

## **INDUSTRY PUTTING PRESSURE ON CAA TO STREAMLINE CERTIFICATION PROCEDURES**

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**Australia's airlines and the major General Aviation aircraft distributors are beginning to publicly query the often unique certification standards applied to Australian registered transport aircraft.**

Qantas and Ansett have both issued lengthy submissions to both the Industries Assistance Commission inquiry into the travel and tourism industries and the Air Safety Regulatory Panel (ASRP) set up by the then Aviation Minister, Mr Peter Morris to rewrite, update and streamline the Australian aviation regulatory environment. The IAC will issue the results of its report during 1989 while the initial draft of the ASRP was due to be handed to the present Minister for Aviation as we closed for press.

To a large extent the move to actively query, or at least try and get the CAA to publicly justify its often unique certification standards, stems from increasing industry frustration at not being able to get aircraft certificated without a costly and time consuming certification process which to many is likened to "merely reinventing the wheel" of an already certificated US Federal Aviation Agency transport aircraft.

To some extent the feelings within industry have also been stoked by the high relative cost of putting the Airbus A320, the 747-400 and the 737-300 on the register while aircraft such as the Mohawk 298 (Lloyd Aviation) and the Beech 1900 (Hawker Pacific) have met with what is considered by many to be an unduly lengthy, complex and technically unjustified certification process.

The Mohawk situation is perhaps a classic example of why many aviation firms within Australia wonder why they ever bothered to get into the business at all.

Lloyd Aviation of Adelaide required an aircraft of larger capacity than their existing Bandeirantes. After examining the limited range of options, they settled on four Mohawk 298s that were being used by the then Pan American commuter operator, Ransome Airlines, in the north east sector of the USA.

The Mohawk 298 is essentially a re-engined (Pratt & Whitney Canada PT6A-45) version of the Aerospatiale Nord 262 which first flew back in 1962. Some 110 examples were built, nine of which were converted to Mohawk 298 standards during the mid seventies by the Fred Frakes organisation in the USA. The Nord 262 originally was certificated under CAR 4(B) and later FAR Part 298 (Federal Aviation Regulation), the origin of the actual designation of the converted aircraft and the same standard that the FH-227 and Fokker F-27 are certificated to in the USA.

The Mohawks looked like the answer to Lloyd Aviation's dreams, a 26 seat pressurised commuter that could comfortably cruise at up to 200mph and at around \$5m for the four aircraft with spares, even the bank manager had reason to smile.

Lloyds had little doubt as to the structural or operational qualities of the aircraft as they had been flying without incident in the USA for more than ten years, while the actual Nord 262 design had almost a quarter century of flying operations backing its design integrity. Hence, in accordance with normal operating procedures, senior representatives of the company discussed the acquisition of the Mohawks with the CAA's (then DofA but hereinafter referred to as CAA) senior Airworthiness people in Canberra. Lloyds tell us that there appeared to be no problems with bringing in the aircraft and placing it on the Australian register. So, confident that this was the answer to their needs, Lloyd Aviation proceeded with the acquisition of the four Mohawks

Lloyd's problems began though when the first of type arrived in Australia. The CAA would then not accept any of the FAA performance data even though the aircraft had more than a decade of practical in-service use behind it. Areas of the flight manuals had to be metricated (a normal process due to Australia's metrification), performance gauges recalibrated, etc. What the CAA wouldn't accept, however, was the FAA based performance data despite, according to Lloyds, not being unduly concerned by this in the initial briefings in Canberra prior to purchase. Fred Frakes, an internationally respected aeronautical engineer and head of the firm that originally performed the Mohawk conversion, even came to Australia to meet with CAA airworthiness representatives as did senior Ansett engineering personnel who were constantly assisting Lloyds in getting the aircraft operational for their newly won southern Queensland routes. This then necessitated a lengthy and expensive flight test programme using Australian Test Flight Services in Adelaide to prove the validity of the original FAA and French airworthiness data as the CAA refused to undertake such tests. According to Lloyds, once the data was finally evaluated it was found to be little different to what had been originally ascertained a decade earlier by the US airworthiness authorities. But the story didn't end there.

During this time, the CAA had also shown a reluctance to accept the structural engineering analysis data either of the FAA or the original French manufacturer and certification authority following the Frakes conversion. Consequently, an entirely new fatigue audit had to be undertaken prior to a local CofA being awarded. Thus Lloyd's senior structural engineer spent four weeks in Aerospatiale's Toulouse headquarters working to reinvent the specific fatigue data that the company had generated nearly a quarter century earlier when the 262 was originally certificated. It is also perhaps worth reporting that in all those years the Nord 262 has had an excellent fatigue history - after all this was the same design team that later contributed greatly to such advanced types as the Concorde, ATR and all of the Airbus products.

However, their problems did not stop there. Initially the Mohawks were only provisionally certified to carry 17 passengers which meant that on most flights they would have to operate at uneconomic load factors as the aircraft had been specifically acquired to operate Lloyds new Queensland routes as a 26 seat aircraft. It was almost a year after the first aircraft was initially supposed to enter revenue service that a final CofA was awarded allowing the Lloyd Aviation Mohawks to operate almost as if they were back in the USA. In other words, a year of service lost, a fortune of additional expense incurred and a free ride to Lloyd's competitors in the period that it was commercially uncompetitive due to lack of suitable equipment.

Today the Mohawks are flying just as they would have if they were still carrying their Ransome livery except that the fatigue inspection period has been halved from 1500 hours to 750 hours. At this point a full inspection has to be undertaken, something that may well be justified *if* the CAA can offer supporting data for same and regrettably something that in the longer term will greatly increase the Direct Operating Costs of the aircraft as each inspection has the aircraft out of service for up to three weeks at a time, requires between 300 and 400 man-hours and yet has to be performed every eight or nine months. These are the only four Nord 262 type aircraft in the entire world that are subjected to this requirement.

So much for Lloyd Aviation and their ill-fated Mohawk.

(The article continues with other case studies).