

Our Readers Ask



BY NORM CHALMERS,
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I thank you readers who have written

to us with your queries and concerns about aviation regulation, or lack thereof, and suggesting subjects to address. Wayne Dick, an instructor at Aveos, sent in numerous excellent topic suggestions that I began with in the last issue and conclude in this issue as follows:

3. “Major Repair and Modifications - What are the differences between the definitions in the CARs vs. the FARs?”

This subject area is relatively large, complex and nebulous so I can’t go into great depth for now. Under the USA system and the FARs, we refer to FAR 43 Appendix A for the lists of major repairs and major alterations. We also refer to FAR 43 Appendix B for the reporting requirements which includes a section relating to Canada.

In Canada, under the CARs, we have a significantly different system. TC bifurcated each of the old “Major Modification” and “Major Repair” categories by introducing the “Specialized Work” category as defined in CAR 571 Schedule 2. This action separated the data approval from the approval requirements for those who perform the work. In Canada, a major repair or modification may be performed by an AME or non-specialized AMO if the work does not include specialized work. Some specialized work may be done without approved data but each repair and modification needs to be assessed individually.

4. “Why report Major Repairs and Modifications?” “Registering new aircraft coming into Canada: why does TC want this info and what do they do with it?” “What effect does major work

have on an aircraft and why report it? People seem to be most interested in what TC does with the information.”

Our international agreements require each country to keep a register of all aircraft, with emphasis on approved and certified aircraft. This requirement is inter-related with the international obligation to notify other relevant countries regarding failures and airworthiness directives (AD). To do this, the government needs to be able to identify aircraft by serial number, type, make, model and installed equipment. Additionally, governments notify individual owners that their aircraft are affected by ADs. This all relates to the ability of aircraft with normal and unrestricted Certificates of Airworthiness to be legally flown from one country to another under international agreement without further approval by the destination country.

Each “approved” aircraft is manufactured to conform to a type certificate that defines it in detail. When that aircraft is completed, sold and registered, it goes

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onto the national registry as conforming to that type certificate. When we do a modification/alteration or repair that makes a change to that aircraft, it no longer conforms to that type certificate. We then must amend the legal description of the aircraft in the data held by the country of registration. This basically approves the aircraft for continuing on that list as meeting international airworthiness requirements for aircraft that may cross borders.

When Transport Canada receives a major modification report regarding a change or added equipment, the aircraft database is amended to ensure that any AD applicable to that changed configuration is forwarded to the owner. When Transport Canada receives a major repair report, that report becomes part of the aircraft legal description as a variance from the Type Certificate and keeps the aircraft legal.

5. "What authority does a TC Inspector have?"

Inspectors have a great deal of authority to deal with issues addressed in the Aeronautics Act and CARs. Most inspectors do not exercise all of the items of delegation. The document that gives the inspector this authority is the Ministerial Delegation Of Authority. There is a different delegation for each type of Inspector. The ones that we are most interested in are the Airworthiness Inspectors. Among other authorities, they have the authority to access aviation sites, to inspect and seize aircraft and aviation records and to get copies of documents. The document was available on line at the Transport Canada website but has been removed by design or by the whim of the Transport Canada web overlord.

6. "What is the training of a TC Inspector?"

Not enough of the correct stuff. The formal training is developed, or done by personnel ensconced in, what is commonly referred to (because of colour of the glass) the Tower Of Darkness in Ottawa. They have never done the operational job with a few exceptions. After that basic training, the inspectors work in the field offices doing on-the-job-training (OJT). With this OJT they learn the different ways that different inspectors like to do the job and they can decide how they want to do it. Every inspector is different, every district is different, and every region is different. That way we get variety. Since the Ottawa headquarters never audits the regions, this variety is destined to remain.

7. "Are there only airworthiness inspectors, or do other inspectors exist?"

Canada is the only developed country in the world without "Airworthiness Inspectors." Due to the continual (and seemingly continuous) need to change in order to simulate progress, Transport Canada decided to call their Airworthiness Inspectors by the derogatory term "M&M Inspectors". Please note that they did not receive any free M&Ms with this change. This change accommodated the territorial battles going on in the Tower of Darkness between the various directors trying to protect their empires while showing change, which is equated to progress.

There are other specialized inspectors for various areas such as flight deck crew, cabin crew, dangerous goods, OSH and enforcement. I hope this includes everyone, and I apologize to those I left out. There may have been recent additions or deletions because of the ongoing reorganization.

Martin Doyle, in his “Letter to the Editor” from the last issue of AMU, mentioned a “growing element of apathy from employers and employees in the industry regarding regulations”.

I don’t know if apathy is growing, but I do know that it has been a characteristic of Canada’s aviation industry since the Silver Dart first flew. Few other developed countries allow senior bureaucrats to go on rampages, enacting laws that they have personal passions for. Did anyone out there in the “real world” know about or comment on SMS before it became law? The TC Inspectors dealing with the public first found out about it when they were told it was a done deal.

Likewise, the changes to the AME licence were generally opposed across the country but were pushed through in the same manner. In the TC Ottawa headquarters, they call the process “Social Engineering.” This is the process of moulding society in such a way as to seem progressive to the senior mandarins. TC does claim that the CARAC process ensures public participation, but CARAC is a screening process which is occasionally swept aside by a puff of prioritization.

Unless an individual or company has sufficient resources to get the cooperation of politicians, the only hope for the aviation maintenance industry to be able to influence the future is to form a group or groups that speak for numerous corporate members. The manufacturing sector has the Aerospace Industry Associations, the commercial operators have various groups, the AMEs have their association(s) but maintenance companies have no organized voice.

We received an email from Richard Wyeroski (just Google that name), a former FAA Inspector, who states:

“My concern is overseas maintenance in Third World countries performed by \$2-an-hour unlicensed mechanics, if you could call them that. The safety issues are too obvious. However, the other issue is terrorism. These facilities have little security and operate for about 20 to 30 cents on the dollar compared to US, Canadian and European MROs. Billions are spent all over the world for security, yet our aircraft are unprotected in these facilities.”

As I indicated in a previous column, politics and economics trump safety. Unless it becomes politically necessary to change direction, globalization is the dogma of the industries with influence over our politics. Many aviation professionals see the problem, but the general public doesn’t understand and/or doesn’t care. The public is more interested in the libertine escapades of politicians than the safety of aircraft.

While answering your queries is an important part of this column, I also want this

regulatory discourse to clarify regulations in an orderly way and build on previous columns. The regulatory subject for this issue is “Applicability” or “Does that rule apply to me?” Every regulation, and every enabled document that flows out of that regulation, including standards and orders, has an intended scope of applicability that may be stated as to whom it applies or does not apply. These are some examples:

- CAR 101 gives no applicability; therefore the definitions are applicable to all the



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other regulations unless another regulation gives a different definition that is applicable only to itself.

- CAR 102 refers to all the CARs. It excludes military aircraft and other borderline flying machines, including hovercraft.
- CAR 106 applies to only the stated certificate holders.
- CAR 571 is applicable to all “persons” in Canada when working on Canadian and most foreign aircraft, except ultra-lights and hang-gliders. Within that scope, some paragraphs exclude some aircraft, such as amateur-built, from certain requirements. One of the interpretation problems we have with foreign aircraft is that the maintenance requirements of the country of registry take precedence. If we are working on an aircraft of USA register then we must know the applicable rules with emphasis on FAR43.
- CARs 602 and 605 generally apply to all “persons” but they do get complicated and we need to read the specific paragraphs in detail to determine applicability. For example, some paragraphs give

exclusion to previous paragraphs. Further influences on the applicability of the regulations are issued in the form of exemptions by Transport Canada. That’s another subject for another time. I will go further into CARs 500, 600 and 700 series in future AMU issues.

Until then, be safe.

NORM CHALMERS worked with Transport Canada as an Airworthiness Inspector for 25 years. Before this, from 1967 to 1983, he worked in the aircraft maintenance industry in and around Western Canada and in the Arctic. His industry experience includes the operational maintenance of normal and commuter category aircraft and smaller transport category aircraft in the corporate sector as well as several years working in major repairs in the helicopter sector. As an Airworthiness Inspector, he has been responsible for most duties related to the position, including the approval of all aspects of maintenance, manufacturing, training, and responsibilities related to distribution organizations. Norm operates Pacific Airworthiness Consulting; www.pacificairworthiness.ca. ■

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