

Surface Rescue Swimmer School

Aviation Life Support Systems
LT 4.5

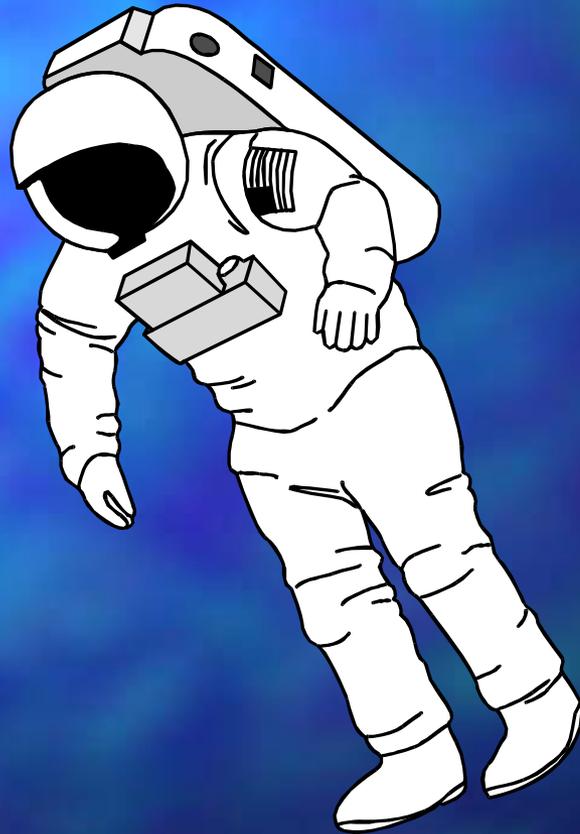
Enabling Objectives

- Explain the functional operation and hardware associated with various parachute harnesses.
- List the types of harnesses outlined in NTTP 3-50.1.

Enabling Objectives

- Describe the procedures for donning/doffing the following assemblies:
 - Helmet assemblies
 - RSSK assemblies
 - Oxygen mask assemblies
 - Survival vest/flotation assemblies

General Equipment



Anti-Exposure Suits

Anti-Exposure and dry suits. Worn under the flight suit

- Imperial Wetsuits (quick-donning)
 - Bright orange in color.
 - Worn over the flight suit/clothing.
 - Positive buoyancy may negate self-righting features of MEDEVAC litter.
 - Some have lifting “V” ring in the center of the chest.

Flight Helmets

- Covered with high visibility reflective tape.
- Provide limited flotation.
- May hinder communications between survivor and rescuer.
- Helmets are not removed until survivor is aboard rescue platform.

Oxygen Masks

- Form fit to face.
- Attach to helmet with bayonet fitting.
- Oxygen supply hose connects to Rigid Seat Survival Kit (RSSK) or aircraft console.
- Always disconnect mask from helmet first to eliminate the possibility of suffocation.

Flotation Devices



Aircrew Flotation Devices

- Naval aircrew flotation is provided by an LPU series life preserver assembly attached to either an AIRSAVE survival vest or a PCU parachute harness.

Aircrew Flotation Devices

Providing flotation to the survivor is very important. There are three methods of inflating an LPU.

- Some jet aircrew may have an automatic inflation device, such as the FLU-8. This device is activated within 8-15 seconds upon immersion in the water, and will require no action on the part of the rescue swimmer.
- Manual inflation is accomplished by pulling the beaded handles located near the outer seam of flotation.

Aircrew Flotation Devices

- Oral inflation is accomplished by loosening the knurled knob on the inflation tube, holding it down with your teeth, and blowing into the tube. This method will require the most effort on the part of the rescue swimmer.

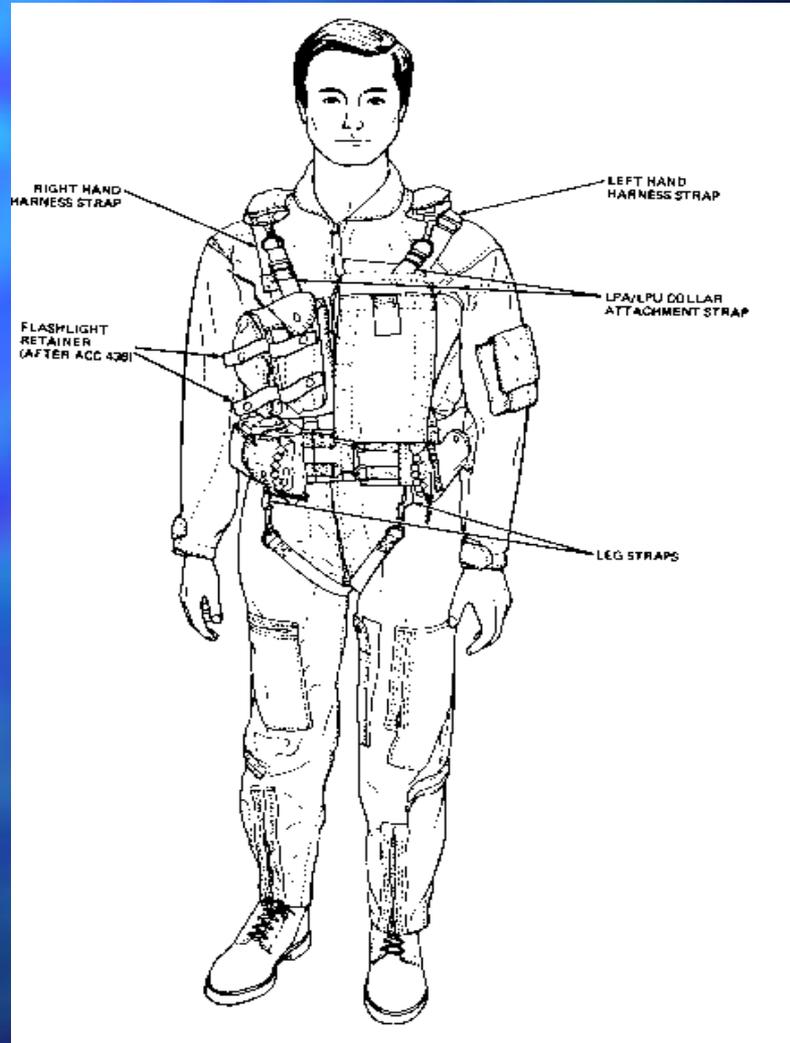
■ Other Flotation Assemblies

- Worn by flight deck personnel and aircraft passengers.

Aircrew Flotation Devices

- Inflated by CO₂ or orally.
 - Pull cord for CO₂ inflation.
 - Oral inflation.

Backpack Parachute



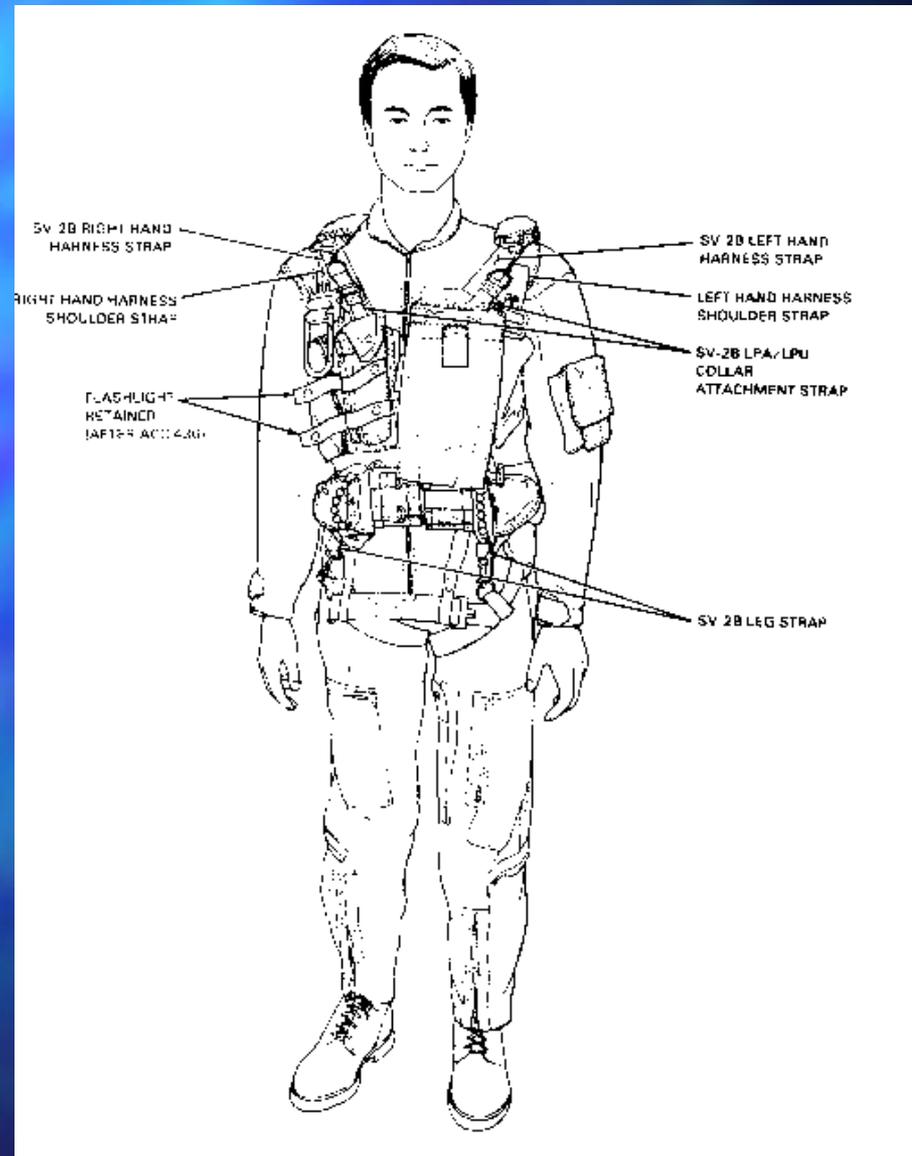
Backpack Parachute

- Large fixed wing land base aircraft crew (P-3, C-130) wear an NB-series Back Pack Type Parachute with quick donning harness.

Backpack Parachute

- Harness is worn over the AIRSAVE survival vest and flotation.
- Harness must be removed to separate the survivor from the parachute.
- Removed by releasing three quick ejector snaps, one at the chest, and one for each leg.

Torso Harness-style Parachute/Rigid Seat Survival Kit Release



Torso Harness-style Parachute and Rigid Seat Survival Kit Release

- Jet and E-2 aircrew wear a PCU-Series Torso Harness.
- The torso harness is not removed during the rescue. The parachute must be separated from the torso harness.
- For Navy gear, the parachute is separated by releasing the Koch fittings which attach the parachute risers to the harness.

Torso Harness-style Parachute and Rigid Seat Survival Kit Release

- Most jet gear incorporates Sea Water Activated Release System (SEAWARS) which automatically release the Koch fittings upon complete immersion in salt water. This system poses no danger to the rescue swimmer and requires no action of the rescue swimmer.
- Manual release is accomplished by separating the male portion of the Koch fitting assembly (located on the right and left upper chest area) from the female ends (on the parachute risers).

Torso Harness-style Parachute/Rigid Seat Survival Kit Release

- A Rigid Seat Survival Kit/Seat Kit Unit containing a raft, oxygen, and survival gear is attached to the lap belt of the torso harness. E-2 aircraft, incorporates a lap belt type detachment from the RSSK.

Torso Harness-style Parachute/Rigid Seat Survival Kit Release

- Disconnect oxygen hose from RSSK by lifting the knurled locking ring and pulling firmly on the supply hose.
- After ensuring the oxygen hose is disconnected, remove the RSSK by releasing the mini-Koch fittings located near the aviator's hips.

USAF/OTHER PARACHUTE HARNESSES

- USAF harnesses closely resemble Navy Backpack Type.
- Risers may be attached with Frost, Koch, or J1 Capewell Fittings.
- Seat kits may use mini-Koch fittings or a fitting closely resembling automotive lap belts.

Hoisting Attachment Points

- For hoisting, the rescue hook or rescue swimmer's snap hook may be attached directly to the aviator in one of two ways:
 - Hoist via the gated "D" ring of an AIRSAVE vest (if so equipped).
 - Hoist via the gated "D" ring of a PCU torso harness.

Review

- True/False, Helmets are to be removed as soon as possible?

False: Helmets are not removed until survivor is aboard rescue platform.

- What are the three methods to inflate a survivor's flotation?

Automatic (FLU-8), Manual, Oral

Review

- True/False, To release the parachute from the harness of a Torso harness, you must remove the three (3) quick-ejector snaps?

False: The Torso harness uses four (4) Koch fittings, two (2) Koch fittings located on the shoulders, and two (2) mini-Koch fittings located on the lap belt.

Questions?
