

Survival Fundamentals

A. The 3 fundamental goals of a survivor are:

1. Developing a good emergency action plan BEFORE you fly
2. Maintaining life
3. Returning to fly another day

B. Five conditions that may have an effect on a survivor's ability to return are:

1. Climate (temp, winds, precip)
2. Terrain (land, water)
3. Life forms (plant, animal)
4. Survivor's physical condition
5. Duration

C. Emergency Action Plan

1. Just as important as a thorough preflight or flight plan
2. Developing a logical plan is much easier sitting by a warm fire drinking a cold beer than sitting on a snow bank wishing you had a hot cup of coffee.
3. Having an emergency action checklist helps to focus your attention on the problem at hand and minimizes mental stress, depression, and shock.
4. Starts with the flight briefing so that everyone knows his/her initial responsibilities during an in-flight emergency through the subsequent landing and initial gathering point after the aircraft has come to rest.

SURVIVORS ARE THE ONES WHO KEEP A CLEAR HEAD AND MAKE RATIONAL DECISIONS DURING AN EMERGENCY. STATISTICS ARE THE ONES WHO DON'T.....

D. Maintaining Life

1. Maintaining body heat is the single most important need. It can only be accomplished through proper techniques of personal protection.

2. Clothing - Proper wear and care of clothing cannot be over emphasized.

- a. Insulation (down, wool, thinsulate, etc)
- b. Layer system (total body covering) (inner, middle, protective)

c. Heat loss

- (1) Radiation (cover head and neck)
- (2) Conduction (direct contact with cold objects)
- (3) Convection (wind chill/movement of air through clothes)
- (4) Evaporation (don't allow yourself to sweat)
- (5) Respiration (cover nose and mouth)

d. Care and use

- (1) **C** - clean
- (2) **O** - overheat
- (3) **L** - layers
- (4) **D** - dry
- (5) **E** - examine/exposure
- (6) **R** - repair

3. Shelters (dictated by the length of day, temp extremes, hazards)

a. Immediate action (gets you out of the elements)

b. Improvised shelters

(1) Thermal principal (radiant heat from ground and insulation from snow)

(2) Shelter site (avoid hazards)

(3) Ventilate (if you have external heat source)

c. Arctic fire craft (fire is not a necessity)

d. Equipment (assists with personal protection)

(1) Survival kit

(2) Aircraft parts

(3) Personal equipment/clothing

4. Sustenance (once you are in a survival situation, you need to put fluids back into your system as soon as possible - **YOU NEED 5-6 QUARTS/DAY**)

a. Do not eat snow (it depletes body heat)

b. Rations (use to transition from commercial to natural diet)

c. Plants (if you don't know what it is, perform edibility test first)

d. Animals

(1) Stay away from big game unless you have a gun

(2) Cut meal size pieces and freeze separately

5. Medical (SEE HANDOUT)

E. Signaling and recovery

1. Survivor responsibilities

- a. Know how and when to use signals
- b. Be able to use signals on short notice
- c. Establish contact with rescue forces
- d. Follow instructions given by rescue forces

2. Electronic signals

- a. Line of sight
- b. Cone of silence
- c. Keep the 406 ELT on. If you have an old style ELT, turn it off when attempting voice contact
- d. Affects of temp on batteries

3. Visual signals

- a. Signal mirror (read the directions and practice before you need it)
- b. Pyrotechnic devices (flares) (same as above)
- c. Fire/smoke (aircraft tires/seat covers/oil make great black smoke)
- d. Distress signals stamped in the snow
- e. Orange signal panels

4. Audio signals

- a. Whistles can be heard over several miles

FROM THE 99'S

MANY PARTS OF THE AIRCRAFT ARE USABLE!! FOR EXAMPLE:

MAGNESIUM WHEELS - signaling
NOSE SPINNER CONE - bucket, stove with sand, oil and fuel
OIL FILTER - burn for black smoke
PROPELLER - shovel, snow cutting tool, bracing for shelter
ROTATING BEACON LENS - drinking cup
RUGS - ground pad, insulation, clothing
SEATS- sleeping cushions, back brace for spinal injury, fire starter and signal material, insulation, ground pad, sponge rubber for neck support
SEATBELTS - binding material, slings, bandages
SPRING STEEL LANDING GEAR - pry bar
TIRES - fire starter and fuel, black smoke
VERTICAL STABILIZER - shelter support, platform
WHEEL FAIRINGS - water storage or collection, black smoke when burned
WINDOWS - break up for snow cutting
WINGS - windbreaks, shelter supports, overhead shade, platform for fire if metal, water collector, signaling device
WING STRUTS - pry bar, splint, shelter brace, flag pole for signaling, crutch
WING TIPS- drip collection and water carriers
WIRING - binding and rope
WOODEN WING STRUTS, BRACES & PROPS— fire starter, fuel
Note: this is only a partial list of possibilities. Uses are almost unlimited.

(Survivor's Hierarchy of Basic Needs)

HIS / HER

Hazard	Heat
Injuries	Energy
Shelter	Rest & Relaxation