

Subtly Exchanging Electrons

T-1 gets zapped in lightning storm

By Maj Joe Williams, Columbus AFB, Miss.



It was supposed to be an uneventful pilot training sortie in the comfortable T-1A. “Comfortable” would have to wait for the La-Z-Boy recliner and wide-screen TV at home.

The mission started from Columbus Air Force Base, Miss., as a 3-hour formation flight to Chattanooga, Tenn., and then a 2-hour copilot ride home for the student. The copilot return leg included a drop-in to Warner Robins, Ga.

On the second sortie, the plan started falling apart as the automated terminal information system at Robins AFB, Ga., reported, “Thunderstorms within 10 miles and the potential for wind shear and hail.”

They may as well have hung a “closed for business” sign out as far as we were concerned.

We elected to skip the approaches there and go on to Columbus. We climbed to flight level 260 and asked Atlanta Center for some routing changes to avoid the obvious weather on our radar. Then we’d be home free ... or so we thought.

The radar painted nothing remarkable. But suddenly we were in a ping-pong ball — a flash of light slightly off the nose, a muffled bang, a slight buffet ... and a scream from the student copilot.

It took a second or two to soak in what had happened. If we hadn’t been struck by lightning, it had been pretty close.

We checked the aircraft systems. Everything appeared to work perfectly. I checked the jump seat student off to look out the rear windows to check the outside of the airplane for signs of a strike.

He couldn’t see anything. While we referenced our DASH 1 (the aircraft’s owner manual) for guidance, I began to wonder if it wasn’t just a close call.

I called our operations desk to get approval to land early, as flight durations are very specific in pilot training. Ops approved the request, with the recommendation to declare an in-flight emergency with approach control to have the fire crews respond.

The DASH 1 provided little help other than to say be careful of grounding the aircraft after a possible strike as residual electrons may have stowed away on the aircraft.

We continued to check the aircraft systems repeatedly for the 20-minute flight to Columbus, and we reviewed the emergency ground egress procedures in case the fire crews wanted us to get out of the jet.

We recovered into Columbus uneventfully. The fire crews found no signs of a lightning strike and cleared us to park.

I really felt stupid having all these people respond to the aircraft and getting the squadron involved in this non-event. However, when we parked, got out of the air-

craft skin. Additionally, the elevator horn had been delaminated. Discussion ensued as to whether we had been struck by lightning, or was it just a bad case of static discharge? I don’t think we’ll ever know. But I do know there was a significant exchange of electrons one way or another between my jet and the clouds.

The lesson for our crew was that the lightning event in this case proved subtle. With all the aircraft insulation, the sound wasn’t significant (though the copilot’s scream was). The systems worked perfectly, and there were no large smoking holes obvious to us. Nevertheless, we sustained a pretty severe jolt that did some minor structural damage to one of the flight controls.

With all the flying out there in the real world, it’s tough for pilots to make that call whether to continue a mission or not. But this event reinforced with me the marching orders we receive as flyers in Air Education and Training Command: There isn’t a flight we can’t do tomorrow. So if something doesn’t seem right, bring it home. We’ll try it again tomorrow.

We continued to check the aircraft systems repeatedly ... we reviewed the emergency ground egress procedures in case we had to get out of the jet quickly.

craft and started looking around the jet a little closer, it turned into an “Easter egg hunt.”

Maintenance eventually found 14 burn marks. It looked like a cigar had been pressed onto the

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