

MALAYSIAN STATE AIRWORTHINESS AUTHORITY



MALAYSIAN STATE TECHNICAL AIRWORTHINESS MANUAL

MALAYSIAN STATE TECHNICAL AIRWORTHINESS PROGRAM (MSTAP) INTERIM VOLUME 1

The Malaysian State Airworthiness Authority (MSAA) issued the Malaysian State Technical Airworthiness Manual (MSTAM) as a Technical Airworthiness Management System with authority given by the Minister of Defence under Council of Ministers of Defence Meeting Series 02/06 (*Mesyuarat Lembaga Menteri Pertahanan Siri 02/06* dated 05 September 2006), the State Airworthiness Authority (SAA) issued this MSTAM in managing State Technical Airworthiness regulatory requirement in Malaysia.

MSTAM contains Airworthiness Management System (AMS) information related to policies, regulatory frameworks, State Technical Airworthiness Regulations (STAR), Airworthiness Requirements, and Implementing Rules specific to the State Technical Airworthiness Program. The Implementing Rules describe the Technical Requirements, Acceptable Means of Compliance, and Guidance Material to give effect to the MSTAR provision applicable to state aircraft set out in the Malaysian State Technical Airworthiness Regulation (MSTAR) produced by the Technical Airworthiness Regulator (TAR). MSTAM and its supplementary documents apply to every person, aircraft, aeronautical product, and maintenance training related to State aircraft.

Non-compliance with these Orders

Any organisation or person subject to and upon the terms and conditions of the agreement which contravenes any provision in this MSTAM shall be liable to the implication imposed under appropriate airworthiness instruments.

MALAYSIAN STATE TECHNICAL AIRWORTHINESS PROGRAM

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Note: * Shows the effective pages of amendments

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MALAYSIAN STATE TECHNICAL AIRWORTHINESS PROGRAM**LIST OF ABBREVIATIONS**

Notes:

1. Definitions with no superscript have been sourced directly from the European Military Airworthiness Document (EMAD 1). Those definitions and terminologies with a superscript* are either DGTA-specific or derived from other sources.

AA*	Airworthiness Authority
AAC*	Airworthiness Advisory Circular
ABDR*	Aircraft Battle Damage Repair
AD	Airworthiness Directive
AO*	Airworthiness Order
AMS*	Airworthiness Management System
AM*	Accountable Manager
AMC	Acceptable Means Compliance
AMO*	Approved Maintenance Organisation
AMTO*	Approved Maintenance Training Organisation
AB*	Airworthiness Board
ASR*	Airworthiness Standards Representative
ARC	Airworthiness Review Certificate
BoSTA*	Board of State Technical Airworthiness
CAA*	Civil Aviation Authority
CAAM*	Civil Aviation Authority of Malaysia
CAD*	Civil Airworthiness Directive
CAESE*	Centre for Aerospace and Engineering Services Establishment
CAP*	Competent Authority Procedures
CAME	Continuing Airworthiness Management Exposition
CAMO	Continuing Airworthiness Management Organisation
CAR*	Corrective Action Request
CARs*	Canadian Aviation Regulations
CDCCL	Critical Design Configuration Control Limitations
CDL	Configuration Deviation List
CI	Configuration Item
Cmaint*	Contingency Maintenance
CMM	Component Maintenance Manual
CRS	Certificate of Release to Service
CoA*	Certificate of Airworthiness
CS	Certification Specification
DAR*	Delegated Airworthiness Representative
DCA*	Department Civil Aviation
DGTA*	Directorate General Technical Airworthiness
DOE	Design Organisation Exposition
DoD*	U.S. Department of Defence
DOA	Design Organisation Approval
EAC*	Engineering Authority Certificate
EASA	European Aviation Safety Agency
EDA	European Defence Agency
EDP	Electronic Data Processing
EMACC	European Military Airworthiness Certification Criteria
EMAD	European Military Airworthiness Document
EMAD R	European Military Airworthiness Document Recognition

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EMAR	European Military Airworthiness Requirement
EMPA	European Military Part Approval
EMTSO	European Military Technical Standard Order
ESF	Equivalent level of Safety Finding
EWIS	Electrical Wiring Interconnect System
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FTS	Fuel Tank Safety or Flight Test Schedule
GFE	Government Furnished Equipment
GM	Guidance Materials
GoM*	Government of Malaysia
HF	Human Factor
ICA*	Instructions for Continuing Airworthiness
ICAO	International Civil Aviation Organisation
IQA*	Internal Quality Audit
LEA*	Letter of Engineering Authority
LEP*	List of Effective Pages
LMA*	Letter of Maintenance Authority
LMS	Learning Management System
LMTA*	Letter of Maintenance Training Authority
MA*	Maintenance Authority
MAA*	Military Airworthiness Authority
MAC*	Maintenance Authority Certificate
MAF*	Malaysian Armed Forces
MAO*	Maintenance Authorising Office
MCAI*	Mandatory Continuing Airworthiness Information
MCAR*	Malaysian Civil Aviation Regulations
MCOQ*	Multiple Choice Objective Question
MM	Maintenance Manager
MEL	Minimum Equipment List
MSTC*	Malaysian State Type Certificate
MTAC	Maintenance Training Authority Certificate
MTC	Military Type Certificate
MTCH	Military Type Certificate Holder
MoD*	Ministry of Defence
MoT*	Ministry of Transport
MI/S*	Maintenance Inspector/Supervisor
MMI*	Maintenance Managed Item
MMP*	Maintenance Management Plan
MMS*	Maintenance Management System
MRM*	Management Review Meeting
MSTA*	Malaysian State Technical Airworthiness
MSTAR*	Malaysian State Technical Airworthiness Regulation
MSTC*	Malaysian State Type Certification
MTF*	Maintenance Test Flight
MTMP*	Maintenance Training Management Plan
NAA*	National Airworthiness Authority
NDT	Non-Destructive Test
OAA*	Operational Airworthiness Authority
OAR	Operational Airworthiness Regulator
OEM	Original Equipment Manufacturer
OJT*	On-Job Training
OM*	Operational Maintenance
OPPDMEF*	Organisation, People, Procedure, Data, Material, Equipment and Facilities
OSH*	Occupational Safety and Health

POA*	Production Organisation Approval
POE	Product Organisation Exposition
PTF	Permit To Fly
QM*	Quality Manager
QMS*	Quality Management System
RMAF*	Royal Malaysian Air Force
RMSTC*	Restricted Malaysian State Type Certificate
SAA*	State Airworthiness Authority
SARPs*	Standards and Recommended Practices
SAO*	State Aircraft Operator
SB	Service Bulletin
SMM*	Senior Maintenance Manager
SMS*	Safety Management Systems
SOI*	Statement of Operating Intent
SOR*	Statement of Operating Requirements
SRAO*	State Registered Aircraft Operator
SSP*	State Safety Programme
STANAG	Standardisation Agreement (in NATO)
STAP*	State Technical Airworthiness Policies
STAR*	State Technical Airworthiness Regulations
STC*	Supplemental Type Certificate
STI*	Special Technical Instruction
TAA*	Technical Airworthiness Authority
TAAC*	Technical Airworthiness Advisory Circular
TAC*	Technical Airworthiness Clearance
TAD*	Technical Airworthiness Directive
TAMM*	Technical Airworthiness Management Manual
TC	Type Certificate
TCCA*	Transport Canada Civil Aviation
TIR*	Technical Information Review
TM*	Training Manager
TSN*	Training Support Network
UAS	Unmanned Aircraft System

MALAYSIAN STATE TECHNICAL AIRWORTHINESS PROGRAM**GLOSSARY**

Notes:

1. Definitions with no superscript have been sourced directly from the European Military Airworthiness Document (EMAD 1). Those definitions and terminologies with a superscript* are either DGTA-specific or derived from other sources.

Academic and Curriculum Manager*

A person who oversees the curriculum design, training media, lesson plan, and instructor guides to evaluate the effectiveness of basic and type training courses.

Acceptable Means of Compliance

This illustrates a means, but not the only means, by which regulation can be met, and a regulated entity may decide to show compliance by other means. Hence, only an Authority can agree on alternatives to the published Acceptable Means of Compliance. Acceptable Means of Compliance are strongly recommended practices, and justification will be required of the Authority if they are followed. The burden of proof that regulation is satisfied rests entirely with a regulated entity when alternatives are proposed to the Authority.

Accountable Manager*

A person designated by the Approved Organisation and named in the Exposition who is accountable to the DGTA for maintaining safety standards required by relevant MSTAR and any additional standards specified in the respective Exposition. Also, a key figure with influence within the organisation and the ability to make appropriate resource decisions to ensure compliance with airworthiness regulations.

Addition

The inclusion of further basic categories or sub-categories to a State Aircraft Maintenance Licence that is already held by an individual.

Adopt

To transcribe, with no deviation, the requirements (European Military Airworthiness Requirements) into national regulations using English or the National Language(s).

Advisory Material

Advisory Material provides interpretation of technical airworthiness requirements and standards to assist in understanding and implementation. It also provides guidance on methods and procedures that are in compliance with technical airworthiness requirements and standards. Advisory material, including the described methods and procedures, is not mandatory, and organisations may choose to follow other means of demonstrating compliance.

Aeronautical Product*

Any airframe, aircraft system (airframe, avionics, engine, armament, and egress and survival), aircraft power train (including engines, auxiliary power units, and transmissions), propeller, rotor and/or components/parts/materials, or equipment parts, including computer systems

software/firmware, that, when connected, has a direct effect on the structural and technical integrity of the aircraft.

Aircraft

Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

Aircraft Airborne Equipment*

Equipment that interfaces with and is borne by the aircraft or aircrew during flight. This includes role equipment but not items of cargo.

Aircraft Battle Damage Repair*

Aircraft Battle Damage Repair is the subset of Battle Damage Repair that uniquely applies to aircraft and is used to restore sufficient strength and serviceability to permit damaged aircraft to fly additional operational sorties or to enable those aircraft that are damaged beyond unit repair capability to make a one-time ferry flight to a major repair facility.

Aircraft Flight Manual

An Aircraft Flight Manual is a manual associated with the Malaysian State Type Certificate (MSTC) containing limitations within which the aircraft is to be considered airworthy and instructions and information necessary to the flight crew members for the safe operation of the aircraft.

Aircraft Maintenance Documentation*

The aircraft's maintenance and operational certificate, maintenance forecast, and technical particulars record.

Aircraft Maintenance Program

A document that describes or incorporates by reference the specific schedule maintenance tasks and their frequency of completion, the associated maintenance procedures, and related standard maintenance practices necessary to preserve the airworthiness of those aircraft to which it applies.

Aircraft Non-Airborne Equipment*

Equipment that interfaces with the aircraft, aircrew, or aircraft equipment but which is not usually airborne itself. Such equipment may include but is not limited to aircraft ground servicing equipment, ground test equipment, and some mission planning systems that interface with the aircraft or aircraft equipment.

Aircraft-Related Equipment*

Aircraft-related equipment can be aircraft airborne equipment or aircraft non-airborne equipment whose performance could directly affect airworthiness.

Aircraft Technical Log*

The flight logbook is the primary source of technical and operational data on each flight. It is a

system for recording data that includes defects and malfunctions, block times, and fuel consumption during the aircraft's operation. It also records details of all maintenance carried out on an aircraft between scheduled base maintenance visits. Also known as the journey logbook, it records flight safety and maintenance information that the operating crew needs to know.

Airworthiness

The ability of an aircraft or other airborne equipment or system to operate in flight and on the ground without significant hazard to aircrew, ground crew, passengers (where relevant), or to other third parties.

Airworthiness Codes

Product airworthiness requirements are applicable to the design of a product that is approved by a competent airworthiness authority for the use with standardised aircraft categories (e.g. EASA CS, FAA FAR, STANAG, Def-STAN, etc).

Airworthiness Directive

A document issued or adopted by the Authority that mandates actions to be performed on an aircraft to restore an acceptable level of safety when evidence shows that the safety level of this aircraft may otherwise be compromised.

Airworthiness Limitation Item

This is an item arising from a system safety analysis that has been shown to have failure mode(s) associated with an unsafe condition.

Airworthiness Standards Representative*

A Head of Design Organisation with delegated authority from the Technical Airworthiness Regulator (TAR) to set and review airworthiness standards for the State Aircraft Operator (SAO).

Airworthy*

The status of an aircraft, engine, propeller, or part when it conforms to its approved design and is in condition for safe operation.

Approved Basic Training Course*

The Approved basic training course shall consist of knowledge training, knowledge examination, practical training, and a practical assessment.

Approved Maintenance Organisation*

An organisation sponsored by the Maintenance Authorising Office, certified (awarded a Maintenance Authority Certificate) by the TAR, and authorised to conduct maintenance on state aircraft and aeronautical products.

Approved Maintenance Training Organisation*

An organisation that has been certified (awarded a Maintenance Training Authority Certificate

(MTAC)) by the TAR and authorised by the relevant MAO to conduct training and/or examinations and issue certificates to students upon successful completion of the courses.

Approved Training Course*

This means a defined course of maintenance training designed to give a student a level of knowledge and some experience.

Approved Type Training Course*

Aircraft-type training can be divided into aircraft or helicopter-type ratings for state aircraft maintenance licensing for Category B1 aeromechanical and Category B2 avionics.

Artefact

An airworthiness-related document, either hard copy or electronic, can be used as evidence in making an airworthiness judgment.

Authorised Aircrew*

Nominated aircrew formally authorised by the Senior Maintenance Manager (SMM) or delegate to perform a particular maintenance task.

Authorised Technical Data*

Data that has been reviewed, approved, and released by the TAR or a DOA responsible for the technical equipment to which the technical data applies.

Authorised Tradesperson*

An individual operating as part of an AMO, authorised by the SMM or delegate as competent to carry out a specific scope of maintenance activities.

Authority

Authority means a National Military Airworthiness Authority responsible for the airworthiness of military aircraft.

Aviation Ground Support Equipment*

AGSE is the equipment used to support maintenance and aeronautical equipment directly.

Aviation Software*

Aviation Software is inclusive of the following:

- a. On-aircraft software, off-aircraft software with aircraft interface, and off-aircraft software with no interface but with airworthiness or safety implications.
- b. Technologies that resemble software development.

Base Maintenance

Maintenance tasks falling outside the criteria for line Maintenance.

Board of State Technical Airworthiness*

BoSTA is convened at least four times a year or as and when required. It is a platform for recommending technical airworthiness management to the TAR and issuing Aircraft Certificates, Organisation Approval (DOA, AMO, AMTO, CAMO), and Personnel Licensing. BoSTA ensures that each aircraft type remains airworthy to fly by verifying the technical airworthiness requirements are met. Any issues related to technical airworthiness requirements and procedures shall be reviewed and approved by the BoSTA committee.

Continuing Airworthiness Management Organisation*

The State Aircraft Operator / State Registered Aircraft Operator (SAO/SRAO) responsible for managing the Configuration Item (CI) of the whole aircraft is required to have CAMO approval from TAA-DGTA.

Centre of Expertise*

SAO DOA, in which the Senior Design Engineer (SDE) position is designated as an Airworthiness Standard Representative appointment.

Certification

Recognition that a product, part or, appliance, organisation or person complies with the applicable airworthiness requirement followed by the declaration of compliance.

Certification Basis*

The set of standards that define the criteria against which the design of aircraft or aircraft-related equipment, or changes to that design, are assessed to determine their airworthiness.

Certificate of Release to Service

This statement, signed by an appropriately authorised person on behalf of an approved organisation, asserts that maintenance has been properly carried out. The Certificate of Release to Service contains the basic details of the maintenance carried out, the date it was completed, and the identification details (may include an authorisation stamp) of the person issuing the certificate.

Certification Review Item

A document recording Deviations, Special Conditions, new Means of Compliance, or any other certification issue that requires clarification and interpretation or represents major technical or administrative issues.

Certifying Staff

Personnel responsible for the release of an aircraft or a component after production and/or maintenance.

Chief Invigilator*

This means a person who is appointed to lead the Invigilators.

Chief Executive Officer*

A person who is responsible for a civil company within which the Approved Organisation operates. The Chief Executive Officer may report to a board of directors and may appoint other managers, or he/she may be one of very few people in a small company. In relation to MSTAR M, the Chief Executive Officer is mentioned as he/she may be senior to the Accountable Manager.

Compliance Demonstration

Activities to demonstrate that the product, part, or appliance complies with the requirements in the Certification Basis.

Component

Any engine, propeller, part, or appliance.

Component Maintenance Manual

A formal document that details how off-aircraft maintenance instructions on the specified component shall be accomplished.

Configuration*

The functional and physical characteristics of existing or planned hardware, firmware, software or a combination thereof, as outlined in technical documentation (which includes specifications, standards, and drawings) and ultimately achieved in a product.

Configuration Control

A systematic process that ensures that changes to released configuration documentation are properly identified, documented, evaluated for impact, approved by an appropriate level of authority, incorporated, and verified.

Configuration Deviation List

A list, established by the Type Certificate Holder and approved by the National Military Airworthiness Authority, which identifies any external parts of an aircraft type that may be missing at the commencement of a flight and which contains, where necessary, any information on associated operating limitations and performance correction. Examples of Configuration Deviation List items will vary from aircraft type but typically may include external light covers, retractable landing lights, etc.

Configuration Item

Any component, module, subcomponent, equipment, technical manuals, software, or ground support equipment can be submitted to the configuration control process.

Configuration Management

A management process for establishing and maintaining consistency of a product's performance, functional, and physical attributes with its requirements, design, and operational information throughout its life.

Contingency Maintenance*

Those maintenance activities are performed during a declared contingency operation. CMaint involves revised servicing schedules, component lifting strategies (plans), and repair philosophies, including Battle Damage Repair, which will maximise operational availability while constraining and managing risk.

Continuing Airworthiness

All of the processes ensure that, at any time in its operating life, the aircraft complies with the airworthiness requirements in force and is in a condition for safe operation.

Continued (design) Airworthiness

All tasks to be carried out to verify that the conditions under which a Type Certificate or a Supplemental Type Certificate has been granted continue to be fulfilled at any time during its validity period.

Crew/Aircrew

Include Pilot(s) and other personnel on board the aircraft and/or the Unmanned Aerial Vehicle control station with responsibilities to ensure the safe conduct of the flight.

Critical Design Configuration Control Limitations

Critical Design Configuration Control Limitations identify the critical design features such as proper wire separation, proper installation of a panel gasket, minimum bonding jumper resistance level, etc., that must be maintained in the same manner throughout the life of the aircraft to comply with the (Military) Type Certificate and maintain airworthiness. The purpose of the Critical Design Configuration Control Limitations is to provide instruction to ensure these critical features are present throughout the life of the airplane and are inspected and verified when changes, repairs, or maintenance actions occur in the area.

Declaration of Compliance

A statement, signed by the Head of Design or by an authorised representative, to show compliance with all applicable type certification basis and, where applicable, environmental protection requirements. It declares that the aircraft is airworthy within the specific design limitations.

Deeper Maintenance*

This level of maintenance includes tasks that are more complex than operational maintenance and typically require specialised equipment and technical skills. It relies on access to extensive support equipment and workshop facilities for successful conduct.

Design*

The process or act of creating or changing a product and related technical process descriptions through applying scientific and engineering effort (verb) or the outcome of that process (noun). The design, therefore, encompasses not only the configuration of the product, but also the:

- a. Testing and evaluation are needed to validate that the design meets performance and safety requirements.

- b. Manufacturing processes (including production test requirements) that require special control to ensure the product meets requirements.
- c. In-service monitoring requirements, maintenance processes, and authorised repairs.
- d. Maintenance lives and intervals and fatigue life.
- e. Operating procedures and limits.

Design Acceptance*

The process whereby a design or design change (i.e. an output of the design process) involving aircraft or aircraft-related equipment is determined to be technically acceptable for SAO use based on a determination that the specified requirements and design standards are sufficient and applicable (to the SAO authorised configuration, maintenance policy and procedures, and operations) and that the quality of the design has been proven to the satisfaction of the responsible CAMO - Continuing Airworthiness Manager. Generally, design quality is assured through approval by a DOA against the approved design requirements and standards, plus an acceptable basis for design verification.

Design Acceptance Certification*

The final act of the Design Acceptance process is whereby a CAMO - Continuing Airworthiness Manager provides a certified record of the technical acceptability of a change to aircraft or aircraft-related equipment Type Design.

Delegated Airworthiness Representative*

An individual within the SAO organisations who has been delegated with the authority by TAR to undertake the responsibility and manage the initial airworthiness activities on behalf of TAR.

Design Approval Certification*

The act of approval of design output resulting from a process that formally examines and documents compliance of a design (or design change) with specified requirements and design standards.

Design Change*

A design change is a change in Type Design as defined in MSTAR 21A.91.

Design Engineer*

A professional engineer within a DOA with assigned authority from the SDE to perform specific engineering activities, including judging the significance of design changes and undertaking a design review of significant design changes.

Design Organisation Approval*

An organisation sponsored by the Maintenance Authorising Office and certified (awarded an Engineering Authority Certificate (EAC)) by the TAR to provide design or engineering management services to the SAO.

Design Organisation Exposition*

A controlled quality document containing the details of an organisation's Engineering Management System (EMS). The DOE describes all of the requirements that are satisfied by an organisation to become and remain a DOA.

Design Review*

The act whereby a design (or design change) is independently checked by an authorised person (other than the person who developed the design) to verify the validity of the assumptions, conditions, data, and methods used in design development and to verify that the design output meets the specified design input requirements.

Design Support Network*

A collective term describes a group of agencies that provide design support to a DOA.

Deviation*

A specific written authorisation to depart from an item's current approved configuration documentation. A deviation differs from an engineering change in that an approved engineering change requires revision of documentation defining the affected item. In contrast, a deviation does not revise the applicable document or drawing.

Engineering Authority*

The authority is assigned expressly to an organisation (DOA) or an individual within an organisation to undertake specific engineering activities.

Engineering Authority Certificate*

The certificate awarded by the TAR to an organisation to operate as a DOA.

Engineering Change*

A change to the currently approved configuration documentation of a Configuration Item (CI) at any point in the life cycle of the CI.

Engineering Change Proposal*

An Engineering Change Proposal is defined as a proposed change to the current approved configuration of a CI and the supporting design documentation via which the change is described, justified, and submitted to the Configuration Control Board (CCB).

Examination*

A written or practical examination or combination of both is conducted at the end of every subject.

Examination Department*

Means a department in the training organisation for managing all examinations conducted.

Examination Manager*

A person who oversees the design of question papers, standards of examinations, and invigilation. Such person(s) may also be an Instructor and/or Assessor.

Examiner*

This means a person approved by DGTA or an approved training organisation will conduct and administer the examination.

Exemption*

The TAR grants written authorisation to either a DOA, AMO, CAMO, AMTO, or licensing to depart from a particular technical airworthiness regulation for a specified period.

Exposition

The document or documents that contain the material specifying the scope of work deemed to constitute approval and showing how the organisation complies with an MSTAR.

Extension

Inclusion of additional topics to Categories A, B1, and B2 Military Aircraft Maintenance Licences as detailed in MSTAR 66 Appendix I (which includes Modules 50-55) that are not part of the applicable modules for that category of Military Aircraft Maintenance Licence.

Flight Safety Critical Item*

Any part, assembly, or installation containing a critical characteristic whose failure, malfunction, or absence could cause a catastrophic failure or an uncommon engine shutdown, resulting in loss or severe damage to the aircraft or an unsafe condition.

Fit for Flight

Condition of a type design being certified as compliant with applicable airworthiness requirements as well as of an aircraft having been serviced and inspected as meeting the certified design and prepared for the intended flight.

Guidance Material

This is typically developed to provide additional explanation to assist the application of the requirement and/or explain the Acceptable Means of Compliance.

Human Factors

Principles apply to design, certification, production, training, operation, and maintenance and seek a safe interface between the human and other system components by properly considering human performance.

Human Performance

Human capabilities and limitations have an impact on the safety and efficiency of operations.

Implement*

To introduce MSTAR requirements into regulations by either adoption or compliance.

Instructions for Continuing Airworthiness

Instructions for Continuing Airworthiness detail the methods, inspections, processes, and procedures necessary to keep aircraft and/or products airworthy.

Instructor*

This means a person appointed to carry out instructional duties, compile examination questions, and undertake duties as invigilator and examiner.

Invigilator*

This means a person responsible for overseeing the conduct of the examinations.

Letter of Engineering Authority*

An attachment to an EAC that defines the scope of activity and any caveats and limitations under which the EAC is issued.

Letter of Maintenance Authority*

An attachment to the MAC defines the scope of activity and any caveats and limitations under which the MAC is issued.

Letter of Maintenance Training Authority*

An attachment to the MTAC defines the scope of activity and any caveats and limitations under which the MTAC is issued.

Life Limited Parts

Parts that, as a condition of their type certificate, may not exceed specified operating time, calendar time, number of operating cycles, or any other approved service life consumption units.

Limited Certification Authorisation

This is issued by the Approved Maintenance Organisation, by a procedure approved by the DGTA, for the flight crew, flight engineer, or crew chief to carry out specific tasks (usually away from their home base or station). The authorisation permits the holder to issue certificates of release to service following specific tasks within the limits of the tasks specifically endorsed on the authorisation.

Line Maintenance

Carried out before flight to ensure that the aircraft is fit for the intended flight.

Maintenance

Any one or combination of overhaul, repair, inspection, replacement, modification, or defect/fault rectification of an aircraft or component, with the exception of pre-flight inspection.

Maintenance Authority*

The authority to undertake specific maintenance activities.

Maintenance Authority Certificate*

The certificate awarded by the TAR to an organisation to operate as an AMO.

Maintenance Authorising Office*

The MAO is the Head of the SAO Aviation Engineering Organisation and is responsible for controlling the resources that enable the maintenance organisation to conduct maintenance.

Maintenance Document*

The orders, instructions, publications, and forms utilised by technical personnel when conducting maintenance include Defence Instructions, Standing Instructions, maintenance forms, Special Technical Instructions, specifications, and worksheets. Maintenance documents may be provided in paper-based and/or electronic formats.

Maintenance Inspector/Supervisor*

A person authorised to conduct compulsory maintenance inspections and/or supervise maintenance activities on nominated aircraft type and aeronautical product. The term applies to all personnel with direct maintenance task supervision or inspection responsibilities and, as such, may include, but is not limited to, trade supervisors, independent/final inspectors, and progressive/mandatory inspectors.

Maintenance Manager*

An authorised person responsible for managing maintenance activities on nominated aircraft type or aeronautical product within an AMO.

Maintenance Manual*

That part of the Instruction for Continuing Airworthiness. Those instructions are required to keep aircraft and aircraft-related equipment in an airworthy condition.

Maintenance Organisation Exposition*

A controlled quality document containing the details of an organisation's maintenance management system, the MOE, describes all the requirements an organisation must satisfy to become and remain an AMO.

Maintenance Records*

This is an important document that demonstrates compliance with the airworthiness requirements has been met. It is completed and signed by an authorised person to certify that the maintenance work performed has been completed satisfactorily under approved data. Maintenance records information includes:

- a. The total time in service (hours, calendar time, and cycles, as appropriate) of the aeroplane and all life-limited components.
- b. The status of compliance with all mandatory continuing airworthiness information.
- c. Appropriate details of modifications and repairs.
- d. The time in service (hours, calendar time, and cycles, as appropriate) since the last overhaul of the aeroplane or its components subject to a mandatory overhaul life.
- e. The status of the aeroplane's compliance with the maintenance program.
- f. The detailed maintenance records show that all requirements for signing a maintenance release have been met.

Maintenance Training Authority Certificate*

The certificate awarded by the TAR to an organisation to operate as an AMTO.

Maintenance Training Management Plan*

A controlled quality document containing the details of an organisation's training management system. The MTMP describes all of the requirements that are satisfied by an organisation to become and remain an AMTO.

Maintenance Personnel*

Maintenance personnel, including aircrew and Non-Trade Personnel (NTP), are authorised to perform maintenance tasks.

Maintenance Support Network*

A collective term describes a group of agencies that provide maintenance support to an AMO.

Maintenance Test Flight*

It is a flight to ensure that an aircraft meets specifications concerning performance and handling characteristics and to establish, on prescribed occasions, that no standard deterioration has occurred in service.

Malaysia State Airworthiness Authority*

The Competent Authority consists of the State Airworthiness Authority and includes any officer empowered by him to perform all or any of the functions.

Malaysian State Type Certificate*

A certificate issued by the State Airworthiness Authority (SAA) for an aircraft type entered on the register of state aircraft. The MSTC signifies that the SAO has assessed the aircraft type (undergone type certification) as airworthy and supportable in its intended SAO role/s.

Master Minimum Equipment List*

The Master Minimum Equipment List is established for a particular aircraft type by the organisation responsible for the Type Design with the approval of the Malaysian State Airworthiness Authority. It identifies items that may individually be unserviceable at the commencement of a flight and may be associated with special operating conditions, limitations, or procedures.

Material*

Products used in the manufacture of components and in the maintenance and operation of aircraft, including fuels, oils, and lubricants.

Mean of Compliance

The techniques will be used to demonstrate the compliance of the type design against each certification requirement identified on the Certification basis. Examples include tests, analyses, and inspections.

Military Aircraft*

Aircraft (including Unmanned Aircraft Systems) in the military service of the Armed Forces include any aircraft commanded by a member of the Armed Forces in the course of his duties as such a member.

Minor Amendment*

Those changes to the Organisation's Exposition(s) do not affect the Malaysian State Airworthiness Regulation-related approval.

Minor Maintenance

Includes repetitive tasks and simple defect/fault rectification.

Mission Critical Item*

An item whose failure will seriously degrade an aircraft's ability to complete an assigned mission or lead to a mission being aborted.

Modification

A modification is a change of the design to the authorised configuration of the approved type design of a product, part, or appliance. Typical examples are component changes, equipment additions, or software changes and often involve a revision to the drawings and support documentation.

Non-Conformance*

The failure of a product, process or system to meet its regulatory, specification, drawing, or quality requirements.

Non-installed equipment

This means any instrument, equipment, mechanism, apparatus, appurtenance, software, or

accessory carried on board an aircraft by the aircraft operator, which is not a part and which is used or intended to be used in operating or controlling an aircraft, support the occupants' survivability, or which could impact the safe operation of the aircraft.

Non-Technical Personnel*

A collective term covering personnel who have not completed formal SAO-recognised technical trade training.

Occurrence Reporting

The reporting to the relevant Authorities, to the Malaysian State Type Certificate Holder, or Restricted Type Certificate Holder, and/or the Supplemental Type Certificate Holder as appropriate, of any failure, malfunction, defect, or other occurrence which has resulted in or may result in an unsafe condition. The Type Certificate Holder can also make an Occurrence Report to the Authority.

Organisation*

This means an organisation is registered as a legal entity. Such an organisation may conduct business from multiple addresses and hold more than one approval.

Original Equipment Manufacturer*

The OEM is the manufacturer listed as the approved source of manufacture for components in the type certificate data sheet. The OEM owns and controls the source drawings, i.e., the component's design.

Operational Maintenance*

Tasks directly related to equipment preparation for immediate use, recovery, and minor repair of the equipment after use. OM tasks require a limited range of support equipment and may involve the limited use of workshop facilities.

Parts and Appliances

Parts and appliances are lower-level components for which a Technical Standard Order may exist.

Period of Operation*

It is the time from the captains' acceptance of an aircraft until it's released back to maintenance. For rotary wing aircraft, the period of operation includes when the aircraft is released to aircrew for ground running of engines with the rotor engaged.

Permit to Fly*

A permit issued under State Technical Airworthiness Regulations.

Practical Assessor*

This means a person approved by the training organisation to conduct the practical assessment.

Procedure*

A documented course of action will be followed to ensure a consistent outcome.

Product

An aircraft, an engine, or a propeller.

Quality Management System*

All activities of the overall management function determine the quality policy, objectives, and responsibilities and implement them through quality planning, quality controls, quality assurance, and quality improvement within the quality system.

Registration

Registration is a formal recording by the National Military Airworthiness Authority (or national equivalent) of individual aircraft on the military aircraft register and the assignment of a tail number.

Repair

A repair means the elimination of damage and/or restoration to an airworthy condition following initial release into service by the manufacturer of any product, part, or appliance.

Shall

Used to express mandatory requirements.

Should

Used to express a preferred, but not mandatory, method of accomplishment. An alternative method of accomplishment shall be agreed upon by the relevant authority.

Sign-Off*

A 'sign-off' is a statement issued by the 'authorised person' that indicates that the task or group of tasks has been correctly performed. A 'sign-off' relates to one step in the maintenance process and is, therefore, different from a certificate of release to service.

Special Conditions

Special conditions are included in the Certification Basis of the aircraft when the design features of a particular product or the experience in operation render any of the airworthiness code provisions inadequate or inappropriate to ensure conformity with essential requirements.

Specification*

A document defines a product's essential function and performance requirements and identifies the relevant standards for the acquisition process. In contrast to standards, specifications provide a more complete description of requirements and include the basis for establishing conformance (particularly during test and evaluation), hence validation for the acceptance of material.

Standard*

A description of a material, product, doctrine, or process meant for repeated applications by many users.

Standard Parts

A standard part is a part designated as such by the design approval holder responsible for the product, part or appliance in which it is intended to be used and manufactured in complete compliance with an established specification, which includes design, manufacturing, testing, and acceptance criteria, an uniform identification requirements. Examples of standard parts are aircraft general spares as defined by the design approval holder, such as nuts, bolts, washers, split pins, etc. All design, manufacturing, inspection data, and marking requirements necessary to demonstrate the conformity of the part will be in the public domain or established as part of recognised specifications.

State Airworthiness Authority*

The Chief of Air Force is appointed by the Minister of Defence under Section 7 to take accountability for the State's Airworthiness.

Statement of Operating Intent*

A document that sufficiently details the intended roles, missions, tasks, and in-service usage of the proposed Aeronautical Product Type Design permits an engineering analysis and assessment to determine and apply the appropriate Airworthiness Standards.

Statement of Operational Requirement*

A document or document defining the complete set of DAR requirements on a design agency to allow DAR acceptance of an aircraft or aircraft-related equipment design or design change. The SOR includes or references a *Specification*, the document defining the specific essential function and performance requirements for the product design or design change.

State Aircraft Maintenance Licence*

A categorised license which, dependent upon completion of all relevant approved training and examinations and the requisite levels of practical experience, permits an authorised individual to issue certificates of release to service or act as support staff for scheduled and/or unscheduled maintenance performed on an aircraft or aircraft systems as defined by MSTAR 66.

State Aircraft Operator*

The SAO are the military organisations or Government of Malaysia enforcement agencies that operate and maintain state-registered aircraft. SAOs that are currently under the ambit of the SAA are as follows:

- a. Royal Malaysian Air Force (RMAF).
- b. Malaysian Army Air Wing.
- c. Royal Malaysian Navy (RMN) Air Wing.

- d. Malaysian Fire and Rescue Department (Air Wing).
- e. Malaysian Maritime Enforcement Agency (MMEA) Air Wing.
- f. Malaysian Armed Forces Headquarters.
- g. Malaysian Joint Forces Headquarters.

State Registered Aircraft*

State aircraft registered with MSAA through DGTA shall be known as state-registered aircraft.

Student*

This means a person who has been enrolled in the training organisation.

Supplemental Type Certificate*

A certificate issued by the Chief of Air Force for an aircraft that undergoes a major design change or role change that is beyond the type design defined in the original MSTC but is not substantial enough to require a complete re-investigation of the aircraft's compliance with the applicable airworthiness standards (i.e., does not require a new MSTC).

Support Staff*

Those staff holding MSTAR 66 SAML in category B1 and/or B2 with the appropriate extension and Military Aircraft Type Ratings are working in a base maintenance environment while not necessarily holding certification privileges.

Task Authorisation*

The legal authority allows a person to perform a specified maintenance task, recognising that the person has completed the prerequisite training relevant to the task and has demonstrated competency in performing the task. Task authorisations are recorded in the person's logbook (RMAF License Without Type Rating-RMAF LWTR) or equivalent document.

Technical Airworthiness*

A concept that defines the condition of an aircraft and supplies the basis for the judgment of its sustainability for flight in that it has been designed, constructed, and maintained to approved standards by competent and approved individuals who are acting as members of an approved organisation and whose work is certified as correct and accepted on behalf of the SAO.

Technical Airworthiness Regulator*

The person with delegated responsibility from the State Airworthiness Authority for technical airworthiness management of state aircraft and aircraft-related equipment.

Technical Data*

All recorded scientific, technical, and engineering nature relating to a weapon system. Includes specifications, standards, engineering drawings, instructions, reports, manuals, tabular data, test results, and software documentation used in the development, production,

in-service operation, and logistics support (such as maintenance, provisioning, codification, testing, and modification), and disposal of a weapon system.

Technical Integrity*

Refers to the state of airworthiness of a platform, combat system, or ancillary item to fulfil its intended mission safely and effectively throughout its planned life. This requires evidence to demonstrate that the material has been designed, constructed, and maintained to approved standards by competent and formally approved personnel acting as members of an approved organisation whose work is certified as correct and accepted on behalf of the SAO.

Technical Record*

A set of documents describing the airworthiness of a particular aeronautical product must be maintained throughout its life cycle. The documents in a technical record generally fall into one of the following sub-categories:

- a. In-service product certification documentation, including Maintenance Release records, aircraft release records, Flight Authority records, and Certificates of Conformance; and
- b. Product status documentation, including operating records, maintenance records, configuration status data, airworthiness directive records, and product-related deviations/waivers.

Terms of Reference*

This means the scope of work that a person is responsible for and authorised to carry out on behalf of the approved maintenance training organisation.

Tool Control*

A systematic means of controlling tool usage to eliminate the risk of tools being inadvertently left in an aircraft or aircraft components/equipment.

Training Manager*

A person who leads and manages the training management team and is responsible for all training functions in the AMTO.

Training Support Manager*

A person shall be appointed to plan and administer training resources to fulfil the knowledge and practical training.

Training Support Network*

A collective term describes a group of agencies that provide training support to an AMTO.

Type Certification*

The process of:

- a. Prescribing and revising minimum standards governing the design of aircraft,

engines, propellers, and other aircraft equipment as may be required for safety.

b. Administering a program to determine compliance with those prescribed standards and maintain certification integrity with a higher level of oversight, specification, and compliance than the normal Design Acceptance process requires. Successful type certification activity leads to the issue of an MSTC.

Type Certification Basis

An agreed set of airworthiness requirements (including code, special condition, etc.) that a product must be compliant with in order to obtain a Type Certificate.

Type Certificate Holder

The organisation is responsible for the relevant Type Design and applying for, and then holding, the Type Certificate and accepting the rights and obligations for the product.

Type Design

The set of approved design information necessary to define the product type, as detailed in MSTAR 21.A.31.

Type Record*

A set of documents describes the state of airworthiness for a particular aeronautical product approved type design, which must be maintained throughout its life. It consists of a summary document that defines the (aircraft) type design at the time of acceptance by Malaysia by providing an index to the issue status of all type design data.

Unapproved Aeronautical Product*

Any part, component, or material that has not been manufactured and certified to conform with the technical data against which type certification is provided.

MALAYSIAN STATE TECHNICAL AIRWORTHINESS PROGRAM**PART 1****CHAPTER 1****MALAYSIAN STATE TECHNICAL AIRWORTHINESS PROGRAM**

Reference(s):

- A. Mesyuarat Lembaga Menteri Pertahanan Siri 02/06 bertarikh 05 Sep 2006.
- B. Waran Perjawatan DGTA:K68/2010 bertarikh 28 June 2010.
- C. PU2103 2nd Edition - Technical Airworthiness Management Manual (TAMM) bertarikh 29 Oct 2015.

INTRODUCTION

1. The concept of a Single State Airworthiness Authority was endorsed by the Ministry of Defence on 5th September 2006 (Reference A), and in conjunction with this endorsement, the Chief of Air Force (Panglima Tentera Udara) was appointed as State Airworthiness Authority (SAA) for State aircraft. The SAA has to establish an Airworthiness Management System (AMS) and appoint a Technical Airworthiness Authority (TAA) to regulate and control the use of state-registered aircraft, aeronautical products, and aircraft-related equipment and has the authority to interpret regulations in the context of specific aircraft design, production, maintenance, and personnel licensing and training. The government approved the establishment of the Directorate General Technical Airworthiness (DGTA) on 28 June 2010 (Reference B) to undertake the TAA function.

2. The DGTA, as the Malaysian State Technical Airworthiness Authority (MSTAA), has issued the Malaysian State Technical Airworthiness Manual (MSTAM). This manual serves as a new Airworthiness Management System framework to replace the previous Technical Airworthiness Management Manual or TAMM (Reference C) and oversee aviation activities applicable under the SAA's responsibility. The MSTAM contains information related to the technical airworthiness program, its role and responsibilities, and the implementation of a regulatory framework.

3. The Malaysian State Technical Airworthiness Manual (MSTAM) consists of two (2) parts, which are the Malaysian State Technical Airworthiness Program (MSTAP), which describes an overview of the technical airworthiness framework, and the Malaysian State Airworthiness Regulation (MSTAR) series that provides the requirements and provisions for the management of technical airworthiness in Malaysian state aviation context. The programs and regulations prescribed in this manual are guided by the principle that airworthiness-related activities and functions are executed based on accepted standards and approved procedures by a qualified and authorised individual from accredited organisations.

SCOPE

4. The scope of this manual is divided into two chapters:

a. **Chapter 1** – Established requirements for the implementation of the MSTAM in particular:

- (1) Function and Responsibility of the Authority (DGTA).
- (2) The State Airworthiness Concept.
- (3) The State Airworthiness Regulatory Framework.

- (4) Legal and governance.
 - b. **Chapter 2** - Establishes all requirements and provisions for the respective MSTAR framework.
5. The MSTAM is structured as follows:
- a. **Volume 1 – Malaysian State Technical Airworthiness Program (MSTAP)**
 - (1) **Part 1 Chapter 1** – Management of Malaysian State Technical Airworthiness Program (MSTAP).
 - (2) **Part 1 Chapter 2** – General Requirements.
 - b. **Malaysian State Technical Airworthiness Regulation (MSTAR)**
 - (1) **Volume 2** – MSTAR 21 Aircraft Design, Production, and Certification.
 - (2) **Volume 3** – MSTAR M Continuing Airworthiness Management.
 - (3) **Volume 4** – MSTAR 145 Requirements for Maintenance Organisations.
 - (4) **Volume 5** – MSTAR 66 State Aircraft Maintenance Licensing.
 - (5) **Volume 6** – MSTAR 147 Aircraft Maintenance Training Organisations.
 - (6) **Volume 7** – MSTAR UAS Implementing Regulations for UAS.
6. To standardise the MSTAR, the content of Volume 2 until Volume 7 regulation will not follow the format of MAFJP0-01. However, this manual's formatting of Volume 1, title header, topic, footnote, and page numbering adheres to the PU 9201.

OBJECTIVE

7. The objectives of this program are the following:
- a. To produce credible aviation safety practices in aviation activities by adopting standard safety rules and measures and assuring compliance with products, persons, and organisations.
 - b. To ensure that aeronautical products, parts, and appliances are used in aircraft operations, persons and organisations involved in aircraft operations must obtain appropriate approval, certification, and licensing within the state regulatory requirements.
 - c. To provide adequate flexibility to address particular circumstances effectively, such as urgent safety measures and compelling operational imperatives or emergencies. Provisions will also be made to achieve an equivalent safety level by other means.
 - d. The program enables effective and close cooperation between the SAA, DGTA, and regulated organisations to detect unsafe conditions and take appropriate remedial measures.

e. Promoting a 'culture of safety' and properly functioning a regulatory system so that incidents and occurrences are promptly reported. Establishing a non-punitive environment should facilitate such reporting, and appropriate measures should be taken by the SAA, DGTA, and regulated organisations to protect such information and those who report it.

f. The program promotes the relationship with other foreign National Military Airworthiness Authority (NMAA) or State Airworthiness Authority through recognition of approval and recognised aviation practices and standards.

DIRECTORATE GENERAL TECHNICAL AIRWORTHINESS (DGTA)**FUNCTIONS AND RESPONSIBILITIES OF THE DGTA**

8. The Director General of DGTA is accountable to SAA for fulfilling the requirements prescribed in this chapter. To assist the SAA in fulfilling its obligations, DGTA must consider international best practices in airworthiness.

9. The Directorate General Technical Airworthiness (DGTA) is responsible for conducting independent airworthiness monitoring and managing State aviation activities. In discharging its responsibilities, DGTA must:

- a. **Prescribe and interpret programs** for managing technical airworthiness, including the MSTAR and related standards.
- b. **Issue authorisations**, including permits, approvals, and licenses, to certify that state aircraft platforms, systems, organisations, and personnel have shown compliance with applicable MSTAR.
- c. **Conduct ongoing oversight and enforcement** activities to assure compliance with the MSTARs and the continued validity of authorisations issued by DGTA.
- d. **Promote understanding of airworthiness** requirements and compliance through education, training, and dissemination of airworthiness information.
- e. **Administrative Roles and Provisions** for effective inter-agency communication.

DELEGATION OF AUTHORITY BY DGTA

10. **Delegated Airworthiness Representatives (DAR)**. DAR are individuals within the SAO organisations who have been delegated with the authority by TAR to undertake the responsibility and manage the initial airworthiness activities on behalf of TAR.

11. SAO (project office) shall notify the TAR in writing of any person nominated for DAR appointment. The notification shall include the following details:

- a. Name, rank, and service number of the person.
- b. The position and responsibilities of the person.
- c. The scope of the delegation sought.
- d. The relevant experience and qualifications of the person.

12. The appointment of a DAR from within the SAO shall only be valid after the Director General of DGTA issues the certificate of authority for the said appointment.

PRESCRIBE AND INTERPRET PROGRAM

13. DGTA must manage the MSTAR on behalf of the SAA. In doing so,
- a. DGTA must ensure that the SAA is advised with adequate oversight and control of MSTAR amendments that may appreciably increase the compliance burden or appreciably reduce technical airworthiness.
 - b. DGTA must issue or apply standards, including airworthiness codes, to implement the MSTAR. Such standards must reflect the state of the art and best practices in the fields concerned and must be updated, considering worldwide aviation experience and technological updates.
 - c. DGTA must issue supporting material to promote understanding and compliance with the MSTAR. Such supporting material may include an acceptable means of complying with the MSTAR.
14. When requested, DGTA must provide an authoritative interpretation of MSTAR and advice regarding MSTAR compliance. Such interpretation and advice must not prescribe a particular course of action regarding airworthiness management unless there is evidence that the system's airworthiness level may otherwise be compromised.
15. DGTA must establish transparent procedures for developing and issuing technical airworthiness programs, standards, and support material. Such procedures must include appropriate provisions for consultation with relevant regulated entities during development.

ISSUE AUTHORISATIONS

16. DGTA may issue all authorisations, including permits, approvals, licenses, and similar artifacts, as necessary for the implementation of the MSTAR.
17. DGTA must only issue authorisations when the applicant has shown, to DGTA's satisfaction, that the applicable regulations have been met.
18. DGTA must only issue authorisations:
- a. To applicants that are part of the State; or
 - b. To applicants that have a contractual relationship with SAO or an SAO contractor, and where that contractual relationship permits enforcement of the MSTAR by DGTA; or
 - c. To applicants entering such a relationship (this process may be initiated upon obtaining a request from SAO, such as a Proof of Capability letter).
19. **Full Approval of Authorisation**. Full approval is granted to the respective organisation's applicant upon successfully demonstrating applicable regulation. The duration of the full approval is three (3) years.
20. **Interim Approval of Authorisation**. Interim approval is an organisational approval to the applicant as a means of authority approval to any organisation without government agreement. This interim is valid for six (6) months. The privileges and compliance requirements to be treated are equivalent to the full approval.

CONDUCT OVERSIGHT AND ENFORCEMENT

21. DGTA must conduct inspections, monitoring, and investigations as necessary to ensure compliance with the MSTAR and the ongoing validity of authorisations it has issued.
22. DGTA's oversight and enforcement programs, procedures, and decisions must:
- Promote a generative and just safety culture that supports voluntary reporting of safety issues.
 - Ensure that any response to non-compliance is effective, fair, proportional, and graduated.
 - Be transparent and evidence-based.
23. DGTA must establish transparent procedures for making enforcement decisions. Those procedures must:
- Ensure the hearing of the entity subject to the enforcement decision is addressed in the decision and that of any other party with a direct concern.
 - Provide notification of the decision to all affected entities.
 - Ensure that the decision contains reasons for the decision.
24. DGTA may amend, suspend, or revoke any authorisation issued by, or under privilege from, DGTA when DGTA identifies that:
- The conditions applying to its issue are no longer fulfilled; or
 - The entity holding the authorisation fails to fulfill the obligations imposed on it by the MSTAR.
25. Special procedures must be established to address the immediate action DGTA must take to react to a safety problem and to inform the relevant interested parties of the action they are to take.

PROMOTE AIRWORTHINESS AWARENESS

26. DGTA must promote airworthiness through education, training, and dissemination of airworthiness information. In performing this function, DGTA must provide an ongoing education and training program to promote understanding of and compliance with the MSTAR.
27. Key objectives of airworthiness promotion must include:
- Fostering the maintenance and improvement of airworthiness.
 - Supporting the development of a generative airworthiness culture.
 - Increasing awareness of prominent airworthiness issues.
 - Supporting the implementation and maintenance of an effective Airworthiness Management System (AMS)

28. The delivery of education and training regarding MSTAR compliance for specific organisational contexts is outside of DGTA's remit.

ADMINISTRATIVE RESPONSIBILITIES AND PROVISIONS

29. **Administration of the MSTAP Manual.** DGTA must manage the MSTAP Manual on behalf of the SAA.

30. **Engagement with the SAA and State Aircraft Operators.** The Director General of DGTA or any DGTA Director may liaise directly with the SAA to report matters of concern that may impact airworthiness. Access to the SAA and State Aircraft Operators supports a generative safety culture by enabling the provision of accurate advice on airworthiness matters of concern that require expertise in specific operational or technical domains.

31. **Recognition of Other Aviation Authorities.** DGTA may recognise the independent airworthiness assurance applied by other civil and military aviation authorities in order to promote efficiency and interoperability. Recognition must only be permitted when it can be demonstrated that the candidate authority applies credible and defensible Aviation Safety oversight.

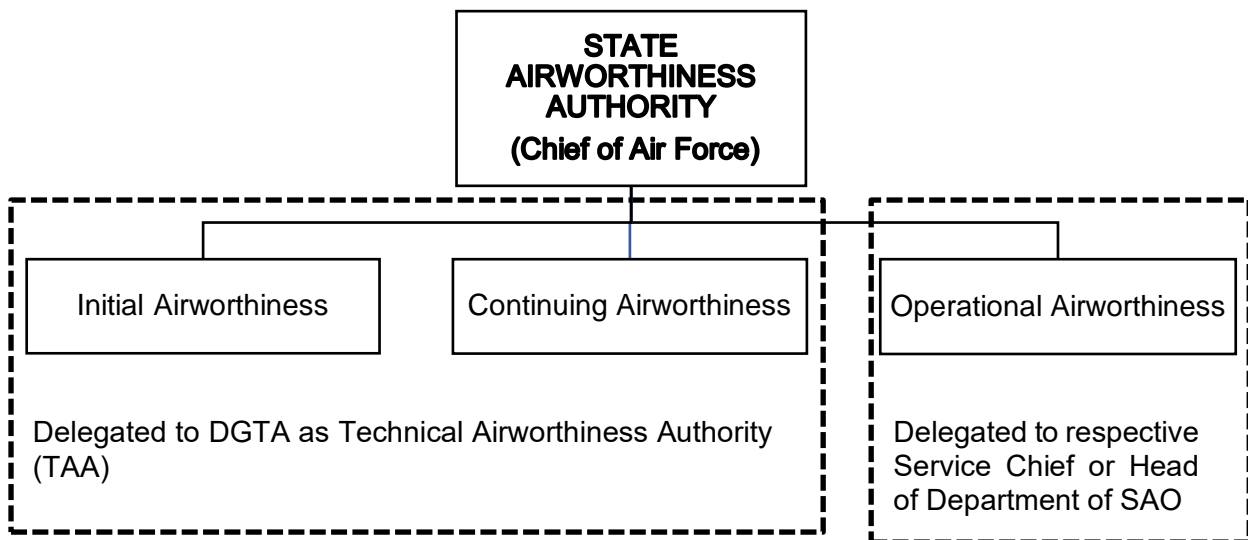
STATE AIRWORTHINESS CONCEPT

Figure 1: State Airworthiness Concept

INITIAL AIRWORTHINESS REGULATION

32. Initial airworthiness involves certifying an aircraft; design and production ensure they meet specific requirements set out under the State Airworthiness Regulatory Framework. This includes overseeing the certification process, issuing military-type certificates, and ensuring that new and modified aircraft meet the required safety and performance standards. The DGTA is responsible for the initial airworthiness of State aircraft in Malaysia.

33. These requirements and procedures apply to the design, production, and manufacture of such items, the process by which a newly built aircraft is certified as airworthy before it leaves the manufacturer.

34. For that purpose, DGTA's organisation as a Technical Authority is structured to deliver the functions and responsibilities for initial airworthiness as stated in Para 8 until 30 above.

CONTINUING AIRWORTHINESS REGULATION

35. Continuing airworthiness involves maintaining, inspecting, and modifying aircraft to ensure they remain safe and operational throughout their service life. The DGTA is responsible for the initial airworthiness of State aircraft in Malaysia.

36. Under continuing airworthiness, it establishes airworthiness requirements and administrative procedures for ensuring the continuing airworthiness of aircraft, including any installation component registered in the MSAA.

37. The airworthiness requirements, processes, and activities are necessary to ensure that aeronautical products meet the appropriate airworthiness rules and standards throughout their operating life.

38. Continuing airworthiness is integral to managing and monitoring an approved type design and the associated aeronautical products after a Type Certificate is issued.

39. Compliance with airworthiness standards during the in-service period ensures that the initial inherent safety of the approved type design and the actual aeronautical products are maintained throughout the product life cycle.

40. DGTA's organisation as a Technical Authority is structured to deliver the functions and responsibilities for initial and continuing airworthiness, as described above.

OPERATIONAL AIRWORTHINESS REGULATION.

41. Operational airworthiness is the other component of airworthiness concerning the operation of an aviation system within approved roles and environmental parameters by qualified, competent, and authorised personnel, according to approved limitations and instructions under a system of checking, with an acceptable risk of loss of life or injury to aircrews and passengers, or damage to the aircraft, and equivalent loss to other personnel or property as a direct consequence of the aviation activity. It ensures the suitability of state aircraft flights by implementing regulations and processes so that aircraft are operated in approved roles with correct mission and equipment by competent and authorised operators according to approved procedures.

42. Each SAO, headed by the respective Operational Airworthiness Authority (OAA), manages operational airworthiness. The OAA remains with the respective Service Chief/Head of SAO without a regulatory framework for operational airworthiness.

43. The Service Chief of respective services may delegate the OAA responsibility to appropriate operational commanders. For other state agencies, the respective operation commander may undertake the OAA responsibilities.

STATE AIRWORTHINESS REGULATION FRAMEWORK

SCOPE AND APPLICABILITY

44. **State Aircraft Operator**. This airworthiness regulation framework applies to all aircraft operated by :

- a. Royal Malaysian Air Force.
- b. Malaysian Army Air Wing.
- c. Royal Malaysian Navy Air Wing.
- d. Defence Agencies such as MDIO.
- e. Malaysian Maritime Enforcement Agency (MMEA) Air Wing.
- f. Malaysian Fire and Rescue Department Air Wing.
- g. Other State Enforcement Agencies.

45. **State Registered Aircraft**. Any State-registered aircraft under MSAA registration as stated in Part 1 Chapter 2 – General Requirement.

46. **Organisation, Person Approval Holder**. Any Organisation Approval Holder, person described in the respective regulation.

RESPONSIBILITIES OF MSTAR COMMUNITY

47. SAO, related organisation, and entity responsible for the aviation activities within the scope of the MSTAM must:

- a. Ensure compliance with the applicable MSTAR, which is promulgated in Vol 2 to Volume 7 of MSTAM and
- b. Take all measures necessary to support independent airworthiness activities carried out by DGTA.

MSTAR – IMPLEMENTING REGULATION.

48. The MSTAR framework results from adopting EMAR airworthiness requirements tailoring a national environment. These requirements are translated and harmonised into the MSTAR to suit the Malaysian state airworthiness environment. In formulating the framework, DGTA recognised the following initiatives:

- a. Close collaboration and consultation with EDA Member State – French MAA.
- b. Engagement and Exchange of Experience with non-EDA – DASA (Australia).

49. The implementing regulations under MSTAR are:

- a. **MSTAR 21: Aircraft Design, Production and Certification**. Refer to Volume 2 - MSTAM for the implementing rules for MSTAR 21.
- b. **MSTAR M: Implementing rules for CAMO**. Refer to Volume 3 - MSTAM, for the implementing rules for MSTAR M.
- c. **MSTAR 145: Requirement for Maintenance Organisations**. Refer to Volume 4 - MSTAM for the implementing rules for MSTAR 145.

- d. **MSTAR 66: State Aircraft Maintenance Licencing**. Refer to Volume 5 - MSTAM, for the implementing rules for MSTAR 66.
 - e. **MSTAR 147: Aircraft Maintenance Training Organisations**. Refer to Volume 6 - MSTAM, for the implementing rules for MSTAR 147.
 - f. **MSTAR UAS: Implementing Regulation for UAS**. Refer to Volume 7 - MSTAM for the implementing rules for MSTAR UAS.
50. The Malaysian state airworthiness regulatory framework is further illustrated below:

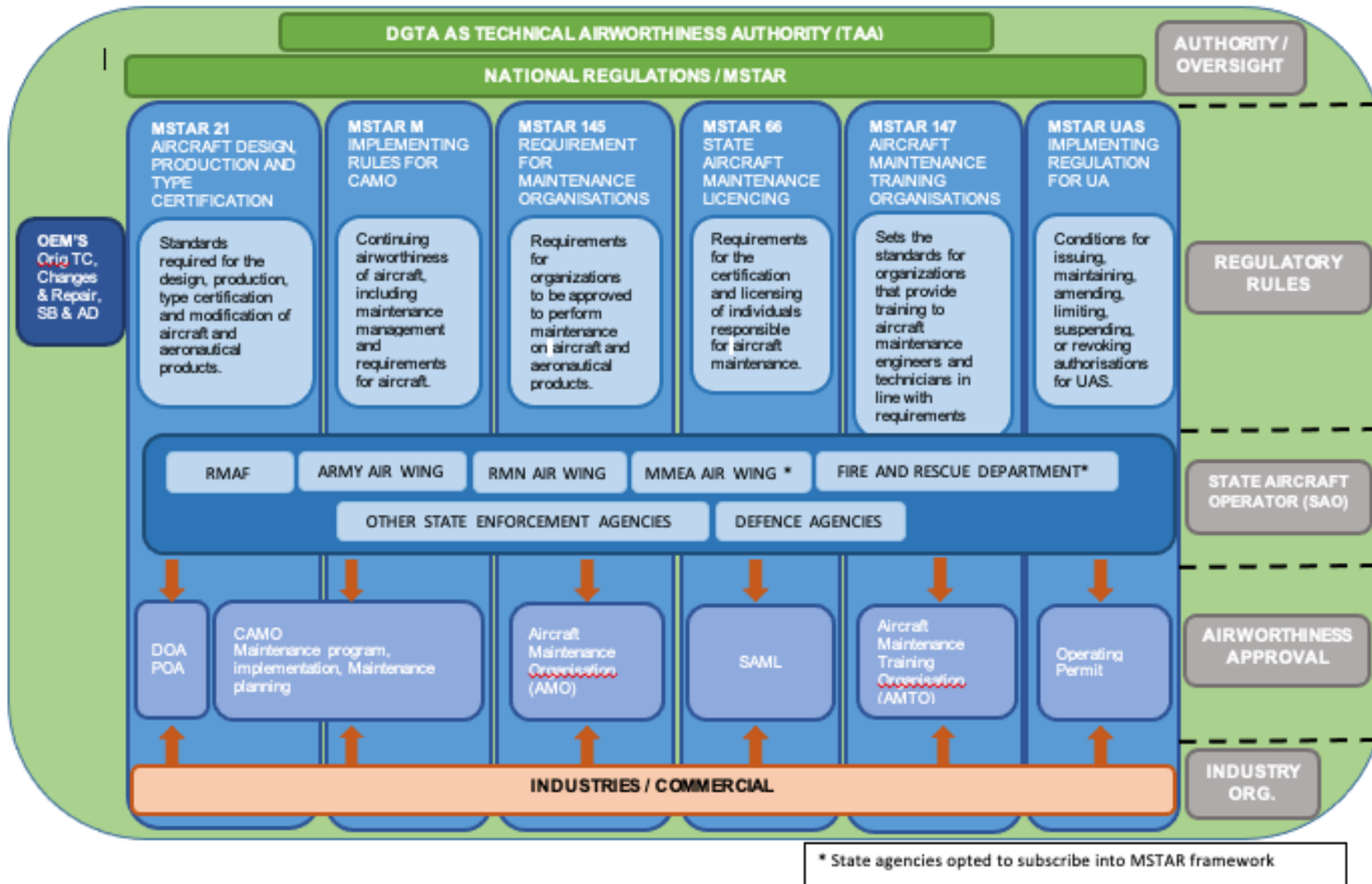


Figure 2: State Airworthiness Framework

MSTAR 21: AIRCRAFT DESIGN, PRODUCTION AND CERTIFICATION.

51. This chapter provides an overview of design and production-related engineering regulations. In particular, it stipulates the requirements, identifies the persons involved mentioned in the regulations, and describes the relationships between them.

52. This chapter also provides the requirements and guidance for the design and production activities for state-registered aircraft, aeronautical products, and aircraft-related equipment. It also defines the standard and assigns authority to organisations or delegates it to individuals to perform engineering activities on behalf of the State Aircraft Operator (SAO).

53. The TAA issued a complete version of Volume 2 - MSTAR 21, adapted and adopted from international practices such as EMAR 21/DASR 21 to suit the Malaysia State Airworthiness Authority's (MSAA) and unique additional requirements in Malaysia environment (If any).

54. MSTAR 21 requirements are generally divided into (12) twelve sub-parts. These sub-parts are supported with the required Acceptable Means of Compliance (AMC) and Guidance Material (GM). The applicant of Design Organisation Approval (DOA) or Production Organisation Approval (POA) must ensure that their Design Organisation Exposition (DOE) or Production Organisation Exposition (POE) complies with related requirements based on MSTAR 21. The outline of the interrelationship between Sub Part of MSTAR 21 is illustrated in Figure below.

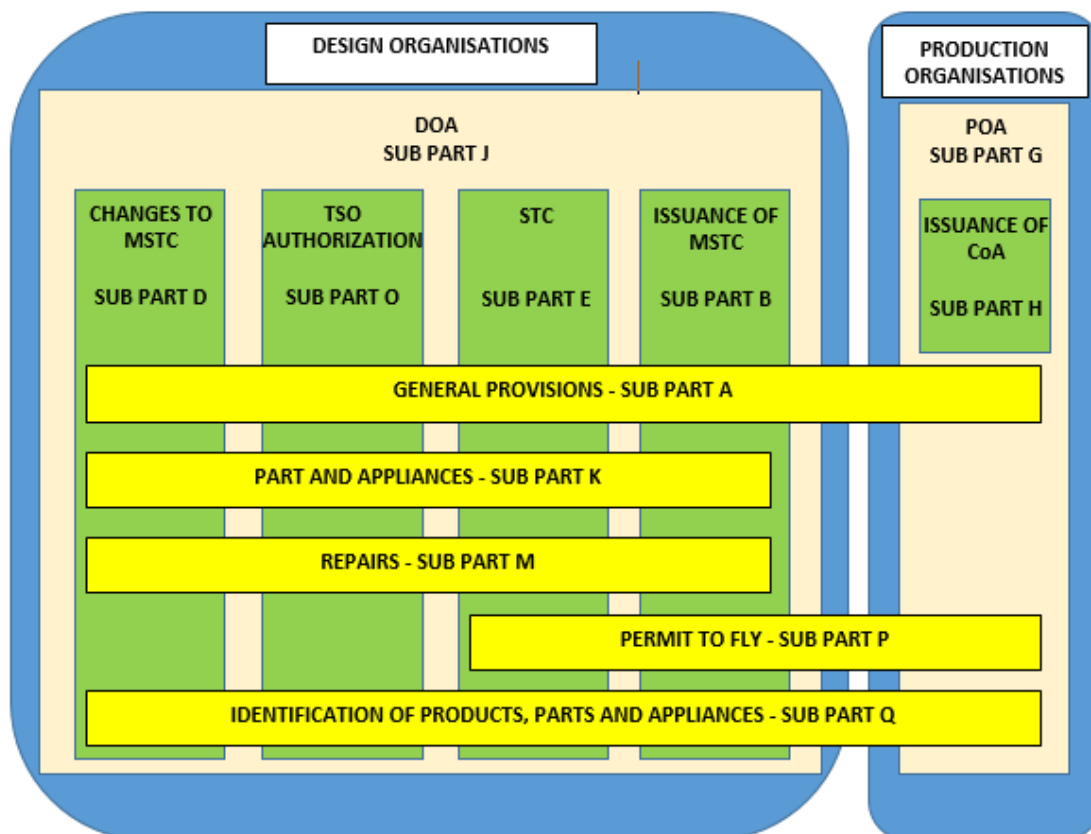


Figure 3: MSTAR 21 Regulation Interrelationship

MSTAR M: CONTINUING AIRWORTHINESS MANAGEMENT.

55. This chapter establishes the measures to be taken to ensure that airworthiness is maintained. It also specifies the conditions to be met by organisations involved in such continuing airworthiness management. Refer to a full version of the MSTAR M in the respective chapter.

56. The complete version of MSTAR M is made available as an individual manual adapted and adopted from EMAR M, EASA Part M, DASR M, FAA Part M, CAAM Part M, and other recognised bodies to suit Malaysia (MSAA) unique requirements and issued by the TAA.

57. This MSTAR M ensures that airworthiness is maintained and specifies the conditions to be met by organisations involved in such continuing airworthiness management.

58. CAMO shall provide the Continuous Airworthiness Management Exposition (CAME). The purpose of the CAME is to set forth the CAMO's procedures, means, and methods. Compliance with its contents will assure compliance with MSTAR M requirements.

59. CAMO shall also provide the AMP, which includes scheduled maintenance tasks, associated maintenance procedures, and standard maintenance practices. Those policies are cascaded into Volume 3 - MSTAR M with additional requirements in green color texts.

60. This chapter provides an overview of the continuous airworthiness management regulatory framework for state-registered aircraft, aeronautical products, and aircraft-related equipment defined by the regulations. In particular, it identifies the major classes of organisations mentioned in the regulations and describes their relationship.

61. The MSTAR M interrelationship with other regulations is illustrated below:

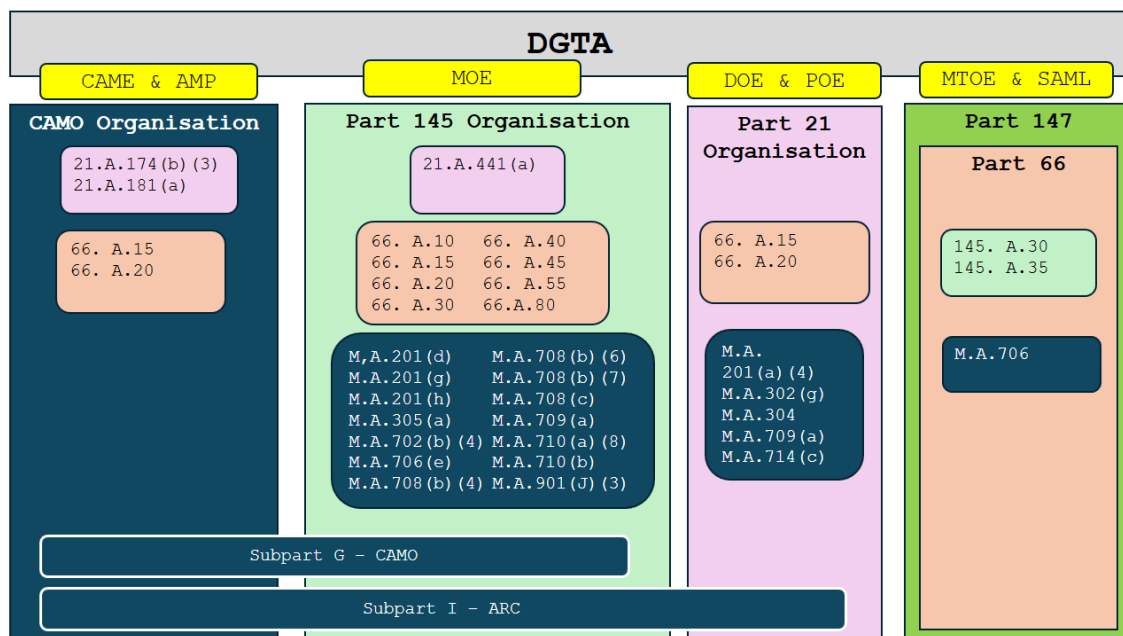


Figure 4: MSTAR M Regulation Interrelationship

MSTAR 145: REQUIREMENT FOR MAINTENANCE ORGANISATIONS.

62. The requirements to be met by a maintenance organisation to qualify for the issue or continuation of approval for the state-registered aircraft and components in Volume 4 - MSTAR 145: Requirements for Maintenance Organisations specify state maintenance policy and practices within the Technical Airworthiness Regulatory framework.

63. The MSTAR 145 has been developed to harmonise with equivalent worldwide civil and military airworthiness regulations. This Section only establishes the framework for MSTAR 145.

64. A complete MSTAR 145 issued by the TAA under an individual manual adapted and adopted from EMAR 145, EASA Part 145, DASR 145, FAA Part 145, CAAM Part 145 and other recognised bodies to suit Malaysia's (MSAA) unique requirements. Subsequently, these policies are cascaded into MSTAR 145 as follows:

- a. Technical Requirements.
- b. AMC & GM.
- c. Appendixes.
- d. Forms and additional requirements for the Malaysia environment.

65. MSTAR 145 Maintenance Organisation approval is a regulatory process established by airworthiness authorities to ensure that aircraft maintenance organisations meet the necessary standards for conducting maintenance, repairs, and inspections. This approval is granted to organisations that demonstrate compliance with specific requirements related to personnel qualifications, facilities, equipment, maintenance procedures, and quality control systems. MSTAR 145 approval ensures that maintenance organisations can perform maintenance tasks safely and effectively, maintaining the airworthiness of aircraft and contributing to the overall safety and reliability of aviation operations. It also involves regular audits and inspections by regulatory authorities to ensure continued compliance with the established standards.

MSTAR 66: STATE AIRCRAFT MAINTENANCE LICENSING.

66. MSTAR 66 is part of Continuing Airworthiness and establishes the regulation framework for State Aircraft Maintenance Licensing (SAML). It defines SAML and details the requirements for application, issue, and continuation of its validity. Furthermore, this chapter also describes the requirements and standards for Basic and Type Training, which is required for SAML application.

67. Volume 5 - MSTAR 66 is adapted and adopted from EMAR-66, EASA Part 66, DASR 66, and other recognised bodies to suit Malaysia's unique requirements. Subsequently, this chapter is cascaded into a few parts:

- a. Part 1 - Technical Requirements.
- b. Part 2 - Acceptable Means of Compliance & Guidance Material.
- c. Part 3 - Appendices.
- d. Part 4 – List of Forms.

MSTAR 147: AIRCRAFT MAINTENANCE TRAINING ORGANISATIONS.

68. As part of Continuing Airworthiness, MSTAR 147 established the Aircraft Maintenance Training Organisation (AMTO) regulation framework. This chapter clarifies the roles of the Maintenance Authorising Office (MAO), applications to be a certified and approved Aircraft Maintenance Training Organisation (AMTO), certification process, airworthiness assurance, and delivery of quality training services. The requirements and standards for Basic & Type Training in this chapter are related to MSTAR 66.

69. Volume 6 - MSTAR 147 is adapted and adopted from EMAR-147, EASA Part 147, DASR 14 and other recognised bodies to suit Malaysia's unique requirements. Subsequently, this chapter is cascaded into a few parts:

- a. Part 1 - Technical Requirements.
- b. Part 2 - Acceptable Means of Compliance & Guidance Material.
- c. Part 3 - Appendixes.
- d. Part 4 - Forms.

MSTAR UAS: IMPLEMENTING REGULATION FOR UAS.

70. This chapter clarifies Volume 7 – MSTAR UAS, the conditions for issuing, maintaining, amending, limiting, suspending, or revoking authorisations, and the privileges and responsibilities of the respective certificate holders. It also covers the rules and procedures for the registration of unmanned aircraft.

71. The MSTAR must require that the design, production, maintenance, and operation of Unmanned Aircraft Systems, including the propulsion systems, propellers, parts, non-installed equipment, and equipment to control them remotely, as well as the personnel and organisations involved in those activities, comply with the essential requirements set out in MSTAR UAS.

72. The MSTAR may require authorisation for designing, producing, maintaining and operating unmanned aircraft systems and the personnel and organisations involved in those activities.

73. For instances where an authorisation is required, the MSTAR must require that:

- a. The authorisation is issued upon application when the applicant has demonstrated that it complies with the relevant MSTAR.
- b. The authorisation specifies the safety-related limitations, operating conditions, and privileges. It may be amended to add or remove limitations, conditions, and privileges.
- c. The authorisation may be limited, suspended, or revoked when the holder no longer complies with the conditions, rules, and procedures for issuing or maintaining such an instrument.

74. The MSTAR must also specify:

- a. The conditions for issuing, maintaining, amending, limiting, suspending, or revoking authorisations.

- b. The privileges and responsibilities of the holders of certificates.
- c. The rules and procedures for the registration of unmanned aircraft.

75. The interrelationship between regulations is illustrated in the diagram below:

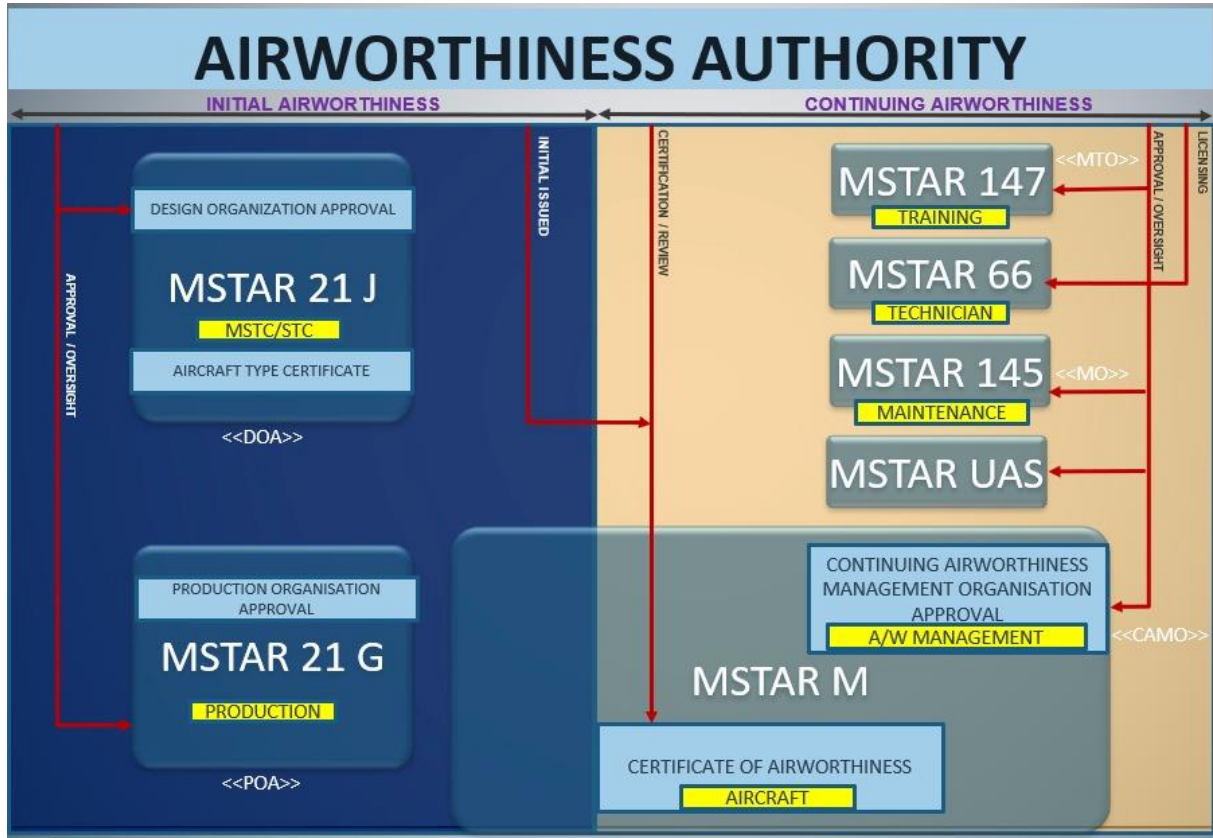


Figure 5: State Airworthiness Framework Interrelationship

LEGAL AND GOVERNANCE

76. The ministry's decision mandated the DGTA establishment and formation of a single State Airworthiness Authority, as stated in References A and B. It described:

- a. Chief of Air Force as SAA and
- b. DGTA as TAA will formulate the AMS.

STATE AIRCRAFT

77. Malaysia, as a contracting state of the International Civil Aviation Organisation (ICAO), has an international obligation to establish systems based on the Convention on International Civil Aviation 1944 (the Chicago Convention) whereby aviation operations are conducted safely and orderly.

78. Article 3 of the Chicago Convention states, "Aircraft used in military, customs, and police services shall be deemed to be state aircraft." The Malaysian Civil Aviation Act of 1969 defined "military aircraft" as an aircraft in the military service of the Armed Forces and includes any aircraft commanded by a member of the Armed Forces in the course of his duties as such a member.

79. In the context of MSAA, state aircraft shall be defined as:

- a. Military aircraft as defined in the Malaysian Civil Aviation Act 1969 above.
- b. Aircraft belonging to or exclusively employed in the service of the Government of Malaysia enforcement and security agencies, subject to the approval of the SAA.

80. State aircraft may be state-registered or civil-registered by or on behalf of the Government of Malaysia. However, the regulation provision in this publication only applies to state-registered aircraft.

NON-COMPLIANCE TO THIS MANUAL

81. The organisation or person holding certification or organisation approval under this MSTAR shall adhere to the MSTAM regulatory requirement. The government of Malaysia will not be liable for the implication of non-compliance.

82. Any organisation or person shall be held accountable for non-compliance to the Malaysian State Airworthiness Regulatory requirement for any accident and incident that may arise due to the non-compliance.

83. Commercial Organisations operating in an MSTAR-regulated environment shall be held accountable for non-compliance with the MSTAR regulatory requirement for any accident and incident that may arise as a result of the non-compliance, which may be subject to a contractual agreement.

GOVERNANCE AND OVERSIGHT

84. DGTA regulatory framework encompasses specific aircraft design, production, maintenance, and personnel licensing and training. The regulatory functions performed by the DGTA acting as Competent Authority for these activities are focused on the following major requirements:

a. **Aircraft Certification.** Aircraft certification is mandatory and must be processed before the introduction of aircraft into service or acceptance of design after major changes/modifications. Formal instruments associated with aircraft certification encompass a Malaysian State Type Certificate (MSTC), a Supplemental Type Certificate (STC), a Certificate of Airworthiness (CoA), a Service Release for major changes to type design, and a Permit to Fly (PTF). At the same time, an Aircraft Structural Integrity Program (ASIP) is established, and technical standards in service for all aircraft are managed.

b. **Organisation Approval.** Commercial organisations or any organisation within the SAO that carries out the design, production, construction, continuing airworthiness management, maintenance, or training activities on state aircraft must be audited and certified by the DGTA Authorised Officer as an approved organisation.

c. **Personnel Licensing.** A person engaged in aircraft maintenance carrying out inspections, servicing, repairs, replacements, modifications, and issuing a certificate of release to service or maintenance release shall hold an aircraft maintenance licence to demonstrate that the person is qualified and has adequate knowledge, experience, and competence in aeronautical engineering as prescribed in MSTAR 66.

d. **Occurrence Reporting.** The MSTAR requires establishing, operating, and managing an Occurrence Reporting system. The Occurrence Reporting system must enable assessment of the safety implications of each occurrence, including previous similar occurrences, to facilitate the achievement of aviation safety assurance requirements. The MSTAR shall specify:

- (1) Conditions for collecting, exchanging, and disseminating information.
- (2) Conditions for conducting ramp inspection, including systematic ones.

85. **Airworthiness Board (AB)**

a. The Airworthiness Board (AB) aims to ensure that each aircraft type remains airworthy by reviewing the Airworthiness Clearance for that type.

b. In addition, the AB is a platform for making recommendations to the SAA regarding state aircraft airworthiness and safety management. The AB committee shall review and approve any issue related to airworthiness regulations. The AB is chaired by the Deputy Chief of RMAF, acting on behalf of the SAA. However, in certain circumstances, the AB may be chaired by the SAA.

c. The AB serves as an executive body to SAA. The AB convenes as and when required and comprises of the following members:

- (1) Deputy Chief of RMAF - Chairman.
- (2) Operational Airworthiness Authority – Member.

- (3) Technical Airworthiness Authority – Member.
- (4) Staff Officer 1 of DGTA – Secretary.
- (5) SAO Competent Representative.
 - (a) Army - Pengarah PUTD.
 - (b) Navy - Panglima Udara.
 - (c) MMEA - Ketua Pengarah Operasi Udara.
 - (d) Fire & Rescue - Chief of Staff.

86. The responsibilities of AB are as follows:

- a. To ascertain the airworthiness status of a newly procured/leased aircraft type and to approve the issuance of the MSTC, STC, and CoA.
- b. Review and approve the Service Release and Permit to Fly application.
- c. Conduct an airworthiness status review when the airworthiness status of an aircraft type is in doubt and has significant implications on flight safety.
- d. To review and approve the aircraft registration and certification.

87. **Board of State Technical Airworthiness (BoSTA):**

- a. The BoSTA is the internal airworthiness committee that addresses:
 - (1) Standardisation of rules and regulations.
 - (2) Review and approve the application for renewal of applicable airworthiness instrument.
 - (3) Validate and approve the certification of *Pegawai Pemeriksa Kapal Terbang (PPKT)*.
- b. The BoSTA is convened regularly and chaired by TAR or any Director of the DGTA Department and comprises the following members:
 - (1) Director General of DGTA – Chairman.
 - (2) Director from the respective department of DGTA – Member.
 - (3) Staff Officer 1 DGTA – Member.
 - (4) Staff Officer 2 DGTA – Secretary.
 - (5) Members in attendance – Lead Auditor for SAO or commercial Compliance/Surveillance audit and other related members (if any).

- c. For the BoSTA/LSTA-BIPKT comprises of the following members:
- (1) Director General of DGTA – Chairman.
 - (2) Director TAQR of DGTA – Member.
 - (3) RMAF Engineering Member – Representative.
 - (4) Army Aviation Air Wing Member – Representative.
 - (5) RMN Air Wing Member – Representative.
 - (6) Staff Officer 2 DGTA – TAQR Secretary.
88. The responsibilities of BoSTA/LSTA-BIPKT are:
- a. To certify eligible Malaysia Armed Forces (MAF) Engineering Officers as PPKT in accordance with *PMAT Bilangan 7 Tahun 2008* dated 28 July 2008.
 - b. To validate the status of PPKT for continual or termination of BIPKT entitlement.
 - c. To accept, review, and approve PPKT's competency course submission.
 - d. To register and update all PPKT occurrences in the DGTA's database.
 - e. To issue a PPKT certificate.
 - f. To develop and interpret PPKT rules stipulated in *Manual Pengurusan PPKT* and review the contents annually.

RESTRICTED

PU 2103

MALAYSIAN STATE TECHNICAL AIRWORTHINESS PROGRAM

PART 1

CHAPTER 2

GENERAL REQUIREMENTS**PURPOSE**

1. This section establishes the MSTAR requirements for managing the airworthiness of state-registered aircraft, aeronautical products, and related equipment by commanders and managers to be fulfilled by the agencies involved.

DEFINITIONS

2. Definitions are available in the **MSTAR Glossary**.

STRUCTURE

3. The structure of MSTAR is comprised of:

a. General Requirements (GR), which are set out below in two subparts:

(1) **Section A**. Scope and applicability define the MSTAR's scope and the MSTAR part's applicability.

(2) **Section B**. Common requirements and provisions establish requirements and provisions that apply to a significant proportion of regulated entities.

(3) The Malaysian State Technical Airworthiness Regulation (MSTAR) details of implementing regulation are set out in the respective MSTAR in Volume 2, 3, 4, 5, 6 and 7.

4. **MSTAR Clauses and Sub Clauses**. MSTAR clauses and sub-clauses may have associated supporting information in the form of:

a. **Acceptable Means of Compliance (AMC)**. AMC is information published by TAA to identify a means of meeting one or more MSTAR requirements. Regulated entities are not required to comply with AMC and may instead propose an Alternative Means of Compliance to DGTA. Any proposal will be subject to a separate assessment by DGTA to determine whether the approach complies with the MSTAR.

b. **Guidance Material (GM)**. GM provides additional explanations to assist in applying the requirement and/or explaining the AMC.

SECTION A: BASIC REQUIREMENT

5. **Aircraft Registration**. State Aircraft operated by SAO must be:

a. State Registered Aircraft.

b. State Registered Unmanned Aircraft System (UAS).¹

Note: The UAS registration is subject to the requirement stipulated in the respective regulation for UAS.

6. **Aircraft Registration And Deregistration.** DGTA shall be the authority for processing aircraft registration and deregistration in Malaysia under state-registered aircraft. An aircraft belonging to or exclusively employed in the service of the Federal Government of Malaysia enforcement and security agencies, subject to the approval of the SAA.

7. The MSTAR must specify the conditions for introducing and removing aircraft from the register.

8. **Non-Airborne Equipment.**

a. The equipment is not fitted on the aircraft but is required to support aircraft flying operations. In the context of airworthiness, regulatory compliance, maintenance standards, and design changes on such equipment do not require the same degree of rigour as airborne equipment.

- (1) Flight Training Simulator.
- (2) Ground Support Equipment and Vehicle.
- (3) Cable and Arrester Barrier.
- (4) Crash and Salvage Equipment.
- (5) Ground Radar and Surveillance System.

b. The mean of compliance for the aircraft non-airborne equipment should obliged to the respective regulation of this manual.

9. **Airworthiness Regulation of State-Registered Aircraft.**

a. The design, production, and certification of state-registered aircraft must be managed in accordance with MSTAR 21 - Aircraft Design, Production, and Certification conforming to Initial Airworthiness requirements.

b. The continuing airworthiness of state-registered aircraft and components thereof must be managed in accordance with the following:

- (1) MSTAR M – Continuing Airworthiness Management.
- (2) MSTAR 145 – Requirements for Maintenance Organisations.
- (3) MSTAR 66 – State Aircraft Maintenance Licensing.
- (4) MSTAR 147 – Aircraft Maintenance Training Organisations.

10. **Operation of State Aircraft.** The operation of state Aircraft by SAO must:

a. State-registered aircraft must have a valid MSTC to conduct operations. The type certificate must be issued in accordance with MSTAR 21 Subpart B Type-Certificates and Restricted Type-Certificates.

b. State-registered aircraft must have a valid Certificate of Airworthiness (CoA) to conduct operations. The certificate must be issued in accordance with MSTAR 21 Subpart H Certificates of Airworthiness and Restricted Certificates of Airworthiness.

- c. By way of exception from paragraphs a and b, an aircraft may be operated where a valid permit to fly has been issued. Any such permit to fly must be issued in accordance with MSTAR 21 Subpart P Permit to Fly (PTF).

SECTION B: COMMON REQUIREMENTS AND PROVISION

11. **Occurrence Reporting.** Where required by respective regulations, regulated entities must report aviation safety occurrences to the authority in a form and manner acceptable to the authority. The process of issuing occurrence reporting is further elaborated in the respective regulations.
12. **Delegated Airworthiness Representative (DAR).** The respective SAO shall appoint a DAR in the project office, a dedicated person to oversee and manage the certification program, and act as the point of contact between OEMs and vendors throughout the acquisition program/project.
13. **Design Acceptance Strategies (DAS).** Previously conducted under the TAMM environment, it is now being implemented and overseen under MSTAR 21 Subpart J and G. The embodiment of the design change product will be overseen by the Continuous Airworthiness Manager (CAM). CAM is responsible for conducting necessary validation activities through internal processes (MRB, CCB) for modification and repair which include:
 - a. Assessing design change, major or minor, for modification and repair.
 - b. Assessing design data applicable for modifications or repairs data as suitable for consumption.
 - c. Assessing technical information and instructions as acceptable for consumption.
14. **Oversight and Enforcement.** Regulated entities assure compliance with the MSTAR.
 - a. To implement paragraph (a), regulated entities must conduct investigations, including ramp inspections, and take any measure to prevent the continuation of non-compliance.
 - b. To facilitate appropriate enforcement action by competent authorities, regulated entities shall exchange information on identified infringements with authority.
15. **Flexibility Provisions.**
 - a. Where an equivalent level of protection attained by applying the MSTAR can be achieved by other means, the authority may approve exceptions and exemptions from those MSTAR.
 - b. The authority may allow a credible and defensible level of military aviation safety performance where an equivalent level of protection to that provided by the application of the MSTAR cannot be demonstrated but can be supported by sound risk management principles.
 - c. The authority must acknowledge that regulated organisations may deviate from the substantive requirements in this regulation in the event of compelling operational imperatives or emergencies.