



# Department of Defense **DIRECTIVE**

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USD(AT&L)

SUBJECT: DoD Airworthiness Policy

References: See Enclosure 1

1. **PURPOSE.** This directive establishes policy and assigns responsibilities for DoD airworthiness in accordance with the authority vested in the Secretary of Defense by section 113 of Title 10, United States Code (Reference (a)).

2. **APPLICABILITY.** This directive:

a. Applies to OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within DoD (referred to collectively in this directive as the “DoD Components”).

b. Does not restrict the authority or responsibilities of the Military Departments with respect to airworthiness in accordance with sections 3013, 5013, and 8013 of Reference (a).

3. **POLICY.** It is DoD policy that:

a. All aircraft and air systems owned, leased, operated, used, designed, or modified by DoD must have completed an airworthiness assessment in accordance with Military Department policy. The airworthiness assessment provides DoD personnel (to include Service members and DoD civilians) and DoD contractors the appropriate level of safety of flight and risk management adapted to DoD-unique mission requirements.

b. Military Department airworthiness authorities, within their respective airworthiness guidance, will provide commanders the ability to conduct missions while employing prudent risk mitigation measures in cases where a timely airworthiness assessment is not feasible.

4. RESPONSIBILITIES. See Enclosure 2.

5. RELEASABILITY. **Cleared for public release.** ~~This directive is available on the Internet from the DoD Issuances Website at <http://www.dtic.mil/whs/directives>~~ *This directive is available on the Directives Division Website at <http://www.esd.whs.mil/DD/>.*

6. EFFECTIVE DATE. This directive is effective May 24, 2013.



Ashton B. Carter  
Deputy Secretary of Defense

Enclosures

1. References
2. Responsibilities
3. DoD Standardized Airworthiness Assurance Requirements

Glossary

ENCLOSURE 1

REFERENCES

- (a) Title 10, United States Code
- (b) DoD Instruction 4500.53, "DoD Commercial Air Transportation Quality and Safety Review Program," October 20, 2008, as amended
- (c) Military Standard MIL-STD-882E, "Department of Defense Standard Practice: System Safety," May 11, 2012
- (d) DoD Instruction 5000.02, "Operation of the Defense Acquisition System," January 7, 2015, *as amended*
- (e) Military Handbook MIL-HDBK-516C, "Department of Defense Handbook: Airworthiness Certification Criteria," December 12, 2014
- (f) DoD Instruction 4540.01, "Use of International Airspace by U.S. Military Aircraft and for Missile/Projectile Firings," June 2, 2015, *as amended*
- (g) DoD Directive 5030.19, "DoD Responsibilities on Federal Aviation," September 13, 2013
- (h) Under Secretary of Defense for Acquisition, Technology and Logistics Memorandum, "Flight in Foreign-Owned Aircraft Implementation Guidance," October 26, 2014<sup>1</sup>
- (i) Federal Aviation Regulation
- (j) Title 14, Code of Federal Regulations
- (k) Part 102-33, Title 41, Code of Federal Regulations

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<sup>1</sup> Available through AT&L

ENCLOSURE 2

RESPONSIBILITIES

1. UNDER SECRETARY OF DEFENSE FOR ACQUISITION, TECHNOLOGY, AND LOGISTICS(USD(AT&L)). The USD(AT&L) establishes policy, assigns responsibilities, provides procedures, and oversees DoD airworthiness matters.

2. DoD COMPONENT HEADS THAT OWN, LEASE, OPERATE, USE, DESIGN, OR MODIFY AIRCRAFT OR AIR SYSTEMS. The DoD Component heads that own, lease, operate, use, design, or modify aircraft or air systems:

a. Utilize the established airworthiness assurance system of a Military Department or develop, implement, and operate an airworthiness assurance system consistent with the guidelines in Enclosure 3 of this directive.

b. Direct subordinate Airworthiness Authorities and Airworthiness Authorities Management and Control Organizations to assist the USD(AT&L) in implementing this directive.

3. SECRETARIES OF THE MILITARY DEPARTMENTS. The Secretaries of the Military Departments:

a. Develop, implement, and operate an airworthiness assurance system consistent with Enclosure 3 of this directive.

b. Direct Airworthiness Authorities and Airworthiness Authorities Management and Control Organizations to assist the USD(AT&L) in implementing this directive.

4. COMBATANT COMMANDERS. When a Combatant Commander requires it, he or she will ensure adequate resources are allocated for the airworthiness assessment of foreign owned or leased aircraft and air systems. This resourcing requirement does not include aircraft and air systems certified or assessed in accordance with DoD Instruction (DoDI) 4500.53 (Reference (b)).

ENCLOSURE 3

DoD STANDARDIZED AIRWORTHINESS ASSURANCE REQUIREMENTS

1. ESTABLISH AN AIRWORTHINESS AUTHORITY

a. Military Departments

(1) Military Department airworthiness authorities will be designated at the general or flag officer or civilian equivalent level.

(2) Military Department airworthiness authorities will maintain Department-level guidance to implement this directive.

(3) Military Department airworthiness authorities will assess and issue airworthiness approvals for manned and unmanned aircraft and air systems owned, leased, operated, used, designed, or modified by their respective Departments.

b. Other DoD Components

(1) DoD Components other than Military Departments that own, lease, operate, use, design, or modify any DoD manned or unmanned aircraft or air systems that do not have an airworthiness authority will either establish an airworthiness authority in accordance with this directive or formally adopt the airworthiness approval provided by a Military Department airworthiness authority.

(2) Other DoD Components that utilize another Military Departments' airworthiness process are responsible for providing the resources necessary to accomplish the required airworthiness assessment or approval.

2. DESIGNATE TECHNICAL AUTHORITY. Each airworthiness authority within DoD will establish a technical authority designated to lead a robust engineering organization capable of independently assessing the airworthiness of aircraft and air system configurations and establishing airworthiness limitations for all aircraft and air systems owned, leased, operated, used, designed, or modified by that Military Department.

3. DESIGNATE AN AIRWORTHINESS MANAGEMENT AND CONTROL ORGANIZATION. The airworthiness authority will designate a suitably trained organization based on existing structure that will be familiar with federal regulations and DoD policy governing airworthiness to manage and control the airworthiness process. The airworthiness organization will be sufficiently independent of acquisition program and operational influence to present an objective and valid assessment of airworthiness, safety of flight residual risk, and to exercise overall engineering oversight in compliance with this directive.

4. AIRWORTHINESS ASSESSMENT AND APPROVAL

a. The airworthiness authority will document the assessment and issue airworthiness approval, if appropriate, that captures the complete description of aircraft or air systems configuration, operating limitations, and other operating information necessary for safe operation of the aircraft or air systems within the scope of their DoD Component.

b. The airworthiness assessment or approval will only be issued by an airworthiness authority (or delegated airworthiness authority) established or recognized in accordance with this directive and will be made available prior to flight.

5. MISHAP RISK ASSESSMENT. The airworthiness authority will ensure that mishap risk assessments, when necessary, are prepared in accordance with Military Standard MIL-STD-882E (Reference (c)) and appropriate DoD Component regulatory guidance and policy in concert with their engineering evaluation conducted to assess and issue airworthiness approvals.

a. The risks will be documented and accepted by the appropriate risk acceptance authorities in accordance with DoDI 5000.02 (Reference (d)).

b. For unmanned aircraft and air systems, risk associated with the loss of aircrew may not apply. However, as with manned air vehicles, safety of flight risks associated with personnel, damage to equipment, property, or environment must be identified and accepted at the appropriate level in accordance with Reference (d) as part of the airworthiness review.

6. CONFIGURATION MANAGEMENT. OSD and DoD Components will establish and implement a means by which the configuration of the aircraft and air systems is managed over the life cycle of the aircraft and air system. This will include processes by which the configuration is identified, change is managed, configuration status is accounted for, and verification and audit of configuration changes are conducted to ensure configuration of the aircraft and air system is maintained to the specific configuration that has been determined by the airworthiness authority to be airworthy. For aircraft and air systems undergoing production or modification, each DoD Component will implement a means by which the production processes are evaluated and controlled such that each product meets the airworthiness requirements for the specific configuration.

7. CONTINUED AIRWORTHINESS. Once their aircraft and air systems are declared to be airworthy, OSD and DoD Components will maintain them to keep that status. The maintenance measures for OSD and DoD Component airworthiness processes include:

a. Inspections. Inspection intervals and criteria will be established to assess the status of the materiel to sustain airworthy operation.

b. Life Limits. Life limits, wear limits, and condition limits for mandatory replacement or overhaul will be established as necessary to assure continued airworthy use.

c. Maintenance and Overhaul. Maintenance and overhaul requirements for continued airworthiness will be documented, including physical standards of the materiel, process standards, and personnel training.

d. Critical Safety Items. Critical safety items will be controlled in compliance with section 2319 of Reference (a).

8. APPROVAL CRITERIA. When applicable, Military Department airworthiness authorities will utilize Military Handbook 516C (Reference (e)) and subsequent revisions for determining airworthiness approval criteria.

9. FLIGHT-TEST-PARTICULAR CONSIDERATIONS. DoD Components will oversee their airworthiness process and verify that it satisfies the unique airworthiness requirements particular to the flight test environment. Specifically, Military Department airworthiness processes should include methods to ensure the airworthiness of developmental aircraft and air systems as operating envelopes are tested and the procedures to follow to safely return to flight after airworthiness limitations have been exceeded during flight testing.

#### 10. ADOPTION OF FEDERAL AVIATION ADMINISTRATION (FAA) AIRWORTHINESS CERTIFICATION

a. Utilization of FAA airworthiness certification by a Military Department airworthiness authority as a basis of airworthiness approval is permissible provided the flight profile, operating environment, and continued airworthiness program as certified for that aircraft and the air system is similar to the intended usage of DoD. The Military Department airworthiness authority will assess and approve the airworthiness of any existing gaps between the intended configuration, usage and operating environment of the FAA certification and the intended configuration, usage and operating environment of DoD.

b. Where required, interface with the FAA for aircraft and air systems certification issues will be coordinated through the FAA Military Certification Office. Interface with the FAA regarding DoD operations will be coordinated as described in DoDI 4540.01 and DoD Directive 5030.19 (References (f) and (g)).

11. ADOPTION OF DOD AIRWORTHINESS APPROVALS. Utilization of a DoD airworthiness approval from another Military Department airworthiness authority as a basis for approval is permissible provided the flight profile, operating environment, and continued airworthiness program as approved for that aircraft and air system is similar to the intended configuration, usage and operating environment of the DoD Components. The Military

Department airworthiness authority will assess and approve the airworthiness of any existing gaps between the intended usage of the original DoD airworthiness approval and their own intended configuration, usage and operating environment.

## 12. JOINT PROGRAMS

a. Joint programs will follow the airworthiness process and policy of the lead Military Department for that particular acquisition program.

b. The lead Military Department airworthiness authority will make considerations for mission and design differences of partner services.

c. If there is no lead Military Department for a particular program, the Program Executive Officer will select a joint program member Military Department's airworthiness authority and subsequent airworthiness process to follow.

d. When a joint program is scheduled to transfer the airworthiness authority of a particular aircraft and air systems design to a Military Department, the joint program must meet the requirements of that Military Department's airworthiness approval processes and standards.

13. FLIGHT IN FOREIGN-OWNED AIRCRAFT. Foreign-owned aircraft designated to fly DoD passengers (to include Service members, DoD civilians, and contractors) or aircrew must comply with this directive or, for DoD commercial air transportation services, Reference (b).

## 14. FOREIGN MILITARY AIRWORTHINESS CERTIFICATION

a. A foreign nation's military airworthiness approval may be accepted as a basis for DoD airworthiness approval if that nation's approval process has been approved by a U.S. Military Department airworthiness authority. The U.S. Military Department airworthiness authority must examine the foreign nation's airworthiness approval process following the standards of this directive before giving his or her approval.

b. Utilization of a DoD-approved, foreign airworthiness authority's approval as a basis for airworthiness approval is permissible provided the flight profile, operating environment, and continued airworthiness program as approved for that aircraft and the air system is similar to the intended usage of DoD. The U.S. Military Department airworthiness authority will assess and approve the airworthiness of any existing gaps between the intended usage of the foreign approval and the DoD intended usage.

c. The U.S. Military Department airworthiness authorities will use the standardized guidelines of USD(AT&L) Memorandum (Reference (h)) to develop internal policies and



procedures for approving flight in foreign-owned military aircraft and for assessing existing gaps between the intended usage of the foreign approval and the DoD intended usage..

15. OTHER U.S. GOVERNMENT ORGANIZATIONS AIRWORTHINESS ASSESSMENTS

a. Other U.S. Government agencies are responsible for assessing airworthiness of their aircraft and air systems in accordance with Federal Aviation Regulation (Reference (i)), Title 14, Code of Federal Regulations (Reference (j)), and part 102-33 of Title 41, Code of Federal Regulations, Management of Government Aircraft (Reference (k)).

b. A Military Department airworthiness assessment is not required for DoD personnel operating in or with U.S. Government agency aircraft or air systems operated under the authority of References (i) and (j), or in accordance with Reference (k).

16. OPERATOR'S MANUAL. Prior to flight, the aircrew will be provided (in an appropriate format) operator's manuals that describe the flight limits of their aircraft and air systems. The operator's manual will provide system descriptions, limitations, operating procedures, emergency procedures, and other pertinent operating information.

17. OPERATOR AUTHORIZATION. Operators of DoD aircraft and air systems will be either:

a. Rated for manned aircraft or qualified for unmanned aircraft systems operators from one of the Military Departments and in compliance with that Military Department's flight regulations, to include qualification, training, evaluation, and currency requirements; or

b. Civilian employees of a U.S. Government agency or U.S. Government contractors who are qualified by one of the Military Departments and are in compliance with its flight regulations or hold appropriate FAA certifications or ratings and have complied with pertinent qualification training, evaluation, and currency requirements in accordance with Federal Aviation Regulations. Civilian employees must have written authorization from the appropriate general or flag officer-level-authority with knowledge of the aircraft and air systems to be flown.

## GLOSSARY

### PART I. ABBREVIATIONS AND ACRONYMS

DoDI	DoD Instruction
FAA	Federal Aviation Administration
USD(AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics

### PART II. DEFINITIONS

These terms and their definitions are for the purpose of this directive.

airworthiness. The property of an air system configuration to safely attain, sustain, and complete flight in accordance with approved usage limits.

airworthiness authority. An individual who has the legal mandate to develop and enforce pertinent rules, regulations, and policy governing airworthiness.

airworthiness assessment. A technical evaluation of data against specific airworthiness criteria and determination of residual risk. An airworthiness assessment is a critical step in the airworthiness approval process but itself does not necessarily result in the issuance of an airworthiness approval.

airworthiness approval. Documents issued by an empowered airworthiness authority and may take a number of different forms (e.g., airworthiness release, military-type certificate, flight clearance), depending on specific airworthiness authority policy. An airworthiness approval affirms that the appropriate tenets of the airworthiness process are met and that the aircraft or air system was assessed against the required airworthiness standards and any residual risk to aircrew, ground crew, passengers, or to third parties has been accepted by the appropriate authority.

critical safety item. A part, an assembly, installation equipment, launch equipment, recovery equipment, or support equipment for an aircraft or aviation weapon system if the part, assembly, or equipment contains a characteristic any failure, malfunction, or absence of which could cause a catastrophic or critical failure resulting in the loss of or serious damage to the aircraft or weapon system, an unacceptable risk of personal injury or loss of life, or an uncommanded engine shutdown that jeopardizes safety.

engineering evaluation. A systems level engineering analysis to verify that the configuration and limitations of the aircraft and air systems are airworthy with respect to the airworthiness criteria defined by the airworthiness authority.

operating envelope. The limitations for a specific configuration defined by the airworthiness authority.

operating environment. The surroundings or conditions in which an aircraft operates including, but not limited to temperatures, loads, ambient environmental conditions, moisture and fluid exposures, electromagnetic spectrum, radiation, maintenance, and ground handling.