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STATEMENT OF ISSUE:

Non-harmonization between the JAR-OPS requirements and FAA ops requirements leads to difficulties in trying to design an aircraft "equipped" for use in the mass market. This is aggravated by a tendency within the operational community to view small jet/fan-powered airplanes as needing to be at higher levels of safety than propeller driven airplanes of the same weight and passenger capacity.

BACKGROUND:

Fan/jet-powered airplanes are hindered from operational approval simply due to the means of propulsion (with higher reliability jets/fans being one of the safety enhancements). This is due to a tendency to require small airplanes powered by jet/fan engines to meet "transport-like" standards, even though the airplanes are certificated to Part 23 standards and provide enhanced safety over propeller driven airplanes of the same weight or passenger capacity.

This tendency is particularly true in JAR-OPS 1, where aircraft performance requirements, no matter the size or passenger seating capacity, for all jet/fan-powered airplanes must be to transport category airplane standards. Therefore, airplanes that may have less safety inherent to the design (i.e., reciprocating engine powered airplanes with less climb capability, aircraft with high stall speeds) and/or that carry more passengers can enter operational use easier and quicker than aircraft that may incorporate safety enhancements. Further, by applying transport standards to small jets, the increased runway lengths would make operation in smaller fields by jets prohibitive. Therefore, safety improvements provided by jet/fan-powered airplanes will be precluded since the shorter fields will continue to be serviced only by propeller driven airplanes.

This also holds true for single pilot operations, where only transport category airplanes and all fan/jet-powered airplanes cannot operate single pilot under JAR-OPS 1. This doesn't seem logical considering that jet powered airplanes are generally simpler to fly than propeller driven airplanes, and that all pilots for jet/fan-powered airplanes are required to have Type Ratings.

Also, the requirements for FAR Part 135 and JAR-OPS 1 do not align, requiring different operational considerations for domestic versus European operations. Besides the aforementioned jet requirements, items such as DME, ADF, etc. may be required for European operations; however, not required for domestic operations. This makes it very difficult for a manufacturer to address operational approval of the airplane as part of the basic design in a cost-effective manner.

Additionally, the JAA has no equivalent to Part 91 for owner/operator operations. This requires owner/operators to use individual country's standards, as opposed to a European standard such as JAR-OPS 1.

Reference Regulations:

The following provides sample reference regulations to above background:

Regulation	Comments
FAR 135.149	Requires a third, independent artificial horizon for turbojet powered airplanes only (also, not required by JAR-OPS 1)
FAR 135.171	Requires an approved shoulder harness for each crewmember for turbojet powered or 10 or more passengers (i.e., Part 25 airplane) (also, not required for JAR-OPS 1)
JAR-OPS 1.470	All Transport Category and all turbojet powered must meet Performance Class A (i.e., JAR-25 performance requirements) (also, not Part 135 requirement)
JAR-OPS 1.652(n)	Requires illuminated chart holder (not required by Part 135)
JAR-OPS 1.820	ELT required (not required under Part 135)
JAR-OPS 1.855	Requires audio selector panel (not required for Part 135)
JAR-OPS 1.865(c)	DME and ADF required for certain instances (not required under Part 135)
JAR-OPS 1.940(b)	Minimum flight crew is 2 for all airplanes with over 9 passengers (i.e. transport category) and all turbojet powered airplanes