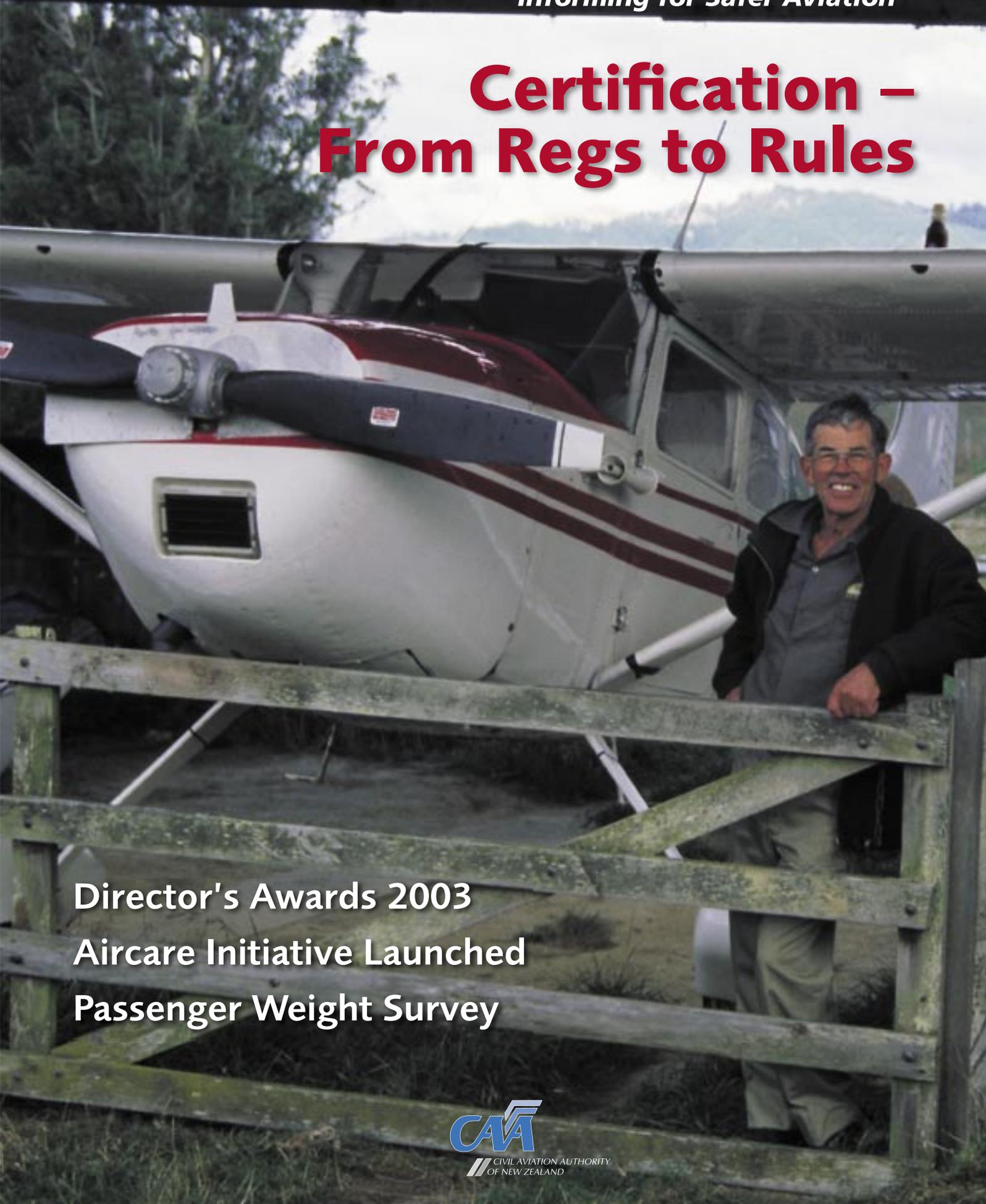


CAA NEWS

Informing for Safer Aviation

Certification – From Regs to Rules



Director's Awards 2003
Aircare Initiative Launched
Passenger Weight Survey

Certification – From Regs to Rules

As we go to press, the final chapter is being closed on one of the biggest changes in New Zealand aviation history. All Air Transport Operators have been re-certificated under the Civil Aviation Rules. The last aviation operators to be re-certificated under Part 119/135 by the February 2003 deadline are now going through the follow-up audits for issue of their certificates.



Peter Kirker (left) with Jim Larsen

The process began with the reforms of the late eighties, and publishing of the Swedavia McGregor Report in 1988. The 'new' Rules came into effect in April 1997. Timetables were set for the various Air Transport Operator groups to become certificated under the Rules – Part 121 operations by February 2000 and Part 125 by March 2000. Part 135 was changed after consultation with industry, and two deadlines were set. February 2001 for twin-engine fixed-wing and rotary aircraft (nine seats

or less), and February 2003 for all other Part 135 operations. All deadlines were met on time.

The Civil Aviation Rules set the minimum standards. They place aircraft involved in Air Transport Operations into three groups. Part 121 governs the operations of large aeroplanes having a passenger seating capacity of more than 30 seats. Part 125 governs the operations of medium size aeroplanes with between 10 to 30 passenger seats, and aeroplanes that operate under Single-Engine Instrument Flight Rules (SEIFR). Part 135 governs the operations of helicopters, and aeroplanes with nine passenger seats or less, and a maximum certified takeoff weight (MCTOW) of 5700 kg, except those engaged in SEIFR.

CAA General Manager GA, John Lanham, said, "This is the end of the beginning, if I may paraphrase Churchill. It is a significant milestone that marks the end of one process and the beginning of a new era in aviation regulation in New Zealand. Under the Civil Aviation Act 1990 and its Rules, the CAA sets the minimum standards acceptable to the community and the responsible industry meets, or exceeds, those standards.

"Under the 'old' Regulations, the Department was responsible for safety and behaved as approver and policeman. Under the

Remote Adventures

Sixty-five kilometres down a metalled road off the well-beaten track of State Highway 3 nestled deep in the Waitotara valley north west of Wanganui, Jim Larsen's farm-stay business certainly lives up to its name of Remote Adventures.

The Larsens have been there since 1922 when Jim's dad came to what is now Ngamatapouri Farm to carve a living from the spectacular landscape. In more recent times, Remote Adventures has become a busy sideline to the farm, offering attractions such as farmstays, jetboating, and guided hunting.

It quickly becomes clear that Jim is also one of those quietly-spoken no-nonsense blokes who gets things done. He has owned his Cessna 185 for 30 years, using it mostly to fly farm-stay guests in from Wanganui, or down south for fishing trips. It has also been used for at least three mercy flights, and Jim has been known to fly-in deer. He designed and built a special rack for dropping hay to cattle on the steeper blocks of the property.

After all, Jim is a man who gets things done.

And when it comes to Part 135 certification in the Waitotara Valley, getting things done means writing the exposition manuals by hand, getting your daughter-in-law to type them, and your wife to act as an independent Quality Assurance check.

Jim started work on certification in 1998, before more urgent matters on the farm took priority. He started again in April 2002. A "few" drafts in an old school exercise book were

required to get something he could work with.

"The preliminary work I'd done had to be shovelled around and changed, so it was a few long nights to get a first copy that was an approximate version of what was required."

Still, for a single-aircraft single-pilot operation, Jim says the certification process was more of an update of his old manual, though he

is grateful for the learning process, assistance from the CAA, and the lift in standards that has resulted.

Flight-following systems, flight planning, records, retention of records, flight training and checking were all brought up to speed.

"Survival equipment was something that I added. I didn't have any, so I've got that in there now. That's quite an important one.

"It's common sense to fly as safely as possible, and the certification certainly made me more aware of the standards required. That's important, because in single-pilot operations such as mine, 90 percent of the operational responsibility always rests with the pilot," Jim Larsen said.



Jim Larsen

Rules, the industry is responsible for safety by complying with the standards in the Rules, and conforming with the processes outlined in their own operator expositions.

In the interests of the aviation community and the public, the CAA ensures that operators meet the standards in the Rules and in their own expositions, through auditing, monitoring, education, and enforcement.

“Industry was quick to see the benefits of certification and became very positive about the process. They realised that their business as a whole would benefit. They have focussed on their businesses in a new way, especially in planning and processes. Many have said that it became a self-assessment process, and helped to improve their efficiency.

“The costs of certification were lower than expected. The first Part 135 group, mostly light twins, came in around \$3,500 – well below the figures which were rumoured. For the single-engine Part 135 group the costs were a little higher, around \$5,500 to \$6,000. This was generally because operators in that group had fewer systems already in place, and more time was required to assist with their manuals.

“We took a number of measures to assist the Part 135 operators through certification. We held workshops, provided templates and matrices on the web site, produced new Advisory Circulars, put out a GA Newsletter, and provided an 0800 number helpdesk. Peter Kirker was assigned to the project and many operators commented on his helpfulness and the usefulness of his advice. The unit manager and staff encouraged, cajoled, and occasionally prodded operators to meet the deadlines. The whole process, which could have been a ‘bone of contention’, took place very smoothly and successfully,” said John Lanham.

The Director of Civil Aviation, John Jones, said, “The last milestone in the certification process is now completed. It allows operators to build a system that is best for them, but ensures that everyone has to meet the same standards.

“It’s a credit to the aviation community that all operators met the deadlines, and I’d like to thank our staff as well, for the role they played in helping industry through the process, and ensuring the deadline was met.

“Now we look forward to the safety benefits from the standards the Rules provide, and from the systems operators have in place. We expect those systems to give early alerts to safety concerns. The credibility of the whole industry will benefit from this,” said John Jones.

For the operator’s viewpoint, here are two examples of re-certification. A one-person operator who began his exposition in an exercise book, and a busy tourist operation with a mix of rotary and fixed-wing aircraft. ■



Volcanic Air Safaris

According to Phill Barclay, owner of Volcanic Air Safaris, aviation is one of those things you have to do right, or not bother doing at all.

Doing it right has been Phill’s aim since 1992, when he and his parents bought Volcanic Air Safaris, with Phill as Operations Manager. Phill and his partner, Dorien Vroom, now own and operate the business. The company operates two Cessna 206 floatplanes and a Bell Jetranger from the Lake Rotorua waterfront, mainly in a tourist flightseeing role.

Phill says the team at Volcanic Air Safaris was quick to see the positives offered by certification, to have a good hard look at the running of the operation. And he reckons it’s running better now as a result.

“If you approach these things with a positive attitude, it’s amazing how much you can tidy up your operation. Until we got into it, it did look rather daunting, but when you start getting a knowledge of the requirements, and how you can meet them, the process suddenly becomes a lot more straightforward,” he says.

Volcanic Air Safaris manuals were written over a four-month period prior to an introductory audit. As is normal practice, there was a check-up a few months later, before the five-year Air Operator Certificate was issued after a detailed six-month audit.

With experience operating under both systems, Phill certainly prefers the new regime to the old.

“Compared to the old regulations, certification really focuses on procedures, and it’s really made us look at the way we do things. A lot of the things that you could do under the 1953 regulations aren’t the most practical way of doing things any more.

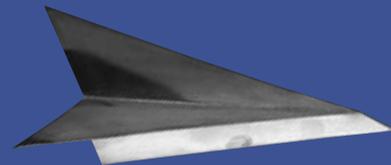
“We’ve had a good look at the current operation and made some really good improvements. The main improvements have been in the maintenance area.”

Phill is aware that his fleet of two floatplanes and a helicopter is an unusual mix, and that as a result, attention to detail is even more crucial. Conscious of the increased potential for airframe damage through operating from water, the certification process has incorporated a major spruce-up of maintenance planning.

“There is a lot more quality assurance involved with Part 135 certification. There is a lot less left to chance maintenance-wise. Under the old 1953 regulations we probably tended to be more reactive than proactive. Certification is more of a systems-based procedure. You can get into details like exactly when you’re going to replace your ELT battery.

“It’s been a very positive process to go through. We can operate with the confidence of knowing our procedures are up to scratch, and that our standards are an acceptable way of doing things,” Phill Barclay said.

Director's Awards 2003



New Zealand's largest international airport and a rural North Island medical examiner were awarded the Director of Civil Aviation Awards for 2003.

In making the presentations, Director of Civil Aviation John Jones said the Awards recognised and rewarded the individual and the organisation that, by their actions, encouraged others to adopt a safety culture and philosophy.

"The recipients clearly recognise that safety is everyone's concern. They understand that aviation can only be safe when individuals and organisations accept their safety responsibilities," he said.

The winner of the Individual Award, Dr Dave Baldwin, is a CAA grade one medical examiner based in Bulls. Four years ago he established the "Not So Royal Bulls Flying Doctor Service" to provide pilot medicals in some of New Zealand's more isolated areas.

'Dr Dave' and his Cessna 172 have become a familiar sight to the flying communities of the North Island's East Coast, the West Coast of the South Island, Aoraki-Mt Cook, Te Anau, and South Westland areas. His nomination was backed by several operators who make use of his service.

Dr Baldwin said the official support for the flying doctor service represented by the Award was a personal and professional milestone.

"Developing this flying doctor thing was going slightly against the grain, because the thinking was that medical examiners had to operate from a set centre. At the same time I could see the numbers of rural doctors going down, and the availability of pilot medical services dropping with it. It's really important to have high standards, and to have the regulatory authority get in behind the idea is very satisfying," he said.

"Long-term, the intention will always be to operate from Bulls as a GP two or three days a week, and then to operate the flying doctor service from Bulls for the next two to three days a week. Bulls-Ohakea will always be the HQ because if you're a flying freak like me, it's the place to be."

Auckland International Airport Limited (AIAL) took the Organisation Award for its runway rehabilitation project. The project involved construction of a standby runway from the main taxiway over a two-year period, for use while the main runway was being upgraded. Use of the standby runway increased the complexity of the airport's operations, involving more detailed ground movements, different approach procedures, and special control procedures to ensure that aircraft used the correct runway.

"The diversion of traffic to the newly created standby runway,

in order to allow the rehabilitation of the R3 section of AIAL's runway, was quite simply the most critical project ever undertaken by the company," Steve Reindler, General Manager Engineering at AIAL, said.

"The degree of planning involved to achieve the successful outcome was absolutely exhaustive, but perhaps the most distinctive and pleasing aspect of this project was the way such a wide range of aviation industry stakeholders became a team and worked together in a determined manner to achieve what was really a brilliant result.

"Receiving this Award has provided us with a great opportunity to say thanks to all those who worked with us on R3, and to also gently point out that we need them all to do it again in April 2004 when we tackle the R5 section!" Steve Reindler said.

The R3 project was successfully completed with no safety or security incidents, ahead of schedule and on budget. It took 23 days to replace about 16,000 square metres of concrete in the middle section of the main runway. Over the period 8,730 aircraft movements were conducted on the standby runway.

Two Director's Commendations were also presented. One marked the outstanding service and leadership in aircraft engineering of Mel Payne, who retired recently after 45 years at Air New Zealand. The other acknowledged the outstanding efforts of a young flying instructor at the beginning of a promising career – Ardmore-based Aviation Safety Coordinator Claire Walton. ■



Director of Civil Aviation John Jones presents the Individual Award to Dr Dave Baldwin.



Auckland International Airport Limited General Manager Engineering Steve Reindler accepts the Organisation Award on behalf of AIAL, from Director of Civil Aviation John Jones.

Aircare Initiative Launched



AIRCARE

A 25 percent cut in the general aviation accident rate in five years is the target of an agreement signed by key players in the aviation industry in July 2003.

The signing, by Aviation Industry Association (AIA) president John Funnell, Director of Civil Aviation John Jones, and Accident Compensation Corporation Chief Executive Garry Wilson at the AIA's annual conference, begins a five-year campaign branded "Aircare – Double Check." The campaign targets the safer operation and servicing of general aviation aircraft. It will pay particular attention to standards of risk assessment, accountability, and care across all experience and skill levels of the general aviation sector, with the aim of making sure that all items relevant to safety are properly scrutinised.

The three-way agreement will also see the pooling of vital safety information, greater consultation within the General Aviation sector, and cooperation with foreign authorities, to achieve the 25 percent target.

General Aviation (GA) includes all airline or commercial operations using aircraft with nine seats or less, or a Maximum Certificated Takeoff Weight (MCTOW) of 5700kgs or less; and all agricultural, helicopter, and sport and recreation operations.

Mr Funnell said the signing sent a clear message to GA operators how seriously the three signatories regarded the need for improvement in the sector.

"New Zealand has an excellent safety record internationally with its airlines, but the performance of the GA sector is only mid-range – there is definitely room for improvement," he said.

Two CAA-hosted "Towards 2005" safety forums had indicated improvements in safety culture were needed in the GA sector. Since then the AIA had highlighted the importance of risk assessment.

"The AIA has undertaken four risk-identification seminars, where senior members of the industry analysed GA accidents over a two-year period and came up with a list of causal factors – the main one being decision making, with one high-risk group being operators who operate on their own," Mr Funnell said.

That did not mean if you operated in a company that you were safe – it was all about assessing the risk prior to an event occurring, he said.

"Studies have demonstrated that those who take the time to identify the risks and put in place actions, or prepare for actions prior to the event, have an enhanced chance of a better outcome.

"Probably the biggest hurdle is getting the message out to everyone who has anything to do with aircraft, that their actions are vital to safety. Accident investigations consistently show that there are multiple contributing causes. Everyone has to adopt the 'Double Check' approach. Any risk that is not fully assessed for its



Signed in triplicate: AIA president John Funnell, left, ACC chief executive Garry Wilson, and Director of Civil Aviation John Jones after signing the agreement.

consequences is unacceptable," Mr Funnell said.

"We need to remind ourselves that we are not doing enough in terms of risk assessment, and the results to date are highly visible in incident reports. It's the key to getting our GA record up there with the best performers overseas."

Mr Funnell said the ACC's success in achieving changes

in safety culture in a wide range of industries would greatly assist the project, especially those operating in isolated environments.

Mr Jones said the AIA-CAA-ACC agreement was another pleasing sign of industry and the regulator taking formal steps to work together to enhance safety. The CAA has signed Memorandums of Understanding with a number of representative aviation groups in recent years in order to facilitate working together towards that common goal.

"Following the efforts of the Tourist Flight Operators group to set their own standards above the minimum set by the Civil Aviation Rules, this agreement represents another formal and very pleasing leap in the right direction," Mr Jones said. ■



Airmanship – Confidence – Experience are the themes of ACE Days, sponsored by the CAA and *Aviation News*. An ACE Day is a day-long seminar with the purpose of increasing airmanship awareness for all GA and recreational pilots. The programme starts at 10 am, lunch is provided, and the day usually concludes about 3 pm.

The next ACE Day will be held on Sunday 2 November at Waipukurau Aerodrome

The ACE Day is free to participants, but numbers are limited, so booking is essential. You can book online at the *Aviation News* web site, www.aviationnews.co.nz/acedays



Passenger Weight Survey



The Civil Aviation Authority (CAA) proposes to coordinate a survey of air travellers to identify the current average weights for fare-paying passengers carried in large, medium and small aeroplanes, and helicopters in New Zealand. The results of this survey will form the basis for standard passenger weights that may be used by air operators, as an alternative to actual passenger weights, when calculating the passenger payload.

Currently the New Zealand Aviation Rules allow the use of actual passenger weights or standard passenger weights. The standard passenger weights can be derived from the standard weights prescribed in the Rules, or by air operators surveying their passenger base to derive their own standard passenger weight, which is then specified in their exposition.

In recent years passenger weight surveys have shown that the current prescribed standard weight of 77 kg is well out of date. This was confirmed in a CAA survey carried out in December 1999. The outcome of that survey showed that the average weight of passengers travelling on the larger Part 121 aeroplanes was 85 kg.

Changes to the Rules have been proposed for some time as a result of this trend. Two Technical Study Groups (TSGs) were formed, one for Part 121 and Part 125 operations, and one for Part 135 operations.

The Civil Aviation Rules place aircraft involved in air transport operations into three groups. Part 121 governs the operations of large aeroplanes, Part 125 governs the operations of medium size aeroplanes, and Part 135 governs the operations of helicopters and small aeroplanes. (See our article on *Certification* for the full definitions.)

For many years international best practice has allowed the use of standardised passenger weights to calculate the aircraft's takeoff weight. This is based on an assumption that the individual weights of all the passengers average out to an average weight that will not cause the aircraft's weight limit to be exceeded when used for calculating the passenger payload. Errors between the actual passenger load weight and the calculated passenger load weight can occur when using standard passenger weights. For statistical reasons these errors become more significant in their effect on aircraft performance as the size of the aircraft (and therefore seating capacity) reduces.

The Federal Aviation Administration (FAA) does not allow the use of standard passenger weights for small aircraft (those with nine seats or less) to reduce the risk of a significant error occurring.

Industry representations to the CAA have questioned the results from the 1999 passenger weight survey. The CAA has

decided to carry out a new survey of passenger weights in order to validate, and update, the figures being used. The new survey will also establish if a variation to the average weight exists between the Part 121, 125, and 135 operating groups.

For Part 135 operations, the current proposal is to allow "passenger declared weights" plus an allowance of 4 kg for clothing and personal belongings. This method is used overseas but has yet to be proven in New Zealand. This proposal is largely accepted by industry, and it is hoped it can be assessed as part of this survey. Actual passenger weights, or exposition passenger weights, could still be used.

The survey will be completed by the end of October 2003, and the CAA should have the final report by the end of November 2003. The full Request for Proposal to conduct the 2003 survey of passenger weights is on the CAA web site, www.caa.govt.nz. ■



Flight Instructor Seminars

For the wider aviation community...

...microlight, helicopter,
aeroplane, glider.

The CAA is conducting five Flight Instructor Seminars in September and October 2003. The Seminars are specifically targeted at Part 149 Instructors and Part 61 B and C-Cat Instructors. See the July/August issue of *CAA News* for more information.

Registrations are now closed, but you are welcome to find out if there are places left due to cancellations. Contact John Parker, Tel: 0-4-560 9560; or Rex Kenny, Tel: 0-4-560 9458.

Flight Instructor Seminars 2003

Part 61 B & C-Cat Instructors and Part 149 Instructors

Whangarei	11 and 12 October
Hamilton	29 and 30 September
Palmerston North	2 and 3 October
Ashburton	5 and 6 October
Dunedin	8 and 9 October

Closing date for registration is 1 September 2003

The registration form is on the CAA web site www.caa.govt.nz, and updated information will be posted there as well. All registrations must be accompanied by the \$50 registration fee.

Complete the form and send with the registration fee to:

Flight Instructor Seminars
Civil Aviation Authority
P O Box 31 441, Lower Hutt

Safety Education Manager Retires

Cliff Jenks, CAA's Manager of the Safety Education and Publishing Unit, retired in August 2003. The CAA's safety education products are held in high regard by the aviation community, as was shown by the recent client survey. The credit for this rests largely with Cliff who has been responsible for *Vector*, and its predecessor *Flight Safety*, since joining the Civil Aviation Division of the Ministry of Transport in 1985. For several years prior to that he produced a flight safety magazine, *Insight*, for the RNZAF.

He joined the Air Force in 1957, beginning flying training the following year. His flying career spanned Bristol Freighters and Hastings aircraft, plus a couple of years instructing on Harvards and Devons. From 1974 to 1976 he commanded No 1 Squadron Bristol Freighters at Whenuapai.

Cliff has a passion for history and has been active in the Aviation Historical Society of New Zealand since 1958. He has edited their *Journal* since 1983, and co-authored *New Zealand Tiger Moths 1938 to 2000* published by the Society in 2000.

Cliff can't quite identify how the Tiger Moth became so special to him. "One of my models in my school years was a Tiger Moth made out of balsa wood and doped paper tissue, but why it was special I don't know. I guess it's just nostalgia for the golden years and de Havilland."

His flying training and first solo was in a Harvard, but the Tiger Moth cropped up again.

"When I went to do my first Bristol Freighter course, I tagged along with a friend to the Auckland Aero Club and got a Tiger Rating. I didn't fly one again until we tripped over one at the Wigram Gliding Club, ZK-ARJ. We formed a syndicate of instructors and bought it. A lot of fun flying followed. If I didn't have a fondness for the Tiger Moth before, it became quite rampant then," said Cliff.

Senior Education Adviser, Pam Collings, who joined the unit in 1989 said, "Cliff has overseen many changes over the years. The safety education team has grown from a staff of two to a team of seven. The unit now produces a range of published products, a long-standing series of safety videos, runs safety seminars, maintains the CAA web site, and coordinates the AIP publications. Cliff has willingly passed on his knowledge and skills and has instilled in his staff the desire to strive for the highest possible quality in all our material."

The design may change a little, but the emphasis is always on what's inside – here is how Cliff put it in the 150th issue of *Vector* (Nov/Dec 2001):

"So here we are at our 150th – and so far no mention of our content? That's largely because, despite the different faces, at heart we have never changed from our basic philosophy. This is to give good advice, in a manner that is easily understood."



Cliff Jenks (left) with instructor and colleague Barnaby Hill when Cliff went "solo again" 40 years after he first went solo in a Harvard.

*"That's easy to say. It takes a lot of effort to do it. But we never lose sight of it. We hope you agree we achieve it most of the time. Above all, we hope you are safer for having read *Vector*."*

He said that a major milestone was a change to the Civil Aviation Act in 1992 that included the following as one of the functions of the Authority:

"To promote safety and security in the civil aviation system by providing safety and security information and advice, and fostering safety and security information education programmes."

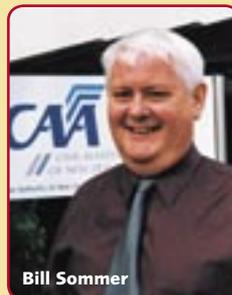
Cliff's advice to instructors today is, "You never stop learning. It's a trite observation, but if you're an inexperienced instructor, then never make the mistake of thinking you know enough to get by. You should aspire to the highest, and when you get there I'm sure the people already there will say that you're never too old to learn."

Asked to sum up progress, Cliff said, "We've come a long way in this unit and the CAA, but that doesn't mean to say there isn't a long way still to go. We can continually improve in all departments. I think we're on the right path – it's just quite wide, and meandering, and you can't see the end of it! But the further along it you get, the safer things should be."

Cliff's experience and expertise will not be lost to the CAA, as he will be a part-time adviser to the Safety Education Unit.

Reorganisation

Following the retirement of Cliff Jenks, the publishing and communications functions within the CAA are being merged into a new Communications and Safety Education Unit. Current Corporate Communications Manager, Bill Sommer, has been appointed to the new position of Manager Communications to head this unit. Contact information for staff in the unit is on the CAA web site, www.caa.govt.nz, and for Bill Sommer, Tel: 0-4-560 9411



Email: sommerb@caa.govt.nz. ■

Helicopter External Loads

There is some confusion about whether the carrying of passengers is permitted when carrying an external load with a helicopter. Operators performing these types of operations obviously need to make themselves familiar with the relevant Civil Aviation Rules and the Aircraft Flight Manual for the helicopter in use. The information below is intended to give a general overview of the situation.

Part 133 is the general Rule dealing with helicopter external load operations. These operations are defined in the Rules to include a number of operations using “underslung loads”. They are:

1. Helicopter external load towing operations
2. Helicopter sling load operations
3. Helicopter winching operations
4. Helicopter rappelling operations.

Each is distinct from the other, and the ability to carry passengers is dependent on the type of operation and the limitations in the aircraft flight manual. Using the phrase “underslung load” can therefore cause confusion, so it is advisable to use the terms in the Rules.

Every person performing any external load operation must adhere to the applicable Rule under Part 133. In addition, they must adhere to the general operating rules in Part 91 – Rule 91.109 is especially relevant.

Aircraft Flight Manual

Rule 91.109 prohibits an operator from operating an aircraft unless they comply with the operating limitations specified in the aircraft flight manual. This particularly affects operators of the AS350/355 series, because the supplement section (Limitations) of the flight manual referring to both the Cargo Sling and Cargo Swing installations states:

“When external loads are carried, **no person may be carried unless –**

He is a flight crew member;

He is a flight crew member trainee; or

He performs an essential function in connection with the external load operation.”

The first two conditions are self explanatory. The third refers to someone that might be carried to ensure the safety of the load in flight. For example, it cannot be argued that a person being carried to construct a kitset hut once it has been delivered, “performs an essential function in connection with the external load operation”.

The above statement is a limitation referred to in the Eurocopter AS 350/355 series helicopters Aircraft Flight Manual. There are no exceptions to Rule 91.109 requiring the Aircraft Flight Manual to be complied with. Some other helicopters commonly operating in New Zealand do not have this particular wording in the Limitations section of the Hook Supplement of their Aircraft Flight Manual.



Parts 133 and 135

The only exception to the general rules in Part 133 is set out in Rule 135.95 which provides that a pilot performing a **Commercial Transport Operation** may carry passengers during an external sling load operation if the goods in the sling load are associated with those passengers on board. But it is important to remember that this exception **only** applies if the operator complies with the following conditions:

1. The flight must be conducted in compliance with the remaining Part 133 Rules;
2. The flight must be conducted under VFR by day; and
3. The helicopter must be operated with not less than a 10% power margin from maximum power available at the point of departure and landing.

It is also important to point out that Rule 135.95 expressly prohibits a pilot conducting an **Air Transport Operation** from carrying an external sling load. The definitions of Air Transport Operation and Commercial Transport Operation can be found in Part 1.

While the Rules allow for the carriage of passengers with a sling load attached in some instances, the operation exposes those passengers to increased risk if something goes wrong. Although an external load can be jettisoned in an emergency, the pilot's primary responsibility is for the safety of their passengers, and every precaution must be taken to ensure that the carriage of the external load does not compromise the safety of the passengers. ■

The Value of Occurrence Reporting

In the May/June 2003 *CAA News* we reported how a problem was revealed with three-bladed Hartzell HC-C3YR-1RF propellers fitted to Fletcher aircraft. Affected operators and propeller maintenance facilities were kept informed at the time, but the issue of an AD was delayed until appropriate corrective actions were determined. Two New Zealand companies, Safe Air and Aeromotive, have been equipping themselves to be able to carry out the shot-peening process required by the AD. The AD has now been issued and is on the CAA web site, www.caa.govt.nz. Our thanks to Aeromotive and Safe Air for their help with this investigation, and thanks to Aeromotive and staff for their help with the photographs.

Keeping Pace with Advances in Avionics

Keeping pace with an industry as progressive as aviation is a major challenge for the CAA. People like the CAA's avionics specialist Zahid Munawar must keep up with the play despite the absence of large-scale New Zealand-based aviation manufacturing facilities.

Zahid is employed in the CAA's aircraft certification unit, with responsibilities for avionics certification, avionics design changes – including modifications and supplemental type certificates – technical standard order certifications, Required Navigational Performance (RNP), and Reduced Vertical Separation Minima (RVSM) approvals.

He also takes part in Minimum Equipment List (MEL) approvals, audits of design organisations, and oversight of design delegation holders. Current projects include technical standard order certification for the Time in Service Recorder, and he is currently processing MEL, RNP, and RVSM approvals for the Airbus A320 introduction.

“Keeping pace with constantly improving technology is a challenge for any regulator, but aviation would have to be at the leading edge of that challenge. In the CAA's case

it is made even more challenging by the nature of the New Zealand industry,” Zahid says.

A former major in the Pakistani Army, Zahid first came to grips with avionics during his armed forces training, which saw him gain a Bachelor of Engineering in Avionics, and later a Masters Degree in Aerospace Engineering at ENSICA, then France's sixth largest engineering school, in 1993. He is also an experienced flight engineer on Mi-8 and Mi-17 helicopters, and he has been involved in maintenance and accident investigation. Last November he passed the FAA's course in avionics certification.

“Industry experience and ongoing training is the only way to keep up with the advances being made in aviation. There are always people out there in industry coming up with amazing solutions to issues they face in daily operations.” He points to the development of the Time in Service Recorders as just one example.

Zahid joined the CAA in 2001, but his move to New Zealand began several years before, when he met a New Zealander in a Lahore Hospital, who told Zahid he should emigrate.



“It went as far as him sending me the necessary forms – which I promptly put in a cupboard. A couple of years later I filled them out, that's how my family and I emigrated,” Zahid, who is married with three children, says.

With 20 years of aeronautical work behind him, and a career that has seen him adopt a country half a world away from his aeronautical beginnings, Zahid knows what it is that keeps his interest alive.

“Aviation is an industry where technological advances are the norm. Avionics is perhaps the sector that is going upwards at the most rapid pace. It is hard to keep up with that, but it only adds to the challenge.”

But while avionics is a field that is going upwards at a rapid pace, the man himself will soon be travelling downwards at a very rapid one when he takes up skydiving. He chuckles at the suggestion that it's only to find out what an altimeter feels like. ■

The CAA has Moved

The CAA has relocated to Petone. Phone numbers and postal address remain the same. The only change is our new location at Aviation House, 10 Hutt Road, Petone. It is just off the Hutt motorway, next to the Home Ideas Centre.



Location:

Aviation House
10 Hutt Road
Petone
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Postal:

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New Zealand

Communication:

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