



## Engineering – Manufacturing - 2017

General Aviation manufacturers met on the 30<sup>th</sup> April, 2015 in Canberra with Mark Skidmore, past CEO of CASA to explain how the current outdated system, and the application of that system by CASA personnel, has unique requirements and red tape being applied. This is not harmonised with the FAA system that was supposedly adopted with the introduction of CASR Part 21.

**Note:** The FAA made extensive changes to FAR Part 21 in 2009 to reduce red tape and introduce quality systems. 8 years on and CASR Part 21 is still unchanged.

**The FAA FAR Part 21 2009 Summary states: "The costs savings a private entity will attain under this rule will exceed the costs imposed by this rule."**

- **Costs Savings with a Rule Change. Wow.**
- **CASR Part 21 is no longer harmonised with FAR Part 21. Why?**

General aviation manufacturers are not in business to provide products just for the Australian market, they are in business to sell their products in the global aviation market. The declining Australia market cannot sustain manufacturing businesses.

For an aircraft, or aircraft component or part, to sell in the global aviation market, it needs to meet the *airworthiness standards* of the FAA and EASA. FAR airworthiness standards underpin world airworthiness standards.

CASR Part 21, based on FAR Part 21, must remain harmonised with FAR Part 21. The FAA made significant changes in 2009 that reduced the costs of compliance with FAR Part 21. Those changes would address the issues raised at the meeting with CASA's past CEO. FAR Part 21, amended to bring quality systems into manufacturing in 2009 should have been the catalyst to harmonise CASR Part 21, especially Subparts F, G, K & O immediately after.

Adopting the FAR 2009 amendments as soon as possible will return Australia to full quality management that applied under CAR 30 pre adoption of CASR Part 21. Harmonising will assist with global marketing and Australia/CASA obtaining recognition by foreign countries & their NAAs.

Australia has a Bilateral Aviation Safety Agreement with the USA and Implementation Procedures between CASA and the FAA based on a harmonised FAR/CASR Part 21. It is imperative that processes and procedures are harmonised with the FAA so manufacturers can apply for and obtain FAA TC, PMA or STC based on a CASA FAA approval.

**Manufacturers fear that Australia is being left behind.**

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## Addendum

Australian aircraft manufacturers who sell their aircraft into foreign countries need to provide components and parts into those countries that buy their aircraft.

This is not happening because government/CASA have no agreement with these foreign countries to accept parts to maintain the on-going airworthiness of the aircraft. This should happen automatically under the ICAO standards but bodies like EASA have aviation safety agreements that are trade related not safety related.

Australian manufactured aircraft and products issued with FAA approvals based on CASA approvals, are necessary to sell the Australian product off-shore because there is little global recognition of CASA approvals in other countries.

Example. To help market Australian manufactured aircraft and products in growing markets like China, we will need some sort of Bilateral Agreement with China. Recognition of CASA issued TC, PMA & STC will need to be accepted by China for Australian manufacturers to obtain the benefits in a large growing aviation market. Only bureaucrats can arrange such agreements.

However, for any international agreement with China to accept the Australian process requires CASR Part 21 to once again harmonise with FAR Part 21. The FAR system supports general aviation manufacturing more economically with better potential for innovation than the EASA CS part 21.

The future potential to design and manufacture a “normal” category aircraft under the new consensus standards of Part 23 opens a new and aspirational era for design and manufacture that could resurrect general aviation.

However, this will only happen if streamlining the current certification processes to remove all the unnecessary red tape and CASA to devolve functions to Part 21 Subpart J ADOs in the same manner as the FAA has done in FAR Part 183.

There is a successful manufacturing business in place that can, by being harmonised with the FAA processes, be much larger and prosperous today.

We call on CASA to amend CASR Part 21 as proposed at the meeting with Skidmore. We also propose that CASA needs to ‘qualify’ their manufacturing inspectors by accessing the training provided by the FAA.

The FAA Summary of the changes in 2009 stated:

*The FAA is amending its certification procedures and identification requirements for aeronautical products and articles. The amendments will update and standardize those requirements for production approval holders (PAHs), revise export airworthiness approval requirements to facilitate global manufacturing, move all part marking requirements from part 21 to part 45, and amend the identification requirements for products and articles. The intent of these changes is to continue to promote safety by ensuring that aircraft, and products and articles designed specifically for use in aircraft, wherever manufactured, meet appropriate minimum standards for design and construction. As a result of this action, the FAA’s regulations now better reflect the current global aircraft and aircraft products and articles manufacturing environment.*

Access to FAA Summary [here](#)

## **Regulatory Changes**

### **Step 1: Harmonise Part 21 Subpart J – Approved Design Organisations**

1. Adopt EASA CS 21 Subpart J word for word and adopt EASA supporting documentation.
2. It is too late to return to the Part 146 system that was originally proposed based on the FARs, but the FAA Part 183 devolvement processes to ADOs and manufacturers should be adopted.
3. The FAA ADO system is harmonised with this EASA provision.
4. A current CAR 30 ADO would meet the adopted EASA standards with minimum change.
5. An added benefit is that it also harmonises with Australian military adoption of EASA ADO requirements.

### **Step 2: Harmonise CASR Part 21 with FAR Part 21**

1. CASR Part 21 was based on FAR Part 21 almost word for word in 1998 with the assumption that future changes to the FAR would mean changes to CASR Part 21 would be adopted to remain harmonised with FAR Part 21.
2. This is a fundamental regulatory necessity that underpins the Bilateral Aviation Safety Agreement with the USA.
3. Adopting FAR Part 21 2009 Changes to CASR Part 21 also provides cost savings that exceed the cost of implementing the rule changes.

### **Step 3: Adopt FAR Associated Regulatory Changes**

1. In making cost effective changes in 2009, the FAA also made changes to associated regulations that also need to be adopted to ensure the changes bring the cost benefits to industry.
2. Total adoption to provide the cost savings to manufacturers and designers.

### **Step 4: Adopting associated FAA associated documentation**

1. To ensure that the regulatory adoption of FAR Part 21 and associated regulations are applied in the same manner as applied by the FAA, adoption of associated FAA supporting documentation must also be adopted.
2. This adoption of the FAR changes will actually improve safety, reduce red tape and provide costs efficiencies that exceeds the cost of adoption of the regulatory changes. Probably a first in aviation in over 27 years.

## **Summary.**

These are all actions CASA should be taking as they have been supported by the general aviation manufacturers and design engineers for the last 8 years.

This action should be taken AS SOON AS POSSIBLE.

The following chart arranges the changes required to remain compliant with the FAR system so Australian manufacturing is not left behind in the global aviation manufacturing market. Immediate action is required by government and bureaucrats to make it happen

<b>CASR Part 21 Amendments to Remain Harmonised</b>						
CASR Part 21	CASR Subpart J	EASA Subpart J	Adopt EASA Part 21 Subpart J word for word. FAA system is harmonised with this provision. Adopting FAR system would create too much change. Too late to return to FAR 183 but adopt FAA function devolvement process. Also harmonises with Australian military adoption of EASA ADO requirements Fairly simple fix.	ASAP	30-Mar	From date of commencement, CAR 30 ADOs can transition from CAR 30 to Part 21 J ADO by CASA issuing new Subpart J certificate with direction to adapt procedures to comply with Subpart J within following 12 months. <ul style="list-style-type: none"> <li>Minimal change between CAR 30 &amp; Subpart J.</li> <li>Similar process used by FAA - reduces red tape.</li> <li>QS used under the past ANR/ANO system.</li> </ul>
	CASR Subparts F, G, K, & O	FAR Subparts F, G, K, & O.	Modernise Part 21 by adopting these FAR Part 21 provisions and other subsequent changes. <ul style="list-style-type: none"> <li>This will address most manufacturing issues.</li> <li>In addition, other minor changes to other provisions of this Part to adopt these particular Subpart provisions.</li> <li>Basically returns to quality systems that existed pre Part 21 in CAR 30.</li> </ul>	ASAP	1-June	Current manufacturers would transition, basically without any CASA involvement, within 12 months of commencement. <ul style="list-style-type: none"> <li>Most already have quality systems.</li> <li>Normal CASA audits would verify implementation of quality system.</li> <li>FAA devolvement policy to be adopted.</li> </ul>
	CASR associated regulations	FAR associated regulations	Adopting the changes to FAR Part 21 also meant changes to other associated Parts/regulations. This same process applies to other CAR/CASR/CAO provisions.	ASAP	1 June	Harmonisation and adoption of associated FAA documentation will enable these changes to be applied in the same manner as the FAA, thus providing the cost benefits with improved safety.
	General	FAR	FAA stated their amendment of FAR Part 21 enhanced safety, reduced red tape and included advanced devolvement of FAA functions to [Subpart J] ADOs that we also need to adopt.	ASAP	1-June	Harmonisation Requirements. This will enable some previous amendments to be removed if they do not value add.

A regulatory change that reduces overall costs, upgrades manufacturing into the global aviation manufacturing market.

A plus for the industry and government and alignment with world manufacturing standards and practices.