

## **Pre-Trek Preparation, Safety Awareness, and Personal Check List - Revised**

This is a list I originally prepared for my own personal use before my first extended wheeling trip out West, of general equipment, maintenance, and personal guidelines that a vehicle and personnel should consider depending on the adventure they are about to embark on. It was compiled from a variety of websites and resources here and there, into one, easily accessible document that I could call up for reference. The majority of credit for the format and information needs to be given to the old Land Rover North America website and the old Border-to-Border Expedition Society website that had expanded the list for one of their earlier expeditions. For some reason, both sites no longer have the lists published on the new versions of their respective sites. I thought that it was a great resource that should not be lost and luckily had saved copies from each site before they disappeared. I hope that each site will eventually put them back up.

### **Disclaimer:**

This document is offered only as an informal, personal guideline that I found useful and wanted to share with others only as a helpful reference. Information contained here carries no guarantee on its equipment or medical accuracy and use of this list other than its intended purpose of an informal reference, is solely at your own risk.

## **BASIC EQUIPMENT LIST:**

### **Recovery Equipment:**

- Hi-Lift jack - 60" recommended if you have any kind of upgraded suspension
- 2x2 sheet of 3/4-inch plywood for jack base if you do not have one
- Shovel
- Ax and/or Saw
- D-ring shackles: At least (4) of them
- Recovery straps: The more, the better. 20,000 lbs rating or better recommended
- Leather or Heavy Duty Gloves
- Snatch Block
- Winch

### **General Maintenance and Repairs:**

- Basic tool kit with automotive size tools
- Full size spare tire
- Spark plug socket
- Jumper cables or a Starter Pack
- Tire gauge
- Air Compressor, Pump, or CO2 Tank
- Fire extinguisher
- Duct Tape
- Assorted metric nuts and bolts, in case some get sheered, bent or broke
- Spare belts, hoses, filters, and bulbs
- Oil, Fluid, assortment – Details below
- Bag or container for storage of above, securely stowed in the vehicle

### **Fuel:**

- Extra NATO style fuel cans – (2) at a minimum for remote trails

### **Communications and Navigation:**

- CB Radio – A must have item for constant communications with other vehicles.
- Compass
- Cellular Phone (if you have one, its worth bringing)
- GPS Navigation ability and knowledge of using it
- Topo or guide map of area (with declination calculated and written on map)

### General, Misc, and Camping:

- Flashlights (Headlamps are extremely convenient)
- Swiss Army Knife
- Matches in a waterproof container
- Candles
- Food: If possible enough for each person for at least three days and nights
- Drinking Water: Carry at least 1 gallon per person, per day
- Plastic safety whistle
- Paper towels
- Toilet paper
- Plastic trash bags (Also good for catching oil droppings in the event of a field repair)
- Sunglasses
- Sunscreen
- First Aid Kit – Details below
- Camera/Camcorder (with plenty of film and tapes)
- Clothing for both below freezing conditions, and humid desert conditions
- Sleeping bags
- Blankets
- Extras batteries for any battery powered item you are taking along
- Cooler to store food and camera film
- Firewood
- Folding camp chairs
- Propane Stoves/Lamps/Heaters (don't forget extra fuel canisters)
- Tent if you are not sleeping in your truck

### Vehicle - First Aid Kit

Sample guideline for what a vehicle may want to carry as the contents of a First Aid Kit. Most everything listed here can be found at your local Rite-Aid or similar large drugstore. For a bit more money, there is a large variety of pre-packaged EMT field kits you can buy from the web. Your medical supplies should be put into a small box or soft bag, preferably air tight, and stored in an easy/rapid accessible place in the truck.

- Package of non-sterile latex or "Nitrile" gloves
- CPR micro-shield (with one way valve) or Pocket Mask
- Box assorted Band-Aids
- Box of 4x4 gauze pads
- Scissors
- Triangular bandages
- (4) rolls 3inch & 4inch cling or conforming gauze bandaging
- (3) "Ace" type elastic bandaging
- (2) emergency survival blankets (space blankets)
- (2) - (4) rolls of medical tape (x1 1inch/ x1 2inch)
- Tweezers
- Thermometer – oral & rectal
- Safety pins
- Cotton balls & swabs
- Aspirin & non-aspirin pain reliever
- Antacid
- Anti-diarrhea medication
- Aloe cream
- Antibiotic cream
- Anti-itch cream
- Antihistamine
- Antibacterial soap

If you need prescribed medications, be certain to have more than enough in supply. This is especially important for allergic reactions, respiratory-asthma; diabetic, cardiac, and/or seizure emergencies.

### **Pre-Trek Vehicle Preparation**

Items that should be checked and replaced if needed, before trips. If you do not perform your own work, share this checklist with your Land Rover Technician/Vehicle Mechanic that will perform these services before heading off.

#### **Preparation and Maintenance Checklist:**

##### **Engine:**

Full tune-up that includes:

- Spark Plugs
- Spark Plugs wires
- Distributor Cap
- Rotor
- Air Filters
- Gas Filters
- Engine Oil '10W30' or '10W40' and oil filters

##### **Transmission:**

- Check condition and level
- Oil ATF Dextron 11D
- Replace transmission oil filter if required

##### **Transfer Case:**

- Check condition and make sure that the shifting mechanism is free and adjusted properly
- Oil 80WEP or equivalent.

##### **Swivel Pin Housing:**

- Check seal and condition of swivel ball for signs of wear
- Oil 80WEP

For those vehicles that have the grease, keep the grease – do not drain the grease and replace with oil. Ones with Oil in the swivel ball make sure the level is correct and is 80WEP

##### **Front and Rear Axles:**

- Check condition and seals
- Oil 80WEP

##### **Drive Shaft, U-Joints, and Sleeves:**

- Check condition
- Grease should be Multipurpose Lithium grease

##### **Cooling System:**

- Pressure test system to detect any leak

##### **Antifreeze:**

- Use an ethylene glycol based antifreeze (containing NO methanol) with non-phosphate corrosion inhibitors suitable for use in aluminum engine to ensure the protection of the cooling system against frost and corrosion.

##### **Battery:**

- Perform battery test (AVR). Replace if in doubt.

##### **Alternator:**

- Perform test (AVR).

**Starter:**

- Perform test (AVR).

**Heat Safety Tips**

During the hot temperatures and humidity that you might experience, excessive heat can subject your body to a variety of problems ranging from mild discomfort to life-threatening heat stroke. You need to protect yourself with some common sense approaches but if heat stress strikes, be alert to the signs and act swiftly to cool down.

General Care for Heat Emergencies falls into three general categories:

- (1) Cool the body
- (2) Administer fluids to the conscious patient
- (3) Minimize shock

**TYPES OF HEAT STRESS EMERGENCIES:**

**Heat Cramps and Exhaustion:**

Heat cramps usually involve the voluntary muscles and present pain and spasms and "cramping" caused by excessive exercise. They are often the first sign of trouble!! They often involve abdominal or leg muscles. It is generally believed that loss of water and salt from heavy perspiring causes cramps. With rest and re-hydration, recovery is not difficult.

Heat exhaustion is less dangerous than heat stroke but without treatment it can progress rapidly into a life-threatening condition. It can occur during strenuous exercise or excessive activity in a warm, humid place where body fluids are lost rapidly through heavy perspiration. This fluid loss results in a decrease of blood flow to the vital organs, resulting in a form of shock that without intervention can deteriorate rapidly. With heat exhaustion, perspiration doesn't evaporate effectively resulting in the body not being cooled properly. It must be attended to quickly before the core body temperature begins to rise.

**Signs & Signals include:**

Cool "clammy" to the touch, moist, pale, or flushed skin; heavy perspiring; headache, nausea or vomiting; dizziness or confusion, general weakness, lowered blood pressure, increased pulse and breathing rates, signs of fainting, tiredness and exhaustion. Body temperatures might still be near normal. If sitting, be alert that the victim may faint or become "light-headed" upon getting up.

**Treatment for Heat Cramps/Exhaustion:**

Move the person to a cooler place and provide rest in a comfortable position. Give a small amount of cool water every 15 minutes only if the patient is conscious. Do not let the individual drink too rapidly. Do not give liquids with alcohol or caffeine in them. Remove or loosen tight clothing and apply cool, wet cloths such as towels or sheets or cold packs (wrapped in a towel not directly against bare skin) to the back of the neck, armpits and groin area. Monitor the patient.

**Heat Stroke:**

Also known as sunstroke, is life threatening. The individual's temperature control system, which produces perspiration to cool the body, stops working. The body temperature can rise high enough that brain damage and death may result if the body is not cooled quickly. Heat stroke results from the failure of the heat regulatory system in the body. The failure of sweating leads to the loss of evaporative cooling of the skin and an uncontrolled rapid rising of the body temperature.

**Signs & Signals include:**

Hot dry skin of red, spotted, or bluish or purplish coloration; changes in level of consciousness; rapid, weak pulse and rapid, shallow breathing; rising, high body temperature; brain disorders possibly consisting of mental confusion, delirium; fainting, convulsions, and coma.

Unless promptly and properly treated, heat stroke may be fatal. The victim may suffer permanent brain injury and complications such as kidney, liver, and blood circulation disorders. Survival and complete recovery after undergoing an initially high body temperature is possible if prompt and effective cooling is provided. The victim must be moved to a cool area; further, soaking of the victim's clothing with cold water and fanning will cool the body. In milder cases of heat disorders, sweating may still be evident in spite of high body temperature.

#### **Treatment for Heat stroke:**

Heat stroke is life threatening so help is needed fast. This person will need to be transported to a medical facility as rapidly as possible. Move the person to a cool place and quickly cool the body. Wrap wet sheets or towels around the body. If you have ice or cold packs place them around the neck, armpits, wrists, and groin areas. (Do not use rubbing alcohol because it closes the skin's pores and prevents heat loss.) Look for signs of breathing problems and make sure the airway is clear. Keep the person lying down.

#### **Water-Deficiency Heat Exhaustion:**

Some individual's feel that by restricting their water intake in hot jobs they reduce the amount of sweat dripping from their faces and into their eyes. They should be convinced that they are trading safety for comfort and that a voluntary restriction of their water intake may lead to water-deficiency heat exhaustion and even heat stroke. The risk of dehydration is greater if the major part of the daily meals is dry or dehydrated. The victim of water deficiency and heat exhaustion is thirsty. In mild cases, rest in a cool area and the taking of water results in a speedy recovery.

Common Sense Approaches To Deal with Heat = Prevention. Know your body. If your environment is hot & you are experiencing any of the above symptoms seek treatment immediately.

#### **Number One Treatment - Drink plenty of fluids in advance of thirst**

- Drink before you get thirsty! Chances are, if you thirsty, you are probably somewhat dehydrated already. Remember it takes some time for the body to absorb fluid orally "Drink early and Drink often!"
- Choose water, fruit or vegetable juices, sports or non-carbonated drinks.
- Drink slowly. The last thing you want to have happen is get nauseated and vomit up the fluid.
- Do not drink alcoholic beverages or ones containing caffeine. They can contribute to the dehydration of your body even more.
- Stay away from carbonated soft drinks. They might taste good but your stomach might not like all that sugar and gas.
- Eat small meals and eat more often but avoid foods high in protein, which increase the metabolic rate.
- Avoid using salt tablets unless directed to do so by a physician.
- Avoid the sun. When outdoors, wear a wide-brimmed hat or carry an umbrella. Don't forget sunscreen on other exposed parts of the body. Limit outdoor activity.
- Select appropriate clothing. Choose lightweight, loose-fitting clothes that breath. Avoid dark-colored clothes; light-colored clothes reflect the heat.

#### **Cold Weather Emergencies**

##### **Exposure to Cold Environment:**

This is a frequent condition that occurs when individuals suffer from low temperatures. It may be due to being caught out in inclement weather; becoming exposed to cold water and unable to change out of wet clothes; exposed to cold winds (wind chill), or simply by being elderly with a body not being able to generate as much heat. It can happen even when the temperature is relatively warm – 50 F. It does not take much to cool the body and a few degrees below 98.6 is heading for trouble.

#### What To Look For – Signs and Symptoms:

- Cool, pale/bluish skin (especially around the lips, face and extremities)
- Weak, slow pulse
- General weakness, drowsiness, lack of muscular co-ordination
- Confusion, uncommunicative, poor judgment
- Shivering

#### Care and Treatment:

- Warm the patient slowly by adding additional clothing and heating source.
- Place hot packs under armpits, neck, and groin area
- If wet, remove any wet clothing & replace with dry.
- If conscious, give sweet fluids- warm is good but not necessary. This is the "fuel" for the body to burn.

### **HYPOTHERMIA**

Hypothermia is a potentially life threatening condition that especially affects the very young and elderly very quickly. The body's core temperature is lowered to the extent that the brain function is impaired and the heart's activity is about to be compromised. Urgent intervention is required and you must seek medical assistance immediately.

#### What To Look For - Signs and Symptoms:

- Pale, cold skin
- Slow, weak pulse – possibly irregular
- Slow, shallow respirations
- Blurred or decreased vision
- Patient may be quiet, appears asleep, difficult to rouse;
- Patient may be unconscious
- Disorientation, confusion, "disconnected from surroundings"
- Absence of shivering
- If very cold, may have non-reacting pupils and skin absence of color.

#### Care and Treatment:

- Immediate EMS intervention & transport to a medical facility as rapidly as possible. This is a serious emergency.
- Warm patient slowly, wrap in "rescue/space blanket" or place in a sleeping bag with another individual for body heat.
- If patient is wet, remove clothing GENTLY and warm slowly
- Move the patient as little as possible.
- Reassess heating once patient commences shivering
- If unconscious, give nothing by mouth.
- Watch for deteriorating conditions – monitor A-B-C's
- Be prepared for sudden cardiac arrest and initiation of CPR.