

FLIGHT STANDARDIZATION BOARD REPORT

ALLISON CONVAIR CV-580 and CV-5800
(CV-A340/CV-A440)

CHAIRMAN: _____ DATE: September 18, 1998

W. Carl Malone
LGB-AEG

MANAGEMENT COORDINATION SHEET

EUGENE F. HUETTNER
MANAGER,
LONG BEACH AIRCRAFT EVALUATION GROUP

DATE: 9/18/98

Gary E. Davis
Acting Manager,
Air Transportation Division

DATE: 10/14/98

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REVISION RECORD

REVISION NO.	SECTION	PAGE #s	DATE
Original	All	All	8/18/98

1 PURPOSE AND APPLICABILITY

1.1 This Flight Standardization Board Report (FSB) specifies FAA master training, checking, and currency requirements applicable to crews operating Convair 340 and 440 aircraft modified with the Allison 501 Turboprop Engine. Provisions of the report include:

- 1.1.1 Defining pilot "type rating(s)" assigned to these aircraft.
- 1.1.2 Describing "Master Common Requirements" (MCR) applicable to all these aircraft.
- 1.1.3 Describing "Master Differences Requirements" (MDR) for crews requiring differences qualification for mixed fleet-flying or transition.
- 1.1.4 Providing examples of acceptable "Operator Difference Requirement (ODR) Tables
- 1.1.5 Describing acceptable training program and training device characteristics necessary to establish compliance with pertinent MDR tables.
- 1.1.6 Minimum requirements which must be applied by FAA field offices, (i.e. MCR, MDR, Type Rating designations, etc,).
- 1.1.7 Information which is advisory in nature, but may be mandatory for particular operators if the designated configurations apply and if approved for that operator (i.e. MDR footnotes, acceptable ODR Tables).
- 1.1.8 Information which is used to facilitate FAA review of an aircraft type or variant proposed for use by an operator.

NOTE: Various sections within the report are qualified as to whether compliance is required considering the provisions of AC 120-53, or is advisory in nature.

- 1.2 The Basic STC is SA41100 for the Convair 340 and 440 Allison Supplemental Type Certificate , STC SA1825 NM is the Propeller conversion, with Allison Turbo-Prop Engines 501-D13D/H and Allison 501-D22G referred to, respectively, as the CV-580 and the CV-580s (Super CV-580). Allison Supplemental Type Certificate, SA6088NM, with the Allison 501-D22H Engine, stretched fuselage, and modernized Electronic Flight Instrument System (EFIS) and is referred to as the "CV-5800".
- 1.3 There are no previous FSB reports relative to the above Allison Supplemental Type Certificates. This report addresses only models CV-580, CV-580s, and CV-5800. Provisions of this report are effective until amended, superseded or withdrawn by subsequent FSB determinations.
- 1.4 Terminology.
- 1.4.1 The term "must" is used in this report and certain MDR footnotes even though it is recognized that this FSB report, and Advisory Circular AC 120-53 upon which it is based, provides one acceptable means, but not necessarily the only means of compliance with FAR 121 Subpart N and O requirements. This terminology acknowledges the need for operators to fully comply with this FSB report MDR and ODR provisions if AC 121-53 is to be used by the operator as the means of complying with FAR 121. Operators who choose this method must comply with each applicable MDR provision including footnotes.
- 1.5 Acronyms
- 1.5.1 Acronyms relevant to this report:
- | | |
|---------|---|
| EFIS | Electronic Flight Instrument System
(Electronic Attitude Indicator)
(Electronic Horizontal Situation Indicator) |
| MCR | Master Common Requirements |
| MDR | Master Difference Requirements |
| ODR | Operator Difference Requirements |
| CV-580 | See Paragraph 1.3 |
| CV-580s | See Paragraph 1.3 |
| CV-5800 | See Paragraph 1.3 |

2 PILOT "TYPE RATING" REQUIREMENTS

- 2.1 The pilot type rating for all models addressed in this report has been established as CV-A340, CV-A440.

3 "MASTER COMMON REQUIREMENTS" (MCR)

- 3.1 Autopilot Engage Altitudes (FAR 121.579).

The CV-580, CV-580s, and CV-5800 autopilot may be engaged after takeoff at or above 500 feet AGL.

- 3.2 Minimum Altitude For Autopilot Use During Non Precision Approaches (FAR 121.579).

Autopilot may be used at or above 500 feet AGL.

- 3.3 Landing Minima Categories (FAR 97.3).

All variants are Category C for all approaches, both straight in and circling.

- 3.4 No Flap Approach.

Demonstration of a No Flap Approach is applicable for all variants.

4 "MASTER DIFFERENCE REQUIREMENTS" (MDR)

- 4.1 MDR Tables.

Requirements for particular Variant Combinations are shown in Appendix 1. These provisions apply when differences between variants exist which affect crew knowledge, skills, or abilities (e.g. Level A or greater differences).

5 ACCEPTABLE "OPERATOR DIFFERENCE REQUIREMENTS" (ODR) TABLES

- 5.1 ODR Tables.

ODR tables are to be developed by each individual operator. Sample tables for operators conducting mixed fleet operations are shown, if available, in Appendix 2. These ODR Tables are provided as samples and do not include all possible combinations.

5.2 Distribution of FAA Approved ODR Tables.

Distribution of the FAA Approved ODR Tables should be as follows: Original FAA approved ODR Tables are to be retained by the operator; Copies of FAA approved ODR Tables are to be retained by the Certificate Holding District Office (CHDO) and provided to the CV-580/580s/5800 Flight Standardization Board (FSB) Chairman, Long Beach AEG, (LGB AEG).

6 FSB SPECIFICATIONS FOR TRAINING

6.1 General.

6.1.1 Numerous training programs exist for any one CV-580 variant alone and have already been approved by numerous Principal Inspectors. Principal Inspectors of operators initially introducing a CV-580/580s/5800 may approve programs consistent with programs approved for any one variant (e.g. an operator introducing a fleet of CV-580s with no differences between any of the individual aircraft).

- a) When such programs are approved, operators should be aware that if variants are to be added or differences are to be introduced, ODR table development and FAA approval is necessary prior to operation of those aircraft with differences.
- b) For information regarding previously approved programs, FAA Principal Inspectors of other existing CV-580/580s/5800 operators may be consulted. In the event of uncertainty regarding evaluation of a proposed program, the CV-580 FSB Chairman should be consulted.

6.1.2 CV-580/580s/5800 Mixed Fleet Programs.

Programs with more than one variant of the CV-580/580s/5800, or combinations require differences training programs meeting criteria specified by MDR tables, or must have alternate approval as prescribed by Section 12 of this report.

6.2 Initial, Transition and Upgrade Training.

6.2.1 Ground Training.

Pilots Initial, Upgrade and Transition Training is accomplished in accordance with FAR 121.419 and SFAR 58, Advanced Qualification Program (AQP). When more than one variant is to be flown or transition from one variant to another is to be accomplished, appropriate instructions in systems differences will be required for each variant that is consistent with MDR provisions.

6.2.2 Flight Training.

Pilots Initial, Upgrade and Transition Training is accomplished in accordance with FAR 121.424 and SFAR 58 (AQP). When this flight training is accomplished, and several variants are to be flown, flight training is to suitably address each variant.

6.2.3 Training program hours may be reduced as specified in FAR 121.405, but may not be reduced to a level that is less than that set forth in the MDR Tables.

6.3 Differences Training (FAR 121.418).

6.3.1 Unless an initial or transition program is completed for each variant, differences training is necessary for each variant as shown in the MDR. A training program addressing pertinent differences described by individual operator ODR tables, including normal, non-normal, and emergency operations, is required for each variant flown. Samples of acceptable ODR Tables are not currently available.

- a) The differences programs for a mixed fleet assume a trainee has completed Initial, Upgrade or Transition Training for the other variant.
- b) Coverage of differences may be completed coincident either with each phase of Initial, Upgrade or Transition Training, or following completion of that training.

6.3.2 Differences Ground Training, in the topics applicable to the pertinent variant and shown by the sample ODR Tables (If available) or the equivalent, is required. When Level C or greater training is required by MDR, comprehensive treatment of the topics specified in the ODR Tables requires at least 20 programmed hours of ground instruction.

6.3.3 Differences Flight Training, in the topics and maneuvers applicable to the pertinent variant and shown by the sample ODR Tables (If available), is required. When such maneuvers are accomplished, the objective is to develop both individual airman and crew knowledge of systems and procedural skills necessary to safely operate the variant aircraft.

6.3.4 Fleets with subtle differences between variants may require additional attention to ensure that habits do not lead to inappropriate or delayed crew response. Examples of such subtle differences include the use of similar controls or indicators which respond in different ways (i.e. reversed switch direction to operate a function), avionics which have "mode selection" or logic switching differences that may not be obvious (i.e. flight director modes selections, engage and reversion modes, annunciations, etc.), or procedural related differences that could be easily confused between variants (i.e. reverse thrust use). Even though not explicitly addressed by MDR'S, a minimum level of A/A/B is designated for such differences.

6.4 Recurrent Training.

6.4.1 Recurrent Training must include appropriate training in accordance with FAR 121.427 for each variant. Recurrent training must be in accordance with the levels specified by MDR and ODR tables for initial differences training.

6.4.2 Recurrent Flight Training requires appropriate maneuvers and procedures identified in FAR 121 Appendix E. Maneuvers and procedures addressed must account for each variant operated. ODR table provisions identify differences in maneuvers or procedures between variants which must be addressed in the operators recurrent program.

6.5 Other Training.

6.5.1 LOFT Limitations, FAR 121.427(d)(2).

LOFT training is not applicable at this time because there are no simulators available.

6.5.4 Flight Attendants may be jointly qualified in all variants provided cabin configurations are similar. Such qualification, however, must address any differences in doors, slides, communication, and emergency equipment when common qualification applies.

6.5.5 Principal Inspectors assure that operators have complied with FAR 121.422 (Dispatcher Training). Dispatchers may be simultaneously qualified in all variants, however, they must be trained to suitably address all differences (performance, procedures, inoperative equipment, approach category, etc,) appropriate to the operators aircraft. Records should be kept for each variant on which each dispatcher is qualified.

7 FSB SPECIFICATIONS FOR CHECKING

7.1 General

7.1.1 Checking specified by FAR 61.58 and FAR 121 Appendix F apply to all variants. For FAR 121, checking items are accomplished as specified by MDR and ODR Tables.

7.1.2 The following areas of emphasis should be addressed during checks as necessary:

- a) Proficiency with manual and automatic flight in normal, abnormal and emergency situations must be demonstrated. The use of manual modes (Manual approaches) and backup equipment must be demonstrated at each proficiency check by all crewmembers.
- b) When noise abatement procedures other than AC 91-53 are used, proper execution and approved procedures should be observed.
- c) No variants have been approved for Extended Range Operations with Two Engine Airplanes (ETOPS) in accordance with AC 120-42A.

7.1.3 No Flap Approaches.

Checking in No Flap Approaches is conducted in accordance with the provisions of paragraph 3.4.

7.2 Type Ratings

7.2.1 Unless otherwise specified by ODR Tables, the oral portion of a type rating practical test need only address the variant(s) to be flown.

7.2.2 Airmen completing the necessary type rating practical test of FAR 61 and the Airline Transport Pilot and/or Type Rating, (Practical Test Standards) in a model of any variant may be issued the (CV-A340/A440) pilot type rating.

- a) Before airmen serve as Pilot-in Command (PIC) under FAR 121 in a variant other than that in which a type rating practical test was completed, differences checks in accordance with MDR provisions must be completed. Operators qualifying aircrews in one or more variants, and who conduct the "interior and exterior visual preflight inspection" portion of practical tests under provisions of ATA Exemption 4416 (as amended), may apply provisions of that exemption to CV-580/580s/5800 variants.
- b) Where crewmembers fly several variants and differences such as in location of door exits, or emergency equipment exist, operators should account for those differences in a manner acceptable to the FAA when applying provisions of Exemption 4416.

7.2.3 When possible, a practical test for an applicant intending to operate under FAR 91 or 125 should be conducted in a variant of the same variant as that intended to be flown. In the event it is not practical, or where a Type Rating is sought and no specific operation is intended, the check may be conducted using any variant for the Type Rating sought. In this instance, and following a successful check, the applicant should be advised of the desirability of completing subsequent differences training if other variants are to be flown. The inspector should recommend that one of the following provisions be met prior to serving as PIC of a different variant than the one in which the original check was accomplished:

- a) Completion of differences qualification in accordance with, or equivalent to, that specified for FAR 121 (e.g. compliance with MDR).
- b) Completion of a check in accordance with FAR 61 completed in the variant(s) to be flown.
- c) Completion of a proficiency check in accordance with or, equivalent to, that specified by FAR 121. A check conducted by a US military service or other equivalent check in an aircraft or the variant series to be flown.

7.3 Proficiency Checks.

7.3.1 Proficiency Checks are administered as designated in FAR 121.441 and FAR 121 Appendix F for a particular variant.

7.4 Operating Experience (AC 120-53 or FAR 121.434).

7.4.1 Unless otherwise authorized in accordance with provisions of this FSB report and approved ODR tables, Operating Experience required by FAR 121.434 applies separately to each variant group.

7.5 Qualifications of FAA Inspectors and Check Airmen.

For the purpose of airman certification, FAA Inspectors, Aircrew Program Designees (APDs), or Check Airmen should have completed appropriate qualification for the variant(s) to be flown. Separate qualification and currency is required for the CV-580, CV-580s, and CV-5800 variant groups. No pilot should be designated as a check airman until he complies with the provisions of FAR 121.652.

8 FSB SPECIFICATIONS FOR CURRENCY

8.1 Currency (Recent Experience) FAR 121.439.

8.1.1 Currency credit may be permitted between CV-580, CV-580s, and CV-5800 as specified in the MDR Tables.

8.1.2 Takeoffs and landings performed in one variant are equivalent to those performed in the other variants if knowledge and procedural issues are suitably addressed through appropriate MDR requirements.

8.2 Methods For Re-establishing Currency.

8.2.1 At level B, currency is re-established by crewmember review of pertinent materials per the operator's guidelines unless the crewmember is also due for a Proficiency Check or recurrent training when differences requalification would be accomplished by:

a) Satisfying the same MDR and ODR Tables (if available) as for initial differences qualification, or

b) Completing the provisions of paragraph 6.4 or paragraph 7.3 of this report.

8.2.2 At level C, currency is re-established in flight with a qualified check airman or a demonstration of proficiency in a Level C or greater device, or completing the provisions of paragraph 6.4 or paragraph 7.3 of this report.

9 FAR 91 AND 121 OPERATING RULES COMPLIANCE CHECKLIST

9.1 Operating Rules Compliance Checklist.

A compliance checklist has been completed for the CV-5800. The Compliance Checklist for the CV-5800 in Appendix 4 reflects the status of the prototype flown by the FSB. This aircraft was Serial Number 276 under United States registration N5800.

9.1.1 CV-5800 Landing Gear Warning Horn.

It has been shown that the Landing Gear Warning Horn meets the requirements of FAR 121.289 as well as FAR 25. The Approved Landing Gear Warning Horn has a switch which is used to select intended landing flap configuration. The switch must be selected to the intended Landing Flap Setting.

9.2 No compliance checklist is provided for the CV-580 or CV-580s in this report.

10 FSB SPECIFICATIONS FOR DEVICES AND SIMULATORS

10.1 Device And Simulator Characteristics.

Device and Simulator characteristics pertinent to variants are as designated in AC 120-40b, AC 120-45, and AC 120-53.

10.2 Aircraft, Simulator And Device Compatibility (Ref FAR 121.407).

When variants are flown in mixed fleets, the combination of simulators and devices used to satisfy MDR and ODR provisions must match specific variants of the aircraft flown in service by that operator. The acceptability of differences between devices, simulators, and aircraft must be addressed by the Principal Inspector.

10.3 Device Approvals.

Requests for device approval should be made to the Principal Inspector. If device characteristics clearly meet established FAA criteria and have been approved by the National Simulator Program Office (AFS-205), the Principal Operations Inspector (POI) may approve those devices for that carrier. Where devices do not clearly satisfy a given difference level POIs should request advice from the FSB Chairman, AFS-205 or AFS-200.

11 APPLICATION OF FSB REPORT

11.1 Operators with any One Variant (no differences).

Apply relevant parts of this report following the effective date of this report.

11.2 Operators with a Mixed Fleet.

Apply the provisions of Paragraph 11.1 as described above. In addition, compliance with MDR's, ODR's, and other relevant FSB report provisions is necessary. Compliance must be within 12 months from the date of approval of this report, or obtain alternate compliance. Operators should submit proposed ODR Tables to Principal Inspectors within 10 months of the date of this report in order to assure timely review and approval of their respective program.

12 ALTERNATE MEANS OF COMPLIANCE TO THIS FSB REPORT

12.1 Approval Level and Approval Criteria.

Alternate means of compliance to differences requirements of FAR 121 Subpart N and O for mixed fleet operations, other than as specified in provisions of this report, must be approved by AFS-200. Operators will be required to show that the proposed alternate means provide an equivalent level of safety to the provisions of AC 120-53 and this FSB report. Analysis, demonstrations, proof of concept testing, differences documentation, or other evidence may be required.

12.2 Equivalent Safety.

If a operator seeks an alternate means of compliance, training program hour reductions, simulator approvals and device approvals may be significantly limited and reporting requirements may be increased to assure equivalent safety. FAA will generally not consider relief through alternate compliance unless sufficient lead time has been planned for by an operator to allow for any necessary testing and evaluation.

12.3 Interim Programs.

In the event of clearly unforeseen circumstances in which it is not possible for an operator to comply with MDR provisions, the operators may seek an interim program rather than a permanent alternate compliance method. Financial arrangements, schedule adjustment, and other such reasons are not considered "unforeseen circumstances" for the purposes of this provision.

13 MISCELLANEOUS - RESERVED

APPENDICES

Appendix 1

MASTER DIFFERENCE REQUIREMENTS - CONVAIR 580, 580s AND 5800

DATE: September 18, 1998

Appendix 1, MASTER DIFFERENCES REQUIREMENTS, CONVAIR
580/580s/5800

		FROM -->	FROM AIRCRAFT		
T O T O A I R C R A F T			CV-580	CV-580s	CV-5800
	CV-580	A/A/A	B/B/B	C/C/C	
	CV-580s	B/B/B	A/A/A	C/C/C	
	CV-5800	C/C/C	C/C/C	A/A/A	

TYPE RATINGS: Pilot Certificate Aircraft Type Designations-
Airplanes
CV-A340, CV-A440

See paragraph 2.1 and 7.2.2 of this report.

See Operations Inspector's Handbook. (Order
8400.10)

Appendix 2

ACCEPTABLE OPERATOR DIFFERENCE REQUIREMENTS TABLES

DATE: September 18, 1998

NO ODR TABLES ARE AVAILABLE AT THIS TIME

Appendix 3

RECOMMENDED TRAINING PROGRAMS

DATE: September 18, 1998

NO RECOMMENDED TRAINING PROGRAMS AVAILABLE AT THIS TIME.

1. The Flight Standardization Board does not recommend a reduced ground or flight training program for any initial, recurrent or transition training on these aircraft.

Appendix 4

CV-5800 COMPLIANCE CHECKLIST

DATE: September 18, 1998

Appendix 4. CONVAIR 5800 COMPLIANCE CHECKLIST

This checklist applies to the CV-440 (CV131F Serial Number 276) modified with STC SA6088 NM, of United States registry N5800, only. Compliance with the following Federal Aviation Regulations and FAA policies has been established, if this aircraft is released for U.S. air carrier service as it was configured on 12/21/94. Items that are identified as "CHDO", need to be evaluated by principal inspectors at the Certificate Holding District Office prior to the CV-5800 aircraft being used in FAR 121 revenue service. Items marked NA are not applicable to this aircraft. Items marked Compiles have either been found to directly comply with the applicable rule or the necessary data or procedures are available to permit assessment of compliance for a particular operations.

FAR 91

91.9	Civil aircraft flight manual, marking, and placard requirements.	CHDO if operated under FAR Part 91.
91.117	Aircraft speed.	Minimum safe speed is less than that specified as maximum in this rule.
91.191	Category II Manual.	Aircraft is not approved for Category II approaches.
91.203	Civil aircraft: Certifications Required.	CHDO.
91.205	Powered civil aircraft with standard category U.S. airworthiness certificates; instruments and equipment requirements.	CHDO, Except (b)(11).
91.207	Emergency locator transmitters.	CHDO.
91.209	Aircraft lights.	Designed to meet the requirements of this rule.
91.211	Supplemental Oxygen.	CHDO.

91.213	Inoperative instruments and equipment.	M MEL.
91.215	ATC Transponder and altitude reporting equipment and use.	CHDO.
91.217	Data correspondence between automatically reported pressure altitude data and the pilot's altitude reference.	Compiles.
91.219	Altitude alerting system or device; turbojet powered civil airplanes.	NA
91.317	Provisionally certified civil aircraft; operating limitations.	NA
91.409	Inspections.	CHDO.
91.413	ATC transponder tests and inspections.	CHDO.
91.415	Changes to aircraft inspection programs.	CHDO.
91.503	Flying equipment and operating information.	CHDO.
91.511	Radio equipment for overwater operations.	CHDO.
91.513	Emergency equipment.	CHDO.
91.517	Smoking and safety belt signs.	CHDO.
91.521	Shoulder harness.	Compiles.
91.525	Carriage of cargo.	CHDO.
91.527	Operating in icing Conditions.	Certified for Light Icing conditions only.
91.603	Aural speed warning device.	Compiles.
91.605	Transport category civil airplane weight limitations.	CHDO.

91.607	Emergency exits for airplanes carrying passengers for hire.	CHDO.
91.609	Flight recorders and cockpit voice recorders.	CHDO.
91.611	Authorization for ferry flights with one engine inoperative.	Not Authorized.
91.805	Final compliance, Subsonic airplanes.	CHDO.
FAR 121		
121.141	Airplane or rotorcraft flight manual.	Compiles.
121.157	Aircraft certification and equipment requirements.	CHDO.
121.173	General.	(b) and (d) apply.
121.189	Transport category airplanes: Turbine engine powered; takeoff limitations.	Compiles, CHDO.
121.191	Transport category airplanes: turbine engine powered: Enroute limitations: One engine inoperative.	Compiles, CHDO.
121.193	Transport category airplanes: Turbine engine powered: Enroute limitations: two engines inoperative.	NA
121.195	Transport category airplanes: Turbine engine powered: Landing limitations: Destination airports.	CHDO, Data provided in AFM.
121.197	Transport category airplanes: Turbine engine powered: Landing limitations: Alternate airports.	CHDO, Data provided in AFM.
121.215	Cabin interiors.	CHDO.

121.217	Internal doors.	CHDO.
121.219	Ventilation.	CHDO.
121.221	Fire precautions.	CHDO.
121.223	Proof of compliance with 121.221.	CHDO.
121.231	Fuel system lines and fittings.	Complies.
121.233	Fuel lines and fittings in designated fire zones.	Complies.
121.235	Fuel valves.	Complies.
121.237	Oil lines and fittings in designated fire zones.	Complies.
121.241	Oil system drains.	Complies.
121.243	Engine breather lines.	Complies.
121.245	Fire walls.	Complies.
121.247	Fire-wall construction.	Complies.
121.249	Cowling.	Complies.
121.251	Engine accessory section diaphragm.	NA.
121.253	Powerplant fire protection.	Complies.
121.255	Flammable fluids.	Complies.
121.257	Shutoff means.	Complies.
121.259	Lines and fittings.	Complies.
121.261	Vent and drain lines.	Complies.
121.263	Fire extinguishing systems.	Complies.
121.265	Fire extinguishing agents.	Complies.
121.267	Extinguishing agent container pressure relief.	Complies.

121.269	Extinguishing agent container compartment temperature.	Complies.
121.271	Fire-extinguishing system materials.	Complies.
121.273	Fire-detector systems.	Complies.
121.275	Fire detectors.	Complies.
121.277	Protection of other airplane components against fire.	Complies.
121.281	Fuel system independence.	Complies.
121.283	Induction system ice protection.	Complies.
121.285	Carriage of cargo in passenger compartments.	CHDO.
121.287	Carriage of cargo in cargo compartments.	CHDO.
121.289	Landing gear: Aural warning device.	Complies. The Descent checklist must include selection of landing configuration for the Aural Warning Switch.
121.291	Demonstration of emergency evacuation procedures.	CHDO.
121.303	Airplane instruments and equipment.	CHDO.
121.305	Flight and navigational equipment.	CHDO.
121.307	Engine instruments.	Complies.
121.308	Lavatory fire protection.	CHDO.
121.309	Emergency equipment.	CHDO.
121.310	Additional emergency equipment.	CHDO.
121.311	Seats, safety belts, and shoulder harnesses.	CHDO.

121.312	Materials for compartment interiors.	CHDO.
121.313	Miscellaneous equipment.	(a) through (e) comply, CHOD for (f) through (i).
121.315	Cockpit check procedure.	CHDO.
121.317	Passenger information.	CHDO.
121.319	Crewmember Interphone system.	Complies.
121.323	Instruments and equipment for operations at night.	Complies.
121.325	Instruments and equipment for operations under IFR or over the-top.	Complies.
121.329	Supplemental oxygen for sustenance: Turbine engine powered airplanes.	CHDO.
121.333	Supplemental oxygen for emergency descent and for first aid: turbine engine powered airplanes with pressurized cabins.	CHDO.
121.335	Equipment standards.	(b) applies, CHDO.
121.337	Protective Breathing equipment.	CHDO.
121.339	Emergency equipment for extended overwater operations.	NA.
121.340	Emergency flotation means.	CHDO.
121.341	Equipment for operations in Icing conditions.	Aircraft is certified for Light Icing conditions only.
121.342	Pitot heat indication systems.	Complies.
121.343	Flight recorders.	CHDO.
121.345	Radio equipment.	CHDO.

121.347	Radio equipment for operations under VFR over routes navigated by pilotage.	CHDO.
121.349	Radio equipment for operations under VFR over routes not navigated by pilotage or for operations under IFR or over- the-top.	CHDO.
121.351	Radio equipment for extend overwater operations and for certain other operations.	CHDO.
121.353	Emergency equipment for operations over uninhabited terrain areas: flag and supplemental air carriers and commercial operators.	CHDO.
121.355	Equipment for operations on which specialized means of navigation are used.	CHDO.
121.357	Airborne weather radar equipment requirements.	CHDO.
121.358	Low-altitude windshear system equipment requirements.	CHDO.
121.359	Cockpit voice recorders.	Complies.
121.360	Ground proximity warning glide slope deviation alerting system.	Complies, (d) and (e) responsibility of CHDO.
121.369	Manual requirements.	CHDO.
121.576	Retention of items of mass in passenger and crew compartments.	CHDO.
121.578	Cabin ozone concentration.	Aircraft meets requirement by type design.
121.579	Minimum altitudes for use of autopilot.	Complies, AFM.
121.581	Forward observer's seat: En route inspections.	Complies.

- | | | |
|---------|---|-------|
| 121.587 | Closing and locking of flight crew compartment door. | CHDO. |
| 121.589 | Carry-on baggage. | CHDO. |
| 121.629 | Fuel supply: All operations: domestic air carriers. | CHDO. |
| 121.652 | Landing weather minimums: IFR: All certificate holders. | CHDO. |

