



RECORD OF CONVERSATION

Malcolm Brenner – NTSB, Human Performance Investigator (author)

Zoë Keliher – NTSB, Air Safety Investigator

Person Contacted: Chris Akin

Date: March 19, 2009

Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Chris Akin:

Mr. Akin was a former pilot with Carson Helicopter Services, Inc. (CHSI).

He stated that he had about 3,400 flight hours. He held an ATP rating in helicopter and airplanes and a CFII certificate in helicopters. He was hired by Carson in March 2004 and laid off in January 2009.

He stated that Carson was about the best job in the industry. It paid very well and took good care of employees. It was a fantastic place and everyone was happy. He worked at Carson for five years. Most other pilots had worked there for a longer time.

The schedule was 12 days on and 12 days off. It was a good schedule and not at all fatiguing. Forest Service work was not too demanding, with 8 hours maximum. Because there were two pilots, each one only worked half of the job.

The company had 50 to 60 pilots. Pilot turnover was rare. He had expected to remain with Carson for the rest of his career. Carson had some of the best pay and schedules in the industry and was a wonderful place to work. It was hard to get employed there.

There was some turnover of management. The Chief Pilot position changed and there had been several Directors of Operations.

The new hires were good. The equipment was in excellent shape. It was very reliable and very well maintained. The company experienced only one down day in the past year. Maintenance was second to none.

The financial condition of the company seemed good. His checks never bounced. The pilots stayed at nice hotels everywhere. He was still sorry to have been laid off.

Relations between the FAA and Carson were great as far as he knew. He was present when Carson began the 135 operations last year for the first time and underwent FAA inspection to receive the Part 135 rating. The FAA performed all company check rides and ratings. The operation was good and had already been improved upon. The training program was great. There were on-line courses for the 135 operation that covered issues such as hazmat; weather, different departures (Category A and B), and FARs. There was pilot training in the actual helicopter. Company pilots were used to hauling material that could be jettisoned. Now, with passengers, there was a lot more to consider and you had to always be ready to fly away in the event of engine loss.

When you reach topping, you jettison. This is a daily experience that pilots deal with when carrying water rather than passengers. Pilots perform a topping check regularly every 8 hours, checking how the engines perform in terms of making power. Before you land off-site, check the power to make sure it is right. When picking up loads, you can reach topping. You can immediately hear when the blades start to droop when you've flown it. The first officer calls out the number. If carrying water, you just jettison some water. It is a standard thing for a helicopter pilot. With passengers, you make sure the airplane is loaded correctly. With passengers, you know right away if it is overloaded and just put it down.

You get very used to how a helicopter feels, plus there is a gauge for everything so you know what happens. Just "torque available" before you land at a site. Pull power until you droop.

Every Carson engine actually put out more torque than what the chart showed.

The accident captain was a fantastic pilot. He was a top logging pilot for years and very professional. He was a fun person, upbeat, and a prankster. Mr. Akin flew with the accident captain several times on contracts. They had just flown together on a repositioning flight two to three weeks before from a fire zone in Florida to a high fire danger area on the West Coast. The accident captain was a funny person. Asked about the accident captain's use of alcohol, Mr. Akin said that he heard the captain had used alcohol years earlier but quit.

Mr. Akin never flew with the accident first officer but they had worked around each other. The accident first officer was an Army Major and seemed very professional. He flew very much by-the-book, military trained.

There was a question in the current accident about weight and balance. He personally had no trouble with weight and balance. He worked only one 135 contract. He flew with a maximum of 10 passengers, taking the crew from sea level to base 4503E. The helicopter flew well. It had a new transmission.

Carson was growing, but always had a homey feel. The office staff was friendly and showed a genuine concern. There were no disgruntled people in the company. The equipment was well cared for. Crews were compatible, quick to become friends.

Regarding areas of improvement for the company, he suggested it would be nice if the company did not grow so fast. This took a toll. When the company was smaller, people had more idea of what was happening. It was a shame that the company disappeared so fast after the accident.

He did not have a background in logging operations. He had worked tours, seismic work, and fire contracts with previous companies.

There was absolutely no pressure from the company to complete missions. Pilots got recognized for safety rather than production. Anytime he mentioned that he did not like something, the company stopped it. The least comfortable person set the tone for a mission.

He had flown with two forest service pilots but did not know whether either was the forest service chief pilot Ramage.

Nobody coached him for the NTSB interview.

His wife worked previously for Carson but no longer worked for them.



RECORD OF CONVERSATION

Malcolm Brenner – NTSB, Human Performance Investigator (author)

Zoë Keliher – NTSB, Air Safety Investigator

Person Contacted: Aaron Lighter

Date: March 19, 2009

Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Aaron Lighter:

Mr. Lighter was a former pilot with Carson Helicopter Services, Inc. (CHSI). He stated that he was employed in that capacity for about 3.5 years.

Carson was a first rate operation. Any pilot would want to work there. He now works for another helicopter operator and they do not compare to Carson.

He has completed about 3,200 flight hours, all in helicopters except about 35 hours. His date of hire with Carson was February 2003 and he worked there until November 2008.

He characterized pay, pilot morale, schedules, equipment, and management at Carson as "1,000 times better than at any other company." Carson had been in the business more than 40 years.

He flew the S-61 helicopter in Hawaii and Canada in logging and passenger operations before joining Carson. He was fortunate to be in the right place to be hired by them. This was the best company to work for.

At Carson, he served as pilot on the proving runs for the Part 135 passenger business operation. The FAA was fantastic to work with. The proving runs had 13 inspectors. The company completed work with them in a straightforward manner and got signed off. There were no growing pains in the 135 operation. Most pilots were high time, but there was just culture shock since logs and people are different. Passenger operations are more conservative and need to keep everybody happy.

The accident captain was an unbelievable individual. Even when the accident captain was a junior pilot, Mr. Lighter learned things from him. The accident captain had flown

the entire gamut of experience. He was hilarious, very customer oriented, and ran a tight ship. He was a perfect person.

The accident first officer was similar. He was a meticulous person who always folded his clothes. He had great knowledge.

Mr. Lighter never encountered weight and balance issues in company operations.

Asked how often he went to topping in regular operations, he stated that it depended on the mission. In ferry operations you would never reach topping. In Forest Service work with passengers you would never reach topping.

He flew all the helicopters. He was the original pilot on the passenger contract.

His father still works at Carson.

It was ridiculous how the Forest Service issued contracts. They expected you to perform within 6 days after contract award, when they needed to provide a 6-month period for the new operation to ramp up. He personally never felt pressured by the Forest Service.

The Chief Pilot sent some supplementary e-mails about weight. There were no actual changes to the charts.

He has already been interviewed by Department of Agriculture, FAA, NTSB, and the Forest Service.



RECORD OF CONVERSATION

Malcolm Brenner – NTSB, Human Performance Investigator (author)

Zoë Keliher – NTSB, Air Safety Investigator

Person Contacted: Chuck Scott

Date: March 19, 2009

Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Chuck Scott:

Mr. Scott was a former pilot with Carson Helicopter Services, Inc. (CHSI). He stated he was employed in that capacity for about 3.5 years.

He had about 12,000 hours flight time, all in rotorcraft. He held a commercial rotor rating. Before working at Carson, he had done logging and passenger operations with several companies (while at Carson he did only water dumps).

His date of hire with Carson was April 2008. He quit the company a few months after the crash, about October 1 2008. He characterized pay at Carson as really excellent, one reason he joined the company. He indicated the schedule was good, with equal time on and off duty and paid overtime. However, he did not like their procedures or standardization and was especially concerned about how they handled paperwork for weight and balance.

In July 2008, he picked up aircraft 410GH in Pennsylvania and ferried it to the West Coast. The paperwork was not done until they started actual operations. He flew the aircraft on the Forest Service for a water drop, not exclusive use, and when he looked at the paperwork he saw that it was not yet completed.

At his previous company, Erickson, the paperwork would have been all completed before operational use. Erickson also used collective locks, while Carson did not have collective locks and there was a tendency to creep up on you.

He knew the accident captain but only from pilot meetings. The accident captain seemed like a nice person. He did not know the accident first officer. In general, he liked the company pilots although a few seemed strange.

The equipment was top rate. Training was pretty good (noting that he was not involved in the Part 135 operations and could not speak for this training). Relations with the FAA seemed good. FAA Inspector Moon gave checkrides to company pilots.

Asked if there was pressure to complete missions, Mr. Scott indicated there was none. In fact, the owner of the company, Frank Carson, spoke to him personally with a safety message: if you don't like something, we'll back you up. This occurred when Mr. Scott was visiting the East Coast hanger to pick up aircraft GH. Mr. Carson checks all his aircraft at the hangar. He introduced himself and talked about flying and safety. Aircraft GH was on the toll-on scales when he picked it up. The company updated the charts at that time. Subsequently, Mr. Scott delivered the aircraft to the West Coast maintenance hanger at Redding California where paint was installed and modifications were made but Chart C was not updated. Normally, the Director of Maintenance would update charts. But at Redding, the work was overseen by Phil McVicers who was more of a fixed-wing person.

In logging, you perform a check for available power every 50 hours. In Forest Service contracts, you perform a power check every 10 hours.

The company provided charts for load calculations based on the new composite blades. The company stayed on top of charts pretty well.

In logging operations, they might experience topping. It was different in 135 operations since, with passengers, you leave room so it won't max out. Don't let blades droop, because then you needed to take power out. In the accident, they didn't have this option because of trees. Therefore, topping is not a shock in logging but you need to get to a clear area. Because the captain does vertical reference, you rely on the first officer to help out to recognize topping. The first officer would realize topping first by watching the max temperature (and torque) on the instruments.

Mr. Scott left Carson because he wanted to work in Malaysia with his old job. He liked Carson as a company.

The paperwork needs to be redone in Perkasio, with the center of gravity. They weighted using roll-on scales. Jack scales give a different problem. After the accident, he considered and became concerned about the weighing procedures at Redding. They had two shifts being weighed at Redding. Paperwork was not correct (but aircraft was in cg). He assumed that the problems in paperwork happened at the West Coast rather than the East Coast. Frank Carson seemed real good, so Mr. Scott perceived the problem was with the West Coast operation.



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Zoë Keliher – NTSB, Air Safety Investigator

Person Contacted: Guy Keilman

Date: March 19, 2009

Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Guy Keilman:

Mr. Keilman was a former pilot with Carson Helicopter Services, Inc. (CHSI). He stated he was employed in that capacity for about 3.5 years.

He had about 23,000 flight time of which all but 300 hours were in rotorcraft. His ratings included single-engine land, multi-engine land, helicopter, instrument, ATP helicopter, and type rating in the Boeing Vertol and S-61 aircraft.

His date of hire with Carson was Labor Day 2005 and he worked until October 29 when he was laid off.

Previously, he worked at Columbia Helicopter for 23 years as a command pilot conducting logging and firefighter operations in the developing world. Carson was a dynamic company, conducted aerial firefighting, and paid more money. The accident forced them to curtail their operations.

He characterized pay as probably close to top for helicopter companies. Pilot morale was “soaring like a hawk” before the accident. The company and its operations were good, equipment was good, it was successful, the rock star of the industry. Schedules were very good. They met or exceeded in time off, lifestyle vs. occupation. The company never coerced pilots to work during their time off, but compensated them well if they did. Management was very good and he had no complaints. Maintenance crews were excellent.

He never felt pressured to complete a trip, but he kept himself from being put in that position. He was never second-guessed.

The accident pilot was an excellent pilot. Mr. Keilman flew together with him in Chinooks at his earlier company, and he flew a tour, about 60 hours, with him at Carson. The accident pilot handled himself well and had good judgment. Going in for a drop, firefighting, he would weigh winds and location. He had a good touch in the cockpit, excellent judgment.

Mr. Keilman did not fly passenger operations with Carson. He was not the most experienced S-61 captain having worked just three years with the company. By contrast, the senior captains at Carson had 5,000 to 8,000 hours in the S-61.

The first officers had less experience but were never at the helm. He did not know the accident first officer except socially.

Working for Carson was a very positive experience. His only complaint was that it took longer than he expected to get his type rating because of difficulties scheduling an FAA inspector. In general, Carson was above everyone else in the industry except heavy lift companies. Relations with the FAA were good. They had audits before the accident and did well.

He never felt any pressure to complete Forest Service missions. At his experience level, he did not think he would be susceptible. No doubt, the same was true for the accident captain. In October 2008, there was a siege of several large fires in Southern California. There was an implied pressure to fly missions because homes were threatened. But, when the accident captain refueled at Van Nuys between missions, the accident captain learned that they were not permitted to hose off retardant because of environment concerns about corrosiveness. Therefore, the accident captain told them they could no longer use the retardant and forced the Forest Service to find a new way to fly the mission. The accident captain never caved in to any pressure, whether it was government, company, or personal.

Logging and passenger operations provide an entirely different environment. In logging, the aircraft has no interior or seats, bare metal and wiring, and carries only what is necessary for the operation. Time is money, and logging is a timed event paid by board foot. By contrast, passenger operations are power by the hour. You cannot jettison loads. Mr. Keilman served as a 135 pilot at Columbia, as did the accident captain.

Topping is normal in logging, but as only as an emergency measure. It is not normal with passengers, where calculations are based on takeoff power rather than topping.

In earlier times, pilots would try to carry more than the helicopter was capable of carrying. Therefore, load calculations are now made as a guide and are rigorously held to in Part 135 operations. With firefighting operations, when carrying water, these calculations are not etched in stone. You trim for comfort, check power available before loading water, then take on water. For example, if you pull in 81% torque as the best power before drooping, therefore at 71% torque you stop loading water. They pull in power to see what they've got. When going in, both pilots have their heads in the

cockpit. Pull power, both note it, this is a standard procedure. If conditions don't change, there is no need to recheck this procedure at the site. Parameters don't change on an every time basis. When hauling passengers, by contrast, the calculations are rigid.

Concerning training on the new charts, the pilots reviewed them at meetings. It was pretty standard procedure regardless of supplement procedure. The charts values showed the minimum specifications of the engine, so with strong engines you typically found that the aircraft could do more. With passenger operations, however, you are bound to whatever the figures show. With water/firefighting operations, you could maybe get more performance. He had never experienced an aircraft to provide less power than the charts indicated.

Over time, he discovered minor errors in the charts provided by the company. He always checked Chart C at the start of tour. If there were any changes in this chart, he would be aware of them.

Forest Service requirements included a survival kit and raft. The last fire he worked was down east of Visalia.

The Director of Operations changed in October 2007, from Joe to Sean. He did not know why, but there were only rumors that Joe was terminated with cause.

Steve was the Chief Pilot/Vice President. He was exceptionally bright, had a sense of humor, and dealt with pilots well. He was the human side of Carson and made everyone want to work there. He was a counterweight to the East Coast side. Mr. Keilman got the best check rides from Steve that he ever received. It was a learning experience, not a "got you."

Some people may have thought that the company was growing too fast but he thought the operations seemed smooth. The Forest Service pods were not palatial. But despite very rapid growth, things went smoothly.

Mr. Keilman knew the accident pilot for 30 years. The accident captain once had alcohol issues, prior to 2005, but he went into rehabilitation and resolved them. His marriage was good, personal life was good, and he had turned the corner on alcohol.

Mr. Keilman had not experienced any weight and balance anomalies with the company.

Mr. Keilman flew a trip with Chuck from Pennsylvania to Grants Pass. The airplane was stuffed with cargo. The pilots changed seats regularly. At Cody Wyoming, Chuck opted to load full fuel for a three-hour flight. Mr. Keilman would have opted instead for only two hours worth, but the aircraft flew OK over the Teton Mountains. At Redmond, they weighted the aircraft and found only a 50-pound discrepancy from the paperwork. Even if he had suspicions that the weight and balance figures were in error, he would not be able to back them up. He had slightly less than 1,000 hours flight time in the S-61.

Vern Sanders was the high time pilot in the company.



RECORD OF CONVERSATION

Malcolm Brenner – NTSB, Human Performance Investigator (author)
Zoë Keliher – NTSB, Air Safety Investigator

Person Contacted: Todd Walchli
Date: November 06, 2008
Subject: LAX08GA259 ; Sikorsky S61N, N612AZ, Weaverville, CA

The following is a summary of conversation with Mr. Todd Walchli:

Mr. Walchli was a former pilot with Carson Helicopter Services, Inc. (CHSI) based at Grants Pass, Oregon. He stated that he had completed about 6,000 hours flight time of which about 400 hours were in fixed-wing aircraft and the rest in rotorcraft. His ratings included commercial VFR land single. He was hired by Carson helicopter in April 2008, following a job lead from a friend who was already a Carson pilot. He had served as a company instructor in Part 135 operations, having come from a Part 135 background in corporate and EMS operations (as well as fire fighting that was not 135).

Overall, it was a good job. The company had a lot to learn about Part 135 operations, and was showing growing pains especially in the area of paperwork. Training was not very extensive. Pay was good. Pilot morale was mixed, good if you were in a clique with upper management.

There could have been improvements in paperwork, especially in weight and balance between East Coast and West Coast. The final weight and balance figures were off. All aircraft were initially weighted by the East Coast, but the West Coast installed extra items and failed to properly update the weight and balance figures. The pilots saw extra items on the aircraft that were not included in the figures. For example, about June 2008, he picked up a brand new aircraft for which the West Coast had just completed work. They had installed a tank, which was reflected in the weight and balance figures, but had failed to include the weight of the attached snorkel, about 90 pounds. This was just an oversight. The work was done by Chuck Croft.

He flew missions for the Forest Service and had mixed feelings about them. He had felt pressure but did not yield to it. They emphasize safety, the missions are extra safe, and

pilots just say when they cannot do something. For example, there can be pressure to take a long helicopter into a real tight area. A pilot with lower time can feel pressure.

Mr. Walchli knew the accident captain and sat next to him for a week. He was a fun person. Mr. Walchli did not know the accident first officer.

He did not know how relations were between the company and the FAA.

He left the job because he was laid off.

He flew the short fuselage in Texas.

He did perform load calculations regularly. The 61 is not a great performer at altitude.

Asked whether he experience topping in regular operations, Mr. Walchli indicated that he did not and stated "limits are limits."