

Fire!



Rick Tutt

Rick Tutt is a 22 year, 14,500 hour, career instructor pilot. He is the West Coast Representative for ATM LLC, the KSCK Airport representative for the California Pilots Association, and a member of several aviation associations.

Once Upon a Time...

The story begins all the way back in 1998. A gentleman by the name of Reid Johnson asked me if I would like to attend a Piper Malibu training class. In doing so I could, upon completion of the session, serve backup when he was unable to take a flight in the PA46 due to other corporate piloting commitments.

So of course I agreed. This is how life goes as an independent corporate pilot. You stretch yourself between multiple clients and hope several do not call at the same time. When that happens, you have to find somebody to fill in, which is exactly what Reid was asking of me. I did not hesitate to help out because Reid was responsible for my earliest opportunities in the corporate world. He gave me the chance to get checked out in numerous airplanes, including all the pressurized Twin Cessnas, the Piper Navajo series, the Beech Baron series, the PA46 and the Super King Air B200.

Initial Training

My first experience with the PA46 began with training instructor Ron Cox, who came in like a drill sergeant. Actually, he is a retired Lt. Colonel in the U.S. Army. He was ready for battle, and off we went.

This initial session with Ron turned out to be the beginning of a long and fruitful relationship. At the time I had a Part 135 Air Charter operation, took whatever corporate flying work came my way and did a little proficiency instruction as well. For six years I owned and operated a flight school locally and trained numerous pilots. I was all set and happy with my diverse flying opportunities. And then along came Ron. He was relentless in his pursuit of a west coast location to reduce his cross-country travels. After much discussion and consideration, I eventually agreed to serve as Ron's West Coast Representative for Aviation Training Management, Inc.

Right from the start I was so busy with training flights, scheduling clients weeks in advance, that I had to pass on charter opportunities. I liked the advanced scheduling compared to those unexpected late night calls for an unplanned early flight the next morning. I soon bailed on the charter business and made a full-time commitment to Ron. We established our first classroom in the Spanos Jet Center at the Stockton Metropolitan Airport (KSCK).

Fast forward more than ten years and I continue today as the West Coast Representative for ATM LLC, still working primarily out of KSCK. Ron has since sold his interest in the organization but the company still lives and thrives. While I train more than 100 pilots annually in a wide variety of aircraft, I have a special kinship with the Malibu. So much so that I co-own one myself.





An Ordinary Day

The morning of August 14, 2009, began like any other. In preparation for the day's first flight I called the Automated Flight Service Station, where I connected as I often do with "Seattle Rick," who refers to me as "Stockton Rick." We have gotten to know each other by phone since I call at 04:30 five days a week. My data are stored under my phone number with the AFSS so the briefer knows who is on the phone; the flight plan form is pre-filled with information that does not vary between flights.

I met Frank Worner at Concord, CA, to complete the in-aircraft flight training portion of his annual recurrent. I have been flying with Frank since 2003. He owns a PA46-310P with the 550C conversion, a clean machine with two GNS 530Ws in the panel.

We started out with an uneventful hour of basic air work, which included in-flight emergency procedures encompassing engine fire, electrical fire, and flight deck and rear cabin smoke and fire. The air-conditioner was not working well so we flew unpressurized.

Not So Ordinary Now

We elected to fly RNAV to LPV minima into Tracy (KTCY) on a routine GPS approach

that I have used before many times. This time was special, however. Just as we crossed the Intermediate Fix (IF) on the final approach course, Frank selected the "Approach Mode" of the KFC150 autopilot. Almost immediately, smoke poured into the cabin.

I immediately said, "Frank, you fly, I'll try to fix the problem." I went to work. We asked each other, "What did we just do last?" We had done something electrical in nature. "Let's start out with turning off the electrical system and see if the smoke dissipates. In the meantime, Tracy is 15 NM on the nose so let's head in that direction while we sort this out." We were at 3,300 MSL at that moment, and just about the same AGL.

Relentless Smoke

We could not immediately determine the origin of the smoke, which just kept coming, mainly from under the co-pilot's rudder pedals. We also noticed that the smoke was black and not electrical in nature. The smoke became so thick that I leaned over Frank's shoulder and opened the storm window. I stuck my hands out the window and funneled the air along my arms and across my chest to blow the smoke toward the rear of the plane. As the cabin was not pressurized, the smoke wafted rearward, and then out the back.

As we considered our condition, we agreed we did not want to slow down to perform an emergency gear extension. So we switched the battery ON to lower the landing gear. No response. We did not have any lights: no red light on the annunciator panel or green lights on the lower panel. We also did not have any sensation that the gear was down or had gone down. We switched off the electrical system.

Once again the smoke became so thick I had to funnel outside air from the side storm vent. The smoke was pouring in at such a high velocity that I had to leave the right seat to determine the origin. To the extent I could determine, the smoke appeared to be entering the cabin from under the right side of the instrument panel. So I stuck my head down towards the right rudder pedals and could see smoke coming in from the pedal push rod that attaches to the bell crank for the steerable nose gear linkage. I was pretty sure I could see flames flickering through that seal. The smoke was so thick I could stick my head down there for no more than a moment at a time.

Awfully Quiet

Then, in the midst of all this, the engine suddenly quit. I asked Frank if he did something and he replied, "No." I said, "It looks like we're going to make a forced

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landing.” Frank set up for best glide and looked for a place to land.

We had several open fields in front of us but many were surrounded by power lines. We continued forward looking for a good spot, “good” being relative of course. We went through the drill to attempt an engine restart by confirming air, fuel and spark, mixture rich, propeller lever forward, throttle forward, magnetos on and fuel selector switched to a good source. Nothing. Frank shut everything down and we continued to glide. We were now down to 2,000 feet MSL.

One benefit of the dead engine was that the smoke began to subside. I blew air rearward one more time and looked closely at the rudder pedals, where I noticed the smoke was just lightly flowing through the seal. We were now about 1,000 MSL. The good news is that Frank spotted a field with no power lines at the approach end. The bad news is that we were heading perpendicular to the rows. Our proposed destination airport, Tracy, had winds at 300 degrees, and we could see the wind on the surface here favored that direction. We had 10 knots of wind on the nose and never considered landing parallel with the rows.

I asked Frank to lean over to the side a bit so I could jump back in the right seat and buckle up. I reminded myself to do three things: sit up straight, listen for the seatbelt tab to snap into the buckle and pull the belt snug to my hips (reminding Frank to do the same). I adjusted my shoulder harness snug to my chest. I told Frank to be certain that he touched down with wings level and to *never* stop flying the plane until the plane stopped flying.

Terra Firma

A few seconds later we touched down. We landed firm on the mains, which were in fact down, and nosed over immediately. We were completely caught off guard with the extended gear. At no time did we have a sensation that the wheels were down, nor did we ever suspect them to be extended. In retrospect, we might have speculated about the gear in preparing to land; 20/20 hindsight.

I jumped out of my seat and headed for the cabin door. Frank was right behind. Once outside the airplane, I spotted flames under the engine compartment. We continued to move rearward of the aircraft to gain distance in case of an explosion. Once safely away, our first order of business was to determine if we sustained any injuries. Frank and I were both OK, with nothing more serious than Frank’s scraped knee to show for the wild ride. The plane did not fare as well.

Non-standard Briefing

I called AFSS on the 800-WX-BRIEF phone number. By chance, I got Seattle Rick! He immediately asked, “Are you all right and how’s the guy with you?” I explained our condition and he duly took the information; then he put his supervisor on the line. I asked him to inform the local Fresno FSDO and the NTSB of this event. While I was still on the phone, emergency vehicles began to descend on the scene. After I hung up, Frank and I called our wives.

I uncwaled the engine with the fire department to determine if anything was still burning. We disconnected the battery. From the firewall

to the pressure vessel, hoses and wires were burned and soot covered the entire area. The fuel and hydraulic lines were burned through. The cowling was scorched in an area not visible from the cockpit.

The flames had exited rearward along the wheel well, bumped up against the pressure vessel, burned the pushrod boot and pressure vessel seal, and then ran straight down out the louvers on the nose wheel door. The rear louvers on the right door were burned all the way through, as if a blow torch had been used. This is evidence that a fire raged for awhile with the gear still up and the doors closed.

During much of this time, we had no knowledge of flames, smoke outside the airplane or a heat signature of any kind. Furthermore, if we had been pressurized, we may not have known of the problem until much later. The smoke may not have entered through the pressure seal. Instead, the engine would have quit without any indication of a fire. If that had happened, we would have followed the emergency procedures, which includes engaging the auxiliary fuel pump to attempt an engine restart. Imagine that for a moment: we would have been pouring fuel under high pressure onto an existing fire. That is a scenario I would rather not contemplate.

Trust, But Verify

Even after that forced landing, I retain my trust in these airplanes. The NTSB will not yet talk about this event, nor would Piper at the most recent MMOPA Convention. While both organizations are reluctant to discuss the issue until a final report is out, I am sharing this story now as a reminder to all piston pilots that engine fires are not just some theoretical emergency to consider only during annual training and then to promptly forget until the next year. Training is important because emergencies really happen, and when they do, you must be prepared.

