NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

Attachment 19 - Pan Am Training Academy Records

OPERATIONAL FACTORS

DCA11MA075

A. ACCIDENT

Operator:	Omega Aerial Refueling Services, Inc.
Location:	Point Mugu Naval Air Station, California
Date:	May 18, 2011
Airplane:	Boeing 707-321B, Registration Number: N707AR

B. NATIONAL TRANSPORTATION SAFETY BOARD (NTSB) OPERATIONS GROUP

Captain David Lawrence - Chairman
Senior Air Safety Investigator
National Transportation Safety Board
490 L'Enfant Plaza East S.W.
Washington, DC 20594

Captain John Banitt
B707 Flight Standardization Officer
Omega Air Refueling
700 N. Fairfax Street, Suite 306
Alexandria, Virginia 22314

Mr. Tony James
Air Safety Investigator
Federal Aviation Administration (FAA)
800 Independence Ave. S.W.
Washington, DC 20591

Mr. Michael Coker
Senior Safety Pilot
The Boeing Company
P.O. Box 3707 MC 20-95
Seattle, Washington 98124-2207

C. SUMMARY

On May 18, 2011, at approximately 1727 pm local time (0027 UTC), Omega Air flight 70, a Boeing 707-321B (N707AR), crashed on takeoff at the Point Mugu Naval Air Station[1], Point Mugu, California. The airplane impacted beyond the departure end of runway 21 and was destroyed by post-impact fire. All three flight crewmembers aboard escaped with minor injuries.

[1] Naval Base Ventura County.

D. PAN AM RECORDS

1.0 Part 142.5 Certificate

U.S. Department
of Transportation
Federal Aviation
Administration

Training Center Certificate

Number: PN7X447K

This certificate is issued to

PAN AM INTERNATIONAL FLIGHT ACADEMY

whose primary business address is

5000 NW 36th STREET

MIAMI, FLORIDA 33122

Upon finding that its organization complies in all respects with the requirements of the Federal Aviation Regulations relating to the establishment of an Air Agency, is empowered to operate an approved Training Center in accordance with the Training Specifications issued herewith, and may conduct training courses with respect to the following Parts of the Federal Aviation Regulations:

PART 142

This certificate unless amended, suspended, or revoked, shall continue in effect indefinitely.

By Direction of the Administrator

[redacted]

ACTING OFFICE MANAGER

Date issued: September 12, 1997

Issuing Office: MIAMI FSDO-19

THIS CERTIFICATE IS NOT TRANSFERABLE, AND ANY MAJOR CHANGE IN THE APPROVED FACILITIES, OR IN THE LOCATION THEREOF, SHALL BE IMMEDIATELY REPORTED TO THE RESPONSIBLE FLIGHT STANDARDS DISTRICT OFFICE.

Any alteration of this certificate is punishable by a fine not exceeding $1000, or imprisonment not exceeding 3 years, or both.

FAA FORM 8000-43 (11-95) NSN: 0052-00-517-9C00

2.0 A005 Ops Specs Exemptions and Deviations

U.S. Department of Transportation
Federal Aviation Administration

Training Specifications

A005 . Exemptions and Deviations

HQ Control: 02/11/2005
HQ Revision: 010

a. The certificate holder is authorized to conduct operations in accordance with the provisions, conditions, and/or limitations set forth in the following exemptions and deviations issued in accordance with Title 14 of the Code of Federal Regulations (CFR). The certificate holder is not authorized and shall not conduct any operations under the provisions of any other exemptions and/or deviations issued under Title 14 of the CFR.

b. Exemptions

Exemption Number	Date of Expiration	Remarks and/or References
4901 L	05/31/2013	

c. Deviations

Deviation Authority	Deviation From	Description	Conditions and Limitations
142.9(a)	142.53(b)(1)	Line Operational Simulation (LOS) in Lieu of In-Flight Performance.	Deviation from the annual in-flight performance requirements of 14 CFR § 142.53(b)(1) in order to allow certain Pan Am International Flight Academy flight instructors to satisfy the requirements of that section by satisfactorily completing an approved Line Operational Simulation (LOS) each 12 calendar months, is granted. Additional conditions required under this deviation, including instructor eligibility and LOS minimum standards are specified in the document Line-Performance/Line-Observation Course for Part 142 Flight Instructors, Air Carrier Contract Flight Instructors (Simulator) and Air Carrier Contract Check Pilots (Simulator) located at www.faa.gov/pilots/training/part_142. These additional conditions are an integral part of this deviation and must be adhered to. Expires 12/31/2011 unless sooner canceled by Pan Am International Flight Academy or the FAA
142.9(a)	142.73(d)(1)	Deviation from the requirement to maintain trainee records at the training center or satellite training center where training, testing, or checking occurs.	At the conclusion of training, Pan Am International Flight Academy shall maintain the records required by 14 CFR § 142.73(a) at the location(s) specified in the Pan Am International Flight Academy Part 142 Instructor Training Manual Volume IV, Chapter 01, Paragraph 1.9. Responsibility for maintenance of these records belongs to the person identified in Pan Am International Flight Academy training specification A025, Table 1. Expires 12/31/2011 unless sooner canceled by Pan Am International Flight Academy or the FAA.
142.9(a)	142.73(d)(2)	Deviation from the requirement to maintain instructor and evaluator records at the training center of primary employment.	Pan Am International Flight Academy shall maintain the records required by 14 CFR 142.73(b) at the location(s) specified in the Pan Am International Flight Academy Part 142 Instructor Training Manual, Volume IV, Chapter 01, Paragraph 1.9. Responsibility for maintenance of these records belongs to the person identified in Pan Am International Fight Academy training specification A025, Table 2. Expires 12/31/2011 unless sooner canceled by Pan Am International Flight Academy or the FAA.

Print Date: 5/4/2011 | A005-1 Pan Am International Flight Academy | Certificate No.: PN7X447K

U.S. Department
of Transportation
Federal Aviation
Administration

Training Specifications

1. Issued by the Federal Aviation Administration.
2. These Training Specifications are approved by direction of the Administrator.

2011.05.04 12:02:22 Central Daylight Time
Location: WebOPSS
Digitally signed by Richard Behrle,
Principal Operations Inspector (SOI9)

3. Date Approval is effective: 05/04/2011 Amendment Number: 22

4. I hereby accept and receive the Training Specifications in this paragraph.

Von Lippke, Carmen, Director, Training Center Operations

[redacted]

Date: 5/4/2011

3.0 A015 Flight Simulators Authorization

A015 . Flight Simulators Authorization

HQ Control: 10/17/2008
HQ Revision: 020

The certificate holder is authorized to conduct training, testing, and/or checking, as described in the approved training program, in the following flight simulators providing the certificate holder has, for adequate periods of time and at a location approved by the Administrator, exclusive use of the simulator. Additionally the certificate holder must ensure that the simulator remains qualified in accordance with the requirements of 14 CFR part 60 and 14 CFR part 142 §142.59 for all training, testing, and/or checking activities.

Table 1 - Authorized Flight Simulators

Aircraft Make/Model/Series	FAA Simulator ID Number	Simulator Level	Location City/State/Country	Remarks
A-300-B4	56	C	Hebron, KY USA	P41X
A-320-231	332	C	Miami, FL USA	PN7X
A-320-232	275	C	Miami, FL USA	UQ7X
B-707-321B	268	A	Miami, FL USA	PN7X
B-727-222	174	C	Miami, FL USA	PN7X
B-727-225	58	C	Hebron, KY USA	P41X
B-737-200	559	C	Miami, FL USA	PN7X
B-737-200	220	C	Henderson, NV USA	UXQX
B-737-200	780	C	Miami, FL USA	PN7X
B-737-300	446	C	Miami, FL USA	PN7X
B-737-400	1059	C	Miami, FL USA	PN7X
B-737-700	748	D	Miami, FL USA	UQ7X
B-737-700	978	D	Miami, FL USA	UQ7X
B-737-800	749	D	Miami, FL USA	UQ7X
B-737-800	794	D	Miami, FL USA	UQ7X
B-737-800	1097	D	Miami, FL USA	UQ7X
B-737-800	1161	D	Miami, FL USA	PN7X
B-737-800	1168	D	Henderson, NV USA	UXQX
B-737-800	1104	D	Miami, FL, USA	PN7X
B-747-200	816	C	Miami, FL USA	PN7X
B-747-249F	106	C	Miami, FL USA	PN7X
B-747-341	1064	C	Miami, FL USA	PN7X
B-747-400	722	C	Miami, FL USA	PN7X
B-747-400F	1092	D	Miami, FL USA	PN7X
B-767-200	525	C	Miami, FL USA	PN7X
B-767-269	679	C	Miami, FL USA	PN7X
B-767-275	0031	C	Miami, FL USA	PN7X
B-777-300ER	530	D	Miami, FL USA	UQ7X

U.S. Department
of Transportation
Federal Aviation
Administration

Training Specifications

Aircraft Make/Model/Series	FAA Simulator ID Number	Simulator Level	Location City/State/Country	Remarks
CE-208-B	657	D	Miami, FL USA	PN7X
DC-10-10	375	C	Miami, FL USA	PN7X
DC-8-71	468	B	Hebron KY USA	P41X
DC-8-71	184	C	Miami, FL USA	PN7X
DC-9-30	38	C	Miami, FL USA	PN7X
DC-9-82	410	C	Miami, FL USA	PN7X
DC-9-82	729	C	Henderson, NV USA	UXQX
DC-9-82	122	C	Miami, FL USA	PN7X
MD-88-88	241	C	Henderson,NV USA	UXQX
MD-88-88	302	C	Miami, FL USA	PN7X

1. Issued by the Federal Aviation Administration.
2. These Training Specifications are approved by direction of the Administrator.

2011.04.29 13:36:13 Central Daylight Time
Location: WebOPSS
Digitally signed by Richard Behrle,
Principal Operations Inspector (SO19)

3. Date Approval is effective: 04/15/2011 Amendment Number: 47

4. I hereby accept and receive the Training Specifications in this paragraph.

Von Lippke, Carmen, Director, Training Center Operations

[redacted]

Date: 4/29/2011

Print Date: 4/29/2011 A015-2 Pan Am International Flight Academy Certificate No.: PN7X447K

4.0 B001 Core Curriculums

Table 1: Core Curriculums - Airplane

FAA Curriculum Title [14 CFR Part 61/63 Reference]	Certificate Holder Curriculum Title	Aircraft M/M/S	Facility	Authorization	Approval Status	Date
Airline Transport Pilot Certificate—Airplane—Multiengine Land—Add Aircraft Type Rating [§61.153]	A-300-B4 CORE CURRICULUM	A-300-B4	PN7X	Ground and Flight Training/Testing	Final, Issued On:	07/2001
Commercial Pilot Certificate—Airplane—Multiengine Land—Add Aircraft Type Rating [§61.63(d)]	A-300-B4 CORE CURRICULUM	A-300-B4	PN7X	Ground and Flight Training/Testing	Final, Issued On:	07/2001
Flight Engineer Certificate—Turbojet Powered [§63.31]	A-300-B4 CORE CURRICULUM	A-300-B4	PN7X	Ground and Flight Training/Testing	Final, Issued On:	03/2003
Airline Transport Pilot Certificate—Airplane—Multiengine Land—Aircraft Type Rating [§61.153]	A-300-B4 CORE CURRICULUM	A-300-B4	PN7X	Ground and Flight Training/Testing	Final, Issued On:	07/2001
Airline Transport Pilot Certificate—Airplane—Multiengine Land—Add Aircraft Type Rating [§61.153]	A-320 CORE CURRICULUM	A-320-232	PN7X	Ground and Flight Training/Testing	Final, Issued On:	04/2002
Commercial Pilot Certificate—Airplane—Multiengine Land—Add Aircraft Type Rating [§61.63(d)]	A-320 CORE CURRICULUM	A-320-232	PN7X	Ground and Flight Training/Testing	Final, Issued On:	04/2002
Airline Transport Pilot Certificate—Airplane—Multiengine Land—Aircraft Type Rating [§61.153]	A-320-232 CORE CURRICULUM	A-320-232	PN7X	Ground and Flight Training/Testing	Final, Issued On:	04/2002
Airline Transport Pilot Certificate—Airplane—Multiengine Land—Add Aircraft Type Rating [§61.153]	B-707 CORE CURRICULUM	B-707-321B	PN7X	Ground and Flight Training/Testing	Final, Issued On:	01/2000
Airline Transport Pilot Certificate—Airplane—Multiengine Land—Aircraft Type Rating [§61.153]	B-707 CORE CURRICULUM	B-707-321B	PN7X	Ground and Flight Training/Testing	Final, Issued On:	01/2000
Commercial Pilot Certificate—Airplane—Multiengine Land—Add Aircraft Type Rating [§61.63(d)]	B-707 CORE CURRICULUM	B-707-321B	PN7X	Ground and Flight Training/Testing	Final, Issued On:	01/2000
Flight Engineer Certificate—Turbojet Powered [§63.31]	B-707 CORE CURRICULUM	B-707-321B	PN7X	Ground and Flight Training/Testing	Final, Issued On:	01/2000
Airline Transport Pilot Certificate—Airplane—	B-727 CORE CURRICULUM	B-727-222	PN7X	Ground and Flight	Final, Issued	01/2000

5.0 B002 Specialty Curriculums

U.S. Department of Transportation
Federal Aviation Administration

Training Specifications

FAA Curriculum Title [14 CFR Part 61 Reference]	Certificate Holder Curriculum Title	Aircraft M/M/S	Facility	Authorization	Approval Status	Date
Pilot-in-Command Proficiency Check—Airplane [part 61 §61.58]	A-320 PIC PROFICIENCY CHECK	A-320-232	PN7X	Ground and Flight Training/Checking	Final, Issued On:	04/2002
Pilot-in-Command Proficiency Check—Airplane [part 61 §61.58]	A-320 PIC RECURRENT TRAINING	A-320-232	PN7X	Ground and Flight Training/Checking	Final, Issued On:	04/2002
Second-in-Command Qualification—Airplane—Multiengine Land—[part 61 §61.55(b)]	A-320 SIC INITIAL TRAINING	A-320-232	PN7X	Ground and Flight Training/Checking	Final, Issued On:	04/2002
Second-in-Command Qualification—Airplane—Multiengine Land—[part 61 §61.55(b)]	A-320 SIC RECURRENT TRAINING	A-320-232	PN7X	Ground and Flight Training/Checking	Final, Issued On:	04/2002
Recent Flight Experience: Flight Engineer—Competency Check [part 91 §91.529(b)]	B-707 FLIGHT ENGINEER RECURRENT TRAINING	B-707-321B	PN7X	Ground and Flight Training/Checking	Final, Issued On:	01/2000
Pilot-in-Command Proficiency Check—Airplane [part 61 §61.58]	B-707 PIC PROFICIENCY CHECK	B-707-321B	PN7X	Ground and Flight Training/Checking	Final, Issued On:	01/2000
Pilot-in-Command Proficiency Check—Airplane [part 61 §61.58]	B-707 PIC RECURRENT TRAINING	B-707-321B	PN7X	Ground and Flight Training/Checking	Final, Issued On:	01/2000
Second-in-Command Qualification—Airplane—Multiengine Land—[part 61 §61.55(b)]	B-707 SIC INITIAL TRAINING	B-707-321B	PN7X	Ground and Flight Training/Checking	Final, Issued On:	01/2000
Second-in-Command Qualification—Airplane—Multiengine Land—[part 61 §61.55(b)]	B-707 SIC RECURRENT TRAINING	B-707-321B	PN7X	Ground and Flight Training/Checking	Final, Issued On:	01/2000
Recent Flight Experience: Flight Engineer—Competency Check [part 91 §91.529(b)]	B-727 FLIGHT ENGINEER RECURRENT TRAINING	B-727-225	PN7X	Ground and Flight Training/Checking	Final, Issued On:	01/2000
Recent Flight Experience: Flight Engineer—Competency Check [part 91 §91.529(b)]	B-727 FLIGHT ENGINEER RECURRENT TRAINING	B-727-222	PN7X	Ground and Flight Training/Checking	Final, Issued On:	01/2000
Pilot-in-Command Proficiency Check—Airplane [part 61 §61.58]	B-727 PIC PROFICIENCY CHECK	B-727-222	PN7X	Ground and Flight Training/Checking	Final, Issued On:	01/2000
Pilot-in-Command Proficiency Check—Airplane [part 61 §61.58]	B-727 PIC PROFICIENCY CHECK	B-727-225	PN7X	Ground and Flight Training/Checking	Final, Issued On:	01/2000
Pilot-in-Command Proficiency Check—Airplane	B-727 PIC RECURRENT TRAINING	B-727-222	PN7X	Ground and Flight	Final, Issued	01/2000

Print Date: 4/29/2011 B002-2 Certificate No.: PN7X447K
Pan Am International Flight Academy

6.0 Pan Am Statement of Qualification

Federal Aviation Administration
National Simulator Program

Statement of Qualification

The Federal Aviation Administration (FAA)
National Simulator Program has evaluated the Flight Simulation Training
Device (FSTD) listed below. This FSTD has been found to meet
the standards set forth in the qualification document described below:

Sponsor: Pan Am International Flight Academy
Location: Miami
Aircraft Type: B-707-321B
FAA Identification Number: 268
Qualification Basis: 120-40A
Qualification Level: A

Issued by the National Simulator Program
on April 20, 2011.

[redacted]
Harlan Gray Sparrow III
Manager, National Simulator Program
Federal Aviation Administration

To maintain qualification, the FSTD must meet all of the standards and specifications of the qualification basis and is subject to the conditions and limitations listed in the last FAA FSTD Evaluation Report. This certificate is not transferable, and unless, revoked, suspended, or amended, shall remain in effect until May 31, 2012.

NSP Form T001
Rev 2: 08/24/2005

Federal Aviation Administration
National Simulator Program

Statement of Qualification

The Federal Aviation Administration (FAA)
National Simulator Program has evaluated the Flight Simulation Training Device (FSTD) listed below. This FSTD has been found to meet the standards set forth in the qualification document described below:

Sponsor: Pan Am International Flight Academy
Location: Miami
Aircraft Type: B-707-321B
FAA Identification Number: 268
Qualification Basis: 120-40A
Qualification Level: A

Issued by the National Simulator Program
on April 21, 2010.

[redacted]
Harlan Gray Sparrow III
Manager, National Simulator Program
Federal Aviation Administration

To maintain qualification, the FSTD must meet all of the standards and specifications of the qualification basis and is subject to the conditions and limitations listed in the last FAA FSTD Evaluation Report. This certificate is not transferable, and unless, revoked, suspended, or amended, shall remain in effect until May 31, 2011.

NSP Form T001
Rev 2: 08/24/2005

7.0 PIC Recurrent Training Specialty Curriculum

CHAPTER 6

B-707 PIC RECURRENT TRAINING SPECIALTY CURRICULUM

OBJECTIVE

PAIFA's B-707 Aircraft Recurrent Ground Training objective is to ensure that each crewmember is adequately trained and currently proficient with respect to the B-707 aircraft.

The FAA Regulations pertinent to Part 61 that will be satisfied by completing this curriculum are listed in the Preface of this manual, page P.7.

PREREQUISITES

The crewmember must hold an Airline Transport Pilot Certificate (ATP) with a B-707 Type Rating.

61.58 (e) (3) (i), and

Have completed within the preceding 90 days at least three takeoffs and three landings (one to a full stop) as the sole manipulator of the flight controls in the B-707 airplane.

61.58 (e) (3) (ii)

CHAPTER 6

B-707 PIC RECURRENT TRAINING SPECIALTY CURRICULUM

6. B-707 PIC RECURRENT TRAINING

1.1. General

To ensure that flight crewmembers continue to be knowledgeable of, and proficient in, their specific aircraft type and duty assignment. It also provides an opportunity to introduce developments within the operating environment and aviation industry.

1.2. Curriculum Segments and Hourly Breakdown

B-707 RECURRENT TRAINING CURRICULUM PILOT IN COMMAND (PIC)		
CURRICULUM SEGMENTS	**HOURS**	
GROUND TRAINING • **AIRCRAFT SYSTEMS** • **REVIEW AND EXAMINATION**	**16:00**	
TOTAL GROUND SCHOOL	**16:00**	
SIMULATOR TRAINING	**PAIRED**	**NOT PAIRED**
	2:00 PF **2:00 PM**	**4:00 PF**
TOTAL SIMULATOR TRAINING	**4:00**	**4:00**
PROFICIENCY CHECK	**3:00**	
AIRPLANE FLIGHT TRAINING *	**1:00**	
AIRPLANE PROFICIENCY CHECK *	**1:00**	

*** Required if Proficiency Check conducted in a Level A or B simulator; and crewmember NOT in compliance with FAR 61.58 (e) (3) (ii). Crewmember must state compliance with this regulation in the "Student Information" sheet (signed and dated). The TCE/FAA must review this information and check the respective box in the Training Form before conducting the PC**

1.3 Courseware

1. B-707 Operating Manuals
2. Core Syllabus
3. Cockpit Layout Panels
4. Instrument Approach Charts
5. Audio Visual and CD Presentations
6. Slide Tape Presentations
7. Overhead Projections
8. Handouts
9. B-707 Simulator

6. B-707 PIC RECURRENT TRAINING CURRICULUM

2.0 Ground Training Curriculum

Hours: 16:00

Objective: PAIFA's B-707 Recurrent Ground Training objective is to ensure that each crewmember is adequately trained and currently proficient with respect to the B-707 aircraft.

Ground Training Modules:

- Aircraft Systems Training Modules / Preflight Inspection Training
- Review and Examination

A. Aircraft Systems Training / Preflight Inspection Training

1. Airplane General
2. Air Conditioning and Pressurization
3. Autoflight
4. Communications
5. Electrical
6. Emergency Equipment
7. Fire Protection
8. Flight Controls
9. Flight Instruments
10. Fuel
11. Hydraulics
12. Ice and Rain Protection
13. Landing Gear and Brakes
14. Navigation
15. Pneumatics
16. Powerplant
17. Warnings
18. Performance, Weight and Balance
19. Airport Operational Ground Safety (AC-120-74-A)
20. Preflight Inspection Training

B. REVIEW AND EXAMINATION

6. B-707 PIC RECURRENT TRAINING CURRICULUM (Continued)

2.0 Ground Training Curriculum (Continued)

CURRICULUM	HOURS
A. Aircraft Systems Training **Preflight Inspection Training** 1. Airplane General 2. Air Conditioning and Pressurization 3. Autoflight 4. Communications 5. Electrical 6. Emergency Equipment 7. Fire Protection 8. Flight Controls 9. Flight Instruments 10. Fuel 11. Hydraulics 12. Ice and Rain Protection 13. Landing Gear and Brakes 14. Navigation 15. Pneumatics 16. Powerplant 17. Warnings 18. Performance, Weight and Balance 19. Airport Operational Ground Safety (AC-120-74-A) 20. Preflight Inspection Training	**16:00**
B. REVIEW AND EXAMINATION	**NSTR**

NSTR: No Specific Time Required

6. B-707 PIC RECURRENT TRAINING CURRICULUM (Continued)

2.1 Aircraft Systems Training Curriculum

A. AIRCRAFT SYSTEMS TRAINING MODULES / PREFLIGHT TRAINING

1. **Aircraft General**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal. Abnormal, and Emergency Operations

2. **Air Conditioning**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal. Abnormal, and Emergency Operations

3. **Autoflight**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal. Abnormal, and Emergency Operations

4. **Communications**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal. Abnormal, and Emergency Operations

5. **Electrical**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal. Abnormal, and Emergency Operations

6. **Emergency Equipment**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal. Abnormal, and Emergency Operations

7. **Fire Protection**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal. Abnormal, and Emergency Operations

8. **Flight Controls**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal. Abnormal, and Emergency Operations

9. **Flight Instruments**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal. Abnormal, and Emergency Operations

10. **Fuel**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal. Abnormal, and Emergency Operations

6. B-707 PIC RECURRENT TRAINING CURRICULUM (Continued)

2.1 Aircraft Systems Training Curriculum

A. AIRCRAFT SYSTEMS TRAINING MODULES / PREFLIGHT TRAINING (Continued)

11. Hydraulics
- a. Controls and Indicators
- b. Systems Description
- c. Review Questions
- d. Limitations
- e. Normal, Abnormal, and Emergency Operations

12. Ice and Rain Protection
- a. Controls and Indicators
- b. Systems Description
- c. Review Questions
- d. Limitations
- e. Normal, Abnormal, and Emergency Operations

13. Landing Gear and Brakes
- a. Controls and Indicators
- b. Systems Description
- c. Review Questions
- d. Limitations
- e. Normal, Abnormal, and Emergency Operations

14. Navigation
- a. Controls and Indicators
- b. Systems Description
- c. Review Questions
- d. Limitations
- e. Normal, Abnormal, and Emergency Operations

15. Pneumatics
- a. Controls and Indicators
- b. Systems Description
- c. Review Questions
- d. Limitations
- e. Normal, Abnormal, and Emergency Operations

16. Powerplant
- a. Controls and Indicators
- b. Systems Description
- c. Review Questions
- d. Limitations
- e. Normal, Abnormal, and Emergency Operations

17. Warnings
- a. Controls and Indicators
- b. Systems Description
- c. Review Questions
- d. Limitations
- e. Normal, Abnormal, and Emergency Operations

18. Performance, Weight and Balance
- a. Weight and Balance
- b. Flight Planning and Performance
- c. Aircraft Performance
- d. Applicable Aircraft Manuals

19. Airport Ground Operational Safety (AC-120-74-A)
- a. Planning
- b. Situational Awareness
- c. Written Taxi Instructions
- d. Intra-flight deck Coordination
- e. ATC-flightcrew Communications
- f. Taxiing

6. B-707 PIC RECURRENT TRAINING CURRICULUM (Continued)

2.1 Aircraft Systems Training Curriculum (Continued)

A. AIRCRAFT SYSTEMS TRAINING MODULES / PREFLIGHT TRAINING (Continued)

20. Preflight Inspection Training

PREFLIGHT INSPECTION TRAINING MODULE

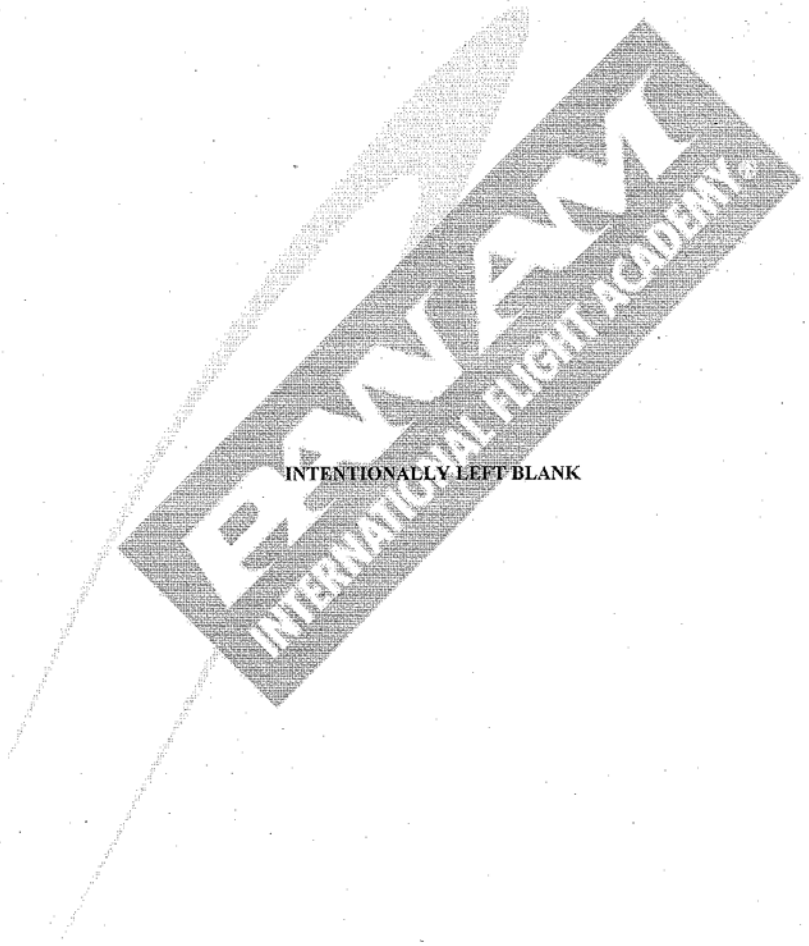
OBJECTIVE: The Preflight Inspection Training Module is a separate training curriculum module. The Preflight Inspection Module should teach the trainee to demonstrate his/her ability to perform the appropriate safety inspection checks. The trainee will be taught how to identify and determine when a component is in an unsafe condition.

EQUIPMENT NEEDED: Applicable checklist and FAA approved pictorial or aircraft.

PREFLIGHT INSPECTION

1. External Safety Inspection
2. Interior Safety Inspection
3. Exterior Inspection
4. Cabin Inspection

B. REVIEW AND EXAMINATION



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6. B-707 PIC RECURRENT TRAINING CURRICULUM (Continued)

2.2 Simulator Training Curriculum : *PAIRED:* [2:00 Hours PF / 2:00 Hours PM]
NOT-PAIRED: [4:00 Hours PF]

DEFINITION: Recurrent Simulator Training is designed to verify the trainee's working knowledge of all published profiles, and Aircraft Systems as they apply to normal, abnormal and emergency procedures. All Immediate Action Emergency items must be committed to memory. Checklist usage, proper responses, and standard call-outs, and Crew Resource Management will be stressed.

Realism is an important objective in simulator training; therefore, the simulator will be treated as a real airplane. Inoperative equipment will be subjected to the same MEL scrutiny as the airplane and in some cases, delay the period until maintenance has resolved the problem. The use of a headset / speakers, shoulder harness, and ATC environment will be required.

PREREQUISITE: Satisfactory completion of the Ground Training curriculum segment.

TRAINING CONSIDERATIONS (EMPHASIS)

- ❑ Duties and Responsibilities
- ❑ Crew Resource Management (CRM)
- ❑ Cockpit Checklist Procedures
- ❑ Aircraft Characteristics

- The Flight Training Modules are developed in a syllabus / briefing notes format. They should be adhered to when progression is normal. Deviation in the selection of maneuvers is avoided.
- Simulator training consists of one module. (Paired – 2:00 PF, 2:00 PM / Not Paired – 4:00 PF)
- Pre and Post Module Briefings will be conducted.
- The Proficiency Check will be conducted with fully qualified crewmembers in the support positions.

PIC SIMULATOR MODULES

1. Simulator Module No. 1
2. Simulator Module No. 2

* Airplane Training Module
* Airplane Practical Test

* **Required if Proficiency Check conducted in a Level A or B simulator; and crewmember NOT in compliance with FAR 61.58 (e) (3) (ii). Crewmember must state compliance with this regulation in the "Student Information" sheet (signed and dated). The TCE/FAA must review this information and check the respective box in the Training Form before conducting the PC**

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6. B-707 PIC RECURRENT TRAINING CURRICULUM (Continued)

2.2 Simulator Training Curriculum (Continued)

SIMULATOR MODULE ONE (1)

OBJECTIVE: To retain, refine and enhance the pilot's proficiency in engine out maneuvers, non-precision approaches, normal, abnormal, and emergency procedures.

EQUIPMENT NEEDED: B-707 Operating Manuals and Runway Analysis Data. Approach charts and checklists applicable to the aircraft.

BRIEFING GUIDE: (1:00)

- Review thrust and speed computations for takeoff.
- Review Procedures Manual (standard and noise restricted takeoff profiles).
- Review CRM concepts.
- Review Standard Callouts
- Review engine starting procedures.
- Review takeoff and departure climb profile.
- Discuss aircraft handling characteristics, steep turns, recovery from approaches to stall and unusual attitudes
- Review Hydraulic failures
- Review Emergency Descend procedure
- Review Operation with one and two engines out
- Brief on remaining maneuvers and procedures to be accomplished in the simulator.
- Answer any questions the trainees may have.

(Continued)

6. B-707 PIC RECURRENT TRAINING CURRICULUM (Continued)

2.2 Simulator Training Curriculum (Continued)

SIMULATOR MODULE ONE (1) (Continued)

SIMULATOR GUIDE (PAIRED 2:00 hours / NOT PAIRED 4:00 hours)

PILOTS

- Cockpit Safety Inspection
- Cockpit Preparation and Departure Briefing
- Aborted Engine Start
- Taxi Out – Runway Incursion
- Low visibility Takeoff (Noise Abatement) SID
- Climb to 5,000'
- Steep turns (45° bank)
- Approach to Stalls (Stall Warning)
  - Clean
  - Takeoff (Flap 14° / 25° bank)
  - Landing
- Recovery from Unusual Attitudes
- Climb to FL 270
- Loss of cabin Pressure
- Emergency Descent
- ILS Coupled Approach and Landing
- Take Off
- Runaway Stabilizer
- VOR Approach
- Missed Approach
- Holding
- Loss of All Generators
- Utility Hydraulic System Loss
- Alternate Flap Extension
- Manual Gear Extension
- LOC Approach and Landing
- Take Off Engine Failure after V1
- One Engine Inoperative ILS Approach
- One Engine Inoperative Missed Approach
- Engine Fire
- Two Engine Inoperative Landing
- ILS (F/D-VFR)
- Rejected Take Off
- Evacuation

DEBRIEFING: (0:30)

6. **B-707 PIC RECURRENT TRAINING CURRICULUM (Continued)**

2.3 **Proficiency Check**

SIMULATOR MODULE TWO (2)
PROFICIENCY CHECK

This Module complies with the Practical Test requirements [As per the Practical Test Standards] to be used by the TCE/FAA when conducting a PIC Proficiency Check.

6. B-707 PIC RECURRENT TRAINING CURRICULUM (Continued)

2.4 Airplane Flight Training Curriculum

A. AIRPLANE FLIGHT TRAINING

AIRPLANE FLIGHT TRAINING MODULE

OBJECTIVE: Airplane training to provide skills in maneuvers for the tasks not creditable in a Level A or Level B simulator.

AIRPLANE FLIGHT TRAINING

A. Preparation
- Preflight

B. Takeoff
- Taxi
- Normal and Crosswind takeoff

C. Approaches
- Circling approach

D. Landings
- Normal and Crosswind Approach and Landing
- Landing from an ILS approach
- Approach and Landing with (simulated) Powerplant failure
- Landing from Circling Approach
- Landing from Zero or Non standard flap approach

6. B-707 PIC RECURRENT TRAINING CURRICULUM (Continued)

2.4 Airplane Flight Training Curriculum

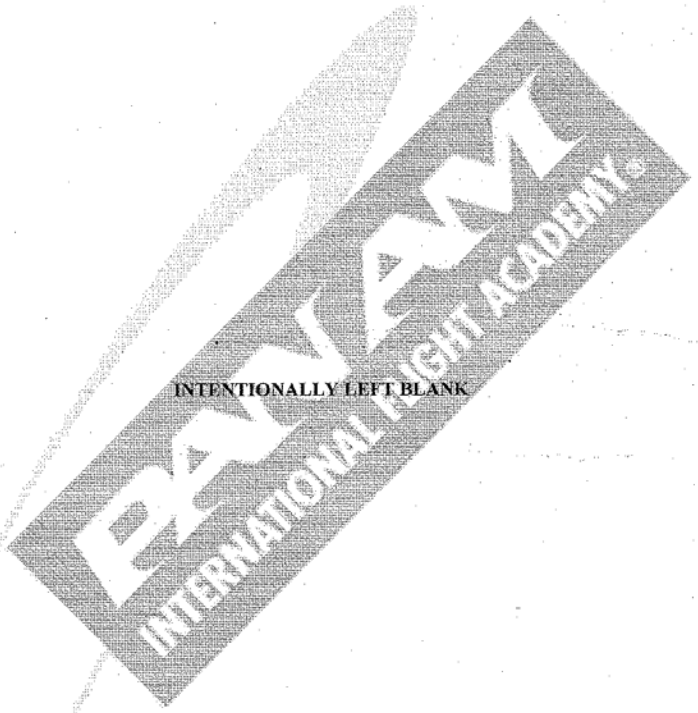
B. AIRPLANE CHECKING

AIRPLANE SEGMENT OF THE PROFICIENCY CHECK

The Airplane Segment of the Proficiency Check consists of at least the following tasks:

- Taxi
- Normal and Crosswind takeoff
- ILS approach
- Circling approach
- Normal and Crosswind Approach and Landing
- Landing from an ILS approach
- Approach and Landing with (simulated) Powerplant failure
- Landing from Circling Approach
- Landing from Zero or Non standard flap approach

The above tasks are normally the required tasks; however, the ICE / FAA Inspector giving the aircraft practical test may require additional items if deemed appropriate.



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8.0 B707 SIC Recurrent Training Specialty Curriculum

CHAPTER 7

B-707 SIC RECURRENT TRAINING SPECIALTY CURRICULUM

OBJECTIVE
PAIFA's B-707 Aircraft Recurrent Ground Training objective is to ensure that each crewmember is adequately trained and currently proficient with respect to the B-707 aircraft.

The FAA Regulations pertinent to Part 61 that will be satisfied by completing this curriculum are listed in the Preface of this manual, page P.7.

PREREQUISITES
The crewmember holds a Private Pilot Certificate with Multi Engine Land and Instrument Rating; and has previously completed an Initial B-707 course.

CHAPTER 7

B-707 SIC RECURRENT TRAINING SPECIALTY CURRICULUM

7. B-707 SIC RECURRENT TRAINING

1.1. General

To ensure that flight crewmembers continue to be knowledgeable of, and proficient in, their specific aircraft type and duty assignment. It also provides an opportunity to introduce developments within the operating environment and aviation industry.

1.2. Curriculum Segments and Hourly Breakdown

B-707 RECURRENT TRAINING CURRICULUM SECOND IN COMMAND (SIC)		
CURRICULUM SEGMENTS	**HOURS**	
GROUND TRAINING • **AIRCRAFT SYSTEMS** • **REVIEW AND EXAMINATION**	**16:00**	
TOTAL GROUND SCHOOL	**16:00**	
SIMULATOR TRAINING	**PAIRED**	**NOT PAIRED**
	2:00 PF **2:00 PM**	**4:00 PF**
TOTAL SIMULATOR TRAINING	**4:00**	**4:00**
SIMULATOR QUALIFICATION CHECK	**3:00**	

1.3 Courseware

1. B-707 Operating Manuals
2. Core Syllabus
3. Cockpit Layout Panels
4. Instrument Approach Charts
5. Audio Visual and CD Presentations
6. Slide Tape Presentations
7. Overhead Projections
8. Handouts
9. B-707 Simulator

7. B-707 SIC RECURRENT TRAINING CURRICULUM

2.0 Ground Training Curriculum

Hours: 16:00

Objective: PAIFA's B-707 Aircraft Recurrent Ground Training objective is to ensure that each crewmember is adequately trained and currently proficient with respect to the B-707 aircraft.

Ground Training Modules:

- Aircraft Systems Training Modules / Preflight Inspection Training
- Review and Examination

A. Aircraft Systems Training / Preflight Inspection Training

1. Airplane General
2. Air Conditioning and Pressurization
3. Autoflight
4. Communications
5. Electrical
6. Emergency Equipment
7. Fire Protection
8. Flight Controls
9. Flight Instruments
10. Fuel
11. Hydraulics
12. Ice and Rain Protection
13. Landing Gear and Brakes
14. Navigation
15. Pneumatics
16. Powerplant
17. Warnings
18. Performance, Weight and Balance
19. Airport Operational Ground Safety (AC-120-74-A)
20. Preflight Inspection Training

B. REVIEW AND EXAMINATION

7. B-707 SIC RECURRENT TRAINING CURRICULUM (Continued)

2.0 Ground Training Curriculum (Continued)

CURRICULUM	HOURS
A. Aircraft Systems Training **Preflight Inspection Training** 1. Airplane General 2. Air Conditioning and Pressurization 3. Autoflight 4. Communications 5. Electrical 6. Emergency Equipment 7. Fire Protection 8. Flight Controls 9. Flight Instruments 10. Fuel 11. Hydraulics 12. Ice and Rain Protection 13. Landing Gear and Brakes 14. Navigation 15. Pneumatics 16. Powerplant 17. Warnings 18. Performance, Weight and Balance 19. Airport Operational Ground Safety (AC-120-74-A) 20. Preflight Inspection Training	**16:00**
B. REVIEW AND EXAMINATION	**NSTR**

NSTR: No Specific Time Required

7. B-707 SIC RECURRENT TRAINING CURRICULUM (Continued)

2.1 Aircraft Systems Training Curriculum

A. AIRCRAFT SYSTEMS TRAINING MODULES / PREFLIGHT TRAINING

1. **Aircraft General**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal, Abnormal, and Emergency Operations

2. **Air Conditioning**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal, Abnormal, and Emergency Operations

3. **Autoflight**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal, Abnormal, and Emergency Operations

4. **Communications**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal, Abnormal, and Emergency Operations

5. **Electrical**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal, Abnormal, and Emergency Operations

6. **Emergency Equipment**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal, Abnormal, and Emergency Operations

7. **Fire Protection**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal, Abnormal, and Emergency Operations

8. **Flight Controls**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal, Abnormal, and Emergency Operations

9. **Flight Instruments**
   a. Controls and Indicators
   b. Systems Description
   c. Review Questions
   d. Limitations
   e. Normal, Abnormal, and Emergency Operations

10. **Fuel**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

7. B-707 SIC RECURRENT TRAINING CURRICULUM (Continued)

2.1 Aircraft Systems Training Curriculum

A. AIRCRAFT SYSTEMS TRAINING MODULES / PREFLIGHT TRAINING (Continued)

11. **Hydraulics**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

12. **Ice and Rain Protection**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

13. **Landing Gear and Brakes**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

14. **Navigation**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

15. **Pneumatics**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

16. **Powerplant**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

17. **Warnings**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

18. **Performance, Weight and Balance**
    a. Weight and Balance
    b. Flight Planning and Performance
    c. Aircraft Performance
    d. Applicable Aircraft Manuals

19. **Airport Ground Operational Safety (AC-120-74-A)**
    a. Planning
    b. Situational Awareness
    c. Written Taxi Instructions
    d. Inter-flight deck Coordination
    e. ATC-flightcrew Communications
    f. Taxiing

7. B-707 SIC RECURRENT TRAINING CURRICULUM (Continued)

2.1 Aircraft Systems Training Curriculum (Continued)

A. AIRCRAFT SYSTEMS TRAINING MODULES / PREFLIGHT TRAINING (Continued)

20. Preflight Inspection Training

PREFLIGHT INSPECTION TRAINING MODULE

OBJECTIVE: The Preflight Inspection Training Module is a separate training curriculum module. The Preflight Inspection Module should teach the trainee to demonstrate his/her ability to perform the appropriate safety inspection checks. The trainee will be taught how to identify and determine when a component is in an unsafe condition.

EQUIPMENT NEEDED: Applicable checklist and FAA approved pictorial or aircraft.

PREFLIGHT INSPECTION

1. External Safety Inspection
2. Interior Safety Inspection
3. Exterior Inspection
4. Cabin Inspection

B. REVIEW AND EXAMINATION

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7. B-707 SIC RECURRENT TRAINING CURRICULUM (Continued)

2.2 Simulator Training Curriculum *PAIRED:* [2:00 Hours PF / 2:00 Hours PM]
NOT-PAIRED: [4:00 Hours PF]

DEFINITION: Recurrent Simulator Training is designed to verify the trainee's working knowledge of all published profiles, and Aircraft Systems as they apply to normal, abnormal and emergency procedures. All Immediate Action Emergency items must be committed to memory. Checklist usage, proper responses, and standard call-outs, and Crew Resource Management will be stressed.

Realism is an important objective in simulator training; therefore, the simulator will be treated as a real airplane. Inoperative equipment will be subjected to the same MEL scrutiny as the airplane and in some cases, delay the period until maintenance has resolved the problem. The use of a headset/speakers, shoulder harness, and ATC environment will be required.

PREREQUISITE: Satisfactory completion of the Ground Training curriculum segments.

TRAINING CONSIDERATIONS (EMPHASIS)

- ❑ Duties and Responsibilities
- ❑ Crew Resource Management (CRM)
- ❑ Cockpit Checklist Procedures
- ❑ Aircraft Characteristics

- The Flight Training Modules are developed in a syllabus / briefing notes format. They should be adhered to when progression is normal. Deviation in the selection of maneuvers is avoided
- Simulator Training consists of one module. (Paired – 2:00 PF, 2:00 PM / Not Paired – 4:00 PF)
- Pre and Post Module Briefings will be conducted.
- The Qualification Check will be conducted with fully qualified crewmembers in the support positions.

SIC SIMULATOR MODULES

1. Simulator Module No. 1
2. Simulator Module No. 2

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7. B-707 SIC RECURRENT TRAINING CURRICULUM (Continued)

2.2 Simulator Training Curriculum (Continued)

SIMULATOR MODULE ONE (1)

OBJECTIVE: To retain, refine and enhance the pilot's proficiency in engine out maneuvers, non-precision approaches, normal, abnormal, and emergency procedures.

EQUIPMENT NEEDED: B-707 Operating Manuals and Runway Analysis Data. Approach charts and checklists applicable to the aircraft.

BRIEFING GUIDE: (1:00)

- Review thrust and speed computations for takeoff.
- Review Procedures Manual (standard and noise restricted takeoff profiles).
- Review CRM concepts.
- Review Standard Callouts
- Review engine starting procedures.
- Review takeoff and departure climb profile.
- Discuss aircraft handling characteristics, steep turns, recovery from approaches to stall and unusual attitudes
- Review Hydraulic failures
- Review Emergency Descend procedure
- Review Operation with one and two engines out
- Brief on remaining maneuvers and procedures to be accomplished in the simulator.
- Answer any questions the trainees may have.

(Continued)

7. B-707 SIC RECURRENT TRAINING CURRICULUM (Continued)

2.2 Simulator Training Curriculum (Continued)

SIMULATOR MODULE ONE (1) (Continued)

SIMULATOR GUIDE (PAIRED 2:00 hours / NOT PAIRED 4:00 hours)

PILOTS

- Cockpit Safety Inspection
- Cockpit Preparation and Departure Briefing
- Aborted Engine Start
- Taxi Out – Runway Incursion
- Low visibility Takeoff (Noise Abatement) SID
- Climb to 5,000'
- Steep turns (45° bank)
- Approach to Stalls (Stall Warning)
  - Clean
  - Takeoff (Flap 14° / 25° bank)
  - Landing
- Recovery from Unusual Attitudes
- Climb to FL 270
- Loss of cabin Pressure
- Emergency Descent
- ILS Coupled Approach and Landing
- Take Off
- Runaway Stabilizer
- VOR Approach
- Missed Approach
- Holding
- Loss of All Generators
- Utility Hydraulic System Loss
- Alternate Flap Extension
- Manual Gear Extension
- LOC Approach and Landing
- Take Off Engine Failure after V1
- One Engine Inoperative ILS Approach
- One Engine Inoperative Missed Approach
- One Engine Inoperative Landing
- ILS (F/D-VFR)
- Rejected Take Off
- Evacuation

DEBRIEFING: (0:30)

7. B-707 SIC RECURRENT TRAINING CURRICULUM (Continued)

2.3 Qualification Check

SIMULATOR MODULE TWO (2)
QUALIFICATION CHECK

This simulator module is to be used by the TCE as a Qualification Check to determine that the trainee has adequate knowledge of the aircraft and its procedures. This Check will include:

- Three takeoffs and three landings as the sole manipulator of the flight controls
- Engine out procedures
- Maneuvering with an engine out while executing the duties of pilot in command
- CRM

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9.0 B-707 Flight Engineer Recurrent Training Specialty Curriculum

CHAPTER 8

B-707 FLIGHT ENGINEER RECURRENT TRAINING SPECIALTY CURRICULUM

OBJECTIVE
PAIFA's B-707 Aircraft Recurrent Ground Training objective is to ensure that each crewmember is adequately trained and currently proficient with respect to the B-707 aircraft.

The FAA Regulations pertinent to Part 63 that will be satisfied by completing this curriculum are listed in the Preface of this manual, page P.7.

PREREQUISITES
The crewmember holds a Flight Engineer with Turbojet Rating and has previously completed an Initial B-707 course.

CHAPTER 8

B-707 F/E RECURRENT TRAINING SPECIALTY CURRICULUM

8. B-707 F/E RECURRENT TRAINING

1.1. General

To ensure that flight crewmembers continue to be knowledgeable of, and proficient in, their specific aircraft type and duty assignment. It also provides an opportunity to introduce developments within the operating environment and aviation industry.

1.2. Curriculum Segments and Hourly Breakdown

B-707 RECURRENT TRAINING CURRICULUM FLIGHT ENGINEER (F/E)	
CURRICULUM SEGMENTS	**HOURS**
GROUND TRAINING	
• **AIRCRAFT SYSTEMS**	**16:00**
• **REVIEW AND EXAMINATION**	
TOTAL GROUND SCHOOL	**16:00**
SIMULATOR TRAINING	**4:00**
TOTAL SIMULATOR TRAINING	**4:00**
PROFICIENCY CHECK	**3:00**

1.3 Courseware

1. B-707 Operating Manuals
2. Core Syllabus
3. Cockpit Layout Panels
4. Instrument Approach Charts
5. Audio Visual and CD Presentations
6. Slide Tape Presentations
7. Overhead Projections
8. Handouts
9. B-707 Simulator

8. B-707 F/E RECURRENT TRAINING CURRICULUM

2.0 Ground Training Curriculum

Hours: 16:00

Objective: PAIFA's B-707 Recurrent Ground Training objective is to ensure that each crewmember is adequately trained and currently proficient with respect to the B-707 aircraft.

Ground Training Modules:

- Aircraft Systems Training Modules / Preflight Inspection Training
- Review and Examination

A. Aircraft Systems Training / Preflight Inspection Training

1. Airplane General
2. Air Conditioning and Pressurization
3. Autoflight
4. Communications
5. Electrical
6. Emergency Equipment
7. Fire Protection
8. Flight Controls
9. Flight Instruments
10. Fuel
11. Hydraulics
12. Ice and Rain Protection
13. Landing Gear and Brakes
14. Navigation
15. Pneumatics
16. Powerplant
17. Warnings
18. Performance, Weight and Balance
19. Airport Operational Ground Safety (AC-120-74-A)
20. Preflight Inspection Training

B. REVIEW AND EXAMINATION

8. B-707 F/E RECURRENT TRAINING CURRICULUM (Continued)

2.0 Ground Training Curriculum (Continued)

CURRICULUM	HOURS
A. Aircraft Systems Training **Preflight Inspection Training** 1. Airplane General 2. Air Conditioning and Pressurization 3. Autoflight 4. Communications 5. Electrical 6. Emergency Equipment 7. Fire Protection 8. Flight Controls 9. Flight Instruments 10. Fuel 11. Hydraulics 12. Ice and Rain Protection 13. Landing Gear and Brakes 14. Navigation 15. Pneumatics 16. Powerplant 17. Warnings 18. Performance, Weight and Balance 19. Airport Operational Ground Safety (AC-120-74-A) 20. Preflight Inspection Training	16:00
B. REVIEW AND EXAMINATION	**NSTR**

NSTR: No Specific Time Required

8. B-707 F/E RECURRENT TRAINING CURRICULUM (Continued)

2.1 Aircraft Systems Training Curriculum

A. AIRCRAFT SYSTEMS TRAINING MODULES / PREFLIGHT TRAINING (Continued)

11. **Hydraulics**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

12. **Ice and Rain Protection**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

13. **Landing Gear and Brakes**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

14. **Navigation**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

15. **Pneumatics**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

16. **Powerplant**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

17. **Warnings**
    a. Controls and Indicators
    b. Systems Description
    c. Review Questions
    d. Limitations
    e. Normal, Abnormal, and Emergency Operations

18. **Performance, Weight and Balance**
    a. Weight and Balance
    b. Flight Planning and Performance
    c. Aircraft Performance
    d. Applicable Aircraft Manuals

19. **Airport Ground Operational Safety (AC-120-74-A)**
    a. Planning
    b. Situational Awareness
    c. Written Taxi Instructions
    d. Intra-flight deck Coordination
    e. ATC-flightcrew Communications
    f. Taxiing

8. B-707 F/E RECURRENT TRAINING CURRICULUM (Continued)

2.2 Preflight Inspection Training Curriculum

A. AIRCRAFT SYSTEMS TRAINING MODULES / PREFLIGHT TRAINING (Continued)

20. Preflight Inspection Training

PREFLIGHT INSPECTION TRAINING MODULE

OBJECTIVE: The Preflight Inspection Training Module is a separate training curriculum module. The Preflight Inspection Module should teach the trainee to demonstrate his/her ability to perform the appropriate safety inspection checks. The trainee will be taught how to identify and determine when a component is in an unsafe condition.

EQUIPMENT NEEDED: Applicable checklist, FAA approved pictorial or an aircraft.

PREFLIGHT INSPECTION

1. External Safety Inspection
2. Interior Safety Inspection
3. Exterior Inspection
4. Cabin Inspection

B. REVIEW AND EXAMINATION

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8. B-707 F/E RECURRENT TRAINING CURRICULUM (Continued)

2.3 Simulator Training Curriculum [4:00 Hours]

DEFINITION: Recurrent Simulator Training is designed to verify the trainee's working knowledge of all published profiles, and Aircraft Systems as they apply to normal, abnormal and emergency procedures. All Immediate Action Emergency items must be committed to memory. Checklist usage, proper responses, and standard call-outs, and Crew Resource Management will be stressed.

Realism is an important objective in simulator training: therefore, the simulator will be treated as a real airplane. Inoperative equipment will be subjected to the same MEL scrutiny as the airplane and in some cases, delay the period until maintenance has resolved the problem. The use of a headset / speakers, shoulder harness, and ATC environment will be required.

PREREQUISITE: Satisfactory completion of the Ground Training curriculum segment.

TRAINING CONSIDERATIONS (EMPHASIS)

- ❑ Duties and Responsibilities
- ❑ Crew Resource Management (CRM)
- ❑ Cockpit Checklist Procedures
- ❑ Aircraft Characteristics

- The Flight Training Modules are developed in a syllabus / briefing notes format. They should be adhered to when progression is normal. Deviation in the selection of maneuvers is avoided
- Simulator training consists of one module. Module One (1) is 4:00 hours long.
- Pre and Post Module Briefings will be conducted.
- The Proficiency Check will be conducted with fully qualified crewmembers in the support positions.

F/E SIMULATOR MODULES

1. Simulator Module No. 1
2. Simulator Module No. 2

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8. B-707 F/E RECURRENT TRAINING CURRICULUM (Continued)

2.3 Simulator Training Curriculum (Continued)

SIMULATOR MODULE ONE (1)

OBJECTIVE: To assure, refine and enhance the flight engineer's proficiency in normal, non-normal and emergency procedures.

EQUIPMENT NEEDED: Systems Manual, Procedures Manual and Runway Analysis Data. Approach charts and checklists applicable to the aircraft.

BRIEFING GUIDE: (1:00)

NOTE: Boxed items are used when the simulator period allows for F/E study only

- Review thrust and speed computations for takeoff.
- Review Procedures Manual (standard and noise restricted takeoff profiles).
- Review CRM concepts.
- Review Standard Callouts
- Review engine starting procedures.
- Review takeoff and departure climb profile.
- Discuss aircraft handling characteristics, steep turns, recovery from approaches to stall and unusual attitudes
- Review Hydraulic failures
- Review Emergency Descend procedure
- Review Operation with one and two engines out
- Brief on remaining maneuvers and procedures to be accomplished in the simulator.
- Answer any questions the trainees may have.

▪ Engine Start Limitations
▪ Manual Control of Cabin Pressure
▪ Generator Faults
▪ Loss of All Generators
▪ Alternate Flap Extension
▪ Manual Gear Extension
▪ Powerplant Abnormal Operation
▪ Brake Cooling Schedule
▪ One and Two Engines Inoperative Performance

(Continued)

8. B-707 F/E RECURRENT TRAINING CURRICULUM (Continued)

2.3 Simulator Training Curriculum (Continued)

SIMULATOR MODULE ONE (1) (Continued)

SIMULATOR GUIDE (4:00)

FLIGHT ENGINEER

- Cockpit Safety Inspection
- Cockpit Preparation and Departure Briefing
- Aborted Engine Start
- Taxi Out – Runway Incursion
- Low visibility Takeoff (Noise Abatement) SID
- Climb to 5,000'
  - Generator Faults
  - AC Generator Drive Malfunctions
  - Air Conditioning System Malfunctions
  - Pneumatic System Malfunctions
  - Fuel Unbalance
- Climb to FL 270
- Loss of cabin Pressure
- Emergency Descent
- ILS Coupled Approach and Landing
- Take Off
- Runaway Stabilizer
- VOR Approach
- Missed Approach
- Holding
- Loss of All Generators
- Utility Hydraulic System Loss
- Alternate Flap Extension
- Manual Gear Extension
- LOC Approach and Landing
- Take Off Engine Failure after V1
- One Engine Inoperative ILS Approach
- One Engine Inoperative Missed Approach
- Engine Fire
- Two Engine Inoperative Landing
- ILS (F/D-VFR)
- Rejected Take Off
- Evacuation

DEBRIEFING: (0:30)

8. B-707 F/E RECURRENT TRAINING CURRICULUM (Continued)

2.4 Proficiency Check

SIMULATOR MODULE TWO (2)
PROFICIENCY CHECK

This Module complies with the Practical Test requirements [As per the Practical Test Standards] to be used by the TCE/FAA when conducting a Flight Engineer Proficiency Check.

PROFICIENCY CHECK (Continued)
AIRCRAFT PREFLIGHT INSPECTION /EXTERIOR

To determine that the applicant exhibits adequate knowledge of the Preflight Inspection Procedures per the Practical Test Standards.

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