

AMROBA® inc

ADVOCATE OF THE AVIATION MRO INDUSTRY

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Performance Based Regulatory Oversight

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CAA(UK) *Howard G Dyer* stated he was the designer of the CAA(UK)'s Performance Based Oversight scheme now currently being rolled out. He also stated that he has been exposed to the CASA approach which is also being trialled. **He (Dyer) states that it's not easy or straightforward.**

Performance Based Oversight is the intelligent deployment of oversight resources to those areas where it will do the most for safety whilst maintaining full confidence that [regulatory] code and other compliance remains assured. Only regulators who are in full control of their strategies, knowledge management and oversight teams can really make a success of it. A successful approach to instigating a programme of performance based oversight is to start deep within the top leadership of the regulator. Expect some lasting outcomes in 5 years time.

Other experienced Regulators stated at the same conference:

- a pre-requisite to performance based oversight is that operators have achieved a level of maturity where strict adherence to the rule is not anymore an issue, meaning that, either they comply or they know why they don't strictly comply but they think they do better and can justify it. This level of maturity seemed to be a "given" for many speakers during that conference, and if this may be the case for some large operators, I have to say it is not necessarily the case for many smaller ones.
- My understanding of performance based regulatory environment is where, as far as feasible, the regulator defines the finality of the rule in terms of what needs to be achieved instead of having a prescriptive approach indicating how it must be achieved. This approach leaves some flexibility allowing the regulated entity to achieve the goal through its own tailored method providing it can achieve an equivalent level of safety. Obviously, the regulator still has oversight responsibility and the regulated entity has the onus to demonstrate that the approach taken will provide a level of safety equivalent to the level of safety the regulations aims at.
- Definitely, this can be done only in States already having a solid compliance based system and the increased flexibility should be available only to those regulated entities having reached a high level of maturity, having an exemplary compliance record and having the capability to perform adequate safety assessments to support their use of the increased flexibility.
- the aim is now to be less prescriptive, stop ever and forever ceasing to be so paternalistic of air operators and allowing to, through the SMS, them to begin to self-regulate. I believe that is the only viable way to start evaluating each operator as a system that works and solves all your problems related to safety and that is all our interests.
- for other speakers : performance oversight cannot replace adherence to the regulation so inspectors need to be trained to do both, compliance inspections and performance/risk based oversight.

Based on the statements from some very experienced regulators, AMROBA wonders if CASA can rely on Performance Based Oversight enough so that they can be confident that compliance and safety is at an acceptable level if:

- Current new regulations being promulgated and proposed are not outcome-based regulations that experienced regulators state are needed, so that the regulated entity can tailor their own method to achieve an equivalent level of safety to meet the aims of the regulations.
- The function of quality manager is extended to "compliance manager" under Performance Based Oversight but there is no proposed formal regulatory framework that would allow CASA to discharge its compliance verification responsibility on that "compliance manager". As long as this regulatory framework does not exist and in view of the maturity of most of our operators/organisations it will take a long time to successfully switch from compliance oversight to performance based oversight.

AMROBA supports the move to Performance Based Oversight by CASA but does not believe it can be successfully implemented until regulations are amended to outcome-based as was originally proposed by CASA and its predecessors instead of the prescriptive regulations being promulgated now.

International Recognition Update

AMROBA has raised, for a number of years with CASA, the lack of global, in particular in the Asia Pacific region, recognition of the maintenance documentation specified by government.

We asked CASA, on a number of occasions, when will the Authorised Release Certificate (Form 1) be accepted, especially in the Asia/Pacific region of the world, in its own right.

Singapore, the most ICAO compliant Asia/Pacific country, sets the benchmark in the Asia/Pacific that we need to obtain an agreement.

CASA's Corporate has advised that they are working on obtaining agreements—the following is an update of what they are doing.

- China – CASA visited the Civil Aviation Administration of China (CAAC) in June 2012 as the first step to commence scoping and negotiations with the CAAC to establish a working arrangement on airworthiness certification. A reciprocal visit by the CAAC to Australia is scheduled for October 2012 to learn about Australia's certification and validation of regulations. We hope that an arrangement can be put in place this financial year;
- Korea – CASA and the Korean Office of Civil Aviation signed a Memorandum of Understanding and Implementation Procedures for Airworthiness in May 2012;

- Singapore – CASA is meeting with the Civil Aviation Authority of Singapore in July to discuss a high level arrangement between the two authorities initially covering certification and maintenance, with scope to include licensing and simulators also.

- Hong Kong – CASA is meeting with the Civil Aviation Department of Hong Kong in August to gain an understanding of the certification processes, policies and procedures and to confirm whether there is scope to enter into an arrangement covering airworthiness certification and potentially maintenance.

AMROBA listed the following countries that were of interest to our members:

United States (needs maintenance agreement), Canada, Singapore, Malaysia, India, Philippines, PNG, Fiji, Indonesia,

Other countries of interest

China, Laos, Vietnam, Cambodia, Japan, Tahiti, and other Pacific Island Countries –

Some countries accept/some don't accept the Australian/CASA Authorised Release Certificate.

Regulatory maintenance standards need to mirror image what Singapore & NZ have been capable of implementing.

Unique Australian aviation regulations THAT DO NOT harmonise globally, in particular in the Asia/Pacific region.

FAA AC 43-13-1

Can this AC be used as *acceptable* maintenance practices and techniques now that CASA has promulgated CASA Instrument 515/11?

For example, AC 43-13-1, Chapter 3 prescribes minor repairs applicable to fibreglass laminate used for non-structural fairing, covers, cowlings, honeycomb panel facings, etc.

This, and many other minor repairs addressed in the AC, now require design approval.

There is no such thing as the [FAA] minor and major repair defined in CASR/CARs.

CASA 515/11 states in its Schedule.

1. *The instructions cannot be used unless there is an existing approval of the modification or repair iaw regulation 35 of CAR1988, regulation 21.435 or 21.437 of CASR 1998 or approved aircraft service documentation.*
2. *The instructions cannot be used in conjunction with a foreign approval of a modification or repair accepted iaw regulation 35 of CAR1988, regulation 21.470 of CASR 1998*

FAA AC 43-13-1 Authorisation states:

1. *Purpose. This advisory circular (AC) contains methods, techniques, and practices acceptable to the Administrator for the inspection and repair [repair instructions not acceptable to CASA without design approval] of nonpressurised areas of civil aircraft, only when there are no manufacturer repair or maintenance instructions. This data generally pertains to minor repairs. The repairs identified in this AC may only be used as a basis for FAA approval for major repairs. The repair data may also be used as approved data, and the AC chapter, page, and paragraph listed in block 8 of FAA form 337 when:*

- a. *The user [A&P-IA] has determined that it is appropriate to the product being repaired;*
- b. *It is directly applicable to the repair being made; and*
- c. *It is not contrary to manufacturer's data*

Important: Ignore the FAA Authorisation.

FAA ACs may only be used for inspection and removal/installation maintenance practices unless the manufacturer has a repair manual.

Is Safety Improving?

Governments spend hundreds of millions on aviation safety and must question whether they are getting value for their dollar. The million of dollars spent on changing legislation, changing licensing and certificate standards, and safety promotion, one would expect to see improvements in safety by participants in the aviation industry. With all the changes that have been, and are continuing to be imposed on the aviation industry, one would expect a decline in errors in this industry.

- Recognising that the industry is in a continual state of change being orchestrated by government that suppose to be improving safety, do the facts actually support the costs involved?
- Has the accident/incident level decreased in Australia as a result of regulatory change?
- Has there been a reduction in enforcement actions by the regulator?
- Has there been a reduction in audit findings by the regulator?
- Has there been an improvement in the aviation safety culture?
- Could the government have got better value for their dollar invested?

As a result of government investment over the last couple of decades, this industry should have achieved a level of maturity where strict adherence to the rule is not anymore an issue, meaning that, either they comply or they know why they don't strictly comply but they think they do better and can justify it.

Improved safety should be reducing costs to government as a more compliant and safer industry meeting above normal level safety goals.

We all know that aircraft designers have improved the safety levels of modern aircraft and products. Some of the improved material and products used on legacy aircraft has also improved reliability.

It has long been recognised by professionals that you cannot improve safety by 'enforcement' nor by creating more legislation. The answer has always been in the safety culture not just in one business, but by all participants in the industry.

If the government money was having an effect, one would expect to see less enforcement, less accidents/incidents and a reduction in the need for government intervention. Is this the case?

CASA's 2012 Annual Report show-cause notices, variations, cancellations & other enforcement actions virtually remained the same each year (2007-2012) listed. Infringement Notices issued have continually increased over the same period, except for 2010-11. There is also an increasing trend towards AAT actions.

Based on these figures, it must be assumed that safety is not improving, rather it appears that CASA data indicates a trend in the opposite direction than what the public would expect as an outcome of the huge government funding over the last decade or two.

According to the most recent ATSB Occurrence Report promulgated on their website, accident and incident rates are not trending downwards.

The hundreds of millions of dollars that have been spent on aviation reform to supposedly improve safety has not been that effective if the statistics are taken into account.

What we have seen, is a reduction in Australians interested in an aviation career.

LNP GA Support

AMROBA has met with senior MPs of the National Party who have assured us that they support GA—they need and use GA. This was quite heartening as they included charter and other kinds of aviation outside airline operations as GA.

The nationals showed personal concern with the decline in charter as they are users of charter operators to meet with their constituencies in rural communities and beyond.

They emphasised that an industry looking for subsidies or funds if they make government will not be successful as they will inherit a huge debt caused by the current government.

They now have a better understanding of changes needed so Australia can trade (aviation) in the Asia Pacific region where we live.

Unlike Australia, Singapore is 100% ICAO compliant and we need to align with the skills standards in this region.

In addition, according to latest ICAO forecast, the Asia/Pacific region has an huge annual shortage in training of pilots, maintenance engineers & air traffic controllers.

We are sure that they understand that we not only have to adopt Asia/Pacific standards, we need to provide training capabilities to address shortages.

Voluntary Compliance

CASA does not have the resources to be present at every AOC, AMO or other entity they have approved. In recognition of that impossible surveillance task, the regulations place the highest level obligation on the companies holding such approval to adhere assiduously to all of the applicable regulatory requirements. This is known as “voluntary compliance.”

From time to time, we hear, mainly from the US, that a company has conspired to conceal from customers and the NAA that their maintenance and repairs were not done in accordance with regulations. Worse still, they are found to completed NAA required forms falsely.

A recent example printed by ARSA in the US of a clear abuse by WECO of the FAA regulator- regulated relationship. The result is a man faces years in prison and a substantial fine. Criminal charges are appropriate because of the wanton actions of the defendant. The repair of generators, alternators, and rotary linear actuators and converters involves a considerable knowledge about the products, the proper procedures to bring it back to an airworthiness state, the testing regimes involved and the documentation to reflect the work performed. In addition to these “mechanical” steps, the FAA imposes a number of procedural requirements that assure quality control and proper records. Substantial information must be kept current—the manufacturers’ original maintenance manuals and continuing airworthiness instructions as well as the FAA’s Airworthiness Directives and Advisory Circular. All of these are moving targets in terms of substantive standards and interpretative emphasis.

The complexity of these technical requirements is daunting and while failure to capture nuances should not rise to the level of WECO’s Mr. Kuwata’s transgressions, it is quite possible that sufficient failure to comply with these

multiple, changing requirements could rise to the level of an FAA enforcement case. Simple errors, like failing to include the OEM’s latest revision in your maintenance shop floor or not fully comprehending the intention of an AD, can easily create the basis for severe FAA sanctions. A pattern of such transgressions might elevate the issue to the criminal consequences.

Self-audits are one way in which to catch the inadvertent errors before they become a civil or criminal case. It takes an exceptional internal asset to see beyond the company’s current practices and even more importantly to point out any failure. It is well worth the dollars to employ outside experts to assess how well you are doing.

Australia, unlike the US, does not have aviation criminal legislation that is designed to prevent unapproved and bogus parts from being used in aircraft.

ICAO SARPs should be the third tier in the regulatory framework.

CASA/government are more interested in changing ICAO standards and practices into criminal law instead of addressing real criminal activities.



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The Aircraft Maintenance Engineers/Technician Creed

Worth Remembering

“UPON MY HONOR I swear that I shall hold in sacred trust the rights and privileges conferred upon me as a qualified aircraft maintenance engineer/technician. Knowing full well that the safety and lives of others are dependent upon my skill and judgment, I shall never knowingly subject others to risks which I would not be willing to assume for myself, or for those dear to me.

IN DISCHARGING this trust, I pledge myself never to undertake work or approve work which I feel to be beyond the limits of my knowledge nor shall I allow any non qualified superior to persuade me to approve aircraft or equipment as airworthy against my better judgment, nor shall I permit my judgment to be influenced by money or other personal gain, nor shall I pass as airworthy aircraft or equipment about which I am in doubt either as a result of direct inspection or uncertainty regarding the ability of others who have worked on it to accomplish their work satisfactorily.

I REALIZE the grave responsibility which is mine as a qualified aircraft maintenance engineer/technician, to exercise my judgment on the airworthiness of aircraft and equipment. I, therefore, pledge unyielding adherence to these precepts for the advancement of aviation and for the dignity of my vocation.”