Risk Management and Single pilot operations

Single Pilot Ops are believed to be about 50% more likely to be involved in accident than with two flight crew members. And the overall fatal accident percentage is twice as high for single pilots vs. two pilot – Single pilot more likely to be owner-operator (vs. two professional pilots) and many such accidents are in challenging weather on landing.

Owner-operators may be flying in support of another (primary) business – may be flying when tired, are successful in other endeavors and bring a "I can do this" attitude with no second crew member to provide a second opinion.

Decision-making before & during flight is critical. But most training organizations focus on training to proficiency about the operation of the plane & systems – not training on aeronautical decision-making. Accident risk factors include total pilot experience, recent & total experience in type and recent experience in type in challenging weather conditions ....

Instrument "currency" should not be a license to try unfamiliar, difficult approaches, when tired. **Set personal minimums** that are appropriate to the situation.

Professional attitude, cockpit discipline and **commitment to excellence** are critical. Flying safely in a single-pilot environment is more of an attitude of 'I'm not going to accept anything but the best from myself'.

Strong **Instrument flying skills** are imperative. One training session per year isn't enough to keep you sharp for 12 months. Practice all the time. Need recent experience with more than "vectors to the ILS"; practice various approach situations.

Know airplane systems & performance limitations – fly plane within tolerances & know when missed approach is mandatory in all situations.

Stay ahead of plane – miles ahead. Single pilots don't have time for 'check-response' CRM procedures. Know rote memory procedures, master cockpit flow patterns and use checklist as follow-up; use as a 'check-list', not a 'do' list.

Errors happen. **Learn to recognize & correct errors** – break 'error chain' before it becomes major problem.

Reduce workload. Fully functioning autopilot a required item; use it. Know how to use GPS and other tools. **Manage workload, plan in advance**.

Situational awareness with new generation avionics: **4 types of awareness** – Position, weather, traffic and terrain.

Be willing to say 'NO': Consider ... non-aviation professional & personal stress; unfamiliar airspace; busy ATC; hard IFR; night; strange approaches; new intersections; new STARs, etc.

Make commitment to:

- embrace highest standards for pre-flight decision making,
- instrument proficiency,
- proficiency training in your aircraft and conditions,
- use automation to reduce workload

→ otherwise find a good safety pilot. Know your limitations, enjoy your plane.

1 Make a commitment to attend regular FAR Part 142 training with high standards that will genuinely test your proficiency. A daylight VFR check and rubber stamp sign-off by a local FAA designee isn't in your best interest if you want to be the safest possible pilot.

2 Maintain good instrument and multiengine flying skills. Show up for proficiency training with a mastery of those basic skills. Instrument refresher training isn't the best use of simulator time. Simulator time should be devoted to scenarios that are too risky to duplicate in an airplane.

3 Become an expert on your airplane, its capabilities, its functions, its range and its performance limitations. Use all the automation to reduce the nuts-and-bolts workload, so as to increase time to manage the "big picture."

4 Recognize the error chain and the importance of situational awareness in breaking it. Don't allow small errors to compound into a self-induced accident.

5 Know your own personal limitations as well as those of the airplane. Recent time in type, recent instrument flying proficiency, night, IFR, familiarity with the operating environment and job stress should be considered, along with professionally identified, individual personality traits.

6 Master the skills, ace the check ride, know your limitations and enjoy single-pilot operations.

RTK Jan2007