

CREWMEMBER SURVIVAL TRAINING

- a. The investigation of a recent aircraft accident illustrated the importance of having crewmembers trained in survival techniques so that they may be able to assist passengers in surviving severe environmental conditions following an accident. This accident occurred in a near-blizzard condition, in mountainous terrain, and rescue operations were delayed about 10 hours because of blowing snow, strong winds, darkness and sub-freezing temperatures. Fortunately, one of the occupants had been trained in winter survival procedures and acted promptly in organizing and directing the passengers which enabled them to survive the severe conditions.
- b. The National Transportation Safety Board, in their investigative report, recommended that certain regulatory amendments be made to require each certificate holder to provide survival training for its crewmembers. This survival training would include instruction in survival techniques under environmental conditions at sea, in desert areas, mountainous regions, and in winter conditions.
- c. Current Federal Aviation Regulation 121.417 and 135.331 requires each certificate holder to provide emergency training for its crewmembers. These training requirements include, among other things, training in the operation of emergency equipment, the proper use of first aid equipment, instruction in handling illness, injury, or other abnormal situations involving passengers or crewmembers. Since much of the training recommended by the Board is currently being given to crewmembers, we believe that any additional training needed in this area can be provided to crewmembers during their normal recurrent training periods. Only the training, as appropriate to the climatic conditions and geographic areas associated with the air carriers route structure not presently in the crewmember's training program, needs to be added.
- d. This Bulletin contains a brief outline of survival training that is recommended for air carrier crewmembers. This outline is based on the Flight Crew Survival Course as conducted by the Aeromedical Education Branch, FAA Aeronautical Center at Oklahoma City. Note that the training listed need not be repeated if that type of training was previously accomplished during another phase of training.
- e. All principal operations inspectors should review the crewmembers survival training outline with their assigned air carriers to ensure that emergency survival training is accomplished, as appropriate, for that carrier's area of operation.

CREWMEMBER SURVIVAL TRAINING COURSE

A. Standard First Aid.

1. Introduction to first aid
2. Respiratory emergencies
3. Mouth-to-mouth breathing
4. Heart attack and stroke
5. Direct pressure, elevation and pressure points
6. Tourniquets
7. Wounds
8. Shock
9. Burns
10. Bandaging
11. Head injuries and internal injuries
12. Fractures, sprains and strains
13. Effects of heat and cold
14. Escaping from fire
15. Obtaining help in an emergency
16. Emergency rescue

B. The Will to Survive

1. Mental attitude required for successful survival
2. The possibility of a survival situation occurring
3. Priorities of life and their significance in survival
4. Environmental conditions for consideration
5. Stresses that may be encountered
6. Enemies that must be overcome
7. Actual examples of the will to survive being a factor

C. Survival Aid

1. Forms of artificial respiration
2. Bleeding control and improvising in various environments
3. Treatment of fractures, dislocations and sprains
4. Shock and mandatory actions
5. Snake bite
6. Infections, treatment and prevention
7. Significance of hygiene in survival
8. Environmental problems

D. Survival Skills

1. Fire building
2. Navigation in survival

E. Aircraft Escape

1. Location and use of emergency exits
2. Availability and use of emergency equipment

F. Survival Equipment

1. Minimum survival gear
2. First aid kit
3. Life preserver operation
4. Rafts
5. Water survival kits
6. Operation of radios
7. Flotation type cushions/life vests

G. Signaling and Recovery Operations

1. Recovery operators
2. Emergency signaling
3. Recovery devices
4. Recovery techniques

H. Operational Use of Equipment

1. Demonstration on use of all available survival equipment

I. Desert Survival

1. Characteristics of deserts in applicable geographic area
2. Special medical problems encountered in deserts
3. Body dehydration problems
4. Water procurement in deserts
5. Clothing requirements
6. Shelter requirements
7. Signaling techniques peculiar to deserts
8. Travel considerations

J. Arctic Survival

1. Hypothermia
2. Hazardous conditions
3. Clothing required
4. Signaling techniques
5. Travel considerations

K. Ditching and Water Survival

1. Preparation for ditching phase
2. Alert phase
3. Ditching phase
4. Rescue phase
5. Raft actions
6. Survival needs
7. Water connected medical problems
8. Signaling techniques
9. Recovery operations