


Emergency Equipment and Survival Gear

Objective	
<p>To ensure the applicant learns the purpose of and can exhibit a clear understanding of the types of emergency equipment and survival gear that are available, including those that are installed in the airplane.</p>	
Purpose <p>While no pilot ever wants to be involved in an in-flight emergency or an off-airport landing, they do happen. Pilots must be prepared to deal with these emergencies, and potentially survive in open water, or other remote areas. This lesson introduces pilots to the types of emergency equipment and survival gear available for use in different types of emergencies.</p>	
Schedule	Equipment
<ul style="list-style-type: none"> ● Ground Lesson: 15 minutes ● Student Q&A: 10 minutes 	<ul style="list-style-type: none"> ● Emergency Equipment from Aircraft ● PLBs (optional)
Student Actions	Instructor Actions
<ul style="list-style-type: none"> ● Ask any questions, receive study material for the next lesson. ● Watch linked video. ● Review listed references. 	<ul style="list-style-type: none"> ● Deliver the ground lesson (below). ● Point out the emergency equipment available in the aircraft before flight.
Completion Standards	
<ul style="list-style-type: none"> ● Ground: Student can explain: <ul style="list-style-type: none"> ● The types of emergency equipment and survival gear that are available to pilots. ● The types and limitations of ELTs, as well as the inspection and testing requirements. ● Which types of emergency and survival gear are useful in various situations. ● Before Flight: Student can point out the emergency equipment installed in the airplane and explain its use. <ul style="list-style-type: none"> ● Simulates briefing passengers on the available emergency equipment and proper use. ● Simulates procedure for ballistic airframe parachute deployment, if installed. 	

References

- Aviation101 - "Lonely Cross Country Flight - Survival Gear & Tools to Carry"
 - YouTube - <https://www.youtube.com/watch?v=NvkN5-Px9SA>
- FAA-H-8083-3C (Airplane Flying Handbook) - UPDATE
- FAA-H-8083-25C (Pilot's Handbook of Aeronautical Knowledge) - UPDATE
- FAA-S-ACS-6C (Private Pilot ACS) - Area IV Task B
- FAA-S-ACS-7B (Commercial Pilot ACS) - Area IV Task B
- FAA-S-ACS-25 (CFI ACS) - Area XII Task D

Ground Lesson Outline

- Dress to Egress
 - Appropriate clothing and footwear for all flights
- Search and Rescue
 - VFR Flight Plans, Flight Following, tell someone where you're going!
- Types of Equipment
 - Emergency
 - ELTs - Must be tested annually, battery replaced when ½ useful life is past - § 91.207
 - 121.5 MHz vs 406 MHz ELTs (Satellite Monitoring)
 - Fire extinguishers, first aid kits, etc.
 - Survival - Flares, food, water, etc.
 - Whole Airframe Parachutes - Cirrus, etc.
 - When to Deploy - Whenever a safe landing is not assured, within the envelope (400-600 AGL)
 - Emergency Auto-Glide or Auto-Land Systems - Garmin SmartGlide, etc.
- For All Flights
 - Fire Extinguisher - Location and operation
 - Crash Knife - For seatbelts, windows, etc.
 - First Aid Kits
- Over Water - Especially beyond gliding distance from land
 - Personal Locator Beacon (PLB)
 - Inflatable Raft / Personal Flotation Devices
 - Signal Flares, Signal Mirror
- Over Remote or Difficult Terrain
 - Personal Locator Beacon (PLB)
 - Signal Flares, Signal Mirror
 - Survival Kit - Food, water, etc.
 - Satellite Phone / Portable VHF Transceiver
- Cold vs Hot Climates
 - Sunscreen, Emergency Blankets, etc.
- Equipment Installed in the Airplane
 - Servicing, Use, and Storage

Ground Lesson Supplements

- In-Cabin Fire Extinguisher



- **Personal Locator Beacon** - PLBs like the Garmin inReach utilize a satellite constellation (Iridium) to continuously broadcast GPS coordinates. These PLBs can even be associated with VFR Flight Plans filed via 1800wxbrief.com



- **Signal Flare**



- **Inflatable Raft**



- **Manually-Inflatable Life Vest**



- **Emergency/Crash Knife**



- **First Aid/Survival Kit**

