

## **Sky-Tec Starter: C24SF3, Shorted Commutator, ATA 2434**

(This report references Cirrus SR20 aircraft with a Continental IO360ES engine.)

"After start up, the crew noted the R/H IFD (instrument flight display) went blank," says this repair station mechanic. "The maintenance crew suspected a bad battery (low voltage), so they installed a new battery. When the negative wire was installed, a large spark (was generated). The 'Battery NO. 1' relay was found to be stuck. After replacing the relay and the battery, the engine would not start. The starter was replaced, and during run up all conditions were normal. IFD data was downloaded and reviewed, and the starter disassembled. The maintenance crew determined a dead short-to-ground caused by a section of the commutator coming loose had caused Battery NO. 1 to rapidly discharge, causing the relay to stick in the closed position. (My) recommendation to flight crews is to monitor the systems page on the IFD (after start up) to determine proper battery discharge/charge rate and bus voltages."



Part Total Time: 850.0 Hours