INTRODUCTION TO

DEFENCE AVIATION SAFETY

GUIDEBOOK

EDITION 2.1

Note to readers

This booklet is an update to the Introduction to Defence Aviation Safety Guidebook released in March 2018.

Every effort has been made to ensure the information in this booklet was accurate at the time of printing. However, this document is a guide and readers are reminded that the *Defence Aviation Safety Assurance Manual* (DASAMAN) and the *Defence Aviation Safety Regulations* (DASR) remain the authoritative documents for the management and regulation of aviation safety in the Defence. Reserved sections within the DASR are not discussed in this guidebook.

The *DASAMAN* and *DASR* are on a six monthly update cycle with a major update released 30 September and minor update released 30 March annually. In exceptional circumstances, an update to either publication maybe released out-of-cycle. Updates to the DASAMAN and DASR may cause elements of this guidebook to become out of date.

February 2019

Defence Aviation Authority

Military aviation is a unique undertaking with hazards and risks that cannot be reasonably and practicably treated by following the statutory Work Health and Safety requirements alone. To meet its moral and legal obligation, Defence issues additional policy and regulations, which provides amplification for the Defence aviation context, achieved primarily through the establishment of the Defence Aviation Safety Framework.

The Defence Aviation Safety Framework is developed cognisant of the unique nature of military operations as well as the imperative to balance operational objectives and safety outcomes within resource constraints. The framework supports Commanders to make informed judgements that enable capability generation while managing aviation safety risks.

Defence cannot afford to manage aviation hazards and risks in isolation. A guiding principle for the ongoing development of the framework is, where practical, the adoption or adaption to the military environment of contemporary global aviation safety management conventions. The Defence Aviation Safety Authority maintains close links with the Australian Civil Aviation Safety Authority while monitoring global developments in aviation safety.

To support the acquisition, maintenance and operation of Defence aviation capabilities, Defence maintains relationships with foreign military and civil aviation authorities, including the International Civil Aviation Organisation. The adoption of global conventions and the establishment of relationships with other authorities provide Defence with efficient access to global supply chains, maintenance vendors, and the opportunity to exploit blended workforce options.

The military aviation environment is both complex and continually evolving. The Defence Aviation Safety Framework will continue to evolve to ensure it remains a contemporary aviation safety system. For Defence to attain excellence in aviation safety it is essential that those involved in the delivery of Military aviation capabilities possess a sound understanding of Defence's strategy for aviation safety. I welcome the update to this guidebook, and commend it you as a handy reference to the Defence Aviation Safety Framework.

GN Davies, AO CSC
Air Marshal
Defence Aviation Authority

February 2019

CONTENTS

Defence Aviation Safety – Why?

Defence has a moral and legal obligation to identify hazards and risks in military aviation to ensure they are eliminated So Far As Reasonably Practicable (SFARP) and, if it is not reasonably practicable to eliminate, to minimise those hazards and risks SFARP.

Prior to 1991, and extending back to the beginning of military aviation, there was a cultural acceptance in Defence that military flying operations were inherently risky and that accidents and fatalities were inevitable. This came to a head in the decade between 1981 and 1991 when the Australian Defence Force (ADF) suffered an aircraft loss rate of more than five per year and fatalities of more than four per year. Figure 1 shows the aircraft hull losses and associated fatalities from 1980 to 2018. In 1991, new safety policy and regulations was progressively introduced; and these policies and regulation have continued to evolve with a strong focus on the importance of a just and generative safety culture in Defence aviation.

Unlike civil aviation in Australia, Defence does not have dedicated aviation safety legislation. Rather, Defence establishes organisations and accountabilities, and prescribes policy and regulation, under the *Defence Act 1903* to amplify obligations in the *Work Health and Safety Act 2011* for military aviation.

Defence Aviation Accidents (Fatalities & Hull Losses) 1980 – present

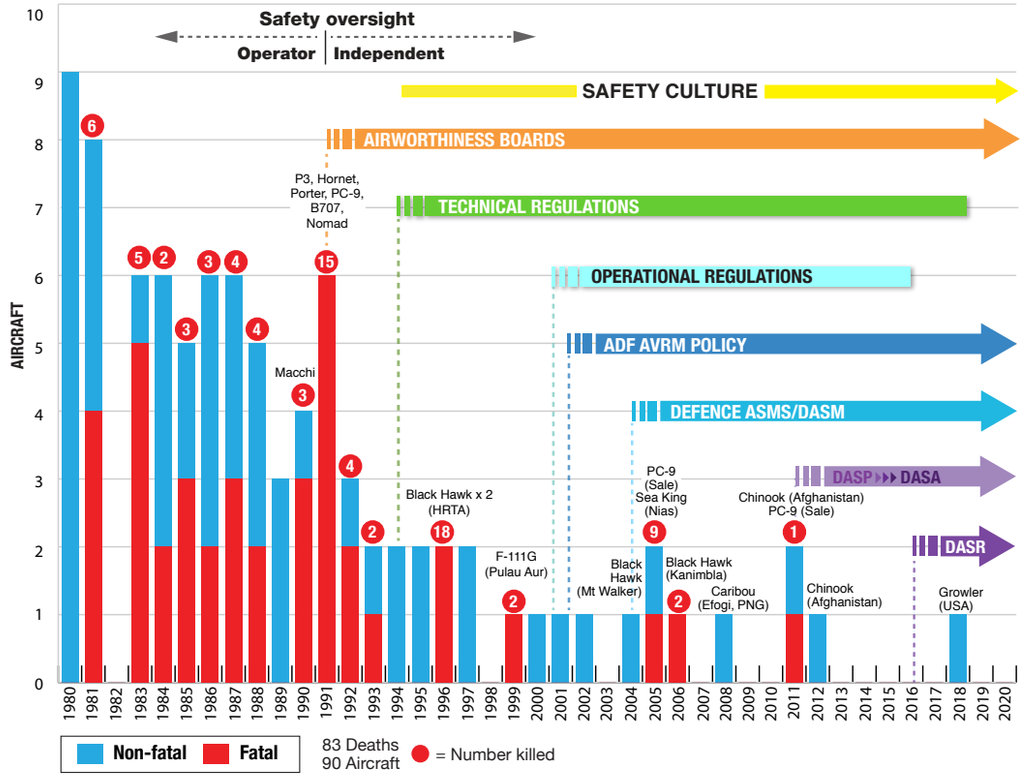

Figure 1. Defence Aviation Accidents 1980 – present

Global Aviation Safety Environment

The Second World War was the catalyst for significant developments in aviation that allowed for increased networks and capacity for the movement of passengers and freight around the world. In 1944, the United States invited 55 nations to attend an International Civil Aviation Conference in Chicago. Building on the work of the International Commission for Air Navigation that was established in Paris in 1919 and other pre-war conferences, committees and conventions, the International Civil Aviation Organisation (ICAO) was ratified in 1947. The core ICAO mandate, which remains unchanged, is to help States to achieve the highest possible degree of uniformity in civil aviation regulations, standards, procedures, and organisation. Since its formation, ICAO has remained contemporary, increasing the number of annexes and issuing more than 12,000 international standards and recommended practices (SARPs), which have been agreed by consensus by ICAO's 192 Member States.

Australian Aviation Safety Environment

Australia is a signatory to the Convention on International Civil Aviation, also known as the Chicago Convention. Article 3 of the Chicago Convention states that the convention applies to civil aviation and does not apply to state aircraft. The Civil Aviation Act of 1988 defines for Australia that a state aircraft is one that is owned and/or operated by any part of the Defence Force or an aircraft commanded by a member of the Defence Force in the course of their duties. The Act also defines aircraft used in the military, customs or police services of a foreign country as state aircraft. While the Chicago Convention excludes state aircraft, Article 3 requires that contracting States undertake, when issuing regulations for their state aircraft, that they will have due regard for the safety of navigation of civil aircraft.

In 1999, ICAO issued annex 19 to the Chicago Convention that requires contracting states to develop a State Safety Program (SSP). Australia's Aviation SSP aims to conform to the requirements of annex 19, with compliance assessed by ICAO. The Defence Aviation Safety Program (DASP) has been developed cognisant of, and broadly aligned with, the ICAO SSP requirements.

Australian Government agencies have agreed to pursue an integrated approach to management of Australia's civil SSP and the DASP, strengthening interagency agreements and pursuing common initiatives to promote the improvement of aviation safety in Australia. Closer engagement between the DASP and the civil SSP offers Australia the opportunity for better engagement with ICAO in the future, an inexpensive and highly valued vehicle for international engagement in the Asia-Pacific region, and reduced overheads for Australian industry with increased harmonisation and recognition of the respective regulation in Defence and civil aviation.

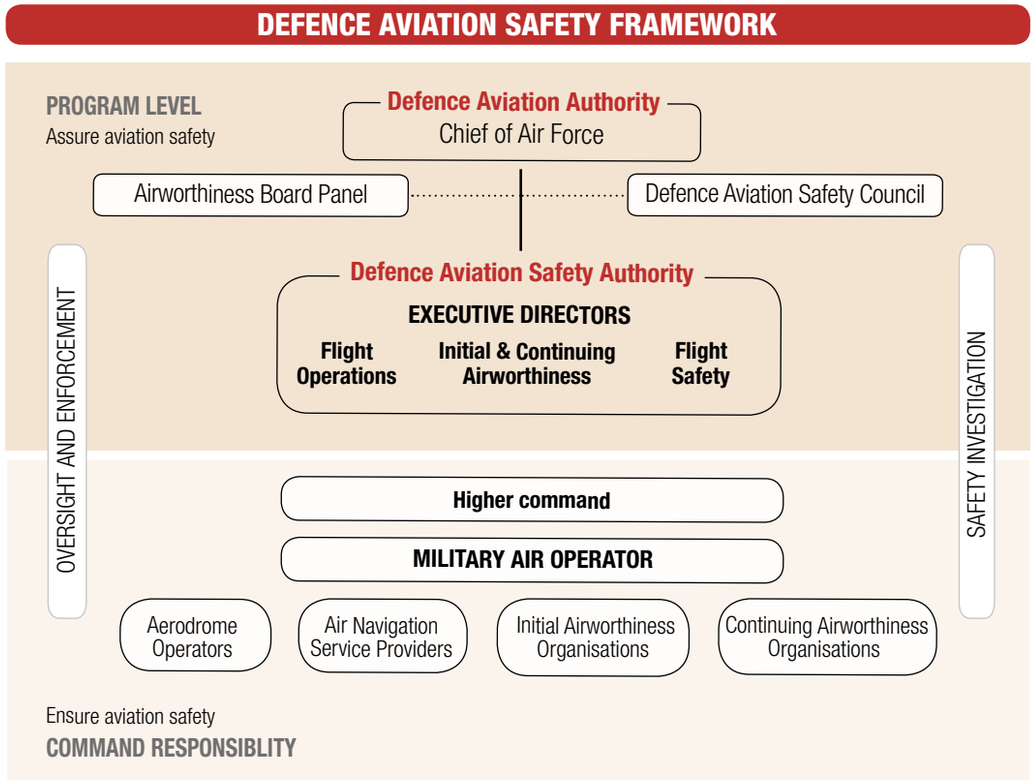

Figure 2. The Defence Aviation Safety Framework

Defence Aviation Safety Framework

The framework of organisations and accountabilities, and prescribed policy and regulation, that contextualise and amplify statutory WH&S obligations for military aviation is called the Defence Aviation Safety Framework (DASF). The framework is established by the Chief of Defence Force (CDF) and Secretary of Defence through their Joint Directive (JD) 24/2016 *Defence Aviation Safety Framework*. Figure 2 provides an illustration of the DASF. JD 04/2018 extended the period of operation of JD 24/2016.

The DASF has been established in accordance with global developments in civil and military airworthiness to optimise mutual recognition and interoperability with international partner nations.

Defence Aviation Authority

The Chief of Air Force (CAF) has been appointed as the Defence Aviation Authority (Defence AA) and is accountable to CDF and the Secretary to:

- Establish an appropriately resourced safety organisation called the Defence Aviation Safety Authority (DASA);
- Implement the DASP in line with contemporary international conventions;
- Prescribe effective Defence Aviation Safety Regulation (DASR) in line with contemporary international regulation;
- Monitor, advise and report on aviation safety performance in Defence; and
- Establish an independent agency for the investigation of aviation safety incidents and accidents.

Defence Aviation Safety Council

The Defence AA has established the Defence Aviation Safety Council (DASC) to provide oversight of the DASP. The DASC is also responsible for considering the views of all significant Defence aviation stakeholders when aviation safety initiatives are proposed, and that the approach to aviation safety adopted by the DASA is aligned, where appropriate, with that taken by the Civil Aviation Safety Authority (CASA) and the Australian Transport Safety Bureau (ATSB). The DASC is chaired by a two-star officer appointed by the Defence AA.

Independent review of aviation safety management – Airworthiness Board

Joint Directive 24/2016 also directs that the Defence AA will establish mechanisms to enable independent review of the aviation safety management within Defence. The Defence AA maintains a panel of Reserve officers of one or two star rank, with an operational aircrew or aviation engineer background, to be members of an Airworthiness Board (AwB). At the direction of the Defence AA, an AwB consisting of an operational and a technical member may be convened to review any aspect of the DASF and, most importantly, AwB's are routinely convened to review the safety performance of military air operations and the airworthiness of State aircraft.

Aviation Safety and Command

While the DASF is a structured framework to assure the credibility and defensibility of aviation safety within Defence, responsibility to *ensure* the safety of military air operations and the airworthiness of aircraft rests with the Command Chain. The well-known adage remains true, 'Aviation safety is a Command responsibility'.

Commanders and managers are therefore accountable for ensuring aviation systems under their command or control are designed, constructed, maintained and operated to approved standards and limitations by competent and authorised personnel acting as members of an approved organisation.

The nature of military aviation is unique and complex, and the need for commanders to balance operational objectives and safety outcomes is well understood. The DASR contains flexibility provisions to assist commanders faced with compelling operational imperatives to make informed judgements regarding compliance with safety obligations. Such judgements must be made at the appropriate command level and must ensure that aviation safety hazards and risks are eliminated SFARP, and if it is not reasonably practicable to eliminate hazards and risks to health and safety, then to minimise those hazards and risks SFARP.

Defence Aviation Safety Authority

Defence Aviation Safety Authority

The DASA is an organisation in Defence that operates independently of the Command Chain to enhance and promote safety of military air operations and the airworthiness of State aircraft in Defence. This objective is primarily achieved through implementation of the DASP that supports compliance with statutory safety obligations and *assures* the effective management of aviation safety risks.

The DASA is administered by the Director General DASA (DGDASA) and comprises seven functional directorates, each led by a senior military or senior Australian Public Service (APS) officer as follows:

- **Director of the Airworthiness Coordination and Policy Agency (ACPA)** – Military aviation operator
- **Director of Initial Airworthiness** – APS engineer
- **Director of Continuing Airworthiness** – Military engineer
- **Director of Policy, Engagement, Promotion and Safety** – APS engineer
- **Director of Aviation Engineering** – Military engineer
- **Chief of Staff** – APS Engineer
- **Director of the Defence Flight Safety Bureau (DFSB)** – Military aviation operator

While these directors are responsible for the smooth operation of the DASP on a day-to-day basis, and have clear leadership functions within the DASA, the Defence AA has appointed three Executive Directors via personal charter letters to make key decisions and issue key instruments on his behalf.

These Executive Directors have direct access to the Defence AA on any matter regarding safe air operations, initial and continuing airworthiness, and air safety investigation respectively; and each is required to attend and make regular reports to the DASC.

Executive Director – Flight Operations

Director Airworthiness Coordination and Policy Agency (DACPA) is appointed as the Executive Director – Flight Operations and is the principal representative for the Defence AA on matters concerning safe air operations, including the broader remit of Operational Airworthiness. This includes the formulation and interpretation of policy and regulations, approval of Operations Specifications and maintaining the Defence Register of aircraft. DACPA provides administrative support to the Defence AA, including maintaining the Defence AA registry and providing secretariat support to AwBs and the DASC.

Executive Director – Flight Safety

Director Defence Flight Safety Bureau (DDFSB) is appointed as the Executive Director – Flight Safety and is the principal representative for the Defence AA on matters concerning aviation safety investigations, safety event reporting, cultural surveys, safety education, promotion and training and provides specialist advice to aviation commanders. DFSB provides an independent aviation safety function to the Defence AA and commanders. The Director of DFSB is the point of contact for Confidential Incident Reports (CONFIR).

Executive Director – Initial and Continuing Airworthiness

DGDASA is appointed as the Executive Director – Initial and Continuing Airworthiness and is the principal representative for the Defence AA on matters of initial and continuing airworthiness. This includes the issue of airworthiness standards, the

certification of State aircraft, and the issue of organisational approvals and licences. DGDASA has also been delegated the authority to prescribe regulations and establish delegates of the safety Authority.

Delegate of the Safety Authority

To assist in the smooth administration of the DASA, and to enable routine matters to be quickly progressed in support of day-to-day operations, the DASA appoints agents – known as Delegates of the Safety Authority (DoSA) – to perform specific DASA functions.

The DoSA is a personal appointment based on the skills, knowledge and experience a person holds in aviation safety; and the level, scope and limitations of the agency arrangement are contained in written letter of delegation. DoSAs are typically established at the aircraft platform level in Capability Acquisition and Sustainment Group (CASG) to progress initial and continuing airworthiness matters, and in the ADF to progress flight test and licencing matters.

The 'Authority'

The term 'Authority' is often used in regulation and training material without specific reference to the either the Defence AA, DASA, the Executive Directors or an individual DoSA. This is a natural by-product of adopting global conventions in aviation safety and airworthiness, and then exploiting the globally available training and education material.

In nearly every case, the use of the term 'Authority' is intended to refer to the DASA, and the regulated community should not engage directly with the Defence AA.

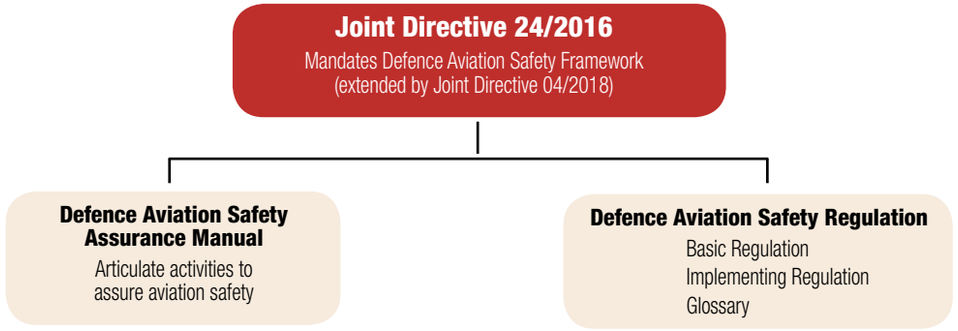

Figure 3. Hierarchy of the Defence Aviation Safety Policy

Defence Aviation Safety Program

The DASP was introduced in 2011, well ahead of the DASA's formation and issuance of new DASR in 2016. In all respects the DASP has been developed in cognisance of, and broadly aligns with, ICAO's requirements in Annex 19. The DASP focusses significant effort for Defence aviation safety around the four pillars of:

- Policy and regulation
- Education and promotion
- Initial certification and approval (based on the management of risk)
- Oversight and Enforcement (as the key aspects of compliance assurance)

In the same manner that ICAO uses SARPs to benchmark the performance of civil SSPs around the world, the performance of Australia's DASP is benchmarked under mutual recognition arrangements by other National Military Aviation Authorities (NMAA). This benchmarking activity uses the globally agreed Military Authorities Recognition Questionset (MARQs), which are a military derivative of ICAO's SARPs.

The similarity between Australia's SSP for civil aviation and Australia's DASP for Defence aviation, provides the framework for improved engagement across Government agencies so that common safety initiatives can be pursued as a matter of policy for the promotion of aviation safety in Australia.

Defence aviation safety arrangements are prescribed in Government policy, legislation, the Joint Directive, the DASP Policy Statement issued by the Defence AA, the Defence Aviation Safety Assurance Manual, and the DASR.

Figure 3 illustrates this hierarchy of the Defence Aviation safety policy which provides the framework, authority, obligations and accountabilities necessary to implement and operate an effective aviation safety program.

Defence Aviation Safety Assurance Manual

The Defence Aviation Safety Assurance Manual (DASAMAN) is used by DASA to provide policies and procedures to support implementation of the DASF and articulate activities to assure effective management of aviation safety.

Key objectives of the manual are to:

- Articulate authoritative aviation safety policy objectives and requirements.
- Provide supporting detail and guidance on the DASF.
- Amplify and contextualise requirements detailed in DASR.

Airworthiness Nomenclature

The DASR brings revised language and concepts to the Defence Aviation environment. While retaining the fundamental tenets of the previous system, DASR aims to align the DASF with contemporary aviation safety conventions, including ICAO standards and recommended practices, and European Military Airworthiness Requirements (EMAR).

Under the ICAO framework, the term Airworthiness (encompassing Initial Airworthiness and Continuing Airworthiness) is associated with design, production and maintenance of aircraft.

The ADF's 'Operational Airworthiness' term has been retained under DASR as a key concept that uniquely addresses the ADF's means of striving for high professional standards and a zero-accident rate.

Operational Airworthiness

Operational Airworthiness extends beyond the scope of flight operations regulation and provides a framework of controls and underpins the learned safety culture required to enable commanders to eliminate risks to aviation safety SFARP and, if not able to be eliminated, then minimise SFARP.

This is particularly relevant in situations where commanders are routinely expected to operate Defence aircraft outside of their certification basis or certificate of airworthiness, often at higher levels of risk than civil aviation, to maintain key capabilities at high levels of operational readiness and to undertake non-discretionary activities in support of Australia's national interests. While the Australian military concept of Operational Airworthiness is not a feature of global aviation conventions, it will remain within the ADF's nomenclature to provide the necessary framework of culture and controls so that aviation commanders can routinely operate State aircraft in satisfaction of their obligations under the Defence Act 1903, while still satisfying their obligations for safety risk management under the WHS Act 2011. The description of Operational Airworthiness is:

> The operation of aircraft, including unmanned aircraft, and interfacing or supporting systems, in approved roles, with correct mission equipment, by qualified and authorised individuals, in accordance with approved orders, instructions and publications, under a safety framework that recognises and supports compliance with statutory safety obligations, enabling appropriate flexibility provisions to support risk based command decisions in delivering capability.

Initial Airworthiness

Initial Airworthiness covers the design, production and certification aspects of an aircraft. This includes, 'Continued Airworthiness', which defines ongoing obligations necessary to ensure the continued validity of a design. Initial airworthiness establishes the criteria for certification of military aircraft and related products as well as design and production organisations.

Continuing Airworthiness

Continuing Airworthiness covers all processes that ensure an aircraft continues to comply with initial airworthiness requirements and supports the ongoing validity of the aircraft's Certificate of Airworthiness (CoA).

The language, Continued and Continuing Airworthiness can be confused. To describe this in a simple way: Continued Airworthiness is a 'Design' function and Continuing Airworthiness is a 'Maintenance' and 'Configuration Management' function.

Operations outside of the approved configuration, role, environment, limitations or conditions

In the circumstance in which a military commander needs to operate a Defence aircraft for a non-discretionary activity outside the approved configuration, role, environment or a prescribed limitation or condition, an approved Military Permit to Fly (MPTF) or Command Clearance is required to supplement the approved CoA.

While an MPTF is a recognised instrument in the emerging global convention of military airworthiness, Command Clearances are unique to the Australian DASR and permit a commander to deviate from the authorised configuration, role, environment limitation or condition to achieve mission requirements in accordance with statutory safety obligations to eliminate risks to aviation safety SFARP and, if not able to be eliminated, then minimised SFARP.

Defence Aviation Safety Regulation

The DASR was issued on 30 September 2016, introducing for the first time in Defence, a suite of integrated aviation safety regulations that represent contemporary practice in global aviation regulation. The introduction of DASR aligns Defence's Initial and Continuing Airworthiness regulations with a contemporary European-based aviation safety convention. In parallel, the introduction of the Military Air Operator (MAO) has clarified responsibilities within Defence aviation safety management and is consistent with Defence's two-decade drive for excellence in aviation safety.

The Regulations – Where are they?

With the introduction of the DASR, all are now contained in one regulation set. The regulations are not issued as a hard copy and can be found both on the Defence intranet and on the DASA internet site. Figure 5 outlines the hierarchal relationship of the DASR.

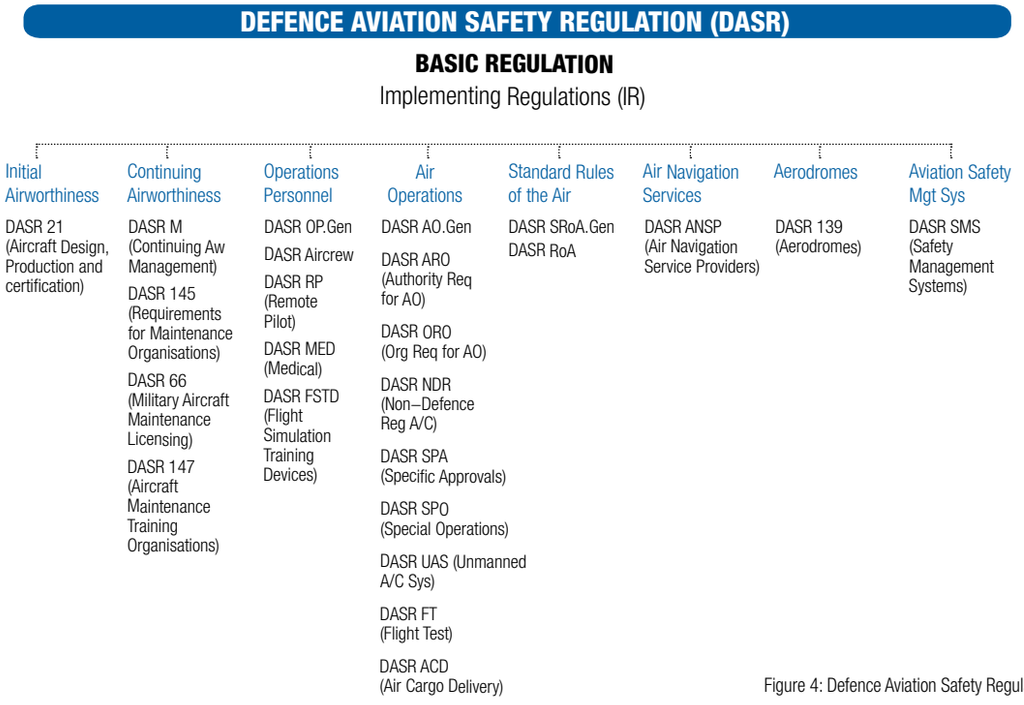

Figure 4: Defence Aviation Safety Regulation

Regulation Structure

Basic Regulation

Basic Regulation (BR) is a credible and defensible level of military aviation safety should be assured at all times via the adoption of common safety rules and measures. The Defence AA achieves this through releasing BR, which establishes the framework for the definition and implementation of common safety requirements and administrative procedures in the field of military aviation.

Implementing Regulation

The DASA is empowered to develop and maintain Implementing Regulations (IR) that gives effect to the requirements of the BR. By nature IR are outcome based and contain sufficient flexibility for addressing special circumstances such as urgent safety measures and compelling operational imperatives or emergencies.

Acceptable Mean of Compliance

Acceptable Mean of Compliance (AMC) is a means a regulated entity may use to show compliance with an Implementing Regulation (IR). AMC is a strongly recommended practice and a justification will be required to the Authority if it is not followed. When proposing an alternative means of compliance to the Authority, the burden of proof that a regulation is satisfied rests entirely with a regulated entity. The nature of aviation safety regulation means that some AMC can be restrictive, and the Authority is unlikely to consider alternative means, while other regulation can easily accommodate an alternative means of compliance. Early engagement with the Authority is recommended if an alternative means of compliance is sought.

Guidance Material

Guidance Material (GM) is non-binding explanatory and interpretation material. GM may provide a background and/or history of the regulation to assist understanding of the requirements or include examples intended to assist the user on complying with regulation.

Derogation

A derogation is a partial or full approval within a regulation that may provide an organisation or applicant relief from a requirement to comply with the regulation or another method of compliance.

Initial Airworthiness

DASR 21 – Aircraft Design, Production and Certification

The purpose of DASR 21 – Aircraft Design, Production and Certification series of regulations assures the certification of military aircraft and related products, parts and appliances, including the regulation for design and production organisations, throughout the entire lifecycle of the platform. DASR 21 is only applicable to aircraft on the Defence register; non-Defence (civil) registered aircraft will continue to be managed under the regulation of the applicable civil airworthiness authority.

Continuing Airworthiness

DASR M – Continuing Airworthiness Management

The purpose of DASR M – Continuing Airworthiness Management (CAM) series of regulations assures that airworthiness is maintained and specifies those conditions that are to be satisfied by those organisations involved in continuing airworthiness management. For example, while not directly responsible for actual aircraft maintenance, the DASR M organisation is responsible for engaging approved DASR 145 organisations to conduct maintenance. The Continuing Airworthiness Management Exposition (CAME) specifies the manner in which the DASR M organisations (and individuals) meet their continuing airworthiness responsibilities.

DASR 145 – Maintenance Organisations

The purpose of DASR 145 – Maintenance Organisations series of regulations assures that an organisation meets the requirements to qualify for the issue or continued approval for the maintenance of aircraft and components. The Maintenance Organisation Exposition (MOE) specifies the requested scope of work and how the maintenance organisation intends to comply with DASR 145.

DASR 66 – Military Aircraft Maintenance Licensing

The purpose of DASR 66 – Military Aircraft Maintenance Licensing (MAML) series of regulations is to define the MAML and to establish the requirements for application, issue and continuation of its validity. The issue of a licence is not an authority to conduct maintenance; this authority resides with the person responsible for the quality system within the DASR 145 entity.

DASR 147 – Maintenance Training Organisations

DASR 66 requires the implementation of DASR 147 – Maintenance Training Organisations (MTO). The purpose of DASR 147 is to establish the requirements to be met by the MTO in order to conduct training and examination as specified in DASR 66.

Operations Personnel

Operations Personnel groups the regulations for the training and qualifications of all personnel involved in military flight operations.

DASR Aircrew

The purpose of DASR Aircrew series of regulations is to assure that Defence aircrew are adequately trained and proficient for employment in a specific role. This includes regulation for the personnel and training aspects of Flying Instruction, Airborne Emergency Training, Crew Resource Management, Aviation Safety Training and Flying Logbooks.

DASR Medical

The DASR Medical (MED) is a series of regulations that assure personnel conducting flying related duties are aware and appropriately trained in aviation medicine before commencing flying activity, meet prescribed medical standards and remain medically fit for flying duties through effective health management.

DASR Flight Simulation Training Devices

The purpose of this regulation is to assure aviation operations augmented by a Flight Simulation Training Device (FSTD) are adequately controlled and managed. Approval of a FSTD is via an Installation Operating Permit (IOP).

Air Operations

The purpose of this regulation is to regulate safe conduct of flying activities for Defence aircraft (including Unmanned Aircraft Systems (UAS)) or aircraft operated on behalf of Defence.

DASR Air Operations General

DASR Air Operations (AO) General is applicable to all areas of DASR AO and includes Orders, Instructions and Publications (OIP) specific to air operations.

DASR Authority Required for Air Operations

DASR Authority Required for Air Operations (ARO) is a series of regulations that address a range of AO matters, including the following:

- Statement of Operating Intent and Usage (SOIU) to inform decisions on whether an aircraft design remains safe for operations.
- Cessation of Flight Operations that provides a mechanism for command to cease flight operations to allow time to address emergent risks.
- Defence Register, to identify aircraft subject to Defence imposed safety requirements, conditions and limitations.
- Independent review (such as AwB) to assure independent oversight of aviation safety.
- Establishment of the MAO.

A MAO is the regulated organisation approved by the Defence AA to conduct air activities. The senior member of a MAO is the Accountable Manager (AM), which is usually a Force Element Group (FEG) commander or equivalent.

The majority of Defence flight operations are conducted under a Military Air Operator Certificate (MAOC) issued to a MAO, usually a FEG or equivalent.

DASR Organisation Requirements for Air Operations

The purpose of DASR Organisation Requirements for Air Operations (ORO) series of regulations is to assure Defence aircraft are operated with adequate controls to ensure safety of flight. They include the following:

- Flight Operations - ensuring aircraft are operated in approved roles, with correct mission equipment, to approved procedures and instructions
- Flying Management Systems
- Appointment of Key Staff
- Aircrew Competency System
- Flight Authorisation System
- Aeronautical Life Support Equipment
- Aircraft Crewing (including Captaincy)
- Oxygen Management (including Flight Crew and Supplemental Oxygen)
- Authorised Electronic Equipment
- Carriage of Personnel on Defence Aircraft
- Use of Role Equipment
- Flight Recorder(s) and Locating Equipment

DASR Non-Defence Registered Aircraft

This regulation assures that operation of non-Defence registered aircraft (NDRA) by or on behalf of Defence is conducted under the airworthiness oversight of Defence recognised national or military airworthiness authorities.

DASR Specific Approval

The purpose of DASR Specific Approval (SPA) series of regulations is to assure that non-routine operational roles requiring Defence to operate outside of an aircraft system's normal Configuration, Role and Environment (CRE) are conducted safely. This includes Command Clearances, Low Flying, Flying Displays and Long Range Operations.

DASR Special Purpose Operations

The purpose of DASR Special Purpose Operations (SPO) series of regulations is to assure that routine operational roles are managed to the specified standards and level of safety. DASR SPO includes Joint Personnel Recovery and Aeromedical Evacuation regulation.

DASR Unmanned Aircraft System

The purpose of DASR UAS series of regulations is to assure the safe operation of UAS.

DASR Flight Test

The purpose of DASR Flight Test (FT) series of regulations is to assure that a MAO only undertakes those flight test activities it is capable of safely conducting, and that the tests are conducted under appropriate airworthiness controls using suitable personnel, processes and data. Flight test is a subset of Defence Test and Evaluation (T&E). Flight test activities involve, to varying extents, the operation of an aircraft other than within its currently established type certification basis. A MAO requires a specific privilege to be able to conduct flight test activities of this nature.

DASR Air Cargo Delivery

The purpose of DASR Air Cargo Delivery (ACD) series of regulations is to assure suitability for flight is not compromised when aircraft are loaded or unloaded with cargo, either on the ground or in the air.

Standard Rules of the Air

The purpose of Standard Rules of the Air (SRoA) series of regulations is to assure that, as they apply to Defence Aviation, the rules stipulated within Defence Aeronautical Information Publication (AIP) are harmonised with ICAO and national civil practice wherever practical, with the intent that Defence Aviation will have due regard for the safety of navigation of civil aircraft.

Air Navigation Services Providers

This series of regulations addresses those systems and services that support flight operations including their CRE, system modifications, review and oversight, compliance requirements, interoperability arrangements and assurance activities.

DASR Air Navigation Services Provider

The purpose of the DASR Air Navigation Services Provider (ANSP) regulation is to describe the organisational, operational and technical requirements for an ANSP. Like the MAO, the ANSP is a DASA approved organisation with an AM, which is usually a FEG commander or equivalent. This regulation applies to Air Traffic Control, Aeronautical Information and Defence provided Meteorological services.

Aerodromes

This regulation addresses matters pertaining to the design, certification and operational requirements for Defence Certified Aerodromes. DASR 139 (ADR) reflects the Defence commitment to align with civil standards and practices where practical to do so, for certification of Defence Aerodromes, including shipborne heliports.

DASR 139 (Aerodromes)

The purpose of DASR 139 Aerodrome regulation is to describe the organisational, operational and technical requirements for Defence certified aerodromes. The aerodrome operator is a DASA approved organisation. This regulation applies to Defence certified aerodromes, including shipborne heliports.

Aviation Safety Management System

An Aviation Safety Management System (ASMS) is a systematic approach by an organisation to manage aviation safety hazards and risks as close as possible to where they arise; and includes the necessary organisational structures, accountabilities, policies, procedures and plans. Building on the compliant processes in an organisation, aviation safety performance is enhanced when the ASMS couples the positive attitudes, beliefs, values and practices of the personnel within an organisation.

DASR ASMS requires all organisations holding an organisational approval under DASR to exercise an ICAO Annex -19 compliant ASMS. This includes organisations in Defence and Defence Industry involved in initial and continuing airworthiness, military air operations, air navigation and aerodrome operations. Importantly, the risk management element of DASR ASMS is a direct adoption of the statutory obligations for risk management in Australia's *WHS Act 2011*, allowing Defence aviation to exploit the global convention in ASMS while remaining compliant with uniquely Australian legislation.

The Defence ASMS

In compliance with DASR, the Command Chain in Defence has mandated the use of a standardised Defence ASMS for MAOs in Navy, Army and Air Force. Standardisation allows for improved coordination between respective MAOs, use of common tools and systems, and the collection and analysis of safety intelligence by the Command Chain and the Authority to improve and promote aviation safety performance respectively. The Defence ASMS may be extended by the Command Chain to cover other aviation organisations in the future, such as design organisations.

Defence Registration and Instruments

Defence Registration

An aircraft should be Defence registered when the operation of an aircraft will be predominantly in a military configuration, role or environment. A civil registered aircraft commanded by a member of the Defence Force in the course of their duties, causes that aircraft to be a State aircraft. Registration determines which Australian legislation and regulation applies to the design, construction, maintenance and operation of Australia's State aircraft.

There may be exceptions by prior agreement with CASA for a civil registered aircraft being operated by Defence, to be subject to specified sections of the DASR. All flight operations of Defence registered aircraft conducted in (or over) a foreign country require a diplomatic clearance. These aircraft are operated under DASR flight instruments and approvals.

Military Air Operator Certificate

A MAOC is the principal authorisation granted by the Defence AA to conduct military air activities. A MAOC is a single page certificate (DASR Form 138) to authorise the MAO, usually a FEG or equivalent, to perform military air operations as defined in the accompanying Operations Specifications (OpSpec) and in accordance with DASR. A MAOC itself is always accompanied by:

OpSpec. An OpSpec (DASR Form 139) is approved by the Authority, as delegated by the Defence AA Charter Letter, and includes aircraft (Defence registered and NDRA, including UAS) types that the MAO is authorised to operate or sponsor. The OpSpec may include operating provisions, both general and flight test privileges. Annexes for each aircraft will reference the SOIU (if applicable), specific approvals, and any limitations or conditions.

Compliance Statement. A MAO will submit a compliance statement seeking initial issue and to request an update to the MAOC and OpSpec. The compliance statement demonstrates how compliance with DASR is achieved and includes MAO AM attestation that appropriate arrangements are in place to support the scope of flight operations contained in the OpSpec.

Military Type Certificate

A Military Type Certificate (MTC) is issued by the Authority and certifies that the aircraft type design complies with the applicable Type Certification Basis when operated within the conditions and limitations specified on the associated Type Certificate Data Sheet.

Type Certificate Data Sheet

A Type Certificate Data Sheet (TCDS) is a companion document to the MTC and describes the type certification basis, details technical characteristics and operating limitations, and includes details of each aircraft added to the TCDS.

Military Supplemental Type Certificate

A Military Supplemental Type Certificate (MSTC) is issued by the Authority and certifies a major change to the type design by any eligible design organisation.

Airworthiness Directive

An Airworthiness Directive (AD) is issued by the Authority to mandate action on an aircraft to restore safety, when evidence shows that the airworthiness of this aircraft may otherwise be compromised.

Certificate of Airworthiness and Airworthiness Review Certificate

A non-expiring CoA is issued by the Authority to attest that an individual aircraft conforms to, and is 'airworthy' against, the MTC. An

individual aircraft remains ‘airworthy’ if the CoA is validated annually by issuance of an Airworthiness Review Certificate (ARC). Under DASR, the ARC may be extended, or a new ARC issued. The ARC review is a routine functional and physical configuration audit, by suitably qualified personnel, to ensure an aircraft tail number be operated safely by the MAO.

Military Permit To Fly

A MPTF is issued by the Authority to permit the flight of an aircraft that does not meet, or has not yet met, it’s airworthiness requirements. In the application to the Authority, the MAO is required to document the specified purpose, conditions and limitations that ensure the aircraft can be operated safely; that is, that all hazards and risks have been eliminated SFARP, or if not eliminated, then minimised SFARP in the circumstance. The DoSA Flight Test assists MAO in the development of conditions and limitations for flight test activities, and issues MPTFs for complex flight test on behalf of the DASA.

Unmanned Aircraft System Operating Permit

An Unmanned Aircraft System Operating Permit (UASOP) is issued by the Authority to permit the flight of a UAS that has not been issued an MTC or CoA, does not meet the Open UAS category, and cannot be authorised to fly under a specific scenario in the DASR. In the application to the Authority, the MAO is required to document the specified purpose, conditions and limitations that ensure the UAS can be operated safely; that is, that all hazards and risks have been eliminated SFARP, or if not eliminated, then minimised SFARP in the circumstance.

Flight Simulation Training Device Installation Operating Permit

This is not an Authority instrument, rather a Flight Simulation Training Device Installation Operating Permit (FSTD IOP) is issued by Commander Australian Fleet, Commander Forces Command or Air Commander Australia, to authorise operation of a FSTD in accordance with stated limitations and conditions.

Approval to Operate

An Approval to Operate (ATO) is issued to authorise operation, by or on behalf of Defence, of an aircraft that is not Defence registered and not operated under a MAOC. This is authorised and issued by the Sponsor that purchases, wet leases, dry leases, or charters the aircraft. The Defence AA retains the right to issue the ATO.

Air Navigation Service Provider Certificate:

In Defence, an Air Navigation Service Provider Certificate (ANSPC) is the principal authorisation granted by the Defence AA to provide Air Navigation Services (ANS). An ANSPC is a single page certificate to authorise the ANSP, usually a FEG or equivalent to provide ANS as defined in the accompanying Service Provision Conditions (SPC). An ANSPC itself is always accompanied by:

Service Provision Conditions. The Authority approves the SPC as delegated by the Defence AA Charter Letter. The SPC defines the types of ANS provided and any limitations or conditions. In some circumstances, this may include specific systems or sub-systems such as Navigation Aids.

Compliance statement. An ANSP will submit a compliance statement seeking initial issue and to request an update to the ANSPC and the SPC. The compliance statement demonstrates how compliance with DASR is achieved and includes ANSP AM attestation that appropriate arrangements are in place to support the scope of services described in the SPC.

Defence AA Directive

A Defence Aviation Authority Directive (DAAD) is issued by the Defence AA to promulgate immediate and binding requirements to authorise or restrict a course of action in relation to an Aviation System.

Advisory Circular

While not technically an Instrument, an Advisory Circular (AC) is issued by the Authority to promulgate important information to the Defence Aviation community but does not mandate any action. Examples include information regarding aviation safety or airworthiness matters, information that enhances compliance understanding for existing regulation, or policy guidance for aviation issues not yet regulated that require further understanding.

NMAA/NAA Recognition Certificate

A Recognition Certificate is issued by the Authority to detail the scope, conditions and caveats that must be considered before the recognition of a foreign NMAA or civil National Aviation Authority (NAA) can be exploited. Recognition Certificates are promulgated on the DASA internet site.

Defence Aviation Safety Authority Contacts
Correspondence to the Defence AA – all correspondence to the Defence AA should be through ACPA Registry for staffing and administrative processing.
DASA Intranet: http://drnet/dasa/Pages/default.aspx
DASA Internet: http://www.defence.gov.au/DASP/

Email:
General enquiries: dasa.registry@defence.gov.au
Regulatory enquiries: dasa.dasr@defence.gov.au
Newsbreak subscription: dasa.subscribe@defence.gov.au
Feedback: dasa.stakeholderfeedback@defence.gov.au

Flight Safety Reporting Contacts:
DFSB Duty Officer: (02) 6144 9199
Air Transport Safety Bureau Duty Officer: 1800 011 034
WHS Notifiable events: 1300 366 979

Confidential Safety Report
All CONFIR are to be submitted direct to the Director of DFSB in writing, by email or telephone. Contact details for the Director are available on the DASA web site or the Defence Corporate Directory. The Defence Aviation Safety Manual (DASM) contains further details.

Aviation Safety Reporting Help Desk
Email: asr.helpdesk@defence.gov.au
Telephone: (02) 6128 7476

ACRONYMS

AC	Advisory Circular
ACD	Air Cargo Delivery
ACPA	Airworthiness Coordination Policy Agency
AD	Airworthiness Directive
ADF	Australian Defence Force
ADR	Aerodromes
AIP	Aeronautical Information Publication
AM	Accountable Manager
AMC	Acceptable Mean of Compliance
ANS	Air Navigation Service
ANSP	Air Navigation Service Provider
ANSPC	Air Navigation Service Provider Certificate
AO	Air Operations
APS	Australian Public Service
ARC	Airworthiness Review Certificate
ARO	Authority Requirements for Air Operations
ASMS	Aviation Safety Management Systems
ATO	Approval to Operate
ATSB	Australian Transport Safety Bureau
AwB	Airworthiness Board
BR	Basic Regulation
CAF	Chief of Air Force
CAM	Continuing Airworthiness Management
CAME	Continuing Airworthiness Management Exposition
CASA	Civil Aviation Safety Authority
CASG	Capability Acquisition and Sustainment Group
CDF	Chief of Defence Force
CoA	Certificate of Airworthiness
CONFIR	Confidential Incident Reports
CRE	Configuration, Role and Environment
DAAD	Defence Aviation Authority Directive
DACPA	Director Airworthiness Coordination and Policy Agency
DASAMAN	Defence Aviation Safety Assurance Manual
DASA	Defence Aviation Safety Authority
DASC	Defence Aviation Safety Council
DASF	Defence Aviation Safety Framework
DASP	Defence Aviation Safety Program
DASR	Defence Aviation Safety Regulations
DDFSB	Director Defence Flight Safety Bureau
Defence AA	Defence Aviation Authority
DFSB	Defence Flight Safety Bureau
DGDASA	Director General Defence Aviation Safety Authority
DoSA	Delegate of the Safety Authority
EMAR	European Military Airworthiness Requirements
FEG	Force Element Group
FSTD	Flight Simulation Training Device
FSTD IOP	Flight Simulation Training Device Installation Operating Permit
FT	Flight Test
GM	Guidance Material
ICAO	International Civil Aviation Organisation
IOP	Installation Operating Permit
IR	Implementing Regulation
JD	Joint Directive
MAML	Military Aircraft Maintenance Licensing
MAO	Military Air Operator
MAOC	Military Air Operator Certificate
MARQ	Military Authorities Recognition Questionset
MED	Medical
MOE	Maintenance Organisation Exposition
MPTF	Military Permit to Fly
MSTC	Military Supplemental Type Certificate
MTC	Military Type Certificate
MTO	Maintenance Training Organisations
NAA	National Aviation Authority
NDRA	Non-Defence Registered Aircraft
NMAA	National Military Aviation Authority
OIP	Orders, Instructions and Publications
OpSpec	Operations Specifications
ORO	Organisation Requirements for Air Operations
SARP	Standards and Recommended Practices
SFARP	So Far As Reasonably Practicable
SOIU	Statement of Operating Intent and Usage
SPA	Specific Approval
SPC	Service Provision Conditions
SPO	Special Purpose Operations
SRoA	Standard Rules of the Air
SSP	State Safety Program
TCDS	Type Certificate Data Sheet
T&E	Test and Evaluation
UAS	Unmanned Aircraft Systems
UASOP	Unmanned Aircraft Systems Operating Permit


DEFENCE AVIATION
SAFETY AUTHORITY