European Union Aviation Safety Agency

Extended model list

Use of extended model list in case of minor changes for common replacements (box out - box in) of basic avionics equipment (e.g. transponder)

Answer

The replacement of avionics is a change to the type design that has to be approved in accordance with Part-21, and, for that, it has to be classified as major or minor, depending on the effect that the change has on the airworthiness of the A/C. The rules for the classification are identified in paragraph 21.A.91 and the guidance in the GM 21.A.91. Additional guidance can be found in the FAA AC 23.1309-1E and the "FAQ table of design change classification".

Regarding the applicability of the change, each application need to include a reference to the TC and the eligible A/C type/model to be changed. As indicated on EASA website at the FAQ for Fees and Charges, one application for TC, RTC, STC, Major and Minor Change can cover several models but not more than one type per certificate.

There are, however, some **exceptions** where a list of models, applicable to aircraft covered by different TC's, has been accepted. In such case, it has to be shown that the design change and the demonstration of compliance is valid, **without relevant differences**, on all the TC's/models listed in the paragraph on the applicability of the modification.

Modifications consisting of a replacement ("box out – box in") of basic avionics (e.g. transponder) represent one of such exceptions. In order for a design change to fall in this category, where an extended model list of A/C from different types can be accepted, the following criteria should be met:

- The design change is classified as minor according to Part 21.A.91;
- A proper and detailed model list is provided;
- A common certification basis in the Area of the change can be applied;
- Commuter category is excluded;
- The design change must be a pure replacement ("box out – box in");
- For equipment located on the flight deck, it must be replaced by equipment

which utilises the same location as the equipment which was removed;
- The validity of the modification design has been checked and justified in writing for all the models in the list;
- The minor classification is valid for all the models on the list. This means that the conditions that make the classification minor are valid for all the models (and categories) and no limitation is invalidated (example: installation of transponder on A/C with cruise TAS greater than 250 kts, is major);

The following conditions also apply:

- The mass of the new equipment is not significantly higher;
- Cables and Antennas have not changed (change of the mating electrical connector on the aircraft is accepted);
- The equipment does not add any new functionality.

Meeting all the above conditions typically allows acceptance of applications with extended model list. When one or more of the above conditions are not met, a case by case evaluation is possible. In both cases, acceptance will not constitute a precedent for any future change.

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Link:

https://www.easa.europa.eu/en/faq/19358