

MAINTENANCE INTERVALS PLANNING OPTIMIZATION OF NEW GENERATION AIRCRAFTS AVIONICS.

One of the major reasons of aviation accident is unsuitable maintenance program.

Nowadays maintenance steering group-3, the “Operator/Manufacturer Scheduled Maintenance Development Document” is used.

The airlines restructured MSG-3 to be a system-driven, top-down, and task-oriented process. MSG-3 inspection tasks are now written in a specific descriptive format (task-oriented) that is easier to understand, instead of just citing the task process. The Boeing 757 and 767 were the first MSG-3 decision logic designed aircraft.

MSG-3 analysis is a rigorous, structured process that by-design determines optimal scheduled inspection tasks and intervals. It employs a lean set of building-block inspections consisting of zonal, general visual, detailed visual, and non-destructive. Each successively higher inspection incorporates lower-level tasks. For example, a depot-level, non-destructive inspection for a structural item will satisfy all lower-level visual inspections. The end result is a totally integrated maintenance program.

But is it usefull to maintain all units of aircraft as one, even if they are of one type?

In my opinion there is another way of problem solving.

Firstly it is better to consider aircraft as unique one. Than replace “system” oriented program into system oriented on “Statistical Intervals”. That means that you take into account not only general knowledge about systems their faults, but Scheduled Maintenance, Log Books, Component Removal, Delay & Cancellation, Shop records and Maintenance Cost. After this you have to analyze all this documents and make a conclusion. Doing this you will receive optimized task interval.

Finally you will achieve increasing of Aircraft Availability, reliability, Implementation Speed, also Maintenance Cost and Maintenance Labor Hours will be decreases.

So, I propose to have such steps in impruvment of maintainence intervals:

1. Gather Data;
2. Optimize Tasks;
3. Update Program;
4. Regulatory Approval
5. Start maintaining using new intervals.

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