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From the Director of Aviation Safety

John McCormick

In the past month CASA has asked the aviation industry to comment on three important proposed parts of the Civil Aviation Safety Regulations. A notice of proposed rule making has been published for Part 119, which covers air operator's certificates for passenger and cargo air transport. Drafts of Part 135 – air transport operations in small aeroplanes – and Part 133 – rotorcraft air transport operations – have also been released. In all three cases these proposed sets of rules are the culmination of years of work by both people in CASA and the aviation industry. In the case of Part 119 a total of 31 people are listed as having directly participated in the development of proposed regulations. This includes people from the major airlines, aviation academics and medium sized air operators. In addition, there has been previous broad consultation with the industry which allowed a wide range of other people to comment on the proposals. The draft regulations and proposed standards we are seeing now are the outcome of careful thought by many people about the future of aviation safety in Australia. They are most certainly not proposals created behind closed doors by CASA to be imposed on the aviation industry.



In fact, each new part of the suite of Civil Aviation Safety Regulations is a piece of a mosaic designed to create an even safer aviation safety system for Australia. As far as is possible the new rules are based on International Civil Aviation Organization standards and recommended practices and align with other leading aviation nations. The safety standards aim to address known risks and to improve the safety performance of organisations and individuals in aviation. In many areas of the proposed new rules there is a focus on building defences against organisational and individual failures that can jeopardise safety. Requirements for the establishment of safety management systems and the introduction of human factors training are examples of defences that we know will deliver better safety outcomes and these are being proposed where appropriate.

I understand that some people will look at the volume of proposed rules being released and feel a little overwhelmed and perhaps wonder why it is all happening now. The answer is that many of these regulatory parts are dependent on each other and only make sense when you can see the whole picture. If you are not directly affected by a set of proposed new regulations, you really only need to gain an understanding of the bigger picture, which you can quickly obtain from the summary information posted on the CASA web site. Naturally, if a set of rules impacts directly on your operations I would urge you to take the time to read the

consultation material in more detail. There is more on the proposed Parts 119, 133 and 135 later in this edition of the CASA Briefing.

In summary, CASA will have the remaining new parts of the Civil Aviation Safety Regulations made as law shortly, bringing an effective end to the regulatory reform program. CASA is very cognizant; however, that the major issue to be faced is the ability of the aviation industry to absorb change. In fact, at the recent Standards Consultative Committee meeting in Canberra, there were calls from some sectors of the industry for the regulatory reform program to be slowed down.

CASA has gained significant momentum over the last few years with the establishment of the Regulatory Task Force, which was formed in concert with the Attorney General's Department. We would be foolish to disrupt this demonstrably successful initiative. However, CASA can and will moderate the commencement date of the new regulation suites and develop savings provisions as necessary as we assess the amount of transition that is required by the industry with the overriding caveat as explained above that many of the remaining regulatory parts are not viable as 'stand-alone' items: they must go as one package.

Once again, I urge you all to respond to our calls for comments so that Australia can move forward with a regulatory set that positions us at the forefront of the aviation industry world wide.

Best regards

John F McCormick

Old control cable only held together by lock-wire

A rejected take off in a Cherokee Six due to an elevator control that "felt unusual" has highlighted the risks of operating aircraft with control cables more than 15 years old. The Queensland pilot and owner of the aircraft, who had three passengers of board, reported the flight controls operated normally during the daily inspection and pre-flight checks. It was only during final control checks that there were signals something was not right. After commencing the take-off run, the pilot felt uncomfortable and rejected the take-off. When the problem was investigated by a licensed aircraft maintenance engineer it was found one elevator cable terminal had separated, with only lock-wire holding the terminal to the cable. The aircraft is 35 years old and the cable is likely to be original.

At the last 100 hourly inspection the maintainer of the aircraft had recommended replacing the flight control cables in accordance with CASA's airworthiness bulletin on cable retirement. The bulletin says all control cables with terminal fittings manufactured from stainless steel SAE-AISI 303Se should be retired before reaching 15 years time in service. In the case of the Cherokee Six the owner had not yet decided whether to replace the control

cables. At the 100 hourly inspection the flight control cable terminals appeared serviceable – 22 hours time in service later the forward elevator control terminal separated at the threaded end. A preliminary inspection of the terminal by CASA confirms there were few clues on the surface of the terminal to indicate the extent of the internal corrosion which caused the failure. This is consistent with the advice in the airworthiness bulletin, which says sub-surface corrosion is extremely difficult to assess and the rate of crack propagation is unpredictable.

Read the control cable terminal retirement [airworthiness bulletin](#).

Comment now on air operator's certificate proposals

The aviation industry is being asked to comment on proposed new regulations relating to the issuing of air operator's certificates for passenger and cargo transport. A notice of proposed rule making has been released setting out standards being considered for inclusion in Part 119 of the Civil Aviation Safety Regulations. This will cover air operator's certificates for scheduled and unscheduled passenger carrying operations, as well as all cargo operations. Part 119 will be a set of overarching requirements that complements specific and detailed operational requirements set out in other parts of the Civil Aviation Safety Regulations. Specific operational rules for small aeroplanes will be in Part 135, for rotorcraft in Part 133 and for large aeroplanes in Part 121. Under the new regulations there will be no distinction between charter and regular public transport operations – they will be known as air transport operations.

A range of changes to current regulatory requirements are proposed for the new Part 119. Organisations holding an air transport air operator's certificate would be required to have a position known as the Safety Manager. The person in this position would be responsible for managing all aspects of the organisation's safety management system. Both current regular public transport and charter operators would need to develop and maintain a safety management system and provide human factors and non-technical skills training. Operators would be required to manage fatigue risks and flight crew training and checking requirements already in place for regular public transport operators would extend to current charter operators. Chief executive officers would be ultimately accountable and responsible for the safety outcomes of their organisation.

Find out more about the [proposed new standards for air operator's certificates](#) and have your say before 5 September 2012.

Better rules for air transport in small aircraft

More comprehensive fuel standards, new take-off alternate requirements, weather radar and terrain awareness warning systems for some aircraft and flight crew training and checking relevant to the complexity of operations. These are some of the proposed new provisions

included in draft regulations recently released by CASA covering air transport operations conducted in small aeroplanes. The draft of Part 135 of the Civil Aviation Safety Regulations is open for comment until 24 August 2012. Part 135 will contain the rules applying to passenger transport operations in aeroplanes with a maximum take-off weight of 8618 kilograms and a maximum of nine passenger seats. The proposed new rules apply to both scheduled and unscheduled operations. Part 135 will not cover aerial work operations or cost sharing flights. CASA has developed the draft regulations after extensive consultation with the aviation industry going back to 2002 and the rules are aligned as closely as possible with International Civil Aviation Organization standards and recommended practices.

In a briefing document released along with the draft regulations, CASA says many of the proposed changes are minor and formalise existing rules. However, a number would place additional requirements on air operators. A terrain awareness warning system class B, as well as a weather radar, would need to be fitted to aeroplanes with six or more passenger seats operating to instrument flight rules. The starting date for the weather radar requirement would be set after consideration of any technological developments in weather reporting systems. Changes would be made to requirements for flights over water, including the carriage of life rafts when flying beyond gliding distance from a safe forced landing area. It is proposed that pilots flying multi-engine aeroplanes would need two proficiency checks each year, while pilots operating single engine aeroplanes in visual flight rules would be checked one a year. There would also be more comprehensive fuel requirements.

Get full details of the [proposed rules for small air transport operations](#) and comment now.

New rules are coming for helicopter operations

Charter helicopter operators will be required to upgrade their current practices and procedures under proposed new regulations. CASA has released a draft of the new regulations for rotorcraft transport operations, which will be in Part 133 of the Civil Aviation Safety Regulations. A key aspect of the proposed new rules is blending the current standards for regular public transport and charter into common air transport operations standards. The briefing document which accompanies the draft regulations says the impact on the rotorcraft industry will vary from “significant to minimal dependant on the current safety systems an operator has in place”. CASA will ensure the transition period to the new rules gives operators the time to allocate resources and make changes to their operations. Those most affected will be helicopter charter operators with no pilot training and checking organisation, safety management systems or fatigue risk management systems.

The draft regulations align as closely as possible with International Civil Aviation Organization standards and recommended practices and harmonise where possible with rotorcraft rules in other leading aviation nations. Specific aspects of the regulations address

known and likely safety risks, plug gaps in the current rules and aim for outcomes which statistically improve safety. There will be additional flight preparation and planning requirements for some night operations and minimum equipment, instrument and systems standards for day and night visual and instrument flight rules operations. Operators will be required to assess the risks associated with helicopter landing sites and to ensure landing sites are safe. A set of performance regulations will be introduced, outlining a performance code of operation based on passenger numbers and type of operation. The proposed rules set safety-based outcomes for flights over water, with new equipment requirements. The draft air transport rotorcraft regulations have been subject to extensive consultation with the aviation industry, beginning in 2000.

Comment on the [proposed rotorcraft rules](#) before 17 August 2012.

Get your aircraft maintenance guides for pilots and owners

Two new easy-to-read guides about aircraft maintenance are now available. There is a 44 page maintenance guide for pilots and a 12 page guide for aircraft owners and operators. Both booklets outline the key maintenance responsibilities and activities that must be followed to ensure aircraft can be operated safely and in line with the safety regulations. The maintenance guide for pilots covers the maintenance release, certification for maintenance, the daily inspection, minimum equipment lists, special flight permits and maintenance work that can be undertaken by pilots. Information on the maintenance release explains each section of the release, the information that must be provided and the reasons for the maintenance release requirements. Fourteen pages of the pilot's maintenance guide are devoted to the daily inspection. There are diagrams, drawings and photographs to show how daily inspections should be conducted thoroughly and completely. The section on pilot aircraft maintenance dispels some myths, while providing pilots with information on what work can be legally performed on their aircraft. The maintenance guide for aircraft owners and operators covers the responsibilities of registered owners and operators, maintenance programs, airworthiness directives and bulletins, service bulletins, defect reporting and corrosion prevention. Owners and operators are told the responsibility for the continuing airworthiness of their aircraft begins and ends with them.

Order the new maintenance guide for pilots now from [CASA's online store](#).

Order the guide for [aircraft owners and operators](#).

R44 fuel system modifications can prevent fires

Owners, operators and maintainers of Robinson 44 helicopters are being urged to make a range of important modifications to their aircraft. CASA has issued an airworthiness bulletin relating to modifications of the R44 fuel system. The modifications have been detailed in service bulletins issued by the manufacturer following a number of post-crash fires in R44

helicopters. The chances of surviving a crash in an R44 are improved by making the modifications, which improve fuel system resistance to leaks after an accident. There are four service bulletins from Robinson covering the modifications. These relate to replacing the rigid aluminium fuel tanks with flexible bladder fuel tanks, the rotor brake switch, gascolator assembly, rigid fuel line replacement and fuel hose supports. The manufacturer calls for the fitting of the flexible bladder fuel tanks by 31 December 2013. CASA advises owners and operators to carry out all of the modifications as soon as is possible. There have been two R44 accidents in Australia in recent years where post impact fires occurred. Both aircraft were fitted with rigid aluminium fuel tanks. An accident at Cessnock on February 2011 saw the occupants of the R44 survive the initial impact with the ground but they did not survive a post impact fire. According to an Australian Transport Safety Bureau investigation into an accident in February 2012 at Jaspers Brush, much of the wreckage was consumed by a post impact, fuel-fed fire. Both occupants were killed.

Read the [R44 airworthiness bulletin](#).

Your fatigue questions are answered

There is a quick and easy way to get answers to your questions about the proposed new fatigue management rules for flight crew and air operators. Twenty nine commonly asked questions and their answers have been posted on the CASA web site. These range from why change the fatigue management rules at all, to what is involved in setting up a fatigue risk management system. CASA issued a notice of proposed rule making in May 2012 setting out a graduated approach to fatigue regulation so air operators can use the most appropriate set of standards for their type of operations. Less complex air operators, such as those conducting aerial work, could work under a basic set of flight and duty time limitations. More complex air operators could use a set of detailed flight and duty time limits that take into account factors such as split duty, augmented crew and late night operations. Other operators, such as large airlines, would be required to implement an approved fatigue risk management system instead of meeting prescriptive requirements. The questions and answers address issues relevant to both individuals and organisations. Information is provided for flying schools, aerial work operators and large and small charter operators. There is a section devoted to questions about fatigue risk management systems which looks at processes, documentation and costs.

Learn from the [fatigue risk management questions and answers](#).

Support for our newsletter is clear

A big thank you to everyone who took part in our recent survey of CASA Briefing readers. The good news is you are happy with this newsletter. Eighty eight per cent of respondents rated the CASA Briefing as excellent or good. Only five per cent said this newsletter is fair or

poor. Eighty five per cent of people taking part in the survey rate the CASA Briefing as very relevant or relevant. Support for the current design and layout was also strong, with 67 per cent saying it is easy to read and looks good. Only seven per cent of respondents were unhappy with the design. People support the current length of articles – 81 per cent agree they are not too long or too short. Based on the positive feedback, we will not be making major changes to this newsletter. A few people commented that a print friendly version would be valuable, so that will be explored.

Seminars and forums help pilots keep safe

Sydney's pilots are being urged to get along to a special aviation information forum being run jointly by CASA, Airservices Australia, the Australian Transport Safety Bureau, the Bureau of Meteorology and the RAAF. The forum is being held in Sydney on 22 August 2012 at the University of NSW. The safety education forum is a chance to access a wide range of important information across a number of topics, with a special focus on human factors issues. The Sydney forum is part of a capital city program that includes Melbourne, Adelaide and Perth later in the year. Each forum is held in conjunction with a major university. The all day events feature presentations from each aviation body involved and a light lunch and refreshments will be provided. There is no charge and forums are open to everyone involved in aviation – not just university students and staff.

Please book your place for the Sydney Aviation Information [Access All Areas forum](#) now.

In addition, during August 2012 there will be ten AvSafety seminars for pilots. The seminars are being held in the Northern Territory, Queensland and Victoria. Topics covered at each location will be human factors in aviation and aviation resources on the internet. CASA wants all pilots to attend an AvSafety seminar in their area as it is a great chance to learn, discuss safety with colleagues and talk with CASA's aviation safety advisers. The seminars are free but everyone is asked to book online at the CASA web site.