TECHNICAL GUIDANCE MATERIAL
for
Maintenance Review Board Process

SUBJECT: **TECHNICAL GUIDANCE MATERIAL FOR MAINTENANCE REVIEW BOARD PROCESS**

EFFECTIVE DATE: 30 November 2025

1. APPLICABILITY

This guidance material is applicable to the Civil Aviation industry for the development and revision of the initial scheduled maintenance programme for a derivative or newly Type Certificated large aircraft.

2. PURPOSE

The purpose of the MRB process is to assist the design organization and the air operator in establishing an initial approved maintenance programme for aeroplanes and the CAA in approving that programme. After the SACAA's approval the MRB report becomes the basis for the first issue of an air operator's initial maintenance programme

3. REQUIREMENTS

SACAR Part 21.02.2, SACAR Part 21.02.3 and FAR 25

4. REFERENCE:

i. Federal Aviation Administration (FAA) airworthiness requirements as stated in FAR Part 25
ii. ICAO Doc 9760
iii. Part 1 of the Civil Aviation Regulations (SACAR's);
iv. Part 121 of the South African Civil Aviation Regulations (SACAR's);
v. Part 135 of the South African Civil Aviation Regulations (SACAR's);
vi. Part 187 of the SACARs, Fees
vii. Part 21 of the South African Civil Aviation Regulations (SACAR's);
viii. Part 43 of the South African Civil Aviation Regulations (SACAR's);
ix. Part 91 of the South African Civil Aviation Regulations (SACAR's);
x. SACATS 21, South African Aviation Technical Standards (SACATS);

5. LIST OF DEFINITIONS AND ABBREVIATIONS USED IN THIS DOCUMENT

5.1. Definitions

TERMINOLOGY	DESCRIPTION
Aircraft	means an aircraft as defined in the Act, including its engine, propellers, rotor, components, parts, equipment, instruments, accessories and materials
Aircraft Type	means all aircraft of the same basic design, including all modifications thereto, except those modifications which result in a change in handling or flight characteristics.
Airworthiness Data	means any information necessary to ensure that an aircraft or aircraft component can be maintained in an airworthy condition;
Approved Data	means data that can used to substantiate major repairs or major altercations derived from Supplemental Type Certificates, Airworthiness Directives etc.
Finding of Compliance	means a determination that a specific element of the design or design change satisfies applicable airworthiness standards

5.2. Abbreviations

ABBREVIATION	MEANING
AD	Airworthiness Directive
ADO	Approved Design Organisation
AMO	Approved Maintenance Organisation
E: ASO	Executive: Aviation Safety Operations
ETOP	Extended Twin Engine Operations
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
ICAO	International Civil Organisation Organization
ISC	Industry Steering Committee
LOA	Letter of Authorization
M: AED	Manager: Airworthiness Engineering
MPP	Maintenance Program Proposal
MRB	Maintenance Review Board
MRBR	Maintenance Review Board Report
MSG	Maintenance Steering Group
MSI	Maintenance Significant Item
NAA	National Aviation Authority
OEM	Original Equipment Manufacturer
PPH	Policy and Procedure Handbook
SACAA	South African Civil Aviation Authority
SACAR	South African Civil Aviation Regulations
SACATS	South African Civil Aviation Technical Standards
STC	Supplemental Type Certificate

STCH	Supplemental Type Certificate Holder
SM: AW	Senior Manager: Airworthiness
TC	Type Certificate
TCDS	Type Certificate Data Sheet
TCH	Type Certificate Holder

6. GENERAL

6.1 BACKGROUND

The process of developing a maintenance programme for new aeroplanes has evolved from one in which each operator proposed their own unique programme, to one in which the regulatory authority and aviation industry work together to develop initial minimum maintenance requirements for new aeroplanes.

6.2 MRB PROCESS

6.2.1 The process of developing maintenance programmes for new aircraft and power plants has evolved from one in which each operator proposed his own unique programme to one in which the CAA, other regulatory authorities and industry (type certificate applicant, air operator) work together to develop the initial minimum maintenance requirements for new aircraft.

6.2.2 The primary purpose of the MRB process is to assist the design organisation and the air operator in establishing an initial approved maintenance programme for aircraft and the regulatory authority in approving that programme.

6.2.3 The MRB supports, by active participation, the development of a proposal or a report containing the initial minimum maintenance requirements to be used in the development of an approved maintenance programme for a derivative or newly certificated aeroplane.

6.2.4 The SACAA should approve minimum maintenance requirements that will be used by an operator to establish the operator's maintenance programme. The MRB basically consists of several industry specialists working groups composed of selected specialists from CAA, operators, TCH/STCH/OEM who use the MSG-3 logic to develop and propose maintenance tasks for a specific aircraft type.

6.2.5 The MRB also ensures that the design organisation and manufacturer provide the necessary technical training to MRB, ISC and WG members. The MRB reviews reports, provides notification of potential problem areas and offers guidance and assistance to the ISC and WG.

6.3 TYPE CERTIFICATE APPLICANT OR HOLDER FUNCTIONS

6.3.1 Develop and prepare a draft PPH for ISC approval.

6.3.2 Provide required aircraft technical/MSG training for all ISC and WG members and CAA/regulatory authorities before holding the first WG meeting.

6.3.3 Provide the ISC with a comprehensive candidate Maintenance Significant Items (MSI) and Structural Significant Items (SSI) list and a list of the items precluded from the candidate MSI/SSI list before beginning any ISC/WG meeting.

6.3.4 Arrange for the required attendance of the appropriate OEM/TCH design personnel at each ISC/WG meeting.

6.3.5 Provide WG members with current technical data to support the analysis of each MSI, SSI, and zones of the aircraft for analysis by each WG. The data are required 30 days before the ISC/WG meeting.

6.3.6 Arrange for technical support and access to the aircraft, appropriate OEM/TCH, and/or vendor facility, as required for the development of analysis and tasks.

6.3.7 During each ISC/MRB meeting, provide the ISC/MRB and appropriate WG members, with an updated report of all airworthiness limitation items (ALI), Certification Maintenance Requirements (CMR), and design changes that impact the MSG-3 analysis.

6.3.8 Ensure that the OEM/TCH manuals contain information and procedures for accomplishing all on-aircraft systems/structures/zonal tasks covered in the MRBR.

6.3.9 Participate in all ISC and WG activities in support of the development of the MRBR.

6.3.10 Record all ISC and WG activity and discussion in meeting minutes and record unresolved open actions/open issues in a formal ongoing action list or report.

6.3.11 Provide the MRB chairperson a copy of all supporting technical data/analysis for the proposed MRBR at the conclusion of the project.

6.3.12 Submit the MRBR proposal to the MRB chairperson at least 90 calendar-days before scheduled approval.

6.3.13 When the OEM/TCH conducts sampling and analytical inspections of the aircraft, powerplant, or systems/components on an opportunity basis, the OEM/TCH will provide timely notification to the MRB chairperson (or representative) regarding the time and location of the inspection to permit MRB chairperson (or representative) participation. When the attendance of the MRB Chairperson (or representative) is not possible, the OEM/TCH must provide a copy of the complete inspection report to the MRB chairperson.

6.4 CIVIL AVIATION AUTHORITY PARTICIPATION AND FUNCTIONS

6.4.1 When the TC Applicant informs the CAA of the intention to proceed with development of an MRB proposal the CAA Airworthiness department will appoint a chairperson for the MRB using CAA staff and when necessary NAA seconded staff under appropriate contractual arrangements.

6.4.2 The chairperson will request a selected number of advisors and specialist staff as appropriate, being CAA staff and when necessary, NAA seconded staff under appropriate contractual arrangements, to form the MRB.

6.4.3 The Airworthiness Section will ensure prior to appointment that the chairperson, advisors, and specialist staff possess the knowledge & competence level appropriate to their role.

6.4.4 The MRB Chairperson in consultation with the Airworthiness Senior manager will determine the number of staff required to participate in the MRB, ISC and Working Groups. For new type certification projects, major changes, existing approved MRBR evolution exercises, new regulation incorporation or similar activity the CAA will, depending on resources participate in all MRB, ISC and Working Groups. Participation may be reduced for existing approved

MRBR development and review where there are no major changes involved. As a minimum, participation at the ISC and a selection of working groups will be required.

6.4.5 The chairperson will provide summary progress reports to the CAA MRB Section following each meeting. The summary progress report should indicate the future schedule of meetings, intended date of completion

6.4.6 The CAA will approve the MRBR after satisfactory evidence has been presented or submitted by the MRB Chairperson.

6.5 INDUSTRY PARTICIPATION

6.5.1 INDUSTRY STEERING COMMITTEE (ISC)

6.5.1.1 The ISC comprises of representatives from aircraft, engine, propeller, and appliance manufacturers and intended operators.

6.5.1.2 Representatives of maintenance organizations may also be part of the ISC, subject to coordination with the Maintenance Review Board (MRB) chairperson.

6.5.1.3 The ISC establishes policies, sets goals for maintenance check intervals, directs activities of working groups, prepares final maintenance programme recommendations, and represents air operators under the leadership of the ISC Chairperson.

6.5.1.4 The ISC chairperson should work with the MRB chairperson.

6.5.1.5 The proposed tasks are presented to an Industry Steering Committee (ISC). The CAA and other regulatory authorities (the States of the intended operators) normally participate in the ISC and its individual WGs in an advisory capacity.

6.5.1.6 The ISC prepares, after considering the working group proposals, a draft MRBR. This draft is then reviewed by the MRB Chairperson and his/her advisors. Upon successful review, the CAA accepts the MRBR or its revision. It is then published as the MRBR.

6.5.1.7 The MRBR outlines the initial minimum maintenance requirements to be used in the development of an approved maintenance programme for the aeroplane.

6.6 WORKING GROUPS (WGs)

6.6.1 The TC applicant in conjunction with the ISC should organise the setting up of working groups. Such groups should be composed of specialists from participating air operators, design organizations and regulatory authorities.

6.6.2 The WGs should be chaired by an industry representative appointed by the ISC. The MRB chairperson will assign CAA personnel to act as advisors to each working group. CAA working group advisors may include staff from AED, AID, FOD and personnel from other authorities.

6.6.3 Working groups are responsible for conducting significant item analysis using the MSG Logic process, as revised to develop the initial minimum maintenance inspection requirements for the new or derivative aircraft. Working Groups should establish meeting minutes to provide to the ISC and MRB.

6.7 MAINTENANCE REVIEW BOARD (MRB)

6.7.1 The MRB will be composed of CAA Airworthiness Inspectors and Certification Engineers. The MRB chairperson will assign MRB members to work as advisors to the industry working groups.

6.7.2 Functions and Responsibilities of the MRB, under the direction and management of the MRB chairperson:

6.7.2.1 Determine in consultation with the Airworthiness Section the number and type of CAA personnel that are necessary and organise them.
6.7.2.2 Provide the ISC Chairperson with a list of CAA personnel names, their affiliations, assignments, and changes as they occur.
6.7.2.3 Ensure with the TC Applicant a harmonised and co-ordinated approach with other NAA participants, through their representatives.
6.7.2.4 For SACAA projects agree on the participation of other NAA's at the MRB and inform the ISC Chairperson of participating other NAA's.
6.7.2.5 Establish the extent of other NAA's participation and assignment of Working Group Advisors.
6.7.2.6 Brief other NAA's regarding MRB policy and procedures prior to and during the MRB process.
6.7.2.7 Establish and maintain a file of all MRB and ISC proceedings for the MRB historical file.
6.7.2.8 Accept the PPH following a review by participating regulatory authorities within thirty days of receipt.
6.7.2.9 Co-ordinate the MRB activities and associated matters with the ISC Chairperson.
6.7.2.10 Ensure the manufacturer provides the necessary technical and MSG training to MRB Members and Working Groups Advisors.
6.7.2.11 Attend ISC meetings.
6.7.2.12 Ensure appropriate CAA attendance at all Working Group meetings.
6.7.2.13 Offer guidance and assistance to the ISC and the Working Groups.
6.7.2.14 Invite the ISC Chairperson and selected ISC members to MRB meetings.
6.7.2.15 Review reports from previous ISC meetings (if applicable) and reports from the Working Group Members.
6.7.2.16 Provide timely notification of potential problem areas or controversy to the CAA Airworthiness Section and Project Leader and to the ISC Chairperson.
6.7.2.17 Establish and maintain links with the CAA Project Certification Manager and participate in any associated activity as required i.e. ETOPS etc
6.7.2.18 Upon successful review, the CAA approves the MRB report or revision.

6.8 MRB MEMBERS ARE REQUIRED TO:

6.8.1 Provide guidance to the CAA Working Group Advisors and Working Group Members.

6.8.2 Direct CAA Working Group Advisors in assigned Working Group.

6.8.3 Attend MRB meetings

6.8.4 Attend ISC meetings as invited by the MRB Chairperson in coordination with the ISC Chairperson.

6.8.5 Review Working Group meeting minutes and provide progress reports, prior to the next scheduled ISC meeting, to the MRB Chairperson. This review will contain an assessment of Working Group activities, including a notification of controversial problem or areas.

6.9 MAINTENANCE REVIEW BOARD REPORT

6.9.1 The MRB report outlines the initial minimum maintenance requirements to be used in the development of an approved maintenance programme for the aeroplane and its major components (aircraft, engine, systems and other components).

6.9.2 Industry and CAA generate an MRBR as a coordinated effort of achieving timely compliance with the applicable certification regulatory requirements and the minimum scheduled maintenance requirements.

6.9.3 Although the MRB report is approved by the State of Design, there may be a need to identify national regulation differences that are not compatible, acceptable or applicable to all regulatory authorities. When this condition
exists, an appendix to the MRB report is used to list these differences, each being accepted by the respective regulatory authority.

6.9.4 Upon receipt of the MPP from the ISC Chairperson, the MRB Chairperson shall invite the MRB Board
Members to review the MPP. When all issues have been resolved, including if appropriate, those of the other NAA's, the MRB Chairperson will recommend to the CAA for approval of the MRB Report.

6.9.5 The approved MRB Report will be forwarded to the ISC Chairperson under a letter of transmittal. Normally, other NAA's approval will occur concurrently with that of the CAA. This approval process will occur as soon as practicable but in any case within a time frame of not more than ninety days.

6.9.6 The TC Applicant/ Holder is responsible for publishing and distributing initial and revised MRB Reports and any supporting documents to all holders of the maintenance programme, including the authorities in the State of Registry and the State of the Operator.

6.9.7 The regulatory authorities in the State of Registry and the State of the Operator review the MRB report and,
once it is found acceptable, authorize the air operator to incorporate all applicable maintenance requirements in the report into its initial maintenance programme.

6.9.8 The MRB and ISC normally conduct a joint annual review of each MRB report to determine the need for
revision. Where the need exists, the ISC and MRB convene and evaluate the proposed changes. Proposed revisions are processed and approved in the same manner as the MRB report

6.10 MSG-3 LOGIC

6.10.1 The latest version of the ATA MSG analysis process and procedures must be used for the development of an MRBR for all new aircraft.

6.10.2 For development of derivative designs (amended TC), the applicant should apply the most current version of MSG-3 logic to those systems or structures that have changed.

6.10.3 Reapplication for a TC after an expired TC application requires using the most recent version of the MSG logic process.

6.11 IMPLEMENTATION OF THE MRB REPORT OR REVISION

6.11.1 Air operators of the aeroplane type are strongly urged to implement the MRB report, or revisions, in accordance with established procedures. Adjustments to initial maintenance programme intervals may be approved by the State of Registry depending on the air operator's qualifications and overall maintenance experience.

6.11.2 With the agreement of the regulatory authority, air operators may elect to deviate from the MRB report or revision. In this case, air operators may have additional requirements placed in their maintenance programme by the State of Registry to ensure that equivalent safety is maintained.

6.12 NON-ACCEPTANCE OF THE PROPOSED MRB REPORT

6.12.1 The MRB Chairperson will co-ordinate with the CAA MRB allocated team if it is likely that a recommendation for approval of the MRB Report or Revision will not be able to be made prior to notifying the ISC Chairperson officially in writing of such action.

6.12.2 The non-approval letter will include the specific justification for the non-approval and the necessary guidance needed to make the MRB Report proposal or revision acceptable.

6.12.3 The non-approval subject(s) should be discussed with the ISC Chairperson before initiating this process.

6.13 MRB REPORT REVISION

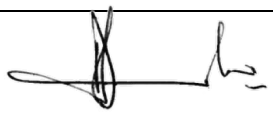
6.13.1 The MRB report is intended to be an up-to-date document and as such, the ISC Chairperson, the TC Holder and the MRB Chairperson, will conduct, joint regular reviews to determine the need for a revision. Such reviews must be conducted at least annually. Results of these reviews will be documented by the MRB Chairperson for inclusion in the MRB historical file.

6.13.2 The annual review should consider but not be limited to the following: modifications to the original design standard, in-service experience, fleet reliability, changes to the operating environment, age of the aircraft fleet, changes to the applicability including fleet utilisation, incorporation of Temporary Revisions, etc.

6.13.3 Changes may be proposed directly by the TC holder, unless the ISC considers that there is a need to convene an ad-hoc Working-Group, subject to the availability of Industry experts for such a Working Group.

6.13.4 If a need exists, the ISC and MRB will convene and evaluate the proposed changes. Proposed changes are submitted with supporting data to the MRB Chairperson through the ISC Chairperson. Approval/non approval of proposed revisions will be processed in the same manner as outlined above for the initial MRB Report approval/non approval.

7. AUTHORISATION

DEVELOPED BY:		
	**THANDI MOFOKENG**	**30 NOVEMBER 2025**
SIGNATURE OF M: AED	**NAME IN BLOCK LETTERS**	**DATE**
REVIEWED & VALIDATED BY:		
	**LOBANG THABANTSO**	**30 NOVEMBER 2025**
SIGNATURE OF SM: AW	**NAME IN BLOCK LETTERS**	**DATE**
APPROVED BY:		
	**DEAN KHUMALO**	**30 NOVEMBER 2025**
SIGNATURE OF E: ASO	**NAME IN BLOCK LETTERS**	**DATE**

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