	45(D)	45(D)	47(D)	47(D)	43(D)	43(D)	44(D)	44(D)	39(D)	39(D)	40(D)	40(D)
400 to 449	51(D)	51(D)	54(D)	54(D)	48(D)	48(D)	51(D)	51(D)	44(D)	44(D)	47(D)	47(D)
450 to 499	57(D)	57(D)	61(D)	61(D)	54(D)	54(D)	58(D)	58(D)	49(D)	49(D)	53(D)	53(D)
500 to 549	63(D)	63(D)	68(D)	68(D)	60(D)	60(D)	65(D)	65(D)	55(D)	55(D)	59(D)	59(D)
550 to 599	69(D)	69(D)	76(D)	76(D)	65(D)	65(D)	72(D)	72(D)	60(D)	60(D)	66(D)	66(D)
600 to 649	75(D)	75(D)	84(D)	84(D)	71(D)	71(D)	79(D)	79(D)	65(D)	65(D)	73(D)	73(D)
650 to 699	81(D)	81(D)	91(D)	91(D)	77(D)	77(D)	87(D)	87(D)	71(D)	71(D)	79(D)	79(D)
700 to 749	87(D)	87(D)	99(D)	99(D)	83(D)	83(D)	94(D)	94(D)	76(D)	76(D)	86(D)	86(D)
750 to 799	93(D)	93(D)	107(D)	107(D)	89(D)	89(D)	102(D)	102(D)	82(D)	82(D)	93(D)	93(D)
800 to 849	99(D)	99(D)	115(D)	115(D)	94(D)	94(D)	109(D)	109(D)	87(D)	87(D)	100(D)	100(D)
850 to 899	105(D)	105(D)	123(D)	123(D)	100(D)	12(D)	117(D)	117(D)	93(D)	93(D)	107(D)	107(D)
900 to 949	111(D)	111(D)	131(D)	131(D)	106(D)	106(D)	125(D)	125(D)	98(D)	98(D)	114(D)	114(D)
950 to 999	117(D)	117(D)	140(D)	140(D)	112(D)	112(D)	133(D)	133(D)	104(D)	104(D)	121(D)	121(D)
1,000 to 1,049	123(D)	123(D)	148(D)	148(D)	118(D)	118(D)	140(D)	140(D)	109(D)	109(D)	129(D)	129(D)
1,050 to 1,099	129(D)	129(D)	150(D)	156(D)	123(D)	123(D)	148(D)	148(D)	115(D)	115(D)	136(D)	136(D)
1,100 to	135(D)	135(D)	150(D)	165(D)	129(D)	129(D)	150(D)	156(D)	120(D)	120(D)	143(D)	143(D)

**EMERGENCY FIELD ARRESTMENT GUIDE  
(SHEET 2)**

SE

SE

# SINGLE-ENGINE OPERATIONS

## Index

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**SINGLE-ENGINE  
FAILURE FIELD/  
CATAPULT LAUNCH/  
WAVEOFF**

**SINGLE-ENGINE  
OPERATIONS**

- \*1. Set 10° pitch attitude on the waterline (14 units AOA maximum).
- \*2. Rudder ..... Opposite Roll/Yaw, Supplemented by Lateral Stick
- \*3. Both throttles ..... As Required for Positive Rate of Climb
- \*4. Landing gear ..... UP
- \*5. Jettison ..... If Required

*If banner tow:*

- 6. Hook ..... DN
- 7. If unable to control aircraft ..... Eject
- 8. Establish 10-unit AOA climb.
- 9. Climb to safe altitude.
- 10. Flaps ..... UP
- 11. Refer to Single-Engine Cruise Operations (page 181).

**SINGLE-ENGINE LANDING — PRI MODE**

- 1. FUEL SHUT OFF handle (inoperative engine) ..... Pull

*If not on final approach:*

- 2. Refer to Single-Engine Cruise Operations (page 181).

**CONTINUED**

*If after commencing final approach or in landing pattern:*

- 2. ATLS ..... Check ON

**WARNING**

If ATLS is inoperative, the use of afterburner is prohibited.

- 3. Afterburner operation ..... Stage to verify proper ATLS operation (airspeed > 170 KIAS, fuel permitting and full rudder authority (RUDDER AUTH light out))
- 4. Wing sweep ..... Set at 20° (EMER)

**WARNING**

If hammering (cavitation) is experienced in the hydraulic system, component rupture is imminent. Turn the hydraulic transfer pump switch (BIDI) OFF.

- 5. Reduce gross weight/minimize lateral asymmetry into the inoperative engine side ..... As Required
- 6. Speedbrakes ..... RET (on final approach)
- 7. LDG GEAR ..... DN (if combined hydraulic pressure is zero — (EMERG DN))
- 8. Hook ..... As Required

**CONTINUED**

- 9. Check SAS ..... ON
- 10. If combined pressure  
zero ..... Pull AUX FLAP/  
FLAP CONTR cb (7G3)
- 11. Flaps ..... DN
- 12. DLC (if on RT engine) ..... Do Not Engage  
(if operating on left engine and 3,000 psi com-  
bined pressure, engage on final).
- 13. EMERG FLT HYD ..... HIGH (on final,  
committed to land)

**WARNING**

If combined pressure is zero, do not re-  
turn to auto (low) mode once module is  
selected on. If module is shut off after  
operation commences, it may not  
restart.

- 14. For landing pattern, use 12 units AOA for pattern  
airspeed and do not attempt turns greater than  
20° angle of bank.

**WARNING**

Extreme caution must be exercised  
when performing turns into a dead en-  
gine. Decaying airspeed/increasing  
AOA can rapidly result in a situation  
where there is not enough rudder au-  
thority to return the aircraft to level  
flight and insufficient altitude to effect  
a recovery.

15. Final approach airspeed:

- a. DLC engaged ..... 15 Units AOA
- b. DLC stowed ..... 14 Units AOA  
 Refer to Single-Engine Landing Approach  
 Airspeed (page 183)

**WARNING**

Military power climb performance during heavy waveoffs may not adequately arrest high sink rate conditions. Use of full AB provides an increase in climb performance. Up to full rudder may be required to counter AB asymmetric thrust yawing moment during waveoff or bolter. Do not exceed 14 units AOA during waveoff or bolter.

**SINGLE-ENGINE LANDING —  
SEC MODE**

- 1. FUEL SHUTOFF (inoperative engine) .... Pull
- 2. In CV environment ..... Divert
- 3. Refer to Single-Engine Cruise and Engine Transfer to SEC Mode procedures.

*If not preparing for CV approach, see step 6.*



*If divert not possible:*

**WARNING**

Engine thrust and thrust response can be severely degraded such that level flight cannot be maintained in the full-flap landing configuration. **DO NOT** configure for landing until the performance test has been accomplished.

*If not configured for landing:*

4. Perform constant airspeed climb (+5 knots) at 10 units AOA, landing gear up, maneuvering flaps down (if possible), above 2,000 feet. Minimum climb required in 30 seconds is as follows:

	CHANGE IN ALTITUDE — FEET	
	MANEUVER FLAPS DN	MANEUVER FLAPS UP
2,000 feet	950 feet	900 feet
4,000 feet	800 feet	750 feet
6,000 feet	700 feet	650 feet

**CAUTION**

If minimum performance test is passed based on predicted gross weight, do not lower landing gear and flaps until predicted gross weight is reached.

**Note**

Climb performance will improve by 20 feet in 30-second climb for every 1,000-pound gross weight reduction. Minimum performance criteria is based on optimum conditions (day, VMC, steady deck, experienced aircrew, normal wind over deck, etc.) and should be increased for degraded conditions based on judgment.

- 5. If minimum performance criteria are not passed and all options are exhausted (stores jettisoned, minimum gross weight, and divert not possible), eject under controlled conditions.

*If configured for landing:*

- 4. Throttle ..... MIL
- 5. Ensure a minimum of 500-fpm rate of climb at 14 units AOA available for CV approach.

*When preparing for landing:*



Shipboard recovery in single-engine SEC mode is considered extremely hazardous and should be conducted only as a last resort and if the performance check is successful.

- 6. RUDDER AUTH light ..... Verify Out
- 7. Wing sweep ..... Set at 20°

**CONTINUED**

**WARNING**

If hammering (cavitation) is experienced in the hydraulic system, component rupture is imminent. Turn the HYD TRANSFER PUMP switch (BIDI) OFF.

- 8. External stores ..... Jettison for Shipboard Recovery
- 9. Fuel ..... Dump or Burn
- 10. Speedbrakes ..... RET (on final approach)
- 11. LDG GEAR handle ..... DN
- 12. Hook ..... As Required
- 13. Check SAS ..... ON

**WARNING**

Shore-based landings should be conducted with flaps up. If conditions warrant a full-flap landing, conduct a performance test and proceed as in the case of a ship-board landing.

- 14. If combined pressure zero ..... Pull AUX FLAP/ FLAP CONTR cb (7G3)
- 15. Flaps ..... DN (shipboard recovery), As Required (field landing)
- 16. DLC ..... Do Not Engage
- 17. EMERG FLT HYD ..... HIGH (on final, committed to land)

**WARNING**

If combined pressure is zero, do not return to auto (low) mode once module is selected on. If module is shut off after operation commences, it may not restart.

18. For landing pattern, use 10 units AOA for pattern airspeed and do not attempt turns greater than 20° angle of bank.

**WARNING**

Extreme caution must be exercised when performing turns into a dead engine. Decaying airspeed/increasing AOA can rapidly result in a situation where there is not enough rudder authority to return the aircraft to level flight and insufficient altitude to effect recovery.

19. Final approach airspeed . . . . . 13 Units (CV)  
(field landing, slow to,  
15 units AOA, no flaps  
at touchdown)

**Note**

Waveoff should be conducted by rotating to 14 units (maximum) AOA until a positive rate of climb is attained.

**Note**

Bolters should be conducted by rotating to 10° pitch attitude not to exceed 14 units AOA.

**SINGLE-ENGINE CRUISE OPERATIONS**

- 1. **FUEL SHUT OFF**  
    handle (inoperative engine) ..... Pull
- 2. **If on final approach or landing, refer to Single-Engine Landing.**

*When either fuselage tape reaches 4,500 pounds of fuel or less:*

- 3. **WING/EXT TRANS switch ..... OFF**

**Note**

The WING/EXT TRANS switch automatically returns to AUTO if the REFUEL PROBE switch is placed to ALL EXTEND, DUMP is selected, or there is 2,000 pounds remaining in the low side. The WING/EXT TRANS switch can be reselected to OFF after a 5-second delay, the REFUEL PROBE is retracted, or DUMP is secured.

- 4. **FEED switch ..... Operating Engine Side**

*When pilot workload permits close monitoring of fuel distribution:*

- 5. **FEED switch ..... Inoperative Engine Side**

*If the fuselage quantity on the inoperative engine side begins to increase:*

- 6. **FEED switch ..... Immediately Move to Operating Engine Side**

**CONTINUED** ➤

**CAUTION**

An increase in fuel quantity on the inoperative engine side indicates that the sump tank interconnect valve is not open. Fuel available is limited to the quantity on the operating engine side.

*If the fuselage fuel quantity on the inoperative engine side begins to decrease:*

- 6. FEED switch ..... Remain on  
Inoperative Engine
- 7. WING/EXT TRANS switch ..... AUTO
- 8. Refer to appropriate hydraulic system failure.

REMARKS

INOPERATIVE ENGINE: LOCKED ROTOR  
(N<sub>1</sub> = 0 RPM, N<sub>2</sub> = 0 RPM)

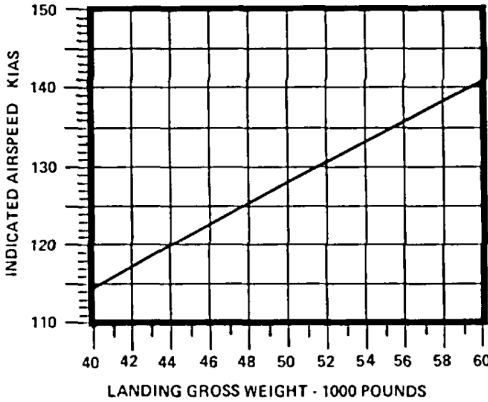
DATE: JANUARY 1990

DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

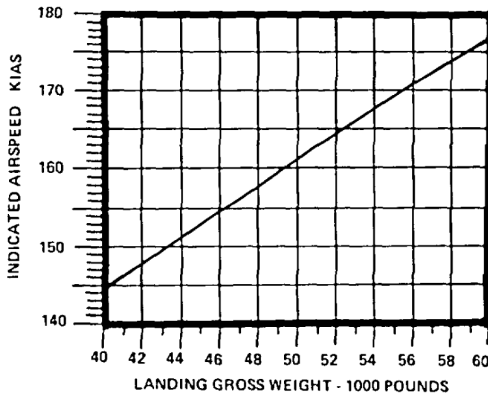
FUEL GRADE: JP-5 (JP-8, JP-4)

FUEL DENSITY: 6.8 (6.7, 6.5) lb/gal

**ALL DRAG INDEXES, 35° FLAPS, GEAR DOWN  
SPEED BRAKES RETRACTED, DLC STOWED**



**ALL DRAG INDEXES, 0° FLAP, GEAR DOWN**



0-F52D-23-0

**SINGLE-ENGINE LANDING APPROACH  
AIRSPEED (14 UNITS)**





## TAKEOFF

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<b>ABORTED TAKEOFF</b>	<b>TAKEOFF</b>
------------------------	----------------

- \*1. Throttles ..... IDLE
- \*2. Speedbrakes ..... EXT
- \*3. Stick ..... Aft

**Note**

The stick should be positioned fully aft at a rate that will not cause any more rotation.

- \*4. Hook ..... DN (1,000 feet before wire)
- \*5. Brakes ..... As Required
- \*6. Right engine ..... OFF (if required)



Aircrew should expect hot brakes following heavy gross weight, high-speed aborts. Application of the parking brake could cause the brake assembly to fail and result in a brake failure.

**Note**

If performing no flap/maneuvering flap takeoff, lowering the flap handle slightly during an abort will deploy all spoilers for ground roll braking if SPL BK or BOTH is selected, assisting in decelerating the aircraft.

**BLOWN TIRE DURING TAKEOFF**

**TAKEOFF ABORTED OR AFTER LANDING TOUCHDOWN**

- \*1. Nosewheel steering ..... Engaged
- \*2. ANTI SKID SPOILER BK ..... SPOILER BK



- Do not delay engaging nosewheel steering in order to center rudder pedals.
- Aircraft should have ground locks installed and engine secured before moving aircraft.

**TAKEOFF CONTINUED OR AFTER LANDING GO-AROUND**

- \*1. Throttles ..... As Required
- \*2. Landing gear and flaps ..... Leave as Set for Takeoff
- 3. HYD ISOL switch ..... FLT

**Note**

This will require bending the cam on the gear handle in order to move the HYD ISOL isolate switch to FLT.

- 4. Refer to Blown Tire Landing procedures.

## BINGO

### Note

During descent with engines in PRI mode, advancing throttle(s) slightly to partially closed nozzle(s) will increase range.

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# NAVAIR 01-F14AAP-1B

DRAG TABLE		
STORE	STATION(S)	DRAG INDEX (PER STATION)
OPEN AIM-7 CAVITIES (CLEAN)	3, 4, 5, 6	5 (TOTAL)
AIM-7	3, 6/5, 4	2, 2/2, 2
AIM-7	1B, 8B	6, 6
AIM-9	1, 8	8, 8
AIM-54	3, 4	12, 8
AIM-54	6, 5	12, 8
AIM-54	1B, 8B	12, 12
AIM-54 WPNS RAIL	3, 4, 5, 6	10
AIM-54 RAIL FAIRING	3, 6	—
TARPS POD	5	25
MULTIPURPOSE PYLON	1, 8	3, 3
AIM-54 ADAPTOR/LAUNCHER	1B, 8B	3, 3
AIM-7 ADAPTOR/LAUNCHER	1B, 8B	2, 2
AIM-9 ADAPTOR/LAUNCHER	1, 8	1, 1
AIM-9 LAUNCHER	1A, 8A	—
BRU-32/ADU-703A/A	3, 4, 5, 6	2
BRU-42 (ITER)	3, 4, 5, 6	6
MK 76 (3 BOMBS)	3, 4, 5, 6	9
MK 82/BSU-33 (NTP)	3, 4, 5, 6	5
(TP)	3, 4, 5, 6	6
MK 82/BSU-86 (NTP)	3, 4, 5, 6	10
(TP)	3, 4, 5, 6	11
MK 83 CONICAL (NTP)	3, 6	7
(NTP)	4, 5	5
(TP)	3, 6	8
(TP)	4, 5	6
MK 83/BSU-85 (NTP)	3, 6	11
(NTP)	4, 5	9
(TP)	3, 6	12
(TP)	4, 5	10
MK 84 CONICAL (NTP)	3, 6	11
(NTP)	4, 5	9
(TP)	3, 6	13
(TP)	4, 5	10
GBU-10	3, 4, 5, 6	16
GBU-16	3, 4, 5, 6	11

(See  
NOTE  
2)

(See  
NOTE  
3, 4)

# NAVAIR 01-F14AAP-1B

## DRAG TABLE

STORE	STATIONS	DRAG INDEX (PER STATION)
MK 20/ROCKEYE/ OBU-99/100	3, 6 4, 5	11 9
CBU-78 GATOR	3, 6 4, 5	11 9
CBU-59 APAM	3, 6 4, 5	11 9
TALD	3, 4, 5, 6	17
EXTERNAL FUEL TANK	2, 7	9, 9
EXTERNAL FUEL TANK RACK	2, 7	1, 1
ALQ-167 POD	6	14

### NOTES

- FOR AIRCRAFT BUNO 159025 AND EARLIER AIRCRAFT WITH AFC 301 (MODIFIED BOATTAIL), ADD 10 COUNTS TO DRAG INDEX. DRAG INDEX OF ZERO REFERS TO FAIRED AIM-7 CAVITIES.

WEAPONS DRAG COUNT \_\_\_\_\_

RAILS/LAUNCHERS DRAG COUNT + \_\_\_\_\_

EXTERNAL FUEL DRAG COUNT + \_\_\_\_\_

MISCELLANEOUS DRAG COUNT + \_\_\_\_\_

TOTAL DRAG COUNT =

- DRAG INDEX VALUES ARE 12, 12 WHEN (2) AIM-54 ARE CARRIED ONLY ON STATIONS 4 AND 5
- (NTP) NONTHERMALLY PROTECTED  
(TP) THERMALLY PROTECTED
- DRAG INDEX IS FOR EACH STATION.  
EX: FOR FOUR SMOOTH MK 84 CONICAL BOMBS, DRAG INDEX IS  $4 \times 10 = 40$ ; FOR BOMBS ONLY



# NAVAIR 01-F14AAP-1B

WEIGHT TABLE	
STORE	POUNDS PER STORE
20 MM AMMUNITION	0.6 LB/ROUND
AIM-9	200
AIM-7	500
AIM-54	1,000
TARPS POD	1,750
AIM-54 RAIL/LAUNCHER	500
AIM-54 RAIL FAIRINGS	100 (COMBINED)
MULTIPURPOSE PYLON	500 (PAIR)
AIM-54 ADAPTER/LAUNCHER	200
AIM-7 ADAPTER/LAUNCHER	100
AIM-9 ADAPTER/LAUNCHER	100
AIM-9 LAUNCHER (1a, 8a)	100
BRU-32/ADU-703A/A	186
BRU-42 (ITER)	99
MK 76 (3 BOMBS)	75
MK 82/BSU-33 (NTP)	527
(TP)	540
MK 82/BSU-86 (NTP)	566
(TP)	579
MK 83 CONICAL (NTP)	971
(TP)	987
MK 83/BSU-85 (NTP)	1,006
(TP)	1,022
MK 84 CONICAL (NTP)	1,970
(TP)	1,989
GBU-10	2,083
GBU-16	1,100
MK 20 ROCKEYE/CBU-99/100	490
CBU-78 GATOR	490
CBU-59 APAM	760
TALD	400
EXTERNAL FUEL TANK	200
EXTERNAL TANK RACK	100
<p>NOTE</p> <p>CERTAIN WEIGHTS ROUNDED TO NEAREST 100 POUNDS.</p> <p>BASIC AIRCRAFT WEIGHT. _____</p> <p>FUEL WEIGHT (INC EXT) + _____</p> <p>ARMAMENT WEIGHT + _____</p> <p>TANKS, LAUNCHERS, RAILS + _____</p> <p>TOTAL GROSS WEIGHT = _____</p> <p>(NTP) NONTHERMALLY PROTECTED <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px; vertical-align: middle;"></span></p> <p>(TP) THERMALLY PROTECTED</p>	



# NAVAIR 01-F14AAP-1B

**GEAR UP  
FLAPS UP**

**BINGO**

**48,000 lb  
TWIN ENG**

DATE: SEPTEMBER 1987

DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			SEA LEVEL CRUISE				
	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	FUEL REQ (lbs)		MACH OR KIAS	DIST (nmi)	
					NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND
<b>DRAG INDEX 0</b>	200	.75	42,000	.72	149	101	210	4250	4950	278	114	101
	150	.75	37,000	.71	120	78	210	3810	4390	278	91	82
	100	.75	29,000	.60	81	50	210	3350	3830	276	68	63
	80	.75	25,000	.60	65	39	210	3140	3580	276	58	54
	60	.75	20,000	.56	48	28	210	2910	3300	276	46	45
	40	.75	15,000	.52	33	19	210	2660	2960	276	33	33
	20	.75	6000	.44	13	7	210	2360	2550	274	18	19
<b>DRAG INDEX 50</b>	200	.73	43,000	.73	135	90	205	4420	5180	262	112	98
	150	.73	38,000	.70	110	71	205	3950	4570	264	90	79
	100	.73	30,000	.60	75	47	205	3450	3970	264	67	60
	80	.73	26,000	.60	61	37	205	3230	3700	264	57	52
	60	.73	21,000	.55	46	27	205	2990	3400	264	46	43
	40	.73	15,000	.49	30	17	205	2710	3040	264	32	32
	20	.73	8000	.44	15	8	205	2390	2600	264	18	19
<b>DRAG INDEX 100</b>	200	.72	43,000	.73	120	79	201	4610	5420	256	112	94
	150	.72	39,000	.71	102	66	201	4100	4750	256	90	76
	100	.72	31,000	.62	71	44	201	3560	4120	256	67	59
	80	.72	27,000	.60	59	35	201	3330	3830	254	58	51
	60	.72	22,000	.56	44	26	201	3070	3510	254	47	42
	40	.72	16,000	.49	30	17	201	2770	3130	254	34	31
	20	.72	8000	.42	14	8	201	2420	2660	254	19	18
<b>DRAG INDEX 150</b>	200	.70	42,000	.72	104	67	197	4810	5680	246	112	94
	150	.70	40,000	.72	.96	62	197	4250	4950	246	91	75
	100	.70	32,000	.63	68	42	197	3680	4270	244	68	58
	80	.70	28,000	.58	57	34	197	3430	3960	244	58	50
	60	.70	23,000	.52	43	25	197	3150	3620	242	46	42
	40	.70	16,000	.47	28	15	197	2830	3220	242	34	31
	20	.70	8000	.40	13	7	197	2460	2710	242	19	18

**NOTES**

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).

0-F52P-33-1

# NAVAIR 01-F14AAP-1B

**GEAR UP  
FLAPS DOWN**

## BINGO

**48,000 lb  
TWIN ENG**

DATE: SEPTEMBER 1987

DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			SEA LEVEL CRUISE				
	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	FUEL REQ (lbs)		MACH OR KIAS	DIST (nmi)	
					NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND
<b>DRAG INDEX 0</b>	200	.40	29,000	.46	35	17	149	7790	11,130	188	131	108
	150	.40	29,000	.45	35	17	149	6480	9010	186	102	84
	100	.40	28,000	.44	34	16	149	5180	6970	184	72	60
	80	.40	27,000	.44	32	15	149	4660	6170	184	60	50
	60	.40	23,000	.40	27	12	149	4120	5440	182	48	40
	40	.40	17,000	175	19	8	149	3530	4590	182	35	30
	20	195	6000	185	6	2	149	2830	3570	182	19	19
<b>DRAG INDEX 50</b>	200	.40	28,000	.44	33	15	148	8010	11,581	188	133	110
	150	.40	28,000	.43	33	15	148	6630	9330	186	102	84
	100	.40	28,000	.43	33	15	148	5270	7150	184	72	60
	80	.40	27,000	.43	31	14	148	4730	6310	184	60	50
	60	.40	24,000	.41	27	12	148	4170	5490	182	48	40
	40	.40	17,000	175	18	7	148	3570	4670	182	35	31
	20	195	7000	185	7	3	148	2860	3610	180	19	18
<b>DRAG INDEX 100</b>	200	.40	27,000	.43	31	14	147	8250	12,070	188	134	112
	150	.40	28,000	.43	32	15	147	6770	9650	186	103	85
	100	.40	28,000	.43	32	15	147	5370	7360	184	72	60
	80	.40	27,000	.43	31	14	147	4810	6460	184	60	50
	60	.40	23,000	.40	25	11	147	4230	5630	182	48	40
	40	195	15,000	170	16	6	147	3610	4810	182	35	31
	20	195	7000	180	7	3	147	2880	3660	180	20	18
<b>DRAG INDEX 150</b>	200	.40	26,000	.42	29	13	145	8480	12,570	186	136	112
	150	.40	27,000	.43	30	13	145	6940	10,000	184	104	86
	100	.40	27,000	.43	30	13	145	5470	7580	182	73	60
	80	.40	26,000	.41	29	13	145	4890	6640	180	61	50
	60	.40	23,000	.39	25	10	145	4290	5750	180	48	40
	40	165	15,000	170	15	6	145	3650	4900	180	35	32
	20	195	7000	180	7	2	145	2900	3710	178	19	19

### NOTES

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).

0-F52P-33-2

# NAVAIR 01-F14AAP-1B

**GEAR DOWN  
FLAPS UP**

## BINGO

**48,000 lb  
TWIN ENG**

DATE: SEPTEMBER 1987

DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			SEA LEVEL CRUISE				
	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	FUEL REQ (lbs)		MACH OR KIAS	DIST (nmi)	
					NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND
<b>DRAG INDEX 0</b>	200	.56	36,000	.65	68	42	194	5530	6760	.56	122	100
	150	.56	35,000	.63	66	40	194	4820	5800	.56	98	80
	100	.56	33,000	.60	60	37	194	4100	4840	.56	73	60
	80	.56	30,000	.58	53	32	194	3800	4460	.56	63	52
	60	.49	20,000	.47	31	18	194	3460	4120	.49	.49	45
	40	.43	13,000	.41	19	10	194	3050	3600	.43	37	34
	20	.225	3000	.220	4	2	194	2570	2930	.36	20	19
<b>DRAG INDEX 50</b>	200	.56	35,000	.61	61	37	191	5720	7060	.33	123	100
	150	.56	35,000	.61	61	37	191	4960	6010	.33	98	80
	100	.56	33,000	.60	57	34	191	4200	4990	.33	73	60
	80	.56	30,000	.56	50	29	191	3880	4580	.33	62	52
	60	.50	21,000	.47	32	17	191	3520	4210	.33	50	44
	40	.43	13,000	.40	18	10	191	3090	3680	.33	36	34
	20	.225	4000	.210	6	3	191	2590	2980	.32	20	19
<b>DRAG INDEX 100</b>	200	.56	35,000	.61	58	35	189	5910	7350	.33	123	100
	150	.56	35,000	.61	58	35	189	5100	6230	.32	98	80
	100	.56	33,000	.58	53	32	189	4290	5130	.32	72	58
	80	.56	30,000	.54	47	27	189	3950	4710	.32	62	50
	60	.51	22,000	.47	32	17	189	3580	4300	.32	50	43
	40	.44	14,000	.40	19	10	189	3140	3750	.32	36	33
	20	.225	4000	.210	5	3	189	2620	3030	.32	20	19
<b>DRAG INDEX 150</b>	200	.56	35,000	.61	54	33	187	6110	7660	.33	124	100
	150	.56	35,000	.61	54	33	187	5250	6450	.32	98	79
	100	.56	33,000	.58	50	30	187	4390	5290	.32	73	58
	80	.56	30,000	.54	44	26	187	4040	4830	.32	62	50
	60	.51	22,000	.45	30	16	187	3640	4410	.32	50	42
	40	.44	14,000	.40	18	9	187	3180	3840	.32	36	32
	20	.225	5000	.205	6	3	187	2640	3070	.32	20	19

**NOTES**

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).

0-F52P-33-3

# NAVAIR 01-F14AAP-1B

**GEAR DOWN  
FLAPS DOWN**

# BINGO

**48,000 lb  
TWIN ENG**

DATE: SEPTEMBER 1987

DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			SEA LEVEL CRUISE				
	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	FUEL REQ (lbs)		MACH OR KIAS	DIST (nmi)	
					NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND
<b>DRAG INDEX 0</b>	200	.40	26,000	.40	29	12	142	8720	13,230	170	136	112
	150	.40	27,000	.40	30	13	142	7120	10,480	168	104	84
	100	.40	27,000	.41	30	13	142	5610	7900	166	72	59
	80	.40	26,000	.40	29	12	142	5010	6910	166	60	50
	60	.40	23,000	160	25	10	142	4390	5970	164	48	40
	40	195	14,000	160	14	5	142	3720	5110	164	34	31
	20	195	7000	160	7	2	142	2930	3820	164	18	18
<b>DRAG INDEX 50</b>	200	.40	26,000	.40	28	12	140	8910	13,670	170	136	113
	150	.40	27,000	.40	29	12	140	7270	10,810	168	104	86
	100	.40	27,000	.40	29	12	140	5720	8120	166	74	60
	80	.40	26,000	.40	28	12	140	5100	7090	166	62	50
	60	.40	22,000	160	23	9	140	4460	6130	164	49	40
	40	195	14,000	160	14	5	140	3760	5200	164	35	32
	20	195	7000	160	7	2	140	2950	3880	162	19	18
<b>DRAG INDEX 100</b>	200	.40	25,000	.40	26	11	138	9160	14,220	170	138	115
	150	.40	26,000	.40	27	11	138	7450	11,200	168	106	87
	100	.40	26,000	.40	27	11	138	5830	8370	166	75	60
	80	.40	25,000	160	26	11	138	5190	7290	164	62	50
	60	.40	22,000	160	23	9	138	4520	6260	164	49	40
	40	195	14,000	160	14	5	138	3790	5300	164	35	31
	20	195	6000	160	6	2	138	2970	3950	162	19	18
<b>DRAG INDEX 150</b>	200	.40	25,000	.4	26	10	136	9370	14,680	170	140	116
	150	.40	25,000	.4	26	10	136	7640	11,600	168	107	88
	100	.40	26,000	.4	27	11	136	5940	8600	166	75	60
	80	.40	25,000	160	26	10	136	5280	7470	164	62	50
	60	.40	21,000	160	21	8	136	4590	6440	164	50	41
	40	195	13,000	160	13	4	136	3840	5440	162	35	32
	20	195	7000	160	7	2	136	2990	3990	162	19	18

**NOTES**

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).

0-F52P-33-4

**GEAR UP  
FLAPS UP**

## BINGO

**48,000 lb  
SINGLE ENG**

DATE: SEPTEMBER 1987

N1 = WINDMILLING

DATA BASIS: ESTIMATED

N2 = 0 RPM

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			FUEL REQ (lbs)		SEA LEVEL CRUISE		
	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	NO WIND	100 Kn HEAD WIND	MACH OR KIAS	DIST (nmi)	
					NO WIND	100 Kn HEAD WIND					NO WIND	100 Kn HEAD WIND
<b>DRAG INDEX 0</b>	200	.44	24,000	.59	52	30	196	4650	5750	260	149	135
	150	.44	23,000	.58	49	28	196	4060	4930	258	116	106
	100	.44	18,000	.51	37	21	196	3460	4120	258	81	77
	80	.44	16,000	.50	33	18	196	3200	3770	256	66	64
	60	.44	13,000	.47	26	14	196	2930	3400	256	51	50
	40	.44	9000	.43	18	9	196	2650	3000	256	35	36
	20	.44	4000	.40	8	4	196	2340	2540	256	18	20
<b>DRAG INDEX 50</b>	200	.43	23,000	.52	45	26	194	4940	6230	246	150	136
	150	.43	22,000	.51	43	24	194	4280	5290	244	116	106
	100	.43	19,000	.50	36	20	194	3600	4350	244	82	74
	80	.43	16,000	.47	30	16	194	3320	3960	244	67	63
	60	.43	14,000	.45	26	14	194	3020	3540	242	52	50
	40	.43	9000	.41	16	8	194	2710	3110	242	36	36
	20	.43	4000	.40	7	4	194	2370	2600	242	19	19
<b>DRAG INDEX 100</b>	200	.42	21,000	.50	38	21	192	5240	6780	244	152	139
	150	.42	21,000	.50	38	21	192	4500	5680	244	117	108
	100	.42	18,000	.47	32	17	192	3740	4600	242	82	76
	80	.42	16,000	.45	28	15	192	3430	4160	242	68	63
	60	.42	13,000	.43	22	12	192	3110	3710	242	52	50
	40	.42	9000	.40	15	8	192	2770	3220	240	37	37
	20	.42	4000	.39	7	3	192	2410	2660	240	19	20
<b>DRAG INDEX 150</b>	200	.40	20,000	.49	33	18	189	5560	7360	228	152	142
	150	.40	19,000	.48	31	17	189	4730	6100	230	117	109
	100	.40	17,000	.46	28	15	189	3890	4870	230	82	76
	80	.40	16,000	.45	26	14	189	3550	4370	230	68	63
	60	.40	14,000	.43	22	12	189	3200	3860	230	52	49
	40	.40	9000	.40	14	7	189	2830	3340	230	37	36
	20	.40	5000	.39	8	4	189	2440	2720	228	19	20

**NOTES**

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).
- IF BOTH ROTORS ZERO RPM ADD 80 COUNTS TO DRAG INDEX.

0-F52P-33-5

## GEAR UP FLAPS DOWN

# BINGO

## 48,000 lb SINGLE ENG

DATE: SEPTEMBER 1987

N1 = WINDMILLING

DATA BASIS: ESTIMATED

N2 = 0 RPM

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	FUEL REQ (lbs)		MACH OR KIAS	DIST (nmi)	
	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	NO WIND	50 Kn HEAD WIND		KCAS	NO WIND	50 Kn HEAD WIND	MACH OR KIAS	NO WIND
<b>DRAG INDEX 0</b>	200	180	8000	165	8	5	147	10,020	12,900	172	179	173
	150	180	9000	165	9	6	147	7930	10,020	170	133	129
	100	180	10,000	165	10	7	147	5950	7300	170	89	86
	80	180	10,000	165	10	7	147	5190	6260	172	72	70
	60	180	9000	165	9	6	147	4430	5420	170	55	54
	40	180	6000	165	6	4	147	3650	4230	170	38	37
	20	180	3000	165	3	2	147	2850	3160	170	20	20
<b>DRAG INDEX 50</b>	200	180	8000	165	8	5	146	10,290	13,340	170	180	177
	150	180	8000	165	8	5	146	8180	10,410	168	134	131
	100	180	9000	165	9	6	146	6100	7540	166	90	88
	80	180	9000	165	9	6	146	5310	6440	166	72	70
	60	180	8000	165	8	5	146	4510	5380	166	56	54
	40	180	6000	165	6	4	146	3700	4310	164	38	36
	20	180	3000	165	3	2	146	2870	3200	164	20	19
<b>DRAG INDEX 100</b>	200	175	7000	165	7	5	144	10,630	13,910	170	183	180
	150	175	7000	165	7	5	144	8420	10,810	168	134	133
	100	175	8000	165	8	5	144	6240	7780	166	90	88
	80	175	8000	165	8	5	144	5410	6630	166	72	71
	60	175	8000	165	8	5	144	4580	5490	164	55	54
	40	175	6000	165	6	4	144	3750	4390	164	38	38
	20	175	3000	165	3	2	144	2900	3240	164	20	20
<b>DRAG INDEX 150</b>	200	170	6000	165	6	4	143	11,000	14,510	170	183	180
	150	170	6000	165	6	4	143	8680	11,240	168	137	136
	100	170	7000	165	7	4	143	6390	8040	166	91	89
	80	170	8000	165	8	5	143	5510	6800	166	74	72
	60	170	8000	165	8	5	143	4650	5620	164	56	54
	40	170	6000	165	6	4	143	3800	4470	162	38	37
	20	170	3000	165	3	2	143	2920	3280	162	20	20

### NOTES

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).
- IF BOTH ROTORS ZERO RPM ADD 40 COUNTS TO DRAG INDEX.

0-F52P-33-6



**GEAR DOWN  
FLAPS UP**

## BINGO

**48,000 lb  
SINGLE ENG**

DATE: SEPTEMBER 1987

N1 = WINDMILLING

DATA BASIS: ESTIMATED

N2 = 0 RPM

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			SEA LEVEL CRUISE				
	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	FUEL REQ (lbs)		MACH OR KIAS	DIST (nmi)	
					NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND
<b>DRAG INDEX 0</b>	200	.40	19,000	.44	28	15	187	6230	8610	214	159	143
	150	.40	19,000	.44	28	15	187	5240	7030	212	122	109
	100	.40	18,000	.43	26	14	187	4250	5510	210	85	76
	80	.40	16,000	.41	23	12	187	3850	4910	210	70	63
	60	.40	13,000	.40	18	9	187	3440	4310	210	55	50
	40	210	7000	210	10	5	187	3000	3680	210	38	36
	20	210	1000	210	1	1	187	2520	2910	208	20	20
<b>DRAG INDEX 50</b>	200	.40	18,000	.42	25	13	186	6520	9180	210	161	146
	150	.40	18,000	.42	25	13	186	5450	7450	210	123	111
	100	.40	17,000	.41	23	12	186	4390	5780	208	85	77
	80	.40	16,000	.41	22	11	186	3960	5120	208	70	64
	60	200	12,000	200	16	8	186	3530	4490	208	54	52
	40	205	8000	205	11	5	186	3060	3780	206	37	37
	20	205	2000	205	3	1	186	2550	2970	206	19	20
<b>DRAG INDEX 100</b>	200	.40	17,000	.41	22	12	185	6820	9800	206	162	148
	150	.40	17,000	.41	22	12	185	5670	7900	206	124	112
	100	.40	17,000	.41	22	12	185	4530	6050	204	86	77
	80	.40	15,000	.40	19	10	185	4080	5350	204	70	64
	60	200	12,000	200	15	8	185	3610	4650	202	54	51
	40	200	8000	200	10	5	185	3120	3890	202	37	36
	20	200	1000	200	1	1	185	2580	3030	202	20	20
<b>DRAG INDEX 150</b>	200	.40	15,000	.40	18	9	183	7160	10,500	204	165	152
	150	.40	16,000	.40	20	10	183	5890	8380	204	125	114
	100	.40	16,000	.40	20	10	183	4680	6360	204	86	78
	80	.40	14,000	.39	17	9	183	4190	5590	202	71	64
	60	200	12,000	200	15	7	183	3700	4820	202	55	50
	40	200	8000	200	10	5	183	3170	4010	202	38	36
	20	200	2000	200	2	1	183	2610	3090	202	20	20

**NOTES**

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).
- IF BOTH ROTORS ZERO RPM ADD 70 COUNTS TO DRAG INDEX.

0-F52P-33-7

**GEAR DOWN  
FLAPS DOWN**

## BINGO

**48,000 lb  
SINGLE ENG**

DATE: SEPTEMBER 1987  
DATA BASIS: ESTIMATED

**N1 = WINDMILLING  
N2 = 0 RPM**

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			SEA LEVEL CRUISE				
	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	FUEL REQ (lbs)		MACH OR KIAS	DIST (nmi)	
					NO WIND	50 Kn HEAD WIND		NO WIND	50 Kn HEAD WIND		NO WIND	50 Kn HEAD WIND
<b>DRAG INDEX 0</b>	200	160	6000	160	6	4	139	10,960	14,590	162	185	182
	150	160	7000	160	7	4	139	8590	11,200	160	137	134
	100	160	8000	160	8	5	139	6340	8030	158	91	88
	80	160	9000	160	9	6	139	5470	6800	158	73	70
	60	160	9000	160	9	6	139	4640	5640	156	56	54
	40	160	7000	160	7	4	139	3800	4490	156	39	37
	20	160	3000	160	3	2	139	2930	3310	156	20	20
<b>DRAG INDEX 50</b>	200	160	6000	160	6	4	138	11,210	15,010	162	186	183
	150	160	7000	160	7	4	138	8770	11,510	160	138	134
	100	160	7000	160	7	4	138	6490	8290	158	92	88
	80	160	8000	160	8	5	138	5580	6990	158	73	70
	60	160	8000	160	8	5	138	4710	5770	156	55	54
	40	160	7000	160	7	4	138	3850	4570	156	38	37
	20	160	3000	160	3	2	138	2950	3340	156	19	19
<b>DRAG INDEX 100</b>	200	155	5000	155	5	3	137	11,590	15,670	162	190	186
	150	155	6000	155	6	4	137	9040	11,960	160	140	136
	100	155	6000	155	6	4	137	6660	8570	158	92	90
	80	155	7000	155	7	4	137	5700	7210	158	74	72
	60	155	7000	155	7	4	137	4800	5920	156	56	54
	40	155	7000	155	7	4	137	3900	4660	156	38	36
	20	155	3000	155	3	2	137	2970	3390	156	20	19
<b>DRAG INDEX 150</b>	200	155	4000	155	4	2	136	11,990	16,360	162	192	189
	150	155	5000	155	5	3	136	9320	12,450	160	142	138
	100	155	6000	155	5	4	136	6790	8800	158	93	90
	80	155	6000	155	5	4	136	5830	7440	158	75	72
	60	155	6000	155	5	4	136	4890	6090	156	56	54
	40	155	6000	155	5	4	136	3950	4760	156	38	37
	20	155	2000	155	2	1	136	3000	3440	154	20	20

**NOTES**

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).
- IF BOTH ROTORS ZERO RPM ADD 30 COUNTS TO DRAG INDEX.

0-F52P-33-8

# NAVAIR 01-F14AAP-1B

GEAR UP  
FLAPS UP  
WINGS  $\wedge$  = 68°

## BINGO

48,000 lb  
TWIN ENG

DATE: SEPTEMBER 1987

DATA BASIS: ESTIMATED

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	INBOUND DISTANCE (nmi)	CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE	
		MACH OR KIAS	ALT (FEET)	MACH OR KIAS	DIST (nmi)	VELOCITY (KCAS)	FUEL REQ (lb)	MACH OR KIAS	DIST (nmi)
<b>DRAG INDEX 0</b>	200	.85	39,000	.89	62	274	4820	.54	122
	150	.85	39,000	.88	62	274	4160	.54	94
	100	.85	37,000	.85	58	274	3520	.54	66
	80	.85	33,000	.81	51	274	3260	.54	54
	60	.85	27,000	.77	40	274	3010	.54	44
	40	.85	20,000	.66	28	274	2730	.54	31
	20	.85	11,000	.60	14	274	2410	.54	17
<b>DRAG INDEX 50</b>	200	.81	38,000	.86	58	263	5100	.47	122
	150	.81	38,000	.86	55	263	4380	.47	94
	100	.81	37,000	.84	53	263	3670	.47	66
	80	.81	34,000	.81	47	263	3390	.47	55
	60	.81	28,000	.78	38	263	3110	.47	44
	40	.81	21,000	.61	27	263	2800	.47	32
	20	.81	11,000	.55	13	263	2450	.47	18
<b>DRAG INDEX 100</b>	200	.78	36,000	.82	47	255	5400	.46	123
	150	.78	36,000	.82	47	255	4620	.46	94
	100	.78	35,000	.81	45	255	3840	.45	66
	80	.78	33,000	.80	42	255	3528	.45	55
	60	.78	28,000	.78	34	255	3210	.45	43
	40	.78	21,000	.67	24	255	2880	.45	32
	20	.78	11,000	.55	12	255	2500	.45	18
<b>DRAG INDEX 150</b>	200	.74	34,000	.80	40	247	5730	.46	126
	150	.74	34,000	.80	40	247	4870	.46	96
	100	.74	33,000	.80	39	247	4020	.45	68
	80	.74	32,000	.80	38	247	3670	.45	56
	60	.74	28,000	.78	32	247	3330	.45	45
	40	.74	21,000	.67	23	247	2970	.45	33
	20	.74	11,000	.55	11	247	2540	.45	18

### NOTES

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).

0-F52P-33-9

**GEAR UP  
FLAPS UP  
WINGS  $\Delta$  = 68°**

## BINGO

**48,000 lb  
SINGLE ENG**

DATE: SEPTEMBER 1987  
DATA BASIS: ESTIMATED

**N1 = WINDMILLING  
N2 = 0 RPM**

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	INBOUND DISTANCE (nmi)	CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE	
		MACH OR KIAS	ALT (FEET)	MACH OR KIAS	DIST (nmi)	VELOCITY (KCAS)	FUEL REQ (lb)	MACH OR KIAS	DIST (nmi)
<b>DRAG INDEX 0</b>	200	.55	15,000	.60	18	240	5610	.46	123
	150	.55	15,000	.60	18	240	4725	.45	93
	100	.55	15,000	.60	18	240	3860	.45	64
	80	.55	15,000	.60	18	240	3510	.45	52
	60	.55	13,000	.57	15	240	3160	.45	40
	40	.55	10,000	.54	12	240	2800	.45	28
	20	.55	5000	.49	6	240	2420	.45	15
<b>DRAG INDEX 50</b>	200	.51	15,000	.60	17	228	6090	.46	169
	150	.51	15,000	.60	17	228	5090	.45	128
	100	.51	15,000	.60	17	228	4110	.45	87
	80	.51	13,000	.57	14	228	3710	.45	71
	60	.51	12,000	.56	13	228	3310	.45	54
	40	.51	9000	.53	10	228	2900	.45	38
	20	.51	5000	.49	5	228	2470	.45	20
<b>DRAG INDEX 100</b>	200	.48	14,000	.59	14	219	6630	.46	172
	150	.48	14,000	.59	14	219	5490	.46	130
	100	.48	13,000	.57	13	219	4370	.45	88
	80	.48	12,000	.56	12	219	3920	.45	72
	60	.48	10,000	.54	10	219	3460	.45	55
	40	.48	8000	.52	8	219	3000	.45	38
	20	.48	4000	.48	4	219	2520	.45	20
<b>DRAG INDEX 150</b>	200	241	11,000	.56	11	213	7240	304	178
	150	241	11,000	.55	11	213	5930	302	134
	100	241	11,000	.55	11	213	4650	300	91
	80	245	10,000	.54	10	213	4140	298	74
	60	250	9000	.53	9	213	3630	298	56
	40	264	6000	.50	6	213	3100	296	38
	20	279	3000	.47	3	213	2570	296	20

**NOTES**

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).
- IF BOTH ROTORS ZERO RPM ADD 90 COUNTS TO DRAG INDEX.

0-F52P-33-10

# NAVAIR 01-F14AAP-1B

**GEAR UP  
FLAPS UP**

**BINGO**

**53,000 lb  
TWIN ENG**

DATE: SEPTEMBER 1987

DATA BASIS: ESTIMATED

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			SEA LEVEL CRUISE				
	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	FUEL REQ (lbs)		MACH OR KIAS	DIST (nmi)	
					NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND
<b>DRAG INDEX 0</b>	200	.75	41,000	.73	134	91	220	4350	5090	288	116	104
	150	.75	37,000	.72	114	76	220	3880	4460	290	93	82
	100	.75	29,000	.62	79	51	220	3380	3870	288	69	62
	80	.75	25,000	.60	64	40	220	3170	3610	288	58	54
	60	.75	20,000	.57	47	29	220	2940	3310	288	47	44
	40	.75	14,000	.53	31	18	220	2670	2960	288	34	32
	20	.75	7000	.46	15	8	220	2370	2550	286	19	18
<b>DRAG INDEX 50</b>	200	.73	41,000	.73	118	80	215	4540	5340	272	115	100
	150	.73	38,000	.72	105	70	215	4030	4660	272	92	80
	100	.73	30,000	.64	74	47	215	3500	4020	270	68	60
	80	.73	26,000	.60	60	38	215	3270	3740	270	58	52
	60	.73	21,000	.58	45	28	215	3010	3420	268	46	42
	40	.73	15,000	.51	30	18	215	2730	3050	268	34	31
	20	.73	8000	.45	15	9	215	2400	2600	268	19	18
<b>DRAG INDEX 100</b>	200	.72	40,000	.72	102	68	210	4750	5600	262	115	99
	150	.72	39,000	.73	98	65	210	4190	4860	262	92	79
	100	.72	31,000	.65	70	44	210	3620	4170	262	68	60
	80	.72	27,000	.60	58	36	210	3370	3870	262	57	52
	60	.72	22,000	.58	44	26	210	3100	3540	260	46	43
	40	.72	16,000	.51	30	17	210	2790	3140	260	34	32
	20	.72	8000	.44	14	8	210	2430	2660	260	18	18
<b>DRAG INDEX 150</b>	200	.70	40,000	.72	93	61	207	4960	5880	258	115	98
	150	.70	39,000	.73	89	58	207	4360	5080	256	92	78
	100	.70	32,000	.66	67	42	207	3750	4330	256	68	58
	80	.70	27,000	.60	53	32	207	3480	4020	254	58	50
	60	.70	22,000	.54	41	24	207	3190	3660	254	47	42
	40	.70	16,000	.49	28	16	207	2860	3240	254	34	31
	20	.70	8000	.42	13	7	207	2470	2720	254	19	18

**NOTES**

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).

0-F52P-33-11

# NAVAIR 01-F14AAP-1B

**GEAR UP  
FLAPS DOWN**

# BINGO

**53,000 lb  
TWIN ENG**

DATE: SEPTEMBER 1987

DATA BASIS: ESTIMATED

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			SEA LEVEL CRUISE				
	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	FUEL REQ (lbs)		MACH OR KIAS	DIST (nmi)	
					NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND
<b>DRAG INDEX 0</b>	200	.40	27,000	.45	32	15	156	8250	11,820	196	137	115
	150	.40	27,000	.45	32	15	156	6810	9510	194	106	88
	100	.40	27,000	.45	32	15	156	5390	7270	192	75	62
	80	.40	25,000	.44	29	14	156	4820	6418	192	62	52
	60	.40	22,000	.41	25	12	156	4240	5560	192	50	42
	40	.40	15,000	180	16	7	156	3610	4710	190	36	32
	20	195	6000	180	6	3	156	2870	3590	190	19	19
<b>DRAG INDEX 50</b>	200	.40	27,000	.44	30	14	155	8490	12,310	194	138	116
	150	.40	27,000	.45	31	15	155	6970	9840	194	106	89
	100	.40	26,000	.44	30	14	155	5490	7480	192	74	62
	80	.40	25,000	.43	28	13	155	4900	6570	192	62	52
	60	.40	22,000	.40	25	11	155	4300	5680	192	49	42
	40	.40	15,000	180	16	7	155	3650	4790	190	36	32
	20	195	6000	180	6	2	155	2890	3640	190	19	19
<b>DRAG INDEX 100</b>	200	.40	25,000	.43	28	13	154	8570	12,840	194	139	119
	150	.40	26,000	.44	29	14	154	7140	10,210	192	106	90
	100	.40	26,000	.44	29	14	154	5600	7710	192	75	63
	80	.40	25,000	.43	28	13	154	4990	6730	190	62	52
	60	.40	22,000	.40	24	11	154	4370	5810	190	50	42
	40	195	15,000	180	16	7	154	3700	4890	190	36	32
	20	195	6000	180	6	2	154	2920	3700	190	19	19
<b>DRAG INDEX 150</b>	200	.40	24,000	.42	26	12	152	9000	13,370	192	141	120
	150	.40	25,000	.43	27	12	152	7320	10,580	192	107	92
	100	.40	25,000	.43	27	12	152	5710	7950	190	76	64
	80	.40	25,000	.42	27	12	152	5080	6910	188	62	52
	60	.40	22,000	.40	23	10	152	4430	5930	188	49	42
	40	195	14,000	180	14	6	152	3740	5000	188	36	32
	20	195	6000	180	6	2	152	2940	3760	186	19	19

## NOTES

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).

0-F52P-33-12

# NAVAIR 01-F14AAP-1B

**GEAR DOWN  
FLAPS UP**

## BINGO

**53,000 lb  
TWIN ENG**

DATE: SEPTEMBER 1987

DATA BASIS: ESTIMATED

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			SEA LEVEL CRUISE				
	INBD DJUST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	FUEL REQ (lbs)		MACH OR KIAS	DIST (nmi)	
					NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND
<b>DRAG INDEX 0</b>	200	.56	34,000	.66	62	39	203	5790	7100	.35	128	106
	150	.56	33,000	.63	60	37	203	5010	6050	.35	101	85
	100	.56	31,000	.60	55	34	203	4230	5010	.35	75	64
	80	.55	25,000	.55	41	25	203	3910	4650	.35	64	56
	60	.47	18,000	.47	28	16	203	3530	4220	.35	52	46
	40	.42	11,000	.41	16	9	203	3100	3660	.35	37	34
	20	.225	3000	.225	4	2	203	2590	2940	.35	20	20
<b>DRAG INDEX 50</b>	200	.56	34,000	.63	58	36	201	5990	7410	.56	127	106
	150	.56	33,000	.61	56	34	201	5160	6280	.56	100	84
	100	.56	32,000	.60	53	33	201	4330	5150	.56	72	62
	80	.55	25,000	.53	39	23	201	3990	4790	.55	64	54
	60	.49	20,000	.48	30	17	201	3600	4300	.49	52	44
	40	.42	11,000	.41	15	8	201	3140	3750	.42	37	34
	20	.225	4000	.225	6	3	201	2610	2990	.37	20	20
<b>DRAG INDEX 100</b>	200	.56	33,000	.61	52	32	199	6200	7750	.34	128	106
	150	.56	33,000	.61	52	32	199	5320	6520	.34	101	83
	100	.56	31,000	.58	48	29	199	4430	5320	.34	74	61
	80	.56	29,000	.55	44	27	199	4070	4840	.34	64	52
	60	.49	20,000	.46	28	16	199	3660	4420	.33	51	44
	40	.43	13,000	.41	17	9	199	3190	3810	.33	36	34
	20	.225	4000	.225	5	3	199	2640	3040	.33	20	20
<b>DRAG INDEX 150</b>	200	.56	33,000	.61	50	30	197	6420	8080	.34	128	106
	150	.56	33,000	.61	50	30	197	5480	6760	.34	102	83
	100	.56	31,000	.58	46	28	197	4540	5490	.34	74	61
	80	.56	28,000	.54	40	24	197	4155	5000	.33	64	52
	60	.50	21,000	.46	28	16	197	3730	4510	.33	50	44
	40	.43	13,000	.41	17	9	197	3240	3900	.33	36	34
	20	.225	4000	.225	5	3	197	2670	3100	.33	20	20

**NOTES**

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).

0-F52P-33-13

# NAVAIR 01-F14AAP-1B

**GEAR DOWN  
FLAPS DOWN**

# BINGO

**53,000 lb  
TWIN ENG**

DATE: SEPTEMBER 1987

DATA BASIS: ESTIMATED

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			SEA LEVEL CRUISE				
	INBD DIST (nmi)	MACH OR KIAS	ALT (feet)	MACH OR KIAS	DIST (nmi)		KCAS	FUEL REQ (lbs)		MACH OR KIAS	DIST (nmi)	
					NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND		NO WIND	100 Kn HEAD WIND
<b>DRAG INDEX 0</b>	200	.40	24,000	.40	26	11	149	9240	14,060	178	140	119
	150	.40	25,000	.41	27	12	149	7500	11,080	176	107	90
	100	.40	25,000	.40	27	12	149	5850	8280	174	76	62
	80	.40	25,000	.40	27	12	149	5190	7180	172	63	52
	60	.40	21,000	165	22	10	149	4530	6180	172	50	42
	40	200	13,000	165	13	5	149	3800	5210	172	36	32
	20	200	6000	170	6	2	149	2970	3870	170	20	20
<b>DRAG INDEX 50</b>	200	.40	24,000	.40	25	11	147	9450	14,530	178	141	120
	150	.40	24,000	.40	25	11	147	7690	11,480	176	108	91
	100	.40	25,000	.40	27	12	147	5960	8510	174	76	63
	80	.40	24,000	.40	25	11	147	5290	7380	172	63	52
	60	.40	21,000	165	22	9	147	4600	6310	172	50	42
	40	200	13,000	165	13	5	147	3840	5310	172	36	32
	20	200	6000	165	6	2	147	2990	3920	170	20	18
<b>DRAG INDEX 100</b>	200	.40	23,000	.40	24	10	145	9720	15,120	178	144	122
	150	.40	24,000	.40	25	11	145	7850	11,840	176	110	92
	100	.40	24,000	.40	25	11	145	6080	8770	174	77	64
	80	.40	24,000	.40	25	11	145	5380	7570	172	64	52
	60	.40	20,000	160	20	8	145	4660	6490	172	50	42
	40	200	13,000	160	13	5	145	3880	5410	170	36	32
	20	200	6000	165	6	2	145	3010	3980	170	19	19
<b>DRAG INDEX 150</b>	200	.40	23,000	.40	23	10	143	9940	15,610	176	144	123
	150	.40	23,000	.40	23	10	143	8050	12,270	174	110	94
	100	.40	24,000	.40	24	10	143	6200	9020	172	76	64
	80	.40	24,000	.40	24	10	143	5480	7770	172	63	52
	60	.40	20,000	160	20	8	143	4730	6630	172	50	42
	40	200	13,000	160	12	5	143	3930	5510	170	36	32
	20	200	6000	160	6	2	143	3030	4040	170	19	18

## NOTES

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).

0-F52P-33-14



# NAVAIR 01-F14AAP-1B

GEAR UP  
FLAPS UP  
WINGS  $\Lambda = 68^\circ$

## BINGO

53,000 lb  
TWIN ENG

DATE: SEPTEMBER 1987

DATA BASIS: ESTIMATED

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	INBOUND DISTANCE (nmi)	CLIMB	CRUISE		DESCEND			SEA LEVEL CRUISE	
		MACH OR KIAS	ALT (FEET)	MACH OR KIAS	DIST (nmi)	VELOCITY (KCAS)	FUEL REQ (lb)	MACH OR KIAS	DIST (nmi)
<b>DRAG INDEX 0</b>	200	.85	37,000	.88	57	288	5040	.56	129
	150	.85	37,000	.88	57	288	4330	.56	100
	100	.85	36,000	.86	55	288	3620	.56	70
	80	.85	32,000	.82	48	288	3340	.56	58
	60	.85	27,000	.80	39	288	3060	.56	46
	40	.85	19,000	.68	26	288	2760	.56	33
	20	.85	10,000	.60	13	288	2430	.56	20
<b>DRAG INDEX 50</b>	200	.81	36,000	.86	50	276	5340	.49	128
	150	.81	36,000	.86	50	276	4560	.49	98
	100	.81	35,000	.85	49	276	3780	.49	70
	80	.81	32,000	.81	44	276	3480	.49	57
	60	.81	27,000	.80	36	276	3170	.49	44
	40	.81	20,000	.69	25	276	2840	.49	32
	20	.81	10,000	.57	12	276	2470	.49	18
<b>DRAG INDEX 100</b>	200	.78	34,000	.83	43	268	5680	.48	130
	150	.78	34,000	.82	43	268	4820	.48	100
	100	.78	34,000	.82	43	268	3970	.47	70
	80	.78	32,000	.80	40	268	3630	.47	58
	60	.78	27,000	.80	33	268	3280	.47	46
	40	.78	20,000	.69	23	268	2930	.47	34
	20	.78	11,000	.58	12	268	2520	.47	19
<b>DRAG INDEX 150</b>	200	.74	32,000	.80	37	260	6040	318	131
	150	.74	32,000	.80	37	260	5090	316	100
	100	.74	32,000	.80	37	260	4160	314	70
	80	.74	30,000	.80	35	260	3780	314	58
	60	.74	27,000	.80	30	260	3400	312	46
	40	.74	20,000	.69	21	260	3010	312	33
	20	.74	11,000	.58	11	260	2570	310	19

### NOTES

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).

0-F52P-33-15

# NAVAIR 01-F14AAP-1B

<b>GEAR UP</b>	<b>EXTENDED RANGE BINGO</b>	<b>48,000 lb</b>
<b>FLAPS UP</b>		<b>TWIN ENG</b>

	INBD DIST (nmi)	CLIMB MACH	DESCEND			FUEL REQ (lb)	
			DISTANCE (nmi)		KCAS	NO WIND	100KT HEAD
			NO WIND	100KT HEAD WIND			
<b>DRAG INDEX 0</b>	300	0.745	123	79	212	5330	6440
	400	0.745	121	77	212	6310	7770
	500	0.745	120	76	212	7310	9130
	600	0.745	118	81	212	8330	10,510
	700	0.745	116	79	212	9350	11,910
	800	0.745	124	77	212	10,400	13,330
	900	0.745	122	76	212	11,450	14,810
	1000	0.745	121	81	212	12,510	16,330
<b>DRAG INDEX 50</b>	300	0.732	111	70	206	5580	6790
	400	0.732	110	69	206	6650	8240
	500	0.732	108	67	206	7740	9740
	600	0.732	106	72	206	8850	11,250
	700	0.732	105	70	206	9980	12,790
	800	0.732	112	68	206	11,120	14,370
	900	0.732	110	67	206	12,280	15,970
	1000	0.732	108	72	206	13,460	17,610
<b>DRAG INDEX 100</b>	300	0.718	100	63	202	5840	7140
	400	0.718	99	61	202	6990	8710
	500	0.718	97	65	202	8160	10,340
	600	0.718	96	64	202	9360	11,970
	700	0.718	102	62	202	10,590	13,660
	800	0.718	100	61	202	11,830	15,380
	900	0.718	99	65	202	13,090	17,140
	1000	0.718	97	63	202	14,380	18,920
<b>DRAG INDEX 150</b>	300	0.705	91	57	198	6100	7500
	400	0.705	90	55	198	7340	9200
	500	0.705	89	58	198	8600	10,960
	600	0.705	87	57	198	9910	12,730
	700	0.705	92	56	198	11,220	14,560
	800	0.705	91	54	198	12,560	16,450
	900	0.705	89	57	198	13,930	18,320
	1000	0.705	88	56	198	15,320	20,280

OPTIMUM ALTITUDE (FEET)				
GROSS WEIGHT (1,000 lb)	DRAG INDEX			
	0	50	100	150
70	32,300	33,400	33,900	34,200
65	33,900	35,000	35,500	35,700
60	35,500	36,600	37,100	37,300
55	37,300	38,300	38,800	39,100
50	39,300	40,200	40,600	40,900

<b>CRUISE MACH</b>
0.718

<b>NOTES</b>	<ul style="list-style-type: none"> <li>• MILITARY POWER CLIMB FROM SEA LEVEL TO OPTIMUM ALTITUDE FOR INITIAL CLIMB WEIGHT</li> <li>• STEP UP ALTITUDE AS GROSS WEIGHT DECREASES</li> <li>• IDLE POWER MAXIMUM RANGE DESCENT SPEED BRAKES RETRACTED</li> <li>• FUEL REQUIRED INCLUDES 2,000 POUNDS RESERVE</li> </ul>
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# NAVAIR 01-F14AAP-1B

GEAR UP  
FLAPS UP  
WINGS  $\wedge$  = 68°

## BINGO

53,000 lb  
TWIN ENG

DATE: SEPTEMBER 1987

DATA BASIS: ESTIMATED

BASED ON FLIGHT TEST

INITIAL ALTITUDE: SEA LEVEL

	CLIMB		CRUISE		DESCEND			SEA LEVEL CRUISE	
	INBOUND DISTANCE (nmi)	MACH OR KIAS	ALT (FEET)	MACH OR KIAS	DIST (nmi)	VELOCITY (KCAS)	FUEL REQ (lb)	MACH OR KIAS	DIST (nmi)
<b>DRAG INDEX 0</b>	200	.85	37,000	.88	57	288	5040	.56	129
	150	.85	37,000	.88	57	288	4330	.56	100
	100	.85	36,000	.86	55	288	3620	.56	70
	80	.85	32,000	.82	48	288	3340	.56	58
	60	.85	27,000	.80	39	288	3060	.56	46
	40	.85	19,000	.68	26	288	2760	.56	33
	20	.85	10,000	.60	13	288	2430	.56	20
<b>DRAG INDEX 50</b>	200	.81	36,000	.86	50	276	5340	.49	128
	150	.81	36,000	.86	50	276	4560	.49	98
	100	.81	35,000	.85	49	276	3780	.49	70
	80	.81	32,000	.81	44	276	3480	.49	57
	60	.81	27,000	.80	36	276	3170	.49	44
	40	.81	20,000	.69	25	276	2840	.49	32
	20	.81	10,000	.57	12	276	2470	.49	18
<b>DRAG INDEX 100</b>	200	.78	34,000	.83	43	268	5680	.48	130
	150	.78	34,000	.82	43	268	4820	.48	100
	100	.78	34,000	.82	43	268	3970	.47	70
	80	.78	32,000	.80	40	268	3630	.47	58
	60	.78	27,000	.80	33	268	3280	.47	46
	40	.78	20,000	.69	23	268	2930	.47	34
	20	.78	11,000	.58	12	268	2520	.47	19
<b>DRAG INDEX 150</b>	200	.74	32,000	.80	37	260	6040	318	131
	150	.74	32,000	.80	37	260	5090	316	100
	100	.74	32,000	.80	37	260	4160	314	70
	80	.74	30,000	.80	35	260	3780	314	58
	60	.74	27,000	.80	30	260	3400	312	46
	40	.74	20,000	.69	21	260	3010	312	33
	20	.74	11,000	.58	11	260	2570	310	19

### NOTES

- MILITARY POWER CLIMB TO INDICATED ALTITUDE FROM SEA LEVEL
- IDLE POWER MAXIMUM RANGE DESCENT TO SEA LEVEL (SPEED BRAKES RETRACTED)
- FUEL REQUIRED INCLUDES 2000 POUNDS RESERVE FUEL
- WT = ZERO FUEL WEIGHT
- FOR DISTANCES GREATER THAN 200 nmi, ADD FUEL REQUIRED FOR SHORTER DISTANCES AND SUBTRACT EXCESS FUEL RESERVE (S).

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# NAVAIR 01-F14AAP-1B

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## Note

A bracketed **T [T]** in a procedural step identifies items pertaining only to TARPS aircraft.

## ADMINISTRATIVE BRIEF

The following items should be covered for each flight regardless of the mission.

1. Event number
2. Launch/recovery times/recovery order
3. Lineup/call signs/avionics plan
4. Missions assigned/alternate missions
5. External assets/call signs
6. Weather
  - a. Base, en route, target, area, divert
  - b. Water/air temperature, sea state
7. Ordnance and stores carried/preflight/restrictions on use
8. Communications plan
9. Area/NOTAMs
10. Clearance/NAVAIDs
11. Ground/deck procedures
12. Takeoff/departure/rendezvous
13. En route/formation
14. Tanking plan
15. Combat checks/OBC
16. Recovery procedures (VFR/IFR)
17. Joker/bingo fuel
18. NORDO procedures
19. Emergencies/diverts/SAR/birdstrike
20. Training rules
21. Contingencies

EJECTION SEAT INSPECTION

- 1. Face curtain locking tab . . . . . Up (locked)
- 2. Lower ejection handle . . . . . Guard Up (locked)
- 3. Face curtain connecting link (R) . . . . . Safe Indication
- 4. Time release mechanism trip rod . . . . . Connected



If sear is not fully inserted into firing release mechanism, inadvertent operation of the timing release mechanism will occur. This will safe the lower firing handle and release the occupant from the seat. The seat kit and parachute will remain attached to the aircrew via lap belts and koch fittings.

- 5. Face curtain automatic release linkage . . . . . Disconnected
- 6. System initiator . . . . . Connected and Pin Removed
- 7. Time release mechanism rod . . . . . Scissors Release Pin Protruding
- 8. Drogue chute link lines . . . . . Clips Engaged
- 9. Scissors shackle . . . . . Stowed, Drogue Lanyard, Connected
- 10. Ejection gun sear . . . . . Connected and Pin Removed
- 11. Ejection gun sear withdrawal links . . . . . Connected
- 12. Drogue chute housing flaps . . . . . Tacked Down
- 13. Face curtain . . . . . Secure
- 14. Face curtain connecting link (L) . . . . . Safe Indication
- 15. Drogue chute lines (L) . . . . . Clips Engaged
- 16. Drogue withdrawal line . . . . . Connected to Drogue Slug



## NAVAIR 01-F14AAP-1B

- 17. Drogue slug shear pin ..... Head Impressed
- 18. Top latch mechanism ..... Flush
- 19. Parachute withdrawal line screw  
connector ..... Fingertight

### WARNING

If the personnel parachute withdrawal line is not securely connected, automatic deployment of the parachute will not occur after ejection.

- 20. Guillotine cutter ..... Withdrawal Line  
Routed Through Guillotine
- 21. Power inertial reel sear ..... Connected
- 22. Fork ends of harness sear rods ..... Connected
- 23. Rocket motor initiator sear  
and Pin Removed ..... Connected
- 24. Drogue gun trip rod ..... Connected and Pin Removed
- 25. Rocket motor initiator sear extraction  
lanyard ..... Attached
- 26. Parachute premature deployment lanyard ..... Secured
- 27. Shoulder harness ..... Secured
- 28. Canopy releases ..... Proper Installation
- 29. Ripcord ..... Routed Through Parachute Pack Ring
- 30. Manual ripcord eyelet ..... Connected to  
Leap Ripcord Pin
- 31. Ripcord pins ..... Straight/No Corrosion
- 32. Ventilation hose ..... Connected to Seat or  
Disconnected
- 33. Personnel services block ..... Verify Connection  
to Seat Bucket Disconnect  
Lanyard(s) (Two)  
Secured to Deck

## NAVAIR 01-F14AAP-1B

- 34. Raft release handles . . . . . Note Type
- 35. Lapbelt restraint . . . . . Secured
- 36. Emergency oxygen trip cable . . . . . Secured
- 37. Survival kit sticker clips and  
lugs . . . . . Secured and Engaged
- 38. Survival kit front lock release lever . . . . Full Forward

### WARNING

Failure of survival kit front lock release lever to return to its full-forward position will prevent ejection by means of the lower ejection handle.

- 39. Emergency oxygen supply bottle . . . . Full Indication,  
1,800 Psi (in black)
- 40. Emergency oxygen actuator . . . . . Connected, Stowed
- 41. Leg restraint cords . . . . . Secured to Deck,  
Routed Through Snubber,  
Anchored to Seat Release Fitting
- 42. Survival kit forward restraint pin . . . . . Engaged
- 43. URT-33 lanyard . . . . . Connected
- 44. Emergency restraint release handle . . . . . Down  
and Secured, Pin Removed
- 45. Guillotine initiator sear . . . . . Connected
- 46. Ejection and canopy pins . . . . . Stowed

COCKPIT PROCEDURES

INTERIOR INSPECTION — PILOT



NATOPS prohibits the attaching or storing of unauthorized equipment on or above the canopy rails during CV launch or arrestment due to potential for missile hazard.

1. Harnessing . . . . . Fasten
2. Oxygen . . . . . Check
3. VENT AIRFLOW thumbwheel . . . . . Set
4. Tone VOLUME CONTROLS . . . . . Set
5. TACAN function selector . . . . . OFF
6. ICS panel . . . . . Set
7. STAB AUG switches . . . . . OFF
8. UHF function selector . . . . . OFF
9. Wing-sweep mode switch . . . . . MANUAL
10. Emergency wing sweep handle . . . . . Corresponding
11. Left and right throttles . . . . . Off
12. Speedbrake switch . . . . . RET
13. Exterior lights master switch . . . . . Set
14. FLAP handle . . . . . Corresponding
15. Throttle friction lever . . . . . Off(aft)
16. ASYM LIMITER switch . . . . . ON (guard down)
17. L and R ENG MODE SELECT switches . . . . . PRI
18. BACKUP IGNITION switch . . . . . OFF
19. THROTTLE TEMP switch . . . . . NORM

## NAVAIR 01-F14AAP-1B

- 20. THROTTLE MODE switch ..... BOOST
- 21. L and R INLET RAMPS switches ..... AUTO
- 22. ANTI SKID SPOILER BK switch ..... OFF
- 23. FUEL panel ..... Set
  - a. WING/EXT TRANS switch ..... AUTO
  - b. REFUEL PROBE switch ..... RET
  - c. DUMP switch ..... OFF
  - d. FEED switch ..... NORM (guard down)
- 24. LDG GEAR handle ..... DN

*Check HYD ISOL switch to TO/LDG.*

- 25. NOSE STRUT switch ..... OFF
- 26. Parking brake ..... Pull
- 27. Radar altimeter ..... OFF
- 28. Altimeter ..... Set
- 29. Left and right FUEL SHUT OFF handles ..... IN
- 30. ACM switch ..... OFF (guard down)
- 31. MASTER ARM switch ..... OFF (guard down)
- 32. Weapon select ..... OFF
- 33. VDIG and HSD retaining locks ..... Engaged
- 34. Standby attitude gyro ..... Caged
- 35. G-meter ..... Reset
- 36. Clock ..... Wind and Set
- 37. Fuel BINGO ..... Set
- 38. Circuit breakers ..... Checked
- 39. Brake accumulator pressure ..... Check in Green
- 40. HYD HAND PUMP ..... Check
- 41. HOOK handle ..... Corresponding

## NAVAIR 01-F14AAP-1B

- 42. DISPLAYS panel ..... Set
- 43. ELEV LEAD knob ..... Set
- 44. INBD and OUTBD spoiler switches ..... NORM  
(guard down)
- 45. L and R generator switches ..... NORM

### WARNING

Ground engine operation without electrical power supplied by either the generators or external power may cause 20-mm ammunition detonation because of excessive heat in the gun ammunition drum.

- 46. EMERG generator switch ..... NORM  
(guard down)
- 47. Air-condition controls ..... Set
  - a. TEMP mode selector switch ..... AUTO
  - b. TEMP thumbwheel control ..... As Desired  
(5 to 7 midrange)
  - c. CABIN PRESS switch ..... NORM
  - d. AIR SOURCE pushbutton ..... OFF
- 48. WSHLD AIR switch ..... OFF
- 49. ANTI-ICE switch ..... AUTO/OFF
- 50. COMPASS panel ..... Set
- 51. ARA-63 panel ..... OFF
- 52. MASTER LIGHT panel controls ..... As Required
- 53. MASTER TEST switch ..... OFF
- 54. EMERG FLT HYD switch ..... AUTO  
(guard down)
- 55. HYD TRANSFER PUMP switch ..... SHUTOFF  
(guard up)

## NAVAIR 01-F14AAP-1B

- 56. CANOPY AIR DIFFUSER lever . . . . . CABIN AIR
- 57. VIDEO CONTROL switch . . . . . OFF
- 58. Storage case . . . . . Inspect

### INTERIOR INSPECTION — RIO

- 1. Left and right circuit breakers . . . . . Set
- 2. Left and right foot pedals . . . . . Adjust
- 3. Harnessing . . . . . Fasten
- 4. Oxygen . . . . . Check
- 5. VENT AIRFLOW thumbwheel . . . . . OFF
- 6. SYS TEST-SYS PWR ground  
check panel . . . . . Closed
- 7. [T] CPS switches . . . . . OFF
- 8. KY-28 or KY-58 . . . . . P/OFF
- 9. ICS panel . . . . . Set
- 10. CDNU . . . . . OFF
- 11. VHF/UHF MODE selector . . . . . OFF
- 12. LIQ COOLING switch . . . . . OFF
- 13. EJECT CMD lever . . . . . Set  
Determined by squadron policy
- 14. Data storage unit . . . . . Secure
- 15. ARMAMENT control panel . . . . . Set
- 16. Standby attitude gyro . . . . . Caged
- 17. NAV MODE knob . . . . . OFF
- 18. PTID PWR switch . . . . . OFF
- 19. Clock . . . . . Set and Wind
- 20. WCS switch . . . . . OFF
- 21. IR/TV power switch . . . . . OFF
- 22. RECORD switch . . . . . OFF
- 23. RADAR WARNING RCVR PWR switch . . . . . OFF

## NAVAIR 01-F14AAP-1B

- 24. DECM selector knob . . . . . OFF
- 25. AN/ALE-47 DCDU, MODE/PWR switch . . . . . OFF
- 26. AN/ALE-47 GROUND TEST/  
DIMMER PNL . . . . . GUARD DOWN
- 27. APX-76 . . . . . OFF
- 28. INTERIOR LIGHTS panel . . . . . Check
- 29. IFF MASTER knob . . . . . OFF
- 30. MODE 4 switch . . . . . Out
- 31. IFF ANT and TEST panel . . . . . Set
- 32. RADAR BEACON switch . . . . . OFF
- 33. RADAR BEACON  
MODE switch . . . . . Single or Double
- 34. POWER SYS TEST switch . . . . . OFF
- 35. DATA/ADF switch . . . . . OFF

### PRESTART — PILOT

- 1. External electrical power . . . . . ON
- 2. If wings are not in OV SWP:
  - a. WING SWEEP DRIVE NO. 1 and  
WG SWP DR NO. 2/MANUV  
FLAP cb's (LE1, LE2) . . . . . Pull
  - b. Emergency WING SWEEP  
handle . . . . . Extend and Match  
Captain Bars With  
Wing Position Tape



Wings will move to emergency handle position regardless of wing-sweep cb position.

**Note**

If wings are in OV SW, do not extend handle.

3. ICS . . . . . Check
4. Landing gear indicator and transition light . . . . . Check  
Check gear indication down and transition light off.
5. MASTER TEST switch . . . . . Check  
Coordinate with RIO.
  - a. LTS



Initial failure with subsequent illumination after slight adjustment of either fire warning light during lights test is indicative of a weakened fire light retaining clip and/or current flow impediments at the bulb contact points. Either condition seriously degrades fire warning indication reliability. The fire warning lights must be seated securely with the operable bulb contact points free of impediments to current flow at all times to ensure proper operation of the fire warning light.



**WARNING**

Failure of the EMERG STORES JETT push-button to illuminate during LTS check could indicate that the pushbutton light is burned out or that the test circuit is defective. If the switch is actuated, stores will jettison when weight is off wheels. If this occurs, status of the emergency stores jettison circuit cannot be determined. Under some lighting conditions, it may be difficult to determine when the light is illuminated. Ensure that the light goes off when LTS on MASTER TEST switch is deselected. Failure of the light to go off indicates emergency jettison is selected; stores will jettison when weight is off wheels.

- b. FIRE DET/EXT
- c. INST
- d. MASTER TEST switch . . . . . OFF
- 6. Ejection seats . . . . . Armed  
Verify seat armed with RIO.
- 7. CANOPY handle . . . . . CLOSE

**WARNING**

Flightcrews shall ensure that hands and foreign objects are clear of front cockpit handholds and top of ejection seats and canopy sills to prevent personal injury and/or structural damage during canopy opening or closing sequence. Only minimum clearance is afforded when canopy is transitioning fore and aft.

**Note**

If CLOSE does not close the canopy, depress the grip latch, release and push handle outboard and forward into BOOST. If it is necessary to use BOOST, the handle shall be returned to CLOSE to avoid bleed-off of pneumatic pressure.

- 8. ACM panel ..... Set
- 9. EMERG STORES JETT pushbutton light ..... Out

**Note**

The MASTER CAUTION light and the EMERG JETT caution light illuminate when the EMERG STORES JETT pushbutton is activated.

- 10. LADDER light ..... OFF
- 11. Inform RIO ..... Ready To Start
- 12. Starter air ..... ON

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### PRESTART — RIO

1. Seat, ICS, and U/VHF foot switches . . . . . Adjust
2. External power and air . . . . . ON
3. ICS . . . . . Check
4. DL, tacan, and U/VHF . . . . . Set
5. Fuel quantity . . . . . Check
6. Lights . . . . . Check
7. LTS test . . . . . Check
8. Ejection seats . . . . . Armed
9. CANOPY handle . . . . . CLOSE  
Alert pilot.
10. Acknowledge . . . . . Ready To Start

### ENGINE START — PILOT

The RIO must monitor pilot procedures and plane captain signals to ensure maximum safety during the engine start sequence.



Coordinate movement of any external surfaces and equipment with the plane captain or director.

**CAUTION**

- If engine chugs and/or rpm hangup is encountered with one engine turning during normal ground start, monitor EGT for possible hot start. AIR SOURCE pushbutton should be set for the operating engine until rpm stabilizes at idle, then set to BOTH ENG.
- To prevent possible engine overtemperature during crossbleed start attempts, select the operating engine for air source and return to BOTH ENG after rpm stabilizes at idle or above.

1. ENG CRANK switch . . . . . L (left engine)
2. ENG CRANK switch . . . . . OFF
3. ENG CRANK switch . . . . . R (right engine)
4. ENG CRANK switch . . . . . OFF
5. EMERG FLT HYD  
switch . . . . . LOW-HIGH-AUTO (LOW)

**CAUTION**

Combined and brake accumulators should be charged prior to backup module checks. Checks should be made slowly enough to ensure continuous ON indication in the hydraulic pressure indicator to prevent damage to the pump or motor.

**Note**

Ensure combined and flight hydraulic pressures are zero prior to testing emergency flight hydraulic system to allow proper check of 300 psi priority valve.

6. ENG CRANK switch . . . . . R (right engine)



- If no oil pressure or hydraulic pressure is indicated, start shall be aborted by setting ENG CRANK switch to OFF.
- If the ENG CRANK does not automatically return to the OFF position by 50-percent rpm during start, ensure the ENG CRANK switch is off prior to 60-percent rpm to prevent starter overspeed.
- If the START/VALVE caution light illuminates after the ENG CRANK switch is off, select AIR SOURCE to OFF to prevent starter overspeed.
- When attempting a crossbleed or normal ground start, do not attempt to reengage the ENG CRANK switch if the engine is spooling down and rpm is greater than 46 percent. Between 30-and 46-percent rpm, the ENG CRANK switch may not stay engaged because of normal variations in starter cutout speed.

**Note**

During cold starts, oil pressure may exceed 65 psi. This pressure limit should not be exceeded for more than 1 minute.

7. Right throttle . . . . . IDLE at 20-Percent Rpm



If an idle crossbleed start is attempted with high-residual engine EGT and/or throttles are advanced from OFF to IDLE prior to 20-percent rpm, higher than normal EGT readings may occur. If the EGT appears to be rising abnormally, increasing the supply engine to 80-percent rpm may yield a normal start temperature.

**Note**

- Advancing the R throttle from OFF to IDLE automatically actuates the ignition system. An immediate indication of fuel flow (300 to 350 pph) will be exhibited and light-off (EGT rise) should be achieved within 5 to 15 seconds. Peak starting temperatures will be achieved in the 40- to 50-percent rpm range. After a slight hesitation, the EGT will return to normal. Exceeding 890°C constitutes a hot start. During the initial starting phase, the nozzle should expand to a full-open (100 percent) position.

**Note**

- Loss of electrical power may result in smoke entering the cockpit via the ECS.

- 8. R GEN light . . . . . Out
- 9. R FUEL PRESS light . . . . . Out
- 10. Idle engine instrument readings . . . . . Check
  - a. Rpm . . . . . 62 to 78 Percent
  - b. EGT . . . . . 500° (nominal)
  - c. FF . . . . . 950 to 1,400 Pph (nominal)
  - d. NOZ position . . . . . 100 Percent
  - e. OIL . . . . . 25 to 35 psi (nominal)  
(15 psi minimum)
  - f. FLT HYD PRESS . . . . . 3,000 Psi
- 11. External power . . . . . Disconnect



Ground engine operation without electrical power supplied by either the generators or external power may cause 20-mm ammunition detonation because of excessive heat in the gun ammunition drum.

- 12. ENG CRANK switch . . . . . L (left engine)  
When combined hydraulic pressure reaches 3,000 psi, return switch to neutral (center position).
- 13. HYD TRANSFER PUMP switch . . . . . NORMAL  
Hydraulic transfer pump will operate from flight side to maintain the combined side between 2,400 to 2,600 psi.



If the transfer pump does not pressurize the combined system within 5 seconds, immediately set HYD TRANSFER PUMP switch to SHUTOFF.

- 14. HYD TRANSFER PUMP switch . . . . . SHUTOFF
- 15. Repeat steps 6 through 10 for left engine.
- 16. Starter air. . . . . Disconnect
- 17. AIR SOURCE switch . . . . . L ENG, R ENG,  
then BOTH ENG
- 18. HYD TRANSFER PUMP switch . . . . . NORMAL
- 19. Ground safety pins . . . . . Remove and Stow



**POSTSTART — PILOT**

1. STAB AUG switches . . . . . All ON
2. MASTER TEST switch . . . . . EMERG GEN
3. MASTER RESET pushbutton . . . . . Depress  
Verify DFCS caution lights extinguished.

**Note**

An FCS CAUTION at this point probably indicates a PQVM fault due to a lack of pitch and roll attitude inputs from the EGI (DCP FAIL group will indicate IMU).

4. MASTER TEST switch . . . . . OFF
5. MASTER RESET pushbutton . . . . . Depress  
Verify DFCS caution lights extinguished.  
STAB AUG switches should not disengage.
6. Advise RIO that test and checks are completed.
7. Controls and displays . . . . . ON
8. AFTC . . . . . Check
  - a. L ENG MODE SELECT switch . . . . . SEC  
L ENG SEC light illuminates, RPM Drop, left NOZ indicator pointer below zero.
  - b. Advance L throttle to ensure engine response.
  - c. L ENG MODE SELECT switch . . . . . PRI  
L ENG SEC light goes out, left NOZ indicator to 100 percent.

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- d. R ENG MODE SELECT switch . . . . . SEC  
R ENG SEC light illuminates, RPM drop, right NOZ  
indicator pointer below zero.
- e. Advance R throttle to ensure engine response.
- f. R ENG MODE SELECT switch . . . . . PRI  
R ENG SEC light goes out, right NOZ indicator to 100  
percent.



Selecting secondary (SEC) mode closes exhaust nozzles increasing exhaust nozzle jet wake hazard.

### Note

- Performing AFTC check during OBC inhibits AICS ramps from programming. Ramps must be reset before another OBC can be performed.
- Operating engines in secondary mode inhibits the engine monitoring system portion of FEMS until primary mode is reselected.

9. EMERGENCY WING SWEEP handle . . . . . OV SW



If the "OVER" flag is not displayed in the wing sweep indicator with the wings in oversweep the stick should remain centered.



If wings are not in oversweep, move the wings to 68° using wing sweep emergency handle in raised position. Then raise handle to full extension and hold until HZ TAIL AUTH caution light goes out and OVER flag appears on wing sweep indicator. Move handle to full aft OV SW and stow.

10. WING SWEEP MODE switch ..... AUTO
11. WING SWEEP DRIVE NO. 1  
and WG SW DR. NO. 2 /  
MANUVFLAP cb ..... IN (LE1, LE2)
12. WING/EXT TRANS switch ..... OFF
13. COMM/NAV/GEAR/DISPLAYS ..... ON
14. Trim ..... Set 000
15. Standby gyro ..... Erect
16. MASTER RESET pushbutton ..... Depress
17. DCP ..... Verify codes (FAIL, FLT, IBIT)

## Note

An FCS CAUTION at this point probably indicates a PQVM fault due to a lack of pitch and roll attitude inputs from the IMU (DCP FAIL group will indicate IMU). This fault will not affect DFCS IBIT results and can be extinguished with a MASTER RESET before or after, but not during OBC.

- 18. MASTER TEST switch . . . . . OBC
- 19. AUTOPILOT switch . . . . . ENGAGE



OBC commencement with autopilot engaged and nose down trim may result in a force link disconnect when the stick hits forward stick stop during the pitch parallel actuator checks.

- 20. OBC . . . . . Initiate  
(coordinate with RIO and plane captain)



If CIA acronym is displayed in CM after completion of OBC, aircrew must select maintenance display to determine type of failure in the AWG-15. The possibility of inadvertent stores release exists when this acronym is present.

**WARNING**

Increased suction around intakes during inlet ramp programming and the automatic movement of the horizontal stabilizers presents a FOD hazard and a potential for injury to ground personnel not clear of these areas.

- 21. Speedbrake switch . . . . . EXT, then RET
- 22. REFUEL PROBE switch . . . . . ALL EXT, then RET
- 23. WSHLD AIR switch . . . . . Cycle
- 24. MASTER TEST switch/OBC . . . . . OFF
- 25. WING/EXT TRANS switch . . . . . OFF
- 26. Trim . . . . . Checked and set 000

**CAUTION**

Ensure adequate clearance before moving wings.

**Note**

For CV operations, omit steps 27 through 50.

- 27. EMERGENCY WING SWEEP handle . . . . . 20°
- 28. MASTER RESET pushbutton . . . . . Depress
- 29. External lights . . . . . Check (prior to night/IMC flight)

**WARNING**

During night operations, aircraft with inoperable tail and aft anticollision lights will not be visible from the rear quadrant even under optimum meteorological conditions, thus increasing midair potential.

- 30. Flaps and slats ..... DN
- 31. Flight controls ..... Cycle

Observe the following:

- a. Pitch control ..... 36° TEU to 9° TED  
horizontal tail (33° to 12°  
without ITS)
- b. Lateral control ..... 24° total differential tail
- c. Directional control ..... ±30° rudder
- d. Longitudinal/Lateral combined ..... 35° TEU  
to 15° TED horizontal tail
- e. Spoilers ..... 55°
- 32. DLC ..... Check  
Verify horizontal tail shift with DLC input.
- 33. ANTI SKID SPOILER BK ..... SPOILER BK
- 34. Spoilers and throttles ..... Check
- 35. ANTI SKID SPOILER BK switch ..... OFF
- 36. DCP ..... Verify codes (FAIL, FLT, IBIT)

**WARNING**

Aircraft shall be considered down with PFCC, RFCC, or YFCC codes in the DCP FAIL group or with an inoperative DCP display. Initiation of OBC/IBIT with this condition will result in invalid IBIT indications.

- 37. MASTER TEST switch . . . . . DFCS BIT (IBIT ARM)
- 38. AUTOPILOT switch . . . . . ENGAGE
- 39. MASTER TEST switch . . . . . DFCS BIT (IBIT RUN)  
(coordinate with RIO and plane captain)
- 40. DCP . . . . . Verify & record codes (FAIL, FLT, IBIT)
- 41. DCP . . . . . Clear codes (FAIL & FLT)
- 42. Flaps and slats . . . . . UP
- 43. Maneuver flaps . . . . . Down
- 44. WING SWEEP MODE switch . . . . . MAN 50°

**CAUTION**

If wing sweep commanded position indicator (captain bars) does not stop at 50°, immediately select AUTO with WING SWEEP switch.

- 45. Maneuver flaps . . . . . Crack up
- 46. WING SWEEP MODE switch . . . . . BOMB
- 47. EMERGENCY WING SWEEP handle . . . . . 68°
- 48. EMERGENCY WING SWEEP handle . . . . . OV SW
- 49. WING SWEEP MODE switch . . . . . AUTO

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50. MASTER RESET pushbutton . . . . . Depress

### Note

CV checklist resumes.

- 51. ANTI SKID SPOILER BK switch . . . . . BOTH
- 52. ANTI SKID . . . . . BIT
- 53. ANTI SKID SPOILER BK switch . . . . . OFF
- 54. Radar altimeter . . . . . BIT
- 55. Displays . . . . . Check
- 56. Tacan . . . . . BIT
- 57. ARA-63 . . . . . BIT
- 58. HUD-VIDEO . . . . . BIT
- 59. Altimeter . . . . . SET/RESET mode
- 60. Compass . . . . . Check
- 61. Flight instruments . . . . . Check

## POSTSTART — RIO

### Note

The RIO will ensure that the EMERG GEN check is completed before commencing post-start procedures.

- 1. CDNU . . . . . ON
- 2. DATA LINK . . . . . ON
- 3. DATA LINK Mode . . . . . CAINS/WAYPT (CV Ops)  
TAC (Shore Based)

After CDNU SELF TEST complete:

- 4. NAV MODE switch . . . . . Align
- 5. WCS switch . . . . . STBY  
Verify AWG-9 COND light illuminated.



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6. PTID power switch . . . . . ON
7. LIQ COOLING switch . . . AWG-9 or AWG-9/AIM-54  
Verify that AWG-9 COND light goes off and that AUTO  
BIT 2 is running
8. CDNU . . . . . Enter current POSITION/DATE/TIME
9. IR/TV power switch . . . . . STBY/IR/TV
10. Communications . . . . . On and Set
11. [T] CPS system switch . . . . . RDY  
Observe DATA/MAN V/H light illuminated.
12. [T] IRLS switch . . . . . STBY  
Observe IR NR light is illuminated for cooldown period  
(maximum of 17 minutes).
13. TACAN/EGI select switch . . . . . EGI
14. RADAR WARNING RCVR panel . . . . . Set
15. DECM knob . . . . . STBY
  - a. When STBY light goes out, select HOLD 3 SEC, then  
ACT for OBC.
16. IFF MASTER knob . . . . . STBY
17. AUTO BIT 2 . . . . . Verify Completed
18. Verify pilot has OBC selected:
  - a. Observe SAT display on PTID.
  - b. Observe failed acronyms on PTID in CM.

### WARNING

If CIA acronym is displayed in CM after completion of OBC, aircrew must select maintenance display to determine type of failure in the AWG-15. The possibility of inadvertent stores release exists when this acronym is present.

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- c. Observe test completed on PTID.
- d. Altimeter ..... Reset
- 19. CDNU ..... Enter desired data, WP, FP, etc.
- 20. [T] V/H check:
  - a. Manual V/H thumbwheel set . . . 360 Knots/200 Feet
  - b. V/H switch ..... Test  
Observe MAN V/H light is out.
  - c. V/H switch ..... MANUAL
- 21. [T] Vertical frame check
  - a. Manual V/H thumbwheel set ..... 350 Knots/  
1,800 Feet
  - b. FRAME switch ..... VERT
  - c. FILM switch ..... RUN  
Observe exposure interval of 1.0 second and frame  
camera green light illuminated; check camera frame  
counter for proper operation.
  - d. FILM switch ..... OFF
  - e. FRAME switch ..... OFF
- 22. [T] PAN BIT check
  - a. PAN switch ..... BIT/RELEASE  
Observe exposure interval of 1.0 second, green PAN  
light illumination, and counter decrease as five frames  
are exposed.
- 23. [T] PAN autocycle check
  - a. PAN switch ..... CTR
  - b. FILM switch ..... RUN  
Observe exposure interval of 1.0 second, green PAN  
light illumination, and check camera frame counter  
for proper operation.

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- c. PAN switch ..... LEFT or RIGHT  
Observe exposure interval of 2.0 seconds, PAN go light illuminated, and frame counter for proper operation.
  - d. FILM switch ..... OFF
24. [T] PAN pulse mode check
- a. Manual V/H thumbwheel set 350 Knots/13,500 Feet
  - b. PAN switch ..... CTR
  - c. FILM switch ..... RUN  
Observe exposure interval of 5.0 seconds, green PAN light illumination, and check camera frame counter for proper operation.
  - d. FILM switch ..... OFF
  - e. PAN switch ..... OFF
25. [T] IR sensor check

### Note

Before IRLS system check, observe IR NR light is out following cooldown and BIT. Observe film counter movement by 1 foot.

- a. IRLS switch ..... WFOV
  - b. Manual V/H thumbwheel set . . 350 Knots/600 Feet
  - c. FILM switch ..... RUN  
Observe green IR LS light flashing at 5-second interval and check proper film counter operation.
  - d. FILM switch ..... OFF
  - e. IRLS switch ..... STBY
26. Computer address panel ..... Set
27. DDD ..... Set
28. PTID controls ..... Set
29. Multiple display indicator ..... Set
30. DATA/ADF switch ..... BOTH

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- 31. Hand control panel . . . . . Set
- 32. AN/ALE-47 DCDU, MODE/PWR SWITCH . . STBY
- 33. CANOPY DEFOG-CABIN AIR lever . . . CABIN AIR
- 34. D/L reply . . . . . As Required
- 35. AAI control panel . . . . . Set
- 36. Indicator lights . . . . . Test
- 37. DDI BIT . . . . . Test
- 38. After alignment is completed:
  - a. PTID NAV mode . . . . . INS
  - b. Program restart . . . . . Depress
  - c. STBY/READY lights . . . . . OFF
- 39. DEST data . . . . . Verify
- 40. BRG/DIST to destination . . . . . Check
- 41. OWN A/C groundspeed . . . . . Check
- 42. MAG VAR . . . . . Check
- 43. KY-28/58 . . . . . As Required
- 44. Standby attitude gyro . . . . . Erect
- 45. Notify pilot . . . . . Ready To Taxi

### FINAL CHECKER (ASHORE)

- 1. NOSE STRUT switch . . . . . Kneel, Check  
Launch Bar Down
- 2. Hook . . . . . DN, Check RATS Advisory  
Light On, Then UP
- 3. LAUNCH BAR switch . . . . . Cycle
- 4. NOSE STRUT switch . . . . . EXTD

**FINAL CHECKER (ABOARD CV)**

1. Hook . . . . . DN on Director's Signal  
Check RATS Advisory  
Light On, Then Up



Carrier operations with an inoperative RATS will increase wind-over-deck requirements. Failure to notify CV OPS may result in damage to the ship's arresting gear or aircraft tail-hook assembly structure.

2. Nosewheel steering . . . . . Cycle Off, Then On



Failure to cycle nosewheel steering following hook check will permit nosewheel steering centering to remain engaged and may cause mispositioning of the launch bar during catapult hookup. This can result in launch bar disengaging from shuttle during catapult stroke.

**TAXI — PILOT**



Taxiing with the left engine secured is not authorized. Normal braking and nosewheel steering control will be lost if the hydraulic transfer pump (BIDI) fails while taxiing with the left engine secured.

1. Parking brake . . . . . Release
2. Nosewheel steering . . . . . Check
3. Brakes . . . . . Check
4. Turn-and-slip indicator . . . . . Check
5. Ordnance . . . . . Safe

**TAXI — RIO**

1. Perform BIT confidence checks 2, 3, 4, 1 if not previously checked and record results on BER form.
2. OWN A/C groundspeed . . . . . Check on ECMD
3. [T] Own A/C altitude . . . . . Check

TAKEOFF CHECKLIST

RIO CHALLENGE

PILOT REPLY

- |   |  |
|---|--|
| 1. "BRAKES"   | CHECK OK, ACCUMULATOR PRESSURE UP"   |
| 2. "FUEL TOTAL<br>_____ lb"   | "NORMAL FEED, AUTO-TRANSFER DUMP OFF, TRANSFER CHECKED, TOTAL _____ WINGS/EXT _____ AFT AND LEFT _____ FORWARD AND RIGHT _____ FEED TANKS FULL BINGO SET. _____" |
| 3. "CANOPY CLOSED, LOCKS ENGAGED, LIGHT OUT, STRIPES ALIGNED, HANDLE IN CLOSE POSITION" | "CLOSED, LOCKS ENGAGED, LIGHT OUT, SEAL INFLATED, HANDLE IN CLOSE POSITION"  |
| 4. "SEAT — ARMED TOP AND BOTTOM COMMAND EJECT _____ (as briefed), STRAPPED IN SIX WAYS" | "ARMED TOP AND BOTTOM, PILOT/MCO IN WINDOW (as indicated), STRAPPED IN SIX WAYS"   |
| 5. "STAB AUG"   | "ALL ON"   |
| 6. "ATLS"   | "ON"   |
| 7. ALL CIRCUIT BREAKERS SET"  | "ALL IN"   |
| 8. "MASTER TEST SWITCH"   | "OFF"  |
| 9. "BIDIRECTIONAL"  | "NORMAL"   |

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## RIO CHALLENGE

## PILOT REPLY

- |   |  |
|---|--|
| 10. "COMPASS, STANDBY GYRO, TURN NEEDLE, AND ALTIMETER" | "COMPASS SYNCHRONIZED, STANDBY GYRO ERECT, GOOD TURN NEEDLE, ALTIMETER SET (LOCAL SETTING) " |
|---|--|

CV — Approaching

CAT on Director's Signal

- |   |  |
|---|--|
| 11. "WINGS" (visually checked)                                  | "20°, AUTO, BOTH LIGHTS OUT"   |
| 12. "FLAPS AND SLATS" (visually checked)                        | AS REQUIRED  |
| 13. "SPOILERS AND ANTISKID"                                     | "SPOILER MODULE ON, SPOILER BRAKES SELECTED" (field)<br>"SPOILER MODULE ON, SPOILER BRAKES OFF" (CV) |
| 14. "TRIM"  | "0,0,0" (field) AS REQUIRED (CV)   |
| 15. "HARNESS — LOCKED"  | "LOCKED"   |
| 16. "CONTROLS" (RIO visually check for full spoiler deflection) | "FREE, 33_ AFT STICK, FULL SPOILER DEFLECTION, LEFT AND RIGHT, HYDRAULICS 3,000 PSI"                 |
| 17. "ALL WARNING AND CAUTION LIGHTS OUT"                        | "ALL WARNING AND CAUTION LIGHTS OUT"   |

ASHORE — In Takeoff Position

- |                               |                      |
|-------------------------------|----------------------|
| 18. "ANTISKID/SPOILER BRAKES" | "BOTH" (if operable) |
|-------------------------------|----------------------|



**ASCENT CHECKLIST**

At level-off or 15,000 feet (whichever occurs first):

- 1. Cabin pressurization . . . . . Check
- 2. Fuel transfer . . . . . Check
- 3. In-flight OBC . . . . . Run



Failure of the CIA class I OBC to run could be an indication of shorted master arm circuitry and possible failure of the LAU-7 detent to engage, resulting in inadvertent AIM-9 separation from the aircraft during an arrested landing.

**PRELAND AND DESCENT**

- 1. HOOK/HOOK BYPASS . . . . . As Desired
- 2. Exterior lights . . . . . As Desired
- 3. Compass/BDHI . . . . . Check With Mag Compass
- 4. Wing-sweep mode switch . . . . . As Desired
- 5. ANTI SKID SPOILER BK switch . . . . . BOTH  
(if operable, CV-OFF)
- 6. Altimeter . . . . . Set
- 7. Radar altimeter . . . . . On/BIT Check
- 8. Fuel quantity and distribution . . . . . Check
- 9. Armament . . . . . Safe
- 10. CANOPY DEFOG/CABIN AIR lever . . . . . DEFOG
- 11. ANTI-ICE switch . . . . . AUTO/OFF
- 12. PDCP . . . . . Set
- 13. ARA-63/ACLS . . . . . ON/BIT Check

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- 14. DECM switch ..... STBY
- 15. AN/ALE-47 DCDU, MODE/PWR SWITCH ... OFF

### WARNING

If LAU-7 mounted stores are loaded, perform steps 16 and 17 with the aircraft in a safe area and headed in a direction where inadvertent gun firing would not cause damage.

- 16. WEAPON SELECT ..... Cycle to GUN, Then OFF

### WARNING

If HOT TRIG light illuminates with MASTER ARM switch OFF or CI/PSU acronym was displayed during in-flight OBC, perform step 17.

- 17. STA 1/8 AIM-9 REL PWR cb (6D4, 6D3) ..... Pull
- 18. WCS switch ..... STBY or XMT (pulse)

### WARNING

The RIO should place WCS switch to STBY or XMT (pulse) on final approach to prevent unnecessary exposure of flight deck personnel to RF radiation hazards.

- 19. [T] Resolution run ..... Completed

**Note**

Before reconnaissance system shutdown, run film leader to protect target imagery from inadvertent exposure during film download.

- 20. [T] FRAME switch ..... OFF
- 21. [T] PAN switch ..... OFF
- 22. [T] IRLS switch ..... OFF
- 23. [T] FILM switch ..... OFF



Before selecting system switch to OFF, delay 15 seconds for sensor shutdown, IR door to close, and mount to drive to vertical.

- 24. [T] CPS system switch ..... OFF

**LANDING CHECKLIST**

- 1. Wing-sweep mode switch ..... 20° AUTO
- 2. Wheels. .... Three DN (check transition light out)
- 3. SAS ..... ON
- 4. Flaps ..... Full DN
- 5. DLC ..... Checked
- 6. Hook ..... As Desired
- 7. Harness ..... Locked
- 8. Speedbrakes ..... EXT (out)
- 9. Brakes ..... Check
- 10. Fuel. .... Check

POSTLANDING — PILOT

1. Speedbrake switch . . . . . RET
2. ANTISKID SPOILER BK switch . . . . . OFF
3. Flaps and slats . . . . . UP
4. WING SWEEP MODE switch . . . . . BOMB



Ensure that emergency WING SWEEP handle and wings move to 55°.

5. EMERGENCY WING SWEEP handle . . . . . OV SW
6. Avionics . . . . . OFF
7. DCP . . . . . Verify & record codes (FAIL, FLT, IBIT)
8. Right throttle . . . . . OFF
9. HYD TRANSFER PUMP switch . . . . . SHUTOFF  
(after BIDI check)
10. Ejection seats . . . . . SAFE (coordinate with RIO)
11. Ordnance . . . . . Dearth (field)
12. Wheels . . . . . Chocked
13. Parking brake . . . . . Pull



Do not pull parking brake subsequent to a field landing if the brakes have been used extensively.

14. UHF FUNCTION selector . . . . . OFF
15. OXYGEN switch . . . . . OFF  
After removing mask, turn oxygen off.

## NAVAIR 01-F14AAP-1B

16. EMERG generator switch ..... OFF
17. Standby attitude gyro ..... Cage
18. Left throttle ..... OFF (alert RIO)
19. Lights ..... OFF
20. EJECT CMD indicator ..... Verify PILOT
21. CANOPY handle ..... OPEN (alert RIO)

### POSTLANDING — RIO

1. Ejection seat ..... Safe
2. EJECT CMD lever ..... PILOT
3. Radar beacon ..... OFF
4. IFF ..... Mode 4 Hold, Then OFF
5. Data link ..... OFF
6. DECM switch . ..... OFF
7. CDNU ..... RECORD BLENDED/  
GPS/FREE INERTIAL POS  
Record RNAV page data after aircraft parked.
8. NAV MODE switch ..... OFF  
Requires 10 seconds to restore history data prior to  
removal of electrical power.
9. RECORD switch ..... OFF  
Requires at least 20 seconds to allow tape to unthread  
prior to removal of electrical power.
10. IR/TV power switch ..... OFF
11. WCS ..... OFF
12. PTID power switch ..... OFF
13. LIQ COOLING switch ..... OFF
14. Standby attitude gyro ..... Cage
15. OXYGEN switch ..... OFF
16. U/VHF MODE selector ..... OFF
17. [T] CPS switches ..... OFF

## NAVAIR 01-F14AAP-1B

18. Report ..... Ready for Shutdown

After shutdown of both engines:

19. CANOPY handle ..... OPEN  
Alert pilot.

20. Flightcrew ..... Egress

### HOT REFUELING PROCEDURES

1. Fire extinguishing equipment ..... Available
2. All emitters ..... STBY or OFF
3. Right throttle ..... OFF
4. Wheels ..... Chocked
5. Parking brake ..... Pull



If heavy braking is used during landing or taxiing followed by application of the parking brake, normal brake operation may not be available following release of the parking brake if the brakes are still hot. Check for normal brake operation after releasing the parking brake and before commencing taxiing.

6. REFUEL PROBE switch ..... FUS EXTD/  
ALL EXTD (as desired)
7. WING/EXT TRANS switch ..... As Desired
8. REFUEL PROBE switch ..... RET
9. WING/EXT TRANS switch ..... OFF

**ON-DECK, MAINTENANCE TROUBLESHOOTING**



To ensure a safe in-cockpit maintenance troubleshooting evolution, the following procedures should be used.

1. Parking brake . . . . . PULL
2. THROTTLE MODE switch . . . . . MAN
3. Throttle friction lever . . . . . INC
4. Ejection seats . . . . . SAFED, CMD — PILOT
5. Flightcrew . . . . . Remain strapped in

**HOT SWITCH PROCEDURES**

1. Parking brake . . . . . Pull
2. HYD TRANSFER PUMP switch . . . . . NORMAL
3. WCS switch . . . . . OFF
4. IR/TV power switch . . . . . OFF
5. RECORD switch . . . . . OFF
6. [T] CPS system switch . . . . . OFF
7. Left throttle . . . . . OFF
8. ASYM LIMITER switch . . . . . ON (guard down)
9. ENG MODE SELECT switch . . . . . PRI
10. THROTTLE MODE switch . . . . . MAN
11. Throttle friction lever . . . . . Increase
12. Ejection seats . . . . . Safe
13. Flightcrew . . . . . Unstrap
14. Cockpit . . . . . Check for FOD
15. CANOPY handle . . . . . OPEN
16. Flightcrews . . . . . Switch
17. Flightcrew . . . . . Strap In

## NAVAIR 01-F14AAP-1B

- 18. Ejection seats . . . . . Armed
- 19. CANOPY handle . . . . . CLOSE
- 20. FIRE DET/TEST . . . . . TEST
- 21. THROTTLE MODE switch . . . . . BOOST
- 22. Throttle friction lever . . . . . As Desired
- 23. Left engine . . . . . Start
- 24. WCS switch . . . . . STBY



Ensure that TARPS maintenance personnel have loaded sensors and cleared aircraft before initiating power to TARPS pod.

- 25. [T] CPS system switch . . . . . RDY

### IN-FLIGHT REFUELING CHECKLIST

The in-flight refueling checklist shall be completed before plug-in.

- 1. WCS switch . . . . . STBY
- 2. Arming switches . . . . . Safe
- 3. DUMP switch . . . . . OFF
- 4. AIR SOURCE pushbutton . . . . . L ENG
- 5. REFUEL PROBE switch . . . . . As Desired  
(transition light out)
- 6. Wing-sweep mode — MAN/  
wing-sweep angle . . . . . As Desired
- 7. Visors . . . . . Recommended Down

When clear of the drogue:

- 1. REFUEL PROBE switch . . . . . RET
- 2. Probe transition light . . . . . Check OFF
- 3. AIR SOURCE pushbutton . . . . . BOTH ENG
- 4. Wing-sweep mode switch . . . . . AUTO



# NAVAIR 01-F14AAP-1B

## WING $\Lambda_{LE} = 20^\circ$ MILITARY POWER

AIRCRAFT CONFIGURATION:  
ALL DRAG INDEXES  
0° FLAPS  
GEAR DOWN

ENGINES (2) F110-GE-400  
HARD DRY RUNWAY  
DATE: JANUARY 1990  
DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

### DISTANCE IN FEET

RUNWAY TEMP °F	PRESSURE ALTITUDE (FEET)			HEAD- WIND (KNOTS)	GROSS WEIGHT (POUNDS)	TAKEOFF SPEED (KNOTS)	ROTATION SPEED KNOTS
	SEA LEVEL	4000	8000				
20	2070	2810	3875	0	58,000	150	140
59	2255	3060	4225				
90	2510	3440	4770				
120	2990	4105	5720				
20	1630	2245	3140	20	65,000	159	149
59	1790	2465	3455				
90	2000	2305	3285				
120	2400	2780	3970				
20	1315	1835	2605	40	72,000	168	158
59	1455	2030	2880				
90	1635	2305	3285				
120	1970	2780	3970				
20	2650	3615	4995	0	72,000	168	158
59	2900	3940	5450				
90	3225	4430	6170				
120	3845	5325	7460				
20	2110	2925	4095	20	72,000	168	158
59	2325	3210	4505				
90	2605	3630	5130				
120	3125	4385	6230				
20	1725	2420	3425	40	72,000	168	158
59	1915	2670	3790				
90	2155	3035	4335				
120	2590	3680	5285				
20	3330	4560	6300	0	72,000	168	158
59	3635	4960	6875				
90	4065	5600	7830				
120	4865	6780	9545				
20	2665	3725	5225	20	72,000	168	158
59	2950	4085	5740				
90	3320	4635	6570				
120	3995	5640	8040				
20	2190	3110	4405	40	72,000	168	158
50	2450	3425	4870				
90	2765	3905	5595				
120	3340	4770	6875				

### TAKEOFF SPEED AND GROUND ROLL DISTANCE — FLAPS UP

# NAVAIR 01-F14AAP-1B

## WING SWEEP $\Lambda_{LE} = 20^\circ$ MILITARY POWER CG = 6%

AIRCRAFT CONFIGURATION:  
ALL DRAG INDEXES  
35° FLAPS  
GEAR DOWN

ENGINES (2) F110-GE-400  
HARD DRY RUNWAY  
DATE: JANUARY 1990  
DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

### DISTANCE IN FEET

RUNWAY TEMP °F	PRESSURE ALTITUDE (FEET)			HEAD- WIND (KNOTS)	GROSS WEIGHT (POUNDS)	TAKEOFF SPEED (KNOTS)	ROTATION SPEED KNOTS						
	SEA LEVEL	4000	8000										
20	2535	3595	5190	0	58,000	152	142						
59	2775	3925	5690										
90	3125	4475	6590										
120	3850	5585	8460										
20	2000	2885	4225	20				65,000	160	150			
59	2210	3170	4665										
90	2505	3640	5435										
120	3100	4565	7010										
20	1620	2365	3510	40							72,000	168	158
59	1800	2620	3900										
90	2055	3020	4565										
120	2555	3805	5910										
20	3245	4630	6785	0	72,000	168	158						
59	3555	5060	7440										
90	4030	5820	8755										
120	4990	7405	—										
20	2585	3750	5575	20				72,000	168	158			
59	2860	4130	6155										
90	3260	4775	7280										
120	4055	6105	9690										
20	2115	3105	4665	40							72,000	168	158
59	2350	3440	5185										
90	2695	3995	6160										
120	3365	5125	8225										
20	4130	5940	8836	0	72,000	168	158						
59	4515	6500	9710										
90	5160	7570	—										
120	6475	9855	—										
20	3325	4855	7325	20				72,000	168	158			
59	3665	5350	8100										
90	4215	6265	9800										
120	5315	8200	—										
20	2740	4050	6175	40							72,000	168	158
59	3040	4485	6870										
90	3510	5275	8345										
120	4445	6930	—										

DISTANCES NOT SHOWN EXCEED 10,000 FEET

### TAKEOFF SPEED AND GROUND ROLL DISTANCE — FLAPS DOWN (Sheet 1 of 2)

# NAVAIR 01-F14AAP-1B

## WING SWEEP $\Lambda_{LE} = 20^\circ$ MILITARY POWER CG = 16.2%

AIRCRAFT CONFIGURATION:  
ALL DRAG INDEXES  
35° FLAPS  
GEAR DOWN

ENGINES (2) F110-GE-400  
HARD DRY RUNWAY  
DATE: JANUARY 1990  
DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

### DISTANCE IN FEET

RUNWAY TEMP °F	PRESSURE ALTITUDE (FEET)			HEAD- WIND (KNOTS)	GROSS WEIGHT (POUNDS)	TAKEOFF SPEED (KNOTS)	ROTATION SPEED KNOTS						
	SEA LEVEL	4000	8000										
20	1795	2500	3535	0	58,000	132	122						
59	1960	2730	3875										
90	2200	3065	4390										
120	2640	3745	5415										
20	1370	1945	2795	20				65,000	140	130			
59	1510	2140	3090										
90	1710	2420	3520										
120	2060	2975	4365										
20	1080	1555	2270	40							72,000	147	137
59	1200	1730	2525										
90	1365	1960	2890										
120	1655	2420	3600										
20	2340	3270	4690	0	72,000	147	137						
59	2550	3570	5125										
90	2860	4045	5860										
120	3475	4980	7340										
20	1810	2575	3755	20				72,000	147	137			
59	1995	2835	4135										
90	2250	3230	4760										
120	2750	4005	5990										
20	1450	2085	3080	40							72,000	147	137
59	1605	2310	3415										
90	1820	2645	3945										
120	2335	3295	4985										
20	2940	4150	6015	0	72,000	147	137						
59	3215	4540	6580										
90	3625	5155	7585										
120	4425	6425	9665										
20	2300	3305	4865	20				72,000	147	137			
59	2540	3645	5365										
90	2885	4165	6215										
120	3540	5220	7960										
20	1855	2695	4020	40							72,000	147	137
59	2060	2995	4460										
90	2355	3440	5195										
120	2900	4325	6680										

### TAKEOFF SPEED AND GROUND ROLL DISTANCE — FLAPS DOWN (Sheet 2)

# NAVAIR 01-F14AAP-1B

FLIGHT CONDITION	ANGLE-OF-ATTACK UNITS
CATAPULT (15 KNOTS EXCESS) TRANSITION FROM CATAPULT	MRT 14.0 AB 13.0
MILITARY POWER CLIMB ALL DRAG INDEXES	SEA LEVEL 6.0 COMBAT CEILING 9.5
MAXIMUM POWER CLIMB ALL DRAG INDEXES	SEA LEVEL 5.0 COMBAT CEILING 8.0
CRUISE AT ALTITUDES BELOW 20,000 FEET (ALL GROSS WEIGHTS)	
DRAG INDEX = 8	8.0
DRAG INDEX = 100	9.0
CRUISE AT OPTIMUM ALTITUDE DRAG INDEXES	8.0
MAXIMUM ENDURANCE ALL DRAG INDEXES ALL ALTITUDES	10.0
IDLE	
250 KNOTS	9.0
MAXIMUM RANGE	10.0
GEAR AND FLAPS EXTENSION	
SAFE GEAR EXTENSION (FLAPS UP) AT 280 KNOTS	6.5
SAFE FLAP EXTENSION (GEAR DN) AT 225 KNOTS	9.0
APPROACH	
CCA/GCA PATTERN, 220 KNOTS; GEAR UP; FLAPS UP; 54,000 POUNDS. FINAL ON SPEED APPROACH (GEAR DN): TWO ENGINES (ALL FLAPS CONFIGURATIONS)	9.0  15.0
SINGLE ENGINES/PRI:	
FULL FLAP, DLC ENGAGE	15.0
FULL FLAP, DLC STOWED, AND NO FLAP	14.0
SINGLE ENGINES/SEC:	
FULL FLAP (CV ONLY)	13.0
NO FLAP (FIELD ONLY)	15.0
DRAG INDEX . . . . . CONFIGURATION	
8	(4) AIM-7
100	(6) AIM-54 (2) 267-gallon external tanks

## AIRSPEED INDICATOR FAILURE

# NAVAIR 01-F14AAP-1B

DRAG INDEX	CLIMB SCHEDULE	LANDING WEIGHT LB	FUEL REMAINING — POUNDS					DESCENT SCHEDULE
			4000	8000	12,000	16,000	20,000	
			ALT/SPEED TIME (MIN)	ALT/SPEED TIME (MIN)	ALT/SPEED TIME (MIN)	ALT/SPEED TIME (MIN)	ALT/SPEED TIME (MIN)	
0	0.73 IMN	46,000	15,000/200 29	34,000/205 98	32,000/210 162	31,000/220 220	31,000/220 273	0.73 IMN TO 250 KIAS
		51,000	13,000/205 27	32,000/215 89	30,000/220 148	29,000/225 202	29,000/230 231	
		56,000	11,000/215 25	30,000/220 82	28,000/230 136	27,000/225 186	27,000/240 231	
50	0.73 IMN	46,000	14,000/195 27	34,000/205 90	32,000/210 150	31,000/220 203	31,000/220 252	0.73 IMN TO 250 KIAS
		51,000	13,000/205 25	32,000/210 82	30,000/220 136	29,000/225 186	29,000/230 232	
		56,000	11,000/210 23	30,000/220 75	29,000/230 125	27,000/235 172	27,000/235 213	
100	0.72 IMN	46,000	14,000/195 25	34,000/200 84	32,000/205 139	30,000/215 188	30,000/220 234	0.73 IMN TO 250 KIAS
		51,000	13,000/200 23	32,000/210 76	30,000/215 126	29,000/225 173	29,000/225 215	
		56,000	8,000/215 21	30,000/220 69	29,000/225 116	27,000/230 159	27,000/235 199	
150	0.70 IMN	46,000	14,000/190 23	29,000/200 78	32,000/205 130	34,000/215 177	34,000/215 219	0.73 IMN TO 250 KIAS
		51,000	10,000/205 22	27,000/205 71	30,000/215 118	32,000/220 161	32,000/225 201	
		56,000	4,000/215 20	15,000/215 65	28,000/225 108	31,000/230 149	31,000/230 185	

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## TWO-ENGINE MAXIMUM ENDURANCE ON STATION

# NAVAIR 01-F14AAP-1B

DRAG INDEX	CLIMB SCHEDULE	LANDING WEIGHT LB	FUEL REMAINING — POUNDS					DESCENT SCHEDULE
			4000	8000	12,000	16,000	20,000	
			ALT/SPEED TIME (MIN)	ALT/SPEED TIME (MIN)	ALT/SPEED TIME (MIN)	ALT/SPEED TIME (MIN)	ALT/SPEED TIME (MIN)	
0	0.43 IMN	46,000	500/195 29	8,000/200 86	13,000/205 140	12,000/210 190	12,000/215 234	250 KIAS
		51,000	500/210 26	6,000/210 78	11,000/215 128	10,000/220 173	10,000/225 214	
		56,000	500/220 24	3,000/215 72	9,000/225 118	8,000/230 160	8,000/230 198	
50	0.43 IMN	46,000	500/190 28	7,000/200 82	13,000/205 134	11,000/210 180	11,000/215 217	250 KIAS
		51,000	500/210 25	4,000/210 75	10,000/215 122	9,000/220 165	9,000/225 199	
		56,000	500/215 23	2,000/215 69	8,000/220 112	7,000/225 152	7,000/235 183	
100	0.42 IMN	46,000	500/195 26	6,000/195 77	12,000/200 125	10,000/210 168	10,000/215 203	250 KIAS
		51,000	500/205 23	3,000/205 70	10,000/210 113	8,000/220 152	8,000/225 186	
		56,000	500/220 22	2,000/215 64	7,000/220 104	6,000/225 140	6,000/230 172	
150	0.40 IMN	46,000	500/195 24	5,000/195 72	11,000/200 117	9,000/210 156	9,000/215 191	250 KIAS
		51,000	500/200 22	2,000/205 66	9,000/210 106	8,000/220 142	8,000/220 175	
		56,000	500/210 21	1,000/215 60	7,000/220 98	6,000/230 130	6,000/230 162	

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## SINGLE-ENGINE MAXIMUM ENDURANCE ON STATION

# NAVAIR 01-F14AAP-1B

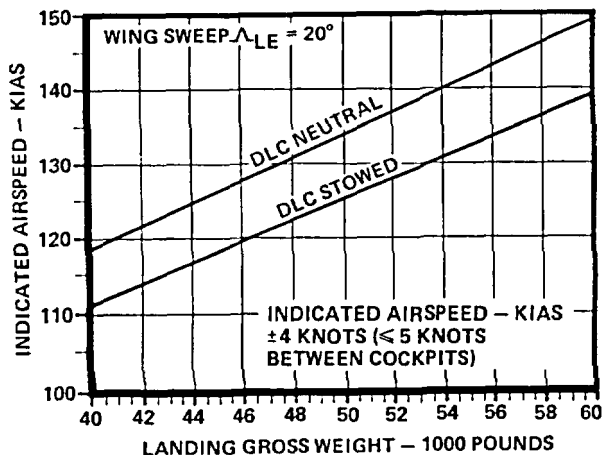
DATE: SEPTEMBER 1987

FUEL GRADE: JP-5

DATA BASIS: FLIGHT TEST

FUEL DENSITY: 6.8 lb/gal.

ALL DRAG INDEXES, 35° FLAP,  
GEAR DOWN



## EMERGENCY OPERATION (WING SWEEP LESS THAN OR EQUAL TO 50°)

AIRSPEED CORRECTION TO BE  
ADDED TO DLC STOWED APPROACH SPEED

WING SWEEP (°)	AUXILIARY FLAPS RETRACTED (KIAS)	ALL FLAPS/SLATS RETRACTED (KIAS)	SLAT RETRACTED MANEUVER FLAPS EXTENDED (KIAS)
20	6	27	22
25	14	33	28
30	20	38	33
35	25	44	39
40	30	49	44

LANDING APPROACH AIRSPEED  
(15 UNITS AOA) (SHEET 1 OF 2)

# NAVAIR 01-F14AAP-1B

**EMERGENCY OPERATION  
(WING SPEED GREATER THAN 50°)  
AIRSPEED CORRECTION TO BE ADDED  
TO DCL STOWED APPROACH SPEED**

<b>WING SWEEP (°)</b>	<b>15 UNITS AOA (KIAS)</b>	<b>17 UNITS AOA (KIAS)</b>
51	55	45
60	58	48
68	60	50

**LANDING APPROACH AIRSPEED  
(15 UNITS AOA) (SHEET 2)**



# NAVAIR 01-F14AAP-1B

## MAXIMUM BRAKING — HARD DRY RUNWAY WING $\Lambda$ LE = 20°

AIRCRAFT CONFIGURATION:  
ALL DRAG INDEXES  
ALL DECELERATION DEVICES  
FULL ANTISKID BRAKING  
35° FLAPS, GEAR DOWN

ENGINES (2) F110-GE-400  
IDLE POWER  
DATE: JANUARY 1990  
DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

### DISTANCE IN FEET

RUNWAY TEMP °F	HEADWIND (KNOTS)					PRESSURE ALTITUDE (FEET)	GROSS WEIGHT (LBS)	TOUCH- DOWN SPEED (KNOTS)				
	0	10	20	30	40							
20	2065	1775	1550	1360	1210	SEA LEVEL	45,000	126				
59	2230	1930	1690	1490	1330							
90	2360	2050	1805	1595	1425							
120	2485	2170	1915	1700	1520							
20	2355	2050	1805	1600	1425	4000			50,000	134		
59	2545	2230	1965	1750	1570							
90	2695	2370	2095	1870	1680							
120	2845	2505	2225	1990	1790							
20	2735	2405	2130	1905	1710	8000					50,000	134
59	2955	2610	2325	2080	1875							
90	3130	2775	2475	2225	2010							
120	2290	1990	1745	1545	1375							
20	2290	1990	1745	1545	1375	SEA LEVEL	50,000	134				
59	2475	2160	1905	1690	1515							
90	2620	2295	2030	1810	1625							
120	2760	2430	2155	1925	1730							
20	2620	2300	2035	1815	1625	4000			50,000	134		
59	2830	2495	2215	1985	1785							
90	3000	2650	2365	2120	1915							
120	3160	2805	2505	2255	2040							
20	3045	2695	2400	2155	1950	8000					50,000	134
59	3290	2925	2620	2360	2135							
90	3480	3105	2790	2520	2290							
120	3665	3280	2955	2675	2435							

## LANDING DISTANCE GROUND ROLL — FLAPS DOWN (Sheet 1 of 2)

# NAVAIR 01-F14AAP-1B

## MAXIMUM BRAKING — HARD DRY RUNWAY WING $\Lambda_{LE} = 20^\circ$

AIRCRAFT CONFIGURATION:  
ALL DRAG INDEXES  
ALL DECELERATION DEVICES  
FULL ANTISKID BRAKING  
35° FLAPS, GEAR DOWN

ENGINES (2) F110-GE-400  
IDLE POWER  
DATE: JANUARY 1990  
DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

### DISTANCE IN FEET

RUNWAY TEMP °F	HEADWIND (KNOTS)					PRESSURE ALTITUDE (FEET)	GROSS WEIGHT (LBS)	TOUCH- DOWN SPEED (KNOTS)
	0	10	20	30	40			
20	2525	2210	1995	1740	1555	SEA LEVEL		
59	2730	2400	2130	1900	1710			
90	2890	2555	2270	2035	1855			
120	3050	2700	2410	2160	1955			
20	2895	2560	2275	2040	1840	4000	55,000	141
59	3130	2775	2480	2230	2020			
90	3315	2950	2645	2390	2165			
120	3495	3120	2805	2535	2305			
20	3365	2995	2690	2426	2200	8000		
59	3635	3255	2930	2650	2415			
90	3850	3455	3120	2830	2585			
120	4055	3650	3305	3005	2745			
20	2775	2445	2170	1940	1750	SEA LEVEL		
59	3000	2655	2370	2125	1920			
90	3180	2820	2525	2270	2055			
120	3350	2985	2675	2415	2190			
20	3185	2830	2535	2280	2065	4000	60,000	149
59	3445	3075	2760	2495	2265			
90	3650	3265	2940	2665	2425			
120	3845	3450	3120	2830	2580			
20	3700	3315	2990	2710	2470	8000		
59	4000	3600	3255	2960	2705			
90	4415	3985	3615	3295	3015			
120	4815	4355	3960	3615	3320			

## LANDING DISTANCE GROUND ROLL — FLAPS DOWN (Sheet 2)

# NAVAIR 01-F14AAP-1B

## MAXIMUM BRAKING — HARD DRY RUNWAY WING $\Delta$ LE = 20°

AIRCRAFT CONFIGURATION:  
ALL DRAG INDEXES  
INBD SPOILERS SPEED BRAKES  
FULL ANTISKID BRAKING  
0° FLAPS, GEAR DOWN

ENGINES (2) F110-GE-400  
IDLE POWER  
DATE: JANUARY 1990  
DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

### DISTANCE IN FEET

RUNWAY TEMP °F	HEADWIND (KNOTS)					PRESSURE ALTITUDE (FEET)	GROSS WEIGHT (LBS)	TOUCH- DOWN SPEED (KNOTS)		
	0	10	20	30	40					
20	2890	2545	2260	2020	1820	SEA LEVEL	45,000	148		
59	3120	2760	2460	2210	1995					
90	3305	2935	2625	2360	2140					
120	3485	3105	2780	2510	2275					
20	3305	2935	2625	2385	2140	4000			45,000	148
59	3570	315	2860	2585	2350					
90	3780	3385	3050	2760	2515					
120	3985	3780	3230	2930	2675					
20	3840	3440	3100	2810	2555	8000	45,000	148		
59	4145	3730	3375	3065	2800					
90	4390	3960	3590	3275	2995					
120	4625	4185	3800	3475	3185					
20	3185	2825	2520	2265	2045	SEA LEVEL			50,000	156
59	3440	3065	2745	2475	2245					
90	3645	3255	2925	2645	2405					
120	3840	3440	3100	2810	2560					
20	3650	3260	2930	2650	2410	4000	50,000	156		
59	3940	3535	3195	2900	2645					
90	4175	3760	3400	3095	2830					
120	4400	3970	3605	3285	3010					
20	4240	3820	3455	3145	2880	8000			50,000	156
59	4605	4160	3785	3455	3170					
90	5130	4650	4240	3880	3565					
120	5660	5145	4700	4310	3965					

## LANDING DISTANCE GROUND ROLL — FLAPS UP (Sheet 1 of 2)

# NAVAIR 01-F14AAP-1B

## MAXIMUM BRAKING — HARD DRY RUNWAY WING $\Lambda_{LE} = 20^\circ$

AIRCRAFT CONFIGURATION:  
ALL DRAG INDEXES  
INBD SPOILERS, SPEED BRAKES  
FULL ANTISKID BRAKING  
35° FLAPS, GEAR DOWN

ENGINES (2) F110-GE-400  
IDLE POWER  
DATE: JANUARY 1990  
DATA BASIS: ESTIMATED BASED  
ON FLIGHT TEST

### DISTANCE IN FEET

RUNWAY TEMP °F	HEADWIND (KNOTS)					PRESSURE ALTITUDE (FEET)	GROSS WEIGHT (LBS)	TOUCH- DOWN SPEED (KNOTS)		
	0	10	20	30	40					
20	3480	3100	2780	2510	2275	SEA LEVEL	55,000	164		
59	3760	3360	3030	2740	2495					
90	3980	3570	3225	2930	2670					
120	4295	3865	5500	3180	2910					
20	3990	3585	3235	2940	2680	4000				
59	4475	4035	3655	3330	3050					
90	4985	4510	4095	3740	3430					
120	5485	4975	4530	4145	3810					
20	5105	4620	4205	3840	3525	8000				
59	5860	5320	4855	4450	4100					
90	6480	5900	5400	4960	4570					
120	7085	6470	5930	5460	5040					
20	3770	3375	3040	2755	2510	SEA LEVEL			60,000	171
59	4360	3920	3540	3220	2940					
90	4850	4375	3965	3615	3305					
120	5335	4825	4385	4005	3670					
20	4840	4365	3960	3610	3305	4000				
59	5570	5045	4590	4200	3855					
90	6150	5585	5045	4670	4295					
120	6720	6120	5595	5155	4735					
20	6290	5715	5220	4785	4405	8000				
59	7180	6545	5995	5515	5090					
90	7905	7230	6635	6115	5655					
120	8600	7885	7250	6695	6205					

## LANDING DISTANCE GROUND ROLL — FLAPS UP (Sheet 2)

# CIRCUIT BREAKERS AND SERVICING DATA

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# NAVAIR 01-F14AAP-1B

## CIRCUIT BREAKERS ALPHANUMERIC INDEX

3F6	AC ESS BUS NO. 2 FDR PH A
4F1	AC ESS BUS NO. 2 FDR PH B
4F4	AC ESS BUS NO. 2 FDR PH C
2I4	ACM LT/SEAT ADJ/STEADY POS LT
4B6	ACM PNL LT/INS SYNC
6D5	ACM PNL PWR
RB2	AFCS/NOSE WHEEL STEER
3C6	AHRS PH A
4C1	AHRS PH B
4C5	AHRS PH C
LF2	AICS L
2I5	AICS L HTR
7E2	AICS L LKUP PWR/EMER GEN TEST
6A6	AICS L RAMP STOW
LG2	AICS R
2I8	AICS R HTR
7E1	AICS R LKUP PWR/ANTI-SKID
6A5	AICS R RAMP STOW
8A4	AIM-54 MSL
8G4	AIM-7 L BATT ARM
8G3	AIM-7 R BATT ARM
RC2	AIR SOURCE CONTR
8B6	ALE-47 CHAFF/FLARE DISP
8B5	ALE-47 SEQ 1 & 2 SQUIBS
7C8	ALPHA COMP/PEDAL SHAKER
4B3	ALPHA HTR
6C1	ALQ-126 DECM
1C2	ALQ-126 PH A
1C5	ALQ-126 PH B
1C6	ALQ-126 PH C
1I4	ALR-67 CMPTR
2G4	ALR-67 RCVR PH A
2H3	ALR-67 RCVR PH B
2I10	ALR-67 RCVR PH C
6B6	ALT LOW WARN

## NAVAIR 01-F14AAP-1B

### CIRCUIT BREAKERS ALPHANUMERIC INDEX

8D1	AMC BIT/R DC TEST
8G1	AMCS ENABLE
8F5	AN/ALR-67 CONT
3D7	AN/ARA-50
7D6	AN/ARA-50
1D2	AN/AWG-9 CMPTR PH A
1D5	AN/AWG-9 CMPTR PH B
1D6	AN/AWG-9 CMPTR PH C
2G3	AN/AWG-9 PUMP PH A
2G6	AN/AWG-9 PUMP PH B
2G7	AN/AWG-9 PUMP PH C
8H6	AN/AWW-4
1B3	AN/AWW-4 PH A
1C4	AN/AWW-4 PH B
1B6	AN/AWW-4 PH C
3C3	ANGLE OF ATTK IND AC
7E3	ANGLE OF ATTACK IND DC
4F5	ANL ATTK TOTAL TEMP HTR
7C1	ANN PANEL PWR
7F3	ANN PILOT PANEL AUX PWR/TR-ADVSY
8C2	ANN PNL/DDI DIM CONTR
8G2	ANT LOCK EXCIT
1F2	ANT SVO HYD PH A
1F4	ANT SVO HYD PH B 
1F5	ANT SVO HYD PH B 
1F6	ANT SVO HYD PH C
2I1	ANTICOLL/SUPP POS/POS LTS
7C2	ANTI-ICE RAIN RPL/HK CONT
RG2	ANTI-ICE/ENG/PROBE
7E1	ANTI-SKID/R AICS LKUP PWR
7E7	APN-154
5C4	APX-72 AC
6F7	APX-72 DC
8I6	APX-72 TEST SET
7C7	ARA-63 ILS DC



## NAVAIR 01-F14AAP-1B

<b>CIRCUIT BREAKERS ALPHANUMERIC INDEX</b>	
3A6	ARA-63 ILS PH A
4A3	ARA-63 ILS PH B
4A5	ARA-63 ILS PH C
6B3	ARC-159 NO. 1
6D1	ARC-159 NO. 2
8D7	ARMT GAS INGEST PWR
4E6	AS/ARA-48 ANT
1J2	ASW-27 (AC)
8G6	ASW-27 (DC)/DDI
LA3	AUTO PITCH DRIVE TRIM
1J1	AUTO THROT AC
8B7	AUTO THROT DC
7G3	AUX FLAP/FLAP CONTR
6B7	AWG-15 DC
5B5	AWG-15 PH A NO. 1
5B4	AWG-15 PH A NO. 2
5D5	AWG-15 PH B NO. 1
5D4	AWG-15 PH B NO. 2
5F5	AWG-15 PH C NO. 1
5F4	AWG-15 PH C NO. 2
3D3	BARO ALTM AC
7C6	BARO ALT/TURN SLIP
4F6	BDHI INST PWR/TACAN AC
7E8	BDHI/TACAN DC
7F6	BINGO/OXY CAUTION
7F2	BLEED AIR/L OIL HOT
4A4	BLEED DUCT AC
8D5	BRAKE ACCUM SOV
7A1	CABIN PRESS
7C5	CAN/LAD CAUTION/EJECT CMD IND
8D4	CDNU
LA2	CHAN 1 CADC PH A
LB2	CHAN 1 CADC PH B

## NAVAIR 01-F14AAP-1B

### CIRCUIT BREAKERS ALPHANUMERIC INDEX

LC2	CHAN 1 CADC PH C
LH2	CHAN 2 CADC
3D1	COMB HYD PRESS IND
8A5	CONTR/DISPL SUBSYS
1G2	CONTR/DISPLAY PH A
1G3	CONTR/DISPLAY PH B
1G6	CONTR/DISPLAY PH C
8D2	COUNTING ACCEL/TARPS/FEMS
7D5	CSDC
3B7	CSDC PH A
4B2	CSDC PH B
4B5	CSDC PH C
6B5	DC ESS NO. 1 FDR
7A2	DC ESS NO. 2 BUS FDR
7G7	DC L TEST/RUDDER TRIM
8D1	DC R TEST/AMC BIT
1I1	DDI AC
8C2	DDI/ANN PNL DIM CONTR
8G6	DDI DC ASW-27
7B1	DFCS BUS FDR
7D8	DISPLAY PWR
RD1	DUMP/FUEL FEED
8E7	DYHR UNIT
7D4	ECS TEMP CONTR DC
8B1	EGI
6C3	EIG NO. 1
6C2	EIG NO. 2
5F3	EIG WHT LTS
7C5	EJECT CMD IND/CAN-LAD CAUTION
8H4	ELEC COOLING
6B2	EMERG FLT HYD AUTO
6B1	EMERG FLT HYD MAN
7E2	EMER GEN TEST/L AICS LKUP PWR

## NAVAIR 01-F14AAP-1B

<b>CIRCUIT BREAKERS ALPHANUMERIC INDEX</b>	
8I2	EMERG GEN CONTR
7G8	ENG AFT FAULT
RB1	ENG ANTI-ICE/VALVES
4C6	ENG L OIL PRESS
7D1	ENG OIL COOL
RG2	ENG/PROBE/ANTI-ICE
4D6	ENG R OIL PRESS
7F10	ENG STALL TONE
6A4	ENG STALL WARN LT
RE1	ENG START
7A5	EXHAUST NOZZLE/R ENG AFT CONT
7G10	EXT LT CONTR
8D2	FEMS/COUNTING ACCEL
7C4	FIRE L DET LT
6C5	FIRE L EXT
7C3	FIRE R DET LT
6C4	FIRE R EXT
7G3	FLAP CONTR/AUX FLAP
3E3	FLAP IND/TAIL/RUDDER
RE2	FLAP/SLAT CONTR SHUT-OFF
LD1	FLT CONTR AUTH AC
RF2	FLT CONTR AUTH DC
2A1	FLT HYD BACKUP PH A
2C1	FLT HYD BACKUP PH B
2E1	FLT HYD BACKUP PH C
3D2	FLT HYD PRESS IND
2H2	FORM/TAXI LT
RD1	FUEL FEED/DUMP
7F7	FUEL LOW CAUTION
RC1	FUEL MGT PNL
RG1	FUEL P/MOTIVE FLOW ISOL V (P-PUMP)
7F1	FUEL PRESS ADVSY
3F2	FUEL QTY IND AC
7D3	FUEL QTY IND DC

## NAVAIR 01-F14AAP-1B

### CIRCUIT BREAKERS ALPHANUMERIC INDEX

7E4	FUEL TRANS ORIDE
7F9	FUEL VENT VALVE
7F5	GEN L CAUTION
7F4	GEN R CAUTION
8F4	GND PWR/COOLING INTERLK
7G1	GND ROLL BRAKING/SPOILER POS IND
8D6	GND TEST
8C3	GUN ARMED POWER
8B3	GUN CLR/GUN CONTR PWR DC
2H5	GUN CONTR PWR AC
8B3	GUN CONTR PWR DC/GUN CLR
8I3	GYRO PWR
1B1	HSD/ECMD PH A
1B4	HSD/ECMD PH B
1B7	HSD/ECMD PH C
8C4	HUD CAMERA DC
1F1	HUD CAMERA PH A
1D4	HUD CAMERA PH B
1E5	HUD CAMERA PH C
3C7	HUD PH A
4C2	HUD PH B
4C4	HUD PH C
1A1	HV PWR SUP PH A
1A2	HV PWR SUP PH B
1A3	HV PWR SUP PH C
7E6	HYD PRESS IND
7G11	HYD PUMP SPOILER CONTR
7E5	HYD VALVE CONTR
LD3	ICE DET
6F3	ICS NFO
6F2	ICS PILOT
1I7	IFF A/A AC

# NAVAIR 01-F14AAP-1B

## CIRCUIT BREAKERS ALPHANUMERIC INDEX

8F6	IFF A/A DC
7C7	ILS ARA-63 DC
3A6	ILS ARA-63 PH A
4A3	ILS ARA-63 PH B
4A5	ILS ARA-63 PH C
7G9	INBD SPOILER CONTR
4B6	INS SYNC/ACM PNL LT
5D3	INST BUS FDR
5A1	INST LT
1I2	INTEG TRIM AC
8F3	INTEG TRIM DC
4A2	INTRF BLANKER
8I1	INTRPT FREE DC BUS FDR NO. 1
8C6	INTRPT FREE DC BUS FDR NO. 2
6E3	JETT 1
6E2	JETT 2
7D7	JULIET 28
LF2	L AICS
2I5	L AICS HTR
7E2	L AICS LKUP PWR/EMER GEN TEST
6A6	L AICS RAMP STOW
8G4	L AIM-7 BATT ARM
7G7	L DC TEST/RUDDER TRIM
7A4	L ENG AFT CONT/ARMT/RATS IND
5A4	L ENG BACK-UP IGN
4C6	L ENG OIL PRESS
7C4	L FIRE DET LT
6C5	L FIRE EXT
7F5	L GEN CAUTION
1A5	L MAIN XFMR/RECT
7F2	L OIL HOT/BLEED AIR
3E6	L PH A TEST/P. ROLL TRIM
4E2	L PH B TEST/P. ROLL TRIM

# NAVAIR 01-F14AAP-1B

## CIRCUIT BREAKERS ALPHANUMERIC INDEX

4E5	L PH C TEST/P. ROLL TRIM
4D1	L PITOT STATIC HTR
3B1	L TIT IND
7A3	LCH BAR NLG STRUT ADVSY
2H10	LIQUID COOLING CONTR AC
8B4	LIQUID COOLING CONTR DC <span style="float: right; border: 1px solid black; padding: 2px;">3</span>
LD2	MACH TRIM AC
RD2	MACH TRIM DC
LE2	MANUV FLAP/WG SWP DRIVE NO. 2
6B4	MASTER ARM
8H5	MASTER TEST
8H3	MECH FUZING STA 1/8
8H2	MECH FUZING STA 3/4
8H1	MECH FUZING STA 5/6
7G5	MLG HANDLE RLY NO. 1
7G4	MLG HANDLE RLY NO. 2
6F5	MLG SAFETY RLY NO. 1
6F4	MLG SAFETY RLY NO. 2
8D3	MONITOR BUS CONTR
8I5	MOTOR FIRE A
8I4	MOTOR FIRE B
1G1	MSL AUX PH A
1G4	MSL AUX PH B
1G7	MSL AUX PH C
8A1	MSL AUX SUBSYS
2G2	MSL HTR PH A
2G5	MSL HTR PH B
2G8	MSL HTR PH C
1I3	NAV PWR SUP PH A
1I5	NAV PWR SUP PH B
1I6	NAV PWR SUP PH C
2I2	NFO CONSOLE LT
7A3	NLG STRUT LCH BAR ADVSY

# NAVAIR 01-F14AAP-1B

<b>CIRCUIT BREAKERS ALPHANUMERIC INDEX</b>	
RB2	NOSE WHEEL STEER/AFCS
5F6	NVG FLOOD LT
7F2	OIL L HOT/BLEED AIR
7D2	OIL R HOT
8C5	OUTBD SPOILER CONTR
2B2	OUTBD SPOILER PUMP
7F6	OXY/BINGO CAUTION
3F3	OXY QTY IND
7C8	PEDAL SHAKER/ALPHA COMP
3E6	P. ROLL TRIM/L PH A TEST
4E2	P. ROLL TRIM/L PH B TEST
4E5	P. ROLL TRIM/L PH C TEST
RA2	P. ROLL TRIM/SPD BK ENABLE
3E6	PH A L TEST/P. ROLL TRIM
2H1	PH A R TEST
4E2	PH B L TEST/P. ROLL TRIM
2H4	PH B R TEST
4E5	PH C L TEST/P. ROLL TRIM
2H8	PH C R TEST
2I3	PILOT CONSOLE LT
5A1	PILOT INST LT
LB1	PITCH A AC
7B7	PITCH A DC
LH1	PITCH B AC
7B3	PITCH B DC
4D1	PITOT L STATIC HTR
4D2	PITOT R STATIC HTR
7E3	PLT ANN PNL AUX PWR/TR-ADVSY
2I1	POS/ANTICOLL/SUPP POS LTS
RG2	PROBE/ENG/ANTI-ICE
4F2	PROBE LT
LG2	R AICS
2I8	R AICS HTR

# NAVAIR 01-F14AAP-1B

## CIRCUIT BREAKERS ALPHANUMERIC INDEX

7E1	R AICS LKUP PWR/ANTI-SKID
6A5	R AICS RAMP STOW
8G3	R AIM-7 BATT ARM
8D1	R DC TEST/AMC BIT
7C2	RAIN REPL/ANTI-ICE CONTR/HKCONTR
8G7	RECON ECS CONT DC
2G4	RECON ECS CONT AC
2B1	RECON HTR PWR PH A
2D1	RECON HTR PWR PH B
2F1	RECON HTR PWR PH C
1F4	RECON POD
8F7	RECON POD CONTR
8F1	RECON POD DC PWR NO. 2
8F2	RECON POD DC PWR NO. 1
7A5	R ENG AFT CONT/EXHAUST NOZZLE
5A3	R ENG BACK UP IGN
3C2	R ENG N2 TACH
4D6	R ENG OIL PRESS
7C3	R FIRE DET LT
6C4	R FIRE EXT
7F4	R GEN CAUTION
2E3	R MAIN XFMR RECT
7D2	R OIL HOT
2H1	R PH A TEST
2H4	R PH B TEST
2H8	R PH C TEST
4D2	R PITOT STATIC HTR
5D6	RADAR ALTM
3B2	R TIT IND
8A3	RADAR SUBSYS NO. 1
8A2	RADAR SUBSYS NO. 2
LB3	ROLL A / YAW M
7B4	ROLL A DC
LA1	ROLL B AC



## NAVAIR 01-F14AAP-1B

### CIRCUIT BREAKERS ALPHANUMERIC INDEX

7B2	ROLL B DC
3E3	RUDDER/TAIL/FLAP IND
7G7	RUDDER TRIM/L DC TEST
3E7	RUDDER TRIM PH A
4E1	RUDDER TRIM PH B
4E4	RUDDER TRIM PH C
2I4	SEAT ADJ/ACM LT/STEADY POS LT
1E2	SEMI REG PWR SUP PH A
1E4	SEMI REG PWR SUP PH B
1E6	SEMI REG PWR SUP PH C
1J6	SIGNAL DATA CONVERTER
1H1	SOL PWR SUP PH A
1H5	SOL PWR SUP PH B
1H7	SOL PWR SUP PH C
RA2	SPD BK/P-ROLL TRIM ENABLE
7G11	SPOILER CONTR HYD PUMP
7G9	SPOILER CONTR INBD
8C5	SPOILER CONTR OUTBD
7G1	SPOILER POS IND/GND ROLL BRAKING
8E4	STA 1 AIM-9 COOL PWR
6D4	STA 1 AIM-9 REL PWR
6C7	STA 1 REL PWR A
6C6	STA 1 REL PWR B
8E6	STA 1A AIM-9 PWR
2H7	STA 1A AIM-9 PWR PH B
8E5	STA 1B AIM-9 PWR
2H9	STA 1B AIM-9 PWR PH C
1E1	STA 1/8 AIM-7 PH A
1E3	STA 1/8 AIM-7 PH B
1E7	STA 1/8 AIM-7 PH C
6D7	STA 2, 3, & 4 REL PWR A
6D6	STA 2, 3, & 4 REL PWR B
8H2	STA 3/4 MECH FUZING
1D1	STA 3/6 AIM-7/AIM-54 PUMP PH A

## NAVAIR 01-F14AAP-1B

### CIRCUIT BREAKERS ALPHANUMERIC INDEX

1D3	STA 3/6 AIM-7/AIM-54 PUMP PH B
1 D7	STA 3/6 AIM-7/AIM-54 PUMP PH C
1C1	STA 4/5 AIM-7 PH A
1C3	STA 4/5 AIM-7 PH B
1C7	STA 4/5 AIM-7 PH C
6E7	STA 5, 6, & 7 REL PWR A
6E6	STA 5, 6, & 7 REL PWR B
8E1	STA 8 AIM-9 COOL PWR
6D3	STA 8 AIM-9 REL PWR
6E5	STA 8 REL PWR A
6E4	STA 8 REL PWR B
8E3	STA 8A AIM-9 PWR
2I7	STA 8A AIM-9 PWR PH B
8E2	STA 8B AIM-9 PWR
2I9	STA 8B AIM-9 PWR PH C
7F8	STARTER VALVE LT/THRUST LIM
5A5	STBY ATTD IND PH A
5C5	STBY ATTD IND PH B
2I4	STEADY POS LT/ACM LT/SEAT ADJ
2I1	SUPP POS/ANTICOLL/POS LTS
3D6	TACAN ARM-84
7E8	TACAN/BDHI
4F6	TACAN/BDHI INST PWR
3E3	TAIL/RUDDER/FLAP IND
2H2	TAXI/FORM LT
1H2	TCS PH A
1H3	TCS PH B
1H6	TCS PH C
8A6	TCS SEL
4D4	TEMP CONT AC
7D4	TEMP CONTR ECS DC
7F3	TR-ADVSY/PLT ANN PNL AUX PWR
6F6	UHF CONTR

# NAVAIR 01-F14AAP-1B

## CIRCUIT BREAKERS ALPHANUMERIC INDEX

4D5	UTILITY LT
3B6	VDI PH A
4B1	VDI PH B
4B4	VDI PH C
LE2	WG SWP DR NO. 2/MANUV FLAP
7G6	WHEELS POS IND
2H6	WHITE FLOOD LT
3B3	WING POS IND AC
7G2	WING POS IND DC
LE1	WING SWEEP DRIVE NO. 1
7C2	WSHD AIR/ANTI-ICE/HK CONTR
8B2	WSHLD DEFOG CONTR
1A5	XFMR RECT L MAIN
2E3	XFMR RECT R MAIN
7B6	YAW A DC
7B5	YAW B DC
LC1	YAW A AC
LC3	YAW B AC
LB3	YAW M / ROLL A
3F7	26 VAC BUS FDR
1B2	28 VDC PWR SUP PH A
1B5	28 VDC PWR SUP PH B
1B8	28 VDC PWR SUP PH C

### EFFECTIVITY



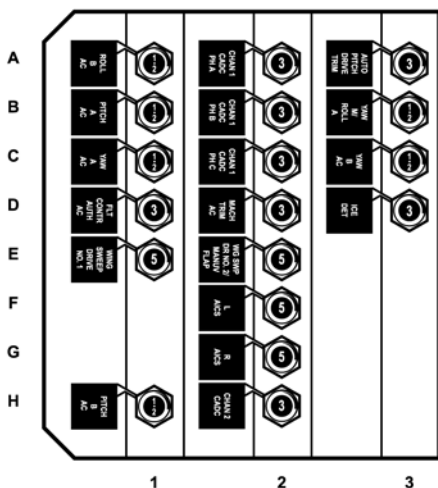
TARPS aircraft only.



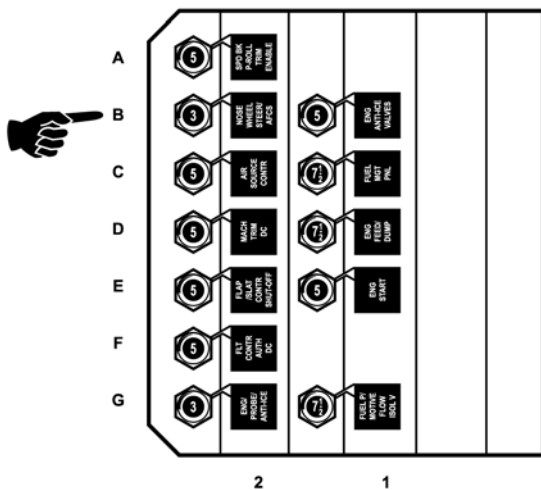
Labeled RECON POD on TARPS aircraft.



TARPS aircraft with ALQ-167 pod circuit breaker is labeled LIQ CLG/ALQ-167 CONT DC.



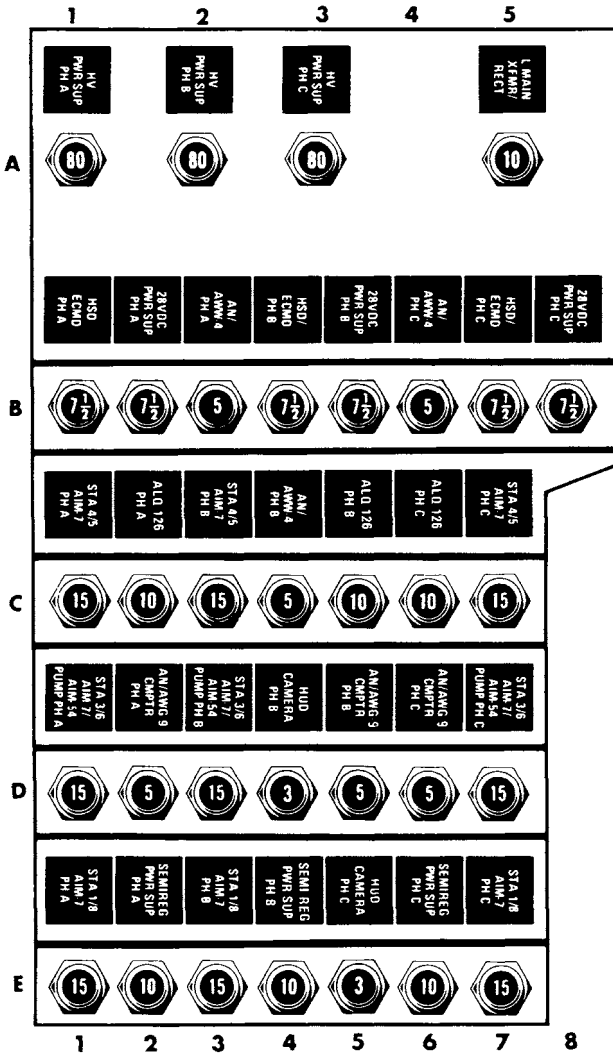
**PILOT AC ESSENTIAL (LEFT KNEE)  
CIRCUIT BREAKER PANEL**



**PILOT DC ESSENTIAL (RIGHT KNEE)  
CIRCUIT BREAKER PANEL**

CSC-F14B-1B-002B

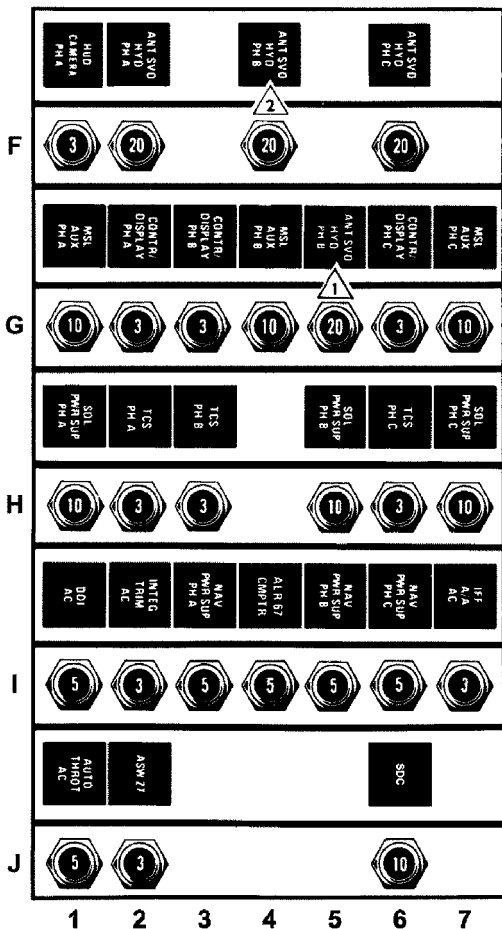
# NAVAIR 01-F14AAP-1B



0-F52P-1-2

AC LEFT MAIN CIRCUIT BREAKER PANEL  
(LEFT AFT) (PANEL NO. 1 — UPPER SEGMENT)

# NAVAIR 01-F14AAP-1B



CSC-F14B-1B-PCL-002

## EFFECTIVITY



TARPS AIRCRAFT.



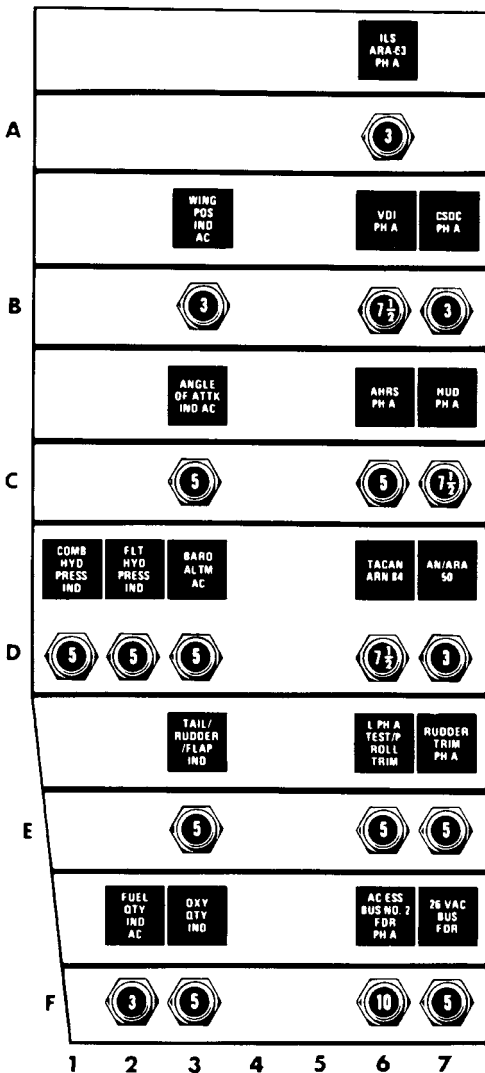
LABELED RECON POD ON TARPS ON AIRCRAFT.

1-F52P-1-3

## AC LEFT MAIN CIRCUIT BREAKER PANEL (LEFT AFT) (PANEL NO. 1 — LOWER SEGMENT)



# NAVAIR 01-F14AAP-1B

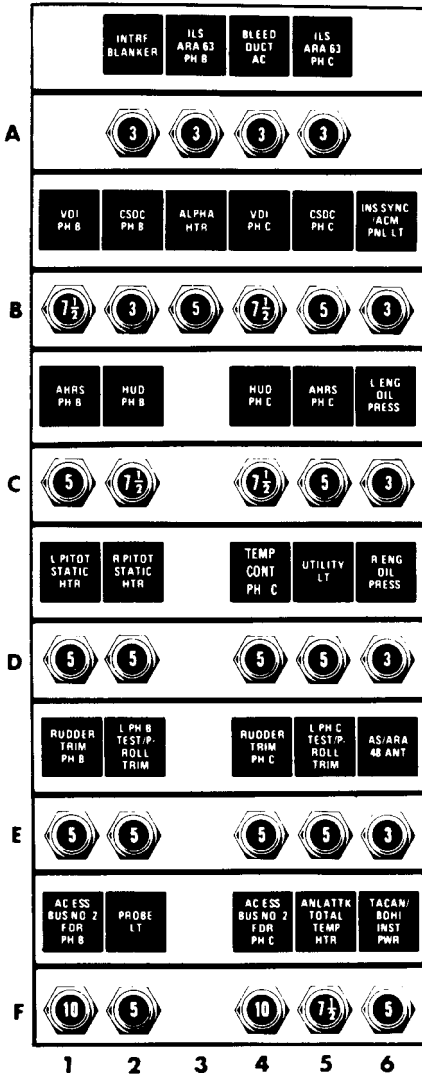


0-F52P-1-5

AC ESSENTIAL NO. 2 PHASE A CIRCUIT BREAKER PANEL (LEFT) (PANEL NO. 3)



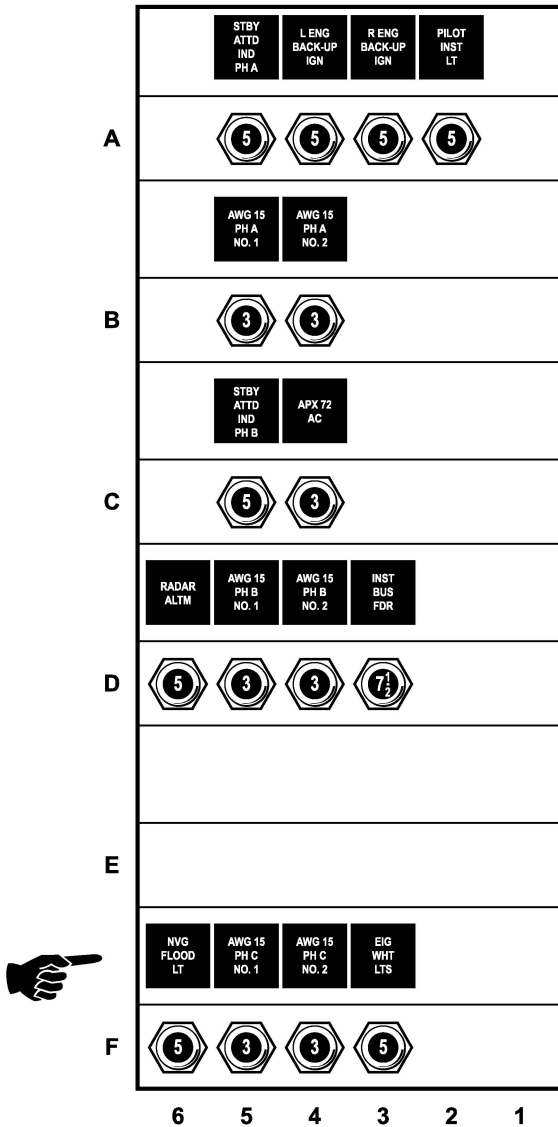
# NAVAIR 01-F14AAP-1B



1-F52P-1-6

AC ESSENTIAL NO. 2 PHASE B AND C CIRCUIT BREAKER PANEL (LEFT) (PANEL NO. 4)

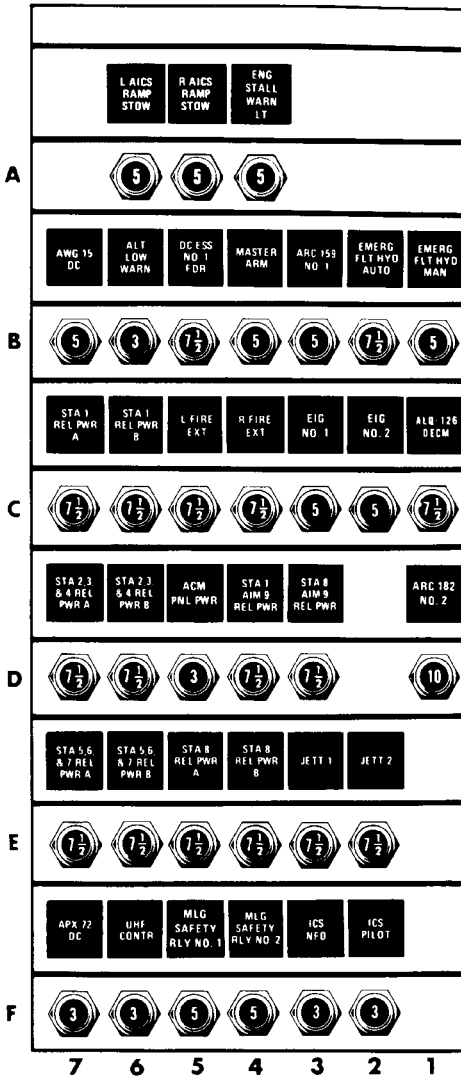
# NAVAIR 01-F14AAP-1B



CSC-F14B-1B-003

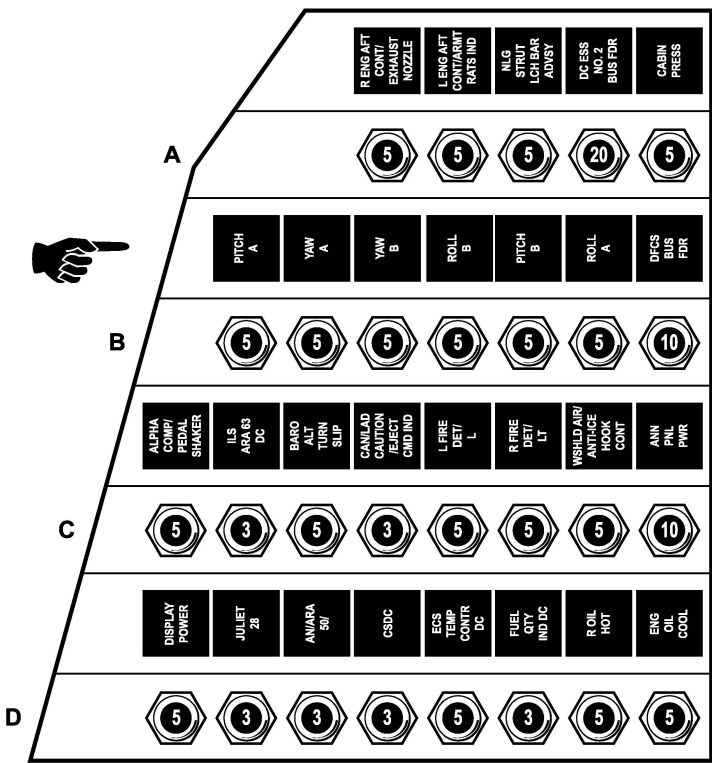
## AC ESSENTIAL NO. 1 CIRCUIT BREAKER PANEL (RIGHT SIDE) (PANEL NO. 5)

# NAVAIR 01-F14AAP-1B



0-F52P-1-8

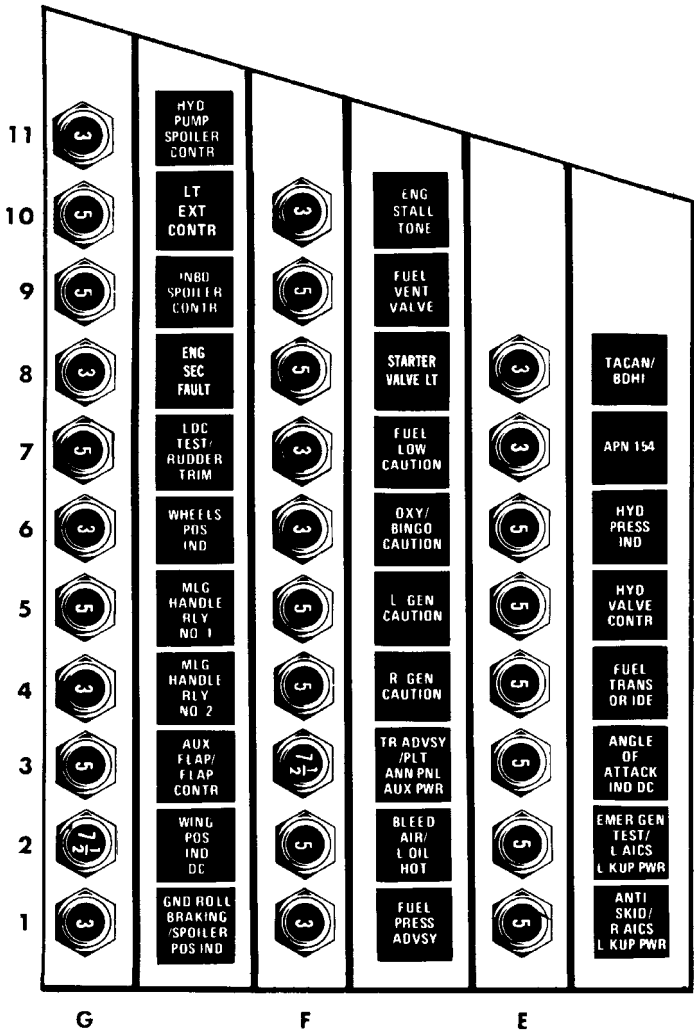
**DC ESSENTIAL NO. 1 CIRCUIT BREAKER  
PANEL (RIGHT SIDE) (PANEL NO. 6)**



CSC-F14B-1B-004B

**DC ESSENTIAL NO. 2 CIRCUIT BREAKER PANEL (RIGHT AFT) (PANEL NO. 7 — UPPER SEGMENT)**

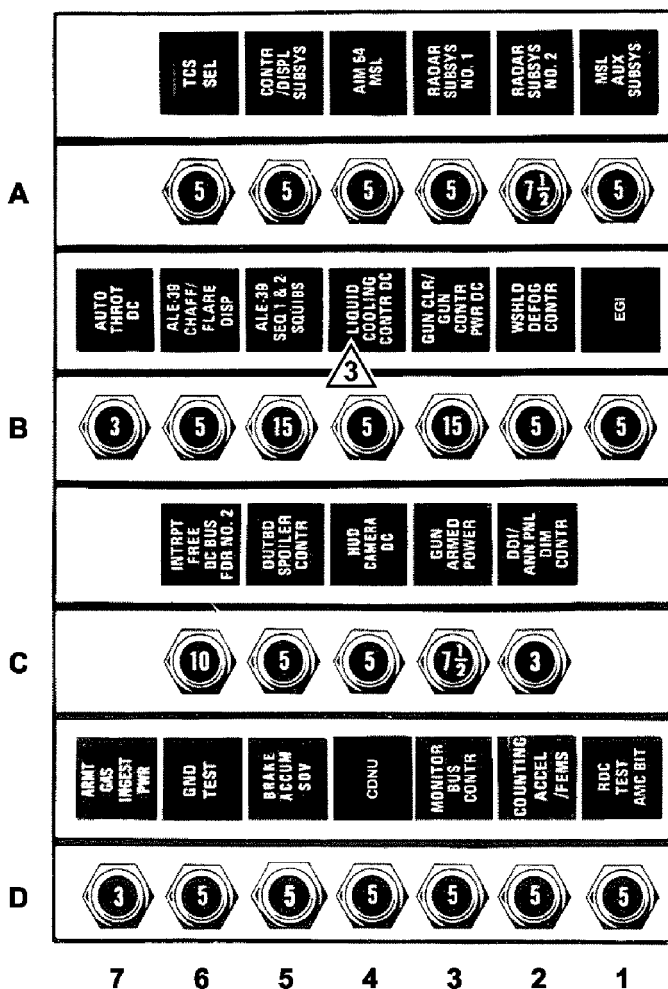
# NAVAIR 01-F14AAP-1B



1-F52P-1-10

**DC ESSENTIAL NO. 2 CIRCUIT BREAKER PANEL (RIGHT AFT) (PANEL NO. 7 — LOWER SEGMENT)**

# NAVAIR 01-F14AAP-1B



CSC-F14B-1B-PCL-005

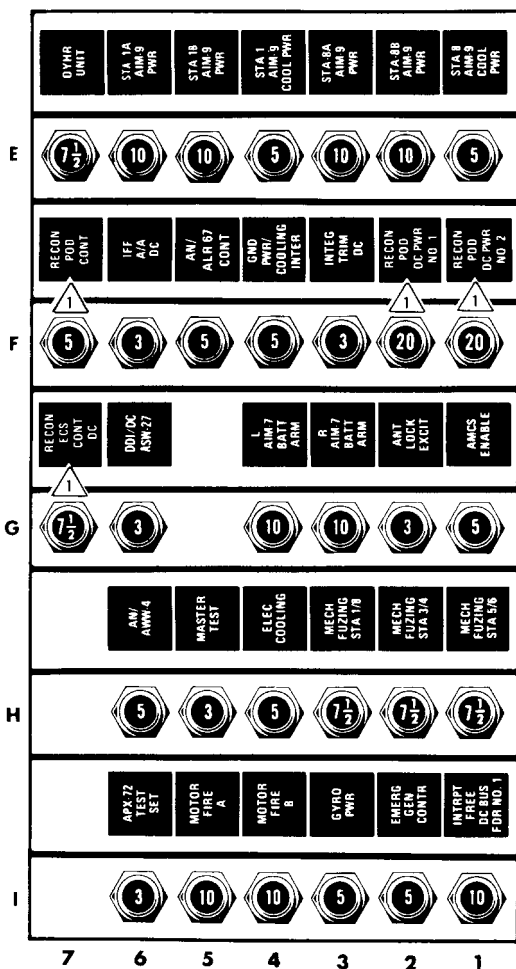


### EFFECTIVITY

TARPS AIRCRAFT WITH ALQ-167 POD CIRCUIT BREAKER IS LABELED LIQ CLG/ALQ-167 CONTR DC.

**DC MAIN CIRCUIT BREAKER PANEL  
(RIGHT AFT) (PANEL NO. 8 — UPPER SEGMENT)**

# NAVAIR 01-F14AAP-1B




**EFFECTIVITY**  
 1 TARPS AIRCRAFT.

0-F52P-1-12L

**DC MAIN CIRCUIT BREAKER PANEL  
(RIGHT AFT) (PANEL NO. 8 — LOWER SEGMENT)**

**SERVICING DATA**

**GROUND REFUELING**

Single-point refueling is through a standard pressure refueling receptacle on the forward right fuselage. Refueling is controlled by two selector valves and the vent pressure gauge adjacent to the refueling receptacle. When aircraft fuel tanks are full, fueling stops automatically.

The maximum refueling rate is approximately 500 gallons per minute at a pressure of 50 psi. Nominal and minimum pressure is approximately 15 psi, and maximum pressure is 50 psi.



**WARNING**

Ensure that both the fueling unit and aircraft are properly grounded, bonding cable is connected between aircraft and refueling source, and fire extinguishing equipment is readily available.



**CAUTION**

During ground refueling operations, the direct-reading vent pressure indicator shall be observed and refueling stopped if pressure indications are in the red band (above 4 psi).



## Note

- If the aircraft is serviced with JP-4 fuel, the main fuel-control fuel-grade (specific gravity adjustment) selector on each engine should be reset to the JP-4 position. If the aircraft is being regularly serviced with JP-8 or JP-5 fuel, the fuel control fuel-grade (specific gravity adjustment) selector on each engine should be reset to the JP-5 position.
- Removal of JP-8 from the aircraft is not required before refueling with JP-5. If removal of JP-8 from the aircraft aboard ship is necessary, it shall not be defueled into storage tanks containing JP-5.

## ENGINE OIL

For normal servicing, sight gauge on the oil storage tank is the primary indicator as to whether servicing is required. During servicing, overflow oil exits the overflow discharge port when the tank is properly serviced. Servicing is accomplished using PON-6 servicing cart. Normal oil consumption is 0.03 gallon per hour with the maximum being 0.1 gallon per hour.

### WARNING

Lubricating oil, MIL-L-23699, is toxic and flammable. Protection: chemical splash-proof goggles, gloves, and good ventilation. Keep sparks, flames, and heat away. Keep lubricating oil off skin, eyes, and clothes; do not breathe vapors. Wash hands thoroughly after handling.

**WARNING**

Do not overservice oil storage tank. Overservicing can cause scavenge pump failure and subsequent engine failure.

**Note**

Engine oil quantity must be checked within 30 minutes after engine shutdown, otherwise, run engine at 80 percent rpm or greater for 10 minutes to ensure proper servicing.

## INTEGRATED DRIVE GENERATOR

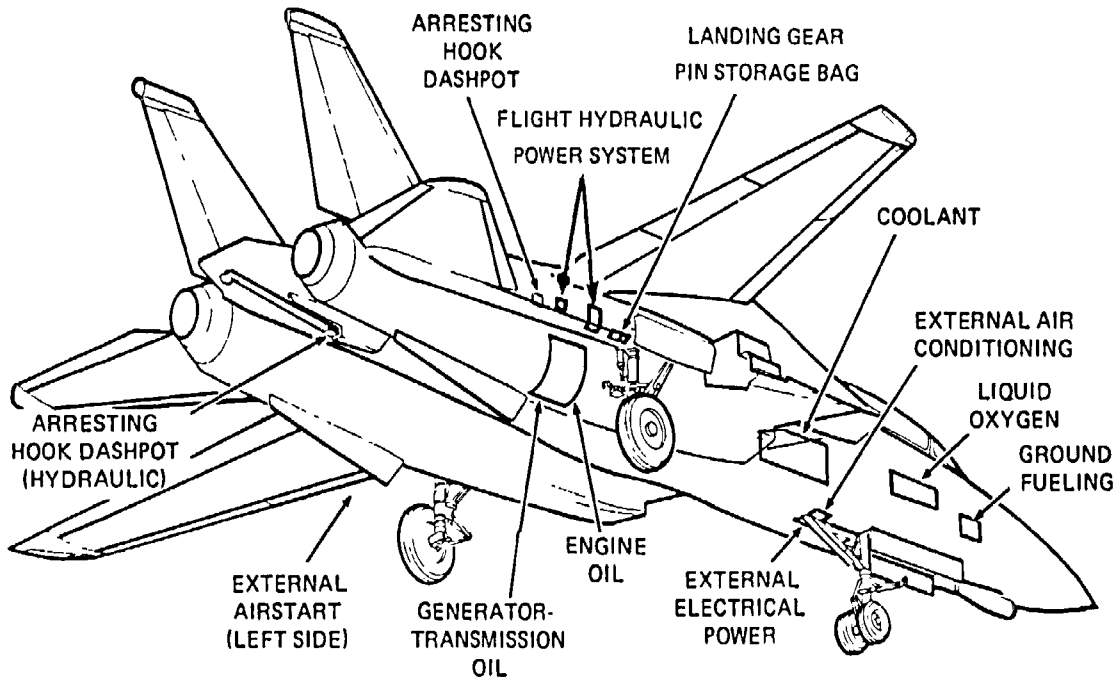
IDG oil level is checked at the IDG mounted on the forward right side of the forward accessory gearbox of each engine. It is serviced at the pressure fill port on the right side. To obtain a valid fluid level check, the sight gauge must be checked no sooner than 5 minutes and no later than 60 minutes after shutdown.

## HYDRAULIC SYSTEMS

Hydraulic servicing is required on the flight and combined systems, outboard spoiler backup module, main landing gear, nosewheel shock struts, and arresting hook dashpot. A hydraulic pressure filling cart is required to service the systems with fluid and an air-nitrogen cart to preload the reservoirs. The temperature recording gauge in the flight and combined systems indicates the maximum temperature attained by the hydraulic fluid.

## PNEUMATIC SYSTEMS

Pneumatic servicing is required for normal operations of the canopy, emergency landing gear extension, auxiliary canopy opening, both hydraulic systems, servicing panels, brake systems, and arresting hook.



# NAVAIR 01-F14AAP-1B

ITEM	DESIGNATION SPECIFICATION	NATO CODE	COMMERCIAL EQUIVALENT	DOD IFR SUPPLEMENT CODE	REMARKS
FUEL	MIL-T-5624 (JP-5)	F-44	NONE	JP-5	SELECTOR ON MAIN ENG. CONT. SHALL BE SET TO JP5, JP4, OR DENSITY OF OTHER FUEL USED
	MIL-T-5624 (JP-4)	F-40	JET B	JP-4	
	MIL-T-83133 (JP-8) (STRAW COLOR)	F-34	JET A-1	JP-8	
ENGINE OIL	MIL-L-23699	0-156	NONE	0-156	USE MIL-L-7808 WHEN GROUND TEMPERATURE IS -40°F (-40°C).
	MIL-L-7808	0-148	NONE	0-148	
INTEGRATED DRIVE (IDG)	MIL-L-23699	0-156	NONE	0-156	USE MIL-L-7808 WHEN GROUND TEMPERATURE IS -40°F (-40°C).
	MIL-L-7808	0-148	NONE	0-148	
HYDRAULIC FLUID	MIL-H-83282	NONE	NONE	NONE	
OXYGEN (LIQUID)	MIL-O-27210 TYPE II	NONE	NONE	LOX	
OXYGEN (GASEOUS)	ML-O-27210 TYPE I	NONE	NONE	HPOX LHOX	SURVIVAL KIT SHALL BE REMOVED FROM AIRCRAFT FOR SERVICING EMERGENCY OXYGEN BOTTLE.
NITROGEN	BB-N-411C (TYPE I, GRADE A)	NONE	NONE	NONE	USE CLEAN, OIL FREE FILTERED DRY AIR, IF NITROGEN IS NOT AVAILABLE.
LIQUID COOLANT	COOLANT 25, 25R (MONSANTO CHEMICAL CO)	NONE	NA	NONE	EITHER COOLANT MAY BE MIXED WITHOUT ADVERSE REACTION.
	CHEVRON FLO-COOL 180 (CHEVRON CHEMICAL CO)	NONE	NA	NONE	
WIPE ON RAIN REPELLANT FLUID	MIL-W-6882	NONE	NONE	NONE	CLEAN AND DRY WINDSHIELD. APPLY WITH CLOTH USING OVERLAPPING WIPES. AFTER 1-MINUTE DRYING. WIPE CLEAN WITH SOFT CLOTH.

	POWER UNITS			
	PNEUMATIC STARTING	ELECTRICAL POWER	AIR CONDITIONING	HYDRAULICS
ACCEPTABLE USN UNITS	ASHORE:	NC8A	NR 5C (ELECTRICAL)	AHT 63/64 TTU-228/E (AHT-73) MJ-3
	NCPP-105	MD-3		
	RCPT-105	MD-3A	NR 8 (DIESEL)	
	A/M47A-4	MD-3M	MA-1	
		MA-3MPSU	MA-1A	
	AFLOAT:	A/M32A-60	A/M32C-5	
A/S47A-1	A/M32A-60A	A/M32C-6		
GROUND SUPPORT EQUIPMENT REQUIREMENTS	200 lb/min AT 75 3 psi (STD. DAY)	115+/-20 V ac, 400+/-25 Hz, 60 kVA, 3 PHASE ROTATION	70 lb/ min AT 3 psi AND 60 F	50 gal/min MAXIMUM AT 3000 PSI

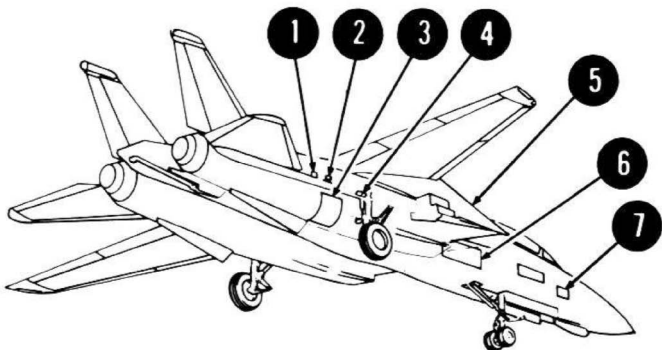
## AIRCRAFT SERVICING DATA (Sheet 1 of 8)

## NAVAIR 01-F14AAP-1B

PNEUMATIC PRESSURE		
SYSTEM	PRESSURE	
EMERGENCY LANDING GEAR	3000 PSI AT 70° F	
COMBINED HYDRAULIC	1800 PSI AT 70° F	
FLIGHT HYDRAULIC	1800 PSI AT 70° F	
CANOPY NORMAL (1200 PSI MINIMUM)	3000 PSI AT 70° F	
CANOPY AUXILIARY (800 PSI MINIMUM)	3000 PSI AT 70° F	
WHEEL BRAKE ACCUMULATORS (2)	1900 PSI AT 70° F	
ARRESTING HOOK DASHPOT	800 ± 10 PSI	
MAIN GEAR SHOCK STRUTS (2)	980 PSI	
NOSEGEAR SHOCK STRUT	1300 PSI	
WINDSHIELD AIR	75 PSI	
<b>NOTE</b>		
DRY NITROGEN, SPECIFICATION BB-N-411C, TYPE 1, GRADE A, IS PREFERRED FOR TIRE INFLATION AND CHARGING PNEUMATIC SYSTEMS SINCE IT IS INERT, AND THEREFORE WILL NOT SUPPORT COMBUSTION.		
TIRES		
TYPE	OPERATION	PRESSURE
NOSE (2)	ASHORE	105 PSI
22 X 6.6-10	AFLOAT	350 PSI
20 PLY		
MAIN (2)	ASHORE	245 PSI
37 X 11.50-16	AFLOAT	350 PSI
28 PLY		

### AIRCRAFT SERVICING DATA (SHEET 2)

# NAVAIR 01-F14AAP-1B



**ARRESTING HOOK DASHPOT  
PNEUMATIC FILL**



**PNEUMATIC PRESSURE  
GAGE AND FILL**

1-F52P-3-1

**AIRCRAFT SERVICING DATA (SHEET 3)**

# NAVAIR 01-F14AAP-1B



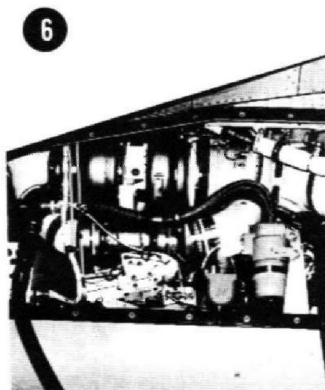
EXTERNAL HYDRAULIC  
CONNECTIONS (BOTH SIDES)



LANDING GEAR PIN STORAGE  
BAG



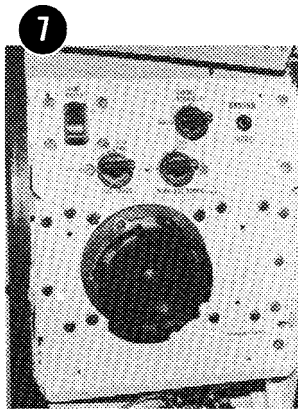
AUXILIARY CANOPY GAGE  
AND ACCESS PANEL



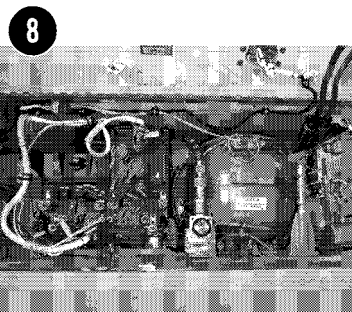
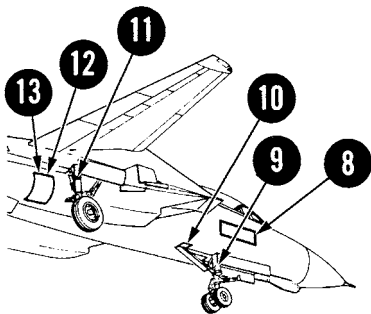
WEAPON CONTROL SYSTEM  
COOLANT FILL AND BOOT  
STRAP TURBINE

1-F52P-3-2

# NAVAIR 01-F14AAP-1B



GROUND FUELING STATION



LIQUID OXYGEN  
CONVERTER BOTTLE



NOSE GEAR  
SHOCK STRUT

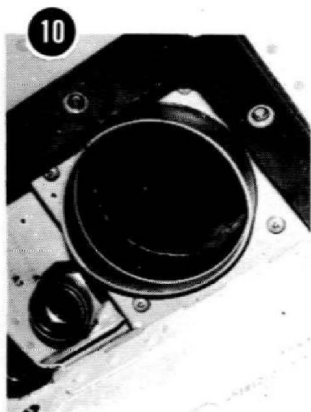


CSC-F14B-1B-001A

## AIRCRAFT SERVICING DATA (SHEET 5)



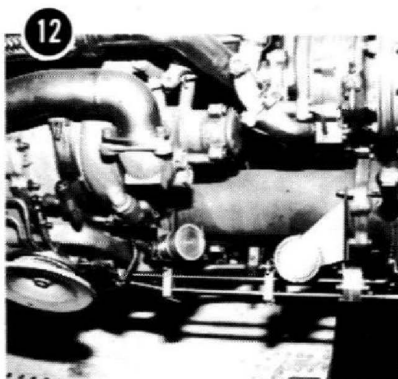
NAVAIR 01-F14AAP-1B



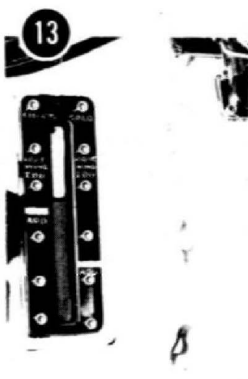
EXTERNAL AIR  
CONDITIONING



MAIN LANDING GEAR  
SHOCK STRUT



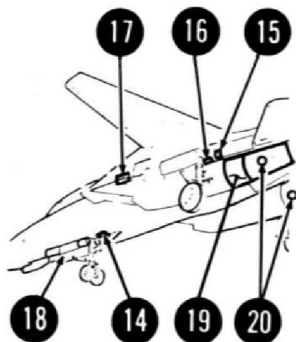
OIL SERVICE LINE  
DUST CAPS



GENERATOR  
TRANSMISSION  
OIL FILL AND GAGE

1-F52P-3-4

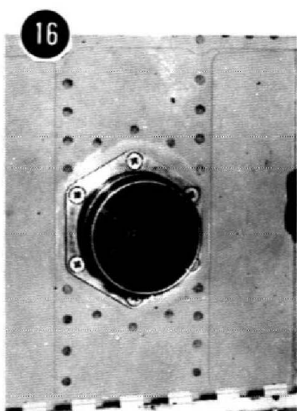
NAVAIR 01-F14AAP-1B



EXTERNAL ELECTRICAL  
POWER PANEL



COMBINED HYDRAULIC  
TEMPERATURE GAGE

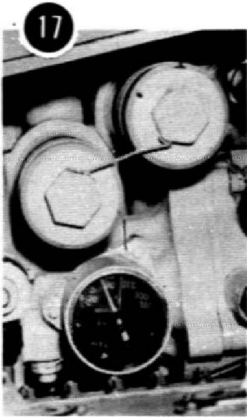


ENGINE GROUND START  
AND COMBINED FILL

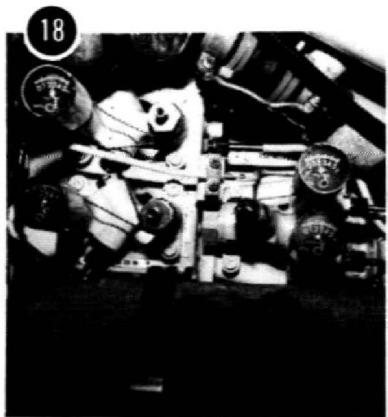
1-F52P-3-5

AIRCRAFT SERVICING DATA (SHEET 7)

NAVAIR 01-F14AAP-1B



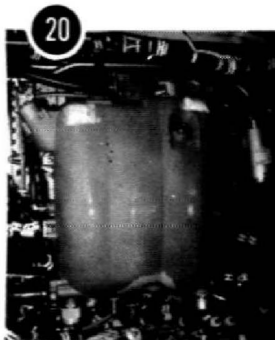
OUTBOARD SPOILER  
MODULE



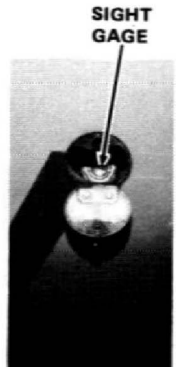
AUX AND PARK BRAKE/  
CANOPY/EMERGENCY  
LANDING GEAR PRESSURE  
GAGES.



STARTER FILL  
AND DRAIN



ENGINE OIL LUBE TANK  
AND SIGHT GAGE



1-F52P-3-6L

AIRCRAFT SERVICING DATA (SHEET 8)



**How to use the DFCS IN FLIGHT FAULT MATRIX:**

These cards are organized according to the relative “level of severity” of the six individual DFCS caution lights “six pack”. When a DFCS related failure is detected in flight, the aircrew can resolve the cause of that failure by identifying the caution/advisory lights illuminated and the AFC acronyms reported in the maintenance file. First, identify the highest “level of severity” caution light observed in the cockpit (as indicated by the order of the fault cards). For example, if the ARI/SAS OUT caution light is not illuminated, proceed to the next card. Likewise if the ARI DGR caution light is not illuminated proceed to the next card. Proceed until one of the lights is recognized. Then identify the matching set of caution lights observed in the cockpit with those in the “LIGHT(S)” column (note that the lights for each fault are organized by level of severity as well). Now within this row, identify the sub-level row that matches the associated AFC acronyms “ACRO(S)” observed in the cockpit. Note that the aircraft configuration “CONFIG” is sometimes important for the proper resolution of certain faults. This process should identify a single failure (or family of failures) in the “FAILURE CAUSE(S)” column, the degraded functionality associated with that fault in the “FUNCTIONALITY DEGRADE” column, and the reported DCP FLT group codes that can be expected in the “DCP CODE(S)” column.



## ARI SAS/OUT

LIGHT(S)	ACRO(S)	CONFIG	FAILURE CAUSE(S)	FUNCTIONALITY DEGRADE	DCP FLT CODE(S)
ARI/SAS OUT ARI DGR YAW DGR ROLL DGR PITCH SAS FCS CAUTION	PC, RC, YC	PA or UA	1. Internal DFCC test failure. 1. Power on Reset.  CAUTION – Depressing the MASTER RESET pushbutton with this condition is the equivalent of executing a POR. See PCL POR procedures.	1. Total DFCS failure. Pitch, Roll, Yaw SAS, ARI, SR, & spoilers inop. Authority stops inop. DLC, Autopilot, Mach trim inop.	1. _C##, POR. 2. _C##, POR.
ARI/SAS OUT ARI DGR YAW DGR ROLL DGR FCS CAUTION	PA, PS, RS, YA, YC, YS, AM	PA or UA	1. YAW A & B computer fault. <sup>1,3,4,5</sup>	1. Yaw SAS, ARI, SR inop. Roll SAS basic. OB spoilers inop. Authority stops inop. DLC, Autopilot inop. DCP inop.	1. DCP inop (YC## codes blanked).
	PS, RS, YS	UA	1. Yaw rate 2F.	1. Roll SAS, ARI, SR inop. Yaw SAS, ARI, SR inop. PQVM inop.	1. YGY#.
	AM	UA	1. Lateral accel 2F.	1. Roll SAS, ARI, SR inop. Yaw SAS, ARI, SR inop.	1. LAT#.
ARI/SAS OUT ARI DGR  YAW DGR ROLL DGR	YA	UA	1. Yaw series actuator 2F. <sup>1</sup>	1. Roll SAS, ARI, SR inop. Yaw SAS, ARI, SR inop.	1. YSA#.
	YC	UA	1. Yaw bridge monitor 2F. <sup>5</sup>	1. Same as YAW A or YAW B computer failure degrade.	1. YC##.
ARI/SAS OUT ARI DGR YAW DGR  FCS CAUTION	PS, RS, YS	PA	1. Yaw rate 2F.	1. Roll SAS basic. Yaw SAS, ARI, SR inop. PQVM inop.	1. YGY#.
	AM	PA	1. Lateral accel 2F.	1. Roll SAS basic. Yaw SAS, ARI, SR inop.	1. LAT#.
ARI/SAS OUT ARI DGR  YAW DGR	YA	PA	1. Yaw series actuator 2F. <sup>1</sup> 2. YAW SAS switch fault.	1. Roll SAS basic. Yaw SAS, ARI, SR inop.	1. YSA#. 2. DCP3.
	YC	PA	1. Yaw bridge monitor 2F. <sup>5</sup>	1. Same as YAW A or YAW B computer failure degrade.	1. YC##.

NAVAIR 01-F14AAP-1B

CARD 4 of 10		DFCS IN FLIGHT FAULT MATRIX CARDS			OFP 4.4	
ARI SAS/OUT						
LIGHT(S)	ACRO(S)	CONFIG	FAILURE CAUSE(S)	FUNCTIONALITY DEGRADE	DCP FLT CODE(S)	
ARI/SAS OUT ARI DGR ROLL DGR PITCH SAS FCS CAUTION	PS	UA	1. Mach 2F.	1. Pitch SAS inop. Roll SAS/ARI inop. Yaw SAS basic.	1. AD01, 03, 04, 05 & MACL/ MACR.	
ARI/SAS OUT ARI DGR ROLL DGR FCS CAUTION	PS, RA, RC, RS	PA or UA	1. ROLL A & B computer fault. <sup>1,2,5</sup>	1. Roll SAS, ARI, SR inop. Yaw SAS basic. IB spoilers inop. DLC, Autopilot, Mach trim inop.	1. RC##.	
	PS	UA	1. AOA 2F.	1. Roll SAS, ARI inop. Yaw SAS basic.	1. AOAC/AC28, AOAT, & AOAL/AOAR.	
	RC	PA or UA	1. Roll bridge monitor 2F. <sup>1,2,5</sup>	1. Same as ROLL A or ROLL B computer failure degrade.	1. RC##.	
	RS	PA or UA	1. Roll Rate 2F <sup>1</sup> .  2. Lateral stick position 2F. <sup>5</sup>	1. Roll SAS, ARI inop. Yaw SAS basic. 2. Roll SAS, ARI, SR inop. Yaw SAS basic. Spoilers inop.	1. RGY#.  2. RCP#.	
ARI/SAS OUT ARI DGR ROLL DGR	RA	PA or UA	1. Roll series actuator 2F. <sup>1</sup> 2. ROLL SAS switch fault.	1. Roll SAS, ARI inop. Yaw SAS basic.	1. RSA#. 2. DCP2.	
ARI/SAS OUT	RS	PA (flaps dn)	1. Gear handle 2F.	1. UA-ARI control laws in PA configuration.	1. LDG#.	
	None	PA or UA	1. Roll and/or yaw axis disengaged (SAS switch OFF).	1. Roll and/or Yaw SAS + ARI disengaged. Other basic SAS.	1. None.	
<sup>1</sup> May also illuminate AUTOPILOT and ACLS A/P caution lights. <sup>2</sup> Will also illuminate MACH TRIM caution light. <sup>3</sup> Will also illuminate HZ TAIL AUTH caution light. <sup>4</sup> Will also illuminate RUDDER AUTH caution light. <sup>5</sup> Will also illuminate SPOILERS caution light. <sup>6</sup> Will also illuminate L INLET and R INLET caution light respectively.						



## ARI DGR

LIGHT(S)	ACRO(S)	CONFIG	FAILURE CAUSE(S)	FUNCTIONALITY DEGRADED	DCP FLT CODE(S)
ARI DGR YAW DGR FCS CAUTION	PS, YA, YC, YS, AM	PA or UA	1. YAW A computer fault. <sup>3,4</sup>	1. Yaw SAS, ARI, SR half auth. Authority stops inop. DLC, Mach trim inop. DCP inop.	1. DCP inop (YC## blanked).
	PA, PS, YA, YC, YS, AM	PA or UA	1. YAW B computer fault. <sup>1,3,4,5</sup>	1. Yaw SAS, ARI, SR half auth. OB spoilers inop. Authority stops inop. DLC, Autopilot, Mach trim inop.	1. YC##.
	YC	PA or UA	1. Yaw bridge monitor 1F (command). <sup>3,4,5</sup>	1. Same as YAW A or YAW B computer failure degrade.	1. YC##.
ARI DGR YAW DGR	YA	PA or UA	1. Yaw series actuator 1F.	1. Yaw SAS, ARI half authority (gain doubled).	1. YSA#.
ARI DGR ROLL DGR PITCH SAS FCS CAUTION	PS	PA or UA	1. Mach 1F ( > 600 kts & AICS cross check).	1. Pitch SAS inop. Roll SAS degrade (low gain). ARI degrade (fixed Mach gains).	1. MACL/MACR & AICX.
ARI DGR ROLL DGR FCS CAUTION	PS, RA, RC, RS	PA or UA	1. ROLL A computer fault. <sup>1,2,5</sup>	1. Roll SAS, ARI half auth. IB spoilers inop. DLC, Autopilot, Mach trim inop. ARI DGR after maneuvering (WRS, LSXC inop).	1. RC##.
	PS, RC, RS	PA or UA	1. ROLL B computer fault. <sup>1,2</sup>	1. Roll SAS, ARI half auth. Autopilot, Mach trim inop.	1. RC##.
	RC	PA or UA	1. Roll bridge monitor 1F (command). <sup>2,5</sup>	1. Same as ROLL A or ROLL B computer failure degrade.	1. RC##.
ARI DGR ROLL DGR	RA	PA or UA	1. Roll series actuator 1F.	1. Roll SAS, ARI half auth.	1. RSA#.
ARI DGR PITCH SAS FCS CAUTION	PA, PC, PS, RA, RS	PA or UA	1. PITCH A & B computer fault. <sup>1,5</sup>	1. Pitch SAS inop. Spoilers inop. DLC, Autopilot inop. ARI DGR after maneuvering (WRS, LSXC inop).	1. PC##.

CARD 6 of 10		DFCS IN FLIGHT FAULT MATRIX CARDS			OFF 4.4
ARI DGR					
LIGHT(S)	ACRO(S)	CONFIG	FAILURE CAUSE(S)	FUNCTIONALITY DEGRADED	DCP FLT CODE(S)
ARI DGR PITCH SAS FCS CAUTION	PA, PC, PS, RS	PA or UA	1. PITCH B computer fault. <sup>1,5</sup> 2. DLC trim servo isolation fault. <sup>1,5</sup>	1. Pitch SAS half auth. OB spoilers inop. DLC, Autopilot inop. ARI DGR after maneuvering (WRS, LSXC inop).	1. PC##. 2. DLT2.
ARI DGR FCS CAUTION	PS	PA or UA	1. SCADC Mach invalid fault. <sup>1</sup> 2. SCADC valid to roll computer fault. <sup>1,2</sup> 3. Air data computer (CADC) fault. <sup>1,2,3,4</sup> 4. L AICS computer fault. <sup>6</sup> 5. R AICS computer fault. <sup>6</sup>	1. ARI degrade (fixed Mach gains). 2. Autopilot, Mach trim inop. YAW DGR after maneuvering (WRS, LSXC inop). 3. ARI degrade (fixed Mach gains). Autopilot, Mach trim inop. YAW DGR after maneuvering (WRS, LSXC inop). 4-5. Equivalent of AOA /Mach 1F.	1. AD01. 2. AD04. 3. AD01, 04. 4. AOAL, MACL, & AICX. 5. AOAR, MACR, & AICX.
		PA	1. AOA 2F. 2. Mach 1F (< 600 kts). 3. Mach 2F.	1. PA-ARI degrade (fixed AOA gains). 2-3. ARI degrade (fixed Mach gains).	1. AOAC/AC28, AOAT, & AOAL/AOAR. 2-3. AD01, 03, 04, 05 & MACL/R.
		UA	1. Mach 1F (< 600 kts).	1. ARI degrade (fixed Mach gains). LSXC, WRS inop.	1. AD01, 03, 04, 05 & MACL/R.
	YS	PA or UA	1. Rudder pedal position 2F.	1. ARI degrade. UA – LSXC, WRS inop. PA – pedal fadeout for LSRI, RRC inop (slipped approach).	1. RPP#.
<sup>1</sup> May also illuminate AUTOPILOT and ACLS A/P caution lights. <sup>2</sup> Will also illuminate MACH TRIM caution light. <sup>3</sup> Will also illuminate HZ TAIL AUTH caution light. <sup>4</sup> Will also illuminate RUDDER AUTH caution light. <sup>5</sup> Will also illuminate SPOILERS caution light. <sup>6</sup> Will also illuminate L INLET and R INLET caution light respectively.					

**ROLL DGR**

LIGHT(S)	ACRO(S)	CONFIG	FAILURE CAUSE(S)	FUNCTIONALITY DEGRADED	DCP FLT CODE(S)
ROLL DGR PITCH SAS FCS CAUTION	PS	UA	1. AICS cross check (> 600 kts or invalid Qbar). 2. SCADC Qbar & AICS cross check. <sup>3,4</sup>	1-2. Pitch SAS inop. Roll SAS degrade (low gain).	1-2. AICX.

<sup>3</sup> Will also illuminate HZ TAIL AUTH caution light.

<sup>4</sup> Will also illuminate RUDDER AUTH caution light.

**PITCH SAS**

LIGHT(S)	ACRO(S)	CONFIG	FAILURE CAUSE(S)	FUNCTIONALITY DEGRADED	DCP FLT CODE(S)
PITCH SAS FCS CAUTION	PC, PS, RA, RS	PA or UA	1. PITCH A computer fault. <sup>1,5</sup>	1. Pitch SAS half auth. IB spoilers inop. DLC, Auto pilot inop. ARI DGR after maneuvering (WRS, LSXC inop).	1. PC##.
	PC	PA or UA	1. Pitch bridge monitor 1F (command). <sup>5</sup> 2. Pitch bridge monitor 2F. <sup>1,5</sup>	1-2. Same as PITCH A or PITCH B computer failure degrade.	1-2. PC##.
	PS	PA or UA	1. Pitch rate 2F. <sup>1</sup>	1. Pitch SAS inop.	1. PGY#.
PITCH SAS	PA	PA or UA	1. Pitch series actuator 1F. 2. Pitch series actuator 2F. <sup>1</sup>	1. Pitch SAS half auth. 2. Pitch SAS inop.	1. PSA#. 2. PSA#.

<sup>1</sup> May also illuminate AUTOPILOT and ACLS A/P caution lights.

<sup>5</sup> Will also illuminate SPOILERS caution light.

CARD 8 of 10		DFCS IN FLIGHT FAULT MATRIX CARDS			OFP 4.4	
FCS CAUTION						
LIGHT(S)	ACRO(S)	CONFIG	FAILURE CAUSE(S)	FUNCTIONALITY DEGRADE	DCP FLT CODE(S)	
FCS CAUTION	PS, RS	PA or UA	1. IMU related fault. <sup>1</sup>	1. No effect, pitch and roll axes one failure away from loss of SAS.	1. IMU#.	
	PS	PA or UA	1. AOA 1F. 2. 28V alpha computer cb. 3. AICS cross check 1F with valid SCADC (> 600 kts). 4. Pitch rate 1F.	1-3. No effect, one failure away from degraded ARI. 4. No effect, one failure away from loss of pitch SAS.	1. AOAC, AOAT, or AOAL/AOAR. 2. AC28. 3. AICX. 4. PGY#.	
	PA	PA or UA	1. PITCH SAS switch fault.	1. Pitch SAS inop.	1. DCP1.	
	RS	PA or UA	1. Lateral stick position 1F. 2. Roll rate 1F.	1. No effect, one failure away from loss of roll SAS/ARI/ spoilers. 2. No effect, one failure away from loss of roll SAS/ARI.	1. RCP#. 2. RGY#.	
	YS	PA or UA	1. Rudder pedal position 1F. 2. Yaw rate 1F.	1. No effect, one failure away from degraded ARI. 2. No effect, one failure away from loss of yaw SAS/ARI.	1. RPP#. 2. YGY#.	
	AM	PA or UA	1. Lateral accel 1F.	1. No effect, one failure away from loss of yaw SAS/ARI.	1. LAT#.	
	None	PA or UA	1. Pitch bridge monitor 1F (monitor). 2. Roll bridge monitor 1F (monitor). 3. Yaw bridge monitor 1F (monitor). 4. CIU/CSDC fault. <sup>1</sup> 5. CCDL fault. 6. Relay voter 1F.	1-3. No effect (failure of monitor channel only), one failure away from loss of affected axis. 4. Autopilot degrade (HDG hold inop), IBIT inop. 5-6. No effect, one failure away from loss of function.	1. PC##. 2. RC##. 3. YC##. 4. CSDC. 5. _C##. 6. _C##.	

<sup>1</sup> May also illuminate AUTOPILOT and ACLS A/P caution lights.

**CARD 9 of 10**

**DFCS IN FLIGHT FAULT MATRIX CARDS**

**OFF 4.4**

<b>LIGHT(S)</b>	<b>ACRO(S)</b>	<b>CONFIG</b>	<b>FAILURE CAUSE(S)</b>	<b>FUNCTIONALITY DEGRADED</b>	<b>DCP FLT CODE(S)</b>
SPOILERS	PA	PA or UA	1. Outboard spoiler(s) fault. <sup>1</sup>	1. Affected L/R spoiler(s) inop.	1. SP3L, SP3R, SP4L, &/or SP4R
	RA	PA or UA	1. Inboard spoiler(s) fault. <sup>1</sup>	1. Affected L/R spoiler(s) inop.	1. SP1L, SP1R, SP2L, &/or SP2R.
HZ TAIL AUTH RUDDER AUTH	-	PA or UA	1. Flight controls authority 28 VDC power fault. 2. SCADC valid to yaw computer. 1,3,4	1-2. Lateral & rudder authority stops inop.	1. CA28. 2. AD05.
HZ TAIL AUTH	-	PA or UA	1. Lateral authority actuator fault. 2. 28 VDC lateral authority fault. 3. Lateral authority schedule fault.	1-3. Lateral authority stops inop.	1. HZTA. 2. HT28. 2. AD07.
RUDDER AUTH	-	PA or UA	1. Rudder authority actuator fault. 2. 28 VDC rudder authority fault. 3. Rudder authority schedule fault.	1-3. Rudder authority stops inop.	1. RUDA. 2. RD28. 2. AD08.
MACH TRIM	-	PA or UA	1. Mach trim actuator fault. 2. 28 VDC Mach trim fault.. 3. Mach trim schedule fault.	1-3. Mach trim inop.	1. MTRM. 2. MT28. 3. AD06.
AUTOPILOT ACLS/AP	PA	PA or UA	1. Pitch parallel actuator fault (w/ ACL engaged).	1. ACLS inop.	1. PPA.
AUTOPILOT	PA	PA or UA	1. Pitch autotrim actuator fault. <sup>1</sup>	1. Autopilot degraded.	1. PTRM.

<sup>1</sup> May also illuminate AUTOPILOT and ACLS A/P caution lights.

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CARD 10 of 10		DFCS IN FLIGHT FAULT MATRIX CARDS			OFF 4.4
LIGHT(S)	ACRO(S)	CONFIG	FAILURE CAUSE(S)	FUNCTIONALITY DEGRADED	DCP FLT CODE(S)
-	PS, RS, YS	PA or UA	1. Weight-on-wheels 2F.	1. Autopilot inop. Ground roll braking inop. DCP display blank on deck.	1. DCP inop (WOW# codes blanked).
	PA	PA	1. DLC trim actuator fault.	1-2. No DLC functionality.	1. DLT1.
	PS	PA or UA	1. Weight-on-wheels 1F.	1. No effect, one failure away from loss of function.	1. WOW1.
	RS	PA or UA	1. Main landing gear handle 1F. 2. Weight-on-wheels 1F.	1-2. No effect, one failure away from loss of function in PA configuration.	1. LDG#. 2. WOW2.
	RS	UA	1. Main landing gear handle 2F.	1. No effect, loss of function in PA configuration only.	1. LDG#.
	YS	PA or UA	1. Weight-on-wheels 1F.	1. No effect, one failure away from loss of function.	1. WOW3.
	-	PA or UA	1. Wing sweep discrete fault.	1. Spoilers inop (flaps up).	1. WSP#.
		PA or UA	1. AHRS valid fault (w/INS invalid). <sup>1</sup>	1. AHRS inop. Autopilot & ACLS inop w/ IMU failure.	1. AHR#.
		PA or UA	1. Emergency disengage to pitch/roll computer fault. <sup>1</sup>	1. Emergency paddle off capability inop. DLC and autopilot inop.	1. EDPS.
		PA or UA	1. PITCH SAS switch fault. 2. ROLL SAS switch fault. 3. YAW SAS switch fault. 4. AUTOPILOT switch fault. <sup>1</sup>	1-4. Loss of switch functionality.	1. DCP1. 2. DCP2. 3. DCP3. 4. DCP4.
		PA or UA	1. SCADC valid to pitch computer. <sup>1</sup>	1. Autopilot degrade (HDG hold inop), IBIT inop.	1. AD03.
		PA or UA	1. MASTER RESET pushbutton 1F. 2. MASTER RESET pushbutton 2F.	1. No effect, one failure away from loss of function. 2. MASTER RESET inop - DFCS.	1. MRS#. 2. MRS#.
		PA	1. Flap fault (w/ ACL engaged). <sup>1</sup>	1. Autopilot ACL inop.	1. FLAP.
PA	1. Rudder pedal shaker fault. 2. Ground roll braking fault.	1. Rudder pedal shaker inop. 2. Ground roll braking inop.	1. SHKR. 2. GRBS.		

<sup>1</sup> May also illuminate AUTOPILOT and ACLS A/P caution lights.

<sup>2</sup> Will also illuminate MACH TRIM caution light.

<sup>3</sup> Will also illuminate HZ TAIL AUTH caution light.

<sup>4</sup> Will also illuminate RUDDER AUTH caution light.

**F-14 DFCS SELF-TEST AND FAULT REPORTING**

DFCS self-tests include: a power-up BIT (PBIT), automatic-BIT (ABIT), and initiated-BIT (IBIT) modes. DFCS self-tests PBIT and ABIT are together referred to as the operational flight program (OFF) self-test mode. DFCS fault reporting is indicated by CAI panel lights, maintenance file acronyms, and DCP FAULT DISPLAY codes. DFCS fault reporting CAI panel lights and DCP FAULT DISPLAY codes indicate results of all self-test modes. DFCS fault reporting maintenance file acronyms immediately following IBIT are not valid and may be ignored. DCP FAULT DISPLAY codes are grouped into "IBIT" (IBIT self-test) and "FAIL" or "FLT" (PBIT and ABIT self-tests). DCP FAULT DISPLAY codes include some that have sequential alphanumeric codes (for example AD## & AHR#). DFCS IBIT is the most robust flight control system self-test possible on deck (compared to PBIT and ABIT). DFCS IBIT CAI panel lights are cleared upon master reset and any remaining lights are ABIT (OFF) detected failures. DFCS IBIT shall be executed on initial startup and following any on deck POR prior to flight operations. DFCS IBIT shall be executed with flaps down (shorebased ops) or wings aft (shipboard ops or boat launch). DFCS IBIT will only detect and report aircraft flight control system related degrades/failures. DFCS UP/DN STATUS CRITERIA may be modified by squadron SOP at the discretion of the commanding officer.

**DFCS UP/DOWN STATUS CRITERIA:**

DFCS UP/DOWN status determined based upon the DCP FAULT DISPLAY "FAIL", "FLT", and "IBIT" fault codes. DFCS UP/DOWN status for sequential alphanumeric fault codes is further resolved by associated CAI panel lights. If DFCS IBIT reports "PASS" and no CAI panel lights, aircraft considered UP with respect to flight control system. If DFCS IBIT reports "NOGO", identify the illuminated CAI panel lights prior to depressing MASTER RESET. Refer to DFCS UP/DOWN STATUS TABLE for DCP fault codes, IBIT/OFP, failure indications, and functions lost. DFCS DN status troubleshooting may include POR, master reset, cycle flight controls & trim, followed by IBIT. DFCS DN or SW status may be further resolved by the DOWN (DN) / SOP WAIVER (SW) NOTES (see below). Aircraft UP/DOWN status regarding other systems shall be considered independent of DFCS IBIT test results.

**DOWN (DN) / SOP WAIVER (SW) NOTES:**
**Numbers = Fault Description:**

- 1 Two or more AOA redundancy failures is DN unless all are AICS (tertiary source) related failures.
- 2 Check for additional CADC failure / CAI panel light indications to resolve aircraft status.  
SW if HZ TAIL AUTH or RUD AUTH caution light following IBIT, but not in ABIT.  
Verify full flight control authority. DN if full flight control authority is not available.
- 3 IMU# fault code + single RGY# fault code is DN.
- 4 Adhere to IBIT CAI PANEL CAUTION LIGHT CRITERIA (see below).
- 5 POR, master reset, cycle flight controls & trim, and run IBIT in attempt to clear fault.  
PSA# DN only if actuator hydraulic leak.  
RSA# and/or YSA# is DN.
- 6 Two or more roll gyro fault codes is DN (unless both RGY1& RGY3 or RGY2&RGY5). RGY7 is DN.
- 7 POR, master reset, cycle wings & flight controls, and run IBIT in attempt to clear fault.  
If WSP# fault code(s), the affected spoilers will work with flaps down, but not flaps up.
- 8 Two or more yaw gyro fault codes is DN (unless both YGY1&YGY4, YGY2&YGY5, or YGY3&YGY6).
- 9 If during shipboard IBIT wait for ship motion to steady out and re-run IBIT in attempt to clear fault.
- 0 Minimum pilot flight hour requirement in type 500 hrs.

**Letters = Imposed aircraft limitations:**

- A Remain below 600 KIAS / 1.3 IMN / 20 units AOA.
- B Remain below .93 IMN / at or below 15 units AOA.
- C Adhere to NATOPS limitations for any ABIT detected caution lights.
- D No limitations.

**IBIT CAI PANEL CAUTION LIGHT CRITERIA**

**UP** = FCS CAUTION and/or PITCH SAS only (DFCS 6-pack)  
AUTOPILOT, MACH TRIM

**DOWN** = ROLL DGR, YAW DGR, ARI DGR, and/or ARI/SAS OUT (DFCS 6-pack)  
SPOILERS, HZ TAIL AUTH, and/or RUDDER AUTH

**ABBREVIATIONS:**

APC	Autothrottle approach power compensator fault	I	Initiated BIT (BIT) self-test
ARI	Automatic rudder interconnect	O	OFF mode (PBIT & ABIT) self-tests
LSRI	Lateral stick to rudder interconnect	1x	Single fault code = single fault, 1st fault, 1F
DTFO	Differential tail fadeout	2x	Two fault codes = dual fault, 2nd fault, 2F
WRS	Wing rock suppression	A	Channel A of flight control computer
LSXC	Low speed cross control	B	Channel B of flight control computer
SAS	Stability augmentation system		
SR	Spin recovery		

# NAVAIR 01-F14AAP-1B

F-14 DFCS UP/DOWNSTATUS CARDS			FLEET OFFP 4.4 Card 2 of 2				
FAULT CODES			DFCS UP/DOWN STATUS TABLE				
DCP	IBIT	OPF	FAILURE INDICATION	UP	DN	SW	FUNCTIONS LOST
115V	I		Aircraft 115 VAC power supply fault.		X		Computer problems
28DC	I		Aircraft 28 VDC power supply fault.		X		Computer problems
AC28	I	O	Alpha computer 28 VDC power fault.			A1	AOA redundancy, rudder pedal shaker
AD##	I	O	Air data computer (CADC) related fault.			C2	CADC related degrade/failure
AHR#		O	AHRS related fault.	X			1x - Redundancy, 2x - Autopilot (IMU backup)
AICX		O	AICS crosscheck fault.			B1	Degraded ARI, LSXC, WRS, AOA redundancy
AOAC	I	O	Alpha computer fault.			A1	AOA redundancy (primary source)
AOAL		O	Left AICS AOA fault.			B1	Degraded ARI, LSXC, WRS, AOA redundancy
AOAR		O	Right AICS AOA fault.			B1	LSXC, WRS, Degraded ARI, AOA redundancy
AOAT	I	O	ADD transmitter fault.			A1	AOA redundancy (secondary source)
APCA	I		Normal accelerometer sensor fault.	X			Degraded APC, autopilot ACL mode
APCS	I		Scheduled outputs to APC fault.	X			Degraded APC
CA28	I		Flight controls authority 28 VDC fault.		X		Lateral & rudder authority actuators
CSDC	I		CIU / CSDC interface fault.	X			Autopilot HDG, GT, VEC/PCD, ACL modes
DCP1		O	PITCH STAB AUG switch fault.	X			Pitch SAS control switch (default ON)
DCP2		O	ROLL STAB AUG switch fault.		X		Roll SAS control switch (default ON)
DCP3		O	YAW STAB AUG switch fault.		X		Yaw SAS control switch (default ON)
DCP4	I	O	AUTOPILOT switch fault.	X			Autopilot control switch (default OFF)
DLCT	I		DLC thumbwheel fault.			D0	DLC, autopilot ACL mode
DLT1	I	O	DLC trim actuator fault.			D0	DLC, autopilot ACL mode
DLT2	I	O	DLC trim actuator fault.		X4		Pitch SAS & spoilers degrade/failure
DPSL	I		Left AICS delta pressure sensor fault.			A1	AOA redundancy (tertiary source)
DPSR	I		Right AICS delta pressure sensor fault.			A1	AOA redundancy (tertiary source)
EDPS		O	Emergency disengage paddle switch fault.	X			DLC, autopilot modes
FLAP		O	Flaps > 25 deg switch fault.			D0	DLC, autopilot ACL mode
GRBS		O	Ground roll braking switch fault.			D0	Ground roll braking
HT28		O	HZ TAIL AUTH 28 VDC power fault.		X		Lateral stick authority actuator
HZTA	I	O	HZ TAIL AUTH actuator fault.		X		Lateral stick authority actuator
IMU#		O	Inertial measurement unit fault.			A3	1x - IMU failure
LAT#	I	O	Lateral accelerometer fault.		X9		1x - Redundancy, 2x - Yaw SAS/ARI
LDG#		O	Main landing gear handle discrete fault.			D0	1x - Redundancy, 2x - Default UA control laws
MACL		O	Left AICS Mach fault.			B1	Degraded ARI, LSXC, WRS, Mach redundancy
MACR		O	Right AICS Mach fault.			B1	Degraded ARI, LSXC, WRS, Mach redundancy
MRS#		O	MASTER RESET pushbutton fault.		X		1x - Redundancy, 2x - Master reset pushbutton
MT28	I	O	MACH TRIM 28 VDC power fault.	X			Mach trim actuator
MTRM	I	O	MACH TRIM actuator fault.	X			Mach trim actuator
PC##	I	O	Pitch flight control computer related fault.		X4		Pitch SAS & spoilers degrade/failure
PGY#	I	O	Pitch sensor (gyro) fault.	X			1x - Redundancy, 2x - Pitch SAS
POR		O	In-flight Power on Reset.		X		Complete master reset and IBIT before flight
PPA	I	O	Pitch parallel actuator fault.	X			Autopilot ACL mode
PSA#	I	O	Pitch series servo actuator fault.			D5	1x - Degraded, 2x - Pitch SAS
PTRM	I	O	Auto pitch trim actuator fault.	X			Degraded autopilot modes
RC##	I	O	Roll flight control computer related fault.		X4		Roll SAS/ARI & spoilers degrade/failure
RCP#		O	Roll stick transducer fault.		X		1x - Redundancy, 2x - Roll SAS/ARI & spoilers
RD28		O	RUDDER AUTH 28 VDC power fault.		X		Rudder authority actuator
RGY#	I	O	Roll rate gyro fault.		X6		1x - Redundancy, 2x - Roll SAS/ARI
RPP#		O	Rudder pedal position sensor fault.			D0	1x - Redundancy, 2x - LSXC, WRS
RSA#	I	O	Roll series servo actuator fault.		X5		1x - Degraded, 2x - Roll SAS/ARI
RUDA	I	O	RUDDER AUTH actuator fault.		X		Rudder authority actuator
RSHR		O	Pedal shaker motor fault.			D0	Rudder pedal shaker
SP#L	I	O	Left spoiler actuator fault.		X7		Left spoiler actuator
SP#R	I	O	Right spoiler actuator fault.		X7		Right spoiler actuator
SPSL	I		Left AICS static pressure sensor fault.			B1	Degraded ARI, LSXC, WRS, AOA/Mach redncy
SPSR	I		Right AICS static pressure sensor fault.			B1	Degraded ARI, LSXC, WRS, AOA/Mach redncy
TPSL	I		Left AICS total pressure sensor fault.			B1	Degraded ARI, LSXC, WRS, AOA/Mach redncy
TPSR	I		Right AICS total pressure sensor fault.			B1	Degraded ARI, LSXC, WRS, AOA/Mach redncy
WOW#		O	Weight-on-wheels discrete fault.			D0	1x - Redundancy, 2x - Default W-Off-W
WSP#		O	Wingsweep roll/pitch computer fault.		X7		#1 - outbd spoilers, #2 - inbd spoilers (flaps up)
YCF#	I	O	Yaw flight control computer related fault.		X4		Yaw SAS/ARI & spoilers degrade/failure
YGY#	I	O	Yaw rate gyro fault.		X8		1x - Redundancy, 2x - Yaw SAS/ARI
YSA#	I	O	Yaw series servo actuator fault.		X5		1x - Degraded, 2x - Yaw SAS/ARI



## SAR ON SCENE COMMANDER CHECKLIST

1. Maintain sight  
Do not fly through any cloud layers.  
Parachute fall rate is about 1000 ft/min.
2. Squak 7700
3. Switch guard (243.0) for initial call  
“Mayday, Mayday, Mayday.”  
“This is \_\_\_\_\_ on guard.”  
“(Downed A/C)” is on the (Radial/ DME) of TACAN  
Station \_\_\_\_\_.”  
“I am taking station overhead at angels \_\_\_\_\_,  
switching to frequency \_\_\_\_\_.”
4. Switch to a controlling agency  
Repeat initial call  
Controlling agency will initialize SAR.
5. Note the time, Lat/Long, and winds.
6. Monitor guard. When contact is established with SAR Helo, switch to SAR primary (282.8).
7. Warn non-participating A/C to stay clear.
8. Leave frequency open during Helo hover/recovery.
9. Make positive transfer of on scene commander responsibilities prior to RTB.



- Do not run yourself out of gas (know your bingo profile).
- Do not descend through a cloud layer until you are sure that the aircrew are in the water.
- Monitor your own A/C altitude, attitude and airspeed.

### Rules of 25

Don't go below 2.5 on fuel.

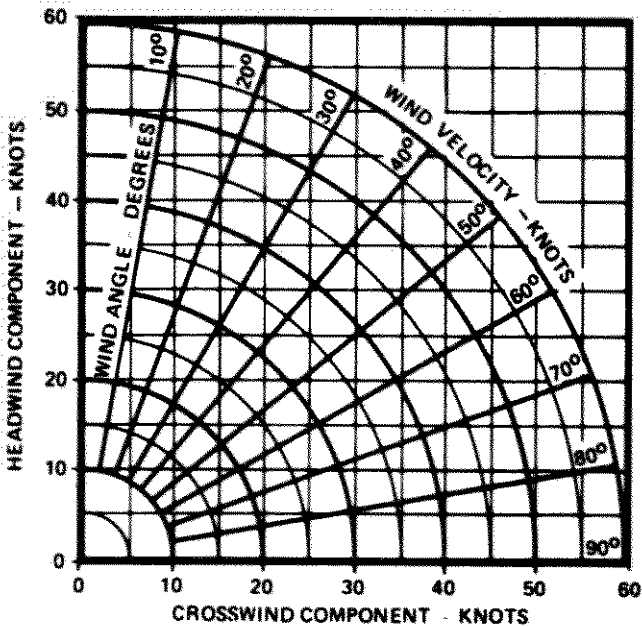
Don't descend below 2.5K'AGL.

Don't decel below 250 KTS.

Don't exceed 25° AOB.



TO USE, DETERMINE WIND ANGLE RELATIVE TO RUNWAY HEADING. ENTER CHART FROM LOWER LEFT ALONG WIND ANGLE LINE TO REPORTED VELOCITY ARC. FROM (INTERSECTION OF WIND ANGLE AND VELOCITY DETERMINE HEADWIND COMPONENT BY PROJECTING HORIZONTALLY TO LEFT; DETERMINE CROSSWIND COMPONENT BY DROPPING VERTICALLY TO BASELINE.



UNTIL FURTHER FLIGHT TEST DATA IS AVAILABLE, CROSSWIND TAKEOFFS AND LANDINGS ARE NOT TO EXCEED 20 KNOTS AT 90°.

2-F052-2-0

### CROSSWIND CHART