OPERATOR:	
CHDO:	
LOCATION:	
DATE (S):	
PARTICIPANTS:	

A. **PURPOSE**. **The Aircraft Conformity job aid along with the SAI/EPI (1.1.1, 1.1.2, 1.2.6, 1.3.2, 3.1.2, 3.1.3) , TCDS, HBAT, HBAW, FSAT, FSAW and the AFM, will serve as a guide for the conformity review of an aircraft. The job aid targets areas for evaluation to verify compliance with applicable portions of, but not limited to, FAR Parts 21, 23, 25, 33, 91, & 121. This job aid is not all-inclusive, and it is the responsibility of the operator or the party applying for an Airworthiness Certificate to ensure that all legal and technical requirements are properly met.**

B. **CANCELLATION**. CSET Aircraft Conformity checklist, Revision 9 dated 1/10/02 is cancelled.

C. **RELATED Federal Aviation Regulation (FAR) SECTIONS.** FAR Parts 21, 23, 25, 33, 39, 43, 91, 121, CAR 4B

D. **ABBREVIATIONS AND ACRONYMS.**

AC	Advisory Circular
AMM	Aircraft Maintenance Manual
AWL	Airworthiness Limitations
CAR	Civil Air Regulation
EPI	Element Performance Inspection
FCC	Federal Communication Commission
FSAT	Flight Standards Air Transportation Bulletin
FSAW	Flight Standards Airworthiness Bulletin
HBAT	Hand Book Bulletin Air Transportation
HBAW	Handbook Airworthiness
HBGA	Hand Book Bulletin General Aviation
ICAO	International Civil Aviation Organization
LOPA	List of Passenger Accommodations
MMEL	Master Minimum Equipment List
MRB	Maintenance Review Board
NAT	North Atlantic
NOAA	National Oceanic and Atmospheric Administration
PL	FAA Policy Letter
RTCA	Radio Technical Commission for Aeronautics
SAI	Safety Attribute Inspection
SPPS	Safety Program Analysis Systems
TSO	Technical Standard Order

1) LIST OF EFFECTIVE PAGES AND RECORD OF REVISIONS

LIST OF EFFECTIVE PAGES				RECORD OF REVISIONS	
PAGE NUMBER	EFFECTIVE DATE	PAGE NUMBER	EFFECTIVE DATE	REVISION NUMBER	REVISION DATE
1	2/21/02	33	2/21/02	ORIGINAL	09/12/00
2	2/21/02	34	2/21/02	Revision 1	10/12/00
3	2/21/02			Revision 2	11/04/00
4	2/21/02			Revision 3	12/07/00
5	2/21/02			Revision 4	12/28/00
6	2/21/02			Revision 5	01/06/01
7	2/21/02			Revision 6	01/14/01
8	2/21/02			Revision 7	05/20/01
9	2/21/02			Revision 8	08/11/01
10	2/21/02			Revision 9	01/10/02
11	2/21/02			Revision 10	02/21/02
12	2/21/02				
13	2/21/02				
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27	2/21/02				
28	2/21/02				
29	2/21/02				
30	2/21/02				
31	2/21/02				
32	2/21/02				

TABLE OF CONTENTS

2) AIRCRAFT DESCRIPTION

AIRCRAFT	**Serial #**	**Line or Fuselage #**	**Date of Manufacture**	**Type Certificate Data Sheet**	**Repair Map?**
Make/Model/Series			***mm/dd/yy***		***Yes or No***
	Total Time (TT)	**Last Operator (Designator)**	**Last CAMP Program**	**Last "C" Check**	**Last "D" Check**
			mm/dd/yy	***mm/dd/yy***	***mm/dd/yy***
	Total Cycles (TC)	**Current Operator (Designator)**	**Previous Registration #**	**Interior Configuration (# Pax)**	**Availability of LOPA?**
					Yes or No
		Current Registration #			
POWERPLANT TYPE	**Serial # Position 1**	**Serial # Position 2**	**Serial # Position 3**	**Serial # Position 4**	**Type Certificate Data Sheet**
Make/Model/Series					
	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)**	
PROPELLERS	**Type Installed**	**Type Installed**	**Type Installed**	**Type Installed**	**Type Certificate Data Sheet**
Make/Model/Series					
	Serial #	**Serial #**	**Serial #**	**Serial #**	
	Total Time (TT)	**Total Time (TT)**	**Total Time (TT)**	**Total Time (TT)**	
	Time Since Overhaul (TSO)	**Time Since Overhaul (TSO)**	**Time Since Overhaul (TSO)**	**Time Since Overhaul (TSO)**	

APU (TSO-C77A)	Serial #	Check A/C TCDS for Applicability?			
Make/Model/Series		*Yes or No*			
	Total Time (TT)				
	Total Cycles (TC)				
	Time Since Overhaul (TSO)				
LANDING GEAR TYPE	Serial # Nose Gear	Serial # Main Gear LT	Serial # Main Gear RT	Serial # Gear (other)	Serial # Gear (other)
Make/Model/Series					
	Total Time (TT)	Total Time (TT)	Total Time (TT)	Total Time (TT)	Total Time (TT)
	Total Cycles (TC)	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)	Time Since Overhaul (TSO)
AIRCRAFT WEIGHTS	Max Taxi or Ramp Weight	Max Takeoff Weight	Max Landing Weight	Max Zero Fuel Weight	Operator's Empty Weight
	Max Structural Weights	Max Structural Weights (2)	Last Weighing of Aircraft	Current Aircraft Equipment list?	
				Yes or No	

3) DOCUMENTATION

	SAI	CERTIFICATES REQUIRED	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.1.1	**Aircraft Registration**. Current or last. All aircraft bearing US registration markings must be properly registered. If None, FAA Form 8050-1, Application for Certificate of Registration must be completed. Record date of Issuance. **Issue Date**:_____			121.153(a) (1)	47.3 91.203(a) AC 20-5G
b.	1.1.1	**Airworthiness Certificate**. Current or last. List Exemptions granted, if applicable. Or FAA Form 8130-6, Application for Certificate of Airworthiness, completed. **Listing of exemptions** _____:	21.183(d)		121.153(a)	91.203(a)
c.	1.1.1	**Export Airworthiness Certificate.** If applicable. Any aircraft manufactured within the boundaries of the United States and NOT certified in the US and then exported will have an Original export Certificate of Airworthiness. This certificate is essential to the certification process and can be obtained through the manufacturer or the FAA if not available from the seller. The aircraft must comply with its' TCDS as originally exported.	21.329			8130.2D AC 21.2H
d.		**Certificate of Sanitary Construction**				
e.		**Aircraft Incident/Accident Records**. Review history of incidents and/or accidents the aircraft may have been involved in.				SPAS
f.		**Type Certificate Data Sheet (TCDS)** . Review applicability of TCDS.	21.21			www.airweb.faa.gov
g.		**FCC Radio License.** A FCC Aircraft Radio Station License is maintained by the operator to permit the operation of communication radios aboard their aircraft. This license is granted for a set number of aircraft and must be updated when additional aircraft are added to the fleet.				FCC
h.		**SARSET Beacon Registration** (Required for 406 MHZ ELT) Form OMB-0648-0295 is to be submitted NOAA.				
i.	1.1.1	**Export Certificate.** Current and valid from country of current location. (If applicable)	21.183, 197 21.500			
j.	1.1.3	**Special Flight Authorization**. If applicable. Special Flight Permit may be required to operate the aircraft prior to being placed on an operator's ops spec. FSAW 95-02 and FSAT 95-03 (Extended): List of Minimum Instruments to Ferry Large Turbojet Airplanes	21.197			FSAT 95-03 FSAW 95-02
k.	1.1.1	**Identification of Aircraft & Related Products.** Assure that the identification plate required by FAR Part 45.11 is secured in such a manner that it will not likely be defaced or removed during normal service, and secured to the aircraft fuselage exterior.	21.182(c) 21.607			45.11(a)(d) 45.13, 45.15
		Required Manuals On-Board				
l.	2.1.4	**Airplane Flight Manual (AFM):** Check that the Aircraft has a current copy of the Manufacturer's Airplane Flight Manual (AFM) for the particular make, model and serial number. Confirm appropriate supplements.	21.5 23.1581 thru 23.1589	25.1581 thru 25.1587	121.133	CAR4b.740 91.9
m.	2.1.4	**Airplane Operating Manual (AOM):** Per 121.141(b) Certificate holder shall carry either the manual required by 121.133, if it contains the information required for the applicable flight manual and this information is clearly identified as flight manual requirements, or an Approved AFM.			121.141	
n.	2.1.4	**Emergency Procedures Manual/Checklist.** Cockpit Checklist / Emergency Procedures Manual. POIs shall ensure aircraft checklists are limited to action items or verification items. The aircraft checklist should not contain elaboration or explanation. POIs must ensure that the required actions and decisions for flight crews when performing a checklist are thoroughly described in the operator's manual and training program.			121.133 121.135	8400.10 Vol. 3 CH. 15
o.	1.3.5 2.1.4 3.2.3	**Minimum Equipment List.** Check revision is current with MMEL. MEL items should correspond with aircraft equipment list. Check required (M)(O) procedures have been addressed.			121.303(d) 121.627(b) 121.628	91.213
p.	1.3.17 2.1.4	**Weight & Balance Manual**. (Also Cargo Loading Manual if applicable) Review manual(s).	23.1583(c)	25.1583(c)	121.133	CAR4b.740 91.605

3) DOCUMENTATION (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
q.	2.1.4	**Flight Attendant Manual (FAM):** Check that the Aircraft has a current copy of the FAM (or its equivalent, i.e., In-flight manual)			121.133 121.135 121.137 121.139	8400.10 Vol. 3 CH. 15, Sect. 6
r.	1.3.16 1.3.18 2.1.4	**Other Manuals required by 121.133 and 121.135** Check that the Aircraft has a current copy of the De-Iceing, Fueling manual, and any other manual required by the operators GOM/GMM			121.133 121.135 121.139	

4) MAINTENANCE PROGRAMS

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.3.1	**Maintenance Program.** Each operator/applicant must have a maintenance program adequate to perform the work and a separate inspection program adequate to perform required inspections. Minimum Standard The program should be identified and be traceable to its minimum standard or baseline, i.e. Maintenance Review Board (MRB), Mfr. Approved Program or recommended tasks and intervals, fleet average, etc. In the event that the program fails to meet an established standard such as the MRB all areas of deficiency should be identified. Identify any OC or CM systems, assemblies, or components that the operator performs specific tests upon to determine their acceptability: Identify test procedures and equipment. Maintenance Review Board reports contains the initial minimum maintenance/inspection requirements to be used in the development of an approved continuous airworthiness maintenance program for the airframe, engines, systems and components.	21.181		121.367 121.380	91.409 119.49 8300.10 Vol. 2 CH. 64 HBAW 98-03A
b.	1.3.1	**Certification Maintenance Requirements.** A CMR is a required periodic task, established during the design certification of the aircraft as an operating limitation of the type certificate. CMRs are a subject of the tasks identified during the type certification process. CMRs usually result from a formal, numerical analysis conducted to show compliance with catastrophic and hazardous failure conditions.	23.1309 23.1529	25.1309 25.1529		AC 25.19 AC 1309 1A
c.	1.3.1	**Turbine Engine Critical Rotating Hardware Enhanced Inspection Program.** Operators certificated under 14 CFR parts 121 and 135 with an approved continuous airworthiness maintenance program, in accordance with paragraph (*) of the AD, must incorporate the inspection requirements of the AD AWL into their existing maintenance/inspection programs. Principal Maintenance Inspector's with certificate management responsibilities of these operators must ensure that the operator's program incorporate the inspections and procedures required by the applicable AD. These inspections are contained in the airworthiness limitations section, time limitations section, or other listing as appropriate with reference to the manual section containing the actual procedures, of the engine manufacturer's ICA.			121.380 121.709	Check AWL
d.	1.1.1 1.1.2 1.3.1 1.3.2	**Time Controlled Items**. Documentation should exist for time-controlled items installed on the aircraft and/or engine, since the last required action. The Listing should include components identified by nomenclature, part number, and serial number. The records should state present status and time remaining. Substantiation of these records may be made by reviewing documentation as applicable to the last overhaul, last maintenance activity or manufacture. If installation cannot be verified through record research, a physical inspection to verify component identification will be necessary.			121.380	91.409, AC 121.1A Applicable MRBR
e.	1.3.1 1.3.2	**VOR Equipment Checks for IFR Operations**. No person may operate a civil aircraft under IFR using the VOR system of radio navigation unless the VOR equipment of that aircraft; (1) Is maintained, checked, and inspected under an approved procedure, or (2) Has been operationally checked within the preceding 30 days, and was found to be within the limits of the permissible indicated bearing error set forth in paragraph (b) or (c) of this section. The aircraft VOR must be or have been tested and/or maintained under an approved program. Example: (MPD / MRBR etc.).				91.171 TSO-C40c TSO-C66c

4) MAINTENANCE PROGRAMS (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
f.	1.3.1 1.3.2	**HIRF/Lightning Protection Maintenance Program.** These programs assure that lightning and HIRF protection are maintained against electromagnetic hazards, caused by exposure to lightning and HIRF environments, and to flight critical electrical/electronic systems installed on or within the aircraft. Equipment hazards addressed include those due to effects on equipment and associated wiring on or within the aircraft. This document applies to in-service aircraft, equipment, modifications of existing aircraft or equipment, and applications of existing (off the shelf) equipment. The program should include maintenance/inspection requirements for lightning and HIRF protection for applicable electric/electronic subsystems such as, but not limited to; power distribution and generating equipment, electronic and electromechanical devices, systems that use data busses for critical functions, electronic engine and flight controls including Full Authority Digital Engine Controls (FADEC), as well as associated interconnecting wiring or cables. FSAW 97-16A (Extended)	23.867 23.954	25.581 25.954 25.1316		CAR4b.628 8300.10 Vol. 2 CH. 63 & 237 FSAW 97-16A N8110.71 AC 20-53D AC 20-115B AC 20-136 MRBR PL 2137, RTCA DO160 C/D & DO178 A/B
g.	1.3.1 1.3.2	**Pitot-Static System/Altimeter Tests and Inspection.** Section 91.411, does not apply to an aircraft maintained in accordance with a continuous airworthiness maintenance program as provided in part 121. AEG's position is that the carriers CAMP program normally exceeds the requirements 91.411. The carriers CAMP should still address how they will test and inspect the pitot static/altimeter system.	23.1325(b) (2)(ii)	25.1325(c) (2)(ii)		43 app. E 91.401 91.411
h.	1.1.1	**ATC Transponder Installation, Tests and Inspections**. Includes altitude-reporting equipment. Verify strapping if registration change.			121.345(c)	43 app. F 91.215(a) 91.413 8400.10, Vol.1 CH. 23, TSO C112 (Mode S), TSO-C74b
i.	1.1.2 1.3.1	**Anticollision Lights**. Verify Air Carrier Strobe Light Maintenance Program (if applicable). FSAW 98-01 (Extended): Air Carrier Strobe Light Maintenance Programs.	23.1401	25.1401	121.323(b)	CAR4b.637 FSAW 98-01 AC 20-30B TSO-C96a
j.	1.3.1 1.3.2 5.1.9	**RVSM**. Reduced Vertical Separation Minimum Airspace. Refer to FAR 91 –Appendix G for requirements. Additional Maintenance Requirements for Operational Approval of Operators Requesting RVSM Approval Federal Aviation Administration (FAA) Memorandum 91-RVSM, entitled "Interim Guidance for Approval of Aircraft for Reduced Vertical Separation Minimum (RVSM) Flight," dated March 14, 1994, relating to additional maintenance requirements pursuant to the operational approval of aircraft for flight in oceanic airspace where RVSM is applied. Specifically, section 10, Continued Airworthiness (Maintenance Requirements), addresses additional maintenance requirements for RVSM operational approval.			121 app G.	91.706, HBAT 97-14 HBAT 00-01 AC 91-RVSM ICAO 9574 MMEL GC-33 NAT RVSM Doc-002
k.	1.3.1 1.3.2	**Structural Inspection Requirements**. The Structure Program defines the directed inspections for each Structural Significant Item (SSI) developed through evaluation of their fatigue, environmental and accidental damage characteristics. A list of all SSIs and a list of SSIs having no scheduled maintenance task are given in Appendix 4 of the MRB Report.	23.611	25.611		MRB and/or AD's (as applicable)
l.	1.3.1 1.3.2	**Corrosion Prevention Control Program (CPCP)/Aging Aircraft**. Required per applicable Airworthiness Directive and/or MRB report. A Corrosion Prevention and Control Program should be established to maintain the aircraft's resistance to corrosion as a result of systematic (e.g. age related) deterioration through chemical and/or environmental interaction. Verify reporting activity. Verify that the Aging Aircraft/Corrosion Control program provides the necessary guidance to evaluate and respond in a timely manner to structural fatigue and corrosion.	23.609	25.609		8300.10 Vol. 3 CH. 36,& 8300.10 app. 5, HBAW 94-05B, HBAW 96-01, MRB and/or AD's

4) MAINTENANCE PROGRAMS (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
m.	1.3.1	**Damage Tolerance Rating Evaluations.** A qualification standard for aircraft structure. An item is judged to be damage tolerant if it can sustain damage and the remaining, structure can withstand reasonable loads without structural failure or excessive structural deformation until the damage is detected. Verify DTRs are incorporated in air carrier's maintenance program.	23.573	25.571	121.370	MRB and/or AD's (as applicable) AC 25.571-1 pg 4, par 3(p)
n.	1.3.1	**Flight Data Recorder Maintenance Program**. Does operator have a DFDR maintenance program (AC 20-41). Review the most recent instrument calibration and the recording medium from which the calibration was derived, and the recorder correlation. Are the range and accuracy of the correlation within the limits specified in FAR 121 appendix. B & M. Does the operator have a program for accomplishing a Ping test each time the ULB is replaced?	23.1459(c)	25.1459(c)	121.343 121.344 121.344a	N8110.65 AC 20-141 121 app. B & M
o.	1.2.2 1.3.9	**Major Repairs and Alterations.** A complete and accurate listing of all major structural repairs including method of repair and FAA approval must be furnished. Review records containing list of current major repairs and alterations to each airframe, engine, or component. Documentation should be provided for each major repair/alteration that verifies that the work has been done in accordance with technical data approved by the FAA. (i.e. STC, SRM, DER, or FAA field approval)			121.379(b) 121.380 121.707	43.9(b) 43 app. A & B AC 140.6C
p.	1.2.2 1.3.9	**Supplemental Type Certificates (STC)**. All incorporated STCs must be supported by documented approved data. Has the operator and/or the manufacturer of the STC, developed Instructions for Continued Airworthiness and are they incorporated into the carriers maintenance program? Does operators GMM have procedures for accomplishing this?	21.117 21.463 21.477 23.1529	25.1529	121.379(b) 121.380 121.707	8110.69 HBAW 98-16
q.	1.2.1 1.2.3 1.3.6	**Airworthiness Directives (ADs).** Confirm summary completed. Perform random sampling of Airframe, Engine, & Appliance ADs and their compliance. If the AD was performed on a rotable component or assembly, serial numbers and installation and removal dates shall be provided to ensure that the aircraft's AD compliance list is still valid. The records must include: (1) The ID of the particular airframe, engine, appliance, or component to which the AD applies. (2) The AD number and if applicable, its revision number, revision date, or amendment number. (3) The date on which the required action was last accomplished. (4) The total time-in-service, as expressed by the applicable standard, as required by the AD. (5) The method of compliance, by reference to a specific action described in the AD, a specific description of the work performed or a description of an AMOC with a copy of the FAA approval. AMOCs accepted must be transferable to the new owner/operator, If not transferable compliance with all requirements of the AD must be established. (6) If the AD requires recurring action, the interval to the next required action as expressed by the applicable standard. (7) If available, actual completed work card for repetitive and terminated ADS. (8) CPCP compliance status of the aircraft must be reviewed, and any AMOCs required to take credit for previous accomplishment must be applied for. **The following ADs are applicable to Transport Category Aircraft:** *74-08-09 R2 LAVATORY FIRE PREVENTION* *75-22-22 DOT-3HT-3000 COMPRESSED GAS CYLINDERS MANUFACTURED BY PRESSED STEEL TANK COMPANY* *76-05-02 SIDE-FACING FLIGHT ATTENDANT SEAT* *87-08-09 INFLATE TIRES WITH NITROGEN ONLY PLACARD/PROGRAM*	21.99		121.380	39.1 39.3 39.11 91.417 HBAW 98-02
r.	1.3.2	**Temporary Repairs**. All repairs performed on the aircraft, which have been identified as requiring recurring inspections shall be noted and their inspection requirements and intervals documented.				Applicable AMM
s.	1.2.1 1.2.3	**Aircraft Maintenance/Overhaul Records**. Perform a random sampling of records of the most recent repetitive maintenance tasks, inspections, and overhaul teardowns performed on the aircraft, engine, and components as required by the operator's current inspection program. If the aircraft is not currently on a continuous airworthiness maintenance program, records from the last approved operator's inspection program are to be reviewed.			121.380	91.417 HBAW 98-02
t.	1.3.2	**Repair Assessment for Pressurized Fuselages**. FAA approved repair assessment guidelines must be incorporated into the air carriers maintenance program by May 25, 2001.			121.370	91.410

4) MAINTENANCE PROGRAMS (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
u.	1.3.1 1.3.2 1.3.11	**Airplane Conformity Program.** 1. Does the operator have an aircraft conformity process documented within their manual system. 2. Does the operator's aircraft conformity process meet all applicable requirements of the CFR's and their Continued Airworthiness Maintenance Program (CAMP) 3. Does the operator's aircraft conformity process include procedures for documenting discrepancies discovered during the aircraft conformity process. 4. Does the aircraft conformity process include procedures for corrective action of those discrepancies. 5. Does the operator have a performance measurement within their CASS for the aircraft conformity requirements. Should these questions be included w/in the job aid, the results will give us risk indicators as they relate to their CASS, Maintenance Program and their Inspection Program. SAIs; 1.3.11, 1.3.1 and 1.3.2 respectively.			121.135(b) (16), (17)	

5) GENERAL

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	2.1.4	**Performance Requirements** The performance requirements of this Subpart, Sections 25.101 to 25.125, are applicable to all aircraft certificated under FAR 25 Sub. A. The performance requirements of CAR 4b, Subpart B, Sections 4b.100 to 4b.125-1, are applicable to all aircraft certificated under CAR 4b. Each specific aircraft Performance and Limitations for exiting aircraft configuration, modifications, improvements and engines installation, must be included in the particular FAA approved Aircraft Flight Manual (AFM).	23.45 thru 23.77	25.101 thru 25.125	121.173 121.189 thru 121.197 121 app. K	CAR 4b.100 to 4b.125-1
b.	1.1.1 1.1.2	**Operating Noise Limits.** Identify level of compliance with airframe and engine noise suppression requirements. List mfr. service bulletins, STCs, etc. Reference compliance with FAR 36, Stage I, II, III, or ICAO Annex 16, CH. 1, 2, 3. Advisory Circular 36-3G, Estimated Airplane Noise Levels in A-Weighted Decibels.	21.183(e)			36 91.801 AC 36-3G
c.	1.1.1	**Special Airworthiness Requirements – Subpart J of FAR 121:** If airplane was type certificated under Aero Bulletin 7A or the Civil Air Regulation in effect before November 1, 1946, assure that all special airworthiness requirements listed in 121.215 through 121.283.			121.211 121.215 thru 121.283	
d.	1.1.1	**Special Retroactive Requirements**. The requirements included in 25.2(a)(1)&(b) are applicable to all aircraft irrespective of reference regulation used for the certification and TCDS approval.	23.2	25.2(a)(1) 25.2(b)		
e.		**Function and Installation**. Each item of installed equipment must: a) Be of a kind and design appropriate to its intended function; b) be labeled as to its identification, function, or operating limitations, or any applicable combination of these factors; c) Be installed according to limitations specified for that equipment; and d) function properly when installed.	23.1301	25.1301		

6) FUSELAGE – EXTERIOR - AVIONICS

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.1.2	**Heated Pitot Tubes**. An airspeed indicating system with heated Pitot Tube or equivalent means for preventing malfunctioning due to icing. HBAW 97-15: Additional Procedures to the Air Carrier's Continuous Airworthiness Maintenance Program that Ensures Covers are Removed From Pitot-Static Ports Following Cleaning and Maintenance	23.1323(d) 23.1326	25.1323(e) 25.1326	121.323(e) 121.342	HBAW 97-15

6) FUSELAGE – EXTERIOR – AVIONICS (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
b.	1.1.1 1.1.2	**Static Pressure Systems**. Two independent static pressure systems, vented to the outside atmospheric pressure so that they will be least affected by airflow variation or moisture or other foreign matter, and installed so as to be airtight except for the vent. 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.	23.1325	25.1325	121.313(e) 121.323	CAR4b.612 43 app. E 91 app. A HBAW 97-15 TSO-C2d.
c.	1.1.2	**Landing Lights**. Two landing lights, except that only one landing light is required for non-transport category aircraft type certificated after December 31, 1964. **Night Operations**	23.1383	25.1383	121.323(c)	CAR4b.631 91.205(c)
d.	1.1.2	**Position Lights.** System installation, Dihedral angles, Distribution & intensities. **Night Operations**	23.1385 thru 23.1399	25.1385 thru 25.1399	121.323(a)	CAR4b.632 thru 4b.635 91.205(c) PL 1104, 1106 TSO-C30c
e.	1.1.2	**Anticollision Lights.** Verify Air Carrier Strobe Light Maintenance Program (if applicable). FSAW 98-01 (Extended): Air Carrier Strobe Light Maintenance Programs.	23.1401	25.1401	121.323(b)	CAR4b.637 FSAW 98-01 AC 20-30B PL 1106,PL 1107 PL 1108 PL 1112 PL 1114 PL 1115 Preamble 23-11 TSO-C96a
f.	1.1.2	**Antennas** Security and indications of corrosion				8300.10 Vol. 3 CH. 1
g.	1.1.2	**Placards.** Verify mfg. required placards are installed. Refer to aircraft maintenance manual chapter 11 for data. All placards required in either the approved AFM, the applicable operating rules, or the Certification Basis must be installed in the airplane.	23.1557	25.1557		CAR4b.730 91.9(b), TCDS AFM Limits AMM CH. 11

7) FUSELAGE – EXTERIOR – MAINTENANCE

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.3.1 1.3.2	**Aircraft Inspection**. Inspect the following zones for general condition, damage, corrosion, fluid leaks, security of attachment, and corrosion prevention treatment application: Fuselage, wings, nacelles, pylons, stabilizers-vertical/horizontal, & control surfaces. Examine joints, seams and skin for wrinkles, bulges, rivets, skin erosion, corrosion, oxidation, non-approved repairs and modifications, composite material panels for contamination and bonding, separation of skin-bonding. Compare repair mapping with aircraft. Photograph exterior as necessary.	21.183		121.367	43 app. D 91.409 AMM
b.		**Identification of Aircraft.** On aircraft manufactured before March 7, 1988, the identification plate required by paragraph (a) of this section may be secured at an accessible exterior or interior location near an entrance, if the model designation and builder's serial number are also displayed on the aircraft fuselage exterior. The model designation and builder's serial number must be legible to a person on the ground and must be located either adjacent to and aft of the rearmost entrance door, or on the fuselage near the tail surfaces. The model designation and builder's serial number must be displayed in such a manner that they are not likely to be defaced or removed during normal service.	21.182			45.11(d) 45.23 119.9
c.	1.3.1 1.3.2 1.3.17	**Aircraft Painting.** Aircraft that have been painted must comply with the manufacturer's painting procedures, and use the manufacturer's recommended or equivalent materials. The aircraft must be weighed and balanced. The flight controls may have to be Statically Balanced (painting an aircraft is considered preventative maintenance).			121.367	43.13(a) & (b) 43 app. A

7) FUSELAGE – EXTERIOR – MAINTENANCE (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
d.		**Certificate Holder Name.** The name of the certificate holder who is operating the aircraft, or the air carrier or operating certificate number of the certificate holder who is operating the aircraft, must be legibly displayed on the aircraft and clearly visible and readable from the outside of the aircraft to a person standing on the ground at any time except during flight.				119.9
e.	1.1.1	**Placards:** All placards required in either the approved AFM, the applicable operating rules, or the Certification Basis must be installed in the airplane.	23.1557	25.1557		CAR4b.730 91.9(b) AFM Limits AMM Chapter 11
f.	1.1.1	**Fuel Tank Impact Resistant Access Doors**. All fuel tank access covers must be designed to minimize penetration and deformation by tire fragments, low energy engine debris, or other likely debris, unless the covers are located in an area where service experience indicates a strike is not likely.		25.963(e)	121.316	AC 20-128 AC 25.963-1
g.	1.1.1	**Exterior Exit Markings**. Each passenger emergency exit and the means of opening that exit from the outside must be marked on the outside of the airplane. Refer to 121.310(g) for requirements.	21.183(f)	25.811	121.310(g)	CAR4b.362
h.	1.3.1 1.3.2	**Windows**. Inspect for Delamination, scratches, crazing, and general visibility	21.183 23.775	25.775	121.367	8300.10 Vol. 3 CH. 1
i.	1.1.1	**Emergency Exit Arrangement.** Each emergency exit, including a flight crew emergency exit, must be a movable door or hatch in the external walls of the fuselage, allowing unobstructed opening to the outside. Each emergency exit must be operable from the inside and the outside except that sliding window emergency exits in the flight crew area need not be operable from the outside if other approved exits are convenient and readily accessible to the flight crew area. The required crew emergency exits are accessible under any cargo loading condition.	21.183(f) 23.807 23.813	25.807 25.809 25.813 25.857	121.221	CAR 4b.362
j.	1.1.1	**Exterior Emergency Lighting and Escape Route.** Refer to 121.310 & 25.810 for requirements. Check general condition of emergency floor path lighting system.	23.812	25.810 25.812	121.310(h)	
k.	1.3.1 1.3.2	**Doors**. (Entry, cargo, emergency, service, & access doors) Inspect for cleanliness, poor condition, loose/missing equipment, deterioration breakage leakage, corrosion, proper installation, and other indications of defects. Pay particular attention to doorjambs.	21.183 23.783	25.783	121.367	CAR4b.356 43.13 Applicable AMM

8) FUSELAGE – EXTERIOR - POWERPLANT – MAINTENANCE

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.3.1 1.3.2	**Engines, APU, Nacelles, and Compartments.** Inspect for cleanliness, poor condition, loose/missing equipment, deterioration breakage leakage, corrosion, proper installation, and other indications of defects. Pay particular attention to excessive oil/fuel/ or hydraulic leaks, proper hardware installation.	21.183		121.367	43 app. D Applicable AMM/PMM PL 818
b.	1.3.1 1.3.2	**Engines, APU**. Assure that current maintenance program contains instruction for maintaining continued airworthiness of each engine and APU. This program should meet the minimum requirements of FAR 33, Appendix A	21.183	33 app. A	121.367	
c.		**Airworthiness Standards** Type Certificate and Changes to Type Certificate		33.1		
d.	1.3.1 1.3.2	**Engine:** Instructions for Continued Airworthiness		33.4		
e.		**Engine:** Ratings and Operating Limitations		33.7		
f.		**Engine:** TCDS	21.41			

9) FUSELAGE – INTERIOR - AVIONICS

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.3.1 1.3.2	**Equipment Compartment Inspection**. Perform inspection in electrical/electronics compartment(s). Inspect for cleanliness, poor condition, loose/missing equipment, deterioration breakage leakage, corrosion, proper installation, and other indications of defects. Pay particular attention to equipment installation lighting, and airplane wiring for the following: proper routing; marking; chaffing; location with respect to fluid lines, lavs and galley; drip loops; bend radius; coil, cap and stow methods; proper slack, segregation and separation; clamping; and splicing.	21.183	25.631 25.869 25.903(d) 25.1301 25.1309(b) 25.1353(b) 25.1529	121.367	43 app. D AMM TSO-C84 AC-25-10 AC-25-16 AC-43.13-1B
b.	1.1.2	**Batteries/Power Supplies.**	23.1331 23.1353	25.1331 25.1353		CAR4b.625 PL 25.1301.746
c.	1.1.1 1.1.2	**Cockpit Voice Recorder**. No certificate holder may operate a large turbine engine powered airplane or a large pressurized airplane with four reciprocating engines unless an approved cockpit voice recorder is installed in that airplane. Verify Underwater Locator Beacon (ULB) shelf life. Part Number:_____ Location:_____ ULB Due Date:_____ ULB Date of MFG._____ When was the ULB last Ping Tested/Inspected?	23.1457	25.1457	121.359	CAR4b.606 91.609 8300.10 Vol. 2 CH. 1 & 237, Vol. 3, CH. 142 8300.56, 8430.58 AC 21-10A AC 43.13-2B PL 300 TSO-C121 TSO-C123a
d.	1.1.1 1.1.2	**Digital Flight Data Recorder.** Refer to 121.344 for required parameters. Note: The installation of enhanced DFDR must be accomplished at the earliest time practicable, but no later than the next heavy maintenance check after August 18, 1999. HBAW 96-09: Self-Test of Teledyne Controls, (ARINC 563) Flight Data Recorder System, Central Electronics Unit. Verify Underwater Locator Beacon (ULB) shelf life. Part Number:_____ Location:_____ ULB Due Date:_____ ULB Date of MFG._____ When was the ULB last Ping Tested/Inspected?	23.1459	25.1459	121.344 121.344(a) 121 app .M 121 app. B	CAR4b.606 91.609 8300.10 Vol. 3 CH. 142 HBAW 96-09 HBAW 97-13B N8110.65 AC 20-141 TSO-C111 TSO-C121 TSO-C124b
		Digital Flight Data Recorder (Cont.) 1) ***Turbine-engine powered transport category airplanes operating under the provisions of 14 CFR part 121*** a. **Airplanes manufactured on or before October 11, 1991, that were not equipped with Flight Data Acquisition Units (FDAU) as of July 16, 1996.** These airplanes must be upgraded from their current eleven (11) parameter recording capability to record eighteen (18) parameters. The retrofit must be accomplished by the next heavy maintenance check after August 18, 1999, but no later than August 20, 2001. b. **Airplanes manufactured on or before October 11, 1991, that were equipped with FDAU as of July 16, 1996. These airplanes must be upgraded to record 22 Parameters**. The retrofit must be accomplished by the next heavy maintenance check after August 18, 1999, but no later than August 20, 2001.	23.1459	25.1459	121.344 121.344(a) 121 app. M 121 app. B	91.609 CAR4b.606 8300.10 Vol. 3 CH. 146 AC 20-141 HBAW 96-09 HBAW 97-13B N8110.65 TSO-C111 TSO-C121 TSO-C124b

9) FUSELAGE – INTERIOR – AVIONICS (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
		c. **Airplanes manufactured on or before October 11, 1991, that were equipped with ARINC 717 DFDAU or equivalent as of July 16, 1996**. These airplanes must be upgraded to record 22 parameters. The retrofit must be accomplished by August 20, 2001. d. **Airplanes manufactured after October 11, 1991, but before August 18, 2000.** These airplanes must be upgraded to record 34 parameters. The retrofit must be accomplished by August 20, 2001. e. **Airplanes manufactured after August 18, 2000, but before August 20, 2002**. The airplanes must be equipped to record 57 parameters. f. **Airplanes manufactured after August 19, 2002**. These airplanes must be equipped to record 88 parameters. The parameter specifications of part 121, appendix M, or part 125, appendix E, apply to all parameters. **2)** ***Turbine-engine powered airplanes having passenger seating of 10 to 19 seats operating under the provisions of 14 CFR part 121*** a. **Airplanes (10 to 19 passengers) brought onto the U. S. register or foreign-registered airplanes added to an operator's U. S. operations specifications after October 11, 1991, but manufactured on or before August 18, 2000**. In order to operate under part 121, these airplanes must be equipped with a DFDR system recording 18 parameters by the next heavy maintenance check or equivalent after August 18, 1999, but before August 20, 2001. b. **Airplanes (10 to 19 passengers) manufactured after August 18, 2000, but before August 20, 2002.** These airplanes operated under part 121 must be equipped with a DFDRs that records 57 parameters. c. **Airplanes (10 to 19 passengers) manufactured after August 19, 2002**. These airplanes must be equipped with the 88-parameter system. ***3) U.S. registered aircraft operated by a foreign carrier under part 129. These aircraft must have a DFDR that records the parameters that would be required under part 121, 125, or 135 as applicable to the aircraft.***	23.1459	25.1459	121.344 121.344(a) 121 app. M 121 app. B	91.609 CAR4b.606 8300.10 Vol. 3 CH. 146 AC 20-141 HBAW 96-09 HBAW 97-13B N8110.65 TSO-C111 TSO-C121 TSO-C124b

10) FUSELAGE -- INTERIOR - MAINTENANCE

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.3.2	**Aircraft Inspection.** Inspect the following zones for general condition, damage, corrosion, fluid leaks, security of attachment, and corrosion prevention treatment application: Fwd & Rear pressure bulkhead (fore & aft), interior and under floor areas. Fuselage, wings, nacelles, pylons, stabilizers-vertical/horizontal, & control surfaces. Examine joints, seams and skin for wrinkles, bulges, rivets, skin erosion, corrosion, oxidation, non-approved repairs and modifications, composite material panels for contamination and bonding, separation of skin-bonding. Compare repair mapping with aircraft. Photograph exterior as necessary.	21.183		121.367	43.13, 43 app. D 91.409 8130.2D 8300.10, Vol.3 CH. 2 AMM
b.	1.3.1 1.3.2	**Repair Mapping**. Obtain operator's repair mapping for external/internal structural repairs. (Recommended)			121.370 121.380	

11) COCKPIT – AVIONICS / OPERATIONS

	SAI	DESCRIPTION: FLIGHT AND NAVIGATIONAL EQUIPMENT	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.1.1 1.3.1	**Cockpit Inspection**. Inspect for cleanliness, poor condition, loose/missing equipment, deterioration breakage leakage, corrosion, proper installation, legibility of placards, and other indications of defects. Pay particular attention to windshields, windows, paneling, flooring, controls, lighting, and wiring installations.	21.183		121.153	AMM
b.	1.1.1	**Instrument Arrangement, Visibility & Lighting.** Basic flying instruments must be installed in compliance with FAR 25.1303 and grouped in compliance with FAR 25.1321(b). Instrument lights providing enough light to make each required instrument, switch, or similar instrument, easily readable and installed so that the direct rays are shielded from the flight crewmembers' 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. **Night Operations** See Requirements at 121.323	23.1303 23.1321(d) 23.1381	25.1303 25.1321(b) 25.1381	121.303(b) 121.323(d) 121.325(c)	CAR4b.611 91.205
c.	1.3.1 1.3.2	**ELECTRONIC FLIGHT INSTRUMENT SYSTEM (EFIS) & ELECTRONIC CENTRALIZED AIRCRAFT MONITORING (ECAM).** Verify instructions for continued airworthiness. Verify installation approval (TC/STC)	21.91 21.111 23.1309 23.1311	25.1309 25.1333		8300.10 Vol. 2 CH. 237 FSAW 95-09B HBAW 91-13 AC 25.1309-1A AC 25-11 PL 1050 PL 1065 PL 1698 RTCA DO178 A/B RTCA DO 160C TSO-C113
d.	1.1.2	**Instrument Markings.** Ranges/information correct for installed equipment. For imported aircraft, measurements are in pounds, knots, and feet.	23.1541 23.1543	25.1541 25.1543		CAR4b.731 AC 20-69
e.	1.1.1	**Instruments Using a Power Supply.** For each instrument required by § 25.1303(b) that uses a power supply, the following apply: (1) Each instrument must have a visual means integral with, the instrument, to indicate when power adequate to sustain proper instrument performance is not being supplied. The power must be measured at or near the point where it enters the instruments. For electric instruments, the power is considered to be adequate when the voltage is within approved limits. (2) Each instrument must, in the event of the failure of one power source, be supplied by another power source. This may be accomplished automatically or by manual means. (3) If an instrument presenting navigation data receives information from sources external to that instrument and loss of that information would render the presented data unreliable, the instrument must incorporate a visual means to warn the crew that the presented data should not be relied upon, when such loss of information occurs.	23.1331	25.1331	121.313(c)	CAR4b.612(e)
f.	1.1.2	**Pitot Heat Indication Systems**. The indication system must comply with the following requirements: (a) The indication provided must incorporate an amber light that is in clear view of a flight crewmember. (b) The indication provided must be designed to alert the flight crew if either of the following conditions exist: (1) The Pitot heating system is switched "off". (2) The Pitot heating system is switched "on" and any Pitot Tube heating element is inop.	23.1326	25.1326	121.342	HBAW 97-15
g.	1.1.2	**Airspeed Indicating System**. With heated Pitot tube or equivalent means for preventing malfunctioning due to icing. Check airspeed placard. Check AFM Operating limitations. Verify that each Airspeed indicator is calibrated in knots and pertinent placards are expressed in knots.	23.1303(g) (1) 23.1545 23.1583	25.1303(b) (1) 25.1545 25.1583	121.303(c) 121.305(a) 121.323(e) 121.325(a)	CAR4b.612(a)(5) TSO-C2d TSO-C46a

11) COCKPIT – AVIONICS / OPERATIONS (CONT'D)

	SAI	DESCRIPTION: FLIGHT AND NAVIGATIONAL EQUIPMENT (CONT'D)	FAR 21/23	FAR 25/33	FAR 121	OTHER
h.	1.1.2	**Sensitive Altimeter.** Check AFM Operating limitations. FSAW 97-02: Modification of Technical Standard Order (TSO) Altimeters. (Although 91.411 is not applicable to 121 operations, requirements should be contained in the maintenance program)	23.1303(g) (2)	25.1303(b) (2)	121.305(b) 121.323(f) 121.325(b)	43 app. E 91.217 91.411 FSAW 97-02 AC 43-6A TSO-C10b TSO-C88a
i.	1.1.2	**Sweep-Second Hand Clock**. A clock displaying hours, minutes, and seconds with a sweep-second pointer or digital presentation.		251303(a)(2)	121.305(c)	91.205(d)(6) AC 20-94
j.	1.1.2	**Free air (OAT) Temperature Indicator.** Or an air temperature indicator, which provides indications that are convertible to free air temperature.	23.1303(d)	25.1303(a) (1)	121.305(d)	TSO-C43b
k.	1.1.2	**Gyroscopic Bank and Pitch Indicator**. Artificial horizon. In addition to two gyroscopic bank and pitch indicators for use at the pilot stations. FSAW 95-09B : Electronic Horizontal Situation Indicator (EHSI) Approvals	23.1303(b) (5)	25.1303(b) (5)	121.305(e) (k)	91.205(d)(8) FSAW 95-09B TSO-C4c
l.	1.1.2	**Standby Horizon Additional Attitude Instrument**. A third such instrument is installed in accordance with 121.305(k), and: (1) Is powered from a source independent of the electrical generating system; (2) Continues reliable operation for a minimum of 30 minutes after total failure of the electrical generating system; (3) Operates independently of any other attitude indicating system; (4) Is operative without selection (automatic) after total failure of the electrical generating system; (5) Is located on the instrument panel in a position acceptable to the Administrator that will make it plainly visible to and usable by each pilot at his or her station; and (6) Is appropriately lighted during all phases of operation.	23.1303(g) (3)	25.1303(b) (4)	121.305(j),	TSO-C4c
m.	1.1.2	**Gyroscopic Rate of Turn Indicator.** Combined with an integral slip/skid indicator (turn and bank indicator) except that only a slip/skid indicator is required when a third attitude instrument system usable through flight attitudes of 360° of pitch and roll is installed.		25.1303(b) (4)	121.305(f)	91.205(d)(3) TSO-C3e
n.	1.1.2	**Gyroscopic Direction Indicator.** Directional gyro or equivalent.		25.1303(b) (6)	121.305(g)	91.205(d)(9) TSO-C5e, TSO-C6d, TSO-C7d
o.	1.1.2	**Magnetic Compass.** The magnetic compass must be calibrated to reflect the maximum deviation, and illuminated for night operations	23.1303(c) 23.1327 23.1547	25.1303(a) (3) 25.1327 25.1547	121.305(h)	CAR 4b.612-3 91.205(b)(3) TSO-C7d
p.	1.1.2	**Vertical Speed Indicator.** Rate of climb indicator.		25.1303(b) (3)	121.305(i)	TSO-C8d
q.	1.1.2	**Speed Warning Device**. Is required for turbine engine powered airplanes and for airplanes with VMO/MMO greater than 0.8 VDF/MDF or 0.8 VD/MD. 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 VMO plus 6 knots or MMO + 0.01. The upper limit of the production tolerance for the warning device may not exceed the prescribed warning speed.	23.1303(e)	25.1303(c) (1)		91.603 TSO-C101
r.	1.1.2	**Machmeter**. Is Required At Each Pilot Station For Airplanes With Compressibility Limitations Not Otherwise Indicated To The Pilot By The Airspeed Indicating System Required Under 25.1303(b)(1).		25.1303(c) (2)		TSO-C95

11) COCKPIT – AVIONICS / OPERATIONS (CONT'D)

	SAI	DESCRIPTION: FLIGHT AND NAVIGATIONAL EQUIPMENT (CONT'D)	FAR 21/23	FAR 25/33	FAR 121	OTHER
s.	1.1.2	**Automatic Pilot System**. Refer to 25.1329 for requirements. Aircraft Flight Manual must show minimum altitude for use of autopilot. If CAT II or CAT III, aircraft autopilot can be used for lower altitudes when approved by Ops Specs.	23.1329	25.1329	121.579	CAR4b.612-4 HBAW95-07 AC 25-11 AC 25.1329-1A TSO-C9c
		DESCRIPTION: POWERPLANT INSTRUMENTS				
t.	1.1.1 1.1.2	**Instrument Markings**. For each required Powerplant and auxiliary power unit instrument, as appropriate to the type of instrument - (a) Each maximum and, if applicable, minimum safe operating limit must be marked with a red radial or a red line; (b) Each normal operating range must be marked with a green arc or green line, not extending beyond the maximum and minimum safe limits; (c) Each takeoff and precautionary range must be marked with a yellow arc or a yellow line; and (d) Each engine, auxiliary power unit, or propeller speed range that is restricted because of excessive vibration stresses must be marked with red arcs or red lines. Check AFM Operating limitations and TCDS for approved appliances.	23.1521 23.1541 23.1543 23.1549 23.1583	25.1521 25.1543 25.1541 25.1549 25.1583		AC 20-69 AC 20-88A
u.	1.1.2	**Exhaust Gas Temperature Indicator.** FAR 23/25 for Turbine Engine Powered Airplanes	23.1305(c)(1)	25.1305(c)(1)		TSO-C43b
v.	1.1.2	**Fuel Pressure Indicator.** FAR 25 for all airplanes. FAR 23 for Turbine Engine Powered Airplanes	23.1305(c)(3)	25.1305(a)(1) 25.1337(f)	121.307(c)	CAR4.b.613(f) TSO-C47
w.	1.1.2	**Fuel Pressure Warning.** Or a master warning means for all engines with provision for isolating the individual warning means from the master warning means. FAR 25 for all airplanes. FAR 23 for Turbine Engine Powered Airplanes	23.1305(c)(3)	25.1305(a)(1)	121.307(k)	CAR4b.
x.	1.1.2	**Fuel Flowmeter Indicator.** For each engine. FAR 23/25 for Turbine Engine-Powered Airplane	23.1305((c)(2) 23.1337(c)	25.1305(c)(2) 25.1337(c)	121.307(d)	CAR4b.613(c) TSO-C44b
y.	1.1.2	**Fuel Quantity Indicator.** For each fuel tank. FAR 23/25 1337(b)(1) MUST be calibrated to read Zero during level flight when the quantity of fuel remaining is equal to the unusable fuel supply determined under 23.959(a) / 25.959.	23.1305(a)(1) 23.1337(b)	25.1305(a)(2) 25.1337(b)	121.307(e)	CAR4b.613(b) 91.205((b)(9)
z.	1.1.2	**Engine Pressure Ratio Indicator** FAR 23/25 Turbojet Engine Powered Airplanes	23.1305(d)(1)	25.1305(d)(1)		
aa.	1.1.2	**Oil Quantity Indicator.** For each oil tank. 23.1305(a)(4) For all Airplanes, An Oil Quantity Indicating Device for each oil tank which meets the requirements of 23.1337(d).	23.1305(a)(4) 23.1551	25.1305(a)(3) 25.1337(d) 25.1551	121.307(h)	CAR4b.613(d)
bb.	1.1.2	**Oil Pressure Indicator.** For each independent pressure oil system of each engine.	23.1305(a)(2)	25.1305(a)(4)	121.307(g)	CAR4b.604(k) 91.205(b)(7) TSO-C47
cc.	1.1.2	**Oil Pressure Warning.** Or a master warning means for all engines with provision for isolating the individual warning means from the master warning means. 23.1305(c)(6) for Turbine Engine-Powered airplanes	23.1305(c)(6)	25.1305(a)(5)		CAR4b.604(l)
dd.	1.1.2	**Oil Temperature Indicator.** For each engine.	23.1305(a)(3)	25.1305(a)(6)	121.307(i)	91.205(b)(7) CAR4b.604(l) TSO-C43b
ee.	1.1.2	**Fire Warning Indicators.** 23.1305(a)(5) is for those airplanes required to comply with 23.1203 fire detection system.	23.1305(a)(5)	25.1305(a)(7)		CAR4b.485
ff.	1.1.2	**Augmentation Liquid Quantity Indicator.** Appropriate for the manner in which the liquid is to be used in operation) for each tank.		25.1305(a)(8)		

11) COCKPIT – AVIONICS /OPERATIONS (CONT'D)

	SAI	DESCRIPTION: POWERPLANT INSTRUMENTS (CONT'D)	FAR 21/23	FAR 25/33	FAR 121	OTHER
gg.	1.1.2	**N1, N2, N3 Tachometer**. To indicate the speed of the rotors with established limiting speeds for each engine.	23.1305(c) (5)	25.1305(c) (3)	121.307(j)	CAR4b.604(o) 91.205(b)(4) TSO-C49b
hh.	1.1.2	**Engine starter Indication.**		25.1305(c) (4)		
ii.	1.1.2	**Powerplant Ice Protection System Indicator.** To indicate the functioning of the system for each engine.	23.1305(c) (7)	25.1305(c) (5)		
jj.	1.1.2	**Fuel Strainer or Filter Indicator.** To indicate the occurrence of contamination of the strainer or filter before it reaches the capacity established in accordance with 25.997.	23.997 23.1305(c) (8)	25.997 25.1305(c) (6)		AD 96-07-09
kk.	1.1.2	**Oil Strainer or Filter Warning**. If it has no bypass, to warn the pilot of the occurrence of contamination of the strainer or filter screen before it reaches the capacity established in accordance with 25.1019(a)(2).	23.1019 23.1305(c)9	25.1019 25.1305(c) (7)		
ll.	1.1.2	**Fuel Heat Indication**. Indicate the proper functioning of any heater used to prevent ice clogging of fuel system components.	23.1305(c) (10)	25.1305(c) (8)		
mm	1.1.2	**Thrust Indicator**. Or a parameter that is directly related to thrust, to the pilot. The indication must be based on the direct measurement of thrust or of parameters that are directly related to thrust. The indicator must indicate a change in thrust resulting from any engine malfunction, damage, or deterioration. 23.1305(d)(1) for Turbojet/Turbofan engine powered airplanes 25.1305(d)(1) for Turbojet engine powered airplanes.	23.1305(d) (1)	25.1305(d) (1)		CAR4b.604(q)
nn.	1.1.2	**Thrust Reverser Position Indication**. Means to indicate to the flight crew when the thrust-reversing device is in the reverse thrust position, for each engine using a thrust reversing device. 23.1305(d)(2) for Turbojet/Turbofan engine powered airplanes. 25.1305(d)(2) for Turbojet engine powered airplanes.	23.1305(d) (2)	25.1305(d) (2)		CAR4b.604(t)
oo.	1.1.2	**Vibration Indicator.** To indicate rotor system unbalance		25.1305(d) (3)		
pp.	1.1.2	**Torque Indicator.** For each engine. (Turbo-propeller powered airplanes)	23.1305(e) (1)	25.1305(e) (1)		CAR4b.603®
qq.	1.1.2	**Propeller Blade Angle Position Indication.** To indicate to the flight crew when the blade angle is below the flight low pitch position, for each propeller. (Turbo-propeller powered airplanes)	23.1305(e) (2)	25.1305(e) (2)	121.307(l)	CAR4b.603(s)
rr.	1.1.2	**Thrust or Power Augmentation**. To indicate the proper functioning of that system to the flight crew. (Turbo-propeller powered airplanes) (If equipped)	23.1305(f)	25.1305(f)		
		RADIO EQUIPMENT:				
ss.	1.1.2	**Radio Equipment.** **Two systems for *two-way radio communications***, 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 use of a common antenna system is acceptable if adequate reliability is shown. **Two systems *for radio navigation***, 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 use of a common antenna system is acceptable if adequate reliability is shown.		25.1307(d) 25.1307(e)	121.345	CAR4b.650 8300.10 Vol. 2 CH. 237 AC 25.10 TSO-C31d TSO-C32d TSO-C37d TSO-C38d TSO-C40c TSO-C41d TSO-C50c TSO-C57a TSO-C58a
tt.	1.1.2	**Radio Equipment for operations under VFR over routes navigated by pilotage.**			121.347	CAR4b.605 91.205(d)

11) COCKPIT – AVIONICS / OPERATIONS (CONT'D)

	SAI	DESCRIPTION: RADIO EQUIPMENT (CONT'D)	FAR 21/23	FAR 25/33	FAR 121	OTHER
uu.	1.1.2	**Radio Equipment for operations under VFR over routes not navigated by pilotage or for operations under IFR or over the top.** Marker beacon (1), ILS receiver (1), LFRR (1) or ADF receiver (1) (as applicable) if VOR receivers (2), DME (1). Mics (2), & headsets (2) or headsets (2), & speaker (1).		25.1307(e)	121.349	CAR4b.605 91.205(e) TSO-C58a,
vv.	1.1.2	**Radio and Navigation Equipment for extended overwater operations and for certain other operations.** Marker beacon (1), ILS receiver (1), LFRR (1) or ADF receiver (1) (as applicable) if VOR receivers (2), DME (1). Mics (2), & headsets (2) or headsets (2), & speaker (1). PLUS LRNS (2) when VOR or ADF is unusable. 1 LRNS may be used if approved.		25.1307	121.351	CAR4b.605 91.511 AC 121-13
ww.	1.1.2	**Flight Management Systems (FMS).** Verify database is current.				8300.10 Vol. 2 CH. 1 & CH. 237 AC 20-129 AC 20-130A AC 25-15 RTCA DO178A & B TSO-C115A
xx.	1.1.2	**Equipment for operations on which specialized means of navigation is used.** Refer to 121.355 for requirements. 121 Appendix G Operations in Reduced Vertical Separation Minimum (RVSM) Airspace.		25.1307	121.355 121 app. G	
yy.	1.1.2	**Traffic Alert and Collision Avoidance System**. In addition, the appropriate manuals required by 121.131 shall contain the following information on the TCAS II System or TCAS I System, as appropriate, as required by this section: (1) Appropriate procedures for (i) The operation of the equipment; and (ii) Proper flight crew action with respect to the equipment. ***TCAS ANTENNA***. The active Mode S transponder shall have a top and bottom Omni-directional antenna. The TCAS II shall have a top directional antenna and a bottom Omni-directional or directional antenna. (A) Directional antennas. For an aircraft installation, the TCAS II directional antenna should be located on the top forward fuselage as close to the centerline as possible. If more than one directional antenna is provided, locate the second antenna in a similar manner on the lower fuselage. The TCAS II antennas should be mounted on the aircraft with at least 20-db isolation from other L band frequency antennas. Since the antenna diameter may be large, some structural considerations may be necessary and a centerline offset resulting in an angular offset of up to 5 degrees is acceptable. The maximum height of the directional antenna is expected to be approximately 1 inch, and therefore is not considered susceptible to icing effects in the general area of the proposed installation. Otherwise, anti-icing provisions should be considered. Section 3 of Volume I of RTCA document DO-185 provides antenna selection and performance criteria. For propeller driven aircraft, the location and performance of the directional antenna must be investigated for minimum blockage and to ensure that the propellers do not interfere with system operation. (B) Omni-directional antennas. The TCAS II antennas should be mounted on the aircraft with at least 20-db isolation from other L band frequency antennas. The Mode S transponder antennas shall be mounted at locations chosen for adequate isolation and signal coverage. These antennas may be standard ATCRBS transponder antennas. (C) Structural analysis. A structural analysis of the antenna installations showing compliance with the applicable FAR should be submitted to the FAA. This includes the structural provisions for a beam steering unit (if installed) if it is not mounted in a standard avionics rack.	23.1301	25.1301	121.356	91.221 8300.10 Vol. 2 CH. 237 AC 120-55a AC 20-131A TSO-C119b
zz.	1.1.2	**ATC Transponder**			121.345(c)	91.215 91.413
aaa.	1.1.2	**Airborne Weather Radar Equipment**. No person may operate any transport category airplane (except C-46 type airplanes) unless approved airborne weather radar equipment has been installed in the airplane.			121.357	AC 43-14 TSO-C63c RTCA DO-173 TSO-C133

11) COCKPIT – AVIONICS / OPERATIONS (CONT'D)

	SAI	DESCRIPTION: RADIO EQUIPMENT (CONT'D)	FAR 21/23	FAR 25/33	FAR 121	OTHER
bbb.	1.1.2	**Low Altitude Windshear System Equipment.** Refer to 121.358 for applicability.			121.358	8430.54 8430.59 HBAW 91-12 AC 00-54 AC 25-12 AC 120-41 AC 120-50 TSO-C117a
ccc.	1.1.2	**Ground Proximity Warning / Glide Slope Deviation Alerting System**. No person may operate a turbine-powered airplane unless it is equipped with a ground proximity warning system that meets the performance and environmental standards of TSO-C92 or incorporates TSO-approved ground proximity warning equipment. Verify that AFM has info required.			121.360	8300.10 Vol. 2 CH. 237 RTCA DO-161A TSO-C92c
ddd.	1.1.2	**Altitude Alerting System or Device.** Refer to 91.219 for requirements.				91.219
eee.	1.1.2	**Radio Altimeter**. Refer to equipment requirements for lower landing minimum operations.				TSO-C87
fff.	1.1.2	**Global Positioning System GPS**				8110.60 8300.10 Vol. 2 CH. 237 FSAW 94-32(A) AC 20-130A AC 20-138 TSO-C115B TSO-C129
ggg.	1.1.2	**Terrain Awareness and Warning System.** Required for all airplanes mfg. After March 29, 2002. TAWS meet TSO C151. Airplanes mfg. On or before March 29, 2002: May not operate after March 29, 2005 unless equipped with TAWS TSO C151.			121.354	TSO C151
hhh.	1.1.2	**Take Off Warning System.** 121.293 requires Part 23 normal and commuter category airplanes to have takeoff warning systems that meet the requirements of 25.703. The system does not have to cover any device for which it is demonstrated that takeoff with the device in the most adverse position would not create a hazardous condition. 25.703 requires and aural warning during the initial portion of the takeoff roll that the airplane is in a configuration that would not allow a safe takeoff.		25.703	121.293	AC 25.703-1
iii.	1.1.2	**Landing Gear Aural Warning Device.** 121.189 requires a wing activated aural means to warn that the landing gear is not extended and locked for landing. This section does not apply to transport category airplanes that are required to comply with 25.729(e) as part of type certification. 25.729(e) requires a warning to serve the same purpose as 121.189, but does not require the warning to be activated by wing flap position. 23.729(f) requires a landing gear warning system, but does not require the warning to be aural. This section currently requires such warning means to be both throttle and flap position activated	23.729(f)	25.729(e) 25.1309(c)	121.289(a)	CAR4b.334(e)(2)
jjj.	1.1.2	**Aural speed Warning Device**. A speed-warning device is required for turbine engine powered airplanes and for airplanes with VMO/MMO greater than 0.8 VDF/MDF or 0.8 VD/MD. 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 VMO plus 6 knots or MMO + 0.01. The upper limit of the production tolerance for the warning device may not exceed the prescribed warning speed.	23.1303(e)	25.1303(c) (1)		CAR4b.603(k) 91.603
kkk.	1.1.2	**North Atlantic Minimum Navigation Performance Specifications (NAT/MNPS)**. Refer to FAR 91 - Appendix C for requirements. Advisory Circulars 91-49, General Aviation Procedures for Flight in North Atlantic Minimum Navigation Performance Specifications Airspace, as amended, and AC 120-33, Operational Approval of Airborne Long Range Navigation Systems for Flight Within the North Atlantic Minimum Navigation Performance Specifications Airspace.				91.703 91.705 91 Appendix C HBAW 95-10 AC 120-33

11) COCKPIT – AVIONICS / OPERATIONS (CONT'D)

	SAI	DESCRIPTION: RADIO EQUIPMENT (CONT'D)	FAR 21/23	FAR 25/33	FAR 121	OTHER
lll.	1.1.2	**BRNAVRNP-10 Required Navigation Performance 10 Capability.** RNP-10 requires that each individual aircraft must be determined to be qualified, and appropriate FAA offices must approve the individual operator before the operator conducts flight in RNP-10 airspace. Refer to FAA Order 8400.12 for aircraft/equipment requirements.			121 app. G	8400.10 Vol. 3 CH. 1 HBAT 98-16A HBAT 98-15 HBAW 98-06 HBAW 98-07A AC 90-96 ICAO 9613-AN/937

12) COCKPIT – MAINTENANCE/OPERATIONS

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.1.2	**Windows**. Inspect for Delamination, scratches, crazing, and general visibility	21.183 23.775	25.775	121.367	8300.10 Vol. 3 CH. 1
b.	1.1.2	**Cockpit Interiors/Fire Resistance.** Look on back of cushions to identify if the seats have been blocked. It should state that the cushion meets the requirements of 25.853(c). Review documentation of flame testing. Ac 25.853-1 - Flammability Requirements For Aircraft Seat Cushions, FSAT 96-11 - Flammability Of Airline Blankets.	23.853 23.855 23.1359 23 app. F	25.853(a) 25.855 25 app. F	121.215 121.312,	CAR 4B.381 AC 25-10 AC 25.853-1
c.	1.1.1	**Emergency Exit Arrangement.** Each emergency exit, including a flight crew emergency exit, must be a movable door or hatch in the external walls of the fuselage, allowing unobstructed opening to the outside. Each emergency exit must be operable from the inside and the outside except that sliding window emergency exits in the flight crew area need not be operable from the outside if other approved exits are convenient and readily accessible to the flight crew area. The required crew emergency exits are accessible under any cargo loading condition.	23.807	25.809 25.857	121.221	CAR 4b.362
d.	1.1.1 1.1.2 1.3.2	**Emergency Equipment.** Each item of emergency and flotation equipment: (1) Must be inspected regularly in accordance with inspection periods established in the operations specifications to ensure its condition for continued serviceability and immediate readiness to perform its intended emergency purposes; (2) Must be readily accessible to the crew and, with regard to equipment located in the passenger compartment, to passengers; (3) Must be clearly identified and clearly marked to indicate its method of operation; and (4) When carried in a compartment or container, must be carried in a compartment or container marked as to contents and the compartment or container, or the item itself, must be marked as to date of last inspection.			121.309	CAR4b.646
e.	1.1.2	**Medical Kit** (if located on flightdeck.) Refer to requirements located at Section 4. Cabin-Maintenance of this job aid.			121.309(d) 121 app. A	91.513 8300.10 Vol. 3 CH. 1, AC 25-17
f.	1.1.2	**Hand Fire Extinguishers for Flight Crew.** At least one hand fire extinguisher must be conveniently located on the flight deck for use by the flight crew. 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 and, for passenger compartments, must be designed to minimize the hazard of toxic gas concentrations. Check for Fire extinguisher security, pressure, hydrostatic test dates, and seal.	23.851	25.851	121.309(c)	CAR4b.380 91.513 AC 20-42C
g.	1.1.2	**Protective Breathing Equipment (PBE).** If there is a class A, B, or E cargo compartment, protective breathing equipment must be installed for the use of appropriate crewmembers. In addition, protective-breathing equipment must be 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. HBAT 98-29: Smoke Goggles and Oxygen Masks (PBE)		25.1439	121.337	CAR4b.380 8300.10 Vol. 3 CH. 1 HBAT 98-29 AC 25-9a AC 25-18 TSO-C99

12) COCKPIT – MAINTENANCE/OPERATIONS (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
h.	1.1.1	**Oxygen Equipment and Supply.** Aircraft must be equipped with Oxygen equipment per 25.1441 to 25.1453. Oxygen/Fire extinguishers pressure vessels inspections must comply with 49 CFR 173.34, DOT, or US Coast Guard requirements. Crewmember Demand Oxygen Masks TSO-C78, Crewmember Protective Breathing Equipment TSO-C116, Oxygen Mask Assembly Continuous Flow, Passenger (For Air Carrier Aircraft) TSO-C64a, Oxygen Regulators, Demand TSO-C89 Protective Breathing Equipment TSO-C99. Check all portable and fixed oxygen bottles and fire bottles for hydrostatic test dates.	23.1441 thru 23.1453	25.1441 thru 25.1453	121.309, 121.329, 121.333, 121.574	CAR4b.651 91.211 CFR 49
i.	1.1.2	**Seats, Berths, Safety Belts, and Harnesses**. Each seat at a flight deck station must have 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 occupant's necessary flight deck functions. There must be a means to secure each combined restraint system when not in use to prevent interference with the operation of the airplane and with rapid egress in an emergency. Aircraft Seats and Berths (Type I Transport, 6g Forward Load) TSO-C25a, Aircraft Seats and Berths TSO-C39b, Safety Belts TSO-C22g, Torso Restraint Systems TSO-C 114. Ac 21-25a - Approval Of Modified Seating Systems Initially Approved Under A Technical Standard Order Ac 25-17 - Transport Airplane Cabin Interiors Crashworthiness Handbook Ac 25.562-1a - Dynamic Evaluation Of Seat Restraint Systems & Occupant Protection On Transport ,	23.785	25.785(g) 25.853	121.311(f)	CAR4b.358 CAR4b.381 91.521 AC 21-25A AC 25.562-1A TSO-22g TSO-39b TSO-C 114 TSO-C25a
j.	3.1.3	**Approved Cockpit Check Procedures Checklist.**	23.1585	25.1585	121.315	CAR4b.470
k.	1.1.2 3.1.3	**Observer Seat**. Verify installation of cockpit observer seat and all required peripheral equipment.		25.785(l) 25.853	121.581	CAR4b.358
l.	1.1.1 1.3.1	**Placards.** Verify mfg. required placards are installed. Refer to aircraft maintenance manual chapter 11 for data. All placards required in either the approved AFM, the applicable operating rules, or the Certification Basis must be installed in the airplane.	23.1557	25.1557		CAR4b.730 AMM CH. 11
m.	1.1.1 1.1.2	**Windshield Wiper**. Or equivalent for each pilot station.			121.313(b)	91 app. A AC 25-17

13) CABIN INTERIOR – MAINTENANCE / OPERATIONS

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.1.1	**Compartment Interiors/Fire Resistance** Review documentation of flame testing. AC 25-10 - Guidance For Installation Of Miscellaneous, Non-required Electrical Equipment AC 25-17 - TRANSPORT AIRPLANE CABIN INTERIORS CRASHWORTHINESS HANDBOOK AC 25.853-1 - FLAMMABILITY REQUIREMENTS FOR AIRCRAFT SEAT CUSHIONS.	23.853 23 app. F	25.785 25.853 25 app. F	121.215 121.312	CAR 4B.381 AC 25-10 AC 25-17 AC 25.853-1
b.	3.1.2	**Passenger Safety Information Briefing Cards.** Perform random sample and assure proper distribution.			121.571(b)	AC 121-24A
c.	1.1.1 1.1.2	**Lavatory Placard**. Sign or placard stating, "Federal Law provides for a penalty of up to $2,000 for tampering with the smoke detector installed in this lavatory."			121.317(e)	
d.	1.1.1	**Floor Surfaces**. The floor surface of all areas, which are likely to become wet in service, must have slip resistant properties.		25.793		

13) CABIN INTERIOR – MAINTENANCE /OPERATIONS (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
e.	1.1.1	**Ashtrays.** If smoking is to be 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 the ashtray can be seen readily from the cabin side of each lavatory served. Each receptacle used for the disposal of flammable waste material must be fully enclosed, constructed of at least fire resistant materials, and must 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.	23.853(c)(1) 23.853(d)(2)	25.853(f) 25.853(g)	121.215(d)	CAR 4b.381(c)
f.	1.1.1 1.1.2	**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 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. AD 74-08-09 R2 requires operators inclusive of B737 aircraft 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. AC 25-17 - TRANSPORT AIRPLANE CABIN INTERIORS CRASHWORTHINESS HANDBOOK	23.853(d)(1)	25.853(h) 25.854	121.215(e), 121.308	CAR 4b.381(d) **AD 74-08-09** SFAR41.7 AC 25-17
g.	1.1.2	**Pilot Compartment Doors**. A lockable door installed between the pilot compartment and the passenger compartment: (a) The emergency exit configuration must be designed so that neither crewmembers nor passengers need use that door in order to reach the emergency exits provided for them; and (b) Means must be provided to enable flight crewmembers to directly enter the passenger compartment from the pilot compartment if the cockpit 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.		25.772	121.217 121.219 121.313(f)	CAR 4b.356 AC 25-17
h.	1.1.1	**Ventilation**. Each passenger or crew compartment must be suitably ventilated. Carbon monoxide concentration may not be more than one part in 20,000 parts of air, and fuel fumes may not be present. In any case where partitions between compartments have louvers or other means allowing 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.	23.831	25.831	121.219	SFAR 41.4
i.	1.1.2	**Carriage of Cargo in Passenger Compartments**. Refer to FAR 121.285 for requirements.	23.855	25.855	121.285 121.583 121.589	CAR4b.359 91.525
j.	1.1.1	**Cabin Load Capability.** The structure must be designed to give each occupant every reasonable chance of escaping serious injury in a minor crash landing when the occupant experiences the following ultimate inertia forces acting separately relative to the surrounding structure. : (i) Upward, 3.0 g. (ii) Forward, 9.0 g. (iii) Sideward, 3.0 g on the airframe; and 4.0 g on the seats and their attachments. . (iv) Downward, 6.0 g. (v) Rearward, 1.5 g. For equipment/ cargo in the passenger compartments and any other large masses, these items must be positioned so that if they break loose they will be unlikely to: (i) Cause direct injury to occupants. ; (ii) Penetrate fuel tanks or lines or cause fire or explosion hazard by damage to adjacent systems. Or (iii) Nullify any of the escape facilities provided for use after an emergency landing. When such positioning is not practical (e.g. fuselage mounted engines or auxiliary power units) each such item of mass shall be restrained under all loads up to those specified previously. The local attachments for these items should be designed to withstand 1.33 times the specified loads if these items are subject to severe wear and tear through frequent removal (e.g. quick-change interior items).	23.561	25.561	121.285	CAR4b.260 91.525
k.	1.3.2	**Galleys/Service Centers.** Inspect the following: Trash bin lids for fit, Storage compartment restraints, Stationary cart tie-downs, Lower lobe equipment/restraints, Lift operation, Galley supplies stowage.	21.183		121.367	

13) CABIN INTERIOR – MAINTENANCE /OPERATIONS (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
l.	1.1.1	**Stowage Compartments.** Check for weight restriction placards and the doors for proper latching, when 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 its placarded maximum weight of contents and for the critical load distribution at the appropriate maximum load factors corresponding to the specified flight and ground load conditions, and to the emergency landing conditions of § 25.561(b). 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 loads specified in paragraph (a) of this section. For stowage compartments in the passenger and crew cabin, if the means used is a latched door, the design must take into consideration the wear and deterioration expected in service.	23.561 23.787 23.1557	25.561 25.787 25.1557	121.589 121.285	CAR4b.359
m.	1.1.1	**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).	23.787(a)(2)	25.789	121.589	CAR4b.359 91.523
n.	1.3.2	**Emergency Equipment.** Each item of emergency and flotation equipment: (1) ***Must be inspected regularly in accordance with inspection periods established in the operations specifications*** to ensure its condition for continued serviceability and immediate readiness to perform its intended emergency purposes; (2) Must be readily accessible to the crew and, with regard to equipment located in the passenger compartment, to passengers; (3) Must be clearly identified and clearly marked to indicate its method of operation; and (4) When carried in a compartment or container, must be carried in a compartment or container marked as to contents and the compartment or container, or the item itself, must be marked as to date of last inspection.			121.309	
o.	1.1.2	**Hand Fire Extinguishers for Passenger Compartment.** Refer to 121.309 for requirements. 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 and, for passenger compartments, must be designed to minimize the hazard of toxic gas concentrations. At least two of the required hand fire extinguisher installed in passenger-carrying airplanes must contain Halon 1211 (bromochlorofluoromethane) or equivalent as the extinguishing agent. At least one hand fire extinguisher in the passenger compartment must contain Halon 1211 or equivalent. Check for Fire extinguisher security, pressure, hydrostatic test dates, and seal.	23.851	25.851	121.309	CAR4b.381 91.513 AC 25-17 AC 20-42C NFPA 10
p.	1.1.2	**Hand Fire Extinguishers for Cargo Compartment**. At least one hand fire extinguisher must be conveniently located for use in each class E cargo compartment that is accessible to crewmembers during flight. 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 and, for passenger compartments, must be designed to minimize the hazard of toxic gas concentrations. Check for Fire extinguisher security, pressure, hydrostatic test dates, and seal		25.851	121.309	CAR4b.384 91.513 AC 25-17 AC 20-42C NFPA 10
q.	1.1.2	**Hand Fire Extinguishers for Galley Compartment**. At least one hand fire extinguisher must be conveniently located for use in each galley located in a compartment other than a passenger, cargo, or crew compartment. 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 and, for passenger compartments, must be designed to minimize the hazard of toxic gas concentrations. . Check for Fire extinguisher security, pressure, hydrostatic test dates, and seal.		25.851	121.309	CAR4b.381 91.513 AC 25-17 AC 20-42C NFPA 10
r.	1.1.2	**First Aid and Emergency Medical Equipment and Protective Gloves.** Approved first aid kits, and in airplanes for which a flight attendant is required, an emergency medical kit. 2 Pairs of protective latex gloves, or equivalent non-permeable gloves, equal in number to the number of first aid kits on board the aircraft. These gloves must be distributed as evenly as practicable throughout the cabin of the aircraft.	`		121.309 121 app. A	91.513 8300.10 Vol. 3 CH. 1 AC 25-17
s.	1.1.2	**Emergency Evacuation**. Each crew and passenger area must have emergency means to allow rapid evacuation in crash landings, with landing gear extended or retracted. For aircraft with a service compartment located below the main deck which may be occupied during taxi or flight but not during take off and landing the following apply: Refer to 25.819 for Lower deck service compartments (including galleys) requirements. Check Slide containers to ensure containers are properly marked for content. Check pressure of slide inflation bottle, if visible. PL 279 Exit Row Seating Approval Inst	23.803	25.803 25.819 25 app. J	121.291 121.570 121 app. D	CAR4b.362 8300.10 Vol. 2 CH. 77 & 85, Vol. 3 CH. 1 PL 279

13) CABIN INTERIOR – MAINTENANCE /OPERATIONS (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
t.	1.1.1	**Means for Emergency Evacuation**. Each passenger carrying landplane emergency exit (other than over the wing) that is more than 6 feet from the ground with the airplane on the ground and the landing gear extended, must have an approved means to assist the occupants in descending to the ground.		25.810	121.310	CAR4b.362 TSO-C69b
u.	1.1.2	**Interior Emergency Exit Marking.** Emergency Exit Access. For each Type III Exit, regardless of the passenger capacity of the airplane in which it is installed, there must be placards that "if the exit is a removable hatch, state the WEIGHT of the hatch and indicate an appropriate location to place the hatch after removal. Refer to 121.310(b) for additional requirements.	23.811	25.811 25.813(3)(iii)	121.310(b)	CAR4b.362 AC 45-2A, 25-17
v.	1.1.2	**Emergency Exit Operating Handles.** Refer to 121.310(e) for requirements.	23.811	25.811	121.310(e)	CAR4b.362
w.	1.1.2	**Emergency Exit Access**. Access to emergency exits must be provided. Refer to 121.310(f) for requirements. In addition, Except as provided by § 121.627and except for an airplane used in operations under this part on October 16, 1987, and having an emergency exit configuration installed and authorized for operation prior to October 16, 1987, for an airplane that is required to have more than one passenger emergency exit for each side of the fuselage, no passenger emergency exit shall be more than 60 feet from any adjacent passenger emergency exit on the same side of the same deck of the fuselage, as measured parallel to the airplane's longitudinal axis between the nearest exit edges.	23.813	25.813	121.310(f) 121.310(m)	CAR4b.362
x.	1.1.2	**Floor-level Exits**. Each floor-level door or exit in the side of the fuselage (other than those leading into a cargo or baggage compartment that is not accessible from the passenger cabin) that is 44 or more inches high and 20 or more inches wide, but not wider than 46 inches, each passenger ventral exit (except the ventral exits on M-404 and CV-240 airplanes), and each tail cone exit, must meet the requirements of this section for floor-level emergency exits.		25.807 25.813 25 app. J	121.310(i)	CAR4b.362 AC 25-17
y.	1.1.2	**Additional Emergency Exits.** Approved emergency exits in the Pax compartments that are in excess of the minimum number of required emergency exits must meet all of the applicable provisions of 121.310(f)(1), (2), &(3) and must be readily accessible.		25.807 25.813 25 app. J	121.310(j)	CAR4b.362 AC 25-17
z.	1.1.2	**Ventral Exit and Tailcone Exit**. Must be: (1) Designed and constructed so that it cannot be opened during flight; and (2) Marked with a placard readable from a distance of 30 inches and installed at a conspicuous location near the means of opening the exit, stating that the exit has been designed and constructed so that it cannot be opened during flight.		25.807	121.310(k)	CAR4b.362 AC 25-17
		DESCRIPTION: Emergency Equipment For Extended Overwater Operations / Uninhabited Terrain Areas				
aa.	1.1.2	The required life rafts, life preservers, and survival type emergency locator transmitter (ELT) must be easily accessible in the event of a ditching without appreciable time for preparatory procedures. This equipment must be installed in conspicuously marked and approved locations.			121.339 121.352	
bb.	1.1.2	**Life Preserver.** Equipped with an approved survivor locator light, for each occupant of the airplane. Check inspection date of randomly selected vests.	23.1415	25.801 25.1411 25.1415	121.339 121.340	CAR 4b.645 91.205, 91.509 HBAW 91-14 AC 120-47 TSO-C13F, C72c
cc.	1.1.2	**Life Rafts**. Enough life rafts (each equipped with an approved survivor locator light) of a rated capacity and buoyancy to accommodate the occupants of the airplane. Unless excess rafts of enough capacity are provided, the buoyancy and seating capacity of the rafts must accommodate all occupants of the airplane in the event of a loss of one raft of the largest rated capacity.	23.1415	25.801 25.1411 25.1415 25 app. J	121.339	CAR4b.645 TSO-C70a
dd.	1.1.2	**Pyrotechnic Signaling Device.** At least one for each life raft. Uninhabited Terrain Areas			121.339	CAR4b.645 91.509 AC 120-47 TSO-C85
ee.	1.1.2	**Survival Kit.** Appropriately equipped for the route to be flown must be attached to each required life raft. Uninhabited Terrain Areas			121.339 121.353	91.509 AC 120-47

13) CABIN INTERIOR – MAINTENANCE /OPERATIONS (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
ff.	1.1.2	**Protective Breathing Equipment**. If there is a class A, B, or E cargo compartment, protective breathing equipment must be installed for the use of appropriate crewmembers. In addition, protective-breathing equipment must be 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.		25.1439	121.309 121.329 121.337	CAR4b.380 CAR4b.651 HBAT 98-29 AC 25-9a AC 25-17 AC 25-18 TSO-C99
gg.	1.1.2	**Oxygen Equipment and Supply.** Aircraft must be equipped with Oxygen equipment per 25.1441 to 25.1453. Oxygen/Fire extinguishers pressure vessels inspections must comply with 49 CFR 173.34, DOT, or US Coast Guard requirements. Crewmember Demand Oxygen Masks TSO-C78, Crewmember Protective Breathing Equipment TSO-C116, Oxygen Mask Assembly Continuous Flow, Passenger (For Air Carrier Aircraft) TSO-C64a, Oxygen Regulators, Demand TSO-C89 Protective Breathing Equipment TSO-C99. Check all portable and fixed oxygen bottles and fire bottles for hydrostatic test dates. Check for proper pressure and security.	23.1441 thru 23.1453	25.1441 thru 25.1453	121.309 121.329 121.333 121.574	CAR4b.651 91.211 91.405 CFR 49
hh.	1.1.2	**Compartment Interiors/Fire Resistance**. Look on back of cushions to identify if the seats have been fire-blocked. It should state that the cushion meets the requirements of 25.853(c). Review documentation of flame testing. Includes material for wall & ceiling. AC 25-10 - GUIDANCE FOR INSTALLATION OF MISCELLANEOUS, NON-REQUIRED ELECTRICAL EQUIPMENT. AC 25.853-1 - FLAMMABILITY REQUIREMENTS FOR AIRCRAFT SEAT CUSHIONS.	23.853 23 app. F	25.853 25 app. F	121.215 121.312	CAR4b.381 AC 25-10 AC 25-17 AC 25-25A AC 25-853-1 TSO-39b
ii.	1.1.2	**Passenger Seats, Berths, Safety Belts, and Harnesses**. Refer to 25.785 for requirements. Check that seats adjacent to emergency exits do not block exit path, seats are secure in seat track (random sample), seat breakover pressure is in accordance with operator's maintenance program (random Sample), "Fasten Seat Belt During Flight" placards are in view from all seats, seat belts have metal-to-metal latches and are in good general condition (random sample). Aircraft Seats and Berths (Type I Transport, 6g Forward Load) TSO-C25a, Aircraft Seats and Berths TSO-C39b, Safety Belts TSO-C22g, Torso Restraint Systems TSO-C 114. Ac 21-25a - Approval Of Modified Seating Systems Initially Approved Under A Technical Standard Order Ac 25-17 - Transport Airplane Cabin Interiors Crashworthiness Handbook Ac 25.562-1a - Dynamic Evaluation Of Seat Restraint Systems & Occupant Protection On Transport , FSAW 95-03 (Extended) Seat Back Break-Over	23.785 23.853	25.785(g) 25.853	121.311	CAR4b.358 CAR4b.381 CAR4b.643 91.107 91.521 FSAW 95-03 AC 25-17 AC 21-25A AC 25.562-1A AC 25.853-1 TSO-C22g TSO-C25a TSO-C39b TSO-C114
jj.	1.1.2	**Cabin Attendant Seats, Berths, Safety Belts, and Harnesses**. Refer to 25.785 for requirements. Pull the jump seat down to ensure seat retracts (those in-path of exits) Inspect seat belts for Technical Standard Order marking, metal-to-metal latching and general condition. Aircraft Seats and Berths (Type I Transport, 6g Forward Load) TSO-C25a, Aircraft Seats and Berths TSO-C39b, Safety Belts TSO-C22g, Torso Restraint Systems TSO-C 114. AC 21-25A - APPROVAL OF MODIFIED SEATING SYSTEMS INITIALLY APPROVED UNDER A TECHNICAL STANDARD ORDER AC 25-17 - TRANSPORT AIRPLANE CABIN INTERIORS CRASHWORTHINESS HANDBOOK AC 25.562-1A - DYNAMIC EVALUATION OF SEAT RESTRAINT SYSTEMS & OCCUPANT PROTECTION ON TRANSPORT AIRPLANES		25.785 25.853	121.311(f)	CAR4b.358 CAR4b.381 CAR4b.643 91.107 91.521 AC 25-17 AC 21-25A AC 25.562-1A AC 25.853-1 TSO-C22g TSO-C25a TSO-C39b TSO-C 114

13) CABIN INTERIOR – MAINTENANCE /OPERATIONS (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
kk.	1.1.1	**Materials for Compartment Interiors.** Refer to 25.853 for requirements.	23.853 23 app. F	25.853 25 App. F	121.215 121.221 121.312 121.314	CAR 4b.381 AC 25.853-1
ll.	1.1.1	**Maximum Number of Seats Abreast**. On airplanes having only one passenger aisle, no more than three seats abreast may be placed on each side of the aisle in any one row.		25.817		
mm.	1.1.1	**Width of Aisle.** Refer to 25.815 for requirements.	23.815	25.815		
nn.	1.1.2	**Cabin Ozone Concentration**. Refer to 25.832 for requirements.		25.832		AC 120-38
oo.	1.1.2	**Smoking/No Smoking Signs**. If smoking is to be prohibited there must be at least one placard so stating that is legible to each person seated in the cabin. If smoking is to be allowed, and if the crew compartment is separated from the passenger compartment, there must be at least one sign notifying when smoking is prohibited. Signs that notify when smoking is prohibited must be operable by a member of the flight crew and, when illuminated, must be legible under all probable conditions of cabin illumination to each person seated in the cabin. In addition, A placard must be located on or adjacent to the door of each receptacle used for the disposal of flammable waste materials to indicate that use of the receptacle for disposal of cigarettes, etc., is prohibited. Lavatories must have "No Smoking" or "No Smoking in Lavatory" placards conspicuously located on or adjacent to each side of the entry door. Symbols that clearly express the intent of the sign or placard may be used in lieu of letters.	23.853(c)	25.791	121.317	CAR4b.644 AC 25-17
pp.	1.1.2	**Fasten Seat Belt Signs.** Signs that notify when seat belts should be fastened and that are installed to comply with the operating rules of this chapter must be operable by a member of the flight crew 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.	23.791	25.791	121.317	CAR4b.644 AC 25-17
qq.	1.1.2	**Door & Key.** Between the passenger and pilot compartments, with a locking means to prevent passengers from opening it without the pilot's permission. The key must be readily available for each crewmember. A means for the crew, in an emergency to unlock each door that leads to a compartment that is normally accessible to passengers and that can be locked by passengers.		25.772	121.313(f) 121.313(g) 121.313(i)	CAR4b.356
rr.	1.1.2	**Door placard**. 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		25.809	121.313(h)	CAR4b.356
ss.	1.1.2	**Placards.** Verify mfg. required placards are installed. Refer to aircraft maintenance manual chapter 11 for data. All placards required in either the approved AFM, the applicable operating rules, or the Certification Basis must be installed in the airplane.	23.1557	25.1557		CAR4b.738 AMM CH. 11

14) CABIN INTERIOR – AVIONICS /OPERATIONS

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.1.1	**Entertainment Systems**	23.1301	25.1301		PL 1725 RTCA/DO-160
b.	1.1.2	**Lavatory Fire Protection.** 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. 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 designed to discharge automatically into each disposal receptacle upon occurrence of a fire in the receptacle.		25.854	121.308	CAR 4b.381 AD's
		EMERGENCY EQUIPMENT:				
c.	1.1.2	**Megaphones.** **Refer to 121.309 for requirements.** A restraining means must be provided that is capable of restraining the megaphone when it is subjected to the ultimate inertia. Check for Megaphone(s) security and general condition.		25.1421	121.309	91.513, AC 25-17

14) CABIN INTERIOR – AVIONICS /OPERATIONS

	SAI	DESCRIPTION: EMERGENCY EQUIPMENT (CONT'D)	FAR 21/23	FAR 25/33	FAR 121	OTHER
d.	1.1.2	**Lighting for Interior Emergency Exit Markings.** Refer to 121.310(c) for requirements.	23.812	25.812	121.310(c)	
e.	1.1.2	**Emergency Light Operation.** Refer to 121.310(d) for requirements.	23.812	25.812	121.310(d)	
f.	1.1.2	**Exterior Emergency lighting and Escape Route.** Refer to 121.310 & 25.810 for requirements. Check general condition of emergency floor path lighting system.		25.810	121.310(h)	
g.	1.1.2	**Portable lights**. No person may operate a passenger-carrying airplane unless it is equipped with flashlight stowage provisions accessible from each flight attendant seat. Check condition of Flight attendant flashlight holder			121.310(l)	8300.10, Vol. 3 CH. 1
h.	1.1.2	**Public Address System**. No person may operate an airplane with a seating capacity of more than 19 passengers unless it is equipped with a public address system. System must be accessible for immediate use from each of two flight crewmember stations in the pilot compartment. Each required floor level passenger emergency exit that has an adjacent flight attendant seat must have a microphone that is readily accessible to the seated flight attendant. Refer to 25.1423 for requirements. Aircraft mfg. after 11/27/90 must meet 25.1423.	21.305	25.819 25.1423	121.318	AC 25-17
i.	1.1.2	**Crewmember Interphone System**. No person may operate an airplane with a seating capacity of more than 19 passengers unless the airplane is equipped with a crewmember interphone system that: Refer to 121.319 for requirements		25.789 25.1423	121.319	AC 25-17
j.	1.1.2	**Emergency Equipment For Extended Overwater Operations / Uninhabited Terrain Areas** The required life rafts, life preservers, and survival type emergency locator transmitter must be easily accessible in the event of a ditching without appreciable time for preparatory procedures. This equipment must be installed in conspicuously marked and approved locations.			121.339	
k.	1.1.2	**Survival Type Emergency locator Transmitter**. Batteries used in this transmitter must be replaced (or recharged, if the battery is rechargeable) when the transmitter has been in use for more than 1 cumulative hour, or when 50 percent of their useful life (or for rechargeable batteries, 50 percent of their useful life of charge) has expired, as established by the transmitter manufacturer under its approval. The new expiration date for replacing (or recharging) the battery must be legibly marked on the outside of the transmitter. The battery useful life (or useful life of charge) requirements of this paragraph do not apply to batteries (such as water activated batteries) that are essentially unaffected during probable storage intervals.		25.1415(d)	121.339 121.353	91.207 AC 25-17 TSO-C91a, TSO-C126
		MISCELLANEOUS EQUIPMENT:				
l.	1.1.2	**Protective Fuses**. If protective fuses are installed on an airplane, the number of spare fuses approved for that airplane and appropriately described in the certificate holder's manual.	23.1357	25.1357	121.313(a)	91.205, AC 25-16, 25.1357-1
m.	1.1.2	**Power Supply.** Refer to requirements of 25.1309, 25.1331, 25.1351(a) and (b)(1) through (4), 25.1353, 25.1355, and 25.1431(b).	23.1309 23.1331 23.1351(a) 23.1351(b) (1) thru (b)(4) 23.1353, 23.1365 23.1431(b)	25.1309, 25.1331, 25.1351(a) 25.1351(b) (1) thru(b)(4) 25.1353, 25.1355 25.1431(b)	121.313(c)	AC 20-136 AC 25.1309-1A

15) GENERAL CARGO COMPARTMENT REQUIREMENTS – AVIONICS AND / OR MAINTENANCE

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.3.1 1.3.2	**Compartment Inspection.** Perform inspection in electrical/electronics compartment(s). Inspect for cleanliness, poor condition, loose/missing equipment, deterioration breakage leakage, corrosion, proper installation, and other indications of defects. Pay particular attention to cargo and container handling systems, lighting, smoke detectors & fire extinguishers (if applicable), paneling, cargo pit tape installation/adhesion, leaking and corrosion including that which may normally be concealed by compartment liners and paneling. Ensure an Airworthiness Directive search for particular Make and Model aircraft is accomplished. (I.e. Cargo doors, weight restrictions, etc.) Ensure any relief given in the operator's MEL is based on the MMEL or other approved data (i.e. STC or TC) Ensure CAMP includes all aspects of the Cargo installation.	21.183 23.787 23.855		121.367 121.221(a)(1) thru (a)(4)	43 app. D 8300.10 Vol. 3 CH. 1 HBAT 97-12A HBAW 97-12A AC 25-18 AD 93-07-15 AMM
b.	1.3.1	**Placards.** Verify mfg. required placards are installed. Refer to aircraft maintenance manual chapter 11 for data. All placards required in either the approved AFM, the applicable operating rules, or the Certification Basis must be installed in the airplane.	23.1557	25.1557		CAR4b.738 AMM CH. 11
c.	1.1.1	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 when necessary.			121.217	
d.	1.1.1	Each passenger or crew compartment must be suitable ventilated. Ref. FAR 25.831 or CAR 4b.371, as applicable.		25.831	121.219	4b.371
e.	1.1.1	Each compartment occupied by flight crew or passengers must be covered with at least flash, fire, or flame resistant material, as prescribed for the area, by the applicable regulation. FAR 25, crew/passengers compartments must be lined with materials tested in compliance with FAR 25, Subpart F, Part IV V, or I as applicable to the compartment area/component. CAR 4b aircraft must meet CAR 4b.381 requirements. Note: Lining of the compartments depends on the certification basis of the aircraft, for example the B-747 main deck class "E" compartment is not completely lined.		25.853(a) to 25.853 (h)		4b.381(a) to 4b.381 (f)
f.	1.1.2	Each compartment must be designed so that, when used for storing cargo or baggage, it meets the requirements of this paragraph. The compartment must meet one of the class requirements of FAR 25.857 or CAR 4b.382(c) and CAR 4b.383(a) to (e).		25.857		4b.382(c) 4b.383(a) to 4b.383(e).
g.	1.1.1	Wires, cables, fluid lines, and equipment. Radios (including CVR & DFDR installations forward of the rear bulkhead), or accessories, whose damage, failure and/or sources of heat could affect the safety of flight, can not be exposed. They must be protected, insulated and shielded. Cargo compartments must met specified individual fire detection and protection requirements of this section. NOTE: FAA Inspector should read specific requirements for each class compartment.		25.855(e) to 25.855(i)		4b.382(a) to 4b.382(d)
h.	1.1.2	Required crew emergency exists must be accessible under all cargo loading conditions. Cockpit flight crews emergency exits can not be located within the "E" compartment. For aircraft which cockpit emergency side windows and/or top hatch can not be opened from outside, the nearest suitable most forward main cabin exit is considered as a required flight crew emergency exit.		25.809(a) & (b) 25.857(e)(5)		4b.383(e)(5) 4b.362(a)
i.	1.1.1	Major alterations of aircraft modified to cargo freighters, including palletized restrain systems, cargo doors, etc., must be documented in compliance with FAA approved data (TCDS, STC and TSO C-90). Only TSO/PMA parts (FAR 21.303) may be utilized for the modification. The modifications must be reflected in the aircraft FAA approved AFM. Note: The weight and balance supplement will contain the modification information. Also, intermix of restraint components must be addressed if the operator intends to utilize other OEM parts. This is a major alteration.	21.113			
j.	1.1.1	All aircraft must be equipped with passengers and crew baggage/cargo compartments, bins and galleys capable of retaining items of mass (Ref FAR 25.2).		25.789(a) and (b)		

15) GENERAL CARGO COMPARTMENT REQUIREMENTS – AVIONICS AND / OR MAINTENANCE (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
k.	1.1.1	Aircraft compartments occupied by passengers or crewmembers ("A" or B"), must be properly ventilated. An outside air supply of no less than 0.55 pounds per minute (10 qubic feet per minute), must be maintained in all areas occupied by passengers or flight crew. Pressurized aircraft must be able to maintain an 8,000 feet cabin pressure altitude. The compartments must be free of noxious gases or fumes or other dangerous air contamination. "E" cargo compartments are sealed vessels within the pressurized vessel; flow of air in "E" compartment is controlled by flight crew using the "E" compartment air flow control valve and closing the 9G bulkhead sealed door. Ozone concentration must also meet the requirements of FAR 25.853 and 121.578.		25.831(a) to 25.831(g), 25.841 & 25.832	121.578	4b.371(a) to 4b.371(e)
l.	1.1.1	Aircraft's existing cargo restrain system installation, (restrain system, pallets and nets), must be properly certificated, (FAR 21.303), identified (FARs 21.607 or FAR 45.11/45.13), comply with manufacturer's specifications and have a maintenance program in compliance with FAR 25.1529. Note: The authorized ULD's for a particular aircraft configuration should be noted in the operator's manuals. Also, non-certified ULD's are allowed on certain aircraft however, a maintenance program must be shown that prevents these ULD's from becoming a hazard to the aircraft.				TSO C90 OR STC
m.	1.1.1	FAR 25.787(c) requires that if cargo compartment lamps are installed, each lamp must be installed so as to prevent contact between the lamp bulb and cargo (protective covering). In addition to illuminating the cargo compartment during ground handling and maintenance operations, the ceiling lights in commercial airplane cargo compartments are part of an important safety system. These light assemblies are a component of the cargo lining and are designed to contribute to the smoke- and Fire-containment requirements of various aviation regulatory agencies. However, if a light lens assembly is damaged, missing, or modified, the bulb could become a fire ignition source. In addition, if the light lens were missing on some Newer commercial airplane models, the cargo compartment would no longer meet its certification requirements for fire containment.		25.787(c)		
n.	1.1.2	Main cabin utilized for cargo only must be equipped with a 9g barrier in compliance with this section. The floor, ceiling, walls and rear bulkhead as well as all other compartment components must also meet all of their airworthiness requirements listed in this section. If classified as a class "E", the compartment must meet all the applicable FAR 25 or CAR 4b requirements of an "E" compartment. Note: A class "E" compartment may have a restraint system that is certified to the 9g loading requirement and therefore a barrier of net is not required. This also requires type 1 ULD's		25.561(b)(3)		4b.260(a)

16) CARGO COMPARTMENT CLASSES – AVIONICS AND / OR MAINTENANCE

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
a.	1.1.1 1.1.2	**Class- A -Cargo Compartments**. Compartment in which fire therein would be readily discernible to a member of the crew while at his station. 1. All parts of a Class "A" compartment (Main cargo Cabin) can be entered and occupied during flight, by a member of the crew. 2. There must be a hand fire extinguisher available for each Class A compartment. 3. The compartment must also meet the requirements of FAR 25.853 or CAR 4b.381.		25.851(a) 25.853 25.855 25.857(a) 25 app. F	121.221(b) 121.221(b) (1) 121.221(b) (2) 121.223 121.309	CAR 4b.381(f) CAR 4b.383(a) 91.525 HBAT 97-12A HBAW 97-12A AC 25-17 8110.27A AC 21-17 AC 25-18

16) CARGO COMPARTMENT CLASSES – AVIONICS AND / OR MAINTENANCE (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25/33	FAR 121	OTHER
b.	1.1.1 1.1.2	**Class- B -Cargo Compartments (Small main cabin compartments).** Cargo and baggage compartments are classified in the "B" category if enough access is provided while in flight to enable a member of the crew to effectively reach all of the compartment and its contents with a hand fire extinguisher. 1. It must have a separate approved smoke or fire detector system to give warning at the pilot or flight engineer station. 2. There must be a hand fire extinguisher available for class "B" compartments. 3. It must be constructed with flame resistant materials and lined with at least fire resistant material, except that additional service lining of flame resistant material may be used. 4. If cargo compartment lamps are installed, each lamp must be installed so as to prevent contact between lamp bulb and cargo. Compartments located immediately behind the cockpit, (separated by a wall and door), and accessible to the flight crew/dead heads in flight. If equipped with jump seat installations, and/or galley, potty, life raft, technical library, and/or where "required emergency exits are located, for aircraft with cockpit windows that can not be open from the outside", and/or where the "E" compartment Air Flow Shut Off Valve Control Handle is located, are classified as Class "B" compartments. The compartment must be located forward of the 9G barrier, it must be properly ventilated, protected by the 9G barrier or 9G net/smoke curtain combination against noxious fumes or smoke. Above described "B" compartment can not be classified as part of the class "E" compartment.		25.787 25.851(a)(3) 25.855(b) 25.857(b) 25 app. F	121.221(c) 121.221(c) (1) 121.221(c) (2) 121.221(c) (3) 121.223	CAR 4b.381(f) CAR 4b.382(c) CAR 4b.383(b) CAR 4b.383(b)(2) CAR 4b.383(b)(3) CAR 4b.383(b)(4) 91.525 HBAT 97-12A HBAW 97-12A AC 25-17 8110.27A AC 21-17 AC 25-18
c.	1.1.1 1.1.2	**Class- C -Cargo Compartments** Cargo and baggage compartments are classified in the "C" category if they do not conform to the requirements for the "A", "B", "D", or "E" categories. Each Class C compartment must comply with the following:: 1. I t must have a separate approved smoke or fire detector system to give warning at the pilot or flight engineer station. 2. It must have an approved built-in fire extinguishing system controlled from the pilot or flight engineer station. 3. It must be designed to exclude hazardous quantities of smoke, flames, or extinguishing agents from entering into any compartment occupied by the crew or passengers. 4. It must be ventilated and draft controlled, so when the fire extinguishing agent is discharged, it can control any fire that may start in the compartment. 5. It must be lined with fire resistant material, except that additional service lining of flame resistant material may be used. (Aircraft certificated under FAR 25, "C" compartment) 6. It must be constructed with flame resistant materials and lined with at least fire-resistant material. (Aircraft certificated under CAR 4b, "C" compartment) 7. If cargo compartment lamps are installed, each lamp must be installed so as to prevent contact between lamp bulb and cargo. AC 25-17 – TRANSPORT AIRPLANE CABIN INTERIORS CRASHWORTHINESS HANDBOOK		25.787 25.855(b) 25.855(c) 25.855(d) 25.857(c) 25.857(c)(1) 25.857(c)(2) 25.857((c)(3) 25.857(c)(4)	121.221(d) 121.223 121.314 121 app. L	CAR 4b3.81(f) CAR 4b.382(c) CAR 4b.383(c) 4b.383(c)(1)(I) 4b.383(C)(1)(ii) 4b.383(c)(2) 4b.383(c)(3) 4b.383(c)(4) 91.525 HBAW 97-12A HBAT 97-12A TSO-C1 8110.27A AC 21-17 AC 25-18

16) CARGO COMPARTMENT CLASSES – AVIONICS AND / OR MAINTENANCE (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25	FAR 121	OTHER
d.	1.1.1 1.1.2	**Class- D -Cargo Compartments**. Note: *As of March 19, 2001 all class "D" compartments need to be converted to C or E compartments!* Cargo and baggage compartments are classified in the "D" category if they are so designed and constructed that a fire occurring therein will be completely confined without endangering the safety of the airplane or the occupants. Each Class D compartment must comply with the following: 1. It must have a means to exclude hazardous quantities of smoke, flames, or noxious gases from entering any compartment occupied by the crew or passengers. 2. It must be ventilated and draft controlled, so when the fire extinguishing agent is discharged, it can control any fire that may start in the compartment 3. It must be completely lined with fire resistant material. Consideration must be given to the effect of heat within the compartment on adjacent critical parts of the airplane. (Aircraft certificated under FAR 25, "D" compartment) 4. Compartments must be constructed with flame resistant materials and completely lined with fire resistant materials (Aircraft certificated under CAR 4b, "D" compartment) 5. Main cabin utilized for cargo only must be equipped with a 9g barrier in compliance with this section. The floor, ceiling, walls and rear bulkhead as well as all other compartment components must also meet all of their airworthiness requirements listed in this section. **NOTE:** Class D cargo compartments must be converted or retrofitted to meet the standards of Class C or, for all-cargo operations, Class E compartments. Such conversions applicable for transport category airplanes type-certificated after January 1, 1958, must be accomplished on or before March 19, 2001.		25.855(d) 25.855(h)(2) 25.855(h)(3)	121.221(e) 121.221(e) (2). 121.221(e) (3) 121.221(e) (4) 121.223 121.314 121 app. L	CAR 4b.382(c) CAR4b.383(d) CAR 4b.383(d)(1) CAR 4b.383(d)(2) CAR 4b.383(d)(3) 91.525 HBAT 97-12A HBAW 97-12A AC 25-17 AC 25-18 8110.27A
e.	1.1.1 1.1.2	**Class- E -Cargo Compartments.**. **The Class "E" compartment is designed only to be used for the carriage of cargo**. Flight crew/s have no access to "E" compartment while in flight. Seat installation is not authorized in "E" compartments. Each Class E compartment must comply with the following:: 1. Main Cabin must be constructed with flame resistant materials and completely lined with fire resistant material. **Note**: This depends on the certification basis of the TC or STC. Some aircraft do not have the Class "E" compartment fully lined. 2. It must have a separate system of an approved type smoke or fire detector to give warning at the pilot or flight engineer station. The compartment immediately behind the pilot does not meet this requirement. FAR 25.858, FAR 121.221(f)(2) and CAR 4b.382(e)(2). 3. It must have a means to shut off the ventilating airflow to or within the compartment and the controls for that means must be accessible to the flight crew in the crew compartment. 4. It must have a means to exclude hazardous quantities of smoke, flames, or noxious gases from entering the flight crew compartment. The "E" Compartment air shut off valve handle can not be located within the "E" compartment. 5. If instead of a solid 9g metal barrier, a 9g net is used, the 9G Net must include a smoke curtain installation forward of the barrier. 6. The compartment must be completely sealed, including the forward 9G barrier or net.		25.787 25.855(b) to 25.855(h) 25.857(e) 25.857(e)(2) 25.857(e)(3) 25.857(e)(4)	121.219 121.221(f) 121.223 121.314 121 app. L	CAR 4b.381(f) CAR 4b.382(c) CAR 4b.383(e) CAR 4b.383(e)(1) CAR 4b.383(e)(2) CAR 4b.383(e)(3) CAR 4b.383(e)(4) 91.525 HBAW 97-12A HBAT 97-12A TSO-C1 8110.27A AC 21-17 AC 25-18

16) CARGO COMPARTMENT CLASSES – AVIONICS AND / OR MAINTENANCE (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25	FAR 121	OTHER
		Class- E -Cargo Compartments (Cont'd) **Note**: MEL considerations: If the smoke barrier is damaged the cockpit door must be functional and able to prevent smoke from entering the cockpit. 7. Required crew emergency exits must be accessible under all cargo loading conditions. 8. If cargo compartment lamps are installed, each lamp must be installed so as to prevent contact between lamp bulb and cargo. AC 25-17 - TRANSPORT AIRPLANE CABIN INTERIORS CRASHWORTHINESS HANDBOOK AC 25-18 - TRANSPORT CATEGORY AIRPLANES MODIFIED FOR CARGO SERVICE				
f.	1.1.1	Cargo compartments must be tested as per FAR 25, Appendix F, Part III, FAR 121.221(f)(3) & (4) – Test Method To Determine Flame Penetration Resistance. Each compartment occupied by the crew or passengers, (including the compartment immediately behind the cockpit), need to be tested only to FAR 25, Appendix F, Part I or II, and need to meet only that requirement. Cargo compartments must meet FAR 25.855(a) through (c) and FAR 121.215(a) through (e). **Note**: This depends on the certification basis of the TC or STC		25.855(b)	121.221(a)(3) 121.221(f)(1) 121.287 121.312(a)(1) & (c)	CAR 4b.359 CAR.4b.382(c)
g.	1.1.1	The cargo compartment may not contain exposed controls, wiring, lines, equipment, radios, or accessories, whose damage or failure would affect the aircraft safe operation, unless the items are protected (Shielded), so it cannot be damaged by the movement of cargo, and their breakage or failure will not create a fire hazard. DFDR and/or CVRs, attached to the forward side of the Rear Pressure Bulkhead, must be protected as required under FAR 25.855(e)&((g), 121.211(a)&(b), and 121.221(a)(1).		25.855(e)(1) 25.855(e)(2)	121.221(a)(1)	CAR 4B.382(a)
h.	1.1.1	There must be means to prevent cargo or baggage in the compartment, from interfering with the functioning of the fire protective feature of the compartment.		25.855(f)	121.221(a)(2)	CAR4b.382(b)
i.	1.1.1	Sources of heat within the compartment must be shielded and insulated to prevent igniting the cargo or baggage.		25.855(g)	121.221(a)(4) and (f)(4)	CAR 4b.382(d)
j.	1.1.1 1.1.2	**Class- E -Cargo Compartments (Cont'd)** The required crew emergency exits must be accessible under any loading conditions. On airplanes that have two cockpit windows that cannot be opened from outside, the most forward left main external passenger door is considered a required emergency exit. **Note**: Emergency exit markings vary from aircraft to aircraft depending again on the requirements of the TC or STC. Some aircraft have the cockpit windows as the required emergency exit and therefore are not required to have the L-1 door marked as an emergency exit)		25.857((e)(5)		CAR 4b382(e)(5) 8110.27A
k.	1.1.1	FAR 25 and CAR 4B, Regardless of airplane configuration (Passengers or "E" compartment), the entire pressure vessel must be properly ventilated to provide each occupant with an airflow containing at least 0.55 pounds r and/or 10 cubic feet per minute of outside fresh air. Regardless of altitude the entire pressure vessel must be maintained at no more than 8,000 feet pressure altitude. The airflow to the compartment immediately behind the cockpit can not be shut off. The required ventilating airflow also applies to "E" compartment, except that the flow of air to or within, the compartment must be controlled and shut off in case of fire, smoke or noxious fumes emanate from it.		25.831(a)	121.219	4b.370 to 4b.375

16) CARGO COMPARTMENT CLASSES – AVIONICS AND / OR MAINTENANCE (CONT'D)

	SAI	DESCRIPTION:	FAR 21/23	FAR 25	FAR 121	OTHER
I.	1.1.1 1.1.2	Large transport airplane main cabin to be approved as an "E" compartment Major alterations of passenger aircraft main passenger cabin modified to "E" type cargo compartment freighters, including installed palletized restrain system, cargo door/s, etc. must be performed in compliance with FAA approved data and properly documented. TSO/PMA parts must be utilized for the modification. The modifications must be reflected (included), in the aircraft FAA approved Aircraft Flight Manual (AFM), WT&BAL Report, Equipment List, Loading Schedule and in the aircraft's FAA approved inspection program, as follows: 1. - Supplemental Type Certificate (STC) design data for the Conversion to "E" compartment installation, description of system, provisions for ventilation and control of air flow, normal and abnormal operational instructions, requirements and limitations for cargo door, 9G Bulkhead, floors modified to higher load bearing capability, cargo pallets restraint system, pallets and cargo nets must be included in the FAA Airplane Flight Manual (AFM). 2. - Installation and description of each component, plus identification and physical location in aircraft, and cargo restrain system and limitations, must be included in Aircraft FAA approved Weight and Balance Report and Equipment List; Loading instructions, identifying all "E" compartment stations maximum loading capacity must also be included in WT&BAL Loading Schedule 3. - An inspection/maintenance program for converted "E" compartment installation, including STC designed data, cargo door, 9G Bulkhead, floors modified to higher load bearing capability, cargo pallets restrain system, pallets and cargo nets must be included in Aircraft FAA approved CAMP. Reference: CAR 4b are not included because they are almost identical to FAR 25. FAR 21.31, 21.93, 21.97, 21.113, 21.303, 21.305, 21.502, 21.607, 25 Subpart D, 25.601 to 25.613, 25.803, 25.609(b), 25.831 to 25.833, 25.841 and 25.843, 25.1529, 121.370, TCDS and Manufacturer's SRM and maintenance manuals.	21.303 21.607	25.1519 25.1529 25.1581(a) (1) to (3) 25.1583(c)	121.707	CAR 4b.740(c), CAR 4b.740-1(b) CAR 4b,740(b)(1) TCDS, STC, PMA TSO C-90