



SAFECOM Summary August 2011

 FOREST SERVICE AVIATION RISK MANAGEMENT



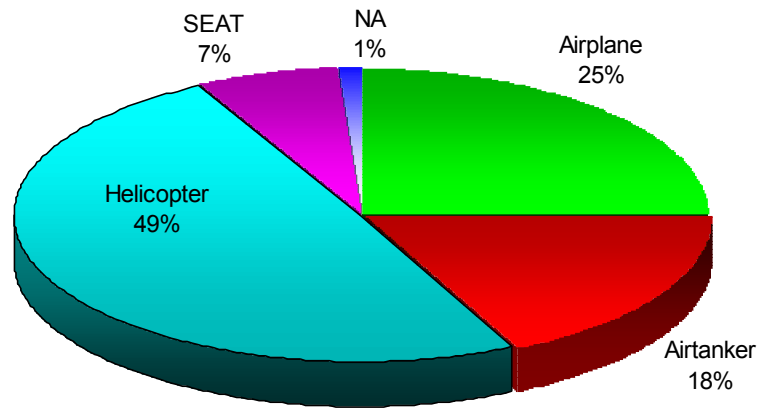
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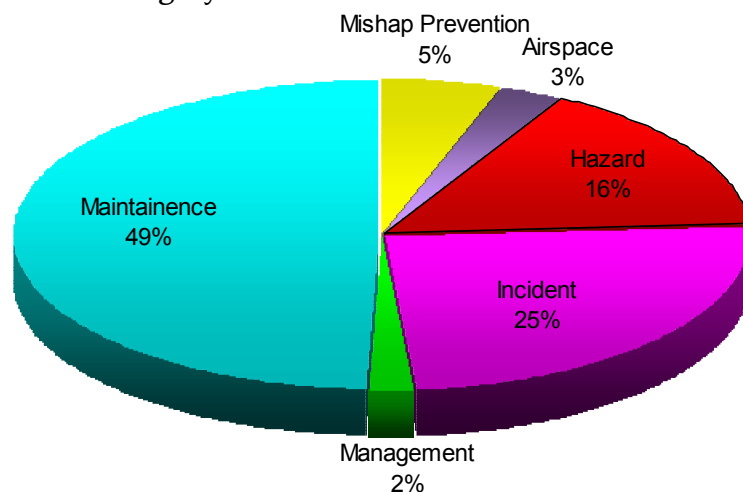
SAFECOM's by Aircraft Type

For the month of August there were 89 USFS SAFECOM's submitted, well below the 10 year average of 159. Of the 89 SAFECOM's reported, 22 were airplane, 16 airtanker, 6 SEAT, 44 helicopter and 1 N/A. The chart below shows the percentage of SAFECOM's by aircraft type.



SAFECOM's by Category

Often there are more than one category assigned to a SAFECOM, resulting in a grand total of more than the total number of SAFECOM's. There were only 3 airspace, 18 hazard, 28 incident, 56 maintenance related, 6 mishap prevention and 2 management SAFECOM's reported for this period. Below is the percent of SAFECOM's in each category.





SAFECOM's by Category continued...

ACCIDENT - We made it through another month without an accident, this is awesome news and we commend our employees, cooperators and vendors for this outstanding achievement. We are proud to say that we have gone 14 months without an accident.



AIRSPACE - There were only 3 airspace events reported. One was a private airplane that flew into an FTA and the other two were procedural issues, one with a helicopter entering an FTA and the other was an air-attack that flew through a live restricted area. The GPS unit the air-attack used gave misinformation on the restricted area. This is why it is critical to use sectional charts and the local units need to give thorough briefings to pilots on military airspace and local hazards.

HAZARD - There were 18 hazard reports in August. Communications accounted for 9 of the reported hazards, ranging from hand communications between aircraft and ground, frequency management, mic stuck, not being able to transmit and communicating general information. Policy deviation indicated 3 instances of aircraft being overloaded with retardant, rappel deviation with incorrectly fastened gunner strap, and pilot overflying hours.

INCIDENT - There were 28 incident reports of which 13 were precautionary landings; 5 due to chip lights, 3 from electrical problems, 2 from engine issues, 2 due to flight controls and one oil problem. There were 4 dropped loads of which 2 were SEATS and 2 were large airtankers. There were three dragged loads, 2 buckets clipping the tops of trees and one that contacted the ground while crossing a ridge. Categorized as "Other" included fixed wing aircraft sliding on landing, a scraped tail guard, fuel truck getting stuck, a rappeller cross loading and 2 issues with rappel ropes.

MAINTENANCE - Forty-nine percent of the reports submitted had maintenance associated issues. Engine were the most reported with 14 including one air attack ship that required an engine shutdown and precautionary landing. There were 11 electrical issues, 8 chip lights, and 5 problems associated with flight controls. There were several instances mentioned where mechanics, pilots and crewmembers detected maintenance issues during preflight and routine inspections; great job folks, keep up the good work!

MANAGEMENT - There were two management reports, one internal and one external. The internal issue was miscommunication between a pilot and dispatch where the pilot to flew over 8 hours. The external was an issue where there was a public area with people close to the airport where a helicopter was landing.

MISHAP PREVENTION - There were 6 SAFECOM's in this category which included managers, crewmembers and ATGS questioning things from seat restraints, product weights, mechanical issues and catching incorrect rigged equipment. Kudos to all for asking questions and speaking up when things didn't look right.

SAFECOM's

These are samplings from the SAFECOM's submitted for the month of July. We hope you will discuss the lessons learned in your daily briefings. Some of the SAFECOMs have been edited due to length, to read the SAFECOM in it's entirety, please click on the link.

SAFECOM 11-917: A strong thunderstorm passed over the area producing high winds with heavy rainfall. Helicopter xx was parked in the parking area at the Airport. The next morning at approx. 0800 the pilot and 1 helitack crewmember arrived at the airport to begin the pre-flight on the aircraft. When approaching the aircraft the pilot noticed the blade tie down was laying on the ground {still attached to the skids}. An inspection of the tie down sleeve showed that the stitching on one side of the sleeve was torn. The helicopter blades were also turned and not in the same position as they were left when tied down. The pilot then inspected the aircraft for any visual damage. No visual damage was found, but the pilot mentioned to the crewmember to inform the pilot if they heard any weird noises during flight. The crewmember then contacted the Manager {who was at the office receiving a briefing on the missions scheduled for the day} and told her what had happened with the aircraft. **CORRECTIVE ACTION:** The Manager discussed what had happened with the Forest Aviation Officer and then contacted the Regional Aviation Maintenance Inspector (RAMI). The RAMI and Manager agreed that a mechanic from the Company needed to complete an inspection on the aircraft and a test flight be performed prior to the aircraft being available for missions that day. Mechanic inspected aircraft and no issues were found. Pilot flew a short maintenance flight with no issues. RAMI was contacted and faxed maintenance log and aircraft was returned to contract availability. Vendors need to check all equipment {such as blade tie downs} and replace anything that becomes weathered or seems extremely worn, which could help in preventing situations like this one from happening again. RASM-Good call by the manager and RAMI to require a qualified maintenance review and flight before allowing our people to use this aircraft. Listening for ``weird noises`` during flight operations is not an adequate substitute for a detailed maintenance inspection and functional test flight.

SAFECOM 11-914: A Type 2 team ordered a gel product and batch plant assuming it could be used by all the assigned helicopters. It was determined that the weight of the gel had been misrepresented to the helicopter operators. Initially the helicopter pilots were informed that the product weighed the same as water. Later it was discovered that the gel mix was actually heavier than water weighing 8.34 pounds per gallon. It was also discovered that the gel product was not approved for fixed tank helicopters and the product information {MSDS} had not been given to the parties involved {i.e, the mechanics and technicians that would potentially come in contact with the gel as they rinsed the aircraft and/or buckets}. I challenged the team AOBD and the IC about educating the parties involved {helicopter managers, vendor pilots, vendor mechanics etc.} The IC agreed that they needed to educate everyone that would be using the gel. The managers asked tough questions about the gel and when they could not make contact with the AOBD and not having an ASGS they contacted the R2 HOS. This lack of communication put personnel at the airport helibase in a difficult position. There needed to be briefings, education and transparency in the introduction of the gel. **CORRECTIVE ACTION:** The IC sent the AOBD and a representative to the airport helibase to brief everyone. The attendees were given the weight, mixture ratio and specifics about the gel. RASM 9/02/2011 From the RAMI: ``Several loads of this gel had been flown under the auspices of it only weighing the equivalent of water when in fact it weighed .34 lbs more per gallon than water {a 500 gallon load would weigh 150(#)`s more than the pilot anticipated. Coupled with the 9000 ft elevation at 20 degrees C there is not much wiggle room for some poor performing a/c}. When we are asking our contract aircraft to be spot on with the aircraft equipped weight for performance planning purposes and then instructing them to fly a product that weighs more than advertised, we have effectively not held ourselves to the same standard we ask of our vendors.`` Again this is a good example of if you see something, say something. All involved in the remedy did a good job recognizing a concern and mitigating it before an incident occurred.

SAFECOM's continued.....

SAFECOM 11-782: A pilot and plane had been working yearly bug survey on 8/2/2011. After the survey was completed for the day, the pilot called requesting a return back to station after hours: permission was granted. **CORRECTIVE ACTION:** Dispatcher received a bill for 9hrs for 8/2/2011 but allowable flight time was only 8 hours. Notification was made to the acting FAO and RO Aviation Safety Manager. **ACTING FAO COMMENTS:** Contacted the RAOM, also spoke with Vendor regarding flight over the 8 hour limit, and reminded vendor that the pilot's flight and duty limitations per part 135 were not followed. Pilot/Vendor should have contacted the COR to be released from the contract and then flown back to home base under part 91. Vendor was not paid for the 9th hour. **RASL Comments:** Discussed with dispatch and vendor the need for positive communications. The pilot should have been very clear that he was seeking permission to exceed the 8 hour limit and the response from dispatch would have been very different.

SAFECOM 11-860: The shoulder or torso restraint system in the pilot and co-pilot seats are ineffective. Aircraft was resource ordered to the airport with an arrival late 8/25. I married up with the pilot and aircraft the morning of 8/26. Pilot Qualification and Aircraft Data cards were reviewed and the pilot provided a passenger safety briefing. We then programmed the radios and became available for ATGS missions. The seat belt system appeared normal. On 8/27 we were requested to provide ATGS relief on an incident. When fastening the restraint system I noticed that the crossover shoulder strap did not capture my torso, but rather barely captured my right shoulder, providing no protection. The mission was completed. I contacted the acting FAO on the morning of 8/28 who requested Aviation Maintenance Inspectors on a quality assurance team to look at the restraint system. Both were already on the unit. The decision was made to not use the aircraft until the issue could be further researched and remedied.

CORRECTIVE ACTION: Quality Assurance team discussed situation with vendor. The aircraft had been retrofitted to add shoulder restraints to meet contract requirements. At some point the seat belt system was modified and the attachment point for the separate torso restraints was repositioned to the center of the belt instead of the left/right hip area as originally designed. Contractor removed the aircraft from service and installed a replacement belt system that meets requirements. **RASM Comments:** Excellent catch by the ATGS on this no one had reported this problem until he brought it to attention of the maintenance quality assurance team. The rapid response of the team prevented further operations at a higher risk than was appropriate.

SAFECOM 11-894: The tanker taxied to Runway 04 to take off for High Cascades Complex. When cleared for takeoff the tanker moved onto the runway and armed the retardant doors. The tower notified the tanker that they were dripping retardant, and then approved a 180 degree turn on the runway to see how much retardant they were losing. During this maneuver the tower saw that two doors on the tank had opened: dropping approximately 750 gallons of retardant on the end of the runway. **CORRECTIVE ACTION:** They returned to base and determined that the head controller on the tank system was defective and needed replaced after the problem repeated in the pits. The remaining retardant was off loaded and the defective part will be replaced. Tanker is out of service until repairs can be completed. The airport fire department washed off the end of the runway.

SAFECOM 11-881: On August 29, the engine start was normal. Tests for engine #1 were normal. Taxi and takeoff were normal, as was flight over the incident. After approximately an hour and a half into flight, engine horsepower fluctuated momentarily up and down, and then returned to normal. After monitoring for several minutes, horsepower began to slowly rise. In approximately 15 minutes it rose from about 200 to 400 with the power lever at flight idle. During this time, a relief ATGS was ordered and emergency plans were considered. Shortly thereafter, horsepower rose from 400 to 500 with engine temperature near the high limit. At this point, we departed the fire, toward Boise in a climb, keeping

SAFECOM's continued.....

Salmon as our secondary alternative in case an engine shut-down was required. Central Idaho Dispatch was notified that we would be departing the fire for Boise and flight following was established. Enroute upon approaching Boise, flight following was established with Boise Dispatch and cancelled with central Idaho. Boise was our preferred destination due to runway length and width, the presence of atc, and fire, crash, rescue resources. With the increasing temperature though, Salmon was our expected destination, as it was most likely an engine shut-down would be required within a short time. Soon after departing the fire, engine speed and temperature stabilized within normal parameters. By adjusting engine rpm the engine horsepower was down to about 400, with a corresponding temperature reduction. At this point, Boise became our safest alternative so we continued toward Boise, keeping salmon available if necessary. Single engine climb performance was considered and more than adequate to maintain terrain clearance enroute. Pilot and ATGS briefed emergency procedures, and prepared for completion of engine shut-down check list items. The ability of a pressurized turbine platform cannot be overstated for performance capability under these circumstances in mountainous terrain. Communication was established with atc, our condition was communicated to Boise approach, and we declared an emergency. We informed them of our intentions and received an approach clearance. Once out of mountainous terrain and having established a very long, high final approach, the engine was shut down and secured, check-list items were completed and we continued to an uneventful landing and taxi. Again the performance and safety margin of a pressurized turbine platform cannot be overstated for the ability to climb and gain altitude and airspeed in the mountainous terrain, as well as the single engine performance. **CORRECTIVE**

ACTION: The aircraft was taken to the FBO maintenance facility at BOI. The Regional Aviation Safety Manager {RASM} and Regional Aircraft Maintenance Inspector {RAMI} were immediately notified of the situation. The pilot contacted the company maintenance supervisor and director of operations. The fuel controller has been identified as the source of the uncontrolled high power setting problem. The vendor has made arrangements for part replacement and repair with a vendor that specializes in Garrett engines and fuel controllers. A certified A & P mechanic is enroute to BOI with parts for replacement. Upon completion the RAMI will be notified and have documentation of repair. RASM Comments: R4 MX was notified and has completed the review of the incident, and aircraft was returned to contract availability. Upon interview with the pilot, the events above are an accurate depiction. The pilots actions in the management of the event, were appropriate and IAW procedures required in the aircraft POH. No further action required.

SAFECOM 11-875: Pilots account: While pulling water out of a heli-well, I had established positive lift with forward movement into about a 15-20 knot wind. When I turned downwind to fly to the target I encountered a tailwind/downdraft from the mountain to the west of the heli-well. The helicopter immediately began to descend with full power and it was clear that the bucket would not clear the trees. At this point I released the water and stopped forward flight into a hover. The empty bucket however did contact one of the trees that was close to the heli-well. No damage occurred to person or equipment so I returned to refill the bucket, extended the into wind portion of the flight and continued with the mission. Eyewitness account: Helicopter X was working Div A on the Fire. The pilot flew in to fill his bucket at the heli-wells near drop point #3. The helicopter made his usual line of approach, he filled his bucket and began to climb and depart the heli-well along his usual path. A heavy gust of wind came out of the south as the helicopter was lifting out. The gust was strong enough to push the loaded bucket towards a stand of trees. The pilot, realizing the bucket would hit the trees, dumped his water so he could climb quicker to avoid an incident. Although the water was dumped from the bucket, the pilot did not have enough time to climb over the trees. The empty bucket hit into the stand of pine trees. The bucket hit the top of the trees. The cable and bucket did not get tangled in the branches and the pilot was able to keep the helicopter stable. The pilot hovered for a minute then refilled his bucket and returned to Div A to keep suppressing the

SAFECOM's continued.....

fire. There were no injuries to pilot, firefighters, or equipment. The pilot had been in the dip 70 + times prior to this incident using the same flight pattern with no issues. The pilot took appropriate safety measures to ensure no damage to life or property. **CORRECTIVE ACTION:** The incident was shared with all personnel at the Helibase and discussion took place about winds predicted and experienced. Helibase personnel discussed mitigations to include alternate flight paths entering and departing dip site, helitack personnel on the ground monitoring winds, and increasing the number and placement of wind indicators at the dip site. It was determined that The helibase would send two helitack personnel to the heli-well site to monitor winds and establish communications with the pilots to inform them of changing wind patterns and speeds. The pilots have been excellent about communicating with each other about weather changes and their locations on the incident. We will continue to experience adverse weather on all incidents, it's how we handle them that matters. I am very relieved that the pilot had the experience and SA that enabled him to avoid a potentially disastrous situation. RASM Comments: Discussed incident and mitigations with Helicopter Operations Specialist. Field procedures in place will mitigate problems. Good example of how repeating an operation numerous times can give us the false perception that nothing will change on the current operation unless we have clues to the changing conditions. Good job on the pilot recognizing the situation and taking fast action to prevent damage to aircraft and change procedures to mitigate wind shift.

SAFECOM 11-852: On a demob mission bringing smokejumpers from Lewiston back to McCall aircraft departed at approximately 2120 with low light conditions out of LWS. Upon approach for landing in MYL at approximately 2210 it was recognized that both landing lights were not functioning. The runway is lighted but the landing in low visibility conditions was still difficult and the pilot reported that it was ``firmer`` than what he would have liked. Upon inspection the pilot noted that the tail guard appeared to have been scraped and so not knowing if that was due to this particular landing or not, he elected to ground the aircraft until maintenance could inspect for possible damage **CORRECTIVE ACTION:** Maintenance was notified. Regional maintenance inspector replaced landing lights and cleared aircraft after hard landing inspection and completed 7-day inspection. No defect found in either hard landing or 7-day inspection other than the landing lights. RASM Comments: It is not known if the incident occurred on this flight or a previous flight. Pilot acted correctly upon noticing that paint on the tail had been scraped off. Maintenance inspection indicated no damage to aircraft. Pilot{s} have been reminded to include close inspection of aircraft ``tail area`` on post flight. No further action required.

SAFECOM 11-795: While providing buckets support on a forest service incident in central Washington, a 120 gallon bambi bucket contacted the ground full of water. The aircraft was flying east to west in a narrow canyon with steep slopes. When crossing a spur ridge to line up for the drop the altitude was too low and the bucket made contact with the ground. No personnel were present on the ground when incident occurred. The Air attack witnessed incident and then had aircraft returned to helibase. **CORRECTIVE ACTION:** Aircraft landed at helibase and shut down. Phone calls were made to the COR and UAO, pilot also contact company representative. An AAR was conducted with crew and pilot. Aircraft returned to fire with new bucket. The load calculation and the manifest for the mission were reviewed with the pilot, HMGB and HEB1. The load calculation was completed correctly and the bucket was cinched to ensure that the load could not exceed the capabilities and limitations of the aircraft. The pilot stated that his visual reference was on forward flight as he proceeded out of the canyon with a full bucket of water. The UAO, HMGB and pilot discussed the importance of vertical reference during long line and bucket operations and the need to move above ground obstacles in the flight path. If necessary, complete a high level recon prior to loading bucket and proceeding with operations to familiarize you with operational area. The incident was discussed at the helibase evening debrief.

SAFECOM's continued.....

SAFECOM 11-772: Helicopter departed for the morning logistic mission to the fire, after takeoff the pilot noted that the pedal response wasn't as crisp as it should be. The helicopter returned to the field and landed without incident. The helicopter manager contacted the maintenance inspector and the ship was made unavailable. **CORRECTIVE ACTION:** The mechanic inspected the expandable bolt in the tail rotor bell housing, cleaning and replacing it, the pilot then lifted for a test flight and reported that pedal response was no longer ``mushy`` and felt as crisp as it should be. The manager contacted the maintenance inspector and the ship was returned to contract availability. RASM Comments: Talked to RAMI aircraft returned to contract availability. Good job by the pilot catching it early and having it taken care of promptly.

SAFECOM 11-763: On 8/8/2011 an airtanker was ordered to go to Alamogordo to reposition for a fire. Upon arriving in Alamogordo, the tanker called on the ramp frequency and requested to go to the hanger for a 1 hour maintenance break before taking a load of retardant to the fire. The request was granted and PIC walked from the hanger to the air tanker base to communicate what they were checking out on the aircraft and to see what fire he was going to. The PIC was given a ride back to the hanger in the golf cart to see how things were progressing, as we had multiple new fire starts and air tankers were in demand. Upon arriving at the hanger we saw that a 10K forklift owned by the company and operated by a company employee had run into the right wing damaging the wing tip and aileron. **CORRECTIVE ACTION:** Removed and replace wing tip and aileron. Ground function check was good and a functional check flight was performed. Returned to contact availability by RAMI. RASM comments: This is a good reminder to be aware when working around aircraft. Every few years we have a forklift versus airtanker event, but we also need to be cautious when moving any vehicle around aircraft, such as fuel or chase trucks.

SAFECOM 11-885: The helicopter flew a ferry flight from Home Base to Incident Base to help with fire support on the Fire. The ship landed and the helitack crew hooked up the bucket. The pilot went to take off and he told the crew over the radio that the hydraulic light stayed on 20 to 40 seconds longer than normal. He said the light went off and would lift to see how it felt. When he lifted up, the cyclic jerked hard to the left and the pilot had to pull it back. He landed the aircraft and waited for the mechanic to inspect it. After the mechanic's inspection he said it would be safer to replace the main rotor hydraulic servo and took the aircraft out of service. The regional aviation maintenance inspector was notified of the situation. **CORRECTIVE ACTION:** The mechanic replaced the left side main rotor hydraulic servo. After the part was replaced the pilot and mechanic performed a ground run, leak check, and functional hydraulic test. They also performed a functional test flight. The aircraft was approved by the mechanic and placed back into service. The regional aviation maintenance inspector was notified and the aircraft was returned to contract availability. RASM Comments: This crew has been excellent at identifying maintenance problems and fixing them quickly. Keep up the good work.

SAFECOM 11-771: Helicopter Mission was passenger transport from Ketchikan, AK to Foggy Bay High Mtn. to complete site inspection. Upon landing on constructed helipad, the pilot noticed the helicopter ``settled hard to the left``. Upon further inspection hydraulic fluid was leaking from the rear pilot's side strut. The helicopter manager called the Regional maintenance inspector, and the pilot notified company mechanic. **CORRECTIVE ACTION:** The helicopter was released to fly back to its base of operations to repair the leak. Forest Service personnel remained on site. Following Regional Maintenance Inspector approval the helicopter was returned to service. The helicopter returned to High mtn. to retrieve the personnel and the site visit mission was completed. RAMI COMMENTS: Talked to the DOM they replaced L/H strut that was leaking hydraulic fluid.

SAFECOM's continued.....

SAFECOM 11-757: Shortly after takeoff, airtanker had a problem with the nose gear. They jettisoned the load of retardant, followed correct procedures and landed at Alamogordo. After Landing, mechanics met the airtanker on the runway, pinned the mains and the aircraft was towed off the runway.

CORRECTIVE ACTION: Inspection of the nose gear position switch was checked and all other components of gear. A full swing was performed. All checked out OK. RAMI comments: Mechanics could not duplicate any issues on the ground. They swung the gear 9 times and could not find any problems. This is one to keep on the radar. RASM comments: Timely reporting with the RAMI for trending purposes. No further action required.

SAFECOM 11-849: During refueling I looked into the cowling at the front of the aircraft. I noticed a broken metal line on the right side of the front engine. After removing the engine cowling the pilot determined it was the fuel primer line. Note: The fuel priming system is normally used only during cold wx ops, so the pilot had not been using the priming system. **CORRECTIVE ACTION:** The primer line was replaced by the company. The aircraft was out of service for 3.5 hours. Contacted the regional aviation airworthiness inspector, he spoke with the mechanic and gave approval to return the aircraft to contract availability. The mechanic faxed the RAMI a copy of the log book entry. RASM Comments: Great catch by the ATGS demonstrates the effectiveness of crew members paying attention, identifying problems, asking questions, and communicating with the rest of the flight crew.

SAFECOM 11-864: The tanker taxied from RDM Ramp loaded en route to Incident number 184. During run up prior to take off, engine number 2 failed to meet acceptable pre take off check off level. The tanker returned to the reload ramp. The problem was AMP levels reached acceptable levels on forward thrust check during run up, but failed to drop amp level to {0} zero on reverse check. Mechanics tried various trouble shooting tests and inspections in addition to a switch replacement but reverse check continued to show an amp draw. After several minutes of discussion between Pilots and mechanics on possible causes, a phone call was made to another company mechanic. The problem and what had been completed to that point to correct amp issue were explained and asked for his opinion on the possible cause of prop still showing the draw. The mechanic explained that if batteries were low the generator would continue to run showing the amp draw. Pilot was not satisfied with conclusion so an additional off site mechanic was called and given the same conditions. That mechanic reached the same conclusion as the first and felt the plane was air worthy. Satisfied, the Pilot was ready to return to service and continue on with mission to Incident number 184. When Pilot attempted to start engine number 1, it failed to start due to batteries being run down from the prior trouble shooting tests. Battery charger was connected for 30 minutes but failed to create enough power to start engines. **CORRECTIVE ACTION:** Mechanics replaced and installed all new batteries. Once completed engine number 1 started as well as number 2. And the tanker was released to return to service and continue with initial mission. The tanker left RDM and flew several missions the rest of the day with no further amp issues. AMI Comments: Procedures were followed as required...

SAFECOM 11-947: During a Smokejumper Mission flight to Region 6 from Redding CA, in the Shorts C-23A ``Sherpa``, a starboard outer window departed the aircraft with the inner window remaining in place. The incident was brought to the aircrews attention after landing at Redmond,OR and shown to mechanic who reinstalled a new outer window. It was determined that sufficient force on the window, probably from a parachute pack, pushed the window and seal from the frame. No other damages were found. The flight was largely flown over non congested areas: however, I cannot guarantee the window departed over a non-congested area. **CORRECTIVE ACTION:** The window was replaced and the aircraft returned to service. This occurrence was reviewed and is being shared amongst the Smokejumper personnel. This SAFECOM is being written to help remind other Smokejumper personnel of this possible hazard. RASM comments: Good information sharing this event. Thanks.