

# USDA Forest Service



## Aviation Safety Summary July 2002

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# Information Sharing

## EMERGENCY AIRWORTHINESS DIRECTIVE

Aircraft Certification Service

Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "av-info.faa.gov"*

**DATE: June 27, 2002**

**2002-13-51**

**Send to all U.S. owners and operators of Model HH-1K, TH-1F, TH-1L, UH-1A, UH-1B, UH-1E, UH-1F, UH-1H, UH-1L, and UH-1P; and Southwest Florida Aviation SW204, SW204HP, SW205, and SW205A-1 helicopters manufactured by Bell Helicopter Textron Inc. for the Armed Forces of the United States.**

This Emergency Airworthiness Directive (EAD) is prompted by reports of timed-out tail rotor T/R grips, part number (P/N) 204-011-728-019, being improperly remarked and reinstalled on certain Bell Helicopter Textron, Inc. (Bell) helicopters. This unsafe condition, if not detected, could result in failure of the T/R grip and subsequent loss of control of the helicopter.

The FAA issued EAD 2002-08-53 on April 22, 2002, and superseding EAD 2002-09-51, May 9, 2002, for the Bell Model 204B, 205A, A-1, and B helicopters, to require cleaning and inspecting T/R grip, P/N 204-011-728-019, with a magnet to determine if it is made of steel. If it is not made of steel, the current EAD requires replacing the T/R grip with an airworthy steel T/R grip. According to reports, T/R grips, P/N 204-011-728-019, removed from service on the Bell Model 204B and 205A-1 helicopters as required by AD 73-17-04 (38 FR 22223, August 17, 1973), were re-marked as P/N 205-011-711-101 and may have been installed on Bell Model 204 and 205 helicopters. These T/R grips may also be installed on similar restricted category military surplus helicopters.

This unsafe condition is likely to exist or develop on certain restricted category helicopters of these same type designs. This EAD requires cleaning the affected T/R grip, inspecting the T/R grip by placing a magnet on the exterior of the main body of the T/R grip to determine if the T/R grip is made of steel, and replacing any T/R grip not made of steel.

This rule is issued under 49 U.S.C. Section 44701 pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this emergency airworthiness directive.

**2002-13-51 ARROW FALCON EXPORTERS, INC. (previously UTAH STATE UNIVERSITY); FIREFLY AVIATION HELICOPTER SERVICES (previously ERICKSON AIR-CRANE CO.); GARLICK HELICOPTERS, INC.; GLOBAL HELICOPTER TECHNOLOGY, INC.; HAGGLUND HELICOPTERS, LLC (previously WESTERN INTERNATIONAL AVIATION, INC.); HAWKINS AND POWERS AVIATION, INC.; INTERNATIONAL HELICOPTERS, INC.; ROBINSON AIR CRANE, INC.; SMITH HELICOPTERS; SOUTHERN HELICOPTER, INC.; SOUTHWEST FLORIDA AVIATION; TAMARACK HELICOPTERS, INC. (previously RANGER HELICOPTERS SERVICES, INC.); U.S. HELICOPTER, INC.; and WILLIAMS HELICOPTER CORPORATION (previously SCOTT PAPER CO.): Docket No. 2002-SW-21-AD.**

**Applicability: Model HH-1K, TH-1F, TH-1L, UH-1A, UH-1B, UH-1E, UH-1F, UH-1H, UH-1L, and UH-1P; Southwest Florida Aviation SW204, SW204HP, SW205, and SW205A-1 Helicopters Manufactured by Bell Helicopter Textron Inc. for the Armed Forces of the United States, with tail rotor (T/R) grip, part number (P/N) 205-011-711-101, installed, certificated in any category.**

Note 1: This AD applies to each helicopter identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For helicopters that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required before further flight, unless accomplished previously.

To prevent failure of the T/R grip and subsequent loss of control of the helicopter, accomplish the following:

(a) Clean the T/R grip.

(b) Determine if the T/R grip is made of steel by placing a magnet on the exterior of the main body of the T/R grip. Do not make this determination by placing the magnet on the steel bushing or steel interior liner. If the main body of the T/R grip is not made of steel, replace it with an airworthy steel T/R grip. Only replacement T/R grips made of steel are eligible for installation.

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Rotorcraft Certification Office, FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Rotorcraft Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Rotorcraft Certification Office.

(d) Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199 to operate the helicopter to a location where the requirements of this AD can be accomplished.

(e) Emergency AD 2002-13-51, issued June 27, 2002, becomes effective upon receipt.

FOR FURTHER INFORMATION CONTACT: Kennedy Jones, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Rotorcraft Certification Office, Fort Worth, Texas 76193-0170, telephone (817) 222-5148, fax (817) 222-5783.

Issued in Fort Worth, Texas, on June 27, 2002.

David A. Downey,

Manager, Rotorcraft Directorate,  
Aircraft Certification Service.

Post Office Box 482  
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Tel: (817) 280-3344  
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August 8, 2002

To: Marketing Personnel, Carl Harris

CC: G. Hess, P. Costanzo, C. Bond, T. Harrington, P. Dieterich, PSE Managers, L. Danner, D. Gastinger, J. Fila, J. St. Laurent, J. Gallagher, M. Winstanley, S. Estill

Subject: Inquiry on Lightning Strikes on Blades

Gentlemen,

There have been numerous inquiries regarding the above subject as it relates to Bell Helicopter blades. In order to communicate in a "One Voice" way, the following information has been formulated to assist with any additional requests for information from sources outside the Bell network. Please use this to keep your customers informed of the factual data.

Upon hearing of the unfortunate accident on the S-76, I had initiated a review last week of all the Bell procedures and instructions to our customer through the Maintenance Manuals and other published documentation. It is our understanding that the blade in question (S-76) sustained damage from a prior lightning strike and was overhauled and returned to service. The unconfirmed reports we have received indicate that the titanium spar of the blade had sustained non-visible damage, which weakened it and allowed it to fail.

In the Bell fleet, the main and tail rotor blades on all of our aircraft equipped with two bladed rotor systems are metal, with the exception of wooden blades which may be used on very old Model 47s, and those used on the Model 214 and Model 222. The 222 blade, which also is used on the 230, is a hybrid blade with a metal spar and a fiberglass afterbody. The 214 uses a composite main rotor blade. However, the maintenance manuals for all of these aircraft impose the requirement that if any lightning damage to a blade occurs, the blade must be scrapped, including the main and tail rotors. The four-bladed main rotor system was introduced commercially on the Model 412 in 1980 and uses a composite main rotor blade, though metal tail rotor blades continued to be used. Again, if there is evidence of lightning strike damage to the blades, they are required to be scrapped. The Models 407 and 427 composite main rotor blades were developed from the AHIP rotor system. The entire system, including the blades, was lightning strike tested. The 430 is a follow-on to the 407/427 and is also lightning strike tested. Bell Helicopter Textron Inc. is a subsidiary of Textron Inc.

Aviation Plan for McCall Airport  
(Operations being conducted while the airport runway is being repaired)

Background:

The McCall Municipal Airport is planning to close their runway for several weeks to perform scheduled repairs starting September 16<sup>th</sup>. To continue operations the Airport has elected to use the parallel taxiway as the runway for the period that the runway will remain closed. The airport manager has informed all of the tenants of the McCall Airport of the impending closure. The airport manager is working with the Federal Aviation Administration (FAA) regarding this closure and in the future there will be a published "Notice To Airman" (NOTAM) by the FAA, notifying all airman of the runway closure and airport procedures.

Forest Service Operations:

The Forest Service will be impacted by this runway closure. To mitigate risks associated with using the taxiway as a runway, a Job Hazard Analysis (JHA) was constructed to be used as a briefing tool and Standard Operating Procedures (SOP) for our aviation operations till such time the runway is reopened. Most impacted by this closure are the airtanker operations. Our airtankers (T-23, T-119) and leadplane (L-44) will be repositioned to the Boise Air Tanker Base.

Job Hazard Analysis:

A JHA was constructed to use as a briefing tool and SOP during runway closure operations on the taxiway. Visit this JHA daily to review any changes that might have taken place during the course of events of runway repair.

Brief all pilots and all visiting pilots of this JHA. Please disseminate this JHA to all aviation operations in the Forest Service.

Point of Contact:

Any questions regarding this JHA please contact:

John Humphries (Acting FAO, Payette National Forest) Work: 208-634-0380

Cell: 208-634-9443

# Mishap Update

Region 2, Big Elk Fire, Arapaho-Roosevelt NF  
Mission: Airtanker Retardant Operations

NTSB Identification: DEN02GA074

Accident occurred Thursday, July 18, 2002 at Estes Park, CO

Aircraft: Consolidated-Vultee P4Y-2, registration: N7620C

Injuries: 2 Fatal.

This is preliminary information, subject to change, and may contain errors. Any errors in this report will be corrected when the final report has been completed.

On July 18, 2002, at 1840 mountain daylight time, a Consolidated-Vultee P4Y-2, N7620C, operated by the U. S. Department of Agriculture Forest Service and piloted by a commercial pilot, was destroyed when it impacted into mountainous terrain 6 miles southwest of Estes Park, Colorado. A post-crash fire ensued. Prior to the impact, the airplane's left wing separated and aircraft control was lost while maneuvering to deliver fire retardant on the Big Elk wildfire, burning in an area northwest of Lyons, Colorado. Visual meteorological conditions prevailed at the time of the accident. The public use flight was being conducted under the provisions of Title 14 CFR Part 137, aerial application. A flight plan was not on file. The pilot and second pilot on board the airplane were fatally injured. The flight originated at Broomfield, Colorado, at 1815.

According to the Air Tanker Base Manager at Jeffco Airport, Broomfield, Colorado, the airplane, Tanker 123, was dispatched to join other air tankers, Tanker 161 and Tanker 22, a tanker helicopter, number T-16, and a U. S. Forest Service lead airplane, Lead Bravo 8, to drop fire retardant on the Big Elk fire. The airplane had flown seven previous air attack missions on the fire that day. Prior to the accident mission, the airplane was loaded with approximately 2,000 gallons of fire retardant, and 550 gallons of fuel.

The captain of T-161 said, "Tanker 22 had just completed his drop and Tanker 123 had observed the drop and was preparing to drop. All communication between 123 and Lead Bravo 8 was normal. I fell behind T-123 on downwind and base. I looked away momentarily and I again focused on T-123. I noticed his left wing was falling. The aircraft was in a 15 to 20 degree bank. I next saw fire near the fuselage as the wing failed inboard of the number 2 engine. The aircraft pitched nose down in a huge fireball and plunged into the ground vertically starting an immediate large fire."

The copilot of T-161 said Tanker 123 was in his base turn for the drop and in a "smooth 15 to 20 degree bank turn," when the left wing separated from the airplane. "The aircraft then went into a rotation and impacted the ground." The copilot said that operations were normal and the weather in the area consisted of "the smoothest, least turbulent conditions of the day."

The pilot in the Forest Service lead airplane said, "The conditions were perfect for a tanker drop. No turbulence and no smoke in that area." The pilot said, "I had just made two runs with Tanker 22 on the same drop area. He had departed and I allowed helicopter 72D to make a water drop on the area. Tanker 123 was on scene when Tanker 22 made his split load drop, two different runs. I instructed Tanker 123 that we would be extending Tanker 22's first drop. Tanker 123 responded with something like, 'We can do that' or 'We see that,' and that he was on downwind for the drop. I told him I was at his 8 o'clock and [he] said that he had me in sight. I then told him I would come up on his left side and continue downwind with him until he was ready to turn back. He then responded with 'I think I'm



going to use this nice big valley to turn around in.' I told him that sounded like a good idea to me. We flew approximately 15 seconds before he began a gentle turn to final. We continued in the turn from downwind to final without squaring off for a base, which is normal on tanker runs." The pilot said that after he turned on final, he told the captain on Tanker 123 that his attack run would require a pitch over which was approximately 1/2 mile ahead. The pilot said after he finished that transmission, the captain of Tanker 161 called him and said that the left wing had just come off of Tanker 123 and the airplane had gone in.



Region 2, Big Elk Fire, Arapaho-Roosevelt NF  
Mission: Helicopter Bucket Operations

NTSB Identification: DEN02GA085  
Accident occurred Tuesday, July 30, 2002 at Estes Park, CO  
Aircraft: Aerospatiale SA315B, registration: N3978Y  
Injuries: 1 Fatal.

This is preliminary information, subject to change, and may contain errors. Any errors in this report will be corrected when the final report has been completed.

On July 30, 2002, approximately 1845 mountain daylight time, an Aerospatiale SA315B, N3978Y, registered to Roberts Aircraft Co., Granite Canyon, Wyoming, and operated by Geo-Seis Helicopters, Inc., Fort Collins, Colorado, was destroyed when it struck terrain while maneuvering 6 miles southeast of Estes Park, Colorado. The commercial pilot, the sole occupant aboard, was fatally injured. Visual meteorological conditions prevailed at the time, and no flight plan had been filed. The flight originated from a staging area near Estes Park approximately 1840.

The helicopter was being operated by the U.S. Forest Service and was engaged in fire suppression activities at the Big Elk fire in the Rocky Mountain National Park. It had been refueled and had taken off to apply water along the fire boundary. Witnesses heard the pilot give a warning over the radio: "Helicopter going down." They heard a high pitched whine and saw the main rotor blades turning slowly as the helicopter descended. There was a postimpact ground fire that was quickly extinguished.



# SafeCom Summary

**There have been 661 SafeComs filed this fiscal year (October 1, 2001 – July 31, 2002). Last year there were 440 and in 2000 there were 559 for the same time period.**

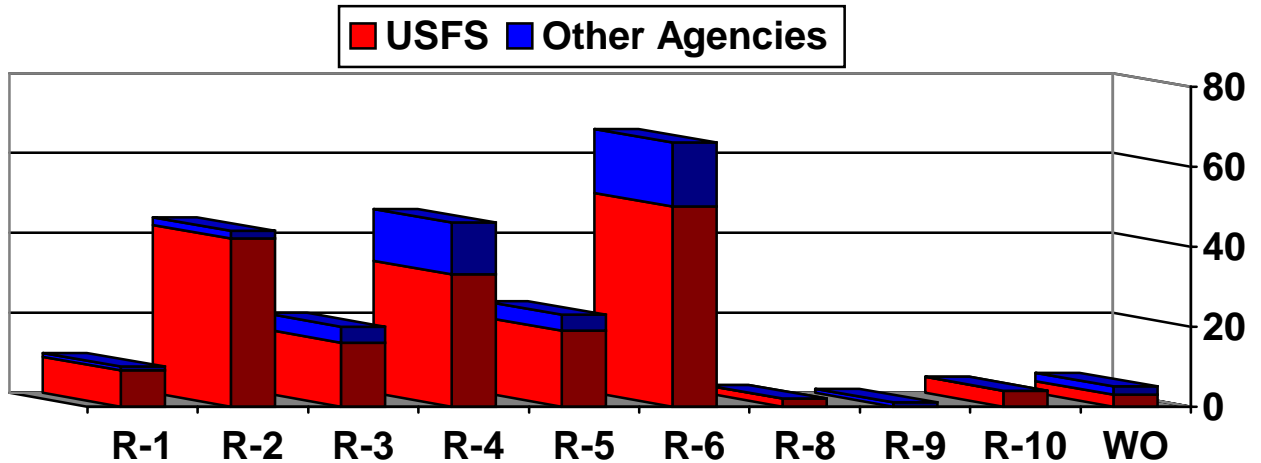
The following charts are based on SafeComs that occurred from July 1 through July 31. There were 221 (178 USFS and 43 other agency) SafeComs reported this July compared to 163 SafeComs last July and 180 in July of 2000.

Included in this report are representative samplings of the SafeComs reported in July of this year. To view all the USFS SafeComs click on the link to SafeComs below. Pick the options you want to search for, then click on submit, or simply click on submit to view all of the latest SafeComs and use the arrows at the bottom left of the screen to navigate backward and forward.

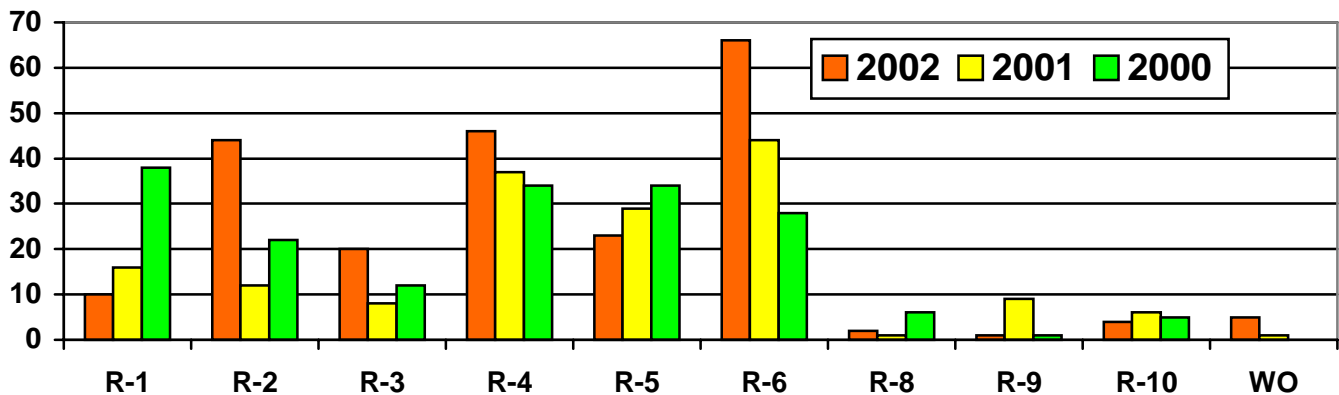
<http://www.aviation.fs.fed.us/safecom/psearch.asp>

## SafeComs by Region

The chart below shows the number of SafeComs by region (FS and other agency) reported for July of this year.

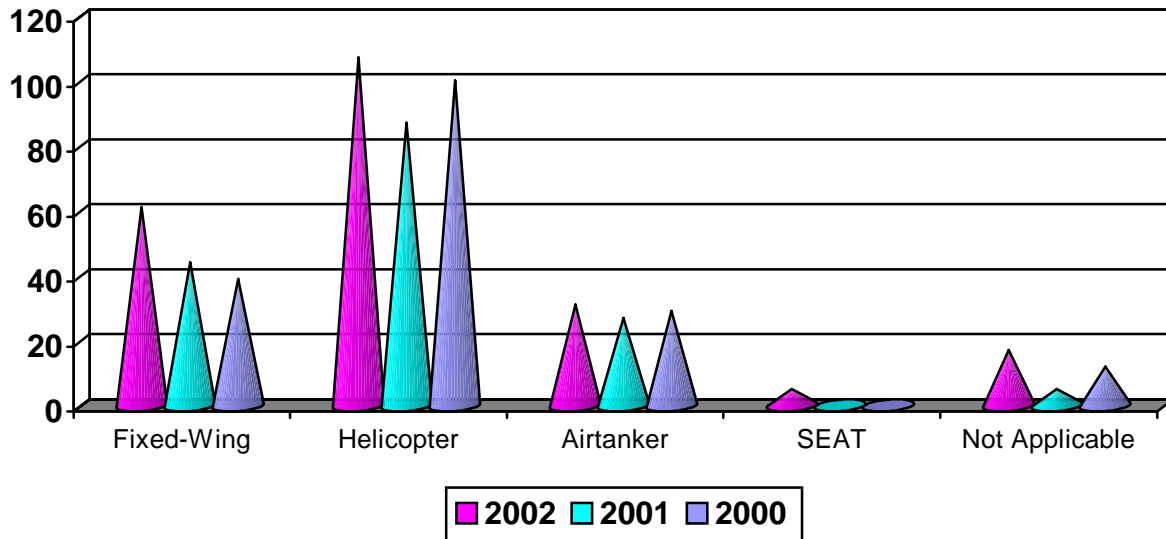


The following chart shows the total number of SafeComs reported by region for July of this year, last year and 2000.



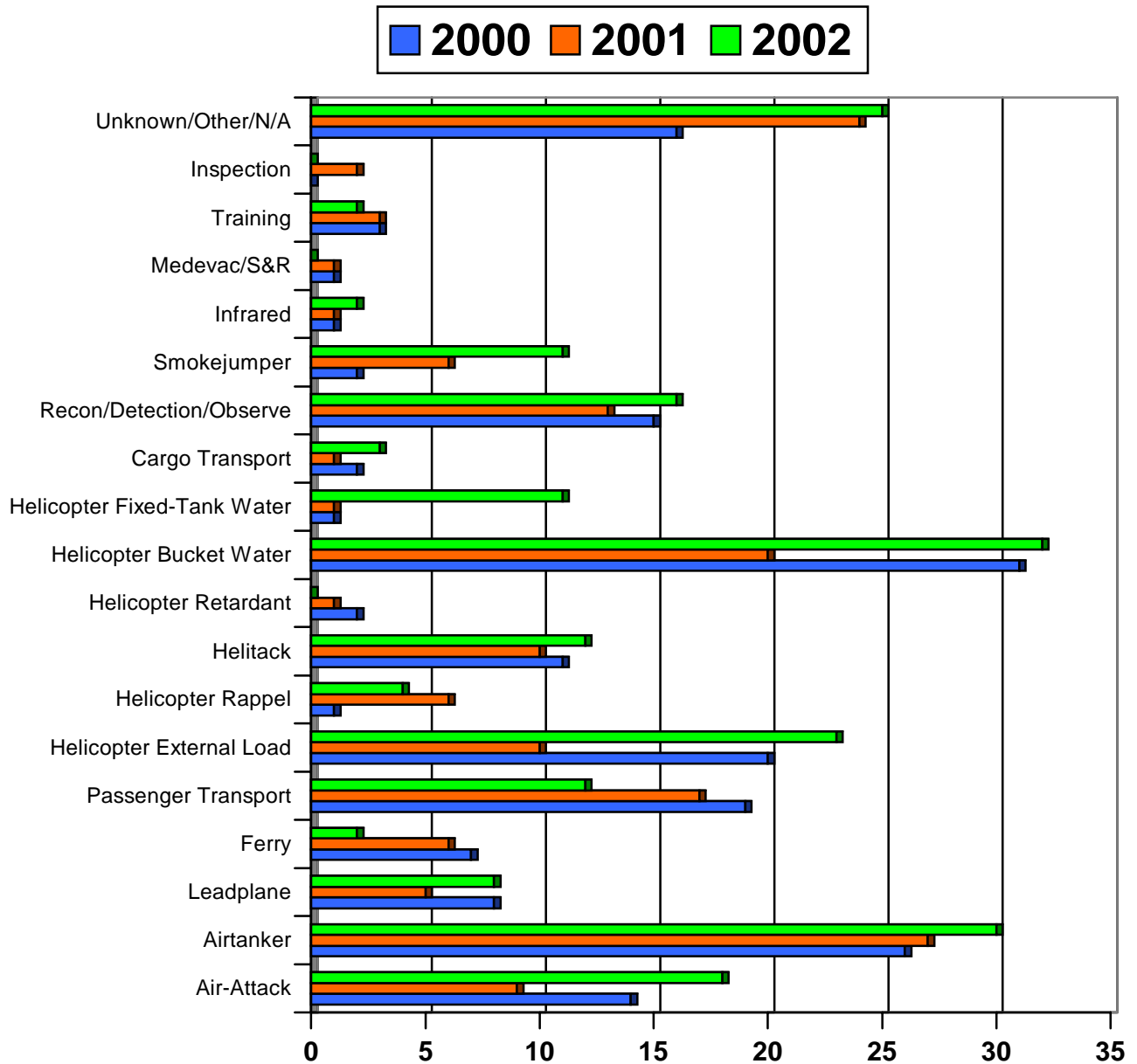
## SafeComs by Aircraft Type

In July helicopter SafeComs accounted for nearly half of the SafeComs this year compared to just over half in 2000 and 2001. Fixed-wing SafeComs were 28% this year, 27% last year and 22% in 2000. The percent of Airtanker SafeComs were also comparable at 14% this year, 17% last year and 16% in 2000. SafeComs for SEAT's are slightly increasing as we continue to utilize them more and more. The chart below shows the number of SafeComs reported in June by aircraft type for this year, last year and 2000.



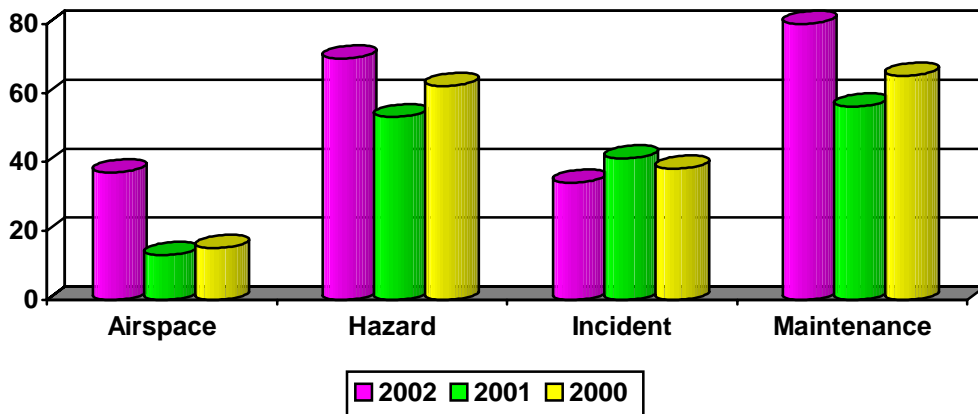
## SafeComs by Mission Type

With the exception of Unknown/Other/N/A, helicopter water bucket drops followed by airtanker retardant drops, then helicopter external loads were the most reported SafeComs this year. Last year, airtankers followed by helicopter water bucket drops then passenger transport were the most reported. In 2000, helicopters water bucket drops followed by airtankers then passenger transport were the most reported SafeCom's. The chart below shows the number of SafeComs reported in July by mission for this year, last year and 2000.



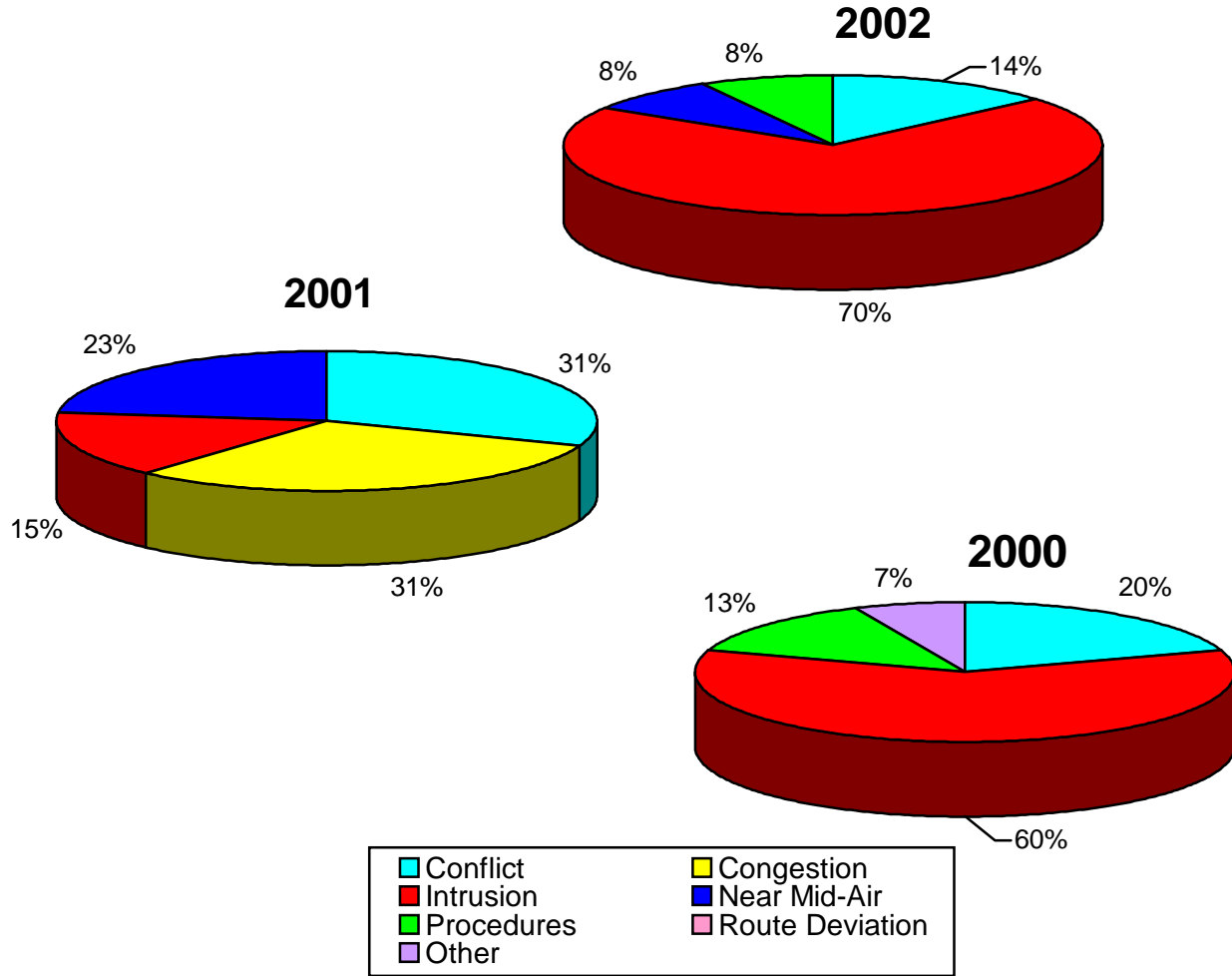
## SafeComs by Category

SafeComs on Maintenance are generally the most reported, which the chart below continues to indicate for the month of July the last three years. This year maintenance SafeComs accounted for 36% of the SafeComs reported, compared to 34% last year and 37% in 2000. Airspace SafeComs were significantly higher this year than the previous couple of years, with 17% compared to 8% in both 2001 and 2000. Hazard SafeComs were the second most reported, which is generally the case and comparable at 32% this year, 33% last year and 34% in 2000. Incident SafeComs reported were much lower this year, which was surprising. They only accounted for 15% compared to 25% in 2001 and 21% in 2000. The chart below shows the number of SafeComs reported in July by category for this year, last year and 2000.



## Airspace SafeComs

There were 37 SafeComs reported in this category in July of this year compared to 13 last year and 15 in 2000. The numbers this year is well over double of last year and 2000. Intrusions were the most reported in this category for this year (26) and 2000 (9). "See and Avoid" is critical, don't let your guard down just because there is a TFR. Along with submitting a SafeCom, it is also critical to report intrusions to the local dispatch center or airspace coordinator so they can take immediate action. The charts below show the percent of Airspace SafeComs by sub-category for July of this year, last year and 2000.



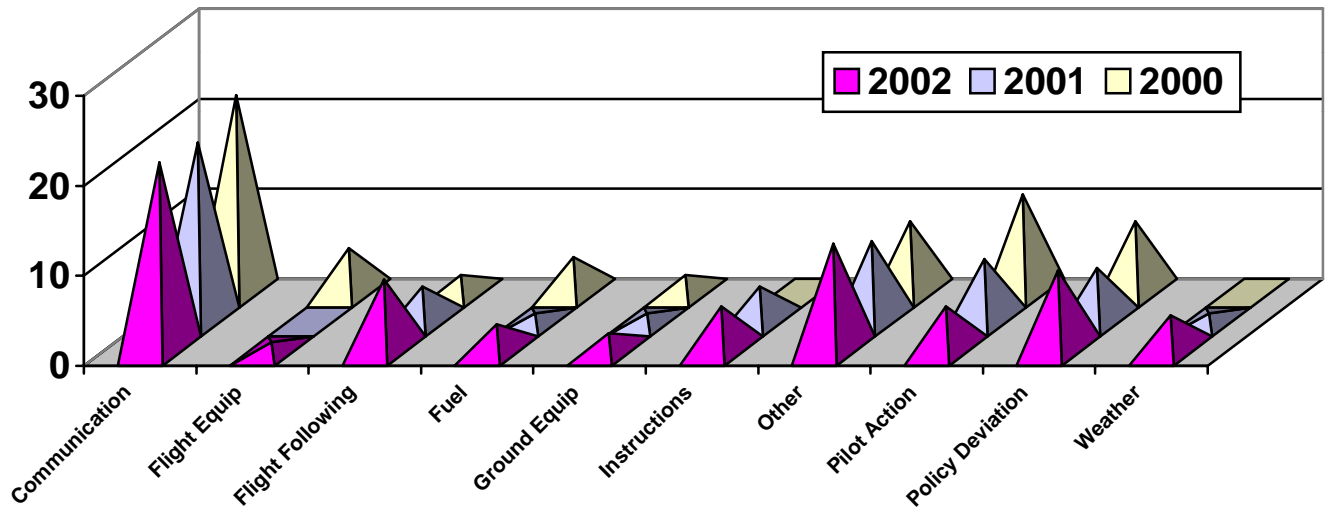
Select from the links below to view a sampling of the Airspace SafeComs.

- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3475>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3547>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3408>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3587>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3616>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3487>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3554>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3472>



# Hazard SafeComs

There were 70 SafeComs reported in this category this year compared to 53 last year and 62 in 2000. SafeComs for communications have consistently been the most reported in this category. There were 21 reported this year, 20 last year and 22 in 2002. Besides other, policy deviation was the second most reported in this category this year, last year and in 2000 it was pilot action. The chart below shows the number of Hazard SafeComs reported by sub-category for July of this year, last year and 2000.

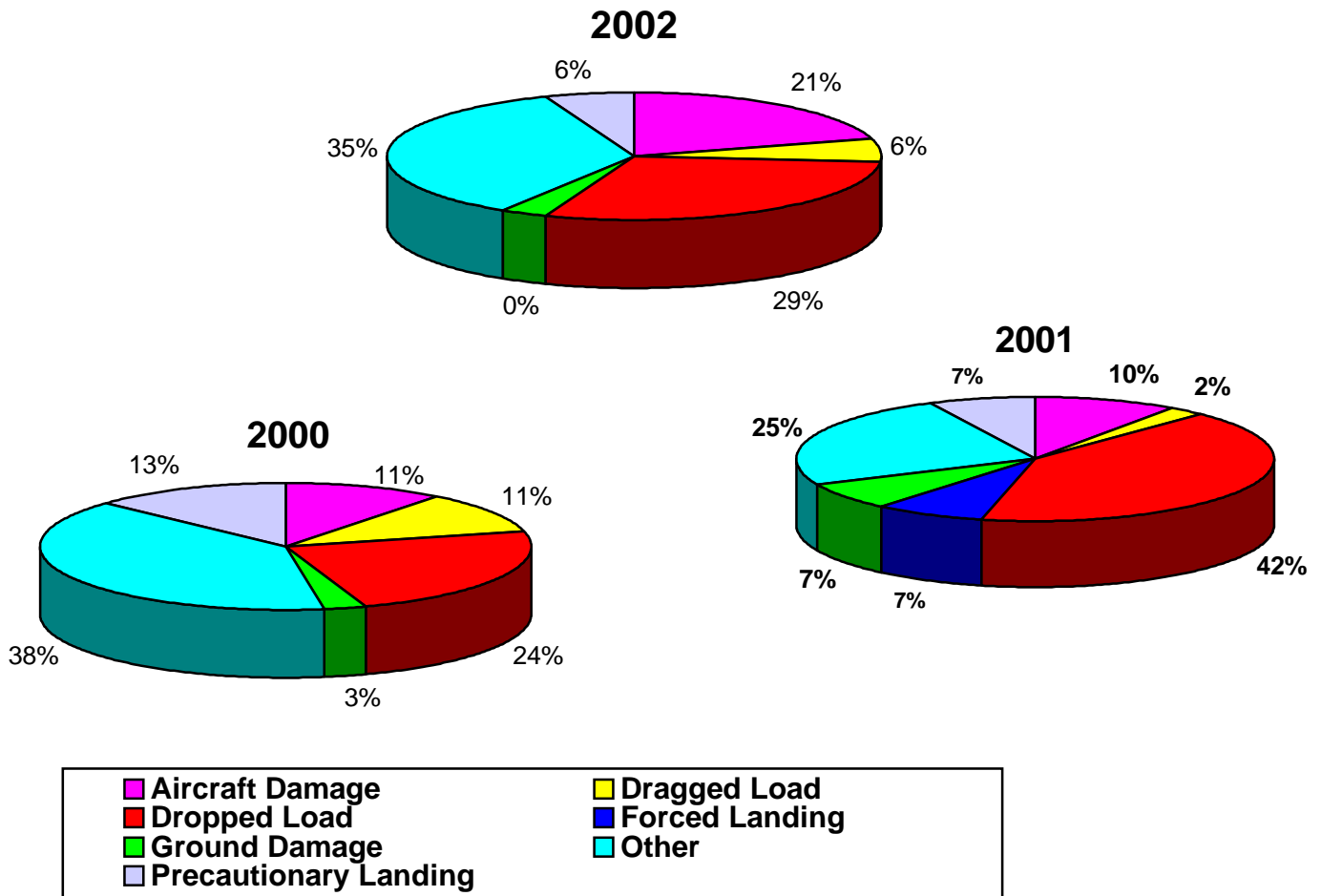


Select from the links below to view a sampling of the Hazard SafeComs.

- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3571>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3442>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3551>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3562>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3648>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3517>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3390>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3576>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3542>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3590>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3594>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3529>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3401>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3598>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3497>

## Incident SafeComs

Considering the number of mishaps we've had this year, the number of SafeComs reported in this category are somewhat surprising. There have been only 34 reported this year, compared to 41 last year and 38 in 2000. Besides "Other", dropped load were the most reported SafeComs in this category all three years, with 10 this year, 17 last year and 9 in 2000. The charts below show the percent of Incident SafeComs by sub-category for July of this year, last year and 2000.

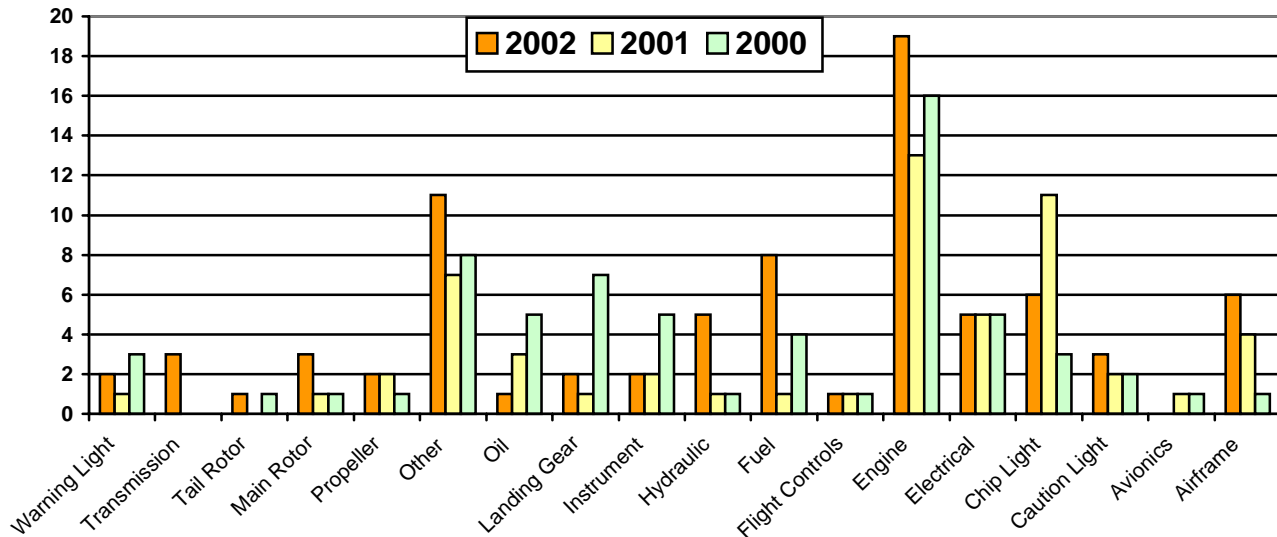


Select from the links below to view a sampling of the Incident SafeComs.

- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3465>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3478>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3441>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3601>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3561>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3599>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3397>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3520>
- <http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3463>

## Maintenance SafeComs

There were 80 Maintenance SafeComs reported this year compared to 56 last year and 65 in 2000. SafeComs reported on engines were the most reported for all years. This year the second most reported SafeComs, other than "Other" were fuel followed by chip light and airframe tied in third place. The chart below shows the number of Maintenance SafeComs reported by sub-category for July of this year, last year and 2000.



Select from the links below to view a sampling of the Maintenance SafeComs.

<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3563>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3584>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3461>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3534>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3405>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3586>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3406>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3425>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3549>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3458>  
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<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3457>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3643>  
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<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3474>  
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<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3540>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3612>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3427>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3582>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3502>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3409>  
<http://www.aviation.fs.fed.us/safecom/psearchone.asp?ID=3560>

United States Department of Agriculture  
Forest Service  
**Aviation Safety Alert**

**No. 2002-17**

July 16,2002

Page 1 of 1

**Subject:** Accepted procedures for the mixing and loading of retardant into SEAT aircraft

**Area of Concern:** SEAT Aircraft Operations

**Distribution:** All Aviation and Fire Personnel

Discussion: There have been several recent aircraft incidents that involved the overloading of SEAT aircraft with liquid concentrate (LC) retardant as a result of mixing or loading procedures. These procedures included loading LC directly into aircraft from bulk storage tanks while utilizing various types of hardware devices that were intended to blend retardant being pumped directly from the bulk tanks to the aircraft. These hardware devices have included Canadian Y Blenders, "SEAT" Y Blenders, pre-calibration tanks and other locally fabricated hardware. However, serious overloading can occur when pure LC is loaded into an aircraft without being mixed with the appropriate ratio of water.

In an effort to eliminate the possibility of overloading an aircraft with an incorrect mix of retardant, the following procedures apply immediately:

Both powdered and liquid bulk materials will be blended in a mixing container prior to being introduced into the aircraft. In order to maintain quality control and safe flight operations, no bulk material will be loaded into an aircraft prior to being mixed to the proper ratio and checked by refractometer or other accepted method. The practice of loading an aircraft with bulk material and then adding water is not an acceptable method of mixing retardant.

All personnel engaged in the loading of retardant aboard SEAT aircraft must be knowledgeable of, and fully trained on, the use of retardant loading systems for SEAT aircraft.

This new procedure has been coordinated among DOI bureaus and the USDA/Forest Service.

*/s/ Ron Hanks*

USFS National Aviation Safety and Training Manager

United States Department of Agriculture  
Forest Service  
**Aviation Safety Alert**

**No. 2002-18**      July 22, 2002

Page 1 of 2

**Subject:**      Bell 407 Main Rotor Blade Airworthiness

**Area of Concern:**      Helicopter Operations

**Distribution:**      All Aviation and Fire Personnel

Discussion: On July 16, 2002 a Bell 407 helicopter was on short final to a helibase in Arizona when the pilot experienced a slight yaw to the left, shaking of the cyclic, and a vibration in the helicopter. The pilot chose to take the aircraft to an open flat field approximately ¼ of a mile away to avoid possible injury to personnel on the ground at the helibase. After the helicopter was shut down the aircraft was inspected and it was discovered that the skin on the underside of one of the main rotor blades had de-bonded and separated from the blade tip extending inboard approximately 8 ½ inches. The skin tore away from the blade along a line at the aft lower edge of the leading edge abrasion strip and de-bonded aft approximately four inches. The occurrence is currently under investigation to try to determine the cause of the failure.

The USDA Forest Service is asking all contractors to assure airworthiness of all Bell BHT 407 Main Rotor Blades. This assurance is required prior to further flight after receipt of this safety alert. Regional Aviation Maintenance Inspectors in the Forest Service Regions will be notified as to the status of all contracted (exclusive use or all when needed) Bell BHT 407 helicopters.

If any abnormalities are noted or suspected the aircraft is not to be flown and the operator needs to notify a Forest Service Maintenance Inspector immediately.

For further information on the event that occurred in AZ, contact Larry Hindman, R-3 Regional Aviation Safety Manager (505) 842-3351, or Ron Livingston, Acting R-3 Regional Aviation Maintenance Inspector (505) 842-3356.

*/s/ Ron Hanks*  
USFS National Aviation Safety and Training Manager





United States Department of Agriculture  
Forest Service  
**Aviation Safety Alert**

**No. 2002-19**

July 22, 2002

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**Subject:** Helicopter Water Bucket Operations

**Area of Concern:** Helicopter Operations

**Distribution:** All Aviation and Fire Personnel

Discussion: Contract helicopter operations utilizing varying lengths of extension lead lines attached to buckets have resulted in tail boom and/or tail rotor damage in two recent mishaps. This safety alert is being issued to draw attention to this specific aviation safety hazard as well as to identify new policy developed to mitigate this problem.

With the incorporation of these modifications, Interagency Fire Helicopter operations will continue to be conducted in accordance with the IHOG as amended by the following two (2) changes.

1. If long lines are utilized for water bucket operations then the long lines shall be a minimum of 50 feet in length to reduce the risk of bucket or long line entanglement with the tail rotor or tail boom.
2. Pilots utilizing long lines with water buckets must be approved for vertical reference operations

This policy change will bring our helicopter bucket operations in line with some bucket manufacturers' recommended practices and safety warnings, without seriously degrading operational capability.

Each operator, pilot and helicopter manager shall review the manufacturers' bucket operator's manual and limitations for the applicable bucket prior to use.

The effect of this policy is that "tag lines" of less than 50 feet are no longer authorized and pilots not approved for vertical reference operations must attach the bucket directly to the belly hook during water bucket operations.

This policy has been coordinated with all DOI bureaus that utilize the Interagency Helicopter Operations Guide and the USDA Forest Service.

*/s/ Ron Hanks*

USFS National Aviation Safety and Training Manager

United States Department of Agriculture  
Forest Service  
**Aviation Safety Alert**

**No. 2002-20**

August 1, 2002

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**Subject:** SA 315B Lama Stand Down

**Area of Concern:** Helicopter Operations

**Distribution:** All Aviation and Fire Personnel

Discussion: Investigation of the SA 315B Lama accident in Colorado is underway, however there is no conclusive information available to the Forest Service at this time. Some contractors have requested down time for inspection of their aircraft, and those have been granted by the controlling Forests.

This letter is to recommend that Regions who have this make/model of helicopter working on fires and projects provide a 24-hour period of relief from contract availability. The purpose of this safety stand down is to allow time for an additional, thorough maintenance inspection with emphasis on the engine, transmission, and drive train areas.

Regions may implement the safety inspection period while continuing availability payment, and begin or end it at their discretion upon receipt of this notice.

*/s/ Ron Hanks*

National Aviation Safety and Training Manager



United States Department of Agriculture  
Forest Service  
**Aviation Safety Alert**

**No. 2002-21**

August 19, 2002

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**Subject:** Retardant Fill Rate (Maximum – 500 gpm)

**Area of Concern:** Airtanker Operations

**Distribution:** All Aviation Personnel

Discussion: The National Airtanker Service Contract Section C.5.2 (6) (B) states: “All retardant tanks shall be capable of being filled in conformity with the certified retardant load through 3-inch diameter single or dual kamlock fittings on both sides of the aircraft or from the tail at a minimum fill rate of 400 to a maximum fill rate of 500 gallons per minute.”

Exceeding the 500-gallon per minute fill rate may result in certain aircraft to be overfilled and leak retardant.

*/s/ Ron Hanks*  
National Aviation Safety and Training Manager

*/s/ Asher Williams*  
National Aviation Operations Officer