

F/A-18 A/B/C/D MAINTENANCE TRAINING

DRAFT



MOS 6337 LESSON GUIDES



F/A-18 A/B/C/D MAINTENANCE TRAINING

A.01 (A thru F)	Special / Support Equipment
A.02 (A thru I)	Safety Precautions and Procedures
A.03 (A thru F)	Aircraft Publications, Diagrams, Sketches, and Drawings
A.04 (A thru J)	Precision Measuring Equipment
A.05 (A thru B)	ESD, Electrical Bonding, and EMC
B.01 (A thru L)	Scheduled / Unscheduled Inspections
B.02 (A thru D)	Technical Directives / Changes / Bulletins
B.03 (A thru D)	Canopy and Boarding Ladder System
B.04 (A thru D)	Landing Gear System
B.05 (A thru D)	Fire Detection System
B.06 (A thru D)	Power Plants and Related Systems
B.07 (A thru D)	Environmental Control System
B.08 (A thru D)	Electrical System
B.09 (A thru D)	Lighting System
B.10 (A thru D)	Fuel Systems
B.11 (A thru D)	Pitot Static System and Related Instruments
B.12 (A thru D)	Air Data Computer System
B.13 (A thru D)	Integrated Flight Control System
B.14 (A thru D)	Instrument, Back-up Attitude, and Navigation Systems
B.15 (A thru J)	Wire Repair



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- A. **LECTURE NUMBER:** F/A-18 MOS 6337 A.01 (A thru F)
- B. **TIME:** 0.5 Hours
- C. **DATE PREPARED:** 31 Aug 03
- D. **DATE REVIEWED:** On separate sheet
- E. **TITLE:** Support/Special Equipment
- F. **OBJECTIVE:** Student will be able to demonstrate/apply knowledge of the operation, care, and maintenance requirements of applicable work center support/special equipment.
- G. **INSTRUCTIONAL AIDES:**
- H. **REFERENCES:**

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1. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
2. A1-F18AC-WRM-000, Organizational Maintenance Wiring Repair with IPB F/A-18A and F/A-18B
3. A1-F18AE-WRM-000, Organizational Maintenance Wiring Repair with IPB F/A-18C and F/A-18D

- I. **PRESENTATION:** This period of instruction will inform students about the operation, care, and maintenance requirements of applicable work center support / special equipment.

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Discuss operation of the F/A-18 Utility Power Adaptor.
2. Discuss care and maintenance of the F/A-18 Utility Power Adaptor.
3. Discuss operation of the heating tool.
4. Discuss care and maintenance the heating tool.
5. Discuss operation of the wire and connector repair set.
6. Discuss care and maintenance the wire and connector repair set.

- J. **SUMMARY:** During this period of instruction we covered the operation, care, and maintenance requirements of applicable work center support/special equipment.

- K. **QUESTION AND ANSWERS:**

- A. **LECTURE NUMBER:** F/A-18 MOS 6257 A.02 (A thru I)
- B. **TIME:** 1.0 Hours
- C. **DATE PREPARED:** 31 Aug 03
- D. **DATE REVIEWED:** On separate sheet
- E. **TITLE:** Safety Precautions and Procedures in the work center
- F. **OBJECTIVE:** Student will be able to demonstrate knowledge of safety precautions and procedures in the work center.
- G. **INSTRUCTIONAL AIDES:**
- H. **REFERENCES:**



1. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
2. A1-NAOSH-SAF-000/P5100-1,
3. OSHA 29 CFR 1910, Confined Space Entry
4. A1-F18AC-120-100, Organizational Maintenance Theory of Operation Seat, Canopy, Survival Equipment, and Boarding Ladder
5. A1-F18AE-120-100, Organizational Maintenance Theory of Operation Seat, Canopy, Survival Equipment, and Boarding Ladder
6. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
7. A1-F18AC-LMM-020, Organizational Maintenance Line Maintenance Emergency Procedures

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Discuss canopy safety procedures.
2. Discuss ejection seat safety procedures.
3. Discuss boarding ladder procedures.
4. Discuss controls/switches/indicators and normal positions in the cockpit.
5. Discuss maintenance line emergency procedures.
6. Discuss general housekeeping.
7. Discuss shop and safety equipment.
8. Discuss composite material safety.

- J. **SUMMARY:** During this period of instruction we covered safety precautions and procedures in the work center.
- K. **QUESTION AND ANSWERS :**

DRAFT

- A. **LECTURE NUMBER:** F/A-18 MOS 6337 A.03 (A thru F)
- B. **TIME:** 1.0 Hours
- C. **DATE PREPARED:** 31 Aug 03
- D. **DATE REVIEWED:** On separate sheet
- E. **TITLE:** Aircraft Publications, diagrams, sketches, and drawings
- F. **OBJECTIVE:** Student will be able to demonstrate knowledge of aircraft publications, diagrams, sketches, and drawings.
- G. **INSTRUCTIONAL AIDES:** Work center DTPL or squadron CTPL
- H. **REFERENCES:**



1. 100 Series Publications, Principles of Operation Manuals
2. 200 Series Publications, Testing and Troubleshooting Manuals
3. 300 Series Publications, System Maintenance with IPB Manuals
4. 500 Series Publications, System Schematic Manuals
5. A1-F18AC-GAI-000, General Aircraft Information
6. A1-F18AC-LMM-010, Line Maintenance Access Doors
7. A1-F18AC-LMM-020, Line Maintenance Emergency Procedures
8. A1-F18AC-PCM-000, Plane Captain Manual
9. A1-F18AX-FIM-000, Fault Isolation Manual
10. A1-F18AX-FRM-000, Fault Reporting Manual
11. A1-F18AX-OLD-000/010, Organizational Flight Program Simplified Schematics
12. A1-F18AC-LMM-000, Line Maintenance Procedures
13. A1-F18AC-IPB-450, Parts List Index Manual
14. A1-F18AX-MRC-000, Periodic Maintenance Information Cards
15. A1-F18AX-MRC-200, Maintenance Requirement Cards
Daily/Special/Conditional
16. A1-F18AX-MRC-300, Phased Maintenance Requirement Cards
17. A1-F18AX-WDM-000/010, Wiring Diagram Manual
18. A1-F18AX-WRM-000 thru 800, Wiring Repair Manual
19. A1-F18AX-SCM-000/050/060/070, Software Configuration Manual
20. A1-F18AC-WAP-000, Workaround Procedures
21. A1-F18AX-WUC-800, Work Unit Code Manual
22. OPNAVINST 4790.2_, Naval Aviation Maintenance Program (NAMP)
23. NA 01-1A-509, Aircraft Corrosion Control
24. NA 01-1A-540, Avionics Corrosion Control
25. NA 07-1-505, Toxicity, Flashpoint, and Flammability of
Chemicals
26. NAVSUP PUB 4500, Consolidated Hazardous Item List
27. A1-F18AC-AML-000, Aircraft Technical Documentation List
28. AG-000AC-GSE-000/100, Miscellaneous Peculiar Support Equipment

I. PRESENTATION: Review with the student following publications as the pertain to the work center:

1. 100 Series Publications
2. 200 Series Publications
3. 300 Series Publications
4. 500 Series Publications
5. A1-F18AC-GAI-000
6. A1-F18AC-LMM-010
7. A1-F18AC-LMM-020
8. A1-F18AC-PCM-000
9. A1-F18AX-FIM-000
10. A1-F18AX-FRM-000
11. A1-F18AX-OLD-000/010
12. A1-F18AC-LMM-000
13. A1-F18AC-IPB-450
14. A1-F18AX-MRC-000
15. A1-F18AX-MRC-200
16. A1-F18AX-MRC-300
17. A1-F18AX-WDM-000/010
18. A1-F18AX-WRM-000 thru 800
19. A1-F18AX-SCM-000/050/060/070
20. A1-F18AC-WAP-000
21. A1-F18AX-WUC-800
22. OPNAVINST 4790.2_
23. NA 01-1A-509
24. NA 01-1A-540
25. NA 07-1-505
26. NAVSUP PUB 4500
27. A1-F18AC-AML-000
28. AG-000AC-GSE-000/100

J. SUMMARY: During this period of instruction we discussed applicable aircraft publications, diagrams, sketches, and drawing for the work center.

K. QUESTION AND ANSWERS :

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- A. **LECTURE NUMBER:** F/A-18 MOS 6337 A.04 (A thru J)
- B. **TIME:** 1.0 Hours
- C. **DATE PREPARED:** 31 Aug 03
- D. **DATE REVIEWED:** On separate sheet
- E. **TITLE:** Precision Measuring Equipment
- F. **OBJECTIVE:** Student will be able to demonstrate knowledge and operation of applicable precision measuring equipment.



G. **INSTRUCTIONAL AIDES:**

1. Proximity switch control, 74D420030-1001
2. Air Data test set
3. Pitot-static adapter
4. Time domain reflectometer
5. Fuel/LOX gauging test set, 74D51003-1001
6. Multimeter, Simpson 260
7. Fluke meter, 77/AN
8. Standby compass calibrator
9. Arresting gear hook rigging set, 74D130027-1001
10. Fuel system test set, 74D460108-1003

H. **REFERENCES:**

1. A1-F18AC-LMM-000, Organizational Line Maintenance Procedures
2. A1-F18AC-510-200, Organizational Maintenance Testing and Troubleshooting Instrument Systems
3. A1-F18AX-WRM-000, Wire Repair Manuals
4. A1-F18AX-460-Series, Fuel Systems Publications
5. A1-F18AC-LWS-000, Airborne Weapons/Stores Loading Manual
6. A1-F18AC-730-300, Systems Maintenance INS, Backup Attitude, and Navigation Systems
7. A1-F18AC-130-310, Organizational Maintenance with IPB Landing Gear and Related Systems
8. Applicable operator's manuals

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review operation of the inch-pound torque wrench.
2. Review operation of the foot-pound torque wrench.
3. Review operation of the balance scale, trip 0.10-gram graduation.

4. Review operation of the balance scale, trip 0.1 to 0.50-gram graduation.
5. Review operation of the resiliency tester, DDPH-250.
6. Review operation of the push-pull gauge, DDPH-50.
7. Review operation of the thermometer.
8. Review operation of the dial indicator tensiometer.
9. Review operation of the multimeter.
10. Review operation of the micrometer set.

J. SUMMARY: During this period of instruction we covered applicable precision measuring equipment.

K. QUESTION AND ANSWERS :

DRAFT

A. **LECTURE NUMBER:** F/A-18 MOS 6337 A.05 (A-B)

B. **TIME:** 1.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

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E. **TITLE:** Electrical Static Discharge (ESD), Electrical Bonding, and Electromagnetic Compatibility (EMC)

F. **OBJECTIVE:** Student will be able to demonstrate/apply knowledge of Electrical Static Discharge (ESD), electrical bonding, and Electromagnetic Compatibility (EMC).

G. **INSTRUCTIONAL AIDES:**

H. **REFERENCES:**

1. NA 01-1A-23, Electronic Assembly Repair Standard Maintenance Practice Manual
2. A1-F18AX-WRM Series, Wire Repairs Manuals

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Discuss Electrical Static Discharge protection.
2. Discuss electrical bonding and Electromagnetic compatibility protection.

J. **SUMMARY:** During this period of instruction we covered Electrical Static Discharge (ESD), electrical bonding, and Electromagnetic Compatibility (EMC).

K. **QUESTION AND ANSWERS:**

A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.01 (A thru L)

B. **TIME:** 1.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

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E. **TITLE:** Scheduled/Unscheduled Inspections

F. **OBJECTIVE:** Student will be able to perform scheduled and unscheduled inspections safely and comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AC-MRC-000, Periodic Maintenance Information Cards
2. A1-F18AC-MRC-100, Turnaround Checklist
3. A1-F18AC-MRC-200, Daily Maintenance Requirement Cards
4. A1-F18AC-MRC-300, Phased Maintenance Requirement Cards
5. A1-F18AC-LMM-030, Organizational Maintenance Conditional Inspection Procedures
6. A1-F18AX-WUC-800, Work Unit Code
7. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
8. NA 16-1-540, Avionics Systems Cleaning and Corrosion Control Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review electrical and hydraulic application, as well as jacking and servicing procedures. REF: A1-F18AC-LMM-000
2. Review Periodic Maintenance Procedures REF: A1-F18AC-MRC-000
3. Review Turnaround Checklist Requirements. REF: A1-F18AC-MRC-100
4. Review Daily, Special, and Preservation Inspection Requirements. REF: A1-F18AC-MRC-200
5. Review Conditional Inspection Procedures. REF: A1-F18AC-LMM-030
6. Discuss Phase Maintenance Requirements. REF: A1-F18AC-MRC-300.
7. Discuss corrosion detection. REF: NA 16-1-540

J. **SUMMARY:** During this period of instruction we covered Periodic Maintenance, Turnaround and Daily Requirements,

Special, Preservation and Conditional Maintenance Requirements and we also discussed Phase Inspections.

K. QUESTION AND ANSWERS :

DRAFT

- A. LECTURE NUMBER:** F/A-18 MOS 6337 B.02 (A thru D)
- B. TIME:** 1.0 Hours
- C. DATE PREPARED:** 31 Aug 03
- D. DATE REVIEWED:** On separate sheet
- E. TITLE:** Technical Directives
- F. OBJECTIVE:** Student will be able demonstrate a knowledge of
Technical Directive Changes / Bulletins.
- G. INSTRUCTIONAL AIDES:**
- H. REFERENCES:**
1. NA 5215.12, NAVAIRSYSCOM Technical Directive System
 2. NA 5215.10, Processing of RAMEC
 3. OPNAVINST 4290.2_, Naval Aviation Maintenance Program (NAMP)
- I. PRESENTATION:**
1. Discuss the Technical Directive system. REF: NA 5215.12
 2. Discuss Rapid Action Minor Engineering Change proposals.
REF: NA 5215.10
 3. Discuss incorporating Technical Directive Changes.
REF: OPNAVINST 4790.2_
 4. Discuss incorporating Technical Directive Bulletins.
REF: OPNAVINST 4790.2_
- J. SUMMARY:** During this period of instruction we covered the
Technical Directives System, RAMECs, and incorporating
Technical Directive Changes / Bulletins.
- K. QUESTION AND ANSWERS :**

DRAFT

A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.03 (A thru C)

B. **TIME:** 1.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

E. **TITLE:** Canopy and Boarding Ladder System

F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Canopy and boarding ladder system theory of operation, functional check, and fault isolation procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AX-120-100, Organizational Maintenance Principles of Operation Seat, Canopy, Survival Equipment, and Boarding Ladder
2. A1-F18AX-120-100, Organizational Maintenance Testing and Troubleshooting Seat, Canopy, Survival Equipment, and Boarding Ladder
3. A1-F18AX-120-100, Organizational Maintenance Seat, Canopy, Survival Equipment, and Boarding Ladder
4. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
5. A1-F18AX-WUC-800, Work Unit Code
6. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
7. NA 16-1-540, Avionics Cleaning and Corrosion Prevention/Control

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Discuss theory of operation for the canopy system. REF: A1-F18AX-120-100
2. Discuss fault isolation for the canopy system. REF: A1-F18AX-120-200
3. Discuss functional check for the canopy system. REF: A1-F18AX-120-200
4. Discuss theory of operation for the boarding ladder system. REF: A1-F18AX-120-100

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5. Discuss fault isolation for the boarding ladder system. REF: A1-F18AX-120-200
6. Discuss functional check for the boarding ladder system. REF: A1-F18AX-120-200
7. Discuss appropriate 3M documentation procedures. REF: OPNAVINST 4790.2_ and A1-F18AX-WUC-800
8. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
9. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
10. Discuss corrosion detection and prevention procedures. REF: NA 16-1-540

J. SUMMARY: During this period of instruction we covered canopy and boarding ladder system theory of operation, functional check, and fault isolation of canopy and boarding ladder system components. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS :

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40. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
41. Discuss corrosion detection and prevention procedures. REF:
NA 16-1-540

J. SUMMARY: During this period of instruction we covered electrical system theory of operation, functional check, fault isolation, and maintenance procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS :



DRAFT

- A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.4 (A thru D)
- B. **TIME:** 3.0 Hours
- C. **DATE PREPARED:** 31 Aug 03
- D. **DATE REVIEWED:** On separate sheet
- E. **TITLE:** Landing Gear System



F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Landing gear system theory of operation, functional check, fault isolation, and removal and replacement procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AC-130-100, Organizational Maintenance Principles of Operation Landing Gear and Related Systems
2. A1-F18AC-130-200, Organizational Maintenance Testing and Troubleshooting Landing Gear and Related Systems
3. A1-F18AC-130-300, Organizational Maintenance with IPB Landing Gear and Related Systems
4. A1-F18AC-130-310, Organizational Maintenance with IPB Landing Gear and Related Systems
5. A1-F18AC-130-320, Organizational Maintenance with IPB Landing Gear and Related Systems
6. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
7. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
8. A1-F18AX-WUC-800, Work Unit Code Manual
9. NA 16-1-540, Avionics Systems Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review landing gear system theory of operation. REF: A1-F18-AC-130-100
2. Review landing gear control system functional check procedures. REF: A1-F18AC-130-200
3. Review landing gear position indicating system functional check procedures. REF: A1-F18AC-130-200
4. Review landing gear warning system functional check procedures. REF: A1-F18AC-130-200

5. Review wheel brake and anti skid system functional check procedures. REF: A1-F18AC-130-200
6. Review nose wheel steering system functional check procedures. REF: A1-F18AC-130-200
7. Review launch bar / arresting gear systems functional check procedures. REF: A1-F18AC-130-200
8. Review landing gear control system fault isolation procedures. REF: A1-F18AC-130-200
9. Review landing gear position indicating system fault isolation procedures. REF: A1-F18AC-130-200
10. Review landing gear warning system fault isolation procedures. REF: A1-F18AC-130-200
11. Review wheel brake and anti skid system fault isolation procedures. REF: A1-F18AC-130-200
12. Review nose wheel steering system fault isolation procedures. REF: A1-F18AC-130-200
13. Review launch bar / arresting gear systems fault isolation procedures. REF: A1-F18AC-130-200
14. Discuss R&R of the Landing Gear Control Unit (LGCU). REF: A1-F18AC-130-300
15. Discuss R&R of the MLG down-lock switch. REF: A1-F18AC-130-300
16. Discuss R&R of the MLG weight-on-wheels switch. REF: A1-F18AC-130-300
17. Discuss R&R of the NLG up-lock switch. REF: A1-F18AC-130-300
18. Discuss R&R of the NLG weight-on-wheels switch. REF: A1-F18AC-130-300
19. Discuss R&R LH vertical console control panel procedures. REF: A1-F18AC-130-300
20. Discuss R&R motion pickup transducer procedures. REF: A1-F18AC-130-300
21. Discuss R&R skid control box assembly procedures. REF: A1-F18AC-130-300
22. Discuss R&R arresting hook up switch procedures. REF: A1-F18AC-130-300
23. Discuss R&R arresting hook down proximity switch procedures. REF: A1-F18AC-130-300
24. Discuss switch rigging procedures. REF: A1-F18AC-130-300
25. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800
26. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
27. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
28. Discuss corrosion detection and prevention procedures. REF: NA 16-1-540

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J. SUMMARY: During this period of instruction we covered landing gear system theory of operation, functional check, fault isolation, and removal and replacement

procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS :

DRAFT

A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.5 (A thru D)

B. **TIME:** 3.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

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E. **TITLE:** Fire Detection System

F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Fire detection system theory of operation, functional check, fault isolation, and removal and replacement procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AC-240-100, Organizational Maintenance Principles of Operation Secondary Power System and Related Systems
2. A1-F18AC-240-200, Organizational Maintenance Testing and Troubleshooting Secondary Power System and Related Systems
3. A1-F18AC-240-300, Organizational Maintenance with IPB Landing Gear and Related Systems
4. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
5. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
6. A1-F18AX-WUC-800, Work Unit Code Manual
7. NA 16-1-540, Avionic Systems Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review fire detection system theory of operation. REF: A1-F18-AC-240-100
2. Review fire detection system functional check procedures. REF: A1-F18AC-240-200
3. Review fire detection system fault isolation procedures. REF: A1-F18AC-240-200
4. Discuss removal and replacement of the fire detection control unit. REF: A1-F18AC-240-300
5. Discuss removal and replacement of the fire detection element. REF: A1-F18AC-240-300
6. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800

7. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
8. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
9. Discuss corrosion detection and prevention procedures. REF:
NA 16-1-540

J. SUMMARY: During this period of instruction we covered fire detection system theory of operation, functional check, fault isolation, and removal and replacement procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS :

DRAFT

A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.6 (A thru D)

B. **TIME:** 3.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

E. **TITLE:** Power Plants and Related System

F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Power plants and related systems theory of operation, functional check, fault isolation, and removal and replacement procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AC-270-100, Organizational Maintenance Principles of Operation Power Plants and Related Systems
2. A1-F18AC-270-200, Organizational Maintenance Testing and Troubleshooting Power Plants and Related Systems
3. A1-F18AC-270-300, Organizational Maintenance with IPB Power Plants and Related Systems
4. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
5. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
6. A1-F18AX-WUC-800, Work Unit Code Manual
7. NA 16-1-540, Avionics Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review power plants and related systems theory of operation. REF: A1-F18AC-270-100
2. Discuss EMI / IFEI functional check procedures. REF: A1-F18AC-270-200
3. Discuss inlet bleed air doors functional check procedures. REF: A1-F18AC-270-200
4. Discuss inlet ice detector functional check procedures. REF: A1-F18AC-270-200
5. Discuss EMI / IFEI fault isolation procedures. REF: A1-F18AC-270-200

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6. Discuss inlet bleed air doors fault isolation procedures. REF: A1-F18AC-270-200
7. Discuss inlet ice detector fault isolation procedures. REF: A1-F18AC-270-200
8. Discuss R&R of the engine monitor indicators. REF: A1-F18AC-270-300
9. Discuss R&R of the bleed air door actuator. REF: A1-F18AC-270-300
10. Discuss R&R of integrated fuel-engine indicator. REF: A1-F18AC-270-300
11. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800
12. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
13. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
14. Discuss corrosion detection and prevention procedures. REF: NA 01-1A-509

J. SUMMARY: During this period of instruction we covered power plant and related systems theory of operation, functional check, fault isolation, and removal and replacement procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS :

DRAFT

A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.07 (A thru D)

B. **TIME:** 3.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

E. **TITLE:** Environmental Control System

F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Environmental control system theory of operation, functional check, fault isolation, and removal and replacement procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AC-410-100, Organizational Maintenance Principles of Operation Environmental Control System
2. A1-F18AC-410-200, Organizational Maintenance Testing and Troubleshooting Environmental Control System
3. A1-F18AC-410-300, Organizational Maintenance with IPB Environmental Control System
4. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
5. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
6. A1-F18AX-WUC-800, Work Unit Code Manual
7. NA 16-1-540, Avionics Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review environmental control system theory of operation.
REF: A1-F18AC-410-100
2. Discuss avionics cooling system functional check procedures.
REF: A1-F18AC-410-200
3. Discuss bleed air leak detection system functional check procedures. REF: A1-F18AC-410-200
4. Discuss avionics cooling system fault isolation procedures.
REF: A1-F18AC-410-200
5. Discuss bleed air leak detection system fault isolation procedures. REF: A1-F18AC-410-200
6. Discuss R&R ECS panel assembly. REF: A1-F18AC-410-300

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7. Discuss R&R of the bleed air leak detection control unit. REF: A1-F18AC-410-300
8. Discuss R&R of the engine duct sensing element. REF: A1-F18AC-410-300
9. Discuss R&R of the ACS temperature/flow control. REF: A1-F18AC-410-300
10. Discuss R&R of the ground cooling fan. REF: A1-F18AC-410-300
11. Discuss R&R of the ground cooling fan contactor. REF: A1-F18AC-410-300
12. Discuss R&R of the avionics fan control pressure switch. REF: A1-F18AC-410-300
13. Discuss R&R of the avionics ground cooling air inlet duct adapter and coupling switch. REF: A1-F18AC-410-300
14. Discuss R&R of the FCS emergency RAM air scoop solenoid. REF: A1-F18AC-410-300
15. Discuss R&R of the avionics cooling fan and filter. REF: A1-F18AC-410-300
16. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800
17. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
18. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
19. Discuss corrosion detection and prevention procedures. REF: NA 16-1-540

J. SUMMARY: During this period of instruction we covered environmental control system theory of operation, functional check, fault isolation, and removal and replacement procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS:

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A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.08 (A thru D)

B. **TIME:** 3.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

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E. **TITLE:** Electrical System

F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Electrical system theory of operation, functional check, fault isolation, and maintenance procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AC-420-100, Organizational Maintenance Principles of Operation Electrical System
2. A1-F18AC-420-200, Organizational Maintenance Testing and Troubleshooting Electrical System
3. A1-F18AC-420-300, Organizational Maintenance with IPB Electrical System
4. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
5. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
6. A1-F18AX-WUC-800, Work Unit Code Manual
7. NA 16-1-540, Avionics Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review electrical system theory of operation. REF: A1-F18AC-420-100
2. Discuss AC Power system functional check procedures. REF: A1-F18AC-420-200
3. Discuss DC Power system functional check procedures. REF: A1-F18AC-420-200
4. Discuss ground power switching system functional check procedures. REF: A1-F18AC-420-200
5. Discuss AC Power system fault isolation procedures. REF: A1-F18AC-420-200
6. Discuss DC Power system fault isolation procedures. REF: A1-F18AC-420-200

7. Discuss ground power switching fault isolation check procedures. REF: A1-F18AC-420-200
8. Discuss R&R utility/emergency batteries. REF: A1-F18AC-420-300
9. Discuss R&R utility/emergency batteries limiter/holder. REF: A1-F18AC-420-300
10. Discuss R&R battery charging panel assembly. REF: A1-F18AC-420-300
11. Discuss R&R utility/emergency battery voltmeter. REF: A1-F18AC-420-300
12. Discuss R&R battery charger converter. REF: A1-F18AC-420-300
13. Discuss R&R DC power sensor. REF: A1-F18AC-420-300
14. Discuss R&R L/R DC bus tie current limiter/holder. REF: A1-F18AC-420-300
15. Discuss R&R L/R power supply. REF: A1-F18AC-420-300
16. Discuss R&R external power monitor. REF: A1-F18AC-420-300
17. Discuss R&R external power contactor. REF: A1-F18AC-420-300
18. Discuss R&R generator tie control panel assembly. REF: A1-F18AC-420-300
19. Discuss R&R electric power control panel assembly. REF: A1-F18AC-420-300
20. Discuss R&R L/R A/C bus tie current limiters/limit holders. REF: A1-F18AC-420-300
21. Discuss R&R L/R current transformer assembly. REF: A1-F18AC-420-300
22. Discuss R&R L/R bus tie contactor. REF: A1-F18AC-420-300
23. Discuss R&R L/R power contactor. REF: A1-F18AC-420-300
24. Discuss R&R 26 volt AC transformer assembly. REF: A1-F18AC-420-300
25. Discuss R&R ground power control panel assembly. REF: A1-F18AC-420-300
26. Discuss R&R #2 CB panel assembly. REF: A1-F18AC-420-300
27. Discuss R&R #4 CB panel assembly. REF: A1-F18AC-420-300
28. Discuss R&R #5 CB panel assembly. REF: A1-F18AC-420-300
29. Discuss R&R #7 CB/relay panel assembly. REF: A1-F18AC-420-300
30. Discuss R&R #8 CB/relay panel assembly. REF: A1-F18AC-420-300
31. Discuss R&R #2 relay panel assembly. REF: A1-F18AC-420-300
32. Discuss R&R #3 relay panel assembly. REF: A1-F18AC-420-300
33. Discuss R&R #4 relay panel assembly. REF: A1-F18AC-420-300
34. Discuss R&R LH essential circuit breakers control panel assembly. REF: A1-F18AC-420-300
35. Discuss R&R RH essential circuit breakers control panel assembly. REF: A1-F18AC-420-300
36. Discuss R&R #9 relay panel assembly. REF: A1-F18AC-420-300
37. Discuss R&R generator converter unit. REF: A1-F18AC-420-300
38. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800
39. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_

A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.09 (A thru D)

B. **TIME:** 3.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

E. **TITLE:** Lighting System

F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Lighting system theory of operation, functional check, fault isolation, and removal and replacement procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AC-440-100, Organizational Maintenance Principles of Operation Lighting System
2. A1-F18AC-440-200, Organizational Maintenance Testing and Troubleshooting Lighting System
3. A1-F18AC-440-300, Organizational Maintenance with IPB Lighting System
4. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
5. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
6. A1-F18AX-WUC-800, Work Unit Code Manual
7. NA 16-1-540, Avionics Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review lighting system theory of operation. REF: A1-F18AC-440-100
2. Discuss interior lighting system functional check procedures. REF: A1-F18AC-440-200
3. Discuss Warning/Caution/Advisory lighting system functional check procedures. REF: A1-F18AC-440-200
4. Discuss exterior lighting system functional check procedures. REF: A1-F18AC-440-200
5. Discuss interior lighting system fault isolation procedures. REF: A1-F18AC-440-200
6. Discuss Warning/Caution/Advisory lighting system fault isolation procedures. REF: A1-F18AC-440-200

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7. Discuss R&R exterior lighting system fault isolation procedures. REF: A1-F18AC-440-200
8. Discuss R&R of the cockpit electric light control. REF: A1-F18AC-440-300
9. Discuss R&R of the exterior light control panel assembly. REF: A1-F18AC-440-300
10. Discuss R&R of the LEX position light. REF: A1-F18AC-440-300
11. Discuss R&R of the wing tip position light. REF: A1-F18AC-440-300
12. Discuss R&R of the supplemental position light. REF: A1-F18AC-440-300
13. Discuss R&R of the tail position light. REF: A1-F18AC-440-300
14. Discuss R&R of the formation lights. REF: A1-F18AC-440-300
15. Discuss R&R of the wing tip formation light. REF: A1-F18AC-440-300
16. Discuss R&R of the landing/taxi light assembly. REF: A1-F18AC-440-300
17. Discuss R&R of the tail position light transformer. REF: A1-F18AC-440-300
18. Discuss R&R of the anti collision strobe light. REF: A1-F18AC-440-300
19. Discuss R&R of the strobe light power supply. REF: A1-F18AC-440-300
20. Discuss R&R of the strobe light fault indicator. REF: A1-F18AC-440-300
21. Discuss R&R of the interior light control box panel assembly. REF: A1-F18AC-440-300
22. Discuss R&R of the cockpit floodlight. REF: A1-F18AC-440-300
23. Discuss R&R of the L/R advisory and threat warning indicator panel. REF: A1-F18AC-440-300
24. Discuss R&R of the caution light indicator panel. REF: A1-F18AC-440-300
25. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800
26. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
27. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
28. Discuss corrosion detection and prevention procedures. REF: NA 16-1-540

J. SUMMARY: During this period of instruction we covered lighting system theory of operation, functional check, fault isolation, and removal and replacement procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to

K. QUESTION AND ANSWERS

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A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.10 (A thru D)

B. **TIME:** 3.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

E. **TITLE:** Fuel System

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F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Fuel system theory of operation, functional check, fault isolation, and removal and replacement procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AX-460-100, Organizational Maintenance Principles of Operation Fuel System
2. A1-F18AX-460-200, Organizational Maintenance Testing and Troubleshooting Fuel System
3. A1-F18AX-460-300, Organizational Maintenance with IPB Fuel System
4. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
5. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
6. A1-F18AX-WUC-800, Work Unit Code Manual
7. NA 16-1-540, Avionics Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review fuel system theory of operation. REF: A1-F18AC-460-100
2. Discuss fuel quantity gauging system functional check procedures. REF: A1-F18AX-460-200
3. Discuss fuel level low warning system functional check procedures. REF: A1-F18AX-460-200
4. Discuss fuel quantity gauging fault isolation procedures. REF: A1-F18AX-460-200
5. Discuss fuel level low warning system fault isolation procedures. REF: A1-F18AX-460-200
6. Discuss performance transmitter capacitance test procedures. REF: A1-F18AC-460-200

7. Discuss R&R of the fuel quantity indicator. REF: A1-F18AX-460-300
8. Discuss R&R of the fuel quantity gauging intermediate device. REF: A1-F18AX-460-300
9. Discuss R&R of the selected fuel quantity transmitters. REF: A1-F18AX-460-300
10. Discuss R&R of the fuel level low sensing control unit. REF: A1-F18AX-460-300
11. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800
12. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
13. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
14. Discuss corrosion detection and prevention procedures. REF: NA 16-1-540

J. SUMMARY: During this period of instruction we covered fuel system theory of operation, functional check, fault isolation, and removal and replacement procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS :

DRAFT

A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.11 (A thru D)

B. **TIME:** 3.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

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E. **TITLE:** Pitot Static System & Related Instruments

F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Pitot static system theory of operation, functional check, fault isolation, and removal and replacement procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AC-510-100, Organizational Maintenance Principles of Operation Pitot Static System
2. A1-F18AC-510-200, Organizational Maintenance Testing and Troubleshooting Pitot Static System
3. A1-F18AC-510-300, Organizational Maintenance with IPB Pitot Static System
4. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
5. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
6. A1-F18AX-WUC-800, Work Unit Code Manual
7. NA 16-1-540, Avionics Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review pitot static system theory of operation. REF: A1-F18AC-510-100
2. Discuss pitot static system and related instruments functional check procedures. REF: A1-F18AC-510-200
3. Discuss pitot static system heaters functional check procedures. REF: A1-F18AC-510-200
4. Discuss pitot static system and related instruments fault isolation procedures. REF: A1-F18AC-510-200
5. Discuss pitot static system heaters fault isolation procedures. REF: A1-F18AC-510-200
6. Discuss R&R of the L shaped pitot static tube. REF: A1-F18AC-510-300

7. Discuss R&R of the standby instruments. REF: A1-F18AC-510-300
8. Discuss R&R of the selected fuel quantity transmitters. REF: A1-F18AC-510-300
9. Discuss R&R of the source select valve. REF: A1-F18AC-510-300
10. Discuss R&R of the static tube tee. REF: A1-F18AC-510-300
11. Discuss R&R of the current flow sensor. REF: A1-F18AC-510-300
12. Discuss R&R of the moisture trap assembly. REF: A1-F18AC-510-300
13. Discuss R&R of the mechanical aircraft clock. REF: A1-F18AC-510-300
14. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800
15. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
16. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
17. Discuss corrosion detection and prevention procedures. REF: NA 16-1-540

J. SUMMARY: During this period of instruction we covered pitot static system theory of operation, functional check, fault isolation, and removal and replacement procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS :

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A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.12 (A thru D)

B. **TIME:** 3.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

E. **TITLE:** Air Data Computer System

F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Air data computer system theory of operation, functional check, fault isolation, and removal and replacement procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AC-560-100, Organizational Maintenance Principles of Operation Air Data Computer System
2. A1-F18AC-560-200, Organizational Maintenance Testing and Troubleshooting Air Data Computer System
3. A1-F18AC-560-300, Organizational Maintenance with IPB Air Data Computer System
4. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
5. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
6. A1-F18AX-WUC-800, Work Unit Code Manual
7. NA 16-1-540, Avionics Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review air data computer system theory of operation. REF: A1-F18AC-560-100
2. Discuss air data computer system functional check procedures. REF: A1-F18AC-560-200
3. Discuss TTP / ADSU heaters functional check procedures. REF: A1-F18AC-560-200
4. Discuss AOA approach and indexer light functional check procedures. REF: A1-F18AC-560-200
5. Discuss air data computer system fault isolation procedures. REF: A1-F18AC-560-200
6. Discuss R&R of the air data computer. REF: A1-F18AC-560-300

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7. Discuss R&R of the total temperature probe. REF: A1-F18AC-560-300
8. Discuss R&R of the air stream direction sensing unit. REF: A1-F18AC-560-300
9. Discuss R&R of the AOA approach light assembly. REF: A1-F18AC-560-300
10. Discuss R&R of the approach lights flasher. REF: A1-F18AC-560-300
11. Discuss R&R of the AOA indexer assembly. REF: A1-F18AC-560-300
12. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800
13. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
14. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
15. Discuss corrosion detection and prevention procedures. REF: NA 16-1-540

J. SUMMARY: During this period of instruction we covered air data computer system theory of operation, functional check, fault isolation, and removal and replacement procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS :

DRAFT

A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.13 (A thru D)

B. **TIME:** 3.0 Hours

C. **DATE PREPARED:** 31 Aug 03

D. **DATE REVIEWED:** On separate sheet

E. **TITLE:** Integrated Flight Control System

F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Integrated flight control system theory of operation, functional check, fault isolation, and removal and replacement procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft

H. **REFERENCES:**

1. A1-F18AC-570-100, Organizational Maintenance Principles of Operation Integrated Flight Control System
2. A1-F18AC-570-200, Organizational Maintenance Testing and Troubleshooting Integrated Flight Control System
3. A1-F18AC-570-300, Organizational Maintenance with IPB Integrated Flight Control System
4. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
5. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
6. A1-F18AX-WUC-800, Work Unit Code Manual
7. NA 16-1-540, Avionics Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review integrated flight control system theory of operation.
REF: A1-F18AC-570-100
2. Discuss FCS MAINT BIT procedures. REF: A1-F18AC-570-200
3. Discuss FCS NWS BIT procedures. REF: A1-F18AC-570-200
4. Discuss FCS ATC BIT procedures. REF: A1-F18AC-570-200
5. Discuss FCS rigging procedures. REF: A1-F18AC-570-200
6. Discuss FCS test groups. REF: A1-F18AC-570-200
7. Discuss fault isolation of the horizontal stabilizer system.
REF: A1-F18AC-570-200
8. Discuss fault isolation of the trailing edge flap system.
REF: A1-F18AC-570-200

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9. Discuss fault isolation of the leading edge flap system. REF: A1-F18AC-570-200
10. Discuss fault isolation of the rudder system. REF: A1-F18AC-570-200
11. Discuss fault isolation of the aileron system. REF: A1-F18AC-570-200
12. Discuss R&R of the linear electric accelerometer. REF: A1-F18AC-570-300
13. Discuss R&R of the A/C controls stick grip assembly. REF: A1-F18AC-570-300
14. Discuss R&R of the control stick sensor. REF: A1-F18AC-570-300
15. Discuss R&R of the rudder control. REF: A1-F18AC-570-300
16. Discuss R&R of the rate gyroscope. REF: A1-F18AC-570-300
17. Discuss R&R of the air data sensor. REF: A1-F18AC-570-300
18. Discuss R&R of the FCS control panel. REF: A1-F18AC-570-300
19. Discuss R&R of the longitudinal feel trim actuator. REF: A1-F18AC-570-300
20. Discuss R&R of the asymmetry control. REF: A1-F18AC-570-300
21. Discuss R&R of the ratio changer actuator. REF: A1-F18AC-570-300
22. Discuss R&R of the wing fold electric drive unit. REF: A1-F18AC-570-300
23. Discuss R&R of the roll pitch yaw computer. REF: A1-F18AC-570-300
24. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800
25. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
26. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
27. Discuss corrosion detection and prevention procedures. REF: NA 16-1-540

J. SUMMARY: During this period of instruction we covered integrated flight control system theory of operation, functional check, fault isolation, and removal and replacement procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS :

DRAFT

- A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.14 (A thru D)
- B. **TIME:** 3.0 Hours
- C. **DATE PREPARED:** 31 Aug 03
- D. **DATE REVIEWED:** On separate sheet
- E. **TITLE:** Instruments, Back-up Attitude, and Navigation Systems
- F. **OBJECTIVE:** Student will be able to demonstrate knowledge of the following: Instruments, Back-up Attitude, and Navigation system theory of operation, functional check, fault isolation, and removal and replacement procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.
- G. **INSTRUCTIONAL AIDES:** F/A 18 Aircraft



H. **REFERENCES:**

1. A1-F18AC-730-100, Organizational Maintenance Principles of Operation Inertial Navigation, Backup Attitude, and Navigation Systems
2. A1-F18AC-730-200, Organizational Maintenance Testing and Troubleshooting Inertial Navigation, Backup Attitude, and Navigation Systems
3. A1-F18AC-730-300, Organizational Maintenance with IPB Inertial Navigation, Backup Attitude, and Navigation Systems
4. A1-F18AC-LMM-000, Organizational Maintenance Line Maintenance Procedures
5. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
6. A1-F18AX-WUC-800, Work Unit Code Manual
7. NA 16-1-540, Avionics Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Review instruments, back-up attitude, and navigation systems theory of operation. REF: A1-F18AC-730-100
2. Review inertial navigation system theory of operation. REF: A1-F18AC-730-100
3. Discuss attitude reference indicator operation functional check procedures. REF: A1-F18AC-730-200
4. Discuss instrument ground initiated BIT procedures. REF: A1-F18AC-730-200

5. Review instruments, back-up attitude, and navigation systems fault isolation. REF: A1-F18AC-730-200
6. Review inertial navigation system fault isolation. REF: A1-F18AC-730-200
7. Discuss R&R of the inertial navigation unit. REF: A1-F18AC-730-300
8. Discuss R&R of the light support and MAD compensator panel. REF: A1-F18AC-730-300
9. Discuss R&R of the magnetic azimuth detector. REF: A1-F18AC-730-300
10. Discuss R&R of the standby compass. REF: A1-F18AC-730-300
11. Discuss R&R of the static power inverter. REF: A1-F18AC-730-300
12. Discuss R&R of the attitude reference indicator. REF: A1-F18AC-730-300
13. Discuss ground alignment procedures. REF: A1-F18AC-730-300
14. Discuss ground alignment stored heading procedures. REF: A1-F18AC-730-300
15. Discuss gyro bias calibration. REF: A1-F18AC-730-300
16. Discuss MAD calibration-ground. REF: A1-F18AC-730-300
17. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800
18. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
19. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
20. Discuss corrosion detection and prevention procedures. REF: NA 16-1-540

J. SUMMARY: During this period of instruction we covered instruments, back-up attitude, and navigation systems theory of operation, functional check, fault isolation, and removal and replacement procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS :

DRAFT

- A. **LECTURE NUMBER:** F/A-18 MOS 6337 B.15 (A thru D)
- B. **TIME:** 3.0 Hours
- C. **DATE PREPARED:** 31 Aug 03
- D. **DATE REVIEWED:** On separate sheet
- E. **TITLE:** Instruments, Back-up Attitude, and Navigation Systems
- F. **OBJECTIVE:** Student will be able to demonstrate knowledge of wire repair procedures. Students will also be able to comply with all 3M, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.



G. **INSTRUCTIONAL AIDES:**

H. **REFERENCES:**

1. A1-F18AX-WRM-XXX, Organizational Maintenance Wiring Repair with Parts Data General Wiring Procedures
2. NA 01-1A-505.XXX, Installation Practices Electric and Electronic Wiring
3. OPNAVINST 4790.2_, Naval Aviation Maintenance Program
4. A1-F18AX-WUC-800, Work Unit Code Manual
5. NA 16-1-540, Avionics Cleaning and Corrosion Manual

I. **PRESENTATION:**

NOTE: Stress all WARNINGS, CAUTIONS and NOTES throughout the presentation.

1. Discuss wire repair procedures. REF: A1-F18AX-WRM-XXX
2. Discuss use of wire repair manuals. REF: A1-F18AX-WRM-XXX
3. Discuss use of applicable tools and support equipment. REF: A1-F18AX-WRM-XXX
4. Discuss routing of wires, wire bundles, and coaxial cables. REF: A1-F18AX-WRM-XXX
5. Discuss repair of coaxial connectors. REF: A1-F18AX-WRM-XXX
6. Discuss repair/replacement of cannon plugs. REF: A1-F18AX-WRM-XXX
7. Discuss installation of splices, terminals, and end caps. REF: A1-F18AX-WRM-XXX
8. Discuss repair of shielded/non-shielded conductors. REF: A1-F18AX-WRM-XXX
9. Discuss environmental sealing of cables/components. REF: A1-F18AX-WRM-XXX
10. Discuss installation of insulation sleeving/protective boots. REF: A1-F18AX-WRM-XXX

11. Discuss appropriate 3M documentation procedures. REF: NA OPNAVINST 4790.2_ and A1-F18AX-WUC-800
12. Discuss Tool Control procedures. REF: OPNAVINST 4790.2_
13. Discuss FOD prevention guidelines. REF: OPNAVINST 4790.2_
14. Discuss corrosion detection and prevention procedures. REF: NA 16-1-540

J. SUMMARY: During this period of instruction we covered wire repair procedures. We also discussed proper 3M documentation, Tool Control, FOD, and Corrosion Control procedures as they pertain to each task.

K. QUESTION AND ANSWERS :

DRAFT