

# DUNCAN INTELLIGENCE

## Static Electricity and You

• *By Mark Goertzen*

When most people think of static electricity and aircraft maintenance, they focus on its potential as a fire hazard. However, in today's digital world, static electricity is an unseen and sometimes latent hazard for aircraft components.

For example, some of the printed circuit cards in newer model Falcons use incorporated "chips" where relays once were. Static electricity, even at its lowest (unseen and unfelt) potential is lethal to these cards since most of them do their switching at the 5-volt level. Keep in mind that damage is not always immediate. These cards can be weakened and fail long after the original electrical hit. A grounding-strap that clips onto the aircraft on one end and around your wrist on the other is cheap insurance and is strongly recommended before the handling of any printed circuit card.

## Why Wait?

• *By Ron Hall*

The Eurocontrol "Elementary Surveillance" mandate (Flight ID) is scheduled for March 31, 2005, for all IFR and VFR flights within European Civil Aviation Conference (ECAC) countries. If your Falcon is not equipped for this mandate, now is the time to take action. The current turntime for Flight ID equipment is seven to 10 days with advance scheduling. Turntime in the fourth quarter could reach two weeks. Call us to learn more about this or any of the upcoming mandates to be certain you are legal to roam the entire planet.

## Maintenance Practices for the 406 MHz ELTs

• *By Ron Grose*

Early ELT versions operated at a frequency of 121.5 MHz and later versions at 243.0 MHz. However, when multiple electronic units started operating on the same frequency, there was a large increase in the level of untimely alerts. As a result, new ELT technology emerged operating at a frequency of 406.025 MHz which has a discrete digital code that is transmitted to a network of satellites that have the capability of looking at much more data and locating signals with far greater accuracy.

FAR 91.207 requires a complete ELT system check following initial installation and repeated once a year. The early version ELTs were tested by activating them on their operational frequency (121.5 MHz) during the first five minutes past the hour. The new 406 MHz ELTs are tested with special test equipment called out by the ELT manufacturer. Not following the new test procedures could trigger an alert and a phone call from NOAA (National Oceanic and Atmospheric Administration).

If the ELT is replaced for any reason or the aircraft registration is changed, the ELT will have to be reprogrammed with the registration number as identification. Depending on the ELT manufacturer's specifications, some units can be reprogrammed locally while others must be sent to the manufacturer (or their representative). Check with the manufacturer of your ELT and plan ahead to save downtime.

