

AIR RESCUE REPORT

International Commission for Alpine Rescue

Kommission für Luftrettung • Commission pour le Sauvetage Aérien • Commission for Air Rescue



IKAR-CISA

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INTRODUCTION:

This year's congress was hosted by the Société valaisanne de secours en montagne. The commission was chaired by Patrick Fauchère, of Airs Glaciers. The Air-Rescue Sub-commission met with members representing 19 countries. They were Austria, Bulgaria, Canada, Croatia, Czech Republic, France, Greece, Italy, Ireland, Montenegro, Norway, Poland, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, and United States of America.

FIELD DAY

A Field day was organized at the Air Zermatt helicopter base. Static displays were on sight with rescue equipment used by the local rescue team. In addition, Eurocopter brought in an EC145 demonstrator. Pilots on the air rescue commission were given the opportunity to fly the aircraft.



ACCIDENTS & INCIDENT REVIEWS FROM MEMBER COUNTRIES:

Switzerland-Entanglement-Patrick Fauchère

This accident took place on the Pointe Dufour in the Mont Rose massif. A mountain guide had requested rescue for an exhausted client unable to continue. The guide was anchored to a block. Both clients in succession were tied a few metres below him. The lowest client was also anchored to a block. A rescuer was lowered from a Lama onto the ridge to evacuate the client between the guide and the other client. When the rescuer and victim were about to get hoisted, the guide noticed his rope laying over one of the packs hanging from the rescue load. As he tried to flip the rope off that was not under tension, he lost his balance and fell of the ridge onto a snow slope 5 metres below. The block he was anchored to came loose and cut his rope. He fell another 500 metres to his death.

France – Crash. While performing a night-time medevac in Corsica an EC145 of the Sécurité Civile crashed. The aircraft was flying with the flight management system to Bastia. The pilot encountered reduced visibility and while reducing air speed struck a ridge. The crew and the patient (a pregnant woman) died in the crash.



France-Engine failure. An EC145 of the Sécurité Civile was on final approach when one of the two engines failed. The pilot aborted the landing and returned to base where he landed uneventfully. Initial speculations were that the five mobile phones on board may have interfered with the overspeed box but this was later dismissed. The incident is still under investigation.

Austria-Crew emergency. An EC135 of the OAMTC was on final approach to a hospital heliport. The pilot was reaching for the overhead panel when he reported a complete loss of sensation to his feet. He managed to land without incident and was admitted to the hospital. After two days of tests, it was not determined what the problem was. He subsequently lost his medical.

Greece-Crash. A Robinson R44 crashed while accessing a rescue site. None of the crew were severely injured in the crash. The wreckage was removed with a military Chinook.



Norway-Birdstrike A bird went through the chin bubble of a Norwegian Red Cross EC135 during a migration. There were no injuries to the crew and no other damage. Other incidents with bird strikes have occurred mostly during night flying.

Italy-Cable strike A109

While investigating a landslide for victims near Belluno, an A109 struck cables spanning the valley. The aircraft crashed and all four occupants on board died.



United States (New Mexico) - Accident

On June 9, 2009 a New Mexico State Police Agusta A109E crashed during the attempted rescue of an uninjured hiker near Santa Fe Baldy Peak 12,632 feet (3,850 m) near Santa Fe, New Mexico.



Instrument meteorological conditions prevailed when the helicopter impacted terrain, killing the 46 year-old pilot and female subject. The pilot and police spotter had landed after locating the search subject just before dark. Dispatchers had directed the helicopter crew to the missing hiker, as they spoke with her by cell phone. While the pilot hiked off from the landing zone to reach the subject, the weather deteriorated and began sleeting. The pilot returned carrying the hiker on his back. After becoming airborne, storm clouds closed in around the helicopter. Based on radio transmissions, the pilot reported "we hit a mountain," and continued to fly for at least one minute. The helicopter impacted terrain and rolled 800 feet down a steep talus slope. The deteriorating weather conditions were known in advance and the helicopter response lacked a formal mission briefing between all personnel involved. The incident commander had not dispatched and was not in operational control of the helicopter during the mission. The flight crew was not prepared with adequate survival equipment to remain at the landing zone overnight. A late season snowstorm hampered rescue efforts and the spotter, who was the sole survivor, was not located until the following day.

United States (California) – Heli-Rappel Accident

A 20 year-old US Forest Service Firefighter died on July 21, 2009, when he fell 200 feet during a proficiency heli-rappel training session. The incident occurred during the 6,000 plus acre (2428 hectare) Backbone Fire on the Shasta-Trinity National Forest (CA). The accident occurred during the initial load of rappellers for the training exercise. Personnel were on board the Bell 212 helicopter on the ground, with the engine running, while safety checks were completed. During the safety check, it was observed that the involved firefighter was missing an elastic O-ring keeper within the triangular screw link on his harness. The screw link is the connection point on the rappeller's WBBH-HR-2 Harness to a spring-loaded locking "J-hook", which is ultimately connected to the Sky Genie descender on the rappel line. The firefighter left the aircraft and got his harness reconfigured with the missing O-ring. The O-ring was tragically configured in such a manner that it created the sole connection between the triangular screw link and the "J-hook". The training exercise proceeded without the improper rigging being detected. The aircraft was stabilized in a 200 foot hover, away from other aircraft at the helibase. As the involved firefighter leaned back and loaded his harness, the connection created by the lightweight O-ring failed, causing him to fall un-arrested to the ground below. The aircraft landed immediately, and following resuscitation attempts, the firefighter was pronounced dead at the scene.



United States (Colorado) – Accident

Four soldiers died on August 19, 2009 after a Black Hawk helicopter crashed 400 feet (122 m) below the summit of Colorado's 14,421-foot (4,396 m) Mount Massive, during a training mission. The high-altitude training began from Peterson Air Force Base in Colorado Springs, which is 90 miles (145 km) east of Mount Massive. The helicopter was assigned to the 160th Special Operations Aviation Regiment (Airborne) at Fort Campbell, KY. Soldiers in the 160th are known as "Night Stalkers" because they specialize in nighttime operations. A trail crew working nearby witnessed the aircraft descend and impact a ridgeline. Two crew members were ejected from the wreckage as it rolled down the mountain. Prevailing weather conditions reported 4,000 feet lower than the crash weren't unusual for the mountains with temperatures in the 60s and winds gusting up to 26 mph. The entire inter-agency response, recovery, investigation and salvage at the high altitude site took a total of eight days. The Black Hawk's flight recorder was recovered and military investigators from Fort Rucker, AL are examining the accident.



United States (Wyoming) - Inadvertent Short-Haul Hook Release

During a helicopter short-haul training session on July 9, 2009 at Grand Teton National Park an inadvertent release occurred of the primary anchor point, which is a Talon Keeperless Cargo Hook (manufactured by Onboard Systems). During this release, with a suspended human load, the backup anchor point, a three-ring release system, caught load as designed. Prior to the mishap, the involved Eurocopter AS 350 helicopter was returning from refueling and the spotter observed the short-haul rope had released from the cargo hook and was held by the backup “three-ring”



system. Subsequently the equipment was inspected and tested with training resumed. During the training exercise, with a human load suspended 10 feet AGL, the primary anchor (cargo hook) experienced an inadvertent release. The release shifted the load to the secondary anchor (three ring release). Following the release from the primary hook, the litter and attendant began to spin. Several attempts were made by the attendant to slow the rate of spin, but with only limited success. The litter and attendant were immediately returned to staging site. Subsequent investigation noted damage on the outer sheath of the manual release cable. With the manual release mechanism cover removed, the rigging of the fore and aft cables could be measured. The manual release cable to the cargo hook had approximately ¼ inch (0.6 cm) of the movement necessary to effect a mechanical release when connected. Any bending of forward cable, such as when the collective is raised, causes an effective “shortening” of the inner cable. Unlike conventional hooks which reset themselves, Talon Keeperless Hook must be manually re-cocked. Rigging of the release cables should be done with hook open and minimum clearance in system. Closing and latching hook eliminates clearance and pre-loads release trigger.

Post-Incident recommendations included:

1. Check clearance between end of the inner cable and end of the outer sheath.
2. Check clearance between the guide on forward cable and end of the aft cable.
3. Check general cleanliness and condition of the release cable.

United States- Improving HEMS Operational Safety

2008 was the deadliest year on record for USA HEMS operations, which included eight fatal accidents with 29 fatalities. The National Transportation Safety Board (NTSB) conducted HEMS Safety Hearings during February 2009 and then subsequently released their recommendations on September 1, 2009.



NTSB HEMS Safety Recommendations include the following

COMMERCIAL HEMS OPERATIONS:

- Scenario-based pilot training
- FAA-approved scenario-based simulator training for pilot
- Safety management system program
- Flight data recording devices
- Annual report on activity
- Use Aviation Digital Data Service Weather Tool
- Evaluate low-altitude airspace infrastructure for safe HEMS operations
- Night vision imaging systems
- Autopilot

PUBLIC AIRCRAFT HEMS OPERATIONS:

- Scenario-based pilot training
- Safety management system program
- Flight data recording devices
- Night vision imaging systems
- Autopilot

PRESENTATIONS:

Rescue Hoists-Geoff Dinsdale, Breeze eastern UK.

A number of near miss incidents were described involving cable strikes against aircraft fuselage. It was reiterated that abseiling from the hoist hook is a dangerous practice not supported by the manufacturer. A number of different hooks were shown and the manufacturer is trying to come up with hook designs that will preclude the possibility of rollout.



New Aircraft-Eurocopter, Jean-Pierre Brassler

A new aircraft design was presented by Eurocopter. The EC175 is intended to fill the void between the AS365 (Dauphin) and the AS332.225 (Super Puma). It will be in the 7 ton class. The design criteria include safety, green, innovative and competitive. It will be powered by twin PW PT6 engines with Fadec. This is a joint project with China and two separate versions will be produced.



Royal Norwegian Air Force-Captain Lasse Coucheron

The Sea King Squadron of the Norwegian Air Force was described. The Norwegian Red Cross is the terrestrial rescue organization in Norway and the IKAR member. They are responsible for providing helicopter support to mountain rescue operations in Norway along with the Norwegian Air Ambulance. They are also tasked in offshore SAR operations, and HEMS operations. The Sea King crews are made up of 6 members including two pilots, an engineer, a navigator, a rescue swimmer, and an anaesthetist.

- **6 bases**
- 1 detachment Florø
- **21 crew**
- **12 Sea King**



Organization



137 Airwing

Rescue Hoists-Goodrich Hoists, Bob Strickland, USA.

This presentation focused on incidents involving improper use of hoist and their cables. Firstly a clarification was made on the difference between hoists and winches. Hoists operate in a vertical environment such as with helicopters while winches operate in a horizontal environment such as on a vessel. Examples of what can cause miswraps and fouling were discussed. Some of the testing of hoist such as for lightning strikes was presented.

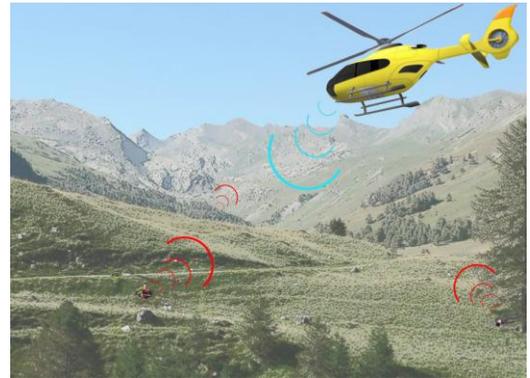


Long line accident-Marc Ledwidge Canada

Although not involving a rescue operation, this incident was presented to illustrate the consequences of multiple factors resulting in a serious outcome. This incident involved a Bell 206LR. While attempting to place a mining drill with a long line, the pilot lost control and crashed. He sustained fatal injuries. Contributing causes includes aircraft over gross weight, collective bounce including a thin long line more likely to induce bounce and hovering beyond HOGE capability.

Victim Location device-Lamda Technologies

The latest device for locating victims buried in avalanches or missing in remote areas was presented. This device has applications with helicopter air searches. This technology uses high frequency radio waves and already has applications in similar environments in aviation, navigation and SAR.



Joint session with the Medical Commission

At the request of Mecom, a working group has been formed to develop standards for HEMS crew members in mountain operations. A report is expected in 2010.

Risk assessment with the “Go” decision- Patrick Fauchère, Switzerland

A risk analysis was presented for crew members making decisions on night missions or missions in difficult weather conditions. Triage criteria for evacuations on avalanche accidents was also presented.

Harness criteria- Patrick Fauchère, Switzerland

The issue of proposed standards for rescuer harnesses by EASA was discussed. Most rescue organizations are currently working with harnesses that are certified for mountaineering work. This approach is the desired outcome from rescue organizations.

Flight data monitoring device-Eurocopter

Eurocopter has developed the Alert Vision 1000 for audio and video cockpit monitoring. It is a low cost and light system that is easily installed.



IKAR/CISA 2010

It will be held in Vysoke in the High Tatras of the Slovak Republic
October 6 to 9, 2010.