

VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES**CHAPTER 9 AIRCRAFT CONFIGURATION CONTROL DOCUMENT****Section 1 Safety Assurance System: Aircraft Configuration Control Document****10-9-1-1 GENERAL.**

A. Purpose. This section provides information and references for the evaluation of an aircraft configuration based on Title 14 of the Code of Federal Regulations (14 CFR) part 121 airworthiness requirements. If you are a participant in the evaluation of an aircraft configuration, then this section applies to you.

B. Scope. Participants in the evaluation of an aircraft configuration should follow this process to determine if an aircraft meets the airworthiness requirements. Record all findings in Safety Assurance System (SAS) automation tools. The Aircraft Configuration Control Document (ACCD) includes the following information:

- Guidance in the development of a certificate holder's aircraft conformity and acceptance programs.
- Configuration and operating requirements of part 121 subparts J and K.
- Verification of supporting documents when adding new make or model aircraft to an existing certificate holder's certificate (operations specification (OpSpec) D085).
- Regulatory and advisory guidance.

NOTE: The references in this section may not be all inclusive and are subject to change.

10-9-1-3 RESERVED.**10-9-1-5 BACKGROUND.**

A. General Information. A review of case law relating to airworthiness reveals that an aircraft must meet two conditions to be considered "airworthy," as defined in 14 CFR part 3, § 3.5(a). Additionally, an aircraft must be determined as eligible for the issuance of an airworthiness certificate under Title 49 of the United States Code (49 U.S.C.) § 44704(d)(1) and 14 CFR part 21, §§ 21.1(b)(1) and 21.183(a), (b), and (c)(3). Two conditions that must be met for issuance of an airworthiness certificate as described in Volume 8, Chapter 5, Section 1, and the current edition of Federal Aviation Administration (FAA) Order 8130.2, Airworthiness Certification of Products and Articles, chapter 2, section 1, are:

1) The aircraft must conform to its type certificate (TC) (design). This is attained when the aircraft configuration and the engine, propeller, and articles installed are consistent with the drawings, specifications, and other data that are part of the TC. This includes any Supplemental Type Certificate (STC) and repairs and alterations incorporated into the aircraft.

2) The aircraft must be in a condition for safe operation. This refers to the condition of the aircraft relative to wear and deterioration (e.g., skin corrosion, window delamination/crazing, fluid leaks, and tire wear). (Refer to Order 8130.2, chapter 2, section 1.)

B. Standard Airworthiness Certificate. The aircraft must have a standard airworthiness certificate. This certificate remains valid as long as the aircraft:

- 1) Meets its approved type design.
- 2) Is in a condition for safe operation.
- 3) Has up-to-date maintenance and preventive maintenance.
- 4) Alterations are performed in accordance with 14 CFR parts 21, 43, and 91.
- 5) Conforms to the “Limitations” and “Supplement” sections within the approved Airplane Flight Manual (AFM).

C. Special Airworthiness Requirements in Part 121 Subpart J. The ACCD lists limited specifications for aircraft certificated under Aeronautics Bulletin 7a, Airworthiness Requirements for Aircraft; Part 4 of the Civil Aviation Regulations (CAR) or nontransport category airplanes TC'd after December 31, 1964; and CAR 4b.

NOTE: It is suggested to conduct further research when evaluating aircraft of this vintage.

D. Request List. Figure 10-9-1A, Request List, is a list of items the aircraft owner/operator should have available to support the aircraft and document evaluation. This list is not all inclusive.

E. Related 14 CFR Parts that May be Listed. Title 14 CFR parts 21, 25, 39, 43, 45, 91, and 121.

F. Related Element Design Data Collection Tools (ED DCT) and Element Performance Data Collection Tools (EP DCT). The majority of the inspection items within this job aid contain specific regulatory requirements and are supported by the related ED/EP DCTs.

G. The Physical Inspection of the Aircraft (Including General Visual Inspection (GVI)). This inspection is a visual examination of the interior and exterior areas of the aircraft to evaluate equipment and manual requirements as required in part 121 and to detect obvious damage, failure, or irregularity. You, the aviation safety inspector (ASI), conduct this level of inspection under normally available lighting conditions, such as daylight, hangar lighting, flashlight, or drop light. This inspection may require the removal or opening of access panels or doors. Stands, ladders, or platforms may be required to access the area of inspection. Use normal inspection aids (as required), such as an inspection mirror, a flashlight, and a mechanic's 6-inch scale.

NOTE: This section may reference certification regulations, but they are not listed in the regulatory column.

Figure 10-9-1A. Request List

Request List
Copy of the certificate holder's inspection document (configuration/conformity inspection).
Copy of the bridging (transfer) document and the Continuous Airworthiness Maintenance Program (CAMP) for the aircraft, including work cards and time limits (may be in electronic format).
The Maintenance Review Board (MRB) and Maintenance Planning Document (MPD) (manufacturer's recommended maintenance program) for the aircraft.
List of Passenger Accommodations (LOPA) for the interior and additional diagrams that might include location of emergency equipment, if not on the LOPA.
Passenger briefing cards.
Current aircraft equipment list (as revised).
The Federal Aviation Administration (FAA) will also ensure the operator has the aircraft in its tracking system (forecast, next check due, etc.).
Flight deck checklists.
Flammability test certifications for aircraft interior materials (14 CFR part 23, § 23.853 and part 25, § 25.853), as appropriate.
Skin mapping (repairs) and repair assessment, if applicable (14 CFR part 121, § 121.707).
Airplane Flight Manual (AFM) and company manual used in lieu of AFM, if applicable (§ 121.141).
Major Repair and Alteration Report (§ 121.707(a)(b)).
Minimum equipment list (MEL).
Pilot aircraft operating manual (§ 121.135).
Engineering Orders (EO) accomplished.
Placard diagram and/or manual.
Records required by §§ 121.380 and 121.707.
In-flight manual (flight attendant (F/A) manual) (§ 121.135).
Technical documents that firmly establish the digital flight data recorder (DFDR) parameter types and accuracies, and the latest DFDR data download, if available (§§ 121.343, 121.344, and 121.344a).
All Supplemental Type Certificates (STC) for the aircraft.

Figure 10-9-1B. Aircraft Information Form

A I R C R A F T	Make/Model/Series	Current Registration	Date of Last "Heavy" <i>(MM/DD/YY)</i>	List of Passenger Accommodations
	Serial No.	Previous Registration	Date of Last "C" CK. <i>(MM/DD/YY)</i>	Yes No
	Line or Fuselage No.	Total Time (TT)	Last Operator <i>(Designator)</i>	Repair Assessment Available? Yes No
	Date of Manufacture	Total Cycles (TC)	Current Operator <i>(Designator)</i>	Bridging Document Available? Yes No
	TC Data Sheet (No.)	Interior Configuration <i>(# of PAX)</i>		
W G T	Operator's Empty Wgt.	Max Structural Wgt.	Max Take-Off Wgt.	Date of Last Weighing <i>(MM/DD/YY)</i>
	Max Zero Fuel Wgt.	Max Taxi or Ramp Wgt.	Max Landing Wgt.	Current Acft Equip List? Yes No
P O W E R P L A N T	Power Plant 1	Power Plant 2	Power Plant 3	Power Plant 4
	Make/Model/Series	Make/Model/Series	Make/Model/Series	Make/Model/Series
	Serial No.	Serial No.	Serial No.	Serial No.
	Total Time (TT)	Total Time (TT)	Total Time (TT)	Total Time (TT)
	Total Cycles (TC)	Total Cycles (TC)	Total Cycles (TC)	Total Cycles (TC)
	Time Since Overhaul (TSO)	Time Since Overhaul (TSO)	Time Since Overhaul (TSO)	Time Since Overhaul (TSO)
	Powerplant Type Certificate Data Sheet (No.)			

P R O P S	Propeller 1	Propeller 2	Propeller 3	Propeller 4
	Make/Model/Series	Make/Model/Series	Make/Model/Series	Make/Model/Series
	Serial No.	Serial No.	Serial No.	Serial No.
	Total Time (TT)	Total Time (TT)	Total Time (TT)	Total Time (TT)
	Total Cycles (TC)	Total Cycles (TC)	Total Cycles (TC)	Total Cycles (TC)
Propeller Type Certificate Data Sheet (No.)				
A P U	Make/Model/Series	Total Time (TT)	Time Since Overhaul (TSO)	Applicable to Acft TCDS?
	Serial No.	Total Cycles (TC)		Yes No
L D G G E A R	Nose Gear	RH Main Gear	LH Main Gear	Other Gear Assemblies
	Make/Part Number	Make/Part Number	Make/Part Number	Make/Part Number
	Serial No.	Serial No.	Serial No.	Serial Nos.
	Total Time (TT)	Total Time (TT)	Total Time (TT)	Total Time (TT)
	Total Cycles (TC)	Total Cycles (TC)	Total Cycles (TC)	Total Cycles (TC)
	Time Since Overhaul (TSO)			
				/

Table 10-9-1A. Configuration-Related Research

ITEM	CONFIGURATION-RELATED RESEARCH	REFERENCE
1	Aircraft History. Review aircraft information in Federal Aviation Administration (FAA) databases and other applicable sources.	Safety Performance Analysis System (SPAS) Foreign Civil Aviation Authority (FCAA) Manufacturer, etc.
2	Airframe Type Certificate Data Sheets (TCDS). a. Compare information on the TCDS to aircraft information the certificate holder provides. b. Research related information, including all TCDS notes (instructions for continued airworthiness (ICA), Reduced Vertical Separation Minimums (RVSM) eligibility, High Intensity Radiated Field (HIRF) requirements, basic equipment list, etc.).	14 CFR part 21, § 21.21 FAA Order 8130.2, Airworthiness Certification of Products and Articles, Chapter 8, Processing Forms, Reports, and Certification Files (current edition)
3	Engine TCDS. Review the applicability of the TCDS. Verify the compatibility of propellers to the installed engines.	§ 21.41 14 CFR part 33, § 33.1
4	Propeller TCDS. Review the applicability of the TCDS. Verify that the propellers are approved for operation with installed engines.	§ 21.41
5	Master Minimum Equipment List (MMEL). Obtain a copy of the current MMEL for comparison to the certificate holder's minimum equipment list (MEL) for correct revision.	http://fsims.faa.gov/PICResults.aspx?mode=Publication&doctype=MMEL
6	Airworthiness Directives (AD) (Airframe, Engines, Propellers, and Appliances). Research and generate an applicable AD listing.	http://www.faa.gov/regulations_policies/airworthiness_directives/

ITEM	CONFIGURATION-RELATED RESEARCH	REFERENCE
	NOTE: It may not be possible to complete the list until after reviewing the manufacturer's and operator's appliance and equipment lists.	
7	Additional Information. Review any other information that is available and related to the specific aircraft being evaluated (e.g., SPAS, Safety Assurance System (SAS) automation, Web-based Operations Safety System (WebOPSS) authorization reference).	Will need to enter SAS via: https://sas.avs.faa.gov/sas.internal.portal/Home/InternalPortal#/UserAdminView?Key=Select_User http://home.spas.faa.gov/splash/splash.asp These are internal FAA sites only
8	Review ICAs—(Maintenance Review Board Report (MRBR), Maintenance Planning Document (MPD), etc.). Review ICAs for additional regulatory requirements (e.g., Certification Maintenance Requirements (CMR)).	Advisory Circular (AC) 121-22, Maintenance Review Boards, Maintenance Type Boards, and OEM/TCH Recommended Maintenance Procedures (current edition)

Table 10-9-1B. Manuals

ITEM	MANUALS	REFERENCE
1	Airplane Flight Manual (AFM). a. Verify that the certificate holder has a current and complete copy of the applicable manufacturer's Federal Aviation Administration (FAA)-approved AFM for the particular aircraft make, model, and serial number. b. Verify that all supplements are applicable, complete, and properly approved (including Airworthiness Directives (AD)). c. Verify that the actual aircraft configuration conforms to the supplements, which includes Supplemental Type Certificate (STC)-derived supplements. d. Verify all aircraft checklists, including expanded checklists, match the AFM/Airplane Operations Manual (AOM).	14 CFR part 91, § 91.9 14 CFR part 121, § 121.141
2	Airplane Operations Manual (AOM). a. If the operator elects to develop and use an AOM in lieu of the FAA-approved AFM (Item 1) to operate the aircraft, it must be current and complete with respect to the operator's master	§ 121.141

ITEM	MANUALS	REFERENCE
	<p>AOM and the FAA-approved AFM and supplements. It must match the subject aircraft configuration and account for the interrelationships between related systems. AOM operating procedures and performance information derived from the AFM must be accurate and clearly identified as such. AFM operating and performance information modified by the operator in the AOM must be FAA-approved.</p> <p>b. Verify that the AOM is part of the certificate holder's manual system.</p> <p>c. Verify that all AOM supplements or bulletins are appropriate and complete.</p> <p>d. Verify that the AOM is on board the aircraft, if required by the operator's manual.</p>	
3	<p>Flight Deck Check Procedures (Checklist). Verify that flight deck check procedures (checklists) are current and complete, properly approved, and limited to action or verification items. The operator's manual and training programs must thoroughly describe required actions and decisions for crewmembers performing a checklist.</p>	<p>§ 121.315 Volume 3, Chapter 32, Section 2</p>
4	<p>Performance Requirements. The performance requirements of 14 CFR part 25, §§ 25.101 through 25.125 apply to all aircraft certificated under part 25 subpart A. The performance requirements of Civil Aviation Regulation (CAR) 4b subpart B, §§ 4b.100 to 4b.125-1 apply to all aircraft certificated under CAR 4b. Each specific aircraft's performance and limitations for existing aircraft configuration, modifications, improvements, and engine installation must be included in the particular FAA-approved AFM or AOM.</p>	<p>§§ 121.141, 121.173, 121.189, 121.191, 121.193, 121.195, 121.197, 121.198; and part 121 appendix K</p>
5	<p>Minimum Equipment List (MEL). Verify that the operator's MEL is FAA-approved, is configured to the subject aircraft, and is current with respect to the Master Minimum Equipment List (MMEL).</p>	<p>§ 91.213 § 121.628 Volume 4, Chapter 4, Sections 1 and 7</p>
6	<p>Weight and Balance (W&B) Manual (and Cargo Loading Manual, if Applicable).</p> <p>a. Verify that the certificate holder's approved W&B manual is appropriate to the make, model, and series (M/M/S) of the subject aircraft.</p>	<p>§ 91.605 § 121.135 Volume 3, Chapter 47 AC 120-27, Aircraft Weight and Balance Control (current edition)</p>

ITEM	MANUALS	REFERENCE
	<p>b. Verify that listed weights are configured to the Type Certificate Data Sheet (TCDS), AFM/AOM, and the current edition of Advisory Circular (AC) 120-27, Aircraft Weight and Balance Control.</p>	
7	<p>Flight Attendant (F/A) Manual. If the type of aircraft requires F/As per § 121.391, verify that the operator has a current, complete, and FAA-accepted manual available. Ensure that the manual accurately depicts the cabin configuration and equipment.</p>	<p>§§ 121.135, 121.139, and 121.391 Volume 3, Chapter 32, Section 13</p>
8	<p>Other Manual Parts by Regulation.</p> <p>a. Verify that all manual parts required by the operator to be carried on board the aircraft are in fact on board.</p> <p>b. Verify that the manual is current, is FAA-approved or FAA-accepted (as appropriate), and accurately reflects the aircraft configuration.</p> <p>c. Verify that the operator has a system to revise and keep current all of its technical manuals (e.g., Aircraft Maintenance Manual (AMM), Illustrated Parts Catalogue (IPC), and other manuals for maintaining its aircraft). (Part 121 operators are responsible for their manual system and maintaining the currency of this manual with the source (manufacturer's document).)</p>	<p>§§ 121.133, 121.135, 121.139, and 121.369 Volume 3, Chapter 32, Section 11</p>

Table 10-9-1C. Records

ITEM	RECORDS	REFERENCE
1	<p>Export Certificate of Airworthiness.</p> <p>a. Does the aircraft have a properly issued U.S. Certificate of Airworthiness?</p> <p>b. Check the applicability of exemptions/deviations from the Type Certificate Data Sheet (TCDS) or other certification document.</p> <p>c. For foreign-registered aircraft, does the Foreign Civil Aviation Authority (FCAA)-issued Certificate of Airworthiness meet the regulatory requirements for the U.S. certificate holder service? (Refer to Title 14 of the Code of Federal Regulations (14 CFR) part 121, § 121.153(c).)</p>	<p>§ 121.153 Volume 3, Chapter 17 Volume 3, Chapter 31, Section 5 FAA Order 8130.2, Airworthiness Certification of Products and Articles (current edition)</p>

ITEM	RECORDS	REFERENCE
2	<p>Maintenance Overhaul/Time Controlled/Life-Limited Items/Certification Maintenance Requirements (CMR)/Airworthiness Limitations.</p> <p>a. Review documentation for all articles subject to time/cycle/life limits. (Are the articles tracked by nomenclature, part number, serial number, lot number, or via records the operator retains?)</p> <p>b. Review the TCDS for specific tracking requirements.</p> <p>c. Does the operator have a system to verify inspection status, overhauls, and repetitive maintenance/inspection tasks for this specific aircraft?</p> <p>d. Are the requirements of the applicable Maintenance Review Board Report (MRBR) evident in the operators program? Have all MRBR requirements been met? (See Table 10-9-1A, Configuration-Related Research, for a description.)</p> <p>e. Are the records and inspection intervals in accordance with the certificate holder's authorized Continuous Airworthiness Maintenance Program (CAMP)?</p> <p>f. Perform a sampling inspection of articles/components installed on the aircraft. (Are the articles/components maintained in accordance with the certificate holder's authorized CAMP?)</p>	<p>§ 121.380</p> <p>Volume 3, Chapter 31, Section 5</p> <p>Volume 6, Chapter 2, Section 28</p> <p>FAA Order 8110.54, Instructions for Continued Airworthiness Responsibilities, Requirements, and Contents (current edition)</p> <p>Advisory Circular (AC) 20-62, Eligibility, Quality, and Identification of Aeronautical Replacement Parts (current edition)</p> <p>AC 120-16, Air Carrier Maintenance Programs (current edition)</p>
3	<p>Air Traffic Control (ATC) Transponder Test and Inspection.</p> <p>a. Do the operator's records document the completion of the 24-month tests and inspection of the ATC transponder system (including altitude reporting equipment) in accordance with 14 CFR part 43 appendix F?</p> <p>b. Do the records support proper transponder reporting of the current aircraft Mode Select (Mode S) address?</p>	<p>Part 43 appendix F</p> <p>14 CFR part 91, § 91.413</p> <p>§ 121.345</p>

ITEM	RECORDS	REFERENCE
4	<p>Repair Assessment and Survey of Pressurized Fuselages (Damage-Tolerance (DT)-Based Inspections and Procedures). Check the aircraft records to ensure that inspections, repairs, and alterations made to the pressure vessel of the aircraft are configured to the certificate holder’s program and regulatory requirements.</p>	<p>Part 43 appendix A, operations specification (OpSpec) D097, and § 121.1107</p> <p>Volume 6, Chapter 2, Section 28</p> <p>Volume 6, Chapter 11, Section 14</p> <p>FAA Order 8300.13, Repair Assessment Program (current edition)</p> <p>AC 25.571-1, Damage Tolerance and Fatigue Evaluation of Structure (current edition)</p> <p>AC 91-56, Continuing Structural Integrity Program for Airplanes (current edition)</p>
5	<p>Temporary Repairs.</p> <p>a. Check the records of temporary repairs made to the aircraft for compliance with program and regulatory requirements.</p> <p>b. Perform a spot check of the aircraft for evidence of repairs and correlate those repairs to supporting documentation.</p>	<p>§ 43.13</p> <p>Volume 3, Chapter 36</p> <p>Order 8300.13</p> <p>AC 25-22, Certification of Transport Airplane Mechanical Systems (current edition)</p> <p>AC 120-73, Damage Tolerance Assessment of Repairs to Pressurized Fuselages (current edition)</p>

ITEM	RECORDS	REFERENCE
6	<p>Supplemental Type Certificates (STC).</p> <p>a. Check that Federal Aviation Administration (FAA)-approved data support the installed STCs.</p> <p>b. Check that the installations are not partial applications of the STC.</p> <p>c. Check the installations to the data and ensure that the required changes to the operating manuals (Airplane Flight Manual (AFM) supplements) and maintenance manuals address the change.</p> <p>d. Review the instructions for continued airworthiness (ICA) provided with the STC and ensure these requirements are addressed in the operator's maintenance/inspection program and publications.</p> <p>e. Check STCs installed on the aircraft. Check for evidence that the interrelationship of the installations was reviewed and determined to be acceptable (STC requirement).</p>	<p>§ 91.403(d)</p> <p>§§ 121.367, 121.379, 121.380, and 121.707</p> <p>Volume 3, Chapter 36, Section 1</p> <p>Volume 4, Chapter 3, Sections 1 and 3</p> <p>Volume 6, Chapter 11, Section 2</p> <p>Order 8110.54</p>
7	<p>Airworthiness Directives (AD).</p> <p>a. Check that the operator has a method to track the current status of all applicable ADs. The records must conform to the requirements of the certificate holder's manual. The information must be specific enough to identify each AD by the:</p> <ol style="list-style-type: none"> 1) Date accomplished. 2) Method of accomplishment. 3) One-time or recurring. 4) Time/date of the next required action. <p>b. Do alternative methods of compliance (AMOC) satisfy an AD requirement (if applicable)?</p> <ol style="list-style-type: none"> 1) Does documentation exist approving the AMOC, and does it allow the specific certificate holder to use that AMOC as a basis for compliance as specified within its text? 2) Spot check of one-time and recurring ADs (airframe, engine, propeller, and appliance). 3) Does the operator have a system to track and report AD status and compliance? 	<p>14 CFR part 39</p> <p>§ 91.403</p> <p>§ 121.380</p>

ITEM	RECORDS	REFERENCE
8	<p>Major Repairs and Alterations.</p> <p>a. Review records for current major repairs and alterations for each airframe, engine, propeller (if applicable), and appliance.</p> <p>b. Is there documentation for each major repair and alteration, and was it accomplished in accordance with FAA-approved technical data? (e.g., STC, Structural Repair Manual (SRM), Designated Engineering Representative (DER), FAA field approval, etc.)</p> <p>c. Are there ICAs for each alteration and/or repair included in the certificate holder's maintenance and inspection program?</p>	<p>§ 43.9</p> <p>Part 43 appendix A</p> <p>Part 43 appendix B</p> <p>§§ 121.379, 121.380, 121.707, and 121.709</p> <p>Volume 6, Chapter 11, Section 2</p> <p>AC 120-77, Maintenance and Alteration Data (current edition)</p>
9	<p>Digital Flight Data Recorder System (DFDRS) or Flight Data Recorder System (FDRS), as Applicable.</p> <p>a. Does the certificate holder maintain the correlation data required by the applicable part 121 section?</p> <p>b. Review DFDRS or FDRS download/analysis records required by the certificate holder's manual.</p> <p>c. Check the recorder system for all required parameters.</p> <p>d. Is there a system for the analysis download and documenting discrepancies? Are those discrepancies corrected per the certificate holder's manual?</p> <p>e. Verify the record of filtered parameters.</p>	<p>§§ 121.343, 121.344, 121.344(a), and 121.346</p> <p>Part 121 appendix B</p> <p>Part 121 appendix M</p> <p>Volume 4, Chapter 14, Section 8</p> <p>AC 20-141, Airworthiness and Operational Approval of Digital Flight Data Recorder Systems (current edition)</p>
10	<p>CMRs. Verify that all CMR tasks were properly incorporated into the operator's programs (e.g., CAMP).</p> <p>Methods and time intervals associated with these tasks must be FAA-approved by the Aircraft Certification Office (ACO) and certificate-holding district office (CHDO), as applicable, in the certificate holder's OpSpecs. CMRs may be located in the applicable MRBR.</p>	<p>14 CFR part 119, § 119.49</p> <p>§ 121.367</p>
11	<p>Fuel Tank Safety (FTS), Regulatory Requirements. Section 121.1113 states that after December 16, 2008, no certificate holder may operate an airplane unless that operator has revised the maintenance program for that airplane to include applicable inspections, procedures, and limitations for the fuel tank systems. This requirement specifically addresses the "No Unsafe Condition" category, task, and intervals found in Volume 6, Chapter 11, Section 23, paragraph 6-2698, ICA Development. This means that the operator must include in its maintenance or inspection program the type certificate</p>	<p>§§ 121.1111, 121.1113, and 121.1117</p> <p>OpSpec D097</p> <p>Volume 3, Chapter 18, Section 6</p>

ITEM	RECORDS	REFERENCE
	holder (TCH)-developed MRBR or maintenance implementation document revisions.	Volume 6, Chapter 11, Section 23
12	<p>Automatic Dependent Surveillance-Broadcast (ADS-B). On May 27, 2010, the FAA published new rules (contained in §§ 91.225 and 91.227) mandating airspace and avionics performance requirements after January 1, 2020. The avionics perform a function that is generally known as “ADS-B Out,” which transmits precise location and other information about the aircraft to ground stations and other ADS-B-equipped aircraft.</p> <p>The ADS-B rule mandates ADS-B Out avionics performance when operating within the designated airspace, giving aircraft owners approximately 10 years to equip.</p> <p>The ADS-B rule, like current transponder operating requirements, requires operators to have ADS-B Out avionics installed and operating in order to fly their aircraft in the busiest airspace as described in the following:</p> <ul style="list-style-type: none"> • Class A, B, and C airspace; • All airspace at and above 10,000 feet mean sea level (MSL) over the 48 contiguous United States and the District of Columbia; • Within 30 nautical miles (NM) of airports listed in § 91.225, from the surface up to 10,000 feet MSL; and • Class E airspace over the Gulf of Mexico from the coastline of the United States out to 12 NM, at and above 3,000 feet MSL. <p>FAA Technical Standard Orders (TSO) describe the equipment approved for ADS-B operations. The ADS-B rule states that avionics must meet the standards of either TSO-C166b, Extended Squitter Automatic Dependent Surveillance-Broadcast (ADS-B) and Traffic Information Service-Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz), for 1090ES link equipment or TSO-C154c, Universal Access Transceiver (UAT) Automatic Dependent Surveillance-Broadcast (ADS-B) Equipment Operating on Frequency of 978 MHz, for UAT link equipment. TSO-C166b is required in Class A airspace and either link can be used in all other airspace.</p> <p>For more information about the FAA’s ADS-B program, visit http://www.faa.gov/nextgen/programs/adsb/.</p>	§§ 91.225 and 91.227

Table 10-9-1D. Inspection Program and Programs Covering Other Maintenance, Preventive Maintenance, and Alterations

ITEM	INSPECTION PROGRAM AND PROGRAMS COVERING OTHER MAINTENANCE, PREVENTIVE MAINTENANCE, AND ALTERATIONS	REFERENCE
<p>1</p>	<p>Inspection Program and Programs Covering Other Maintenance, Preventive Maintenance, and Alterations.</p> <p>If the certificate holder is adding the same make, model, and series (M/M/S) aircraft that it is operating, verify proper correlation between the operator’s maintenance tasks and time limitations for its approved maintenance program.</p> <p>If the certificate holder does not have prior operating experience with the M/M/S aircraft being evaluated, verify that the operator-developed maintenance program for aircraft and installed components are based on the manufacturer’s recommended baseline program (e.g., Maintenance Review Board Report (MRBR), Maintenance Planning Document (MPD), etc.) and other Federal Aviation Administration (FAA) requirements. In this manner, the continuing airworthiness of the aircraft and installed components is ensured, and only those tasks that are applicable and effective are performed. If the aircraft was operated under a different maintenance program by a previous operator, verify proper transition (bridging) of the previously accumulated times and/or cycles to the current certificate holder’s instructions for continued airworthiness (ICA).</p> <p>The maintenance program must include damage tolerance rating (DTR) evaluations and structural inspection requirements.</p> <p style="padding-left: 40px;">NOTE: Refer to the Maintenance Review Board (MRB) and/or Airworthiness Directives (AD), as applicable.</p> <p>Airplane Configuration Process. Verify that the certificate holder has an aircraft configuration or similar process within its manual system, and that the process results in the aircraft meeting its type design or properly altered condition. Verify that the certificate holder’s inspection program and programs covering other maintenance, preventive maintenance, and alterations are acceptable to the Administrator before the aircraft is added to the operations specifications (OpSpecs) D085.</p>	<p>14 CFR part 91, § 91.409(h) 14 CFR part 119, § 119.49 14 CFR part 121, § 121.367 Volume 3, Chapter 43, Section 1 Volume 6, Chapter 2, Section 28 Advisory Circular (AC) 120-16, Air Carrier Maintenance Programs (current edition) AC 120-73, Damage Tolerance Assessment of Repairs to Pressurized Fuselages (current edition)</p>

ITEM	INSPECTION PROGRAM AND PROGRAMS COVERING OTHER MAINTENANCE, PREVENTIVE MAINTENANCE, AND ALTERATIONS	REFERENCE
2	<p>Very High Frequency Omnidirectional Range Station (VOR) Equipment Checks for Instrument Flight Rules (IFR) Operations. Verify that the aircraft is included in the operator's program. Ensure that the VOR equipment of the aircraft is maintained, checked, and inspected under an approved procedure, or is operationally checked within the preceding 30 days and was found to be within the limits of the indicated permissible bearing error set forth in § 91.171. Also see related Item 4 under Table 10-9-1C.</p>	<p>§ 91.171 § 121.367 Volume 6, Chapter 2, Section 28</p>
3	<p>High Intensity Radiated Field (HIRF)/Lightning Protection Maintenance Program. Verify that the aircraft is included and maintained in accordance with the certificate holder's HIRF maintenance and inspection programs. Refer to the MRBR and Supplemental Type Certificate (STC).</p>	<p>§ 121.367 Volume 3, Chapter 43, Section 1 Volume 6, Chapter 2, Section 28 AC 20-53, Protection of Aircraft Fuel Systems Against Fuel Vapor Ignition Caused by Lightning (current edition) AC 20-136, Aircraft Electrical and Electronic System Lightning Protection (current edition) AC 20-158, The Certification of Aircraft Electrical and Electronic Systems for Operation in the High-intensity Radiated Fields (HIRF) Environment (current edition)</p>
4	<p>Air Traffic Control (ATC) Transponder Tests and Inspections. Verify that the aircraft is included and maintained in accordance with the certificate holder's program and that the program included 24-month tests and inspections of the ATC transponder systems in accordance with 14 CFR part 43 appendix F. Tests and inspections should include altitude reporting equipment.</p>	<p>Part 43 appendix F § 91.413 § 121.367 AC 20-131, Airworthiness Approval of Traffic Alert and Collision Avoidance Systems (TCAS II) and Mode S Transponders (current edition)</p>

ITEM	INSPECTION PROGRAM AND PROGRAMS COVERING OTHER MAINTENANCE, PREVENTIVE MAINTENANCE, AND ALTERATIONS	REFERENCE
5	Reduced Vertical Separation Minimums (RVSM). If authorized to conduct RVSM operations, verify that the aircraft conforms to its RVSM data package and that the aircraft is maintained in accordance with the certificate holder's approved program.	§§ 91.3, 91.703, 91.706, and 91.180 Part 91 appendix G Volume 4, Chapter 1, Section 5 Volume 4, Chapter 10, Section 1 AC 91-70, Oceanic and International Operations (current edition)
6	Flight Data Recorder System (FDRS). Verify that as a minimum, the certificate holder's maintenance program meets the requirements of AC 20-141, Airworthiness and Operational Approval of Digital Flight Data Recorder Systems (current edition).	§ 121.367 Volume 4, Chapter 14, Section 8 AC 20-141
7	Underwater Locating Device (ULD). Verify that operational and battery capacity tests of each ULD were performed in accordance with the certificate holder's Continuous Airworthiness Maintenance Program (CAMP).	§§ 121.343(k), 121.359, and 121.359(c)(2)(iii) Volume 4, Chapter 14, Section 8 Volume 4, Chapter 14, Section 9
8	Corrosion Prevention and Control Program (CPCP). Verify that the certificate holder has a CPCP. This program defines the minimum requirements for preventing or controlling corrosion problems that may jeopardize continuing airworthiness of the aircraft. To meet these requirements, operators must have effective corrosion prevention and control procedures incorporated into the maintenance program for all airplanes reaching or exceeding the implementation age. The level of corrosion found on Principal Structural Elements (PSE) determines the effectiveness of a corrosion control program for a given airplane area.	§ 121.367 Volume 3, Chapter 43, Section 1 Volume 6, Chapter 2, Section 28 Order 8300.12, Corrosion Prevention and Control Programs (current edition) For MSG-1 and -2 aircraft, refer to Order 8300.12. For all MSG-3 and above aircraft, refer to the manufacturer's MRBR and/or ADs, as applicable.
9	Engines, Auxiliary Power Unit (APU). Ensure the engines and APU are included and maintained in accordance with the operator's current maintenance and inspection programs. Refer to the MRBR and/or ADs (as applicable).	§ 121.367 Volume 3, Chapter 43, Section 1 Volume 6, Chapter 2, Section 28 AC 120-16

ITEM	INSPECTION PROGRAM AND PROGRAMS COVERING OTHER MAINTENANCE, PREVENTIVE MAINTENANCE, AND ALTERATIONS	REFERENCE
10	<p>Lower Landing Minimums. If authorized to conduct Category II/III Approach (CAT II/CAT III) operations, verify that the aircraft conforms to, and is maintained in accordance with, the certificate holder's approved program. (Refer to OpSpecs C059 and C060.)</p>	<p>§§ 121.367, 121.369(b), and 121.567</p> <p>Volume 3, Chapter 18, Section 5</p> <p>Volume 4, Chapter 2, Section 11</p> <p>AC 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout (current edition)</p> <p>AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach (current edition)</p>
11	<p>Electrical Wiring Interconnection Systems (EWIS) Maintenance Program. Verify that the operator has an EWIS maintenance program. Text below is excerpted from § 121.1111(b).</p> <p>“After March 10, 2011, no certificate holder may operate an airplane identified in paragraph (a) of this section unless the maintenance program for that airplane includes inspections and procedures for electrical wiring interconnection systems (EWIS).”</p> <p>Submit revisions to the principal ASI for review and approval.</p> <p>Once the program is incorporated, ensure required inspections have been accomplished.</p>	<p>§ 121.1111</p>

Table 10-9-1E. Fuselage, Exterior, Engines, and Propellers

ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCE
1	<p>Radome Area.</p> <p>a. Inspect radome, erosion cap, and lightning diverter strips for condition and security.</p> <p>b. If the radome internal area is accessible, do the following:</p> <p>1) Inspect exposed electronic/electrical components for condition, security, and proper bonding/grounding (antennas, weather radar waveguide, cable and wire bundles, connectors, etc.).</p> <p>2) Inspect the exposed airframe area (forward-pressure bulkhead) for condition, corrosion, damage, and repairs. When repairs are noted, including the radome, check the repair data at the certificate holder's record section for Federal Aviation Administration (FAA)-approved or FAA-accepted data.</p>	<p>14 CFR part 121, §§ 121.135, 121.367, and 121.369</p> <p>Volume 6, Chapter 2, Section 4</p>
2	<p>Pitot Air Probes.</p> <p>a. Inspect for proper installation, condition, and type. Probes must have a heat function (or equivalent means for preventing malfunctioning due to icing). Ports must be free of obstructions.</p> <p>b. Visually inspect the critical surface areas around the probes for any irregularity that could impair the effectiveness of the probes. If repairs are noted, check the repair data at the certificate holder's record section for FAA-approved data.</p>	<p>§§ 121.323, 121.325, 121.341, and 121.342</p> <p>Volume 6, Chapter 2, Section 4</p>
3	<p>Static Pressure Ports.</p> <p>a. Check ports for condition. Check that all openings are free of obstructions.</p> <p>b. Visually inspect the critical surface areas around the probes for any irregularity that could impair the effectiveness of the ports.</p> <p>c. If repairs are noted, check the repair data at the certificate holder's record section for FAA-approved data.</p>	<p>§§ 121.313 and 121.341</p> <p>Volume 6, Chapter 2, Section 4</p> <p>Advisory Circular (AC) 120-73, Damage Tolerance Assessment of Repairs to Pressurized Fuselages (current edition)</p>

ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCE
4	<p>External Lights. Inspect the proper installation, condition, and weather sealing of all external lights and light lenses. Check the operation of the following:</p> <ul style="list-style-type: none"> a. Anti-collision lights, fuselage. b. Wing tip and tail white gas discharge lights (strobe lights). c. Exterior emergency lights (if installed). d. Landing lights. e. Taxi lights. f. Position lights. g. Wing icing detection lights. h. If high-intensity (strobe) lights are used, verify at the operator's record repository for the latest luminosity check. i. Wheel well lights (if installed). 	<p>§§ 121.323 and 121.341 AC 20-30, Aircraft Position Light and Anticollision Light Installations (current edition) AC 20-74, Aircraft Position and Anticollision Light Measurements (current edition) AC 43.13-2, Acceptable Methods, Techniques, and Practices—Aircraft Alterations (current edition)</p>
5	<p>Antennas. Inspect for proper installation and condition, such as leading edge erosion and cracking of the composite covering. Pay particular attention to possible corrosion under antenna bases.</p>	<p>§§ 121.345 and 121.367 Volume 6, Chapter 2, Section 4</p>
6	<p>Miscellaneous Fuselage Sensors (e.g., ice detection, total air temperature, vibration). Inspect sensors for condition, security, and corrosion on fuselage skin.</p>	<p>§ 121.367 Volume 6, Chapter 2, Section 4</p>
7	<p>Static Dischargers. Inspect for proper condition and security, and for the proper discharger types, quantities, and locations. Consult the appropriate aircraft documentation for the proper type. Refer to Master Minimum Equipment List (MMEL) and Configuration Deviation List (CDL) for minimum required.</p>	<p>§ 121.367 Volume 6, Chapter 2, Section 4</p>

ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCE
8	<p>Aircraft Inspection (with Doors, Compartment Doors, and Service Panels Opened; Flaps and Slats Down).</p> <p>a. Inspect the aircraft exterior for general condition, damage, corrosion, fluid leaks, etc. Check fuel drains, fuel vents, fuel filler caps, and underwing fuel filler hard point.</p> <p>b. Check the security of attachment of control surfaces and corrosion prevention treatment application.</p> <p>c. Check wing and tail leading edges for dents and erosion.</p> <p>d. Check heating pads on top of wing surfaces above inboard fuel tanks for condition.</p> <p>e. Examine joints, seams, and skin for wrinkles, bulges, fasteners, skin erosion, corrosion, and oxidation.</p> <p>f. When dents are noted, verify at the operator's record repository and/or the aircraft maintenance log that a limit check is performed and noted.</p> <p>g. Check composite material panels for moisture contamination and bonding, delaminating, or separation of skin-bonding.</p> <p>h. Check windshield wipers for condition, security, and operation.</p> <p>i. Compare repair mapping with aircraft. Pay attention to critical areas.</p> <p>j. If repairs are noted, check the repair data at the certificate holder's record repository for FAA-approved data.</p>	<p>Volume 6, Chapter 2, Section 4 AC 20-116, Marking Aircraft Fuel Filler Openings With Color Coded Decals (current edition)</p> <p>AC 43-204, Visual Inspection for Aircraft (current edition)</p>
9	<p>Aircraft Painting.</p> <p>a. Check for condition, flaking, and evidence of corrosion at seams and fasteners; and for filiform corrosion under painted surfaces.</p> <p>b. Verify at the operator's record repository that accepted materials and procedures were followed, including the balancing of flight control surfaces.</p>	<p>Volume 6, Chapter 2, Section 4 AC 120-27, Aircraft Weight and Balance Control (current edition)</p>
10	<p>Identification of Aircraft. Verify that a fireproof identification plate or other approved marking is attached to the aircraft with all pertinent data as required by, and in accordance with, applicable 14 CFR parts.</p>	<p>14 CFR part 45, §§ 45.11 and 45.13</p> <p>AC 45-2, Identification and Registration Marking (current edition)</p>

ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCE
11	<p>Name of Certificate Holder. Verify that the aircraft legibly displays the business name or certificate number appearing on the aircraft certificate holder's operations specifications (OpSpecs). Ensure the display is clearly visible and readable to a person standing on the ground at any time except during flight.</p>	14 CFR part 119, § 119.9
12	<p>Placards, Markings, Exterior Exit Markings.</p> <p>a. Check that all placards are properly installed at the location specified by the FAA-approved Airplane Flight Manual (AFM), aircraft type certification basis, applicable operating rules, and the operator's manual.</p> <p>b. Check that all placards and/or markings are not easily erased, disfigured, or obscured. Check that each passenger emergency exit is marked on the outside of the aircraft by a 2-inch contrasting colored band.</p> <p>c. Check that instructions for the means of opening those exits from the outside are marked on the outside of each passenger emergency exit.</p> <p>d. If the emergency exit is located only on one side of the fuselage, check that it has a conspicuous marking on the other side.</p>	<p>§ 121.310</p> <p>AC 20-88, Guidelines on the Marking of Aircraft (current edition)</p>
13	<p>Exterior Escape Route.</p> <p>a. Check that the surface of each emergency escape route is made of slip-resistant material.</p> <p>b. Check general condition of emergency slip-resistant escape route.</p>	§ 121.310
14	<p>Windows.</p> <p>a. For passenger compartment windows, inspect for general condition, security, visibility, scratches, crazing, and condensation.</p> <p>b. For flight deck windshield, side windows, direct-view windows, or operable sliding windows, check for condition and delamination.</p> <p>c. Check condition of windshield wipers.</p>	<p>§ 121.313</p> <p>AC 25.775-1, Windows and Windshields (current edition)</p>

ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCE
15	<p>Doors (Cabin, Cargo Compartment, Emergency Escape, Service, and Access).</p> <p>a. Inspect all exterior doors, hatches, and servicing access panels for general condition and installation.</p> <p>b. Check for damage, corrosion, security of attachment, and the application of corrosion prevention treatment. Pay particular attention to doorjamb areas and door seals. Check doors for proper operation.</p> <p>c. Check the hold open latches on floor-level doors for general condition and proper operation.</p> <p>d. For aircraft with a ventral exit, check that it has provisions to prevent it from being opened during flight. For inward opening doors, check for a means to prevent crowding against the door.</p> <p>e. Check that the emergency doors and/or hatches/plugs can be opened from the inside by the flightcrew, as well as from the outside of the aircraft in normal ground configuration by emergency rescue personnel.</p> <p>f. Check viewing ports for damage, deterioration, distortion, and security to permit viewing the conditions outside the exit(s) when closed.</p> <p>g. Check for a provision for a visual inspection of the door-locking mechanism to determine that doors are fully closed and locked (excluding inward-opening doors).</p> <p>h. If repairs are noted, check the repair data at the certificate holder's record repository for FAA-approved data.</p> <p>i. Check for the appropriate amount and type of exits.</p>	<p>§ 121.310</p> <p>AC 20-60, Accessibility to Excess Emergency Exits (current edition)</p> <p>AC 25.783-1, Fuselage Doors and Hatches (current edition)</p>
16	<p>Fuel Tank Impact Resistant Access Doors. Inspect for general condition, security, and position marking. Refer to 14 CFR part 25, § 25.963.</p>	<p> §§ 121.316 and 121.1113</p>

ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCE
Engines		
17	<p>Engines, Mounting Structure, and Compartments.</p> <p>a. Inspect for cleanliness, general condition, loose/missing equipment, breakage, signs of fluid leaks, corrosion, proper installation, and other indications of defects.</p> <p>b. Check fire extinguishing system components and extinguishing agent indicators.</p> <p>c. Inspect the visible inlet guide vanes and compressor and turbine blades for dents, erosion, nicks, and other irregularities. Check the electronic engine control (EEC)/full-authority digital electronic control (FADEC) unit (if installed) for general condition, corrosion, and security.</p> <p>d. Check electrical wiring for condition and security.</p>	<p>AC 43-204</p> <p>AC 43-206, Inspection, Prevention, Control, and Repair of Corrosion on Avionics Equipment (current edition)</p>
18	<p>Engine Nacelles.</p> <p>a. Check for general condition, dents, scratches, loose or missing fasteners, corrosion, erosion, etc.</p> <p>b. Check acoustic panels for general condition.</p>	<p>AC 43-204</p> <p>AC 43-206</p>
19	<p>Thrust Reversers and Blocker Doors. Check for general condition, dents, corrosion, fluid leaks, proper installation, and indications of defects. If repairs are noted, verify at the operator's records repository repair data for FAA-approved data.</p>	<p>AC 43-204</p>
20	<p>Auxiliary Power Unit (APU).</p> <p>a. Inspect the APU for cleanliness, fire containment shrouds, and seals for general condition.</p> <p>b. Check exhaust ducts for general condition, signs of leaks, and proper mounting.</p> <p>c. Check for loose/missing equipment, breakage, signs of fluid leaks, corrosion, proper installation, and indications of defects.</p> <p>d. Check the APU EEC/FADEC unit (if installed) for general condition, corrosion, and security.</p> <p>e. Check APU compartment for general condition, corrosion, and damage.</p>	<p>AC 43-204</p> <p>AC 43-206</p>

ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCE
	<p>f. If the rear pressure bulkhead is visible, check for condition, corrosion, and evidence of damage and repairs.</p> <p>g. Check the exposed airframe structure for general condition, corrosion, damage, and repairs.</p> <p>h. Check the condition of the fire extinguishing system components and extinguishing agent indicators.</p> <p>i. Check that the power cable(s) is isolated from flammable fluid lines, or shrouded by a nonmetallic, flexible conduit in addition to the cable insulation.</p> <p>j. Check all wiring and power cables for proper attachment, routing, and security to the airframe structure.</p>	
21	<p>Identification of Engines.</p> <p>a. Check for the presence of a fireproof identification plate or other approved marking on each engine, as required by the referenced data.</p> <p>b. Verify the data with the operator's supplied data sheet.</p>	<p>§§ 45.11 and 45.13 AC 45-2 AC 45-3, Installation, Removal, or Change of Identification Data and Identification Plates on Aircraft Engines (current edition)</p>
22	<p>Identification of the APU.</p> <p>a. If applicable, check for the presence of a fireproof identification plate or other approved marking containing the data required by the referenced data.</p> <p>b. Verify the data with the operator's supplied data sheet.</p>	<p>§§ 45.11 and 45.13 AC 45-2 AC 45-3</p>
23	<p>EECs Including APU FADEC.</p> <p>a. If applicable, check for installation and security of the EEC and mounting hardware.</p> <p>b. Check electrical cabling and connectors for general condition, corrosion, and security.</p> <p>c. Verify the installation of proper version software at the operator's records repository.</p>	<p>14 CFR part 33, § 33.28 AC 33.28-1, Compliance Criteria for 14 CFR § 33.28, Aircraft Engines, Electrical and Electronic Engine Control Systems (current edition)</p>

ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCE
Propellers		
24	<p>Identification of Propellers, Propeller Blades, and Propeller Hubs.</p> <p>a. Verify that each propeller, propeller blade, and propeller hub is identified in accordance with the referenced guidance material.</p> <p>b. Verify the data with the operator's supplied data sheet.</p>	<p>§§ 45.11 and 45.13 AC 45-2</p>
25	<p>Propeller Inspection.</p> <p>a. Inspect the condition and security of spinner, blades, hub, pitch locks (if installed or visible), anti/deicing slip ring, brushes and wiring (if installed), boots and electrical wiring, etc.</p> <p>b. Check composite blades for erosion, disbonding, and delamination, and check the ultraviolet coating for condition.</p> <p>c. Check leading edges for condition and attachment.</p> <p>d. For metal blades, check for general condition and leading edges for erosion, nicks, and dents.</p> <p>e. Check the aircraft records for FAA-approved repair data.</p>	<p>AC 43-204 AC 43-206</p>

Table 10-9-1F. Fuselage Interior

ITEM	FUSELAGE INTERIOR	REFERENCE
1	<p>Aircraft Registration. Each aircraft must have inside it:</p> <ul style="list-style-type: none"> • An effective U.S. registration certificate issued to its owner; • For operation in the U.S., the second duplicate (pink) copy of the Aircraft Registration Application; or • A registration certificate issued under the laws of an International Civil Aviation Organization (ICAO) member country displayed in accordance with the certificate holder's requirements. 	<p>14 CFR part 91, § 91.203 14 CFR part 121, § 121.153</p>

ITEM	FUSELAGE INTERIOR	REFERENCE
2	<p>Airworthiness Certificate. Except as provided in § 91.715, there must be within the aircraft an appropriate and current airworthiness certificate. It must be the original (not a copy), and must be displayed at the cabin or flight deck entrance so that it is legible to passengers or crew, and is in accordance with the certificate holder's requirements.</p> <p>NOTE: For a foreign airworthiness certificate, check for the expiration date.</p>	§§ 91.203 and 91.715 § 121.153
3	<p>Federal Communications Commission (FCC) Radio Station License. This is required for other-than-domestic operations. This license must be issued to the aircraft operator and must be updated if the addition of the aircraft results in the operator's fleet exceeding the number of aircraft for which the license was issued.</p> <p>NOTE: Requirement of FCC, ICAO Articles 29 and 30.</p>	
4	<p>General Placards and Markings. Verify the presence and inspect the condition of cabin interior placards and markings in accordance with the certificate holder's manual, Type Certificate Data Sheet (TCDS), Supplemental Type Certificate (STC), Airplane Flight Manual (AFM), and chapter 11 of the Aircraft Maintenance Manual (AMM).</p>	§§ 121.310 and 121.317
5	<p>General Equipment Installation. Inspect the proper condition, security, and configuration of equipment and systems.</p>	§§ 121.153 and 121.367
6	<p>Flight Deck Voice Recorder. Large, turbine-engine-powered, or large pressurized airplanes with multiengine aircraft having a passenger seat configuration with more than 10 seats, must have an approved flight deck voice recorder installed. Check for proper condition (e.g., color of recorder case and reflective tape), security, and configuration.</p>	§ 91.609 § 121.359 Volume 4, Chapter 14, Section 9
7	<p>Flight Data Recorder System (FDRS). Check for proper condition (e.g., color of recorder case and reflective tape), security, and configuration.</p>	§ 91.609 Volume 4, Chapter 14, Section 8

ITEM	FUSELAGE INTERIOR	REFERENCE
8	<p>Compartment Interiors/Fire Resistance.</p> <p>a. Look on the backs of cushions to identify if the seats have been fire-blocked. The cushions must meet the requirements of 14 CFR part 25, § 25.853(c). Review documentation of flame testing. Includes material for walls, furnishings, and ceiling.</p> <p>b. The following is excerpted from § 121.312(e):</p> <p>“(e) Thermal/acoustic insulation materials. For transport category airplanes type certificated after January 1, 1958:</p> <p>(1) For airplanes manufactured before September 2, 2005, when thermal/acoustic insulation is installed in the fuselage as replacements after September 2, 2005, the insulation must meet the flame propagation requirements of § 25.856 of this chapter, effective September 2, 2003, if it is:</p> <p>(i) Of a blanket construction or</p> <p>(ii) Installed around air ducting.</p> <p>(2) For airplanes manufactured after September 2, 2005, thermal/acoustic insulation materials installed in the fuselage must meet the flame propagation requirements of § 25.856 of this chapter, effective September 2, 2003.</p> <p>(3) For airplanes with a passenger capacity of 20 or greater, manufactured after September 2, 2009, thermal/acoustic insulation materials installed in the lower half of the fuselage must meet the flame penetration resistance requirements of § 25.856 of this chapter, effective September 2, 2003.”</p>	<p>§ 25.853(c)</p> <p>§§ 121.215, 121.312, and 121.312(e)</p>
9	<p>Fuselage Interior (Cabin and Equipment Compartments).</p> <p>a. Inspect interior and compartments for cleanliness, general condition, loose and/or missing equipment, deterioration, leakage, corrosion, proper installations, and other indications of defects. Pay particular attention to control cables and fluid lines.</p> <p>b. Inspect for the proper application of corrosion prevention treatments in the forward and rear pressure bulkheads, interior, and accessible under-floor areas.</p>	<p>§ 121.367</p> <p>Volume 6, Chapter 2, Section 6</p>
10	<p>Lavatory Placard. The lavatory must have a sign or placard stating, “Federal Law provides for a penalty of up to \$2,200 as applicable, for tampering with the smoke detector installed in this lavatory.”</p>	<p>14 CFR part 13, § 13.305</p> <p>§ 121.317</p> <p>Volume 6, Chapter 2, Section 4</p>

ITEM	FUSELAGE INTERIOR	REFERENCE
11	<p>Ashtrays. If smoking is allowed in any other compartment occupied by the crew or passengers, an adequate number of self-contained, removable ashtrays must be provided for all seated occupants. Lavatories must have self-contained, removable ashtrays located conspicuously on or near the entry side of each lavatory door, except that one ashtray may serve more than one lavatory door if it can be seen readily from the cabin side of each lavatory served.</p>	<p>§ 121.215 AC 25-17, Transport Airplane Cabin Interiors Crashworthiness Handbook (current edition)</p>
12	<p>Waste Receptacle. Each receptacle used for the disposal of flammable waste material must be fully enclosed, constructed of at least fire resistant materials, and must be able to contain fires likely to occur in it under normal use. The capability of the receptacle to contain those fires under all probable conditions of wear, misalignment, and ventilation expected in service must be demonstrated by test. Airworthiness Directive (AD) 74-08-09, Various Transport Category Airplanes, requires operators to inspect all lavatory paper and linen waste receptacle enclosure access doors and disposal doors for proper operation, fit, sealing, and latching for the containment of possible trash fires. A placard containing the legible words “No Cigarette Disposal” must be located on or near each disposal receptacle door.</p>	<p>§ 121.215 AD 74-08-09</p>
13	<p>Ventilation. Where partitions between compartments have louvers or other means that allow air to flow between compartments, there must be a means convenient to the crew for closing the flow of air through the partitions, when necessary.</p> <p>NOTE: Emphasize with new or altered interiors (STC).</p>	<p>§ 121.219 (as applicable)</p>
14	<p>Carriage of Cargo in Passenger Compartments.</p> <p>a. Ensure that each compartment or area used for the stowage of cargo and/or baggage provides protection to the passengers and crewmembers from injury by its contents.</p> <p>b. Ensure that there are provisions to prevent the cargo/baggage from becoming a hazard by shifting.</p> <p>c. Ensure that a compartment used for stowage is placarded for its weight limits.</p>	<p>§§ 121.285 and 121.589 Volume 3, Chapter 33, Section 6</p>
15	<p>Galleys/Service Centers. Verify proper approval. Inspect the following: trash bin lids for fit, storage compartment restraints, stationary cart tie-downs, lower lobe equipment and restraints, lift operation, and galley supplies stowage.</p>	<p>§ 121.367</p>

ITEM	FUSELAGE INTERIOR	REFERENCE
16	<p>Stowage Compartments. Check weight restriction placards and the doors for proper latching, if applicable. Each compartment for the stowage of cargo, baggage, carry-on articles, and equipment (such as life rafts), and any other stowage compartment must be designed for:</p> <ul style="list-style-type: none"> a. Its placarded maximum weight of contents. b. The critical load distribution at the appropriate maximum load factors corresponding to the specified flight and ground load conditions. c. The emergency landing conditions of § 25.561(b). <p>If the airplane has a passenger-seating configuration (excluding pilots' seats) of 10 seats or more, each stowage compartment in the passenger cabin (except for under-seat and overhead compartments for passenger convenience) must be completely enclosed. There must be a means to prevent the contents in the compartments from becoming a hazard by shifting under the specified loads. For stowage compartments in the passenger and crew cabin, if the means used is a latched door, the design must consider in-service wear and deterioration.</p>	§§ 121.285 and 121.589
17	<p>Retention of Items of Mass in Passenger and Crew Compartments and Galleys. Means must be provided to prevent each item of mass (that is part of the airplane type design) in a passenger or crew compartment or galley from becoming a hazard by shifting under the appropriate maximum load factors corresponding to the specified flight and ground load conditions, and to the emergency landing conditions of § 25.561(b).</p>	§§ 91.523, 121.576, and 121.589 Volume 3, Chapter 33, Section 6
18	<p>Pax Recovery Plan. Each certificate holder conducting domestic or flag operations must show that it has an approved system for obtaining, maintaining, and distributing to appropriate personnel current aeronautical data for each airport it uses to ensure a safe operation at that airport. The aeronautical data must include the following:</p> <ul style="list-style-type: none"> • Airports, • Facilities, and • Public Protection. <p>After February 15, 2008, for Extended Operations (ETOPS) beyond 180 minutes or operations in the North Polar area and South Polar area, this includes facilities at each airport or in the immediate area sufficient to protect the passengers from the elements and to see to their welfare.</p>	§§ 121.97 and 121.135 AC 120-42, Extended Operations (ETOPS and Polar Operations) (current edition) OpSpecs B055, North Polar Operations

ITEM	FUSELAGE INTERIOR	REFERENCE
	<p>AC 120-42 states: “A minimum of two cold weather anti-exposure suits must be on board each airplane, so that outside coordination at a diversion airport with extreme climatic conditions can be accomplished safely. A short term MEL relief for this item may be granted provided the certificate holder has arranged ground support provisions for providing such protective clothing at alternate airports. The FAA may also relieve the certificate holder from this requirement during those periods of the year when the seasonal temperature makes the equipment unnecessary.”</p> <p>The passenger recovery plan is approved in operations specification (OpSpec) B055 and states that airplanes are to be equipped with a minimum of two cold weather anti-exposure suits.</p>	
19	<p>Emergency Equipment for Extended Overwater Operations/Uninhabited Terrain Areas. Ensure the following for each item of emergency and flotation equipment:</p> <ul style="list-style-type: none"> a. Is regularly inspected in accordance with inspection periods established in the OpSpecs to ensure its condition for continued serviceability and immediate readiness to perform its intended emergency purposes. b. Is readily accessible to the crew, and regarding equipment located in the passenger compartment, to passengers. c. Is clearly identified and marked to indicate its method of operation. d. Is stored in a compartment or container marked as to its contents. The compartment, container, or the item must indicate date of last inspection. 	<p>§§ 121.309, 121.339, and 121.353</p> <p>AC 120-47, Survival Equipment for Use in Overwater Operations (current edition)</p>
	<p>Life Preservers. Ensure that the aircraft is equipped with an approved flotation means for each occupant. Each life preserver must:</p> <ul style="list-style-type: none"> a. Be equipped with an approved survivor locator light. b. Be readily removable from the airplane. 	<p>§ 91.509</p> <p>§ 121.339</p> <p>AC 120-47</p>
	<p>Life Rafts. Ensure the aircraft is equipped with enough life rafts of a rated capacity to accommodate the occupants of the airplane.</p> <ul style="list-style-type: none"> a. Ensure the rafts have approved survivor locator lights. b. Ensure that the total capacity of the equipped rafts will accommodate all the passengers of the airplane in the event there is a loss of one raft with the largest capacity. <p>NOTE: Life raft—Deviation allowed with OpSpec A013.</p>	<p>§ 121.339</p> <p>AC 120-47</p>

ITEM	FUSELAGE INTERIOR	REFERENCE
	Survival Kits. Must be attached to each required life raft.	§ 91.509 §§ 121.339 and 121.353 AC 120-47
	Pyrotechnic Signaling Device. Ensure there is at least one device for each life raft. Uninhabited terrain: suitable pyrotechnic devices.	§ 91.509 §§ 121.339 and 121.353 AC 120-47
	Survival Emergency Locator Transmitters (ELT). a. Check for proper approval. b. Check for the expiration date. c. Refer to §§ 121.339 and 121.353 for battery information.	§ 91.509 §§ 121.339 and 121.353 AC 120-47
20	Oxygen Equipment and Supply (Drop-Down Oxygen Masks). Verify: a. Oxygen pressure vessel inspections comply with the Department of Transportation (DOT) (if applicable). b. Continuous flow oxygen mask assemblies meet the requirements of Technical Standard Order (TSO)-C64b, Passenger Oxygen Mask Assembly, Continuous Flow. c. Demand-type oxygen regulators meet the requirements of TSO-C89a, Crewmember Oxygen Regulators, Demand. d. Hydrostatic test dates of all fixed oxygen bottles (if applicable). e. Aircraft documents properly describe distribution of the oxygen masks in the passenger compartment, ensuring that the quantity of oxygen masks exceeds the number of seats by at least 10 percent. f. The 10 percent of extra oxygen masks are uniformly distributed throughout the cabin. g. Each lavatory oxygen-dispensing unit is equipped with two oxygen masks. h. Each lavatory oxygen-dispensing unit above the flight attendant (F/A) jump seats is equipped with two oxygen masks. Since flightcrews have been made aware of AD 2011-04-09 by the actions in the individual notices and these procedures were to be applied for a limited time (30 days) only, the procedures are no longer considered necessary and are not included in this AD. Flightcrews are still made aware of corrective actions taken as a	§ 91.211 § 121.333 TSO-C64b TSO-C89a, Crewmember Oxygen Regulators, Demand

ITEM	FUSELAGE INTERIOR	REFERENCE
	<p>result of this AD since maintenance activities are recorded and available to the flightcrew using existing maintenance procedures.</p> <p>NOTE: Flightcrews are made aware of corrective actions taken as a result of an airplane lavatory(ies) modified by AD 2011-04-09, since maintenance activities are recorded and available to the flightcrew using existing maintenance procedures.</p> <p>i. All oxygen masks are designed to cover the nose and mouth, and are equipped with a means to secure the mask to a person's face.</p>	
<p>21</p>	<p>Emergency Equipment. Check to ensure that each item of emergency and flotation equipment listed below:</p> <p>a. Is readily accessible to the crew, and, regarding equipment located in the passenger compartment, to passengers.</p> <p>b. Is clearly identified and clearly marked to indicate its method of operation.</p> <p>c. Is in a compartment or container marked as to its contents; and the compartment, container, or the item, must indicate the date of last inspection.</p> <p>d. Meets preflight requirements per the F/A manual and/or the Flight Operations Manual (FOM), as applicable.</p>	<p>§ 91.513 § 121.309</p>
	<p>Portable Oxygen Bottles (POB). Check:</p> <p>a. That the required number(s) of POBs are on board and that the POBs provide oxygen flow of at least 4 liters per minute, but not less than 2 liters per minute.</p> <p>b. That each POB has its own mask and tubing, and that the crew can determine if oxygen is being delivered.</p> <p>c. That the continuous flow oxygen mask assemblies meet the requirements of TSO-C64b.</p> <p>d. That the oxygen pressure vessel inspections comply with the DOT.</p> <p>e. The hydrostatic test dates.</p>	<p>§§ 121.329 and 121.333</p>

ITEM	FUSELAGE INTERIOR	REFERENCE
	<p>Flotation Devices (Non-extended Overwater Operations). Verify that:</p> <ul style="list-style-type: none"> a. The aircraft is equipped with an approved (TSO-C72c, Individual Flotation Devices) flotation means for each occupant (includes lap children). b. The flotation means are within easy reach of each seated occupant. c. The flotation means are readily removable from the airplane. 	<p>§ 121.340 AC 20-56, Marking of TSO-C72b Individual Flotation Devices (current edition)</p>
	<p>Hand Fire Extinguishers.</p> <ul style="list-style-type: none"> a. Ensure that each extinguisher is an approved type, and that the type and quantity of extinguishing agent is the most suitable for the kinds of fires that are likely to occur in the compartment. b. Check the extinguishers to ensure they meet the preflight requirements in the F/A manual or FOM. <p>Passenger Compartment.</p> <ul style="list-style-type: none"> a. Ensure that fire extinguishers are conveniently located. If more than two are installed, ensure uniform distribution. b. For the required quantities of extinguishers, refer to § 121.309(c)(5). c. Ensure that at least one extinguisher contains Halon 1211 or equivalent. <p>Galley Compartments. Ensure that at least one hand fire extinguisher is conveniently located and easily accessible for use in the galley.</p>	<p>§ 91.513 § 121.309 Volume 6, Chapter 2, Section 4</p>
	<p>Megaphones. Ensure that the aircraft is equipped with one megaphone for more than 60 passengers and two for more than 99 passengers. Ensure that each is properly secured.</p>	<p>§ 91.513 § 121.309 Volume 6, Chapter 2, Section 4</p>
	<p>Portable Lights. Ensure that the aircraft is equipped with a flashlight stowage provision that is accessible from each F/A seat.</p>	<p>§ 121.310</p>
	<p>Protective Breathing Equipment (PBE).</p> <ul style="list-style-type: none"> a. If there is a Class A, B, or E cargo compartment, ensure that PBE is installed for the use of appropriate crewmembers. 	<p>§ 25.1439 § 121.337(c) Volume 6, Chapter 2, Section 4</p>

ITEM	FUSELAGE INTERIOR	REFERENCE
	<p>b. Ensure that PBE is installed in each isolated, separate compartment in the airplane, including upper and lower lobe galleys, in which crewmember occupancy is permitted during flight for the maximum number of crewmembers expected to be in the area during any operation. Refer to § 25.1439 for requirements.</p> <p>c. Ensure the PBE meets the requirements of TSO-C99a, Flight Deck (Sedentary) Crewmember Protective Breathing Equipment.</p> <p>d. Ensure the PBE meets the preflight requirement in the F/A manual or FOM (refer to § 121.337(c)). Ensure the PBE is within 3 feet of the required fire extinguisher(s) (refer to § 121.337(b)(9)).</p>	
22	<p>Emergency Medical Equipment.</p> <p>First Aid Kits.</p> <p>a. Ensure the minimum number of first aid kits are on board (refer to part 121 appendix A for requirements).</p> <p>b. Ensure the first aid kits meet the contents that are required by part 121 appendix A.</p> <p>c. Ensure that the first aid kits meet the preflight requirements in the F/A manual or FOM.</p> <p>NOTE: Arm and leg splints may not fit in the first aid kit. They are to be stowed in a readily accessible location that is near the kit.</p>	<p>§ 91.513</p> <p>§ 121.803</p> <p>Part 121 appendix A</p> <p>Volume 6, Chapter 2, Section 4</p> <p>AC 121-33, Emergency Medical Equipment (current edition)</p>
	<p>Emergency Medical Kit.</p> <p>a. Ensure that the emergency medical kit meets the content requirements of part 121 appendix A.</p> <p>If all of the required items do not fit into one container, then more than one container may be used.</p> <p>b. Ensure that it meets the preflight requirements as set forth in the F/A manual or FOM.</p>	<p>§ 121.803</p> <p>Part 121 appendix A</p> <p>Volume 6, Chapter 2, Section 4</p> <p>AC 121-33</p>
	<p>Automatic External Defibrillators (AED).</p> <p>a. Ensure that at least one approved AED is stored in the passenger cabin.</p> <p>b. Ensure that it meets the preflight requirements in the F/A manual or the FOM.</p> <p>c. Ensure that it meets the TSO requirements for power sources, effective April 30, 2005.</p>	<p>§ 121.803</p> <p>Part 121 appendix A</p> <p>AC 121-33</p>

ITEM	FUSELAGE INTERIOR	REFERENCE
	<p>d. Ensure that it is maintained according to the manufacturer's specifications.</p> <p>NOTE: Airplanes with an F/A and a payload of more than 7,500 lbs. must have AEDs.</p>	
23	<p>Passenger Seats, Berths, Safety Belts, and Harnesses. Verify that:</p> <p>a. Seats do not block the emergency escape exit.</p> <p>b. Seats are secure in seat track (random sample).</p> <p>c. Seat break-over pressure is in accordance with operator's maintenance program (random sample).</p> <p>d. The "Fasten Seatbelt While Seated" placards are viewable from all seats.</p> <p>e. Seatbelts have metal-to-metal latches and are in good condition (random sample).</p> <p>f. Each seat, berth, safety belt, and harness (if installed) is designed so that a person properly using these devices will not suffer serious injury in an emergency landing.</p> <p>g. Each passenger seat or berth is equipped with a safety belt (TSO-C22g, Safety Belts) with a metal-to-metal latching device.</p> <p>h. Each seat and berth is normally approved by TSO-C39, 9g Transport Airplane Seats Certified by Static Testing, or other approved methods. For sideward-facing seats, ensure that a safety belt and shoulder harness (TSO-C114, Torso Restraint System) will prevent the head from contacting any object that would injure the person sitting in such a seat.</p> <p>i. Each occupant is protected from head injury by a safety belt when there are no objects within head strike range that would cause injury. Ensure a safety belt plus a cushioned rest supports the arms, shoulders, head, and spine.</p> <p>j. If the seat backs do not provide a firm handhold, there is a handgrip or rail along each aisle (seat back break-over).</p> <p>k. Any projecting object that could cause injury is padded to ensure that people who are seated or moving about the airplane in normal flight will not be injured.</p> <p>l. There are no more than three seats on each side of the aisle if the aircraft has a single aisle.</p>	<p>§§ 91.107 and 91.521</p> <p>§§ 121.311 and 121.317</p>

ITEM	FUSELAGE INTERIOR	REFERENCE
24	<p>Cabin Attendant Seats, Berths, Safety Belts, and Harnesses. Pull the jump seat down to ensure it retracts (those in path of exits). The seats should be positioned so that when not in use, they will not interfere with the use of the passageways and exits.</p> <ul style="list-style-type: none"> a. If applicable, ensure that the jump seat retracts automatically. b. Ensure that F/A jump seats are in the passenger compartment near approved floor-level emergency exits, unless another location has been approved. c. Ensure that each F/A jump seat position is equipped with a combination shoulder harness and lap belt that has a single-point, metal-to-metal latching system. d. Inspect seatbelts for proper approval (e.g., TSO-C22g or equivalent), metal-to-metal latching, and general condition. e. Ensure the torso restraint meets the requirements of TSO-C114 or equivalent. f. Ensure that the shoulder harness/lap belt has a means to be secured when not in use to prevent rapid egress in an emergency. g. Ensure that the F/A, when seated, has a direct view of the cabin that they are responsible for without compromising their proximity to the floor level exit. h. Ensure that the F/A jump seats are located in an area that would minimize the probability that the occupants would suffer injury by being struck by items that were dislodged from service areas, stowage compartments, or service equipment. i. If the aircraft was manufactured after March 6, 1980, verify that F/A jump seats provide a direct view of the cabin area for which the occupant of each of the seats is responsible. Direct view is defined as a view (without head movement) of at least 50 percent of the entire passenger seating areas, at least 25 percent of any zone, and 100 percent of passenger aisles. 	<p>§ 91.521 § 121.311 AC 25.785-1, Flight Attendant Seat and Torso Restraint System Installations (current edition)</p>
25	<p>Width of Aisle. Ensure that the width of the aisle at any point between passenger seats meets the requirements of § 25.815.</p>	<p>§ 121.291 Volume 6, Chapter 2, Section 4</p>

ITEM	FUSELAGE INTERIOR	REFERENCE
26	<p>Passenger Safety Information Briefing Cards. While on board the aircraft, perform a random sampling of the passenger briefing cards to ensure its proper distribution, that it is conveniently located for each passenger, and that the card:</p> <ul style="list-style-type: none"> a. Includes information that is pertinent to that type and model of aircraft. b. Contains diagrams of and methods of operating the emergency exits. Ensure that the cards concur with the placards located on and/or near the emergency exits. c. If applicable, contains instructions necessary for the use of emergency equipment. d. Meets all of the requirements of § 121.585(d) and (e) regarding exit row seating. A separate card may have been designed specifically for the exit row seated passengers; ensure that it meets the above listed requirements. 	<p>§§ 121.571 and 121.585</p> <p>Volume 6, Chapter 2, Section 4</p> <p>AC 121-24, Passenger Safety Information Briefing and Briefing Cards (current edition)</p>
27	<p>“Fasten Seatbelt” Signs. Signs that notify when seatbelts should be fastened and that are installed to comply with the operating rules of this chapter must be operable by a member of the flightcrew, and when illuminated, must be legible under all probable conditions of cabin illumination to each person seated in the cabin. Symbols that clearly express the intent of the sign or placard may be used in lieu of letters.</p>	§ 121.317
28	<p>Doors (Other than Flight Deck). Lavatory doors must be designed to ensure that no one will become trapped inside, and if equipped with a locking device, it must be capable of being unlocked from the outside without the aid of special tools.</p> <p>If there is a door that separates the passenger cabin from other areas, and it is necessary to pass through the doorway to reach any required emergency exit, the door must have a means to latch it in the open position. The door must be open for each takeoff and landing. If the airplane is equipped with a crew rest area that has separate entries from the flight deck and the passenger compartment, the door between the crew rest area and the passenger compartment must have a locking means.</p>	§ 121.313
29	<p>Door Placard. A placard is required on each door that is the means of access to a required passenger emergency exit, to indicate that it must be open during takeoff and landing.</p>	§ 121.313

ITEM	FUSELAGE INTERIOR	REFERENCE
30	<p>Emergency Exits.</p> <p>a. Ensure that the number of emergency exits meets or exceeds requirements of the passenger seating configuration.</p> <p>b. If applicable, ensure that the step down distance for Type II, III, and IV exits meet § 25.807.</p> <p>c. For an airplane that is required to have more than one emergency exit for each side of the fuselage, no passenger exit may be more than 60 feet from any adjacent passenger emergency exit on the same side, same deck, as measured parallel to the airplane's longitudinal axis between the nearest exit edges.</p> <p>d. A ventral or tailcone exit must be designed and constructed so that it cannot be opened during flight. It must be marked with a placard that is readable from 30 inches away. The placard must be placed conspicuously near the means for opening the exit; it must state that the exit was designed and constructed so that it cannot be opened during flight.</p> <p>e. Passenger compartment emergency exits that are in excess of the minimum number of required emergency exits must be readily accessible and meet all of the applicable provisions of § 121.310(f).</p>	<p>§ 121.310</p> <p>AC 20-60, Accessibility to Excess Emergency Exits (current edition)</p>
31	<p>Emergency Evacuation. Ensure that each crew and passenger area has an emergency means to allow rapid evacuation in crash landings with landing gear extended or retracted. (Refer to § 25.803.)</p> <p>a. Passageways that lead to emergency exits must be unobstructed.</p> <p>b. There must be adequate space to allow crewmembers(s) to assist in the evacuation of passengers.</p>	<p>§ 121.310</p>
32	<p>Emergency Exit Markings. Verify that:</p> <p>a. Each passenger emergency exit, its means of access, and its means of opening must be conspicuously marked. Means must be provided to assist occupants in locating exits in conditions of dense smoke.</p> <p>b. The identity and location of each passenger emergency exit must be recognizable from a distance equal to the width of the cabin.</p> <p>c. A sign visible to occupants approaching along the main aisle must indicate the location of each emergency exit.</p>	<p>§ 121.310</p>

ITEM	FUSELAGE INTERIOR	REFERENCE
	<p>d. There must be a locating sign:</p> <ol style="list-style-type: none"> 1) Above the aisle near each over-the-wing passenger emergency exit, or at another ceiling location if it is more practical because of low headroom. 2) Next to each floor-level passenger emergency exit (one sign may serve two exits if both can be readily seen from the sign). 3) On each bulkhead or divider that prevents fore and aft vision along the passenger cabin (if this is not possible, the sign may be placed at another appropriate location). <p>e. Each passenger emergency exit locator sign and each passenger emergency exit marking sign must have red letters at least 1½ inches high on an illuminated white background.</p> <p>NOTE: The above colors can be reversed.</p> <p>Emergency Exit Operating Handles.</p> <p>a. For an aircraft in which the type certification (TC) was filed before May 1, 1972, the location of each passenger emergency exit operating handle, and instructions for opening the exit, must be shown by a marking on or near the exit that is readable from 30 inches away.</p> <p>b. For Type I and II emergency exits with a locking mechanism released by rotary motion of the handle, the instructions must be shown by:</p> <ol style="list-style-type: none"> 1) A red arrow with a shaft at least ¾ inch wide and a head twice the width of the shaft. 2) The word “open” in red letters, 1 inch tall, placed horizontally near the head of the arrow. <p>c. Each Type A, Type B, Type C, Type I, or Type II passenger emergency exit operating handle must be self-illuminated or be conspicuously located and well illuminated by the emergency lighting even in conditions of occupant crowding at the exit.</p> <p>Type III exits must be placarded with the weight of the exit and indicating an appropriate location to place the hatch after removal.</p>	

ITEM	FUSELAGE INTERIOR	REFERENCE
33	<p>Emergency Lighting.</p> <p>a. Inspect the interior and exterior emergency lighting and escape path markings to the applicable airworthiness and operating rules, and to its approved configuration (STC, TC, etc.).</p> <p>b. Verify the system is designed so that each light is manually operable, both from the flight deck and from a point in the passenger cabin that is readily accessible to the F/A seat.</p> <p>c. The lights must be safeguarded to prevent inadvertent operation.</p> <p>d. Verify that each light has a flight deck control device that has an “on,” “off,” and “armed” position.</p> <p>e. There must be a flightcrew warning light that illuminates when power is on in the airplane and the emergency lighting control device is not armed.</p> <p>Ensure that the system, when activated, illuminates each passenger exit marking and locating sign, and includes floor proximity lighting emergency escape path markings that meet the requirements of § 25.812.</p>	<p>§ 121.310</p> <p>AC 25.812-1, Floor Proximity Emergency Escape Path Marking (current edition)</p> <p>AC 25.812-2, Floor Proximity Emergency Escape Path Marking Systems Incorporating Photoluminescent Elements (current edition)</p>
34	<p>Emergency Evacuation Assist Means. Verify that each exit (other than over-wing exits) that is higher than 6 feet from the ground has an approved means to assist the occupants to the ground (slides, ramp/slides, etc.). For floor-level exits, verify that:</p> <p>a. Slide-bottle pressures are within acceptable levels.</p> <p>b. Slide containers are properly marked for content (as applicable).</p> <p>c. Slides meet the requirements of TSO-C69c, Emergency Evacuation Slides, Ramps, Ramp/Slides, and Slide/Rafts.</p>	<p>§ 25.810</p> <p>§ 121.310</p>
35	<p>Lavatory Fire Protection. The following is excerpted from § 121.308(a) and (b):</p> <p>“...no person may operate a passenger-carrying airplane unless each lavatory in the airplane is equipped with a smoke detector system or equivalent that provides a warning light in the cockpit or provides a warning light or audio warning in the passenger cabin which would be readily detected by a flight attendant, taking into consideration the positioning of flight attendants throughout the passenger compartment during various phases of flight.</p> <p>“...each lavatory in the airplane is equipped with a built-in fire extinguisher for each disposal receptacle for towels, paper, or waste located within the lavatory. The built-in fire extinguisher must be</p>	<p>§ 121.308</p>

ITEM	FUSELAGE INTERIOR	REFERENCE
	designed to discharge automatically into each disposal receptacle upon occurrence of a fire in the receptacle.”	
36	Crewmember Interphone System. For airplanes with a seating capacity for more than 19 passengers, verify the installation of a crewmember interphone system that meets the requirements of the applicable airworthiness and operating rules.	§ 121.319
37	Public Address (PA) System. For airplanes with a seating capacity for more than 19 passengers, verify installation of an approved PA system that meets the requirements of the applicable airworthiness and operating rules.	§ 121.318
38	Automatic Type Emergency Locator Transmitter (ELT). Verify that the unit is approved (e.g., TSO-C91a, Emergency Locator Transmitter (ELT) Equipment, or TSO-126b, 406 MHz Emergency Locator Transmitter (ELT)) and properly installed for those operations not exempt from the applicable operating rule. For new installations after June 21, 1995, the installed unit may not have been approved under TSO-C91a.	§§ 91.205 and 91.207 § 121.353(b) TSO-C91a TSO-126b

Table 10-9-1G. Flight Deck

ITEM	FLIGHT DECK	REFERENCE
1	<p>Two-Way Radio Communications Systems. For 14 CFR part 25 aircraft, verify the installation of two complete two-way radio communications systems, with controls for each accessible from each pilot station, designed and installed so that failure of one system will not preclude operation of the other system. The systems must include two microphones and two headsets (or one headset and one speaker).</p> <p>For non-part 25 aircraft, verify that the installation meets the basic requirements for at least one complete radio communications system for instrument flight rules (IFR) operations. For overwater and extended overwater operations, two complete communication systems must be installed. Those systems must include two microphones and two headsets (or one headset and one speaker). For extended overwater operations, the two systems must be independent.</p>	<p>14 CFR part 91, §§ 91.205 and 91.511</p> <p>14 CFR part 121, §§ 121.345, 121.347, and 121.349</p>

ITEM	FLIGHT DECK	REFERENCE
2	<p>Two-Way Radio Communications System (or Other Means of Communication Approved by the Administrator).</p> <p>For communications between each airplane and the appropriate dispatch office, and between each airplane and the appropriate air traffic control (ATC) unit, except as specified in § 121.351(c). Determine the certificate holder's method of compliance with § 121.99. Based on that determination, ensure that the necessary equipment is properly approved and installed in the subject aircraft.</p>	§§ 121.99 and 121.351
3	<p>Radio Navigation Systems. For part 25 aircraft, verify the installation of two-radio navigation systems, with controls for each accessible from each pilot station, designed and installed so that failure of one system will not preclude operation of the other system. Notwithstanding the above, for all aircraft, verify the installation of the equipment required by the referenced operating rules and the operations specifications (OpSpecs) for specific operational approvals.</p>	§§ 91.205 and 91.511 §§ 121.345, 121.347, 121.349, 121.351, and 121.355 Part 121 appendix G
4	<p>Collision Avoidance System.</p> <p>a. Turbine-powered airplanes of more than 33,000 lb maximum certificated takeoff weight must be equipped with an appropriate class of Mode Select (Mode S) transponder that meets Technical Standard Order (TSO)-C112, Air Traffic Control Radar Beacon System/Mode Select (ATCRBS/Mode S) Airborne Equipment, or a later revision, and one of the following approved units:</p> <p>1) Traffic Alert and Collision Avoidance System (TCAS) II that meets TSO-C119b, Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II, version 7.0, or a later version.</p> <p>2) TCAS II that meets TSO-C119a, Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II, version 6.04A Enhanced, that was installed in that airplane before May 1, 2003. If that TCAS II (version 6.04A Enhanced) no longer can be repaired to TSO-C119a standards, it must be replaced with a TCAS II that meets TSO-C119b (version 7.0) or a later version.</p> <p>3) A collision avoidance system equivalent to TSO-C119b (version 7.0), or a later version, capable of coordinating with units that meet TSO-C119a (version 6.04A Enhanced), or a later version.</p> <p>b. Passenger or combination cargo/passenger airplanes that have a passenger seat configuration of 10–30 seats must be equipped with either:</p> <p>1) TCAS I that meets TSO-C118, Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS I, or a later version;</p>	§ 91.221 § 121.356

ITEM	FLIGHT DECK	REFERENCE
	<p>2) A collision avoidance system that has a TSO-C118, or a later version; or</p> <p>3) A collision avoidance system and Mode S transponder that meet subparagraph 10-9-1-5A.1).</p> <p>c. Piston-powered airplanes of more than 33,000 lb maximum certificated takeoff weight must be equipped with one of the following:</p> <p>1) TCAS I that meets TSO-C118 (or a later version).</p> <p>2) A collision avoidance system equivalent to maximum TSO-C118 (or a later version).</p> <p>3) A collision avoidance system and Mode S transponder that meet TSO-C112 (or a later version) and one of the following approved units:</p> <p>a) TCAS II that meets TSO-C119b (version 7.0), or a later version.</p> <p>b) TCAS II that meets TSO-C119a (version 6.04A Enhanced) that was installed in that airplane before May 1, 2003. If that TCAS II (version 6.04A Enhanced) can no longer be repaired to TSO-C119a standards, it must be replaced with a TCAS II that meets TSO-C119b (version 7.0), or a later version.</p> <p>c) A collision avoidance system equivalent to TSO-C119b (version 7.0), or a later version, capable of coordinating with units that meet TSO-C119a (version 6.04A Enhanced), or a later version.</p>	
<p>5</p>	<p>ATC Transponder. Verify that the installation of a transponder that meets the requirements of § 91.215. If installed on or before January 1, 1992, the transponder must meet TSO-C74b, Airborne ATC Transponder Equipment; TSO-C74c, Airborne ATC Transponder Equipment, as appropriate (provided that the equipment was manufactured before January 1, 1990); or the appropriate class of TSO-C112 (Mode S). If installed after January 1, 1992, the transponder must be the appropriate class of TSO-C112 (Mode S).</p> <p>NOTE: “Installation” does not include temporary installation of TSO-C74b or TSO-C74c (as appropriate) substitute equipment during maintenance of the permanent equipment, reinstallation of equipment after temporary removal for maintenance, or for fleet operations, installation of equipment in a fleet aircraft after removal of the equipment for maintenance from another aircraft in the same operator’s fleet.</p>	<p>§ 91.215 § 121.345</p>
<p>6</p>	<p>Airborne Weather Radar System. Persons may not operate any transport category airplanes (except the C-46 type), and nontransport</p>	<p>§ 121.357</p>

ITEM	FLIGHT DECK	REFERENCE
	category airplanes certificated after December 31, 1964, unless approved airborne weather radar equipment has been installed in the airplane.	
7	<p>Low-Altitude Wind Shear System.</p> <p>a. Except for turbopropeller-powered airplanes, all turbine-powered airplanes manufactured after January 2, 1991, must be equipped with either an approved airborne wind shear warning and flight guidance system, an approved airborne detection and avoidance system, or an approved combination of these systems.</p> <p>b. The following aircraft must be equipped with either an approved airborne wind shear warning and flight guidance system, an approved airborne detection and avoidance system, or an approved combination of these systems: A-300-600; A-310; A-320; B-737-300, 400, and 500; B-747-400; B-757; B-767; F-100; MD-11; and MD-80 series equipped with an electronic flight instrument system (EFIS) and Honeywell-970 digital flight guidance computer. All other turbine-powered airplanes must be equipped with at least an approved airborne wind shear warning system. These airplanes may be equipped with an approved airborne wind shear detection and avoidance system or an approved combination of these systems.</p>	§ 121.358
8	<p>Radio Altimeter. Verify that the installation meets the requirements of the Airplane Flight Manual (AFM) and approved Category II Approach (CAT II)/Category III Approach (CAT III) program(s), as applicable.</p>	<p>Advisory Circular (AC) 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing and Rollout (current edition)</p> <p>AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach (current edition)</p>

ITEM	FLIGHT DECK	REFERENCE
9	<p>Global Positioning System (GPS). Verify that installations meet appropriate system descriptions, operational procedures, and limitations in the AFM/Airplane Operations Manual (AOM), as applicable. Also verify that the software version meets the AFM/AOM and certificate holder's requirements. Ensure the aircraft conforms to the appropriate approved documents.</p>	AC 20-138, Airworthiness Approval of Positioning and Navigation Systems (current edition)
10	<p>Terrain Awareness and Warning System (TAWS).</p> <p>a. Verify that all turbine-powered airplanes manufactured after March 29, 2002, are equipped with an FAA-approved TAWS. The installation must also include an approved terrain situational awareness (SA) display. All turbine-powered airplanes manufactured on or before March 29, 2002, must be equipped as described above by March 29, 2005.</p> <p>b. Verify the installation of proper operational and terrain database software versions, and that the AFM/AOM contains appropriate procedures for use of the system and proper flightcrew reaction in response to the system's audio and visual warnings.</p>	§ 121.354 TSO-C151, Terrain Awareness and Warning System (TAWS)
11	<p>Instrument Arrangement, Visibility, and Markings.</p> <p>a. Verify the arrangement and visibility of flight and navigation instruments in accordance with the applicable regulations.</p> <p>b. Verify that displayed information and ranges are appropriate to the aircraft and the installed equipment.</p> <p>c. Verify that when markings are on the cover glass of the instrument, there is a means to maintain the correct alignment of the glass cover with the face of the dial.</p> <p>d. Verify appropriate powerplant instrument markings.</p>	§ 91.205 § 121.305
12	<p>Electronic Flight Information Systems (EFIS) and Electronic Centralized Aircraft Monitoring (ECAM). Verify display/pictures in the book match the aircraft's AFM/AOM and current software configuration/revision date.</p>	AC 25-11, Electronic Flight Displays (current edition)
13	<p>Instrument Requirements.</p> <p>a. Airspeed Indicating System. Verify the installation of an approved instrument at each pilot station that is calibrated in knots, and that each airspeed limitation and item of related information in the AFM and pertinent placards are expressed in knots. The system must include a heated pitot tube or equivalent means for preventing malfunctioning due to icing, and must meet all pertinent airworthiness standards.</p>	§§ 91.205, 91.217, and 91.219 §§ 121.303, 121.305, 121.313, 121.323, and 121.325

ITEM	FLIGHT DECK	REFERENCE
	<p>b. Sensitive Altimeter. Verify installation of an approved instrument at each pilot station. The instruments must be adjustable for barometric pressure.</p> <p>c. Sweep-Second Hand Clock. Verify the installation of an approved clock displaying hours, minutes, and seconds with a sweep-second pointer, digital presentation, or approved equivalent.</p> <p>d. Standby Horizon Additional Attitude Instrument. Verify that, if required by § 121.305(j), an additional approved third such instrument is installed in accordance with § 121.305(k).</p> <p>e. Gyroscopic Bank and Pitch Indicator (Artificial Horizon, Attitude Indicator, etc.). Verify the installation of an approved instrument at each pilot station.</p> <p>f. Free Air Temperature Indicator. Verify the installation of an approved free air temperature indicator or an air temperature indicator that provides indications that are convertible to free air temperature.</p> <p>g. Gyroscopic Rate-of-Turn Indicator. Verify that the installation of an approved instrument at each pilot station is combined with an integral slip/skid indicator (turn and bank indicator), except that only slip/skid indicators are required when a third attitude instrument system is installed in accordance with § 121.305(k).</p> <p>h. Gyroscopic Direction Indicator. Verify the installation of an approved directional gyro, or equivalent, at each pilot station.</p> <p>i. Vertical Speed (Rate of Climb) Indicator. Verify the installation of approved instruments at each pilot station.</p> <p>j. Magnetic Compass. Verify the installation of an approved instrument that is visible from each pilot station and that is lighted during night operations. On or near the instrument must be a placard that:</p> <ol style="list-style-type: none"> 1) Shows calibration of the instrument in level flight with the engines operating. 2) States whether the calibration was made with radio receivers on or off. 3) Displays magnetic heading calibration readings, in not more than 45° increments for part 25 aircraft, or 30° increments for 14 CFR part 23 aircraft. 4) For part 23 aircraft, and except as provided by part 23, § 23.1547, the placard must not reflect maximum deviations of more than 10°. 	

ITEM	FLIGHT DECK	REFERENCE
	<p>5) When a means is provided for transferring an instrument from its primary operating system to an alternate system, the means must include a positive positioning control and must be marked to indicate clearly which system is being used.</p> <p>6) The following is excerpted from § 91.219: “No person may operate a turbojet-powered, U.S.-registered civil airplane unless that airplane is equipped with an approved altitude alerting system.”</p>	
14	<p>Speed Warning Device. Verify installation of an aural speed warning device on turbine engine-powered airplanes, and airplanes with a maximum operating limit speed (V_{MO}/M_{MO}) greater than 0.8 demonstrated flight diving speed (V_{DF}/M_{DF}) or $0.8 V_{DF}/M_{DF}$. The speed warning device must give effective aural warning (differing distinctively from aural warnings used for other purposes) to the pilots, whenever the speed exceeds V_{MO} plus 6 knots or M_{MO} plus 0.01. The upper limit of the production tolerance for the warning device may not exceed the prescribed warning speed.</p>	§ 91.603
15	<p>Automatic Pilot System. Verify that indicators and controls meet applicable airworthiness standards, including the requirement that quick release (emergency) controls must be on both control wheels, on the side of each wheel opposite the throttles. Verify that the AFM (and certificate holder’s AOM, if applicable) show minimum altitude for use of autopilot.</p> <p>NOTE: If the certificate holder is authorized for CAT II or CAT III operations, the aircraft autopilot can be used for lower altitudes when approved by OpSpecs.</p>	§ 121.579
16	<p>Instrument Lighting. Verify that instrument lights provide enough light to make each required instrument, switch, or similar instrument easily readable and installed so that the direct rays are shielded from flightcrew members’ eyes and that no objectionable reflections are visible to them. There must be a means of controlling the intensity of illumination unless it is shown that non-dimming instrument lights are satisfactory.</p>	§§ 121.323(d) and 121.325(c)
17	<p>Pitot Heat Indication Systems. Verify that the indication system incorporates an amber light that is in clear view of a flightcrew and that is designed to alert the flightcrew if the pitot heating system is switched <i>off</i>, or the pitot heating system is switched <i>on</i>, and any pitot tube heating element is inoperative.</p>	§ 121.342

ITEM	FLIGHT DECK	REFERENCE
18	<p>Required Powerplant Instruments. Verify the installation of approved instruments as listed below:</p> <ul style="list-style-type: none"> a. Fuel pressure indicator for each engine and either an independent fuel pressure warning device for each engine, or a master warning device for all engines with a means for isolating the individual warning circuits from the master warning device. b. Fuel flow indicator for each engine not equipped with an automatic altitude mixture control. c. Fuel quantity indicator for each fuel tank to be used. d. Oil pressure indicator for each engine. e. Oil quantity indicator for each oil tank. <ul style="list-style-type: none"> NOTE: Indicator may not always be located on the flight deck. f. Oil temperature indicator for each engine. g. Oil pressure warning means for each engine. h. Tachometer for each engine. For turbine engine-powered aircraft, the indicators must display speed rotors (i.e., N1, N2, N3) that have established limiting speeds. i. Augmentation liquid quantity indicator for each tank (if applicable). j. An approved means to ensure prompt detection of a fire in designated fire zones (engine or auxiliary power unit (APU) compartments for parts 23 and 25 aircraft). There must also be a means to allow the crew to check, in-flight, the functioning of each fire detector electric circuit. k. Reverse pitch indication for each reversible propeller (if applicable). l. Gas temperature (e.g., exhaust gas temperature (EGT)) indicator for each turbine engine (if applicable). m. Engine starter indication for each turbine engine-powered part 25 aircraft (if applicable). n. Ice protection system indication for each turbine engine (if applicable). o. Fuel filter bypass indication for each turbine engine (if applicable). p. Oil strainer or filter warning indication for each turbine engine (if no bypass is installed) to warn the flightcrew of the occurrence of contamination of the strainer or filter before it reaches maximum capacity (if applicable). 	<p>§ 91.205 § 121.307</p>

ITEM	FLIGHT DECK	REFERENCE
	<p>q. A means to indicate proper functioning of any heater(s) used to prevent ice clogging of fuel system components.</p> <p>r. Thrust (or directly related (e.g., N1)) indicator for each turbojet or turbofan engine (if applicable).</p> <p>s. Thrust reversing indicator for each engine using a thrust-reversing device, to indicate to the flightcrew when the thrust-reversing device is in the reverse thrust position (if applicable).</p> <p>t. Rotor system unbalance indicator for part 25 turbojet-powered aircraft (if applicable).</p> <p>u. Torque indication for each turbine propeller-powered aircraft engine (if applicable).</p> <p>v. Propeller position indication for each propeller of turbopropeller-powered aircraft (if applicable). For airplanes equipped with fluid systems (other than fuel) for thrust or power augmentation, an approved means must be provided to indicate to the flightcrew the proper functioning of that system, if applicable.</p> <p>w. For part 23 turbine-engine-powered aircraft, a fuel low level warning means for any fuel tank that should not be depleted of fuel in normal operations (if applicable).</p> <p>x. Carburetor air temperature indicator.</p> <p>y. For air-cooled engines, a cylinder head temperature indicator for each engine.</p>	
19	<p>Takeoff Warning System. Verify the installation of a takeoff warning system.</p>	Part 25, § 25.703 § 121.293
20	<p>Landing Gear Aural Warning Device. The following is excerpted from § 121.289(a)(1) and (2):</p> <p>“(a) Except for airplanes that comply with the requirements of § 25.729 of this chapter on or after January 6, 1992, each airplane must have a landing gear aural warning device that functions continuously under the following conditions:</p> <p>(1) For airplanes with an established approach wing-flap position, whenever the wing flaps are extended beyond the maximum certificated approach climb configuration position in the Airplane Flight Manual and the landing gear is not fully extended and locked.</p> <p>(2) For airplanes without an established approach climb wing-flap position, whenever the wing flaps are extended beyond the position at which landing gear extension is normally performed and the landing gear is not fully extended and locked.”</p>	§ 121.289

ITEM	FLIGHT DECK	REFERENCE
21	Flight Deck Inspection. Inspect the flight deck for cleanliness, poor condition, loose/missing equipment, deterioration, breakage, leakage, corrosion, proper installation, and other indications of defects. Pay particular attention to windshields, windows, paneling, flooring, controls, lighting, and wiring installations.	§ 121.153
22	Flight Deck Interiors/Fire Resistance. Examine seat dress cover assemblies for meeting the flammability requirements of § 25.853(a). Review documentation of flame testing (the current edition of AC 25.853-1, Flammability Requirements for Aircraft Seat Cushions).	§§ 121.215 and 121.312
23	Flightcrew Emergency Exits. For airplanes in which the proximity of passenger emergency exits to the flightcrew area does not offer a convenient and readily accessible means of evacuation for the flightcrew, and for all airplanes having a passenger-seating capacity greater than 20: <ul style="list-style-type: none"> a. Verify that flightcrew exits are located in the flightcrew area. b. Verify that such exits are of sufficient size and are located to permit rapid evacuation by the crew. One exit must be provided on each side of the airplane, or a top hatch may be provided. Each exit must encompass an unobstructed rectangular opening of at least 19 by 20 inches unless satisfactory exit utility can be demonstrated by a typical crewmember. 	§ 25.807 § 121.221
24	Emergency Equipment. Verify that each item of emergency and flotation equipment meet the following requirements: <ul style="list-style-type: none"> a. Be inspected regularly in accordance with inspection periods established in the OpSpecs to ensure its condition for continued serviceability and immediate readiness to perform its intended duty. b. Be readily accessible to the crew. c. Be clearly identified and marked to indicate its method of operation. d. When carried in a compartment or container, be carried in a compartment or container marked as to contents. The compartment or container, or the item itself, must be marked as to date of last inspection. 	§§ 121.221 and 121.309
25	Medical Kit (If Located on Flight Deck). See the requirements of Table 10-9-1F, Fuselage Interior, Item 22.	§ 121.803 Part 121 appendix A

ITEM	FLIGHT DECK	REFERENCE
26	<p>Hand Fire Extinguishers for Flightcrew. Verify that at least one hand fire extinguisher is conveniently located on the flight deck for use by the flightcrew. The type and quantity of extinguishing agent must be suitable for the kinds of fires likely to occur in the compartment where the extinguisher is intended to be used. Check for fire extinguisher security, pressure, hydrostatic test dates, and seal.</p>	<p>§ 121.309 Part 121 appendix A AC 20-42, Hand Fire Extinguishers for Use in Aircraft (current edition)</p>
27	<p>Protective Breathing Equipment (PBE). The following is excerpted from § 121.337(b)(1):</p> <p>“The equipment must protect the flightcrew from the effects of smoke, carbon dioxide or other harmful gases or an oxygen deficient environment caused by other than an airplane depressurization while on flight deck duty and must protect crewmembers from the above effects while combatting fires on board the airplane.”</p> <p>The following is excerpted from § 121.337(b)(9)(i) and (ii):</p> <p>“(i) One PBE is required for each hand fire extinguisher located for use in a galley other than a galley located in a passenger, cargo, or crew compartment.</p> <p>“(ii) One on the flight deck, except that the Administrator may authorize another location for this PBE if special circumstances exist that make compliance impractical and the proposed deviation would provide an equivalent level of safety.”</p>	<p>§ 121.337</p>
28	<p>Oxygen Equipment and Supply.</p> <p>a. Verify that the aircraft is equipped with oxygen equipment per §§ 25.1441 through 25.1453.</p> <p>b. Oxygen/fire extinguisher pressure vessel inspections must comply with Title 49 of the Code of Federal Regulations (49 CFR) part 180, § 180.205, Department of Transportation (DOT), or United States Coast Guard (USCG) requirements.</p> <p>c. Check all portable and fixed oxygen bottles and fire bottles for hydrostatic test dates.</p>	<p>§ 91.211 §§ 121.309, 121.329, 121.333, and 121.574</p>
29	<p>Seats, Berths, Safety Belts, and Harnesses. Verify that each seat at a flight deck station has a restraint system consisting of a combined safety belt and shoulder harness with a single-point release that permits the flight deck occupant, when seated with the restraint system fastened, to perform all of the necessary flight deck functions.</p>	<p>§ 91.521 § 121.311</p>

ITEM	FLIGHT DECK	REFERENCE
30	Approved Flight Deck Check Procedures Checklist. Verify that approved procedures include each item necessary for flightcrew members to check for safety before starting engines, taking off, or landing, and in engine and systems emergencies.	§ 121.315
31	Observer Seat. Verify installation, security, and condition of flight deck observer seat and all required peripheral equipment.	§ 121.581
32	Placards. Verify that manufacturer-required placards are installed. Refer to chapter 11 of the Aircraft Maintenance Manual (AMM) for data. All placards required by either the approved AFM, the applicable operating rules, operators' placard manual, or the certification basis must be installed in the airplane. Refer to the Type Certificate Data Sheet (TCDS), Supplemental Type Certificates (STC), the current edition of AC 20-88, Guidelines on the Marking of Aircraft, and the AMM.	§ 121.310
33	Windshield Wiper. Verify installation or equivalent for each pilot station.	§ 121.313
34	<p>Pilot Compartment Doors. Verify the following requirements for a lockable door that must be installed between the pilot compartment and the passenger compartment:</p> <p>a. The emergency exit configuration must be designed so that neither crewmembers nor passengers need to use that door to reach the emergency exits provided for them.</p> <p>b. Means must be provided to enable flightcrew members to directly enter the passenger compartment from the pilot compartment if the flight deck door becomes jammed. In any case where internal doors are equipped with louvers or other ventilating means, there must be a means convenient to the crew for closing the flow of air through the door when necessary.</p> <p>c. The following is an excerpt from § 121.313(f):</p> <p>“A door between the passenger and pilot compartments (i.e., flight deck door), with a locking means to prevent passengers from opening it without the pilot's permission, except that nontransport category airplanes certificated after December 31, 1964, are not required to comply with this paragraph. For airplanes equipped with a crew rest area having separate entries from the flight deck and the passenger compartment, a door with such a locking means must be provided between the crew rest area and the passenger compartment.”</p>	§§ 121.217, 121.219, and 121.313

ITEM	FLIGHT DECK	REFERENCE
	<p>d. The following is an excerpt from § 121.313(j)(1)(i): “Each such door must meet the requirements of § 25.795(a)(1) and (2) in effect on January 15, 2002.”</p>	
35	<p>Portable Electronic Devices (PED) and Electronic Flight Bags (EFB).</p> <p>a. Verify that the certificate holder has properly determined that permitted PEDs and/or EFBs will not cause interference with the navigation and communication systems of the subject aircraft.</p> <p>b. Verify that the software version meets the AFM/AOM and certificate holder’s requirements. Refer to the current edition of AC 120-76, Guidelines for the Certification, Airworthiness, and Operational Use of Electronic Flight Bags.</p>	§ 121.306
36	<p>Protective Fuses. If protective fuses are installed on the airplane, the certificate holder’s manual must describe the number of spare fuses approved for that airplane.</p>	<p>§ 91.205</p> <p>§ 121.313</p> <p>AC 25-16, Electronic Fault and Fire Prevention and Protection (current edition)</p> <p>AC 25.1357-1, Circuit Protective Devices (current edition)</p>
37	<p>Crash Ax. Each transport-category airplane must be equipped with a crash ax.</p>	§ 121.309(e)

Table 10-9-1H. Equipment and Cargo Compartments

ITEM	EQUIPMENT AND CARGO COMPARTMENTS	REFERENCE
1	<p>General Visual Inspection (GVI).</p> <ul style="list-style-type: none"> a. Check electronic/electrical components including wiring and connectors for condition, proper bonding, and security. b. Check that wiring is properly grouped, bundled, routed, and secured to airframe structure. c. Check with the current aircraft equipment list for installed equipment. d. Check for metal shavings or other debris that can cause electrical shorts and fire. e. Check the exposed airframe structure (forward pressure bulkhead, if accessible) for general condition, corrosion inhibiting compound (CIC) application, and evidence of fluid leaks and damage. f. Check insulation blankets for condition and liquid saturation. g. If repairs are noted to the airframe structure (major repair), verify that the repair data is Federal Aviation Administration (FAA)-approved. h. Check that all placards required by the FAA-approved Airplane Flight Manual (AFM), aircraft Type Certificate Data Sheet (TCDS), and applicable operating rules are properly installed at the location specified by those documents. i. Check each compartment for general condition and that the flammability requirements of ceiling, sidewall liners, and floor material are met (no holes or tears and seams sealed with approved tape). j. Check all visible cables, wiring, hydraulic and fuel lines, and equipment for security and damage. k. Verify that the equipment and cargo compartments meet their type design per the TCDS and any changes that have a Supplemental Type Certificate (STC) approved by the FAA and the aircraft is in compliance with that data. l. Check that the digital flight data recorder (DFDR) and flight deck voice recorder are protected from any contact with shifting baggage or cargo (when applicable). 	<p>14 CFR part 43, § 43.13(c), and part 121, §§ 121.221, 121.223, 121.312, 121.313, 121.314, and 121.369</p> <p>Volume 6, Chapter 2, Section 4 Advisory Circular (AC) 43-206, Inspection, Prevention, Control, and Repair of Corrosion on Avionics Equipment (current edition)</p>

ITEM	EQUIPMENT AND CARGO COMPARTMENTS	REFERENCE
2	<p>Required Crew Emergency Exits.</p> <p>a. Check that the crew has access to emergency exits under all cargo loading conditions. These emergency exits cannot be located within the “E” cargo compartment.</p> <p>b. Check for required placards and markings of the emergency exit(s).</p> <p>c. Check aircraft that have two flight deck windows that cannot be opened from the outside, the most forward left main (L1) fuselage door is designated as the required emergency exit.</p> <p>d. Depending on the type certificate (TC) or STC, marking and designation of the emergency exits will vary. Some aircraft have designated the flight deck windows as the emergency exit.</p> <p>e. On certain aircraft, an overhead hatch may be provided as an emergency exit.</p> <p>f. Check that the path from the flight deck to the designated emergency exit is free from obstacles and properly marked.</p>	<p>§§ 121.221 and 121.223</p> <p>Volume 6, Chapter 2, Sections 4 and 5</p>
3	<p>Baggage and Cargo Restraint System.</p> <p>a. Perform the configuration evaluation check per the approved or accepted data of the Original Equipment Manufacturer (OEM) or STC holder.</p> <p>b. Check that the restraint system meets Technical Standard Order (TSO)-C90, Cargo Pallets, Nets, and Containers (Unit Load Devices), or other approved means as required.</p> <p>c. Check that the certificate holder has a maintenance program for its cargo system, including restrain system, pallets, nets, and unit load device (ULD).</p> <p>d. Check the existing aircraft baggage and cargo restraint system installation (restrain system, pallets, and nets) for general condition, security, and to verify if they are properly identified to its weight or load limits.</p>	<p>§§ 121.135, 121.221, 121.223, 121.285, and 121.367</p> <p>Volume 6, Chapter 2, Sections 4 and 5</p> <p>AC 25-18, Transport Category Airplanes Modified for Cargo Service (current edition)</p> <p>AC 120-85, Air Cargo Operations (current edition)</p> <p>TSO-C90</p>

ITEM	EQUIPMENT AND CARGO COMPARTMENTS	REFERENCE
4	<p>Major Alterations of Aircraft Modified to Cargo Freighters (Including Palletized Restraint Systems, Cargo Doors, etc.).</p> <p>a. Check that the certificate holder's aircraft has been modified to a cargo freighter in accordance with an FAA-approved STC.</p> <p>b. When other than the STC holder's parts and components are used, verify compliance with approved data obtained from the certificate holder's records repository.</p>	<p>Volume 4, Chapter 9, Section 1</p> <p>Volume 6, Chapter 2, Sections 5, 36, and 42</p> <p>AC 120-77, Maintenance and Alteration Data (current edition)</p>
5	<p>Upper Deck and Cargo Barrier. Regardless whether the main cabin is used for cargo-only or as a combi, it must be equipped with a forward 9.0g barrier; either a solid bulkhead or net, in compliance with § 25.561, § 121.285, or Civil Aviation Regulation (CAR) 4b.269.</p> <p>a. Check the 9G cargo barrier (net or bulkhead) for general condition, fraying, hardware integrity and airframe attachment, and conformity with approved data.</p> <p>b. If the aircraft has been converted from a passenger configuration to a cargo-only or a combi through an STC, refer to AC 25-18 for details and verify the records for approved data. Perform the conformity review with this data.</p> <p>c. Check for the presence of an FAA Parts Manufacturer Approval (FAA-PMA) tag, and TSO tag if applicable.</p> <p>d. Check all visible cables, wiring, hydraulic and fuel lines, and equipment for security and damage.</p> <p>e. Check that each lamp is adequately shielded to prevent contact between lamp bulb and baggage or cargo.</p> <p>f. Check that any heat source is adequately shielded and insulated to prevent igniting the baggage or cargo.</p> <p>g. Check for approved hand-held fire extinguishers and if they are available for each class A and E compartment (main deck cargo).</p>	<p>§§ 21.31, 121.221, 121.223, 121.285, 121.309, and 121.367</p> <p>Volume 6, Chapter 2, Sections 4 and 5</p> <p>AC 20-42, Hand Fire Extinguishers for Use in Aircraft (current edition)</p> <p>AC 20-88, Guidelines on the Marking of Aircraft (current edition)</p> <p>AC 20-168, Certification Guidance for Installation of Non-Essential, Non-Required Aircraft Cabin Systems & Equipment (CS&E) (current edition)</p> <p>AC 21-10, Flight Recorder and Cockpit Voice Recorder Underwater Locating Devices (current edition)</p> <p>AC 25-16, Electronic Fault and Fire Prevention and Protection (current edition)</p> <p>AC 25-18</p>

ITEM	EQUIPMENT AND CARGO COMPARTMENTS	REFERENCE
	<p>h. Check that a separate approved smoke or fire detector system is installed to give warning to the pilot or Flight Engineer (FE) and is controllable from the flight deck.</p> <p>i. Check if the installed equipment is in compliance with the current aircraft equipment list, including STC requirements.</p> <p>j. Check the condition of the smoke curtain (if installed). If a smoke curtain was not installed, check the condition of the flight deck door seals.</p> <p>k. Check for livestock carrying freighters for FAA-approved modification data.</p> <p>l. Check for a means to prevent cargo or baggage from interfering with the functioning of the fire extinguishing system of the compartment (i.e., a top loading limit marking per the manufacturer’s or STC holder’s requirement).</p> <p>m. Check the cargo doors seals for condition.</p> <p>n. Check the condition of the cargo bin or pallet loading system (if installed) such as rollers, tracks, pallet or bin clamps, or other securing devices for condition and operation.</p> <p>o. Check if the emergency exit is more than 6 feet off the ground and that a means is provided for the crew and extra supernumeraries (if so equipped) to descend to the ground (e.g., inflatable slide or slide raft, cargo, etc.).</p>	

10-9-1-7 through 10-9-1-29 RESERVED.