AIR AMERICA: DE HAVILLAND CANADA DHC-6 TWIN OTTERs

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First published on 15 August 2003, last updated on 24 August 2015

An unknown Air America DHC-6 in night colors at Udorn in 1973
(with kind permission from Ward S. Reimer)

The types of missions flown by Air America's Twin Otters:

Air America's Twin Otters were the special project aircraft of the early seventies. Captain Clyde Moorehouse was Chief Pilot of the Twin Otter program, and Captain Jim Pearson was Chief Pilot of Special Projects on the Twin Otter.[1] This role of the Twin Otter explains why the official blue and black stripes of its color scheme were quickly replaced by a black night color scheme, which makes the registration very difficult to be seen. Some of them had special electronic equipment, including terrain following radar. Of course, the aircraft could make deliveries of all sorts of supplies, and sometimes did so in order to hide their real activities. These included nightly supply drops to road watcher teams, relay missions for electronic signals, parachuting Commando raiders, and intelligence flights. N6868 acted as an airborne command post during the wiretap mission to Vinh, North Vietnam, and during that period it was operated out of the secret base at PS-44 in Southern Laos.

Captain Jim Pearson recalls: "As the war and the ensuing aerial delivery requirements continued to escalate during 1971 and into 1972, Air America was again confronted with the necessity of obtaining aircraft that would now exceed the performance of the Pilatus Porter. Heavier loads and much longer distances were paramount in this aircraft's attributes that caused Air America to select the Twin Otter. Also the fact that the plane noise was much diminished over the Pilatus Porter was a large consideration in view of the potential utilization intended.

[1] E-mail dated 2 July 2005, kindly sent to the author by Jim Pearson.

This aircraft was manufactured by De Havilland Aircraft of Canada and was a twin engine, high wing with external strut support STOL aircraft with a passenger capacity of 19 passengers. It could be used for scheduled passenger and cargo operations under airline operating specifications or as employed by Air America, 'Anything, Anywhere, Anytime. Professionally.'

At first its mission was to support USAID operations in Laos, and for that reason the company decided that one pilot was all that was needed. The Twin Otter was designed as a one pilot aircraft if necessary. With the usual natural absorption into the routine of Air America operations it was not long before it was an absolute that we needed to have two pilots up front for the usual reason: If one should become incapacitated with 19 people onboard, someone had to operate the plane. As a very short time in service with the escalating war proved out, two pilots were now necessary.

The first aircraft to arrive on scene was N774M, more affectionately known as '74Mike'. It was deployed on USAID missions up country along side Pilatus Porters. However due to the fact it was new, the customer did not utilize it to its full capacity, and the pilots in the Otter program suffered accordingly: low flying hours for the first few months. We also noticed that flying the Twin Otter by the prescribed STOL procedures as outlined by the manufacturer would be a short trip to the cemetery. The two Pratt & Whitney turbine engines were wonderful engines and ultra reliable in service. However the engine was a twin spool engine consisting of a gas generator and a turbine section attached to a reduction gear box for passing hot gas energy to the propeller. It has a tendency to slow down to idle speed when the power levers were reduced, making for a short period where there was no power available to the propeller. We called that letting the engine spool down such as descending from altitude with the power levers pulled back. A pilot confronted the situation every time he makes a STOL landing which made for a potentially disastrous situation if he should have need of high power for reverse after landing or a go around. Upon advancing the power levers he would experience one or two eternities waiting for the engines to spool up and give him the life saving power to either reverse to a stop on the ground or make a go around if he misses an approach. After a few knee shaking scares we got on top of the situation by slightly modifying the STOL approach procedures. We could come in low with large flap extensions, causing us to carry more power on the engines (now the gas generators are really spooled up); then on landing or go around you had instant power available. End of problem.

Shortly after 74M went into service, another newly manufactured Twin Otter arrived on the scene: N5662. This aircraft had been worked over by the customer after the company accepted delivery from the manufacturer. It had installed a Texas Instruments Terrain Following Radar – the same as on the US F-111 low level fighter bomber aircraft. Of course due to the infinitely different operating characteristics the unit in the Twin Otter had a modified templet installed to accommodate its somewhat lack luster performance compared to the massive F-111.

By now I was by default the instructor pilot of the program and was sent to Udorn Air Force Base in Thailand for instruction by a USAF Captain on the in flight use of the TFR. During the course of our night navigation flights utilizing the TFR along with the incorporated Doppler navigation unit, the instructor and I managed to log 11 hours together when the second incident regarding the Obstacle Clearance light caused him to pronounce me fully qualified to be an Instructor Pilot on the equipment and night low level operations. His comment was: 'I'm out of here before I get killed.'

I described both the incidents to the TI representative at Vientiane, Laos and he went to work. A few test flights later and voila, solved. I did not know whether I should be happy or slash my wrists knowing now that I was the instructor in this low level operation and would be involved in many of the flights. Then the realization hit me when the customer in

Vientiane called me in and wanted me to make out a training roster and an annual schedule for training, so he could cost it out. Later my fate was sealed, when the Chief Pilot called me in and said he was leaving the base for an extended period of time and: 'When 662 flies, you and only you will be on board!' All of a sudden the flight load of 662 skyrocketed. Seems all the customers wanted to utilize the plane for something. Naturally, my flying time skyrocketed far beyond the time the remainder of the pilots were getting on 74M. I went to the customer in Udorn and asked to use the plane for training purposes. Not only 'No', but 'Hell, no, you could not use that plane for training!' Finally that operational glitch resolved itself, and I began to train more pilots. Regrettably I only managed to get two more pilots fully qualified to fly the missions, and due to the heavy enemy action now the plane was flying nearly every day and or night with no time for more training.

By now 74M had been shot down once, but the pilot realizing the situation made the good judgment to climb until he ran out of fuel, then managed to glide the plane about twenty miles back to Pakse, Laos and land uneventfully with both engines feathered. Again a few weeks later, 74M had a fuel line shot out, and the pilot made it in without incident. At this time I made the practice of feathering both propellers and glide the plane for a few minutes to give pilots the feel and confidence of flying with both engines out part of the training program. Note: the propeller was feathered, thus producing no thrust, but the turbines were operation; in the event power was needed the pilot just unfeathered the propeller as opposed to restarting the engine, which was time consuming.

One important function I had to perform while managing the Twin Otter program was to decide the minimum length of runway we would utilize under normal circumstances due to the fact the manufacturers statistics were grossly exceeded. Naturally, we could not operate the aircraft in the Laotian theater in accordance with the certification performance due to the terrain and shortness of the runways. It was determined that the aircraft could land fully loaded in approximately 300 feet. The company rules declared that there must be a 50 foot long sterilized zone at the beginning and end of all runways. So I determined that an adequately trained and experienced pilot in the Twin Otter should be able to land safely in 600 feet, which gives 200 feet for irregularities. The pilot had to be cautioned: Due to the size of the plane he had to make certain the locals, who normally run up and jump on, did not overload the aircraft for take-offs. Fortunately, during most operations we carried one or two kickers in the back to help load, offload and push the loads out for air drop.

As the North Vietnamese and the Pathet Lao moved southward towards Long Tieng, the Twin Otters were flying daily in both north central and southern Laos supporting the customers' operations there. Out of the Alternate in north central Laos, operations were basically routine and consisted of mostly air drops of food and ammunition to the local forces holding the mountain outposts checking the advance of the North Vietnamese and Pathet Lao forces. This operation became rather hectic as the enemy forces got closer. Due to their constant motion, it was also difficult to determine their exact location, so you were shot at from nearly everywhere you were sent to drop supplies. During all this maneuvering back and forth the customers' demands increased, and the Twin Otters were flying day and night missions. At this point in time, we still flew with one pilot in day-time and two pilots on night drop missions. Due to the shortage of trained pilots on the TFR Radar, it was usually the same two of us on night missions for some time.

We would depart Vientiane around 1730 to 1800 locally and fly up to LS 272 Ban Xon, as Long Tieng was by now destroyed and the enemy had withdrawn. The first night mission was conducted the instant we were indoctrinated on the newly modified Loran C installation on 74M. Captain Parker and I flew five night drops and delivered Commando raiders on the East side of the *Plaine des Jarres* in North Central Laos. It was pitch black out and thunder storms in the area. On our first drop, we could see out somewhat, even though it was pitch black.

However, on the second through fifth drop it was completely IFR, and we dropped the Commandos on instrument conditions in the high mountains. Fortunately they all survived. The mission success was rather dubious, unless you consider the fact they all came back, which makes it successful. Their objective was to capture and hold a position that the USAF helicopters were going to utilize for other missions the next day. The mandate was that no US aircraft could be damaged or downed in Laos, so the high degree of anxiety regarding the security of the air strips they utilized. During this hectic period of operations my log shows that I was making up to 36 take offs and landings per day."[2]

At that time, flying in the Long Tieng area was quite hazardous, especially making air drops onto Skyline ridge. Jim Pearson recalls two particularly dangerous situations: "[…] Captain Parker and I were flying two Twin Otters making air drops onto Skyline ridge. I was first in and noticed heavy 12.7mm weapons firing at us, when Captain Parker arrived and began holding overhead. I said: 'Pete, we are taking heavy 12.7 fire, be careful up there!' So we made our second pass, and just before the DZ I turned away and made a very hard 360 degree turn. Just as we turned away, we heard numerous explosions on the DZ. The enemy (smart guys) timed our procedure and fired mortars to try and knock us down as we over-headed the DZ. As we made our second drop, we noticed much heavier 12.7 firing. I again told Pete: 'Be careful, we are really taking heavy fire!' 'They can't get me way up here.' I mentioned that 5000 feet is the effective range of the 12.7. The bullets don't stop there. On the third pass, the same turn away maneuver with the same explosions with a quick 360 and drop to the steadily increasing tune of 12.7s. On my fourth pass in again 12.7s. I told Pete: 'Be careful and hold somewhere else!' He replied: 'They can't hit me up here.' I said: 'No, unless they get lucky.' The pregnant pause! 'They just got lucky, I am on fire!' I told him to high tail it to Alternate and put her down. Then I rolled in and made two tight drops and headed for Alternate myself at a high power setting and tried to catch him. I heard him say: 'I'm not landing there.' Apparently the enemy said him coming in smoking and knew he would be landing. Again they fired mortar rounds, so as to impact just as he landed, and as he came over the runway threshold they began exploding, causing him to go around. I told him to head for Phu Kao on the 9700 foot mountain Phu Bia. It is where LS-14 was located and it was harassed by the enemy daily. By now I was approaching Alternate and saw Captain Parker's plane and did not see any smoke and told him so. I told him to land at Phu Khao and I would follow him in and pick him up, which I did. They shut down and chocked the plane and jumped on my plane, and we were out of there in seconds. Fortunately, the strip was not attacked that evening and we flew in the next day and retrieved the repaired plane.

Again making drops on Skyline. I was heading west looking for a DZ, and unbeknownst to me, a Continental Twin Otter was heading east, looking for a DZ at the same height! The sun was in my eyes, and I caught a glint of light which attracted my attention only to see both pilots in the Continental Twin Otter looking at me. The glint was, as they saw me first, they took evasive action by diving, and the changing attitude of the plane reflected the sun into my eyes. I saw they were descending, so I just pulled up slightly and we missed each other. My plane naturally was OK, but in his massive effort to evade my aircraft he dislodged the cargo and it flew up to the overhead along with the two kickers. When he pulled out, the load crashed down onto the deck, doing heavy damage to the plane and injuring one kicker very much. I have always felt the most dangerous situation was first weather, then the possibility of a mid-air collision and lastly enemy action."[3]

But the *Plaine des Jarres* was not the only area where Twin Otters were used. "Shortly after utilizing the Twin Otter out of Long Tieng area on night missions, the customer focused

[2] E-mail dated 5 September 2005, kindly sent to the author by Jim Pearson.
[3] E-mail dated 5 September 2005, kindly sent to the author by Jim Pearson.

on the Pakse, Laos area. The Twin Otter began operations with constant air drops to teams positioned all over the *Plateau des Bolovens* just east of Pakse. We would begin usually with a recon flight interrogating all the positions as to their present locations and needs, then fly back to Pakse and begin to assemble drop bundles. These missions were taking up to six hours. [...]

I had been advocating the utilization of two pilots on the Otter for some time due to the threat of enemy fire, when I was assigned a night mission beginning at Udorn at 0530 in the morning: 'Proceed to Pakse and fly as assigned by the customer until relieved, then after the evening meal, proceed to PS-44 for briefing.' I asked if they required two pilots. This particular customer said 'no' – he seemed to only want one pilot on board. So after dropping to positions all day and doing some point to point flying, I proceeded to PS-44 and loaded up with 20 Commando raiders and one customer, and he said: 'Go to Udorn.' Oh well off to Udorn, where we picked up the Number One customer, and he said: 'Go to Luang Prabang, Laos.' We would be the Command ship with two just converted Twin Pack helicopters, on their first operational flight. 'Where to?' 'Commando raid on Dien Bien Phu, Viet Nam.' Wow, and only one pilot! This guy must have balls or is a pilot himself. So off from L-54 northward with two choppers full of Commandos. Our raiders were issued chutes, and if the choppers got into trouble, we would deploy our Commandos to assist on the ground. Our primary duty was Command ship. After heading north we turned off all lights on the aircraft and proceeded black to a short distance from Dien Bien Phu and then orbited, while waiting for the choppers to insert and exfil the commandos.

Going in, all was well, however they managed to stir up the hornets' nest, and they were really pissed off. One of the choppers got shot up pretty badly coming out, and some on board were injured and I think one or two fatalities. We had been holding black for over an hour and I was not that sure of our position, however I had not doubts about going back to L-54, as the evening was still clear out. The shot up chopper's pilot was somewhat distressed as this was his first mission utilizing the S-58T, which had two Pratt & Whitney turbine engines which really sucked up the jet fuel compared to the Wright 1820 recip engine. He had been hit in the fuel tanks and in the fuselage and was losing fuel, to compound his problems. He asked me my position and distance from L-54. I barely got 'I am app...' (approximately), when he jumped down my throat: 'I want to know exactly how many miles from L-54!' Well, a quick calculation (wild assed guess): 'I could just barely see the glow of the lights of the town of Luang Prabang, I am exactly 110 miles north.' He said: 'I cannot see you.' So with that to help him calm down, I turned on every light on the aircraft including the landing and taxi lights. He could not see me. So I told him: 'I will fly directly to where I think you are coming from. Tell me when you see my lights.' When he said 'I see you now', I said: 'I will head for L-54 and orbit overhead until you come in. Call if you have any doubts as to whether or not you are going to make it and I will come running.' He made it into L-54 OK, so we landed and refueled, reloaded and headed for Udorn. On arrival at Udorn, the One customer got off, and we proceeded to PS-44. On arrival at PS-44, now about three in the morning, we were greeted with zero zero weather at the site. After circling I noticed that I could get under the clouds from the south and make it up to where I thought the runway began. The runway was pitched up about 20 degrees from the horizontal and had an easterly heading. When I turned final, above the runway touch down zone, but below the upper portion of the runway, my visibility went zero zero. I went to full throttle (thank heavens for our change in landing procedures as the engines spooled up beautifully). We went into the murk and climbed for all we could and then broke out on top. I turned south and began another approach and I analyzed I could make it OK. Second approach, same thing, go around. By now, the customer was really feeling the stress and said: 'Let's go to Pakse.' Sure, with 20 fully armed Commandos on board they would think this was a *Coup d'etat*. So I

made one more approach and just as planned. We went zero zero and I applied max power, and on the go around the aircraft impacted the ground. Fortunately for us, we could be nowhere but on the runway, so I reversed both engines fully and applied the brakes before I really hit something, and sure enough, we were on the runway. So with knees shaking, we slowly taxied back and offloaded the Commandos and the customers. Then once again I got the wonderful opportunity of making an instrument take-off with trees on both sides up a 20 degree slope and climb at full throttle, until I saw some beautiful safe sky. Then I proceeded to Pakse and went to the crew quarters and went to bed, while the other chopper pilots were just getting up for a day's work. 0530 until 0500: not a bad duty day for one pilot!

I got orders to select and train five First Officers for the Twin Otter. Just a routine function with no glitches. All First Officers were Pilot in Command material, so we had back up if needed. In fact, we only had three fatalities in the program, which resulted in the aircraft impacting a mountain in bad weather and losing one wing. Both pilots and one kicker were killed on N5662. As 662 was the primary radar night drop aircraft, the customer took 74M and modified it to accept the Texas Instruments Terrain Following Radar."[4]

One of the most spectacular missions Air America flew during the final years of the war in Vietnam was the wiretap mission to Vinh. An Air America Hughes 500P was to fly into North Vietnam where a wire tap was to be installed on the main phone lines running from Hanoi to the south. Two S-58Ts were to act as rescue aircraft for the commandos and for the Hughes 500P in case it was downed, and a Twin Otter was to act as an airborne command post.[5] The mission was so secret that even Air America's Chief Pilot of Special Projects on the Twin Otter, Captain Jim Pearson, had not been informed. He recalls: "Unknowingly I had been involved with this mission since 7January 72 when I flew a Twin Otter from Vientiane, Laos to Taipei, Taiwan. We had long range tanks installed and only had to uplift fuel from Pakse, Laos then flew nonstop to TPE for security reasons. As was the norm in the Special Project Operation, I had no idea what for or why I was flying the plane to Taipei. Our uniform instructions were, no uniform, only civilian clothes. The First Officer was Capt Clyde Morehouse. On arrival TPE we deplaned and I was taken aside and given a short briefing. Capt Morehouse was sent to the Hotel as he was not in the Special Project portion of the Twin Otter program. I was to continue on to RCPO, a Chinese Military base where Chinese Special Projects were operated from by 555 Squadron. The aircraft was N5662 which at this time was the only aircraft equipped with the Terrain Avoidance/Following Radar manufactured by Texas Instruments.

On landing at Poppa Oscar I was met by a Chinese contingency and was informed I was to check them out on the aircraft and the Radar system. We flew 8 January 72 through 11 January 72 logging 91 take offs and landings in nearly zero/zero conditions.[6] This really improved my confidence in the radar system as we could actually pick up the runway on instruments and fly down and land zero/zero. Little did I realize that at the conclusion of this assignment I would be privileged with meeting these gentlemen again. Capt Moorehouse and I returned to Vientiane, Laos and commenced normal operations on 12 January 72.

My next contact with these Chinese Gentlemen commenced on 17 January 72 and continued through 3 February 72. At the completion of my daily flight assignment I was

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[4] E-mail dated 5 September 2005, kindly sent to the author by Jim Pearson.

[5] See Conboy / Morrison, *Shadow war*, pp.379-86; Conboy / Morrison, *The Quiet One*.

[6] In his e-mail dated 5 September 2005, Jim Pearson describes the training as follows: "I was ordered to fly the primary radar aircraft to Taipei, drop the American First Officer and proceed to Hsin-chu, Taiwan for further orders. Up on arrival at Hsin-chu, I learned I was to train two indigenous pilots on the operation of the Otter on night low level missions. The weather cooperated beautifully. The next morning it was zero zero. The runway was beautiful, very long and extremely wide, especially for the Otter. We went out and I just trained the pilots in instrument conditions as I could give us a GCA from the right seat. They were experienced pilots, so the flying part was easy."

instructed to proceed to PS-44 and commence night TFR training. No questions asked, I just proceed to PS-44 and linked up with the same people I trained on the aircraft at Poppa Oscar. This period of training resulted in 123 plus night landings.

The only incident of note was on training mission one the plane was fueled up to maximum utilizing the wing tip tanks. This gives the aircraft a peculiar feel on landing which may induce the pilot to land short… Shortly after take off we descended to 195 feet to commence low level terrain avoidance training. The radar malfunctioned after a short period so we aborted the mission and returned to PS-44. Now the wing tanks were still full and the main fuselage tanks were hardly used as we were only out about thirty minutes. As we approached PS-44 for landing to the west I briefed the pilots as to how to handle the plane especially not to slow below 70 knots and watch for a nose heavy condition. Due to the configuration I had to sit in the cabin and look over their shoulders. Needless to say I was not enamored of this arrangement. As we approached PS-44 from the east we had to overfly an area on the end of the runway that had been cleared by blasting down the trees leaving rather high jagged stumps. Precisely as I had briefed, they did not comply. The aircraft hit short of the runway in the area of jagged tree stumps and how I will never know we bounced and jinked through the stumps and with the landing gear firmly on the ground bounced over the runway threshold markers onto the runway. Not a Scratch. All further flights were normal from the actual flying aspects. I do not think the TCN pilots were too receptive to operating on the proposed low level flights. I never saw them again.

My next Vinh mission assignment was on 21 October 72. Again with no knowledge as to the purpose of the mission, Capt Jason Broussard and I flew the Twin Otter that day out of Pakse, Laos. Upon arrival in Pakse (Lima 11) we noticed a USAF C-130 off loading two Hughes helicopters. Not being familiar with the Hughes other than noticing some had showed up a few months earlier at Udorn and were seen flying all over Laos we were not particularly aware of any modifications. A couple young men approached us wearing the khaki colored nomex flight suits with breast patches that said Air America on them. They seemed to be very anxious to make the point that they were with Air America also. Naturally we had never seen them before.

Then we found out that two of the black Hughes Choppers and two AAM Choppers were going to fly a night mission and we would be the command ship. Where they were going, we had no idea. We left Pakse and flew to PS-44 to pick up a load of commando raiders and then flew to an airstrip east of Thakhek, Laos (Lima 40). I notice it was surrounded with barbed wire and had sentries posted all around. We then took off and flew an orbit just west of the North Viet Nam border then back to the airstrip east of Thakhek. We then flew to T-55 and back to L-40 and flew another orbit mission landing back at the strip east of Thakhek. Then we flew to L-39 Savannakhet, Laos and then to PS-44 off loaded the raiders and then to L-11. Due to the security and compartmentalization involved we did not have any idea if the mission was a success or failure. We only knew, if a chopper went down we were to go in and drop the commandos and become the Command ship. The aircraft was N774M, which was now equipped with the Terrain Following radar system due to the destruction of N5662 killing its flight crew. The routing began in L11 thence, PS-44, L-39, L-40, Orbit east of Thakhek, near the Ho Chi Minh road, L-40, T-55, L-40, Orbit, L-40 L-39, PS-44, L-11.

The last flight I flew involving the Vinh mission was on 26 October 72. The aircraft was N774M and Barney Heidt was the first officer. The routing was: L-08, T-08, PS-44, L-39, L-40, Orbit, L-40, T-08, L-08. As you can see, we did not go to Pakse for the start up on this mission which indicates that the Choppers originated somewhere else, probably T-55 where it is a straight shot across Laos to Vinh. Again we had no idea as to the progress of the mission

on our return. Lastly, when the first successful mission was flown, I happened to be flying out of Vientiane that day and was not available."[7]

"By now, the military situation at Pakse was getting tight. Due to enemy action, the USAF had a *Spectre* gun ship shot down, and Air America lost two C-123s and one Caribou plus two or three H-34 helicopters. The decision was made that the Twin Otter will commence night operations to resupply positions due to the large number of aircraft shot up during daylight operations. We had to put in Commando raiders on the Saravane, Laos runway at night, as there was a seven USAF Jolly Green mission scheduled in the morning, ferrying in troops to retake the position from the enemy. In the morning, we all gathered at a strip just west of PS-44 to pick up troops and a customer. Of the seven planes, two aborted for maintenance, one sustained damage on landing. Later one went mechanical before departure. We lead the remaining planes with troops into Saravane and held overhead for the customer in case of a counter attack. After a while we were beginning to get short of fuel. I called the customer and he said he had to stay longer. I did not want to leave him, so I asked if he had any prisoners. He said: 'Yes, why?' 'I am running low on fuel and don't want to leave. Can you run them up and down the runway and check for land mines?' He said: 'Just a minute.' He called back and said: 'OK, come on in….' Don't know what he used to check, but we were OK on this one. When he came out, he said we would have to shuttle troops, as there were only three choppers working, and we would have to pick up the slack. Thus it was an uneventful day for us, we had a chopper shot down, and the customer on board was killed. I noticed that of late more and more customers were getting killed by enemy action.

The last operations of note out of Pakse were due to the critical situation regarding the enemy proximity to the city. The Pathet Lao and their cohorts, the North Vietnamese, were only 20 kilometers from the city of Pakse, with no opposition between and no air cover. All aerial assets were totally utilized elsewhere. So one morning, the customer at Pakse told me to load up with six 55 gallon drums of Av Gas and: 'Go up the road from Pakse to the Plateau and join up with a Raven who will mark targets for you.' Wow, I could not believe this. Real combat flying, except in an unarmed plane! Well, you can't have everything, make do. The customer decided to go and watch the hot soup drop.[8] On the way up to the contact area, I was pondering just how to deliver this weaponry: two 55 gallon drums of Av Gas with two thermite grenades taped to the side! Finally, I decided that in order to hit the target, the drums had to be going straight towards the target; so to make the drums go straight to the target, I had to point the plane straight to the target, until stabilized, and then ring the bell, and the kickers would push out two drums attached to the static line, which would remove the safety pins allowing the grenades to explode. So I met up with the Raven, and he said he had a target and would put in Willy Pete for me. White smoke. He smoked the target and told me to put the ordnance on the beginning of the smoke. So with my newly concocted drop procedure, I pulled up to 1200 feet over the drop zone and slowed the plane to 80 knots with 10 degrees of flap. Max flap speed was 110 knots. So I pushed the nose into a dive straight at the beginning of the smoke plume, and when it was coming straight at my window, I rang the bell. Out went the drums, and I pulled up and rolled to the left and watched the grenades begin to smoke and watched until both barrels hit the beginning of the smoke and exploded. Wow, on target! I was mostly relieved, as the customer was on board watching this entire episode. Again I repeated this procedure on two more targets and went back to Pakse and picked up four more loads that day. We stopped the advance of the enemy troops."[9]

But two or three times a week, Air America's Twin Otters also had a very sad duty to perform at Pakse, as Jim Pearson recalls: "To pick up the KIA in body bags and fly them to

[7] E-mail dated 1 January 2006, kindly sent to the author by Jim Pearson.
[8] The use of "hot soup" by Air America Caribous is described in Robbins, *Air America*, pp.135-37.
[9] E-mail dated 5 September 2005, kindly sent to the author by Jim Pearson.

Ubon, Thailand and pick up replacements. We would land in Ubon, and as usual, it was steaming hot. The kickers just offloaded the dead and placed them haphazardly in piles beside the aircraft in the full heat of the sun. I told them: 'These are dead comrades and should be treated with more dignity. Please place them in a row under the shade of the wings!' Then with them nicely placed under the wings the buses drive up with the replacements. The troops (kids) climbed down from the buses with big smiles. Going on an airplane ride, big smiles. Then they noticed the body bags all in a row under the plane wings. The smiles of happiness begin to fade and then a feeling of horror overtakes them, then silence, as they just kept looking at the body bags. They loaded up with no problems, and we hauled them to the slaughtering grounds. When making air drops to these guys in the positions, I was amazed at the amount of enemy incoming fire they were subjected to. It was as if the DZ was elevated up about 15 feet into the air, with all the dust and explosions going on. For this reason I would never turn away until I had dropped my load. I wanted them to know that we (AAM) would be there when they needed us".[10]

However, Long Tieng and Pakse were not the only area where Air America used Twin Otters: "One more episode in Air America's utilization of the Twin Otter in Laos was flying Commando raiders into LS-32 at night pitch black. We would bring the raiders out of PS-44 to Udorn and then to LS-32, join up with the choppers, and after refueling depart with the choppers to North Viet Nam as Command ship. We flew numerous missions which basically were routine of nature, except the landing and take-off from LS-32. It was down in a bowl on top of a mountain. After about three attempts, we settled on a guy standing at the far end of the runway with a flash light pointing at us. With this aid, we came in over a rock rim (part of the bowl shaped depressed mountain top) at a speed of 70 knots with full flaps (engines spooled up). We would make a slight descent until the flash light disappeared, then begin a slight reduction in descent rate until the light came back on. Then we made a normal descent until impacting the runway. Scary! Yes, very! Nearly as much as with full fuel and full load of Commandos on take-off.

Most of these flights were routine except during one day flight. We were operating in the same area with air cover. AD Sky Raiders, call-sign 'Sandy', were overhead with the most beautiful load of ordnance one could imagine. We were returning to LS-32 when we began taking ground fire. The Chief Pilot was in the right seat with me this flight. He alerted the choppers: 'Ground fire, guys, scatter!' The Sandy came in with 'I got em!' and proceeded to drop CBUs on them until they hated their mothers.

About mid 1973, Air America management came to Udorn and gave us special project pilots a special briefing. AAM was going to cease operations and commence commercial ventures, and there would be some changes in salaries in an effort to keep the company on a competitive footing with the remainder of the industry. Somewhat of a questionable observation, when airline pilots in the US were by now making far higher salaries than were pilots with Air America! In any event, our customer called us in and explained that he did not know what color of uniform we would be wearing, but when AAM ceased operations, we would keep on flying our intelligence gathering flights. Frankly, I had mixed emotions regarding this statement, but really hated to leave the area and leave an operation such as Air America. I have never missed anything so much in my life.

Later in the war, in December 1973, the customer deployed our Twin Otters with long range tanks, 650 gallons of internal fuel giving us a total of over 1000 gallons. This could keep the Otter aloft in excess of 10 hours. We would fill up at Pakse and proceed to Phnom Penh, Cambodia with four interpreters onboard. On reaching Phnom Penh, we would climb to 20,000 feet and follow the orders of the interpreters. They would listen on enemy frequencies

[10] E-mail dated 5 September 2005, kindly sent to the author by Jim Pearson.

and then call in air strikes directly. We would usually work around Phnom Penh, then up to Battambang and around Siem Reap, then back to the Prey Veng area, and when finished proceed to Pakse and fuel up for Udorn, Thailand.

In April 1974, we lost another Twin Otter. It came in as a replacement for N5662, and its tail number was N389EX. Captain Watson was making a landing on a mountain top strip south east of Luang Prabang and on the west side of the PDJ in high winds. The aircraft overshot the runway and flipped over on its back and slid down the side of the mountain for some distance, coming to a stop in two pieces. The crew survived and the pilots received minor injuries. However the kicker Jack Brennan received a serious back injury and spent much of his last days with AAM undergoing back surgery. This proved my initial selection of crews, when I told the Chief Pilot that the guys were excellent pilots, but not of the aggressive nature I wanted in the STOL program. Much to his not wanting them to fly STOL operations, the operation developed around the necessity. N389EX never flew after that. It was evacuated by an AAM CH-47 Chinook helicopter and the empennage broke off in flight, causing the helicopter to land at Vang Vieng, Laos and set it down. That evening, vandals entered the plane and destroyed the instrument panel and radios. It was replaced by N6868, which made it up to the Air America shut down in Udorn in 1974.

During the first half of 1974, it was heartbreaking to watch old friends being laid off and the equipment disposed of, as the contracts began expiring. Finally, we got the word. The customers' operations were being terminated due to new intelligence gathering assets on the scene. Satellites and the SR-71 were making us obsolete."[11]

Statistics according to official Air America documents:
Inventories of 31 March 72 > 30 November 72 (UTD/CIA/B1F10): 3 > 3

The individual aircraft histories:

Type	registration / serial	c/n (msn)	date acquired	origin

DHC-6 N774M at Udorn in 1973
(with kind permission from Judy Porter)

N774M in night colors at Udorn in Sept. 73
(with kind permission from Ward S. Reimer)

DHC-6-300	N774M	236	25 Feb. 71	leased from Aviation and Inland Marine Rentals Inc; had been with

[11] E-mail dated 5 September 2005, kindly sent to the author by Jim Pearson.

Intermountain Aviation, then Rocky Mountain Airways (leased)

Service history: leased from Aviation and Inland Marine Rentals Inc on 25 February 71 (Status as of 12 August 74, in: UTD/CIA/B56F4); arrived at Udorn in late April 71, where a Loran C navigation system and later an improved version of the LORAN was added; flown by Don Romes to Taiwan in May 71 for familiarization flights by RoCAF pilots; (Conboy / Morrison, *Shadow war*, p. 380); assigned to contract AID-439-713 for use out of Vientiane at least 1-31 July 71 (F.O.Circulars of 1 July 71 and 15 July 71, in: UTD/Hickler/B8F7B); in the summer of 1971, it was flown in the vicinity of Saravane and around the Bolovens doing low-level supply drops in the day and parachute insertion of commando raiders after dark (Conboy / Morrison, *Shadow war*, p. 380); probably operated out of PS 44, a secret base 26 kms north of Pakse, where Taiwanese crews were living and trained to fly the Twin Otter on daylight supply drops (Conboy / Morrison, *The quiet one*, p. 44; used as an airborne relay link during a dusk raider insert near Dien Bien Phu on 25 July 71 (Conboy / Morrison, *The quiet one*, p. 44; Conboy / Morrison, *Shadow war*, p. 380); in August 71, N774M was used in northern Laos experimentally dropping to raider units Ryan paravanes loaded with supplies (Conboy / Morrison, *Shadow war*, pp. 380/1); on 20 October 71, a person walked into the left propeller of N774M at Wat Phu (L-107) and was instantly killed (XOXO of 20 Oct. 71, in: UTD/Hickler/B25F11); hit by ground fire at Ban Nongkin near Toong Set (LS-449) in Laos on 7 December 71, damaging the fuselage; again hit by ground fire on 8 December 71, while in the drop zone near Pakse (L-11); both engines flamed out within 5 minutes, and the pilot made a dead stick landing at Pakse (L-11); the fuel line, the right wing and the flap were damaged; repaired and returned to service on 17 December 71 (XOXO of 8 Dec. 71, in: UTD/Hickler/B25F11; Minutes ExCom-AACL/AAM of 11 January 72, in: UTD/CIA/B9F7); again hit by ground fire in Laos on 24 December 71, damaging the leading edges of both wings; on 25 December 71, it was again hit by ground fire over Laos, this time damaging the right flap; repaired (Minutes ExCom-AACL/AAM of 11 January 72, in: UTD/CIA/B9F7); the right main landing gear collapsed at Bouam Long (LS-32), Laos, on a hard landing on 6 February 72 (a photo is preserved in: UTD/Anthony/F6), damaging the landing gear, the right engine, prop and wing; repaired and returned to service on 21 February 72 (XOXO of 6 Feb. 72, in: UTD/Hickler/B27F2; Minutes ExCom-AACL/AAM of 11 January 72, in: UTD/CIA/B9F7).

Fate: sold to Air America on 22 February 72

N774M	236	22 Feb. 72	bought from Aviation and Inland Marine Rentals Inc

Service history: bought by Air America on 22 February 72 (Status as of 12 August 74, in: UTD/CIA/B56F4); the lower fuel cell and the right engine nacelle were damaged by ground fire at coordinates TG 7823, approximately 1 mile northwest of Sam Thong (LS-20) in Laos on 23 February 72; nobody on board was injured; the aircraft was repaired and returned to service on 27 February 72 (XOXO of 23 Feb. 72, in: UTD/Hickler/B27F2; Minutes ExCom-AACL/AAM of 14 March 72, in: UTD/CIA/B9F7); registration requested on 2 March 72 (Letter by Clyde S. Carter dated 2 March 72, in: UTD/CIA/B15F2); registered to Air America on 8 March 72 (Status as of 12 August 74, in: UTD/CIA/B56F4); hit by gun fire at coordinates WC 8524 near Khong Sedone (LS-289) over a drop zone in Laos on 2 July 72, damaging the fuel cell and the right rudder cable; the AFD (B. Khouanxay) lost two toes from

the left foot; the aircraft was repaired and returned to service on 11 July 72 (XOXO of 2 July 72, in: UTD/Hickler/B27F2; Minutes ExCom-AACL/AAM of 11 July 72, in: UTD/CIA/B9F7); on 21 October 72 and on 26 October 72, Jim Pearson flew N774M in connection with 2 aborted wiretap missions (e-mail dated 1 January 2006, kindly sent to the author by Jim Pearson); on 4 December 72, the aircraft attach cable of N774M for static lines broke over a drop zone at coordinates TG 9027, northeast of Tha Tam Bleung (LS-72); it entangled with AFD Somphane's left foot; the aircraft returned to Vang Vieng (L-16) and Somphane was taken to hospital (XOXO of 4 Dec. 72, in: UTD/Hickler/B27F2); special flight permits for overload flights for special purpose missions requested on 30 January 73 (Attachment, in: UTD/CIA/B15F5); assigned to contract F04606-71-C-0002 for use out of Vientiane 16-30 April 73 (F.O.C. of 16 April 73, in: UTD/Kaufman/B1F14); at Udorn 18 April 73 (Udorn daily flight schedule of 18 April 73, in: UTD/Dexter/F1); photos in UTD/Landry/B1F2; later painted dark blue/black (on the Hmong/Long Tieng tape preserved at the Air America Archives); on 12 September 73, Capt. J. L. Parker injured himself, when he tried to climb into N774M at Udorn, and was flown to hospital at Bangkok (XOXO of 12 Sept. 72, in: UTD/Hickler/B25F12); assigned to contract F04606-71-C-0002 for use out of Udorn at least 1 November-31 December 73 and 1 April-31 May 74 (F.O.Circulars of 1 November 73, 1 December 73, 1 April 74, and 1 May 74, in: UTD/Hickler/B8F7C).

Fate: sold to Coastair (Coastal Air Services), Washington DC, on 17 May 74 (Agreement of Sale) for $450,000.00 plus ferry charges; Bill of Sale dated 25 May 74 (Status as of 12 August 74, in: UTD/CIA/B56F4); deregistration requested on 3 July 74 (Letters by Clyde S. Carter dated 22 May 74 and 3 July 74, in: UTD/CIA/B17F3); reregd N76214; crashed at Candor, NC, on 13 July 78, while on an Army contract flight; the wreck was ferried to DHC, Downsview, in December 78; no longer regd. on 31 October 82.

DHC-6 N5662 at Vientiane in 1972
(*Air America Log*, vol. VI, no. 3, 1972, p. 1)

DHC-6-300 N5662 326 27 July 71 De Havilland Canada (new)

Service history: officially based at Vientiane; equipped with special electronic equipment, including a APQ-115 terrain-following radar (TFR) and a LORAN C

navigation system, that is test-flown on CIA missions and directly controlled by Washington in September 71 (Memorandum of 29 September 71, p. 6, in: UTD/CIA/B19F8); then ferried to Bangkok by Intermountain Aviation; arrived at Udorn in November 71 (UTD/Leary/B1 for 13 November 71; Conboy / Morrison, *Shadow war*, pp. 380/1); used for TFR training out of Udorn between November 71 and mid-January 72 (Conboy / Morrison, *Shadow war*, p. 381); hit by ground fire in Laos on 18 December 71, damaging the lower fuselage; repaired (Minutes ExCom-AACL/AAM of 11 January 72, in: UTD/CIA/B9F7); photo in *Air America Log*, vol. VI, no.3, 1972, p. 1; between 7 and 12 January 72, Jim Pearson used N5662 to train RoCAF pilots on a military base near Taipei, Taiwan; between 17 January and 3 February 72, Jim Pearson trained the same RoCAF pilots out of PS-44, a secret base 26 kms north of Pakse, where Taiwanese crews were living and trained to fly the Twin Otter in low-level night practice missions (e-mail dated 1 January 2006, kindly sent to the author by Jim Pearson); those mission continued in February 72 (Conboy / Morrison, *The quiet one*, p. 44; Conboy / Morrison, *Shadow war*, pp. 380/1); then used to parachute Commando raider teams at night and to resupply those teams (Conboy / Morrison, *Shadow war*, p. 381); the fuel cells were damaged by ground fire at coordinates TG 802201, approximately 1 ½ miles southeast of Sam Thong (LS-20) in Laos on 11 March 72; nobody on board was injured, and the aircraft was repaired and returned to service on 12 March 72 (XOXO of 11 March 72, in: UTD/Hickler/B27F2; Minutes ExCom-AACL/AAM of 14 March 72, in: UTD/CIA/B9F7); the engine oil line and the right engine cowling of N5662 were damaged by ground fire at coordinates UG 2968 near Bouam Long (LS-32) over Laos on 30 March 72; nobody on board was injured, and the aircraft was repaired and returned to service on 1 April 72 (Minutes ExCom-AACL/AAM of 14 April 72, in: UTD/CIA/B9F7).

Fate: crashed at coordinates TG 8827 into a small hill north-east of Tha Tam Bleung (LS-72), Laos, 95 miles north of Vientiane, on 25 July 72, after encountering poor weather conditions, killing the pilot, Benjamin Frank Coleman, the First Officer John Thomas Grover and kicker Thanom Khanthaphengxay; kicker S. Kingkland was injured; the aircraft was on a resupply flight for troops in contact under the provisions of Contract F04606-71-C-0002, carrying a cargo of 2,780 pounds of palletized rations, and was attempting to fly under a low ceiling, when it hit the ground; in an apparent attempt to abort its pass toward the drop zone due to the weather, it appears that N5662 probably broke left into a steep left bank followed by an apparent aircraft stall. The aircraft left wing tip dug into the ground and the aircraft crashed at approximately 250345Z (XOXOs of 25 and 26 July 72, in: UTD/Hickler/B27F2; Accident report, in: UTD/Anthony/F4; Board of review report dated 31 August 72, in: UTD/CIA/B34F5; Accident report dated 5 Jan.73, in: UTD/CIA/B61F7; Memorial; Memorial file, in: UTD/LaShomb/B16F3; List “Aircraft destroyed or lost”, in: UTD/CIA/B49F2; UTD/Leary/B1 for 25 February 72); deregistration "because of accident" requested on 14 August 72 (Letter by Clyde S. Carter dated 14 August 72); canx on 22 August 72); deleted from Contract no. F04606-71-C-0002 by Modification no. P00062, dated 29 August 72, in: UTD/Bisson/B5, microfilm reel no. 23.

DHC-6 N389EX airlifted by Chinook 016 near LS-260 in April 74
(UTD/Maxwell/B1F5)

DHC-6-300	N389EX	251	10 Jan. 72	Executive Airlines, Boston (National Energy Leasing)

Service history: taken over at West Palm Beach, FL, on 10 January 72 for $435,000; registration requested on 10 January 72 (Letter by Clyde S. Carter dated 10 January 72, in: UTD/CIA/B15F2); ferried from West Palm Beach, FL, to Bangkok, Thailand, by World Aviation in Jan. 72, beginning on 20 January 72 and taking about 12 days (Letter by Clyde S. Carter dated 13 January 72, in: UTD/CIA/B15F2; Minutes ExCom-AACL/AAM of 11 January 72, in: UTD/CIA/B9F7); registered to Air America on 7 February 72 (Status as of 12 August 74, in: UTD/CIA/B56F4); was dark blue with light blue line, red light on top of the fin (photo in UTD/Jenkins); special flight permits for overload flights for special purpose missions requested on 30 January 73 (Attachment, in: UTD/CIA/B15F5); assigned to contract F04606-71-C-0002 for use out of Vientiane 16-30 April 73 (F.O.C. of 16 April 73, in: UTD/Kaufman/B1F14); at Udorn 18 April 73 (Udorn daily flight schedule of 18 April 73, in: UTD/Dexter/F1) and 15 May 73 (Crew member duty report of H. F. Miller, in: UTD/Miller/B4F6); assigned to contract F04606-71-C-0002 for use out of Udorn at least 1 November-31 December 73 and 1 April-28 April 74 (F.O.Circulars of 1 November 73, 1 December 73, 1 April 74 and 1 May 74, in: UTD/Hickler/B8F7C); on 4 February 74, the aircraft was substantially damaged in the nose wheel mount area at Ban Na (LS-15) in Laos due to flying techniques and local weather conditions; repaired and returned to service on 17 February 74 (XOXO of 4 Feb. 74, in: UTD/Hickler/B25F14; Minutes ExCom-AACL/AAM of 12 February 74, in: UTD/CIA/B10F1).

Fate: ran off the end of the runway at Sala Phou Koum (LS-260), Laos, on 28 April 74, due to a pilot error, and substantially damaged; two passengers were injured, but there were no fatalities; the aircraft was destroyed beyond economic repair (XOXOs of 28 April 74 to 7 May 74, in: UTD/Hickler/B25F14 and UTD/CIA/B50F5; UTD/Leary/B1 for 28 April 74; Minutes ExCom-AACL/AAM of 30 April 74, in: UTD/CIA/B10F1); airlifted by Air America CH-47C “016” (a photo is preserved in: UTD/Maxwell/B1F5) and then by Air America C-130E “405” back to Udorn in April 74; deregistration requested on 14 August 74 (Letter by Clyde S. Carter dated 14 August 74, in: UTD/CIA/B17F3); cancelled on 22 August 74 (?) as “scrapped”.

DHC-6 N6868 in night colors at Vientiane in March 74
(*Air America Log*, vol. VIII, no. 2, 1974, p. 12)

DHC-6-300 N6868 235 26 Aug. 72 Interior Airways, Fairbanks, AK

Service history: bought at a price of $475,000 (Minutes ExCom-AACL/AAM of 22 August 72, in: UTD/CIA/B9F7); registration requested on 18 August 72 (Letter by Clyde S. Carter dated 18 August 72, in: UTD/CIA/B15F2); registered to Air America on 25 September 72 (Status as of 15 January 74, in: UTD/CIA/B56F3); equipped with APQ-115 terrain-following radar (Conboy / Morrison, *The quiet one*, p. 48-49, with photo); initially painted in regular blue/white/black colors - see the photos preserved in the A. Cates collection at TTU (nos. VA024840 and VA024841); arrived at Udorn on 10 September 72; added to Contract no. F04606-71-C-0002 by Modification no. P00062, dated 29 August 72, in: UTD/Bisson/B5, microfilm reel no. 23; flew standard resupply sorties by day and Special Project drops by night (Conboy / Morrison, *Shadow war*, p. 381); operated out of PS-44 north of Pakse; acted as airborne command post during the wiretap mission to Vinh, North Vietnam, on 6/7 December 72 (Conboy / Morrison, *The quiet one*, p. 44, photo pp.48/9); special flight permits for overload flights for special purpose missions requested on 30 January 73 (Attachment, in: UTD/CIA/B15F5); received battle damage over Laos in 9 February 73; repaired (Accident note to the USAF, dated 10 Feb. 73, in: UTD/CIA/B32F1); at Udorn on 19 February 73 (Crew member duty report of H. F. Miller, in: UTD/Miller/B4F6); assigned to contract F04606-71-C-0002 for use out of Vientiane 16-30 April 73 (F.O.C. of 16 April 73, in: UTD/Kaufman/B1F14); assigned to contract F04606-71-C-0002 for use out of Udorn at least 1 November-31 December 73 and 1 April-31 May 74 (F.O.Circulars of 1 November 73, 1 December 73, 1 April 74 and 1 May 74, in: UTD/Hickler/B8F7C); in dark night colors; a photo taken at Vientiane in March 74 was published in: *Air America Log*, vol. VIII, no. 3, 1974, p. 12, preserved in: UTD/LaShomb/B8F1); flew Udorn-Pitt's Camp (T-603)-Udorn on 28 April 74 (Udorn Flight Schedule of 28 April 74, in: UTD/Walker/B31F7); stored at Tainan in March 75 (Telex dated 20 March 75, in: UTD/CIA/B18F2).

Fate: departure from Tainan to the Continental US was scheduled for 27 March 75 (Telex dated 20 March 75, in: UTD/CIA/B18F2); staged through Air Asia at Tainan, where it was painted all white (Inventory list made up by R. Dixon Speas Associates Inc and dated 10 and 11 November 1975, pp. 4, 11 (photo) and 12, in: UTD/CIA/B18F6); was at Tainan between 15 June 75 and 9 September 75; ferried to

Roswell NM between 9 and 26 September 75 (Air America, owned aircraft as of 30 September 75, in: UTD/CIA/B56F1); sold to Omni Aircraft Sales, Washington DC, at $ 275,000 according to the Sales Agreement of 13 November 75 (Summary of aircraft sales, in: UTD/CIA/B40F6); sold to Omni Aircraft Sales, Washington, DC, on 2 February 76 (Properties list dated 17 February 76, in: UTD/CIA/B18F9); dere-gistration requested on 6 February 76 (Letter by Clyde S. Carter dated 6 February 76, in: UTD/CIA/B16F9); arrived at Downsview on 2 April 76 for wingtip installation; the US registration was cancelled on 11 June 76; sold to Greenlandair Charter A/S, Godthab, as OY-POF in August 76; temp. regd. on 16 July 76; CofA on 29 October 76; regd. on 29 October 76; photo in *Air-Britain Digest*, Nov.-Dec. 81, p.141; leased to the Norwegian Antarctic Expedition on October 86; returned to Greenlandair in May 87; leased to Empire Airways, Coeur d'Alene, ID, on 26 June 91; returned to Greenlandair in December 91; current in 1998; now used for bulk fuel hauling and provision.

An unknown DHC-6 in night colors at Udorn in October 1973
(with kind permission from Ward S. Reimer)

Problem:

DHC-6-300	"A-060"	285	Jan. 72	reportedly subleased from Continental Air Services XW-PHS who had leased it from Saber Air 9V-BCL (*North American Aviation News*, 49, p. 8)

Service history: seen at Singapore on 19 January 72 (*Aviation Letter*, no. 64, March 72, p. 23; *Aviation Letter*, no. 72, November 72, p. 15); the Laotian registration XW-

PHS was officially cancelled on 19 January 72 (Letter dated 8 June 72, written by His Royal Highness, Prince Tiao Sisouphannouvong, Directeur de l'Aviation Civile du Laos, to the author); this DHC-6 has also been reported as operated by Air America (*North American Aviation News* no. 49, October 78, p. 8), or by Continental Air Service (*Aviation Letter* no. 72, November 72, p. 15); but an Air America "Company confidential" about competitive aircraft operating in Laos, dated 26 May 72 (in: UTD/Hickler/B8F7C) does not list this aircraft as a CASI aircraft; official Air America documents preserved at the Air America Archives do not show any evidence that it was really used by Air America, although it may have been used as a Project Aircraft for the wiretap mission into North Vietnam; but probably such a secret Project Aircraft would not have appeared at Singapore; so A-060 was probably only a storage number used at Singapore.
Fate: returned to Continental Air Services on 5 July 72, when it became XW-PKH (*Aviation Letter*, no. 70, September 72, p. 5); registered to Continental Air Services as XW-PKH on 20 July 72 (Letter dated 23 April 74, written by His Royal Highness, Prince Tiao Sisouphannouvong, Directeur de l'Aviation Civile du Laos, to the author); returned to Saber Air, Singapore, as 9V-BCL on 30 September 73; sold to Nihon Kinkyori Airways, Saporo, as JA8797 in March 74; became Air Nippon, Tokyo, on 1 April 87; leased to Air Hokkaido on 22 July 94; returned to Air Nippon; current in 1998.

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