

Survival Fundamentals

- A. The 3 fundamental goals of a survivor are:
 - I. 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)

H I S / H E R

Hazard

Heat

Injuries

Energy

Shelter

Rest & Relaxation