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COMMENTARY / THE CLASSIC INSTRUCTOR

Jerky Driver or Smooth Aviator

Which are you?

BY STEVE KROG

I FLEW WITH A YOUNG LADY recently who had earned her private pilot certificate the previous week. She has a goal of building time, earning additional ratings, and eventually becoming a flight instructor. Her instructor had suggested that she get a tailwheel endorsement.

She handled the airplane beautifully even though this was her first flight in a tailwheel airplane. Control inputs were smooth and coordinated. Back in the traffic pattern, everything was fluid and precise, and the landings were quite good for doing them the first time. After she left, I reviewed the flight in my mind and began comparing it to some of the other flights I've experienced. What a difference there can be from one pilot to another.

For instance, even just taxiing away from the hangar, a smooth aviator is quite conscious of the surface wind direction and velocity, positioning controls as needed. The jerky driver just lets the control stick bounce and flop with no consideration for the wind.

Once taxiing has begun, the jerky driver continuously advances and retards the throttle, speeding up and then slowing down and frequently riding the brakes. The smooth aviator applies light power, gets the airplane rolling, and then sets the power as needed to maintain a steady taxi speed. When flying with jerky drivers, I often think they must make automobile drivers that follow them crazy by always speeding up and then slowing down.

En route to the runway, I have all students practice very slight S-turns to observe for traffic or obstructions. Turn the nose about 20 degrees left and then lean to the right for a clear view. Repeat left and right every 10 seconds until reaching the runway end. The jerky driver usually taxis too fast due to throttle inputs, which causes the S-turns to become more and more exaggerated until doing near 90-degree turns. The ride to the end of the runway can get very interesting, sometimes leading to a bit of off-roading around runway lights and other ground hazards. The smooth aviator continues the practice of slight but steady power application and steady taxi speed. The S-turns for traffic monitoring remain slight and always under control.

Our airport is laid out with intersecting runways. Thus, we often must cross a runway to get to the desired departure runway. The smooth aviator plans ahead, coasts to a stop behind the solid yellow lines, visually checks for traffic, and then announces the intention to cross the runway. The jerky driver slows down by riding the brakes but leaves the power at a setting used for checking magnetos and seldom stops. Then the jerky driver rolls through with little or no consideration for other traffic, advancing the power even more.

One maneuver that really shows the difference between a jerky driver and a smooth aviator is the 360-degree steep turn.

Performing the pretakeoff checklist also shows a difference between the two types of pilots. The jerky driver rushes through the list, checks mags and carb heat so rapidly the tachometer doesn't have time to show the rpm drop, and then taxis onto the runway. The smooth aviator methodically checks everything on the list. Mags are checked slowly to observe the proper rpm drop. The same with the carb heat check. When all is as it should be, a visual traffic check is made followed by a radio announcement ensuring that there are no potential traffic encroachments.

Now the fun really begins. The jerky driver taxis onto the runway and slams the throttle to full power. The engine coughs and then roars, and off we go with a large swerve to the left side of the runway. The jerky driver then slams a foot hard on the right rudder pedal causing the tires to squeal as the airplane makes an approximate 60-degree turn on the runway. This is followed by an equally hard stomp on the left rudder performing another 60-degree turn. While all of this is happening during the first five seconds of the takeoff roll, speed is increasing, and the tail is raised. The jerky driver now pushes hard on the control stick "to see over the nose,"

causing the airplane to veer even harder to the left. Once recognized the right foot is firmly planted on the right rudder and the 60-degree runway S-turns are resumed.

As ground speed increases, the jerky driver now pulls hard on the control stick and the badly abused airplane is forced into the sky. However, control input abuse during the takeoff and climb-out are still not over. The jerky driver plants the right foot hard on the right rudder positioning the airplane in a hard skid configuration. To offset the flat right turn, left aileron is now applied and the poor airplane is forced to try and climb sideways with the controls being badly abused.

The smooth aviator will taxi into position onto the runway, pause for a deep breath, visualize the takeoff, and then smoothly apply power and idle to full power over a 3-5 second time frame. As the power kicks in, the smooth aviator is prepared for the engine torque and propeller P-factor influence and gently taps the right rudder once or twice. The airplane tracks down the runway centerline, and back-pressure control is relaxed slightly as the speed increases. The tail lifts off the ground but remains in a tail-low attitude, allowing the wings to establish a near ideal positive lift attitude. The right rudder is again tapped a time or two, which keeps the airplane aligned with the runway centerline. Within a few seconds, speed increases and the airplane gently floats into the sky. No yanking, banking, or stomping was needed. Slight steady right rudder pressure, along with positioning the nose on the horizon for the climb, and the airplane performs the climb-out smoothly and efficiently.

One maneuver that really shows the difference between a jerky driver and a smooth aviator is the 360-degree steep turn. The smooth aviator will apply coordinated aileron and rudder inputs followed by adding slight back-pressure to maintain altitude. Once the bank is established, the aileron and rudder inputs are relaxed and the airplane performs a flawless turn. The rollout is equally fluid with coordinated opposite aileron and rudder application followed by relaxing the back-pressure being held.

The jerky driver looks upon this maneuver as a challenge and immediately begins moving the control stick to the left followed by stomping the left rudder pedal to the floor. This action then leads to full power application followed by pulling hard on the control stick. The rollout is equally uncoordinated. When I am in the passenger seat with a jerky pilot performing this maneuver, I can't help but think that the poor airplane is straining at every rivet and/or weld, while questioning the operator's ability.

The traffic pattern, approach, and landing are also easy giveaways to tell the difference between the jerky driver and the smooth aviator.

IF AIRPLANES COULD TALK

If airplanes could talk, wouldn't it be interesting to listen in on a conversation between two of them some evening?

"You wouldn't believe what the clown with the heavy feet tried to do to me today. He was trying to do steep turns, but it reminded me more of a hard game of Twister. My rudder is sore and my ailerons ache from the way the guy was pulling and twisting on them. I sure hope I don't have to fly with that one again tomorrow. I need some time to heal!"

The traffic pattern, approach, and landing are also easy giveaways to tell the difference between the jerky driver and the smooth aviator. A jerky driver enters the traffic pattern at full power and then yanks the power back with the engine popping, banging, and backfiring. One can tell immediately what kind of operator is at the controls of the arriving aircraft just by the sound.

The nose is then pointed skyward in an attempt to slow the airplane, followed by a steep nose-down drop as the turn to base leg is made. Watching closely from the ground, one can easily see the left rudder has been slammed to the floor while the ailerons are pushed in the opposite direction to keep the bank from increasing. Then, the turn onto the final leg is made with a repeat of the cross-controlled aileron and rudder inputs. Now the jerky driver tries to skid the aircraft over to align with the runway while adding about half power to offset the rapid altitude loss caused by the skidding turns.

The aircraft arrives over the runway end numbers about 15 mph too fast. The jerky driver chops the power and then begins searching for the runway, only to touch down and bounce 10 or more feet in the air. If the jerky pilot is in a tailwheel airplane, the rudder hinges and rudder pedals are smoking hot from the pedals each being slammed to the floor, causing the rudder to slam into the rudder stops.

The smooth aviator plans ahead. Power is reduced while entering the traffic pattern, dissipating any excess airspeed. Further power reductions are made while establishing a constant descent attitude, and coordinated control inputs are made for the turn onto base leg. The same is applied for the turn onto final. Power usage is smooth with only slight adjustments made to maintain a constant airspeed while making a steady descent. Once the smooth operator determines the runway is easily made at a proper altitude, power is slowly reduced, back-pressure is gently applied, and the touchdown is smooth with no bounce. Rudder inputs amount to slight taps to maintain a straight line while rolling out to a stop.

Again, if this airplane could talk, it would probably go like this: "I had a great flight today. We floated through the sky with no effort. I never once thought I'd pull a muscle, and the landing was like alighting on a cloud. My tires didn't even chirp. I can't wait to go again tomorrow!"

Are you a jerky driver or a smooth aviator? A bit of self-critiquing will help you determine the category in which you will be judged. Smooth, coordinated inputs will make for a better, safer flight, with a lot less wear and tear on your airplane. EAA

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