



MRO Regulatory Development Promises Long Term Simplification & Benefits Attained

An emerging concern of many in the aviation industry is how will future CASA managers and staff apply the proposed new regulations if the way to comply is in non regulatory documents such as Acceptable Means of Compliance (AMC) and Guidance Material (GM); documents that can be changed at the whim of CASA managers & staff.

Ever since this regulatory change started post the 1980s, successive CASA managers and staff have applied the legislation differently than what the CASA managers that introduced the change advised industry. Considering that CASA changes its management quite regularly, how can industry participants be confident that future CASA managers and staff will not apply principle based rules quite differently – all they have to do is change an AMC or GM to apply an outcome based rule quite differently – no legislative requirement to have industry consensus prior to making such a change.

It has been proven that what one CASA Director/CEO puts in place is not necessarily supported by the next CASA Director/CEO. 1992 simplification and removal of internal CASA processes (Airworthiness & Flying Operation Instructions were all cancelled to remove the continuation of previous processes). They have been recreated and the processes are now more detailed than they were pre 1992 when government instigated direction to simplify the processes and provide cost effective benefits to industry.

Many of our members are concerned that a move to more principle based regulations will introduce more non standardisation and individual whims of CASA managers and staff that will change over time. Where is clarity? Where are the “minimum” standards to underpin the basis of the safety culture that has underpinned our industry so far?

Past history

1. Basically, CASA current managers and staff are applying current legislation quite differently to what was proposed by past CASA managers and staff when major regulatory changes were made. For example:
 - a. Ron Cooper introduced changes to ‘simplify’ CAA processes but a decade later under new CASA managers and staff these provisions are now requiring more bureaucratic processes than what existed prior to the 1992 rule changes.
 - i. The 1992 changes have now failed their intent and purpose – future changes must not fail, post making, the intent or purpose of change.
 - ii. New legislation must therefore have clarity (prescription) to prevent the simplification and benefits that should be included with new rules to once again be lost by new interpretations that reverse the intent and purpose of change a decade on.
 - b. Simplification and benefits introduced have been reversed and CASA application and processes are becoming more and more process driven possibly to match CASA employment levels. In 1998 the adoption of FARs Parts 21-35 was also suppose to simplify CAA/CASA processes.
 - c. Latest CASA change is the one page application form created with the introduction of Part 21 for a Production Certificate has now been changed to a multi-page micro-management application form.
 - i. 1992 all over again – increased costs.
 - ii. One page (maintenance) application forms used post 1992 have been converted into multi-page micro-management forms that limit industry MRO ability to easily adjust to contract maintenance requirements.

- d. The original application document was the same as the FAA document and had existed for many decades but changes administratively introduced have reversed benefits that were the intent of the regulatory change.
 - i. CASA has made no attempt to simplify their process driven documents.
 - ii. This is not in accordance with government policy to reduce red tape for small businesses.
- 2. AMROBA supports the current MRO regulations being developed using the EASA format and supporting documentation, but we highlight that EASA has yet to develop GA airworthiness and maintenance requirements. Also, currently in Europe, each ICAO contracting States still have their own aviation regulatory system supporting EASA regulatory development. There are noticeable variations between EU Member States.
 - a. AMROBA has made a presentation to the CASA on the US FBO/SASO system as it relates to the non airline system in the US but, unlike the fortitude that NZ showed over a decade ago, we do not think that CASA will consider this approach for a number of reasons.
 - b. Adoption of the US GA FBO/SASO will reduce CASA employment levels as workload would be reduced.
 - i. Adoption of the GA FBO/SASO system would remove the need for many current CASA approvals by having regulations empowering an Australian Registered Business to provide GA with flying training and/or maintenance without CASA issued certificates.
 - ii. We also believe the FBO/SASO system will remove industry pressure to want more Self Administration Organisations (SAO) for private aviation. SAOs are only being proposed by GA people because bureaucratic costs continue to escalate.

Airworthiness and Maintenance Costs

Maintenance of aircraft and aeronautical products is an uncomplicated activity, based on manufacturers' data and acceptable industry practices, until regulatory requirements are applied. Maintenance tasks in themselves may be quite complex and utilise very skilled personnel and equipment. Failure to complete a task or not use appropriately skilled personnel to do the task also introduces risks into a system that can be very unforgiving. However, it is the maintainers culture that is nurtured, from one generation to the next, by maintenance personnel and 'airworthiness & maintenance control' personnel that has most contributed to aviation product safety. Regulatory requirements, excluding mandatory directions, do not add too much to safety by themselves.

It takes people, educated in the history of aviation safety, to nurture and enhance aviation safety not legislation and enforcement policies. It has long been recognised that legislation that is used to micro-manage activities can negatively impact on the safety culture that takes generations to develop because people start to rely more and more on the ever increasing micro-management by governments. Over regulation creates a pass-the-blame culture to the regulator and the regulator gets deeper into micro-management to protect itself from liability. This is a real catch 22 situation.

For that reason, it is imperative that new pieces of aviation legislation being developed by CASA 'value-add' to safety, not value-add to costs, by making the appropriate persons in industry responsible for safety. In other words, a safety case must be developed to justify a requirement unless it is needed to meet international obligations.

- ▶ Why have legislation unless it value-adds to safety?
- ▶ Why have CASA administrative processes unless they value-add to safety?

Ron Cooper, Director of Aviation Safety over a decade ago, first asked these questions of Authority staff in the early 1990s. Leroy Keith and now Bruce Byron has virtually asked CASA to do the same but there is little evidence of proper analysis of current provisions and justification for retention of each provision. It makes enormous sense to harmonise the Air Transport legislative requirements with those of the major trading partners of our international operators and it also makes sense to look at adopting cost benefits from other NAA regulatory systems.

For a decade and a half, CASA and its predecessor has been attempting to reform and develop legislative maintenance requirements. There have been many attempts and various methods that have been adopted with little visible success.

- ▶ Is it because the package is too large?
- ▶ Should the European lesson be adopted and address Air Transport first?

AMROBA still supports the EASA format and had hoped that the EASA working group created by Bruce Byron to speed up development of the maintenance regulations would have followed the JAA/EASA method in producing regulations, AMCs and GMs as a package so that the intent of each regulatory provision is in the public domain.

Bruce Gemmell; [CASA past Deputy Director] advised the SCC on 22 February 2006 that “*the new direction also includes the adoption of a ‘small team approach’ where a small number of CASA staff and industry representatives **will sit down and write AMC material in technical language.** The content of the regulations, being outcome based, will not include the details of compliance as these will be spelt out in the associated AMC”.*

Bruce went on to explain that “this work will provide the basis to quickly transition to the EASA rule model as it provides material which will need to be re-jigged into outcome based regulation, AMC or GM”.

He underlined the point that “the EASA model offers simplification and flexibility for CASA and industry to meet their aviation safety regulatory obligations.”

Simplification, benefits & flexibility have been CASA Directors’ policy as far back as Director Ron Cooper in the early 1990s. So why doesn’t it actually happen?

- Is it the lack of dedication from CASA staff to follow their Deputy Director’s announcement to industry in February last year?
- Where are the written AMCs and GMs that Bruce Gemmell stated would be written by CASA and industry representatives?
- Will CASA eventually produce an EASA style NPRM complete with regulations, AMCs and GMs?

Like many other industries, we are all having problems attracting new participants and retaining those personnel once they have been skilled. Many personnel in the MRO industry do not want aviation regulatory responsibilities because they are unsure of what they are held responsible for.

Clarity and minimum standards plus precise minimum standards are required so that maintenance personnel know exactly what they are held responsible for – not like current requirements where there has been differing applications.

EASA Model

The success of the EASA model is that they produce Regulations, Acceptable Means of Compliance and Guidance Material as a package – they do not make regulations and then post making the regulations, develop AMCs and GMs as has happened ever since regulatory reform started in the late 1980s. The following chart is an example of how EASA presents regulations complete with AMCs and, if necessary, GMs.

EASA Regulation	Acceptable Means of Compliance (AMC)	Guidance Material
<p>145.A.25 Facility requirements The organisation shall ensure that: (b) Office accommodation is provided for the management of the planned work referred to in paragraph (a), and certifying staff so that they can carry out their designated tasks in a manner that contributes to good aircraft maintenance standards.</p>	<p>AMC 145.A.25(b) Facility requirements It is acceptable to combine any or all of the office accommodation requirements into one office subject to the staff having sufficient room to carry out assigned tasks.</p>	Nil
<p>145.A.60 Occurrence reporting (b) The organisation shall establish an internal occurrence reporting system as detailed in the exposition to enable the collection and evaluation of such reports, including the assessment and extraction of those occurrences to be reported under paragraph (a). This procedure shall identify adverse trends, corrective actions taken or to be taken by the organisation to address deficiencies and include evaluation of all known relevant information relating to such occurrences and a method to circulate the information as necessary.</p>	<p>AMC 145.A.60(b) Occurrence reporting</p> <ol style="list-style-type: none"> 1. The aim of occurrence reporting is to identify the factors contributing to incidents, and to make the system resistant to similar errors. 2. An occurrence reporting system should enable and encourage free and frank reporting of any (potentially) safety related occurrence. This will be facilitated by the establishment of a just culture. An organisation should ensure that personnel are not inappropriately punished for reporting or co-operating with occurrence investigations. 3. The internal reporting process should be closed-loop, ensuring that actions are taken internally to address safety hazards. 4. Feedback to reportees, both on an individual and more general basis, is important to ensure their continued support for the scheme. 	<p>GM 145.A.60(a) Occurrence reporting The organisation responsible for the design is normally the TC holder of the aircraft, engine or propeller and/or if known the STC holder.</p>

It should be noted that EASA regulations are not specifically principle based; they have fairly prescriptive regulations and they are written in plain English. So where does that place the CASA EASA working group who have been tasked with writing AMCs & GMs if CASA is creating principle based regulations? Clarity has been promised.

AMROBA has supported principle based regulations up till now, but, it has become obvious that they must have enough prescriptive provisions to prevent future changes in interpretation of the regulations by the next generation of CASA managers and staff as has been the case since 1992 – no promulgated standards in AMCs & GMs, no standardised application by industry or CASA staff.

Byron and Gemmell presented an acceptable way to complete the maintenance regulations 19 months ago and it is disappointing that draft regulations, AMCs and GMs are not appearing in the public domain at this stage as was expected when CASA created the 'small working group' instead of using SCC Sub-committees.

Past Experiences

Although most MRO industry participants support the need for regulatory change, the mistakes of the past cannot be allowed to happen again. The reason that industry participants want reform is that many regulatory changes made in 1992 to the CARs, including repeal of many prescriptive CAOs, have failed the clarity test and needs of the industry. When the 1992 changes were introduced the then CASA Director explained the benefits and simplification of CASA processes that these rules introduced. Sadly, simplification of legislation has been replaced, by following generation(s) of CASA staff, with increasing and costly administrative processes not envisaged by past CASA staff.

It is for that reason that AMROBA expects the AMCs that Deputy Director Bruce Gemmell tasked the CASA and industry representatives to write in February 2006 – 19 months ago, to be promulgated with draft regulations. Considering that the CASA EASA team were going to have rules/AMC/GMs ready last year when will we see the drafts of these supporting documents? The detail is in the final documents.

The reason that regulatory reform continues to fail the MRO industry is that the supporting documentation is not written and promulgated prior to making regulations. The same happened in 1998 with the making of CASR Parts 21-35 that adopted the FAA system. The FAA has a huge library of data, including ACs, Orders and Instructions, that support those regulations but CASA has only promulgated some of the FAA ACs as CASA ACs to support the 1998 regulations.

Learning from Past Experiences

If a proper analysis is made of past regulatory changes that affect the MRO sector it would show that theoretical benefits and simplification gained soon after the making of the regulations are eroded away by later CASA management and staff creating increasing administrative processes.

- ▶ Simplifications and benefits notionally introduced in 1992 have been eroded by changing CASA administrative processes and application of new interpretations of the rules. Changes that have added costs not safety.
- ▶ Industry accepted CAA proposed changes but the meaning and intent of legislation has been changed by new CASA staff. Some 15 years after the making of the rules there is still debate on interpretation and application.
- ▶ Industry has not been able to keep pace with the changing interpretations and variable application of regulations.
- ▶ Principle based legislation, without prescriptive minimum standards, will enable future CASA managers and staff to apply requirements quite differently.
- ▶ Reason for change has not been well documented but there is also reason to be wary of providing future CASA managers and staff with the ability to change the intent and meaning without justification.
- ▶ The removal of 'direct supervision' provisions in 1992 added administrative costs with no added safety to aircraft or products. This successful system was ICAO compliant and kept costs to a minimum for the owner/operators of aircraft.
- ▶ Regulations are quite often being developed without following government policy by using the safety issue to over-ride cost and risk assessment.

In addition, introduction of the CASRs in 1998 introduced some benefits that are also being replaced by growing and cost-adding administrative processes. Many promised benefits, like international recognition, still have not eventuated for the small parts manufacturer and maintenance organisations.

AMROBA recommends that the regulatory development process needs to be re-assessed to ensure regulatory time frames can be met and that a standard process be followed that matches the Office of Best Practice Regulations.

How long has it been since proper analysis, including detailed cost-benefit & risk analysis, been observed?

The Office of Best Practice Regulation

This office role includes:

- ▶ advise Government, departments and agencies on appropriate quality control mechanisms for the development of regulatory proposals and for the review of existing regulations;
- ▶ examine Regulation Impact Statements and advise whether they meet the Government's requirements and provide an adequate level of analysis, including cost-benefit and risk analysis of appropriate quality;
- ▶ advise departments and agencies on the Government's requirements for compliance costs assessment, and maintain the Business Cost Calculator as a regulation costing tool;

This office can be manipulated if CASA pressures them by over emphasising the safety benefits of a particular rule. This should not be the case with major rule development.

AMROBA suggestions (not recommendations)

It is obvious that the small working group created by CASA to develop the maintenance regulations has not written the AMCs & GM that CASA stated they would write. The development of the regulations is a bigger project than was envisaged and the working group has not been a success as no AMCs or GM have been promulgated 15 months after commencement.

AMROBA sees the AMCs and GM as the most important part of the maintenance suite of regulations. Without them, we cannot identify what legislation will be applied equally nationally and which provisions will be applied at the impulse of individual CASA staff. Regulations must never be made in haste again without adequate supporting advisory material.

Therefore, AMROBA **suggests** that CASA start promulgating draft regulations, AMCs and GM in the form of a table, even if the OLD has not yet legalised the wording of particular provisions.

The actual number of people involved in the aviation MRO industry is small when compared to other transport industries so the use of the electronic media, open to all, should be utilised during this formative stage.

AMROBA suggests that CASA could quite easily produce a table document similar to the table used in this document that spells out proposed rules, AMCs & GM.

The JAA/EASA experience of openly promulgating proposed rules, AMCs and GM should be copied. The combination of these 3 documentary structures clearly informs industry of the intent of the legislation by providing clarity.

AMROBA also suggests that CASA revisit the reasons why 'direct supervision' (see attached Appendix) provisions were removed in 1992 and re-instate if cost effective.

This document is sent to CASA with a hope that this project's developing outcomes will be put in the public domain for all to comment on. Sometimes the big picture gets blurred by minuscule detail – minuscule detail that ends up being the basis of enforcement action.

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For & on behalf of AMROBA

Appendix

Direct supervision provisions that operated prior to 1992. Removed without consultation process of today – would not have been supported. It is amazing how much clarity previous CAOs had compared with today's legislation - legislation that continues to be applied differently to when introduced. Compliance was more easily achieved by small GA businesses and industry was just as safe using the 'direct supervision' provisions.

CAO104.1 Definition/provisions

***Direct supervision** means that the supervisor observes and checks the work being performed to ensure that it is being performed properly.*

***System of quality control** means a system established by the holder of a certificate of approval to ensure that as applicable*

- *the aircraft and aircraft components and aircraft materials manufactured will comply with; and*
- *the maintenance of aircraft components is carried out in accordance with; the design data or document intended to be observed for such manufacture or maintenance.*

Note: Maintenance of aircraft was not included in this definition.

Paragraph 3.2 - Quality Control [Excerpts - format change for clarity]

(1) *Except as provided for in para (2), a system of quality control specified in writing shall be observed for the manufacture of aircraft, aircraft components and aircraft materials and the maintenance of aircraft components.*

(2) *The activities referred to in para (1) [manufacture and maintenance] but not necessarily the performance of an inspection using:*

- a. *Dye penetrant*
- b. *Eddy current*
- c. *Magnetic particle*
- d. *Radiographic; or*
- e. *Ultrasonic methods; and*
- f. *Manual welding including braze welding*

may be carried out by or under the direct supervision of a person appointed for the purpose by the certificate of approval holder and whom the holder had established as having such qualifications and experience as to be capable of determining that the work has been completely and properly carried out. Under these circumstances no system of quality control need be provided in accordance with sub-paragraph (1) of this paragraph.

Note: In addition, the following had to be supplied to the Authority

- a copy of the specification of the certificate of approval holder's system of quality control (if direct supervision was not used),
- a copy of the register of locations,
- a copy of the register of persons (directly supervising and signing M/R)

(5) *The holder of a certificate of approval who carries out work under direct supervision shall maintain a register of names of the persons appointed pursuant to sub-paragraph (2) of this paragraph to carry or directly supervise the work and the activity and period for which they are appointed.*

Basically, the above provisions were successfully used by the majority of GA maintenance organisations. No written system of quality control required because it has been long proven that the best quality control for aircraft maintenance is "direct supervision". You just cannot inspect safety into aircraft maintenance.

Removing the "direct supervision" capability and applying large organisation requirements on small business has created the problems of today. A return to 'direct supervision' should be mandatory when new legislation is drafted.

AMROBA will continue to explore all systems possible to lower costs without a reduction in safety.