

AIRWORTHINESS CIRCULAR

USAF Maintenance & Operations Airworthiness Evaluations of Contractor Owned & Contractor Operated Air Systems

PURPOSE:

This USAF airworthiness circular (AC) provides assistance on the airworthiness (AW) assessment of Contractor Owned, Contractor Operated (COCO) aircraft operations and maintenance procedures.

SCOPE:

This AC applies to all COCO aircraft used to support USAF unit mission requirements with or without USAF personnel on board.

ATTACHMENTS:

1. Abbreviations and Acronyms
2. Airworthiness Technical Evaluator Checklist for Operator Inspection for Continued Airworthiness

CANCELLATIONS:

Not applicable. This is the first issuance of this AC.

REFERENCED DOCUMENTS:

1. AWB-340, *USAF Airworthiness Requirements for Contractor-Owned and Contractor Operated Aircraft.*

BACKGROUND:

Often times USAF units obtain the services of contractors to support and help fulfill unit mission requirements. That support may include contractors providing, operating and supporting their own (non-government owned) aircraft. Those aircraft may or may not be wholly or partially FAA or US Military type certified. To ensure the safety of USAF personnel that may participate in the operation and maintenance of those COCO aircraft while they perform contracted services for the USG, AWB-340 requires the contracting organization complete an AW evaluation of those aircraft.

DISCUSSION:

AWB-340 requires usage of the attached checklist by the USAF contracting unit to perform and document a maintenance and operational AW evaluation of COCO aircraft used to support mission requirements. Trained personnel, such as a Government Flight Representative, Contracting Officer’s Representative, or other qualified representative should complete the checklist. In completing the applicable checklist, every field should have an entry. If a particular item is Not Applicable, the inspector should enter an N/A. AWB-340, this AC and the attached Checklist outline the process and tools for evaluating the operational and maintenance AW of COCO aircraft.

RECOMMENDATIONS:

Before awarding a contract to an outside organization to provide COCO aircraft support, organizations should specify in the contract the USAF unit will conduct an evaluation of the AW of those aircraft prior to contract operations. This evaluation may identify unacceptable AW related concerns which would may result in increased levels of risk. The contracting organization must accept these risks prior to issuance of the AW approval. The USAF conducted evaluation should be early to facilitate risk identification which may result in unacceptable risks for the contracting organization and potential termination of the contract.

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Attachment 1

Abbreviations and Acronyms

AD – Airworthiness Directive
AFE – Aircrew Flight Equipment
ALSE – Aviation Life Support Equipment
ALSS – Aviation Life Support Systems
ATC – Air Traffic Control
AW – Airworthiness
AWB – Airworthiness Bulletin
CFR – Code of Federal Regulations
CAMP – Continuous Airworthiness Inspection Package
COCO – Contractor-Owned, Contractor-Operated
DER – Designated Engineering Representative
E3 – Electromagnetic Environmental Effects
ELT – Emergency Locator Transmitter
FAA – Federal Aviation Administration
FAR – Federal Aviation Regulations
FOD – Foreign Object Debris
FSDO – Field Standards District Office
GA – General Aviation
OJT – On the Job Training
SLL – Service Life Limit
TC – Type Certificate
TCDS – Type Certification Data Sheet
TMDE – Test, Measurement, and Diagnostic Equipment
TO – Technical Order
USAF – United States Air Force
USC – United States Code

Operator Inspection for Continued Airworthiness

Version: 14 NOVEMBER 2018

Contractor/Offeror:

Evaluator:

Location:

Date:

ID	Checklist Item Description	Background/Notes for Evaluator (Informational)	Applicability	Satisfactory	Unsatisfactory	Method (D=Discuss, R= Review, I= Inspect)	Artifact	Notes
1.0	Aircraft Inspection, Maintenance, and Modication Records							
1.1	<p>Determine type of inspection program under 14 CFR part 91.409 -Small aircraft (CE-172, PA-28) will be under an: (a)(1)Annual Inspection "or" (b) 100 hour "or" (d) Progressive Inspection</p> <p>-Large airplanes (turbojet multiengine airplane, turbo propeller-powered or turbine-powered rotorcraft) (Lear 35, CL-604, King Air, Cessna 208) will be under an: (f)(2) Continuous Airworthiness inspection program (CAMP) part 121/135 certificate holders only. (f)(3) inspection program recommended by the manufacture (this is the most common) (f)(4) Inspection program established by the owner/operator approved by the FAA under 91.409(g)</p> <p>Note turbine-powered rotorcraft can elected to use the inspection provisions of 91.409(a), (b), (c) or (d) in lieu of an inspection option of 91.409(f).</p>	<p>Review maintenance logs to determine how aircraft is maintained in accordance with an inspection program meeting the scope and content described in § 91.409(f). The owner/operator must select and identify in the aircraft maintenance records one of the following programs for the inspection of the aircraft: (a) For type-certificated aircraft, a current inspection program recommended by the manufacturer; or (b) For former military aircraft, an inspection program recommended turbine engine by the manufacturer or North Atlantic Treaty Organization (NATO) airplanes, military service; or (c) An FAA-approved inspection program.</p> <p>Inspections must be recorded in the aircraft maintenance records showing the following, or a similarly worded, statement: "I certify that this aircraft has been inspected on [insert date] per [identify applicable inspection program] and found to be in a condition for safe operation." The entry will include the aircraft's total time-in-service (cycles if appropriate), and the name, signature, certificate number, and type of certificate held by the person performing the inspection.</p>						
1.2	<p>Obtain copy of current inspection status of the aircraft, including the time since last inspection required by the inspection program under which the aircraft and its appliances are maintained.</p>	<p>Review maintenance logs to determine how aircraft is maintained in accordance with an inspection program meeting the scope and content described in § 91.409(f). The owner/operator must select and identify in the aircraft maintenance records one of the following programs for the inspection of the aircraft: (a) For type-certificated aircraft, a current inspection program recommended by the manufacturer; or (b) For former military aircraft, an inspection program recommended by the manufacturer or military service; or (c) An FAA-approved inspection program.</p> <p>Inspections must be recorded in the aircraft maintenance records showing the following, or a similarly worded, statement: "I certify that this aircraft has been inspected on [insert date] per [identify applicable inspection program] and found to be in a condition for safe operation." The entry will include the aircraft's total time-in-service (cycles if appropriate), and the name, signature, certificate number, and type of certificate held by the person performing the inspection.</p>						

1.3	Obtain the total time in service of: -Each Airframe, -Each Engine, -Each Propeller and -Each Rotor	Review maintenance logs to determine how aircraft is maintained in accordance with an inspection program meeting the scope and content described in § 91.409(f). The owner/operator must select and identify in the aircraft maintenance records one of the following programs for the inspection of the aircraft: (a) For type-certificated aircraft, a current inspection program recommended by the manufacturer; or (b) For former military aircraft, an inspection program recommended by the military service; or (c) An FAA-approved inspection program. Inspections must be recorded in the aircraft maintenance log showing the following, or a similarly worded, statement: "I certify described above. that this aircraft has been inspected on [insert date] in accordance with the [insert either: scope and detail of part 43, appendix D; or manufacturer's inspection procedures] and was found to be in a condition for safe operation." The entry will include the aircraft's total time-in-service (cycles if appropriate), and the name, signature, certificate number, and type of certificate held by the person performing the inspection.						
1.4	Obtain current status of any life-limited parts for: -Each Airframe, -Each Engine, -Each Propeller and -Each Rotor and -Appliance	(TCDS for small aircraft may state what manufacture document has Airworthiness Limitations listed, which include life limited parts) (Large Aircraft will have life limited parts listed in manufactures program under Airworthiness Limitations or Engine Chapter 5 limits)						
1.5	Review time since last overhaul of all items which are required to be overhauled on a specified time basis.							
1.6	Review current status of applicable airworthiness directives (AD) and safety directives.	Note: Look for the method of compliance, AD number and revision date. If the AD requires recurring action note the time and date when the next action is due.						
1.7	Review the maintenance log entry for Altimeter system and altitude reporting equipment tests and inspections required by 14	(due every 24 months)						
1.8	Review the maintenance log entry for ATC Transponder Tests and Inspections required by 14 CFR part 91.413.	(due every 24 months)						
1.9	Review maintenance records that shows the Emergency Locator Transmitters (ELT) has been inspected within 12 calendar months.	Reference 14 CFR part 91.207 (d).						
1.10	Obtain a current Weight and Balance report and manual.	Note configuration of aircraft during weight check and or any equipment that was on aircraft at time of weight check and compare to current configuration of aircraft.						
2.0	Continued Airworthiness Program							
2.1	Contractor's Written Procedures		Ref. DCMA Instruction 8210.1C Chapter 3					
2.1.1	Review contractor's general procedures and ensure they:							
2.1.1.1	adequately explain the operation to include purpose and scope	8210.1C 3.3						
2.1.1.2	provide specific guidance for safety, and flight and ground operations applicable for all aircraft and operating locations	8210.1C 3.3						
2.1.1.3	describe how contractor ensures that individuals perform only duties they are qualified and authorized to perform	8210.1C 3.3						

2.1.1.4	describe contractor review of their procedures to ensure validity, safety, and effectiveness	8210.1C 3.13							
2.2	Publications / Technical Data								
2.2.1	Ensure written procedures identify methods for receiving, distributing, and maintaining the currency of flight manuals and checklists	8210.1C 4.1.15.2							
2.3	Flight Operations	8210.1C 4.3, 4.5, 4.8							
2.3.1	Verify pilots have an FAA Commercial Pilot or Airline Transport Pilot Certificate and the appropriate category and class ratings								
2.3.2	Verify pilots have annual FAA Second Class flight physical								
2.3.3	Ensure contractor procedures Describe the methods used to ensure that aircrews maintain currency, and don't perform tasks for which they are not current and qualified								
2.3.4	Ensure contractor maintains a record folder for each crewmember after the completion of training and qualification.								
2.3.5	Ensure contractor maintain a records folder for each non-crewmember								
2.4	Ground Operations								
2.4.1	Review contractor procedures to ensure that only trained, qualified and certified personnel perform all aircraft ground operations	8210.1C 5.1							
2.4.2	The contractor provides each employee comprehensive initial indoctrination training and continuation training sufficient to enable him/her to perform authorized ground operations in a safe and effective manner. All personnel performing ground operations are qualified for the procedures they are required to perform.	8210.1C 5.2							
2.5	Training								
2.5.1	Contractors have developed a Master Training Plan to ensure that contractor personnel are qualified/certified to perform their tasks, which includes: - A roster of instructors - Initial and continuation training (Written / Practical / Other?) - Course Documentation & Retention - Course outlines, Authorship - Course / Training Currency - Training Type (Initial, Recurrent, OJT?) - Credit for Prior Training	8210.1C 5.2.1 Only applicable for Part 91(k), 125/121/135/137 or 141, which require a Master Training Plan							
2.5.2	Review contractor training, qualification, and certification records, including initial, recurring, currency/proficiency and re-certification training status for employees	8210.1C 5.2.2 Applicable to programs which do not fall under 4.5.1 above							
2.5.3	Aircraft Ground Handling Procedures								
2.5.3.1	Fixed Wing / Do Ground Personnel Conduct Taxi Operations?								
2.5.3.1	Rotor Craft / Do Ground Personnel Conduct Taxi Operations?								

2.5.4	Review contractor procedures for Ground Run & Operation Training (Content, Process & Recurrency) Academic, Practical, Actual Operation. Ensure personnel who start and operate aircraft engines are properly qualified and certified.	8210.1C 5.4							
2.6 FOD and Tool Control									
2.6.1	Review contractor FOD prevention program, to include:	8210.1C 5.3							
2.6.1.1	Housekeeping, FOD Control & Disposal								
2.6.1.2	FOD Protection Devices (Covers, Plugs, Edge Covers, Cones etc..)								
2.6.2	Review contractor Tool Control programs, to include:	8210.1C 5.3.13							
2.6.2.1	Tool Inventory, Accountability, Traceability (shadow boxes, inventory systems, chits, tags, etc.)								
2.6.2.2	Issuance/Return processes, control logs								
2.6.2.3	Lost tool procedures								
2.6.2.4	Control and inventory of specialty tools and test equipment								
2.6.2.5	Periodic surveillance/assessment/inventory								
2.6.2.6	Serviceability/calibration requirements for all equipment								
2.7 Aircraft Servicing									
2.7.1	Review contractor aircraft servicing processes, to include:	8210.1C 5.8							
2.7.1.1	Refuel/defuel process;								
2.7.1.2	Fuel servicing equipment;								
2.7.1.3	Hydraulic systems, engines, gearboxes, propellers...								
2.7.1.4	Oxygen (liquid and gaseous);								
2.7.1.5	Aircraft tires;								
2.7.1.6	Grease guns, dispensing cans, spray bottles, ...								
2.7.1.7	Processes for preventing cross contamination.								
2.7.1.8	Stores, Parts, Hardware, Electronics etc								
2.8 Aircrew Flight Equipment Life Support, and Survival Gear (AFE/ALSE/ALSS) maintenance and Training									
2.8.1	Review contractor AFE/ALSE/ALSS storage and servicing procedures, to include:	8210.1C 5.10-11							
2.8.1.1	All personnel performing maintenance, removal, installation, operational checkout of ALSE must be trained and certified								
2.8.1.2	Ensure Technical Data Currency, revision service, processes, responsibility								
2.8.1.3	Work center explosive safety program (If applicable)								
2.8.1.4	Proper storage of equipment								
2.9 Aircraft / Conditional or Accelerated Inspection items									
2.9.1	Identify any aircraft systems, sub-systems or components that are subject to conditional or accelerated inspection tasks or intervals. Identify reason or condition for identified inspection task / interval.	This may include, but is not limited to, Inspections required due to AD requirements, Repair related conditional inspections, Engine Oil Sampling, Magnetic chip detection inspection, Accelerated filter inspections etc..							
2.10 Aircraft Historical Incident , Accident or Significant Event Occurrence(s)									
2.10.1	Review aircraft historical documents and identify any any Incident, accident(s) or significant events for the aircraft.								
2.11	Test, Measurement, and Diagnostic Equipment (TMDE) / Precision Measurement & Equipment Laboratory	8210.1C 5.14							

2.11.1	Review contractor procedures for TMDE/PMEL, to include:								
2.11.1.1	Management and tracking of equipment,								
2.11.1.2	Notification and recall process for equip due calibration								
2.11.1.3	Management actions required for overdue items,								
2.11.1.4	Actions for Out-of-Tolerance Equipment								
2.12	Weight & Balance	8210.1C 5.15							
2.12.1	Review contractor weight and balance procedures								
2.13	Technical Orders/Maintenance Manuals	8210.1C 5.19							
2.13.1	Review contractor procedures for TOs/Manuals/Records to include:								
2.13.1.1	Ensure only current technical pubs are available for use	Technical Data Revision process (Rev Service etc)							
2.13.1.2	Method for receiving, distributing, and maintaining the currency of technical publications								
2.13.1.3	Contractor maintains all applicable Airworthiness Directives and Service Bulletins for FAA certified aircraft								
2.14	Records Management	8210.1C 5.20							
2.14.1	Aircraft Records Management. Procedures address at a minimum, maintenance, management, and control of documents, work pages/plans, historical records, etc..	FAA AC 43-9C							
2.15	Flight Release	8210.1C 5.21							
2.15.1	Safe-for-Flight Release. The process that certifies the aircraft is safe for flight.								
2.15.2	Procedure for recording servicing, inspections, scheduled/unscheduled maintenance, weight and balance,								
2.15.3	All discrepancies that would preclude flight have been corrected								
2.15.4	All deferred discrepancies have been evaluated and documented as "safe for flight" by those certified to make that determination								
2.15.5	Process for maintenance and / or flight release								
2.16	Service Life								
2.16.1	Review the service life limit (SLL) for the aircraft								
2.16.2	Ensure the aircraft has not reached its SLL, and determine remaining life								
2.17	Weapons Integration								
2.17.1	Identify weapons types planned for carriage/employment								
2.17.2	Identify bomb/store racks for carriage/employment								
2.17.3	Identify weapons delivery personnel. Review contractor weapons delivery training and currency requirements. Ensure training is applicable to weapons intended for use. Ensure personnel are suitably qualified.								
2.17.4	Identify weapons loading personnel. Review contractor weapons loading training and currency requirements. Ensure training is applicable to weapons intended for use. Ensure personnel are suitably qualified.								
2.17.5	Witness weapons loading/unloading demonstration.								

2.17.6	Inspect weapons delivery controls, including arming switch, station or gun select switch, and trigger. Ensure implementation is sufficient to prevent crewmember inadvertent release, and to ensure delivery controls are only accessible to authorized personnel.								
2.17.7	Inspect hung store indicators; review contractor procedures for hung stores.								
2.17.8	Review weapons safe separation analysis (e.g. SEEK EAGLE).								
2.17.9	Review list of approved weapons/stores in Tos; review any limitations in TOs or other contractor publications.	Ensure that all weapon platforms do not exceed the aircraft's weight and balance once installed. Ensure that wing loading is not exceeded.							
2.17.10	Review Electromagnetic Environmental Effects (E3) analysis/tests for weapons compatibility.								
2.17.11	Review Bureau of Alcohol, Tobacco, Firearms, & Explosives (ATF) Licenses for installed weapons								
2.18	Aircraft Condition Inspection								
2.18.1	Perform a general visual inspection of aircraft/engines: -Engine(s) & propeller (s) -Flight deck -Cargo/baggage compartments Flaps and or slats should be deployed, landing gear doors opened, cargo/baggage compartments opened, engine cowls opened. Note any major repairs and or modifications to aircraft. Verify them against FAA Form 337's	Aircraft inspection prior to understanding "What" the configuration should look like is counter-productive.							
2.19	Spectrum Management								
2.19.1	Review FCC approvals for all installed transmitting equipment								