

To whom it may concern.

It has come to our tragic attention that the smoke system continuing to run may have been a factor in the fatal accident of Amanda Franklin as well as a factor in a least 3 other accidents that I have seen video of. To prevent this I have wired a simple pressure switch into the smoke system control circuit. The system has worked well in testing and at airshows. Parts list as follows.

1. Utilize a part comparable to the Switch Summit Racing part # SUM G1438. This is a fuel pump safety switch for turning off fuel in case of loss of oil pressure.
2. Guarded switch for Bypass. SPST toggle. (Very high quality switches are available from marine supply houses.)
3. Earls #99170 1/8 NPT tee fitting. (check size required for your installation.)
4. Relay. Standard aux light relay for automotive use. Mine is Bosch from NAPA.

Installation was as follows.

1. Install tee fitting between the engine and sending unit. You will get a quicker response if the switch is installed before oil pressure restrictor fitting.
2. Installed switch #G1438 in to tee fitting and leak checked installation.
3. I wired the switch into the ground wire from the relay control. It allowed me to run only one wire but it could go any place in that circuit.
4. A bypass was installed in the ground circuit to allow emptying the tank on the ground without oil pressure being present.

Aircraft standard practices as outlined in AC 43 13 should be followed. Also if you are a certified aircraft a 337 form and inspection by an IA may be required.

The installation as described has been able to shut off the smoke in less than 4 seconds after the engine has stopped. This is not perfect but is better than what we are doing now. I have also developed a healthy respect for the oil we use and its dangers. I have run an F350 turbo diesel on it and have some other demos being put together for ICAS. This stuff is not water and is dangerous.

Guys this is what I have done to prevent the continued running of the smoke system after an accident. The total installation time and expense came to 2.5 hours and about \$46. This or something like it should be installed in all systems that use an electric pump to move smoke oil.

Thanks guys let me know if this is clear enough.

Flysafe
Buck Roetman