

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.75

National Policy

Effective Date:
06/12/09

Cancellation Date:
06/12/10

SUBJ: Policy for the Implementation and Optimization of Tasking Intervals per Issue Paper 44

1. Purpose of This Notice. This notice provides guidance regarding the International Maintenance Review Board Policy Board (IMRBPB) Issue Paper 44, Evolution/Optimization Guidelines used by the Original Equipment Manufacturer/type-certificate holder (OEM/TCH) and Maintenance Review Board (MRB)/Industry Steering Committee (ISC) members who are involved with the evolution/optimization of tasks in a current MRB Report (MRBR). This policy applies to evolution/optimization activities where no official correspondence has been forwarded to the Federal Aviation Administration (FAA) or for activities to be finalized (MRBR proposal/Merit Promotion Program submittal) after April of 2009.

2. Audience. The primary audience for this notice is Aircraft Evaluation Group (AEG) aviation safety inspectors (ASI) with oversight responsibilities for MRBR revisions. The secondary audience includes Flight Standards branches and divisions in the regions and in headquarters.

3. Where You Can Find This Notice. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at <http://fsims.avs.faa.gov>. Operators and the public may find this information at: <http://fsims.faa.gov>.

4. Background.

a. Process Shortcomings Analysis. Since February 28, 2008, a working group made up of members from the AEG and IMRBPB has met in Long Beach, California. This work group was formed to discuss process shortcomings regarding OEM/TCH evolution/optimization of tasks as they relate to the MRBR.

b. Issue Paper 44 Concurrence. On March 31, 2008 the Issue Paper 44 working group convened in Ottawa, Canada to agree and assemble Issue Paper 44 to be presented at the International Policy Board in May of 2008. Concurrence was reached and a final copy of Issue Paper 44 was assembled and posted on the International Policy Board Web site. Issue Paper 44 was accepted at the IMRBPB meeting in April of 2008.

5. Related Documents (current editions).

- Advisory Circular (AC) 121-22, Maintenance Review Board Procedures.

- Order 8900.1, Flight Standards Information Management System, Volume 8, Chapter 2, Section 7, Maintenance Review Board Reports, and
- Issue Paper 44, Evolution/Optimization Guidelines.

6. Policy Statement.

a. An OEM/TCH Data Collection System. The OEM/TCH should have a system in place that allows for the collection of data found during the operator's task accomplishment to be delivered to the OEM/TCH. This data must be entered in a standardized format into their data collection system. The OEM data collection system must include:

- (1) A data communication process/facility;
- (2) A data storage infrastructure (electronic, manual, etc.) and
- (3) A data management system (revision control, access control, etc.).

b. MRBR/TCH Utilization of a Standardized Format. MRBR task evolution/optimization must be based on worldwide representative samples that span the operating environment and age groupings of the aircraft. The OEM/TCH must utilize in-service data in a standardized format (ATA SPEC2000 chapter 11, format or equivalent), to ensure data quality and integrity.

(1) The OEM must demonstrate that the operator's data is collected in, or converted to, SPEC2000 format or equivalent. An equivalent format may be acceptable if the following requirements are met:

(a) The format is standardized and used by all operators submitting data to ensure data integrity.

(b) The data should be in electronic format.

(c) The data elements are clearly defined to facilitate an analysis comparison.

(d) The required data fields are available to support statistical analysis and engineering evaluation.

(e) The data attributes are designed based on SPEC2000 definitions.

(f) The formats/templates used for in-service data collection must be incorporated into the PPH.

(2) The OEM/TCH must have a data quality system in place. The system should be able to:

(a) Validate incoming data to ensure that data format/content conforms to the standard.

(b) Quality Control and audit reports are generated and corrective actions are taken, as necessary.

(c) Original data is kept unchanged throughout the process.

(d) Be accessible as needed.

(3) The data collected and used by the OEM/TCH regarding evolution/optimization must include the following information:

(a) Number of tasks accomplished.

(b) Interval of tasks findings applied.

(c) Component data (shop findings, no-fault-found removals and failures), if available.

(d) Aircraft utilization (flight hours, cycles, calendar days, as applicable) should be captured and evaluated.

(e) Unscheduled maintenance findings, as applicable.

(f) Scheduled maintenance findings:

- Routine maintenance tasks that generate no findings,
- Routine maintenance tasks that generate findings,
- Unrelated significant findings, if applicable,
- Four digit ATA code, if available, and
- Serial number of aircraft.

(4) To the extent possible, consecutive task check data should be captured to assess reliability of aircraft systems, components, or structural elements related to the MRBR task. This requirement may be applied to lower interval tasks.

(a) In-service data and both scheduled and unscheduled maintenance findings related to the intent of the Maintenance Steering Group - 3rd Task Force (MSG-3) task should be evaluated.

(b) Scheduled maintenance findings and in service findings should be linked to appropriate MRBR tasks, as applicable. Only findings related to the MSG-3 task intent are relevant.

(c) Unscheduled maintenance findings, and the resulting corrective actions captured from pilot reports and maintenance reports should be reviewed, as applicable.

(d) Operators should capture significant non-routine findings generated in the course of an unrelated maintenance task, if applicable.

(5) MRB optimization should be on a task-by-task basis. The OEM must develop a statistical analysis methodology that is acceptable to the FAA.

(a) Interval evolution/optimization should be based on risk management. Risk management is the systematic application of management policies, procedures and practices to the tasks of identifying, analyzing, evaluating, treating and monitoring risk.

(b) MRBR task interval optimization is based on principles that reflect the criticality of airplane systems, components, identified during MSG-3 analysis. Failure Effect Categories should be accounted for during the analysis.

(c) MRB task intervals can be escalated based on the results of in-service experience. In addition, tasks should be deescalated when in-service data supports interval reductions. A task may also be deleted when it is determined that the task is ineffective or the failure mode for which the task was selected never developed due to effective design provisions.

(d) Task deletion, addition, or modification of intent requires new/revised/amended MSG-3 analysis.

(e) The intervals of potential failure finding tasks (i.e., those looking for degradation) should be between the point at which a potential failure becomes detectable and the point at which it degrades into a functional failure. Consecutive task accomplishments should be assessed to show that failures are not occurring before the new initial interval.

(6) OEM statistical methods must be able to determine the right amount of data is available to provide 95 percent confidence level.

(a) In a data-driven statistical decision-making process, data size is determined based on the level of confidence.

(b) Confidence level refers to the likelihood that the overall fleet performance lies within the range specified by the sample fleet performance. The confidence level is usually expressed as a percentage. For example, a 95 percent confidence level implies that the probability that the fleet parameter lies within the confidence interval is 0.95.

(c) For a given confidence level, data size may vary depending on the fleet size and variability of in-service data.

(d) Aircraft Age - MRB Task evolution must be based on in-service data collected from a representative sample of older as well as newer aircraft incorporating more current production standards and modifications. Fleet age representation must be summarized in the analysis report.

(e) Geographical or Operational Environment Representation, as appropriate MRB task interval adjustments must be based on in-service data collected from a representative sample which spans statistically significant operating environments.

(f) MRB task interval adjustments should be considered after sufficient service experience is accumulated since entry into service. Subsequent task interval adjustments should be considered after additional service experience has been accumulated since the last interval adjustment. In both cases, data sufficiency is measured by the level of confidence as stipulated in these guidelines.

(g) The OEM/TCH must develop and implement a statistical analysis system to provide justification that a 95 percent level of confidence has been achieved for the evolution/optimization exercise on a task by task basis. Exceptions can be presented and may be approved at the discretion of the approving Airworthiness authorities.

(h) Sufficient data must be collected by the OEM/TCH that would support the expected confidence level. However, engineering judgment will remain a part of the evaluation.

(7) Operator's and regulator's feedback must be recorded and dispositioned.

(a) OEM/TCH must develop and implement internal quality procedures to review and validate MRBR revision process as defined in the Policy Procedures Handbook (PPH).

(b) OEM/TCH must develop and implement internal process to validate MRBR revised tasks and/or intervals resulting from evolution or demonstrate that an equivalent written internal process already exists to reach the same intent.

(c) FAA must be notified in writing by the OEM/TCH applicant of their intent to begin an evolution/optimization process. This will be in the form of an official correspondence or other communication media as defined in the PPH.

(d) The FAA will respond, in writing, to the OEM/TCH of their intent to participate in the evolution/optimization exercise for a given fleet or model.

(8) This guideline must be utilized as the basis for a Policy and Procedures Handbook (PPH) procedure when the OEM/TCH, MRB, and ISC wish to proceed with evolution/optimization regarding the MRBR process.

(a) OEM/TCH must define further details and procedure clarifications in the PPH. Each OEM/TCH may adopt the same evolution/optimization processes for all ISC/MRB PPH, and for all models, as demonstrated and accepted by FAA. The PPH is a living document; a response must be given within 60 days after ISC acceptance/OEM submission. Where applicable PPH revisions must be coordinated and approved by the MRB/ISC.

(b) OEM/TCH must include within the PPH the policy requirements and criteria as contained within this document.

(c) OEM/TCH must further define the details and procedural actions necessary to conduct the evolution/optimization exercise. This plan must be coordinated with and approved by the MRB/ISC.

(d) Where documents that support the evolution/optimization are incorporated by reference within the PPH, the current document number and revision number must be stated.

7. Effect of Policy. This guidance provides, a standardize way when working with OEM/TCH to demonstrate compliance with IMRBPB Issue Paper 44 and any evolution/optimization MRB task adjustment. Whenever OEM/TCH proposed method of compliance differs from this policy, the OEM/TCH proposal must be coordinated with the AEGs. This guidance will standardize all MRBR evolution/optimization activities after April 30, 2009.

8. Disposition. We will permanently incorporate this information in FSIMS before this notice expires. Direct questions concerning this notice to Ken Kerzner, AFS-300, Aircraft Maintenance Division, at (202) 385-6426, kenneth.kerzner@faa.gov.

ORIGINAL SIGNED by
Chester D. Dalbey for

John M. Allen
Director, Flight Standards Service