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31 January 2019

Part 43 - Maintenance of general aviation and aerial work aircraft (CD 1812SS)

The Aircraft Electronics Association (AEA) appreciates the opportunity to comment on the CASA's proposed Part 43 - Maintenance of general aviation and aerial work aircraft (CD 1812SS).

The AEA represents more than 1,300 aviation businesses worldwide, as well as 38 approved maintenance organisations in Australia, which includes repair stations, manufacturers and operators. The AEA membership also includes instrument facilities, avionics equipment manufacturers, instrument manufacturers, airframe manufacturers, test equipment manufacturers, major distributors and educational institutions.

In general, the AEA supports the need for General Aviation regulations. As such, we recognize that the Federal Aviation Administration (FAA) has a better GA model than the European Aviation Safety Agency (EASA). However, simply because the FAA has a better model does not mean Australia should adopt and perpetuate the errors and failures of this 50-year-old legacy system.

In addition, there is a false assumption regarding the Australian adoption of part 43. Many of the comments are not centered on part 43, but rather on part 65 (Australian part 66). Part 43 provides for who can perform and return to service aircraft (14 CFR 43.3, 43.7, and with certain limitations 43.17); how maintenance is to be performed (14 CFR 43.13 Performance rules, 43.5, (approval for RTS), 43.10 (life limited parts), 43.16 (airworthiness limitations), and 43.15 (additional rules for inspections)); and finally, the recordkeeping (14 CFR 43.9 and 43.11) but does not address the scope and limitations of the individual maintenance provider.

Within part 43 there are three sections which address “who” can perform maintenance. 43.17 is unique for Canadian maintenance providers. 43.3 is limited to the simple act of performing maintenance, while 43.7 is focused on who can return to service the aircraft after maintenance. A proposal that allows individuals listed in 43.3 to return to service would be considered a less-safe system than the FAA’s.

The scope of which maintenance an individual may perform is contained in part 65.

- § 65.81 General privileges and limitations.
- § 65.85 Airframe rating; additional privileges.
- § 65.87 Powerplant rating; additional privileges.

It is important to understand the regulatory limitations rather than the hearsay of United States' general aviation maintenance. Reviewing § 65.81 General privileges and limitations is important.

(a) A certificated mechanic may perform or supervise the maintenance, preventive maintenance or alteration of an aircraft or appliance, or a part thereof, for which he is rated (but excluding major repairs to, and major alterations of, propellers, and any repair to, or alteration of, instruments), and may perform additional duties in accordance with §§ 65.85, 65.87, and 65.95.

An instrument is defined in 14 CFR part 1. In addition to the legacy “steam gauges” that were the norm when this 50-year-old regulations was written, it also includes all primary flight displays, multifunction displays that show aircraft or system operations as well as any autopilot/auto flight control system.

In addition, § 65.81 (a) prohibits a certificated mechanic from supervising any maintenance, preventive maintenance, or alteration of, **or approve and return to service**, any aircraft or appliance, or part thereof, for which he is rated unless he has satisfactorily performed the work concerned at an earlier date.

These are critical limitations in making part 43 support safe aircraft maintenance.

As a note, system software update for software-based PFDs/MFDs/EFIS are in fact “repairs or alterations of” instruments, which is specifically prohibited for a mechanic to perform. While this may seem like an overlooked issue, the original equipment manufacturer (OEM) who approves the software only validates their software interface to an OEM limited interface. Quite often, these software updates cause other systems to need to be reconfigured to operate correctly. What is considered “configuration control” in large transport RPT type aircraft is now required for general aviation aircraft, something the 50-year-old part 43 does not clearly address, but the limitation of part 65 does.

Finally, in today’s risk-based oversight of aviation, the FAA system falls short in reasonable oversight. While the U.S. has approximately 320,000 certificated mechanics, the FAA has no knowledge of how many of them are independently offering their services for compensation or hire. While there are requirements for anyone offering flight services or flight training services for compensation to register with the FAA, there is absolutely no requirement for a certificated mechanic who, independent of a repair station (part 145, which is registered), to register their business with the FAA. This flaw effectively prohibits the FAA from providing any reasonable level of risk-based oversight. For CASA to adopt a system without registration and, at a minimum, a certification of self-audit, would be a repudiation of their legislative responsibility to the citizens of Australia and the flying public.

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It is the recommendation of the Aircraft Electronics Association that the following limitations be added to the final rule:

- (1) CASA must incorporate the supervision and return-to-service limitations contained within 14 CFR section 65.81.
- (2) CASA must require appropriate and adequate recordkeeping to show compliance with 14 CFR section 65.81. This would not only include the appropriate training (formal or OJT), but also the endorsement of the “appropriately rated mechanic, or a certificated repairman, who has had previous experience in the specific operation concerned”, as required by § 65.81 (a).
- (3) All instrument/aircraft system operating software updates (managing configuration control) must be installed at an appropriately rated maintenance organization (repair station/MRO).
- (4) CASA must require any independent maintenance provider who offers their services for “compensation or hire” to register with CASA.
- (5) CASA must require any independent maintenance provider to submit to CASA a self-certifying statement (audit) that they have all the housing, facilities, equipment, material, technical data, processes, and trained personnel in place to perform the work on the aircraft as required by part 43.

The Aircraft Electronics Association appreciates the opportunity to comment on this proposed regulation and looks forward to discussing these challenges further. Should you have any questions, please do not hesitate to contact me at 202-589-1144 or email at: ricp@aea.net.

Sincerely,



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