

DUNCAN INTELLIGENCE

Battery Technology

•Karl Detweiler

Securaplane and Enersys have developed a true, solid lead acid main aircraft battery. This technology has been used in military and commercial applications since 1973, and is now available for corporate aviation. STCs exist for F2000s and F50s, and one is currently being developed for F900s. Batteries have been installed under field approval for other Falcon models. STCs are also available for many other corporate aircraft.

This battery has many advantages over liquid and gel cell lead acid batteries and NiCad batteries. It can be stored fully charged for 24 months with no required maintenance and when in use, it only requires servicing every 18 months. It has improved performance at hot and cold temperatures, eliminating thermal runaway potential and can be completely discharged and re-charged.

Since it is a true, solid battery, it is rated non-hazardous and can be shipped by standard means. Turning over or tipping will not cause damage.

This battery includes a 30 month warranty (not pro-rated) that begins at the time of installation, and is in addition to the 24 month shelf life. A lead acid battery's life span is usually 15-18 months, but this battery has a 30 month warranty, and therefore should have the same life span as NiCad batteries.

Battery manufacturers rate their batteries at full capacity when new. So a 25 amp/hour battery is considered 25 amp/hour at full capacity when it leaves the production line. When Securaplane says its battery is a 25 amp/hour battery, it is rated 25 amp/hour at 80% of battery capacity. Therefore a new Securaplane 25 amp/hour battery, at full capacity, will have 31 amp/hour performance.

This cost is approximately 1/2 the cost of NiCad batteries and there is no need to ever replace the battery. If the battery eventually requires cells, its two cells can be "re-blocked" for about 2/3 the cost of a new battery and again has a full 30 month warranty.

Call Chris Gress for further information at 800.228.4277, ext. 1664.

Resistor Box Connections

•Kevin Bornhorst

On Falcon models 2000 and 900 we have found several windshield resistor boxes with loose and discolored connections. Each aircraft has two resistor boxes which are located in the radome area. The resistor boxes have vent holes that can be used to make a general inspection of the large wire connections. If any signs of discoloration are seen on the wire connections, the covers should be removed and the wiring connections checked for condition and torque.

Hydraulic Pump Improvement

•Chris Gress

Some hydraulic pumps used on Falcons have had reoccurrence of shaft seal leaks. Abex, the manufacturer of the 42045 hydraulic pumps, has developed an improved unit. These are p/n 42045-01, which are more dependable and less susceptible to leaks. The modification increases the shaft bearing load capacity, changes the nose seal material to a material which is less susceptible to cracking and increases the sealing surface area for longer life and less wear. Modification to the -01 is suggested, however p/n 42045 pumps can be repaired and returned to service as p/n 42045. Modification to the -01 must be complied with at Abex. Service Bulletin 42045-29-285 describes this modification.

Welcome, Pete!

•Jeff Manion

Duncan Aviation welcomes Pete Hubbard to the LNK Falcon sales team. In this position, Pete will assist Falcon operators in planning for maintenance events and provide quotes for these worksopes. Pete has been involved with aviation since 1977. He joined Duncan Aviation in 1992, and most recently held the position of Falcon team leader.

