



## CLIENT ADVISORY

November 26, 2012

### **Aircraft operations**

To minimize the cost of repairs and subsequent rental rate increase and aircraft downtime, Ace Aviation would like to recommend the following time-tested aircraft handling procedures and care guidelines to our clients:

**Safe and efficient taxiing RPM:** Please do no taxi at greater than 1000 RPM other than needed for maneuvers such as turning, crosswinds, or uphill taxiways. The tendency is to use a higher RPM and ride the brakes for more positive steering of the airplane because of the free casting nose wheel. Also, some pilots are using this method with higher than safe taxi speeds.

**Landing with the feet up on the brake pedals:** Landing in this manner causes the pilot to have brakes applied upon touch down creating flat spots drastically decreasing the life cycle of the tire. This can be severe enough, particularly at KRTS because of the pavement grooving, to go through layers of cord, thus either disabling the airplane until repair can be made, or perhaps worse. In the future, it is possible that upon heavy braking a flat spot can stop the tire and the consequent "locked up" condition will then result in possible destruction and/or a flat.

**Pivoting on one tire:** When positioning the airplane, pivoting on one tire creates excessive wear on one point. This may not be visible at first, but leads to flat spots later in the life of that tire.

**Electric fuel pumps:** Use of the electric fuel pumps should be limited to take off, initial climb, ground reference maneuvers, switching fuel tanks, and landing.

**Starter motor:** Use the starter motor as prescribed on the panel placard and proper priming/engine control configuration procedures as well as exercise absolute diligence when checking mags on the run up.

**Fouled spark plugs:** Fouled spark plugs have been the result of taxiing with the mixture full rich and lack of proper leaning procedures through the climb and at altitude.

**Cruise climb airspeeds:** Use of cruise climb airspeeds are encouraged to decrease vibration and give greater life with less maintenance to our aircraft. Often there are harmonic vibrations that occur around particular airspeeds and power settings that can be

avoided. Of particular importance with summer temperatures and density altitudes being much higher, use of cruise climb airspeeds and periodic level off during climb out reduce the risk of oil temperatures reaching critical levels, i.e., the "red zone" on the oil temp gauge. Keeping the needle out of the upper end of the yellow on the gauge monitoring oil temperatures with diligence avoids the difficulty and consumption of time to cool the engine once it does reach the "red zone" at which point engine damage and/or destruction can occur. Reduction of power settings during the level off can also greatly aid in cooling. Cruise climb airspeeds to be used are 80 knots for the DA-20 and 90 knots for the DA-40. As always, thank you for flying with us and helping to maintain safer aircraft.

**Clean cockpit:** Clean cockpits and a clean wind screen contribute to safer operations. Often our planes have the pockets full with the previous pilot's charts, lip balm, old pens, used tissue paper, food debris, etc. We will make every effort to keep the cockpit area and wind screen clean before your flight, but we request that you assist us by cleaning up after your flight so that the next pilot finds a clean cockpit. The tow bar and other implements need to be stowed in the appropriate storage area. It is a good pre-flight practice to ensure that the wind screen is clean before your flight. Our instructor can show you how to quickly and properly (no swirl marks) clean the wind screen if you are not familiar with this pre-flight procedure.

**Post-flight procedure:** Along with removing the items described above from the cockpit after your flight, it is good practice to perform a post-flight, similar to a pre-flight, of the aircraft, identify any abnormal structural or mechanical conditions that may have developed and notifying us immediately so that we can make every effort to make any necessary repairs before the next pilot arrives to perform a pre-flight and cancel the flight.