Transport Canada To Require New 406-MHz ELTs In Most Aircraft Flying In Canada

OTTAWA, ONTARIO – According to Kevin Psutka, President of the Canadian Owners & Pilots Association (COPA), in an article he wrote and posted on the COPA website on May 11, 2010 (http://www.copanational.org/ELTUpdateMay112010.cfm), Transport Canada has decided to mandate the new 406-MHz Emergency Locator Transmitter (ELT) for most aircraft flying in Canadian airspace, including private, and both Canadian and foreign aircraft. Note, however, that as of press time, the regulation had not yet been released. The current regulation remains in place until such time as the new regulation goes into effect, which happens when it is released in the Canada Gazette Part II. So, at this time, aircraft owners are not required to do anything.

COPA has known for some time about the Minister of Transport's decision to mandate 406 ELTs, but wanted to wait until it is finalized in order to provide a detailed explanation based on the exact wording of the final rule.

The regulation is expected to require all aircraft flying in Canadian airspace to be equipped with either an ELT that is capable of transmitting on 406 MHz and 121.5 MHz, or an "alternate means of compliance." The exact wording for the alternate means is not known at this time, but we do know that the wording will not change significantly from a previous draft of the regulation; "wording that excludes all affordable alternatives for our sector of aviation," says Psutka.

The regulation will permit a transition period of two (2) years for commercial aircraft and three (3) years for private aircraft. There are exceptions similar to the current regulation (balloons for example). All foreign aircraft will also have to comply, even United States-registered aircraft that are not required to have the equipment in the U.S.

The regulation is with the Minister of Transport now for sign-off, and will then go to a Treasury Board hearing before being released. COPA does not know when this process will be completed, but if it is not completed soon, it could be delayed further due to summer recess.

What Went Wrong?

COPA had reached a compromise with Transport Canada in 2009 that would not require privately registered aircraft to equip with 406-MHz ELTs. COPA was concerned that the Department of National Defence (DND), who did not participate in the key consultation meetings, disagreed with the compromise and would work at the political level to press for a solution that best suited them.

DND took their case to the Treasury Board, last stop on the way to the regulation coming into law and at which the public has no input, and convinced the board to overrule COPA's agreement and force the switch to the 406. The Treasury Board then sent the regulation back to Transport Canada for re-work.

The Transport Minister could have held his ground at the Treasury Board and follow the advice of his advisors, both internally and externally (COPA), but he chose not to do so.

"It seems that the military knows what is best for our sector of aviation," says Psutka. "The real shame of this development, besides the millions of dollars that our sector will have to spend to meet DND's agenda, is that this is a sign that the military can essentially control civil aviation. They overstepped the public consultation process, including years of in-depth work that resulted in a practical solution.

"In many countries where the military controls/influences civil aviation, General Aviation (GA) is either severely curtailed or non-existent. Perhaps the unwillingness of our Transport Minister to listen to reason and stand up against the military is a sign of things to come. This is regrettable in this country (Canada) that is dependent on GA as a form of transportation."

Through COPA's extensive efforts, the organization managed to delay the imposition of the requirement. In 1998, when the first attempt was made to mandate new ELTs starting in 2000 and cease monitoring 121.5 MHz by satellite in 2002, the cost to purchase and install an ELT was a minimum of about $4,000, due in large part to a lack of competition and very little development effort to seek low-cost solutions. At that time, COPA stated that the resistance point to being forced to install a new ELT, given their propensity to fail, was about $1,000 installed.

COPA also convinced Canadian authorities that among other issues, the industry was not prepared, in terms of supply, to equip tens of thousands of aircraft in a very short time. "Incredible as it seems, the international folks who set the original schedule did not do any research on the ability of the industry to meet the schedule, and they were about to set the stage for a mass grounding of aircraft," says Psutka.

In the ensuing years, there has been a competitive effort to develop lower cost ELTs. There are some

available now for as little as $600 U.S. (some of these are available only in the U.S. at this point – Canadian approval pending), but buyers should be aware that it is very much a matter of you get what you pay for.

Although the $600 ELTs technically meet the certification requirement, which means they have features built into them that permit them to function automatically, many aircraft owners may be tempted to go with the minimum cost to comply.

However, as with any electronic device where production costs are reduced through sourcing of low-cost components and employing low-cost manufacturing techniques, the device's performance under extreme conditions, or its capability to last a reasonable time beyond the warranty period, may be questionable.

COPA's effort also resolved two other issues – lithium batteries and who can install ELTs. COPA convinced Transport Canada to catch up with the times regarding lithium batteries. At the heart of a requirement to buy new ELTs many years ago, was the faulty standard for batteries that resulted in several malfunctions, including fires. The standard was revised and the battery installations were improved in the 1990s so that there was no longer a reason to ban them in Canada.

The prohibition was removed a few years ago, thereby increasing the choice and eliminating a more costly "Canada-only" solution if unique ELTs for Canada were required. This helps to drive the cost down through choice and competition.

ELTs were considered specialized maintenance. As far as COPA could determine, ELTs were simply captured for no good reason in a revision of the maintenance regulations. In an effort to reduce the installation costs, Transport Canada was convinced to permit installation of the new ELTs by Aircraft Maintenance Engineers (AMEs) instead of having to go to a shop that can perform specialized maintenance. This can reduce the overall cost by several hundred to several thousands of dollars because the installation can be done in place when the annual is performed and the aircraft is open for inspection anyway, and the owner can help to reduce the time and therefore cost.

When you purchase an ELT, it must be programmed for a specific aircraft before it is installed. Depending on the make of ELT you purchase, there are varying ways to have the ELT programmed, but you cannot do so yourself. Most vendors will have the equipment to program the ELT and they can find the 24-bit address for you. You will also be responsible for registering the ELT in the beacon registry in the same country as the aircraft is registered (http://www.cospas-sarsat.org). Only about 40% of all 406 MHz alerting devices in the world are currently registered, so this important (and mandatory) step is frequently missed. This step involves entering data about you and your aircraft (emergency contact phone number, color of aircraft, etc.) into a registry that is maintained and used by the rescue people with the Canada Department of National Defence or the U.S. Air Force in the United States.

"Aircraft Spruce Canada" is working with COPA to provide one-stop shopping for the purchase and programing of an ELT as a membership benefit. For additional information contact Aircraft Spruce Canada at 877-795-2278 or visit www.aircraftspruce.ca.

For additional information on regulations on registering and installing a 406-MHz ELT, contact your avionics facility. We anticipate that additional information will be forthcoming from manufacturers, the Federal Aviation Administration and pilot organizations to help guide aircraft owners. In the meantime, refer to the COPA website at http://www.copanational.org, but anticipate that there may be differences in requirements between the U.S. and Canada.

Is an ELT enough to protect you?

This was the million-dollar question during the long debate. There is no doubt that the new ELTs, with a more powerful signal, less interference and the capability to send a coded message identifying the unit and providing an optional GPS location, is an improvement over the previous ELTs. However, the primary reasons why ELTs fail to automatically activate and send a signal to monitoring agencies is not addressed by the new 406 ELTs.

Antennas will break off, wreckage will sink or be inverted, and ELTs will be destroyed by impact forces. We can debate about how much improvement in the failure rate will occur, which in our opinion was nowhere near being acceptable with the older units, but it will take some years to gather data in order to see how the millions of dollars aircraft owners will spend has made our prospects for being rescued any better, if at all, and we will be risking lives to find out.

As with any form of insurance, each person has to assess their aversion to risk and purchase whatever satisfies their level of risk. As a pilot, you should consider carrying something else with you (PLB, SPOT, tracking service, mobile phone, sat phone etc.), brief someone about your route of flight, and file and stick to a flight plan in order to improve your odds of being found.

"If technology does what it usually does, ELTs will be surpassed by much better technology in the near future that will meet everyone's needs, government and aircraft owners alike," says Psutka. "Let's just hope the government does not leap onto new technology too soon and force yet another requirement on us before we have time to recover from the millions that will be spent by our sector because of the mandatory ELT requirement."

Again, the new 406 ELT requirement will pertain only to aircraft flying in Canada. ❑