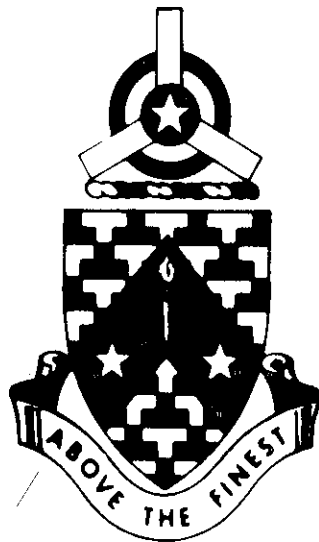


PROGRAMED TEXT

AIRCRAFT ACCIDENT INVESTIGATIONS

AM 82



JANUARY 1969

**UNITED STATES ARMY
PRIMARY HELICOPTER SCHOOL
FORT WOLTERS, TEXAS**

PROGRAMED TEXT

PROGRAM TEXT

FILE NO:

PROGRAM TITLE

AM-82

AIRCRAFT ACCIDENT INVESTIGATION

POI SCOPE:

The purpose, classification and membership of aircraft accident investigation board and how it differs from a collateral board.

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AIRCRAFT ACCIDENT INVESTIGATIONS

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PREFACE

This program will present a basic understanding of the classification of aircraft accidents. It will define the purpose of an AIRCRAFT ACCIDENT INVESTIGATION BOARD and a COLLATERAL BOARD and explain the difference between the two. In addition it will state the minimum membership requirements and qualifications for an aircraft accident investigation board.

Start with frame 1 and work each frame in succession. Each frame will usually ask you a question. The correct answer is printed on the top of the next frame. If you were incorrect, turn back and restudy the information before continuing on to the next frame. When you have finished the text, complete the self evaluation exercise. Now begin by studying the performance objectives on page iv.

PERFORMANCE OBJECTIVES

Upon completion of this programed text, you will be able to determine:

1. the purpose of aircraft accident investigation board,
2. the classification of the accident (major, minor, or incident),
3. the membership of aircraft accident investigation board, and
4. the difference between aircraft accident investigation and aircraft collateral board

in a given situation involving a helicopter crash.

FRAME 1

Damage to one or more Army aircraft in the Army inventory which occurs between the time the engine or engines starting procedures is initiated with the intent to fly, until the time the aircraft comes to rest with all engines and propellers or rotors stopped, upon completion of flight, regardless of responsibility is an Army aircraft accident.

NOTE: Damage to equipment or property incident to an Army operation or activity incurred as a result of combat operations or direct action by a hostile or belligerent force is not classified as an accident.

An OH-23G was damaged by enemy fire in Vietnam and required extensive repairs. Would this be classified as an Army aircraft accident?

a. Yes

☒ b. No

TURN TO FRAME 2 PAGE 3

ANSWER: c. Incident. Engines are not considered major components.

FRAME 6

In the event of an Army aircraft accident, an investigation ensues. The members of the investigation are pre-selected according to their AVIATION QUALIFICATIONS and EXPERIENCE. When an aircraft accident occurs they work together as the aircraft accident investigation board.

Which would be the purpose of the accident investigation board:

- a. determine accident cause factors.
- b. assemble information upon which to base recommendations for preventing future accidents.
- ☒ c. determine the cause of the accident and to make recommendations to prevent similar accidents.

TURN TO FRAME 7 PAGE 4

ANSWER: b. No, because damage was incurred as a result of hostile fire.

FRAME 2

Damage to Army aircraft as a result of accidents are classified as follows:

MAJOR

MINOR

INCIDENTS

The following criteria is used to classify aircraft accidents:

1. Total cumulative man hours of work required to replace and/or repair damage.
2. If an aircraft is destroyed or a major component must be replaced, it is classed as a MAJOR accident.

What is the criterion used in classifying aircraft accidents?

- a. Cost of repairs.
- b. Depends on type of aircraft, fixed wing or rotary wing.
- ☒ c. Number of man hours to repair or major component replacement.

TURN TO FRAME 3 PAGE 5

ANSWER: c. determine the cause of the accident and to take recommendations to prevent similar accidents.

FRAME 7

MAJOR ACCIDENT BOARDS are composed of a minimum of four officers. At least two of whom will be Army aviators currently on flight status. One aviator should be a master or senior Army aviator. An aviation medical officer should be a member of the board if available. A medical officer may be utilized if an aviation medical officer is not available.

A MINOR ACCIDENT BOARD may consist of one aviator, preferably a master or senior aviator, on flight status.

What is the minimum number of aviators on flight status required for a major accident board.

- a. One
- ☒ b. Two
- c. Three
- (d) Four

ANSWER: c. Number of man hours to repair or major component replacement

FRAME 3

An aircraft accident is classified MAJOR if the aircraft is destroyed, or damage sustained is equal to or in excess of the man hour criteria in Table I.

TABLE I
MAJOR DAMAGE CLASSIFICATION

CLASS A 150 Man Hrs.	CLASS B 400 Man Hrs.
Aircraft	Aircraft
OH-13	UH-1
OH-23	UH-19
TH-55	

An aircraft accident is classified as MINOR when the damage sustained equals or exceeds the man hour criteria in Table II but is less than Table I.

TABLE II
MINOR DAMAGE CLASSIFICATION

CLASS A 50 Man Hrs.	CLASS B 100 Man Hrs.
Aircraft	Aircraft
OH-13	UH-1
OH-23	UH-19
TH-55	

What is the classification of an accident involving an OH-13 requiring 55 man hours to repair?

- a. Major
- ☒ b. Minor
- c. Incident

ANSWER: b. Two

FRAME 8

One of the members of a major accident board will be a qualified aircraft maintenance officer IF a maintenance or materiel factor is indicated.

One member of the board MUST BE QUALIFIED in the same type of aircraft involved in the accident.

One board member may meet two or more of the required qualifications.

For example, one member may be a

1. Maintenance officer,
2. Army aviator on flight status,
3. Senior or master aviator, and
4. Qualified in the same type aircraft.

If one member of the board is a maintenance officer and also a senior Army aviator, what is the minimum required membership for a major accident board?

- a. One
- b. Two
- c. Three
- ☒ d. Four

ANSWER: b. Minor

FRAME 4

An INCIDENT is aircraft damage which is less than the criteria for minor damage cited in Table II.

TABLE II
MINOR DAMAGE CLASSIFICATION

CLASS A 50 Man Hrs.	CLASS B 100 Man Hrs.
Aircraft	Aircraft
OH-13	UH-1
OH-23	UH-19
TH-55	

An accident in an OH-23 could be classified as incident if it took:

- a. more than 50 hours to repair.
- ☒ b. less than 50 hours to repair.
- c. less than 100 hours to repair.
- d. more than 100 hours to repair.

ANSWER: d. four

FRAME 9

The COLLATERAL INVESTIGATION BOARD is convened for an entirely different purpose than the aircraft accident investigation board.

The collateral investigation board is a fact finding body to compile information and data pertaining to the accident which can be used by the Army for any purpose OTHER than accident prevention.

Examples of the administrative purpose of the collateral board are:

1. Basis for imposing pecuniary liability against military personnel.
2. Use in connection with claims against the government involving aircraft accidents.

Members of the aircraft accident board WILL NOT be assigned to a collateral board conducting an investigation of the same aircraft accident.

A collateral board is:

- a. the same as an accident board.
- ☒ b. convened for purposes other than accident prevention.
- c. assigned the same members as the accident board.
- d. a fact finding body to prevent accidents.

ANSWER: b. Less than 50 hours to repair

FRAME 5

If damage to major components is so extensive as to require removal and replacement, it is classified as a major accident.

Examples of major components are:

Main rotor heads.

Transmissions.

Tail booms.

Fuselages or major sections.

NOTE: ENGINES ARE NOT considered major components.

A TH-55 experienced engine failure and after autorotation the helicopter required extensive plexiglass repair and engine replacement. Maintenance estimated 45 man hours to repair the TH-55.

What is the classification of the above situation?

- ☒ a. Major
- ☐ b. Minor
- ☐ c. Incident

STOP RETURN TO FRAME 6 PAGE 2

ANSWER: b. convened for purposes other than accident prevention.

FRAME 10

Testimony or statements given to the accident investigation board by a witness or by personnel involved in an accident MAY NOT BE USED or COMPARED, either in whole or in part, by the collateral investigation board.

Witnesses may not appear before a collateral board until released by the accident board.

1. A COLLATERAL BOARD is convened for purposes other than accident prevention.
2. AN ACCIDENT BOARD is convened to determine the cause, and to recommend measures which will prevent similar accidents.

How soon after an accident investigation, may the collateral board use the testimony of the witnesses called before the aircraft accident board?

- a. Immediately
- b. Seven days
- ☒ c. Can not be used
- d. 24 hours

SELF EVALUATION EXERCISE

1. During a practice autorotation a FM antenna was damaged due to a hard landing. The replacement of the antenna required 5 man hours. What is the classification of this damage?
 - a. Major accident
 - b. Minor accident
 - ☒ c. Incident
2. The main rotor blades flexed downward and severed the tail boom as a result of a hard landing. The replacement of the tail boom required 45 man hours. What is the classification of this damage?
 - ☒ a. Major accident
 - b. Minor accident
 - c. Incident
3. Using an OH-13, OH-23, TH-55, or UH-1 as an example, an incident can be defined as: aircraft damage which requires less than 50 man hours to repair.
 - ☒ a. True
 - b. False
4. What is the purpose of an aircraft accident investigation board?
 - a. to analyze the wreckage, and take fuel, oil and hydraulic samples
 - b. to find the cause of the accident and establish if the aviator was negligent
 - c. to find the cause of the accident through a complete and thorough investigation and establish if the aviator or crew were negligent
 - ☒ d. to determine the cause of the accident through a complete and thorough investigation, analyze, and develop recommendations that may prevent recurrence of similar accidents
5. What is the minimum membership requirements for a major aircraft accident investigation board?
 - a. two
 - ☒ b. four
 - c. three
 - d. five

SELF EVALUATION EXERCISES

1. During a practice autorotation a FM engine failed. The replacement of the engine required 5 man hours. What is the classification of this damage?

ANSWER: c. Can not be used.

2. The main rotor blades, fixed downward and severed the tail boom as a result of a hard landing. The replacement of the tail boom required 45 man hours. What is the classification of this damage?

ANSWER: b. Minor accident.

3. Using an OH-13, OH-23, TH-55, or UH-1 as an example, an incident can be defined as: aircraft damage which requires less than 50 man hours to repair.

ANSWER: a. True

4. What is the purpose of an aircraft accident investigation board?

ANSWER: a. To analyze the wreckage, and take fuel, oil and hydraulic samples to find the cause of the accident and establish if the aviator was negligent.

5. What is the minimum membership requirements for a major aircraft accident investigation board?

ANSWER: b. four

In selecting officers for a major aircraft accident board, what are the minimum required qualifications and ratings? (Questions 6-10)

6. Army aviator(s) on flight status

- a. one
- ☒ b. two
- c. three
- d. four

7. Senior or master aviators (preferred)

- ☒ a. one
- b. two
- c. three
- d. four

8. Maintenance officer(s) (If needed)

- ☒ a. one
- b. two
- c. three
- d. four

9. Aviation medical officer(s)

- ☒ a. one
- b. two
- c. three
- d. four

10. Aviators qualified in the same type aircraft involved in the accident

- ☒ a. one
- b. two
- c. three
- d. four

11. What is the difference between an aircraft accident investigation board and a collateral board?

- a. They work for the same purpose, but the collateral board uses all of the data from the accident board for administration purposes.
- ☒ b. The collateral board compiles information and data about an accident for the Army for any purpose other than accident prevention.
- c. In name only

INTENTIONALLY LEFT BLANK

5-1-1988 10:00

ANSWERS TO SELF EVALUATION EXERCISE

1. c
2. a
3. a
4. d
5. b
6. b
7. a
8. a
9. a
10. a
11. b

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